THEREFORE A PENTHOUSE ALARM SHALL ACTIVATE THE 8TH FLOOR AND AN 8TH FLOOR SIGNALS.

GENERAL NOTES:
- WALL
- TROUBLE CONDITIONS
- WHICHEVER IS LOWER
- NATIONAL ELECTRIC CODE

ACCEPTED HERE
- 24.
- 18.
- 35. 36. 37.

JUNCTION BOX
- FIRE SUPPRESSION
- FLEX TO ASSOCIATED MODULE
- FUNCTION. LABEL REMOTE TEST SWITCHES WITH ASSOCIATED DUCT DETECTOR ADDRESS AND MATCHING THAT ON THESE PLANS. LABEL ALL MONITOR AND RELAY MODULES WITH ASSOCIATED NOTIFICATION APPLIANCES SHALL BE LABELED WITH THEIR ASSOCIATED NAC IDENTIFIER

EQUIPMENT CAN BE MAINTAINED ADEQUATELY.

BOZEMAN, MONTANA
- A/C SUPPLY
- DB
- AC
- AFF

- FIRE ALARM NOTES:
- ACU

- ADDRESSABLE MANUAL PULL STATION
- ADDRESSABLE MONITOR MODULE
- ADDRESSABLE INTERFACE DEVICE
- ANNUNCIATOR CIRCUIT (RS-485, NETWORK DATA)
- ANNUNCIATOR WITH REMOTE MIC
- ANNUNCIATOR PANEL
- AUDIO/VISUAL

- CEILING MOUNTED
- CEILING.
- SD-TRK
- C.

- DEVICE ANNOTATION
- DEVICE AND BUILDING ARCHITECTURAL FEATURES. INSTALLING CONTRACTOR SHALL MARK SUCH CHANGES ON THE AS-BUILT DRAWINGS. IF THESE CHANGES REQUIRE ALTERNATE EQUIPMENT AND BUILDING ARCHITECTURAL FEATURES, INSTALLING CONTRACTOR SHALL Cooperate with ELECTRICAL AND MECHANICAL SYSTEM COORDINATE THE EXACT DEVICE LOCATIONS WITH ELECTRICAL AND MECHANICAL SYSTEM CHANGES IN THE FIELD.

- SB

- SAFETY CONSIDERATIONS
- SAFETY CONSIDERATIONS
- SAFETY CONSIDERATIONS
- SAFETY CONSIDERATIONS
- SAFETY CONSIDERATIONS

- FIRE ALARM NOTES:
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- FIRE ALARM NOTES:
- FIRE ALARM NOTES:
PLAN KEY NOTES

1. REMOVE DUCT DETECTOR AND RELAY CONNECTION WITH EXISTING VFD. SALVAGE FAN SHUTDOWN CONNECTION FOR NEW WORK. PLUG ANY HOLES IN DUCT WORK AS A RESULT OF REPLACING DUCT DETECTOR AND SAMPLING TUBE.

PLAN GENERAL NOTES

1. ALL WORK TO BE COMPLETED BY MAY 23, 2019.
2. EXISTING SYSTEM TO REMAIN OPERATIONAL UNTIL INSTALLATION OF NEW SYSTEM. REMOVE EXISTING SYSTEMS AS NEEDED.

DISCONNECT AND SALVAGE EXISTING 120VAC BRANCH CIRCUIT FOR NEW FACP.
PLAN GENERAL NOTES

1. All spaces shown are existing at this time. Ergo, throughout May 23, 2019.

2. Existing systems to remain operational. Completion of new system installation, upon completion of new system, requires existing systems to be removed in entirety.

FA1.2
FIRST FLOOR
FIRE ALARM
DEMO PLAN

Dec 05, 2019 - 5:18pm - 190902 - FA MASTER.dwg
P:\Boz\19Jobs\190902 MSU - Leon Johnson Hall\0.0 DWGS\FA\
1. All devices shown are existing at time of refresh through May 23, 2019.
2. Existing system to remain operational until completion of new work. Remove existing systems upon completion of new work.

