

CONTROL DIAGRAM LEGEND									
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY OR EXHAUST AIR VALVE		VARIABLE FREQUENCY DRIVE		GRAVITY BACKDRAFT DAMPER		TEMPERATURE SENSOR		FILTER DIFFERENTIAL PRESSURE
	MOTOR OPERATED CONTROL DAMPER		2-WAY CONTROL VALVE		HEAT EXCHANGER		HUMIDITY SENSOR		DIGITAL INPUT
	FILTER		3-WAY CONTROL VALVE		VARIABLE AIR VOLUME TERMINAL UNIT		CARBON MONOXIDE SENSOR		DIGITAL OUTPUT
	COOLING COIL		FLOW MEASURING DEVICE		FREEZE STAT		CARBON DIOXIDE SENSOR		ANALOG INPUT
	HEATING COIL		PUMP				OUTSIDE RELATIVE HUMIDITY SENSOR		ANALOG OUTPUT
	FAN		DIRECTION OF FLOW				BUILDING STATIC PRESSURE SENSOR		NORMALLY OPEN (CONTROLLED DEVICE POSITION WITHOUT POWER)
							SMOKE DETECTOR		NORMALLY CLOSED (CONTROLLED DEVICE POSITION WITHOUT POWER)

GENERAL NOTES FOR ALL SHEETS

GENERAL
COORDINATE ALL CONTROLS WORK WITH CONTRACTORS ON ALL RELATED CONSTRUCTION PACKAGES.

ALL POINTS DEFINED BELOW SHALL BE INDEPENDENT.

ALL SET POINTS SHALL BE ADJUSTABLE.

IN THE EVENT OF AN ABNORMAL OFF CONDITION, THE FAILED EQUIPMENT SHALL BE LOCKED OUT AND AN ALARM SHALL BE SENT TO THE OPERATOR'S WORK STATION. IF THE EQUIPMENT IN QUESTION IS PART OF AN N+1 REDUNDANT GROUP THE NEXT UNIT IN ROTATION SHALL START.

POWER FAILURE MODE
THE AUTOMATION SYSTEM SHALL MONITOR THE GENERATOR CONTROL SYSTEM FOR LOSS OF UTILITY POWER SIGNAL. OPERATING ON GENERATORS SIGNAL AND SYSTEM READY TO RETURN TO UTILITY POWER SIGNAL.

ON A LOSS OF UTILITY POWER, THE AUTOMATION SYSTEM SHALL WAIT FOR ALL SPINNING LOADS TO COME TO A STOP 4 MINUTES (ADJ.).

UPON RECEIPT OF THE OPERATING ON GENERATORS SIGNAL, THE AUTOMATION SYSTEM SHALL START THE BUILDING HVAC EQUIPMENT AS FOLLOWS.

LAB EXHAUST FAN SYSTEM - ONE FAN AT 25% AIRFLOW
BUILDING HEATING WATER PUMPS
CADAVER LAB AIR HANDLING UNITS - AHU-3 OR AHU-4
CADAVER LAB CONDENSING UNITS - CU-3 OR CU-4

ON RECEIPT OF A SYSTEM READY TO RETURN TO UTILITY POWER SIGNAL ALL HVAC LOADS SHALL BE STOPPED. AFTER A FIVE MINUTE DELAY (ADJ.) THE EQUIPMENT SHALL BE STARTED IN ACCORDANCE WITH THE ABOVE SEQUENCE FOR STARTING ON GENERATOR POWER.

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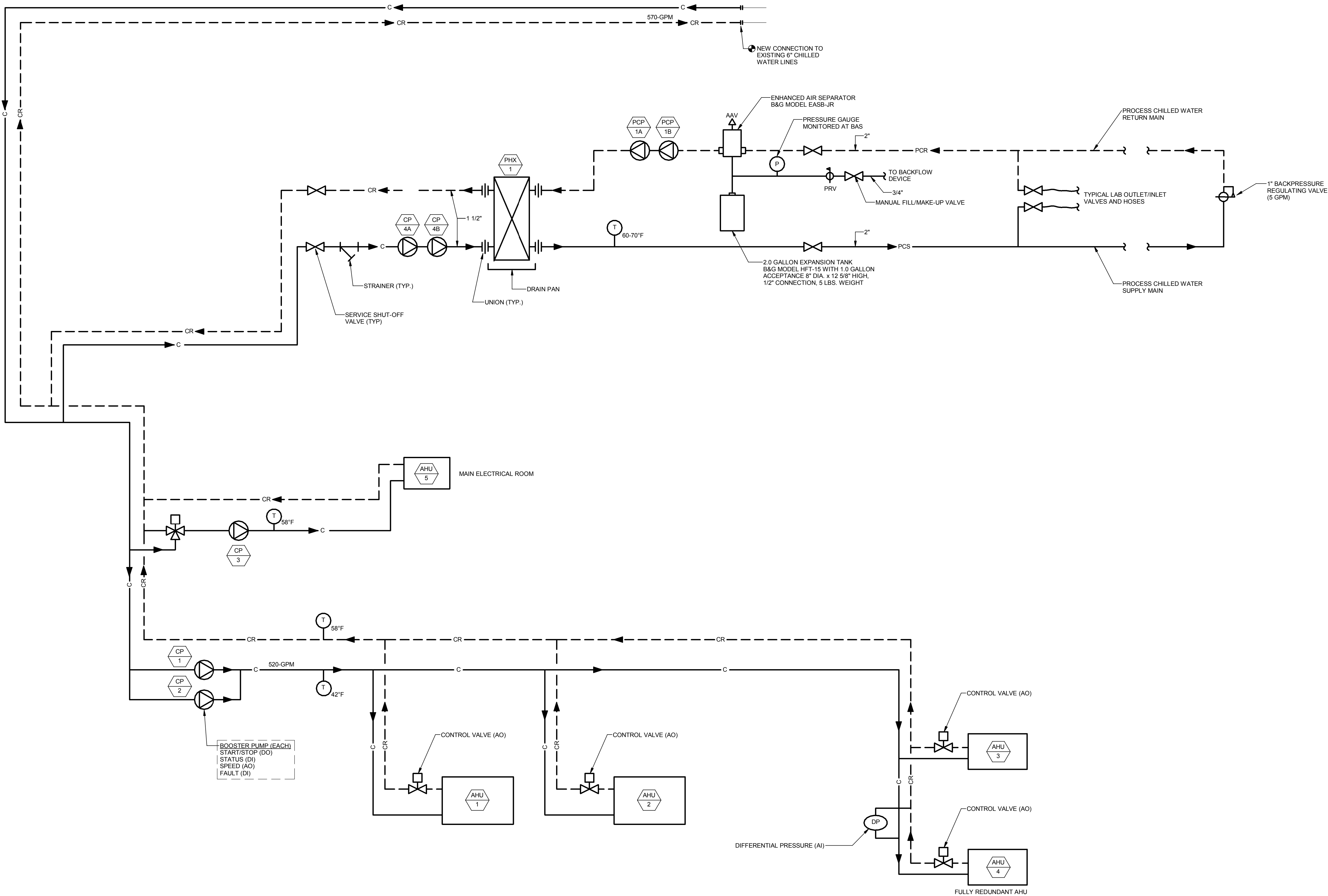
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CHILLED WATER FLOW AND AUTOMATION DIAGRAM

CONFORMED SET 01 JUL 2016

ISSUED FOR CONSTRUCTION (BP2) 01 MAR 2016
No. Description Date

Drawing Title:

DIAGRAMS - MECHANICAL

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