



Office of General Services

DESIGN & CONSTRUCTION GROUP
THE GOVERNOR NELSON A. ROCKEFELLER
EMPIRE STATE PLAZA
ALBANY, NY 12242

ADDENDUM NO. 2 TO PROJECT NO. 47552

ELECTRICAL WORK UPGRADE ELECTRONIC SECURITY SYSTEMS VALLEY RIDGE CIT 274 CHIARINO DRIVE NORWICH NY 13815

November 20, 2024

NOTE: This Addendum forms a part of the Contract Documents. Insert it in the Project Manual. Acknowledge receipt of this Addendum in the space provided on the Bid Form.

SPECIFICATION GROUP

1. SECTION 281300 CARD ACCESS CONTROL SYSTEM: Discard the Section bound in the Project Manual and substitute the accompanying Section (pages 281300 – 1 thru 281300 – 13) noted “Revised 11/19/2024.”
2. SECTION 282304 INDOOR AND OUTDOOR DIGITAL CAMERA SURVEILLANCE SYSTEM: Discard the Section bound in the Project Manual and substitute the accompanying Section (pages 282304 – 1 thru 282304 – 16) noted “Revised 11/19/2024.”
3. Page 285000 – 8, Article 2.10, Add the following paragraph:
 - “C. (Long Range Antenna Power Supply)
 1. Power Supply having:
 - a. 90 to 264 Volt AC, 47 to 63 Hertz Input, 24 Volt DC
 - b. Comnet Model # PS-AMR2-24”

ELECTRICAL WORK DRAWINGS

4. Revised Drawings:
 - a. Drawing Nos. E-016, E-613, E-730, E-731, E 734, E-735 and E-736 noted “ADDENDUM#2 REVISED DRAWING 1/19/2024” accompany this Addendum and supersede the same numbered originally issued drawings.

END OF ADDENDUM

Brady M. Sherlock, P.E.
Director, Division of Design
Design & Construction

SECTION 281300

CARD ACCESS CONTROL SYSTEM

PART 1 GENERAL

1.01 DESCRIPTION OF EXISTING SYSTEM

- A. The existing Millenium card access control system controls, monitors and records all valid and invalid entries by personnel using existing photo ID Weigand Technology access cards located adjacent to doors requiring secured access. The system also detects security violations at doors within secured areas.
- B. This system consists of Millenium field panels, transmitter/receiver communication infrastructure, related power supplies, card readers, door contacts, Avigilon intercoms and associated required accessories located in the Program Building and the individual houses (5).
- C. The existing Millenium access control head-end equipment serving the campus located in Communications Room 11. The system communicates to the houses utilizing the existing fiber-optic network and copper to fiber media convertors.

1.02 MODIFICATIONS TO EXISTING SYSTEM

- A. The existing Millenium card access control system is to be replaced with a new Avigilon card access control system, in its entirety. An existing Avigilon server that currently accommodates the Safety Office Sally Port functionality will remain in place and new access control system software will be installed on this server.
- B. The existing Millenium workstation and associated card reader, I/O and - specialty field modules are to be removed and replaced with new Mercury access control modules in the same location where the existing are to be removed.
- C. Peripheral field card access components such as door contacts, request to exit devices, Avigilon intercoms and selected power supplies are to remain and existing the Millenium backboxes are to remain, unless specifically noted otherwise. Also, all card readers are to be replaced with new, in their same location as well as installing new as required.

1.03 DESCRIPTION OF COMPLETED SYSTEM

- A. The new Avigilon headend and Mercury card access system when expanded to its full capacity will have a minimum of 1,024 controllers, 2048 card readers and 5060 input/outputs capacity.

- B. User programmable alarm monitoring and event functions (up to 200) may be programmed by the attendant through appropriate keyboard/mouse commands or GUI touch-screen or to automatically activate control points upon an alarm condition from monitored points.
- C. All transactions are automatically logged, up to 50,000 events can be permanently recorded on disk storage.
- D. The central controller automatically controls door access by comparing security information stored within the access card with information programmed within the central controller (facility code, list of acceptable access card I.D. numbers with their authorized places and times of entry, card access level, etc.).
 - 1. If all conditions are met, a signal is sent by the central controller to the card reader terminal location to operate the release device, allowing the person to open door and enter secure area.
 - a. A green lamp illuminates at the card reader terminal indicating that access is granted.
 - b. A programmable access time period determines the length of time the releasing device will remain open for authorized access.
 - 2. If all conditions are not met, the central controller does not activate the release device but sounds an alarm and indicates an alarm condition on the GUI display the access point, time of day and indication of why access was denied.
 - a. Invalid versus valid access attempts are printed and displayed in contrasting color or manner.
 - b. A red lamp illuminates at the card reader terminal indicating that access is denied.
 - 3. The attendant, using appropriate keyboard/mouse commands may program the central controller to transmit commands to automatically override card reader terminal control so that corresponding release device may be freed to enable door access for long time intervals when card access is not required (terminal override by time control).
 - 4. The attendant may track a specific person through appropriate keyboard commands (entering the person's name), displaying the last door used by that person.
- F. Each door is monitored for status (open/close).
 - 1. When a door is opened without authorization an alarm sounds at the central controller. A printout occurs indicating which door is opened, and time of day. Duplicate information is displayed.
 - 2. A programmable alarm shunt timer (2 to 120 seconds) allows door to be opened for authorized card access entry, allowing adequate time to enter without alarming system. An alarm occurs if door remains open beyond the preset alarm period.
 - 3. The system does not alarm when an exit device (pushbutton, panic device) is used to leave a secure area. A programmable alarm shunt timer (2 to 120 seconds) allows door to be opened, allowing adequate time to exit. An alarm occurs if door remains open beyond the preset alarm period.
 - 4. The attendant, using appropriate keyboard/mouse commands or GUI touch-screen, may program the central controller to automatically

suppress alarms to enable door access for long time intervals when monitoring is not required.

- G. Alarm conditions are reported audibly, displayed visually, and printed with the time, date, location, alarm code and alarm detector identity. Alarms are silenced through appropriate keyboard commands.
- H. Access to the system functions are controlled thru at least 2 levels of access security to prevent program modifications or use by unauthorized personnel. Selective passwords may be used to allow display or control only, and for authorization to change programming parameters.
- I. The attendant, using appropriate keyboard/mouse commands, may validate or invalidate access card I.D. numbers or status levels and also add, delete or change the status level or time zone assignments for card readers.
- J. Upon appropriate keyboard or function command, the central controller GUI, displays and archives summary reports, including:
 - 1. Alarms.
 - 2. Access activity at specified card reader.
 - 3. Denied access attempts.
 - 4. Doors in override mode (card access).
 - 5. Doors with alarms suppressed (monitored).
 - 6. All transactions are archived in the system hard-drives and stored (printout can also be selective by date, time, transaction type, card I.D. number, card reader or alarm monitor transactions).
 - 7. All user programmable data.
- K. The central controller maintains a calendar clock for controlling and indicating all time-related functions.
 - 1. The attendant may alter the parameters for time zone control through appropriate keyboard/mouse commands or GUI touch-screen to define times when access to secure areas should be granted to card holder groups. A time zone consists of one or more intervals with each interval comprised of a start day and time and a stop day and time. It is possible to assign more than one interval to a single day within one time zone.
 - 2. The attendant may add, omit or alter the parameters for user programmable automatic time-initiated functions (start/stop, on/off, etc.) through appropriate keyboard/mouse commands or GUI touch-screen . The control points may also be manually operated through appropriate keyboard commands.
- L. Failure of the 120 V ac primary (main) power supply:
 - 1. Automatically transfers the card reader terminals and release devices to the secondary (standby) power supplies which then operate under maximum normal load condition for 4 hour
 - 2. Automatically transfers the central controller to it's secondary (standby) power supply which maintains vital memory parameters for 4 hours. The

central controller, printer and display are non-functional. Failure of the ac operating power is indicated at the central controller.

- M. Upon restoration of the primary (main) 120 V ac power supply, the system reverts back to normal operation without attendant intervention or manual re-start procedures.
- N. The central controller continuously monitors the communications and data processing cycles of the micro-processor. Upon central controller failure, an audible and visual alarm alerts attendant.

1.04 SUBMITTALS

- A. Waiver of Submittals: The “Waiver of Certain Submittal Requirements” in Section 013300 does not apply to this Section.
- B. Submittals Package: Submit the shop drawings, product data, and quality control submittals specified below at the same time as a package.
- C. Shop Drawings:
 - 1. Bill of materials.
 - 2. Composite wiring and/or schematic diagrams of the complete system as proposed to be installed (standard diagrams will not be accepted).
 - 3. Total electrical load of the complete system in supervisory and alarm conditions.
 - 4. Detailed description of system operation (format similar to SYSTEM DESCRIPTION).
- D. Product Data:
 - 1. Catalog sheets, specifications and installation instructions.
 - 2. Name, address and telephone number of nearest fully equipped service organization.
- E. Quality Control Submittals:
 - 1. Copy of license for installing Security Systems.
 - a. Also include copy of identification card issued by the Licensee for each person who will be performing the work.
 - 2. Company Field Advisor Data: Include:
 - a. Name, business address and telephone number of Company Field Advisor secured for the required services.
 - b. Certified statement from the Company listing the qualifications of the Company Field Advisor.
 - c. Services and each product for which authorization is given by the Company, listed specifically for this project.
- F. Contract Closeout Submittals:
 - 1. Test Report: System acceptance test report.
 - 2. Certificate: Affidavit, signed by the Company Field Advisor and notarized, certifying that the system meets the contract requirements and is operating properly.

3. Operation and Maintenance Data:
 - a. Deliver 2 copies, covering the installed products, to the Director's Representative. Include:
 - 1) Operation and maintenance data for each product.
 - 2) Complete point to point wiring diagrams of entire system as installed. Number all conductors and show all terminations and splices. (Numbers shall correspond to numbered tags installed on each conductor.)
 - 3) Name, address, and telephone number of nearest fully equipped service organization.

1.05 QUALITY ASSURANCE

- A. Company Testing Facility: The Company producing the system shall have test facilities available which can demonstrate that the proposed system meets contract requirements.
- B. Equipment Qualifications For Products Other Than Those Specified:
 1. At the time of submission provide written notice to the Director of the intent to propose an "or equal" for products other than those specified. Make the "or equal" submission in a timely manner to allow the Director sufficient time to review the proposed product, perform inspections and witness test demonstrations.
 2. If products other than those specified are proposed for use furnish the name, address, and telephone numbers of at least 5 comparable installations that can prove the proposed products have performed satisfactorily for 3 years. Certify in writing that the owners of the 5 comparable installations will allow inspection of their installation by the Director's Representative and the Company Field Advisor.
 - a. Make arrangements with the owners of 2 installations (selected by the Director) for inspection of the installations by the Director's Representative. Also obtain the services of the Company Field Advisor for the proposed products to be present. Notify the Director a minimum of 3 weeks prior to the availability of the installations for the inspection, and provide at least one alternative date for each inspection.
 - b. Only references from the actual owner or owner's representative (Security Supervisor, Maintenance Supervisor, etc.) will be accepted. References from dealers, system installers or others, who are not the actual owners of the proposed products, are not acceptable.
 - 1) Verify the accuracy of all references submitted prior to submission and certify in writing that the accuracy of the information has been confirmed.
 3. The product manufacturer shall have test facilities available that can demonstrate that the proposed products meet the contract requirements.
 - a. Make arrangements with the test facility for the Director's Representative to witness test demonstrations. Also obtain the services of the Company Field Advisor for the proposed product to be present at the test facility. Notify the Director a minimum of

- 3 weeks prior to the availability of the test facility, and provide at least one alternative date for the testing.
4. Provide written certification from the manufacturer that the proposed products are compatible for use with all other equipment proposed for use for this system and meet all contract requirements.
- C. Company Field Advisor: Secure the services of a Company Field Advisor for a minimum of 16 working hours for the following:
1. Render advice regarding installation and final adjustment of the system.
 2. Assist in initial programming of the system.
 3. Witness final system test and then certify with an affidavit that the system is installed in accordance with the contract documents and is operating properly.
 4. Train facility personnel on the operation and maintenance of the system (minimum of 2 one hour sessions).
 5. Explain available service programs to facility supervisory personnel for their consideration.
- D. Service Availability: A fully equipped service organization capable of guaranteeing response time within 24 hours to service calls shall be available to service the completed Work.

PART 2 PRODUCTS

2.01 CARD ACCESS CONTROL SYSTEM

- A. Avigilon Access Control Manager 6 Enterprise Plus System Software, having:
1. Open Architecture to field hardware
 2. Auto fail-over with seamless redundancy
 3. Auto synchronization of security data across all Avigilon Enterprise appliances in real-time
 4. Seamless integration with Avigilon Video Analytic VMS software and video appliances
 5. 32GB memory minimum
 6. 16-2048 card reader capacity
 7. 10000 inputs, 5000 outputs capacity
 8. Remote Management
 9. Support for all Avigilon Control Center appliances and software
 10. Model # AC-APP-256_ENT2-6 (256 Readers)

2.02 CARD ACCESS SYSTEM SERVER

- A. Avigilon – EXISTING TO REMAIN

2.03 DIGITAL VIDEO REMOTE MONITORING WORKSTATION

- A. Avigilon Model # RM7-WKS-2MN-NA having:
1. Processor – Intel core i3
 2. Memory – 8 GB DDR4 RAM

3. Video Playback – 16MP @ 24fps (minimum)
4. Video Drive – 256 GB
5. Network Interface – 2 × 1 Gigabit Ethernet RJ-45 ports (1000Base-T)
6. Optical Drive – wDVD-RW
7. Rack Mountable Accessories included
8. Keyboard/Mouse

2.04 INTELLIGENT CONTROLLERS

- A. Avigilon Intelligent Controller 2-Reader Panel, having:
 1. Mercury Security open field hardware protocol
 2. Supports RS-485 IO protocol
 3. 16 access levels per cardholder
 4. Supports up to 504 inputs/500 outputs
 5. 12 to 24Vdc primary power
 6. OSDP Protocol: Secure channel communications to card reader
 7. Supports multiple card formats, elevator and biometric devices
 8. Anti-passback support
 9. Offline reader access
 10. 12 V DC reader support with 24 V DC power source
 11. (2) supervised inputs (min) and (2) output relays
 12. Model # AC-MER-CONT-LP1501

- B. Avigilon Intelligent Controller 4-Reader Panel, having:
 1. Mercury Security open field hardware protocol
 2. Supports RS-485 IO protocol
 3. 16 access levels per cardholder
 4. Supports up to 504 inputs/500 outputs
 5. 12 to 24Vdc primary power
 6. OSDP Protocol: Secure channel communications to card reader
 7. Supports multiple card formats, elevator and biometric devices
 8. Anti-passback support
 9. Offline reader access
 10. 12 V DC reader support with 24 V DC power source
 11. (8) supervised inputs (min) and (4) output relays
 12. Model # AC-MER-CONT-LP1502

- C. Avigilon Intelligent 16 Input Interface Panel , having:
 1. Mercury Security open field hardware protocol
 2. Compact footprint and RS-485 connectivity
 3. 12-24 Vdc* primary power
 4. Offline reader access
 5. (16) supervised inputs D
 6. (2) Form-C Relays
 7. Model # AC-MER-CONT-MR16IN-S3

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- D. Avigilon Intelligent 16 Output Interface Panel, having:
 - 1. Mercury Security open field hardware protocol
 - 2. Compact footprint and RS-485 connectivity
 - 3. 12 Vdc* primary power
 - 4. Offline reader access
 - 5. (16) programmable digital outputs
 - 6. (2) Form-C Relays
 - 7. Model # AC-MER-M5-16DO-1

2.05 CARD READERS

- A. HID Contactless OSPD Reader, having:
 - 1. Single-Factor authentication
 - 2. Multiple card type support (PIV, PIV-1, PIV-C, CAC, CIV, iClass and Prox) and PKI-enabled smart cards
 - 3. Card Holder Unique IDentifier (CHUID)
 - 4. Input: Tri-color LED, Buzzer, Hold Output: Tamper Relay
 - 5. Full duplex supports HID pivCLASS protocol, Half duplex supports OSDP and HID pivCLASS protocol . Wiegand, Clock & Data integrated into base hardware
 - 6. Model # HID R10 / RP10 - mullion R40 / RP40 / RK40 / RPK40 - Wallswitch