PLAN KEY NOTES

- Remove nons-required duct detector and relay connection with existing VFD. Safe off fan shutdown circuit. Plug any holes in duct work as a result of removing duct detector and sampling tube.
- Remove duct detector and relay connection with existing VFD. Salvage fan shutdown connection for new work. Plug any holes in duct work as a result of replacing duct detector and sampling tube.
1. All devices shown are existing as found in the walk-through on May 23, 2019.

2. Existing system to remain operational until completion of new work installation. Upon completion of new system, remove existing system in its entirety.

PLAN KEY NOTES

- Remove non-required duct detector and relay connection with existing VFD. Safe off fan shutdown circuit. Plug any holes in duct work as a result of removing duct detector and sampling tube.

- Remove duct detector and relay connection with existing VFD. Salvage fan shutdown connection/remote connection. Plug any holes as duct work as a result of replacing duct detector and sampling tube.

PPA#18-2184

REV. 1

REVIEWS BY:

DRAWN BY:

SHEET TITLE: MSU-CPDC

MONTANA STATE UNIVERSITY

BOZEMAN, MONTANA

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ph 406.582.1936

751 Osterman Dr., Suite 104

Bozeman, MT 59715

DATE: 12-8-19

FA1.4

SECOND FLOOR

FIRE ALARM

DEMOLITION PLAN

AREA B

PRELIMINARY - NOT FOR CONSTRUCTION
PLAN GENERAL NOTES
1. All devices shown are existing as shown in the walkthrough on May 23, 2019.
2. Existing system to remain operational until completion of new system installation. Upon completion of new system, remove existing systems entirely.

PLAN KEY NOTES
1. Remove non-required duct detector and relay connection with existing VFD. Safe off fan shutdown circuit. Plug any holes in duct work as a result of removing duct detector and sampling tube.
2. Remove duct detector and relay connection with existing VFD. Salvage fan shutdown connection for new work. Plug any holes in duct work as a result of replacing duct detector and sampling tube.
2. EXISTING SYSTEM TO REMAIN OPERATIONAL UNTIL COMPLETION OF NEW SYSTEM INSTALLATION. UPON COMPLETION OF NEW SYSTEM, REMOVE EXISTING SYSTEM IN ITS ENTIRETY.
PLAN GENERAL NOTES
2. EXISTING SYSTEM TO REMAIN OPERATIONAL UNTIL COMPLETION OF NEW WORK INSTALLATION. UPON COMPLETION OF NEW SYSTEM, REMOVE EXISTING SYSTEM IN ITS ENTIRETY.

PLAN KEY NOTES
1. REMOVE NON-REQUIRED DUCT DETECTOR AND RELAY CONNECTION WITH EXISTING VFD. SAFE OFF FAN SHUTDOWN CIRCUIT. PLUG ANY HOLES IN DUCT WORK AS A RESULT OF REMOVING DUCT DETECTOR AND SAMPLING TUBE.
2. HVAC SYSTEM PREVIOUSLY REMOVED. DEMO ASSOCIATED FIRE ALARM DEVICES.
PLAN GENERAL NOTES
1. All devices shown are existing at time of review on May 23, 2019.
2. Existing system to remain operational until completion of new system installation. Upon commissioning of new system, remove existing systems entirely.

PLAN KEY NOTES
1. Remove non-required duct detector and relay connections with existing VFD. Safe off fan shutdown circuit. Plug any holes in duct work as a result of removing duct detector and sampling tube.
2. HVAC system previously removed. Demo associated fire alarm devices.

LEON JOHNSON HALL
FIRE SUPPRESSION
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751 Osterman Dr., Suite 104
Bozeman, MT 59715

FA1.8
DATE
12-8-19
1. All devices shown are existing as found in the walk-through on May 23, 2019.

2. Existing system to remain operational until completion of new system installation. Upon completion of new system, remove existing system in its entirety.

