

MECHANICAL DRAWING LIST	
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M0003	MECHANICAL LEGEND AND SYMBOLS 2 OF 2
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M0102	MECHANICAL STANDARD DETAILS 2 OF 8
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M0104	MECHANICAL STANDARD DETAILS 4 OF 8
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M1102	DEMOLITION PLAN - FIRST FLOOR
M1103	DEMOLITION PLAN - SECOND FLOOR
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M1105	DEMOLITION PLAN - FOURTH FLOOR
M1106	DEMOLITION PLAN - FIFTH FLOOR
M1107	DEMOLITION PLAN - ROOF
M2101	PLUMBING - BASEMENT FLOOR
M2102	PLUMBING - FIRST FLOOR
M2103	PLUMBING - SECOND FLOOR
M2104	PLUMBING - THIRD FLOOR
M2105	PLUMBING - FOURTH FLOOR
M2106	PLUMBING - FIFTH FLOOR
M2107	PLUMBING - ROOF
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M3101	DRAINAGE - BASEMENT FLOOR
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M5105	HVAC - FOURTH FLOOR
M5106	HVAC - FIFTH FLOOR
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Project Management Office  
Metro Hall Toronto, ON  
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ISSUES		
No.	DESCRIPTION	DATE
A	50% SUBMISSION	2024-10-31
B	75% SUBMISSION	2025-03-17
C	ISSUED FOR PRELIMINARY COSTING	2025-06-27
D	ISSUED FOR PERMIT 100%	2025-07-31
E	ISSUED FOR TENDER	2025-09-02

CONSULTANTS

SEAL

PRIME CONSULTANT



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PROJECT TITLE  
50 RICHMOND ST. E.  
RENOVATIONS

PROJECT ADDRESS

50 RICHMOND STREET EAST  
TORONTO, ON

PROJECT NO:  
122260

DRAWN BY: C. SU	CHECKED BY: E. PANAHI
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PROJECT MGR: F. BOLOURIAN	APPROVED BY: R. BARROSO
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SHEET TITLE  
MECHANICAL DRAWING  
LIST

SHEET NUMBER  
M0001

ISSUE  
E

## MECHANICAL LEGEND AND SYMBOLS

PLUMBING & DRAINAGE	FIRE PROTECTION	MECHANICAL PIPING	VALVES, FITTINGS AND SPECIALTIES	VALVES, FITTINGS AND SPECIALTIES
<div>- - - DCW - - - DOMESTIC COLD WATER - - - DHW - - - DOMESTIC HOT WATER - . . . DHWR . . . DOMESTIC HOT WATER RECIRCULATION --- NPW --- NON-POTABLE WATER -- TW -- TEMPERED HOT WATER -- IW -- IRRIGATION WATER -- BRIN -- BRINE WATER ----- CHEM ----- ---- SW ---- SOFT WATER ----- SAN ----- ----- SAN ----- ----- SAN-P ----- ----- STM ----- STORM DRAIN - ABOVE GRADE ----- STM ----- STORM DRAIN - BELOW GRADE ----- STM-P ----- PUMPED STORM DRAIN ---- PW ---- PROCESS DRAIN - ABOVE GRADE ----- PW ----- PROCESS DRAIN - BELOW GRADE ----- PW-P ----- PUMPED PROCESS DRAIN ----- WP ----- WEEPER DRAIN (SUB-DRAIN) ----- V ----- VENT ----- COND ----- CONDENSATE DRAIN ----- DL ----- OVERFLOW DRAIN  ● FD-A FLOOR DRAIN (LETTER INDICATES TYPE SEE SPECIFICATION) ⊕ RD ROOF DRAIN (CONVENTIONAL) ⊕ RD -1 CONTROL FLOW ROOF DRAIN (NUMBER INDICATES NOTCHES) Y FUNNEL DRAIN - ELEVATION X HB HOSE BIBB + NFWH HYDRANT - NON-FREEZE △ SHOWER HEAD % ▽ PITCH-INDICATES DOWN SLOPE CO CLEANOUT - ABOVE GRADE ▴ CO CLEANOUT - ABOVE GRADE □ CO CLEANOUT - BELOW GRADE ◇ CO CLEANOUT - BELOW GRADE T RUNNING TRAP BFP BACKFLOW PREVENTOR BACK WATER VALVE (FOR SEWAGE) BACKFLOW PREVENTER (RP TYPE) BACKFLOW PREVENTER (DCVA)  WC WALL HUNG FLUSH VALVE WC FLOOR MOUNTED FLUSH TANK URINAL WALL HUNG FLUSH VALVE ) LAVATORY WALL HUNG ) LAVATORY COUNTER TOP ) SERVICE SINK GROUP WASHFOUNTAIN MOP SINK / JANITOR SINK DFC-1 DRINKING FOUNTAIN COOLER (NUMBER INDICATES TYPE - SEE SPECS.) ESS SAFETY SHOWER &amp; EYE WASH STATION EW EYE WASH STATION VM VENDING MACHINE CB1 600 X 600 X 700 (H) CATCH BASIN CB2 IN LINE C.B. TD TRENCH DRAIN WITH CONTINUOUS SLOPE</div>	<div>F FIRE MAINS STP FIRE STANDPIPE SP SPRINKLER PIPE DSTP DRY FIRE STANDPIPE DSP DRY SPRINKLER PIPE PS PRE-ACTION PIPE DELUGE DELUGUE PIPE CAG CLEAN AGENT GAS  ⊗ PENDENT SPRINKLER HEAD ○ UPRIGHT SPRINKLER HEAD ● CONCEALED SPRINKLER HEAD ▽ SIDEWALL SPRINKLER HEAD FE FIRE EXTINGUISHER FHC FE FIRE EXTINGUISHER WITH CABINET FHVC FIRE HOSE CABINET FHV FIRE HOSE VALVE CABINET FHR FIRE HOSE REEL FHH OH FH FIRE HOSE RACK / FIRE HOSE HANGER SURFACE MOUNTED SURFACE MOUNTED SEMIR ECCESED SEMI-RECESSED RECCESED RECESSED WH WALL HYDRANT RH RH ROOF HOSE HOUSE FH FIRE HYDRANT FD DEPARTMENT CONNECTION SV SUPERVISED VALVE FS FLOW SWITCH FA FS WET ALARM VALVE (FS = FLOW ALARM SWITCH PS = LOW PRESSURE SWITCH) DA FS DRY ALARM VALVE (FS = FLOW ALARM SWITCH PS = LOW PRESSURE SWITCH) PA PA PREACTION SPRINKLER ALARM CHECK VALVE DL DL DELUGUE SPRINKLER ALARM CHECK VALVE ALG ALARM GONG HOSE HEADER 8 x 620 c/w HOSE CAP PIV POST INDICATOR VALVE O.S. O.S. Y. VALVE O.S. O.S. Y. VALVE-IN RISER IT INSPECTORS TEST CONNECTION</div>	<div>X-Y "X" PIPE SIZE NPS "Y" PIPE SERVICE HWS HEATING WATER SUPPLY HWR HEATING WATER RETURN HCS HEATING / CHILLED WATER SUPPLY HCR HEATING / CHILLED WATER RETURN GLY-HWS GLYCOL HEATING WATER SUPPLY GLY-HWR GLYCOL HEATING WATER RETURN CHWS CHILLED WATER SUPPLY CHWR CHILLED WATER RETURN PCHWS PROCESS CHILLED WATER SUPPLY PCHWR PROCESS CHILLED WATER RETURN CTWS COOLING WATER SUPPLY CTWR COOLING WATER RETURN HPS HIGH PRESSURE STEAM LPS HIGH PRESSURE STEAM COND STEAM CONDENSATE COND-P PUMPED STEAM CONDENSATE RL REFRIGERANT LIQUID RG REFRIGERANT GAS FUEL FUEL PIPE FOS FUEL OIL SUPPLY FOR FUEL OIL RETURN FOV FUEL OIL VENT H HUMIDIFIER LINE EO ENGINE OIL SO B' SOLUBLE "B" OIL HONE HONE OIL GASO GASOLINE MCS LP MACHINE COOLANT SUPPLY (LOW PRESSURE) MCS HP MACHINE COOLANT SUPPLY (HIGH PRESSURE) MCR MACHINE COOLANT RETURN G NATURAL GAS PROPANE PROPANE AIR COMPRESSED AIR VACUUM VACUUM PIPE MDG MEDICAL GAS PIPE O2 OXYGEN NO NITROUS OXIDE N NITROGEN CO2 CARBON DIOXIDE CO CARBON MONOXIDE He HELIUM H2 HYDROGEN AR ARGON DIRECTION OF FLOW NEW PIPING / DUCTWORK EXISTING PIPING / DUCTWORK TO REMAIN EXISTING PIPING / DUCTWORK TO BE REMOVED</div>	<div>GATE VALVE LOBE VALVE CHECK VALVE PLUG VALVE BUTTERFLY VALVE BALL VALVE DIAPHRAM VALVE HOSE END VALVE BOILER BLOWDOWN VALVE FIRE STOP VALVE RUPTURE DISC VALVE IN RISER PRESSURE REDUCING VALVE PRESSURE RELIEF VALVE - ELEVATION PRESSURE RELIEF VALVE PRESSURE RELIEF VALVE - PLAN FLOAT ACTIVATED SIGNAL TRANSMITTER FLOAT OPERATED VALVE BACK PRESSURE VALVE DIFFERENTIAL BACK PRESSURE VALVE NEEDLE VALVE BALANCING VALVE FLOW METERING FITTING (UNDER 75mm) FLOW METERING FITTING (75mm AND LARGER) CONTROL VALVE - ELECTRIC CONTROL VALVE - PNEUMATIC THREE-WAY CONTROL VALVE - ELECTRIC THREE-WAY CONTROL VALVE - PNEUMATIC MOTORIZED VALVE PUMP CONTROL VALVE GLOBE CONTROL VALVE - PNEUMATIC BUTTERFLY CONTROL VALVE - PNEUMATIC PNEUMATIC ACTUATOR ELECTRIC ACTUATOR ELECTRIC MOTOR ELECTRIC SOLENOID HEAT TRACING</div>	<div>ELBOW TURNED TOWARD ELBOW TURNED AWAY TEE TURNED AWAY TEE TURNED TOWARD CONCENTRIC REDUCER ECCENTRIC REDUCER PIPE CAP THREADED PIPE CAP WELDED PLUG FLEXIBLE CONNECTION UNION FLANGE CONNECTION BLIND FLANGE ORIFICE FLANGES QUICK CONNECTION FITTING PIPE ANCHOR PIPE LINE GUIDE PIPE LINE TRAPEZE HANGER PIPE LINE EXPANSION JOINT EXPANSION LOOP Y-TYPE STRAINER BASKET TYPE STRAINER DUPELEX BASKET TYPE STRAINER IN-LINE SIGHT GLASS GAUGE GLASS DRIP PAN ELBOW THERMOMETER-STEM TYPE PG OR PG PRESSURE GAUGE M METER WM WATER METER GM N.GAS METER CAM COMPRESSED AIR METER PUMP F&amp;T STEAM TRAP - FLOAT &amp; THERMOSTATIC B STEAM TRAP - INVERTED BUCKET T STEAM TRAP - THERMOSTATIC TH STEAM TRAP - THERMODYNAMIC ADT AUTOMATIC DRAIN TRAP - COMPRESSED AIR AE AIR ELIMINATOR WAHAM WATER HAMMER ARRESTOR HYDRAULIC SEPARETOR AAV AUTOMATIC AIR VENT</div> <div>NOTE: THIS LEGEND IS THE STANDARD FORM SHEET. NOT ALL LEGEND ITEMS MAY BE ASSOCIATED WITH THIS PROJECT.</div>

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Metro Hall Toronto, ON  
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**Arcadis Professional Services (Canada) Inc**

ISSUES		
No.	DESCRIPTION	DATE
A	ISSUED FOR PERMIT 100%	2025-07-31
B	ISSUED FOR TENDER	2025-09-02

## CONSULTANTS

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PROJECT TITLE  
50 RICHMOND ST. E.  
RENOVATIONS

PROJECT ADDRESS

50 RICHMOND STREET EAST  
TORONTO, ON

PROJECT NO:  
122260

DRAWN BY  
C. SU

CHECKED BY:  
E. PANAHI

PROJECT MGR  
F. BOLOURIAN

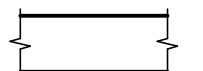
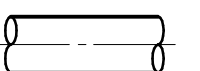


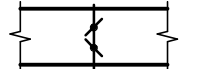
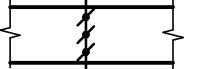


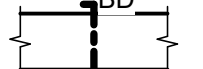





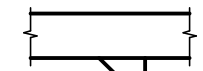

















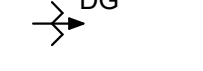
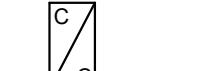

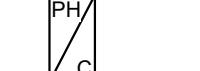

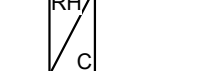



SHEET TITLE  
MECHANICAL LEGEND  
AND SYMBOLS 1 OF 2

SHEET NUMBER

M0002

ISSUE

B

HEATING, VENTILATION AND AIR CONDITIONING		EQUIPMENT IDENTIFICATION		CONTROLS POINT FUNCTION ABBREVIATION																																																																																																																																																																					
	DUCTWORK (RECTANGULAR)		DUCTWORK (ROUND)	<div><div>ITEM SEE ABBREVIATION FOR DETAILS</div><div>UNIT COUNTER XX-XXX</div></div>		<table><thead><tr><th colspan="2">FIRST LETTER</th><th colspan="2">SECOND LETTER</th><th colspan="2">THIRD LETTER</th><th colspan="2">FOURTH LETTER</th></tr></thead><tbody><tr><td>A</td><td>AIR</td><td>A</td><td>H-O-A STATUS</td><td>H</td><td>HIGH</td><td>H</td><td>HIGH</td></tr><tr><td>C</td><td>COMPRESSED GAD</td><td>C</td><td>CLOSE</td><td>L</td><td>LOW</td><td>L</td><td>LOW</td></tr><tr><td>D</td><td>DAMPER</td><td>E</td><td>VOLTAGE</td><td>X</td><td>TRASMITTER</td><td></td><td></td></tr><tr><td>E</td><td>EQUIPMENT</td><td>F</td><td>FIRE (ALARM) SMOKE</td><td>Z</td><td>INDICATING TRANSMITTER</td><td></td><td></td></tr><tr><td>G</td><td>NATURAL GAS</td><td>FL</td><td>FLOW</td><td>D</td><td>DIFFERENTIAL</td><td></td><td></td></tr><tr><td>L</td><td>LIQUID</td><td>H</td><td>HUMIDITY</td><td></td><td></td><td></td><td></td></tr><tr><td>S</td><td>STEAM</td><td>I</td><td>CURRENT</td><td></td><td></td><td></td><td></td></tr><tr><td>V</td><td>VALVE</td><td>L</td><td>LEVEL</td><td></td><td></td><td></td><td></td></tr><tr><td>M</td><td>MISCELLANEOUS</td><td>O</td><td>OPEN</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>OL</td><td>OVERLOAD</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>OR</td><td>OVERRIDE</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>P</td><td>PRESSURE</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>SS</td><td>START / STOP</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>ST</td><td>STATUS</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>T</td><td>TEMPERATURE</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>V</td><td>VELOCITY / SPEED</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>WT</td><td>WINDING TEMPERATURE</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>X</td><td>POSITION</td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>Y</td><td>SERIAL COMM'S</td><td></td><td></td><td></td><td></td></tr></tbody></table>				FIRST LETTER		SECOND LETTER		THIRD LETTER		FOURTH LETTER		A	AIR	A	H-O-A STATUS	H	HIGH	H	HIGH	C	COMPRESSED GAD	C	CLOSE	L	LOW	L	LOW	D	DAMPER	E	VOLTAGE	X	TRASMITTER			E	EQUIPMENT	F	FIRE (ALARM) SMOKE	Z	INDICATING TRANSMITTER			G	NATURAL GAS	FL	FLOW	D	DIFFERENTIAL			L	LIQUID	H	HUMIDITY					S	STEAM	I	CURRENT					V	VALVE	L	LEVEL					M	MISCELLANEOUS	O	OPEN							OL	OVERLOAD							OR	OVERRIDE							P	PRESSURE							SS	START / STOP							ST	STATUS							T	TEMPERATURE							V	VELOCITY / SPEED							WT	WINDING TEMPERATURE							X	POSITION							Y	SERIAL COMM'S				
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	MOTORIZED DAMPER		ACOUSTIC DUCT INSULATION - INTERNAL	<div><div>AC</div><div>AIR CONDITIONING UNIT</div></div>																																																																																																																																																																					
	OPPOSED BLADE DAMPER		PARALLEL BLADE DAMPER	<div><div>ACCU</div><div>AIR COOLED CONDENSING UNIT</div></div>		<div><div>AHU</div><div>AIR HANDELING UNIT</div></div>																																																																																																																																																																			
	FIRE DAMPER		SMOKE DAMPER	<div><div>EF</div><div>EXHAUST FAN</div></div>		<div><div>P</div><div>PUMP</div></div>																																																																																																																																																																			
	VOLUME DAMPER/ BALANCING DAMPER		COMBINATION FIRE & SMOKE DAMPER	<div><div>SP</div><div>SEWAGE PUMP</div></div>																																																																																																																																																																					
	VOLUME EXTRACTOR		REDUCER	ABBREVIATIONS																																																																																																																																																																					
	TURNING VANES		ELBOW	AC - AIR CONDITIONING UNIT		FSD - FIRE SMOKE DAMPER																																																																																																																																																																			
	TAP-IN FITTING		CONICAL TEE FITTING	ACCU - AIR COOLED CONDENSING UNITS		FTS - FLOAT SWITCH																																																																																																																																																																			
	WYE-TEE		SPLITTER DAMPER	AD - COMPRESSED AIR DRYER		F.U. - FIXTURE UNITS																																																																																																																																																																			
	ROUND DUCT TURNING TOWARD		ROUND DUCT TURNING AWAY	A.F.F. - ABOVE FINISHED FLOOR		GEN E/A - GENERAL EXHAUST AIR																																																																																																																																																																			
	SUPPLY DUCT TURNING TOWARD		RETURN DUCT TURNING TOWARD	AHU - AIR HANDLING UNIT		GI - GREASE INTERCEPTOR																																																																																																																																																																			
	SUPPLY DUCT TURNING AWAY		RETURN DUCT TURNING AWAY	AHS - COMPRESSED AIR HOSE STATION		GM - GAS METER																																																																																																																																																																			
	ACOUSTIC DUCT INSULATION INTERNAL - SINGLE LINE		SILENCER	AR - AIR RECEIVER		GV - GRAVITY VENT																																																																																																																																																																			
	FLEXIBLE DUCTWORK		FLEXIBLE CONNECTION	ARS - COMPRESSED AIR REGULATING STATION		H - HUMIDIFIER																																																																																																																																																																			
	VAV BOX WITH ATTENUATOR		VAV BOX WITH RHC & ATTENUATOR	B - BOILER		HB - HOSE BIB																																																																																																																																																																			
	VAV BOX		CONSTANT VOLUME BOX	BS - BOILER (STEAM)		HC - HEATING COIL																																																																																																																																																																			
	SUPPLY AIR DIFFUSER (SEE SPECIFICATION FOR TYPE)		RETURN AIR GRILLE (SEE SPECIFICATION FOR TYPE)	BW - BOILER (HOT WATER)		HD - HUB DRAIN																																																																																																																																																																			
	DOOR GRILLE		COOLING COIL	BAS - BUILDING AUTOMATION SYSTEM		HRV - HEAT RECOVERY VENTILATOR																																																																																																																																																																			
	FAN		PREHEAT COIL	BB - BASEBOARD HEATER		HT - DOMESTIC HOT WATER HEATER																																																																																																																																																																			
	HUMIDIFIER		REHEAT COIL	BFP - BACKFLOW PREVENTER		HTT - HEAT TRACING																																																																																																																																																																			
	AIR FLOW MEASURING STATION			BMS - BUILDING MANAGEMENT SYSTEM		HST - HOISTING EQUIPMENT																																																																																																																																																																			
				B.O.D.EL - BOTTOM OF DUCT ELEVATION		HW - HOT WATER (DOMESTIC)																																																																																																																																																																			
				B.O.P.EL - BOTTOM OF PIPE ELEVATION		HWR - HOT WATER RETURN																																																																																																																																																																			
				C - COMPRESSOR		HWT - HOT WATER TANK																																																																																																																																																																			
				CC - COOLING COIL		HX - HEAT EXCHANGER																																																																																																																																																																			
				CF - DESTRATIFICATION FAN		IH - INFRARED HEATER																																																																																																																																																																			
				CFRD - CONTROLLED FLOW ROOF DRAIN		INV. EL. - INVERT ELEVATION																																																																																																																																																																			
				CH - CHILLER		JB - JUNCTION BOX																																																																																																																																																																			
				CL.EL - CENTER LINE OF PIPE ELEVATION		JS - JANITOR SINK																																																																																																																																																																			
				CO - CLEAN OUT		KS - KITCHEN SINK																																																																																																																																																																			
				CP - CONTROL PANEL		L - LOUVRE																																																																																																																																																																			
				CR - CRANE		LAT - LEAVING AIR TEMPERATURE																																																																																																																																																																			
				CRAC - COMPUTER ROOM AC UNIT		LAV - LAVATORY																																																																																																																																																																			
				CT - COOLING TOWER		LS - LEVEL SWITCH																																																																																																																																																																			
				CTE - CONNECT TO EXISTING		LWT - LEAVING WATER TEMPERATURE																																																																																																																																																																			
				CU - CONDENSING UNIT		M - METER																																																																																																																																																																			
				CUH - CABINET UNIT HEATER		MD - MOTORIZED DAMPER																																																																																																																																																																			
				CV - CONTROL VALVE		MDA - MOTORIZED DAMPER ACTUATOR																																																																																																																																																																			
				CW - COLD WATER (DOMESTIC)		MS - MOISTURE SEPARATOR																																																																																																																																																																			
				C/W - COMPLETE WITH		MUA - MAKE-UP AIR UNIT																																																																																																																																																																			
				DH - DOOR HEATER		N.C. - NORMALLY CLOSED																																																																																																																																																																			
				DTH - DUCT HEATER		NFGH - NON-FREEZE GROUND HYDRANT																																																																																																																																																																			
				DP - DIAPHRAGM PUMP		NFHB - NON-FREEZE HOSE BIBB																																																																																																																																																																			
				DSN - DOWNSPOUT NOZZLE		NFRH - NON-FREEZE ROOF HYDRANT																																																																																																																																																																			
				E/A - EXHAUST AIR		NFWH - NON-FREEZE WALL HYDRANT																																																																																																																																																																			
				EAO - EXHAUST AIR OUTLET		N.I.C. - NOT IN CONTRACT																																																																																																																																																																			
				EAT - ENTERING AIR TEMPERATURE		N.O. - NORMALLY OPENED																																																																																																																																																																			
				EEB - ELECTRIC BASEBOARD HEATER		O/A - OUTSIDE AIR																																																																																																																																																																			
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				EJ - EXPANSION JOINT		OI - OIL INTERCEPTOR																																																																																																																																																																			
				EPP - EXCESS PRESSURE PUMP		P - PUMP																																																																																																																																																																			
				ESP - EXTERNAL STATIC PRESSURE		PBS - PUSH BUTTON STATION																																																																																																																																																																			
				ESS - EMERGENCY SHOWER & EYE WASH STATION		PHC - PREHEAT COIL																																																																																																																																																																			
				ET - EXPANSION TANK		PP - PISTON PUMP																																																																																																																																																																			
				EUH - ELECTRIC UNIT HEATER		PRV - PRESSURE REDUCING VALVE /PRESSURE REGULATING VALVE																																																																																																																																																																			
				EW - EMERGENCY EYEWASH STATION		PW - POWER WASHER																																																																																																																																																																			
				EWT - ENTERING WATER TEMPERATURE		R/A - RETURN AIR																																																																																																																																																																			
				FA - FRESH AIR		RC - REFRIGERATION COMPRESSOR OR CHILLER																																																																																																																																																																			
				FC - FAN COIL UNIT		RF - RETURN AIR FAN																																																																																																																																																																			
				FD - FLOOR DRAIN		RD - ROOF DRAIN																																																																																																																																																																			
				FFD - FUNNEL FLOOR DRAIN		RHC - REHEAT COIL																																																																																																																																																																			
				FFH - FORCED AIR HEATER / FORCED FLOW HEATER		RP - RADIANT PANEL																																																																																																																																																																			
				F.F.L. - FINISHED FLOOR LEVEL		RTU - ROOFTOP UNIT																																																																																																																																																																			
				FE - FIRE EXTINGUISHER		RV - RELIEF VALVE																																																																																																																																																																			
				FEC - FIRE EXTINGUISHER CABINET		RWL - RAINWATER LEADER																																																																																																																																																																			
				FHC - FIRE HOSE CABINET		S - SILENCER																																																																																																																																																																			
				FHR - FIRE HOSE REEL		S/A - SUPPLY AIR																																																																																																																																																																			
				FHV - FIRE HOSE VALVE		SAN E/A - SANITARY EXHAUST AIR																																																																																																																																																																			
				FHVC - FIRE HOSE VALVE CABINET		SDM - SMOKE DAMPER																																																																																																																																																																			
				FLX - FLEX. CONNECTOR		SDT - SMOKE DETECTOR																																																																																																																																																																			
				FM - FLUID METER		SF - SUPPLY FAN																																																																																																																																																																			
				F.M.S. - FLOW MEASURING STATION		SP - SUMP PUMP / SEWAGE PUMP																																																																																																																																																																			
				FP - FUEL PUMP		SPW - STEAM POWER WASHER																																																																																																																																																																			
				FS - FLOW SWITCH		STP - STANDPIPE																																																																																																																																																																			

XX - YYYY

POINT FUNCTION ABBREVIATION

POINT TYPE

AI: ANALOG INPUT

AO: ANALOG OUTPUT

DI: DIGITAL INPUT

DO: DIGITAL OUTPUT

HW: HARDWIRED

SC: SERIAL COMMUNICATION

DO - ESS

START / STOP

EQUIPMENT












DIGITAL OUTPUT

DO - ESS

START / STOP

EQUIPMENT

DIGITAL OUTPUT

ABBREVIATIONS		CONTROLS - GENERAL SYMBOLS	
SVC	- SPRINKLER VALVE CABINET		DIFFERENTIAL PRESSURE SENSOR
T	- TANK		DEW POINT SENSOR & TRANSMITTER
TAD	- TRANSFER AIR DUCT		THERMOSTAT
TD	- TRENCH DRAIN		HUMIDISTAT
TIH	- TANK IMMERSION HEATER		LEVEL SWITCH
T.O.D.	- TOP OF DUCT		TEMPERATURE SENSOR & TRANSMITTER
T.O.P.	- TOP OF PIPE		PRESSURE SENSOR / TRANSMITTER / SWITCH
TP	- TRAP PRIMER		HUMITIDY SENSOR & TRANSMITTER
TSP	- TRAP SEAL PRIMER ASSEMBLY		FLOW SENSOR & TRANSMITTER
TU	- TERMINAL UNIT		LEVEL SENSOR & TRANSMITTER
TUF	- TERMINAL UNIT - FAN		ANALYTICAL SENSOR OR TRANSMITTER
TW	- TRACER WIRE	XX: CO2 = CARBONE DIOXIDE	
TWB	- TRACER WIRE JUNCTION BOX	CO = CARBON MONOXIDE	
U.C.	- UNDER CUT	NOx= NITROUS OXIDE	
UH	- UNIT HEATER	O2 = OXYGEN	
U/S	- UNDER SIDE	H2= HYDROGEN	
V	- VENT	AM = AMMONIA	
VAV	- VARIABLE AIR VOLUME BOX	PH = PH	
VFD	- VARIABLE FREQUENCY DRIVE	C = CONDUCTIVITY	
VH	- VENTILATOR HOOD		
VP	- VACUUM PUMP		
VU	- VENTILATING UNIT		
WF	- WALL FIN RADIATION		
WJB	- WALL JIB		
WM	- WATER METER		
WGD	- WASTE GLYCOL DRUM		
WOD	- WASTE OIL DRUM		

LENGTH

No OF SLOTS  
A=1/2" SLOT  
B=3/4" SLOT

PATTERN  
1=1 WAY  
2=2 WAY  
D=DOWNBLAST

AIR QUANTITY  
[L/s]

PLENUM SIZE

3000-3A-D-250-200X150

FINNED TUBE LINEAR CONVECTORS

TYPE

FINNED LENGTH

ENCLOSURE HEIGHT

KW

A-900-600-0.9

 AC AIR CONDITIONING UNIT

 ACCU AIR COOLED CONDENSING UNIT

 AHU AIR HANDLING UNIT

 EF EXHAUST FAN

 P PUMP

 SP SEWAGE PUMP

ABBREVIATIONS

AC

- AIR CONDITIONING UNIT

ACCU

- AIR COOLED CONDENSING UNITS

AD

- COMPRESSED AIR DRYER

A.F.F.

- ABOVE FINISHED FLOOR

AHU

- AIR HANDLING UNIT

AHS

- COMPRESSED AIR HOSE STATION

AR

- AIR RECEIVER

ARS

- COMPRESSED AIR REGULATING STATION

B

- BOILER

BS

- BOILER (STEAM)

BW

- BOILER (HOT WATER)

BAS

- BUILDING AUTOMATION SYSTEM

BB

- BASEBOARD HEATER

BFP

- BACKFLOW PREVENTER

BMS

- BUILDING MANAGEMENT SYSTEM

B.O.D.EL

- BOTTOM OF DUCT ELEVATION

B.O.P.EL

- BOTTOM OF PIPE ELEVATION

C

- COMPRESSOR

CC

- COOLING COIL

CF

- DESTRATIFICATION FAN

CFRD

- CONTROLLED FLOW ROOF DRAIN

CH

- CHILLER

CL EL

- CENTER LINE OF PIPE ELEVATION

CO

- CLEAN OUT

CP

- CONTROL PANEL

CR

- CRANE

CRAC

- COMPUTER ROOM AC UNIT

CT

- COOLING TOWER

CTE

- CONNECT TO EXISTING

CU

- CONDENSING UNIT

CUH

- CABINET UNIT HEATER

CV

- CONTROL VALVE

CW

- COLD WATER (DOMESTIC)

C/W

- COMPLETE WITH

DH

- DOOR HEATER

DTH

- DUCT HEATER

DP

- DIAPHRAGM PUMP

DSN

- DOWNSPOUT NOZZLE

E/A

- EXHAUST AIR

EAO

- EXHAUST AIR OUTLET

EAT

- ENTERING AIR TEMPERATURE

EEB

- ELECTRIC BASEBOARD HEATER

ECU

- ECOLOGY UNIT

EDTH

- ELECTRIC DUCT HEATER

EF

- EXHAUST FAN

EJ

- EXPANSION JOINT

EPP

- EXCESS PRESSURE PUMP

ESP

- EXTERNAL STATIC PRESSURE

ESS

- EMERGENCY SHOWER & EYE WASH STATION

ET

- EXPANSION TANK

EUH

- ELECTRIC UNIT HEATER

EW

- EMERGENCY EYEWASH STATION

EWT

- ENTERING WATER TEMPERATURE

FA

- FRESH AIR

FC

- FAN COIL UNIT

FD

- FLOOR DRAIN

FFD

- FUNNEL FLOOR DRAIN

FFH

- FORCED AIR HEATER / FORCED FLOW HEATER

F.F.L.

- FINISHED FLOOR LEVEL

FE

- FIRE EXTINGUISHER

FEC

- FIRE EXTINGUISHER CABINET

FHC

- FIRE HOSE CABINET

FHR

- FIRE HOSE REEL

FHV

- FIRE HOSE VALVE

FHVC

- FIRE HOSE VALVE CABINET

FLX

- FLEX. CONNECTOR

FM

- FLUID METER

F.M.S.

- FLOW MEASURING STATION

FP

- FUEL PUMP

FS

- FLOW SWITCH

FSD

- FIRE SMOKE DAMPER

FTS

- FLOAT SWITCH

F.U.

- FIXTURE UNITS

GEN E/A

- GENERAL EXHAUST AIR

GI

- GREASE INTERCEPTOR

GM

- GAS METER

GV

- GRAVITY VENT

H

- HUMIDIFIER

HB

- HOSE BIB

HC

- HEATING COIL

HD

- HUB DRAIN

HRV

- HEAT RECOVERY VENTILATOR

HT

- DOMESTIC HOT WATER HEATER

HTT

- HEAT TRACING

HST

- HOISTING EQUIPMENT

HW

- HOT WATER (DOMESTIC)

HWR

- HOT WATER RETURN

HWT

- HOT WATER TANK

HX

- HEAT EXCHANGER

IH

- INFRARED HEATER

INV. EL.

- INVERT ELEVATION

JB

- JUNCTION BOX

JS

- JANITOR SINK

KS

- KITCHEN SINK

L

- LOUVRE

LAT

- LEAVING AIR TEMPERATURE

LAV

- LAVATORY

LS

- LEVEL SWITCH

LWT

- LEAVING WATER TEMPERATURE

M

- METER

MD

- MOTORIZED DAMPER

MDA

- MOTORIZED DAMPER ACTUATOR

MS

- MOISTURE SEPARATOR

MUA

- MAKE-UP AIR UNIT

N.C.

- NORMALLY CLOSED

NFGH

- NON-FREEZE GROUND HYDRANT

NFHB

- NON-FREEZE HOSE BIBB

NFRH

- NON-FREEZE ROOF HYDRANT

NFWH

- NON-FREEZE WALL HYDRANT

N.I.C.

- NOT IN CONTRACT

N.O.

- NORMALLY OPENED

O/A

- OUTSIDE AIR

O.B.B.

- OPPOSED BLADE BALANCING

O.E.D.

- OPEN ENDED DUCT

OF

- OVERFILL ALARM

OI

- OIL INTERCEPTOR

P

- PUMP

PBS

- PUSH BUTTON STATION

PHC

- PREHEAT COIL

PP

- PISTON PUMP

PRV

- PRESSURE REDUCING VALVE /PRESSURE REGULATING VALVE

PW

- POWER WASHER

R/A

- RETURN AIR

RC

- REFRIGERATION COMPRESSOR OR CHILLER

RF

- RETURN AIR FAN

RD

- ROOF DRAIN

RHC

- REHEAT COIL

RP

- RADIANT PANEL

RTU

- ROOFTOP UNIT

RV

- RELIEF VALVE

RWL

- RAINWATER LEADER

S

- SILENCER

S/A

- SUPPLY AIR

SAN E/A

- SANITARY EXHAUST AIR

SDM

- SMOKE DAMPER

SDT

- SMOKE DETECTOR

SF

- SUPPLY FAN

SP

- SUMP PUMP / SEWAGE PUMP

SPW

- STEAM POWER WASHER

STP

- STANDPIPE

FIRST LETTER

A

AIR

C

COMPRESSED GAD

D

DAMPER

E

EQUIPMENT

G

NATURAL GAS

L

LIQUID

S

STEAM

V

VALVE

M

MISCELLANEOUS

SECOND LETTER

A

H-O-A STATUS

C

CLOSE

E

VOLTAGE

F

FIRE (ALARM) SMOKE

FL

FLOW

H

HUMIDITY

I

CURRENT

L

LEVEL

O

OPEN

OL

OVERLOAD

OR

OVERRIDE

P

PRESSURE

SS

START / STOP

ST

STATUS

T

TEMPERATURE

V

VELOCITY / SPEED

WT

WINDING TEMPERATURE

X

POSITION

Y

SERIAL COMM'S

THIRD LETTER

H

HIGH

L

LOW

X

TRASMITTER

Z

INDICATING TRANSMITTER

D

DIFFERENTIAL

FOURTH LETTER

H

HIGH

L

LOW

BMS POINT

NOTE: IF AN INSTRUMENT IS NOT DESIGNATED AS A TRANSMITTER "X" OR AN INDICATING TRANSMITTER "Z", IT IS A SENSOR OR SWITCH, DEPENDING ON POINT TYPE.

XX - YYYY

POINT FUNCTION ABBREVIATION

POINT TYPE

AI: ANALOG INPUT

AO: ANALOG OUTPUT

DI: DIGITAL INPUT

DO: DIGITAL OUTPUT

HW: HARDWIRED

SC: SERIAL COMMUNICATION

e.g. DO - ESS

START / STOP EQUIPMENT

DIGITAL OUTPUT

ABBREVIATIONS

SVC

- SPRINKLER VALVE CABINET

T

- TANK

TAD

- TRANSFER AIR DUCT

TD

- TRENCH DRAIN

TIH

- TANK IMMERSION HEATER

T.O.D.

- TOP OF DUCT

T.O.P.

- TOP OF PIPE

TP

- TRAP PRIMER

TSP

- TRAP SEAL PRIMER ASSEMBLY

TU

- TERMINAL UNIT

TUF

- TERMINAL UNIT - FAN

TW

- TRACER WIRE

TWB

- TRACER WIRE JUNCTION BOX

U.C.

- UNDER CUT

UH

- UNIT HEATER

U/S

- UNDER SIDE

V

- VENT

VAV

- VARIABLE AIR VOLUME BOX

VFD

- VARIABLE FREQUENCY DRIVE

VH

- VENTILATOR HOOD

VP

- VACUUM PUMP

VU

- VENTILATING UNIT

WF

- WALL FIN RADIATION

WJB

- WALL JIB

WM

- WATER METER

WGD

- WASTE GLYCOL DRUM

WOD

- WASTE OIL DRUM

CONTROLS - GENERAL SYMBOLS

 DIFFERENTIAL PRESSURE SENSOR

 DEW POINT SENSOR & TRANSMITTER

 THERMOSTAT

 HUMIDISTAT

 LEVEL SWITCH

 TEMPERATURE SENSOR & TRANSMITTER

 PRESSURE SENSOR / TRANSMITTER / SWITCH

 HUMITIDY SENSOR & TRANSMITTER

 FLOW SENSOR & TRANSMITTER

 LEVEL SENSOR & TRANSMITTER

 ANALYTICAL SENSOR OR TRANSMITTER  
XX: CO2 = CARBONE DIOXIDE  
CO = CARBON MONOXIDE  
NOx = NITROUS OXIDE  
O2 = OXYGEN  
H2 = HYDROGEN  
AM = AMMONIA  
PH = PH  
C = CONDUCTIVITY

 VOLATILE ORGANIC COMPOUND SENSOR & TRANSMITTER

CLIENT

CITY OF TORONTO

Corporate Real Estate Management  
Project Management Office  
Metro Hall Toronto, ON  
M5V 3C6

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ISSUES

No.	DESCRIPTION	DATE
A.	ISSUED FOR PERMIT 100%	2025-07-31
B	ISSUED FOR TENDER	2025-09-02

CONSULTANTS

SEAL

PRIME CONSULTANT



100 - 175 Galaxy Blvd,  
Toronto, ON M9W 0C9, Canada  
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PROJECT TITLE

50 RICHMOND ST. E.  
RENOVATIONS

PROJECT ADDRESS

50 RICHMOND STREET EAST  
TORONTO, ON

PROJECT NO:  
122260

DRAWN BY:  
C. SU

CHECKED BY:  
E. PANAH

PROJECT MGR:  
F. BOLOURIAN

APPROVED BY:  
R. BARROSO

SHEET TITLE

MECHANICAL LEGEND  
AND SYMBOLS 2 OF 2

SHEET NUMBER

M0003

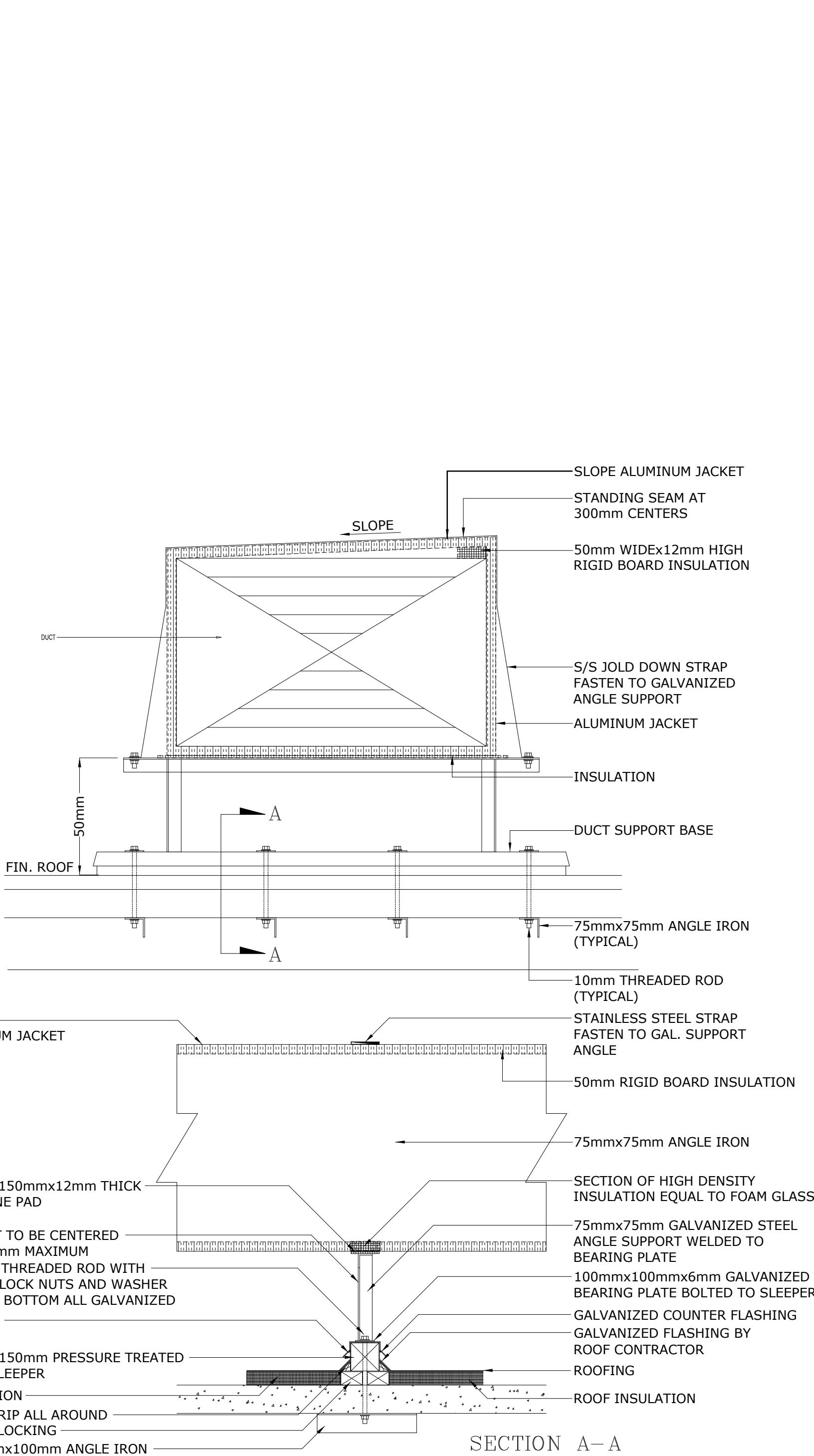
ISSUE

B

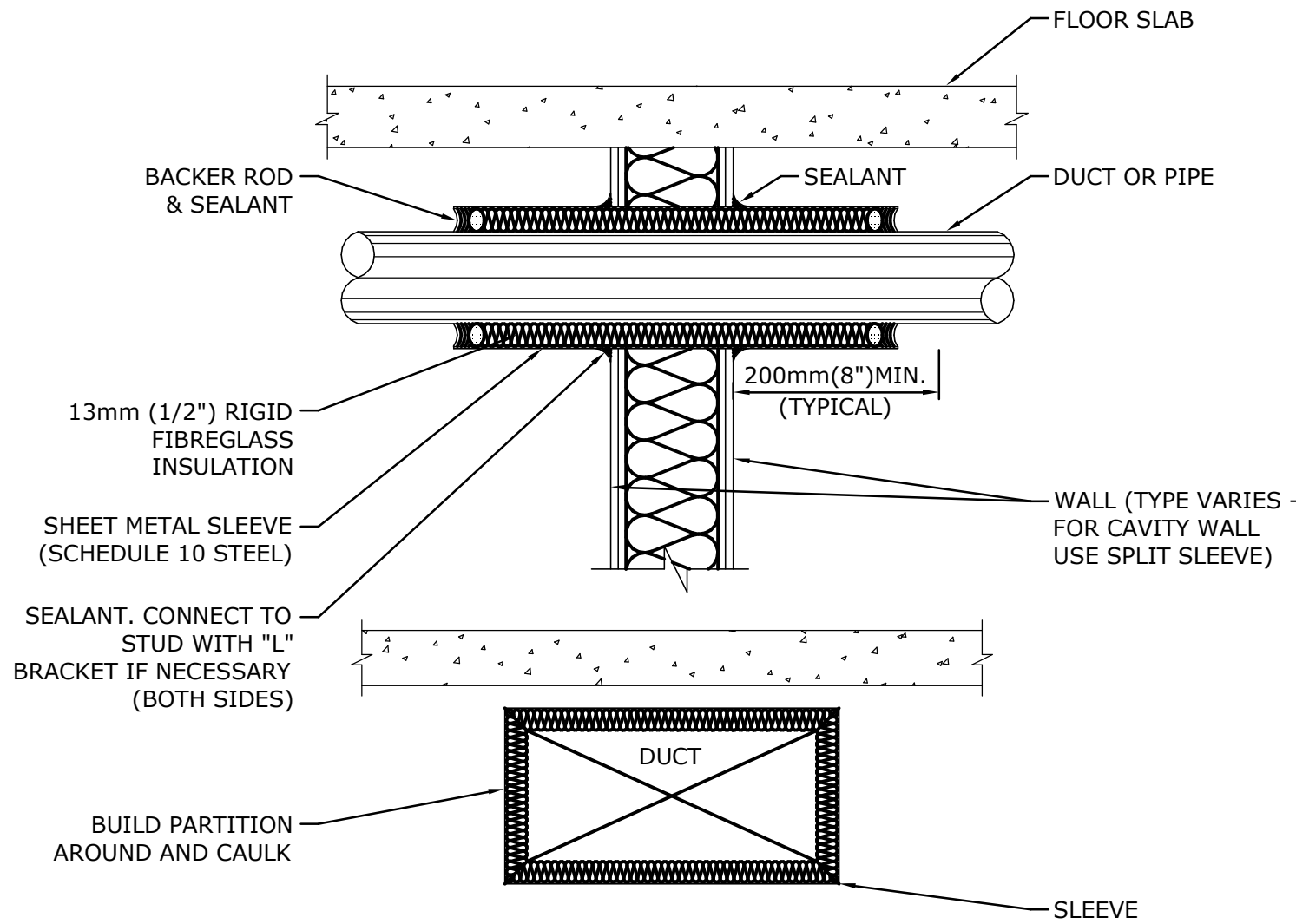
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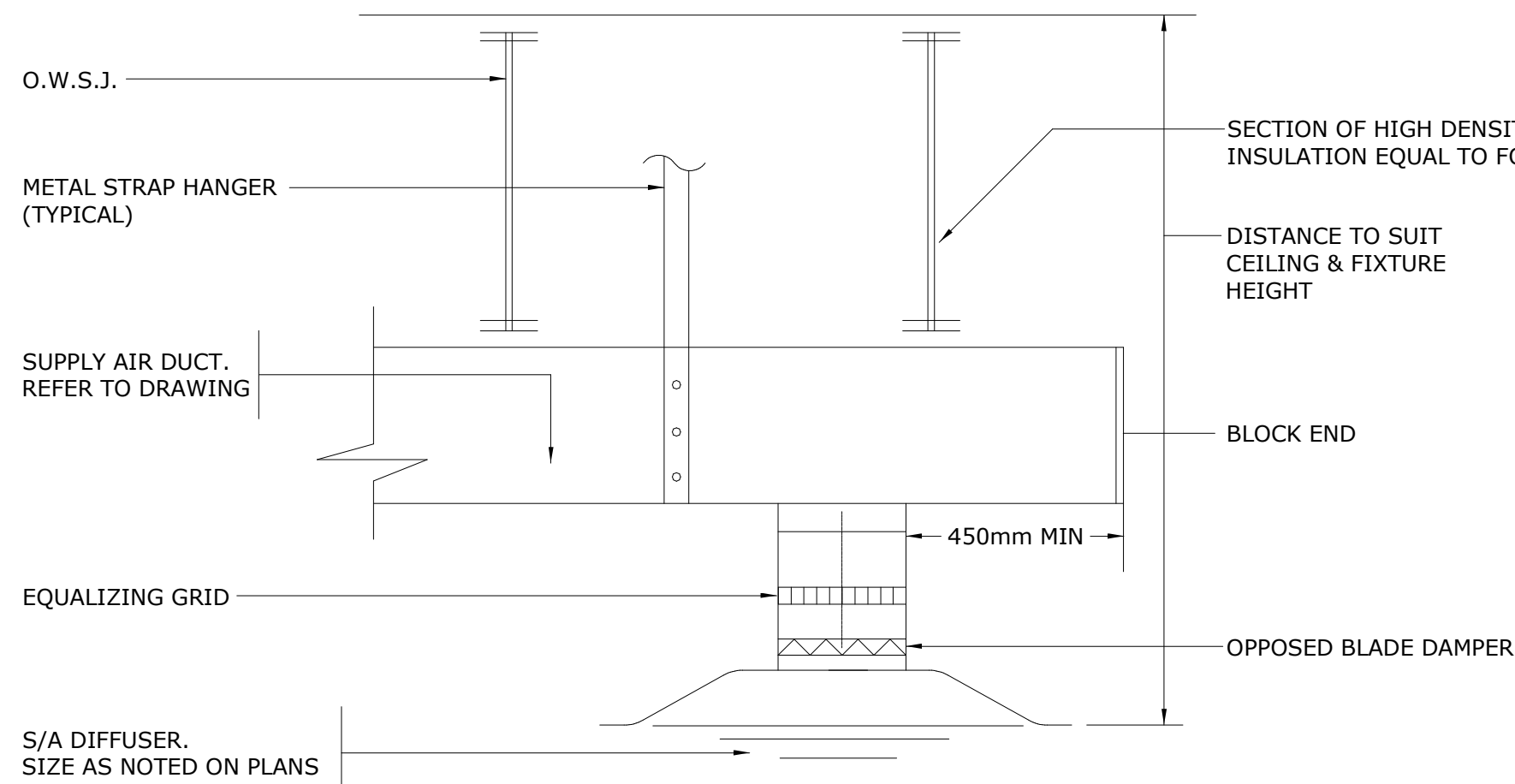
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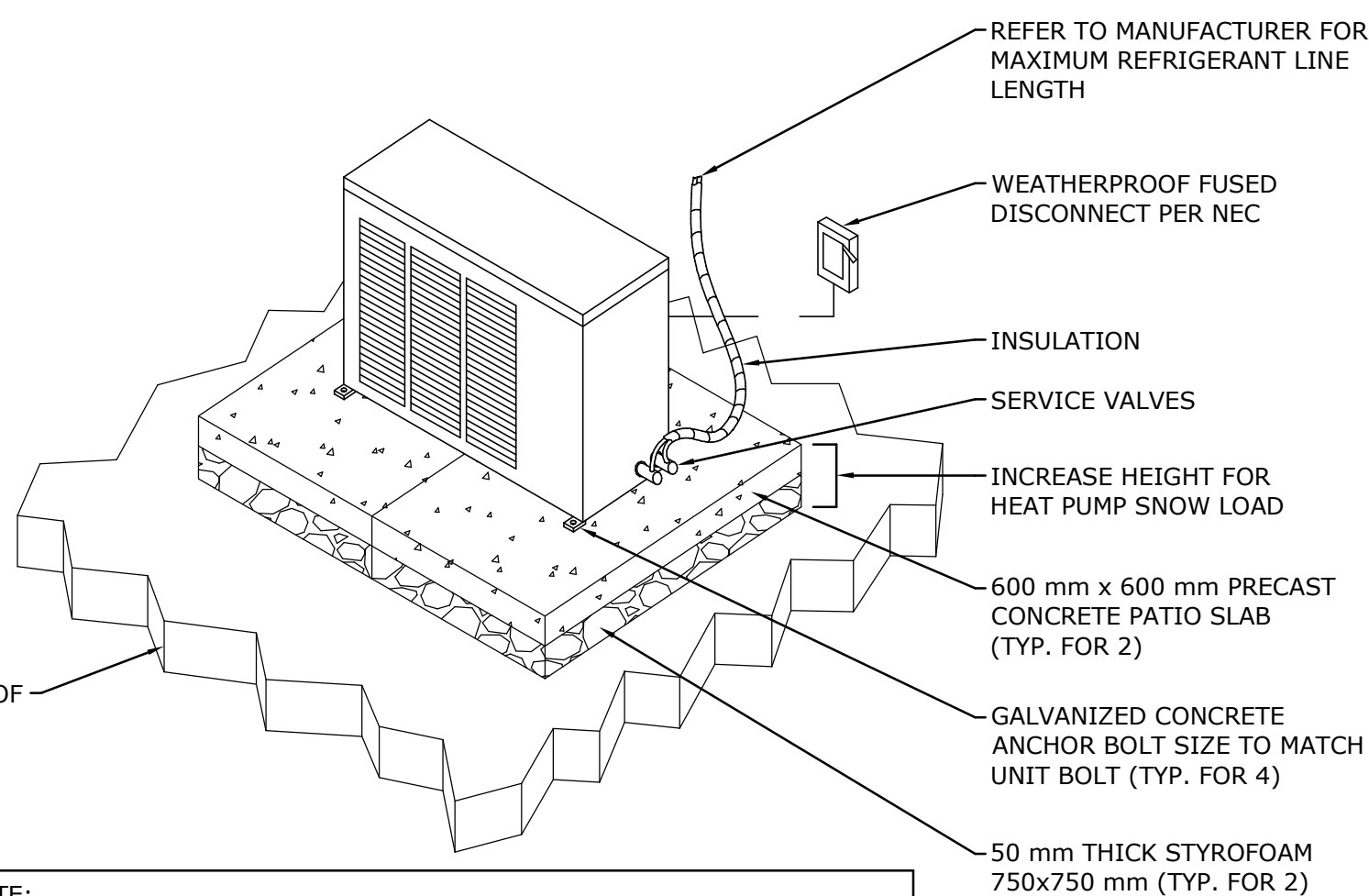
1 DUCT SUPPORT ON ROOF  
Scale: NTS



2 PIPE AND DUCT PENETRATION DETAIL  
Scale: NTS



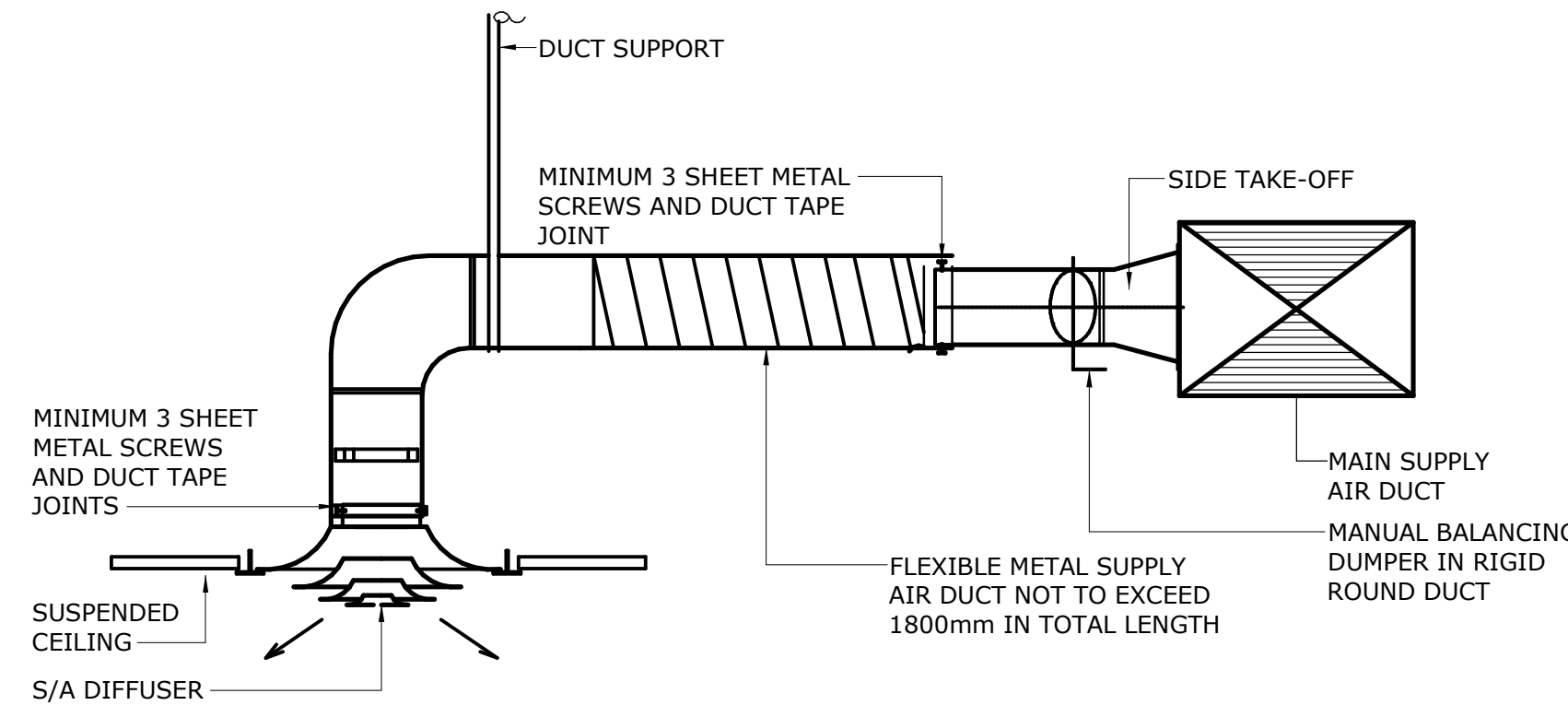
4 DUCT MOUNTED SUPPLY AIR DIFFUSER  
Scale: NTS



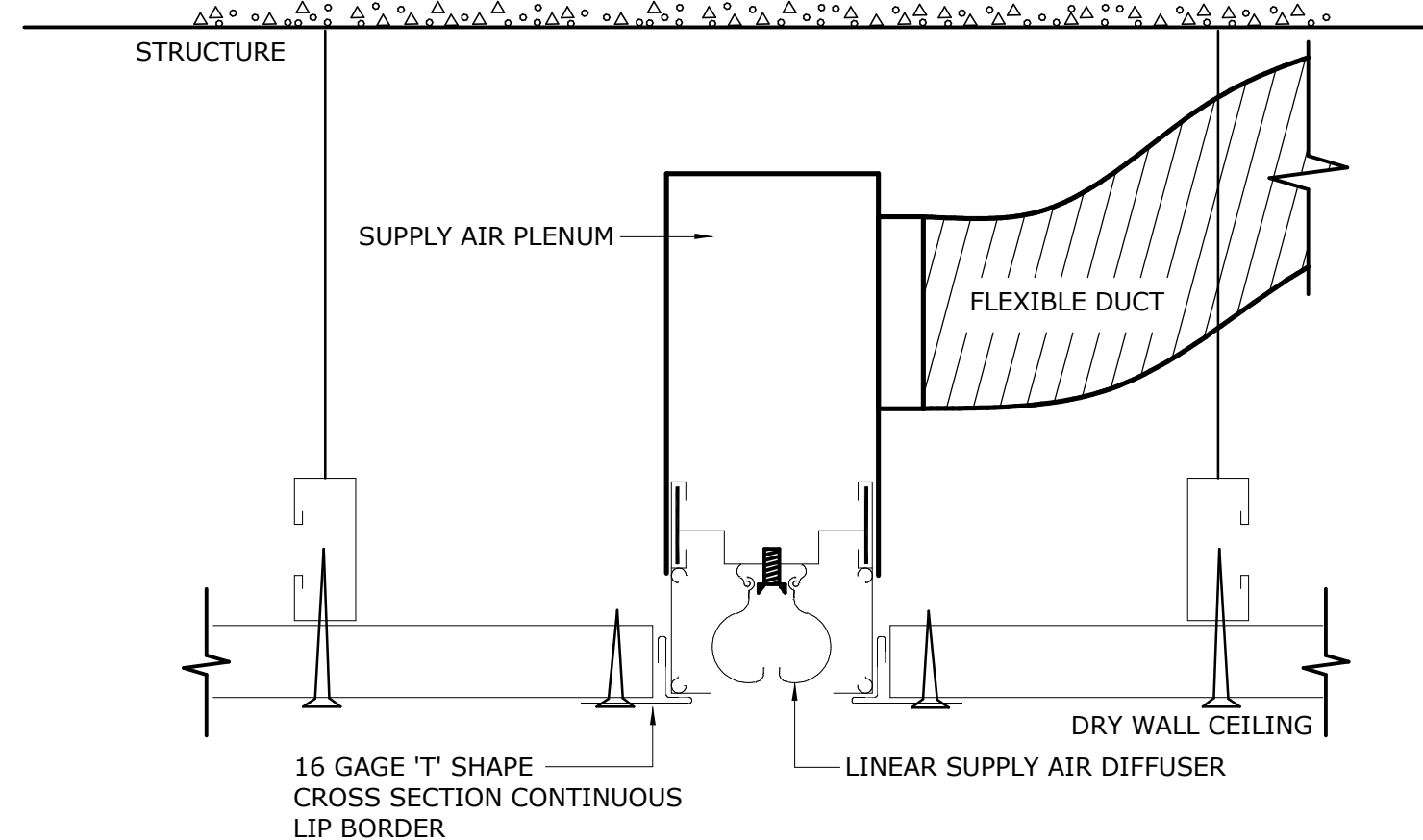
**NOTE:**

- 1.MINI SPLIT DX SYSTEM TO BE INSTALLED ACCORDING TO ALL APPLICABLE NATIONAL AND LOCAL ELECTRICAL, MECHANICAL AND BUILDING CODES.
- 2.REFER TO MANUFACTURER FOR MINIMUM INSTALLATION CLEARANCES.
- 3.INSTALL EQUIPMENT PER MANUFACTURER RECOMMENDATIONS.

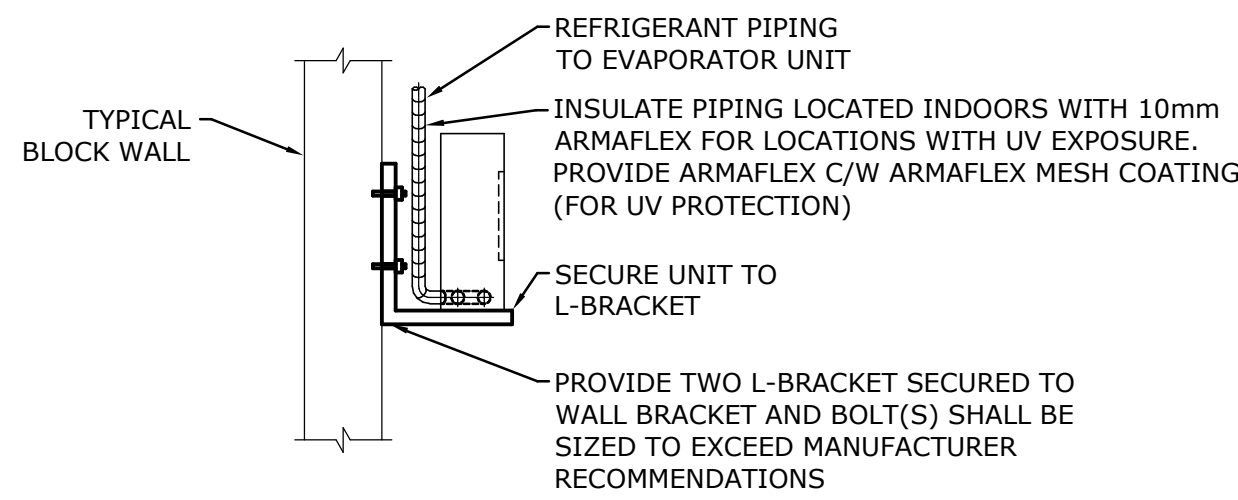
6 SPLIT WALL MOUNTED DX WITH CONDENSER  
Scale: NTS



3 SUPPLY AIR BRANCH WITH FLEX DUCT  
Scale: NTS

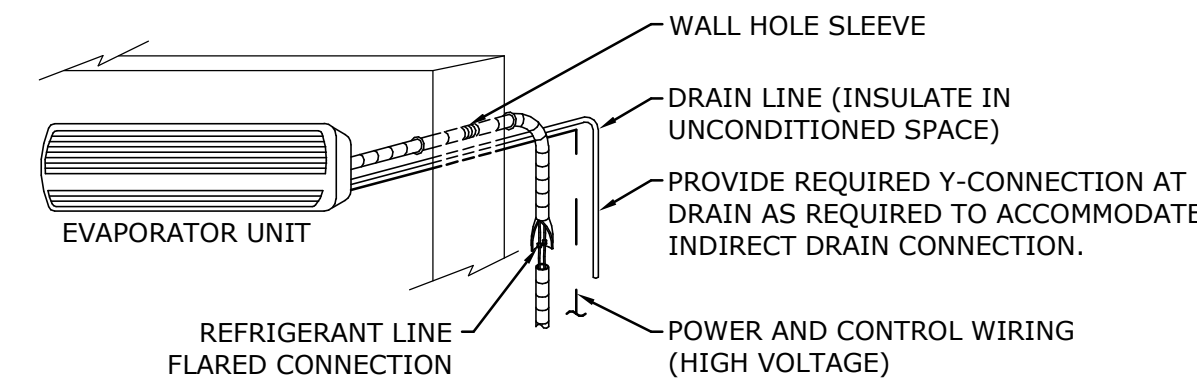


5 SLOT DIFFUSER WITH PLENUM BOX  
Scale: NTS



**NOTE:**

- 1.CONDENSER UNIT TO BE INSTALLED ACCORDING TO ALL APPLICABLE NATIONAL AND LOCAL ELECTRICAL, MECHANICAL AND BUILDING CODES.
- 2.REFER TO MANUFACTURER FOR MINIMUM INSTALLATION CLEARANCES.
- 3.INSTALL EQUIPMENT PER MANUFACTURER RECOMMENDATIONS.