2.06 POWER SUPPLIES

- A. Access Control Power Supply, having:
 - 1. 24VAC or 28VAC Input
 - 2. 12VDC @ 10A or 24VDC @ 6A- Output
 - 3. Altronix Model # SMP10 with T2428175 Open Frame Transformer and T2428175C Transformer with Enclosure

2.07 MONITORS

- A. LCD Displays having:
 - 1. Narrow Bezel with Integrated Speaker
 - 2. 1920x1820 resolution (minimum)
 - 3. 16:9 widescreen resolution
 - 4. Native display of full HD video sources
 - 5. HDMI and DSP Inputs
 - 6. 75 x 75 & 100 x 100mm Star VESA plate compatible
 - 7. Sharp Model # AS221F-BK-22

2.08 DOOR ALARM CONTACTS

- A. UTC Interlogix Recessed Door contact Model # 1078W-N
- B. UTC Interlogix Surface Door contact Model # 1045T-G
- C. UTC Interlogix Aluminum Surface Door contact with armored cable Model # 2507A-L

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2.09 NETWORK ETHERNET SWITCH

- A. Optical Fiber Switch (OFS): D-Link DXS-3610-54S; (Item # VMS-DL-DXS-3610-54S), having:
 - 1. Multi-rate 100GbE ports support 10/25/40/50 GbE. 40GbE ports support 10GbE. 10GbE ports support 1GbE. Up to four different simultaneous speeds are possible in a given profile.
 - 2. Suitable for mounting in an EIA standard 19 inch rack (including necessary mounting hardware and accessories).
 - 3. Hot-swappable redundant power supplies.
 - 4. 28 fixed 10GbE SFP+ ports, 2 fixed 100GbE QSFP28 ports.
 - 5. 960Gbps (full-duplex) non-blocking, cut-through switching fabric delivers line-rate performance under full load.
 - 6. VXLAN gateway functionality support for bridging and routing the non-virtualized and the virtualized overlay networks with line rate performance.
 - 7. Converged network support with DCB.
 - 8. Layer 2 and 3 switching and routing protocols with integrated IP services, quality of service, manageability and automation features.
 - 9. Provide with D-Link networking, Transceiver, SFP+, 10GbE, ST, short range for transmission distances under 300m: Item # VMS-D-DEM-432XT

- B. 48 Port Power Over Ethernet switch (POE): D-Link DGS-3630-52PS having:
 - 1. Minimum 48 ports of PoE+ or 32 ports of PoE 60W (min) in 1RU without an external power supply.
 - 2. (4) Four 10G SFP+ ports
 - 3. Suitable for mounting in an EIA standard 19 inch rack (including necessary mounting hardware and accessories).
 - 4. Switching solution with 10GbE uplinks for advanced layer 2 distribution.
 - 5. Use dual internal hot-swappable power supplies for high availability and power efficiency.
 - 6. Hot swappable expansion module supporting dual-port SFP+ or dual-port 10GBaseT.
 - 7. Compliance for operation in environments up to 113 degrees Fahrenheit.
 - 8. 48x RJ45 10/100/1000Mb PoE+ (up to 50W) auto sensing ports.
188 Gbps Switching Capability
 - 10. Provide with D-Link networking, Transceiver, SFP+, 10GbE, ST, short range for transmission distances under 300m: Item # VMS-D-DEM-432XT

2.10 NETWORK OPTICAL FIBER TRANSIEVER

- A. Comnet SFP-46 (100Mbps. Multimode 2 Fiber)

2.11 NETWORK FIBER OPTIC JUMBER CABLES

- A. Eaton N318-01M (ST/LC, 3ft)
- B. Eaton N318-03M (ST/LC, 10ft)

2.12 REMOTE LAPTOP (Avigilon Client)

- A. Levona ThinkPad Z16 Gen 2 having:
 - 1. Processor - AMD Ryzen 9 PRO 7940HS
 - 2. Graphics – AMD Radeon 780M
 - 3. Operating System – Windows 11 DG Windows 10 Pro 64 (as required by the Avigilon Client minimum performance and software specifications)
 - 4. Memory – 16GB (minimum) with 2TB (minimum) Storage Support

2.13 WIRING

- A. Network Cables:

(Blue in color for Access Control System devices)

- 1. Factory connectorized Category 6A (CAT 6A) network cable:

- a. Shall be capable of supporting 10 Gigabit Ethernet communications.
- b. Connectors shall have a strain relief boot.
- c. Lengths as required for connections within the EER and CMC.

- 2. Field assembled Category 6A (CAT 6A) network cable:

- a. Belden Cable model 10GX12 Category 6A cable (color code: white) or equal as recommended by Intellicene Security
 - 1) Shall be capable of supporting 10 Gigabit Ethernet communications.
- b. RJ-45 (8P8C) connectors (male), manufacturer as recommended by Intellicene Security
 - 1) Shall be capable of supporting 10 Gigabit Ethernet communications.
 - 2) Shall have a strain relief boot.

- B. Insulated Conductors shall meet requirements of Section 260519 and the following:

1. Signal Line Circuits (Wiring from Central Controller to Card Reader Terminals and Alarm Monitor Terminals): Jacketed, 22 gage insulated copper, individually twisted shielded pairs; Belden Corp.'s 8723.
2. Initiating Device Circuits (Wiring from Card Reader Terminals and Alarm Monitor Terminals to Alarm Detectors): Jacketed, 22 gage insulated copper twisted shielded pair; Belden Corp.'s 8451.
3. Wiring from Card Reader Terminals to Release Devices: Jacketed, 18 gage insulated copper twisted pair; Belden Corp.'s 8461.
4. Terminal, Faceplate and Release Device Grounding: 16 gage insulated copper conductor; Belden Corp.'s 9980.
5. Wiring shall be shielded or unshielded as recommended by the Company producing the system.
6. Number of conductors and conductor size as recommended by the Company producing the system, except that conductor size shall not be less than previously specified.

2.14 TERMINAL LOCATOR

- A. Card holder with aluminum or stainless steel frame, plexiglass front and sheet aluminum card backing plate. Print graphically on card, floor plan showing each card reader terminal, alarm monitor terminal and alarm detector. More than one card and card holder may be used. Minimum size card 8 x 10 inches.

2.15 LABELS

- A. Embossed, self adhesive tape, minimum 1/4 inch wide, color of tape similar to color of equipment to be labeled (DYMO Labelmaker System).

2.16 ACCESSORIES

- A. System shall include all accessories required to perform the functions summarized in SYSTEM DESCRIPTION and indicated on the drawings.

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2.17 SPARE PARTS

1. (2) Avigilon Intelligent Controller 2-Reader Panel - AC-MER-CONT-LP1501
2. (2) Avigilon Intelligent Controller 4-Reader Panel - AC-MER-CONT-LP1502
3. (1) Avigilon Intelligent 16 Input Interface Panel - AC-MER-CONT-MR16IN-S3
4. (1) Avigilon Intelligent 16 Output Interface Panel - AC-MER-M5-16DO-S3
5. (5 of each type) HID Contactless OSPD Reader - HID R10 / RP10 - mullion R40
6. (5) UTC Interlogix Recessed Door contact Model # 1078W-N
7. (5) UTC Interlogix Surface Door contact Model # 1045T-G
8. (2) Fiber Transceivers - Comnet SFP-46 (100Mbps. Multimode 2 Fiber)

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install system in accordance with the Company's printed instructions.
- B. Terminal Locator: Install adjacent to central controller.
- B. Labels: Install on each card reader terminal, alarm monitor terminal and alarm detector, an identifying label (Card Reader No. 1, etc.).

3.02 FIELD QUALITY CONTROL

- A. Preliminary System Test:
 - 1. Preparation: Have the Company Field Advisor adjust the completed system and then operate it long enough to assure that it is performing properly.
 - 2. Run a preliminary test for the purpose of:
 - a. Determining whether the system is in a suitable condition to conduct an acceptance test.
 - b. Checking and adjusting equipment.
 - c. Training facility personnel.
- B. System Acceptance Test:
 - 1. Preparation: Notify the Director's Representative at least three working days prior to the test so arrangements can be made to have a Facility Representative witness the test.
 - 2. Make the following tests:
 - a. Individually test each door (card access and monitoring).
 - b. Test audible alarm.
 - c. Test each system function step by step as summarized under **SYSTEM DESCRIPTION**.
 - 3. Supply all equipment necessary for system adjustment and testing.
 - 4. Submit written report of test results signed by Company Field Advisor and the Director's Representative. Mount a copy of the final report in a plexiglass enclosed frame assembly adjacent to the central controller.

3.03 TRAINING

- A. Instructor: Include in the project the services of an instructor, who shall have received specific training from the manufacturer for the training of other persons regarding the inspection, testing and maintenance of the system provided. The instructor shall train the employees designated by the owner, in the care, adjustment, maintenance, and operation of the entire access control system.

- B. Training sessions shall cover all aspects of system performance, including system architecture.
- C. Required Instruction Time: Provide 16 hours of instruction after final acceptance of the system. The instruction shall be given during working hours on such dates and times as are selected by the owner. The instruction may be divided into two or more periods at the discretion of the owner and one training session shall be videotaped by the contractor.
- D. Comprehensive system troubleshooting training shall be provided for a single individual designated by the owner. This session shall be separate and distinct from the above-described sessions.
- E. All training sessions shall be conducted by an access control alarm system distributor representative, who has received specific training from the manufacturer for the training of other persons regarding the inspection, testing, and maintenance of the system provided.

END OF SECTION

SECTION 282304

INDOOR AND OUTDOOR DIGITAL CAMERA SURVEILLANCE SYSTEM

PART 1 GENERAL

1.01 DESCRIPTION OF EXISTING SYSTEM

- A. The existing indoor and outdoor analog camera surveillance system consists of matrix/switchers, camera stations and monitors located throughout the facility.
- B. Camera stations transmit video signals to the analog network for control and distribution to monitors and client servers.
- C. A Security officer in the security office at the central monitoring console operates the system and observes the monitors to survey and evaluate the status of personnel in the areas within range of the camera stations.
- D. The Security Officer may converse with a person standing in proximity to camera stations which are equipped with Axis intercom units. The audio follows the video on a selected automatic sequencing monitor.
- E. The existing matrix/switcher automatically controls and limits the function of each camera station, monitor, and keyboard/mouse control unit in the system.
- F. An external alarm from a video motion detector causes the camera station in alarm to take priority over sequencing cameras and hold on one or more predetermined by the client server (LCD monitors). The video signal from motion detector equipped camera stations is looped through the video motion detectors before transmission to the matrix/switcher.
 - 1. The video from the camera station in alarm is automatically called up and displayed on a specific monitor connected to the client server.
 - a. Alarm overrides camera sequence on the alarm (armed) monitor.
 - b. Multiple alarms cause sequencing at the rate of 2 seconds among alarmed camera stations.
 - c. Attendant may enable or disable alarm call up, and may arm or disarm individual camera stations for alarm call up.
 - d. Alarm status (arm/off) of each camera and monitor is displayed on the monitors.
- G. Time, date, and camera station identification is recorded on the existing hard drives in conjunction with the video from the analog camera station in alarm 24/7 for an assumed duration of 30days.

1.02 MODIFICATIONS TO EXISTING SYSTEM

- A. The existing Avigilon digital camera surveillance system is to be replaced with a new Avigilon digital video server/archiver along with the replacement of all existing analog cameras and new camera stations throughout the campus. This new video digital server/archiver will be located in the same location where the existing Avigilon server is located in the Program Building in Communications Room 11.
- B. The existing Avigilon video digital server/archiver is to remain in place and in service as currently operating, until all new cameras are replaced, and new cameras are installed as indicated one the drawings.
- C. Following the compete testing of all of the cameras and new Avigilon video digital server/archiver is completed and approved, migration of all cameras and related required camera system devices shall be cut-over to the new server.

1.03 DESCRIPTION OF COMPLETED SYSTEM

- A. Following the installation and testing of the new Avigilon video digital server/archiver and complete cut-over of all new cameras and the existing cameras to be replaced is complete, the system shall operate as it does currently with the following enhanced and upgraded system capabilities:
 - 1. Video Analytics management software will be installed on the new Avigilon video digital server/archiver to create real-time automated alerts, previews and achieve maximum video efficiency.
 - 2. All video will continue to be archived 24/7 for 30days for at 15fps at 1920/1080 resolution with H.264/265 compression and with 30% capacity for future video expansion archiving.
 - 3. A new Avigilon video client workstation will be installed in the Program Building Security Office existing security rack for Security Officer access to camera monitoring and digital video system operation.
 - 4. A new track-mounted digital video wall will be installed above the existing Safety Officer desk. New monitors will be installed on the track system and will be capable of being relocated horizontally as required and for convenience.
 - 5. All existing outdoor analog cameras are to be replaced with new IP cameras along with their associated analog to fiber media convertors. New fiber to ethernet convertors will take their place in the same location.

1.04 SUBMITTALS

- A. Waiver of Submittals: The “Waiver of Certain Submittal Requirements” in Section 013300 does not apply to this Section.
- B. Submittals Package: Submit the shop drawings, product data, and quality control submittals specified below at the same time as a package.
- C. Shop Drawings:
 - 1. Composite wiring and/or schematic diagrams of the complete systems proposed to be installed (standard diagrams will not be accepted),

including video signal integrity equipment, etc. required for a complete system.

2. Scale drawings showing mounting of camera station components.
3. Details of camera station poles and bases.
4. Scale drawings of central monitoring console and intercom stations showing location and mounting of components.

D. Product Data:

1. Catalog sheets, specifications and installation instructions.
2. Bill of materials.
3. Detailed description of system operation (format similar to SYSTEM DESCRIPTION).
4. State number of video inputs and outputs used specifically for this project and number of video inputs and outputs available for future use if system is expanded to maximum capacity.
5. Name, address and telephone number of nearest fully equipped service organization.

E. Quality Control Submittals:

1. Copy of license for installing Security Systems.
 - a. Also include copy of identification card issued by the Licensee for each person who will be performing the work.
2. Design Data: Certified data from the manufacturer of the camera station poles proving that the deflection rate will not exceed the specified limits.
3. Installers Qualifications Data: Include the following for each person who will be performing the Work:
 - a. Name.
 - b. Employers name, business address and telephone number.
 - c. Name and addresses of the required number of similar projects worked on which meet the experience criteria.
4. Company Field Advisor Data: Include:
 - a. Name, business address and telephone number of Company Field Advisor secured for the required services.
 - b. Certified statement from the Company listing the qualifications of the Company Field Advisor.
 - c. Services and each product for which authorization is given by the Company, listed specifically for this project.

F. Contract Closeout Submittals:

1. Archived video recordings (scenes).
2. System acceptance test report.
3. Certificate: Affidavit, signed by the Company Field Advisor and notarized, certifying that the system meets the contract requirements and is operating properly.
4. Operation and Maintenance Data:
 - a. Deliver 2 copies, covering the installed products, to the Director's Representative. Include:
 - 1) Operation and maintenance data for each product.

- 2) Complete point to point wiring diagrams of entire system as installed. Identify all conductors and show all terminations and splices. (Identification shall correspond to markers installed on each conductor.)
 - 3) Name, address, and telephone number of nearest fully equipped service organization.
5. Photographs:
- a. 1) 2 of each console from different positions.
 - 2) 1 overall view of each console.

1.05 QUALITY ASSURANCE

- A. Equipment Qualifications for Products Other Than Those Specified:
1. At the time of submission provide written notice to the Director of the intent to propose an “or equal” for products other than those specified. Make the “or equal” submission in a timely manner to allow the Director sufficient time to review the proposed product, perform inspections and witness test demonstrations.
 2. If products other than those specified are proposed for use furnish the name, address, and telephone numbers of at least 5 comparable installations that can prove the proposed products have performed satisfactorily for 3 years. Certify in writing that the owners of the 5 comparable installations will allow inspection of their installation by the Director's Representative and the Company Field Advisor.
 - a. Make arrangements with the owners of 2 installations (selected by the Director) for inspection of the installations by the Director's Representative. Also obtain the services of the Company Field Advisor for the proposed products to be present. Notify the Director a minimum of 3 weeks prior to the availability of the installations for the inspection, and provide at least one alternative date for each inspection.
 - b. Only references from the actual owner or owner's representative (Security Supervisor, Maintenance Supervisor, etc.) will be accepted. References from dealers, system installers or others, who are not the actual owners of the proposed products, are not acceptable.
 - 1) Verify the accuracy of all references submitted prior to submission and certify in writing that the accuracy of the information has been confirmed.
 3. The product manufacturer shall have test facilities available that can demonstrate that the proposed products meet the contract requirements.
 - a. Make arrangements with the test facility for the Director's Representative to witness test demonstrations. Also obtain the services of the Company Field Advisor for the proposed product to be present at the test facility. Notify the Director a minimum of 3 weeks prior to the availability of the test facility, and provide at least one alternative date for the testing.
 4. Provide written certification from the manufacturer that the proposed products are compatible for use with all other equipment proposed for use for this system and meet all contract requirements.

