

CERTIFICATION OF WORK SERVICE CALL

(To be completed by the Contractor and saved in the Contractor's CMMS)

FACID/Building: MD002 Date of Visit: 04-10-19

Contractor Personnel on Site:

1. Dan Hainey, TES Technician
2. _____
3. _____
4. _____
5. _____
6. _____

Service Call Number

CSS# 15107 WO# 5993

Description of Repairs

- Replace (6) JACE batteries, software revision upgrades, AHU-3 JACE N4 upgrade
- Complete incomplete/missing graphics
- Complete missing value bindings
- Add missing hyperlinks onto existing floorplans
- Correct incorrect scheduling and history recording
- Compile deficiency list for Phase II repairs

CERTIFICATION OF WORK

To be signed by the Contractor:

Print Name: Brad Pappal Date: 5-22-19

Signed: BcPappal

To be signed by Facility Manager:

By signing the Certification of Work, the said government representative signature does not constitute acceptance of any work performed by the contractor, it only acknowledges that the contractor was on-site during the identified timeline:

Print Name/Rank: SEE attachemnt acknowledgement Date: _____

Signed: _____

E-Mail: _____

CLASSIFICATION: UNCLASSIFIED

I'm not sure how to confirm this in the system. I can confirm they were here onsite.

Very Respectfully,

Mr. Christopher Huebler
AFOS, Contractor
99TH DIV(R), GAT
Mobile: 443.614.7707
Desk: 910.598.2503
Email: christopher.f.huebler.ctr@mail.mil

-----Original Message-----

From: Tina Lee [<mailto:tina.lee@tideh2o.net>]
Sent: Thursday, May 30, 2019 07:35
To: Huebler, Christopher F CTR USARMY 99 RSC (USA)
<christopher.f.huebler.ctr@mail.mil>
Cc: Augustin, Kenneth P CIV USARMY 99 RSC (USA)
<kenneth.p.augustin.civ@mail.mil>; Adam Colopy <adam.colopy@tideh2o.net>
Subject: [Non-DoD Source] CSS 15107.pdf

Chris,

Could you please sign the COW attached and return to me?

Thank you!

Tustin Energy Solutions, LLC Preventative Maintenance Report

Report Date: 4/17/2019
 Site: USAFC Baltimore
 Address: 450 Sentry Parkway
 Technician: Dan Hainey
 Reviewed By:

Date: 4/17/2019
 Date:

HVAC Automation

- Good - System Operational
- Potential Issue - Additional Work Required
- Non-Functional - Immediate Repair Required

Item #	Add	Checked	Date	Contract Status	Type	Site Name	Device Name	Area Served	Location	Description	Age (Yrs)	System Health	Issue	Issues	Corrective Action Complete
1	x	Yes	A-19	Active	PM	USAFCR Baltimore	AHU-1		Mech 113	York XTI-033X045-EAGA046A VFD SAF	✓ 9	●	Yes	1. Unable to start/stop or schedule the unit from the graphic. 2. Hot water heating coil valve is not responding to commands and remains in open position. 3. Software has provisions for OA airflow station but no airflow station is installed. 4. Supply fan status not reading (remains off).	No

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2	x	Yes	A-19	Active	PM	USAFCR Baltimore	AHU-2		Mech 113	York XTI-036X057-DAHA046A CV SAF	✓ 9	●	Yes	1. Unable to start/stop or schedule the unit from the graphic. 2. Occupancy point not working (unit does not shut-down). 3. VFD points and duct static pressure sensor found in software but there is no VFD. 4. Temperature sensor readings are erratic. 5. Values on graphic do not match values in database (hot water valve, supply air temp). 6. Valves not operating as expected (heating when calling for cooling). 7. Software has provisions for OA airflow station but no airflow station is installed.	No

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3	x	Yes	A-19	Active	PM	USAFCR Baltimore	AHU-3		Mech 217	York XTI-042X066-EAKA046A VFD SAF	✓ 9	●	No	1. Unable to start/stop or schedule the unit from the graphic. 2. Software has provisions for OA airflow station but no airflow station is installed. 3. Heating coil valve unresponsive to commands and remains in current position.	No

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4	x	Yes	A-19	Active	PM	USAFCR Baltimore	HRU-1		Mech 113	York XTI-042X072-HHJJ017A CV SAF CV EAF	✓ 9	●	Yes	1. Energy recovery wheel remains On when the unit is disabled (Unoccupied). 2. Valves not operating as expected (unit is heating when calling for cooling). 3. EAD, SAD, and Bypass modulating dampers not shown on graphic. 4. When the OA damper is set to automatic control it was found to be closed. The bypass damper also found to be closed. This starves the supply fan. One of these dampers should be full open at all times and both modulate in sequence. 5. ExhaustFilterS point reading fault/stale.	No
5	x	Yes	A-19	Active	PM	USAFCR Baltimore	Boiler 1	Building	Mech 113	Lochinvar KBN501	✓ 9	●	Yes	1. Boiler 1Alm point in fault, stale. 2. System differential pressure reading low. 3. System flow reading low.	No

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6	x	Yes	A-19	Active	PM	USAFRC Baltimore	Boiler 2	Building	Mech 113	Lochinvar KBN501	✓ 9	●	Yes	1. System differential pressure reading low. 2. System flow reading low.	No
7	x	Yes	A-19	Active	PM	USAFRC Baltimore	Chiller	Building	Outside Mech 113	York YLAA0115SE46XCA	✓ 9	●	Yes	1. Appears that BACnet connection planned but never completed. 2. Chiller operating standalone only. 3. Chilled water pump status points not working. 4. Chilled water flow meter not reading. 5. Chiller graphic incomplete. 6. PumpDischPress not reading. 7. PumpSuctPress not reading. 8. Chiller is turned off at this time.	No

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8	x	Yes	A-19	Active	PM	USAFCR Baltimore	VAV1_02				✓ 9	●	Yes	1. Controller needs a download. 2. Airflow setpoints seem too low. 3. Unable to change setpoints on graphic. 4. Box is low on airflow. 5. CO2 sensor reading low (171 ppm). 6. Reheat valve override not working.	No
9	x	Yes	A-19	Active	PM	USAFCR Baltimore	VAV1_03				✓ 9	●	Yes	1. Unable to change setpoints on graphic. 2. Box is low on airflow.	No
10	x	Yes	A-19	Active	PM	USAFCR Baltimore	VAV1_04				✓ 9	●	Yes	1. Airflow setpoints seem too low. 2. Unable to change setpoints on graphic.	No
11	x	Yes	A-19	Active	PM	USAFCR Baltimore	VAV1_05				✓ 9	●	Yes	1. Airflow setpoints seem too low. 2. Unable to change setpoints on graphic.	No
12	x	Yes	A-19	Active	PM	USAFCR Baltimore	VAV1_06				✓ 9	●	Yes	1. Airflow setpoints seem too low. 2. Unable to change setpoints on graphic.	No

