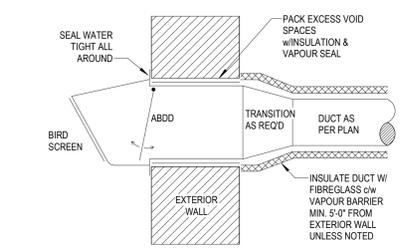
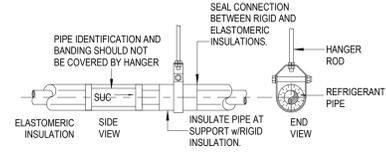


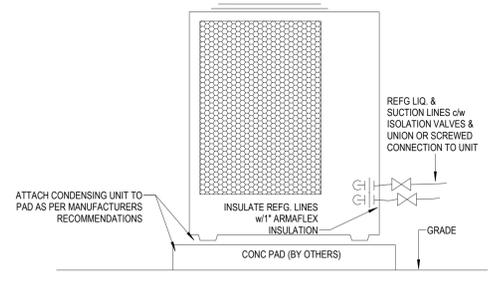
Mechanical & Electrical Consultants:
O n s a F.C. O'Neill, Scriven & Assoc's Limited
 Consulting Engineers
 7071 Bayers Road, Suite 2001, Halifax, NS



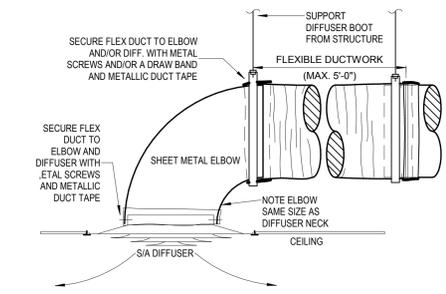
1 EXHAUST AIR WALL CAP
N.T.S.



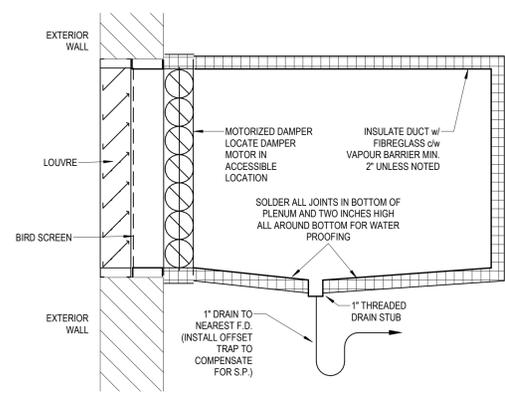
2 REFRIGERANT PIPE SUPPORT
N.T.S.



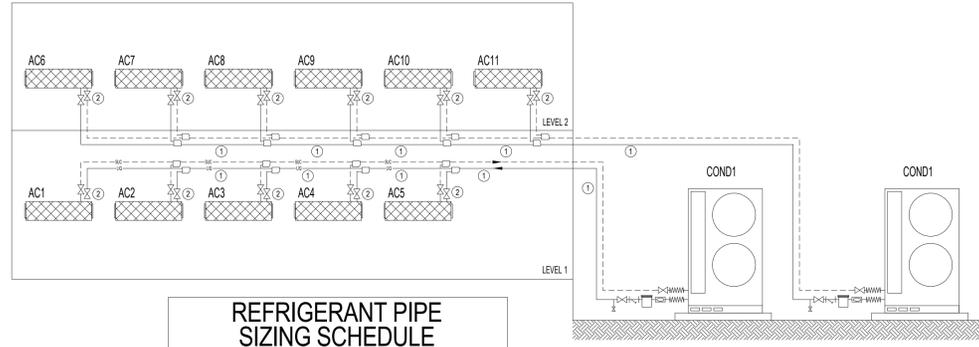
3 SMALL OUTDOOR CONDENSER
N.T.S.



5 DIFFUSER FLEX CONNECTION
N.T.S.



6 LOUVRE PLENUM DRAIN
N.T.S.



4 REFRIGERANT SYSTEM PIPING SCHEMATIC
SCALE: N.T.S.

DESIG.	SERVING	SIZE (mm)			WT. (kg)	NOMINAL COOLING CAPACITY	NOMINAL HEATING CAPACITY	ELECTRICAL			PIPE SIZE		COMMENTS
		H	W	D				kW	MCAMAX BRKR	POWER	LIQUID	SUCTION	
COND1	LEVEL 1	1338	1050	355	122	48,000	54,000	5.1	31/44	208/1	3/8"	5/8"	LOW AMBIENT KIT (40°F), SEA COAST MODEL
COND1	LEVEL 1	1338	1050	355	122	48,000	54,000	5.1	31/44	208/1	3/8"	5/8"	LOW AMBIENT KIT (40°F), SEA COAST MODEL