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No.	DESCRIPTION	DATE
A	ISSUED FOR PERMIT 100%	2025-07-31
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SEAL

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PROJECT TITLE  
**50 RICHMOND ST. E.  
RENOVATIONS**

PROJECT ADDRESS

50 RICHMOND STREET EAST  
TORONTO, ON

PROJECT NO:

122260

DRAWN BY:

C. SU

CHECKED BY:

E. PANAH

PROJECT MGR:

F. BOLOURIAN

APPROVED BY:

R. BARROSO

SHEET TITLE

**MECHANICAL STANDARD  
DETAILS 1 OF 8**

SHEET NUMBER

**M0101**

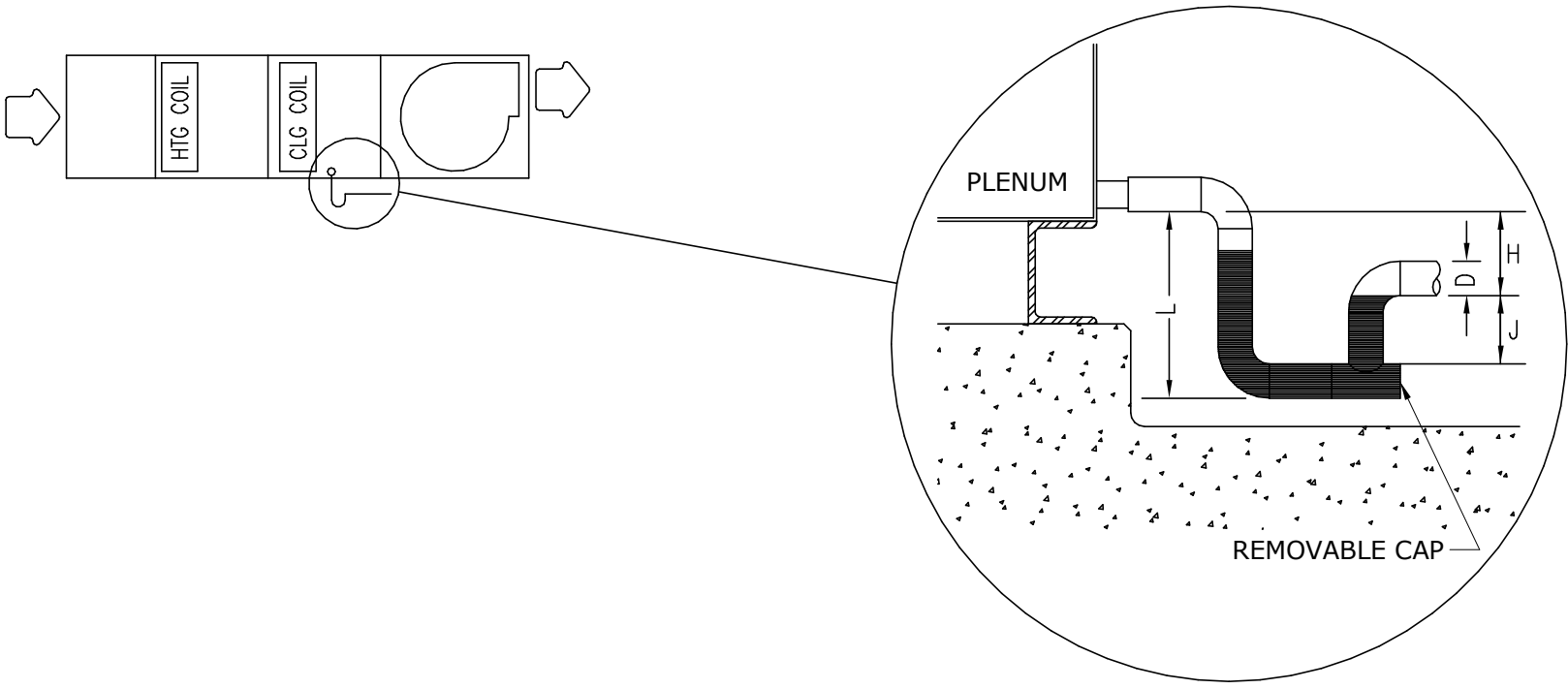
ISSUE

**B**

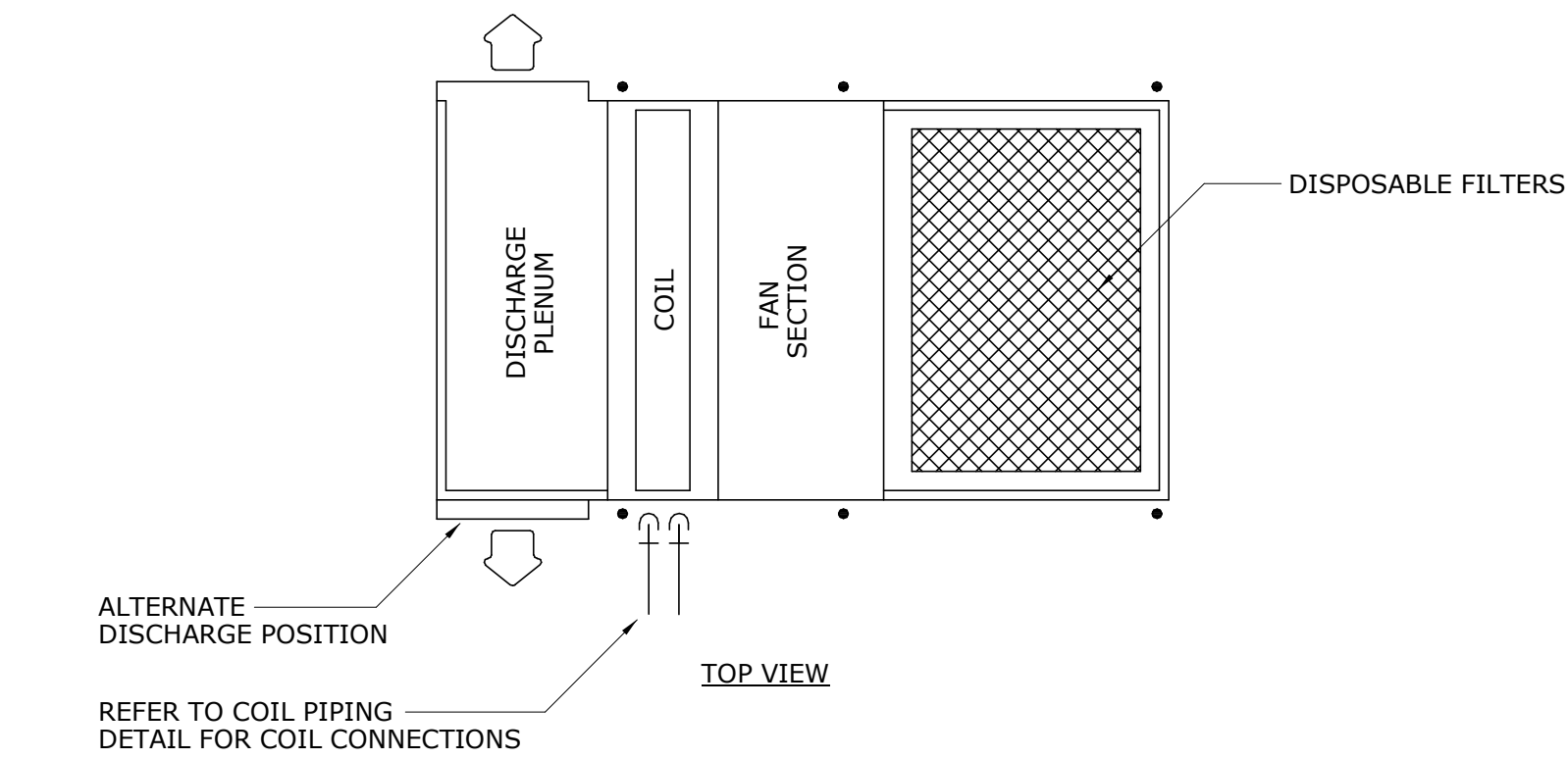
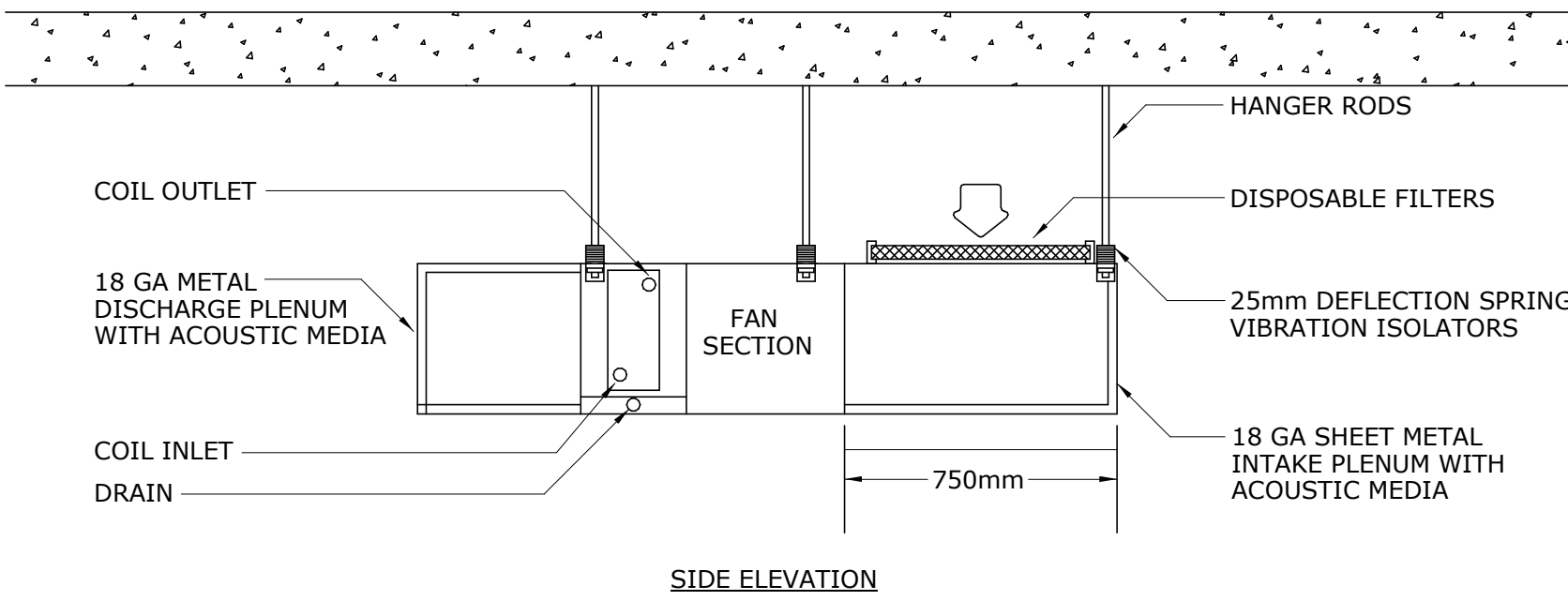


CONDENSATE TRAP DESIGN FOR 'DRAW-THROUGH' TYPE ROOFTOP AC UNIT (Negative Pressure Trap) (METRIC)									
MAXIMUM NEG. (Pa)	DRAIN SIZE D	H	J	L	MAXIMUM NEG. (Pa)	DRAIN SIZE D	H	J	L
25	25	50	25	100	25	32	50	25	107
38	25	63	31	119	38	32	63	31	126
50	25	75	38	138	50	32	75	38	145
63	25	88	44	156	63	32	88	44	163
75	25	100	50	175	75	32	100	50	182
88	25	113	56	194	88	32	113	56	201
100	25	125	63	213	100	32	125	63	220
113	25	138	69	231	113	32	138	69	238
125	25	150	75	250	125	32	150	75	257
138	25	163	81	269	138	32	163	81	276
150	25	175	88	288	150	32	175	88	295
MAXIMUM NEG. (Pa)	DRAIN SIZE D	H	J	L	MAXIMUM NEG. (Pa)	DRAIN SIZE D	H	J	L
25	38	50	25	113	25	50	50	25	125
38	38	63	31	132	38	50	63	31	144
50	38	75	38	151	50	50	75	38	163
63	38	88	44	169	63	50	88	44	181
75	38	100	50	188	75	50	100	50	200
88	38	113	56	207	88	50	113	56	219
100	38	125	63	226	100	50	125	63	238
113	38	138	69	244	113	50	138	69	256
125	38	150	75	263	125	50	150	75	275
138	38	163	81	282	138	50	163	81	294
150	38	175	88	301	150	50	175	88	313
163	38	188	94	319	163	50	188	94	331
175	38	200	100	338	175	50	200	100	350

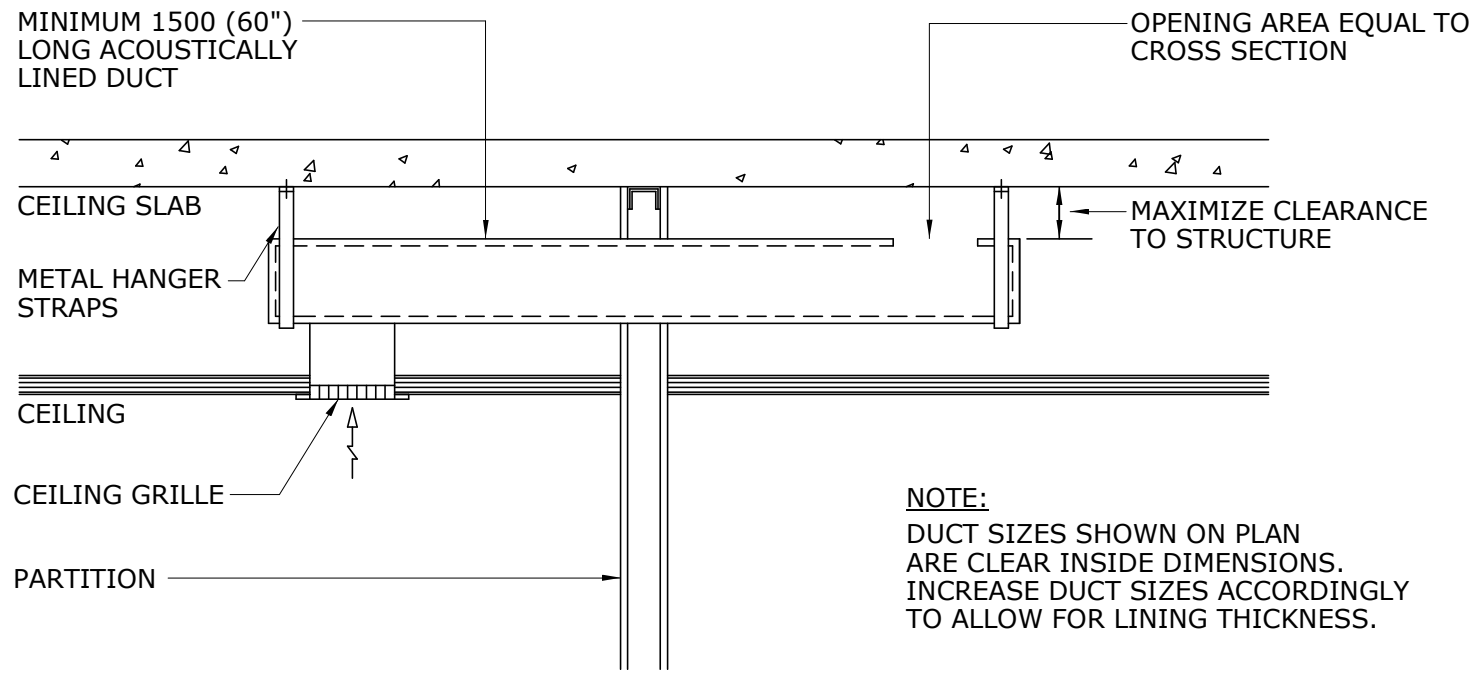
Notes:  
D = Pipe Diameter  
H = 25 Pa for each 25mm of negative SP + 25mm  
  
H = 2 x J  
L = H + J + D



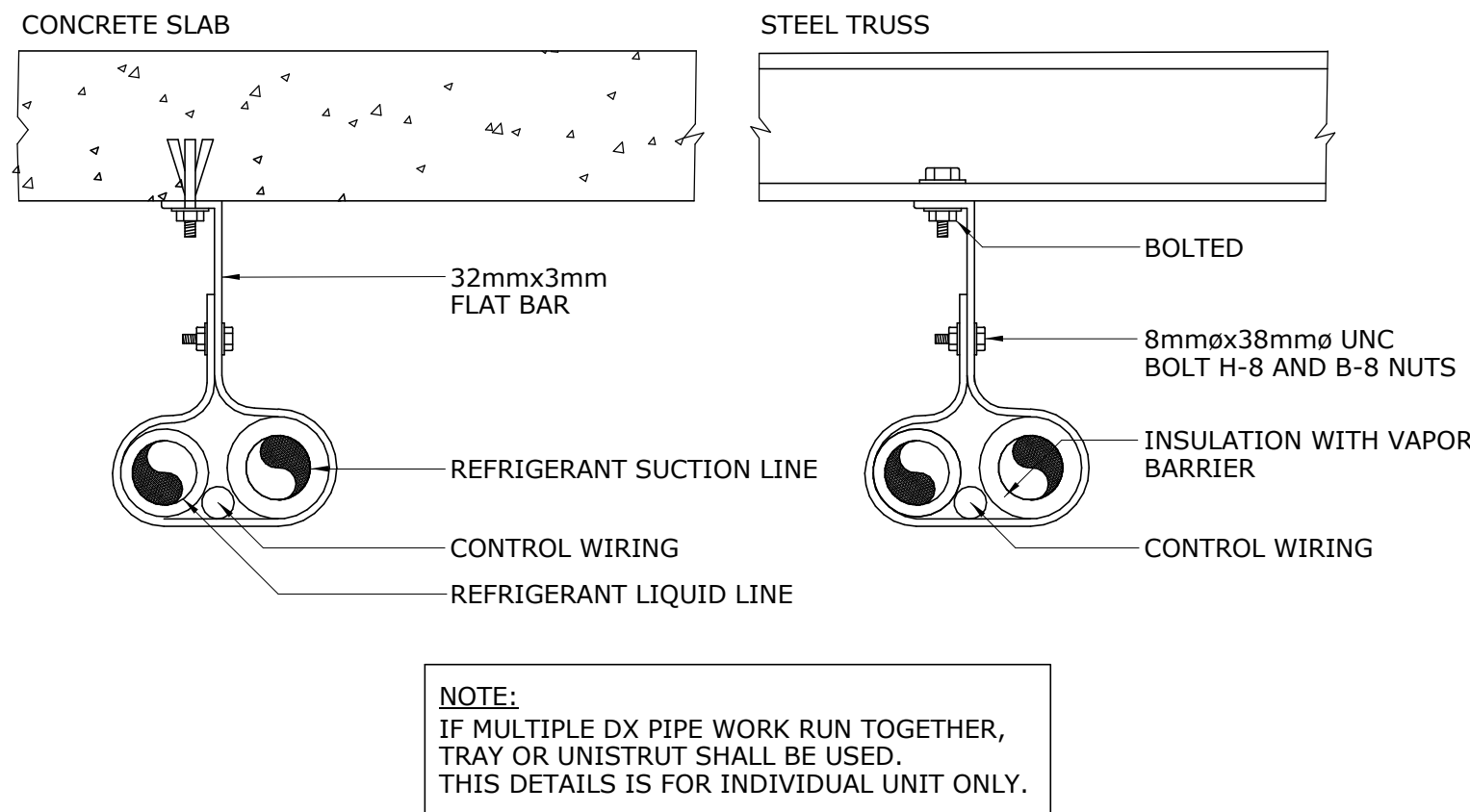
1 RTU CONDENSATE NEGATIVE PRESSURE  
M0102 Scale: NTS



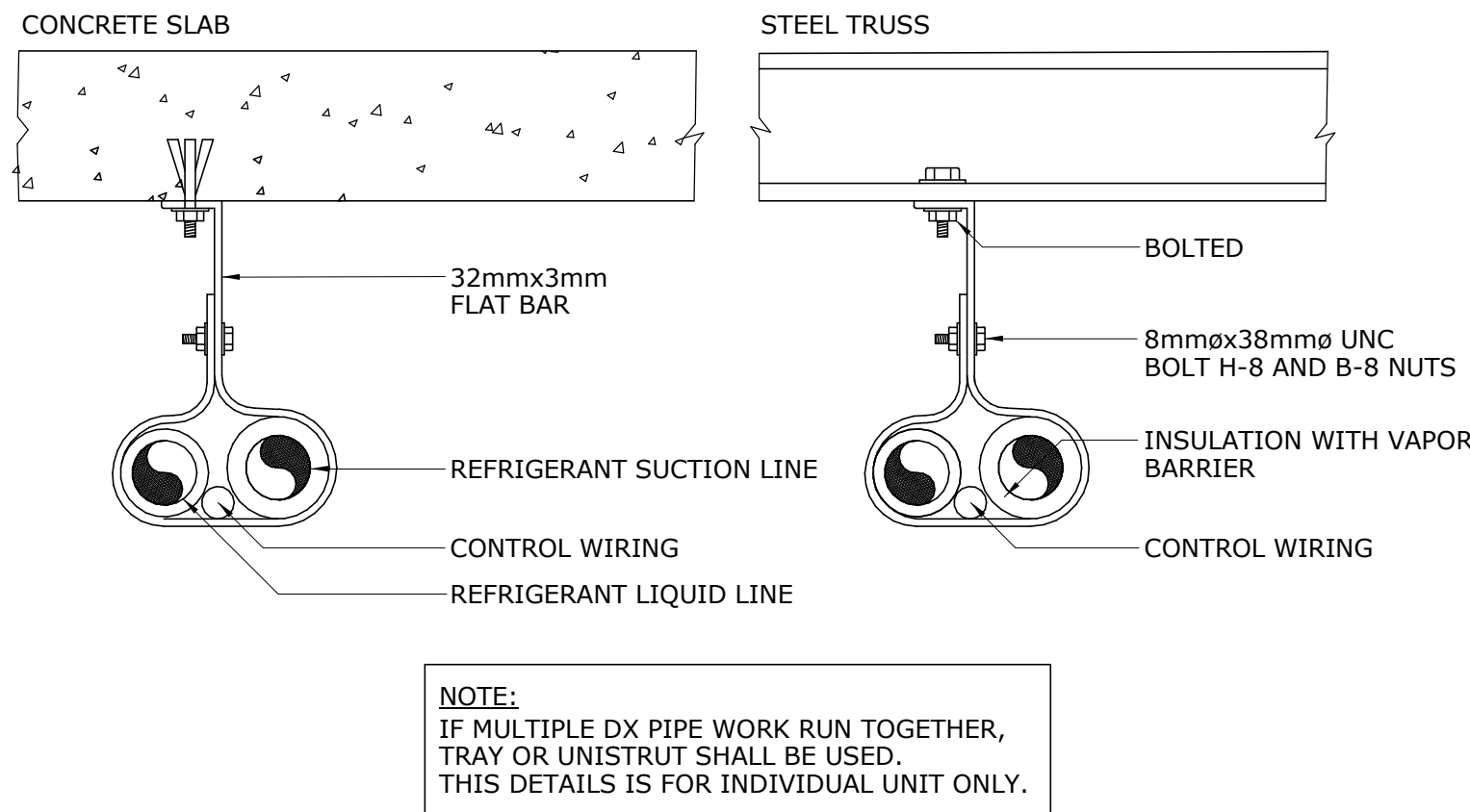
6 FAN COIL UNIT  
M0102 Scale: NTS



4 TRANSFER AIR DUCT 2  
M0102 Scale: NTS



5 WALL BOX INSTALLATION DETAIL  
M0102 Scale: NTS



8 SINGLE BATHROOM EXHAUST FAN  
M0102 Scale: NTS

7 REFRIGERANT PIPE HANGER DETAIL  
M0102 Scale: NTS

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A	ISSUED FOR PERMIT 100%	2025-07-31
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PROJECT TITLE  
**50 RICHMOND ST. E.  
RENOVATIONS**

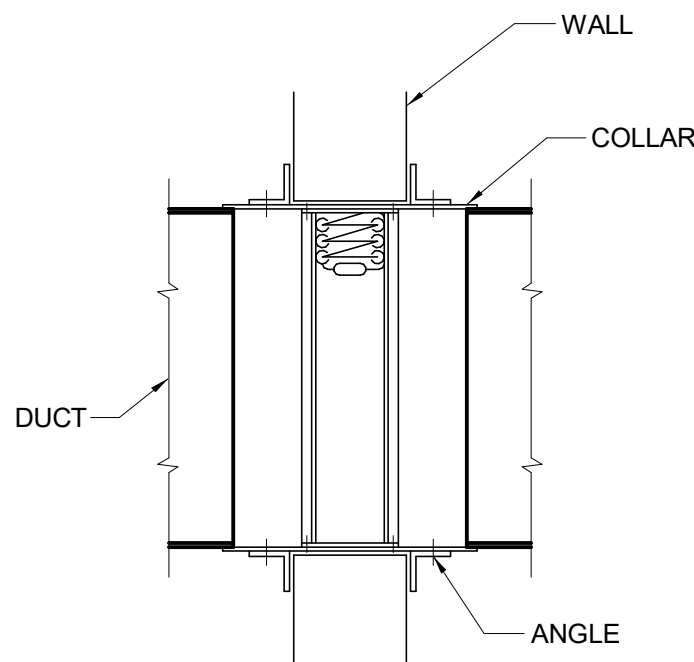
PROJECT ADDRESS

**50 RICHMOND STREET EAST  
TORONTO, ON**

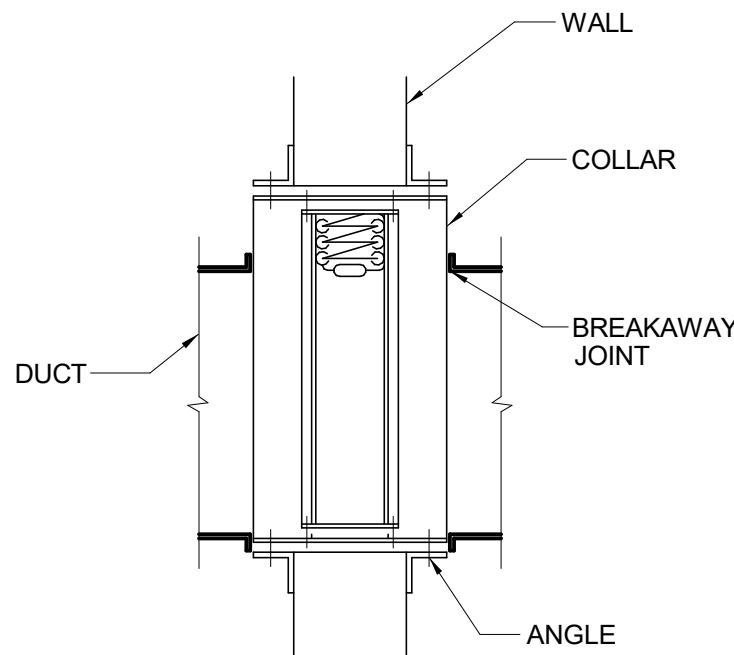
PROJECT NO: 122260	
DRAWN BY: <b>C. SU</b>	CHECKED BY: <b>E. PANAH</b>
PROJECT MGR: <b>F. BOLOURIAN</b>	APPROVED BY: <b>R. BARROSO</b>

SHEET TITLE  
**MECHANICAL STANDARD  
DETAILS 2 OF 8**

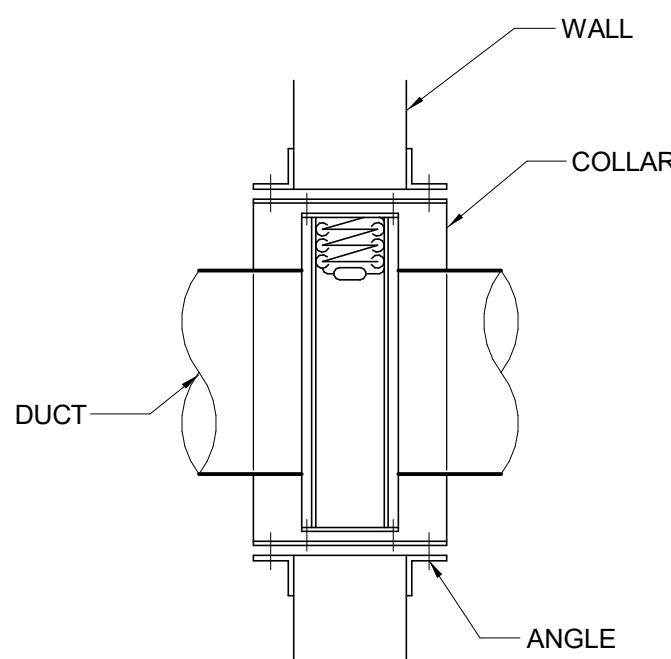
SHEET NUMBER  
**M0102**  
ISSUE  
**B**



TYPE A  
VERTICAL MOUNTING



TYPE B  
VERTICAL MOUNTING



TYPE C  
VERTICAL MOUNTING

FIRE DAMPER MOUNTING

1  
M0103 Scale: NTS

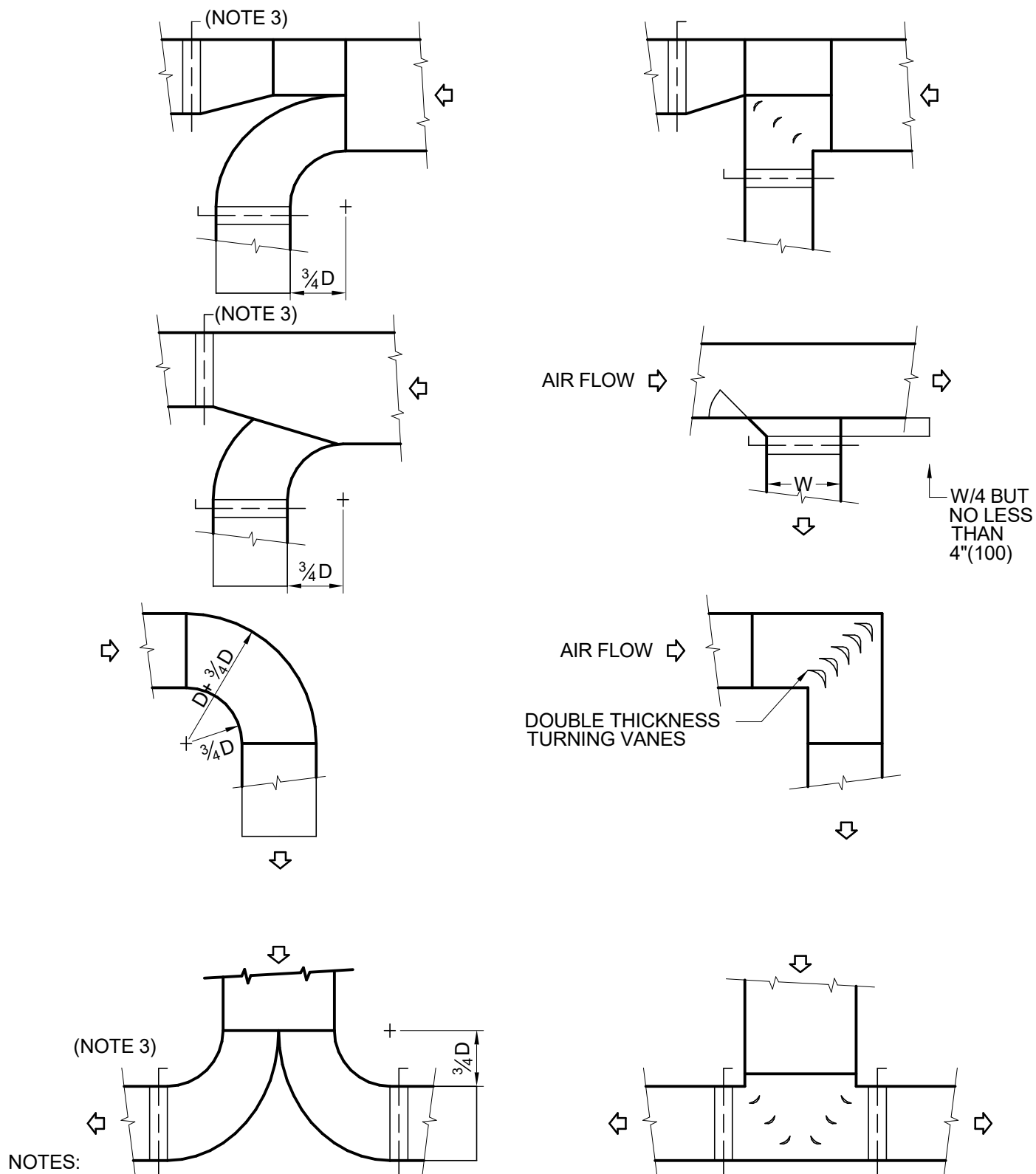
NOTES:

1. VERTICAL MOUNTINGS SHOWN. HORIZONTAL MOUNTINGS SIMILAR.
2. THE INSTALLATION SHOWN COMPLY WITH THE FIRE DAMPER MANUFACTURES PRINTED INSTALLATION INSTRUCTIONS.
3. FIRE DAMPER SHALL BE INSTALLED IN THE PLANE OF THE FIRE SEPARATION.
4. PROVIDE AN ACCESS DOOR FOR EACH FIRE DAMPER.
5. PROVIDE SHOP DRAWINGS AND INSTALLATION DETAILS FOR REVIEW.

DRIVE SLIP	PLAIN "S" SLIP	HEMMED "S" SLIP
STANDING 'S'	REINFORCED BAR SLIP	ANGLE SLIP
POCKET LOCK	ANGLE REINFORCED POCKET LOCK	COMPANION ANGLES (CAULK OR GASKET)
DUCT DIMENSION MAXIMUM SIZE	METAL GA. U.S. STD.	CONSTRUCTION METHODS TRANSVERSE JOINTS AND REINFORCING
300mm AND LESS	26 GA.	DRIVE SLIP, PLAIN "S" SLIP, OR 25mm POCKET LOCK ON 2400mm. CENTRES.
325mm THRU 450mm	24 GA.	HEMMED"S" SLIP, 25mm BAR SLIP, 25mm POCKET LOCK ON 1200 CENTRES, OR ON 2400 CENTRES WITH 25x25x3mm ANGLES ON CENTRE LINE BETWEEN.
475mm THRU 750mm	24 GA.	HEMMED"S" SLIP, 25mm BAR SLIP, 25mm POCKET LOCK ON 1200 CENTRES, OR ON 2400 CENTRES WITH 25x25x3mm ANGLES ON CENTRE LINE BETWEEN.
775mm THRU 1070mm	22 GA.	25mm BAR SLIP, REINFORCED BAR SLIP 25mm POCKET LOCK ON 1200 CENTRES, OR ON 2400 CENTRES WITH 25x25x3mm ANGLES ON CENTRE LINE BETWEEN.
1100mm THRU 1375mm	22 GA.	40mm BAR SLIP, 40mm POCKET LOCK ON 1200 CENTRES, ON 2400 CENTRES WITH 40x40x3mm ANGLES ON CENTRE LINE BETWEEN.
1400mm THRU 1525mm	20 GA.	40mm BAR SLIP, 40mm POCKET LOCK ON 1200 CENTRES, ON 2400 CENTRES WITH 40x40x3mm ANGLES ON CENTRE LINE BETWEEN.
1550mm THRU 2135mm	20 GA.	40mm REINFORCED BAR SLIP, ANGLE SLIP, OR ANGLE REINFORCED POCKET LOCK, ON 1200. CENTRES WITH 40x40x3mm REINFORCING ANGLES ON JOINTS AND ON CENTRE LINE BETWEEN.
2150mm THRU 2440mm	18 GA.	COMPANION ANGLES, ANGLE SLIP, OR ANGLE REINFORCED POCKET LOCK, ON 1200mm CENTRES WITH 40x40x4mm COMPANION OR REINFORCING ANGLES ON JOINTS AND ON CENTRE LINE BETWEEN.
2450mm AND OVER	18 GA.	COMPANION ANGLES, ANGLE SLIP, OR ANGLE REINFORCED POCKET LOCK, ON 1200 CENTRES WITH 50x50x6mm COMPANION OR REINFORCING ANGLES ON JOINTS AND ON CENTRE LINE BETWEEN.

RECTANGULAR DUCT CONSTRUCTION LOW PRESSURE

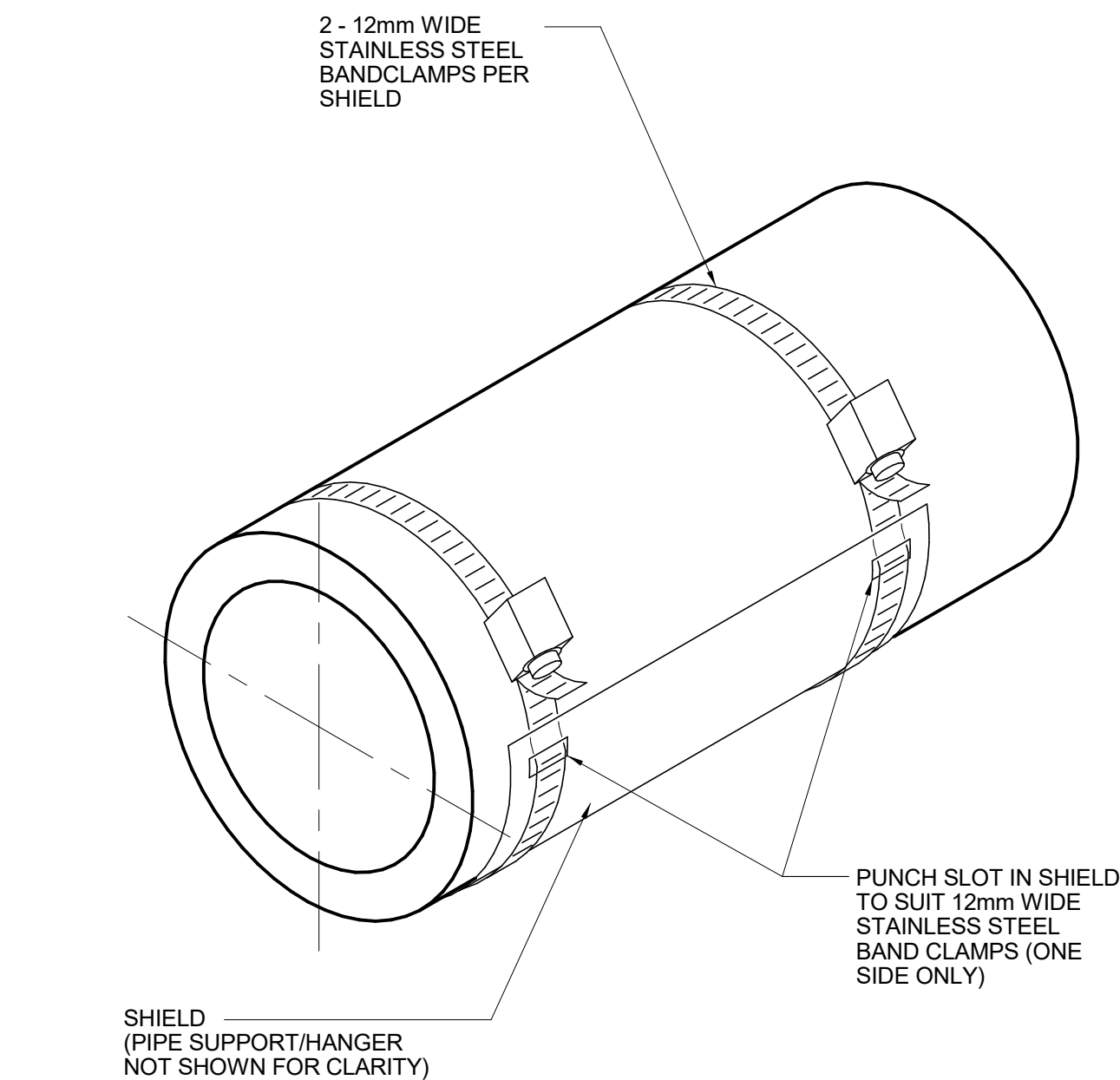
2  
M0103 Scale: NTS



- NOTES:
1. OMIT VOLUME DAMPERS ON RETURN AIR DUCT WORK
  2. DIMENSIONS IN BRACKETS IN MILLIMETERS
  3. DO NOT USE SPLITTER DAMPERS

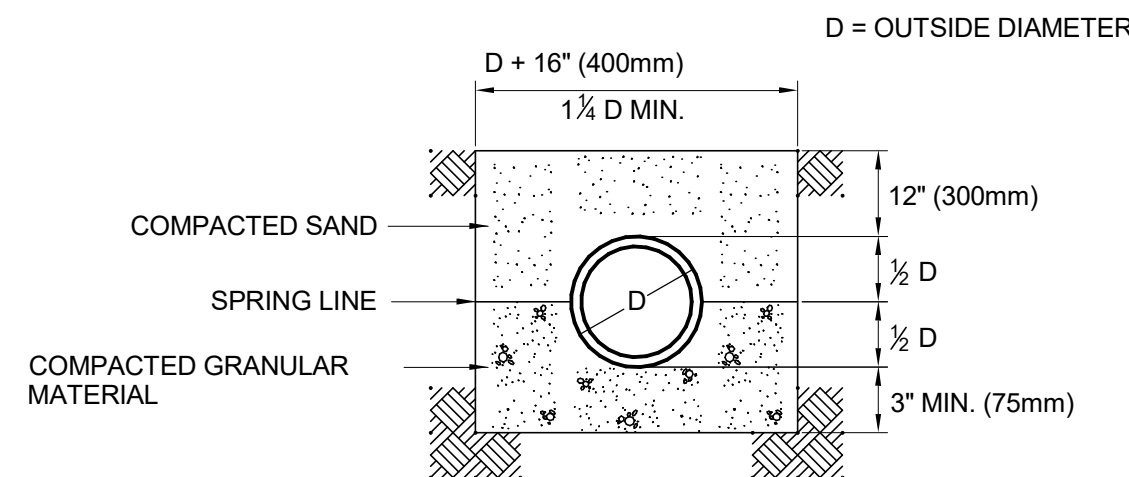
LOW PRESSURE SUPPLY AND RETURN AIR DUCT TAKE-OFFS

7  
M0103 Scale: NTS

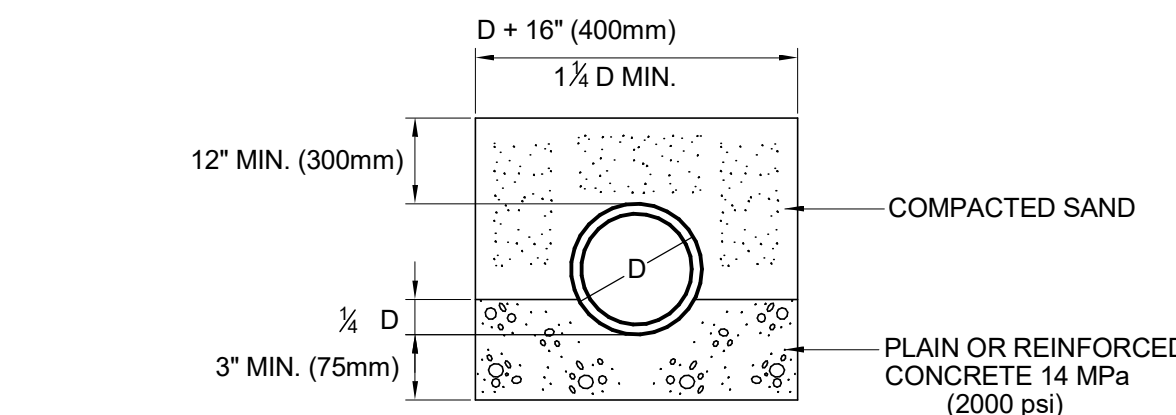


INSULATION SHIELD INSTALLATION

3  
M0103 Scale: NTS



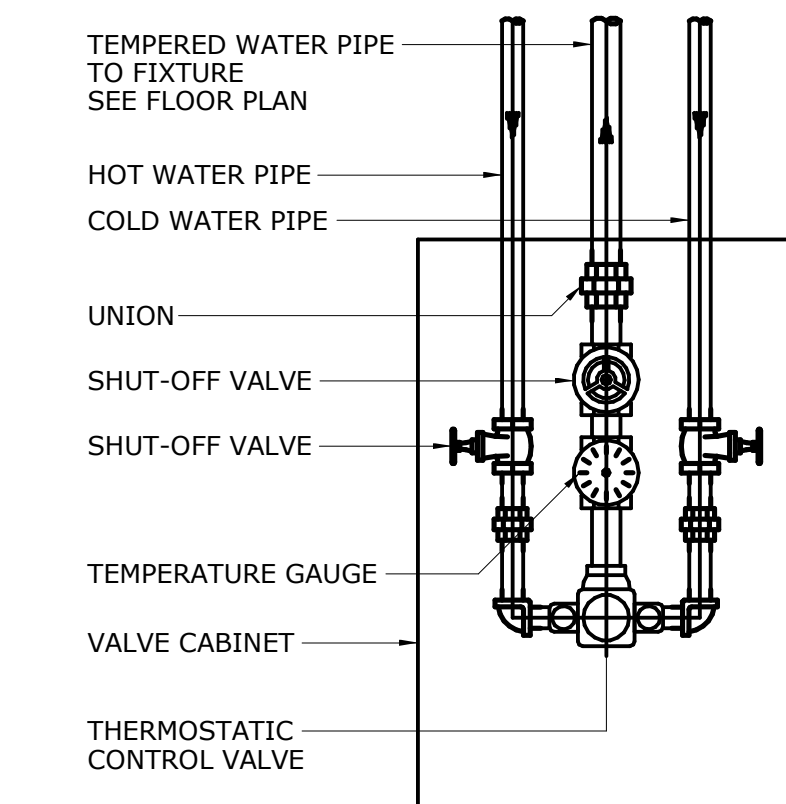
CLASS 'B' - GRANULAR FOUNDATION



CLASS 'A' - CONCRETE CRADLE

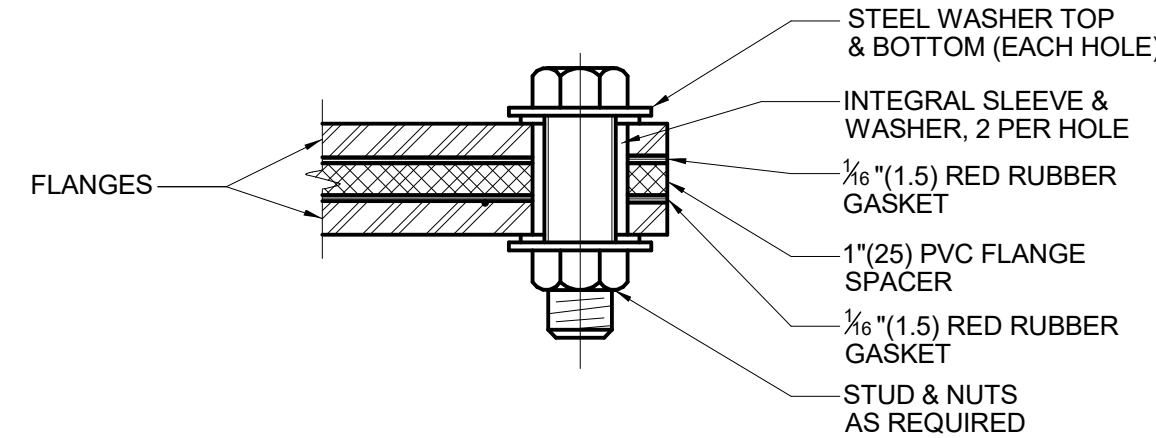
CLASS A AND CLASS B TRENCH BEDDING

5  
M0103 Scale: NTS



THERMOSTATIC CONTROL VALVE

8  
M0103 Scale: NTS

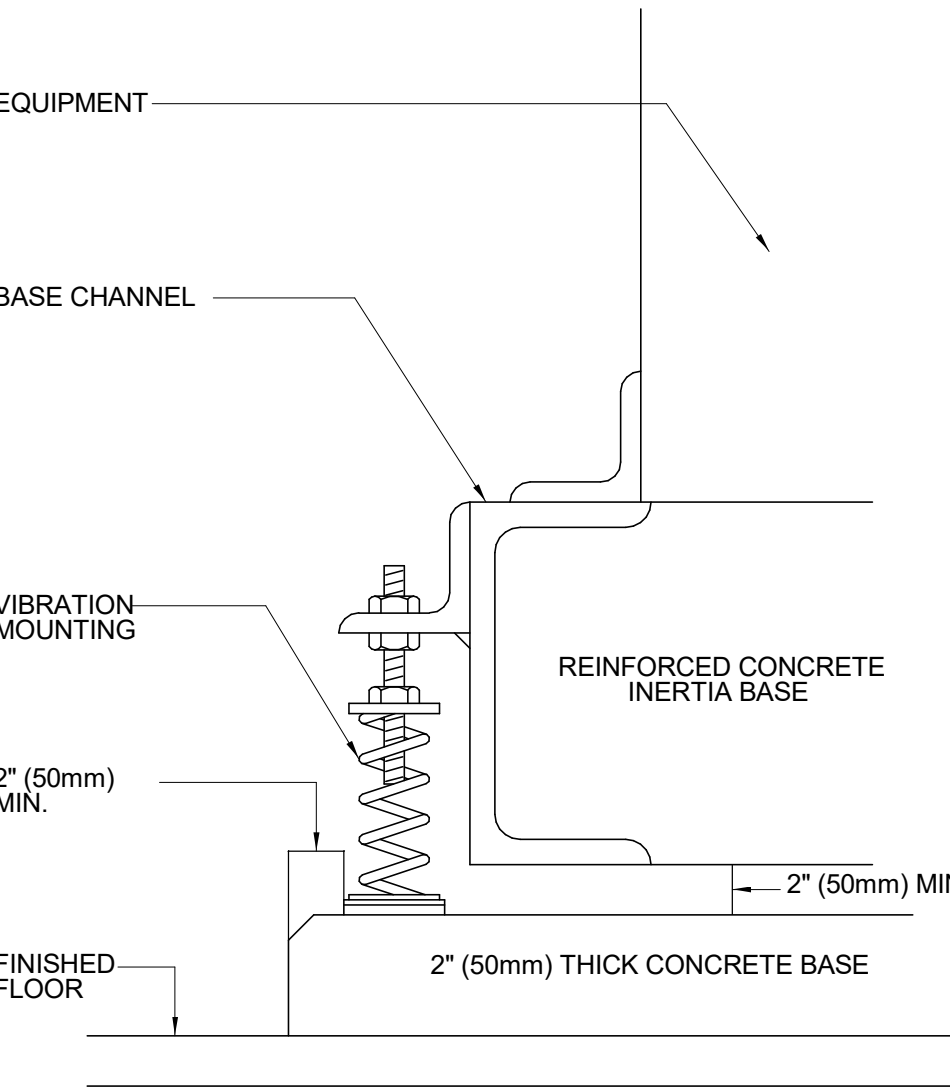


NOTE:

ISOLATION FLANGE TO BE USED WHERE SITE UNDERGROUND MAINS ARE DUCTILE IRON AND CORROSION PROTECTED ANODES ARE NOT PROVIDED.

FLANGE ISOLATION

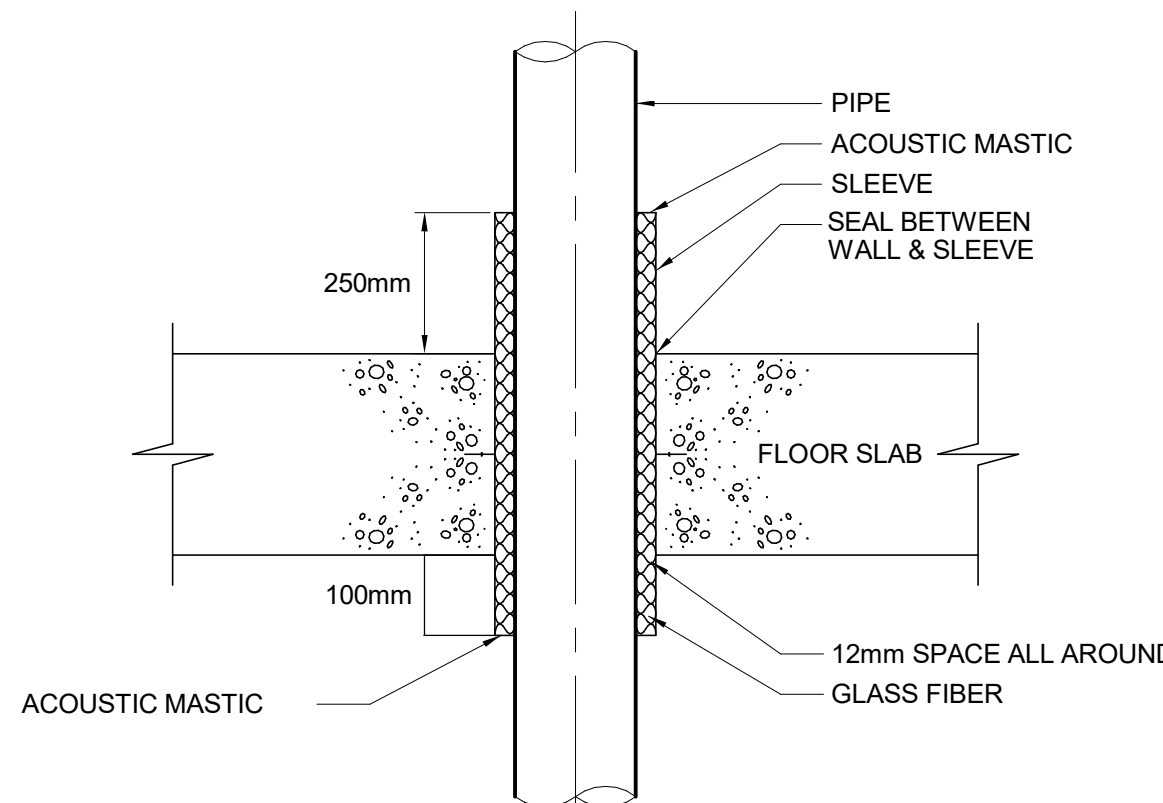
4  
M0103 Scale: NTS



TYPE CS

SPRING MOUNTS

6  
M0103 Scale: NTS



ACOUSTIC TREATMENT OF PIPE PENETRATION OF MECHANICAL ROOM FLOOR SLAB

9  
M0103 Scale: NTS

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50 RICHMOND STREET EAST  
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PROJECT NO:

122260

DRAWN BY:

C. SU

CHECKED BY:

E. PANAH

PROJECT MGR:

F. BOLOURIAN

APPROVED BY:

R. BARROSO

SHEET TITLE

**MECHANICAL STANDARD  
DETAILS 3 OF 8**

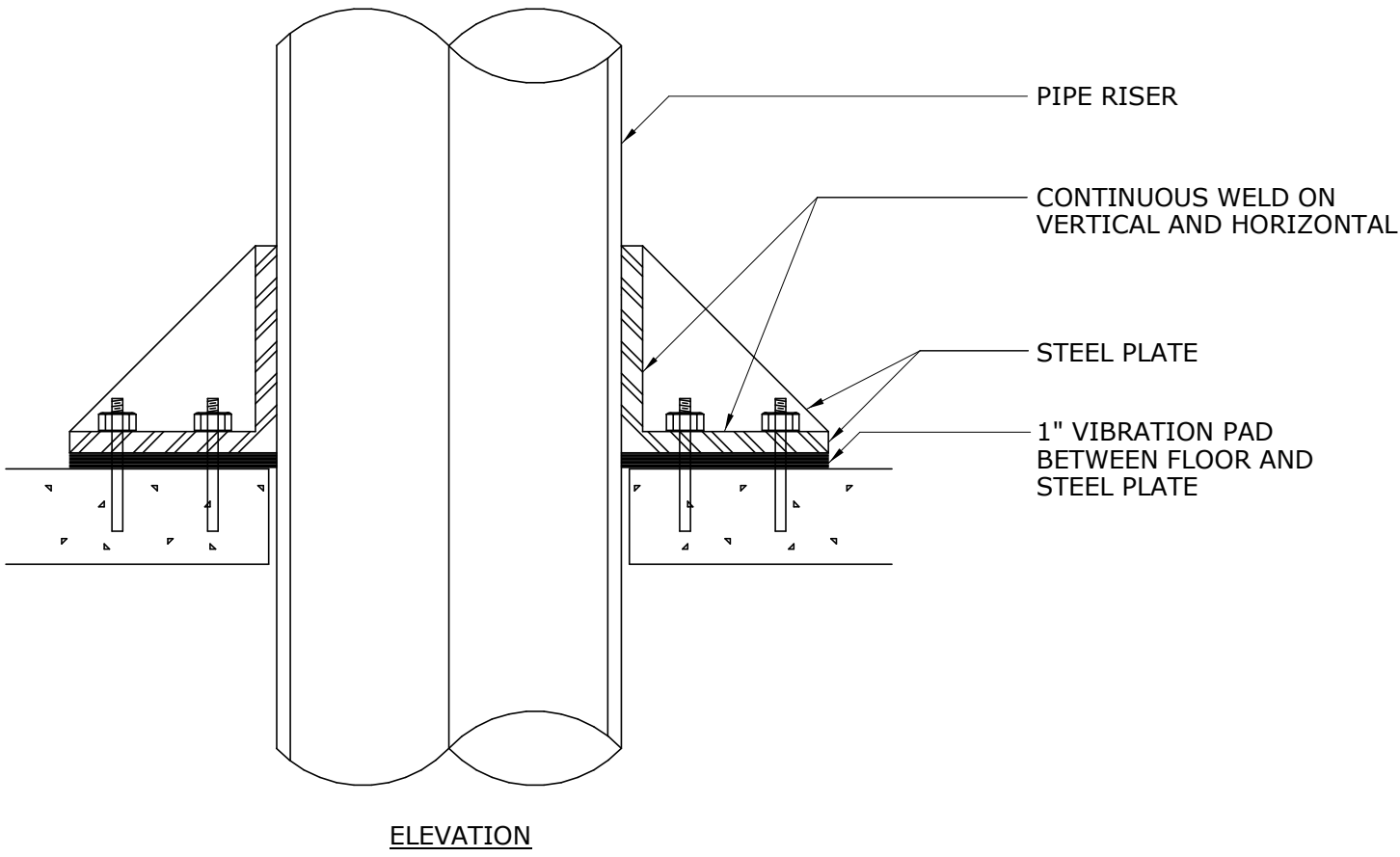
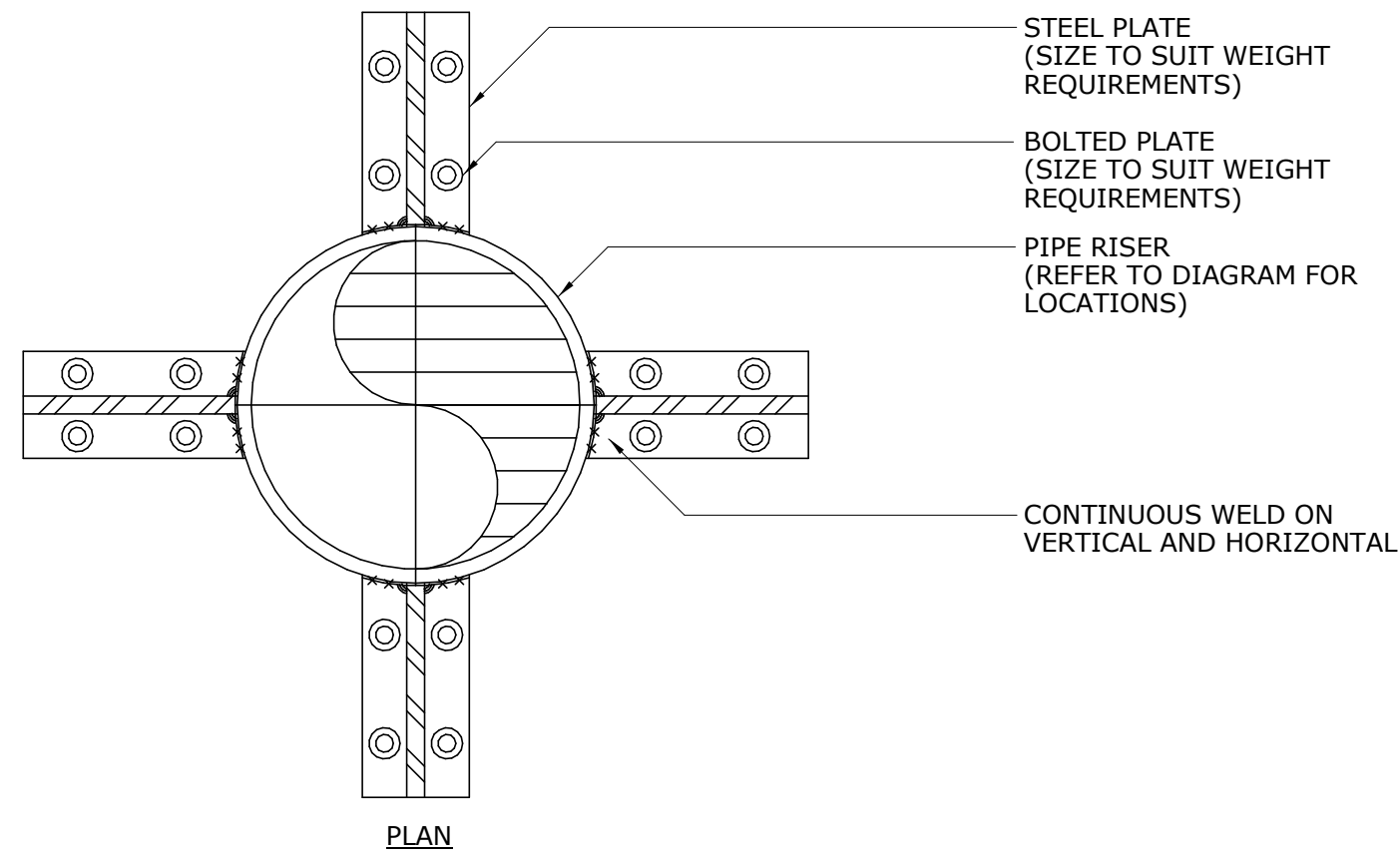
SHEET NUMBER

**M0103**

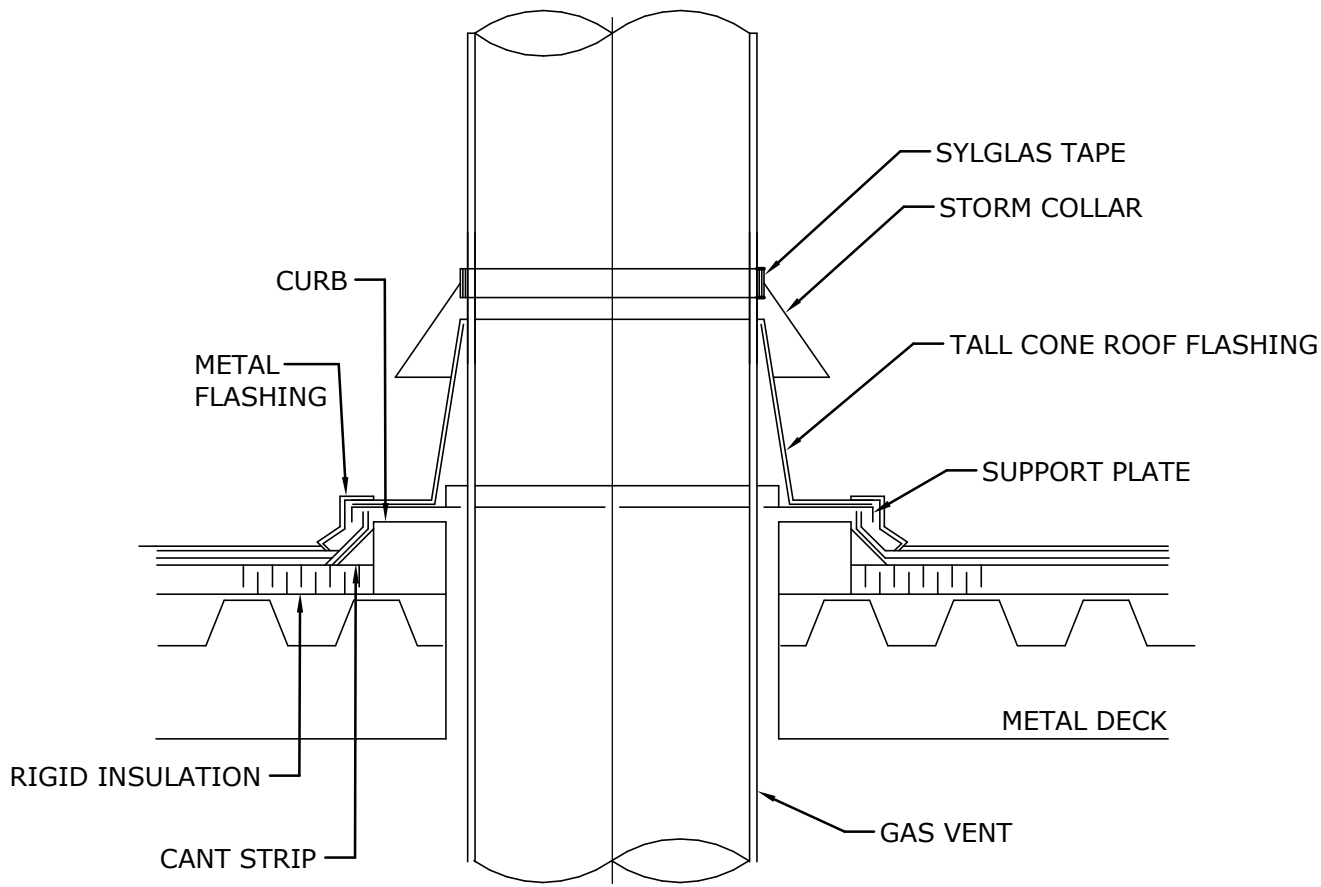
ISSUE

**B**

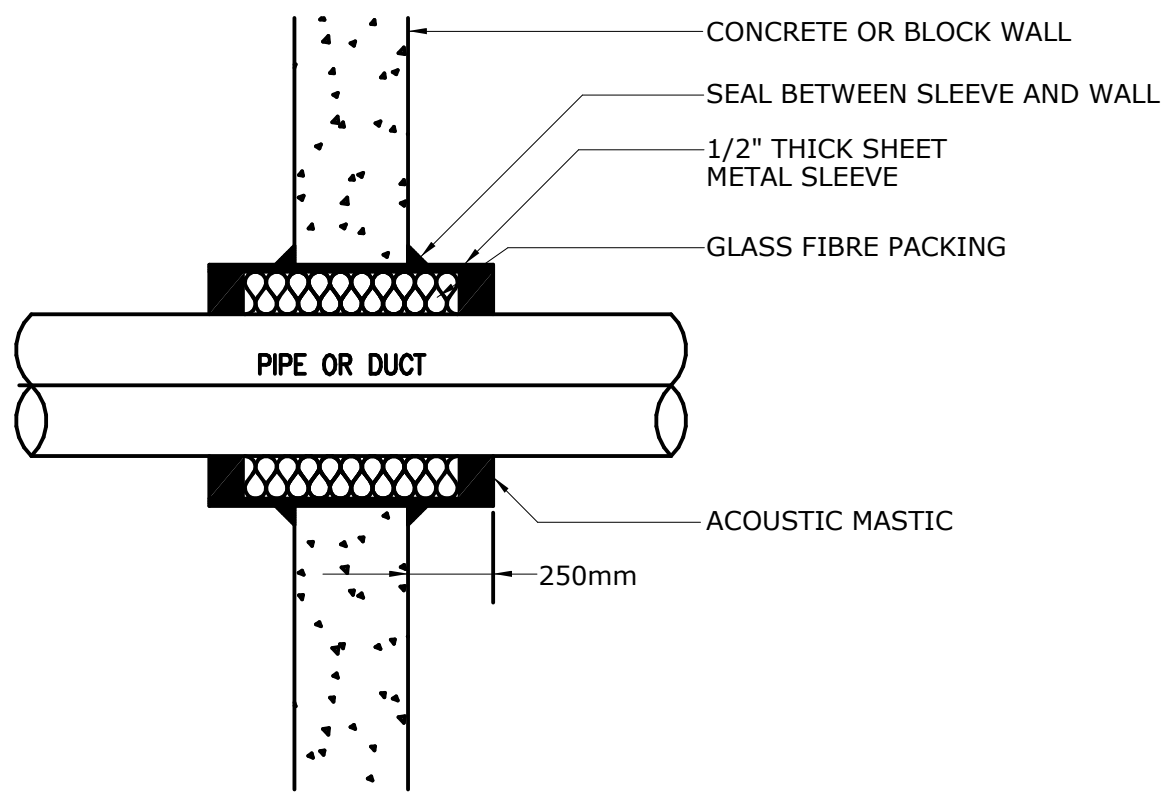
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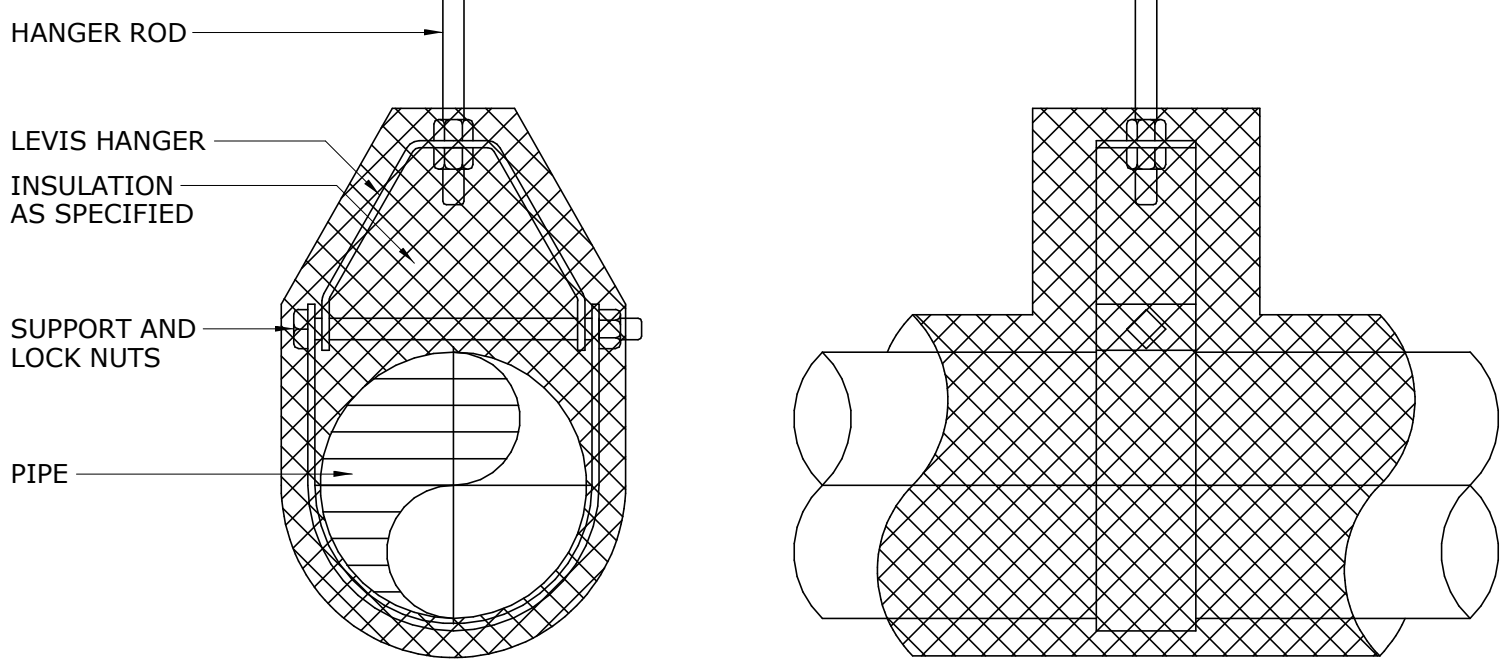
1 FLOOR MOUNTED PIPE ANCHORING CONCEPT  
M0104 Scale: NTS



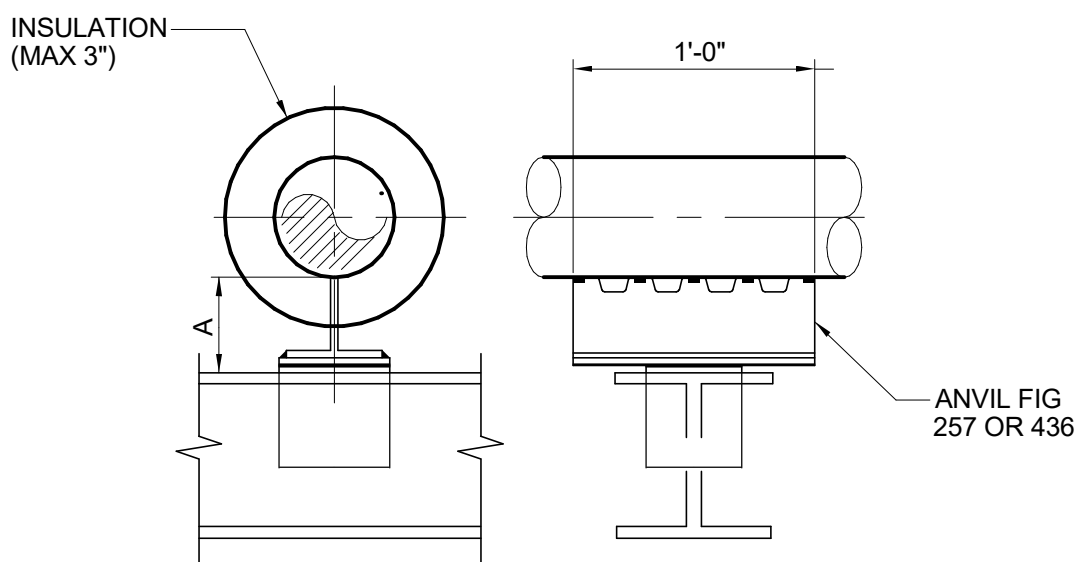
6 FLU VENT THROUGH ROOF DETAIL  
M0104 Scale: NTS



7 PENETRATION THROUGH SOUND ISOLATION WALL  
M0104 Scale: NTS



2 PIPE HANGER  
M0104 Scale: NTS



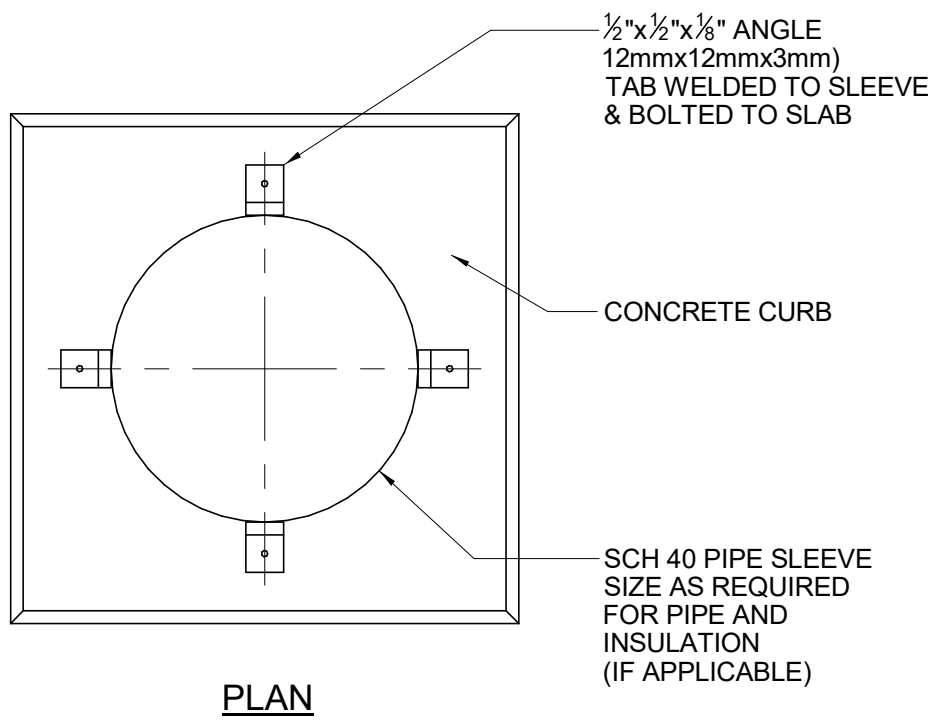
DETAIL NOTES:

1. FOR DIMENSION B, SEE SHOE TABLE THIS DWG.
2. STAINLESS STEEL LINES SHALL HAVE PS-125 INSTALLED BETWEEN THE PIPE AND THE SHOE.

