

MECHANICAL LEGEND	
SYMBOL	DESCRIPTION
ACV	AUTOMATIC CONTROL VALVE
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
BAS	BUILDING AUTOMATION SYSTEM
BDD	BACK DRAFT DAMPER
BFF	BELOW FINISHED FLOOR
CC	COOLING COIL
CF	CEILING FAN
COF	COEFFICIENT OF PERFORMANCE
CTE	CONNECT TO EXISTING
CU	CONDENSING UNIT
DCW	DOMESTIC COLD WATER
DHU	DEHUMIDIFICATION UNIT
DHW	DOMESTIC HOT WATER
DV	DRAIN VALVE C/W HOSE END
DX	DIRECT EXPANSION
EAT	EXTENDING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EEV	ELECTRONIC EXPANSION VALVE
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EA	EXHAUST AIR
FD	FLOOR DRAIN (PLUMBING) / FIRE DAMPER (HVAC)
FE	FIRE EXTINGUISHER
FIC	FIRE HOSE CABINET
FPI	FINS PER INCH
FS	FLOW SWITCH (PIPING) / FIRE-SMOKE DAMPER (HVAC)
HVAC	HEATING, VENTILATION & AIR CONDITIONING
HWH	HEATING WATER
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
HL	HIGH LEVEL
IEER	INTEGRATED ENERGY EFFICIENCY RATIO
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
LL	LOW LEVEL
LPL	LOW PRESSURE CONDENSATE
LPC	LOW PRESSURE STEAM
MCA	MINIMUM CIRCUIT AMPACITY
MCP	MAXIMUM OVERCURRENT PROTECTION
NC	NORMALLY CLOSED
NTS	NOT TO SCALE
O/A	OUTDOOR AIR
OBC	ONTARIO BUILDING CODE
ODP	OPEN DRIP PROOF
OESC	ONTARIO ELECTRICAL SAFETY CODE
P	PUMP
PG	PRESSURE GAUGE
PRV	PRESSURE REDUCING VALVE
RIA	RETURN AIR
RV	RELIEF VALVE
RHC	REHEAT COIL
SA	SUPPLY AIR
TH	THERMOMETER
TD	TRANSFER OPENING
UH	UNIT HEATER
UC	0.75" (19MM) UNDERCUT DOOR
US	UNDERSIDE
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
WH	WATER HEATER
WF	WALL FIN
①	REFERS TO NOTE ON THE SAME DRAWING/DETAIL
HVAC-1	EQUIPMENT TAG
]	DUCT / PIPE CAP
ST	STORM DRAIN ABOVE FLOOR
.	DOMESTIC COLD WATER PIPING
HWS	HEATING WATER SUPPLY PIPING
HWR	HEATING WATER RETURN PIPING
R	REFRIGERATION PIPING
↙	PIPING TURNING DOWN
↘	PIPING TURNING UP
CV-1	ISOLATION VALVE
CV-2	CIRCUIT BALANCING VALVE & FLOW RATE (L/S)
CV-3	CHECK VALVE
2-WAY	2-WAY AUTOMATIC CONTROL VALVE
STR	STRAINER
UNION	UNION / FLANGE
◇	CHANGE IN PIPE SIZE
3-WAY	3-WAY AUTOMATIC CONTROL VALVE
TH	THERMOMETER
PG	PRESSURE GAUGE
AV	AUTOMATIC AIR VENT
P	PUMP
□	RECTANGULAR SUPPLY DUCT UP / DN
□	RECTANGULAR RETURN OR EXHAUST DUCT UP / DN
—	RIGID ROUND DUCT (SINGLE LINE DESIGNATION)
—	MANUAL BALANCING DAMPER
20	AIRFLOW (L/S)
1000/50	GRILLE/DIFFUSER SIZE (MM) & TYPE
	ACOUSTIC LINING
—	THERMAL INSULATION
—	DUCT SIZE TRANSITION
—	TRANSITION RECTANGULAR TO ROUND
—	SLOPE DUCT DOWN IN DIRECTION OF AIRFLOW
—	SLOPE DUCT UP IN DIRECTION OF AIRFLOW
—	ROUND BRANCHES TURNING DOWN
—	ROUND BRANCHES TURNING UP
—	MOTORIZED DAMPER
TV	SPACE MOUNTED TEMPERATURE SENSOR & EQUIPMENT CONTROLLED
TV	SPACE MOUNTED HUMIDITY SENSOR & EQUIPMENT CONTROLLED
TV	DUCT MOUNTED TEMPERATURE SENSOR
TV	DUCT MOUNTED HUMIDITY SENSOR
TV	DUCT MOUNTED CARBON DIOXIDE SENSOR
120V	120V POWER SOURCE

HVAC UNIT SCHEDULE			
SYMBOL	DESCRIPTION	MANUFACTURER & MODEL	REMARKS
HVAC-5.6	INDOOR AIR HANDLING UNIT, DX COOLING / HEAT PUMP, HYDRONIC BACKUP HEATING, FLOOR-MOUNTED - SUPPLY AIRFLOW=4251 CFM (205 L/S) AT 3.1" WC (747 PA) ESP. - DESIGN VENTILATION AIRFLOW=1750 CFM (825 L/S) - MINIMUM VENTILATION AIRFLOW=425 CFM (200 L/S) - DX COOLING / HEAT PUMP HEATING COIL: - ROWS / FPI: 8 / 7 - AIR PD=0.59" WC (147 PA) - COOLING PERFORMANCE: - TOTAL CAPACITY=215 MBH (83.1 KW) - SENSIBLE CAPACITY=120 MBH (37.3 KW) - EAT=21.0°F DB / 18.8°F WB (21.2°C DB / 20.4°C WB) - LAT=53.2°F DB / 52.4°F WB (11.8°C DB / 11.3°C WB) - AMBIENT TEMP.=55.0°F DB (32.0°F DB) - HEATING PERFORMANCE: - TOTAL CAPACITY=183 MBH (54.5 KW) - EAT=43.3°F (7.4°C) - LAT=65.2°F (28.9°C) - AMBIENT TEMP.=19.0°F DB (-12.2°C) (BALANCE POINT) - REFRIGERANT REHEAT COIL: - ROWS / FPI: 3 / 6 - TOTAL CAPACITY=85.9 MBH (25.2 KW) - EAT=42.5°F (11.4°C) - LAT=71.1°F (21.7°C) - AIR PD=0.68" WC (22.1 PA) - HOT WATER HEATING COIL: - TOTAL CAPACITY=148 MBH (43.4 KW) - EAT=38.8°F (3.8°C) - LAT=70.7°F (21.5°C) - AIR PD=0.21" WC (52.3 PA) - EWT=180.0°F (82.2°C) - LWT=193.8°F (78.9°C) - FLOW RATE=14.5 USGPM (0.914 L/S) - HEAD LOSS=1.50 FT (0.457 M)	DAIKIN CAH19GDCM	575-3-60, 6.7 HP (0.8 KW), UNIT WEIGHT=194 LBS (89.4 KG). PROVIDE THE FOLLOWING FEATURES / ACCESSORIES: - DOUBLE WALL CONSTRUCTION C/W 2" (50MM) WALL THICKNESS, 24 GA. GALVANIZED STEEL PAINTED OUTER PANEL, 24 GA. GALVANIZED STEEL LINER & R-13 FOAM INJECTED INSULATION. - 20 GA. FLOOR PANELS. - LOW LEAKAGE CONSTRUCTION (<1% OF AIRFLOW). - 4" (100MM) FORMED CHANNEL BASE. - TREAD PLATE FLOOR LINER. - FLUSH MOUNTED, HINGED ACCESS PANELS C/W QUARTER TURN HANDLES, STAINLESS STEEL LATCHES & FASTENINGS. - MIXING SECTION C/W TOP RETURN AIR & REAR OUTDOOR AIR CONNECTION (REFER TO FLOOR PLAN & DETAIL). - SECTION SPLITS TO PERMIT INDOOR INSTALLATION THRU EXTERIOR DOUBLE DOOR (REFER TO FLOOR PLANS FOR ACCESS ROUTE). - PARALLEL BLADE LOW LEAKAGE & INSULATED OUTDOOR AIR DAMPER (TAMCO 900). PROVIDE FIELD 24V MODULATING ACTUATOR C/W SPRING RETURN (FAL OPEN) (BAS CONTROLLED). - PARALLEL BLADE LOW LEAKAGE RETURN AIR DAMPER (TAMCO 1000). PROVIDE FIELD 24V MODULATING ACTUATOR C/W SPRING RETURN (FAL OPEN) (BAS CONTROLLED). - FILTER SECTION C/W 2" (50MM) FLAT PANEL PRE-FILTER MERV 13 FILTERS SIZED FOR <400 FPM (2.0 M/S) VELOCITY. - DIRECT DRIVE PLENUM SUPPLY FAN C/W AIRFOIL BLADES & INTEGRATED ECM DRIVE. - ECM DRIVE FACTORY MOUNTED MOTOR CONTROL PANEL ON UNIT CASING C/W FUSED DISCONNECT SWITCH & LOW VOLTAGE TERMINAL STRIP. PROVIDE FIELD CONTROL & POWER WIRING TO MOTOR CONTROL PANEL. - CUSTOM SUPPLY AIR DISCHARGE PLENUM (SEE FLOOR PLAN & DETAIL). - COPPER TUBE / ALUMINUM FIN HEATING & COOLING COILS. - HEATING / COOLING COIL HANDING TO SUIT FLOOR PLANS. - R-410A REFRIGERANT COILS. - PURE WATER HEATING COIL. - STAINLESS STEEL DOUBLE SLOPED DRAIN PAN FOR COOLING COIL HANDING TO SUIT FLOOR PLANS. - FIELD PROVIDE COOLING COIL CONDENSATE DRAIN C/W TRAP. SIZE TRAP ACCORDING TO MANUFACTURER REQUIREMENTS. - FIELD INSTALL FREEZESTAT ON HEATING COIL & HARDWARE TO FAN.
APPROVED EQUALS: ENVENT, ENGINEERED AIR, TRANE			

VRF CONDENSING UNIT SCHEDULE			
SYMBOL	DESCRIPTION	MANUFACTURER & MODEL	REMARKS
CU-5.6	VRF OUTDOOR UNIT, HEAT RECOVERY, ROOF-MOUNTED - COOLING MODE: - NOMINAL CAPACITY=20 TONS (70.3 KW) - RATED CAPACITY=220 MBH (66.8 KW) - AMBIENT TEMP.=95.0°F DB (35.0°C DB) - NOMINAL EFFICIENCY: 9.9 EER / 18.1 IEER - HEATING MODE: - NOMINAL CAPACITY=270 MBH (78.1 KW) - RATED CAPACITY=183 MBH (54.6 KW) - AMBIENT TEMP.=10.0°F DB (-12.2°C DB) (BALANCE POINT) - NOMINAL EFFICIENCY=3.5 COP - CONNECTIVITY RATIO: 90% - APPROXIMATE VRF SYSTEM REFRIGERANT CHARGE = 110 LBS (50 KG) (CONTRACTOR TO DETERMINE EXACT REFRIGERANT CHARGE BASED ON PIPING ROUTING)	DAIKIN REYQ24XBYCA	575-3-60, MCA=18.2+18.2, MOC=25+25. UNIT WEIGHT=1454 LBS (661 KG). PROVIDE THE FOLLOWING FEATURES / ACCESSORIES: - DAIKIN ERKGD03A/US D-CONTROL BOX C/W 358-1-60 POWER SUPPLY & MODBUS COMMUNICATION PROTOCOL. FIELD INSTALL WHERE INDICATED ON FLOOR PLAN. PROVIDE POWER & CONTROL WIRING CONNECTIONS ACCORDING TO WIRING SCHEMATIC. - DAIKIN ERKWB4/US DX COOLING COIL. SEE KIT QUANTITY. TWO (2). FIELD INSTALL WHERE INDICATED ON FLOOR PLAN. PROVIDE PIPING & CONTROL WIRING CONNECTIONS ACCORDING TO SCHEMATICS. - DAIKIN ERK2Y150-US REHEAT COIL. SEE KIT QUANTITY. TWO(2). FIELD INSTALL WHERE INDICATED ON FLOOR PLAN. PROVIDE PIPING & CONTROL WIRING CONNECTIONS ACCORDING TO SCHEMATICS. - INTERIS MODBUS TO BACNET MSTP GATEWAY WHEN REQUIRED FOR COMMUNICATION WITH BAS USING BACNET MSTP PROTOCOL. FIELD INSTALL WHERE INDICATED ON FLOOR PLAN. PROVIDE FIELD WIRING CONNECTIONS & CONTROL ENCLOSURE. - ECOPOINT MODEL EFM-10 SUPPORT SYSTEM CONDENSATE DRIP TRAYS. PROVIDE FIELD HEAT TRACE OF ENTIRE DRIP TRAY C/W INSULATION (REFER TO ROOF PLAN & SPEC FOR ADDITIONAL INFORMATION). - LOW AMBIENT BAFFLE KIT. - R-410A REFRIGERANT.
APPROVED EQUALS: LG, MITSUBISHI			

VRF BRANCH SELECTOR BOX SCHEDULE			
SYMBOL	DESCRIPTION	MANUFACTURER & MODEL	REMARKS
BS-1.2	HEAT RECOVERY MULTI-PORT BRANCH SELECTOR BOX - MAX PORT CAPACITY=54.0 MBH (15.6 KW) - MAX UNIT CAPACITY=290 MBH (85.0 KW) - NUMBER OF PORTS: 8	DAIKIN BSF924TVJ	208-1-60, MCA=8.0, MOC=15. UNIT WEIGHT=61 LBS. PROVIDE THE FOLLOWING FEATURES / ACCESSORIES: - INTERNAL SEV MODULES. - PIPE REDUCER KITS (WHERE REQUIRED). - R-410A REFRIGERANT.
APPROVED EQUALS: LG, MITSUBISHI			

RECIRCULATING PUMP SCHEDULE			
SYMBOL	DESCRIPTION	MANUFACTURER & MODEL	REMARKS
P-13.14	HVAC UNIT HOT WATER COIL RECIRCULATION PUMP - 14.5 USGPM (0.915 L/S) AT 19.2 FT (5.8 M) TOTAL HEAD. - 1700 RPM - FLUID: PURE WATER	TACO 1911	208-1-60, 0.75 HP (0.56 KW) DOP HIGH EFFICIENCY MOTOR. PUMP SHALL BE CAST IRON / BRONZE FITTED CONSTRUCTION, 4.5" (115MM) IMPELLER DIAMETER, 1.12" (30MM) FLANGE SIZE.
P-15	HOT WATER RETICULATING PUMP - 3.0 USGPM (0.19 L/S) AT 9.5 FT (3 M) TOTAL HEAD - 3200 RPM - FLUID: POTABLE WATER	TACO 007-SF3	120-1-60, 0.7 AMP, 0.04 HP (0.03 KW) PUMP SHALL BE STAINLESS STEEL CONSTRUCTION CERTIFIED TO NSF61 C/W 0.75" (19MM) FLANGE SIZE.
APPROVED EQUALS: ARMSTRONG, XYLEM B&G, GRUNDFOS			

HYDRONIC HEATING EQUIPMENT SCHEDULE (MANUFACTURER: SIGMA)			
NOTE: CAPACITIES BASED ON 180°F (82°C) ENTERING WATER & 160°F (71°C) LEAVING WATER. ENTERING AIR TEMPERATURES ARE 65°F (18°C) FOR WALL/FIN & 60°F (16°C) FOR FORCE FLOW HEATERS & UNIT HEATERS. PROVIDE PRIMER FINISH.			
HORIZONTAL UNIT HEATERS			
UH-1-MAX	0.030	TYPE - MOUNTING HEIGHT (MM)	WATER FLOW (L/S)
1.1-2.06		MOTOR AMPS - KW RATING	
UH-1: TYPE 1039V, SPEED CONTROLLER, 120-140, 1200 HP, 0.68A, 570 CFM (270 L/S), 850 RPM. PROVIDE BAS SPACE TEMPERATURE SENSOR WHERE INDICATED ON THE FLOOR PLANS.			
UH-2.3: TYPE 200H, SPEED CONTROLLER, 120-140, 1/2 HP, 5.6A, 3380 CFM (1698 L/S), 850 RPM. PROVIDE BAS SPACE TEMPERATURE SENSOR WHERE INDICATED ON THE FLOOR PLANS.			
CONVECTORS			
CV-1-MAX	0.030	TYPE - MOUNTING HEIGHT (MM)	WATER FLOW (L/S)
2.06		KW RATING	
CV-1: TYPE 'CWS' SLOPE TOP ENCLOSURE, 4" (100MM) WIDE, 16" (400MM) LONG, 14" (350MM) HIGH, 2300 BTU/H (0.67 KW) HEAT OUTPUT. PROVIDE STANDARD GAUGE CASING, ACCESS DOOR TO SUIT INSTALLATION. MOUNT WITH MIN CLEARANCE OF 6" (152MM) FROM BOTTOM OF ENCLOSURE TO FINISHED FLOOR.			
CV-2: TYPE 'CWS' SLOPE TOP ENCLOSURE, 4" (100MM) WIDE, 48" (1200MM) LONG, 14" (350MM) HIGH, 1200 BTU/H (3.28 KW) HEAT OUTPUT. PROVIDE STANDARD GAUGE CASING, ACCESS DOOR TO SUIT INSTALLATION. MOUNT WITH MIN CLEARANCE OF 6" (152MM) FROM BOTTOM OF ENCLOSURE TO FINISHED FLOOR.			