ABBREVIATIONS: COND TO BE c/w WIND & SNOW BAFFLE

UNIT	SERVING	AIRFLOW (CFM)	COOLING TOTAL CAPACITY (MBH)	HEATING (MBH)	REFRIG. TYPE	ELECTRICAL		
						MCA	kW	VOLTS/PH
AC1	103 PPE STORAGE	170-210	6	6.7	R-410A	-	0.03	208/1
AC2	103 PPE STORAGE	170-210	6	6.7	R-410A	-	0.03	208/1
AC3	106 TRAINING ROOM	320-415	12	13.5	R-410A	-	0.03	208/1
AC4	106 TRAINING ROOM	320-415	12	13.5	R-410A	-	0.03	208/1
AC5	107 OFFICE	320-415	12	13.5	R-410A	-	0.03	208/1
AC6	205 BEDROOM	320-415	8	9	R-410A	-	0.03	208/1
AC7	207 BEDROOM	320-415	8	9	R-410A	-	0.03	208/1
AC8	208 BEDROOM	170-210	6	6.7	R-410A	-	0.03	208/1
AC9	204 BEDROOM	170-210	6	6.7	R-410A	-	0.03	208/1
AC10	202 TRAINING ROOM / LIVING SPACE	170-210	6	6.7	R-410A	-	0.03	208/1
AC11	202 TRAINING ROOM / LIVING SPACE	170-210	6	6.7	R-410A	-	0.03	208/1

ABBREVIATIONS: EDB - ENTERING DRY BULB TEMP. IN °F, EWB - ENTERING WET BULB TEMP. IN °F, LDB - LEAVING DRY BULB TEMP. IN °F

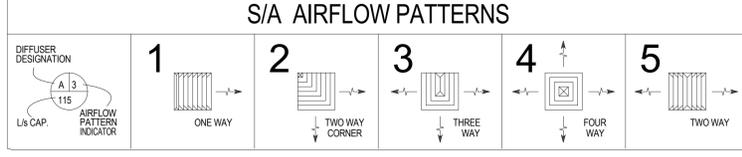
NOTES: 1 - ELECTRICAL DISCONNECTS FOR ALL UNITS BY ELECTRICAL CONTRACTOR, 2 - INSULATE ALL INTERNAL PIPING INTEGRAL TO THE HEAT PUMP UNITS, 3 - INSULATE CONDENSATE DRAINAGE PIPING FOR ALL UNITS, 4 -

ITEM	DESCRIPTION	WATER		WASTE		VENT
		COLD	HOT	INDIRECT	DIRECT	
L1	DROP IN LAVATORY	13	13	-	32	32
L2	WALL HUNG LAVATORY (BARRIER FREE)	13	13	-	32	32
L3	WALL HUNG LAVATORY	13	13	-	32	32
WC1	WATER CLOSET (BARRIER FREE)	19	-	-	76	-
WC2	WATER CLOSET	19	-	-	76	-
SH1	SHOWER	13	13	-	38	-
SH2	SHOWER (BARRIER FREE)	13	13	-	38	-
BT	BATH TUB	13	13	-	38	-
S1	DROP IN SINK (BARRIER FREE)	13	13	-	38	-
JS1	JANITOR SINK	13	13	-	76	38

ABBREVIATIONS: CW - DOMESTIC COLD WATER, HW - DOMESTIC HOT WATER, SS - STAINLESS STEEL, H&C - HOT & COLD WATER, SAN - SANITARY WASTE, WC - WATERCLOSET, UR - URINAL, HB - HOSE BIB, WH - WALL HUNG SINK, LV - LAVATORY SINK, HS - HAND SINK

DESIGNATION	DESCRIPTION	NECK	FACE	AIR CAP. L/s	COMMENTS
A	ROUND PLAQUE DIFFUSER	152 DIA.	338 DIA.	50	SURFACE MOUNT, CA
B	LOUVRE FACE SUPPLY GRILLE	250x150	300x200	250	SURFACE MOUNT, CA
C	FIRE RATED SQ. PLAQUE DIFFUSER	152 DIA.	300 x 300	50	SURFACE MOUNT, CA c/w INTEGRAL FIRE DAMPR AND FIRE BLANKET AND SURFACE MOUNT FRAME
R1	PERFORATED RETURN GRILLE	250x250	304x304	250	SURFACE MOUNT, CA c/w INTEGRAL FIRE DAMPR AND FIRE BLANKET AND SURFACE MOUNT FRAME
R2	FIRE RATED PERF. RETURN GRILLE	250x250	304x304	250	SURFACE MOUNT, CA c/w INTEGRAL FIRE DAMPR AND FIRE BLANKET AND SURFACE MOUNT FRAME
AL	ALUMINUM DOOR GRILLE	-	600x600	215	CA