PLAN KEY NOTES

- Remove non-required duct detector and relay connection with existing VFD. Safe off fan shutdown circuit. Plug any holes in duct work as a result of removing duct detector and sampling tube.

- HVAC system previously removed. Demo associated fire alarm devices.

- Change existing AC units with new AC units as listed on drawing.

- Fire alarm panel to be relocated as indicated on drawing.

- Refer to electrical plans for duct work and air handling unit.
PLAN GENERAL NOTES
2. EXISTING SYSTEM TO REMAIN OPERATIONAL UNTIL COMPLETION OF NEW WORK INSTALLATION. UPON COMPLETION OF NEW SYSTEM, REMOVE EXISTING SYSTEM IN IT'S ENTIRETY.

PLAN KEY NOTES
REMOVE DUCT DETECTOR AND RELAY CONNECTION WITH EXISTING VFD. SALVAGE FAN SHUTDOWN CONNECTION FOR NEW WORK. PLUG ANY HOLES IN DUCT WORK AS A RESULT OF REPLACING DUCT DETECTOR AND SAMPLING TUBE.
1. All devices shown are existing as found in the walk-through on May 23, 2019.
2. Existing system to remain operational until completion of new system installation. Upon completion of new system, remove existing system in its entirety.

PLAN KEY NOTES

FA1.11

Preliminary - Not for Construction

Leon Johnson Hall
Fire Suppression

Montana State University

Dec 05, 2019 - 5:19pm - 190902 - FA MASTER.dwg

P:\Boz\19Jobs\190902 MSU - Leon Johnson Hall\0.0 DWGS\FA\
PLAN GENERAL NOTES

1. All devices shown are existing as found in the walk-through on May 23, 2019.
2. Existing system to remain operational until completion of new work installation. Upon completion of new system, remove existing system in its entirety.

FA1.12
ROOF PLAN
FIRE ALARM DEMO PLAN
PLAN GENERAL NOTES
1. ALL SPEAKERS ARE 1/4W UNLESS OTHERWISE NOTED.
2. PROVIDE DOCUMENT CABINET ADJACENT TO FACP FOR RECORD STORAGE.
3. CONTRACTOR TO PROVIDE BATTERY CABINET LARGE ENOUGH TO HOUSE 12V50AH BATTERIES BELOW OR ADJACENT TO FACP.

PLAN KEY NOTES
ADDRESS POINTS FOR MCC1 CONTROL RELAYS IN MFC-A. SEE DETAIL 2/FA5.1 & 3/FA5.1 FOR WIRING DIAGRAM.
CONDUIT TO UPPER FLOORS, SEE FA2.2 FOR CONTINUATION.
CONDUIT TO ELEVATOR MACHINE ROOM, SEE FA2.12 FOR CONTINUATION.

WIRE & CABLE LEGEND
2 #14 THHN
TAG
TYPE
18-4 FPL
CIRCUIT DESCRIPTION
REMOTE TEST STATION
2 #14 THHN
A
B
16-2 UTP-FPL
SIGNALING LINE CIRCUIT
18-2 TSP-FPL
AUDIO RISER
P
AUXILIARY 24VDC RISER
K
FIRE FIGHTER TELEPHONE CIRCUIT
T
NOTIFICATION APPLIANCE CIRCUIT - STROBES
S
NOTIFICATION APPLIANCE CIRCUIT - SPEAKERS
Y
INITIATING DEVICE CIRCUIT 'CLASS B'
L
ANNUNCIATOR CIRCUIT (RS-485, NETWORK DATA)
461
18-2 UTP-FPL
120VAC POWER CIRCUIT
Z
3 #12 THHN
R
REMOTE MICROPHONE
P
18-4 TSP-FPL
FIRE FIGHTER TELEPHONE RISER
18-2 TSP-FPL
120VAC POWER CIRCUIT
3 #12 THHN
R
REMOTE MICROPHONE
P
18-4 TSP-FPL
FIRE FIGHTER TELEPHONE RISER
18-2 TSP-FPL
Z
120VAC POWER CIRCUIT
Z
INSTALLING CONTRACTOR SHALL PROVIDE COLOR CODED CABLING FOR DIFFERENT CIRCUIT TYPES. MAINTAIN COLOR CODE THROUGHOUT EACH CIRCUIT.
1. PROVIDE TCS-6 PHONE CABINET AND SIX 6700-0061 PHONES ADJACENT TO ANNUNICATOR PANEL.
LEON JOHNSON HALL
FIRE SUPPRESSION