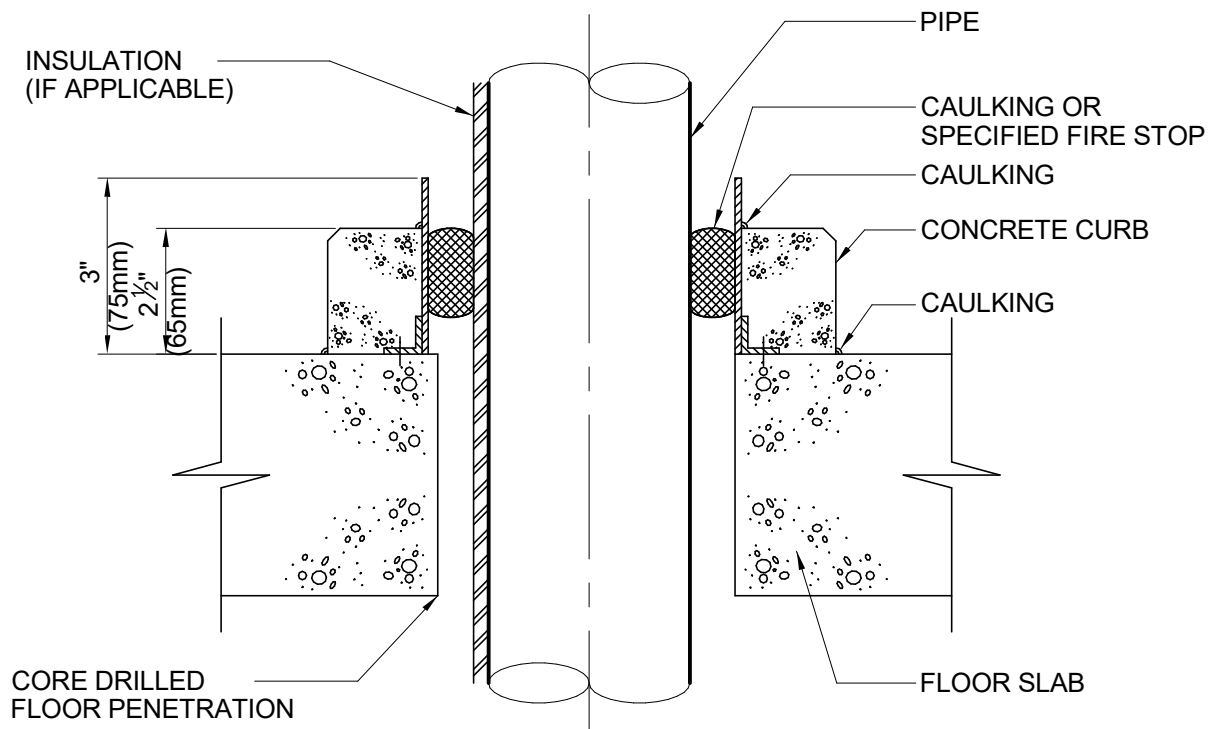
SHOE TABLE

	ANVIL FIGURE 257			ANVIL FIGURE 436		
ANVIL TYPE	A	B	C	A	B	C
TEE	3 <sup>15</sup> / <sub>16</sub>	4	12	4	4	4
1	4 <sup>3</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>2</sub>	2	4	4	4
2	5	8	4	4	4	4
3	5	8	4	4	4	4
4	4 <sup>3</sup> / <sub>4</sub>	5 <sup>1</sup> / <sub>2</sub>	2	4	4	6
5	5	11 <sup>1</sup> / <sub>2</sub>	4	4	4	6
6	5	11 <sup>1</sup> / <sub>2</sub>	4	4	4	6

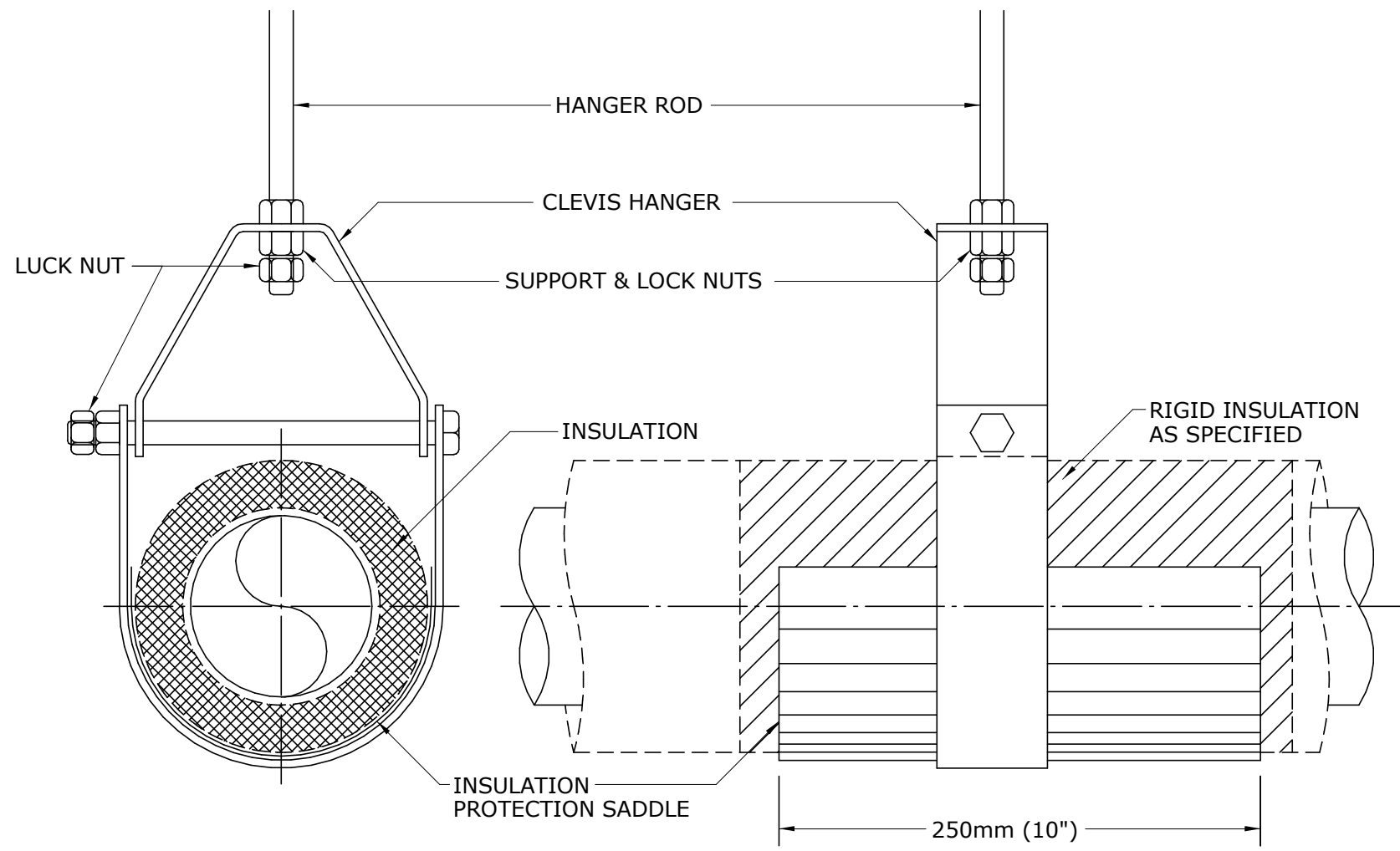
4 PS4 - SLIDING PIPE SUPPORT  
M0104 Scale: NTS



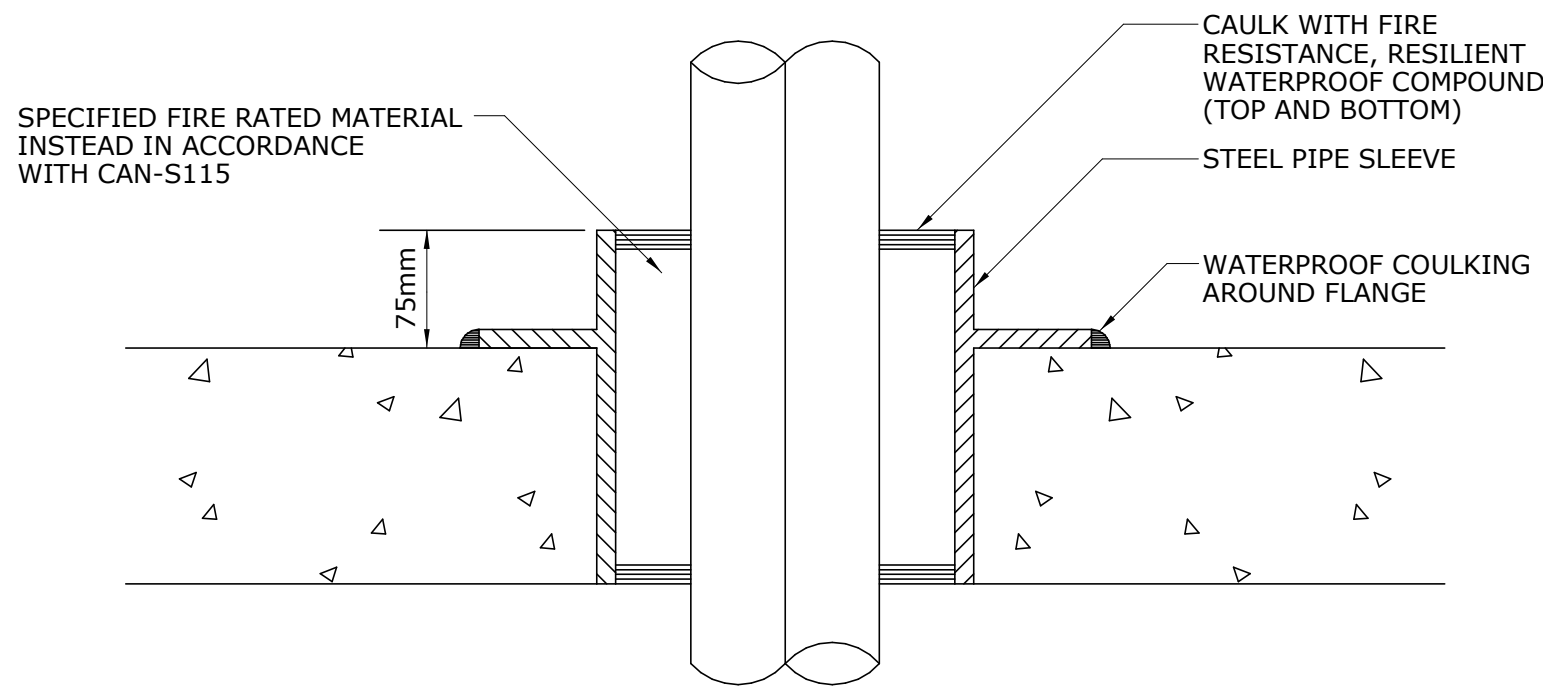
PLAN



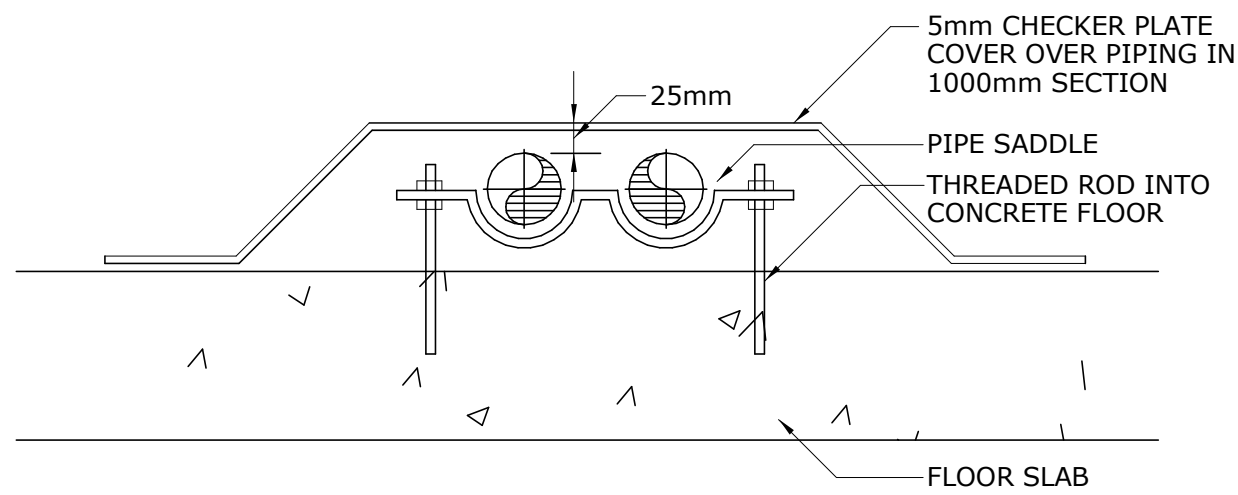
8 PIPE SLEEVE THROUGH EXISTING FLOOR SLAB  
M0104 Scale: NTS



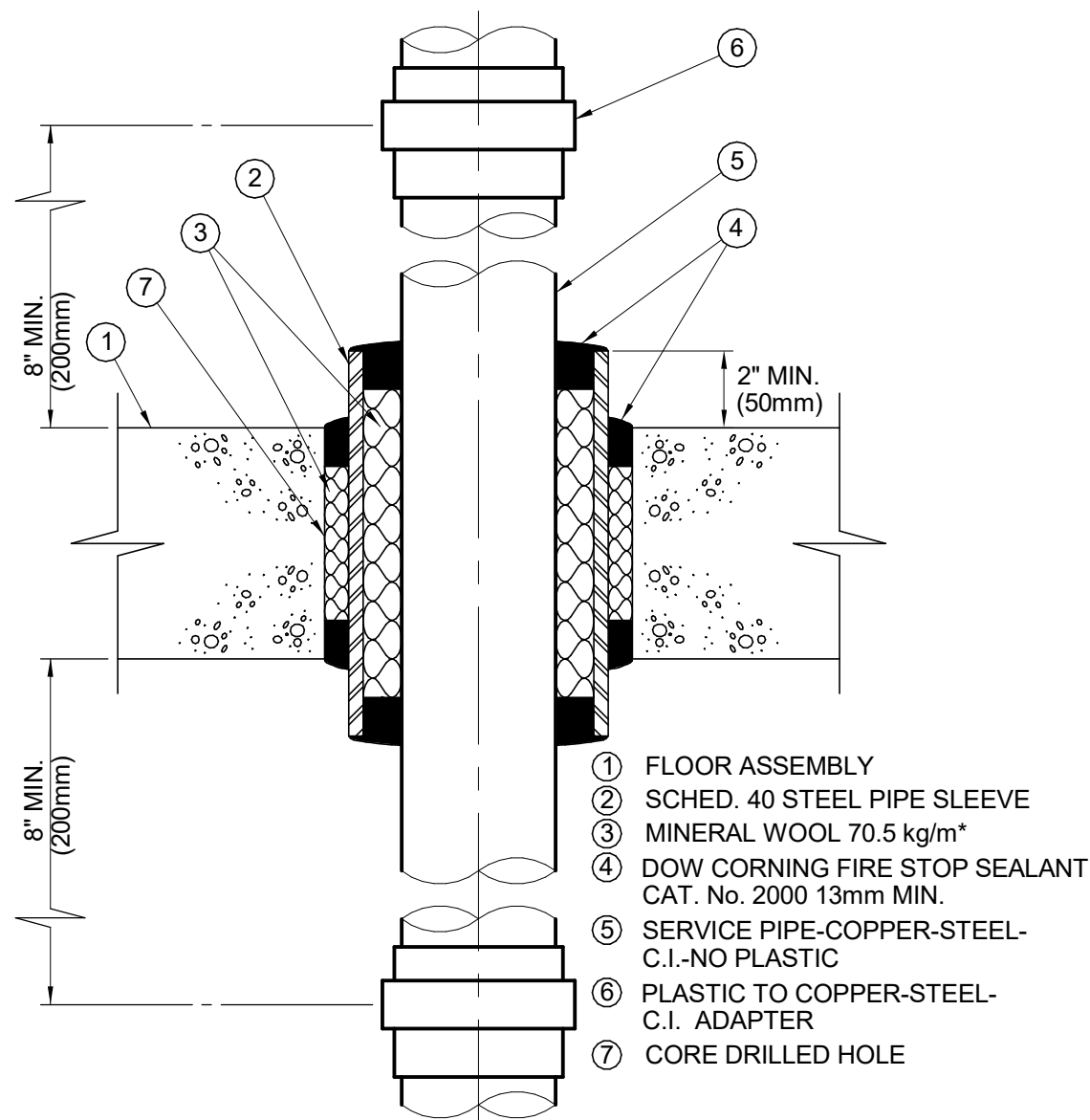
3 PIPE HANGER WITH INSULATION  
M0104 Scale: NTS



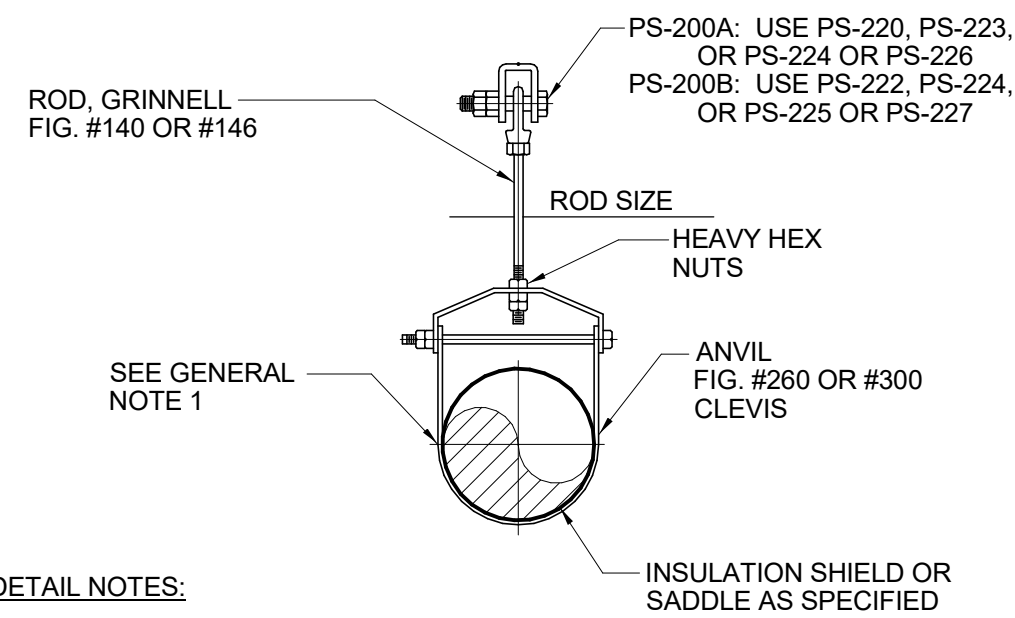
5 FIRE RATED PIPE SLEEVE  
M0104 Scale: NTS



9 PIPE SUPPORT AND COVER DETAIL  
M0104 Scale: NTS



10 PIPE SLEEVE THROUGH FIRE RATED FLOOR SLAB  
M0104 Scale: NTS



DETAIL NOTES:

1. PS-200B CAN ONLY BE USED IF THE LINE TEMPERATURE IS LESS THAN 650°F AND FOR LINES 3/4" TO 1 1/2" WITH 2" MAXIMUM INSULATION THICKNESS, AND LINES 2" TO 12" WITH 4" MAXIMUM INSULATION THICKNESS.
2. AS AN OPTION, STAINLESS STEEL WEAR PLATE MAY BE WELDED TO CLEVIS, (IF CLEVIS IS NOT GALVANIZED.)

PS-200A NON INSULATED CLEVIS ANVIL FIG. #260		PS-200B INSULATED CLEVIS ANVIL FIG. #300	
LINE SIZE	ROD SIZE	LINE SIZE	ROD SIZE
2 1/2"	1/2"	2 1/2"	1/2"
3"	1/2"	3"	1/2"
4"	5/8"	4"	5/8"
6"	3/4"	6"	3/4"
8"	3/4"	8"	3/4"
10"	7/8"	10"	7/8"
12"	7/8"	12"	7/8"
14"	1"		
16"	1"		
18"	1"		
20"	1 1/4"		
24"	1 1/4"		
30"	1 1/4"		

11 PS2 - CLEVIS PIPE SUPPORT  
M0104 Scale: NTS

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CHECKED BY:  
**E. PANAH**

PROJECT MGR:  
**F. BOLOURIAN**

APPROVED BY:  
**R. BARROSO**

SHEET TITLE  
**MECHANICAL STANDARD  
DETAILS 4 OF 8**

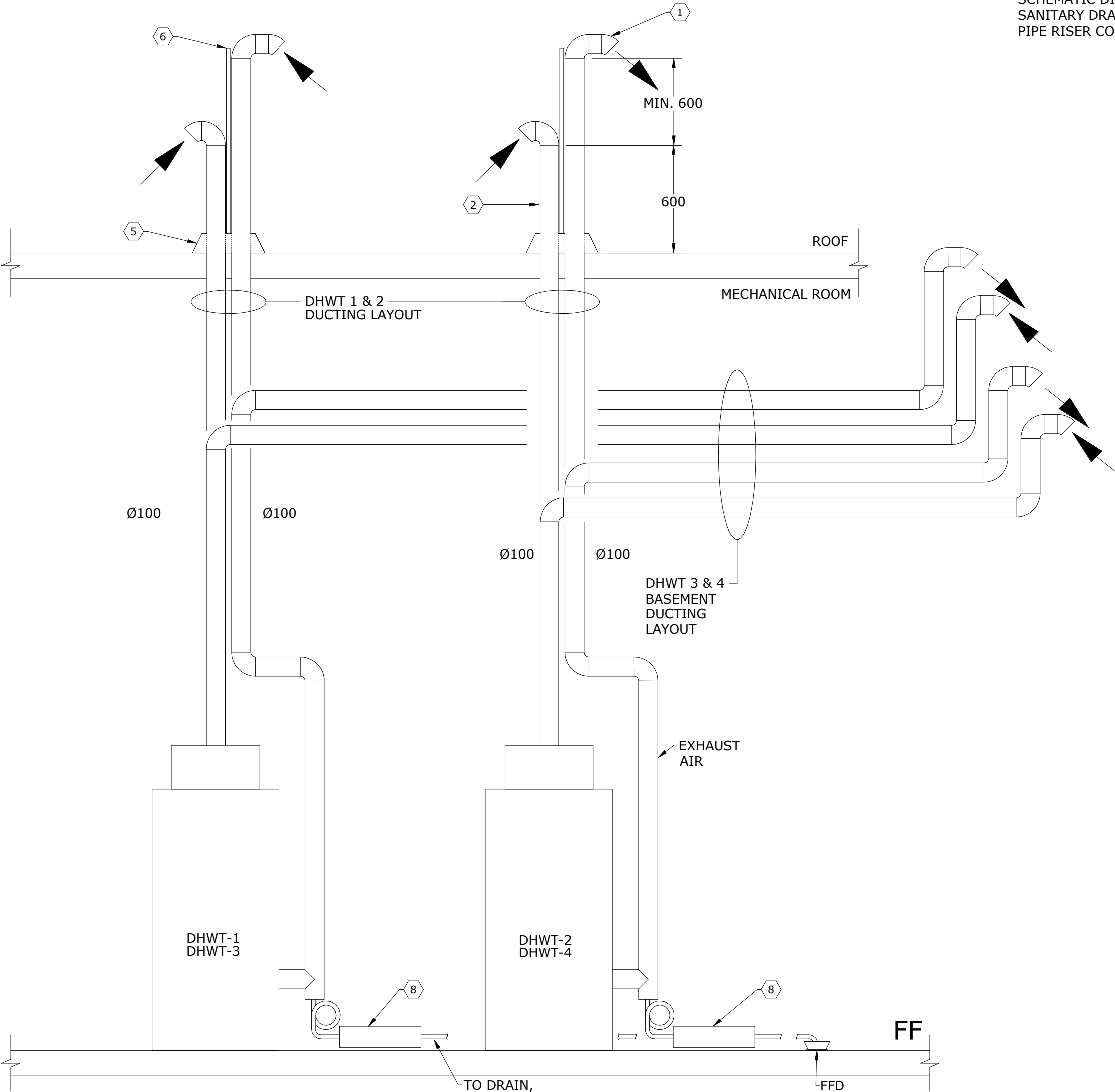
SHEET NUMBER

**M0104**

ISSUE

**B**

1 DOMESTIC WATER HEATING VENTING



- REFERENCE NOTES:
1. PROVIDE Ø100 EXHAUST PIPE C/W GOOSENECK, TYP. FOR 2.
  2. Ø100 FRESH AIR INTAKE PIPE C/W GOOSENECK AND INSECT SCREEN, TYP. FOR 2.
  3. PROVIDE NEW VENTING AND NEW LINER INSTALLATION, TYP. FOR BOTH HEATERS.
  4. PROVIDE Ø200 ID (Ø250 OD) VENT PIPE (MODULAR DOUBLE WALL PREFABRICATED SYSTEM), TYP. FOR 2.
  5. PROVIDE NEW FLASHING, TYP. FOR ALL.
  6. PROVIDE GALVANIZED STEEL SUPPORT FOR PIPES, TYP. FOR 2.
  7. PROVIDE INSULATED ROOF THIMBLE (Ø250 ID, OUTSIDE DIAMETER TO MATCH EXISTING ROOF OPENING); SHALL BE SUPPLIED BY THE VENT PIPE SUPPLIER.
  8. SUPPLY AND INSTALL NEW CONDENSATE NEUTRALIZER KIT.

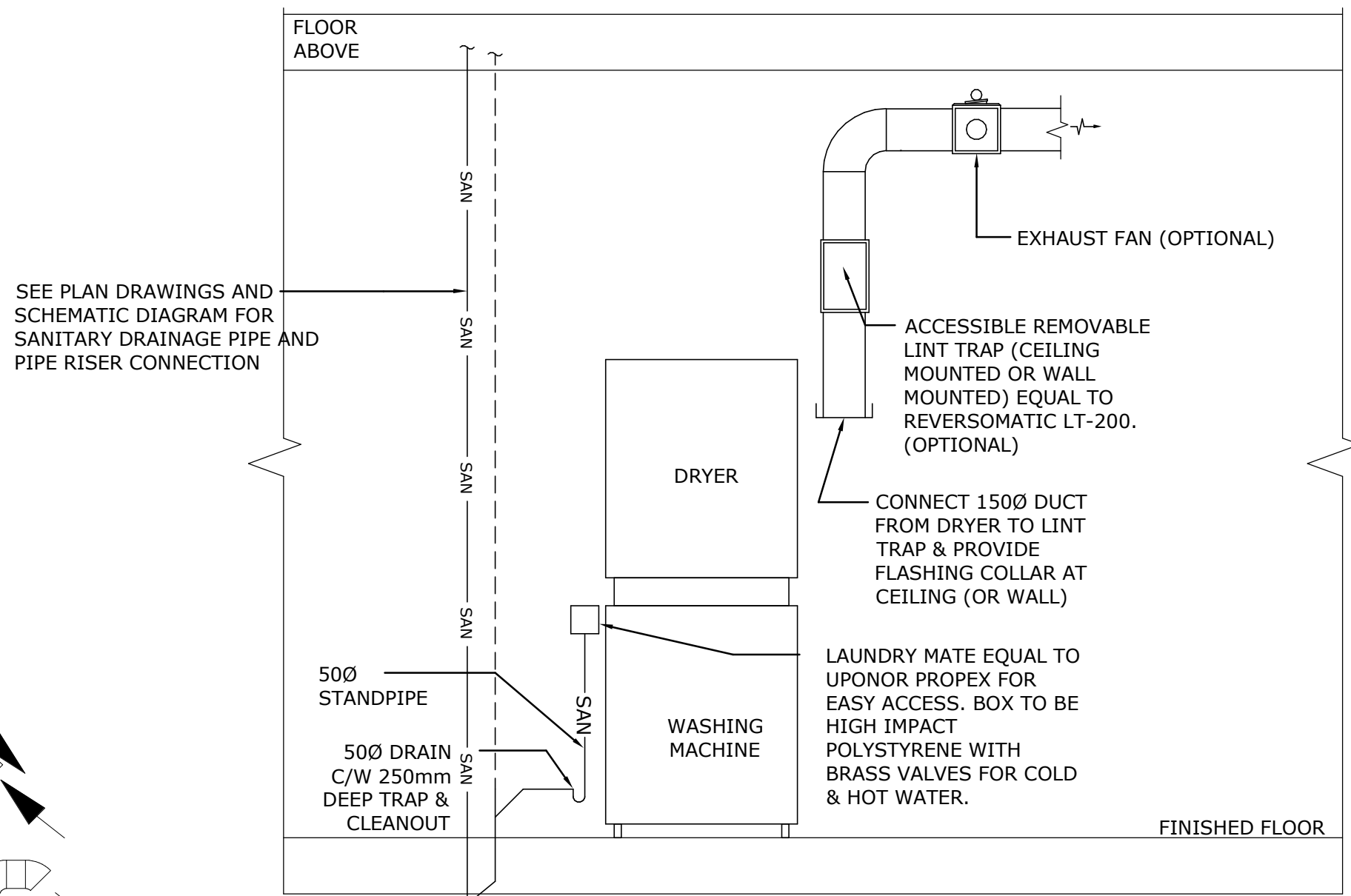
4 PLUMBING FIXTURE SCHEDULE

DESCRIPTION	SERVICES				REMARKS
	CW	HW	WASTE	VENT	
WATER CLOSET (FLUSH VALVE)	25	-	75	40	
WATER CLOSET (FLUSH TANK)	12	-	75	40	
URINAL (FLUSH VALVE)	20	-	50	40	
URINAL (FLUSH TANK)	12	-	40	32	
LAVATORY	12	12	32	32	
SHOWER	12	12	75	32	
SERVICE SINK	12	12	75	40	
DRINKING FOUNTAIN	12	-	32	32	
SINKS	12	12	40	32	
GROUP WASH FOUNTAIN	25	25	40	40	

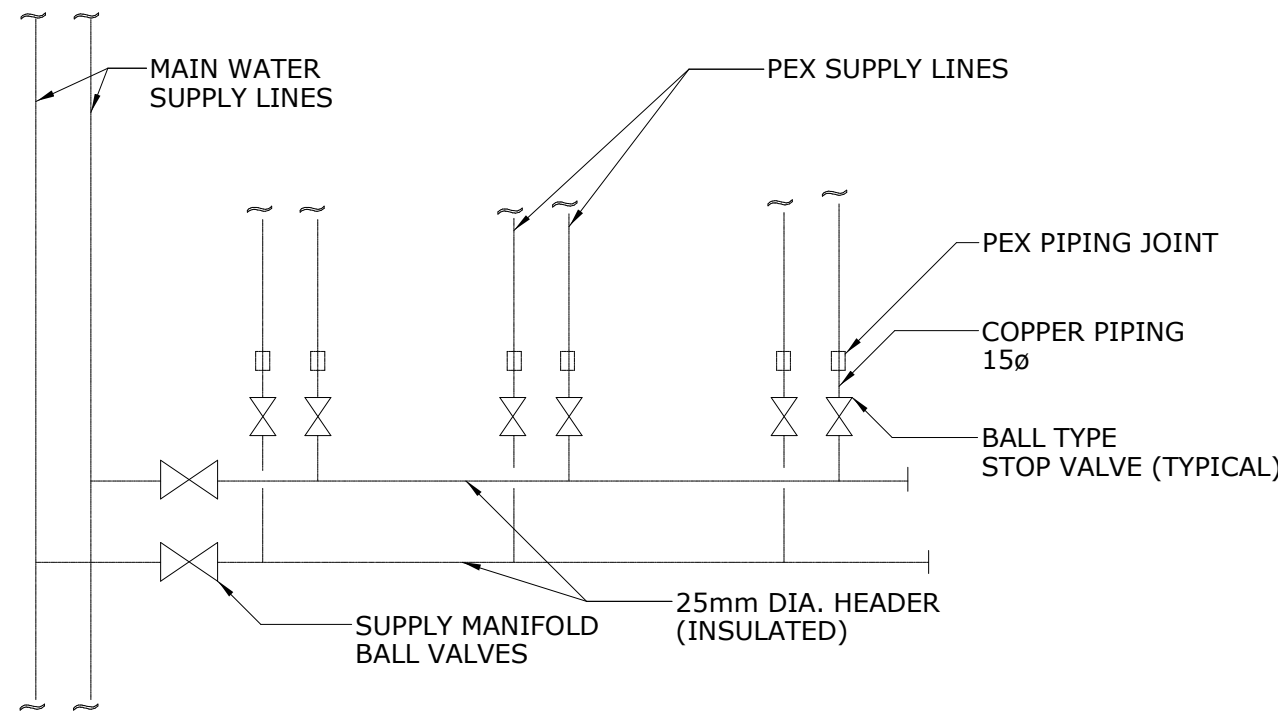
NOTES:

1. SIZING OF SUPPLIES INSIDE WASHROOM TO BE BASED ON 35 KPa PRESSURE DROP PER 30m OF PIPE OR MAXIMUM VELOCITY OF 1.2 mps.
2. CONTRACTOR SHALL PROVIDE SHOP DRAWING OF PLUMBING AND DRAINAGE INSIDE WASHROOM AREA FOR ALL WASHROOMS.

2 WASHER DRYER INSTALLATION DETAIL

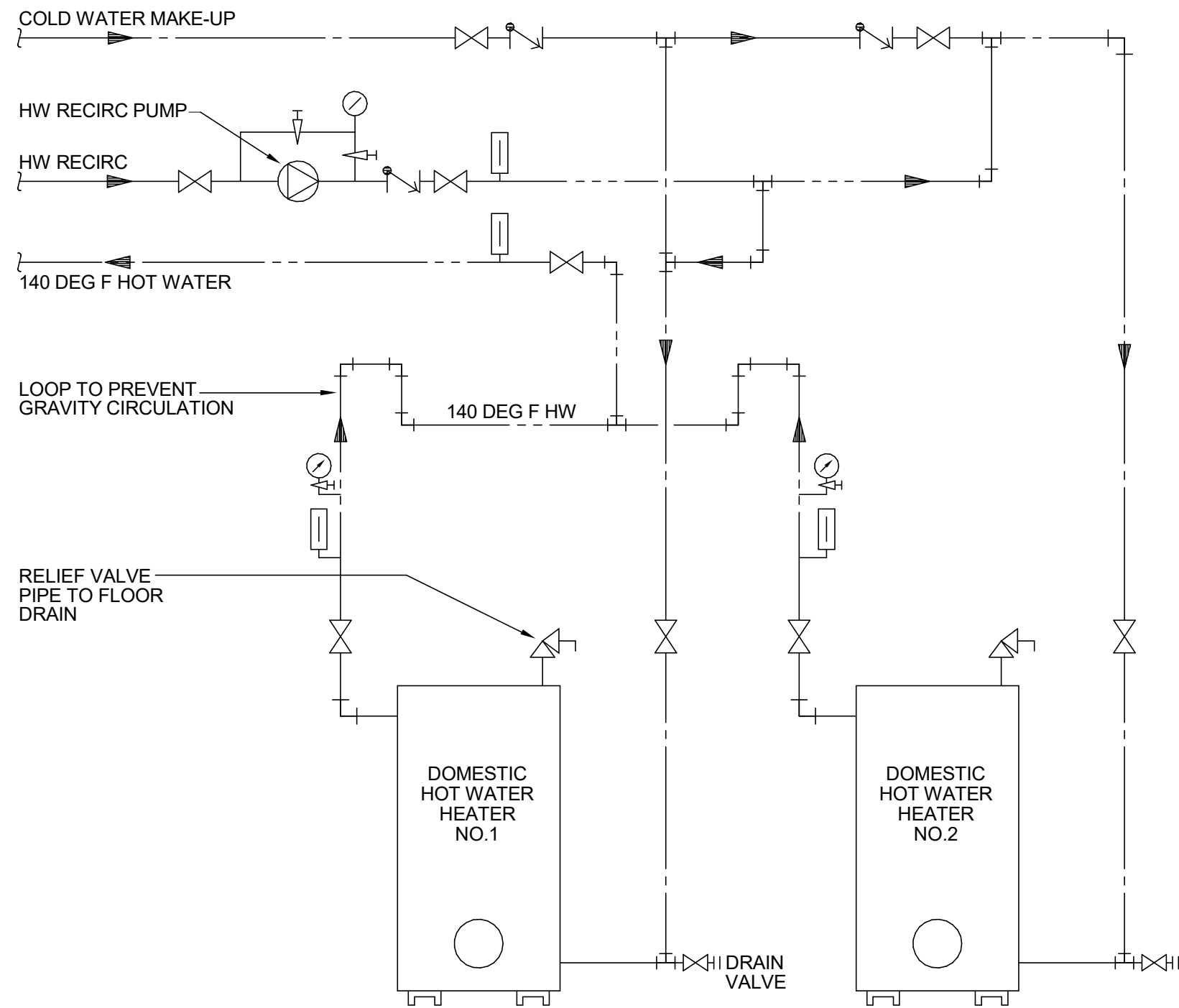


5 DOMESTIC WATER MANIFOLD DETAILS



1. MANIFOLD DISTRIBUTION ALL SUPPLY LINES BE FED FROM A 25mm INSULATION HEADER.
2. BALL TYPE SERVICE VALVES TO BE PROVIDED FOR EACH SUPPLY LINES FED OFF THE 20mm DIAMETER DISTRIBUTION HEADER. (SEE DETAIL ON DRAWINGS)
3. QUANTITY OF PIPE CONNECTION FROM MANIFOLD. SEE PLAN DRAWINGS AND SCHEMATIC DIAGRAM

3 2 WATER TANK HEATER PIPING



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RENOVATIONS

PROJECT ADDRESS

50 RICHMOND STREET EAST  
TORONTO, ON

PROJECT NO:

122260

DRAWN BY:

C. SU

CHECKED BY:

E. PANAH

PROJECT MGR:

F. BOLOURIAN

APPROVED BY:

R. BARROSO

SHEET TITLE  
MECHANICAL STANDARD  
DETAILS 5 OF 8

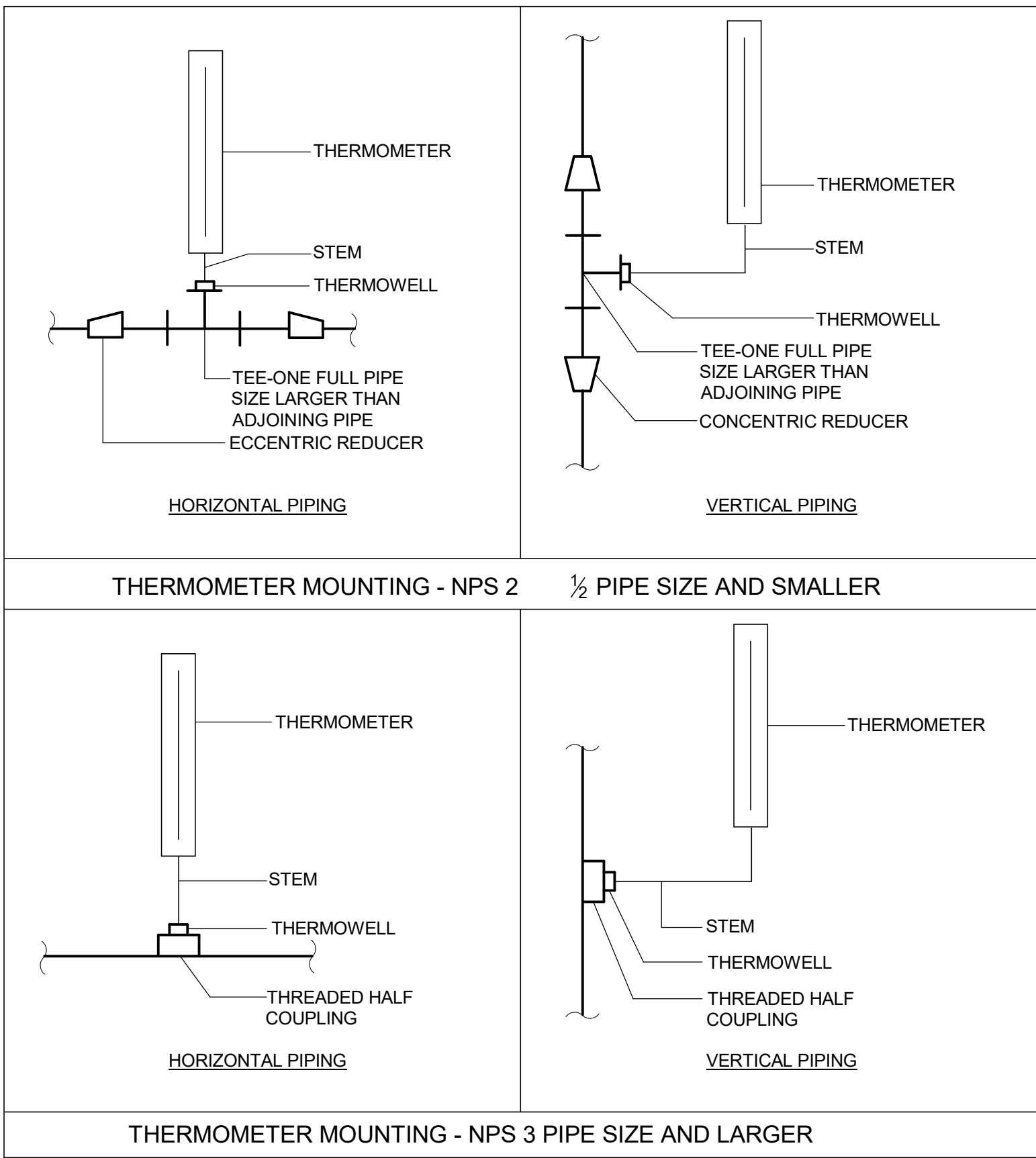
SHEET NUMBER

M0105

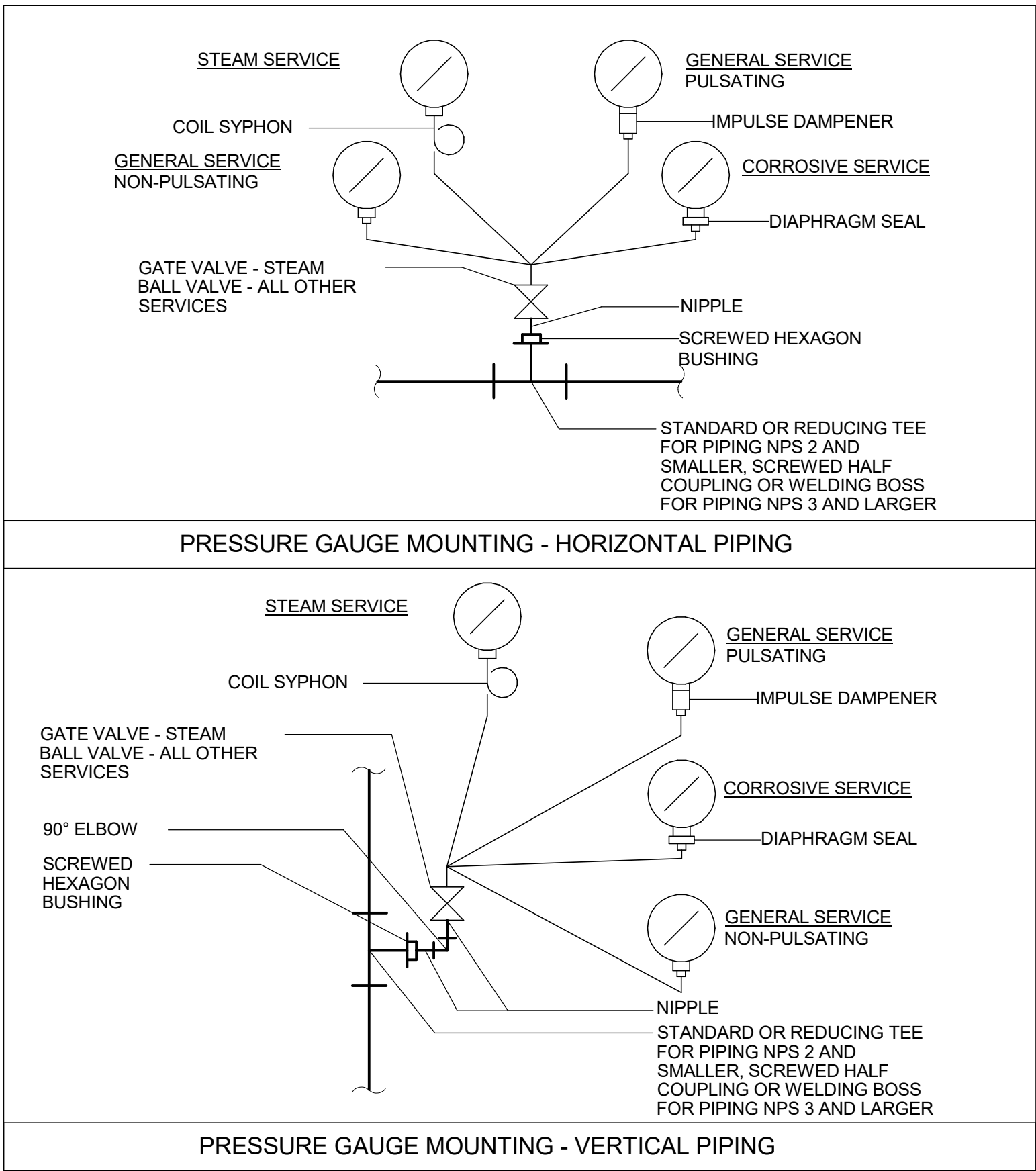
ISSUE

B

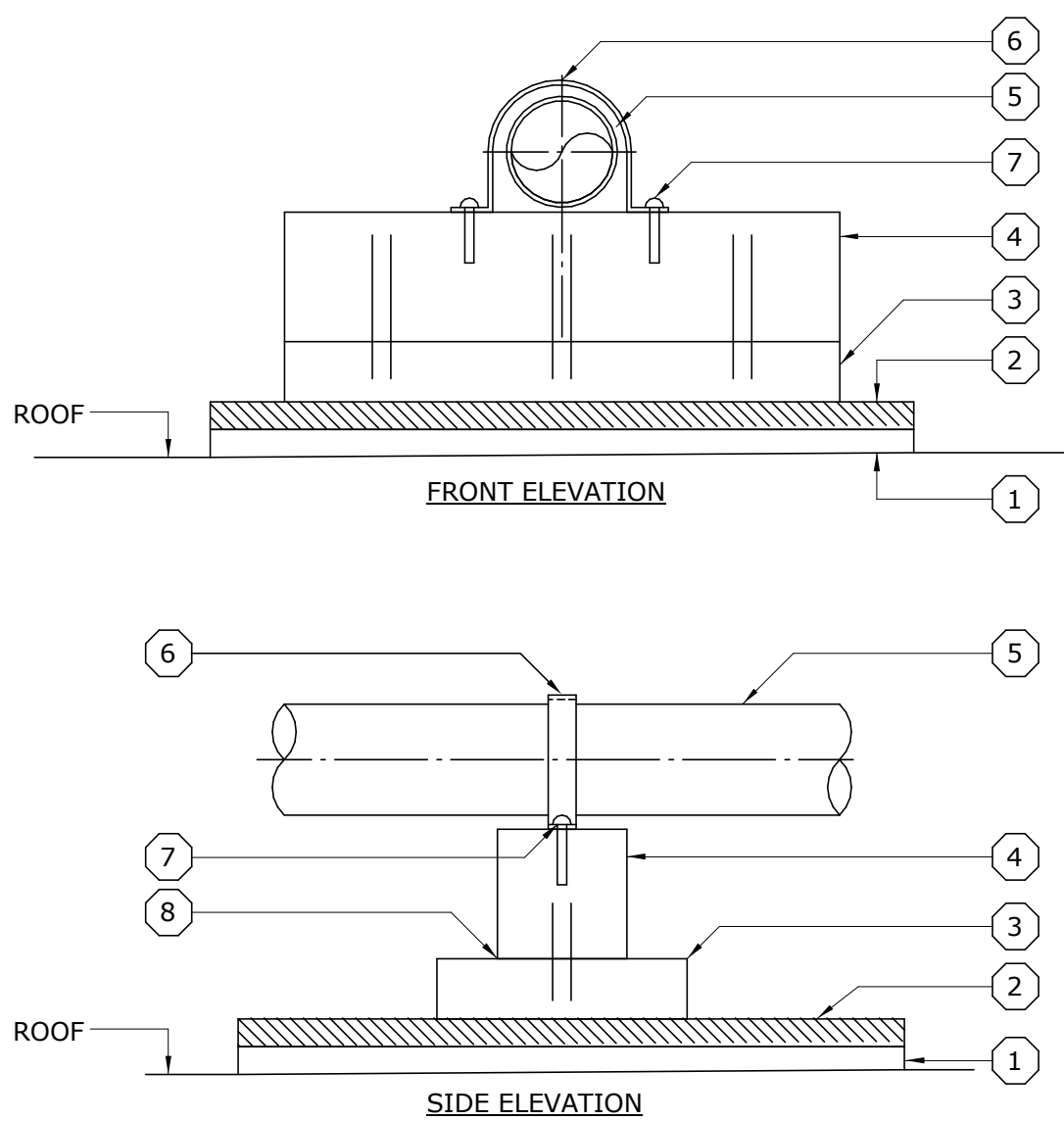




1 TEMPERATURE GAUGES  
M0106 Scale: NTS

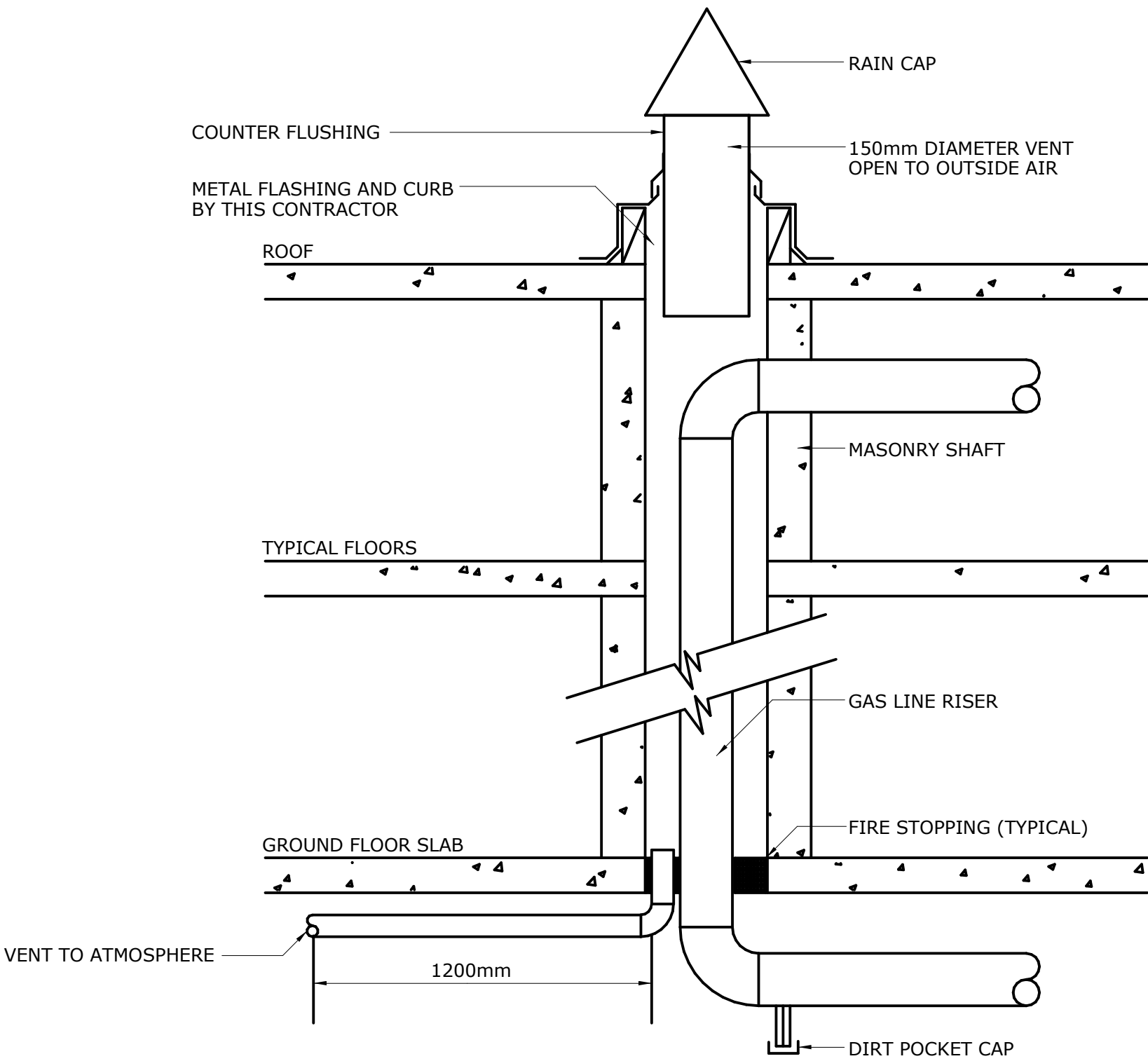


2 PRESSURE GAUGES  
M0106 Scale: NTS



- NOTES:
- 450mmx450mmx50mm ROOFMATE INSTALLATION PLACED ON FINISHED ROOF
  - 450mmx450mmx50mm PATIO STONES
  - 50mmx200mmx300mm LONG PRESSURE TREATED WOOD } NAILED TOGETHER WITH
  - 100mmx100mmx300mm LONG PRESSURE TREATED WOOD } GALVANIZED NAILS
  - SCHEDULE 50 STEEL PIPE
  - CARBON STEEL STRAPS - GRINNELL FIG. 262 OR EQUAL - OVERSIZE (1 SIZE LARGER) TO ALLOW FOR PIPE MOVEMENT - PAINT STRAPS WITH ANTI-CORROSIVE PAINT. PIPE SUPPORTS TO BE 2450mm APART FOR 25mm PIPE & 3050mm APART FOR 32mm PIPE & OVER. THERE MUST BE A SUPPORT AT EVERY 90° HORIZONTAL/VERTICAL ELBOW AND TEE FITTINGS.
  - CADMIUM PLATED No. 12 - 50mm LONG SCREWS
  - SHIM WOOD BLOCKING AS REQUIRED TO COMPENSATE FOR ROOF SLOPE
  - ALL PIPING ON ROOF TO BE PAINTED YELLOW-ORANGE BY GENERAL CONTRACTOR
  - ALL VERTICAL PIPING UP SIDE OF WALL OR ROOF ELEVATION CHANGES PAINTED TO MATCH WALL FINISH BY GENERAL CONTRACTOR AND BANDED (IDENTIFIED GAS) BY MECHANICAL CONTRACTOR.

3 GAS PIPING SUPPORT ON ROOF  
M0106 Scale: NTS



4 GAS LINE RISER VENTING  
M0106 Scale: NTS

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Arcadis Professional Services (Canada) Inc.

ISSUES		
No.	DESCRIPTION	DATE
A	ISSUED FOR PERMIT 100%	2025-07-31
B	ISSUED FOR TENDER	2025-09-02

CONSULTANTS

SEAL

PRIME CONSULTANT  
ARCADIS

100 - 175 Galaxy Blvd,  
Toronto, ON M9W 0C9, Canada  
tel 416 679 1930  
www.arcadis.com

PROJECT TITLE  
50 RICHMOND ST. E.  
RENOVATIONS

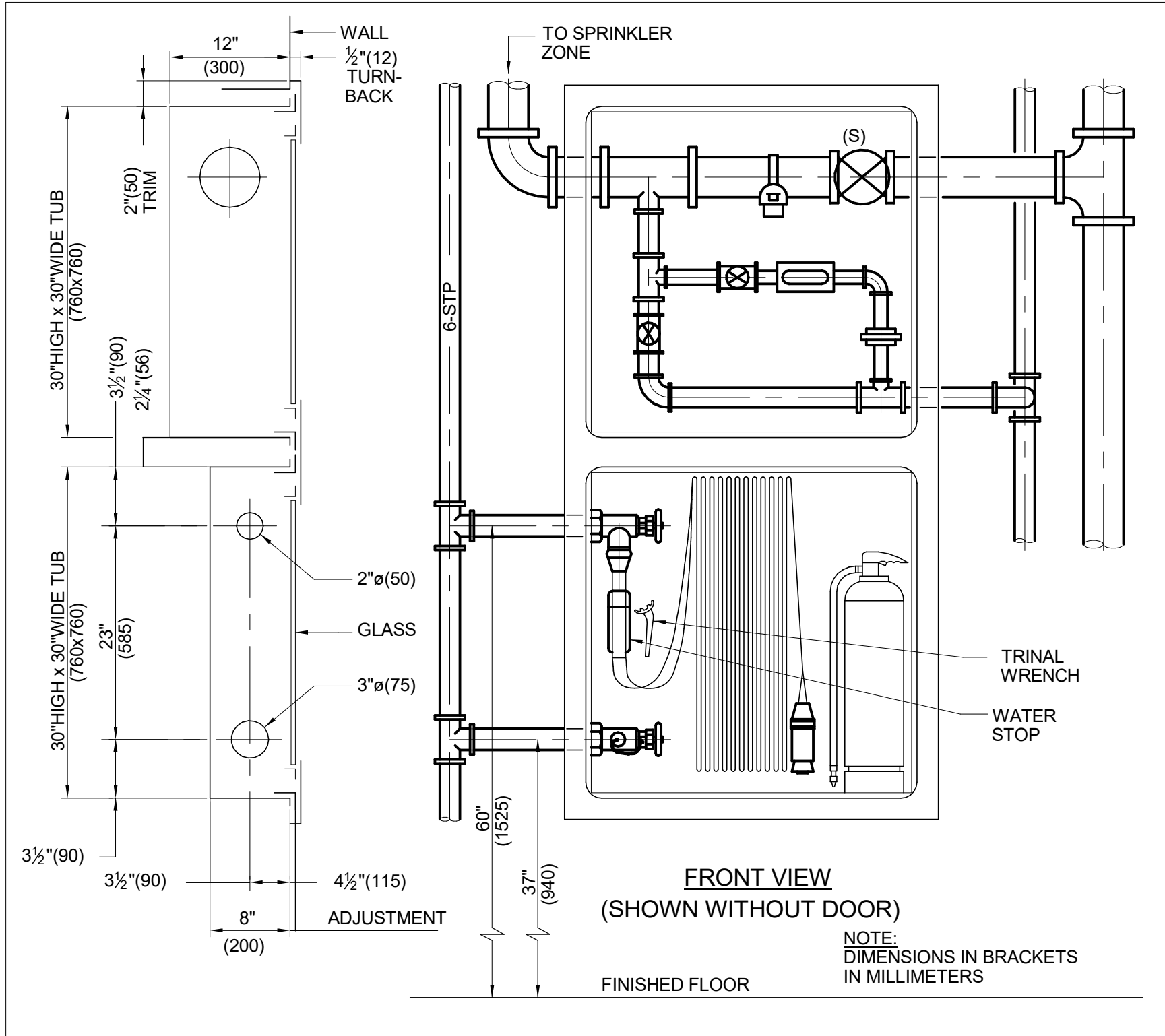
PROJECT ADDRESS

50 RICHMOND STREET EAST  
TORONTO, ON

PROJECT NO:  
122260  
DRAWN BY:  
C. SU  
CHECKED BY:  
E. PANAH  
PROJECT MGR:  
F. BOLOURIAN  
APPROVED BY:  
R. BARROSO

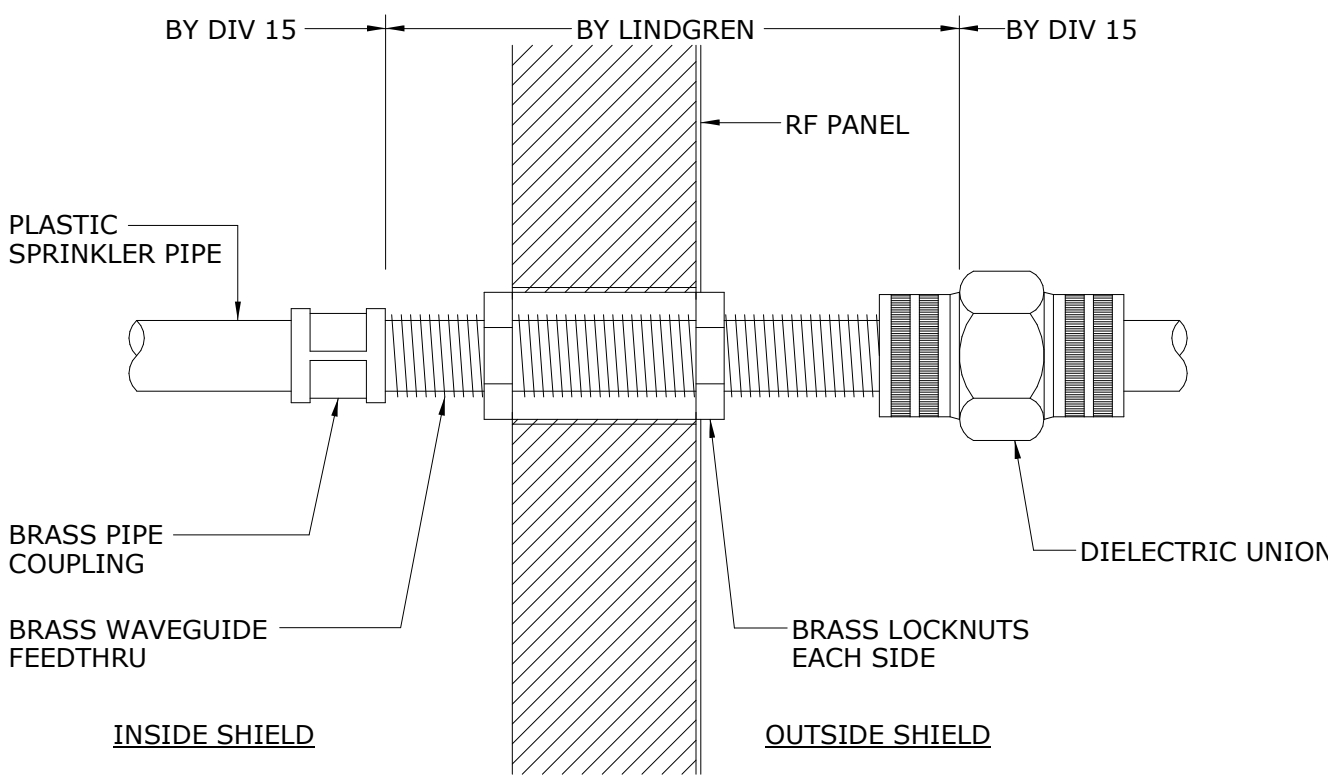
SHEET TITLE  
MECHANICAL STANDARD  
DETAILS 6 OF 8

SHEET NUMBER  
M0106  
ISSUE  
B



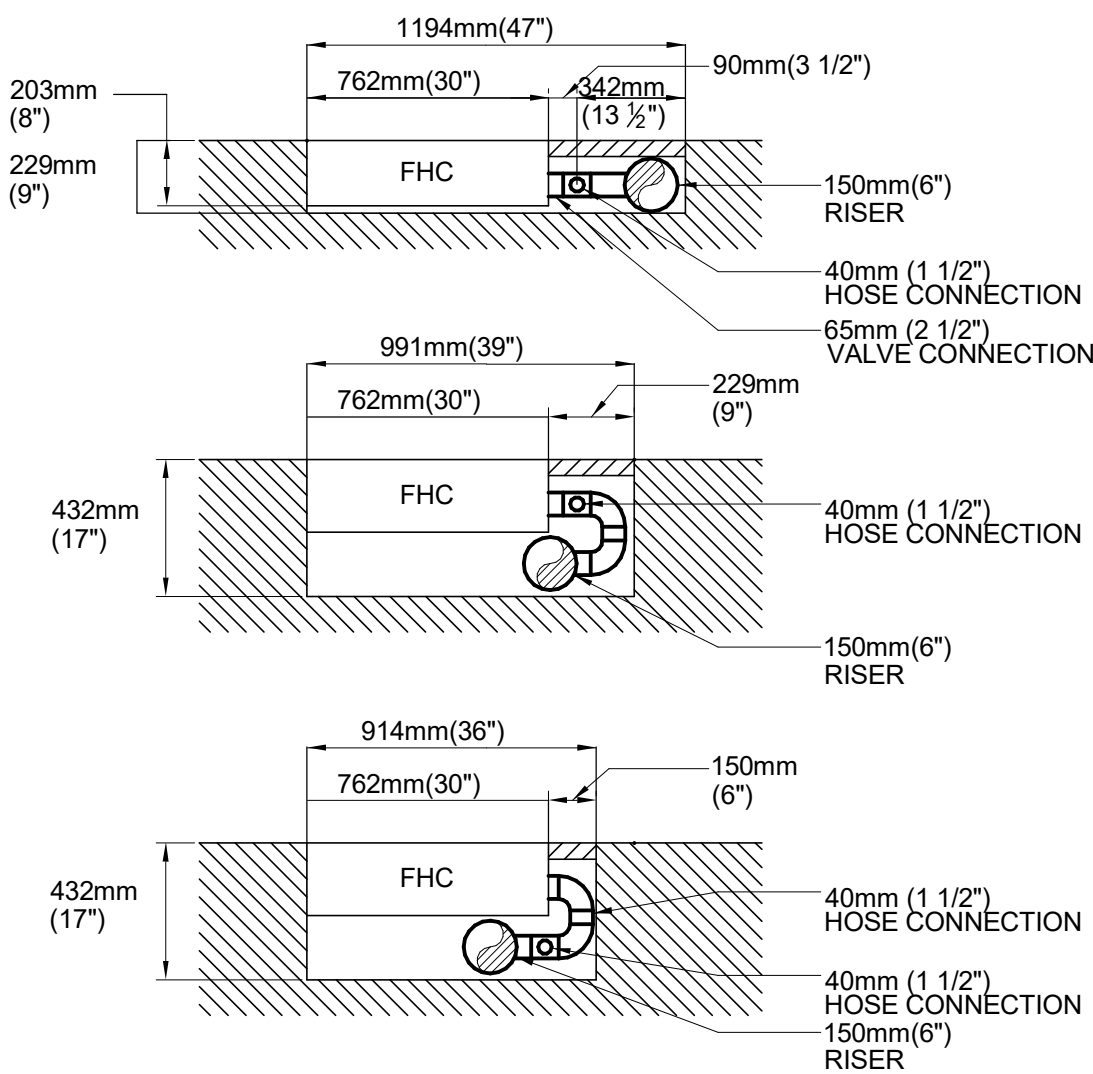
1  
M0107 Scale: NTS

RECESSED TYPE FIRE HOSE CABINET, SINGLE VALVE WITH EXTINGUISHER



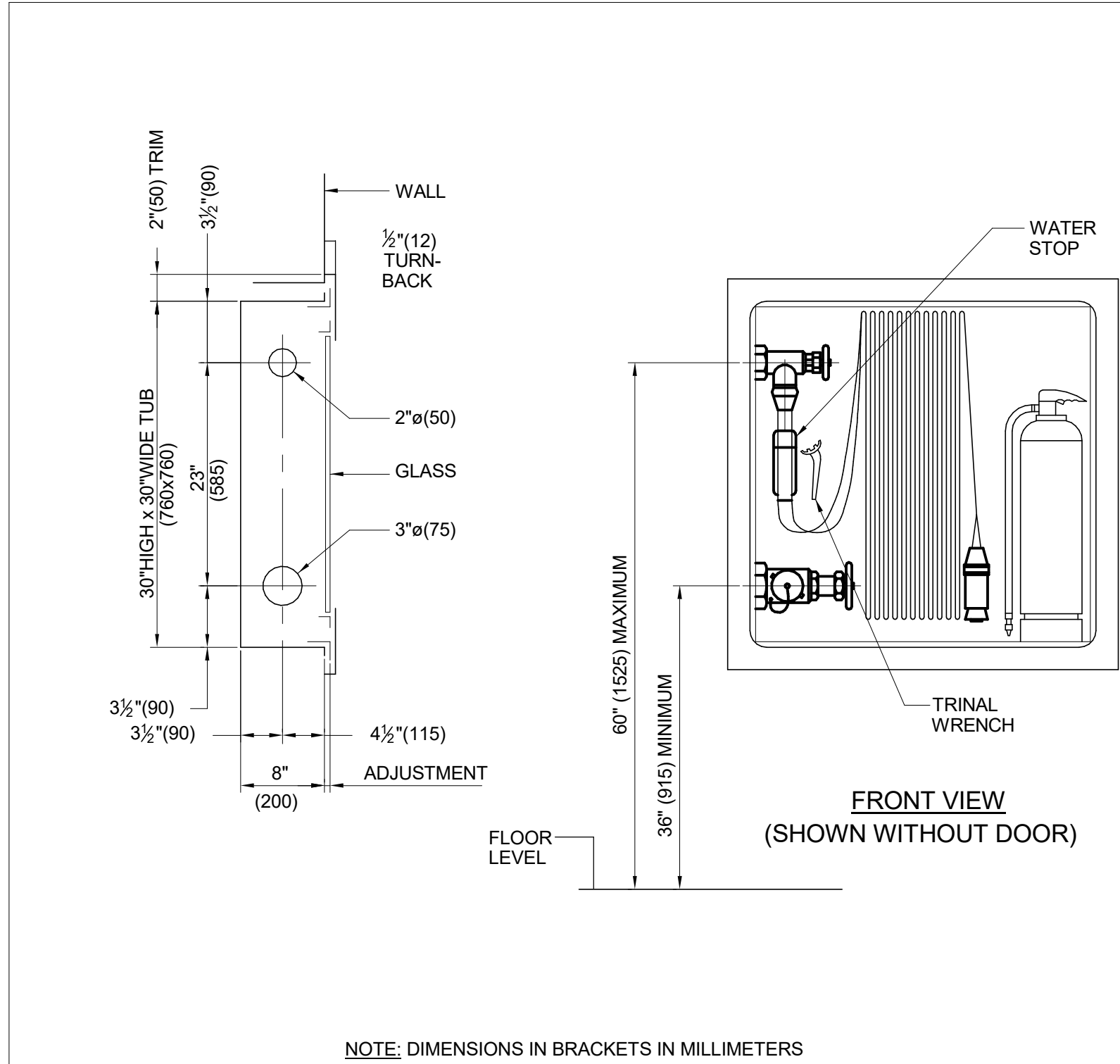
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M0107 Scale: NTS

