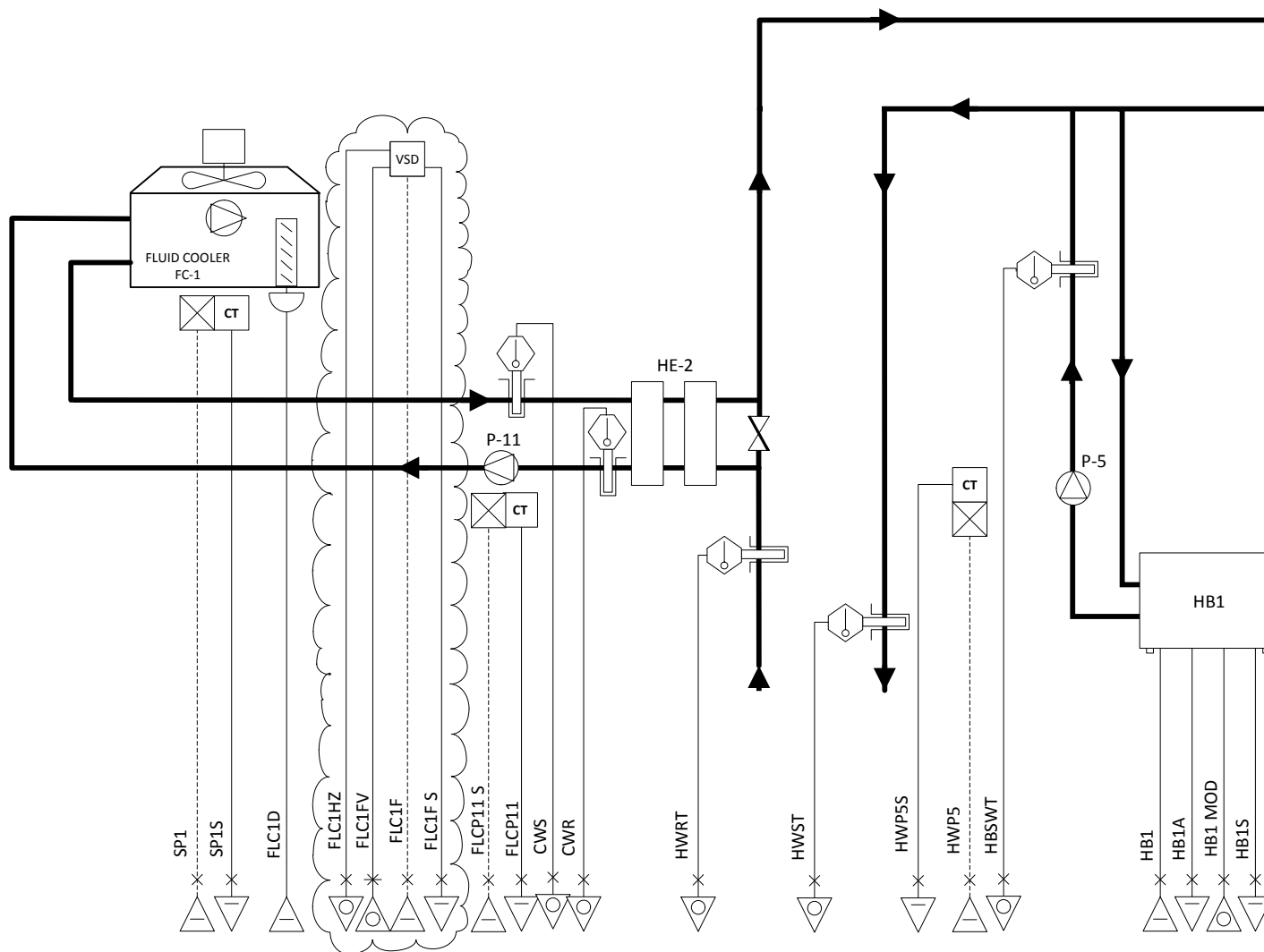


Track Changes	Name	Description	AI	AO	BI	BO
	MAKE-UP AIR UNIT					
	EAD	EXHAUST AIR DAMPER				1
	EAT	EXHAUST AIR TEMPERATURE	1			
Add. No. 1	RFHZ	RETURN FAN SPEED (HZ)	2x1			
Add. No. 1	RFV	RETURN FAN MODULATION		2x1		
Add. No. 1	RF	RETURN FAN START/STOP				2x1
Add. No. 1	RFS	RETURN FAN STATUS			2x1	
	RAF	RETURN AIR FLOW	1			
	RAT	RETURN AIR TEMPERATURE	1			
	RAH	RETURN AIR HUMIDITY	1			
	CO2	RETURN AIR CO2	1			
	OAT	OUTDOOR AIR TEMPERATURE	1			
	OAD	OUTDOOR AIR DAMPER				1
	FLTA	FILTER STATUS				1
	CHV	HOT WATER VALVE		1		
	SPEED	HEAT WHEEL SPEED		1		
	START/STOP	HEAT WHEEL START/STOP				1
	STATUS	HEAT WHEEL STATUS			1	
	HP STATUS	HEAT PUMP STATUS			1	
	CLG	COOLING COMMAND				1
	HTG	HEATING COMMAND				1
	FAD					1
	HUMV	HUMIDIFIER MODULATION		1		
	SAF	SUPPLY FAN FLOW	1			
Add. No. 1	SFHZ	SUPPLY FAN SPEED	2x1			
Add. No. 1	SFV	SUPPLY FAN MODULATION		2x1		
Add. No. 1	SF	SUPPLY FAN START/STOP				2x1
Add. No. 1	SFS	SUPPLY FAN STATUS			2x1	