PLAN GENERAL NOTES
1. ALL SPEAKERS ARE 1/4W UNLESS OTHERWISE NOTED.

WIRE & CABLE LEGEND

PLAN KEY NOTES

PRELIMINARY - NOT FOR CONSTRUCTION

DRAWN BY
DVW

REVIEWED BY:
JAA

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FAX: 406.994.5665

120VAC POWER CIRCUIT
3 #12 THHN
N14-02
305

FIRE SUPPRESSION
2 #14 THHN
18-2 TSP-FPL
307A

FIRE FIGHTER TELEPHONE CIRCUIT
3 #14 THHN
18-2 TSP-FPL
307

NOTIFICATION APPLIANCE CIRCUIT - SPEAKERS
16-2 TSP-FPL
306

NOTIFICATION APPLIANCE CIRCUIT - STROBES
2 #14 THHN
305

REMOTE MICROPHONE
18-4 TSP-FPL
307

AUXILIARY 24VDC RISER
2 #14 THHN
15cd

ANNUNCIATOR CIRCUIT (RS-485, NETWORK DATA)
18-2 UTP-FPL
308

FIRE FIGHTER TELEPHONE RISER
2 #14 THHN
15cd

REMOTE TEST STATION
18-4 FPL
308

SIGNALING LINE CIRCUIT
16-2 UTP-FPL
308

AUDIO RISER
18-2 TSP-FPL
308

USE SIGA-CRH FOR FAN SHUTDOWN RELAY.

TYPES. MAINTAIN COLOR CODE THROUGHOUT EACH CIRCUIT.
INSTALLING CONTRACTOR SHALL PROVIDE COLOR CODED CABLING FOR DIFFERENT CIRCUIT

1. PLAN GENERAL NOTES
2. PLAN KEY NOTES
3. PRELIMINARY - NOT FOR CONSTRUCTION
4. DRAWN BY
DVW

REVIEWED BY:
JAA

PHONE: 406.994.5413
FAX: 406.994.5665

120VAC POWER CIRCUIT
3 #12 THHN
N14-02
305

FIRE SUPPRESSION
2 #14 THHN
18-2 TSP-FPL
307A

FIRE FIGHTER TELEPHONE CIRCUIT
3 #14 THHN
18-2 TSP-FPL
307

NOTIFICATION APPLIANCE CIRCUIT - SPEAKERS
16-2 TSP-FPL
306

REMOTE MICROPHONE
18-4 TSP-FPL
307

AUXILIARY 24VDC RISER
2 #14 THHN
15cd

ANNUNCIATOR CIRCUIT (RS-485, NETWORK DATA)
18-2 UTP-FPL
308

FIRE FIGHTER TELEPHONE RISER
2 #14 THHN
15cd

REMOTE TEST STATION
18-4 FPL
308

SIGNALING LINE CIRCUIT
16-2 UTP-FPL
308

AUDIO RISER
18-2 TSP-FPL
308

USE SIGA-CRH FOR FAN SHUTDOWN RELAY.

