

Addendum

DATE: 9/24/2026

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PROJECT: ATF Dayton Field Office Renovation
Phase 2

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PROJECT ADDRESS: 4770 Hempstead Station Drive
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ADDENDUM NO. 2

RECEIPT OF THIS ADDENDUM MUST BE NOTED ON THE FORM OF PROPOSAL

TO ALL BIDDERS:

This addendum supplements and amends the original Plans and Specifications and shall be considered in preparing proposals and shall become part of the Contract Documents.

SPECIFICATIONS:

- ITEM S1: 00 0110 TABLE OF CONTENTS
1. Update table of contents to add Spec Section 28 2300 Video Surveillance.
- ITEM S2 28 2300 VIDEO SURVEILLANCE
1. Add new specification section.
- ITEM S3 GENERAL NOTE OF CLARIFICATION
1. Division 27 Communications and Division 28 Electronic Safety and Security specification sections are included in the specification manual, out of order. Sections can be found after Section 12 3600 Countertops.

ARCHITECTURAL DRAWINGS:

- ITEM A1: Sheet A0.2 – FINISH SCHEDULES, WALL TYPES AND DETAILS
1. Room Finish Schedule: Update ceiling material at rooms 119, 120, and 130.
 2. Material Legend: Update APC-1 material model number.
 3. Material Legend: Add APC-2.
- ITEM A2 Sheet A2.2 – REFLECTED CEILING PLAN
1. Update ceiling tile sizes.

ELECTRICAL DRAWINGS:

- ITEM E1: Sheet E0.2 – SCHEDULES, DETAILS AND SINGLE LINE DIAGRAM
1. Update Branch Panel E schedule.
 2. Update Motors, Starters, Disconnects & Controls schedule.

ITEM E2: Sheet E3.1 – NEW WORK POWER PLAN

1. Add ceiling occupancy sensor in Room 122.
2. Add wall vacancy sensor/dimmer in Room 129.
3. Revise lighting layout in Garage Area 124.

CONTRACTOR QUESTIONS:

Question: Room Finish Schedule calls for ceiling tile Optima 3256 which is a 4' x 4' tile. The RCP is showing a 2' x 2' and 2' x 4' tile. Request clarification please.

Answer: Revise to: Armstrong 3354, 24" x 24" tegular edge tile as the basis of design.

Question: Standard logo sign sizes available from Signarama are 18", 24" or 30". Please clarify size.

Answer: Provide 24" diameter logo sign, at both locations.

Question: Verify if project is davis bacon wages.

Answer: YES, project is davis bacon wages.

Question: Will the Control Wiring Conduit for HVAC Equipment be ran by the HVAC Contractor?

Answer: Controls wiring/conduit for HVAC is assigned to the HVAC Contractor. It is their responsibility to install or sub-contract any portion of that work to the E.C., if desired.

Question: Will the HVAC Contractor provide and install all Control Devices, VFD's, Disconnects, etc.?

Answer: Refer to MSD&C Schedule, sheet E0.2 & H0.3, for responsibility, EF-1 has disconnect/ECM controller furnished with unit. Provide 60A/3P breaker in Panel "E" with 3-#6, #10, 1"C. to fused disconnect (by E.C.) at RTU-1 unit.

Question: The Bid Documents mention supplying a 400a 120/240v 1ph Temporary Service for the project, is this actually needed?

Answer: Disregard temporary service requirements except for temporary lighting (existing fixtures may be utilized or temp lighting assemblies) and coordinate convenience receptacle placement for construction tools.

Question: Per Drawing E3.1 the Lighting Plan Detail does not have any Lighting Control's or Switches figured for the (2) Office Space's. What will be operating these Office's?

Answer: Provide ceiling occupancy sensor in Wiretap Room(122) (with wall mt'd dimmer). Provide wallbox vacancy sensor/dimmer in Office (129).

Question: What is the Brand Name of the Recorder for the CCTV

Answer: Exacq G-Series NVR.

Question: Are there Specs for Division 28? If so please send as they were not part of the bid package we received.

Answer: Division 28 specifications are included in the spec book but out of order, right after Section 12 3600 Countertops, before Plumbing. Section 28 2300 Video Surveillance will be added.

END OF ADDENDUM NO. 2

ATTACHMENTS: Specifications: 00 2110 Table of Contents, 28 2300 Video Surveillance
Drawing sheets: A0.2, A2.2, E0.2, E3.1

SECTION 00 0110 - TABLE OF CONTENTS**PROCUREMENT AND CONTRACTING REQUIREMENTS****Division 00 -- Procurement and Contracting Requirements**

00 0110 - Table of Contents

00 1113 - Advertisement for Bids

00 2113 - Instructions to Bidders

00 4100 - Bid Form

00 5000 - Contracting Forms and Supplements

00 7300 - Supplementary Conditions

AIA DOCUMENT A101-2017 Agreement (Sample for Reference)

AIA DOCUMENT A201-2017 General Conditions (Sample for Reference)

Agreement & Waiver For Transfer and Use of Architectural Electronic Files

Police Background Check Form with Required Fields Highlighted

Davis Bacon Prevailing Wage Rates

SPECIFICATIONS**Division 01 -- General Requirements**

01 1000 - Summary

01 2000 - Price and Payment Procedures

01 2100 - Allowances

01 2500 - Substitution Procedures

01 3000 - Administrative Requirements

01 4000 - Quality Requirements

01 5000 - Temporary Facilities and Controls

01 6000 - Product Requirements

01 7000 - Execution and Closeout Requirements

01 7800 - Closeout Submittals

Division 02 -- Existing Conditions

02 4100 - Demolition

Division 03 -- Concrete

03 3000 - Cast-in-Place Concrete

Division 06 -- Wood, Plastics, and Composites

06 1000 - Rough Carpentry

06 4100 - Architectural Wood Casework

06 6100 - Cast Polymer Fabrications

Division 07 -- Thermal and Moisture Protection

07 9200 - Joint Sealants

Division 08 -- Openings

08 1113 - Hollow Metal Doors and Frames

08 7100 - Door Hardware

Division 09 -- Finishes

- 09 0561 - Common Work Results for Flooring Preparation
- 09 2116 - Gypsum Board Assemblies
- 09 3000 - Tiling
- 09 5100 - Acoustical Ceilings
- 09 6500 - Resilient Flooring
- 09 6813 - Tile Carpeting
- 09 9123 - Interior Painting

Division 12 -- Furnishings

- 12 2400 - Window Shades
- 12 3600 - Countertops

Division 22 -- Plumbing**22 0000 General Requirements for Plumbing Systems****Division 22 -- Plumbing****22 0000 General Requirements for Plumbing Systems**

- 22 0001 - Basic Plumbing Requirements
- 22 0002 - Plumbing Work in Existing Buildings
- 22 0005 - Excavation, Backfill and Surface Restoration

22 0500 Common Work Results for Plumbing

- 22 0523 - General Duty Valves
- 22 0529 Pipe Hangers and Supports
- 22 0553 - Identification for Plumbing Systems

22 0700 Plumbing Insulation

- 22 0719 - Pipe Insulation

22 1000 Plumbing Piping and Pumps

- 22 1116 - Domestic Water Piping
- 22 1119 - Domestic Water Piping Specialties
- 22 1316 - Sanitary Waste and Vent Piping
- 22 1319 - Sanitary Waste Piping Specialties
- 22 1613 - Natural Gas House Piping
- 22 3436 - Gas-Fired Storage Water Heaters

22 4000 Plumbing Fixtures

- 22 4200 - Plumbing Fixtures

Division 23 -- Heating, Ventilating, and Air-Conditioning (HVAC)**23 0000 General Requirements for HVAC Systems**

- 23 0001 - Basic HVAC Requirements
- 23 0002 - HVAC Work in Existing Buildings
- 23 0005 - Excavation, Backfill and Surface Restoration

23 0500 Common Work Results for HVAC

23 0513 - Electrical Requirements for HVAC Equipment

23 0530 Equipment Bases and Supports

23 0548 - Vibration Control

23 0553 - Identification for HVAC Systems

23 0593 - Testing, Adjusting and Balancing

23 0700 HVAC Insulation

23 0713 - Duct Insulation

23 0900 Instrumentation and Control for HVAC

23 0913 - Instruments and Control Devices

23 0914 - Control Wiring and Cabling

23 3000 HVAC Air Distribution

23 3113 - Ductwork

23 3119 - Plenum Casings

23 3300 - Air Duct Accessories

23 3400 - Fans

23 3713 - Diffusers, Registers and Grilles

23 7000 Central HVAC Equipment

23 7413 - Packaged Dedicated Outdoor Air, Heating & Cooling Units

23 8128 - DX Mini Split Systems

Division 26 -- Electrical

26 0000 General Requirements for Electrical Systems

26 0001 - Basic Electrical Requirements

26 0002 - Electrical Work in Existing Buildings

26 0500 Common Work Results for Electrical

26 0519 - Low-Voltage Electrical Power Conductors and Cables

26 0526 - Grounding and Bonding for Electrical Systems

26 0529 - Hangers and Supports for Electrical Systems

26 0533 - Raceway and Boxes for Electrical Systems

26 0537 - J-Hook Pathways For Electrical Systems

26 0543 - Underground Ducts and Raceways for Electrical Systems

26 0553 - Identification for Electrical Systems

26 0900 Instrumentation and Control for Electrical

26 0923 - Lighting Control Devices

26 2000 Low-Voltage Electrical Distribution

26 2416 - Panelboards

26 2726 - Wiring Devices

26 2813 - Fuses

26 2816 - Enclosed Switches and Circuit Breakers

26 5000 Lighting

26 5113 - Interior Lighting Fixtures

26 5200 - Exit and Emergency Lighting

26 7000 Communications

26 7533 - Raceway and Boxes for Communications Systems

Division 27 -- Communications

27 0500 - Common Work Results for Communications

27 0504 - Communication Systems Submittals

27 0526 - Grounding and Bonding for Communications

27 0528 - Pathways for Communications

27 0553 - Identification for Communications

27 1100 - Communications Equipment Room Fittings

27 1500 - Communications Horizontal Cabling

27 5119 - Sound Masking Systems

Division 28 -- Electronic Safety and Security

28 1300 - Access Control System

28 1600 - Intrusion Detection System

Division 32 -- Exterior Improvements

END OF SECTION 00 0110

Addendum #2, Add:

28 2300 - Video Surveillance

SECTION 28 23 00
VIDEO SURVEILLANCE

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This Section specifies the design, furnishing, installation, configuration, integration, testing, training, and warranty of a networked Internet Protocol (IP) Video Surveillance System (VSS), including:
1. Fixed and pan-tilt-zoom (PTZ) network cameras.
 2. Multi-sensor and multi-directional network cameras.
 3. Specialty cameras (license plate recognition, thermal, panoramic, body-worn integration ports).
 4. Network video recording infrastructure: on-premises server-class Network Video Recorders (NVRs), hybrid cloud-archive appliances, and Video Surveillance as a Service (VSaaS) cloud-recording option.
 5. Video Management System (VMS) software, licensing, and client workstations.
 6. Edge analytics and server-side artificial intelligence (AI) and deep-learning analytics.
 7. Mass storage and storage management.
 8. Operator workstations, monitors, decoders, and video walls.
 9. Camera enclosures, mounts, brackets, poles, and adapters.
 10. Local and remote power, including Power over Ethernet (PoE) injectors and midspans, surge protection, and uninterruptible power supplies (UPS) dedicated to the VSS head-end.
 11. Network infrastructure dedicated to the VSS: managed PoE-capable Ethernet switches, fiber-optic media converters where applicable, and VSS-specific VLAN segmentation.
 12. Structured cabling, jumpers, connectors, and patch panels dedicated to the VSS.
 13. Cybersecurity hardening, identity-management integration, and firmware lifecycle management.
 14. Integration with the Section 28 13 00 Access Control System (ACS) and other associated systems.
 15. System programming, commissioning, owner training, and warranty.

