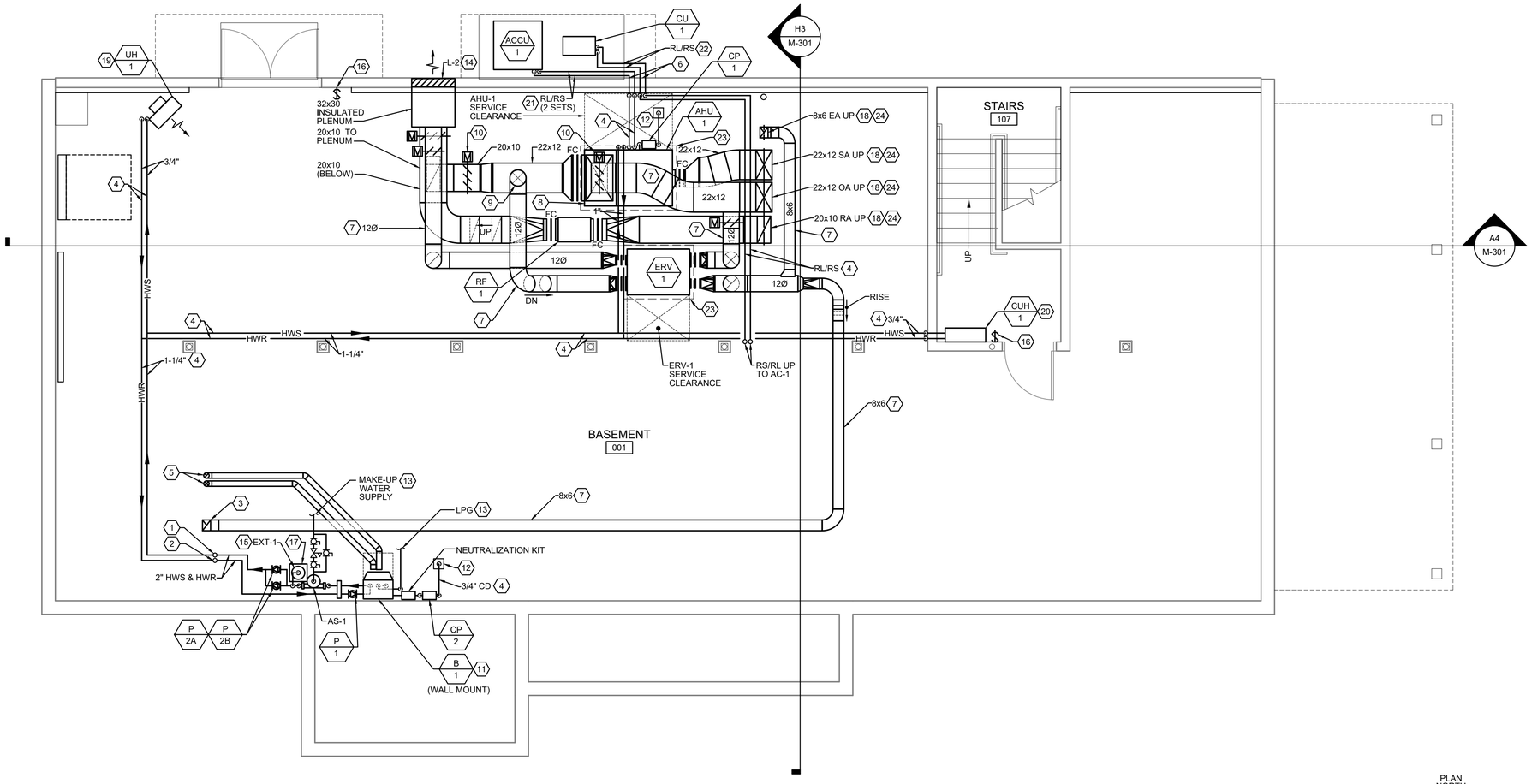
HVAC SYSTEM MAINTENANCE
U.S. ARMY CORPS OF ENGINEERS
OTTER BROOK LAKE
KEENE, NH
PERFORMANCE WORK STATEMENT

APPENDIX B

Project Drawings



A2 BASEMENT MECHANICAL PLAN

SCALE 1/4" = 1' - 0"

0 2' 4' 8'

PLAN NORTH

GENERAL SHEET NOTES:

1. FOR MECHANICAL SYMBOLS, LEGENDS, AND ABBREVIATIONS REFER TO SHEET M-001.
2. INSTALL EQUIPMENT TO ALLOW MAINTENANCE ACCESS AS REQUIRED BY EQUIPMENT MANUFACTURER'S WRITTEN INSTRUCTIONS. PROVIDE MINIMUM 12" MAINTENANCE CLEARANCE AT VALVES AND OTHER ACCESS LOCATIONS.
3. FOR DUCTWORK FABRICATION, HANGER AND SUPPORT DETAILS REFER TO SHEETS M-501, M-502, AND M-503.
4. DUCTWORK AND PIPING PENETRATIONS THROUGH FIRE/SMOKE WALLS/FLOORS/BARRIERS SHALL BE SEALED WITH FIRE STOPPING ACCORDING TO DIVISION 7 REQUIREMENTS.
5. NO FLEXIBLE DUCT SHALL PASS THROUGH FIRE/SMOKE WALLS/FLOORS/BARRIERS.
6. COORDINATE INSTALLATION WITH FIRE ALARM, PLUMBING, MECHANICAL, AND ELECTRICAL TRADES.

KEYNOTES: (THIS SHEET ONLY)

1. 1-1/4" HWS UP.
2. 1-1/4" HWR UP.
3. 8x6 EA UP.
4. ROUTE PIPING AS HIGH AS POSSIBLE.
5. 3" BOILER COMBUSTION AIR AND EXHAUST UP THRU ROOF. COORDINATE LOCATIONS WITH ARCHITECTURAL DRAWINGS.
6. SEAL WALL PENETRATION WEATHERTIGHT.
7. ROUTE DUCTWORK AS HIGH AS POSSIBLE.
8. FIELD FABRICATE MIXING BOX.
9. DUCT SA VENTILATION AIR FROM ERV-1 INTO RETURN OF AHU-1.
10. FOR SEQUENCE OF OPERATION AND MOTORIZED DAMPER POSITIONS IN ECONOMIZER MODE REFER TO A4/M-701.
11. FOR BOILER PIPING DIAGRAM REFER TO F2/M-502.
12. CONDENSATE DRAIN TO DISCHARGE INTO INDIRECT WASTE. REFER TO D16/P-601.
13. FOR CONTINUATION REFER TO SHEET P-101.
14. FOR LOUVER CONNECTION, REFER TO DETAIL F1/M-501.
15. FOR EXPANSION TANK EXT-1 PIPING DIAGRAM, REFER TO K4/M-502.
16. BOILER EMERGENCY SHUT-OFF SWITCH.
17. PROVIDE CONCRETE EQUIPMENT PAD. SEE DETAIL L6/SB502.
18. PROVIDE DUCT ACCESS PANEL FOR INSPECTION AND MAINTENANCE OF FIRE DAMPER.
19. FOR UNIT HEATER PIPING DETAIL REFER TO K7/M-501.
20. FOR CABINET UNIT HEATER PIPING DETAIL REFER TO K10/M-502.
21. REFRIGERANT LINE SET; RS 1-1/8" AND RL 3/8".
22. REFRIGERANT LINE SET; RS 1/2" AND RL 1/4".
23. HOUSEKEEPING EQUIPMENT PAD.
24. PROVIDE DUCT MOUNTED FIRE DAMPER BELOW FIRST FLOOR ASSEMBLY

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11/5/21

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OTTER BROOK DAM LAKE
NEW OPERATIONS OFFICE

BASEMENT MECHANICAL PLAN

SHEET ID
OTTER BROOK
MH100

05 Nov, 2021 - 1:37pm
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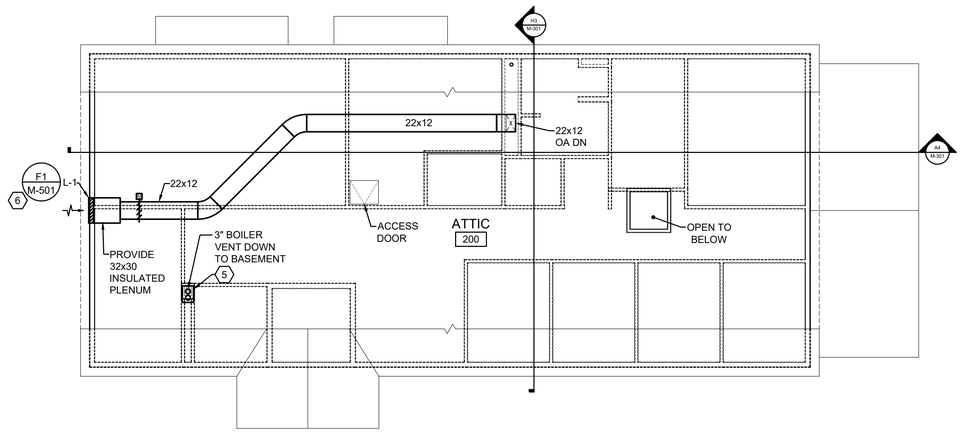
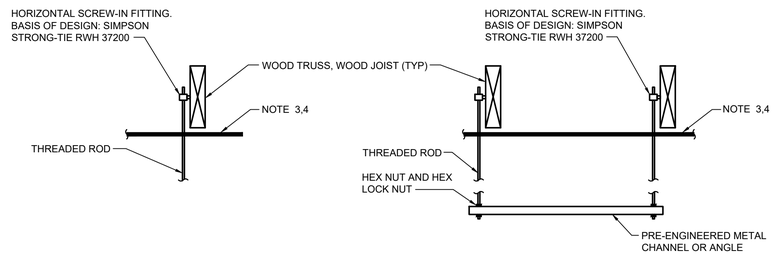


K2 ATTIC MECHANICAL PLAN

SCALE 1/8" = 1' - 0"

PLAN NORTH

0 4' 8' 16'

