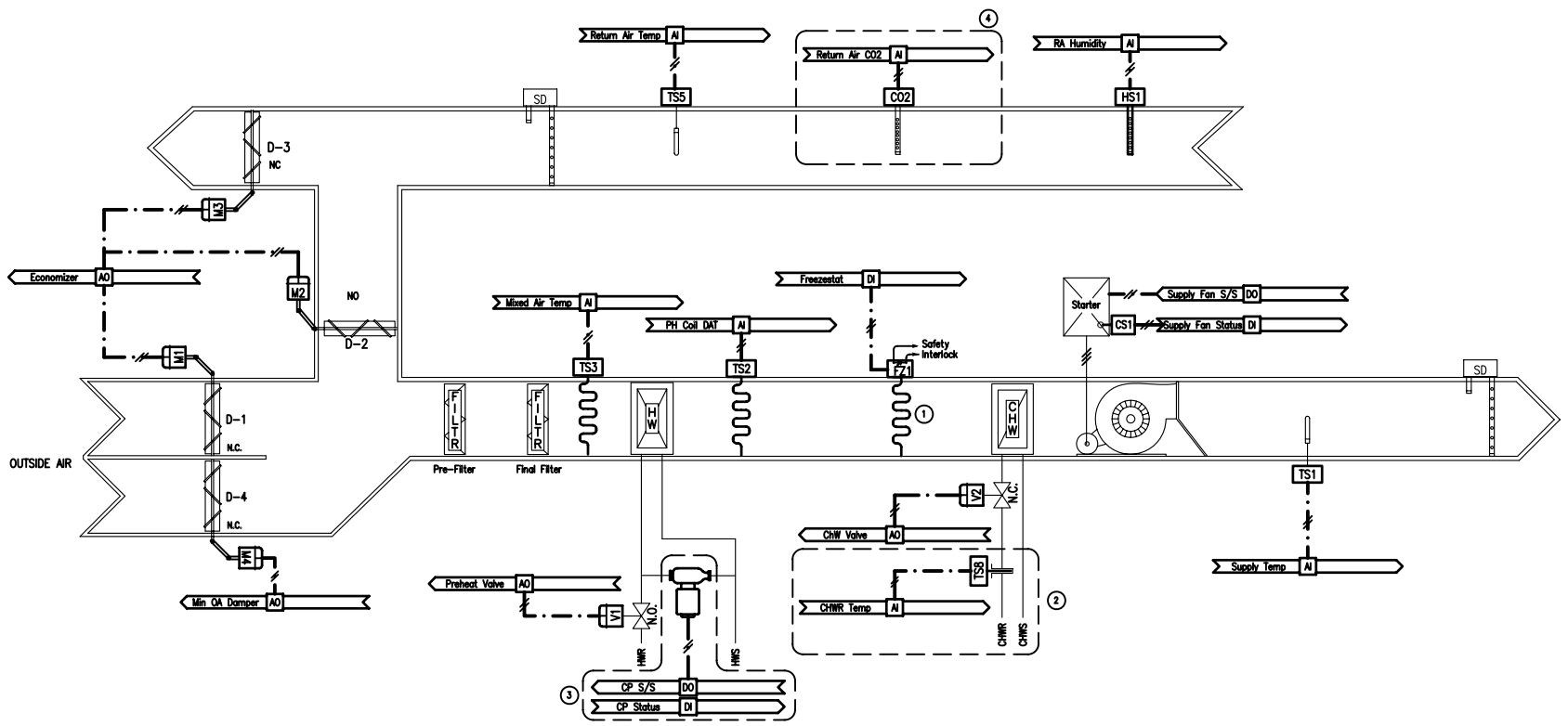
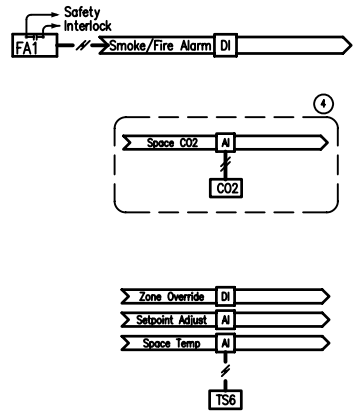


NOTES

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. Provide Return Air or Space CO2 sensors as directed.
5. See sheet C-4.05 Miscellaneous Controls for additional equipment details.