1.02 RELATED REQUIREMENTS

- A. Section 26 05 26 – Grounding and Bonding for Electrical Systems.
- B. Section 26 05 33 – Raceways and Boxes for Electrical Systems.
- C. Section 27 05 26 – Grounding and Bonding for Communications Systems.
- D. Section 27 05 28 – Pathways for Communications Systems.

- E. Section 27 05 43 – Underground Ducts and Raceways for Communications Systems.
- F. Section 27 05 53 – Identification for Communications Systems.
- G. Section 27 11 00 – Communications Equipment Room Fittings.
- H. Section 27 15 00 – Communications Horizontal Cabling.
- I. Section 28 05 00 – Common Work Results for Electronic Safety and Security.
- J. Section 28 13 00 – Access Control.
- K. Section 28 31 00 – Fire Detection and Alarm.
- L. Section 28 46 00 – Electronic Detection and Alarm (where intrusion-detection is provided).

1.03 REFERENCE STANDARDS

- A. The publications listed below form a part of this Section to the extent referenced. Comply with the latest edition in effect at the time of bid unless a specific edition is cited herein.
- B. ANSI/AVIXA, BICSI, and TIA:
 - 1. ANSI/AVIXA 10:2013 – Audiovisual Systems Performance Verification.
 - 2. ANSI/BICSI 007-2020 – Information Communication Technology Design and Implementation Practices for Intelligent Buildings and Premises (incorporates content formerly in BICSI 005).
 - 3. ANSI/BICSI N1 – Installation Practices for Telecommunications and ICT Cabling and Related Cabling Infrastructure.
 - 4. ANSI/BICSI N2 – Practices for the Installation of Telecommunications and ICT Cabling Intended to Support Remote Power Applications.
 - 5. ANSI/BICSI N3 – Planning and Installation Methods for the Bonding and Grounding of Telecommunication and ICT Systems and Infrastructure.
 - 6. ANSI/TIA-568.0-E – Generic Telecommunications Cabling for Customer Premises.
 - 7. ANSI/TIA-568.2-D – Balanced Twisted-Pair Telecommunications Cabling and Components Standard.
 - 8. ANSI/TIA-568.3-D – Optical Fiber Cabling and Components Standard.
 - 9. ANSI/TIA-569-E – Telecommunications Pathways and Spaces.
 - 10. ANSI/TIA-606-D – Administration Standard for Telecommunications Infrastructure.
 - 11. ANSI/TIA-607-E – Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises.
 - 12. ANSI/TIA-862-C – Structured Cabling Infrastructure Standard for Intelligent Building Systems.
 - 13. ANSI/TIA-942-C – Telecommunications Infrastructure Standard for Data Centers.

14. ANSI/TIA TSB-184-A – Guidelines for Supporting Power Delivery Over Balanced Twisted-Pair Cabling.

C. IEEE:

1. IEEE 802.1Q – Bridges and Bridged Networks (VLAN).
2. IEEE 802.1X – Port-Based Network Access Control.
3. IEEE 802.3 – Ethernet.
4. IEEE 802.3af / 802.3at / 802.3bt – Power over Ethernet (Types 1 through 4).

D. IEC, ISO, and ONVIF:

1. IEC 60529 – Degrees of Protection Provided by Enclosures (IP Code).
2. IEC 62262 – Degrees of Protection Provided by Enclosures for Electrical Equipment Against External Mechanical Impacts (IK Code).
3. ISO/IEC 27001 – Information Security Management Systems.
4. ONVIF Profile S – Streaming video.
5. ONVIF Profile G – Recording and storage.
6. ONVIF Profile T – Advanced video streaming, including H.265 and analytics.
7. ONVIF Profile M – Metadata and analytics.
8. ONVIF Profile A – Access control configuration (for ACS integration).

E. NFPA and NEC:

1. NFPA 70 – National Electrical Code (current adopted edition). Comply with Articles 725, 770, and 800 / Chapter 8 as restructured by NEC 2026, including new Article 750 where applicable.
2. NFPA 72 – National Fire Alarm and Signaling Code.
3. NFPA 75 – Standard for the Fire Protection of Information Technology Equipment.
4. NFPA 731 – Standard for the Installation of Premises Security Systems.

F. UL and Other Safety Listings:

1. UL 294 – Access Control System Units (where VSS interfaces directly with ACS power or relays).
2. UL 62368-1 – Audio/Video, Information and Communication Technology Equipment – Safety Requirements.
3. UL 2900-1 / UL 2900-2-3 – Software Cybersecurity for Network-Connectable Products, General and Industry Specific (Security and Life Safety).
4. UL 1981 – Central-Station Automation Systems (where central-station monitoring is provided).

G. Federal:

1. NDAA Section 889 (Pub. L. 115-232) – Prohibition on contracting for certain telecommunications and video-surveillance services or equipment.

2. FAR 52.204-25 – Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.
 3. FIPS PUB 140-3 – Security Requirements for Cryptographic Modules.
 4. NIST SP 800-53 – Security and Privacy Controls for Information Systems and Organizations.
 5. NIST SP 800-171 – Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations.
 6. NIST Cybersecurity Framework (CSF) 2.0.
- H. Applicable building, electrical, life-safety, and accessibility codes and ordinances having jurisdiction at the Project location.

1.04 DEFINITIONS

- A. **AI Analytics:** Edge- or server-resident analytic processes that apply deep-learning or other artificial-intelligence techniques to video and/or metadata for the purpose of detection, classification, attribute extraction, and search.
- B. **Camera-as-a-Service (CaaS) / VSaaS:** A subscription-based service in which video recording, storage, management software, cybersecurity patching, and remote-access infrastructure are hosted by a service provider in the cloud and consumed by the Owner on a per-camera or per-site basis.
- C. **Edge Recording:** Recording of video and metadata to onboard storage media (microSD, SD, or onboard SSD) within the camera or to a local appliance at the edge of the network, with cloud or central server functioning as secondary, archive, or failover target.
- D. **FPS:** Frames Per Second.
- E. **H.264:** ITU-T Recommendation H.264 (also known as MPEG-4 Part 10 / AVC) video compression standard.
- F. **H.265 / HEVC:** ITU-T Recommendation H.265 (High-Efficiency Video Coding) compression standard.
- G. **Head-End:** Centralized server, NVR, storage, switching, and management equipment that supports the VSS.
- H. **IP Rating:** Ingress-protection rating per IEC 60529.
- I. **IK Rating:** Impact-protection rating per IEC 62262.
- J. **LPR / ANPR:** License Plate Recognition / Automatic Number Plate Recognition – edge or server analytic that extracts vehicle license-plate text from video.
- K. **Multi-Sensor Camera:** A single camera housing containing two or more independent image sensors, each with its own lens, providing simultaneous coverage of multiple fields of view from a single mounting point and a single network connection.
- L. **NVR:** Network Video Recorder – a server or appliance that receives, indexes, records, and serves IP video streams.
- M. **ONVIF:** Open Network Video Interface Forum – global standardization initiative governing interfaces between IP-based physical-security products.

- N. **PoE / PoE+ / PoE++:** Power over Ethernet (IEEE 802.3af), Power over Ethernet Plus (IEEE 802.3at), and 4-Pair Power over Ethernet (IEEE 802.3bt Types 3 and 4).
- O. **PTZ:** Pan, Tilt, and Zoom camera.
- P. **SoC:** System-on-Chip – integrated processor used in network cameras and recording devices.
- Q. **VMS:** Video Management System – software platform that manages live viewing, recording, playback, alarms, users, and integrations across the VSS.
- R. **VSS:** Video Surveillance System – this entire Section 28 23 00 work.
- S. **WDR:** Wide Dynamic Range – imaging technology that increases the usable dynamic range of a camera scene.

1.05 SYSTEM DESCRIPTION

- A. **General:** Provide a complete, networked IP video surveillance system that captures, transmits, records, displays, retains, and protects video and associated metadata from interior and exterior areas as indicated on the Drawings. Architecture shall be open, standards-based, NDAA Section 889 compliant, and cybersecure.
- B. **Architecture:** The system shall consist of edge devices (network cameras and encoders), one or more managed PoE switches dedicated to the VSS VLAN, video-recording infrastructure (on-premises servers/NVRs, hybrid cloud-archive appliances, or cloud-only recording where specified), VMS software, operator workstations, and integration interfaces to the Access Control System (Section 28 13 00) and other premises systems.
- C. **Three Deployment Models.** The system shall be capable of any of the following deployment models. The selected model shall be coordinated with the Owner and documented in the Submittals:
 - 1. **On-Premises VMS:** VMS server(s), NVR(s), and storage installed in the Owner's facility. All recording, retention, and analytics performed locally. Internet connectivity required only for remote viewing, software updates, and cloud backup.
 - 2. **Hybrid (Cloud-Managed, Edge-Recorded):** Recording occurs at the edge (camera SD/SSD or local appliance). Management plane, configuration, user administration, and selected archive video reside in the manufacturer's cloud platform. Suitable for distributed sites with limited IT staff.
 - 3. **VSaaS (Video Surveillance as a Service / Cloud Recording):** Recording, storage, retention, and management are provided as a subscription cloud service. Local appliances function as a bridge / cyber gateway between cameras and the cloud. Bandwidth and retention sized per the Owner's operational requirements.
- D. **Cybersecurity Posture:** All edge devices, recorders, servers, and cloud services shall enforce signed firmware, secure boot, encrypted transport (TLS 1.2 or later), unique device certificates, multi-factor authentication for administrative access, and role-based access control. All equipment shall be NDAA Section 889 compliant. Cryptographic modules used to protect data in transit and at rest shall be FIPS 140-2 or FIPS 140-3 validated where required by the Owner.
- E. **Performance Objectives:** Unless otherwise indicated:

1. Image resolution: minimum 4 MP (2688 x 1520) for fixed cameras in identification and recognition zones; minimum 2 MP (1920 x 1080) for general detection zones.
 2. Recorded frame rate: 15 fps minimum for general coverage; 30 fps minimum for entries, transaction points, and LPR coverage; configurable to 30 fps per camera.
 3. Recording retention: 30 days minimum continuous recording, expandable to 90 days for designated forensic-priority cameras.
 4. Compression: H.265 with bitrate-control technology (smart codec) shall be the default codec; H.264 fallback permitted only for legacy or compatibility-constrained devices.
 5. Latency, live view: less than 500 ms from camera image acquisition to operator display on the same VLAN.
 6. System availability: 99.5% per month, exclusive of scheduled maintenance windows.
- F. **Coordination With Access Control:** Provide bi-directional integration with the ACS specified in Section 28 13 00 such that access-control events automatically call up live and recorded video and create bookmarks at the time of the event; cardholder records and door schedules shall be searchable from the VMS where supported. Integration shall be by the manufacturer's documented method (REST API, SDK, ONVIF Profile A, or native plug-in).

1.06 ACTION SUBMITTALS

- A. Submit the following in accordance with Section 01 33 00 – Submittal Procedures and Section 28 05 00 – Common Work Results for Electronic Safety and Security:
1. Product data sheets for each camera model, recorder, server, switch, accessory, mount, enclosure, UPS, and software license proposed for the Project.
 2. Manufacturer's NDAA Section 889 compliance statement for each device, recorder, server, and switch.
 3. Camera schedule cross-referenced to floor plans, including model number, location, mounting height, lens / field-of-view, IP/IK rating, PoE class, and assigned channel.
 4. Field-of-view (FOV) study for each camera location: pixels-per-foot at the design Distance-To-Subject (DTS) for both Detect (20 ppf), Recognize (40 ppf), and Identify (80 ppf) zones, prepared by the Contractor or camera manufacturer using a published FOV calculator.
 5. Rack elevation drawings showing each on-premises NVR, server, UPS, switch, PDU, and cable manager.
 6. Block diagram showing camera-to-switch-to-NVR / cloud connectivity, VLAN assignments, recording paths, and integration to the ACS.
 7. Storage calculation worksheet for each NVR or cloud retention bucket, demonstrating compliance with retention requirements based on the as-designed camera schedule, codec, frame rate, and motion percentage.
 8. Network bandwidth calculation per VLAN, per uplink, and per WAN circuit for VSaaS / hybrid deployments.