	SAT	SUPPLY AIR TEMPERATURE	1			
	SAH	SUPPLY AIR HUMIDITY	1			
	SASP	SUPPLY AIR STATIC PRESSURE	1			
	SPT	SPACE TEMPERATURE	1			
	HEAT PUMP BOILER AND FLUID COOLER SYSTEM		AI	AO	BI	BO
	SP1	FC PUMP COMMAND				1
	SP1S	FC PUMP STATUS			1	
	FLC1D	FLUID COOLER DAMPER				1
Add. No. 1	FLC1	FLUID COOLER FAN START/STOP				1
	FLC1FS	FLUID COOLER STATUS			1	
	FLCP11S	PUMP 11 STATUS			1	
	FLCP11	PUMP 11 COMMAND				1
	CWS	CHILLED WATER SUPPLY TEMPERATURE	1			
	CWR	CHILLED WATER RETURN TEMPERATURE	1			
Add. No. 1	FLC1	FLUID COOLER FAN MODULATION		1		
Add. No. 1	FLC1HZ	FLUID COOLER FAN SPEED	1			
	HWRT	HOT WATER RETURN TEMPERATURE	1			
	HWST	HOT WATER SUPPLY TEMPERATURE	1			
	HWP5S	PUMP 5 STATUS			1	
	HWP5S	PUMP 5 COMMAND				1
	BLRSWT	BOILER SUPPLY TEMPERATURE	1			
	HB1	BOILER 1 COMMAND				1
	HB1A	BOILER ALARM			1	
	HB1MOD	BOILER MODULATION		1		
	HB1S	BOILER STATUS			1	
	GROUND SOURCE AND BUILDING LOOP PUMPS CONTROL SYSTEM		AI	AO	BI	BO
	GSRT	GROUND SOURCE RETURN TEMP	1			