- B. Installers' Qualifications: The persons installing the Work of this Section and their supervisor shall be personally experienced in closed circuit television systems and shall have been engaged in the installation of closed circuit television systems for a minimum of 3 years.
 - 1. Furnish to the Director the names and addresses of 5 similar projects which the foregoing people have worked on during the past 3 years.
- C. Test Facility: The Company producing the system shall have test facilities available which can demonstrate that the proposed system meets contract requirements.
- D. Company Field Advisor: Secure the services of a Company Field Advisor from the Company producing the Video Management System (VMS) and cameras for a minimum of 40 hours for the following:
 - 1. Render advice regarding installation and final adjustment of the system.
 - 2. Render advice on the suitability of each camera, camera tube, and lens for its particular application.
 - 3. Assist in initial programming of the system.
 - 4. Witness final system test and certify with an affidavit that the system is installed in accordance with the contract documents and is operating properly.
 - 5. Train facility maintenance personnel in operation, programming and routine maintenance of the system (minimum of 16 hours).
 - 6. Train facility security personnel in operation and programming of the system (minimum of two/ 2 hour sessions).
 - 7. Explain available service programs to facility supervisory personnel for their consideration.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Storing Cameras: Do not store cameras in below 60^ Fahrenheit for extended periods.

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- “B. Spare parts:
 - 1. Spare parts listed in the 282304-13 Section 2.20 “Spare Parts” will be purchased and turned over to the director’s representative during the acceptance phase of this project.
 - 2. Spare parts must be tested and witnessed by the director’s representative and may be used as part of the training session.
 - 3. All spare parts will be documented in writing with the model number, serial number, date of purchase, with warranty start and expiration dates.
 - 4. Any installation additions, upgrades or service calls required during the warranty period of this contract that requires a device listed in the 282304-13 Section 2.20 “Spare Parts” section shall be used for that purpose and shall be replaced/rotated into the spare parts stock within 10 business days.
 - 5. All items placed back into the spare parts stock shall be documented as performed in this section under lines “b and c.” and a new warranty dates will be issued. “

1.07 MAINTENANCE

- A. Service Availability: A fully equipped service organization capable of guaranteeing response time within 8 hours to service calls shall be available 24 hours a day, 7 days a week to service the completed system.

PART 2 PRODUCTS

2.01 DIGITAL VIDEO SERVER/ARCHIVER

- A. Avigilon Model # NVR5 PRM having:
 - 1. Storage – 192-224TB (minimum)
 - 2. Processor – Intel 16-core Xeon
 - 3. Memory – 6x8 GB DDR4
 - 4. Video Analytics
 - 5. Storage Controller – Internal RAID
 - 6. Drive Bays – RAID 60 Hot Swappable
 - 7. Power Supply – Dual 1100, 100-240AC
 - 8. Keyboard/Mouse

2.02 DIGITAL VIDEO REMOTE MONITORING WORKSTATION

- A. Avigilon Model # RM7-WKS-2MN-NA having:
 - 1. Processor – Intel core i3
 - 2. Memory – 8 GB DDR4 RAM
 - 3. Video Playback – 16MP @ 24fps (minimum)
 - 4. Video Drive – 256 GB
 - 5. Network Interface – 2 × 1 Gigabit Ethernet RJ-45 ports (1000Base-T)
 - 6. Optical Drive – wDVD-RW
 - 7. Rack Mountable Accessories included
 - 8. Keyboard/Mouse

2.03 KEYBOARD CONTROL UNIT

- A. Keyboard Control Unit (KCU): Avigilon Communications Item ACC-USB-JOY-PRO, having:
 - 2. Powered Via USB interface.
 - 3. Polycarbonate ABS casing.
 - 4. USB 1.1/2.0/3.0 compliant.
 - 5. Hall-effect joystick with three axis:
 - a) X/Y for pan and tilt.
 - b) Z knob for zoom.
 - c) 6 application defined hotkeys.
 - 6. USB Connector.

2.04 DISPLAY MONITORS

- A. LCD Displays
 - 1. Sharp Model # AS221F-BK-22 (22") having:
 - a. Narrow Bezel with Integrated Speakers
 - b. 1920x1820 resolution (minimum)
 - c. 16:9 widescreen resolution
 - d. native display of full HD video sources
 - e. HDMI and DSP Inputs
 - f. 75 x 75 & 100 x 100mm Star VESA plate compatible

2.05 MONITOR MOUNTS

- A. ERGOMART Track System:
 - 1. Track- Model # RT-156-CAB (156") and RT -39-CAB (39") having:
 - a. US made Aluminum
 - b. RT Clamps for attaching Track to vertical standards (vertical Unistrut)
 - c. Capable of handling 90-pound loads between anchoring points
 - c. Compatible with all MKIT accessories
 - d. RT Wire Management trough included with all required mounting hardware
 - 2. Rail Mount Model # MKIT-N2 having:
 - a. Optional locking mechanism when movement is not desired
 - c. Monitor weight up to 55 pounds
 - d. Black finish
 - 3. Mounting Arm (articulating) Model # SAA2415 having:
 - a. Compatible with MKIT-N2 rail mount hardware and 75 x 75 & 100 x 100mm Star VESA plate
 - b. 22" reach at full extension
 - c. Monitor weight up to 55 pounds
 - d. 14.5" vertical adjustment
 - e. Black finish
 - 4. VESA Mounting Plate having:
 - a. 75 x 75 & 100 x 100mm Star VESA plate
 - b. Monitor weight up to 55 pounds
 - d. Black finish

2.06 CAMERA STATIONS (INDOOR)

“Revised 11/19/2024”

- A. (Indoor Dome):
 - 1. Dome Camera having:
 - a. POE with external 12VDC and 24VAC power source
 - b. 4 or 6MP resolution with 4.4-9.3mm lens as indicated on the Camera Schedule drawing E-106 included in this Addendum.
 - c. Remote Zoom/Video Analytics/Alarm in, alarm out I/O and audio input
 - d. Capable of being mounted on ceiling or wall while keeping stable horizontal image
 - e. Unusual Activity Detection (UAD)
 - f. Avigilon Appearance Search
 - g. Avigilon Model # H6 Series 4.0C-H6A-D1-IR and H6 Series 6.0C-H6A-D1-IR, as indicated on the Camera Schedule drawing E-106 “

“Revised 11/19/2024”

- B. (Indoor Dome-Fisheye Panoramic):
 - 2. Dome Camera having:
 - a. POE with external 12VDC and 24VAC power source
 - b. 12MP resolution with 1.6mm lens
 - c. Remote Zoom/Video Analytics/Alarm in, alarm out I/O and audio input
 - d. Capable of being mounted on ceiling or wall while keeping stable horizontal image
 - e. Unusual Activity Detection (UAD)
 - f. Avigilon Appearance Search
 - g. Avigilon Model # H5A Series 12.OW-H5A-FE-DO1-IR

“Revised 11/19/2024”

- C. (Indoor Dome Pan-Tilt-Zoom (PTZ)):
 - 1. Dome Camera having:
 - a. POE++ (60W) with external 12VDC and 24VAC power source
 - b. 36X Optical Zoom with 1/2.5” Type “Exmor R” CMOS Image Sensor
 - c. H.264 Multi-Stream with Alarm in, alarm out I/O and audio input
 - d. 4K, 2MP (Per Image Sensor)
 - e. 2 × microSD/microSDHC/ microSDXC slot only
 - f. Avigilon Appearance Search
 - g. Avigilon Model # 2.0C-H5A-PTZ-DC36 Pendant mount and with required mounting accessories

2.07 CAMERA STATIONS (OUTDOOR)

- A. (Outdoor Dome 180° Bldg Mount):
 - 1. Dome Camera having:
 - a. POE++ (50W) with external 12VDC and 24VAC power source
 - b. 11520 x 2160 resolution
 - c. H.264 Multi-Stream with 64 Privacy Zones and Alarm in, alarm out I/O and audio input
 - d. 4K, 8MP (Per Image Sensor)
 - e. Unusual Activity Detection (UAD)
 - f. Avigilon Appearance Search
 - g. Avigilon Model # 24C-H5A-3MH-180-IR with Pendant wall mount and required mounting accessories

- B. (Outdoor Dome 360° Pole Mount):
 - 1. Dome Camera having:
 - a. POE++ (50W) with external 12VDC and 24VAC power source
 - b. 15360 x 2160 resolution
 - c. H.264 Multi-Stream with 64 Privacy Zones and Alarm in, alarm out I/O and audio input
 - d. 4K, 8MP (Per Image Sensor)
 - e. Unusual Activity Detection (UAD)
 - f. Avigilon Appearance Search
 - g. Avigilon Model # 32-H5A-4MH-360-IR with Pole Pendant mount and required mounting accessories

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- C. (Outdoor Dome Pan-Tilt-Zoom (PTZ)):
 - 1. Dome Camera having:
 - a. POE++ (60W) with external 12VDC and 24VAC power source
 - b. 36X Optical Zoom with 1/2.5” Type “Exmor R” CMOS Image Sensor
 - c. H.264 Multi-Stream with Alarm in, alarm out I/O and audio input
 - d. 4K, 8MP (Per Image Sensor)
 - e. 2 × microSD/microSDHC/ microSDXC slot only
 - f. Avigilon Appearance Search
 - g. Provide Pole Pendant mount as indicated on the Camera Schedule drawing E-106
 - h. Avigilon Model # 8.0C-H5A-IRPTZ-DP36 with Pendant wall mount and required mounting accessories

2.08 CAMERA STATIONS (MEDIA CONVERTERS)

“Revised 11/19/2024”

- A. (Outdoor Camera Fiber to Ethernet Media Converter)
 - 1. Converter having:
 - a. (4) Four Port 10/100T(X) Ethernet Ports
 - b. Up to 30 W PoE+ on Ports 1 and 2 and Up to 60 W PoE+ on Ports 3 and 4
 - c. Optical port supports 1000 Mbps full duplex data
 - d. Comnet Model # CNGE2FE4SMSPOEHO with SP48VDC 5ADIN plug-in power supply

“Revised 11/19/2024”

- B. (Media Converter Din-Rail Mount)
 - 1. Comnet Model # DINBKT4 with the DINBKT3 adapter plate assembly

“Revised 11/19/2024”

- C. (Media Converter with Rack Mount Cage with Power Supply)
 - 1. Rack Mount Supply Having:
 - a. 19” Rack Mount with (14) 1” Slots
 - b. Input voltage - 90-264 VAC @ 70 W Maximum
 - c. Comnet Model # CNGE22MC Media Convertors as required
 - d. Comnet Model # C1-US with power supply and cord and (6) C1 BP 1” - Blank Panels

2.09 AVIGILON CAMERA LICENSE

- A. Avigilon Model # ACC7-ENT for each individual license

2.10 CCTV NETWORK SWITCH VERTICAL EQUIPMENT RACK

- A. Wall Mounted Vertical Electronics Equipment Rack (EER): Vertical wall cabinet shall be fully enclosed metal cabinet to secure rack mount equipment to a wall location; Middle Atlantic Products’ 19” Wide Opening VWM Series Rack VWN-8P-36-10-BW.
 - 1. Each section 32 inches high by 19 inches wide panel space, with “10” depth as indicated on drawings with 8 Rack Units (RU). Note: The number of sections indicated on the drawings is the minimum number to be provided. If additional sections are required due to the characteristics of the system equipment, provide additional sections as approved.
 - 2. Front and Back Panels:
 - a. Back panels with adjustable mounting rails.
 - b. Blank panels to cover front panel space where equipment is not

- installed.
- c. Perforated side and bottom panels on cabinet to provide adequate ventilation of components.
- d. Solid front door with lock and two keys.
- 3. Size as required to enclose equipment indicated on the drawings.
- 4. Black enamel finish.
- 5. Accessories as required for mounting and support of equipment.
- 6. Surge Protection Multi-outlet strips mounted within the enclosure with eight 15 amp, 120V ac, NEMA 5-15R receptacles (3 wire grounding type). Middle Atlantic with NEMA 5-15P plug. Provide one Surge Protection Multi-outlet strip per rack.
- 7. Rack mounted exhaust fans with guards on both sides and accessories required for mounting. Exhaust fans shall be cord and plug connected. They shall provide adequate airflow to remove heat from the cabinet.
- 8. Rack unit quantity as indicated on drawings.
- 9. Depth of rack as indicated.
- 10. Seismic Performance: Equipment racks shall withstand the effects of earthquake motions determined according to ASCE/SEI 7. The term “withstand” means “the unit will remain in place without separation of any parts from the device when subjected to the seismic forces and the unit will be fully operational after the seismic event.

2.11 RACK MOUNT SHELF

- A. Middle Atlantic Model # AS3-26-23 having:
 - 1. 2U, 22” width and adjustable depth and 4 point mount
 - 2. Steel Construction with black finish
 - 3. 200- pound weight capacity minimum (standard)
 - 4. Field Verify all dimensions

2.12 RACK BLANK PLATE

- A. Middle Atlantic Model # BL Series having:
 - 1. Steel Construction with black finish
 - 2. Field Verify all dimensions

2.13 RACK MOUNT KVM/DISPLAY

- A. Cabinet Rail Mount LCD KVM Switch having:
 - 1. 8 Direct Computer Ports
 - 2. 8 KVM Ports
 - 3. 19” LCD Monitor
 - 4. 1280 x 1024 Resolution
 - 5. Dual Rail Housing
 - 6. LED Illuminated
 - 7. PS/2 Keyboard and USB Mouse
 - 8. Aten Model # CL5808

2.14 VERTICAL RACK MANAGER

- A. Rack Manager having:
 - 1. Finger design promotes efficient routing of patchcords between racks.
 - 2. 6" wide cage is supplied with four cable management pools and 12 bend-limiting clips
 - 3. 77.25 x 3.75 x 8.62 deep with black finish
 - 4. Legrand Model # - MM20VMS704-B

2.15 FEED THROUGH HORIZONTAL CABLE MANAGER

- A. Cable Manager having:
 - 1. Maximum ring fill capacity using Category 6 cable is 60 cables.
 - 2. Steel Construction
 - 4. Legrand Model # - 60400129 (Ortronics)

2.16 SURGE SUPPRESSORS

- A. Equip outdoor camera stations with surge suppressors to protect equipment from voltage transients and lightning surges (suitable for use with CAT5e, Cat6 and CAT6A wiring as required).
 - 1. Surge Protection having:
 - a. Hybrid design utilizing SAD and GDT technologies for optimal protection
 - b. Supports data speeds up to 10GbE without signal degradation
 - c. RJ45 female connections with external grounding screw
 - d. Complies with all IEEE Power over Ethernet standards
 - e. Up to 144W power handling and 10GbE data rate
 - e. DITEK Model # DTK-MRJPOES with DIN Rail Mounting Kit (DTK-DRK)

2.17 WIRING

- A. Network Cables:
 - (Light Blue in color for Video Surveillance System devices)
 - 1. Factory connectorized Category 6A (CAT 6A) network cable:
 - a. Shall be capable of supporting 10 Gigabit Ethernet communications.
 - b. Connectors shall have a strain relief boot.
 - c. Lengths as required for connections within the EER and CMC.

2. Field assembled Category 6A (CAT 6A) network cable:

- a. Belden Cable model 10GX12 Category 6A cable (color code: white) or equal as recommended by Intellicene Security
 - 1) Shall be capable of supporting 10 Gigabit Ethernet communications.
- b. RJ-45 (8P8C) connectors (male), manufacturer as recommended by Intellicene Security
 - 1) Shall be capable of supporting 10 Gigabit Ethernet communications.
 - 2) Shall have a strain relief boot.