9. Cybersecurity hardening plan, including default-password change procedure, port-restriction plan, certificate-management plan, firmware update plan, and backup/restore plan.
10. Sample of all labels and identification markings in accordance with Section 27 05 53 and ANSI/TIA-606-D.
11. Where a cloud / VSaaS option is selected: service-level agreement (SLA), data-residency statement, encryption-at-rest statement, data-portability statement, and transition / exit plan.

1.07 INFORMATIONAL SUBMITTALS

A. Submit the following:

1. Qualifications of the Installer and lead technician, including manufacturer certifications for each proposed camera and VMS platform.
2. Installer's company profile and list of three (3) projects of comparable scope and complexity completed in the last five (5) years.
3. Cybersecurity certifications of the proposed platform (e.g., UL 2900-2-3, ISO/IEC 27001 for cloud-hosted services).
4. Manufacturer test reports for each camera model: IP/IK rating, EMC, NDAA compliance, FIPS 140 validation (where claimed).
5. List of cybersecurity vulnerabilities (CVEs) disclosed against proposed firmware versions within the prior 24 months, and the date of resolution for each.

1.08 CLOSEOUT SUBMITTALS

A. Submit prior to Substantial Completion:

1. As-built drawings reflecting final camera locations, model numbers, IP addresses, MAC addresses, recording groups, and PoE-switch port assignments.
2. Final camera FOV / pixels-per-foot study reflecting actual installed conditions.
3. Test reports for each camera: focus, image quality, recording verification, analytic verification, network reachability, and PoE budget.
4. Network test reports per Section 27 15 00 for each VSS cable.
5. Operations and Maintenance (O&M) manuals (electronic, searchable PDF) including:
 - a. Theory of operation for each subsystem.
 - b. Detailed product data and warranty documents.
 - c. User-level operating procedures.
 - d. Administrator-level procedures: user provisioning, role assignment, recording-group editing, schedule editing, firmware-update procedure, backup and restore.
 - e. Cybersecurity reference: account inventory, password-rotation procedure, certificate inventory and rotation procedure, system-event log retrieval, syslog destinations, and incident-response runbook.

- f. Spare-parts list and recommended on-hand spares.
- 6. Software licenses (perpetual or subscription) registered to the Owner; original license certificates.
- 7. Training records and attendance sheets.
- 8. Where a cloud / VSaaS option is selected: cloud-tenant administrator credentials transferred to the Owner; signed data-processing agreement.

1.09 QUALITY ASSURANCE

- A. **Manufacturer Qualifications:** Firms regularly engaged in the manufacture of network video-surveillance equipment of types and capacities indicated, having a documented history of products having been in satisfactory service for a minimum of five (5) years prior to bid. Manufacturer's products specified shall be NDAA Section 889 compliant, ISO/IEC 27001 certified for any hosted services offered, and shall be supported in the United States.
- B. **Installer Qualifications:** Firm authorized by the basis-of-design manufacturer of the proposed VMS platform as a current certified integrator. Installer's lead technician shall be a manufacturer-certified specialist on the proposed VMS, hold a BICSI Installer 2 (INST2) credential or higher, and have a minimum of three (3) years of documented experience with network video systems of comparable scope.
- C. **Regulatory Compliance:** All cameras, recorders, encoders, switches, software, and cloud services provided under this Section shall be NDAA Section 889 / FAR 52.204-25 compliant. Products manufactured by Hangzhou Hikvision Digital Technology Co., Dahua Technology Co., Huawei Technologies Co., Hytera Communications Corp., ZTE Corp., or any subsidiary or affiliate thereof, including OEM-rebranded variants, shall not be acceptable.
- D. **Privacy and Data-Handling Compliance:** Comply with applicable state and federal privacy law governing video surveillance, biometric data (where face- or LPR-based analytics are deployed), and student or patient information where applicable. Provide privacy-mask capability on every camera and a documented procedure for owner-controlled redaction of exported video.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products in manufacturer's original, unopened, undamaged containers with identification labels intact.
- B. Store products indoors in a clean, dry, temperature-controlled space within manufacturer's published storage range. Do not store outdoors.
- C. Handle products with care to avoid damage, abrasion, and impact. Replace products damaged during handling at no additional cost to the Owner.

1.11 PROJECT CONDITIONS

- A. Coordinate work of this Section with other Sections as required to provide a complete and operational system.
- B. Verify field conditions and dimensions prior to installation. Notify the Architect/Engineer in writing of any conditions that would prevent satisfactory installation.

- C. Cameras viewing exterior spaces in cold-climate locations shall be specified with a heater package suitable for sustained operation at the design low temperature.

1.12 WARRANTY

- A. **Manufacturer's Warranty:** Cameras and recording appliances shall carry a minimum 5-year manufacturer's warranty against defects in materials and workmanship. PTZ cameras with mechanical drive trains shall carry a minimum 3-year manufacturer's warranty. Network switches and UPS shall carry the manufacturer's standard warranty, minimum 3 years.
- B. **Installation Warranty:** Installer shall warrant labor and workmanship for one (1) year from Date of Substantial Completion, including on-site response for defects within four (4) business hours of notification by the Owner.
- C. **Software / Cloud Subscription:** Where a subscription-based VMS or VSaaS solution is provided, include first-year subscription cost in the bid for all cameras, sites, retention days, and user seats specified. Subsequent renewals shall be the Owner's responsibility unless otherwise specified.

PART 2 - PRODUCTS

2.01 MANUFACTURERS – BASIS-OF-DESIGN

- A. **Approved Manufacturers:** Provide the equipment and software of one (1) of the following manufacturers. Mixing of camera and VMS manufacturers shall be permitted only where bi-directional certified integration is published and supported by both manufacturers' current release notes. Submit a complete bill of materials and integration certification for review and acceptance.
- B. Approved Camera and VMS Platforms:
 - 1. Axis Communications AB – Cameras (Q, P, M, and F series) and AXIS Camera Station Pro VMS (current release; 6.x as of date of issue). Cloud option: AXIS Cloud Connect.
 - 2. Hanwha Vision America – Wisenet cameras (P, X, Q, and T series) and Wisenet WAVE VMS (on-premises) or Wisenet OnCloud (cloud / VSaaS).
 - 3. LenelS2 (Honeywell) – VRx or NetVR VMS, integrated with the LenelS2 OnGuard or NetBox access-control platform; cameras shall be sourced from the LenelS2 Certified Camera List, including Axis and Hanwha. Cloud option: LenelS2 Elements (cloud-native VMS + access control).
- C. **Substitutions:** Substitutions to the manufacturers listed above shall be submitted in accordance with Section 01 25 00 – Substitution Procedures, and shall demonstrate equivalent or superior performance in image quality, cybersecurity posture, NDAA Section 889 compliance, manufacturer support, and integration capability.

2.02 NETWORK CAMERAS – GENERAL REQUIREMENTS

- A. **Common Requirements:** All network cameras shall comply with the following:
 - 1. NDAA Section 889 compliant; manufacturer-published statement on file.
 - 2. ONVIF Profile S, G, and T conformant; Profile M where on-board analytics are provided.

3. Power: IEEE 802.3af/at/bt Class as required by the device; auxiliary 12 VDC / 24 VAC input only where required by external accessories.
4. Operating temperature: meet or exceed the as-deployed environmental range; exterior cameras minimum -40 deg F to +122 deg F (-40 deg C to +50 deg C).
5. Ingress protection: IP66 minimum for exterior; IP52 minimum for interior.
6. Impact protection: IK10 for cameras installed below 12 ft (3.7 m) AFF in publicly accessible areas; IK08 minimum for all other locations.
7. Codec: H.265, H.264, and MJPEG; manufacturer's bandwidth-reduction technology (smart codec, Zipstream, WiseStream, or equal).
8. Wide Dynamic Range (WDR): 120 dB minimum on cameras viewing scenes with mixed lighting; manufacturer's forensic-grade WDR preferred.
9. Low-light technology: color image to 0.05 lux at f/1.6 or better.
10. Onboard storage: dual microSD/SDHC/SDXC slots, minimum 256 GB capacity each, supporting edge recording and failover.
11. Cybersecurity features: signed firmware, secure boot, TPM 2.0 (FIPS 140-2 Level 2 where claimed), IEEE 802.1X port authentication, HTTPS / TLS 1.2 or later, individual device certificate, and user-account management with strong-password enforcement.
12. Edge analytics: line crossing, intrusion, loitering, object classification (person / vehicle), tamper detection, and audio analytics where audio is provided. AI-based analytics required on identification-zone cameras.
13. Audio (where indicated): bi-directional audio capability with G.711 / G.726 / AAC support and external microphone / speaker input.
14. Cabling and mounting hardware furnished by camera manufacturer (or equal) shall be used where applicable to maintain warranty and weather rating.

2.03 FIXED CAMERAS – INTERIOR

- A. **Interior Dome – 4 MP (Identification Zones):** Indoor IK10 vandal-resistant mini-dome network camera with edge AI analytics, motorized varifocal lens, dual SD-card slots, PoE Class 4, and TPM module.
1. Basis-of-design products:
 - a. Axis: AXIS P3268-LV, AXIS M4318-LVE, or approved equal.
 - b. Hanwha Vision: PNV-A6081R or PNV-A9081R (P-series AI), or approved equal.
 - c. LenelS2: model from the OEM Camera Catalog including Axis or Hanwha models above.
 2. Performance:
 - a. Image sensor: 1/1.8" or larger; 4 MP (2688 x 1520) minimum; 8 MP / 4K available for forensic-priority cameras.
 - b. Lens: motorized varifocal, 3.4-8.9 mm or wider; remote focus and zoom.
 - c. Frame rate: 30 fps minimum at full resolution.

- d. WDR: 120 dB forensic.
- e. Audio: built-in microphone and line-in; speaker line-out.

2.04 FIXED CAMERAS – EXTERIOR

- A. **Exterior Dome / Bullet – 4 MP:** Outdoor IP66, IK10 (dome) or IP66 (bullet) network camera with edge AI analytics, motorized varifocal lens, integrated IR illumination, dual SD-card slots, heater, and PoE Class 4 (or higher per IR requirement).
 - 1. Basis-of-design products:
 - a. Axis: AXIS P3268-LVE (dome) / AXIS P1468-LE (bullet), or approved equal.
 - b. Hanwha Vision: PNO-A6081R / PNO-A9081R (bullet) and PNV-A6081R / PNV-A9081R (vandal dome), or approved equal.
 - c. LenelS2: equivalent product from the OEM Camera Catalog.
 - 2. Performance:
 - a. Image sensor: 1/1.8" or larger; 4 MP minimum, 8 MP/4K for forensic-priority cameras.
 - b. Integrated IR LED: effective range 100 ft (30 m) minimum, adaptive.
 - c. WDR: 120 dB forensic; Lightfinder, X-Lighter, or equivalent low-light enhancement.
 - d. Operating temperature: -40 deg F to +140 deg F (-40 deg C to +60 deg C).
 - e. Surge protection: integrated transient suppression on the Ethernet port and a separately bonded ground lug; comply with NFPA 70 Article 800.

2.05 MULTI-SENSOR CAMERAS

- A. **Multi-Directional Multi-Sensor:** Quad-sensor or four-sensor network camera providing four independent 4 MP image streams from a single mounting point and a single network connection. Suitable for intersections, parking-lot quadrants, building corners, and large-area overviews.
 - 1. Basis-of-design products:
 - a. Axis: AXIS P3727-PLE or AXIS Q3819-PVE, or approved equal.
 - b. Hanwha Vision: PNM-9322VQP or PNM-9085RQZ1, or approved equal.
 - c. LenelS2: equivalent product from the OEM Camera Catalog.
 - 2. Performance:
 - a. Sensors: four (4) independently adjustable image sensors, each minimum 4 MP.
 - b. Aggregate resolution: minimum 16 MP across all sensors.
 - c. Combined coverage: up to 360 degrees of selectable field-of-view.
 - d. PoE: IEEE 802.3bt Class 6 (Type 3) or higher to accommodate combined sensor and heater load.

