

NOTES:

- ① SEE FLN SCHEDULE FOR NETWORK CONNECTION INFORMATION.
 - ② SEE LAYOUT DRAWINGS WITH PAGE #'S BEGINNING WITH "N" FOR INDIVIDUAL PANEL WIRING DETAILS. SEE DRAWINGS "EWIR", "MWIR", "PWIR", "SWIR" & "TWR" FOR RESPECTIVE PANEL TERMINATION INFO.
 - ③ 120 VAC BY DIVISION 26 CONTRACTOR.
 - [N] ETHERNET CONNECTION TO CUSTOMER NETWORK BY OTHERS.
- - - - - FLOOR LEVEL NETWORK 1 (FLN-1) - 4000' MAX
 - - - - - FLOOR LEVEL NETWORK 2 (FLN-2) - 4000' MAX
 - - - - - FLOOR LEVEL NETWORK 3 (FLN-3) - 4000' MAX
 - - - - - BUILDING LEVEL NETWORK (BLN) - 24AWG TSP, 4000' MAX
 - - - - - ETHERNET BLN NETWORK (EBLN) - CAT5e, 328' MAX
 - - - - - BUS EXTENSION NETWORK - 14AWG TWISTED SHIELDED 4 CONDUCTOR OR 14AWG TP (2 CABLES), 164' MAX

REVISION HISTORY

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SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY FAIRBANKS, AK					
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE	
TL	NEP	TMA	05/23/06	09/15/15	
RISER					

440P-159367
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Control Device	Qty	Product Number	Manufacturer	Document Number	Description	
Field Mounted Devices						
ESW	1	1	GS105	NETGEAR	N/A	5 PORT ETHERNET SWITCH
PNL	1-2	2	EXISTING	N/A	N/A	EXISTING
PNL	3-4	2	PXA-ENC34	SIEMENS	149475	ENCLOSURE ASSY 34
PNL	3A	1	PXA-ENC19	SIEMENS	149475	ENCLOSURE ASSY 19"
SB	1-2	2	EXISTING	N/A	N/A	EXISTING
SB	3-4	2	PXA-SB115V192VA	SIEMENS	N/A	SERVICE BOX 115V, 24VAC, 192VA
UPS	1	1	EXISTING	N/A	N/A	EXISTING
UPS	3-4	2	PSH2RB10	FUNCTIONAL DEVICES	N/A	10A SW, 2 120VAC OUT, 120VAC IN

REVISION HISTORY

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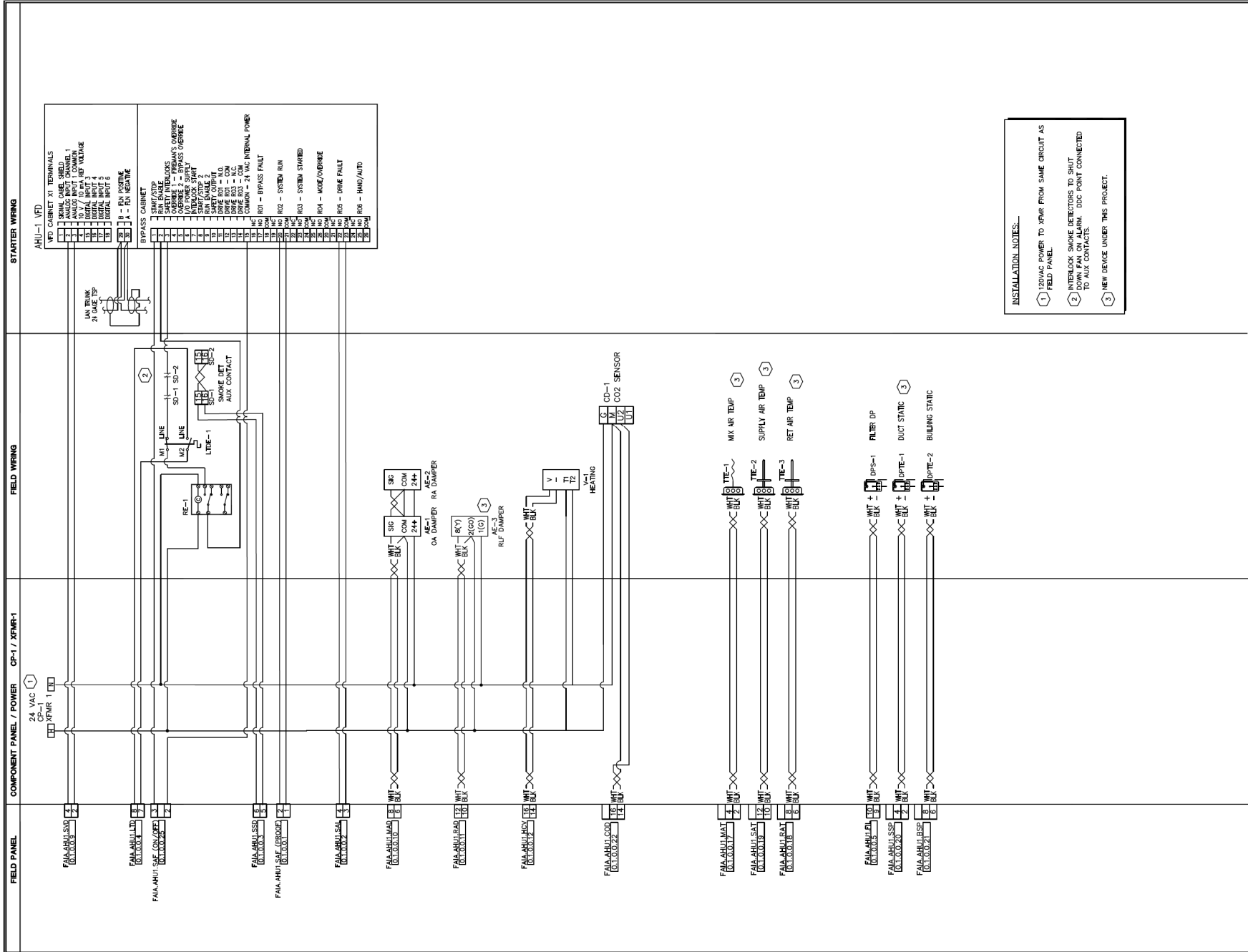
**DMVA FAIRBANKS ARMORY
 FAIRBANKS, AK**

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TL	NEP	TMA		09/14/15

RISER BOM

440P-159367

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INSTALLATION NOTES:

- 120VAC POWER TO XFMR FROM SAME CIRCUIT AS FIELD PANEL
- INTERLOCK SMOKE DETECTORS TO SHUT DOWN FAN ON ALARM. DDC POINT CONNECTED TO AUX CONTACTS.
- NEW DEVICE UNDER THIS PROJECT.

REVISION HISTORY	SIEMENS	2620 ROLAND ROAD FAIRBANKS, AK 99709 USA Phone: 907.479.7034 Fax: 907.479.8879	DWVA FAIRBANKS ARMORY FAIRBANKS, AK	440P-169367							
		<table border="1"> <tr> <td>PROJECT</td> <td>DATE</td> <td>BY</td> <td>REVISION</td> <td>LAST DATE</td> </tr> <tr> <td>TL</td> <td>NEP</td> <td>TMA</td> <td>06/23/09</td> <td>09/16/15</td> </tr> </table>	PROJECT	DATE	BY	REVISION	LAST DATE	TL	NEP	TMA	06/23/09
PROJECT	DATE	BY	REVISION	LAST DATE							
TL	NEP	TMA	06/23/09	09/16/15							

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
AE 1-2	2	EXISTING	N/A	N/A	EXISTING
AE 3	1	GCA161.1P	SIEMENS	154001	MOD(V) SR,24V, MED. PLNM
CD 1	1	QPA63.2	SIEMENS	149399	O/RB QPA2002D
DPS 1	1	EXISTING	N/A	N/A	EXISTING
DPTE 1	1	26412R5WB11TIC	SETRA	0608cut003	DP TRAN AIR,1%,+/-2.5"
DPTE 2	1	PXPLX01S	VERIS INDU	N/A	PXPLX01S Pressure,Dry,Panel,LCD,0-1"WC
LTDE 1	1	EXISTING	N/A	N/A	EXISTING
RE 1	1	RIB2401D	FUNCTIONAL DEVICES	1208cut002	RIB 24VAC 24VAC/DC DPDT
SD 1-2	2	EXISTING	N/A	N/A	EXISTING
SPP 1	1	269-062	SIEMENS	N/A	PR269 ACCESSORY, SENSING TUBE
TTE 1	1	544-342	SIEMENS	149 261	OBS/BY 544-342-24,TEMP SENS RTD,-40/240F
TTE 2-3	2	544-339	SIEMENS	149 261	*OBS/BY 544-339-18* D/PT TEMP SENSOR,
V					SEE VALVE SUBMITTAL

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY

EXISTING AIR HANDLING UNIT (AHU-1):

AIR HANDLING UNIT AHU-1 IS A VARIABLE VOLUME SYSTEM. THE SUPPLY FAN IS AUTOMATICALLY START/STOPPED ON TIME PROGRAM (ADJUSTABLE) THROUGH THE DDC PANEL.

SUPPLY STATUS IS MONITORED VIA A CURRENT SWITCH. AN ALARM IS GENERATED WHENEVER THERE IS A MISMATCH BETWEEN THE SUPPLY FAN STATUS AND THE DDC COMMAND SIGNAL.

A DIFFERENTIAL PRESSURE SWITCH IS PROVIDED ACROSS THE FILTER TO ALARM WHEN A PRESSURE INCREASE OVER SETPOINT (FIELD SET) IS DETECTED. THE TEMPERATURE CONTROL SYSTEM IS SOFTWARE INTERLOCKED WITH THE UNIT. WHEN THE UNIT IS OFF, ALL CONTROL SYSTEMS WILL GO TO THEIR DISABLED OR SAFE POSITIONS. WHEN THE UNIT IS ON, ALL CONTROL SIGNALS ARE CONTROLLED AUTOMATICALLY THROUGH THE DDC CONTROL PANEL AS OUTLINED BELOW.

THERE ARE (3) MODES OF OPERATION FOR AUTOMATED CONTROL: NIGHT MODE OPERATION, MORNING WAR-UP OPERATION

AND DAY MODE OPERATION.

NIGHT MODE OPERATION:

DURING THE NIGHT MODE OPERATION, THE SUPPLY FAN WILL BE OFF, OSA DAMPER WILL BE FULLY CLOSED AND RA DAMPER WILL BE FULLY OPEN. THE HEATING COIL VALVE WILL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE AT THE NIGHT SETBACK SETPOINT (ADJUSTABLE) EXCEPT UNDER FREEZE ALARM CONDITIONS AS DEFINED BELOW.

BUILDING RELIEF AIR CONTROL DAMPERS WILL BE CLOSED.

MORNING WARM-UP OPERATION:

AT THE THE BEGINNING OF THE DAY MODE, THE SUPPLY FAN WILL START, AND THE OSA DAMPER WILL BE FULLY CLOSED. THE HEATING COIL WILL MODULATE TO MAINTAIN THE SUPPLY AIR TEMPERATURE AT THE MORNING WARM-UP SETPOINT (DEFAULT: 80 DEG F-ADJUSTABLE) THE SYSTEM WILL SWITCH TO DAY MODE OPERATION AS OUTLINED BELOW.

BUILDING RELIEF AIR CONTROL DAMPERS WILL BE CLOSED.

DAY MODE OPERATION:

A SUPPLY AIR TEMPERATURE SENSOR WILL MODULATE OSA DAMPER AND HEATING COIL VALVE, IN SEQUENCE, TO MAINTAIN SUPPLY AIR TEMPERATURE AT SETPOINT. THE SUPPLY AIR TEMPERATURE SETPOINT WILL BE RESET BY THE OUTSIDE AIR TEMPERATURE SENSOR AS OUTLINED BELOW. ALL LIMITS ARE OPERATOR ADJUSTABLE.

OUTSIDE AIR TEMP	SUPPLY AIR TEMP
0.0	65.0
70.0	55.0

DURING DAY MODE OPERATION, A SOFTWARE MINIMUM POSITION WILL MAINTAIN OSA DAMPER AT MINIMUM POSITION (DEFAULT: 20%-ADJUSTABLE).

BUILDING RELIEF AIR CONTROL DAMPERS WILL MODULATE TO MAINTAIN 0.01" SP RELIEF.

A FREEZE STAT LOCATED IN THE DISCHARGE AIR PLENUM WILL SHUT DOWN THE AIR HANDLING UNIT, THROUGH HARDWARE, IF A FREEZE CONDITION IS DETECTED. AN ALARM WILL ALSO BE ISSUED THROUGH THE DDC PANEL, THE OSA DAMPERS WILL FULLY CLOSE AND THE HEATING VALVE WILL GO FULL OPEN. THE FREEZE STAT WILL RESET AUTOMATICALLY.

RA/SA SMOKE DETECTOR ALARM ARE MONITORED VIA SMOKE DETECTORS IN THE RETURN AND SUPPLY AIR DUCTS. AN ALARM IS GENERATED WHENEVER EITHER SMOKE DETECTION IS ACTIVATED. UPON SMOKE DETECTION, THE SUPPLY FAN WILL BE SHUT DOWN, THROUGH HARDWARE. THE DDC PANEL WILL COMMAND OSA DAMPER FULLY CLOSED. THE HEATING VALVE WILL CONTINUE TO MODULATE, THROUGH THE DDC PANEL, TO MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT.

REVISION HISTORY

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TL	NEP	TMA		09/14/15

AIR HANDLER 1 BOM & SEQ (EX)

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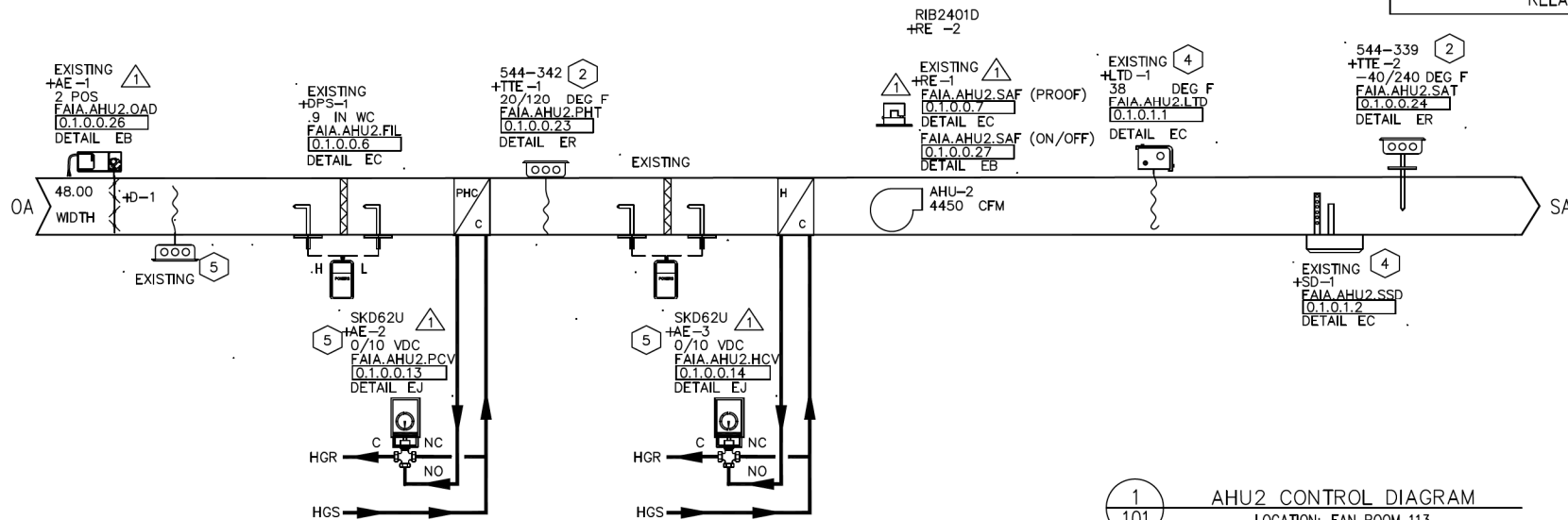
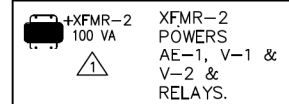
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AIR HANDLER 2

INSTALLATION NOTES:

- 1 DEVICES AND WIRING WERE REUSED UNLESS OTHERWISE NOTED.
- 2 REPLACED EXISTING SENSOR WITH SIEMENS SENSOR.
- 3 VALVE BODY IS EXISTING, NEW ACTUATOR UNDER THIS PROJECT.
- 4 INTERLOCK SHUTDOWN FAN UPON ALARM.
- 5 EXISTING DEVICES TO REMAIN.

COMPONENT PANEL CP-1



1
 101
AHU2 CONTROL DIAGRAM
 LOCATION: FAN ROOM 113
 SERVES: SOUTH KITCHEN
 TYPICAL OF 1

REVISION HISTORY

1	9/12/2006	TCP	AS-BUILT DRAWING
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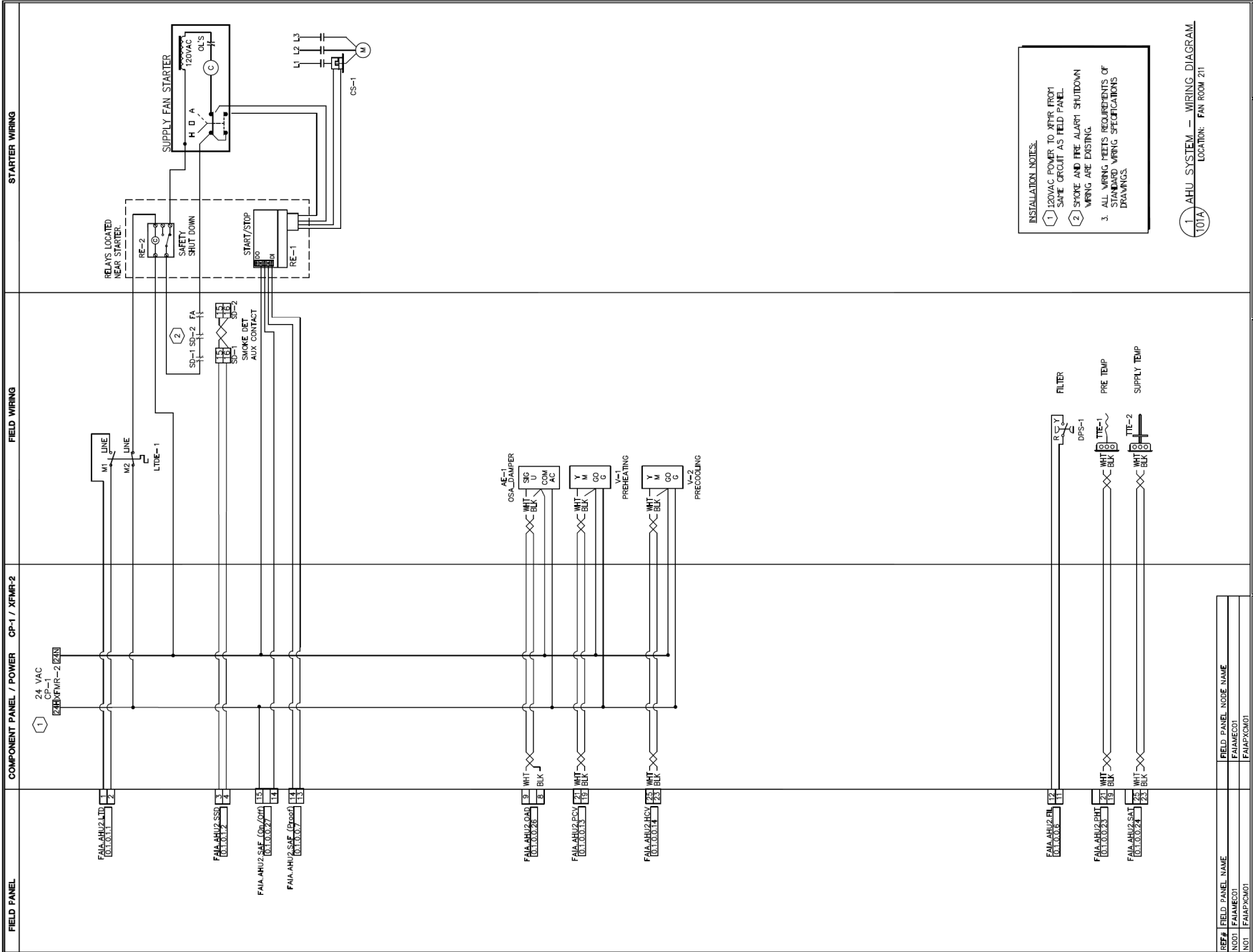
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FAIRBANKS, AK

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TL	NEP	TMA	05/23/06	09/11/15

AIR HANDLER 2 (EX)

440P-159367
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101



INSTALLATION NOTES:

- 120VAC POWER TO XFRM FROM SAME CIRCUIT AS FIELD PANEL.
- SHOCK AND FIRE ALARM SHUTDOWN WIRING ARE EXISTING.
- ALL WIRING MEETS REQUIREMENTS OF STANDARD WIRING SPECIFICATIONS DRAWINGS.

101A AHU SYSTEM - WIRING DIAGRAM
LOCATION: FAN ROOM 211

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N001	FA1AMEC01	FA1AMEC01
N01	FA1APXCM01	FA1APXCM01

REVISION HISTORY	
1	19/12/2006 TDC PAS-BUILT DRAWING

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DWA FAIRBANKS ARMORY
FAIRBANKS, AK

440P-16867
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101A

AIR HANDLER 2 WIRING (EX)

DESIGNED BY: TWA
CHECKED BY: WTB/REB/AS
LAST DATE FILED: 06/23/08
TWA
09/11/15

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
AE 1	1	EXISTING	N/A	N/A	EXISTING
AE 2-3	2	SKD62U	SIEMENS	155 180	ELEC/HYD ACT,24VAC,0-10VDC,SR
DPS 1	1	EXISTING	N/A	N/A	EXISTING
LTD 1	1	EXISTING	N/A	N/A	EXISTING
RE 1	1	EXISTING	N/A	N/A	EXISTING
RE 2	1	RIB2401D	FUNCTIONAL DEVICES	1208cut1002	RIB 24VAC 24VAC/DC DPDT
SD 1	1	EXISTING	N/A	N/A	EXISTING
TTE 1	1	544-342	SIEMENS	149 261	OBS/BY 544-342-24,TEMP SENS RTD,-40/240F
TTE 2	1	544-339	SIEMENS	149 261	*OBS/BY 544-339-18* D/PT TEMP SENSOR,

DURING DAY MODE OPERATION, THE SUPPLY FAN WILL BE AUTOMATICALLY START/STOPPED BASED ON A TIME PROGRAM THROUGH THE DDC PANEL. THE OSA DAMPER WILL OPEN. THE PREHEAT COIL VALVE WILL MODULATE TO MAINTAIN PREHEAT TEMPERATURE AT SETPOINT (DEFAULT: 35.0° F-ADJUSTABLE).

THE HEATING COIL VALVE WILL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE AT SETPOINT (DEFAULT 65.0° F-ADJUSTABLE).

PREHEAT AND HEATING COIL VALVES WILL BE LOCKED OUT WHEN OUTSIDE AIR TEMPERATURE IS ABOVE 55.0° F (ADJUSTABLE).

KITCHEN HOOD EXHAUST FAN IS SOFTWARE INTERLOCKED WITH THE SUPPLY FAN. WHEN KITCHEN HOOD EXHAUST FAN IS IN OPERATION, THE SUPPLY FAN WILL OPERATE AND THE OSA DAMPER WILL BE FULLY OPEN. PREHEAT AND HEATING COIL VALVES WILL MODULATE AS OUTLINED ABOVE IN DAY MODE OPERATION.

A FREEZE STAT LOCATED IN THE DISCHARGE AIR PLENUM, DOWNSTREAM OF THE PREHEAT COIL, WILL SHUT DOWN THE AIR HANDLING UNIT, THROUGH HARDWARE, IF A FREEZE CONDITION IS DETECTED. AN ALARM WILL ALSO BE ISSUED. THROUGH THE DDC PANEL THE OSA DAMPERS WILL FULLY CLOSE AND THE PREHEAT AND HEATING VALVES WILL GO FULL OPEN. THE FREEZE STAT WILL RESET AUTOMATICALLY.

SA SMOKE DETECTOR IS MONITORED VIA A SMOKE DETECTOR IN THE SUPPLY DUCT. AN ALARM IS GENERATED WHENEVER THE SMOKE DETECTOR IS ACTIVATED. UPON SMOKE DETECTION, THE SUPPLY FAN WILL BE SHUT DOWN, THROUGH HARDWARE. THE DDC PANEL WILL COMMAND THE OSA DAMPER FULLY CLOSED. THE PREHEAT AND HEATING VALVES WILL CONTINUE TO MODULATE, THROUGH THE DDC PANEL, TO MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT.

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY

EXISTING AIR HANDLING UNIT (AHU-2):

AIR HANDLING UNIT AHU-2 IS A CONSTANT VOLUME SYSTEM.

SUPPLY STATUS WILL BE MONITORED VIA A CURRENT SWITCH. AN ALARM IS GENERATED WHENEVER THERE IS A MISMATCH BETWEEN THE SUPPLY FAN STATUS AND THE DDC COMMAND SIGNAL.

A DIFFERENTIAL PRESSURE SWITCH IS PROVIDED ACROSS THE FILTER TO ALARM WHEN A PRESSURE INCREASE OVER SETPOINT (FIELD SET) IS DETECTED.

THE TEMPERATURE CONTROL SYSTEM IS SOFTWARE INTERLOCKED WITH THE UNIT. WHEN THE UNIT IS OFF, ALL CONTROL SYSTEMS WILL GO TO THEIR DISABLED OR SAFE POSITIONS. WHEN THE UNIT IS ON, ALL CONTROL SIGNALS ARE CONTROLLED AUTOMATICALLY THROUGH THE DDC CONTROL PANEL AS OUTLINED BELOW.

THERE ARE (2) MODES OF OPERATION FOR AUTOMATED CONTROL: NIGHT MODE OPERATION AND DAY MODE OPERATION.

NIGHT MODE OPERATION:

DURING THE NIGHT MODE OPERATION THE SUPPLY FAN WILL BE OFF, OSA DAMPER WILL BE FULLY CLOSED. THE HEATING COIL VALVE WILL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE AT THE NIGHT SETBACK SETPOINT (ADJUSTABLE) EXCEPT UNDER FREEZE ALARM CONDITIONS AS DEFINED BELOW.