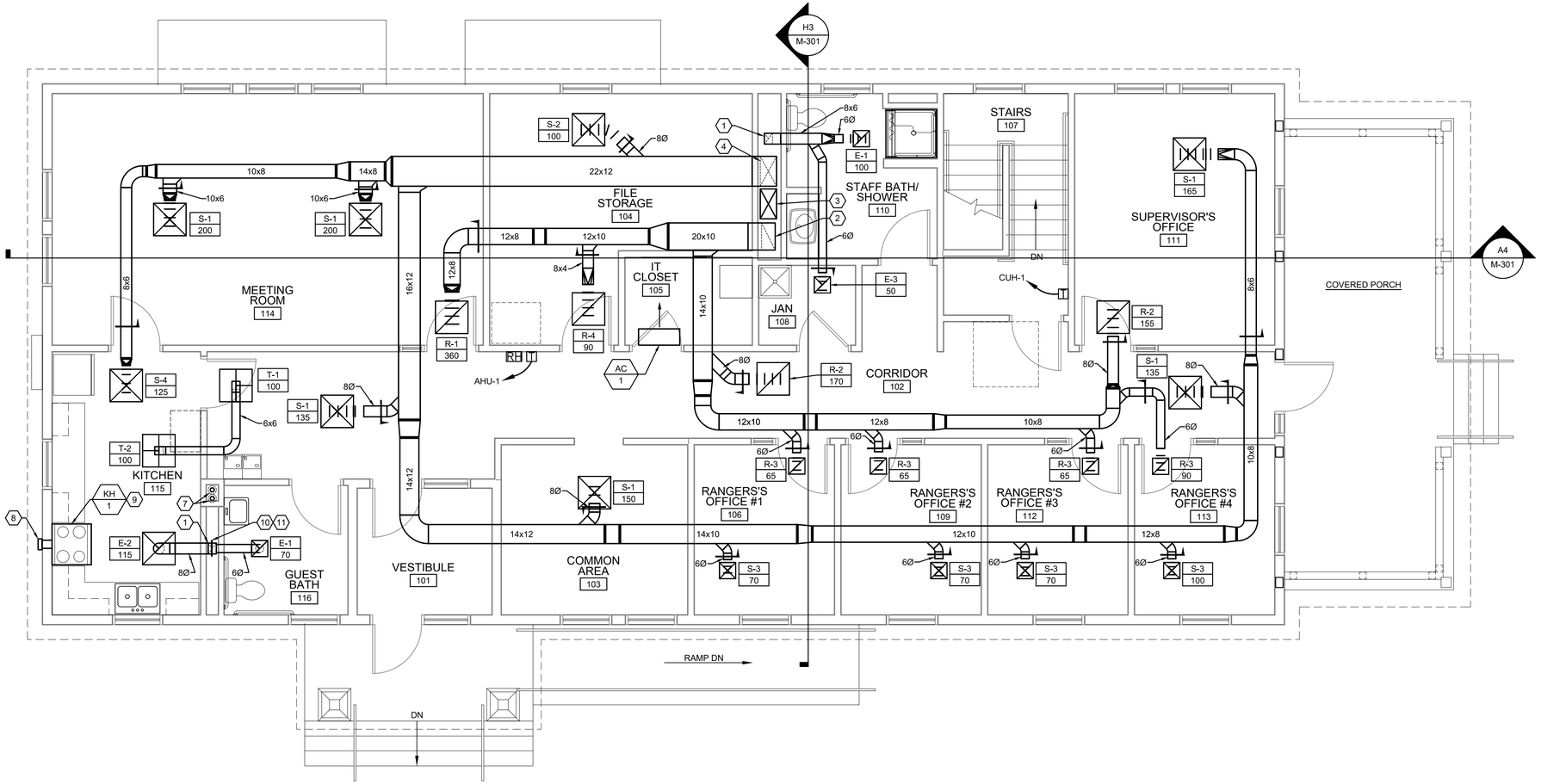


SUPPORT FROM WOOD JOIST AND TRUSSES DETAIL NOTES:

1. PROVIDE FOR DUCTWORK, PIPING, EQUIPMENT, AND FIXTURE SUPPORT FROM WOOD JOISTS AND TRUSSES.
2. COORDINATE WITH ELECTRICAL AND PLUMBING INSTALLERS TO AVOID CONFLICTS.
3. PROVIDE SUPPORT RODS PRIOR TO INSTALLATION OF AIR AND VAPOR BARRIER WHERE APPLICABLE.
4. PATCH AND RESTORE VAPOR AND AIR BARRIER.
5. PROVIDE DUCTS AND PIPES TIGHT TO CEILINGS TO MAXIMIZE CLEAR SPACE BELOW AS REQUIRED.

L10 SUPPORT FROM WOOD JOISTS AND TRUSSES DETAIL

NOT TO SCALE



A2 FIRST FLOOR MECHANICAL PLAN

SCALE 1/4" = 1' - 0"

PLAN NORTH

0 2' 4' 8'

05 Nov, 2021 - 9:15am
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GENERAL SHEET NOTES:

1. FOR MECHANICAL SYMBOLS, LEGENDS, AND ABBREVIATIONS REFER TO SHEET M-001.
2. VAPOR BARRIER AND GYPSUM AT BOTTOM OF CEILING JOISTS IS NOT TO BE PUNCTURED, AND/OR DAMAGED DURING INSTALLATION OF MECHANICAL SYSTEMS AND DAMAGE MUST BE REPAIRED AT NO COST TO GOVERNMENT.
3. INSTALL EQUIPMENT TO ALLOW MAINTENANCE ACCESS AS REQUIRED BY EQUIPMENT MANUFACTURER'S WRITTEN INSTRUCTIONS. PROVIDE MINIMUM 12" MAINTENANCE CLEARANCE AT VALVES AND OTHER ACCESS LOCATIONS.
4. FOR DUCTWORK FABRICATION, HANGER AND SUPPORT DETAILS REFER TO SHEETS M-501, M-502, AND M-503.
5. DUCTWORK PENETRATIONS THROUGH FIRE/SMOKE WALLS/FLOORS/BARRIERS SHALL BE SEALED WITH FIRE STOPPING ACCORDING TO DIVISION 7 REQUIREMENTS.
6. NO FLEXIBLE DUCT SHALL PASS THROUGH FIRE/SMOKE WALLS/FLOORS/BARRIERS.
7. COORDINATE INSTALLATION WITH FIRE ALARM, PLUMBING, MECHANICAL, AND ELECTRICAL TRADES.

KEYNOTES: (THIS SHEET ONLY)

1. 8x6 EA DN TO ERV-1.
2. 20x10 RA DN TO AHU-1.
3. 22x12 OA UP AND DOWN.
4. 22x12 SA DOWN TO AHU-1.
5. 3" BOILER COMBUSTION AIR AND EXHAUST UP THRU ROOF. PROVIDE MANUFACTURERS VENT KIT AT ROOF PENETRATION. PROVIDE INSULATION PER MANUFACTURER RECOMMENDATIONS. COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS.
6. LOUVER L-1, COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS.
7. 3" BOILER COMBUSTION AIR AND EXHAUST UP AND DOWN IN CHASE.
8. PROVIDE MANUFACTURERS THRU WALL VENT WITH EXHAUST KIT.
9. COORDINATE INSTALLATION OF KITCHEN HOOD WITH KITCHEN CABINETS. REFER TO G11/AE740.
10. PROVIDE DUCT MOUNTED FIRE DAMPERS AT FIRST FLOOR.
11. PROVIDE DUCT ACCESS PANEL FOR INSPECTION AND MAINTENANCE OF FIRE DAMPERS. COORDINATE ACCESS WITH CHASE ACCESS PANELS, REFER TO ARCHITECTURAL DRAWINGS.

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FIRST FLOOR & ATTIC
MECHANICAL PLANS