- B. **Panoramic Single-Sensor (Fisheye):** 360-degree fisheye camera with onboard dewarping for interior corridor, classroom, retail, or open-office overview; minimum 12 MP single sensor.
 - 1. Basis-of-design products: AXIS M4327-P, Hanwha PNF-A9311RV, or approved equal LenelS2 catalog equivalent.

2.06 PTZ CAMERAS

- A. **Standard PTZ:** Pan-tilt-zoom dome network camera with 360-degree continuous rotation, integrated IR or white-light illumination, and on-board AI auto-tracking.
 - 1. Basis-of-design products:
 - a. Axis: AXIS Q6135-LE or AXIS Q6225-LE, or approved equal.
 - b. Hanwha Vision: XNP-9250R or XNP-C9303RW, or approved equal.
 - c. LenelS2: equivalent product from the OEM Camera Catalog.
 - 2. Performance:
 - a. Resolution: 4 MP minimum at 30 fps.
 - b. Optical zoom: 25x minimum.
 - c. IR or white-light illumination: 750 ft (230 m) range adaptive.
 - d. Preset positions: 256 minimum; configurable tours and guard tours.
 - e. PoE: IEEE 802.3bt Class 6 (Type 3) or higher; high-PoE midspan permitted where the connected switch port is limited.
 - f. Speed: 700 deg/s preset pan minimum; auto-tracking shall maintain target lock with sub-second response to motion within the scene.

2.07 SPECIALTY CAMERAS

- A. **License Plate Recognition (LPR) Camera:** Dedicated LPR camera with onboard LPR engine, license-included regional database, and event-output to the VMS.
 - 1. Basis-of-design products: Hanwha PNO-A9081RLP or PNV-A9081RLP (Wisenet Road AI LPR), Axis P1468-LE with AXIS License Plate Verifier, or approved equal.
 - 2. Performance: minimum 4K resolution at 30 fps, dedicated narrow field of view, configurable plate-region database for North America.
- B. **Thermal Camera (Where Indicated):** Long-wave-infrared thermal network camera for perimeter detection in zero-light conditions.
 - 1. Basis-of-design products: Axis Q1951-E / Q2901-E, Hanwha TNO-3050T / TNO-7180TRP, or approved equal LenelS2-listed thermal product.

2.08 NETWORK VIDEO RECORDING – ON-PREMISES OPTION

- A. **Recording Server / NVR:** Server-class rack-mount network video recording appliance with redundant power supplies, hot-swappable hard drives, hardware RAID controller (RAID 5 minimum, RAID 6 for storage greater than 48 TB), iLO/IDRAC-class out-of-band management, and TPM 2.0.
 - 1. Basis-of-design appliances:

- a. Axis: AXIS Camera Station S22 / S24 / S26 Appliance series.
 - b. Hanwha Vision: Wisenet WAVE WRR-P-S2xxx series (e.g., WRR-P-S205W) or WRR-Q rack-mount.
 - c. LenelS2: NetVR or VRx appliance from the current series price list.
2. Sizing:
- a. Sized to the as-designed camera count plus 25 percent spare channel capacity.
 - b. Storage sized to retention requirement per Article 1.05, with capacity calculations submitted per Article 1.06.
 - c. Network ports: minimum two (2) 10 GbE uplinks to the VSS switch; out-of-band management on a separate 1 GbE port.
 - d. Power: redundant 80-PLUS Platinum or Titanium PSUs; total UPS-supported AC load including 25 percent margin.
- B. **Storage Architecture:** Provide on-board RAID storage for primary recording. For systems exceeding 100 cameras or 96 TB of effective capacity, provide a separate iSCSI / SAS attached storage shelf in the same rack.
- C. **Hard Drives:** Manufacturer-qualified, surveillance-grade hard drives (WD Purple Pro, Seagate SkyHawk AI, or manufacturer-equivalent), minimum 8 TB each; minimum five (5) year manufacturer warranty per drive. Provide one (1) on-site hot spare per RAID group.

2.09 NETWORK VIDEO RECORDING – HYBRID CLOUD-MANAGED OPTION

- A. **Architecture:** Where the Owner elects the hybrid deployment model per Article 1.05.C.2, provide an edge-recording solution: cameras record continuously to internal SD/SSD storage (256 GB minimum each, dual cards); management plane is the manufacturer's cloud service. Provide a cloud-bridge appliance per site where total camera count exceeds the cloud-direct connectivity limit of the chosen platform.
- B. Basis-of-design hybrid services:
- 1. Axis Cloud Connect with AXIS Camera Station Edge.
 - 2. Hanwha Vision OnCloud (cloud-managed, edge-recorded).
 - 3. LenelS2 Elements (cloud-native access control and video, integrated).

2.10 NETWORK VIDEO RECORDING – VSAAS FULL-CLOUD OPTION

- A. **Architecture:** Where the Owner elects the VSaaS deployment model per Article 1.05.C.3, provide cloud-recorded video surveillance: video transported from a cloud-bridge appliance to a hosted, multi-tenant or single-tenant cloud-recording infrastructure. Local appliance buffers video during WAN outages and uploads upon restoration.
- B. Basis-of-design VSaaS services:
- 1. Axis Cloud Connect with full cloud-recording service tier.
 - 2. Hanwha Vision OnCloud with cloud-recording subscription tier.
 - 3. LenelS2 Elements with cloud-recording subscription.

C. VSaaS Service Requirements:

1. **Encryption:** video and metadata encrypted in transit (TLS 1.2 or later) and at rest (AES-256).
2. **Authentication:** Single Sign-On (SAML 2.0, OIDC, or Microsoft Entra ID integration), multi-factor authentication, role-based access control.
3. **Geographic data residency:** video and metadata shall be stored in U.S. data centers; service provider shall identify the data-center provider (e.g., AWS, Azure, GCP) and the primary and secondary regions.
4. **Cybersecurity certifications:** ISO/IEC 27001 and SOC 2 Type II for the hosted service.
5. **Data portability:** at the Owner's request and at the end of the subscription term, the service provider shall provide a method for bulk export of recorded video in a non-proprietary format (MP4 or MKV with H.264/H.265 elementary streams) on standard media or via secure download. Vendor lock-in by proprietary container format alone shall not be acceptable.
6. **Service Level Agreement:** 99.9 percent service availability per month exclusive of scheduled maintenance; documented support response times.
7. **Camera bandwidth:** provide bandwidth-management features (per-camera streaming bitrate caps, scheduling, and store-and-forward) suitable for the available WAN circuit.
8. **Retention:** minimum 30 days as specified; offered higher-retention tiers shall be available.

2.11 VIDEO MANAGEMENT SYSTEM (VMS)

- A. **General:** Provide the VMS software corresponding to the selected manufacturer per Article 2.01, in the currently shipping version at time of project award. Manufacturer's standard Owner-facing maintenance / Software Update Plan (SUP) shall be included for the first year.
- B. VMS Functional Requirements:
 1. Live view of all cameras with operator-configurable layouts; minimum 16 cameras per pane, 64 cameras per screen.
 2. Synchronized multi-camera playback of recorded video, with audio.
 3. Search by time, camera, event, alarm, motion region, and metadata (object class, color, attribute).
 4. Bookmarks (manual and auto-on-event), export to MP4, AVI, or native format with chain-of-custody hash and watermark.
 5. Map / GIS view supporting drag-and-drop placement of camera and door icons, with live status.
 6. Active Directory / LDAP / SAML / OIDC integration for user authentication; multi-factor authentication for administrative accounts.
 7. Role-based permissions: minimum five (5) role tiers (super-admin, admin, operator, view-only, audit-only).

8. Audit log: complete log of user logons, video views, exports, configuration changes, and analytic events. Audit log shall be exportable to syslog and tamper-evident.
 9. Mobile and web clients: iOS, Android, and HTML5 web clients with the same authentication and role enforcement as the desktop client.
 10. API: REST or SDK for integration; bi-directional integration to the ACS specified in Section 28 13 00.
 11. Health monitoring: per-camera, per-recorder, and per-storage status with alerts on degradation.
 12. Failover / redundancy: N+1 server failover for camera count exceeding 100 cameras; daily configuration backup.
 13. Cybersecurity: signed installers, TLS 1.2 or later for all client-server traffic, automated firmware push to cameras with cryptographic verification.
- C. **VMS License Quantities:** Provide a license per camera in the as-designed camera schedule, plus 25 percent spare channel capacity. Provide at minimum the number of operator-workstation seats indicated on the Drawings or in the Workbook (companion document).

2.12 VIDEO ANALYTICS

- A. **Edge Analytics:** Each camera provided under this Section shall include the manufacturer's standard edge-analytic suite, with at minimum: motion / pixel-change detection, tamper detection, line crossing, zone intrusion, loitering, object classification (person, vehicle), and sound classification (where the camera includes a microphone).
- B. **AI / Deep-Learning Analytics:** Identification-zone cameras shall additionally provide: BestShot or equivalent re-identification, vehicle-attribute extraction (color, type), face-attribute extraction (where lawful and authorized by the Owner), and metadata streaming for forensic search in the VMS.
- C. **Disabling Conditions.** The Contractor shall disable face-recognition analytics by default and shall enable face-related features only on written authorization of the Owner. Any use of biometric analytics shall comply with applicable state privacy law.

2.13 NETWORK INFRASTRUCTURE FOR VSS

- A. **Managed Ethernet Switch:** Layer 2+ managed Ethernet switch with PoE+ / PoE++ ports sized to the as-designed camera load plus 20 percent spare PoE budget and 25 percent spare port count.
 1. Basis-of-design: Cisco Catalyst 9200-L / 9300, Juniper EX2300 / EX3400, Aruba CX 6200 / 6300, Netgear M4250 / M4350, or approved equal that meets the Owner's IT standard.
 2. Required features: 802.1Q VLAN tagging, 802.1X port authentication, port-based MAC limit, IGMP snooping, LACP, jumbo frame, SNMP v3, RADIUS / TACACS+, NTP, syslog.
 3. PoE: per-port budgeting; 802.3bt Type 3 / Type 4 ports allocated to PTZ and multi-sensor cameras.
 4. Uplinks: dual 10 GbE SFP+ to the core / NVR; LACP aggregation.

- B. **VLAN Segmentation:** Provide a dedicated VSS-VLAN routed only to the NVR, VMS server, and operator workstations. Cameras shall not be reachable from end-user networks except via the VMS proxy.
- C. **Cabling:** Category 6A 4-pair UTP or shielded cabling per Section 27 15 00, terminated with manufacturer-rated RJ-45 jacks and supporting IEEE 802.3bt Type 4 (90 W). Plenum-rated CMP / OFNP where required by NEC. Multi-mode (OM4) or single-mode fiber where distances exceed 295 ft (90 m) channel.
- D. **Surge Protection:** Provide UL-listed Ethernet surge protection devices on every cable that leaves the building envelope or crosses between buildings, in accordance with NFPA 70 Article 800 (or Chapter 8 / Article 750 per the adopted NEC). Bond surge protectors to the telecommunications grounding bus per Section 27 05 26.

2.14 OPERATOR WORKSTATIONS AND DISPLAYS

- A. **Operator Workstation:** PC workstation with VMS-manufacturer-recommended specification for the as-designed channel count and display configuration, minimum 32 GB RAM, 1 TB NVMe SSD, discrete GPU sufficient to drive the connected displays at 30 fps without frame loss, dual 1 GbE NICs, and a UPS-supported power inlet. Windows 11 Pro 64-bit or current manufacturer-supported equivalent.
- B. **Displays:** Commercial-grade LCD or LED monitors, minimum 27" diagonal, 4K (3840 x 2160) resolution, IPS or VA panel, 24/7 rated for monitoring applications. Mount on swing-arm or VESA wall-mount as indicated.
- C. **Video Wall (Where Indicated):** Provide manufacturer's video-wall decoder or controller (e.g., AXIS T8705, Hanwha SPD-152, LenelS2 Magic Monitor) and associated displays per the Drawings. Coordinate with Section 27 41 16 where applicable.

