

## ADDENDUM NO.3

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### VA ROSEBURG HEALTHCARE SYSTEM SEISMICALLY UPGRADE BUILDING 7

May 29, 2015

The contents of this addendum are to be covered in the bids and in closing the Contract will become a part thereof. Changes noted herein affect only the specific words in paragraphs mentioned and the balance of the Drawings and/or Specifications remains in full force.

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#### **SPECIFICATIONS:**

##### **Item -1 Section 23 09 11 – INSTRUMENTATION AND CONTROL FOR BOILER PLANT**

Paragraph 2.8 B1. ADD the following:

“ e: Meter will measure fluids with conductivity greater than or equal to 5 uS/cm.

f: Meter fluid temperature range 14-248F.”

##### **Item- 2 Section: 28 23 00 – VIDEO SURVEILLANCE**

Paragraph 3.2 E DELETE the following:

3.2-E.2 IDS

3.2-E.3 Security Access Detection

3.2-E.4 EPPS

##### **Item-3 Section 28 23 29 – DOOR INTERCOM SYSTEM**

Paragraph 1.4 A.2 DELETE and ADD the following:

“Personnel can observe an individual, communicate through the intercom, and have the option to remotely release the door lock from both a master station and a routine on workstation A, only, located in control room 104. Access control software shall be installed on workstation A for door lock release control from workstation.”

##### **Item-4 Section 26 05 73 – OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY**

Paragraph 1.1 DESCRIPTION ADD the following:

“D. Overcurrent protective devices shall be coordinated for the period of time that a fault’s duration extends beyond 0.1 seconds.”

Paragraph 1.6 STUDY REQUIREMENTS: ADD the following:

“D. Arc Flash Hazard Analysis:

1. Provide an Arc Flash Hazard Study per the requirements set forth in NFPA 70E. The arc flash hazard analysis shall be performed according to the IEEE 1584 equations that are presented in NFPA70E.
2. Arc flash study to determine:
  - a. Arc flash incident energies.
  - b. Arc flash boundaries.
  - c. Shock hazard boundaries
  - d. Personal protective equipment (PPE) for energized electrical equipment.
3. Arc flash study shall provide following information for each system mode of operation and shall be documented. The study results shall include:
  - a. Equipment name and voltage.
  - b. Equipment device name and ANSI function (i.e. 51/50).
  - c. Equipment type, i.e., switchgear, MCC, panel, VFD, etc.
  - d. Equipment arc gap.
  - e. Bolted and estimated arcing fault current at the fault point (equipment) in symmetrical amperes. The estimated arcing current should be based on the arcing current equations used.
  - f. Trip time, opening time, and total clearing time (total Arc time) of the protective device.
  - g. Worst-case arc flash boundary for each bus/equipment in the model.
  - h. Worst-case arc flash hazard incident energy in cal/cm<sup>2</sup> for each bus/equipment in the model.
  - i. Worst-case personal protective equipment (PPE) for each bus/equipment in the model.
  - j. Working distances for up to five different distances showing items g, h, and i for each distance.
  - k. Indicate “Danger/Hazardous” areas where incident energy is greater than 40 cal/cm<sup>2</sup> and provide recommendations to reduced arc flash energy levels for these areas.
  - l. Flag results where 85% arcing current provided worst-case results.
4. Arc flash study report format:
  - a. Introduction.
  - b. Methodology.
  - c. Back up information.
  - d. Key assumptions.
  - e. IEEE 1584-2002 considerations.
  - f. Arc flash reduction options: Overcurrent protective device changes.
  - g. Explanation of data in arc flash hazard report tables.
  - h. NFPA 70E Information.
    - 1) Shock hazards with covers removed.
    - 2) Shock hazard approach boundaries.
      - a) Limited approach boundary.
      - b) Restricted approach boundary.
      - c) Prohibited approach boundary.

- 3) Arc flash hazard boundaries.
- i. Results of arc flash hazard analysis for high voltage, medium voltage and low voltage systems, including: 1) Working distances. 2) Energy levels. 3) PPE requirements. 4) Recommendations to reduce arc flash hazard energy and exposure.
- j. Arc flash hazard report.
- k. Electronic file.
- 5. Provide labels for the project.”

