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REFERENCE SYMBOLS

- NEW MECHANICAL WORK
- EXISTING MECHANICAL WORK
- EXISTING MECHANICAL WORK TO BE DEMOLISHED
- ENLARGED PLAN BORDER
- MATCHLINE
- SECTION IDENTIFIER
- DETAIL OR DRAWING IDENTIFIER
- REVISION CLOUD INDICATES WHERE SECTION APPEARS
- INDICATES REVISION & NUMBER
- FLAG NOTE
- EQUIPMENT IDENTIFIER
- POINT OF CONNECTION
- NORTH ARROW
- MECHANICAL ACCESS

PLUMBING LINE DESIGNATION SYMBOLS

- DOMESTIC COLD WATER (POTABLE)
- DOMESTIC HOT WATER (POTABLE)
- DOMESTIC HOT WATER CIRCULATING (POTABLE)
- SANITARY SEWER ABOVEGROUND
- SANITARY SEWER UNDERGROUND
- VENT PIPING
- GREASE WASTE ABOVEGROUND
- GREASE WASTE UNDERGROUND

HVAC LINE DESIGNATION SYMBOLS

- DUAL TEMPERATURE HEATING AND COOLING WATER SUPPLY
- DUAL TEMPERATURE HEATING AND COOLING WATER RETURN
- MAKEUP WATER
- CONDENSATE DRAIN
- REFRIGERANT LIQUID LINE
- REFRIGERANT SUCTION LINE
- LIQUEFIED PETROLEUM GAS

FIRE PROTECTION LINE DESIGNATION SYMBOLS

- FIRE SPRINKLER
- DRY FIRE SPRINKLER

PIPING ELEMENTS/VALVING

- VALVE
- CHECK VALVE
- BALANCING VALVE
- THREE WAY CONTROL VALVE
- TWO WAY CONTROL VALVE
- SOLENOID VALVE
- PRESSURE REDUCING VALVE (PRV)
- TEMPERATURE/PRESSURE RELIEF VALVE
- RELIEF/SAFETY VALVE
- MANUAL AIR VALVE
- AUTOMATIC AIR VENT (EXTEND DISCHARGE TO DRAIN)
- FLOW METER
- AUTOMATIC FLOW CONTROL VALVE
- DIRECTION OF FLOW
- DIRECTION OF PITCH-RISE OR DROP
- STRAINER
- STRAINER WITH BLOW OFF VALVE
- UNION
- ANCHOR
- GUIDE
- FLOW SWITCH
- TEMPERATURE TRANSMITTER
- PRESSURE TRANSMITTER OR PRESSURE SWITCH
- PRESSURE GAUGE
- THERMOMETER
- AQUASTAT
- GAUGE WITH GAUGE COCK & SIPHON (STEAM)
- GAS PRESSURE REGULATOR
- TEMPERATURE/PRESSURE TEST PORT
- BASKET STRAINER
- STEAM TRAP
- EXPANSION JOINT
- VACUUM BREAKER
- FLEXIBLE CONNECTORS
- WATER METER
- GAS METER
- PUMP
- SPRINKLER HEAD
- BACKFLOW PREVENTION DEVICE (REDUCED ZONE)
- BACKFLOW PREVENTION DEVICE (DOUBLE CHECK VALVE ASSEMBLY)
- WATER HAMMER ARRESTER
- HOSE BIBB
- ROOF DRAIN
- FLOOR DRAIN
- FLOOR SINK
- CLEANOUT (FLOOR)
- CLEANOUT (WALL)
- CLEANOUT
- PIPE CONTINUES
- PIPE CAP
- VENT THRU ROOF
- TRENCH DRAIN
- PIPE RISING UP
- PIPE DROPPING DOWN
- PIPE CONNECTION
- PIPE CONNECTION DOWN

DUCTWORK SYMBOLS

- NEW DUCTWORK
- CLEAR INSIDE DUCT SIZE
- INTERNALLY LINED DUCTWORK
- MANUAL VOLUME DAMPER
- BACKDRAFT DAMPER
- MOTOR OPERATED DAMPER
- DUCT SMOKE DETECTOR
- FIRE DAMPER
- SMOKE DAMPER
- COMBINATION FIRE/SMOKE DAMPER
- DUCT AIRFLOW STATION
- HORIZONTAL FIRE DAMPER
- HORIZONTAL SMOKE DAMPER
- HORIZONTAL COMBINATION FIRE/SMOKE DAMPER
- FLEXIBLE CONNECTION
- UNDERCUT DOOR
- SUPPLY AIR DUCT SECTION
- RETURN OR OUTSIDE AIR DUCT SECTION
- EXHAUST AIR DUCT SECTION
- RECTANGULAR DUCT UP
- RECTANGULAR DUCT DOWN
- ROUND DUCT UP
- ROUND DUCT DOWN
- FLEXIBLE DUCTWORK

DIFFUSER, REGISTER, AND GRILLE SYMBOLS

- AIR DEVICE TAG
- SUPPLY DIFFUSER
- RETURN OR RELIEF GRILLE
- EXHAUST GRILLE
- SIDEWALL GRILLE (SUPPLY, LOUVER (EXHAUST OR RETURN)
- SIDEWALL GRILLE (RETURN OR EXHAUST), LOUVER (OUTSIDE)
- LINEAR GRILLE
- ROUND DIFFUSER

CONTROL SYMBOLS

- ROOM TEMPERATURE SENSOR "THERMOSTAT"
- ROOM SENSOR
- ROOM PRESSURE SENSOR
- ROOM HUMIDITY SENSOR
- ROOM CARBON MONOXIDE SENSOR
- ROOM CARBON DIOXIDE SENSOR
- OCCUPANCY SENSOR
- VARIABLE FREQUENCY DRIVE
- STARTER OR STARTER/DISCONNECT
- DIRECT DIGITAL CONTROL PANEL
- DIFFERENTIAL PRESSURE TRANSMITTER CONTROL WIRING
- SWITCH

MECHANICAL SHEET LIST

NO.	DESCRIPTION
M001	MECHANICAL LEGEND
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M003	MECHANICAL SCHEDULES
M004	MECHANICAL SCHEDULES
M005	MECHANICAL SCHEDULES
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M008	MECHANICAL SCHEDULES
M100	MECHANICAL SITE PLAN
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M102	LOWER LEVEL - FOUNDATION PLAN - AREA B
M111	UPPER LEVEL - FOUNDATION PLAN - AREA A
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M113	UPPER LEVEL - FOUNDATION PLAN - AREA C
M114	UPPER LEVEL - FOUNDATION PLAN - AREA D
M201	LOWER LEVEL - PLUMBING FLOOR PLAN - AREA A
M202	LOWER LEVEL - PLUMBING FLOOR PLAN - AREA B
M211	UPPER LEVEL - PLUMBING FLOOR PLAN - AREA A
M212	UPPER LEVEL - PLUMBING FLOOR PLAN - AREA B
M213	UPPER LEVEL - PLUMBING FLOOR PLAN - AREA C
M214	UPPER LEVEL - PLUMBING FLOOR PLAN - AREA D
M301	LOWER LEVEL - HVAC FLOOR PLAN - AREA A
M302	LOWER LEVEL - HVAC FLOOR PLAN - AREA B
M311	UPPER LEVEL - HVAC FLOOR PLAN - AREA A
M312	UPPER LEVEL - HVAC FLOOR PLAN - AREA B
M313	UPPER LEVEL - HVAC FLOOR PLAN - AREA C
M314	UPPER LEVEL - HVAC FLOOR PLAN - AREA D
M401	LOWER LEVEL - HVAC PIPING FLOOR PLAN - AREA A
M402	LOWER LEVEL - HVAC PIPING FLOOR PLAN - AREA B
M411	UPPER LEVEL - HVAC PIPING FLOOR PLAN - AREA A
M412	UPPER LEVEL - HVAC PIPING FLOOR PLAN - AREA B
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M902	MECHANICAL DETAILS
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M906	MECHANICAL DETAILS
M907	MECHANICAL DETAILS

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MECHANICAL LEGEND

M001

PLUMBING FIXTURE SCHEDULE

TAG	FIXTURE	CONNECTIONS				NOTES
		W	V	CW	HW (NOTE 1)	
P-1	WATER CLOSET	4"	2"	1-1/2"	-	-
P-1A	WATER CLOSET ADA	4"	2"	1-1/2"	-	-
P-1B	PRIMARY WATER CLOSET	4"	2"	1-1/2"	-	-
P-2	NOT USED	-	-	-	-	-
P-3A	STUDENT LAVATORY - TWO STATION	2"	2"	1/2"	1/2"	2
P-3B	STUDENT LAVATORY - WALL MOUNTED	2"	2"	1/2"	1/2"	2
P-4	STAFF LAVATORY - WALL MOUNTED	2"	2"	1/2"	1/2"	2
P-5	SERVICE SINK	3"	2"	3/4"	3/4"	-
P-6	CLASSROOM SINK	2"	2"	1/2"	1/2"	-
P-7	SINK - SINGLE COMPARTMENT	2"	2"	1/2"	1/2"	-
P-8	SINK - DOUBLE COMPARTMENT	2"	2"	1/2"	1/2"	-
P-9	HEALTH SINK	2"	2"	1/2"	1/2"	-
P-10	DRINKING FOUNTAIN HILO WITH BOTTLE FILLING STATION	2"	2"	1/2"	-	120V/1Ø
P-11	SHOWER ADA	2"	2"	1"	1"	-
P-12	EMERGENCY EYE/FACE WASH - WALL MOUNTED ABOVE SINK	-	-	3/4"	3/4"	-
P-12A	EMERGENCY EYE/FACE WASH	2"	2"	3/4"	3/4"	-
P-13	INSTA-HOT	-	-	1/2"	-	120V/1Ø, 1300W
P-14	GARBAGE DISPOSER	2"	-	-	-	120V/1Ø, 1300W
P-15	DISHWASHER CONNECTION	2"	-	-	1/2"	3
P-16	COLD WATER SERVICE BOX	-	-	1/2"	-	-
P-17	WASHER SERVICE BOX	2"	2"	1/2"	1/2"	6
P-18	OUTDOOR SINK	2"	2"	1/2"	1/2"	-
HB-1	EXTERIOR NONFREEZE WALL HYDRANT	-	-	3/4"	-	-
HB-2	INTERIOR HOT AND COLD WALL HYDRANT	-	-	3/4"	3/4"	-
HB-3	EXTERIOR HOT AND COLD WALL HYDRANT	-	-	3/4"	3/4"	-
HB-4	ROOF NONFREEZE HYDRANT	-	-	1"	-	-
TP	TRAP PRIMER	-	-	1/2"	-	120V/1Ø, 5 AMPS, NOTE 7
FD, FD-1	FLOOR DRAIN	2", 3", 4"	2"	-	-	4
FFD, FD-1	FUNNEL FLOOR DRAIN	2", 3", 4"	2"	-	-	4
FS-1, FS2-1	FLOOR SINK - HALF GRATE	2", 3", 4"	2"	-	-	5
FS-2, FS2-2	FLOOR SINK - WITHOUT GRATE	2", 3", 4"	2"	-	-	5
FS-3, FS2-3	FLOOR SINK - 3/4 GRATE	2", 3", 4"	2"	-	-	5

NOTES:
 1) SEE MAX PIPING LENGTH TO PLUMBING HOT WATER SUPPLY SCHEDULE TO MEET 2015 WASHINGTON STATE ENERGY CODE REQUIREMENTS.
 2) PROVIDE WITH INDIVIDUAL FIXTURE WATER TEMPERING VALVES. SEE DETAIL 1/M903 LOCAL MIXING VALVE DETAIL.
 3) HOT WATER AND WASTE ROUTED TO ADJACENT SINK.
 4) SEE DETAIL 6/M903 FOR FLOOR DRAIN DETAIL. SEE 4/M901 FOR FLOOR DRAIN FD-1 DETAIL.
 5) SEE DETAIL 3/M903 FOR FLOOR SINK DETAIL.
 6) SEE DETAIL 8/M903 FOR WASHING MACHINE BOX DETAIL.
 7) SEE DETAIL 4/M903 FOR ELECTRIC TRAP-SEAL PRIMER DETAIL.

EXPANSION TANK SCHEDULE

TAG	SYSTEM SERVED	LOCATION	MANUFACTURER / MODEL	VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	SYSTEM CONN (IN)	DIMENSIONS (DIAxHT) (INxIN)	OPERATING WEIGHT (LBS)	DETAIL CALLOUT	NOTES
ET-01	HYDRONIC WATER	AHU/BOILER 08	AMTROL 1000-L	264	264	1-1/2"	36x74	2,820	1/M801	1, 2, 3
ET-02	DOMESTIC HW	AHU/BOILER 08	AMTROL ST-30V-C	14	9	3/4"	17x20	150	9/M903	1
ET-03	KITCHEN HW	AHU/BOILER 08	AMTROL ST-30V-C	14	9	3/4"	17x20	150	9/M903	1
ET-04	DOMESTIC CW	AHU/BOILER 08	AMTROL ST-20V-C	8	3	3/4"	12x20	100	5/M901	1

NOTES:
 1) CHARGE EXPANSION TANK ON SITE TO SYSTEM OPERATING PRESSURE. COORDINATE WITH ENGINEER PRIOR TO CHARGING.
 2) PROVIDE WITH SEISMIC RESTRAINT OPTIONS.
 3) FLUID IS 30% PROPYLENE GLYCOL.

AIR SEPARATOR SCHEDULE

TAG	SYSTEM SERVED	LOCATION	MANUFACTURER / MODEL	VOLUME (GAL)	FLOW (GPM)	UNIT CONN (IN)	SYSTEM PIPE SIZE (IN)	MAX WPD (FT HD)	DIMENSIONS (DIAxHT) (INxIN)	OPERATING WEIGHT (LBS)	DETAIL CALLOUT	NOTES
AS-01	HYDRONIC WATER	AHU/BOILER 08	SPIROTHERM VDN500	19.8	350	5"	6"	2	19x42	500	1/M801	1, 2

NOTES:
 1) HANG TIGHT TO STRUCTURE WITH SPACE FOR AUTOMATIC AIR VENT. PROVIDE SEISMIC BRACING.
 2) TRANSITION PIPING TO CONNECT TO UNIT.

AUTOMATIC GLYCOL FEEDER

TAG	SYSTEM SERVED	LOCATION	MANUFACTURER / MODEL	TANK CAPACITY (GAL)	MAX WORKING PRESSURE (PSI)	SYSTEM CONNECTION (IN)	ELECTRICAL VOLTAGE/PHASE (V/Ø)	DIMENSIONS (DIAxHT) (INxIN)	WEIGHT (LBS)	DETAIL CALLOUT	NOTES
AGF-01	BUILDING LOOP	AHU/BOILER 08	ARMSTRONG GLA-S-HP-1	53	125	1/2	120/1	26x51	600	1/M801	1, 2

NOTES:
 1) PROVIDE WITH INTEGRAL CONTROLLER AND OUTPUTS FOR MONITORING/ALARM TO EMS.
 2) EQUIPMENT SHALL BE PROVIDED WITH VISIBLE NAMEPLATE INDICATING THE SCCR RATING IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL POWER ONE-LINE DIAGRAM ON E600 FOR MINIMUM RATINGS.

PUMP SCHEDULE

TAG	SYSTEM SERVED	LOCATION	MANUFACTURER / MODEL	FLOW (GPM)	HEAD (FT)	FLUID	ELECTRICAL		VOLTAGE/PHASE (V/Ø)	DIMENSIONS (LxWxHT) (INxINxIN)	OPERATING WEIGHT (LBS)	DETAIL CALLOUT	NOTES	
							MOTOR ENCLOSURE	RPM (RPM)						
PU-01	HYDRONIC WATER	AHU/BOILER 08	B&G SERIES e-80SC 4x4x11B	335	110	30% PROPYLENE GLYCOL	TEFC	20	1750	460/3	26x16x37	750	1/M801	1, 2, 3
PU-02	HYDRONIC WATER	AHU/BOILER 08	B&G SERIES e-80SC 4x4x11B	335	110	30% PROPYLENE GLYCOL	TEFC	20	1750	460/3	26x16x37	750	1/M801	1, 2, 3
PU-03	AHWP CIRC	AHU/BOILER 08	B&G SERIES e-80SC 5x5x9.5B	324	30	30% PROPYLENE GLYCOL	TEFC	5	1170	460/3	29x17x35	500	1/M801	1, 2, 3
PU-04	BOILER CIRC	AHU/BOILER 08	B&G SERIES e-80SC 3x3x7C	111	18	30% PROPYLENE GLYCOL	TEFC	1	1150	460/3	19x12x30	250	1/M801	2, 4
PU-05	BOILER CIRC	AHU/BOILER 08	B&G SERIES e-80SC 3x3x7C	111	18	30% PROPYLENE GLYCOL	TEFC	1	1150	460/3	19x12x30	250	1/M801	2, 4
PU-06	DOMESTIC HW	AHU/BOILER 08	B&G SERIES PL	8	27	WATER	-	1/6	3300	115/1	10x8x5	20	9/M903	2, 4, 5
PU-07	KITCHEN HW	AHU/BOILER 08	B&G SERIES PL	8	27	WATER	-	1/6	3300	115/1	10x8x5	20	9/M903	2, 4, 5

NOTES:
 1) PROVIDE WITH VARIABLE FREQUENCY DRIVE AND MOTOR SHAFT GROUNDING SYSTEM.
 2) EQUIPMENT SHALL BE PROVIDED WITH VISIBLE NAMEPLATE INDICATING THE SCCR RATING IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL POWER ONE-LINE DIAGRAM ON E600 FOR MINIMUM RATINGS.
 3) PROVIDE WITH SPRING ISOLATED CONCRETE INERTIA BASE.
 4) HANG FROM STRUCTURE. PROVIDE SEISMIC BRACING.
 5) PROVIDE LEAD FREE MODEL.

ELECTRIC WATER HEATER SCHEDULE

TAG	SYSTEM SERVED	LOCATION	MANUFACTURER / MODEL	CAPACITY (GAL)	RECOVERY AT 80°F (GPH)	TEMP SETTING (F)	CAPACITY (KW)	CAPACITY STAGES (#)	CW INLET (IN)	HW OUTLET (IN)	ELECTRICAL VOLTAGE/PHASE (V/Ø)	DIMENSIONS (DIAxHT) (INxIN)	OPERATING WEIGHT (LBS)	DETAIL CALLOUT	NOTES	
WH-01	BUILDING	AHU/BOILER 08	AO SMITH DVE-120-54	119	359	120	54	9	1-1/4	1-1/4	65	480/3	30x63	1300	9/M903	1, 2, 3
WH-02	KITCHEN	AHU/BOILER 08	AO SMITH DVE-120-54	119	359	120	54	9	1-1/4	1-1/4	65	480/3	30x63	1300	9/M903	1, 2, 3

NOTES:
 1) PROVIDE WITH BACNET GATEWAY FOR BAS INTERFACE.
 2) LOCATE WATER HEATER ON CONCRETE HOUSEKEEPING PAD WITH PAN AND INSULATED BASE. SEISMICALLY ANCHOR UNIT.
 3) EQUIPMENT SHALL BE PROVIDED WITH VISIBLE NAMEPLATE INDICATING THE SCCR RATING IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL POWER ONE-LINE DIAGRAM ON E600 FOR MINIMUM RATINGS.

ELECTRIC BOILER SCHEDULE

TAG	LOCATION	MANUFACTURER / MODEL	HEATING MEDIUM	DESIGN PRESSURE (PSIG)	RELIEF VALVE (PSIG)	CAPACITY (GAL)	OUTPUT CAPACITY (MBH)	ELEMENTS (QTY - KW)	HEAD LOSS (FT)	EWT (°F)	LWT (°F)	DESIGN FLOW (GPM)	CONNECTION SIZE (IN)	ELECTRICAL KW	AMPS	VOLTAGE/PHASE (V/Ø)	DIMENSIONS (LxWxHT) (INxINxIN)	OPERATING WEIGHT (LBS)	DETAIL CALLOUT	NOTES
B-01	AHU/BOILER 08	CLEAVER BROOKS WB-201	30% PROPYLENE GLYCOL	60	60	78	1105	(3) 72, (3) 36	2.3	105	125	111	4	324	391	480/3	38x44x71	2100	1/M801	1, 2, 3
B-02	AHU/BOILER 08	CLEAVER BROOKS WB-201	30% PROPYLENE GLYCOL	60	60	78	1105	(3) 72, (3) 36	2.3	105	125	111	4	324	391	480/3	38x44x71	2100	1/M801	1, 2, 3

NOTES:
 1) LOCATE BOILER ON CONCRETE HOUSEKEEPING PAD AND SEISMICALLY ANCHOR UNIT.
 2) PROVIDE WITH SCR MODULATING CAPACITY CONTROLLER, BACNET CONTROL INTERFACE, TERMINAL STRIP WITH HARDWIRED START/STOP, TEMP RESET, SAFETY DOOR INTERLOCK, AUXILIARY LOW WATER CUT-OFF AND ALARM HORN WITH SILENCING SWITCH.
 3) EQUIPMENT SHALL BE PROVIDED WITH VISIBLE NAMEPLATE INDICATING THE SCCR RATING IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL POWER ONE-LINE DIAGRAM ON E600 FOR MINIMUM RATINGS.

AIR TO WATER HEAT PUMP SCHEDULE

TAG	AREA SERVED	LOCATION	MANUFACTURER / MODEL	TYPE	REFRIGERANT	HEATING CAPACITY (MBH)	MIN HEATING CAPACITY (MBH)	COP (NOTE 1)	AMBIENT COOLING (F)	AMBIENT HEATING (F)	COOLING CAPACITY (TONS)	MIN COOLING CAPACITY (TONS)	PART LOAD EFF	FULL LOAD EFF	# OF CIRCUITS	FLUID TYPE	CONDENSER								ELECTRICAL (NOTE 6)				DIMENSIONS (LxWxHT) (INxINxIN)	WEIGHT (LBS)	NOTES					
																	HEATING				COOLING				WPD	VEL	EVAPORATOR					COMPRESSORS		HEAT TRACE		MCA
AHWP-01	BUILDING	SERVICE YARD	AIRSTACK (4)ARP080	MODULAR SCROLL	R-410A	2693	1155	2.86	95	40	246.9	61.72	0.687	10.84	4	30% PROPYLENE GLYCOL	323.4	81	125	105	323.4	65	45	6	6	16	25	8	26	30	553	700	460/3	36x72x95	22000	2, 3, 4, 5

NOTES:
 1) EFFICIENCIES ARE IN ACCORDANCE WITH AHRI STANDARD 590.
 2) EQUIPMENT SHALL BE PROVIDED WITH VISIBLE NAMEPLATE INDICATING THE SCCR RATING IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL POWER ONE-LINE DIAGRAM ON E600 FOR MINIMUM RATINGS.
 3) USER INTERFACE SHALL BE MOUNTED ON MODULE BY FACTORY WITHIN NEMA 4X WEATHERPROOF ENCLOSURE AT A LOCATION THAT DOES NOT IMPED E ON MAINTENANCE ACCESS TO UNIT.
 4) PROVIDE WITH ISOLATION VALVES, REDUNDANT FACTORY HEAT TRACING CIRCUITS, DOOR INTERLOCK, SINGLE POINT POWER (NOT INCLUDING HEAT TRACE CIRCUIT), BRAZED PLATE HEAT EXCHANGER, CORROSION-RESISTANT ELECTROFIM CONDENSER COIL COATING, (2) CONDENSER FANS PER MODULE, OUTDOOR FLOW SWITCH (FIELD INSTALLED), CARBON STEEL PAINTED LIFTING FRAME, ECM FAN MOTORS, AND FIVE YEAR COMPRESSOR WARRANTY.
 5) SEISMICALLY ANCHOR UNIT TO HOUSEKEEPING PAD.
 6) PARALLEL FEEDS ARE REQUIRED.

SPLIT-SYSTEM AIR-CONDITIONER UNIT SCHEDULE

TAG	AREA SERVED	OUTDOOR UNIT LOCATION	MANUFACTURER/MODEL	INDOOR FAN			HEAT PUMP HEATING				COOLING				ELECTRICAL OUTDOOR UNIT								DIMENSIONS INDOOR/OUTDOOR (LxWxHT) (INxINxIN)	WEIGHT INDOOR/OUTDOOR (LBS)	INDOOR DETAIL CALLOUT	OUTDOOR DETAIL CALLOUT	NOTES
				FLOW (CFM)	FLA (AMPS)	MCA (AMPS)	VOLTAGE/PHASE (V/Ø)	CAPACITY (BTU/HR)	OUTDOOR AIR TEMP (°F)	COP	TOTAL CAPACITY (BTU/HR)	SENSIBLE CAPACITY (BTU/HR)	SEER	COMP FLA (AMPS)	COMP LRA (AMPS)	FAN FLA (AMPS)	MCA (AMPS)	MAX FUSE (AMPS)	VOLTAGE/PHASE (V/Ø)	MCA		MCP					
FCU-01/HP-01	ELEV MACH RM 02A	ON ROOF	mitsubishi PKA-A18HA/PUZ-A18NHA	425	0.33	1	208/1	19,000	47	2.83	18,000	12,240	15.3	-	-	0.35	13	20	208/1	36x12x10 / 32x12x24	35 / 110	5/M904	9/M905	1, 2, 3, 4, 5			
AC-02/CU-02	MDF 09	ON ROOF	mitsubishi PKA-A30HA/PUY-A30NHA	775	0.36	1	208/1	-	-	-	30,000	21,000	15.5	17.5	12	0.75	25	40	208/1	47x12x15 / 38x15x38	50 / 175	5/M904	9/M905	1, 2, 3, 4, 5			
AC-03/CU-03	IDF 83	ON ROOF	mitsubishi PKA-A24HA/PUY-A24NHA	775	0.36	1	208/1	-	-	-	24,000	18,480	17	14	12	0.75	18	30	208/1	47x12x15 / 38x15x38	50 / 175	5/M904	9/M905	1, 2, 3, 4, 5			
AC-04/CU-04	IDF 63	ON ROOF	mitsubishi PKA-A24HA/PUY-A24NHA	775	0.36	1	208/1	-	-	-	24,000	18,480	17	14	12	0.75	18	30	208/1	47x12x15 / 38x15x38	50 / 175	5/M904	9/M905	1, 2, 3, 4, 5			
AC-05/CU-05	IDF 35	ON ROOF	mitsubishi PKA-A24HA/PUY-A24NHA	775	0.36	1	208/1	-	-	-	24,000	18,480	17	14	12	0.75	18	30	208/1	47x12x15 / 38x15x38	50 / 175	5/M904	9/M905	1, 2, 3, 4, 5			

NOTES:
 1) EFFICIENCIES ARE IN ACCORDANCE WITH AHRI STANDARD 210/240.
 2) PROVIDE WITH WIRED REMOTE CONTROLLER. PROVIDE CONTROL POWER WIRES AND REFRIGERANT PIPING FROM CONDENSING UNIT TO AC UNIT PER MANUFACTURER'S RECOMMENDATIONS.
 3) PROVIDE WITH INTEGRAL THERMASTAT.
 4) SECTION 230900 TO PROVIDE ADDITIONAL THERMASTAT FOR MONITORING/ALARM.
 5) EQUIPMENT SHALL BE PROVIDED WITH VISIBLE NAMEPLATE INDICATING THE SCCR RATING IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL POWER ONE-LINE DIAGRAM ON E600 FOR MINIMUM RATINGS.

FINNED TUBE CONVECTOR SCHEDULE

TAG	LOCATION	MANUFACTURER / MODEL	ENCLOSURE										HEATING ELEMENTS			HEATING WATER										DETAIL CALLOUT	NOTES
			STYLE	MOUNTING	INLET GRILLE	OUTLET GRILLE	OVERALL LENGTH (FT)	ACTIVE LENGTH (FT)	DEPTH (IN)	HEIGHT (IN)	MOUNTING HEIGHT (IN)	TUBE DIAMETER (IN)	# OF ROWS (#)	FIN SIZE (INxIN)	FIN SPACING (#/FT)	TOTAL CAPACITY (MBH)	EAT (°F)	EWT (°F)	LWT (°F)	FLOW (GPM)	MAX WPD (FT HD)	MIN WATER VEL (FPS)	PIPE CONNECTION (IN)	VALVE TYPE			
FT-A01	EAGLE STUDIO 104	RITTLING	-	WM	-	-	21	20	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	18.4	65	125	115.5	3.2	2.6	2	3/4"	3-WAY	8/M905	3, 4	
FT-A02	KINDERGARTEN 21	RITTLING	-	WM	-	-	14	13	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	12.1	65	125	117.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-A03	KINDERGARTEN 23A	RITTLING	-	WM	-	-	14	13	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	12.1	65	125	117.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-A04	KINDERGARTEN 23B	RITTLING	-	WM	-	-	14	13	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	12.1	65	125	117.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-A05	KINDERGARTEN 25A	RITTLING	-	WM	-	-	14	13	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	12.1	65	125	117.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-A06	KINDERGARTEN 25B	RITTLING	-	WM	-	-	14	13	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	12.1	65	125	117.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-A07	KINDERGARTEN 27	RITTLING	-	WM	-	-	14	13	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	12.1	65	125	117.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-B01	MUSIC 95	RITTLING	-	WM	-	-	19	18	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	16.2	65	125	114.8	3.2	2.6	2	3/4"	3-WAY	8/M905	3, 4	
FT-B02	OT/PT 84	RITTLING	-	WM	-	-	14	13	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	12.1	65	125	117.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-B03	RESOURCE ROOM 81	RITTLING	-	WM	-	-	14	13	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	12.1	65	125	117.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-B04	SPECIAL ED. 77	RITTLING	-	WM	-	-	19	18	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	16.2	65	125	114.8	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-B05	EARLY LEARNING CENTER 75	RITTLING	-	WM	-	-	18	17	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	15.4	65	125	115.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-B06	HEAD START 73	RITTLING	-	WM	-	-	18	17	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	15.4	65	125	115.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-B07	EARLY HEAD START 71	RITTLING	-	WM	-	-	18	17	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	15.4	65	125	115.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-B08	CLASSROOM 78	RITTLING	-	WM	-	-	29	28	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	23.9	65	125	110.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-B09	CLASSROOM 79	RITTLING	-	WM	-	-	29	28	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	23.9	65	125	110.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-C01A	CLASSROOM 51	RITTLING	-	WM	-	-	36	35	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	28.6	65	125	107.1	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-C01B	CLASSROOM 51	RITTLING F55	SL	WM	PL	F, PL	13	12	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	8.3	65	125	119.8	3.2	2.6	2	3/4"	3-WAY	8/M905	1, 2, 3	
FT-C02	CLASSROOM 54A	RITTLING	-	WM	-	-	14	13	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	12.1	65	125	117.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-C03	CLASSROOM 54B	RITTLING	-	WM	-	-	14	13	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	12.1	65	125	117.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-C04	CLASSROOM 57	RITTLING	-	WM	-	-	34	33	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	27.6	65	125	109.1	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-C05	CLASSROOM 58	RITTLING	-	WM	-	-	28	27	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	23	65	125	110.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-C06	CLASSROOM 59	RITTLING	-	WM	-	-	28	27	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	23	65	125	110.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-C07	CLASSROOM 61	RITTLING	-	WM	-	-	20	19	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	17	65	125	114.4	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-C08	CLASSROOM 64A	RITTLING	-	WM	-	-	19	18	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	16.2	65	125	114.8	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-C09	CLASSROOM 64B	RITTLING	-	WM	-	-	19	18	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	16.2	65	125	114.8	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-C10	CLASSROOM 67	RITTLING	-	WM	-	-	20	19	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	17	65	125	114.4	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-D01	CLASSROOM 31	RITTLING	-	WM	-	-	34	33	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	27.6	65	125	109.1	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-D02	CLASSROOM 34A	RITTLING	-	WM	-	-	14	13	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	12.1	65	125	117.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-D03	CLASSROOM 34B	RITTLING	-	WM	-	-	14	13	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	12.1	65	125	117.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-D04	CLASSROOM 37	RITTLING	-	WM	-	-	34	33	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	27.6	65	125	109.1	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-D05	CLASSROOM 38	RITTLING	-	WM	-	-	28	27	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	23	65	125	110.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-D06	CLASSROOM 39	RITTLING	-	WM	-	-	28	27	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	23	65	125	110.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-D07	CLASSROOM 41	RITTLING	-	WM	-	-	26	25	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	21.7	65	125	112.1	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-D08	CLASSROOM 44A	RITTLING	-	WM	-	-	14	13	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	12.1	65	125	117.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-D09	CLASSROOM 44B	RITTLING	-	WM	-	-	14	13	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	12.1	65	125	117.5	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-D10A	CLASSROOM 47	RITTLING	-	WM	-	-	36	35	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	28.6	65	125	107.1	3.2	2.6	2	3/4"	2-WAY	8/M905	3, 4	
FT-D10B	CLASSROOM 47	RITTLING F55	SL	WM	PL	F, PL	9	8	5-3/8	24	28	3/4	3	4-1/4x4-1/4	48	5.6	65	125	121.5	3.2	2.6	2	3/4"	3-WAY	8/M905	1, 2, 3	

NOTES:
 1) PROVIDE END CAPS, MOUNTING BRACKETS AND ACCESSORIES TO MATCH ARRANGEMENT INDICATED ON DWGS. SUPPLY AND RETURN SHALL CONNECT ON THE SAME SIDE AS SHOWN ON DRAWINGS. END CAPS SHALL BE SIZED TO ALLOW CONCEALED BRANCH PIPING CONNECTIONS TO UNIT. COORDINATE DIMENSIONS WITH ARCH DWGS.
 2) COLOR PER ARCHITECT.
 3) FLUID IS 30% PROPYLENE GLYCOL.
 4) FINNED TUBE CONVECTOR SHALL INCLUDE FIN TUBE ELEMENT, SUPPORT BRACKETS SPACED EVERY 3' FOR EACH ROW, WALL MOUNTING CHANNEL FOR SUPPORT BRACKETS AND RETURN TUBING WITH SUPPORT HANGERS FOR INSTALLATION BEHIND CASEWORK. SUPPLY AND RETURN SHALL CONNECT ON THE SAME SIDE AS SHOWN ON DRAWINGS.

ABBREVIATIONS:
 SL = SLOPED TOP, FL = FLAT TOP, WM = WALL MOUNTED, FM = FLOOR MOUNTED, F = FRONT, T = TOP, PL = PUNCHED LOUVER, EABG = EXTRUDED AL BAR GRILLE.

EXHAUST FAN SCHEDULE

TAG	AREA SERVED	LOCATION	MANUFACTURER / MODEL	FAN				MOTOR				DRIVE TYPE	INLET TYPE	DIMENSIONS (LxWxHT) (INxINxIN)	WEIGHT (LBS)	DETAIL CALLOUT	NOTES
				FLOW (CFM)	ESP (IN WC)	SPEED (RPM)	POWER (HP)	SPEED (RPM)	VOLTAGE/PHASE (V/Ø)								
EF-A101	COMMONS NORTH TOILET ROOMS	AHU/BOILER 08	GREENHECK SQ-99-VG	440	0.75	1502	1/4	1725	115/1	DIRECT	69	24x15x15	65	2/M905	3		
EF-A102	KITCHEN RANGE HOOD	ROOF	GREENHECK CUE-161-VG	2800	1.5	1465	2	1725	208/1	DIRECT	71	29x32	125	9/M904	2, 3, 5		
EF-A103	KITCHEN RANGE HOOD	ROOF	GREENHECK CUE-161HP-VG	2200	1.5	1653	1	1673	208/1	DIRECT	69	29x32	120	9/M904	2, 3, 5		
EF-A104	KITCHEN WAREWASHER	ROOF	GREENHECK CUE-099-VG	600	1.0	1626	1/4	1725	115/1	DIRECT	58	25x31	65	8/M904	1, 2, 3		
EF-A105	LEARNING KITCHEN RANGE HOOD	AHU/BOILER 08	GREENHECK SQ-98-VG	300	0.85	1602	1/4	1725	115/1	DIRECT	60	24x15x15	70	2/M905	1, 3		
EF-A106	MAIN ELECTRICAL 112	KILN 113	GREENHECK SQ-99-VG	650	0.75	1691	1/4	1725	115/1	DIRECT	63	24x15x15	70	2/M905	3		
EF-A107	COMMONS SOUTH TOILET/CUST	ROOF	GREENHECK G-097-VG	220	0.75	1628	1/4	1725	115/1	DIRECT	57	25x26	55	8/M904	2, 3		
EF-A108	KILN 113	KILN 113	GREENHECK SQ-99-VG	640	0.5	1501	1/4	1725	115/1	DIRECT	59	24x15x15	65	2/M905	3		
EF-A109	KILN 113	KILN 113	SKUTT ENVIROVENT 2	140	-	-	1.4 AMPS	-	115/1	-	-	-	-	-	3, 4		
EF-A201	BOILER 08	AHU/BOILER 08	GREENHECK SQ-100-VG	1000	0.5	1513	1/4	1725	115/1	DIRECT	58	24x17x17	65	2/M905	3		
EF-A202	STAFF LOUNGE RANGE HOOD	ROOF	GREENHECK G-103HP-VG	300	0.75	1481	1/4	1725	115/1	DIRECT	52	25x26	55	8/M904	1, 2, 3		
EF-A203	ADMIN	AHU/BOILER 08	GREENHECK SQ-130-VG	1450	1.0	1565	3/4	1725	115/1	DIRECT	63	24x21x21	75	2/M905	3		

NOTES:
 1) DIVISION 26 TO PROVIDE WALL SWITCH TO ENABLE FAN.
 2) PROVIDE COLOR AS SELECTED BY ARCHITECT.
 3) EQUIPMENT SHALL BE PROVIDED WITH VISIBLE NAMEPLATE INDICATING THE SCCR RATING IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL POWER ONE-LINE DIAGRAM ON E600 FOR MINIMUM RATINGS.
 4) PROVIDE INTERLOCK WITH FAN TO KILN WITH ENVIROLINK OPTION.
 5) INTERLOCK ENABLE OF FAN THROUGH KITCHEN HOOD PANELS.

SINGLE-DUCT AIR TERMINAL UNIT SCHEDULE - HYDRONIC HEATING COIL

TAG	AREA SERVED	ASSOCIATED HEAT RECOVERY UNIT	MANUFACTURER / MODEL	PRIMARY AIRFLOW MAX (CFM)	PRIMARY AIRFLOW MIN (CFM)	INLET SIZE (IN)	INLET PRESSURE (IN WC)	PRESSURE DROP (IN WC)	HYDRONIC HEATING COIL										DIMENSIONS (LxWxHT) (INxINxIN)	NOTES
									TOTAL CAPACITY (MBH)	EAT (°F)	LAT (°F)	MAX AIR VEL (FPM)	EWT (°F)	LWT (°F)	FLOW (GPM)	HWS/R RUNOUT (IN)	CONTROL VALVE TYPE			
VAVH-A01	STAFF LOUNGE 02	AHU-A03	NAILOR 30RW-12	850	510	12"	0.8	0.3	23.4	60	85	450/2	125	105	2.3	3/4"	2-WAY	16x15	1, 6	
VAVH-A02	FAMILY RESOURCE CENTER 14B	AHU-A03	NAILOR 30RW-8	500	200	9"	0.8	0.3	13.8	60	85	450/2	125	105	1.4	3/4"	2-WAY	14x12 1/2	1, 6	
VAVH-A03	LARGE CONF. 01	AHU-A03	NAILOR 30RW-8	350	210	8"	0.8	0.3	9.6	60	85	450/2	125	105	1.0	1/2"	2-WAY	12x10	1, 6	

CEILING FAN SCHEDULE

TAG	AREA SERVED	MANUFACTURER / MODEL	FINISH	FAN		MOTOR		VOLTAGE/PHASE (V/Ø)	BLADE DIAMETER (IN)	FAN HEIGHT (IN)	WEIGHT (LBS)	NOTES	
				MIN RPM	MAX RPM	TYPE	WATTS (W)						AMPS (A)
CF-A01A	COMMONS 101	BIG ASS FAN / ESSENCE	SILVER MOTOR HOUSING, BLACK WINGLETS	-	76	ECM	-	10	120/1	96	32	110	1
CF-A01B	COMMONS 101	BIG ASS FAN / ESSENCE	SILVER MOTOR HOUSING, BLACK WINGLETS	-	76	ECM	-	10	120/1	96	32	110	1
CF-A01C	COMMONS 101	BIG ASS FAN / ESSENCE	SILVER MOTOR HOUSING, BLACK WINGLETS	-	76	ECM	-	10	120/1	96	32	110	1
CF-A02A	EAGLE STUDIO 104	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-A02B	EAGLE STUDIO 104	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-A03	KINDERGARTEN 21	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-A04	KINDERGARTEN 23A	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-A05	KINDERGARTEN 23B	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-A06	KINDERGARTEN 25A	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-A07	KINDERGARTEN 25B	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-A08	KINDERGARTEN 27	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-B01A	MUSIC 95	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-B01B	MUSIC 95	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-B02	OT/PT ROOM 84	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-B03	RESOURCE ROOM 81	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-B04A	SPECIAL ED. 77	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-B04B	SPECIAL ED. 77	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-B05A	EARLY LEARNING CENTER 75	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-B05B	EARLY LEARNING CENTER 75	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-B06A	HEAD START 73	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-B06B	HEAD START 73	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-B07A	EARLY HEAD START 71	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-B07B	EARLY HEAD START 71	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-B08A	CLASSROOM 78	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-B08B	CLASSROOM 78	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-B09A	CLASSROOM 79	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-B09B	CLASSROOM 79	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-C01A	CLASSROOM 51	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-C01B	CLASSROOM 51	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-C02	CLASSROOM 54A	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-C03	CLASSROOM 54B	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-C04A	CLASSROOM 57	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-C04B	CLASSROOM 57	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-C05A	CLASSROOM 58	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-C05B	CLASSROOM 58	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-C06A	CLASSROOM 59	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-C06B	CLASSROOM 59	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-C07A	CLASSROOM 61	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-C07B	CLASSROOM 61	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-C08A	CLASSROOM 64A	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-C08B	CLASSROOM 64A	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-C09A	CLASSROOM 64B	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-C09B	CLASSROOM 64B	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-C10A	CLASSROOM 67	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-C10B	CLASSROOM 67	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-D01A	CLASSROOM 31	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-D01B	CLASSROOM 31	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-D02	CLASSROOM 34A	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-D03	CLASSROOM 34B	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-D04A	CLASSROOM 37	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-D04B	CLASSROOM 37	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-D05A	CLASSROOM 38	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-D05B	CLASSROOM 38	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-D06A	CLASSROOM 39	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-D06B	CLASSROOM 39	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-D07A	CLASSROOM 41	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-D07B	CLASSROOM 41	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-D08	CLASSROOM 44A	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-D09	CLASSROOM 44B	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-D10A	CLASSROOM 47	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2
CF-D10B	CLASSROOM 47	BIG ASS FAN / HAIKU L-SERIES	WHITE MOTOR AND AIRFOIL FINISH	60	182	ECM	17.7	0.25	120/1	52	16.4	25	2

NOTES:
 1) PROVIDE START/STOP AND SPEED CONTROL INPUTS FOR BAS INTERFACE.
 2) DISABLE LIGHT IN FIXTURE. PROVIDE WITH WALL MOUNTED 0-10V FAN SPEED CONTROL AND MOUNTING HARDWARE FOR HARD WIRED OPERATION/CONTROL. LOCATE SPEED CONTROL SWITCH ON WALL ADJACENT TO AND AT SAME ELEVATION AS THERMOSTAT. COORDINATE LOCATION FOR SWITCH AND WIRING INSTALL BY DIV 26.

AIR-HANDLING UNIT SCHEDULE (INDOOR AND OUTDOOR)

TAG	AREA SERVED	LOCATION	MANUFACTURER / MODEL	MIN CO2 OA AIRFLOW (CFM)		MAX CO2 OA AIRFLOW (CFM)		MIN OA AIRFLOW (CFM)		SUPPLY FAN (NOTE 1)		RETURN FAN (NOTE 2)		FLUID		DUAL TEMPERATURE WATER COIL (NOTE 6)										ELECTRICAL			FILTER SIZES (#LxWxH) (#INxIN)	DIMENSIONS (LxWxH) (INxINxIN)	WEIGHT (LBS)	DETAIL CALLOUT	NOTES						
				MIN	MAX	MIN	MAX	AIRFLOW	ESP	MOTOR	VOLTAGE/PHASE	AIRFLOW	ESP	MOTOR	VOLTAGE/PHASE	CAPACITY (MBH)	EAT (°F)	LAT (°F)	FLOW (GPM)	EW/LT (°F/FT)	VEL/WPD (FPS/FT HD)	MAX WATER VEL/APD (FPM/IN)	RUNOUT SIZE (IN)	CONTROL VALVE TYPE	MCA (AMPS)	MOP (AMPS)	DISCONNECT (AMPS)	VOLTAGE/PHASE (V/Ø)											
AHU-A01	CENTRAL KITCHEN 108	AHU/BOILER 08	INNOVENT CAHU	-	-	250	1560	1990	-	1.5	2	2249	480/3	1990	-	-	-	-	-	-	30% PROPYLENE GLYCOL	336.8	34.0	85	33.7	125/105	4/10	5000.15	1-1/2"	2-WAY	-	-	-	-	(4) 24x24	156x36x43	3300	1/M906	4, 5, 10, 13, 14
AHU-A02	COMMONS 101	AHU/BOILER 08	INNOVENT CAHU	660	3460 / 4700	2450	-	6000	4500	1.5	7.5	1934	480/3	-	-	-	-	-	-	-	30% PROPYLENE GLYCOL	336.8	34.0	85	33.7	125/105	4/10	5000.15	2-1/2"	3-WAY	-	-	-	-	(4) 24x24	156x36x43	3450	2/M906	3, 5, 9, 13, 14
AHU-A03	ADMIN	ROOF	INNOVENT CAHU	-	-	800	5400	2940	2.0	7.5	2210	480/3	3950	1490	1.5	5	1768	480/3	-	-	30% PROPYLENE GLYCOL	163.5	57.5	85	16.3	125/105	4/10	5000.15	2"	2-WAY	18.5	25	30	460/3	(4) 24x24	265x52x63	5400	3/M906	4, 7, 8, 9, 11, 12, 13, 14
AHU-B01	GYMNASIUM 91	AHU 127	INNOVENT CAHU	1060	2500	-	7600	5700	1.5	7.5	2046	480/3	-	-	-	-	-	-	-	-	30% PROPYLENE GLYCOL	294.1	49.8	85	29.4	125/105	4/10	5000.15	2"	3-WAY	-	-	-	-	(4) 24x24	156x62x63	3300	4/M906	3, 5, 9, 13, 14
AHU-B02	LIBRARY 85	AHU 127	INNOVENT CAHU	325	570	-	4785	-	1.5	5	1804	480/3	4785	-	1.5	3	1774	480/3	-	-	30% PROPYLENE GLYCOL	107.8	64.5	85	10.8	125/105	4/10	5000.15	1-1/2"	2-WAY	-	-	-	-	(4) 20x20	216x45x54	3700	5/M906	4, 5, 13, 14

NOTES:
 1) SUPPLY FAN ARRAY: CLASS I, STEEL, AIRFOIL, CENTRIFUGAL, PLENUM, DIRECT DRIVE.
 2) RETURN FAN: CLASS I, STEEL, AIRFOIL, CENTRIFUGAL, PLENUM, DIRECT DRIVE.
 3) DAMPERS: OUTSIDE AIR AND RETURN AIR MIXING DAMPERS.
 4) DAMPERS: OUTSIDE AIR, RELIEF AIR AND RETURN AIR MIXING DAMPERS.
 5) PROVIDE WITH VARIABLE FREQUENCY DRIVE AND MOTOR SHAFT GROUNDING SYSTEM. VFDS SHALL BE SHIPPED TO FACTORY FOR INSTALLATION.
 6) SELECT DUAL TEMPERATURE COIL FOR HEATING CONDITIONS. FOR SUBMITTALS, PROVIDE EQUIVALENT COOLING CAPACITY AT HEATING GPM, 76F DB/64F WB EAT AND 45F EWT.
 7) PROVIDE WITH SPRING VIBRATION ISOLATED ROOF CURB. COORDINATE WITH ROOF SLOPE AND STRUCTURAL DRAWINGS FOR ROOF CURB DESIGN. REFER TO 230548 MECHANICAL VIBRATION CONTROLS AND SEISMIC RESTRAINTS SPECIFICATION. SEE 6/M901 FOR ROOF CURB DETAIL.
 8) PROVIDE UNIT WITH SINGLE POINT POWER CONNECTION. PROVIDE A SEPARATE 120V/1PH CONNECTION FOR LIGHTS AND RECEPTACLES.
 9) PROVIDE OUTSIDE AIR FLOW MEASURING STATION. FLOW MEASURING STATIONS SHALL BE FURNISHED BY 230900 AND SHIPPED TO AIR HANDLER MANUFACTURER FOR FACTORY INSTALLATION.
 10) SECONDARY MIN OUTSIDE AIR POSITION OVERRIDE WHEN BOTH EF-A102 AND EF-A103 ARE ENABLED.
 11) SECONDARY MIN OUTSIDE AIR POSITION OVERRIDE WHEN EF-A102 OR EF-A103 IS ENABLED. TERTIARY MIN OUTSIDE AIR POSITION OVERRIDE WHEN BOTH EF-A102 AND EF-A103 IS ENABLED.
 12) PROVIDE CONTROL ENCLOSURE FOR INSTALLATION OF VFD AND UNIT CONTROLLERS. VFDS SHALL BE SHIPPED TO FACTORY FOR INSTALLATION.
 13) SEE DETAIL 4/M904 FOR DUAL TEMPERATURE WATER COIL PIPING DETAIL.
 14) EQUIPMENT SHALL BE PROVIDED WITH VISIBLE NAMEPLATE INDICATING THE SCRR RATING IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL POWER ONE-LINE DIAGRAM ON E600 FOR MINIMUM RATINGS.

HEAT RECOVERY AIR-HANDLING UNIT SCHEDULE (OUTDOOR DOAS UNIT)

TAG	AREA SERVED	LOCATION	MANUFACTURER AND MODEL	HIGH MIN OUTSIDE AIRFLOW (CFM)		LOW MIN OUTSIDE AIRFLOW (CFM)		OA AIRFLOW (CFM)		SUPPLY FAN (NOTE 1)		EXHAUST FAN (NOTE 2)		HEAT RECOVERY EXHAUST										HEAT RECOVERY SUPPLY										DUAL TEMPERATURE WATER COIL (NOTE 6)										ELECTRICAL			FILTER SIZES (#LxWxH) (#INxIN)	DIMENSIONS (LxWxH) (INxINxIN)	WEIGHT (LBS)	DETAIL CALLOUT	NOTES
				MIN	MAX	MIN	MAX	AIRFLOW	ESP	MOTOR	VOLTAGE/PHASE	AIRFLOW	ESP	MOTOR	VOLTAGE/PHASE	AIRFLOW	VEL/APD (FPM/IN)	EAT DB (°F)	WB (°F)	LAT DB (°F)	WB (°F)	EAT DB (°F)	WB (°F)	LAT DB (°F)	WB (°F)	EAT DB (°F)	WB (°F)	LAT DB (°F)	WB (°F)	EAT DB (°F)	WB (°F)	LAT DB (°F)	WB (°F)	CAPACITY (MB																	

DIFFUSER, REGISTER, GRILLE AND LOUVER SCHEDULE

TAG	MANUFACTURER / MODEL	TYPE	MATERIAL (NOTE 7)	FINISH	FACE STYLE	FACE SIZE	DUCT INLET	MOUNTING	PATTERN	DAMPERS	ACCESSORIES	DETAIL CALLOUT	NOTES
A	TITUS TMSA	SQUARE CEILING DIFFUSER	ST	WHITE	-	NOTE 1	NOTE 3	NOTE 4	ADJ	NONE	-	7/M905	-
B	PRICE DF1	DISPLACEMENT SUPPLY GRILLE	AL	NOTE 8	DF1W	24x48	NOTE 3	NOTE 4	-	NONE	-	8/M901	NOTE 12
C	PRICE DF1	DISPLACEMENT SUPPLY GRILLE	AL	NOTE 8	DF1W	30x60	NOTE 3	NOTE 4	-	NONE	-	8/M901	NOTE 11
D	PRICE DF1	DISPLACEMENT SUPPLY GRILLE	AL	NOTE 8	DF1W	36x48	NOTE 3	NOTE 4	-	NONE	-	8/M901	NOTE 11
E	PRICE DF1	DISPLACEMENT SUPPLY GRILLE	AL	NOTE 8	DF1W	36x60	NOTE 3	NOTE 4	-	NONE	-	8/M901	NOTE 11
F	TITUS 50F	EGGCRATE GRILLE	AL	WHITE	-	NOTE 2	NOTE 3	NOTE 4	-	NONE	-	6/M905	-
H	TITUS 33RL	HEAVY DUTY RETURN GRILLE	ST	NOTE 8	-	NOTE 2	NOTE 3	NOTE 4	-	NONE	-	4/M905	-
K	TITUS FL-10, 2 SLOT	LINEAR SLOT DIFFUSER	AL	NOTE 6	-	-	-	NOTE 5	FA	NONE	P	7/M901	-
L	NOTE 9	LOUVER	AL	NOTE 9	-	-	NOTE 10	5/M905	-	-	-	5/M905	-
M	PRICE DF1W	DISPLACEMENT SUPPLY GRILLE	AL	NOTE 8	DF1W	15x24	NOTE 3	NOTE 4	-	NONE	-	-	-
N	TITUS DL	DRUM LOUVER	AL	NOTE 8	-	NOTE 2	NOTE 3	SURFACE/DUCT	-	NONE	-	-	-
S	TITUS 300RL	SUPPLY GRILLE	ST	NOTE 8	-	NOTE 2	NOTE 3	NOTE 4	FA	NONE	-	-	-
R	TITUS 350RL	RETURN GRILLE	ST	NOTE 8	-	NOTE 2	NOTE 3	NOTE 4	-	NONE	-	-	-

NOTES:

- SEE DRAWINGS FOR FACE SIZE (24x24 OR 12x12). PROVIDE 24x24 FOR LAY IN CEILINGS.
- FACE SIZE DETERMINED FROM DUCT INLET SIZE.
- SEE AIR DEVICE TAG FOR DUCT INLET SIZE.
- COORDINATE BORDER TYPE (SURFACE MOUNT, SNAP IN, LAY-IN, SPLINE, DROPPED FACE, AND BEVELED DROP FACE) WITH ARCHITECTURAL CEILING PLANS.
- COORDINATE BORDER TYPE WITH ARCHITECTURAL CEILING DETAILS.
- PROVIDE WHITE BORDER AND BLACK PATTERN CONTROLLER.
- PROVIDE ALUMINUM DIFFUSERS, REGISTERS, AND GRILLES IN KITCHENS, ROOMS CONTAINING SHOWERS AND OTHER AREAS SUBJECT TO MOISTURE.
- PROVIDE COLOR PER ARCHITECT.
- PROVIDED BY OTHERS.
- DUCT SIZE SHALL MATCH LOUVER SIZE UNLESS OTHERWISE NOTED.
- PROVIDE GRILLE WITH CUSTOM DF1 16" DEEP PLENUM BOX AND DF1W FACE.
- PROVIDE GRILLE WITH CUSTOM DF1 13" DEEP PLENUM BOX AND DF1W FACE.

ABBREVIATIONS:

ST = STEEL, AL = ALUMINUM, BE = BAKED ENAMEL, AA = ANODIZED ALUMINUM, FA = FULLY ADJUSTABLE, TP = TWO POSITION, OPD = OPPOSED BLADE DAMPERS, ADJ = ADJUSTABLE, BA = BAKED ACRYLIC, BO = BLANK OFF, DB = DIRECTIONAL BLADES, AND P = PLENUM.

SINGLE-DUCT AIR TERMINAL UNIT SCHEDULE - ELECTRIC COIL

TAG	AREA SERVED	ASSOCIATED HEAT RECOVERY UNIT	LOCATION	MANUFACTURER / MODEL	PRIMARY AIRFLOW (CFM)	INLET SIZE (IN)	INLET PRESSURE (IN WC)	PRESSURE DROP (IN WC)	CAPACITY (KW)	ELECTRIC COIL		CONTROL	DIMENSIONS (LxWxHT) (INxINxIN)	NOTES	
										EAT (°F)	LAT (°F)				
VAVE-A01	EAGLE STUDIO 104	HRU-03	AHU/BOILER 08	NAILOR 30RE-9	450	9	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x14x12.5	1, 2, 3, 4
VAVE-A02	KINDERGARTEN 21	HRU-03	CEILING	NAILOR 30RE-6	225	6	0.8	0.3	1.0	60	70	450/0.2	SCR	36.5x10x10	1, 2, 3, 4
VAVE-A03	KINDERGARTEN 23A	HRU-03	CEILING	NAILOR 30RE-6	225	6	0.8	0.3	1.0	60	70	450/0.2	SCR	36.5x10x10	1, 2, 3, 4
VAVE-A04	KINDERGARTEN 23B	HRU-03	CEILING	NAILOR 30RE-6	225	6	0.8	0.3	1.0	60	70	450/0.2	SCR	36.5x10x10	1, 2, 3, 4
VAVE-A05	KINDERGARTEN 25A	HRU-03	CEILING	NAILOR 30RE-6	225	6	0.8	0.3	1.0	60	70	450/0.2	SCR	36.5x10x10	1, 2, 3, 4
VAVE-A06	KINDERGARTEN 25B	HRU-03	CEILING	NAILOR 30RE-6	225	6	0.8	0.3	1.0	60	70	450/0.2	SCR	36.5x10x10	1, 2, 3, 4
VAVE-A07	KINDERGARTEN 27	HRU-03	CEILING	NAILOR 30RE-6	225	6	0.8	0.3	1.0	60	70	450/0.2	SCR	36.5x10x10	1, 2, 3, 4
VAVE-B01	MUSIC 95	HRU-04	CEILING	NAILOR 30RE-9	450	9	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x14x12.5	1, 2, 3, 4
VAVE-B02	EARLY HEAD START 71	HRU-04	CEILING	NAILOR 30RE-8	350	8	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x12x12.5	1, 2, 3, 4
VAVE-B03	HEAD START 73	HRU-04	CEILING	NAILOR 30RE-8	350	8	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x12x12.5	1, 2, 3, 4
VAVE-B04	EARLY LEARNING CENTER 75	HRU-04	CEILING	NAILOR 30RE-8	350	8	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x12x12.5	1, 2, 3, 4
VAVE-B05	SPECIAL ED. 77	HRU-04	CEILING	NAILOR 30RE-8	350	8	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x12x12.5	1, 2, 3, 4
VAVE-B06	CLASSROOM 78	HRU-04	CEILING	NAILOR 30RE-8	350	8	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x12x12.5	1, 2, 3, 4
VAVE-B07	CLASSROOM 79	HRU-04	CEILING	NAILOR 30RE-8	350	8	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x12x12.5	1, 2, 3, 4
VAVE-B08	RESOURCE ROOM 81	HRU-04	CEILING	NAILOR 30RE-6	225	6	0.8	0.3	1.0	60	70	450/0.2	SCR	36.5x10x10	1, 2, 3, 4
VAVE-B09	OT/PT ROOM 84	HRU-04	CEILING	NAILOR 30RE-6	225	6	0.8	0.3	1.0	60	70	450/0.2	SCR	36.5x10x10	1, 2, 3, 4
VAVE-C01	CLASSROOM 51	HRU-02	CEILING	NAILOR 30RE-9	450	9	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x14x12.5	1, 2, 3, 4
VAVE-C02	CLASSROOM 54A	HRU-02	CEILING	NAILOR 30RE-6	225	6	0.8	0.3	1.0	60	70	450/0.2	SCR	36.5x10x10	1, 2, 3, 4
VAVE-C03	CLASSROOM 54B	HRU-02	CEILING	NAILOR 30RE-6	225	6	0.8	0.3	1.0	60	70	450/0.2	SCR	36.5x10x10	1, 2, 3, 4
VAVE-C04	CLASSROOM 57	HRU-02	CEILING	NAILOR 30RE-9	450	9	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x14x12.5	1, 2, 3, 4
VAVE-C05	CLASSROOM 58	HRU-02	CEILING	NAILOR 30RE-8	350	8	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x12x12.5	1, 2, 3, 4
VAVE-C06	CLASSROOM 59	HRU-02	CEILING	NAILOR 30RE-8	350	8	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x12x12.5	1, 2, 3, 4
VAVE-C07	CLASSROOM 61	HRU-02	CEILING	NAILOR 30RE-8	350	8	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x12x12.5	1, 2, 3, 4
VAVE-C08	CLASSROOM 64A	HRU-02	CEILING	NAILOR 30RE-8	350	8	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x12x12.5	1, 2, 3, 4
VAVE-C09	CLASSROOM 64B	HRU-04	CEILING	NAILOR 30RE-8	350	8	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x12x12.5	1, 2, 3, 4
VAVE-C10	CLASSROOM 67	HRU-04	CEILING	NAILOR 30RE-8	350	8	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x12x12.5	1, 2, 3, 4
VAVE-C11	SLP 62	HRU-02	CEILING	NAILOR 30RE-4	40	4	0.8	0.3	0.5	60	70	450/0.2	SCR	36.5x10x10	1, 2, 3, 4
VAVE-C12	PSYCHOLOGIST OFFICE 62	HRU-02	CEILING	NAILOR 30RE-4	40	4	0.8	0.3	0.5	60	70	450/0.2	SCR	36.5x10x10	1, 2, 3, 4
VAVE-D01	CLASSROOM 31	HRU-03	CEILING	NAILOR 30RE-9	450	9	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x14x12.5	1, 2, 3, 4
VAVE-D02	CLASSROOM 34A	HRU-03	CEILING	NAILOR 30RE-6	225	6	0.8	0.3	1.0	60	70	450/0.2	SCR	36.5x10x10	1, 2, 3, 4
VAVE-D03	CLASSROOM 34B	HRU-03	CEILING	NAILOR 30RE-6	225	6	0.8	0.3	1.0	60	70	450/0.2	SCR	36.5x10x10	1, 2, 3, 4
VAVE-D04	CLASSROOM 37	HRU-03	CEILING	NAILOR 30RE-9	450	9	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x14x12.5	1, 2, 3, 4
VAVE-D05	CLASSROOM 38	HRU-03	CEILING	NAILOR 30RE-8	350	8	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x12x12.5	1, 2, 3, 4
VAVE-D06	CLASSROOM 39	HRU-03	CEILING	NAILOR 30RE-8	350	8	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x12x12.5	1, 2, 3, 4
VAVE-D07	CLASSROOM 41	HRU-03	CEILING	NAILOR 30RE-9	450	9	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x14x12.5	1, 2, 3, 4
VAVE-D08	CLASSROOM 44A	HRU-03	CEILING	NAILOR 30RE-6	225	6	0.8	0.3	1.0	60	70	450/0.2	SCR	36.5x10x10	1, 2, 3, 4
VAVE-D09	CLASSROOM 44B	HRU-03	CEILING	NAILOR 30RE-6	225	6	0.8	0.3	1.0	60	70	450/0.2	SCR	36.5x10x10	1, 2, 3, 4
VAVE-D10	CLASSROOM 47	HRU-03	CEILING	NAILOR 30RE-9	450	9	0.8	0.3	1.5	60	70	450/0.2	SCR	36.5x14x12.5	1, 2, 3, 4
VAVE-D11	OFFICE/CONF 36	HRU-03	CEILING	NAILOR 30RE-4	40	4	0.8	0.3	0.5	60	70	450/0.2	SCR	36.5x10x10	1, 2, 3, 4
VAVE-D12	SLP 46	HRU-03	CEILING	NAILOR 30RE-4	40	4	0.8	0.3	0.5	60	70	450/0.2	SCR	36.5x10x10	1, 2, 3, 4

NOTES:

- VAV BOXES PROVIDE VENTILATION AIR ONLY AND ARE NOT ZONE HEATING DEVICES.
- ON/OFF CONTROL OF BOX THROUGH AUX CONTACT ON DIVISION 26 SUPPLIED OCCUPANCY SENSOR.
- SEE DRAWINGS FOR LOCATION OF VAV BOXES WITH CONTROLLER AND ACTUATOR FACING DOWN TOWARD THE FLOOR FOR ACCESS.
- EQUIPMENT SHALL BE PROVIDED WITH VISIBLE NAMEPLATE INDICATING THE SCRR RATING IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL POWER ONE-LINE DIAGRAM ON E600 FOR MINIMUM RATINGS.

CABINET HEATER SCHEDULE

TAG	LOCATION	MANUFACTURER / MODEL	CABINET TYPE	AIR INLET	AIR OUTLET	FAN			HEATING WATER				ELECTRICAL		FILTER (# - WxHxD)	DIMENSIONS (LxWxHT) (INxINxIN)	WEIGHT (LBS)	NOTES				
						AIRFLOW (CFM)	ESP (IN WC)	SPEED (RPM)	POWER (HP)	CAPACITY (MBH)	EWT/LWT (°F/F)	MAX WPD (FT)	FLOW (GPM)	HWS/R RUNOUT SIZE (IN)					CONTROL VALVE TYPE	FLA (AMPS)	MOTOR (HP)	VOLTAGE/PHASE (V/Ø)
CH-A01	HALLWAY 10	RITTLING RC 04	HSM	B	B	490	0.2	920	1/4	18.8	125/107	1.0	2.1	3/4"	2-WAY	1.7	1/4	120V1	1 - 34x9.75x1	51x10x24	150	1, 3, 4, 5
CH-B01	GYM LOBBY 90	RITTLING RFRC 08	HFR	B	B	920	0.2	1150	(2) 1/4	34.5	125/108	1.0	4.1	1"	2-WAY	(2) 1.76	(2) 1/4	120V1	1 - 52x9.75x1	69x10x27	200	2, 3, 4, 5
CH-B02	HALLWAY 80	RITTLING RC 04	HSM	B	B	490	0.2	920	1/4	18.8	125/107	1.0	2.1	3/4"	2-WAY	1.7	1/4	120V1	1 - 34x9.75x1	51x10x24	150	1, 3, 4, 5
CH-B03	HALLWAY 60	RITTLING RC 03	HSM	B	B	345	0.2	1025	1/4	13.6	125/107	1.0	1.5	3/4"	2-WAY	1.61	1/4	120V1	1 - 28x9.75x1	45x10x24	130	1, 3, 4, 5
CH-C01	HALLWAY 60	RITTLING RC 03	HSM	B	B	345	0.2	1025	1/4	13.6	125/107	1.0	1.5	3/4"	2-WAY	1.61	1/4	120V1	1 - 28x9.75x1	45x10x24	130	1, 3, 4, 5
CH-C02	HALLWAY 50	RITTLING RC 03	HSM	B	B	345	0.2	1025	1/4	13.6	125/107	1.0	1.5	3/4"	2-WAY	1.61	1/4	120V1	1 - 28x9.75x1	45x10x24	130	1, 3, 4, 5
CH-D01	HALLWAY 30	RITTLING RC 04	HSM	B	B	490	0.2	920	1/4	18.8	125/107	1.0	2.1	3/4"	2-WAY	1.7	1/4	120V1	1 - 34x9.75x1	51x10x24	150	1, 3, 4, 5
CH-D02	HALLWAY 30	RITTLING RC 04	HSM	B	B	490	0.2	920	1/4	18.8	125/107	1.0	2.1	3/4"	2-WAY	1.7	1/4	120V1	1 - 34x9.75x1	51x10x24	150	1, 3, 4, 5

NOTES:

- PROVIDE WITH EC MOTOR AND 2 ROW COIL. COLOR SHALL BE BRONZE.
- PROVIDE WITH EC MOTOR AND 2 ROW COIL. COLOR SHALL BE WHITE.
- FLUID IS 30% PROPYLENE GLYCOL.
- REFER TO DETAIL 4/M904. INSTALL VALVES ABOVE ACCESSIBLE CEILING.
- EQUIPMENT SHALL BE PROVIDED WITH VISIBLE NAMEPLATE INDICATING THE SCRR RATING IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL POWER ONE-LINE DIAGRAM ON E600 FOR MINIMUM RATINGS.

ABBREVIATIONS:

VSM = VERTICAL SURFACE MOUNTED, VSR = VERTICAL SEMIRECESSED, VFR = VERTICAL FULLY RECESSED, HSM = HORIZONTAL SURFACE MOUNTED, HSR = HORIZONTAL SEMIRECESSED, HFR = HORIZONTAL FULLY RECESSED, F = FRONT, T = TOP, PL = PUNCHED LOUVER, EABG = EXTRUDED AL BAR GRILLE, OB = OPEN BOTTOM, DC = DUCT CONNECTION, B = BOTTOM, QL = QUAD LOUVER

THIS DRAWING HAS BEEN UPDATED TO INCORPORATE CHANGES MADE TO THE BID DOCUMENTS BY ADDENDA. IT IS ISSUED FOR THE CONVENIENCE OF THE CONTRACTOR AND DOES NOT REPLACE THE CONTRACT DOCUMENTS AS ENUMERATED IN THE CONTRACT.

UNIT HEATER SCHEDULE

TAG	AREA SERVED	MANUFACTURER / MODEL	FAN			ELECTRIC HEATING			AIR DISCHARGE	MOUNTING LOCATION	MOUNTING HEIGHT (FT)	DIMENSIONS (LxWxH)	WEIGHT (LBS)	NOTES
			AIRFLOW (CFM)	SPEED (RPM)	POWER (HP)	CAPACITY (KW)	AMPS (A)	VOLTAGE/PHASE (V/Ø)						
UH-A01	SPRINKLER RISER 115	QMARK MUH05-41	350	1600	1/100	5	6	480/3	HORIZONTAL	WALL	8	14x7x16	30	1, 2, 4
UH-A02	MAIN ENTRY VEST 19	QMARK EFF1500	-	-	-	1.5	12.5	120/1	VERTICAL	CEILING	9.375	19x14x4	40	1, 3, 4
UH-A03	MAIN ENTRY VEST 15	QMARK EFF1500	-	-	-	1.5	12.5	120/1	VERTICAL	CEILING	9.375	19x14x4	40	1, 3, 4
UH-A04	AHUBOILER 08	QMARK MUH05-41	350	1600	1/100	5	6	480/3	HORIZONTAL	WALL	8	14x7x16	30	1, 2, 4
UH-B01	EMERGENCY STOR 99	QMARK MUH05-41	350	1600	1/100	5	6	480/3	HORIZONTAL	WALL	8	14x7x16	30	1, 2, 4
UH-B02	AHU 127	QMARK MUH05-41	350	1600	1/100	5	6	480/3	HORIZONTAL	WALL	8	14x7x16	30	1, 2, 4

NOTES:
 1) PROVIDE WITH DISCONNECT SWITCH, AND BUILT IN CONTACTOR FOR LOW VOLTAGE CONTROL. COORDINATE CONTROLS OPTIONS WITH SECTION 15900 CONTRACTOR.
 SECTION 15900 CONTRACTOR SHALL BE ABLE TO ENABLE AND DISABLE HEAT AND FAN.
 2) PROVIDE WITH MOUNTING BRACKET AND FAN GUARD.
 3) PROVIDE COLOR PER ARCHITECT.
 4) EQUIPMENT SHALL BE PROVIDED WITH VISIBLE NAMEPLATE INDICATING THE SCCR RATING IN ACCORDANCE WITH UL REQUIREMENTS. REFER TO ELECTRICAL POWER ONE-LINE DIAGRAM ON E600 FOR MINIMUM RATINGS.

RADIANT PANEL SCHEDULE

TAG	LOCATION	MANUFACTURER / MODEL	MOUNTING	OVERALL LENGTH (FT-IN)	ACTIVE LENGTH (FT)	DEPTH (IN)	HEIGHT (IN)	MOUNTING HEIGHT (IN)	HEATING ELEMENTS			HEATING WATER							NOTES	
									TUBE DIAMETER (IN)	# OF TUBES (#)	TOTAL CAPACITY (BTU)	EAT (°F)	EWT (°F)	LWT (°F)	FLOW (GPM)	MAX WPD (FT HD)	MIN WATER VEL (FPS)	PIPE CONNECTION (IN)		VALVE TYPE
RP-C01	SLP 52	RITTLING PR-3	WM	5	4	2	5.75	12	3/4	3	530	65	125	105	0.5	2.5	0.5	1/2"	2-WAY	1, 2, 3, 4
RP-C02	PSYCHOLOGIST OFFICE 62	RITTLING PR-3	WM	5	4	2	5.75	12	3/4	3	530	65	125	105	0.5	2.5	0.5	1/2"	2-WAY	1, 2, 3, 4
RP-D01	OFFICE/CONF. 36	RITTLING PR-3	WM	5	4	2	5.75	12	3/4	3	530	65	125	105	0.5	2.5	0.5	1/2"	2-WAY	1, 2, 3, 4
RP-D02	SLP 46	RITTLING PR-3	WM	5	4	2	5.75	12	3/4	3	530	65	125	105	0.5	2.5	0.5	1/2"	2-WAY	1, 2, 3, 4

NOTES:
 1) COLOR PER ARCHITECT.
 2) FLUID IS 30% PROPYLENE GLYCOL.
 3) PROVIDE SAME END CONNECTIONS FOR SUPPLY AND RETURN PIPING.
 4) PROVIDE WITH REAR COIL CONNECTIONS AND CONCEAL PIPING AS SHOWN ON PLANS. REFER TO DETAIL 4/M904. INSTALL VALVES ABOVE ACCESSIBLE CEILING.

