

Part 1 General

1.1 SUMMARY

- .1 Section Includes:
 - .1 At minimum detailed narrative description of Sequence of Operation of each system including ramping periods and reset schedules.
 - .1 Control Description Logic (CDL) for each system.
 - .2 Adjustments and fine tuning of all control parameters.
 - .3 Controls Contractor is responsible for 120V power for the controls. Use existing circuits.

1.2 HEATING SYSTEMS

- .1 Hot Water Boiler Plant:
 - .1 Will be re-used to supply heating water to the new room.
- .2 HRV Units (2):
 - .1 Preheat: provide a discharge thermostat that will modulate the preheat coil to maintain 4°C (Adjustable) discharge coil temperature. Shut down the HRV fan if the temperature drops to 2°C and close the outdoor air damper.
 - .2 Reheat: Provide a room thermostat that will modulate the reheat valve and power a relay to cycle the underfloor valve to maintain the room temperature as set on the thermostat.
 - .3 Fan to run constantly, open the outdoor air damper when HRV is on.
- .3 Underfloor (2):
 - .1 The underfloor pump will run when the outdoor air temperature is below 15°C.
 - .2 The control valve will cycle open from either of the 2 room thermostats calling for heat. Provide an aquastat to cycle the control valve to limit the maximum loop temperature to 40°C (adj).
- .4 Thermostats
 - .1 Preheat discharge thermostat to be equal to a Johnson Controls A350D with proper sensor mount for a duct.
 - .2 Room thermostat to be a modulating output to control the reheat valve.
 - .3 Freeze thermostat to be bulb style with proper sensor mount for a duct and will manual reset.

END OF SECTION