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13	x	Yes	A-19	Active	PM	USAFC Baltimore	VAV1_07				✓ 9	●	Yes	1. Airflow setpoints seem too low. 2. Unable to change setpoints on graphic. 3. No rise in SAT with heating valve override to open.	No
14	x	Yes	A-19	Active	PM	USAFC Baltimore	VAV1_08				✓ 9	●	Yes	1. Airflow setpoints all generally the same value. 2. Box is low on airflow. 3. Unable to change setpoints on graphic. 4. CO2 sensor reading too high.	No
15	x	Yes	A-19	Active	PM	USAFC Baltimore	VAV1_09				✓ 9	●	Yes	1. Airflow setpoints do not appear correct. 2. Unable to change setpoints on graphic. 3. CO2 sensor reading too high.	No
16	x	Yes	A-19	Active	PM	USAFC Baltimore	VAV1_10				✓ 9	●	Yes	1. Airflow setpoints are not correct. 2. Unable to change setpoints on graphic. 3. CO2 sensor reading too low.	No
17	x	Yes	A-19	Active	PM	USAFC Baltimore	CAV2_01				✓ 9	●	Yes	1. Box is low on airflow. 2. Unable to change setpoints on graphic. 3. Box is occupied and graphic reads that the box is unoccupied.	No

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18	x	Yes	A-19	Active	PM	USAFCR Baltimore	CAV2_02	Kitchen	Receiving		✓ 9	●	Yes	1. Box is low on airflow. 2. Unable to change setpoints on graphic. 3. CO2 sensor reading too low.	No
19	x	Yes	A-19	Active	PM	USAFCR Baltimore	CAV4_01				✓ 9	●	Yes	1. Box is low on airflow. 2. Unable to change setpoints on graphic. 3. CO2 sensor reading too high (900 ppm).	No
20	x	Yes	A-19	Active	PM	USAFCR Baltimore	CAV4_02				✓ 9	●	Yes	1. Box is low on airflow. 2. Unable to change setpoints on graphic.	No
21	x	Yes	A-19	Active	PM	USAFCR Baltimore	CAV4_03				✓ 9	●	Yes	1. Box is low on airflow. 2. Unable to change setpoints on graphic. 3. No rise in DAT when heating coil valve commanded open.	No
22	x	Yes	A-19	Active	PM	USAFCR Baltimore	VAV3_01				✓ 9	●	Yes	1. Controller needs a download. 2. Unable to change setpoints on graphic. 3. CO2 sensor reading low (270 ppm).	No
23	x	Yes	A-19	Active	PM	USAFCR Baltimore	VAV3_02				✓ 9	●	Yes	1. Controller needs a download. 2. Unable to change setpoints on graphic.	No

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24	x	Yes	A-19	Active	PM	USAFC Baltimore	VAV3_03				✓ 9	●	Yes	1. Box a little low on airflow. 2. Unable to change setpoints on graphic.	No
25	x	Yes	A-19	Active	PM	USAFC Baltimore	VAV3_04				✓ 9	●	Yes	1. Box low on airflow. 2. Unable to change setpoints on graphic. 3. CO2 setpoint in software but no CO2 sensor.	No
26	x	Yes	A-19	Active	PM	USAFC Baltimore	VAV3_05				✓ 9	●	Yes	Unable to change setpoints on graphic.	No
27	x	Yes	A-19	Active	PM	USAFC Baltimore	VAV3_06				✓ 9	●	Yes	Unable to change setpoints on graphic.	No
28	x	Yes	A-19	Active	PM	USAFC Baltimore	VAV3_07				✓ 9	●	Yes	Unable to change setpoints on graphic.	No
29	x	Yes	A-19	Active	PM	USAFC Baltimore	VAV3_08				✓ 9	●	Yes	Unable to change setpoints on graphic.	No
30	x	Yes	A-19	Active	PM	USAFC Baltimore	VAV3_09				✓ 9	●	Yes	1. Box a little low on airflow. 2. Unable to change setpoints on graphic.	No
31	x	Yes	A-19	Active	PM	USAFC Baltimore	VAV3_10				✓ 9	●	Yes	Unable to change setpoints on graphic.	No
32	x	Yes	A-19	Active	PM	USAFC Baltimore	VAV3_11				✓ 9	●	Yes	Unable to change setpoints on graphic.	No
33	x	Yes	A-19	Active	PM	USAFC Baltimore	VAV3_12				✓ 9	●	Yes	Unable to change setpoints on graphic.	No
34	x	Yes	A-19	Active	PM	USAFC Baltimore	VAV3_13				✓ 9	●	Yes	Unable to change setpoints on graphic.	No
35	x	Yes	A-19	Active	PM	USAFC Baltimore	UH_1A	112 Equip Storage	112 Equip Storage	Vulcan	✓ 9	●	No		
36	x	Yes	A-19	Active	PM	USAFC Baltimore	UH_2A	112 Equip Storage	112 Equip Storage	Vulcan	✓ 9	●	No		
37	x	Yes	A-19	Active	PM	USAFC Baltimore	UH_3A	Receiving	Receiving	Vulcan	✓ 9	●	No		

