BLDG. 0001 BASE OPERATIO

BLDG TOTAL POINTS	123

TOTAL EXISTING POINTS	117
TOTAL NEW POINTS	6

CONTROLLER #1 - AHU 2 VAV BOXES - 4 VAV'S HOOKED UP TO AN INTEGRATOR CONTROLLER. THIS WILL REQUIRE 4 NEW VAV CONTROLLERS FOR THE 4 VAV BOXES.

POINT INFO	TYPE	NOTES/COMMENTS
VAV1		
VAV 1 RM 131 FLOW, CFM	AI	VAV OUTPUT CFM'S
RM 131 OFFICE TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW
VAV 1 DAMPER CONTROL	AO	DAMPER ACTUATOR
VAV 1 REHEAT VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
VAV 1 REHEAT VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
VAV2		
VAV 2 CREW COMM FLOW, CFM	AI	VAV OUTPUT CFM'S
CREW COMMUNICATIONS ROOM TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW
VAV 2 DAMPER CONTROL	AO	DAMPER ACTUATOR
VAV 2 REHEAT VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
VAV 2 REHEAT VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
VAV3		
VAV 3 RM 130 MEN'S RR, CFM	AI	VAV OUTPUT CFM'S
MEN'S ROOM TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW
VAV 3 DAMPER CONTROL	AO	DAMPER ACTUATOR
VAV 3 REHEAT VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
VAV 3 REHEAT VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
VAV4		
VAV 4 RM 127 CFM	AI	VAV OUTPUT CFM'S
RM 127 DV LOUNGE TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW
VAV 4 DAMPER CONTROL	AO	DAMPER ACTUATOR
VAV 4 REHEAT VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
VAV 4 REHEAT VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	20	

CONTROLLER #2 - CHILLER / CHILLED WATER PUMP

POINT INFO	TYPE	NOTES/COMMENTS
CHILLED WATER SUPPLY TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
CHILLED WATER RETURN TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING

OUTSIDE AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
CHILLED WATER PUMP STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
CHILLER ENABLE	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
CHILL WATER PUMP START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	6	

CONTROLLER #3 - AHU 2 FOR 1ST FLOOR WEST VAV'S

POINT INFO	TYPE	NOTES/COMMENTS
MIXED AIR TEMP	AI	REQUIRES NEW AVERAGING SENSOR. USE EXISTING WIRING
RETURN AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
DUCT STATIC PRESSURE	AI	0-2.5"=4-20mA. USE EXISTING DEVICE, WIRING AND CONDUIT.
OUTSIDE AIR DAMPER	AO	2-10 VDC. USE EXISTING DEVICE, WIRING AND CONDUIT.
EXHAUST/RETURN DAMPERS	AO	2-10 VDC. USE EXISTING DEVICE, WIRING AND CONDUIT.
RETURN FAN VFD CONTROL	AO	4-20 mA. USE EXISTING DEVICE, WIRING AND CONDUIT
SUPPLY FAN VFD CONTROL	AO	4-20 mA. USE EXISTING DEVICE, WIRING AND CONDUIT
SUPPLY FAN STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
RETURN FAN STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
FREEZE STAT	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
FIRE ALARM	BI	INPUT FROM FIRE ALARM PANEL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
FANS START/STOP	BO	ONE OUTPUT STARTS BOTH FANS. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	15	

CONTROLLER #4 - AHU 1 MAIN LOBBY

POINT INFO	TYPE	NOTES/COMMENTS
LOBBY TEMP SENSOR	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING.
MIXED AIR TEMP	AI	REQUIRES NEW AVERAGING SENSOR. USE EXISTING WIRING
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
OUTSIDE AIR DAMPER	AO	2-10 VDC N.C. TO OUTSIDE. USE EXISTING DEVICE, WIRING AND CONDUIT
RELIEF DAMPER	AO	USE EXISTING DEVICE, WIRING AND CONDUIT
FREEZE STAT	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
RETURN FAN STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
SUPPLY FAN STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
FANS START/STOP	BO	ONE OUTPUT STARTS BOTH FANS. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT. STEM DOWN IS OPEN
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
STEAM VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT. STEM UP IS OPEN
STEAM VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	13	

