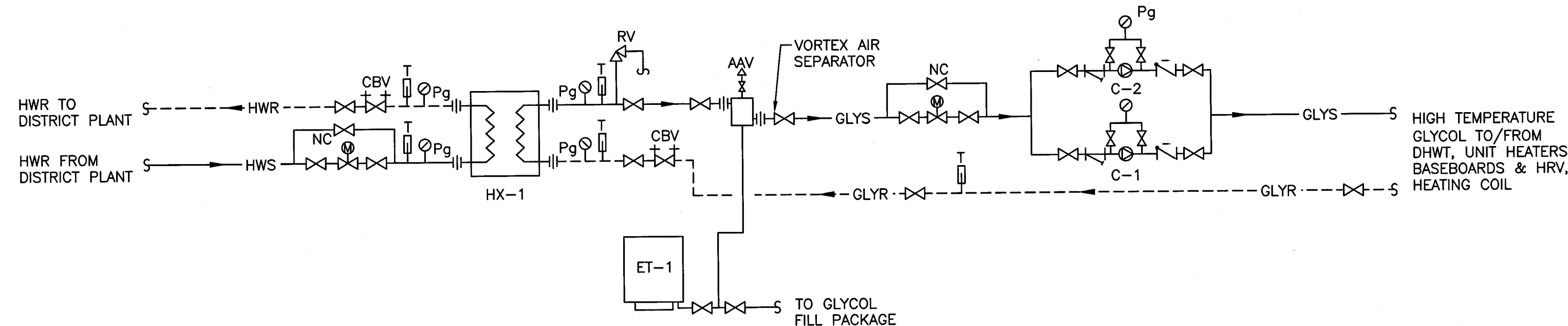


PLATE & FRAME HEAT EXCHANGER SCHEDULE												
UNIT No.	HEAT EXCHANGER (kW)	HOT SIDE					COLD SIDE					COMMENTS
		FLUID	FLOW RATE (l/s)	INLET TEMP. (°C)	OUTLET TEMP. (°C)	PRESS. DROP (kPa)	FLUID	FLOW RATE (l/s)	INLET TEMP. (°C)	OUTLET TEMP. (°C)	PRESS. DROP (kPa)	
HX-1	146	WATER	3.5	110	100	35	45% PROP. GLYCOL	3.2	82	71	35	REFER TO SPECIFICATION FOR DETAILS.

PUMP SCHEDULE											
UNIT No.	LOCATION	SERVICE	TYPE	FLOW RATE (l/s)	TOTAL HEAD (m)	ELECTRIC MOTOR			VFD	MFRG/MODEL	COMMENTS
						MAX kW	SPEED	SERVICE			
C-1	MECHANICAL ROOM 107	GLYCOL HEATING	INLINE CENTRIFUGAL	3.2	16.8	1.5	1750	575/3/60	Y	BELL & GOSSETT SERIES 80 1 1/2x1 1/2x9 1/2	45% PROPYLENE GLYCOL/WATER MIXTURE; FULLY REDUNDANT PARALLEL PUMPS, INVERTER DUTY RATED PREMIUM EFFICIENCY MOTOR, c/w SUCTION DIFFUSER AND TRIPLE DUTY VALVE
C-2	MECHANICAL ROOM 107	GLYCOL HEATING	INLINE CENTRIFUGAL	3.2	16.8	1.5	1750	575/3/60	Y	BELL & GOSSETT SERIES 80 1 1/2x1 1/2x9 1/2	45% PROPYLENE GLYCOL/WATER MIXTURE; FULLY REDUNDANT PARALLEL PUMPS, INVERTER DUTY RATED PREMIUM EFFICIENCY MOTOR, c/w SUCTION DIFFUSER AND TRIPLE DUTY VALVE

GLYCOL FEED SYSTEMS SCHEDULE												
DESIGNATION	LOCATION	MFRG.	MODEL	TANK VOLUME (l)	TANK DIMENSIONS		PUMP DISCHARGE DATA		ELECTRICAL		FILL FLUID	REMARKS
					Ø (mm.)	HEIGHT (mm.)	FLOW l/s @ kPa	MAX OUTLET PRESS. kPa	V/PH/Hz	AMPS		
GF-1	ATTIC SPACE	AXIOM INDUSTRIES	SF100	208	24	49	00.6 @ 345	345	115/1/60	0.7	45% PROP. GLYCOL	PLUG IN ELECTRICAL CONNECTION, LOW SHUT OFF FLUID LEVEL SWITCH C/W DRY CONTACT FOR REMOTE MONITORING AND SELECTABLE AUDIBLE ALARM, LEVEL ALARM FOR DROPPING FLUID LEVEL, FLEXIBLE CONNECTION HOSE WITH CHECK VALVE, SELF PRIMING TO 2.1m