PLUMBING FIXTURE & EQUIPMENT SCHEDULE				
SYMBOL	DESCRIPTION	FIXTURE SUPPLIER & MODEL	TRIM SUPPLIER & MODEL	REMARKS
L	WALL-MOUNT LAVATORY AUTOMATIC / SENSOR OPERATION	AMERICAN STANDARD 0321.026	DELTA 591T1250 337260 337311	VITREOUS CHINA FIXTURE C/W EVERCLEAN BACK OVERFLOW, THREE TRIM HOLES, 4" (100MM) CENTERSET, WALL HUNG WITH WALL HANGER, BATTERY FAUCET C/W CHROME FINISH, 0.5 USGPM (1.9 LPM) LAMNAR OUTLET & SOLENOID VALVE / CONTROL ASSEMBLY IN SURFACE-MOUNTED BOX C/W SCREENED STOP. SET THERMOSTAT MIXING VALVE FOR MAX DELIVERY 144°F (60°C) OUTLET TEMPERATURE. SENSOR CORD WITH LENGTH TO SUIT SITE CONDITIONS. PROVIDE STAINLESS STEEL BRAIDED HOSE FOR CONNECTION OF SOLENOID VALVE TO FAUCET. MOUNT CONTROL BOX AT MAX HEIGHT BELOW LAVATORY. PROVIDE CHROME SUPPLY KIT (DIAH, E13-2276) C/W CHROME PLATED ANGLE STOPS, STAINLESS STEEL BRAIDED HOSES & ESCUTCHEONS. WASTE KIT C/W CHROME FINISH, OPEN-GRID STRAINER, OFFSET TABLET & TRAP.
WC	FLOOR-MOUNT WATER CLOSET MANUAL FLUSH TANK	AMERICAN STANDARD CASEY FRO 215C3.004 C/W 4188B.054	N/A	VITREOUS CHINA FIXTURE C/W ROUND BOWL, 1.6 USGPF (6.0 LPM) & MOUNT WITH RM EVALUATION 15" (375MM) A/F. PROVIDE CANTO20 300C-40T ROUND, BLACK SEAT C/W CLOSED FRONT & PLASTIC HARDWARE. PROVIDE SUPPLY KIT (DIAH, E13-2276) C/W ESCUTCHEON, ANGLE STOP & STAINLESS STEEL BRAIDED HOSE.
NOTES: 1. COLOUR OF ALL VITREOUS CHINA FIXTURES & ALL WATER CLOSET SEALS SHALL BE WHITE (UNLESS NOTED OTHERWISE). 2. QUANTITY OF FIXTURES & EQUIPMENT ARE AS INDICATED ON DRAWINGS. 3. REFER TO MECH SPEC FOR REQ'D MOUNTING HEIGHT OF ALL FIXTURES & EQUIPMENT. VERIFY ON SITE & ADJUST TO SUIT ARCH.				

GRILLE & DIFFUSER SCHEDULE			
SYMBOL	DESCRIPTION	MANUFACTURER & MODEL	REMARKS
A	LINEAR SLOT DIFFUSER, CEILING MOUNTED	KRUEGER DFL-48-20-02-04-FF-4T-CF-44	PROVIDE 48" (1200MM) LENGTH, TWO (2) 2" (50MM) SLOTS, NARROW REVEAL, END PLATES AT BOTH ENDS, CONCEALED MOUNT FRAME TYPE 'FP', HORIZONTAL THROW DEFLECTORS (TWO-WAY THROW IN OPPOSITE DIRECTIONS) & DFP20 PLENUM WITH MOUNTING CLIP C/W 8" (200MM) OVAL INLET ON TOP OF PLENUM.
B	LINEAR BAR GRILLE, HIGH-WALL MOUNTED	KRUEGER 1500-F-30-01-01-0-01-0-44	PROVIDE 1/2" (11MM) BAR SPACING, 1/2" (5.9MM) BARS, 30° BLADE DEFLECTION (AIM UPWARDS), TYPE 'D' ALUMINUM FRAME C/W 0.5" (13MM) FLANGE, SPRING CLIP MOUNTING, END CAPS AT BOTH ENDS & STEEL LOBD.
C	SQUARE STEEL CEILING DIFFUSER, 4-WAY THROW, ADJUSTABLE	KRUEGER 1458A-04-F22-24X24-35	PROVIDE SURFACE MOUNT STEEL FRAME C/W 24"X24" (600X600MM) PANEL SIZE, STEEL ADAPTER FRAME & BLACK FINISH.
D	DOUBLE DEFLECTION GRILLE, DUCT MOUNTED	KRUEGER 800-H-F22-NONE-01-00-00-44	PROVIDE 0.75" (19MM) BLADE SPACING, HORIZONTAL FRONT BLADES, SURFACE MOUNT STEEL FRAME & SCREW HOLE MOUNTING.
E	PERFORATED STEEL RETURN GRILLE	KRUEGER 800P-F22-NONE-01-00-00-44	PROVIDE SURFACE MOUNT STEEL FRAME & SCREW HOLE MOUNTING.
F	SQUARE STEEL CEILING DIFFUSER, 4-WAY THROW, ADJUSTABLE	KRUEGER 1458A-04-F22-12X12-44	PROVIDE SURFACE MOUNT STEEL FRAME C/W 12"X12" (300X300MM) PANEL SIZE & STEEL ADAPTER FRAME, ROUND OPPOSED BLADE DAMPER OPERABLE FROM FACE OF DIFFUSER.
G	ALUMINUM GRID CORE EXHAUST GRILLE	KRUEGER EGCS-F22-NONE-01-01-00-44	PROVIDE 0.5" (13MM) CORE, ALUMINUM SURFACE MOUNT FRAME, SCREW HOLE MOUNTING & OPPOSED BLADE DAMPER.
NOTES: - PROVIDE BRITISH WHITE FINISH UNLESS NOTED OTHERWISE. - PROVIDE STAINLESS STEEL FASTENERS FOR ALUMINUM GRILLES. APPROVED EQUALS: TITUS, E.H. PRICE, NAILOR, METALAIR			

EXHAUST FAN SCHEDULE			
SYMBOL	DESCRIPTION	MANUFACTURER & MODEL	REMARKS
EF-1.2	EXHAUST FAN, DOWN BLAST, ROOF-MOUNTED - 4250 CFM (205 L/S) AT 0.5" WC (124 PA) ESP.	PENNBERRY D024B	208-3-60, 1.0 HP (0.75KW). PROVIDE ADJUSTABLE MOTOR PULLEY, BIRDSCREEN, GRAVITY BACKDRIFT DAMPER, NEMA 3R DISCONNECT, THERMAL OVERLOAD PROTECTION, PREMIUM EFFICIENCY INVERTER DUTY MOTOR & 24" (600MM) ROOF CURB. PROVIDE VFD SUITABLE FOR OUTDOOR INSTALLATION TO SUIT MOTOR HORSEPOWER C/W DC CHOKE, BYPASS & DISCONNECT SWITCH.
EF-3	EXHAUST FAN, SUSPENDED, CEILING MOUNTED - 200 CFM (95 L/S) AT 0.83" WC (156 PA) ESP.	PENNBERRY ZPH	120-1-60, 1.6 AMPS. PROVIDE BACKDRIFT DAMPER, TYPE 'TD' (IN-LINE) DISCHARGE, INSULATED ACCESS DOOR, UNIT MOUNTED, 10V VARIABLE SPEED CONTROLLER, THERMAL OVERLOAD PROTECTION & PLUG-TYPE DISCONNECT.
APPROVED EQUALS: TWIN CITY, COOK, GREENECK			

CEILING FAN SCHEDULE			
SYMBOL	DESCRIPTION	MANUFACTURER & MODEL	REMARKS
CF-1.2	OVERHEAD PROPELLER FAN, CAGED, GYMNASIUM - 38" (900MM) DIAMETER	BIG ASS FANS F-AE1	120-1-60, 9.8 A MAX. WEIGHT=70 LBS (30 KG). PROVIDE BAFCON CONTROLLER (ONE FOR BOTH FANS - FOR BAS CONTROL), INDUSTRIAL MOUNT KIT C/W BEAM MOUNT, DIRECTIONAL AIRFLOW ADJUSTMENT, OSHA COMPLIANT STEEL WIRE CAGE, EC MOTOR & 16.5 M POWER CORD. FAN BLADES, CAGE & MOUNTING SYSTEM SHALL HAVE WHITE FINISH (FIELD PAINT WHERE FACTORY FINISH UNAVAILABLE).
APPROVED EQUALS: MACROAIR, ENVIRA-NORTH			

SILENCER SCHEDULE (MANUFACTURER: KINETICS)																
SYMBOL	MODEL	LOCATION	FLOW RATE (CFM [L/S])	PRESSURE DROP (IN WC [PA])	WIDTH (IN [MM])	HEIGHT (IN [MM])	LENGTH (IN [MM])	MINIMUM INSERTION LOSS (HZ)							NC LEG FOR TERMINAL SPACE	
								63	125	250	500	1000	2000	4000		8000
SL-1	600 KCRS-F3	HVAC-6 S/A, IN DUCT RISER BY STAGE, STRAIGHT	4250 (2005)	0.27 (68)	24 (600)	24 (600)	142 (3600)	13	26	37	53	57	38	25	23	20
SL-2	300 GKCES-F1.5	HVAC-5 R/A, MECHANICAL ROOM, ELBOW	4250 (2005)	0.21 (52)	26 (650)	26 (650)	94 (2400)	10	19	20	32	26	23	20	18	20
SL-3A	1200 GKCES-F1.5	HVAC-4 S/A, IN DUCT RISER BY ATTIC, ELBOW	4250 (2005)	0.18 (46)	24 (600)	24 (600)	142 (3600)	10	23	26	49	36	29	24	22	20
SL-3B	625-KCCS-F-4-B3	HVAC-6 S/A, IN ATTIC, STRIGHT	3800 (1795)	0.14 (35)	34 (850) Ø ID 40 (1030) Ø OD	46 (1200)	4	8	15	26	45	30	13	10	10	20
SL-4	300 GKCES-F1.5	HVAC-4 R/A, MECHANICAL ROOM, ELBOW	4250 (2005)	0.21 (52)	26 (650)	26 (650)	94 (2400)	10	19	20	32	26	23	20	18	20
NOTES: - ADJUST LEG DIMENSIONS TO SUIT SITE CONDITIONS PROVIDED TOTAL LENGTH DOES NOT CHANGE. - SILENCERS SHALL BE SELECTED TO ACHIEVE NC 20 IN THE AUDITORIUM BASED ON DESIGN HVAC LOADS. APPROVED EQUALS: VAW SYSTEMS, VIBRRO-ACOUSTICS, IAC ACOUSTICS, E.H. PRICE																

PLUMBING BRANCH PIPING SCHEDULE					
FIXTURE	SYMBOL	SANITARY	VENT	COLD WATER	HOT WATER
LAVATORY	L	32	32	13	13
WATER CLOSET (FT)	WC	75	38	13	-

DRAWING LIST	
M1.1	MECHANICAL DRAWING LIST, LEGEND & SCHEDULES.
M1.2	MECHANICAL DETAILS
M2.1	PIPING DEMOLITION PLANS
M2.2	HVAC & ROOF MECHANICAL DEMOLITION PLANS
M3.1	PIPING PLANS
M3.2	PIPING PLANS
M4.1	HVAC PLANS
M4.2	HVAC PLANS
M5.1	MECHANICAL ROOF PLAN



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Galt Collegiate Institute

Tassee Hall Upgrades

MECHANICAL DRAWING LIST, LEGEND & SCHEDULES.

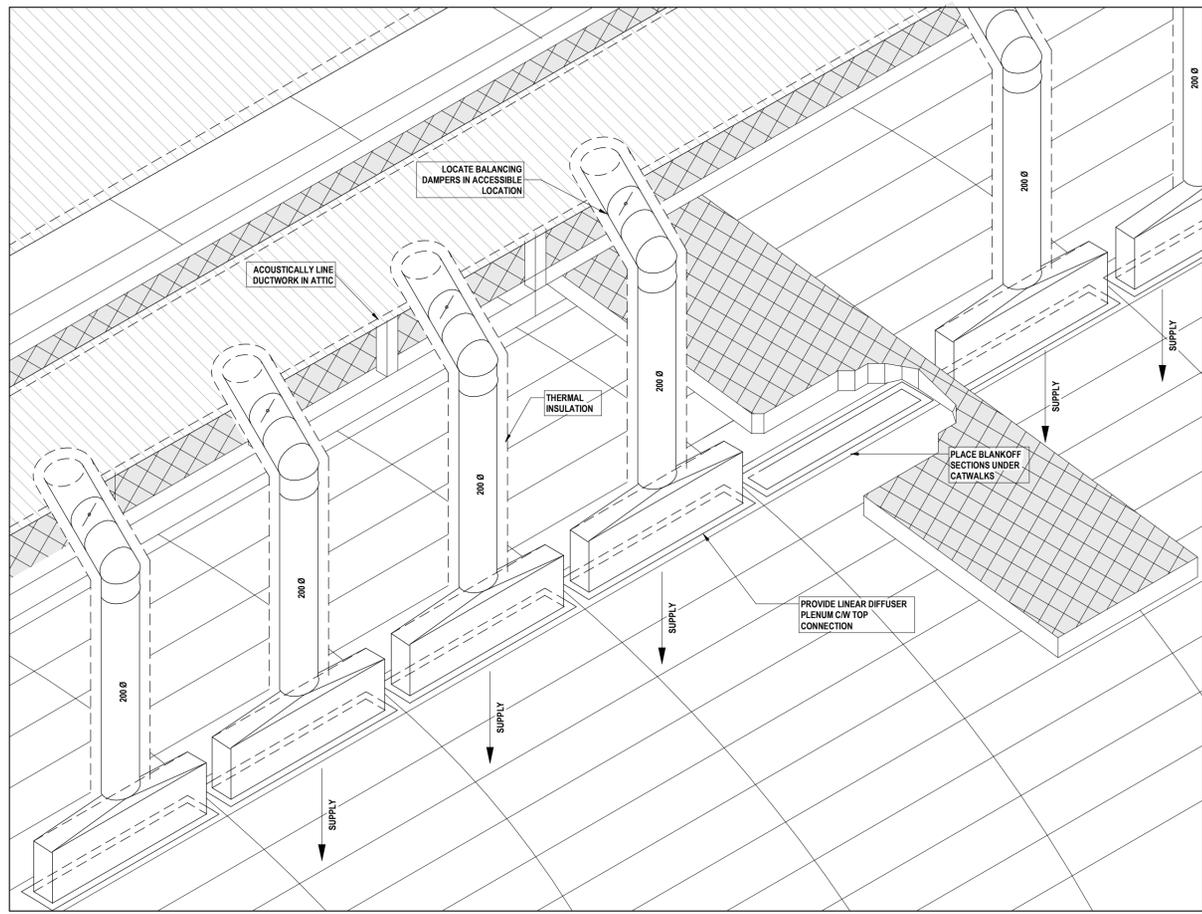
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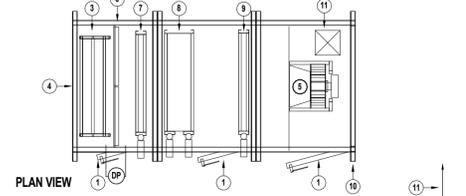
Checked By: C.J.C

200 Water Street North, Cambridge, ON

M1.1



BARREL CEILING LINEAR INSTALLATION DETAIL
SCALE: N.T.S.



HVAC-5,6 ACOUSTIC PERFORMANCE SCHEDULE (DAIKIN)

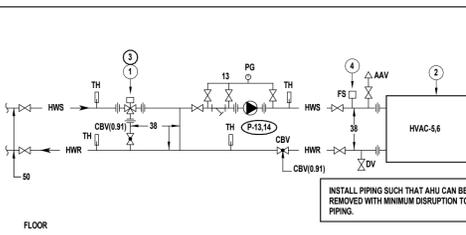
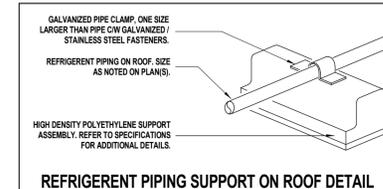
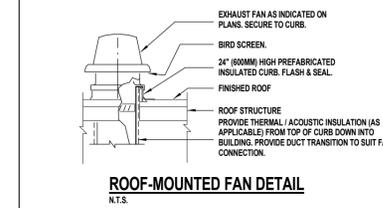
LOCATION	CENTRE FREQUENCY (Hz) / SOUND POWER (dB)							
	63	125	250	500	1000	2000	4000	8000
S/A OUTLET	85	86	96	88	91	86	80	77
R/A INLET	75	77	78	69	69	65	57	53
UNIT CASING RADIATED	75	77	78	67	69	58	46	51

NOTES:
- SOUND POWER SHALL NOT EXCEED SCHEDULED VALUE.

