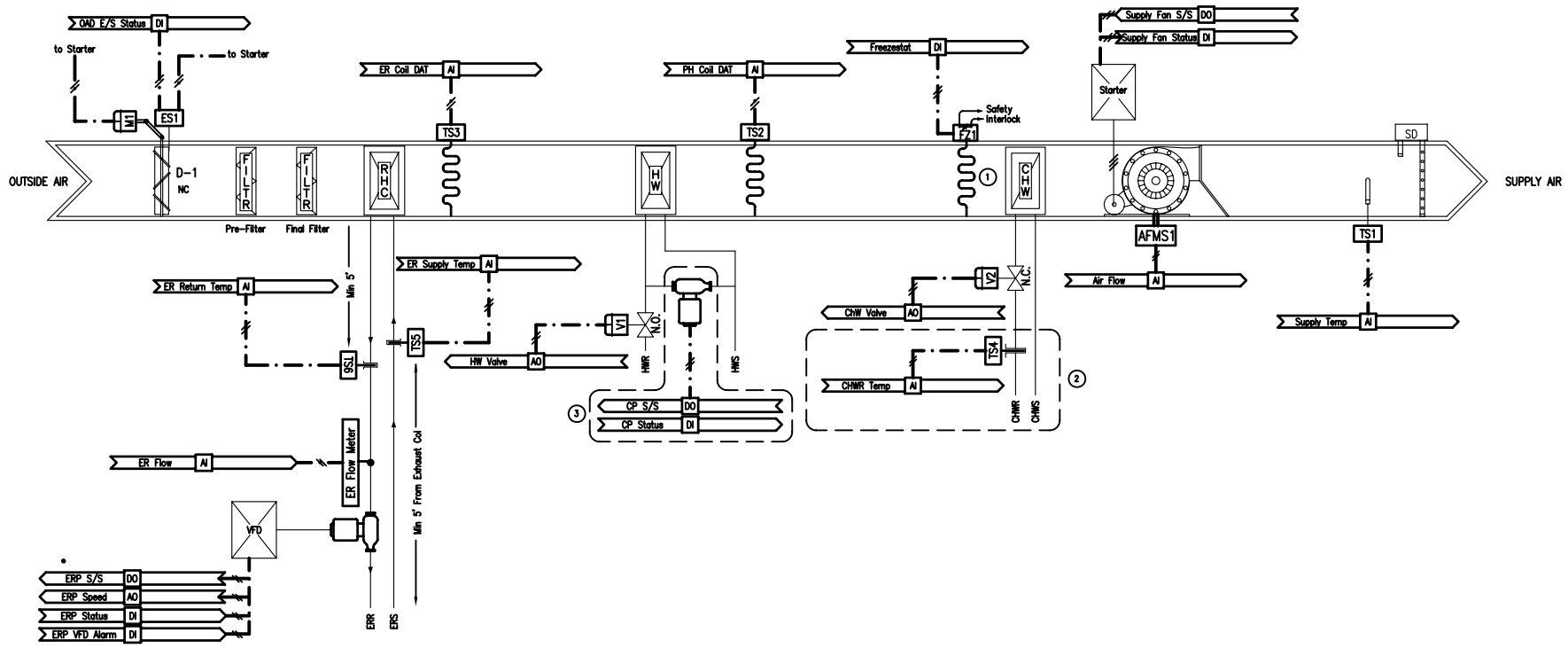