TYPES. MAINTAIN COLOR CODE THROUGHOUT EACH CIRCUIT.
FIRE ALARM NEW
FOURTH FLOOR

INITIATING DEVICE CIRCUIT 'CLASS B'

NOTIFICATION APPLIANCE CIRCUIT - SPEAKERS

REMOTE MICROPHONE

FIRE FIGHTER TELEPHONE CIRCUIT

AUXILIARY 24VDC RISER

NOTIFICATION APPLIANCE CIRCUIT - STROBES

ANNUNCIATOR CIRCUIT (RS-485, NETWORK DATA)

REMOTE TEST STATION

FIRE FIGHTER TELEPHONE RISER

SIGNALLING LINE CIRCUIT

AUDIO RISER

WIRE & CABLE LEGEND

PH: 406.582.1936
WWW.COFFMAN.COM
BOZEMAN, MT 59715
751 OSTERMAN DR., SUITE 104

PRELIMINARY - NOT FOR CONSTRUCTION
ALL SYSTEMS ARE GROUNDED TO A COMMON GROUND. THIS UNIT HAS NO COMMON RETURN AIR SYSTEM. THIS AHU BRINGS IN 100% OUTSIDE AIR. Duct Detection Not Required. AHU.
FIRE ALARM NEW
SEVENTH FLOOR

INSTALLING CONTRACTOR SHALL PROVIDE COLOR CODED CABLING FOR DIFFERENT CIRCUIT TYPES. MAINTAIN COLOR CODE THROUGHOUT EACH CIRCUIT.

1. PLAN GENERAL NOTES
2. PLAN KEY NOTES
3. USE SDCS FOR FAN SHUTDOWN RELAY.

1. PLAN GENERAL NOTES

2. PLAN KEY NOTES

ALL SPEAKERS ARE 1/4W UNLESS OTHERWISE NOTED.

1. PLAN GENERAL NOTES

2. PLAN KEY NOTES

USE SIGA-CRH FOR FAN SHUTDOWN RELAY.
PRELIMINARY - NOT FOR CONSTRUCTION

PLANT GENERAL NOTES

1. All plans are subject to change and other notes.

PLANT KEY NOTES

1. Plan was corrected due to updates, please review and confirm for accuracy.
2. Elevator controller wiring is part of this project.
3. Coordinate with elevator contractor for final wiring and termination.
4. Elevator controller wiring is part of this project.

PLAN TITLE

WORK PLAN

FIRE ALARM NEW

8 FLOOR

TYPES. MAINTAIN COLOR CODE THROUGHOUT EACH CIRCUIT.

INSTALLING CONTRACTOR SHALL PROVIDE COLOR CODED CABLING FOR DIFFERENT CIRCUIT

120VAC POWER CIRCUIT

Z #12 THHN

INITIATING DEVICE CIRCUIT 'CLASS B'

Y #14 THHN

FIRE FIGHTER TELEPHONE CIRCUIT

T #14 THHN

NOTIFICATION APPLIANCE CIRCUIT - SPEAKERS

S #14 THHN

NOTIFICATION APPLIANCE CIRCUIT - STROBES

N #14 THHN

REMOTE MICROPHONE

1/2W

REMOTE TEST STATION

1/2W

FIRE FIGHTER TELEPHONE RISER

F #14 THHN

SIGNALING LINE CIRCUIT

B #16 THHN

AUDIO RISER

A #18 THHN

WIRE & CABLE LEGEND

1. All plans are subject to change and other notes.

1. Plan was corrected due to updates, please review and confirm for accuracy.

1. Elevator controller wiring is part of this project.

1. Coordinate with elevator contractor for final wiring and termination.

1. Elevator controller wiring is part of this project.

WIRE & CABLE LEGEND

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</table>

DATE
12-8-19
PLAN GENERAL NOTES
1. ALL SPEAKERS ARE 1/4W UNLESS OTHERWISE NOTED.
2. HEAT DETECTORS IN ELEVATOR MACHINE ROOM SHALL BE PLACED WITHIN 2' OF SPRINKLER HEAD.