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38	x	Yes	A-19	Active	PM	USAFCR Baltimore	UH_4A	121 TA50 Storage	121 TA50 Storage	Vulcan	✓ 9	●	No		
39	x	Yes	A-19	Active	PM	USAFCR Baltimore	UH_5A	Mech 113	Mech 113	Vulcan HV-036	✓ 9	●	No		
40	x	Yes	A-19	Active	PM	USAFCR Baltimore	UH_6A	Mech 217	Mech 217	Vulcan	✓ 9	●	No		
41	x	Yes	A-19	Active	PM	USAFCR Baltimore	EF_1A			Wired to CAV4_02 controller	✓ 9	●	No		
42	x	Yes	A-19	Active	PM	USAFCR Baltimore	EF_2A			Wired to VAV1_10 controller	✓ 9	●	No		
43	x	Yes	A-19	Active	PM	USAFCR Baltimore	EF_3A			Wired to VAV3_02 controller	✓ 9	●	Yes	1. Controller needs a download. 2. Fan appears uncontrolled on / off except for HVAC Shutdown. 3. Fan not shown on graphics.	No
44	x	Yes	A-19	Active	PM	USAFCR Baltimore	EF_4A			Wired to VAV1_07 controller	✓ 9	●	Yes	Fan not shown on graphics.	No
45	x	Yes	A-19	Active	PM	USAFCR Baltimore	EF_5A	112 Equip Storage	112 Equip Storage	1. Inline Duct 2. Wired to CAV2_01 controller	✓ 9	●	Yes	1. Check software. Fan running constant and should start/stop based on room temperature.	No
46	x	Yes	A-19	Active	PM	USAFCR Baltimore	EF_6A			Wired to VAV1_09 controller	✓ 9	●	No		
47	x	Yes	A-19	Active	PM	USAFCR Baltimore	EF_7A	Mech 113	Mech 113	Inline Duct	✓ 9	●	Yes	1. Fan not running in Auto or Hand. 2. Fan start/stop to relay ok. 3. Motor operated intake air damper non-functional.	No
48	x	Yes	A-19	Active	PM	USAFCR Baltimore	EF-8A			Wired to VAV3_07 controller	✓ 9	●	Yes	1. Fan appears uncontrolled on / off except for HVAC Shutdown. 2. Fan not shown on graphics.	No
49	x	Yes	A-19	Active	PM	USAFCR Baltimore	EF_9A	Mech 217			✓ 9	●	Yes	Fan noisy.	No

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50	x	Yes	A-19	Active	PM	USAFCR Baltimore	EF_10A		121 TA50 Storage	1. Inline Duct 2. Wired to VAV1_03 controller	9	●	Yes	1. Fan fails to start when commanded on. 2. Fan start/stop to relay ok.	No
51															
52															
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USAFRC Baltimore BAS Status Report REV1

May 2019

Log-in Credentials Provided By Owner

Username: CMI

Password: CMI_Md002#

In addition, there are some existing usernames that remain unchanged. These can be deleted, updated or changed as required.

	Name	Full Name	Enabled	Expiration
	guest		false	Never
	admin		true	Never
	BACnet		true	Never
	99thRSC_Admin		true	Never
	AFOS_MD002		true	Never
	Tustin	Tustin Energy Solutions	true	Never
	asable	Andrew Sable - TES	true	Never
	CMI	CMI PM Contractor	true	Never
	ClientConnection	ClientConnection	true	Never

Building Wide HVAC Shut-Down

The Building Automation System is equipped with a building wide HVAC shut-down. This might be intended for shelter-in-place or a variety of other reasons. Once this intent is clarified, the operation should be tested, and the initiation point clearly indicated on BAS graphics.

Honeywell WEBs AX and N4 Stations

Completed Work

1. The following stations are upgraded to version 3.8.401:

Database							
Name	Exts	Address	Host Model	Version	Status	Health	
CBA_Chiller	██████	ip:192.168.2.129	NPM2	3.8.401	{ok}	Ok [03-May-19 10:00 AM EDT]	█
CBA_Ahu1	██████	ip:192.168.2.123	NPM6	3.8.401	{ok}	Ok [03-May-19 9:56 AM EDT]	█
CBA_Boiler	██████	ip:192.168.2.127	NPM2	3.8.401	{ok}	Ok [03-May-19 10:00 AM EDT]	█
CBA_Ahu2	██████	ip:192.168.2.124	NPM2	3.8.401	{ok}	Ok [03-May-19 10:00 AM EDT]	█
CBA_HRU1	██████	ip:192.168.2.121	NPM2	3.8.401	{ok}	Ok [03-May-19 9:56 AM EDT]	█

2. CBA_Ahu3 is upgraded to version 4.4.93.40. This station hosts the graphical interface for the building:

Database								5 objects
Name	Exts	Address	Host Model	Version	Status	Health		
CBA_Chiller	      	ip:192.168.2.129	NPM2	3.8.401	{ok}	Ok [03-May-19 10:02 AM EDT]		
CBA_Ahu1	      	ip:192.168.2.123	NPM6	3.8.401	{unackedAlarm}	Ok [03-May-19 10:02 AM EDT]		
CBA_Ahu2	      	ip:192.168.2.124	NPM2	3.8.401	{unackedAlarm}	Ok [03-May-19 9:57 AM EDT]		
CBA_Ahu3	      	ip:192.168.2.125	NPM6	4.4.93.40	{unackedAlarm}	Ok [03-May-19 10:01 AM EDT]		
CBA_Boiler	      	ip:192.168.2.127	NPM2	3.8.401	{ok}	Ok [03-May-19 9:57 AM EDT]		

3. Batteries replaced and are currently new for all the above WEBs controllers.

Deficiencies

There are no current deficiencies known.

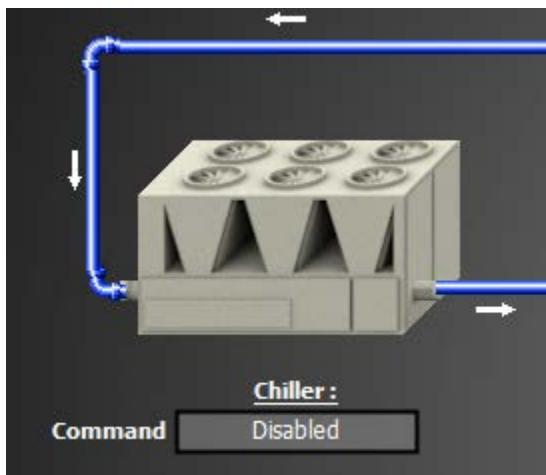
Chiller Plant

Completed Work

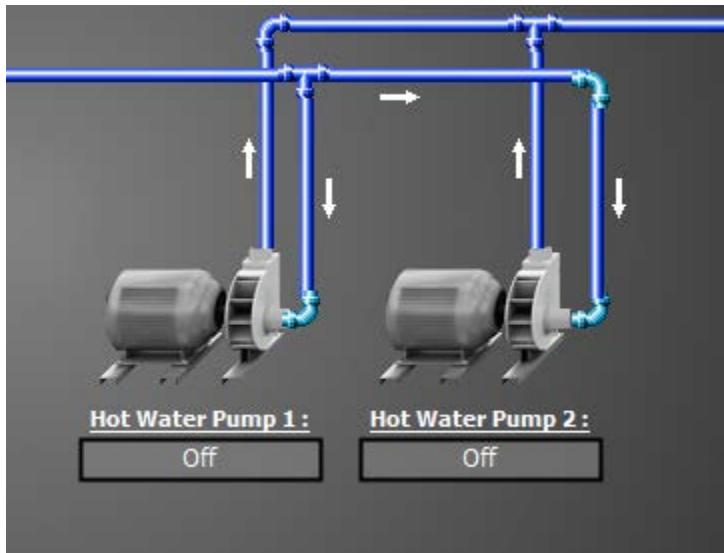
There is no work completed at this time. It is recommended at a minimum that the chiller enable point and pump status points are completed. This includes wiring, hardware, software and graphics. Control logic is already present to enable/disable the chiller based on chilled water valve demand. Chilled water supply temperature reset should be considered as an energy saving strategy.