DAY MODE OPERATION:

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ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

AIR HANDLER 2 BOM & SEQ (EX)

101B

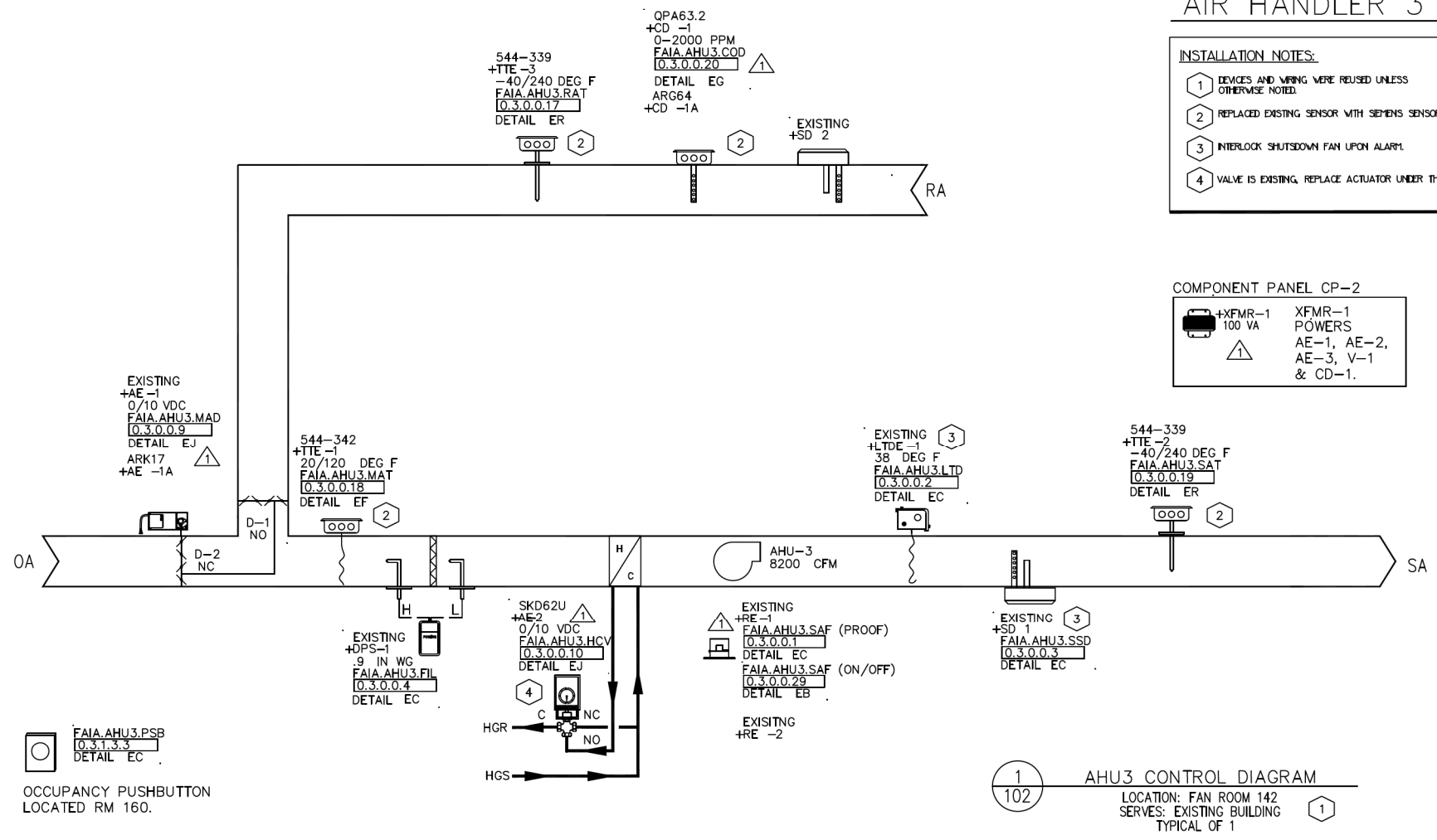
AIR HANDLER 3

INSTALLATION NOTES:

- 1 DEVICES AND WIRING WERE REUSED UNLESS OTHERWISE NOTED.
- 2 REPLACED EXISTING SENSOR WITH SIEMENS SENSOR.
- 3 INTERLOCK SHUTDOWN FAN UPON ALARM.
- 4 VALVE IS EXISTING, REPLACE ACTUATOR UNDER THIS PROJECT.

COMPONENT PANEL CP-2

+XFMR-1 100 VA XFMR-1 POWERS AE-1, AE-2, AE-3, V-1 & CD-1.



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMEC03	FAIAMEC-03

REVISION HISTORY			
1	9/12/2006	TCP	AS-BUILT DRAWING

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AIR HANDLER 3 (EX)

440P-159367
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102

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
AE 1	1	EXISTING	N/A	N/A	EXISTING
AE 2	1	SKD62U	SIEMENS	155 180	ELEC/HYD ACT,24VAC,0-10VDC,SR
AE 1A	1	ARK17	SIEMENS	N/A	HONEYWELL V501XN (A,B,C,F,G,N)1/2"THRU 3
CD 1	1	QPA63.2	SIEMENS	149399	O/RB QPA2002D
CD 1A	1	ARG64	AIRTRON	149399	OBSOLETE R/BY QPM2102
DPS 1	1	EXISTING	N/A	N/A	EXISTING
LTDE 1	1	EXISTING	N/A	N/A	EXISTING
RE 1	1	EXISTING	N/A	N/A	EXISTING
RE 2	1	EXISTING	N/A	N/A	N/A
SD 1-2	2	EXISTING	N/A	N/A	EXISTING
TTE 1	1	544-342	SIEMENS	149 261	OBS/BY 544-342-24,TEMP SENS RTD,-40/240F
TTE 2-3	2	544-339	SIEMENS	149 261	*OBS/BY 544-339-18* D/PT TEMP SENSOR,

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY

EXISTING AIR HANDLING UNIT AHU-3:

AIR HANDLING UNIT AHU-3 IS A CONSTANT VOLUME SYSTEM.

SUPPLY FAN STATUS WILL BE MONITORED VIA A CURRENT SWITCH. AN ALARM IS GENERATED WHENEVER THERE IS A MISMATCH BETWEEN THE SUPPLY FAN STATUS AND THE DDC COMMAND SIGNAL.

A DIFFERENTIAL PRESSURE SWITCH IS PROVIDED ACROSS THE FILTER TO ALARM WHEN A PRESSURE INCREASE OVER SETPOINT (FIELD SET) IS DETECTED.

THE TEMPERATURE CONTROL SYSTEM IS SOFTWARE INTERLOCKED WITH THE UNIT. WHEN THE UNIT IS OFF, ALL CONTROL SIGNALS WILL GO TO THEIR DISABLE OR SAFE POSITIONS. WHEN THE UNIT IS, ALL CONTROL SIGNALS ARE CONTROLLED AUTOMATICALLY THROUGH THE DDC CONTROL PANEL AS OUTLINED BELOW.

THERE ARE (3) MODES OF OPERATION FOR AUTOMATED CONTROL, NIGHT MODE OPERATION, MORNING WARM-UP OPERATION, AND DAY MODE OPERATION.

NIGHT MODE OPERATION:

DURING THE NIGHT MODE OPERATION THE SUPPLY FAN WILL BE OFF, OSA DAMPER WILL BE FULLY CLOSED AND THE RA DAMPER WILL BE FULLY OPEN. THE HEATING COIL VALVE WILL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE AT THE NIGHT SETBACK SETPOINT (ADJUSTABLE) EXCEPT UNDER FREEZE ALARM CONDITIONS AS DEFINED BELOW.

MORNING WARM-UP OPERATION:

WHEN SCHEDULED VIA DDC, OR WHEN THE MANUAL OCCUPANCY SWITCH IS ACTIVATED BY THE USER, THE SUPPLY FAN WILL START, AND THE OSA DAMPER WILL BE FULLY CLOSED. THE HEATING COIL WILL MODULATE TO MAINTAIN THE SUPPLY AIR TEMPERATURE AT THE MORNING WARM-UP SETPOINT (DEFAULT: 80 DEG. F- ADJUSTABLE) WHEN THE RETURN AIR TEMPERATURE RISES TO THE DAY MODE START TEMPERATURE SETPOINT (DEFAULT: 60 DEG. F - ADJUSTABLE) THE SYSTEM WILL SWITCH TO DAY MODE OPERATION AS OUTLINED BELOW.

DAY MODE OPERATION:

AFTER WARM-UP THE SUPPLY AIR TEMPERATURE SENSOR WILL MODULATE OSA DAMPER AND HEATING COIL VALVE, IN SEQUENCE, TO MAINTAIN SUPPLY AIR TEMPERATURE AT SETPOINT. THE SUPPLY AIR TEMPERATURE SETPOINT WILL BE RESET BY THE OUTSIDE AIR TEMPERATURE SENSOR AS OUTLINED BELOW. ALL LIMITS ARE OPERATOR ADJUSTABLE.

OUTSIDE AIR TEMP.	SUPPLY TEMP
0.0	65.0
70.0	55.0

DURING DAY MODE OPERATION, A SOFTWARE MINIMUM POSITION WILL MAINTAIN OSA DAMPER AT MINIMUM POSITION (DEFAULT: 20% - ADJUSTABLE). HEATING COIL VALVE WILL BE DISABLED VIA PROGRAMMING WHEN OUTSIDE AIR TEMPERATURE IS ABOVE 70.0 DEG. F. (ADJUSTABLE).

A FREEZE STAT LOCATED IN THE MIX AIR PLENUM WILL SHUT DOWN THE AIR HANDLING UNIT, THROUGH HARDWARE, IF A FREEZE CONDITION IS DETECTED. AN ALARM WILL ALSO BE ISSUED. THROUGH THE DDC PANEL THE OSA DAMPERS WILL FULLY CLOSE AND THE HEATING VALVE WILL GO FULL OPEN. THE FREEZE STAT WILL RESET AUTOMATICALLY.

RS/ SA SMOKE DETECTOR:

RS/ SA SMOKE DETECTOR ALARM ARE MONITORED VIA SMOKE DETECTORS IN THE RETURN AND SUPPLY AIR DUCTS. AN ALARM IS GENERATED WHENEVER EITHER SMOKE DETECTOR IS ACTIVATED. UPON SMOKE DETECTION, THE SUPPLY FAN WILL BE SHUT DOWN, THROUGH HARDWARE. THE DDC PANEL WILL COMMAND THE OSA DAMPER TO FULLY CLOSED. THE HEATING VALVE WILL CONTINUE TO MODULATE, THROUGH THE DDC PANEL, TO MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT. SMOKE DETECTORS MOUNTED AND WIRED BY OTHERS.

REVISION HISTORY

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TL	NEP	TMA		09/14/15

AIR HANDLER 3 BOM & SEQ (EX)

440P-159367

102B

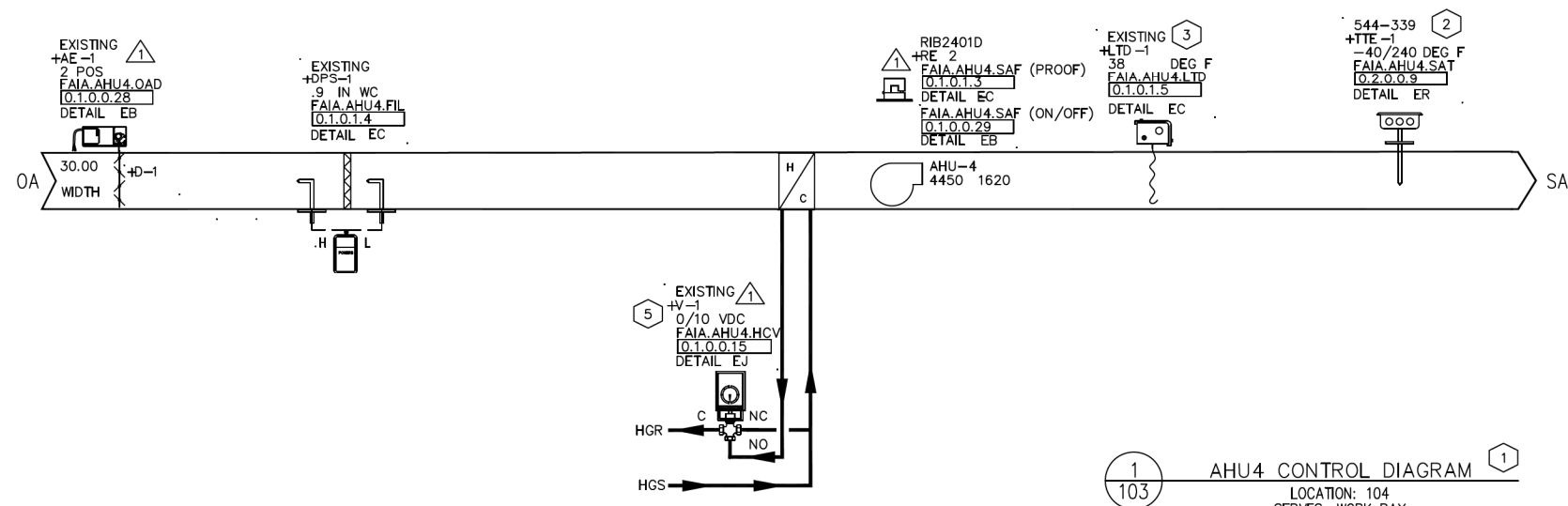
AIR HANDLER 4

INSTALLATION NOTES:

- 1 DEVICES AND WIRING WERE REUSED UNLESS OTHERWISE NOTED.
- 2 REPLACED EXISTING SENSOR WITH SIEMENS SENSOR.
- 3 INTERLOCK SHUTDOWN FAN UPON ALARM.

COMPONENT PANEL CP-1

	+XFMR-3 100 VA	XFMR-3 POWERS AE-1, V-1 & RELAYS.



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N02	FAIAPXCC02	FAIAPXCC02
N001	FAIAMEC01	FAIAMEC01
N01	FAIAPXCM01	FAIAPXCM01

REVISION HISTORY			
1	9/12/2006	TCP	AS-BUILT DRAWING

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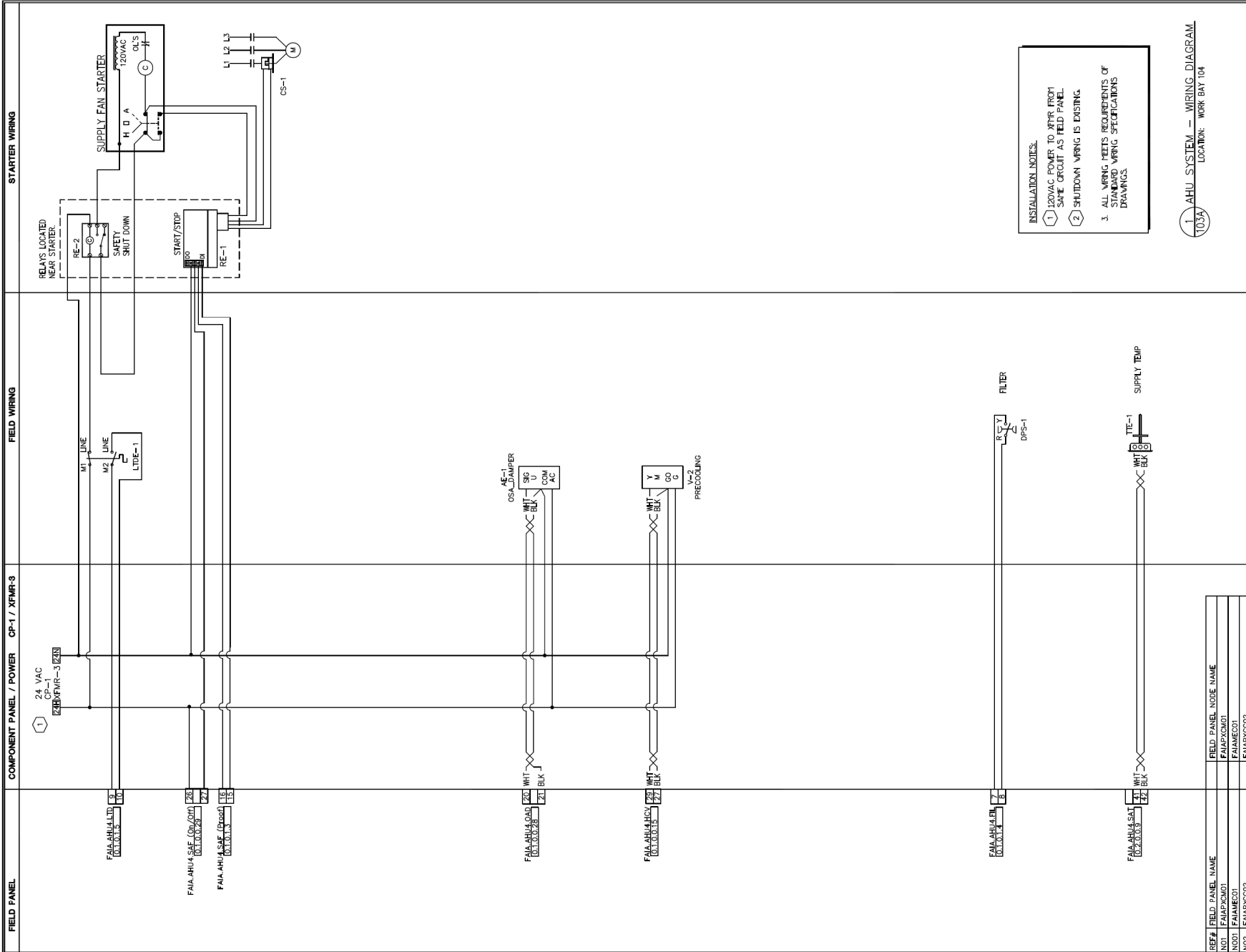
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TL	NEP	TMA	05/23/06	09/11/15

AIR HANDLER 4 (EX)

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INSTALLATION NOTES:

- 120VAC POWER TO XFMR FROM SAME CIRCUIT AS FIELD PANEL.
- SHUTDOWN WIRING IS EXISTING.
- ALL WIRING MEETS REQUIREMENTS OF STANDARD WIRING SPECIFICATIONS DRAWINGS.

103A AHU SYSTEM - WIRING DIAGRAM
LOCATION: WORK BAY 104

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N01	FAIAPRCM01	FAIAPXC0M01
N001	FAIAMEC01	FAIAMEC01
N02	FAIAPXC02	FAIAPXC02

REVISION HISTORY

1	19/12/2006	TCP	TAS-BUILT DRAWING
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DWVA FAIRBANKS ARMOY
FAIRBANKS, AK

440P-169367
0

103A

PROJECT: 103A
DESIGNED BY: TMA
CHECKED BY: TMA
DATE: 06/23/06
LAST REV. DATE: 09/11/15

AIR HANDLER 4 WIRING (EX)

Control Device	Qty	Product Number	Manufacturer	Document Number	Description	
Existing Equipment To Remain						
AE	1	1	EXISTING	N/A	N/A	EXISTING
D						SEE DAMPER SUBMITTAL
DPS	1	1	EXISTING	N/A	N/A	EXISTING
LTD	1	1	EXISTING	N/A	N/A	EXISTING
RE	2	1	RIB2401D	FUNCTIONAL DEVICES	1208cut002	RIB 24VAC 24VAC/DC DPDT
TTE	1	1	544-339	SIEMENS	149 261	*OBS/BY 544-339-18* D/PT TEMP SENSOR,
V						SEE VALVE SUBMITTAL

68.0
74.0

80.0
55.0

DURING DAY MODE OPERATION, THE OUTSIDE AIR DAMPER WILL BE FULLY OPEN. THE HEATING COIL VALVE WILL BE LOCKED OUT WHEN OUTSIDE AIR TEMPERATURE IS ABOVE 70.0 DEG F (ADJUSTABLE).

SHOP EXHAUST FAN EF-2 IS SOFTWARE INTERLOCKED WITH SUPPLY FAN. WHEN THE SHOP EXHAUST FAN IS IN OPERATION, THE SUPPLY FAN WILL OPERATE AND THE OSA DAMPER WILL GO FULL OPEN.

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY

EXISTING AIR HANDLING UNIT (AHU-4):

AIR HANDLING UNIT AHU-4 IS A CONSTANT VOLUME SYSTEM.

SUPPLY STATUS WILL BE MONITORED VIA A CURRENT SWITCH. AN ALARM IS GENERATED WHENEVER THERE IS A MISMATCH BETWEEN THE SUPPLY FAN STATUS AND THE DDC COMMAND SIGNAL.

A DIFFERENTIAL PRESSURE SWITCH IS PROVIDED ACROSS THE FILTER TO ALARM WHEN A PRESSURE INCREASE OVER SETPOINT (FIELD SET) IS DETECTED.

THE TEMPERATURE CONTROL SYSTEM IS SOFTWARE INTERLOCKED WITH THE UNIT. WHEN THE UNIT IS OFF, ALL CONTROL SYSTEMS WILL GO TO THEIR DISABLED OR SAFE POSITIONS. WHEN THE UNIT IS ON, ALL CONTROL SIGNALS ARE CONTROLLED AUTOMATICALLY THROUGH THE DDC CONTROL PANEL AS OUTLINED BELOW.

THERE ARE (2) MODES OF OPERATION FOR AUTOMATED CONTROL: NIGHT MODE OPERATION AND DAY MODE OPERATION.

NIGHT MODE OPERATION:

DURING THE NIGHT MODE OPERATION THE SUPPLY FAN WILL BE OFF, OSA DAMPER WILL BE FULLY CLOSED. THE HEATING COIL VALVE WILL BE CLOSED EXCEPT UNDER FREEZE ALARM CONDITION AS DEFINED BELOW.

DAY MODE OPERATION:

A SUPPLY AIR TEMPERATURE SENSOR WILL MODULATE HEATING COIL VALVE TO MAINTAIN SUPPLY AIR TEMPERATURE AT SETPOINT. THE SUPPLY AIR TEMPERATURE SETPOINT WILL BE RESET BY THE AVERAGE SPACE TEMPERATURE OF TWO SENSORS LOCATED IN WORK-BAY 104 AS OUTLINED BELOW. ALL LIMITS ARE OPERATOR ADJUSTABLE.

SPACE TEMP

SUPPLY TEMP

REVISION HISTORY

SIEMENS

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

440P-159367

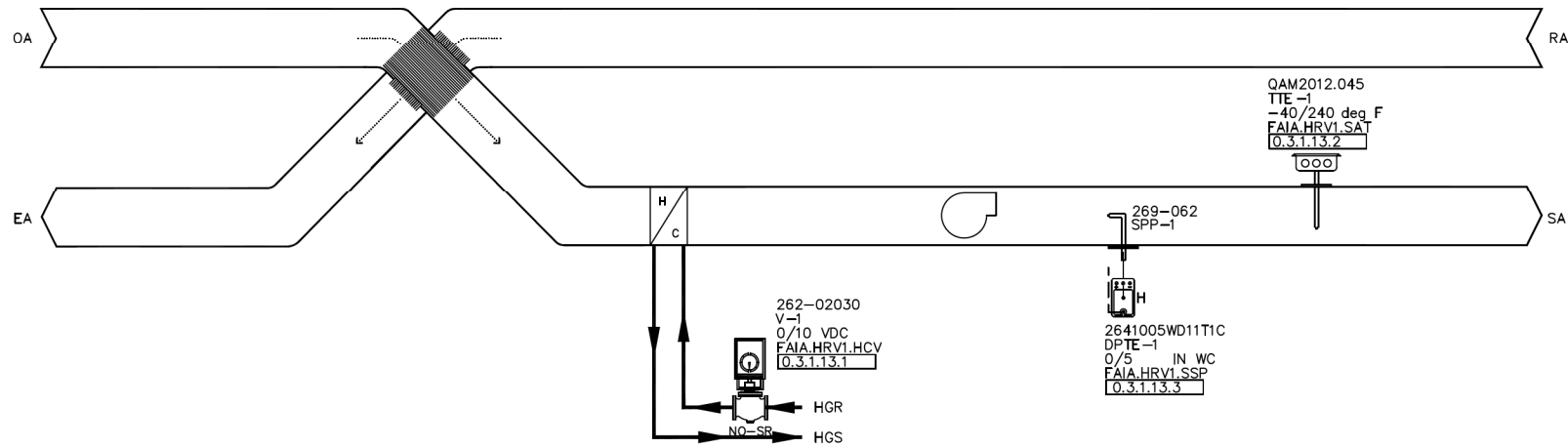
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

AIR HANDLER 4 BOM & SEQ (EX)

103B

NOTES:

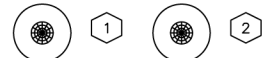
- ① OCCUPANCY SENSOR LOCATED IN ROOM 138A. SEE DRAWING 400.
- ② OCCUPANCY SENSOR LOCATED IN ROOM 138B. SEE DRAWING 400A.



① **HEAT RECOVERY VENTILATION 1**
 104
 LOCATED: ROOM 138
 SERVES: ROOMS 138A & 138B VENTILATION

FAIA.HRV1.ENABLE
 IN03:0.6.4

HRV-1



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAPXCM03	FAIAPXCM03

REVISION HISTORY	

SIEMENS

2520 ROLAND ROAD
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 USA
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 Fax: 907.479.3879

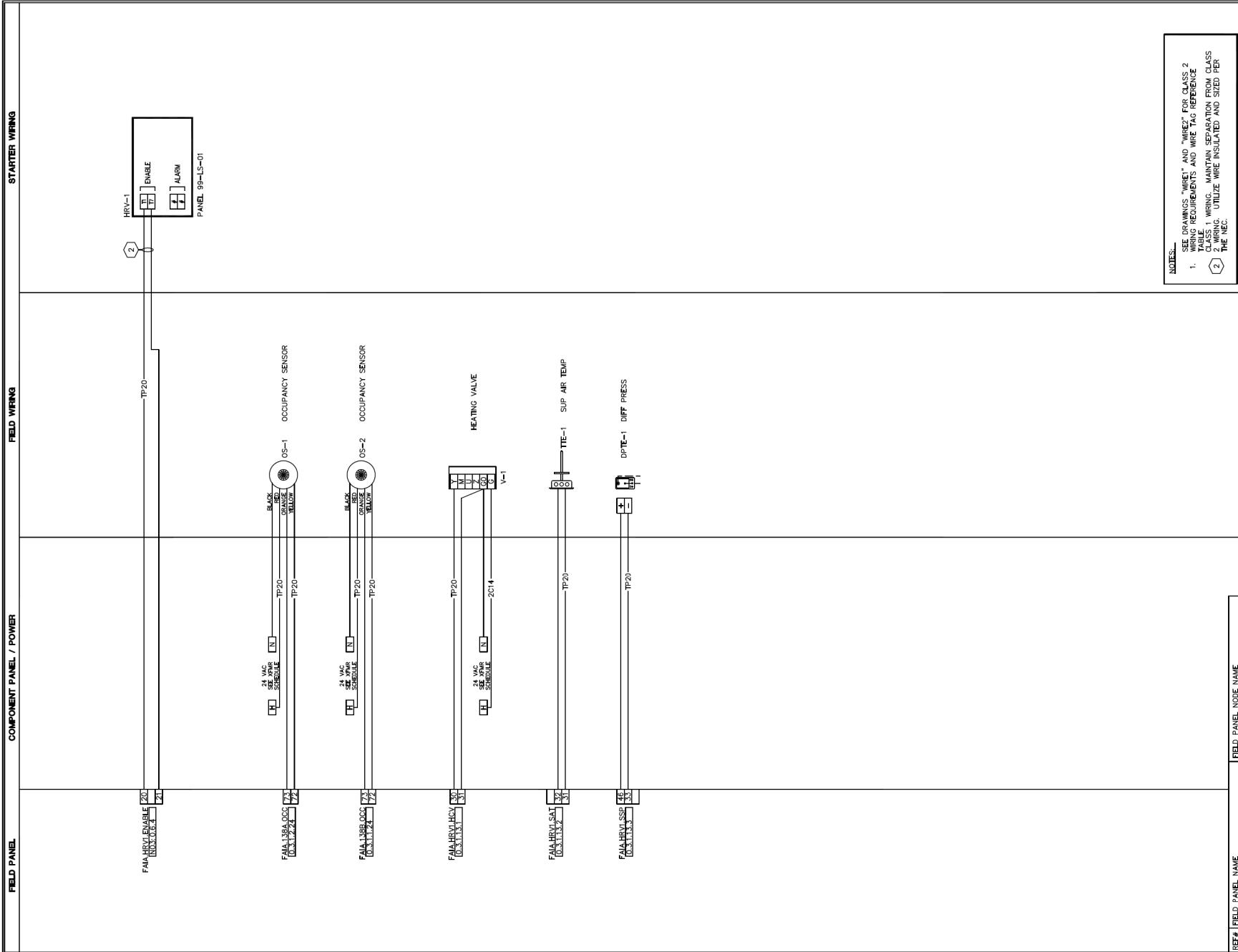
SIEMENS INDUSTRY, INC
 BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY
 FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15

HEAT RECOVERY UNIT 1

440P-159367
 0
104



NOTES:
 SEE DRAWINGS "WIRE" AND "WIRE" FOR CLASS 2 WIRING REQUIREMENTS AND WIRE TAG REFERENCE TABLE 1. WIRING MAINTAIN SEPARATION FROM CLASS 2 WIRING. UTILIZE WIRE INSULATED AND SIZED PER THE NEC.