DIELECTRIC SPRINKLER WAVEGUIDE



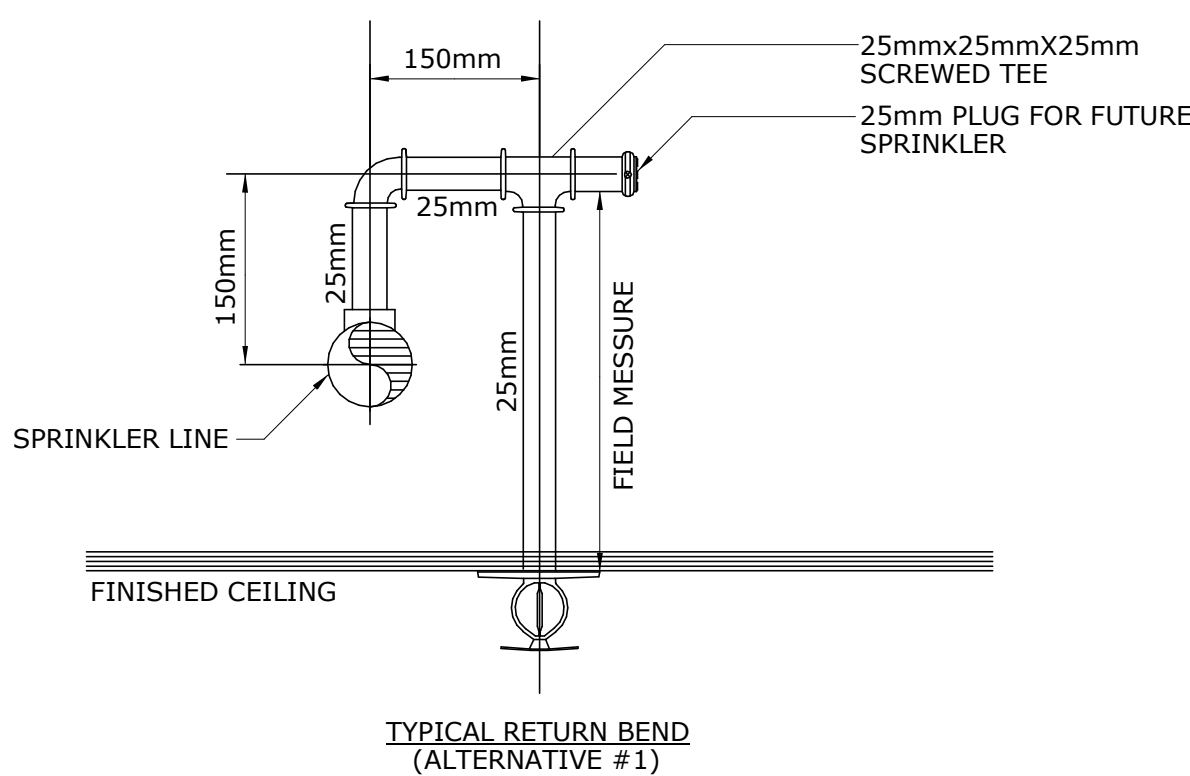
7  
M0107 Scale: NTS

FIRE HOSE CABINETS AND STANDPIPES



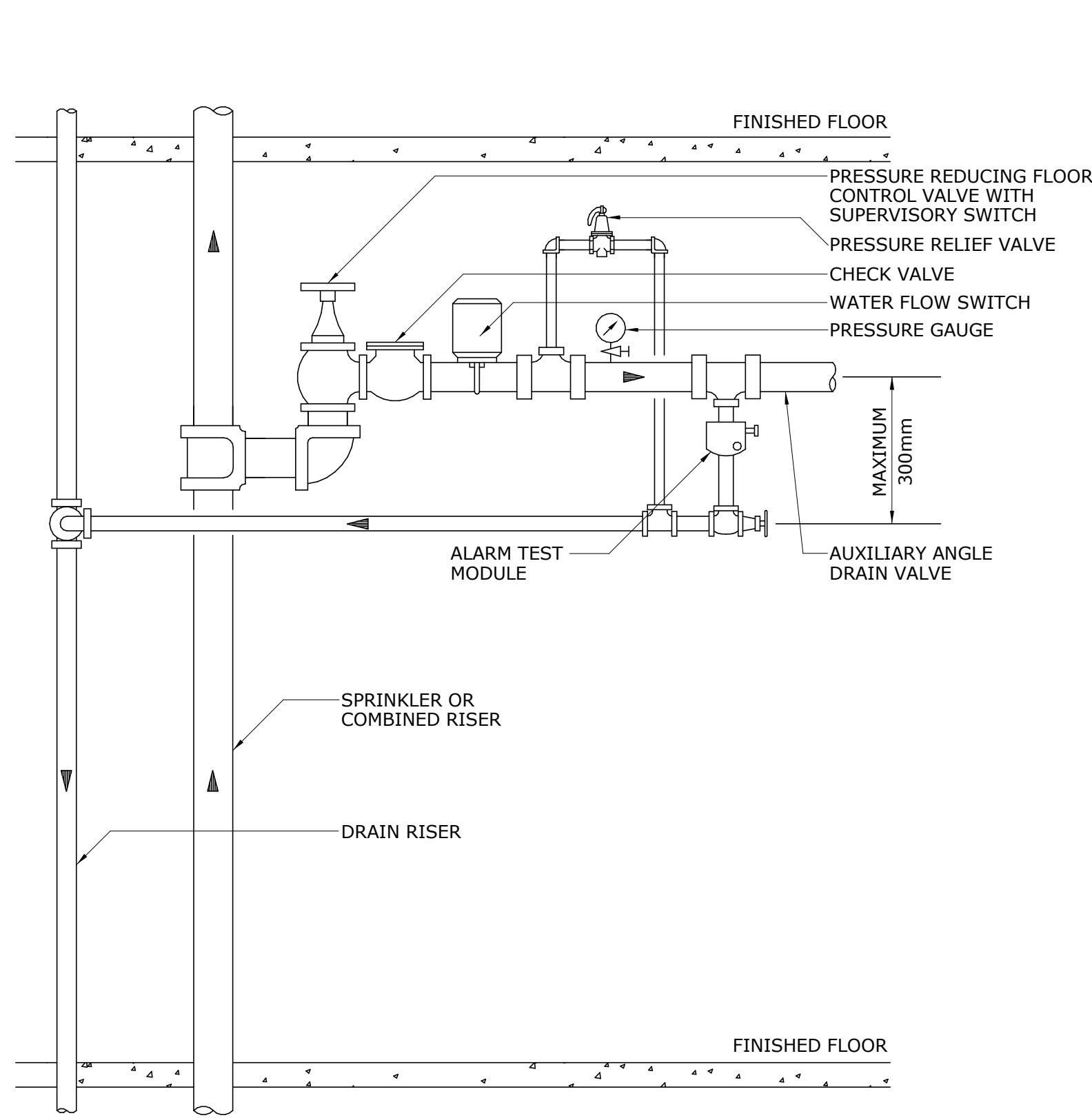
2  
M0107 Scale: NTS

SINGLE OR DOUBLE VALVE CABINET (FHCR), WITH EXTINGUISHER



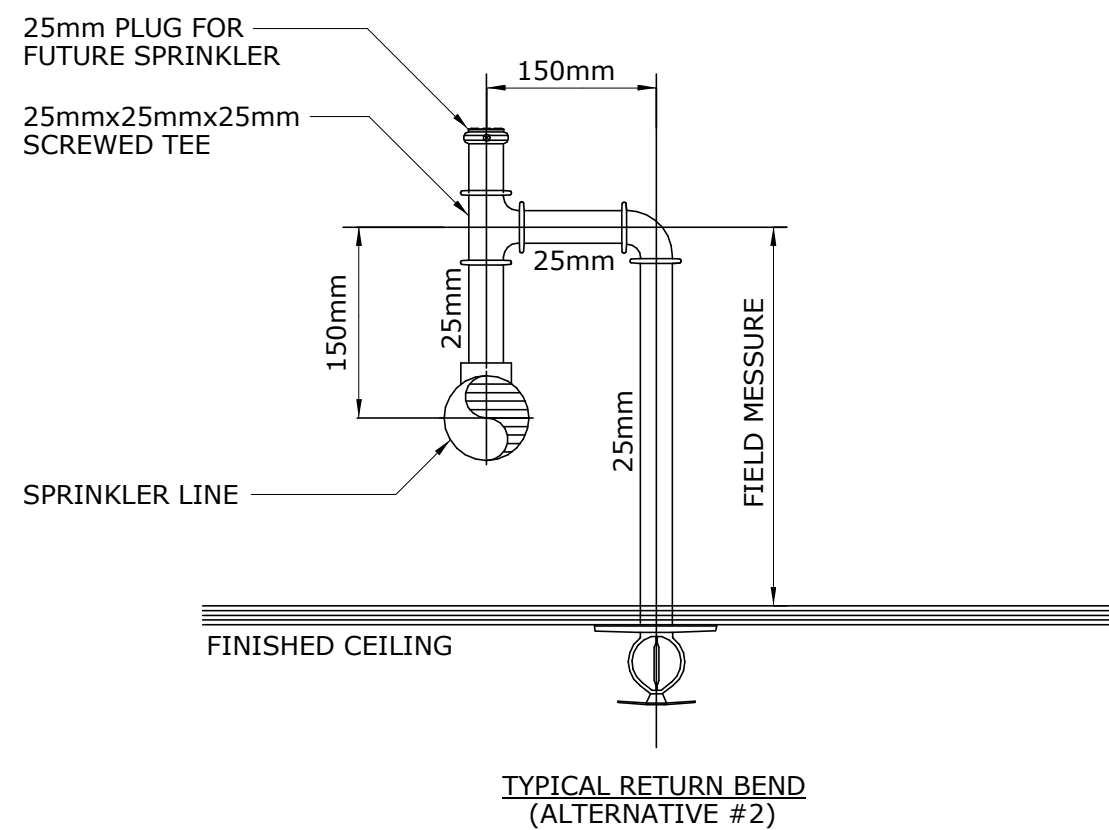
5  
M0107 Scale: NTS

TYPICAL SPRINKLER HEAD INSTALLATION 1



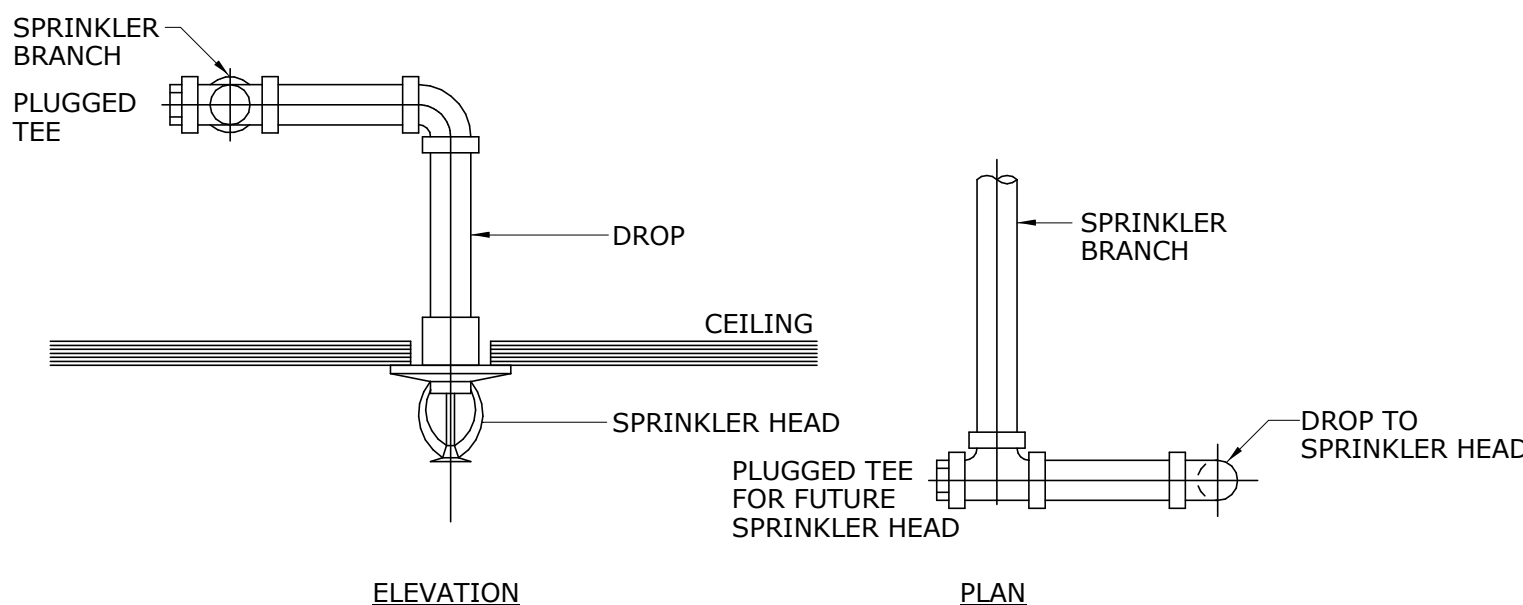
3  
M0107 Scale: NTS

SPRINKLER PRESSURE REDUCING STATION



6  
M0107 Scale: NTS

TYPICAL SPRINKLER HEAD INSTALLATION 2



8  
M0107 Scale: NTS

SPRINKLER BRANCH AT DROPS

ISSUES		
No.	DESCRIPTION	DATE
A	ISSUED FOR PERMIT 100%	2025-07-31
B	ISSUED FOR TENDER	2025-09-02

CONSULTANTS

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PROJECT TITLE  
**50 RICHMOND ST. E.  
RENOVATIONS**

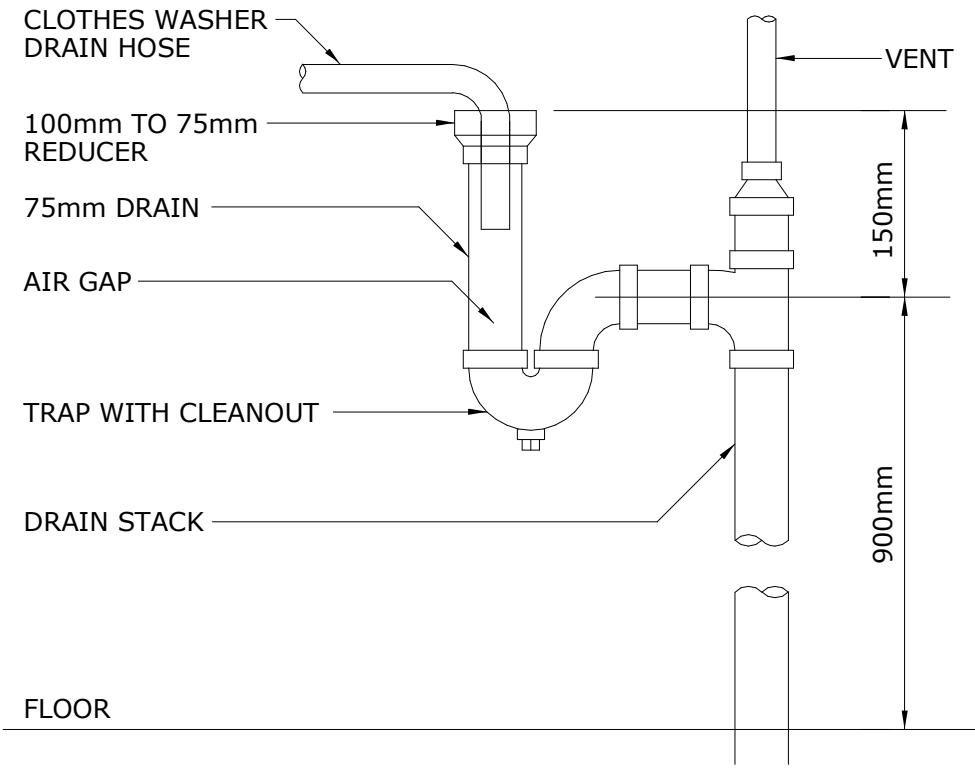
PROJECT ADDRESS  
**50 RICHMOND STREET EAST  
TORONTO, ON**

PROJECT NO:  
122260

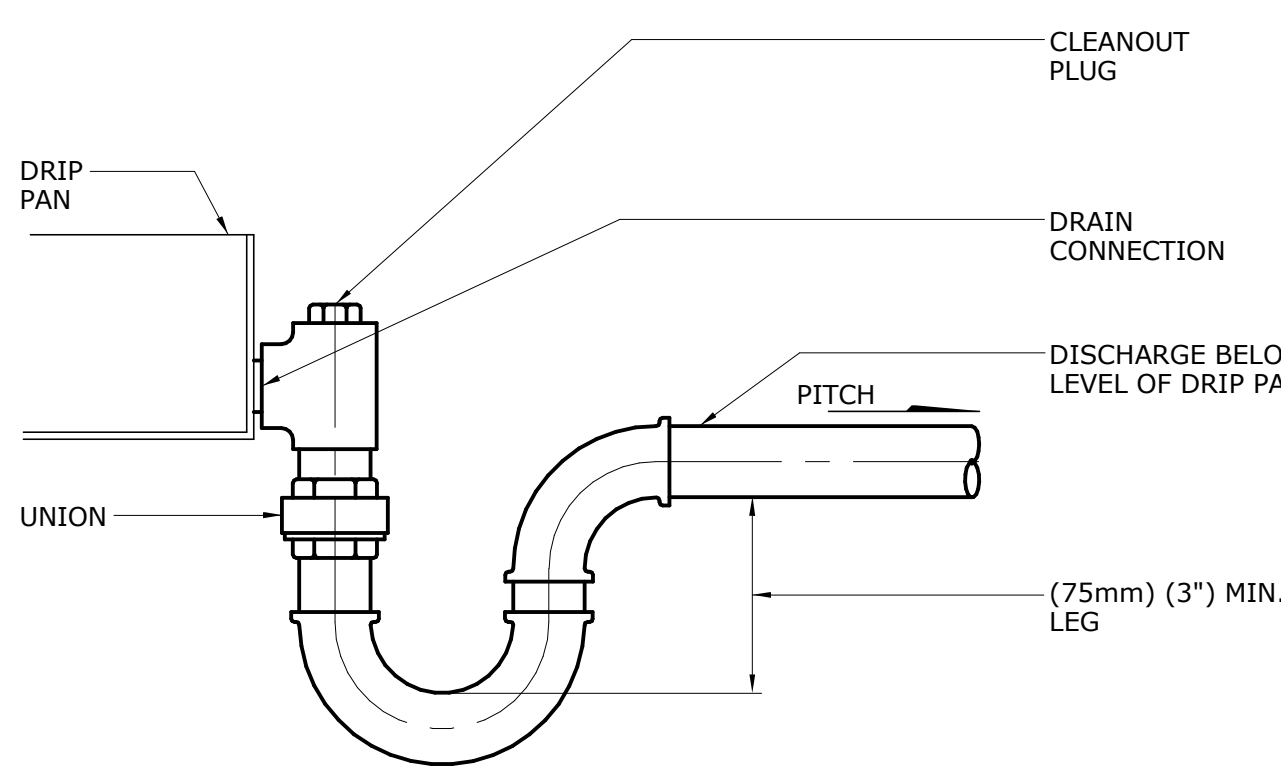
DRAWN BY: <b>C. SU</b>	CHECKED BY: <b>E. PANAH</b>
PROJECT MGR: <b>F. BOLOURIAN</b>	APPROVED BY: <b>R. BARROSO</b>

SHEET TITLE  
**MECHANICAL STANDARD  
DETAILS 7 OF 8**

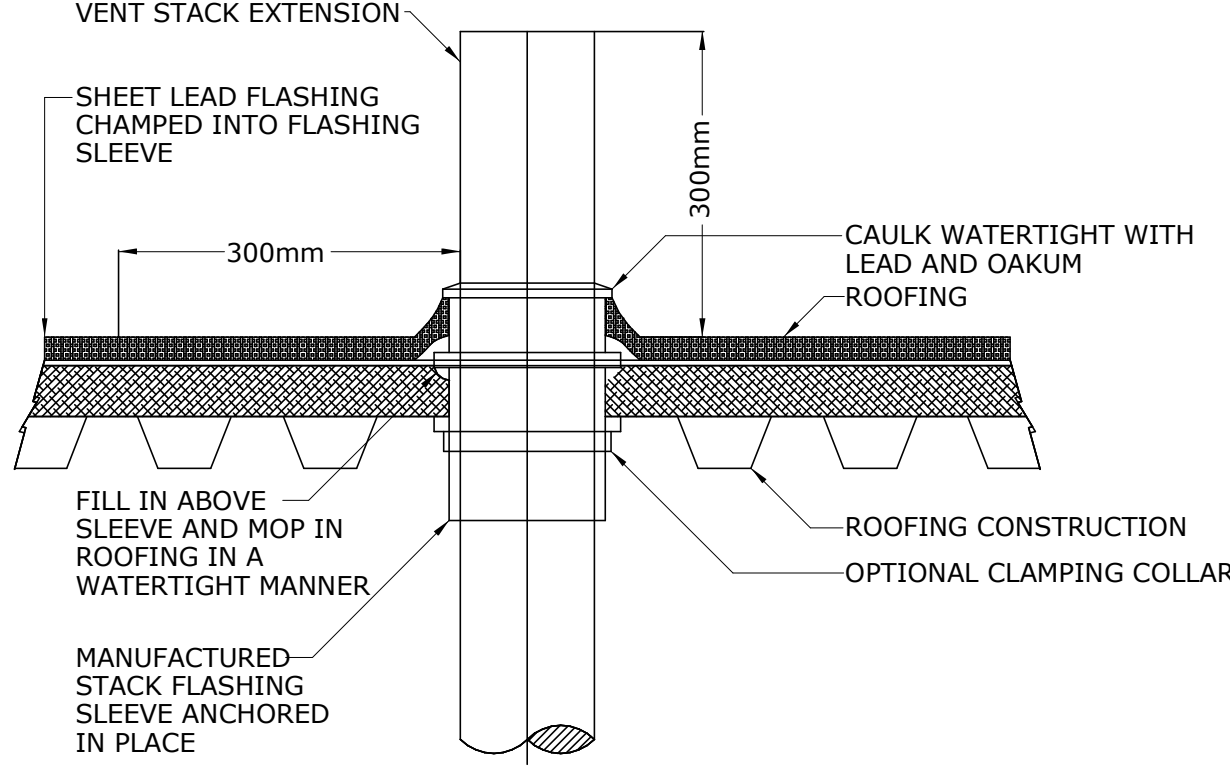
SHEET NUMBER <b>M0107</b>	ISSUE <b>B</b>
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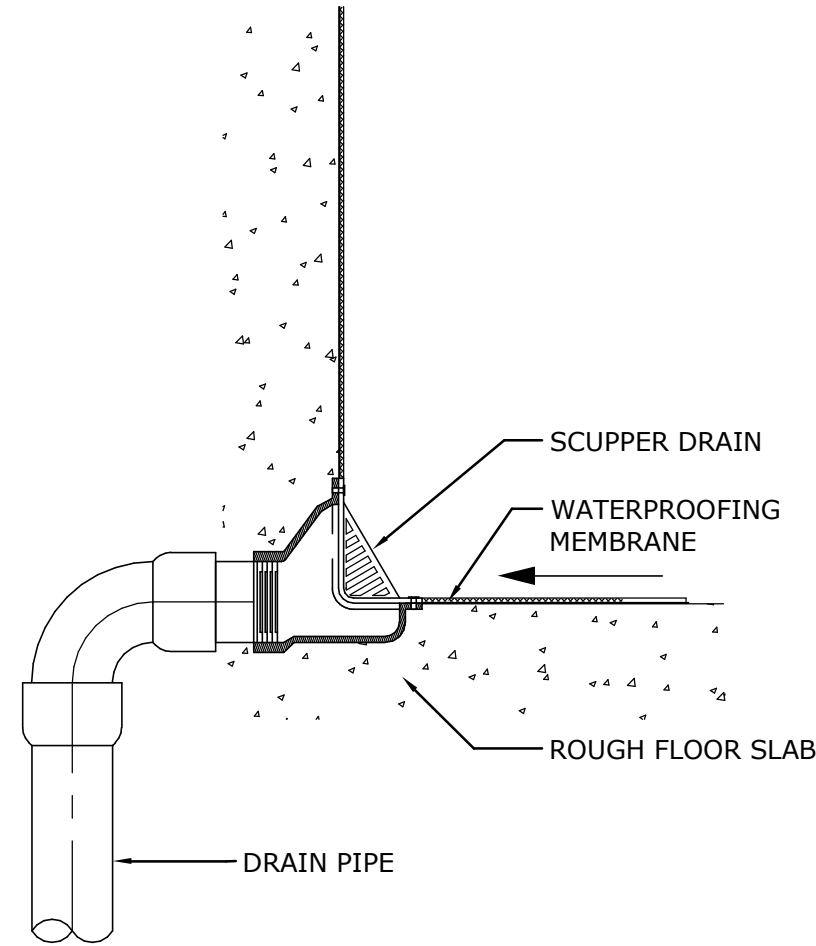
1 DRAIN FOR CLOTHES WASHER  
M0108 Scale: NTS



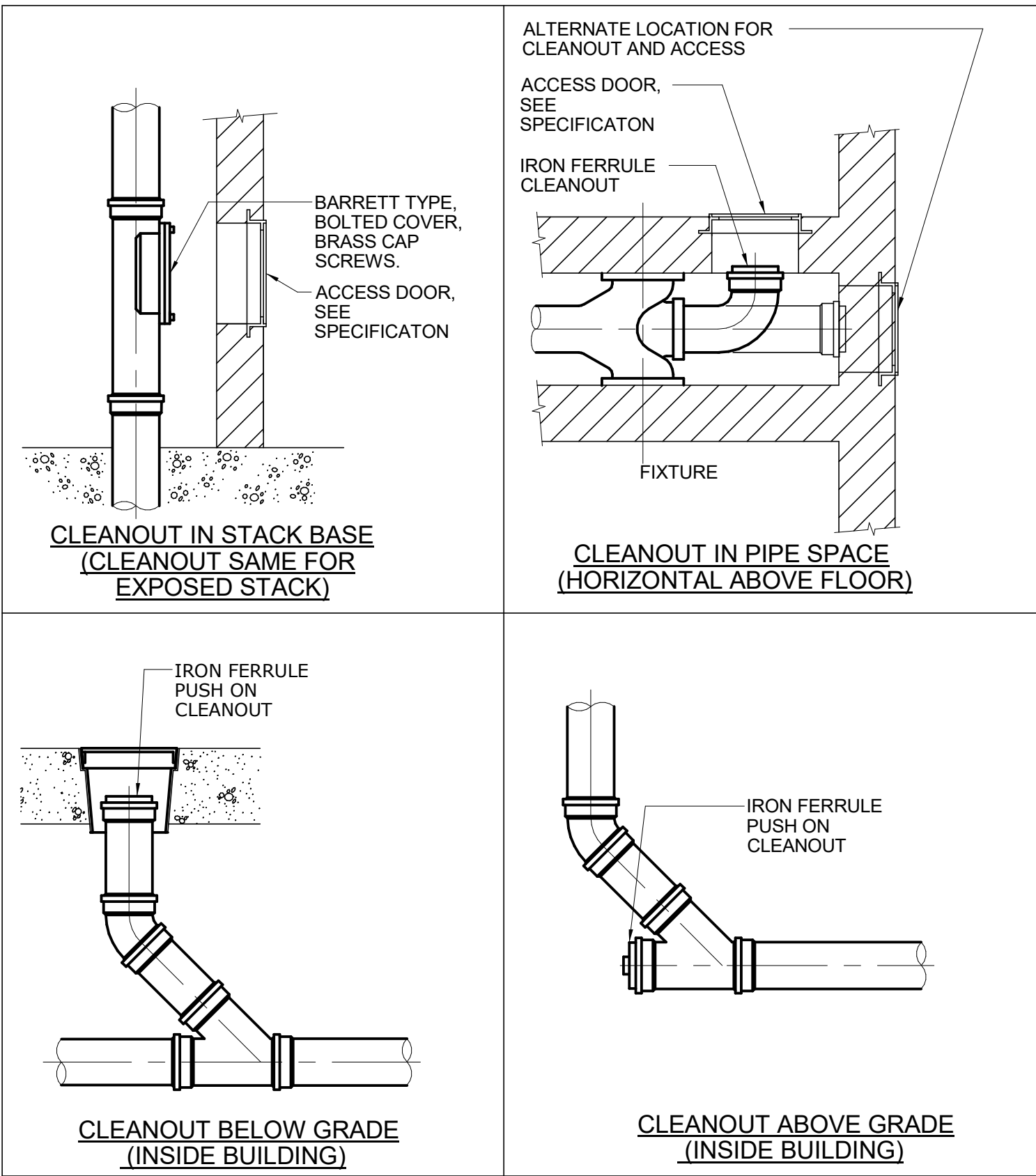
2 DRAIN PAN DETAILS  
M0108 Scale: NTS



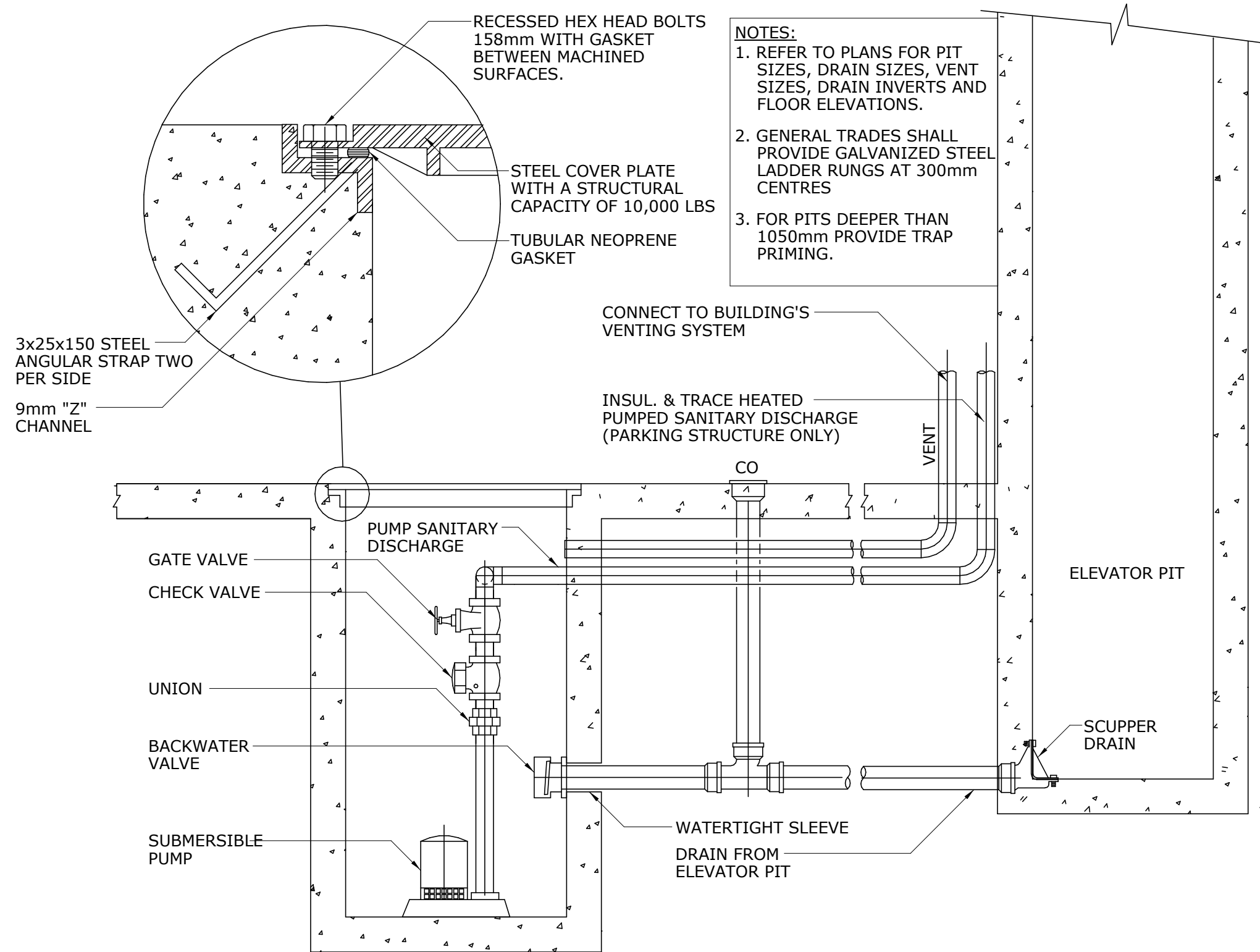
3 SAN VENT THROUGH ROOF  
M0108 Scale: NTS



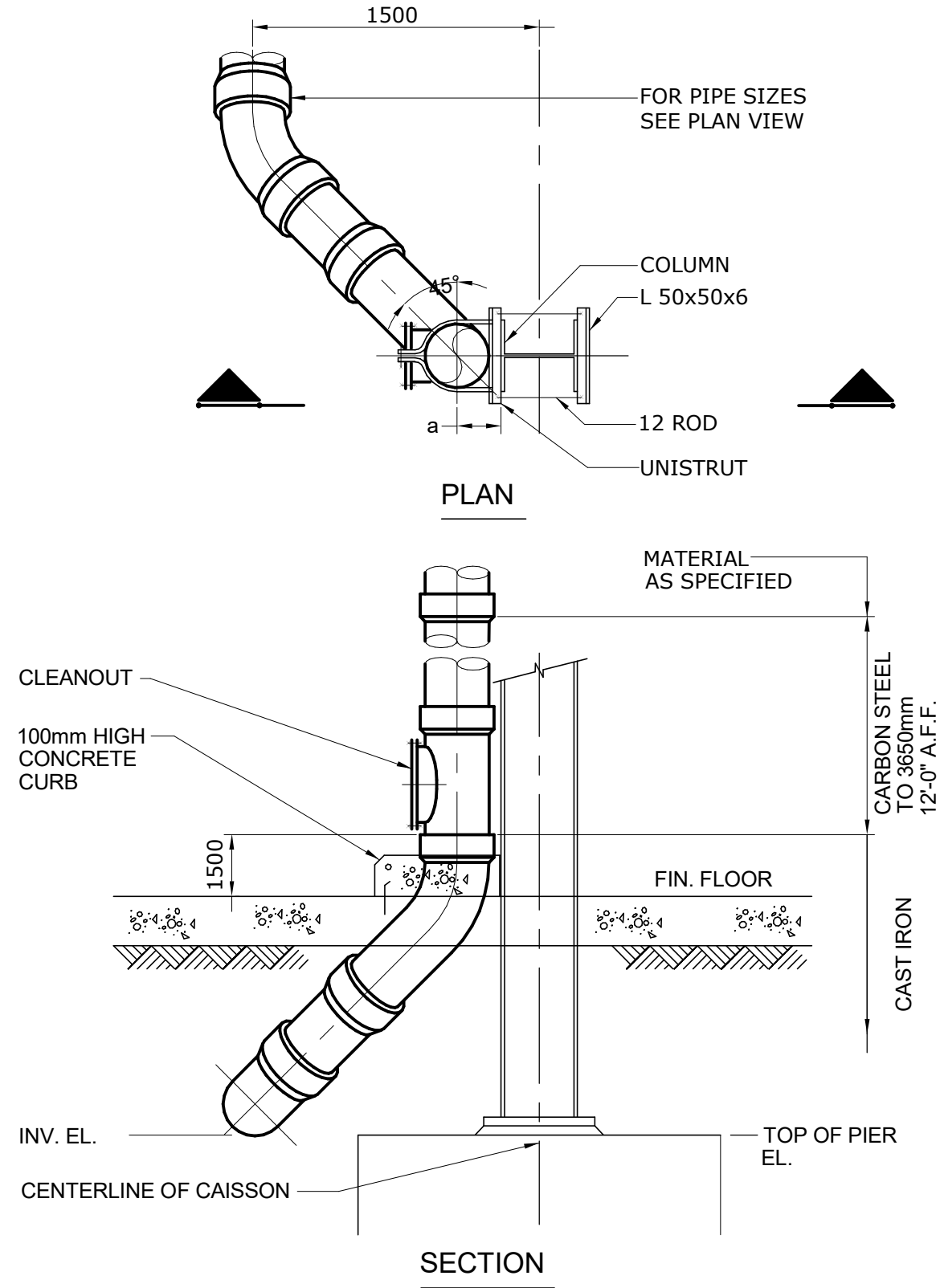
4 SCUPPER DRAIN  
M0108 Scale: NTS



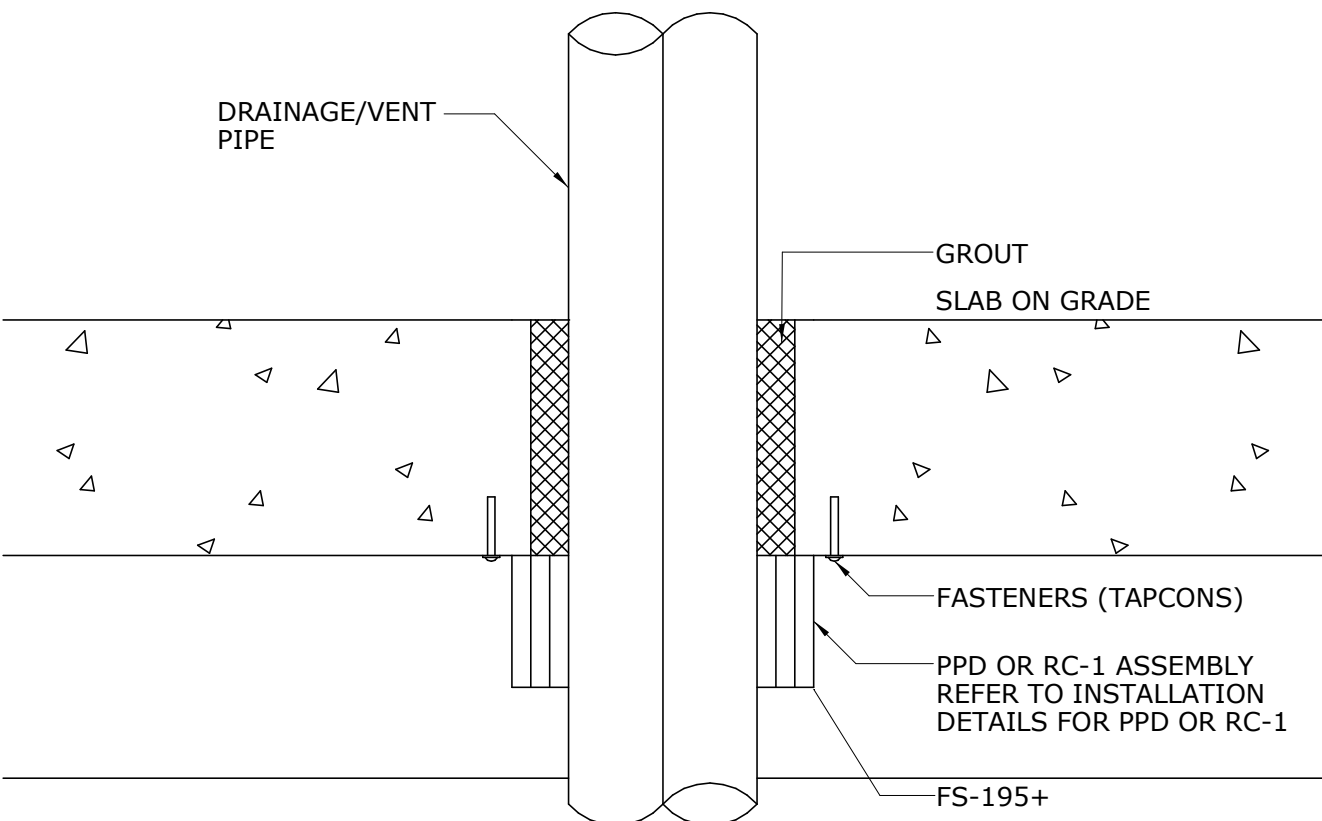
5 DRAINAGE CLEANOUT DETAIL - INTERIOR  
M0108 Scale: NTS



6 ELEVATOR SUMP PIT  
M0108 Scale: NTS



7 STACKBASE DETAIL SANITARY AND STORM  
M0108 Scale: NTS



8 SOLID PVC-CPVC PIPE THROUGH CONCRETE FLOOR  
M0108 Scale: NTS

ISSUES		
No.	DESCRIPTION	DATE
A	ISSUED FOR PERMIT 100%	2025-07-31
B	ISSUED FOR TENDER	2025-09-02

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SEAL		
PRIME CONSULTANT		

PROJECT TITLE		
50 RICHMOND ST. E. RENOVATIONS		

PROJECT ADDRESS		
50 RICHMOND STREET EAST TORONTO, ON		

PROJECT NO: 122260		
DRAWN BY: C. SU	CHECKED BY: E. PANAH	
PROJECT MGR: F. BOLOURIAN	APPROVED BY: R. BARROSO	

SHEET TITLE		
MECHANICAL STANDARD DETAILS 8 OF 8		

SHEET NUMBER		ISSUE
M0108		B

INDOOR FAN COIL UNITS										
Mark No.		BF-01 to BF-09	1F -01 to 1F-12	2F-01 to 2F-14	3F-01 to 3F-13	4F-01 to 4F-12	5F-01 to 5F-12	EE-01	EE-02 TO EE-06	EE-07
Revision Date		27-Aug-25	27-Aug-25	27-Aug-25	27-Aug-25	27-Aug-25	27-Aug-25	27-Aug-25	27-Aug-25	27-Aug-25
Service		Basement	First Floor	Second Floor	Third Floor	Fourth Floor	Fifth Floor	Basement Elec Room	Electrical/IT Rooms	Roof Elevator Machine Room
Drawing Location		M5101	M5102	M5102	M5102	M5103	M5103	M5104	-	M5107
FCU Quantity		9	14	14	13	12	12	1	5	1
Condenser		ACC-1	ACC-2	ACC-3	ACC-4	ACC-5	ACC-6	ACC-7	ACC-8 TO 12	ACC-13
General Requirements										
Manufacturer		Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric
Unit Type		CEILING CONCEALED DUCTED	CEILING CONCEALED DUCTED	CEILING CONCEALED DUCTED	CEILING CONCEALED DUCTED	CEILING CONCEALED DUCTED	CEILING CONCEALED DUCTED	WALL MOUNTED DUCTLESS	WALL MOUNTED DUCTLESS	WALL MOUNTED DUCTLESS
Model		PEFY-WL06NMAU-A	PEFY-WL06NMAU-A	PEFY-WL06NMAU-A	PEFY-WL06NMAU-A	PEFY-WL06NMAU-A	PEFY-WL06NMAU-A	PKA-A12LA1-TH	PKA-A12LA1-TH	PKA-A18HA7
Net Weight	kg	21	21	21	21	21	21	12.7	12.7	13
Heat Exchanger Type		Cross fin (Aluminum fin and copper tube)	Cross fin (Aluminum fin and copper tube)	Cross fin (Aluminum fin and copper tube)	Cross fin (Aluminum fin and copper tube)	Cross fin (Aluminum fin and copper tube)	Cross fin (Aluminum fin and copper tube)	Cross fin (Aluminum fin and copper tube)	Cross fin (Aluminum fin and copper tube)	Cross fin (Aluminum fin and copper tube)
Water Volume	L	0.9	0.9	0.9	0.9	0.9	0.9	-	-	-
Fan										
Capacity	LPS (Low-Mid-High)	106 - 133 - 150	106 - 133 - 150	106 - 133 - 150	106 - 133 - 150	106 - 133 - 150	106 - 133 - 150	75-125-150	75-125-150	290-335-380
External Static Pressure	Pa	150	150	150	150	150	150	-	-	-
Cooling (Hydronic)										
Nominal Capacity	kW	1.58	1.58	1.58	1.58	1.58	1.58	3.5	3.5	5.28
Rated Capacity	kW	1.75	1.75	1.75	1.75	1.75	1.75	-	-	5.28
Evaporator EAT (db)	°C	26.7°C	26.7°C	26.7°C	26.7°C	26.7°C	26.7°C	26.7°C	26.7°C	26.7°C
Evaporator EAT (wb)	°C	19.4°C	19.4°C	19.4°C	19.4°C	19.4°C	19.4°C	19.4°C	19.4°C	19.4°C
Heating (Hydronic)										
Nominal Capacity	kW	1.4	1.4	1.4	1.4	1.4	1.4	-	-	-
Rated Capacity	kW	1.96	1.96	1.96	1.96	1.96	1.96	-	-	-
EAT	°C	19	19	19	19	19	19	-	-	-
Filter										
Type		PP honeycomb fabric.	PP honeycomb fabric.	PP honeycomb fabric.	PP honeycomb fabric.	PP honeycomb fabric.	PP honeycomb fabric.	PP honeycomb fabric.	PP honeycomb	PP honeycomb
MERV Rating	No.	13	13	13	13	13	13	8	8	8
Fan Motor / Power										
Power	kW	0.085	0.085	0.085	0.085	0.085	0.085	0.03	0.03	0.03
MCA	A	1.75	1.75	1.75	1.75	1.75	1.75	0.24	0.24	1
MOP	A	15	0.42	0.42	0.42	0.42	0.42	-	-	-
Volts/Phase/Hz		208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60
Unfused Disconnect		FUSE	FUSE	FUSE	FUSE	FUSE	FUSE	FUSE	FUSE	FUSE
CONTROLS										
Control Sequence	CS	-	-	-	-	-	-	-	-	-
Controlled by		Thermostat	Thermostat	Thermostat	Thermostat	Thermostat	Thermostat	Thermostat	Thermostat	Thermostat
ELECTRICAL COORDINATION										
General Requirements										
Normal Power		YES	YES	YES	YES	YES	YES	YES	YES	YES
Emergency Power		NO	NO	NO	NO	NO	NO	NO	NO	NO
Disconnect provided by		MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER

Notes:

1. Starter is supplied with equipment.

DOMESTIC WATER MANIFOLD (MF)																			
Mark No.		MF-BC	MF-BH	MF-1C	MF-1H	MF-2AC	MF-2AH	MF-2BC	MF-2BH	MF-3AC	MF-3AH	MF-3BC	MF-3BH	MF-4AC	MF-4AH	MF-4BC	MF-4BH	MF-5AC	MF-5AH
Revision Date		Aug 22 2025	Aug 22 2025	Aug 22 2025	Aug 22 2025	Aug 22 2025	Aug 22 2025	Aug 22 2025	Aug 22 2025	Aug 22 2025	Aug 22 2025	Aug 22 2025	Aug 22 2025	Aug 22 2025	Aug 22 2025	Aug 22 2025	Aug 22 2025	Aug 22 2025	Aug 22 2025
Service		DCW	DHW	DCW	DHW	DCW	DHW	DCW	DHW	DCW	DHW	DCW	DHW	DCW	DHW	DCW	DHW	DCW	DHW
Drawing Location		M2101/M2108	M2101/M2108	M2102/M2108	M2102/M2108	M2103/M2108	M2103/M2108	M2103/M2108	M2103/M2108	M2104/M2108	M2104/M2108	M2104/M2108	M2104/M2108	M2105/M2108	M2105/M2108	M2105/M2108	M2105/M2108	M2106/M2108	M2106/M2108
Details																			
Pipe Size Connection	mm	20	20	20	20	20	20	25	25	20	20	20	20	25	25	25	25	20	20
No. of Ports		8	8	6	6	5	5	10	10	8	8	4	4	9	8	10	8	7	6
Operating Pressure	kPa	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380
Operating Approx. Temperature	°C	< 22.3	< 60	< 22.3	< 60	< 22.3	< 60	< 22.3	< 60	< 22.3	< 60	< 22.3	< 60	< 22.3	< 60	< 22.3	< 60	< 22.3	< 60
Manufacturer		Uponor	Uponor	Uponor	Uponor	Uponor	Uponor	Uponor	Uponor	Uponor	Uponor	Uponor	Uponor	Uponor	Uponor	Uponor	Uponor	Uponor	Uponor
Controls																			
Control Sequence	CS	Manual Valve	Manual Valve	Manual Valve	Manual Valve	Manual Valve	Manual Valve	Manual Valve	Manual Valve	Manual Valve	Manual Valve	Manual Valve	Manual Valve	Manual Valve	Manual Valve	Manual Valve	Manual Valve	Manual Valve	Manual Valve
Remarks:																			

1. All manifold shall be insulated, provided with isolation valves and pipe and valve identification tag.

2. All manifold shall be adequately supported and housed in a manufacturer supplied housing recessed on the wall.

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Arcadis Professional Services (Canada) Inc.

ISSUES		
No.	DESCRIPTION	DATE
A	ISSUED FOR PRELIMINARY COSTING	2025-06-27
B	ISSUED FOR PERMIT 100%	2025-07-31
C	ISSUED FOR TENDER	2025-09-02

CONSULTANTS

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www.arcadis.com

PROJECT TITLE  
50 RICHMOND ST. E.  
RENOVATIONS

PROJECT ADDRESS

50 RICHMOND STREET EAST  
TORONTO, ON

PROJECT NO:  
122260

DRAWN BY:  
C. SU

CHECKED BY:  
E. PANAH

PROJECT MGR:  
F. BOLOURIAN

APPROVED BY:  
R. BARROSO

SHEET TITLE

MECHANICAL  
EQUIPMENT SCHEDULE  
1 OF 6

SHEET NUMBER

M0201

ISSUE

C



AIR COOLED CONDENSING UNITS...										
Mark No.		ACC-1	ACC-2	ACC-3	ACC-4	ACC-5	ACC-6	ACC-7	ACC-8 TO 12	ACC-13
Revision Date		27-Aug-25	27-Aug-25	27-Aug-25	27-Aug-25	27-Aug-25	27-Aug-25	27-Aug-25	27-Aug-25	27-Aug-25
Service		Basement	First Floor	Second Floor	Third Floor	Fourth Floor	Fifth Floor	Basement Electrical Rm	Electrical/IT Rooms	Roof Elevator Machine Room
Drawing Location		M5107	M5107	M5107	M5107	M5107	M5107	M5101	-	M5107
Performance										
Associated Equipment		BF-01 to 09	1F-01 to 12	2F-01 to 14	3F-01 to 13	4F-01 to 12	5F-01 to 12	EE-01	EE-02 TO 06	EE-07
Nominal Cooling Capacity	KW	20.08	20.22	20.83	20.73	20.14	20.5	3.516	3.516	5.28
Rated Cooling Capacity	KW	20.22	20.22	20.22	20.22	20.22	20.22	3.516	3.516	5.28
Nominal Heating Capacity	KW	17.78	17.57	17.92	17.91	17.78	17.87	-	-	-
Rated Heating Capacity	KW	22.27	22.27	22.27	22.27	22.27	22.27	-	-	-
Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
No. of Compressors		1	1	1	1	1	1	1	1	1
Manufacturer		Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric
Model		PURY-P72TNU-A1 (-BS)	PURY-P72TNU-A1 (-BS)	PURY-P72TNU-A1 (-BS)	PURY-P72TNU-A1 (-BS)	PURY-P72TNU-A1 (-BS)	PURY-P72TNU-A1 (-BS)	PUY-A12NKA8	PUY-A12NKA8	PUY-A18NKA7
Net Weight	kg	236	236	236	236	236	236	-	-	-
Fan										
Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1
Airflow rate	m3/min	170	170	170	170	170	170	45	45	45
Motor output	KW	0.92	0.92	0.92	0.92	0.92	0.92	0.05	0.05	0.05
Compressor										
Type x Quantity		Inverter scroll hermetic compressor x 1	Inverter scroll hermetic compressor x 1	Inverter scroll hermetic compressor x 1	Inverter scroll hermetic compressor x 1	Inverter scroll hermetic compressor x 1	Inverter scroll hermetic compressor x 1	-	-	DC INVERTER-DRIVEN TWIN ROTARY
Motor output	KW	4	4	4	4	4	4	-	-	-
Case Heater	KW	0.035	0.035	0.035	0.035	0.035	0.035	-	-	-
Motor / Power										
Maximum Overcurrent Protection	A	50-45	50-45	50-45	50-45	50-45	50-45	28	28	28
Maximum Circuit Amps	A	33	33	33	33	33	33	17	17	11
Volts/Phase/Hz		208/3/60	208/3/60	208/3/60	208/3/60	208/3/60	208/3/60	208/1/60	208/1/60	208/1/60
Unfused Disconnect		YES	YES	YES	YES	YES	YES	YES	YES	YES
Distribution Unit										
Manufacturer		Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric	-	-	-
Model		CMB-WP1016NU-AA	CMB-WP1016NU-AA	CMB-WP1016NU-AA	CMB-WP1016NU-AA	CMB-WP1016NU-AA	CMB-WP1016NU-AA	-	-	-
Power Input	KW	0.41/0.49	0.41/0.49	0.41/0.49	0.41/0.49	0.41/0.49	0.41/0.49	-	-	-
MCA	A	3.78	3.78	3.78	3.78	3.78	3.78	-	-	-
Volts/Phase/Hz		208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	-	-	-
Net Weight	kg	98.43	98.43	98.43	98.43	98.43	98.43	-	-	-
CONTROLS										
Control Sequence	CS	SEE SPECIFICATIONS 23 81 29	SEE SPECIFICATIONS 23 81 29	SEE SPECIFICATIONS 23 81 29	SEE SPECIFICATIONS 23 81 29	SEE SPECIFICATIONS 23 81 29	SEE SPECIFICATIONS 23 81 29	752	752	752

PRESSURE REDUCING VALVES (PRV)				
Mark No.		PRV-1	PRV-2	PRV-3
Revision Date		Aug 22 2025	Aug 22 2025	Aug 22 2025
Service		DCW Express	DCW	DCW
Drawing Location		M2101/M2108	M2101/M2108	M2101/M2108
Performance				
Media		Water	Water	Water
Approx Water Flow	l/s	4.06	4.06	3.66
Size	mm	40	50	50
Inlet Pressure	kPa	731	745	1058
Outlet Pressure	kPa	517	517	541
Actuator Type		Direct Acting	Direct Acting	Direct Acting
Pilot Positioner		N/A	N/A	N/A
Relief Valve Setting	kPa	551	551	551
Relief Valve Rating		1378	1378	1378
Sound Attenuation		-	-	-
Controls				
Control Sequence	CS	-	-	-

Grilles & Diffusers (GD)		
Mark No.	A	B
Service	Air Supply	Air Return
Performance		
Material	Steel	Steel
Size	As Shown	As Shown
Opposed Blade Damper	YES	YES
Manufacturer	EH Price	EH Price
Model	610	630

ELECTRICAL HEATERS					
Mark No.		FAH-01	FAH-02	FAH-03	FAH-04
Service		BASEMENT EXIT	STAIR A (201)	STAIR A (301)	STAIR A (401)
Manufacturer		OUELLET	OUELLET	OUELLET	OUELLET
Model		OAC04008-T	OAC04008-T	OAC04008-T	OAC04008-T
Capacity Output	KW	4	4	4	4
V/Ph/Hz		208/1/60	208/1/60	208/1/60	208/1/60
Weight	kg	10.9	10.9	10.9	10.9
Fan Power	KW	-	-	-	-
Fan Flow Rate		75	75	75	75
Notes:					
1. C/W BUILT IN THERMOSTAT AND DISCONNECT SWITCH					

EXPANSION TANKS (ET)			
Mark No.		ET-1	ET-2
Revision Date		Aug 22 2025	Aug 22 2025
Service		DCW	DHW
Drawing Location		M2101/M2108	M2106/M2108
Reference		Armstrong	Armstrong
Performance			
Tank Volume	Litres	132.5	94.6
Acceptance Volume	Litres	106	76.5
Fluid		Water	Water
Diameter	mm	406	406
Height	m	1143	838
Length	m	N/A	N/A
Width	m	N/A	N/A
Minimum Pressure	kPa	517	517
Maximum Pressure	kPa	1034	1034
Max Operating Temperature	°C	23	60
Pressure Relief Valve setting	kPa	541	541
Construction			
Materials		Carbon Steel	Carbon Steel
Lining		Polypropylene	Polypropylene
System Connection		Stainless Steel	Stainless Steel
Mounting Feet		Housekeeping Pad	Housekeeping Pad
Net Weight (no water)	kg	51	45
Pipe Size Connection	mm	25	25
Controls			
Control Sequence	CS	N/A	N/A

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Arcadis Professional Services (Canada) Inc.		
ISSUES		
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B	ISSUED FOR PERMIT 100%	2025-07-31
C	ISSUED FOR TENDER	2025-09-02

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PROJECT TITLE  
50 RICHMOND ST. E.  
RENOVATIONS

PROJECT ADDRESS

50 RICHMOND STREET EAST  
TORONTO, ON

PROJECT NO: 122260	
DRAWN BY: C. SU	CHECKED BY: E. PANAH
PROJECT MGR: F. BOLOURIAN	APPROVED BY: R. BARROSO

SHEET TITLE  
MECHANICAL  
EQUIPMENT SCHEDULE  
2 OF 6

SHEET NUMBER  
M0202

ISSUE  
C

DOMESTIC WATER HEATER (DWH)				
Mark No.	DWH-1			DWH-2
Revision Date			Aug 8 2025	Aug 8 2025
Service			DOMESTIC HOT WATER	DOMESTIC HOT WATER
Drawing Location			G33-M2106	G33-M2106
Performance				
Fuel Type			NAT GAS	NAT GAS
Input	MBH	KW	130/38	130/38
Output	MBH	KW	125/36.6	125/36.6
Manufacturer			AO SMITH	AO SMITH
Model			BSS 130	BSS 130
Water Side				
Flow Rate	gpm	lps	32/2.01	32/2.01
Temperature Rise	°F	°C	165/74	165/74
Storage Capacity	gal	litres	34/128	34/128
Recovery Rate	gph	lph	165/0.17	165/0.17
Design Pressure	in.	mm	-	-
Electrical				
Power	KW	KW	-	-
Number of Elements			-	-
MCA	A	A	5	5
Volts/Phase/Hz			120/1/60	120/1/60
Unfused Disconnect			-	-
CONTROLS				
Control Sequence	CS	CS		
Controlled by			Water Temp Sensor	Water Temp Sensor
ELECTRICAL COORDINATION				
General Requirements				
Normal Power			YES	YES
Emergency Power			NO	NO
Disconnect provided by			MANUFACTURER	MANUFACTURER

Notes:

1. Starter is supplied with equipment.

PUMPS (P)				
Mark No.	P-1A, P-1B		P-2	P-3
Revision Date		Aug 8 2025	Aug 8 2025	Aug 8 2025
Service		Domestic Water	Domestic Water	Domestic Water
Drawing Location		G33-M2101	G33-M2106	G33-M3101
Performance				
Fluid		Domestic Potable Water	Domestic Recirculating Water	Sanitary Waste Water from Elevator Pit
Fluid Temperature	°C	City Water	60	-
Flow Rate	l/s	9	0.5	0.63
Head	m	57	9.5	6
NPSHA	m	-	-	-
Type		Multi Stage	Circulator	Sump Pump
Size		-	-	-
Design Pressure	kPa	490	104	60
Manufacturer		TACO	TACO	HYDROMATIC
Model		15VR-03	VR3452	SP4
Vibration Control				
Base Type		CI	None	None
Isolator Type		OS	SHR	None
Static Deflection	mm	19.0	19.0	-
Motor				
HP		5.0	1	0.4
FLA	A	-	-	4.7
RPM		3,450	-	1,750
Volts/Phase/Hz		230/1/60	230/1/60	230/1/60
VFD Rated Motor		Yes	No	No
Unfused Disconnect		-	-	-
CONTROLS				
Control Sequence	CS			
ELECTRICAL COORDINATION				
General Requirements				
Normal Power		Yes	Yes	Yes
Emergency Power		No	No	Yes
Disconnect provided by		Pump Supplier	Pump Supplier	Pump Supplier

Notes:

1. Starter is supplied with equipment.

ROOFTOP OUTDOOR AIR UNIT (AC)		
Mark No.	AC-1	
Service	OUTDOOR AIR SUPPLY AND PRESSURIZATION	
Drawing Location	G33-M5107	
General Requirements		
Manufacturer	DAIKIN	
Model	REBEL PACKAGE UNIT DPSH12B	
Weight	kg	943
Fan		
Capacity	l/s	1700
External Static Pressure	Pa	350
Cooling		
Type	DX	
Sensible Capacity	kW	30
Total Capacity	kW	43.2
Evaporator EAT (db)	°C	26.67
Evaporator EAT (wb)	°C	19.4
Evaporator LAT (db)	°C	11.67
Evaporator LAT (wb)	°C	11.6
Condenser EAT (db)	°C	32.2
Heating		
Type	Gas Fired	
Capacity	kW	118
EAT	°C	-20.0
Filter		
Type	-	
MERV Rating	No.	13.0
Motor / Power		
Power	kW	-
MCA	A	30
FLA	A	25.8
Volts/Phase/Hz	575/3/60	
Unfused Disconnect	-	
CONTROLS		
Control Sequence	CS	
Operating Controls		
BMS Start/Stop	YES	
Fire Alarm Stop	NO	
ELECTRICAL COORDINATION		
General Requirements		
Normal Power	Yes	
Emergency Power	Yes	
Disconnect provided by	Manufacturer	
Starter (refer to Controls Schedule for Operating Controls)		
Standard Starter Detail	(Note 1)	
MCA	25.8	
FLA	-	
Volts/Phase/Hz	-	

Notes:

1. Starter is supplied with equipment.

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PROJECT TITLE  
50 RICHMOND ST. E.  
RENOVATIONS

PROJECT ADDRESS

50 RICHMOND STREET EAST  
TORONTO, ON

PROJECT NO: 122260	
DRAWN BY: C. SU	CHECKED BY: E. PANAHİ
PROJECT MGR: F. BOLOURIAN	APPROVED BY: R. BARROSO

SHEET TITLE  
MECHANICAL  
EQUIPMENT SCHEDULE  
3 OF 6

SHEET NUMBER M0203	ISSUE C
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FANS (EF)											
MARK NO.		BEF-01	BEF-02	BEF-03	BEF-04	BEF-05	BEF-06	BEF-07	1EF-01	1EF-02	1EF-03
AREA SERVED		BASEMENT SHOWER 008	UNIVERSAL WASHROOM 009	BASEMENT LAUNDRY ROOM	BASEMENT STORAGE 013	BASEMENT NEGATIVE PRESSURE #1	BASEMENT NEGATIVE PRESSURE #2	BASEMENT MECH ROOM	CLIENT WC 108	STAFF WC 109	STORAGE 110
SERVICE		EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST
PERFORMANCE											
TYPE		CENTRIFUGAL DIRECT INLET	CENTRIFUGAL DIRECT INLET	CENTRIFUGAL DIRECT SINGLE INLET	CENTRIFUGAL DIRECT INLET	CENTRIFUGAL DIRECT SINGLE INLET	CENTRIFUGAL DIRECT SINGLE INLET	CENTRIFUGAL DIRECT INLET	CENTRIFUGAL DIRECT INLET	CENTRIFUGAL DIRECT INLET	CENTRIFUGAL DIRECT INLET
CAPACITY	L/S	45	45	70	35	70	70	45	35	35	35
EXTERNAL STATIC PRESSURE	PA	100	100	100	75	100	100	100	75	75	75
MANUFACTURER		REVERSOMATIC	REVERSOMATIC	REVERSOMATIC	REVERSOMATIC	REVERSOMATIC	REVERSOMATIC	REVERSOMATIC	REVERSOMATIC	REVERSOMATIC	REVERSOMATIC
MODEL		CF-170	CF-170	TLD 200	QCF-110	TLD 200	TLD 200	CF-170	QCF-110	QCF-110	QCF-110
PHYSICAL											
BASE TYPE		CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED
HEIGHT	MM	225	225	150	200	150	150	225	200	200	200
WEIGHT	KG	-	-	-	-	-	-	-	-	-	-
MOTOR											
HP		0.02	0.02	-	0.015	-	-	0.02	0.015	0.015	0.015
FLA	A	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.6	0.6
RPM		1400	1400	1050	1050	1050	1050	1400	1050	1050	1050
VOLTS/PHASE/HZ		120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60
VFD RATED MOTOR		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
BACKDRAFT DAMPER											
TYPE		GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY
SUPPLIED BY		MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER
POWER		120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60
CONTROLS											
OPERATING CONTROLS											
BAS START/STOP		NO	NO	NO	NO	YES	YES	NO	NO	NO	NO
FIRE ALARM STOP		NO	NO	NO	NO	YES	YES	NO	NO	NO	NO
CONTROLLED BY		OCCUPANCY SENSOR	OCCUPANCY SENSOR	THERMOSTAT	THERMOSTAT/ MANUAL	CONTINUOUS	CONTINUOUS	THERMOSTAT	OCCUPANCY SENSOR	OCCUPANCY SENSOR	THERMOSTAT/ MANUAL
ELECTRICAL COORDINATION											
GENERAL REQUIREMENTS											
NORMAL POWER		NO	NO	NO	NO	YES	YES	NO	NO	NO	NO
EMERGENCY POWER		NO	NO	NO	NO	YES	YES	NO	NO	NO	NO
NOTES: 1. CEILING INSTALLED FANS SHALL BE PROVIDED WITH MANUFACTURER RECOMMENDED HANGERS AND SUPPORTS. 2. STARTER AND DISCONNECT SWITCHES TO BE SUPPLIED BY MANUFACTURER. 3. PROVIDE STARTERS WITH FANS FOR H-O-A CONTROL..											

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PROJECT TITLE  
50 RICHMOND ST. E.  
RENOVATIONS

PROJECT ADDRESS

50 RICHMOND STREET EAST  
TORONTO, ON

PROJECT NO: 122260	
DRAWN BY: C. SU	CHECKED BY: E. PANAHİ
PROJECT MGR: F. BOLOURIAN	APPROVED BY: R. BARROSO

SHEET TITLE  
MECHANICAL  
EQUIPMENT SCHEDULE  
4 OF 6

SHEET NUMBER M0204	ISSUE C
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FANS (EF)									
MARK NO.		2EF-01	2EF-02	2EF-03	3EF-01	3EF-02	3EF-03	3EF-04	3EF-05
AREA SERVED		CLIENT WASHROOM 205	GARBAGE & STORAGE 211	MECH ROOM 212	BF CLIENT WC 306	CLIENT WC 307	MEDICINE SUPPLY ROOM 308	STORAGE 311	JANITOR CLOSET 312
SERVICE		EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST
PERFORMANCE									
TYPE		CENTRIFUGAL DIRECT INLET	CENTRIFUGAL DIRECT SINGLE INLET	CENTRIFUGAL DIRECT INLET	CENTRIFUGAL DIRECT INLET	CENTRIFUGAL DIRECT INLET	CENTRIFUGAL DIRECT INLET	CENTRIFUGAL DIRECT INLET	CENTRIFUGAL DIRECT SINGLE INLET
CAPACITY	L/S	35	70	35	35	35	35	45	70
EXTERNAL STATIC PRESSURE	PA	75	100	75	75	75	75	100	100
MANUFACTURER		REVERSOMATIC	REVERSOMATIC	REVERSOMATIC	REVERSOMATIC	REVERSOMATIC	REVERSOMATIC	REVERSOMATIC	REVERSOMATIC
MODEL		QCF-110	TLD 200	QCF-110	QCF-110	QCF-110	QCF-110	CF-170	TLD 200
PHYSICAL									
BASE TYPE		CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED
HEIGHT	MM	200	150	200	200	200	200	225	150
WEIGHT	KG	-	-	-	-	-	-	-	-
MOTOR									
HP		0.015	-	0.015	0.015	0.015	0.015	0.02	-
FLA	A	0.6	0.7	0.6	0.6	0.6	0.6	0.7	0.7
RPM		1050	1050	1050	1050	1050	1050	1400	1050
VOLTS/PHASE/HZ		120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60
VFD RATED MOTOR		NO	NO	NO	NO	NO	NO	NO	NO
BACKDRAFT DAMPER									
TYPE		GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY
SUPPLIED BY		MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER
POWER		120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60
CONTROLS									
OPERATING CONTROLS									
BAS START/STOP		NO	NO	NO	NO	NO	NO	NO	NO
FIRE ALARM STOP		NO	NO	NO	NO	NO	NO	NO	NO
CONTROLLED BY		OCCUPANCY SENSOR	THERMOSTAT	THERMOSTAT	OCCUPANCY SENSOR	OCCUPANCY SENSOR	THERMOSTAT/ MANUAL	THERMOSTAT/ MANUAL	THERMOSTAT/ MANUAL
ELECTRICAL COORDINATION									
GENERAL REQUIREMENTS									
NORMAL POWER		NO	NO	NO	NO	NO	NO	NO	NO
EMERGENCY POWER		NO	NO	NO	NO	NO	NO	NO	NO
NOTES: 1. CEILING INSTALLED FANS SHALL BE PROVIDED WITH MANUFACTURER RECOMMENDED HANGERS AND SUPPORTS. 2. STARTER AND DISCONNECT SWITCHES TO BE SUPPLIED BY MANUFACTURER. 3. PROVIDE STARTERS WITH FANS FOR H-O-A CONTROL.									

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PROJECT TITLE  
50 RICHMOND ST. E.  
RENOVATIONS

PROJECT ADDRESS

50 RICHMOND STREET EAST  
TORONTO, ON

PROJECT NO:  
122260

DRAWN BY: C. SU	CHECKED BY: E. PANAHI
--------------------	--------------------------

PROJECT MGR: F. BOLOURIAN	APPROVED BY: R. BARROSO
------------------------------	----------------------------

SHEET TITLE  
MECHANICAL  
EQUIPMENT SCHEDULE  
5 OF 6

SHEET NUMBER  
M0205

ISSUE  
C



FANS (EF)										
MARK NO.		4EF-01	4EF-02	4EF-03	4EF-04	5EF-01	5EF-02	5EF-03	5EF-04	REF-01
AREA SERVED		UNIVERSAL WC 404	SOILED UTILITY 405	CLIENT WC 409	SERVERY	UNIVERSAL WC 505	GENDER NEUTRAL WC 506	MECH ROOM 508	KITCHEN LOUNGE 511	ROOF ELEVATOR MACHINE ROOM
SERVICE		EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST
PERFORMANCE										
TYPE		CENTRIFUGAL DIRECT INLET	CENTRIFUGAL DIRECT INLET	CENTRIFUGAL DIRECT INLET	CENTRIFUGAL DIRECT INLET	CENTRIFUGAL DIRECT INLET	CENTRIFUGAL DIRECT INLET	CENTRIFUGAL DIRECT SINGLE INLET	CENTRIFUGAL DIRECT SINGLE INLET	PROPELLER DIRECT SINGLE INLET
CAPACITY	L/S	45	45	35	45	45	35	70	70	216
EXTERNAL STATIC PRESSURE	PA	100	100	75	100	100	75	100	100	-
MANUFACTURER		REVERSOMATIC	REVERSOMATIC	REVERSOMATIC	REVERSOMATIC	REVERSOMATIC	REVERSOMATIC	REVERSOMATIC	REVERSOMATIC	GREENHECK
MODEL		CF-170	CF-170	QCF-110	CF-170	CF-170	QCF-110	TLD 200	TLD 200	SE1-8-DGEX-QD
PHYSICAL										
BASE TYPE		CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED	CEILING SUSPENDED	WALL MOUNTED
HEIGHT	MM	225	225	200	225	225	200	150	150	330
WEIGHT	KG	-	-	-	-	-	-	-	-	-
MOTOR										
HP		0.02	0.02	0.015	0.02	0.02	0.015	-	-	0.0125
FLA	A	0.7	0.7	0.6	0.7	0.7	0.6	0.7	0.7	-
RPM		1400	1400	1050	1400	1400	1050	2500	2500	1725
VOLTS/PHASE/HZ		120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	115/1/60
VFD RATED MOTOR		NO	NO	NO	NO	NO	NO	NO	NO	NO
BACKDRAFT DAMPER										
TYPE		GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY
SUPPLIED BY		MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER	MANUFACTURER
POWER		120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	115/1/60
CONTROLS										
OPERATING CONTROLS										
BAS START/STOP		NO	NO	NO	NO	NO	NO	NO	NO	NO
FIRE ALARM STOP		NO	NO	NO	NO	NO	NO	NO	NO	NO
CONTROLLED BY		OCCUPANCY SENSOR	THERMOSTAT/ MANUAL	OCCUPANCY SENSOR	THERMOSTAT/ MANUAL	OCCUPANCY SENSOR	OCCUPANCY SENSOR	CO SENSOR/THERMOSTAT	MANUAL	MANUAL
ELECTRICAL COORDINATION										
GENERAL REQUIREMENTS										
NORMAL POWER		NO	NO	NO	NO	NO	NO	NO	NO	NO
EMERGENCY POWER		NO	NO	NO	NO	NO	NO	NO	NO	NO

NOTES:  
1. CEILING INSTALLED FANS SHALL BE PROVIDED WITH MANUFACTURER RECOMMENDED HANGERS AND SUPPORTS.  
2. STARTER AND DISCONNECT SWITCHES TO BE SUPPLIED BY MANUFACTURER.  
3. PROVIDE STARTERS WITH FANS FOR H-O-A CONTROL.

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No.	DESCRIPTION	DATE
A	ISSUED FOR PRELIMINARY COSTING	2025-06-27
B	ISSUED FOR PERMIT 100%	2025-07-31
C	ISSUED FOR TENDER	2025-09-02

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PROJECT TITLE  
50 RICHMOND ST. E.  
RENOVATIONS

PROJECT ADDRESS

50 RICHMOND STREET EAST  
TORONTO, ON

PROJECT NO:

122260

DRAWN BY:

C. SU

CHECKED BY:

E. PANAHI

PROJECT MGR:

F. BOLOURIAN

APPROVED BY:

R. BARROSO

SHEET TITLE

MECHANICAL  
EQUIPMENT SCHEDULE  
6 OF 6

SHEET NUMBER

M0206

ISSUE

C

ISSUES		
No.	DESCRIPTION	DATE
A	50% SUBMISSION	2024-10-31
B	75% SUBMISSION	2025-03-17
C	ISSUED FOR PRELIMINARY COSTING	2025-06-27
D	ISSUED FOR PERMIT 100%	2025-07-31
E	ISSUED FOR TENDER	2025-09-02

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PROJECT TITLE  
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DRAWN BY:  
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**E. PANAHI**

PROJECT MGR:  
**F. BOLOURIAN**

APPROVED BY:  
**R. BARROSO**

SHEET TITLE  
**DEMOLITION PLAN -  
BASEMENT FLOOR**

SHEET NUMBER

**M1101**

ISSUE

**E**

Autodesk Docs // 122260 - Cot TAU Upgrades R02024122260-TAU-33-50-Richmond-M-R24.rvt

10mm

SCALE CHECK  
1 m

REMOVE EXISTING WATER SUPPLY  
SYSTEM PIPES, FITTING, VALVES AND  
ALL ACCESSORIES UP TO THE MAIN  
ISOLATION VALVE

REMOVE EXISTING FIRE PROTECTION  
SYSTEM PIPES, FITTING, VALVES AND  
ALL ACCESSORIES UP TO THE MAIN  
ISOLATION VALVE

REMOVE AND RELOCATE THE FIRE  
PUMP. REFER TO M4101 FOR  
NEW LOCATION

REMOVE EXISTING DRAINAGE  
SYSTEM PIPES, FITTING, VALVES AND  
ALL ACCESSORIES

EXISTING FIRE DEPARTMENT  
SIAMESE CONNECTION WILL REMAIN

REMOVE EXISTING GAS SYSTEM PIPES,  
FITTING, VALVES AND ALL  
ACCESSORIES SIAMESE UP TO  
ENBRIDGE PLUG VALVE/FLANGE  
CONNECTION

EXISTING GAS PIPE TO REMAIN

EXISTING FIRE PROTECTION PIPE,  
DOMESTIC PIPE AND GAS PIPE WILL  
BE REMAIN  
PIPE DEMOLITION AND REMOVAL  
TERMINATES TO THE EXISTING  
PIPE ELBOW

REMOVE AND STORE ROTARY GAS  
METER. COORDINATE WITH ENBRIDGE  
FOR TEMPORARY REMOVAL AND  
RECONNECTION

EXISTING GAS PIPE TO REMAIN

THE MAIN INCOMING WATER AND  
FIRE LINE TO REMAIN UP TO THE  
ISOLATION VALVE.