Deficiencies

1. Chiller controls are incomplete. It appears that a BACnet connection to the chiller was planned but not connected. Wires are pulled from the chiller control panel out to the chiller but left unterminated.
2. Chiller package (including chilled water pumps) run standalone. The chiller is currently enabled/disabled by the switch at the chiller control panel and will run continuously if nobody attends to it. The BAS system shows a chiller command point which does not work:



3. The graphic also shows chilled water pump status which is also does not work.



4. Several chilled water flow meters are installed but none are reporting data at the BAS.
5. Pump Discharge Pressure and Pump Suction Pressure are unconnected points in the database that are not reading:

- + PumpDischPress
- + PumpSuctPress

Boiler Plant (Boiler 1 and Boiler 2)

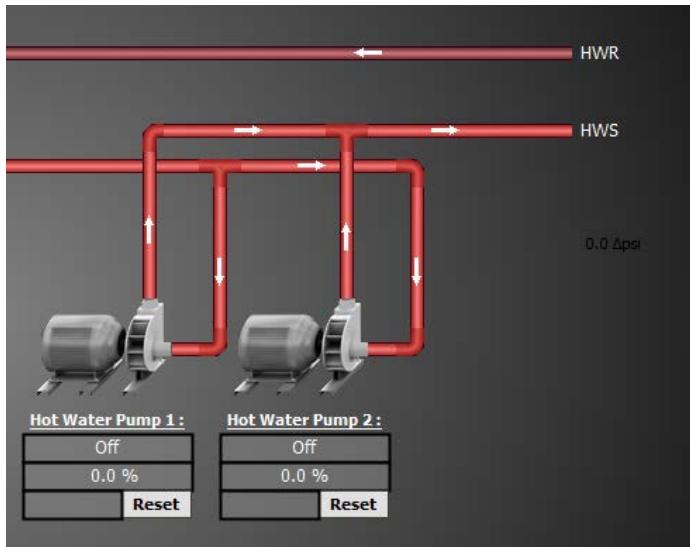
Completed Work

There is no work completed at this time. Boilers are currently enabled/disabled based on outside air temperature and work standalone once enabled. Pump rotation occurs every Monday just after 9AM. Boiler rotation occurs on the 1st of every month just after 9AM. Control logic is present to rotate the lead pump or boiler when a failure is detected.

Deficiencies

1. Boiler sequencing should be modified to extend boiler operation into the warmer months if high levels of indoor humidity are present.
2. The boilers are equipped to receive a supply water temperature reset signal from the BAS. This should be implemented as an energy saving strategy especially if the boilers are used during the summer months.
3. The domestic water pump has a start/stop schedule built in which is currently enabled for 24 hours a day operation. Consider changing the schedule to match actual building occupancy.
4. Boiler and pump rotation schedules are not shown on the graphics. This might be preferred depending on the experience level of the building operators.

5. Boiler hot water pumps are VFD controlled to maintain system differential pressure setpoint:



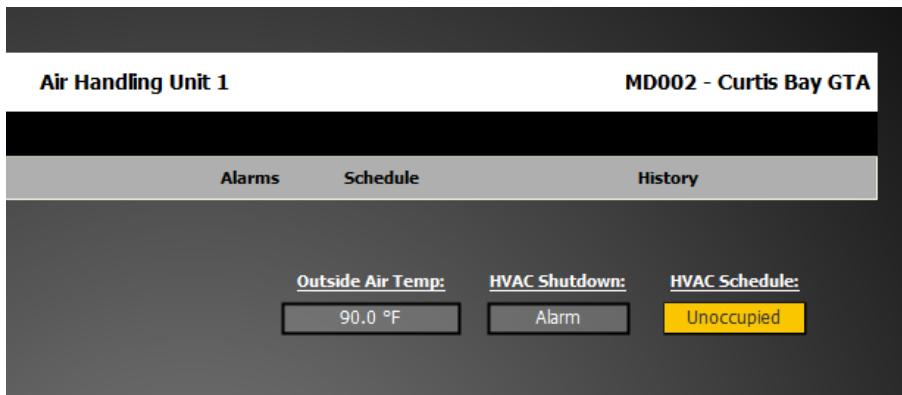
The system is also equipped with a hot water bypass valve which is not shown on the graphic. Differential pressure setpoint is also not shown on the graphic. Differential pressure reads very low and as a result pumps are continually ramped to 100 percent. System differential pressure control and hardware devices should be checked for proper operation.

- The system is equipped with a hot water flow meter which is not shown on the graphics. System flow reads very low. Hot water flow meter should be checked for proper operation.
- Boiler 1 Alarm point reading fault/stale and should be checked out.