POINTS LIST

ADDRESS	POINT DESCRIPTOR	POINT TYPE DI	AI	DO	AO	VP	REMARKS
	Supply Fan S/S			*			
	Supply Fan Status	*					
	Supply Temp		*				
	PH Coil DAT		*				
	Freezestat	*					
	Space Temp		*				
	Setpoint Adjust		*				
	Zone Override	*					
	Mixed Air Temp		*				
	Return Air Temp		*				
	PreHeat Valve				*		
	Circ Pump S/S			*			See Note 3
	Circ Pump Status	*					See Note 3
	CHW Valve				*		
	Economizer				*		
	Min OA Damper				*		
	Return Air CO2		*				See Note 4
	Space CO2		*				See Note 4
	CHWR Temp		*				See Note 2
	Smoke/Fire Alarm	*					
	RA Humidity		*				

LOGIC VARIABLES

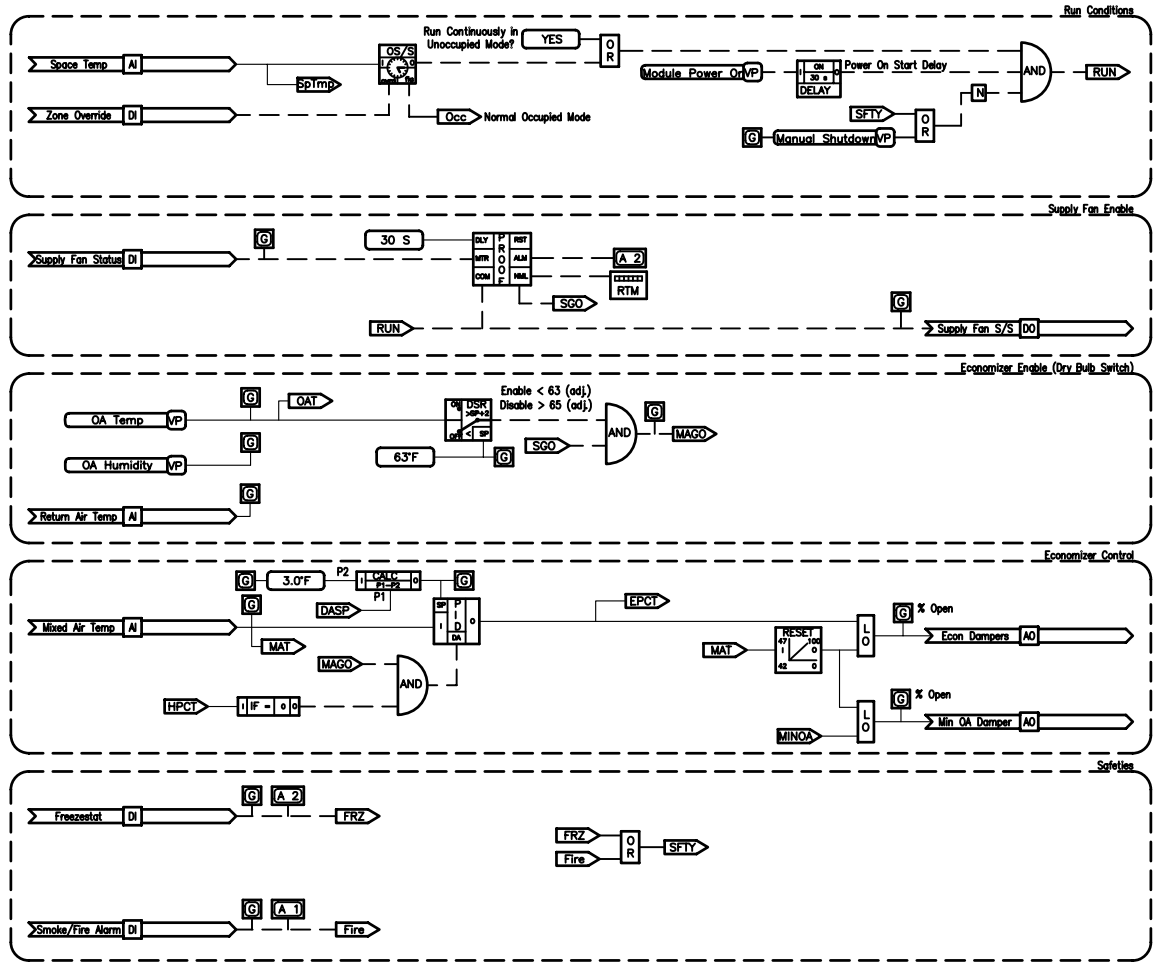
BINARY	ANALOG	DESCRIPTION
Occ		ON WHEN OCCUPIED MODE ACTIVE
RUN		ON WHEN UNIT COMMANDED TO START
SBH		ON WHEN SETBACK HEATING MODE ACTIVE
SBC		ON WHEN SETBACK COOLING MODE ACTIVE
WUP		ON WHEN WARM-UP MODE ACTIVE
CDN		ON WHEN COOL-DOWN MODE ACTIVE
SGO		ON WHEN SUPPLY FAN ENERGIZED AND STATUS PROVEN
MAGO		ON WHEN OA CONDITIONS ALLOW ECONOMIZER CONTROL
FRZ		ON WHEN FREEZESTAT IS IN ALARM
Fire		ON WHEN FIRE ALARM IS ACTIVE
SFTY		ON WHEN ANY UNIT SHUTDOWN ALARM IS ON
	SpTmp	VARIABLE VALUE OF SPACE TEMPERATURE
	OAT	VARIABLE VALUE OF OUTSIDE AIR TEMPERATURE
	SAT	VARIABLE VALUE OF SUPPLY AIR TEMPERATURE
	PHT	VARIABLE VALUE OF PREHEAT AIR TEMPERATURE
	MAT	VARIABLE VALUE OF MIXED AIR TEMPERATURE
	DASP	VARIABLE CALCULATED VALUE OF DISCHARGE TEMPERATURE SETPOINT
	CPCT	VARIABLE CALCULATED VALUE OF CHW VALVE POSITION
	HPCT	VARIABLE CALCULATED VALUE OF HW VALVE POSITION
	EPCT	VARIABLE CALCULATED VALUE OF ECONOMIZER PID OUTPUT
	MINOA	VARIABLE CALCULATED VALUE OF MIN OA DAMPER POSITION