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME										
NO3	FAMA.PCM03	FAMA.PCM03										
REVISION HISTORY												
<table border="1"> <tr> <td>DESIGNED BY</td> <td>DATE</td> <td>LAST DATE FILED</td> </tr> <tr> <td>TJ</td> <td>06/23/09</td> <td>09/11/15</td> </tr> </table>			DESIGNED BY	DATE	LAST DATE FILED	TJ	06/23/09	09/11/15				
DESIGNED BY	DATE	LAST DATE FILED										
TJ	06/23/09	09/11/15										
<table border="1"> <tr> <td>PROJECT</td> <td>TMA</td> <td>06/23/09</td> <td>09/11/15</td> </tr> <tr> <td>CONTRACT</td> <td>NSP</td> <td></td> <td></td> </tr> </table>			PROJECT	TMA	06/23/09	09/11/15	CONTRACT	NSP				
PROJECT	TMA	06/23/09	09/11/15									
CONTRACT	NSP											
<table border="1"> <tr> <td>440P-16867</td> <td>0</td> <td>104A</td> </tr> <tr> <td colspan="2">DVA FAIRBANKS ARMOY</td> <td>HEAT RECOVERY UNIT 1 WIRING</td> </tr> </table>			440P-16867	0	104A	DVA FAIRBANKS ARMOY		HEAT RECOVERY UNIT 1 WIRING				
440P-16867	0	104A										
DVA FAIRBANKS ARMOY		HEAT RECOVERY UNIT 1 WIRING										
<table border="1"> <tr> <td>2620 ROLAND ROAD</td> <td>2620 ROLAND ROAD</td> </tr> <tr> <td>FAIRBANKS, AK 98709</td> <td>FAIRBANKS, AK 98709</td> </tr> <tr> <td>USA</td> <td>USA</td> </tr> <tr> <td>Phone: 907.479.7034</td> <td>Phone: 907.479.7034</td> </tr> <tr> <td>Fax: 907.479.8879</td> <td>Fax: 907.479.8879</td> </tr> </table>			2620 ROLAND ROAD	2620 ROLAND ROAD	FAIRBANKS, AK 98709	FAIRBANKS, AK 98709	USA	USA	Phone: 907.479.7034	Phone: 907.479.7034	Fax: 907.479.8879	Fax: 907.479.8879
2620 ROLAND ROAD	2620 ROLAND ROAD											
FAIRBANKS, AK 98709	FAIRBANKS, AK 98709											
USA	USA											
Phone: 907.479.7034	Phone: 907.479.7034											
Fax: 907.479.8879	Fax: 907.479.8879											
<table border="1"> <tr> <td>SIEMENS</td> <td>DVA FAIRBANKS ARMOY</td> </tr> <tr> <td>SIEMENS INDUSTRY, INC</td> <td>FAIRBANKS, AK</td> </tr> <tr> <td>BUILDING TECHNOLOGIES</td> <td></td> </tr> </table>			SIEMENS	DVA FAIRBANKS ARMOY	SIEMENS INDUSTRY, INC	FAIRBANKS, AK	BUILDING TECHNOLOGIES					
SIEMENS	DVA FAIRBANKS ARMOY											
SIEMENS INDUSTRY, INC	FAIRBANKS, AK											
BUILDING TECHNOLOGIES												

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Field Mounted Devices					
DPTE	1	2641005WD11T1C	SETRA	0608cut003	DP TRAN AIR,1%,5inch
SPP	1	269-062	SIEMENS	N/A	PR269 ACCESSORY, SENSING TUBE
TTE	1	QAM2012.045	SIEMENS	149915	DUCT PT SNSR, PT 1K OHM, (385), 18 IN
V					SEE VALVE SUBMITTAL

SEQUENCE OF OPERATIONS:

FAIRBANKS DMVA ARMORY

HEAT VENTILATION UNIT 1 (HRV-1):?

- A. OCCUPIED MODE
 - 1. OPERATION
 - a. THE UNIT IS CONTROLLED VIA MANUFACTURER PROVIDED CONTROLS.
 - b. THE DDC SYSTEM ENABLES THE UNIT BASED ON OCCUPANCY DETECTION VIA AN OCCUPANCY SENSOR.
 - c. THE HEATING COIL VALVE SHALL MODULATE TO MAINTAIN THE SUPPLY AIR TEMPERATURE SET POINT AT 70 DEGREES F (ADJUSTABLE).
- B. UNOCCUPIED MODE
 - 1. OPERATION
 - a. THE UNIT SHALL BE OFF.
 - b. HEATING COIL VALVE SHALL CLOSE.
- C. SYSTEM SAFETIES & MONITORING
 - 1. UPON LOW SUPPLY AIR TEMPERATURE OF 40 DEGREES F (ADJUSTABLE), THE HRU WILL SHUT DOWN AFTER A TWO MINUTE DELAY AND AN ALARM WILL BE GENERATED.
 - 2. AN ALARM SHALL BE GENERATED IF THE FAN IS NOT OPERATING AS DETECTED BY A PRESSURE SENSOR.

REVISION HISTORY

SIEMENS

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SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

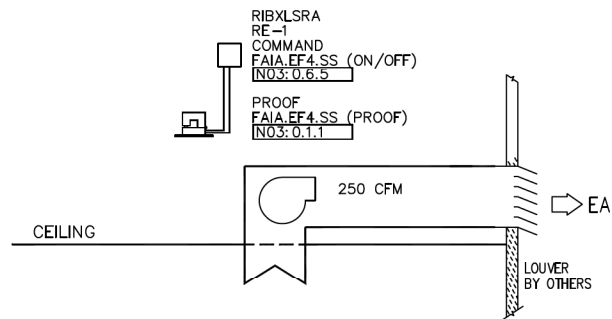
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

440P-159367

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

HEAT RECOVERY 1 BOM & SEQ

104B



QAA2235.EWSN
 TTE -1
 55/95 DEG F
 FAIA.EF4.RMT
 NO3:0.4.3

1
 105 EXHAUST FAN 4
 (REFERENCED AS EF-1 ON CONTRACT DWGS)
 LOCATION/SERVES: SERVER ROOM 150

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAPXCM03	FAIAPXCM03

REVISION HISTORY	

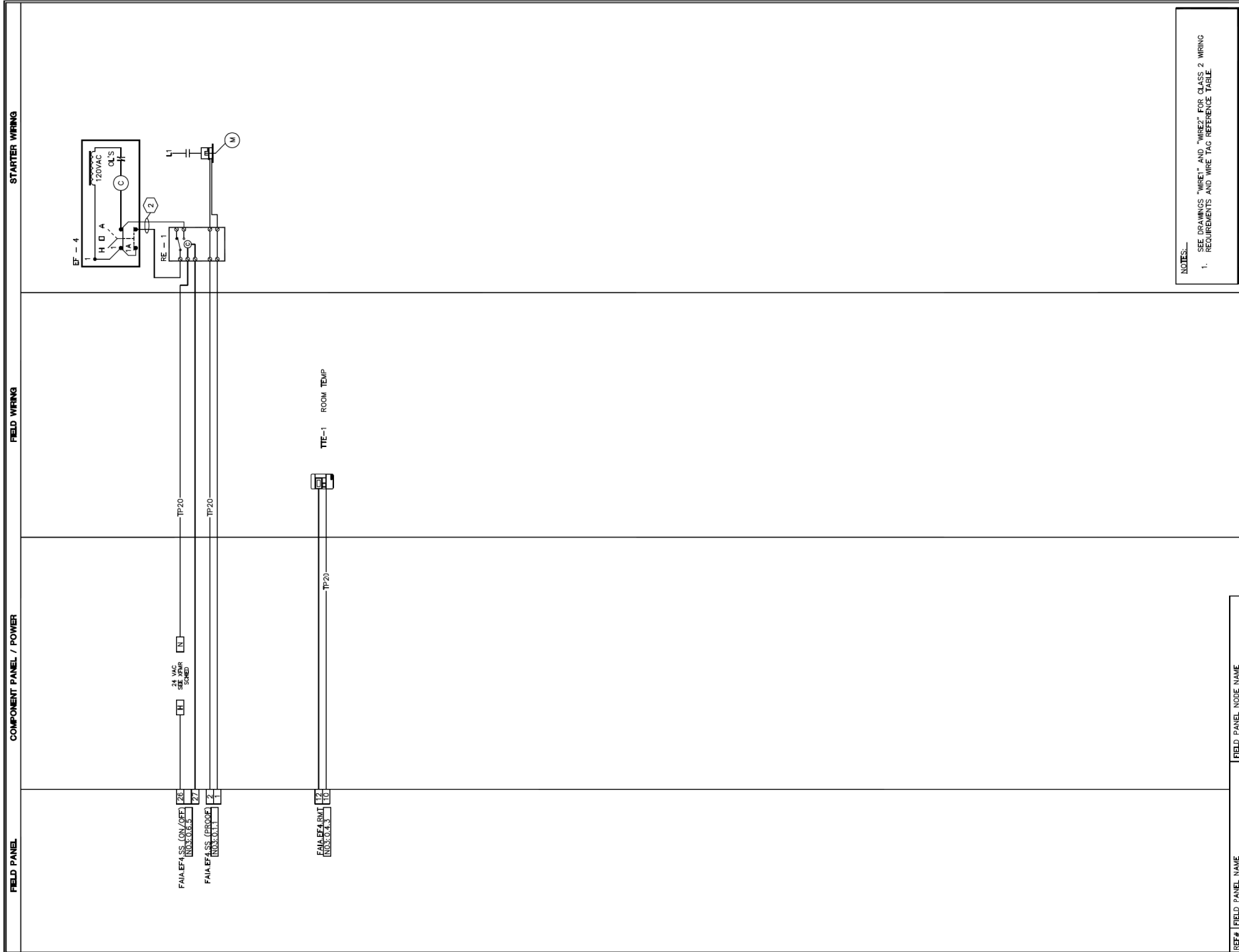
SIEMENS

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DMVA FAIRBANKS ARMORY FAIRBANKS, AK				
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/11/15
EXHAUST FAN 4 (EF-1 ROOM 150)				

440P-159367
 0
105



NOTES:
 SEE DRAWINGS "WIRE1" AND "WIRE2" FOR CLASS 2 WIRING REQUIREMENTS AND WIRE TAG REFERENCE TABLE.

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
003	FAIAPX0M03	FAIAPX0M03

REVISION HISTORY

SIEMENS		DVA FAIRBANKS ARMORY		440P-16367
2620 ROLAND ROAD FAIRBANKS, AK 99709 USA Phone: 907.479.7034 Fax: 907.479.8879		FAIRBANKS, AK		0
SIEMENS INDUSTRY, INC BUILDING TECHNOLOGIES		EXHAUST FAN 4 WIRING		105A
DESIGNED BY	DESIGNED BY	DATE	DATE	DATE
TL	TMA	06/23/09	09/11/15	

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Field Mounted Devices					
RE 1	1	RIBXLSRA	FUNCTIONAL DEVICES	1208cut137	CS ENC RM ADJ 1.25-150A REL,OV
TTE 1	1	QAA2235.EWSN	SIEMENS	149708	RTS, BAU HSNQ, 100K , NC

SEQUENCE OF OPERATIONS:

FAIRBANKS DMVA ARMORY

EXHAUST FAN 4 (NEW EF-1 SERVING SERVER ROOM 150):

A. OPERATION

1. THE EXHAUST FAN SHALL START AND STOP TO MAINTAIN ROOM TEMPERATURE SET POINT OF 75 DEGREES F (ADJUSTABLE).

B. SYSTEM SAFETIES & MONITORING

1. AN ALARM SHALL BE GENERATED IF THE ROOM TEMPERATURE SET POINT EXCEEDS 80 DEGREES F (ADJUSTABLE).

REVISION HISTORY

SIEMENS

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FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

EXHAUST FAN 4 BOM & SEQ

440P-159367

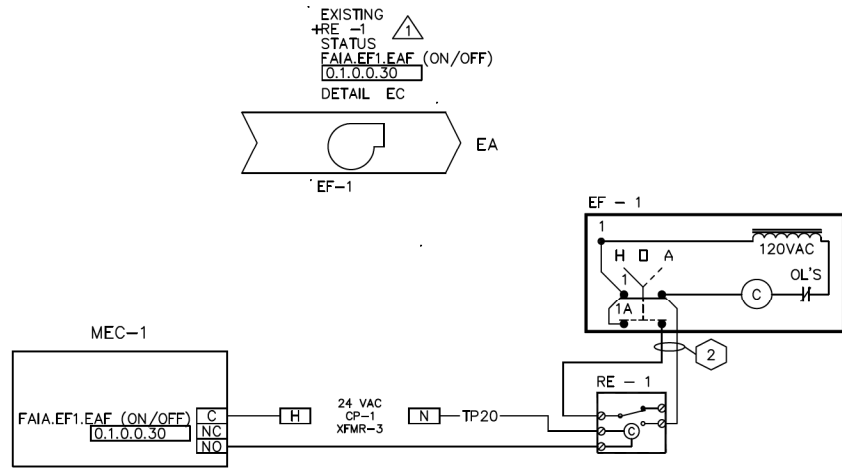
105B

EXHAUST FANS 1-3

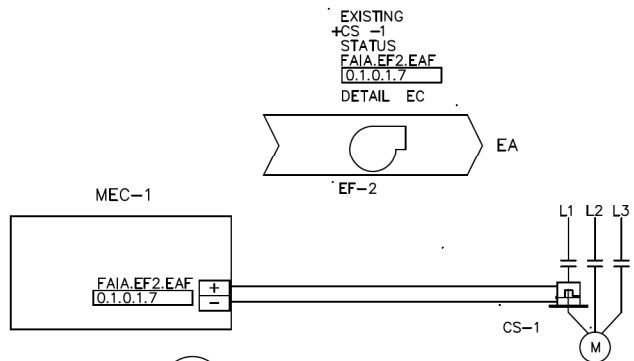
INSTALLATION NOTES:
 1 DEVICES AND WIRING WERE REUSED UNLESS OTHERWISE NOTED.

COMPONENT PANEL CP-1

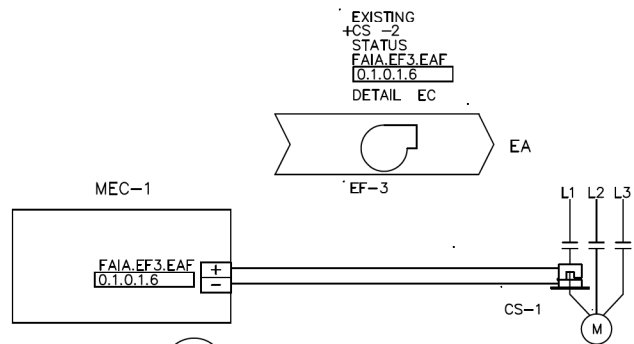
XFMR-3 100 VA
 XFMR-3 POWERS RELAYS.



1
106
EXHAUST FAN 1
SERVES: TOILET/SHOWER
TYPICAL OF 1



2
106
EXHAUST FAN 2
SERVES: WORK BAY 104
TYPICAL OF 1



3
106
EXHAUST FAN 3
SERVES: KITCHEN HOOD
TYPICAL OF 1

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N01	FAIAPXCM01	FAIAPXCM01
NO01	FAIAMEC01	FAIAMEC01

REVISION HISTORY			
1	9/12/2006	TCP	AS-BUILT DRAWING

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DMVA FAIRBANKS ARMORY
 FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/11/15

EXHAUST FANS 1-3 (EX)

440P-159367
 0
106

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
CS 1-2	2	EXISTING	N/A	N/A	EXISTING
RE 1	1	EXISTING	N/A	N/A	EXISTING

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY
EXHAUST FAN 1 (EF-1):

THE EXHAUST FAN WILL BE AUTOMATICALLY START/STOPPED BASED ON A TIME PROGRAM (ADJUSTABLE) THROUGH THE DDC CONTROL PANEL.

THERE ARE (2) MODES OF OPERATION FOR AUTOMATED CONTROL: NIGHT MODE OPERATION AND DAY MODE OPERATION.

NIGHT MODE OPERATION:
DURING NIGHT MODE OPERATION THE SUPPLY FAN WILL BE OFF.

DAY MODE OPERATION:
DURING DAY MODE OPERATION THE SUPPLY FAN WILL BE ON.

EXHAUST FAN 2 (EF-2):

SHOP EXHAUST FAN EF-2 IS MANUALLY ENABLE BY THE USER AND IS SOFTWARE INTERLOCKED WITH AHU-4. WHEN THE SHOP EXHAUST FAN IS IN OPERATION, THE AHU-4 SUPPLY FAN WILL OPERATE AND THE AHU-4 OSA DAMPER WILL GO FULL OPEN.

EXHAUST FAN 3 (EF-3):

KITCHEN HOOD EXHAUST FAN EF-3 IS MANUALLY ENABLED BY THE USER AND IS SOFTWARE INTERLOCKED WITH AHU-2. WHEN KITCHEN HOOD EXHAUST FAN IS IN OPERATION, THE SUPPLY FAN FOR AHU-2 WILL OPERATE AND THE AHU-2 OSA DAMPER WILL BE FULLY OPEN. AHU-2 PREHEAT AND HEATING COIL VALVES WILL MODULATE IN DAY MODE OPERATION (REFERENCE AHU-2 SEQUENCE OF OPERATIONS).

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
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DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

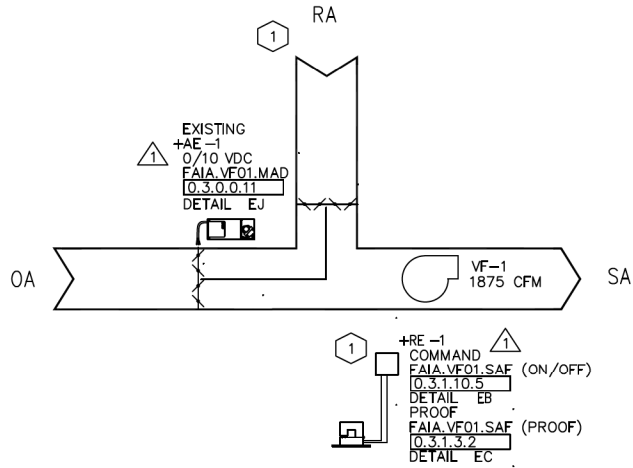
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

EXHAUST FANS 1-3 BOM & SEQ (EX)

440P-159367

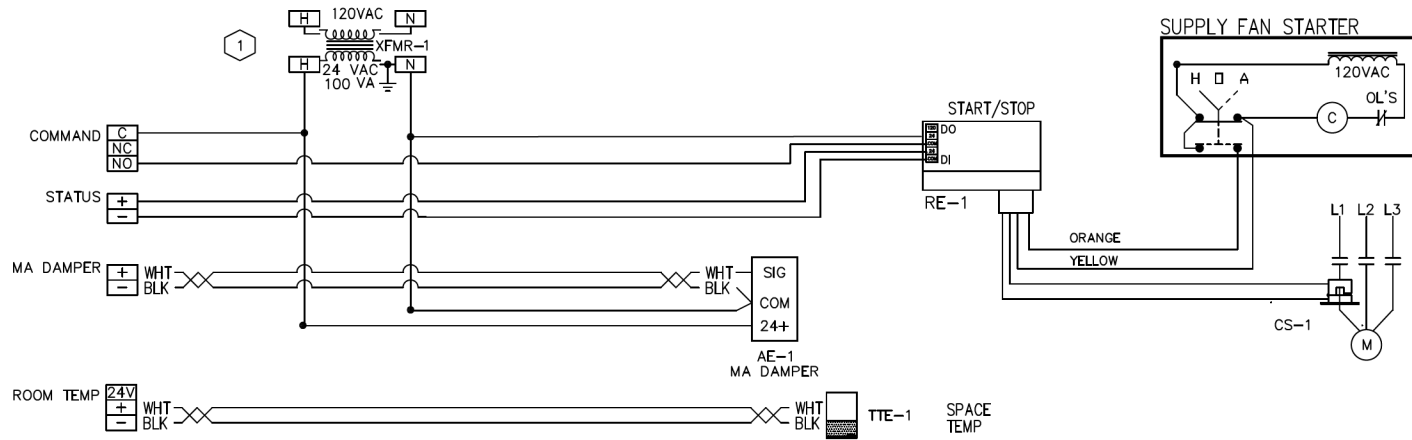
106A

VENTILATION FAN 1



INSTALLATION NOTES:
 1 DEVICES ARE EXISTING UNLESS OTHERWISE INDICATED.

COMPONENT PANEL CP-C2
 +XFMR-2 100 VA
 XFMR-2 POWERS
 AE-1 & RELAY.



1
107
VF-1 SYSTEM DIAGRAM
 LOCATION: BOILER ROOM 114
 SERVES: BOILER ROOM

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMEC03	FAIAMEC-03

REVISION HISTORY			
1	9/12/2006	TCP	AS-BUILT DRAWING

SIEMENS
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SIEMENS INDUSTRY, INC
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DMVA FAIRBANKS ARMORY
 FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/11/15

BOILER VENT FAN (EX)

440P-159367
 0
107

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Field Mounted Devices					
TTE	1	544-760A	SIEMENS	149168	ROOM SENSOR,DST BEIGE

SEQUENCE OF OPERATIONS:
 FAIRBANKS DMVA ARMORY
 BOILER VENT FAN 1 (VF-1):

THIS UNIT WILL RUN BASED ON ROOM COOLING NEEDS. THE SPACE THERMOSTAT WILL ENABLE FAN AND MODULATE MIXING DAMPERS TO MAINTAIN SPACE TEMPERATURE AT SETPOINT (ADJUSTABLE).

REVISION HISTORY

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 BUILDING TECHNOLOGIES

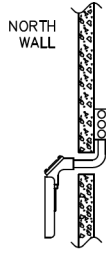
DMVA FAIRBANKS ARMORY
 FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

BOILER VENT FAN BOM & SEQ (EX)

440P-159367

107A

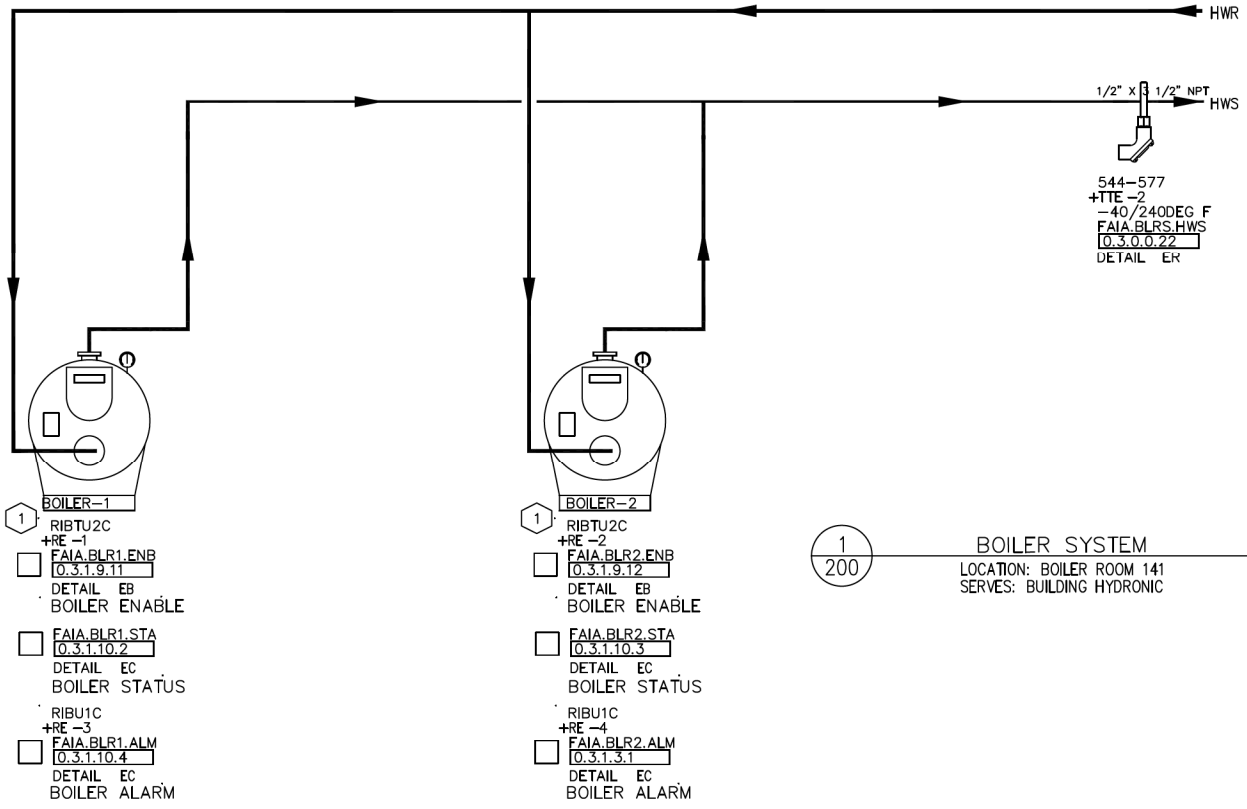


536-768
+TTE -1
-58/122DEG F
FAIA.OSAT
[0.3.0.0.21]
DETAIL ER

BOILERS

INSTALLATION NOTES:
1 DEVICES AND WIRING WERE REUSED UNLESS OTHERWISE NOTED.

