RQAW | DCCM

ADDENDUM NO. 1

Job Name: Harrison County Jail MEP Renovation

Project Number: 800-71929

Date of Addendum: **12/5/2025**

THIS ADDENDUM FORMS A PART OF THE CONTRACT DOCUMENTS AND IS ISSUED IN ACCORDANCE WITH THE INSTRUCTIONS TO BIDDERS. ACKNOWLEDGE RECEIPT OF THIS ADDENDUM BY SIGNING THE ADDENDUM ACKNOWLEDGEMENT SECTION OF YOUR PROPOSAL.

Specifications:

1. SECTION 23 09 23 DIRECT DIGITAL CONTROL SYSTEM FOR HVAC
    A. Added Schneider Electric by Comfort Systems USA – Kentucky to the approved manufacturer list.

Drawings:

General Drawings

1. G -101 & G-102 – FIRST FLOOR FIRE AND LIFE SAFETY PLAN & SECOND FLOOR FIRE AND LIFE SAFETY PLAN
    a. **Clarifications:** Revised Code Summary and revised First Floor Fire and Life Safety Plan to graphically show the existing with more clarity.
2. PH-101, PH-201, & PH-203 – FIRST FLOOR PHASE 1, SECOND FLOOR PHASE 1, & SECOND FLOOR PHASE 3
    a. **Clarifications:** Revised spelling in Phasing Notes for A6 and E1. Phasing Notes P1, P2, P3 added. Plumbing and Fire Protection Remarks added.

Civil Drawings

3. C100 – STORMWATER POLLUTION PREVENTION & SITE DEMOLITION PLAN
    a. Clarified notes for project phasing scope. Added section of broken sanitary pipe to be replaced.
4. C200 – SITE DEVELOPMENT PLAN
    a. Added section of broken sanitary pipe to be replaced.

Structure Drawings

5. S110 – NEW BUILD-OUT FOUNDATION AND ROOM FRAMING PLAN
    a. Modified foundation walls for new utility plant buildout.

6. S300 – SECTION
    a. Modified foundation wall section 1/S300 for new utility plant buildout.

Architecture Drawings

7. AD-101 & AD-102 – OVERALL FIRST FLOOR DEMOLITION PLAN & OVERALL SECOND FLOOR DEMOLITION PLAN
    a. Clarifications: Demo Floor Plan Note #8 added and says, "Demolish existing tile floor, prep and prepare subfloor as required for installation of new carpet."
8. ADC-101 & ADC-102 – FIRST FLOOR REFLECTED CEILING DEMOLITION PLAN & SECOND FLOOR REFLECTED CEILING DEMOLITON PLAN
    a. Clarifications: Ceiling tile graphics revised for more clarity.
9. A-101 – OVERALL FIRST FLOOR PLAN
    a. Clarifications: Floor Plan text notes for doors 1216, 1207, and 1026 removed from floor plan for clarity. Graphical changes to roof plan that affected graphics on Overall First Floor Plan.
10. A-102 – OVERALL SECOND FLOOR PLAN
    a. Clarifications: Graphical changes to roof plan that affected graphics on Overall Second Floor Plan.
11. AC-101 – FIRST FLOOR REFLECTED CEILING PLAN
    a. Clarifications: Graphical changes to ceiling tiles for First Floor Reflected Ceiling Plan for clarity. Detail 3A revised.
12. AC-102 – SECOND FLOOR REFLECTED CEILING PLAN
    a. Clarifications: Graphical changes to ceiling tiles for First Floor Reflected Ceiling Plan for clarity.
13. AR-101 – ARCHITECTURAL ROOF PLAN
    a. Clarifications: Roof Plan Notes #2 and #5 revised, #6 and #7 added. Roof Plan graphics revised to reflect changes to roof plan notes. Detail 4A revised.
14. AF1A1 – NEW CONSTRUCTION UNIT PLANS
    a. Clarifications: Door & Frame Schedule revised. Interiors Finish Legend revised. On the Plan Notes Schedule, notes F3 and R6 were revised. Revision to note F3 affected New Offices Second Floor Plan graphics. Graphical revisions made to Mechanical Room First Floor Plan.
15. AF1A2 - NEW CONSTRUCTION UNIT PLANS
    a. Clarifications: revisions made to views 1A, 3A, 4A, 5D, 6D, and 6E. Wall type S4-D has been removed. Views 3A, 4A, and 4B have been renamed with "Mechanical Room" in the view title.
16. AF1A3 - NEW CONSTRUCTION UNIT PLANS

a. **Clarifications:** Views 2A, 2C, and 2D revised. View 2E and 5E added to the sheet.

Fire Protection Drawings

17. F001 – FIRE PROTECTION SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES
    a. Revised flow test information.
18. F210A – FIRST FLOOR FIRE PROTECTION PLAN – UNIT A
    a. Added keynotes for new fire incoming services.
    b. Added keynotes for skylight infill and sprinkler coverage.
19. F220A – SECOND FLOOR FIRE PROTECTION PLAN – UNIT A
    a. Added keynotes for skylight infill and sprinkler coverage.
20. F800 – FIRE PROTECTION DETAILS
    a. Added notes for existing fire riser to remain in operation throughout construction phases.

Plumbing Drawings

21. P100A – FOUNDATION PLUMBING DEMOLITION PLAN – UNIT A
    a. Indicated line a saw-cut for sanitary demolition.
22. P100B – FOUNDATION PLUMBING DEMOLITION PLAN – UNIT B
    a. Indicated line a saw-cut for sanitary demolition.
23. P110A – FIRST FLOOR PLUMBING DEMOLITION PLAN – UNIT A
    a. Indicated ALTERNATE 2 fixtures to be replaced and keynote.
24. P110B – FIRST FLOOR PLUMBING DEMOLITION PLAN – UNIT B
    a. Indicated ALTERNATE 2 fixtures to be replaced and keynote.
25. P120B – SECOND FLOOR PLUMBING DEMOLITION PLAN – UNIT B
    a. Indicated ALTERNATE 2 fixtures to be replaced and keynotes.
26. P210A – FIRST FLOOR PLUMBING PLAN – UNIT A
    a. Indicated ALTERNATE 2 fixtures to be replaced near Inmate Processing area and keynote.
27. P600 –PLUMBING SCHEDULES
    a. Revised make and models for LV-2 and EWC-1.
28. P800 – PLUMBING DETAILS - WILLOUGHBY
    a. Indicated ALTERNATE 2 Correctional fixtures and water management system scope of work responsibilities.

Mechanical Drawings

29. M803 – EQUIPMENT DETAILS – MECHANICAL

a. Added curb cap detail.

30. M804 – PIPING DETAILS – MECHANICAL
    a. Added Roof Pipe Doghouse Detail

Electrical Drawings

31. Sheet E110A FIRST FLOOR DEMOLITION PLAN – UNIT A
    a. Replace with attached revised sheet in its entirety.
32. Sheet E210A FIRST FLOOR LIGHTING PLAN – UNIT A
    a. Replace with attached revised sheet in its entirety.
33. Sheet E210B FIRST FLOOR LIGHTING PLAN – UNIT
    a. Replace with attached revised sheet in its entirety.
34. Sheet E220A SECOND FLOOR LIGHTING PLAN – UNIT A
    a. Replace with attached revised sheet in its entirety.
35. Sheet E220B SECOND FLOOR LIGHTING PLAN – UNIT B
    a. Replace with attached revised sheet in its entirety.
36. Sheet E230B INTERSTITIAL LIGHTING PLAN – UNIT B
    a. Replace with attached revised sheet in its entirety.
37. Sheet E310A FIRST FLOOR POWER PLAN – UNIT A
    a. Replace with attached revised sheet in its entirety.
38. Sheet E310B FIRST FLOOR POWER PLAN – UNIT B
    a. Replace with attached revised sheet in its entirety.
39. Sheet E320A SECOND FLOOR POWER PLAN – UNIT A
    a. Replace with attached revised sheet in its entirety.
40. Sheet E320B SECOND FLOOR POWER PLAN – UNIT B
    a. a. Replace with attached revised sheet in its entirety.
41. Sheet E340 ROOF POWER PLAN
    a. Replace with attached revised sheet in its entirety.
42. Sheet E410A FIRST FLOOR SYSTEMS PLAN – UNIT A
    a. Replace with attached revised sheet in its entirety.
43. Sheet E410B FIRST FLOOR SYSTEMS PLAN – UNIT B
    a. Replace with attached revised sheet in its entirety.
44. Sheet E420A SECOND FLOOR SYSTEMS PLAN – UNIT A
    a. Replace with attached revised sheet in its entirety.

45. Sheet E430B INTERSTITIAL SYSTEMS PLAN – UNIT B
    a. Replace with attached revised sheet in its entirety.
46. Sheet E500 ENLARGED ELECTRICAL PLAN
    a. Replace with attached revised sheet in its entirety.
47. Sheet E601 ELECTRICAL SCHEDULES
    a. Replace with attached revised sheet in its entirety.
48. Sheet E602 ELECTRICAL SCHEDULES
    a. Replace with attached revised sheet in its entirety.
49. Sheet E603 ELECTRICAL SCHEDULES
    a. Replace with attached revised sheet in its entirety.
50. Sheet E604 ELECTRICAL SCHEDULES
    a. Replace with attached revised sheet in its entirety.
51. Sheet E605 ELECTRICAL SCHEDULES
    a. Replace with attached revised sheet in its entirety.
52. Sheet E700 ELECTRICAL RISER DIAGRAM
    a. Replace with attached revised sheet in its entirety.

END OF ADDENDUM 1

SECTION 230923
DIRECT DIGITAL CONTROL (DDC) SYSTEM FOR HVAC

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes DDC system for monitoring and controlling of HVAC systems.
   1. Section includes requirements for control and monitoring of the POD exhaust system.

B. Scope: Furnish all labor, materials and equipment necessary for a complete and operating Building Management System (BMS), utilizing Direct Digital Controls as shown on the drawings and as described herein. Drawings are diagrammatic only. All controllers furnished in this section shall communicate on a peer-to-peer bus over a single BACnet open protocol bus.
   1. The intent of this specification is to provide an open protocol system the Niagara N4™ Framework.
   2. System architecture shall fully support a multi-vendor environment and be able to integrate third party systems via existing vendor protocols including, as a minimum, BACnet, and Modbus. Non BACnet communication protocol for specific pieces of equipment must be approved on a case by case basis.
   3. System architecture shall provide secure Web access using MS Edge, Chrome, and Firefox from any computer on the owner's LAN.
   4. All control devices furnished with this Section shall be programmable directly from the Niagara-N4™ Workbench upon completion of this project. The use of configurable or programmable controllers that require additional software tools for post-installation maintenance shall not be acceptable.
   5. Any control vendor that must provide additional BMS server software shall be unacceptable. Only systems that utilize the WEBs Niagara N4™ Framework shall satisfy the requirements of this section.
   6. The BMS server shall host all graphic files for the control system. All graphics and navigation schemes for this project shall match those that are on the existing campus Niagara-N4 framework server
   7. A laptop computer including engineering/programming software to modify Operating System Server BMS programs and graphics shall be included
   8. OPEN NIC STATEMENTS - All NiagaraN4 software licenses shall have the following NiCS: "accept.station.in=*"; "accept.station.out=*"and "accept.wb.in=*"and "accept.wb.out=*". All open NIC statements shall follow Niagara Open NIC specifications

1.02 SUBMITTALS

A. Action Submittals:
   1. Product Data: For each type of product include:
      a. Product description with complete technical data, performance curves, and product specification sheets. Clearly indicate and highlight applicable information.
      b. Installation, operation and maintenance instructions.
   2. Software Submittal:
      a. Listing of software to be loaded on each operator workstation, server, gateway, and DDC controller.
      b. Description and technical data of all software provided.
      c. Operating system software, operator interface and programming software, color graphic software, DDC controller software, maintenance management software, and third-party software.
      d. Description of system database, including data included in database, database capacity and limitations to expand database.
      e. Controlled Systems: Instrumentation list with element name, type of device, manufacturer, and model number. Include written description of sequence of operation including schematic diagram.
   3. Shop Drawings:

a. Floor plan drawings indicating the following:
    1) Each desktop workstation, server, gateway, router, DDC controller, control panel, damper, and valve connecting to DDC controller.
    2) Placement of devices in rooms, ducts, and piping.
    3) Network communication cable and raceway routing.
    4) Routing of wiring, cabling, conduit, and tubing, coordinated with building services.
b. Schematic drawings for each controlled HVAC system indicating the following:
    1) I/O points labeled with point names shown. Indicate instrument range, normal operating set points, and alarm set points. Indicate fail position of each damper and valve.
    2) I/O listed in table format showing point name, type of device, manufacturer, model number, and cross-reference to product data sheet number.
    3) Wiring diagram with each I/O point having a unique identification and indicating labels for all wiring terminals.
    4) Unique identification of each I/O point.
    5) Elementary wiring diagrams of controls for HVAC equipment motor circuits including interlocks, switches, relays and interface to DDC controllers.
    6) Narrative sequence of operation.
c. DDC system network riser diagram indicating each device connected to network with unique identification for each. For each network, indicate communication protocol, speed and physical means of interconnecting network devices, such as copper cable type, or optical fiber cable type. Indicate raceway type and size for each.
d. DDC system electrical power riser diagram indicating each point of connection to field power with requirements (volts/phase//hertz/amperes/connection type) listed, control power supplies, transformers, power-line conditioners, transient voltage suppression, high filter noise units, DC power supplies, UPS units, products requiring power with requirements, power wiring type and size, and raceway type.
e. Color graphics indicating itemized list of color graphic displays, a true color copy of each display screen, and intended operator access between related hierarchical display screens.

4. System Description:
    a. Full description of DDC system architecture, network configuration, operator interfaces and peripherals, servers, controller types and applications, gateways, routers and other network devices, and power supplies.
    b. Description of testing plans and procedures.
    c. Description of Owner training.

B. Informational Submittals:
1. Data Communications Protocol Certificates: Certifying that each proposed DDC system component complies with ASHRAE 135 (BACnet).
2. Product Test Reports: For each product that requires testing.

C. Closeout Submittals:
1. Operation and Maintenance Data: For DDC system to include in emergency, operation and maintenance manuals.
    a. Project Record Drawings of as-built versions of submittal Shop Drawings provided in electronic PDF format.
    b. Testing and commissioning reports and checklists of completed final versions of reports, checklists, and trend logs.
    c. As-built versions of submittal Product Data.
    d. Names, addresses, e-mail addresses and 24-hour telephone numbers of Installer and service representatives for DDC system and products.

e. Operator's manual with procedures for operating control systems including logging on and off, handling alarms, producing point reports, trending data, overriding computer control and changing set points and variables.
f. Programming manuals with description of programming language and syntax, of statements for algorithms and calculations used, of point database creation and modification, of program creation and modification, and of editor use.
g. Engineering, installation, and maintenance manuals that explain how to:
   1) Design and install new points, panels, and other hardware.
   2) Perform preventive maintenance and calibration.
   3) Debug problems.
   4) Repair or replace hardware.
h. Documentation of all programs created using custom programming language including set points, tuning parameters, and object database.
i. Backup copy of graphic files, programs, and database on electronic media such as DVDs or USB drive.
j. List of recommended spare parts with part numbers and suppliers.
k. Complete original-issue documentation, installation, and maintenance information for furnished third-party hardware including computer equipment and sensors.
l. Complete original-issue copies of furnished software, including operating systems, custom programming language, operator workstation software, and graphics software.
m. Licenses, guarantees, and warranty documents.
n. Recommended preventive maintenance procedures for system components, including schedule of tasks such as inspection, cleaning, and calibration; time between tasks; and task descriptions.
o. Owner training materials.

1.03 WARRANTY

A. Manufacturer's Warranty: Manufacturer and Installer agree to repair or replace products that fail in materials or workmanship within specified warranty period.
   1. Failures shall be adjusted, repaired, or replaced at no additional cost or reduction in service to Owner.
   2. Include updates or upgrades to software and firmware if necessary to resolve deficiencies. Install updates only after receiving Owner's written authorization.
   3. Warranty service shall occur during normal business hours and commence within 24 hours of Owner's warranty service request.
   4. Warranty Period: Three years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 DDC SYSTEM MANUFACTURERS / INSTALLERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following. Where a specific manufacturer is listed in the Drawings, this shall be considered the Basis-of-Design.
   1. Open Control Systems
   2. Distech Controls (by Jackson Systems)
   3. Honeywell International Inc. (by Honeywell branch)
   4. Johnson Controls, Inc. (by Conserv or Johnson Controls branch)
   5. Precision Controls / Havel Controls.
   6. Siemens Building Technologies, Inc. (by Siemens branch)
   7. Trane (by Trane branch)
   8. Schneider Electric (by Comfort Systems USA - Kentucky)

2.02 DDC SYSTEM DESCRIPTION

A. Microprocessor-based monitoring and control including analog/digital conversion and program logic. A control loop or subsystem in which digital and analog information is received and

processed by a microprocessor, and digital control signals are generated based on control algorithms and transmitted to field devices to achieve a set of predefined conditions.

1. DDC system shall consist of a high-speed, peer-to-peer network of distributed DDC controllers, other network devices, operator interfaces, and software.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.03 WEB ACCESS

A. DDC system shall be Web compatible. Server shall perform overall system supervision and configuration, graphical user interface, management report generation, and alarm annunciation. DDC system shall support Web browser access to building data. Operator using a standard Web browser shall be able to access control graphics and change adjustable set points. Web access shall be password protected.

2.04 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional to design DDC system to satisfy requirements indicated.

1. System Performance Objectives:
    a. DDC system shall manage HVAC systems.
    b. DDC system control shall operate HVAC systems to achieve optimum operating costs while maintaining specified performance.
    c. DDC system shall respond to power failures, HVAC equipment failures, and adverse and emergency conditions encountered through connected I/O points.
    d. DDC system shall operate while unattended by an operator as well as through operator interaction.
    e. DDC system shall record trends and transaction of events and produce report information such as performance, energy, occupancies, and equipment operation.

B. Surface-Burning Characteristics: Products installed in ducts, equipment, and return-air paths shall comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency. Flame-spread index 25 or less. Smoke-developed index 50 or less.

C. DDC System Speed:

1. Response Time of Connected I/O:
    a. Input point values connected to DDC system updated at least every five seconds for use by DDC controllers. Points used globally also complying with this requirement.
    b. Output points connected to DDC system begin to respond to controller output commands within two seconds. Global commands also complying with this requirement.
2. Display of Connected I/O:
    a. Point changes of value connected to DDC system updated and displayed at least every 10 seconds for use by operator.
    b. Alarms of points connected to DDC system displayed within 45 seconds of activation or change of state.
    c. Graphic display refresh updated within eight seconds.

D. Network Bandwidth: Design each network of DDC system to include at least 30 percent available spare bandwidth with DDC system operating under normal and heavy load conditions indicated. Calculate bandwidth usage, and apply a safety factor to ensure that requirement is satisfied when subjected to testing under worst case conditions.

E. DDC System Data Storage:

1. Include capability to archive not less than 24 consecutive months of historical data for all I/O points connected to system, including alarms, event histories, transaction logs, trends and other information indicated.

2. Local Storage: Provide server with data storage indicated. Servers shall use IT industry standard database platforms and be capable of functions described in "DDC Data Access" Paragraph.
3. Cloud Storage: Provide application-based and web browser interfaces to configure, upload, download, and manage data, and service plan with storage adequate to store all data for term indicated. Cloud storage shall use IT industry standard database platforms and be capable of functions described in "DDC Data Access" Paragraph.

F. DDC Data Access: When logged into the system, operator able to also interact with any DDC controller connected to DDC system as required for functional operation of DDC system.
1. Systems used for application configuration; for archiving, reporting and trending of data; for operator transaction archiving and reporting; for network information management; for alarm annunciation; and for operator interface tasks and controls application management.

G. Expandability: DDC system size expandable to an ultimate capacity of at least two times total I/O points indicated. Additional DDC controllers, I/O and associated cond shall be all that is needed to achieve ultimate capacity. Initial network infrastructure designed and installed to support ultimate capacity. Operator interfaces installed initially shall not require hardware and software additions and revisions for ultimate capacity.

H. Input Point Displayed Accuracy: Input point displayed values shall meet following end-to-end overall system accuracy, including errors associated with meter, sensor, transmitter, lead wire or cable, and analog to digital conversion.
1. Energy:
   a. Thermal: Within 3 percent of reading.
   b. Electric Power: Within 1 percent of reading.
   c. Requirements indicated on Drawings for meters not supplied by utility.
2. Flow:
   a. Air: Within 5 percent of design flow rate.
   b. Air (Terminal Units): Within 10 percent of design flow rate.
   c. Water: Within 5 percent of design flow rate.
3. Gas:
   a. Carbon Dioxide: Within 50 ppm.
   b. Carbon Monoxide: Within 5 percent of reading.
   c. Oxygen: Within 5 percent of reading.
   d. Refrigerant: Within 50 ppm.
4. Moisture (Relative Humidity):
   a. Air: Within 5 percent RH.
   b. Space: Within 2 percent RH.
   c. Outdoor: Within 2 percent RH.
5. Level: Within 5 percent of reading.
6. Pressure:
   a. Air, Ducts and Equipment: 1 percent of instrument range.
   b. Space: Within 1 percent of instrument range.
   c. Water: Within 1 number> percent of instrument range.
7. Speed: Within 5 percent of reading.
8. Temperature, Dew Point:
   a. Air: Within 1 deg F (0.5 deg C).
   b. Space: Within 1 deg F (0.5 deg C).
   c. Outdoor: Within 3 deg F (1.5 deg C).
9. Temperature, Dry Bulb:
   a. Air: Within 1 deg F (0.5 deg C).
   b. Space: Within 1 deg F (0.5 deg C).
   c. Outdoor: Within 1 deg F (0.5 deg C).
   d. Chilled Water: Within 1 deg F (0.5 deg C).

e. Heating Hot Water: Within 1 deg F (0.5 deg C.
f. Temperature Difference: Within 0.25 deg F (0.15 deg C).
g. Other Temperatures Not Indicated: Within 1 deg F (0.5 deg C).

10. Temperature, Wet Bulb:
    a. Air: Within 1 deg F (0.5 deg C).
    b. Space: Within 1 deg F (0.5 deg C).
    c. Outdoor: Within 1 deg F (0.5 deg C).
11. Vibration: Within 5 percent of reading.

I. Precision of I/O Reported Values: Values reported in database and displayed shall have following precision:
    1. Current:
        a. Milliamperes: Nearest 1/100th of a milliampere.
        b. Amperes: Nearest 1/10th of an ampere up to 100 A; nearest ampere for 100 A and more.
    2. Energy:
        a. Electric Power:
            1) Rate (Watts): Nearest 1/10th of a watt through 1000 W.
            2) Rate (Kilowatts): Nearest 1/10th of a kilowatt through 1000 kW; nearest kilowatt above 1000 kW.
            3) Usage (Kilowatt-Hours): Nearest kilowatt through 10,000 kW; nearest 10 kW between 10,000 and 100,000 kW; nearest 100 kW for above 100,000 kW.
        b. Thermal, Rate:
            1) Heating: For Btu/h, nearest Btu/h up to 1000 Btu/h; nearest 10 Btu/h between 1000 and 10,000 Btu/h; nearest 100 Btu/h for above 10,000 Btu/h. For Mbh, round to nearest Mbh up to 1000 Mbh; nearest 10 Mbh between 1000 and 10,000 Mbh; nearest 100 Mbh above 10,000 Mbh.
            2) Cooling: For tons, nearest ton up to 1000 tons; nearest 10 tons between 1000 and 10,000 tons; nearest 100 tons above 10,000 tons.
        c. Thermal, Usage:
            1) Heating: For Btu, nearest Btu up to 1000 Btu; nearest 10 Btu between 1000 and 10,000 Btu; nearest 100 Btu for above 10,000 Btu. For Mbtu, round to nearest Mbtu up to 1000 Mbtu; nearest 10 Mbtu between 1000 and 10,000 Mbtu; nearest 100 Mbtu above 10,000 Mbtu.
            2) Cooling: For ton-hours, nearest ton-hours up to 1000 ton-hours; nearest 10 ton-hours between 1000 and 10,000 ton-hours; nearest 100 tons above 10,000 tons.
    3. Flow:
        a. Air: Nearest 1/10th of a cfm through 100 cfm; nearest cfm between 100 and 1000 cfm; nearest 10 cfm between 1000 and 10,000 cfm; nearest 100 cfm above 10,000 cfm.
        b. Water: Nearest 1/10th gpm through 100 gpm; nearest gpm between 100 and 1000 gpm; nearest 10 gpm between 1000 and 10,000 gpm; nearest 100 gpm above 10,000 gpm.
    4. Gas:
        a. Carbon Dioxide (ppm): Nearest ppm.
        b. Carbon Monoxide (ppm): Nearest ppm.
        c. Oxygen (Percentage): Nearest 1/10th of 1 percent.
        d. Refrigerant (ppm): Nearest ppm.
    5. Moisture (Relative Humidity):
        a. Relative Humidity (Percentage): Nearest 1 percent.
    6. Level: Nearest 1/100th of an inch through 10 inches; nearest 1/10 of an inch between 10 and 100 inches; nearest inch above 100 inches.
    7. Speed:
        a. Rotation (rpm): Nearest 1 rpm.

b. Velocity: Nearest 1/10th fpm through 100 fpm; nearest fpm between 100 and 1000 fpm; nearest 10 fpm above 1000 fpm.
8. Position, Dampers and Valves (Percentage Open): Nearest 1 percent.
9. Pressure:
a. Air, Ducts and Equipment: Nearest 1/10th in. w.c.
b. Space: Nearest 1/100th in. w.c.
c. Steam: Nearest 1/10th psig through 100 psig; nearest psig above 100 psig.
d. Water: Nearest 1/10 psig through 100 psig; nearest psig above 100 psig.
10. Temperature:
a. Air, Ducts and Equipment: Nearest 1/10th of a degree.
b. Outdoor: Nearest degree.
c. Space: Nearest 1/10th of a degree.
d. Chilled Water: Nearest 1/10th of a degree.
e. Heating Hot Water: Nearest degree.
11. Vibration: Nearest 1/10th in/s.
12. Voltage: Nearest 1/10 volt up to 100 V; nearest volt above 100 V.

J. Control Stability: Control variables indicated within the following limits:
1. Flow:
a. Air, Ducts and Equipment, except Terminal Units: Within 5 percent of design flow rate.
b. Air, Terminal Units: Within 10 percent of design flow rate.
c. Water: Within 5 percent of design flow rate.
2. Gas:
a. Carbon Dioxide: Within 50 ppm.
b. Carbon Monoxide: Within 5 percent of reading.
c. Oxygen: Within 5 percent of reading.
d. Refrigerant: Within 50 ppm.
3. Moisture (Relative Humidity):
a. Air: Within 5 percent RH.
b. Space: Within 2 percent RH.
c. Outdoor: Within 2 percent RH.
4. Level: Within 5 percent of reading.
5. Pressure:
a. Air, Ducts and Equipment: 1 percent of instrument range.
b. Space: Within 1 percent of instrument range.
c. Water: Within 1 percent of instrument range.
6. Temperature, Dew Point:
a. Air: Within 1 deg F. (0.5 deg C)
b. Space: Within 1 deg F. (0.5 deg C).
7. Temperature, Dry Bulb:
a. Air: Within 2 deg F (1 deg C).
b. Space: Within 2 deg F (1 deg C).
c. Chilled Water: Within 1 deg F (1 deg C).
d. Heating Hot Water: Within 2 deg F (1 deg C).
8. Temperature, Wet Bulb:
a. Air: Within 1 deg F (1 deg C).
b. Space: Within 1 deg F (1 deg C).

K. Environmental Conditions for Controllers, Gateways, and Routers:
1. Products shall operate without performance degradation under ambient environmental temperature, pressure and humidity conditions encountered for installed location.
a. If product alone cannot comply with requirement, install product in a protective enclosure that is isolated and protected from conditions impacting performance.

Enclosure shall be internally insulated, electrically heated, cooled and ventilated as required by product and application.

2. Products shall be protected with enclosures satisfying the following minimum requirements unless more stringent requirements are indicated. Products not available with integral enclosures complying with requirements indicated shall be housed in protective secondary enclosures. Installed location shall dictate the following NEMA 250 enclosure requirements:
   a. Outdoors, Protected: Type 3.
   b. Outdoors, Unprotected: Type 4.
   c. Indoors, Heated with Filtered Ventilation: Type 2.
   d. Indoors, Heated with Non-Filtered Ventilation: Type 2.
   e. Indoors, Heated and Air Conditioned: Type 1.
   f. Mechanical Equipment Rooms:
      1) Chiller and Boiler Rooms: Type 4.
      2) Air-Moving Equipment Rooms: Type 1.
   g. Localized Areas Exposed to Washdown: Type 4.
   h. Within Duct Systems and Air-Moving Equipment Not Exposed to Possible Condensation: Type 3.
   i. Within Duct Systems and Air-Moving Equipment Exposed to Possible Condensation: Type 4.
   j. Hazardous Locations: Explosion-proof rating for condition.

L. Environmental Conditions for Instruments and Actuators:
   1. Instruments and actuators shall operate without performance degradation under the ambient environmental temperature, pressure, humidity, and vibration conditions specified and encountered for installed location.
      a. If instruments and actuators alone cannot comply with requirement, install instruments and actuators in protective enclosures that are isolated and protected from conditions impacting performance. Enclosure shall be internally insulated, electrically heated, cooled and ventilated as required by instrument and application.
   2. Instruments, actuators and accessories shall be protected with enclosures satisfying the following minimum requirements unless more stringent requirements are indicated. Instruments and actuators not available with integral enclosures complying with requirements indicated shall be housed in protective secondary enclosures. Installed location shall dictate the following NEMA 250 enclosure requirements:
      a. Outdoors, Protected: Type 3.
      b. Outdoors, Unprotected: Type 4.
      c. Indoors, Heated with Filtered Ventilation: Type 2.
      d. Indoors, Heated with Non-Filtered Ventilation: Type 2.
      e. Indoors, Heated and Air-conditioned: Type 1.
      f. Mechanical Equipment Rooms:
         1) Chiller and Boiler Rooms: Type 4.
         2) Air-Moving Equipment Rooms: Type 1.
      g. Localized Areas Exposed to Washdown: Type 4.
      h. Within Duct Systems and Air-Moving Equipment Not Exposed to Possible Condensation: Type 3.
      i. Within Duct Systems and Air-Moving Equipment Exposed to Possible Condensation: Type 4.
      j. Hazardous Locations: Explosion-proof rating for condition.

M. DDC System Reliability:
   1. Design, install and configure DDC controllers, gateways and routers to yield a mean time between failures of at least 40,000 hours, based on a confidence level of at least 90 percent. mean time between failures value shall include any failure for any reason to any part of products indicated.

2. If required to comply with mean time between failures indicated, include DDC system and product redundancy to maintain DCC system, and associated systems and equipment that are being controlled, operational and under automatic control.
3. Critical systems and equipment that require a higher degree of DDC system redundancy than mean time between failures indicated shall be indicated on Drawings.

N. Electric Power Quality:
1. Power-Line Surges:
   a. Protect susceptible DDC system products connected to ac power circuits from power-line surges to comply with requirements of IEEE C62.41.
   b. Do not use fuses for surge protection.
   c. Test protection in the normal mode and in the common mode, using the following two waveforms:
      1) 10-by-1000-mic.sec. waveform with a peak voltage of 1500 V and a peak current of 60 A.
      2) 8-by-20-mic.sec. waveform with a peak voltage of 1000 V and a peak current of 500 A.
2. Power Conditioning:
   a. Protect susceptible DDC system products connected to ac power circuits from irregularities and noise rejection. Characteristics of power-line conditioner shall be as follows:
      1) At 85 percent load, output voltage shall not deviate by more than plus or minus 1 percent of nominal when input voltage fluctuates between minus 20 percent to plus 10 percent of nominal.
      2) During load changes from zero to full load, output voltage shall not deviate by more than plus or minus 3 percent of nominal.
      3) Accomplish full correction of load switching disturbances within five cycles, and 95 percent correction within two cycles of onset of disturbance.
      4) Total harmonic distortion shall not exceed 3-1/2 percent at full load.
3. Ground Fault: Protect products from ground fault by providing suitable grounding. Products shall not fail due to ground fault condition.

O. Backup Power Source:
1. HVAC systems and equipment served by a backup power source shall have associated DDC system products that control such systems and equipment also served from a backup power source.

P. UPS:
1. DDC system products powered by UPS units shall include the following:
   a. Desktop workstations.
   b. Printers.
   c. Servers.
   d. Gateways.
   e. DDC controllers, except application-specific controllers.
2. DDC system instruments and actuators powered by UPS units shall include the following:
   a. Instruments associated with the following systems controlled by DDC system:
      1) AHU controllers, RTU controllers, smoke dampers, fans, and all associated systems and components.
      2) Pod exhaust
   b. Dampers and actuators associated with the following systems controlled by DDC system:
      1) AHU controllers, RTU controllers, smoke dampers, fans, and all associated systems and components.
      2) Pod exhaust
   c. Valves and actuators associated with the following systems controlled by DDC system:

1) AHU controllers, RTU controllers, smoke dampers, smoke fans, and all associated systems and components.
2) Pod exhaust

Q. Continuity of Operation after Electric Power Interruption:
1. Equipment and associated factory-installed controls, field-installed controls, electrical equipment, and power supply connected to building normal and backup power systems shall automatically return equipment and associated controls to operating state occurring immediately before loss of normal power, without need for manual intervention by operator when power is restored either through backup power source or through normal power if restored before backup power is brought online.

2.05 SYSTEM ARCHITECTURE

A. DDC system shall consist of dedicated and separated LANs that are not shared with other building systems and tenant data and communication networks.

B. System architecture shall be modular and have inherent ability to expand to not less than two times system size indicated with no impact to performance indicated.

C. System architecture shall perform modifications without having to remove and replace existing network equipment.

D. Number of LANs and associated communication shall be transparent to operator. All I/O points residing on any LAN shall be capable of global sharing between all system LANs.

E. System design shall eliminate dependence on any single device for system alarm reporting and control execution. Each controller shall operate independently by performing its' own control, alarm management and historical data collection.

F. Special Network Architecture Requirements:
1. Air-Handling Systems: For control applications of an air-handling system that consists of air-handling unit(s) and VAV terminal units, include a dedicated LAN of application-specific controllers serving VAV terminal units connected directly to controller that is controlling air-handling system air-handling unit(s). Basically, create a DDC system LAN that aligns with air-handling system being controlled.
2. Pod Exhaust System: For control application of air handling systems with master override panel in control room.

2.06 DDC SYSTEM OPERATOR INTERFACES

A. Operator Means of System Access: Operator shall be able to access entire DDC system through any of multiple means, including, but not limited to, the following:
1. Desktop and portable workstation with hardwired connection through LAN port.
2. Portable operator terminal with hardwired connection through LAN port.
3. Portable operator workstation with wireless connection through LAN router.ex
4. Mobile device and application with secured wireless connection through LAN router or cellular data service.
5. Remote connection through web access.

B. Access to system, regardless of operator means used, shall be transparent to operator.

C. Network Ports: For hardwired connection of desktop or portable workstation. Network port shall be easily accessible, properly protected, clearly labeled, and installed at the following locations:
1. Each mechanical equipment room
2. At each Air Handling Unit in POD
3. Inside of vehicle Sallyport.
4. Each boiler room.
5. Each chiller room or outdoor chiller yard.
6. Each different roof level with roof-mounted air-handling units or rooftop units.
7. Security system command center/Control Room.
8. Fire-alarm system command center.

D. Desktop Workstations:
   1. Connect to DDC system Level one LAN through a communications port directly on LAN or through a communications port on a DDC controller.
   2. Able to communicate with any device located on any DDC system LAN.

E. Portable Workstations:
   1. Connect to DDC system Level one LAN through a communications port directly on LAN or through a communications port on a DDC controller.
   2. Able to communicate with any device located on any DDC system LAN.
   3. Connect to DDC system Level two LAN through a communications port on an application-specific controller, or a room temperature sensor connected to an application- specific controller.
   4. Portable workstation shall be able to communicate with any device connected to any system LAN regardless of point of physical connection to system.
   5. Monitor, program, schedule, adjust set points, and report capabilities of I/O connected anywhere in system.
   6. Have dynamic graphic displays that are identical to desktop workstations.

F. Portable Operator Terminal:
   1. Connect DDC controller through a communications port local to controller.
   2. Able to communicate with any DDC system controller that is directly connected or connected to DDC system.

G. Critical Alarm Reporting:
   1. Operator-selected critical alarms shall be sent by DDC system to notify operator of critical alarms that require immediate attention.
   2. DDC system shall send alarm notification to multiple recipients that are assigned for each alarm.
   3. DDC system shall notify recipients by any or all means, including e-mail, text message and prerecorded phone message to mobile and landline phone numbers.

H. Simultaneous Operator Use: Capable of accommodating up to five simultaneous operators that are accessing DDC system through any one of operator interfaces indicated.

2.07 NETWORKS

A. Acceptable networks for connecting workstations and network controllers include the following:
   1. IP.
   2. IEEE 8802-3, Ethernet.

B. Acceptable networks for connecting programmable application controllers include the following:
   1. IP.
   2. IEEE 8802-3, Ethernet.

C. EIA-485A.
   1. EIA-485A
   2. IP.
   3. IEEE 8802-3, Ethernet.

2.08 NETWORK COMMUNICATION PROTOCOL

A. Network communication protocol(s) used throughout entire DDC system shall be open to Owner and available to other companies for use in making future modifications to DDC system.

B. ASHRAE 135 Protocol:
   1. ASHRAE 135 communication protocol shall be sole and native protocol used throughout entire DDC system.
   2. DDC system shall not require use of gateways except to integrate HVAC equipment and other building systems and equipment, not required to use ASHRAE 135 communication protocol.

3. If used, gateways shall connect to DDC system using ASHRAE 135 communication protocol and Project object properties and read/write services indicated by interoperability schedule.
4. Operator workstations, controllers and other network devices shall be tested and listed by BACnet Testing Laboratories.

2.09 WALL MOUNTED THERMOSTATS AND SENSORS

A. Unless otherwise noted on plans, all wall mounted thermostats shall have a visible digital display with user setpoint adjustability. Temperature range adjustability shall be able to be restricted to a range set by the central control system.

B. Where humidity-stats and CO2 sensors are shown on plans near a zone temperature sensor, all sensors shall be combined into a single wall sensor with user adjustment and digital display.

C. Tamper-proof lockboxes shall be provided for wall sensors and thermostats where indicated on plans but protected thermostats shall still be user adjustable with digital displays unless noted otherwise.

2.10 DESKTOP WORKSTATIONS

A. Description: A tower or all-in-one computer designed for normal use at a single, semi-permanent location.

B. Performance Requirements (Minimum):
1. Performance requirements may dictate equipment exceeding minimum requirements indicated.
2. Energy Star compliant.

C. Personal Computer:
1. Minimum Processor Speed: Intel, 2.8 GHz.
2. RAM:
   a. Capacity: 4.0 GB.
   b. Speed and Type: 1333 MHz.
3. Hard Drive:
   a. Media: Solid state.
   b. Number of Hard Drives: One.
   c. Capacity: 1000 GB.
4. At least four expansion slots of 64 bit.
5. Video Card:
   a. Resolution: 1600 by 1200 pixels.
   b. Video Adapter
   c. 64 MB video memory
   d. TV out.
6. Network Interface Card: Include card with connection, as applicable.
   a. Integrated Intel Pro 10-100-1000 base Ethernet with RJ45 connector port.

D. Wireless Ethernet, 802.11 a/b/g/n.
1. I/O Ports:
   a. Two USB 3.0 ports on front panel, six on back panel, and three internal on motherboard.
   b. One serial port.
   c. One parallel port.
   d. Two PS/2 ports.
   e. One RJ45.
   f. One stereo line-in and headphone/line-out on back panel.
   g. One microphone and headphone connector on front panel.
   h. One IEEE 1394 on front and back panel with PCI-e card.
   i. One ESATA port on back panel.

2. Battery: Life of at least three years to maintain system clock/calendar and ROM, as a minimum.

E. DVD/RW:
1. 48x24x48

F. Keyboard:
1. QWERTY, 105 keys.
2. Full upper- and lowercase ASCII keyset, numeric keypad, dedicated cursor control keypad, and 12 programmable function keys.

G. Pointing Device:
1. Three-button, optical mouse.
2. Wireless operation within up to 72 inches (1800 mm) in front of workstation.

H. Flat Panel Display Monitor:
1. Display:
a. Color display with 19 inches diagonal viewable area, LCD color.
b. Digital input signal.
c. Aspect Ratio: 16 to 9.
d. Antiglare display.
e. Dynamic Contrast Ratio: 50000 to 1.
f. Brightness: 250 cd/sq. m.
g. Tilt adjustable base.
h. Energy Star compliant.
i. Resolution: 1920 by 1080 pixels at 60 Hz with pixel size of 0.277 mm or smaller.
j. Number of Displays: One.

I. Speakers:
1. Two, with individual controls for volume, bass and treble.
2. Signal to Noise Ratio: At least 65 dB.
3. Power: At least 4 W per speaker/channel.
4. Magnetic shielding to prevent distortion on the video monitor.

J. I/O Cabling: Include applicable cabling to connect I/O devices.

2.11 PORTABLE WORKSTATIONS

A. Description: A self-contained computer designed to allow for normal use in different locations and conditions.

B. Performance Requirements:
1. Performance requirements may dictate equipment exceeding minimum requirements indicated.
2. Energy Star compliant.
3. Hardware and software shall support local down-loading to DDC controllers.
4. Data transfer rate to DDC controller shall be at network speed.
5. Windows 10 Operating System to match Workstation with minimum 2 year license.

C. Processor:
1. RAM:
a. Capacity: 2GB.
b. Speed and Type: 1600 MHz, DDR3.
2. Hard Drive:
a. Number of Hard Drives: One.
b. Capacity: 500 GB

D. Input and Output Ports:
1. Serial port.
2. Shared port for external keyboard or mouse.
3. Four USB 3.0 ports.

4. Ethernet port.
5. HDMI port.
6. IEEE 1394 port.

E. Battery:
1. Capable of supporting operation of portable workstation for a minimum of 8 hours.
2. Battery life of at least three years.
3. Battery charge time of less than three hours.

F. Keyboard:
1. 85-key backlit keyboard.
2. Full upper- and lowercase ASCII keyset.

G. Integral Pointing Device: Touchpad with two buttons. Gesture enabled.

H. Display:
1. 11 inches diagonal or larger high-definition LED color display.
2. Antiglare screen.
3. 1920 by 1080 pixel resolution.
4. Brightness: 300 nits.

I. Network Interfaces:
1. Network Interface Card: Include card with connection, as application.
   a. Pro 10-100-1000 base Ethernet with RJ45 connector port.
2. Wireless:
   a. Internal with integrated antenna, capable of supporting 802.11 a/b/g/n.

J. Accessories:
1. Nylon carrying case.
2. Docking station.
3. Mobile broadband card.
4. Wireless optical mouse.
5. 2 TB portable hard drive.
6. Light-sensitive web cam and noise-cancelling digital array microphone.
7. Category 6a patch cable. Minimum cable length shall be 10 ft.
8. HDMI cable. Minimum cable length shall be 10 ft.

2.12 SYSTEM SOFTWARE

A. System Software Minimum Requirements:
1. Real-time multitasking and multiuser 64-bit operating system that allows concurrent multiple operator workstations operating and concurrent execution of multiple real-time programs and custom program development.
2. Operating system shall be capable of operating DOS and Microsoft Windows applications.
3. Database management software shall manage all data on an integrated and non-redundant basis. Additions and deletions to database shall be without detriment to existing data. Include cross linkages so no data required by a program can be deleted by an operator until that data have been deleted from respective programs.
4. Network communications software shall manage and control multiple network communications to provide exchange of global information and execution of global programs.
5. Operator interface software shall include day-to-day operator transaction processing, alarm and report handling, operator privilege level and data segregation control, custom programming, and online data modification capability.
6. Scheduling software shall schedule centrally based time and event, temporary, and exception day programs.

B. Operator Interface Software:
1. Minimize operator training through use of English language prorating and English language point identification.