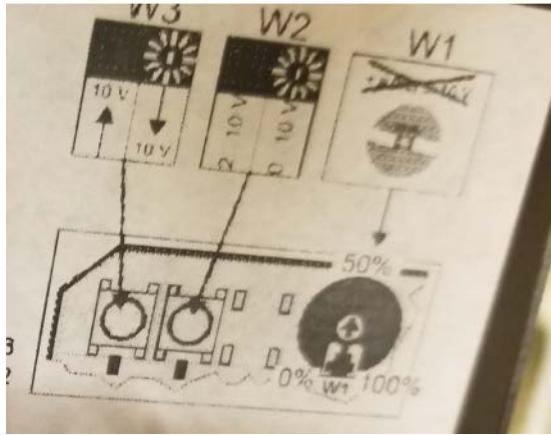
AHU-1

Completed Work

- Unit is scheduled from the graphical interface:

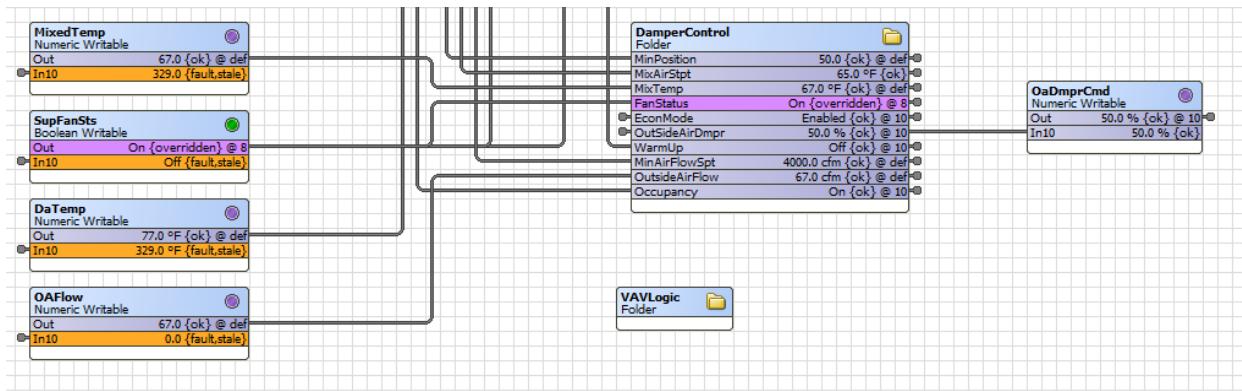


2. Control valves reconfigured to match the programming / software for AHU and HRU units. Note that each hot water and chilled water valve has a setting for 2-10VDC signal or 0-10VDC signal (W2). There is also a direct or reverse acting setting (W3). The correct setting is a 2-10VDC signal. The direct or reverse acting setting depends on whether the valve is used for chilled water or hot water. If the valve seems to be operating in reverse, then change this setting.



Deficiencies

- Supply air fan status remains off when the fan is commanded to run. VFD will remain at minimum speed unless this point is overridden on. The fan proving device needs adjustment or replaced to correct this deficiency.
- Existing AHU mixed air damper control takes outside air airflow into control logic. There is no airflow station installed. This portion of software and mixed air damper control should be corrected:

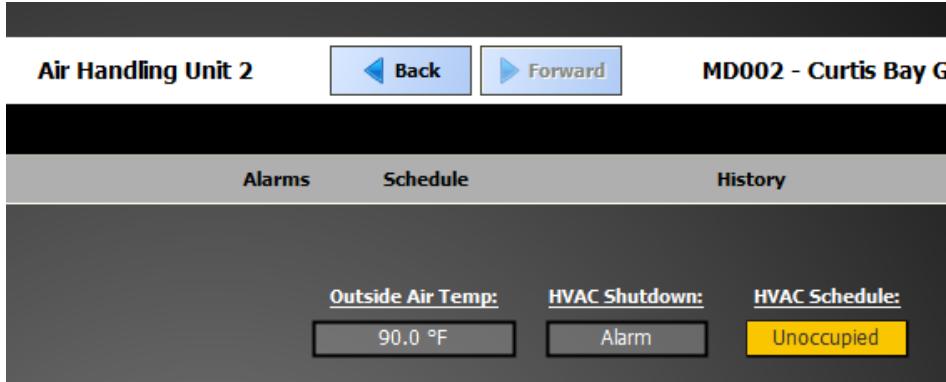


- This building appears to have generally low occupancy. Proper utilization of CO2 detectors would be an added benefit to optimize mixed air damper control / minimum damper position when outside air conditions are not favorable to economizer.

AHU-2

Completed Work

1. Unit is scheduled from the graphical interface:



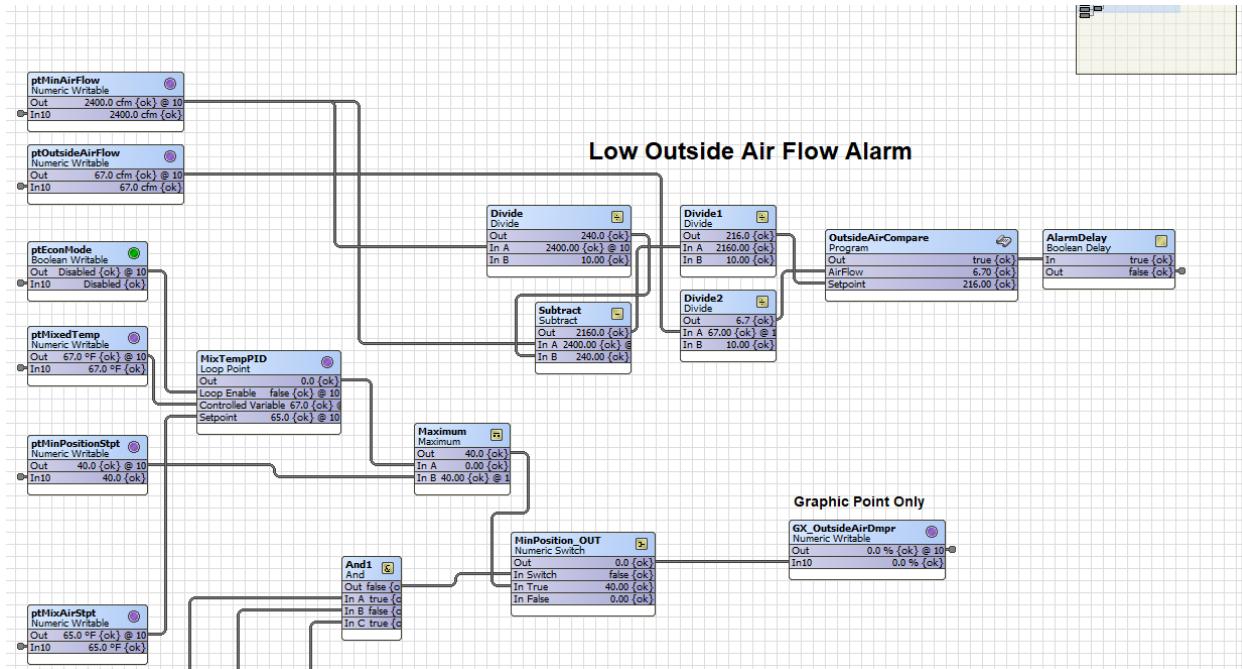
2. Refer to Note 2 under AHU-1 Completed Work.