HVAC-5,6 DETAIL
N.T.S.

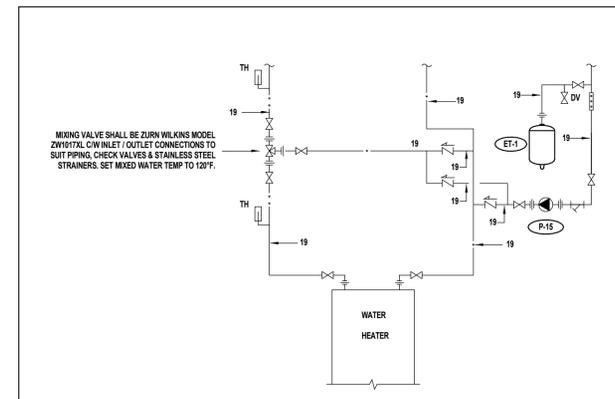
LEGEND

①	FLUSH MOUNTED ACCESS DOORS
②	SUPPLY AIR TEMPERATURE & HUMIDITY SENSOR
③	LOW LEAKAGE RETURN AIR DAMPER FIELD MOUNTED IN DUCT C/W MODULATING SPRING RETURN ACTUATOR (FAIL OPEN)
④	LOW LEAKAGE & INSULATED OUTDOOR AIR DAMPER C/W MODULATING SPRING RETURN ACTUATOR (FAIL CLOSED)
⑤	DIRECT DRIVE PLENUM SUPPLY FAN C/W EC DRIVE
⑥	MERV 13 FILTERS C/W FILTER STATUS DIFFERENTIAL PRESSURE SENSOR
⑦	MHW HEATING COIL C/W FREEZESTAT
⑧	VRF DX COOLING / HEAT PUMP HEATING COIL
⑨	VRF REHEAT COIL
⑩	FORMED CHANNEL BASE
⑪	SUPPLY DUCT CONNECTION (EXACT LOCATION VARIES PER UNIT. REFER TO FLOOR PLAN)



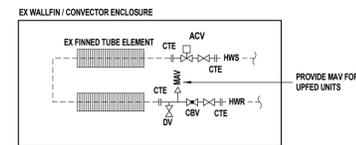
- NOTES FOR THIS SCHEMATIC:**
- PROVIDE 3-WAY ACV TO DIRECT FULL FLOW THRU HEATING COIL ON FAILURE. SELECT TO SUIT FLOW RATE. REFER TO SPECS FOR ADDITIONAL INFO.
 - CONNECT TO HEATING COIL ACCORDING TO HVAC UNIT MANUFACTURER REQUIREMENTS.
 - MODULATE BAS CONTROLLED 3-WAY VALVE ACCORDING TO SPEC.
 - PROVIDE FLOW SWITCH. 3-WAY VALVE SHALL REMAIN OPEN (100% FLOW THRU COIL) UNLESS WATER FLOW IS PROVIDED. DE-ENERGIZE FAN & CLOSE OA DAMPER IF FLOW NOT PROVEN.

HVAC UNIT HEATING COIL PIPING SCHEMATICS
N.T.S.

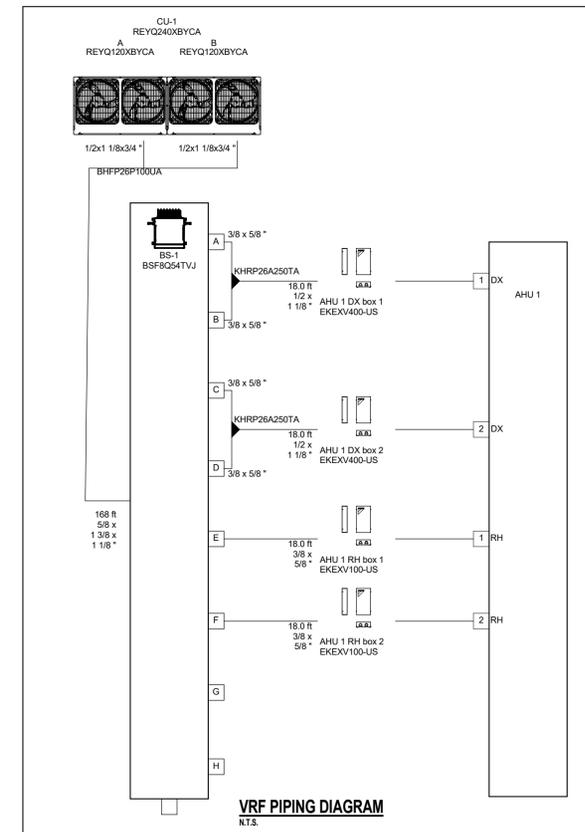
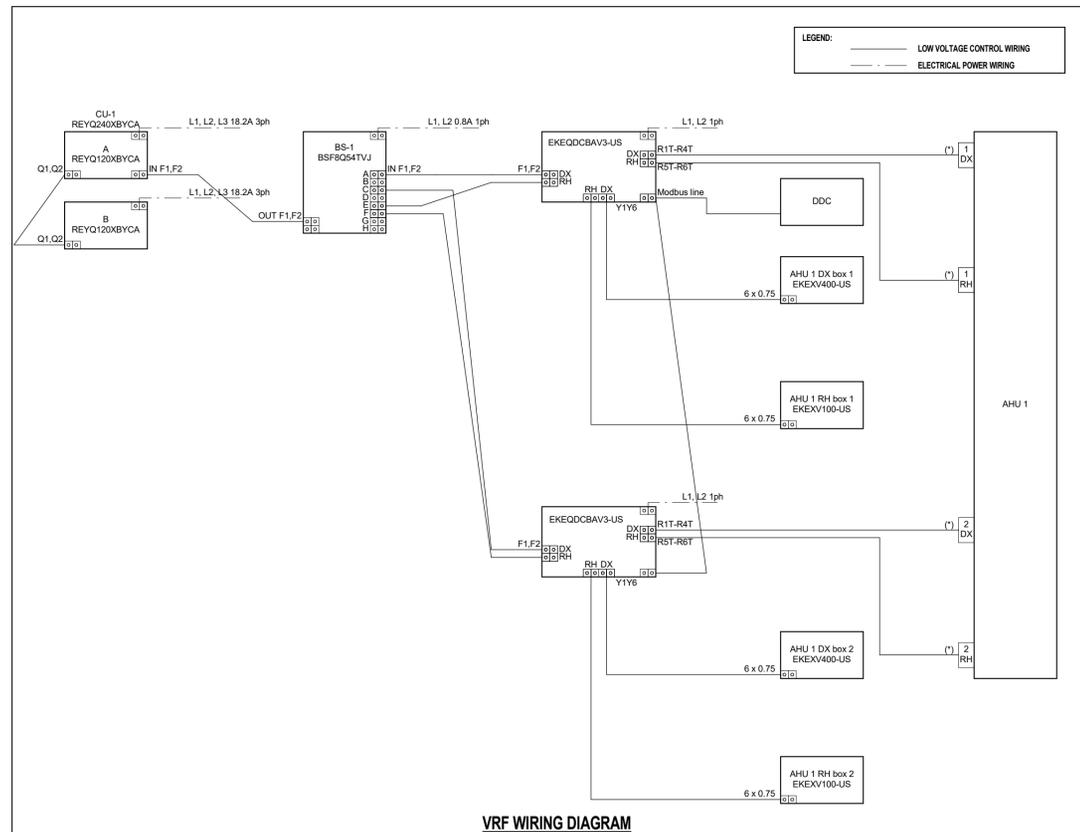
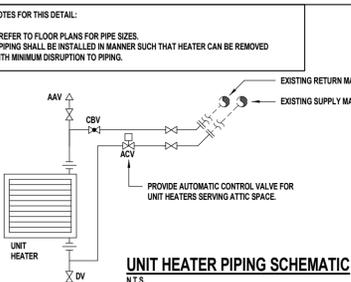
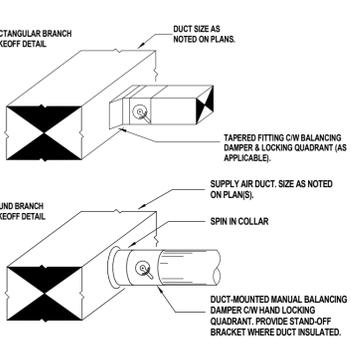


DOMESTIC WATER HEATER CONNECTION DETAIL
SCALE: N.T.S.

- NOTES FOR THIS DETAIL:**
- REMOVE EXISTING PNEUMATIC CONTROL VALVE (NOT SHOWN) C/W ASSOCIATED TUBING, DEVICES, EXISTING ISOLATION VALVES, ETC. CUT BACK & CAP PNEUMATIC TUBING IN CONCEALED AREA.
 - VALVING SHALL BE LOCATED WITHIN CONVECTOR / WALLFIN ENCLOSURE. VALVING DEVICES, CONTROLS, ETC. LOCATED OUTSIDE OF ENCLOSURE NOT PERMITTED.
 - COMB & MEDIUM FINNED HEATING ELEMENTS WHILE ENCLOSURE REMOVED.
 - FREEZE PIPING TO PERMIT VALVE REPLACEMENTS WHERE EXISTING ISOLATION VALVES DO NOT HOLD.



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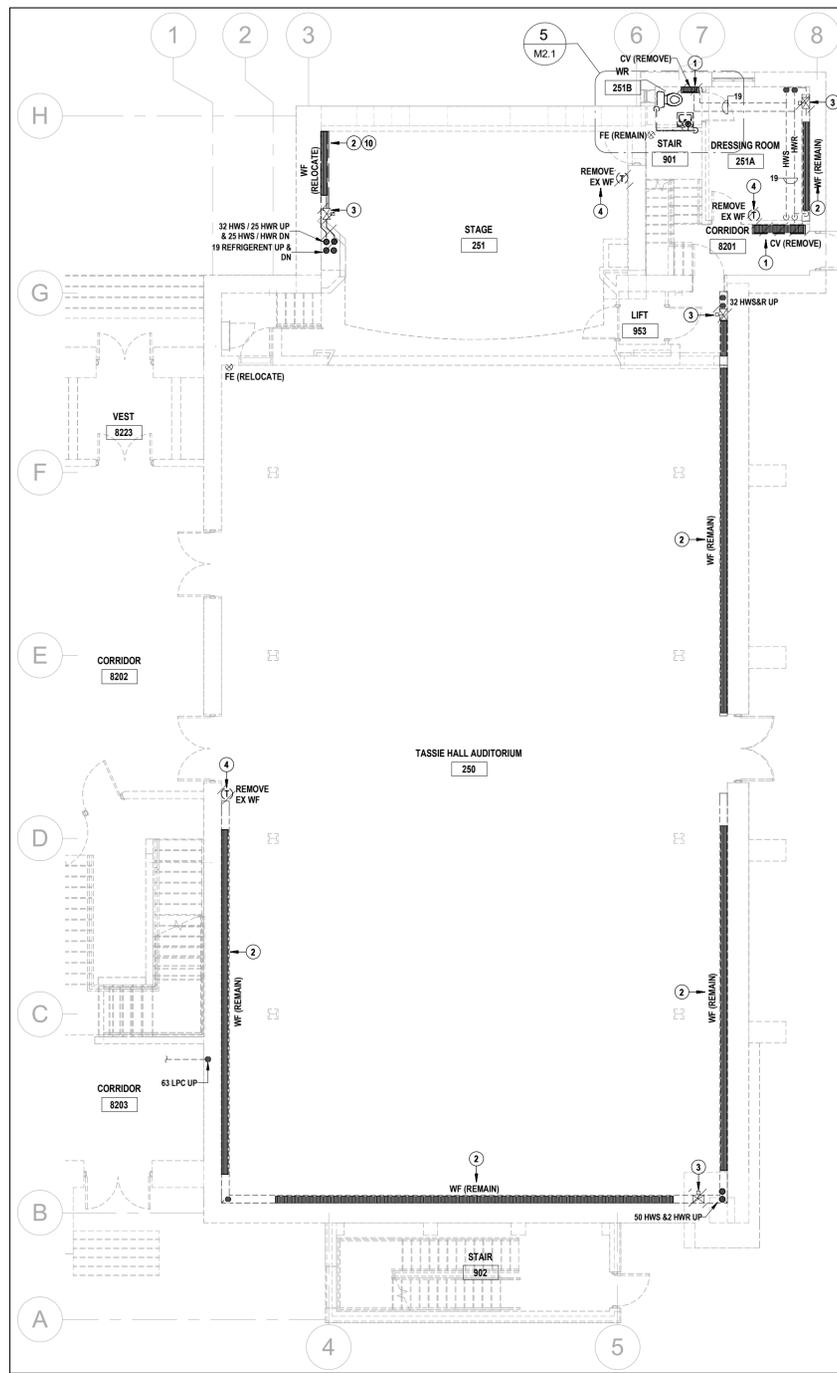


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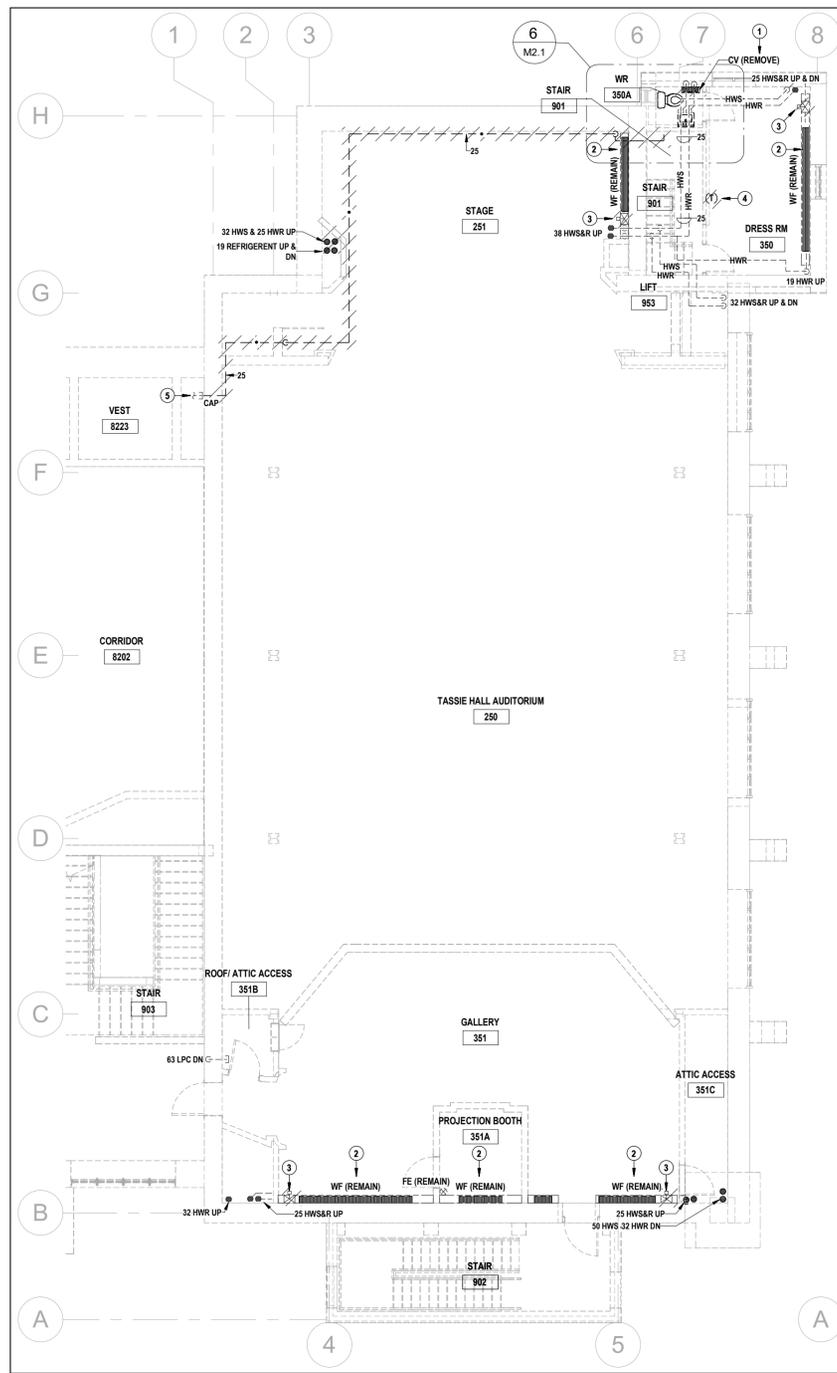
MECHANICAL DETAILS

Project No.: 25067
Checked By: C.J.C.
Drawn By: M.R.C.