2. Minimize use of a typewriter-style keyboard through use of a pointing device similar to a mouse.
3. Operator sign-off shall be a manual operation or, if no keyboard or mouse activity takes place, an automatic sign-off.
4. Automatic sign-off period shall be programmable from one to 60 minutes in one-minute increments on a per operator basis.
5. Operator sign-on and sign-off activity shall be recorded and sent to printer.
6. Security Access:
    a. Operator access to DDC system shall be under password control.
    b. An alphanumeric password shall be field assignable to each operator.
    c. Operators shall be able to access DDC system by entry of proper password.
    d. Operator password shall be same regardless of which computer or other interface means is used.
    e. Additions or changes made to passwords shall be updated automatically.
    f. Each operator shall be assigned an access level to restrict access to data and functions the operator is cable of performing.
    g. Software shall have at least five access levels.
    h. Each menu item shall be assigned an access level so that a one-for-one correspondence between operator assigned access level(s) and menu item access level(s) is required to gain access to menu item.
    i. Display menu items to operator with those capable of access highlighted. Menu and operator access level assignments shall be online programmable and under password control.
7. Data Segregation:
    a. Include data segregation for control of specific data routed to a workstation, to an operator or to a specific output device, such as a printer.
    b. Include at least 32 segregation groups.
    c. Segregation groups shall be selectable such as "fire points," "fire points on second floor," "space temperature points," "HVAC points," and so on.
    d. Points shall be assignable to multiple segregation groups. Display and output of data to printer or monitor shall occur where there is a match of operator or peripheral segregation group assignment and point segregations.
    e. Alarms shall be displayed and printed at each peripheral to which segregation allows, but only those operators assigned to peripheral and having proper authorization level will be allowed to acknowledge alarms.
    f. Operators and peripherals shall be assignable to multiple segregation groups and all assignments are to be online programmable and under password control.
8. Operators shall be able to perform commands including, but not limited to, the following:
    a. Start or stop selected equipment.
    b. Adjust set points.
    c. Add, modify, and delete time programming.
    d. Enable and disable process execution.
    e. Lock and unlock alarm reporting for each point.
    f. Enable and disable totalization for each point.
    g. Enable and disable trending for each point.
    h. Override control loop set points.
    i. Enter temporary override schedules.
    j. Define holiday schedules.
    k. Change time and date.
    l. Enter and modify analog alarm limits.
    m. Enter and modify analog warning limits.
    n. View limits.
    o. Enable and disable demand limiting.
    p. Enable and disable duty cycle.

q. Display logic programming for each control sequence.

9. Reporting:
   a. Generated automatically and manually.
   b. Sent to displays, printers and disk files.
   c. Types of Reporting:
      1) General listing of points.
      2) List points currently in alarm.
      3) List of off-line points.
      4) List points currently in override status.
      5) List of disabled points.
      6) List points currently locked out.
      7) List of items defined in a "Follow-Up" file.
      8) List weekly schedules.
      9) List holiday programming.
      10) List of limits and deadbands.
10. Summaries: For specific points, for a logical point group, for an operator selected group(s), or for entire system without restriction due to hardware configuration.

C. Graphic Interface Software:
1. Include a full interactive graphical selection means of accessing and displaying system data to operator. Include at least five levels with the penetration path operator assignable (for example, site, building, floor, air-handling unit, and supply temperature loop). Native language descriptors assigned to menu items are to be operator defined and modifiable under password control.
2. Include a hierarchical-linked dynamic graphic operator interface for accessing and displaying system data and commanding and modifying equipment operation. Interface shall use a pointing device with pull-down or penetrating menus, color and animation to facilitate operator understanding of system.
3. Include at least 10 levels of graphic penetration with the hierarchy operator assignable.
4. Descriptors for graphics, points, alarms and such shall be modified through operator's workstation under password control.
5. Graphic displays shall be online user definable and modifiable using the hardware and software provided.
6. Data to be displayed within a graphic shall be assignable regardless of physical hardware address, communication or point type.
7. Graphics are to be online programmable and under password control.
8. Points may be assignable to multiple graphics where necessary to facilitate operator understanding of system operation.
9. Graphics shall also contain software points.
10. Penetration within a graphic hierarchy shall display each graphic name as graphics are selected to facilitate operator understanding.
11. Back-trace feature shall permit operator to move upward in the hierarchy using a pointing device. Back trace shall show all previous penetration levels. Include operator with option of showing each graphic full screen size with back trace as horizontal header or by showing a "stack" of graphics, each with a back trace.
12. Display operator accessed data on the monitor.
13. Operator shall select further penetration using pointing device to click on a site, building, floor, area, equipment, and so on. Defined and linked graphic below that selection shall then be displayed.
14. Include operator with means to directly access graphics without going through penetration path.
15. Dynamic data shall be assignable to graphics.
16. Display points (physical and software) with dynamic data provided by DDC system with appropriate text descriptors, status or value, and engineering unit.

17. Use color, rotation, or other highly visible means, to denote status and alarm states. Color shall be variable for each class of points, as chosen by operator.
18. Points shall be dynamic with operator adjustable update rates on a per point basis from one second to over a minute.
19. For operators with appropriate privilege, points shall be commanded directly from display using pointing device.
    a. For an analog command point such as set point, current conditions and limits shall be displayed and operator can position new set point using pointing device.
    b. For a digital command point such as valve position, valve shall show its current state such as open or closed and operator could select alternative position using pointing device.
    c. Keyboard equivalent shall be available for those operators with that preference.
20. Operator shall be able to split or resize viewing screen into quadrants to show one graphic on one quadrant of screen and other graphics or spreadsheet, bar chart, word processing, curve plot and other information on other quadrants on screen. This feature shall allow real-time monitoring of one part of system while displaying other parts of system or data to better facilitate overall system operation.
21. Help Features:
    a. On-line context-sensitive help utility to facilitate operator training and understanding.
    b. Bridge to further explanation of selected keywords. Document shall contain text and graphics to clarify system operation.
        1) If help feature does not have ability to bridge on keywords for more information, a complete set of user manuals shall be provided in an indexed word-processing program, which shall run concurrently with operating system software.
    c. Available for Every Menu Item:
        1) Index items for each system menu item.
22. Graphic generation software shall allow operator to add, modify, or delete system graphic displays.
    a. Include libraries of symbols depicting HVAC symbols such as fans, coils, filters, dampers, valves pumps, and electrical symbols similar to those indicated.
    b. Graphic development package shall use a pointing device in conjunction with a drawing program to allow operator to perform the following:
        1) Define background screens.
        2) Define connecting lines and curves.
        3) Locate, orient and size descriptive text.
        4) Define and display colors for all elements.
        5) Establish correlation between symbols or text and associated system points or other displays.

D. Project-Specific Graphics: Graphics documentation including, but not limited to, the following:
1. Site plan showing each building, and additional site elements, which are being controlled or monitored by DDC system.
2. Plan for each building floor, including interstitial floors, and each roof level of each building, showing the following:
    a. Room layouts with room identification and name.
    b. Locations and identification of all monitored and controlled HVAC equipment and other equipment being monitored and controlled by DDC system.
    c. Location and identification of each hardware point being controlled or monitored by DDC system.
    d. AHU zone plans with color coded shading showing temperature satisfaction.
    e. Pod Control Zones.
3. Control schematic for each of following, including a graphic system schematic representation, similar to that indicated on Drawings, with point identification, set point and dynamic value indication, sequence of operation and control logic diagram.

4. Graphic display for each piece of equipment connected to DDC system through a data communications link. Include dynamic indication of all points associated with equipment.
5. DDC system network riser diagram that shows schematic layout for entire system including all networks and all controllers, gateways, operator workstations and other network devices.

E. Customizing Software:
1. Software to modify and tailor DDC system to specific and unique requirements of equipment installed, to programs implemented and to staffing and operational practices planned.
2. Online modification of DDC system configuration, program parameters, and database using menu selection and keyboard entry of data into preformatted display templates.
3. As a minimum, include the following modification capability:
    a. Operator assignment shall include designation of operator passwords, access levels, point segregation and auto sign-off.
    b. Peripheral assignment capability shall include assignment of segregation groups and operators to consoles and printers, designation of backup workstations and printers, designation of workstation header points and enabling and disabling of print-out of operator changes.
    c. System configuration and diagnostic capability shall include communications and peripheral port assignments, DDC controller assignments to network, DDC controller enable and disable, assignment of command trace to points and application programs and initiation of diagnostics.
    d. System text addition and change capability shall include English or native language descriptors for points, segregation groups and access levels and action messages for alarms, run time and trouble condition.
    e. Time and schedule change capability shall include time and date set, time and occupancy schedules, exception and holiday schedules and daylight savings time schedules.
    f. Point related change capability shall include the following:
        1) System and point enable and disable.
        2) Run-time enable and disable.
        3) Assignment of points to segregation groups, calibration tables, lockout, and run time and to a fixed I/O value.
        4) Assignment of alarm and warning limits.
    g. Application program change capability shall include the following:
        1) Enable and disable of software programs.
        2) Programming changes.
        3) Assignment of comfort limits, global points, time and event initiators, time and event schedules and enable and disable time and event programs.
4. Software shall allow operator to add points, or groups of points, to DDC system and to link them to energy optimization and management programs. Additions and modifications shall be online programmable using operator workstation, downloaded to other network devices and entered into their databases. After verification of point additions and associated program operation, database shall be uploaded and recorded on hard drive and disk for archived record.
5. Include high-level language programming software capability for implementation of custom DDC programs. Software shall include a compiler, linker, and up- and down-load capability.
6. Include a library of DDC algorithms, intrinsic control operators, arithmetic, logic and relational operators for implementation of control sequences. Also include, as a minimum, the following:
    a. Proportional control (P).
    b. Proportional plus integral (PI).
    c. Proportional plus integral plus derivative (PID).

d. Adaptive and intelligent self-learning control.
   1) Algorithm shall monitor loop response to output corrections and adjust loop response characteristics according to time constant changes imposed.
   2) Algorithm shall operate in a continuous self-learning manner and shall retain in memory a stored record of system dynamics so that on system shut down and restart, learning process starts from where it left off.

7. Fully implemented intrinsic control operators including sequence, reversing, ratio, time delay, time of day, highest select AO, lowest select AO, analog controlled digital output, analog control AO, and digitally controlled AO.
8. Logic operators such as "And," "Or," "Not," and others that are part of a standard set available with a high-level language.
9. Arithmetic operators such as "Add," "Subtract," "Multiply," "Divide," and others that are part of a standard set available with a high-level language.
10. Relational operators such as "Equal To," "Not Equal To," "Less Than," "Greater Than," and others that are part of a standard set available with a high-level language.

F. Alarm Handling Software:
1. Include alarm handling software to report all alarm conditions monitored and transmitted through DDC controllers, gateways and other network devices.
2. Include first in, first out handling of alarms according to alarm priority ranking, with most critical alarms first, and with buffer storage in case of simultaneous and multiple alarms.
3. Alarm handling shall be active at all times to ensure that alarms are processed even if an operator is not currently signed on to DDC system.
4. Alarms display shall include the following:
   a. Indication of alarm condition such as "Abnormal Off," "Hi Alarm," and "Low Alarm."
   b. "Analog Value" or "Status" group and point identification with native language point descriptor such as "Space Temperature, Building 110, 2nd Floor, Room 212."
   c. Discrete per point alarm action message, such as "Call Maintenance Dept. Ext-5561."
   d. Include extended message capability to allow assignment and printing of extended action messages. Capability shall be operator programmable and assignable on a per point basis.
5. Alarms shall be directed to appropriate operator workstations, printers, and individual operators by privilege level and segregation assignments.
6. Send e-mail alarm messages to designated operators.
7. Send e-mail, page, text and voice messages to designated operators for critical alarms.
8. Alarms shall be categorized and processed by class.
   a. Class 1:
      1) Associated with fire, security and other extremely critical equipment monitoring functions; have alarm, trouble, return to normal, and acknowledge conditions printed and displayed.
      2) Unacknowledged alarms to be placed in unacknowledged alarm buffer.
      3) All conditions shall cause an audible sound and shall require individual acknowledgment to silence audible sound.
   b. Class 2:
      1) Critical, but not life-safety related, and processed same as Class 1 alarms, except do not require individual acknowledgment.
      2) Acknowledgement may be through a multiple alarm acknowledgment.
   c. Class 3:
      1) General alarms; printed, displayed and placed in unacknowledged alarm buffer queues.
      2) Each new alarm received shall cause an audible sound. Audible sound shall be silenced by "acknowledging" alarm or by pressing a "silence" key.
      3) Acknowledgement of queued alarms shall be either on an individual basis or through a multiple alarm acknowledgement.

4) Alarms returning to normal condition shall be printed and not cause an audible sound or require acknowledgment.

d. Class 4:

1) Routine maintenance or other types of warning alarms.

2) Alarms to be printed only, with no display, no audible sound and no acknowledgment required.

9. Include an unacknowledged alarm indicator on display to alert operator that there are unacknowledged alarms in system. Operator shall be able to acknowledge alarms on an individual basis or through a multiple alarm acknowledge key, depending on alarm class.

10. To ensure that no alarm records are lost, it shall be possible to assign a backup printer to accept alarms in case of failure of primary printer.

G. Reports and Logs:

1. Include reporting software package that allows operator to select, modify, or create reports using DDC system I/O point data available.

2. Each report shall be definable as to data content, format, interval and date.

3. Report data shall be sampled and stored on DDC controller, within storage limits of DDC controller, and then uploaded to archive on workstation for historical reporting.

4. Operator shall be able to obtain real-time logs of all I/O points by type or status, such as alarm, point lockout, or normal.

5. Reports and logs shall be stored on workstation hard drives in a format that is readily accessible by other standard software applications, including spreadsheets and word processing.

6. Reports and logs shall be readily printed and set to be printed either on operator command or at a specific time each day.

H. Standard Reports: Standard DDC system reports shall be provided and operator shall be able to customize reports later.

1. All I/O: With current status and values.

2. Alarm: All current alarms, except those in alarm lockout.

3. Disabled I/O: All I/O points that are disabled.

4. Alarm Lockout I/O: All I/O points in alarm lockout, whether manual or automatic.

5. Alarm Lockout I/O in Alarm: All I/O in alarm lockout that are currently in alarm.

6. Logs:

a. Alarm history.

b. System messages.

c. System events.

d. Trends.

I. Custom Reports: Operator shall be able to easily define any system data into a daily, weekly, monthly, or annual report. Reports shall be time and date stamped and shall contain a report title.

J. Utility Reports: Prepare Project-specific reports.

1. Electric Report:

a. Include weekly report showing daily electrical consumption and peak electrical demand with time and date stamp for each meter.

b. Include monthly report showing the daily electrical consumption and peak electrical demand with time and date stamp for each meter.

c. Include annual report showing the monthly electrical consumption and peak electrical demand with time and date stamp for each meter.

d. For each weekly, monthly and annual report, include sum total of submeters combined by load type, such as lighting, receptacles and HVAC equipment showing daily electrical consumption and peak electrical demand.

e. For each weekly, monthly and annual report, include sum total of all submeters in building showing electrical consumption and peak electrical demand.

2. Natural Gas Report:

a. Include weekly report showing daily natural gas consumption and peak natural gas demand with time and date stamp for each meter.
b. Include monthly report showing the daily natural gas consumption and peak natural gas demand with time and date stamp for each meter.
c. Include annual report showing the monthly natural gas consumption and peak natural gas demand with time and date stamp for each meter.
d. For each weekly, monthly and annual report, include sum total of submeters combined by load type, such as boilers and service water heaters showing daily natural gas consumption and peak natural gas demand.
e. For each weekly, monthly and annual report, include sum total of all submeters in building showing natural gas consumption and peak natural gas demand.

K. Weather Reports:
1. Include daily report showing the following:
a. Daily minimum, maximum, and average outdoor dry-bulb temperature.
b. Daily minimum, maximum, and average outdoor wet-bulb temperature.
c. Daily minimum, maximum, and average outdoor dew point temperature.
d. Number of heating degree-days for each day calculated from a base temperature of 55 deg F (13 deg C).
e. Number of cooling degree-days for each day calculated from a base temperature of 65 deg F (18 deg C).
f. Daily minimum, maximum, and average outdoor carbon dioxide level.
g. Daily minimum, maximum, and average relative humidity.
h. Daily minimum, maximum, and average barometric pressure.
i. Daily minimum, maximum, and average wind speed and direction.
2. Include weekly report showing the following:
a. Daily minimum, maximum, and average outdoor dry-bulb temperature.
b. Daily minimum, maximum, and average outdoor wet-bulb temperature.
c. Daily minimum, maximum, and average outdoor dew point temperature.
d. Number of heating degree-days for each day calculated from a base temperature of 55 deg F (13 deg C).
e. Number of cooling degree-days for each day calculated from a base temperature of 65 deg F (18 deg C).
f. Weekly minimum, maximum, and average outdoor carbon dioxide level.
g. Daily minimum, maximum, and average relative humidity.
h. Daily minimum, maximum, and average barometric pressure.
i. Daily minimum, maximum, and average wind speed and direction.
3. Include monthly report showing the following:
a. Daily minimum, maximum, and average outdoor dry-bulb temperature.
b. Daily minimum, maximum, and average outdoor wet-bulb temperature.
c. Daily minimum, maximum, and average outdoor dew point temperature.
d. Number of heating degree-days for each day calculated from a base temperature of 55 deg F (13 deg C).
e. Number of cooling degree-days for each day calculated from a base temperature of 65 deg F (18 deg C).
f. Monthly minimum, maximum, and average outdoor carbon dioxide level.
g. Daily minimum, maximum, and average relative humidity.
h. Daily minimum, maximum, and average barometric pressure.
i. Daily minimum, maximum, and average wind speed and direction.
4. Include annual (12-month) report showing the following:
a. Monthly minimum, maximum, and average outdoor dry-bulb temperature.
b. Monthly minimum, maximum, and average outdoor wet-bulb temperature.
c. Monthly minimum, maximum, and average outdoor dew point temperature.

d. Number of heating degree-days for each day calculated from a base temperature of 55 deg F (13 deg C).
e. Number of cooling degree-days for each day calculated from a base temperature of 65 deg F (18 deg C).
f. Annual minimum, maximum, and average outdoor carbon dioxide level.
g. Monthly minimum, maximum, and average relative humidity.
h. Daily minimum, maximum, and average barometric pressure.
i. Daily minimum, maximum, and average wind speed and direction.

L. Standard Trends:
1. Trend all I/O point present values, set points, and other parameters indicated for trending.
2. Trends shall be associated into groups, and a trend report shall be set up for each group.
3. Trends shall be stored within DDC controller and uploaded to hard drives automatically on reaching 75 percent of DDC controller buffer limit, or by operator request, or by archiving time schedule.
4. Preset trend intervals for each I/O point after review with Owner.
5. Trend intervals shall be operator selectable from 10 seconds up to 60 minutes. Minimum number of consecutive trend values stored at one time shall be 100 per variable.
6. When drive storage memory is full, most recent data shall overwrite oldest data.
7. Archived and real-time trend data shall be available for viewing numerically and graphically by operators.

M. Custom Trends: Operator shall be able to define a custom trend log for any I/O point in DDC system.
1. Each trend shall include interval, start time, and stop time.
2. Data shall be sampled and stored on DDC controller, within storage limits of DDC controller, and then uploaded to archive on workstation hard drives.
3. Data shall be retrievable for use in spreadsheets and standard database programs.

N. Programming Software:
1. Include programming software to execute sequences of operation indicated.
2. Include programming routines in simple and easy to follow logic with detailed text comments describing what the logic does and how it corresponds to sequence of operation.
3. Programming software shall be any of the following:
a. Graphic Based: Programming shall use a library of function blocks made from preprogrammed code designed for DDC control systems.
1) Function blocks shall be assembled with interconnection lines that represent to control sequence in a flowchart.
2) Programming tools shall be viewable in real time to show present values and logical results of each function block.
b. Menu Based: Programming shall be done by entering parameters, definitions, conditions, requirements and constraints.
4. Include means for detecting programming errors and testing software control strategies with a simulation tool before implementing in actual control. Simulation tool may be inherent with programming software or as a separate product.

2.13 OFFICE APPLICATION SOFTWARE

A. Include current version of office application software at time of Substantial Completion.

B. Office application software package shall include multiple separate applications and use a common platform for all applications, similar to Microsoft's "Office Professional" Windows 10 with high-speed Internet Access.
1. Database.
2. E-mail.
3. Presentation.
4. Publisher.

5. Spreadsheet.
6. Word processing.

2.14 ASHRAE 135 GATEWAYS

A. Include BACnet communication ports, whenever available as an equipment OEM standard option, for integration via a single communication cable. BACnet-controlled plant equipment includes, but is not limited to, boilers, chillers, and variable-speed drives.

B. Include gateways to connect BACnet to legacy systems, existing non-BACnet devices, and existing non-BACnet DDC-controlled equipment, only when specifically requested and approved by Owner.

C. Include with each gateway an interoperability schedule showing each point or event on legacy side that BACnet "client" will read, and each parameter that BACnet network will write to. Describe this interoperability of BACnet services, or BIBBs, defined in ASHRAE 135, Annex K.

D. Gateway Minimum Requirements:
   1. Read and view all readable object properties on non-BACnet network to BACnet network and vice versa where applicable.
   2. Write to all writeable object properties on non-BACnet network from BACnet network and vice versa where applicable.
   3. Include single-pass (only one protocol to BACnet without intermediary protocols) translation from non-BACnet protocol to BACnet and vice versa.
   4. Comply with requirements of Data Sharing Read Property, Data Sharing Write Property, Device Management Dynamic Device Binding-B, and Device Management Communication Control BIBBs according to ASHRAE 135.
   5. Hardware, software, software licenses, and configuration tools for operator-to-gateway communications.
   6. Backup programming and parameters on CD media and the ability to modify, download, backup, and restore gateway configuration.

2.15 ASHRAE 135 PROTOCOL ANALYZER

A. Analyzer and required cables and fittings for connection to ASHRAE 135 network. Analyzer shall include capturing and storing to a file data traffic on all network levels, measuring bandwidth usage, and filtering options with ability to ignore select traffic.

2.16 WIRELESS ROUTERS FOR OPERATOR INTERFACE

A. Single-Band Wireless Routers: High-speed router with integral Ethernet ports. IEEE 802.11n; 2.4-GHz speed band. Speed up to 300 Mbps. Compatibility with IEEE 802.11n/g/b/a wireless devices. Ethernet ports four, gigabit (1000 Mbps). Wi-Fi Protected Access (WPA) and WPA2 according to IEEE 802.11i.

B. Dual-Band Wireless Routers: Description: High-speed, dual-band router with integral Ethernet ports and USB port. Technology: IEEE 802.11n; 2.4- and 5-GHz speed bands. Speed up to 300 Mbps on 2.4-GHz band and up to 450 Mbps on 5-GHz band. Compatibility with IEEE 802.11n/g/b/a wireless devices. Ethernet ports four, gigabit (1000 Mbps). USB 3.0 port. Wi-Fi Protected Access (WPA) and WPA2 according to IEEE 802.11i.

2.17 DDC CONTROLLERS

A. DDC system shall consist of a combination of network controllers, programmable application controllers and application-specific controllers to satisfy performance requirements indicated.

B. DDC controllers shall perform monitoring, control, energy optimization and other requirements indicated.

C. DDC controllers shall use a multitasking, multiuser, real-time digital control microprocessor with a distributed network database and intelligence.

D. Each DDC controller shall be capable of full and complete operation as a completely independent unit and as a part of a DDC system wide distributed network.

E. Environment Requirements:
   1. Controller hardware shall be suitable for the anticipated ambient conditions.
   2. Controllers located in conditioned space shall be rated for operation at 32 to 120 deg F (Zero to 50 deg C).
   3. Controllers located outdoors shall be rated for operation at -10 to 150 deg F (40 to 65 deg C).

F. Power and Noise Immunity:
   1. Controller shall operate at 90 to 110 percent of nominal voltage rating and shall perform an orderly shutdown below 80 percent of nominal voltage.
   2. Operation shall be protected against electrical noise of 5 to 120 Hz and from keyed radios with up to 5 W of power located within 36 inches (900 mm) of enclosure.

G. DDC Controller Spare Processing Capacity:
   1. Include spare processing memory for each controller. RAM, PROM, or EEPROM will implement requirements indicated with the following spare memory:
      a. Network Controllers: 50 percent.
      b. Programmable Application Controllers: Not less than 60 percent.
      c. Application-Specific Controllers: Not less than 70 percent.
   2. Memory shall support DDC controller's operating system and database and shall include the following:
      a. Monitoring and control.
      b. Energy management, operation and optimization applications.
      c. Alarm management.
      d. Historical trend data of all connected I/O points.
      e. Maintenance applications.
      f. Operator interfaces.
      g. Monitoring of manual overrides.

H. DDC Controller Spare I/O Point Capacity: Include spare I/O point capacity for each controller as follows:
   1. Network Controllers:
      a. 20 percent of each AI, AO, BI, and BO point connected to controller.
   2. Programmable Application Controllers:
      a. 20 percent of each AI, AO, BI, and BO point connected to controller.
   3. Application-Specific Controllers:
      a. 10 percent of each AI, AO, BI, and BO point connected to controller.

I. Maintenance and Support: Include the following features to facilitate maintenance and support:
   1. Mount microprocessor components on circuit cards for ease of removal and replacement.
   2. Means to quickly and easily disconnect controller from network.
   3. Means to quickly and easily access connect to field test equipment.
   4. Visual indication that controller electric power is on, of communication fault or trouble, and that controller is receiving and sending signals to network.

J. Input and Output Point Interface:
   1. Hardwired input and output points shall connect to network, programmable application and application-specific controllers.
   2. Input and output points shall be protected so shorting of point to itself, to another point, or to ground will not damage controller.
   3. Input and output points shall be protected from voltage up to 24 V of any duration so that contact will not damage controller.
   4. AIs:
      a. AIs shall include monitoring of low-voltage (zero- to 10-V dc), current (4 to 20 mA) and resistance signals from thermistor and RTD sensors.
      b. AIs shall be compatible with, and field configurable to, sensor and transmitters installed.

c. Controller AIs shall perform analog-to-digital (A-to-D) conversion with a minimum resolution of 12 bits or better to comply with accuracy requirements indicated.
d. Signal conditioning including transient rejection shall be provided for each AI.
e. Capable of being individually calibrated for zero and span.
f. Incorporate common-mode noise rejection of at least 50 dB from zero to 100 Hz for differential inputs, and normal-mode noise rejection of at least 20 dB at 60 Hz from a source impedance of 10000 ohms.

5. AOs:
   a. Controller AOs shall perform analog-to-digital (A-to-D) conversion with a minimum resolution of 12 bits or better to comply with accuracy requirements indicated.
   b. Output signals shall have a range Division 26 for as required to include proper control of output device.
   c. Capable of being individually calibrated for zero and span.
   d. AOs shall not exhibit a drift of greater than 0.4 percent of range per year.
6. BIs:
   a. Controller BIs shall accept contact closures and shall ignore transients of less than 5-ms duration.
   b. Isolation and protection against an applied steady-state voltage of up to 180-V ac peak.
   c. BIs shall include a wetting current of at least 12 mA to be compatible with commonly available control devices and shall be protected against effects of contact bounce and noise.
   d. BIs shall sense "dry contact" closure without external power (other than that provided by the controller) being applied.
   e. Pulse accumulation input points shall comply with all requirements of BIs and accept up to 10 pulses per second for pulse accumulation. Buffer shall be provided to totalize pulses. Pulse accumulator shall accept rates of at least 20 pulses per second. The totalized value shall be reset to zero on operator's command.
7. BOs:
   a. Controller BOs shall include relay contact closures or triac outputs for momentary and maintained operation of output devices.
      1) Relay contact closures shall have a minimum duration of 0.1 second. Relays shall include at least 180 V of isolation. Electromagnetic interference suppression shall be provided on all output lines to limit transients to non-damaging levels. Minimum contact rating shall be 1 A at 24-V ac.
      2) Triac outputs shall include at least 180 V of isolation. Minimum contact rating shall be 1 A at 24-V ac.
   b. BOs shall include for two-state operation or a pulsed low-voltage signal for pulse-width modulation control.
   c. BOs shall be selectable for either normally open or normally closed operation.
   d. Include tristate outputs (two coordinated BOs) for control of three-point floating- type electronic actuators without feedback.
   e. Limit use of three-point floating devices to VAV terminal unit control applications, and other applications indicated on Drawings. Control algorithms shall operate actuator to one end of its stroke once every 24 hours for verification of operator tracking.

2.18 NETWORK CONTROLLERS

A. General Network Controller Requirements:
   1. Include adequate number of controllers to achieve performance indicated.
   2. System shall consist of one or more independent, standalone, microprocessor-based network controllers to manage global strategies indicated.
   3. Controller shall have enough memory to support its operating system, database, and programming requirements.
   4. Data shall be shared between networked controllers and other network devices.

5. Operating system of controller shall manage input and output communication signals to allow distributed controllers to share real and virtual object information and allow for central monitoring and alarms.
6. Controllers that perform scheduling shall have a real-time clock.
7. Controller shall continually check status of its processor and memory circuits. If an abnormal operation is detected, controller shall assume a predetermined failure mode and generate an alarm notification.
8. Controllers shall be fully programmable.
9. The SNC shall be a JACE 9000 supporting the Tridium N4 framework
10. SNC shall include a 3-year Software Maintenance Agreement (SMA)

B. Communication:
1. Network controllers shall communicate with other devices on DDC system Level one network.
2. Network controller also shall perform routing if connected to a network of programmable application and application-specific controllers.

C. Operator Interface:
1. Controller shall be equipped with a service communications port for connection to a portable operator's workstation.
2. Local Keypad and Display:
a. Equip controller with local keypad and digital display for interrogating and editing data.
b. Use of keypad and display shall require security password.

D. Serviceability:
1. Controller shall be equipped with diagnostic LEDs or other form of local visual indication of power, communication, and processor.
2. Wiring and cable connections shall be made to field-removable, modular terminal strips or to a termination card connected by a ribbon cable.
3. Controller shall maintain BIOS and programming information in event of a power loss for at least 96 hours.

2.19 PROGRAMMABLE APPLICATION CONTROLLERS

A. General Programmable Application Controller Requirements:
1. Include adequate number of controllers to achieve performance indicated.
2. Controller shall have enough memory to support its operating system, database, and programming requirements.
3. Data shall be shared between networked controllers and other network devices.
4. Operating system of controller shall manage input and output communication signals to allow distributed controllers to share real and virtual object information and allow for central monitoring and alarms.
5. Controllers that perform scheduling shall have a real-time clock.
6. Controller shall continually check status of its processor and memory circuits. If an abnormal operation is detected, controller shall assume a predetermined failure mode and generate an alarm notification.
7. Controllers shall be fully programmable.

B. Communication:
1. Programmable application controllers shall communicate with other devices on network.

C. Operator Interface:
1. Controller shall be equipped with a service communications port for connection to a portable operator's workstation.
2. Local Keypad and Display:
a. Equip controller with local keypad and digital display for interrogating and editing data.
b. Use of keypad and display shall require security password.

D. Serviceability:
   1. Controller shall be equipped with diagnostic LEDs or other form of local visual indication of power, communication, and processor.
   2. Wiring and cable connections shall be made to field-removable, modular terminal strips or to a termination card connected by a ribbon cable.
   3. Controller shall maintain BIOS and programming information in event of a power loss for at least 96 hours.

2.20 APPLICATION-SPECIFIC CONTROLLERS

A. Description: Microprocessor-based controllers, which through hardware or firmware design are dedicated to control a specific piece of equipment. Controllers are not fully user-programmable but are configurable and customizable for operation of equipment they are designed to control.
   1. Capable of standalone operation and shall continue to include control functions without being connected to network.
   2. Data shall be shared between networked controllers and other network devices.

B. Communication: Application-specific controllers shall communicate with other application-specific controller and devices on network, and to programmable application and network controllers.

C. Operator Interface: Controller shall be equipped with a service communications port for connection to a portable operator's workstation.

D. Serviceability:
   1. Controller shall be equipped with diagnostic LEDs or other form of local visual indication of power, communication, and processor.
   2. Wiring and cable connections shall be made to field-removable, modular terminal strips or to a termination card connected by a ribbon cable.
   3. Controller shall use nonvolatile memory and maintain all BIOS and programming information in event of power loss.

2.21 CONTROLLER SOFTWARE

A. General Controller Software Requirements:
   1. Software applications shall reside and operate in controllers. Editing of applications shall occur at operator workstations.
   2. I/O points shall be identified by up to 30-character point name and up to 16-character point descriptor. Same names shall be used at operator workstations.
   3. Control functions shall be executed within controllers using DDC algorithms.
   4. Controllers shall be configured to use stored default values to ensure fail-safe operation. Default values shall be used when there is a failure of a connected input instrument or loss of communication of a global point value.

B. Security:
   1. Operator access shall be secured using individual security passwords and user names.
   2. Passwords shall restrict operator to points, applications, and system functions as assigned by system manager.
   3. Operator log-on and log-off attempts shall be recorded.
   4. System shall protect itself from unauthorized use by automatically logging off after last keystroke. The delay time shall be operator-definable.

C. Scheduling: Include capability to schedule each point or group of points in system. Each schedule shall consist of the following:
   1. Weekly Schedule:
      a. Include separate schedules for each day of week.
      b. Each schedule should include the capability for start, stop, optimal start, optimal stop, and night economizer.
      c. Each schedule may consist of up to 10 events.

d. When a group of objects are scheduled together, include capability to adjust start and stop times for each member.

2. Exception Schedules:
   a. Include ability for operator to designate any day of the year as an exception schedule.
   b. Exception schedules may be defined up to a year in advance. Once an exception schedule is executed, it will be discarded and replaced by regular schedule for that day of week.
3. Holiday Schedules:
   a. Include capability for operator to define up to 99 special or holiday schedules.
   b. Schedules may be placed on scheduling calendar and will be repeated each year.
   c. Operator shall be able to define length of each holiday period.

D. System Coordination:
1. Include standard application for proper coordination of equipment.
2. Application shall include operator with a method of grouping together equipment based on function and location.
3. Group may then be used for scheduling and other applications.

E. Binary Alarms:
1. Each binary point shall be set to alarm based on operator-specified state.
2. Include capability to automatically and manually disable alarming.

F. Analog Alarms:
1. Each analog object shall have both high and low alarm limits.
2. Alarming shall be able to be automatically and manually disabled.

G. Alarm Reporting:
1. Operator shall be able to determine action to be taken in event of an alarm.
2. Alarms shall be routed to appropriate operator workstations based on time and other conditions.
3. Alarm shall be able to start programs, print, be logged in event log, generate custom messages, and display graphics.

H. Remote Communication:
1. System shall have ability to dial out in the event of an alarm.

I. Electric Power Demand Limiting:
1. Demand-limiting program shall monitor building or other operator-defined electric power consumption from signals connected to electric power meter or from a watt transducer or current transformer.
2. Demand-limiting program shall predict probable power demand such that action can be taken to prevent exceeding demand limit. When demand prediction exceeds demand limit, action will be taken to reduce loads in a predetermined manner. When demand prediction indicates demand limit will not be exceeded, action will be taken to restore loads in a predetermined manner.
3. Demand reduction shall be accomplished by the following means:
   a. Reset air-handling unit supply temperature set points.
   b. Reset space temperature set points.
   c. De-energize equipment based on priority.
4. Demand-limiting parameters, frequency of calculations, time intervals, and other relevant variables shall be based on the means by which electric power service provider computes demand charges.
5. Include demand-limiting prediction and control for any individual meter monitored by system or for total of any combination of meters.
6. Include means operator to make the following changes online:
   a. Addition and deletion of loads controlled.
   b. Changes in demand intervals.
   c. Changes in demand limit for meter(s).

d. Maximum shutoff time for equipment.
e. Minimum shutoff time for equipment.
f. Select rotational or sequential shedding and restoring.
g. Shed and restore priority.

7. Include the following information and reports, to be available on an hourly, daily, weekly, monthly and annual basis:
   a. Total electric consumption.
   b. Peak demand.
   c. Date and time of peak demand.
   d. Daily peak demand.

J. Maintenance Management: System shall monitor equipment status and generate maintenance messages based on operator-designated run-time, starts, and calendar date limits.

K. Sequencing: Include application software based on sequences of operation indicated to properly sequence chillers, boilers, and other applicable HVAC equipment.

L. Control Loops:
1. Support any of the following control loops, as applicable to control required:
   a. Two-position (on/off, open/close, slow/fast) control.
   b. Proportional control.
   c. Proportional plus integral (PI) control.
   d. Proportional plus integral plus derivative (PID) control.
      1) Include PID algorithms with direct or reverse action and anti-windup.
      2) Algorithm shall calculate a time-varying analog value used to position an output or stage a series of outputs.
      3) Controlled variable, set point, and PID gains shall be operator-selectable.
   e. Adaptive (automatic tuning).

M. Staggered Start: Application shall prevent all controlled equipment from simultaneously restarting after a power outage. Order which equipment (or groups of equipment) is started, along with the time delay between starts, shall be operator-selectable.

N. Anti-Short Cycling:
1. BO points shall be protected from short cycling.
2. Feature shall allow minimum on-time and off-time to be selected.

O. On and Off Control with Differential:
1. Include an algorithm that allows a BO to be cycled based on a controlled variable and set point.
2. Algorithm shall be direct- or reverse-acting and incorporate an adjustable differential.

P. Run-Time Totalization:
1. Include software to totalize run-times for all BI and BO points.
2. A high run-time alarm shall be assigned, if required, by operator.

2.22 ENCLOSURES

A. General Enclosure Requirements:
1. House each controller and associated control accessories in a single enclosure. Enclosure shall serve as central tie-in point for control devices such as switches, transmitters, transducers, power supplies and transformers.
2. Do not house more than one controller in a single enclosure.
3. Include enclosure door with key locking mechanism. Key locks alike for all enclosures and include one pair of keys per enclosure.
4. Individual wall-mounted single-door enclosures shall not exceed 36 inches (900 mm) wide and 48 inches (1200 mm) high.
5. Include wall-mounted enclosures with brackets suitable for mounting enclosures to wall or freestanding support stand as indicated.

6. Supply each enclosure with a complete set of as-built schematics, tubing, and wiring diagrams and product literature located in a pocket on inside of door.

B. Internal Arrangement:
1. Internal layout of enclosure shall group and protect pneumatic, electric, and electronic components associated with a controller, but not an integral part of controller.
2. Arrange layout to group similar products together.
3. Include a barrier between line-voltage and low-voltage electrical and electronic products.
4. Factory or shop install products, tubing, cabling and wiring complying with requirements and standards indicated.
5. Terminate field cable and wire using heavy-duty terminal blocks.
6. Include spare terminals, equal to not less than 10 percent of used terminals.
7. Include spade lugs for stranded cable and wire.
8. Install a maximum of two wires on each side of a terminal.
9. Include enclosure field power supply with a toggle-type switch located at entrance inside enclosure to disconnect power.
10. Include enclosure with a line-voltage nominal 20-A GFCI duplex receptacle for service and testing tools. Wire receptacle on hot side of enclosure disconnect switch and include with a 5-A circuit breaker.
11. Mount products within enclosure on removable internal panel(s).
12. Include products mounted in enclosures with engraved, laminated phenolic nameplates (black letters on a white background). The nameplates shall have at least 1/4-inch- (6-mm-) high lettering.
13. Route tubing cable and wire located inside enclosure within a raceway with a continuous removable cover.
14. Label each end of cable, wire and tubing in enclosure following an approved identification system that extends from field I/O connection and all intermediate connections throughout length to controller connection.
15. Size enclosure internal panel to include at least 25 percent spare area on face of panel.

C. Environmental Requirements:
1. Evaluate temperature and humidity requirements of each product to be installed within each enclosure.
2. Calculate enclosure internal operating temperature considering heat dissipation of all products installed within enclosure and ambient effects (solar, conduction and wind) on enclosure.
3. Where required by application, include temperature-controlled electrical heat to maintain inside of enclosure above minimum operating temperature of product with most stringent requirement.
4. Where required by application, include temperature-controlled ventilation fans with filtered louver(s) to maintain inside of enclosure below maximum operating temperature of product with most stringent requirement.
5. Include temperature-controlled cooling within the enclosure for applications where ventilation fans cannot maintain inside temperature of enclosure below maximum operating temperature of product with most stringent requirement.
6. Where required by application, include humidity-controlled electric dehumidifier or cooling to maintain inside of enclosure below maximum relative humidity of product with most stringent requirement and to prevent surface condensation within enclosure.

D. Wall-Mounted, NEMA 250, Type 1:
1. Enclosure shall be NRTL listed according to UL 50 or UL 50E.
2. Construct enclosure of steel, not less than:
   a. Enclosure size less than 24 in. (600 mm): 0.053 in. (1.35 mm) or 0.067 in. (1.7 mm) thick.
   b. Enclosure size 24 in. (600 mm) and larger: 0.067 in. (1.7 mm) or 0.093 in. (2.36 mm) thick.

3. Finish enclosure inside and out with polyester powder coating that is electrostatically applied and then baked to bond to substrate.
    a. Exterior color shall be manufacturer's standard.
    b. Interior color shall be manufacturer's standard.
4. Hinged door full size of front face of enclosure and supported using:
    a. Enclosures sizes less than 36 in. (900 mm) tall: Multiple butt hinges.
    b. Enclosures sizes 36 in. (900 mm) tall and larger: Continuous piano hinges.
5. Removable internal panel with a white polyester powder coating that is electrostatically applied and then baked to bond to substrate.
    a. Size less than 24 in. (600 mm): Solid or Perforated steel, 0.053 in. (1.35 mm) thick.
    b. Size 24 in. (600 mm) and larger: Solid steel, 0.093 in. (2.36 mm) thick.
6. Internal panel mounting hardware, grounding hardware and sealing washers.
7. Grounding stud on enclosure body.
8. Thermoplastic pocket on inside of door for record Drawings and Product Data.

E. Wall Mounted NEMA 250, Types 4 and 12:
1. Enclosure shall be NRTL listed according to UL 508A.
2. Seam and joints are continuously welded and ground smooth.
3. Where recessed enclosures are indicated, include enclosures with face flange for flush mounting.
4. Externally formed body flange around perimeter of enclosure face for continuous perimeter seamless gasket door seal.
5. Single-door enclosure sizes up to 60 inches tall by 36 inches wide (1500 mm tall by 900 mm wide).
6. Double-door enclosure sizes up to 36 inches tall by 60 inches wide (900 mm tall by 1500 mm wide).
7. Construct enclosure of steel, not less than the following:
    a. Size Less Than 24 Inches (600 mm): 0.053 inch (1.35 mm) or 0.067 inch (1.7 mm) thick.
    b. Size 24 Inches (600 mm) and Larger: 0.067 inch (1.7 mm) thick.
8. Finish enclosure with polyester powder coating that is electrostatically applied and then baked to bond to substrate.
    a. Exterior color shall be manufacturer's standard.
    b. Interior color shall be manufacturer's standard.
9. Corner-formed door, full size of enclosure face, supported using multiple concealed hinges with easily removable hinge pins.
    a. Sizes through 24 Inches (600 mm) Tall: Two hinges.
    b. Sizes between 24 Inches (600 mm) through 48 Inches (1200 mm) Tall: Three hinges.
    c. Sizes Larger 48 Inches (1200 mm) Tall: Four hinges.
10. Double-door enclosures with overlapping door design to include unobstructed full-width access.
    a. Single-door enclosures 48 inches (1200 mm) and taller, and all double-door enclosures, with three-point (top, middle and bottom) latch system.
11. Removable internal panel with a white polyester powder coating that is electrostatically applied and then baked to bond to substrate.
    a. Size Less Than 24 Inches (600 mm): Solid or perforated steel, 0.053 inch (1.35 mm) thick.
    b. Size 24 Inches (600 mm) and Larger: Solid steel, 0.093 inch (2.36 mm) thick.
12. Internal panel mounting studs with hardware, grounding hardware, and sealing washers.
13. Grounding stud on enclosure body.
14. Thermoplastic pocket on inside of door for record Drawings and Product Data.

F. Wall-Mounted, NEMA 250, Type 4X SS:
1. Enclosure shall be NRTL listed according to UL 508A.
2. Seam and joints are continuously welded and ground smooth.