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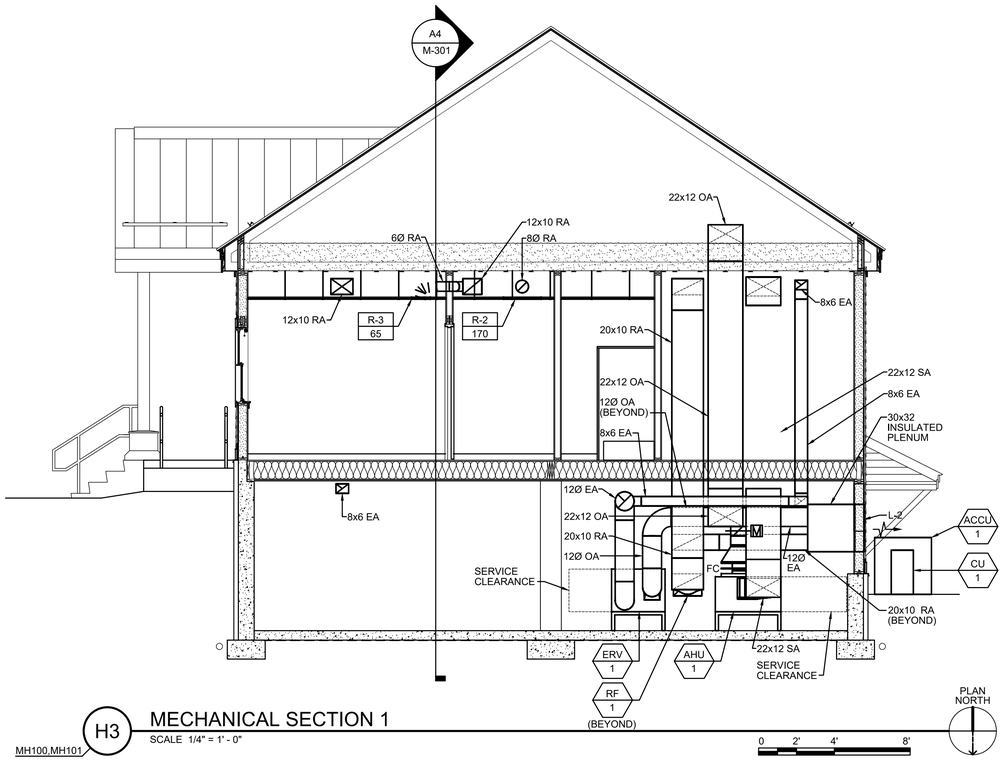
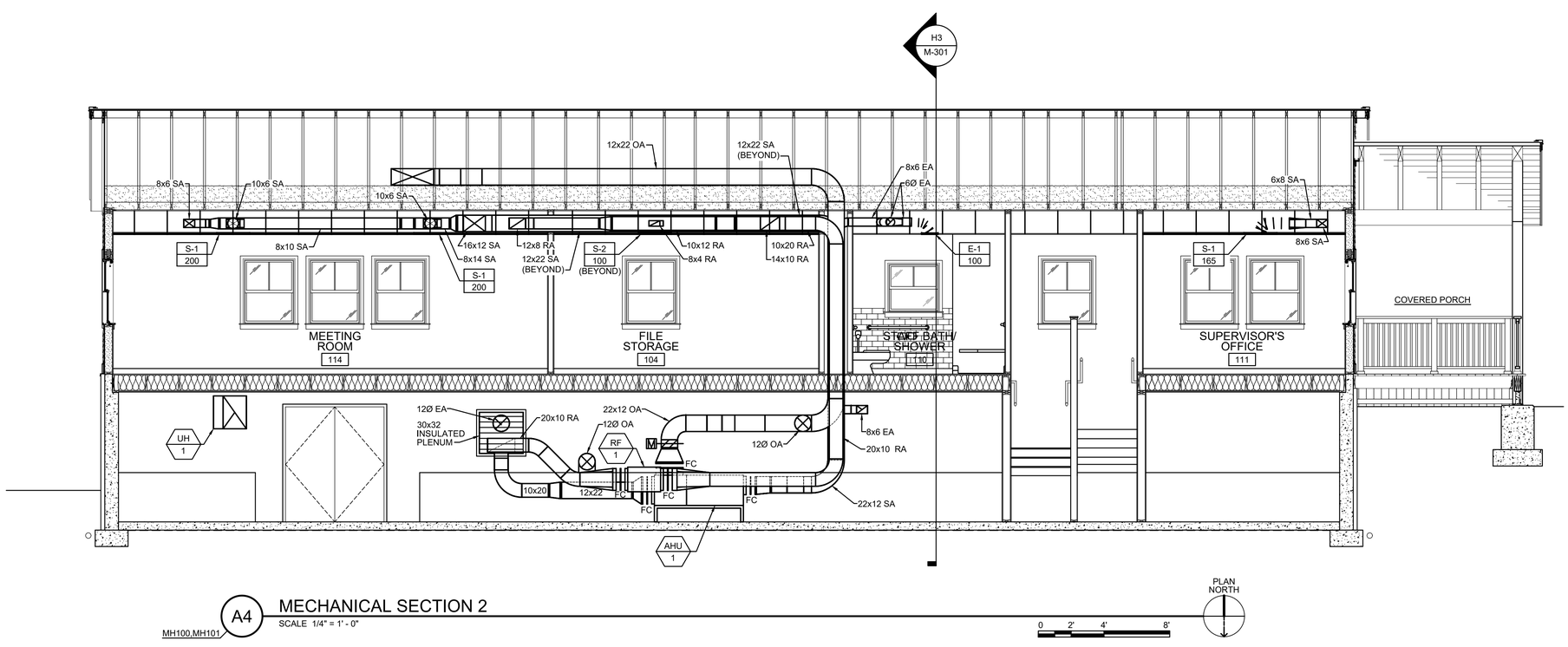


H3 MECHANICAL SECTION 1

MH100,MH101

SCALE 1/4" = 1' - 0"



A4 MECHANICAL SECTION 2

MH100,MH101

SCALE 1/4" = 1' - 0"

GENERAL SHEET NOTES:

1. FOR MECHANICAL SYMBOLS, LEGENDS, AND ABBREVIATIONS REFER TO SHEET M-001.
2. INSTALL EQUIPMENT TO ALLOW MAINTENANCE ACCESS AS REQUIRED BY EQUIPMENT MANUFACTURER'S WRITTEN INSTRUCTIONS. PROVIDE MINIMUM 12" MAINTENANCE CLEARANCE AT VALVES AND OTHER ACCESS LOCATIONS.
3. FOR DUCTWORK FABRICATION, HANGER AND SUPPORT DETAILS REFER TO SHEETS M-501, M-502 AND M-503.
4. DUCTWORK AND PIPING PENETRATIONS THROUGH FIRE/SMOKE WALLS/FLOORS/BARRIERS SHALL BE SEALED WITH FIRE STOPPING ACCORDING TO DIVISION 7 REQUIREMENTS.
5. COORDINATE INSTALLATION WITH FIRE ALARM, PLUMBING, MECHANICAL PIPING AND DUCTWORK, AND ELECTRICAL TRADES.
6. DUCTWORK AND PIPING ARE SHOWN DIAGRAMMATICALLY, EXACT LOCATION SHALL BE DETERMINED IN THE FIELD. COORDINATE IN THE FIELD WITH STRUCTURAL ELEMENTS.

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MECHANICAL SECTIONS

SHEET ID
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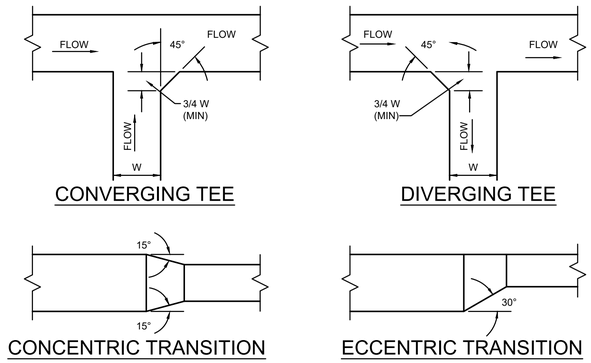
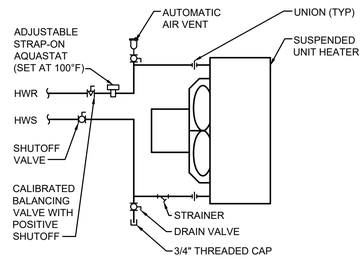
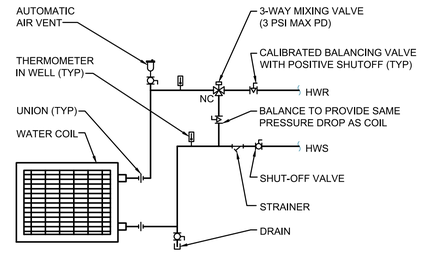


K1 RECTANGULAR DUCT TRANSITIONS DETAIL
NOT TO SCALE



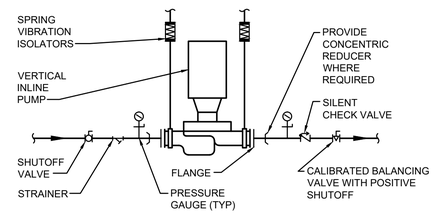
A2
MH100 K7 UNIT HEATER WATER COIL PIPING SCHEMATIC
NOT TO SCALE



NOTES

1. VALVES MUST BE SAME SIZE AS PIPE.
2. SHUT-OFF VALVES MAY BE BALL OR BUTTERFLY. REFER TO SPECIFICATIONS FOR VALVE TYPE AND SIZE RESTRICTIONS.
3. PROVIDE UNIONS AND/OR FLANGES AS REQUIRED FOR FIT-UP AND REMOVAL OF COIL.