CONTROLLER #5 - AHU 4 ZONE DAMPER CONTROL

POINT INFO	TYPE	NOTES/COMMENTS

2ND FLOOR NORTH ROOM 205 TEM	AI	INSTALL NEW WALL SENS USE EXISTING WIRING.
2ND FLOOR SOUTH ROOM 208 TEM	AI	INSTALL NEW WALL SENS USE EXISTING WIRING.
NORTH ZONE DAMPER	AO	2-10 VDC N.O. TO HOT DECK. USE EXISTING DEVICE, WIRING AND CONDUIT
SOUTH ZONE DAMPER	AO	2-10 VDC N.O. TO HOT DECK. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	4	

*NOTE - Controllers 5 & 6 are located in the same enclosure. Recommend all AHU 4 points be placed in a single controller.

CONTROLLER #6 - AHU 4 MULTIZONE UNIT FEEDS 2ND FLOOR

POINT INFO	TYPE	NOTES/COMMENTS
MIXED AIR TEMP	AI	REQUIRES NEW AVERAGING SENSOR. USE EXISTING WIRING
RETURN TEMPERATURE	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
COLD DECK TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
HOT DECK TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
OUTSIDE AIR DAMPER	AO	2-10 VDC N.C. TO OUTSIDE. USE EXISTING DEVICE, WIRING AND CONDUIT
RETURN DAMPER	AO	2-10 VDC N.O. USE EXISTING DEVICE, WIRING AND CONDUIT
FREEZE STAT	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
FAN STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
SUPPLY FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COLD DECK VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT. STEM DOWN IS OPEN
COLD DECK VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HOT DECK VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT. STEM UP IS OPEN
HOT DECK VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	13	

CONTROLLER #7 - BASEMENT PHONE ROOM / REST ROOM EXH FAN

POINT INFO	TYPE	NOTES/COMMENTS
FAN COIL 4 SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
BASEMENT PHONE ROOM TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING.
FAN COIL 4 FAN STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
FAN COIL 4 CW VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
FAN COIL 4 CW VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
FAN COIL 4 FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
RESTROOM EXH FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	7	

CONTROLLER #8 - AHU 3 1ST FLOOR EAST OFFICES

POINT INFO	TYPE	NOTES/COMMENTS
RM 109 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING.
MIXED AIR TEMP	AI	REQUIRES NEW AVERAGING SENSOR. USE EXISTING WIRING
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
MIXED AIR DAMPER	AO	2-10 VDC. USE EXISTING DEVICE, WIRING AND CONDUIT
FREEZE STAT	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
RETURN FAN STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
SUPPLY FAN STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT

AHU FANS START/STOP	BO	OUTPUT STARTS BOTH FAI USE EXISTING DEVICE, WIRING AND CONDUIT
STEAM VALVE (FLOATNG)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT. STEM UP IS OPEN
STEAM VALVE (FLOATNG)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
CW VALVE (FLOATNG)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
CW VALVE (FLOATNG)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT. STEM DOWN IS OPEN
TOTAL	12	

CONTROLLER #9 - FAN COIL 3 1ST FLOOR RM. 118 WEATHER LOBBY

POINT INFO	TYPE	NOTES/COMMENTS
FAN COIL 3 SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
RM 118 LOBBY TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING.
FAN COIL 3 FAN STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
FAN COIL 3 CW VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
FAN COIL 3 CW VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
FAN COIL 3 FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	6	

CONTROLLER #10 - FAN COIL 2 FIRST FLOOR RM. 122 DISPATCH

POINT INFO	TYPE	NOTES/COMMENTS
FAN COIL 2 SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
RM 122 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING.
FAN COIL 2 FAN STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
FAN COIL 2 CW VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
FAN COIL 2 CW VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
FAN COIL 2 FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	6	

CONTROLLER #11 - FAN COIL 1 COMPUTER ROOM LIEBERT UNIT

POINT INFO	TYPE	NOTES/COMMENTS
COMPUTER ROOM TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING.
FAN COIL 1 DISCHARGE AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
FAN COIL 1 MIXED AIR TEMP	AI	REQUIRES NEW AVERAGING SENSOR. USE EXISTING WIRING
FAN COIL 1 MIXED AIR DAMPER	AO	2-10 VDC USE EXISTING DEVICE, WIRING AND CONDUIT
FAN COIL 1 FAN STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
FAN COIL 1 COOL VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
FAN COIL 1 COOL VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
FAN COIL 1 FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	8	

CONTROLLER #12 - COMPUTER ROOM DX FAN COIL

POINT INFO	TYPE	NOTES/COMMENTS

ROOM HUMIDITY	AI	REQUIRES NEW SENSOR. [illegible] EXISTING WIRING. SEE NOTE BELOW.
ROOM TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING.
DX COOLING START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
FAN COIL START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	4	

Controller 12 Note - Either a combination humidity/temp sensor or separate humidity and temp sensors are acceptable.