3. Externally formed body flange around perimeter of enclosure face for continuous perimeter seamless gasket door seal.
4. Construct enclosure of Type 304 or Type 316L stainless steel, not less than the following:
   a. Size Less Than 24 Inches (600 mm): 0.053 inch (1.35 mm) thick.
   b. Size 24 Inches (600 mm) and Larger: 0.067 inch (1.7 mm) thick.
5. Outside body and door of enclosure with brushed No. 4 finish.
6. Corner-formed door, full size of enclosure face, supported using continuous piano hinge full length of door.
7. Removable internal panel shall be 0.093-inch (2.36-mm) solid steel with a white polyester powder coating that is electrostatically applied and then baked to bond to substrate.
8. Internal panel mounting studs and hardware, grounding hardware, and sealing washers.
9. Install corrosion-resistant polyester vent drain in a stainless-steel sleeve at the bottom of enclosure.
10. Include enclosure with stainless-steel mounting brackets.

G. Freestanding, NEMA 250, Type 1:
1. Enclosure shall be NRTL listed according to UL 508A.
2. Seam and joints are continuously welded and ground smooth.
3. Externally formed body flange around perimeter of enclosure face.
4. Single-door enclosure sizes up to 84 inches tall by 36 inches wide (2100 mm tall by 900 mm wide).
5. Construct enclosure of steel, not less than 0.067 inch (1.7 mm) thick.
6. Finish enclosure with polyester powder coating that is electrostatically applied and then baked to bond to substrate.
   a. Exterior color shall be manufacturer's standard.
   b. Interior color shall be manufacturer's standard.
7. Corner-formed flush door, full size of enclosure face, supported using four concealed hinges with easily removable hinge pins.
8. Doors with three-point (top, middle, and bottom) latch system with single heavy-duty handle and integral locking mechanism.
9. Removable back covers.
10. Removable solid steel internal panel, 0.093 inch (2.36 mm) thick, with a white polyester powder coating that is electrostatically applied and then baked to bond to substrate.
11. Internal panel mounting studs with hardware, grounding hardware, and sealing washers.
12. Grounding stud on enclosure body.
13. Thermoplastic pocket on inside of door for record Drawings and Product Data.
14. Nominal 4-inch- (100-mm-) tall integral lifting base, not less than 0.123 inch (3.12 mm) thick, with predrilled holes for attachment to mounting surface.
15. Each top end of enclosure fitted with lifting tabs, not less than 0.172 inch (4.37 mm) thick.
16. Internal rack-mount shelves and angles as required by application.

H. Freestanding, NEMA 250, Types 4 and 12:
1. Enclosure shall be NRTL listed according to UL 508A.
2. Seam and joints are continuously welded and ground smooth.
3. Externally formed body flange around perimeter of enclosure face.
4. Type 12 Enclosure Sizes:
   a. Single-door enclosure sizes up to 90 inches tall by 36 inches wide (2250 mm tall by 900 mm wide).
5. Type 4 Enclosure Sizes:
   a. Single-door enclosure sizes up to 72 inches tall by 36 inches wide (1800 mm tall by 900 mm wide).
6. Construct enclosure of steel, not less than 0.093 inch (2.36 mm) thick.
7. Finish enclosure with polyester powder coating that is electrostatically applied and then baked to bond to substrate.
   a. Exterior color shall be manufacturer's standard.

b. Interior color shall be manufacturer's standard.
8. Corner-formed door with continuous perimeter oil-resistant gasket supported using continuous piano hinge full length of door.
9. Doors fitted with three-point (top, middle, and bottom) latch system with latching rod rollers and single, heavy-duty oil-tight handle with integral locking mechanism.
10. Removable solid steel internal panel, 0.093 inch (2.36 mm) thick, with a white polyester powder coating that is electrostatically applied and then baked to bond to substrate. Internal panel mounting studs with hardware, grounding hardware, and sealing washers.
11. Grounding stud on enclosure body.
12. Thermoplastic pocket on inside of door for record Drawings and Product Data.
13. Top of enclosure fitted with no fewer than two lifting eyes.
14. Internal rack-mount shelves and angles as required by application.

I. Accessories:
1. Electric Heater:
a. Aluminum housing with brushed finish.
b. Thermostatic control with adjustable set point from zero to 100 deg F (Minus 18 to 38 deg C).
c. Capacity: 100, 200, 400, and 800 W as required by application.
d. Fan draws cool air from bottom of enclosure and passes air across thermostat and heating elements before being released into enclosure cavity. Heated air is discharged through the top of heater.
2. Ventilation Fans, Filtered Intake and Exhaust Grilles:
a. Number and size of fans, filters and grilles as required by application.
b. Compact cooling fans engineered for 50,000 hours of continuous operation without lubrication or service.
c. Fans capable of being installed on any surface and in any position within enclosure for spot cooling or air circulation.
d. Thermostatic control with adjustable set point from 32 to 140 deg F (Zero to 60 deg C).
e. Airflow Capacity at Zero Pressure:
1) 4-Inch (100-mm) Fan: 100 cfm (47 L/s).
2) 6-Inch (150-mm) Fan: 240 cfm (113 L/s).
3) 10-Inch (250-mm) Fan: 560 cfm (264 L/s).
f. Maximum operating temperature of 158 deg F (70 deg C).
g. 4-inch (100-mm) fan thermally protected and provided with permanently lubricated ball-bearings.
h. 6- and 10-inch (150- and 250-mm) fans with ball-bearing construction and split capacitor motors thermally protected to avoid premature failure.
i. Dynamically balanced impellers molded from polycarbonate material.
j. Fan furnished with power cord and polarized plug for power connection.
k. Fan brackets, finger guards and mounting hardware provided with fans to complete installation.
l. Removable Intake and Exhaust Grilles: stainless steel of size to match fan size and suitable for NEMA 250, Types 1 and 12 enclosures.
m. Filters for NEMA 250, Type 1 Enclosures: Washable aluminum, of a size to match intake grille.
n. Filters for NEMA 250, Type 12 Enclosures: Disposable, of a size to match intake grille.
3. Air Conditioner:
a. Electric-powered, self-contained air-conditioning unit specially designed for electrical enclosures to maintain temperature inside enclosure below ambient temperature outside enclosure.
b. Thermostatic control with adjustable set point from 60 to 120 deg F (16 to 49 deg C).

c. Enclosure side or top mounting with unit capacity as required by application.
d. Designed for closed-loop cooling with continuous operation in ambient environments up to 125 deg F (52 deg C).
e. HFC refrigerant.
f. Reusable and washable air filter.
g. High-performance, industrial-grade, and high-efficiency fans.
h. Furnished with power cord and polarized plug for power connection.
i. Condensate management system with base pan side drain.
j. Mounting hardware, gaskets, mounting template and instruction manual furnished with unit.
k. Outdoor units equipped with head pressure control for low ambient operation, compressor heater, coated condenser coil and thermostat.

4. Thermoelectric Humidifier:
   a. ABS plastic enclosure.
   b. Capacity of 8 oz. (0.24 L) of water per 24 hours.
   c. Built-in drain captures moisture and plastic hose directs moisture to outside enclosure through a drain.
   d. Controlled to maintain enclosure relative humidity at an adjustable set point.
   e. Unit power supply shall be internally wired to enclosure electrical power source.
5. Framed Fixed Window Kit for NEMA 250, Types 4, 4X, and 12 Enclosures:
   a. -inch- (6-mm-) thick, scratch-resistant acrylic or polycarbonate window mounted in a metal frame matching adjacent door material.
   b. Enclosure types, except NEMA 250 Type 1, shall have a continuous gasket material around perimeter of window and frame to provide watertight seal.
   c. Window kit shall be factory or shop installed before shipment to Project.
6. Frameless Fixed Window Kit for NEMA 250, Type 1 Enclosures:
   a. -inch- (3-mm-) thick, polycarbonate window mounted in enclosure door material.
   b. Window attached to door with screw fasteners and continuous strip of high- strength double-sided tape around window perimeter.
   c. Window kit shall be factory or shop installed before shipment to Project.
7. Frame Fixed or Hinged Window Kit for NEMA 250, Types 1 and 12 Enclosures:
   a. -inch- (6-mm-) thick, scratch-resistant acrylic or polycarbonate window mounted in a metal frame matching adjacent door material.
   b. Enclosure types, except NEMA 250 Type 1, shall have a continuous gasket material around perimeter of window and frame to provide watertight seal.
   c. Window kit shall be factory or shop installed before shipment to Project.
8. Bar handle with keyed cylinder lock set.

2.23 RELAYS

A. General-Purpose Relays:
   1. Relays shall be heavy duty and rated for at least 10 A at 250-V ac and 60 Hz.
   2. Relays shall be either double pole double throw (DPDT) or three-pole double throw, depending on the control application.
   3. Use a plug-in-style relay with an eight-pin octal plug for DPDT relays and an 11-pin octal plug for three-pole double-throw relays.
   4. Construct the contacts of either silver cadmium oxide or gold.
   5. Enclose the relay in a clear transparent polycarbonate dust-tight cover.
   6. Relays shall have LED indication and a manual reset and push-to-test button.
   7. Performance:
      a. Mechanical Life: At least 10 million cycles.
      b. Electrical Life: At least 100,000 cycles at rated load.
      c. Pickup Time: 15 ms or less.
      d. Dropout Time: 10 ms or less.
      e. Pull-in Voltage: 85 percent of rated voltage.

f. Dropout Voltage: 50 percent of nominal rated voltage.
g. Power Consumption: 2 VA.
h. Ambient Operating Temperatures: Minus 40 to 115 deg F (Minus 40 to 46 deg C).

8. Equip relays with coil transient suppression to limit transients to non-damaging levels.
9. Plug each relay into an industry-standard, 35-mm DIN rail socket. Plug all relays located in control panels into sockets that are mounted on a DIN rail.
10. Relay socket shall have screw terminals. Mold into the socket the coincident screw terminal numbers and associated octal pin numbers.

B. Multifunction Time-Delay Relays:
1. Relays shall be continuous duty and rated for at least 10 A at 240-V ac and 60 Hz.
2. Relays shall be DPDT relay with up to eight programmable functions to provide on/off delay, interval and recycle timing functions.
3. Use a plug-in-style relay with either an 8- or 11-pin octal plug.
4. Construct the contacts of either silver cadmium oxide or gold.
5. Enclose the relay in a dust-tight cover.
6. Include knob and dial scale for setting delay time.
7. Performance:
a. Mechanical Life: At least 10 million cycles.
b. Electrical Life: At least 100,000 cycles at rated load.
c. Timing Ranges: Multiple ranges from 0.1 seconds to 100 minutes.
d. Repeatability: Within 2 percent.
e. Recycle Time: 45 ms.
f. Minimum Pulse Width Control: 50 ms.
g. Power Consumption: 5 VA or less at 120-V ac.
h. Ambient Operating Temperatures: Minus 40 to 115 deg F (Minus 40 to 46 deg C).
8. Equip relays with coil transient suppression to limit transients to non-damaging levels.
9. Plug each relay into an industry-standard, 35-mm DIN rail socket. Plug all relays located in control panels into sockets that are mounted on a DIN rail.
10. Relay socket shall have screw terminals. Mold into the socket the coincident screw terminal numbers and associated octal pin numbers.

C. Latching Relays:
1. Relays shall be continuous duty and rated for at least 10 A at 250-V ac and 60 Hz.
2. Relays shall be either DPDT or three-pole double throw, depending on the control application.
3. Use a plug-in-style relay with a multibladed plug.
4. Construct the contacts of either silver cadmium oxide or gold.
5. Enclose the relay in a clear transparent polycarbonate dust-tight cover.
6. Performance:
a. Mechanical Life: At least 10 million cycles.
b. Electrical Life: At least 100,000 cycles at rated load.
c. Pickup Time: 15 ms or less.
d. Dropout Time: 10 ms or less.
e. Pull-in Voltage: 85 percent of rated voltage.
f. Dropout Voltage: 50 percent of nominal rated voltage.
g. Power Consumption: 2 VA.
h. Ambient Operating Temperatures: Minus 40 to 115 deg F (Minus 40 to 46 deg C).
7. Equip relays with coil transient suppression to limit transients to non-damaging levels.
8. Plug each relay into an industry-standard, 35-mm DIN rail socket. Plug all relays located in control panels into sockets that are mounted on a DIN rail.
9. Relay socket shall have screw terminals. Mold into the socket the coincident screw terminal numbers and associated octal pin numbers.

D. Current Sensing Relay:

1. Monitors ac current.
2. Independent adjustable controls for pickup and dropout current.
3. Energized when supply voltage is present and current is above pickup setting.
4. De-energizes when monitored current is below dropout current.
5. Dropout current is adjustable from 50 to 95 percent of pickup current.
6. Include a current transformer, if required for application.
7. House current sensing relay and current transformer in its own enclosure. Use NEMA 250, Type 12 enclosure for indoors and NEMA 250, Type 4 for outdoors.

E. Combination On-Off Status Sensor and On-Off Relay:
1. Description:
   a. On-off control and status indication in a single device.
   b. LED status indication of activated relay and current trigger.
   c. Closed-Open-Auto override switch located on the load side of the relay.
2. Performance:
   a. Ambient Temperature: Minus 30 to 140 deg F (Minus 34 to 60 deg C).
   b. Voltage Rating: Single-phase loads rated for 300-V ac. Three-phase loads rated for 600-V ac.
3. Status Indication:
   a. Current Sensor: Integral sensing for single-phase loads up to 20 A and external solid or split sensing ring for three-phase loads up to 150 A.
   b. Current Sensor Range: As required by application.
   c. Current Set Point: Fixed or adjustable as required by application.
   d. Current Sensor Output:
      1) Analog, zero- to 5- or 10-V dc.
      2) Analog, 4 to 20 mA, loop powered.
4. Relay: Single-pole double-throw, continuous-duty coil; rated for 10-million mechanical cycles.
5. Enclosure: NEMA 250, Type 1 enclosure.

2.24 ELECTRICAL POWER DEVICES

A. Transformers:
1. Transformer shall be sized for the total connected load, plus an additional 25 percent of connected load.
2. Transformer shall be at least 100 VA.
3. Transformer shall have both primary and secondary fuses.

B. Power-Line Conditioner:
1. General Power-Line Conditioner Requirements:
   a. Design to ensure maximum reliability, serviceability and performance.
   b. Overall function of the power-line conditioner is to receive raw, polluted electrical power and purify it for use by electronic equipment. The power-line conditioner shall provide isolated, regulated, transient and noise-free sinusoidal power to loads served.
2. Standards: NRTL listed per UL 1012.
3. Performance:
   a. Single phase, continuous, 100 percent duty rated KVA/KW capacity. Design to supply power for linear or nonlinear, high crest factor, resistive and reactive loads.
   b. Automatically regulate output voltage to within 2 percent or better with input voltage fluctuations of plus 10 to minus 20 percent of nominal when system is loaded 100 percent. Use Variable Range Regulation to obtain improved line voltage regulation when operating under less than full load conditions.
      1) At 75 Percent Load: Output voltage automatically regulated to within 3 percent with input voltage fluctuations of plus 10 to minus 35 percent of nominal.
      2) At 50 Percent Load: Output voltage automatically regulated to within 3 percent with input voltage fluctuations of plus 10 to minus 40 percent of nominal.

3) At 25 Percent Load: Output voltage automatically regulated to within 3 percent with input voltage fluctuations of plus 10 to minus 45 percent of nominal.

c. With input voltage distortion of up to 40 percent, limit the output voltage sine wave to a maximum harmonic content of 5 percent.
d. Automatically regulate output voltage to within 2.5 percent when load (resistive) changes from zero percent to 100 percent to zero percent.
e. Output voltage returns to 95 percent of nominal level within two cycles and to 100 percent within three cycles when the output is taken from no load to full resistive load or vice-versa. Recovery from partial resistive load changes is corrected in a shorter period of time.
f. K Factor: 30, designed to operate with nonlinear, non-sinusoidal, high crest factor loads without overheating.
g. Input power factor within 0.95 approaching unity with load power factor as poor as 0.6.
h. Attenuate load-generated odd current harmonics 23 dB at the input.
i. Electrically isolate the primary from the secondary. Meet isolation criteria as defined in NFPA 70, Article 250-5D.
j. Lighting and Surge Protection: Compares to UL 1449 rating of 330 V when subjected to Category B3 (6000 V/3000 A) combination waveform as established by IEEE C62.41.
k. Common-mode noise attenuation of 140 dB.
l. Transverse-mode noise attenuation of 120 dB.
m. With loss of input power for up to 16.6 ms, the output sine wave remains at usable ac voltage levels.
n. Reliability of 200,000 hours' mean time between failures.
o. At full load, when measured at 1-m distance, audible noise is not to exceed 54 dB.
p. Approximately 92 percent efficient at full load.

4. Transformer Construction:
a. Ferroresonant, dry type, convection cooled, 600V class. Transformer windings of Class H (220 deg C) insulated copper.
b. Use a Class H installation system throughout with operating temperatures not to exceed 150 deg C over a 40-deg C ambient temperature.
c. Configure transformer primary for multi-input voltage. Include input terminals for source conductors and ground.
d. Manufacture transformer core using M-6 grade, grain-oriented, stress-relieved transformer steel.
e. Configure transformer secondary in a 240/120-V split with a 208-V tap or straight 120 V, depending on power output size.
f. Electrically isolate the transformer secondary windings from the primary windings. Bond neutral conductor to cabinet enclosure and output neutral terminal.
g. Include interface terminals for output power hot, neutral and ground conductors.
h. Label leads, wires and terminals to correspond with circuit wiring diagram.
i. Vacuum impregnate transformer with epoxy resin.

5. Cabinet Construction:
a. Design for panel or floor mounting.
b. NEMA 250, Type 1, general-purpose, indoor enclosure.
c. Manufacture the cabinet from heavy gauge steel complying with UL 50.
d. Include a textured baked-on paint finish.

C. Transient Voltage Suppression and High-Frequency Noise Filter Unit:
1. The maximum continuous operating voltage shall be at least 125 percent.
2. The operating frequency range shall be 47 to 63 Hz.
3. Protection modes according to NEMA LS-1.

4. The rated single-pulse surge current capacity, for each mode of protection, shall be no less than the following:
   a. Line to Neutral: 45,000 A.
   b. Neutral to Ground: 45,000 A.
   c. Line to Ground: 45,000 A.
   d. Per Phase: 90,000 A.
5. Clamping voltages shall be in compliance with test and evaluation procedures defined in NEMA LS-1. Maximum clamping voltage shall be as follows:
   a. Line to Neutral: 360 V.
   b. Line to Ground: 360 V.
   c. Neutral to Ground: 360 V.
6. Electromagnetic interference and RF interference noise rejection or attenuation values shall comply with test and evaluation procedures defined in NEMA LS-1.
   a. Line to Neutral:
      1) 100 kHz: 42 dB.
      2) 1 MHz: 25 dB.
      3) 10 MHz: 21 dB.
      4) 100 MHz: 36 dB.
   b. Line to Ground:
      1) 100 kHz: 16 dB.
      2) 1 MHz: 55 dB.
      3) 10 MHz: 81 dB.
      4) 100 MHz: 80 dB.
7. Unit shall have LED status indicator that extinguishes to indicate a failure.
8. Unit shall be listed by an NRTL as a transient voltage surge suppressor per UL 1449, and as an electromagnetic interference filter per UL 1283.
9. Unit shall not generate any appreciable magnetic field.
10. Unit shall not generate an audible noise.

D. DC Power Supply:
   1. Plug-in style suitable for mating with a standard eight-pin octal socket. Include the power supply with a mating mounting socket.
   2. Enclose circuitry in a housing.
   3. Include both line and load regulation to ensure a stable output. To protect both the power supply and the load, power supply shall have an automatic current limiting circuit.
   4. Performance:
      a. Output voltage nominally 25-V dc within 5 percent.
      b. Output current up to 100 mA.
      c. Input voltage nominally 120-V ac, 60 Hz.
      d. Load regulation within 0.5 percent from zero- to 100-mA load.
      e. Line regulation within 0.5 percent at a 100-mA load for a 10 percent line change.
      f. Stability within 0.1 percent of rated volts for 24 hours after a 20-minute warmup.

2.25 UNINTERRUPTABLE POWER SUPPLY (UPS) UNITS FOR WORKSTATIONS

A. 250 through 1000 VA:
   1. UPS units shall provide continuous, regulated output power without using their batteries during brown-out, surge, and spike conditions.
   2. Load served shall not exceed 75 percent of UPS rated capacity, including power factor of connected loads.
      a. Larger-capacity units shall be provided for systems with larger connected loads.
      b. UPS shall provide five minutes of battery power.
   3. Performance:
      a. Input Voltage: Single phase, 120- or 230-V ac, compatible with field power source.
      b. Load Power Factor Range (Crest Factor): 0.65 to 1.0.

c. Output Voltage: 101- to 132-V ac, while input voltage varies between 89 and 152- V ac.
d. On Battery Output Voltage: Sine wave.
e. Inverter overload capacity shall be minimum 150 percent for 30 seconds.
f. Recharge time shall be a maximum of six hours to 90 percent capacity after full discharge to cutoff.
g. Transfer Time: 6 ms.
h. Surge Voltage Withstand Capacity: IEEE C62.41, Categories A and B; 6 kV/200 and 500 A; 100-kHz ringwave.

4. UPS shall be automatic during fault or overload conditions.
5. Unit with integral line-interactive, power condition topology to eliminate all power contaminants.
6. Include front panel with power switch and visual indication of power, battery, fault and temperature.
7. Unit shall include an audible alarm of faults and front panel silence feature.
8. Unit with four NEMA WD 1, NEMA WD 6 Configuration 5-15R receptacles.
9. UPS shall include dry contacts (digital output points) for low battery condition and battery-on (primary utility power failure) and connect the points to the DDC system.
10. Batteries shall be sealed lead-acid type and be maintenance free. Battery replacement shall be front accessible by user without dropping load.
11. Include tower models installed in ventilated cabinets to the particular installation location.

B. 1000 through 3000 VA:
1. UPS units shall provide continuous, regulated output power without using their batteries during brown-out, surge, and spike conditions.
2. Load served shall not exceed 75 percent of UPS rated capacity, including power factor of connected loads.
a. Larger-capacity units, or multiple units, shall be provided for systems with larger connected loads.
b. UPS shall provide 10 minutes of battery power.
c. 2 kVa (Minimum)
3. Performance:
a. Input Voltage: Single phase, 120-V ac, plus 20 to minus 30 percent.
b. Power Factor: Minimum 0.97 at full load.
c. Output Voltage: Single phase, 120-V ac, within 3 percent, steady state with rated output current of 10.0 A, 30.0-A peak.
d. Inverter overload capacity shall be minimum 150 percent for 30 seconds.
e. Recharge time shall be a maximum of eight hours to 90 percent capacity.
4. UPS bypass shall be automatic during fault or overload conditions.
5. UPS shall include dry contacts (digital output points) for low battery condition and battery-on (primary utility power failure) and connect the points to the DDC system.
6. Batteries shall be sealed lead-acid type and be maintenance free.
7. Include tower models installed in ventilated cabinets or rack models installed on matching racks, as applicable to the particular installation location and space availability/configuration.

2.26 PIPING AND TUBING

A. Pneumatic, and Pressure Instrument Signal Air, Tubing and Piping:
1. Products in this paragraph are intended for use with the following:
a. Signal air between pressure instruments, such as sensors, switches, transmitters, controllers and accessories.
2. Copper Tubing:
a. Seamless phosphor deoxidized copper, soft annealed or drawn tempered, with chemical and physical properties according to ASTM B 75.
b. Performance, dimensions, weight and tolerance according to ASTM B 280.

c. Diameter, as required by application, not less than nominal 0.25 inch (6 mm).
d. Wall thickness, as required by the application, but not less than 0.030 inch (0.8 mm).

3. Copper Tubing Connectors and Fittings:
   a. Brass, compression type.
   b. Brass, solder-joint type.
4. Polyethylene Tubing:
   a. Fire-resistant black virgin polyethylene according to ASTM D 1248, Type 1, Class C and Grade 5.
   b. Tubing shall comply with stress crack test according to ASTM D 1693.
   c. Diameter, as required by application, of not less than nominal 0.25 inch (6 mm).
5. Polyethylene Tubing Connectors and Fittings:
   a. Brass, barbered fittings.
   b. Brass, compression type.

B. Process Tubing:
1. Products in this paragraph are intended for signals to instruments connected to liquid and steam systems.
2. Copper Tubing:
   a. Seamless phosphor deoxidized copper, soft annealed or drawn tempered with chemical and physical properties according to ASTM B 75.
   b. Performance, dimensions, weight and tolerance according to ASTM B 280.
   c. Diameter, as required by application, of not less than nominal 0.25 inch (6 mm).
   d. Wall thickness, as required by application, but not less than 0.030 inch (0.8 mm).
3. Copper Tubing Connectors and Fittings:
   a. Brass, compression type.
   b. Brass, solder-joint type.
4. Stainless-Steel Tubing:
   a. Seamless Type 316 stainless steel, Grade TP, cold drawn, annealed and pickled, free from scale.
   b. Chemical and physical properties according to ASTM A 269.
   c. Diameter, as required by application, of not less than nominal 0.25 inch (6 mm).
   d. Wall thickness, as required by application, but not less than 0.035 inch (0.9 mm).
   e. Furnish stainless-steel tubing in 20-foot (6-mm) straight random lengths.
5. Stainless-Steel Tubing Connectors and Fittings:
   a. Connectors and fittings shall be stainless steel, with stainless-steel collets, flareless type.
   b. Connect instruments to tubing with connectors having compression connector on one end and IPS or NPT thread on other end.

2.27 CONTROL WIRE AND CABLE

A. Wire: Single conductor control wiring above 24 V.
1. Wire size shall be as specified under Division 26. Wiring shall be furnished as part of Division 23 contractor’s scope of work.
2. Conductor shall be 7/24 soft annealed copper strand with 2- to 2.5-inch (50- to 65-mm) lay.
3. Conductor insulation shall be 600 V, Type THWN or Type THHN, and 90 deg C according to UL 83.
4. Conductor colors shall be black (hot), white (neutral), and green (ground).
5. Furnish wire on spools.

B. Single Twisted Shielded Instrumentation Cable above 24 V:
1. Wire size shall be as specified under Division 26. Wiring shall be furnished as part of Division 23 contractor’s scope of work.
2. Conductors shall be a twisted, 7/24 soft annealed copper strand with a 2- to 2.5-inch (50- to 65-mm) lay.

3. Conductor insulation shall have a Type THHN/THWN or Type TFN rating.
4. Shielding shall be 100 percent type, 0.35/0.5-mil aluminum/Mylar tape, helically applied with 25 percent overlap, and aluminum side in with tinned copper drain wire.
5. Outer jacket insulation shall have a 600-V, 90-deg C rating and shall be Type TC cable.
6. For twisted pair, conductor colors shall be black and white. For twisted triad, conductor colors shall be black, red and white.
7. Furnish wire on spools.

C. Single Twisted Shielded Instrumentation Cable 24 V and Less:
1. Wire size shall be as specified under Division 26. Wiring shall be furnished as part of Division 23 contractor's scope of work.
2. Conductors shall be a twisted, 7/24 soft annealed copper stranding with a 2- to 2.5-inch (50- to 65-mm) lay.
3. Conductor insulation shall have a nominal 15-mil thickness, constructed from flame-retardant PVC.
4. Shielding shall be 100 percent type, 1.35-mil aluminum/polymer tape, helically applied with 25 percent overlap, and aluminum side in with tinned copper drain wire.
5. Outer jacket insulation shall have a 300-V, 105-deg C rating and shall be Type PLTC cable.
6. For twisted pair, conductor colors shall be black and white. For twisted triad, conductor colors shall be black, red and white.
7. Furnish wire on spools.

D. LAN and Communication Cable: Comply with DDC system manufacturer requirements for network being installed.
1. Cable shall be balanced twisted pair.
2. Comply with the following requirements and for balanced twisted pair cable described in Division 26.
a. Cable shall be plenum rated.
b. Cable shall have a unique color that is different from other cables used on Project.

2.28 RACEWAYS

A. Comply with requirements in Division 26 for electrical power raceways and boxes.

B. Comply with requirements in Division 26 for raceways for balanced twisted pair cables and optical fiber cables.

2.29 OPTICAL FIBER CABLE AND CONNECTORS

A. Comply with requirements in Division 26 for optical fiber backbone cabling and connectors.

B. Comply with requirements in Division 26 for optical fiber horizontal cabling and connectors.

2.30 ACCESSORIES

A. Pneumatic Pressure Gages:
1. Pressure gages shall a 1.5-inch- (38-mm-) diameter face for pressures up through 30 psig (207 kPa) and 2.5-inch- (65-mm-) diameter face for greater pressures.
2. Include separate gages for branch pressure and main pressure lines.
3. White dial face with black printing.
4. Include 1-psig (6.9-kPa) increment for scale ranges through 30 psig (207 kPa) and 2-psig (13.8-kPa) increment for larger ranges.
5. Accuracy: Within 1 percent of full-scale range.

B. Pressure Electric Switches:
1. Diaphragm-operated snap acting switch.
2. Set point adjustable from 3 to 20 psig (21 to 138 kPa).
3. Differential adjustable from 2 to 6 psig (14 to 41 kPa).
4. Rated for resistance loads at 120-V ac.
5. Body and switch housing shall be metal.

C. Damper Blade Limit Switches:
   1. Sense positive open and/or closed position of the damper blades.
   2. NEMA 250, Type 13, oil-tight construction.
   3. Arrange for the mounting application.
   4. Additional waterproof enclosure when required by its environment.
   5. Arrange to prevent "over-center" operation.

D. I/P and E/P Transducers:
   1. Commercial Grade:
      a. The transducer shall convert an AO signal to a stepped pneumatic signal. Unless otherwise required by the operating sequence, use a 3- to 15-psig (21- to 103-kPa) pneumatic signal for pneumatic actuation.
      b. Construct the entire assembly so that shock and vibration will neither harm the transducer nor affect its accuracy.
      c. Transducer shall have auto/manual output switch, manual output control and an output pressure gage.
      d. Accuracy: Within 1.0 percent of the output span.
      e. Linearity: Within 0.5 percent of the output span.
      f. Output Capacity: Not less than 550 scim at 15 psig (103 kPa).
      g. Transducer shall have separate zero and span calibration adjustments.
      h. The transducer shall withstand up to 40 psig (276 kPa) of supply pressure without damage.
      i. For use on only modulating pneumatic outputs that are associated with terminal units, including fan-coil units, VAV units and unit heaters.
   2. Industrial Grade:
      a. The transducer shall convert an AO signal to a proportional pneumatic signal. Unless otherwise required by the operating sequence, use a 3- to 15-psig (21- to 103-kPa) pneumatic signal for pneumatic actuation. A stepped pneumatic signal is unacceptable.
      b. Construct the entire assembly so that shock and vibration will neither harm the transducer nor affect its accuracy.
      c. Suitable for operation in an ambient temperature range of minus 40 to 150 deg F (minus 40 to 66 deg C).
      d. Accuracy: Within 0.5 percent of the output span.
      e. Linearity: Within 0.5 percent of the output span.
      f. Output Capacity: Not less than 5 scfm.
      g. Transducer shall have zero and span calibration adjustments.
      h. The transducer shall withstand up to 50 psig (345 kPa) of supply pressure without damage.
      i. For use on all modulating pneumatic outputs, not requiring a commercial-grade transducer.

E. E/P Switch:
   1. Construct the body of cast aluminum or brass; three pipe body (common, normally open, and normally closed).
   2. Internal construction of steel, copper or brass.
   3. Air Connections: Barb.
   4. Rating of 30 psig (207 kPa) when installed in systems below 25 psig (172 kPa) and of 150 psig (1034 kPa) when installed in systems above 25 psig (172 kPa).
   5. Include coil transient suppression.

F. Instrument Enclosures:
   1. Include instrument enclosure for secondary protection to comply with requirements indicated in "Performance Requirements" Article.
   2. NRTL listed and labeled to UL 50.
   3. Sized to include at least 25 percent spare area on subpanel.

4. Instrument(s) mounted within enclosure on internal subpanel(s).
5. Enclosure face with engraved, laminated phenolic nameplate for each instrument within enclosure.
6. Enclosures housing pneumatic instruments shall include main pressure gage and a branch pressure gage for each pneumatic device, installed inside.
7. Enclosures housing multiple instruments shall route tubing and wiring within enclosure in a raceway having a continuous removable cover.
8. Enclosures larger than 12 inches (300 mm) shall have a hinged full-size face cover.
9. Equip enclosure with lock and common key.

G. Manual Valves:
1. Needle Type:
   a. PTFE packing.
   b. Construct of brass for use with copper and polyethylene tubing and of stainless steel for use with stainless-steel tubing.
   c. Aluminum T-bar handle.
   d. Include tubing connections.
2. Ball Type:
   a. Body: Bronze ASTM B 62 or ASTM B 61.
   b. Ball: Type 316 stainless steel.
   c. Stem: Type 316 stainless steel.
   d. Seats: Reinforced PTFE.
   e. Packing Ring: Reinforced PTFE.
   f. Lever: Stainless steel with a vinyl grip.
   g. 600 WOG.
   h. Threaded end connections.

H. Wall-Mounted Portable Workstation Cabinet:
1. Surface-mounted wall cabinet for tilt-out operation of laptop computers and large-format mobile devices.
2. Cabinet shall have a load limit of 50 lb (23 kg).
3. Cabinet shall include the following:
   a. Oil-filled dampers for controlled lowering of equipment to operational position.
   b. 3RU EIA mounting rails.
   c. Removable laptop shelf.
   d. Separate top compartment with mounting area, hinged rail and security lock.
   e. Front ventilation slots.
   f. Knockouts for conduit connections on top and bottom of cabinet.
4. Cabinet shall be constructed of steel and painted with a powder-coat epoxy.
5. Inside center of backbox shall have provision to mount a field-furnished and -installed, single gang electrical outlet box.

2.31 IDENTIFICATION

A. Instrument Air Pipe and Tubing:
1. Engraved tag shall bear the following information:
   a. Service (Example): "Instrument Air."
   b. Pressure Range (Example): 0 to 30 psig (0 to 200 kPa).
2. Letter size shall be a minimum of 0.25 inch (6 mm) high.
3. Tag shall consist of white lettering on blue background.
4. Tag shall be engraved phenolic consisting of three layers of rigid laminate. Top and bottom layers are color-coded blue with contrasting white center exposed by engraving through outer layer.
5. Include tag with a brass grommet, chain and S-hook.

B. Control Equipment, Instruments, and Control Devices:
1. Self-adhesive label bearing unique identification.

a. Include instruments with unique identification identified by equipment being controlled or monitored, followed by point identification.

2. Letter size shall be as follows:
   a. Operator Workstations: Minimum of 0.5 inch (13 mm) high.
   b. Servers: Minimum of 0.5 inch (13 mm) high.
   c. Printers: Minimum of 0.5 inch (13 mm) high.
   d. DDC Controllers: Minimum of 0.5 inch (13 mm) high.
   e. Gateways: Minimum of 0.5 inch (13 mm) high.
   f. Repeaters: Minimum of 0.5 inch (13 mm) high.
   g. Enclosures: Minimum of 0.5 inch (13 mm) high.
   h. Electrical Power Devices: Minimum of 0.5 inch (13 mm) high.
   i. UPS units: Minimum of 0.5 inch (13 mm) high.
   j. Accessories: Minimum of 0.25 inch (6 mm) high.
   k. Instruments: Minimum of 0.25 inch (6 mm) high.
   l. Control Damper and Valve Actuators: Minimum of 0.25 inch (6 mm) high.
3. Legend shall consist of white lettering on black background.
4. Laminated acrylic or melamine plastic sign shall be engraved phenolic consisting of three layers of rigid laminate. Top and bottom layers are color-coded black with contrasting white center exposed by engraving through outer layer and shall be fastened with drive pins.
5. Instruments, control devices and actuators with Project-specific identification tags having unique identification numbers following requirements indicated and provided by original manufacturer do not require additional identification.

C. Valve Tags:
1. Brass tags and brass chains attached to valve.
2. Tags shall be at least 1.5 inches (38 mm) in diameter.
3. Include tag with unique valve identification indicating control influence such as flow, level, pressure, or temperature; followed by location of valve, and followed by three-digit sequential number. For example: TV-1.001.
4. Valves with Project-specific identification tags having unique identification numbers following requirements indicated and provided by original manufacturer do not require an additional tag.

D. Raceway and Boxes:
1. Comply with requirements for identification specified in Division 26
2. Paint cover plates on junction boxes and conduit same color as the tape banding for conduits. After painting, label cover plate "HVAC Controls," using an engraved phenolic tag.
3. For raceways housing air signal tubing, add a phenolic tag labeled "HVAC Air Signal Tubing."

E. Equipment Warning Labels:
1. Self-adhesive label with pressure-sensitive adhesive back and peel-off protective jacket.
2. Lettering size shall be at least 14-point type with white lettering on red background.
3. Warning label shall read "CAUTION-Equipment operated under remote automatic control and may start or stop at any time without warning. Switch electric power disconnecting means to OFF position before servicing."
4. Lettering shall be enclosed in a white line border. Edge of label shall extend at least 0.25 inch (6 mm) beyond white border.

2.32 SOURCE QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to evaluate the following according to industry standards for each product, and to verify DDC system reliability specified in performance requirements:
1. DDC controllers.

2. Gateways.
3. Routers.
4. Operator workstations.

B. Product(s) and material(s) will be considered defective if it does not pass tests and inspections.

C. Prepare test and inspection reports.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
1. Verify compatibility with and suitability of substrates.

B. Examine roughing-in for products to verify actual locations of connections before installation.
1. Examine roughing-in for instruments installed in piping to verify actual locations of connections before installation.
2. Examine roughing-in for instruments installed in duct systems to verify actual locations of connections before installation.

C. Examine walls, floors, roofs, and ceilings for suitable conditions where product will be installed.

D. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.

E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 DDC SYSTEM INTERFACE WITH OTHER SYSTEMS AND EQUIPMENT

A. Communication Interface to Equipment with Integral Controls:
1. DDC system shall have communication interface with equipment having integral controls and having an open protocol communication interface for remote monitoring or control.
2. Equipment to Be Connected: All equipment and other systems shown on control drawings.

3.03 CONTROL DEVICES FOR INSTALLATION BY INSTALLERS

A. Deliver selected control devices, specified in indicated HVAC instrumentation and control device Sections, to identified equipment and systems manufacturers for factory installation and to identified installers for field installation.

B. Deliver the following to duct fabricator and Installer for installation in ductwork. Include installation instructions to Installer and supervise installation for compliance with requirements.
1. DDC control dampers, which are specified in Division 23.
2. Airflow sensors and switches, which are specified in Division 23.
3. Pressure sensors, which are specified in Division 23.

C. Deliver the following to plumbing and HVAC piping installers for installation in piping. Include installation instructions to Installer and supervise installation for compliance with requirements.
1. DDC control valves, which are specified in Section 230923.11 "Control Valves."
2. Pipe-mounted flow meters, which are specified in Section 230923.14 "Flow Instruments."
3. Pipe-mounted sensors, switches and transmitters. Flow meters are specified in Division
a. 23. Liquid temperature sensors, switches, and transmitters are specified in Division 23.
4. Pipe-mounted thermowells. Liquid thermowells are specified in Division 23.

3.04 GENERAL INSTALLATION REQUIREMENTS

A. Install products to satisfy more stringent of all requirements indicated.

B. Install products level, plumb, parallel, and perpendicular with building construction.

C. Support products, tubing, piping wiring and raceways.

D. **If codes and referenced standards are more stringent than requirements indicated, comply with requirements in codes and referenced standards.**

E. Fabricate openings and install sleeves in ceilings, floors, roof, and walls required by installation of products. Before proceeding with drilling, punching, and cutting, check for concealed work to avoid damage. Patch, flash, grout, seal, and refinish openings to match adjacent condition.

F. Firestop Penetrations Made in Fire-Rated Assemblies: Comply with requirements in Division 7.

G. Seal penetrations made in acoustically rated assemblies. Comply with requirements in Division 7.

H. Fastening Hardware:
   1. Stillson wrenches, pliers, and other tools that damage surfaces of rods, nuts, and other parts are prohibited for work of assembling and tightening fasteners.
   2. Tighten bolts and nuts firmly and uniformly. Do not overstress threads by excessive force or by oversized wrenches.
   3. Lubricate threads of bolts, nuts and screws with graphite and oil before assembly.

I. If product locations are not indicated, install products in locations that are accessible and that will permit service and maintenance from floor, equipment platforms, or catwalks without removal of permanently installed furniture and equipment.

J. Corrosive Environments:
   1. When conduit is in contact with a corrosive airstream and environment, use Type 316 stainless-steel conduit and fittings or conduit and fittings that are coated with a corrosive-resistant coating that is suitable for environment. Comply with requirements for installation of raceways and boxes specified in Division 26.
   2. Where instruments are located in a corrosive airstream and are not corrosive resistant from manufacturer, field install products in NEMA 250, Type 4X enclosure constructed of Type 316L stainless steel.

3.05 WORKSTATION INSTALLATION

A. Desktop Workstations Installation:
   1. Install workstation(s) at location(s) directed by Owner and where shown on plans.
   2. Install multiple-receptacle power strip with cord for use in connecting multiple workstation components to a single duplex electrical power receptacle.
   3. Install software on workstation(s) and verify software functions properly.
   4. Develop Project-specific graphics, trends, reports, logs and historical database.
   5. Power each workstation through a dedicated UPS unit. Locate UPS adjacent to workstation.

B. Portable Workstations Installation:
   1. Turn over portable workstations to Owner at Substantial Completion.
   2. Install software on workstation(s) and verify software functions properly.

C. Color Graphics Application:
   1. Use system schematics indicated as starting point to create graphics.
   2. Develop Project-specific library of symbols for representing system equipment and products.
   3. Incorporate digital images of Project-completed installation into graphics where beneficial to enhance effect.
   4. Submit sketch of graphic layout with description of all text for each graphic for Owner's review before creating graphic using graphics software.
   5. Seek Owner input in graphics development once using graphics software.
   6. Final editing shall be done on-site with Owner's review and feedback.
   7. Refine graphics as necessary for Owner acceptance.
   8. On receiving Owner acceptance, print a hard copy for inclusion in operation and maintenance manual. Prepare a scanned copy PDF file of each graphic and include with softcopy of DDC system operation and maintenance manual.

D. Wall-Mounted Portable Operator's Workstation Cabinet Installation:

1. Install wall-mounted portable operator's workstation cabinet(s) at location(s) shown on plans and at locations directed by Owner:
2. Connect each cabinet to 120-V, single-phase, 60Hz field power source, and install single gang electrical box with NEMA WD 6, Type 20R duplex receptacle and metal cover plate in cabinet. Comply with requirements in Division 26 "Wiring Devices."
3. Connect each cabinet to Ethernet network and install an Ethernet network port for connection to portable operator workstation Ethernet cable. Comply with requirements in Division 26 or 27 for Horizontal Cabling.

3.06 PORTABLE OPERATOR TERMINAL INSTALLATION

A. Install two portable operator terminals.

B. Turn over portable operator terminals to Owner at Substantial Completion.

C. Install software on each portable operator terminal and verify that software functions properly.

3.07 PRINTER INSTALLATION

A. Provide the following printer(s) at location(s) directed by Owner:
   1. Color Laser: Quantity, one.

B. Install printer software on workstations and verify that software functions properly.

3.08 SERVER INSTALLATION

A. Install servers at locations directed by Owner.

B. Install number of servers required to suit requirements indicated. Review Project requirements and indicate layout of proposed location in Shop Drawings.

C. Install software indicated on servers and verify that software functions properly.

D. Develop Project-specific graphics, trends, reports, logs, and historical database.

E. Power servers through dedicated UPS unit. Locate UPS adjacent to server.

3.09 GATEWAY INSTALLATION

A. Install gateways if required for DDC system communication interface requirements indicated.
   1. Install gateway(s) required to suit indicated requirements.

B. Test gateway to verify that communication interface functions properly.

3.10 ROUTER INSTALLATION

A. Install routers if required for DDC system communication interface requirements indicated.
   1. Install router(s) required to suit indicated requirements.

B. Test router to verify that communication interface functions properly.

3.11 CONTROLLER INSTALLATION

A. Install controllers in enclosures to comply with indicated requirements.
   1. Connect controllers to field power supply. and to UPS units where indicated.

B. Install controller with latest version of applicable software and configure to execute requirements indicated.

C. Test and adjust controllers to verify operation of connected I/O to achieve performance indicated requirements while executing sequences of operation.