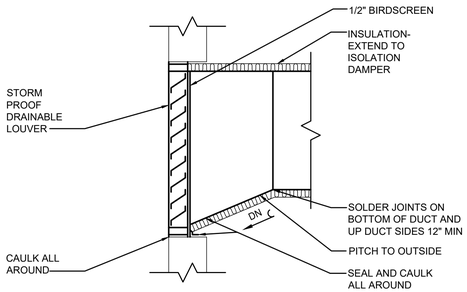
K11 AIR HANDLING UNIT HOT COIL PIPING SCHEMATIC
NOT TO SCALE



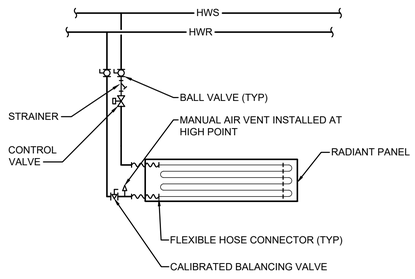
NOTES

1. VALVES MUST BE SAME SIZE AS PIPE.
2. PROVIDE SPRING VIBRATION ISOLATORS FOR PUMP.

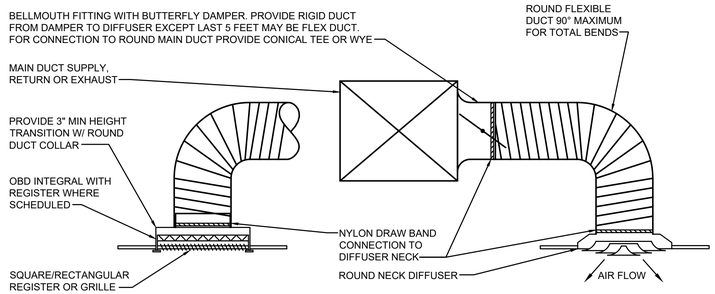
K16 INLINE PUMP PIPING DETAIL
NOT TO SCALE



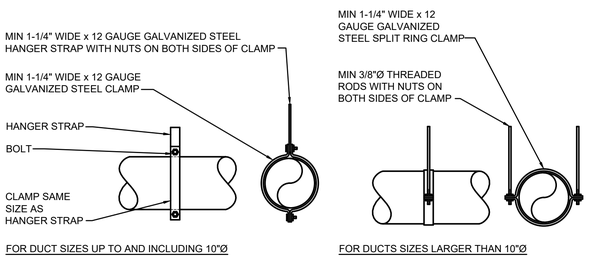
A2,K2
MH100,MH101 F1 LOUVER CONNECTION DETAIL
NOT TO SCALE



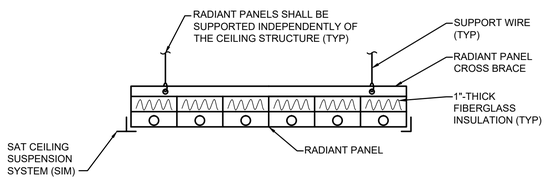
F7 RADIANT PANEL PIPING SCHEMATIC
NOT TO SCALE



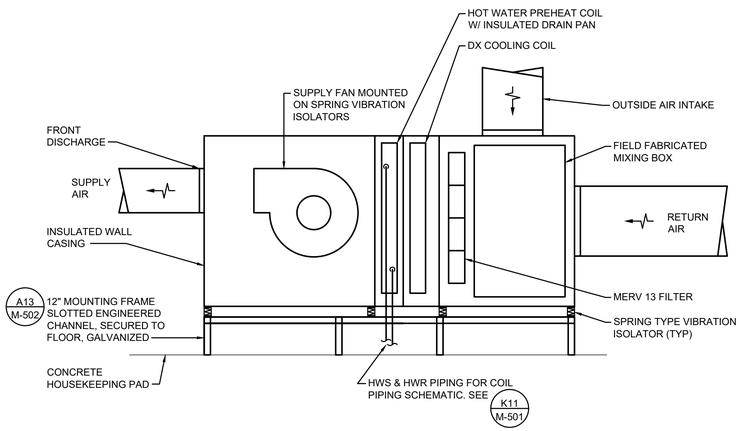
F13 DIFFUSER AND REGISTER RUNOUT DETAIL
NOT TO SCALE



B1 ROUND DUCT HANGER DETAIL
NOT TO SCALE



B7 RADIANT PANEL HANGING DETAIL
NOT TO SCALE



B13 AHU AIR HANDLING UNIT DIAGRAM
NOT TO SCALE

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NEW OPERATIONS OFFICE

MECHANICAL
DETAILS 1

SHEET ID
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M-501

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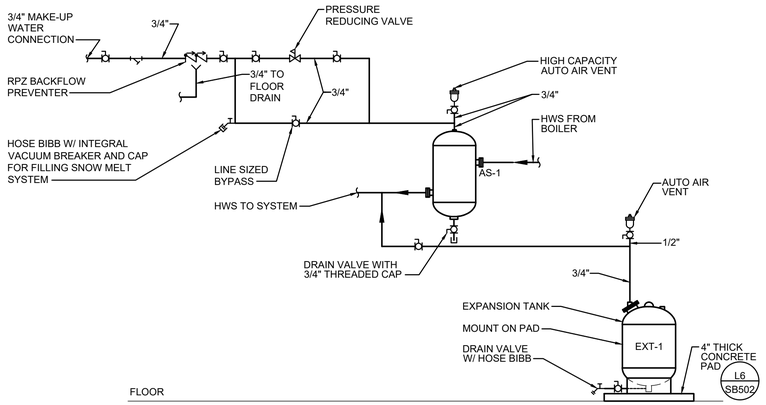
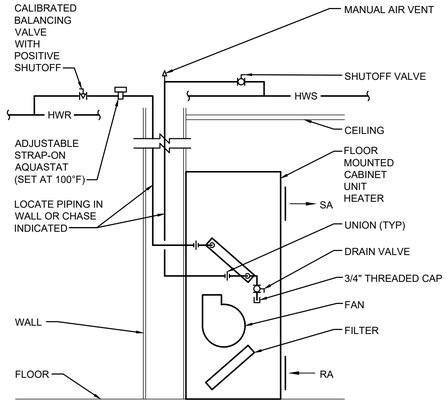
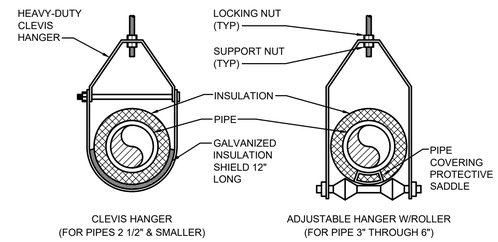


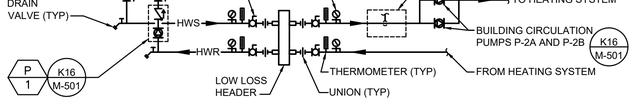
A2 MH100 **K4** AIR CONTROL PIPING DIAGRAM
NOT TO SCALE



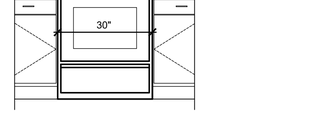
A2 MH100 **K10** CABINET HEATER PIPING SCHEMATIC
NOT TO SCALE



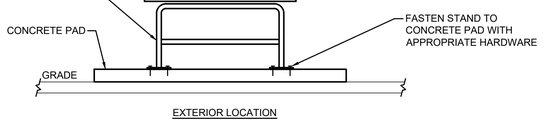
K15 PIPE HANGER ATTACHMENT DETAILS
NOT TO SCALE

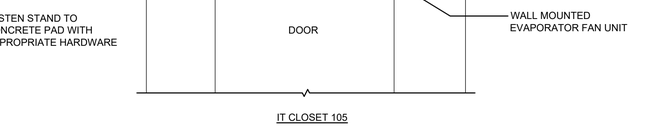


A2 MH100 **F2** BOILER HEATING SYSTEM DIAGRAM
NOT TO SCALE

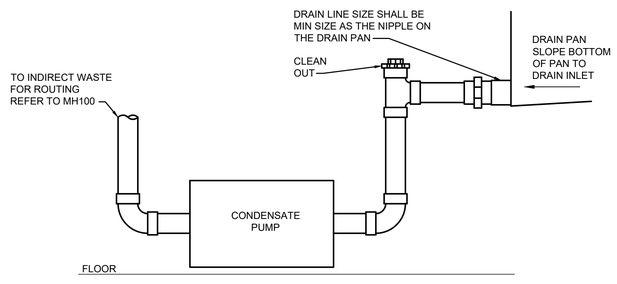


F7 RANGE HOOD DETAIL
NOT TO SCALE

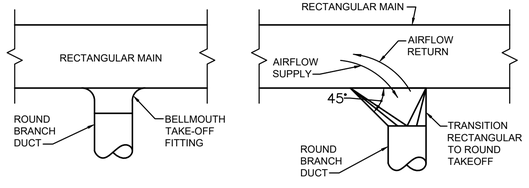




D3 MP101 **F13** DUCTLESS SPLIT SYSTEM ELEVATION
NOT TO SCALE

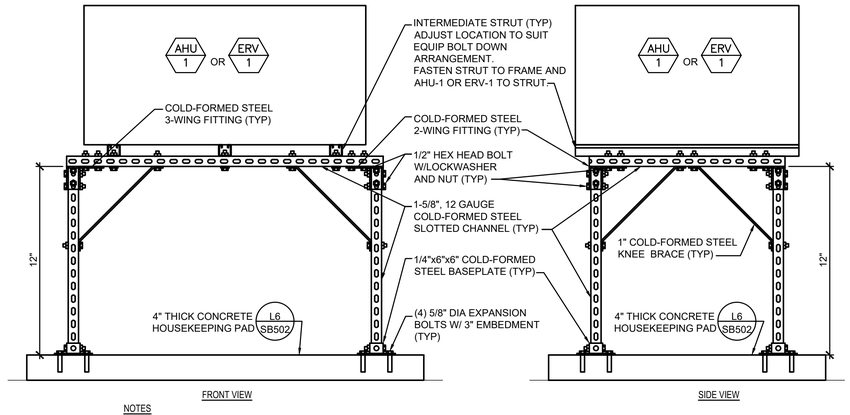


A2 AHU-1 CONDENSATE PUMP DETAIL
NOT TO SCALE



NOTE
1. SPIN-IN TYPE STRAIGHT TAKE-OFF FITTINGS SHALL NOT BE PERMITTED.

A7 TYPICAL ROUND BRANCH DETAIL CONNECTIONS TO RECTANGULAR MAIN
NOT TO SCALE



NOTES
1. SECURE POST BASE TO EXISTING CONCRETE PAD WITH MECHANICAL EXPANSION ANCHORS.
2. FASTENERS AND FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE MFG PRINTED INSTRUCTIONS.

B13 M-501 **A13** PRE-ENGINEERED SLOTTED METAL EQUIPMENT FRAME DETAIL
NOT TO SCALE

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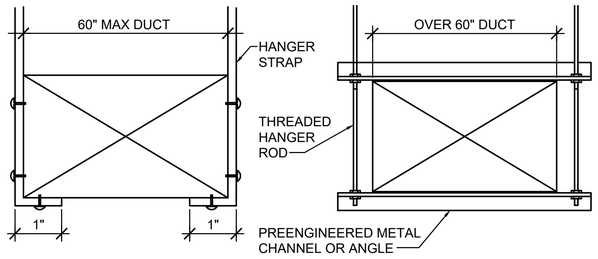
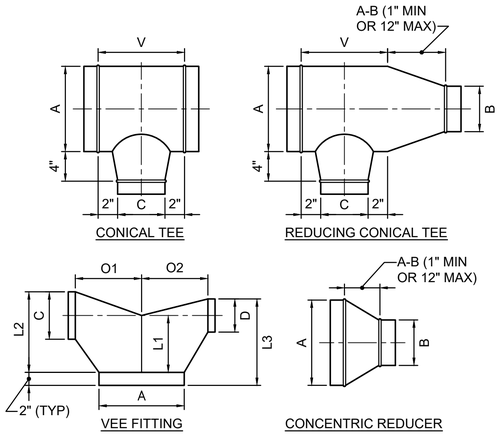
MECHANICAL DETAILS 2

SHEET ID
OTTER BROOK
M-502



NOTE:
SIZE AND RATING OF HANGERS AND SUPPORTS SHALL BE PER LATEST SMACNA STANDARDS.

K2 DUCT SUPPORT ATTACHMENTS DETAIL
NOT TO SCALE



K8 TYPICAL ROUND DUCT FITTINGS DETAIL
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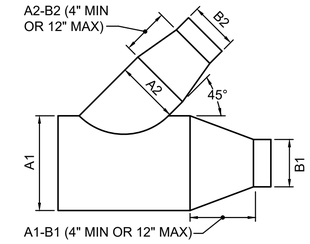
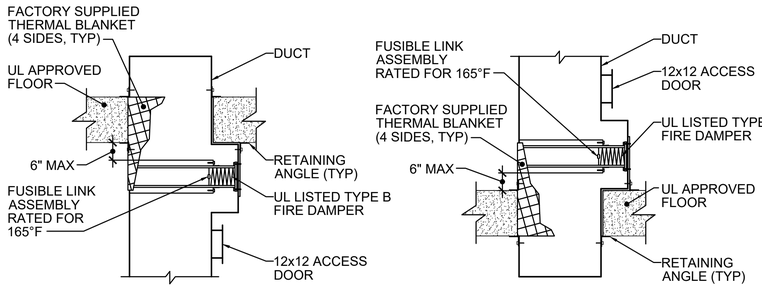


K13 ROUND DUCT-CONICAL REDUCING LATERAL
NOT TO SCALE



NOTES

1. FOR HORIZONTAL FLOOR INSTALLATION PROVIDE FIRE DAMPER WITH SPRING LOADED DAMPER BLADES.
2. FASTEN ANGLES TO SLEEVE WITH POP-RIVETS, SCREWS OR WELDS AT 8-INCH ON CENTER, MINIMUM 2 PER SIDE, 4 SIDES OF OPENING ON BOTH SIDES OF DAMPER.
3. PROVIDE CLEARANCE BETWEEN DAMPER SLEEVE OR DAMPER AND THE FIRE-RATED WALL, PARTITION OR FLOOR IN ACCORDANCE WITH THE FIRE DAMPER MANUFACTURER. IF REQUIRED BY THE DAMPER MANUFACTURER, PROVIDE FIRESTOPPING IN THIS SPACE ON ALL SIDES TO MAINTAIN FIRE RATING.
4. USE FOR GALVANIZED SHEET METAL DUCT ONLY.