BSMNT MECH -  
EXISTING -0.76 m  
BASEMENT  
MECHANICAL - NEW -1.30 m

## SECTION - DEMOLITION - MECH ROOM

M1101 Scale: 1 : 50

## 1 DEMOLITION PLAN - MECH ROOM

M1101 Scale: 1 : 50

SEE DRAWING (1/M1101) FOR  
DEMOLITION DETAILS IN THIS AREA

EXISTING BURIED SANITARY DRAINAGE  
PIPING TO REMAIN. CONTRACTOR TO  
CONDUCT PIPE SCOPING PRIOR TO  
START OF SANITARY DRAINAGE  
INSTALLATION. NOTIFY ENGINEER FOR  
DESIGN AND ACTUAL INSTALLATION  
DISCREPANCIES.

EXISTING STORMWATER  
PIPE TO BE REPLACED WITH  
NEW PIPE OF SAME SIZE

ALL VENTILATION EQUIPMENT  
AND DUCTS IN THIS AREA TO  
BE DEMOLISHED

EXISTING STORMWATER PIPE  
TO BE REPLACED WITH NEW  
PIPE OF SAME SIZE

ALL EXISTING MECHANICAL  
EQUIPMENT AND PIPING  
INCLUDING ANY EXISTING  
VENTILATION EQUIPMENT  
AND DUCTS IN THIS AREA TO  
BE DEMOLISHED

EXISTING GAS AND  
REFRIGERANT PIPING AND  
DUCTS ON WALLS TO BE  
DEMOLISHED

ALL EXISTING  
HYDRONIC, PLUMBING,  
DRAINAGE AND  
STANDPIPE PIPING  
INCLUDING ENCLOSURE  
IN THIS AREA TO BE  
DEMOLISHED

EXISTING FIRE HOSE  
CABINET AND ITS STANDPIPE  
PIPING TO BE DEMOLISHED

ALL EXISTING PLUMBING  
FIXTURES, WATER AND  
SANITARY DRAINAGE  
SYSTEM CONNECTIONS IN  
THIS AREA TO BE  
DEMOLISHED

ALL EXISTING GAS AND HYDRONIC  
PIPING INCLUDING ENCLOSURE IN THIS  
AREA TO BE DEMOLISHED

ALL EXISTING HVAC DUCTING  
INCLUDING MAIN AND BRANCH LINES,  
HANGERS AND GRILLES IN THIS AREA  
TO BE DEMOLISHED

EXISTING HVAC EQUIPMENT (FCU) AND  
ITS UTILITY CONNECTIONS BOTH PIPES  
AND DUCTS TO BE DEMOLISHED

## 3 DEMOLITION - BASEMENT

M1101 Scale: 1 : 50

### GENERAL NOTES:

- CONTRACTOR TO VERIFY SITE CONDITION.
- PRIOR TO DEMOLITION, NOTIFY ENGINEER FOR DISCREPANCIES BETWEEN DRAWINGS AND SITE CONDITION FOR RESOLUTION.
- ALL EXISTING SERVICES SHALL REMAIN UNLESS OTHERWISE NOTED.
- HVAC EQUIPMENT DEMOLITION INCLUDES POWER AND CONTROL WIRING AND THERMOSTAT.
- PLUMBING FIXTURES, WATER AND SANITARY DRAINAGE PIPING INCLUDES PIPE SUPPORTS AND VALVES.
- HYDRONIC AND STANDPIPE PIPING INCLUDES PIPE SUPPORTS AND VALVES.

Scale 1:50



ISSUES		
No.	DESCRIPTION	DATE
A	ISSUED FOR PERMIT 100%	2025-07-31
B	ISSUED FOR TENDER	2025-09-02

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PROJECT TITLE  
**50 RICHMOND ST. E.  
RENOVATIONS**

PROJECT ADDRESS

**50 RICHMOND STREET EAST  
TORONTO, ON**

PROJECT NO:  
**122260**

DRAWN BY:  
**C. SU**

CHECKED BY:  
**E. PANAHI**

PROJECT MGR:  
**F. BOLOURIAN**

APPROVED BY:  
**R. BARROSO**

SHEET TITLE  
**DEMOLITION PLAN -  
FIRST FLOOR**

SHEET NUMBER

**M1102**

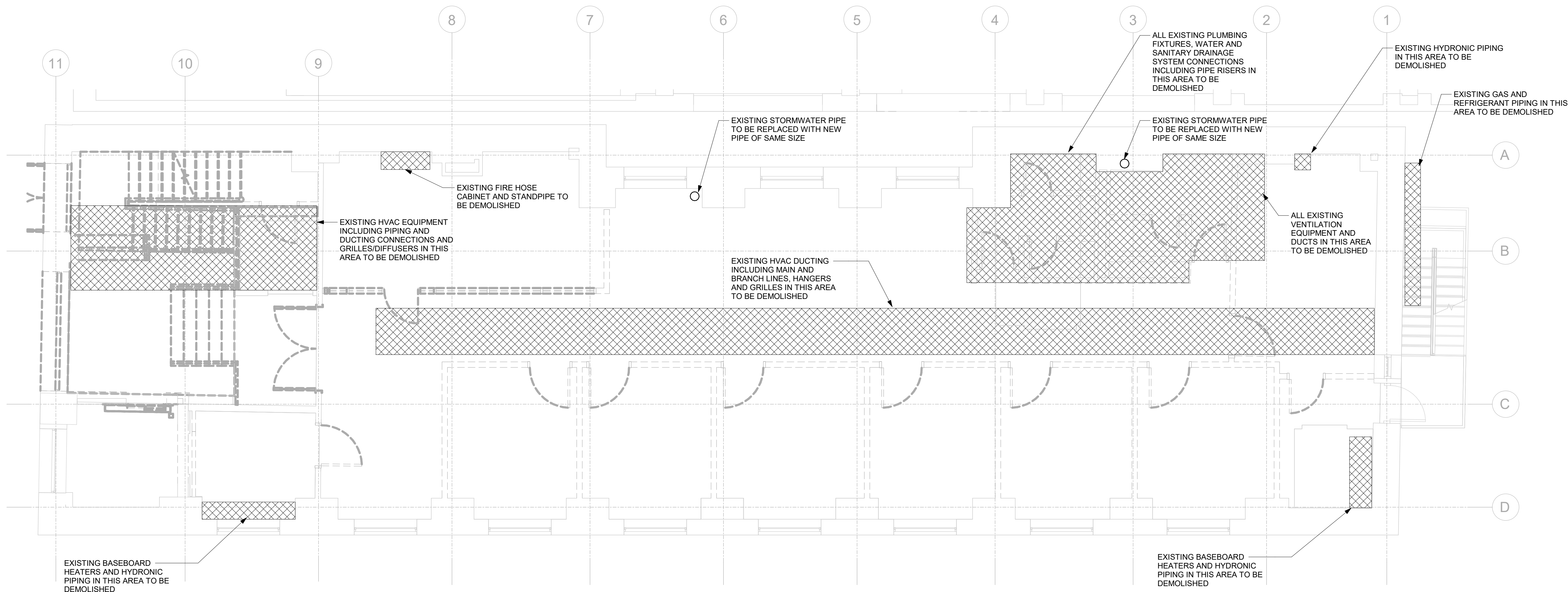
ISSUE

**B**

Autodesk Docs/122260 - Cot TAU Upgrades R20254122260-TAU-33-50-Richmond-M-R24.rvt

10mm

SCALE CHECK  
1 m



**1** DEMOLITION - FIRST FLOOR  
M1102 Scale: 1 : 50

- GENERAL NOTES:
1. CONTRACTOR TO VERIFY SITE CONDITION.
  2. PRIOR TO DEMOLITION, NOTIFY ENGINEER FOR DISCREPANCIES BETWEEN DRAWINGS AND SITE CONDITION FOR RESOLUTION.
  3. ALL EXISTING SERVICES SHALL REMAIN UNLESS OTHERWISE NOTED.
  4. HVAC EQUIPMENT DEMOLITION INCLUDES POWER AND CONTROL WIRING AND THERMOSTAT.
  5. PLUMBING FIXTURES, WATER AND SANITARY DRAINAGE PIPING INCLUDES PIPE SUPPORTS AND VALVES.
  6. HYDRONIC AND STANDPIPE PIPING INCLUDES PIPE SUPPORTS AND VALVES.

Scale 1:50  
0 1 2.5 5 m

9/2/2025 4:50:08 PM

ISSUES		
No.	DESCRIPTION	DATE
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B	ISSUED FOR TENDER	2025-09-02

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PROJECT MGR:  
**F. BOLOURIAN**

APPROVED BY:  
**R. BARROSO**

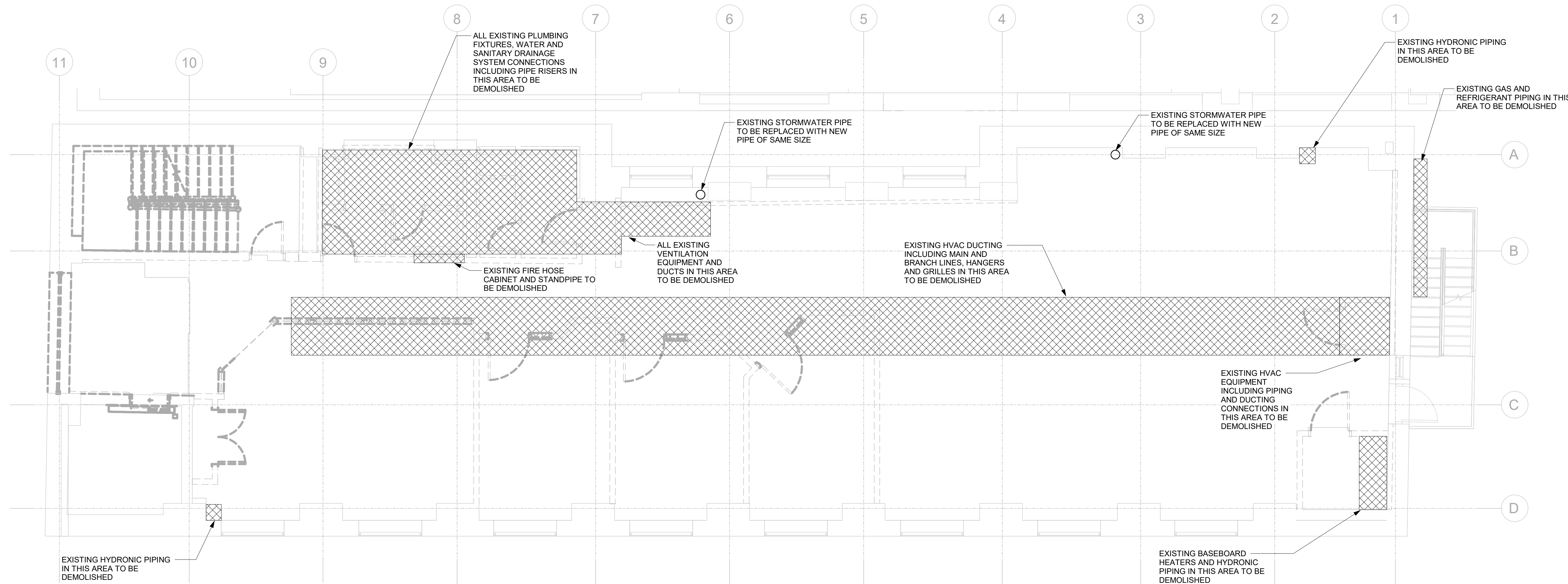
SHEET TITLE  
**DEMOLITION PLAN -  
SECOND FLOOR**

SHEET NUMBER

**M1103**

ISSUE

**B**



**1** DEMOLITION - SECOND FLOOR  
M1103 Scale: 1 : 50

- GENERAL NOTES:
- CONTRACTOR TO VERIFY SITE CONDITION.
  - PRIOR TO DEMOLITION, NOTIFY ENGINEER FOR DISCREPANCIES BETWEEN DRAWINGS AND SITE CONDITION FOR RESOLUTION.
  - ALL EXISTING SERVICES SHALL REMAIN UNLESS OTHERWISE NOTED.
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  - PLUMBING FIXTURES, WATER AND SANITARY DRAINAGE PIPING INCLUDES PIPE SUPPORTS AND VALVES.
  - HYDRONIC AND STANDPIPE PIPING INCLUDES PIPE SUPPORTS AND VALVES.

Scale 1:50  
0 1 2.5 5 m



ISSUES		
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PROJECT MGR:  
**F. BOLOURIAN**

APPROVED BY:  
**R. BARROSO**

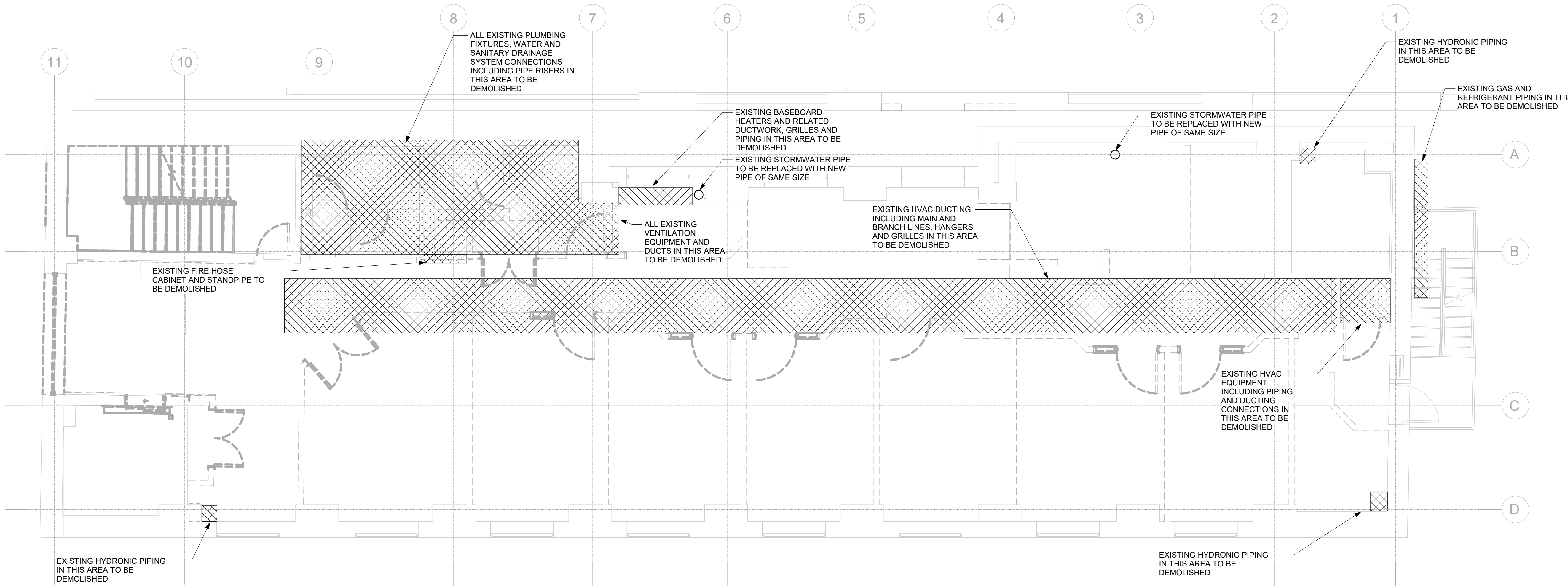
SHEET TITLE  
**DEMOLITION PLAN -  
THIRD FLOOR**

SHEET NUMBER

**M1104**

ISSUE

**B**



**1 DEMOLITION - THIRD FLOOR**

M1104 / Scale: 1 : 50

- GENERAL NOTES:
- CONTRACTOR TO VERIFY SITE CONDITION.
  - PRIOR TO DEMOLITION, NOTIFY ENGINEER FOR DISCREPANCIES BETWEEN DRAWINGS AND SITE CONDITION FOR RESOLUTION.
  - ALL EXISTING SERVICES SHALL REMAIN UNLESS OTHERWISE NOTED.
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  - HYDRONIC AND STANDPIPE PIPING INCLUDES PIPE SUPPORTS AND VALVES.

Scale 1:50  
0 1 2.5 5 m

ISSUES		
No.	DESCRIPTION	DATE
A	ISSUED FOR PERMIT 100%	2025-07-31
B	ISSUED FOR TENDER	2025-09-02

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PROJECT NO:  
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**E. PANAHI**

PROJECT MGR:  
**F. BOLOURIAN**

APPROVED BY:  
**R. BARROSO**

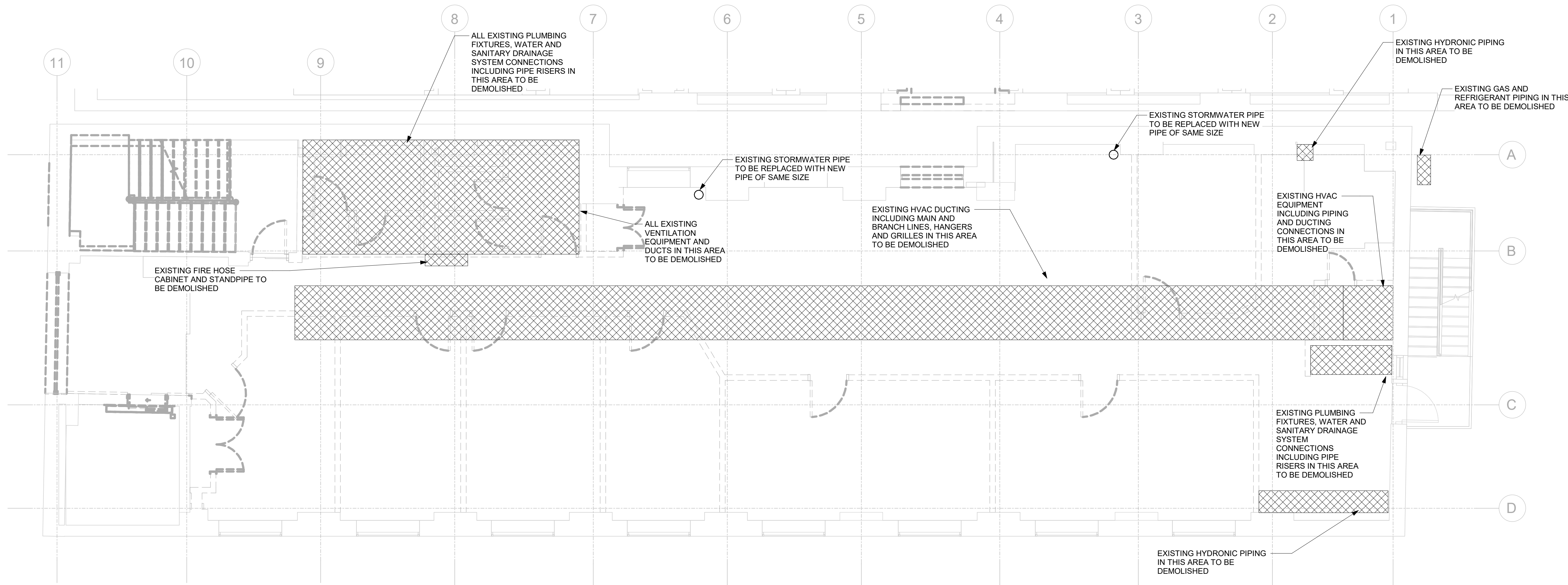
SHEET TITLE  
**DEMOLITION PLAN -  
FOURTH FLOOR**

SHEET NUMBER

**M1105**

ISSUE

**B**



**1** DEMOLITION - FOURTH FLOOR  
M1105 Scale: 1 : 50

- GENERAL NOTES:
- CONTRACTOR TO VERIFY SITE CONDITION.
  - PRIOR TO DEMOLITION, NOTIFY ENGINEER FOR DISCREPANCIES BETWEEN DRAWINGS AND SITE CONDITION FOR RESOLUTION.
  - ALL EXISTING SERVICES SHALL REMAIN UNLESS OTHERWISE NOTED.
  - HVAC EQUIPMENT DEMOLITION INCLUDES POWER AND CONTROL WIRING AND THERMOSTAT.
  - PLUMBING FIXTURES, WATER AND SANITARY DRAINAGE PIPING INCLUDES PIPE SUPPORTS AND VALVES.
  - HYDRONIC AND STANDPIPE PIPING INCLUDES PIPE SUPPORTS AND VALVES.

Scale 1:50  
0 1 2.5 5 m

ISSUES		
No.	DESCRIPTION	DATE
A	ISSUED FOR PERMIT 100%	2025-07-31
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PROJECT NO:  
**122260**

DRAWN BY:  
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**E. PANAH**

PROJECT MGR:  
**F. BOLOURIAN**

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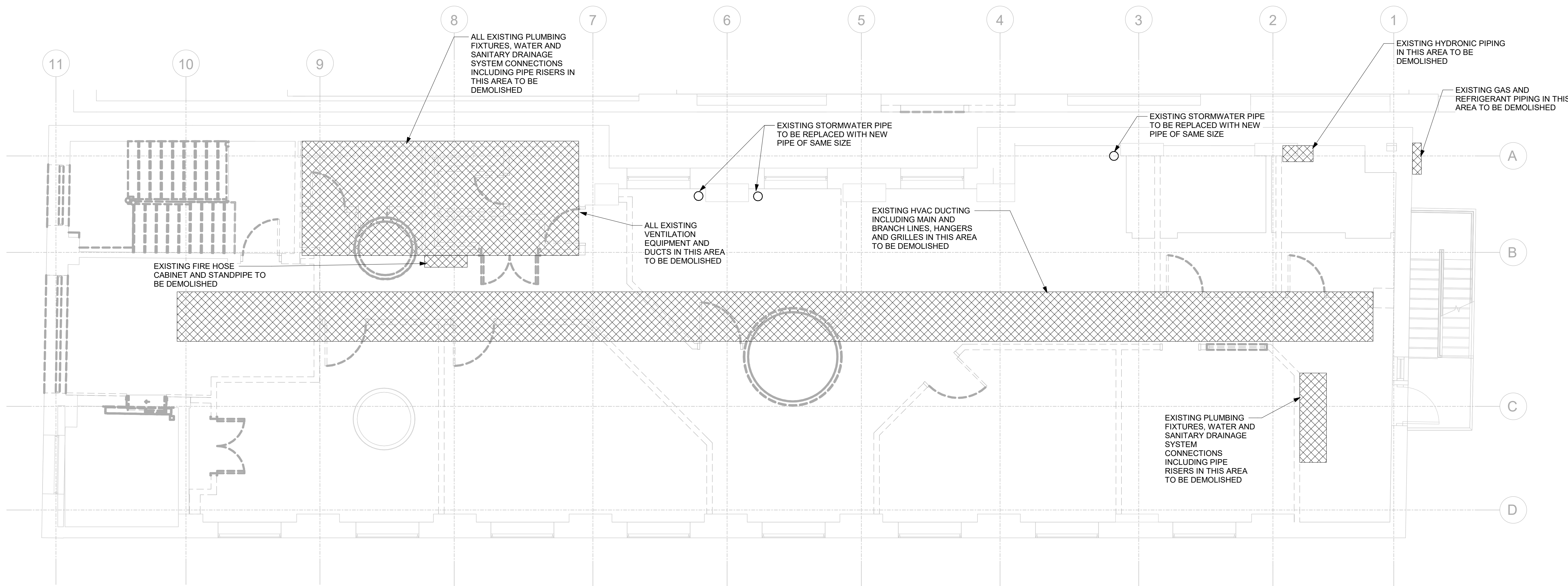
SHEET TITLE  
**DEMOLITION PLAN -  
FIFTH FLOOR**

SHEET NUMBER

**M1106**

ISSUE

**B**



**1**  
DEMOLITION - FIFTH FLOOR  
M1106 Scale: 1 : 50

- GENERAL NOTES:
- CONTRACTOR TO VERIFY SITE CONDITION.
  - PRIOR TO DEMOLITION, NOTIFY ENGINEER FOR DISCREPANCIES BETWEEN DRAWINGS AND SITE CONDITION FOR RESOLUTION.
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  - HYDRONIC AND STANDPIPE PIPING INCLUDES PIPE SUPPORTS AND VALVES.

Scale 1:50  
0 1 2.5 5 m

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APPROVED BY:  
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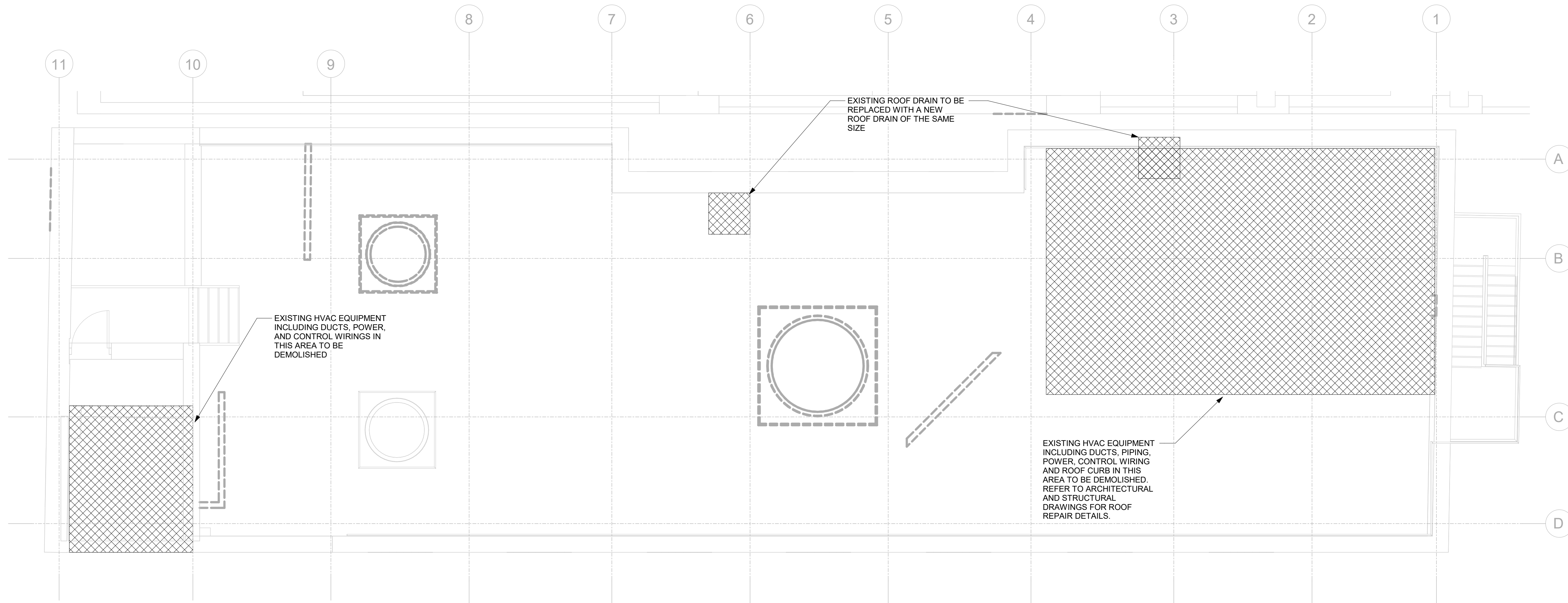
SHEET TITLE  
**DEMOLITION PLAN -  
ROOF**

SHEET NUMBER

**M1107**

ISSUE

**B**



**1** DEMOLITION - ROOF  
M1107 Scale: 1 : 50

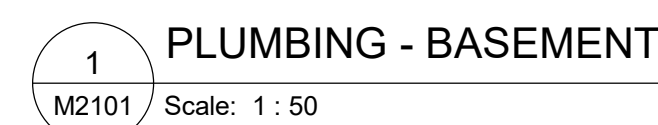
- GENERAL NOTES:
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  - HYDRONIC AND STANDPIPE PIPING INCLUDES PIPE SUPPORTS AND VALVES.

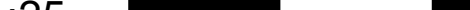
Scale 1:50




0 1 2.5 5 m





Scale 1:25   
0 .5 1 2.5 m

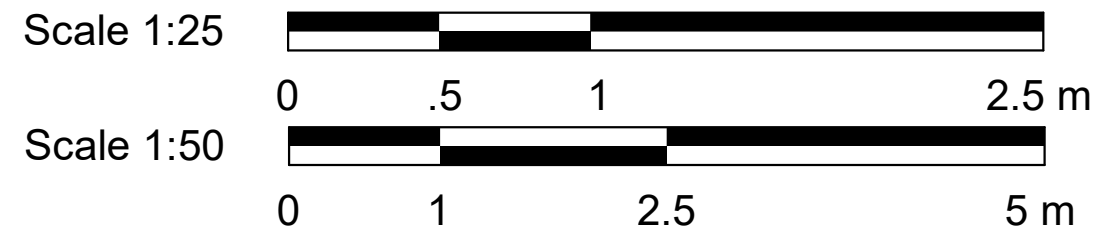
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SHEET NUMBER	ISSUE
M2101	E

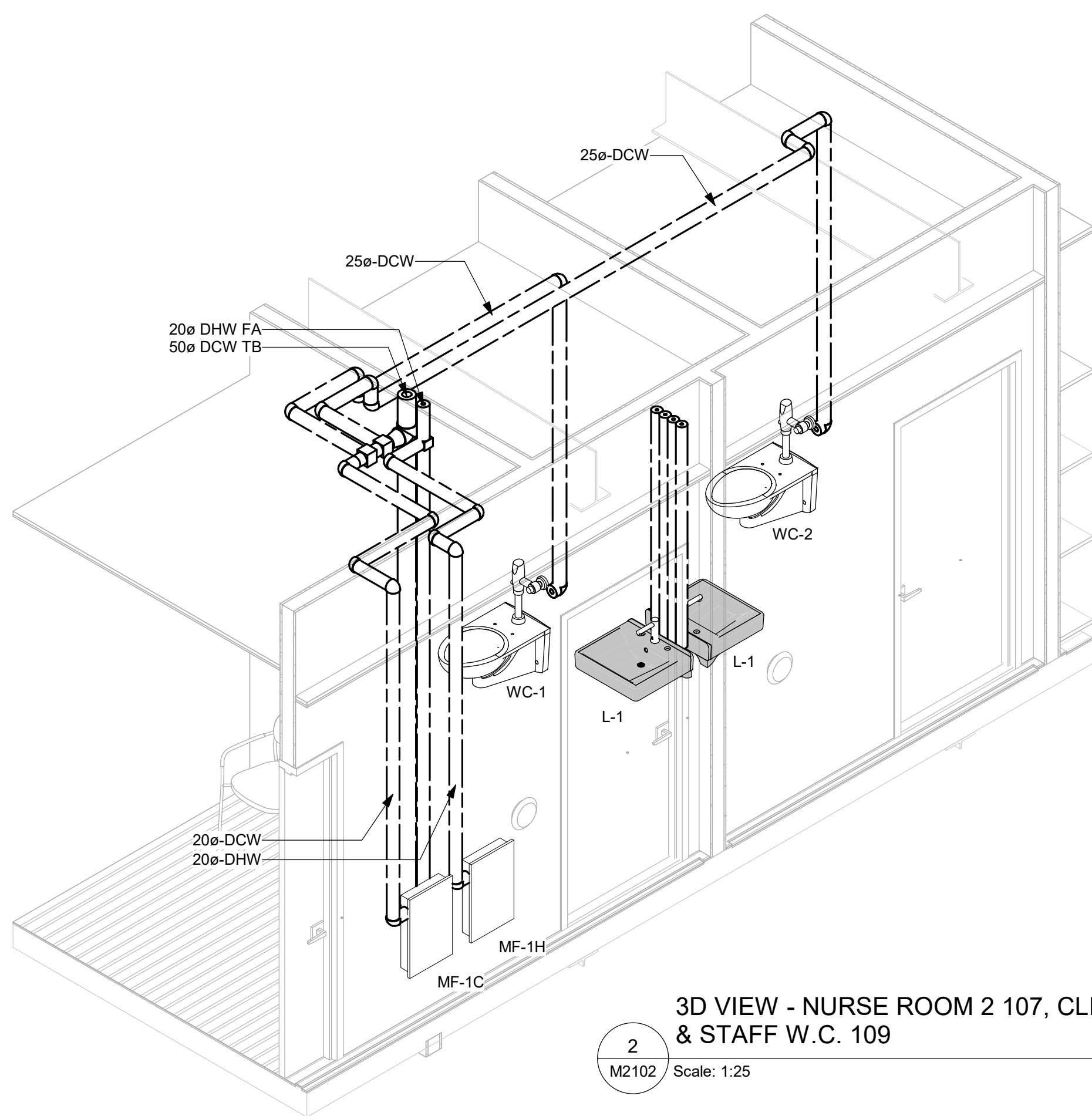
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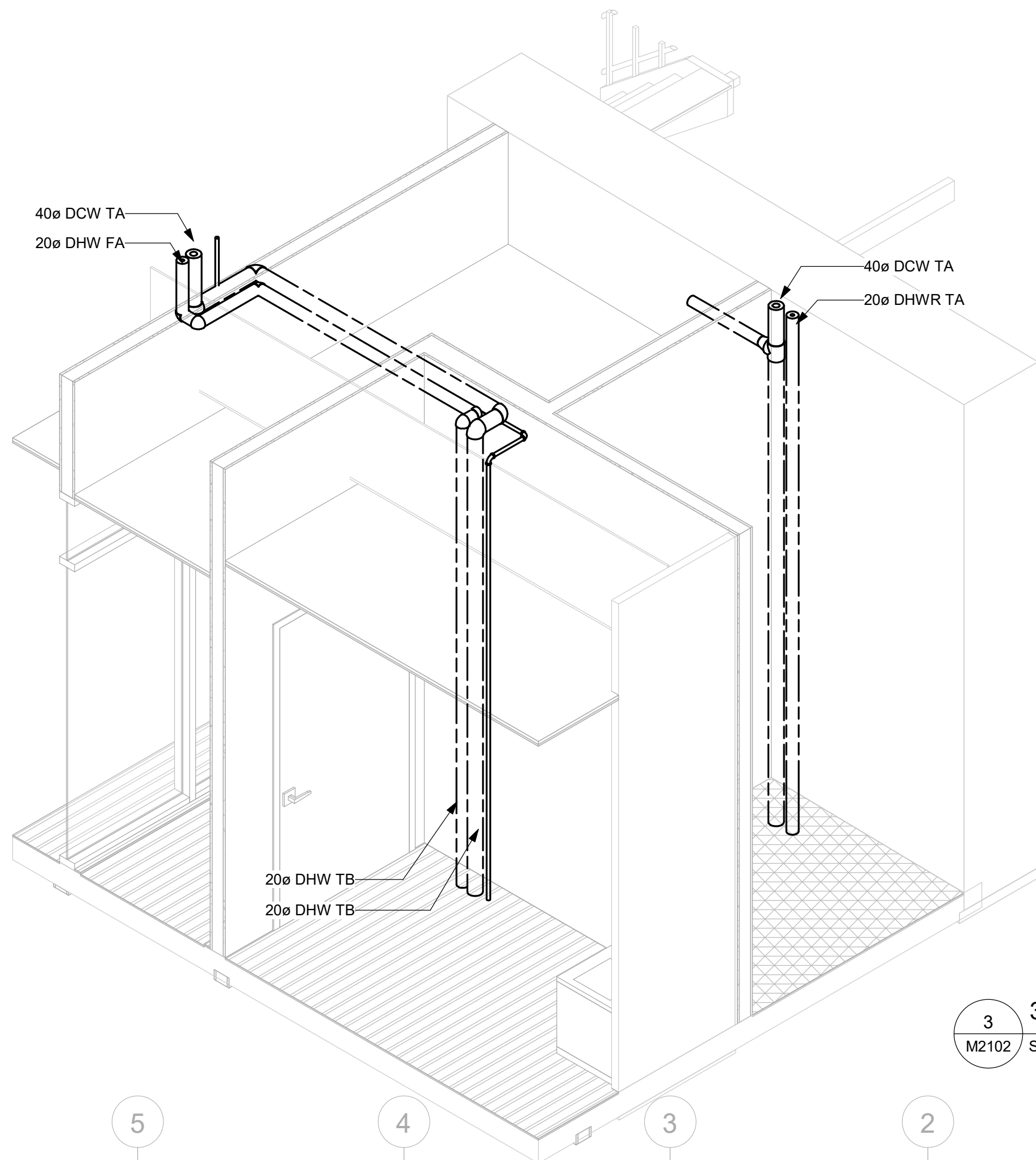
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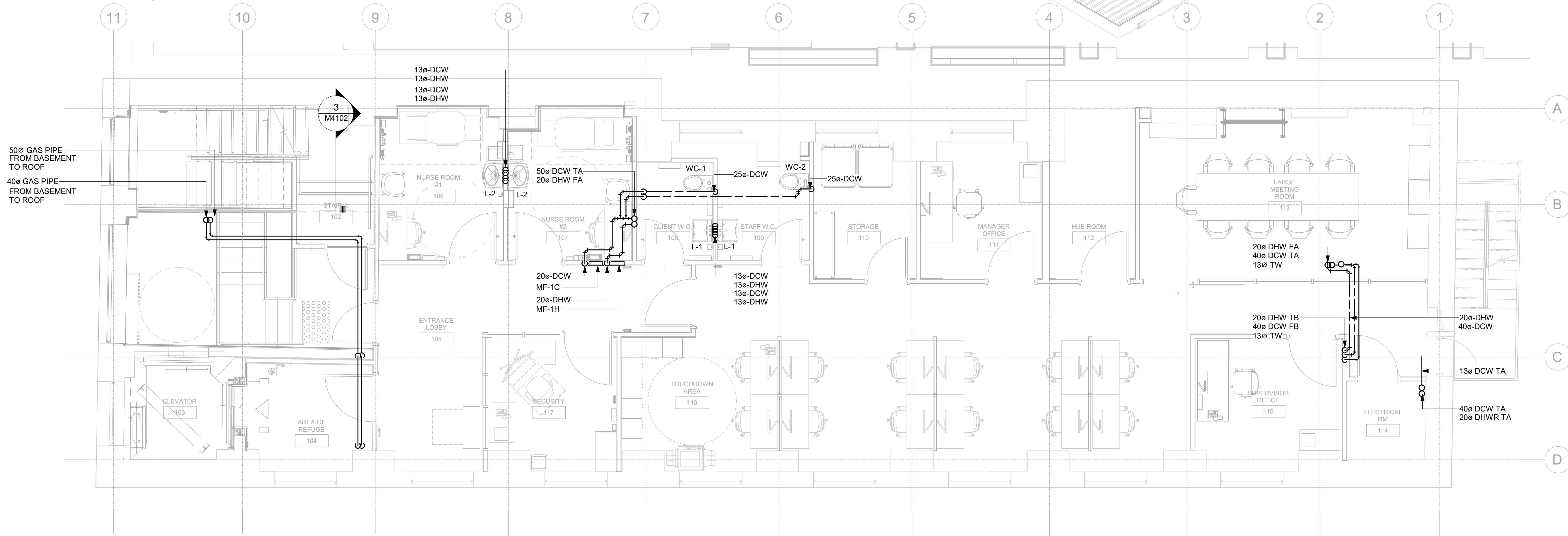
1 PLUMBING - FIRST FLOOR  
M2102 Scale: 1 : 50



2 3D VIEW - NURSE ROOM 2 107, CLIENT W.C. 108 & STAFF W.C. 109  
M2102 Scale: 1:25



3 3D VIEW - ELECTRICAL RM 114  
M2102 Scale: 1:25



PLUMBING NOTES:  
1. CROSS REFERENCE THE PIPE SIZING AND PIPING CONNECTIONS WITH PLUMBING SCHEMATIC DIAGRAM IN DRAWING M2108.  
2. PIPE SIZES AND INSTALLATION SHALL BE AS PER OBC DIVISION B PART 7.6 AND INTERNATIONAL PLUMBING CODE, WHICHEVER IS MORE STRINGENT.  
3. ALL PLUMBING FIXTURES SHALL BE PROVIDED WITH SHUT OFF VALVES FOR BOTH DCW AND DHW WATER SUPPLY PIPING.  
4. ALL PLUMBING VALVES SHALL BE MADE ACCESSIBLE THROUGH 300X300 ACCESS PANELS TO BE COORDINATED WITH ARCHITECTURAL WALLS AND CEILING WORKS.  
5. PLUMBING PIPING INSULATION SHALL BE AS PER PIPING INSULATION SPECIFICATIONS 23 07 19.  
6. CONTRACTOR TO VERIFY ALL PLUMBING AND GAS PIPING LAYOUTS ON SITE FOR OBSTRUCTIONS AND RESTICTIONS. ENGINEER SHALL BE NOTIFIED FOR DISCREPANCIES BETWEEN DRAWING AND ACTUAL SITE CONDITION FOR RESOLUTION.

CLIENT  
**CITY OF TORONTO**  
Corporate Real Estate Management  
Project Management Office  
Metro Hall Toronto, ON  
M5V 3C6

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PROJECT NO:

**122260**

DRAWN BY:

**C. SU**

CHECKED BY:

**E. PANAH**

PROJECT MGR:

**F. BOLOURIAN**

APPROVED BY:

**R. BARROSO**

SHEET TITLE

**PLUMBING - FIRST  
FLOOR**

SHEET NUMBER

**M2102**

ISSUE

**D**

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10mm

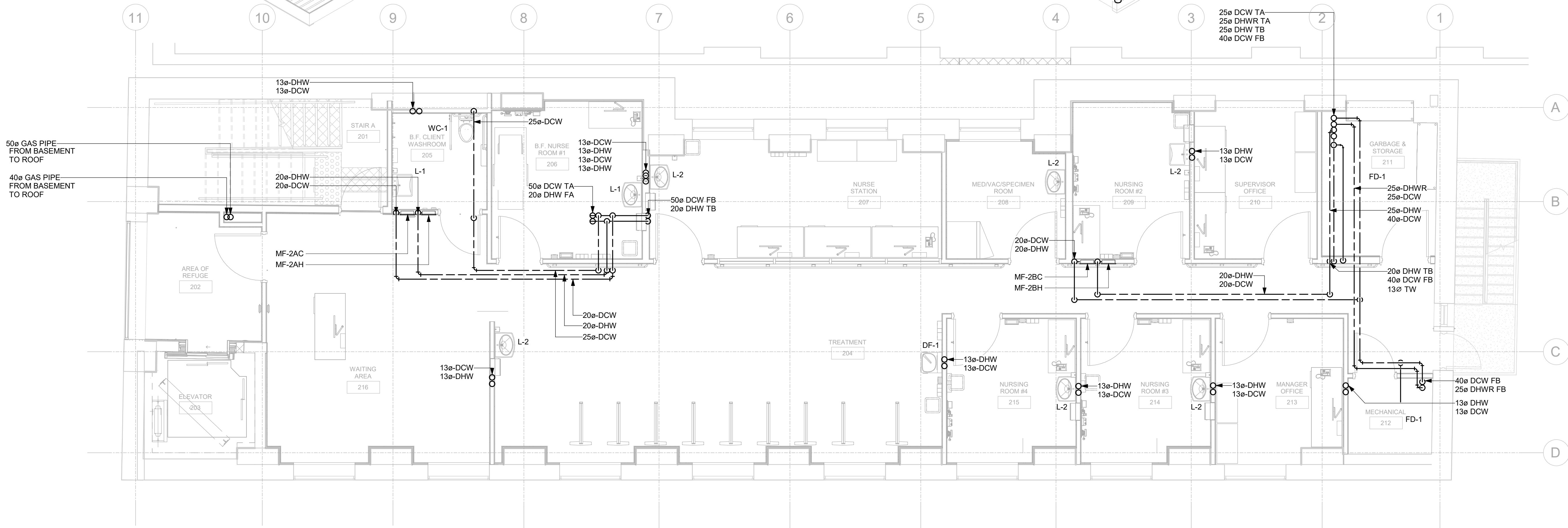
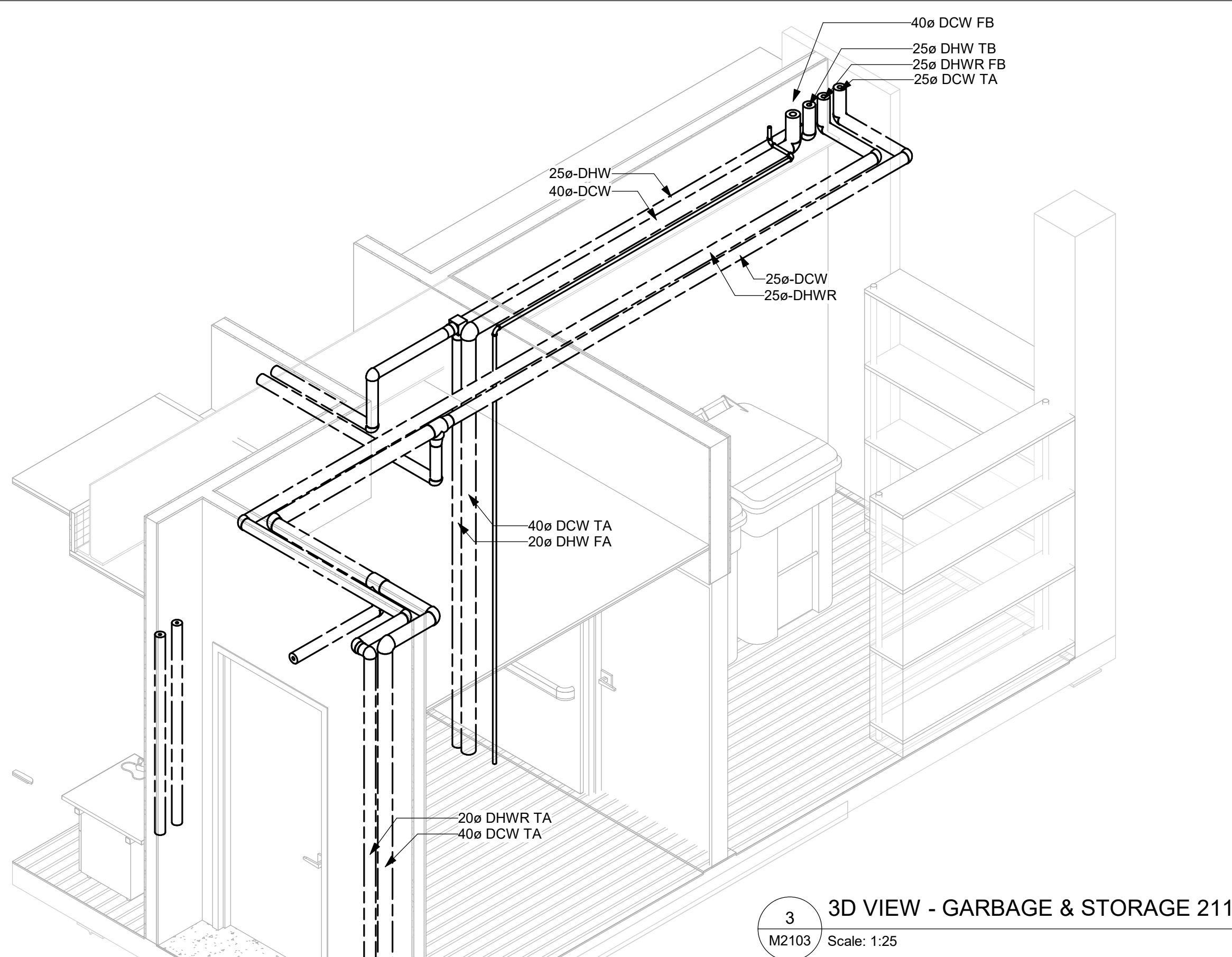
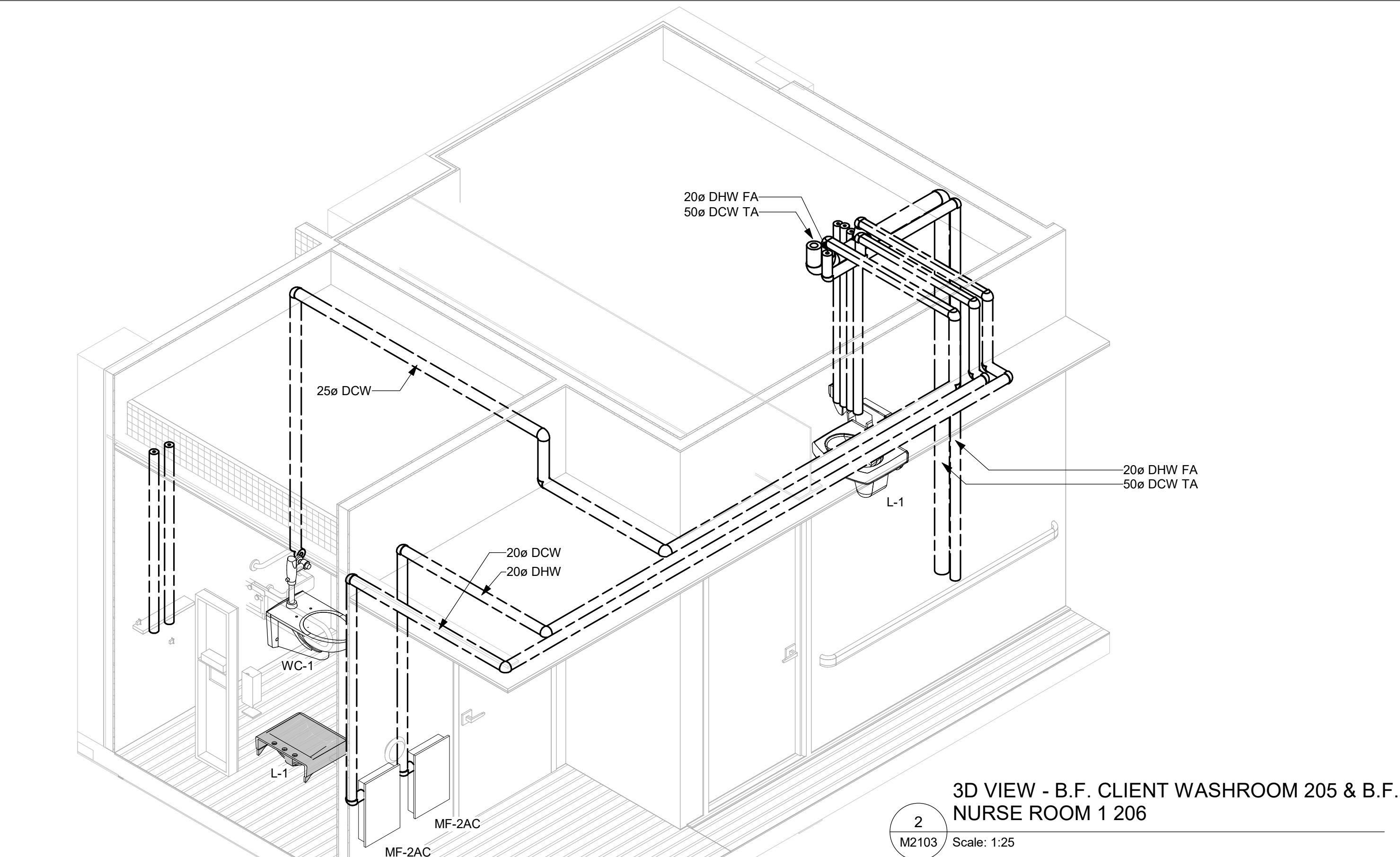
SCALE CHECK  
1 m

9/2/2025 4:50:22 PM

Scale 1:25  
0 .5 1 2.5 m  
Scale 1:50  
0 1 2.5 5 m


1 PLUMBING - SECOND FLOOR  
M2103 / Scale: 1 : 50

PLUMBING NOTES:  
1. CROSS REFERENCE THE PIPE SIZING AND PIPING CONNECTIONS WITH PLUMBING SCHEMATIC DIAGRAM IN DRAWING M2108.  
2. PIPE SIZES AND INSTALLATION SHALL BE AS PER OBC DIVISION B PART 7.6 AND INTERNATIONAL PLUMBING CODE, WHICHEVER IS MORE STRINGENT.  
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4. ALL PLUMBING VALVES SHALL BE MADE ACCESSIBLE THROUGH 300X300 ACCESS PANELS TO BE COORDINATED WITH ARCHITECTURAL WALLS AND CEILING WORKS.  
5. PLUMBING PIPING INSULATION SHALL BE AS PER PIPING INSULATION SPECIFICATIONS 23 07 19.  
6. CONTRACTOR TO VERIFY ALL PLUMBING AND GAS PIPING LAYOUTS ON SITE FOR OBSTRUCTIONS AND RESTICTIONS. ENGINEER SHALL BE NOTIFIED FOR DISCREPANCIES BETWEEN DRAWING AND ACTUAL SITE CONDITION FOR RESOLUTION.



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PROJECT TITLE

50 RICHMOND ST. E.  
RENOVATIONS

PROJECT ADDRESS

50 RICHMOND STREET EAST  
TORONTO, ON

PROJECT NO:  
122260

DRAWN BY:  
C. SU

PROJECT MGR:  
F. BOLOURIAN

SHEET TITLE  
PLUMBING - SECOND  
FLOOR

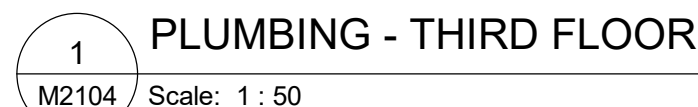
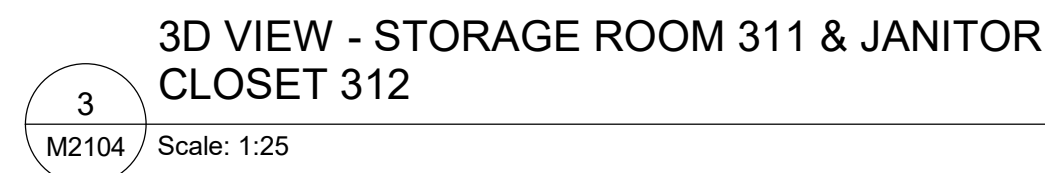
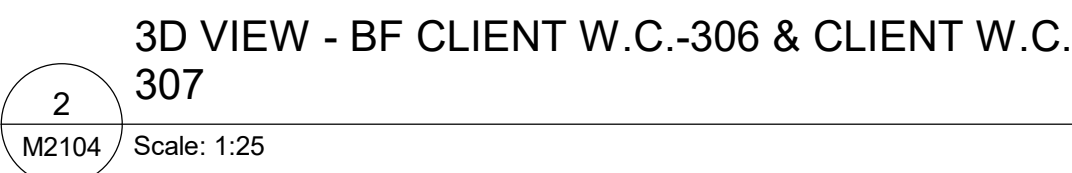
CHECKED BY:  
E. PANAH

APPROVED BY:  
R. BARROSO


SHEET NUMBER  
M2103

ISSUE  
D

Autodesk Docs // 122260 - Cot TAU Upgrades R2024122260-TAU-33-50-Richmond-MR24.rvt 1/10m 1/1m



Scale 1:25   
0 .5 1 2.5 m

Scale 1:50   
0 1 2.5 5 m

D

9/2/2025 4:50:25 PM



ISSUES		
No.	DESCRIPTION	DATE
A	75% SUBMISSION	2025-03-17
B	ISSUED FOR PRELIMINARY COSTING	2025-06-27
C	ISSUED FOR PERMIT 100%	2025-07-31
D	ISSUED FOR TENDER	2025-09-02

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PRIME CONSULTANT



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tel 416 679 1930  
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PROJECT TITLE  
**50 RICHMOND ST. E.  
RENOVATIONS**

PROJECT ADDRESS

**50 RICHMOND STREET EAST  
TORONTO, ON**

PROJECT NO:

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DRAWN BY:

C. SU

CHECKED BY:

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PROJECT MGR:

F. BOLOURIAN

APPROVED BY:

R. BARROSO

SHEET TITLE

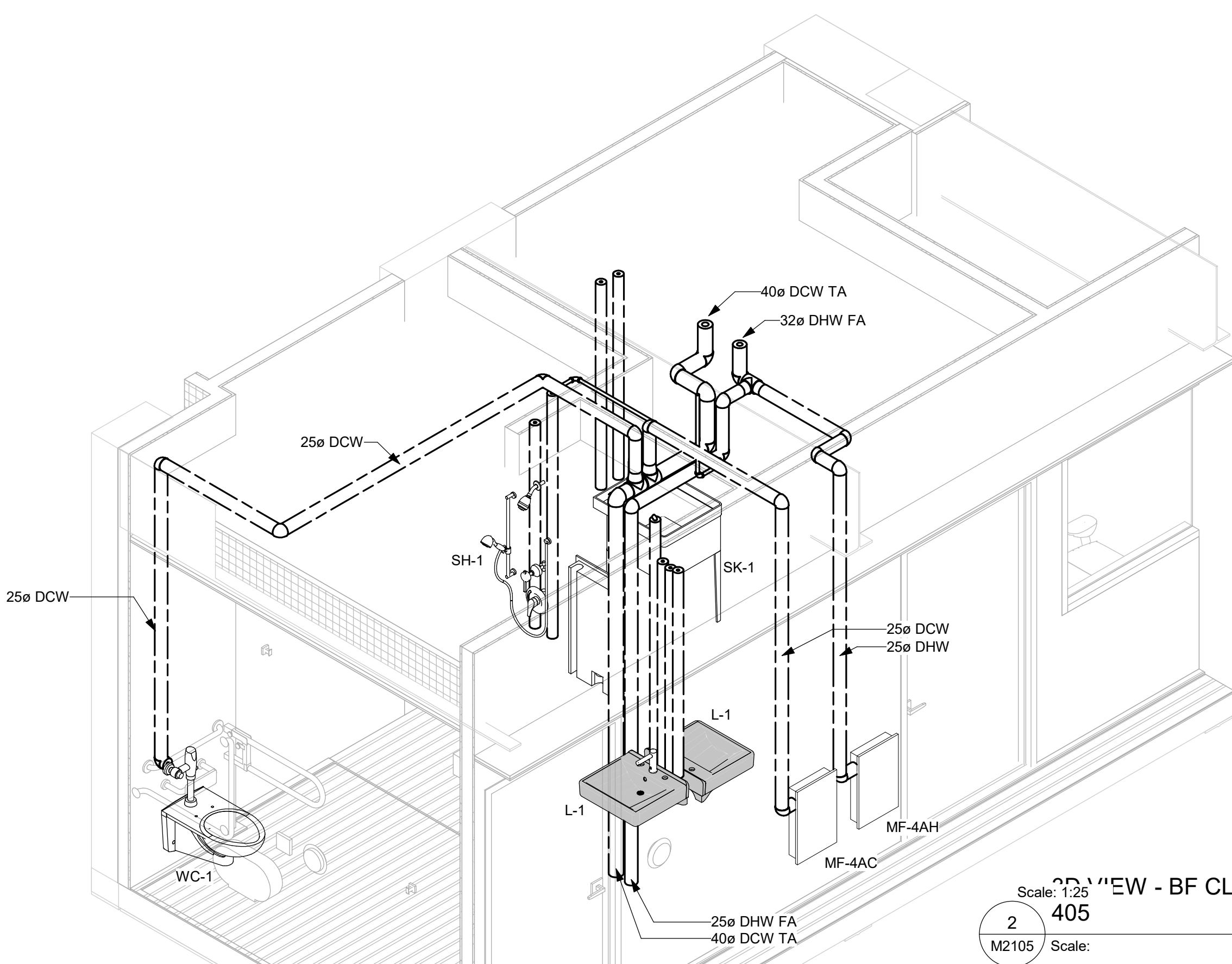
**PLUMBING - FOURTH  
FLOOR**

SHEET NUMBER

**M2105**

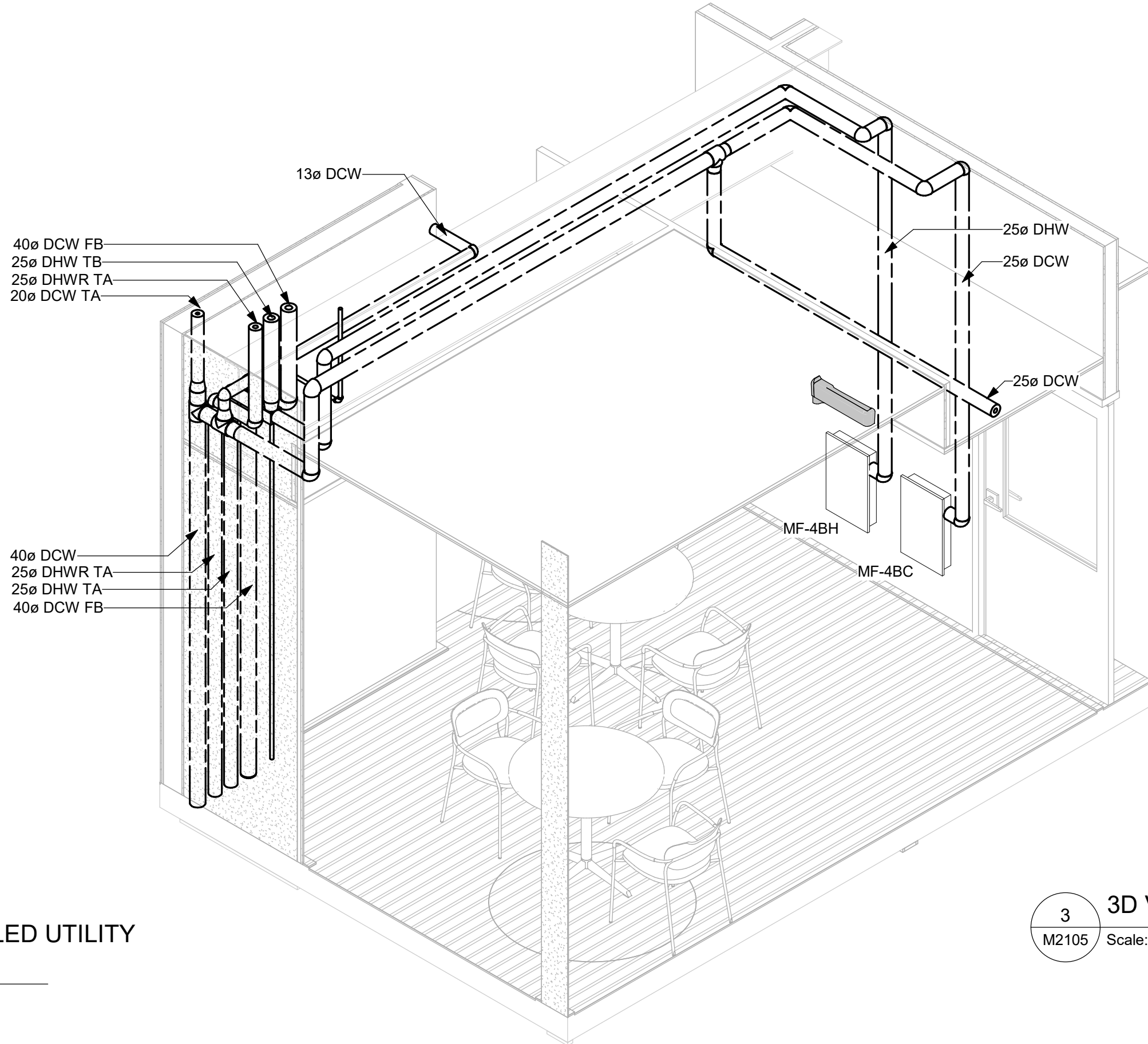
ISSUE

**D**



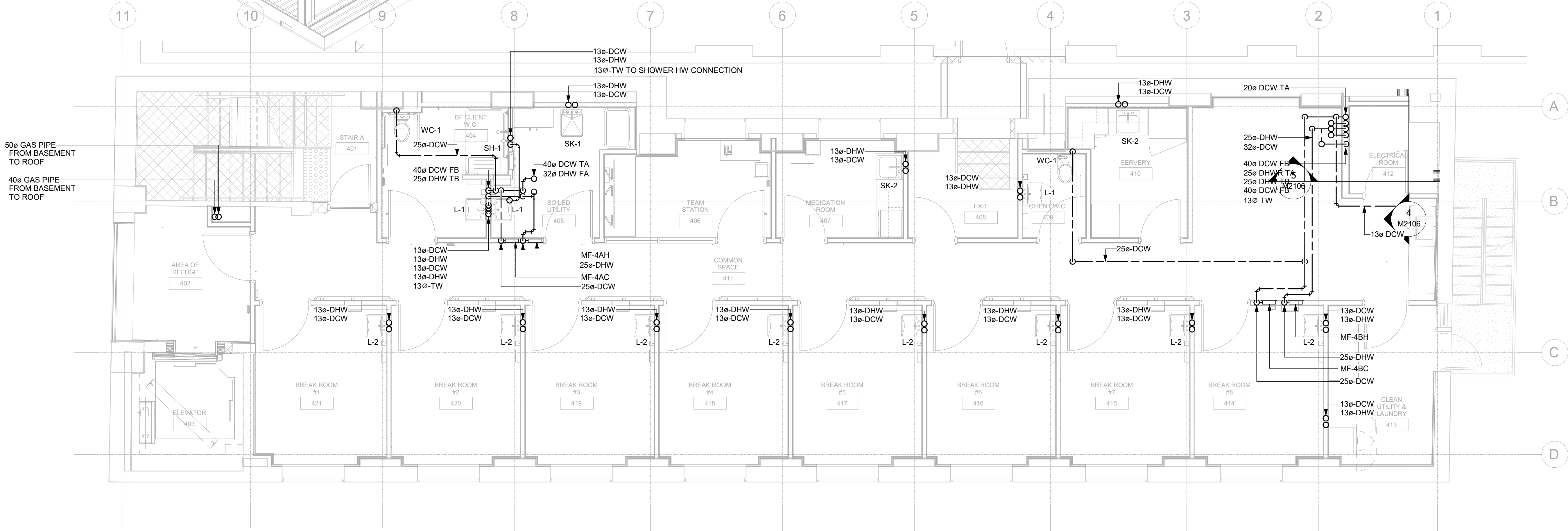
3D VIEW - BF CLIENT W.C. 404 & SOILED UTILITY

Scale: 1:25  
2  
M2105



3D VIEW - COMMON SPACE 411

Scale: 1:25  
3  
M2105

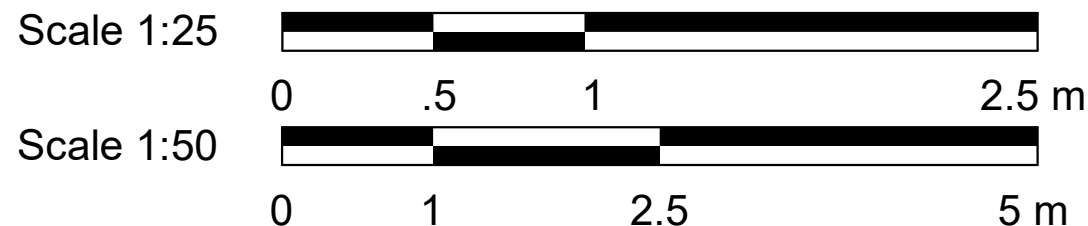


PLUMBING - FOURTH FLOOR

Scale: 1:50  
1  
M2105

**PLUMBING NOTES:**

- CROSS REFERENCE THE PIPE SIZING AND PIPING CONNECTIONS WITH PLUMBING SCHEMATIC DIAGRAM IN DRAWING M2108.
- PIPE SIZES AND INSTALLATION SHALL BE AS PER OBC DIVISION 8 PART 7.6 AND INTERNATIONAL PLUMBING CODE, WHICHEVER IS MORE STRINGENT.
- ALL PLUMBING FIXTURES SHALL BE PROVIDED WITH SHUT OFF VALVES FOR BOTH DCW AND DHW WATER SUPPLY PIPING.
- ALL PLUMBING VALVES SHALL BE MADE ACCESSIBLE THROUGH 300X300 ACCESS PANELS TO BE COORDINATED WITH ARCHITECTURAL WALLS AND CEILING WORKS.
- PLUMBING PIPING INSULATION SHALL BE AS PER PIPING INSULATION SPECIFICATIONS 23 07 19.
- CONTRACTOR TO VERIFY ALL PLUMBING AND GAS PIPING LAYOUTS ON SITE FOR OBSTRUCTIONS AND RESTRICTIONS. ENGINEER SHALL BE NOTIFIED FOR DISCREPANCIES BETWEEN DRAWING AND ACTUAL SITE CONDITION FOR RESOLUTION.