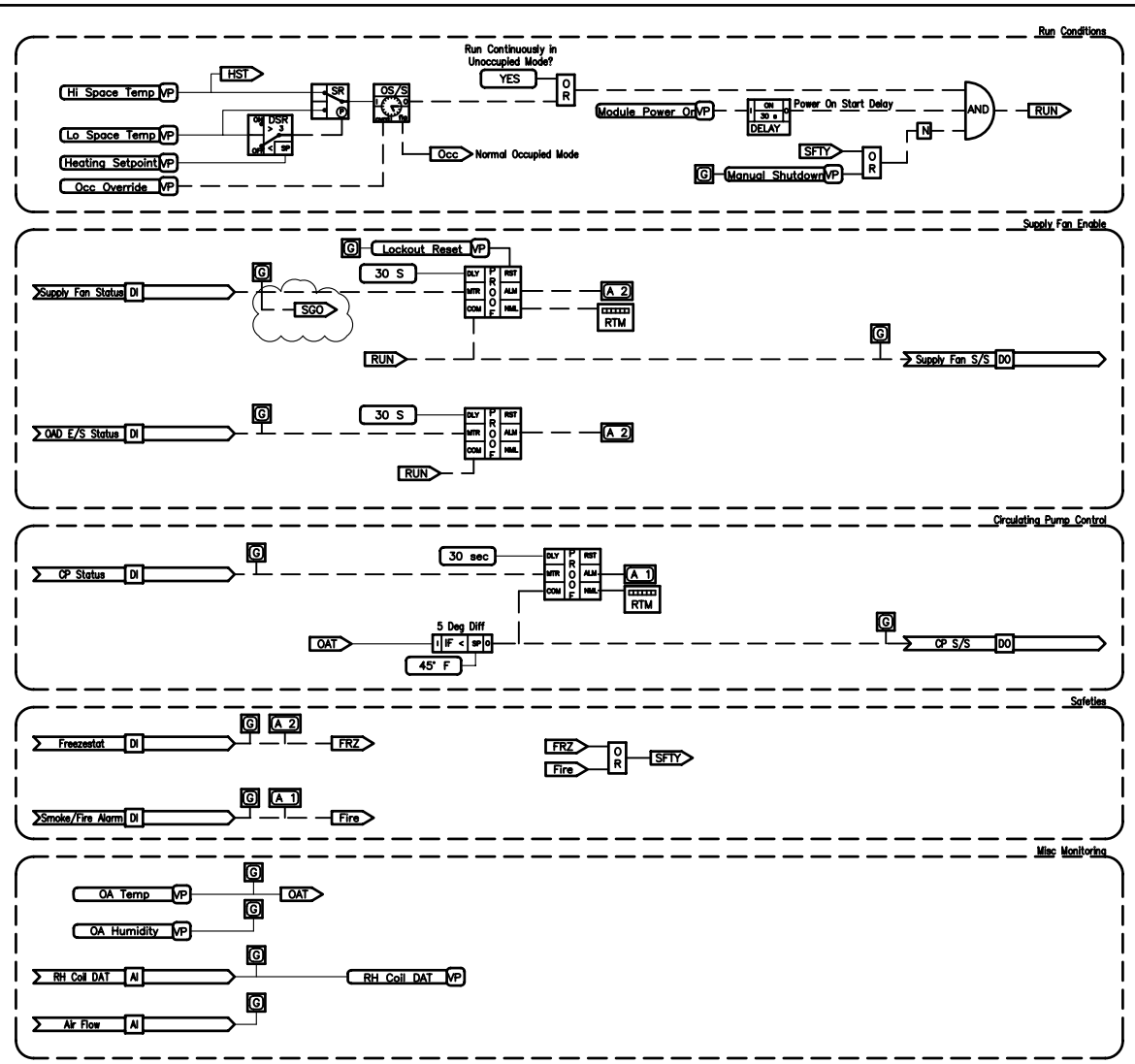