**PART III EXECUTION ADD the following:**

**“3.1 ARC FLASH WARNING LABELS**

- A. Provide a 3.5 inch x 5 inch thermal transfer type label of high adhesion polyester for each work location analyzed.
- B. All labels will be based on recommended overcurrent device settings and will be provided after the results of the analysis have been presented to the owner and after any system changes, upgrades or modifications have been incorporated in the system.
- C. The label shall include the following information, at a minimum:
  - 1. Location designation
  - 2. Nominal voltage
  - 3. Flash protection boundary
  - 4. Hazard risk category
  - 5. Incident energy
  - 6. Working distance
  - 7. Engineering report number, revision number and issue date
- D. Labels shall be machine printed, with no field markings.
- E. One Arc flash label shall be provided for each, unit substation primary and secondary side, switchboard, switchgear section, motor control center, panelboard and busway.

**3.2 ARC FLASH TRAINING**

- A. The contractor of the arc flash hazard analysis shall train the owners qualified electrical personnel of the potential arc flash hazards associated with working on energized equipment (minimum of 4 hours). The training shall be certified for continuing education units (CEUs) by the International Association for Continuing Education Training (IACET) of equivalent.”

**Item-5 Section 26 24 13 – DISTRIBUTION SWITCHBOARDS**

Paragraph 2.6 B. REVISE the following:

“2.6 B. Non-adjustable Trip Molded Case Circuit Breakers (smaller than 225A frame):”

Paragraph 2.6 C. REVISE the following:

“2.6 C Adjustable Trip Molded Case Circuit Breakers (225A frame and larger):”

**DRAWINGS:**

**Item-6 Sheet E-002 LUMINAIRE SCHEDULE**

REVISE the fixture types shown in luminaire schedule (attached). Only fixture types included in luminaire schedule have been modified.

**Item-7 Sheet E-603 ONE-LINE DIAGRAM**

**Add** the following motor control starter wiring diagram indicated on revision drawing 2/E-603 (attached).

**REVISE** EMERGENCY SWITCHBOARD to “STANDBY SWITCHBOARD”.

**REVISE** breaker, located in distribution switchboard, serving UPS to an 80A, 3-P, and change feeder size serving UPS to an 1¼” C – 4 #4 & 1 #8 GND.

**QUESTIONS:**

The attached List of Questions and Answers is part of this addendum.

**ATTACHMENTS:**

List of Questions and Answers

Drawing Luminaire Schedule

Drawing 2/E-603 Typical Starter MCC Diagram

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**END OF ADDENDUM NO.3**

## Answer to Questions

Building 7 Seismic Upgrade, Roseburg VA

May 29, 2015

36. Spec section 28 13 00 Physical Access Control Security drawing E604 detail 1 identifies workstations A, B & C, who provides these workstations? If by contractor please identify what division and specifications.

Answer: Three work stations are being provided that will be connected to the VA private Ethernet network. The workstations are specified in 23 09 11, 2.06. The operator workstations are for boiler plant operators to access data from various plant safety, control, and monitoring systems over the VA private Ethernet network using standard internet browsers. Generally no software other than web browsers are to be installed on workstations. However CCTV software will be installed on each workstation in room 104 and access control software will be installed on workstation A only.

37. Spec section 28 23 29 Door Intercom System 1.4-A-2 Have the option to remotely release the door lock from both a master station and a routine on workstation located in control room 104. The card access system resides on a private VA network V-LAN; to release or unlock a door from a workstation located in room 104 will require a dedicated workstation residing on the private security V-LAN running Continuum software. How many security workstations will be required in room 104 to remotely unlock card reader doors?

Answer: A single workstation, workstation A located in room 104, will have access control software installed that will allow for the workstation to remotely unlock card reader doors.

38. Spec section 28 23 00 Video Surveillance 3.2-2 IDS; Does the CCTV system need to interface with the IDS system on this project? If yes what points need to be monitored and where is the interface point.

Answer: The CCTV system does not need to interface with the IDS system on this project.

39. 3.2-3 Security Access Detection; Does the CCTV system need to interface with the SAD system on this project? If yes what points need to be monitored and where is the interface point.

Answer: The CCTV system does not need to interface with the SAD system on this project.

40. 3.2-4 EPPS; Does the CCTV system need to interface with the EPPS system on this project? If yes what points need to be monitored and where is the interface point.

Answer: The CCTV system does not need to interface with the EPPS system on this project.