ABBREVIATIONS:
 WM = WALL MOUNTED

DUCT SILENCER SCHEDULE

TAG	EQUIPMENT SERVED	LOCATION	TYPE	DIMENSIONS (WxH) (INxIN)	LENGTH (IN)	AIRFLOW (CFM)	MAX APD (IN WC)	DYNAMIC INSERTION LOSS (DB)							
								63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
DS-02S	HRU-02	SUPPLY DUCT	RECT	26x24	36	4230	0.15	7	9	13	20	15	13	11	9
DS-03S	HRU-03	SUPPLY DUCT	RECT	30x36	36	7280	0.15	10	15	22	32	24	21	16	13

VENTILATION SCHEDULE - LOWER LEVEL (PROVIDED FOR REFERENCE ONLY)

AREA	UNIT	ZONE	PEOPLE (QTY)	AREA (SF)	SUPPLY AIR	OUTSIDE AIR				EXHAUST AIR			MINTO BE SCHEDULED OUTSIDE AIR (CFM)	MIN TO BE SCHEDULED EXHAUST AIR (CFM)	NOTES	
						CFM/PERSON (#)	CFM/SF	TOTAL MIN (NOTE 1) (CFM)	TOTAL (CFM)	AIR DIST EFF (CFM)	CORRECTED MIN (NOTE 1) (CFM)	CORRECTED (CFM)				CFM/SF
1A	AHU-A01	CENTRAL KITCHEN 108	0	1895	-	0	0	0	0	0	0.7	0	0	1327	1330	-
1A	AHU-A01	DRY STORAGE 109	0	307	-	0	0.12	37	37	0.8	-	46	0	0	0	-
1A	AHU-A01	OFFICE 110	1	81	-	5	0.06	5	10	0.8	-	12	0	0	0	-
1A	AHU-A01	OFFICE 111	1	80	-	5	0.06	5	10	0.8	-	12	0	0	0	-
1A	AHU-A02	COMMONS 101	302	3015	-	7.5	0.06	181	2446	1	181	2446	0	0	0	-
1A	EF-A101	BOYS 102	0	186	-	0	0	0	0	0.8	-	0	50	3	150	0
1A	EF-A101	GIRLS 103	0	185	-	0	0	0	0	0.8	-	0	50	3	150	0
1A	EF-A107	STAFF TOILET 105	0	52	-	0	0	0	0	0.8	-	0	50	1	50	0
1A	EF-A107	CUST 106	0	55	-	0	0	0	0	0.8	-	0	1	0	0	60
1A	HRU-03	EAGLE STUDIO 104	33	1137	-	10	0.12	136	466	1.2	-	389	0.7	0	0	796
1B	AHU-B01	GYMNASIUM 91	0	3487	-	0	0.3	1046	1046	1	1046	1046	0	0	0	1050
1B	HRU-01	MUSIC 95	35	1195	-	10	0.12	143	493	1.2	-	411	0	0	0	420
1B	HRU-01	HALLWAY 90A	0	559	-	0	0.06	34	34	0.8	-	42	0	0	0	50
1B	HRU-01	GYM LOBBY 90	0	209	-	0	0.06	13	13	0.8	-	16	0	0	0	20
1B	HRU-01	CUST 93	0	73	-	0	0	0	0	0.8	-	0	1	0	0	73
1B	HRU-01	GIRLS 94	0	209	-	0	0	0	0	0.8	-	0	50	4	200	0
1B	HRU-01	BOYS 96	0	181	-	0	0	0	0	0.8	-	0	50	3	150	0

NOTES:
 1) PROVIDED FOR SYSTEMS WITH CO2 CONTROL.
 2) THE SOUTHEAST CLASSROOM AREA HALLWAYS COMMUNICATE WITH EACH OTHER AND THE SOUTH CLASSROOM AREA HALLWAYS COMMUNICATE WITH EACH OTHER. THEREFORE THE VENTILATION IS SPREAD BETWEEN EACH UNIT SERVING THESE AREAS.

VENTILATION SCHEDULE - UPPER LEVEL AHU-A03 (PROVIDED FOR REFERENCE ONLY)

AREA	UNIT	ZONE	PEOPLE (QTY)	AREA (SF)	SUPPLY AIR	OUTSIDE AIR				EXHAUST AIR			MINTO BE SCHEDULED OUTSIDE AIR (CFM)	MIN TO BE SCHEDULED EXHAUST AIR (CFM)	PRIMARY OUTDOOR AIR FRACTION (NOTE 1)	NOTES
						CFM/PERSON (#)	CFM/SF	TOTAL MIN (CFM)	TOTAL (CFM)	AIR DIST EFF (CFM)	CORRECTED (CFM)	CFM/SF				
2A	VAVH-A01	STAFF LOUNGE 02	21	565	850	5	0.06	34	139	0.8	174	0	0	0	0	0.20
2A	VAVH-A02	FAMILY RESOURCE CENTER 14B	4	358	500	5	0.06	21	41	0.8	52	0	0	0	0	0.10
2A	VAVH-A03	LARGE CONF. 01	10	199	350	5	0.06	12	62	0.8	77	0	0	0	0	0.22
2A	VAVH-A04	STAFF WORKROOM 04	2	373	500	5	0.06	22	32	0.8	40	0.5	0	0	187	0.08
2A	VAVH-A05	RECEPTION/WAITING 14	9	289	500	5	0.06	17	61	0.8	76	0	0	0	0	0.15
2A	VAVH-A06	ENTRY / HALLWAY 10A	0	499	1500	10	0.12	60	60	0.8	75	0	0	0	0	-
2A	VAVH-A07	HEALTH 11	3	205	300	5	0.06	12	27	0.8	34	0	0	0	0	0.11
2A	EF-A203	HEALTH TOILET 11A	0	84	-	-	-	-	-	-	-	50	1	50	-	-
2A	VAVH-A08	ASST PRINCIPAL 12	3	149	300	5	0.06	9	24	0.8	30	0	0	0	0	0.10
2A	VAVH-A09	PRINCIPAL OFFICE 13	3	196	300	5	0.06	12	27	0.8	33	0	0	0	0	0.11
2A	EF-A203	STAFF TOILET 05	0	68	-	-	-	-	-	-	-	50	1	50	-	-
2A	EF-A203	STAFF TOILET 06	0	70	-	-	-	-	-	-	-	50	1	50	-	-
2A	VAVH-A10	MAIN CUSTODIAL 07	2	300	300	5	0.06	18	28	0.8	35	0	0	0	0	0.12
	AHU-A03	TOTAL			5400											

NOTES:
 1) PROVIDED FOR DETERMINING SYSTEM VENTILATION EFFICIENCY FOR MULTIPLE ZONE SYSTEMS.

THIS DRAWING HAS BEEN UPDATED TO INCORPORATE CHANGES MADE TO THE BID DOCUMENTS BY ADDENDA. IT IS ISSUED FOR THE CONVENIENCE OF THE CONTRACTOR AND DOES NOT REPLACE THE CONTRACT DOCUMENTS AS ENUMERATED IN THE CONTRACT.

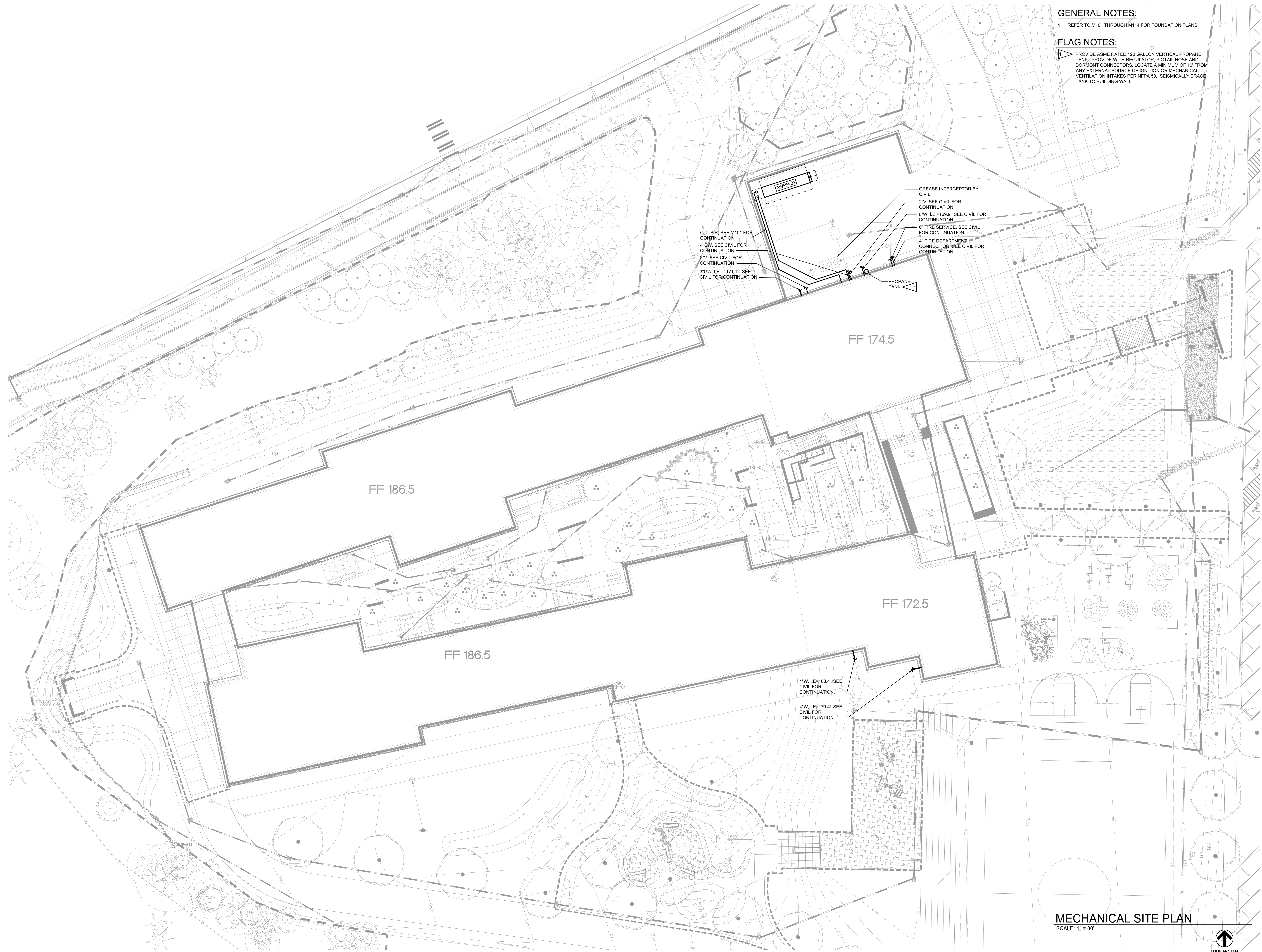
Date: 5/1/17
 Job No.: 21528.00
 Drawn By: KK
 Checked by: MH

#	Date	Description

MECHANICAL SCHEDULES

VENTILATION SCHEDULE - UPPER LEVEL (PROVIDED FOR REFERENCE ONLY)

AREA	UNIT	ZONE	PEOPLE (OCC)	AREA (SF)	SUPPLY AIR	CFM/ PERSON (#)	CFM/SF	TOTAL MIN (NOTE 1) (CFM)	OUTSIDE AIR				EXHAUST AIR			MINTO BE SCHEDULED OUTSIDE AIR (CFM)	MIN TO BE SCHEDULED EXHAUST AIR (CFM)	PRIMARY OUTDOOR AIR FRACTION (NOTE 2)	NOTES
									TOTAL (CFM)	AIR DIST EFF	CORRECTED MIN (NOTE 1) (CFM)	CORRECTED (CFM)	CFM/SF	CFM/FIXTURE	# FIXTURES				
2B	AHU-802	LIBRARY 85	35	1890	4000	5	0.12	227	402	0.8	284	502	0	0	0	0	0	0.13	-
		PROCESSING 86	2	193	290	5	0.06	12	22	0.8	14	27	0	0	0	0	0	0.09	
		LIBRARY PORCH 87	2	338	500	5	0.06	20	30	0.8	25	38	0	0	0	0	0	0.08	
2C	HRU-01	CLASSROOM 64B	27	914	-	10	0.12	110	380	1.2	-	316	0	0	0	0	320	0	-
2C	HRU-01	GIRLS 65	0	174	-	0	0	0	0	0.8	-	0	0	50	4	200	0	200	-
2C	HRU-01	STAFF TOILET 66	0	33	-	0	0	0	0	0.8	-	0	0	50	1	50	0	50	-
2C	HRU-01	CLASSROOM 67	27	901	-	10	0.12	108	378	1.2	-	315	0	0	0	0	320	0	-
2B	HRU-01	EARLY HEAD START 71	23	753	-	10	0.12	90	320	1.2	-	267	0	0	0	0	270	0	-
2B	HRU-01	TOILET 71A	0	122	-	0	0	0	0	0.8	-	0	0	50	2	100	0	100	-
2B	HRU-01	TOILET 73A	0	122	-	0	0	0	0	0.8	-	0	0	50	2	100	0	100	-
2B	HRU-01	HEAD START 73	23	747	-	10	0.12	90	320	1.2	-	266	0	0	0	0	270	0	-
2B	HRU-01	EARLY LEARNING CENTER 75	23	748	-	10	0.12	90	320	1.2	-	266	0	0	0	0	270	0	-
2B	HRU-01	TOILET 75A	0	112	-	0	0	0	0	0.8	-	0	0	50	2	100	0	100	-
2B	HRU-01	TOILET 77A	0	78	-	0	0	0	0	0.8	-	0	0	50	1	50	0	50	-
2B	HRU-01	SPECIAL ED. 77	25	839	-	10	0.12	101	351	1.2	-	292	0	0	0	0	300	0	-
2B	HRU-01	CLASSROOM 78	26	890	-	10	0.12	107	367	1.2	-	306	0	0	0	0	310	0	-
2B	HRU-01	CLASSROOM 79	26	890	-	10	0.12	107	367	1.2	-	306	0	0	0	0	310	0	-
2B	HRU-01	HALLWAY 80	0	1568	-	0	0.06	94	94	0.8	-	118	0	0	0	0	260	0	-
2B	HRU-01	SHARED LEARNING 80	12	397	-	10	0.12	48	168	1.2	-	140	0	0	0	0	0	0	5
2B	HRU-01	HALLWAY 70	0	801	-	0	0.06	48	48	0.8	-	60	0	0	0	0	0	0	4
2B	HRU-01	SHARED LEARNING 70	12	397	-	10	0.12	48	168	1.2	-	140	0	0	0	0	210	0	-
2B	HRU-01	RESOURCE ROOM 81	18	593	-	10	0.12	71	251	1.2	-	209	0	0	0	0	210	0	-
2B	HRU-01	CUST 82	0	60	-	0	0	0	0	0.8	-	0	1	0	0	60	60	0	-
2B	HRU-01	OT/PT ROOM 84	18	609	-	10	0.12	73	253	1.2	-	211	0	0	0	0	220	0	-
2C	HRU-02	CLASSROOM 51	35	1195	-	10	0.12	143	493	1.2	-	411	0	0	0	0	420	0	-
2C	HRU-02	SLP 52	1	131	-	5	0.06	8	13	1.2	-	11	0	0	0	0	20	0	-
2C	HRU-02	CUST 53	0	71	-	0	0	0	0	0.8	-	0	1	0	0	0	71	0	-
2C	HRU-02	CLASSROOM 54A	18	602	-	10	0.12	72	252	1.2	-	210	0	0	0	0	220	0	-
2C	HRU-02	CLASSROOM 54B	18	602	-	10	0.12	72	252	1.2	-	210	0	0	0	0	220	0	-
2C	HRU-02	BOYS 55	0	174	-	0	0	0	0	0.8	-	0	0	50	4	200	0	200	-
2C	HRU-02	STAFF TOILET 56	0	32	-	0	0	0	0	0.8	-	0	0	50	1	50	0	50	-
2C	HRU-02	CLASSROOM 57	35	1195	-	10	0.12	143	493	1.2	-	411	0	0	0	0	420	0	-
2C	HRU-02	CLASSROOM 58	26	890	-	10	0.12	107	367	1.2	-	306	0	0	0	0	310	0	-
2C	HRU-02	CLASSROOM 59	26	890	-	10	0.12	107	367	1.2	-	306	0	0	0	0	310	0	-
2C	HRU-02	HALLWAY 50	0	603	-	0	0.06	36	36	0.8	-	45	0	0	0	0	260	0	4
2C	HRU-02	SHARED LEARNING 50	12	397	-	10	0.12	48	168	0.8	-	210	0	0	0	0	0	0	-
2C	HRU-02	CLASSROOM 61	26	900	-	10	0.12	108	368	1.2	-	307	0	0	0	0	310	0	-
2C	HRU-02	PSYCHOLOGIST OFFICE 62	1	130	-	5	0.06	8	13	1.2	-	11	0	0	0	0	20	0	-
2C	HRU-02	CLASSROOM 64A	27	914	-	10	0.12	110	390	1.2	-	316	0	0	0	0	320	0	-
2C	HRU-02	HALLWAY 60	0	1090	-	0	0.06	65	65	0.8	-	82	0	0	0	0	0	0	4
2C	HRU-02	SHARED LEARNING 60	12	397	-	10	0.12	48	168	1.2	-	140	0	0	0	0	230	0	-
1A	HRU-03	EAGLE STUDIO 104	33	1137	-	10	0.12	136	466	1.2	-	389	0.7	0	0	796	800	800	-
2A	HRU-03	KINDERGARTEN 21	18	581	-	10	0.12	70	250	1.2	-	208	0	0	0	0	210	0	-
2A	HRU-03	K TOILET 21A	0	52	-	0	0	0	0	0.8	-	0	0	50	1	50	0	50	-
2A	HRU-03	K TOILET 23C	0	52	-	0	0	0	0	0.8	-	0	0	50	1	50	0	50	-
2A	HRU-03	KINDERGARTEN 23A	18	594	-	10	0.12	71	251	1.2	-	209	0	0	0	0	210	0	-
2A	HRU-03	KINDERGARTEN 23B	18	594	-	10	0.12	71	251	1.2	-	209	0	0	0	0	210	0	-
2A	HRU-03	K TOILET 23D	0	53	-	0	0	0	0	0.8	-	0	0	50	1	50	0	50	-
2A	HRU-03	K TOILET 25C	0	53	-	0	0	0	0	0.8	-	0	0	50	1	50	0	50	-
2A	HRU-03	KINDERGARTEN 25A	18	594	-	10	0.12	71	251	1.2	-	209	0	0	0	0	210	0	-
2A	HRU-03	KINDERGARTEN 25B	18	594	-	10	0.12	71	251	1.2	-	209	0	0	0	0	210	0	-
2A	HRU-03	K TOILET 25D	0	52	-	0	0	0	0	0.8	-	0	0	50	1	50	0	50	-
2A	HRU-03	K TOILET 27A	0	52	-	0	0	0	0	1.8	-	0	0	50	1	50	0	50	-
2A	HRU-03	KINDERGARTEN 27	18	581	-	10	0.12	70	250	1.2	-	208	0	0	0	0	210	0	-
2A	HRU-03	HALLWAY 20	0	1283	-	0	0.06	77	77	0.8	-	96	0	0	0	0	100	0	3
2D	HRU-03	CLASSROOM 31	35	1196	-	10	0.12	144	494	1.2	-	411	0	0	0	0	420	0	-
2D	HRU-03	STAFF TOILET 32	0	32	-	0	0	0	0	0.8	-	0	0	50	1	50	0	50	-
2D	HRU-03	GIRLS 33	0	174	-	0	0	0	0	0.8	-	0	0	50	4	200	0	200	-
2D	HRU-03	CLASSROOM 34A	18	602	-	10	0.12	72	252	1.2	-	210	0	0	0	0	220	0	-
2D	HRU-03	CLASSROOM 34B	18	602	-	10	0.12	72	252	1.2	-	210	0	0	0	0	220	0	-
2D	HRU-03	OFFICE/CONF. 36	1	123	-	5	0.06	7	12	1.2	-	10	0	0	0	0	20	0	-
2D	HRU-03	CLASSROOM 37	35	1193	-	10	0.12	143	493	1.2	-	411	0	0	0	0	420	0	-
2D	HRU-03	CLASSROOM 38	26	890	-	10	0.12	107	367	1.2	-	306	0	0	0	0	310	0	-
2D	HRU-03	CLASSROOM 39	26	890	-	10	0.12	107	367	1.2	-	306	0	0	0	0	310	0	-
2D	HRU-03	HALLWAY 30 E	10	772.5	-	10	0.12	93	193	0.8	-	241	0	0	0	0	250	0	3
2D	HRU-03	HALLWAY 30 W	10	772.5	-	10	0.12	93	193	0.8	-	241	0	0	0	0	250	0	3
2D	HRU-03	CLASSROOM 41	35	1195	-	10	0.12	143	493	1.2	-	411	0	0	0	0	420	0	-
2D	HRU-03	STAFF TOILET 42	0	32	-	0	0	0	0	0.8	-	0	0	50	1	50	0	50	-
2D	HRU-03	BOYS 43	0	174	-	0	0	0	0	0.8	-	0	0	50	4	200	0	200	-
2D	HRU-03	CLASSROOM 44A	18	602	-	10	0.12	72	252	1.2	-	210	0	0	0	0	220	0	-
2D	HRU-03	CLASSROOM 44B	18	602	-	10	0.12	72	252	1.2	-	210	0	0	0	0	220	0	-
2D	HRU-03	CUST 45	0	71															



GENERAL NOTES:

1. REFER TO M101 THROUGH M114 FOR FOUNDATION PLANS.

FLAG NOTES:

PROVIDE ASME RATED 120 GALLON VERTICAL PROPANE TANK. PROVIDE WITH REGULATOR, PIGTAIL HOSE AND DORMANT CONNECTORS. LOCATE A MINIMUM OF 10' FROM ANY EXTERNAL SOURCE OF IGNITION OR MECHANICAL VENTILATION INTAKES PER NFPA 58. SEISMICALLY BRACE TANK TO BUILDING WALL.

6\"/>

GREASE INTERCEPTOR BY CIVIL
 2\"/>

6\"/>

6\"/>

4\"/>

FF 186.5

FF 174.5

FF 172.5

FF 186.5

4\"/>

4\"/>

MECHANICAL SITE PLAN
 SCALE: 1" = 30'



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**Port Townsend School District No. 50
 GRANT STREET ELEMENTARY SCHOOL
 REPLACEMENT PROJECT**
 1637 GRANT STREET, PORT TOWNSEND, WA 98368

Date:	5/1/17	
Job No.:	21528.00	
Drawn By:	KK	
Checked by:	MH	
Revisions		
#	Date	Description

MECHANICAL
 SITE PLAN

M100

SHEET NOTES

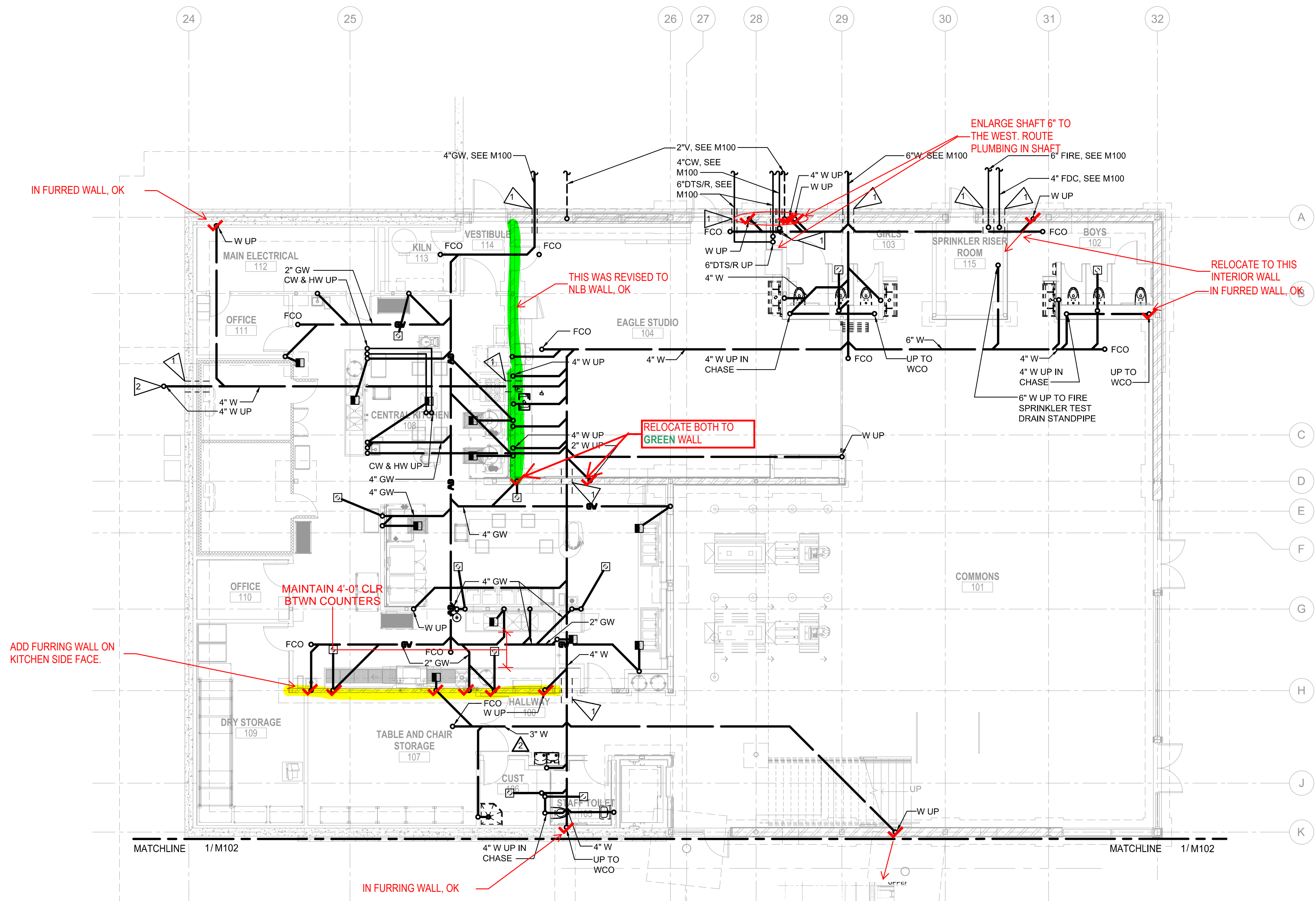
- COORDINATE WASTE PIPE ROUTING WITH STRUCTURAL FOUNDATION PLANS. SLEEVE PIPING WHERE REQUIRED THROUGH STEM WALLS & FOUNDATION. WHERE NOTCHING OF FOUNDATION IS REQUIRED, OBTAIN APPROVAL OF LOCATION AND APPROACH FROM STRUCTURAL ENGINEER PRIOR TO INSTALL.
- PROVIDE CLEANOUTS AT EVERY SINK AND LAVATORY. WHERE THE UPPER TERMINUS OF BRANCH LINES EXCEEDING 5 FEET IN LENGTH DO NOT END WITH A SINK OR LAVATORY, PROVIDE A WALL OR FLOOR CLEANOUT PER UPC 707.4.
- SLOPE WASTE PIPING AT MINIMUM 1/4" PER FOOT.
- PROVIDE TRAP PRIMER CONNECTIONS AT FLOOR DRAINS, FLOOR SINKS, AND OTHER UNDERGROUND TRAPS.

FLAG NOTES:

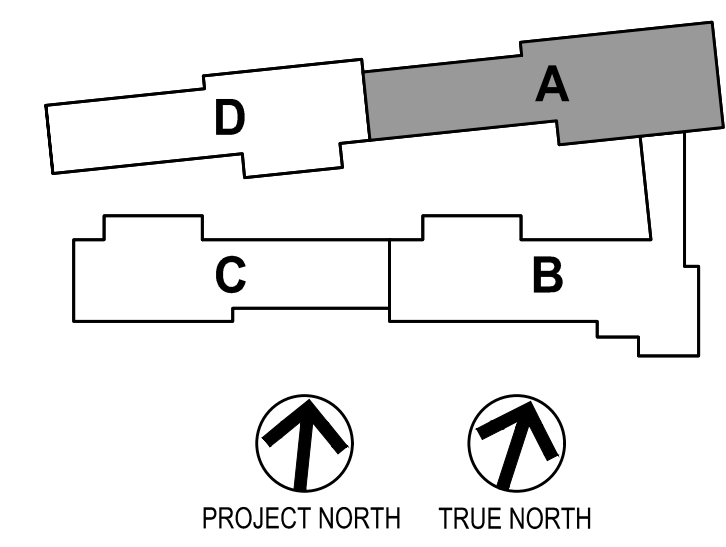
- PROVIDE PIPE SLEEVE THROUGH FOOTING. COORDINATE WITH STRUCTURAL.
- INSTALL PIPING UP TO BELOW UPPER LEVEL FOUNDATION. SEE M111 FOR CONTINUATION.

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RFI 060



LOWER LEVEL - FOUNDATION PLAN - AREA A
 SCALE: 1/8" = 1'-0"



**Port Townsend School District No. 50
 GRANT STREET ELEMENTARY SCHOOL
 REPLACEMENT PROJECT**
 1637 GRANT STREET, PORT TOWNSEND, WA 98368

Date: 5/1/17
 Job No.: 21528.00
 Drawn By: KK
 Checked by: MH

Revisions		
#	Date	Description
2	4/19/17	Addendum 2

LOWER LEVEL -
 FOUNDATION
 PLAN - AREA A

M101

**Port Townsend School District No. 50
GRANT STREET ELEMENTARY SCHOOL
REPLACEMENT PROJECT**
1637 GRANT STREET, PORT TOWNSEND, WA 98368

Date:	5/1/17	
Job No.:	21528.00	
Drawn By:	KK	
Checked by:	MH	
Revisions		
#	Date	Description

LOWER LEVEL -
FOUNDATION
PLAN - AREA B

M102

BID SET 2

SHEET NOTES

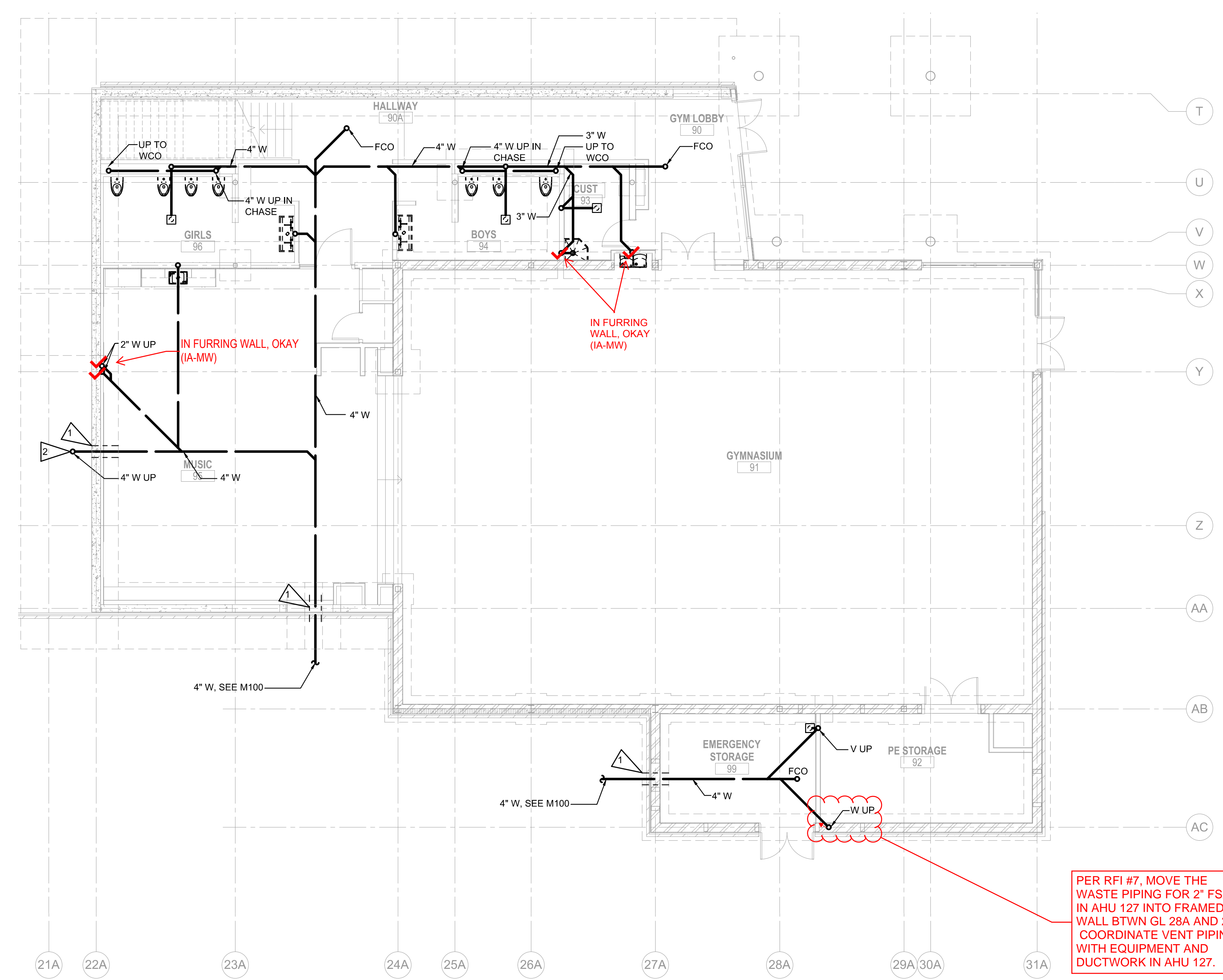
- COORDINATE WASTE PIPE ROUTING WITH STRUCTURAL FOUNDATION PLANS. SLEEVE PIPING WHERE REQUIRED THROUGH STEM WALLS & FOUNDATION. WHERE NOTCHING OF FOUNDATION IS REQUIRED, OBTAIN APPROVAL OF LOCATION AND APPROACH FROM STRUCTURAL ENGINEER PRIOR TO INSTALL.
- PROVIDE CLEANOUTS AT EVERY SINK AND LAVATORY. WHERE THE UPPER TERMINUS OF BRANCH LINES EXCEEDING 5 FEET IN LENGTH DO NOT END WITH A SINK OR LAVATORY, PROVIDE A WALL OR FLOOR CLEANOUT PER UPC 707.4.
- SLOPE WASTE PIPING AT MINIMUM 1/4" PER FOOT.
- PROVIDE TRAP PRIMER CONNECTIONS AT FLOOR DRAINS, FLOOR SINKS, AND OTHER UNDERGROUND TRAPS.

FLAG NOTES:

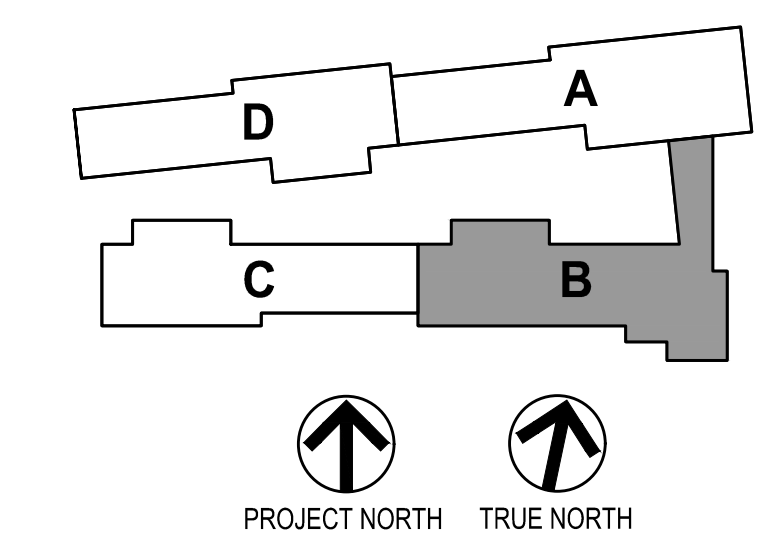
- PROVIDE PIPE SLEEVE THROUGH FOOTING. COORDINATE WITH STRUCTURAL.
- INSTALL PIPING UP TO BELOW UPPER LEVEL FOUNDATION. SEE M112 FOR CONTINUATION.

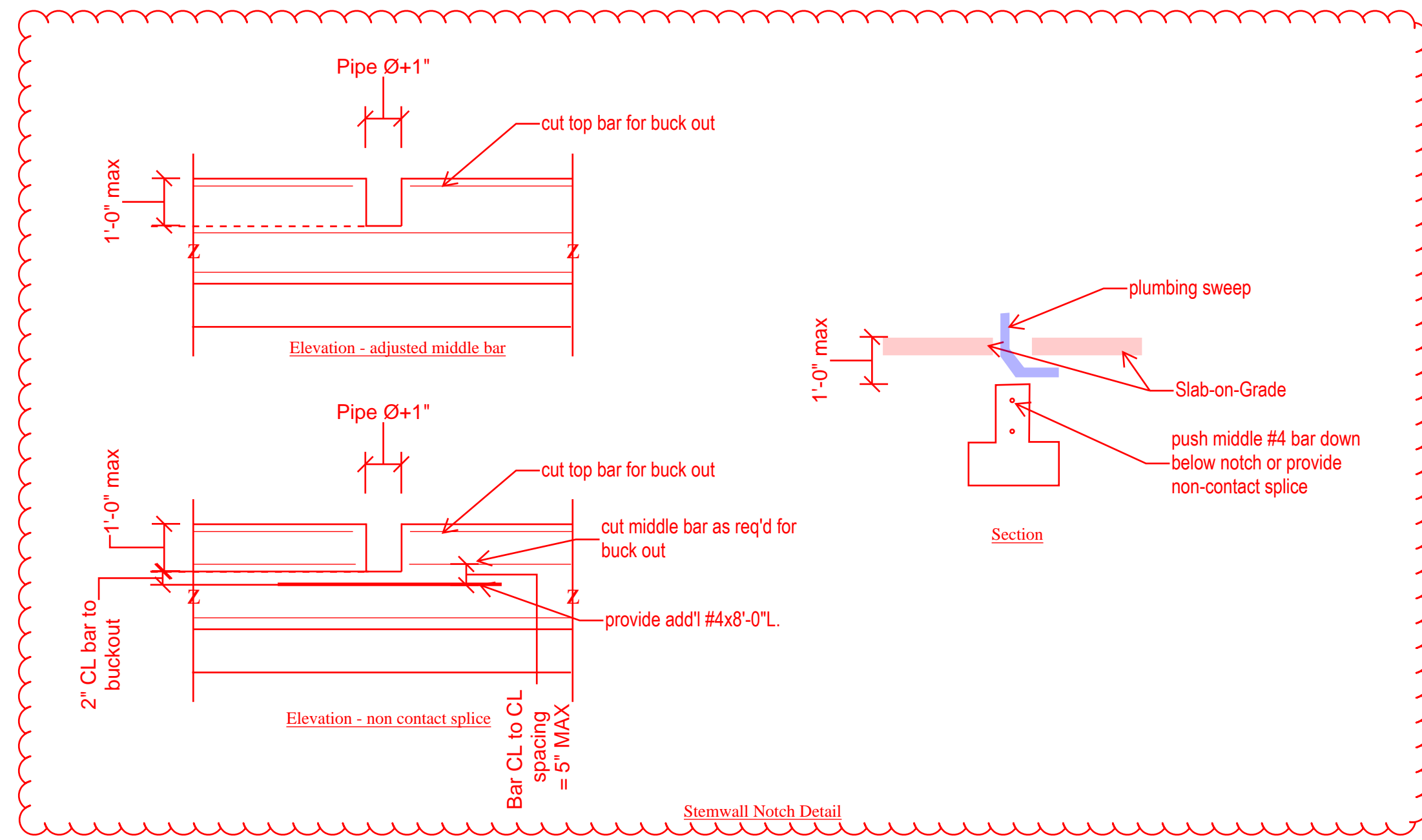
RFI CHANGES ON SHEET
-RFI #7
-RFI 060

PER RFI #7, MOVE THE WASTE PIPING FOR 2" FS2-1 IN AHU 127 INTO FRAMED WALL BTWN GL 28A AND 29A. COORDINATE VENT PIPING WITH EQUIPMENT AND DUCTWORK IN AHU 127.



LOWER LEVEL - FOUNDATION PLAN - AREA B
SCALE: 1/8" = 1'-0"



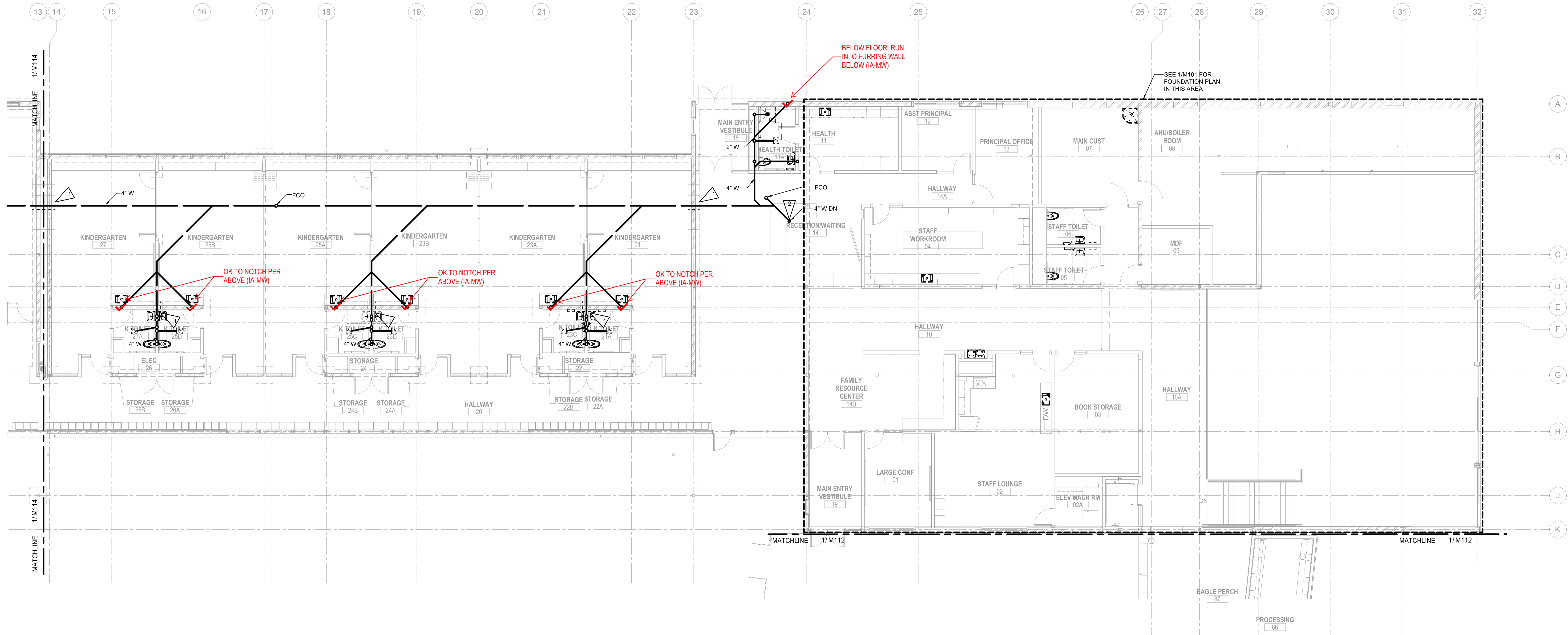


SHEET NOTES

- COORDINATE WASTE PIPE ROUTING WITH STRUCTURAL FOUNDATION PLANS. SLEEVE PIPING WHERE REQUIRED THROUGH STEM WALLS & FOUNDATION. WHERE NOTCHING OF FOUNDATION IS REQUIRED, OBTAIN APPROVAL OF LOCATION AND APPROACH FROM STRUCTURAL ENGINEER PRIOR TO INSTALL.
- PROVIDE CLEANOUTS AT EVERY SINK AND LAVATORY. WHERE THE UPPER TERMINUS OF BRANCH LINES EXCEEDING 5 FEET IN LENGTH DO NOT END WITH A SINK OR LAVATORY, PROVIDE A WALL OR FLOOR CLEANOUT PER UPC 707.4.
- SLOPE WASTE PIPING AT MINIMUM 1/4" PER FOOT.
- PROVIDE TRAP PRIMER CONNECTIONS AT FLOOR DRAINS, FLOOR SINKS, AND OTHER UNDERGROUND TRAPS.

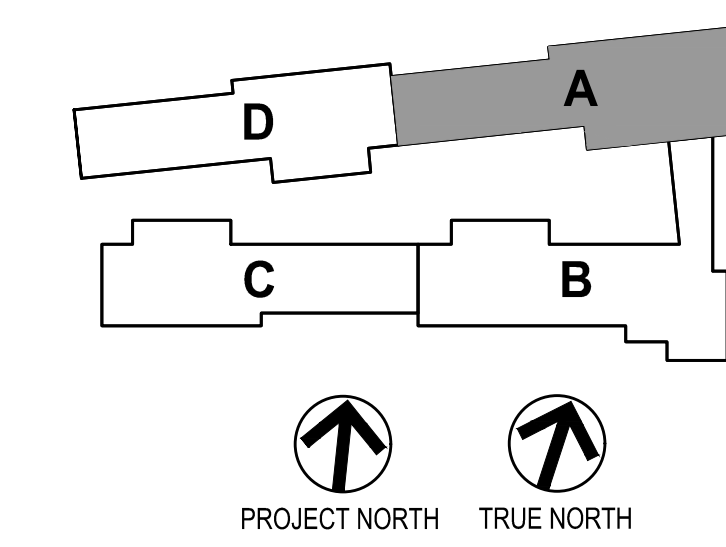
FLAG NOTES:

- 1 PROVIDE PIPE SLEEVE THROUGH FOOTING. COORDINATE WITH STRUCTURAL.
- 2 INSTALL PIPING DOWN BELOW LOWER LEVEL FOUNDATION. SEE M101 FOR CONTINUATION.



UPPER LEVEL - FOUNDATION PLAN - AREA A

SCALE: 1/8" = 1'-0"



**Port Townsend School District No. 50
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REPLACEMENT PROJECT**
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Revisions		
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UPPER LEVEL -
FOUNDATION
PLAN - AREA A

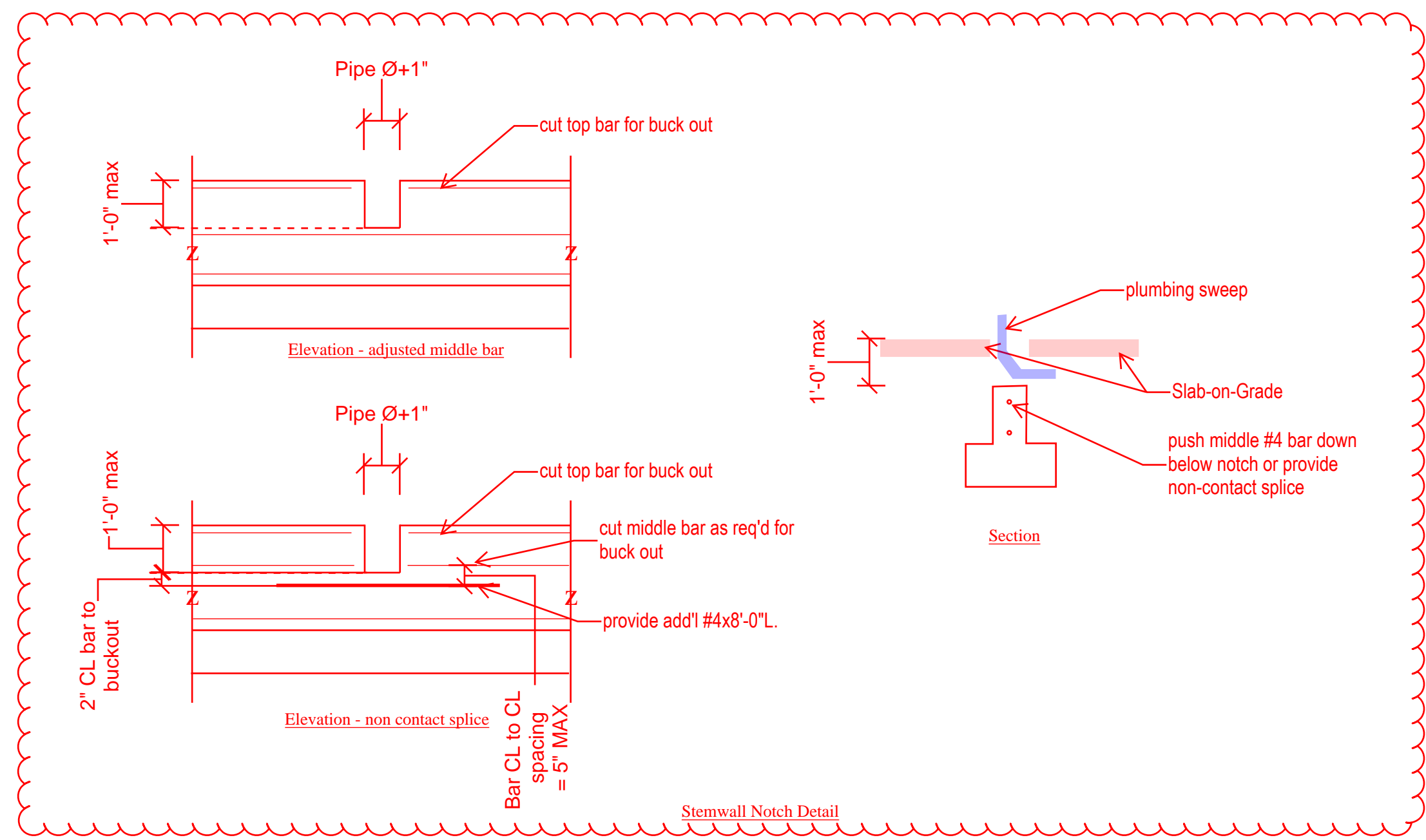
M111

integrus ARCHITECTURE
117 SOUTH MAIN STREET, SUITE 100, SEATTLE, WA, 98104
TELEPHONE: (206) 467-3137, FAX: (206) 467-3138

METRIX ENGINEERS
720 POKELAND AVE, SUITE 100
RENTON, WA 98057
TEL: (206) 885-8800
WWW.METRIXENR.COM

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-RFI 060

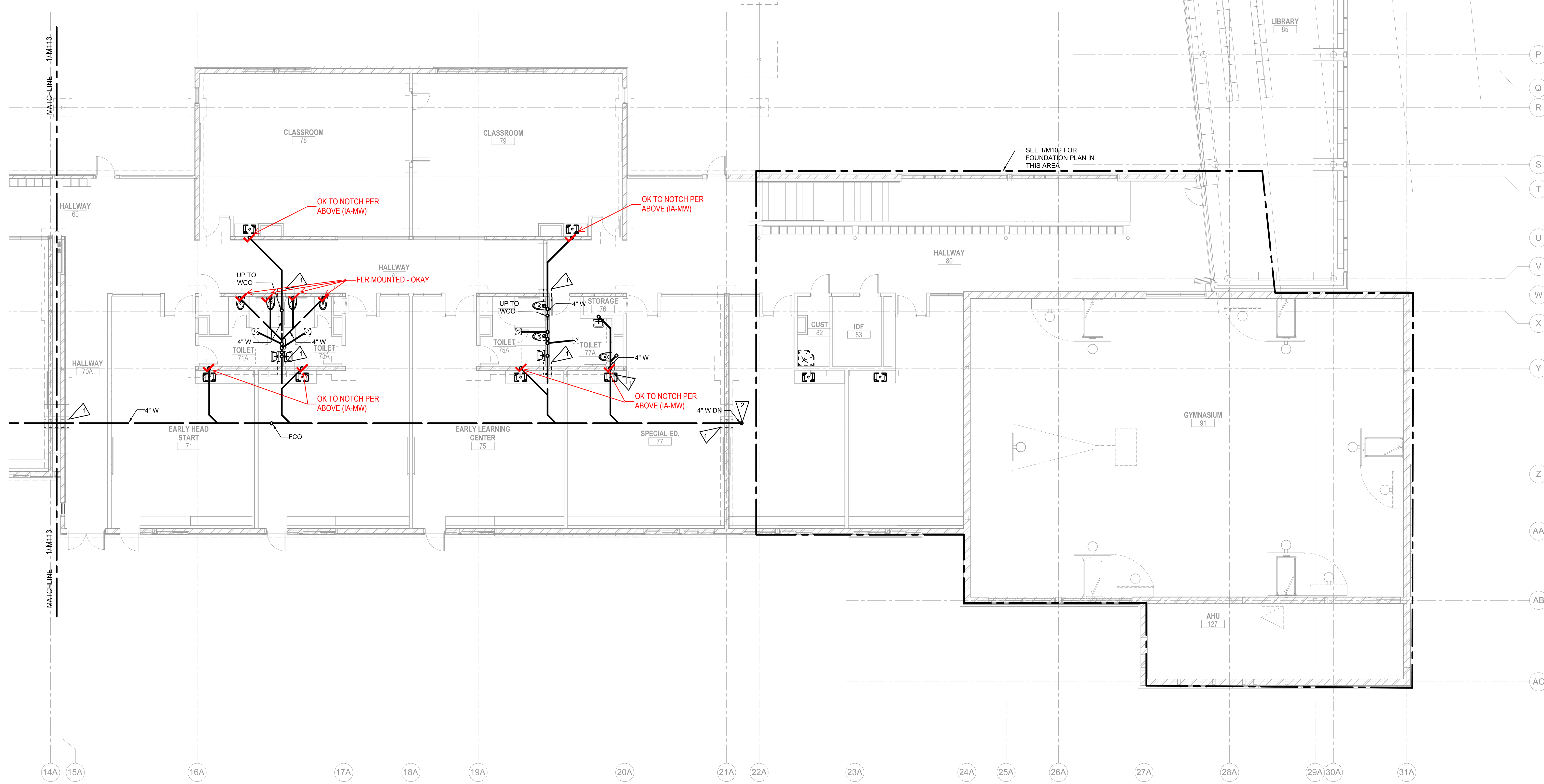
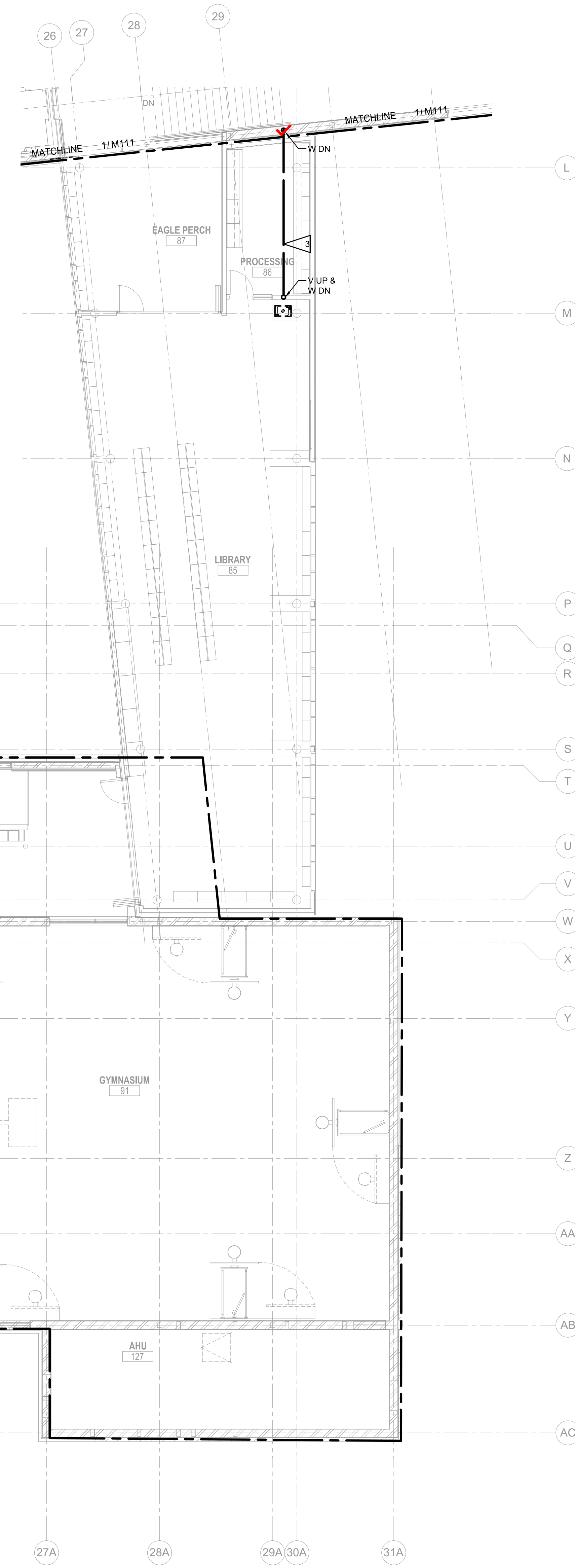


SHEET NOTES

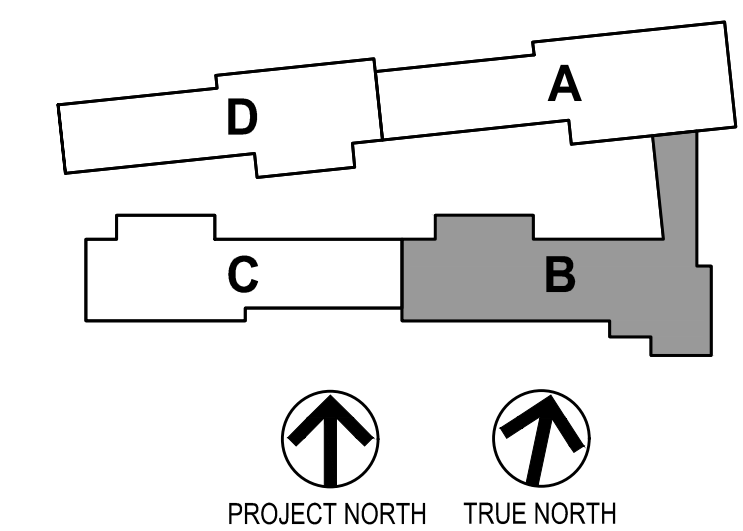
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- PROVIDE CLEANOUTS AT EVERY SINK AND LAVATORY. WHERE THE UPPER TERMINUS OF BRANCH LINES EXCEEDING 5 FEET IN LENGTH DO NOT END WITH A SINK OR LAVATORY, PROVIDE A WALL OR FLOOR CLEANOUT PER UPC 707.4.
- SLOPE WASTE PIPING AT MINIMUM 1/4" PER FOOT.
- PROVIDE TRAP PRIMER CONNECTIONS AT FLOOR DRAINS, FLOOR SINKS, AND OTHER UNDERGROUND TRAPS.

FLAG NOTES:

- PROVIDE PIPE SLEEVE THROUGH FOOTING. COORDINATE WITH STRUCTURAL.
- INSTALL PIPING DOWN BELOW LOWER LEVEL FOUNDATION. SEE M102 FOR CONTINUATION.
- WASTE PIPING TO BE INSTALLED ABOVE INSULATION.



UPPER LEVEL - FOUNDATION PLAN - AREA B
SCALE: 1/8" = 1'-0"



**Port Townsend School District No. 50
GRANT STREET ELEMENTARY SCHOOL
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1637 GRANT STREET, PORT TOWNSEND, WA 98368

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Drawn By:	KK	
Checked by:	MH	
Revisions		
#	Date	Description

UPPER LEVEL -
FOUNDATION
PLAN - AREA B

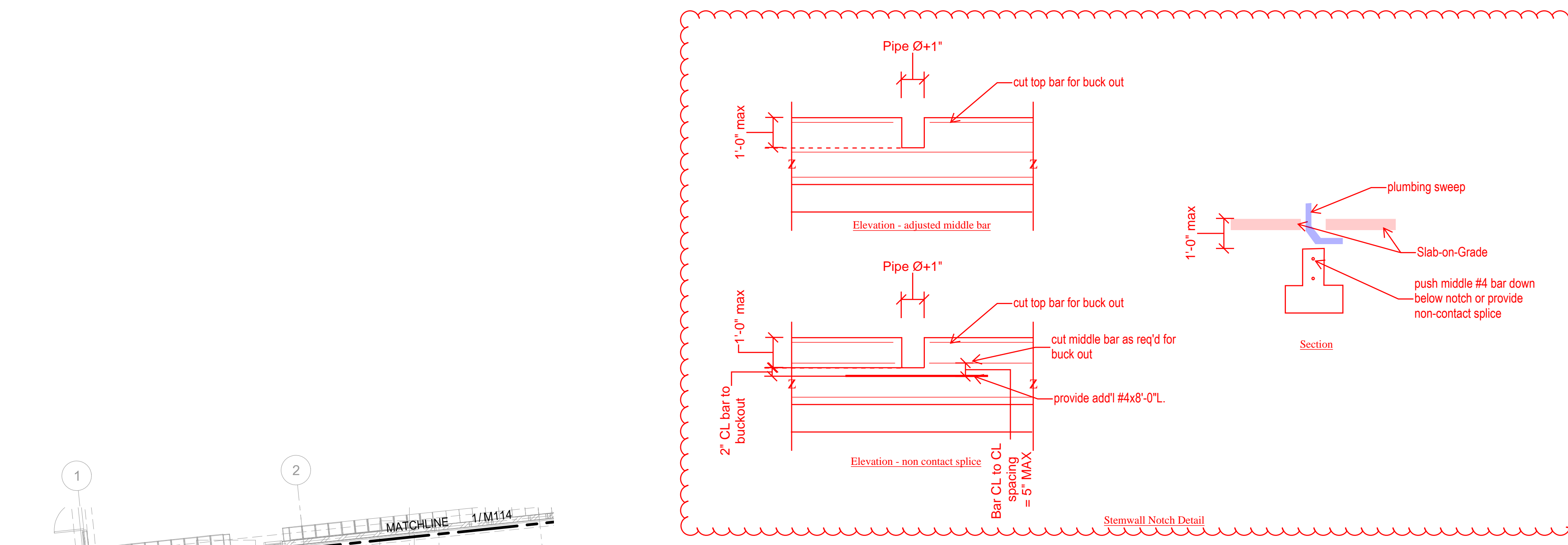
M112

integrus ARCHITECTURE
117 SOUTH MAIN STREET, SUITE 100, SEATTLE, WA 98104
TELEPHONE: (206) 462-3173, FAX: (206) 462-3178

METRIX ENGINEERS
10000 1st Avenue, Suite 100
Renton, WA 98057
TEL: (206) 885-8800
WWW.METRIXENR.COM

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-RFI 060

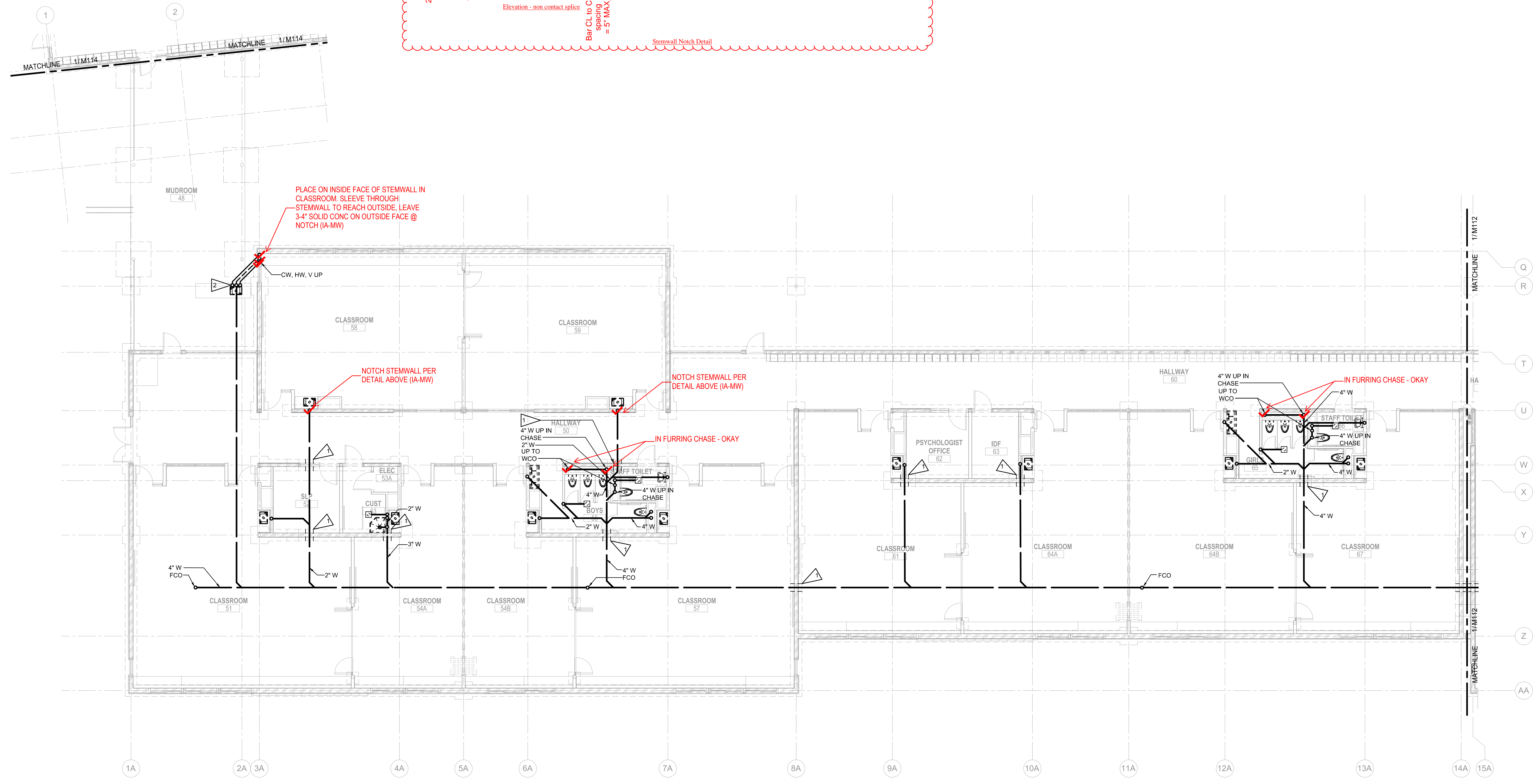


SHEET NOTES

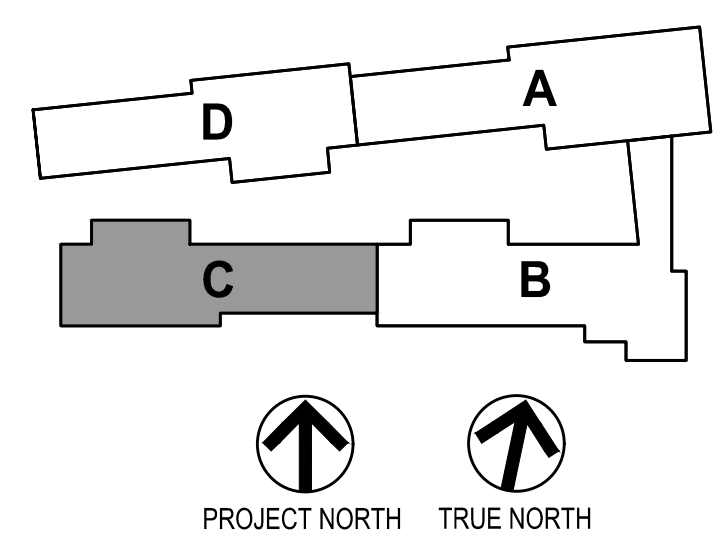
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- PROVIDE CLEANOUTS AT EVERY SINK AND LAVATORY. WHERE THE UPPER TERMINUS OF BRANCH LINES EXCEEDING 5 FEET IN LENGTH DO NOT END WITH A SINK OR LAVATORY, PROVIDE A WALL OR FLOOR CLEANOUT PER UPC 707.4.
- SLOPE WASTE PIPING AT MINIMUM 1/4" PER FOOT.
- PROVIDE TRAP PRIMER CONNECTIONS AT FLOOR DRAINS, FLOOR SINKS, AND OTHER UNDERGROUND TRAPS.

FLAG NOTES:

- PROVIDE PIPE SLEEVE THROUGH FOOTING. COORDINATE WITH STRUCTURAL.
- SEE 9/M902 FOR ISLAND VENT DETAIL.



UPPER LEVEL - FOUNDATION PLAN - AREA C
SCALE: 1/8" = 1'-0"



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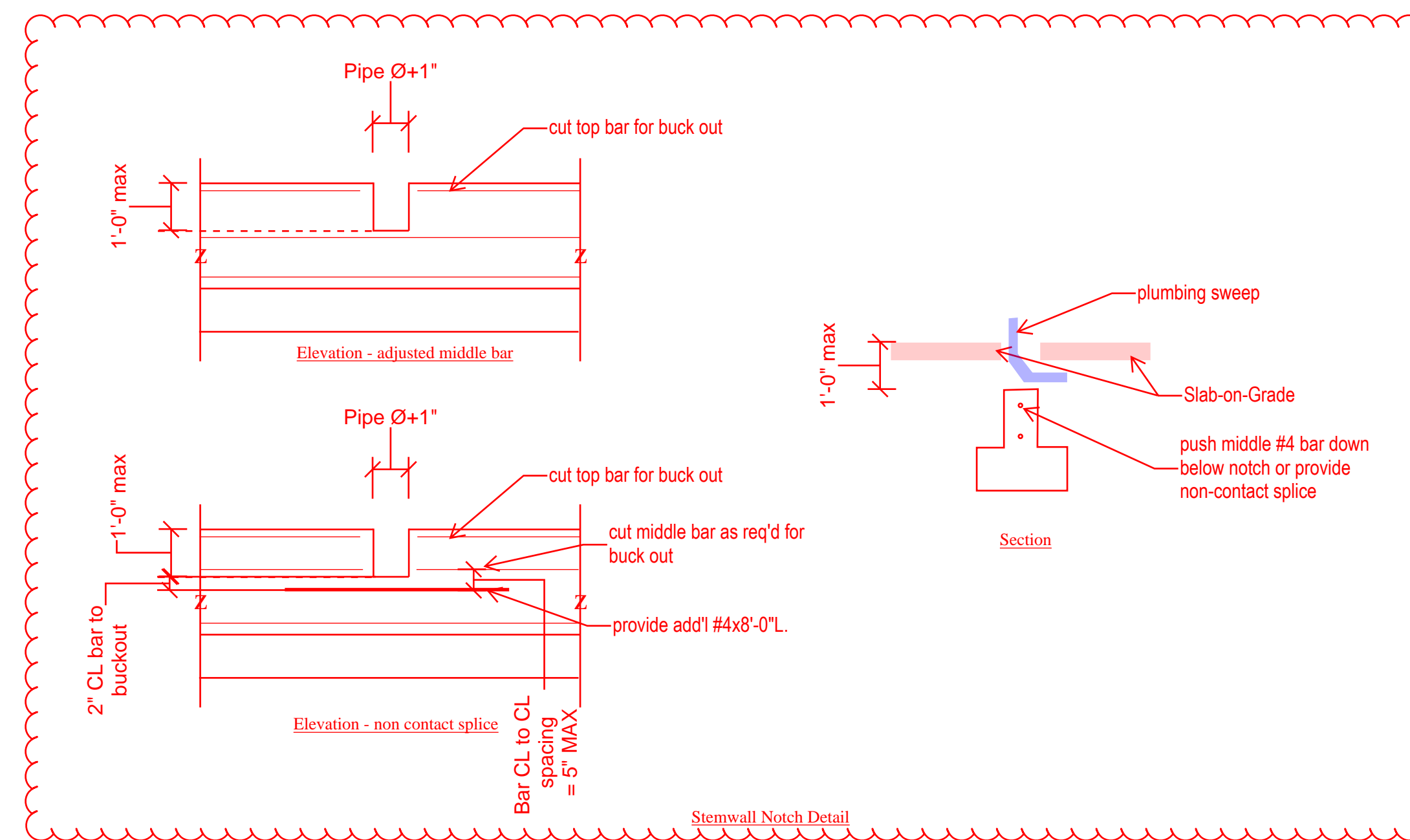
-RF1 060

**Port Townsend School District No. 50
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REPLACEMENT PROJECT**
1637 GRANT STREET, PORT TOWNSEND, WA 98368

Date:	5/1/17	
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Revisions		
#	Date	Description

UPPER LEVEL -
FOUNDATION
PLAN - AREA C

M113



SHEET NOTES

- COORDINATE WASTE PIPE ROUTING WITH STRUCTURAL FOUNDATION PLANS. SLEEVE PIPING WHERE REQUIRED THROUGH STEM WALLS & FOUNDATION. WHERE NOTCHING OF FOUNDATION IS REQUIRED, OBTAIN APPROVAL OF LOCATION AND APPROACH FROM STRUCTURAL ENGINEER PRIOR TO INSTALL.
- PROVIDE CLEANOUTS AT EVERY SINK AND LAVATORY. WHERE THE UPPER TERMINUS OF BRANCH LINES EXCEEDING 5 FEET IN LENGTH DO NOT END WITH A SINK OR LAVATORY, PROVIDE A WALL OR FLOOR CLEANOUT PER UPC 107.4.
- SLOPE WASTE PIPING AT MINIMUM 1/4" PER FOOT.
- PROVIDE TRAP PRIMER CONNECTIONS AT FLOOR DRAINS, FLOOR SINKS, AND OTHER UNDERGROUND TRAPS.