PLAN KEY NOTES
1. CONDUIT FROM BASEMENT. SEE FA2.1 FOR CONTINUATION.
2. CONNECTION TO ELEVATOR CAR VIA TRAVELING CABLE. SEE FA2.11 FOR CONTINUATION.
3. ADDRESS POINTS FOR M-SERIES MODULES IN MFC-A. SEE DETAIL 1/FA5.7 & 2/FA5.7 FOR WIRING DIAGRAM AND MODULES USED.
4. EXISTING FREIGHT ELEVATOR TRAVELS BETWEEN 8TH FLOOR AND ROOF PENTHOUSE. ELEVATOR DOES NOT HAVE PROVISIONS FOR RECALL OR SHUNT.
5. INSTALLING CONTRACTOR SHALL PROVIDE COLOR CODED CABLING FOR DIFFERENT CIRCUIT TYPES. MAINTAIN COLOR CODE THROUGHOUT EACH CIRCUIT.

WIRE & CABLE LEGEND
1. 2 #14 THHN - TAG: INSTALLING CONTRACTOR SHALL PROVIDE COLOR CODED CABLING FOR DIFFERENT CIRCUIT TYPES. MAINTAIN COLOR CODE THROUGHOUT EACH CIRCUIT.
## NAC 1 LOAD/LOSS CALCULATION - FACP

### Calculations

<table>
<thead>
<tr>
<th>Device</th>
<th>Points to Point Method</th>
<th>Points to Circuit Method</th>
<th>Circuit to Circuit Method</th>
<th>Circuit to Main Method</th>
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<td>Device Type</td>
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</table>

### Description

- **Device**: The type of device involved in the calculation.
- **Notes**: Remarks or additional information about the calculation.

## NAC 2 LOAD/LOSS CALCULATION - BPS#1

### Calculations

<table>
<thead>
<tr>
<th>Device</th>
<th>Points to Point Method</th>
<th>Points to Circuit Method</th>
<th>Circuit to Circuit Method</th>
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### Description

- **Device**: The type of device involved in the calculation.
- **Notes**: Remarks or additional information about the calculation.

## NAC 3 LOAD/LOSS CALCULATION - BPS#1

### Calculations

<table>
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<th>Device</th>
<th>Points to Point Method</th>
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### Description

- **Device**: The type of device involved in the calculation.
- **Notes**: Remarks or additional information about the calculation.
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<tr>
<td>Device Manufacturer:</td>
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</tr>
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</tr>
<tr>
<td>Device ID No.:</td>
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<td>Device ID No.:</td>
</tr>
<tr>
<td>EST</td>
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<tr>
<td>Voltage</td>
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<td>Distance from Source to 1st Device</td>
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</tr>
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<td>Fault Current</td>
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<tr>
<td>0.00</td>
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<tr>
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<tr>
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<td>Total Direct Current</td>
<td>Total Direct Current</td>
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<tr>
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<td>1.26</td>
</tr>
<tr>
<td>Distance from Source to 1st Device</td>
<td>Distance from Source to 1st Device</td>
</tr>
<tr>
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</tr>
<tr>
<td>Time</td>
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<td>Fault Current</td>
<td>Fault Current</td>
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### NAC 18 LOAD/LOSS CALCULATION - BPS#5

<table>
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<tr>
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<th>Area Covered Cost</th>
<th>Area Covered Voltage</th>
<th>Area Covered Location</th>
<th>Area Covered Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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### NAC 19 LOAD/LOSS CALCULATION - BPS#5

<table>
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<th>Area Covered Voltage</th>
<th>Area Covered Location</th>
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</thead>
<tbody>
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### NAC 20 LOAD/LOSS CALCULATION - BPS#5

<table>
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</thead>
<tbody>
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### NAC 21 LOAD/LOSS CALCULATION - BPS#5

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<th>Area Covered Location</th>
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</thead>
<tbody>
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### NAC 22 LOAD/LOSS CALCULATION - BPS#6

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<th>Area Covered Voltage</th>
<th>Area Covered Location</th>
<th>Area Covered Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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### NAC 23 LOAD/LOSS CALCULATION - BPS#6