2.15 POWER AND UNINTERRUPTIBLE POWER SUPPLY (UPS)

- A. **Dedicated Branch Circuit:** VSS head-end shall be powered from a dedicated 20 A isolated-ground branch circuit (or 30 A where indicated for larger NVR / storage loads), terminated in a NEMA L5-30R or equivalent twist-lock receptacle. Coordinate with Division 26.
- B. **UPS:** Provide a rack-mount lithium-iron-phosphate (LiFePO4) UPS sized to support the head-end (NVR + switch + workstation) for a minimum of 30 minutes at full load and 4 hours for life-safety-related cameras (perimeter and egress paths). Sealed lead-acid (VRLA / SLA) chemistry is not acceptable.
 - 1. Required features: online double-conversion topology, output power factor 1.0, SNMP v3 management card, dry contact and USB notification, hot-swappable batteries, end-of-life self-test, automatic transfer time less than 4 ms.
 - 2. Basis-of-design: Eaton 9PX Li-ion, CyberPower PRL3000RT2UC, Vertiv Liebert PSI5 (LiFePO4 variant), or approved equal.
- C. **PoE Power Budget:** Size each managed switch PoE budget to support the sum of connected device classes plus 20 percent margin. Where high-PoE (Type 3 / Type 4) cameras exceed switch budget, provide manufacturer-listed midspan PoE injectors.

2.16 IDENTIFICATION

- A. Label all cameras, recorders, switches, patch panels, jacks, and cables in accordance with Section 27 05 53 and ANSI/TIA-606-D, using the Owner's labeling scheme. Provide laminated camera-location plan diagrams at each NVR location.

2.17 ENCLOSURES, MOUNTS, AND ACCESSORIES

- A. **General:** Provide the manufacturer's mounting brackets, pole adapters, corner mounts, parapet mounts, and recessed-ceiling adapters required for each camera location. Painted finishes shall be color-matched to the adjacent surface where indicated by the Architect.
- B. Outdoor pole-mount cameras shall include a pole-mount adapter and back-box rated for the IP and IK requirements of the exposed environment.
- C. Furnish manufacturer's recommended lightning / surge protection at each pole-mount or building-to-building exposed-cable location.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify field conditions are acceptable and that all required pathways (Section 27 05 28), equipment-room provisions (Section 27 11 00), grounding (Section 27 05 26), and electrical service (Division 26) are in place prior to commencing work.
- B. Examine each camera location and verify that the proposed mounting surface is suitable; coordinate with the Architect/Engineer if alternate backing or blocking is required.
- C. Verify network paths and conduit sizes will accommodate Category 6A cabling and PoE bundle de-rating in accordance with ANSI/TIA TSB-184-A.

3.02 INSTALLATION – GENERAL

- A. Install in accordance with the manufacturer's published instructions, the listing of the device, and the applicable provisions of NFPA 70, ANSI/BICSI N1, ANSI/BICSI N2, ANSI/BICSI N3, and ANSI/BICSI 007-2020.
- B. Provide cable supports at intervals not exceeding 60 in (1.5 m) per NFPA 70 Article 800 / Chapter 8 (as applicable to the adopted edition).
- C. Maintain bend-radius and pulling-tension limits published by the cable manufacturer.
- D. Plenum cable (CMP / OFNP) where required by NEC; otherwise riser (CMR / OFNR) within building risers; CM general purpose only in unconcealed spaces below 7 ft (2.1 m) AFF.
- E. Bond all metallic raceways, equipment racks, and surge-protection devices to the Telecommunications Grounding Busbar (TGB) or PBB per Section 27 05 26 and ANSI/TIA-607-E.
- F. Maintain TIA-569-E separation between low-voltage cabling and Class 1 power, including parallel-run distances and crossings.

3.03 INSTALLATION – CAMERAS

- A. Install each camera at the location, mounting height, and orientation indicated on the Drawings, adjusting field-of-view to confirm the design pixels-per-foot at the design distance-to-subject. Use a sample target during commissioning to verify.
- B. Tighten mounting hardware to manufacturer's published torque values. Apply manufacturer-recommended thread-lock compound to fasteners exposed to vibration or mechanical impact.
- C. Pole-mount and corner-mount cameras shall be secured with all manufacturer-supplied hardware; pole banding shall be stainless steel rated to the pole diameter.
- D. Outdoor cameras shall be sealed at the cable entry with the manufacturer's gasket or equivalent silicone bead to maintain IP rating.
- E. Bond each metallic camera enclosure and any exposed metal pole or mast to the telecommunications grounding system.

3.04 NETWORK AND SYSTEM PROGRAMMING

- A. Configure each camera with: unique strong password; HTTPS / TLS 1.2 or later; 802.1X authentication where the network supports it; NTP synchronization to the Owner's time source; SNMPv3 (where used) with unique community and authentication credentials; SYSLOG forwarding to the Owner's SIEM (where deployed).
- B. Disable unused services and ports on each device, including but not limited to: Telnet, FTP, UPnP, multicast discovery (Bonjour, mDNS), and HTTP (in favor of HTTPS).
- C. Configure recording groups, retention policies, alarm rules, schedules, user accounts, and role assignments per the Owner's operational requirements and the as-designed camera schedule.
- D. Establish bi-directional integration with the ACS per Section 28 13 00. Verify door-event-to-camera mapping for every controlled door.
- E. Configure all firmware to the most-current manufacturer release as of the date of Substantial Completion. Document firmware versions for each device.

3.05 FIELD QUALITY CONTROL

- A. Perform manufacturer's published commissioning procedure for each device, the VMS, and the head-end servers. Document results in the Closeout Submittal.
- B. **Tests Required for Each Camera:**
 - 1. Visual: confirm mounting, alignment, gasket, and labeling.
 - 2. Image: capture day and night reference images; confirm focus, exposure, and white balance.
 - 3. FOV: verify design pixels-per-foot at design distance using a calibrated test pattern or pylon-target.
 - 4. Recording: verify 24-hour continuous recording with no dropped frames; confirm motion-event recording.
 - 5. Analytics: validate each configured edge analytic with a representative test scenario.

6. Network: confirm 802.1X authentication (where deployed), TLS handshake, and reachability.
 7. PoE: confirm switch-port power class and load is within budget.
- C. **Tests Required at the Head-End / Cloud:**
1. Storage retention: project storage to design retention and confirm RAID health.
 2. Failover: where N+1 redundancy is provided, demonstrate live failover and recovery.
 3. UPS load test: full transfer test demonstrating runtime per Article 2.15.B.
 4. Cloud / VSaaS: confirm encryption, MFA, and data-residency through the manufacturer's published verification report.
- D. **ACS Integration Test:** Trigger a series of access-control events (valid, invalid, forced-door, door-held-open) at a representative sample of doors and confirm correct video call-up and bookmarking in the VMS.

3.06 COMMISSIONING

- A. Cooperate with the Commissioning Authority (Cx) and the Owner during functional performance testing. Provide trained technicians for the duration of Cx testing.
- B. Demonstrate end-to-end functionality: live view, recording, search, export, alarm, integration, and remote-access.
- C. Demonstrate cybersecurity posture: certificate validity, password strength, account inventory, audit-log capture, firmware version.
- D. Provide a 30-day burn-in / soak-test period beginning at Substantial Completion. Address any defects identified prior to Final Acceptance.

3.07 TRAINING

- A. Provide a minimum of two (2) instructor-led training sessions for the Owner's personnel, conducted at the Project site by manufacturer-certified trainers.
 1. **Operator Training:** eight (8) hours covering daily operation, live view, playback, search, export, and incident response.
 2. **Administrator Training:** sixteen (16) hours covering user provisioning, role configuration, system maintenance, backup / restore, firmware update, cybersecurity hygiene, and report generation.
- B. Video-record each session and provide an electronic copy to the Owner as part of the Closeout Submittal.

3.08 CLEANING AND CLOSEOUT

- A. Clean lenses, domes, and enclosures using manufacturer's recommended cleaning agents prior to Substantial Completion.
- B. Remove from the Project site all packaging materials, scrap, and surplus, and dispose in accordance with Section 01 74 19.
- C. Provide a final walk-through with the Owner; correct deficiencies prior to requesting Final Acceptance.

END OF SECTION 28 23 00

1

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3

4

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6

7

ROOM FINISH SCHEDULE

ROOM No.	ROOM NAME	FLOOR	BASE	WALLS				CEILING	REMARKS
				N	S	E	W		
118	CORRIDOR	VCT-1	RB-1	P-1	P-2	P-1	P-2	APC-1	
119	SHOWER	PT-1	PTWB-1	P-2	P-2	PT-1	P-2	APC-2	
120	ADA SHOWER	PT-1	PTWB-1	P-2	P-2	PT-1	P-2	APC-2	
122	TITLE III WIRE TAP ROOM	LVP-1	RB-1	P-2	P-2	P-2	P-2	APC-1	
123	CORRIDOR	VCT-1	RB-1	P-2	P-2	P-2	P-1	APC-1	
124	GARAGE AREA	EX	RB-1	P-2	P-2	P-2	P-2	GYP - PAINT P-3	
125	INTERVIEW ROOM	CPT-1	RB-1	P-2	P-2	P-2	P-2	APC-1	
126	INTERVIEW ROOM	CPT-1	RB-1	P-2	P-2	P-2	P-2	APC-1	
127	FOYER	VCT-1	RB-1	P-2	P-2	P-2	P-1	APC-1	
128	MECHANICAL ROOM	CPT-1	RB-1	P-2	P-2	P-2	P-2	APC-1	
129	K9 OFFICE	CPT-1	RB-1	P-2	P-2	P-2	P-2	APC-1	
130	SECURE EVIDENCE STORAGE	VCT-1	RB-1	P-2	P-2	P-2	P-2	APC-2	

ROOM FINISH SCHEDULE REMARKS

No.	REMARK
1	

MATERIAL LEGEND

ITEM	MATERIAL	MANUFACTURER	MATERIAL MODEL NO.	CONTACT INFO	COLOR	FLAME / SMOKE	REMARKS
BASE							
EX	EXISTING						
PTWB-1	PORCELAIN TILE WALL BASE	DALTILE	COHESION, 12"x24" x 3/8" THICK MATTE FINISH		CO26 DARK GRAY		CUT TO 6" X 24" WITH SCHLUTER TRIM RONDEC
RB-1	RUBBER BASE	JOHNSONITE	COVE.BASE - 4 1/2"	TRISHA ROE-KEEL, 313.207.5309	20 CHARCOAL		
CABINETS							
SSM-1	SOLID SURFACE	WILSONART		RANDI CALETTI-GARRIS, 614.363.9737	9074EA - BLUESTONE		
CEILING							
APC-1	ACOUSTIC PANEL CEILING	ARMSTRONG	OPTIMA 3354 24" x 24"	JENN McCOY, 519.919.2263	WHITE		
APC-2	ACOUSTIC PANEL CEILING	USG SHEETROCK BRAND	LAY-IN GYPSUM CEILING PANEL CLIMAPLUS 3260 24"x24"		WHITE		
EX	EXISTING						
GYP / P-3	GYPSUM BOARD PAINTED	SHERWIN WILLIAMS	SW 7009 EGGSHELL FINISH	KAREN MCILWIAN, 317.714.5610	PEARLY WHITE		
DOORS							
DEP-3	DOOR & FRAME PAINT	SHERWIN WILLIAMS	SW 7009 EGGSHELL FINISH	KAREN MCILWIAN, 317.714.5610	PEARLY WHITE		
FLOOR							
CPT-1	CARPET TILE	INVISION CARPET TILE	7025 FICTION MODULAR 24"x24"		1775 IRONY	CLASS 1 <450	
EX	EXISTING						
LVP-1	LUXURY VINYL PLANK	SHAW CONTACT	SOLITUDE 0648V - 6"x48" PLANK	LAUREN HILLNER, 513.581.0321	SMOKE 48506	CLASS 1 <450	
PT-1	PORCELAIN TILE	DALTILE	COHESION 12"x24" x 3/8" THICK MATTE FINISH		CO26 DARK GRAY		
VCT-1	ARMSTRONG	EXCELRON VCT TILE	VCT TILE 12" X 12"		51881 - BLUE BERRY		
WALL							
EX	EXISTING						
P-1	PAINT	SHERWIN WILLIAMS	SW 6516 EGGSHELL FINISH	KAREN MCILWIAN, 317.714.5610	DOWN POUR		ACCENT PAINT
P-2	PAINT	SHERWIN WILLIAMS	SW 0055 EGGSHELL FINISH	KAREN MCILWIAN, 317.714.5610	LIGHT FRENCH GREY		WALL PAINT COLOR
P-3	PAINT	SHERWIN WILLIAMS	SW 7009 SEMI GLOSS FINISH	KAREN MCILWIAN, 317.714.5610	PEARLY WHITE		DOOR FRAME PAINT COLOR
PWT-1	PORCELAIN TILE	DALTILE	12"x24" x 5/16" THICK MATTE FINISH		PR85 FABRIQUE BLANC LINEN		

TYP. SHOWER RECEPTOR DETAIL SECTION

1 1/2" = 1'-0"

TYP. SHOWER RECEPTOR DETAIL

1 1/2" = 1'-0"

2

3

4

5

6

7

INTERIOR WALL TYPES SCHEDULE

TYPE	BASE WALL WIDTH	FIRE RATING TESTING AGENCY, ASSEMBLY NO.	DETAILS & NOTES
A1	3 5/8"	-	
A2	3 5/8"	-	
A3	3 5/8"	-	
C1	7/8"	-	
C2	1 1/2"	-	

GENERAL NOTES

A. MOISTURE/MOLD RESISTANT GYPSUM BOARD SHALL BE USED BEHIND ALL SINKS, SERVICE SINKS. EXTEND MINIMUM 24" BEYOND PLUMBING FIXTURES.