COMPONENT PANEL CP-2
+XFMR-2 100 VA
XFMR-2 POWERS RELAYS.
⚠



1 BOILER-1
RIBTU2C
+RE -1
 FAIA.BLR1.ENB [0.3.1.9.11] DETAIL EB BOILER ENABLE
 FAIA.BLR1.STA [0.3.1.10.2] DETAIL EC BOILER STATUS
RIBU1C
+RE -3
 FAIA.BLR1.ALM [0.3.1.10.4] DETAIL EC BOILER ALARM

1 BOILER-2
RIBTU2C
+RE -2
 FAIA.BLR2.ENB [0.3.1.9.12] DETAIL EB BOILER ENABLE
 FAIA.BLR2.STA [0.3.1.10.3] DETAIL EC BOILER STATUS
RIBU1C
+RE -4
 FAIA.BLR2.ALM [0.3.1.3.1] DETAIL EC BOILER ALARM

1
200 BOILER SYSTEM
LOCATION: BOILER ROOM 141
SERVES: BUILDING HYDRONIC

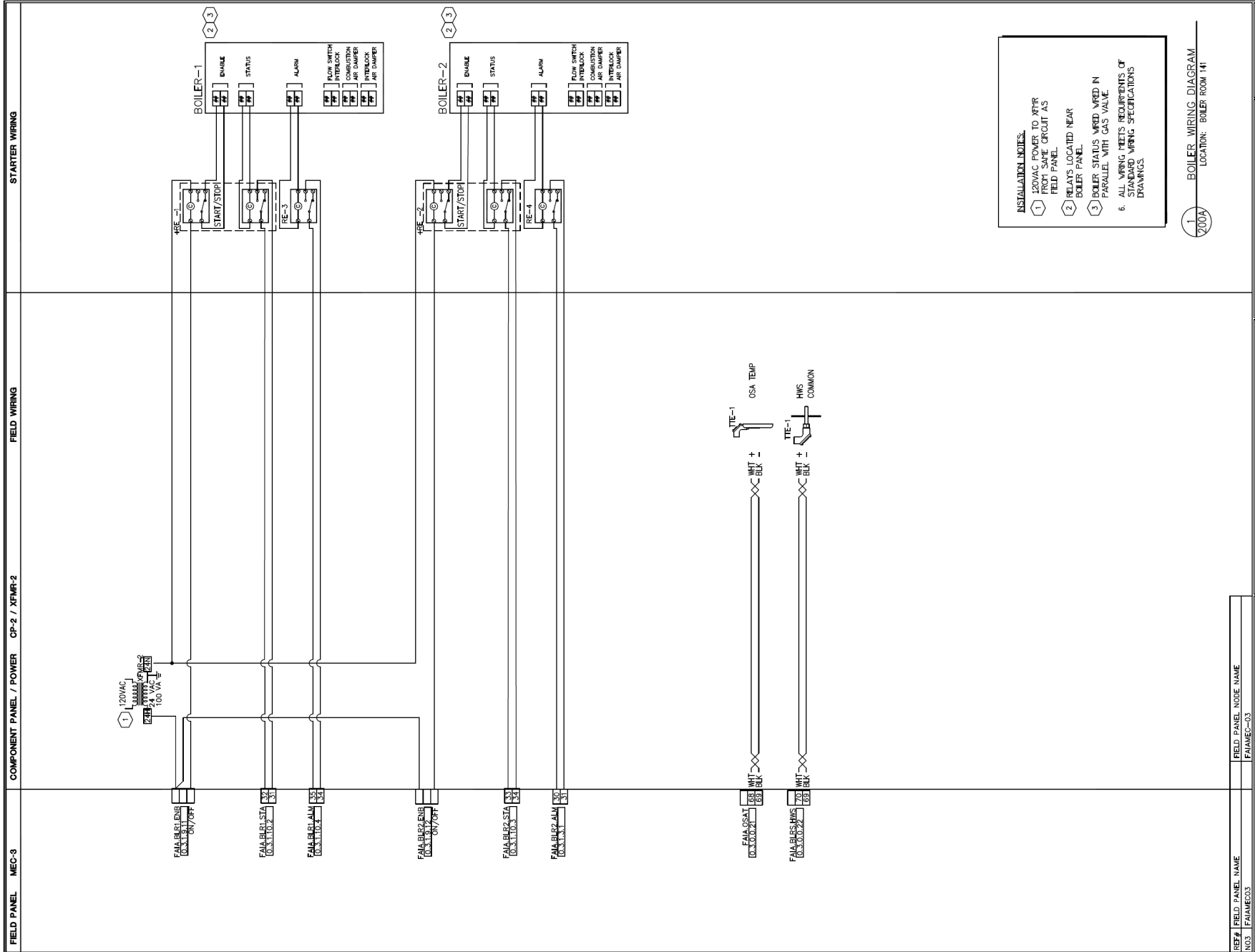
REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMEC03	FAIAMEC-03

REVISION HISTORY			
1	9/12/2006	TCP	AS-BUILT DRAWING

SIEMENS
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BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY FAIRBANKS, AK				
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/11/15
BOILERS (EX)				

440P-159367
0
200



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
103	FAIAMEC3	FAIAMEC-03

REVISION HISTORY	
1	19/12/2006 TDC PAS-BUILT DRAWING

SIEMENS

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SIEMENS INDUSTRY, INC
 BUILDING TECHNOLOGIES

DWA FAIRBANKS ARMORY
 FAIRBANKS, AK

440P-169367
 0

200A

PROJECT: TMA
 SHEET: 06/23/06
 DATE: 09/11/15

BOILERS WIRING (EX)

1 BOILER WIRING DIAGRAM
 LOCATION: BOILER ROOM 141

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
AE 1	1	EXISTING	N/A	N/A	EXISTING
RE 1-2	2	RIBTU2C	FUNCTIONAL DEVICES	1208cut012	T-10A 2 SPDT 10-30VAC/DC120VAC
RE 3-4	2	RIBU1C	FUNCTIONAL DEVICES	1208cut013	RIB 120VAC 24VAC/DC SPDT
TTE 1	1	536-768	SIEMENS	149 263	MRAIR TEMP SENS PLAT -58/122F
TTE 2	1	544-577	SIEMENS	149 261	*OBS/BY 544-577-25* IMM TEMP SENS (-40/2

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY

BOILERS (BOILERS):

THE HOT WATER SYSTEM CONSISTS OF TWO HOT WATER BOILERS AND DEDICATED HOT WATER DISTRIBUTION PUMPS.

THE SYSTEM OPERATES AS FOLLOWS (ALL SUGGESTED SET POINTS AND SETTINGS ARE ADJUSTABLE.):

HEATING CONTROL

BOILERS RUN CONTINUOUSLY FOR HEATING AND DOMESTIC HOT WATER.

IF A BOILER GOES INTO ALARM, THE BOILER IS TURNED OFF AND THE NEXT BOILER COMBINATION IN SEQUENCE TAKES OVER.

THE BOILER CONTROL SYSTEM, PROVIDED BY THE BOILER MANUFACTURER, IS FACTORY WIRED EXCEPT FOR FIELD INSTALLED DEVICES (COMBUSTION AIR DAMPER INTERLOCKS, FLOW SWITCHES, LOW WATER CUT OFF, ETC.). FLAME SAFEGUARD CONTROLS ARE INCLUDED WITH THE BOILER.

THE DDC SYSTEM MONITORS THE BOILER CONTROLS FOR A COMMON ALARM CONDITION (I.E. LOW WATER CUT OFF, FLAME FAILURE, ETC.).

REVISION HISTORY

SIEMENS

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

BOILERS BOM & SEQ (EX)

440P-159367

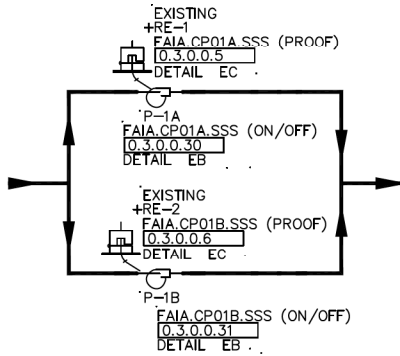
200B

3 PHASE PUMPS

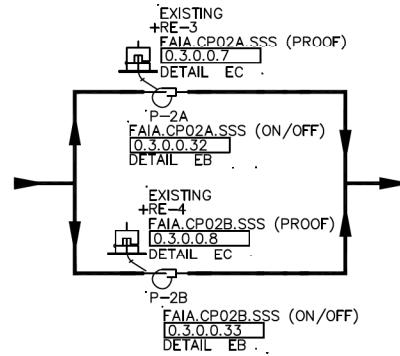
INSTALLATION NOTES:
 ① DEVICES AND WIRING WERE REUSED UNLESS OTHERWISE NOTED.

COMPONENT PANEL CP-2

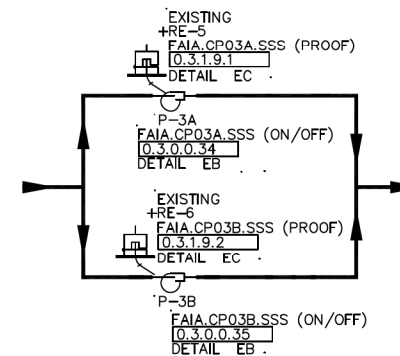
+XFMR-2 100 VA
 XFMR-2 POWERS RELAYS.



①
201 CP 1A & 1B
LOCATED: BOILER ROOM 114
TYPICAL OF 1



②
201 CP 2A & 2B
LOCATED: BOILER ROOM 114
TYPICAL OF 1



③
201 CP 3A & 3B
LOCATED: BOILER ROOM 114
TYPICAL OF 1

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMEC03	FAIAMEC-03

REVISION HISTORY			
1	9/12/2006	TCP	AS-BUILT DRAWING

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BUILDING PUMPS (EX)

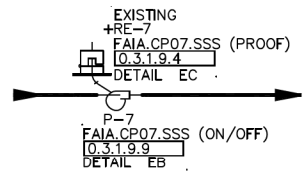
440P-159367
 0
201

120 VAC PUMPS

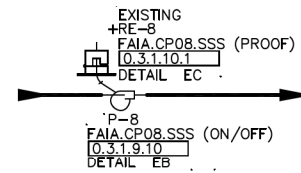
INSTALLATION NOTES:
 ① DEVICES AND WIRING WERE REUSED UNLESS OTHERWISE NOTED.

COMPONENT PANEL CP-2

+XFMR-2 100 VA
 XFMR-2 POWERS RELAYS.




① CP-7
 LOCATED: MECHANICAL ROOM 142
 TYPICAL OF 1



② CP-8
 LOCATED: MECHANICAL ROOM 142
 TYPICAL OF 1

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N03	FAIAMEC03	FAIAMEC-03

REVISION HISTORY			
1	9/12/2006	TCP	AS-BUILT DRAWING

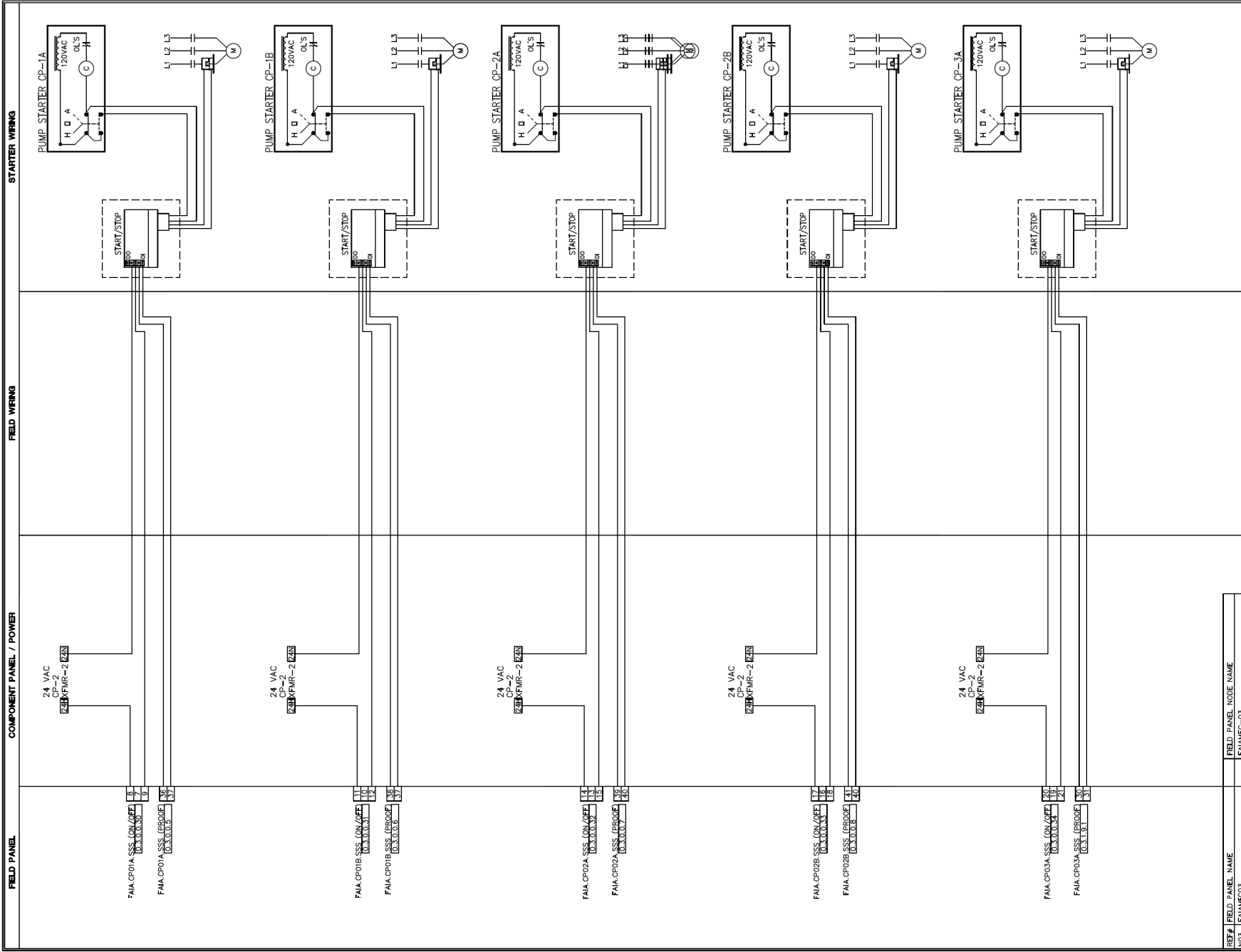
SIEMENS

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SIEMENS INDUSTRY, INC
 BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY FAIRBANKS, AK					
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE	
TL	NEP	TMA	05/23/06	09/11/15	
BUILDING PUMPS WIRING (EX)					

440P-159367
 0
201A



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
001	FA1AMEC3	FA1AMEC-03

REVISION HISTORY

NO.	DESCRIPTION	DATE

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 BUILDING TECHNOLOGIES

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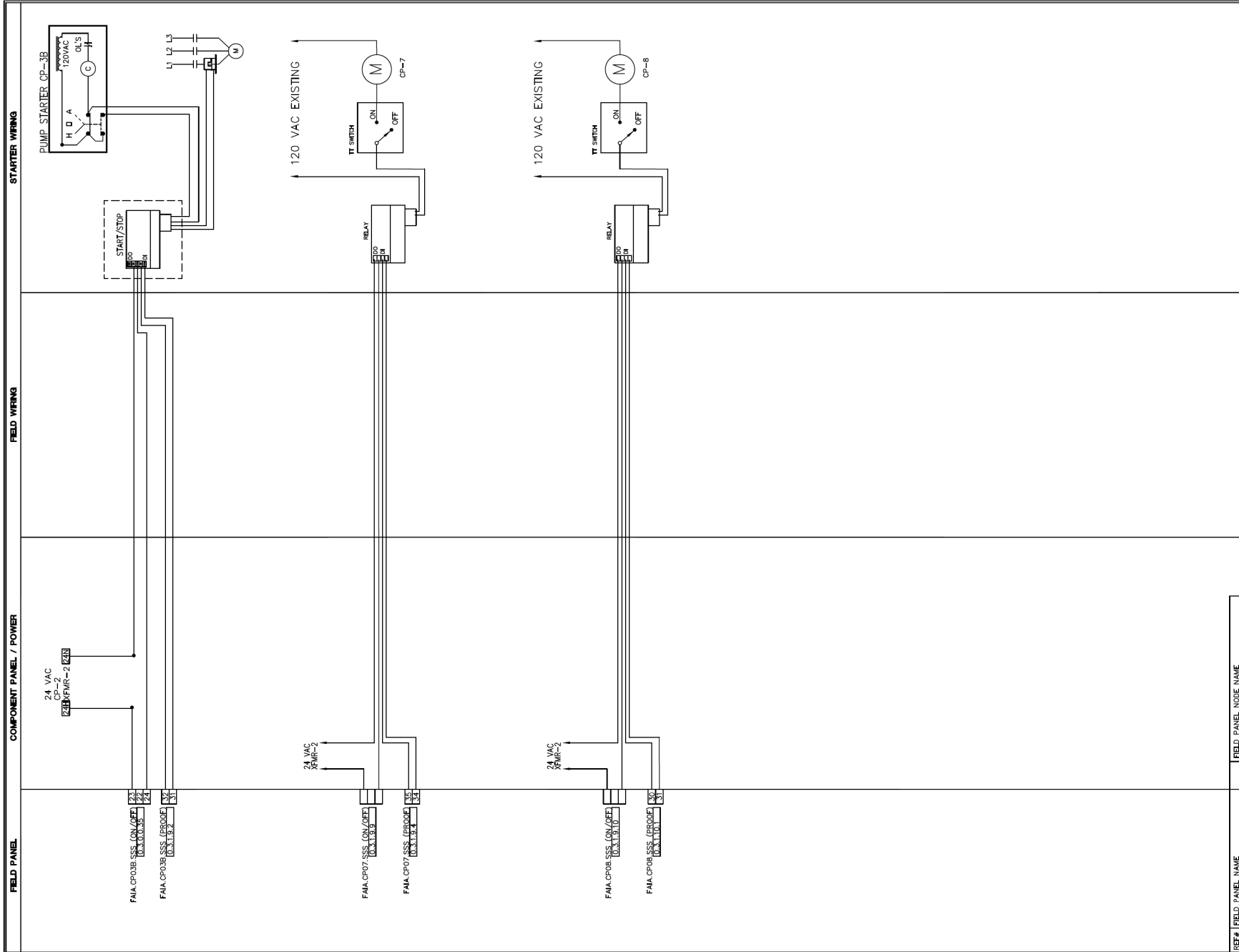
DWA FAIRBANKS ARMOY
 FAIRBANKS, AK

440P-16867
 0

201B

PROJECT: TMA
 TMA
 NBP
 TMA
 06/23/08
 09/11/15

BUILDING PUMPS WIRING (EX)



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
001	FAIAMEC03	FAIAMEC-03

REVISION HISTORY

NO.	DESCRIPTION	DATE

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 BUILDING TECHNOLOGIES
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DWA FAIRBANKS ARMOY
 FAIRBANKS, AK
 440P-16067
 0
2010
 BUILDING PUMPS WIRING (EX)

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
RE 1-8	8	EXISTING	N/A	N/A	EXISTING

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY

HEATING HOT WATER PUMPS (CP-3A/B):

THE LEAD PUMP WILL OPERATE CONTINUOUSLY TO PROVIDE HEATING TO DOMESTIC HOT WATER SYSTEMS AND BUILDING HEAT SYSTEMS.

UPON FAILURE OF THE LEAD PUMP, THE LAG PUMP WILL OPERATE AS NEEDED.

LEAD/LAG OPERATION WILL ALTERNATE AUTOMATICALLY EVERY 200 HOURS (ADJUSTABLE) OF USE.

CIRCULATING PUMPS (CP-7, CP-8):

DOMESTIC HOT WATER RE-CIRCULATION PUMP (CP-7) WILL OPERATE DURING SCHEDULED OCCUPIED TIMES.

UTILITY WATER MAIN RE-CIRCULATION PUMP (CP-8) WILL BE ENABLED BASED ON OUTDOOR AIR TEMPERATURE. PUMP WILL BE ON WHEN OUTSIDE AIR TEMPERATURE IS BELOW 35DEG (ADJUSTABLE) AND OFF OTHERWISE.

BOILER PUMPS (CP-1A & B, CP-2A & B):

THESE PUMPS WILL OPERATE AS PART OF THE BOILER SYSTEM IN A LEAD LAG CONFIGURATION.

UPON FAILURE OF THE LEAD PUMP, THE LAG PUMP WILL OPERATE AS NEEDED.

LEAD/LAG OPERATION WILL ALTERNATE AUTOMATICALLY EVERY 200 HOURS (ADJUSTABLE) OF USE.

REVISION HISTORY

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SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

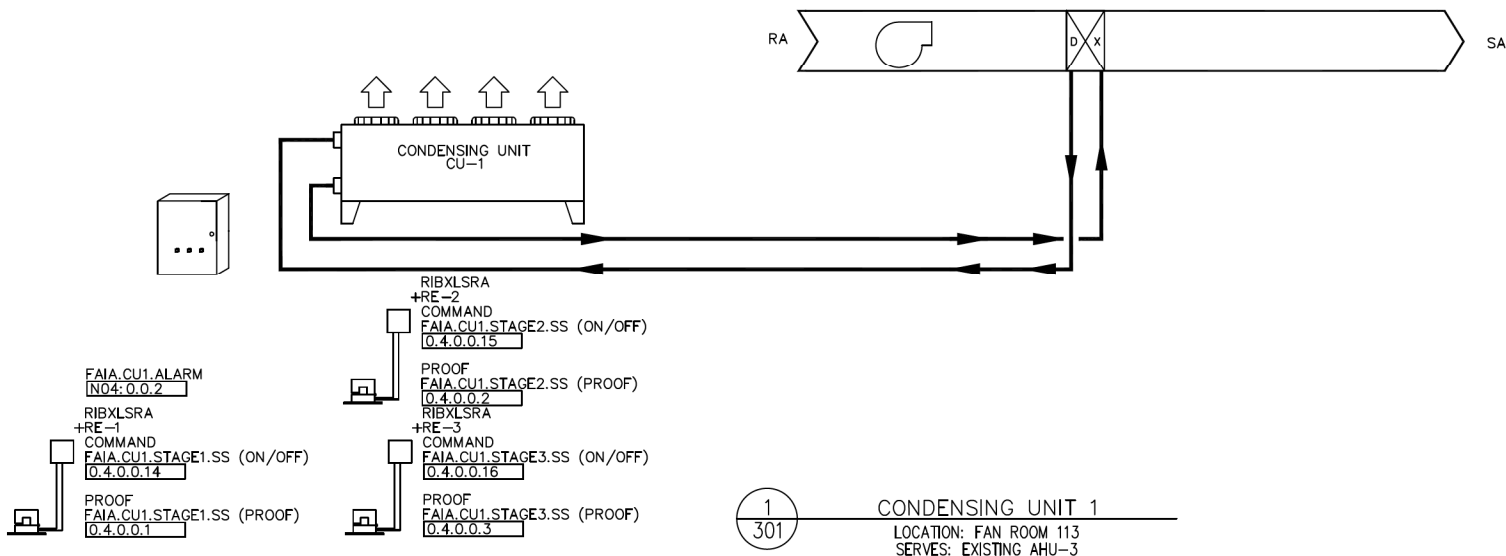
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

440P-159367

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

201D

BUILDING PUMPS BOM & SEQ (EX)



1
301 — CONDENSING UNIT 1
LOCATION: FAN ROOM 113
SERVES: EXISTING AHU-3

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO4	FAIAPXCC01	FAIAPXCC01

REVISION HISTORY	

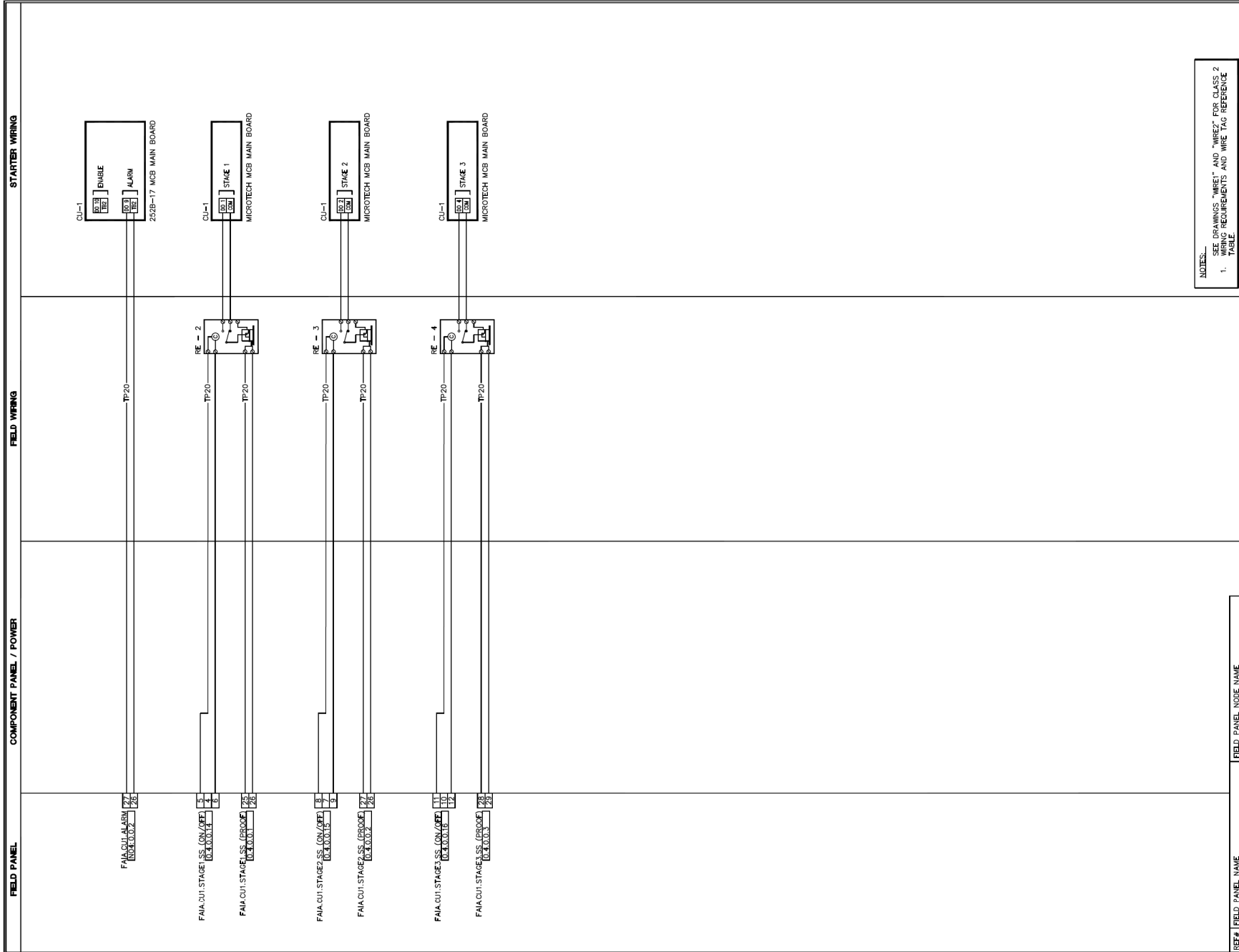
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SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY FAIRBANKS, AK				
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/11/15
CONDENSING UNIT 1				

440P-159367
0
300



NOTES:
 SEE DRAWINGS "WIRE" AND "WIREZ" FOR CLASS 2
 1. WIRING REQUIREMENTS AND WIRE TAG REFERENCE TABLE

REF#	FIELD PANEL NAME	FIELD PANEL NOISE NAME
104	FAIAPXC01	FAIAPXC01

REVISION HISTORY

SIEMENS	2620 ROLAND ROAD FAIRBANKS, AK 98709 USA Phone: 907.479.7084 Fax: 907.479.8879
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FAIRBANKS, AK

PROJECT	DATE	DESCRIPTION	BY	DATE
TL	NSP	TMA	06/23/09	09/11/15

CONDENSING UNIT 1 WIRING

440P-16867
0
300A

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
RE 1-3	3	RIBXLSRA	FUNCTIONAL DEVICES	1208cut137	CS ENC RM ADJ 1.25-150A REL,OV

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY
CONDENSING UNIT 1 (CU-1):?