CONTROLLER #13 - SINGLE 15# STEAM BOILER (HONEYWELL)

POINT INFO	TYPE	NOTES/COMMENTS
STEAM PRESSURE	AI	4-20mA = 0-100psi. USE EXISTING DEVICE, WIRING AND CONDUIT
BOILER ALARM	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
BOILER ENABLE	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	3	

ADDITIONAL REQUIREMENTS - HARDWARE

POINT INFO	TYPE	NOTES/COMMENTS
VAV 1 DISCHARGE AIR SENSOR	AI	INSTALL NEW DISCHARGE AIR SENSOR
VAV 2 DISCHARGE AIR SENSOR	AI	INSTALL NEW DISCHARGE AIR SENSOR
VAV 3 DISCHARGE AIR SENSOR	AI	INSTALL NEW DISCHARGE AIR SENSOR
VAV 4 DISCHARGE AIR SENSOR	AI	INSTALL NEW DISCHARGE AIR SENSOR
COMPUTER ROOM DX FAN COIL FAN STATUS	BI	INSTALL NEW CURRENT SENSING RELAY FOR FAN STATUS
TOTAL	5	

ADDITIONAL REQUIREMENTS - METERS

POINT INFO	TYPE	NOTES/COMMENTS
GAS METER	BI	PROVIDE PULSE METER HEAD FOR EXISTING GAS METER. PULSE HEAD WILL BE WIRED INTO NEW CONTROLLER AND WILL PROVIDE CURRENT AND TOTALIZED GAS CONSUMPTION.
TOTAL	1	

*NOTE - VAV WALL SENSORS

All VAV wall temperature sensors and/or thermostats shall have the ability to access the VAV controller parameters either by using the buttons on the sensor itself or by plugging in a portable field service device for access using an available plug in port on the sensor.

*NOTE - WALL SENSORS/SETPOINT & OVERRIDE CONTROL

Install wall sensors with setpoint and override control in occupied areas unless specifically noted to not install this type sensor. Typical wall sensors for hangars, warehouse areas and mechanical rooms will be industrial grade plate style sensors. Most of the buildings will not use the setpoint or override functions at this time but may in the future as building requirements change. Most buildings will be programmed so that the area setpoint is set in software and not set by occupants. Final determination as to which buildings have occupant setpoint control will be made during the software programming. The setpoints will have high and low limits in buildings where occupant setpoint control is allowed. See specific building requirements for additional information.

**NOTE - SINGLE POINT SHELTER-IN-PLACE (SIP) SWITCH

All air handlers, exhaust fans, fan coils, fan-powered VAV's, unit heaters and cabinet heaters will be programmed to immediately shut down when the shelter-in-place switch is activated. The shelter-in-place switch is located in the main fire station (Bldg. 0003) control room. Essentially, when the shelter-in-place switch is activated all mechanical equipment with a control output and that moves air will be shutdown. When the switch is placed back into the normal position all of the equipment shutdown will restart with delays. The delays are needed to prevent a large load on the utility systems.

SEQUENCE OF OPERATIONS

AIR HANDLER 1

24 Hour Occupied Mode - The air handler fans will run continuously. The heating setpoint is 70 °F (adjustable). The cooling setpoint will be 2 °F (adjustable) above the heating setpoint. The DDC system will modulate the heating valve to maintain the heating setpoint and modulate the cooling valve to maintain the cooling setpoint. The DDC system will modulate the outside and return dampers in tandem to maintain the mixed air setpoint. Mixed air will be reset according to the following reset schedule: the mixed air will be set at 60 °F (adjustable) when room temp is 76 °F and set at 74 °F (adjustable) when the room temp is 68 °F. The relief damper will be reset according to the following reset schedule: outside air damper 100% open = relief dampers 100% open (adjustable), outside air damper 30% open = relief dampers 0% open (adjustable). The mixed air dampers minimum position will be 10% of damper range. When the mixed air temp decreases to 50 °F (adjustable) the dampers will modulate to the closed position to maintain the low limit. When the outside air temp increases to 73 °F (adjustable) the dampers will modulate to the minimum position.