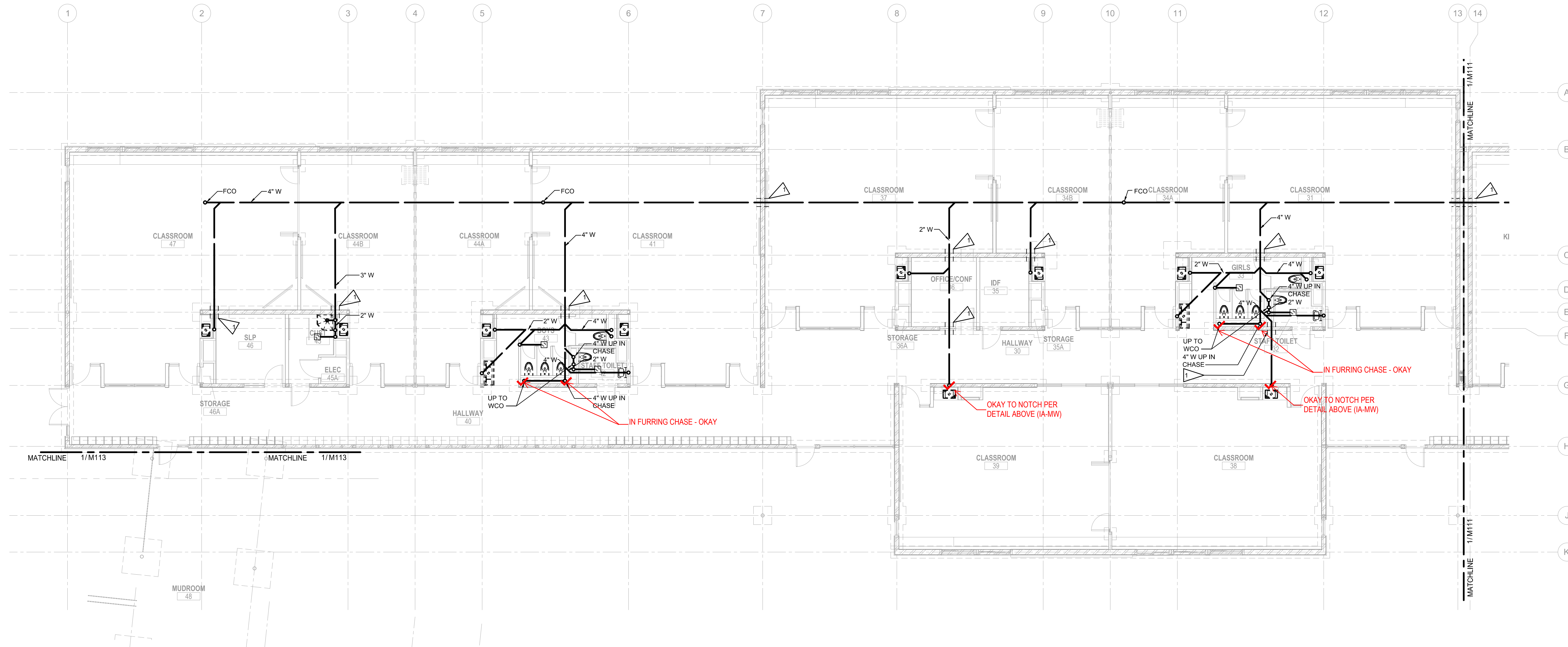
FLAG NOTES:

- PROVIDE PIPE SLEEVE THROUGH FOOTING. COORDINATE WITH STRUCTURAL.

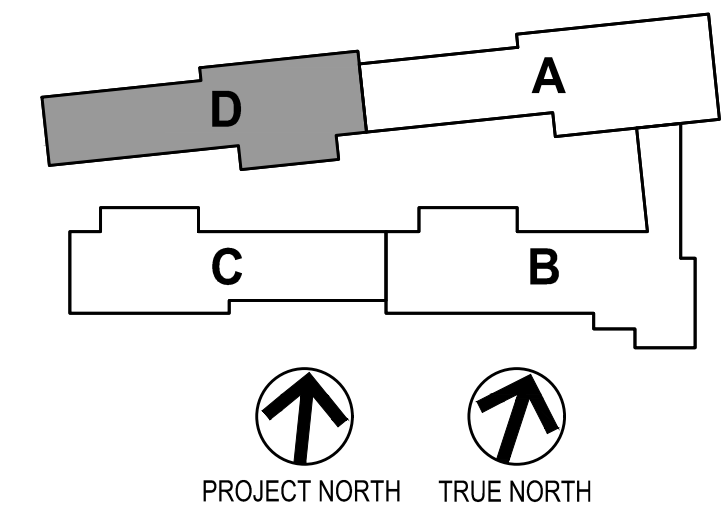
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METRIX ENGINEERS
 727 POWELL LANE, 6TH FLOOR, SUITE 100
 REDTOWN, WA 98073
 TEL: (360) 882-2000
 WWW.METRIXENR.COM

-RFI 060



UPPER LEVEL - FOUNDATION PLAN - AREA D
 SCALE: 1/8" = 1'-0"



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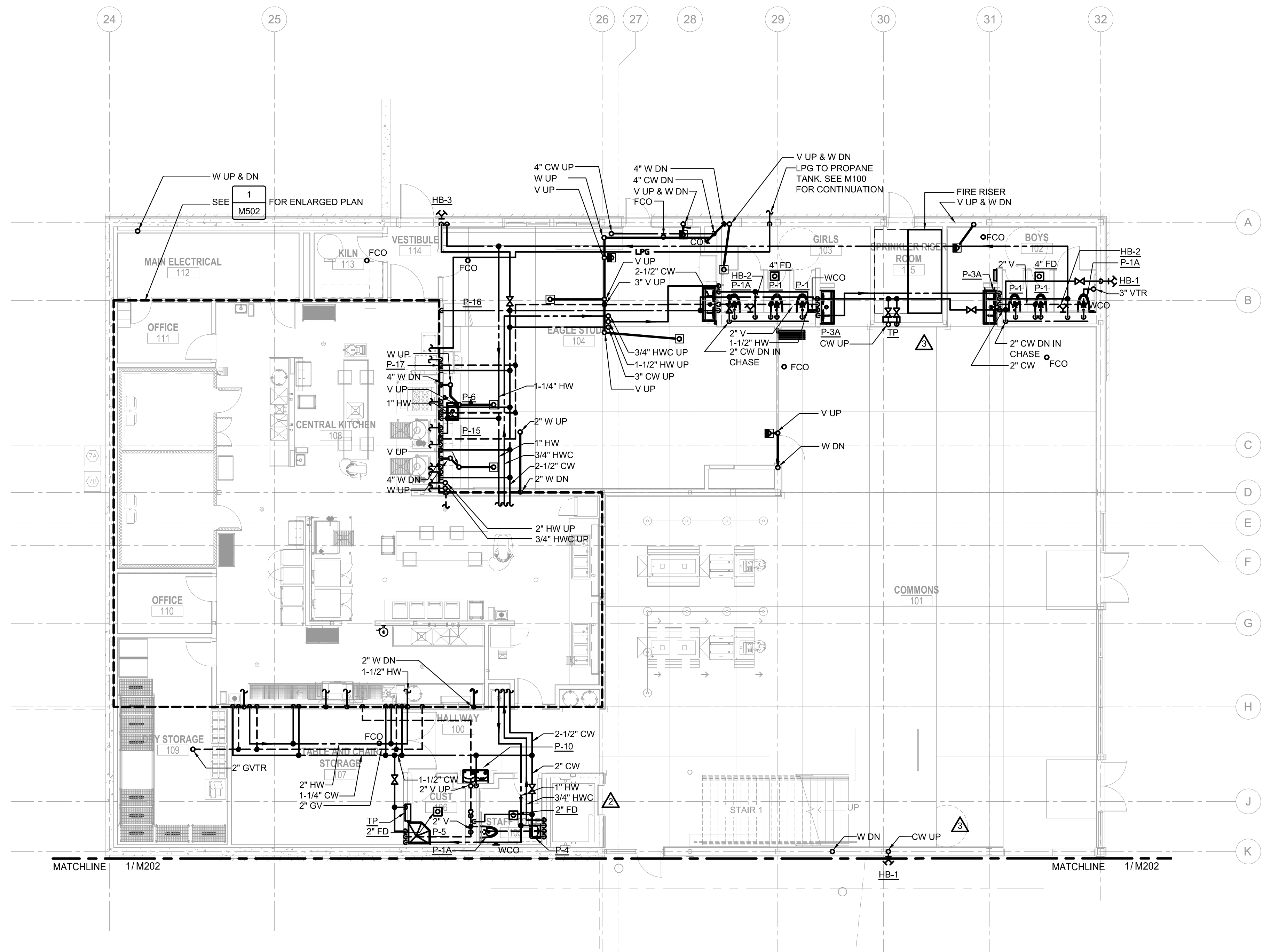
UPPER LEVEL -
 FOUNDATION
 PLAN - AREA D

M114

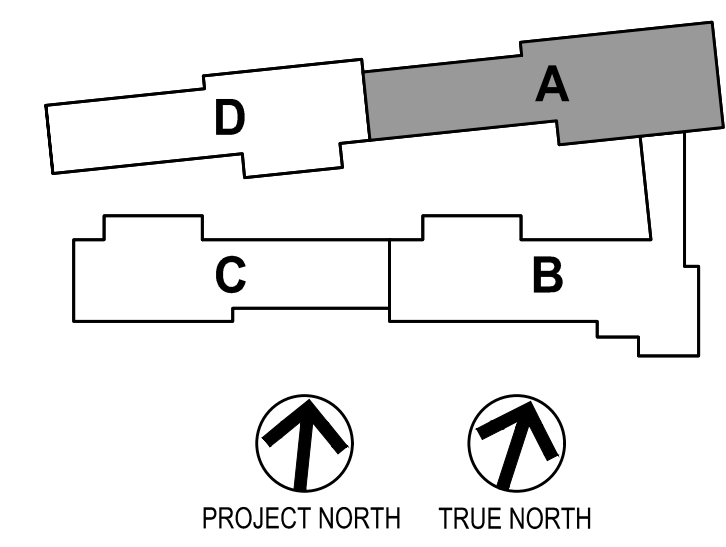
SHEET NOTES

1. PROVIDE CLEANOUTS AT EVERY SINK AND LAVATORY. WHERE THE UPPER TERMINUS OF BRANCH LINES EXCEEDING 8 FEET IN LENGTH DO NOT END WITH A SINK OR LAVATORY, PROVIDE A WALL OR FLOOR CLEANOUT PER UPC 707.4.
2. PROVIDE ACCESS PANEL TO SHUT-OFF VALVES WHERE LOCATED ABOVE HARD LID CEILING.
3. PROVIDE ACCESS PANEL IN WALL FOR WATER HAMMER ARRESTORS AND SHUT-OFF VALVES.
4. COORDINATE PLUMBING TO PROVIDE UNOBSTRUCTED ACCESS TO ABOVE CEILING MECHANICAL EQUIPMENT INCLUDING, BUT NOT LIMITED TO, DAMPERS, VALVES, AND VAV BOXES.
5. PROVIDE TRAP PRIMER CONNECTION TO ALL FLOOR DRAINS, FLOOR SINKS, AIR GAP FITTINGS AND OTHER TRAPS REQUIRING PROTECTION.
6. COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.
7. SEE 2/M903 FOR WATER HAMMER ARRESTOR DETAIL.
8. SEE 5/M903 FOR FLOOR CLEANOUT DETAIL.
9. SEE 2/M502 LPG RISER DIAGRAM FOR LPG SIZES

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LOWER LEVEL - PLUMBING FLOOR PLAN - AREA A
SCALE: 1/8" = 1'-0"



Date: 5/1/17
Job No.: 21528.00
Drawn By: KK
Checked by: MH

Revisions	
#	Description
2	4/19/17 Addendum 2
3	4/26/17 Addendum 3

LOWER LEVEL -
PLUMBING
FLOOR PLAN -
AREA A

M201

RFI CHANGES TO THIS SHEET
-RFI 063

**Port Townsend School District No. 50
GRANT STREET ELEMENTARY SCHOOL
REPLACEMENT PROJECT**
1637 GRANT STREET, PORT TOWNSEND, WA 98368

Date: 5/1/17
Job No.: 21528.00
Drawn By: KK
Checked by: MH

Revisions		
#	Date	Description
2	4/19/17	Addendum 2

LOWER LEVEL -
PLUMBING
FLOOR PLAN -
AREA B

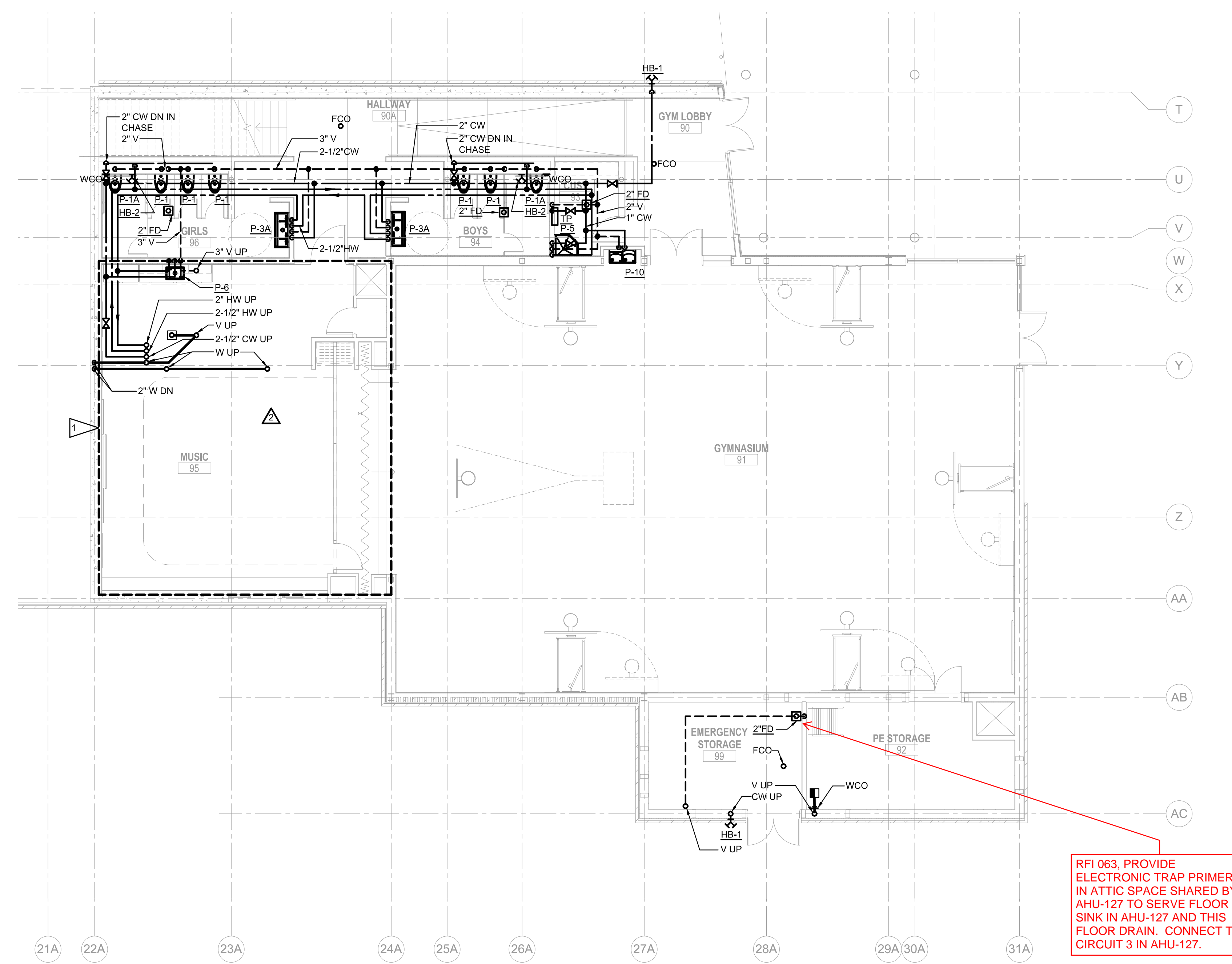
M202

SHEET NOTES

1. PROVIDE CLEANOUTS AT EVERY SINK AND LAVATORY. WHERE THE UPPER TERMINUS OF BRANCH LINES EXCEEDS 5 FEET IN LENGTH DO NOT END WITH A SINK OR LAVATORY. PROVIDE A WALL OR FLOOR CLEANOUT PER UPC 707.4.
2. PROVIDE ACCESS PANEL TO SHUT-OFF VALVES WHERE LOCATED ABOVE HARD LID CEILING.
3. PROVIDE ACCESS PANEL IN WALL FOR WATER HAMMER ARRESTORS AND SHUT-OFF VALVES.
4. COORDINATE PLUMBING TO PROVIDE UNOBSTRUCTED ACCESS TO ABOVE CEILING MECHANICAL EQUIPMENT INCLUDING, BUT NOT LIMITED TO, DAMPERS, VALVES, AND VAV BOXES.
5. PROVIDE TRAP PRIMER CONNECTION TO ALL FLOOR DRAINS, FLOOR SINKS, AIR GAP FITTINGS AND OTHER TRAPS REQUIRING PROTECTION.
6. COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.
7. SEE 2/M903 FOR WATER HAMMER ARRESTOR DETAIL.
8. SEE 5/M903 FOR FLOOR CLEANOUT DETAIL.

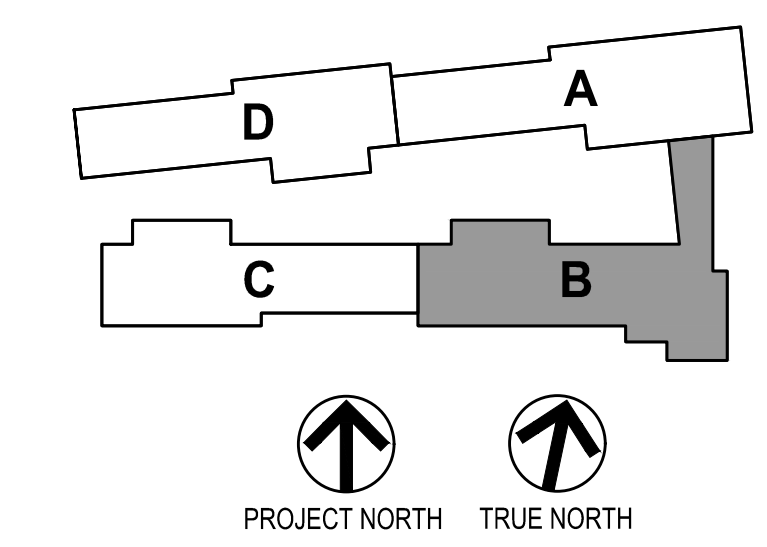
FLAG NOTES:

- 1. SPRING ISOLATED CEILING THIS AREA, REFER TO SPECIFICATION 230548 "MECHANICAL VIBRATION CONTROLS AND SEISMIC RESTRAINTS" FOR REQUIRED PIPING ISOLATION IN THIS AREA. PROVIDE 3/4" ANNULAR ENLARGED PENETRATION THROUGH GWB WITH A 3/8" BEAD OF ACOUSTICAL SEALANT ALL AROUND THE PENETRATION. SEE ARCHITECTURAL DRAWINGS FOR CEILING DETAILS.



RFI 063, PROVIDE ELECTRONIC TRAP PRIMER IN ATTIC SPACE SHARED BY AHU-127 TO SERVE FLOOR SINK IN AHU-127 AND THIS FLOOR DRAIN. CONNECT TO CIRCUIT 3 IN AHU-127.

LOWER LEVEL - PLUMBING FLOOR PLAN - AREA B
SCALE: 1/8" = 1'-0"



**Port Townsend School District No. 50
GRANT STREET ELEMENTARY SCHOOL
REPLACEMENT PROJECT**
1637 GRANT STREET, PORT TOWNSEND, WA 98368

Date: 5/1/17
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Revisions		
#	Date	Description
3	4/26/17	Addendum 3

UPPER LEVEL -
PLUMBING
FLOOR PLAN -
AREA A

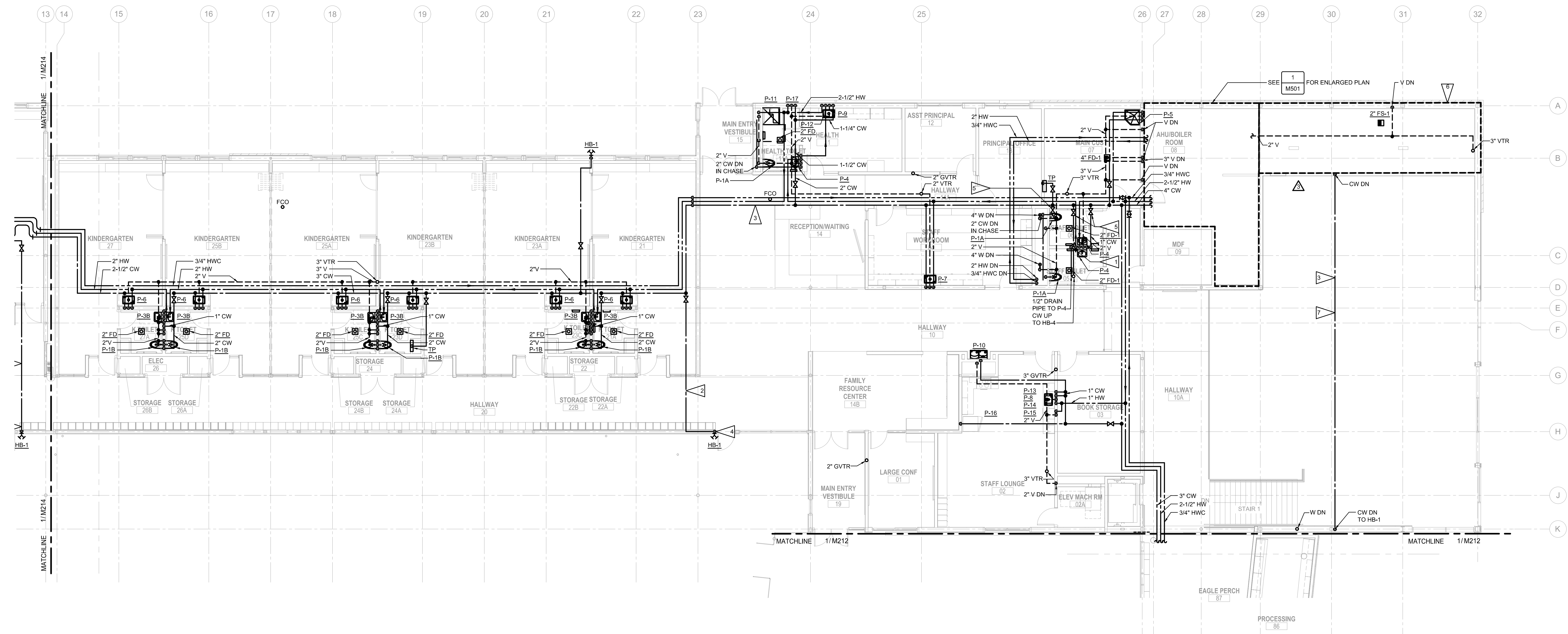
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SHEET NOTES

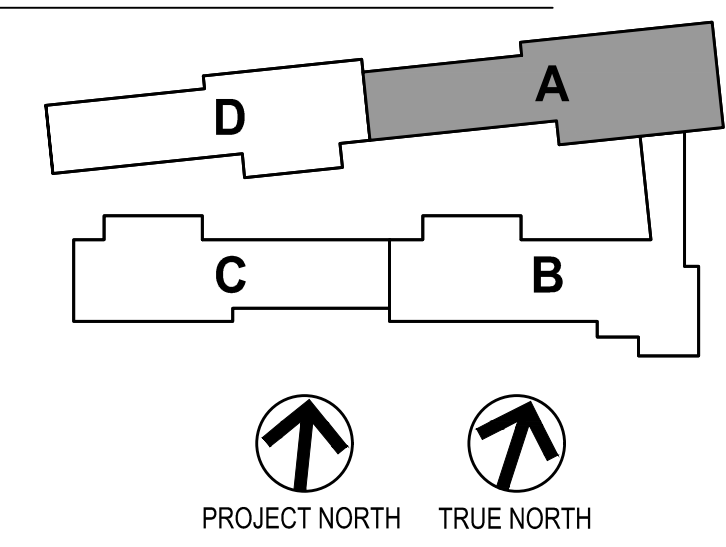
- PROVIDE CLEANOUTS AT EVERY SINK AND LAVATORY. WHERE THE UPPER TERMINUS OF BRANCH LINES EXCEEDING 5 FEET IN LENGTH DO NOT END WITH A SINK OR LAVATORY, PROVIDE A WALL OR FLOOR CLEANOUT PER UPC 707.4.
- PROVIDE ACCESS PANEL TO SHUT-OFF VALVES WHERE LOCATED ABOVE HARD LID CEILING.
- PROVIDE ACCESS PANEL TO SHUT-OFF VALVES FOR WATER HAMMER ARRESTORS AND SHUT-OFF VALVES.
- COORDINATE PLUMBING TO PROVIDE UNOBSTRUCTED ACCESS TO ABOVE CEILING MECHANICAL EQUIPMENT INCLUDING, BUT NOT LIMITED TO, DAMPERS, VALVES, AND VAV BOXES.
- PROVIDE TRAP PRIMER CONNECTION TO ALL FLOOR DRAINS, FLOOR SINKS, AIR GAP FITTINGS AND OTHER TRAPS REQUIRING PROTECTION.
- COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.
- SEE 2/M903 FOR WATER HAMMER ARRESTOR DETAIL.
- SEE 5/M903 FOR FLOOR CLEANOUT DETAIL.

FLAG NOTES:

- CONNECT 1/2" DRAIN PIPE FROM HB-4 TO PLUMBING FIXTURE ABOVE P-TRAP.
- INSTALL EXPOSED PIPING TIGHT TO ROOF DECK.
- INSTALL EXPOSED PIPING TIGHT TO PERPENDICULAR STRUCTURE.
- SEE 8/M902 FOR EXTERIOR HOSE BIBB AT PONY WALL DETAIL.
- LOCATE SHUT-OFF VALVE IN OPEN TO STRUCTURE SPACE (TYP).
- REFER TO SPECIFICATION 230548 "MECHANICAL VIBRATION CONTROLS AND SEISMIC RESTRAINTS" FOR REQUIRED PIPING ISOLATION IN THIS AREA.
- INSTALL EXPOSED PIPING TIGHT TO GLULAM BEAM.



UPPER LEVEL - PLUMBING FLOOR PLAN - AREA A
SCALE: 1/8" = 1'-0"

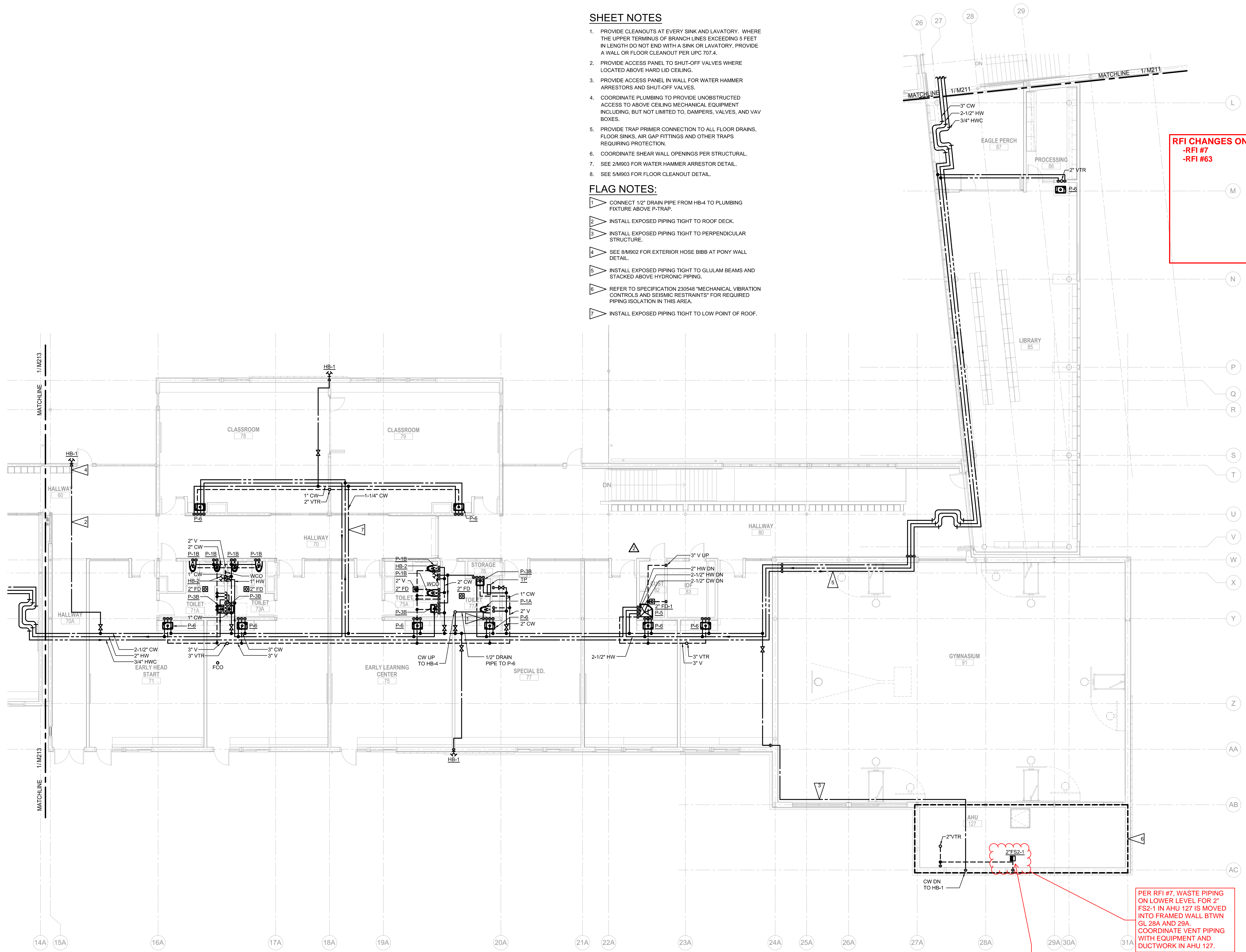


SHEET NOTES

1. PROVIDE CLEANOUTS AT EVERY SINK AND LAVATORY. WHERE THE UPPER TERMINUS OF BRANCH LINES EXCEEDING 5 FEET IN LENGTH DO NOT END WITH A SINK OR LAVATORY, PROVIDE A WALL OR FLOOR CLEANOUT PER UPC 707.4.
2. PROVIDE ACCESS PANEL TO SHUT-OFF VALVES WHERE LOCATED ABOVE HARD LID CEILING.
3. PROVIDE ACCESS PANEL IN WALL FOR WATER HAMMER ARRESTORS AND SHUT-OFF VALVES.
4. COORDINATE PLUMBING TO PROVIDE UNOBSTRUCTED ACCESS TO ABOVE CEILING MECHANICAL EQUIPMENT INCLUDING, BUT NOT LIMITED TO, DAMPERS, VALVES, AND VAV BOXES.
5. PROVIDE TRAP PRIMER CONNECTION TO ALL FLOOR DRAINS, FLOOR SINKS, AIR GAP FITTINGS AND OTHER TRAPS REQUIRING PROTECTION.
6. COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.
7. SEE 2/M903 FOR WATER HAMMER ARRESTOR DETAIL.
8. SEE 5/M903 FOR FLOOR CLEANOUT DETAIL.

FLAG NOTES:

1. CONNECT 1/2" DRAIN PIPE FROM HB-4 TO PLUMBING FIXTURE ABOVE P-TRAP.
2. INSTALL EXPOSED PIPING TIGHT TO ROOF DECK.
3. INSTALL EXPOSED PIPING TIGHT TO PERPENDICULAR STRUCTURE.
4. SEE 8/M902 FOR EXTERIOR HOSE BIBB AT PONY WALL DETAIL.
5. INSTALL EXPOSED PIPING TIGHT TO GLULAM BEAMS AND STACKED ABOVE HYDRONIC PIPING.
6. REFER TO SPECIFICATION 230548 "MECHANICAL VIBRATION CONTROLS AND SEISMIC RESTRAINTS" FOR REQUIRED PIPING ISOLATION IN THIS AREA.
7. INSTALL EXPOSED PIPING TIGHT TO LOW POINT OF ROOF.

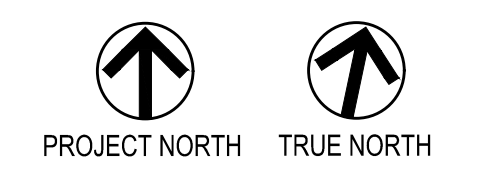
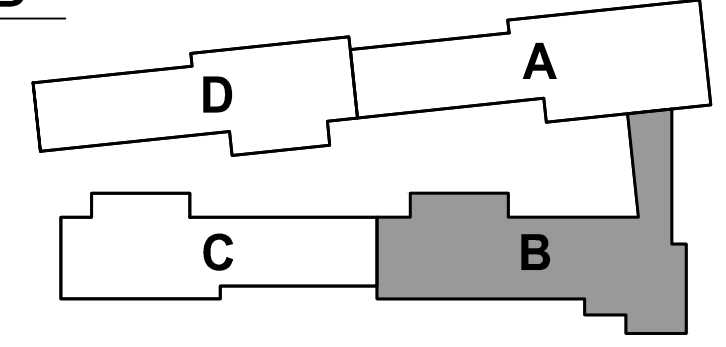


RFI CHANGES ON SHEET
 -RFI #7
 -RFI #63

PER RFI #7, WASTE PIPING ON LOWER LEVEL FOR 2" FS2-1 IN AHU 127 IS MOVED INTO FRAMED WALL BTWN GL 28A AND 29A. COORDINATE VENT PIPING WITH EQUIPMENT AND DUCTWORK IN AHU 127.

RFI 063, PROVIDE ELECTRONIC TRAP PRIMER IN ATTIC SPACE SHARED BY AHU-127 TO SERVE FLOOR SINK IN AHU-127 AND THIS FLOOR DRAIN. CONNECT TO CIRCUIT 3 IN AHU-127.

UPPER LEVEL - PLUMBING FLOOR PLAN - AREA B
 SCALE: 1/8" = 1'-0"



THIS DRAWING HAS BEEN UPDATED TO INCORPORATE CHANGES MADE TO THE BID DOCUMENTS BY ADDENDA. IT IS ISSUED FOR THE CONVENIENCE OF THE CONTRACTOR AND DOES NOT REPLACE THE CONTRACT DOCUMENTS AS ENUMERATED IN THE CONTRACT.

METRIX ENGINEERS
 720 POKELAND AVE. SUITE 100
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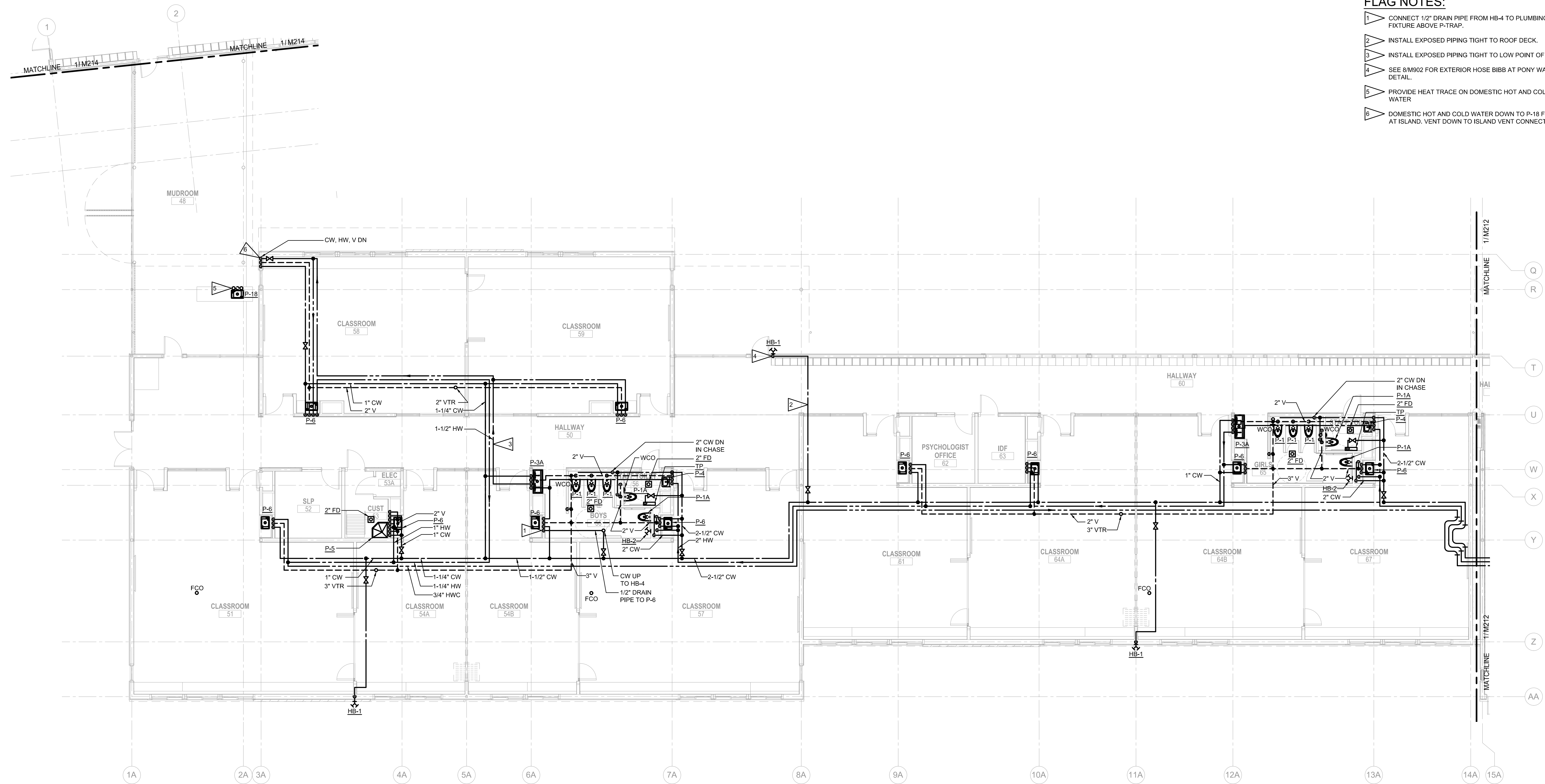
**Port Townsend School District No. 50
 GRANT STREET ELEMENTARY SCHOOL
 REPLACEMENT PROJECT**
 1637 GRANT STREET, PORT TOWNSEND, WA 98368

Date:	5/1/17
Job No.:	21528.00
Drawn By:	KK
Checked by:	MH

Revisions	
#	Description
2	4/19/17 Addendum 2

UPPER LEVEL - PLUMBING FLOOR PLAN - AREA B

M212



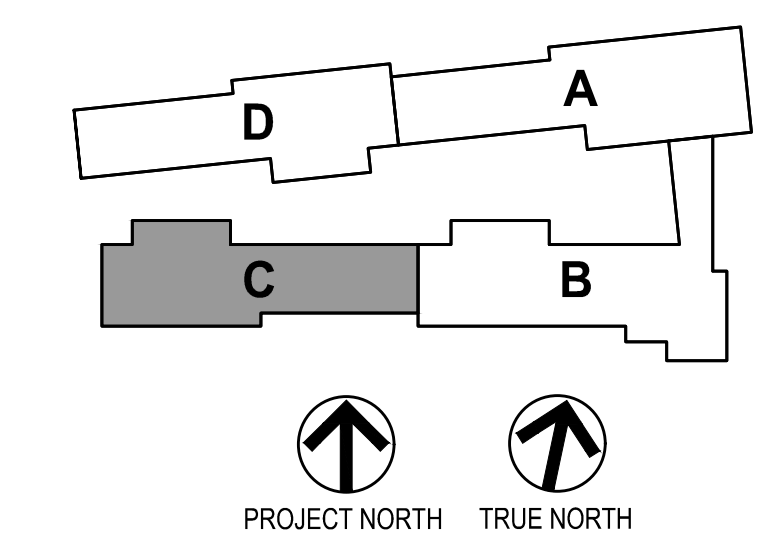
SHEET NOTES

1. PROVIDE CLEANOUTS AT EVERY SINK AND LAVATORY. WHERE THE UPPER TERMINUS OF BRANCH LINES EXCEEDING 5 FEET IN LENGTH DO NOT END WITH A SINK OR LAVATORY, PROVIDE A WALL OR FLOOR CLEANOUT PER UPC 707.4.
2. PROVIDE ACCESS PANEL TO SHUT-OFF VALVES WHERE ARRESTORS AND SHUT-OFF VALVES.
3. PROVIDE ACCESS PANEL IN WALL FOR WATER HAMMER ARRESTORS AND SHUT-OFF VALVES.
4. COORDINATE PLUMBING TO PROVIDE UNOBSTRUCTED ACCESS TO ABOVE CEILING MECHANICAL EQUIPMENT INCLUDING, BUT NOT LIMITED TO, DAMPERS, VALVES, AND VAV BOXES.
5. PROVIDE TRAP PRIMER CONNECTION TO ALL FLOOR DRAINS, FLOOR SINKS, AIR GAP FITTINGS AND OTHER TRAPS REQUIRING PROTECTION.
6. COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.
7. SEE 2/M903 FOR WATER HAMMER ARRESTOR DETAIL.
8. SEE 5/M903 FOR FLOOR CLEANOUT DETAIL.

FLAG NOTES:

- 1. CONNECT 1/2" DRAIN PIPE FROM HB-4 TO PLUMBING FIXTURE ABOVE P-TRAP.
- 2. INSTALL EXPOSED PIPING TIGHT TO ROOF DECK.
- 3. INSTALL EXPOSED PIPING TIGHT TO LOW POINT OF ROOF.
- 4. SEE 8/M902 FOR EXTERIOR HOSE BIBB AT PONY WALL DETAIL.
- 5. PROVIDE HEAT TRACE ON DOMESTIC HOT AND COLD WATER.
- 6. DOMESTIC HOT AND COLD WATER DOWN TO P-18 FIXTURE AT ISLAND. VENT DOWN TO ISLAND VENT CONNECTION.

UPPER LEVEL - PLUMBING FLOOR PLAN - AREA C
SCALE: 1/8" = 1'-0"



**Port Townsend School District No. 50
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REPLACEMENT PROJECT**
1637 GRANT STREET, PORT TOWNSEND, WA 98368

Date:	5/1/17	
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Drawn By:	KK	
Checked by:	MH	
Revisions		
#	Date	Description

UPPER LEVEL -
PLUMBING
FLOOR PLAN -
AREA C

M213

integrus ARCHITECTURE
 117 SOUTH MAIN STREET, SUITE 100, SEATTLE, WA 98104
 TELEPHONE: (206) 461-3137, FAX: (206) 461-3138
METRIX ENGINEERS
 720 PHELPS AVE. SW, SUITE 100
 PORTLAND, OR 97205
 www.metrixeng.com

THIS DRAWING HAS BEEN UPDATED TO INCORPORATE CHANGES MADE TO THE BID DOCUMENTS BY ADDENDA. IT IS ISSUED FOR THE CONVENIENCE OF THE CONTRACTOR AND DOES NOT REPLACE THE CONTRACT DOCUMENTS AS ENUMERATED IN THE CONTRACT.

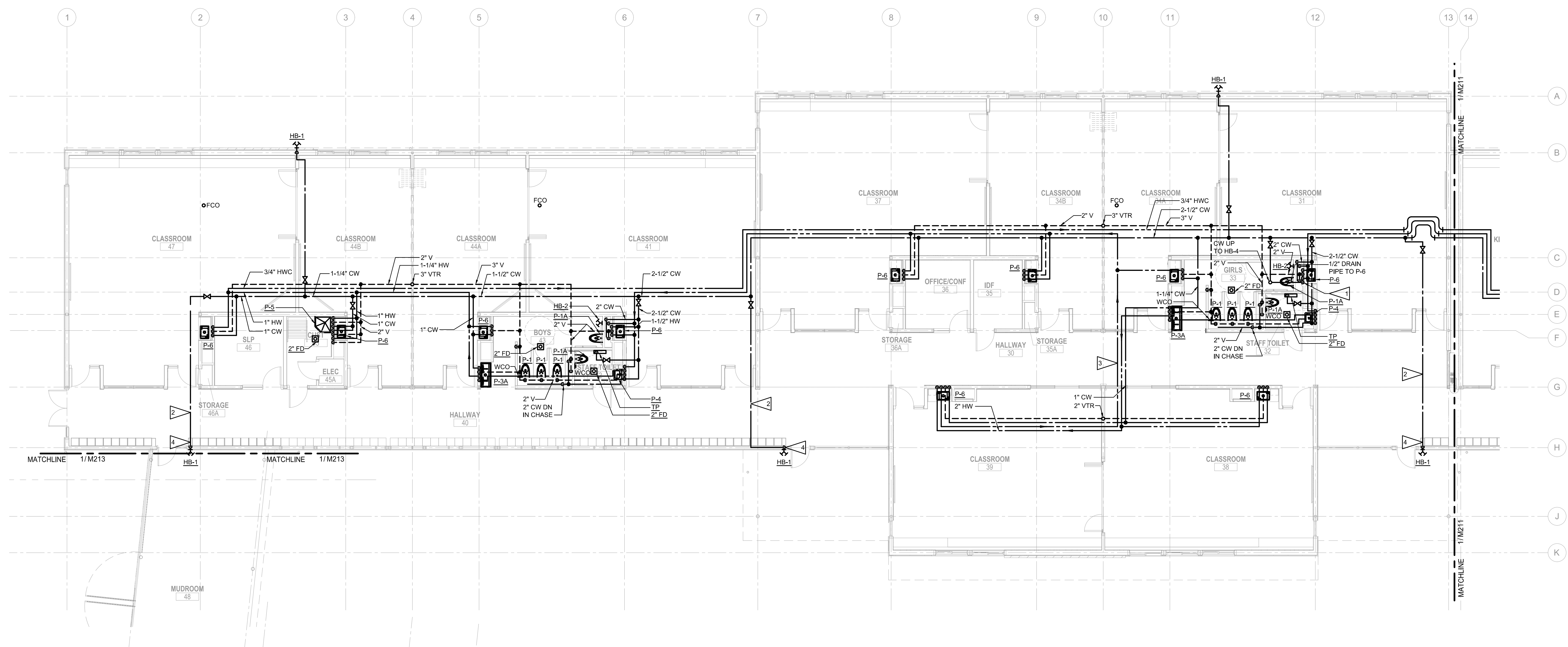
THIS DRAWING HAS BEEN UPDATED TO INCORPORATE CHANGES MADE TO THE BID DOCUMENTS BY ADDENDA. IT IS ISSUED FOR THE CONVENIENCE OF THE CONTRACTOR AND DOES NOT REPLACE THE CONTRACT DOCUMENTS AS ENUMERATED IN THE CONTRACT.

SHEET NOTES

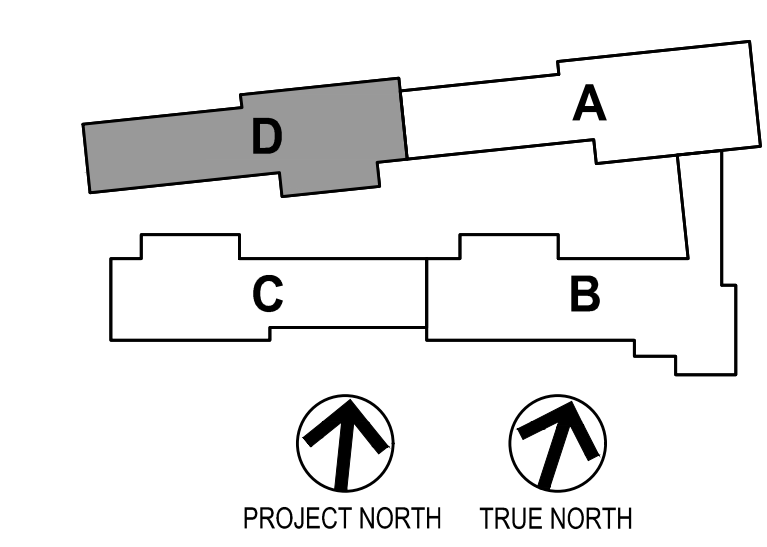
1. PROVIDE CLEANOUTS AT EVERY SINK AND LAVATORY. WHERE THE UPPER TERMINUS OF BRANCH LINES EXCEEDING 5 FEET IN LENGTH DO NOT END WITH A SINK OR LAVATORY, PROVIDE A WALL OR FLOOR CLEANOUT PER UPC 707.4.
2. PROVIDE ACCESS PANEL TO SHUT-OFF VALVES WHERE LOCATED ABOVE HARD LID CEILING.
3. PROVIDE ACCESS PANEL IN WALL FOR WATER HAMMER ARRESTORS AND SHUT-OFF VALVES.
4. COORDINATE PLUMBING TO PROVIDE UNOBSTRUCTED ACCESS TO ABOVE CEILING MECHANICAL EQUIPMENT INCLUDING, BUT NOT LIMITED TO, DAMPERS, VALVES, AND VAV BOXES.
5. PROVIDE TRAP PRIMER CONNECTION TO ALL FLOOR DRAINS, FLOOR SINKS, AIR GAP FITTINGS AND OTHER TRAPS REQUIRING PROTECTION.
6. COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.
7. SEE 2/M903 FOR WATER HAMMER ARRESTOR DETAIL.
8. SEE 5/M903 FOR FLOOR CLEANOUT DETAIL.

FLAG NOTES:

- ▽ CONNECT 1/2" DRAIN PIPE FROM HB-4 TO PLUMBING FIXTURE ABOVE P-TRAP.
- ▽ INSTALL EXPOSED PIPING TIGHT TO ROOF DECK.
- ▽ INSTALL EXPOSED PIPING TIGHT TO LOW POINT OF ROOF.
- ▽ SEE 8/M902 FOR EXTERIOR HOSE BIBB AT PONY WALL DETAIL.



UPPER LEVEL - PLUMBING FLOOR PLAN - AREA D
SCALE: 1/8" = 1'-0"



**Port Townsend School District No. 50
GRANT STREET ELEMENTARY SCHOOL
REPLACEMENT PROJECT**
1637 GRANT STREET, PORT TOWNSEND, WA 98368

Date:	5/1/17	
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Drawn By:	KK	
Checked by:	MH	
Revisions		
#	Date	Description

UPPER LEVEL -
PLUMBING
FLOOR PLAN -
AREA D

M214

THIS DRAWING HAS BEEN UPDATED TO INCORPORATE CHANGES MADE TO THE BID DOCUMENTS BY ADDENDA. IT IS ISSUED FOR THE CONVENIENCE OF THE CONTRACTOR AND DOES NOT REPLACE THE CONTRACT DOCUMENTS AS ENUMERATED IN THE CONTRACT.

RFI CHANGES TO THIS SHEET
 -RFI #75
 -RFI #77

**Port Townsend School District No. 50
 GRANT STREET ELEMENTARY SCHOOL
 REPLACEMENT PROJECT**
 1637 GRANT STREET, PORT TOWNSEND, WA 98368

Date: 5/1/17
 Job No.: 21528.00
 Drawn By: KK
 Checked by: MH

Revisions		
#	Date	Description
2	4/19/17	Addendum 2

LOWER LEVEL - HVAC FLOOR PLAN - AREA A

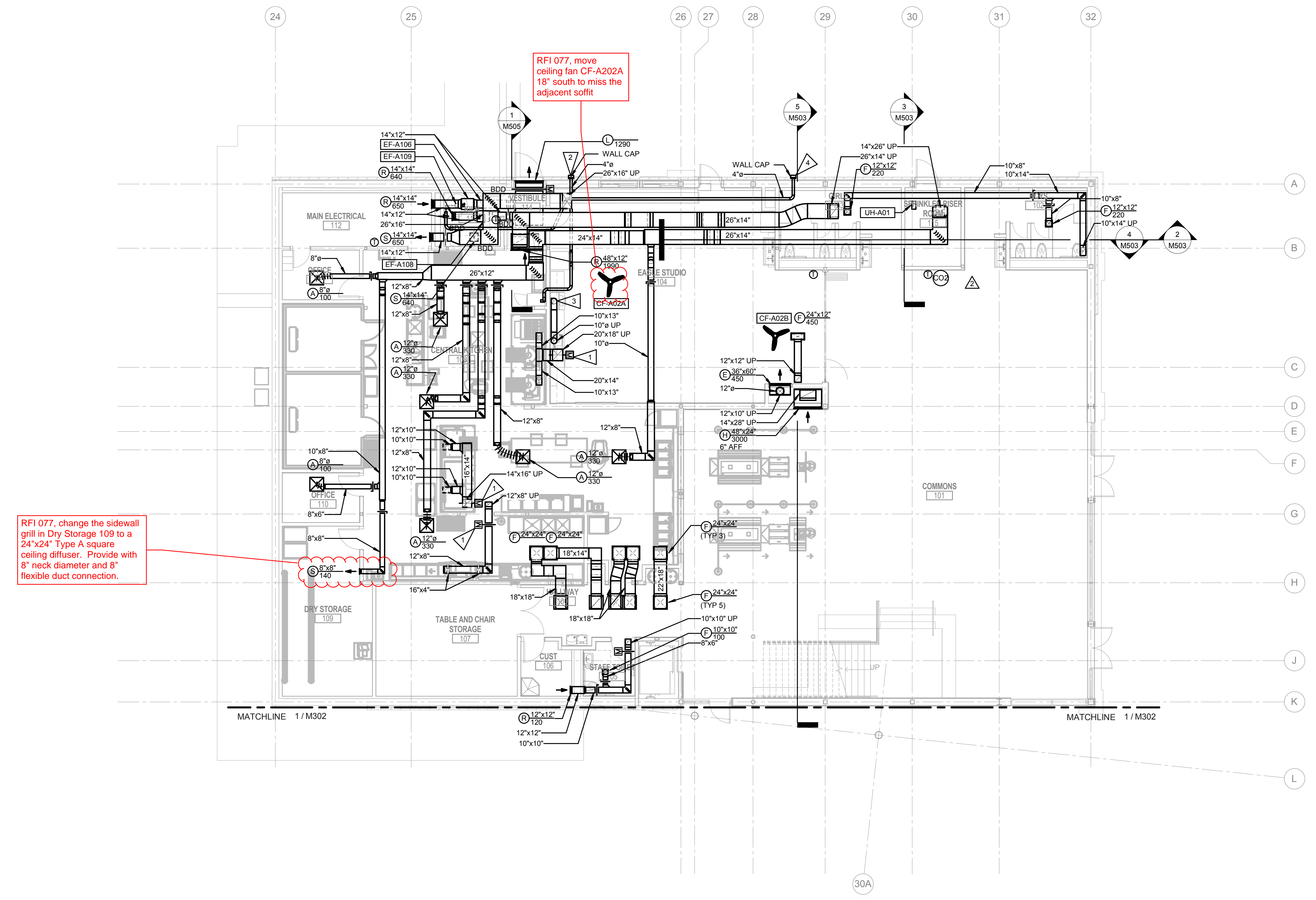
M301

SHEET NOTES

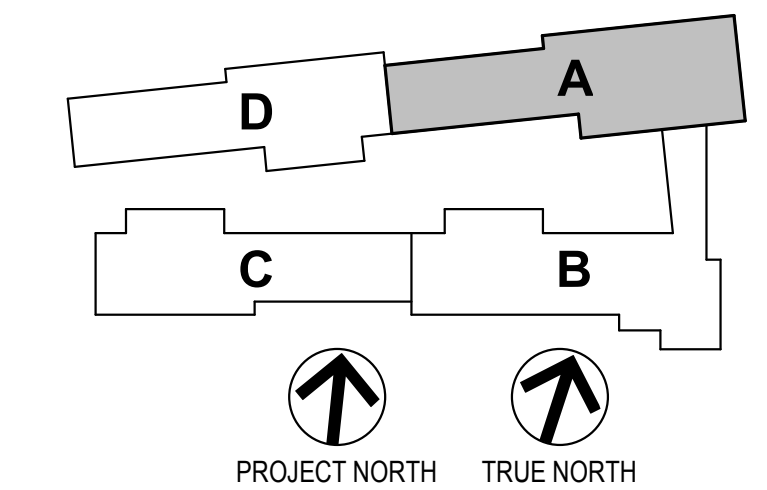
1. ALL DUCTWORK IS CONCEALED UNLESS NOTED OTHERWISE.
2. ALL PENETRATIONS THROUGH THE AIR BARRIER SHALL BE WATER TIGHT AND AIR TIGHT.
3. PROVIDE ACCESS DOORS IN DUCTWORK FOR ACCESS TO BACKDRAFT, FIRE, SMOKE, AND FIRE/SMOKE DAMPERS.
4. PROVIDE ACCESS DOOR IN ALL AIR PLENUMS OR DUCTWORK LOCATED BEHIND LOUVERS FOR MOTORIZED DAMPER ACCESS. PROVIDE 24x24 ACCESS DOOR UNLESS OTHERWISE NOTED.
5. COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.
6. PLENUMS LOCATED BEHIND LOUVERS SHALL BE SIZED TO MATCH LOUVER SIZE UNLESS OTHERWISE NOTED. LOUVER SIZES INDICATED ARE FOR REFERENCE ONLY. CONFIRM WITH ARCH LOUVER SCHEDULE.
7. SEE 1/M905 FOR TYPICAL FLEXIBLE DUCT CONNECTION DETAIL.
8. COORDINATE CLEAR AND MAINTAINABLE ACCESS TO ALL ABOVE CEILING EQUIPMENT. DASHED LINES INDICATE MINIMUM REQUIRED CLEAR SERVICE AREAS.

FLAG NOTES

1. MOTORIZED DAMPER SHALL BE STAINLESS STEEL.
2. PROVIDE DRYER EXHAUST VENT TERMINATION KIT WITH BACKDRAFT FLAPPER.
3. CONNECT 10"x3" EXHAUST DUCT TO RESIDENTIAL RANGE HOOD. FURNISHED BY OTHERS.
4. PROVIDE KILN EXHAUST VENT TERMINATION KIT WITH BACKDRAFT FLAPPER.



LOWER LEVEL - HVAC FLOOR PLAN - AREA A
 SCALE: 1/8" = 1'-0"



THIS DRAWING HAS BEEN UPDATED TO INCORPORATE CHANGES MADE TO THE BID DOCUMENTS BY ADDENDA. IT IS ISSUED FOR THE CONVENIENCE OF THE CONTRACTOR AND DOES NOT REPLACE THE CONTRACT DOCUMENTS AS ENUMERATED IN THE CONTRACT.

**Port Townsend School District No. 50
GRANT STREET ELEMENTARY SCHOOL
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1637 GRANT STREET, PORT TOWNSEND, WA 98368

Date: 5/1/17
Job No.: 21528.00
Drawn By: KK
Checked by: MH

#	Date	Description
1	4/12/17	Addendum 1
2	4/19/17	Addendum 2

LOWER LEVEL -
HVAC FLOOR PLAN
- AREA B

M302

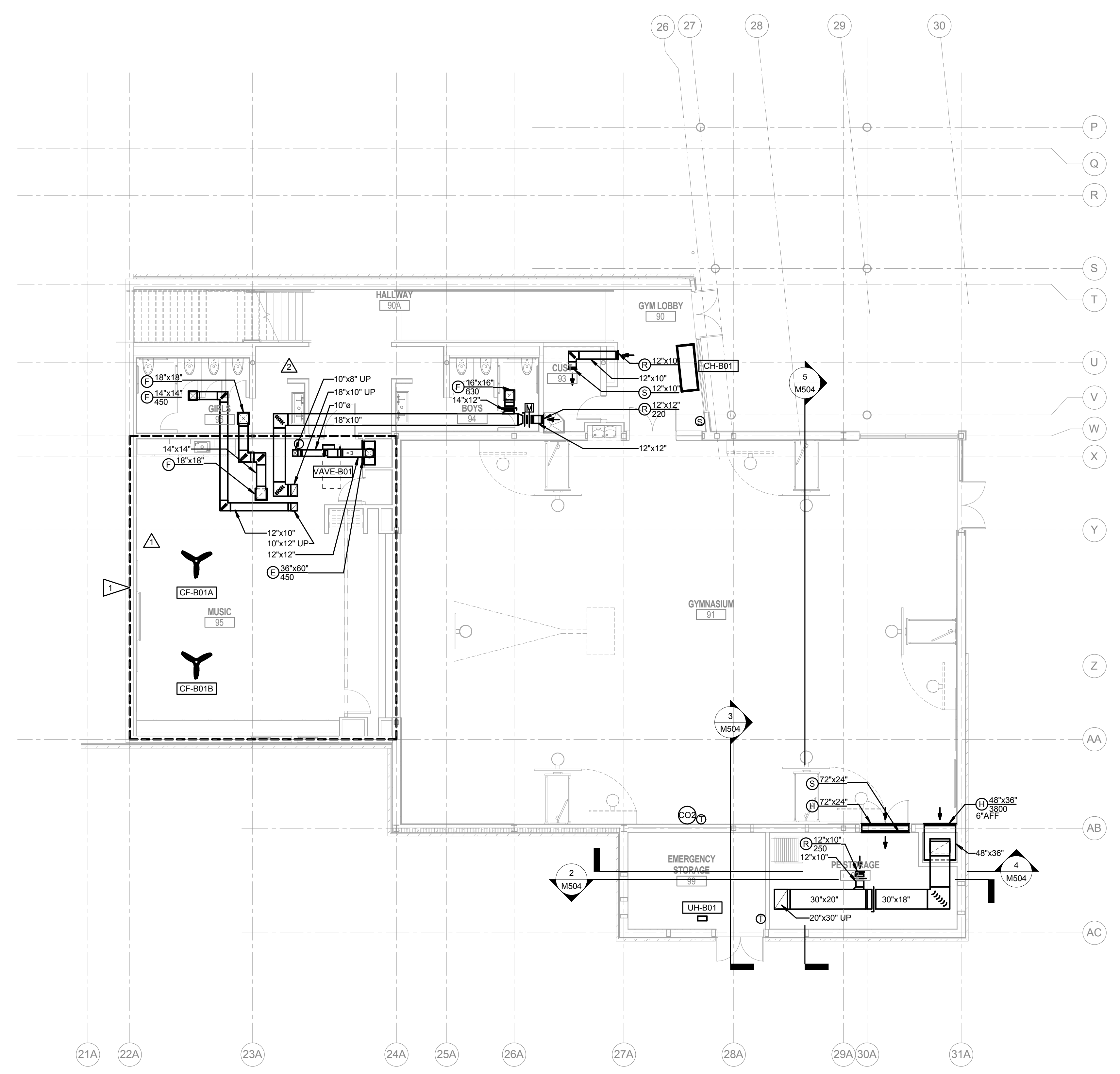
BID SET 2

SHEET NOTES

1. ALL DUCTWORK IS CONCEALED UNLESS NOTED OTHERWISE.
2. ALL PENETRATIONS THROUGH THE AIR BARRIER SHALL BE WATER TIGHT AND AIR TIGHT.
3. PROVIDE ACCESS DOORS IN DUCTWORK FOR ACCESS TO BACKDRAFT, FIRE, SMOKE, AND FIRE/SMOKE DAMPERS.
4. PROVIDE ACCESS DOOR IN ALL AIR PLENUMS OR DUCTWORK LOCATED BEHIND LOUVERS FOR MOTORIZED DAMPER ACCESS. PROVIDE 24x24 ACCESS DOOR UNLESS OTHERWISE NOTED.
5. COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.
6. COORDINATE CLEAR AND MAINTAINABLE ACCESS TO ALL ABOVE CEILING EQUIPMENT. DASHED LINES INDICATE MINIMUM REQUIRED CLEAR SERVICE AREAS.

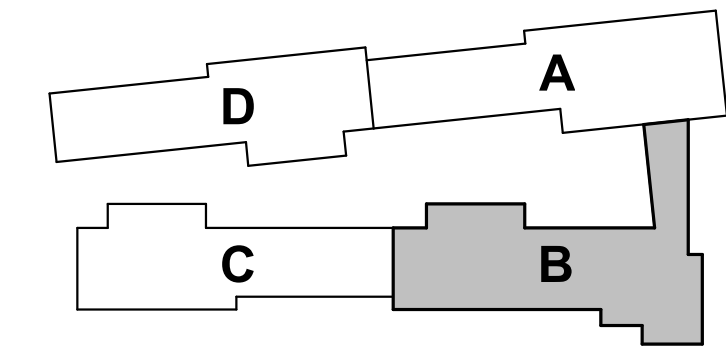
FLAG NOTES

SPRING ISOLATED CEILING THIS AREA. REFER TO SPECIFICATION 230548 "MECHANICAL VIBRATION CONTROLS AND SEISMIC RESTRAINTS" FOR REQUIRED DUCTWORK ISOLATION IN THIS AREA. PROVIDE 3/4" ANNULAR ENLARGED PENETRATION THROUGH GWB WITH A 3/8" BEAD OF ACOUSTICAL SEALANT ALL AROUND PENETRATIONS.



LOWER LEVEL - HVAC FLOOR PLAN - AREA B

SCALE: 1/8" = 1'-0"



PROJECT NORTH
TRUE NORTH

**Port Townsend School District No. 50
 GRANT STREET ELEMENTARY SCHOOL
 REPLACEMENT PROJECT**
 1637 GRANT STREET, PORT TOWNSEND, WA 98368

Date: 5/1/17
 Job No.: 21528.00
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#	Date	Description
1	4/12/17	Addendum 1
2	4/19/17	Addendum 2

UPPER LEVEL - HVAC FLOOR PLAN - AREA A

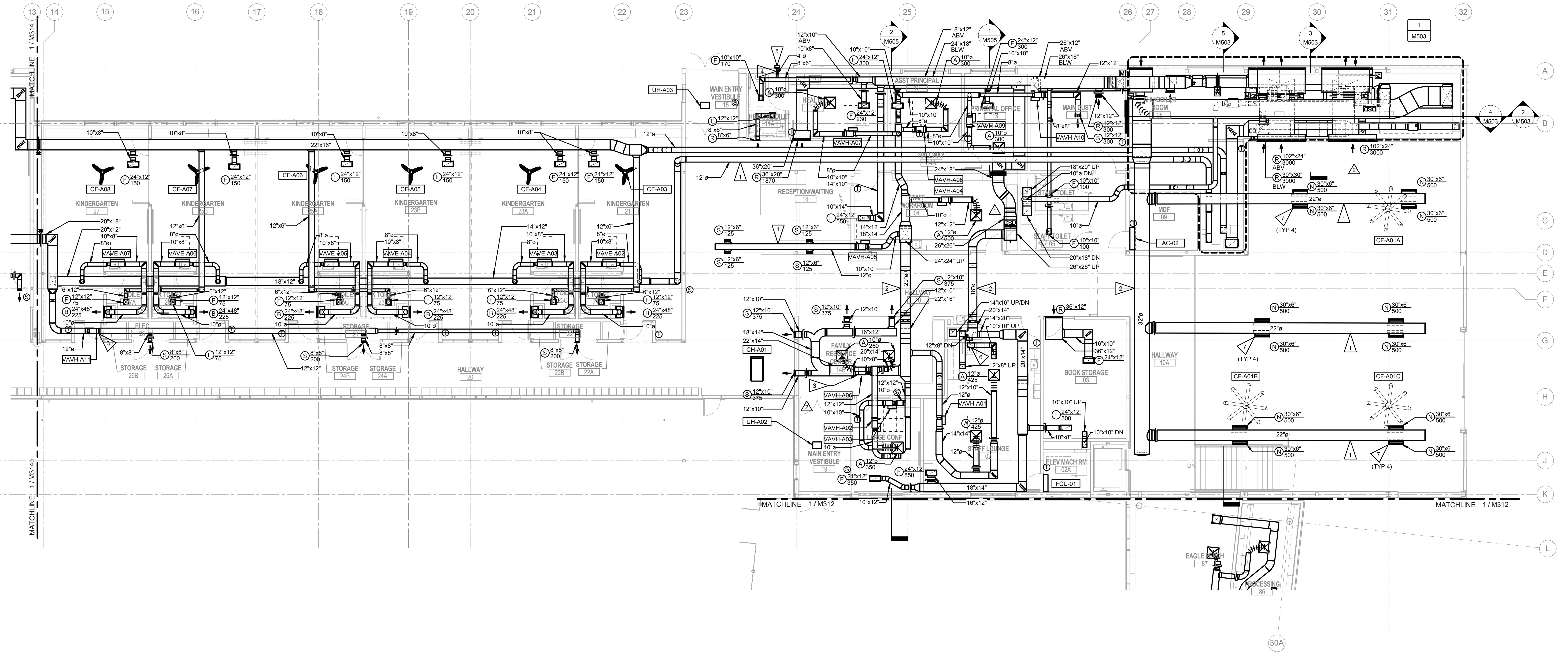
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SHEET NOTES

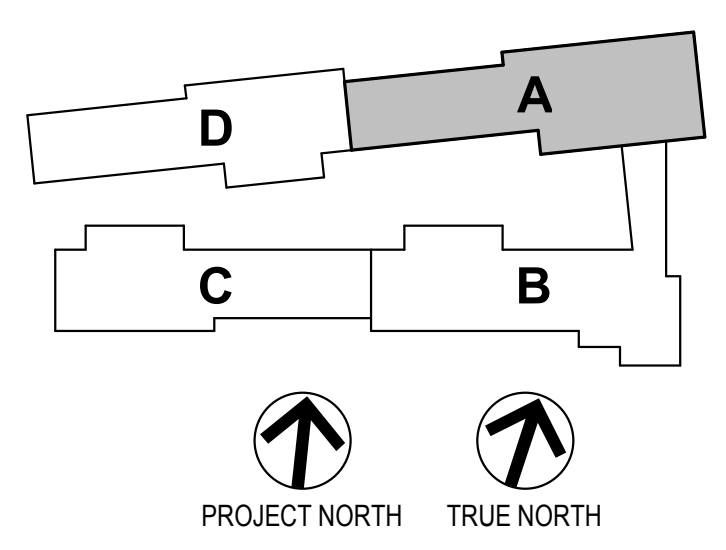
- ALL DUCTWORK IS CONCEALED UNLESS NOTED OTHERWISE.
- ALL PENETRATIONS THROUGH THE AIR BARRIER SHALL BE WATER TIGHT AND AIR TIGHT.
- PROVIDE ACCESS DOORS IN DUCTWORK FOR ACCESS TO BACKDRAFT, FIRE, SMOKE, AND FIRE/SMOKE DAMPERS.
- PROVIDE ACCESS DOOR IN ALL AIR PLENUMS OR DUCTWORK LOCATED BEHIND LOUVERS FOR MOTORIZED DAMPER ACCESS. PROVIDE 24x24 ACCESS DOOR UNLESS OTHERWISE NOTED.
- COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.
- PLENUMS LOCATED BEHIND LOUVERS SHALL BE SIZED TO MATCH LOUVER SIZE UNLESS OTHERWISE NOTED. LOUVER SIZES INDICATED ARE FOR REFERENCE ONLY. CONFIRM WITH ARCH LOUVER SCHEDULE.
- SEAL MECHANICAL ROOM FLOOR PENETRATIONS WATER TIGHT.
- PROVIDE 6'-8"x3'-0" MINIMUM CLEAR ACCESS PATHWAY THROUGH MECHANICAL ROOM. ROUTE ALL DUCTWORK TO MAINTAIN CLEARANCE. PROVIDE OFFSETS AS REQUIRED.
- SEE 1AM804 FOR EXPOSED ROUND METAL DUCT HANGER DETAIL.
- SEE 3M905 FOR COMBINATION FIRE/SMOKE DAMPER DETAIL.
- SEE 1AM905 FOR TYPICAL FLEXIBLE DUCT CONNECTION DETAIL.
- COORDINATE CLEAR AND MAINTAINABLE ACCESS TO ALL ABOVE CEILING EQUIPMENT. DASHED LINES INDICATE MINIMUM REQUIRED CLEAR SERVICE AREAS.