A. OPERATION

1. THE CONDENSING UNIT SHALL ENABLE ON A CALL FOR COOLING.
2. THE UNIT SHALL OPERATE IN STAGES TO MEET COOLING CONDITIONS REQUIRED BY THE SUPPLY AIR TEMPERATURE SET POINT. IF STAGE 1 DOES NOT MEET THE COOLING REQUIREMENT, THEN THE FOLLOWING STAGES SHALL ENABLE UNTIL THE COOLING SET POINT IS SATISFIED:

STAGE	MOTORS/COMPRESSORS
1	2
2	1
3	1 & 4
4	1, 2 & 4

3. THE CONDENSING VALVE SHALL CYCLE ON WHEN THE OUTSIDE AIR TEMPERATE IS ABOVE 65 DEGREES F. THE VALVE SHALL MAINTAIN THE SUPPLY AIR TEMPERATURE SET POINT OF 55 DEGREES F (ADJUSTABLE).

B. SYSTEM SAFETIES & MONITORING

1. AN ALARM IS GENERATED WHEN THE CONDENSING UNIT GOES INTO ALARM MODE.

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

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DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

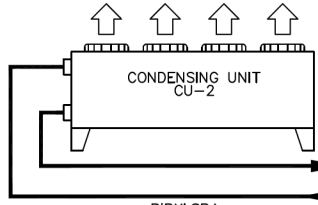
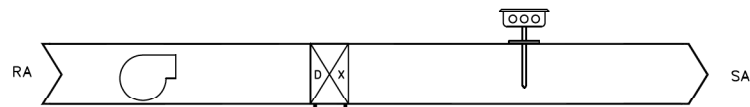
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

CONDENSING UNIT 1 BOM & SEQ

440P-159367

300B

544-339-18
 TTE -2
 -40/240 DEG F
 FAIA.AHU3.CLG.SAT
 0.3.1.23.1



- FAIA.CU2.ALARM
NO3:0.1.6
- RIBXLSRA
RE-1
COMMAND
FAIA.CU2.STAGE1.SS (ON/OFF)
0.3.1.21.1
- PROOF
FAIA.CU2.STAGE1.SS (PROOF)
0.3.1.22.1
- RIBXLSRA
RE-2
COMMAND
FAIA.CU2.STAGE2.SS (ON/OFF)
0.3.1.21.2
- PROOF
FAIA.CU2.STAGE2.SS (PROOF)
0.3.1.22.2
- RIBXLSRA
RE-3
COMMAND
FAIA.CU2.STAGE3.SS (ON/OFF)
0.3.1.21.3
- PROOF
FAIA.CU2.STAGE3.SS (PROOF)
0.3.1.22.3

1
301 — CONDENSING UNIT 2
 LOCATION: MECH ROOM 142
 SERVES: EXISTING AHU-3

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAPXCM03	FAIAPXCM03

REVISION HISTORY

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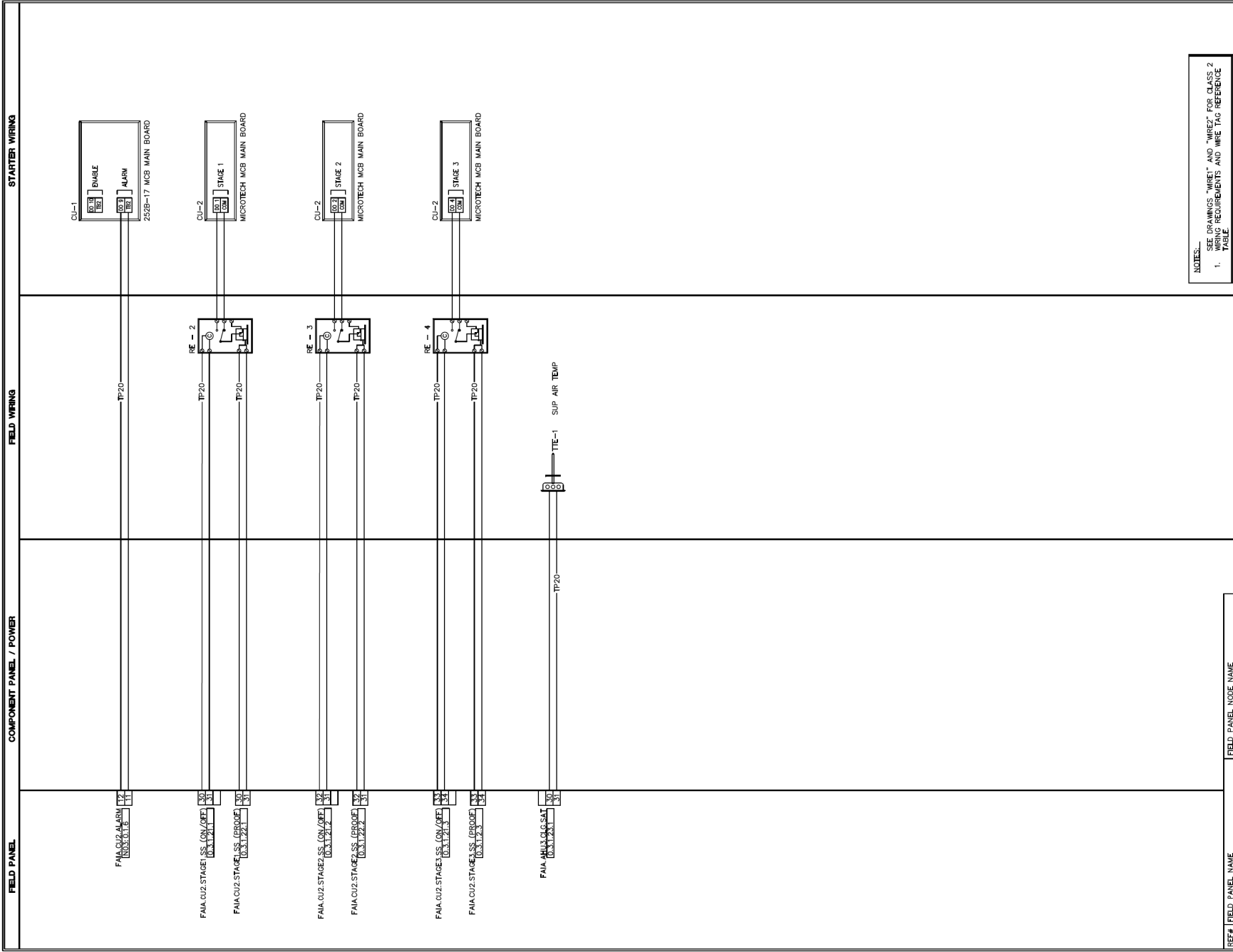
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 BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY
 FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15

CONDENSING UNIT 2

440P-159367
 0
301



NOTES:
 SEE DRAWINGS "WIRE1" AND "WIRE2" FOR CLASS 2 WIRING REQUIREMENTS AND WIRE TAG REFERENCE TABLE.

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO1	FAIAPXM03	FAIAPXM03

REVISION HISTORY

NO1	FAIAPXM03	FAIAPXM03
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SIEMENS
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 Fax: 907.479.8879

DWA FAIRBANKS ARMOY
 FAIRBANKS, AK
 440P-16867
 0

CONDENSING UNIT 2 WIRING
 301A

PROJECT	DATE	BY	REVISION	DATE
TL	NEP	TMA	06/23/09	09/11/15

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Field Mounted Devices					
RE 1-3	3	RIBXLSRA	FUNCTIONAL DEVICES	1208cut137	CS ENC RM ADJ 1.25-150A REL,OV
TTE 1	1	EXISTING	N/A	N/A	EXISTING
TTE 2	1	544-339-18	SIEMENS	149261	DCT PT SNSR, PT 1K OHM, (375), 18" PROBE

SEQUENCE OF OPERATIONS:

FAIRBANKS DMVA ARMORY
CONDENSING UNIT 2 (CU-2): ?

A. OPERATION

1. THE CONDENSING UNIT SHALL ENABLE ON A CALL FOR COOLING.
2. THE UNIT SHALL OPERATE IN STAGES TO MEET COOLING CONDITIONS REQUIRED BY THE SUPPLY AIR TEMPERATURE SET POINT. IF STAGE 1 DOES NOT MEET THE COOLING REQUIREMENT, THEN THE FOLLOWING STAGES SHALL ENABLE UNTIL THE COOLING SET POINT IS SATISFIED:

STAGE	MOTORS/COMPRESSORS
1	2
2	1
3	1 & 4
4	1, 2 & 4

3. THE CONDENSING VALVE SHALL CYCLE ON WHEN THE OUTSIDE AIR TEMPERATE IS ABOVE 65 DEGREES F. THE VALVE SHALL MAINTAIN THE SUPPLY AIR TEMPERATURE SET POINT OF 55 DEGREES F (ADJUSTABLE).

B. SYSTEM SAFETIES & MONITORING

1. AN ALARM IS GENERATED WHEN THE CONDENSING UNIT GOES INTO ALARM MODE.

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
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FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

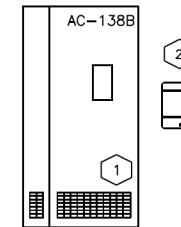
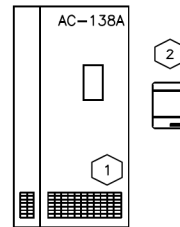
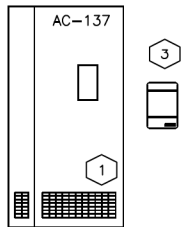
CONDENSING UNIT 2 BOM & SEQ

440P-159367

301B

NOTES:

- 1 AC UNIT SYSTEM BY OTHERS.
- 2 TEMPERATURE SENSOR CONTROLLING THE BASEBOARD IN THE SAME ROOM IS USED TO MONITOR THE HIGH TEMPERATURE ALARM FOR THE AC UNIT. SEE DRAWING 400.
- 3 TEMPERATURE SENSOR WIRED TO TEC-138A SERVING BASEBOARD IN ROOM 138A. SEE DRAWING 400.



1
302 AC UNIT 137
LOCATION/SERVES: SERVER ROOM 137
CONDENSING UNIT LOCATION: ASSEMBLY HALL 160

2
302 AC UNIT 138A
LOCATION/SERVES: SERVER ROOM 138A
CONDENSING UNIT LOCATION: ASSEMBLY HALL 160

3
302 AC UNIT 138B
LOCATION/SERVES: SERVER ROOM 138B
CONDENSING UNIT LOCATION: ASSEMBLY HALL 160

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N03	FAIAPXCM03	FAIAPXCM03

REVISION HISTORY

SIEMENS

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ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15

AIR CONDITIONING UNIT

440P-159367
0
302

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Field Mounted Devices					
TTE	1	QAA2235.EWSN	SIEMENS	149708	RTS, BAU HSNG, 100K , NC

SEQUENCE OF OPERATIONS:

FAIRBANKS DMVA ARMORY

AIR CONDITIONING UNITS (AC):?

A. OPERATION

1. AC UNIT PACKAGED CONTROLS SHALL CYCLE THE UNIT ON AND OFF AS REQUIRED TO MAINTAIN ROOM TEMPERATURE.

B. SYSTEM SAFETIES & MONITORING

1. AN ALARM IS GENERATED WHEN THE ROOM TEMPERATURE EXCEEDS THE TEMPERATURE SET POINT.

REVISION HISTORY

SIEMENS

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
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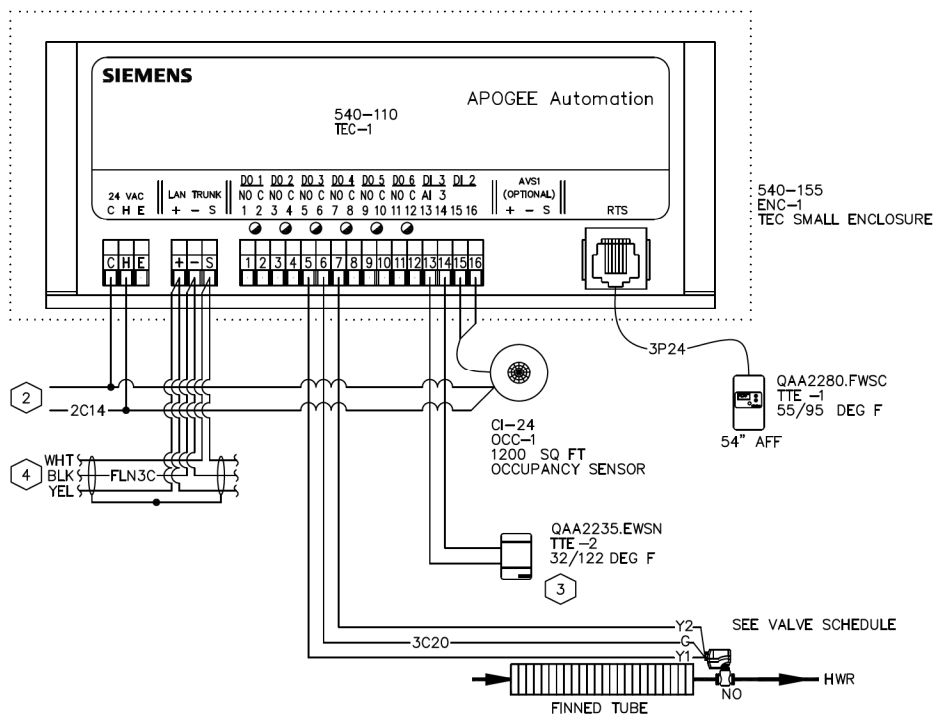
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ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

AIR CONDITIONING BOM & SEQ

440P-159367

302A



- NOTES:**
- SEE DRAWINGS "WIRE1" AND "WIRE2" FOR CLASS 2 WIRING REQUIREMENTS AND WIRE TAG REFERENCE TABLE.
 - SEE TRANSFORMER SCHEDULE UNDER THE SCHEDULES TAB FOR 24VAC POWER.
 - ROOM TEMP SENSOR SERVING AC-137.
 - SEE FLN SCHEDULE IN THE SCHEDULES SECTION OF THIS DOCUMENT FOR NETWORK CONNECTIONS AND WIRING ORDER.

1
400 — BASEBOARD 138A
APPLICATION: 2543
TYPICAL OF 1
LOCATION/SERVES: 138A

REVISION HISTORY

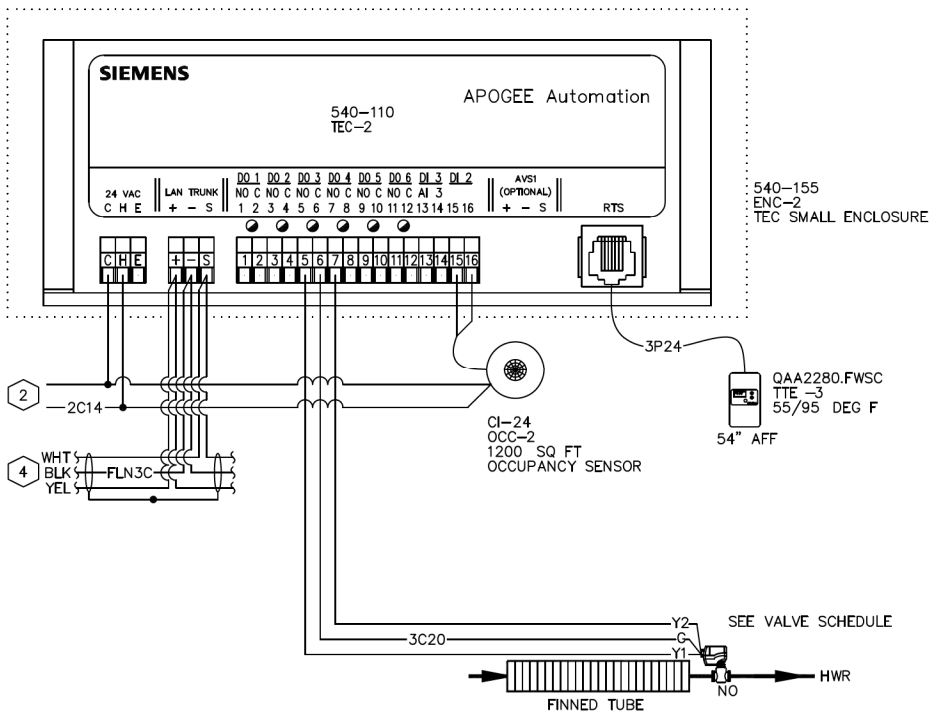
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FAX: 907.479.3879

SIEMENS INDUSTRY, INC
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ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15
BASEBOARD 138A				

440P-159367
0
400



- NOTES:**
- SEE DRAWINGS "WIRE1" AND "WIRE2" FOR CLASS 2 WIRING REQUIREMENTS AND WIRE TAG REFERENCE TABLE.
 - SEE TRANSFORMER SCHEDULE UNDER THE SCHEDULES TAB FOR 24VAC POWER.
 - ROOM TEMP SENSOR SERVING AC-137.
 - SEE FLN SCHEDULE IN THE SCHEDULES SECTION OF THIS DOCUMENT FOR NETWORK CONNECTIONS AND WIRING ORDER.

1
400A ————— BASEBOARD 138B
APPLICATION: 2543
TYPICAL OF 1
LOCATION/SERVES: 138A

REVISION HISTORY

SIEMENS
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ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15
BASEBOARD 138B				

440P-159367
400A

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Field Mounted Devices					
D					SEE DAMPER SUBMITTAL
ENC	1	540-155	SIEMENS	N/A	TEC ENCL CTRL ONLY
OCC	1	CI-24	WATT STOPPER	1011cut029	OCCUPANCY SENS CEILING MT 24VAC
TEC	1	540-110	SIEMENS	149 181	UNIT COND CTRL ELEC OUT
TTE	1	QAA2280.FWSC	SIEMENS	149820	RTS, TEC DIG., F-F, SL
TTE	2	QAA2235.EWSN	SIEMENS	149708	RTS, BAU HSNG, 100K , NC

SEQUENCE OF OPERATIONS:

FAIRBANKS DMVA ARMORY

BASEBOARD (BB-1): ?

A. OPERATION

1. DAY MODE

a. DDC SHALL CYCLE THE CONTROL VALVE TO MAINTAIN SET POINT OF 70 DEGREES F (ADJUSTABLE) BASED ON ROOM TEMPERATURE.

2. NIGHT MODE

a. DDC SHALL CYCLE THE CONTROL VALVE TO MAINTAIN SET POINT OF 65 DEGREES F (ADJUSTABLE) BASED ON ROOM TEMPERATURE.

B. SYSTEM SAFETIES & MONITORING

1. AN ALARM IS GENERATED WHEN THE TEMPERATURE EITHER FALLS BELOW OR EXCEEDS THE ROOM TEMPERATURE SET POINT (ADJUSTABLE).

REVISION HISTORY

SIEMENS

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SIEMENS INDUSTRY, INC
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DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

440P-159367

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

400B

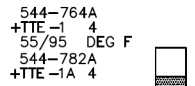
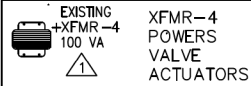
BASEBOARD BOM & SEQ

ROOM THERMOSTATS

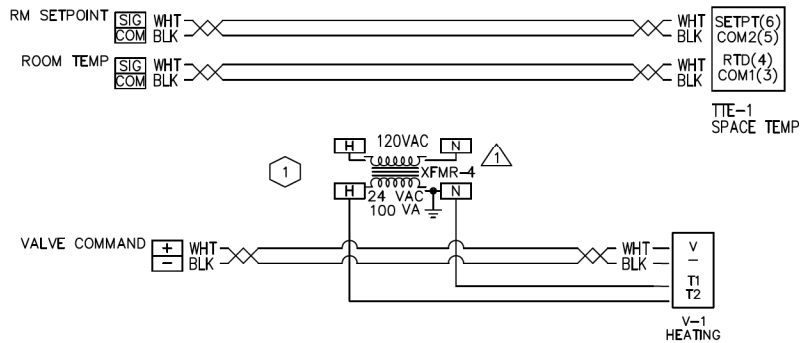
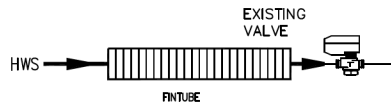
INSTALLATION NOTES:

- 1 RELOCATED SOUTH LOOKER ROOM (101) STAT FROM CENTRAL COLUMN TO SOUTH WALL
- 2 REPLACED EXISTING SENSORS WITH SIEMENS SENSORS. VALVE ACTUATORS ARE EXISTING

COMPONENT PANEL CP-1



ROOM TEMPERATURE



1
401

ROOM THERMOSTATS
LOCATION: VARIOUS ROOMS
TYPICAL OF 13 STATS (15 VALVES)

ROOM TEMP	ROOM SETPOINT	FIN TUBE VALVES	
FAIA.RM136.RMT DETAIL ER	FAIA.RM136.RMV DETAIL ER	FAIA.RM136.RV1 DETAIL EJ	
FAIA.RM114.RMT DETAIL ER	FAIA.RM114.RMV DETAIL ER	FAIA.RM114.RV1 DETAIL EJ	
FAIA.RM123.RMT DETAIL ER	FAIA.RM123.RMV DETAIL ER	FAIA.RM123.RV1 DETAIL EJ	
FAIA.RM101N.RMT DETAIL ER	FAIA.RM101N.RMV DETAIL ER	FAIA.RM101N.RV1 DETAIL EJ	
1 FAIA.RM101S.RMT DETAIL ER	FAIA.RM101S.RMV DETAIL ER	FAIA.RM101S.RV1 DETAIL EJ	FAIA.RM101S.RV2 DETAIL EJ
FAIA.RM115W.RMT DETAIL ER	FAIA.RM115W.RMV DETAIL ER	FAIA.RM115W.RV1 DETAIL EJ	
FAIA.RM115E.RMT DETAIL ER	FAIA.RM115E.RMV DETAIL ER	FAIA.RM115E.RV1 DETAIL EJ	
FAIA.RM126.RMT DETAIL ER	FAIA.RM126.RMV DETAIL ER	FAIA.RM126.RV1 DETAIL EJ	
FAIA.RM127.RMT DETAIL ER	FAIA.RM127.RMV DETAIL ER	FAIA.RM127.RV1 DETAIL EJ	
FAIA.RM120.RMT DETAIL ER	FAIA.RM120.RMV DETAIL ER	FAIA.RM120.RV1 DETAIL EJ	
FAIA.RM122.RMT DETAIL ER	FAIA.RM122.RMV DETAIL ER	FAIA.RM122.RV1 DETAIL EJ	
FAIA.RM112.RMT DETAIL ER	FAIA.RM112.RMV DETAIL ER	FAIA.RM112.RV1 DETAIL EJ	

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N001	FAIAMECO1	FAIAMECO1
N02	FAIAPXCC02	FAIAPXCC02

REVISION HISTORY			
1	9/12/2006	TCP	AS-BUILT DRAWING

SIEMENS

2520 ROLAND ROAD
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FAX: 907.479.3879

SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY
FAIRBANKS, AK


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TL	NEP	TMA	05/23/06	09/08/15

FIN TUBE THERMOSTATS (EX)

440P-159367
0
401

FIN TUBE THERMOSTATS— EXISTING BUILDING

544-764A
 +TTE-2 4
 55/95 DEG F
 544-782A
 +TTE-2A 4




ROOM TEMPERATURE

INSTALLATION NOTES:


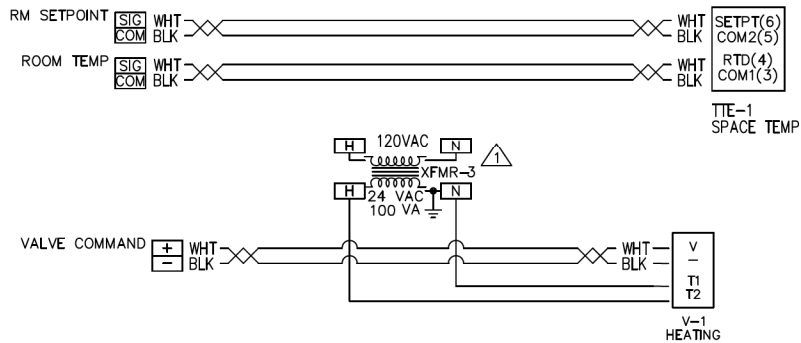
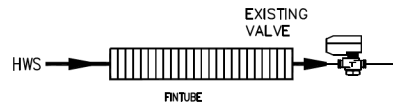
1 REPLACED EXISTING SENSORS WITH SIEMENS SENSORS.
 VALVE ACTUATORS ARE EXISTING TO REMAIN.

COMPONENT PANEL CP-2

EXISTING
 +XFMR-3
 100 VA



XFMR-3
 POWERS
 VALVE
 ACTUATORS

ROOM TEMP ROOM SETPOINT FIN TUBE VALVES

FAIA.RM149.RMT DETAIL ER	FAIA.RM149.RMV DETAIL ER	FAIA.RM149.RV1 DETAIL EJ
FAIA.RM154.RMT DETAIL ER	FAIA.RM154.RMV DETAIL ER	FAIA.RM154.RV1 DETAIL EJ
FAIA.RM155.RMT DETAIL ER	FAIA.RM155.RMV DETAIL ER	FAIA.RM155.RV1 DETAIL EJ
FAIA.RM156.RMT DETAIL ER	FAIA.RM156.RMV DETAIL ER	FAIA.RM156.RV1 DETAIL EJ

1
 401A ROOM THERMOSTATS
 LOCATION: VARIOUS ROOMS
 TYPICAL OF 4 STATS (4 VALVES)

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMEC03	FAIAMEC-03

REVISION HISTORY

1	9/12/2006	TCP	AS-BUILT DRAWING
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ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/08/15

FIN TUBE THERMOSTATS (EX)

440P-159367
 0

401A

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
TTE 1-2	8	544-764A	SIEMENS	149168	OBS, R/B 544-770A; RM SNSR W/STPT-DST
TTE 1A	4	544-782A	SIEMENS	149 359	SINGLE GOOF MOUNTING PLATE KIT BEIGE
TTE 2A	4	544-782A	SIEMENS	149 359	SINGLE GOOF MOUNTING PLATE KIT BEIGE
XFMR 3-4	2	EXISTING	N/A	N/A	EXISTING

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY

FINTUBES (FINTUBE STATS):

BASEBOARD UNIT VALVE WILL MODULATE, THROUGH THE DDC CONTROL PANEL, TO MAINTAIN SPACE TEMPERATURE AT SETPOINT. THE SPACE TEMPERATURE SETPOINT IS ADJUSTABLE FROM THE WALL MODULE IN THE SPACE. SPACE TEMPERATURE AND SETPOINT WILL BE MONITORED THROUGH THE DDC CONTROL PANEL.