EXPANSION TANK SCHEDULE													
DESIGNATION	LOCATION	TYPE OF FLUID	MIN. OR INITIAL FILL TEMP (°C)	MAX. DESIGN TEMP (°C)	MIN. OR INITIAL FILL PRESSURE (kPa)	MAX DESIGN PRESSURE (kPa)	SYSTEM EXPANSION VOLUME (l)	TANK VOLUME (l)	TANK DIMENSIONS (mm)		ACCEPTANCE VOLUME (l)	MFRG/MODEL	COMMENTS
									(DIA)	(H)			
ET-1	MECHANICAL 107	PROPYLENE/GLYCOL 45%	5	82	83	207	600	99	406	991	42	AMTROL 100-LBC; TACO/ARMSTRONG/AMTROL	REPLACEABLE, PARTIAL ACCEPTANCE, BLADDER DESIGN, c/w INTEGRAL WELDED RING BASE, ASME CONSTRUCTION



1 SCHEMATIC — HEATING PIPING
M-4 SCALE : N.T.S.

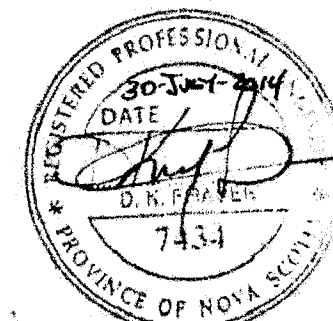
IN-FLOOR RADIANT HEATING REQUIREMENTS							
ZONE	REQ'D HEAT OUTPUT (kW)	APPROX. NET FLOOR AREA (m²)	MAX. HEAD LOSS PER LOOP (m)	LTWS (°C)	LTWR (°C)	MAX. FLOW RATE (l/s)	COMMENTS
1	14	166	3.4	46	35	0.33	SURFACE MOUNTED MANIFOLD IN MECHANICAL ROOM 107
2	11	136	3.4	46	35	0.07	SURFACE MOUNTED MANIFOLD IN STORAGE ROOM 105
3	3	28	1.4	46	35	0.07	FULLY RECESSED MANIFOLD IN STAFF WC 103.

NOTES:

- DESIGN FOR 45% PROPYLENE GLYCOL WATER MIXTURE.
- MANIFOLD SHALL BE c/w MIXING MODULE INCLUDING THERMOSTATIC VALVE AND CIRCULATOR GRUNDFOSS UPS 15-58-130mm, 3-SPEED, INTEGRAL CHECK VALVE, FLOW RANGE 0 TO 1.1 l/s AND HEAD RANGE 0-5.8m.
- MANIFOLD SHALL BE c/w 1 INTEGRAL CONTROL VALVE FOR ZONE CONTROL.
- MANIFOLD SHALL BE ENCLOSED IN GALVANIZED STEEL CABINET c/w DOOR AND ADJUSTABLE LEGS.
- SURFACE TEMPERATURE SHALL NOT EXCEED 30°C FOR INTERIOR LOOPS AND 35°C FOR PERIMETER LOOPS.

GLYCOL UNIT HEATER SCHEDULE							
UNIT No.	LOCATION	WATER FLOW (l/s)	OUTPUT (kW)	ELECTRIC MOTOR			COMMENTS
				(W)	SPEED (RPM)	SERVICE	
HUH-1	MECHANICAL 107	0.1	4	37	1500	115/1/60	45% PROPYLENE GLYCOL/WATER MIXTURE, EGT 82°C, LGT 71°C, EAT 21°C
HUH-2	RECYCLING 101	0.1	4	37	1500	115/1/60	45% PROPYLENE GLYCOL/WATER MIXTURE, EGT 82°C, LGT 71°C, EAT 21°C
HUH-3	RECYCLING 101	0.1	4	37	1500	115/1/60	45% PROPYLENE GLYCOL/WATER MIXTURE, EGT 82°C, LGT 71°C, EAT 21°C

ROOM HEATING UNIT SCHEDULE			
TYPE	MFRG/MODEL	HEATING OUTPUT (W/m)	COMMENTS
A	ENG AIR WF-1A	318	BASED ON 45% PROPYLENE GLYCOL/WATER MIXTURE, EGT 82°C, LGT 71°C, EAT 21°C. ELEMENT c/w ALL HANGERS AND BRACKETS TO SUPPORT FROM WALL. 1 ROW 32mm COPPER TUBE c/w 102x102mm ALUMINUM FINS, 164 FINS/m. 305mm ENCLOSURE HEIGHT. ENCLOSURE SHALL RUN WALL TO WALL UNLESS OTHERWISE NOTED.



0	ISSUED FOR TENDER	
revisions		date
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drawing	MECHANICAL HEATING SCHEDULES & SCHEMATIC	
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approved MDW		approuvé
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