Fan Interlocks - When the air handler is off close the outside and relief air dampers, the heating and cooling valves and open the return damper. When the fire alarm panel is in alarm (located in controller 3) stop the air handler.

AIR HANDLER 2 - FEEDS VAV SYSTEM

24 Hour Occupied Mode - The AHU fans will run continuously. The supply fan VFD will modulate to maintain a 1.5 "WC (adjustable) setpoint. The return fan VFD will track the supply fan VFD according to the following reset schedule: supply VFD output of 13 ma = return VFD output of 20 ma (adjustable) and supply VFD out of 4 ma = return VFD output of 4 ma (adjustable). The DDC system will modulate the outside air dampers, the return/relief dampers and the cooling valve in sequence to maintain the supply air setpoint. Supply air will be reset to satisfy the area with the greatest cooling requirement according to the following reset schedule: the supply air will be set at 55 °F (adjustable) when the max room temp is 78 °F and set at 75 °F (adjustable) when the max room temp is 70 °F. The outside airflow minimum position will be 30% (adjustable) of the damper range. When the outside air increases to 73 °F (adjustable) the outside air damper will be set at the minimum airflow position. The mixed air temp will have a low limit set point of 45 °F (adjustable).

Fan Interlocks - When the air handler is off close the outside, relief air dampers and the cooling valve. When the fire alarm panel is in alarm (located in controller 3) stop the air handler.

VAV TERMINAL UNITS

24 Hour Occupied Mode - VAV's with Reheat
On a call for full cooling at temperature sensor the VAV terminal unit controller shall position the VAV box damper to deliver maximum scheduled air quantity and the heating control valve will be closed to the coil. As the call for cooling decreases controller shall modulate box damper closed to minimum scheduled air quantity. On a call for heating, after the damper is at minimum position, the heating control valve shall modulate to flow through coil. The reverse shall occur on a decrease in call for heating.

AIR HANDLER 3

24 Hour Occupied Mode - The air handler fans will run continuously. The user selected setpoint is the heating setpoint (Rm 109). The cooling setpoint will be 2 °F (adjustable) above the heating setpoint. The DDC system will modulate the heating valve to maintain the heating setpoint and modulate the cooling valve to maintain the cooling setpoint. The DDC system will modulate the mixed dampers, heating valve and cooling valve in sequence to maintain the setpoint. The supply temp will be limited to a maximum of 120 °F (adjustable). The mixed air dampers minimum position will be 10% of damper range. When the mixed air temp decreases to 50 °F (adjustable) the dampers will modulate to the closed position to maintain the low limit. When the outside air temp increases to 73 °F (adjustable) the dampers will modulate to the minimum position.

Fan Interlocks - When the air handler is off close the outside air damper, the heating and cooling valves. When the fire alarm panel is in alarm (located in controller 3) stop the air handler.

AIR HANDLER 4 - FEEDS 2 ZONES ON 2ND FLOOR

24 Hour Occupied Mode - The air hand fans will run continuously. The DDC syst will modulate the outside/return dampers and cooling valve in sequence to maintain the cold deck setpoint. Cold deck air will be reset to satisfy the area with the greatest cooling requirement of the two zones (see controller 5) according to the following reset schedule: the cold deck will be set at 55 °F (adjustable) when the max room temp is 5 °F (adjustable) above setpoint and set at 68 °F (adjustable) when the max room temp difference is 0 °F (adjustable). The DDC system will modulate the heating valve to maintain the hot deck setpoint. Hot deck air will be reset to satisfy the area with the greatest heating requirement of the two zones (see controller 5) according to the following reset schedule: the hot deck will be set at 115 °F (adjustable) when the minimun room temp is 5 °F (adjustable) below setpoint and set at 80 °F (adjustable) when the minimum room temp difference is 0 °F (adjustable).

The mixed air dampers minimum position will be 10% of damper range. When the mixed air temp decreases to 50 °F (adjustable) the dampers will modulate to the closed position to maintain the low limit. When the outside air temp increases to 73 °F (adjustable) the dampers will modulate to the minimum position.

Fan Interlocks - When the air handler is off close the outside air damper, the heating and cooling valves. When the fire alarm panel is in alarm (located in controller 3) stop the air handler.