REVISION HISTORY

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FAIRBANKS, AK

440P-159367

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

FIN TUBE T-STATS BOM & SEQ (EX)

401B

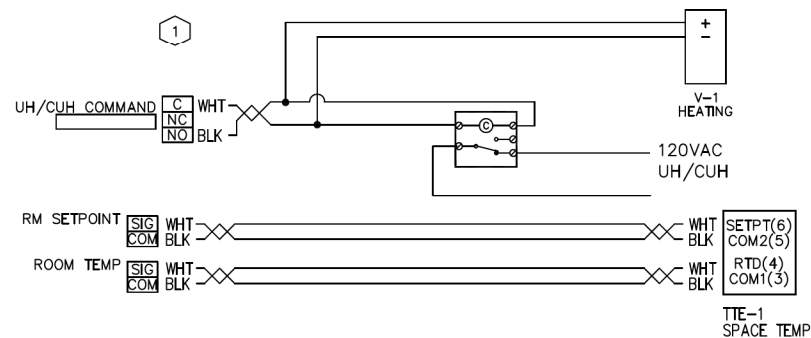
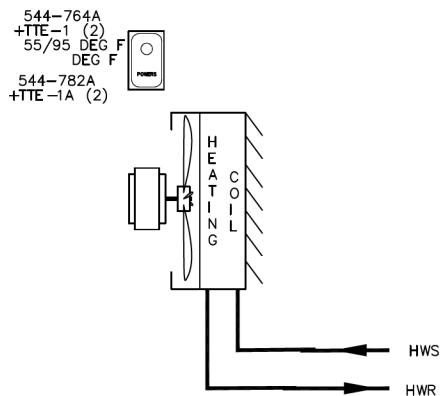
NEW BLDG UH

INSTALLATION NOTES:

1 REPLACED EXISTING SENSORS WITH SIEMENS SENSORS. VALVE ACTUATORS ARE EXISTING TO REMAIN.

COMPONENT PANEL CP-1

EXISTING +XFMR-5 100 VA
 XFMR-5 POWERS ACTUATORS & RELAYS.



1
402 UNIT HEATERS
LOCATION: VARIOUS ROOMS
TYPICAL OF 4

ROOM TEMP	ROOM SETPOINT	ENABLE 1	ENABLE 2
FAIA.RM113.RMT 0.2.0.0.1 DETAIL PH	FAIA.RM113.RMV 0.2.0.0.2 DETAIL PH	FAIA.RM113.UH1 0.2.0.0.20 DETAIL PB	
FAIA.RM100.RMT 0.2.0.0.3 DETAIL PH	FAIA.RM100.RMV 0.2.0.0.4 DETAIL PH	FAIA.RM100N.UH3 0.2.0.0.21 DETAIL PB	FAIA.RM100S.UH2 0.2.0.0.22 DETAIL PB
FAIA.RM135.RMT 0.2.0.0.5 DETAIL PH	FAIA.RM135.RMV 0.2.0.0.6 DETAIL PH	FAIA.RM135.UH4 0.2.0.0.23 DETAIL PB	

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N02	FAIAPXCC02	FAIAPXCC02

REVISION HISTORY			
1	9/12/2006	TCP	AS-BUILT DRAWING

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FAIRBANKS, AK

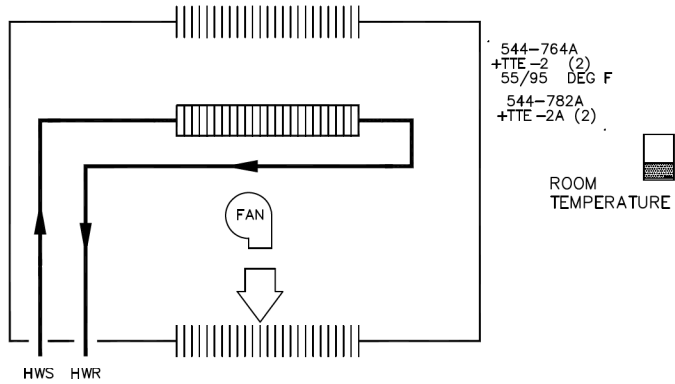
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/15/15

UH (EX)

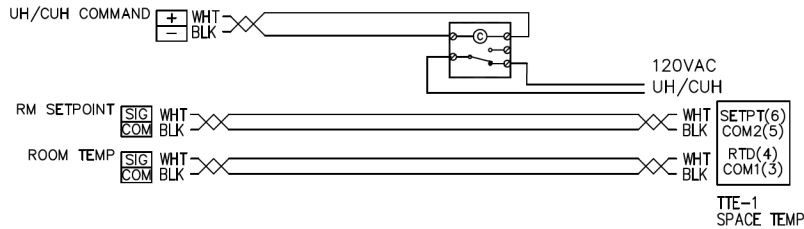
440P-159367
0

402

NEW BUILDING - CUH AND RP



1
402A CABINET UNIT HEATERS
LOCATION: 152
TYPICAL OF 1



ROOM TEMP	HWS HWR	ROOM SETPOINT	ENALBE
FAIA_RM130.RMT [0.1.0.8.3] DETAIL ER		FAIA_RM130.RMV [0.1.0.8.4] DETAIL ER	FAIA_RM130.CUH [0.1.0.0.31] DETAIL EJ
FAIA_RM117.RMT [0.2.0.0.7] DETAIL ER		FAIA_RM117.RMV [0.2.0.0.8] DETAIL ER	FAIA_RM117.CUH [0.1.0.0.32] DETAIL EJ

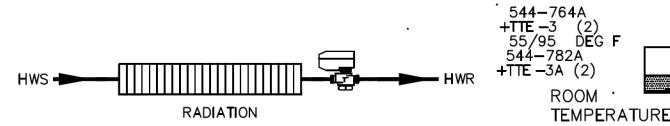
INSTALLATION NOTES:

1 REPLACED EXISTING SENSORS WITH SIEMENS SENSORS. VALVE ACTUATORS ARE EXISTING TO REMAIN.

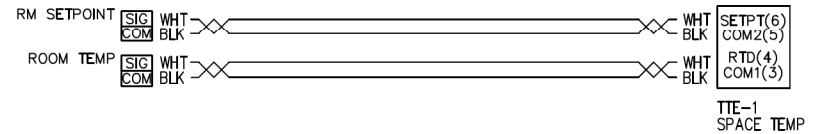
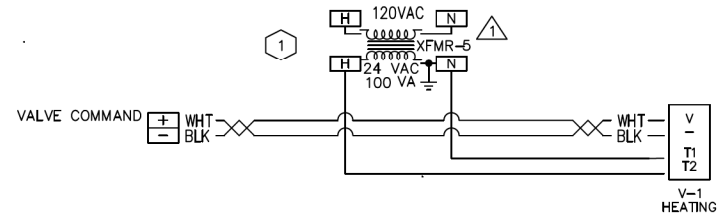
COMPONENT PANEL CP-2

EXISTING XFMR-3 100 VA

XFMR-3 POWERS ACTUATORS & RELAYS.



2
402A RADIANT PANEL
LOCATION: 105
TYPICAL OF 1



ROOM TEMP	ROOM SETPOINT	FIN TUBE VALVES	
FAIA_RM110.RMT [0.1.0.7.3] DETAIL ER	FAIA_RM110.RMV [0.1.0.7.4] DETAIL ER	FAIA_RM110.RP1 [0.1.0.6.8] DETAIL EJ	
FAIA_RM105.RMT [0.1.0.8.1] DETAIL ER	FAIA_RM105.RMV [0.1.0.8.2] DETAIL ER	FAIA_RM105.RP2 [0.1.0.7.5] DETAIL EJ	FAIA_RM105.RP2 [0.1.0.7.5] DETAIL EJ

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
N01	FAIAPXCM01	FAIAPXCM01
N02	FAIAPXCC02	FAIAPXCC02
N001	FAIAMEC01	FAIAMEC01

REVISION HISTORY

REV	DATE	BY	DESCRIPTION
1	9/26/2006	TCP	AS-BUILT DRAWING

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DMVA FAIRBANKS ARMORY FAIRBANKS, AK

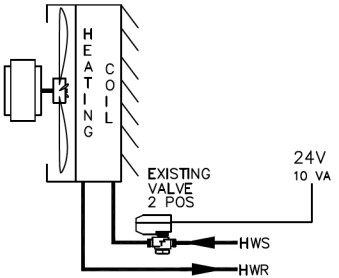
ENGINEER TL DRAPFER CHECKED BY NEP TMA INITIAL RELEASE 05/23/06 LAST EDIT DATE 09/15/15

CUH & RADIANT PANELS (EX)

440P-159367
0

402A

EXISTING BUILDING – UH



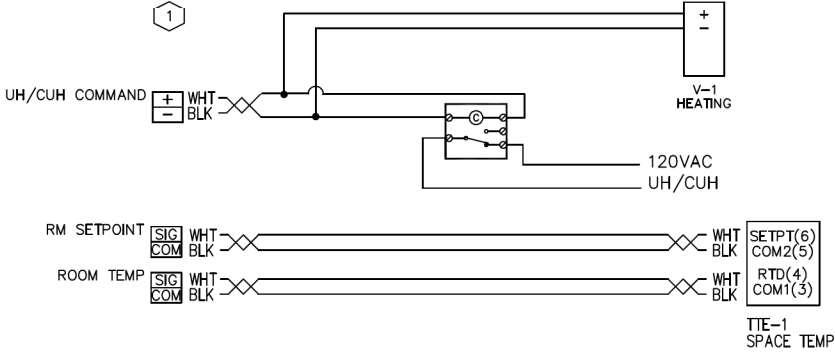
INSTALLATION NOTES:
 1 REPLACED EXISTING SENSORS WITH SIEMENS SENSORS. VALVE ACTUATORS ARE EXISTING TO REMAIN.

COMPONENT PANEL CP-2
 EXISTING +XFMR-3 100 VA
 XFMR-3 POWERS ACTUATORS & RELAYS.

544-764A
 +TTE -4 (10)
 55/95 DEG F
 544-782A
 +TTE -4A (10)

ROOM TEMPERATURE

ROOM TEMP	ROOM SETPOINT	ENABLE	ENABLE 2
FAIA.RM142.RMT [0.3.1.6.1] DETAIL ER	FAIA.RM142.RMV [0.3.1.6.2] DETAIL ER	FAIA.RM142.UH5 [0.3.1.10.6] DETAIL EB	
FAIA.RM148.RMT [0.3.1.6.3] DETAIL ER	FAIA.RM148.RMV [0.3.1.6.4] DETAIL ER	FAIA.RM148.UH7 [0.3.1.10.7] DETAIL ER	
FAIA.RM147.RMT [0.3.1.6.5] DETAIL ER	FAIA.RM147.RMV [0.3.1.6.6] DETAIL ER	FAIA.RM147.UH10 [0.3.1.10.8] DETAIL EB	
FAIA.RM143.RMT [0.3.1.6.7] DETAIL ER	FAIA.RM143.RMV [0.3.1.6.8] DETAIL ER	FAIA.RM143.UH6 [0.3.1.3.5] DETAIL EB	
FAIA.RM145.RMT [0.3.1.7.1] DETAIL ER	FAIA.RM145.RMV [0.3.1.7.2] DETAIL ER	FAIA.RM145.UH8 [0.3.1.3.6] DETAIL EB	FAIA.RM148.UH9 [] DETAIL EB
FAIA.RM138.RMT [0.3.1.7.3] DETAIL ER	FAIA.RM138.RMV [0.3.1.7.4] DETAIL ER	FAIA.RM138.UH1 [] DETAIL EB	FAIA.RM138.UH2 [] DETAIL EB
FAIA.RM140.RMT [0.3.1.7.5] DETAIL ER	FAIA.RM140.RMV [0.3.1.7.6] DETAIL ER	FAIA.RM140.UH2 [] DETAIL EB	
FAIA.RM141.RMT [0.3.1.7.7] DETAIL ER		FAIA.RM141.UH4 [] DETAIL EB	
FAIA.RM160E.RMT [0.3.1.8.1] DETAIL ER	FAIA.RM160E.RMV [0.3.1.8.2] DETAIL ER	FAIA.RM160E.UH2 [] DETAIL EB	
FAIA.RM160W.RMT [0.3.1.8.3] DETAIL ER	FAIA.RM160W.RMV [0.3.1.8.4] DETAIL ER	FAIA.RM160W.UH4 [] DETAIL EB	



1
 402B
 UNIT HEATERS
 LOCATION: VARIOUS ROOMS
 TYPICAL OF 10

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMECO3	FAIAMEC-03

REVISION HISTORY			
1	9/12/2006	TCP	AS-BUILT DRAWING

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 BUILDING TECHNOLOGIES

**DMVA FAIRBANKS ARMORY
 FAIRBANKS, AK**

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/15/15

UH (EX)

440P-159367
 0
402B

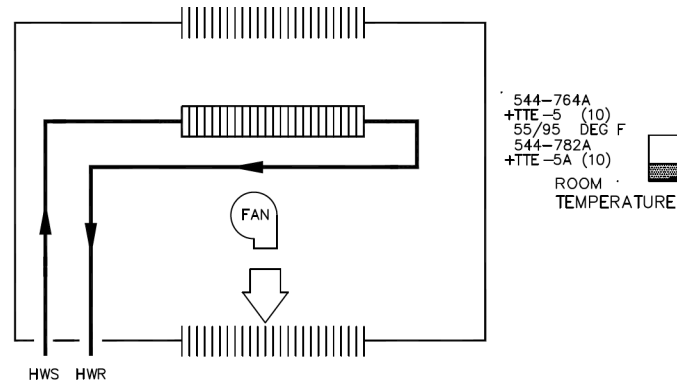
EXISTING BUILDING - CUH

INSTALLATION NOTES:

1 REPLACED EXISTING SENSORS WITH SIEMENS SENSORS. VALVE ACTUATORS ARE EXISTING TO REMAIN.

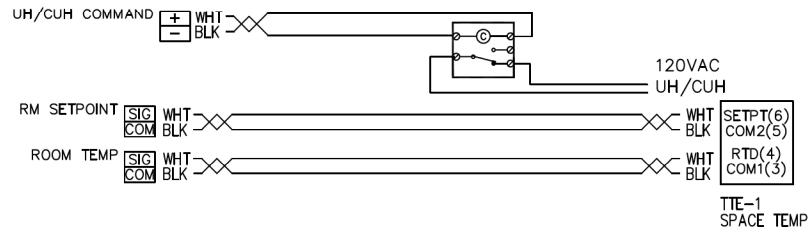
COMPONENT PANEL CP-2

EXISTING +XFMR-3 100 VA
 XFMR-3 POWERS ACTUATORS & RELAYS.



1
 402C CABINET UNIT HEATERS
 LOCATION: 152
 TYPICAL OF 1

ROOM TEMP	ROOM SETPOINT	ENABLE
FAIA_RM152.RMT 0.3.1.8.5 DETAIL ER	FAIA_RM152.RMV 0.3.1.8.6 DETAIL ER	FAIA_RM152.CUH 0.3.1.4.8 DETAIL EJ



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMEC03	FAIAMEC-03

REVISION HISTORY			
1	9/26/2006	TCP	AS-BUILT DRAWING

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DMVA FAIRBANKS ARMORY FAIRBANKS, AK				
ENGINEER TL	DRAFTER NEP	CHECKED BY TMA	INITIAL RELEASE 05/23/06	LAST EDIT DATE 09/15/15
CUH (EX)				

440P-159367
 0
402C

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Existing Equipment To Remain					
TTE 1-5	26	544-764A	SIEMENS	149168	OBS, R/B 544-770A; RM SNSR W/STPT-DST BE
TTE 1A	2	544-782A	SIEMENS	149 359	SINGLE GOOF MOUNTING PLATE KIT BEIGE
TTE 2A	2	544-782A	SIEMENS	149 359	SINGLE GOOF MOUNTING PLATE KIT BEIGE
TTE 3A	2	544-782A	SIEMENS	149 359	SINGLE GOOF MOUNTING PLATE KIT BEIGE
TTE 4A	10	544-782A	SIEMENS	149 359	SINGLE GOOF MOUNTING PLATE KIT BEIGE
TTE 5A	10	544-782A	SIEMENS	149 359	SINGLE GOOF MOUNTING PLATE KIT BEIGE
XFMR 3	1	EXISTING	N/A	N/A	EXISTING
XFMR 5	1	EXISTING	N/A	N/A	EXISTING

SEQUENCE OF OPERATIONS:
FAIRBANKS DMVA ARMORY

CABINET/UNIT HEATERS, RADIANT PANELS (CUH-UH-RP):

UNIT HEATERS:

THE FAN AND VALVE (WHERE INSTALLED) WILL CYCLE TO MAINTAIN SPACE TEMPERATURE AT SETPOINT. THE SPACE TEMPERATURE SETPOINT IS ADJUSTABLE FROM THE WALL MODULE IN THE SPACE. SPACE TEMPERATURE AND SETPOINT WILL BE MONITORED THROUGH THE DDC CONTROL PANEL.

CABINET UNIT HEATERS:

THE FAN WILL CYCLE TO MAINTAIN SPACE TEMPERATURE AT SETPOINT. THE SPACE TEMPERATURE SETPOINT IS ADJUSTABLE FROM THE WALL MODULE IN THE SPACE. SPACE TEMPERATURE AND SETPOINT WILL BE MONITORED THROUGH THE DDC CONTROL PANEL.

RADIANT PANELS:

THE CONTROL VALVE SHALL OPEN/CLOSE TO MAINTAIN SPACE TEMPERATURE AT SETPOINT. SPACE TEMPERATURE AND SETPOINT WILL BE MONITORED THROUGH THE DDC CONTROL PANEL.

REVISION HISTORY

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FAIRBANKS, AK

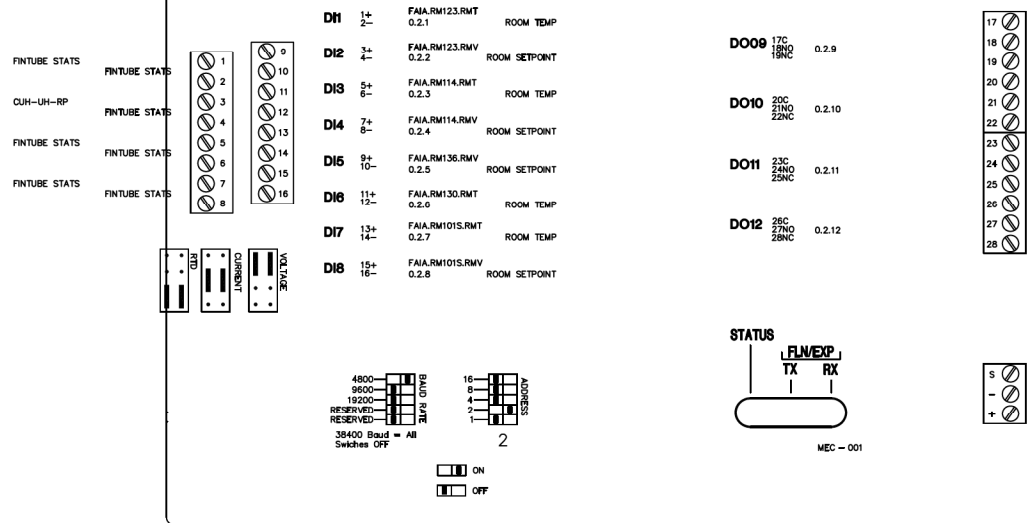
440P-159367

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA		09/14/15

CUH, UH & RADIANT BOM & SEQ (EX)

402D

SIEMENS



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO01	FAIAMEC01	FAIAMEC01

REVISION HISTORY	

SIEMENS

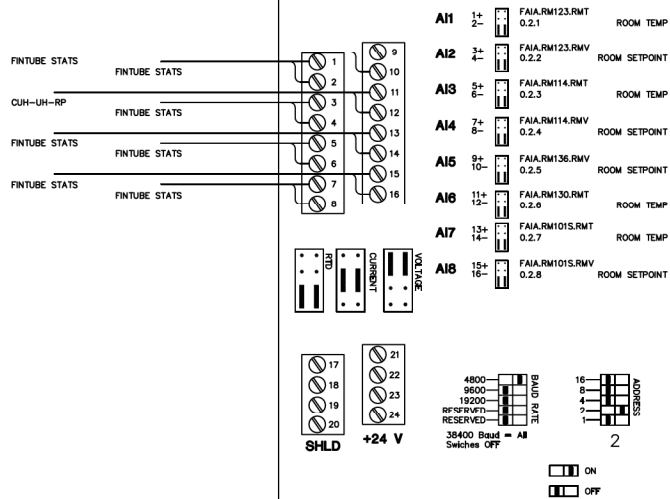
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DMVA FAIRBANKS ARMORY FAIRBANKS, AK				
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	12/02/14
FAIAPXCM01-MECX1 (EX)				

440P-159367
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N01A

SIEMENS



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO01	FAIAMEC01	FAIAMEC01

REVISION HISTORY	

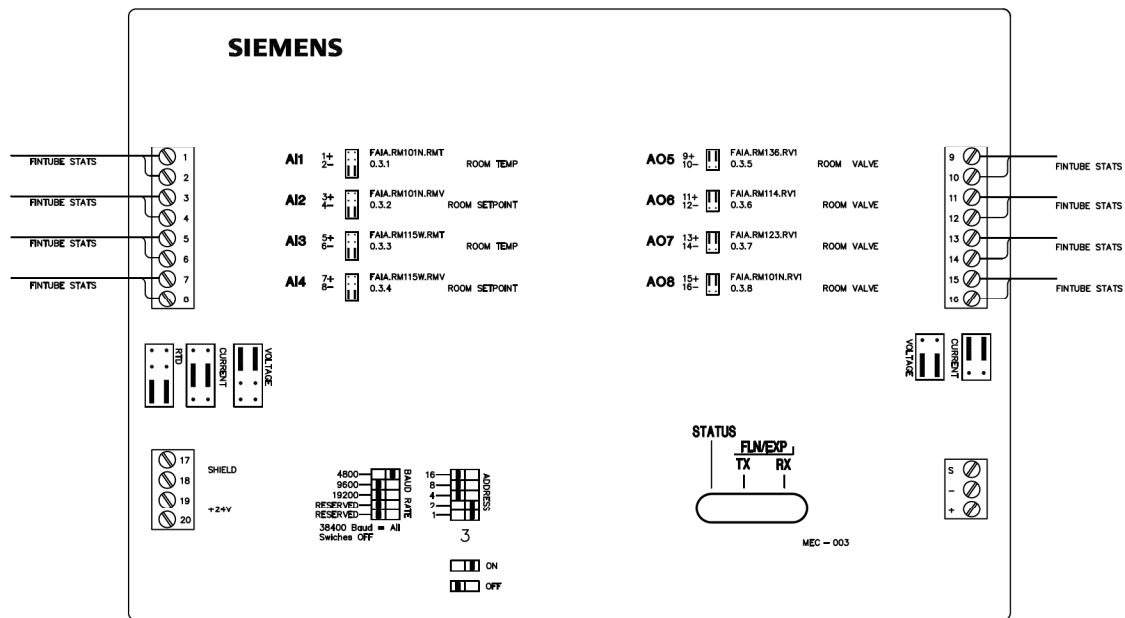
SIEMENS

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FAX: 907.479.3679

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BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY FAIRBANKS, AK				
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	12/02/14
FAIAPXCM01-MECX2 (EX)				

440P-159367
0
N01B



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO01	FAIAMEC01	FAIAMEC01

REVISION HISTORY

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SIEMENS INDUSTRY, INC
BUILDING TECHNOLOGIES

2520 ROLAND ROAD
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FAX: 907.479.3679

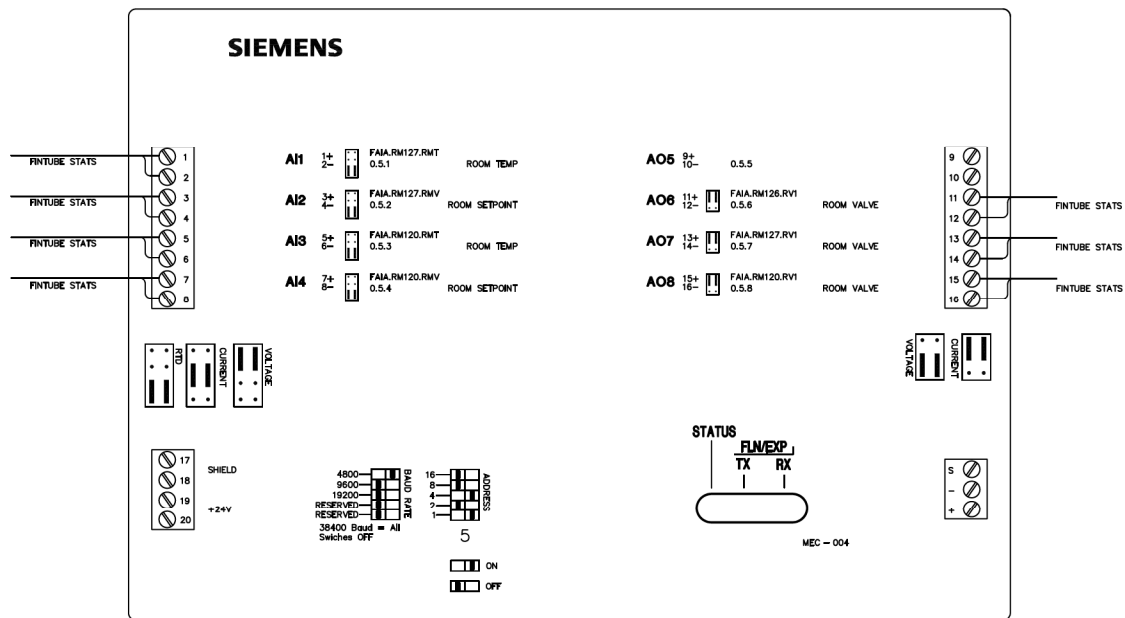
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAWER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	12/02/14

FAIAPXCM01-MECX3 (EX)