B. PROVIDE & INSTALL DEFLECTION TRACK AT ALL INTERIOR WALLS THAT EXTEND TO DECK.

C. DRYWALL CONTRACTOR TO PAINT WALL RATINGS LABELS AT MAXIMUM 12 FEET O.C. ON ALL FIRE RATED PARTITIONS. LABEL TO BE PAINTED ABOVE CEILING WITH A STENCIL MIN. OF 4 INCHES IN HEIGHT, BLACK COLOR.

D. STEEL STUD PARTITIONS SHALL BE BRACED TO STRUCTURE ABOVE.

E. REFER TO FLOOR PLANS FOR LOCATIONS OF INTERIOR PARTITION TYPES.

F. REFER TO THIS SHEET FOR TYPICAL INTERIOR PARTITIONS DETAILS.

G. APPLY ACOUSTICAL SEALANT AT ENTIRE PERIMETER OF ALL GYPSUM BOARD PARTITIONS.

H. EXISTING BUILDING FLOOR TO FLOOR HEIGHTS FOR AREAS OF WORK:
- FIRST FLOOR TO ROOF: APPROXIMATELY 14'-1"

App Architecture

creative focused design

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www.app-arch.com

STATE OF OHIO

TIMOTHY J. BEHMENT

12/05

RECEIVED

Timothy J. Behment, License #12905
Expiration Date 12/31/2027

BUILDING RENOVATION

ATF DAYTON FIELD OFFICE

RENOVATION PHASE 2

4770 HEMPSTEAD STATION DR. DAYTON, OH 45429

ISSUE

NO.	DATE	DESCRIPTION
	08/31/26	FOR CONSTRUCTION
1	09/18/26	ADDENDUM 1
2	09/24/26	ADDENDUM 2

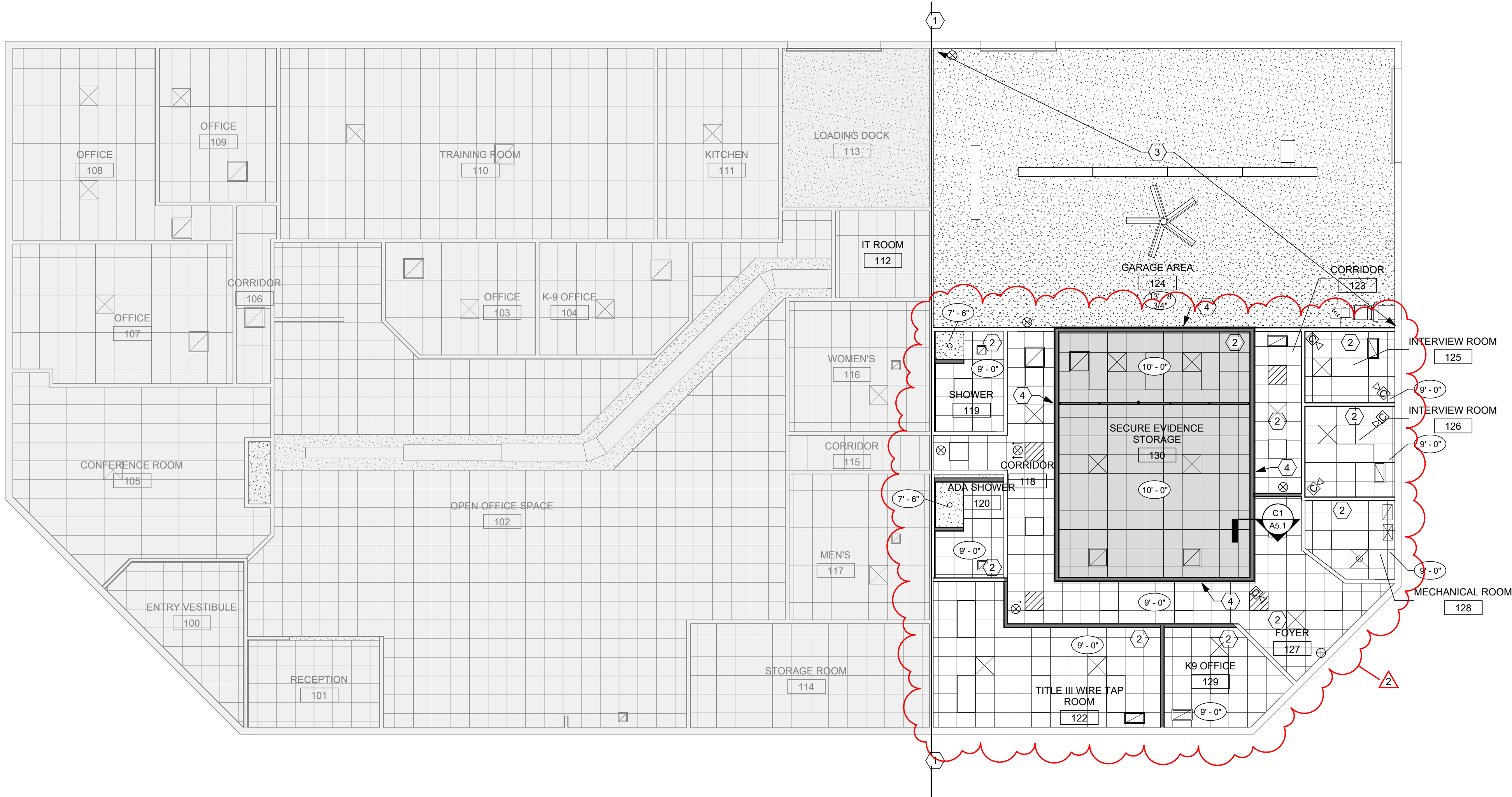
TITLE

FINISH SCHEDULES, WALL TYPES AND DETAILS

SHEET NO.

A0.2

09/24/2026 8:48:10 AM



F1 PROPOSED REFLECTED CEILING PLAN
1/8" = 1'-0"

CONSTRUCTION NOTES

- 00 INDICATES CONSTRUCTION NOTE.
- 1 NO ARCHITECTURAL WORK WEST OF MATCH LINE.
 - 2 NEW ACOUSTICAL PANEL CEILING AND GRID.
 - 3 NEW GYPSUM BOARD CEILING ATTACHED DIRECTLY TO EXISTING GARAGE CEILING. PAINT.
 - 4 SHADED AREA REPRESENTS MESH CEILING ABOVE APC CEILING. EXTEND MESH 2" PAST PARTITION OUTSIDE OF ROOM 130. REFER TO DETAIL C1/A5.1.

GENERAL NOTES

- REFER TO ROOM FINISH SCHEDULE AND MATERIALS LEGEND AND SPECIFICATIONS FOR CEILING TYPES AND FINISHES.
- MEASURE CEILING LAYOUT GRIDS TO BALANCE BORDER WIDTHS AT OPPOSITE EDGES. BORDER TILES TO BE 3" MINIMUM U.N.O. INSTALL EDGE MOLDING AT PERIMETER U.N.O. AND CAULK ANY GAPS AT WALL.
- REFER TO PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR DEVICE DESCRIPTIONS.
- ALL EXPOSED GYPSUM BOARD TO BE PAINTED.

ISSUE		
NO.	DATE	DESCRIPTION
08/31/26	FOR CONSTRUCTION	
1	09/18/26	ADDENDUM 1
2	09/24/26	ADDENDUM 2

DATE	08/31/26
JOB NO.	4301.01
DRAWN	AHB
CHECKED	TJB
COPYRIGHT © 2026 - App Architecture, Inc.	
TITLE REFLECTED CEILING PLAN	

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A

B

C

D

E

F

A

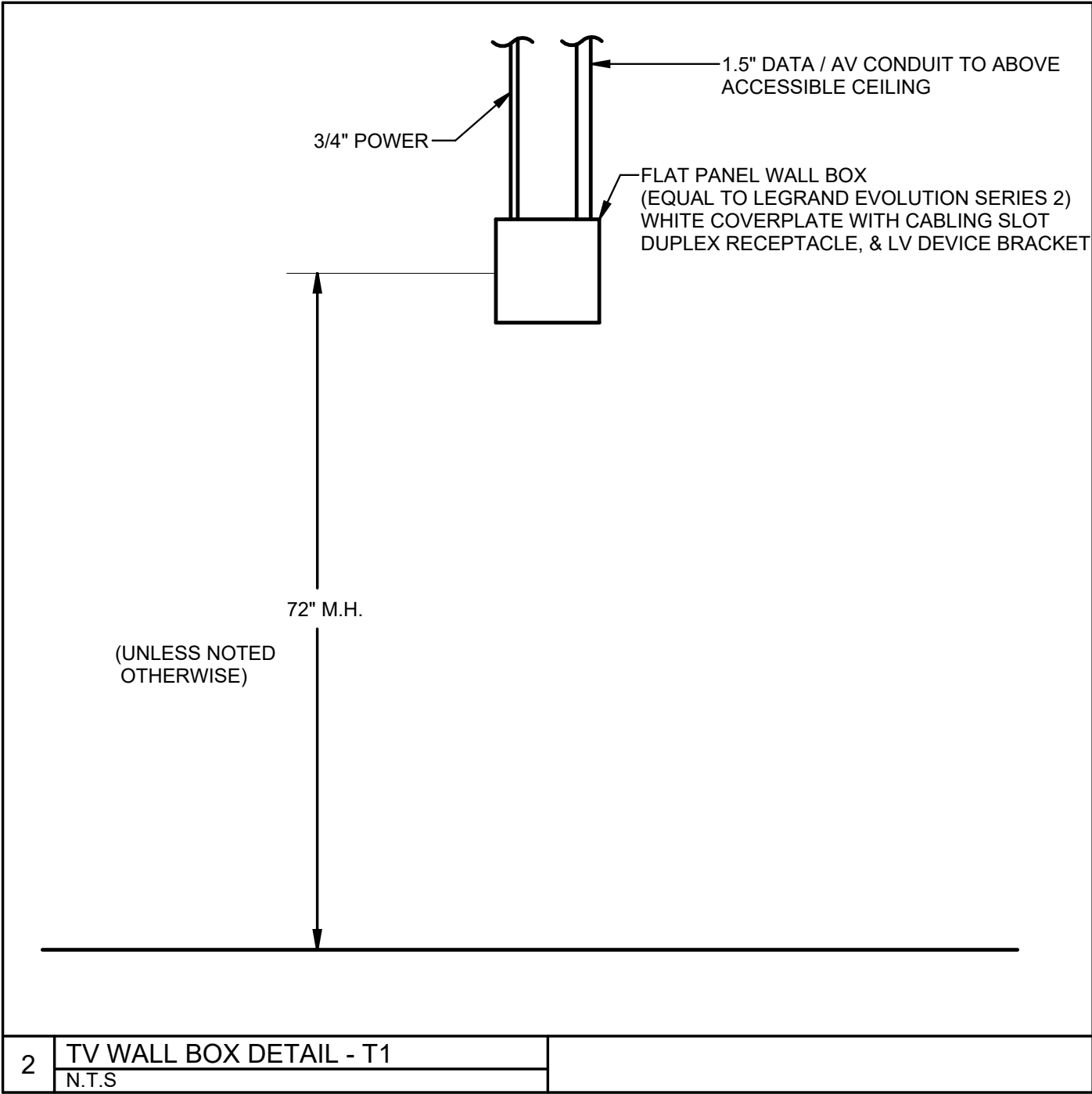
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C