E2 FIRE DAMPER DETAIL
NOT TO SCALE

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MECHANICAL DETAILS 3

SHEET ID
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M-503

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AIR HANDLING UNIT SCHEDULE

UNIT NO	SERVES	CFM	OA CFM	RA CFM	ESP IN WC	DX COOLING COIL					HEATING				ELECTRICAL		BASIS OF DESIGN	NOTES
						TC MBH	SC MBH	EAT DB/WB	LAT DB/WB	REFRIG TYPE	EWT	LWT	MBH	GPM	MOTOR POWER (HP)	VOLTS/PHASE		
AHU-1	BUILDING HVAC	1520	460	1060	1.0	63.9	48.30	81.2/65.8	52.2/51.6	R-410A	140	120	49.15	4.9	1.0	230/1	TRANE BCHD054	1,2,3,4

NOTES:
1. INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS.
2. PROVIDE 2" PLEATED MERV-13 FILTERS.
3. PROVIDE HORIZONTAL TYPE WITH INLET AND OUTLET DUCT COLLAR.
4. PROVIDE DRAIN PAN FLOAT SWITCH.

RADIANT CEILING PANEL SCHEDULE

UNIT NO	LOCATION	ELEMENT		ROOM MBUTH	PANEL MBUTH	PANEL CAPACITY BUTH/LF	AVG WATER TEMP	BASIS OF DESIGN	NOTES
		PASSES	SIZE						
RP-1	COMMON 103	4	24"Wx8'-0"L	1.9	1.9	238	135	STERLING RADIANT CEILING PANEL	1,2,3,4,5
RP-2	RANGER 106	4	24"Wx6'-0"L	1.2	1.42	238	135	STERLING RADIANT CEILING PANEL	1,2,3,4,5
RP-3	RANGER 109	4	24"Wx6'-0"L	1.2	1.42	238	135	STERLING RADIANT CEILING PANEL	1,2,3,4,5
RP-4	RANGER 112	4	24"Wx6'-0"L	1.2	1.42	238	135	STERLING RADIANT CEILING PANEL	1,2,3,4,5
RP-5	RANGER 113	4	24"Wx4'-0"L	1.9	0.95	238	135	STERLING RADIANT CEILING PANEL	1,2,3,5
RP-6	RANGER 113	4	24"Wx5'-0"L		1.19	238	135	STERLING RADIANT CEILING PANEL	1,2,3,5
RP-7	SUPER 111	4	24"Wx7'-0"L	3.2	1.66	238	135	STERLING RADIANT CEILING PANEL	1,2,3,5,6
RP-8	SUPER 111	4	24"Wx7'-0"L		1.66	238	135	STERLING RADIANT CEILING PANEL	1,2,3,4,5,6
RP-9	FILE 104	4	24"Wx10'-0"L	2.2	2.38	238	135	STERLING RADIANT CEILING PANEL	1,2,3,4,5
RP-10	MEETING 114	4	24"Wx12'-0"L	5.7	2.85	238	135	STERLING RADIANT CEILING PANEL	1,2,3,4,5
RP-11	MEETING 114	4	24"Wx12'-0"L		2.85	238	135	STERLING RADIANT CEILING PANEL	1,2,3,5
RP-12	KITCHEN 115	4	24"Wx6'-0"L	2.5	1.42	238	135	STERLING RADIANT CEILING PANEL	1,2,3,4,5
RP-13	KITCHEN 115	4	24"Wx6'-0"L		1.42	238	135	STERLING RADIANT CEILING PANEL	1,2,3,5
RP-14A	VESTIBULE 101	4	24"Wx7'-0"L	3.0	1.66	238	135	STERLING RADIANT CEILING PANEL	1,2,3,4,5
RP-14B	VESTIBULE 101	4	24"Wx6'-0"L		1.42	238	135	STERLING RADIANT CEILING PANEL	1,2,3,4,5
RP-15	GUEST BATH 116	4	24"Wx5'-0"L	1.0	1.19	238	135	STERLING RADIANT CEILING PANEL	1,2,3,4,5
RP-16	STAFF BATH 110	4	24"Wx5'-6"L	1.3	1.3	238	135	STERLING RADIANT CEILING PANEL	1,2,3,4,5
RP-17	CORRIDOR 102	4	24"Wx5'-0"L	4.5	1.19	238	135	STERLING RADIANT CEILING PANEL	1,2,3,4,5
RP-18	CORRIDOR 102	4	24"Wx14-0"L		3.33	238	135	STERLING RADIANT CEILING PANEL	1,2,3,4,5

NOTES:
1. PROVIDE FULL TRIM ACCESSORIES AS REQUIRED.
2. COLOR AND FINISH SELECTION BY CONTRACTING OFFICER.
3. AVERAGE WATER TEMPERATURE BASED ON 140°F EWT AND 130°F LWT.
4. PROVIDE SAME END PIPING.
5. MOUNT RADIANT PANEL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
6. PROVIDE 3-WAY MIXING VALVE AT PANEL INDICATED.

AIR CONDITIONING UNIT SCHEDULE

UNIT NO	INDOOR UNIT LOCATION	OUTDOOR UNIT LOCATION	CFM	MBH MAX/MIN	ELECTRICAL				BASIS OF DESIGN	NOTES
					VOLTS/PH	AC MCA	CU MCA	CU MOCP		
AC-1/CU-1	IT CLOSET 105	GRADE	320-425	12/5.8	230/1	1	11	28	TRANE MITSUBISHI PKA-12HA7/PUY-A12NKA7	1,2,3,4,5,6

NOTES:
1. INDOOR UNIT AC-1: PROVIDE WITH MANUFACTURER'S WIRED, WALL MOUNTED CONTROLLER.
2. COOLING ONLY UNIT.
3. OUTDOOR CONDENSING UNIT CU-1: PROVIDE 18" PRE-MANUFACTURED, GALVANIZED STEEL, MODULAR EQUIPMENT SUPPORT FRAME WITH EQUIPMENT CLAMPS FOR INSTALLATION.
4. OUTDOOR CONDENSING UNIT CU-1: PROVIDE LOW AMBIENT WIND BAFFLES FOR OPERATION DOWN TO -20°F.
5. STANDARD OPERATION DESIGN TEMPERATURE -20°F TO 95°F. INDOOR UNIT AC-1 USER ADJUSTED THERMOSTAT TO BE SET TO IT/DATA EQUIPMENT RECOMMENDED SETPOINT.
6. CONDENSATE DRAIN SHALL BE INSTALLED TO DRAIN BY GRAVITY.

LOUVER SCHEDULE

UNIT NO	SERVES	TYPE	CFM	DIMENSIONS			MIN FREE AREA SQUARE FT	BASIS OF DESIGN	NOTES
				HEIGHT	WIDTH	DEPTH			
L-1	OA INTAKE	INTAKE	1520	30"	32"	6"	3.5	RUSKIN ELF 6375 DX	1,2,3
L-2	EXHAUST AIR	EXHAUST	1400	30"	32"	6"	3.5	RUSKIN ELF 6375 DX	1,2,3

NOTES:
1. PROVIDE FIXED DRAINABLE BLADES, SELF FLASHING.
2. PROVIDE WIRE MESH BIRDSCREEN.
3. PROVIDE FINISH IN MANUFACTURER'S STANDARD COLOR SELECTED BY ARCHITECT.

RANGE HOOD SCHEDULE

UNIT NO	SERVES	HOOD LENGTH	HOOD DEPTH	HOOD HEIGHT	WEIGHT (LBS)	CFM	SP IN WC	VOLTS/ PHASE	BASIS OF DESIGN	NOTES
KH-1	KITCHEN 115	30"	19.3"	10.5"	60	140-250	0.2	120/1	DENLAR D1000 SERIES	1,2,3,4,5,6,7

NOTES:
1. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND CLEARANCE REQUIREMENTS.
2. PROVIDE WET CHEMICAL FIRE SUPPRESSION SYSTEM. FIRE SUPPRESSION AGENT MUST NOT CONTAIN CHEMICALS THAT ARE CLASSIFIED AS REFRIGERANTS.
3. PROVIDE WITH INLINE FAN WITH REAR DISCHARGE.
4. PROVIDE WITH THRU-WALL EXHAUST AND VENT KIT.
5. PROVIDE WITH ELECTRICAL STOVE SHUT-OFF CONTROL MODULE.
6. RANGE HOOD TO BE INSTALLED IN ACCORDANCE WITH NFPA REQUIREMENTS.
7. PROVIDE MANUAL PULL STATION FOR FIRE SUPPRESSION SYSTEM.

HOT WATER BOILER SCHEDULE

UNIT NO	FUEL	INPUT MBH	CAPACITY MBH	MINIMUM EFFICIENCY	GAS CONNECTION	GAS VENT	AIR INTAKE	VOLTS/PHASE/AMPS	BASIS OF DESIGN	WEIGHT LBS	NOTES
B-1	LPG	155	142	95.1	3/4"	3"	3"	120/1/6.3	HTP EFT-155	200	1,2,3,4,5,6,7,8

NOTES:
1. INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS.
2. PROVIDE INJECTION PUMP. REFER TO PUMP SCHEDULE.
3. PROVIDE MANUFACTURERS STAINLESS STEEL VENTING WITH TERMINATION KITS FOR COMBUSTION AIR AND FLUE VENT.
4. PROVIDE ACCESSORIES: SAFETY RELIEF VALVE, PRESSURE/TEMP GAUGES, CIRCULATOR HARNESS, LOW WATER CUT-OFF, MANUAL RESET HIGH LIMIT.
5. PROVIDE OUTDOOR AIR SYSTEM TEMPERATURE SENSORS.
6. PROVIDE CONDENSATE ACID NEUTRALIZATION KIT.
7. PROVIDE BOILER MANUFACTURER RACKING SYSTEM.
8. PROVIDE DDC INTERFACE EQUIPMENT AND PROGRAMMING.