41. How many monitors will be connected to workstations A, B & C?

Answer: Each workstation will have 4- 24" monitors and 1 – 46" flat screen monitor

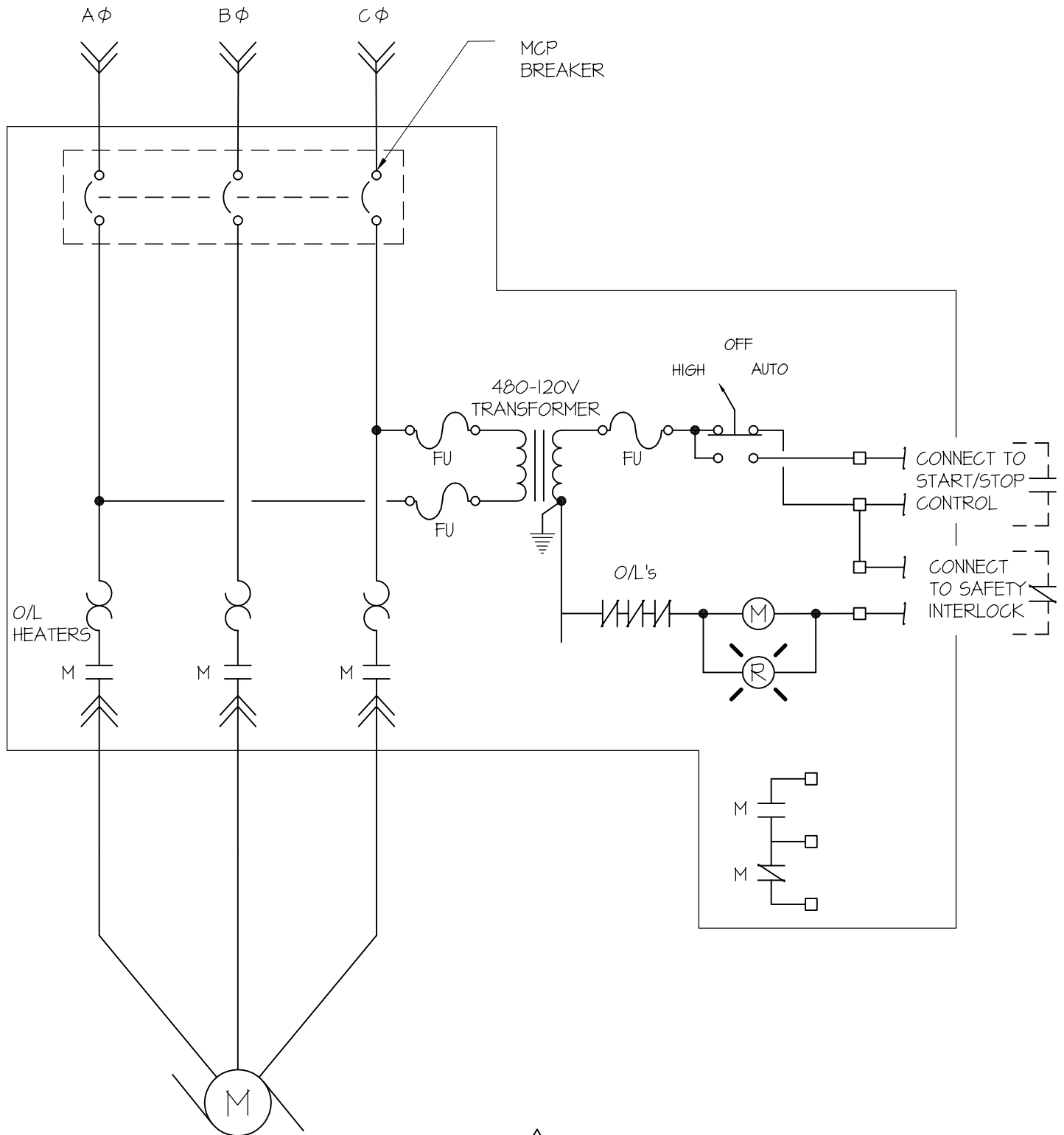
42. How many monitors connected to workstations A, B & C will be dedicated for video?

Answer: This is configurable by the plant operators

43. Who provides the monitors for workstations A, B & C? If by contractor please identify what division and specifications.

Answer: The contractor. The workstations and monitors are specified in 23 09 11, 2.06.