FLAG NOTES

- INSTALL EXPOSED DUCTWORK TIGHT TO PERPENDICULAR STRUCTURE.
- INSTALL EXPOSED DUCTWORK TIGHT TO STRUCTURE AND SLOPED WITH ROOF.
- PROVIDE VAV BOX WITH CONTROLLER AND ACTUATOR FACING DOWN TOWARD THE FLOOR FOR ACCESS. PROVIDE ACCESS PANEL IN HARD LID CEILING FOR VAV BOX MAINTENANCE.
- PROVIDE RECESSED DRYER VENT BOX CONNECTION IN WALL.
- PROVIDE DRYER EXHAUST VENT TERMINATION KIT WITH BACKDRAFT FLAPPER.
- CONNECT 10"x3" EXHAUST DUCT TO RESIDENTIAL RANGE HOOD, FURNISHED BY OTHERS.
- DO NOT INSTALL VOLUME DAMPERS AT DRUM LOUVERS.



UPPER LEVEL - HVAC FLOOR PLAN - AREA A
 SCALE: 1/8" = 1'-0"

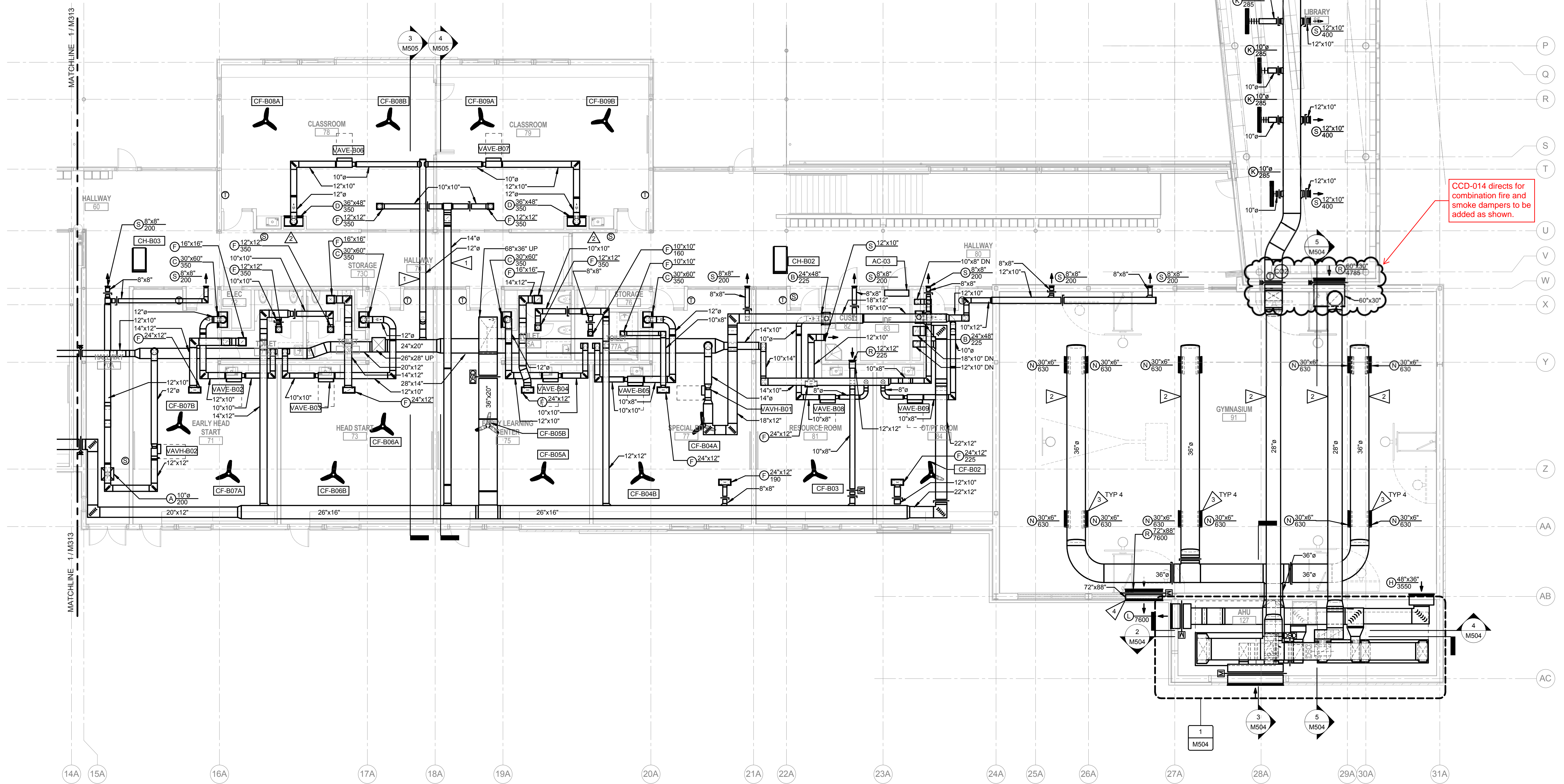


SHEET NOTES

- ALL DUCTWORK IS CONCEALED UNLESS NOTED OTHERWISE.
- ALL PENETRATIONS THROUGH THE AIR BARRIER SHALL BE WATER TIGHT AND AIR TIGHT.
- PROVIDE ACCESS DOORS IN DUCTWORK FOR ACCESS TO BACKDRAFT, FIRE, SMOKE, AND FIRE/SMOKE DAMPERS.
- PROVIDE ACCESS DOOR IN ALL AIR PLENUMS OR DUCTWORK LOCATED BEHIND LOUVERS FOR MOTORIZED DAMPER ACCESS. PROVIDE 24x24 ACCESS DOOR UNLESS OTHERWISE NOTED.
- COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.
- PLENUMS LOCATED BEHIND LOUVERS SHALL BE SIZED TO MATCH LOUVER SIZE UNLESS OTHERWISE NOTED. LOUVER SIZES INDICATED ARE FOR REFERENCE ONLY. CONFIRM WITH ARCH LOUVER SCHEDULE.
- SEAL MECHANICAL ROOM FLOOR PENETRATIONS WATER TIGHT.
- PROVIDE 6'-0" x 3'-0" MINIMUM CLEAR ACCESS PATHWAY THROUGH MECHANICAL ROOM. ROUTE ALL DUCTWORK TO MAINTAIN CLEARANCE. PROVIDE OFFSETS AS REQUIRED.
- SEE 1/M904 FOR EXPOSED ROUND METAL DUCT HANGER DETAIL.
- SEE 3/M905 FOR COMBINATION FIRE/SMOKE DAMPER DETAIL.
- SEE 1/M905 FOR TYPICAL FLEXIBLE DUCT CONNECTION DETAIL.
- COORDINATE CLEAR AND MAINTAINABLE ACCESS TO ALL ABOVE CEILING EQUIPMENT. DASHED LINES INDICATE MINIMUM REQUIRED CLEAR SERVICE AREAS.

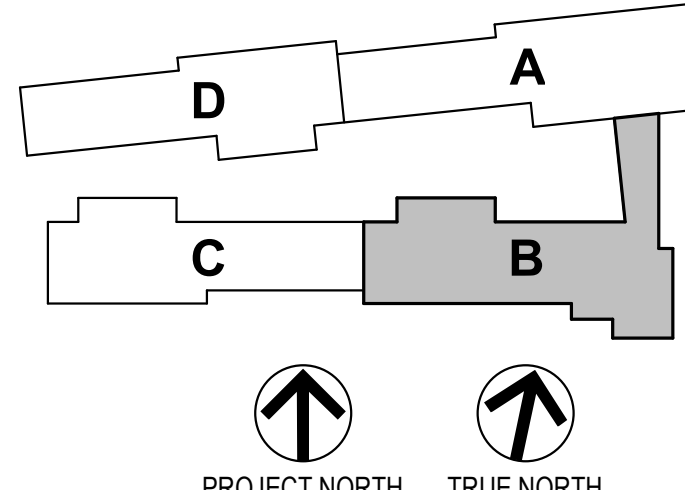
FLAG NOTES

- INSTALL EXPOSED DUCTWORK TIGHT TO LOW POINT OF ROOF.
- INSTALL EXPOSED DUCTWORK TIGHT TO STRUCTURE AND SLOPED WITH ROOF.
- DO NOT INSTALL VOLUME DAMPERS AT DRUM LOUVERS.
- PROVIDE DAMPER WITH ACTUATOR ACCESSIBLE FROM INSIDE FACE OF RELIEF GRILLE.



UPPER LEVEL - HVAC FLOOR PLAN - AREA B

SCALE: 1/8" = 1'-0"



**Port Townsend School District No. 50
GRANT STREET ELEMENTARY SCHOOL
REPLACEMENT PROJECT**
1637 GRANT STREET, PORT TOWNSEND, WA 98368

Date: 5/1/17
Job No.: 21528.00
Drawn By: KK
Checked by: MH

Revisions		
#	Date	Description
2	4/19/17	Addendum 2
14	10/17/17	CCD-14

UPPER LEVEL - HVAC FLOOR PLAN - AREA B

M312

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**Port Townsend School District No. 50
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Revisions		
#	Date	Description
1	4/12/17	Addendum 1
2	4/19/17	Addendum 2

UPPER LEVEL -
 HVAC FLOOR PLAN
 - AREA C

M313

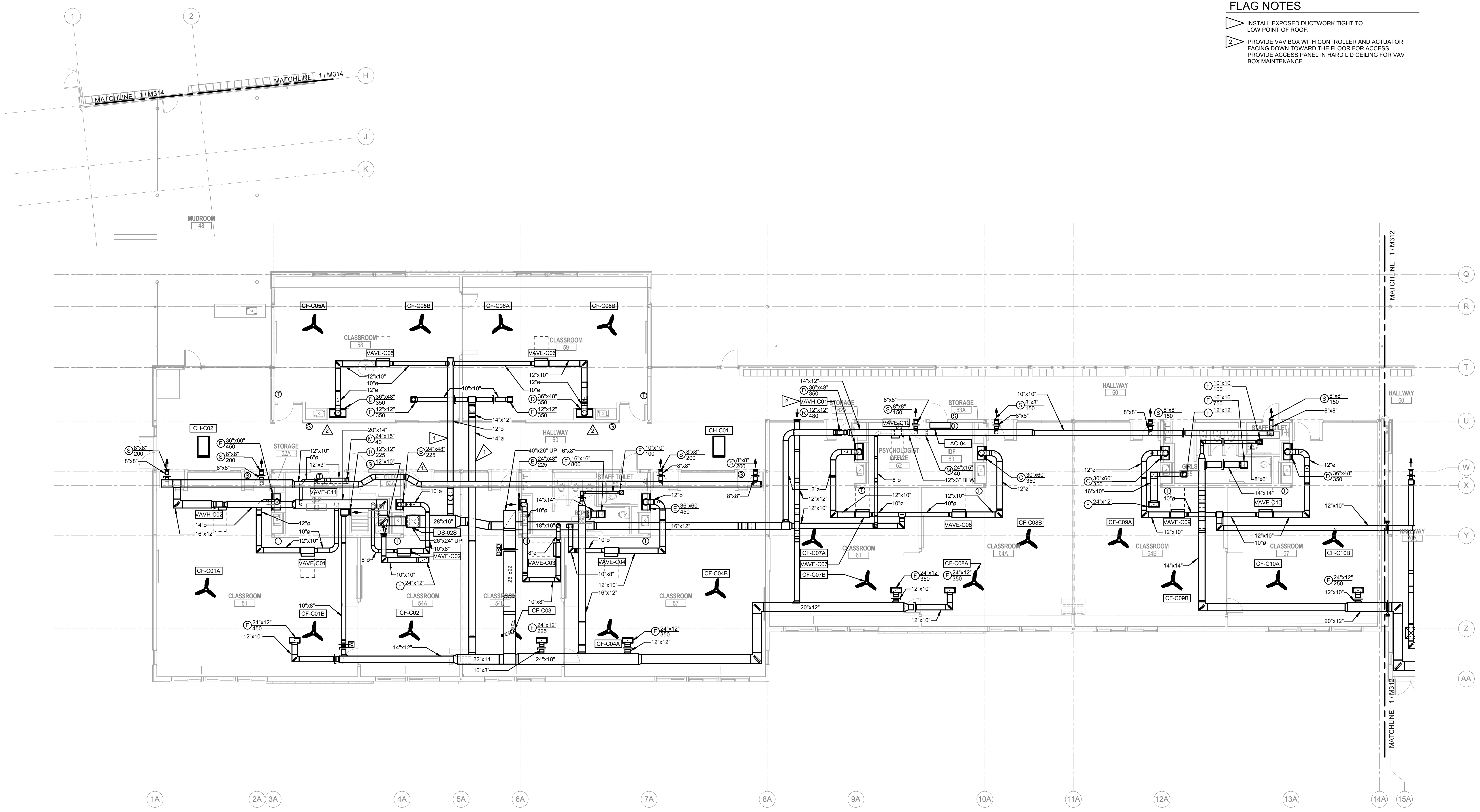
BID SET 2

SHEET NOTES

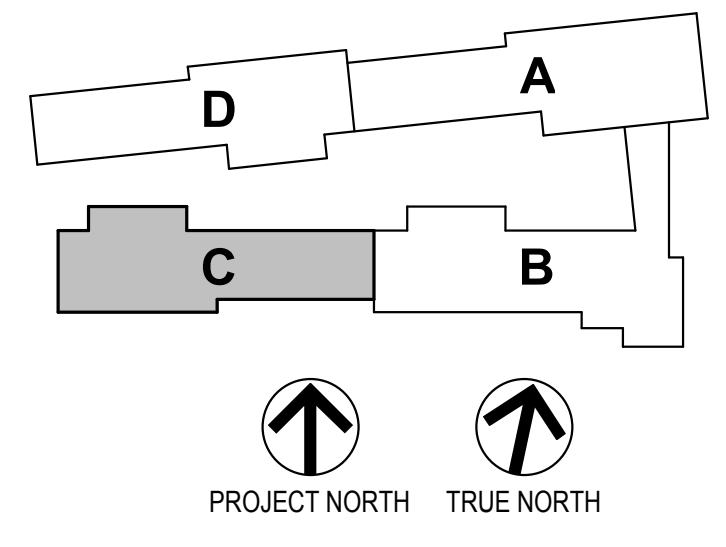
- ALL DUCTWORK IS CONCEALED UNLESS NOTED OTHERWISE.
- ALL PENETRATIONS THROUGH THE AIR BARRIER SHALL BE WATER TIGHT AND AIR TIGHT.
- PROVIDE ACCESS DOORS IN DUCTWORK FOR ACCESS TO BACKDRAFT, FIRE, SMOKE, AND FIRE/SMOKE DAMPERS.
- PROVIDE ACCESS DOOR IN ALL AIR PLENUMS OR DUCTWORK LOCATED BEHIND LOUVERS FOR MOTORIZED DAMPER ACCESS. PROVIDE 24x24 ACCESS DOOR UNLESS OTHERWISE NOTED.
- COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.
- SEE 1/M904 FOR EXPOSED ROUND METAL DUCT HANGER DETAIL.
- COORDINATE CLEAR AND MAINTAINABLE ACCESS TO ALL ABOVE CEILING EQUIPMENT. DASHED LINES INDICATE MINIMUM REQUIRED CLEAR SERVICE AREAS.

FLAG NOTES

- INSTALL EXPOSED DUCTWORK TIGHT TO LOW POINT OF ROOF.
- PROVIDE VAV BOX WITH CONTROLLER AND ACTUATOR FACING DOWN TOWARD THE FLOOR FOR ACCESS. PROVIDE ACCESS PANEL IN HARD LID CEILING FOR VAV BOX MAINTENANCE.



UPPER LEVEL - HVAC FLOOR PLAN - AREA C
 SCALE: 1/8" = 1'-0"



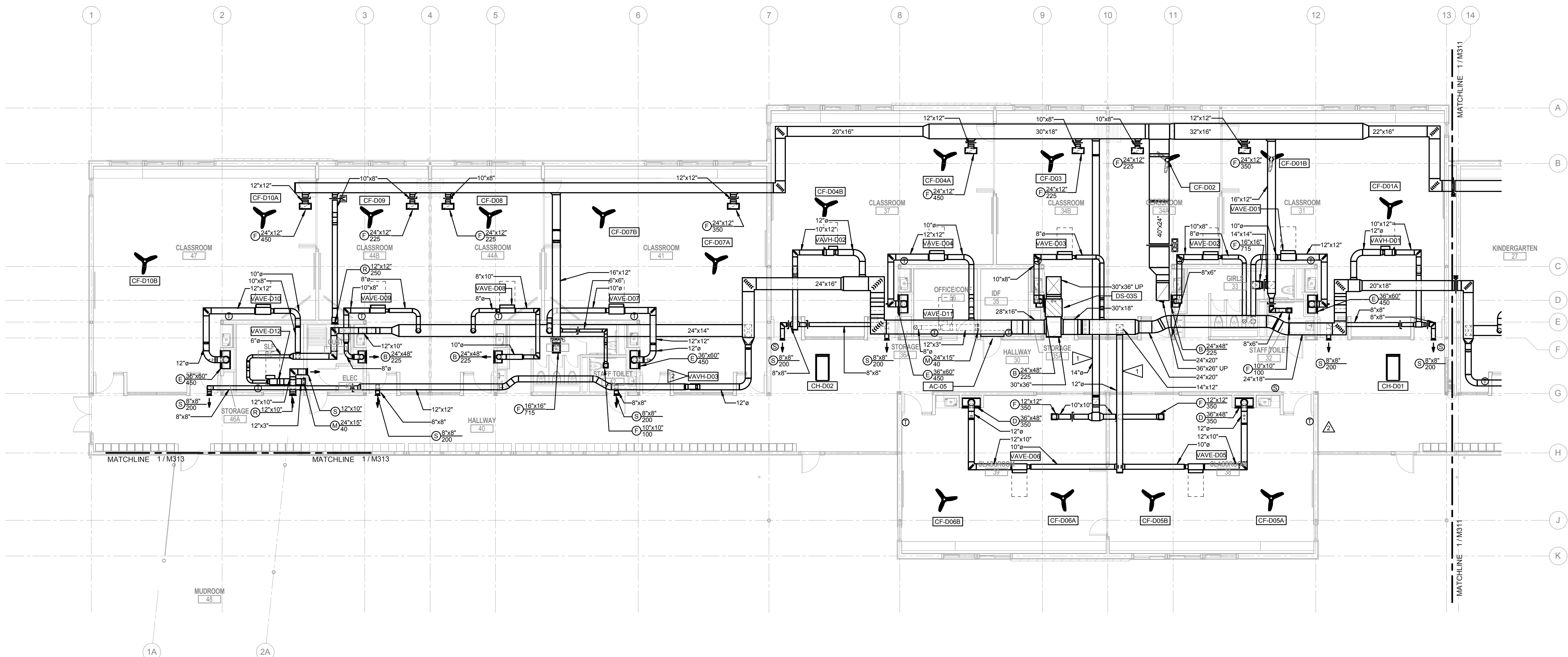
SHEET NOTES

1. ALL DUCTWORK IS CONCEALED UNLESS NOTED OTHERWISE.
2. ALL PENETRATIONS THROUGH THE AIR BARRIER SHALL BE WATER TIGHT AND AIR TIGHT.
3. PROVIDE ACCESS DOORS IN DUCTWORK FOR ACCESS TO BACKDRAFT, FIRE, SMOKE, AND FIRE/SMOKE DAMPERS.
4. PROVIDE ACCESS DOOR IN ALL AIR PLENUMS OR DUCTWORK LOCATED BEHIND LOUVERS FOR MOTORIZED DAMPER ACCESS. PROVIDE 24x24 ACCESS DOOR UNLESS OTHERWISE NOTED.
5. COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.
6. SEE 1/1804 FOR EXPOSED ROUND METAL DUCT HANGER DETAIL.
7. COORDINATE CLEAR AND MAINTAINABLE ACCESS TO ALL ABOVE CEILING EQUIPMENT. DASHED LINES INDICATE MINIMUM REQUIRED CLEAR SERVICE AREAS.

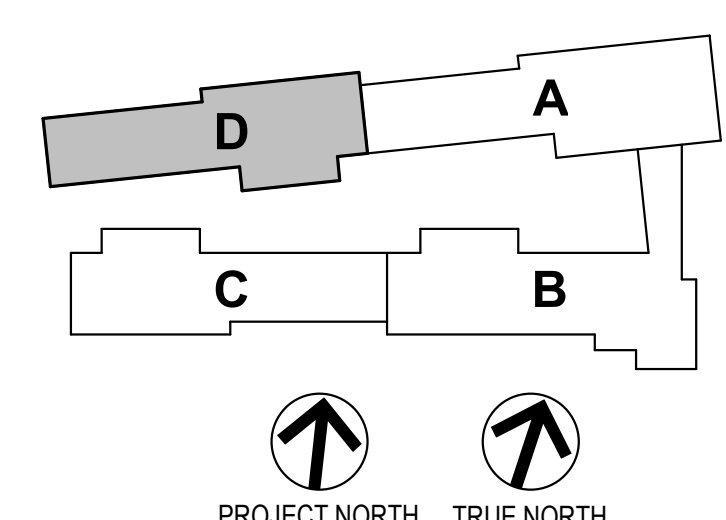
FLAG NOTES

1. INSTALL EXPOSED DUCTWORK TIGHT TO LOW POINT OF ROOF.
2. PROVIDE VAV BOX WITH CONTROLLER AND ACTUATOR FACING DOWN TOWARD THE FLOOR FOR ACCESS. PROVIDE ACCESS PANEL IN HARD LID CEILING FOR VAV BOX MAINTENANCE.

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UPPER LEVEL - HVAC FLOOR PLAN - AREA D
 SCALE: 1/8" = 1'-0"



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 1637 GRANT STREET, PORT TOWNSEND, WA 98368

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Revisions	
#	Description
2	4/19/17 Addendum 2

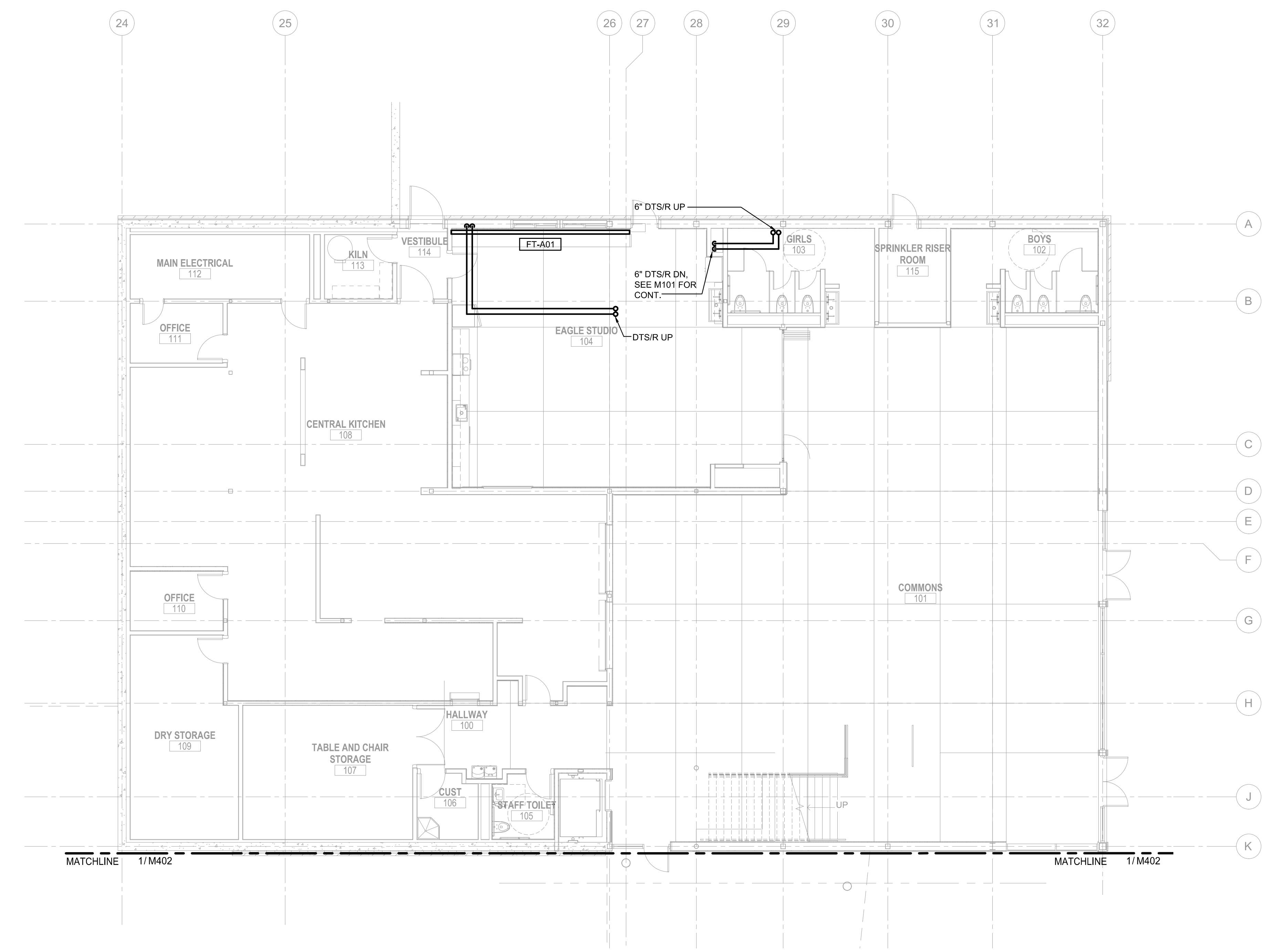
UPPER LEVEL - HVAC FLOOR PLAN - AREA D

M314

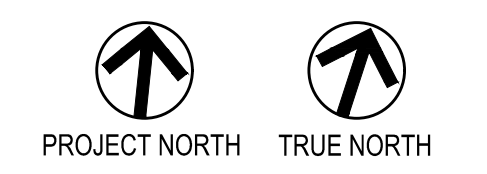
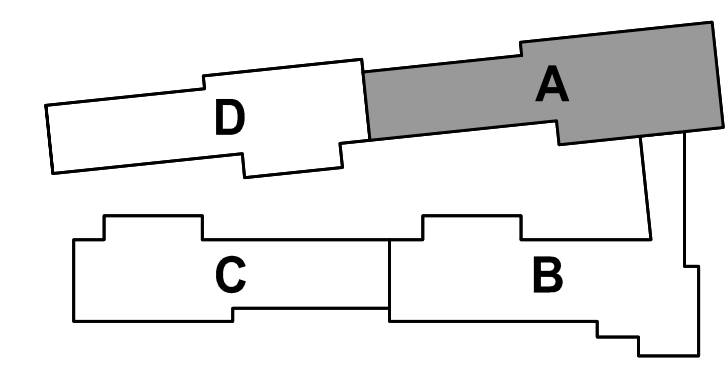
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SHEET NOTES:

1. ALL PENETRATIONS THROUGH THE AIR BARRIER SHALL BE WATER TIGHT AND AIR TIGHT.
2. DO NOT ROUTE HVAC PIPING IN FRONT OF EQUIPMENT. ROUTE TO MAINTAIN ACCESS TO FILTERS & FAN SECTIONS.
3. PROVIDE AUTOMATIC AIR VENTS AT THE HIGH POINTS IN THE HVAC PIPING SYSTEM. INSTALL AUTOMATIC AIR VENTS WITH MANUAL BYPASS AND DRAIN. EXTEND DRAIN FULL SIZE TO NEAREST DRAIN.
4. COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.



LOWER LEVEL - HVAC PIPING FLOOR PLAN - AREA A
SCALE: 1/8" = 1'-0"



**Port Townsend School District No. 50
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LOWER LEVEL -
HVAC PIPING
FLOOR PLAN -
AREA A

M401

**Port Townsend School District No. 50
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#	Date	Description
2	4/19/17	Addendum 2

LOWER LEVEL -
HVAC PIPING
FLOOR PLAN -
AREA B

M402

SHEET NOTES:

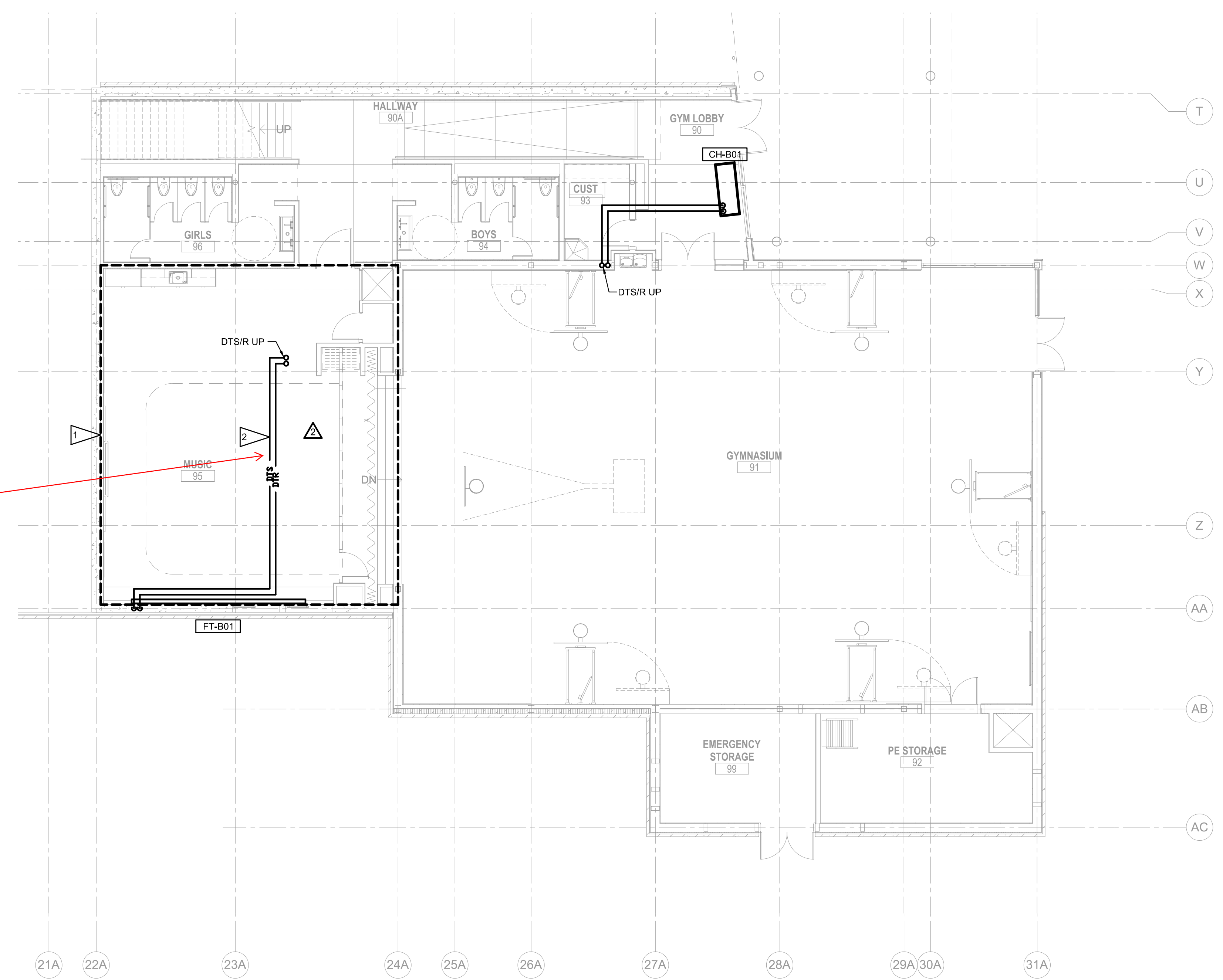
1. ALL PENETRATIONS THROUGH THE AIR BARRIER SHALL BE WATER TIGHT AND AIR TIGHT.
2. DO NOT ROUTE HVAC PIPING IN FRONT OF EQUIPMENT. ROUTE TO MAINTAIN ACCESS TO FILTERS & FAN SECTIONS.
3. PROVIDE AUTOMATIC AIR VENTS AT THE HIGH POINTS IN THE HVAC PIPING SYSTEM. INSTALL AUTOMATIC AIR VENTS WITH MANUAL BYPASS AND DRAIN. EXTEND DRAIN FULL SIZE TO NEAREST DRAIN.
4. COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.

FLAG NOTES:

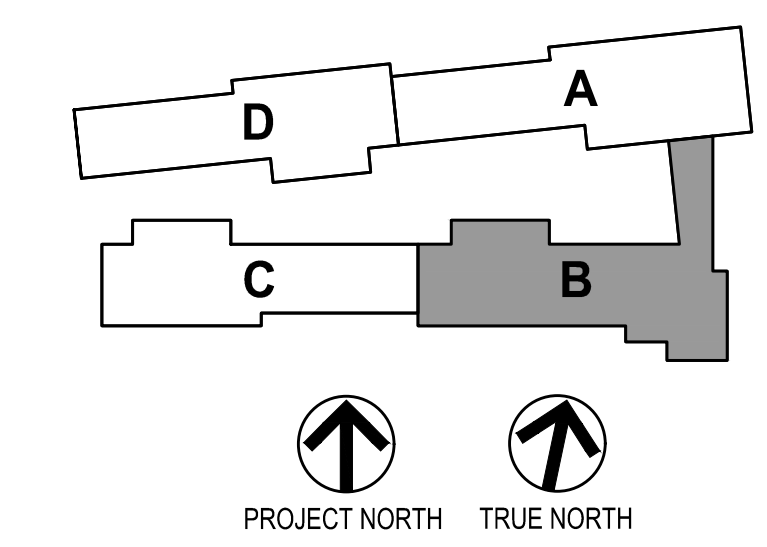
- 1 SPRING ISOLATED CEILING THIS AREA. REFER TO SPECIFICATION 230548 "MECHANICAL VIBRATION CONTROLS AND SEISMIC RESTRAINTS" FOR REQUIRED PIPING ISOLATION IN THIS AREA. PROVIDE 3/4" ANNULAR ENLARGED PENETRATION THROUGH GWB WITH A 3/8" BEAD OF ACOUSTICAL SEALANT ALL AROUND THE PENETRATION. SEE ARCHITECTURAL DRAWINGS FOR CEILING DETAILS.
- 2 INSTALL PIPING THROUGH OPENING IN BEAMS WITH TOP OF PIPE AT THE CENTER OF THE BEAMS.

RFI CHANGES TO THIS SHEET
-RFI #61

RFI 0061, 5-1/2" X 15" PENETRATIONS IN (3) W16X50 BEAMS ARE TO BE PROVIDED FOR THE DTS AND DTR LINES TO RUN THROUGH. THE PENETRATIONS ARE TO BE LOCATED SUCH THAT THE CL OF THE PENETRATIONS ARE 2'-0" EAST FROM THE W10X15 AT THE MECHANICAL SHAFT OPENING. PLACE THE CENTERLINE OF THE PENETRATION AT 10' 8" AFF.



LOWER LEVEL - HVAC PIPING FLOOR PLAN - AREA B
SCALE: 1/8" = 1'-0"

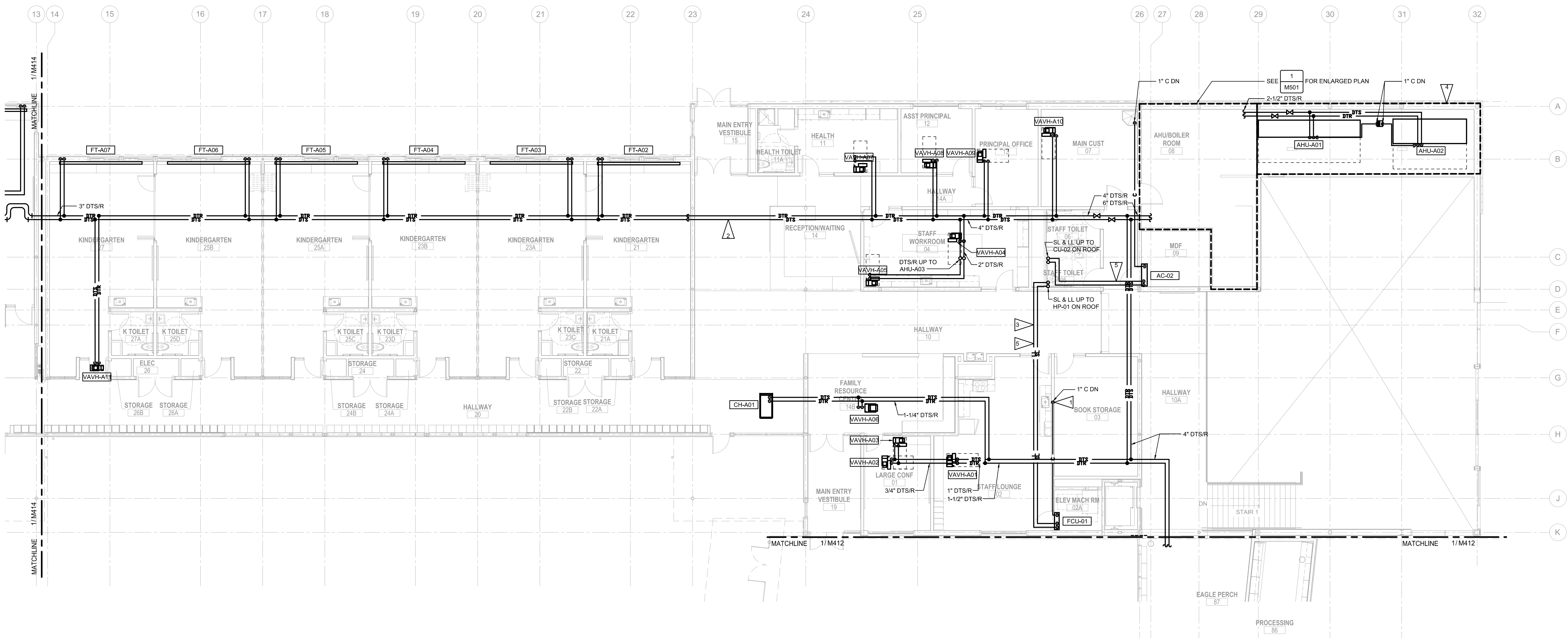


SHEET NOTES:

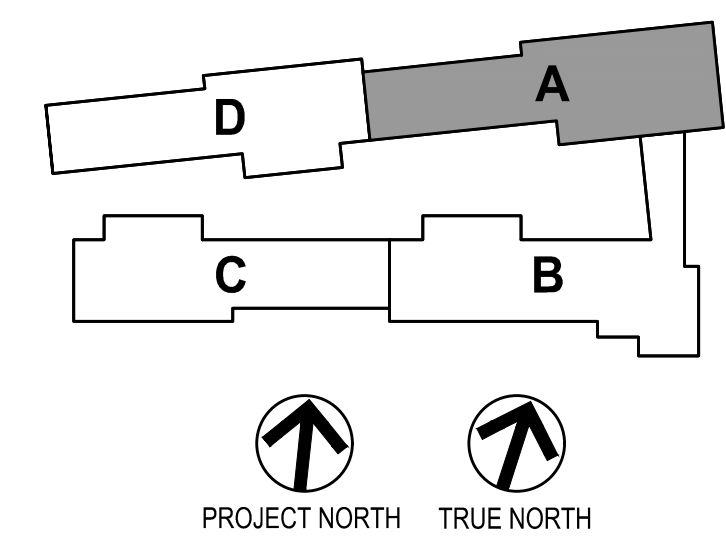
- ALL PENETRATIONS THROUGH THE AIR BARRIER SHALL BE WATER TIGHT AND AIR TIGHT.
- DO NOT ROUTE HVAC PIPING IN FRONT OF EQUIPMENT. ROUTE TO MAINTAIN ACCESS TO FILTERS & FAN SECTIONS.
- PROVIDE AUTOMATIC AIR VENTS AT THE HIGH POINTS IN THE HVAC PIPING SYSTEM. INSTALL AUTOMATIC AIR VENTS WITH MANUAL BYPASS AND DRAIN. EXTEND DRAIN FULL SIZE TO NEAREST DRAIN.
- COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.
- PROVIDE 6'-8"x3'-0" MINIMUM CLEAR ACCESS PATHWAY THROUGH MECHANICAL ROOMS. ROUTE ALL PIPING OVERHEAD TO MAINTAIN CLEARANCE. PROVIDE OFFSETS AS REQUIRED.
- PROVIDE DURABLE NEOPRENE COVERING AT ALL PIPES, EQUIPMENT OR SUPPORTS THAT ARE BELOW 6'-6" AFF IN THE ACCESS PATHWAY IN MECHANICAL ROOMS.
- SEE 6/M904 FOR CONDENSATE DRAIN DETAIL.

FLAG NOTES:

- CONNECT CONDENSATE PIPE TO PLUMBING FIXTURE TAILPIECE UPSTREAM OF P-TRAP.
- INSTALL EXPOSED PIPING TIGHT TO PERPENDICULAR STRUCTURE.
- INSTALL EXPOSED PIPING TIGHT TO ROOF DECK.
- REFER TO SPECIFICATION 230548 "MECHANICAL VIBRATION CONTROLS AND SEISMIC RESTRAINTS" FOR REQUIRED PIPING ISOLATION IN THIS AREA.
- FURNISH, INSTALL, AND SIZE REFRIGERANT PIPING PER MANUFACTURER'S REQUIREMENTS.



UPPER LEVEL - HVAC PIPING FLOOR PLAN - AREA A
SCALE: 1/8" = 1'-0"



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UPPER LEVEL -
HVAC PIPING
FLOOR PLAN -
AREA A

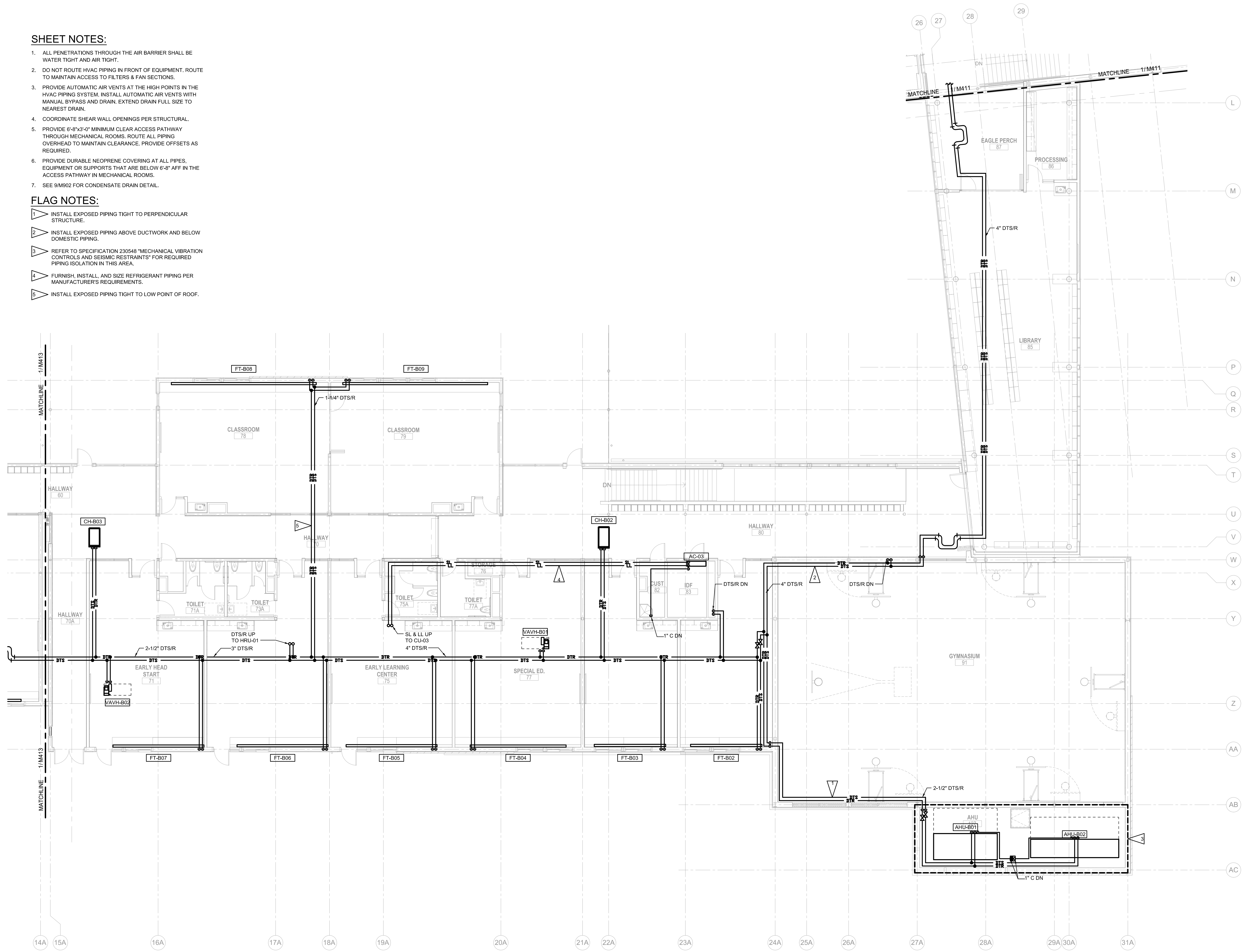
M411

SHEET NOTES:

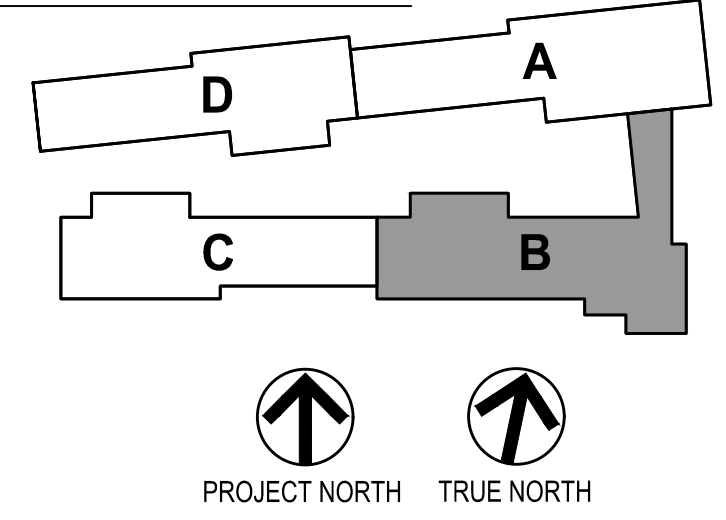
1. ALL PENETRATIONS THROUGH THE AIR BARRIER SHALL BE WATER TIGHT AND AIR TIGHT.
2. DO NOT ROUTE HVAC PIPING IN FRONT OF EQUIPMENT. ROUTE TO MAINTAIN ACCESS TO FILTERS & FAN SECTIONS.
3. PROVIDE AUTOMATIC AIR VENTS AT THE HIGH POINTS IN THE HVAC PIPING SYSTEM. INSTALL AUTOMATIC AIR VENTS WITH MANUAL BYPASS AND DRAIN. EXTEND DRAIN FULL SIZE TO NEAREST DRAIN.
4. COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.
5. PROVIDE 6'-8"x3'-0" MINIMUM CLEAR ACCESS PATHWAY THROUGH MECHANICAL ROOMS. ROUTE ALL PIPING OVERHEAD TO MAINTAIN CLEARANCE. PROVIDE OFFSETS AS REQUIRED.
6. PROVIDE DURABLE NEOPRENE COVERING AT ALL PIPES, EQUIPMENT OR SUPPORTS THAT ARE BELOW 6'-8" AFF IN THE ACCESS PATHWAY IN MECHANICAL ROOMS.
7. SEE 91M902 FOR CONDENSATE DRAIN DETAIL.

FLAG NOTES:

1. INSTALL EXPOSED PIPING TIGHT TO PERPENDICULAR STRUCTURE.
2. INSTALL EXPOSED PIPING ABOVE DUCTWORK AND BELOW DOMESTIC PIPING.
3. REFER TO SPECIFICATION 230549 "MECHANICAL VIBRATION CONTROLS AND SEISMIC RESTRAINTS" FOR REQUIRED PIPING ISOLATION IN THIS AREA.
4. FURNISH, INSTALL, AND SIZE REFRIGERANT PIPING PER MANUFACTURER'S REQUIREMENTS.
5. INSTALL EXPOSED PIPING TIGHT TO LOW POINT OF ROOF.



UPPER LEVEL - HVAC PIPING FLOOR PLAN - AREA B
SCALE: 1/8" = 1'-0"



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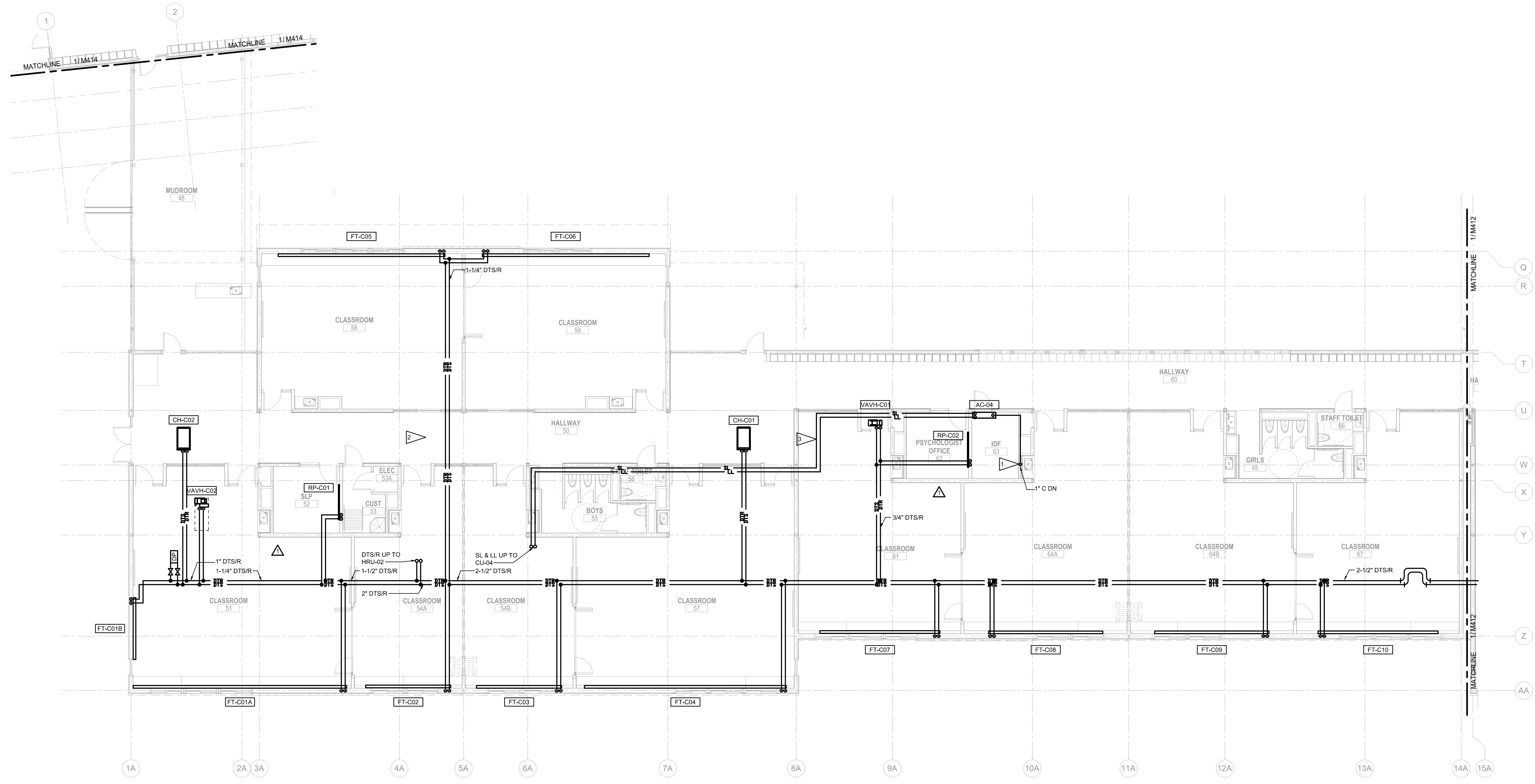
METRIX ENGINEERS
720 POKHILAND BLVD, SUITE 100
RENTON, WA 98057
TEL: 206.885.8200
WWW.METRIXENR.COM

**Port Townsend School District No. 50
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1637 GRANT STREET, PORT TOWNSEND, WA 98368

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Revisions		
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UPPER LEVEL - HVAC PIPING FLOOR PLAN - AREA B

M412



SHEET NOTES:

1. ALL PENETRATIONS THROUGH THE AIR BARRIER SHALL BE WATER TIGHT AND AIR TIGHT.
2. DO NOT ROUTE HVAC PIPING IN FRONT OF EQUIPMENT. ROUTE TO MAINTAIN ACCESS TO FILTERS & FAN SECTIONS.
3. PROVIDE AUTOMATIC AIR VENTS AT THE HIGH POINTS IN THE HVAC PIPING SYSTEM. INSTALL AUTOMATIC AIR VENTS WITH MANUAL BYPASS AND DRAIN. EXTEND DRAIN FULL SIZE TO NEAREST DRAIN.
4. COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.

FLAG NOTES:

1. CONNECT CONDENSATE PIPE TO PLUMBING FIXTURE TAILPIECE UPSTREAM OF P-TRAP.
2. INSTALL EXPOSED PIPING TIGHT TO LOW POINT OF ROOF.
3. FURNISH, INSTALL, AND SIZE REFRIGERANT PIPING PER MANUFACTURER'S REQUIREMENTS.

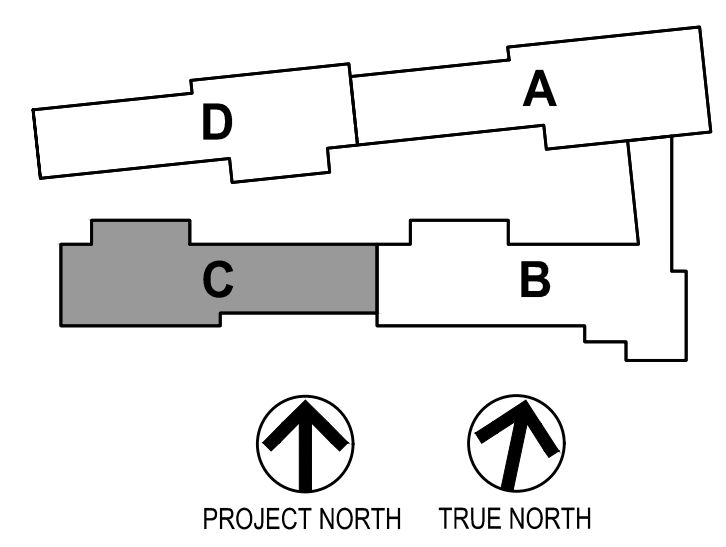
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UPPER LEVEL - HVAC PIPING FLOOR PLAN - AREA C
 SCALE: 1/8" = 1'-0"



**UPPER LEVEL -
 HVAC PIPING
 FLOOR PLAN -
 AREA C**

M413

**Port Townsend School District No. 50
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UPPER LEVEL -
HVAC PIPING
FLOOR PLAN -
AREA D

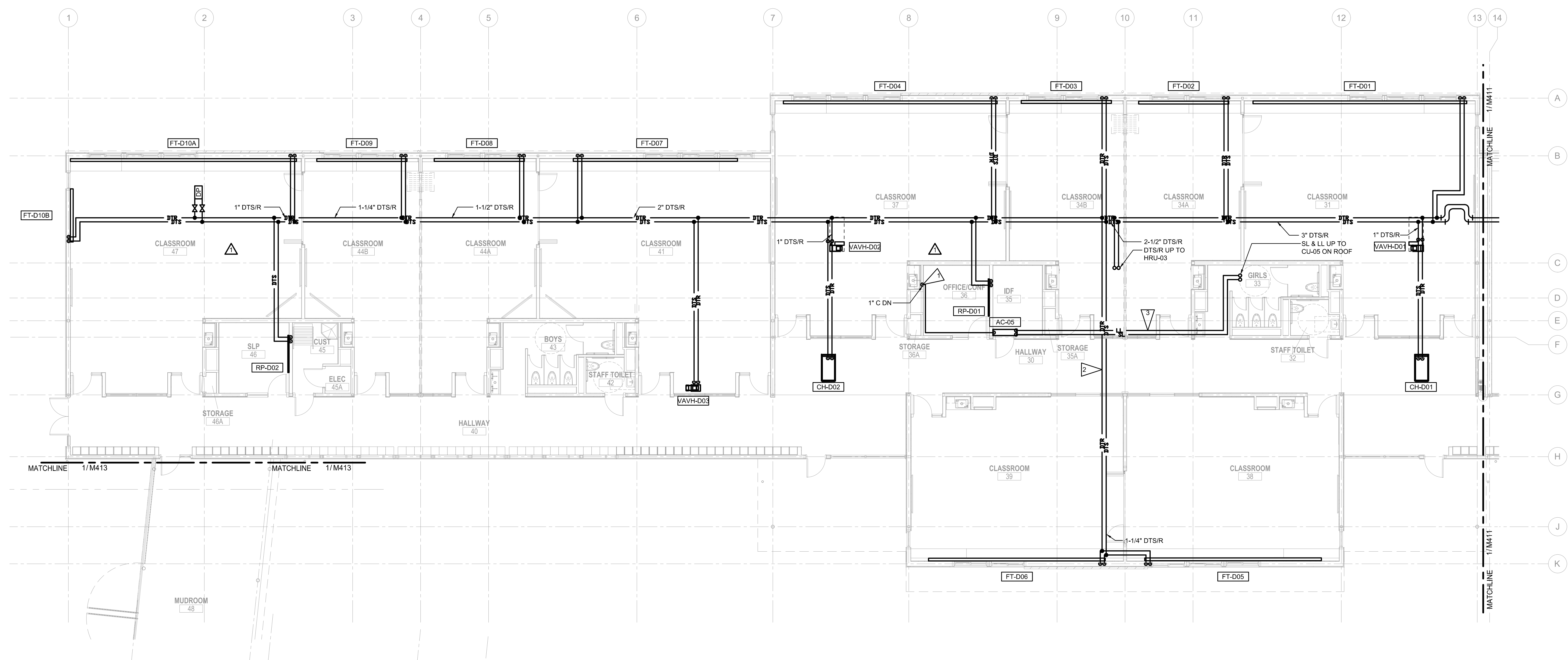
M414

SHEET NOTES:

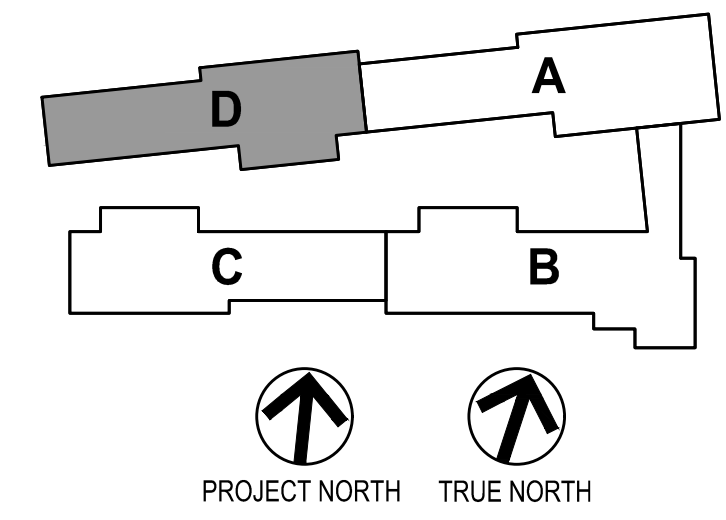
- ALL PENETRATIONS THROUGH THE AIR BARRIER SHALL BE WATER TIGHT AND AIR TIGHT.
- DO NOT ROUTE HVAC PIPING IN FRONT OF EQUIPMENT. ROUTE TO MAINTAIN ACCESS TO FILTERS & FAN SECTIONS.
- PROVIDE AUTOMATIC AIR VENTS AT THE HIGH POINTS IN THE HVAC PIPING SYSTEM. INSTALL AUTOMATIC AIR VENTS WITH MANUAL BYPASS AND DRAIN. EXTEND DRAIN FULL SIZE TO NEAREST DRAIN.
- COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.

FLAG NOTES:

- CONNECT CONDENSATE PIPE TO PLUMBING FIXTURE TAILPIECE UPSTREAM OF P-TRAP.
- INSTALL EXPOSED PIPING TIGHT TO LOW POINT OF ROOF.
- FURNISH, INSTALL, AND SIZE REFRIGERANT PIPING PER MANUFACTURER'S REQUIREMENTS.



UPPER LEVEL - HVAC PIPING FLOOR PLAN - AREA D
SCALE: 1/8" = 1'-0"



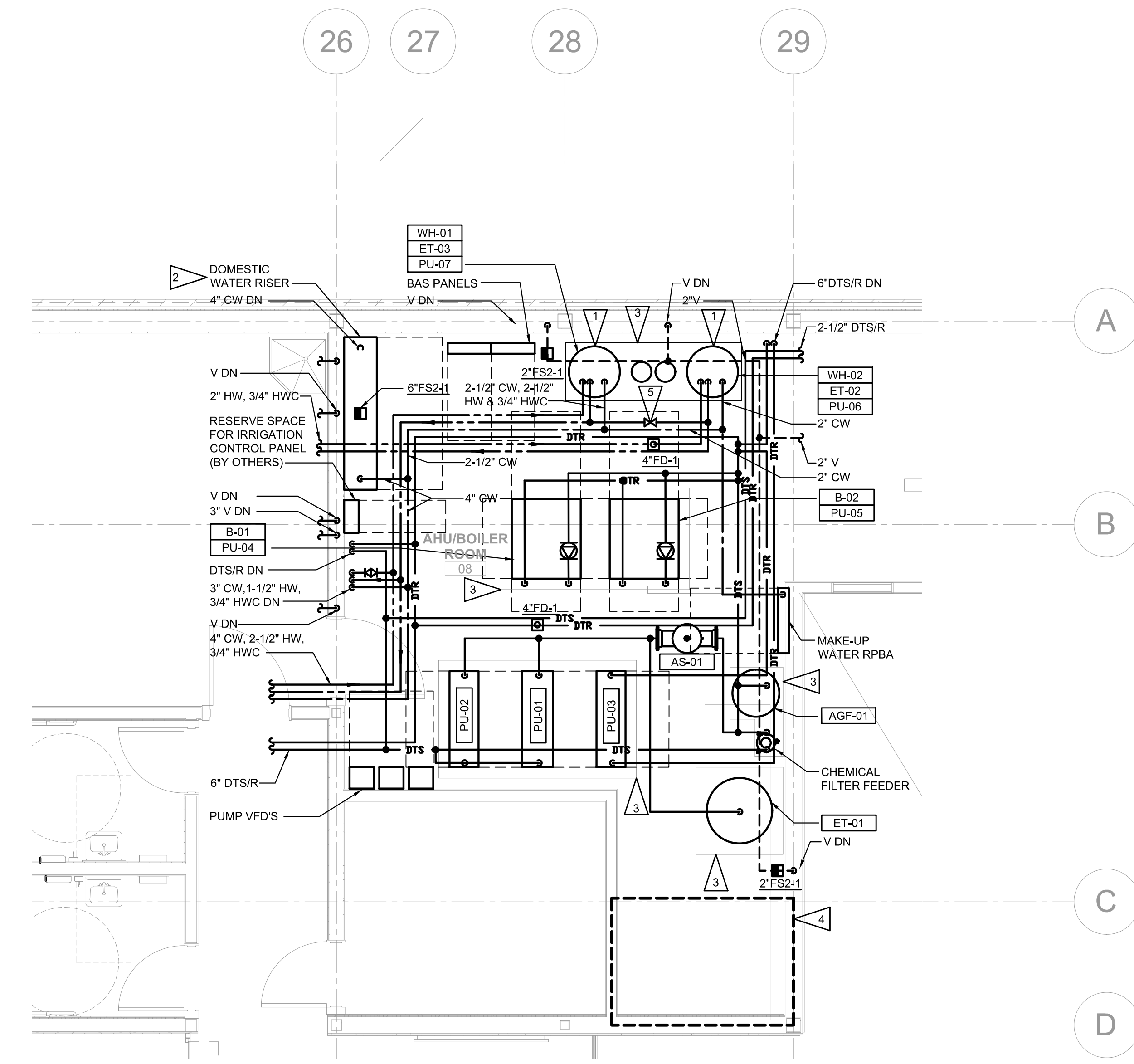
SHEET NOTES:

- SEE M211 & M411 FOR CONTINUATION OF PIPING.
- SEE M503 FOR HVAC IN THIS AREA.
- SEE M801 FOR HYDRONIC WATER PIPING RISER DIAGRAM.
- COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.
- REFER TO SPECIFICATION 230548 "MECHANICAL VIBRATION CONTROLS AND SEISMIC RESTRAINTS" FOR REQUIRED PIPING ISOLATION IN THIS AREA.

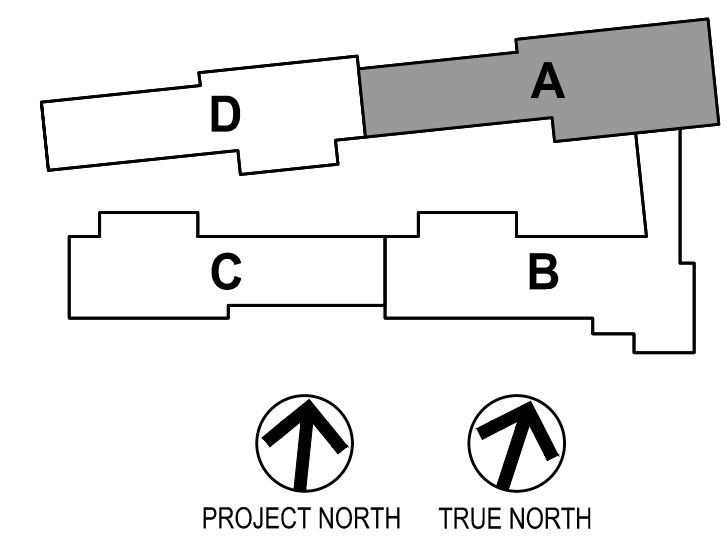
FLAG NOTES:

- SEE DETAIL 9/M903 FOR WATER HEATER DETAIL
- SEE DETAIL 5/M901 FOR DOMESTIC WATER SERVICE DETAIL
- PROVIDE HOUSEKEEPING PAD. REFER TO STRUCTURAL.
- SPACE RESERVED FOR DUCTWORK RISERS. SEE 1/M503.
- PROVIDE 2-1/2" CONNECTION WITH NORMALLY CLOSED SHUT-OFF VALVE BETWEEN HOT WATER PIPING SYSTEMS DOWNSTREAM OF SYSTEM SHUT-OFF VALVES.

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1 ENLARGED BOILER ROOM PLAN
SCALE: 1/4" = 1'-0"



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ENLARGED
BOILER ROOM
PLAN

M501

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ENLARGED
KITCHEN PLAN &
LPG RISER
DIAGRAM

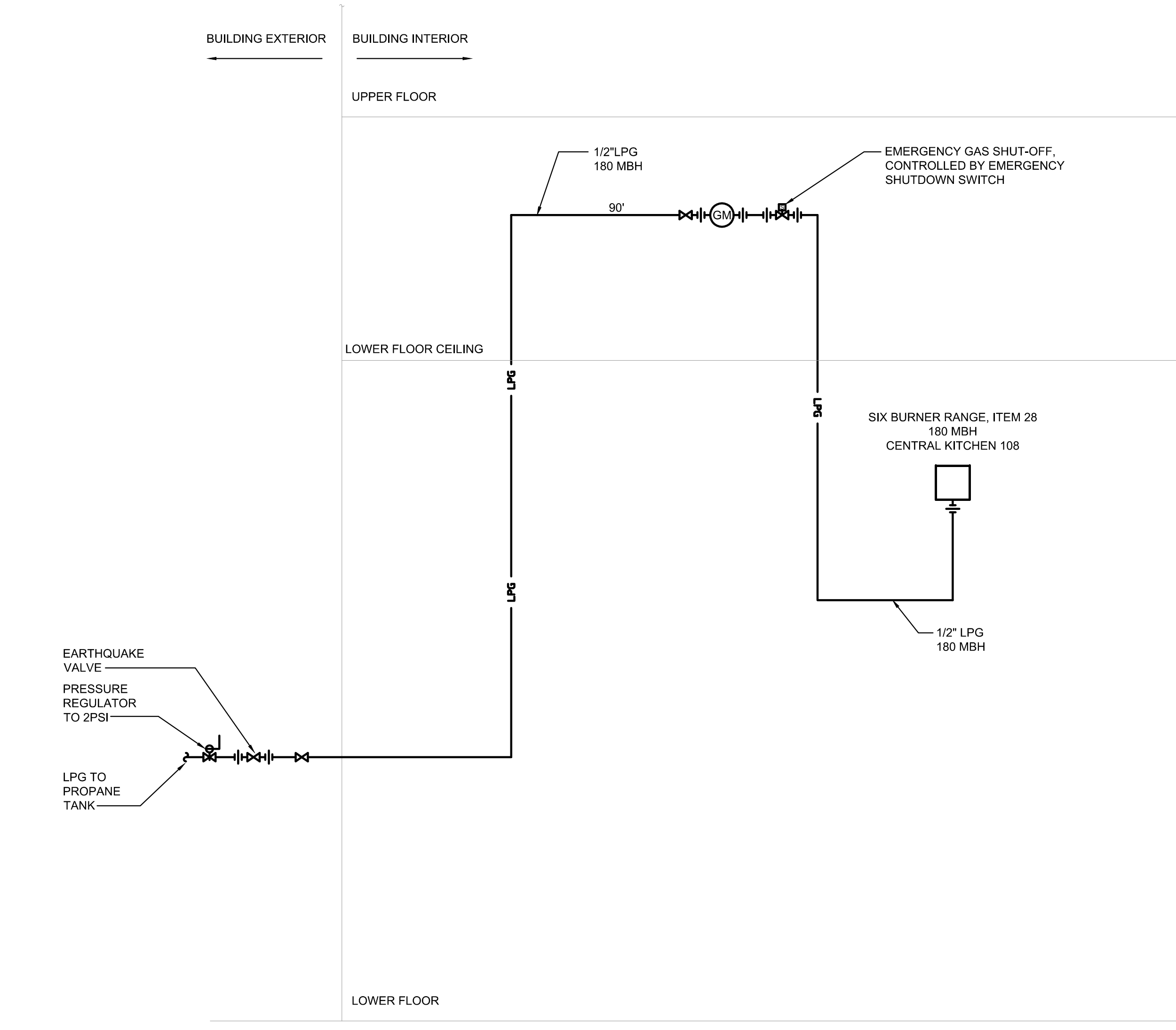
M502

SHEET NOTES:

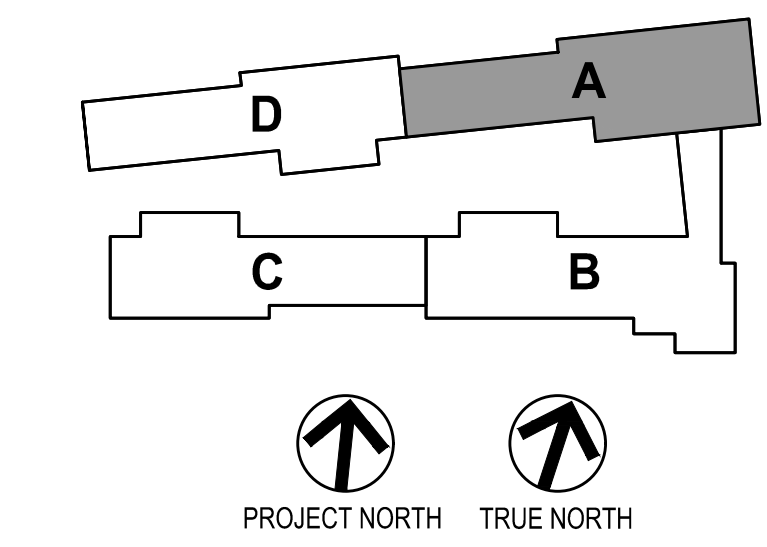
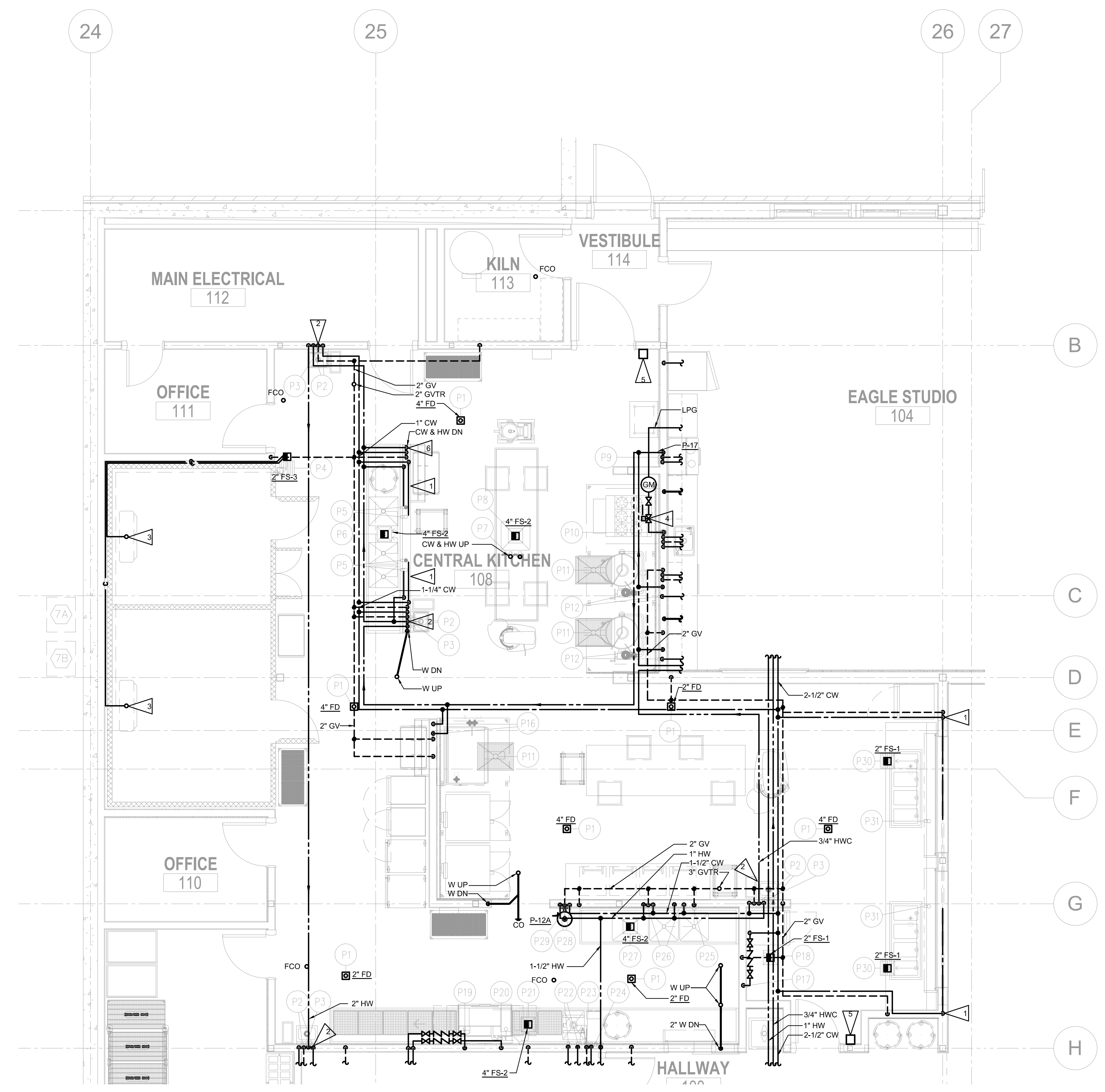
1. SEE FOOD SERVICE DRAWINGS FOR EQUIPMENT CONNECTION SCHEDULE.
2. SEE FOOD SERVICE DRAWINGS FOR INDIRECT WASTE PIPING LAYOUT FROM EQUIPMENT TO FLOOR SINKS.
3. LOCATE FLOOR SINKS PER FOOD SERVICE PLANS.
4. COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.
5. SEE M201 FOR CONTINUATION OF PIPING.
6. SEE M301 FOR HVAC IN THIS AREA.
7. SEE 2M502 FOR LPG PIPING SIZES.
8. PROVIDE PEX PIPING FROM NEAREST TRAP PRIMER TO FLOOR DRAINS, FLOOR SINKS AND FUNNEL FLOOR DRAINS.
9. SEE 2M503 FOR WATER HAMMER ARRESTORS.
10. SEE 6M902 FOR GAS CONNECTION TO EQUIPMENT DETAIL.