AIR COOLED CONDENSING UNIT SCHEDULE

UNIT NO	SERVES	NOMINAL CAPACITY TONS	REFRIG TYPE	EER FULL LOAD	CAPACITY STEPS	CONDENSER FAN(S)			COMPRESSOR(S)			ELECTRICAL			BASIS OF DESIGN	NOTES
						QTY	FAN HP EA	FLA EA	QTY	RLA EA	FLA EA	VOLTS/PHASE	MCA	MOP		
ACCU-1	AHU-1	5	410A	-	2	1	1/4	1.3	1	28.8	152.9	230/1	37	60	TRANE 4TTR7060A	1,2,3,4,5

NOTES:
1. 2-STAGE COMPRESSOR.
2. PROVIDE RUBBER ISOLATOR KIT.
3. OUTDOOR DESIGN TEMP 95°F.
4. PROVIDE PRE-INSULATED REFRIGERANT LINESET.
5. PROVIDE SERVICE VALVE PANEL COVER.

ENERGY RECOVERY VENTILATOR SCHEDULE

UNIT NO	SERVES	SUPPLY			EXHAUST			ELECTRICAL		INSTALLED WEIGHT LBS	BASIS OF DESIGN	NOTES
		CFM	ESP IN WC	FAN HP	CFM	ESP IN WC	FAN HP	VOLTS/ PHASE	MCA			
ERV-1	AHU-1	460	0.75	1/4	335	0.7	1/4	115/1	6.4	215	GREENHECK MINICORE-5	1,2,3,4,5

NOTES:
1. INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS.
2. PROVIDE FIBER MEMBRANE CORE.
3. PROVIDE TIMED FROST CONTROL.
4. PROVIDE VARI-GREEN VARIABLE SPEED MOTOR.
5. PROVIDE INTEGRAL BACKDRAFT DAMPERS.

DIFFUSER / REGISTER SCHEDULE

UNIT NO	FACE SIZE IN	NECK SIZE IN	MAX PRESSURE DROP IN WC	MAX NOISE CRITERIA	CFM RANGE	TYPE	BASIS OF DESIGN	NOTES
S-1	24x24	8Ø	0.1	<25	101-200	LAY-IN CEILING SUPPLY DIFFUSER	PRICE SCD	1,2,3,6
S-2	24x24	6Ø	0.1	<25	0-100	LAY-IN CEILING SUPPLY DIFFUSER	PRICE SCD	1,2,3,6
S-3	12x12	6Ø	0.1	<25	70-100	LAY-IN CEILING SUPPLY DIFFUSER	PRICE SCD	1,2,3,6
S-4	24x24	8Ø	0.1	<25	101-200	LAY-IN CEILING SUPPLY DIFFUSER	PRICE SCD	1,2,4,6
R-1	24x24	10Ø	0.1	<25	251-360	PERFORATED RETURN GRILLE	PRICE PDDR	1,3,6
R-2	24x24	8Ø	0.1	<25	100-250	PERFORATED RETURN GRILLE	PRICE PDDR	1,3,6
R-3	12x12	6Ø	0.1	<25	65-90	PERFORATED RETURN GRILLE	PRICE PDDR	1,3,6
R-4	24x24	6Ø	0.1	<25	0-100	PERFORATED RETURN GRILLE	PRICE PDDR	1,3,6
E-1	12x12	12x12	0.1	<25	0-120	LOUVERED FACE EXHAUST GRILLE	PRICE 530	1,5,6,7,8,9
E-2	24x24	8Ø	0.1	<25	115	PERFORATED EXHUAST GRILLE	PRICE PDDR	1,4,6
E-3	12x12	12x12	0.1	<25	0-100	LOUVERED FACE EXHAUST GRILLE	PRICE 530	1,6,7,8,9
T-1	24x24	6x6	0.1	<25	85-150	PERFORATED TRANSFER GRILLE	PRICE PDDR	1,3,6
T-2	24x24	6x6	0.1	<25	85-150	PERFORATED TRANSFER GRILLE	PRICE PDDR	1,4,6

NOTES:
1. COLOR; WHITE.
2. PROVIDE 4-WAY THROW.
3. MOUNTING FRAME FOR INSTALLATION IN SAT CEILING.
4. MOUNTING FRAME FOR INSTALLATION IN GYP BOARD CEILING.
5. PROVIDE WITH INTEGRAL OPPOSED BLADE DAMPER.
6. PROVIDE TRANSITION FROM DUCTWORK TO DIFFUSER/GRILLE.
7. SURFACE MOUNTED.
8. 3/4" BLADE SPACING, 45-DEG DEFLECTION.
9. BLADE PARALLEL TO LONG DIMENSION.

HOT WATER UNIT HEATER SCHEDULE

UNIT NO	LOCATION	CFM	HEATING MBH	WATER TEMP °F		GPM	MAX PRESSURE DROP IN WC	ELECTRICAL DATA			BASIS OF DESIGN	NOTES
				ENTERING	LEAVING			HP	RPM	VOLTS/PHASE		
UH-1	BASEMENT	370	21.6	140	110	2.2	4.9	1/6	1075	120/1	MODINE LODRONIC HCH 22	1,2,3

NOTES:
1. INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS.
2. PROVIDE WITH FINGER PROOF FAN GUARD.
3. HORIZONTAL SUSPENDED UNIT.

GENERAL NOTE

NOTE ON BASIS OF DESIGN

PRODUCTS OF OTHER MANUFACTURERS ARE ACCEPTABLE IF THEY MEET THE OPERATIONAL REQUIREMENTS INDICATED. ANY ADJUSTMENTS TO DUCTING, PIPING, WIRING OR CONFIGURATION DUE TO THE SELECTION OF A MANUFACTURER OTHER THAN THAT LISTED AS THE BASIS OF DESIGN WILL BE ACCOMPLISHED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE GOVERNMENT.

STATE OF MAINE
DIANE M. ACHESON
No. 9277
11/5/21
LICENSED
PROFESSIONAL ENGINEER

US Army Corps of Engineers®

U.S. ARMY CORPS OF ENGINEERS
OTTER BROOK DAM LAKE
NEW OPERATIONS OFFICE

MECHANICAL SCHEDULES 1

SHEET ID
OTTER BROOK
M-601

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DESIGN CONDITION SCHEDULE

ROOM NO	LOCATION	AREA (SF)	DESIGN OCCUPANCY DENSITY	PEOPLE OA RATE CFM/ PERSON	AREA OA RATE CFM/FT^2	MIN AIRFLOW AREA OA CFM	BREATHING ZONE OA (PEOPLE+ AREA) CFM	AIR DISTRIBUTION EFFECTIVENESS	SPACE OA (CORRECTED PEOPLE+ AREA) CFM	REQUIRED EA AIRFLOW RATE	REQUIRED EA MINIMUM CFM	DESIGN SUPPLY AIR CFM	DESIGN OUTSIDE AIR CFM	DESIGN RETURN AIR CFM	DESIGN EXHUAST AIR CFM
101	VESTIBULE	65	0	0	0	-	-	-	-	-	-	-	-	-	-
102	CORRIDOR	432	0	0	0.06	26	26	1.0	26	-	-	270	82	170	-
103	COMMON AREA	120	4	5.0	0.06	7	27	1.0	27	-	-	150	45	-	-
104	FILE STORAGE	200	1	5.0	0.06	12	17	1.0	17	-	-	100	30	90	-
105	IT CLOSET	42	0	0	0	-	-	-	-	-	-	-	-	-	-
106	RANGERS OFFICE #1	90	1	5.0	0.06	5	10	1.0	10	-	-	70	21	65	-
107	STAIRS	108	0	0	0	-	-	-	-	-	-	-	-	-	-
108	JAN	30	0	0	0	-	-	-	-	1.0/SF	30	-	-	-	50
109	RANGERS OFFICE #2	90	1	5.0	0.06	5	10	1.0	10	-	-	70	21	65	-
110	STAFF BATH/SHOWER	92	0	0	0	-	-	-	-	70/FIXT	70	-	-	-	100
111	SUPERVISORS OFFICE	188	2	5.0	0.06	11	21	1.0	21	-	-	165	50	155	-
112	RANGERS OFFICE #3	90	1	5.0	0.06	5	10	1.0	10	-	-	70	21	65	-
113	RANGERS OFFICE #4	90	1	5.0	0.06	5	10	1.0	10	-	-	100	30	90	-
114	MEETING ROOM	408	13	5.0	0.06	24	89	1.0	89	-	-	400	121	360	-
115	KITCHEN	145	2	7.5	0.12	17	32	1.0	32	0.3/SF	44	125	38	-	115
116	GUEST BATH	60	0	0	0	-	-	-	-	70/FIXT	70	-	-	-	70

DESIGN CONDITION SCHEDULE

ROOM NO	LOCATION	INDOOR COOLING DESIGN TEMP °F	OUTDOOR COOLING DESIGN TEMP °F	INDOOR HEATING DESIGN TEMP °F	OUTDOOR HEATING DESIGN TEMP °F	NOTES
001	BASEMENT	-	85.7	40	-2.1	
101	VESTIBULE	-	85.7	50	-2.1	
102	CORRIDOR	78	85.7	68	-2.1	
103	COMMON AREA	78	85.7	68	-2.1	
104	FILE STORAGE	78	85.7	68	-2.1	
105	IT CLOSET	80	85.7	64	-2.1	
106	RANGERS OFFICE #1	78	85.7	68	-2.1	
107	STAIRS	-	85.7	50	-2.1	
108	JAN	-	85.7	-	-2.1	
109	RANGERS OFFICE #2	78	85.7	68	-2.1	
110	STAFF BATH/SHOWER	78	85.7	68	-2.1	
111	SUPERVISORS OFFICE	78	85.7	68	-2.1	
112	RANGERS OFFICE #3	78	85.7	68	-2.1	
113	RANGERS OFFICE #4	78	85.7	68	-2.1	
114	MEETING ROOM	78	85.7	68	-2.1	
115	KITCHEN	78	85.7	68	-2.1	
116	GUEST BATH	78	85.7	68	-2.1	

NOTES:

FAN SCHEDULE

UNIT NO	SERVES	CFM	ESP IN WC	DRIVE TYPE	FAN TYPE	FAN RPM	SONES	HP	VOLTS/ PHASE	BASIS OF DESIGN	ACCESSORIES	NOTES
RF-1	AHU-1	1060	0.7	DIRECT	INCLINE	1368	8.0	1/2	115/1	GREENHECK SQ-120-VG	A,B	1,2,3

NOTES:

1. PROVIDE COMPANION FLANGES FOR INLET AND OUTLET DUCT CONNECTIONS.
2. PROVIDE TWO SIDED ACCESS PANELS.
3. MANUFACTURER MOUNTED DISCONNECT SWITCH.