LUMINAIRE SCHEDULE				
TYPE	DESCRIPTION	EXAMPLE MANUFACTURER	LAMP	NOTES
'A'	PENDANT MOUNT NULITE LED DIRECT/INDIRECT 4 FEET	RP2 4 B(O6DN/O9UP-L4O) 120 DIM IC FRF WH SR 48 4'  FINELITE HP2-LED ZUMTOBEL SLDI - 2	LED 4000 K  (__87__W)	MOUNTING :SUSPENDED AIR CRAFT CABLE HOUSING :STEEL LENS/REFL:FROSTED FLUSH VOLTAGE :120V BALLAST :ELECTRONIC 0-10V DIMMING MISC :
'AB'	PENDANT MOUNT NULITE LED DIRECT/INDIRECT 8 FEET	RP2 8 B(O6DN/O9UP-L4O) 120 DIM IC FRF WH SR 48 8'  FINELITE HP2-LED ZUMTOBEL SLDI - 2	LED 4000 K  (__173__W)	MOUNTING :SUSPENDED AIR CRAFT CABLE HOUSING :STEEL LENS/REFL:FROSTED FLUSH VOLTAGE :120V BALLAST :ELECTRONIC 0-10V DIMMING MISC :
'B'	BETA XACARA CEILING R SURFACE	XACARA 50 1014 ME WH CL  DMF LIGHT DRD2 SURFACE	LED 4000 K  (__26__W)	MOUNTING :SURFACE HOUSING :STEEL LENS/REFL:CLEAR LENS VOLTAGE :120V BALLAST :ELECTRONIC 0-10V DIMMING MISC :
'C'	HIGH EFFICIENCY SURFACE MOUNT 1' X 4' HE WILLIAMS	HESI 4 LED PH38 A ED PH UNV DAYBRIGHT SDL SERIES	LED 4000 K  (__43__W)	MOUNTING :SURFACE HOUSING :STEEL LENS/REFL:FROSTED, RIBBED ACRYLIC DIFFUSER VOLTAGE :120V BALLAST :ELECTRONIC MISC :DAMP LOCATION RATED
'CE'	HIGH EFFICIENCY SURFACE MOUNT 1' X 4' HE WILLIAMS	HESI 4 LED PH38 A EM/BSL310 UNV  DAYBRIGHT SDL SERIES	LED 4000 K  (__43__W)	MOUNTING :SURFACE HOUSING :STEEL LENS/REFL:FROSTED, RIBBED ACRYLIC DIFFUSER VOLTAGE :120V BALLAST :BATTERY BACKUP / EMERGENCY LED DRIVER MISC :DAMP LOCATION RATED
'CW'	HIGH EFFICIENCY WALL SURFACE MOUNT 1' X 4' HE WILLIAMS	SLF 4 LED*PH45/840 HIA ED*UT UNV  DAYBRIGHT CSH48	LED 4000 K  (__59__W)	MOUNTING :WALL SURFACE HOUSING :STEEL LENS/REFL:FROSTED, RIBBED ACRYLIC DIFFUSER VOLTAGE :120V BALLAST :ELECTRONIC MISC :DAMP LOCATION RATED
'D'	HOLOPHANE PHZ SERIES HEAVY-DUTY SUSPENDED HIGH BAY	PHZ 18L 5K 12 P 6 M MSE62L3VDL CDP-L5-15-15 A USPOM PHZCHAIN15  GE ALBEO. ABVI 102T	LED 5000 K  (__185__W)	MOUNTING :SUSPENDED-AIRCRAFT CABLE HOUSING :STEEL LENS/REFL:TEMPERED GLASS LENS VOLTAGE :120V BALLAST :ELECTRONIC MISC :360 D MOTION SENSOR, PRE-WIRED, AUTOMATIC DIMMING CONTROL
'DP'	HOLOPHANE PETROLUX LED HEAVY-DUTY SURFACE	PLED2 08L 5K 12 UN NA 6 L5H  GE ALBEO. ABRI 101T	LED 5000 K  (__74__W)	MOUNTING :SURFACE MOUNT HOUSING :STEEL LENS/REFL:TYPE 5, HIGH ANGLE GLASS VOLTAGE :120V BALLAST :ELECTRONIC MISC :
'E'	BEGA RECESSED STEPLIGHTING LED DIRECTED	2382 LED BLK  WE-EF LIGHTING USA	LED 4000 K  (__7.5__W)	MOUNTING :RECESSED HOUSING :DIE CAST ALUMINUM LENS/REFL:DIE CAST ALUMINUM VOLTAGE :120V BALLAST :ELECTRONIC MISC :