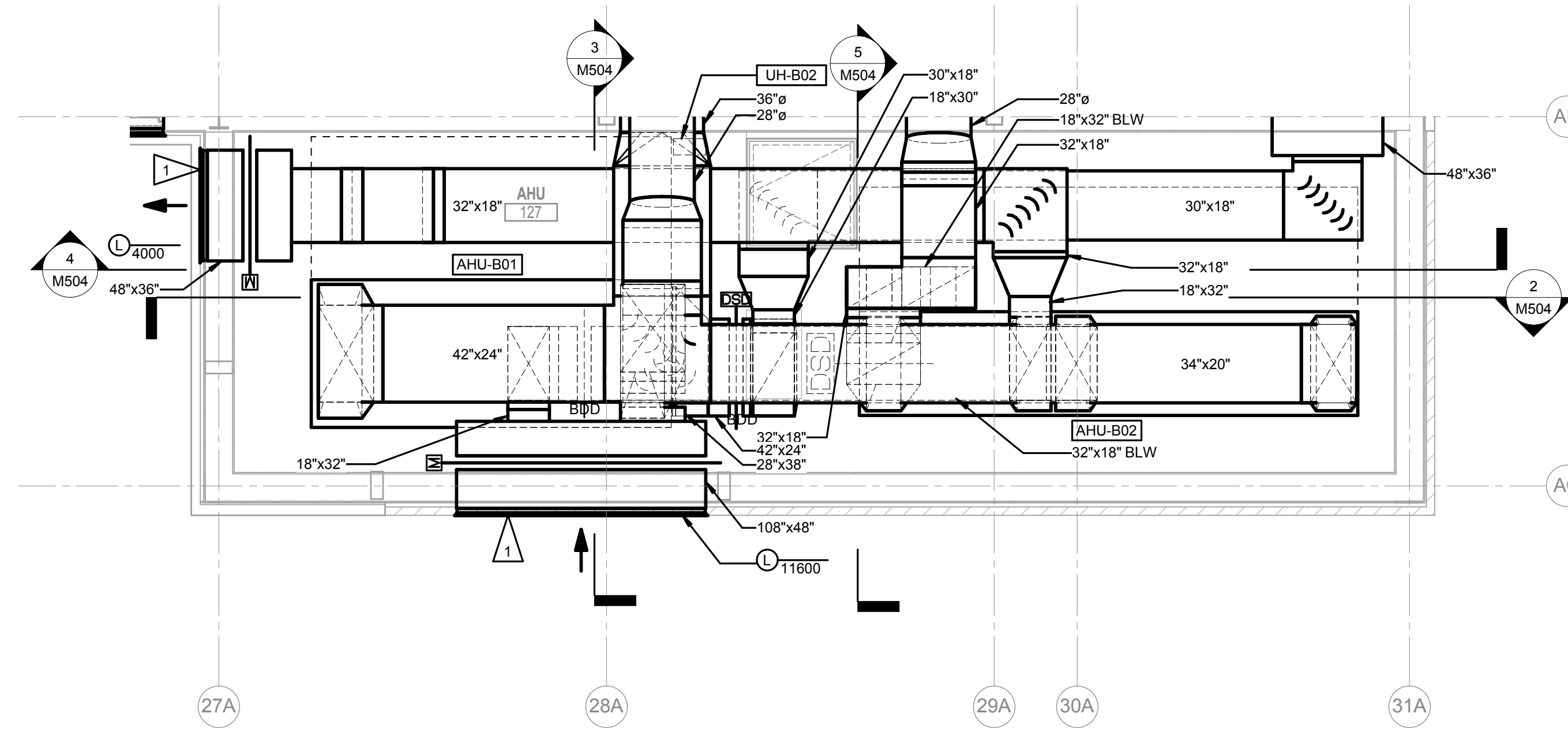
FLAG NOTES:

1. INSTALL DOMESTIC HOT AND COLD PIPING TO SINK FAUCET BELOW OPENING IN WALL.
2. PROVIDE INDIVIDUAL FIXTURE WATER TEMPERING VALVES. SEE DETAIL 1M903 LOCAL MIXING VALVE DETAIL.
3. INSTALL CONDENSATE IN AIRSPACE BEHIND COOLER/FREEZER. ROUTE CONDENSATE LINES SEPARATELY. DO NOT COMBINE THEM. PROVIDE HEAT TRACE FOR PORTION OF CONDENSATE LINES WITHIN COOLER/FREEZER.
4. PROVIDE EMERGENCY GAS SHUT OFF SOLENOID VALVE. VALVE SHALL BE NORMALLY CLOSED. SOLENOID POWER SHALL BE WIRED THROUGH EMERGENCY GAS SHUT OFF SWITCHES.
5. PROVIDE EMERGENCY GAS SHUT OFF SWITCH. ALL SWITCHES SHALL BE POWERED FROM DEDICATED CIRCUIT. LABEL SWITCH.
6. DOMESTIC HOT AND COLD WATER DOWN TO SINK FAUCET AT ISLAND WORK STATION.

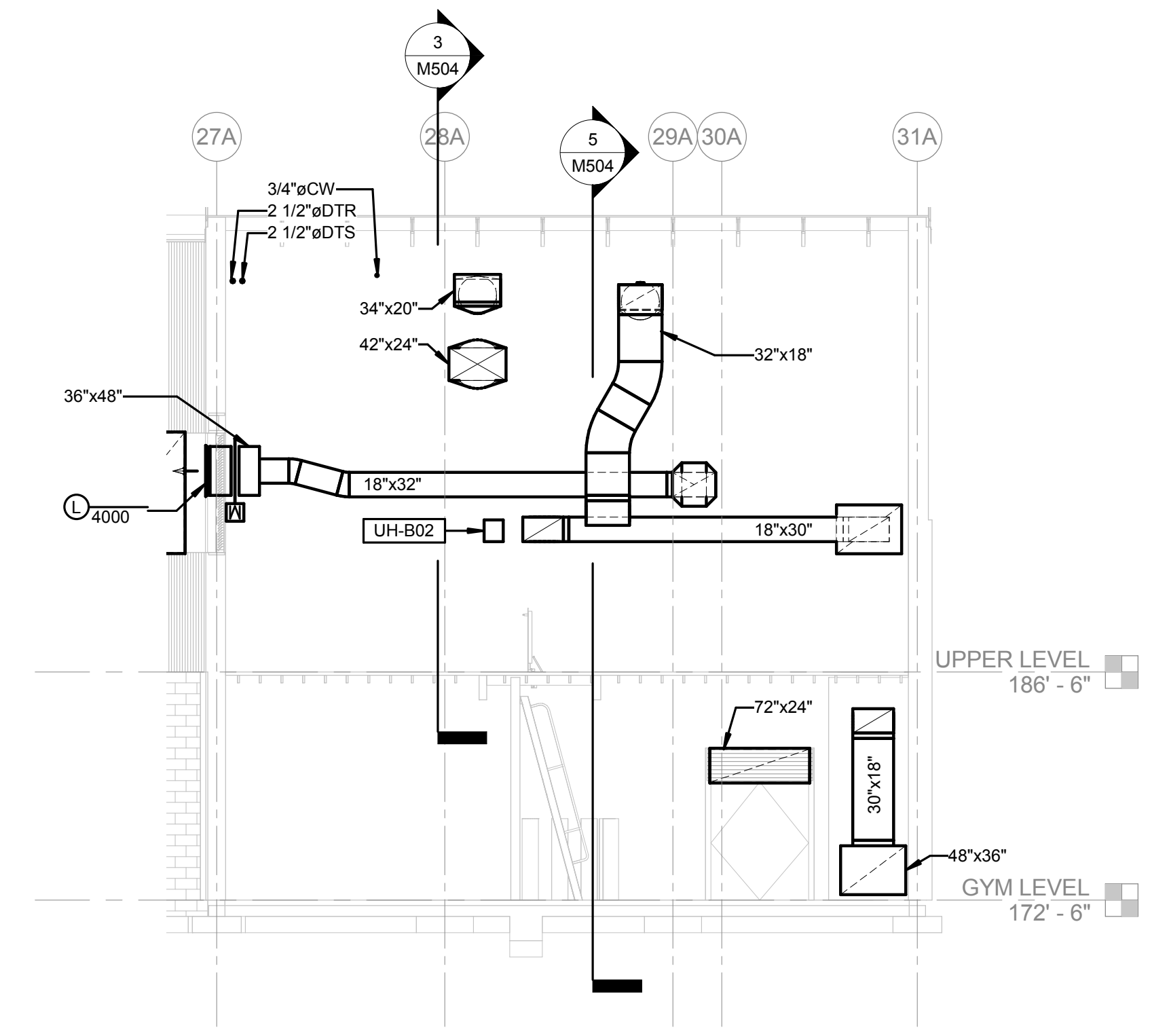


1 ENLARGED KITCHEN PLAN
SCALE: 1/4" = 1'-0"

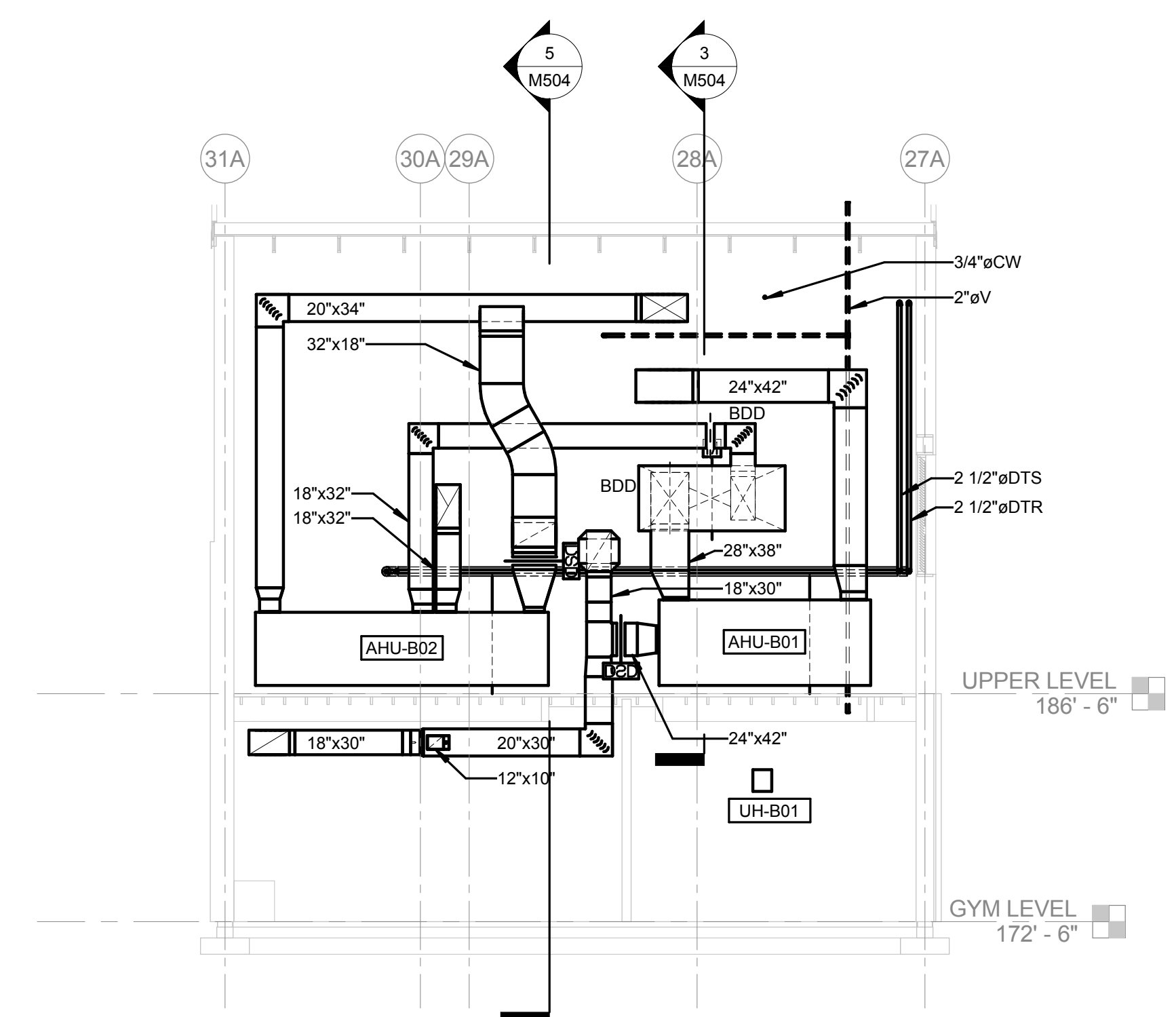




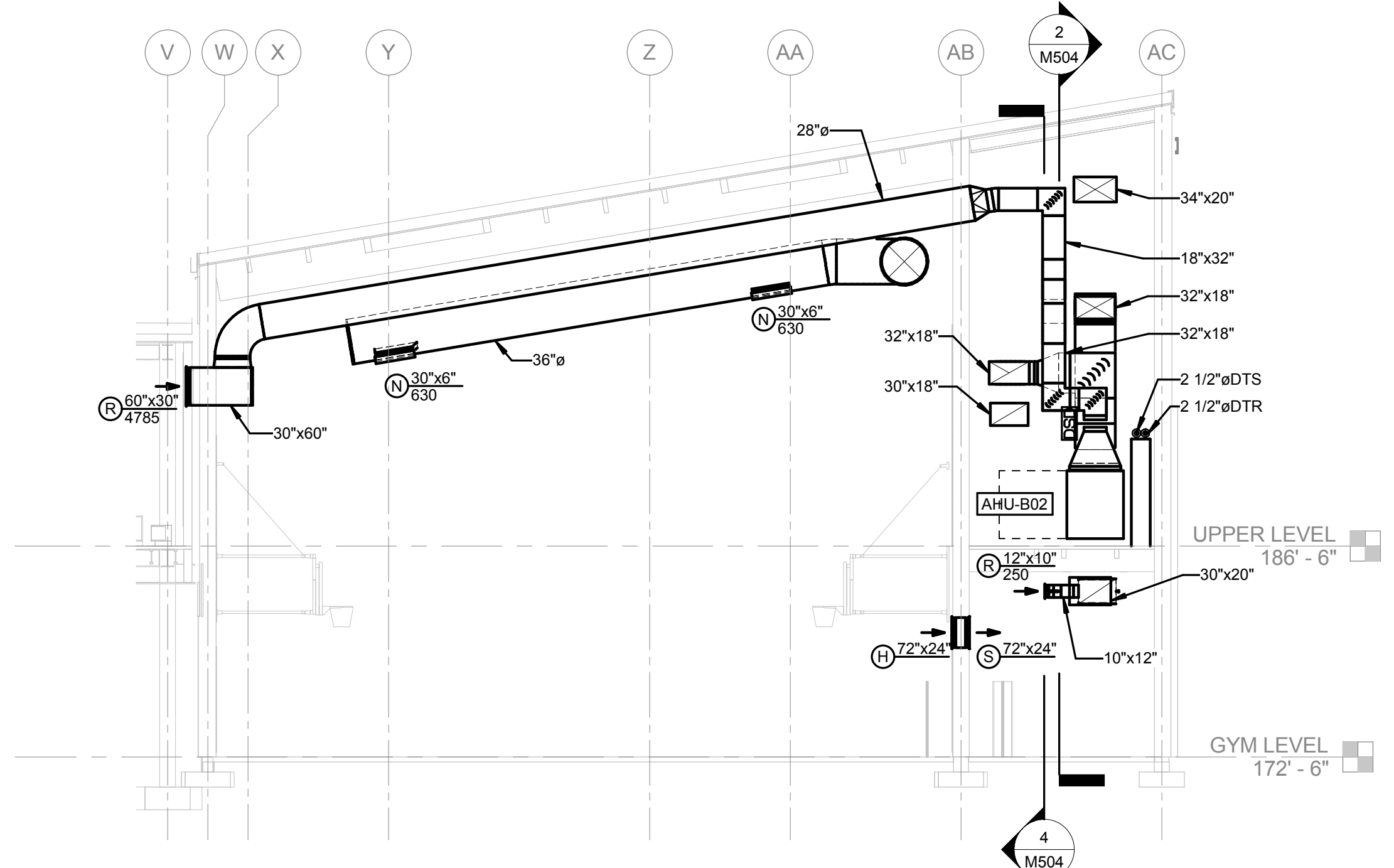
1 ENLARGED AHU 127 HVAC PLAN
SCALE: 1/4" = 1'-0"



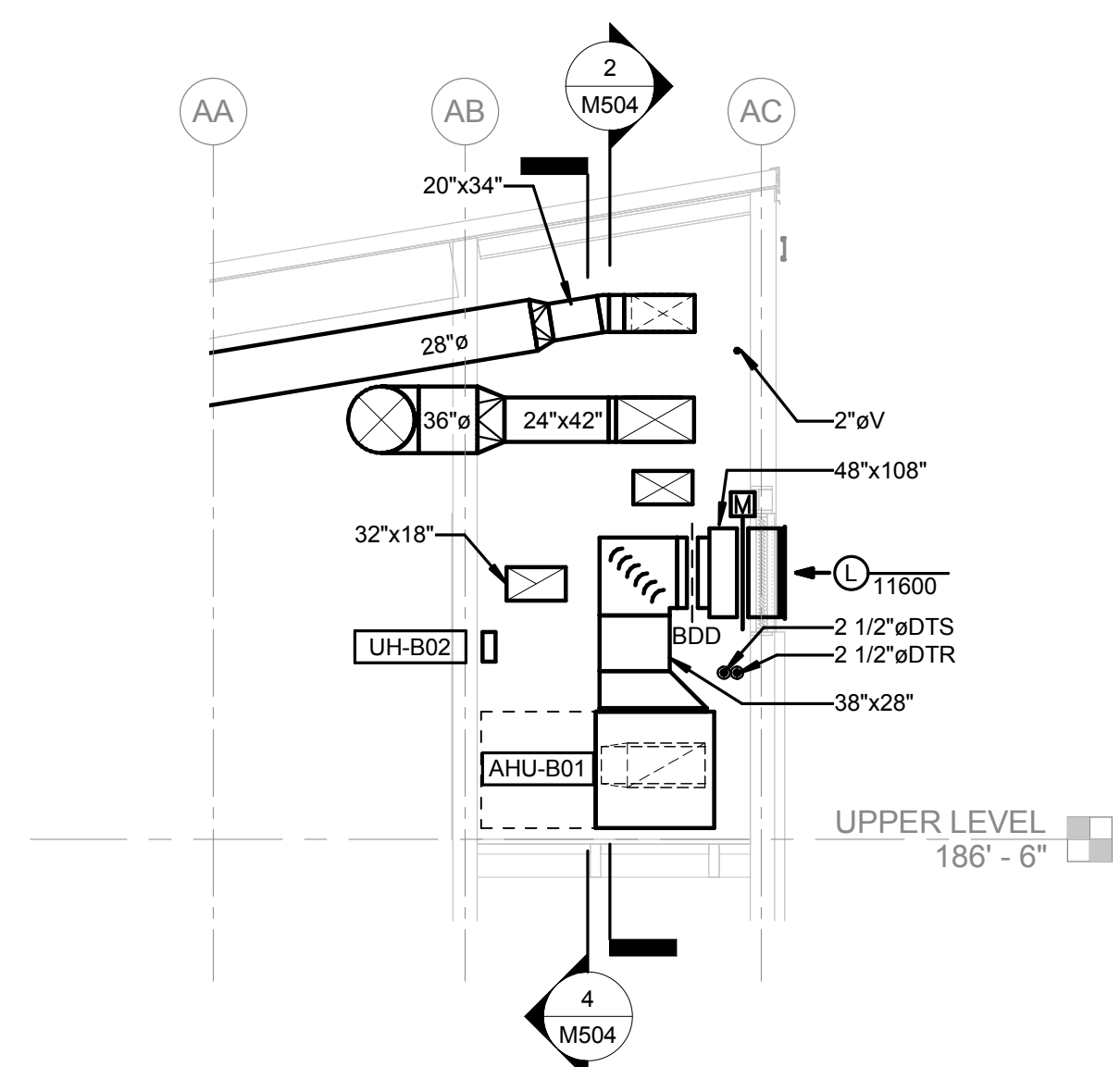
4 AHU 127 MECHANICAL SECTION - NORTH
SCALE: 1/8" = 1'-0"



2 AHU 127 MECHANICAL SECTION - SOUTH
SCALE: 1/8" = 1'-0"



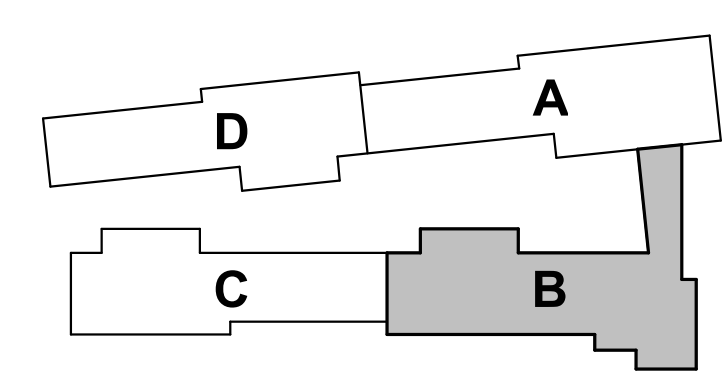
5 AHU 127 MECHANICAL SECTION - EAST
SCALE: 1/8" = 1'-0"



3 AHU 127 MECHANICAL SECTION - EAST
SCALE: 1/8" = 1'-0"

- SHEET NOTES**
- ALL PENETRATIONS THROUGH THE AIR BARRIER SHALL BE WATER TIGHT AND AIR TIGHT.
 - PLENUMS LOCATED BEHIND LOUVERS SHALL BE SIZED TO MATCH LOUVER SIZE UNLESS OTHERWISE NOTED. LOUVER SIZES INDICATED ARE FOR REFERENCE ONLY. CONFIRM WITH ARCH LOUVER SCHEDULE.
 - PROVIDE ACCESS DOORS IN DUCTWORK FOR ACCESS TO BACKDRAFT, FIRE, SMOKE, AND FIRE/SMOKE DAMPERS.
 - PROVIDE ACCESS DOOR IN ALL AIR PLENUMS OR DUCTWORK LOCATED BEHIND LOUVERS FOR MOTORIZED DAMPER ACCESS. PROVIDE 24x24 ACCESS DOOR UNLESS OTHERWISE NOTED.
 - COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.
 - PROVIDE 6'-8"x3'-0" MINIMUM CLEAR ACCESS PATHWAY THROUGH MECHANICAL MEZZANINE. ROUTE ALL DUCTWORK TO MAINTAIN CLEARANCE. PROVIDE OFFSETS AS REQUIRED.
 - SEAL MECHANICAL ROOM FLOOR PENETRATIONS WATER TIGHT.
 - SEE M501 FOR ENLARGED BOILER PLAN FOR PIPING AND PLUMBING AND HVAC PIPING EQUIPMENT IN AHU/BOILER 08.
 - REFER TO SPECIFICATION 230548 "MECHANICAL VIBRATION CONTROLS AND SEISMIC RESTRAINTS" FOR REQUIRED DUCTWORK AND EQUIPMENT ISOLATION IN THESE AREAS.
 - COORDINATE CLEAR AND MAINTAINABLE ACCESS TO ALL ABOVE CEILING EQUIPMENT. DASHED LINES INDICATE MINIMUM REQUIRED CLEAR SERVICE AREAS.

- FLAG NOTES**
- COVER BACK SIDE OF UNUSED PORTION OF LOUVER WITH GALVANIZED SHEET METAL BLANK OFF PANEL AND CAULK WEATHER TIGHT. PROVIDE RIGID BOARD DUCT INSULATION SPECIFIED FOR OUTSIDE AIR DUCT. PAINT OUTSIDE FACE OF BLANK OFF PANEL BLACK PRIOR TO INSTALLATION.



PROJECT NORTH
TRUE NORTH

BID SET 2

**Port Townsend School District No. 50
GRANT STREET ELEMENTARY SCHOOL
REPLACEMENT PROJECT**
1637 GRANT STREET, PORT TOWNSEND, WA 98368

Date:	5/1/17	
Job No.:	21528.00	
Drawn By:	Author	
Checked by:	Checker	
Revisions		
#	Date	Description

ENLARGED
MECHANICAL ROOM
HVAC PLANS &
SECTIONS - AREA B

M504

integrus
ARCHITECTURE
18 SOUTH GARDNER, PORT TOWNSEND, WA 98368
LEPHONE: 360.526.8881 FAX: 360.526.2144

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ENGINEERS
10000 156TH AVE SW SUITE 100
RENTON, WA 98057
www.metrixeng.com

THIS DRAWING HAS BEEN UPDATED TO INCORPORATE CHANGES MADE TO THE BID DOCUMENTS BY ADDENDA. IT IS ISSUED FOR THE CONVENIENCE OF THE CONTRACTOR AND DOES NOT REPLACE THE CONTRACT DOCUMENTS AS ENUMERATED IN THE CONTRACT.

SHEET NOTES

1. ALL DUCTWORK IS CONCEALED UNLESS NOTED OTHERWISE.
2. ALL PENETRATIONS THROUGH THE AIR BARRIER SHALL BE WATER TIGHT AND AIR TIGHT.
3. PROVIDE ACCESS DOORS IN DUCTWORK FOR ACCESS TO BACKDRAFT, FIRE, SMOKE, AND FIRE/SMOKE DAMPERS.
4. PROVIDE ACCESS DOOR IN ALL AIR PLENUMS OR DUCTWORK LOCATED BEHIND LOUVERS FOR MOTORIZED DAMPER ACCESS. PROVIDE 24x24 ACCESS DOOR UNLESS OTHERWISE NOTED.
5. COORDINATE SHEAR WALL OPENINGS PER STRUCTURAL.
6. PLENUMS LOCATED BEHIND LOUVERS SHALL BE SIZED TO MATCH LOUVER SIZE UNLESS OTHERWISE NOTED. LOUVER SIZES INDICATED ARE FOR REFERENCE ONLY. CONFIRM WITH ARCH LOUVER SCHEDULE.
7. SEE 1/8904 FOR EXPOSED ROUND METAL DUCT HANGER DETAIL.
8. COORDINATE CLEAR AND MAINTAINABLE ACCESS TO ALL ABOVE CEILING EQUIPMENT. DASHED LINES INDICATE MINIMUM REQUIRED CLEAR SERVICE AREAS.

FLAG NOTES

1. INSTALL EXPOSED DUCTWORK TIGHT TO LOW POINT OF ROOF.
2. INSTALL EXPOSED DUCTWORK TIGHT TO STRUCTURE AND SLOPED WITH ROOF.

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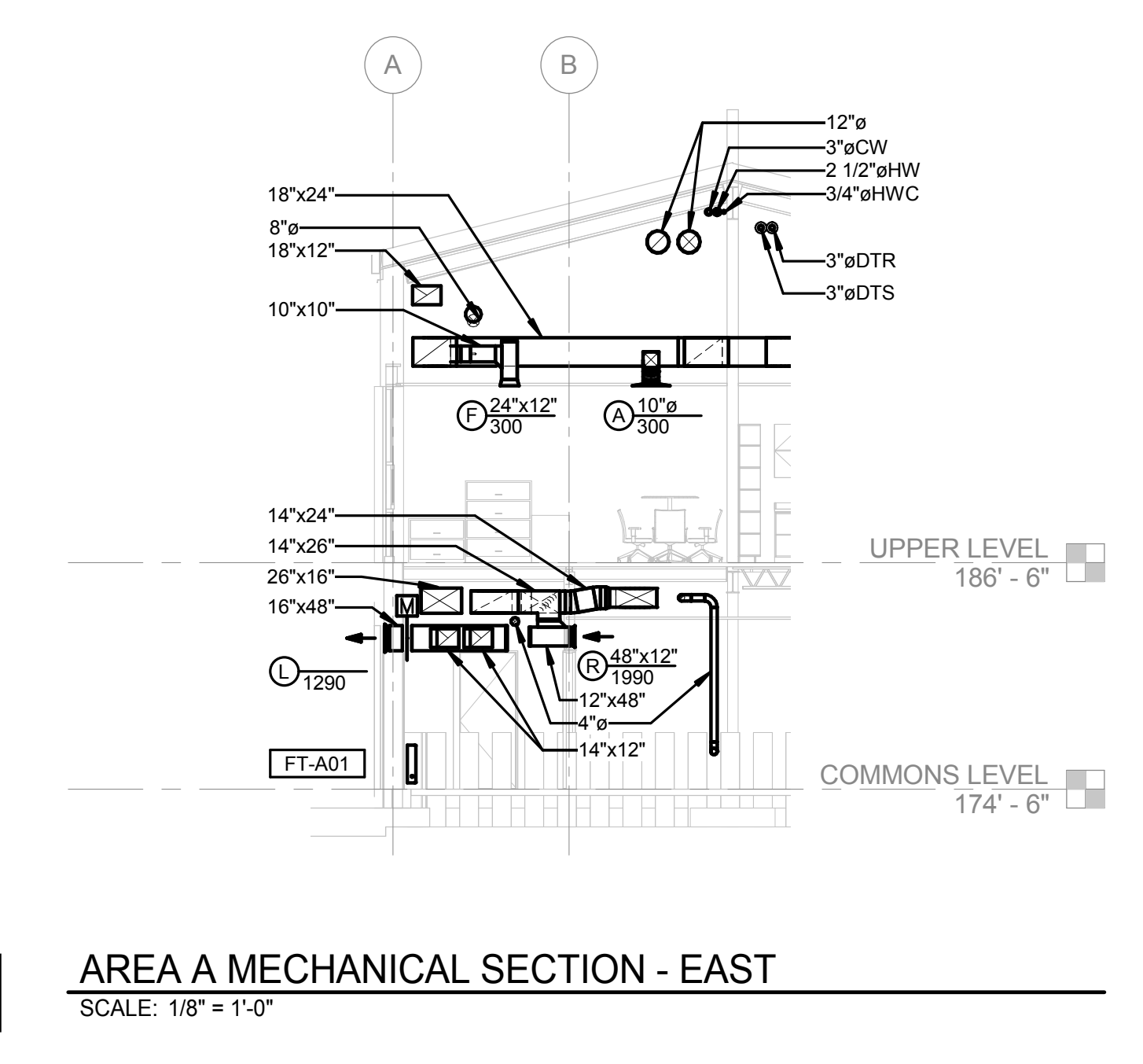
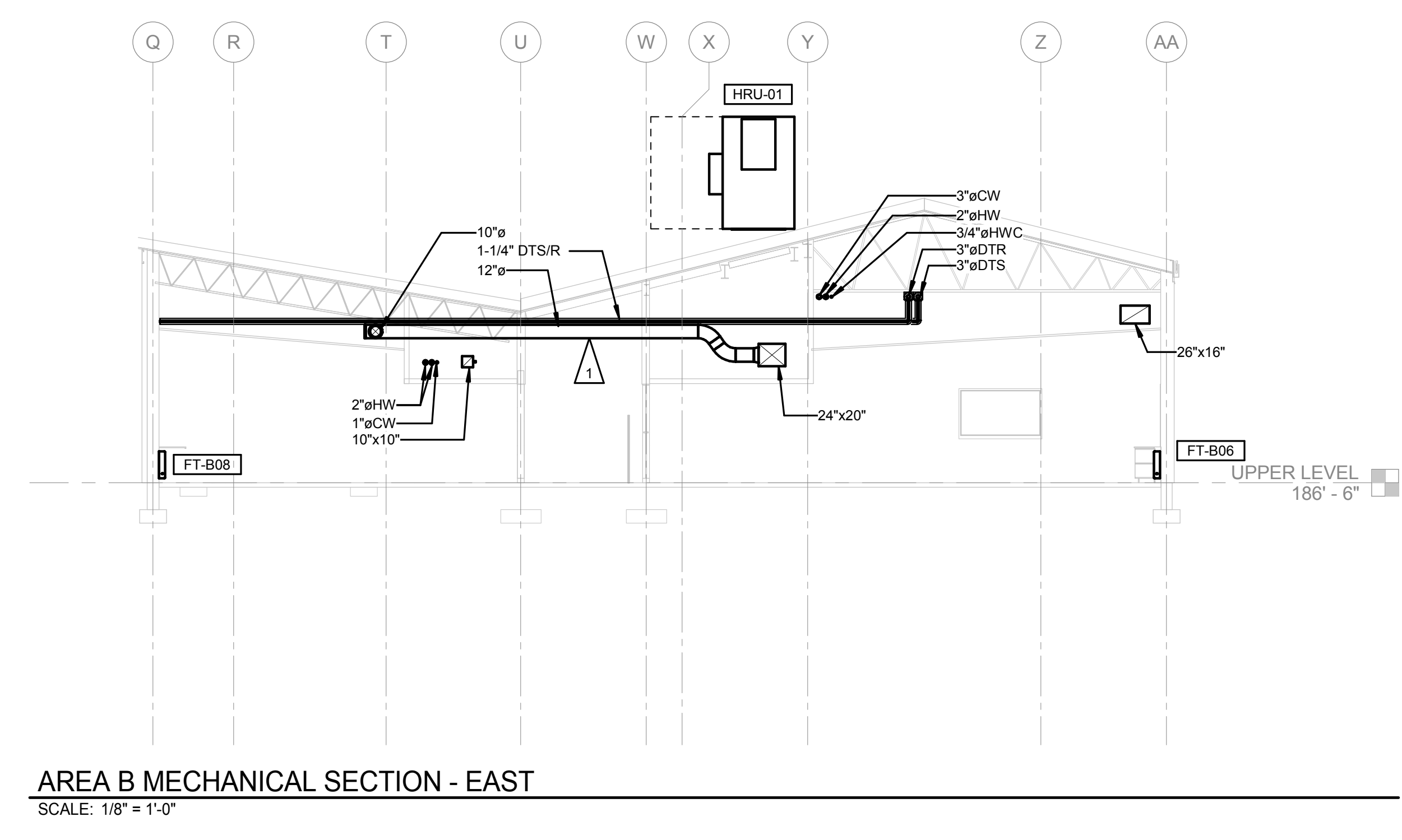
METRIX ENGINEERS
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 RENTON, WA 98057
 P: 206.885.8881 F: 206.885.2142
 WWW.METRIXENG.COM

**Port Townsend School District No. 50
 GRANT STREET ELEMENTARY SCHOOL
 REPLACEMENT PROJECT**
 1637 GRANT STREET, PORT TOWNSEND, WA 98368

Date:	5/1/17	
Job No.:	21528.00	
Drawn By:	KK	
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Revisions		
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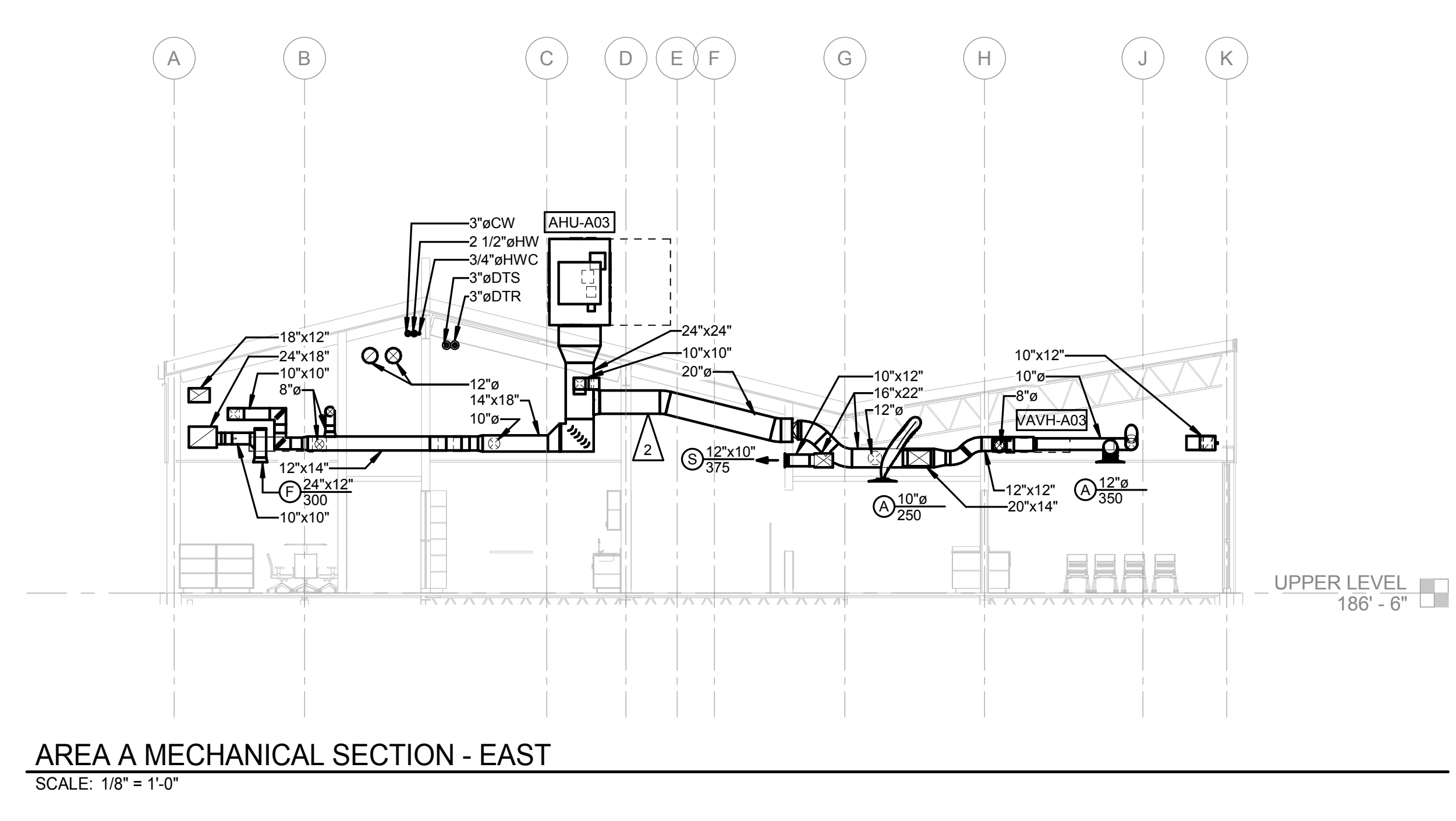
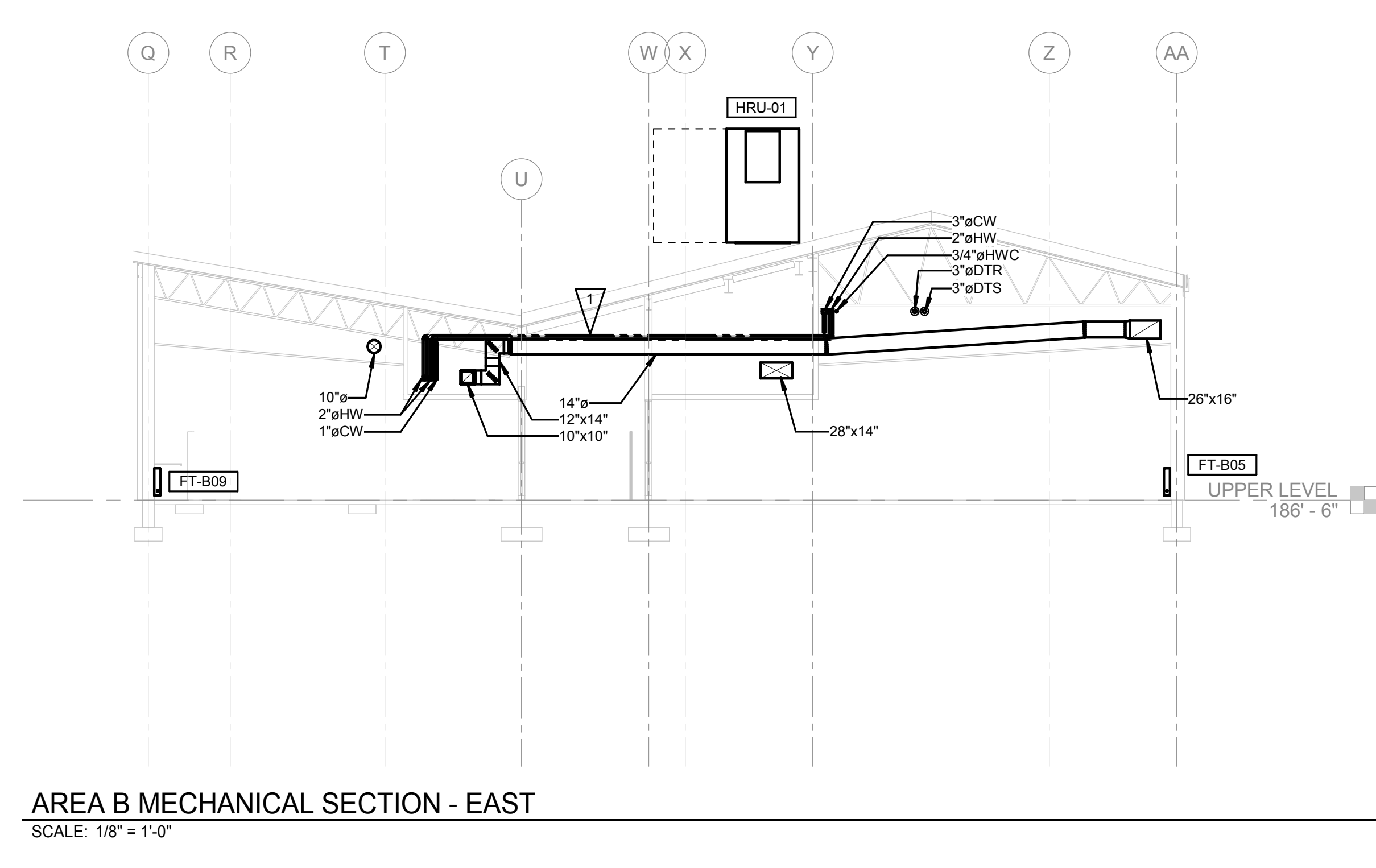
MECHANICAL SECTIONS

M505



3 AREA B MECHANICAL SECTION - EAST
 SCALE: 1/8" = 1'-0"

1 AREA A MECHANICAL SECTION - EAST
 SCALE: 1/8" = 1'-0"



4 AREA B MECHANICAL SECTION - EAST
 SCALE: 1/8" = 1'-0"

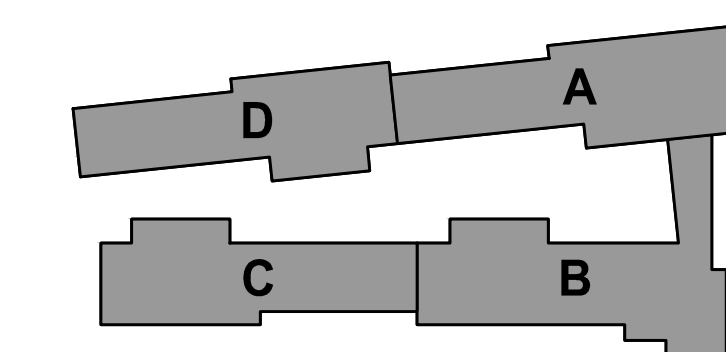
2 AREA A MECHANICAL SECTION - EAST
 SCALE: 1/8" = 1'-0"

SHEET NOTES:

1. SEE 7/M903 FOR PLUMBING VENT THROUGH ROOF DETAIL.
2. SEE 9/M905 FOR ROOF MOUNTED CONDENSING UNIT INSTALLATION DETAIL.
3. SEE 9/M906 FOR ROOFTOP UNIT DETAIL AND 6/M901 FOR ROOF CURB DETAIL.



OVERALL MECHANICAL ROOF PLAN
SCALE: 1/16" = 1'-0"



PROJECT NORTH TRUE NORTH

**Port Townsend School District No. 50
GRANT STREET ELEMENTARY SCHOOL
REPLACEMENT PROJECT**
1637 GRANT STREET, PORT TOWNSEND, WA 98368

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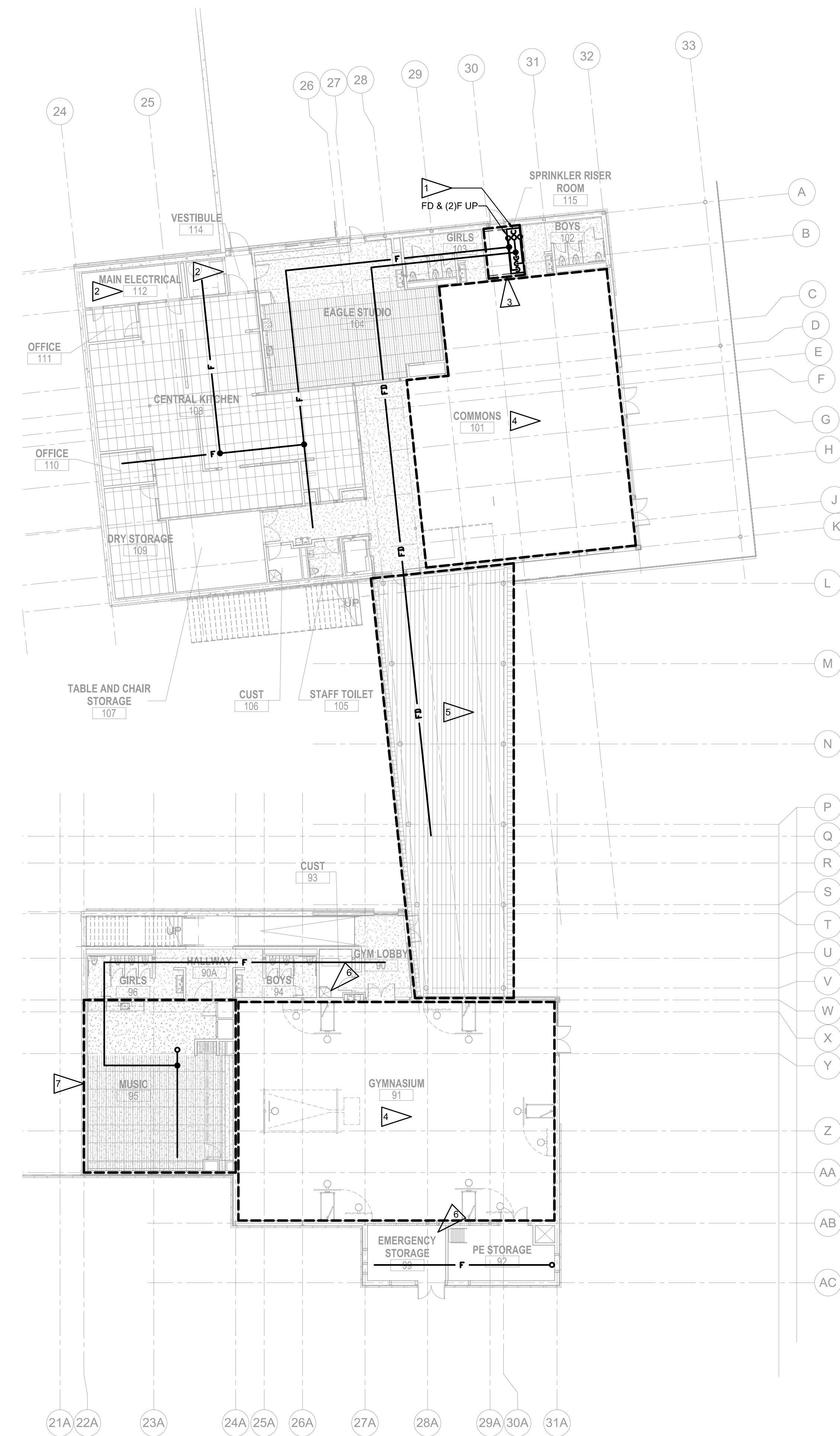
OVERALL MECHANICAL ROOF PLAN

M600

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METRIX ENGINEERS
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TEL: 206.885.8200
WWW.METRIXENR.COM

integrus ARCHITECTURE
117 SOUTH MAIN STREET, SUITE 100, SEATTLE, WA 98144
TELEPHONE: 206.462.5173, FAX: 206.462.5178



LOWER LEVEL - FIRE PROTECTION FLOOR PLAN
 SCALE: 1/16" = 1'-0"

SHEET NOTES:

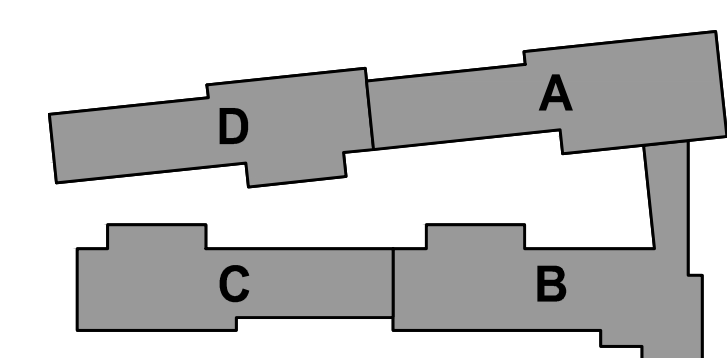
1. PROVIDE FIRE SPRINKLER SYSTEM THROUGHOUT ALL AREAS OF THE BUILDING.
2. FIRE SPRINKLER SYSTEM IS A BIDDER DESIGNED SYSTEM. ROUTING OF CONCEALED FIRE SPRINKLER PIPING ON THESE DRAWINGS IS FOR REFERENCE ONLY, UNLESS NOTED OTHERWISE.
3. SEE DIV 21 SPECIFICATIONS FOR DESIGN GUIDELINES.
4. SPRINKLER SYSTEMS SHALL MEET OR EXCEED NFPA 13 AND AUTHORITY HAVING JURISDICTION.
5. WET FIRE SPRINKLER COVERAGE SHALL INCLUDE ABOVE CEILING EXCEEDING NFPA 13 REQUIREMENTS.
6. SEE ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
7. PROVIDE COMPLETE SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL PRIOR TO SUBMITTING TO THE JURISDICTION. SPRINKLER PIPING INSTALLED WITHOUT PROPER COORDINATION AND APPROVAL BY ARCHITECT SHALL BE SUBJECT TO REMOVAL AND REINSTALLATION AT NO COST.
8. PROVIDE DRY SPRINKLER COVERAGE AT EXTERIOR COMPONENTS OF BUILDING, SUCH AS CANOPIES AND OVERHANGS WHERE REQUIRED BY NFPA 13. USE SIDEWALL DRY HEADS WHERE EVER POSSIBLE. PROVIDE DRY SPRINKLER SYSTEM IF NECESSARY.
9. ALL FIRE SPRINKLER PIPING IN OCCUPIED, FINISHED SPACES SHALL BE CONCEALED UNLESS NOTED ON THE DRAWINGS.
10. THERE SHALL BE NO EXPOSED PIPING IN OCCUPIED SPACES EXCEPT WHERE INDICATED ON THESE DRAWINGS.
11. EXPOSED PIPING SHALL BE LOCATED ONLY AS INDICATED ON THE DRAWINGS OR AS COORDINATED DIRECTLY WITH THE ARCHITECT DURING SHOP DRAWING REVIEW. PIPING SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION. SPRINKLER PIPING INSTALLED WITHOUT PROPER COORDINATION AND APPROVAL BY ARCHITECT SHALL BE SUBJECT TO REMOVAL AND REINSTALLATION AT NO COST.
12. PROVIDE FIRE SPRINKLER COVERAGE AT ELEVATOR HOISTWAY IF REQUIRED BY NFPA 13, § 15.5.
13. FIRE SPRINKLER PIPING IN MECHANICAL SPACES AND MEZZANINES SHALL NOT BE ROUTED IN A MANNER THAT INHIBITS ACCESS TO MECHANICAL, PLUMBING, ELECTRICAL OR CONTROLS EQUIPMENT. PIPING SHALL NOT BLOCK ACCESS TO OR CREATE A TRIPPING HAZARD ON MAINTENANCE WALKWAYS OR PATHWAYS.
14. COORDINATE FIRE SPRINKLER PIPING ROUTING WITH OTHER TRADES. DUCTWORK ROUTING TAKES PRECEDENCE OVER ALL OTHER TRADES, INCLUDING FIRE SPRINKLER PIPING. SPRINKLER PIPING INSTALLED WITHOUT PROPER COORDINATION SHALL BE SUBJECT TO REMOVAL AND REINSTALLATION AT NO COST.
15. FIRE SPRINKLER PIPING SHALL NOT BE ROUTED OVER ELECTRICAL PANELS, SWITCHGEAR OR SIMILAR ELECTRICAL DEVICES. FIRE SPRINKLER MAIN PIPING SHALL NOT BE ROUTED THROUGH TELECOMMUNICATIONS ROOMS (MDF OR IDF ROOMS).
16. PROVIDE SEISMIC FLEXIBLE SPRINKLER HOSE FITTINGS FOR CONNECTIONS TO SPRINKLER HEADS IN CEILING.
17. PROVIDE LOW POINT DRAINS AS REQUIRED BY NFPA 13. LOW POINT DRAIN LOCATIONS SHALL BE AS LOCATED ON THE DRAWINGS OR AS COORDINATED WITH THE ARCHITECT DURING SHOP DRAWING REVIEW.
18. PROVIDE DRY SPRINKLER COVERAGE AT COOLERS/FREEZERS.
19. PROVIDE "HIGH" TEMPERATURE CLASSIFICATION FOR SPRINKLERS ABOVE KILNS.
20. SEE 1/M901 FOR FIRE SPRINKLER HEAD LOCATION DETAIL.

FLAG NOTES:

1. FIRE HEADER WITH SPRINKLER TEST DRAIN. SEE DETAILS 2/M901 AND 3/M901. SEE M101 FOR FOUNDATION PLAN THIS AREA.
2. PROVIDE HIGH TEMPERATURE SPRINKLER HEADS IN THIS AREA.
3. MAINTAIN A MINIMUM OF 6'-8" HIGH ACCESS PATHWAY FOR MAINTENANCE.
4. SEE M702 FOR FIRE PROTECTION THIS AREA.
5. PROVIDE DRY SPRINKLER COVERAGE THIS AREA AS REQUIRED BY AHJ.
6. LOCATE AUXILIARY DRAIN AT FFD IN THIS AREA, IF REQUIRED.
7. SPRING ISOLATED CEILING. PROVIDE 3/4" ANNUAL ENLARGED PENETRATION THROUGH GWB WITH A 3/8" BEAD OF ACOUSTICAL SEALANT ALL AROUND THE PENETRATION. SEE ARCHITECTURAL DRAWINGS FOR CEILING DETAILS.

**Port Townsend School District No. 50
 GRANT STREET ELEMENTARY SCHOOL
 REPLACEMENT PROJECT**
 1637 GRANT STREET, PORT TOWNSEND, WA 98368

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Drawn By:	KK	
Checked by:	MH	
Revisions		
#	Date	Description



PROJECT NORTH
 TRUE NORTH

OVERALL
 LOWER LEVEL -
 FIRE
 PROTECTION
 FLOOR PLAN

M700

integrus ARCHITECTURE
 117 SOUTH MAIN STREET, SUITE 100, SEATTLE, WA, 98104
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 www.metrixeng.com

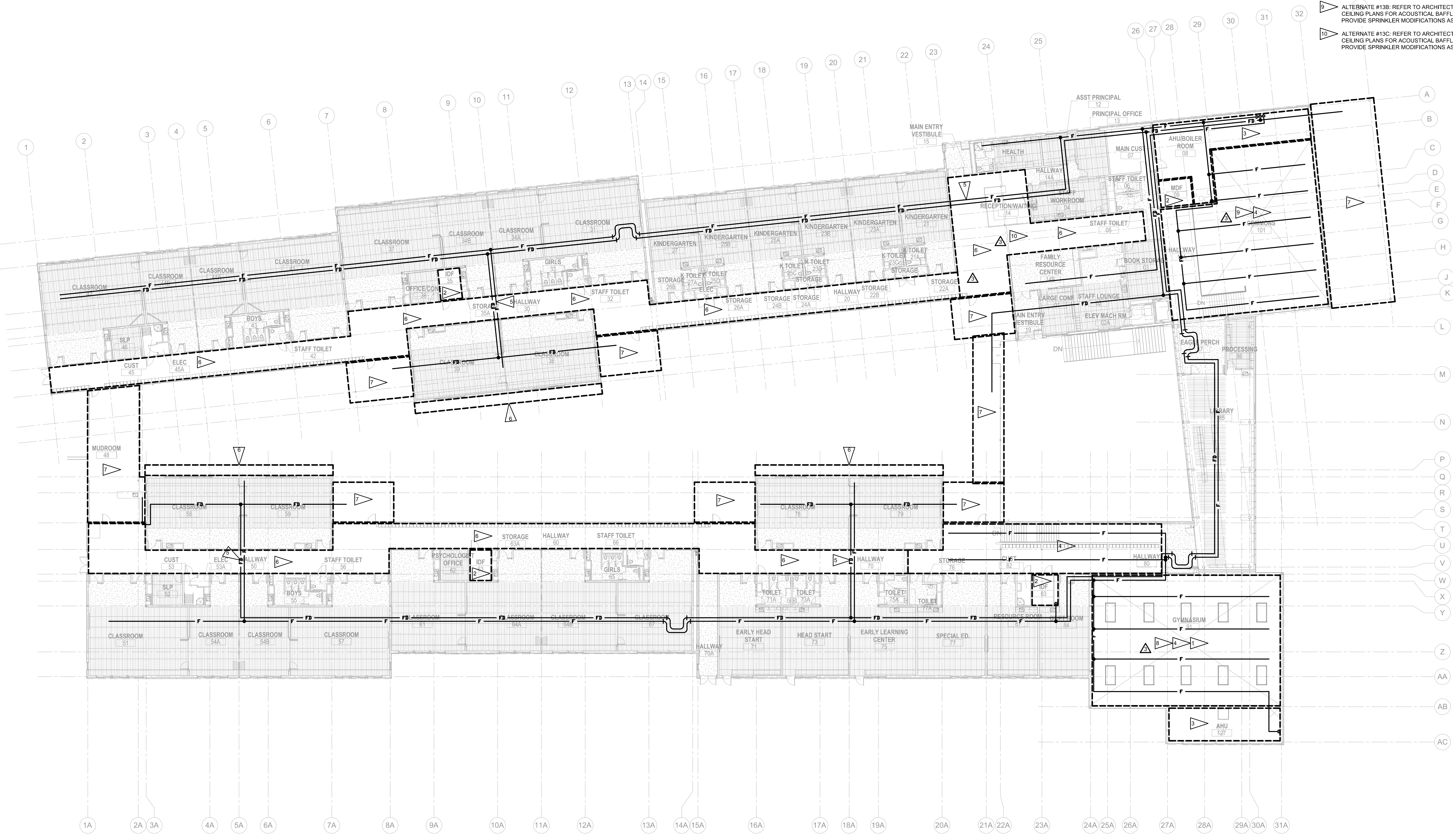
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SHEET NOTES:

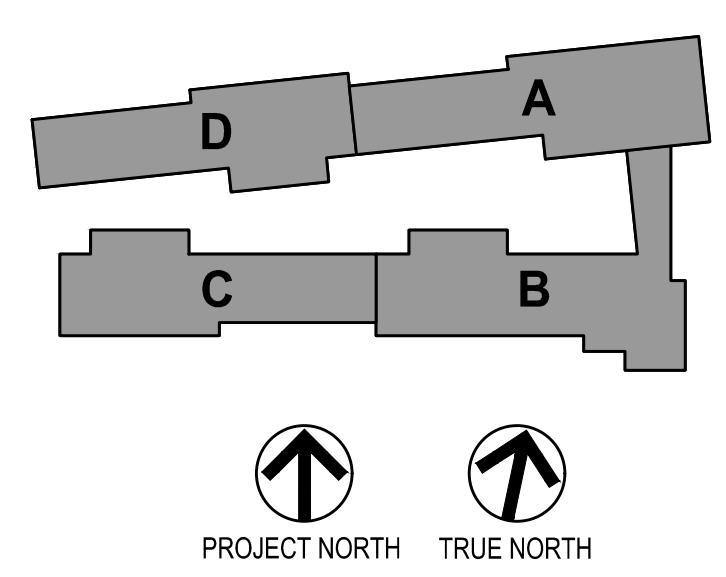
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3. SEE DIV 21 SPECIFICATIONS FOR DESIGN GUIDELINES.
4. SPRINKLER SYSTEMS SHALL MEET OR EXCEED NFPA 13 AND AUTHORITY HAVING JURISDICTION.
5. WET FIRE SPRINKLER COVERAGE SHALL INCLUDE ABOVE CEILING EXCEEDING NFPA 13 REQUIREMENTS.
6. SEE ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
7. PROVIDE COMPLETE SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL PRIOR TO SUBMITTING TO THE JURISDICTION. SPRINKLER PIPING INSTALLED WITHOUT PROPER COORDINATION AND APPROVAL BY ARCHITECT SHALL BE SUBJECT TO REMOVAL AND REINSTALLATION AT NO COST.
8. PROVIDE DRY SPRINKLER COVERAGE AT EXTERIOR COMPONENTS OF BUILDING, SUCH AS CANOPIES AND OVERHANGS WHERE REQUIRED BY NFPA 13. USE SIDEWALL DRY HEADS WHERE EVER POSSIBLE. PROVIDE DRY SPRINKLER SYSTEM IF NECESSARY.
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12. PROVIDE FIRE SPRINKLER COVERAGE AT ELEVATOR HOISTWAY IF REQUIRED BY NFPA 13. 8.15.5.
13. FIRE SPRINKLER PIPING IN MECHANICAL SPACES AND MEZZANINES SHALL NOT BE ROUTED IN A MANNER THAT INHIBITS ACCESS TO MECHANICAL, PLUMBING, ELECTRICAL OR CONTROLS EQUIPMENT. PIPING SHALL NOT BLOCK ACCESS TO OR CREATE A TRIPPING HAZARD ON MAINTENANCE WALKWAYS OR PATHWAYS.
14. COORDINATE FIRE SPRINKLER PIPING ROUTING WITH OTHER TRADES. DUCTWORK ROUTING TAKES PRECEDENCE OVER ALL OTHER TRADES, INCLUDING FIRE SPRINKLER PIPING. SPRINKLER PIPING INSTALLED WITHOUT PROPER COORDINATION SHALL BE SUBJECT TO REMOVAL AND REINSTALLATION AT NO COST.
15. FIRE SPRINKLER PIPING SHALL NOT BE ROUTED OVER ELECTRICAL PANELS, SWITCHGEAR OR SIMILAR ELECTRICAL DEVICES. FIRE SPRINKLER MAIN PIPING SHALL NOT BE ROUTED THROUGH TELECOMMUNICATIONS ROOMS (MDF OR IDF ROOMS).
16. PROVIDE SEISMIC FLEXIBLE SPRINKLER HOSE FITTINGS FOR CONNECTIONS TO SPRINKLER HEADS IN CEILING.
17. PROVIDE LOW POINT DRAINS AS REQUIRED BY NFPA 13. LOW POINT DRAIN LOCATIONS SHALL BE AS LOCATED ON THE DRAWINGS OR AS COORDINATED WITH THE ARCHITECT DURING SHOP DRAWING REVIEW.
18. PROVIDE DRY SPRINKLER COVERAGE AT COOLERS/FREEZERS.
19. PROVIDE "HIGH" TEMPERATURE CLASSIFICATION FOR SPRINKLERS ABOVE KILNS.
20. SEE 1/M901 FOR FIRE SPRINKLER HEAD LOCATION DETAIL.

FLAG NOTES:

1. THERE ARE SKYLIGHTS IN THIS AREA. DO NOT INSTALL SPRINKLER PIPING UNDER SKYLIGHTS.
2. PROVIDE HIGH TEMPERATURE SPRINKLER HEADS IN THIS AREA.
3. MAINTAIN A MINIMUM OF 6'-0" HIGH ACCESS PATHWAY FOR MAINTENANCE.
4. EXPOSED PIPING THIS AREA. ALL EXPOSED PIPING TO RUN PARALLEL TO STRUCTURE AND AS HIGH AS CODE ALLOWS.
5. INSTALL THIS EXPOSED PIPING AS HIGH AS POSSIBLE.
6. PROVIDE FIRE PROTECTION COVERAGE WITH SIDEWALL SPRINKLER HEADS.
7. PROVIDE DRY SPRINKLER COVERAGE THIS AREA AS REQUIRED BY AHJ.
8. ALTERNATE #13A: REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ACOUSTICAL BAFFLE LAYOUT. PROVIDE SPRINKLER MODIFICATIONS AS REQUIRED.
9. ALTERNATE #13B: REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ACOUSTICAL BAFFLE LAYOUT. PROVIDE SPRINKLER MODIFICATIONS AS REQUIRED.
10. ALTERNATE #13C: REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ACOUSTICAL BAFFLE LAYOUT. PROVIDE SPRINKLER MODIFICATIONS AS REQUIRED.



UPPER LEVEL - FIRE PROTECTION FLOOR PLAN
SCALE: 1/16" = 1'-0"



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**Port Townsend School District No. 50
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1637 GRANT STREET, PORT TOWNSEND, WA 98368

Date: 5/1/17
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Drawn By: KK
Checked by: MH

Revisions		
#	Date	Description
3	4/26/17	Addendum 3

OVERALL UPPER LEVEL - FIRE PROTECTION FLOOR PLAN

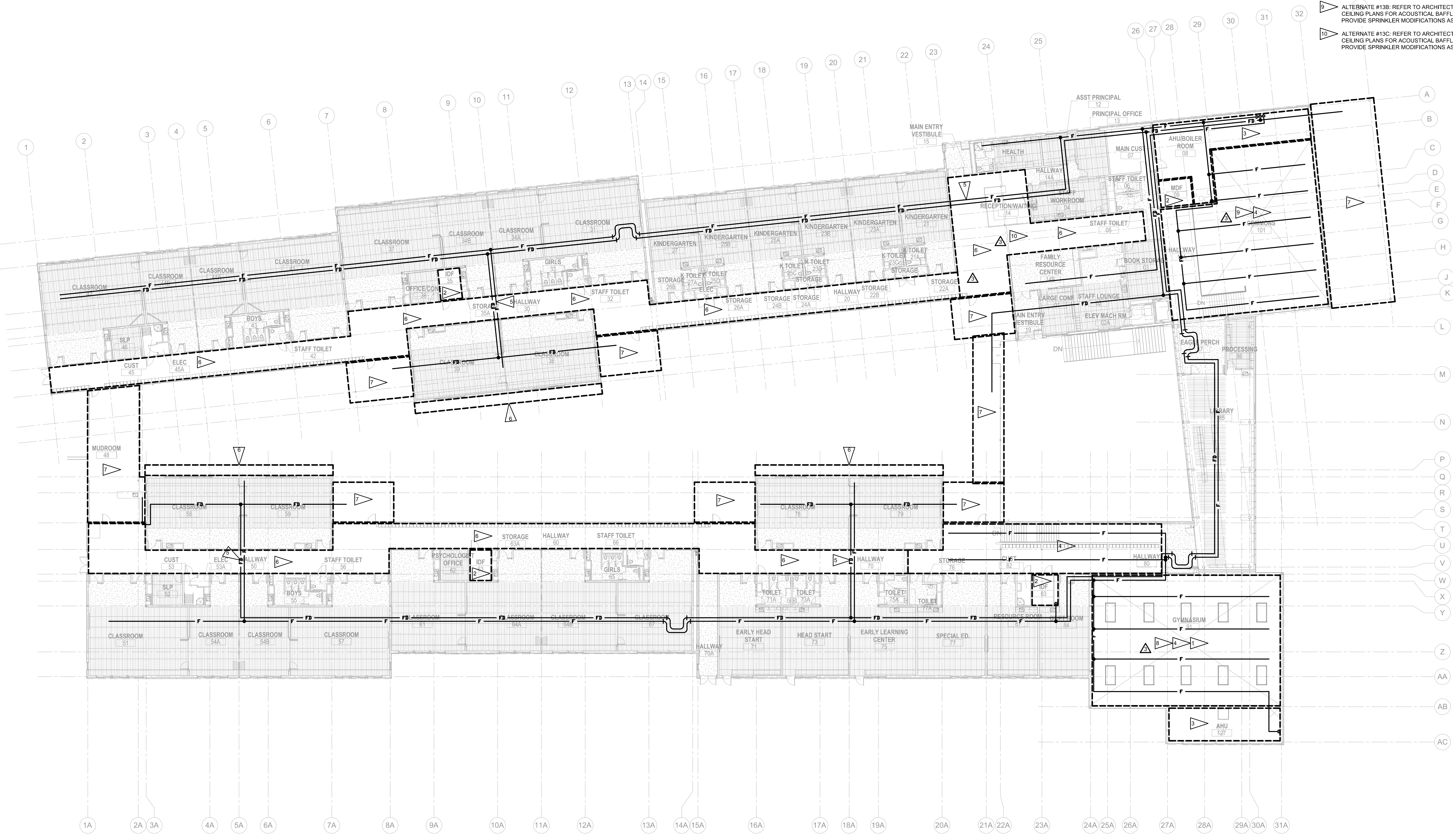
M710

SHEET NOTES:

1. PROVIDE FIRE SPRINKLER SYSTEM THROUGHOUT ALL AREAS OF THE BUILDING.
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18. PROVIDE DRY SPRINKLER COVERAGE AT COOLERS/FREEZERS.
19. PROVIDE "HIGH" TEMPERATURE CLASSIFICATION FOR SPRINKLERS ABOVE KILNS.
20. SEE 1/M901 FOR FIRE SPRINKLER HEAD LOCATION DETAIL.