2.18 CCTV INTERCONNECTION CABINETS

- A. Lockable, vandal resistant, surface mounted cabinets constructed of 14 gage steel, size as recommended by the Company producing the system.

2.19 MARKERS AND NAMEPLATES

- A. Markers: Premarked self-adhesive; W.H. Brady Co.'s B940, Thomas and Betts Co.'s E-Z Code WSL self-laminating, Ideal Industries' Mylar/Cloth wire markers, or Markwick Corp.'s permanent wire markers.
- B. Nameplates: Precision engrave letters and numbers with uniform margins, character size minimum 3/16 inch high.
 - 1. Phenolic: Two color laminated engraver's stock, 1/16 inch minimum thickness, machine engraved to expose inner core color (white).
 - 2. Aluminum: Standard aluminum alloy plate stock, minimum .032 inches thick, engraved areas enamel filled or background enameled with natural aluminum engraved characters.
 - 3. Materials for Outdoor Applications: As recommended by nameplate manufacturer to suit environmental conditions.

“Revised 11/19/2024”

2.20 SPARE PARTS

- 1. (1) Indoor Fixed Dome Cameras – H6 series: 4.0C-H6A-D1-IR
- 2. (1) Indoor Fixed Dome Cameras – H6 series: 6.0C-H6A-D1-IR
- 3. (1) Indoor/Outdoor surface mount – H5 series: Panoramic Fisheye 12.0W-H5-FE-DO1-IR
- 4. (1) Outdoor 180 degree Multi-sensor camera – H5 series: 24C-H5A-3MH-180-IR
- 5. (1) Outdoor 360 degree Multi-sensor camera – H5 series: 32C-H5A-4MH-360-IR

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install closed circuit television system in accordance with the Company's printed instructions unless otherwise indicated.
- B. Connections: Make connections and splices at camera stations, CCTV interconnection cabinets, and console only. Connections or splices will not be allowed at any other location in the system.
 - 1. Use markers to identify conductors at terminal strips, cabinet and pullboxes (designations shall correspond with point to point wiring diagrams).
- C. Surge Suppressors: Install surge suppressors on each conductor entering and leaving console from outdoor camera stations.
- D. Nameplates:
 - 1. Install nameplate with camera station designation:
 - a. For wall and ceiling mounted camera stations, install nameplate on camera station.
 - b. For pole mounted camera stations, install nameplate on pole.
 - c. For dedicated monitors, install nameplate over monitor.
 - 2. Install nameplate with monitor designation over each monitor.
- E. Station Locators: Install adjacent to central monitoring console and each guard station.

3.02 FIELD QUALITY CONTROL

- A. Cable Test: Electronically test coaxial cables under supervision of Company Field Advisor.
- B. Preliminary System Test:
 - 1. Preparation: Have the Company Field Advisor adjust the completed system and then operate it long enough to assure that it is performing properly:
 - a. Make adjustments for clear, sharp, distortion free scenes and roll-free vertical interval switching to the satisfaction of the Director's Representative.
 - b. Aim fixed lens cameras as directed by Director's Representative.
 - 1) If lens installed on camera does not adequately cover the area to be viewed by that camera, replace with a camera and lens with a more suitable focal length at no additional cost.
 - c. Program system, including preposition programming of each

- C. Digital Video Test Recordings (Scenes):
1. After completion of the preliminary system test and prior to system acceptance test make video tape recordings of the following scenes recorded from the cameras installed under this project:
 - a. Consecutive sequencing of all cameras for a period of 15 minutes (cameras in preposition scene No. 1).
 - b. One minute of each repositioned scene from each camera.
 2. Include written description to accompany tape to identify each recorded scene.
- D. System Acceptance Test:
1. Preparation: Notify the Director's Representative at least 3 working days prior to the test so arrangements can be made to have a Facility Representative witness the test.
 2. Make the following tests:
 - a. Test each system function step by step as summarized under SYSTEM DESCRIPTION.
 - b. Demonstrate that:
 - 1) Each camera station provides sharp, clear, distortion free scenes on the associated monitors for the lighting conditions.
 - 2) Each indoor camera station operates through full range of lighting conditions including; daylight (all fixtures off), general lighting on (at night), night lights only (at night).
 - 3) Each outdoor camera station operates through a full range of lighting conditions including low lighting levels. A portion of this test must be performed at night.
 - 4) Each camera operates through the full range of zoom lens.
 - 5) Each camera housing operates through the full range of its pan and tilt capabilities.
 - 6) Outdoor camera station mountings are stable in wind conditions at the site.
 3. Supply equipment necessary for system adjustment and testing.
 4. Submit written report of test results signed by Company Field Advisor and Director's Representative. Mount a copy of the final report in a plexiglass enclosed frame assembly adjacent to the console.

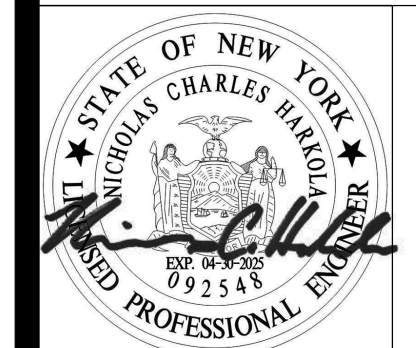
3.03 TRAINING

- A. Instructor: Include in the project the services of an instructor, who shall have received specific training from the manufacturer for the training of other persons regarding the inspection, testing and maintenance of the system provided. The instructor shall train the employees designated by the owner, in the care, adjustment, maintenance, and operation of the entire digital video surveillance system.

- B. Training sessions shall cover all aspects of system performance, including system architecture.
- C. Required Instruction Time: Provide 16 hours of instruction after final acceptance of the system. The instruction shall be given during working hours on such dates and times as are selected by the owner. The instruction may be divided into two or more periods at the discretion of the owner and one training session shall be videotaped by the contractor.
- D. Comprehensive system troubleshooting training shall be provided for a single individual designated by the owner. This session shall be separate and distinct from the above-described sessions.
- E. All training sessions shall be conducted by the digital video surveillance system distributor representative, who has received specific training from the manufacturer for the training of other persons regarding the inspection, testing, and maintenance of the system provided.

END OF SECTION

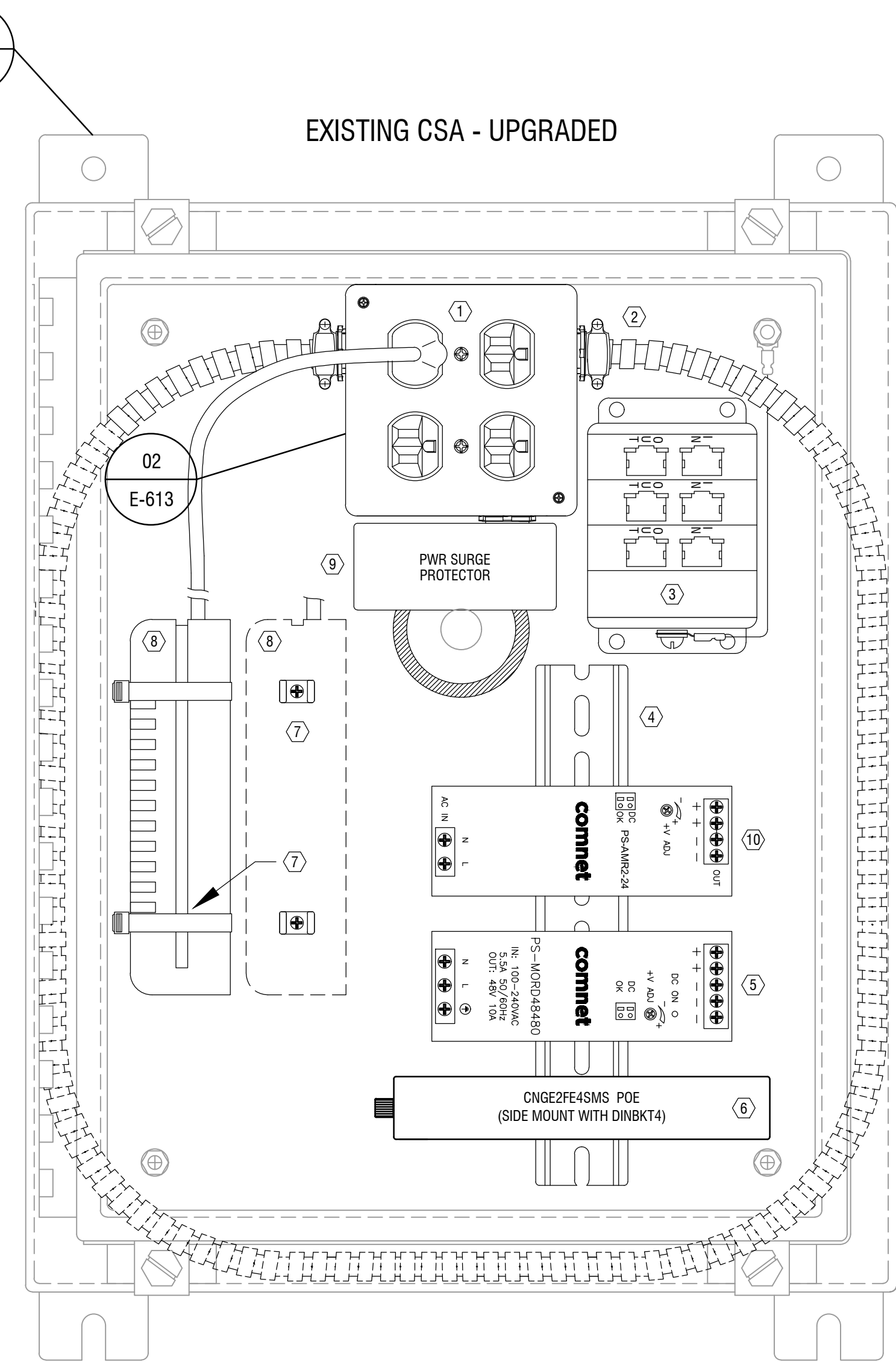
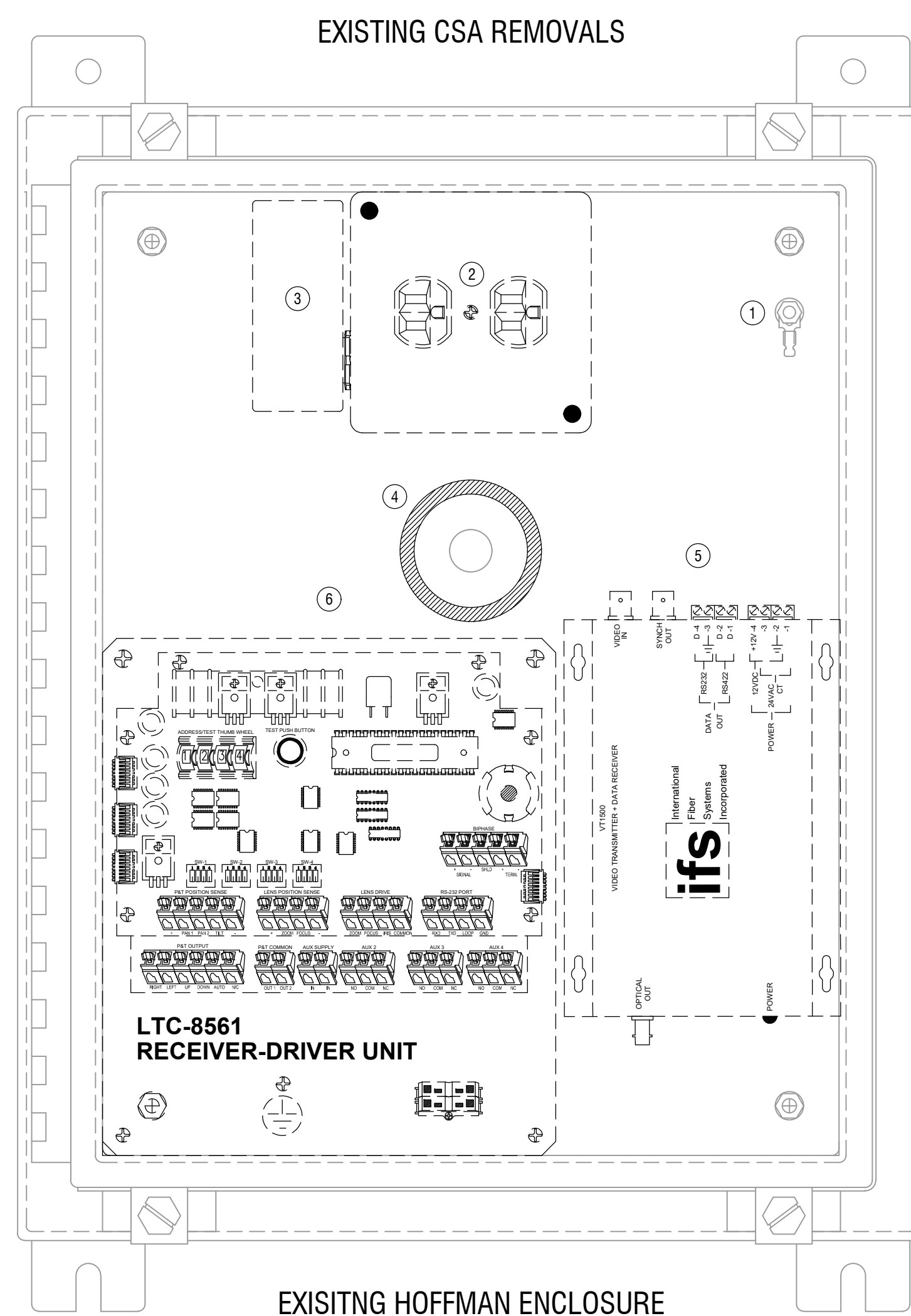
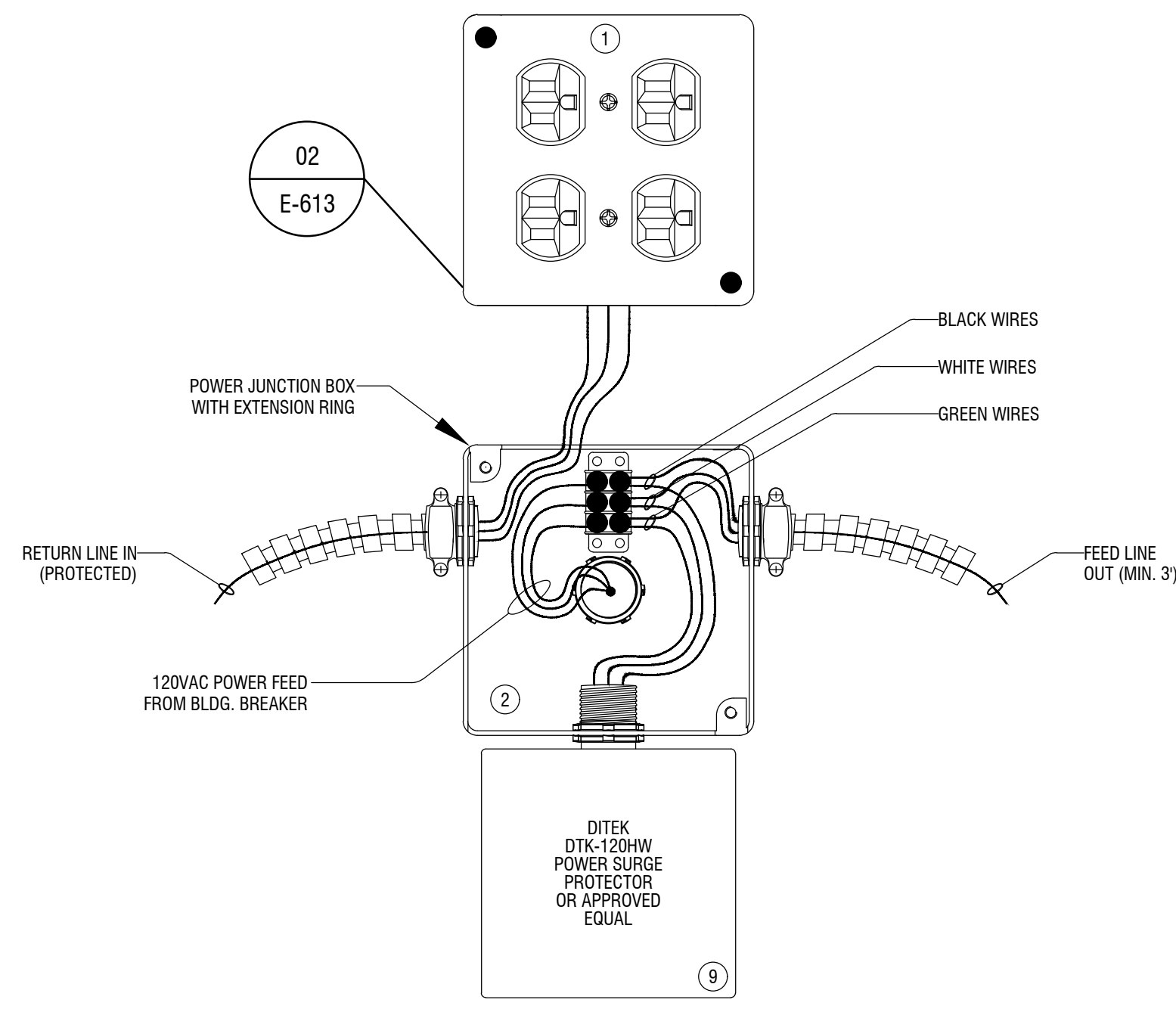
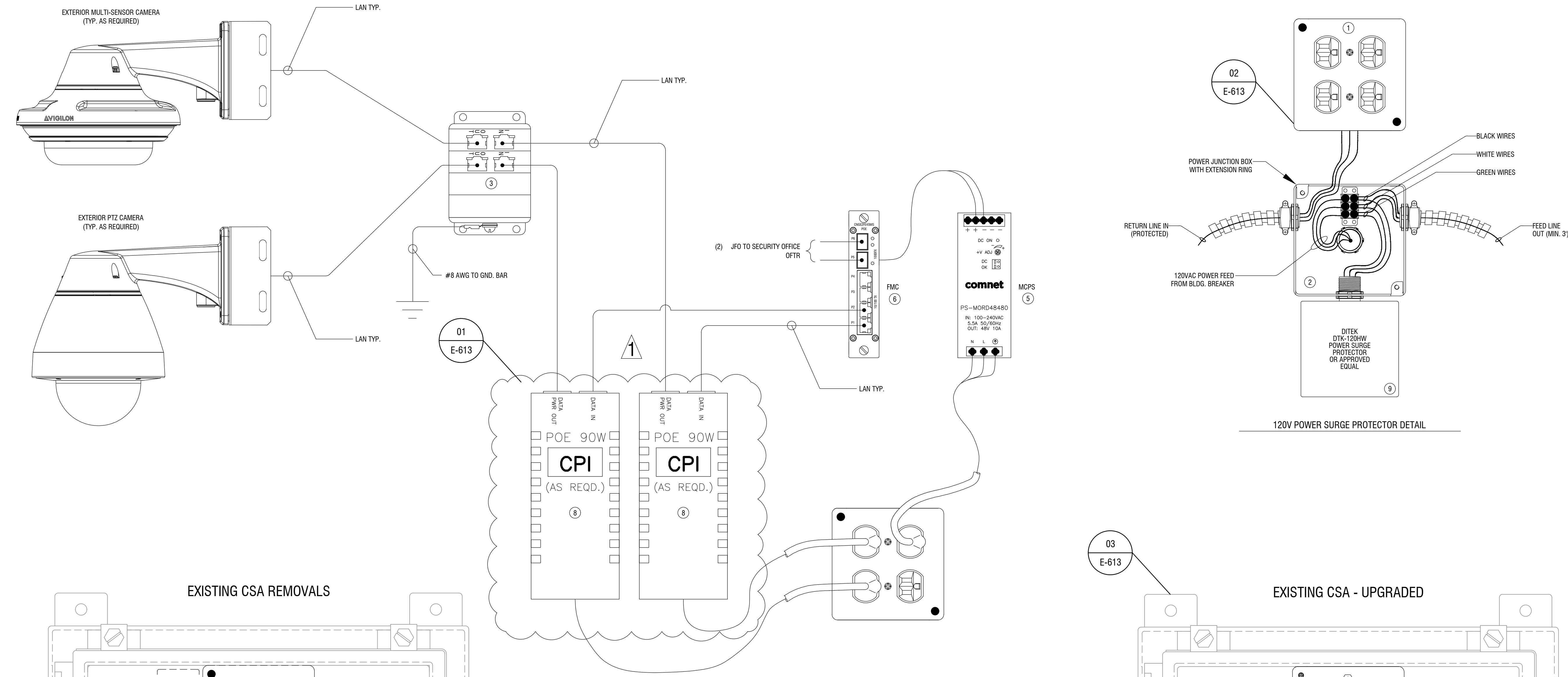
WARNING:
IT IS A VIOLATION OF NEW YORK EDUCATION LAW ART. 145 SEC. 7209 & ART. 147 SEC. 7307, FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, PROFESSIONAL ENGINEER, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER, OR LAND SURVEYOR IS ALTERED, THE ALTERING ARCHITECT, ENGINEER, OR LAND SURVEYOR SHALL AFFIX TO THE ITEM THEIR SEAL AND NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.