Deficiencies

1. AHU-2 cooling valve actuator has failed and needs to be replaced:



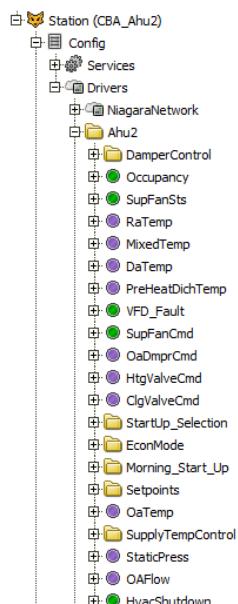
2. There is no airflow station installed. This portion of software should be corrected:



3. This building appears to have generally low occupancy. Proper utilization of CO2 detectors would be an added benefit to optimize mixed air damper control / minimum damper position when outside air conditions are not favorable to economizer. Existing mixed air damper sequencing should be verified.

4. The health of the Ndio hardware should be investigated. Point values are updating erratically.

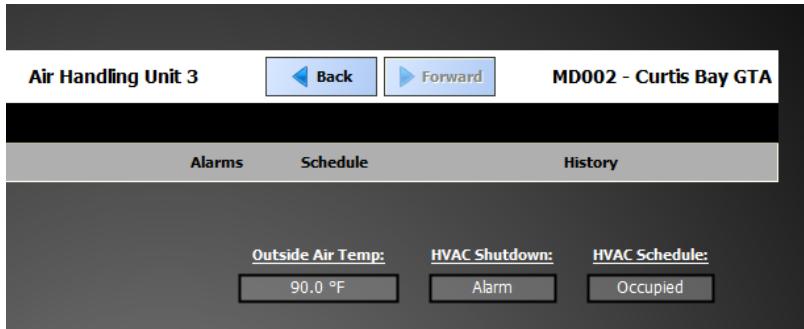
5. Points for Static Pressure and VFD Fault are found in the point database. This is a constant volume AHU:



AHU-3

Completed Work

1. Unit is scheduled from the graphical interface:



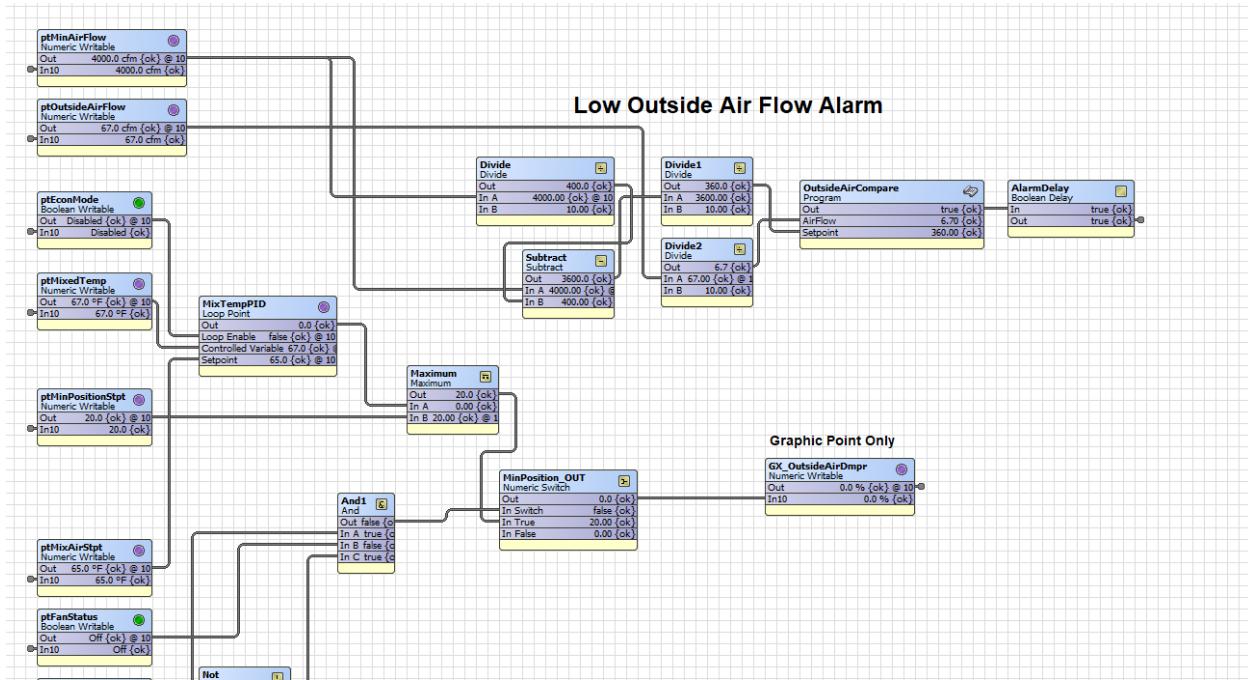
2. Refer to Note 2 under AHU-1 Completed Work.

Deficiencies

1. AHU-3 heating valve actuator has failed and needs to be replaced:



2. There is no airflow station installed. This portion of software should be corrected:

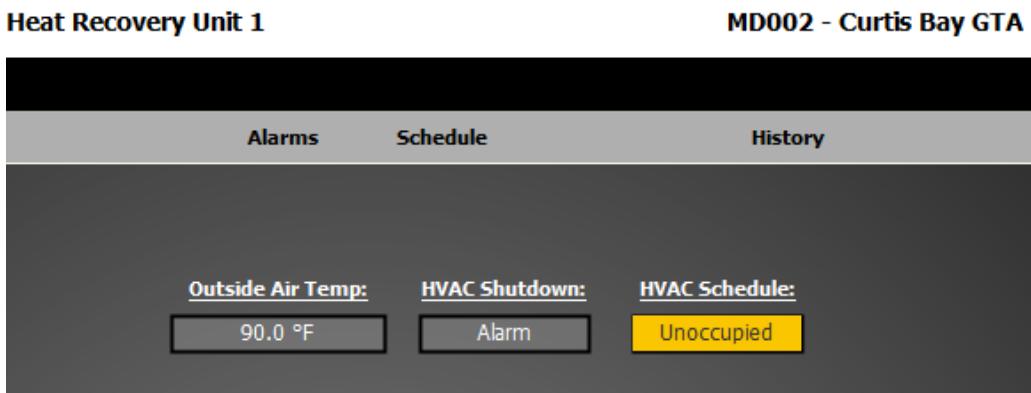


3. This building appears to have generally low occupancy. Proper utilization of CO2 detectors would be an added benefit to optimize mixed air damper control / minimum damper position when outside air conditions are not favorable to economizer. Existing mixed air damper sequencing should be verified.