ABBREVIATIONS: OBD - OPPOSED BLADE DAMPER, CA - COLOUR BY ARCHITECT, PERFOR - PERFORATED FACE, EGG - EGGRATE GRILLE



UNIT NO.	LOCATION	SERVING	TYPE	DISCRPTION	WHEEL		AIR CAP. CFM	S.P. IN.	RPM	ELECTRICAL		SEE NOTE#	COMMENTS
					TYPE	DIA.				WATTS	VOLTS/PH		
EF1	PPE STORAGE	PPE STORAGE	CEL	CEILING MOUNTED CABINET FAN	-	-	250	0.5	-	95	120	1	c/w DISCONNECT, HANGING ISOLATORS
EF2	ELECTRICAL ROOM	ELECTRICAL ROOM	CEL	CEILING MOUNTED CABINET FAN	-	-	450	0.75	1009	350	120	1	c/w DISCONNECT, HANGING ISOLATORS

ABBREVIATIONS: CAB - CABINET FAN, CEL - CEILING MOUNTED FAN, BCD - BACKDRAFT DAMPER, CDT - CENTRIFUGAL FAN, CRB - ROOF CURB, DS - DISCONNECT SWITCH, DSF - DESTRATIFICATION FAN, FC - FORWARD CURVE WHEEL, OF - GREASE FAN, IS - INSPECT SCREEN, MD - MOTORIZED DAMPER, PRFP - PROPELLER BLADE FAN, RF - ROOF MOUNTED FAN, VSC - VARIABLE SPEED CONTROL

NOTES: 1 - c/w WHITE ALUMINUM GRILLE, RECTANGULAR WALL CAP, 2 - , 3 - , 4 -

TAG	DESCRIPTION
TP1	MULTI-OUTLET ELECTRONIC TRAP SEAL PRIMER VALVE ASSEMBLY c/w INTEGRAL WATER HAMMER ARRESTOR, VACUUM BREAKER, TIMER MODULE, AND RECESSED CABINET WITH ACCESS COVER. ELECTRICAL 120/160. PROVIDE WALL/CEILING ACCESS DOOR AS REQUIRED TO ACCESS UNIT.
TP2	SINGLE OUTLET ELECTRONIC TRAP SEAL PRIMER VALVE ASSEMBLY c/w INTEGRAL WATER HAMMER ARRESTOR, VACUUM BREAKER, TIMER MODULE, AND RECESSED CABINET WITH ACCESS COVER. ELECTRICAL 120/160. PROVIDE WALL/CEILING ACCESS DOOR AS REQUIRED TO ACCESS UNIT.
DHW1 DHW2	ELECTRIC DOMESTIC HOT WATER HEATER 287L (80 US GAL.) CAPACITY, DUAL 5.5 kW ELEMENTS, 30/3LPH (81 GPH) FIRST HOUR RATING 208V/160 600mm x 154mm HIGH, 77kg (170 lbs)
MV1	THERMOSTATIC MIXING VALVE LEAD FREE BRASS MIXING VALVE 1-50 USGPM, SET POINT 50°C (122°F) c/w INTEGRAL CHECK VALVES, SHUT-OFF VALVE ON OUTLET, TEMPERATURE GAUGE, BRONZE FINISH
F/E	FIRE EXTINGUISHER 10 LB TYPE ABC FIRE EXTINGUISHER c/w WALL BRACKET

TAG	DESCRIPTION
LV1 LV2	SUPPLY AND EXHAUST LOUVRE STORM RESISTANT 150mm DEEP, 450mm WIDE 450mm HIGH
RANGE HOOD	UNDER CABINET RANGE HOOD, 750mm WIDE x 500mm DEEP x 150mm HIGH, 175 DDIA, DUCT CONNECTION, 80 L/s - 118 L/S COLOUR BY ARCHITECT, 120V, 1.3A
ERV1	ENERGY RECOVERY VENTILATOR SIA 810 CFM @ 0.3" ESP 65A SIA CFM @ 0.3" ESP UNIT SIZE: 1028mm L, 603mm W, 1289mm H. UNIT WEIGHT = 147 kg FANS: QTY 2, 0.5 HWP EACH, DIRECT DRIVE EC MOTORS. FILES: SERV 8 - 20' x 20' x 2' c/w DISCONNECT, INTEGRATED CONTROL PANEL, DOUBLE WALL CONSTRUCTION, LOW LEAKAGE ISOLATION DAMPERS, DRY BULB TEMPERATURE CONTROLS, ELECTRIC DUCT HEATER (7 kW)



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rev.		date

project project
BIO SEARCH & RESCUE MARINE OPERATIONS BUILDING
 Dartmouth, Nova Scotia

drawing dessin
VENTILATION & HEATING DETAILS AND MECHANICAL SCHEDULES

designed	conqu
date	06/07/18
drawn	NGB
date	06/07/18
approved	approved
date	06/07/18
Tender	Submission

PWGC Project Manager Administrateur de projets TPSPGC
 project number no. du projet
R.096002.001

drawing no. no. du dessin
M-6