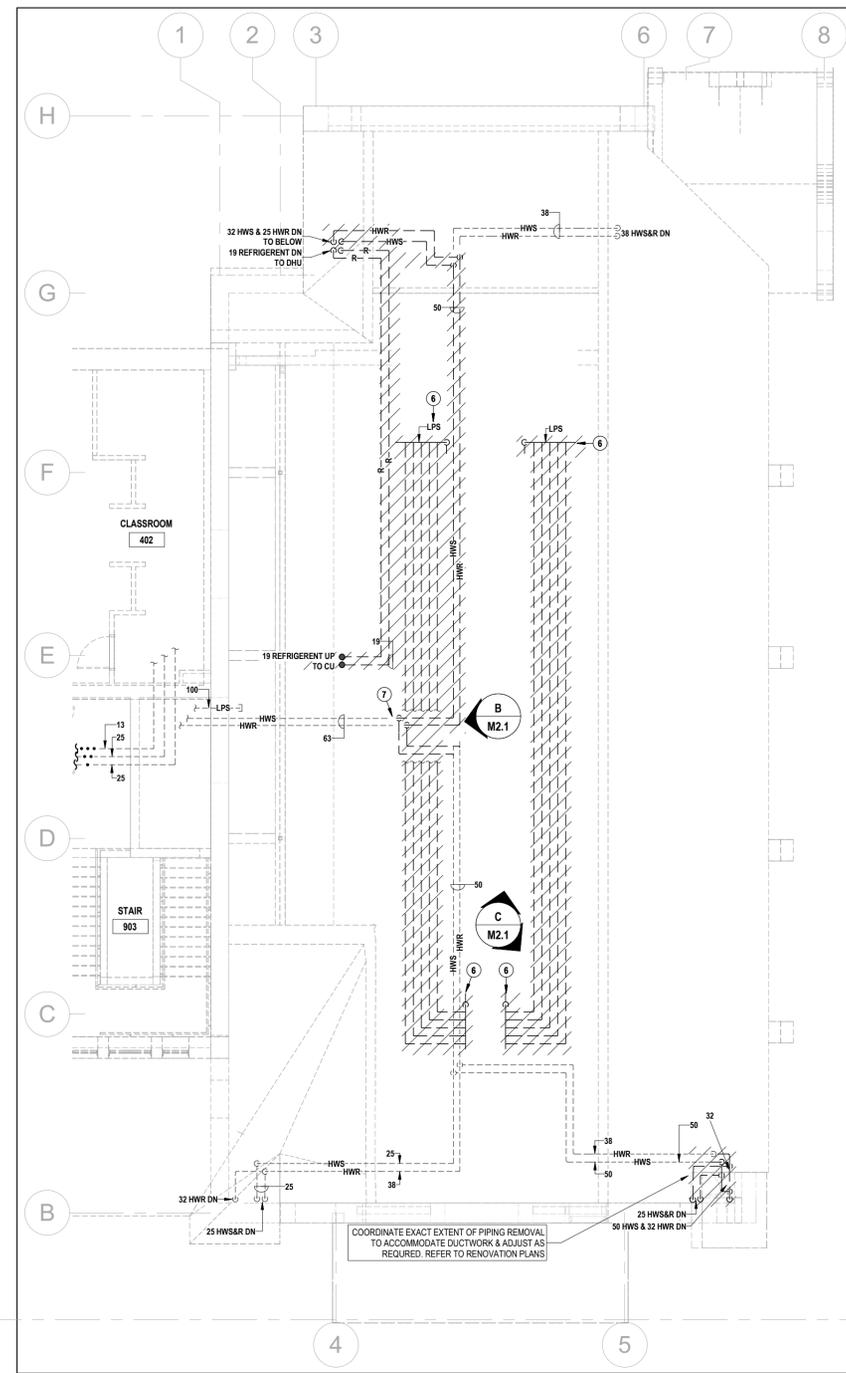
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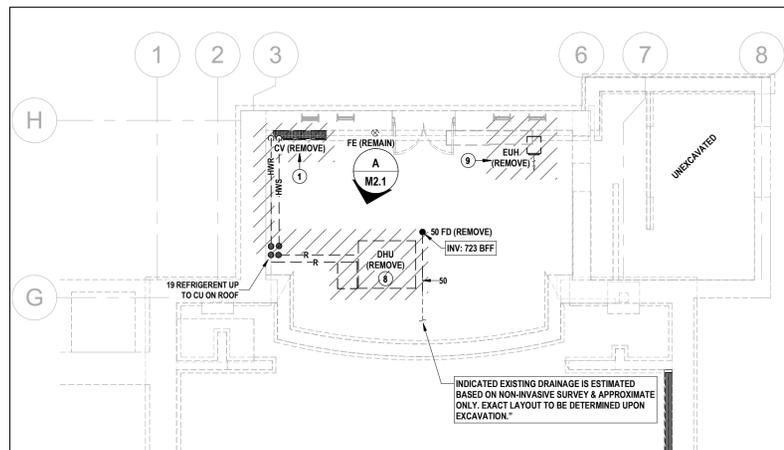
1 SECOND FLOOR PIPING DEMOLITION PLAN
SCALE: 1:100



2 THIRD FLOOR PIPING DEMOLITION PLAN
SCALE: 1:100



3 ATTIC PIPING DEMOLITION PLAN
SCALE: 1:100



4 GROUND FLOOR PIPING DEMOLITION PLAN
SCALE: 1:100

GENERAL NOTES:

- REMOVE ALL REDUNDANT ACCESSIBLE PNEUMATIC TUBING BACK TO SOURCE & SOLDER / MECHANICALLY SEAL TO ENSURE NO LEAKS. REMOVE ACCESSIBLE BRANCH THAT IS NOT IN USE.

- NOTES FOR THIS SHEET**
- DISCONNECT & REMOVE EXISTING CONNECTOR C/W PIPING CONNECTIONS, CONTROLS, SUPPORTS, ETC.
 - REMOVE EXISTING WALL FIN COVERS, EXISTING FIN ELEMENTS TO REMAIN. ENSURE FIN'S REMAIN PROTECTED DURING CONSTRUCTION WHEN COVERS ARE REMOVED.
 - REMOVE EXISTING PNEUMATIC CONTROL VALVE C/W ASSOCIATED TUBING, DEVICES, ETC. CUT BACK & CAP PNEUMATIC TUBING IN CONCEALED AREA.
 - REMOVE THERMOSTAT C/W ASSOCIATED WIRING, PNEUMATIC TUBING (AS APPLICABLE), ETC. CUT BACK & CAP PNEUMATIC TUBING IN CONCEALED AREA.
 - REMOVE DOMESTIC COLD WATER PIPE & CAP IN CONCEALED LOCATION.
 - REMOVE BARE PIPE STEAM HEATING SYSTEM IN ATTIC SPACE. REFER ALSO TO PHOTO DETAIL 'C'.
 - REMOVE EXISTING HWS / HWR PIPES IN ATTIC C/W SUPPORTS, ETC. REFER ALSO TO PHOTO DETAIL.
 - REMOVE EXISTING DEHUMIDIFIER C/W PIPING CONNECTIONS, DUCT CONNECTIONS, CONTROLS, POWERS, SUPPORTS ETC. REFER ALSO TO PHOTO DETAIL 'A'.
 - REMOVE E/H C/W POWER CONNECTIONS, CONTROLS, SUPPORTS, ETC.
 - SALVAGE EXISTING FINNED HEATING ELEMENTS & RELOCATE ACCORDING TO RENO PLANS

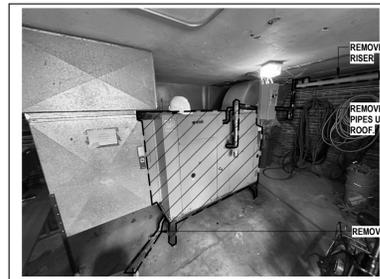


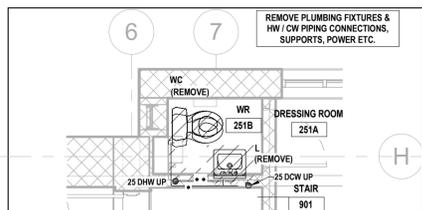
PHOTO DETAIL A: MECHANICAL ROOM DEMOLITION
SCALE: N.T.S.



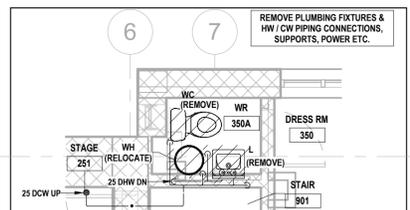
PHOTO DETAIL B: HYDRONIC DEMOLITION
SCALE: N.T.S.



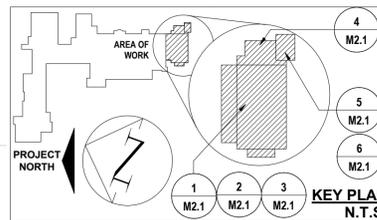
PHOTO DETAIL C: STEAM PIPING DEMOLITION
SCALE: N.T.S.



5 SECOND FLOOR WASHROOM PLUMBING DEMOLITION PLAN
SCALE: 1:50



6 THIRD FLOOR WASHROOM PLUMBING DEMOLITION PLAN
SCALE: 1:50

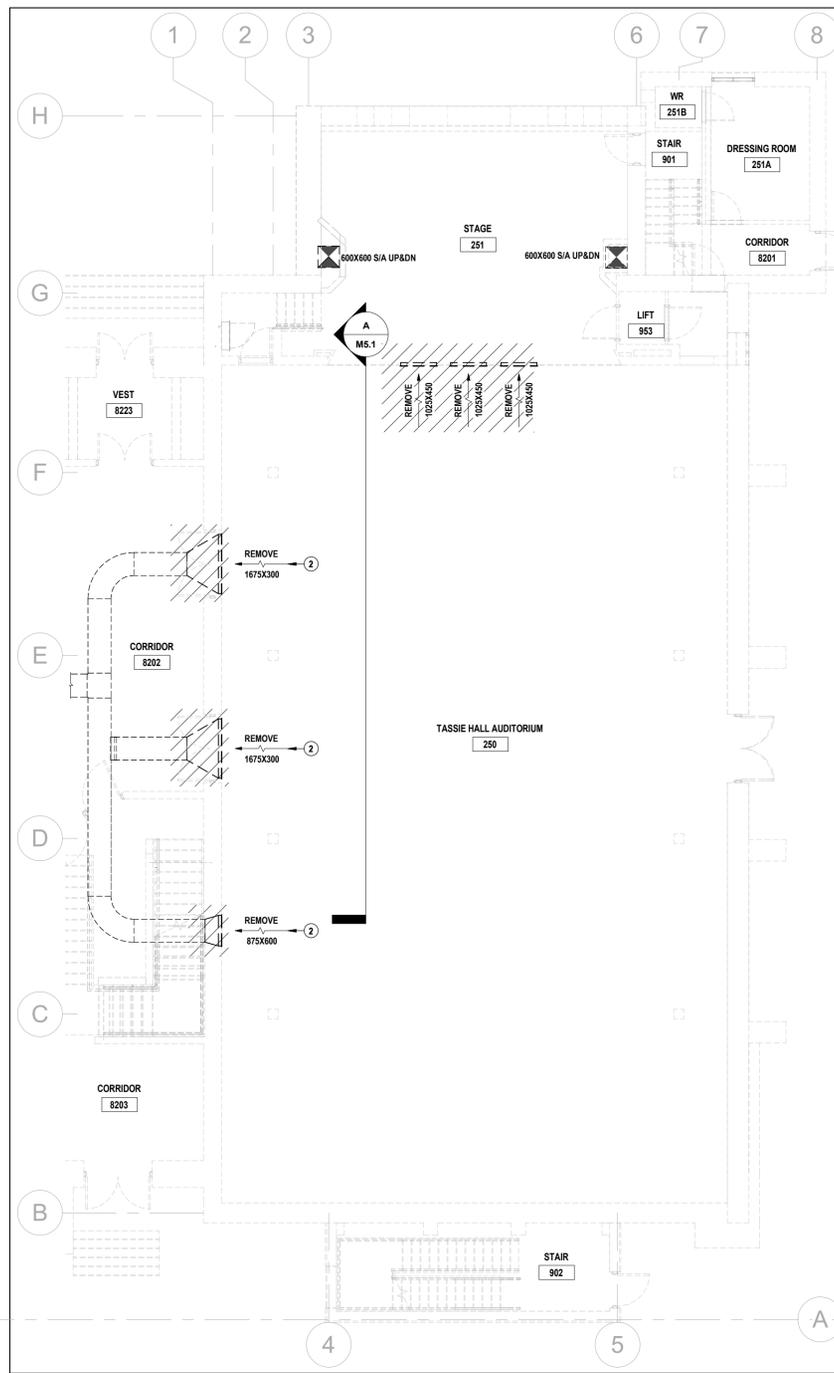


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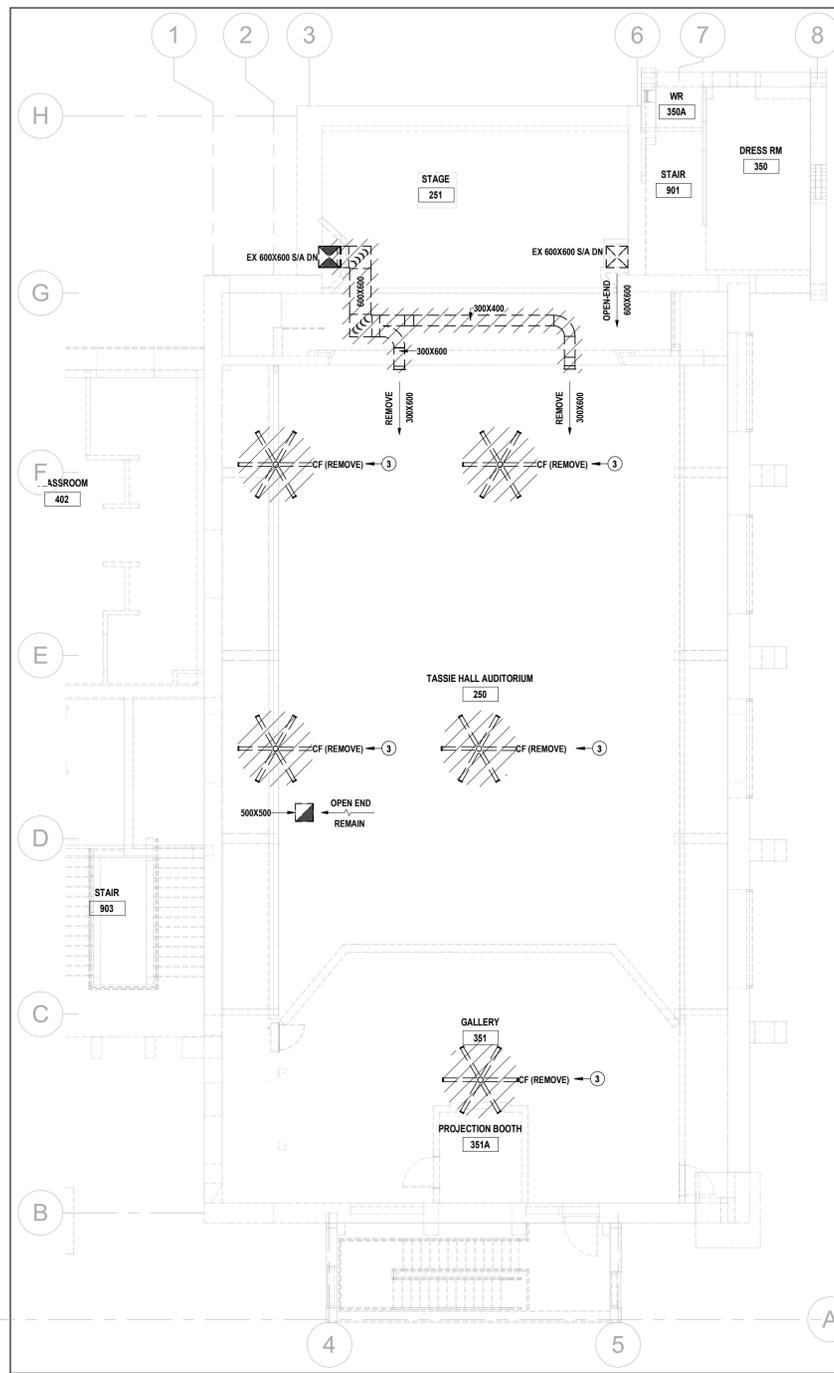


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PIPING DEMOLITION PLANS
Project No.: 25067
Checked By: C.J.C.
Drawn By: M.R.C.