D

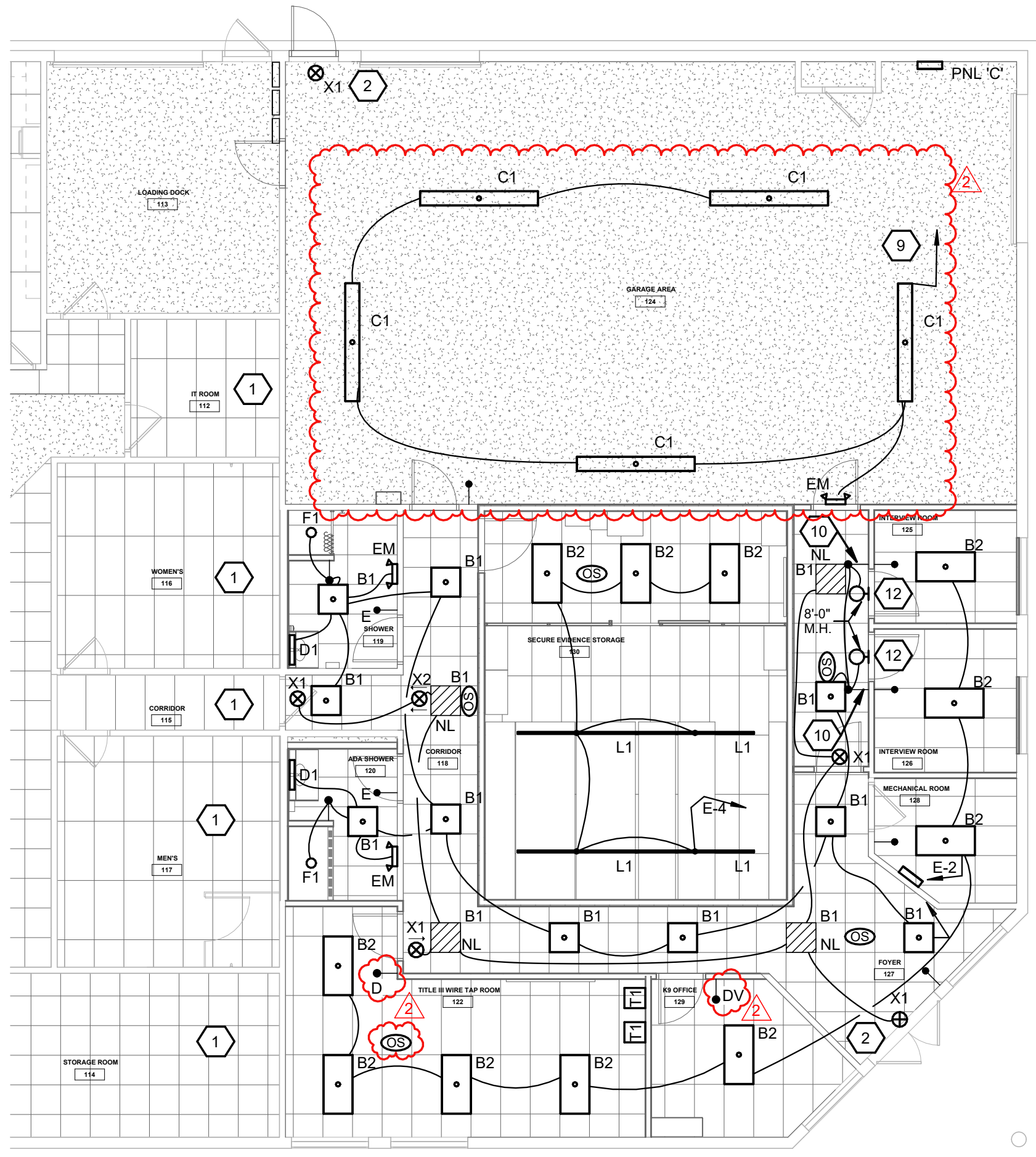
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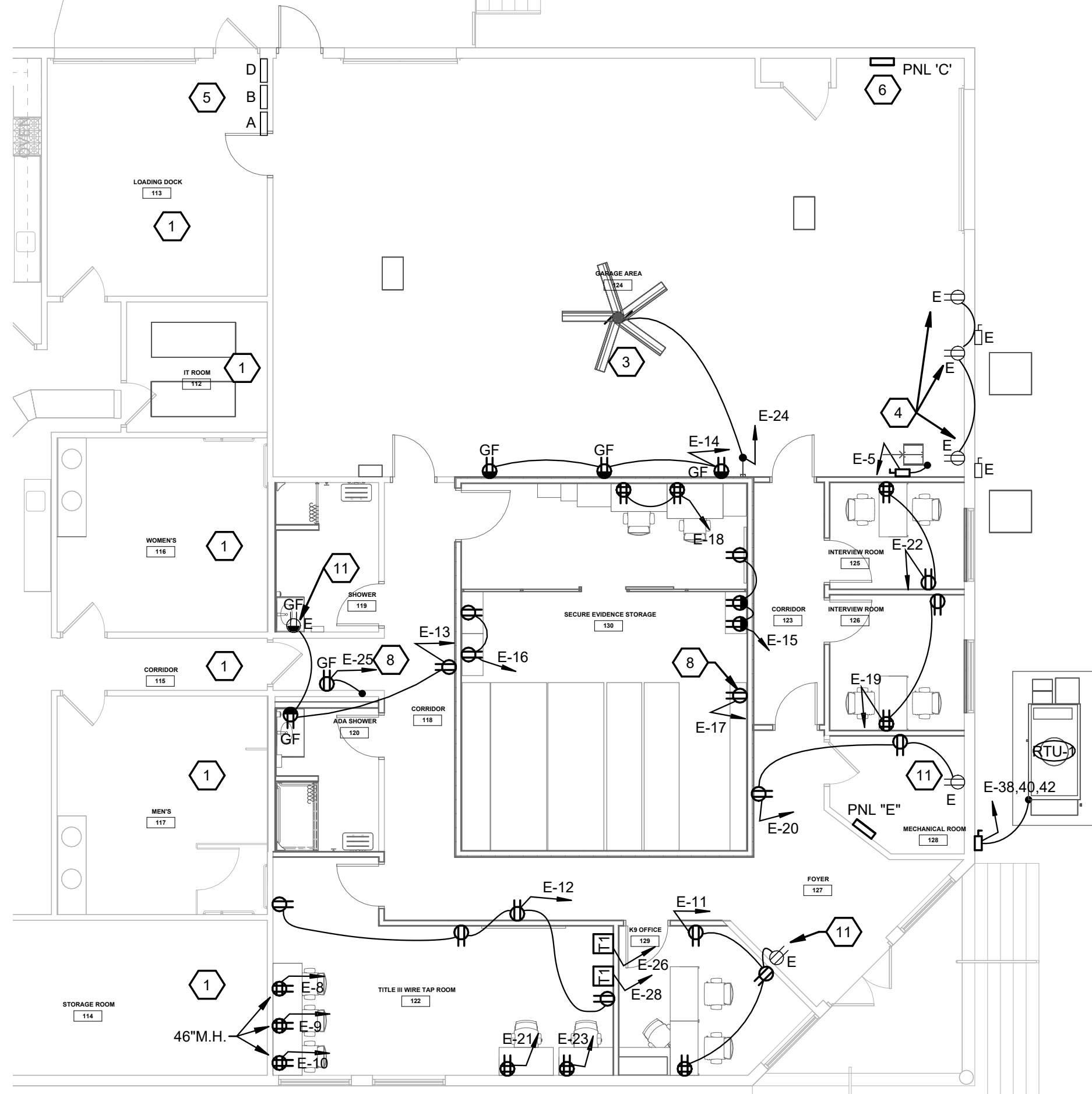


Branch Panel: C					Construction: New/Replacement					System: Normal Power							
LOCATION: GARAGE AREA 124					MOUNTING: Flush					A.I.C RATING							
SUPPLY FROM:					ENCLOSURE: Type 1					MAINS TYPE: M.C.B.							
VOLTAGE: 120/208 Wye-3-4					MCB RATING: 200 A					MAINS RATING: 200 A							
CKT	Description	Trip	Poles	Note	A		B		C		Note	Poles	Trip	Description	CKT		
1	Recpt. N. Wall	20 A	1	2	0 VA	0 VA					2	1	20 A	EXIST LOAD	2		
3	LTS.	20 A	1	2			0 VA	0 VA			2	1	20 A	EXIST LOAD	4		
5	LTS.	20 A	1	2					0 VA	0 VA	2	1	20 A	LTS.	6		
7	LTS.	20 A	1	2	0 VA	0 VA					2	1	20 A	LTS.	8		
9	Micro	20 A	1	2			0 VA	0 VA			2	1	20 A	OH Door E	10		
11	EXT. LTS.	20 A	1	2					0 VA	0 VA	2	1	20 A	Recpt Comp	12		
13	Recpt Kltc	20 A	1	2	0 VA	0 VA					2	1	20 A	Recpt	14		
15	Recpt Lobby	20 A	1	2			0 VA	0 VA			2	1	20 A	Recpt	16		
17	OH Door N	20 A	1	2					0 VA	0 VA	2	1	20 A	Recpt	18		
19	OH Door W	20 A	1	2	0 VA	0 VA					1	20 A	Bench Recpt	20			
21	S	20 A	1	2			0 VA	0 VA			2	20 A	Bench Recpt	22			
23	AC	30 A	2	2					0 VA	0 VA	--	--	--	24			
25	--	--	--	--	0 VA	0 VA					3	30 A	Spare	26			
27	TimeClock	15 A	1	2			0 VA	0 VA			--	--	--	28			
29	EXT. LTS.	20 A	1	2					0 VA	0 VA	--	--	--	30			
31	EXT. LTS.	20 A	1	2	0 VA	0 VA					2	2	30 A	EXT. LTS.	32		
33	CUBE	20 A	1	2			0 VA	0 VA			--	--	--	34			
35	Spare	20 A	1						0 VA	0 VA	2	2	80 A	FOUNTAIN	36		
37	Panel 'E'	100 A	3	1	7085 VA	0 VA					--	--	--	38			
39	--	--	--	--			6636 VA	0 VA			1	20 A	Spare	40			
41	--	--	--	--					8213 VA	--	1	--	Space	42			
Total Load:					7085 VA		6636 VA		8213 VA								
NOTES:																	
1. Remove existing 30A 2P breaker and replace with 100A 3P breaker for New Pnl E																	
2. Existing load, re-feed from replacement panel.																	
Load Classification		Connected Load		Demand Factor		Estimated...		Panel Totals									
Lighting		1295 VA		125.00%		1619 VA											
Motor		1000 VA		125.00%		1250 VA		Total Conn. Load: 21935 VA									
Power		11000 VA		100.00%		11000 VA		Total Est. Demand: 22509 VA									
Receptacles		8640 VA		100.00%		8640 VA		Total Conn. Current: 61 A									
								Total Est. Demand Current: 62 A									