FLAG NOTES:

1. THERE ARE SKYLIGHTS IN THIS AREA. DO NOT INSTALL SPRINKLER PIPING UNDER SKYLIGHTS.
2. PROVIDE HIGH TEMPERATURE SPRINKLER HEADS IN THIS AREA.
3. MAINTAIN A MINIMUM OF 6'-0" HIGH ACCESS PATHWAY FOR MAINTENANCE.
4. EXPOSED PIPING THIS AREA. ALL EXPOSED PIPING TO RUN PARALLEL TO STRUCTURE AND AS HIGH AS CODE ALLOWS.
5. INSTALL THIS EXPOSED PIPING AS HIGH AS POSSIBLE.
6. PROVIDE FIRE PROTECTION COVERAGE WITH SIDEWALL SPRINKLER HEADS.
7. PROVIDE DRY SPRINKLER COVERAGE THIS AREA AS REQUIRED BY AHJ.
8. ALTERNATE #13A: REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ACOUSTICAL BAFFLE LAYOUT. PROVIDE SPRINKLER MODIFICATIONS AS REQUIRED.
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10. ALTERNATE #13C: REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ACOUSTICAL BAFFLE LAYOUT. PROVIDE SPRINKLER MODIFICATIONS AS REQUIRED.



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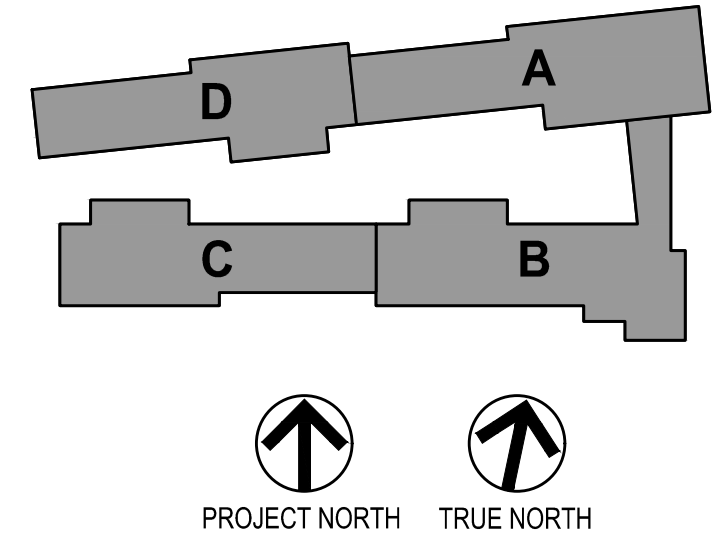
METRIX ENGINEERS
 10000 1st Avenue SW, Suite 100
 Renton, WA 98057
 www.metrixeng.com

**Port Townsend School District No. 50
 GRANT STREET ELEMENTARY SCHOOL
 REPLACEMENT PROJECT**
 1637 GRANT STREET, PORT TOWNSEND, WA 98368

Date: 5/1/17
 Job No.: 21528.00
 Drawn By: KK
 Checked by: MH

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3	4/26/17	Addendum 3

UPPER LEVEL - FIRE PROTECTION FLOOR PLAN
 SCALE: 1/16" = 1'-0"



OVERALL UPPER LEVEL - FIRE PROTECTION FLOOR PLAN

M710

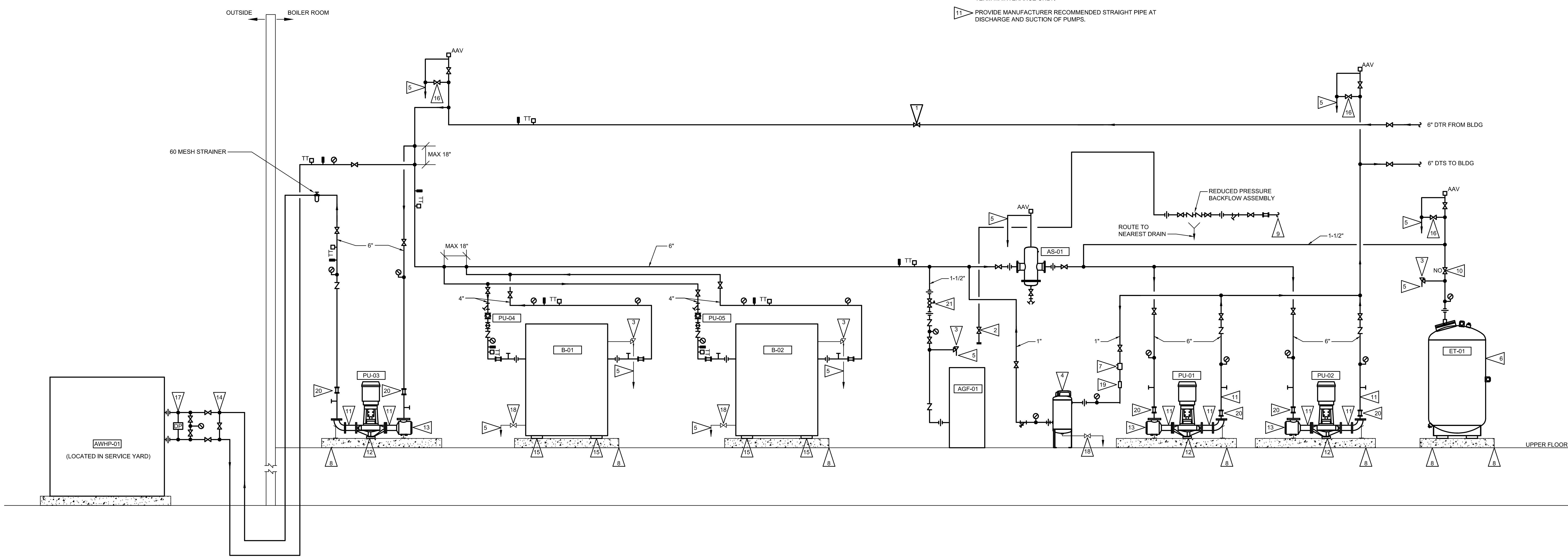
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GENERAL NOTES

1. SEISMICALLY SECURE EQUIPMENT TO HOUSEKEEPING PAD AND/OR BUILDING STRUCTURE.
2. EQUIPMENT & APPURTENANCES SHOWN ON THIS SHEET SHALL BE LOCATED IN MECHANICAL/BOILER ROOM.
3. SYSTEM PROVIDES FOR REDUNDANT HEATING WATER PUMPING.
4. RISER DIAGRAM PROVIDED FOR ROUTING AND DEVICE INSTALLATION LOCATION REQUIREMENTS ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ROUTING AND CONNECTION TO EQUIPMENT AT LOCATIONS SHOWN ON PLANS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS MAINTAINING ALL REQUIRED WORKING CLEARANCE REQUIREMENTS. MAINTAIN MINIMUM 6'-8" HEAD CLEARANCE ACCESS PATHWAY.

FLAG NOTES

1. PROVIDE MANUFACTURER RECOMMENDED STRAIGHT PIPE LENGTH UPSTREAM AND DOWNSTREAM OF FLOW METER.
2. PROVIDE BALL VALVE WITH THREADED HOSE OUTLET VACUUM BREAKER AND CAP FOR FILLING AGF.
3. PROVIDE RELIEF VALVE AT 75 PSIG.
4. PROVIDE CHEMICAL FILTER FEEDER.
5. ROUTE FULL SIZE TO DRAIN. (TYPICAL)
6. CHARGE EXPANSION TANK TO MAINTAIN A MINIMUM OF 4 PSI AT HIGH POINT OF SYSTEM. APPROXIMATELY 17 PSI.
7. PROVIDE AUTOMATIC FLOW CONTROL VALVE SIZED AT 5 GPM.
8. PROVIDE HOUSEKEEPING PAD. MINIMUM 4" HIGH.
9. 1-1/2" CW. ROUTE TO NEAREST DOMESTIC COLD WATER PIPE.
10. SET SHUT-OFF VALVE TO OPEN POSITION AND REMOVE HANDLE PRIOR TO STARTING HOT WATER SYSTEM. SHUT-OFF VALVE PROVIDED FOR EXPANSION TANK CHARGE VERIFICATION AND LONG TERM MAINTENANCE ONLY.
11. PROVIDE MANUFACTURER RECOMMENDED STRAIGHT PIPE AT DISCHARGE AND SUCTION OF PUMPS.
12. PROVIDE CONCRETE INERTIA BASE PAD ANCHORED TO HOUSEKEEPING PAD.
13. PROVIDE SUCTION DIFFUSER ON INLET TO PUMP.
14. NC MANUAL BYPASS FOR SYSTEM FLUSHING. DO NOT SYSTEM FLUSH THROUGH HEAT PUMP.
15. PROVIDE NEOPRENE PAD MOUNT AT BOILERS.
16. PROVIDE AUTOMATIC AIR VENT WITH VALVE BYPASS. (TYPICAL)
17. HARDWIRE BP SENSOR CONTROL DIRECT TO PUMP VFD.
18. PROVIDE DRAIN VALVE. ROUTE FULL SIZE TO NEAREST DRAIN.
19. PROVIDE SITE FLOW INDICATOR.
20. PROVIDE PUMP FLEX CONNECTION.
21. PROVIDE PRESSURE REDUCING VALVE. SET PRESSURE REDUCING VALVE TO MATCH EXPANSION TANK CHARGE. COORDINATE WITH ENGINEER.



HYDRONIC WATER PIPING RISER DIAGRAM
SCALE: NONE

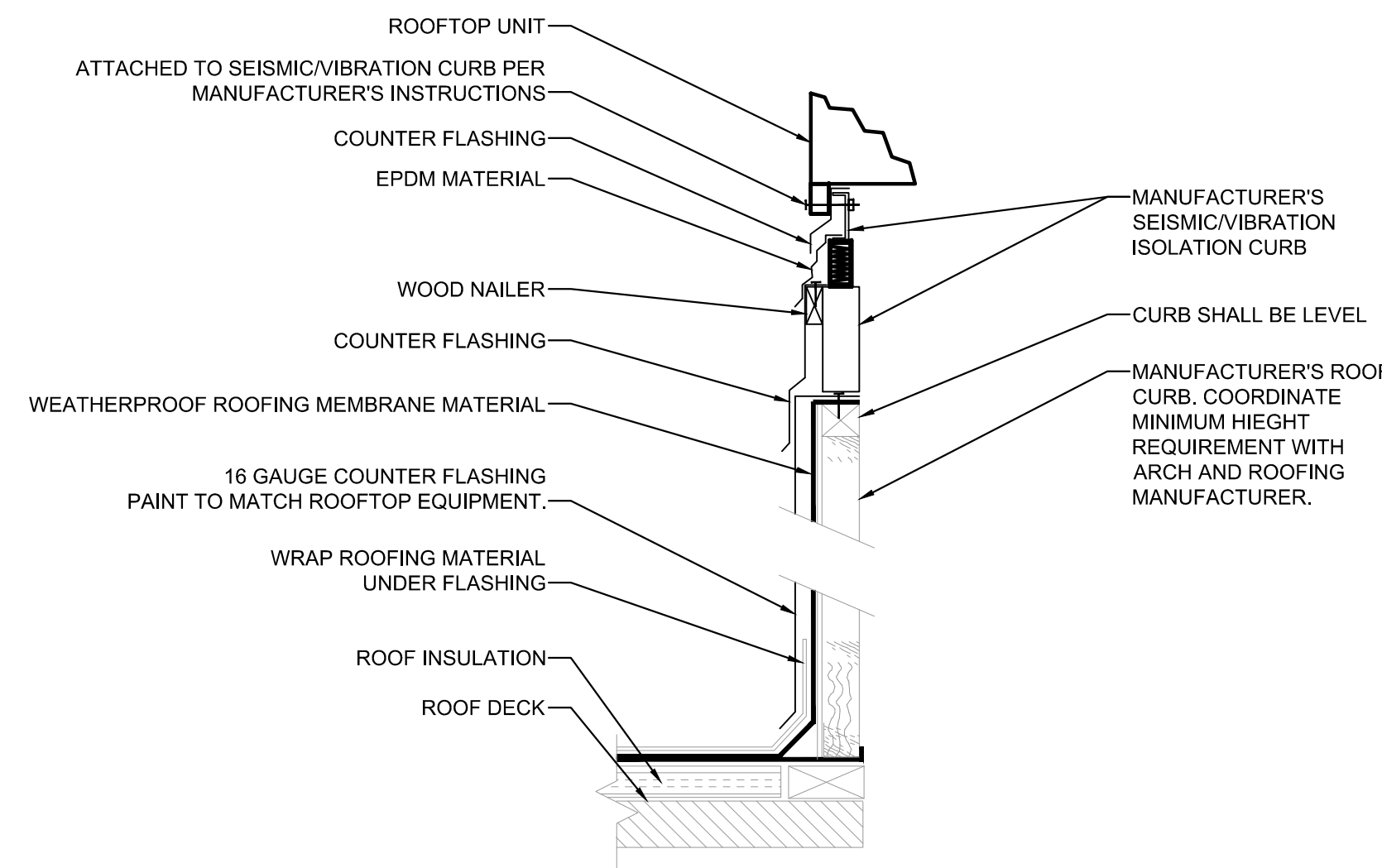
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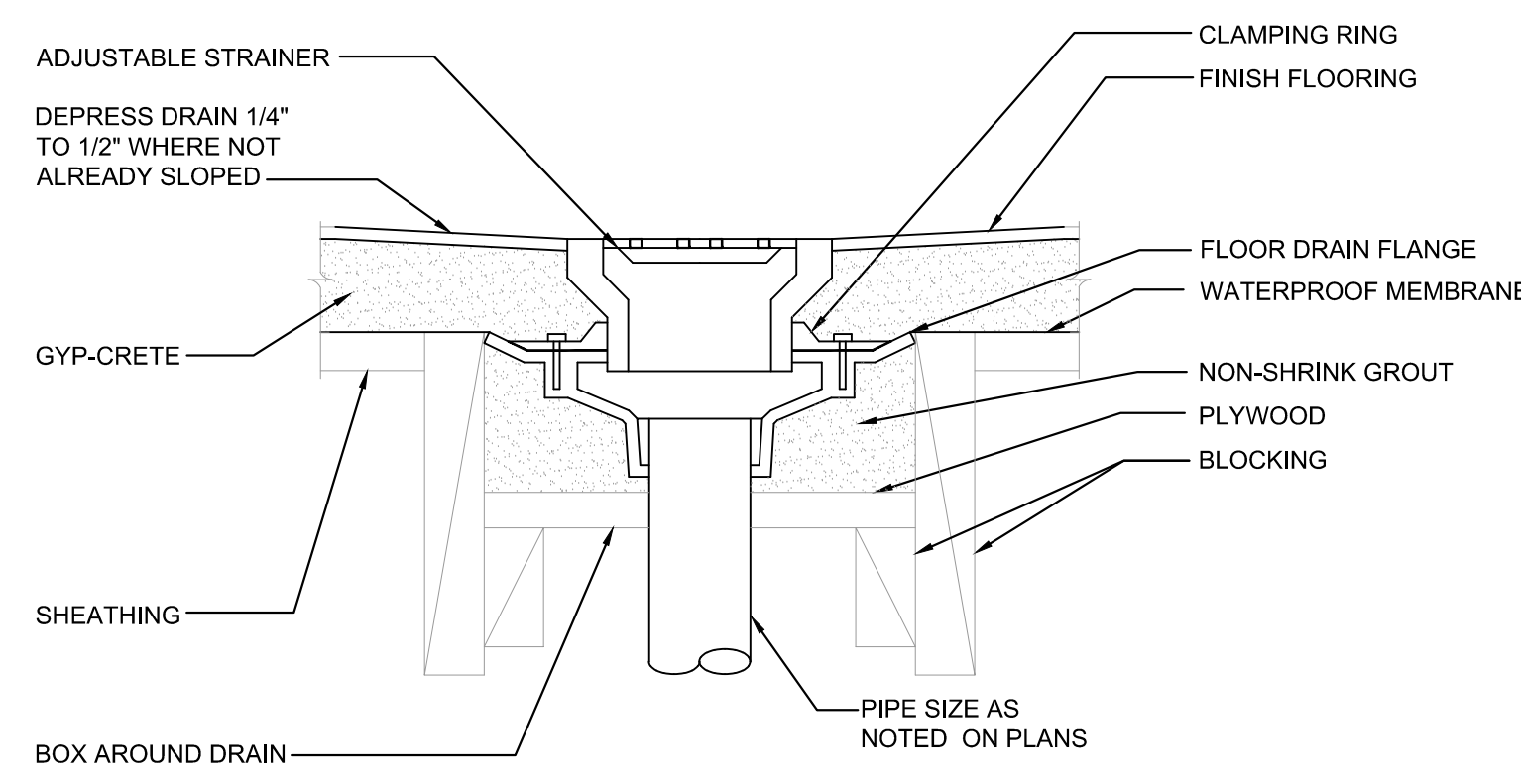
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HYDRONIC
WATER PIPING
RISER DIAGRAM

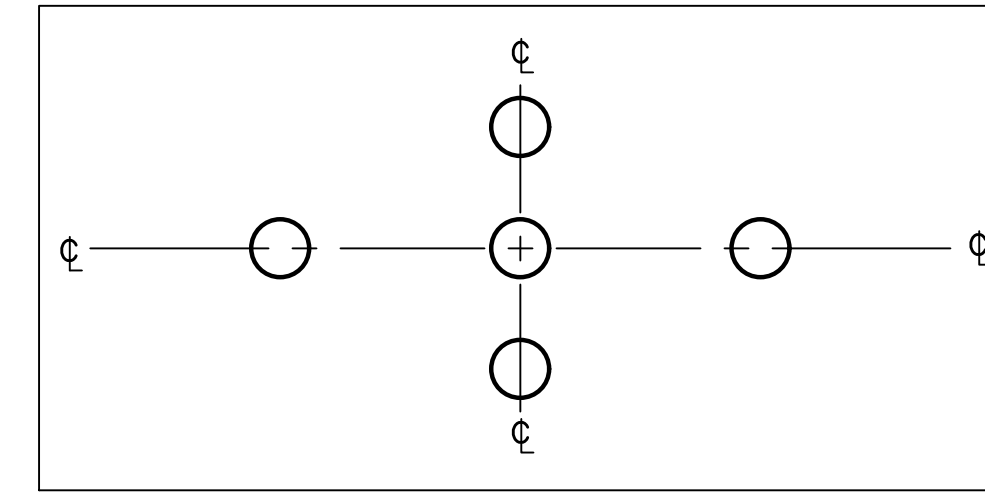
M801



6 ROOF CURB DETAIL
M901 SCALE: NONE

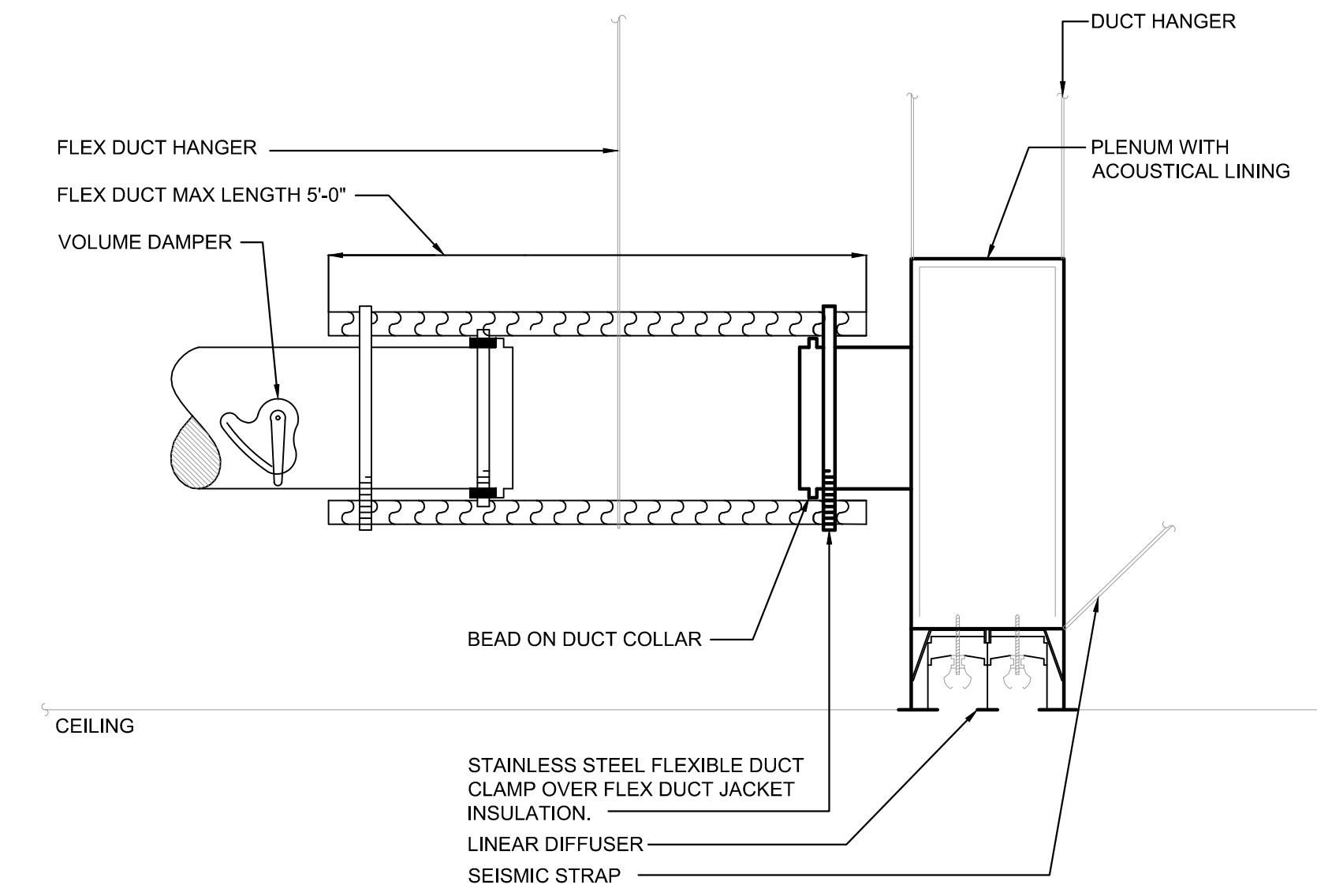


4 FLOOR DRAIN FD-1 DETAIL
M901 SCALE: NONE

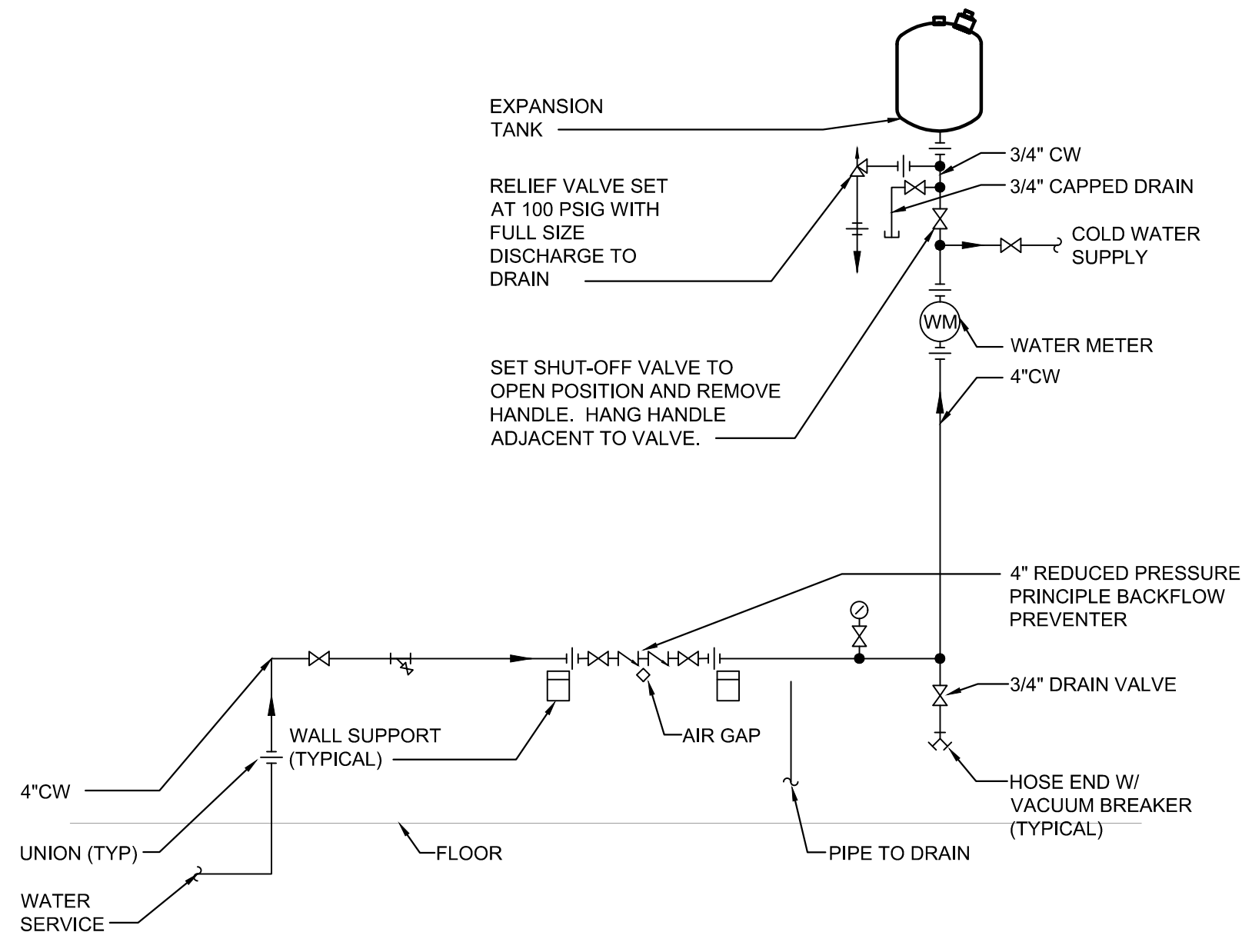


- CEILING FIRE SPRINKLER HEAD LOCATIONS:**
- WHERE SPRINKLER HEADS ARE LOCATED IN A REMOVABLE GRID CEILING, THE HEADS SHALL BE LOCATED ON THE CENTERLINE AXIS OF EITHER THE LONG OR SHORT SIDE DIMENSION (SEE DIAGRAM ABOVE), WITH THE HEAD LOCATED AT QUARTER POINTS OR THE MIDPOINT, WHERE MULTIPLE HEADS ARE REQUIRED WITHIN A ROOM THEY SHALL BE LINED UP.
 - IN ROOMS WITH HARD CEILINGS, THE HEADS SHALL ALSO BE LINED UP, NOT IN A RANDOM PATTERN, DUCTWORK
 - AIR TERMINALS AND LIGHTING LOCATIONS TAKE FIRST PRIORITY OVER FIRE SPRINKLER.
 - COORDINATION FOR FIRE SPRINKLER SYSTEM SHALL BE FIRE SPRINKLER CONTRACTOR'S RESPONSIBILITY. HEADS MUST BE LOCATED IN SUCH A MANNER THAT HEAT FROM A DIFFUSER WILL NOT SET OFF FIRE SYSTEM, AND THE HEADS ARE NOT IN THE WAY OF CEILING ACCESS.

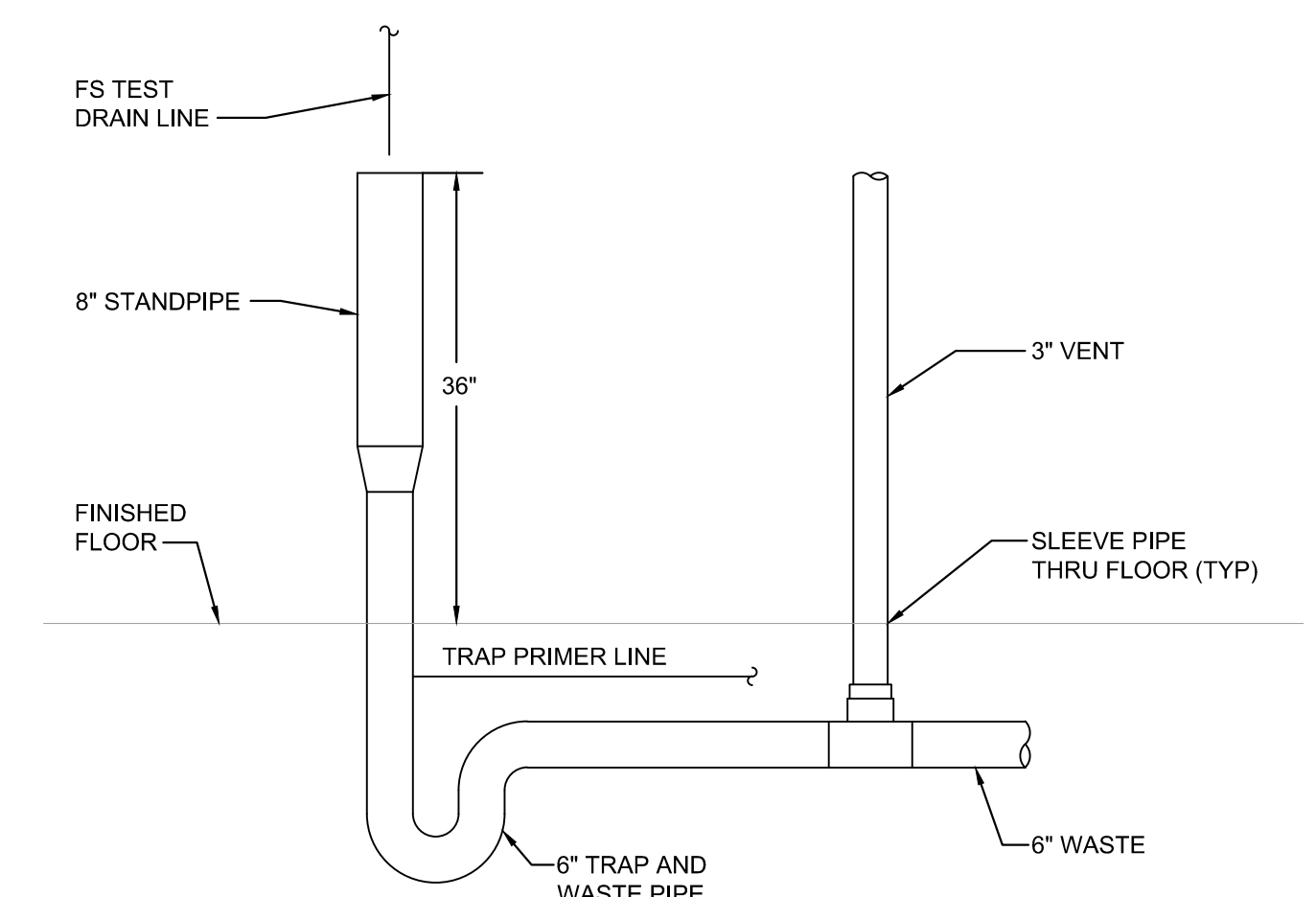
1 FIRE SPRINKLER HEAD LOCATION DETAIL
M901 SCALE: NONE



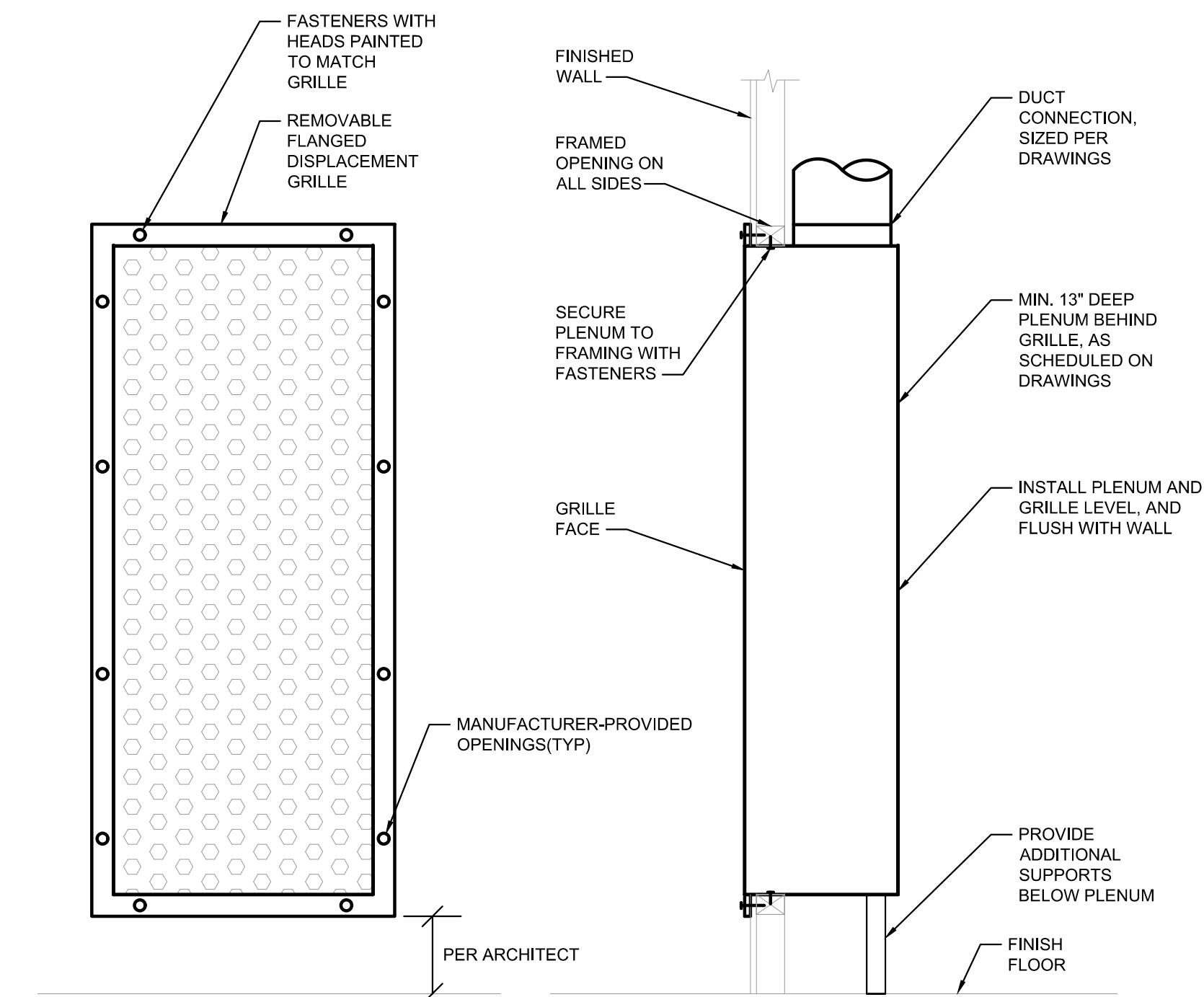
7 LINEAR DIFFUSER CONNECTION
M901 SCALE: NONE



5 DOMESTIC WATER ENTRANCE DETAIL
M901 SCALE: NONE



2 FIRE SPRINKLER TEST DRAIN AND STANDPIPE DETAIL
M901 SCALE: NONE



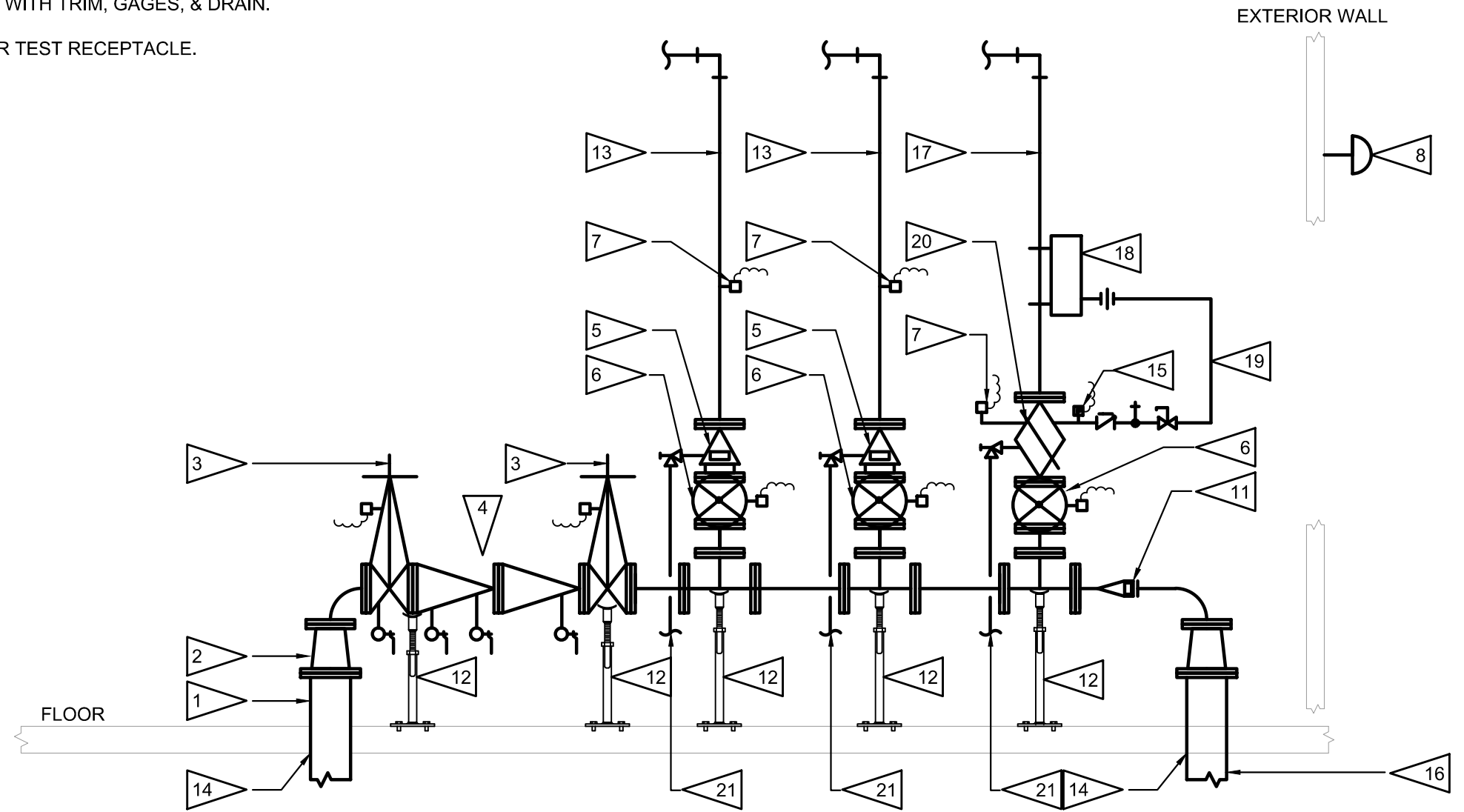
8 DISPLACEMENT GRILLE DETAIL
M901 SCALE: NONE

FLAG NOTES

- | | |
|--|--|
| 1 UNDERGROUND SUPPLY MAIN, 6 INCH. | 15 WATER PRESSURE SWITCH. |
| 2 REDUCER IF REQUIRED. | 16 UNDERGROUND PIPE TO FIRE DEPARTMENT CONNECTION ON SITE. |
| 3 OS&Y VALVE WITH SUPERVISORY SWITCH. | 17 DRY SYSTEM RISER PIPE. |
| 4 DOUBLE DETECTOR CHECK VALVE. | 18 DRY SYSTEM AIR COMPRESSOR. |
| 5 ALARM CHECK VALVE WITH TRIM, GAGES, DRAIN & RETARDING CHAMBER. | 19 AIR SUPPLY PIPING DRY PIPE VALVE. |
| 6 OS&Y VALVE WITH SUPERVISORY SWITCH. | 20 DRY PIPE VALVE COMPLETE WITH TRIM, GAGES, & DRAIN. |
| 7 WATER FLOW INDICATOR. | 21 ROUTE DRAIN TO SPRINKLER TEST RECEPTACLE. |
| 8 ELECTRIC ALARM BELL. | |
| 9 FIRE DEPARTMENT CONNECTION. | |
| 10 AUTOMATIC BALL DRIP. | |
| 11 SWING CHECK VALVE. | |
| 12 PIPE STAND. | |
| 13 WET SYSTEM RISER PIPE. | |
| 14 WATERTIGHT SLEEVE. | |

NOTES:
1. RISER PROVIDED FOR CONTRACTOR REFERENCE AND INDICATES MINIMUM SYSTEM REQUIREMENTS. CONTRACTOR REMAINS RESPONSIBLE FOR FULLY COMPLIANT BIDDER DESIGN IN COMPLIANCE WITH DIVISION 21.

3 SPRINKLER SYSTEM RISER DIAGRAM
M901 SCALE: NONE



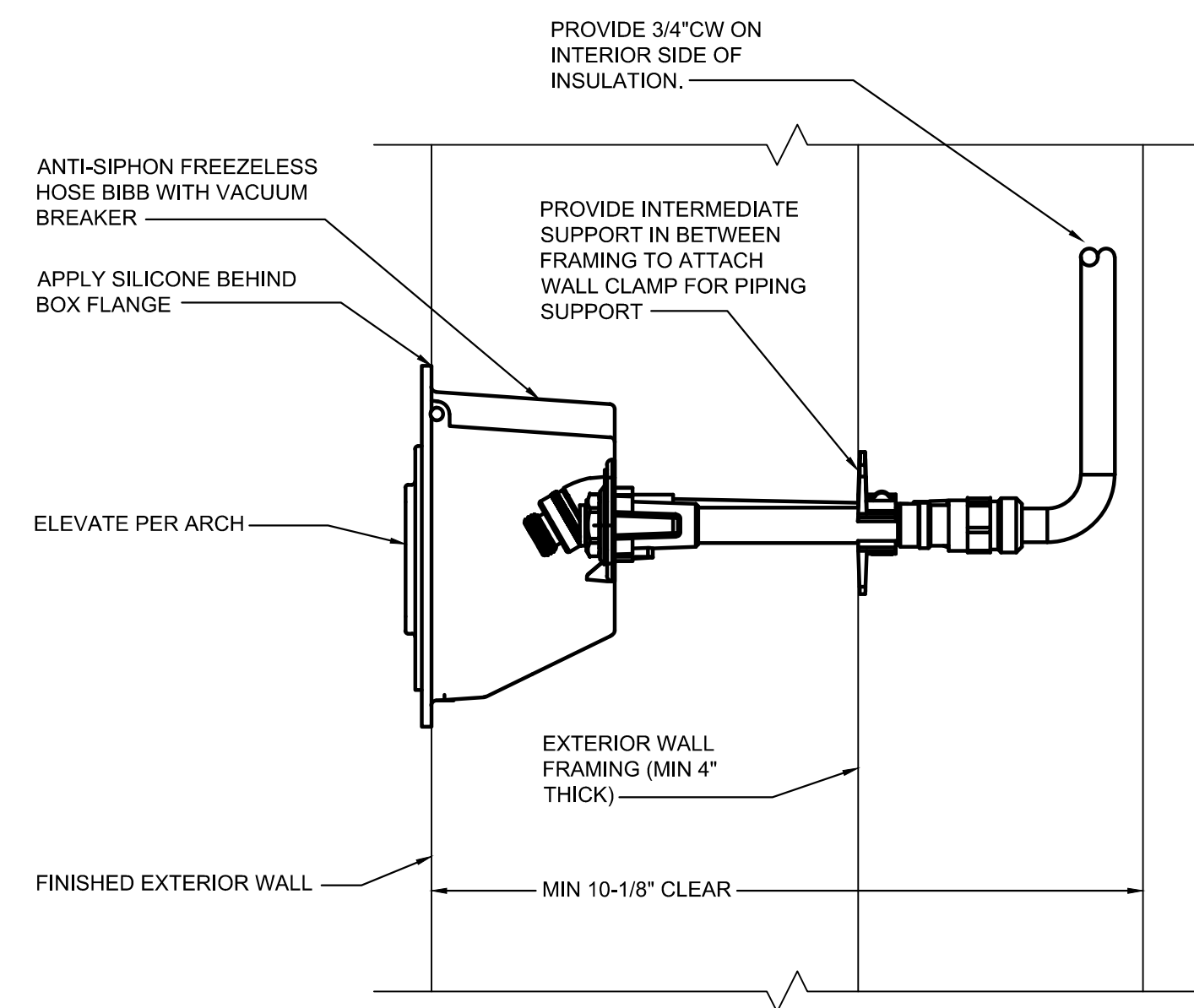
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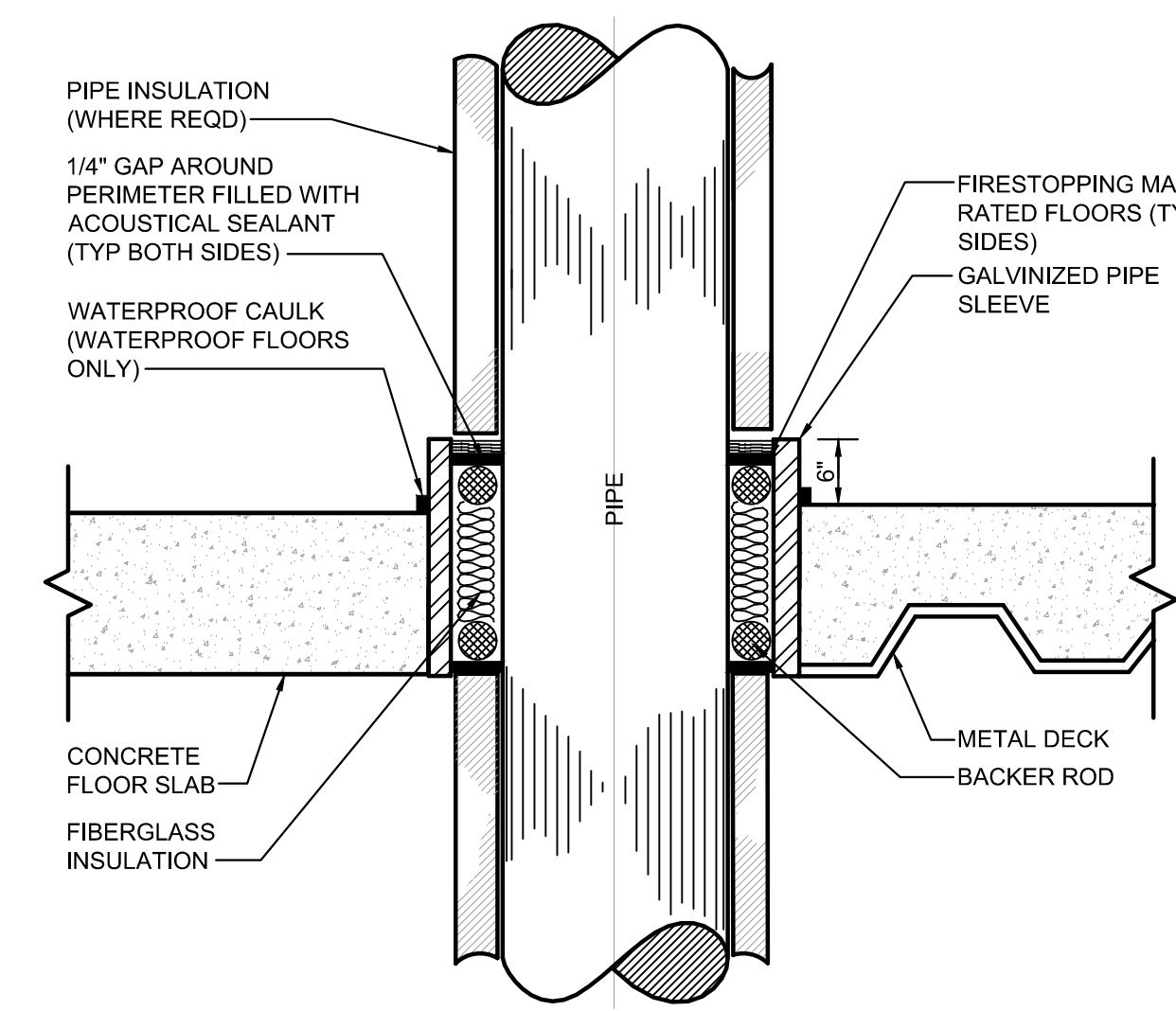
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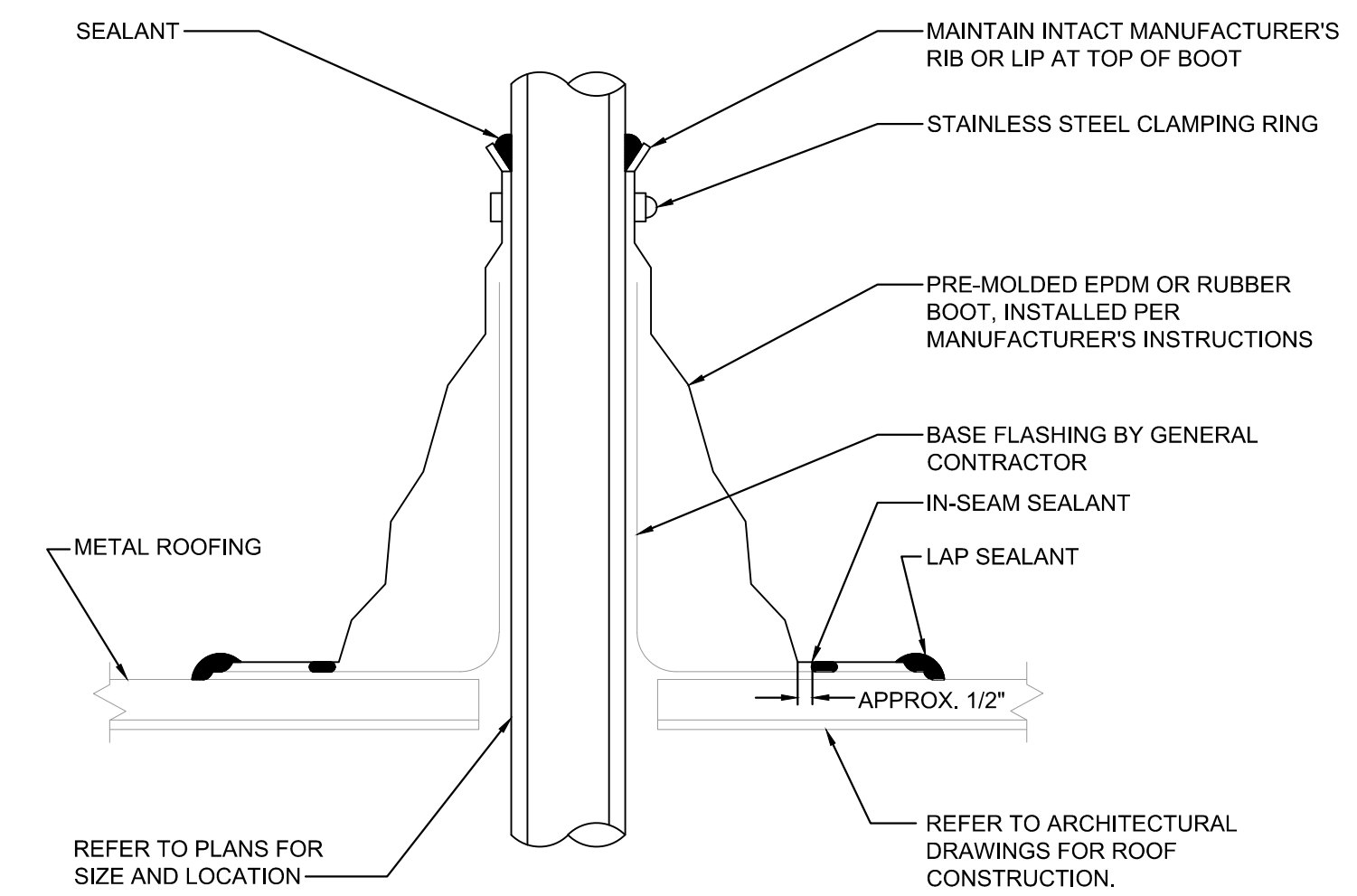
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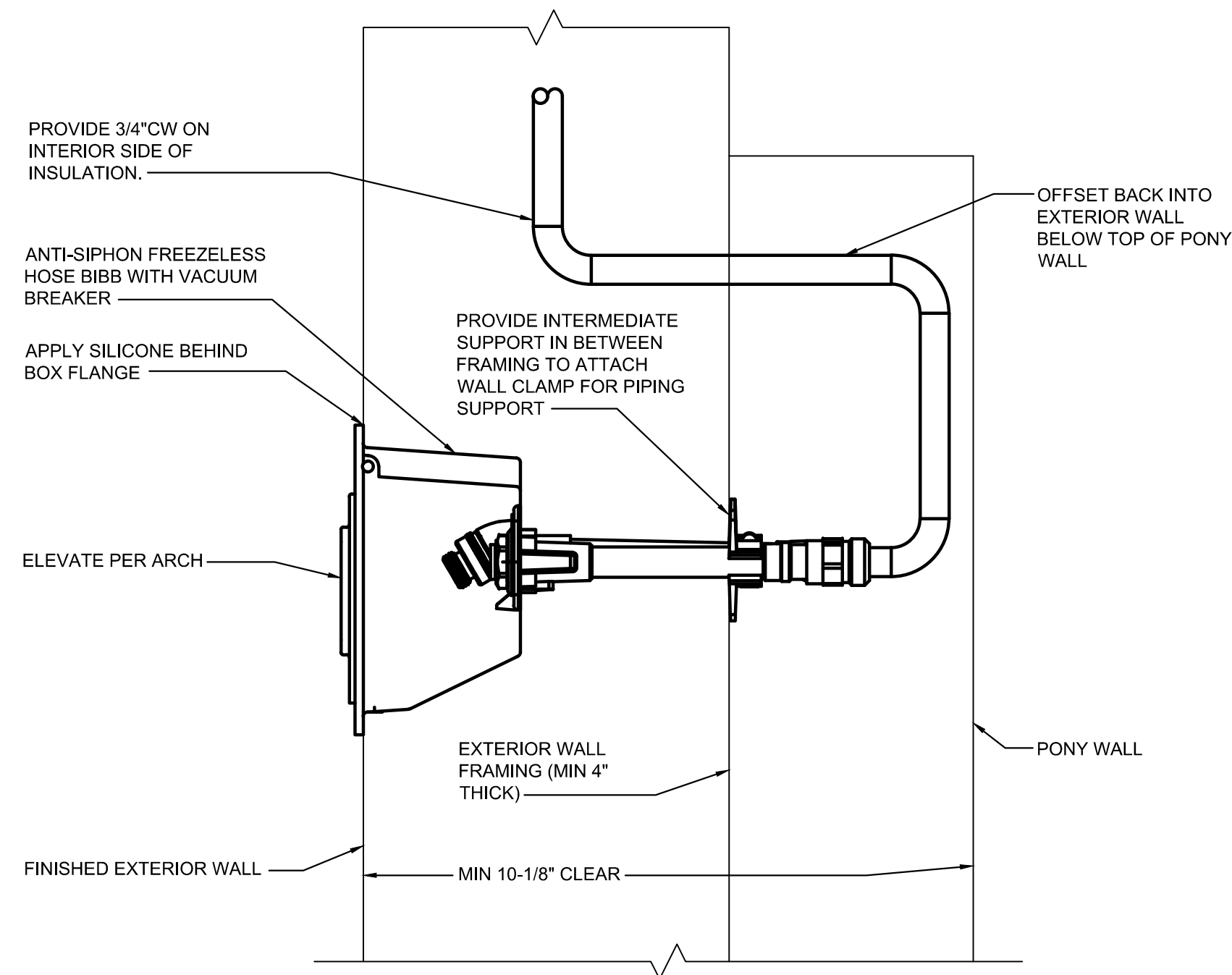
7 EXTERIOR HOSE BIBB DETAIL
M902 SCALE: NONE



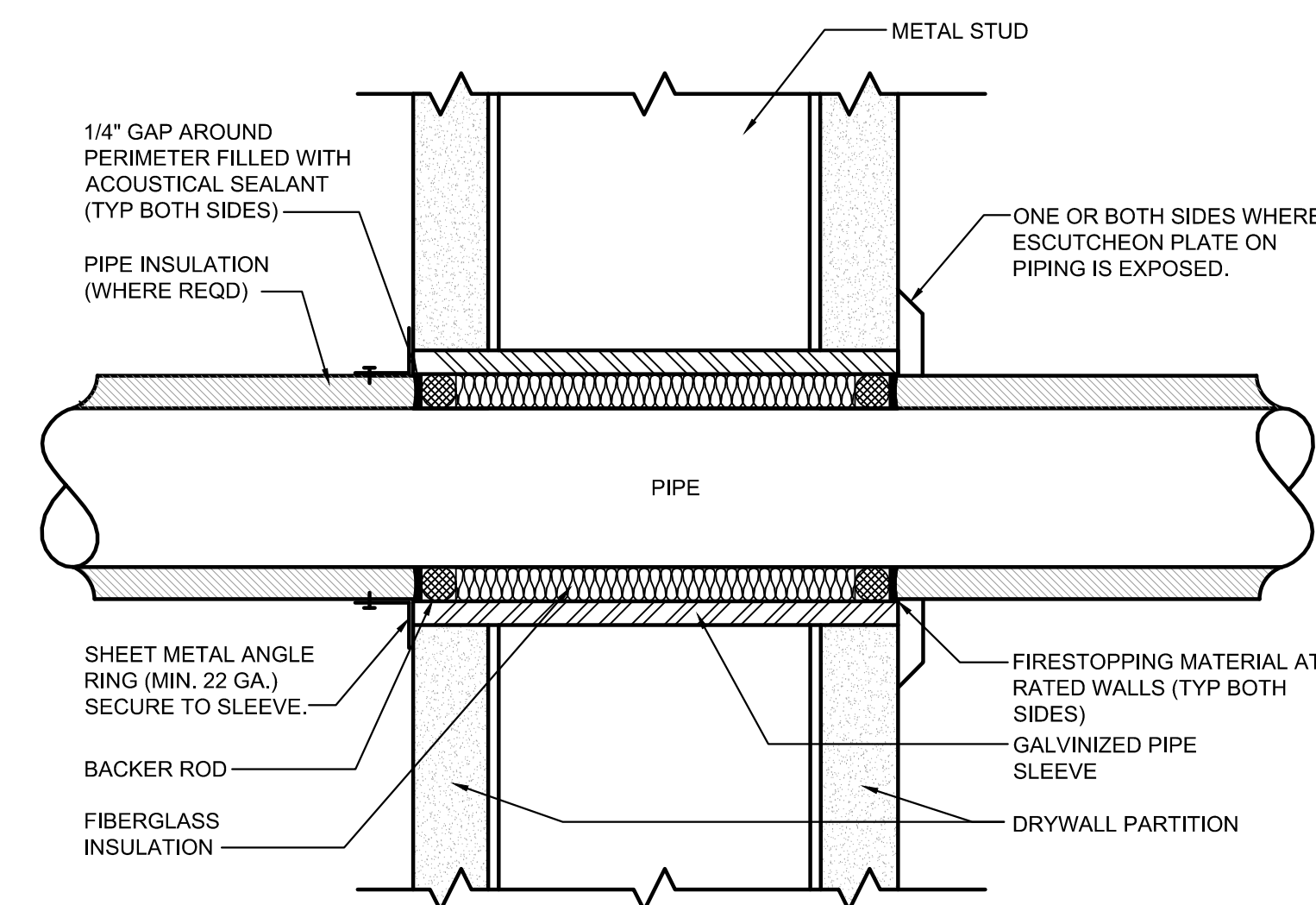
4 PIPE SLEEVE THROUGH FLOOR DETAIL - SLEEVE INSTALLED PRIOR TO SLAB POUR
M902 SCALE: NONE



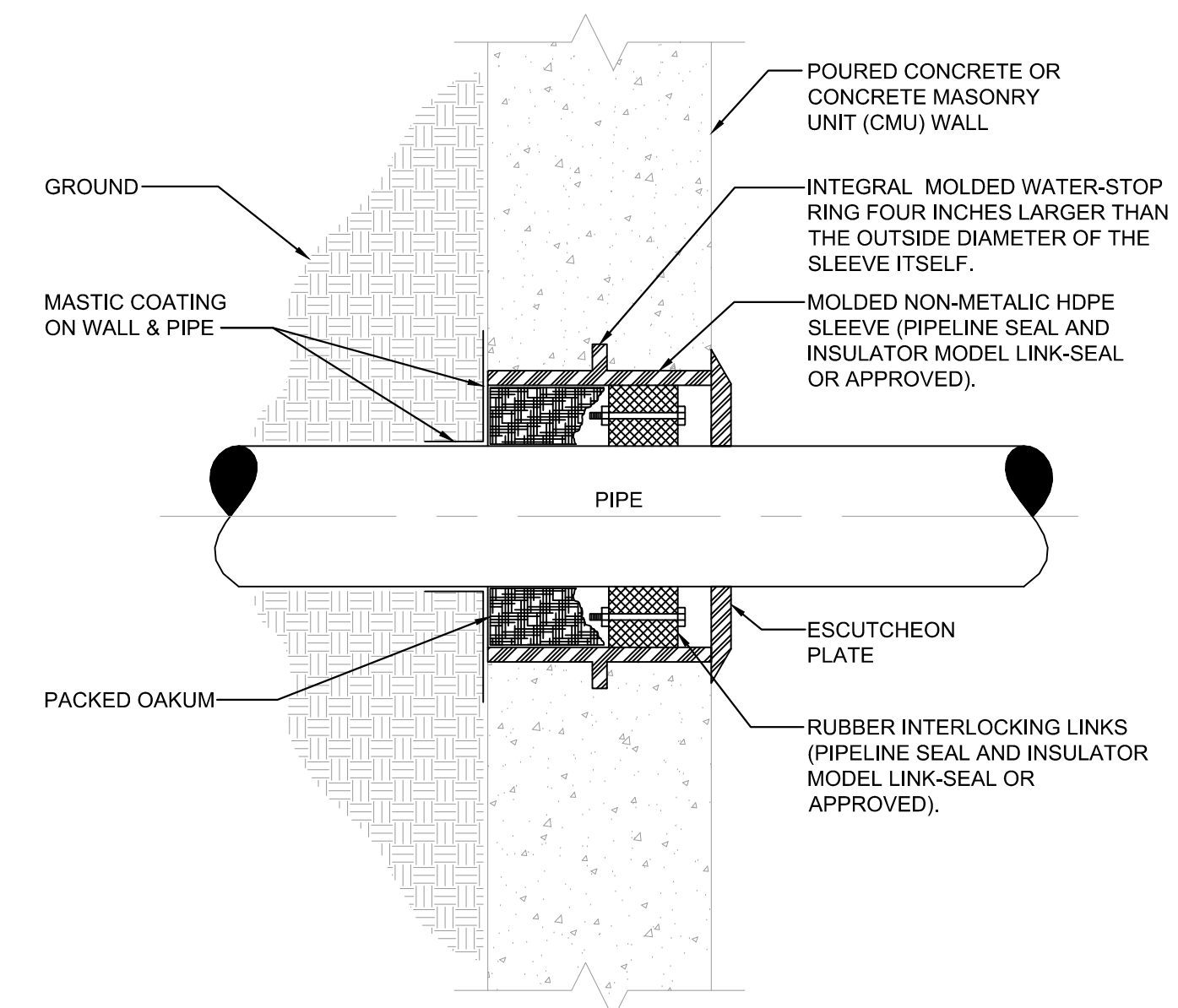
1 PIPE THROUGH ROOF DETAIL
M902 SCALE: NONE



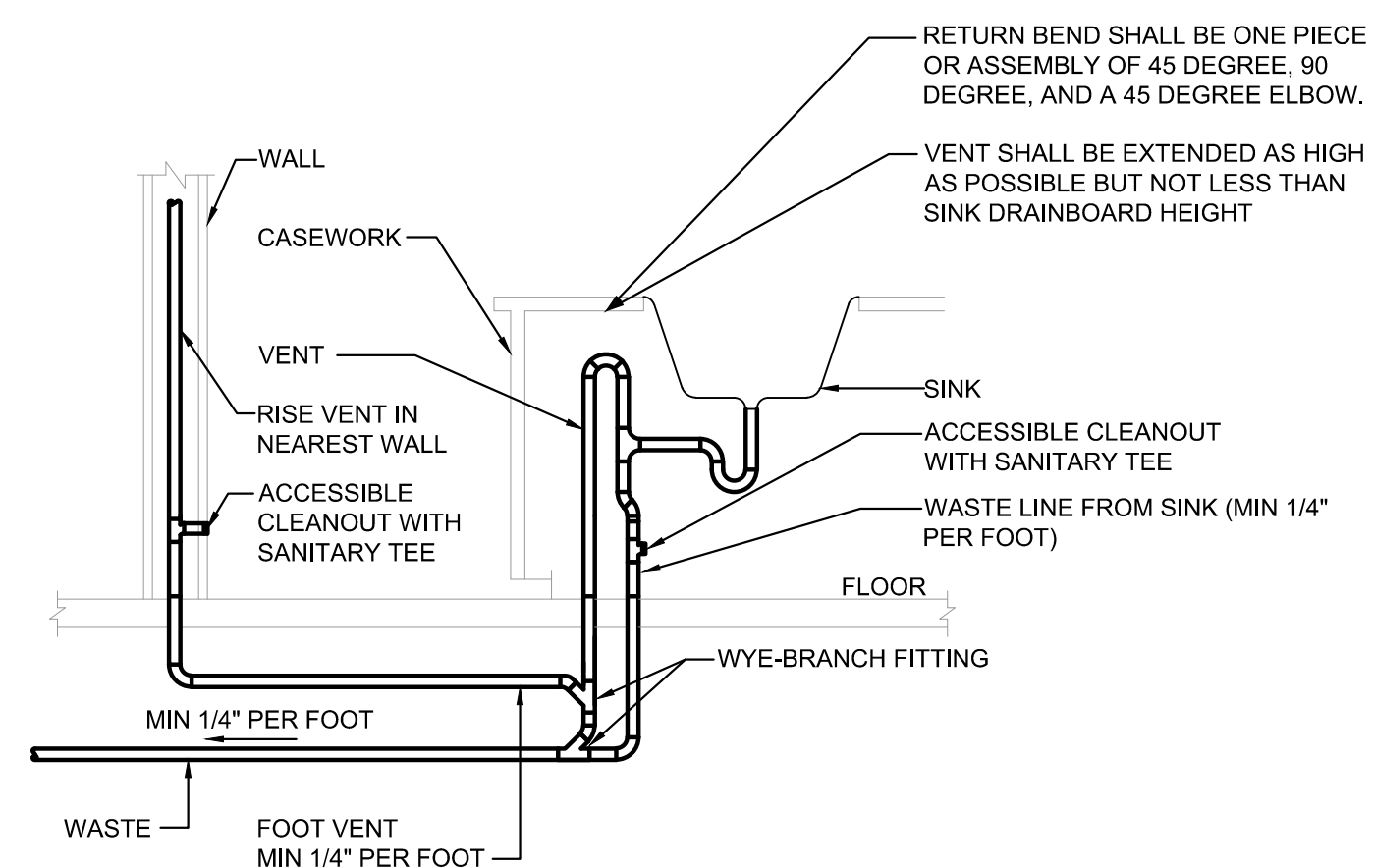
8 EXTERIOR HOSE BIBB AT PONY WALL DETAIL
M902 SCALE: NONE



5 PIPE SLEEVE THROUGH INTERIOR WALL DETAIL
M902 SCALE: NONE

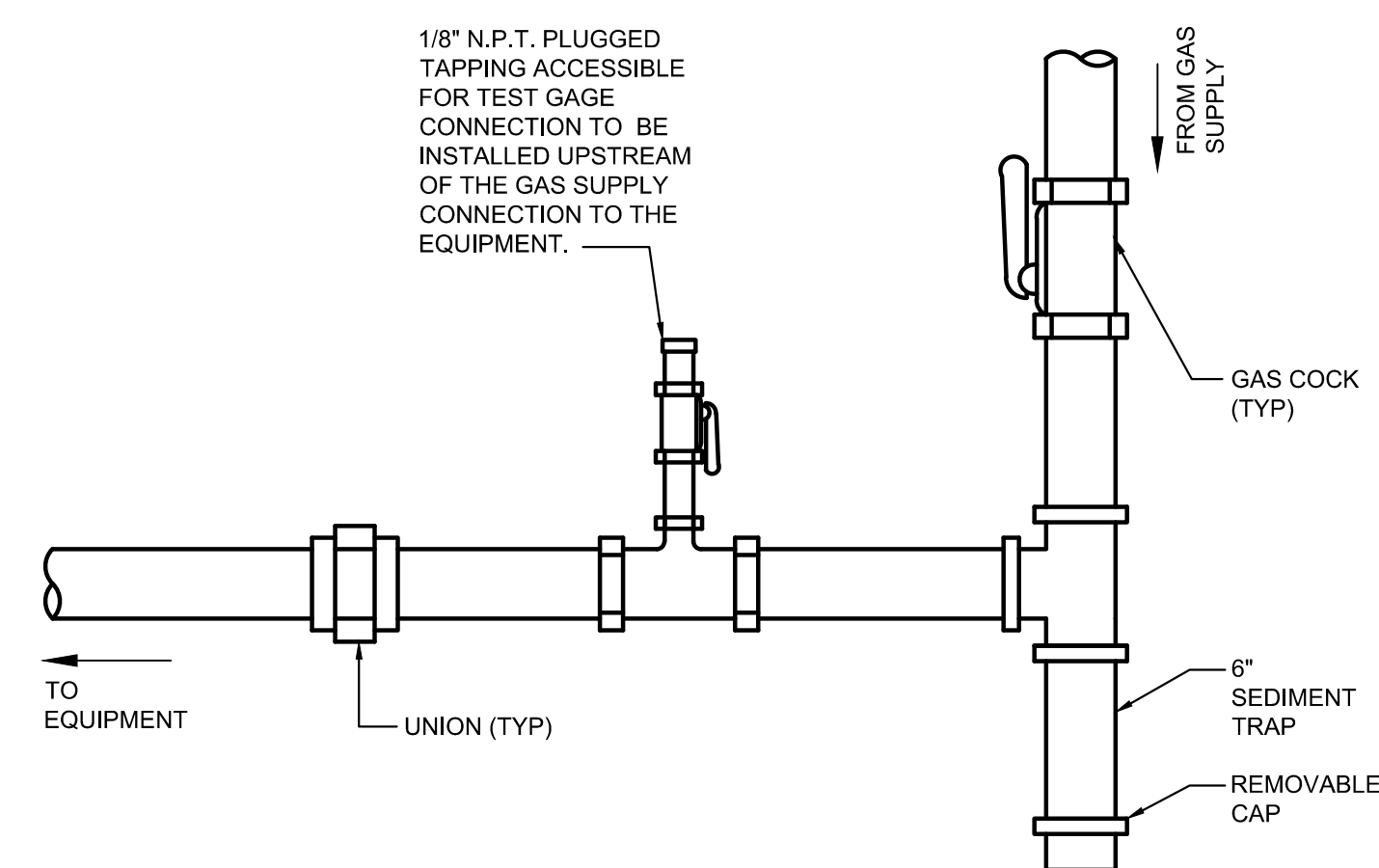


2 PIPE SLEEVE THROUGH BELOW GRADE EXTERIOR WALL DETAIL
M902 SCALE: NONE

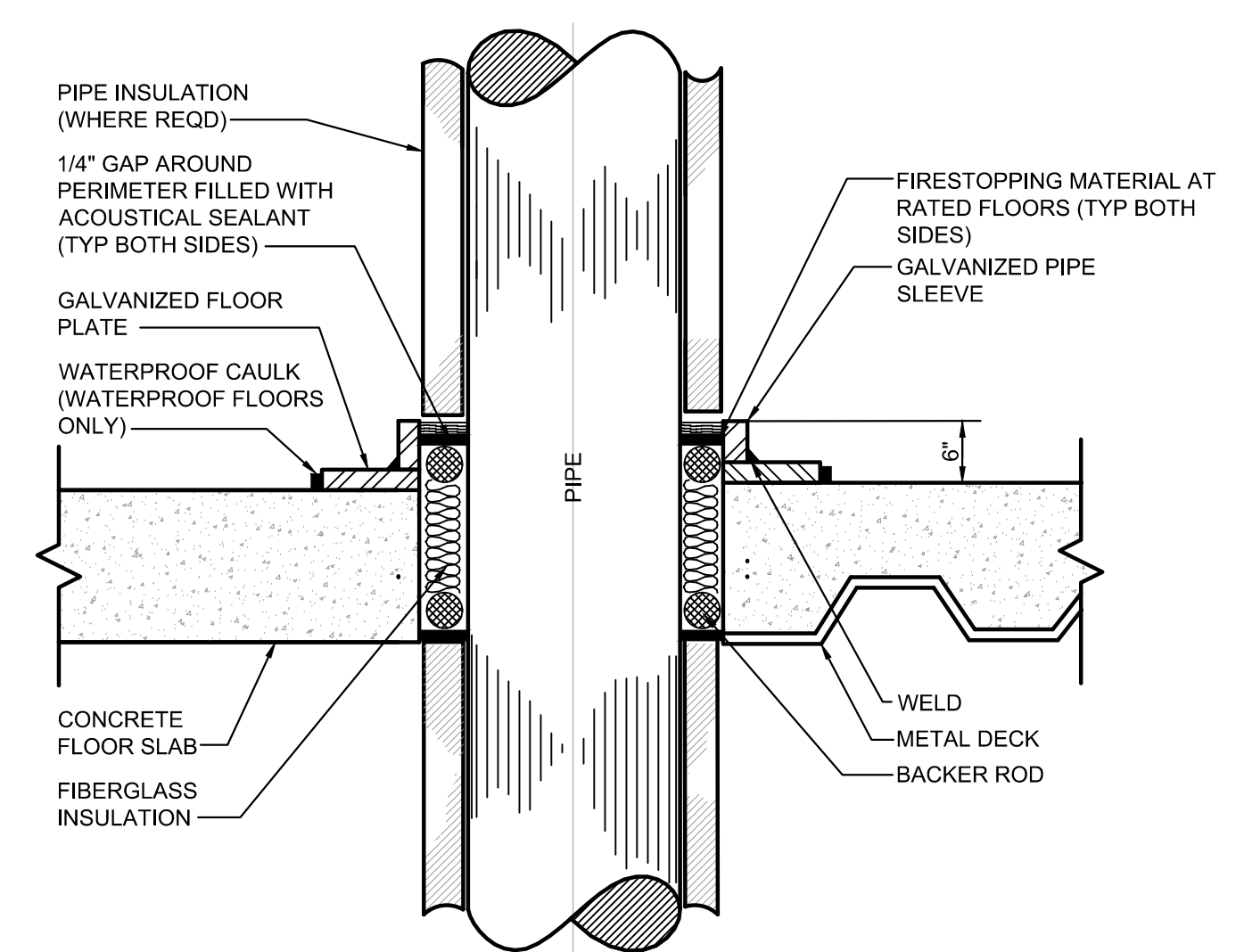


9 ISLAND VENT DETAIL
M902 SCALE: NONE

NOTES:
1. PROVIDE FLEXIBLE CONNECTION TO EQUIPMENT IF EQUIPMENT IS PROVIDED WITH VIBRATION ISOLATION OR IF EQUIPMENT IS NOT RIGIDLY MOUNTED.