Zone Damper Control - The room 205 and room 208 zone dampers will modulate to maintain the user selectable setpoint.

FAN COIL 1 AND DX FAN COIL UNITS FOR WEATHER COMPUTER ROOM

24 Hour Occupied Mode Fan Coil 1 - The fan coil fan will run continuously. The DDC system will modulate the mixed dampers and cooling valve in sequence to maintain the 70 °F (adjustable) room setpoint. The mixed air dampers will modulate closed as necessary to maintain a mixed air low limit of 40 °F (adjustable). When the outside air temp increases to 70 °F (adjustable) the dampers will modulate to the closed position.

DX Fan Coil Unit - This fan coil was added to supplement fan coil 1. The fan and DX will start when the computer room temp reading from the fan coil 1 room sensor in controller 11 increases to 75 °F (adjustable) and stop when the temp is below 73 °F (adjustable).

FAN COIL 2 - RM 122 DISPATCH - The fan coil fan will run continuously. The cooling valve will modulate to maintain the user selectable setpoint.

FAN COIL 3 - RM 118 WEATHER LOBBY - The fan coil fan will run continuously. The cooling valve will modulate to maintain the user selectable setpoint.

FAN COIL 4 - BASEMENT PHONE ROOM - The fan coil fan will run continuously. The cooling valve will modulate to maintain the user selectable setpoint.

REST ROOM EXHAUST FAN - The exhaust fan will run continuously.

CHILLER - Since fan coil 2 & 3 do not have outside air this chiller runs 24x7 to provide a cooling medium for these areas. The chilled water pump will be scheduled to run continuously and the chiller will be enabled when the chilled water pump is indicates the pump is running. If the chilled water pump fails the chiller will be disabled.

HONEYWELL BOILER - The boiler will be enabled to operate at all times. After a 60 second delay a boiler alarm message will be sent to the appropriate pagers via a commercial paging system. This will require the ability to send the same alpha-numeric alarm message to multiple pagers. If the boiler steam pressure drops to 1 psi and remains there for 8 minutes then a steam pressure alarm will be sent to the paging system. If at any time during the delay the boiler pressure rises above 2 psi then the alarm condition will be terminated.

BLDG. 0003 MAIN BASE FIRE STATION

BLDG TOTAL POINTS	390

TOTAL EXISTING POINTS	343
TOTAL NEW POINTS	47

This building is occupied 24 hours a day, seven days a week.

CONTROLLER #1 - FAN COIL #18 ROOM 107

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 107 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	7	

CONTROLLER #2 - FAN COIL #14 ROOM 118

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 118 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	7	

CONTROLLER #3 - FAN COIL #12 ROOM 116

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 116 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT

HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	7	

CONTROLLER #4 - FAN COIL #10 ROOM 114

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 114 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	7	

CONTROLLER #5 - FAN COIL #4 ROOM 108

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 108 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	7	

CONTROLLER #6 - FAN COIL #6 ROOM 110

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 110 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT

HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	7	

CONTROLLER #7 - FAN COIL #8 ROOM 112

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 112 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	7	

CONTROLLER #8 - FAN COIL #9 ROOM 113

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 113 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	7	

CONTROLLER #9 - FAN COIL #7 ROOM 111

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 111 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	7	

CONTROLLER #10 - FAN COIL ..5 ROOM 109

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 109 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	7	

CONTROLLER #11 - FAN COIL #11 ROOM 115

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 115 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	7	

CONTROLLER #12 - FAN COIL #13 ROOM 117

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 117 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	7	

CONTROLLER #13 - FAN COIL #15 ROOM 119

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 119 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	7	

CONTROLLER #14 - FAN COIL #16 ROOM 120

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 120 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	7	

CONTROLLER #15 - FAN COIL #17 ROOM 121

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 121 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	7	