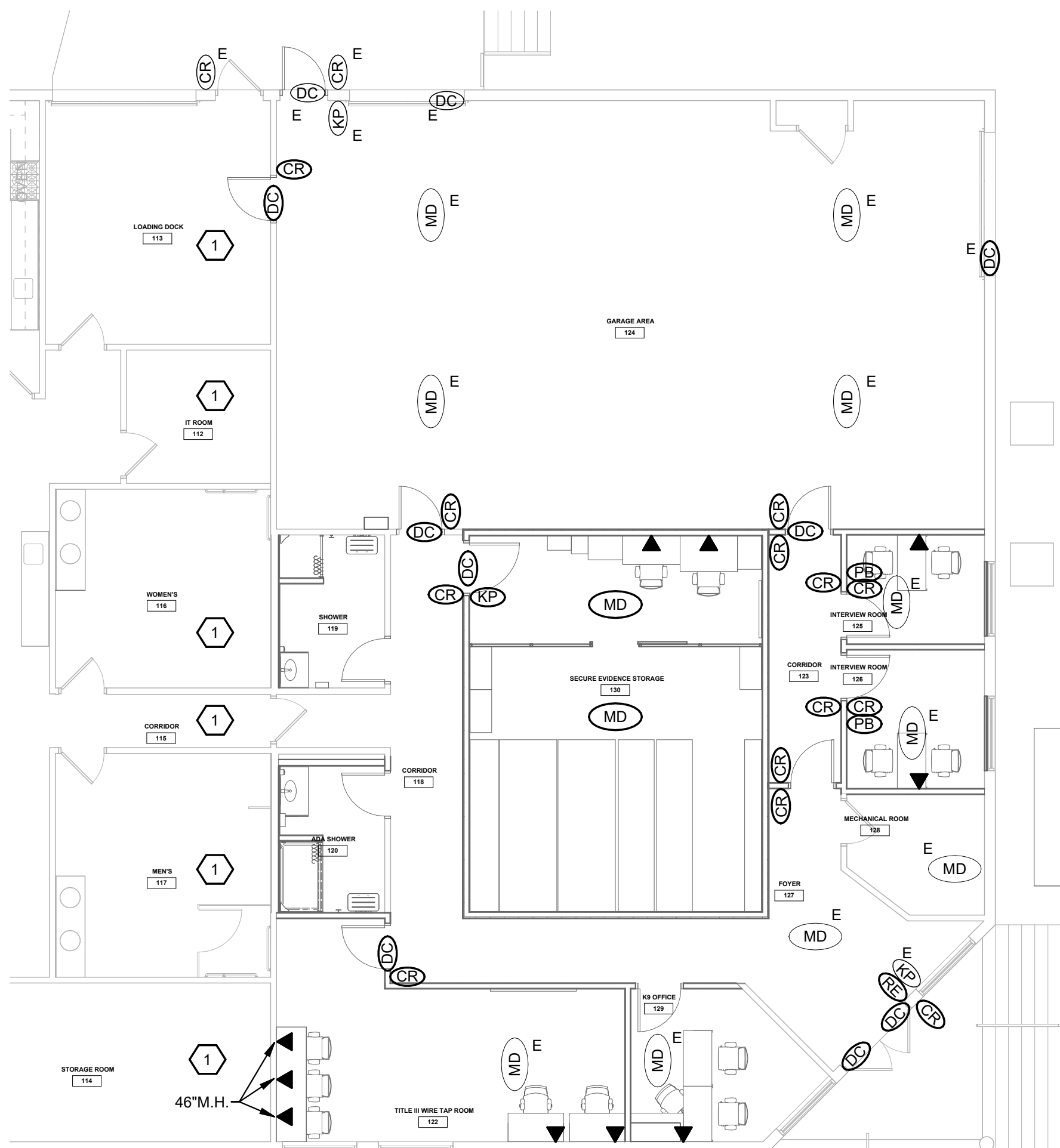
Branch Panel: E										Construction: New										System: Normal Power									
LOCATION: MECHANICAL ROO...										MOUNTING: Surface										A.I.C RATING									
SUPPLY FROM: C										ENCLOSURE: Type 1										MAINS TYPE: M.L.O									
VOLTAGE: 120/208 Wye-3-4										MCB RATING: NA										MAINS RATING: 100 A									
CKT	Description	Trip	Poles	Note	A		B		C		Note	Poles	Trip	Description	CKT														
1	Lighting	20 A	1		152 VA	360 VA						1	20 A	Lighting	2														
3	Lighting	20 A	1				469 VA	315 VA				1	20 A	Lighting	4														
5	EF-1	20 A	1						1000 VA						6														
7						360 VA						1	20 A		8														
9	REC 122	20 A	1				360 VA	360 VA				1	20 A	REC 122	10														
11	REC 129	20 A	1						900 VA	720 VA		1	20 A	REC 122	12														
13	REC 120	20 A	1		540 VA	1080 VA						1	20 A	REC 124	14														
15	REC 130	20 A	1				540 VA	360 VA				1	20 A	REC 130	16														
17	REC 130	20 A	1						180 VA	720 VA		1	20 A	REC 130	18														
19	REC 126	20 A	1		540 VA	540 VA						1	20 A	REC 128	20														
21	REC 122	20 A	1				360 VA	540 VA				1	20 A	REC 125	22														
23	REC 122	20 A	1						360 VA	1000 VA		1	20 A	CF-1	24														
25	Btt Filler	20 A	1		180 VA	0 VA						1	20 A	T1	26														
27								0 VA				1	20 A	T1	28														
29															30														
31															32														
33															34														
35															36														
37						3333 VA						3	60 A	RTU-1	38														
39								3333 VA				--	--	--	40														
41									3333 VA			--	--	--	42														
Total Load:					7085 VA		6636 VA		8213 VA																				
NOTES:																													
Load Classification					Connected Load		Demand Factor		Estimated...		Panel Totals																		
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Power					11000 VA		100.00%		11000 VA		Total Est. Demand: 22509 VA																		
Receptacles					8640 VA		100.00%		8640 VA		Total Conn. Current: 61 A																		
											Total Est. Demand Current: 62 A																		



FIRST FLOOR LIGHTING PLAN
SCALE: 1/8" = 1'-0"



FIRST FLOOR POWER PLAN
SCALE: 1/8" = 1'-0"



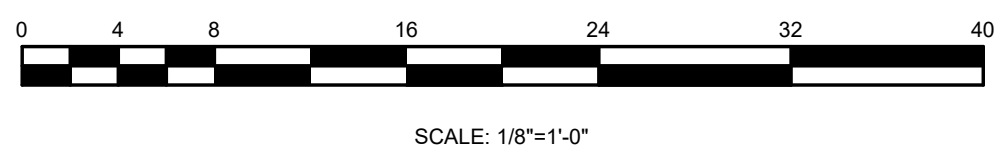
FIRST FLOOR SYSTEMS PLAN
SCALE: 1/8" = 1'-0"

- ### CONSTRUCTION NOTES
- NO WORK IN THIS AREA.
 - REPLACE EXIT SIGN WITH NEW.
 - CEILING FAN AND CONTROLS FURNISHED AND INSTALLED BY H.C., WIRED BY E.C.
 - REPLACE ALL EXISTING RECEPTACLE(S) IN GARAGE WITH GFCI TYPE
 - EXISTING PANELS
 - REPLACE EXISTING PANEL
 - PROVIDE DEDICATED CIRCUIT THROUGH ADJACENT GROUND FAULT RECEPTACLE (WITH AUDIBLE ALARM) FOR BOTTLE FILLER. COORDINATE CONNECTION REQUIREMENTS WITH P.C.
 - PROVIDE DEDICATED CIRCUIT FOR UPS FOR FILE SYSTEM. COORDINATE LOCATION WITH SYSTEMS FURNITURE VENDOR.
 - REPLACE EXISTING GARAGE LIGHTING WITH NEW CONNECT TO EXISTING LIGHTING CIRCUIT AND SWITCH LEG.
 - PROVIDE WALL SWITCH TO CONTROL ROOM IN-USE LIGHT ABOVE DOOR IN HALLWAY AS NOTED AND TO POWER ROOM WHITE NOISE SYSTEM (WHITE NOISE SYSTEM FURNISHED BY OTHERS).
 - REPLACE EXISTING RECEPTACLE WITH NEW RECEPTACLE OF SAME TYPE IN SAME PLACE.
 - PROVIDE SINGLE SECTION RED DOME LIGHT TO INDICATE ROOM OCCUPANCY. SINGLE SECTION RED DOME LIGHT EQUAL TO CORNELL COMMUNICATIONS # LED-101R (REQUIRES SINGLE GANG BACK BOX). PROVIDE POWER SUPPLY FOR LOW VOLTAGE DOME LIGHT (OR LED DRIVER), LOCATED ABOVE ACCESSIBLE CORRIDOR CEILING, EQUAL TO CORNELL COMMUNICATIONS #P-512241A. COORDINATE INTERFACE WIRING FOR WHITE NOISE SYSTEM WITH SYSTEMS PROVIDER.

GENERAL NOTES

ALL EXISTING MOTION DETECTORS INSTALLED IN PHASE 1 SHALL BE TEMPORARILY SUPPORTED AND REINSTALLED IN THE NEW CEILING.

OWNERS SECURITY SYSTEMS SYMBOL	SYSTEMS LEGEND
(SB)	SECURITY STROBE WITH SOUNDER (RED/BLUE/AMBER). PROVIDE T-BAR SUPPORT WHERE LOCATED IN SUSPENDED IN ACOUSTIC CEILING TILE.
(X)	DOOR ACCESS CONTROL SYSTEM CARD READER - 46" M.H. PROVIDE 2-GANG BOX WITH SINGLE GANG MUD RING AND 1" CONDUIT TO ABOVE CEILING.
(DC)	PROVIDE 1 GANG BOX AND 1" CONDUIT TO ABOVE CEILING FOR DOOR CONTACT
(KP)	PROVIDE 1 GANG BOX AND 1" CONDUIT TO ABOVE CEILING FOR KEY PAD
(D)	PROVIDE 1 GANG BOX AND 1" CONDUIT TO ABOVE CEILING FOR PUSH BUTTON
(V)	MOTION DETECTOR. NO WORK BY E.C.
(H)	PROVIDE 1 GANG BOX AND 1" CONDUIT TO ABOVE THE NEAREST ACCESSIBLE CEILING FOR CCTV CAMERA.
(P)	PROVIDE 1 GANG BOX, 46" M.H. AND 1" CONDUIT TO ABOVE THE NEAREST ACCESSIBLE CEILING FOR PHONE.
(F)	NEW DATA OUTLET (18" M.H. UNLESS OTHERWISE INDICATED). TWO GANG OUTLET BOX WITH SINGLE GANG TRIM RING AND BLANK COVERPLATE. STUB AN EMPTY 1.0" BUSHED CONDUIT OUT ABOVE ACCESSIBLE CEILING.
(F)	EXISTING DATA OUTLET (18" M.H. UNLESS OTHERWISE INDICATED M.H.).
(F)	TELEPHONE/DATA FLOOR OUTLET, WITH 1.5" BUSHED CONDUIT TO ABOVE ACCESSIBLE CEILING. PROVIDE CARPET FLANGE WHERE REQUIRED.
(F)	WIRELESS WIFI ACCESS POINT; CEILING MOUNTED.
(F)	TELEVISION MONITOR RECEPTACLE AND CABLE OUTLET BOX ASSEMBLY REFER TO TV WALL BOX DETAIL - T1
(F)	TELEVISION MONITOR RECEPTACLE AND CABLE OUTLET BOX ASSEMBLY REFER TO TV WALL BOX DETAIL - T2



NAUMAN & ZELINSKI LLC.
204 S. Ludlow Street Suite 400 Dayton, Ohio 45402
Phone (937) 233-3821
PROJECT # 26039

ISSUE		
NO.	DATE	DESCRIPTION
1	08/31/26	FOR CONSTRUCTION
2	09/18/26	ADDENDUM 1
3	09/24/26	ADDENDUM 2

DATE	08/31/26
JOB NO.	4301.01
DRAWN	JE
CHECKED	JZ

TITLE
NEW WORK POWER PLAN