D. Installation of Network Controllers:
   1. Quantity and location of network controllers shall be determined by DDC system manufacturer to satisfy requirements indicated.
   2. Install controllers in a protected location that is easily accessible by operators.
   3. Top of controller shall be within 72 inches (1800 mm) of finished floor.

E. Installation of Programmable Application Controllers:
   1. Quantity and location of programmable application controllers shall be determined by DDC system manufacturer to satisfy requirements indicated.

2. Install controllers in a protected location that is easily accessible by operators.
3. Top of controller shall be within 72 inches (1800 mm) of finished floor.

F. Application-Specific Controllers:
1. Quantity and location of application-specific controllers shall be determined by DDC system manufacturer to satisfy requirements indicated.
2. For controllers not mounted directly on equipment being controlled, install controllers in a protected location that is easily accessible by operators.

3.12 ENCLOSURES INSTALLATION

A. Install the following items in enclosures, to comply with indicated requirements:
1. Gateways.
2. Routers.
3. Controllers.
4. Electrical power devices.
5. UPS units.
6. Relays.
7. Accessories.
8. Instruments.
9. Actuators

B. Attach wall-mounted enclosures to wall using the following types of steel struts:
1. For NEMA 250, Type 1 Enclosures: Use corrosion-resistant-coated steel strut and hardware.
2. For NEMA 250, Type 4 Enclosures and Enclosures Located Outdoors: Use stainless-steel strut and hardware.
3. Install plastic caps on exposed cut edges of strut.

C. Align top of adjacent enclosures.

D. Install floor-mounted enclosures located in mechanical equipment rooms on concrete housekeeping pads. Attach enclosure legs using stainless-steel anchors.

E. Install continuous and fully accessible wireways to connect conduit, wire, and cable to multiple adjacent enclosures. Wireway used for application shall have protection equal to NEMA 250 rating of connected enclosures.

3.13 ELECTRIC POWER CONNECTIONS

A. Connect electrical power to DDC system products requiring electrical power connections.

B. Design of electrical power to products not indicated with electric power is delegated to DDC system provider and installing trade. Work shall comply with NFPA 70 and other requirements indicated.

C. Comply with requirements in Division 26 for electrical power circuit breakers.

D. Comply with requirements in Division 26 for electrical power conductors and cables.

E. Comply with requirements in Division 26 for electrical power raceways and boxes.

3.14 IDENTIFICATION

A. Identify system components, wiring, cabling, and terminals. Comply with requirements in Section 260553 "Identification for Electrical Systems" for identification products and installation.

B. Install self-adhesive labels with unique identification on face for each of the following:
1. Operator workstation.
2. Server.
3. Printer.
4. Gateway.
5. Router.
6. DDC controller.

7. Enclosure.
8. Electrical power device.
9. UPS unit.
10. Accessory.

C. Install unique instrument identification on face of each instrument connected to a DDC controller.

D. Install unique identification on face of each control damper and valve actuator connected to a DDC controller.

E. Where product is installed above accessible tile ceiling, also install matching identification on face of ceiling grid located directly below.

F. Where product is installed above an inaccessible ceiling, also install identification on face of access door directly below.

G. Warning Labels and Signs:
1. Shall be permanently attached to equipment that can be automatically started by DDC control system.
2. Shall be in highly visible location near power service entry points.

3.15 NETWORK INSTALLATION

A. Install optical fiber cable when connecting between the following network devices and when located in different buildings on campus, or when distance between devices exceeds 100 meters:
1. Operator workstations.
2. Operator workstations and network controllers.
3. Network controllers.

B. Install balanced twisted pair or optical fiber cable when connecting between the following network devices located in same building:
1. Operator workstations.
2. Operator workstations and network controllers.
3. Network controllers.

C. Install balanced twisted pair or copper cable (as required by equipment) when connecting between the following:
1. Gateways.
2. Gateways and network controllers or programmable application controllers.
3. Routers.
4. Routers and network controllers or programmable application controllers.
5. Network controllers and programmable application controllers.
6. Programmable application controllers.
7. Programmable application controllers and application-specific controllers.
8. Application-specific controllers.

D. Install cable in continuous raceway.
1. Where indicated on Drawings, cable trays may be used for copper cable in lieu of conduit.

3.16 NETWORK NAMING AND NUMBERING

A. Coordinate with Owner and provide unique naming and addressing for networks and devices.

B. ASHRAE 135 Networks:
1. MAC Address:
a. Every network device shall have an assigned and documented MAC address unique to its network.
b. Ethernet Networks: Document MAC address assigned at its creation.
c. ARCNET or MS/TP networks: Assign from 00 to 64.
2. Network Numbering:

a. Assign unique numbers to each new network.
b. Provide ability for changing network number through device switches or operator interface.
c. DDC system, with all possible connected LANs, can contain up to 65,534 unique networks.

3. Device Object Identifier Property Number:
   a. Assign unique device object identifier property numbers or device instances for each device network.
   b. Provide for future modification of device instance number by device switches or operator interface.
   c. LAN shall support up to 4,194,302 unique devices.
4. Device Object Name Property Text:
   a. Device object name property field shall support 32 minimum printable characters.
   b. Assign unique device "Object Name" property names with plain-English descriptive names for each device.
      1) Example 1: Device object name for device controlling boiler plant at Building 1000 would be "HW System B1000."
      2) Example 2: Device object name for a VAV terminal unit controller could be "VAV unit 102".
5. Object Name Property Text for Other Than Device Objects:
   a. Object name property field shall support 32 minimum printable characters.
   b. Assign object name properties with plain-English names descriptive of application.
      1) Example 1: "Zone 1 Temperature."
      2) Example 2 "Fan Start and Stop."
6. Object Identifier Property Number for Other Than Device Objects:
   a. Assign object identifier property numbers according to Drawings or tables indicated.
   b. If not indicated, object identifier property numbers may be assigned at Installer's discretion but must be approved by Owner in advance, be documented and be unique for like object types within device.

3.17 CONTROL WIRE, CABLE AND RACEWAYS INSTALLATION

A. Comply with NECA 1.

B. Wire and Cable Installation:
   1. Provide rigid conduit in any exposed area 11 ft and below. Above 11 ft, free air cabling is acceptable in areas not accessible to inmates.
   2. Controls Contractor shall procure all wiring and cabling for controls system.
   3. Comply with installation requirements in Division 26 for Electrical Power Cables.
   4. Comply with installation requirements in Division 27 for communications copper backbone cabling.
   5. Comply with installation requirements in Division 27 for communications copper horizontal cabling.
   6. Install cables with protective sheathing that is waterproof and capable of withstanding continuous temperatures of 90 deg C with no measurable effect on physical and electrical properties of cable.
      a. Provide shielding to prevent interference and distortion from adjacent cables and equipment.
   7. Terminate wiring in a junction box.
      a. Clamp cable over jacket in junction box.
      b. Individual conductors in the stripped section of the cable shall be slack between the clamping point and terminal block.
   8. Terminate field wiring and cable not directly connected to instruments and control devices having integral wiring terminals using terminal blocks.
   9. Install signal transmission components according to IEEE C2, REA Form 511a, NFPA 70, and as indicated.

10. Use shielded cable to transmitters.
11. Use shielded cable to temperature sensors.
12. Perform continuity and meager testing on wire and cable after installation.

C. Conduit Installation:
1. Comply with Division 26 for control-voltage conductors.
2. Comply with Division 27 for balanced twisted pair cabling and optical fiber installation.

3.18 OPTICAL FIBER CABLE SYSTEM INSTALLATION

A. Comply with installation requirements in Division 27 for Optical Fiber Backbone Cabling.

B. Comply with installation requirements in Division 27 for Optical Fiber Horizontal Cabling.

3.19 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.

B. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and installations, including connections.

C. Perform the following tests and inspections with the assistance of a factory-authorized service representative:
1. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

D. Testing:
1. Perform preinstallation, in-progress, and final tests, supplemented by additional tests, as necessary.
2. Preinstallation Cable Verification: Verify integrity and serviceability for new cable lengths before installation. This assurance may be provided by using vendor verification documents, testing, or other methods. As a minimum, furnish evidence of verification for cable attenuation and bandwidth parameters.
3. In-Progress Testing: Perform standard tests for correct pair identification and termination during installation to ensure proper installation and cable placement. Perform tests in addition to those specified if there is any reason to question condition of material furnished and installed. Testing accomplished is to be documented by agency conducting tests. Submit test results for Project record.
4. Final Testing: Perform final test of installed system to demonstrate acceptability as installed. Testing shall be performed according to a test plan supplied by DDC system manufacturer. Defective Work or material shall be corrected and retested. As a minimum, final testing for cable system, including spare cable, shall verify conformance of attenuation, length, and bandwidth parameters with performance indicated.
5. Test Equipment: Use an optical fiber time domain reflectometer for testing of length and optical connectivity.
6. Test Results: Record test results and submit copy of test results for Project record.

3.20 DDC SYSTEM I/O CHECKOUT PROCEDURES

A. Check installed products before continuity tests, leak tests and calibration.

B. Check instruments for proper location and accessibility.

C. Check instruments for proper installation on direction of flow, elevation, orientation, insertion depth, or other applicable considerations that will impact performance.

D. Check instrument tubing for proper isolation, fittings, slope, dirt legs, drains, material and support.

E. For pneumatic products, verify that air supply for each product is properly installed.

F. Control Damper Checkout:
1. Verify that control dampers are installed correctly for flow direction.

2. Verify that proper blade alignment, either parallel or opposed, has been provided.
3. Verify that damper frame attachment is properly secured and sealed.
4. Verify that damper actuator and linkage attachment is secure.
5. Verify that actuator wiring is complete, enclosed and connected to correct power source.
6. Verify that damper blade travel is unobstructed.

G. Control Valve Checkout:
1. Verify that control valves are installed correctly for flow direction.
2. Verify that valve body attachment is properly secured and sealed.
3. Verify that valve actuator and linkage attachment is secure.
4. Verify that actuator wiring is complete, enclosed and connected to correct power source.
5. Verify that valve ball, disc or plug travel is unobstructed.
6. After piping systems have been tested and put into service, but before insulating and balancing, inspect each valve for leaks. Adjust or replace packing to stop leaks. Replace the valve if leaks persist.

H. Instrument Checkout:
1. Verify that instrument is correctly installed for location, orientation, direction and operating clearances.
2. Verify that attachment is properly secured and sealed.
3. Verify that conduit connections are properly secured and sealed.
4. Verify that wiring is properly labeled with unique identification, correct type and size and is securely attached to proper terminals.
5. Inspect instrument tag against approved submittal.
6. For instruments with tubing connections, verify that tubing attachment is secure and isolation valves have been provided.
7. For flow instruments, verify that recommended upstream and downstream distances have been maintained.
8. For temperature instruments:
   a. Verify sensing element type and proper material.
   b. Verify length and insertion.

3.21 DDC SYSTEM I/O ADJUSTMENT, CALIBRATION AND TESTING:

A. Calibrate each instrument installed that is not factory calibrated and provided with calibration documentation.

B. Provide a written description of proposed field procedures and equipment for calibrating each type of instrument. Submit procedures before calibration and adjustment.

C. For each analog instrument, make a three-point test of calibration for both linearity and accuracy.

D. Equipment and procedures used for calibration shall comply with instrument manufacturer's written instructions.

E. Provide diagnostic and test equipment for calibration and adjustment.

F. Field instruments and equipment used to test and calibrate installed instruments shall have accuracy at least twice the instrument accuracy being calibrated. An installed instrument with an accuracy of 1 percent shall be checked by an instrument with an accuracy of 0.5 percent.

G. Calibrate each instrument according to instrument instruction manual supplied by manufacturer.

H. If after calibration indicated performance cannot be achieved, replace out-of-tolerance instruments.

I. Comply with field testing requirements and procedures indicated by ASHRAE's Guideline 11, "Field Testing of HVAC Control Components," in the absence of specific requirements, and to supplement requirements indicated.

J. Analog Signals:

1. Check analog voltage signals using a precision voltage meter at zero, 50, and 100 percent.
2. Check analog current signals using a precision current meter at zero, 50, and 100 percent.
3. Check resistance signals for temperature sensors at zero, 50, and 100 percent of operating span using a precision-resistant source.

K. Digital Signals:
1. Check digital signals using a jumper wire.
2. Check digital signals using an ohmmeter to test for contact making or breaking.

L. Control Dampers:
1. Stroke and adjust control dampers following manufacturer's recommended procedure, from 100 percent open to 100 percent closed and back to 100 percent open.
2. Stroke control dampers with pilot positioners. Adjust damper and positioner following manufacturer's recommended procedure, so damper is 100 percent closed, 50 percent closed and 100 percent open at proper air pressure.
3. Check and document open and close cycle times for applications with a cycle time less than 30 seconds.
4. For control dampers equipped with positive position indication, check feedback signal at multiple positions to confirm proper position indication.

M. Control Valves:
1. Stroke and adjust control valves following manufacturer's recommended procedure, from 100 percent open to 100 percent closed and back to 100 percent open.
2. Stroke control valves with pilot positioners. Adjust valve and positioner following manufacturer's recommended procedure, so valve is 100 percent closed, 50 percent closed and 100 percent open at proper air pressures.
3. Check and document open and close cycle times for applications with a cycle time less than 30 seconds.
4. For control valves equipped with positive position indication, check feedback signal at multiple positions to confirm proper position indication.

N. Meters: Check sensors at zero, 50, and 100 percent of Project design values.

O. Sensors: Check sensors at zero, 50, and 100 percent of Project design values.

P. Switches: Calibrate switches to make or break contact at set points indicated.

Q. Transmitters:
1. Check and calibrate transmitters at zero, 50, and 100 percent of Project design values.
2. Calibrate resistance temperature transmitters at zero, 50, and 100 percent of span using a precision-resistant source.

3.22 DDC SYSTEM CONTROLLER CHECKOUT

A. Verify power supply.
1. Verify voltage, phase and hertz.
2. Verify that protection from power surges is installed and functioning.
3. Verify that ground fault protection is installed.
4. If applicable, verify if connected to UPS unit.
5. If applicable, verify if connected to a backup power source.
6. If applicable, verify that power conditioning units, transient voltage suppression and high-frequency noise filter units are installed.

B. Verify that wire and cabling is properly secured to terminals and labeled with unique identification.

C. Verify that spare I/O capacity is provided.

3.23 DDC CONTROLLER I/O CONTROL LOOP TESTS

A. Testing:

1. Test every I/O point connected to DDC controller to verify that safety and operating control set points are as indicated and as required to operate controlled system safely and at optimum performance.
2. Test every I/O point throughout its full operating range.
3. Test every control loop to verify operation is stable and accurate.
4. Adjust control loop proportional, integral and derivative settings to achieve optimum performance while complying with performance requirements indicated. Document testing of each control loop's precision and stability via trend logs.
5. Test and adjust every control loop for proper operation according to sequence of operation.
6. Test software and hardware interlocks for proper operation. Correct deficiencies.
7. Operate each analog point at the following:
   a. Upper quarter of range.
   b. Lower quarter of range.
   c. At midpoint of range.
8. Exercise each binary point.
9. For every I/O point in DDC system, read and record each value at operator workstation, at DDC controller and at field instrument simultaneously. Value displayed at operator workstation, at DDC controller and at field instrument shall match.
10. Prepare and submit a report documenting results for each I/O point in DDC system and include in each I/O point a description of corrective measures and adjustments made to achieve desire results.

3.24 DDC SYSTEM VALIDATION TESTS

A. Perform validation tests before requesting final review of system. Before beginning testing, first submit Pretest Checklist and Test Plan.

B. After approval of Test Plan, execute all tests and procedures indicated in plan.

C. After testing is complete, submit completed test checklist.

D. Pretest Checklist: Submit the following list with items checked off once verified:
   1. Detailed explanation for any items that are not completed or verified.
   2. Required mechanical installation work is successfully completed and HVAC equipment is working correctly.
   3. HVAC equipment motors operate below full-load amperage ratings.
   4. Required DDC system components, wiring, and accessories are installed.
   5. Installed DDC system architecture matches approved Drawings.
   6. Control electric power circuits operate at proper voltage and are free from faults.
   7. Required surge protection is installed.
   8. DDC system network communications function properly, including uploading and downloading programming changes.
   9. Each controller's programming is backed up.
   10. Equipment, products, tubing, wiring cable and conduits are properly labeled.
   11. All I/O points are programmed into controllers.
   12. Testing, adjusting and balancing work affecting controls is complete.
   13. Dampers and actuators zero and span adjustments are set properly.
   14. Each control damper and actuator goes to failed position on loss of power.
   15. Valves and actuators zero and span adjustments are set properly.
   16. Each control valve and actuator goes to failed position on loss of power.
   17. Meter, sensor and transmitter readings are accurate and calibrated.
   18. Control loops are tuned for smooth and stable operation.
   19. View trend data where applicable.
   20. Each controller works properly in standalone mode.
   21. Safety controls and devices function properly.
   22. Interfaces with fire-alarm system function properly.

23. Electrical interlocks function properly.
24. Operator workstations and other interfaces are delivered, all system and database software is installed, and graphic are created.
25. Record Drawings are completed.

E. Test Plan:
1. Prepare and submit a validation test plan including test procedures for performance validation tests.
2. Test plan shall address all specified functions of DDC system and sequences of operation.
3. Explain detailed actions and expected results to demonstrate compliance with requirements indicated.
4. Explain method for simulating necessary conditions of operation used to demonstrate performance.
5. Include a test checklist to be used to check and initial that each test has been successfully completed.
6. Submit test plan documentation minimum of 20 business days before start of tests.

F. Validation Test:
1. Verify operating performance of each I/O point in DDC system.
   a. Verify analog I/O points at operating value.
   b. Make adjustments to out-of-tolerance I/O points.
      1) Identify I/O points for future reference.
      2) Simulate abnormal conditions to demonstrate proper function of safety devices.
      3) Replace instruments and controllers that cannot maintain performance indicated after adjustments.
2. Simulate conditions to demonstrate proper sequence of control.
3. Readjust settings to design values and observe ability of DDC system to establish desired conditions.
4. After 24 Hours following Initial Validation Test:
   a. Re-check I/O points that required corrections during initial test.
   b. Identify I/O points that still require additional correction and make corrections necessary to achieve desired results.
5. After 24 Hours of Second Validation Test:
   a. Re-check I/O points that required corrections during second test.
   b. Continue validation testing until I/O point is normal on two consecutive tests.
6. Completely check out, calibrate, and test all connected hardware and software to ensure that DDC system performs according to requirements indicated.
7. After validation testing is complete, prepare and submit a report indicating all I/O points that required correction and how many validation re-tests it took to pass. Identify adjustments made for each test and indicate instruments that were replaced.

G. DDC System Response Time Test:
1. Simulate heavy load conditions.
   a. Heavy load shall be an occurrence of 50 percent of total connected binary changes of value, one-half of which represent an "alarm" condition, and 50 percent of total connected analog changes of value, one-half of which represent an "alarm" condition, that are initiated simultaneously on a one-time basis.
2. Initiate 10 successive occurrences of heavy load conditions and measure response time to typical alarms and status changes.
3. Measure with a timer having at least 0.1-second resolution and 0.01 percent accuracy.
4. Purpose of test is to demonstrate DDC system, as follows:
   a. Reaction to changes of value and alarm conditions during heavy load conditions.
   b. Ability to update DDC system database during heavy load conditions.
5. Passing test is contingent on the following:
   a. Alarm reporting at printer beginning no more than two seconds after the initiation (time zero) of heavy load conditions.

b. All alarms, both binary and analog, are reported and printed; none are lost.
c. Compliance with response times specified.

6. Prepare and submit a report documenting heavy load conditions tested and results of test including time stamp and print out of all alarms.

H. DDC System Network Bandwidth Test:
1. Test network bandwidth usage on all DDC system networks to demonstrate bandwidth usage under DDC system normal operating conditions and under simulated heavy load conditions.
2. To pass, none of DDC system networks shall use more than 70 percent of available bandwidth under normal and heavy load conditions operation.

3.25 FINAL REVIEW

A. Submit written request to Architect and Construction Manager when DDC system is ready for final review. Written request shall state the following:
1. DDC system has been thoroughly inspected for compliance with contract documents and found to be in full compliance.
2. DDC system has been calibrated, adjusted and tested and found to comply with requirements of operational stability, accuracy, speed and other performance requirements indicated.
3. DDC system monitoring and control of HVAC systems results in operation according to sequences of operation indicated.
4. DDC system is complete and ready for final review.

B. Review Architect and Construction Manager shall be made after receipt of written request. A field report shall be issued to document observations and deficiencies.

C. Take prompt action to remedy deficiencies indicated in field report and submit a second written request when all deficiencies have been corrected. Repeat process until no deficiencies are reported.

D. Should more than two reviews be required, DDC system manufacturer and Installer shall compensate entity performing review for total costs, labor and expenses, associated with third and subsequent reviews. Estimated cost of each review shall be submitted and approved by DDC system manufacturer and Installer before making the review.

E. Prepare and submit closeout submittals and begin procedures indicated in "Extended Operation Test" Article when no deficiencies are reported.

F. A part of DDC system final review shall include a demonstration to parties participating in final review.
1. Provide staff familiar with DDC system installed to demonstrate operation of DDC system during final review.
2. Provide testing equipment to demonstrate accuracy and other performance requirements of DDC system that is requested by reviewers during final review.
3. Demonstration shall include, but not be limited to, the following:
a. Accuracy and calibration of 10 I/O points randomly selected by reviewers. If review finds that some I/O points are not properly calibrated and not satisfying performance requirements indicated, additional I/O points may be selected by reviewers until total I/O points being reviewed that satisfy requirements equals quantity indicated.
b. HVAC equipment and system hardwired and software safeties and life-safety functions are operating according to sequence of operation. Up to 10 I/O points shall be randomly selected by reviewers. Additional I/O points may be selected by reviewers to discover problems with operation.
c. **Correct sequence of operation after electrical power interruption and resumption after electrical power is restored for randomly selected HVAC systems.**
d. Operation of randomly selected dampers and valves in normal-on, normal-off and failed positions.

e. Reporting of alarm conditions for randomly selected alarms, including different classes of alarms, to ensure that alarms are properly received by operators and operator workstations.
f. Trends, summaries, logs and reports set-up for Project.
g. For up to three HVAC systems randomly selected by reviewers, use graph trends to show that sequence of operation is executed in correct manner and that HVAC systems operate properly through complete sequence of operation including different modes of operations indicated. Show that control loops are stable and operating at set points and respond to changes in set point of 20 percent or more.
h. Software's ability to communicate with controllers, operator workstations, uploading and downloading of control programs.
i. Software's ability to edit control programs off-line.
j. Data entry to show Project-specific customizing capability including parameter changes.
k. Step through penetration tree, display all graphics, demonstrate dynamic update, and direct access to graphics.
l. Execution of digital and analog commands in graphic mode.
m. Spreadsheet and curve plot software and its integration with database.
n. Online user guide and help functions.
o. Multitasking by showing different operations occurring simultaneously on four quadrants of split screen.
p. System speed of response compared to requirements indicated.
q. For Each Network and Programmable Application Controller:
    1) Memory: Programmed data, parameters, trend and alarm history collected during normal operation is not lost during power failure.
    2) Operator Interface: Ability to connect directly to each type of digital controller with a portable workstation and mobile device. Show that maintenance personnel interface tools perform as indicated in manufacturer's technical literature.
    3) Standalone Ability: Demonstrate that controllers provide stable and reliable standalone operation using default values or other method for values normally read over network.
    4) Electric Power: Ability to disconnect any controller safely from its power source.
    5) Wiring Labels: Match control drawings.
    6) Network Communication: Ability to locate a controller's location on network and communication architecture matches Shop Drawings.
    7) Nameplates and Tags: Accurate and permanently attached to control panel doors, instrument, actuators and devices.
r. For Each Operator Workstation:
    1) I/O points lists agree with naming conventions.
    2) Graphics are complete.
    3) UPS unit, if applicable, operates.
s. Communications and Interoperability: Demonstrate proper interoperability of data sharing, alarm and event management, trending, scheduling, and device and network management. Requirements must be met even if only one manufacturer's equipment is installed.
    1) Data Presentation: On each operator workstation, demonstrate graphic display capabilities.
    2) Reading of Any Property: Demonstrate ability to read and display any used readable object property of any device on network.
    3) Set Point and Parameter Modifications: Show ability to modify set points and tuning parameters indicated. Modifications are made with messages and write services initiated by an operator using workstation graphics, or by completing a field in a menu with instructional text.

4) Peer-to-Peer Data Exchange: Network devices are installed and configured to perform without need for operator intervention to implement Project sequence of operation and to share global data.
5) Alarm and Event Management: Alarms and events are installed and prioritized according to Owner. Demonstrate that time delays and other logic are set up to avoid nuisance tripping. Show that operators with sufficient privileges are permitted.
6) Schedule Lists: Schedules are configured for start and stop, mode change, occupant overrides, and night setback as defined in sequence of operations.
7) Schedule Display and Modification: Ability to display any schedule with start and stop times for calendar year. Show that all calendar entries and schedules are modifiable from any connected operator workstation by an operator with sufficient privilege.
8) Archival Storage of Data: Data archiving is handled by operator workstation and server and local trend archiving and display is accomplished.
9) Modification of Trend Log Object Parameters: Operator with sufficient privilege can change logged data points, sampling rate, and trend duration.
10) Device and Network Management:
    (a) Display of network device status.
    (b) Display of BACnet Object Information.
    (c) Silencing devices transmitting erroneous data.
    (d) Time synchronization.
    (e) Remote device re-initialization.
    (f) Backup and restore network device programming and master database(s).
    (g) Configuration management of routers.

3.26 ADJUSTING

A. Occupancy Adjustments: Contractor shall contact Owner within 10 months after substational substantial completion and provide on-site assistance in adjusting system to suit actual occupied conditions. Provide up to three visits to Project during other-than-normal occupancy hours for this purpose. Notify Engineer of Record to document each visit.

3.27 MAINTENANCE SERVICE

A. Maintenance Service: Beginning at Substantial Completion, maintenance service shall include 12 months' full maintenance by DDC system manufacturer's authorized service representative. Include monthly, quarterly, and semiannual preventive maintenance, repair or replacement of worn or defective components, cleaning, calibration and adjusting as required for proper operation. Parts and supplies shall be manufacturer's authorized replacement parts and supplies.

3.28 SOFTWARE SERVICE AGREEMENT

A. Technical Support: Beginning at Substantial Completion, service agreement shall include software support for two three years.

B. Upgrade Service: At Substantial Completion, update software to latest version. Install and program software upgrades that become available within two years from date of Substantial Completion. Upgrading software shall include operating system and new or revised licenses for using software.
    1. Upgrade Notice: At least 30 days to allow Owner to schedule and access system and to upgrade computer equipment if necessary.

3.29 DEMONSTRATION

A. Engage a factory-authorized service representative with complete knowledge of Project-specific system installed to train Owner's maintenance personnel to adjust, operate, and maintain DDC system.

B. Extent of Training:

1. Base extent of training on scope and complexity of DDC system indicated and training requirements indicated. Provide extent of training required to satisfy requirements indicated even if more than minimum training requirements are indicated.
2. Inform Owner of anticipated training requirements if more than minimum training requirements are indicated.
3. Minimum Training Requirements:
    a. Provide not less than five days of training total.
    b. Stagger training over multiple training classes to accommodate Owner's requirements. All training shall occur before end of warranty period.
    c. Total days of training shall be broken into not more than three separate training classes.
    d. Each training class shall be not less than two consecutive days.

C. Training Schedule:
1. Schedule training with Owner 20 business days before expected Substantial Completion.
2. Schedule training to provide Owner with at least 20 business days of notice in advance of training.
3. Provide staggered training schedule as requested by Owner.

D. Training Attendee List and Sign-in Sheet:
1. Request from Owner in advance of training a proposed attendee list with name, phone number and e-mail address.
2. Provide a preprinted sign-in sheet for each training session with proposed attendees listed and no fewer than six blank spaces to add additional attendees.
3. Preprinted sign-in sheet shall include training session number, date and time, instructor name, phone number and e-mail address, and brief description of content to be covered during session. List attendees with columns for name, phone number, e-mail address and a column for attendee signature or initials.
4. Circulate sign-in sheet at beginning of each session and solicit attendees to sign or initial in applicable location.
5. At end of each training day, send Owner an e-mail with an attachment of scanned copy (PDF) of circulated sign-in sheet for each session.

E. Training Attendee Headcount:
1. Plan in advance of training for attendees.
2. Headcount may vary depending on training content covered in session. Attendee access may be restricted to some training content for purposes of maintaining system security.

F. Attendee Training Manuals:
1. Provide each attendee with a color hard copy of all training materials and visual presentations.
2. Hard-copy materials shall be organized in a three-ring binder with table of contents and individual divider tabs marked for each logical grouping of subject matter. Organize material to provide space for attendees to take handwritten notes within training manuals.
3. In addition to hard-copy materials included in training manual, provide each binder with a sleeve or pocket that includes a DVD or flash drive with PDF copy of all hard-copy materials.

G. Instructor Requirements:
1. One or multiple qualified instructors, as required, to provide training.
2. Instructors shall have not less than five years of providing instructional training on not less than five past projects with similar DDC system scope and complexity to DDC system installed.

H. Organization of Training Sessions:
1. Organize training sessions into logical groupings of technical content and to reflect different levels of operators having access to system. Plan training sessions to accommodate the following three levels of operators:

a. Daily operators.
b. Advanced operators.
c. System managers and administrators.

2. Plan and organize training sessions to group training content to protect DDC system security. Some attendees may be restricted to some training sessions that cover restricted content for purposes of maintaining DDC system security.

I. Training Outline:
1. Submit training outline for Owner review at least 10 business day before scheduling training.
2. Outline shall include a detailed agenda for each training day that is broken down into each of four training sessions that day, training objectives for each training session and synopses for each lesson planned.

J. On-Site Training:
1. Instructor shall provide training materials, projector and other audiovisual equipment used in training.
2. Provide as much of training located on-site as deemed feasible and practical by Owner.
3. On-site training shall include regular walk-through tours, as required, to observe each unique product type installed with hands-on review of operation, calibration and service requirements.
4. Operator workstation provided with DDC system shall be used in training. If operator workstation is not indicated, provide a temporary workstation to convey training content.

K. Training Content for Daily Operators:
1. Basic operation of system.
2. Understanding DDC system architecture and configuration.
3. Understanding each unique product type installed including performance and service requirements for each.
4. Understanding operation of each system and equipment controlled by DDC system including sequences of operation, each unique control algorithm and each unique optimization routine.
5. Operating operator workstations, printers and other peripherals.
6. Logging on and off system.
7. Accessing graphics, reports and alarms.
8. Adjusting and changing set points and time schedules.
9. Recognizing DDC system malfunctions.
10. Understanding content of operation and maintenance manuals including control drawings.
11. Understanding physical location and placement of DDC controllers and I/O hardware.
12. Accessing data from DDC controllers.
13. Operating portable operator workstations.
14. Review of DDC testing results to establish basic understanding of DDC system operating performance and HVAC system limitations as of Substantial Completion.
15. Running each specified report and log.
16. Displaying and demonstrating each data entry to show Project-specific customizing capability. Demonstrating parameter changes.
17. Stepping through graphics penetration tree, displaying all graphics, demonstrating dynamic updating, and direct access to graphics.
18. Executing digital and analog commands in graphic mode.
19. Demonstrating control loop precision and stability via trend logs of I/O for not less than 10 percent of I/O installed.
20. Demonstrating DDC system performance through trend logs and command tracing.
21. Demonstrating scan, update, and alarm responsiveness.
22. Demonstrating spreadsheet and curve plot software, and its integration with database.
23. Demonstrating on-line user guide, and help function and mail facility.

24. Demonstrating multitasking by showing dynamic curve plot, and graphic construction operating simultaneously via split screen.
25. Demonstrating the following for HVAC systems and equipment controlled by DDC system:
    a. Operation of HVAC equipment in normal-off, -on and failed conditions while observing individual equipment, dampers and valves for correct position under each condition.
    b. For HVAC equipment with factory-installed software, show that integration into DDC system is able to communicate with DDC controllers or gateways, as applicable.
    c. Using graphed trends, show that sequence of operation is executed in correct manner, and HVAC systems operate properly through complete sequence of operation including seasonal change, occupied and unoccupied modes, warm-up and cool-down cycles and other modes of operation indicated.
    d. Hardware interlocks and safeties function properly and DDC system performs correct sequence of operation after electrical power interruption and resumption after power is restored.
    e. Reporting of alarm conditions for each alarm, and confirm that alarms are received at assigned locations, including operator workstations.
    f. Each control loop responds to set point adjustment and stabilizes within time period indicated.
    g. Sharing of previously graphed trends of all control loops to demonstrate that each control loop is stable and set points are being maintained.
26. Pod Exhaust System.

L. Training Content for Advanced Operators:
1. Making and changing workstation graphics.
2. Creating, deleting and modifying alarms including annunciation and routing.
3. Creating, deleting and modifying point trend logs including graphing and printing on an ad-hoc basis and operator-defined time intervals.
4. Creating, deleting and modifying reports.
5. Creating, deleting and modifying points.
6. Creating, deleting and modifying programming including ability to edit control programs off-line.
7. Creating, deleting and modifying system graphics and other types of displays.
8. Adding DDC controllers and other network communication devices such as gateways and routers.
9. Adding operator workstations.
10. Performing DDC system checkout and diagnostic procedures.
11. Performing DDC controllers operation and maintenance procedures.
12. Performing operator workstation operation and maintenance procedures.
13. Configuring DDC system hardware including controllers, workstations, communication devices and I/O points.
14. Maintaining, calibrating, troubleshooting, diagnosing and repairing hardware.
15. Adjusting, calibrating and replacing DDC system components.

M. Training Content for System Managers and Administrators:
1. DDC system software maintenance and backups.
2. Uploading, downloading and off-line archiving of all DDC system software and databases.
3. Interface with Project-specific, third-party operator software.
4. Understanding password and security procedures.
5. Adding new operators and making modifications to existing operators.
6. Operator password assignments and modification.
7. Operator authority assignment and modification.
8. Workstation data segregation and modification.

N. Video of Training Sessions:

1. Provide a digital video and audio recording of each training session. Create a separate recording file for each session.
2. Stamp each recording file with training session number, session name and date.
3. Provide Owner with two copies of digital files on DVDs or flash drives for later reference and for use in future training.
4. Owner retains right to make additional copies for intended training purposes without having to pay royalties.

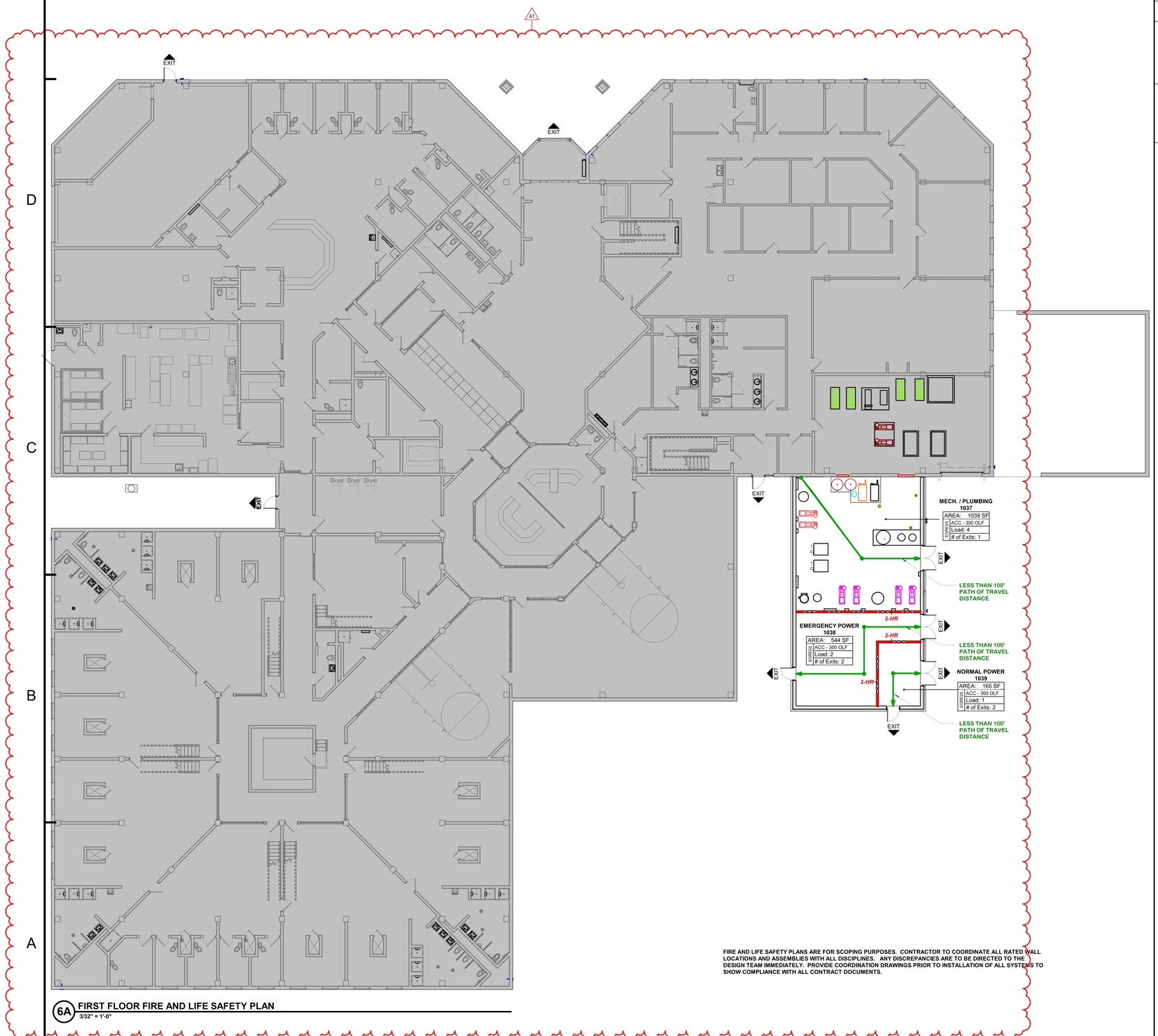
END OF SECTION

LIFE SAFETY PLAN LEGEND

Room name 101 AREA: 150 SF OCCUPANCY: Occupancy LOAD: Load: ## # of Exits: #	EGRESS INFORMATION
EXIT	EGRESS EXITS
	2-HOUR FB (2-HR FB) [IBC 707]
	PATH OF TRAVEL DISTANCE

CODE SUMMARY

APPLICABLE CODE:		2014 INDIANA BUILDING CODE (IBC)
OCCUPANCY CLASSIFICATIONS:	SEC. 308.5 SEC. 308.5.4	EXISTING TO REMAIN INSTITUTIONAL GROUP I-3, TYPE B-2 IN OFFICE BUILDING. NEW OCCUPANCY TYPE ACCESSORY FOR MECHANICAL BUILDING.
BUILDING DESCRIPTION:		PROPOSED RENOVATION OF MEP THROUGHOUT A MIXED OCCUPANCY INSTITUTIONAL BUILDING (SHERIFF'S OFFICE AND SECURITY CENTER). ARCHITECTURAL SCOPE LIMITED TO ASSOCIATED MEP RENOVATIONS, SKYLIGHT INFILL, ASSORTED HARDWARE UPDATES, AND NEW CONSTRUCTION OF MECHANICAL BUILDING.
CODE STRATEGY:		NO CHANGE OF USE. THE AREA OF WORK OUTLINED IN THESE DOCUMENTS DOES NOT CHANGE THE OCCUPANCY TYPE OR DEVISE FROM THE EXISTING CONSTRUCTION TYPE. SPRINKLER LOCATIONS MAY BE UPDATED TO THE EXTENT NECESSARY WITH THE REMOVAL OF WALLS AND INSTALLATION OF NEW CEILINGS TO MAINTAIN NFPA 13 STANDARDS.
CONSTRUCTION TYPE:	SEC. 602.2	PRESUMED TO BE TYPE II-FR, BASED ON MATERIALS USED.
COMMON PATH OF TRAVEL:	SEC. 1014.3 TABLE 1014.3 675 IAC 13-2.6-11(t)	SEPARATION 1 - (B) - MAXIMUM COMMON PATH OF EGRESS TRAVEL: 100'-0" (SPRINKLED) ACTUAL COMMON PATH OF TRAVEL DISTANCE: 66'-1 1/4"; COMPLIES SEPARATION 2 - (I-3) - MAXIMUM COMMON PATH OF EGRESS TRAVEL: 100'-0" (SPRINKLED) FIRST FLOOR ACTUAL MAXIMUM EXIT ACCESS TRAVEL DISTANCE: 146'-9"; DOES NOT COMPLY SECOND FLOOR ACTUAL MAXIMUM EXIT ACCESS TRAVEL DISTANCE:161'-1"; DOES NOT COMPLY 675 IAC 13-2.6-11 Chapter 10; means of egress
SPRINKLER SYSTEM:	SEC. 903.2	YES; NFPA 13; BUILDING IS EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM
STANDPIPES:	SEC. 905.3.1 EXCEPTION #1 EXCEPTION #2 675 IAC 13-2.6-10(v)(w)	STANDPIPES ARE REQUIRED FOR FLOOR LEVEL MORE THAN 30 FEET ABOVE FIRE DEPARTMENT ACCESS. CLASS I ALLOWED FOR BUILDINGS WITH AUTOMATIC SPRINKLER MEETING 903.3.1.1. EXCEPTION #1 MET (EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM) 675 IAC 13-2.6-10 Chapter 9; fire protection systems (v) Amend Section 905.3.1, Height, by deleting the text in Exception 3 and inserting to read as follows: Class I manual dry standpipes are allowed in open parking garages that are subject to freezing temperatures. Standpipes shall be provided in accordance with Section 905.4, and hose connections shall meet the spacing requirements for Class II standpipes in accordance with Section 905.5. (w) Add a new Section 905.3.1.1 after Section 905.3.1 to read as follows: 905.3.1.1 Building Area. In buildings exceeding 10,000 square feet in area per story, Class 1 automatic wet or manual wet standpipes shall be provided where any portion of the building's interior is more than 200 feet of travel, vertically or horizontally, from the nearest point of fire department access. Exceptions: 1. Buildings equipped throughout with automatic sprinkler systems installed in accordance with Section 903.3.1.1. 2. Group A-4, A-5, F-2, R-2, S-2, or U occupancies. 3. Automatic dry and semiautomatic dry standpipes are allowed as provided for in NFPA 14.
FIRE ALARM SYSTEMS:	SEC. 907.2 SEC. 907.2.2 SEC. 907.2.6.3	FIRE ALARM SYSTEM REQUIRED THROUGHOUT IN ALL BUILDINGS 907.2.6.3 GROUP I-3 OCCUPANCIES SHALL BE EQUIPPED WITH A MANUAL FIRE ALARM SYSTEM AND AUTOMATIC SMOKE DETECTION SYSTEM FOR ALERTING STAFF SEC. 907.2.6.3.2 MANUAL FIRE ALARM BOXES ARE NOT REQUIRED TO BE LOCATED IN ACCORDANCE WITH SECTION 907.4.2 WHERE THE FIRE ALARM BOXES ARE PROVIDED AT STAFF-ATTENDED LOCATIONS HAVING DIRECT SUPERVISION OVER AREAS WHERE MANUAL FIRE ALARM BOXES HAVE BEEN OMITTED. SEC. 907.2.2 GROUP B MANUAL FIRE ALARM BOXES ARE NOT REQUIRED (BUILDING IS EQUIPPED WITH SPRINKLER SYSTEM)



FIRE AND LIFE SAFETY PLANS ARE FOR SCOPING PURPOSES. CONTRACTOR TO COORDINATE ALL RATED WALL LOCATIONS AND ASSEMBLIES WITH ALL DISCIPLINES. ANY DISCREPANCIES ARE TO BE DIRECTED TO THE DESIGN TEAM IMMEDIATELY. PROVIDE COORDINATION DRAWINGS PRIOR TO INSTALLATION OF ALL SYSTEMS TO SHOW COMPLIANCE WITH ALL CONTRACT DOCUMENTS.