EXP: 04/30/2025
CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 018281

CONTRACT:	ELECTRICAL
TITLE:	UPGRADE ELECTRONIC SECURITY SYSTEMS
LOCATION:	VALLEY RIDGE CTR 276 COUNTY ROAD 46 NORWICH NY 13815
CLIENT:	OPWDD

MARK	DATE	DESCRIPTION
⚠	11/19/2024	ADDENDUM 2
	7/26/2024	BID DOCUMENT
PROJECT NUMBER:	47552 - E	
DESIGNED BY:	MJP	
DRAWN BY:	MJP	
FIELD CHECK:		
APPROVED:	NCH	
SHEET TITLE:	SITE CAMERA POLE CSA CABINET DETAILS	
DRAWING NUMBER:	E-613	



KEYED NOTES REMOVAL:

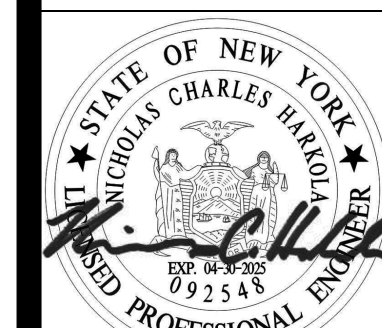
- ① FACTORY DRILLED GROUNDING LUG.
- ② AC POWER PASSES THROUGH HOFFMAN PANEL DIRECTLY INTO 4X4 BACK BOX.
- ③ REMOVE EXISTING 120V POWER SURGE PROTECTION.
- ④ EXISTING HOLE WITH GROMMET THROUGH BACK OF PANEL FOR FIBER.
- ⑤ REMOVE EXISTING FIBER MEDIA CONVERTER UNIT AND UNNECESSARY CABLING.
- ⑥ REMOVE EXISTING RECEIVER/DRIVER UNIT AND ALL CABLING.

KEYED NOTES INSTALLATION:

- ① REMOVE EXISTING SINGLE DUPLEX RECEPTACLE AND REPLACE WITH A DOUBLE DUPLEX. ADD 4"x4"x1-1/2" EXTENSION RING FOR CABLING CLEARANCE.
- ② USING THE EXTENSION RING, RUN A 14/3 SOLID BX CABLE AROUND THE INSIDE OF THE ENCLOSURE NO LESS THAN 3". REFER TO POWER SURGE SUPPRESSION DETAIL.
- ③ PROVIDE DITEK DTK-WM4NETS POE SURGE PROTECTOR WITH A MINIMUM OF 2 ACTIVE PORTS.
- ④ PROVIDE 9" 35mm DIN-RAIL CHANNEL.
- ⑤ PROVIDE COMNET PS-MORD48480 POWER SUPPLY FOR NETWORK SWITCH.
- ⑥ PROVIDE COMNET CNGE2FE4SMS NETWORK MODULE. MOUNT SIDWAYS USING THE DINBRK4 MOUNT.
- ⑦ PROVIDE FOUR SCREW DOWN TIE-WRAP HOLDERS. SPACE APPROX. 2" HORIZONTAL AND 4" VERTICAL.
- ⑧ PROVIDE AVIGLON POE-INJ2-95W-NA POWER INJECTOR. RESERVE SPACE FOR 2ND OR FUTURE UNIT.
- ⑨ PROVIDE DITEK DTK-120HW POWER SURGE SUPPRESSOR.
- ⑩ PROVIDE COMNET PS-AMR2-24 POWER SUPPLY FOR ELPAS ELC ANTENNA.

ADDENDUM #2 REVISED DRAWING
11/19/24

WARNING:
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EXP: 04/30/2025

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 018281

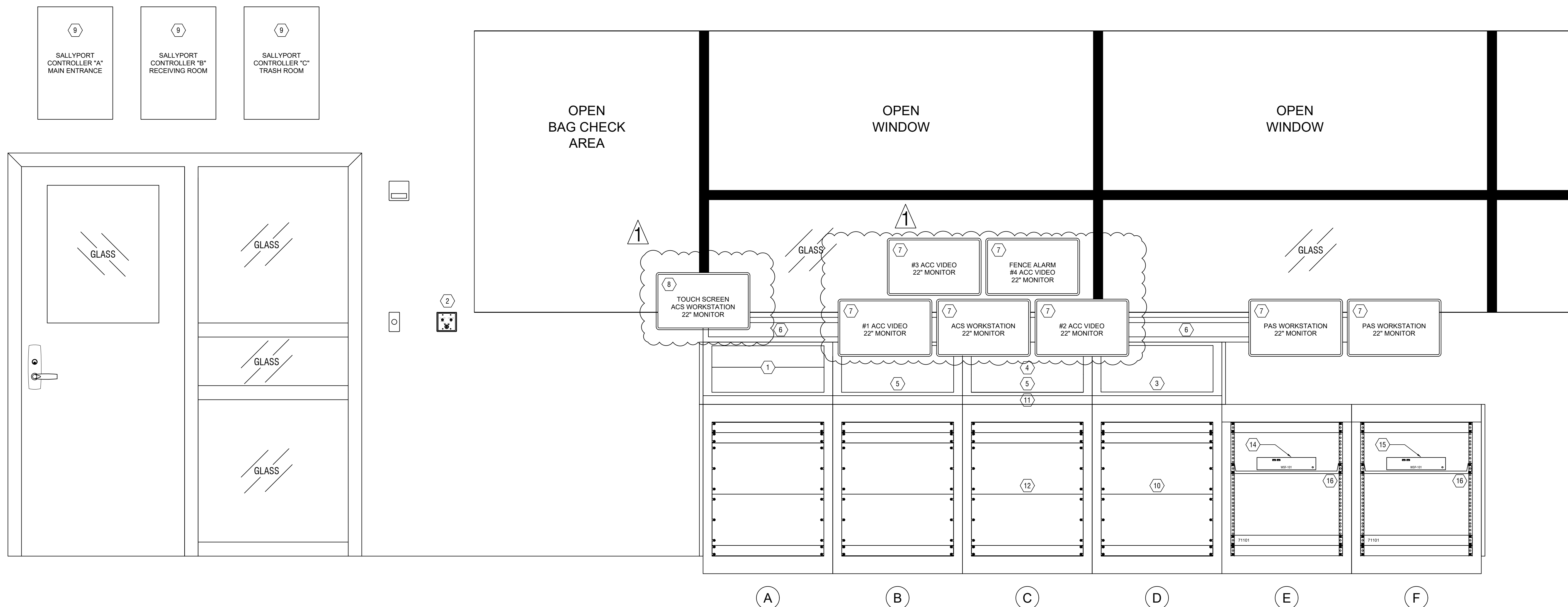
ELECTRICAL

TITLE:
UPGRADE ELECTRONIC SECURITY SYSTEMS

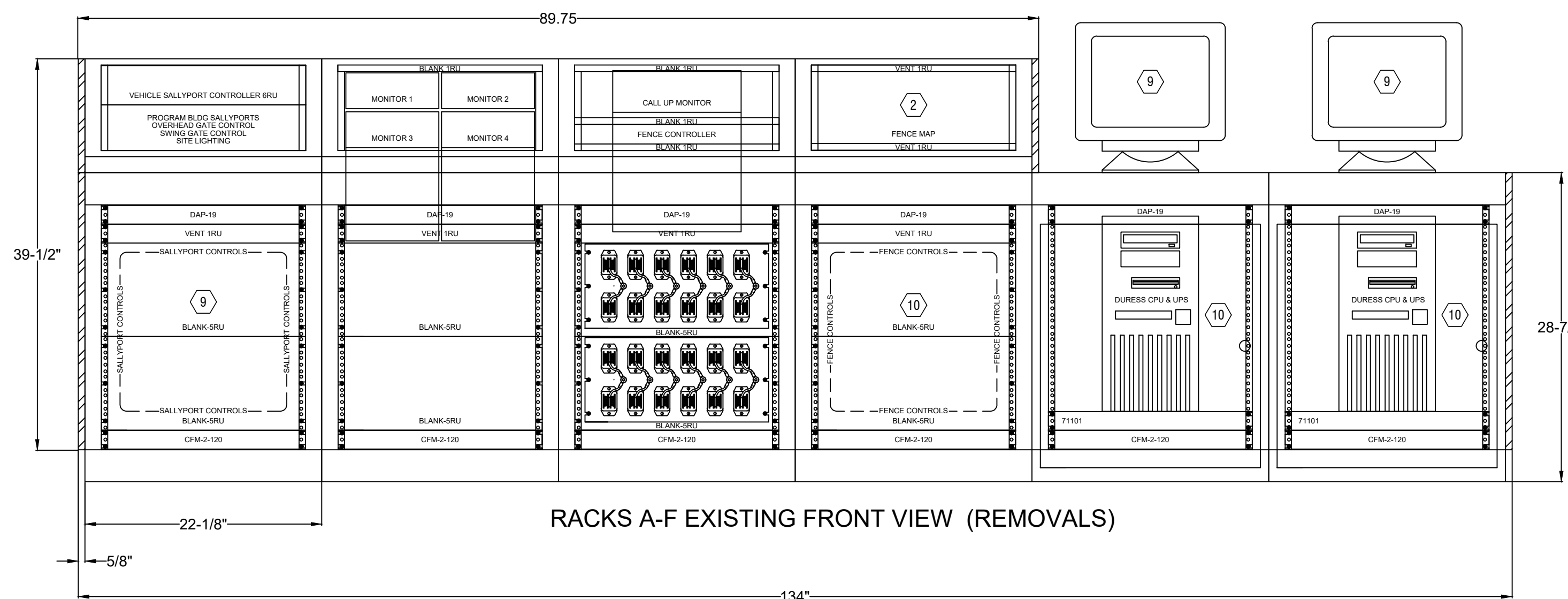
LOCATION:
VALLEY RIDGE CIT
276 COUNTY ROAD 46
NORWICH NY 13815

CLIENT:
OPWDD

PROJECT NUMBER:	47552 - E	
DESIGNED BY:	MJP	
DRAWN BY:	MJP	
FIELD CHECK:		
APPROVED:	NCH	
SHEET TITLE:	PROGRAM BUILDING SECURITY OFFICE RACK A-F ELEVATION	
DRAWING NUMBER:	E-730	



RACKS A-F NEW DESIGN FRONT VIEW



RACKS A-F EXISTING FRONT VIEW (REMOVALS)

KEYED NOTES:

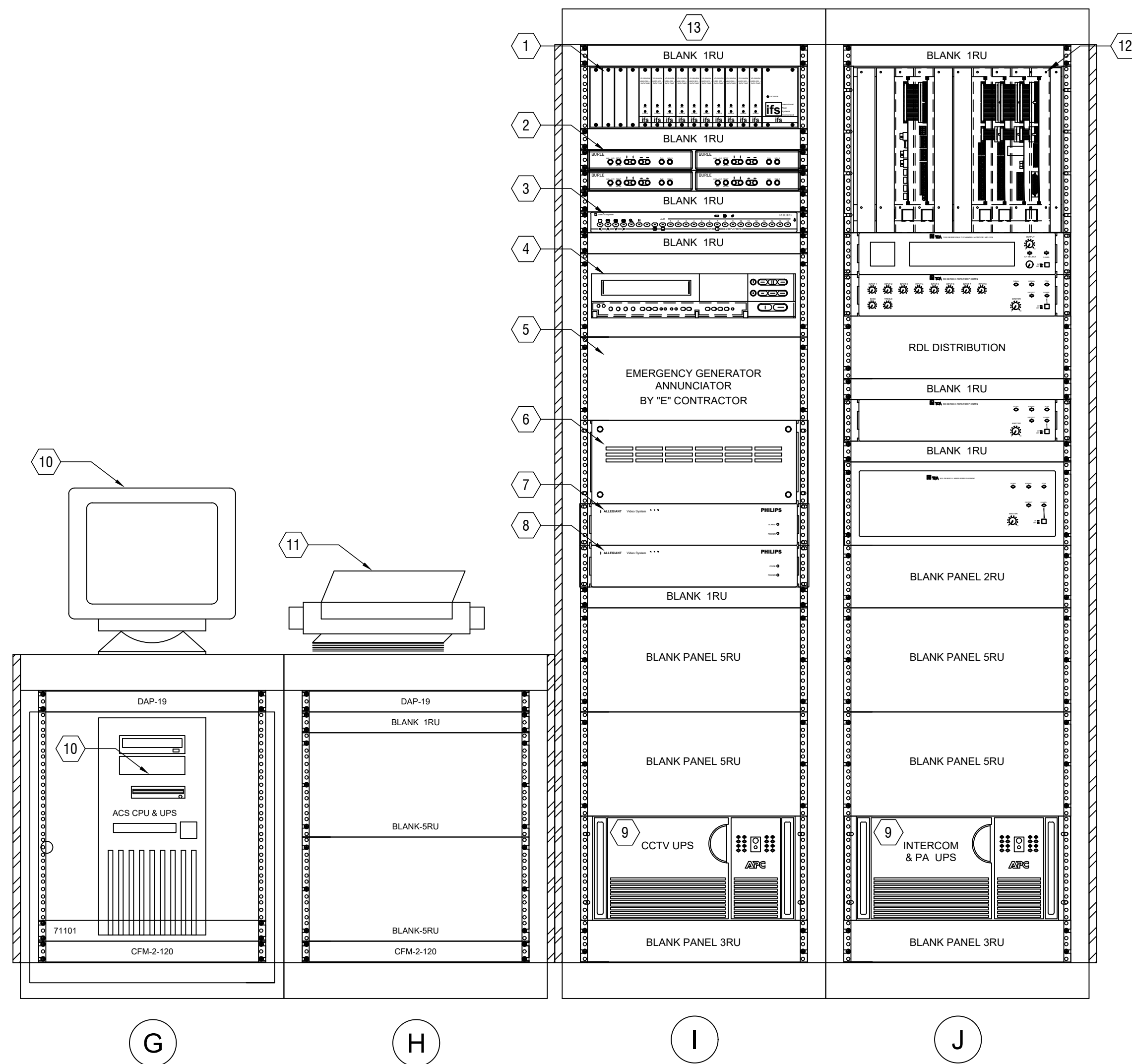
- 1 CONTRACTOR TO PROVIDE SALLYPORT AND GATE CONTROL CONSOLE AND MAINTAIN ALL EXISTING FUNCTIONALITY.
- 2 CONTRACTOR TO PROVIDE MAIN ENTRANCE SALLYPORT SUB-PANEL ON WALL MATCHING THE HEIGHT OF THE LIGHT SWITCH.
- 3 CONTRACTOR TO REMOVE PERIMETER FENCE DETECTION GRAPHIC MAP. PROVIDE PERIMETER FENCE ALARM PC MONITOR. PROVIDE BLANK PANEL.
- 4 CONTRACTOR TO REMOVE PERIMETER FENCE DETECTION CONTROLLER AFTER CONSTRUCTION AND PROVIDE BLANK PANEL.
- 5 CONTRACTOR TO REMOVE ANY EXISTING CRT MONITORS AND REPLACE WITH BLANK PANEL.
- 6 PROVIDE WALL MOUNTED TRACK FOR MULTIPLE MONITOR CONFIGURATIONS. TRACK WILL ALLOW MONITORS TO ADJUST VERTICALLY AND HORIZONTALLY ALONG THE WALL.
- 7 PROVIDE 22" TRACK MOUNTED SECURITY MONITORS AS LABELLED.
- 8 RECENTLY UPGRADED TOUCH SCREEN MONITOR TO REMAIN.
- 9 CONTRACTOR TO REMOVE OLD SALLYPORT CONTROLLERS FROM UNDER BASE CABINETS. USE ENCLOSURES TO HOUSE TERMINAL STRIPS TO EXTEND THE CABLE TO THE NEW SALLYPORT CONTROLLERS MOUNTED IN SECURITY OFFICE ABOVE SALLYPORT DOOR.
- 10 CONTRACTOR TO REMOVE EXISTING PAS WORKSTATION AND MONITOR ONCE PAS SYSTEM HAS BEEN PROVIDED AND ACCEPTED.
- 11 CONTRACTOR TO REMOVE FENCE ARI (RELAY CONTROL) AND ALL CABLING AFTER EXISTING PERIMETER 7000 HAS BEEN REMOVED AND FLEXZONE SYSTEM IS COMPLETED ON PERMANENT FENCE.
- 12 CONTRACTOR TO REMOVE CCTV JOYSTICK AFTER ALL CAMERAS ARE PROVIDED AND OPERATIONAL.
- 13 LIGHTNING SURGE SUPPRESSORS WILL REMAIN. CABLING FOR FOR EXTERIOR SPEAKERS WILL REMAIN. CONTRACTOR TO REMOVE ANY REMAINING INTERCOM CABLING FOR ANALOG INTERCOMS.
- 14 PROVIDE PERIMETER FENCE WORKSTATION AND MONITOR FOR SENSTAR PERIMETER FENCE SYSTEM. NETWORK MANAGER SOFTWARE WILL COMMUNICATE DIRECTLY WITH AVIGILON SOFTWARE VIA ACII TEXT.
- 15 PROVIDE CENTRAK PERSONAL ALARM WORKSTATION AND MONITOR.
- 16 PROVIDE SHELF FOR THIN CLIENT WORKSTATION.

REMOVAL KEYED NOTES:

- 1 REMOVE EXISTING FIBER MEDIA CONVERTER.
- 2 REMOVE 4 EXISTING CCTV MOTION DETECTION UNITS.
- 3 REMOVE EXISTING CCTV MULTIPLEXER.
- 4 REMOVE EXISTING CCTV DIGITAL RECORDER.
- 5 EXISTING GENERATOR EQUIPMENT TO REMAIN.
- 6 REMOVE EXISTING CCTV EXCHANGE UNIT.
- 7 REMOVE EXISTING CCTV ALARM MONITOR.
- 8 REMOVE EXISTING CCTV CODE DISTRIBUTION.
- 9 REMOVE EXISTING RACK MOUNT UPS.
- 10 REMOVE EXISTING ACCESS CONTROL WORKSTATION AND MONITOR.
- 11 DOT MATRIX-IMPACT PRINTER TO REMAIN OR UPGRADED.
- 12 REMOVE TOA INTERCOM EXCHANGE AND CABLING, ALL INTERCOMS WILL BE IP ONLY.
- 13 REMOVE ALL EXISTING ACS MONITORING BOARDS FROM REAR OF RACK "I" AFTER SYSTEM CUT-OVER.

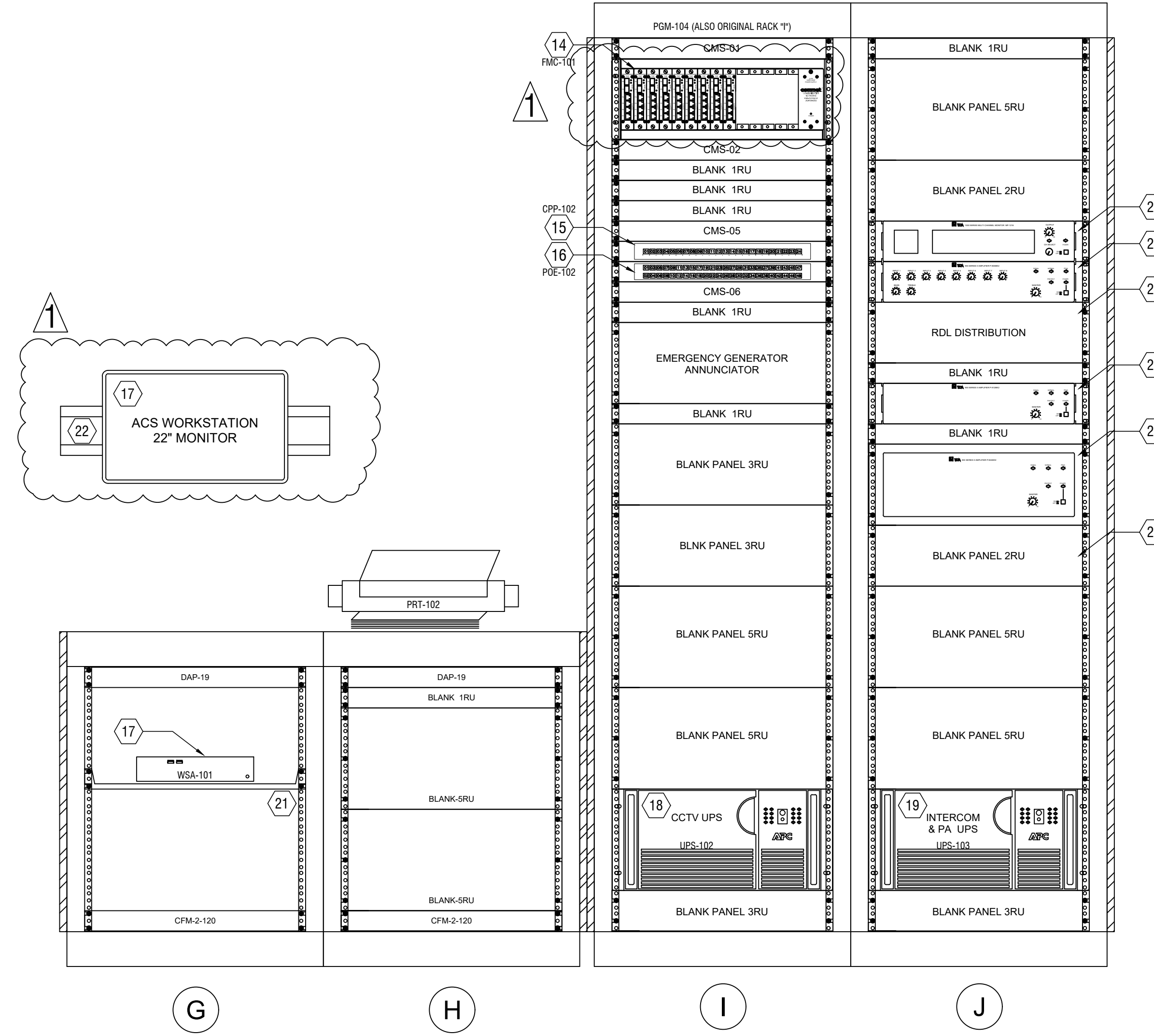
DESIGN KEYED NOTES:

- 14 PROVIDE CCTV CAMERA POLE FIBER MEDIA CONVERTER.
- 15 PROVIDE 24 PORT PATCH PANEL.
- 16 PROVIDE 48 PORT POE SWITCH FOR SECURITY DEVICES.
- 17 PROVIDE ACS LOGGING WORKSTATION AND MONITOR.
- 18 PROVIDE UPS FOR NETWORK EQUIPMENT.
- 19 PROVIDE UPS FOR EXISTING PA EQUIPMENT.
- 20 EXISTING PA HEAD END EQUIPMENT TO REMAIN.
- 21 PROVIDE SHELF FOR THIN CLIENT WORKSTATION.
- 22 PROVIDE 39" WALL MOUNTED TRACK FOR MULTIPLE MONITOR CONFIGURATIONS. TRACK WILL ALLOW.
- 23 REPLACE ALL VENTED PANEL WITH SOLID BLANK PANELS.



RACKS G-J EXISTING FRONT VIEW

1 PROGRAM BUILDING SECURITY OFFICE RACK G-J ELEVATION REMOVAL DETAIL
E-731 SCALE: NOT TO SCALE



RACKS G-J DESIGN FRONT VIEW

2 PROGRAM BUILDING SECURITY OFFICE RACK G-J ELEVATION DESIGN DETAIL
E-731 SCALE: NOT TO SCALE

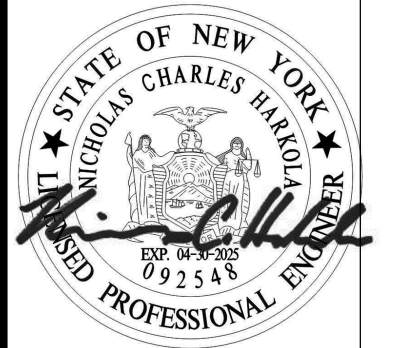
ADDENDUM #2 REVISED DRAWING
11/19/24



300 State Street, Suite 201
Rochester, NY 14614

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EXP: 04/30/2025

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 018281

CONTRACT:

ELECTRICAL

TITLE: UPGRADE ELECTRONIC SECURITY SYSTEMS

LOCATION: VALLEY RIDGE CIT
276 COUNTY ROAD 46
NORWICH NY 13815

CLIENT: OPWDD

MARK	DATE	DESCRIPTION
▲	11/19/2024	ADDENDUM 2
	7/26/2024	BID DOCUMENT
PROJECT NUMBER:	47552 - E	
DESIGNED BY:	MJP	
DRAWN BY:	MJP	
FIELD CHECK:		
APPROVED:	NCH	

SHEET TITLE:

PROGRAM BUILDING SECURITY OFFICE
RACK G-J ELEVATION

DRAWING NUMBER:

E-731

RACK EQUIPMENT DETAIL

- 01) CMS CABLE MANAGEMENT
- 02) EXISTING NETWORK SWITCH
- 03) EXISTING KVM
- 04) EXISTING AVIGILON VIDEO SERVER
- 05) EXISTING AVIGILON ACCESS CONTROL MANAGER SERVER
- 06) EXISTING UNUSED STORAGE SERVER (REMOVED)
- 07) EXISTING UPS
- 08) EXISTING UNUSED UPS (REMOVED)
- 09)
- 10) EXISTING FIBER OPTIONS FMC TO HOUSE ACCESS CONTROL
- 11) EXISTING MILLENNIUM TRUNK INTERFACE UNIT (TIU)
- 12) EXISTING LOCAL MILLENNIUM NETWORK SWITCH (IN REAR)
- 13) EXISTING BLACK BOX POWER STRIP
- 14) EXISTING MILLENNIUM SERVER MONITOR
- 15) EXISTING MILLENNIUM SERVER KEYBOARD AND MOUSE
- 16) EXISTING MILLENNIUM SERVER PRINTER
- 17) EXISTING MILLENNIUM SERVER UPS
- 18) EXISTING MILLENNIUM SERVER
- 19) EXISTING SITE OFTR
- 20) EXISTING EQUIPMENT TO REMAIN/DISREGARD (TYP IN RACK)
- 21) PROVIDE 24 SURGE PROTECTOR, CCTV, PAS
- 22) PROVIDE 24 PORT PATCH PANEL, ACS, CCTV, PAS
- 23) PROVIDE 48 PORT NETWORK SWITCH WITH 4 FIBER PORTS
- 24) PROVIDE 8-PORT KVM-SERVER MONITOR
- 25) PROVIDE AVIGILON VIDEO STORAGE SERVER
- 26) PROVIDE NEW SKVA UPS
- 27) PROVIDE POWER STRIP IN BACK OF RACK
- 28) PROVIDE SENSTAR AND CENTRAK SERVER
- 29) RESERVED SPACE LEAVE OPEN
- 30) PROVIDE SENSTAR NETWORK INTERFACE UNIT (NIU)
- 31) PROVIDE 1RU CABLE MANAGEMENT WITH "FEED THROUGH"
- 32) PROVIDE 1RU 48 PORT SWITCH WITH 6-SFP PORTS