'F'	LITHONIA D-SERIES SIZE 2 LED WALL LUMINAIRE	D-SERIES SIZE 2 DSXW2 LED 30C 530 40K TFTM 120 BSW V6 DBLXD  GE EN52	LED 4000 K  (__54__W)	MOUNTING :WALL MOUNT HOUSING :STEEL LENS/REFL:ACRYLIC LENS VOLTAGE :120V BALLAST :ELECTRONIC MISC :BIRD-DETERRENT SPIKES, VANDAL GUARD
'G'	TLI TERON LIGHTING VICEROY 2' LED	VICEROY 2' VCY24 L12.0 120 TE350 TW 40K  BIRCHWOOD NOLAN LED 2'	LED 4000 K  (__12__W)	MOUNTING :SURFACE HOUSING :STEEL LENS/REFL:STANDARD VOLTAGE :120V BALLAST :ELECTRONIC MISC :
'H1'	LITHONIA FLOOD D-SERIES SIZE 3 WALL MOUNT	DSXF3LED 8 A530/40K WFL 120 THK V6 DBLXD FRWB DBLXD U # AFTS DBLXD U  GE EFNA SERIES	LED 4000 K  (__115__W)	MOUNTING :SURFACE, WALL MOUNT HOUSING :DIE CAST ALUMINUM LENS/REFL: VOLTAGE :120V BALLAST :ELECTRONIC MISC :VANDAL GUARD, RADIUS WALL BRACKET & SLIPFITTER
'H2'	LITHONIA FLOOD D-SERIES SIZE 3 WALL MOUNT	DSXF3LED 8 A530/40K WFL 120 THK V6 DBLXD FRWB DBLXD U # AFTS DBLXD U  GE EFNA SERIES	LED 4000 K  (__158__W)	MOUNTING :SURFACE, WALL MOUNT HOUSING :DIE CAST ALUMINUM LENS/REFL: VOLTAGE :120V BALLAST :ELECTRONIC MISC :VANDAL GUARD, RADIUS WALL BRACKET & SLIPFITTER
'J'	KENALL UNDER CABINET AUC/MAUC SERIES -LED SURFACE MOUNT	MAUCLED 1 SL 20L40K 48 120 PIR  HE WILLIAMS-ISF WITH OCC 5 PHILLIPS COLOR KINETICS	LED 4000 K  (__23__W)	MOUNTING :SURFACE - UNDERCABINET HOUSING :EXTRUDED MARINE-GRADE ALUMINUM LENS/REFL:UV-STABILIZED, HIGH-IMPACT RESISTANT VOLTAGE :120V BALLAST :ELECTRONIC MISC :PIR OCCUPANCY SENSOR
'L'	HE WILLIAMS WALL SURFACE MOUNT 6.5" X 48"	WMAUD 4 LEDPH32/840U - PH32840D AF OCCWS FS-505-PP120 ED*PHU/ED*PHD 120	LED 4000 K  (__80__W)	MOUNTING :WALL SURFACE HOUSING :STEEL LENS/REFL:FROSTED ACRYLIC, .125" THICK VOLTAGE :120V BALLAST :ELECTRONIC MISC :OCCUPANCY SENSORS INCLUDED
'M'	BEGA SURFACE WALL LUMINAIRE 13 W LED - 4000K IP64 RATED	3542 LED K4 BLK FIXED LIGHT DISTRIBUTION  WE-EF LIGHTING USA OCL FIORI FR4-01-OB IP65	LED 4000 K  (__15__W)	MOUNTING :WALL SURFACE HOUSING :DIE-CAST ALUMINUM LENS/REFL:CLEAR SAFETY GLASS VOLTAGE :120V BALLAST :ELECTRONIC MISC :NET LOCATION UL RATED
'X'	SIGNATURE EXIT SIGN LITHONIA	LE EL N LE 5 2 6 120/271 EL N SD DL  EMERGI-LITE, BAPXN-I OR 26 CHLORIDE EMERGENCY LIGHTING	LED GREEN  (__1.5__W)	MOUNTING :SURFACE - CEILING OR WALL MOUNTED HOUSING :DIE-CAST ALUMINUM LENS/REFL:GREEN VOLTAGE :120V BALLAST :ELECTRONIC MISC :NICKEL CADMIUM BATTERY, SELF-DIAGNOSTICS, UL LISTED FOR DAMP LOCATION



06/01/2015 ADDENDUM # 3

# TYPICAL STARTER MCC DIAGRAM

NOT TO SCALE

2  
E-603