6A FIRST FLOOR FIRE AND LIFE SAFETY PLAN
3/32" = 1'-0"

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929
Designed By: Designer
Drawn By: Author
Checked By: Checker
Date: 11.21.2025

MICHAEL FRANCIS GARDNER
REGISTERED
No. 10700168
STATE OF INDIANA
ARCHITECT

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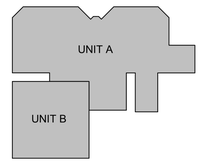

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FIRST FLOOR FIRE AND LIFE SAFETY PLAN

G-101

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LIFE SAFETY PLAN LEGEND

Room name
101

AREA:	150 SF
EGRESS	Occupancy
	Load: ##
	# of Exits: #

EGRESS INFORMATION

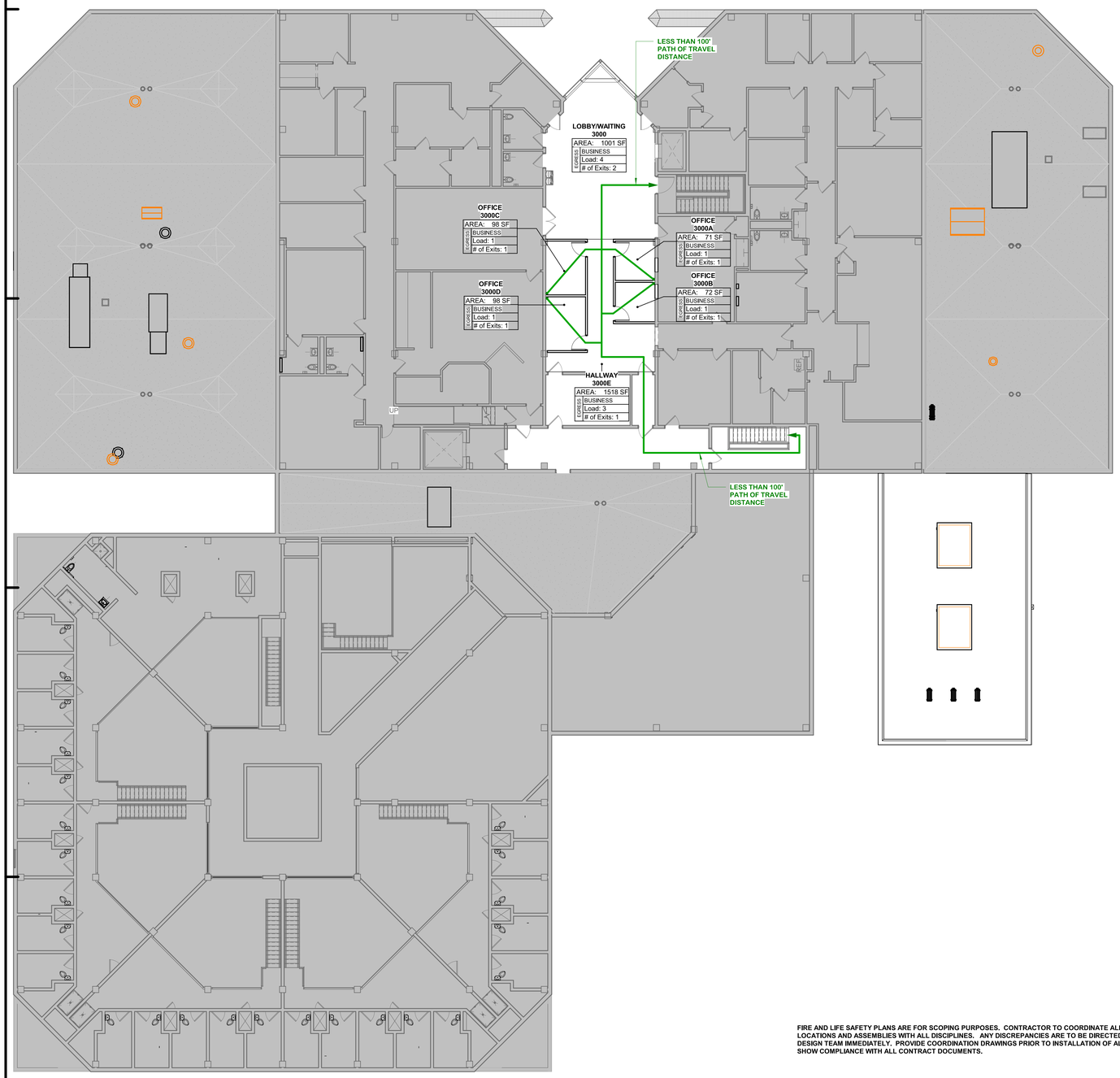
EXIT — EGRESS EXITS

2-HOUR FB (2-HR FB) [IBC 707]

PATH OF TRAVEL DISTANCE

CODE SUMMARY

APPLICABLE CODE:		2018 INDIANA BUILDING CODE (IBC)
OCCUPANCY CLASSIFICATIONS:	SEC. 308.5 SEC. 308.5.4	EXISTING TO REMAIN INSTITUTIONAL GROUP I-3, TYPE B-2 IN OFFICE BUILDING, NEW OCCUPANCY TYPE ACCESSORY FOR MECHANICAL BUILDING.
BUILDING DESCRIPTION:		PROPOSED RENOVATION OF MEP THROUGHOUT A MIXED OCCUPANCY INSTITUTIONAL BUILDING (SHERIFF'S OFFICE AND SECURITY CENTER), ARCHITECTURAL SCOPE LIMITED TO ASSOCIATED MEP RENOVATIONS, SKYLIGHT INFILL, ASSORTED HARDWARE UPDATES, AND NEW CONSTRUCTION OF MECHANICAL BUILDING.
CODE STRATEGY:		NO CHANGE OF USE. THE SCOPE OF WORK OUTLINED IN THIS DOCUMENT IS DONE TO MAINTAIN THE OCCUPANCY TYPE FOR DEVICE FROM THE EXISTING CONSTRUCTION TYPE. SPRINKLER LOCATIONS MAY BE UPDATED TO THE EXTENT NECESSARY WITH THE REMOVAL OF WALLS AND INSTALLATION OF NEW CEILINGS TO MAINTAIN NFPA 13 STANDARDS.
CONSTRUCTION TYPE:	SEC. 602.2	PRESUMED TO BE TYPE II-FR, BASED ON MATERIALS USED.
COMMON PATH OF TRAVEL:	SEC. 1014.3 TABLE 1014.3 675 IAC 13-2.6-11(t)	SEPARATION 1 - (B) - MAXIMUM COMMON PATH OF EGRESS TRAVEL: 100'-0" (SPRINKLED) ACTUAL COMMON PATH OF TRAVEL DISTANCE: 66'-1 1/4"; COMPLIES SEPARATION 2 - (I-3) - MAXIMUM COMMON PATH OF EGRESS TRAVEL: 100'-0" (SPRINKLED) FIRST FLOOR ACTUAL MAXIMUM EXIT ACCESS TRAVEL DISTANCE: 146'-9"; DOES NOT COMPLY SECOND FLOOR ACTUAL MAXIMUM EXIT ACCESS TRAVEL DISTANCE:161'-1"; DOES NOT COMPLY 675 IAC 13-2.6-11 Chapter 10; means of egress
SPRINKLER SYSTEM:	SEC. 903.2	YES; NFPA 13; BUILDING IS EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM
STANDPIPES:	SEC. 905.3.1 EXCEPTION #1 EXCEPTION #2 675 IAC 13-2.6-10(v)(w)	STANDPIPES ARE REQUIRED FOR FLOOR LEVEL MORE THAN 30 FEET ABOVE FIRE DEPARTMENT ACCESS. CLASS I ALLOWED FOR BUILDINGS WITH AUTOMATIC SPRINKLER MEETING 903.3.1.1. EXCEPTION #1 MET (EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM) 675 IAC 13-2.6-10 Chapter 9; fire protection systems (v) Amend Section 905.3.1, Height, by deleting the text in Exception 3 and inserting to read as follows: Class I manual dry standpipes are allowed in open parking garages that are subject to freezing temperatures. Standpipes shall be provided in accordance with Section 905.4, and hose connections shall meet the spacing requirements for Class II standpipes in accordance with Section 905.5. (w) Add a new Section 905.3.1.1 after Section 905.3.1 to read as follows: 905.3.1.1 Building Area. In buildings exceeding 10,000 square feet in area per story, Class 1 automatic wet or manual wet standpipes shall be provided where any portion of the building's interior is more than 200 feet of travel, vertically or horizontally, from the nearest point of fire department access. Exceptions: 1. Buildings equipped throughout with automatic sprinkler systems installed in accordance with Section 903.3.1.1. 2. Group A-4, A-5, F-2, R-2, S-2, or U occupancies. 3. Automatic dry and semiautomatic dry standpipes are allowed as provided for in NFPA 14.
FIRE ALARM SYSTEMS:	SEC. 907.2 SEC. 907.2.2 SEC. 907.2.6.3	FIRE ALARM SYSTEM REQUIRED THROUGHOUT IN ALL BUILDINGS 907.2.6.3 GROUP I-3 OCCUPANCIES SHALL BE EQUIPPED WITH A MANUAL FIRE ALARM SYSTEM AND AUTOMATIC SMOKE DETECTION SYSTEM FOR ALERTING STAFF SEC. 907.2.6.3.2 MANUAL FIRE ALARM BOXES ARE NOT REQUIRED TO BE LOCATED IN ACCORDANCE WITH SECTION 907.4.2 WHERE THE FIRE ALARM BOXES ARE PROVIDED AT STAFF-ATTENDED LOCATIONS HAVING DIRECT SUPERVISION OVER AREAS WHERE MANUAL FIRE ALARM BOXES HAVE BEEN OMITTED. SEC. 907.2.2 GROUP B MANUAL FIRE ALARM BOXES ARE NOT REQUIRED (BUILDING IS EQUIPPED WITH SPRINKLER SYSTEM)



FIRE AND LIFE SAFETY PLANS ARE FOR SCOPING PURPOSES. CONTRACTOR TO COORDINATE ALL RATED WALL LOCATIONS AND ASSEMBLIES WITH ALL DISCIPLINES. ANY DISCREPANCIES ARE TO BE DIRECTED TO THE DESIGN TEAM IMMEDIATELY. PROVIDE COORDINATION DRAWINGS PRIOR TO INSTALLATION OF ALL SYSTEMS TO SHOW COMPLIANCE WITH ALL CONTRACT DOCUMENTS.

6A SECOND FLOOR FIRE AND LIFE SAFETY PLAN
3/32" = 1'-0"

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929
Designed By: Designer
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MICHAEL FRANCIS GARDNER
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No. 10700168
STATE OF INDIANA
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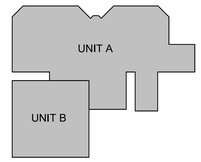

SECOND FLOOR FIRE AND LIFE SAFETY PLAN

G-102

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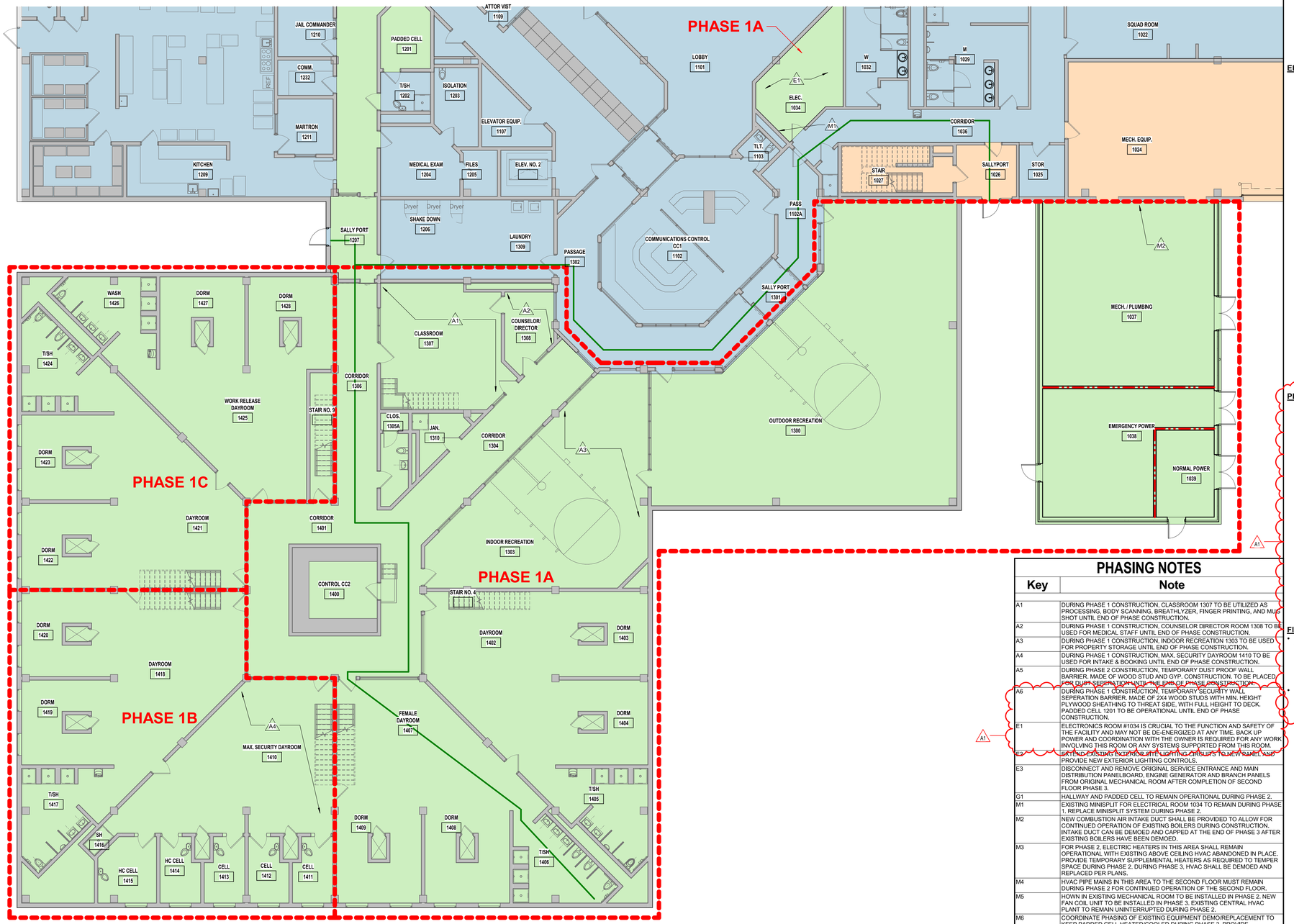
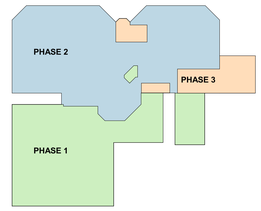


LEGEND:

PHASE SEPARATOR

TEMPORARY WALL / BARRIER

PHASE 1 PATH OF EGRESS



PHASE 1: 9-10 MONTHS

- NEW CENTRAL UTILITY PLANT BUILDOUT SHALL BE COMPLETED.
- HOUSING POD SHALL BE RENOVATED
  - NOTE THAT POD SCOPE IS BROKEN INTO SUB-PHASES 1A, 1B, AND 1C. ALL WORK SHALL BE DONE SUCH THAT ONLY DAYROOMS LOCATED WITHIN THE CURRENT SUB-PHASE ARE UNOCCUPIED. ALL OTHER DAYROOMS SHALL REMAIN OCCUPIED AND OPERATIONAL.
- IT / ELEC ROOM 1034 SHALL UNDERGO RENOVATION AND REPLACEMENT OF EXISTING IT/SECURITY SYSTEMS AS DETAILED BELOW.
- DURING THIS PHASE UNIT A SHALL REMAIN OCCUPIED AND OPERATIONAL.

STRUCTURAL REMARKS

- PROVIDE NEW STRUCTURAL STEEL SUPPORTS AND ROOF REINFORCEMENT FOR NEW ROOFTOP EQUIPMENT DURING PHASES CORRESPONDING TO THE NEW ROOFTOP EQUIPMENT INSTALLATION.

MECHANICAL REMARKS

- CENTRAL COOLING AND HEATING PLANTS SHALL BE COMPLETED AND OPERATIONAL BY THE END OF THIS PHASE.
- MAIN EQUIPMENT FOR THE NEW BUILDING AUTOMATION SYSTEM SHALL BE INSTALLED.
- NEW MINISPLITS SERVING THE NEW EMERGENCY POWER AND NORMAL POWER ROOMS SHALL BE INSTALLED AND OPERATIONAL.
- POD HVAC TO BE DEMOED AND REPLACED ONE SUB-PHASE AT A TIME (1A, 1B, 1C). THE HVAC IN ALL NON-ACTIVE SUB-PHASES AS WELL AS PHASES 2 AND 3 SHALL REMAIN OPERATIONAL DURING PHASE 1.
  - PHASE DEMOLITION OF EXISTING WSHP CONDENSER WATER PIPE MAINS TO ENSURE CONTINUED OPERATION OF OTHER AREA'S HVAC SYSTEMS. EXISTING CENTRAL BOILER / COOLING TOWER PLANT TO REMAIN OPERATIONAL.

ELECTRICAL REMARKS

- A NEW ELECTRIC UTILITY SERVICE ENTRANCE TO BE ESTABLISHED ALONG WITH A NEW NATURAL GAS ENGINE GENERATOR AND ALL NORMAL AND EMERGENCY POWER ASSOCIATED DISTRIBUTION PANELS AND AUTOMATIC TRANSFER SWITCHES TO BE ENERGIZED AND PLACED INTO SERVICE BY THE COMPLETION OF THIS PHASE.
- NEW PANEL BOARD FEEDERS FROM THE NEW MDP FOR PANELS LOCATED IN THE INTERSTITIAL SPACE TO BE INSTALLED AS WELL AS PANEL FEEDERS (PHASE 2 AND PHASE 3) AND BRANCH CIRCUIT CONDUITS FOR PHASE 2 (SOUTH END) TO BE STARTED.
- NEW LIGHTING WILL BE INSTALLED IN THE NORMAL AND EMERGENCY POWER ROOMS AS WELL AS THE NEW MECHANICAL ROOM.
- ELECTRICAL CONNECTOINS WILL BE MADE TO ALL EQUIPMENT IN THE MECHANICAL ROOM.
- A NEW FIRE ALARM PANEL WILL BE INSTALLED AND WILL BE PHASED INTO SERVICE.
- POD DEMOLITION AND ONE FOR ONE REPLACEMENT OF ALL PANELBOARDS, ELECTRICAL WIRING, DEVICES, LIGHT FIXTURES, DISCONNECTS, MOTOR STARTERS AND FIRE ALARM SYSTEM ETC. SHALL COMMENCE IN A SUB-PHASE FASHION (1A,1B AND 1C). THE ELECTRICAL AND LOW VOLTAGE SYSTEMS IN ALL NON-ACTIVE SUB-PHASES AS WELL AS PHASES 2 AND 3 SHALL REMAIN OPERATIONAL DURING PHASE 1.
- CONDUITS AND BACKBOXES TO REMAIN FOR REUSE IN THE POD.
- PHASE DEMOLITION OF EXISTING PANELBOARD FEEDERS AND BRANCH CIRCUITS TO ENSURE CONTINUED OPERATION IN OTHER AREA'S. EXISTING MAIN DISTRIBUTION PANEL AND DISTRIBUTION TO REMAIN OPERATIONAL.
- ALL LOW VOLTAGE WIRING INCLUDING LAN AND SECURITY ELECTRONICS WIRING TO REMAIN INTACT AND IN SERVICE. SECURE ANY LOOSE LOW VOLTAGE WIRING TO STRUCTURE THAT WAS LAYING ON CEILING TILES OR ATTACHED TO DEMOED EQUIPMENT.

PLUMBING REMARKS

- INSTALL NEW UNDERGROUND DOMESTIC WATER SERVICE ENTRANCE, INCLUDING ALL ASSOCIATED MAINS, SITE PIPING, AND CONNECTIONS TO THE BUILDING.
- INSTALL NEW DOMESTIC WATER EQUIPMENT, INCLUDING, BUT NOT LIMITED TO: WATER SOFTENERS, WATER HEATERS, STORAGE TANKS, PUMPS, CONTROL VALVES, BACKFLOW ASSEMBLIES, AND DISTRIBUTION COMPONENTS.
- PREPARE ALL REQUIRED TIE-INS NECESSARY TO SUPPORT TRANSFER OF BUILDING DISTRIBUTION IN PHASES 2 & 3, WITHOUT DISRUPTING OF OPERATION OF EXISTING DOMESTIC WATER DISTRIBUTION SYSTEM.
- BEGIN INSTALLATION OF NEW POD DOMESTIC WATER PIPING WITHOUT IMPACTING ACTIVE SYSTEMS AND COMPLETE INSTALLATION OF ALL NEW POD DOMESTIC WATER PIPING.
- CONDUCT PHASED CUTOVERS FROM EXISTING POD LINES TO NEW PIPING, MAINTAINING DOMESTIC WATER SERVICE TO THE 1ST FLOOR, 2ND FLOOR, AND INTERSTITIAL AREAS THROUGHOUT ALL WORK.
- COMPLETE AND ALL NEW POD WASTE STACK INSTALLATION AND CONNECTION TO NEW AND EXISTING FIXTURES. DEMOLISH EXISTING WASTE STACKS AND ASSOCIATED PIPING UPON REPLACEMENT OF NEW.
- COMPLETE ALL NEW UNDERGROUND WASTE PIPING FOR REPLACEMENT OF NEW SANITARY LINE CONNECTION TO EXISTING.

FIRE PROTECTION REMARKS

- WHILE CEILINGS ARE OPEN, THE CONTRACTOR SHALL INSPECT THE EXISTING FIRE PROTECTION SYSTEM AND REPLACE ANY DEFICIENT MAINS, BRANCHES, DRAINS, SPRINKLER HEADS, AND RELATED COMPONENTS. ALL REPAIRS AND REPLACEMENTS MUST BE COMPLETED BEFORE CEILINGS ARE CLOSED AND COORDINATED WITH NEW ABOVE CEILING TRADES.
- PHASE DEMOLITION, TEMPORARY SHUTDOWN AND DRAINING OF REPLACED SYSTEM PIPING OR COMPONENTS WHILE SYSTEM TO REMAIN IN OPERATION AS PER CODE.

PHASING NOTES

Key	Note
A1	DURING PHASE 1 CONSTRUCTION, CLASSROOM 1307 TO BE UTILIZED AS PROCESSING, BODY SCANNING, BREATHLYZER, FINGER PRINTING, AND MUG SHOT UNTIL END OF PHASE CONSTRUCTION.
A2	DURING PHASE 1 CONSTRUCTION, COUNSELOR DIRECTOR ROOM 1308 TO BE USED FOR MEDICAL STAFF UNTIL END OF PHASE CONSTRUCTION.
A3	DURING PHASE 1 CONSTRUCTION, INDOOR RECREATION 1303 TO BE USED FOR PROPERTY STORAGE UNTIL END OF PHASE CONSTRUCTION.
A4	DURING PHASE 1 CONSTRUCTION, MAX. SECURITY DAYROOM 1410 TO BE USED FOR INTAKE & BOOKING UNTIL END OF PHASE CONSTRUCTION.
A5	DURING PHASE 2 CONSTRUCTION, TEMPORARY DUST PROOF WALL BARRIER, MADE OF WOOD STUD AND GYP. CONSTRUCTION. TO BE PLACED FOR DUST SEPERATION UNTIL THE END OF PHASE CONSTRUCTION.
A6	DURING PHASE 1 CONSTRUCTION, TEMPORARY SECURITY WALL SEPERATION BARRIER, MADE OF 2X4 WOOD STUDS WITH MIN. HEIGHT PLYWOOD SHEATHING TO THREAT SIDE, WITH FULL HEIGHT TO DECK. PADDED CELL 1201 TO BE OPERATIONAL UNTIL END OF PHASE CONSTRUCTION.
E1	ELECTRONICS ROOM #1034 IS CRUCIAL TO THE FUNCTION AND SAFETY OF THE FACILITY AND MAY NOT BE DE-ENERGIZED AT ANY TIME. BACK UP POWER AND COORDINATION WITH THE OWNER IS REQUIRED FOR ANY WORK INVOLVING THIS ROOM OR ANY SYSTEMS SUPPORTED FROM THIS ROOM.
E2	EXTEND EXISTING EXTERIOR SITE LIGHTING CIRCUITS TO NEW PANEL AND PROVIDE NEW EXTERIOR LIGHTING CONTROLS.
E3	DISCONNECT AND REMOVE ORIGINAL SERVICE ENTRANCE AND MAIN DISTRIBUTION PANELBOARD, ENGINE GENERATOR AND BRANCH PANELS FROM ORIGINAL MECHANICAL ROOM AFTER COMPLETION OF SECOND FLOOR PHASE 3.
G1	HALLWAY AND PADDED CELL TO REMAIN OPERATIONAL DURING PHASE 2.
M1	EXISTING MINISPLIT FOR ELECTRICAL ROOM 1034 TO REMAIN DURING PHASE 1. REPLACE MINISPLIT SYSTEM DURING PHASE 2.
M2	NEW COMBUSTION AIR INTAKE DUCT SHALL BE PROVIDED TO ALLOW FOR CONTINUED OPERATION OF EXISTING BOILERS DURING CONSTRUCTION. INTAKE DUCT CAN BE DEMOED AND CAPPED AT THE END OF PHASE 3 AFTER EXISTING BOILERS HAVE BEEN DEMOED.
M3	FOR PHASE 2, ELECTRIC HEATERS IN THIS AREA SHALL REMAIN OPERATIONAL WITH EXISTING ABOVE CEILING HVAC ABANDONED IN PLACE. PROVIDE TEMPORARY SUPPLEMENTAL HEATERS AS REQUIRED TO TEMPER SPACE DURING PHASE 2. DURING PHASE 3, HVAC SHALL BE DEMOED AND REPLACED PER PLANS.
M4	HVAC PIPE MAINS IN THIS AREA TO THE SECOND FLOOR MUST REMAIN DURING PHASE 2 FOR CONTINUED OPERATION OF THE SECOND FLOOR.
M5	HOWN IN EXISTING MECHANICAL ROOM TO BE INSTALLED IN PHASE 2. NEW FAN COIL UNIT TO BE INSTALLED IN PHASE 3. EXISTING CENTRAL HVAC PLANT TO REMAIN UNINTERRUPTED DURING PHASE 2.
M6	COORDINATE PHASING OF EXISTING EQUIPMENT DEMO/REPLACEMENT TO KEEP PADDED CELL HEATED/COOLED DURING PHASE 2. PROVIDE TEMPORARY HVAC FOR ROOMS AS REQUIRED.
P1	COMPLETE NEW DOMESTIC WATER DISTRIBUTION PIPING TO NEW TIE-IN POINT IN EXISTING MECH. EQUIPMENT ROOM.
P2	COMPLETE DEMOLITION OF PLUMBING EQUIPMENT, WATER SERVICE DISTRIBUTION FOR FINAL TIE-IN TO NEW SYSTEMS. EXISTING SYSTEMS SHALL NO LONGER BE IN OPERATION AFTER THIS PHASE 3 IS COMPLETE.
P3	COMPLETE SYSTEM TESTING, BALANCING, AND COMMISSIONING OF EQUIPMENT AT END OF PHASE 3.
S1	COMPLETE STRUCTURAL INFILL OF EXISTING SKYLIGHT INFILL FLOOR IN PHASE 2, INFILL ROOF IN PHASE 3.

6A FIRST FLOOR PHASE 1
1/8" = 1'-0"

12/5/2025 1:28:18 AM

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929

Designed By: Designer

Drawn By: Author

Checked By: Checker

Date: 11.21.2025

MICHAEL FRANCIS GRUNSEN REGISTERED No. 10700168 STATE OF INDIANA ARCHITECT

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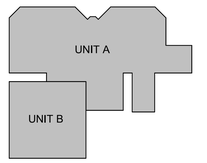
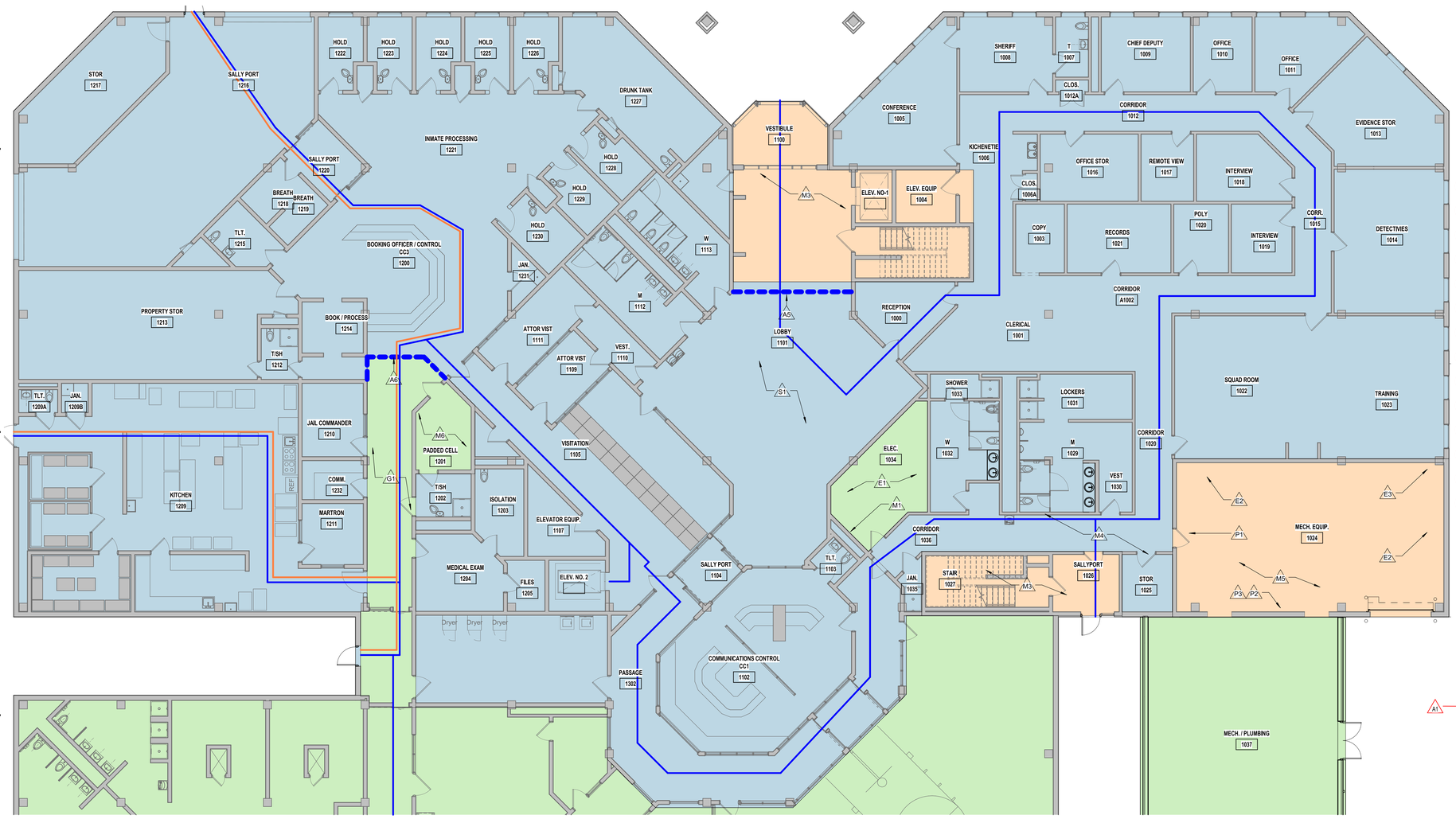


FIRST FLOOR PHASE 1

PH-101



6A **FIRST FLOOR PHASE 2 & 3**
1/8" = 1'-0"

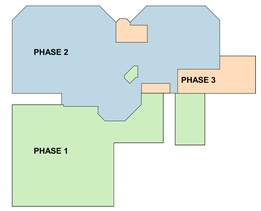
LEGEND:

PHASE SEPARATOR

TEMPORARY WALL / BARRIER

PHASE 2 PATH OF EGRESS

PHASE 3 PATH OF EGRESS



PHASE 2: 4-5 MONTHS
- FIRST FLOOR UNIT A SHALL BE RENOVATED.
- THE BUILDING MAIN ENTRY, STAIRWELL, AND ELEVATOR MUST REMAIN FUNCTIONAL TO ALLOW ACCESS TO THE OCCUPIED SECOND FLOOR.
- THE BACK STAIRWELL 1027 AND ASSOCIATED SALLYPORT 1026 MUST REMAIN OPERATIONAL TO ALLOW EGRESS FROM THE OCCUPIED SECOND FLOOR.
- UNIT B AND THE SECOND FLOOR OF UNIT A SHALL BE OCCUPIED AND OPERATIONAL DURING THIS PHASE.

PHASE 3: 4 MONTHS (FIRST FLOOR SCOPE DESCRIBED HERE)
- RENOVATE THE FRONT MAIN ENTRY AREA AND THE REAR STAIRWELL / SALLYPORT. COORDINATE WITH OWNER TO ENSURE ACCESS AND EGRESS FOR OCCUPIED FIRST FLOOR DURING PHASE 3.
- AT END OF PROJECT, DEMO EXISTING MEP PLANT EQUIPMENT IN MECH ROOM 1024 AND COMPLETE NEW SCOPE SHOWN FOR THIS ROOM TO BE CONVERTED INTO ADDITIONAL STORAGE.

STRUCTURAL REMARKS
- PROVIDE NEW STRUCTURAL STEEL SUPPORTS AND ROOF REINFORCEMENT FOR NEW ROOFTOP EQUIPMENT DURING PHASES CORRESPONDING TO THE NEW ROOFTOP EQUIPMENT INSTALLATION.

MECHANICAL REMARKS
- HVAC SYSTEMS SERVING THE FIRST FLOOR OF UNIT A TO BE DEMOED AND REPLACED WITH NEW.
  - PHASE DEMOLITION OF EXISTING WSHP CONDENSER WATER PIPE MAINS TO ENSURE CONTINUED OPERATION THE SECOND FLOOR HVAC SYSTEMS.
- EXISTING CENTRAL HVAC PLANT SHALL REMAIN OPERATIONAL DURING PHASE 2. EXISTING CENTRAL HVAC PLANT AND COOLING TOWER TO BE DEMOED AT THE END OF PHASE 3.

ELECTRICAL REMARKS
- INSTALL FEEDERS AND LOW VOLTAGE WIRING FOR LAN (INTERNET AND VOIP) FOR TEMPORAY OFFICE AND KITCHEN TRAILERS.
- EXTEND FIRST FLOOR CONDUITS AND WIRING FOR PANEL FEEDERS AND BRANCH CIRCUITS STARTED IN PHASE 1.
- EXTEND PANEL FEEDERS FOR SECOND FLOOR PHASE 3 THAT WERE STARTED IN PHASE 1.
- FIRST FLOOR DEMOLITION AND ONE FOR ONE REPLACEMENT OF ALL PANELBOARDS, ELECTRICAL WIRING, DEVICES, LIGHT FIXTURES, DISCONNECTS, MOTOR STARTERS AND FIRE ALARM SYSTEM ETC.
- ABANDON FIRST FLOOR UNDERGROUND BRANCH CIRCUIT CONDUITS AND INSTALL NEW OVERHEAD CONDUIT AND WIRING.
- EXTEND NEW FIRE ALARM SYSTEM.
- PHASE DEMOLITION OF EXISTING PANELBOARD FEEDERS AND BRANCH CIRCUITS TO ENSURE CONTINUED OPERATION IN OTHER AREA'S. EXISTING MAIN DISTRIBUTION PANEL AND DISTRIBUTION TO REMAIN OPERATIONAL.
- ALL LOW VOLTAGE WIRING INCLUDING LAN AND SECURITY ELECTRONICS WIRING TO REMAIN INTACT AND IN SERVICE. SECURE ANY LOOSE LOW VOLTAGE WIRING TO STRUCTURE THAT WAS LAYING ON CEILING TILES OR ATTACHED TO DEMOED EQUIPMENT.

PLUMBING REMARKS
- INSTALL NEW DOMESTIC WATER DISTRIBUTION SYSTEM PIPING IN THIS PHASE, INCLUDING ALL ASSOCIATED MAINS, BRANCH PIPING, AND CONNECTIONS TO PHASE 1 PIPING.
- INSTALL ALL NEW DOMESTIC WATER DISTRIBUTION SYSTEM PIPING TO CONNECT TO PHASE 3 2ND FLOOR EXISTING PLUMBING FIXTURES.
- INSTALL NEW SHUT-OFF PHASING VALVES TO PREPARE AND COMPLETE ALL REQUIRED TIE-INS NECESSARY TO SUPPORT TRANSFER OF BUILDING DISTRIBUTION IN PHASES 2 & 3, WITHOUT DISRUPTING OPERATION OF EXISTING DOMESTIC WATER DISTRIBUTION SYSTEM.
- CONDUCT PHASED CUTOVERS FROM PHASE 2 WORK, MAINTAINING DOMESTIC WATER SERVICE THROUGHOUT.
- COMPLETE DEMOLITION OF ALL NEW UNDERGROUND WASTE PIPING FOR REPLACEMENT OF NEW SANITARY LINE CONNECTION TO EXISTING. DEMOLITION OF WASTE PIPING SHALL BE PHASED TO MAINTAIN FLOW OF SANITARY SEWER IN OPERATION.
- PREPARE FINAL TIE-INS FOR PHASE 2 & 3 TO NEW DOMESTIC WATER DISTRUBUTION SYSTEM PIPING.

FIRE PROTECTION REMARKS
- WHILE CEILINGS ARE OPEN, THE CONTRACTOR SHALL INSPECT THE EXISTING FIRE PROTECTION SYSTEM AND REPLACE ANY DEFICIENT MAINS, BRANCHES, DRAINS, SPRINKLER HEADS, AND RELATED COMPONENTS. ALL REPAIRS AND REPLACEMENTS MUST BE COMPLETED BEFORE CEILINGS ARE CLOSED AND COORDINATED WITH NEW ABOVE CEILING TRADES.
- PHASE DEMOLITION, TEMPORARY SHUTDOWN AND DRAINING OF REPLACED SYSTEM PIPING OR COMPONENTS WHILE SYSTEM TO REMAIN IN OPERATION AS PER CODE.
- COMPLETE FINAL DEMOLITION OF EXISTING FIRE SPRINKLER SERVICE MAIN AFTER PHASE 3 NEW FIRE TIE-IN COMPLETION.

PHASING NOTES

Key	Note
A1	DURING PHASE 1 CONSTRUCTION, CLASSROOM 1307 TO BE UTILIZED AS PROCESSING, BODY SCANNING, BREATHLYZER, FINGER PRINTING, AND MUG SHOT UNTIL END OF PHASE CONSTRUCTION.
A2	DURING PHASE 1 CONSTRUCTION, COUNSELOR DIRECTOR ROOM 1308 TO BE USED FOR MEDICAL STAFF UNTIL END OF PHASE CONSTRUCTION.
A3	DURING PHASE 1 CONSTRUCTION, INDOOR RECREATION 1303 TO BE USED FOR PROPERTY STORAGE UNTIL END OF PHASE CONSTRUCTION.
A4	DURING PHASE 1 CONSTRUCTION, MAX. SECURITY DAYROOM 1410 TO BE USED FOR INTAKE & BOOKING UNTIL END OF PHASE CONSTRUCTION.
A5	DURING PHASE 2 CONSTRUCTION, TEMPORARY DUST PROOF WALL BARRIER, MADE OF WOOD STUD AND GYP. CONSTRUCTION, TO BE PLACED FOR DUST SEPERATION UNTIL END OF PHASE CONSTRUCTION.
A6	DURING PHASE 1 CONSTRUCTION, TEMPORARY SECURITY WALL SEPERATION BARRIER, MADE OF 2X4 WOOD STUDS WITH MIN. HEIGHT PLYWOOD SHEATHING TO THREAT SIDE, WITH FULL HEIGHT TO DECK. PADDED CELL 1201 TO BE OPERATIONAL UNTIL END OF PHASE CONSTRUCTION.
E1	ELECTRONICS ROOM #1034 IS CRUCIAL TO THE FUNCTION AND SAFETY OF THE FACILITY AND MAY NOT BE DE-ENERGIZED AT ANY TIME. BACK UP POWER AND COORDINATION WITH THE OWNER IS REQUIRED FOR ANY WORK INVOLVING THIS ROOM OR ANY SYSTEMS SUPPORTED FROM THIS ROOM.
E2	EXTEND EXISTING EXTERIOR SITE LIGHTING CIRCUITS TO NEW PANEL AND PROVIDE NEW EXTERIOR LIGHTING CONTROLS.
E3	DISCONNECT AND REMOVE ORIGINAL SERVICE ENTRANCE AND MAIN DISTRIBUTION PANELBOARD, ENGINE GENERATOR AND BRANCH PANELS FROM ORIGINAL MECHANICAL ROOM AFTER COMPLETION OF SECOND FLOOR PHASE 3.
G1	HALLWAY AND PADDED CELL TO REMAIN OPERATIONAL DURING PHASE 2.
M1	EXISTING MINISPLIT FOR ELECTRICAL ROOM 1034 TO REMAIN DURING PHASE 1. REPLACE MINISPLIT SYSTEM DURING PHASE 2.
M2	NEW COMBUSTION AIR INTAKE DUCT SHALL BE PROVIDED TO ALLOW FOR CONTINUED OPERATION OF EXISTING BOILERS DURING CONSTRUCTION. INTAKE DUCT CAN BE DEMOED AND CAPPED AT THE END OF PHASE 3 AFTER EXISTING BOILERS HAVE BEEN DEMOED.
M3	FOR PHASE 2, ELECTRIC HEATERS IN THIS AREA SHALL REMAIN OPERATIONAL WITH EXISTING ABOVE CEILING HVAC ABANDONED IN PLACE. PROVIDE TEMPORARY SUPPLEMENTAL HEATERS AS REQUIRED TO TEMPER SPACE DURING PHASE 2. DURING PHASE 3, HVAC SHALL BE DEMOED AND REPLACED PER PLANS.
M4	HVAC PIPE MAINS IN THIS AREA TO THE SECOND FLOOR MUST REMAIN DURING PHASE 2 FOR CONTINUED OPERATION OF THE SECOND FLOOR.
M5	HOWN IN EXISTING MECHANICAL ROOM TO BE INSTALLED IN PHASE 2. NEW FAN COIL UNIT TO BE INSTALLED IN PHASE 3. EXISTING CENTRAL HVAC PLANT TO REMAIN UNINTERRUPTED DURING PHASE 2.
M6	COORDINATE PHASING OF EXISTING EQUIPMENT DEMO/REPLACEMENT TO KEEP PADDED CELL HEATED/COOLED DURING PHASE 2. PROVIDE TEMPORARY HVAC FOR ROOM AS REQUIRED.
P1	COMPLETE NEW DOMESTIC WATER DISTRIBUTION PIPING TO NEW TIE-IN POINT IN EXISTING MECH. EQUIPMENT ROOM.
P2	COMPLETE DEMOLITION OF PLUMBING EQUIPMENT, WATER SERVICE DISTRIBUTION FOR FINAL TIE-IN TO NEW SYSTEMS. EXISTING SYSTEMS SHALL NO LONGER BE IN OPERATION AFTER THIS PHASE 3 IS COMPLETE.
P3	COMPLETE SYSTEM TESTING, BALANCING, AND COMMISSIONING OF EQUIPMENT AT END OF PHASE 3.
S1	COMPLETE STRUCTURAL INFILL OF EXISTING SKYLIGHT / SHAFT FLOOR IN PHASE 2. INFILL ROOF IN PHASE 3.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929

Designed By: Designer

Drawn By: Author

Checked By: Checker

Date: 11.21.2025

MICHAEL FRANCIS GRONNIER REGISTERED No. 10700168 STATE OF INDIANA ARCHITECT

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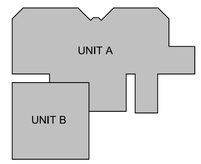

FIRST FLOOR PHASE 2 & 3

PH-102

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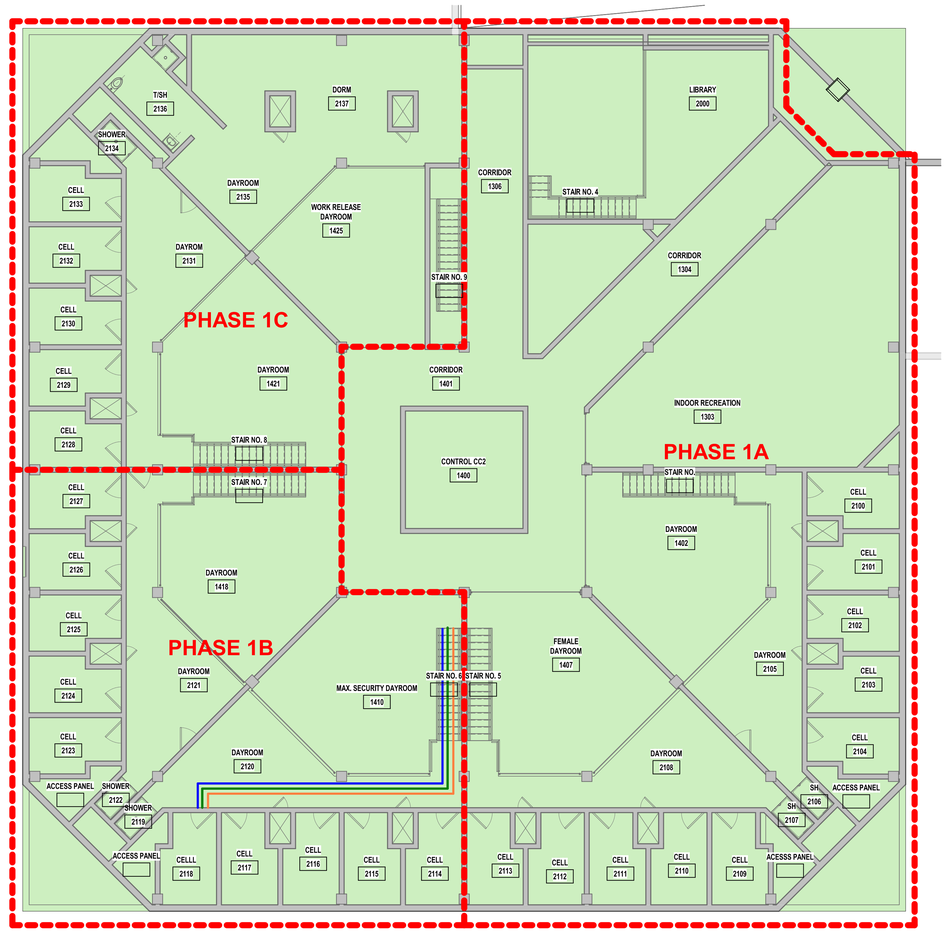


6A **SECOND FLOOR PHASE 1**
1/8" = 1'-0"

LEGEND:

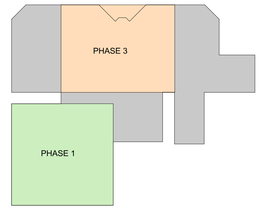
PHASE SEPARATOR

TEMPORARY WALL / BARRIER

PHASE 1 PATH OF EGRESS

PHASE 2 PATH OF EGRESS

PHASE 3 PATH OF EGRESS



PHASE 1: 9-10 MONTHS
- HOUSING POD SHALL BE RENOVATED
  - NOTE THAT POD SCOPE IS BROKEN INTO SUB-PHASES 1A, 1B, AND 1C. ALL WORK SHALL BE DONE SUCH THAT ONLY DAYROOMS LOCATED WITHIN THE CURRENT SUB-PHASE ARE UNNOCUPIED. ALL OTHER DAYROOMS SHALL REMAIN OCCUPIED AND OPERATIONAL.
- DURING THIS PHASE UNIT A SHALL REMAIN OCCUPIED AND OPERATIONAL.