HRU-1

Completed Work

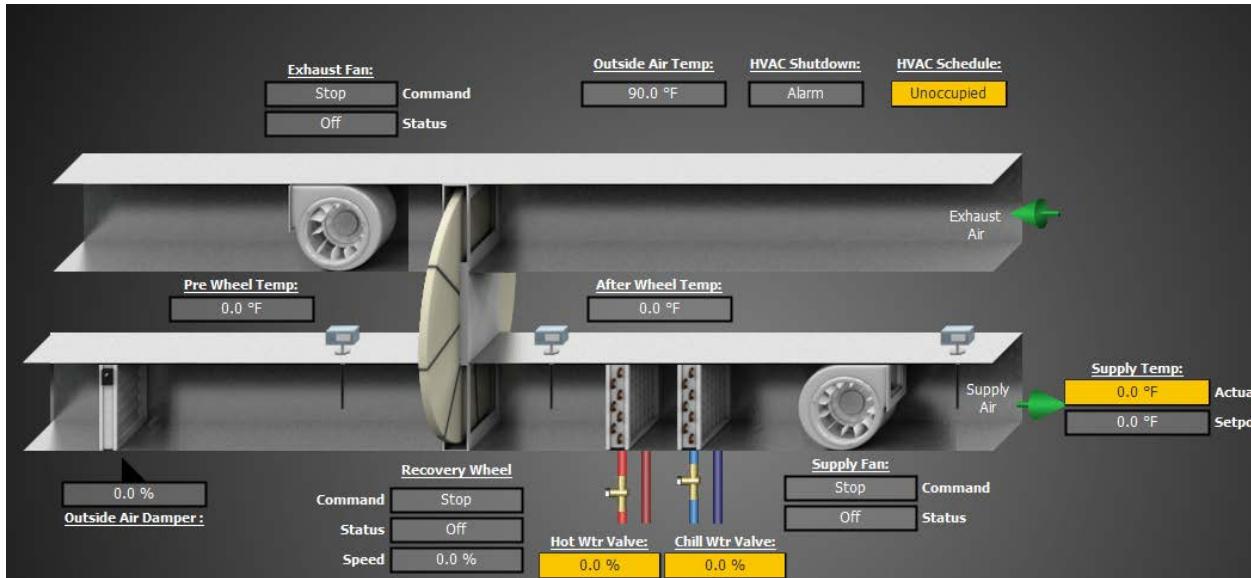
1. Unit is scheduled from the graphical interface:



2. Refer to Note 2 under AHU-1 Completed Work.

Deficiencies

1. The energy recovery wheel remains on when the unit shuts down.
2. Graphics do not show the supply air and exhaust air isolation dampers. These are modulating dampers but really should act as 2 position open/closed dampers only. End switches on damper actuators are recommended to prohibit fan operation unless dampers are proven open.
3. The bypass damper is not shown on the graphics.
4. The unit outside air damper was found to automatically modulate and starve the supply fan when closing. Either the outside air damper or bypass damper must be open to prevent supply fan starvation. During normal unit operation the outside air damper should be 100 percent open to make up for exhaust air exiting from the building:



5. ExhaustFilterS point is reading fault/stale.

VAV and CAV Boxes

Completed Work

1. Corrected communication and controller download issues on VAV and CAV Lon Networks:

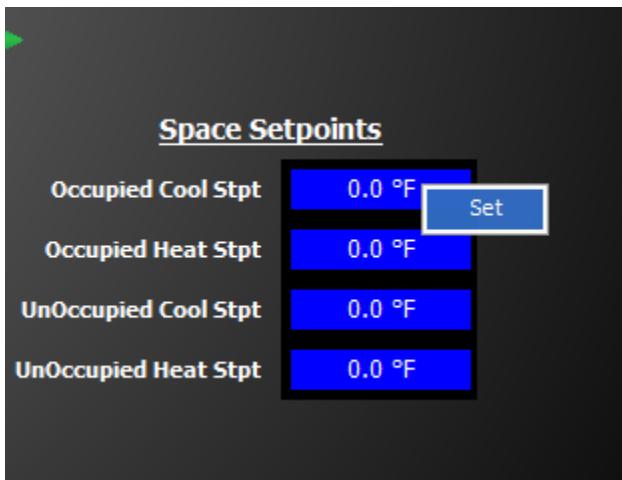
Database												
Name	Type	Exts	State	Subnet	Node	Fault Cause	Manufacturer	Program Id	Neuron Id	Enabled	Lon Xml File	
Local Lon Device	Local Lon Device	Config Online	1	127		tridium	90.00.8e.01.03.80.00.03	04.14.21.c2.02.00	true	null		
Vav1_02	LonSpyder	Config Online	1	2		honeywell	90.00.0c.52.00.03.04.3b	04.b7.60.ac.03.00	true	local:module://honeywell.lon\$		
Vav1_03	LonSpyder	Config Online	1	3		honeywell	90.00.0c.52.00.03.04.3b	04.91.8d.07.04.00	true	local:module://honeywell.lon\$		
Vav1_04	LonSpyder	Config Online	1	1		honeywell	90.00.0c.52.00.03.04.3b	04.c2.25.e9.03.00	true	local:module://honeywell.lon\$		
Vav1_05	LonSpyder	Config Online	1	4		honeywell	90.00.0c.52.00.03.04.3b	04.c1.2b.e9.03.00	true	local:module://honeywell.lon\$		
Vav1_06	LonSpyder	Config Online	1	5		honeywell	90.00.0c.52.00.03.04.3b	04.c0.8d.07.04.00	true	local:module://honeywell.lon\$		
Vav1_07	LonSpyder	Config Online	1	15		honeywell	90.00.0c.52.00.03.04.3b	04.36.63.ac.03.00	true	local:module://honeywell.lon\$		
Vav1_08	LonSpyder	Config Online	1	7		honeywell	90.00.0c.52.00.03.04.3b	04.96.8e.07.04.00	true	local:module://honeywell.lon\$		
Vav1_09	LonSpyder	Config Online	1	8		honeywell	90.00.0c.52.00.03.04.3b	04.e3.8c.07.04.00	true	local:module://honeywell.lon\$		
Vav1_10	LonSpyder	Config Online	1	9		honeywell	90.00.0c.52.00.03.04.3b	04.97.8e.07.04.00	true	local:module://honeywell.lon\$		
Cav2_01	LonSpyder	Config Online	1	6		honeywell	90.00.0c.52.00.03.04.3b	04.30.8b.07.04.00	true	local:module://honeywell.lon\$		
Cav2_02	LonSpyder	Config Online	1	10		honeywell	90.00.0c.52.00.03.04.3b	04.31.8b.07.04.00	true	local:module://honeywell.lon\$		
Cav4_01	LonSpyder	Config Online	1	12		honeywell	90.00.0c.52.00.03.04.3b	04.e4.68.ac.03.00	true	local:module://honeywell.lon\$		
Cav4_02	LonSpyder	Config Online	1	13		honeywell	90.00.0c.52.00.03.04.3b	04.70.66.ac.03.00	true	local:module://honeywell.lon\$		
Cav4_03	LonSpyder	Config Online	1	14		honeywell	90.00.0c.52.00.03.04.3b	04.23.2f.e9.03.00	true	local:module://honeywell.lon\$		