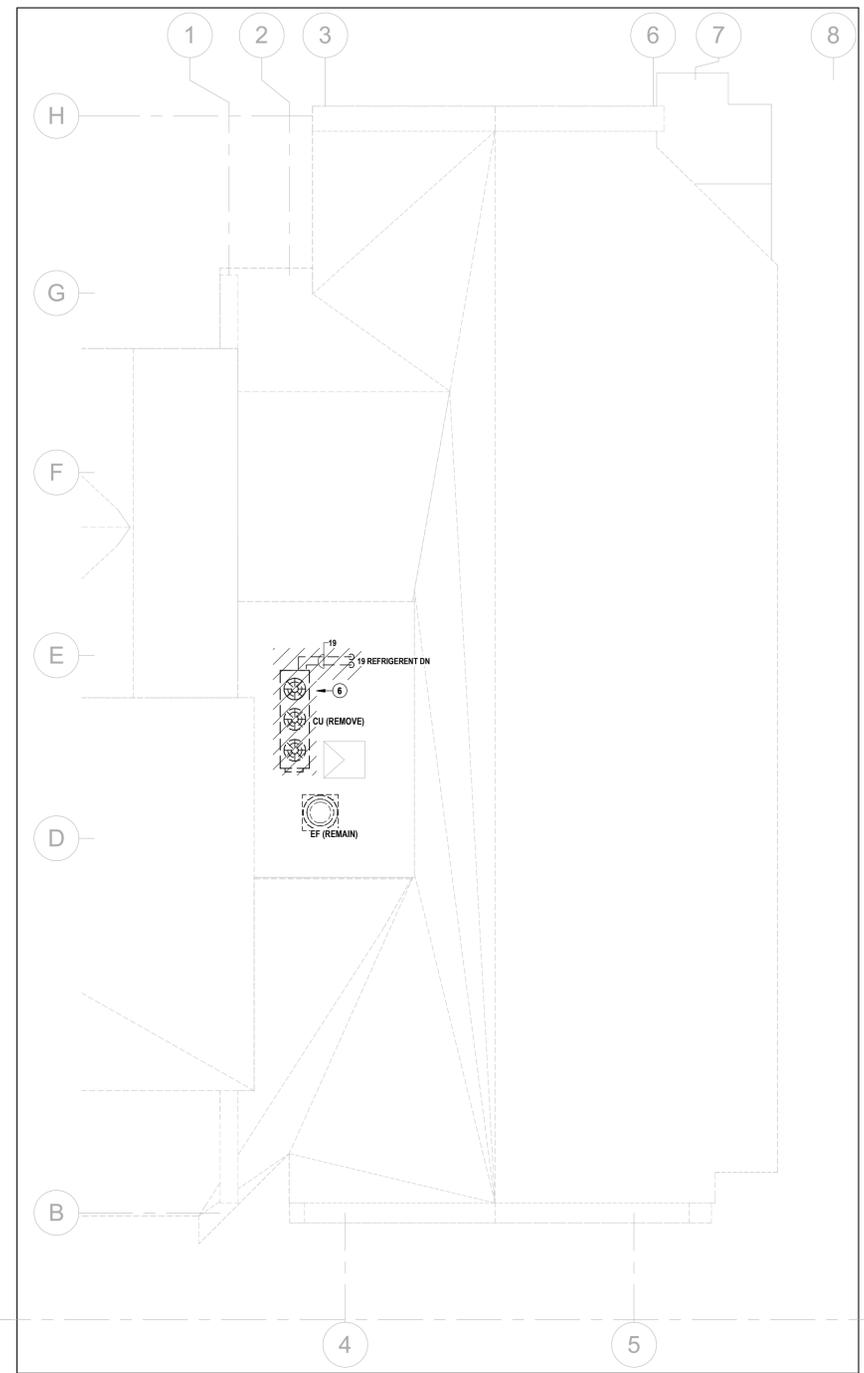
M2.1
KEY PLAN
N.T.S.



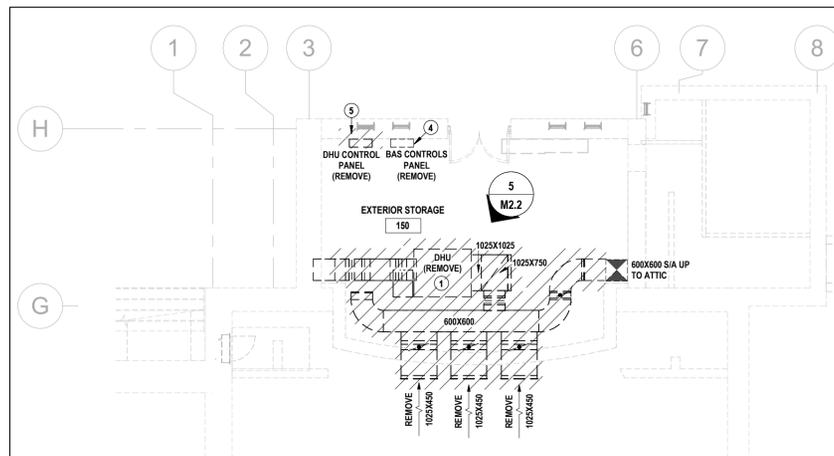
1 SECOND FLOOR HVAC DEMOLITION PLAN
M2.2 SCALE: 1:100



2 ATTIC HVAC DEMOLITION PLAN
M2.2 SCALE: 1:100



4 MECHANICAL ROOF DEMOLITION PLAN
M2.2 SCALE: 1:100



3 GROUND FLOOR HVAC DEMOLITION PLAN
M2.2 SCALE: 1:100

GENERAL NOTES:

- REMOVE ALL REDUNDANT ACCESSIBLE PNEUMATIC TUBING BACK TO SOURCE & SOLDER / MECHANICALLY SEAL TO ENSURE NO LEAKS. REMOVE ACCESSIBLE BRANCH THAT IS NOT IN USE.

NOTES FOR THIS SHEET

- REMOVE EXISTING DEHUMIDIFIER C/W PIPING CONNECTIONS, DUCT CONNECTIONS, CONTROLS, POWERS, SUPPORTS ETC. REFER ALSO TO PHOTO DETAIL 'A'.
- REMOVE GRILLE & CUT BACK DUCT TO CONCEALED LOCATION. PATCH WALL OPENING TO MATCH EXISTING.
- REMOVE CEILING FAN C/W CAGE, SUPPORTS, CONTROLS, POWER, ETC.
- REMOVE REDUNDANT CONTROLS FROM EXISTING BAS PANEL. RE-USE PANEL WHERE POSSIBLE FOR NEW BAS EQUIPMENT CONTROLS.
- REMOVE REDUNDANT DHU CONTROL PANEL C/W ACCESSIBLE WIRING, CONTROLS, DEVICES ETC.
- REMOVE CONDENSING UNIT C/W PIPING CONNECTIONS, POWER, CONTROLS, SUPPORTS, ETC. PATCH OPENING IN ROOF RESULTING FROM REFRIGERANT PIPE REMOVAL.

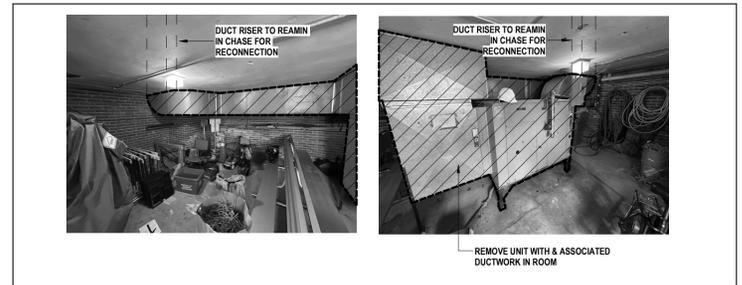
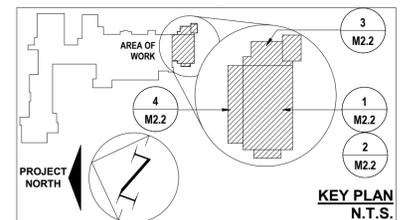


PHOTO DETAIL A: DHU DEMOLITION HVAC
SCALE: N.T.S.



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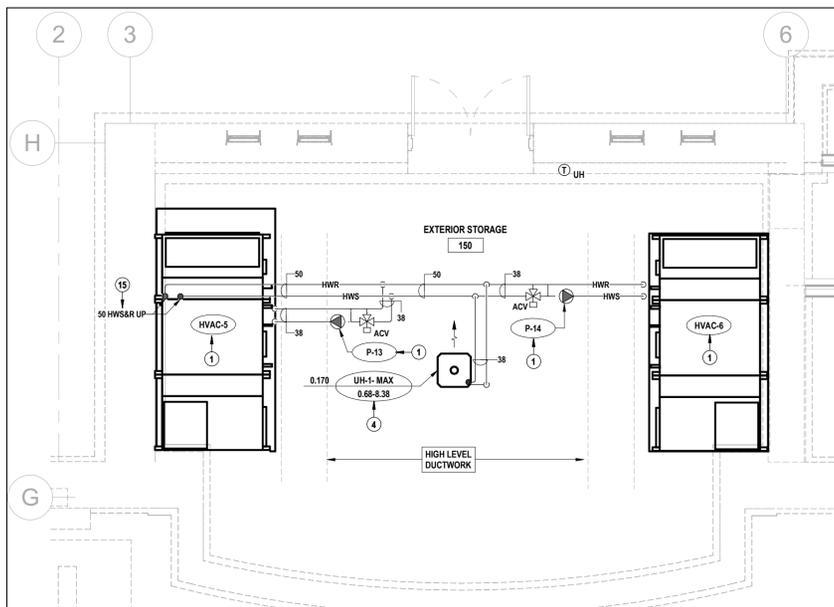


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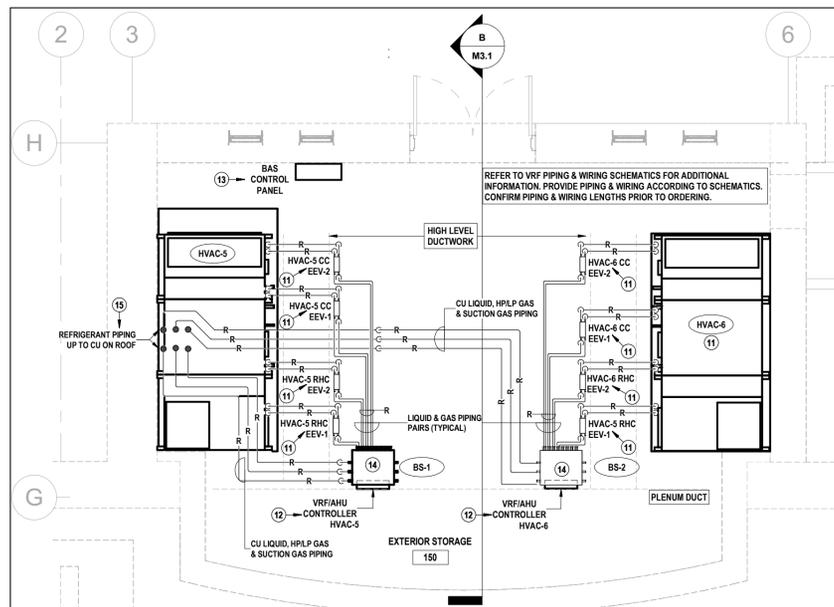
Project No.: 25067
Drawn By: M.R.C.
Checked By: C.J.C.

HVAC & ROOF MECHANICAL DEMOLITION PLANS

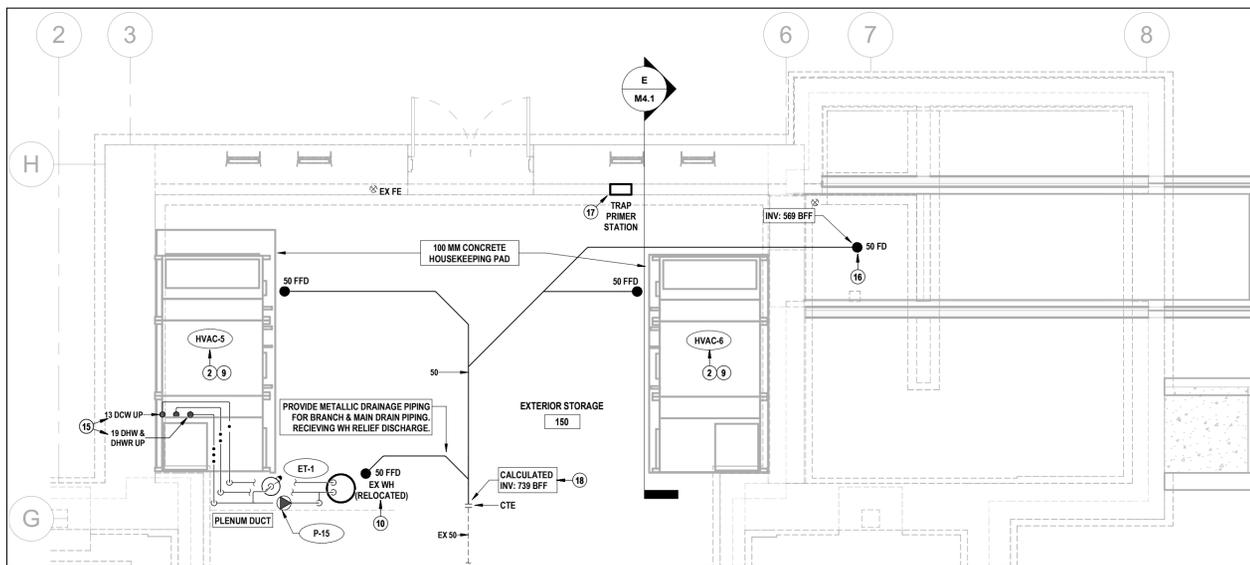
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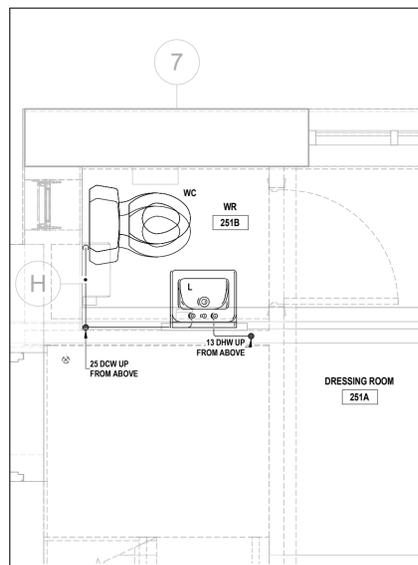
3 GROUND FLOOR HEATING WATER PLAN
SCALE: 1:50