ARCHITECTURAL REMARKS

STRUCTURAL REMARKS
- PROVIDE NEW STRUCTURAL STEEL SUPPORTS AND ROOF REINFORCEMENT FOR NEW ROOFTOP EQUIPMENT DURING PHASES CORRESPONDING TO THE NEW ROOFTOP EQUIPMENT INSTALLATION.

MECHANICAL REMARKS
- CENTRAL COOLING AND HEATING PLANTS SHALL BE COMPLETED AND OPERATIONAL BY THE END OF THIS PHASE.
- MAIN EQUIPMENT FOR THE NEW BUILDING AUTOMATION SYSTEM SHALL BE INSTALLED.
- NEW MINISPLITS SERVING THE NEW EMERGENCY POWER AND NORMAL POWER ROOMS SHALL BE INSTALLED AND OPERATIONAL.
- POD HVAC TO BE DEMOED AND REPLACED ONE SUB-PHASE AT A TIME (1A, 1B, 1C). THE HVAC IN ALL NON-ACTIVE SUB-PHASES AS WELL AS PHASES 2 AND 3 SHALL REMAIN OPERATIONAL DURING PHASE 1.
  - PHASE DEMOLITION OF EXISTING WSHP CONDENSER WATER PIPE MAINS TO ENSURE CONTINUED OPERATION OF OTHER AREA'S HVAC SYSTEMS. EXISTING CENTRAL BOILER / COOLING TOWER PLANT TO REMAIN OPERATIONAL.

ELECTRICAL REMARKS
- SECOND FLOOR DEMOLITION AND ONE FOR ONE REPLACEMENT OF ALL ELECTRICAL WIRING, DEVICES, LIGHT FIXTURES, DISCONNECTS, MOTOR STARTERS AND FIRE ALARM SYSTEM ETC.
- EXTEND NEW FIRE ALARM SYSTEM.
- PHASE DEMOLITION OF EXISTING PANELBOARD FEEDERS AND BRANCH CIRCUITS TO ENSURE CONTINUED OPERATION IN OTHER AREA'S. EXISTING MAIN DISTRIBUTION PANEL AND DISTRIBUTION TO REMAIN OPERATIONAL.
- ALL LOW VOLTAGE WIRING INCLUDING LAN AND SECURITY ELECTRONICS WIRING TO REMAIN INTACT AND IN SERVICE. SECURE ANY LOOSE LOW VOLTAGE WIRING TO STRUCTURE THAT WAS LAYING ON CEILING TILES OR ATTACHED TO DEMOED EQUIPMENT.

PLUMBING REMARKS
- PREPARE ALL REQUIRED TIE-INS NECESSARY TO SUPPORT TRANSFER OF BUILDING DISTRIBUTION IN PHASES 2 & 3, WITHOUT DISRUPTING OF OPERATION OF EXISTING DOMESTIC WATER DISTRIBUTION SYSTEM.
- BEGIN INSTALLATION OF NEW POD DOMESTIC WATER PIPING WITHOUT IMPACTING ACTIVE SYSTEMS AND COMPLETE INSTALLATION OF ALL NEW POD DOMESTIC WATER PIPING.
- CONDUCT PHASED CUTOVERS FROM EXISTING POD LINES TO NEW PIPING, MAINTAINING DOMESTIC WATER SERVICE TO THE 1ST FLOOR, 2ND FLOOR, AND INTERSTITIAL AREAS THROUGHOUT ALL WORK.
- COMPLETE AND ALL NEW POD WASTE STACK INSTALLATION AND CONNECTION TO NEW AND EXISTING FIXTURES. DEMOLISH EXISTING WASTE STACKS AND ASSOCIATED PIPING UPON REPLACEMENT OF NEW.

FIRE PROTECTION REMARKS
- WHILE CEILINGS ARE OPEN, THE CONTRACTOR SHALL INSPECT THE EXISTING FIRE PROTECTION SYSTEM AND REPLACE ANY DEFICIENT MAINS, BRANCHES, DRAINS, SPRINKLER HEADS, AND RELATED COMPONENTS. ALL REPAIRS AND REPLACEMENTS MUST BE COMPLETED BEFORE CEILINGS ARE CLOSED AND COORDINATED WITH NEW ABOVE CEILING TRADES.
- PHASE DEMOLITION, TEMPORARY SHUTDOWN AND DRAINING OF REPLACED SYSTEM PIPING OR COMPONENTS WHILE SYSTEM TO REMAIN IN OPERATION AS PER CODE.

PHASING NOTES

Key	Note
A1	DURING PHASE 1 CONSTRUCTION, CLASSROOM 1307 TO BE UTILIZED AS PROCESSING, BODY SCANNING, BREATHLYZER, FINGER PRINTING, AND MUG SHOT UNTIL END OF PHASE CONSTRUCTION.
A2	DURING PHASE 1 CONSTRUCTION, COUNSELOR DIRECTOR ROOM 1308 TO BE USED FOR MEDICAL STAFF UNTIL END OF PHASE CONSTRUCTION.
A3	DURING PHASE 1 CONSTRUCTION, INDOOR RECREATION 1303 TO BE USED FOR PROPERTY STORAGE UNTIL END OF PHASE CONSTRUCTION.
A4	DURING PHASE 1 CONSTRUCTION, MAX. SECURITY DAYROOM 1410 TO BE USED FOR INTAKE & BOOKING UNTIL END OF PHASE CONSTRUCTION.
A5	DURING PHASE 2 CONSTRUCTION, TEMPORARY DUST PROOF WALL BARRIER. MADE OF WOOD STUD AND GYP. CONSTRUCTION. TO BE PLACED FOR DUST SEPERATION UNTIL THE END OF PHASE CONSTRUCTION.
A6	DURING PHASE 1 CONSTRUCTION, TEMPORARY SECURITY WALL SEPERATION BARRIER. MADE OF 2X4 WOOD STUDS WITH MIN. HEIGHT PLYWOOD SHEATHING TO THREAT SIDE, WITH FULL HEIGHT TO DECK. PADDED CELL 1201 TO BE OPERATIONAL UNTIL END OF PHASE CONSTRUCTION.
E1	ELECTRONICS ROOM #1034 IS CRUCIAL TO THE FUNCTION AND SAFETY OF THE FACILITY AND MAY NOT BE DE-ENERGIZED AT ANY TIME. BACK UP POWER AND COORDINATION WITH THE OWNER IS REQUIRED FOR ANY WORK INVOLVING THIS ROOM OR ANY SYSTEMS SUPPORTED FROM THIS ROOM.
E2	EXTEND EXISTING EXTERIOR LIGHTING CIRCUITS TO NEW PANEL AND PROVIDE NEW EXTERIOR LIGHTING CONTROLS.
E3	DISCONNECT AND REMOVE ORIGINAL SERVICE ENTRANCE AND MAIN DISTRIBUTION PANELBOARD, ENGINE GENERATOR AND BRANCH PANELS FROM ORIGINAL MECHANICAL ROOM AFTER COMPLETION OF SECOND FLOOR PHASE 3.
G1	HALLWAY AND PADDED CELL TO REMAIN OPERATIONAL DURING PHASE 2.
M1	EXISTING MINISPLIT FOR ELECTRICAL ROOM 1034 TO REMAIN DURING PHASE 1. REPLACE MINISPLIT SYSTEM DURING PHASE 2.
M2	NEW COMBUSTION AIR INTAKE DUCT SHALL BE PROVIDED TO ALLOW FOR CONTINUED OPERATION OF EXISTING BOILERS DURING CONSTRUCTION. INTAKE DUCT CAN BE DEMOED AND CAPPED AT THE END OF PHASE 3 AFTER EXISTING BOILERS HAVE BEEN DEMOED.
M3	FOR PHASE 2, ELECTRIC HEATERS IN THIS AREA SHALL REMAIN OPERATIONAL WITH EXISTING ABOVE CEILING HVAC ABANDONED IN PLACE. PROVIDE TEMPORARY SUPPLEMENTAL HEATERS AS REQUIRED TO TEMPER SPACE DURING PHASE 2. DURING PHASE 3, HVAC SHALL BE DEMOED AND REPLACED PER PLANS.
M4	HVAC PIPE MAINS IN THIS AREA TO THE SECOND FLOOR MUST REMAIN DURING PHASE 2 FOR CONTINUED OPERATION OF THE SECOND FLOOR.
M5	HOWN IN EXISTING MECHANICAL ROOM TO BE INSTALLED IN PHASE 2. NEW FAN COIL UNIT TO BE INSTALLED IN PHASE 3. EXISTING CENTRAL HVAC PLANT TO REMAIN UNINTERRUPTED DURING PHASE 2.
M6	COORDINATE PHASING OF EXISTING EQUIPMENT DEMO/REPLACEMENT TO KEEP PADDED CELL HEATED/COOLED DURING PHASE 2. PROVIDE TEMPORARY HVAC FOR ROOM AS REQUIRED.
P1	COMPLETE NEW DOMESTIC WATER DISTRIBUTION PIPING TO NEW TIE-IN POINT IN EXISTING MECH. EQUIPMENT ROOM.
P2	COMPLETE DEMOLITION OF PLUMBING EQUIPMENT, WATER SERVICE DISTRIBUTION FOR FINAL TIE-IN TO NEW SYSTEMS. EXISTING SYSTEMS SHALL NO LONGER BE IN OPERATION AFTER THIS PHASE 3 IS COMPLETE.
P3	COMPLETE SYSTEM TESTING, BALANCING, AND COMMISSIONING OF EQUIPMENT AT END OF PHASE 3.
S1	COMPLETE STRUCTURAL INFILL OF EXISTING SKYLIGHT INSET FLOOR IN PHASE 2. INFILL ROOF IN PHASE 3.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929

Designed By: Designer

Drawn By: Author

Checked By: Checker

Date: 11.21.2025

MICHAEL FRANCIS GARDNER REGISTERED No. 10700168 STATE OF INDIANA ARCHITECT

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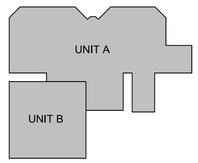

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SECOND FLOOR PHASE 1

PH-201

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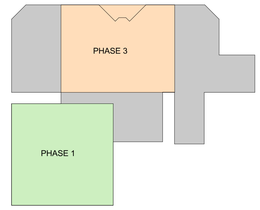
LEGEND:

PHASE SEPARATOR

TEMPORARY WALL / BARRIER

PHASE 1 PATH OF EGRESS

PHASE 2 PATH OF EGRESS



PHASE 3: 4 MONTHS (SECOND FLOOR SCOPE DESCRIBED HERE)
- SECOND FLOOR UNIT A SHALL BE RENOVATED.
- UNIT B AND THE FIRST FLOOR OF UNIT A SHALL BE OCCUPIED AND OPERATIONAL DURING THIS PHASE.

ARCHITECTURAL REMARKS

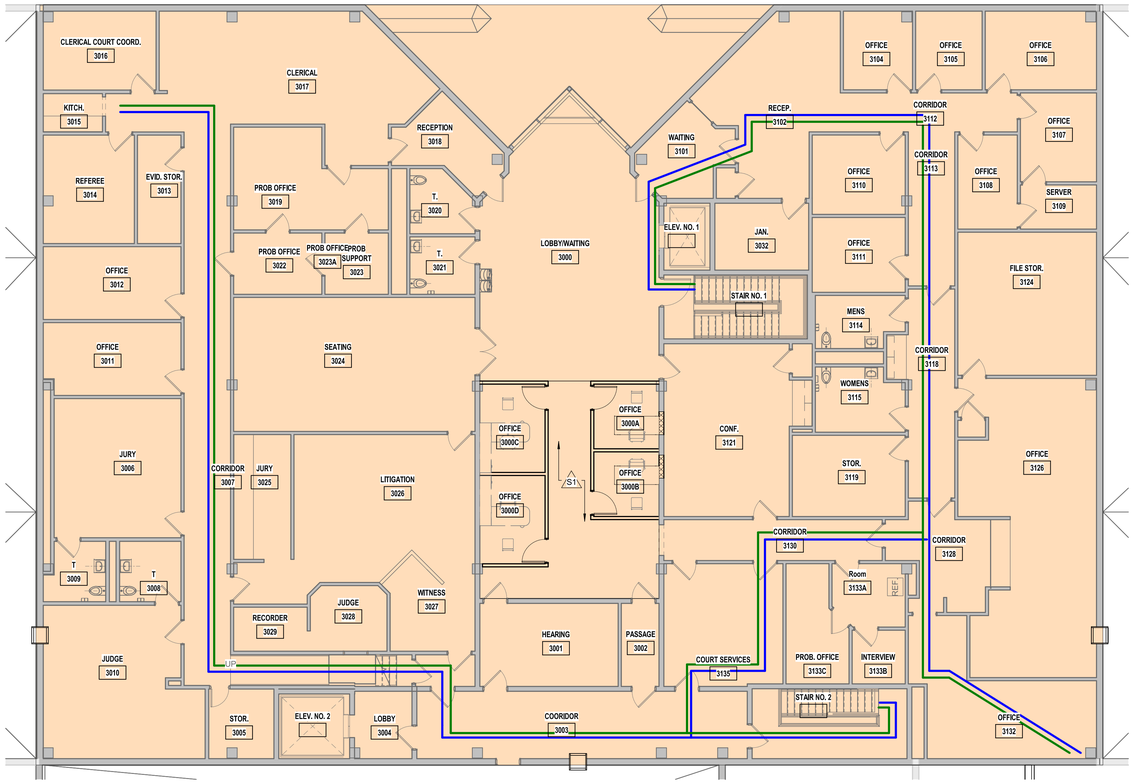
STRUCTURAL REMARKS
- PROVIDE NEW STRUCTURAL STEEL SUPPORTS AND ROOF REINFORCEMENT FOR NEW ROOFTOP EQUIPMENT DURING PHASES CORRESPONDING TO THE NEW ROOFTOP EQUIPMENT INSTALLATION.

MECHANICAL REMARKS
- HVAC SYSTEMS SERVING THE SECOND FLOOR OF UNIT A TO BE DEMOED AND REPLACED WITH NEW.
- EXISTING CENTRAL HVAC PLANT AND COOLING TOWER SHALL BE DEMOED AT THE END OF PHASE 3.

ELECTRICAL REMARKS
- EXTEND CONDUITS AND WIRING FOR PANEL FEEDERS STARTED IN PHASE 1 AND 2.
- SECOND FLOOR DEMOLITION AND ONE FOR ONE REPLACEMENT OF ALL PANELBOARDS, ELECTRICAL WIRING, DEVICES, LIGHT FIXTURES, DISCONNECTS, MOTOR STARTERS AND FIRE ALARM SYSTEM ETC.
- EXTEND NEW FIRE ALARM SYSTEM.
- ALL LOW VOLTAGE WIRING INCLUDING LAN AND SECURITY ELECTRONICS WIRING TO REMAIN INTACT AND IN SERVICE. SECURE ANY LOOSE LOW VOLTAGE WIRING TO STRUCTURE THAT WAS LAYING ON CEILING TILES OR ATTACHED TO DEMOED EQUIPMENT.

PLUMBING REMARKS
- INSTALL NEW DOMESTIC WATER DISTRIBUTION SYSTEM PIPING IN THIS PHASE, INCLUDING ALL ASSOCIATED BRANCH PIPING, AND CONNECTIONS TO PHASE 2 PIPING. FINAL CONNECTION TO PHASE 3 2ND FLOOR FIXTURES SHALL BE COMPLETE.
- COMPLETE DEMOLITION PHASING FOR DOMESTIC WATER DISTRIBUTION FOR FIXTURES TO REMAIN IN OPERATION.
- INSTALL ALL NEW DOMESTIC WATER DISTRIBUTION SYSTEM PIPING TO CONNECT TO PHASE 3 2ND FLOOR EXISTING RESTROOMS, BREAK ROOM AND PLUMBING FIXTURES.
- INSTALL NEW SHUT-OFF PHASING VALVES TO PREPARE AND COMPLETE ALL REQUIRED TIE-INS NECESSARY TO SUPPORT TRANSFER OF BUILDING DISTRIBUTION IN PHASE 3, WITHOUT DISRUPTING OPERATION OF EXISTING DOMESTIC WATER DISTRIBUTION SYSTEM.
- CONDUCT PHASED CUTOVERS FROM PHASE 3 WORK, MAINTAINING DOMESTIC WATER SERVICE THROUGHOUT.

FIRE PROTECTION REMARKS
- WHILE CEILINGS ARE OPEN, THE CONTRACTOR SHALL INSPECT THE EXISTING FIRE PROTECTION SYSTEM AND REPLACE ANY DEFICIENT MAINS, BRANCHES, DRAINS, SPRINKLER HEADS, AND RELATED COMPONENTS. ALL REPAIRS AND REPLACEMENTS MUST BE COMPLETED BEFORE CEILINGS ARE CLOSED AND COORDINATED WITH NEW ABOVE CEILING TRADES.
- PHASE DEMOLITION, TEMPORARY SHUTDOWN AND DRAINING OF REPLACED SYSTEM PIPING OR COMPONENTS WHILE SYSTEM TO REMAIN IN OPERATION AS PER CODE.



PHASING NOTES

Key	Note
A1	DURING PHASE 1 CONSTRUCTION, CLASSROOM 1307 TO BE UTILIZED AS PROCESSING, BODY SCANNING, BREATHLYZER, FINGER PRINTING, AND MUG SHOT UNTIL END OF PHASE CONSTRUCTION.
A2	DURING PHASE 1 CONSTRUCTION, COUNSELOR DIRECTOR ROOM 1308 TO BE USED FOR MEDICAL STAFF UNTIL END OF PHASE CONSTRUCTION.
A3	DURING PHASE 1 CONSTRUCTION, INDOOR RECREATION 1303 TO BE USED FOR PROPERTY STORAGE UNTIL END OF PHASE CONSTRUCTION.
A4	DURING PHASE 1 CONSTRUCTION, MAX. SECURITY DAYROOM 1410 TO BE USED FOR INTAKE & BOOKING UNTIL END OF PHASE CONSTRUCTION.
A5	DURING PHASE 2 CONSTRUCTION, TEMPORARY DUST PROOF WALL BARRIER, MADE OF WOOD STUD AND GYP. CONSTRUCTION, TO BE PLACED FOR DUST SEPERATION UNTIL THE END OF PHASE CONSTRUCTION.
A6	DURING PHASE 1 CONSTRUCTION, TEMPORARY SECURITY WALL SEPERATION BARRIER, MADE OF 2X4 WOOD STUDS WITH MIN. HEIGHT PLYWOOD SHEATHING TO THREAT SIDE, WITH FULL HEIGHT TO DECK. PADDED CELL 1201 TO BE OPERATIONAL UNTIL END OF PHASE CONSTRUCTION.
E1	ELECTRONICS ROOM #1034 IS CRUCIAL TO THE FUNCTION AND SAFETY OF THE FACILITY AND MAY NOT BE DE-ENERGIZED AT ANY TIME. BACK UP POWER AND COORDINATION WITH THE OWNER IS REQUIRED FOR ANY WORK INVOLVING THIS ROOM OR ANY SYSTEMS SUPPORTED FROM THIS ROOM.
E2	EXTEND EXISTING EXTERIOR SITE LIGHTING CIRCUITS TO NEW PANEL AND PROVIDE NEW EXTERIOR LIGHTING CONTROLS.
E3	DISCONNECT AND REMOVE ORIGINAL SERVICE ENTRANCE AND MAIN DISTRIBUTION PANELBOARD, ENGINE GENERATOR AND BRANCH PANELS FROM ORIGINAL MECHANICAL ROOM AFTER COMPLETION OF SECOND FLOOR PHASE 3.
G1	HALLWAY AND PADDED CELL TO REMAIN OPERATIONAL DURING PHASE 2.
M1	EXISTING MINISPLIT FOR ELECTRICAL ROOM 1034 TO REMAIN DURING PHASE 1. REPLACE MINISPLIT SYSTEM DURING PHASE 2.
M2	NEW COMBUSTION AIR INTAKE DUCT SHALL BE PROVIDED TO ALLOW FOR CONTINUED OPERATION OF EXISTING BOILERS DURING CONSTRUCTION. INTAKE DUCT CAN BE DEMOED AND CAPPED AT THE END OF PHASE 3 AFTER EXISTING BOILERS HAVE BEEN DEMOED.
M3	FOR PHASE 2, ELECTRIC HEATERS IN THIS AREA SHALL REMAIN OPERATIONAL WITH EXISTING ABOVE CEILING HVAC ABANDONED IN PLACE. PROVIDE TEMPORARY SUPPLEMENTAL HEATERS AS REQUIRED TO TEMPER SPACE DURING PHASE 2. DURING PHASE 3, HVAC SHALL BE DEMOED AND REPLACED PER PLANS.
M4	HVAC PIPE MAINS IN THIS AREA TO THE SECOND FLOOR MUST REMAIN DURING PHASE 2 FOR CONTINUED OPERATION OF THE SECOND FLOOR.
M5	HOWN IN EXISTING MECHANICAL ROOM TO BE INSTALLED IN PHASE 2. NEW FAN COIL UNIT TO BE INSTALLED IN PHASE 3. EXISTING CENTRAL HVAC PLANT TO REMAIN UNINTERRUPTED DURING PHASE 2.
M6	COORDINATE PHASING OF EXISTING EQUIPMENT DEMO/REPLACEMENT TO KEEP PADDED CELL HEATED/COOLED DURING PHASE 2. PROVIDE TEMPORARY HVAC FOR ROOM AS NEEDED.
P1	COMPLETE NEW DOMESTIC WATER DISTRIBUTION PIPING TO NEW TIE-IN POINT IN EXISTING MECH. EQUIPMENT ROOM.
P2	COMPLETE DEMOLITION OF PLUMBING EQUIPMENT, WATER SERVICE DISTRIBUTION FOR FINAL TIE-IN TO NEW SYSTEMS. EXISTING SYSTEMS SHALL NO LONGER BE IN OPERATION AFTER THIS PHASE 3 IS COMPLETE.
P3	COMPLETE SYSTEM TESTING, BALANCING, AND COMMISSIONING OF EQUIPMENT AT END OF PHASE 3.
S1	COMPLETE STRUCTURAL INFILL OF EXISTING SKYLIGHT OPENING FLOOR IN PHASE 2. INFILL ROOF IN PHASE 3.

6A **SECOND FLOOR PHASE 3**
1/8" = 1'-0"

12/5/2025 1:29:37 AM

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929

Designed By: Designer

Drawn By: Author

Checked By: Checker

Date: 11.21.2025

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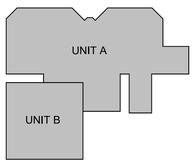

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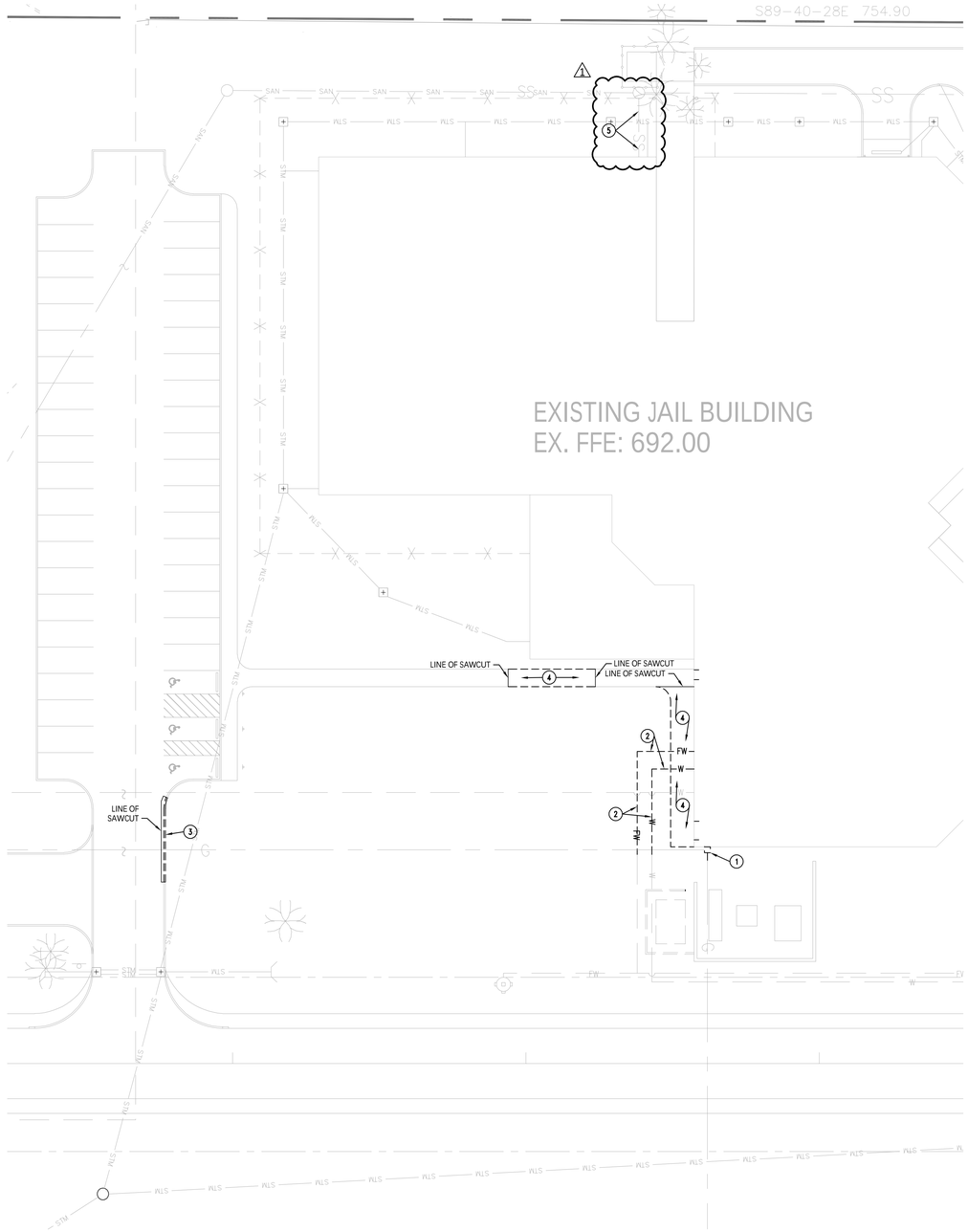
SECOND FLOOR PHASE 3

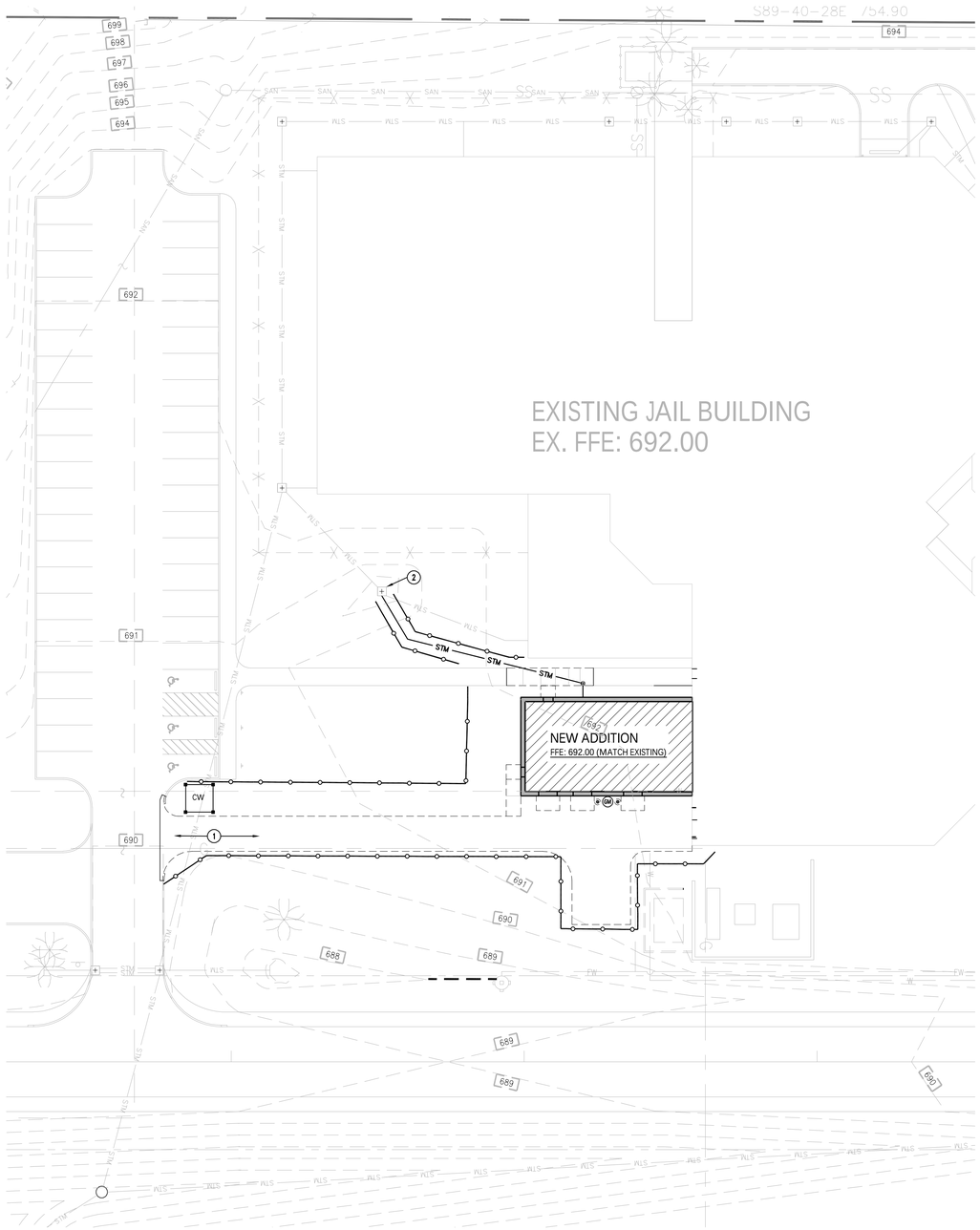
PH-203



2 SITE DEMOLITION PLAN
SCALE: 1"=20'

PLAN NOTES

1. EXISTING GAS METER AND SERVICE LINE TO BE REMOVED BY UTILITY COMPANY. COORDINATE WORK WITH UTILITY COMPANY. THE EXISTING GAS SERVICES TO TEMPORARITY REMAIN JIN SERVICE WHILE INSTALLATION OF NEW SERVICES ARE BEING COMPLETED. UNDERGROUND SERVICE MAIN AND METER SHALL BE DISCONNECTED AND REMOVED BY UTILITY COMPANY AFTER NEW INSTALLATION IS COMPLETE.
2. REMOVE EXISTING WATER LINE COMPLETE. EXISTING WATER AND FIRE SERVICES TO TEMPORARILY REMAIN IN SERVICE WHILE INSTALLATION OF NEW SERVICES ARE BEING COMPLETED. UNDERGROUND LINES SHALL BE DISCONNECTED, CAPPED, AND ABANDONED OR REMOVED AFTER NEW INSTALLATION IS COMPLETE.
3. REMOVE EXISTING CONCRETE CURB. MAKE STRAIGHT SAWCUT AT NEXT ADJACENT JOINT.
4. REMOVE EXISTING CONCRETE SIDEWALK COMPLETE. MAKE STRAIGHT SAWCUT AT TERMINATION.
5. REMOVE AND REPLACE EXISTING BROKEN SANITARY PIPE. REFER TO C200 FOR MORE INFORMATION.



1 STORMWATER POLLUTION PREVENTION PLAN
SCALE: 1"=20'

GENERAL NOTES

A. TEMPORARILY SEED ALL DISTURBED AREA.
B. ADDITIONAL MEASURES MAY BE REQUIRED BY THE INSPECTOR.

PLAN NOTES

1. CONSTRUCTION ENTRANCE.
2. BASKET INLET PROTECTION.

PLAN SYMBOLS

- CW — CONCRETE WASHOUT AREA
- SILT FENCE
- PROPOSED STORM SEWERS
- CONSTRUCTION/GRADING LIMITS
- PROPOSED CONTOURS
- PROPOSED IMPROVEMENTS

0 20 40 FEET
SCALE:1"=20'

RQAW

DCCM

JPS CONSULTING ENGINEERS, LLC

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner Ln NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM #1	05 DEC 2025

Project #: 800-71929
Designed By: NBV
Drawn By: NBV
Checked By: NBV
Date: 11.21.2025

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NICHOLAS BIJAN VIZVATOA REGISTERED No. PE11500269 STATE OF INDIANA PROFESSIONAL ENGINEER

Nicholas Bijan Vizvatoa

STORMWATER POLLUTION PREVENTION & SITE DEMOLITION PLAN

C100

JPS Consulting Engineers - K:\Civil Projects\2025\253\JPSC57 Harrison County Jail - Utilities\Drawings\C100.dwg November 18, 2025 - 3:37 PM Nvegatos

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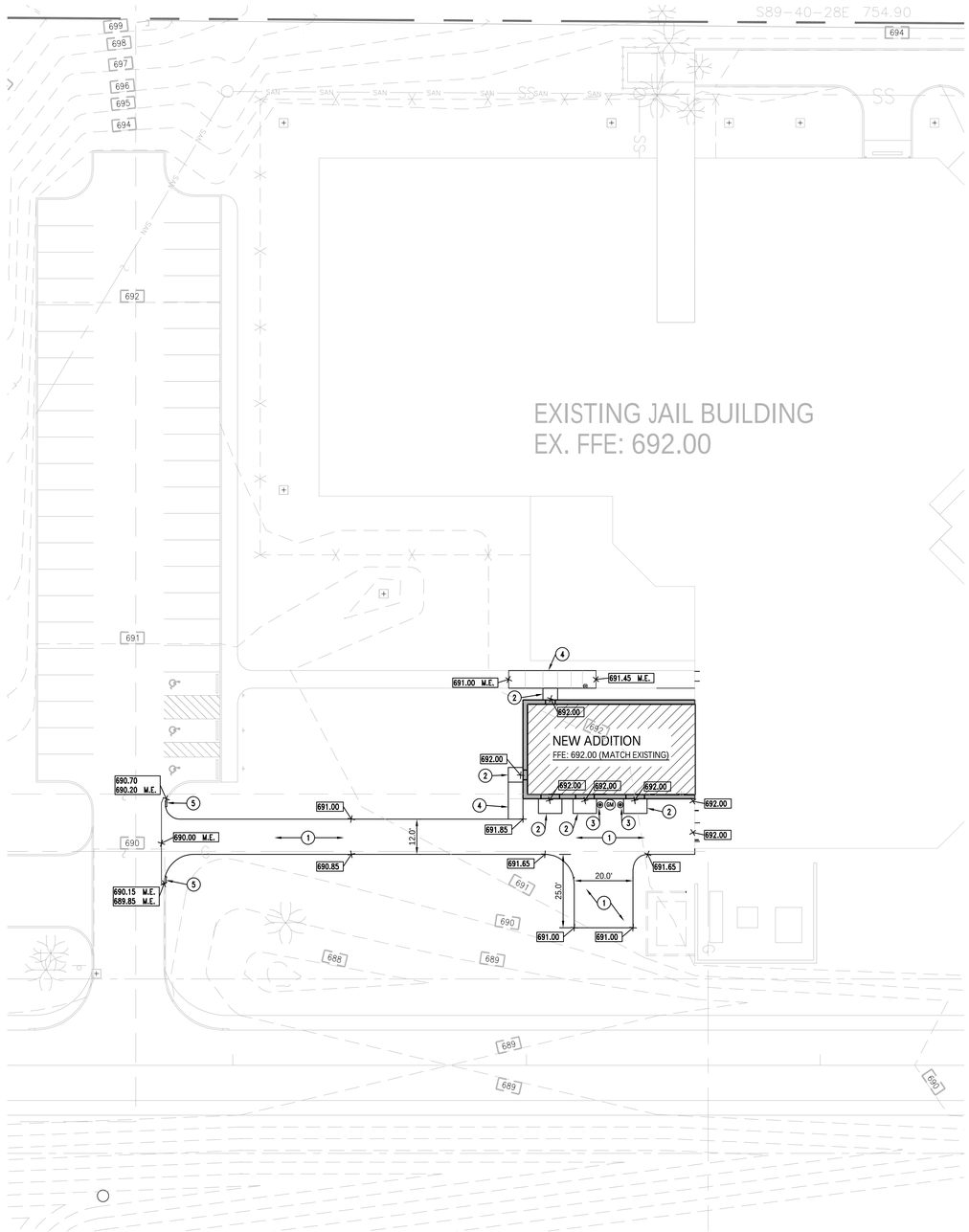
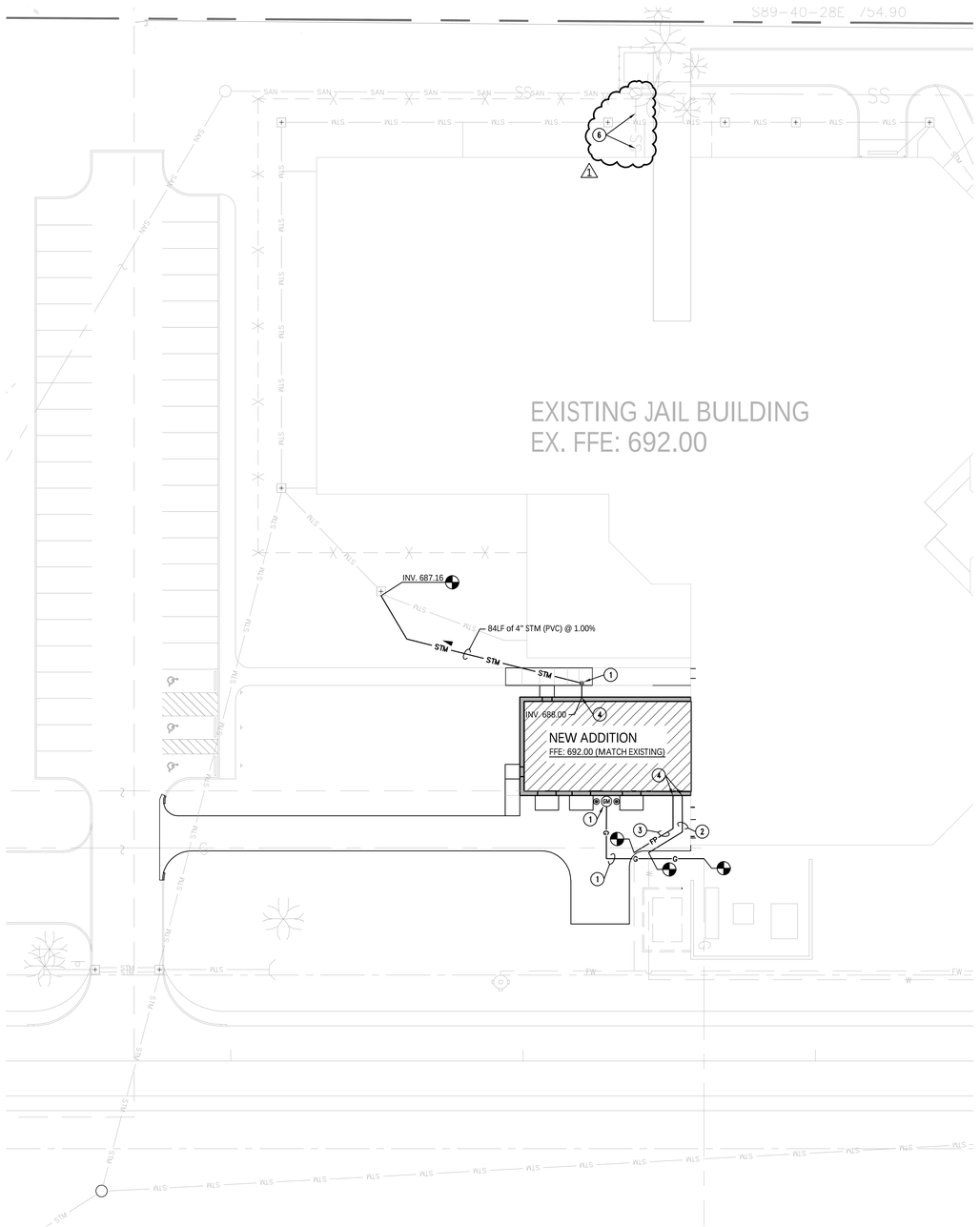


PLAN NOTES

1. ASPHALT PAVEMENT.
2. FLUSH CONCRETE STOOP. REFER TO STRUCTURAL DRAWINGS.
3. 6" STEEL PIPE BOLLARD. PAINTED YELLOW.
4. CONCRETE WALK.
5. 2' CURB TAPER.