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</thead>
<tbody>
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<tr>
<td>2</td>
<td></td>
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### NAC 24 LOAD/LOSS CALCULATION - BPS#7

<table>
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<th>Area Covered Voltage</th>
<th>Area Covered Location</th>
<th>Area Covered Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<tr>
<td>2</td>
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### NAC 25 LOAD/LOSS CALCULATION - BPS#7

<table>
<thead>
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<th>Area Covered Cost</th>
<th>Area Covered Voltage</th>
<th>Area Covered Location</th>
<th>Area Covered Notes</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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<td></td>
<td></td>
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<tr>
<td>2</td>
<td></td>
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</table>
### NAC 27 LOAD/LOSS CALCULATION - BPS#8

**Load February 2019 (27)**

#### NO SCALE

**FA8.4**

<table>
<thead>
<tr>
<th>Device</th>
<th>Current (A)</th>
<th>Voltage (V)</th>
<th>Percent of Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device 1</td>
<td>0.100</td>
<td>120.0</td>
<td>0.100</td>
</tr>
<tr>
<td>Device 2</td>
<td>0.200</td>
<td>120.0</td>
<td>0.200</td>
</tr>
<tr>
<td>Device 3</td>
<td>0.300</td>
<td>120.0</td>
<td>0.300</td>
</tr>
<tr>
<td>Device 4</td>
<td>0.400</td>
<td>120.0</td>
<td>0.400</td>
</tr>
<tr>
<td>Device 5</td>
<td>0.500</td>
<td>120.0</td>
<td>0.500</td>
</tr>
<tr>
<td>Device 6</td>
<td>0.600</td>
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</tr>
<tr>
<td>Device 7</td>
<td>0.700</td>
<td>120.0</td>
<td>0.700</td>
</tr>
<tr>
<td>Device 8</td>
<td>0.800</td>
<td>120.0</td>
<td>0.800</td>
</tr>
<tr>
<td>Device 9</td>
<td>0.900</td>
<td>120.0</td>
<td>0.900</td>
</tr>
<tr>
<td>Device 10</td>
<td>1.000</td>
<td>120.0</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**Total Load:** 5.500 A

**Total Voltage:** 120.0 V

### NAC 28 LOAD/LOSS CALCULATION - BPS#8

**Load February 2019 (28)**

#### NO SCALE

**FA8.4**

<table>
<thead>
<tr>
<th>Device</th>
<th>Current (A)</th>
<th>Voltage (V)</th>
<th>Percent of Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device 1</td>
<td>0.100</td>
<td>120.0</td>
<td>0.100</td>
</tr>
<tr>
<td>Device 2</td>
<td>0.200</td>
<td>120.0</td>
<td>0.200</td>
</tr>
<tr>
<td>Device 3</td>
<td>0.300</td>
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</tr>
<tr>
<td>Device 4</td>
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</tr>
<tr>
<td>Device 10</td>
<td>1.000</td>
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<td>1.000</td>
</tr>
</tbody>
</table>

**Total Load:** 5.500 A

**Total Voltage:** 120.0 V

### NAC 29 LOAD/LOSS CALCULATION - BPS#8

**Load February 2019 (29)**

#### NO SCALE

**FA8.4**

<table>
<thead>
<tr>
<th>Device</th>
<th>Current (A)</th>
<th>Voltage (V)</th>
<th>Percent of Load</th>
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<tbody>
<tr>
<td>Device 1</td>
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<td>0.100</td>
</tr>
<tr>
<td>Device 2</td>
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<td>0.200</td>
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<tr>
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</tr>
<tr>
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<td>Device 7</td>
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<tr>
<td>Device 10</td>
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</tbody>
</table>

**Total Load:** 5.500 A

**Total Voltage:** 120.0 V
1. Worst case BPS calculation requires 4.3293 Ah. Each BPS panel will be provided with 7Ah battery backup.

(1) set of 12 5Ah batteries shall be provided in each BPS.

(1) set of 12 5Ah batteries shall be provided in each BPS.

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