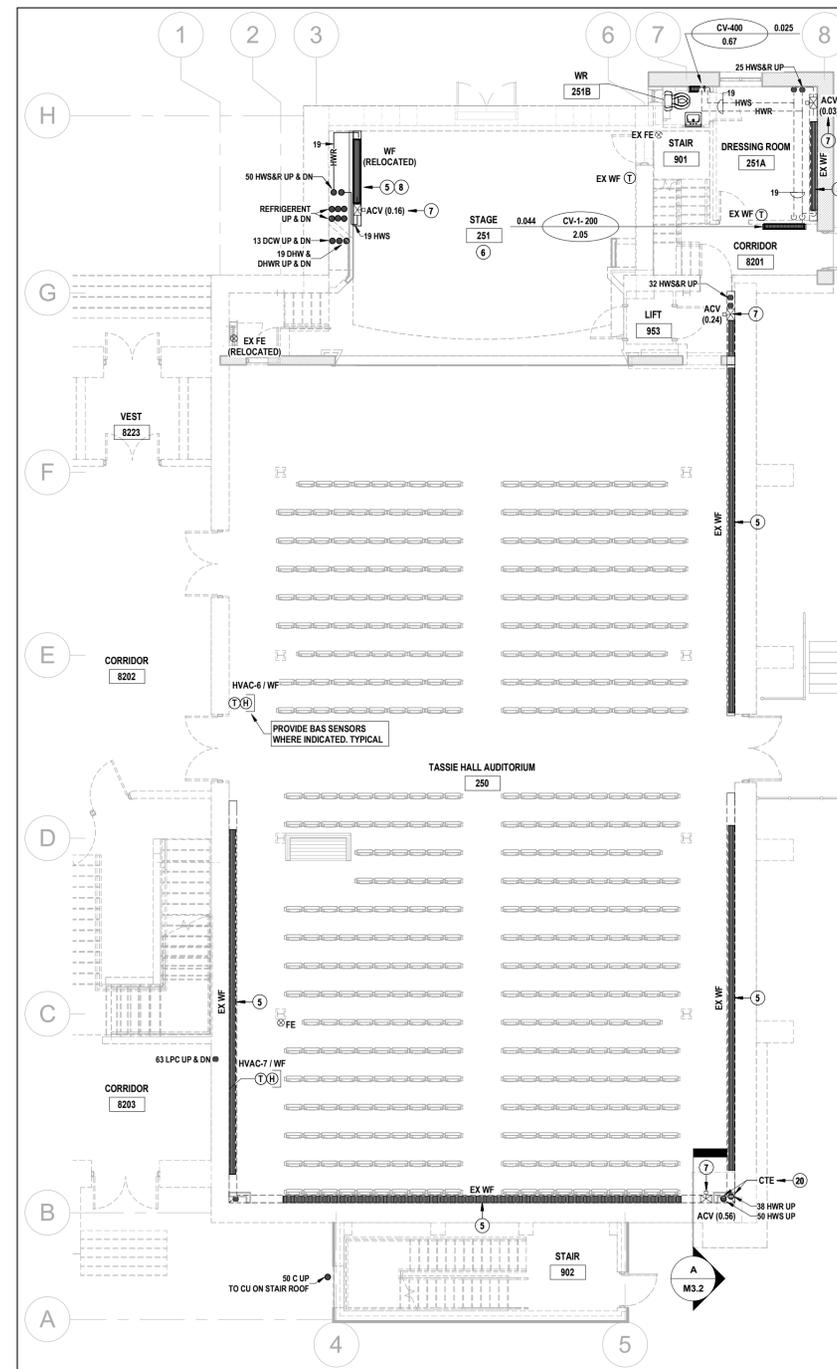
2 GROUND FLOOR REFRIGERANT PIPING PLAN
SCALE: 1:50



1 GROUND FLOOR PLUMBING PLAN
SCALE: 1:50

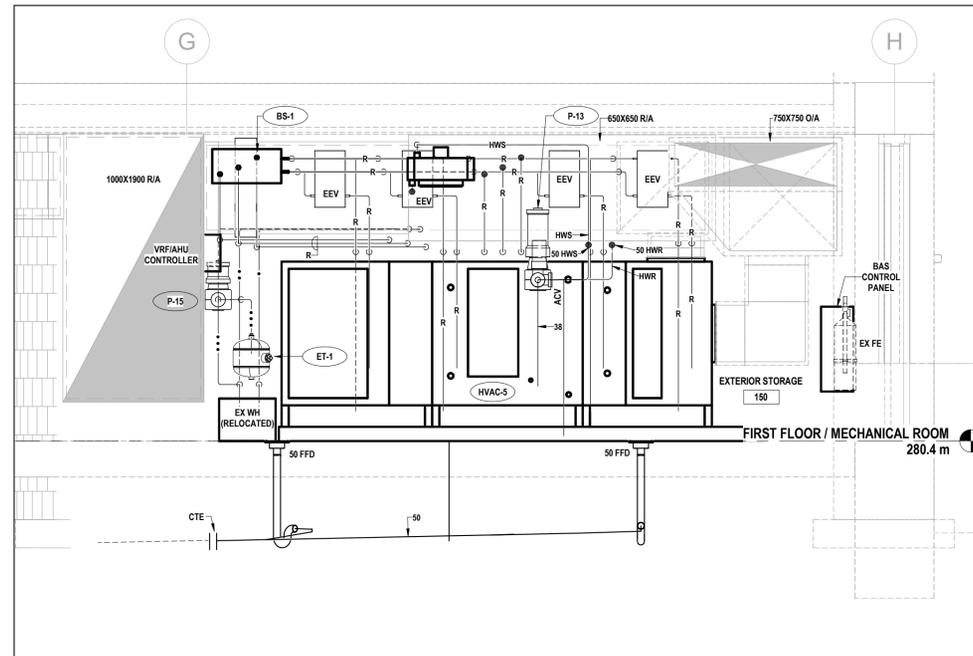
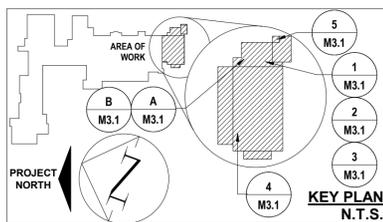


5 SECOND FLOOR DOMESTIC PLUMBING PLAN
SCALE: 1:25

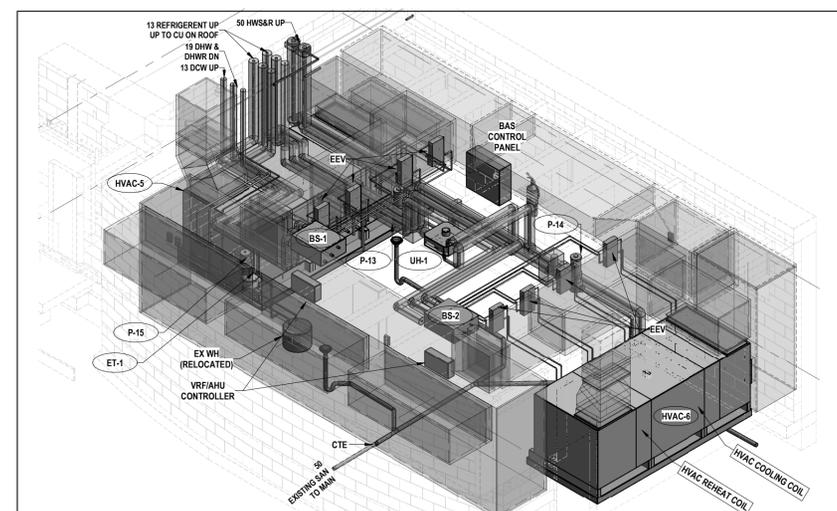


4 SECOND FLOOR HYDRONIC PIPING PLAN
SCALE: 1:100

- NOTES FOR THIS SHEET**
- PROVIDE HWS / HWR CONNECTION TO HVAC-5 & P-314 ACCORDING TO DETAIL.
 - PROVIDE CONDENSATE DRAIN C/W TRAP (NOT SHOWN) FOR AHU & DRAIN TO ADJACENT FLOOR DRAIN. DRAIN SHALL BE SIZED ACCORDING TO MANUFACTURER RECOMMENDATIONS & TRAP SHALL BE SIZED TO SUIT FAN STATIC PRESSURE. COORDINATE CONCRETE PAD HEIGHT WITH TRAP DEPTH PRIOR TO POURING PAD & ADJACENT PAD HEIGHT WHERE REQUIRED.
 - PROVIDE PIPING CONNECTIONS ACCORDING TO SCHEMATIC.
 - MOUNT UH AT MAX HEIGHT.
 - PROVIDE SIGMA SIVE SERIES ENCLOSURE TO MATCH EXISTING WALLFIN HEIGHT
 - ALL EXPOSED SERVICES & EQUIPMENT WITHIN STAGE AREA ARE TO BE SELECTED WITH A BLACK FINISH OR FIELD PAINTED BLACK.
 - PROVIDE GAS DDC ACV & CBV FOR EXISTING WALL FIN. REFER ALSO TO DETAIL. CONFIRM EXACT LOCATION OF EXISTING VALVE ON SITE.
 - RELOCATE SALVAGED FINNED HEATING ELEMENTS TO THIS LOCATION
 - ENSURE ADEQUATE ACCESS TO UNIT. KEEP AREA ADJACENT TO ACCESS DOORS CLEAR.
 - RELOCATE WH TO THIS APPROXIMATE LOCATION & PROVIDE PIPING CONNECTIONS ACCORDING TO DETAIL. PROVIDE 150 PSI (103 kPa) TEMPERATURE PRESSURE RELIEF VALVE & EXTEND RELIEF PIPING TO TERMINATE WITHIN 300MM OF ADJACENT FFD (DO NOT TERMINATE DIRECTLY INTO DRAIN).
 - PROVIDE UNISTRUT / FRAMING SUPPORTS ON DUCTWORK FOR MOUNTING VRF EEV KITS. ENSURE INSTALLATION LOCATION IS ACCESSIBLE & FRAMING IS SUITABLY REINFORCED.
 - PROVIDE UNISTRUT / FRAMING SUPPORTS AS REQUIRED ON RETURN DUCT PLENUM FOR MOUNTING VRF/AHU CONTROLLERS
 - PROVIDE CONTROL PANEL FOR BAS CONTROLLER, DEVICES, ETC IN THIS APPROXIMATE LOCATION. EXISTING PANEL ENCLOSURE MAY BE RE-USED WHERE POSSIBLE. PROVIDE REQUIRED WIRING TO HVAC EQUIPMENT FOR DDC CONTROL.
 - INSTALL VRF BRANCH SELECTOR BOX AT MAX HEIGHT.
 - SPACE PIPING PENETRATIONS THRU STAGE FLOOR STRUCTURE ACCORDING TO STRUCTURAL REQUIREMENTS. REFER TO STRUCTURAL DRAWINGS.
 - PROVIDE AREAWAY FLOOR DRAIN IN LOW POINT OF FLOOR. ADJUST EXACT LOCATION TO SUIT FLOOR SLOPING.
 - PROVIDE ELECTRONIC TRAP PRIMER STATION ON WALL AT LOW LEVEL IN THIS LOCATION. PROVIDE WATER PIPING TO PRIMER STATION (NOT SHOWN) & UNDER GROUND TUBING TO FLOOR DRAINS (NOT SHOWN).
 - INDICATED EXISTING DRAINAGE IS ESTIMATED BASED ON NON-INVASIVE SURVEY & APPROXIMATE ONLY. EXACT LAYOUT TO BE DETERMINED UPON EXCAVATION.
 - CTE TO EXISTING WALLFIN PIPING. REFER TO SECTION.
- GENERAL NOTES**
- PROVIDE CONNECTIONS TO HYDRONIC HEATING EQUIPMENT ACCORDING TO DETAILS. MODIFY AND CONNECT TO EXISTING PIPING AS REQUIRED.
 - PROVIDE PLUMBING FIXTURES WHERE INDICATED C/W CONNECTIONS TO EXISTING. MODIFY EXISTING PIPING AS REQUIRED.



SECTION B: AHU PLUMBING ROUTING
SCALE: N.T.S.



IDOMETRIC VIEW A: MECHANICAL ROOM HVAC
SCALE: N.T.S.



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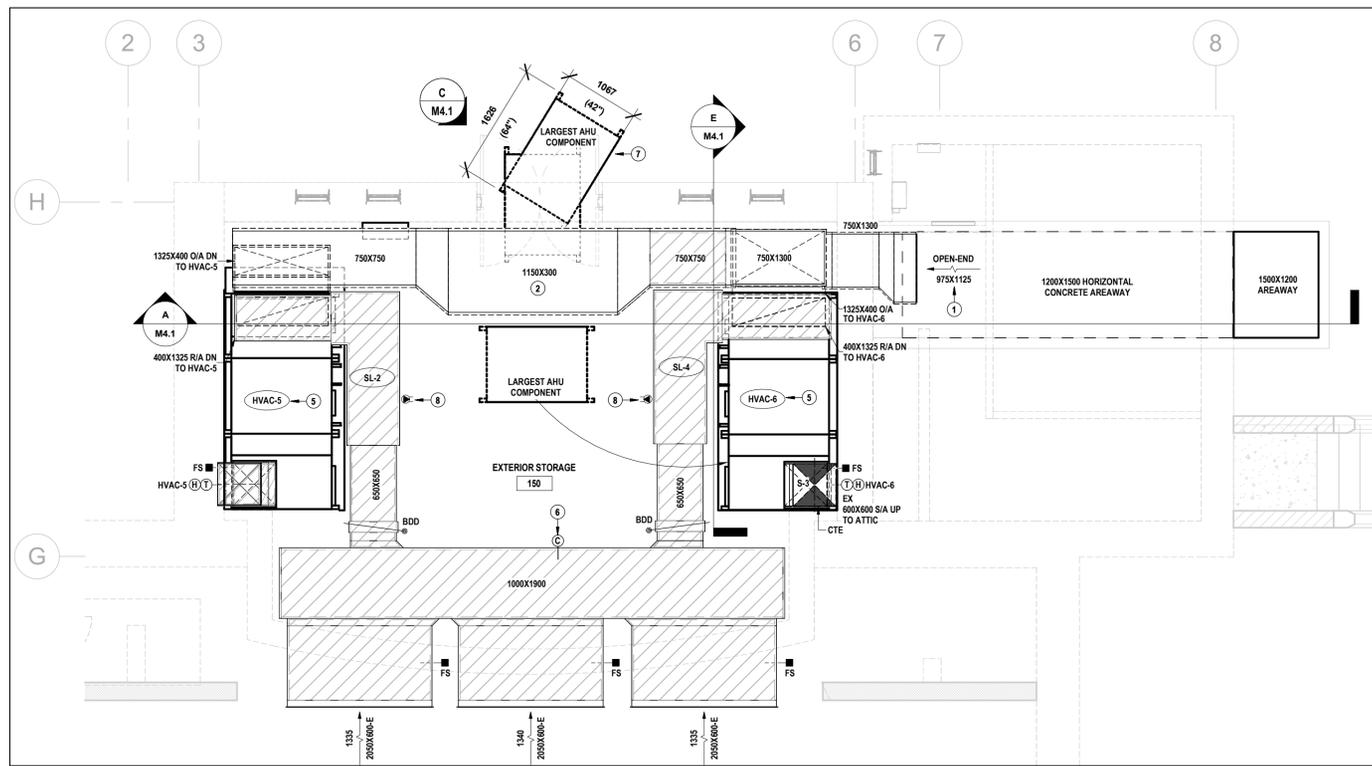


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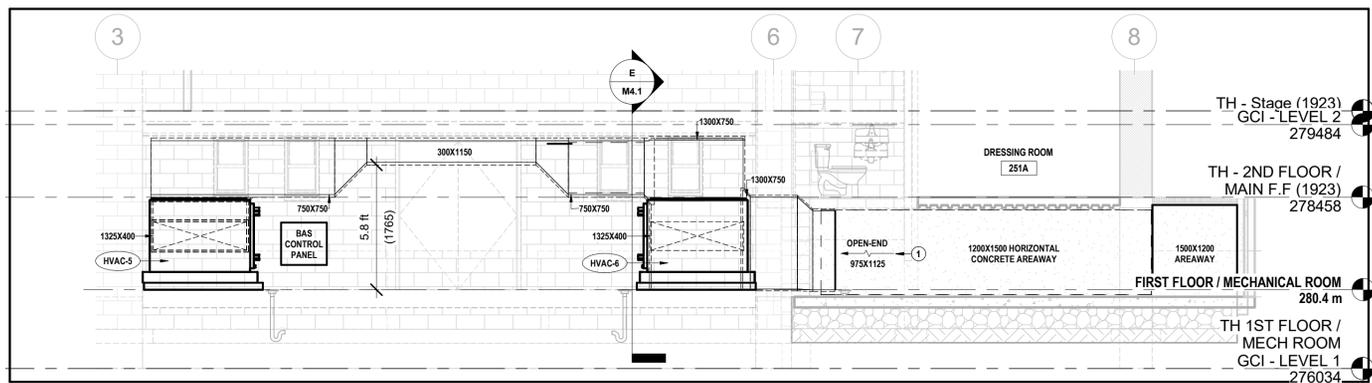
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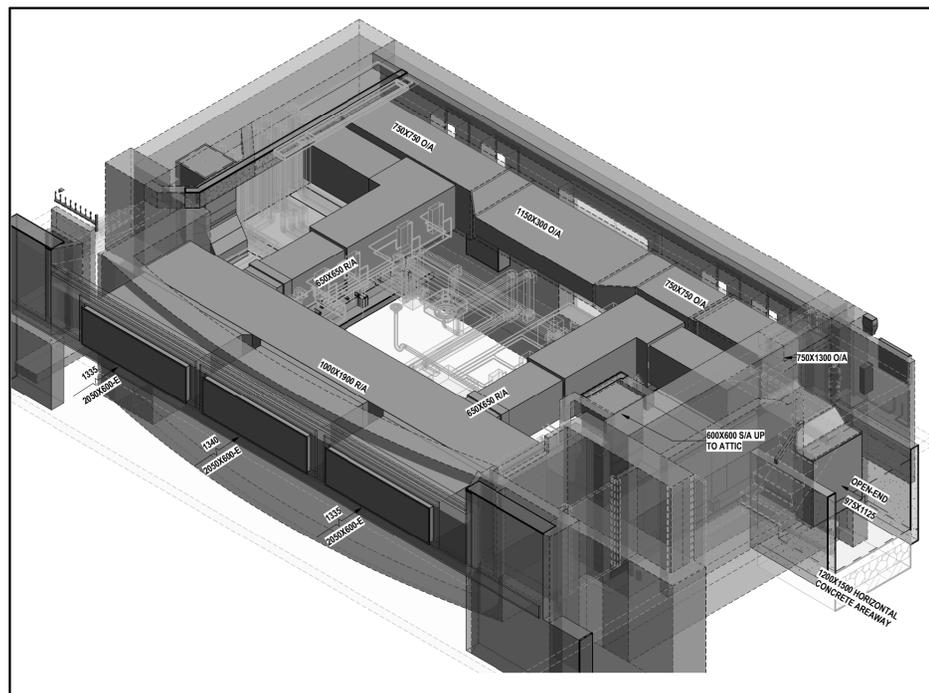
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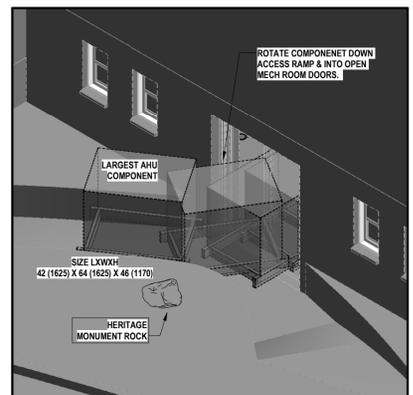
1 GROUND FLOOR HVAC PLAN
SCALE: 1:50



SECTION A: HVAC CONNECTION DUCTWORK SECTION
SCALE: N.T.S.