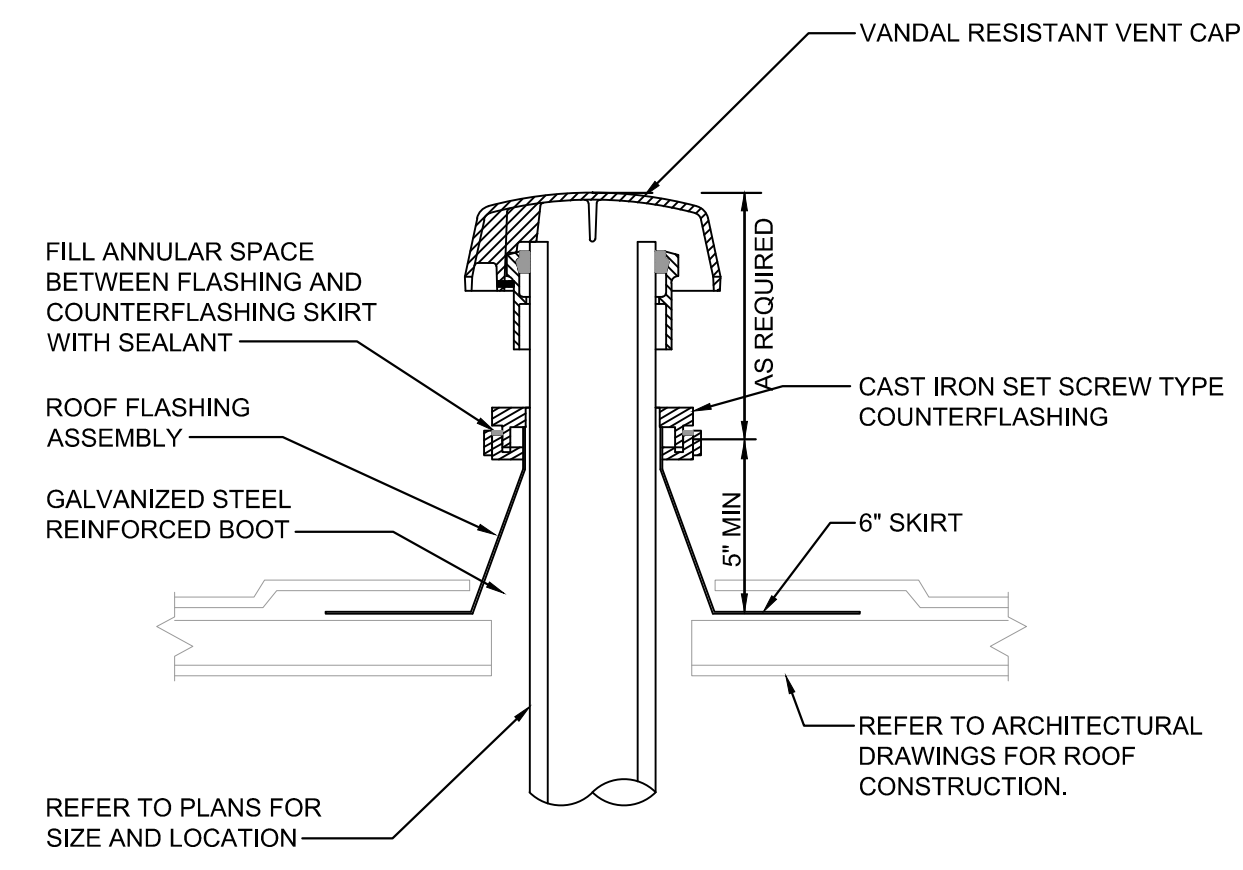
6 GAS CONNECTION TO EQUIPMENT DETAIL
M902 SCALE: NONE



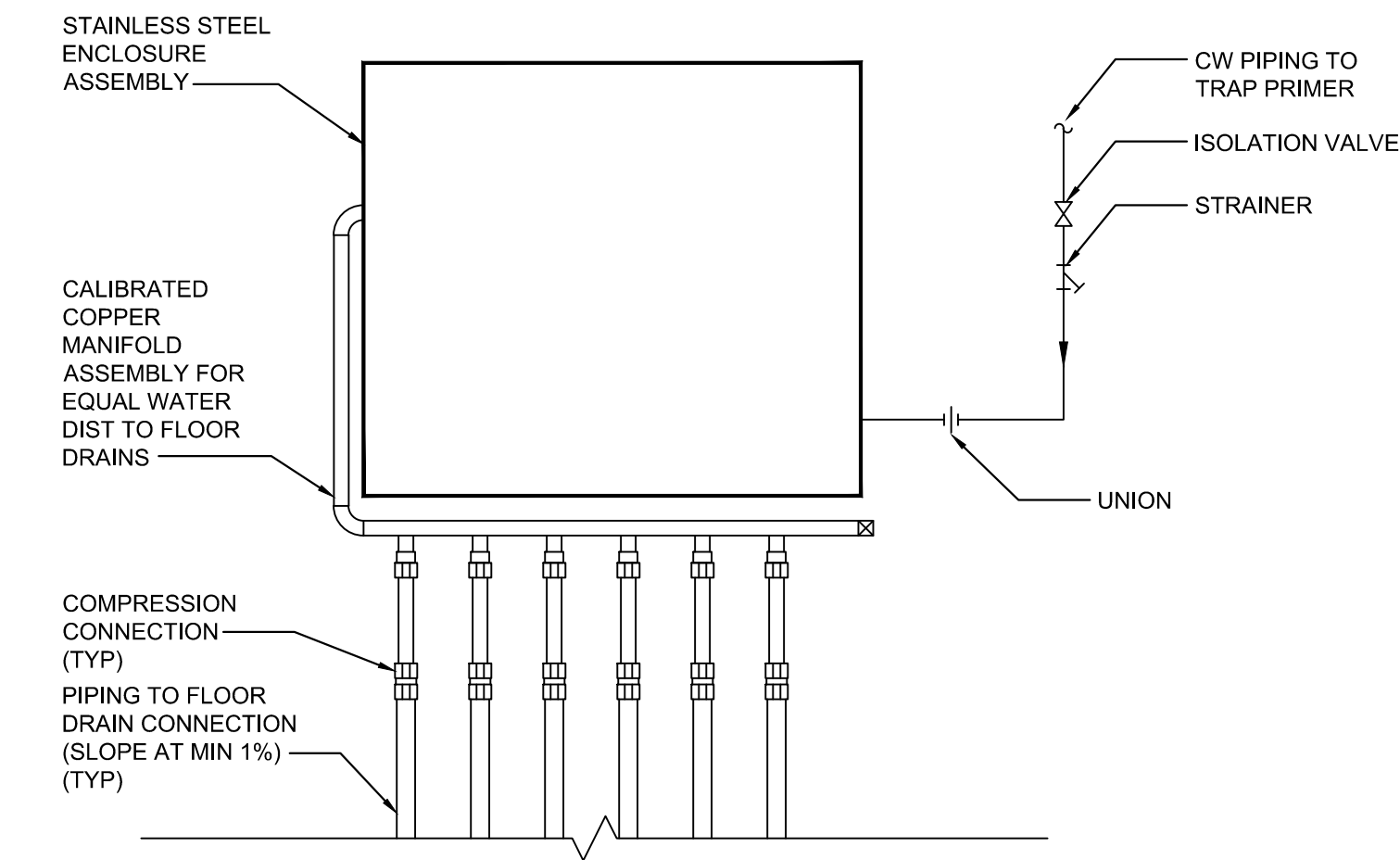
3 PIPE SLEEVE THROUGH FLOOR DETAIL - CORED OPENING
M902 SCALE: NONE

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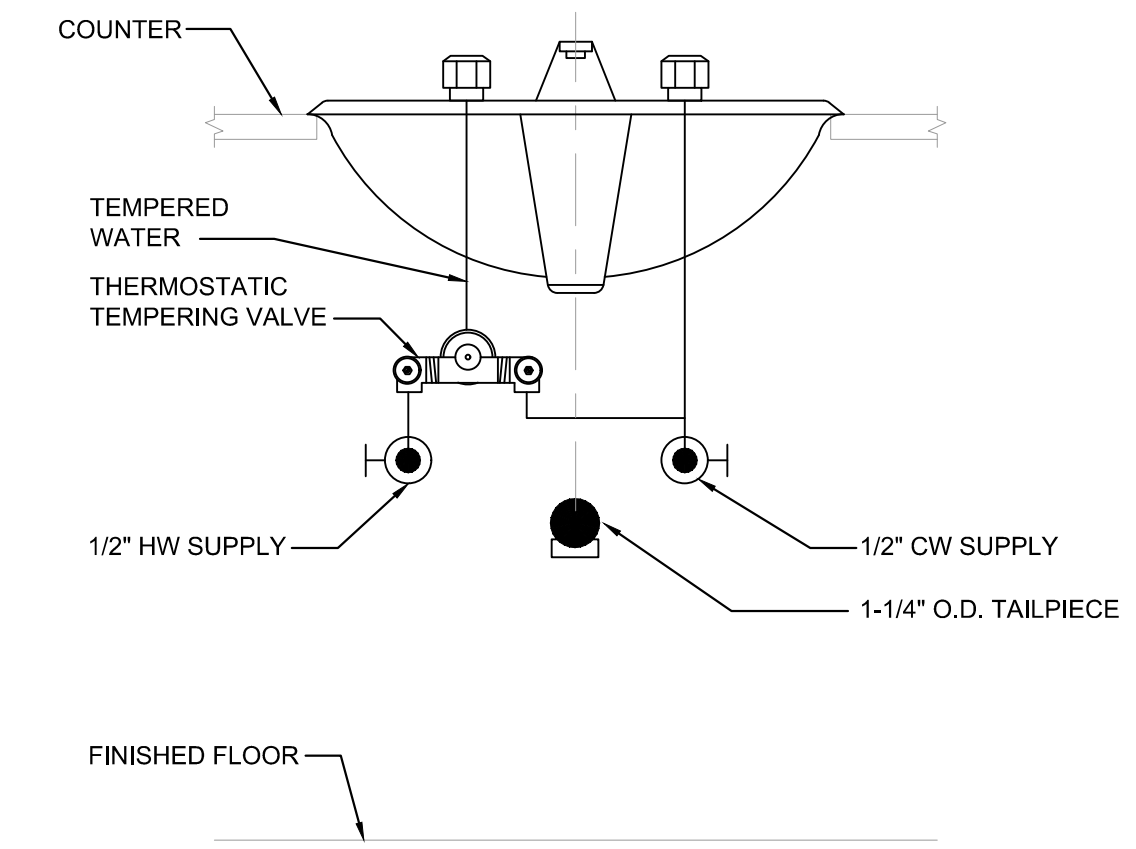


7 PLUMBING VENT THROUGH ROOF DETAIL
M903 SCALE: NONE

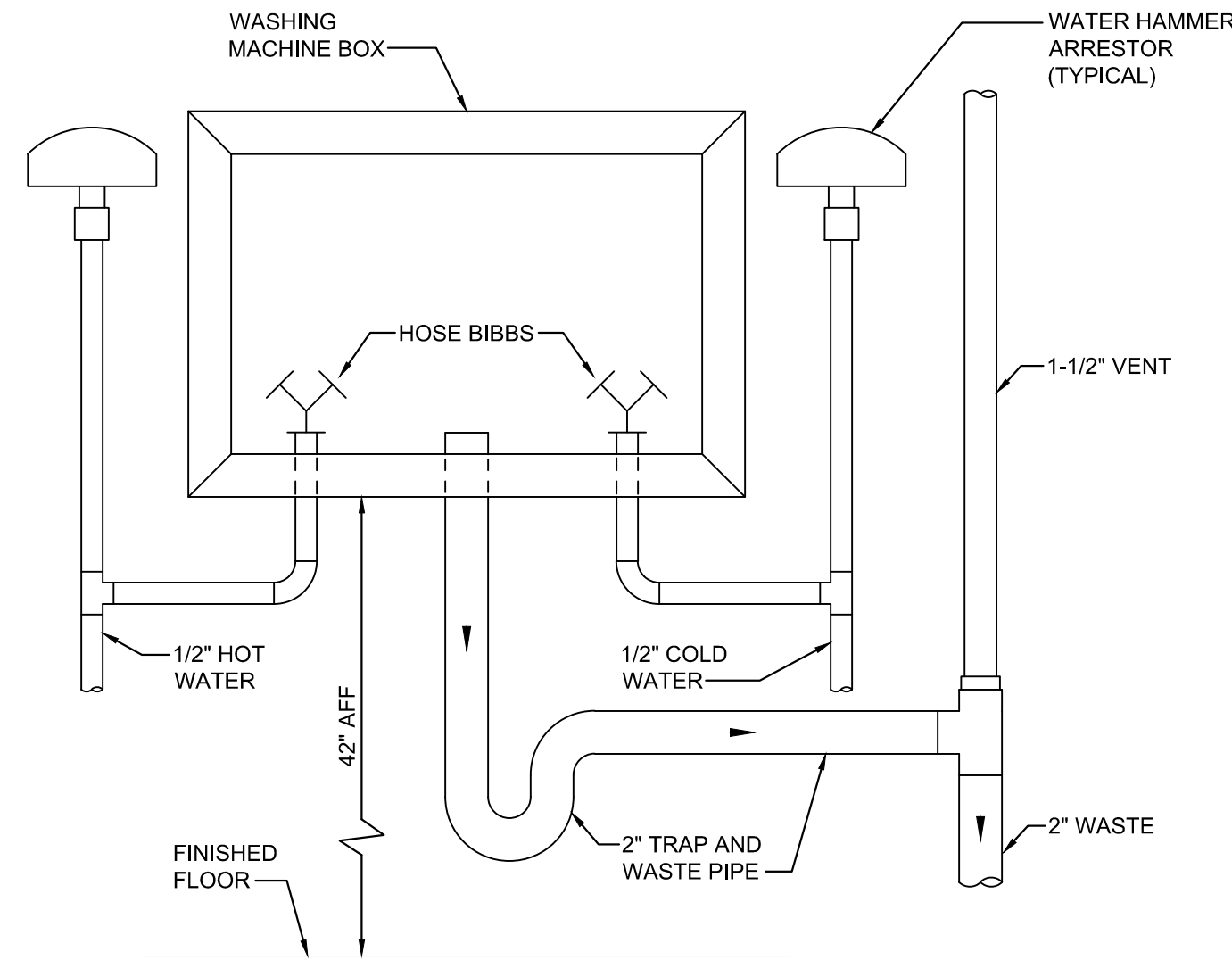


NOTES:
1. PROVIDE RECESSED IN WALL AT OCCUPIED SPACES. LOCATE SURFACE MOUNT IN MECHANICAL ROOMS ONLY.

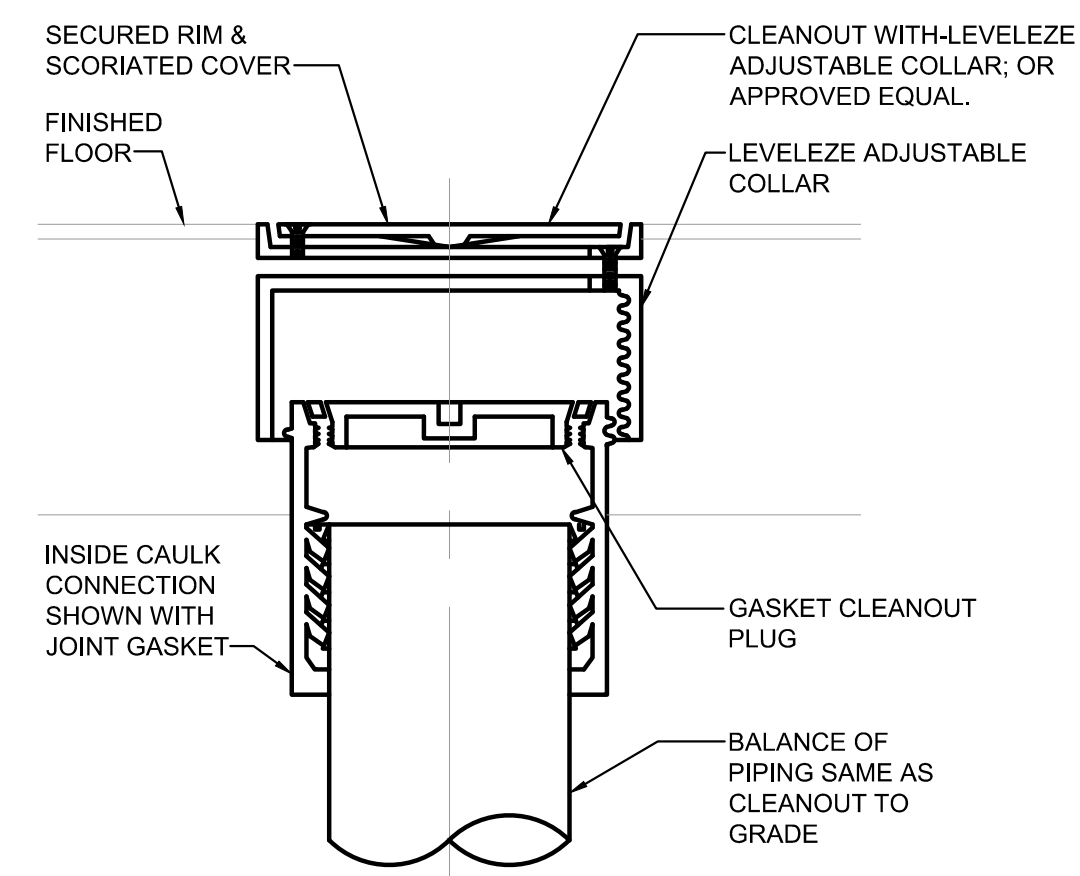
4 ELECTRIC TRAP-SEAL PRIMER DETAIL
M903 SCALE: NONE



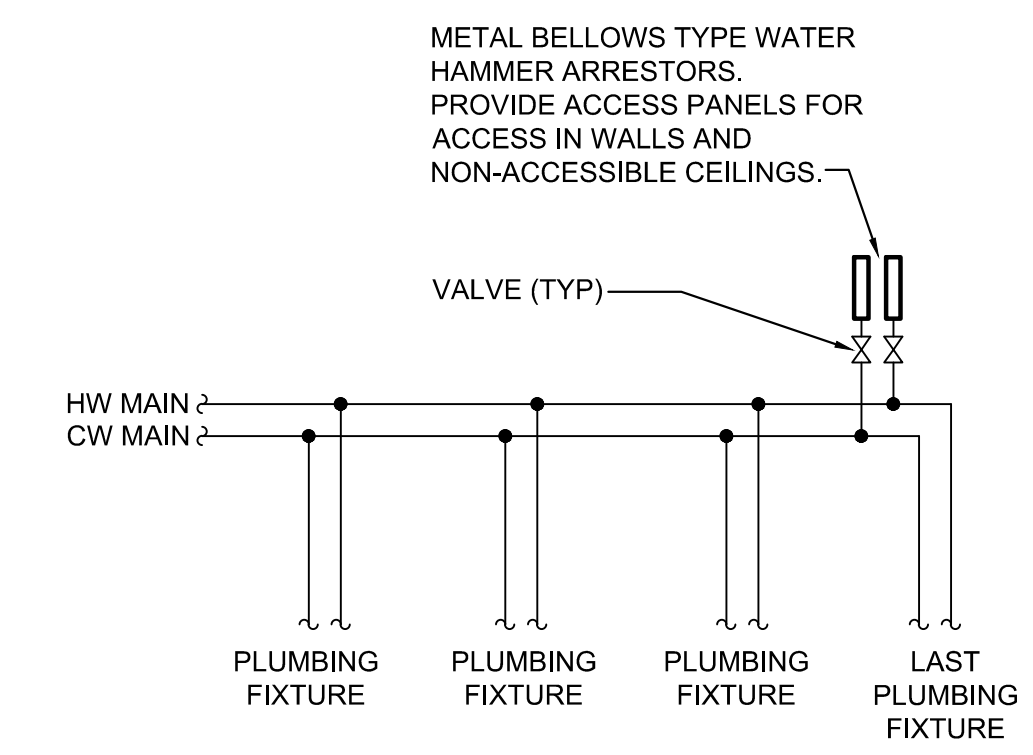
1 LOCAL MIXING VALVE DETAIL
M903 SCALE: NONE



8 WASHING MACHINE BOX DETAIL
M903 SCALE: NONE

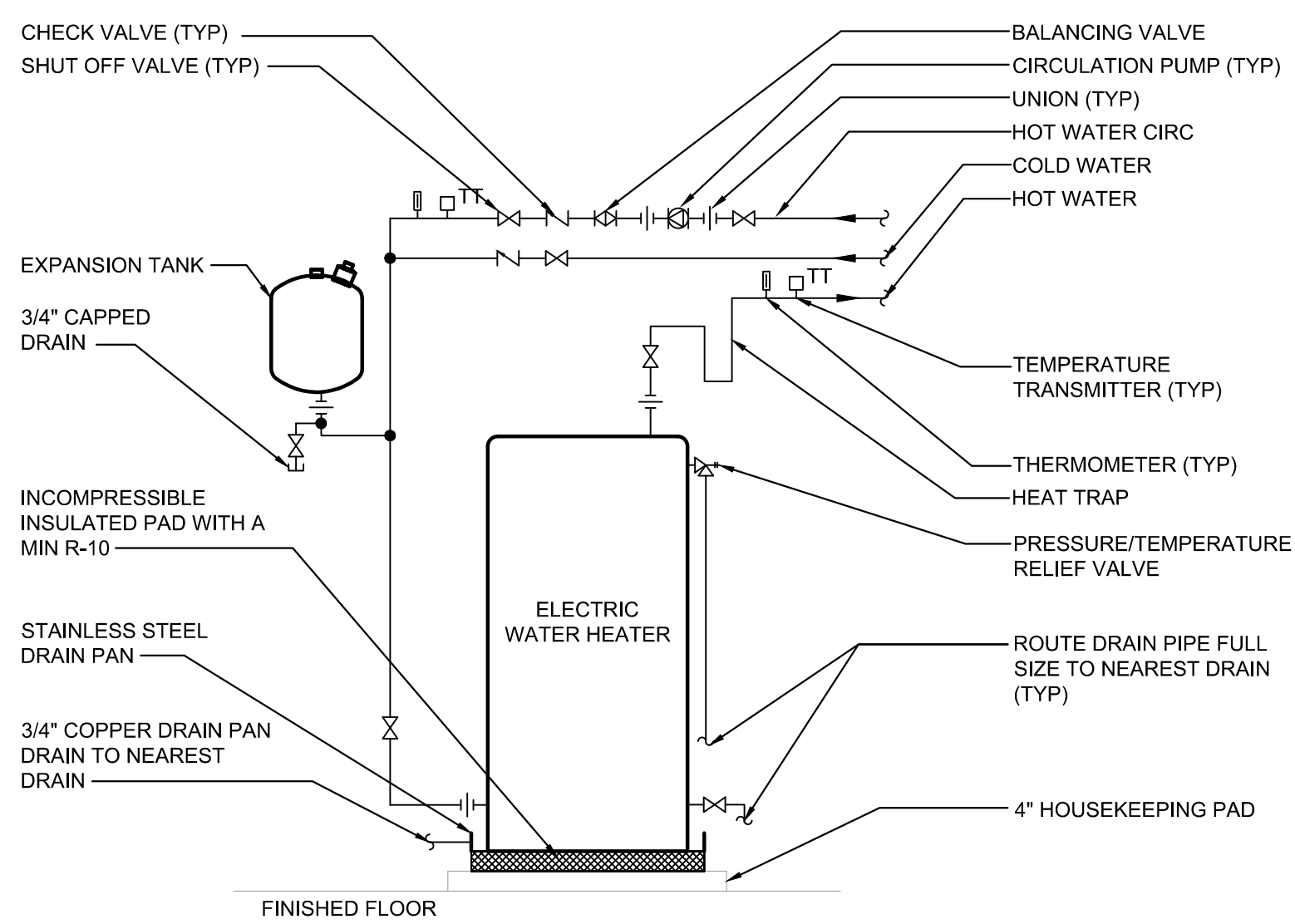


5 FLOOR CLEANOUT DETAIL
M903 SCALE: NONE



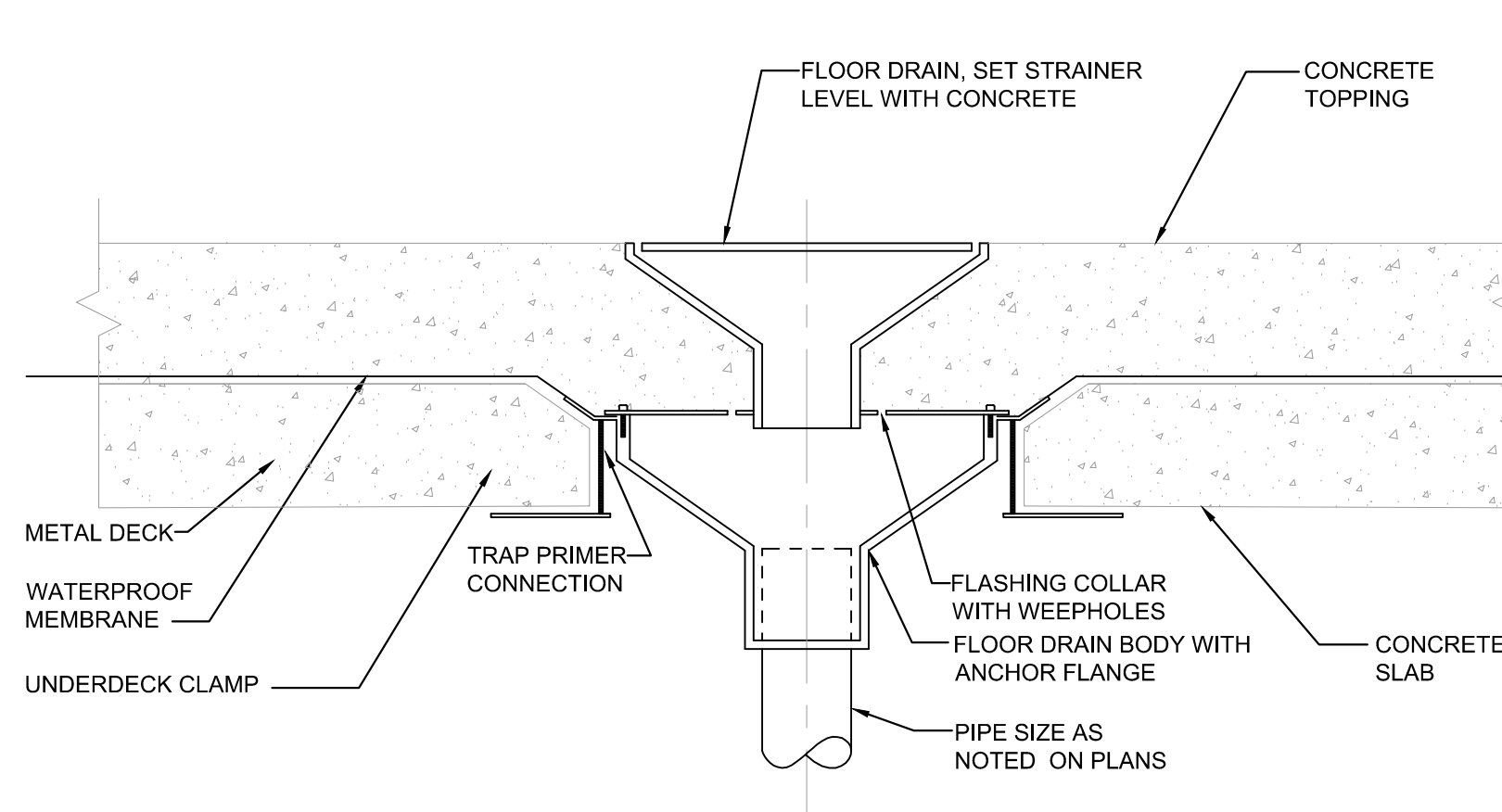
NOTE:
1. WATER HAMMER ARRESTORS ARE NOT SHOWN ON DRAWINGS. LOCATE AND SIZE IN ACCORDANCE WITH PLUMBING & DRAINAGE INSTITUTE (PDI) STANDARD NO. WH 201.

2 WATER HAMMER ARRESTOR DETAIL
M903 SCALE: NONE

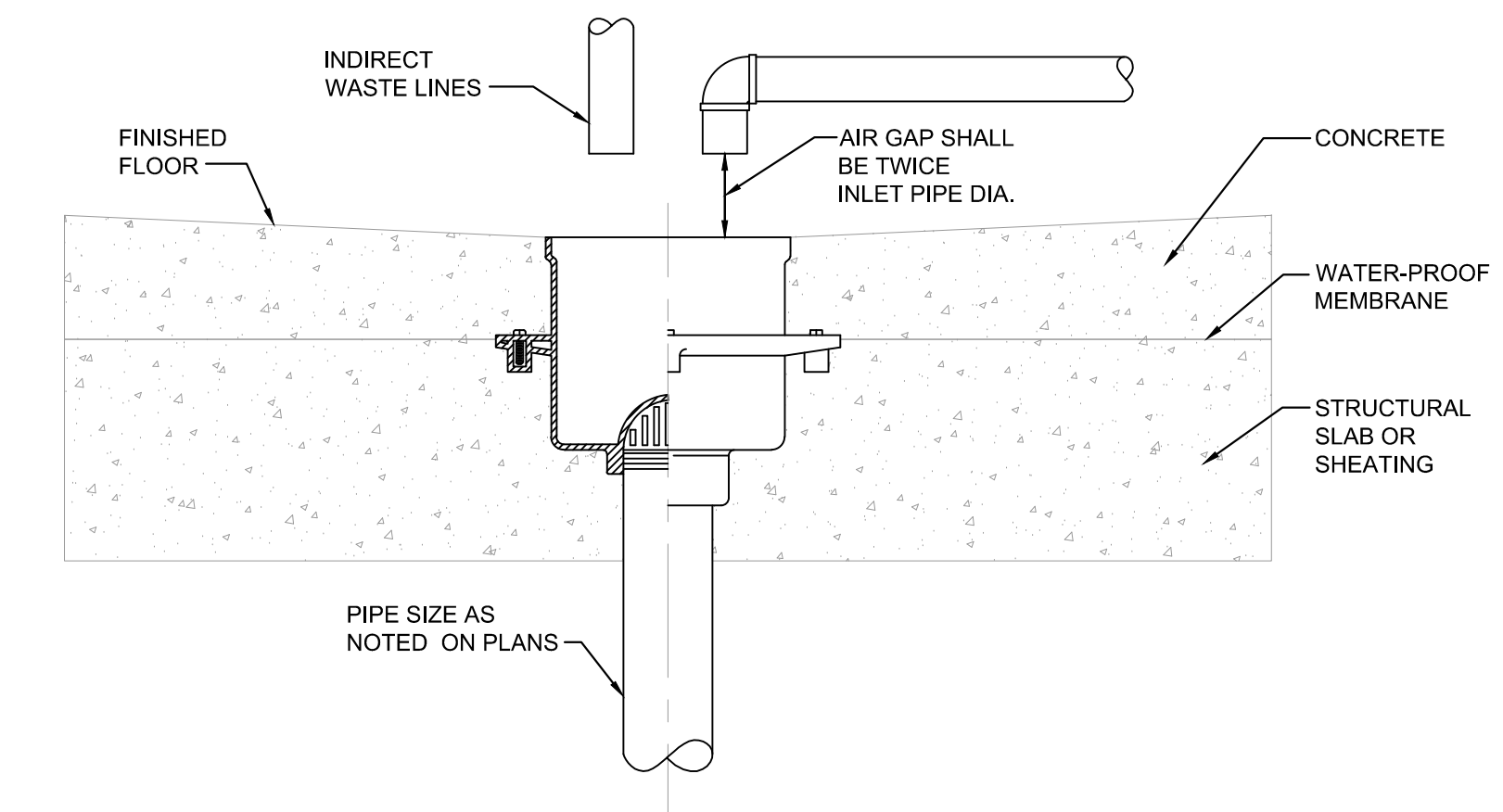


NOTE:
1. PROVIDE SEISMIC RESTRAINT TO FLOOR AND WALL.

9 ELECTRIC WATER HEATER DETAIL
M903 SCALE: NONE



6 FLOOR DRAIN DETAIL
M903 SCALE: NONE



NOTE:
1. INDIRECT WASTE PIPING EXCEEDING 5'-0" IN LENGTH SHALL BE TRAPPED WITH THE EXCEPTION OF CLEAR WATER WASTES.
2. PROVIDE TRAP PRIMER CONNECTION.
3. CONFIRM WITH AHJ THE REQUIRED ELEVATION OF FLOOR SINK RIM. IF AHJ HAS NO REQUIREMENT, INSTALL FLUSH WITH FINISHED FLOOR.

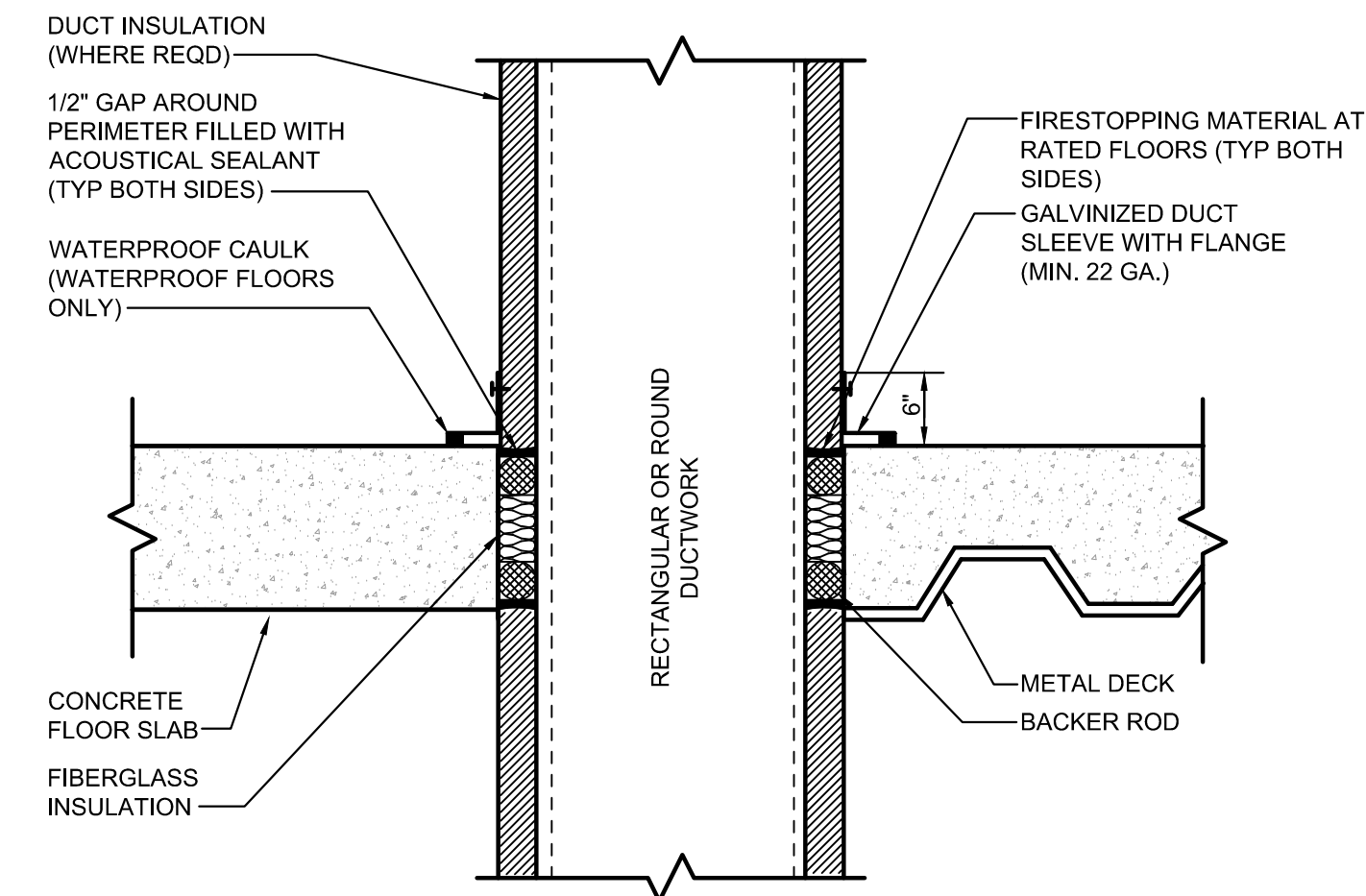
3 FLOOR SINK DETAIL
M903 SCALE: NONE

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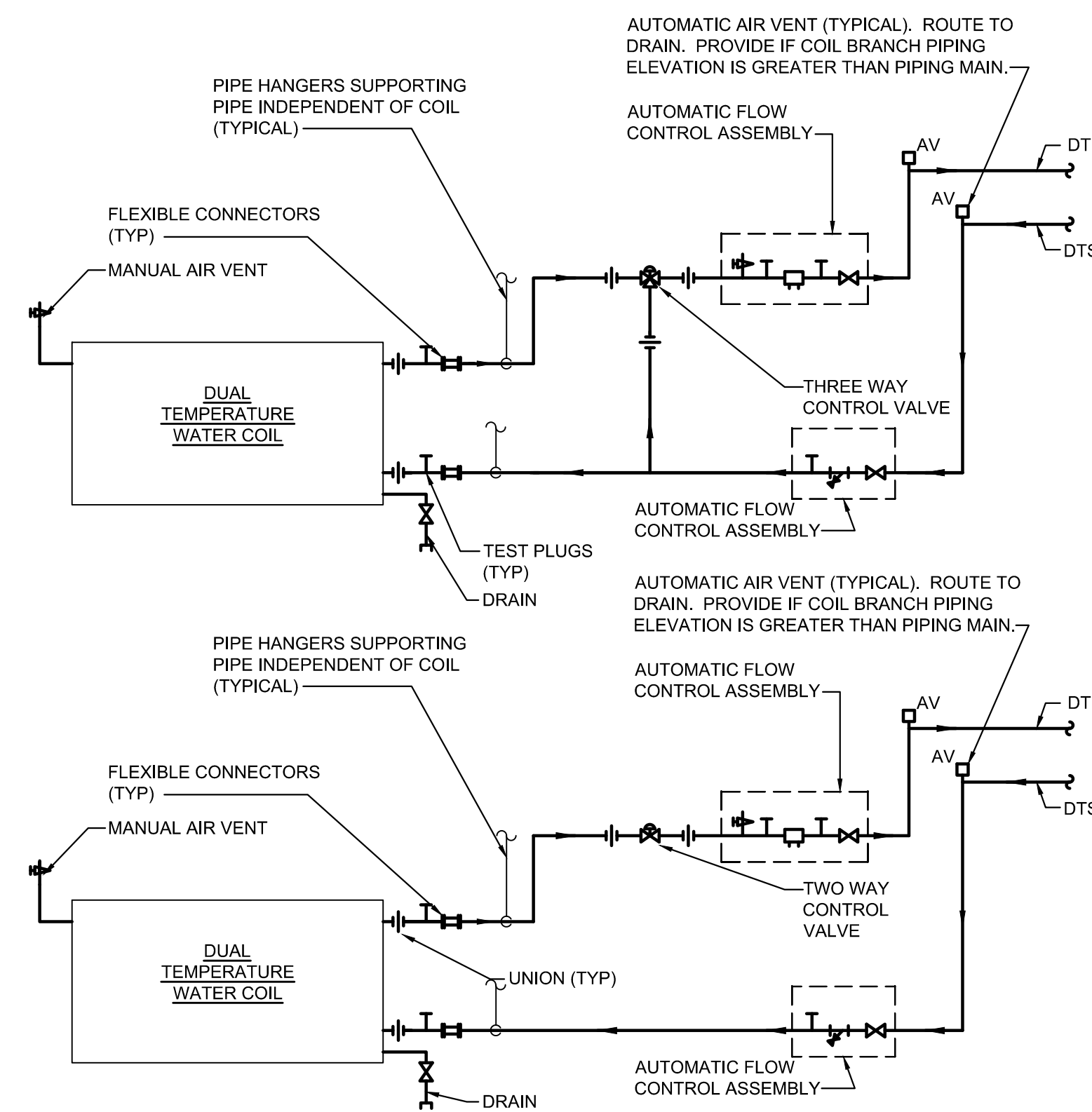
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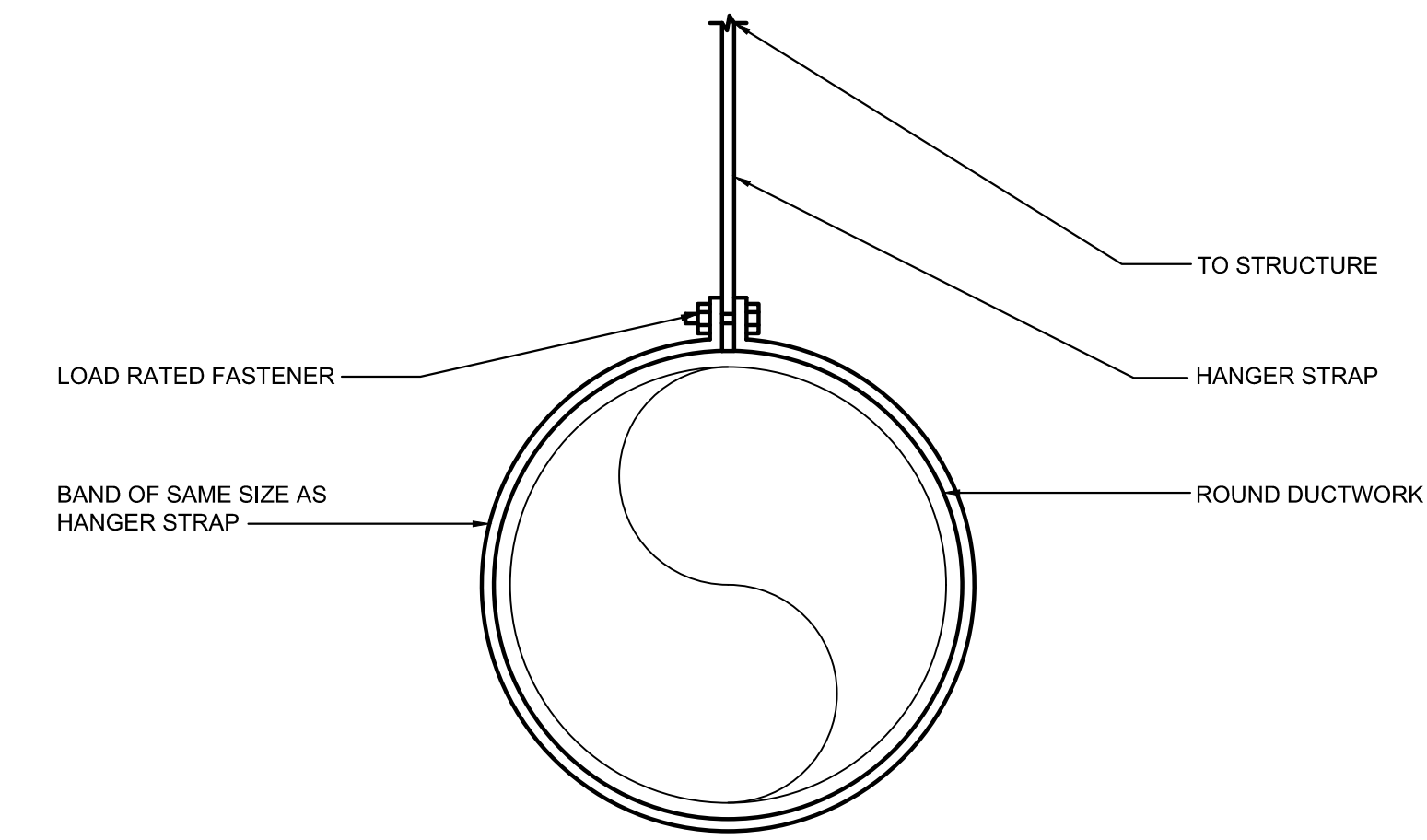
M903



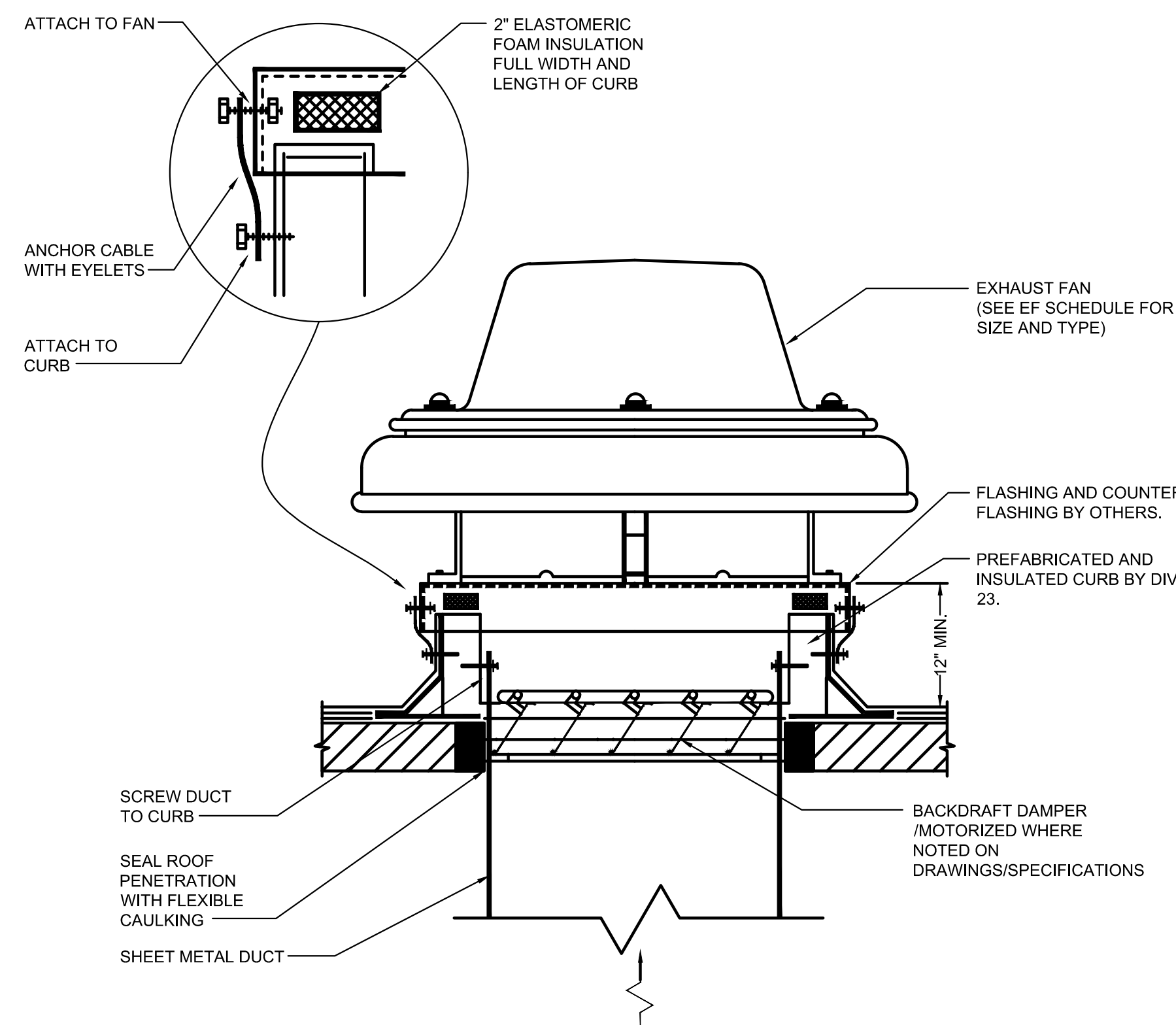
7 DUCT PENETRATION THROUGH FLOOR
M904 SCALE: NONE



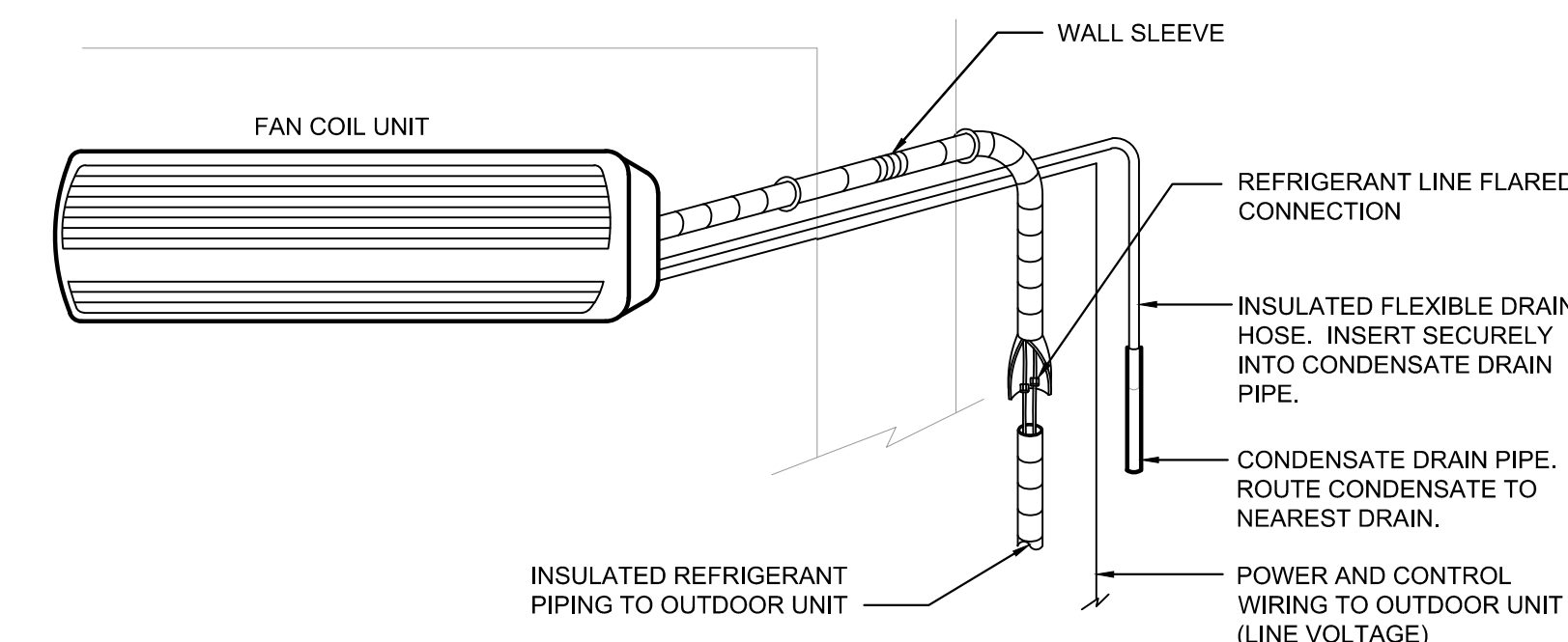
4 DUAL TEMPERATURE WATER COIL PIPING DETAIL
M904 SCALE: NONE



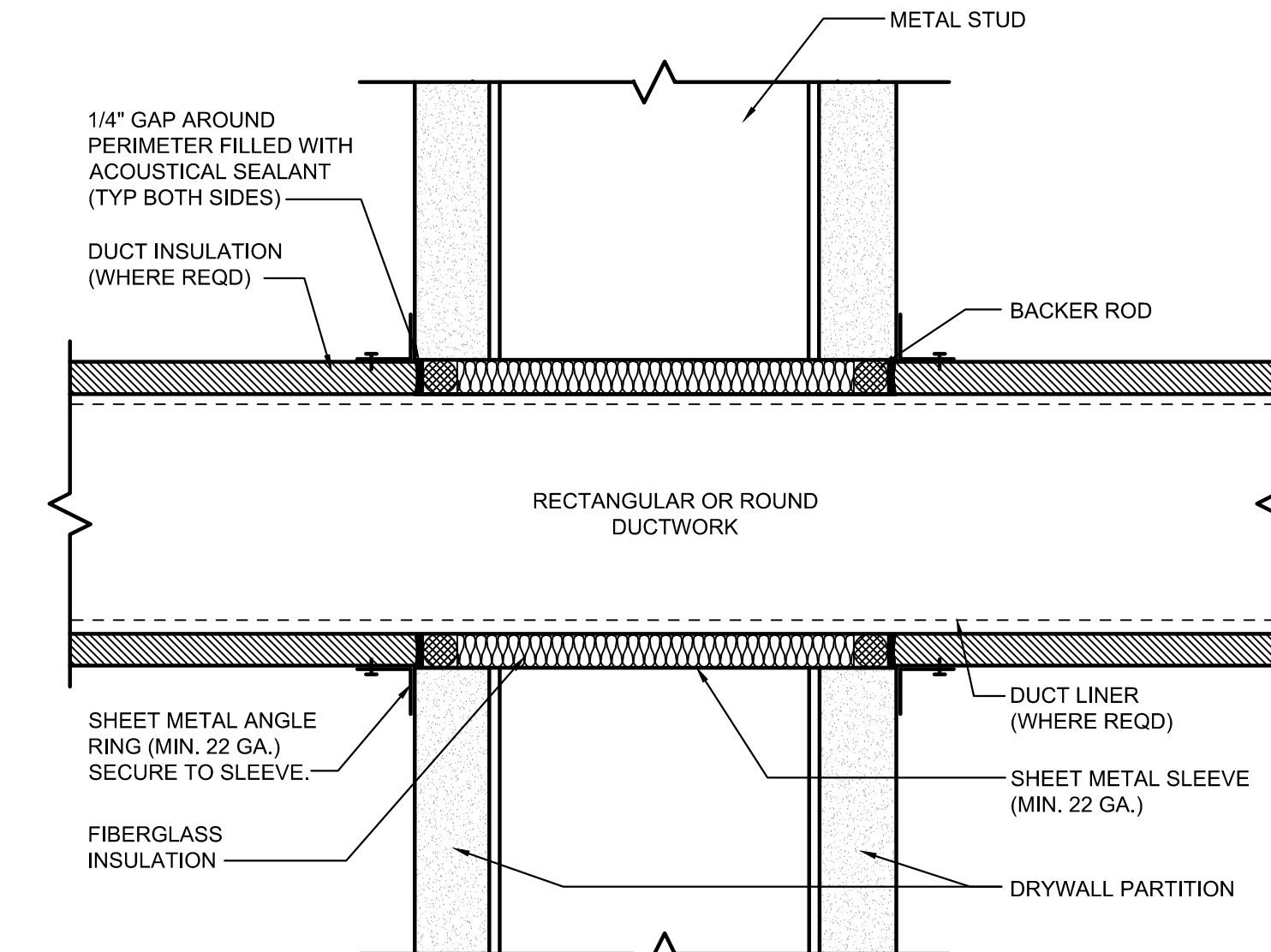
1 EXPOSED ROUND METAL DUCT HANGER DETAIL
M904 SCALE: NONE



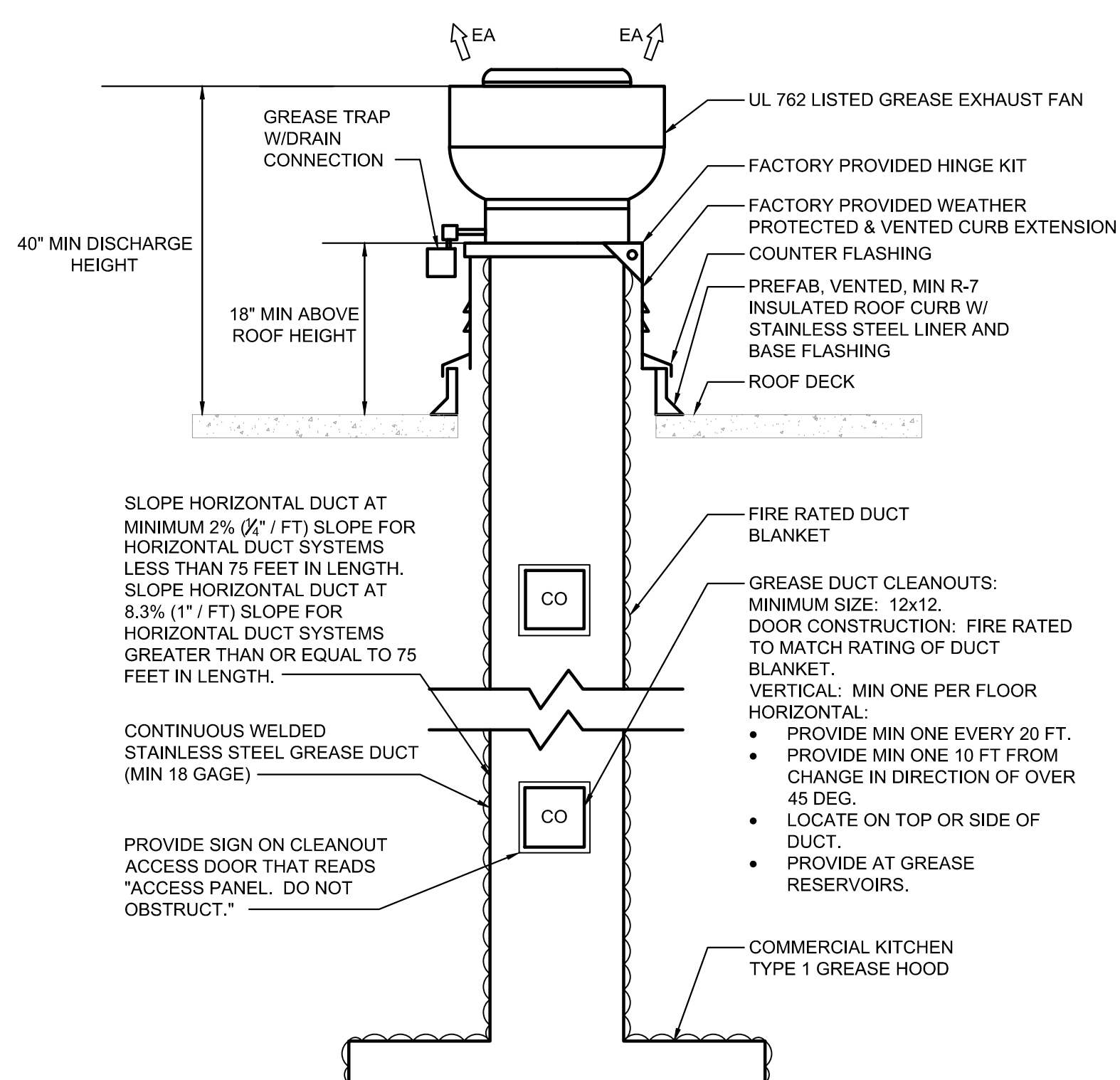
8 ROOF EXHAUST FAN AND CURB DETAIL
M904 SCALE: NONE



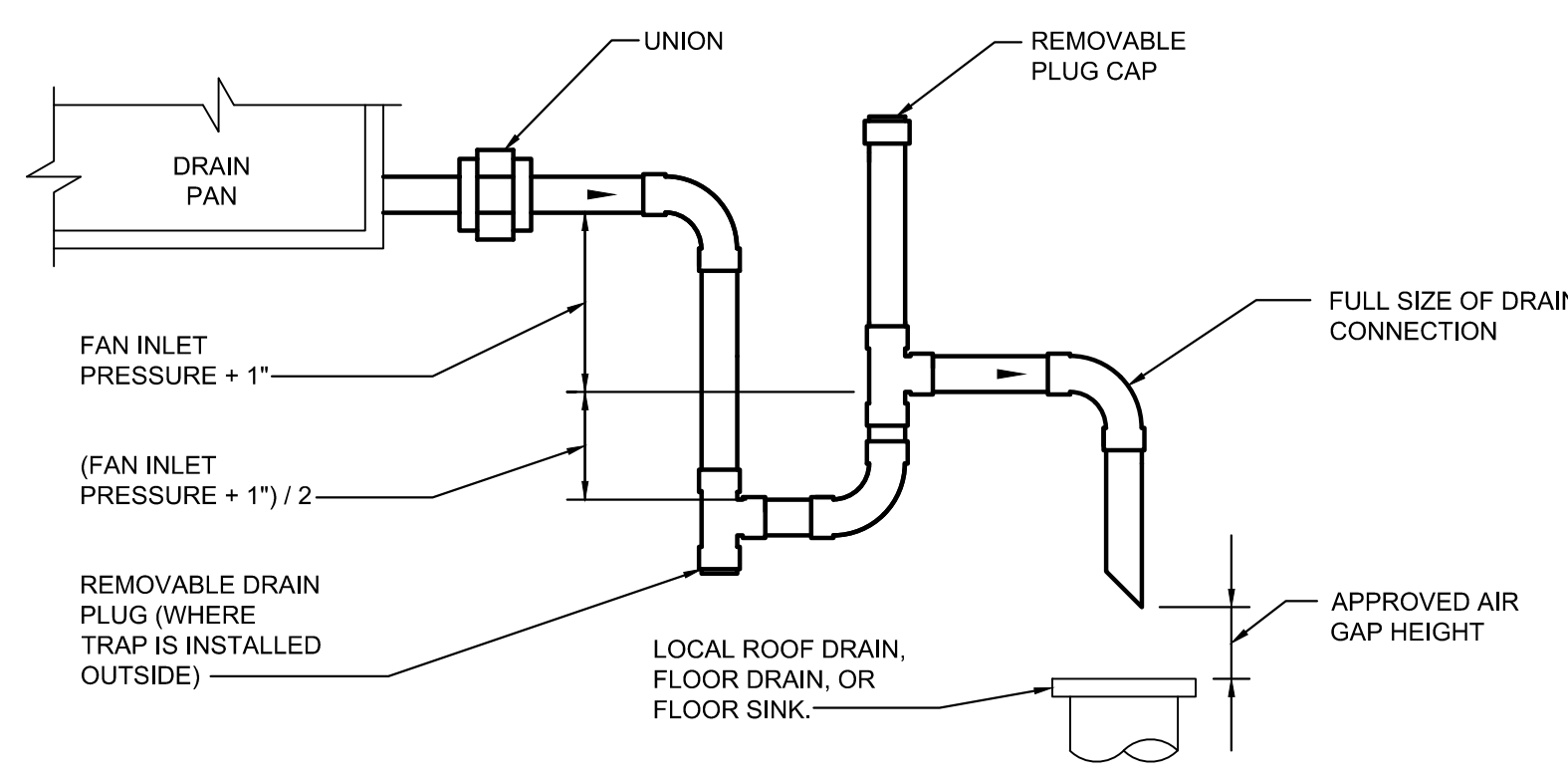
5 WALL MOUNTED FAN COIL UNIT DETAIL
M904 SCALE: NONE



2 DUCT PENETRATION THROUGH NON-FIRE RATED WALL
M904 SCALE: NONE



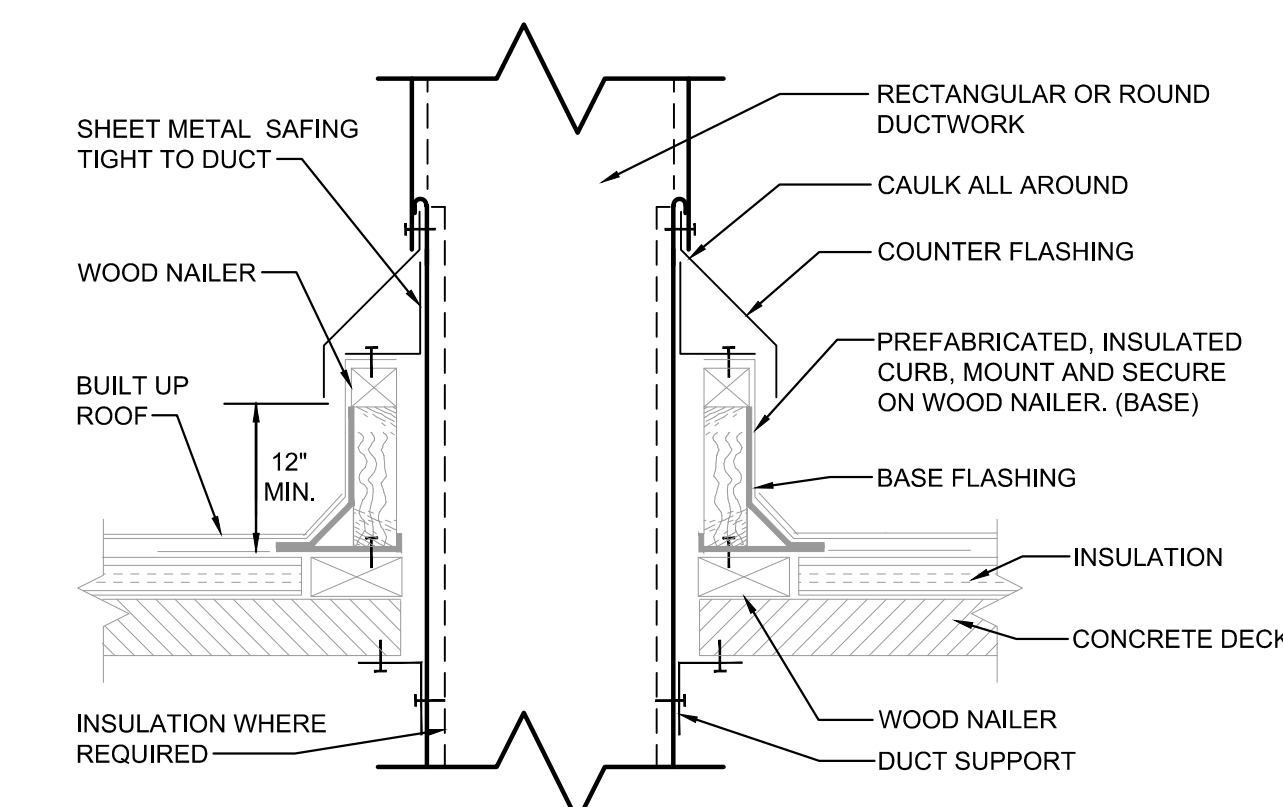
9 ROOF MOUNT CENTRIFUGAL UPBLAST TYPE 1 GREASE EXHAUST FAN DETAIL
M904 SCALE: NONE



EQUIPMENT CAPACITY IN TONS OF REFRIGERATION	MINIMUM CONDENSATE PIPE DIAMETER IN INCHES
0-20 TONS	1"
21-40 TONS	1 1/8"
41-125 TONS	1 1/2"
126-250 TONS	2"

NOTES:
1. THIS CHART CAPACITY ASSUMES 1/8" PER FOOT SLOPE WITH THE PIPE RUNNING 3/4 FULL OF LIQUID. CONDENSATE DRAIN SIZING FOR OTHER SLOPES OR CONDITIONS SHALL BE APPROVED BY THE AHJ.