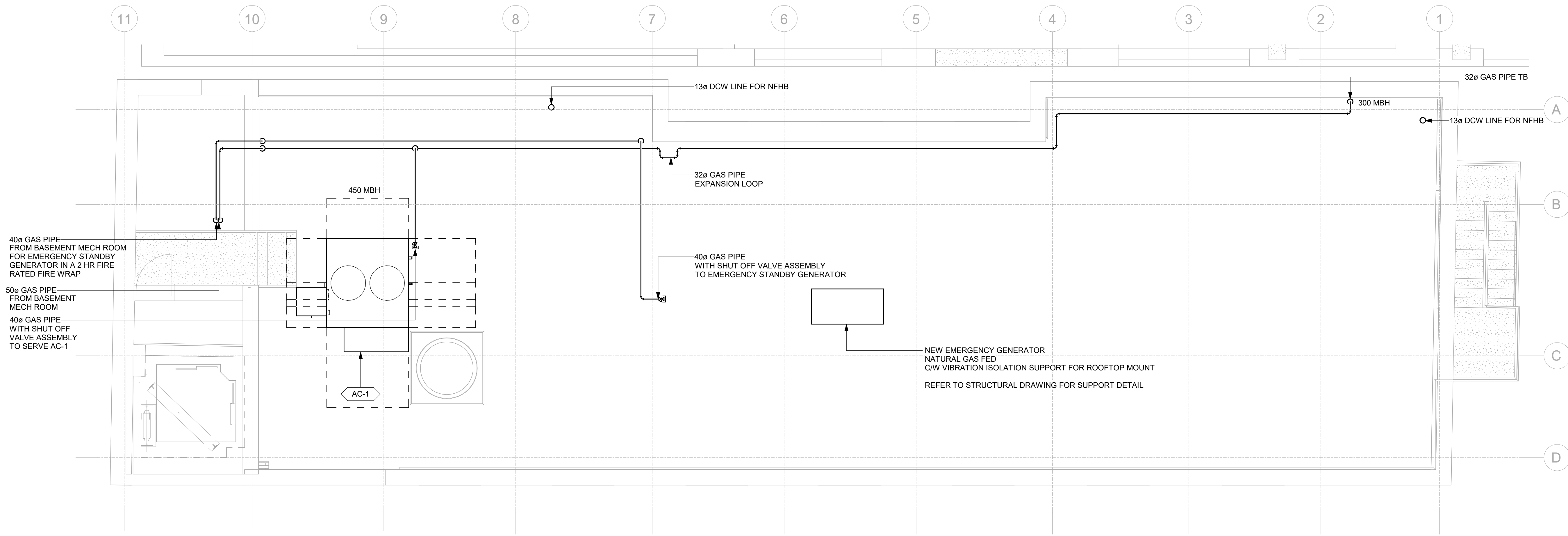




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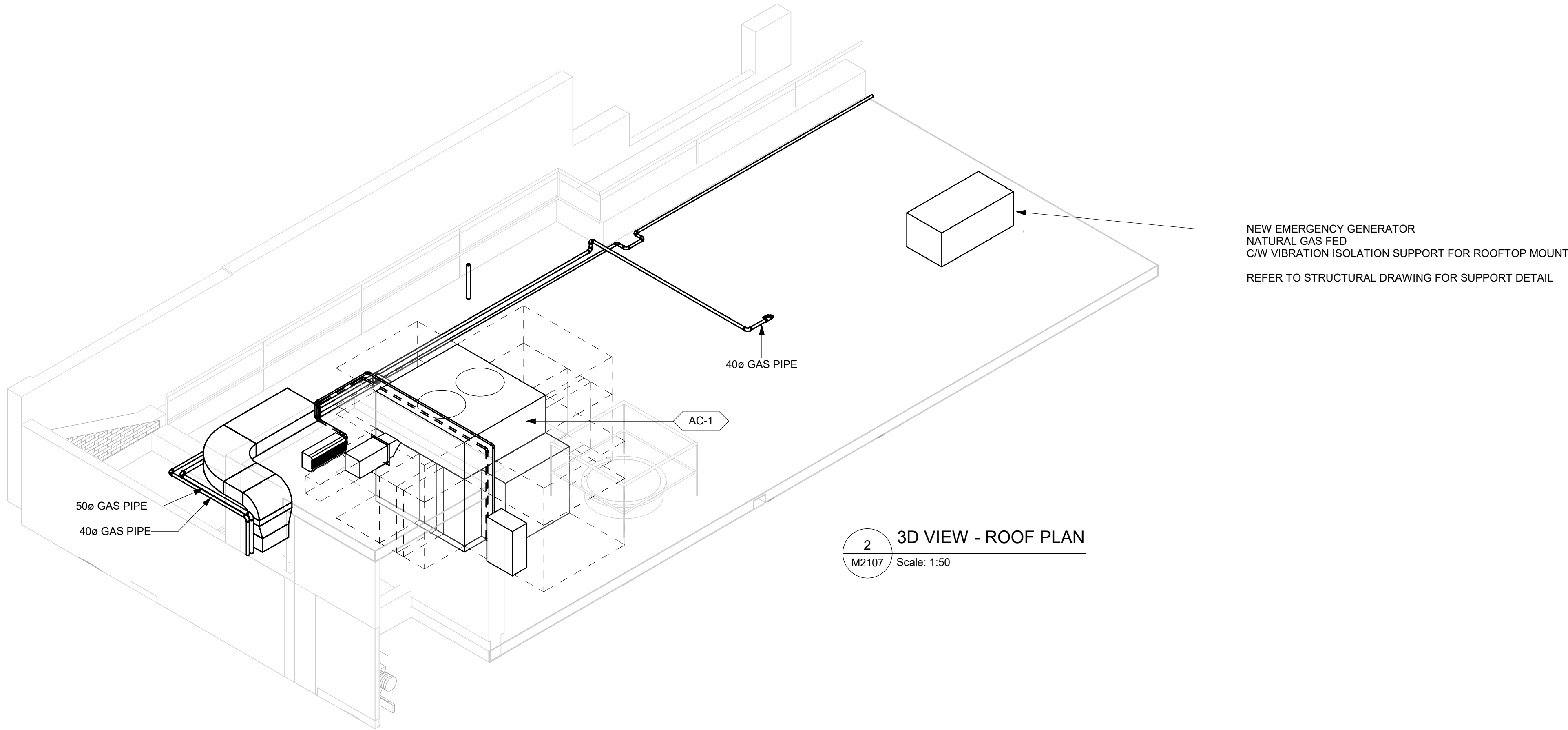
Scale 1:50  
0 1 2.5 5 m

1 PLUMBING - ROOF  
M2107 Scale: 1 : 50



PLUMBING NOTES:

- CROSS REFERENCE THE PIPE SIZING AND PIPING CONNECTIONS WITH PLUMBING SCHEMATIC DIAGRAM IN DRAWING M2108.
- PLUMBING PIPE SIZES AND INSTALLATION SHALL BE AS PER OBC DIVISION B PART 7.6 AND INTERNATIONAL PLUMBING CODE, WHICHEVER IS MORE STRINGENT.
- ALL PLUMBING FIXTURES SHALL BE PROVIDED WITH SHUT OFF VALVES FOR BOTH DCW AND DHW WATER SUPPLY PIPING.
- PLUMBING PIPING INSULATION SHALL BE AS PER PIPING INSULATION SPECIFICATIONS 23 07 19.
- HOSE BIBBS SHALL BE NON-FREEZE TYPE.
- SEAL ALL ROOF AND WALL PIPE PENETRATIONS
- SEE DETAIL 3/M0106 FOR GAS PIPING INSTALLATION DETAIL ON ROOF.
- CONTRACTOR TO VERIFY ALL PLUMBING AND GAS PIPING LAYOUTS ON SITE FOR OBSTRUCTIONS AND RESTICTIONS. ENGINEER SHALL BE NOTIFIED FOR DISCREPANCIES BETWEEN DRAWING AND ACTUAL SITE CONDITION FOR RESOLUTION.



2 3D VIEW - ROOF PLAN  
M2107 Scale: 1:50

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**CITY OF TORONTO**  
Corporate Real Estate Management  
Project Management Office  
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M5V 3C6

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ISSUES		
No.	DESCRIPTION	DATE
A	ISSUED FOR PERMIT 100%	2025-07-31
B	ISSUED FOR TENDER	2025-09-02

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tel 416 679 1930  
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PROJECT TITLE  
**50 RICHMOND ST. E.  
RENOVATIONS**

PROJECT ADDRESS

**50 RICHMOND STREET EAST  
TORONTO, ON**

PROJECT NO:  
**122260**

DRAWN BY:  
**C. SU**

CHECKED BY:  
**E. PANAH**

PROJECT MGR:  
**F. BOLOURIAN**

APPROVED BY:  
**R. BARROSO**

SHEET TITLE  
**PLUMBING - ROOF**

SHEET NUMBER

**M2107**

ISSUE

**B**

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10mm

SCALE CHECK  
1 in

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PROJECT MGR:

F. BOLOURIAN

APPROVED BY:

R. BARROSO

SHEET TITLE

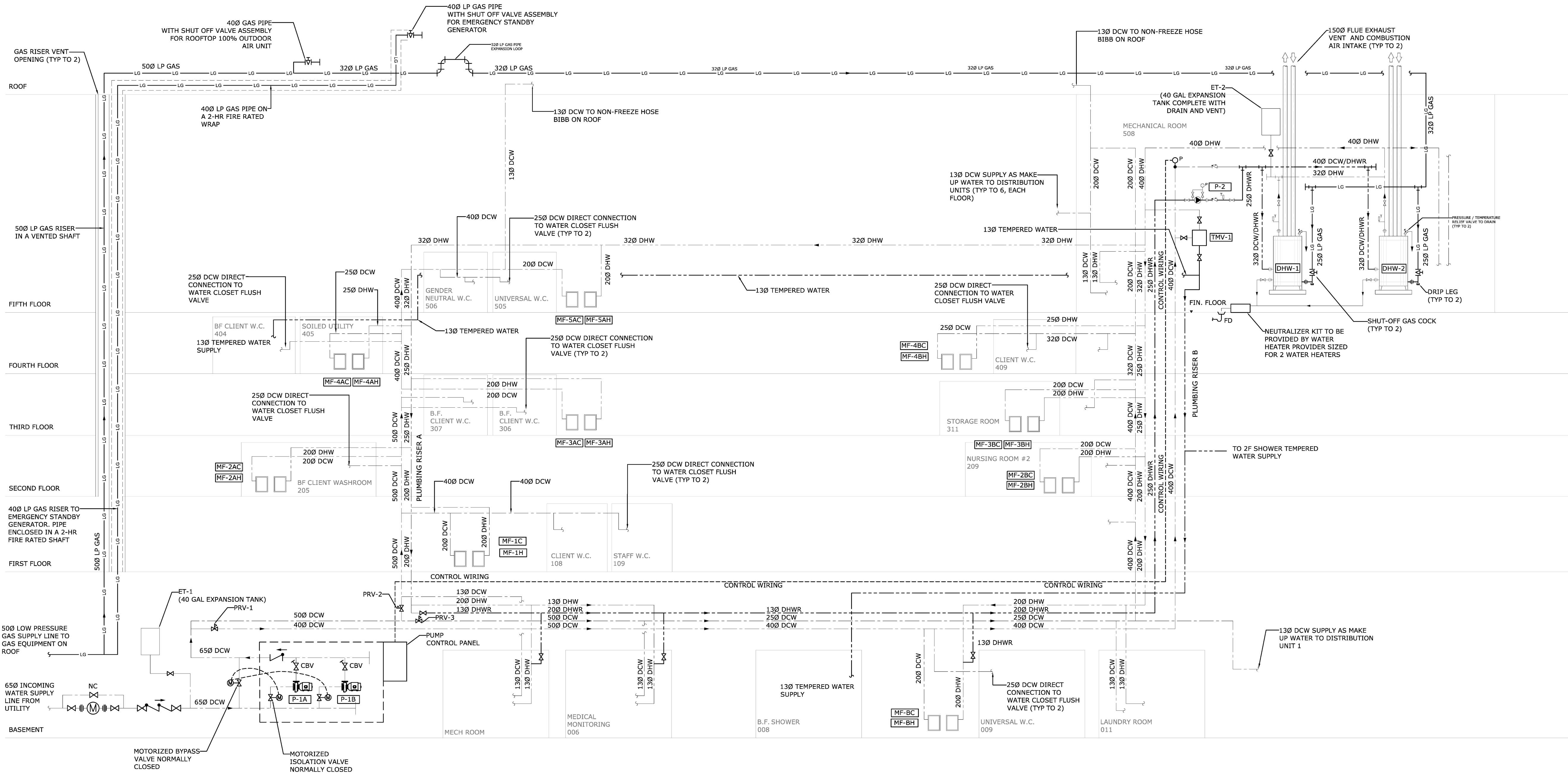
**PLUMBING - OVERALL  
SCHEMATIC**

SHEET NUMBER

**M2108**

ISSUE

**B**



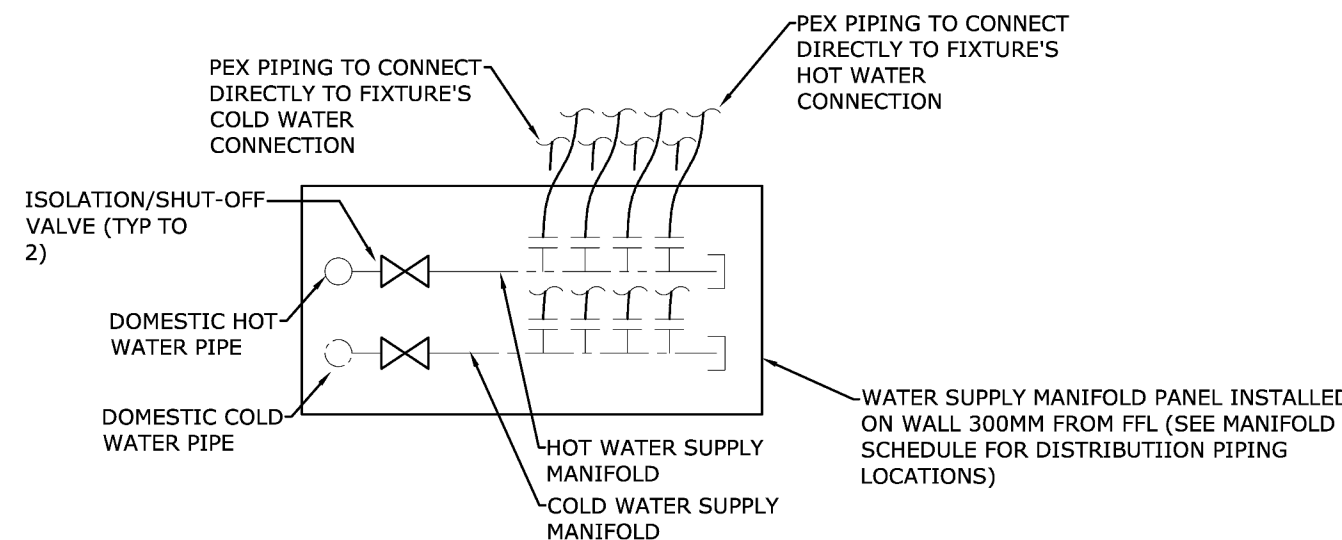
1 DOMESTIC WATER AND GAS PIPING SYSTEM DIAGRAM  
M2108 Scale: NTS

WATER CLOSET	250 DCW
KITCHEN SINK	130 DCW & DHW
WASHER	130 DCW & DHW
LAUNDRY SINK	130 DCW & DHW
SHOWER	130 DCW & DHW
SINK/LAVATORY	130 DCW & DHW
HOSE BIBB	130 DCW
WATER FIXTURE PIPE SIZES	

NOTE:

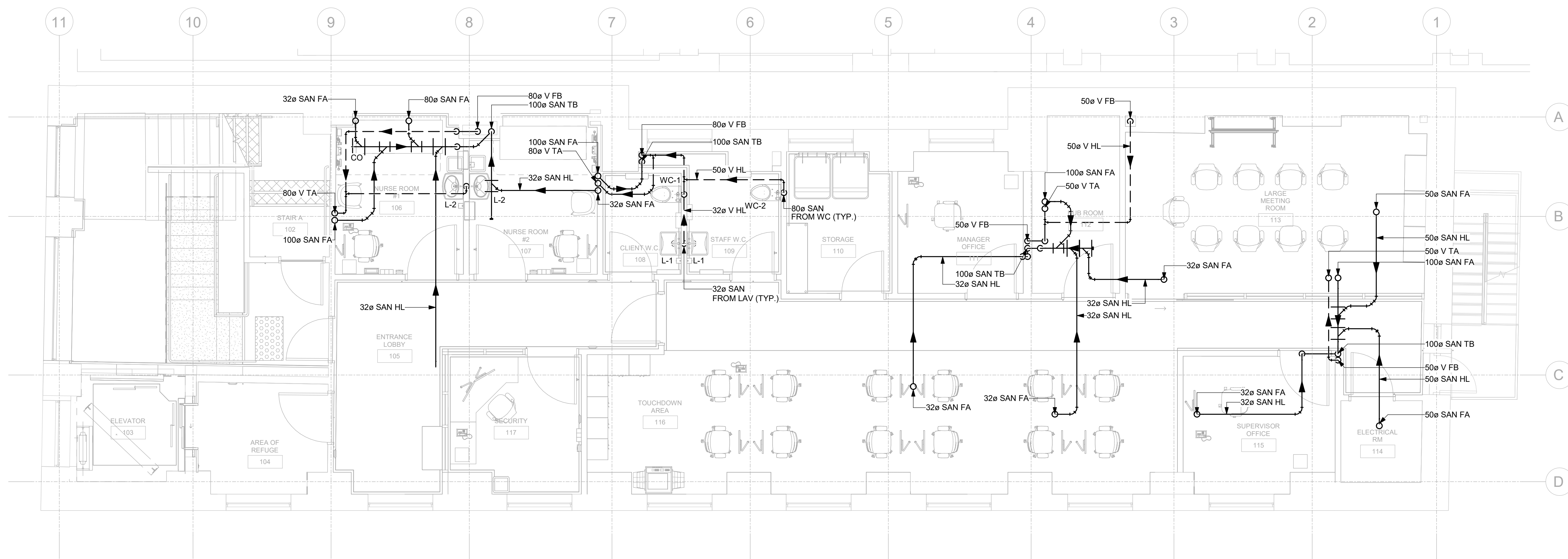
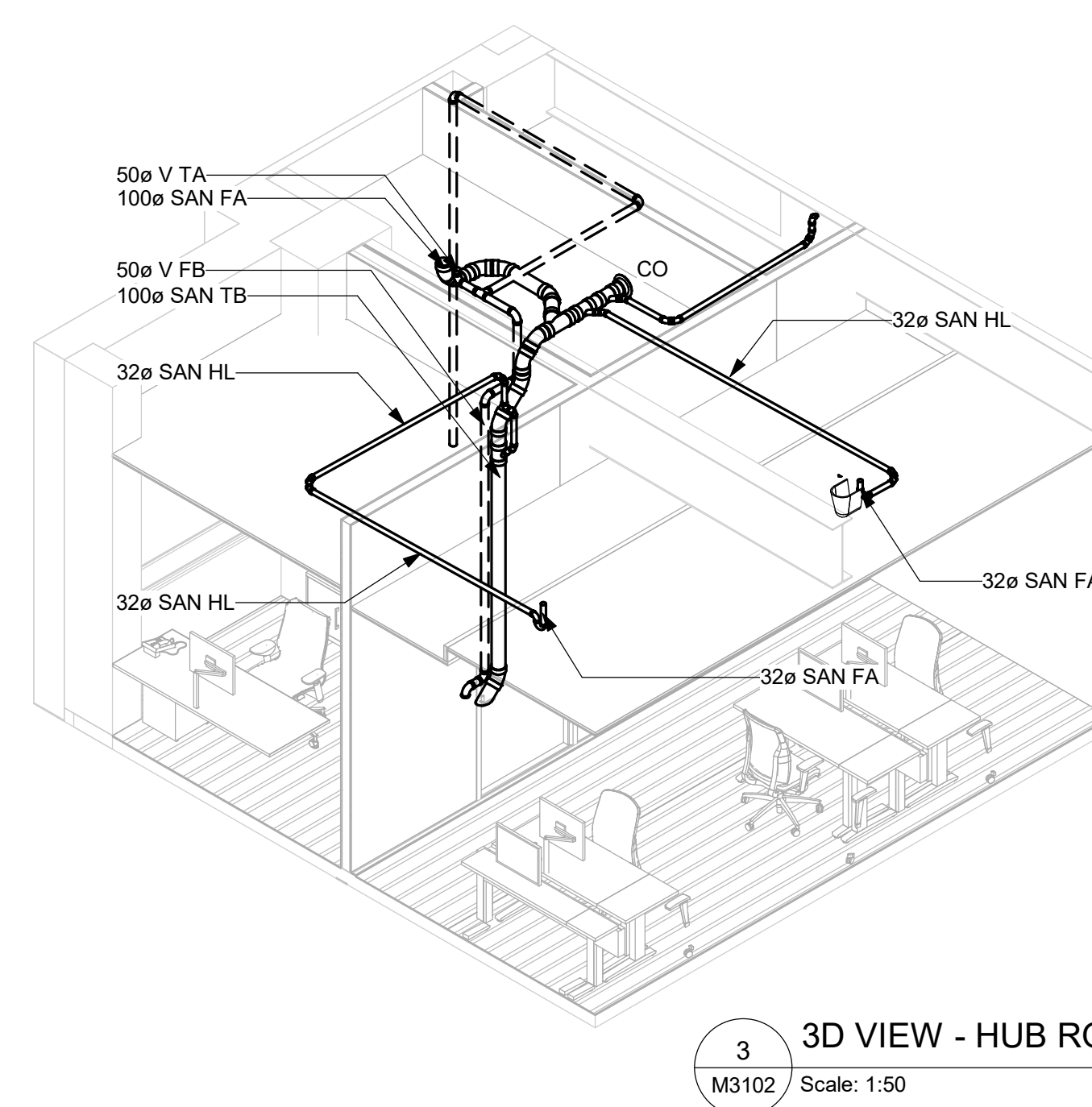
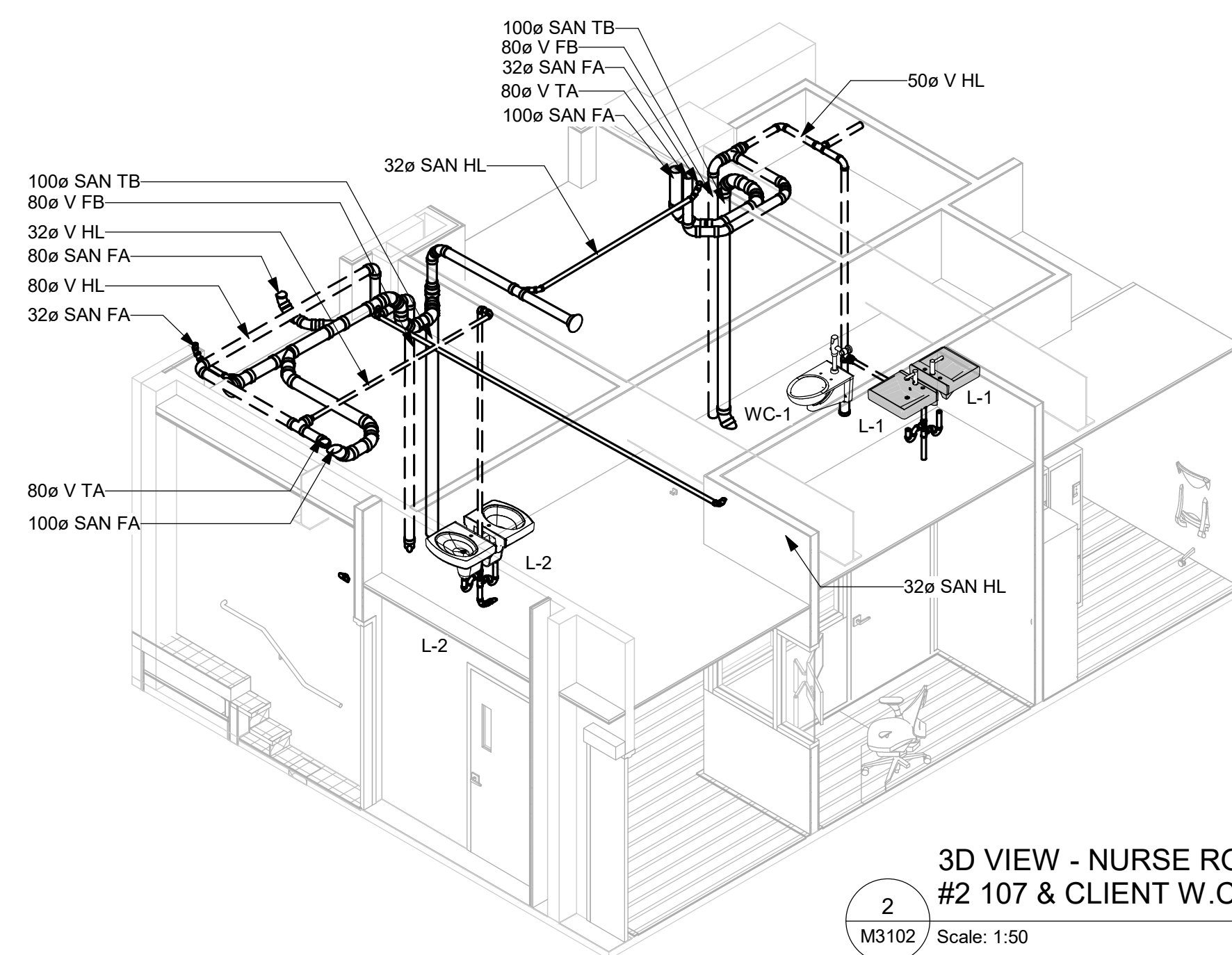
1. PIPING SHALL BE SEPARATE FOR EACH WATER SUPPLY SERVICE (KITCHEN, LAUNDRY, BATHROOM)
2. SEE PLAN DRAWINGS FOR NUMBER OF REQUIRED MANIFOLD CONNECTIONS.
3. ALL PEX PIPING SHALL BE ROUTED FROM MANIFOLD TO PLUMBING FIXTURES USING PEX PIPING MANUFACTURER'S RECOMMENDED FITTINGS AND SUPPORTS.
4. ALL PEX PIPING SHALL BE INSULATED AS PER MANUFACTURER'S INSULATION RECOMMENDATION OR AS PER THIS PROJECT'S PIPING INSULATION SPECIFICATIONS WHICHEVER IS MORE STRINGENT.
5. INSTALLING CONTRACTOR TO VERIFY WATER DISTRIBUTION PIPING LAYOUT AND ROUTING ON SITE. NOTIFY ENGINEER FOR DISCREPANCIES AND ISSUES WITH SITE CONDITION FOR RESOLUTION.

2 DOMESTIC WATER DISTRIBUTION MANIFOLD DIAGRAM  
M2108 Scale: NTS









GENERAL NOTES:  
1. CONTRACTOR TO VERIFY ALL SANITARY DRAINAGE PIPE AND VENT LAYOUTS ON SITE FOR OBSTRUCTIONS AND RESTRICTIONS. ENGINEER SHALL BE NOTIFIED FOR DISCREPANCIES BETWEEN DRAWING AND ACTUAL SITE CONDITION FOR RESOLUTION.  
2. ALL SANITARY DRAINAGE PIPE AND VENT LAYOUTS INCLUDING FITTING CONNECTIONS, CLEAN OUTS, PIPE SLOPING AND PIPE SUPPORTS SHALL BE AS PER OBC DIVISION B PART 7.4 AND 7.5.  
3. ALL SANITARY FIXTURES SHALL BE PROVIDED WITH P-TRAP AND VENT OR AS SHOWN ON THE DRAWINGS AS PER OBC.



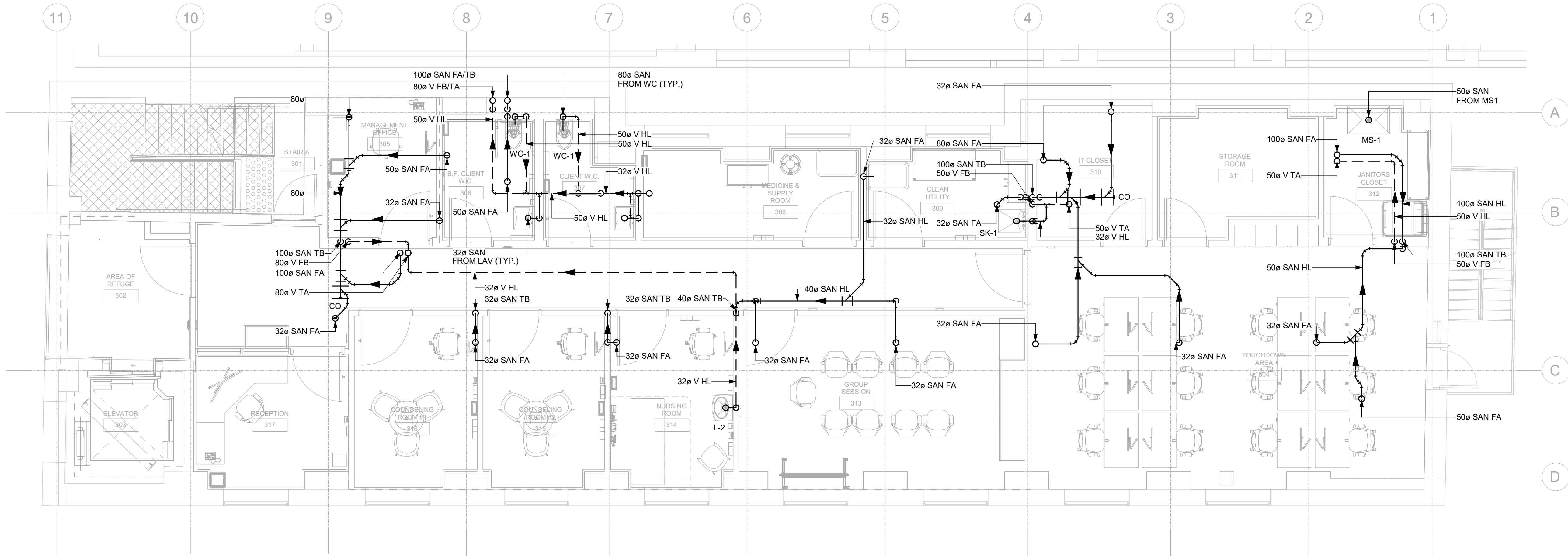


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Scale 1:50

0 1 2.5 5 m

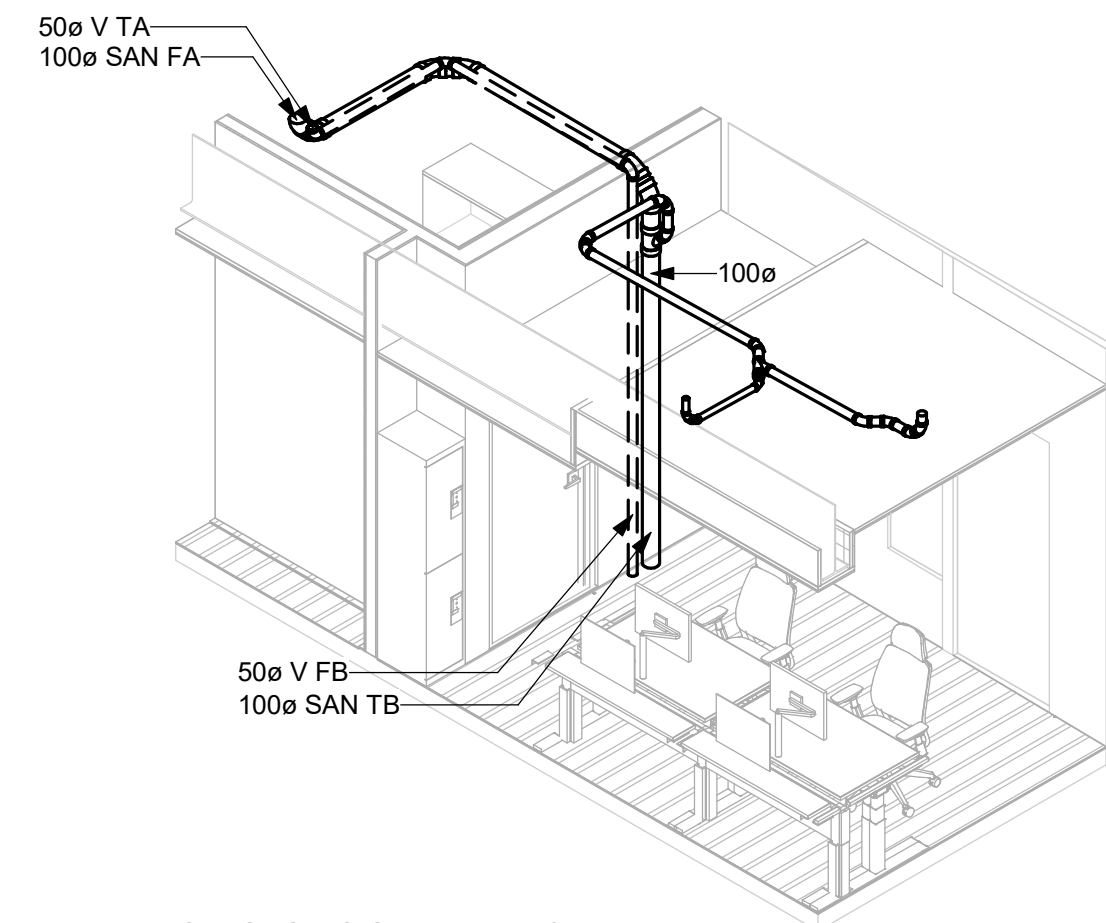
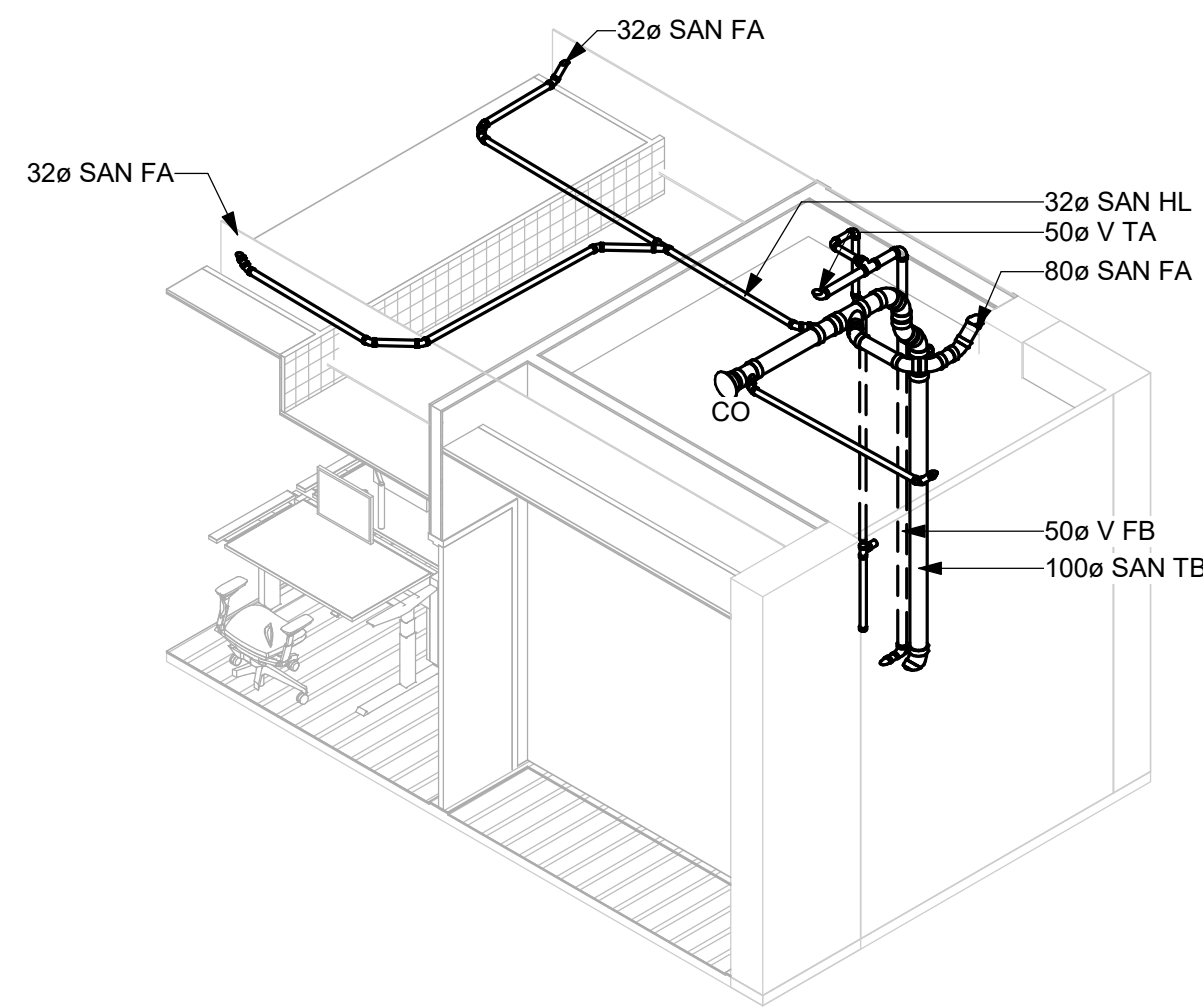
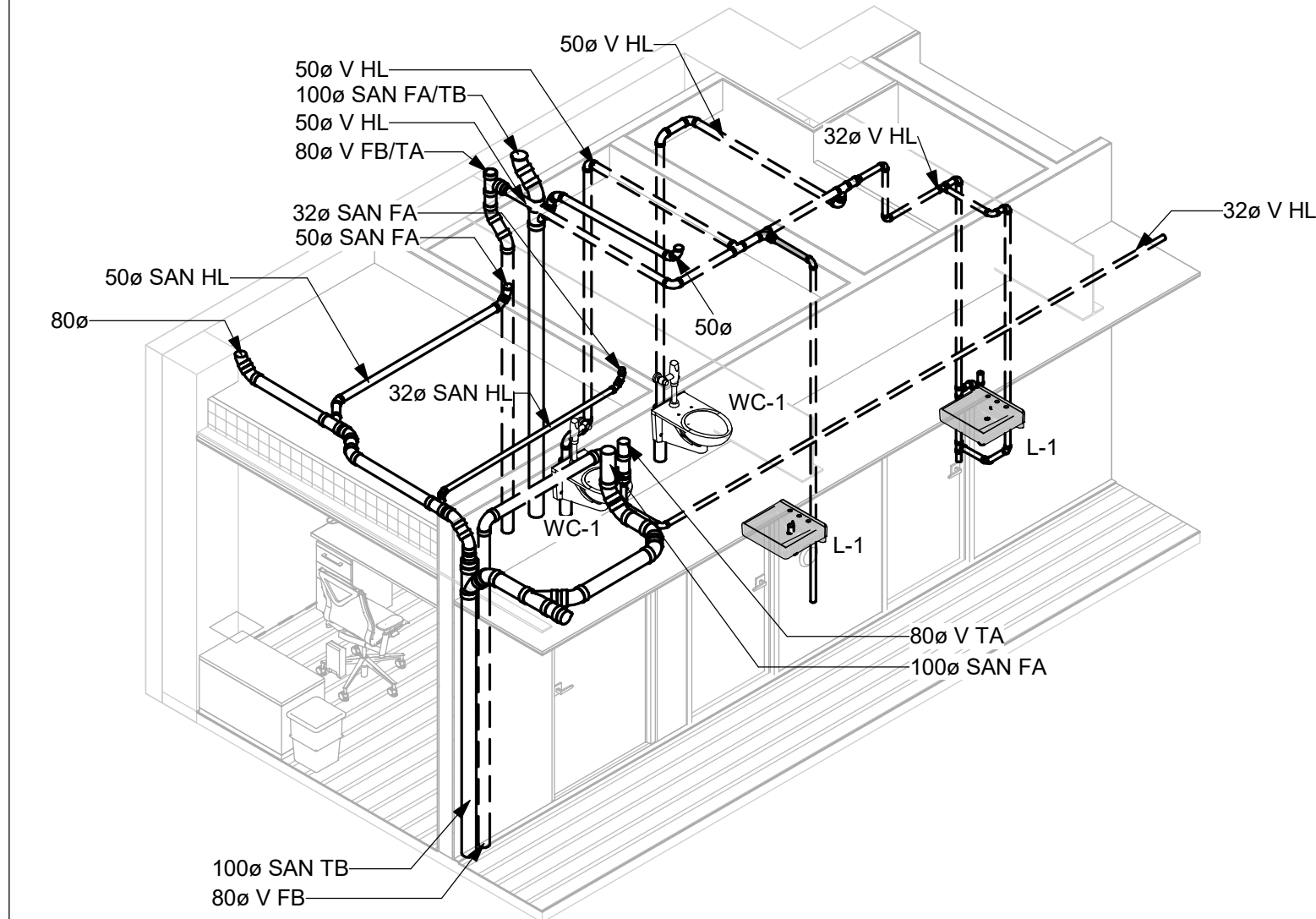
1 DRAINAGE - THIRD FLOOR  
M3104 Scale: 1 : 50



2 3D VIEW - MANAGEMENT OFFICE 205, B.F.  
CLIENT W.C. 306 & CLIENT W.C. 307 - DRAINAGE  
LAYOUT  
M3104 Scale: 1:50

3 3D VIEW - CLEAN UTILITY 309 - DRAINAGE  
LAYOUT  
M3104 Scale: 1:50

4 3D VIEW - JANITORS CLOSET 312 &  
TOUCHDOWN AREA 304 - DRAINAGE LAYOUT  
M3104 Scale: 1:50



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ISSUES		
No.	DESCRIPTION	DATE
A	50% SUBMISSION	2024-10-31
B	75% SUBMISSION	2025-03-17
C	ISSUED FOR PRELIMINARY COSTING	2025-06-27
D	ISSUED FOR PERMIT 100%	2025-07-31
E	ISSUED FOR TENDER	2025-09-02
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PROJECT TITLE		
50 RICHMOND ST. E. RENOVATIONS		
PROJECT ADDRESS		
50 RICHMOND STREET EAST TORONTO, ON		
PROJECT NO: 122260		
DRAWN BY: C. SU		CHECKED BY: E. PANAH
PROJECT MGR: F. BOLOURIAN		APPROVED BY: R. BARROSO
SHEET TITLE		
DRAINAGE - THIRD FLOOR		
SHEET NUMBER		ISSUE
M3104		E

GENERAL NOTES:  
1. CONTRACTOR TO VERIFY ALL SANITARY DRAINAGE PIPE AND VENT LAYOUTS ON SITE FOR OBSTRUCTIONS AND RESTICTIONS. ENGINEER SHALL BE NOTIFIED FOR DISCREPANCIES BETWEEN DRAWING AND ACTUAL SITE CONDITION FOR RESOLUTION.  
2. ALL SANITARY DRAINAGE PIPE AND VENT LAYOUTS INCLUDING FITTING CONNECTIONS, CLEAN OUTS, PIPE SLOPING AND PIPE SUPPORTS SHALL BE AS PER OBC DIVISION B PART 7.4 AND 7.5.  
3. ALL SANITARY FIXTURES SHALL BE PROVIDED WITH P-TRAP AND VENT OR AS SHOWN ON THE DRAWINGS AS PER OBC.

Autodesk Docs/122260 - Cot TAU Upgrades R2024/122260-TAU-33-50-Richmond-MR24.rvt 1/10m 1/1m

9/2/2025 4:51:04 PM

1 DRAINAGE - FOURTH FLOOR  
M3105 Scale: 1:50



GENERAL NOTES:  
1. CONTRACTOR TO VERIFY ALL SANITARY DRAINAGE PIPE AND VENT LAYOUTS ON SITE FOR OBSTRUCTIONS AND RESTICTIONS. ENGINEER SHALL BE NOTIFIED FOR DISCREPANCIES BETWEEN DRAWING AND ACTUAL SITE CONDITION FOR RESOLUTION.  
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CITY OF TORONTO



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CONSULTANTS

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CHECKED BY:  
E. PANAH

PROJECT MGR:  
F. BOLOURIAN

APPROVED BY:  
R. BARROSO

SHEET TITLE  
DRAINAGE - FOURTH  
FLOOR

SHEET NUMBER

M3105

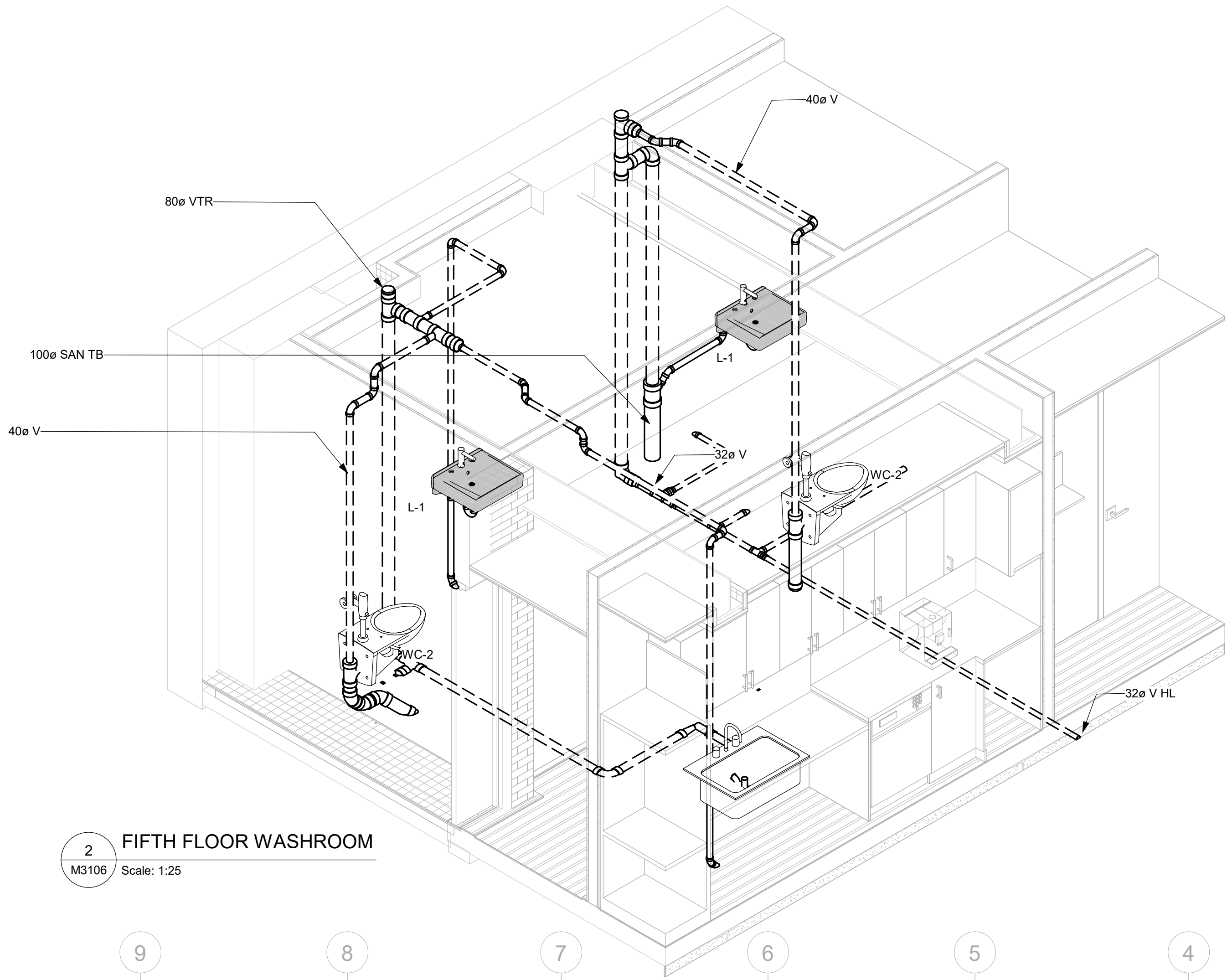
ISSUE

E

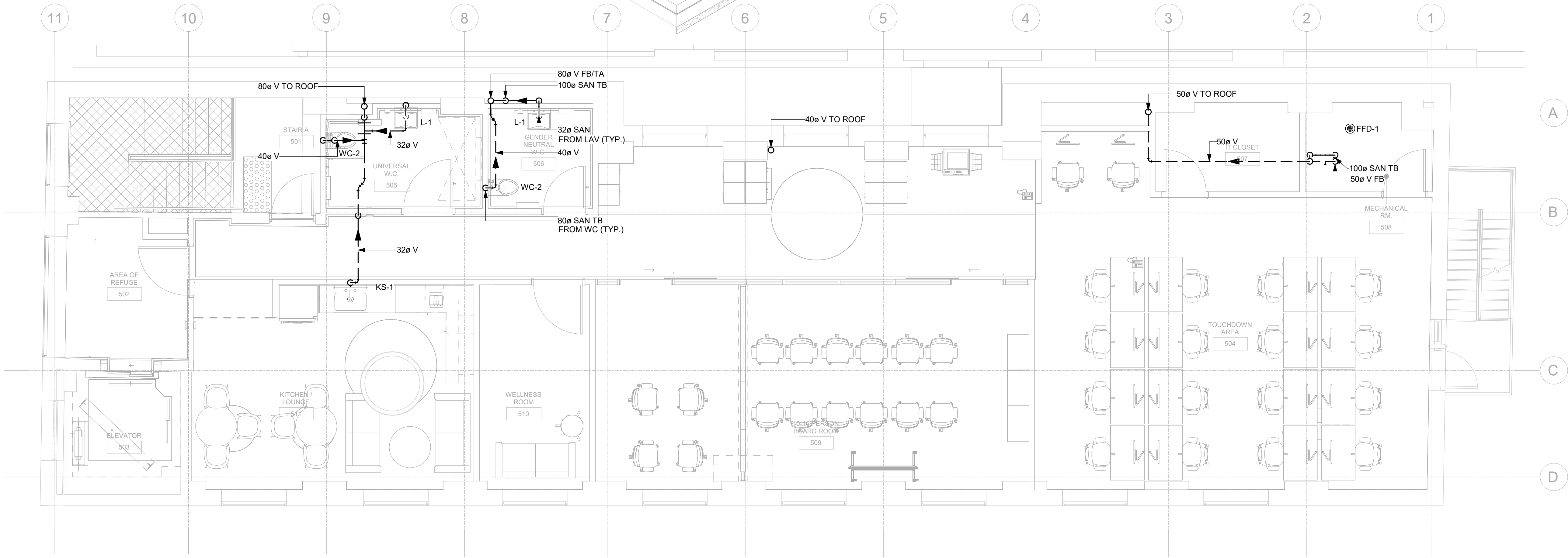
Autodesk Docs/122260 - Cot TAU Upgrades R2024122260-TAU-33-50-Richmond-MR24.rvt

10mm

SCALE CHECK  
1 in



2 FIFTH FLOOR WASHROOM  
M3106 Scale: 1:25



1 DRAINAGE - FIFTH FLOOR  
M3106 Scale: 1:50

Scale 1:50  
0 1 2.5 5 m

GENERAL NOTES:  
1. CONTRACTOR TO VERIFY ALL SANITARY DRAINAGE PIPE AND VENT LAYOUTS ON SITE FOR OBSTRUCTIONS AND RESTICTIONS. ENGINEER SHALL BE NOTIFIED FOR DISCREPANCIES BETWEEN DRAWING AND ACTUAL SITE CONDITION FOR RESOLUTION.  
2. ALL SANITARY DRAINAGE PIPE AND VENT LAYOUTS INCLUDING FITTING CONNECTIONS, CLEAN OUTS, PIPE SLOPING AND PIPE SUPPORTS SHALL BE AS PER OBC DIVISION B PART 7.4 AND 7.5.  
3. ALL SANITARY FIXTURES SHALL BE PROVIDED WITH P-TRAP AND VENT OR AS SHOWN ON THE DRAWINGS AS PER OBC.

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PROJECT NO:  
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**C. SU**

CHECKED BY:  
**E. PANAH**

PROJECT MGR:  
**F. BOLOURIAN**

APPROVED BY:  
**R. BARROSO**

SHEET TITLE  
**DRAINAGE - FIFTH  
FLOOR**

SHEET NUMBER

**M3106**

ISSUE

**E**

ISSUES		
No.	DESCRIPTION	DATE
A	ISSUED FOR PERMIT 100%	2025-07-31
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**F. BOLOURIAN**

APPROVED BY:  
**R. BARROSO**

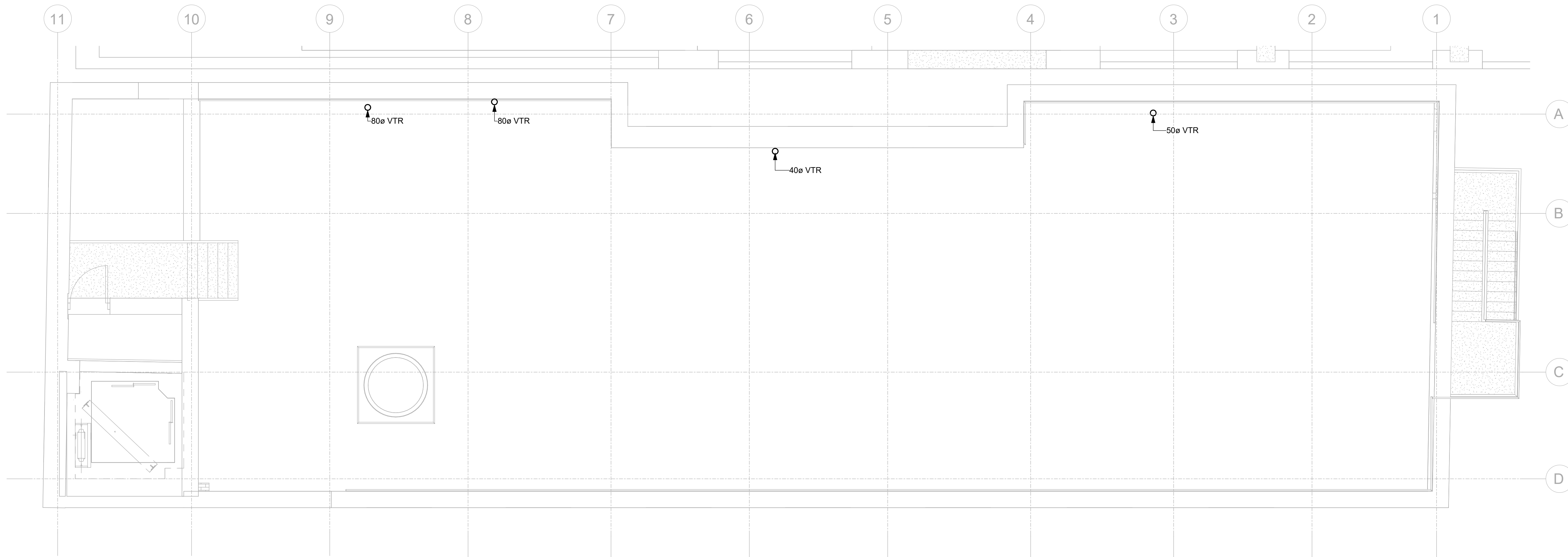
SHEET TITLE  
**DRAINAGE - ROOF**

SHEET NUMBER

**M3107**

ISSUE

**B**



**1 DRAINAGE - ROOF**

M3107 Scale: 1 : 50

**GENERAL NOTES:**

1. CONTRACTOR TO VERIFY ALL SANITARY DRAINAGE PIPE AND VENT LAYOUTS ON SITE FOR OBSTRUCTIONS AND RESTICTIONS. ENGINEER SHALL BE NOTIFIED FOR DISCREPANCIES BETWEEN DRAWING AND ACTUAL SITE CONDITION FOR RESOLUTION.
2. ALL SANITARY DRAINAGE PIPE AND VENT LAYOUTS INCLUDING FITTING CONNECTIONS, CLEAN OUTS, PIPE SLOPING AND PIPE SUPPORTS SHALL BE AS PER OBC DIVISION B PART 7.4 AND 7.5.
3. ALL SANITARY FIXTURES SHALL BE PROVIDED WITH P-TRAP AND VENT OR AS SHOWN ON THE DRAWINGS AS PER OBC.
4. STORMWATER ROOF DRAIN TO BE REPLACED WITH NEW ROOF DRAIN. CONTRACTOR TO FLUSH ALL EXISTING STORMWATER PIPES.

Scale 1:50





ROOF LEVEL

ROOF LEVEL

FIFTH FLOOR LEVEL

FIFTH FLOOR LEVEL

FOURTH FLOOR LEVEL

FOURTH FLOOR LEVEL

THIRD FLOOR LEVEL

THIRD FLOOR LEVEL

SECOND FLOOR LEVEL

SECOND FLOOR LEVEL

FIRST FLOOR LEVEL

FIRST FLOOR LEVEL

BASEMENT LEVEL

BASEMENT LEVEL

STANDPIPE  
DRAINS TO  
FFD

FIRE PUMP  
DRAINS TO  
FFD

WATER METER  
ASSEMBLY DRAINS  
TO FFD

BASEMENT LEVEL

CTE

ELEVATOR SUMP  
PIT WITH SUMP  
PUMP P-3

CITY MAIN SEWER

# 1 SANITARY DRAINAGE PIPING SYSTEM DIAGRAM

M3108 Scale: NTS

GENERAL NOTES:  
1. CONTRACTOR TO VERIFY ALL SANITARY DRAINAGE PIPE AND VENT LAYOUTS ON SITE FOR OBSTRUCTIONS AND RESTICTIONS. ENGINEER SHALL BE NOTIFIED FOR DISCREPANCIES BETWEEN DRAWING AND ACTUAL SITE CONDITION FOR RESOLUTION  
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3. ALL SANITARY FIXTURES SHALL BE PROVIDED WITH P-TRAP AND VENT OR AS SHOWN ON THE DRAWINGS AS PER OBC.  
4. ALL WALL, FLOOR AND CEILING PENETRATIONS SHALL BE COORDINATED ON SITE WITH STRUCTURAL AND ARCHITECTURAL WORKS PRIOR TO INSTALLATION.

CLIENT

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A	ISSUED FOR PERMIT 100%	2025-07-31
B	ISSUED FOR TENDER	2025-09-02

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PROJECT TITLE  
50 RICHMOND ST. E.  
RENOVATIONS

PROJECT ADDRESS

50 RICHMOND STREET EAST  
TORONTO, ON

PROJECT NO:  
122260

DRAWN BY:  
C. SU

CHECKED BY:  
E. PANAH

PROJECT MGR:  
F. BOLOURIAN

APPROVED BY:  
R. BARROSO

SHEET TITLE  
DRAINAGE PIPING  
SYSTEM DIAGRAM

SHEET NUMBER

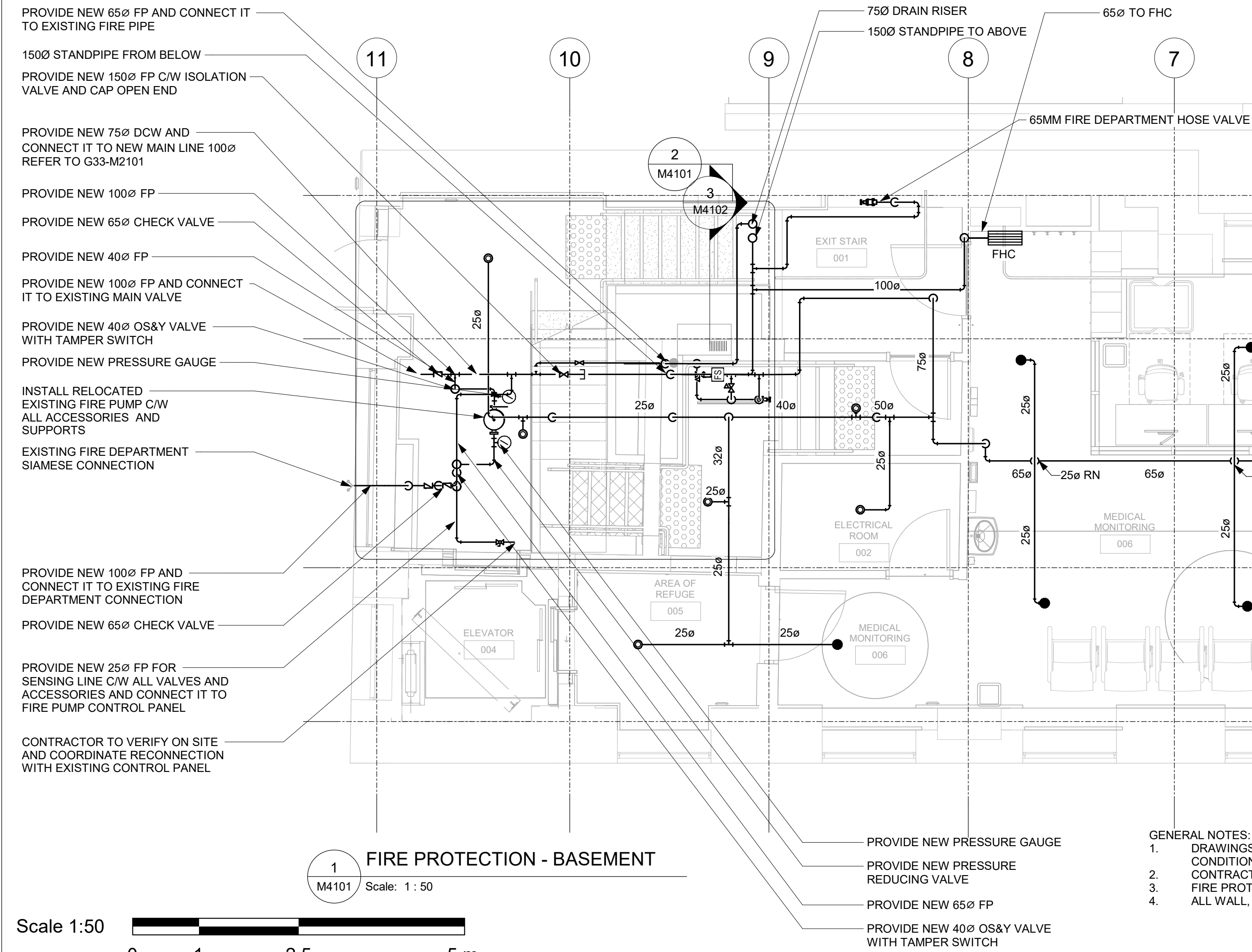
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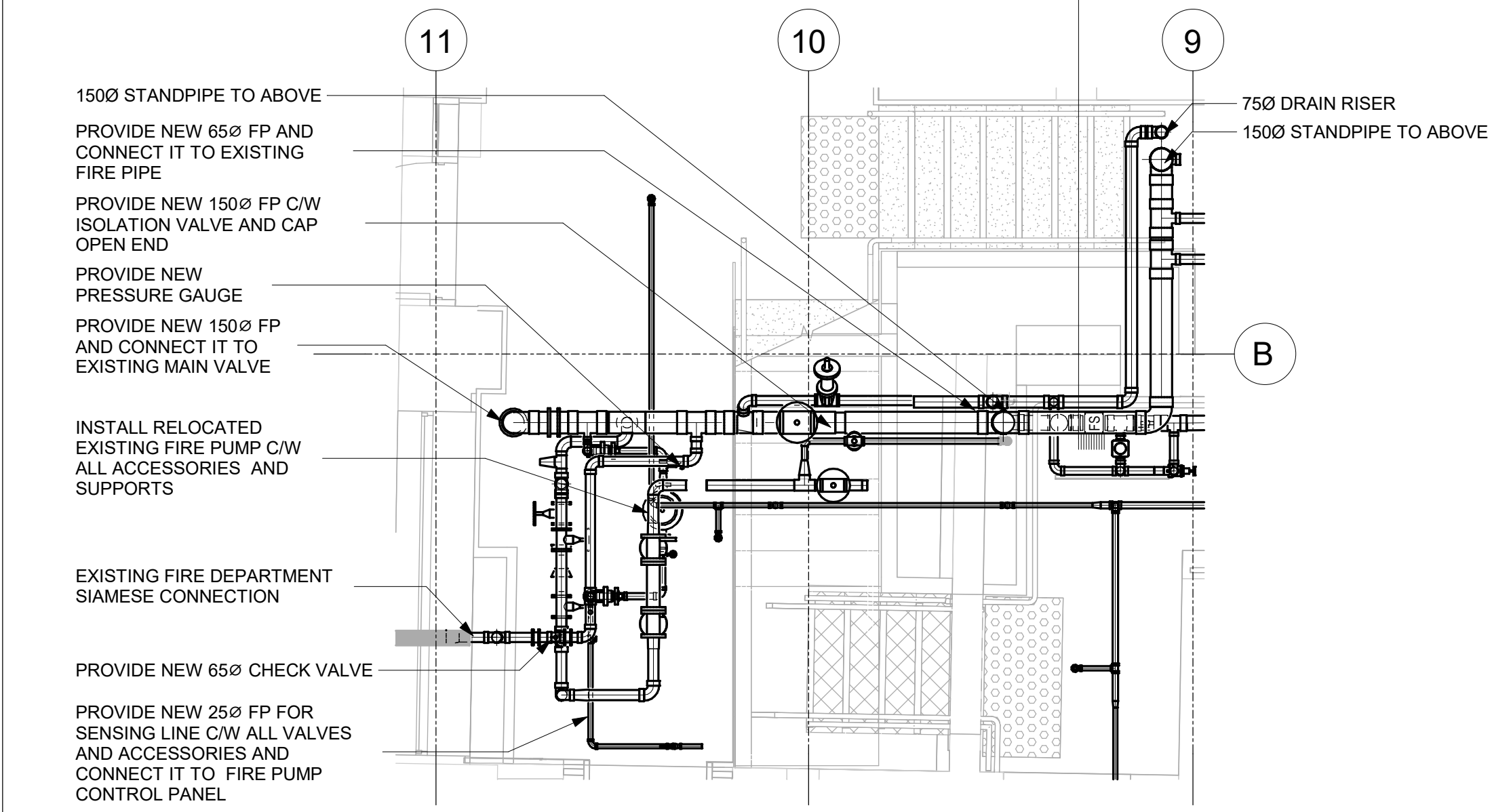
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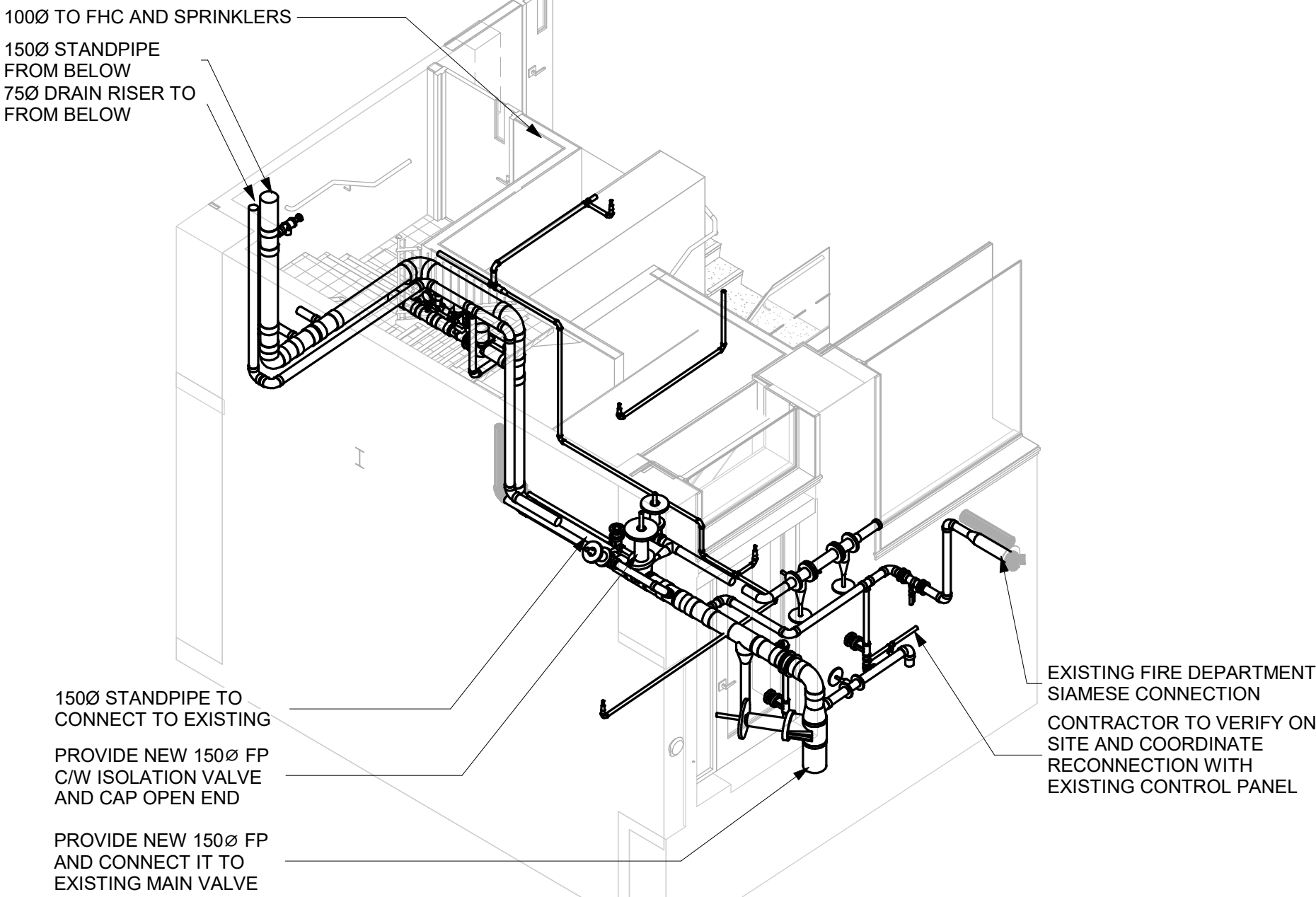
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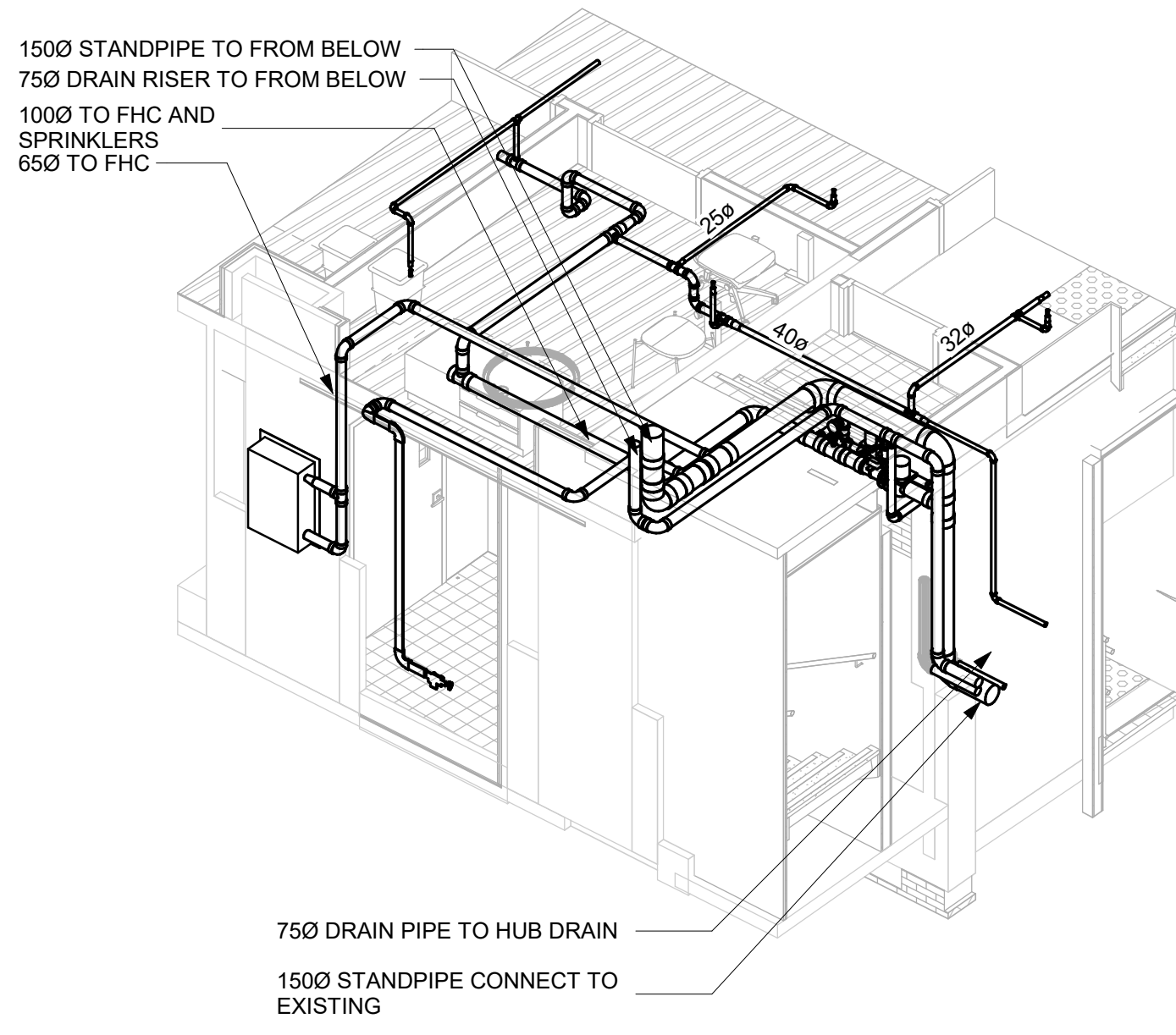
1 FIRE PROTECTION - BASEMENT  
M4101 Scale: 1 : 50



2 FIRE PROTECTION BLOW UP PLAN  
M4101 Scale: 1 : 40



3 3D VIEWS FIRE PROTECTION  
M4101 Scale: 1:50




4 3D VIEW EXIT STAIR 001  
M4101 Scale: 1:50

- GENERAL NOTES:
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APPROVED BY:  
R. BARROSO