CONTROLLER #16 - HW BOILER/CHILLER/MECH ROOM/OSA

POINT INFO	TYPE	NOTES/COMMENTS

CHILLED WATER SUPPLY TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
CHILLED WATER RETURN TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
OUTSIDE AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
HOT WATER SUPPLY TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
HOT WATER RETURN TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
RM 127 MECH RM TEMP	AI	INSTALL NEW PLATE WALL SENSOR. SETPOINT CONTROL NOT REQUIRED. USE EXISTING WIRING.
CW PUMP 6 STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
BOILER ALARM	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
HW PUMP 4 STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
HW PUMP 5 STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
CHILLER 1 START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
CW PUMP 6 START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
BOILER ENABLE	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
HW PUMP 4 START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
HW PUMP 5 START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
RM 127 MECH RM UNIT HEATER	BO	USE EXISTING DEVICE, WIRING AND CONDUIT. PIPING NOT HOOKED UP BUT WILL KEEP CONTROL IN PLACE FOR FUTURE.
TOTAL	**15**	

CONTROLLER #17 - DOMESTIC HOT WATER

POINT INFO	TYPE	NOTES/COMMENTS
DOM HOT WTR SUPPLY TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
TOTAL	**1**	

*NOTE - Put points from controller 16 and 17 in a single controller. Both controllers are located in the same enclosure.

CONTROLLER #35 - FAN COIL 3 ROOM 106

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 106 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	**7**	

CONTROLLER #36 - FAN COIL 2 ROOM 105

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 105 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT

COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	7	

CONTROLLER #37 - FAN COIL 1 ROOM 104

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 104 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	7	

CONTROLLER #40 - LOCKER ROOMS AHU (AHU1/2)-LOCATED IN MEZZANINE MECH ROOM.

POINT INFO	TYPE	NOTES/COMMENTS
RM 102 LOCKER ROOM TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING.
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
HEAT RECOVERY EXHAUST TMP	AI	EXHAUST TEMP. REQUIRES NEW SENSOR. USE EXISTING WIRING
HEAT RECOVERY WTR RETURN	AI	RETURN WATER TEMP. REQUIRES NEW SENSOR. USE EXISTING WIRING
HEAT RECOVERY WTR SUPPLY	AI	SUPPLY WATER TEMP. REQUIRES NEW SENSOR. USE EXISTING WIRING
HEATING & COOLING VALVES	AO	HTG VLV 3-6 VDC N.O. - CLG VLV 9-12 VDC N.C. USE EXISTING DEVICE, WIRING AND CONDUIT
HEAT RECOVERY VALVE	AO	6-9 VDC N.O.
SUPPLY FAN STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
RETURN FAN STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
HEAT RECOVERY PMP STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
HEAT COIL HW CIRC PMP STATU	BI	PUMP STATUS. USE EXISTING DEVICE, WIRING AND CONDUIT
SUPPLY FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
RETURN FAN START/STOP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
HEAT RECOVERY PMP STR/STP	BO	USE EXISTING DEVICE, WIRING AND CONDUIT
HEAT COIL HW CIRC PMP S/S	BO	PUMP START/STOP. USE EXISTING DEVICE, WIRING AND CONDUIT
OUTSIDE AIR DAMPER	BO	2-POSITION DAMPER. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	16	

CONTROLLER #42 - FAN COIL 20 ROOM 140

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING

ROOM 138 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
FAN STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	**7**	

CONTROLLER #43 - FAN COILS 21 & 22 ROOM 140

POINT INFO	TYPE	NOTES/COMMENTS
FC 21 SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
FC 22 SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
FC 21 FAN STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
FC 22 FAN STATUS	BI	USE EXISTING DEVICE, WIRING AND CONDUIT
FC 21 COOLING VLV (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
FC 21 COOLING VLV (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
FC 21 HEATING VLV (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
FC 21 HEATING VLV (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
FC 22 COOLING VLV (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
FC 22 COOLING VLV (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
FC 22 HEATING VLV (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
FC 22 HEATING VLV (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	**12**	

Note: This controller gets its setpoint and temperature from controller #42 - fancoil 20

CONTROLLER #47 - FAN COIL 19 ROOM 134

POINT INFO	TYPE	NOTES/COMMENTS
SUPPLY AIR TEMP	AI	REQUIRES NEW SENSOR. USE EXISTING WIRING
ROOM 139 TEMP	AI	INSTALL NEW WALL SENSOR. USE EXISTING WIRING. CONTROLLER ACCESS FROM SENSOR REQUIRED. SEE NOTES BELOW.
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
COOLING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE OPEN SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
HEATING VALVE (FLOATING)	BO	FLOATING CONTROL VALVE CLOSE SIGNAL. USE EXISTING DEVICE, WIRING AND CONDUIT
TOTAL	**6**	