Track Changes	Name	Description	AI	AO	BI	BO
	GROUND T	GROUND TEMPERATURE 1	1			
	GROUND T	GROUND TEMPERATURE 2	1			
	GSST	GROUND SOURCE SUPPLY TEMP	1			
	GST	GROUND SUPPLY TEMP	1			
	GSP1	PUMP 1 COMMAND				1
	GSP2	PUMP 2 COMMAND				1
	GSP2S	PUMP 2 STATUS			1	
	GSP1S	PUMP 1 STATUS			1	
	V	VALVE MODULATION		1		
	P4HZ	PUMP 4 SPEED	1			
	P4V	PUMP 4 MODULATION		1		
	P3HZ	PUMP 3 SPEED	1			
	P3V	PUMP 3 MODULATION		1		
	P3	PUMP 3 START/STOP				1
	P3S	PUMP 3 STATUS			1	
	P4	PUMP 4 START/STOP				1
	P4S	PUMP 4 STATUS			1	
	HCRWT	BUILDING WATER RETURN TEMP	1			
	HCSWT	BUILDING WATER SUPPLY TEMP	1			
	DIFF. PRESS	SUPPLY WATER DIFFERENTIAL PRESSURE	1			
	DHW CONTROL		AI	AO	BI	BO
	BP	PUMP 6 COMMAND				1
	BPS	PUMP 6 STATUS			1	
	DHWST	DHW SUPPLY TEMPERATURE	1			
	HWRT	HOT WATER RETURN TEMPERATURE	1			
	BP8	PUMP 8 COMMAND				1
	BP8S	PUMP 8 STATUS			1	
	HWST	HOT WATER SUPPLY TEMPERATURE	1			
	HBS	DHW TANK STATUS			1	
	TYPICAL HEAT PUMP		AI	AO	BI	BO
	STATUS	HEAT PUMP STATUS			1	
	FAD	FAN COMMAND				1
	CLG	COOLING COMMAND				1
	HTG	HEATING COMMAND				1
	CO2	CO2 LEVEL	1			
	SPT	SPACE TEMPERATURE	1			
	SETPOINT	TEMPERATURE SETPOINT	1			
	OVERRIDE	OVERRIDE			1	
	EXCESS PRESSURE PUMP		AI	AO	BI	BO
	PS	PUMP STATUS			1	
	UTILITY METERS		AI	AO	BI	BO
	DCWF	DOMESTIC COLD WATER METER	1			
	GF	GAS METER	1			
	KWHM	ELECTRICITY METER	1			
	SELF CONTAINED UNIT (SC UNIT-1) CONTROL SYSTEM		AI	AO	BI	BO
	RAD	MIXED AIR DAMPER		1		
	SAD	SUPPLY AIR DAMPER		1		
	OAT	OUTDOOR AIR TEMPERATURE	*	*	*	*
	FLTA	FILTER STATUS	*	*	*	*
	MAT	MIXED AIR TEMPERATURE	*	*	*	*
	DXSTG1	DX STAGE 1 COMMAND	*	*	*	*
	SF	SUPPLY FAN COMMAND	*	*	*	*

Track Changes	Name	Description	AI	AO	BI	BO
	SFS	SUPPLY FAN STATUS	*	*	*	*
	SAT	SUPPLY AIR TEMPERATURE	*	*	*	*
	SPT	SPACE TEMPERATURE	*	*	*	*
		* BACNET POINT				
	SELF CONTAINED UNIT (SC UNIT-2) CONTROL SYSTEM		AI	AO	BI	BO
	RAD	MIXED AIR DAMPER		1		
	SAD	SUPPLY AIR DAMPER		1		
	OAD	OUTDOOR AIR DAMPER	*	*	*	*
	EAD	EXHAUST AIR DAMPER	*	*	*	*
	EF	EXHAUST FAN COMMAND	*	*	*	*
	EFS	EXHAUST FAN STATUS	*	*	*	*
	RAD	RETURN AIR DAMPER	*	*	*	*
	FLTA	FILTER STATUS	*	*	*	*
	RAT	RETURN AIR TEMPERATURE	*	*	*	*
	MAT	MIXED AIR TEMPERATURE	*	*	*	*
	SF	SUPPLY FAN COMMAND	*	*	*	*
	SFS	SUPPLY FAN STATUS	*	*	*	*
	RAH	RETURN AIR HUMIDITY	*	*	*	*
	D/XC	DX COOLING COMMAND	*	*	*	*
	SAT	SUPPLY AIR TEMPERATURE	*	*	*	*
	LTA	LOW TEMPERATURE ALARM	*	*	*	*
	SPT	SPACE TEMPERATURE	*	*	*	*
		* BACNET POINT				
	MISCELLANEOUS CONTROL SYSTEM		AI	AO	BI	BO
	TYPICAL (3) ROOM VENTILATION					
	SPT	SPACE TEMPERATURE	1			
	OAD	OUTDOOR AIR DAMPER				1
	EFS	EXHAUST FAN STATUS			1	
	EFS	EXHAUST FAN COMMAND				1
	UH	UNIT HEATER COMMAND				1
	MECHANICAL ROOM VENTILATION					
	SPT	SPACE TEMPERATURE	1			
	SF-1	SUPPLY FAN COMMAND				1
	UH	UNIT HEATER COMMAND				1
	CO	CARBON MONOXIDE LEVEL	1			
	MISCELLANEOUS					
	PS	PUMP STATUS MONITORING			1	
	SUMPHLA	SUMP HIGH LEVEL ALARM			1	
	TSPV	TRAP SEAL PRIMER VALVE				1



HEAT PUMP BOILER AND FLUID COOLER SYSTEM

NOTES



MCW Consultants Ltd.

PROJECT

**GOVERNMENT OF CANADA
OFFICE FACILITY**

DRAWING

**HEAT PUMP BOILER AND FLUID
COOLER SYSTEM**

PROJECT NO.

8262

DRAWN BY : EB

DATE: 14/03/2012

CHECKED BY: SG

SCALE: NTS

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