REVISIONS

NO.	DESCRIPTION	DATE

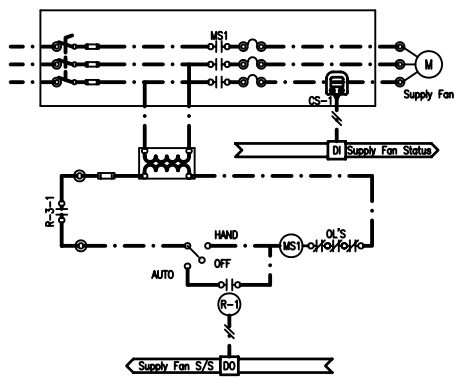
THE UNIVERSITY of NORTH CAROLINA at CHAPEL HILL

SINGLE DUCT CV AH WITH PREHEAT & CHW COIL, MIN OA DAMPER, NO RETURN FAN



Software Logic Diagram

ELECTRIC LADDER DIAGRAMS



SAFETY INTERLOCK DETAIL

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The University of North Carolina
Chapel Hill, North Carolina

Standard Control Drawings

Eng	RR
Drawn	BMV
Chkd	---
Appd	---
Issued	05/05/2010
Job No.	-----
Scale	N/A
Proj Code	

REV. 5

SINGLE DUCT CV AH WITH PREHEAT & CHW COIL, MIN OA DAMPER, NO RETURN FAN

00 OF 00
SHEET NUMBER

C-1.08
DWG NUMBER