Note that this Lon Network and controllers are connected to CBA_Ahu1 station.

Name	Type	Exts	State	Subnet	Node	Fault Cause	Manufacturer	Program Id	Neuron Id	Enabled	Lon Xml File
Local Lon Device	Local Lon Device		Config Online	1	127		tridium	90 00 8e 01 03 80 00 03	04 5b 56 6d 02 00	true	null
Vav3_01	LonSpyder		Config Online	1	1		honeywell	90 00 0c 52 00 03 04 3b	04 bf 2f e9 03 00	true	local: module://honeywellLonSpy
Vav3_02	LonSpyder		Config Online	1	2		honeywell	90 00 0c 52 00 03 04 3b	04 72 29 e9 03 00	true	local: module://honeywellLonSpy
Vav3_03	LonSpyder		Config Online	1	3		honeywell	90 00 0c 52 00 03 04 3b	04 33 8b 07 04 00	true	local: module://honeywellLonSpy
Vav3_04	LonSpyder		Config Online	1	4		honeywell	90 00 0c 52 00 03 04 3b	04 0e 2b e9 03 00	true	local: module://honeywellLonSpy
Vav3_05	LonSpyder		Config Online	1	5		honeywell	90 00 0c 52 00 03 04 3b	04 99 8e 07 04 00	true	local: module://honeywellLonSpy
Vav3_06	LonSpyder		Config Online	1	6		honeywell	90 00 0c 52 00 03 04 3b	04 95 8e 07 04 00	true	local: module://honeywellLonSpy
Vav3_07	LonSpyder		Config Online	1	7		honeywell	90 00 0c 52 00 03 04 3b	04 17 89 07 04 00	true	local: module://honeywellLonSpy
Vav3_08	LonSpyder		Config Online	1	8		honeywell	90 00 0c 52 00 03 04 3b	04 d2 27 e9 03 00	true	local: module://honeywellLonSpy
Vav3_09	LonSpyder		Config Online	1	9		honeywell	90 00 0c 52 00 03 04 3b	04 d3 27 e9 03 00	true	local: module://honeywellLonSpy
Vav3_10	LonSpyder		Config Online	1	10		honeywell	90 00 0c 52 00 03 04 3b	04 37 64 ac 03 00	true	local: module://honeywellLonSpy
Vav3_11	LonSpyder		Config Online	1	11		honeywell	90 00 0c 52 00 03 04 3b	04 71 66 ac 03 00	true	local: module://honeywellLonSpy
Vav3_12	LonSpyder		Config Online	1	12		honeywell	90 00 0c 52 00 03 04 3b	04 3c 64 ac 03 00	true	local: module://honeywellLonSpy
Vav3_13	LonSpyder		Config Online	1	13		honeywell	90 00 0c 52 00 03 04 3b	04 3a 64 ac 03 00	true	local: module://honeywellLonSpy

Note that this Lon Network and controllers are connected to CBA_Ahu3 station.

2. Modified all VAV and CAV graphics to allow changeable space temperature and CO2 setpoints:



Change the setpoint by right clicking in the blue box.

Deficiencies

1. Airflow setpoints do not appear to be correct. It is recommended to input scheduled design airflow setpoints once mechanical drawings are sourced or located. This may alleviate occupant complaints and VAV / CAV boxes low on airflow.
2. VAV1_02: CO2 sensor reads low (171 ppm). Reheat valve override non-functional with a possibility that valve is also non-functional.
3. VAV1_07: There is no rise in supply air temperature with reheat valve override open. Reheat valve is non-functional, or hand isolation valves are closed.
4. VAV1_08: CO2 sensor reading very high.
5. VAV1_09: CO2 sensor reading very high.
6. VAV1_10: CO2 sensor reading too low.
7. CAV2_01: Control indicates Occupied and graphic displays Unoccupied (mismatch).
8. CAV2_02: CO2 sensor reading too low.

9. CAV4_01: CO2 sensor reading too high (900 ppm).
10. CAV4_03: There is no rise in supply air temperature with reheat valve override open. Reheat valve is non-functional, or hand isolation valves are closed.
11. VAV3_01: CO2 sensor reading low (270 ppm).
12. VAV3_04: CO2 setpoint in software but no apparent CO2 sensor.

Exhaust Fans

Completed Work

Exhaust fans functionally tested.

Deficiencies

1. EF_3A: Exhaust fan appears to be uncontrolled on or off except for HVAC Shut-Down, is also not shown on graphics.
2. EF_4A: Exhaust fan is not shown on graphics.
3. EF_5A (112 Equipment Storage): Exhaust fan running continuously. It should be controlled to maintain a space temperature cooling setpoint.
4. EF_7A (Mech 113): Exhaust fan not running in Auto or Hand, which appears to be a mechanical or electrical issue. Or maybe faulty damper end switches prohibiting start / stop. There is an associated motor operated intake air damper which fails to open. This fan should be controlled to maintain a space temperature cooling setpoint.
5. EF_8A: Exhaust fan appears to be uncontrolled on or off except for HVAC Shut-Down, is also not shown on graphics.
6. EF_9A (Mech 217): Exhaust fan is noisy.
7. EF_10A (121 TA50 Storage): Exhaust fan fails to start when commanded on. Control wiring to start / stop relay is ok.

Unit Heaters

Completed Work

Unit heaters functionally tested.

Deficiencies

No deficiencies are noted at this time.