SHEET TITLE

FIRE PROTECTION -  
BASEMENT FLOOR

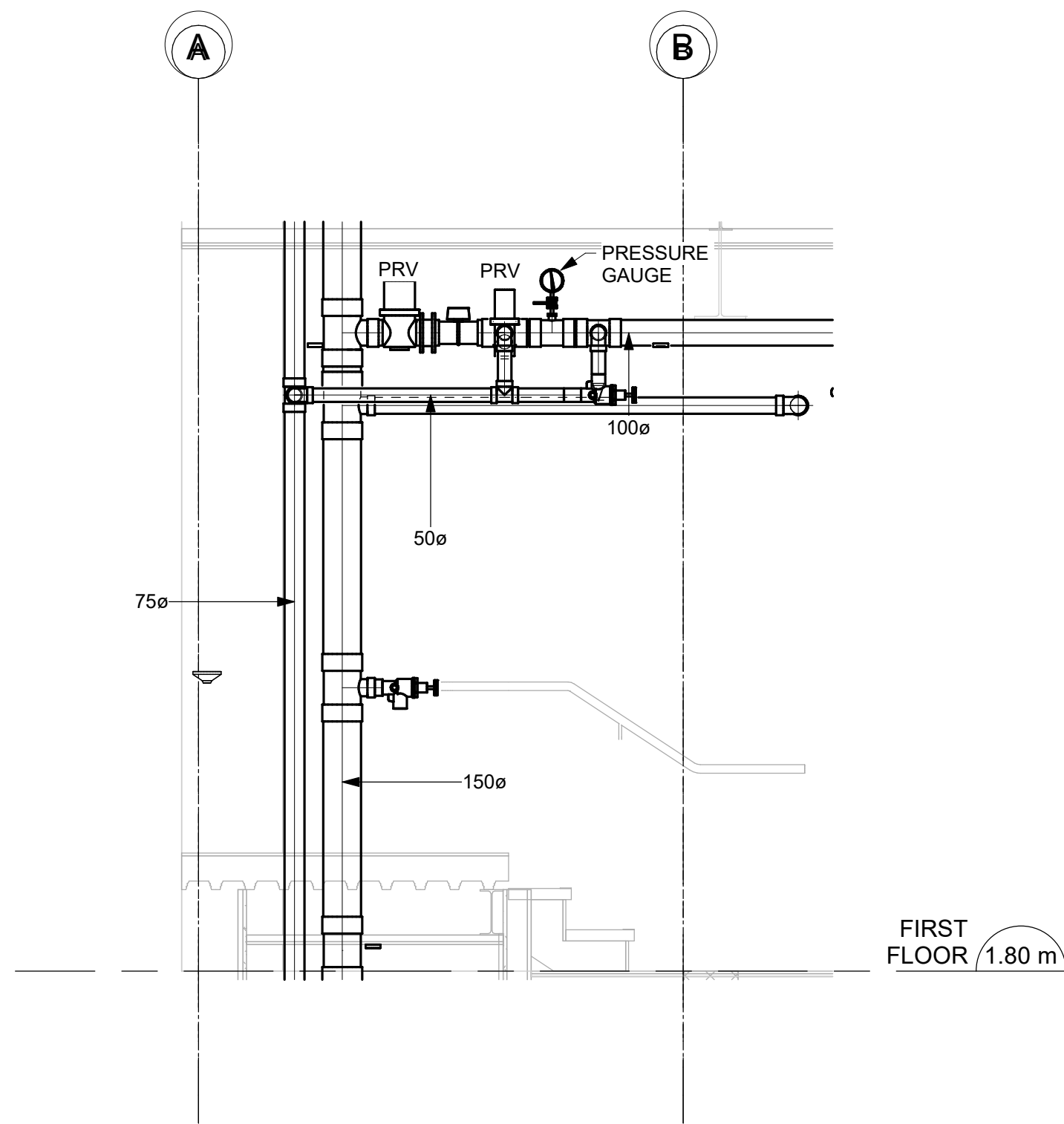
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M4101

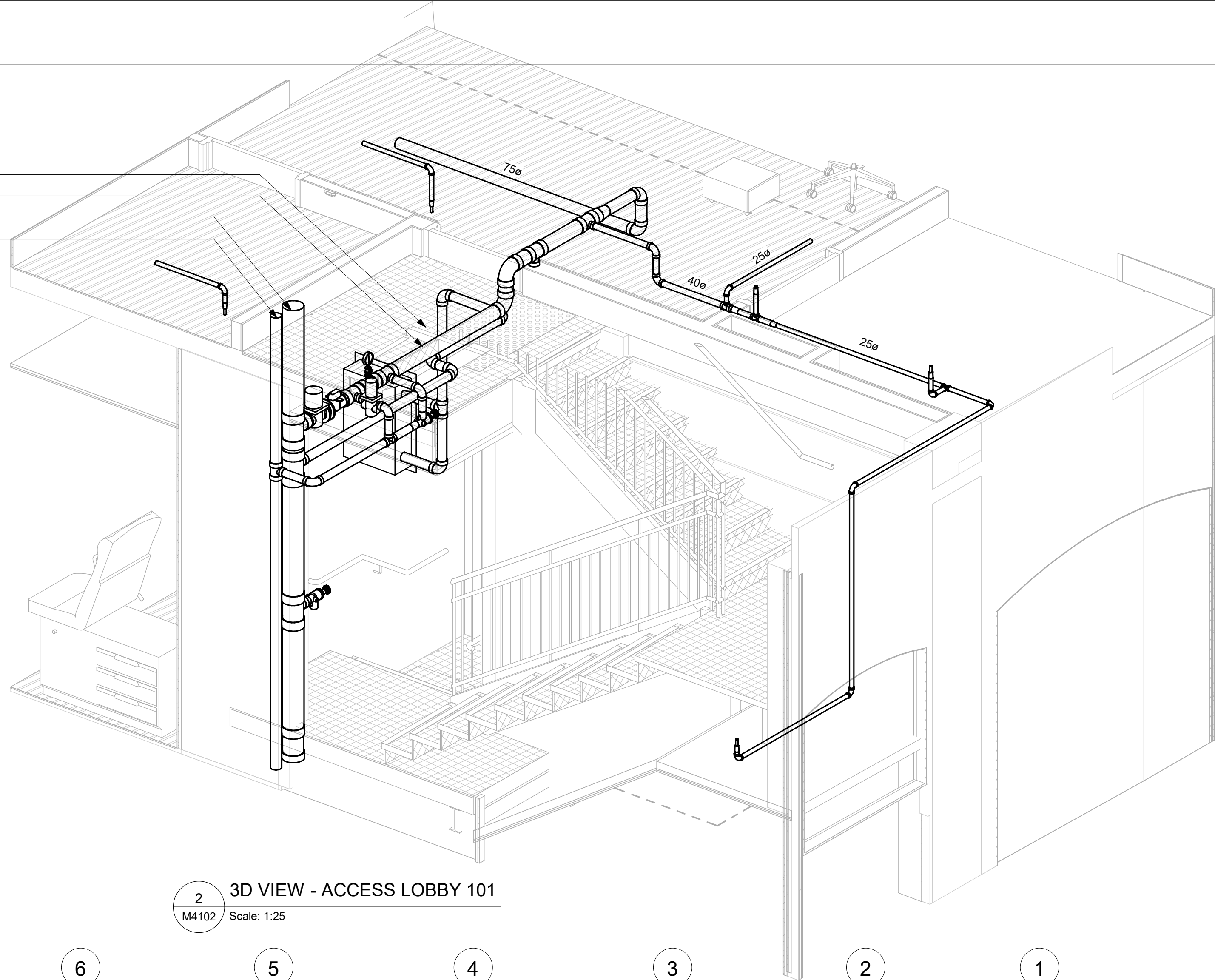
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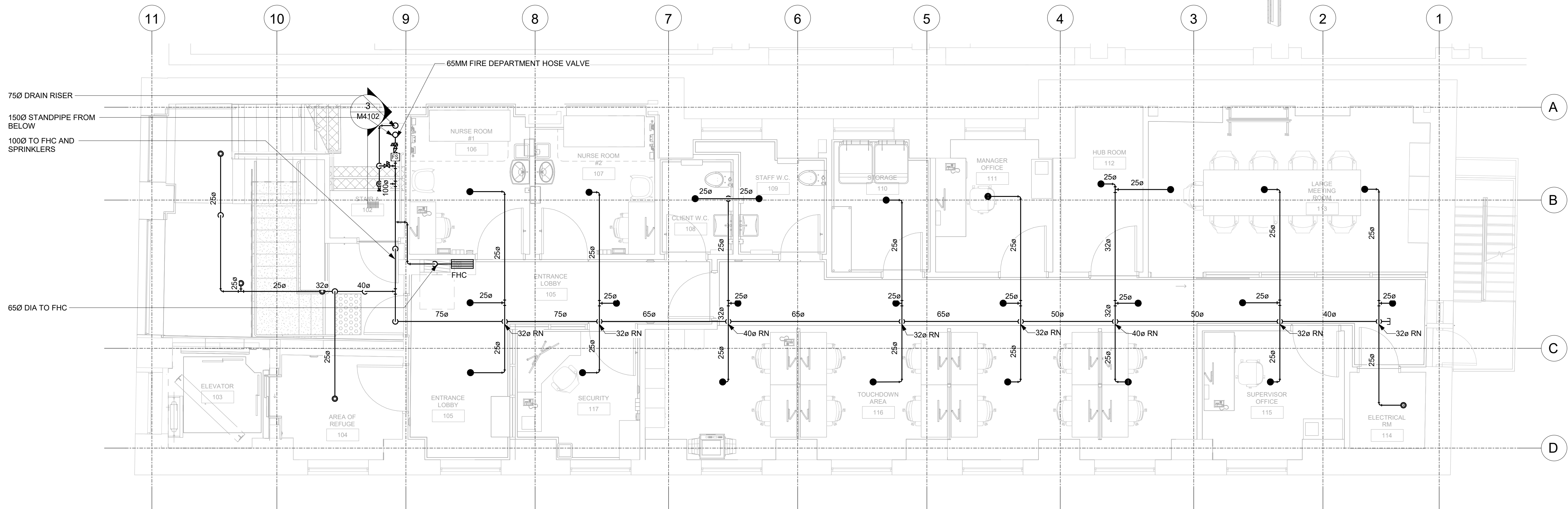
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SCALE CHECK  
1 in



3 SECTION VIEW - STAIR A 102  
M4102 Scale: 1 : 25

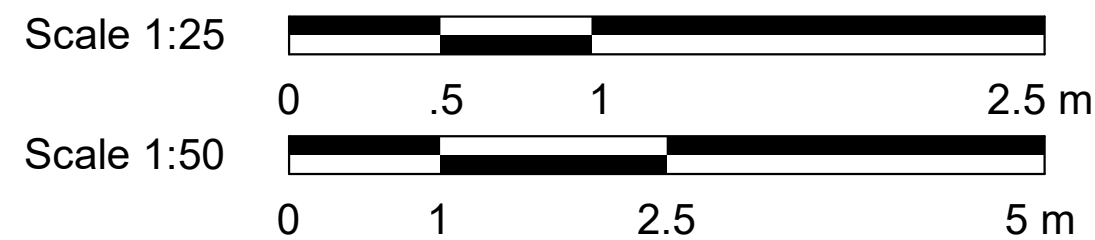


2 3D VIEW - ACCESS LOBBY 101  
M4102 Scale: 1:25



1 FIRE PROTECTION - FIRST FLOOR  
M4102 Scale: 1 : 50

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RENOVATIONS**

PROJECT ADDRESS

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TORONTO, ON**

PROJECT NO:  
122260

DRAWN BY:  
**C. SU**

CHECKED BY:  
**E. PANAH**

PROJECT MGR:  
**F. BOLOURIAN**

APPROVED BY:  
**R. BARROSO**

SHEET TITLE  
**FIRE PROTECTION -  
FIRST FLOOR**

SHEET NUMBER

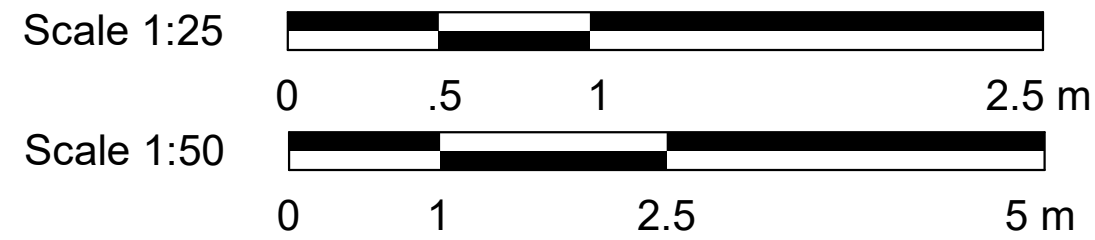
**M4102**

ISSUE

**D**



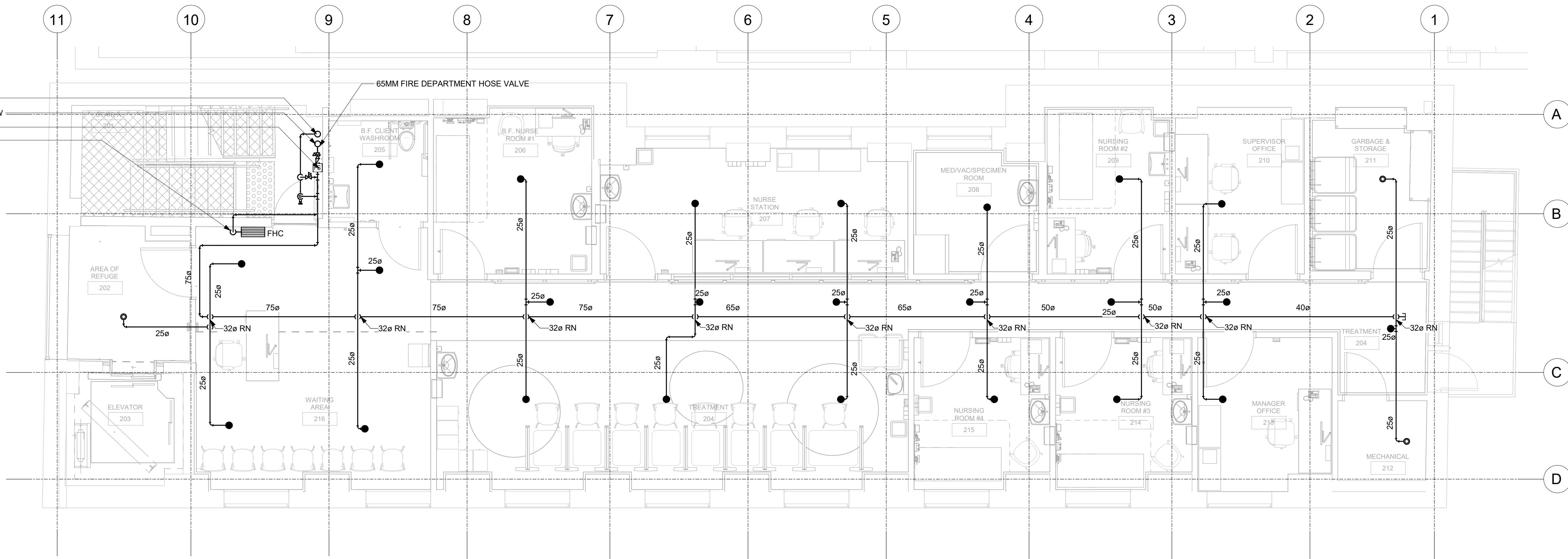
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1 FIRE PROTECTION - SECOND FLOOR  
M4103 Scale: 1 : 50

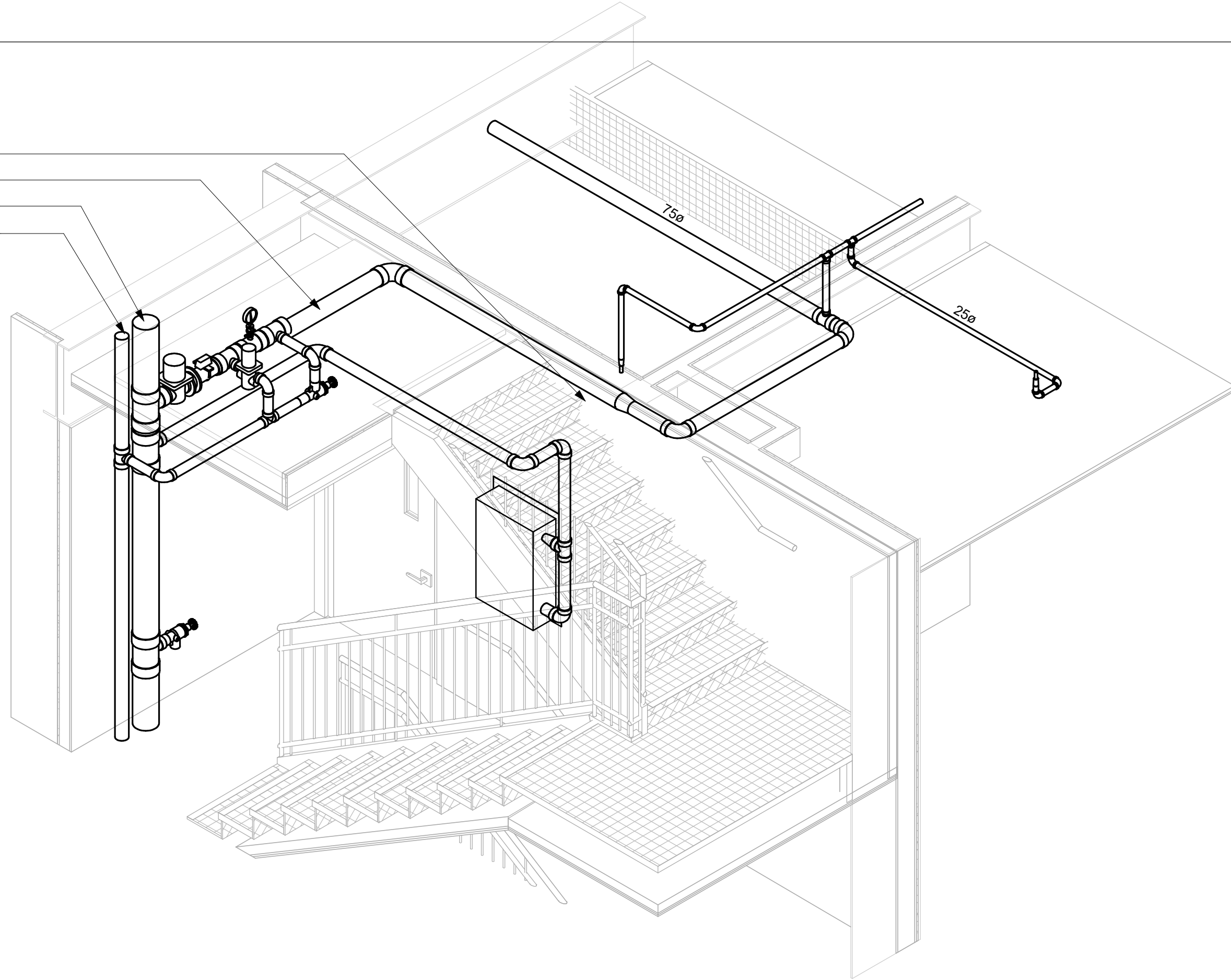
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75Ø DRAIN RISER  
150Ø STANDPIPE TO FROM BELOW  
100Ø TO FHC AND SPRINKLERS  
65MM DIA TO FHC



2 3D VIEW - STAIR A 201  
M4103 Scale: 1:25

65Ø TO FHC  
100Ø TO FHC AND SPRINKLERS  
150Ø STANDPIPE TO FROM BELOW  
75Ø DRAIN RISER TO FROM BELOW



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PROJECT MGR:  
**F. BOLOURIAN**

APPROVED BY:  
**R. BARROSO**

SHEET TITLE  
**FIRE PROTECTION -  
SECOND FLOOR**

SHEET NUMBER

**M4103**

ISSUE

**D**

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10mm

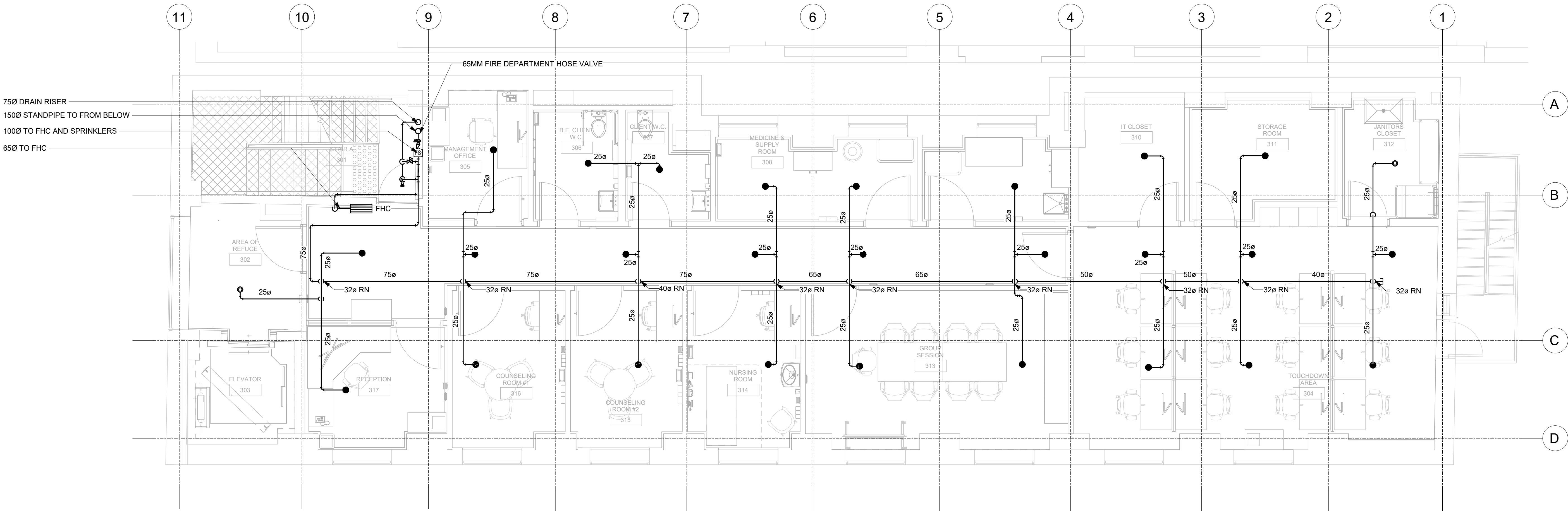
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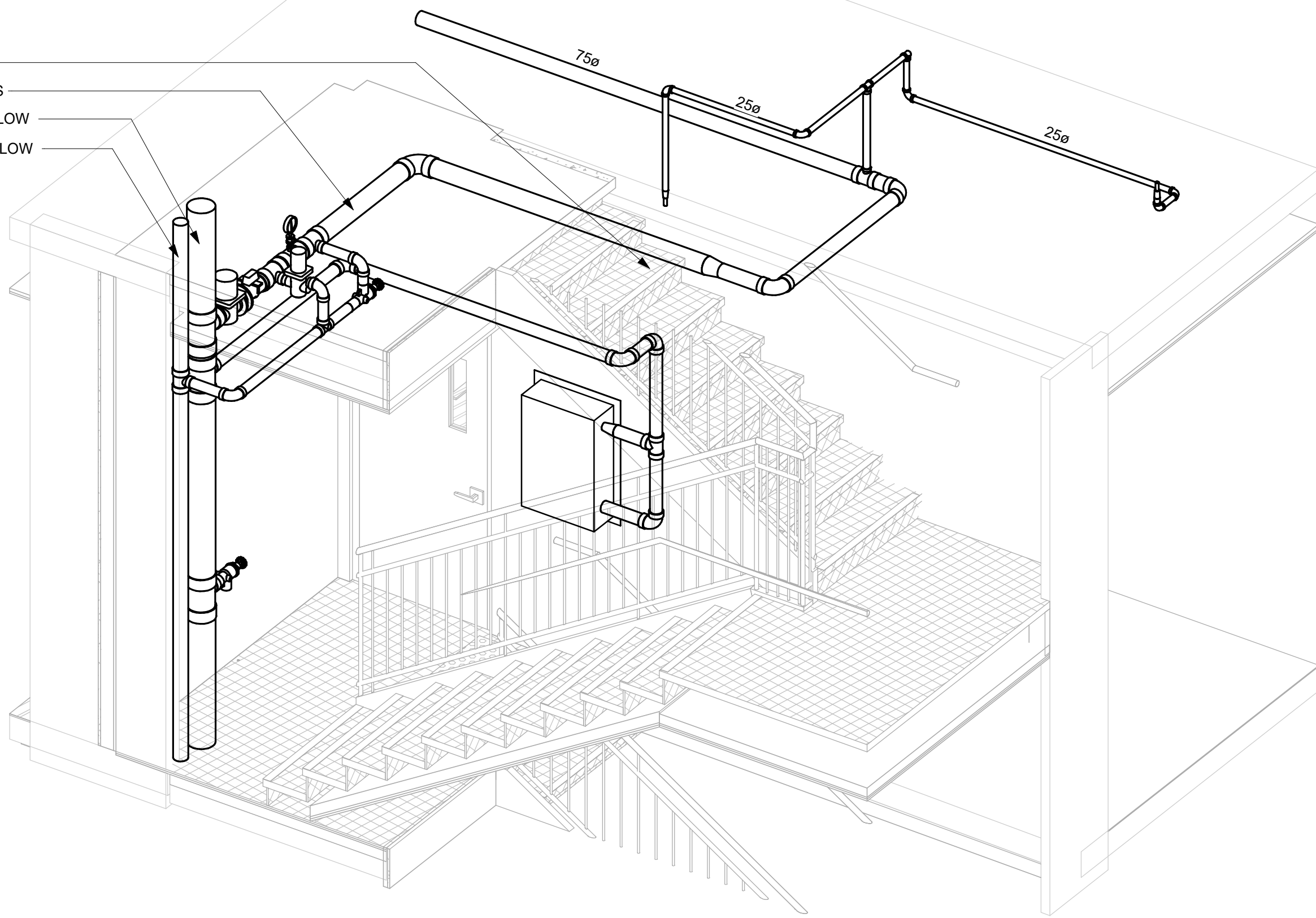
1 FIRE PROTECTION - THIRD FLOOR  
M4104 Scale: 1 : 50

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2 3D VIEW - STAIR A 301  
M4104 Scale: 1:25

65Ø TO FHC  
100Ø TO FHC AND SPRINKLERS  
150Ø STANDPIPE TO FROM BELOW  
75Ø DRAIN RISER TO FROM BELOW



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PROJECT MGR:  
**F. BOLOURIAN**

APPROVED BY:  
**R. BARROSO**

SHEET TITLE  
**FIRE PROTECTION -  
THIRD FLOOR**

SHEET NUMBER

**M4104**

ISSUE

**D**

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10mm

SCALE CHECK  
1 in



ISSUES		
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PROJECT NO:  
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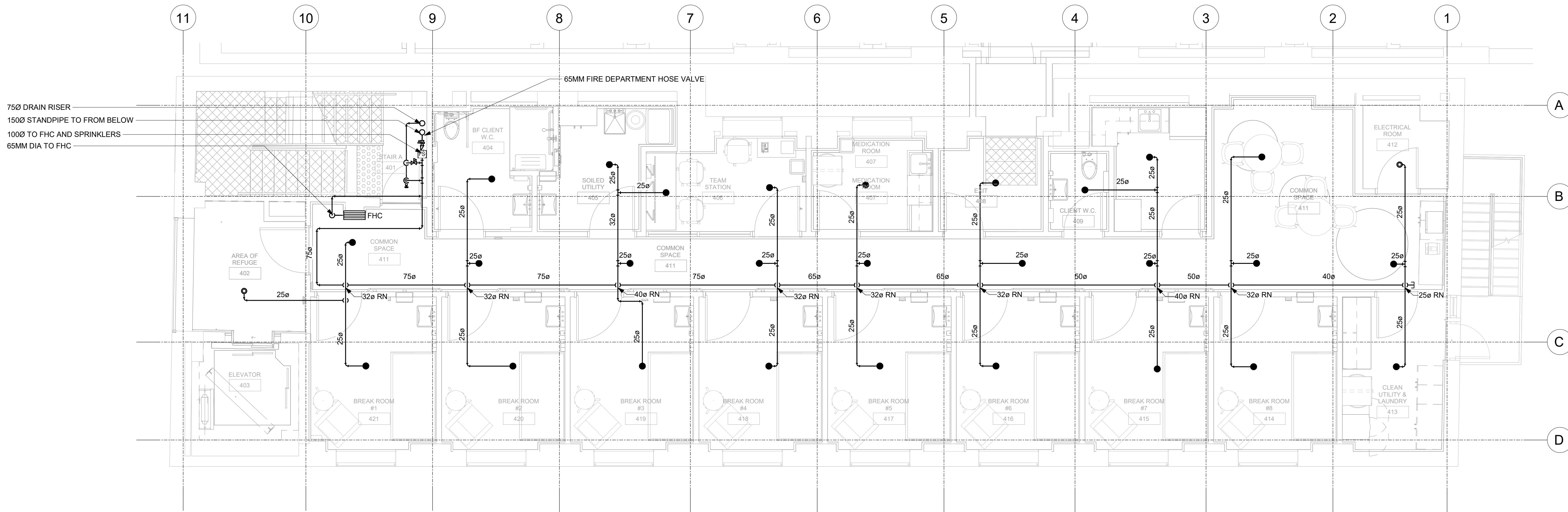
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**FIRE PROTECTION -  
FOURTH FLOOR**

SHEET NUMBER

**M4105**

ISSUE

**D**



**1** FIRE PROTECTION - FOURTH FLOOR  
M4105 Scale: 1 : 50

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Scale 1:50



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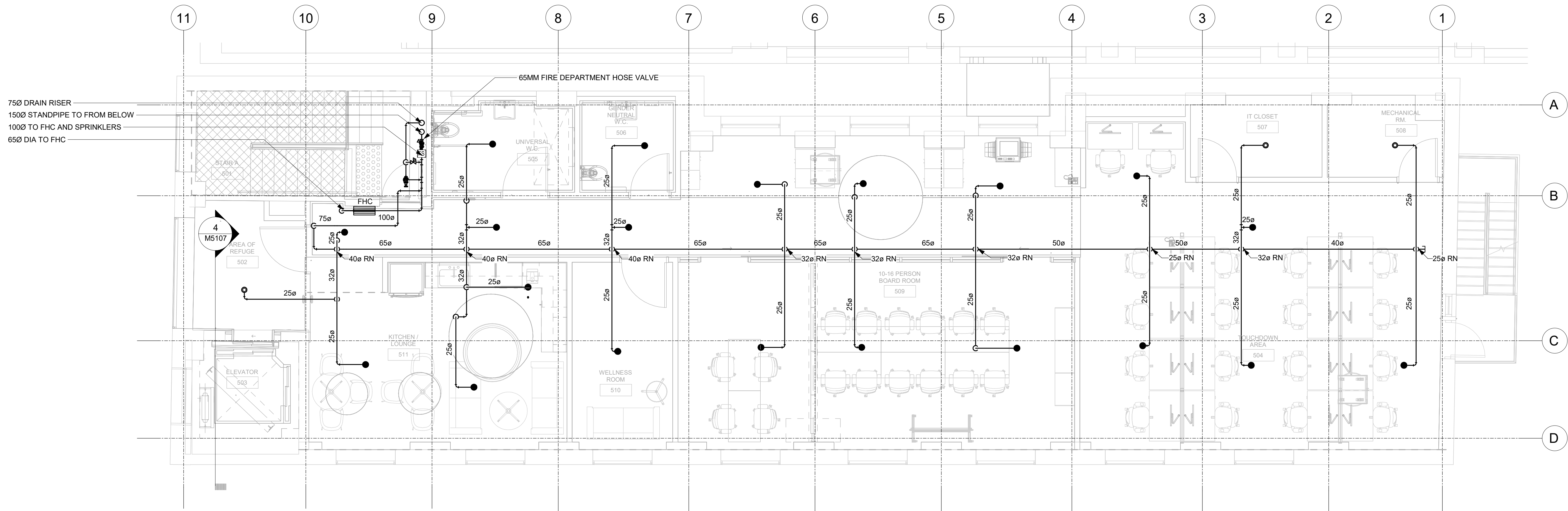
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**FIRE PROTECTION -  
FIFTH FLOOR**

SHEET NUMBER

**M4106**

ISSUE

**D**



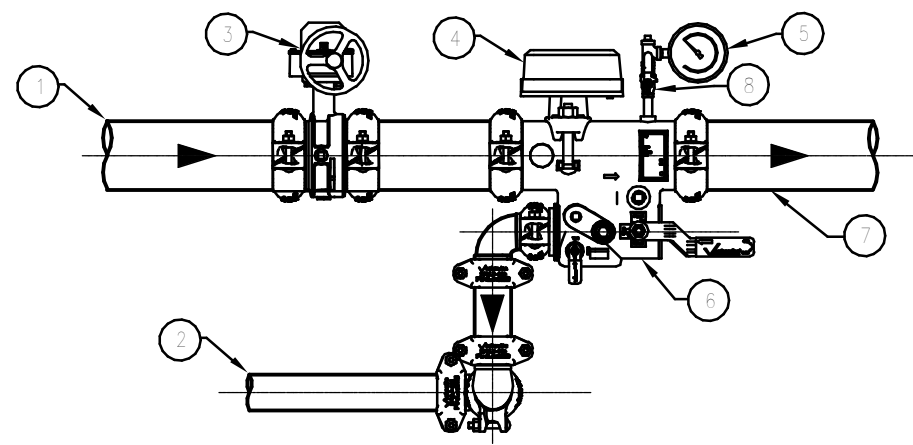
**1 FIRE PROTECTION - FIFTH FLOOR**  
M4106 Scale: 1 : 50

**GENERAL NOTES:**

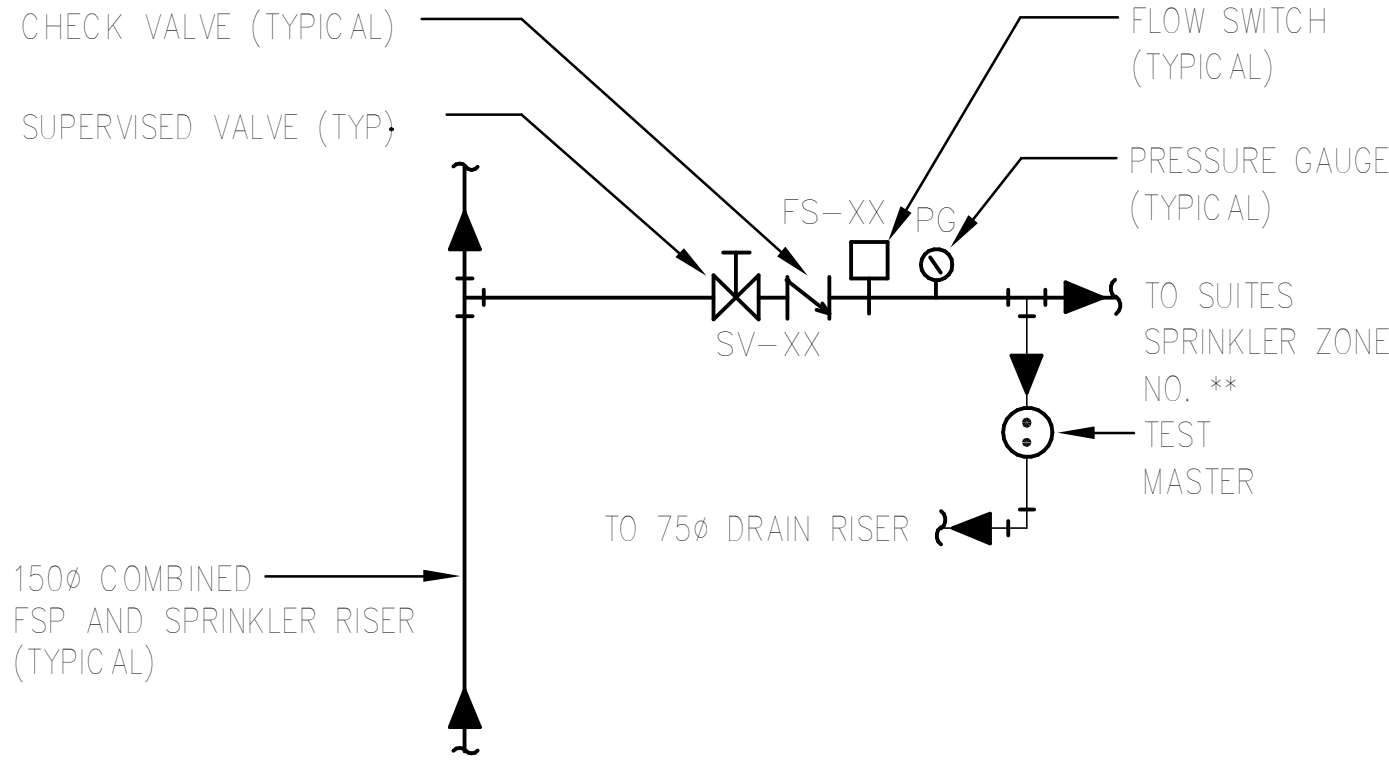
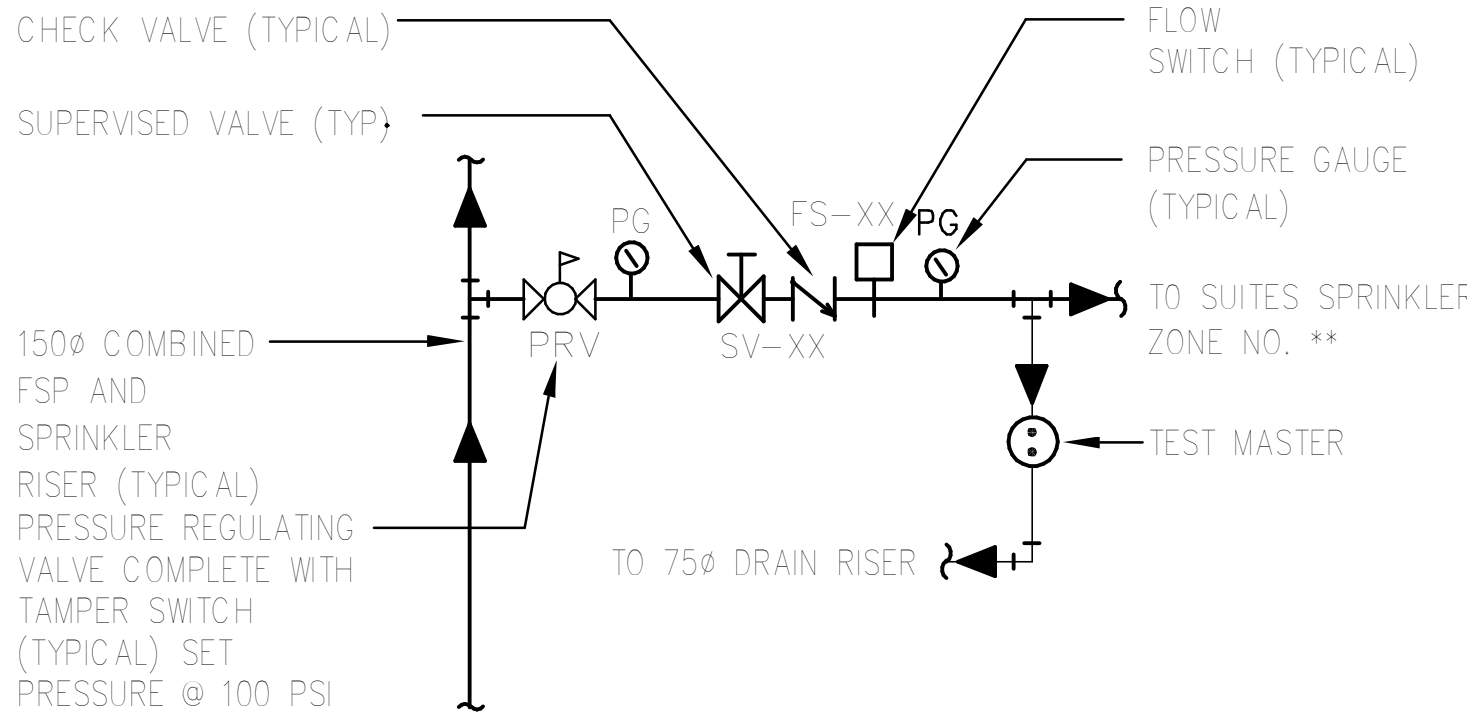
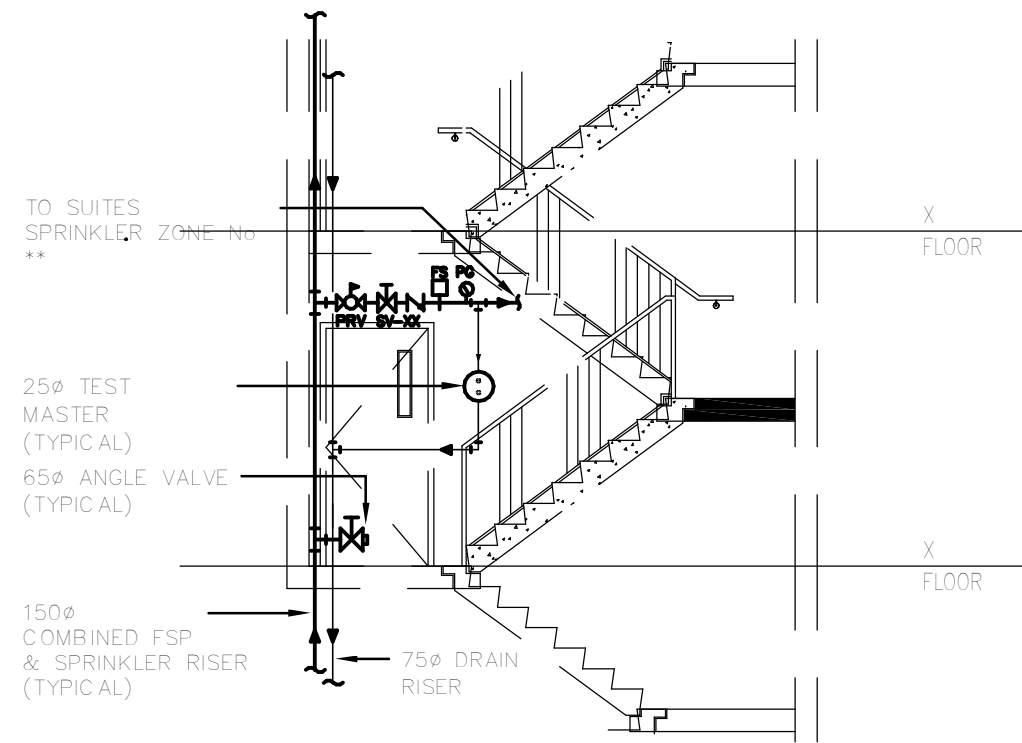
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Scale 1:50





DETAIL LEGEND	
1	1500 SPRINKLER MAIN LINE
2	1500 SPRINKLER MAIN LINE
3	1500 SPRINKLER MAIN LINE
4	1500 SPRINKLER MAIN LINE
5	1500 SPRINKLER MAIN LINE
6	1500 SPRINKLER MAIN LINE
7	1500 SPRINKLER MAIN LINE
8	1500 SPRINKLER MAIN LINE

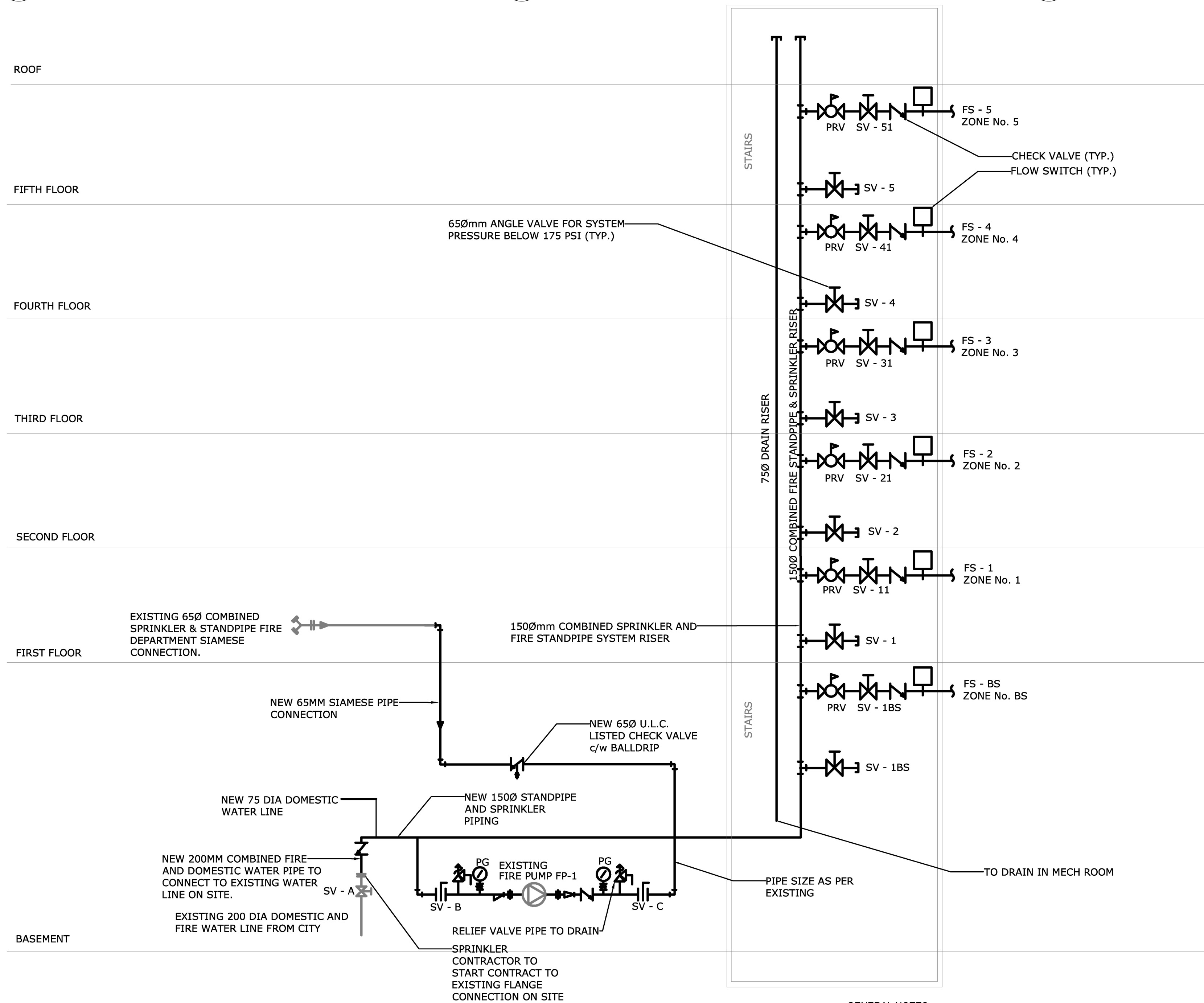


2 INSPECTOR TEST/FLOW STATION DETAIL  
M4107 Scale: NTS

3 TYPICAL COMBINED FIRE STANDPIPE (FSP) AND SPRINKLER RISER INSIDE STAIRWELL  
M4107 Scale: NTS

4 TYPICAL SPRINKLER VALVE ARRANGEMENT (SYSTEM PRESSURE ABOVE 100 PSI)  
M4107 Scale: NTS

5 TYPICAL SPRINKLER VALVE ARRANGEMENT (SYSTEM PRESSURE BELOW 100 PSI)  
M4107 Scale: NTS



### SUPERVISE VALVE SCHEDULE

ZONE	DESCRIPTION	ZONE	LOCATION	INITIATING DEVICE (NEW)
SV-BS	ISOLATION VALVE FOR FIRE DEPARTMENT HOSE VALVE CONNECTED TO STANDPIPE	BS	BASEMENT FHC	SV
SV-1BS	WET SPRINKLER SYSTEM ISOLATION CONNECTED TO STANDPIPE	BS	BASEMENT	SV
SV-1	ISOLATION VALVE FOR FIRE DEPARTMENT HOSE VALVE CONNECTED TO STANDPIPE	1	FIRST FLOOR FHC	SV
SV-11	WET SPRINKLER SYSTEM ISOLATION CONNECTED TO STANDPIPE	1	FIRST FLOOR	SV
SV-2	ISOLATION VALVE FOR FIRE DEPARTMENT HOSE VALVE CONNECTED TO STANDPIPE	2	SECOND FLOOR FHC	SV
SV-21	WET SPRINKLER SYSTEM ISOLATION CONNECTED TO STANDPIPE	2	SECOND FLOOR	SV
SV-3	ISOLATION VALVE FOR FIRE DEPARTMENT HOSE VALVE CONNECTED TO STANDPIPE	3	THIRD FLOOR FHC	SV
SV-31	WET SPRINKLER SYSTEM ISOLATION CONNECTED TO STANDPIPE	3	THIRD FLOOR	SV
SV-4	ISOLATION VALVE FOR FIRE DEPARTMENT HOSE VALVE CONNECTED TO STANDPIPE	4	FOURTH FLOOR FHC	SV
SV-41	WET SPRINKLER SYSTEM ISOLATION CONNECTED TO STANDPIPE	4	FOURTH FLOOR	SV
SV-5	ISOLATION VALVE FOR FIRE DEPARTMENT HOSE VALVE CONNECTED TO STANDPIPE	5	FIFTH FLOOR FHC	SV
SV-51	WET SPRINKLER SYSTEM ISOLATION CONNECTED TO STANDPIPE	5	FIFTH FLOOR	SV
SV-A	INCOMING MAIN FIRE/WATER LINE ISOLATION (EXISTING)	-	BASEMENT	SV
SV-B	EXISTING FIRE PUMP SUCTION ISOLATION VALVE	-	BASEMENT	SV
SV-C	EXISTING FIRE PUMP DISCHARGE ISOLATION VALVE	-	BASEMENT	SV

ABBREVIATIONS: SV - SUPERVISE VALVE  
FS - FLOW SWITCH  
PS - PRESSURE SWITCH  
SS - SUPERVISE SWITCH  
FHC - FIRE HOSE CABINET

1 FIRE PROTECTION STANDPIPE RISER DIAGRAM  
M4107 Scale: NTS

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TORONTO, ON

PROJECT NO:

122260

DRAWN BY:

C. SU

CHECKED BY:

E. PANABI

PROJECT MGR:

F. BOLOURIAN

APPROVED BY:

R. BARROSO

SHEET TITLE

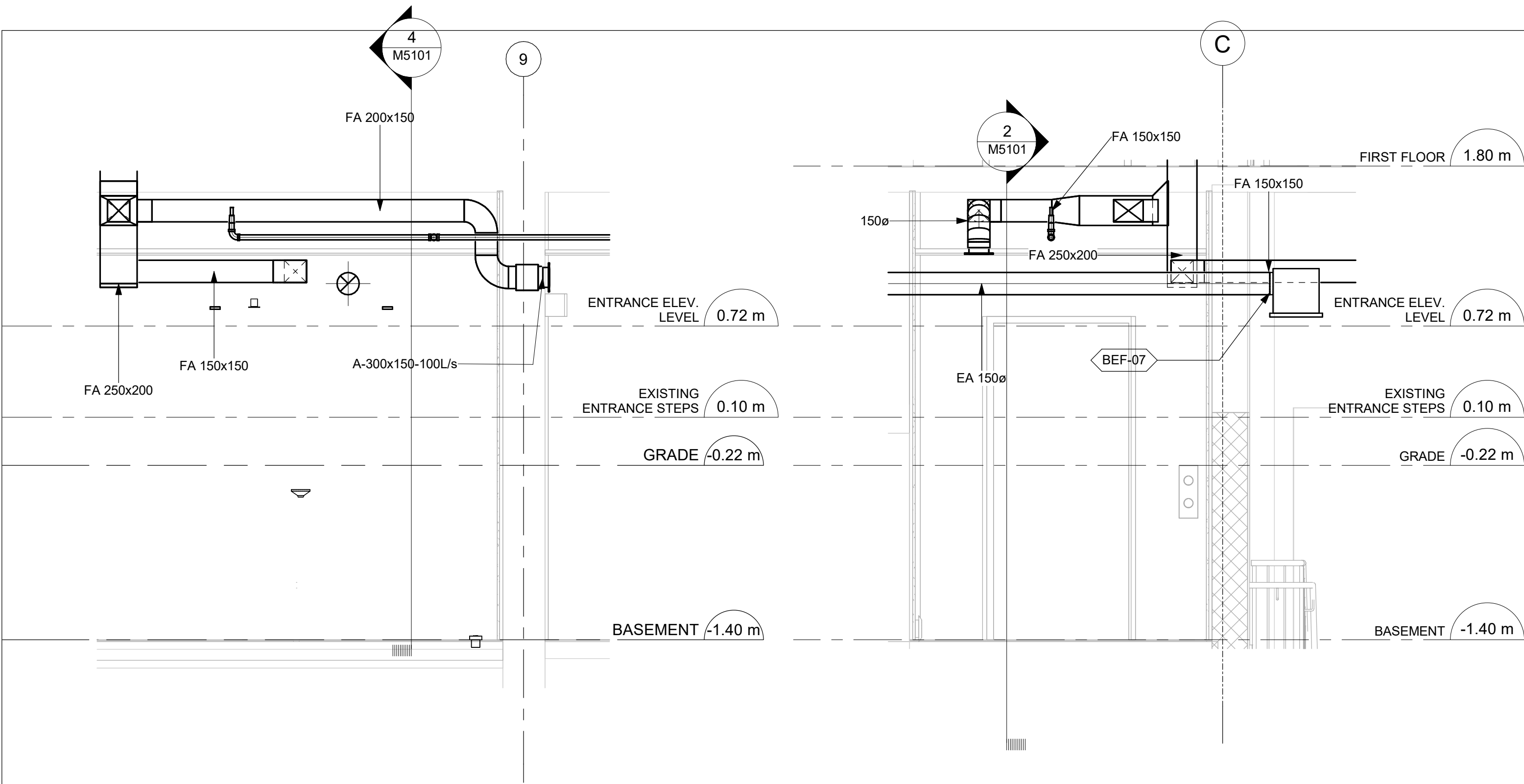
**FIRE PROTECTION  
STANDPIPE RISER  
DIAGRAM**

SHEET NUMBER

**M4107**

ISSUE

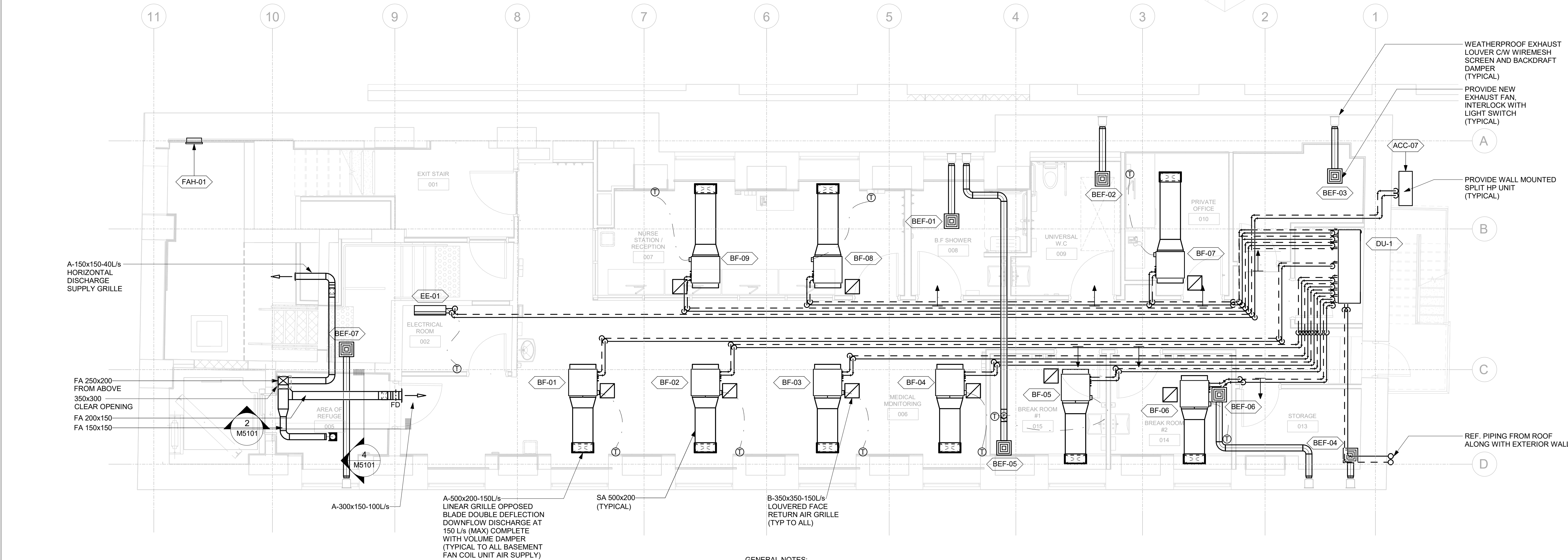
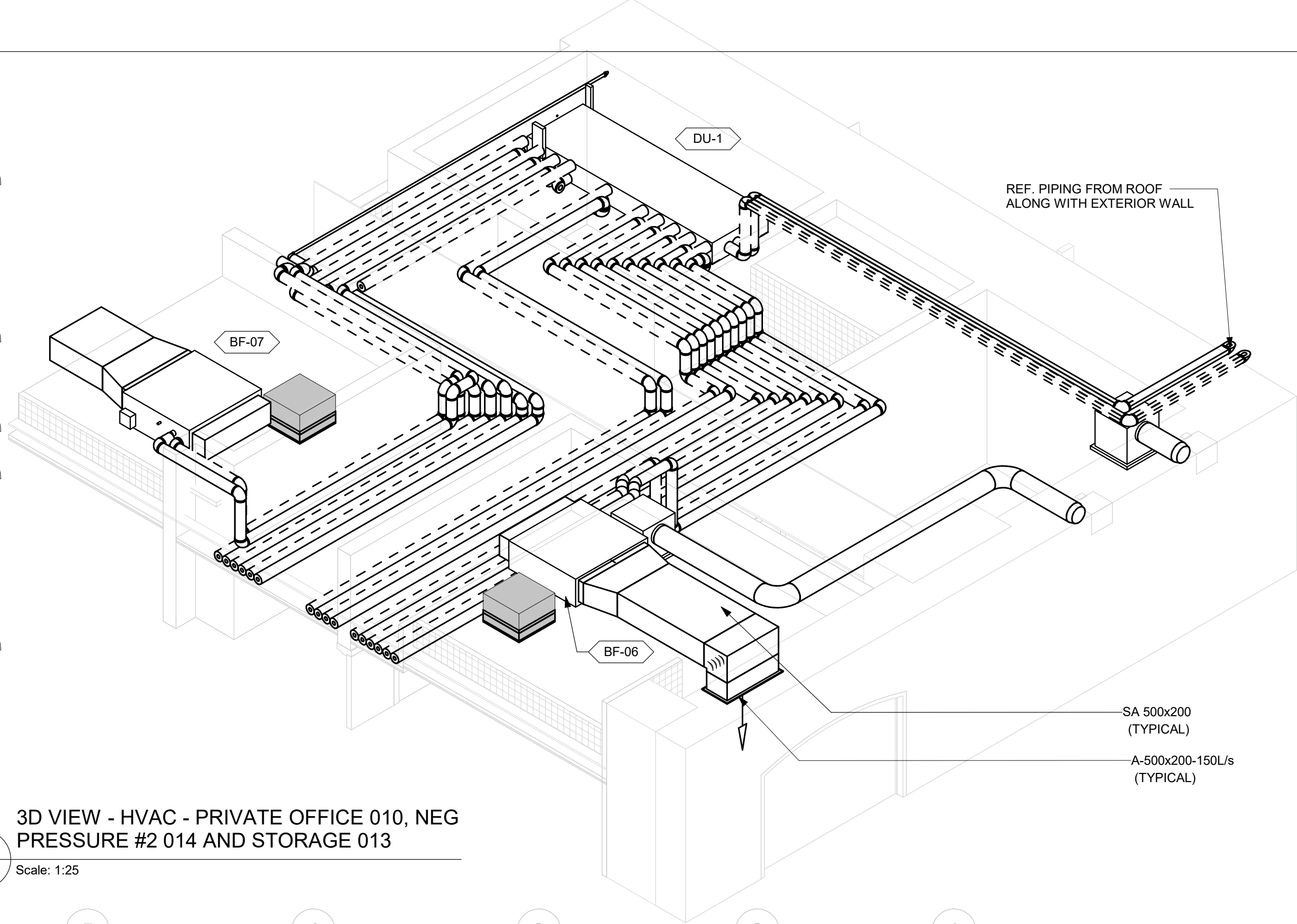
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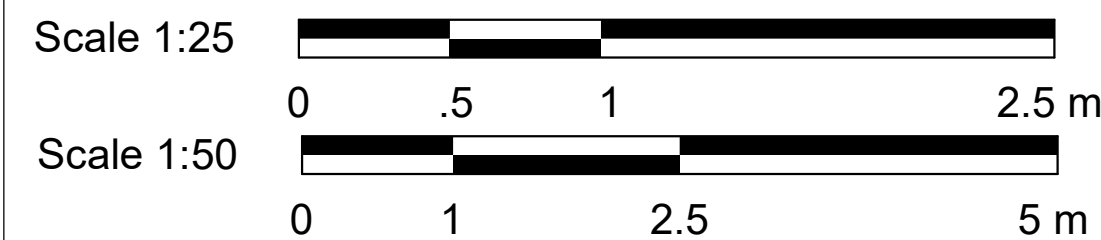
2 SECTION VIEW - AREA OF REFUGE 005  
M5101 Scale: 1: 25

4 SECTION VIEW 2 - AREA OF REFUGE 005  
M5101 Scale: 1: 25

3D VIEW - HVAC - PRIVATE OFFICE 010, NEG  
PRESSURE #2 014 AND STORAGE 013  
M5101 Scale: 1:25



1 HVAC - BASEMENT  
M5101 Scale: 1: 50



- GENERAL NOTES:
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D	ISSUED FOR TENDER	2025-09-02

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Toronto, ON M9W 0C9, Canada  
tel 416 679 1930  
www.arcadis.com

PROJECT TITLE  
**50 RICHMOND ST. E.  
RENOVATIONS**

PROJECT ADDRESS

**50 RICHMOND STREET EAST  
TORONTO, ON**

PROJECT NO:  
**122260**

DRAWN BY:  
**C. SU**

CHECKED BY:  
**E. PANAH**

PROJECT MGR:  
**F. BOLOURIAN**

APPROVED BY:  
**R. BARROSO**

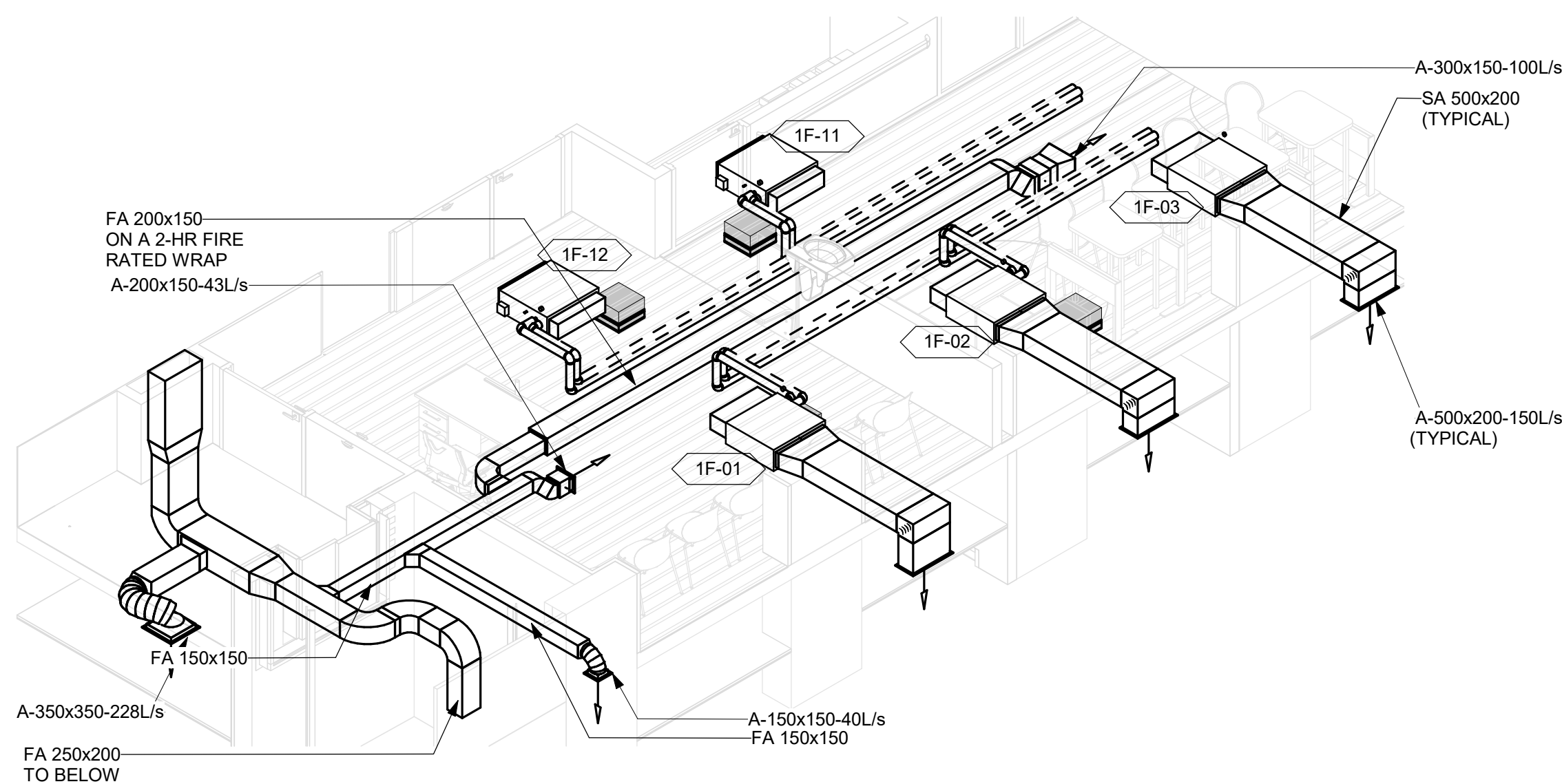
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**HVAC - BASEMENT  
FLOOR**

SHEET NUMBER  
**M5101**

ISSUE  
**D**

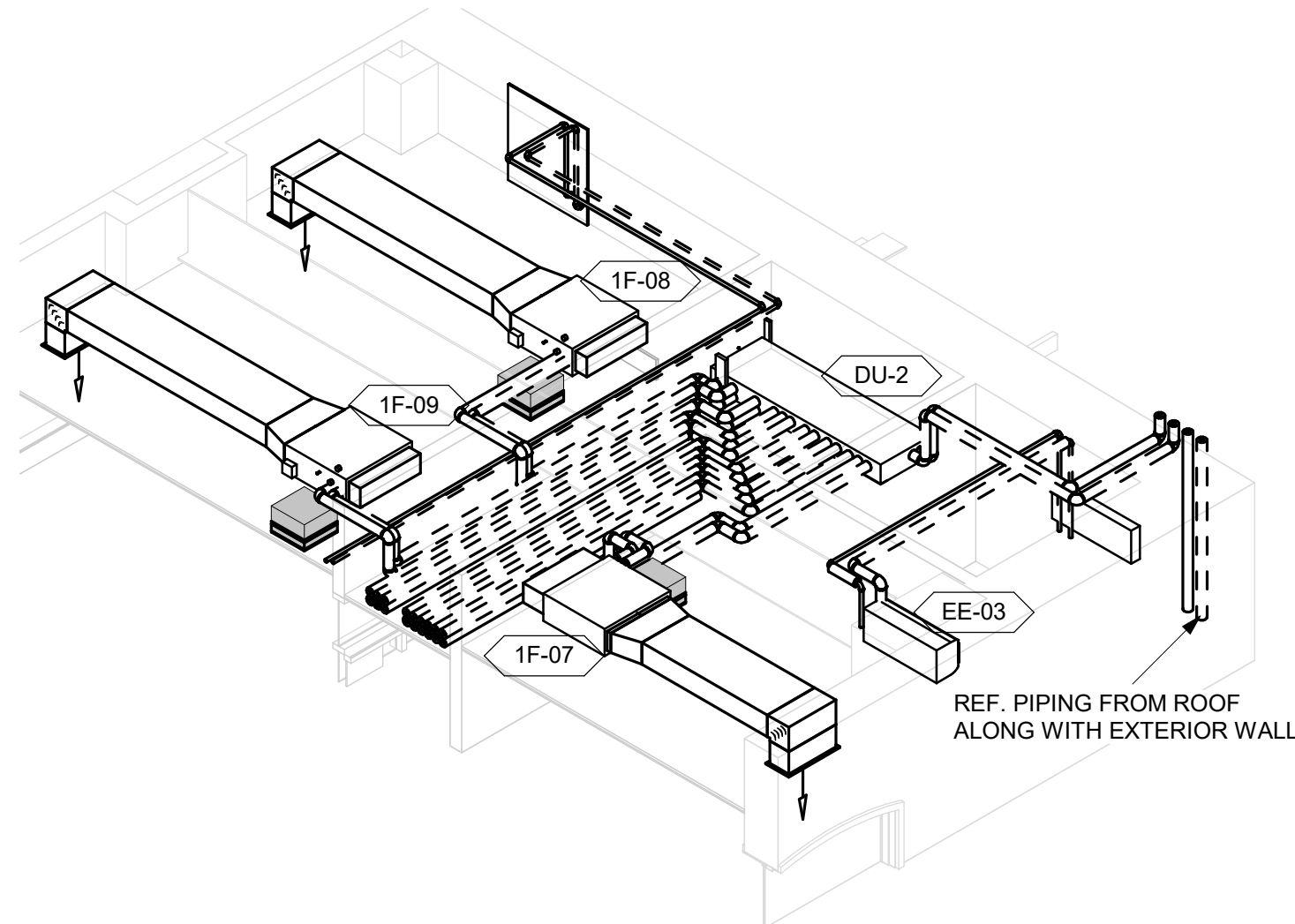


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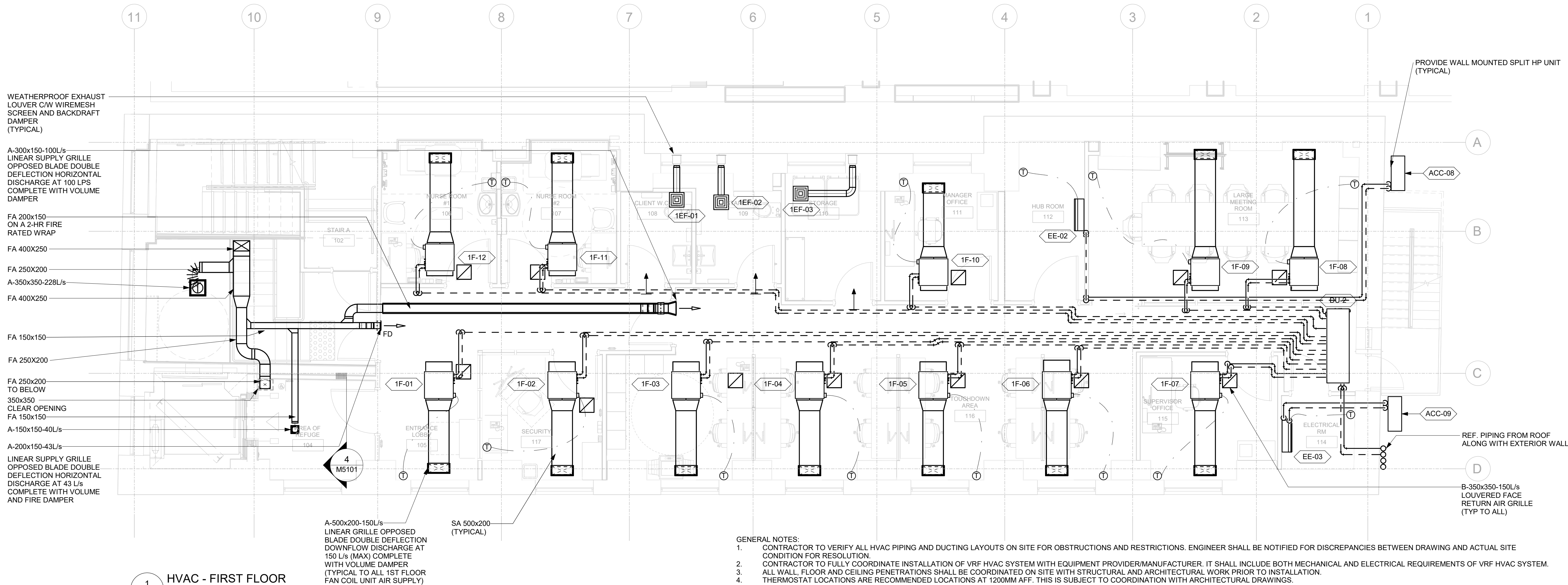
3D VIEW - HVAC - ACCESS LOBBY 101, AREA OF REFUGE 104 AND ENTRANCE LOBBY 105

2  
M5102  
Scale: 1:50



3D VIEW - HVAC - LARGE MEETING ROOM 113, ELECTRICAL RM 114 AND SUPERVISOR OFFICE 115

3  
M5102  
Scale: 1:50



1  
M5102  
Scale: 1:50  
HVAC - FIRST FLOOR

- GENERAL NOTES:
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PROJECT TITLE  
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TORONTO, ON

PROJECT NO:

122260

DRAWN BY:

C. SU

CHECKED BY:

E. PANAH

PROJECT MGR:

F. BOLOURIAN

APPROVED BY:

R. BARROSO

SHEET TITLE

HVAC - FIRST FLOOR

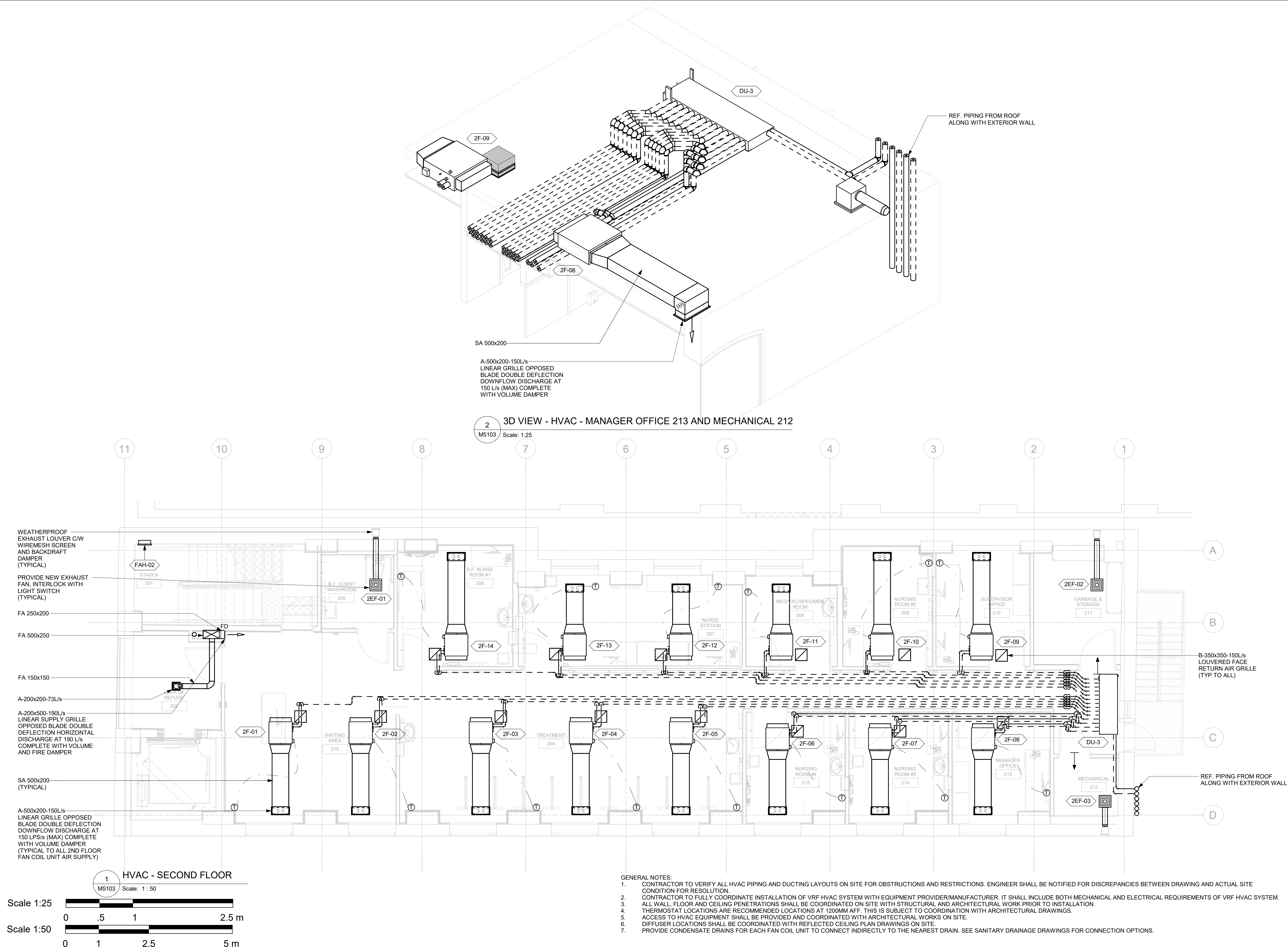
SHEET NUMBER

M5102

ISSUE

D

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PROJECT ADDRESS		
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PROJECT NO: 122260		
DRAWN BY: C. SU		CHECKED BY: E. PANAH
PROJECT MGR: F. BOLOURIAN		APPROVED BY: R. BARROSO
SHEET TITLE		
HVAC - SECOND FLOOR		
SHEET NUMBER		ISSUE
M5103		D

Autodesk Docs/122260 - Cot TAU Upgrades R2024/122260-TAU-33-50-Richmond-M-R24.rvt 1/10

FA 200x150  
ON A 2-HR FIRE  
RATED WRAP

FA 500x250

RA 640x178

B-350x350

SA 500x200

3F-01

FA 150x150

A-500x200

FA 200x200

150e

A-200x200-73L/s

2 3D VIEW - HVAC - AREA OF REFUGE 302  
M5104 Scale: 1:25

3 3D VIEW - HVAC - TOUCHDOWN AREA 304  
M5104 Scale: 1:25

WEATHERPROOF EXHAUST  
LOUVER C/W WIREMESH  
SCREEN AND BACKDRAFT  
DAMPER  
(TYPICAL)

PROVIDE NEW  
EXHAUST FAN  
INTERLOCK WITH LIGHT  
SWITCH  
(TYPICAL)

FA 200x150-70L/s  
ON A 2-HR FIRE  
RATED WRAP  
FA 200x150  
FA 500x250

A-250X150-70L/s  
LINEAR SUPPLY GRILLE  
OPPOSED BLADE  
DOUBLE DEFLECTION  
HORIZONTAL  
DISCHARGE AT 70 L/s  
COMPLETE WITH  
VOLUME AND FIRE  
DAMPER

FA 200x200  
A-200x200-73L/s  
FA 150x150

SA 500x200  
(TYPICAL)

A-500x200-150L/s  
LINEAR GRILLE OPPOSED  
BLADE DOUBLE DEFLECTION  
DOWNFLOW DISCHARGE AT  
150 L/s (MAX) COMPLETE  
WITH VOLUME DAMPER  
(TYPICAL TO ALL 3RD FLOOR  
FAN COIL UNIT AIR SUPPLY)

1 HVAC - THIRD FLOOR  
M5104 Scale: 1:50

GENERAL NOTES:

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REF. PIPING FROM ROOF  
ALONG WITH EXTERIOR WALL

SA 500x200  
(TYPICAL)

A-500x200-150L/s

LINEAR GRILLE OPPOSED  
BLADE DOUBLE DEFLECTION  
DOWNFLOW DISCHARGE AT  
150 L/s (MAX) COMPLETE  
WITH VOLUME DAMPER  
(TYPICAL TO ALL 3RD FLOOR  
FAN COIL UNIT AIR SUPPLY)

PROVIDE NEW WALL MOUNTED  
SPLIT HP UNIT  
(TYPICAL)

A

B

C

D

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PROJECT TITLE  
50 RICHMOND ST. E.  
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TORONTO, ON

PROJECT NO:  
122260

DRAWN BY:  
C. SU

CHECKED BY:  
E. PANAH

PROJECT MGR:  
F. BOLOURIAN

APPROVED BY:  
R. BARROSO

SHEET TITLE  
HVAC - THIRD FLOOR

SHEET NUMBER

M5104

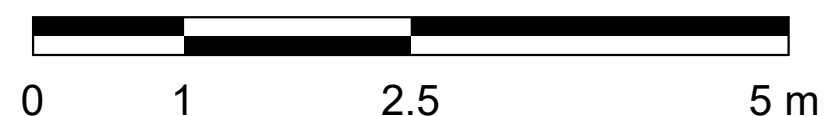
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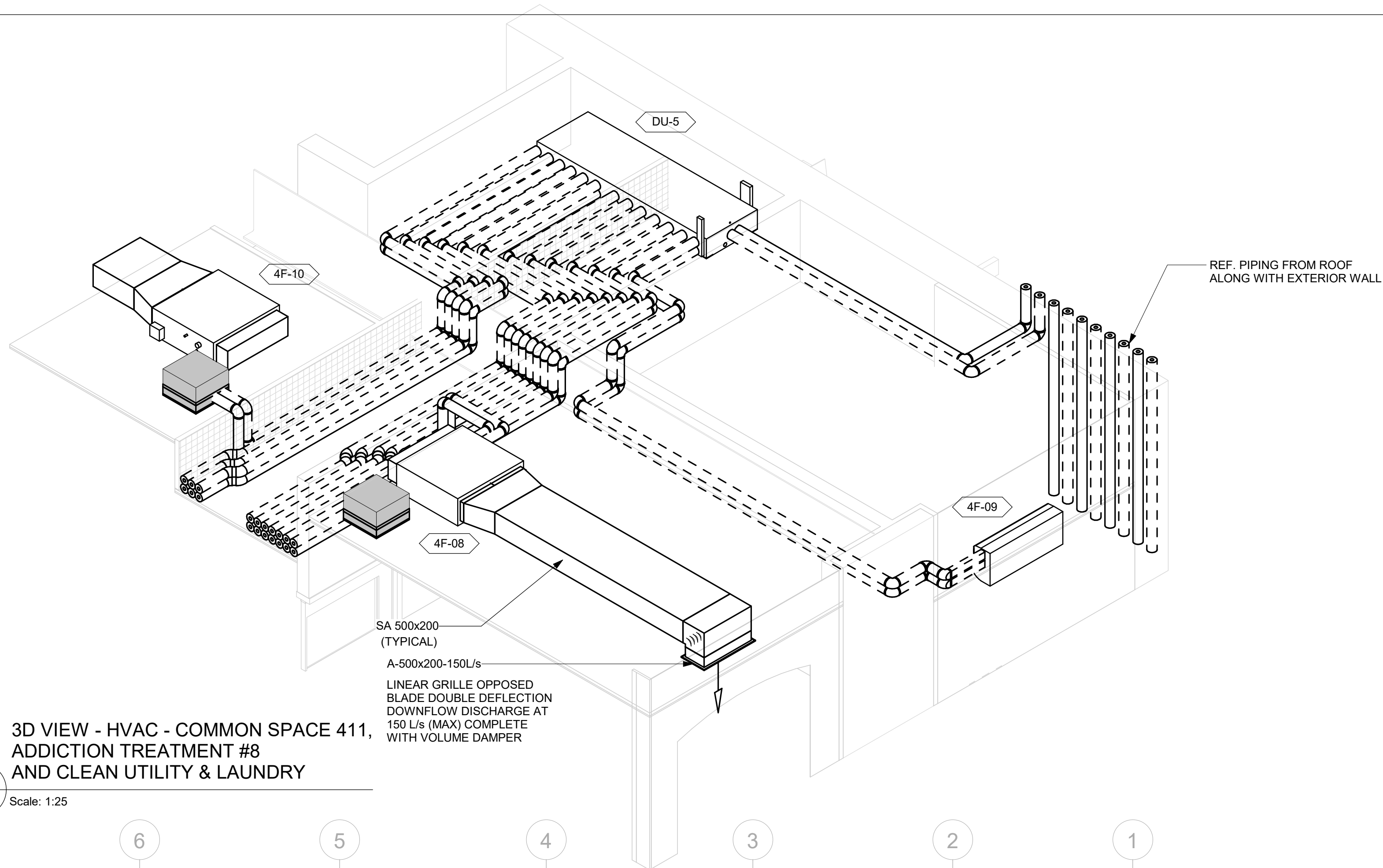
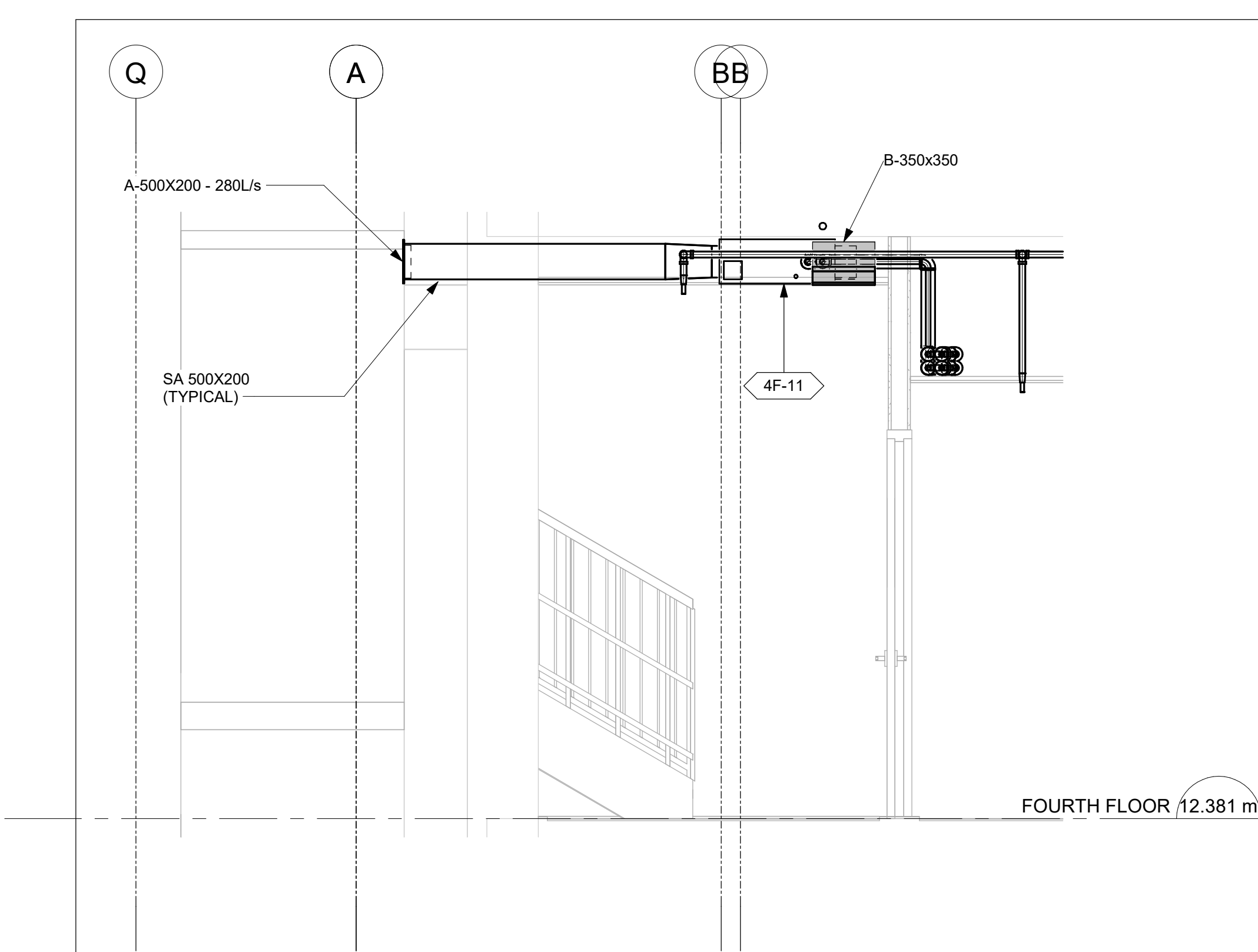
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Scale 1:50

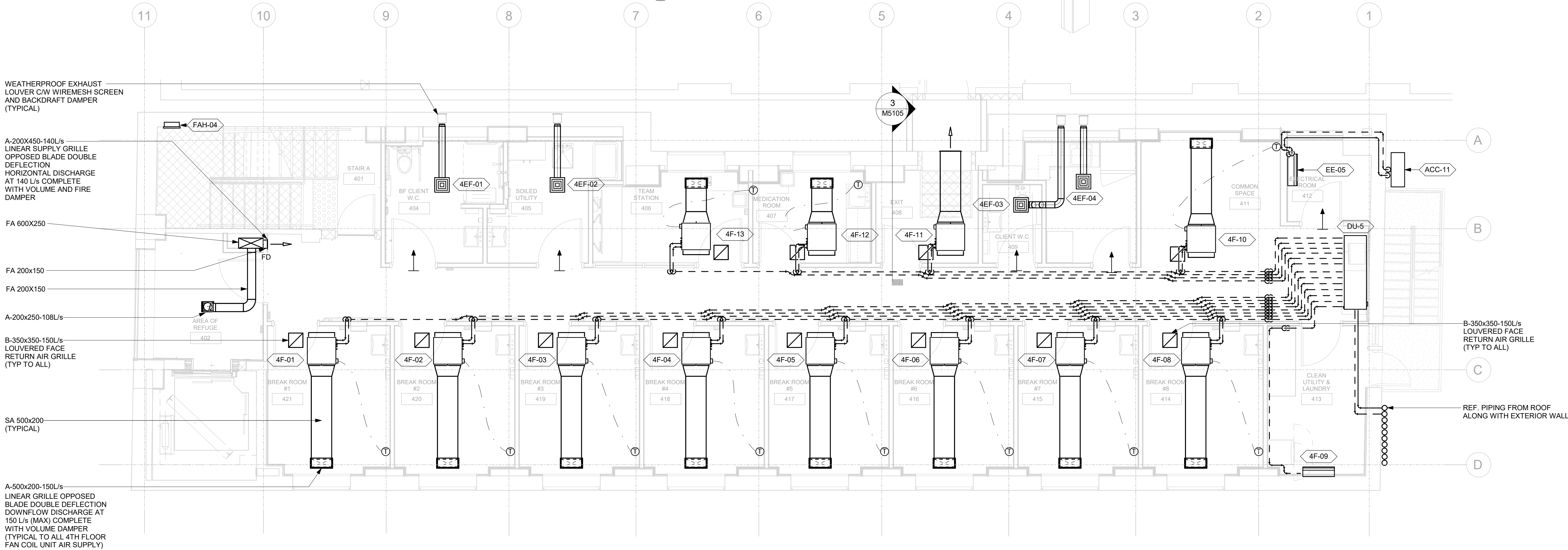






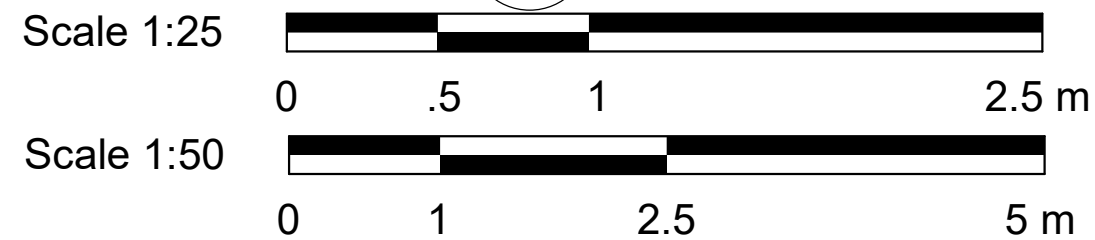
3D VIEW - HVAC - COMMON SPACE 411,  
ADDITION TREATMENT #8  
AND CLEAN UTILITY & LAUNDRY

3D VIEW - HVAC - EXIT 408



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HVAC - FOURTH FLOOR



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C. SU

CHECKED BY:  
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PROJECT MGR:  
F. BOLOURIAN

APPROVED BY:  
R. BARROSO

SHEET TITLE  
**HVAC - FOURTH FLOOR**

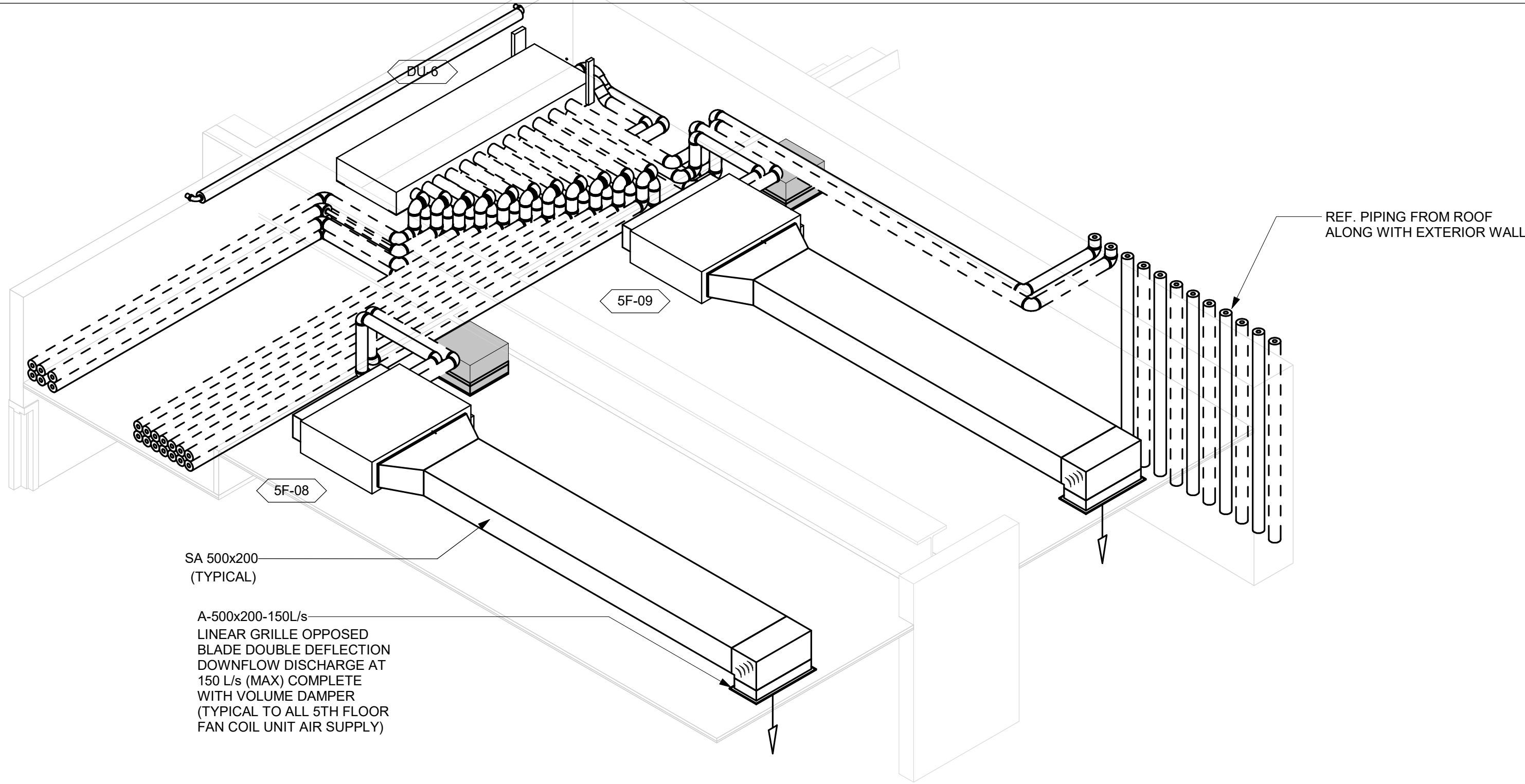
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**M5105**

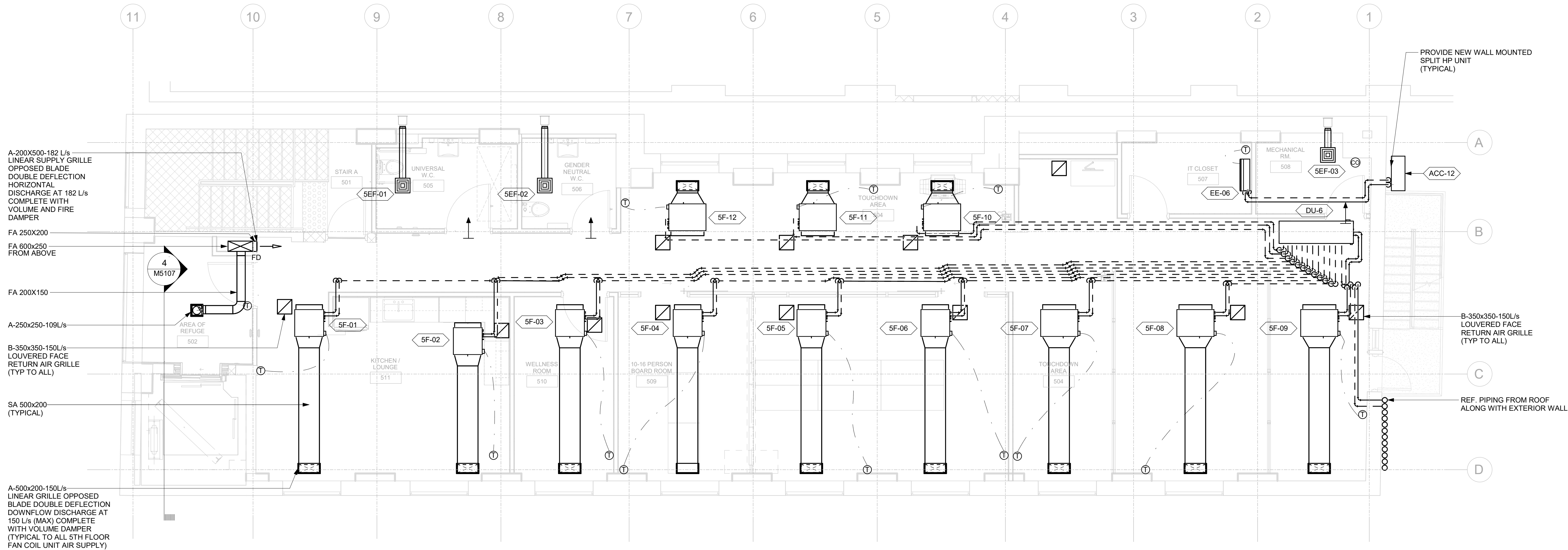
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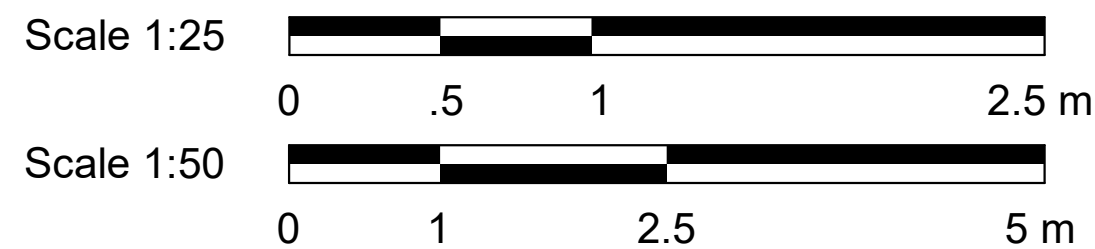




2 3D VIEW - HVAC - TOUCHDOWN AREA 504  
M5106 Scale: 1:25



1 HVAC - FIFTH FLOOR  
M5106 Scale: 1:50



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APPROVED BY:  
**R. BARROSO**

SHEET TITLE  
**HVAC - FIFTH FLOOR**

SHEET NUMBER

**M5106**

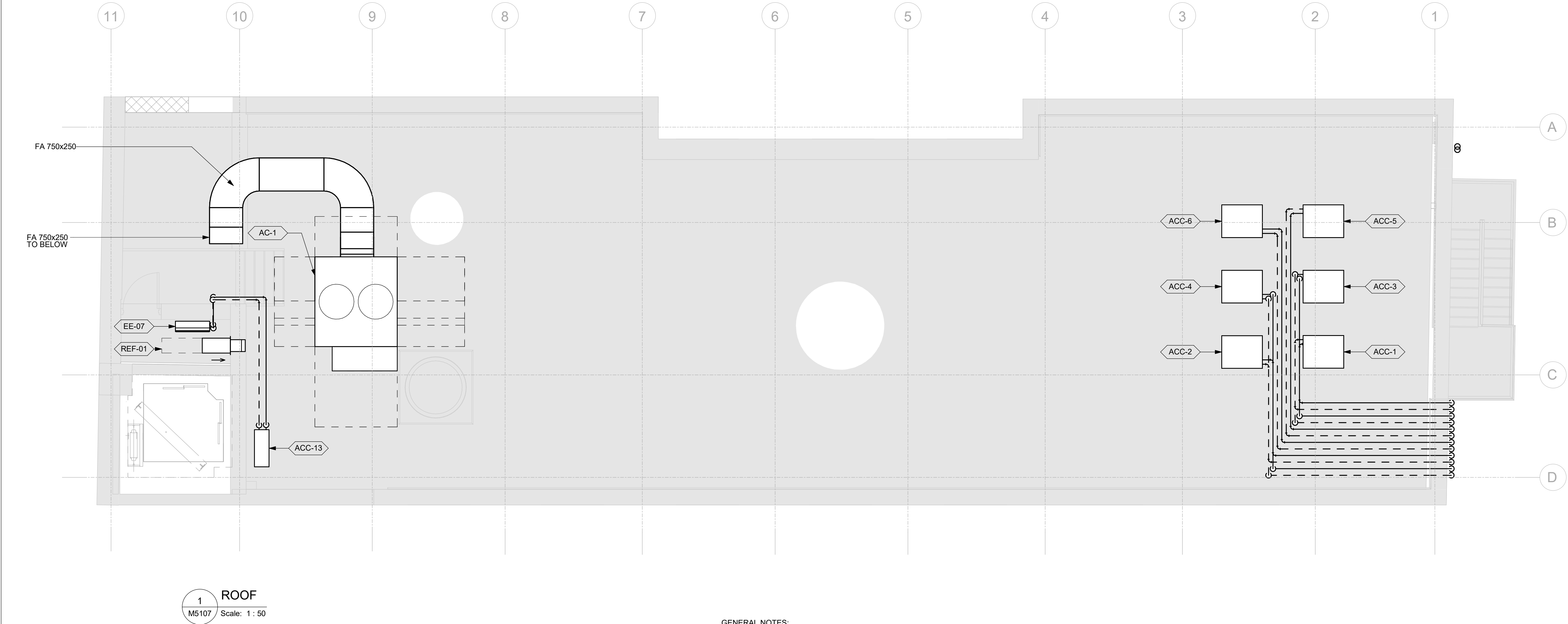
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**D**

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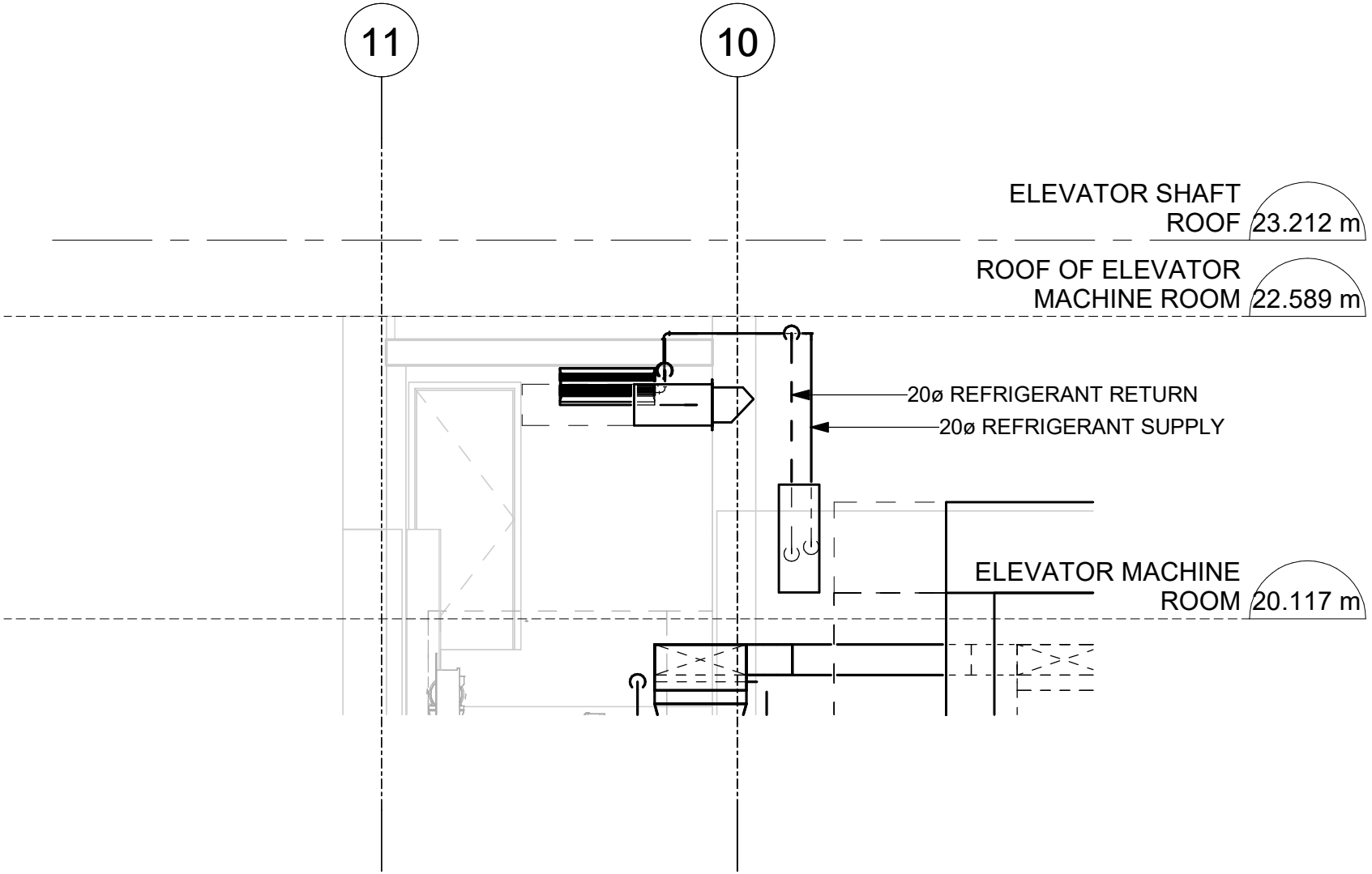
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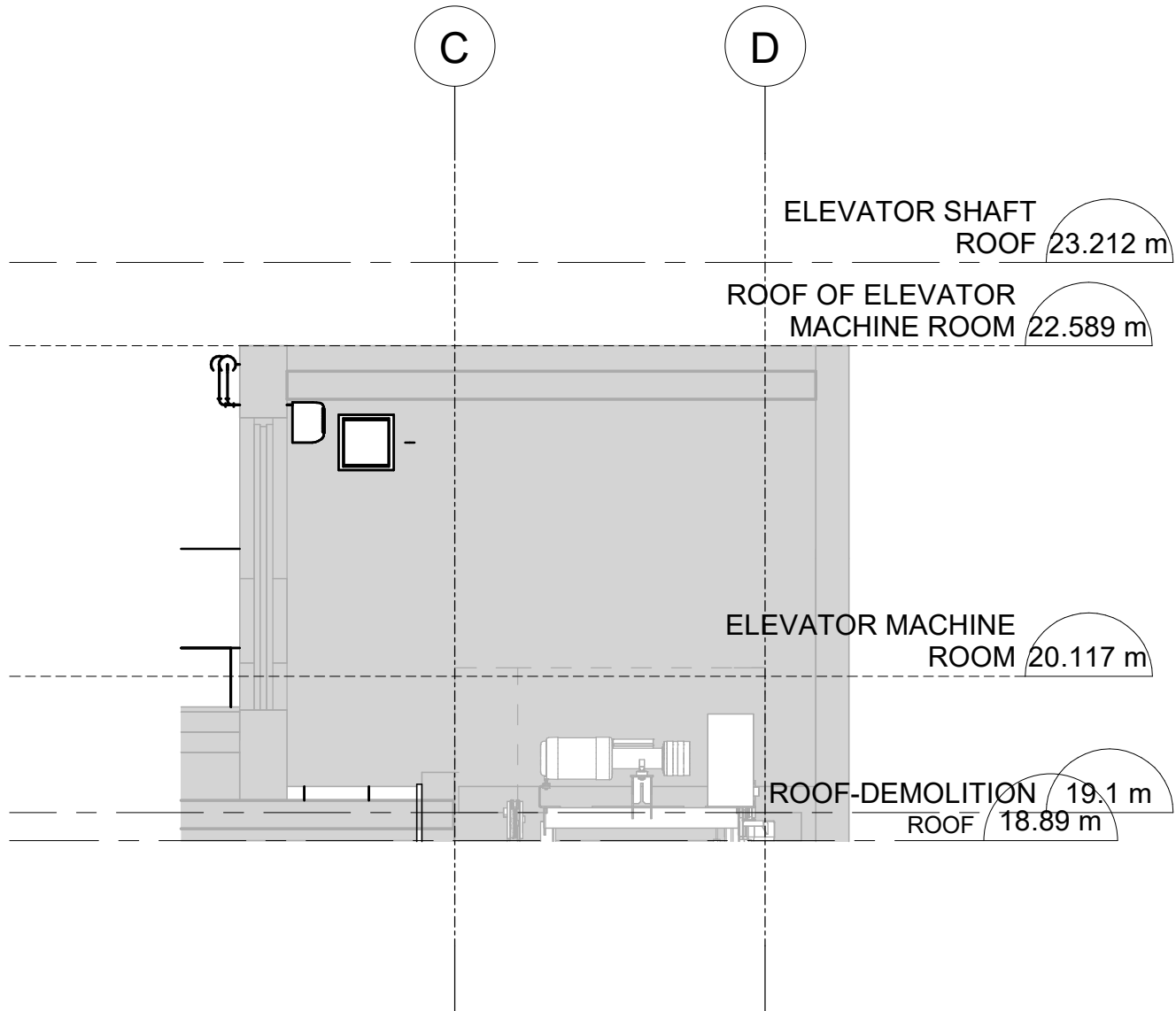
1 ROOF  
M5107 Scale: 1 : 50

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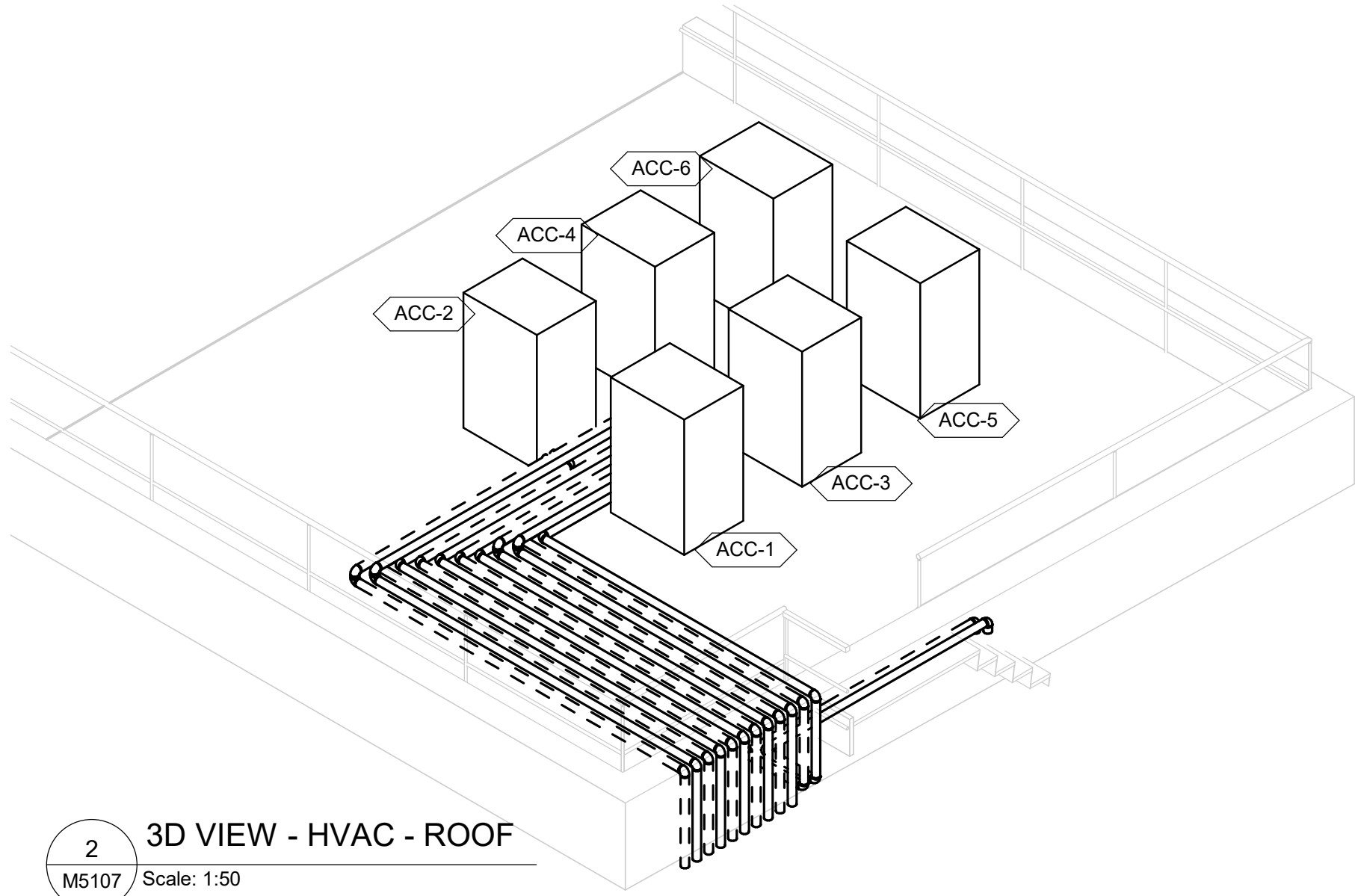
3 CROSS SECTION - HVAC ROOF  
M5107 Scale: 1 : 50



4 LONGITUDINAL SECTION - HVAC ROOF  
M5107 Scale: 1 : 50



2 3D VIEW - HVAC - ROOF  
M5107 Scale: 1:50



ISSUES		
No.	DESCRIPTION	DATE
A	ISSUED FOR PERMIT 100%	2025-07-31
B	ISSUED FOR TENDER	2025-09-02

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CHECKED BY:  
**E. PANAHI**

PROJECT MGR:  
**F. BOLOURIAN**

APPROVED BY:  
**R. BARROSO**

SHEET TITLE

**HVAC - ROOF**

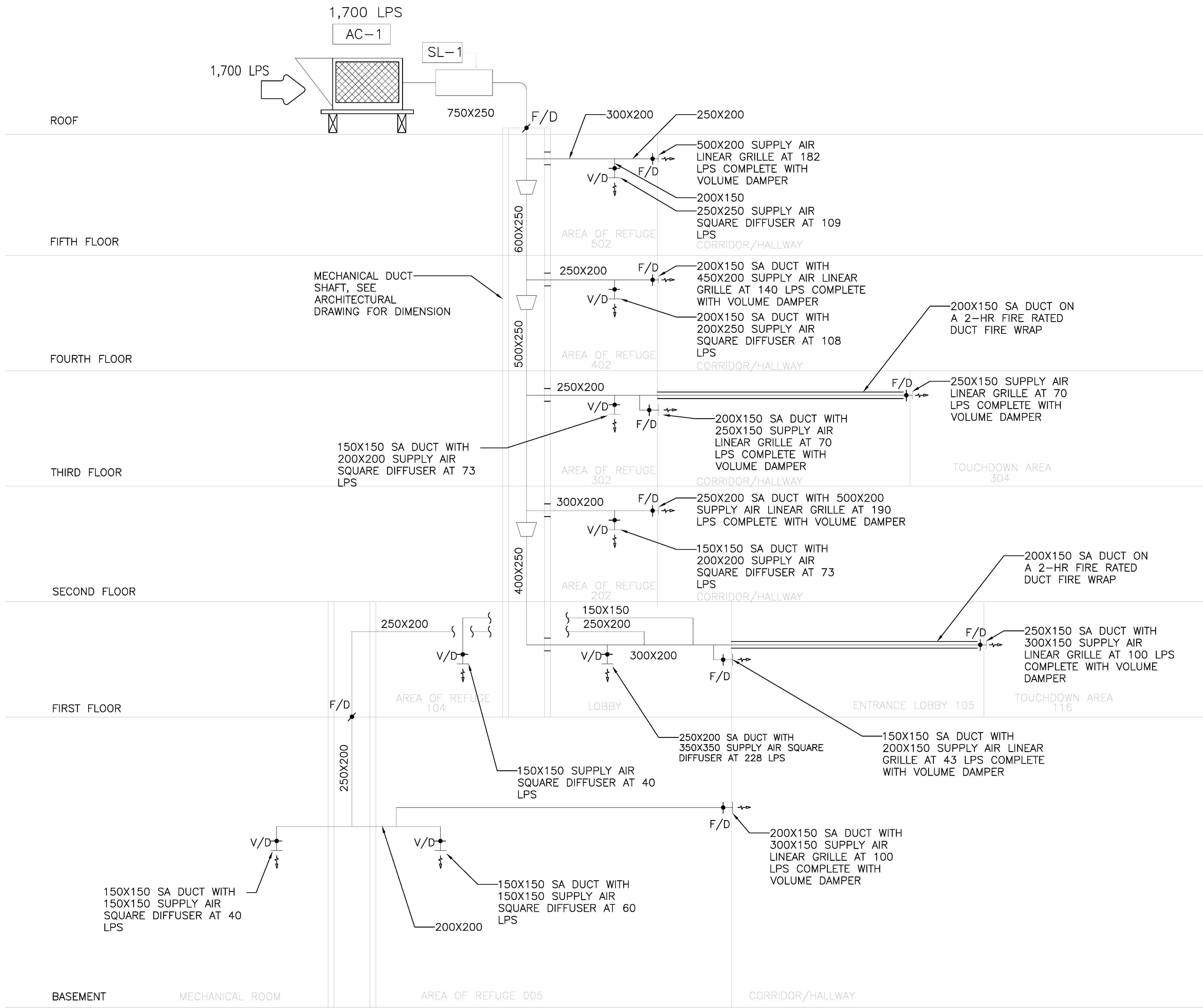
SHEET NUMBER

**M5107**

ISSUE

**B**

9/2/2025 4:52:16 PM



1 HVAC OUTDOOR AIR PRESSURIZATION SYSTEM DIAGRAM  
M5108 Scale: NTS

- GENERAL NOTES:
1. SYSTEM TESTING, BALANCING AND ADJUSTING TO MAKE THE SYSTEM WORK AS DESIGNED SHALL BE CONDUCTED BY THE TESTING AND BALANCING CONTRACTOR IN FULL COORDINATION WITH MANUFACTURER/EQUIPMENT PROVIDER.
  2. PROVIDE VOLUME DAMPERS WHERE REQUIRED FOR AIR BALANCING.
  3. PROVIDE FIRE DAMPERS ON THE AIR DISTRIBUTION SYSTEM WHERE NECESSARY. MAKE SURE THE DAMPER IS ACCESSIBLE. NOTIFY ENGINEER FOR ISSUES ON SITE RELATED TO INSTALLATION OF REQUIRED DAMPERS.

CLIENT

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Project Management Office  
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Arcadis Professional Services (Canada) Inc.

ISSUES		
No.	DESCRIPTION	DATE
A	ISSUED FOR PERMIT 100%	2025-07-31
B	ISSUED FOR TENDER	2025-09-02

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Toronto, ON M9W 0C9, Canada  
tel 416 679 1930  
www.arcadis.com

PROJECT TITLE  
**50 RICHMOND ST. E.  
RENOVATIONS**

PROJECT ADDRESS

**50 RICHMOND STREET EAST  
TORONTO, ON**

PROJECT NO:  
**122260**

DRAWN BY:  
**C. SU**

CHECKED BY:  
**E. PANAHI**

PROJECT MGR:  
**F. BOLOURIAN**

APPROVED BY:  
**R. BARROSO**

SHEET TITLE  
**HVAC OUTDOOR AIR  
PRESSURIZATION  
SYSTEM DIAGRAM**

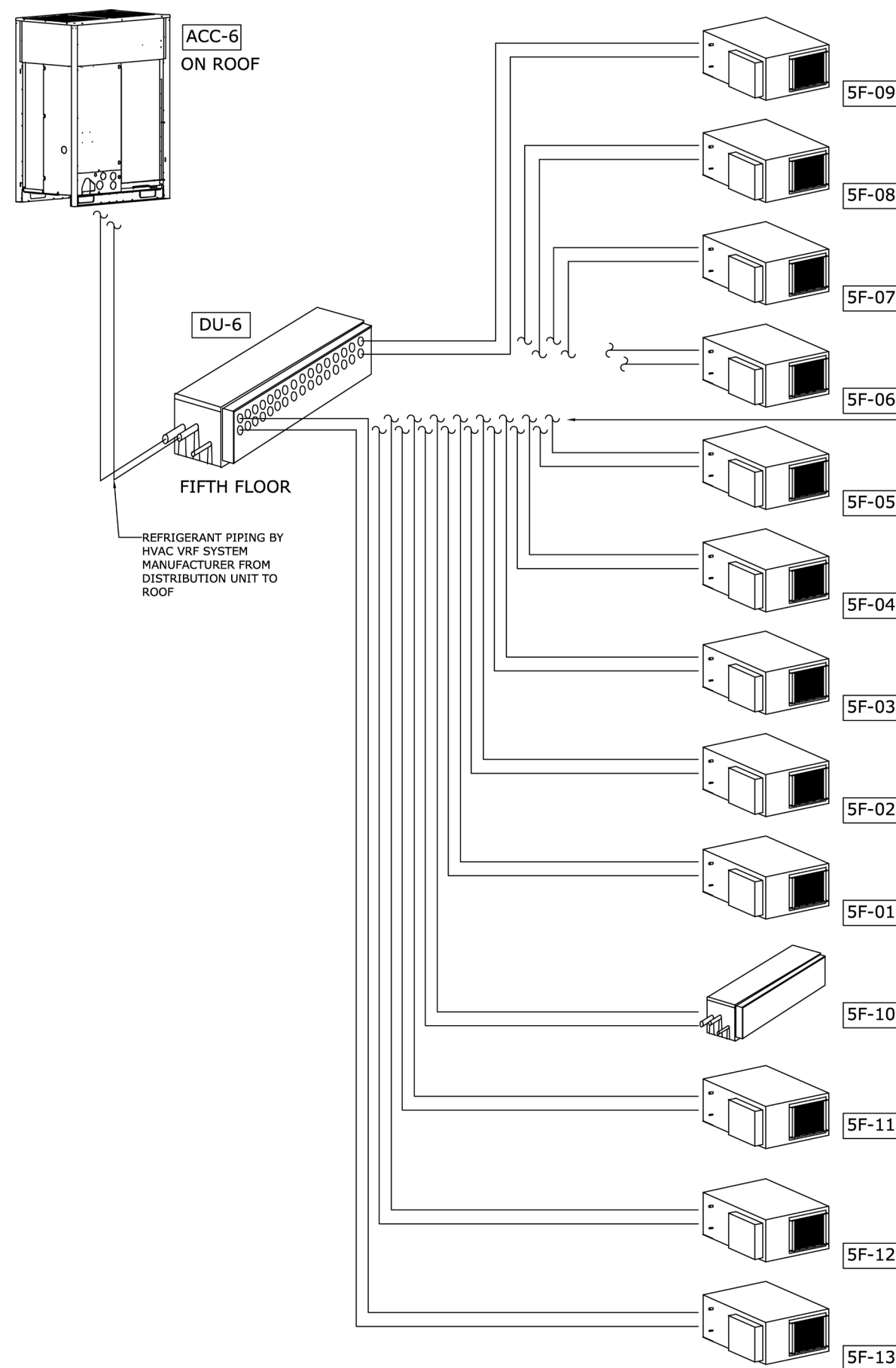
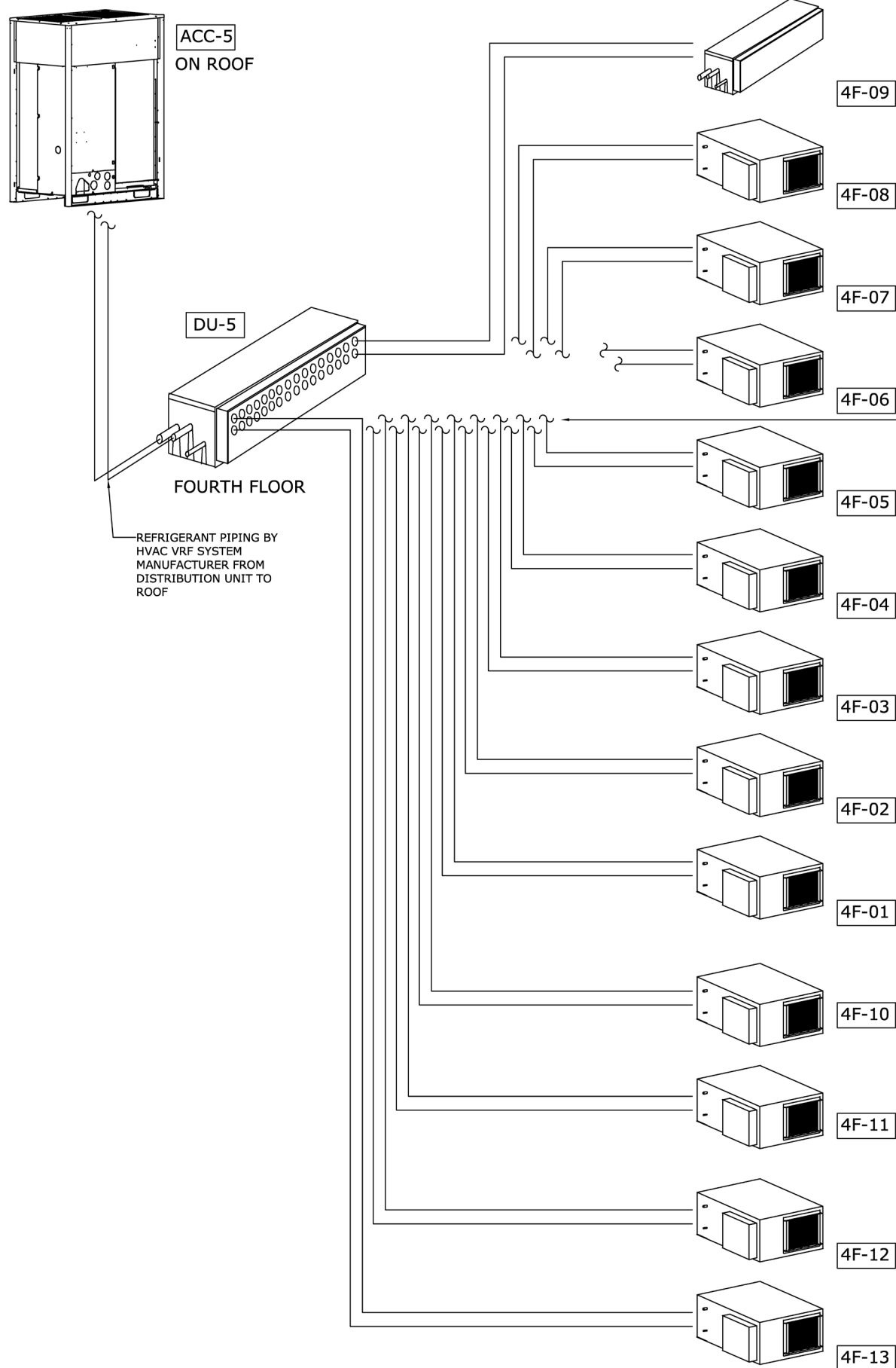
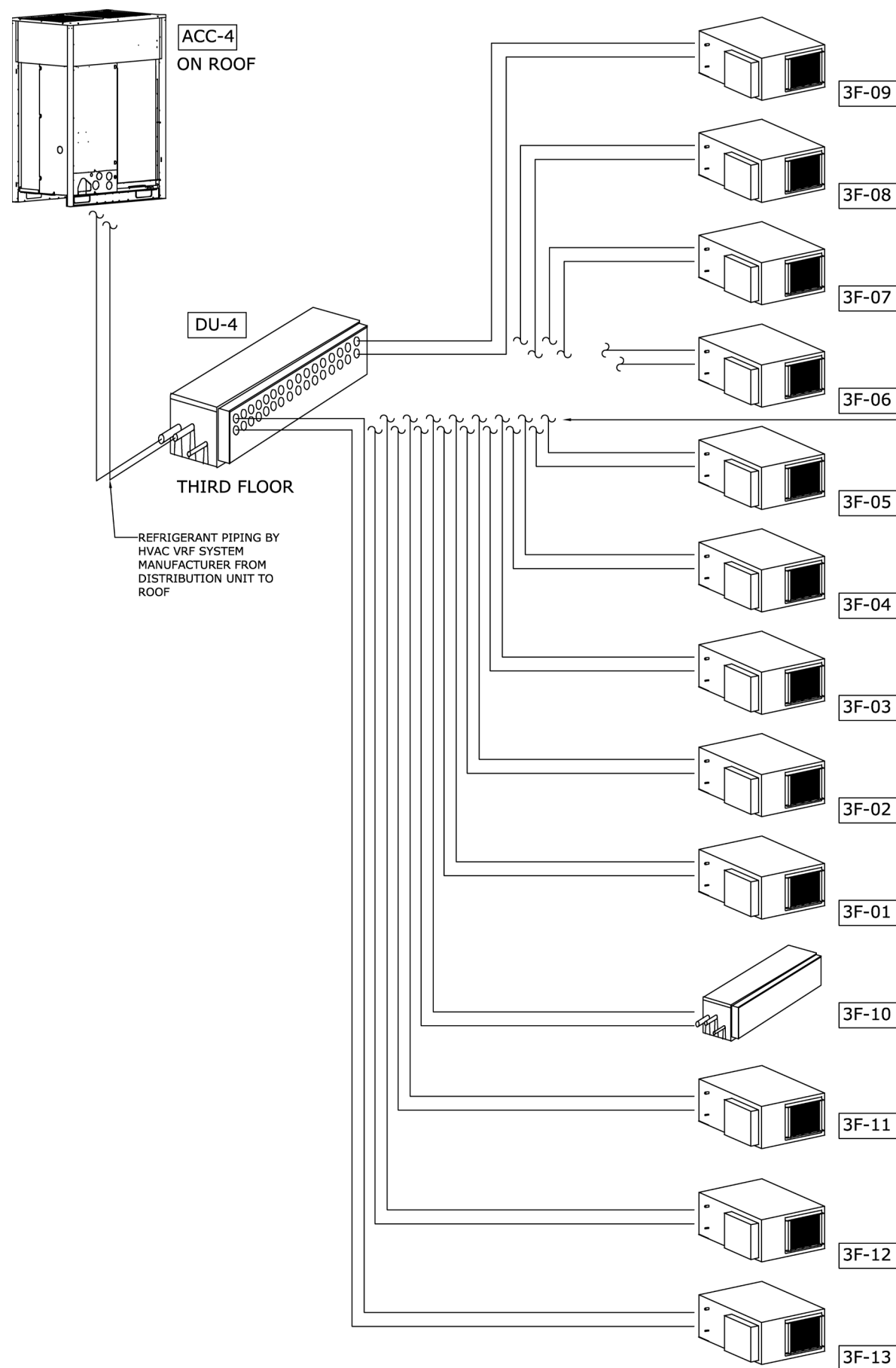
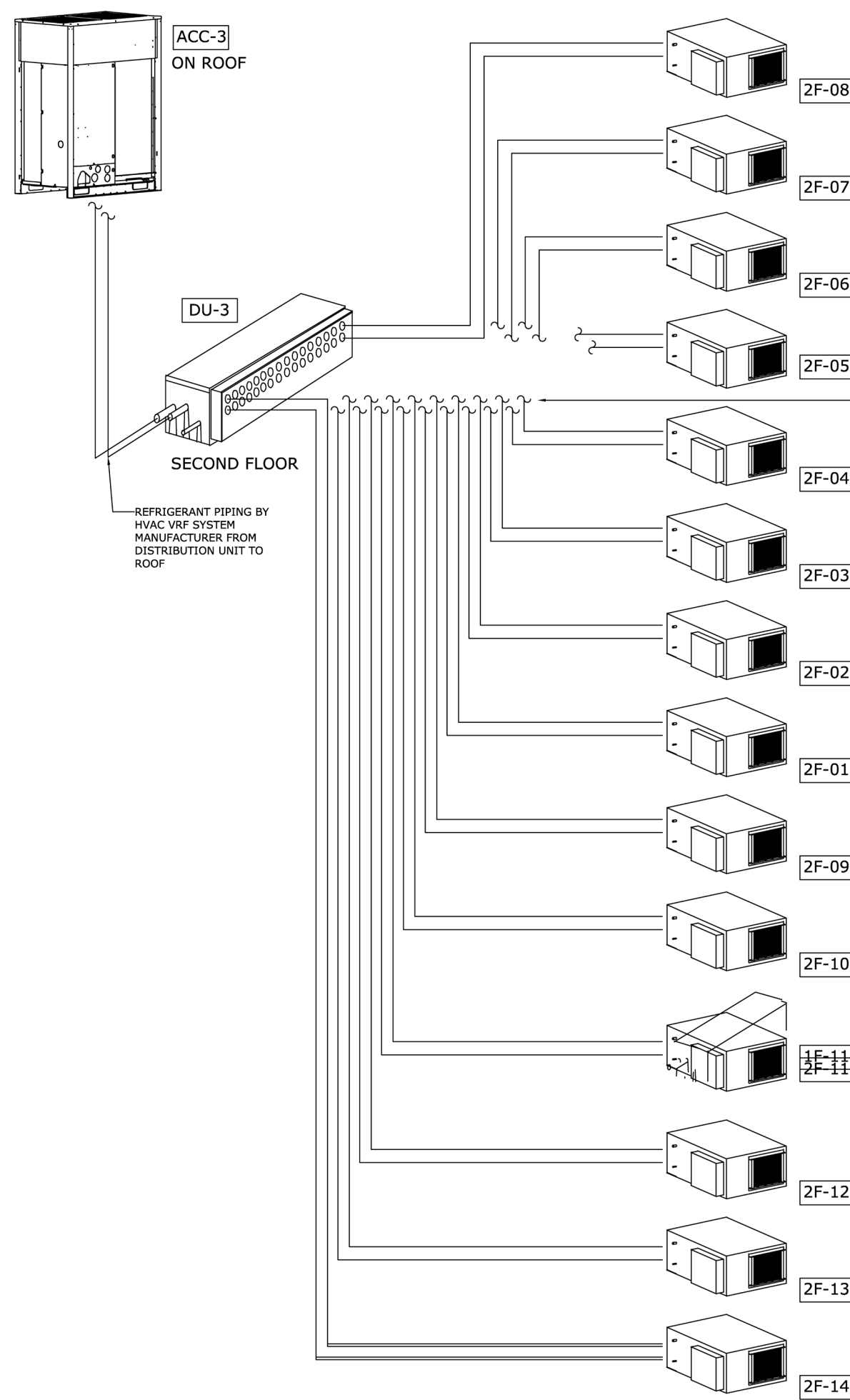
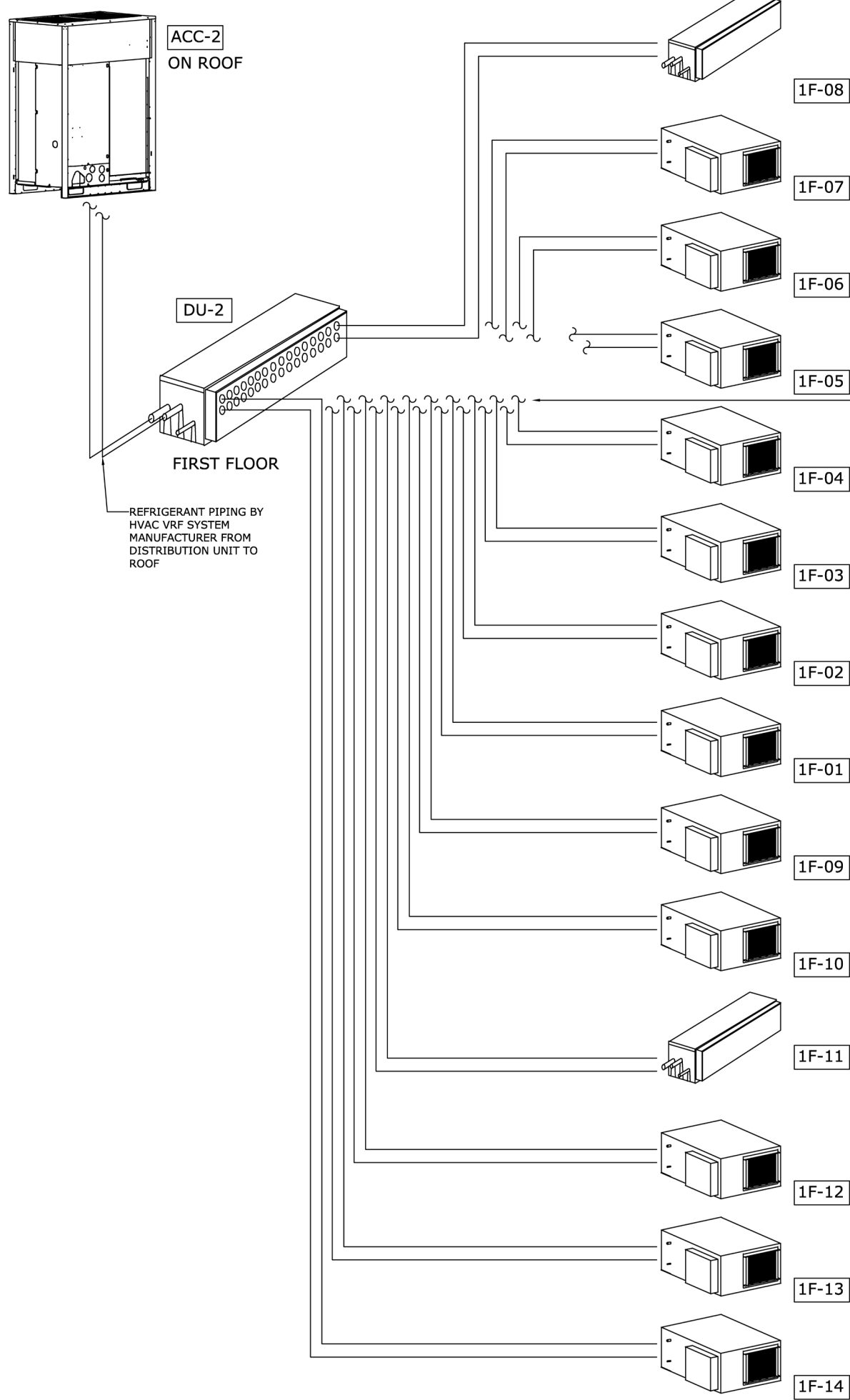
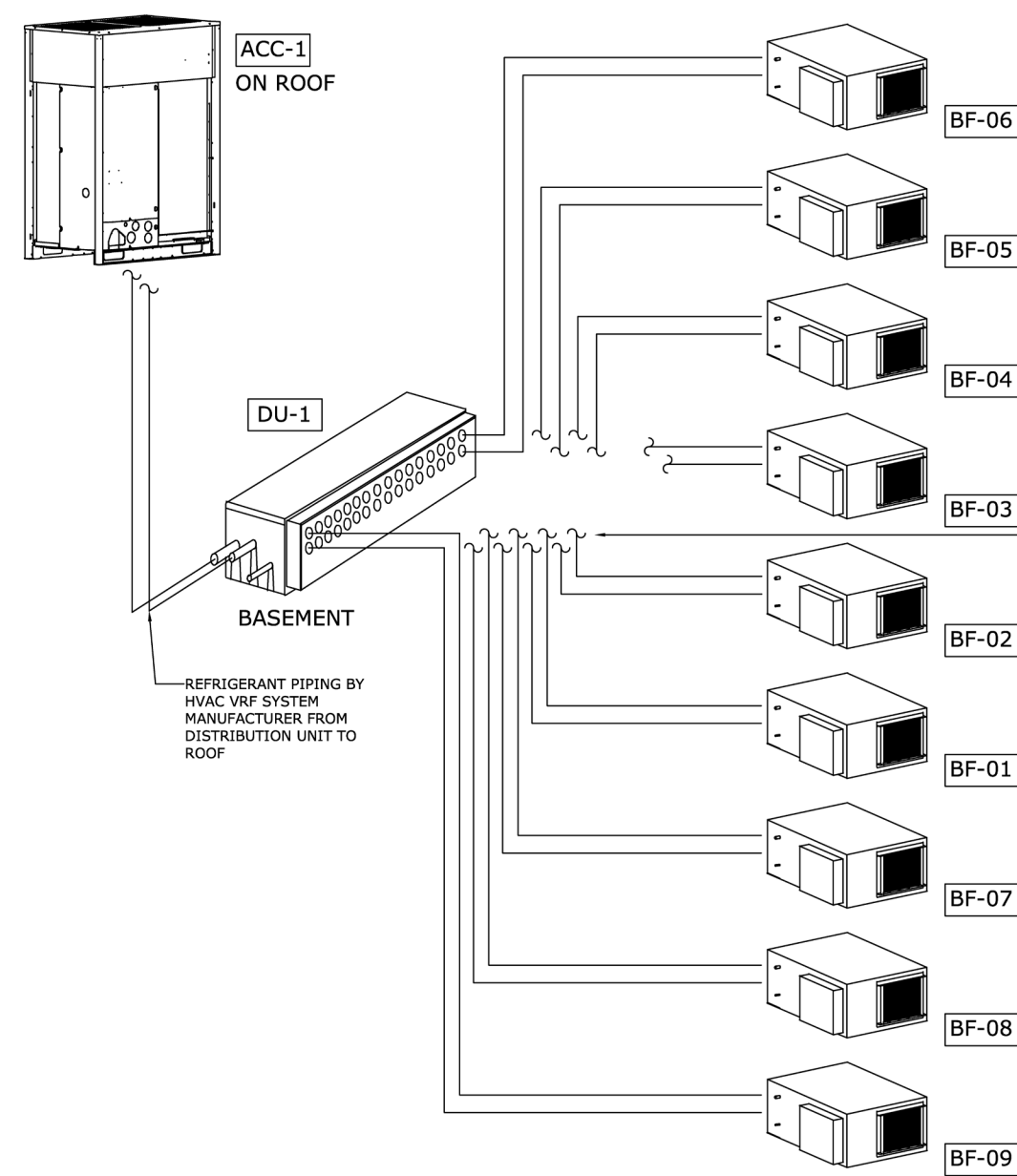
SHEET NUMBER

**M5108**

ISSUE

**B**

Autodesk Docs//122260 - Cot TAU Upgrades R2024122260-TAU-33-50-Richmond-MR24.rvt 1/10m 1/1m



EQUIPMENT NOTES:

- EQUIPMENT SIZING SHALL BE VERIFIED WITH THE MANUFACTURER. IT SHALL INCLUDE REFRIGERANT AND HYDRONIC PIPE SIZES, REFRIGERANT CHARGE AND POWER REQUIREMENTS ACCORDING TO LOCATION ON DRAWINGS AND EQUIPMENT PERFORMANCE PROVIDED IN THE EQUIPMENT SCHEDULE.
- DISTRIBUTION UNITS SHALL BE SUPPLIED BY THE SAME HVAC VRF MANUFACTURER COMPLETE WITH PUMPS, HEAT EXCHANGERS, EXPANSION TANK AND VALVE ASSEMBLY.
- FAN COIL HYDRONIC PIPING ASSEMBLY SHALL BE PROVIDED BY THE EQUIPMENT MANUFACTURER.
- EQUIPMENT MANUFACTURER TO VERIFY REFRIGERANT CHARGE LIMITATION WHERE DISTRIBUTION UNIT IS LOCATED FOR

GENERAL NOTES:

- REFRIGERANT PIPING SHALL BE SIZED BY THE EQUIPMENT PROVIDER WITH THE CONSIDERATION OF ACTUAL PIPE LENGTH ON SITE AND OTHER SITE RELATED CONDITION.
- CONTRACTOR TO FULLY COORDINATE INSTALLATION OF THE HVAC VRF SYSTEM WITH EQUIPMENT PROVIDER. IT SHALL INCLUDE ALL ACCESSORIES AND MANUFACTURER RECOMMENDED INSTALLATION METHODS.
- SYSTEM TESTING, BALANCING AND ADJUSTING TO MAKE THE SYSTEM WORK AS DESIGNED SHALL BE CONDUCTED BY THE TESTING AND BALANCING CONTRACTOR IN FULL COORDINATION WITH THE MANUFACTURER/EQUIPMENT PROVIDER.

1 HVAC VRF SYSTEM DIAGRAM  
M5109 Scale: NTS

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PROJECT MGR:

F. BOLOURIAN

APPROVED BY:

R. BARROSO

SHEET TITLE

**HVAC VRF SCHEMATIC**

SHEET NUMBER

**M5109**

ISSUE

**B**