NOTES

1. Provide multiple Freezestats as required to achieve 3ft of element for each 3 sq.ft of coil face area.
2. Provide CHWR temperature well and sensor on all units with coil capacity greater than 10 tons.
3. Where applicable per mechanical design.
4. See sheet C-4.05 Miscellaneous Controls for additional equipment details.
5. Reset values shown should be adjusted for optimized building and energy performance.

100% OA CV AH WITH HEAT RECOVERY, PREHEAT & CHW COIL



Software Logic Diagram

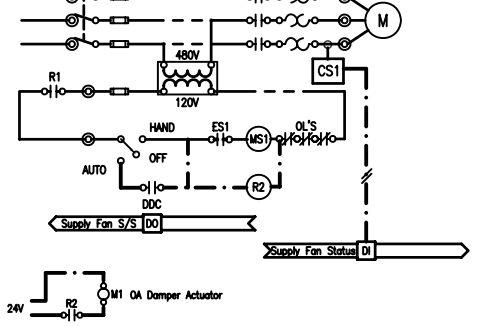
POINTS LIST

ADDRESS	POINT DESCRIPTOR	POINT TYPE DI	AI	DO	AO	VP	REMARKS
	Supply Fan S/S			•			
	Supply Fan Status	•					
	Air Flow		•				
	Supply Temp		•				
	PH Coil DAT		•				
	Freezestat	•					
	OAD E/S Status	•					
	ER Coil DAT		•				
	CHWR Temp		•				See Note 2
	CHW Valve				•		
	HW Valve				•		
	Circ Pump S/S			•			
	Circ Pump Status	•					
	Fire Alarm	•					
	ER Pump S/S			•			
	ER Pump Status	•					
	ERP VFD Alarm	•					
	ERP Speed				•		
	ER Supply Temp		•				
	ER Return Temp		•				
	ER Flow		•				
	EX or SP Humidity		•				

LOGIC VARIABLES

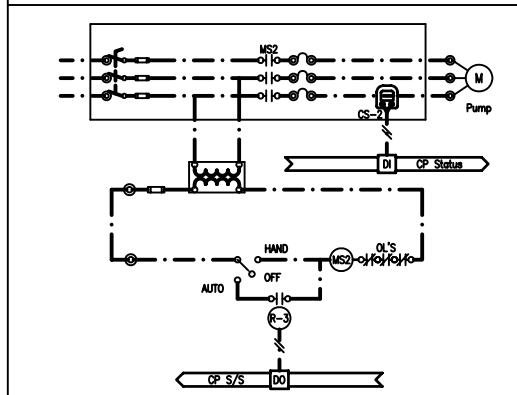
BINARY	ANALOG	DESCRIPTION
Occ		ON WHEN OCCUPIED MODE ACTIVE
RUN		ON WHEN UNIT COMMANDED TO START
SGO		ON WHEN SUPPLY FAN ENERGIZED AND STATUS PROVEN
SMK		ON WHEN SMOKE DETECTOR IS IN ALARM
FRZ		ON WHEN FREEZESTAT IS IN ALARM
Fire		ON WHEN FIRE ALARM IS ACTIVE
SFTY		ON WHEN "FRZ", "Fire" OR "SMK" ARE ON
	HST	VARIABLE CALCULATED VALUE OF HIGHEST SPACE TEMPERATURE
	OAT	VARIABLE VALUE OF OUTSIDE AIR TEMPERATURE
	SAT	VARIABLE VALUE OF SUPPLY AIR TEMPERATURE
	PHT	VARIABLE VALUE OF PREHEAT AIR TEMPERATURE
	CPCT	VARIABLE CALCULATED VALUE OF CHW VALVE POSITION
	HPCT	VARIABLE CALCULATED VALUE OF HW VALVE POSITION
	ERPS	VARIABLE CALCULATED VALUE OF ENERGY RECOVERY PUMP SPEED
ERHT		ON WHEN ENERGY RECOVERY SYSTEM ENABLED IN HEATING MODE
ERCL		ON WHEN ENERGY RECOVERY SYSTEM ENABLED IN COOLING MODE

ELECTRIC LADDER DIAGRAMS



SUPPLY FAN STARTER

SAFETY INTERLOCK DETAIL



CIRCULATING PUMP STARTER

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REVISIONS

NO.	DESCRIPTION	DATE

THE UNIVERSITY of NORTH CAROLINA at CHAPEL HILL

The University of North Carolina
Chapel Hill, North Carolina

Standard Control Drawings

Eng	RR
Drawn	BMV
Chkd	---
Appd	---
Issued	6/15/2012
Job No.	-----
Scale	N/A
Proj Code	

REV. 6

100% OA CV AH WITH HEAT RECOVERY, PREHEAT & CHW COIL

00 OF 00
SHEET NUMBER

C-1.05
DWG NUMBER