6 CONDENSATE DRAIN DETAIL
M904 SCALE: NONE



3 DUCT PENETRATION THROUGH ROOF DETAIL
M904 SCALE: NONE

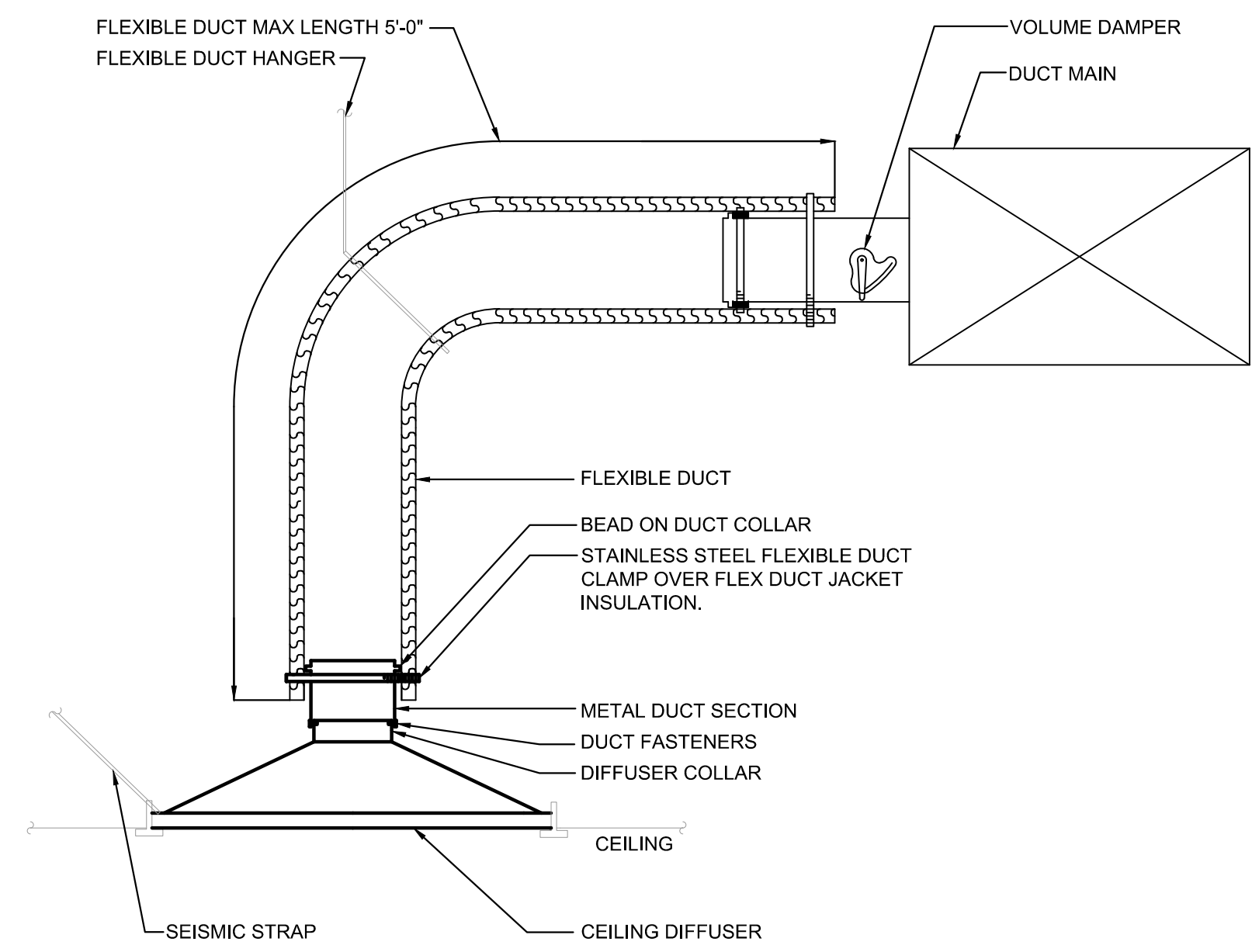
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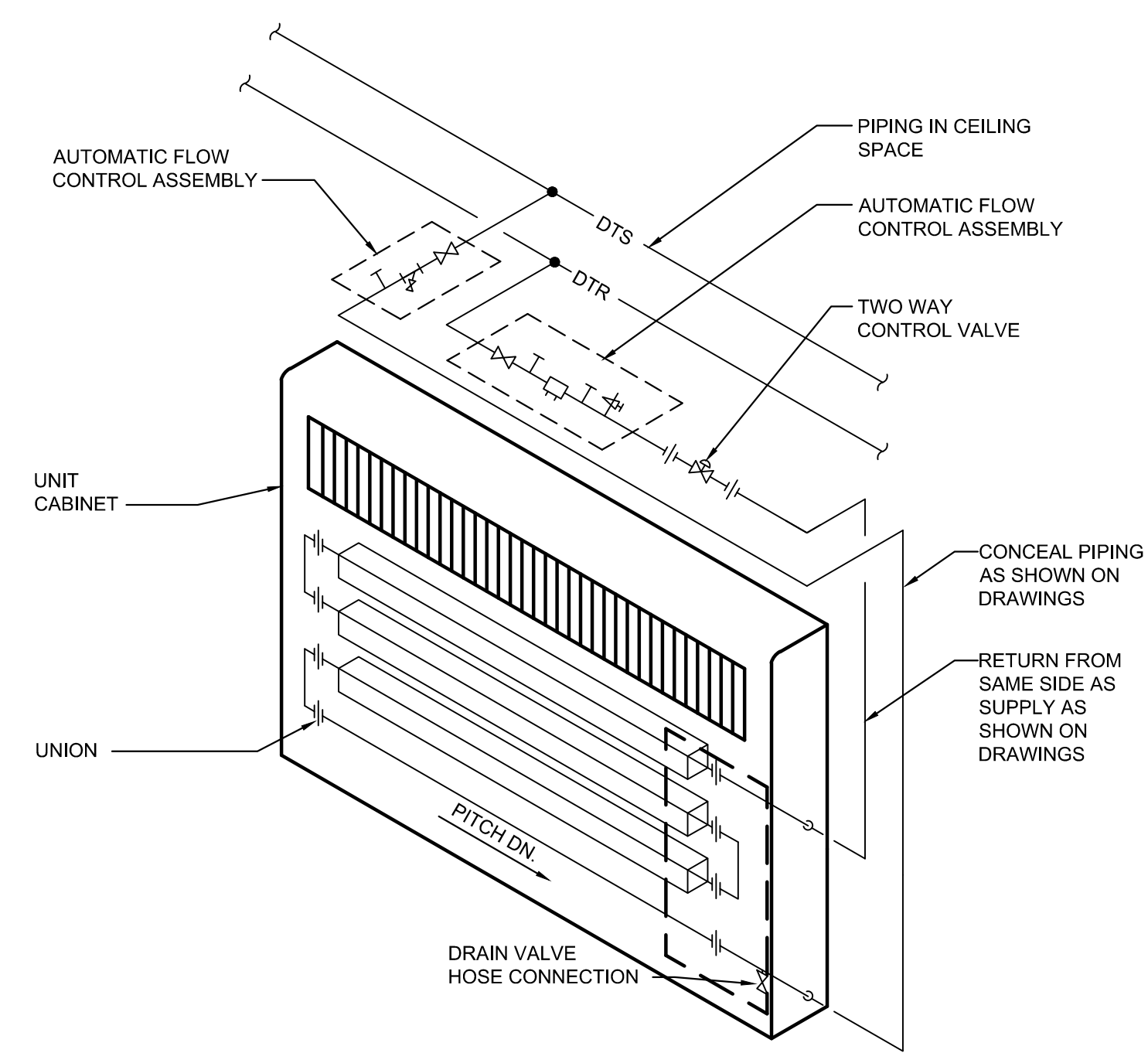
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M904

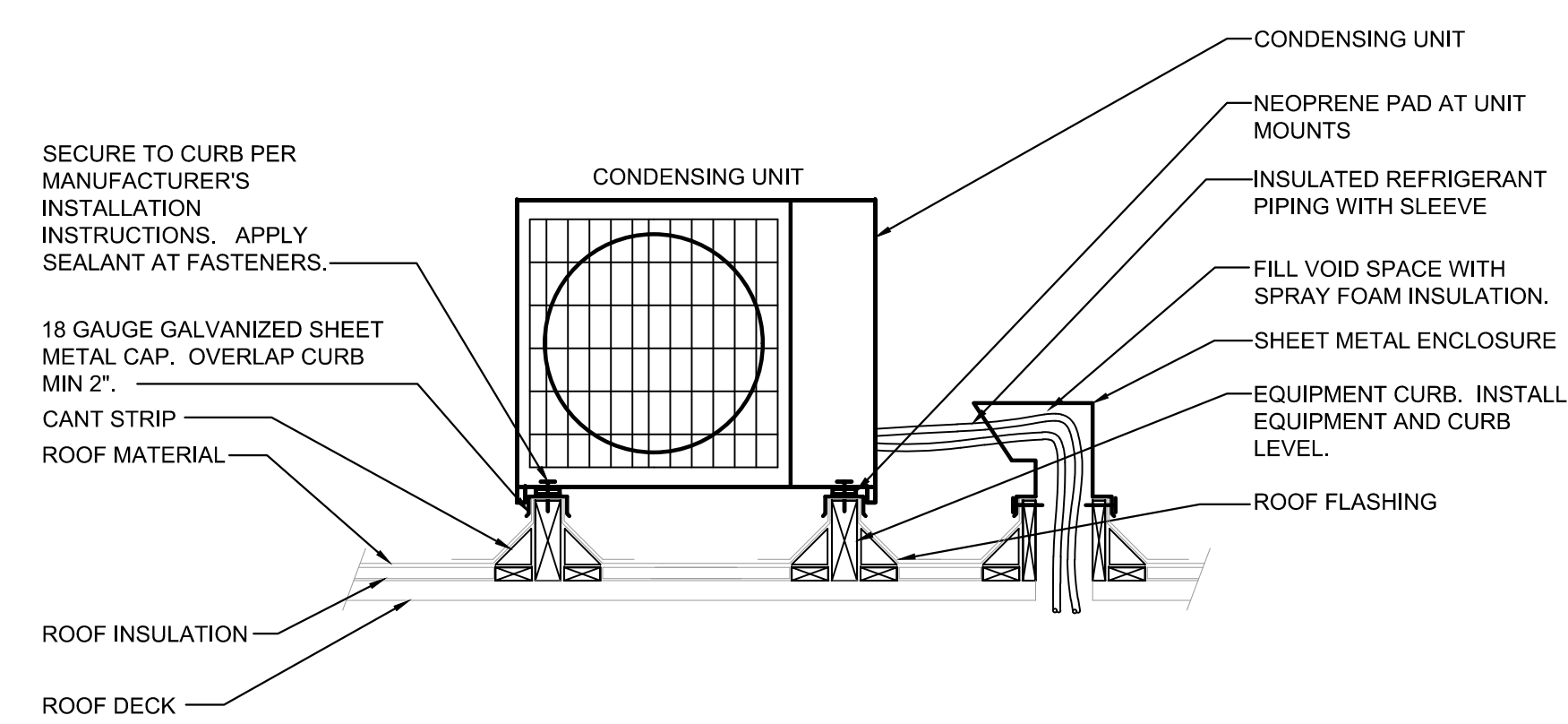


7 TYPICAL DIFFUSER CONNECTION DETAIL
M905 SCALE: NONE

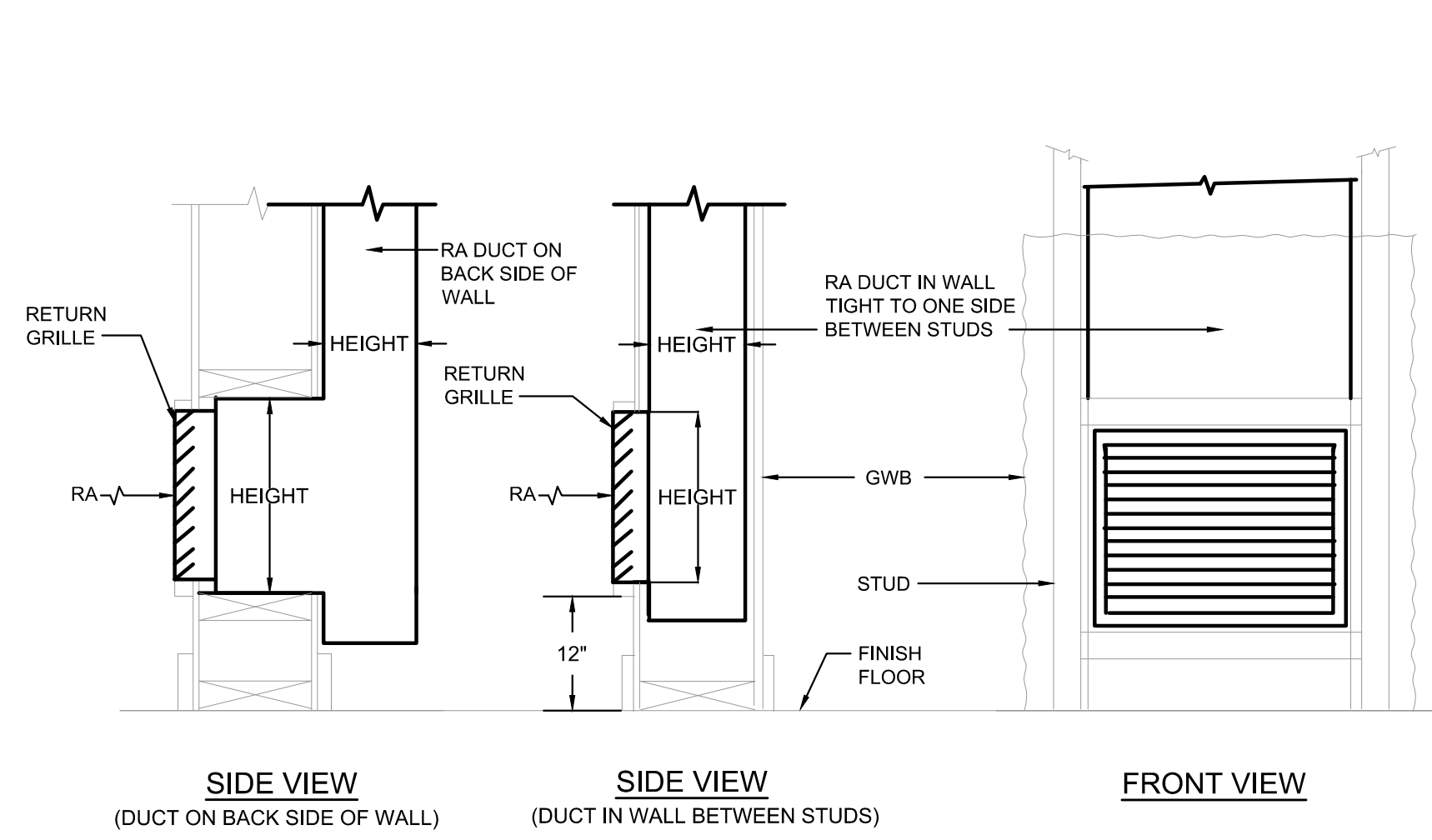


NOTES:
1. PROVIDE WITHOUT UNIT CABINET WHEN NOTED ON SCHEDULE AND INSTALLED BEHIND CASEWORK. PROVIDE ACCESS PANEL IN CASEWORK TO MATCH LOCATION OF CABINET ACCESS PANEL FOR DRAIN VALVE HOSE CONNECTION.

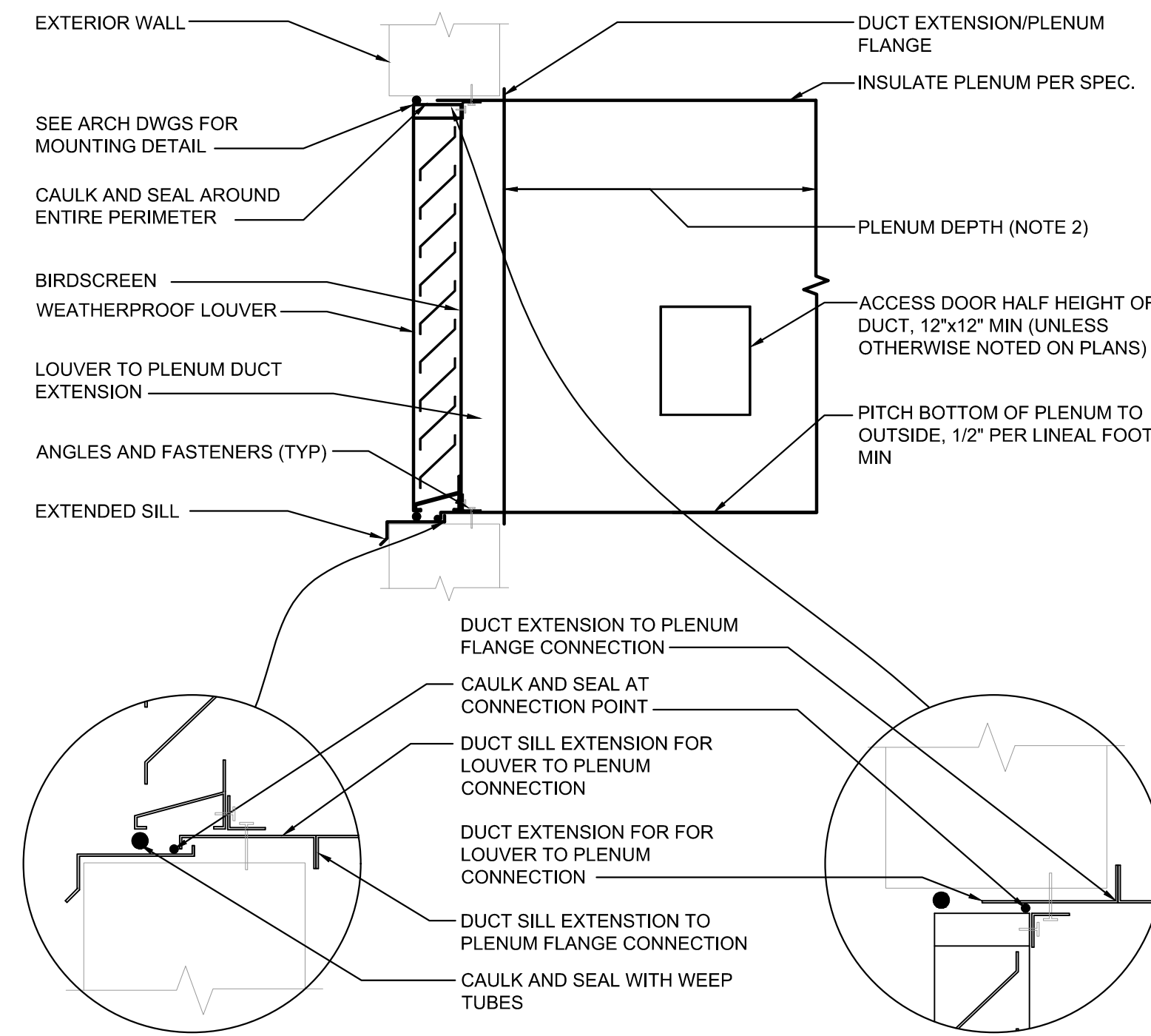
8 TYPICAL FIN TUBE CONVECTOR PIPING DETAIL
M905 SCALE: NONE



9 ROOF MOUNTED CONDENSING UNIT DETAIL
M905 SCALE: NONE

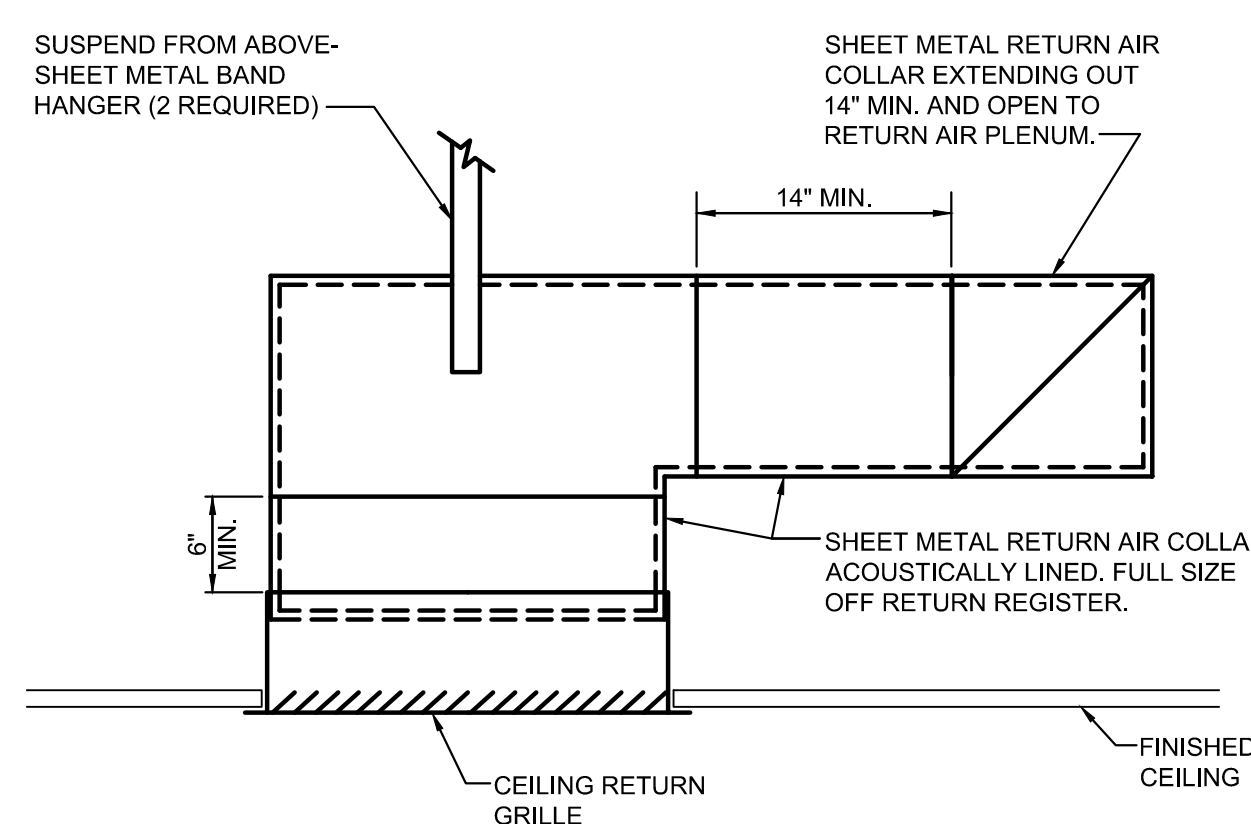


4 WALL MOUNTED RETURN AIR GRILLE DETAIL
M905 SCALE: NONE

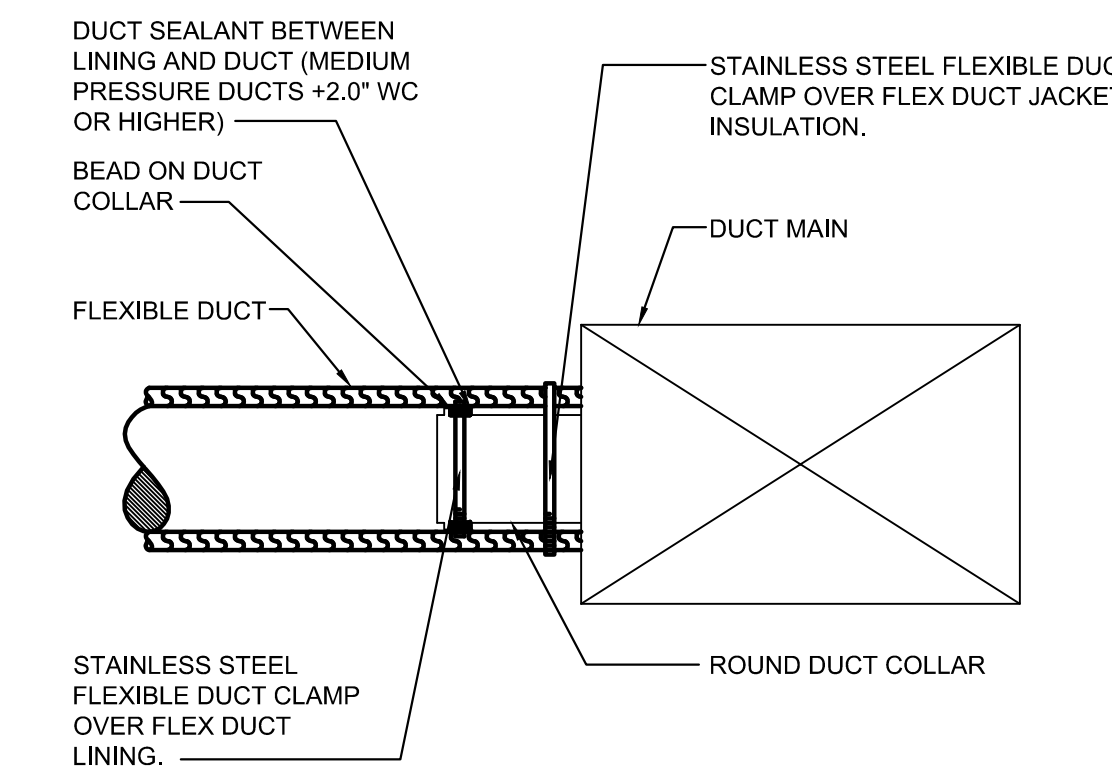


NOTES:
1. COORDINATE LOUVER SIZE & LOCATION WITH ARCHITECTURAL PLANS AND EXTERIOR ELEVATIONS.
2. PLENUM SHALL BE A MINIMUM OF 36" DEEP UNLESS OTHERWISE NOTED.
3. PROVIDE DAMPERS AS REQUIRED PER PLANS AND SPECS.
4. DUCT AND SILL EXTENSION SHALL BE INSTALLED PRIOR TO LOUVER AND PLENUM INSTALLATION.

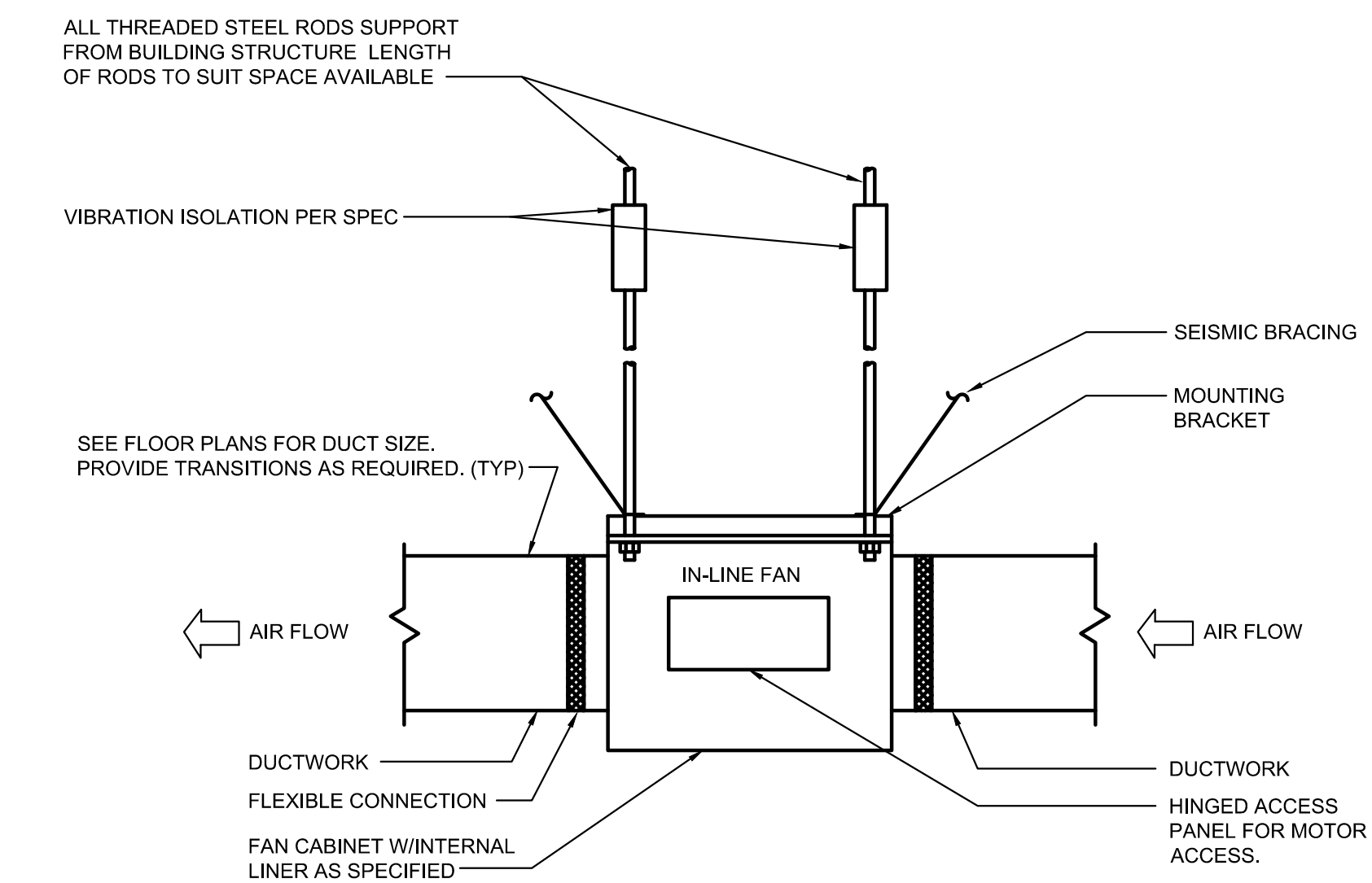
5 LOUVER CONNECTION DETAIL
M905 SCALE: NONE



6 TYPICAL CEILING RETURN AIR GRILLE AND COLLAR DETAIL
M905 SCALE: NONE

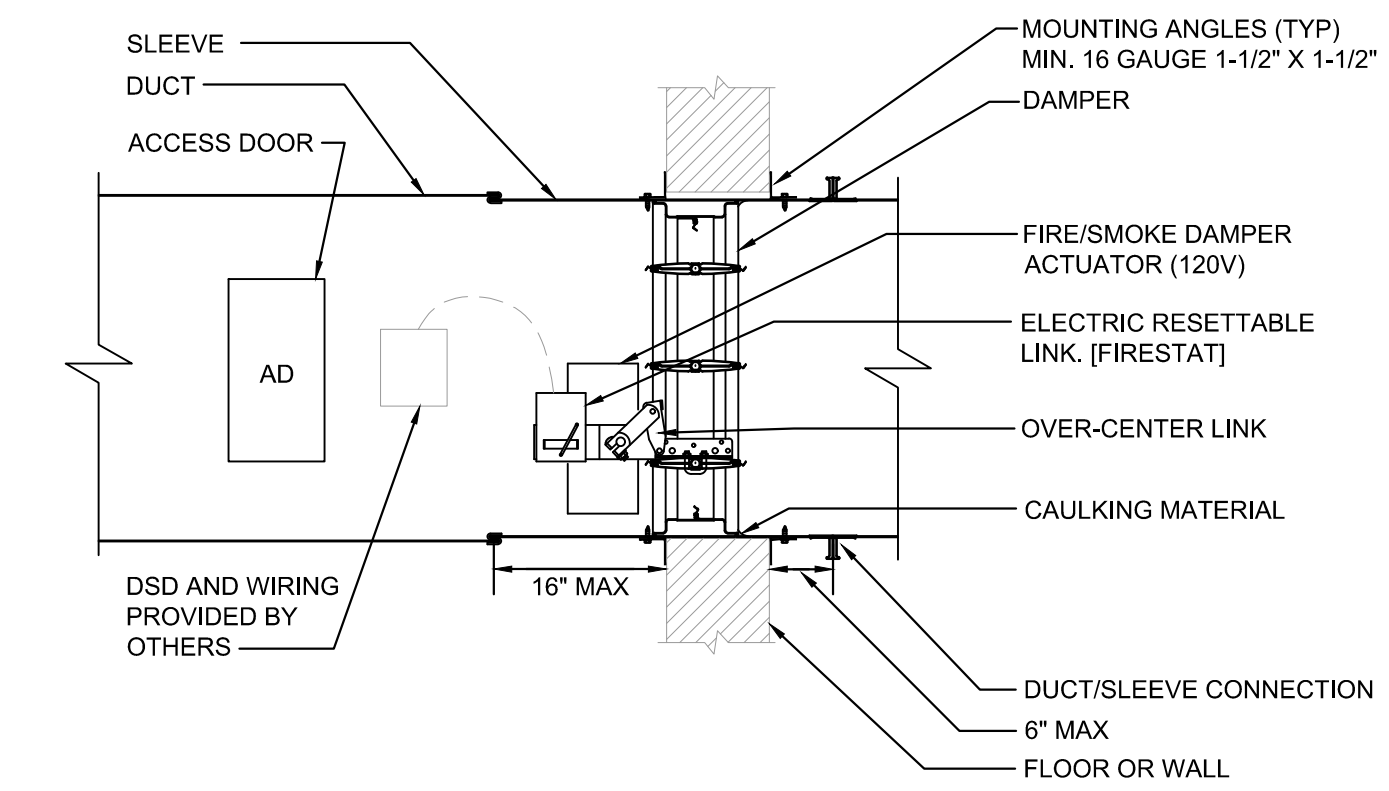


1 TYPICAL FLEXIBLE DUCT CONNECTION DETAIL
M905 SCALE: NONE



NOTES:
1. PROVIDE CLEARANCE FOR MOTOR ACCESS AND MAINTENANCE.

2 CENTRIFUGAL IN-LINE FAN DETAIL
M905 SCALE: NONE



NOTES:
1. COMPLY WITH MFR INSTALLATION INSTRUCTIONS, UL555, UL555S AND SMACNA FIRE DAMPER INSTALLATION MANUAL.
2. FRAME OPENINGS AND PROVIDE DUCT CONNECTIONS PER MFR INSTALLATION INSTRUCTIONS.
3. DAMPER ASSEMBLY INSTALLED IN AND FASTENED TO THE SLEEVE.
4. MAINTAIN FULL DUCT SIZE. DAMPER HOUSING SHALL NOT OBSTRUCT AIR FLOW.
5. MOUNTING SHOWN IS VERTICAL INSTALLATION. COMPLY WITH MFR INSTALLATION INSTRUCTIONS FOR HORIZONTAL INSTALLATIONS.

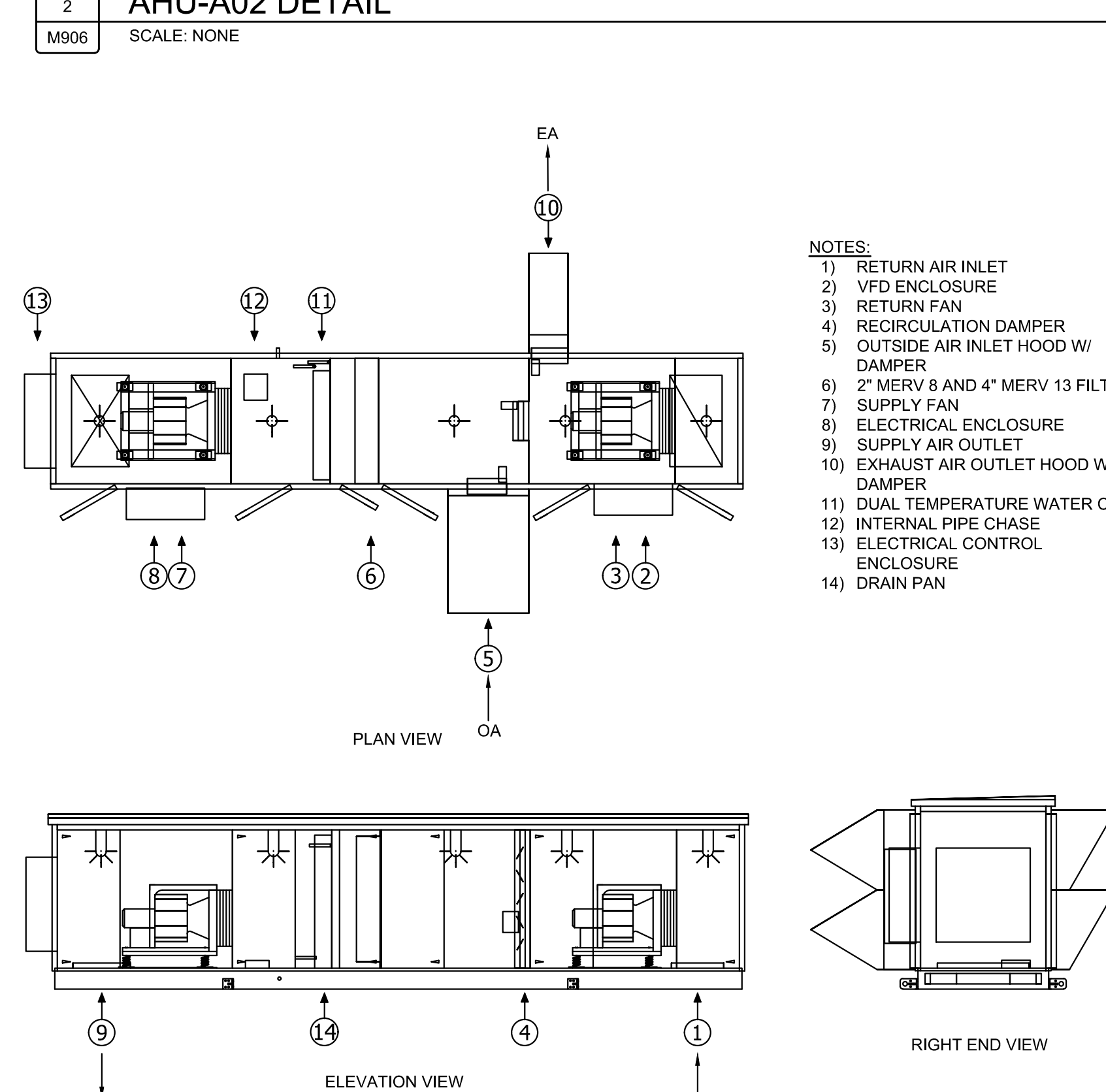
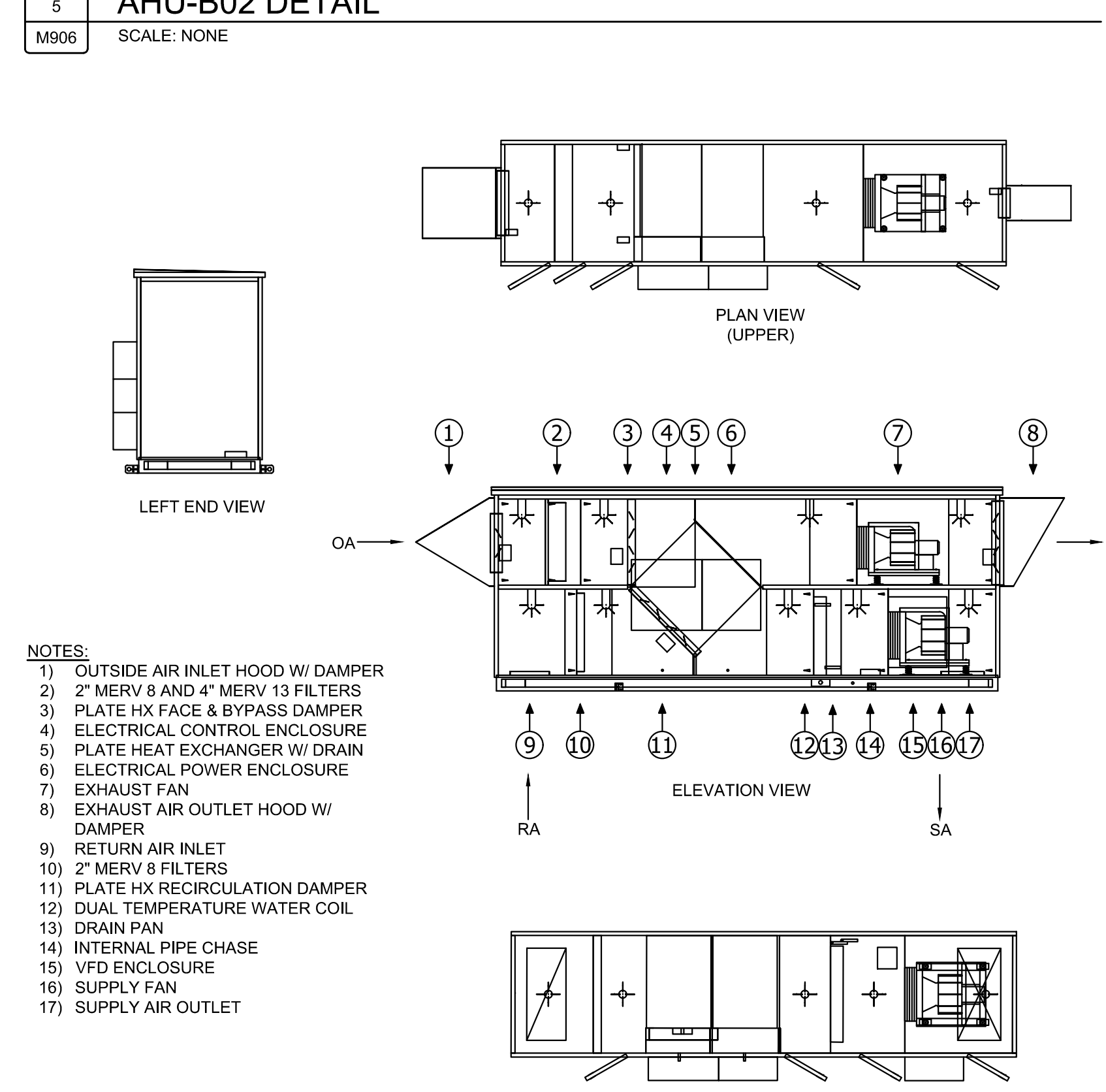
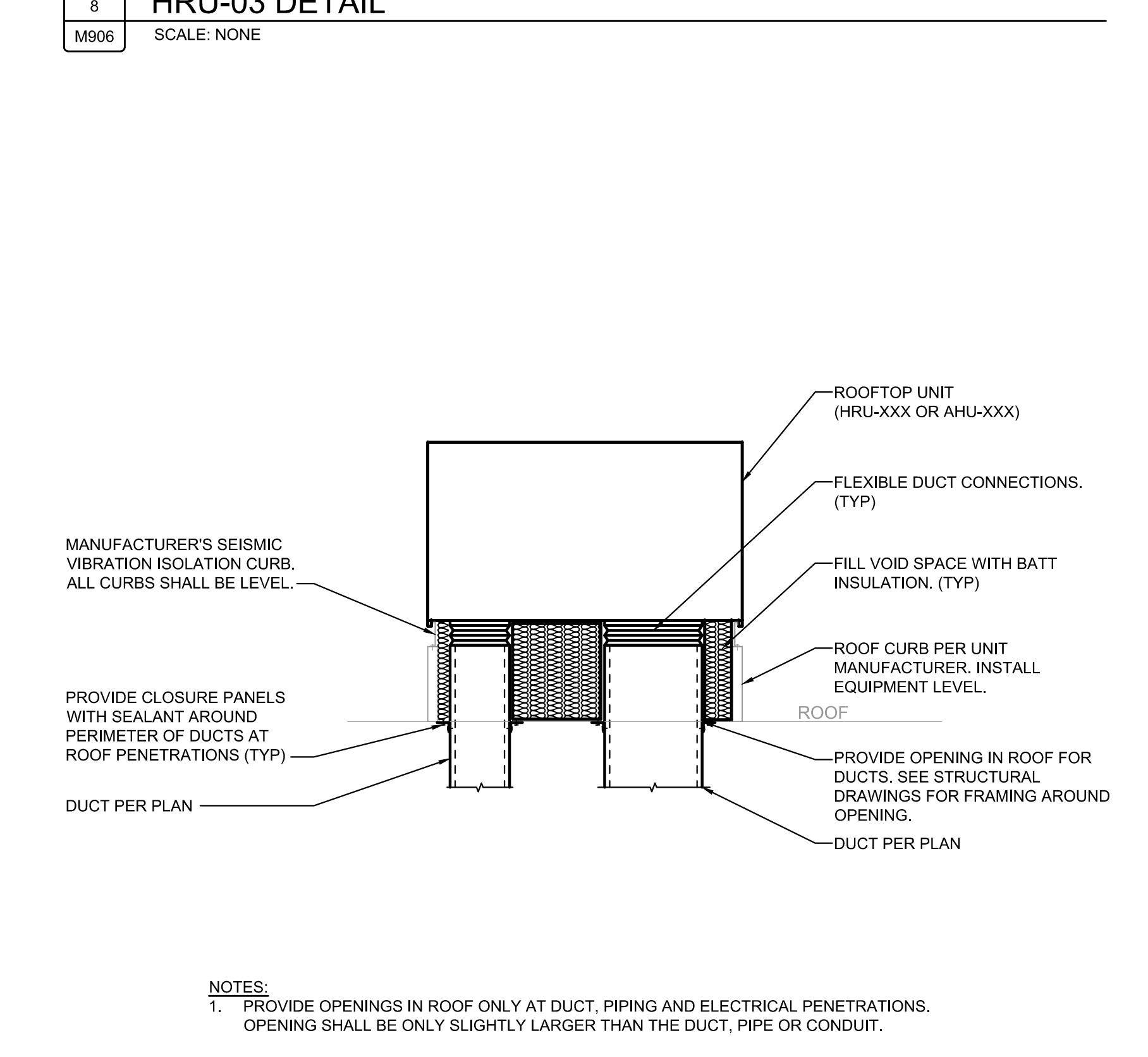
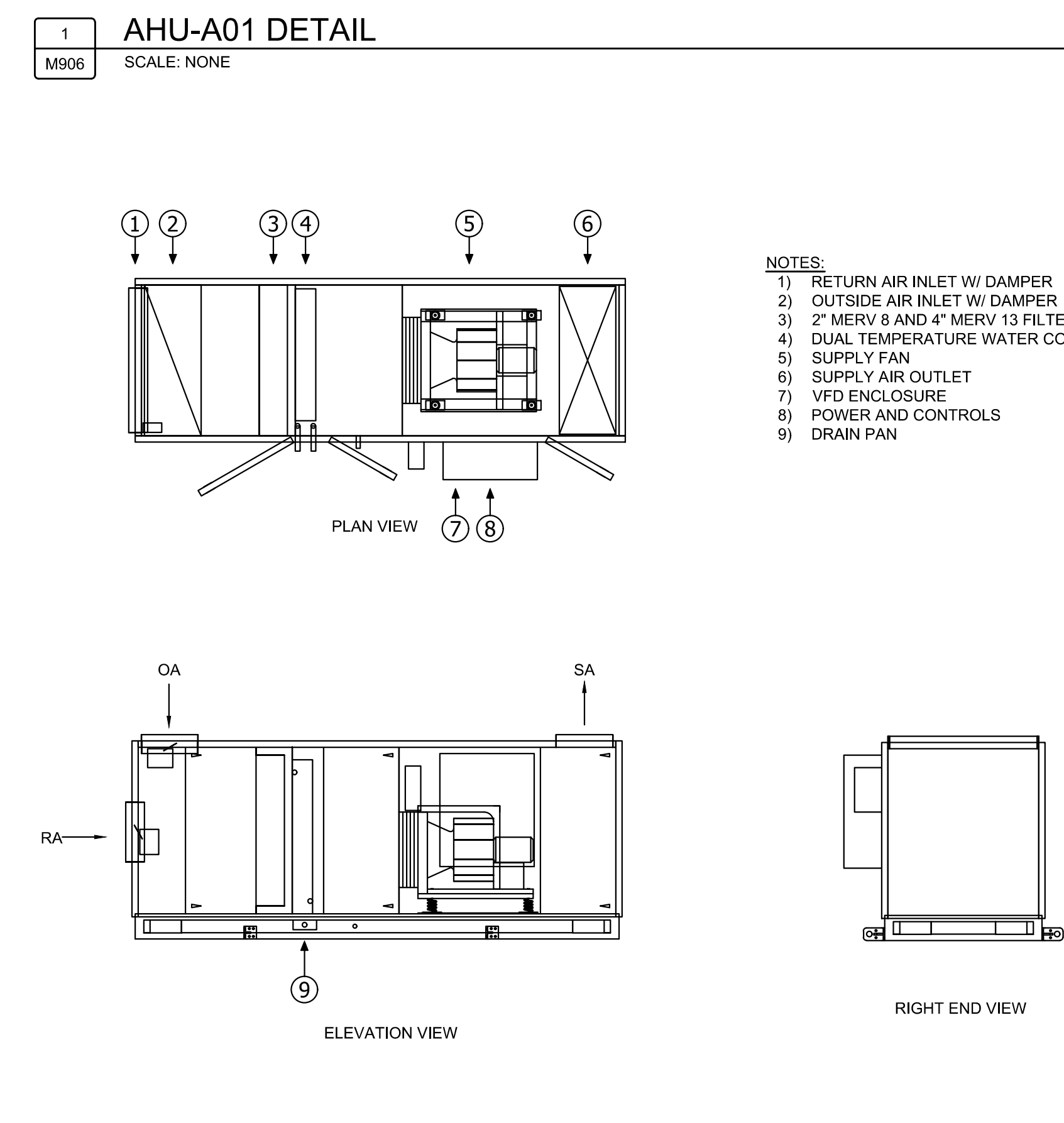
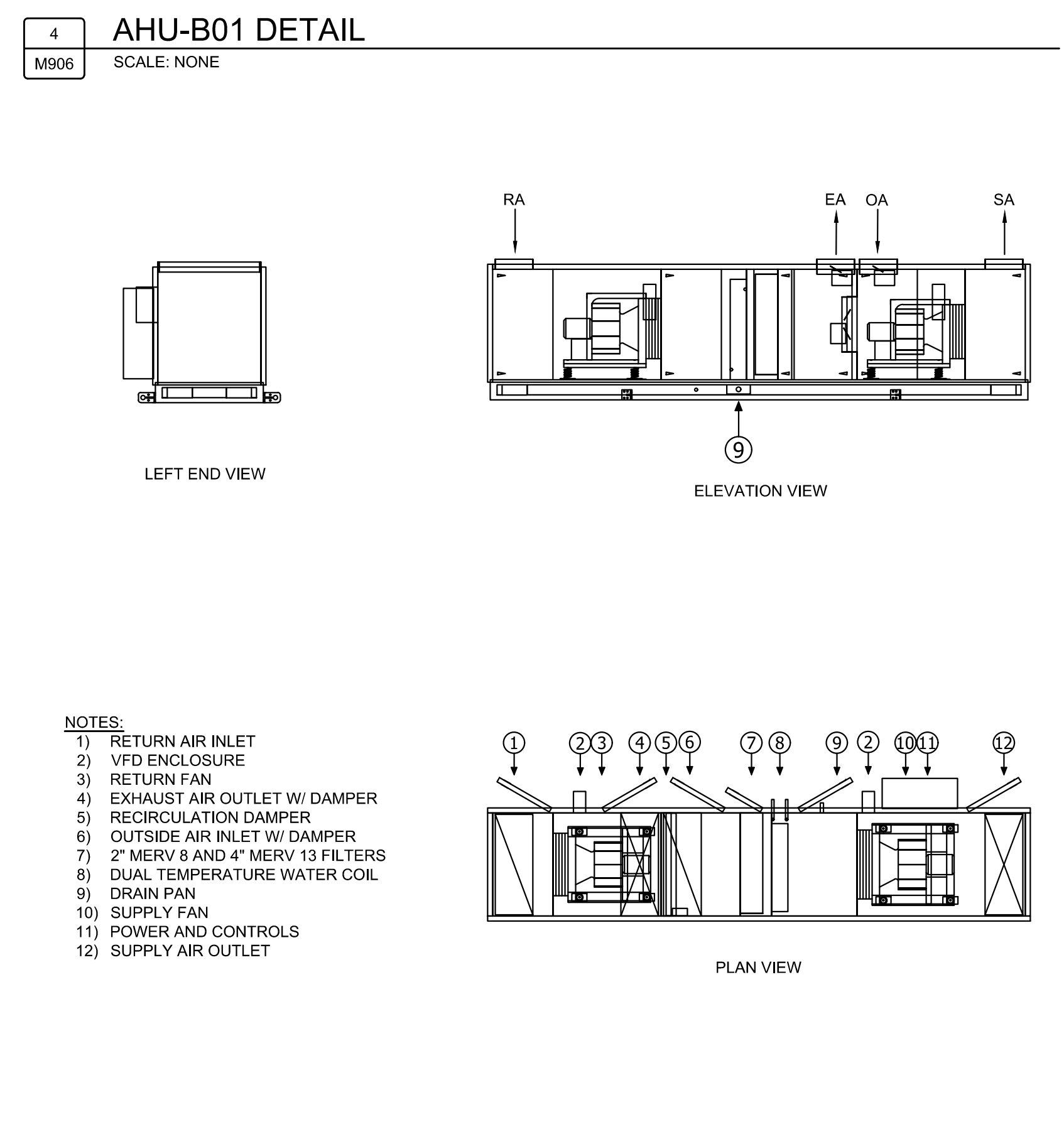
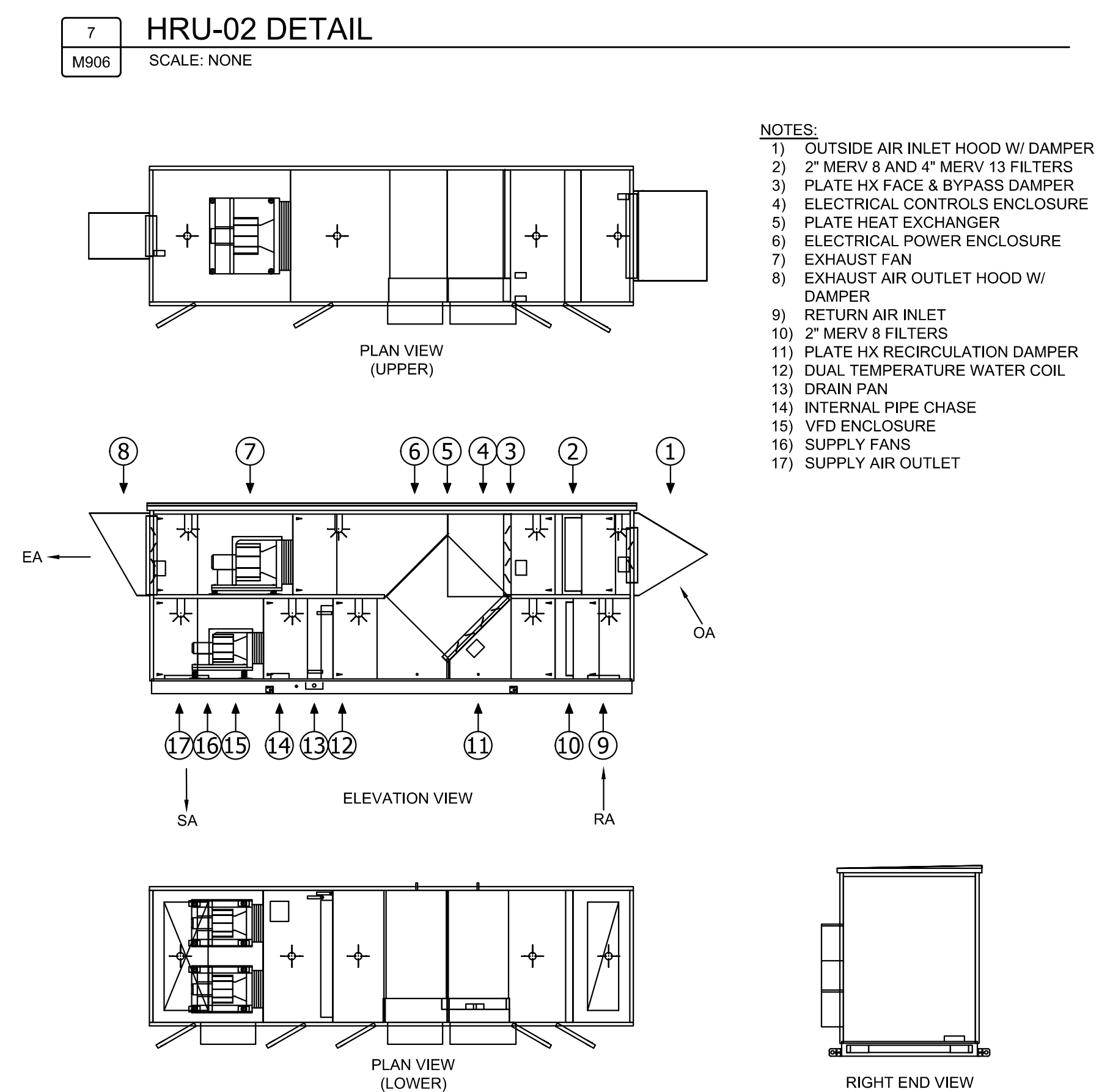
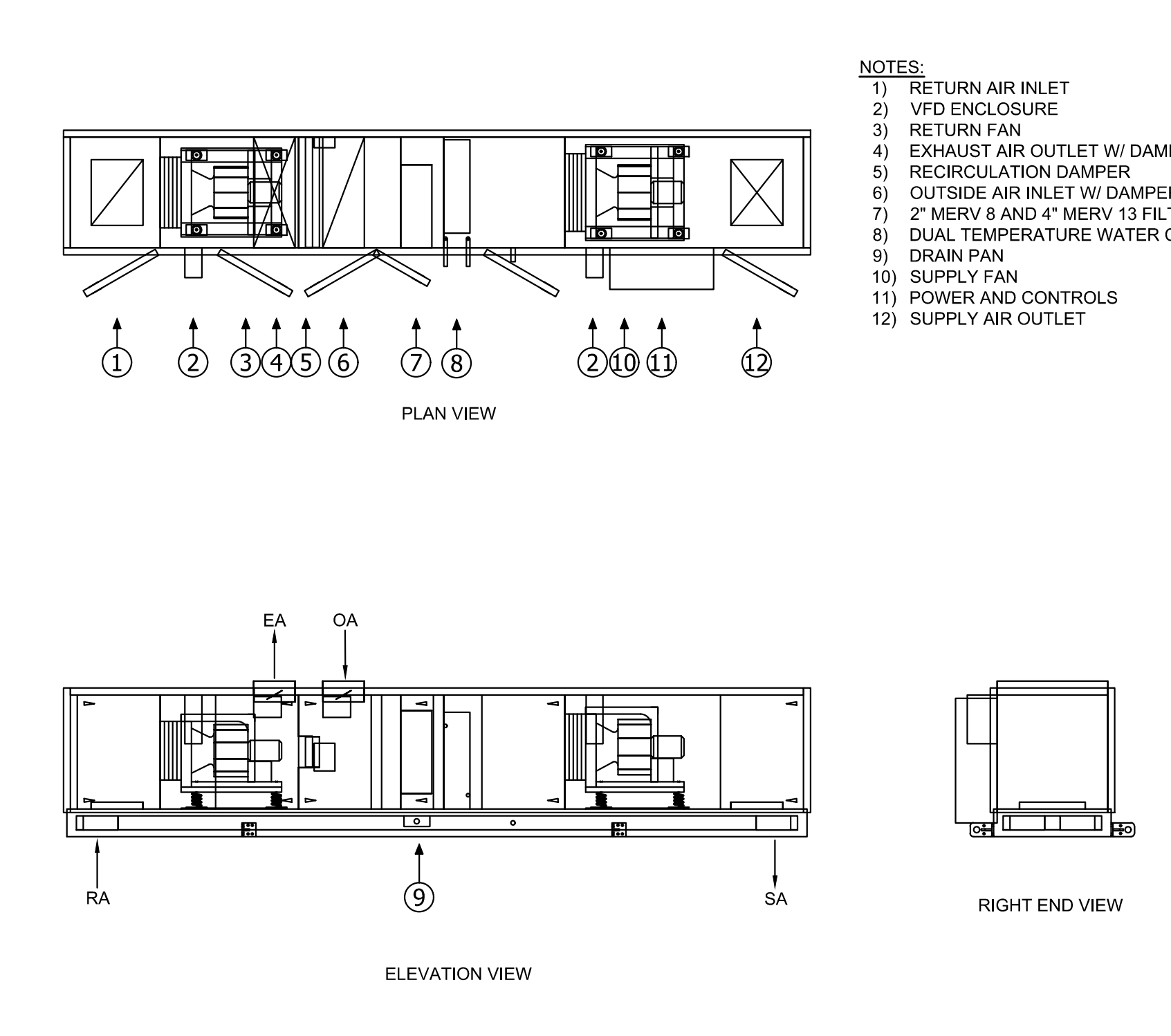
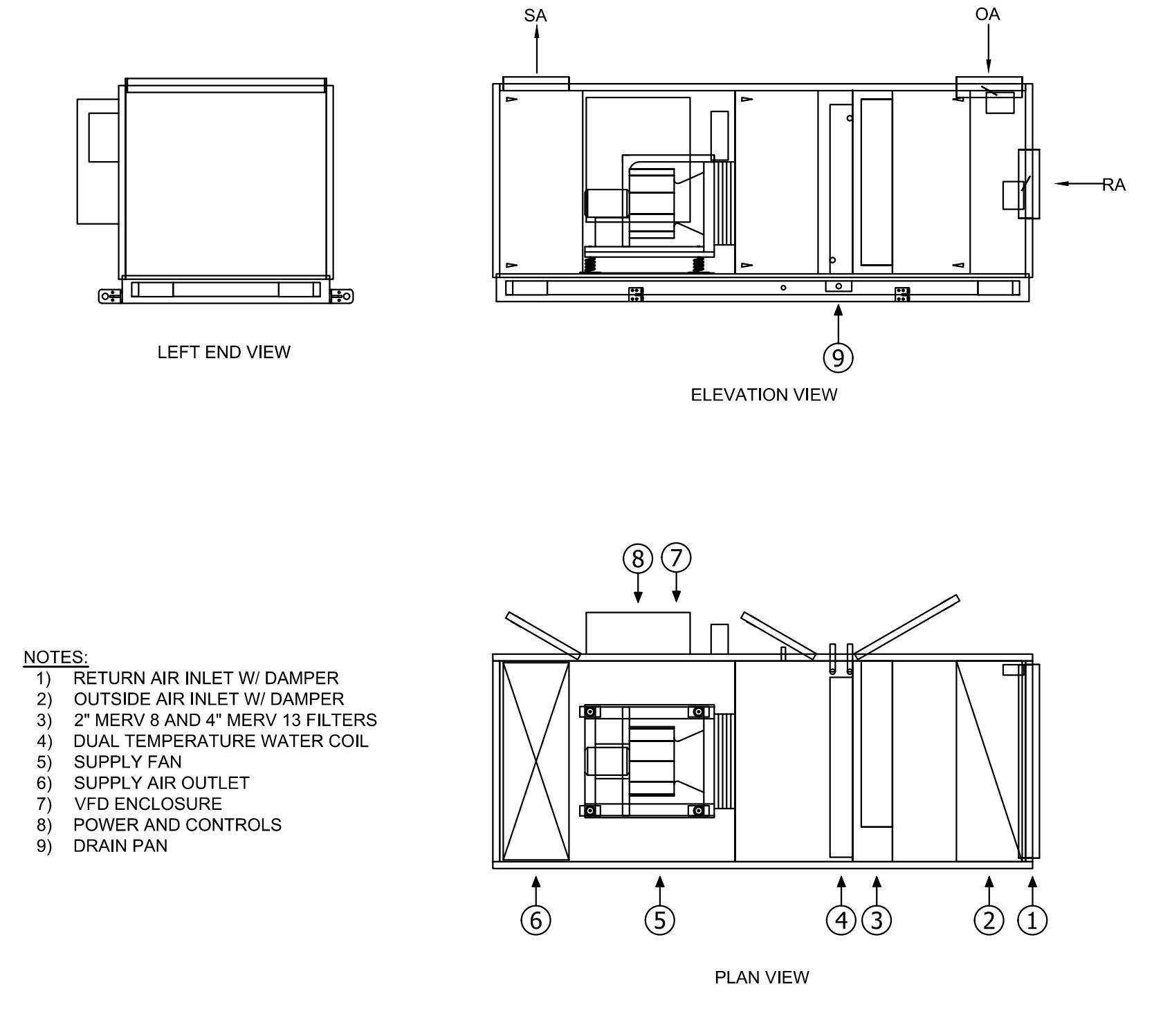
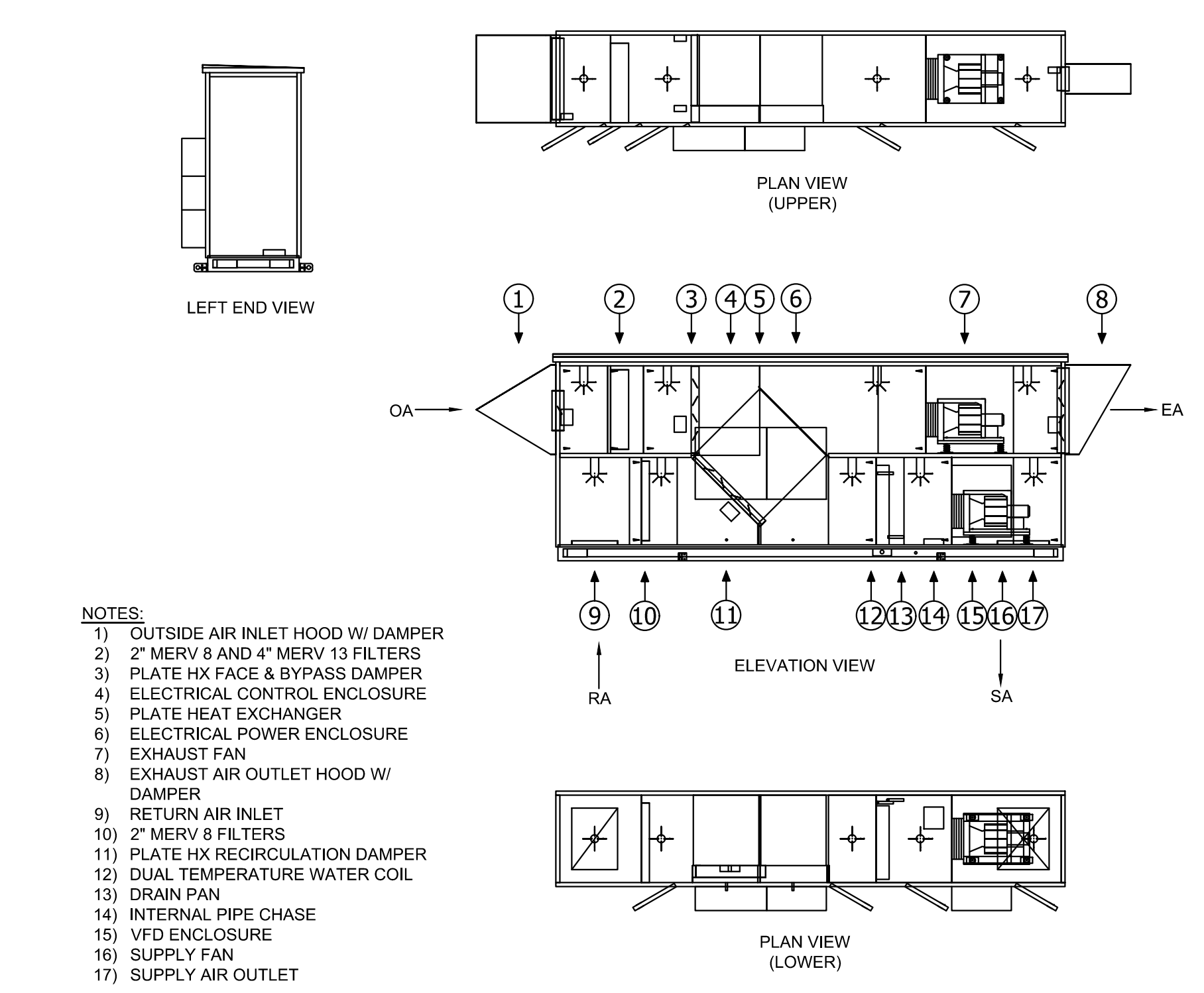
3 COMBINATION FIRE SMOKE DAMPER DETAIL
M905 SCALE: NONE

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Date:	5/1/17
Job No.:	21528.00
Drawn By:	KK
Checked by:	MH
Revisions	
#	Date Description

MECHANICAL
DETAILS

M905



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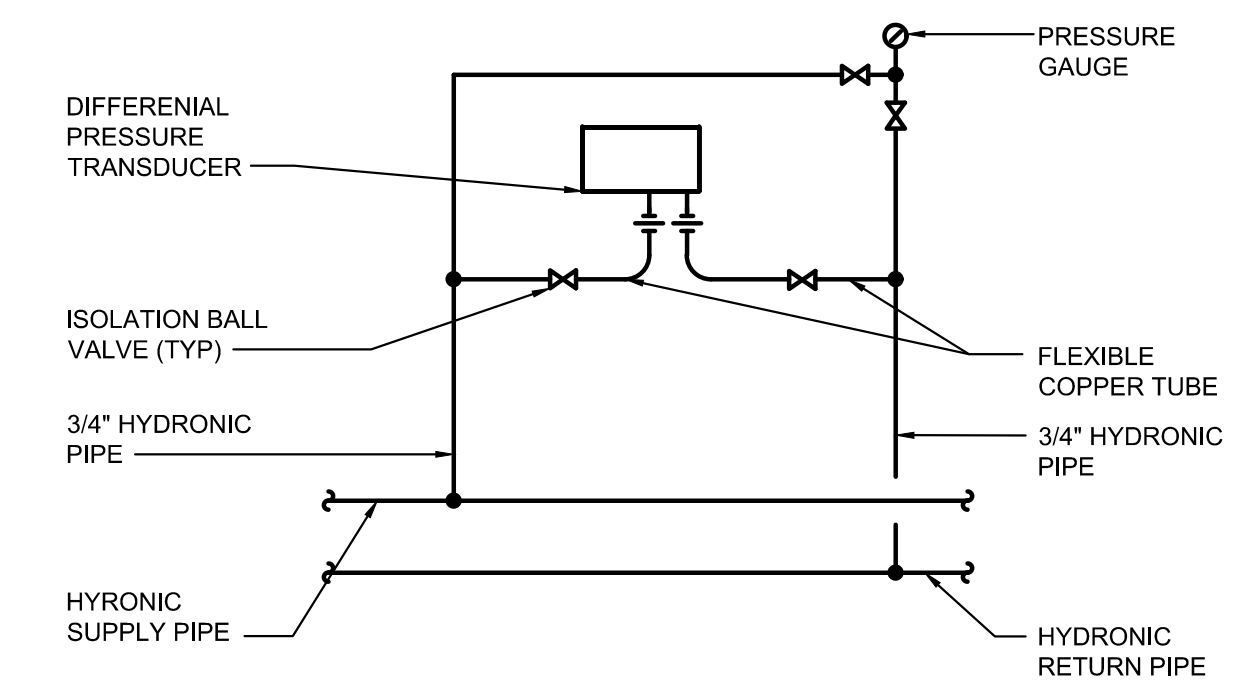
**Port Townsend School District No. 50
GRANT STREET ELEMENTARY SCHOOL
REPLACEMENT PROJECT**
1637 GRANT STREET, PORT TOWNSEND, WA 98368

Date: 5/1/17
Job No.: 21528.00
Drawn By: KK
Checked by: MH

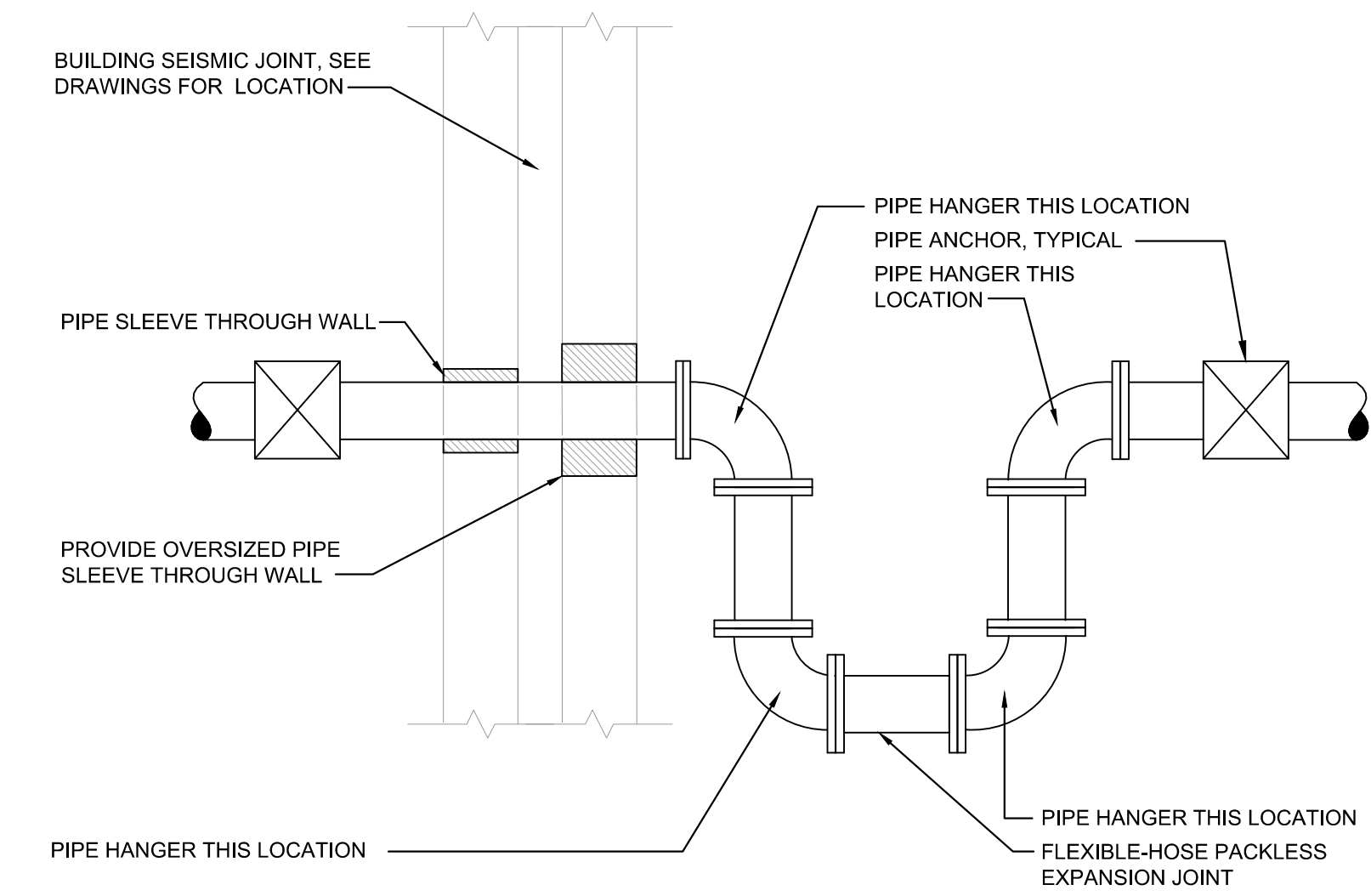
#	Date	Description

MECHANICAL DETAILS

M906



1 HYDRONIC DIFFERENTIAL PRESSURE TRANSDUCER DETAIL
M907 SCALE: NONE



NOTES:
1. PROVIDE PIPE ANCHORS AND GUIDES PER THE FLEXIBLE-HOSE PACKLESS EXPANSION JOINT MANUFACTURER. ANCHORS AND GUIDES SHALL BE SIZED PER THE SEISMIC REQUIREMENTS PIPE TYPE INSTALLED AT THE SEISMIC JOINT.

2 TYPICAL PIPE PENETRATION AT SEISMIC JOINT DETAIL
M907 SCALE: NONE

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Date: 5/1/17
Job No.: 21528.00
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Checked by: MH

Revisions		
#	Date	Description

MECHANICAL
DETAILS

M907