RACK EQUIPMENT REMOVAL-RELOCATIONS

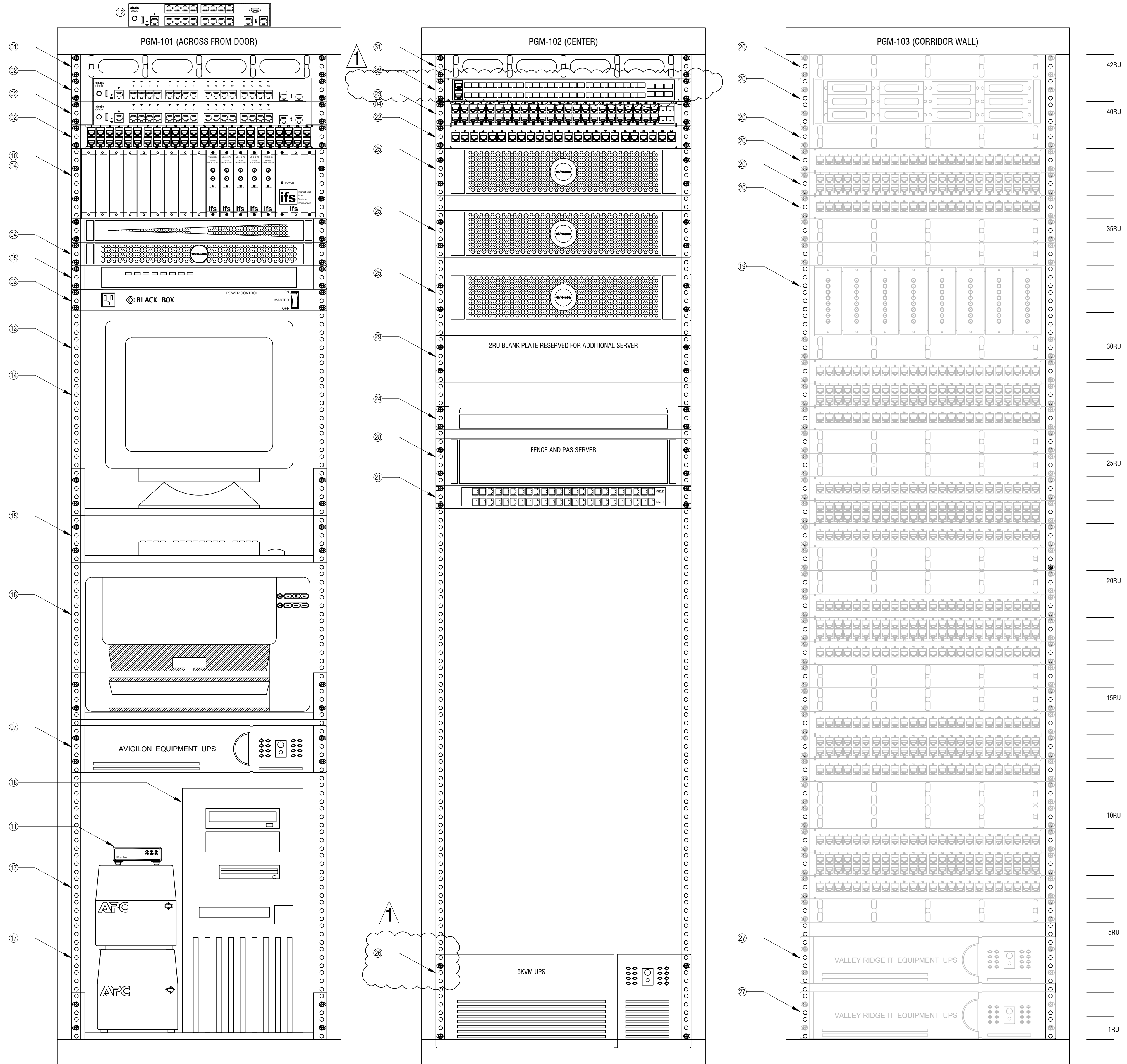
- 01) REMOVE EQUIPMENT AND TURN OVER TO CUSTOMER
- 02) RELOCATE EQUIPMENT TO BACK OF RACK 1
- 03) RELOCATE EQUIPMENT TO RACK 2 REFER TO DWG E-729
- 04) PROVIDE JFOS TO RACK 3

ABBREVIATIONS

- ACM - ACCESS CONTROL MANAGER
- CMS - CABLE MANAGEMENT SYSTEM
- CPP - CABLE PATCH PANEL
- CPI - CAMERA POWER INJECTOR
- DSP - DEVICE SURGE SUPPRESSOR
- EER - ELECTRONICS EQUIPMENT RACK
- FMC - FIBER MEDIA CONVERTER
- IP - INTERNET PROTOCOL
- LAN - CAT6 LOCAL AREA NETWORK CABLE
- NWS - NETWORK SWITCH
- OFTR - OPTICAL FIBER TERMINATION RACK
- PFS - PERSONAL ALARM AND FENCE SERVER
- POE - NETWORK SWITCH WITH PoE +
- PRT - NETWORK PRINTER
- RMB - RACK MONITOR WITH 8 CH. KEYBOARD VIDEO MOUSE
- SAN - STORAGE AREA NETWORK
- SFO - SINGLE MODE FIBER
- SFP - SMALL FORM-FACTOR PLUGGABLE
- UPS - UNINTERRUPTIBLE POWER SUPPLY
- VMS - VIDEO MANAGEMENT SERVER

STEP-2 OBJECTIVE:

- A. SHOW RELOCATED EXISTING EQUIPMENT AFTER STEP-1.
- B. SHOW REMOVED EQUIPMENT AFTER STEP-1, NOT REQUIRED IN STEP-2.
- C. TO RELOCATE SOME EQUIPMENT TO PREPARE FOR STEP-3.
- D. INSTALL NEW EQUIPMENT REQUIRED FOR UPDATED SYSTEMS.



1 PROGRAM BUILDING CLOSET 11 SECURITY SYSTEMS RACK ELEVATION STEP-2
SCALE: NOT TO SCALE

ADDENDUM #2 REVISED DRAWING
11/19/24

CONSULTANT
LaBella
Powered by partnership.
300 State Street, Suite 201
Rochester, NY 14614

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STATE OF NEW YORK
MICHAEL CHARLES HAROLD
REGISTERED PROFESSIONAL ENGINEER
EXP: 04/30/2025
CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 018281

CONTRACT:
ELECTRICAL
TITLE:
UPGRADE ELECTRONIC SECURITY SYSTEMS
LOCATION:
VALLEY RIDGE CIT
276 COUNTY ROAD 46
NORWICH NY 13815
CLIENT:
OPWDD

PROJECT NUMBER:	47552 - E	
DESIGNED BY:	MJP	
DRAWN BY:	MJP	
FIELD CHECK:		
APPROVED:	NCH	
SHEET TITLE:	PROGRAM BUILDING CLOSET 11 SECURITY SYSTEMS RACK ELEVATION STEP-2	
DRAWING NUMBER:	E-734	

Nov 19, 2024, 12:00pm
\\p0515\p0515\p0515\0505210520-24 - Valley Ridge 564848 Supp\06_Drawing\Electrical\E-734_E-734 - PROGRAM BLDG CLOSET 11 RACK ELEVATION.dwg
36x24 PLOT SHEET

RACK EQUIPMENT REMOVED FROM STEP-2

- 01 CABLE MANAGEMENT
- 02 EXISTING NETWORK SWITCH
- 03 EXISTING KVM
- 04 EXISTING UPS
- 05 EXISTING FIBER OPTIONS FMC TO HOUSE ACCESS CONTROL
- 06 EXISTING MILLENNIUM TRUNK INTERFACE UNIT (TIU)
- 07 EXISTING LOCAL MILLENNIUM NETWORK SWITCH (IN REAR)
- 08 EXISTING BLACK BOX POWER STRIP
- 09 EXISTING MILLENNIUM SERVER MONITOR
- 10 EXISTING MILLENNIUM SERVER KEYBOARD AND MOUSE
- 11 EXISTING MILLENNIUM SERVER PRINTER
- 12 EXISTING MILLENNIUM SERVER UPS
- 13 EXISTING MILLENNIUM SERVER

FINAL EQUIPMENT DETAIL STEP-3

- 14 PROVIDE 24 SURGE PROTECTOR, CCTV, PAS
- 15 PROVIDE 24 PORT PATCH PANEL, ACS, PAS, CCTV
- 16 PROVIDE NETWORK SWITCH WITH FIBER PORTS
- 17 PROVIDE 8-PORT KVM-SERVER MONITOR
- 18 PROVIDE AVIGILON VIDEO STORAGE SERVER
- 19 PROVIDE UPS
- 20 PROVIDE POWER STRIP IN BACK OF RACK
- 21 PROVIDE SENSTAR AND CENTRAK SERVER
- 22 RESERVED SPACE LEAVE OPEN
- 23 EXISTING AVIGILON VIDEO SERVER
- 24 EXISTING AVIGILON ACCESS CONTROL MANAGER SERVER
- 25 PROVIDE SHELF WITH 90W POWER INJECTORS
- 26 PROVIDE NETWORK LASER REPORT PRINTER
- 27 EXISTING EQUIPMENT TO REMAIN/DISREGARD (TYP IN RACK)
- 28 PROVIDE SENSTAR NETWORK INTERFACE UNIT (NIU)
- 29 PROVIDE 1RU CABLE MANAGEMENT WITH "FEED THROUGH"
- 30 PROVIDE VERTICAL CABLE MANAGEMENT WITH "FEED THROUGH"
- 31 PROVIDE 1RU 48 PORT SWITCH WITH 6-SFP PORTS

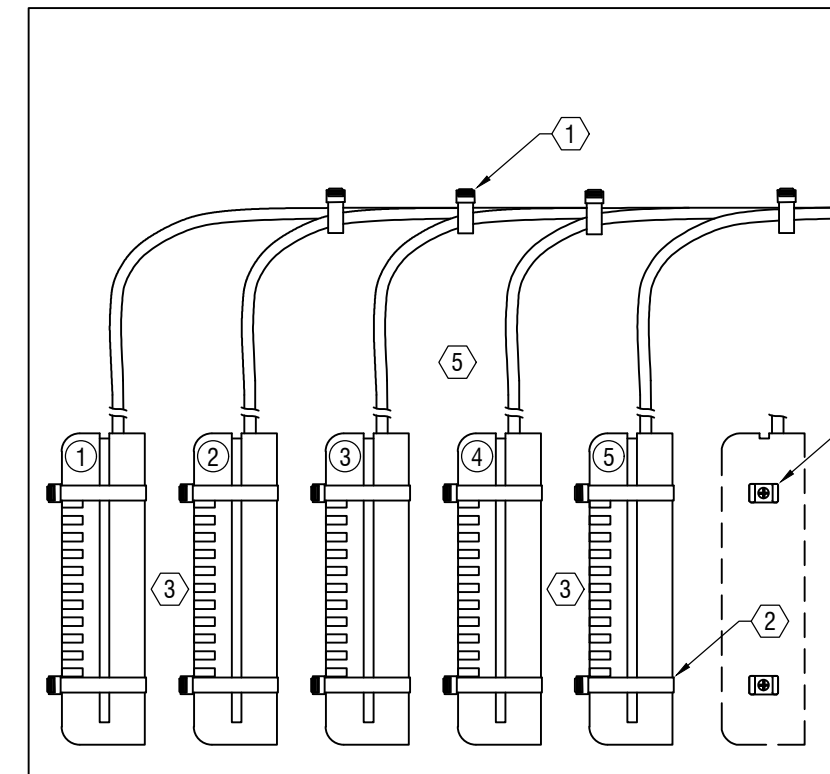
RACK EQUIPMENT REMOVAL-RELOCATIONS

- 01 REMOVE EQUIPMENT AND TURN OVER TO CUSTOMER
- 02 RELOCATE EQUIPMENT TO BACK OF RACK 1
- 03 RELOCATE EQUIPMENT FROM RACK 2 REFER TO DWG E-728
- 04 PROVIDE JFO'S TO RACK 3

ABBREVIATIONS

- ACM - ACCESS CONTROL MANAGER
- CMS - CABLE MANAGEMENT SYSTEM
- CPP - CABLE PATCH PANEL
- CPI - CAMERA POWER INJECTOR
- DSP - DEVICE SURGE SUPPRESSOR
- EER - ELECTRONICS EQUIPMENT RACK
- FMC - FIBER MEDIA CONVERTER
- IP - INTERNET PROTOCOL
- LAN - CAT6 LOCAL AREA NETWORK CABLE
- NWS - NETWORK SWITCH
- OFTR - OPTICAL FIBER TERMINATION RACK
- PFS - PERSONAL ALARM AND FENCE SERVER
- POE - NETWORK SWITCH WITH PoE +
- PRT - NETWORK PRINTER
- RM8 - RACK MONITOR WITH 8 CH. KEYBOARD VIDEO MOUSE
- SAN - STORAGE AREA NETWORK
- SFO - SINGLE MODE FIBER
- SFP - SMALL FORM-FACTOR PLUGGABLE
- UPS - UNINTERRUPTIBLE POWER SUPPLY
- VMS - VIDEO MANAGEMENT SERVER

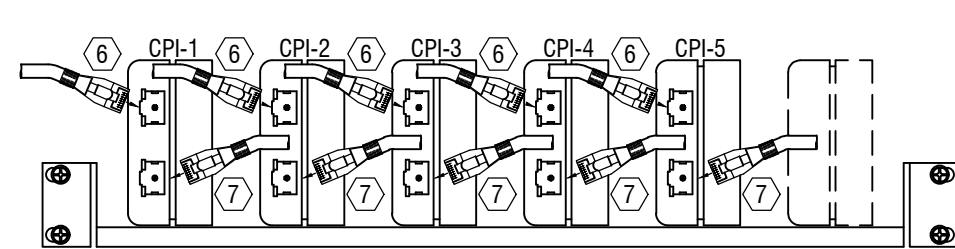
CPI-SHELF DETAIL TOP VIEW



CPI KEYED NOTES:

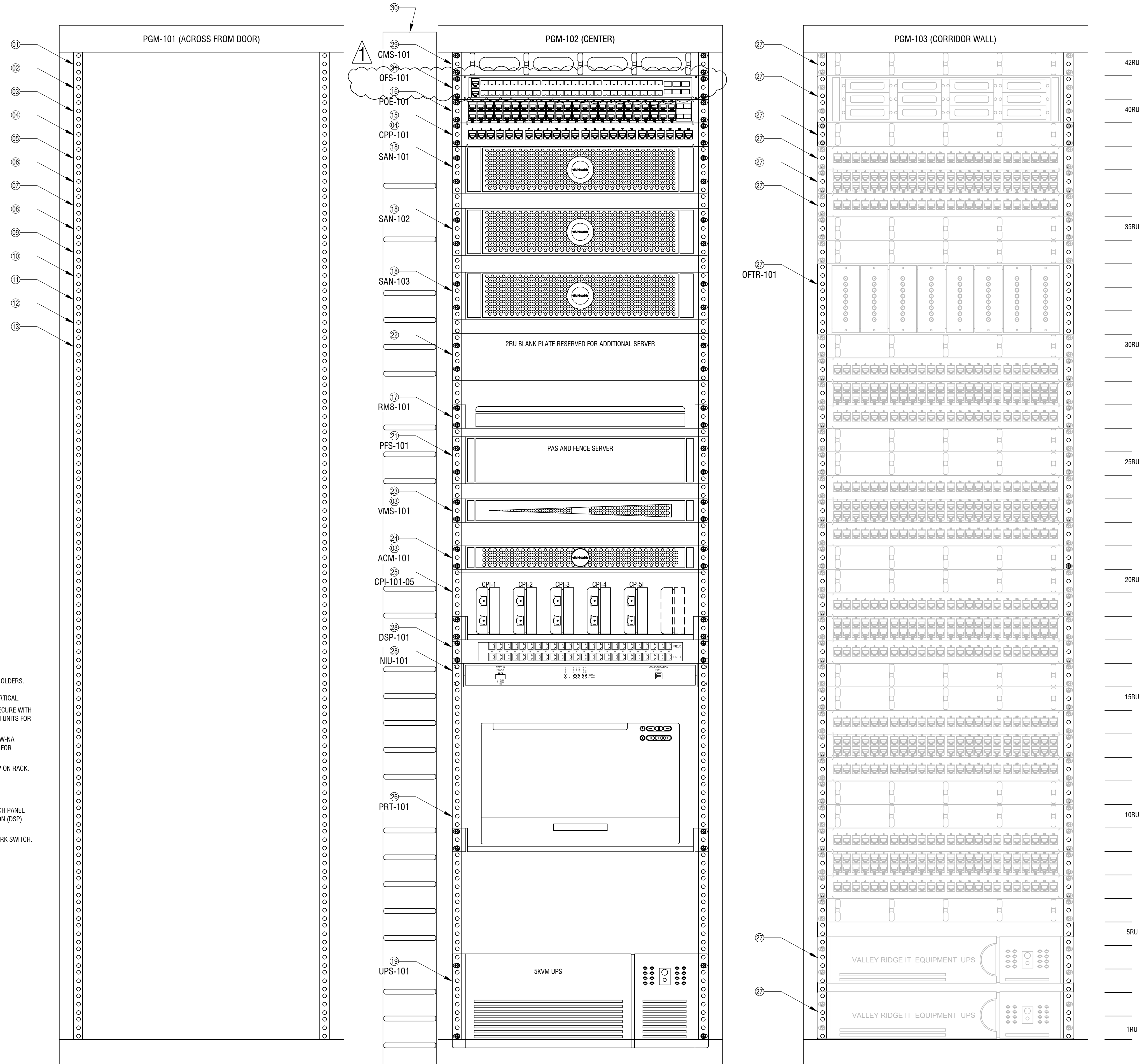
- 1 PROVIDE SCREW DOWN TIE WRAP HOLDERS. SPACE APPROX. 3" HORIZONTAL AND 4" VERTICAL.
- 2 SIDE MOUNT UNIT ON SHELF AND SECURE WITH TIE WRAPS. LEAVE SPACE BETWEEN UNITS FOR VENTILATION.
- 3 PROVIDE CPI AVIGILON POE-INJ2-95W-NA POWER INJECTOR. RESERVE SPACE FOR 6TH FUTURE UNIT.
- 4 120VAC POWER TO UPS PLUG STRIP ON RACK.
- 5 19" X 16" MINIMUM 1RU SHELF.
- 6 LAN JUMPER CABLE TO CABLE PATCH PANEL (CPP) OR DEVICE SURGE PROTECTION (DSP) BEFORE CAMERA.
- 7 LAN JUMPER CABLE TO POE NETWORK SWITCH.