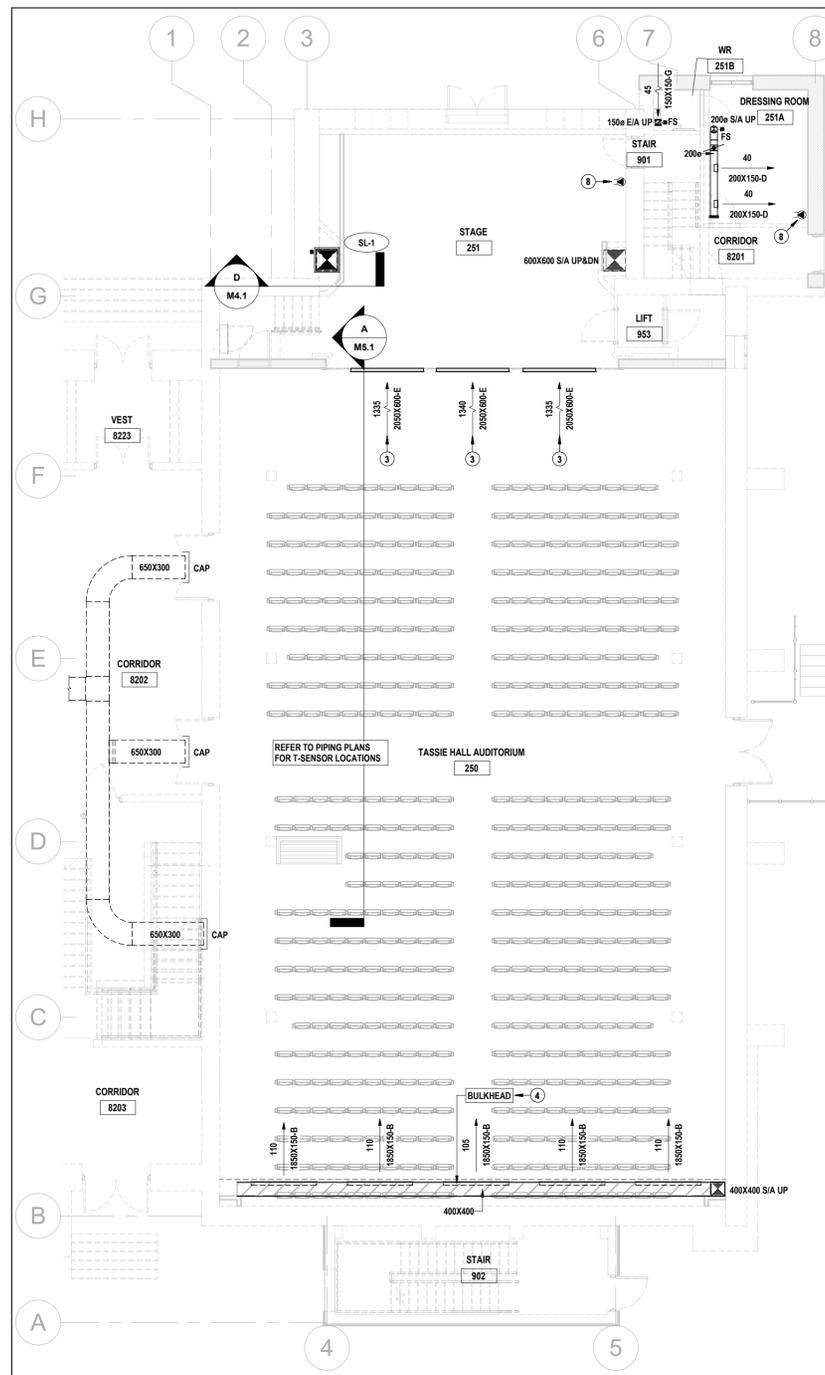
ISOMETRIC VIEW B: MECHANICAL ROOM HVAC
SCALE: N.T.S.



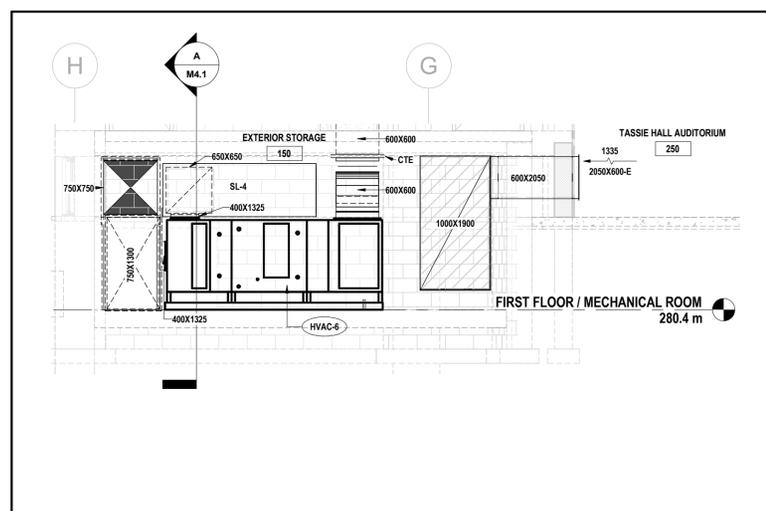
DETAIL C: AHU SECTION THROUGH MECH ROOM DOOR
SCALE: N.T.S.

NOTES FOR THIS SHEET

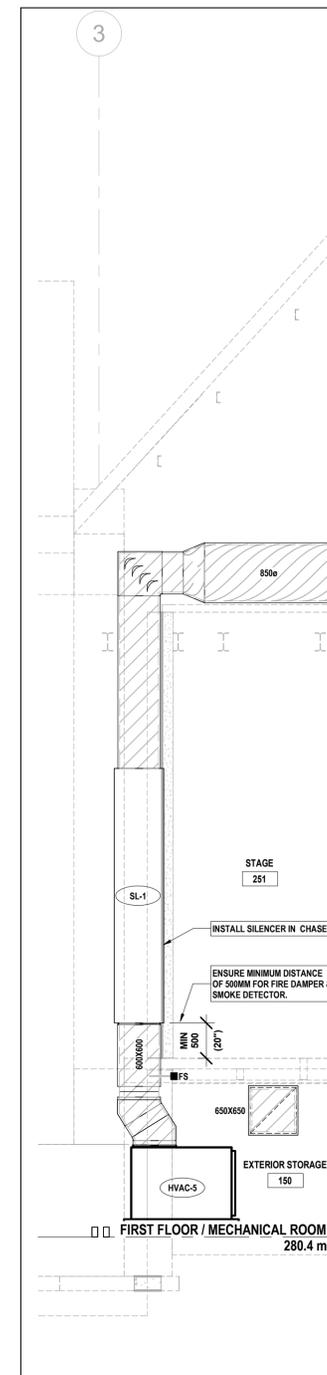
- 1) PROVIDE OPEN-ENDED INTAKE CW BIRDSCREEN.
- 2) OFFSET & TRANSITION DUCT TO MAX HEIGHT.
- 3) LOCATE RETURN GRILLES UNDER STAGE CENTERED IN DECORATIVE TRIM.
- 4) ROUTE DUCTWORK WITHIN BULKHEAD.
- 5) PROVIDE FLEXIBLE DUCT CONNECTORS AT ALL DUCT CONNECTIONS.
- 6) CARBON DIOXIDE SENSOR SHALL PROVIDE BAS INPUT FOR CONTROL OF BOTH AIR HANDLING UNITS.
- 7) EXAMPLE OF PROPOSED PATH INTO MECH ROOM FOR LARGEST SECTION OF HVAC-5&6. REFER ALSO TO DETAIL.
- 8) PROVIDE 120V POWER SOURCE C/W WIRING & TRANSFORMER FOR LOW VOLTAGE CONTROL DEVICES / SENSORS. REFER ALSO TO ELECTRICAL DRAWINGS.



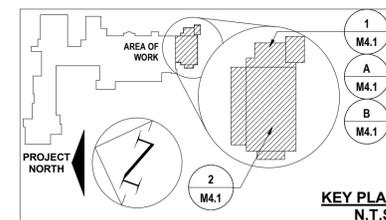
2 SECOND FLOOR HVAC PLAN
SCALE: 1:100



SECTION E: HVAC-6 CONNECTION DUCTWORK SECTION
SCALE: N.T.S.



SECTION D: DUCT SILENCER RISER
SCALE: N.T.S.



KEY PLAN
N.T.S.



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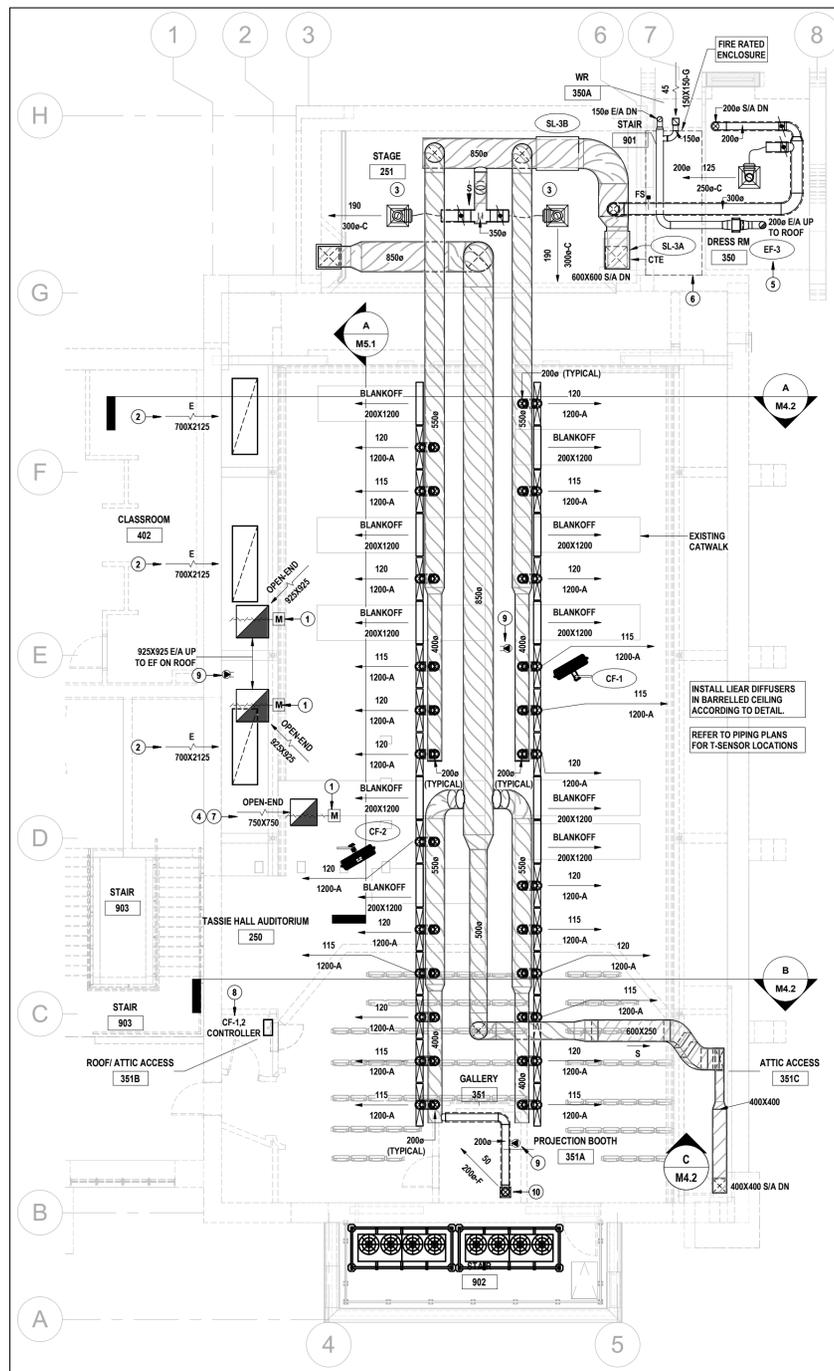


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HVAC PLANS

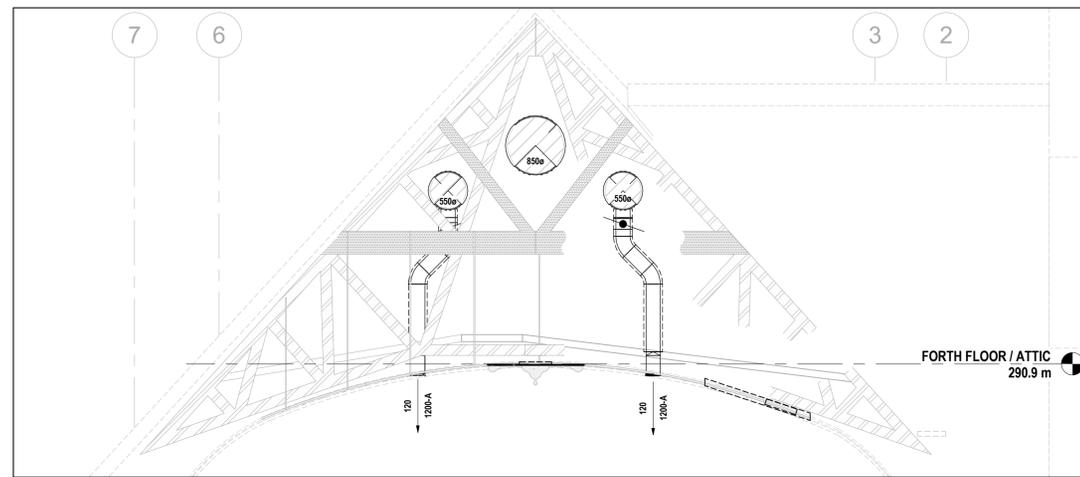
M4.1



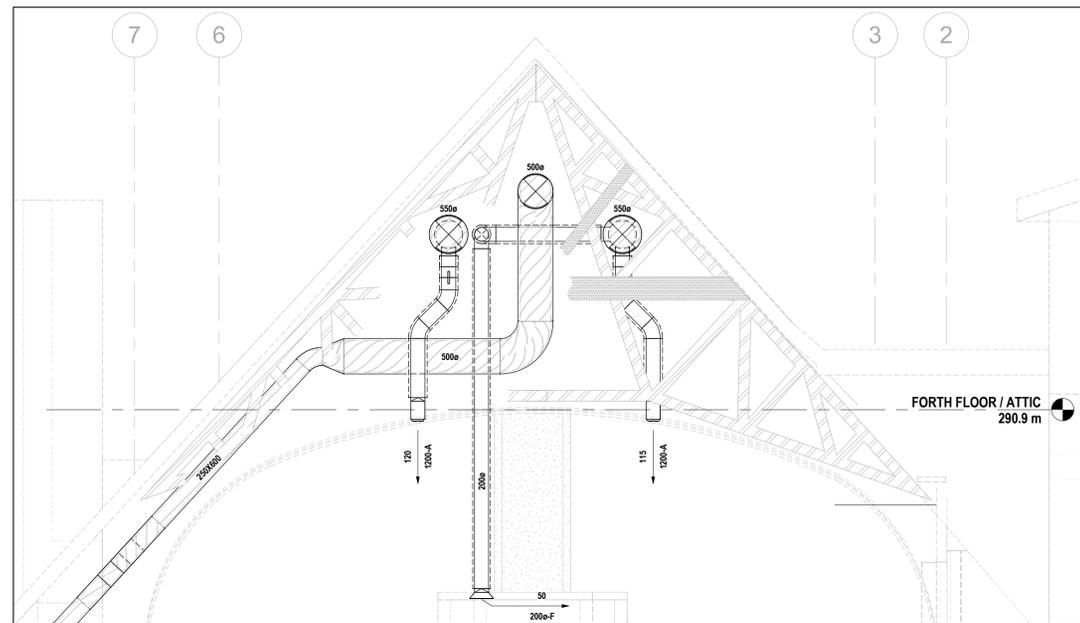
1 THIRD FLOOR / ATTIC HVAC PLAN
M4.2
SCALE: 1:100