2 SITE DEVELOPMENT PLAN
SCALE: 1"=20'



PLAN NOTES

1. GAS METER AND SERVICE FROM EXISTING SERVICE LINE BY UTILITY COMPANY. COORDINATE ROUTING AND CONNECTION WITH UTILITY COMPANY.
2. 4" DOMESTIC WATER SERVICE.
3. 4" FIRE PROTECTION SERVICE.
4. REFER TO PLUMBING PLANS FOR LOCATION, SIZE, DEPTH, AND CONTINUATION OF PIPING INTO BUILDING.
5. EXTERIOR CLEANOUT. 1
6. REMOVE AND REPLACE EXISTING BROKEN SANITARY SEWER PIPE. MATCH EXISTING SIZE AND SLOPE. RECONNECT TO BUILDING SEWER AND EXISTING MANHOLE.

1 SITE UTILITY PLAN
SCALE: 1"=20'

0 20 40 FEET
SCALE:1"=20'

RQAW

DCCM

JPS CONSULTING ENGINEERS, LLC

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner Ln NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM #1	05 DEC 2025

Project #: 800-71929
Designed By: NBV
Drawn By: NBV
Checked By: NBV
Date: 11.21.2025

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ILLINOIS NICHOLAS BIJAN VOYATZIS REGISTERED No. PE11500269 STATE OF INDIANA PROFESSIONAL ENGINEER

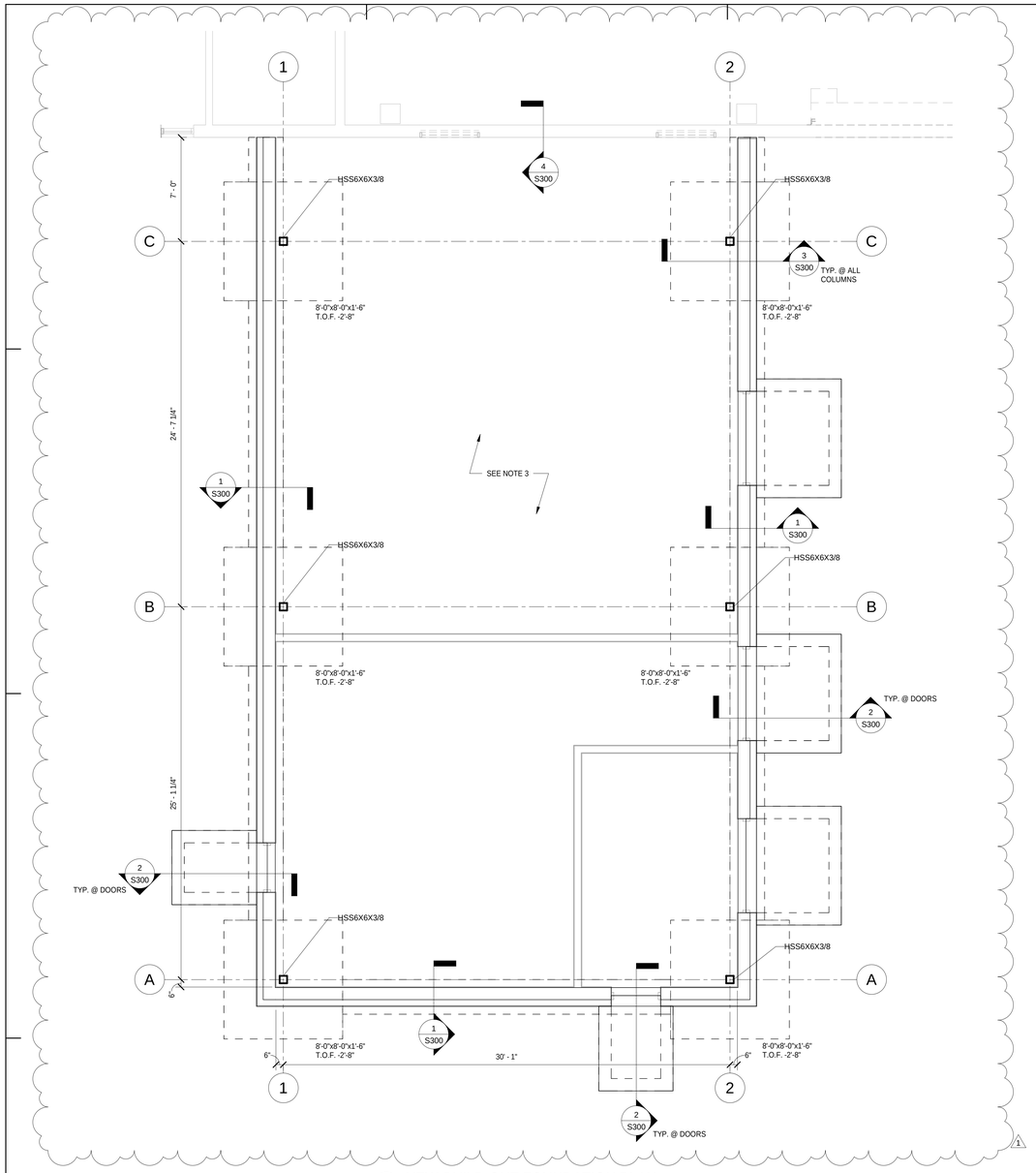
Nicholas Bijan Voyatzis

SITE DEVELOPMENT PLAN

C200

JPS Consulting Engineers - K:\Civil Projects\2025\25JPS\CS7 Harrison County Jail - Utilities\Drawings\C200.dwg November 18, 2025 - 3:43 PM Nvoyatzis

4/24/2025 2:15:58 PM

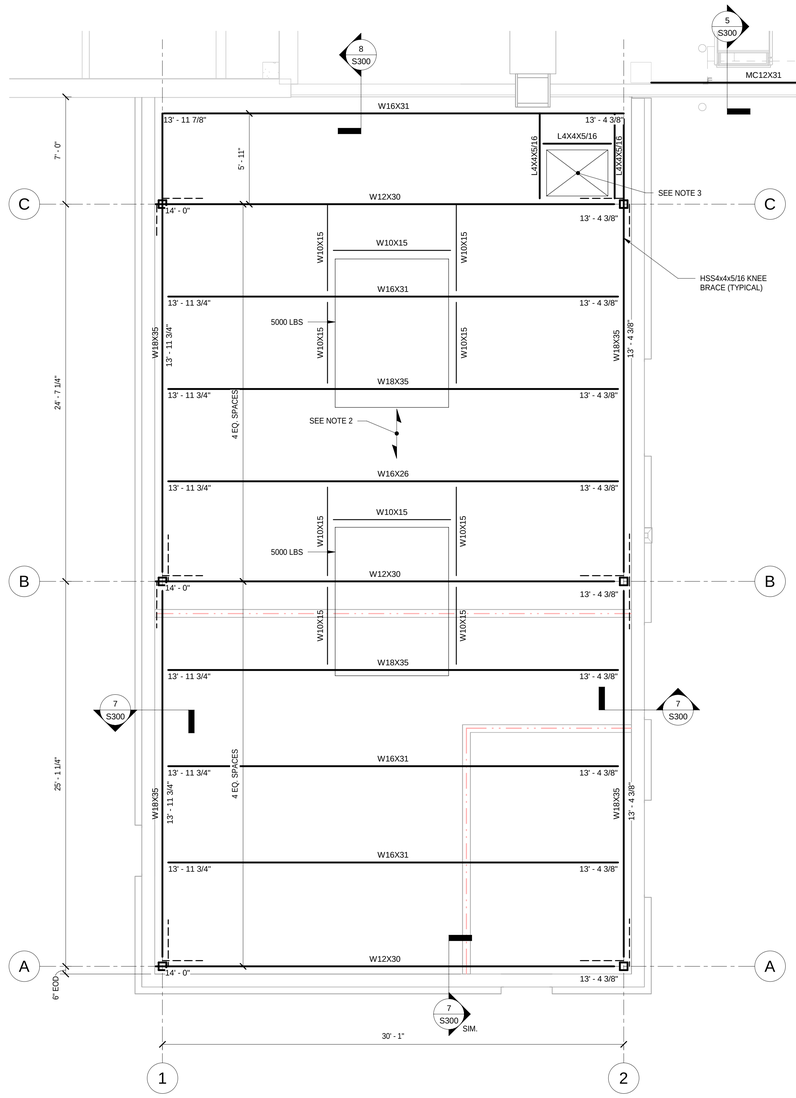


1 S110 NEW BUILD-OUT FOUNDATION PLAN

1/4" = 1'-0"

PLAN NOTES:

1. REFER TO SHEETS S001 - S002 FOR GENERAL NOTES AND TYPICAL DETAILS.
2. T.O.F. X'-X" INDICATES TOP OF FOUNDATION ELEVATION.
3. THE SLAB ON GRADE SHALL BE 4" SLAB WITH 6x6-W2.1xW2.1 W.W.F. ON VAPOR BARRIER OVER 6" COMPACTED DRAINAGE FILL OVER PROOF ROLLED SUBGRADE. TOP OF SLAB SHALL BE AT ELEVATION (0'-0") UNLESS NOTED OTHERWISE.



2 S110 NEW BUILD-OUT FRAMING PLAN

1/4" = 1'-0"

PLAN NOTES:

1. REFER TO SHEETS S001 - S002 FOR GENERAL NOTES AND TYPICAL DETAILS.
2. DECK SHALL BE 1 1/2"x20 GAGE WIDE RIB GALVANIZED METAL DECK.
3. THE G.C. SHALL COORDINATE ALL OPENING SIZE AND LOCATIONS WITH VARIOUS TRADES.

RQAW

DCCM

JPS CONSULTING ENGINEERS
11 MUNICIPAL DRIVE
SUITE 300, FISHERS, IN 46038
317.617.4270 jpsconsultingengineers.com

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HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW,
Corydon, IN 47112

#	Revision	Date
	ADDENDUM #001	12.05.2025

Project #: 800-71929
Designed By: KA
Drawn By: JCB
Checked By: BAP
Date: 11.21.2025

BANGALORE A. PRAKASH
REGISTERED
No.
PE10506070
STATE OF
INDIANA
PROFESSIONAL ENGINEER

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NEW BUILD-OUT FOUNDATION & ROOF FRMING PLAN

S110

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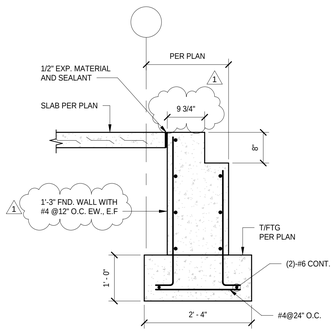
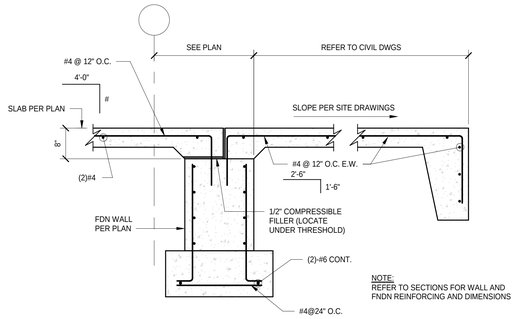
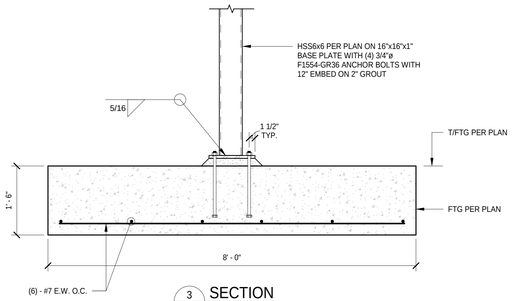


1 SECTION
S300 3/4" = 1'-0"



2 SECTION
S300 3/4" = 1'-0"



3 SECTION
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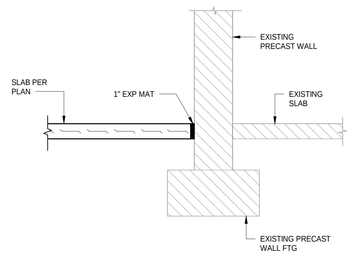
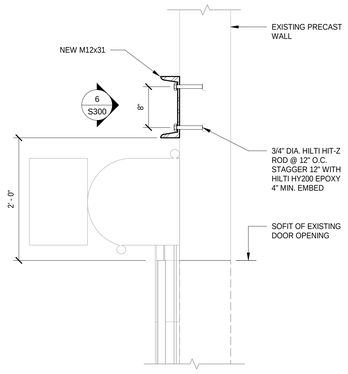
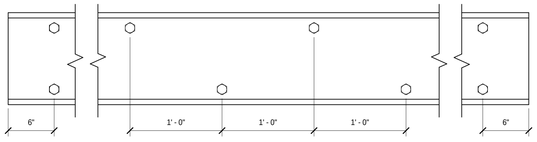


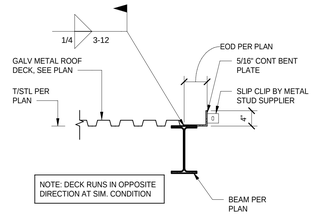
4 SECTION
S300 3/4" = 1'-0"



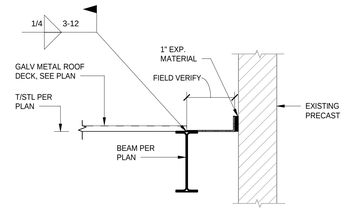
5 SECTION
S300 1" = 1'-0"



6 ELEVATION
S300 1 1/2" = 1'-0"



7 SECTION
S300 3/4" = 1'-0"



8 SECTION
S300 3/4" = 1'-0"

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BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW,
Corydon, IN 47112

#	Revision	Date
	ADDENDUM #001	12.05.2025

Project #: 800-71929
Designed By: KA
Drawn By: JCB
Checked By: BAP
Date: 11.21.2025

BANGALORE A. PRAKASH
REGISTERED
No.
PE10606070
STATE OF
INDIANA
PROFESSIONAL ENGINEER

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SECTION

S300

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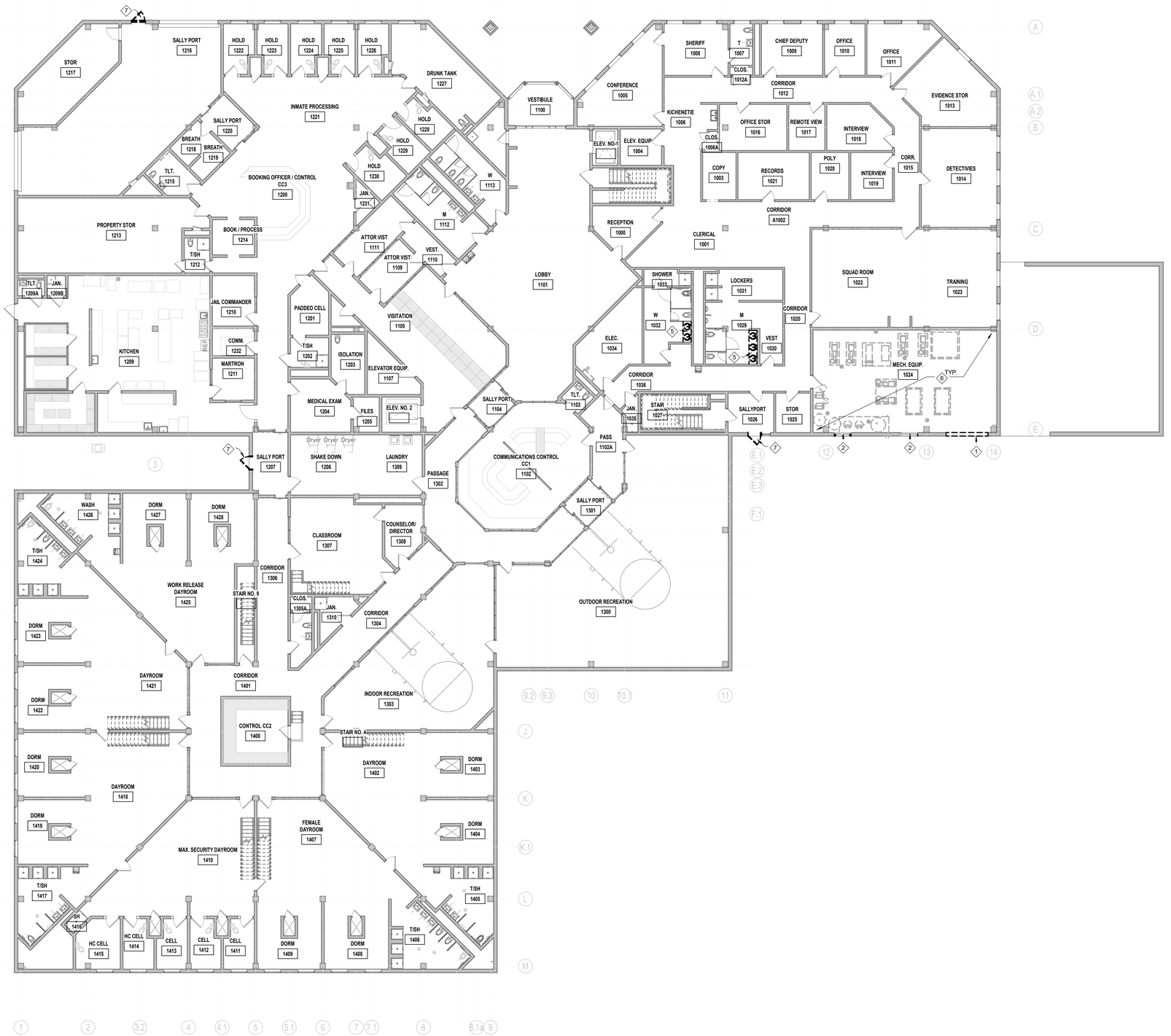

6A OVERALL FIRST FLOOR DEMOLITION PLAN
3/32" = 1'-0"

GENERAL DEMOLITION NOTES

1. CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND ARRANGEMENTS.
2. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL EXISTING SURFACES, MATERIALS, AND COMPONENTS TO REMAIN OR BE RELOCATED. DAMAGE TO THESE RESULTING FROM PERFORMANCE OF WORK SHALL BE REPAIRED BY CONTRACTOR TO SATISFACTION OF OWNER AND ARCHITECT AT NO ADDITIONAL EXPENSE TO OWNER.
3. CONTRACTOR SHALL PROVIDE TEMPORARY DUST PROTECTION AS REQUIRED TO PREVENT CONSTRUCTION DEBRIS AND DUST FROM MIGRATING OUT OF PROJECT AREA. OWNER/ARCHITECT SHALL CONFIRM ALL DUST PREVENTION MEASURES/LOCATIONS AND SHALL DETERMINE CHANGES TO THESE MEASURES.
4. ALL EXISTING EQUIPMENT AND FIXTURES SHALL REMAIN PROPERTY OF OWNER. ALL REUSABLE ITEMS SALVAGED DURING DEMOLITION OPERATIONS SHALL BE RETAINED FOR OWNER'S INSPECTION. ONLY ITEMS SO INSPECTED AND REJECTED BY OWNER SHALL BE DISPOSED. ALL OTHER SUCH ITEMS SHALL BE TURNED OVER TO OWNER FOR DISPOSITION.
5. ALL EXISTING SURFACES LOCATED ADJACENT TO, OR EXPOSED BY DEMOLITION WORK AND SCHEDULED TO RECEIVE NEW CONSTRUCTION SHALL BE PATCHED AND REPAIRED AS REQUIRED TO MATCH ADJACENT OR RECEIVE NEW WORK.
6. ALL EXISTING SURFACES LOCATED ADJACENT TO, OR EXPOSED BY DEMOLITION WORK AND SCHEDULED TO REMAIN EXPOSED AFTER COMPLETION OF NEW CONST. SHALL BE REPAIRED AND PATCHED AS REQUIRED TO MATCH ADJACENT OR TO RECEIVE NEW FINISHES.
7. OWNER WILL BE RESPONSIBLE FOR REMOVAL/REARRANGEMENT OF ALL EXISTING LOOSE FURNISHINGS DURING CONSTRUCTION, UNLESS NOTED OTHERWISE.
8. REFER TO MECH./ELEC. DRAWINGS FOR ADDITIONAL PATCHING AND PREPARATION WORK RELATED TO M.E.P. DEMOLITION ITEMS.
9. EXISTING SLEEVES, HOLES, AND OTHER PENETRATIONS OR NEW DAMAGE OF EXISTING BUILDING STRUCTURE ABOVE GRADE EXPOSED BY DEMOLITION AND REMOVAL OF PIPING, APPURTENANCES, EQUIPMENT SHALL BE PATCHED AND REPAIRED AS PART OF THE WORK. MAINTAIN FIRE RATINGS OF ALL AND ADJACENT CONSTRUCTION AFFECTED.
10. CAP ALL PIPING TO REMAIN OR ABANDONED IN ACCORDANCE WITH REQUIREMENTS OF AUTHORITY HAVING JURISDICTION AND IN ACCORDANCE WITH ALL LOCAL AND STATE PLUMBING AND HEALTH CODES. UTILIZE ONLY PRE-MANUFACTURED AND APPROVED FITTINGS TO CAP EXISTING PIPING.
11. EACH CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION WORK REQUIRED OR NOTED FOR INSTALLATION OF NEW WORK. DEMOLITION MAY INCLUDE ASSOCIATED DISTRIBUTION SYSTEMS, APPURTENANCES, EQUIPMENT SUPPORTING CONTROLS, AND MISCELLANEOUS SUPPORTS, UNLESS NOTED OTHERWISE.
12. COORDINATE ALL DEMOLITION WITH PROJECT SEQUENCING AS DIRECTED BY GENERAL CONTRACTOR OR CONSTRUCTION MANAGER.
13. FOR CEILING DEMOLITION, ALL CEILING ASSEMBLIES AND GRIDS TO BE REMOVED IN THEIR ENTIRETY, UNLESS OTHERWISE NOTED IN REFLECTED CEILING DEMOLITIONS PLANS.

5.4.092 - DEMO FLOOR PLAN NOTES

Key	Note
1	REMOVE EXISTING DOOR ASSEMBLY IN ITS ENTIRETY, INCLUDING ALL ASSOCIATED HARDWARE, ANCHORS AND BRACING. PREPARE OPENING FOR NEW CONSTRUCTION. REFERENCE ARCHITECTURAL DRAWINGS.
2	REMOVE ALL EXISTING LOUVER ASSEMBLIES IN THEIR ENTIRETY, INCLUDING ALL ASSOCIATED HARDWARE, ANCHORS AND BRACING, PREPARE OPENING FOR NEW CONSTRUCTION.
3	REMOVE EXISTING GUARDRAILS IN ITS ENTIRETY, INCLUDING ALL ASSOCIATED ANCHORS AND BRACKETS. PREPARE FOR NEW CONSTRUCTION, REFERENCE ARCHITECTURAL AND STRUCTURAL FLOOR PLANS FOR NEW CONSTRUCTION.
4	REMOVE EXISITNG WINDOW ASSEMBLY IN ITS ENTIRETY, INCLUDING ALL ASSOCIATED HARDWARE, ANCHORS AND BRACKING. PREPARE OPENING FOR NEW CONSTRUCTION. REFERENCE A SERIES FOR NEW CONSTRUCTION.
5	REMOVE ALL EXISTING LOCKER ROOM SINKS AND COUNTER TOPS. PREPARE FOR NEW CONSTRUCTION, REFER TO ARCHITECTURAL AND PLUMBING DRAWINGS.
6	MECHANICAL EQUIPMENT TO BE DEMOLISHED. REFER TO M SERIES DRAWINGS.
7	REMOVE EXISTING DOOR PANEL, EXISTING DOOR FRAMES TO REMAIN. PATCH AND REPAIR EXISTING DOOR FRAME TO PREPARE FOR NEW DOOR PANEL IN NEW CONSTRUCTION, REFERENCE ARCHITECTURAL DRAWINGS.
8	DEMOLISH EXISTING TILE FLOOR, PREP AND PREPARE SUBFLOOR AS REQUIRED FOR INSTALLATION OF NEW CARPET.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929

Designed By: DESIGNER

Drawn By: AUTHOR

Checked By: CHECKER

Date: 11.21.2025

MICHAEL FRANCIS GARDNER REGISTERED No. 10700168 STATE OF INDIANA ARCHITECT

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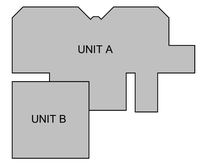

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OVERALL FIRST FLOOR DEMOLITION PLAN

AD-101

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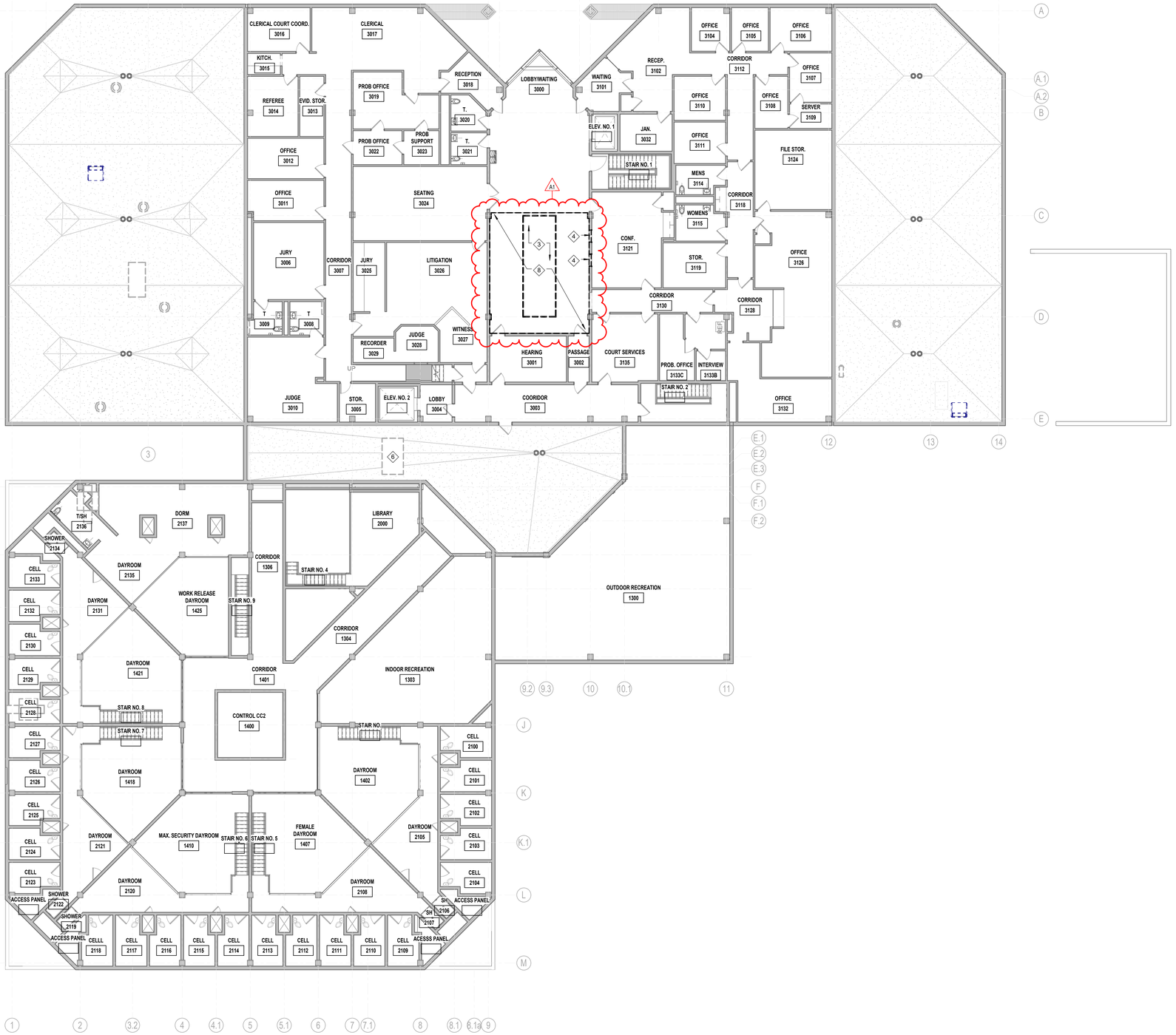

6A OVERALL SECOND FLOOR DEMOLITION PLAN

3/32" = 1'-0"

GENERAL DEMOLITION NOTES

1. CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND ARRANGEMENTS.
2. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL EXISTING SURFACES, MATERIALS, AND COMPONENTS TO REMAIN OR BE RELOCATED. DAMAGE TO THESE RESULTING FROM PERFORMANCE OF WORK SHALL BE REPAIRED BY CONTRACTOR TO SATISFACTION OF OWNER AND ARCHITECT AT NO ADDITIONAL EXPENSE TO OWNER.
3. CONTRACTOR SHALL PROVIDE TEMPORARY DUST PROTECTION AS REQUIRED TO PREVENT CONSTRUCTION DEBRIS AND DUST FROM MIGRATING OUT OF PROJECT AREA. OWNER/ARCHITECT SHALL CONFIRM ALL DUST PREVENTION MEASURES/LOCATIONS AND SHALL DETERMINE CHANGES TO THESE MEASURES.
4. ALL EXISTING EQUIPMENT AND FIXTURES SHALL REMAIN PROPERTY OF OWNER. ALL REUSABLE ITEMS SALVAGED DURING DEMOLITION OPERATIONS SHALL BE RETAINED FOR OWNER'S INSPECTION. ONLY ITEMS SO INSPECTED AND REJECTED BY OWNER SHALL BE DISPOSED. ALL OTHER SUCH ITEMS SHALL BE TURNED OVER TO OWNER FOR DISPOSITION.
5. ALL EXISTING SURFACES LOCATED ADJACENT TO, OR EXPOSED BY DEMOLITION WORK AND SCHEDULED TO RECEIVE NEW CONSTRUCTION SHALL BE PATCHED AND REPAIRED AS REQUIRED TO MATCH ADJACENT OR RECEIVE NEW WORK.
6. ALL EXISTING SURFACES LOCATED ADJACENT TO, OR EXPOSED BY DEMOLITION WORK AND SCHEDULED TO REMAIN EXPOSED AFTER COMPLETION OF NEW CONST. SHALL BE REPAIRED AND PATCHED AS REQUIRED TO MATCH ADJACENT OR TO RECEIVE NEW FINISHES.
7. OWNER WILL BE RESPONSIBLE FOR REMOVAL/REARRANGEMENT OF ALL EXISTING LOOSE FURNISHINGS DURING CONSTRUCTION, UNLESS NOTED OTHERWISE.
8. REFER TO MECH./ELEC. DRAWINGS FOR ADDITIONAL PATCHING AND PREPARATION WORK RELATED TO M.E.P. DEMOLITION ITEMS.
9. EXISTING SLEEVES, HOLES, AND OTHER PENETRATIONS OR NEW DAMAGE OF EXISTING BUILDING STRUCTURE ABOVE GRADE EXPOSED BY DEMOLITION AND REMOVAL OF PIPING, APPURTENANCES, EQUIPMENT SHALL BE PATCHED AND REPAIRED AS PART OF THE WORK. MAINTAIN FIRE RATINGS OF ALL AND ADJACENT CONSTRUCTION AFFECTED.
10. CAP ALL PIPING TO REMAIN OR ABANDONED IN ACCORDANCE WITH REQUIREMENTS OF AUTHORITY HAVING JURISDICTION AND IN ACCORDANCE WITH ALL LOCAL AND STATE PLUMBING AND HEALTH CODES. UTILIZE ONLY PRE-MANUFACTURED AND APPROVED FITTINGS TO CAP EXISTING PIPING.
11. EACH CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION WORK REQUIRED OR NOTED FOR INSTALLATION OF NEW WORK. DEMOLITION MAY INCLUDE ASSOCIATED DISTRIBUTION SYSTEMS, APPURTENANCES, EQUIPMENT SUPPORTING CONTROLS, AND MISCELLANEOUS SUPPORTS, UNLESS NOTED OTHERWISE.
12. COORDINATE ALL DEMOLITION WITH PROJECT SEQUENCING AS DIRECTED BY GENERAL CONTRACTOR OR CONSTRUCTION MANAGER.
13. FOR CEILING DEMOLITION, ALL CEILING ASSEMBLIES AND GRIDS TO BE REMOVED IN THEIR ENTIRETY, UNLESS OTHERWISE NOTED IN REFLECTED CEILING DEMOLITIONS PLANS.

5.4.092 - DEMO FLOOR PLAN NOTES

Key	Note
1	REMOVE EXISTING DOOR ASSEMBLY IN ITS ENTIRETY, INCLUDING ALL ASSOCIATED HARDWARE, ANCHORS AND BRACING. PREPARE OPENING FOR NEW CONSTRUCTION. REFERENCE ARCHITECTURAL DRAWINGS.
2	REMOVE ALL EXISTING LOUVER ASSEMBLIES IN THEIR ENTIRETY, INCLUDING ALL ASSOCIATED HARDWARE, ANCHORS AND BRACING, PREPARE OPENING FOR NEW CONSTRUCTION.
3	REMOVE EXISTING GUARDRAILS IN ITS ENTIRETY, INCLUDING ALL ASSOCIATED ANCHORS AND BRACKETS. PREPARE FOR NEW CONSTRUCTION. REFERENCE ARCHITECTURAL AND STRUCTURAL FLOOR PLANS FOR NEW CONSTRUCTION.
4	REMOVE EXISITNG WINDOW ASSEMBLY IN ITS ENTIRETY, INCLUDING ALL ASSOCIATED HARDWARE, ANCHORS AND BRACKING. PREPARE OPENING FOR NEW CONSTRUCTION. REFERENCE A SERIES FOR NEW CONSTRUCTION.
5	REMOVE ALL EXISTING LOCKER ROOM SINKS AND COUNTER TOPS. PREPARE FOR NEW CONSTRUCTION, REFER TO ARCHITECTURAL AND PLUMBING DRAWINGS.
6	MECHANICAL EQUIPMENT TO BE DEMOLISHED. REFER TO M SERIES DRAWINGS.
7	REMOVE EXISTING DOOR PANEL, EXISTING DOOR FRAMES TO REMAIN. PATCH AND REPAIR EXISTING DOOR FRAME TO PREPARE FOR NEW DOOR PANEL IN NEW CONSTRUCTION. REFERENCE ARCHITECTURAL DRAWINGS.
8	DEMOLISH EXISTING TILE FLOOR, PREP AND PREPARE SUBFLOOR AS REQUIRED FOR INSTALLATION OF NEW CARPET.

A1

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929

Designed By: Designer

Drawn By: Author

Checked By: Checker

Date: 11.21.2025

MICHAEL FRANCIS GARNESS
No. 10700168
STATE OF INDIANA
REGISTERED
ARCHITECT

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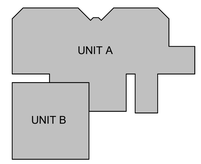

OVERALL SECOND FLOOR DEMOLITION PLAN

AD-102

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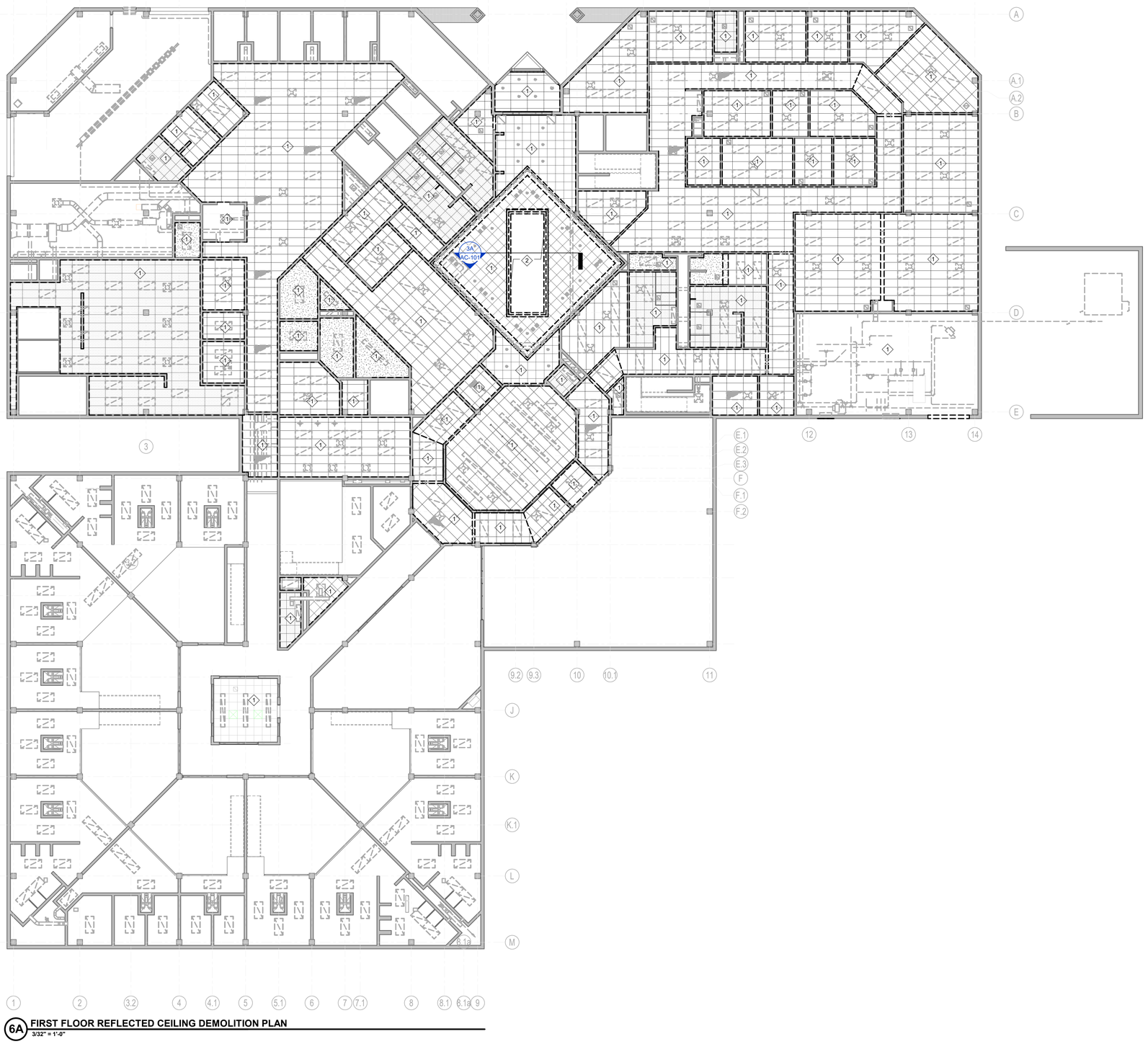

6A FIRST FLOOR REFLECTED CEILING DEMOLITION PLAN
3/32" = 1'-0"

GENERAL DEMOLITION NOTES

1. CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND ARRANGEMENTS.
2. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL EXISTING SURFACES, MATERIALS, AND COMPONENTS TO REMAIN OR BE RELOCATED. DAMAGE TO THESE RESULTING FROM PERFORMANCE OF WORK SHALL BE REPAIRED BY CONTRACTOR TO SATISFACTION OF OWNER AND ARCHITECT AT NO ADDITIONAL EXPENSE TO OWNER.
3. CONTRACTOR SHALL PROVIDE TEMPORARY DUST PROTECTION AS REQUIRED TO PREVENT CONSTRUCTION DEBRIS AND DUST FROM MIGRATING OUT OF PROJECT AREA. OWNER/ARCHITECT SHALL CONFIRM ALL DUST PREVENTION MEASURES/LOCATIONS AND SHALL DETERMINE CHANGES TO THESE MEASURES.
4. ALL EXISTING EQUIPMENT AND FIXTURES SHALL REMAIN PROPERTY OF OWNER. ALL REUSABLE ITEMS SALVAGED DURING DEMOLITION OPERATIONS SHALL BE RETAINED FOR OWNER'S INSPECTION. ONLY ITEMS SO INSPECTED AND REJECTED BY OWNER SHALL BE DISPOSED. ALL OTHER SUCH ITEMS SHALL BE TURNED OVER TO OWNER FOR DISPOSITION.
5. ALL EXISTING SURFACES LOCATED ADJACENT TO, OR EXPOSED BY DEMOLITION WORK AND SCHEDULED TO RECEIVE NEW CONSTRUCTION SHALL BE PATCHED AND REPAIRED AS REQUIRED TO MATCH ADJACENT OR RECEIVE NEW WORK.
6. ALL EXISTING SURFACES LOCATED ADJACENT TO, OR EXPOSED BY DEMOLITION WORK AND SCHEDULED TO REMAIN EXPOSED AFTER COMPLETION OF NEW CONST. SHALL BE REPAIRED AND PATCHED AS REQUIRED TO MATCH ADJACENT OR TO RECEIVE NEW FINISHES.
7. OWNER WILL BE RESPONSIBLE FOR REMOVAL/REARRANGEMENT OF ALL EXISTING LOOSE FURNISHINGS DURING CONSTRUCTION, UNLESS NOTED OTHERWISE.
8. REFER TO MECH./ELEC. DRAWINGS FOR ADDITIONAL PATCHING AND PREPARATION WORK RELATED TO M.E.P. DEMOLITION ITEMS.
9. EXISTING SLEEVES, HOLES, AND OTHER PENETRATIONS OR NEW DAMAGE OF EXISTING BUILDING STRUCTURE ABOVE GRADE EXPOSED BY DEMOLITION AND REMOVAL OF PIPING, APPURTENANCES, EQUIPMENT SHALL BE PATCHED AND REPAIRED AS PART OF THE WORK. MAINTAIN FIRE RATINGS OF ALL AND ADJACENT CONSTRUCTION AFFECTED.
10. CAP ALL PIPING TO REMAIN OR ABANDONED IN ACCORDANCE WITH REQUIREMENTS OF AUTHORITY HAVING JURISDICTION AND IN ACCORDANCE WITH ALL LOCAL AND STATE PLUMBING AND HEALTH CODES. UTILIZE ONLY PRE-MANUFACTURED AND APPROVED FITTINGS TO CAP EXISTING PIPING.
11. EACH CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION WORK REQUIRED OR NOTED FOR INSTALLATION OF NEW WORK. DEMOLITION MAY INCLUDE ASSOCIATED DISTRIBUTION SYSTEMS, APPURTENANCES, EQUIPMENT SUPPORTING CONTROLS, AND MISCELLANEOUS SUPPORTS, UNLESS NOTED OTHERWISE.
12. COORDINATE ALL DEMOLITION WITH PROJECT SEQUENCING AS DIRECTED BY GENERAL CONTRACTOR OR CONSTRUCTION MANAGER.
13. FOR CEILING DEMOLITION, ALL CEILING ASSEMBLIES AND GRIDS TO BE REMOVED IN THEIR ENTIRETY, UNLESS OTHERWISE NOTED IN REFLECTED CEILING DEMOLITIONS PLANS.

5.4.093 - DEMO CEILING PLANS

Key	Note
1	REMOVE ALL EXISTING CEILING ASSEMBLIES AND GRIDS IN THEIR ENTIRETY, INLCUDING ALL WORK DONE ABOVE CEILING. REFER TO M SERIES, S SERIES, AND LIGHTING DRAWINGS FOR COORDINATION.
2	REMOVE EXISTING CEILINGS, GRIDS, AND BULKHEADS WITHIN SKYLIGHT SCOPE. PERPARE FOR NEW CONSTRUCTION. REFER TO M SERIES, S SERIES, AND LIGHTING DRAWINGS FOR COORDINATION.