ACCESSORIES:

A. MFR FAN MOUNTED DISCONNECT SWITCH.
B. NEOPRENE VIBRATION ISOLATORS.

DUCTWORK CONSTRUCTION AND LEAKAGE TESTING SCHEDULE

SYSTEM	DUCT PRESSURE CLASS				SUPPLY				RETURN/ OUTSIDE AIR		DUCT TEST PRESSURE: INCHES OF WATER COLUMN	NOTES
	INCHES OF WATER COLUMN				ROUND/OVAL		RECTANGULAR					
	SUPPLY DUCT	RETURN DUCT	EXHAUST DUCT	OUTSIDE AIR DUCT	DUCT SEAL CLASS	DUCT LEAK CLASS	DUCT SEAL CLASS	DUCT LEAK CLASS	DUCT SEAL CLASS	DUCT LEAK CLASS		
ERV-CONSTANT VOLUME SYSTEM	2	-	-	-	A	8	A	16	-	-	2.0	1
	-	-2	-	-	-	-	-	-	A	16	2.0	1
	-	-	2	-	-	-	-	-	A	16	2.0	1
	-	-	-	-2	-	-	-	-	A	16	2.0	1
DUCTED BLOWER COILS	2	-	-	-	A	8	A	16	-	-	2.0	1
	-	-1	-	-	-	-	-	-	A	16	2.0	1

NOTES:
1. PROVIDE DUCT AIR LEAKAGE TESTING IN ACCORDANCE WITH SPECIFICATION SECTION 23 05 93 TESTING, ADJUSTING, AND BALANCING FOR HVAC AND THE PROCEDURES IN SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL. DUCTWORK SHALL BE LEAK TESTED IN ACCORDANCE WITH ITS DUCT PRESSURE CLASS, NOT ITS DUCT SEAL CLASS.

CONTROL VALVE SCHEDULE

QTY	EQUIPMENT SERVED	LOCATION	SERVICE	TYPE	ACTION	WATER VALVES		FAIL POSITION	NOTES
						GPM	SIZING		
1	AHU-1	BASEMENT 001	HOT WATER	3-WAY	MODULATING	4.88	3 PSID WPD MAX	OPEN	
12	RADIANT PANELS	VARIOUS	HOT WATER	2-WAY	2-POSITION	NOTE 1	LINE SIZE	OPEN	1
1	UH-1	BASEMENT 001	HOT WATER	2-WAY	2-POSITION	2.2	LINE SIZE	OPEN	
1	CUH-1	STAIR 107	HOT WATER	2-WAY	2-POSITION	1.5	LINE SIZE	OPEN	
2	RADIANT PANELS	SUPERVISOR 111, STAFF BATH 110	HOT WATER	3-WAY	2-POSITION	NOTE 1	LINE SIZE	CLOSED	1

NOTES:
1. REFER TO RADIANT CEILING PANEL SCHEDULE ON M-601.

EXPANSION TANK SCHEDULE

UNIT NO	LOCATION	SERVES	ACCEPTANCE VOLUME	DIMENSIONS	BASIS OF DESIGN	NOTES
EXT-1	BASEMENT	HEATING SYSTEM	12 GAL	39"x16"	TACO CBX84-125	1,2

NOTES:
1. PRE-CHARGED TO 40 PSI.
2. VERTICAL TANK CONFIGURATION.

AIR SEPARATOR SCHEDULE

UNIT NO	LOCATION	SERVES	TYPE	CAPACITY (GPM)	PRESSURE DROP (FT)	STRAINER FREE AREA (SQ IN)	BASIS OF DESIGN	NOTES
AS-1	BASEMENT	HEATING SYSTEM	TANK	17	0.15	-	TACO-ACT02	1

NOTES:
1. PROVIDE WITH STRAINER.

PUMP SCHEDULE

UNIT NO	SERVES	TYPE	GPM	TOTAL HEAD	PUMP EFF(%)	MOTOR DATA				SUCTION/ DISCHARGE (IN)	BASIS OF DESIGN	NOTES
						BHP	HP	RPM	VOLTS/PHASE			
P-1	BOILER INJECTION	IN-LINE	14.6	10FT	-	-	1/8	3250	115/1	1-1/2" / 1-1/2"	TACO IL0012	2
P-2A	HEATING SYSTEM	IN-LINE	17.8	25FT	38%	0.28	1/2	1760	208/1	1-1/2" / 1-1/2"	TACO 1915	1,6
P-2B	HEATING SYSTEM	IN-LINE	17.8	25FT	38%	0.28	1/2	1760	208/1	1-1/2" / 1-1/2"	TACO 1915	1,3
CP-1	AHU-1 DX COND.	CENTRIFUGAL	<10	10FT	-	-	1/30	1795	115/1	1" / 1/2"	VCC-20ULS	2,4,5
CP-2	B-1 CONDENSATE	CENTRIFUGAL	<10	10FT	-	-	1/30	1795	115/1	1" / 1/2"	VCC-20ULS	2,4,5

NOTES:
1. PROVIDE ORIENTATION FOR HORIZONTAL MOUNTING.
2. PROVIDE INTEGRAL CHECK VALVE.
3. SPARE/LAG PUMP.
4. PROVIDE 6'-0" CORD.
5. BASIS OF DESIGN VCC-20ULS PART #554200.
6. ACTIVE/LEAD PUMP.

HOT WATER CABINET UNIT HEATER SCHEDULE

UNIT NO	LOCATION	CFM	HEATING MBH	GPM	WATER TEMP °F		PD FT WC	RPM	FAN DATA		BASIS OF DESIGN	NOTES
					ENTERING	LEAVING			HP	VOLTS/PHASE		
CUH-1	STAIR 107	230	5.7	1.5	140	120	0.15	1050	1/15	120/1	STERLING F-02	1,2,3,4

NOTES:
1. PROVIDE CABINET ENCLOSURE WITH TOP DISCHARGE AND FLOOR INLET CONFIGURATION.
2. COLOR BY ARCHITECT.
3. 1-ROW HEATING HOT WATER COIL.
4. PROVIDE FINISH IN MANUFACTURER'S STANDARD COLOR SELECTED BY ARCHITECT.

GENERAL NOTE

NOTE ON BASIS OF DESIGN

PRODUCTS OF OTHER MANUFACTURERS ARE ACCEPTABLE IF THEY MEET THE OPERATIONAL REQUIREMENTS INDICATED. ANY ADJUSTMENTS TO DUCTING, PIPING, WIRING OR CONFIGURATION DUE TO THE SELECTION OF A MANUFACTURER OTHER THAN THAT LISTED AS THE BASIS OF DESIGN WILL BE ACCOMPLISHED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE GOVERNMENT.

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US Army Corps of Engineers®

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OTTER BROOK DAM LAKE
NEW OPERATIONS OFFICE

MECHANICAL SCHEDULES 2

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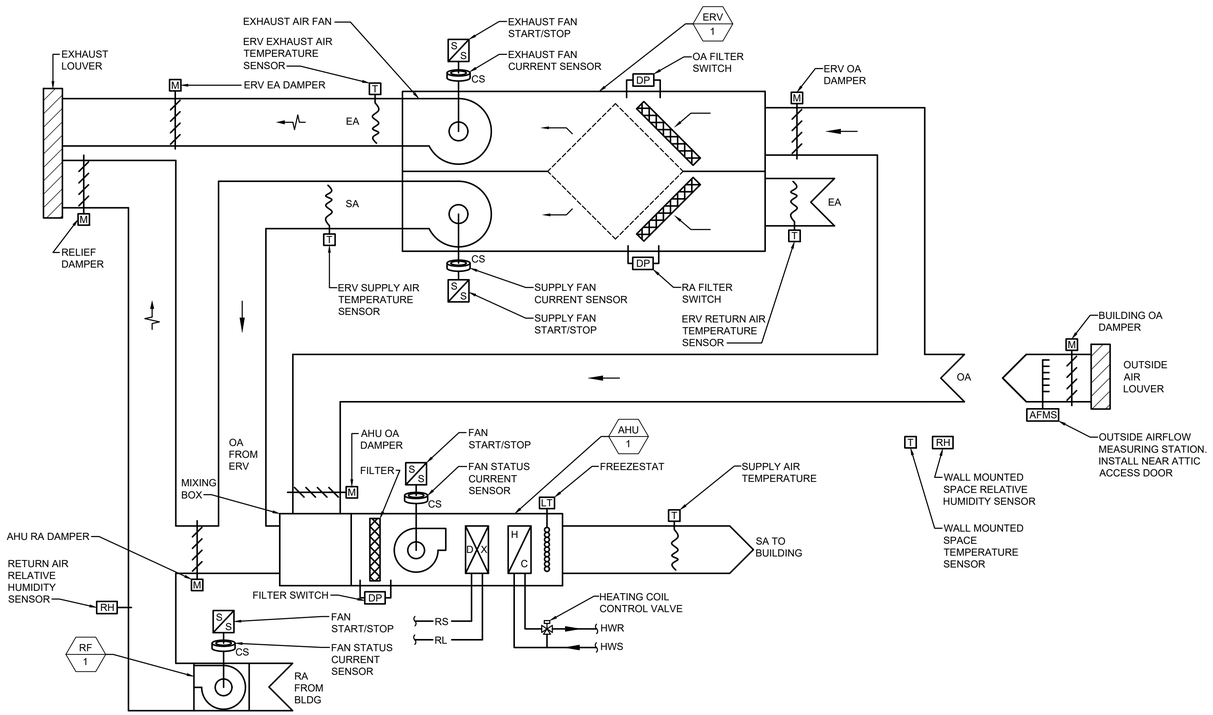