440P-159367
0

N01C



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO01	FAIAMEC01	FAIAMEC01

REVISION HISTORY	

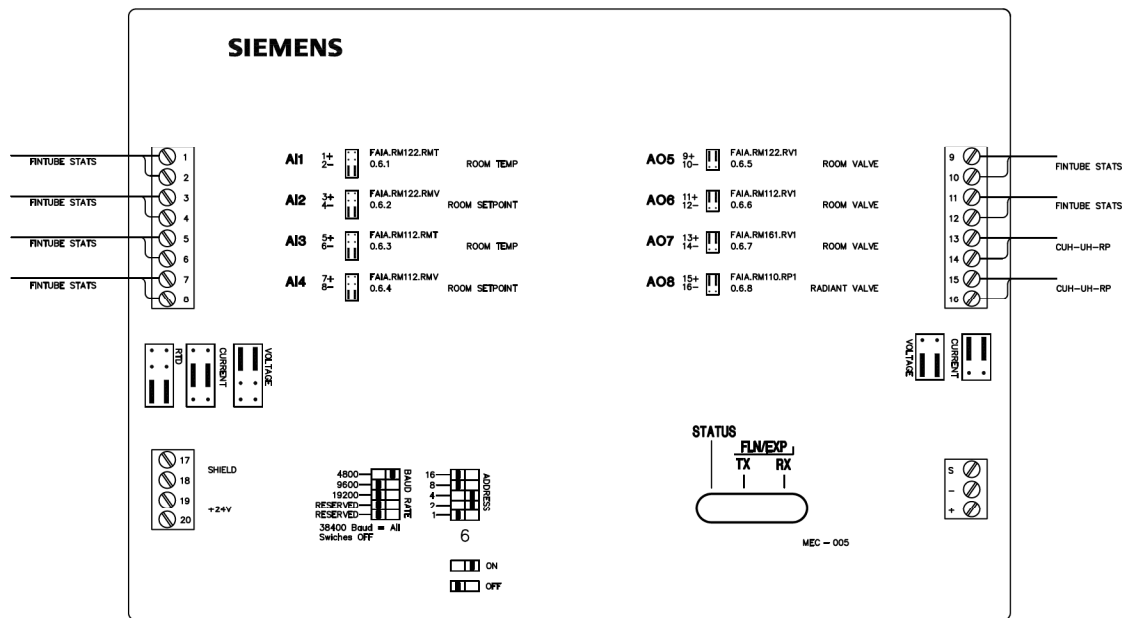
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ENGINEER	DRAWER	CHECKED BY	INITIAL RELEASE
TL	NEP	TMA	05/23/06
		LAST EDIT DATE	
		12/02/14	
FAIAPXCM01-MECX4 (EX)			

440P-159367
0
N01D



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO01	FAIAMEC01	FAIAMEC01

REVISION HISTORY	

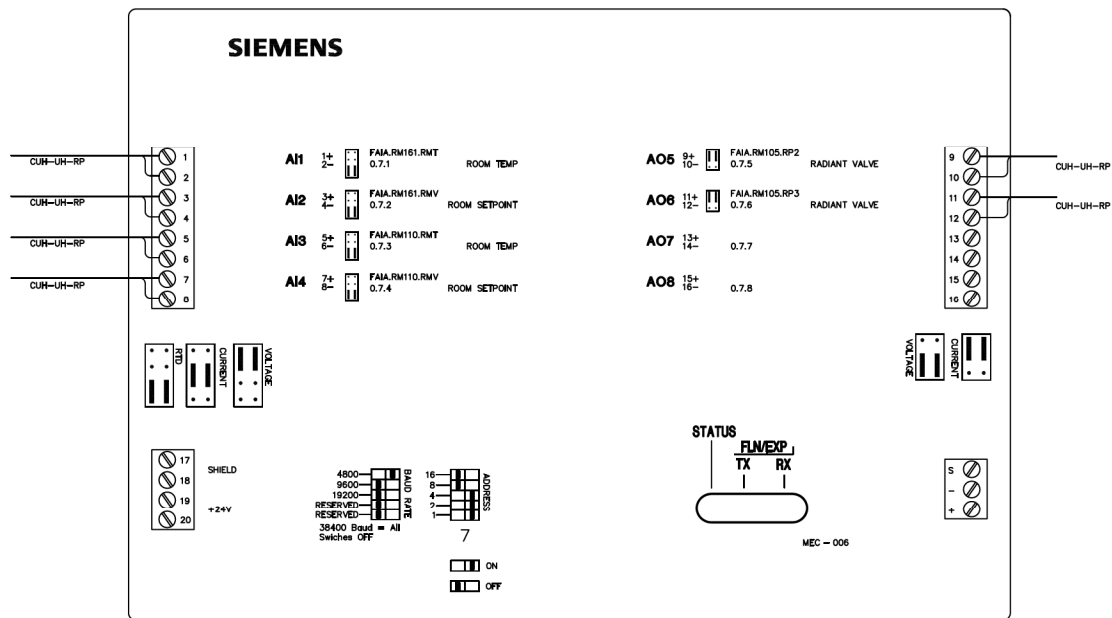
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DMVA FAIRBANKS ARMORY FAIRBANKS, AK			
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE
TL	NEP	TMA	05/23/06
		LAST EDIT DATE	
		12/02/14	
FAIAPXCM01-MECX5 (EX)			

440P-159367
0
N01E



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO01	FAIAMEC01	FAIAMEC01

REVISION HISTORY

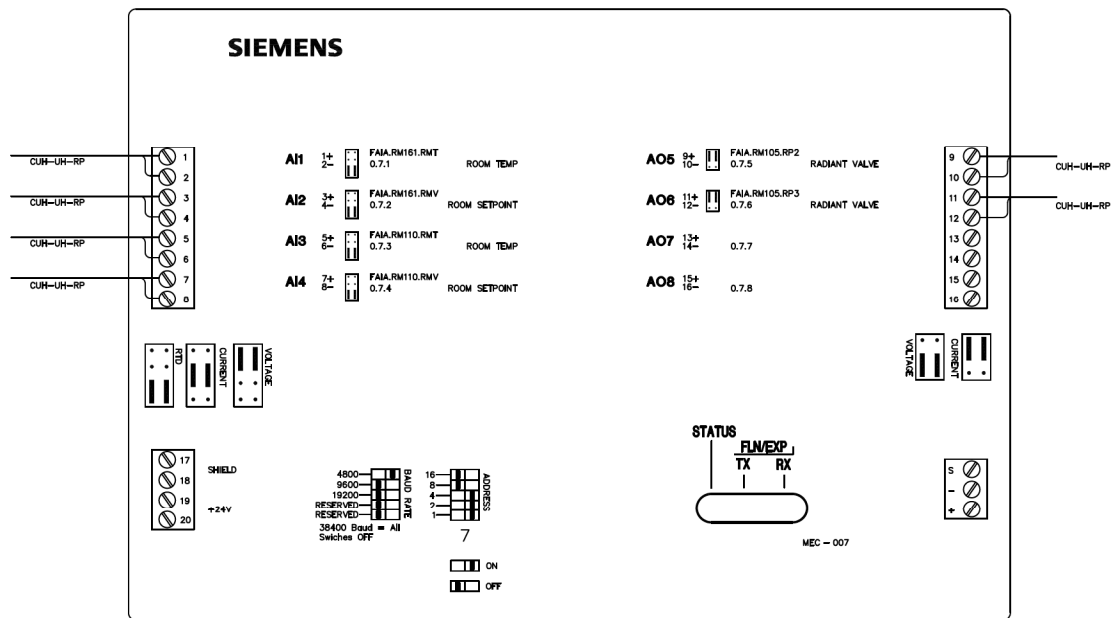
SIEMENS

2520 ROLAND ROAD
FAIRBANKS, AK 99709
USA
PHONE: 907.479.7034
FAX: 907.479.3679

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BUILDING TECHNOLOGIES

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ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	12/02/14
FAIAPXCM01-MECX6 (EX)				

440P-159367
0
N01F



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO01	FAIAMEC01	FAIAMEC01

REVISION HISTORY	

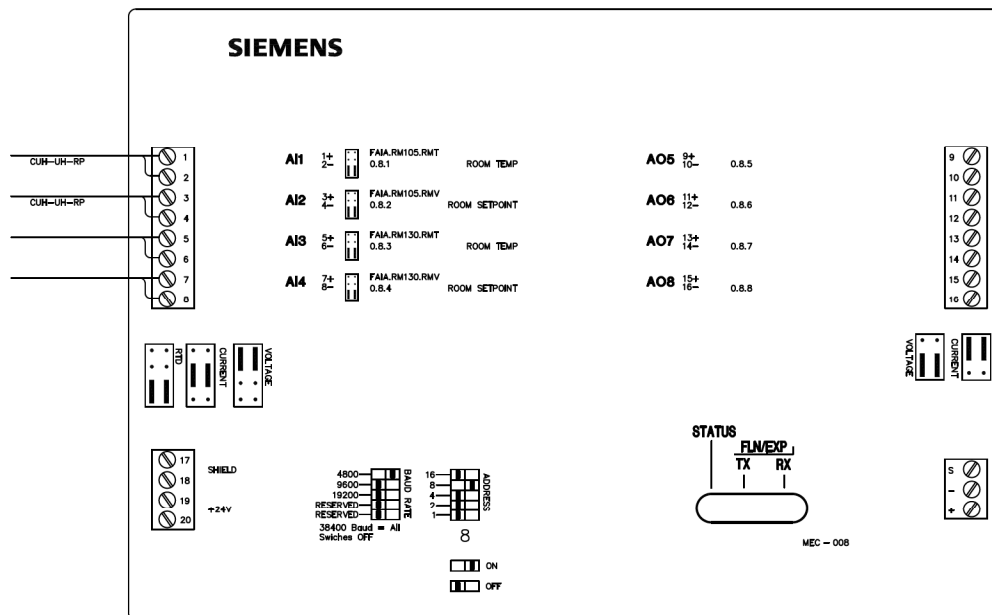
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ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	12/02/14
FAIAPXCM01-MECX7 (EX)				

440P-159367
0
N01G



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO01	FAIAMEC01	FAIAMEC01

REVISION HISTORY	

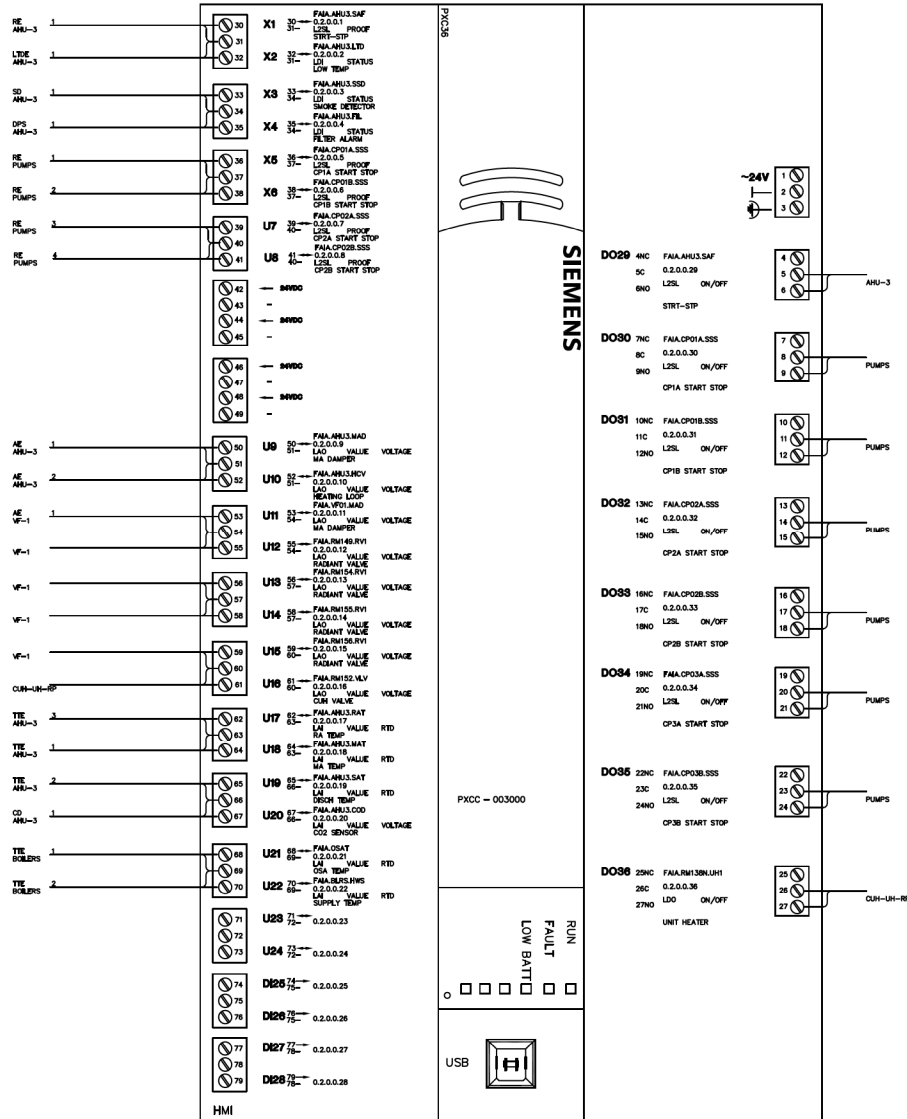
SIEMENS

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ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	12/02/14
FAIAPXCM01-MECX8 (EX)				

440P-159367
0
N01H



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TL	NEP	TMA	05/23/06	09/14/15

FAIA-EBLN FAIAPXC-02 FAN RM 113

440P-159367
0

N02

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Panel Mounted Devices					
PXCC 1	1	PXC24.2-P.A	SIEMENS	149454	APOGEE 24PT, RS-485 ALN

REVISION HISTORY

--

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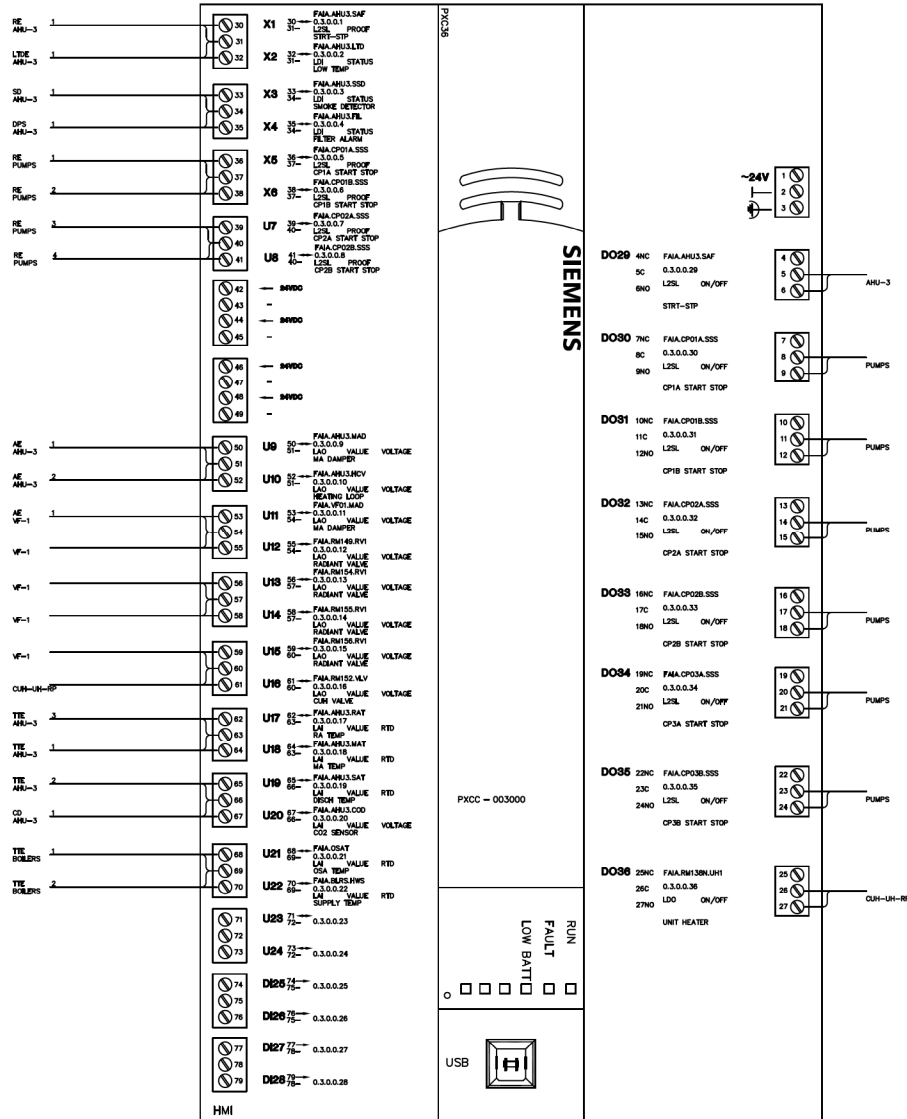
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15

FAIA-EBLN FAIAPXC-02 BOM

440P-159367
0

N02A



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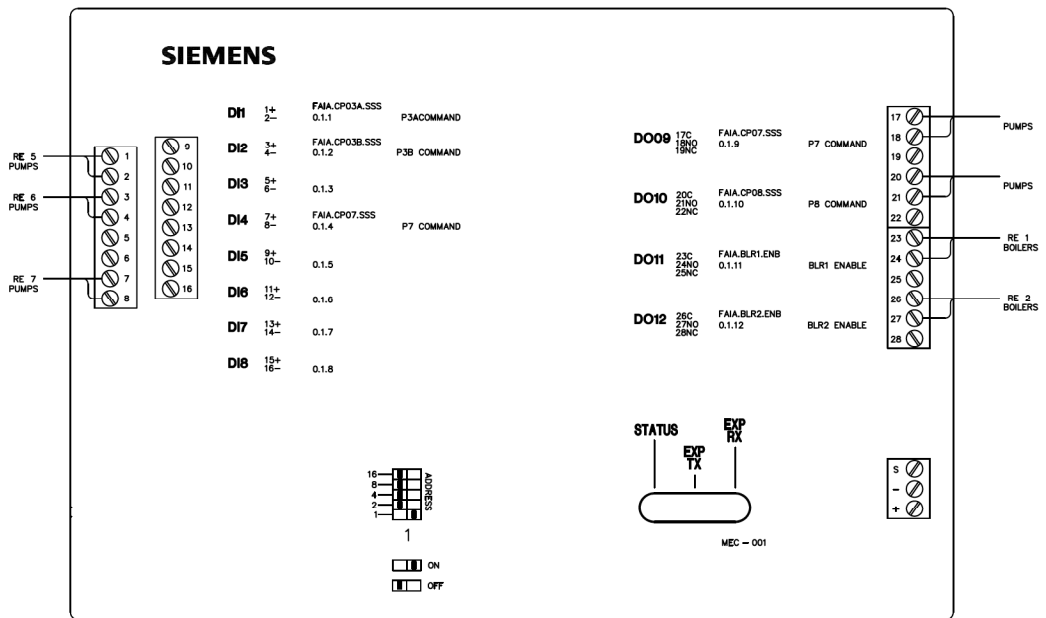
DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

ENGINEER	DRAWER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15

FAIAFPNL-03 BOILER RM 141

440P-159367
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N03



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMEC03	FAIAMEC-03

REVISION HISTORY

SIEMENS

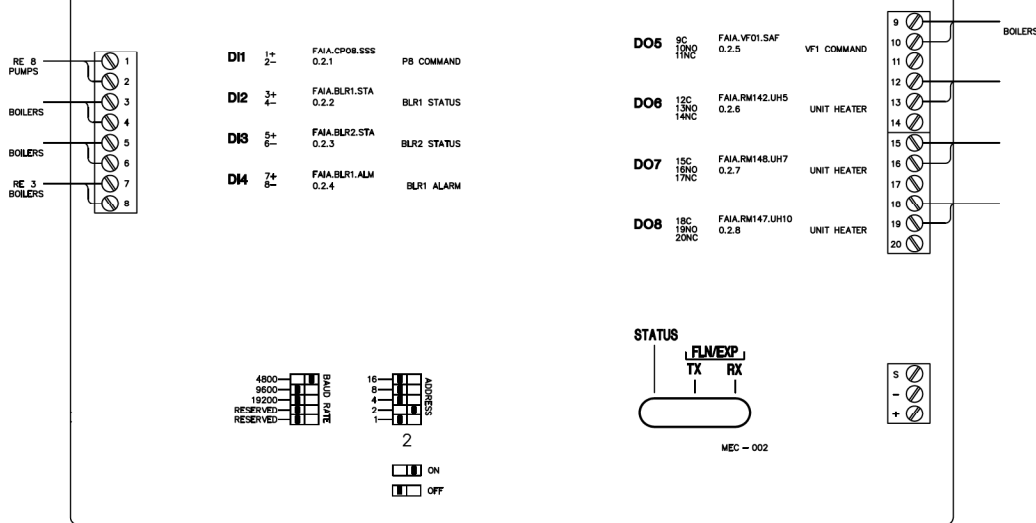
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FAX: 907.479.3679

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BUILDING TECHNOLOGIES

DMVA FAIRBANKS ARMORY FAIRBANKS, AK			
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE LAST EDIT DATE
TL	NEP	TMA	05/23/06 09/14/15
FAIAMEC03-X1 (EX)			

440P-159367
0
N03A

SIEMENS



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMEC03	FAIAMEC-03

REVISION HISTORY	

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DMVA FAIRBANKS ARMORY
FAIRBANKS, AK

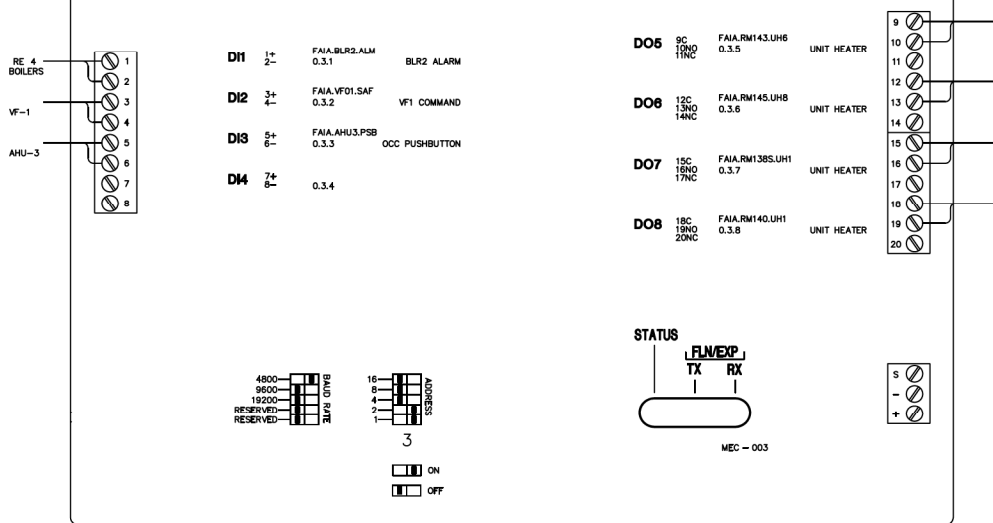
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15

FAIAMEC03-X2 (EX)

440P-159367
0

N03B

SIEMENS



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMEC03	FAIAMEC-03

REVISION HISTORY

SIEMENS

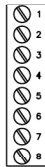
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 BUILDING TECHNOLOGIES

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ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15
FAIAMEC03-X3 (EX)				

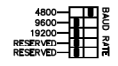
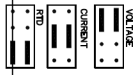
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SIEMENS

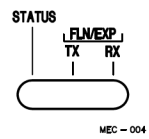


DI1 1+ FAIA.RM149.RMT ROOM TEMP
 2- 0.5.1
DI2 3+ FAIA.RM149.RMV ROOM SETPOINT
 4- 0.5.2
DI3 5+ FAIA.RM154.RMT ROOM TEMP
 6- 0.5.3
DI4 7+ FAIA.RM154.RMV ROOM SETPOINT
 8- 0.5.4

DO5 9C FAIA.RM155.RMT ROOM TEMP
 10NO 0.5.5
 11NC
DO6 12C FAIA.RM155.RMV ROOM SETPOINT
 13NO 0.5.6
 14NC
DO7 15C FAIA.RM156.RMT ROOM TEMP
 16NO 0.5.7
 17NC
DO8 18C FAIA.RM156.RMV ROOM SETPOINT
 19NO 0.5.8
 20NC



ON
 OFF



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMEC03	FAIAMEC-03

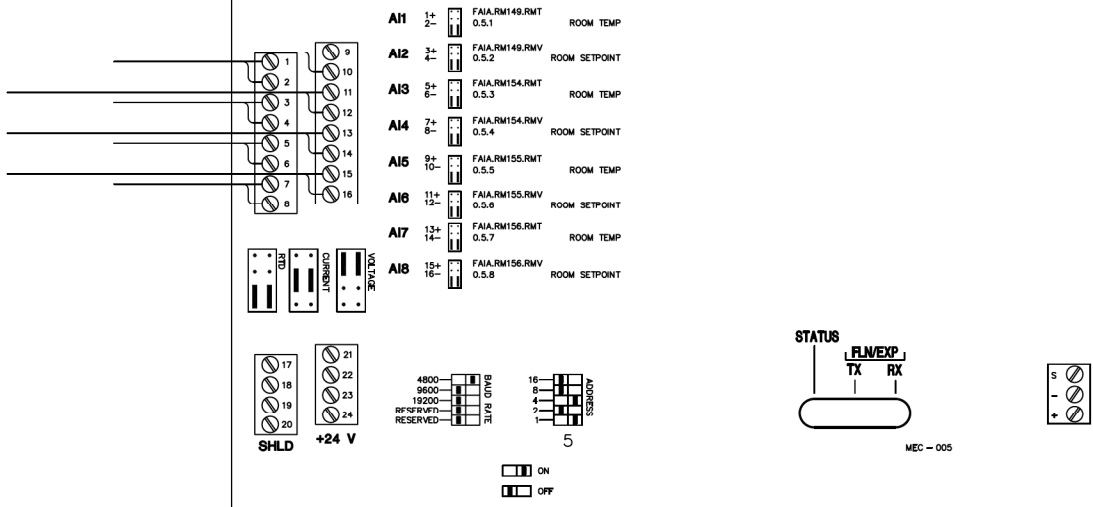
REVISION HISTORY	

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TL	NEP	TMA	05/23/06
LAST EDIT DATE		09/14/15	
FAIAMEC03-X4 (EX)			

440P-159367
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N03D

SIEMENS



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMEC03	FAIAMEC-03

REVISION HISTORY

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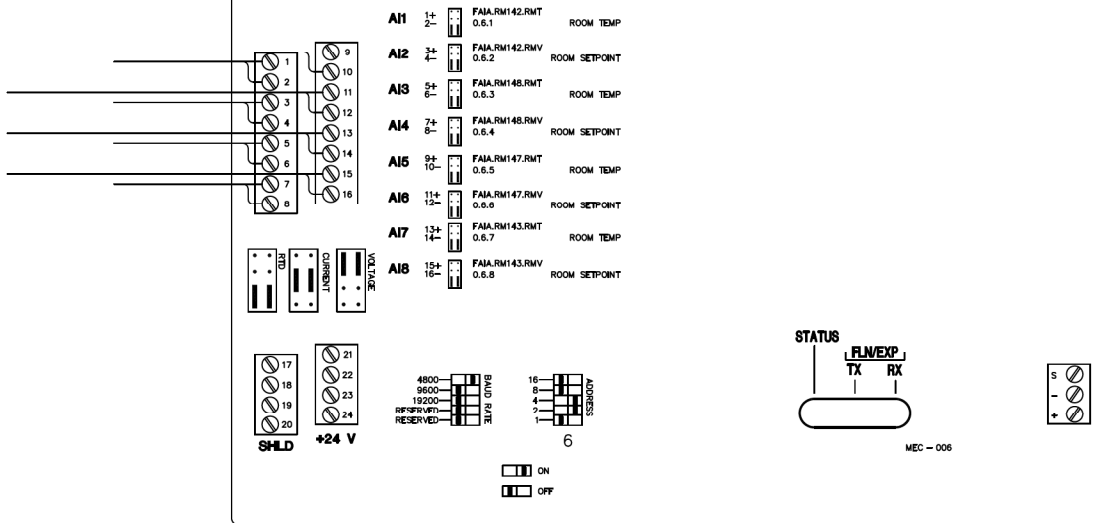
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ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15
FAIAMEC03-X5 (EX)				