NOTES FOR THIS SHEET

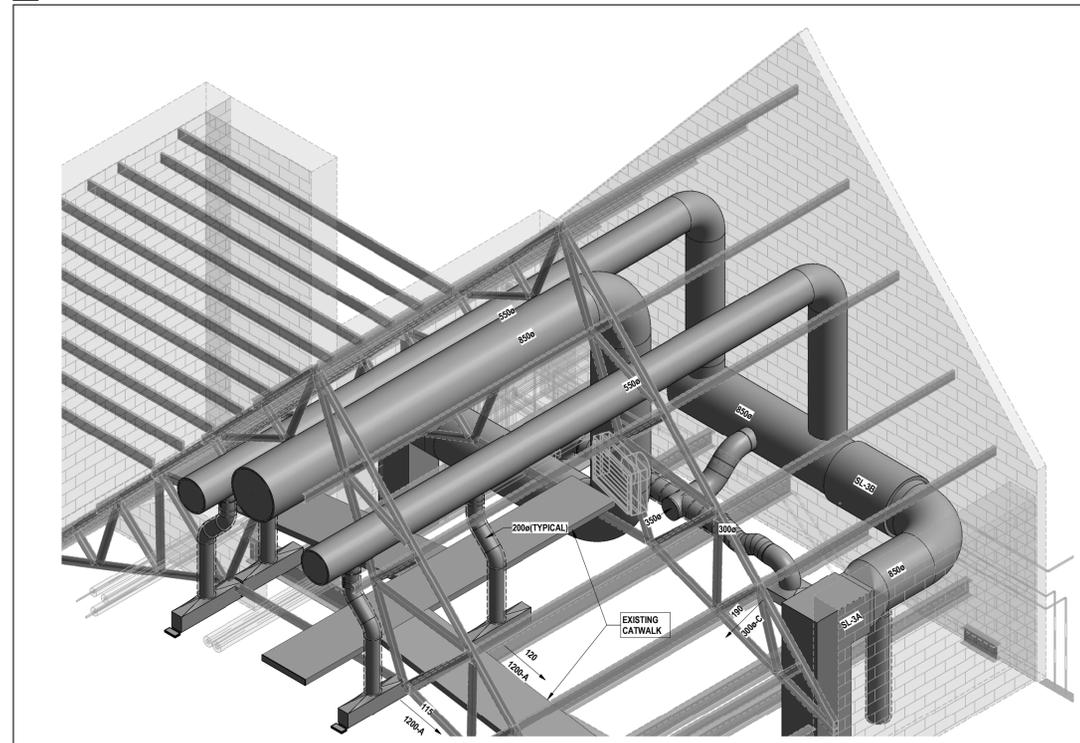
- 1 → PROVIDE INSULATED, BAS CONTROLLED MODULATING DAMPER. ACTUATOR SHALL FAIL CLOSED. REFER ALSO TO SPEC.
- 2 → INSTALL GRILLES CW DUCT SLEEVE IN BULKHEAD COFFERS. CONFIRM EXACT SIZE OF COFFER PRIOR TO ORDERING GRILLE.
- 3 → COORDINATE EXACT LOCATION OF STAGE DIFFUSERS WITH EXISTING STRUCTURE. ADJUST LOCATION AS REQUIRED.
- 4 → PROVIDE DUCT SLEEVE CW MOTORIZED DAMPER FOR EXISTING ROOF PENETRATION TO EXISTING EXHAUST FAN.
- 5 → PROVIDE NEOPRENE VIBRATION ISOLATION PADS AT FAN SUPPORTS POINTS & FLEXIBLE DUCT CONNECTORS.
- 6 → PROVIDE FIRE RATED ENCLOSURE TO SEPARATE SERVICES FROM STAIR. REFER TO ARCHITECTURAL DRAWINGS.
- 7 → INDICATED SIZE ESTIMATED BASED ON VISUAL INSPECTION. ADJUST DAMPER SIZE TO SUIT ACTUAL DUCT SIZE.
- 8 → PROVIDE CEILING FAN SPEED CONTROLLER CW LOCAL OVERRIDE & ADJUSTABLE DIAL TO MODULATE FAN SPEED VIA BAS. INSTALL AT 1200MM AFF & ADJUST PLAN LOCATION TO SUIT ARCHITECTURE. PROVIDE LOCKABLE ENCLOSURE TO PREVENT TAMPERING. PROVIDE FIELD CONTROLLER WHERE NOT SUPPLIED WITH FAN.
- 9 → PROVIDE 120V POWER SOURCE CW WIRING & TRANSFORMER FOR LOW VOLTAGE CONTROL DEVICES / SENSORS. REFER ALSO TO ELECTRICAL DRAWINGS.
- 10 → PROVIDE QUADRANT BLANKOFF FOR SIDES ADJACENT TO WALL.



SECTION A: DUCTWORK THROUGH ATTIC FRAMING
SCALE: N.T.S.



SECTION B: DUCTWORK THROUGH ATTIC FRAMING
SCALE: N.T.S.



ISOMETRIC VIEW D: DUCTWORK ABOVE STAGE
SCALE: N.T.S.

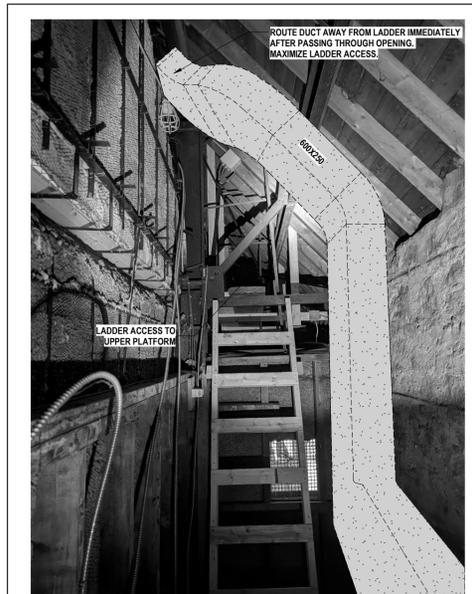
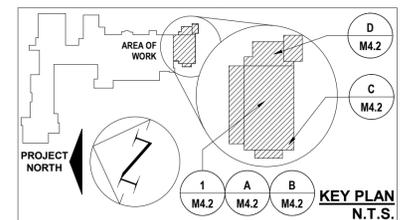


PHOTO DETAIL C: DUCTWORK PLENUM THROUGH STRUCTURE
SCALE: N.T.S.



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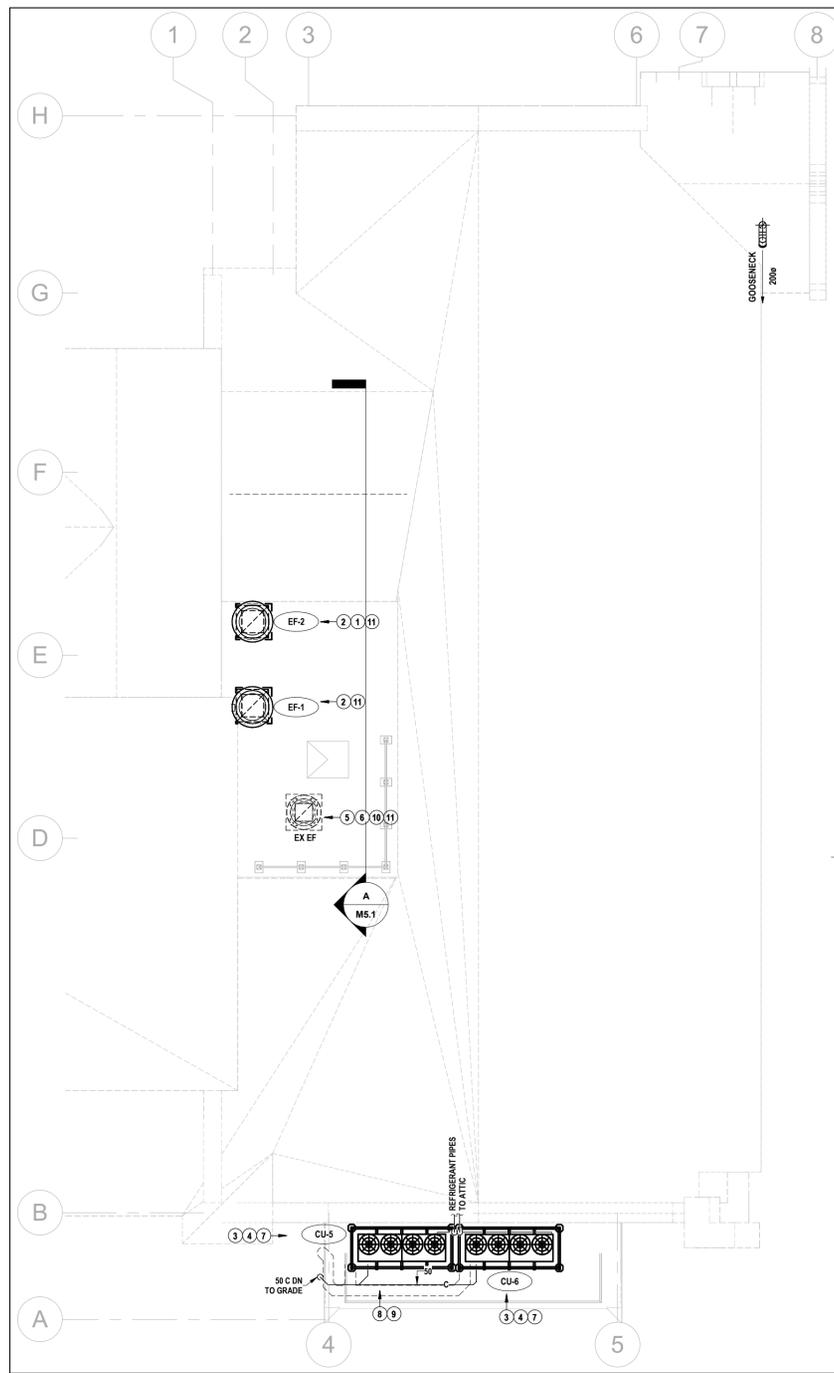
M.R.C.
C.J.C.



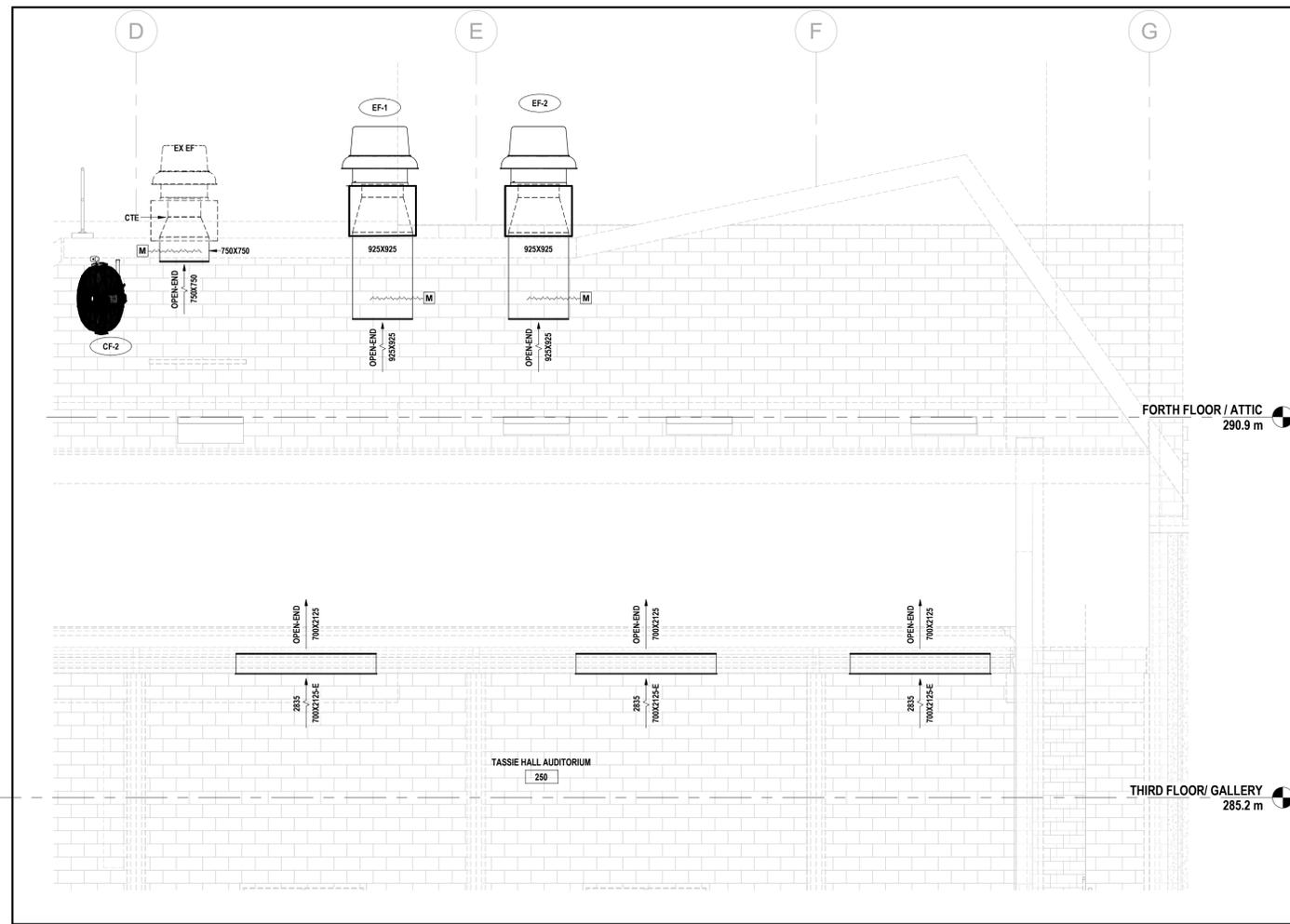
Galt Collegiate Institute
Tassie Hall Upgrades
HVAC PLANS

Checked By: C.J.C.
Drawn By: M.R.C.
Project No.: 25067

M4.2



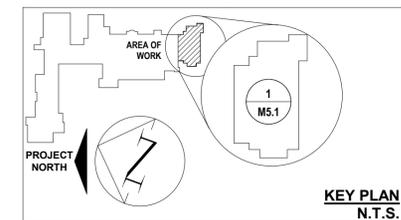
1 MECHANICAL ROOF PLAN
M5.1
SCALE: 1:100



SECTION A: ROOF MOUNTED EXHAUST FAN DUCTWORK
SCALE: N.T.S.

NOTES FOR THIS SHEET

- 1 MAINTAIN 3.0M CLEARANCE TO ROOF EDGE.
- 2 MOUNT UNIT ON ROOF CURB ACCORDING TO DETAIL.
- 3 PROVIDE CONTROL & REFRIGERANT PIPING CONNECTIONS TO CU ACCORDING TO VRF WIRING & PIPING SCHEMATICS. PROVIDE POWER CONNECTIONS ACCORDING TO MANUFACTURER REQUIREMENTS.
- 4 INSTALL CONDENSING UNIT ON ROOF CW ECOFOOT SUPPORT SYSTEM. INSTALL ACCORDING TO MANUFACTURER REQUIREMENTS.
- 5 PROVIDE BAS DDC CONTROL OF EQUIPMENT ACCORDING TO SPEC. PROVIDE WIRING, TRANSFORMERS, DEVICES, CONTROLLERS, SENSORS, ETC. AS REQUIRED.
- 6 REBALANCE EXISTING EF FAN TO 3500 CFM (1650 L/S).
- 7 FIELD INSTALL CONDENSATE DRAIN PAN SUPPLIED WITH CU & HEAT TRACE DRAIN PLAN & ALL PIPING.
- 8 PROVIDE HEAT PUMP CONDENSATE DRAIN CW HEAT TRACE & INSULATION. EXTEND DRAIN PIPING DOWN EXTERIOR WALL TO TERMINATE AT GRADE AS INDICATED. REFER TO ELECTRICAL DOCUMENTS FOR HEAT TRACE REQUIREMENTS.
- 9 SUPPORT CONDENSATE PIPING USING ADJUSTABLE SUPPORTS. SLOPE PIPING AT 2%.
- 10 PROVIDE VFD CW ELECTRICAL BYPASS, DC CHOKE & DISCONNECT FOR EXISTING EXHAUST FAN. VFD SHALL BE SUITABLE FOR OUTDOOR INSTALLATION & SELECTED TO SUIT EXISTING MOTOR HORSEPOWER.
- 11 MOUNT VFD TO FAN CURB USING UNISTRUT ACCORDING TO OESC REQUIREMENTS. PROVIDE POWER ACCORDING TO ELECTRICAL DOCUMENTS.



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M.R.C.
C.J.C.



Galt Collegiate Institute
Tassie Hall Upgrades
MECHANICAL ROOF PLAN

Project No.: 25067
Drawn By: M.R.C.
Checked By: C.J.C.

M5.1