BLOWER COIL UNIT (AHU-1) AND ERV-1 POINTS LIST

SYSTEM POINT DESCRIPTION	GRAPHIC	ANALOG INPUT	ANALOG OUTPUT	BINARY INPUT	BINARY OUTPUT	ALARM	ANALOG VARIABLE	BINARY VARIABLE	TREND LOG		NOTES
AHU FAN START/STOP	X				X				X		
AHU FAN STATUS CURRENT SENSOR	X	X				X			X		1
RETURN FAN START/STOP	X				X				X		
RETURN FAN STATUS CURRENT SENSOR	X	X				X			X		1
HEATING COIL CONTROL VALVE	X		X						X		
DX COOLING STAGE 1	X				X				X		
DX COOLING STAGE 2	X				X				X		
SUPPLY AIR TEMPERATURE	X	X							X		2
LOW TEMPERATURE FREEZESTAT	X		X						X		
FILTER SWITCH	X			X					X		
AHU-1 OUTSIDE AIR DAMPER	X				X				X		
AHU-1 RETURN AIR DAMPER	X				X				X		
OUTSIDE AIRFLOW MEASURING STATION	X	X							X		
RELIEF AIR DAMPER	X				X				X		
BUILDING OUTSIDE AIR DAMPER	X				X				X		
ERV SUPPLY FAN START/STOP	X				X				X		
ERV SUPPLY FAN STATUS	X			X		X			X		1
ERV EXHAUST FAN START/STOP	X				X				X		
ERV EXHAUST FAN STATUS	X			X		X			X		1
ERV OUTSIDE AIR DAMPER	X				X				X		
ERV EXHAUST AIR DAMPER	X				X				X		
ERV EXHAUST AIR TEMPERATURE	X	X				X			X		4
ERV SUPPLY AIR TEMPERATURE	X	X				X			X		5
ERV RETURN AIR TEMPERATURE	X	X							X		
ERV RETURN AIR FILTER SWITCH	X			X		X			X		3
ERV OUTSIDE AIR FILTER SWITCH	X			X		X			X		3
OCCUPANT OVERRIDE ENABLE	X			X					X		
SPACE TEMPERATURE SENSOR	X	X							X		
SPACE RELATIVE HUMIDITY SENSOR	X	X							X		
RETURN AIR RELATIVE HUMIDITY SENSOR	X	X							X		

NOTES:
1. GENERATE AN ALARM IF FAN FAILS TO SHOW PROOF OF OPERATION.
2. GENERATE AN ALARM IF THE ROOM TEMPERATURE FALLS BELOW 60°F (ADJUSTABLE).
3. GENERATE ALARM IF FILTER SWITCH PRESSURE DROP EXCEEDS 0.75 IN H2O.
4. GENERATE ALARM IF TEMPERATURE FALLS BELOW 15°F.
5. GENERATE ALARM IF TEMPERATURE IS NOT ±5°F OF SET POINT.

A4 BLOWER COIL UNIT (AHU-1) AND ERV-1 CONTROL DIAGRAM
SCALE: N.T.S.

SEQUENCE OF OPERATION

THE OCCUPIED AND UNOCCUPIED MODES SHALL BE DETERMINED BY A USER ADJUSTABLE 24-HOUR/7-DAY SCHEDULE THAT IS ACCESSIBLE TO THE BUILDING OPERATOR THROUGH THE GUI.

OCCUPIED MODE: DURING THE OCCUPIED MODE THE AHU-1 SUPPLY FAN, RETURN FAN AND ERV SUPPLY AND EXHAUST FANS SHALL RUN CONTINUOUSLY. THE ERV OUTSIDE AND EXHAUST AIR DAMPERS, BUILDING OUTSIDE AIR DAMPER AND AHU-1 RETURN AIR DAMPER SHALL REMAIN OPEN. AHU-1 OUTSIDE AIR DAMPER SHALL REMAIN CLOSED.

HEATING MODE: THE DX COOLING SHALL REMAIN OFF AND THE HEATING COIL CONTROL VALVE SHALL MODULATE TO MAINTAIN THE SUPPLY AIR TEMPERATURE SET POINT, ACCORDING TO THE FOLLOWING, BUILDING OPERATOR ADJUSTABLE, RESET SCHEDULE;

OUTSIDE AIR TEMP	SUPPLY AIR SET POINT
60 DEF F	60 DEG F
40 DEG F	68 DEG F

COOLING MODE: THE HEATING COIL CONTROL VALVE SHALL REMAIN CLOSED AND THE DX COOLING SHALL REMAIN ON UNTIL THE ZONE TEMPERATURE IS SATISFIED. THE COMPRESSOR SHALL START WHEN THERE IS A CALL FOR COOLING AND STOP WHEN THE TEMPERATURE IS SATISFIED.

ECONOMIZER MODE: THE ECONOMIZER MODE SHALL BE ENABLED WHENEVER THE OUTSIDE AIR ENTHALPY IS 10 PERCENT (OR MORE ADJUSTABLE) BELOW THE RETURN AIR ENTHALPY, THE OUTSIDE AIR TEMPERATURE IS BELOW 60°F (ADJUSTABLE), AND THERE IS A CALL FOR COOLING. OTHERWISE ECONOMIZER COOLING SHALL BE DISABLED. DURING THE ECONOMIZER MODE THE ERV SUPPLY FAN SHALL REMAIN OFF. THE ERV OUTSIDE AIR DAMPER SHALL BE CLOSED AND THE DX COOLING SHALL BE OFF. THE AHU OUTSIDE AIR, RETURN AIR, AND RELIEF DAMPERS SHALL ACT IN UNISON AS A MIXED AIR DAMPER (RA DAMPER SHALL CLOSE AS THE OA AND RELIEF DAMPERS OPEN) AND SHALL MODULATE TO MAINTAIN THE SUPPLY AIR ECONOMIZER COOLING SETPOINT, 55°F (ADJUSTABLE).

UNOCCUPIED MODE: DURING UNOCCUPIED MODE THE AHU-1 SUPPLY FAN, RETURN FAN AND ERV SUPPLY AND EXHAUST FANS SHALL REMAIN OFF, THE DX COOLING SHALL REMAIN OFF, AND THE HEATING COIL CONTROL VALVE SHALL REMAIN CLOSED IF THE OUTSIDE TEMPERATURE IS ABOVE 35°F (ADJUSTABLE). IF THE OUTSIDE AIR TEMPERATURE FALLS BELOW 35°F (ADJUSTABLE) THEN THE HEATING COIL CONTROL VALVE SHALL REMAIN 10% (ADJUSTABLE) OPEN TO HELP PREVENT FREEZING. THE OUTSIDE AIR, EXHAUST AIR AND RELIEF AIR DAMPERS SHALL REMAIN CLOSED.

SAFETY: THE LOW TEMPERATURE THERMOSTAT (FREEZESTAT), WHICH SHALL BE SERPENTINED ACROSS THE DOWNSTREAM FACE OF THE HEATING COIL, SHALL STOP THE SUPPLY AND EXHAUST FANS, CLOSE THE LOUVER OUTSIDE AIR, RELIEF AIR AND ERV EXHAUST AIR DAMPERS IF THE COIL DISCHARGE TEMPERATURE FALLS BELOW 38°F. THE DX COOLING SHALL BE DISABLED, AND THE HEATING COIL CONTROL VALVE SHALL BE FULLY OPEN.

DRAWING NOTES: (ALL CONTROL DRAWINGS)

1. ALARMS SHALL BE RECORDED AND STORED IN THE JACE AND SHALL BE ANNUNCIATED ON THE GRAPHICAL USER INTERFACE (GUI) WHEN CONNECTED.
2. SETTING, MODES, AND SET POINTS THAT ARE INDICATED AS BEING ADJUSTABLE SHALL BE ADJUSTABLE BY THE BUILDING OPERATORS THROUGH THE GUI WITHOUT THE NEED TO CHANGE OR EDIT PROGRAMMING.
3. COMPLY WITH CYBER SECURITY REQUIREMENTS AND PERFORM REQUIRED PROGRAMMING AND TESTING PER SPECIFICATIONS.
4. CONTROL WIRING IN BASEMENT MUST BE IN CONDUIT.
5. PROVIDE LOCKABLE CONTROL PANELS.
6. DISABLE UNUSED COMMUNICATION PORTS ON ALL DEVICES.

STATE OF MAINE
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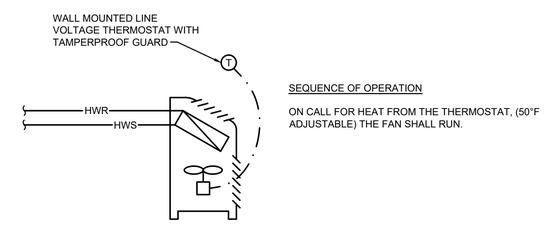
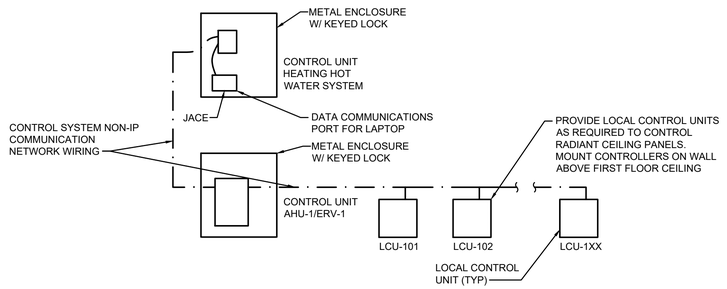
LICENSED
PROFESSIONAL ENGINEER



SEQUENCE OF OPERATION

ON CALL FOR HEAT FROM THE THERMOSTAT, (50°F ADJUSTABLE) THE FAN SHALL RUN.

H14 TYPICAL CABINET UNIT HEATER CONTROL DIAGRAM (NON-DDC)
SCALE: N.T.S.



B14 DIRECT DIGITAL CONTROL SYSTEM ARCHITECTURE
SCALE: N.T.S.

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CONTROL DIAGRAMS 1

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