CPI-SHELF DETAIL FRONT VIEW

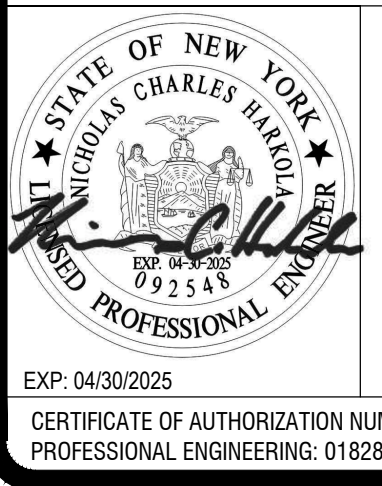


STEP-3 OBJECTIVE:

- A. SHOW FINAL RACK EQUIPMENT IN RACKS 1 AND 2
- B. SHOW RELOCATED EQUIPMENT AFTER STEP-2.
- C. SHOW REMOVED EQUIPMENT AFTER STEP-2, NOT REQUIRED IN STEP-3.
- D. INSTALL REMAINING NEW EQUIPMENT REQUIRED FOR UPDATED SYSTEMS.



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CONTRACT: **ELECTRICAL**

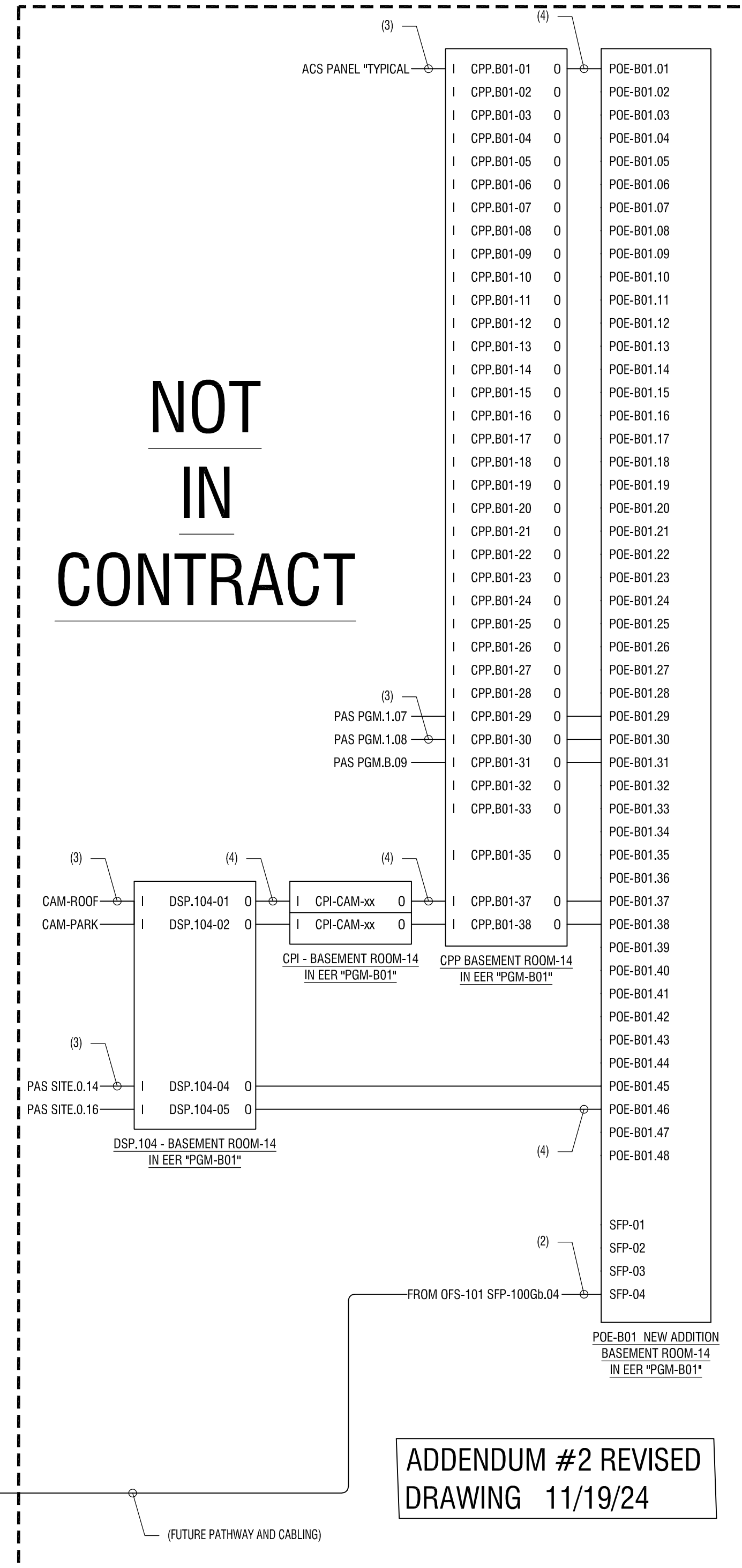
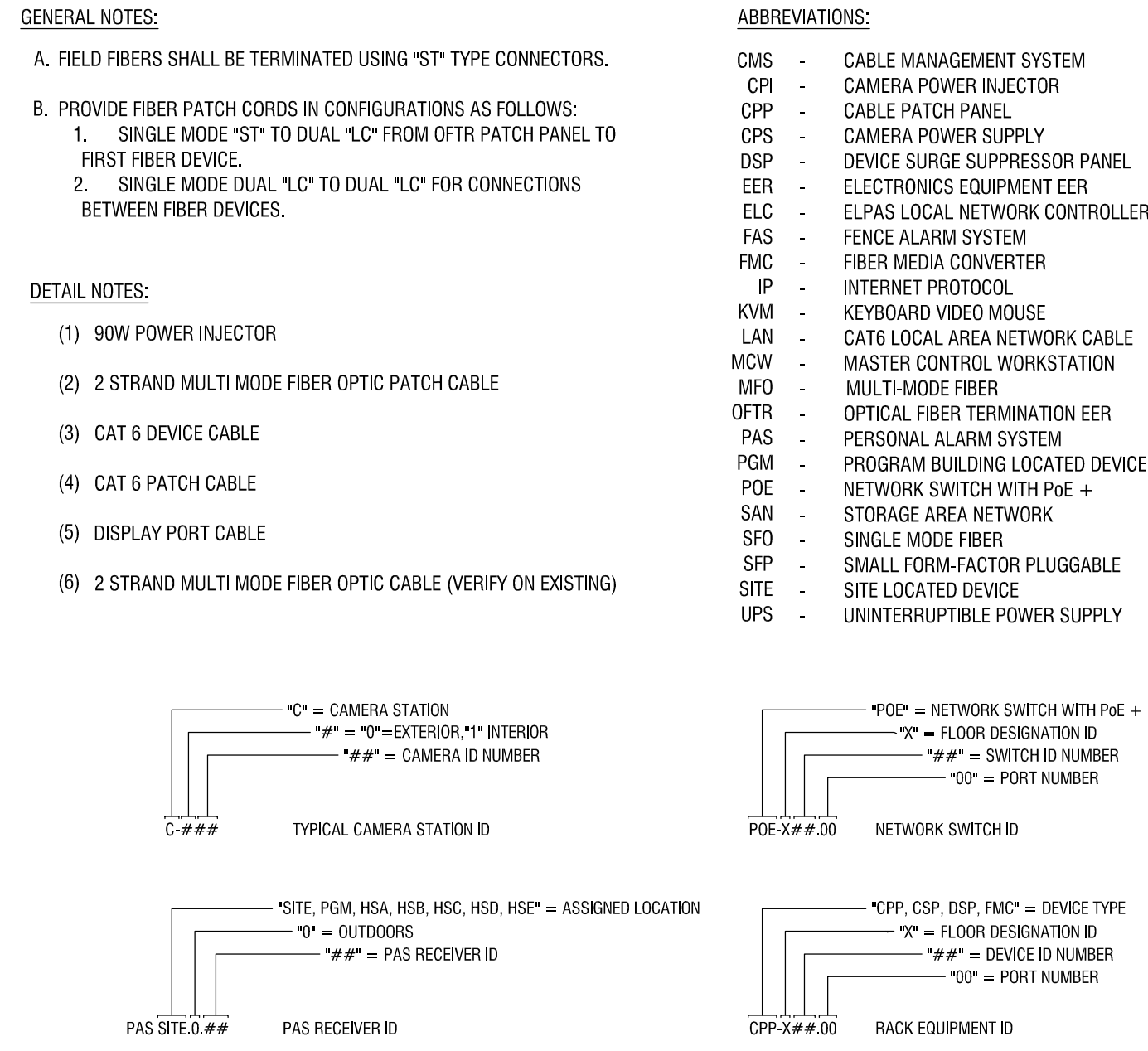
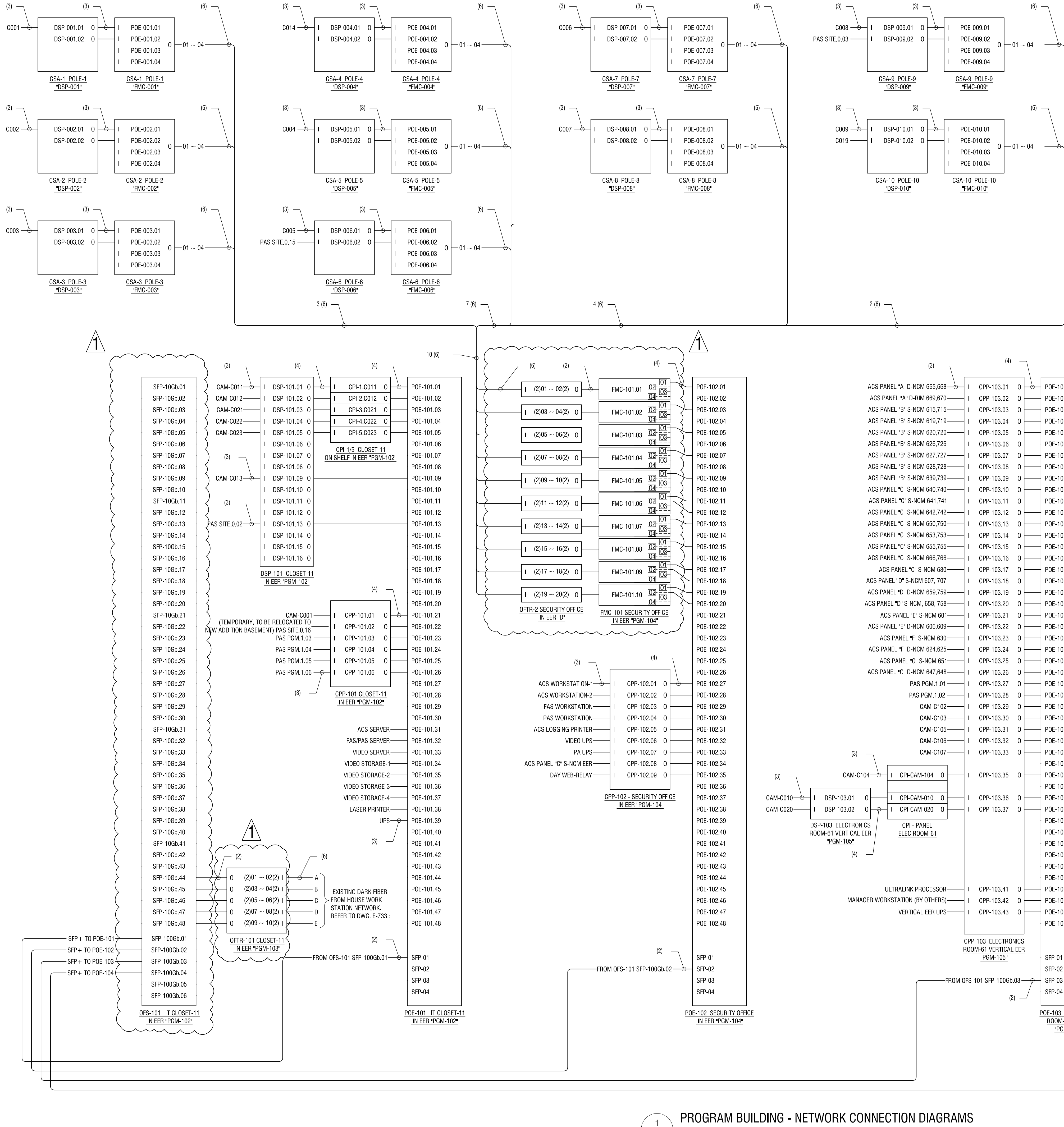
TITLE: UPGRADE ELECTRONIC SECURITY SYSTEMS

LOCATION: VALLEY RIDGE CIT
276 COUNTY ROAD 46
NORWICH NY 13815

CLIENT: OPWDD

PROJECT NUMBER:	47552 - E
DESIGNED BY:	MJP
DRAWN BY:	MJP
FIELD CHECK:	
APPROVED:	NCH
SHEET TITLE:	PROGRAM BUILDING CLOSET 11 SECURITY SYSTEMS RACK ELEVATION STEP-3
DRAWING NUMBER:	E-735

Nov 19, 2024, 12:00pm
\\p0515\p0515\p0515\0515\210520-24 - Valley Ridge SE648 Stg\06_Drawing\Electrical\E-735_E-735 - PROGRAM BUILDING CLOSET 11 RACK ELEVATION.dwg
36x24 PLOT SHEET



PROGRAM BUILDING - NETWORK CONNECTION DIAGRAMS
 SCALE: NOT TO SCALE

NEW YORK STATE OF OPPORTUNITY | **Office of General Services**
DESIGN & CONSTRUCTION

CONSULTANT: **LaBella**
 Powered by partnership.
 300 State Street, Suite 201
 Rochester, NY 14614

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ELECTRICAL
 TITLE: **UPGRADE ELECTRONIC SECURITY SYSTEMS**
 LOCATION: **VALLEY RIDGE CIT 276 COUNTY ROAD 46 NORWICH NY 13815**
 CLIENT: **OPWDD**

MARK	DATE	DESCRIPTION
△	11/19/2024	ADDENDUM 2
	7/26/2024	BID DOCUMENT
PROJECT NUMBER: 47552 - E		
DESIGNED BY: MJP		
DRAWN BY: MJP		
FIELD CHECK:		
APPROVED: NCH		
SHEET TITLE: PROGRAM BUILDING NETWORK CONNECTION DIAGRAMS		
DRAWING NUMBER: E-736		

ADDENDUM #2 REVISED DRAWING 11/19/24