440P-159367
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N03E

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REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMEC03	FAIAMEC-03

REVISION HISTORY	

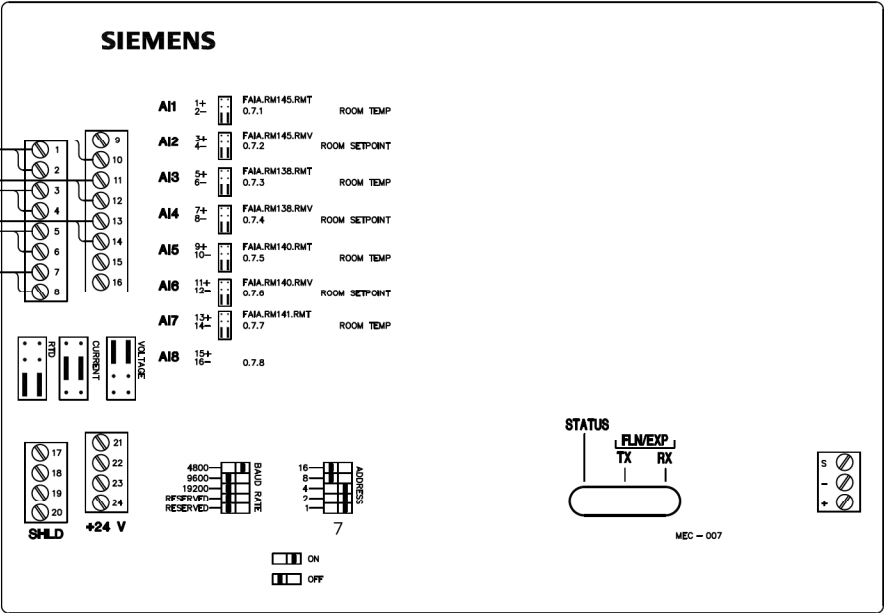
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ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15
FAIAMEC03-X6 (EX)				

440P-159367
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N03F



REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMEC03	FAIAMEC-03

REVISION HISTORY	

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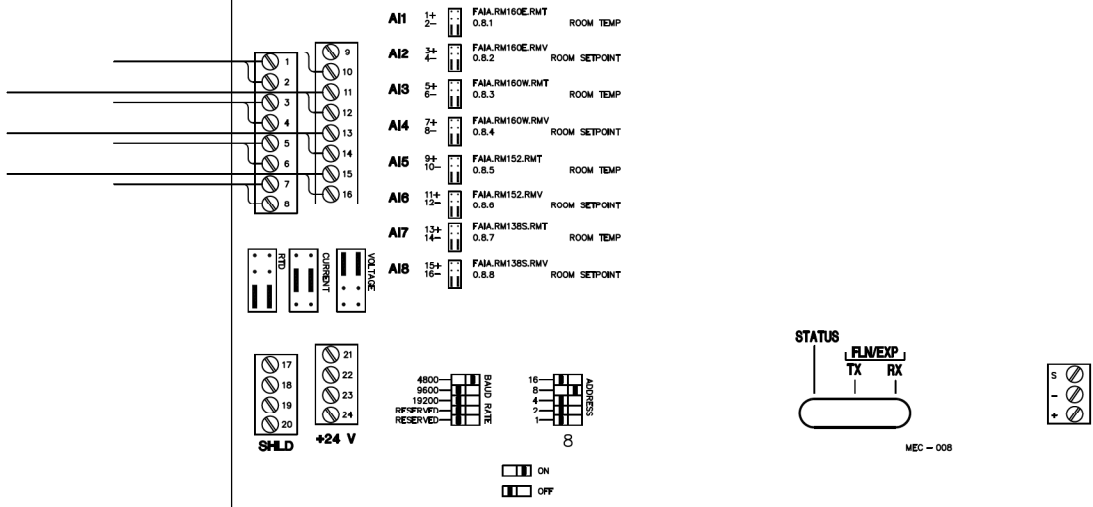
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ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15
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440P-159367
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N03G

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REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
NO3	FAIAMEC03	FAIAMEC-03

REVISION HISTORY	

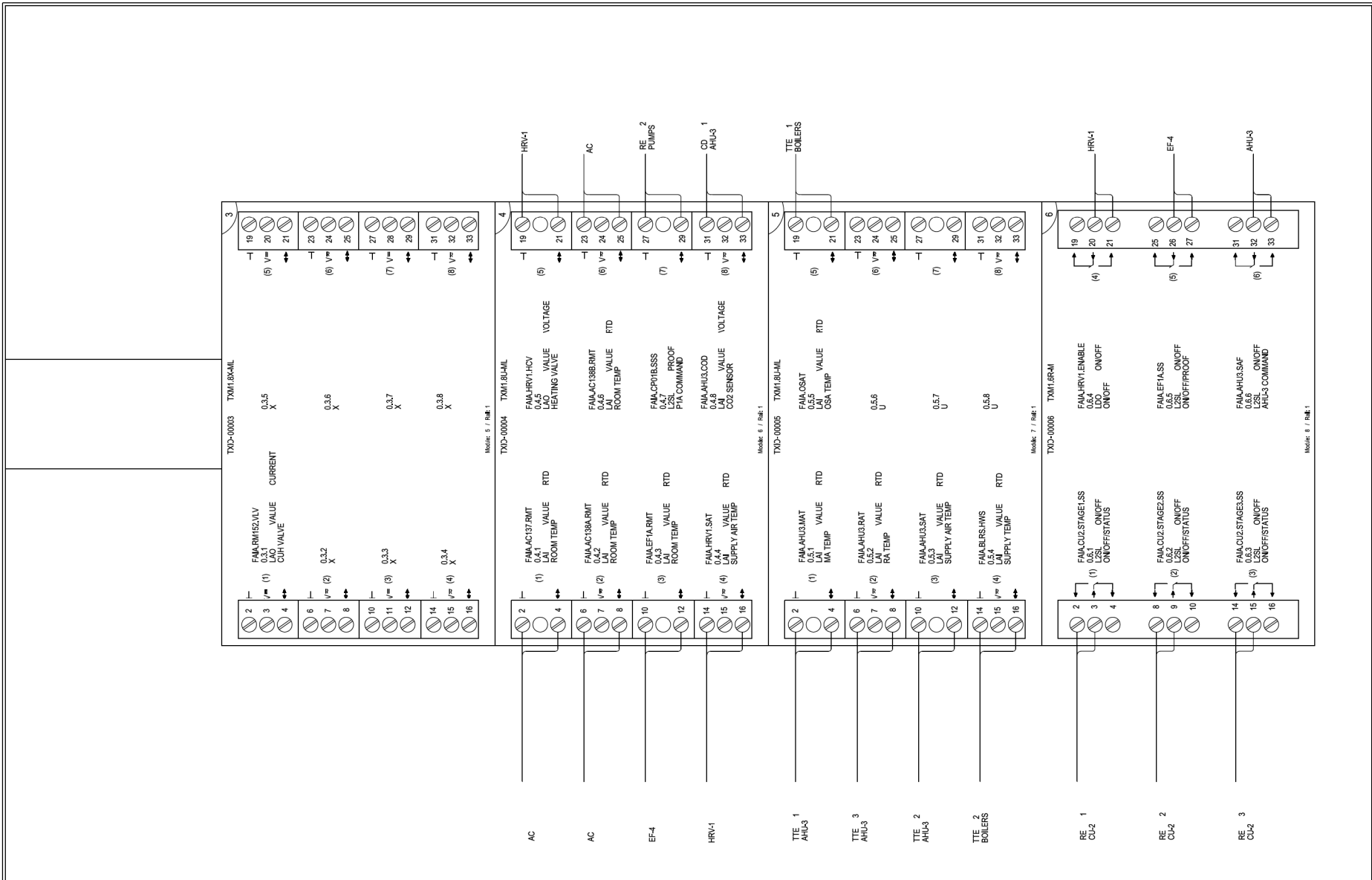
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ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
TL	NEP	TMA	05/23/06	09/14/15
FAIAMEC03-X8 (EX)				

440P-159367
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N03H



REVISION HISTORY

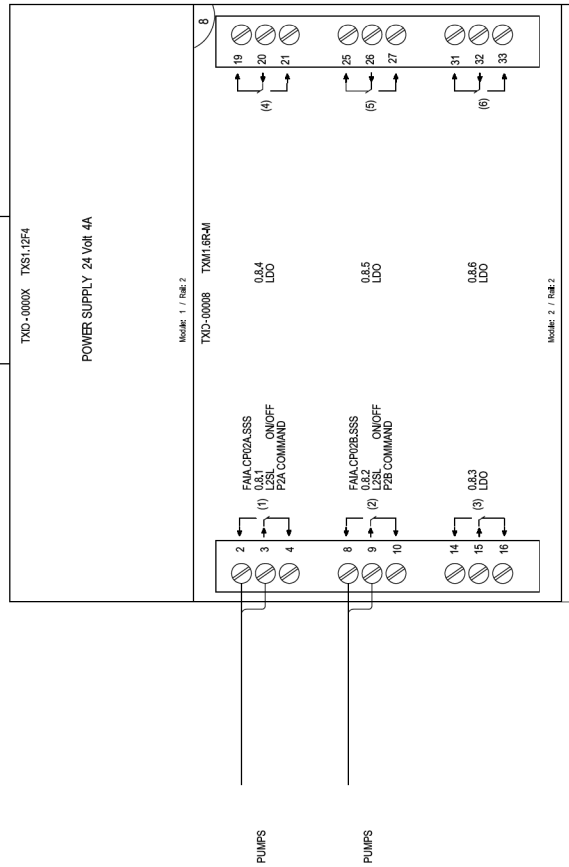
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DMVA FAIRBANKS ARMOY FAIRBANKS, AK					
ENGINEER	DRAWN	CHECKED	BY	INITIAL	RELEASE
TL	NEP	TMA		05/23/06	12/02/14
FAIAPXM03 X-9					

440P-159367
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N03I



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**DMVA FAIRBANKS ARMORY
FAIRBANKS, AK**

ENGINEER	DRAWN	CHECKED BY	INITIAL	RELEASE	LAST FINI DATE
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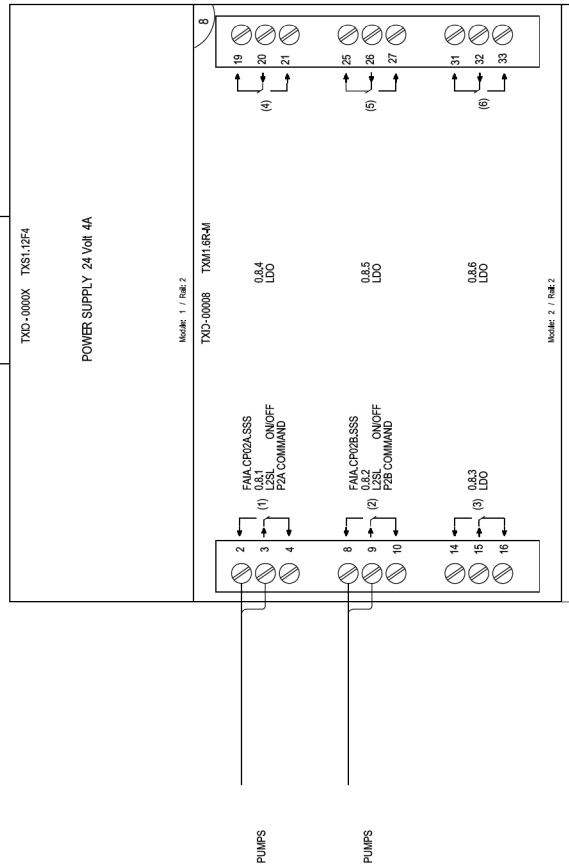
TL	NEP	TMA	05/23/06	12/02/14	
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FAIAPXCM03 X-10

440P-159367

1

N03J



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FAIRBANKS, AK

ENGINEER	DRAWN	CHECKED BY	INITIAL	RELEASE	LAST FPDY DATE
TL	NEP	TMA	05/23/06	12/02/14	

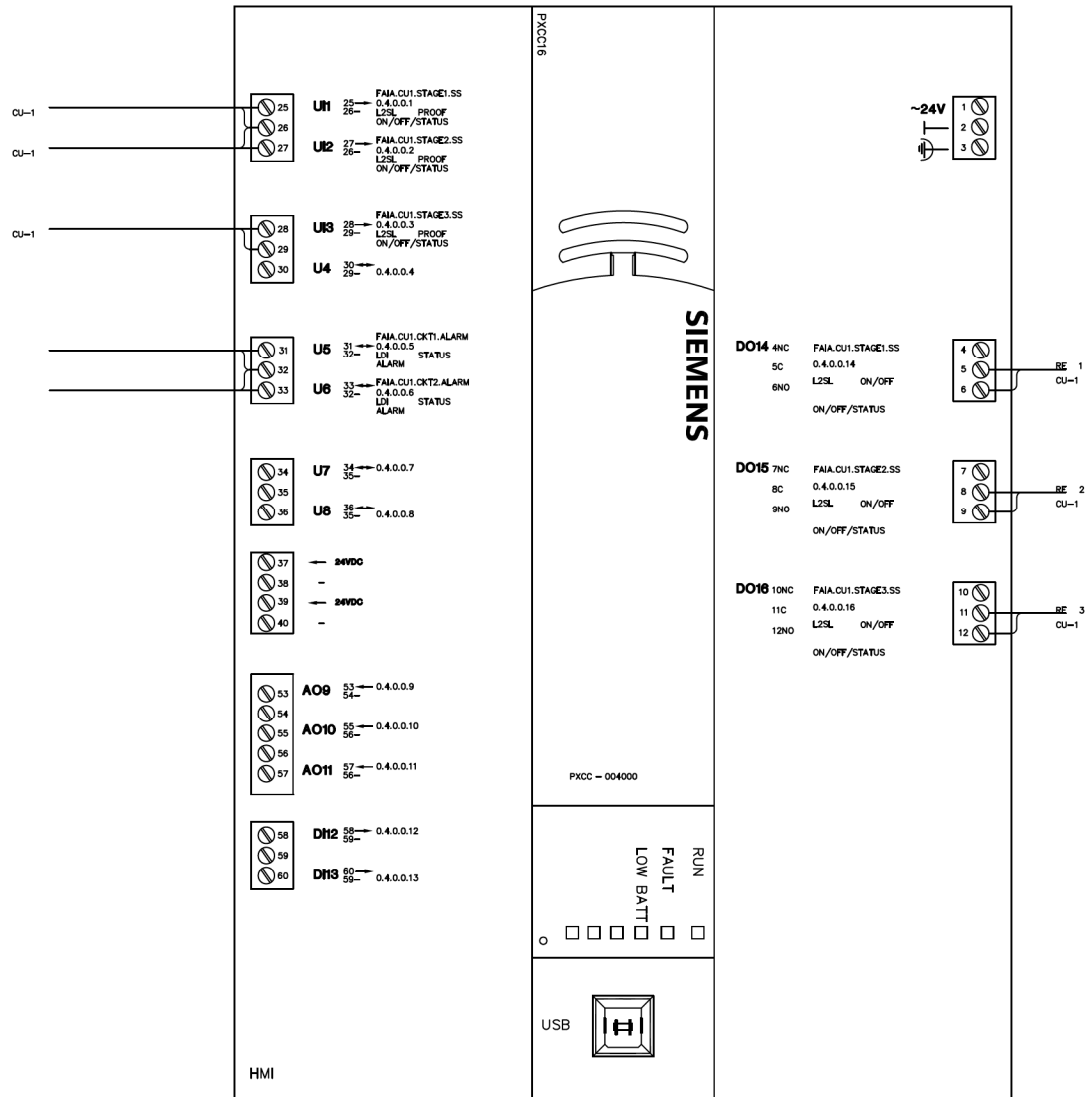
FAIAPXCM03 X-11

440P-159367

1
N03K

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Panel Mounted Devices					
PXCM 000	1	PXC100-PE96.A	SIEMENS	149478	PXC MOD, P2, TX-I/O, 96 NODE, APOGEE
	1	PXX-485.3	SIEMENS	149478	PXC MOD EXPANSION MODULE, 3 RS-485
	1	TXA1.K24	SIEMENS	149476	ADDRESS KEY 1-24
	2	TXS1.12F4	SIEMENS	149476	24VDC SUPPLY 1200MA, 4 A FUSE
	1	TXM1.16D	SIEMENS	149476	16 DIGITAL INPUT MODULE
	3	TXM1.8X-ML	SIEMENS	149476	8 UNIV I/O W/ 4-20MA, OVD&LCD
	1	TXM1.8U	SIEMENS	149476	8 UNIVERSAL I/O MODULE
	3	TXM1.6R-M	SIEMENS	149476	6 RELAY OUTPUT MODULE W/OVD
	1	TXM1.8U-ML	SIEMENS	149476	8 UNIV I/O MODULE W/ OVD&LCD

REVISION HISTORY	SIEMENS	2520 ROLAND ROAD FAIRBANKS, AK 99709 USA PHONE: 907.479.7034 FAX: 907.479.3679	DMVA FAIRBANKS ARMORY FAIRBANKS, AK		440P-159367							
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ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE								
TL	NEP	TMA	05/23/06	12/02/14								
			FAIA PXCM03 BOILER ROOM 141 BOM		N03L							



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TL	NEP	TMA	05/23/06	09/14/15

FAIAFPNL-04 MECH RM 142

440P-159367
0

N04

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Panel Mounted Devices					
PXCC 1	1	PXC16.2-P.A	SIEMENS	149454	APOGEE 16PT, RS-485 ALN

REVISION HISTORY

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FAIAFPNL-04 MECH RM 142 BOM

440P-159367
0

N04A

TEC SCHEDULE

EQUIPMENT TAG	PANEL	FLN NUMBER	ADDRESS	CONTROLLER NAME	APPLICATION	VALVES	OTHER ATTACHED POINTS	LOCATIONS SERVED	SEE DRAWING
BB-138A	N03	1	1	ARMORY.138A.TEC	2543	2		138A	400
BB-138B	N03	1	2	ARMORY.138B.TEC	2543	1		138B	400A

TRANSFORMER SERVICE SCHEDULE

**TRANSFORMER PANEL: SB-3
LOCATION: BOILER ROOM 141**

OUTPUT NUMBER: 1

XFMR CAPACITY: 94 VA CLASS 1

XFMR OUTPUT 1 & 2 FROM SAME POWER SOURCE. COMBINED MAXIMUM TOTAL IS 94 VA.

PAGE	TAG	DEVICE	VA	PAGE	TAG	DEVICE	VA	PAGE	TAG	DEVICE	VA
N01	PXCC	PXC36-E.A	35								
TOTAL											35

OUTPUT NUMBER: 2

XFMR CAPACITY: 94 VA CLASS 1

XFMR OUTPUT 1 & 2 FROM SAME POWER SOURCE. COMBINED MAXIMUM TOTAL IS 94 VA.

PAGE	TAG	DEVICE	VA	PAGE	TAG	DEVICE	VA	PAGE	TAG	DEVICE	VA
TOTAL											0

OUTPUT NUMBER: 3

XFMR CAPACITY: 100 VA

XFMR OUTPUT 1 & 2 FROM SAME POWER SOURCE. COMBINED MAXIMUM TOTAL IS 94 VA.

PAGE	TAG	DEVICE	VA	PAGE	TAG	DEVICE	VA	PAGE	TAG	DEVICE	VA
100A	RE-1	RIBXLSRA	1								
TOTAL											1

TRANSFORMER SERVICE SCHEDULE

**TRANSFORMER PANEL: XFMR-1
LOCATION: BOILER ROOM 141**

**TRANSFORMER PANEL: XFMR-1
OUTPUT NUMBER: 1
XFMR CAPACITY: 100VA**

PAGE	TAG	DEVICE	VA
100A	AE-1	HRV-1 O/A DAMPER	7
100A	AE-2	HRV-1 E/A DAMPER	7
100A	V-1	HRV-1 PREHEAT VALVE	3
100A	V-2	HRV-1 HEATING VALVE	3
200A	V-1	HX-1 STEAM VALVE	17
TOTAL			37

**TRANSFORMER PANEL: XFMR-1
OUTPUT NUMBER: 2
XFMR CAPACITY: 100VA**

PAGE	TAG	DEVICE	VA
400	TEC-1	BB-001 TEC	12
400	TEC-1	BB-002 TEC	12
400	TEC-1	BB-009 TEC	12
400	TEC-1	BB-010 TEC	12
400	TEC-1	BB-011 TEC	12
400	TEC-1	BB-003 TEC	12
TOTAL			72

**TRANSFORMER PANEL: XFMR-1
OUTPUT NUMBER: 3
XFMR CAPACITY: 100VA**

PAGE	TAG	DEVICE	VA
401	TEC-1	UH-1 TEC	14
401	TEC-1	UH-2,3 TEC	16
300	PPM-52	AC-1/VF-2 POINT PICKUP MODULE	4
TOTAL			34

**TRANSFORMER PANEL: XFMR-1
OUTPUT NUMBER: 4
XFMR CAPACITY: 100VA**

PAGE	TAG	DEVICE	VA
TOTAL			0

**TRANSFORMER PANEL: XFMR-1
OUTPUT NUMBER: 5
XFMR CAPACITY: 100VA**

PAGE	TAG	DEVICE	VA
TOTAL			0

TRANSFORMER SERVICE SCHEDULE

**TRANSFORMER PANEL: XFMR-2
LOCATION: FLOOR 1**

**TRANSFORMER PANEL: XFMR-2
OUTPUT NUMBER: 1
XFMR CAPACITY: 100VA**

PAGE	TAG	DEVICE	VA
400	TEC-1	BB-WEST STAIR TEC	12
400	TEC-1	BB-100 TEC	12
400	TEC-1	BB-102 TEC	12
400	TEC-1	BB-104 TEC	12
400	TEC-1	BB-106 TEC	12
400	TEC-1	BB-110 TEC	12
400	TEC-1	BB-114 TEC	12
TOTAL			84

**TRANSFORMER PANEL: XFMR-2
OUTPUT NUMBER: 2
XFMR CAPACITY: 100VA**

PAGE	TAG	DEVICE	VA
400	TEC-1	BB-114 TEC	12
400	TEC-1	BB-116 TEC	12
400	TEC-1	BB-EAST STAIR TEC	12
400	TEC-1	BB-111A TEC	12
400	TEC-1	BB-111 TEC	12
400	TEC-1	BB-109 TEC	12
TOTAL			72

**TRANSFORMER PANEL: XFMR-2
OUTPUT NUMBER: 3
XFMR CAPACITY: 100VA**

PAGE	TAG	DEVICE	VA
400	TEC-1	BB-105 TEC	12
400	TEC-1	BB-103 TEC	12
400	TEC-1	BB-101 TEC	12
401A	TEC-2	CUH-7 TEC	14
TOTAL			50

**TRANSFORMER PANEL: XFMR-2
OUTPUT NUMBER: 4
XFMR CAPACITY: 100VA**

PAGE	TAG	DEVICE	VA
TOTAL			0

**TRANSFORMER PANEL: XFMR-2
OUTPUT NUMBER: 5
XFMR CAPACITY: 100VA**

PAGE	TAG	DEVICE	VA
TOTAL			0

TRANSFORMER SERVICE SCHEDULE

**TRANSFORMER PANEL: XFMR-3
LOCATION: FLOOR 2**

**TRANSFORMER PANEL: XFMR-3
OUTPUT NUMBER: 1
XFMR CAPACITY: 100VA**

PAGE	TAG	DEVICE	VA
400	TEC-1	BB-HALL WEST	12
400	TEC-1	BB-200A TEC	12
400	TEC-1	BB-200B TEC	12
400	TEC-1	BB-202 TEC	12
400	TEC-1	BB-204A TEC	12
400	TEC-1	BB-204B TEC	12
TOTAL			72

**TRANSFORMER PANEL: XFMR-3
OUTPUT NUMBER: 2
XFMR CAPACITY: 100VA**

PAGE	TAG	DEVICE	VA
400	TEC-1	BB-206A TEC	12
400	TEC-1	BB-206B TEC	12
400	TEC-1	BB-HALL EAST	12
400	TEC-1	BB-209B TEC	12
400	TEC-1	BB-207B TEC	12
400	TEC-1	BB-207A TEC	12
TOTAL			72

**TRANSFORMER PANEL: XFMR-3
OUTPUT NUMBER: 3
XFMR CAPACITY: 100VA**

PAGE	TAG	DEVICE	VA
400	TEC-1	BB-205 TEC	12
400	TEC-1	BB-203B TEC	12
400	TEC-1	BB-203A TEC	12
TOTAL			36

**TRANSFORMER PANEL: XFMR-3
OUTPUT NUMBER: 4
XFMR CAPACITY: 100VA**

PAGE	TAG	DEVICE	VA
401A	TEC-2	CUH-1 TEC	12
401A	TEC-2	CUH-3 TEC	12
401A	TEC-2	CUH-5 TEC	12
401A	TEC-2	CUH-6 TEC	12
401A	TEC-2	CUH-4 TEC	12
401A	TEC-2	CUH-2 TEC	12
TOTAL			72

**TRANSFORMER PANEL: XFMR-3
OUTPUT NUMBER: 5
XFMR CAPACITY: 100VA**

PAGE	TAG	DEVICE	VA
TOTAL			0

SIEMENS INDUSTRY, INC

Valve Submittal - Glycol

BUILDING TECHNOLOGIES

LOCATION:	FAIRBANKS, AK	PROJECT NAME:	DMVA FAIRBANKS ARMORY	DATE:	09/15/15
JOB NO:	44OP-159367			PAGE:	1
ENGR:	TL			REV:	

GENERAL NOTES:

1. All valves 2-1/2" and larger have flanged ends, 2" and smaller have screwed ends.
2. All control valves and wells shall be installed by the mechanical contractor.
3. Standard abbreviations used on control valves are:

BODY TYPES: 3W - Three way; 2W - Two way; A - Angle; N.C. - Normally Closed; N.O. - Normally Open;
 NOC - Ball Valve can be N.O. or N.C.; BF - Butterfly Valve; DS - Double Seated;

UNITS:

Steam inlet pressure, actual pressure drop, and shut off pressure indicated in PSIG.

ACTUATOR TYPES: SR - Spring Return; NSR - No Spring Return
 CR - Capacitor Driven Return

Valve ID/Location	Qty	Product Number	Valve Size	Body Type	Body Style	Actual Cv	Actuator Type	Design P. Drop (psi)	Required Flow (gpm)	Min (gpm)	Max (gpm)	Preset (gpm)	Steam Inlet	Press Drop (psi)	Valve Spec Sheet	Shut Off	ANSI Class	Comment
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Mechanical System: HRV-1

HEAT RECOVERY UNIT 1

V-1	1	262-02030	0.50	2 Way	Globe	0.40	NO-SR	3.00	0.50				N/A	0.00	1.66	154 010	120	250.00	HRV-1 HC-1
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NOTES: All control valves and wells shall be installed by the heating contractor.
 Failsafe: NSR - No Spring Return SR - Spring Return NO - Normal Open NC - Normal Close