REFLECTED CEILING PLAN LEGEND

APC-1	2' X 2' ACOUSTICAL PANEL CEILING		LIGHT FIXTURE (REFERENCE E-SERIES DWGS)
APC-2	2' X 2' WASHABLE ACOUSTICAL PANEL CEILING		RETURN AIR (REFERENCE M-SERIES DWGS)
APC-3	2' X 4' ACOUSTICAL PANEL CEILING		
Walls to Deck			SUPPLY AIR (REFERENCE M-SERIES DWGS)

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929
Designed By: Designer
Drawn By: Author
Checked By: Checker
Date: 11.21.2025

MICHAEL FRANCIS GARDNER REGISTERED No. 10700168 STATE OF INDIANA ARCHITECT

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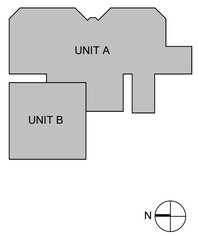

FIRST FLOOR REFLECTED CEILING DEMOLITION PLAN

ADC-101

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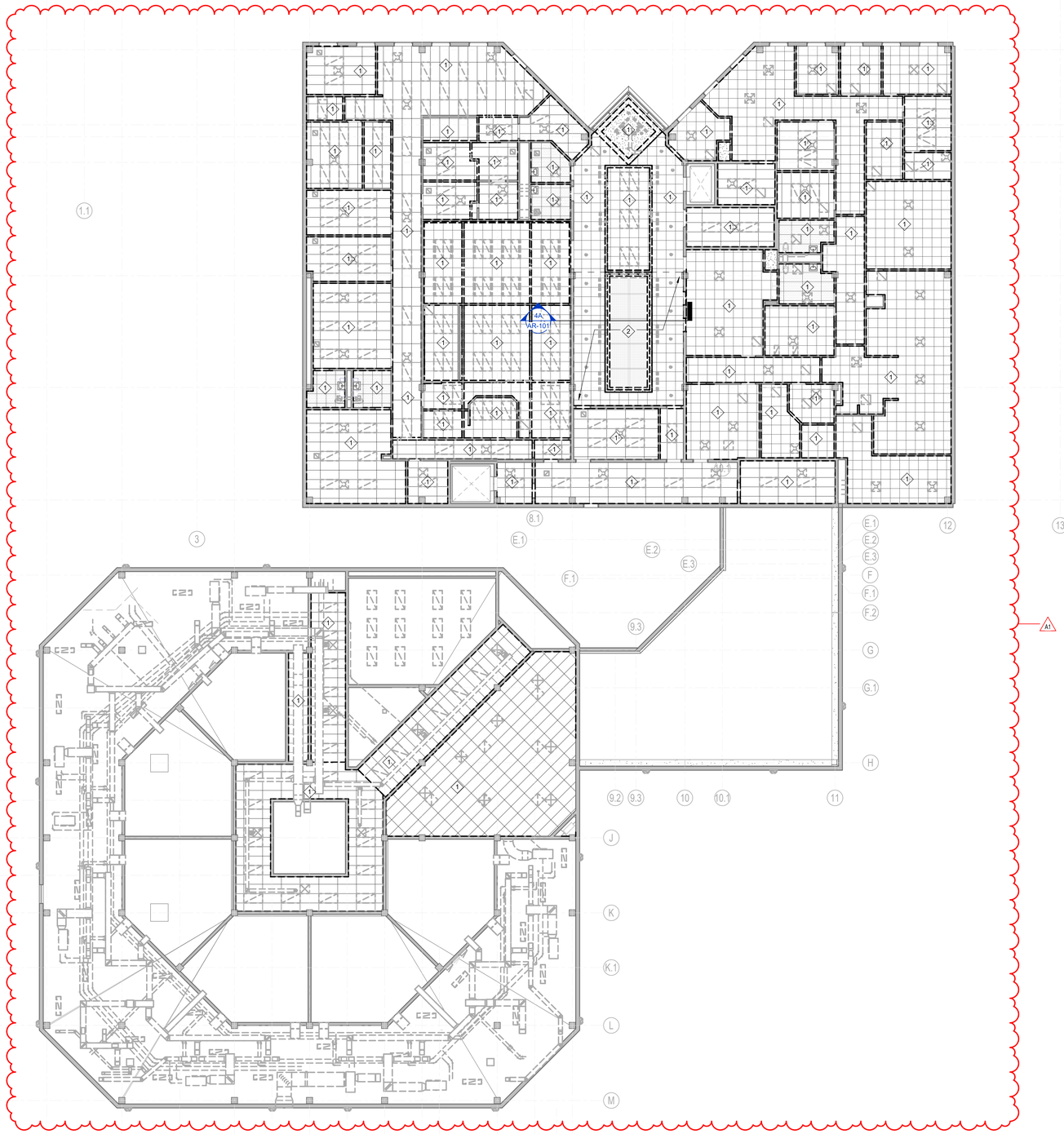

6A **SECOND FLOOR REFLECTED CEILING DEMOLITION PLAN**
3/32" = 1'-0"

GENERAL DEMOLITION NOTES

1. CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND ARRANGEMENTS.
2. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL EXISTING SURFACES, MATERIALS, AND COMPONENTS TO REMAIN OR BE RELOCATED. DAMAGE TO THESE RESULTINOM FROM PERFORMANCE OF WORK SHALL BE REPAIRED BY CONTRACTOR TO SATISFACTION OF OWNER AND ARCHITECT AT NO ADDITIONAL EXPENSE TO OWNER.
3. CONTRACTOR SHALL PROVIDE TEMPORARY DUST PROTECTION AS REQUIRED TO PREVENT CONSTRUCTION DEBRIS AND DUST FROM MIGRATING OUT OF PROJECT AREA. OWNER/ARCHITECT SHALL CONFIRM ALL DUST PREVENTION MEASURES/LOCATIONS AND SHALL DETERMINE CHANGES TO THESE MEASURES.
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5. ALL EXISTING SURFACES LOCATED ADJACENT TO, OR EXPOSED BY DEMOLITION WORK AND SCHEDULED TO RECEIVE NEW CONSTRUCTION SHALL BE PATCHED AND REPAIRED AS REQUIRED TO MATCH ADJACENT OR RECEIVE NEW WORK.
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8. REFER TO MECH./ELEC. DRAWINGS FOR ADDITIONAL PATCHING AND PREPARATION WORK RELATED TO M.E.P. DEMOLITION ITEMS.
9. EXISTING SLEEVES, HOLES, AND OTHER PENETRATIONS OR NEW DAMAGE OF EXISTING BUILDING STRUCTURE ABOVE GRADE EXPOSED BY DEMOLITION AND REMOVAL OF PIPING, APPURTENANCES, EQUIPMENT SHALL BE PATCHED AND REPAIRED AS PART OF THE WORK. MAINTAIN FIRE RATINGS OF ALL AND ADJACENT CONSTRUCTION AFFECTED.
10. CAP ALL PIPING TO REMAIN OR ABANDONED IN ACCORDANCE WITH REQUIREMENTS OF AUTHORITY HAVING JURISDICTION AND IN ACCORDANCE WITH ALL LOCAL AND STATE PLUMBING AND HEALTH CODES. UTILIZE ONLY PRE-MANUFACTURED AND APPROVED FITTINGS TO CAP EXISTING PIPING.
11. EACH CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION WORK REQUIRED OR NOTED FOR INSTALLATION OF NEW WORK. DEMOLITION MAY INCLUDE ASSOCIATED DISTRIBUTION SYSTEMS, APPURTENANCES, EQUIPMENT SUPPORTING CONTROLS, AND MISCELLANEOUS SUPPORTS, UNLESS NOTED OTHERWISE.
12. COORDINATE ALL DEMOLITION WITH PROJECT SEQUENCING AS DIRECTED BY GENERAL CONTRACTOR OR CONSTRUCTION MANAGER.
13. FOR CEILING DEMOLITION, ALL CEILING ASSEMBLIES AND GRIDS TO BE REMOVED IN THEIR ENTIRETY, UNLESS OTHERWISE NOTED IN REFLECTED CEILING DEMOLITIONS PLANS.

5.4.093 - DEMO CEILING PLANS

Key	Note
1	REMOVE ALL EXISTING CEILING ASSEMBLIES AND GRIDS IN THEIR ENTIRETY, INLCUDING ALL WORK DONE ABOVE CEILING. REFER TO M SERIES, S SERIES, AND LIGHTING DRAWINGS FOR COORDINATION.
2	REMOVE EXISTING CEILINGS, GRIDS, AND BULKHEADS WITHIN SKYLIGHT SCOPE. PERPARE FOR NEW CONSTRUCTION. REFER TO M SERIES, S SERIES, AND LIGHTING DRAWINGS FOR COORDINATION.

REFLECTED CEILING PLAN LEGEND

APC-1	2' X 2' ACOUSTICAL PANEL CEILING		LIGHT FIXTURE (REFERENCE E-SERIES DWGS)
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A1	ADDENDUM 1	12/05/2025

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Designed By: Designer
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MICHAEL FRANCIS GARNESS
No. 10700168
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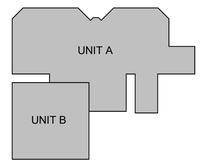

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SECOND FLOOR REFLECTED CEILING DEMOLITION PLAN

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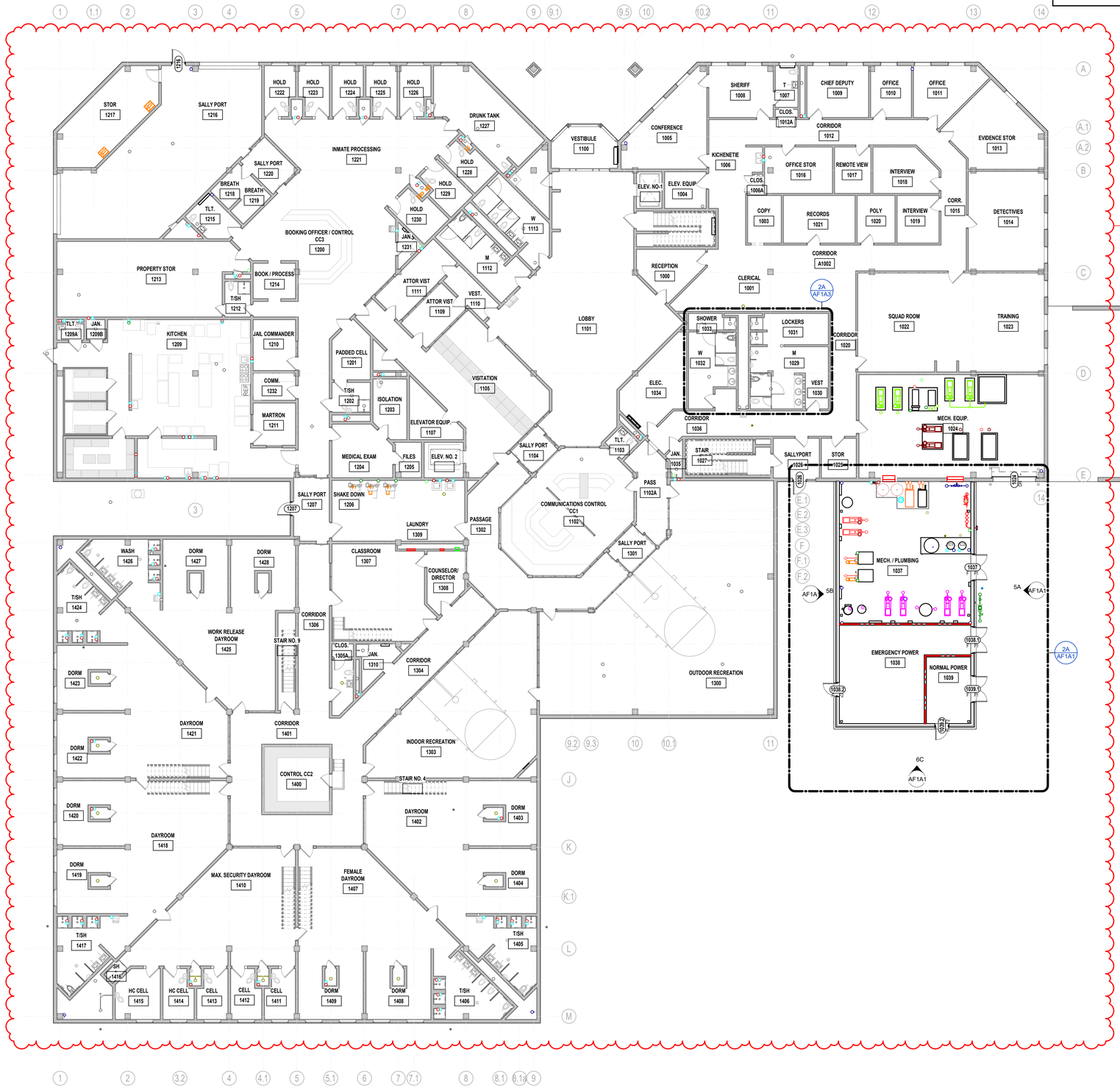

6A OVERALL FIRST FLOOR PLAN

3/32" = 1'-0"

ALTERNATE SUMMARY:

ALT 3 - ALL INTERIOR WALLS TO RECEIVE NEW PAINT IN NEW CONSTRUCTION.

GENERAL PLAN NOTES

(A.) DRAWINGS ESTABLISH THE DESIGN INTENT OF WORK TO BE PERFORMED. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HIGHEST INDUSTRY STANDARDS. ALL PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL TRADES SHALL CAREFULLY COORDINATE WORK OF ALL OTHER TRADES. ANY DISCREPANCIES OR CONFLICTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND THE OWNER PRIOR TO FABRICATION OR INSTALLATION.
(B.) CONTRACTORS SHALL BE RESPONSIBLE FOR CHECKING THE CONTRACT DOCUMENTS FOR COORDINATION BETWEEN ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, ELECTRICAL, PLUMBING, SECURITY AND LANDSCAPING. CONTRACTORS SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS AND FOR VERIFYING THEM WITH THE CONTRACT DOCUMENTS. ANY DISCREPANCY IN THE CONTRACT DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE NOTICE OF THE ARCHITECT PRIOR TO ANY FABRICATION OR CONSTRUCTION.
(C.) PLAN NOTES INDICATE ONE GRAPHIC REPRESENTATION TYPICAL. THE CONTRACTOR SHALL USE THE GRAPHIC REPRESENTATIONS FOR THE COUNT, NOT THE KEYED PLAN NOTES. THE ABSENCE OF A KEYED PLAN NOTE ON THE PLAN DOES NOT ABSOLVE THE CONTRACTOR FROM PROVIDING THE FEATURE GRAPHICALLY REPRESENTED ON THE DRAWING.
(D.) ALL DIMENSIONS SHOWN ARE TO FACE OF STUD OR MASONRY. UNLESS NOTED OTHERWISE. DIMENSIONS DESIGNATED AS "CLR OR "CLEAR" INDICATE A CLEAR DIMENSION FROM FACE OF FINISH TO FACE OF FINISH. DIMENSIONS OF EXTERIOR WALLS ARE TO OUTSIDE EDGE OF EXTERIOR FINISH.
(E.) DIMENSIONS FOR ALL OPENINGS FOR MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL ETC. SHALL BE COORDINATED WITH THE VENDORS AND SHALL BE FIRE STOPPED AT EACH FLOOR/ROOF AND RATED WALL PENETRATION PER THE CODE COMPLIANCE PLAN AND APPLICABLE CODES
(F.) PROVIDE BRACING AND BLOCKING AS REQUIRED IN WALLS SUPPORTING CASEWORK, TACKBOARDS, MARKERBOARDS, TELEVISIONS, RESTROOM ACCESSORIES, AND ANY ADDITIONAL WALL MOUNTED EQUIPMENT. COORDINATE WALL MOUNTED EQUIPMENT WITH MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS.
(G.) ALL COMMERCIAL DOOR FRAMES ARE LOCATED 4" FROM ADJACENT WALL, UNLESS NOTED OTHERWISE.
(H.) ALL EXPOSED OUTSIDE CORNERS OF CMU SHALL BE BULLNOSE.
(I.) SEAL ALL JOINTS BETWEEN DISSIMILAR MATERIALS.
(J.) ALL GYPSUM WALLBOARD IS 5/8" TYPE "X", UNLESS NOTED OTHERWISE.
(K.) ALL INTERIOR STUD WALLS ARE TYPE "SHAT" UNLESS NOTED OTHERWISE.
(L.) BASE ELEVATION OF ADDITION IS 0'-0" = XXX' (UNITED STATES GEOLOGICAL SURVEY DATA). COORDINATE WITH CIVIL DRAWINGS
(M.) ALL WALLS GOING TO DECK ARE TO BE SECURED TO DECK/STRUCTURE ABOVE AS REQUIRED. PROVIDE ADDITIONAL BRACING AS REQUIRED.
(N.) ALL WALLS THAT HAVE THE DESIGNATION "C" AND ARE IN A SPACE WITH NO CEILING WILL BE 10FT TALL.
(O.) ALL CORRIDOR SURFACES SHALL BE FLUSH, AT JUNCTIONS OF MASONRY AND STUD WALLS. MASONRY WALL LOCATIONS SHALL HOLD TRUE AND MTL STUDS SHALL BE MOVED AS REQUIRED TO PROVIDE FLUSH CONNECTION BETWEEN CHYP. BD. AND MASONRY. VERIFY NO. OF LAYERS OF GYP. BD. W/ WALL TYPES. RELOCATION OF WALL SHALL BE APPROVED BY ARCHITECT PRIOR TO CONST. AT TRANSITIONS FROM 1 LAYER GYP. BD. TO 2 LAYERS OF GYP. ON MTL STUDS A MIN. CORRIDOR WIDTH OF 5'-0" FROM FACE OF STUDS SHALL BE MAINTAINED.
(P.) ALL BUILDING MATERIALS (INCLUDING BUT NOT LIMITED TO METAL FLASHING, VAPOR BARRIERS, AIR/WATER RESISTANT BARRIERS, THRU-WALL FLASHING, ETC.) SHALL BE LAPPED TO SHED WATER TO THE OUTSIDE OF THE BUILDING ENVELOPE.
(Q.) SEE CODE COMPLIANCE PLAN G-101 AND G-102 FOR FIRE RATED WALLS.
(R.) SEE WALL TYPE LEGEND A-002 AND A-003 FOR WALLS AND CONSTRUCTION REQUIREMENTS.
(S.) SEE STRUCTURAL/ARCHITECTURAL FOR CONTROL/EXPANSION JOINT LOCATIONS.
(T.) SLOPE CONCRETE SLABS TO FLOOR DRAINS AT 1/16" MIN. PER FT.
(U.) ALL EXPOSED PIPES, DUCTS CONDUITS IN SECURITY AREAS SHALL BE ENCLOSED WITH SECURITY BULKHEAD/COVER/PLATES. PROVIDE TAMPER RESISTANT ANCHORS
(V.) WHEREVER VOLUME DAMPERS (V.D.) ARE LOCATED ABOVE SECURITY CEILINGS, PROVIDE 2'-0"x2'-0" ACCESS PANELS IN THE CEILING. REFER TO MECHANICAL DRAWINGS FOR NUMBER AND LOCATION. COORDINATE WITH ELECTRICAL DRAWINGS. PANELS SHALL BE SECURITY TYPE TO MATCH ADJACENT CEILING.
(W.) ALL CHASE WALLS SHALL BE FULL HEIGHT UNLESS NOTED OTHERWISE
(X.) ALL INTERIOR AND EXTERIOR EXPOSED STEEL TO BE PAINTED. COLOR TO BE SELECTED BY ARCHITECT.
(Y.) SUFFIXES WITHIN SPECIFICATION REFERENCES (i.e. 10 11 33.XX or 10 11 33.A1) IN THE DRAWINGS CAN BE IGNORED. THESE SUFFIXES ARE A SORTING MECHANISM USED IN PREPARING THESE DRAWINGS.
(Z.) ALL ROUGH OPENINGS (R.O.) SHALL BE VERIFIED WITH SELECTED WINDOW AND DOOR MANUFACTURER. ANY CHANGES FROM THE BASIS OF DESIGN WILL BE COORDINATED WITH ALL TRADES AND ROUGH OPENINGS ADJUSTED AS REQUIRED. ANY DISCREPANCIES FOUND WILL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO CONSTRUCTION. ANY CHANGES AND REVISIONS WILL BE AT CONTRACTORS EXPENSE.
(AA.) ALL CONSTRUCTION AROUND PLUMBING FIXTURES IS REQUIRED TO BE COORDINATED WITH SELECTED MANUFACTURERS. ADJUST WALLS AS REQUIRED TO ACCOMMODATE THE INSTALLATION OF THE SELECTED MANUFACTURERS PLUMBING FIXTURES. ANY CHANGES AND REVISIONS WILL BE DONE AT CONTRACTORS EXPENSE.
(BB.) BUILDING ENVELOPE CONTINUITY WILL BE MONITORED BY A COMMISSIONING AGENT. TRANSITIONS BETWEEN BUILDING SYSTEMS (I.E. ROOF TO WALL, CURTAINWALL TO EXTERIOR WALL, ETC.) SHALL INCLUDE CONTINUOUS AIR/VAPOR AIR BARRIER SYSTEM. ALL PENETRATIONS IN THE BUILDING ENVELOPE (INCLUDING WINDOWS, DOORS, STOREFRONT, ETC.) SHALL BE SEALED WITH AIR TIGHT WEATHER SEALS. AT ANY LOCATION WHERE MASONRY TIES OR OTHER MATERIALS PENETRATE THE AIR BARRIER, EACH PENETRATION SHALL BE SEALED AIRTIGHT.
(CC.) ALL EXPOSED FASTENERS IN DETENTION/SECURITY AREAS (INCLUDING BUT NOT LIMITED TO DOOR HARDWARE, ELECTRICAL, PLUMBING, MECHANICAL ETC. ARE TO BE SECURITY TAMPER RESISTANT TYPE.
(DD.) ALL EXPOSED STRUCTURE TO BE PRIMED AND PAINTED WITH HIGH PERFORMANCE PAINT.
(EE.) NON-PREFINISHED INTERIOR SURFACES (MASONRY/DRYWALL/STEEL) IN DETENTION AREAS SHALL RECEIVE HIGH PERFORMANCE EPOXY COATING, AND SHOULD BE PROTECTED DURING CONSTRUCTION. ANY DAMAGE TO PREFINISHED SURFACES DURING CONSTRUCTION SHALL BE REPAIRED AT CONTRACTORS EXPENSE.
(FF.) PROVIDE SHOWER CURTAINS IN ALL SHOWER LOCATIONS.
(GG.) ALL ADA SHOWER UNITS ARE TO RECEIVE BUILT IN SHOWER SEAT AND CODE COMPLIANT GRAB BARS, UNLESS NOTED OTHERWISE
(HH.) ALL ELECTRICAL DEVICES TO BE COORDINATED WITH ALL CASEWORK LOCATION. ADJUST DEVICE LOCATIONS AS REQUIRED TO AVOID CONFLICT, ANY CONFLICT NEEDS TO BE DIRECTED AND APPROVED BY ARCHITECT/ENGINEER PRIOR TO INSTALLATION.
(II.) PROVIDE STAINLESS STEEL FINISH PANEL ABOVE ALL SECURITY SHOWER UNITS. EXTEND TO CEILING FUSION ON ALL SIDES. SECURE AS REQUIRED WITH SECURITY FASTENERS.
(JJ.) PROVIDE WATER MANAGEMENT SYSTEM AT DETENTION PLUMBING FIXTURES - SEE PLUMBING.
(KK.) SECURITY PLUMBING FIXTURES ACCESSORIES: ALL SECURITY PLUMBING TOILET/SINK COMBO UNITS ARE TO RECEIVE A SINGLE LIGATURE PROOF HOOK AND STAINLESS STEEL MIRROR. ALL SECURITY PLUMING ADA TOILET/SINK COMBO UNITS ARE TO RECEIVE A SINGLE LIGATURE PROOF HOOK, (2) STAINLESS STEEL MIRRORS, 42" VERTICAL LIGATURE PROOF GRAB BARS, SECURITY TOILET PAPER HOLDER RECESSED IN THE ADJACENT WALL. ALL NON ADA SECURITY SHOWERS ARE TO RECEIVE A SINGLE LIGATURE PROOF HOOK AND A SHOWER CURTAIN. ALL ADA SECURITY SHOWERS ARE TO RECEIVE A SINGLE LIGATURE PROOF HOOK, A SHOWER CURTAIN, AND ADA APPROVED VERTICAL GRAB BARS. REVIEW PLANS FOR ADDITIONAL ACCESSORIES.
(LL.) ALL COMMERCIAL HOLLOW METAL FRAMES IN STUD WALL CONSTRUCTION TO BE WRAP AROUND WALL DEPTH. ALL COMMERCIAL HOLLOW METAL FRAMES IN CMU CONSTRUCTION TO BE 5-3/4" DEEP CENTRALLY LOCATED IN THE WALL ASSEMBLY WITH BULLNOSE CMU CORNERS. ALL SECURITY HOLLOW METAL FRAMES IN CONCRETE/CAST WALLS TO BE 7-5/8" DEEP, CENTRALLY LOCATED ON AT EXTERIOR APPLICATION 7" FROM THE EXTERIOR FACE.
(MM.) PROVIDE ADDITIONAL ACCESS PANELS AT ALL LOCATIONS REQUIRED FOR MAINTENANCE. COORDINATE WITH MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION CONTRACTOR. PROVIDE SECURITY ACCESS PANELS IN SECURITY AREAS. SEE AF103 AND AF104 FOR SECURITY AREAS.
(NN.) SECURITY SEALANT: PROVIDE SECURITY TYPE SEALANT AT ALL DISSIMILAR MATERIAL IN SECURITY AREAS. SEE AF103 AND AF104 FOR SECURITY AREAS. ALL MASONRY CONTROL JOINTS ARE TO RECEIVE FLEXIBLE SECURITY SEALANTS IN SECURITY AREAS. ALL RATED ASSEMBLIES ARE TO RECEIVE RATED SECURITY SEALANT FROM THE SAME MANUFACTURER. SECURITY SEALANT TO BE TO 10' ABOVE FINISHED LEVEL WHERE INMATES WILL BE PRESENT, @ 10' AFF PROVIDE COMMERCIAL GRADE JOINT SEALANT OR FIRE RATED JOINT SYSTEM. ALL STEEL CELLS TO FLOOR JOINTS SHALL HAVE DYNAPOXY OR EQUAL SECURITY CAULKING.
(OO.) PROVIDE AN 8" STEEL PIPE BOLLARD FILLED WITH CONCRETE TO 2'-6" A.F.F. BOLLARDS ARETO BE PROVIDED AT EACH OVERHEAD DOOR LOCATION, TWO AT EACH JAMB ON BOTH EXTERIOR AND INTERIOR SIDE OF THE JAMB. PAINT EACH BOLLARD SAFETY YELLOW
(PP.) PROVIDE MOISTURE RESISTANT GYPSUM BOARD AT ALL TILE WET WALL LOCATIONS
(QQ.) MASONRY CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CLEAN AND TOOLED JOINTS AT ALL LOCATIONS, INCLUDING BUT NOT LIMITED TO DETENTION AREAS. THE MASONRY CONTRACTOR WILL ALSO BE RESPONSIBLE FOR CLEAN AND TOOLED JOINTS AT BASE OF MASONRY AND SLAB CONDITION. ANY POCKETS OR GAPS SHALL REQUIRE SECURITY CAULKING IN DETENTION AREAS AND SHALL BE THE RESPONSIBILITY OF THE MASONRY CONTRACTOR.
(RR.) CLEAN ALL WALL SURFACES PRIOR TO FINISHING AND ANY GROUT OR DEBRIS STUCK ON WALL SURFACES MUST BE REMOVED PRIOR TO APPLYING FINISHES. ANY DEBRIS AND GROUT WHICH IS LEFT AND PAINTED OVER WILL BE REQUIRED TO BE REMOVED AND REFINISHED AT CONTRACTORS EXPENSE.
(SS.) ALL COMMERCIAL PLUMBING ADA FIXTURES ARE TO RECEIVE ALL REQUIRED GRAB-BARS AS OUTLINED BY ICC A117.1 (MOST CURRENT EDITION AT THE BEGINNING OF PROJECT CONSTRUCTION). INCLUDE ALL HORIZONTAL AND VERTICAL GRAB BARS. PROVIDE BLOCKING OR MANUFACTURERS EQUIVALENT AT ALL GRAB-BAR LOCATIONS. ALL SECURITY GRAB-BARS TO RECEIVE PRE MANUFACTURED ANTI-LIGATURE PLATE WITH WEEPS. HEIGHT OF ALL GRAB BARS SHALL BE PER ICC A117.1 (36" TO TOP OF GRIPPING SURFACE).
(TT.) ALL EXPANSION JOINT COVERS THROUGH RATED WALLS/CEILING/FLOOR ASSEMBLIES SHALL MEET THE RATING REQUIREMENTS OF EACH ASSEMBLY PER THE FIRE AND LIFE SAFETY PLANS.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929
Designed By: CW
Drawn By: CW
Checked By: SP
Date: 11.21.2025

MICHAEL FRANCIS GARNESS
No. 10700168
STATE OF INDIANA
REGISTERED
ARCHITECT

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UNIT A
UNIT B

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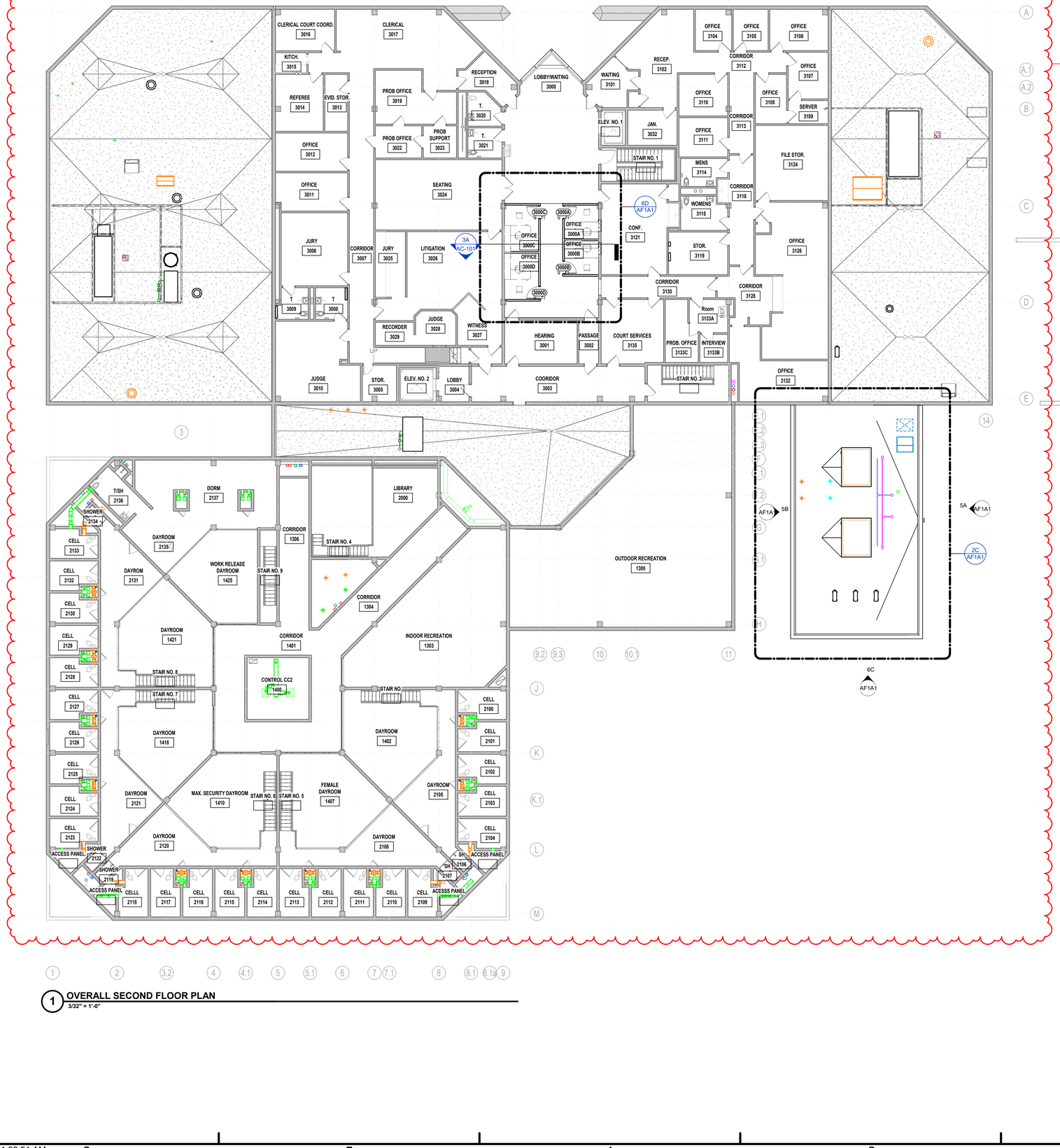
OVERALL FIRST FLOOR PLAN

A-101

12/5/2025 1:30:36 AM



1 OVERALL SECOND FLOOR PLAN

3/32" = 1'-0"

ALTERNATE SUMMARY:

ALT 3 - ALL INTERIOR WALLS TO RECEIVE NEW PAINT IN NEW CONSTRUCTION.

GENERAL PLAN NOTES

(A.) DRAWINGS ESTABLISH THE DESIGN INTENT OF WORK TO BE PERFORMED. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HIGHEST INDUSTRY STANDARDS. ALL PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL TRADES SHALL CAREFULLY COORDINATE WORK OF ALL OTHER TRADES. ANY DISCREPANCIES OR CONFLICTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND THE OWNER PRIOR TO FABRICATION OR INSTALLATION.

(B.) CONTRACTORS SHALL BE RESPONSIBLE FOR CHECKING THE CONTRACT DOCUMENTS FOR COORDINATION BETWEEN ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, ELECTRICAL, PLUMBING, SECURITY AND LANDSCAPING. CONTRACTORS SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS AND FOR VERIFYING THEM WITH THE CONTRACT DOCUMENTS. ANY DISCREPANCY IN THE CONTRACT DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE NOTICE OF THE ARCHITECT PRIOR TO ANY FABRICATION OR CONSTRUCTION.

(C.) PLAN NOTES INDICATE ONE GRAPHIC REPRESENTATION TYPICAL. THE CONTRACTOR SHALL USE THE GRAPHIC REPRESENTATIONS FOR THE COUNT, NOT THE KEYED PLAN NOTES. THE ABSENCE OF A KEYED PLAN NOTE ON THE PLAN DOES NOT ABSOLVE THE CONTRACTOR FROM PROVIDING THE FEATURE GRAPHICALLY REPRESENTED ON THE DRAWING.

(D.) ALL DIMENSIONS SHOWN ARE TO FACE OF STUD OR MASONRY. UNLESS NOTED OTHERWISE. DIMENSIONS DESIGNATED AS "CLR OR "CLEAR" INDICATE A CLEAR DIMENSION FROM FACE OF FINISH TO FACE OF FINISH. DIMENSIONS OF EXTERIOR WALLS ARE TO OUTSIDE EDGE OF EXTERIOR FINISH.

(E.) DIMENSIONS FOR ALL OPENINGS FOR MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL ETC. SHALL BE COORDINATED WITH THE VENDORS AND SHALL BE FIRE STOPPED AT EACH FLOOR/ROOF AND RATED WALL PENETRATION PER THE CODE COMPLIANCE PLAN AND APPLICABLE CODES

(F.) PROVIDE BRACING AND BLOCKING AS REQUIRED IN WALLS SUPPORTING CASEWORK, TACKBOARDS, MARKERBOARDS, TELEVISIONS, RESTROOM ACCESSORIES, AND ANY ADDITIONAL WALL MOUNTED EQUIPMENT. COORDINATE WALL MOUNTED EQUIPMENT WITH MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS.

(G.) ALL COMMERCIAL DOOR FRAMES ARE LOCATED 4" FROM ADJACENT WALL, UNLESS NOTED OTHERWISE.

(H.) ALL EXPOSED OUTSIDE CORNERS OF CMU SHALL BE BULLNOSE.

(I.) SEAL ALL JOINTS BETWEEN DISSIMILAR MATERIALS.

(J.) ALL GYPSUM WALLBOARD IS 5/8" TYPE "X", UNLESS NOTED OTHERWISE.

(K.) ALL INTERIOR STUD WALLS ARE TYPE "SHAFT" UNLESS NOTED OTHERWISE.

(L.) BASE ELEVATION OF ADDITION IS 0'-0" = XXX' (UNITED STATES GEOLOGICAL SURVEY DATA). COORDINATE WITH CIVIL DRAWINGS

(M.) ALL WALLS GOING TO DECK ARE TO BE SECURED TO DECK/STRUCTURE ABOVE AS REQUIRED. PROVIDE ADDITIONAL BRACING AS REQUIRED.

(N.) ALL WALLS THAT HAVE THE DESIGNATION "C" AND ARE IN A SPACE WITH NO CEILING WILL BE 10FT TALL.

(O.) ALL CORRIDOR SURFACES SHALL BE FLUSH, AT JUNCTIONS OF MASONRY AND STUD WALLS. MASONRY WALL LOCATIONS SHALL HOLD TRUE AND MTL STUDS SHALL BE MOVED AS REQUIRED TO PROVIDE FLUSH CONNECTION BETWEEN GYP. BD. AND MASONRY. VERIFY NO. OF LAYERS OF GYP. BD. W/ WALL TYPES. RELOCATION OF WALL SHALL BE APPROVED BY ARCHITECT PRIOR TO CONST. AT TRANSITIONS FROM 1 LAYER GYP. BD. TO 2 LAYERS OF GYP. ON MTL STUDS A MIN. CORRIDOR WIDTH OF 5'-0" FROM FACE OF STUDS SHALL BE MAINTAINED.

(P.) ALL BUILDING MATERIALS (INCLUDING BUT NOT LIMITED TO METAL FLASHING, VAPOR BARRIERS, AIR/WATER RESISTANT BARRIERS, THRU-WALL FLASHING, ETC.) SHALL BE LAPPED TO SHED WATER TO THE OUTSIDE OF THE BUILDING ENVELOPE.

(Q.) SEE CODE COMPLIANCE PLAN G-101 AND G-102 FOR FIRE RATED WALLS.

(R.) SEE WALL TYPE LEGEND A-002 AND A-003 FOR WALLS AND CONSTRUCTION REQUIREMENTS.

(S.) SEE STRUCTURAL/ARCHITECTURAL FOR CONTROL/EXPANSION JOINT LOCATIONS.

(T.) SLOPE CONCRETE SLABS TO FLOOR DRAINS AT 1/16" MIN. PER FT.

(U.) ALL EXPOSED PIPES, DUCTS CONDUITS IN SECURITY AREAS SHALL BE ENCLOSED WITH SECURITY BULKHEAD/COVER/PLATES. PROVIDE TAMPER RESISTANT ANCHORS

(V.) WHEREVER VOLUME DAMPERS (V.D.) ARE LOCATED ABOVE SECURITY CEILINGS, PROVIDE 2'-0"x2'-0" ACCESS PANELS IN THE CEILING. REFER TO MECHANICAL DRAWINGS FOR NUMBER AND LOCATION. COORDINATE WITH ELECTRICAL DRAWINGS. PANELS SHALL BE SECURITY TYPE TO MATCH ADJACENT CEILING.

(W.) ALL CHASE WALLS SHALL BE FULL HEIGHT UNLESS NOTED OTHERWISE

(X.) ALL INTERIOR AND EXTERIOR EXPOSED STEEL TO BE PAINTED. COLOR TO BE SELECTED BY ARCHITECT.

(Y.) SUFFIXES WITHIN SPECIFICATION REFERENCES (i.e. 10 11 33.XX or 10 11 33.A) IN THE DRAWINGS CAN BE IGNORED. THESE SUFFIXES ARE A SORTING MECHANISM USED IN PREPARING THESE DRAWINGS.

(Z.) ALL ROUGH OPENINGS (R.O.) SHALL BE VERIFIED WITH SELECTED WINDOW AND DOOR MANUFACTURER. ANY CHANGES FROM THE BASIS OF DESIGN WILL BE COORDINATED WITH ALL TRADES AND ROUGH OPENINGS ADJUSTED AS REQUIRED. ANY DISCREPANCIES FOUND WILL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO CONSTRUCTION. ANY CHANGES AND REVISIONS WILL BE AT CONTRACTORS EXPENSE.

(AA.) ALL CONSTRUCTION AROUND PLUMBING FIXTURES IS REQUIRED TO BE COORDINATED WITH SELECTED MANUFACTURERS. ADJUST WALLS AS REQUIRED TO ACCOMMODATE THE INSTALLATION OF THE SELECTED MANUFACTURERS PLUMBING FIXTURES. ANY CHANGES AND REVISIONS WILL BE DONE AT CONTRACTORS EXPENSE.

(BB.) BUILDING ENVELOPE CONTINUITY WILL BE MONITORED BY A COMMISSIONING AGENT. TRANSITIONS BETWEEN BUILDING SYSTEMS (I.E. ROOF TO WALL, CURTAINWALL TO EXTERIOR WALL, ETC.) SHALL INCLUDE CONTINUOUS AIRTIGHT AIR BARRIER SYSTEM. ALL PENETRATIONS IN THE BUILDING ENVELOPE (INCLUDING WINDOWS, DOORS, STOREFRONT, ETC.) SHALL BE SEALED WITH AIR TIGHT WEATHER SEALS. AT ANY LOCATION WHERE MASONRY TIES OR OTHER MATERIALS PENETRATE THE AIR BARRIER, EACH PENETRATION SHALL BE SEALED AIRTIGHT

(CC.) ALL EXPOSED FASTENERS IN DETENTION/SECURITY AREAS (INCLUDING BUT NOT LIMITED TO DOOR HARDWARE, ELECTRICAL, PLUMBING, MECHANICAL ETC. ARE TO BE SECURITY TAMPER RESISTANT TYPE.

(DD.) ALL EXPOSED STRUCTURE TO BE PRIMED AND PAINTED WITH HIGH PERFORMANCE PAINT.

(EE.) NON-PREFINISHED INTERIOR SURFACES (MASONRY/DRYWALL/STEEL) IN DETENTION AREAS SHALL RECEIVE HIGH PERFORMANCE EPOXY COATING, AND SHOULD BE PROTECTED DURING CONSTRUCTION. ANY DAMAGE TO PREFINISHED SURFACES DURING CONSTRUCTION SHALL BE REPAIRED AT CONTRACTORS EXPENSE.

(FF.) PROVIDE SHOWER CURTAINS IN ALL SHOWER LOCATIONS.

(GG.) ALL ADA SHOWER UNITS ARE TO RECEIVE BUILT IN SHOWER SEAT AND CODE COMPLIANT GRAB BARS, UNLESS NOTED OTHERWISE

(HH.) ALL ELECTRICAL DEVICES TO BE COORDINATED WITH ALL CASEWORK LOCATION. ADJUST DEVICE LOCATIONS AS REQUIRED TO AVOID CONFLICT, ANY CONFLICT NEEDS TO BE DIRECTED AND APPROVED BY ARCHITECT/ENGINEER PRIOR TO INSTALLATION.

(II.) PROVIDE STAINLESS STEEL FINISH PANEL ABOVE ALL SECURITY SHOWER UNITS. EXTEND TO CEILING FUSION ON ALL SIDES. SECURE AS REQUIRED WITH SECURITY FASTENERS.

(JJ.) PROVIDE WATER MANAGEMENT SYSTEM AT DETENTION PLUMBING FIXTURES - SEE PLUMBING.

(KK.) SECURITY PLUMBING FIXTURES ACCESSORIES: ALL SECURITY PLUMBING TOILET/SINK COMBO UNITS ARE TO RECEIVE A SINGLE LIGATURE PROOF HOOK AND STAINLESS STEEL MIRROR. ALL SECURITY PLUMING ADA TOILET/SINK COMBO UNITS ARE TO RECEIVE A SINGLE LIGATURE PROOF HOOK, (2) STAINLESS STEEL MIRRORS, 42" HORIZONTAL AND 18" VERTICAL LIGATURE PROOF GRAB BARS, SECURITY TOILET PAPER HOLDER RECESSED IN THE ADJACENT WALL. ALL NON ADA SECURITY SHOWERS ARE TO RECEIVE A SINGLE LIGATURE PROOF HOOK AND A SHOWER CURTAIN. ALL ADA SECURITY SHOWERS ARE TO RECEIVE A SINGLE LIGATURE PROOF HOOK, A SHOWER CURTAIN, AND ADA 42" HORIZONTAL AND VERTICAL GRAB BARS. REVIEW PLANS FOR ADDITIONAL ACCESSORIES.

(LL.) ALL COMMERCIAL HOLLOW METAL FRAMES IN STUD WALL CONSTRUCTION TO BE WRAP AROUND WALL DEPTH. ALL COMMERCIAL HOLLOW METAL FRAMES IN CMU CONSTRUCTION TO BE 5-3/4" DEEP CENTRALLY LOCATED IN THE WALL ASSEMBLY WITH BULLNOSE CMU CORNERS. ALL SECURITY HOLLOW METAL FRAMES IN CMU/PRECAST WALLS TO BE 7-5/8" DEEP, CENTRALLY LOCATED OR AT EXTERIOR APPLICATION 3" FROM THE EXTERIOR FACE.

(MM.) PROVIDE ADDITIONAL ACCESS PANELS AT ALL LOCATIONS REQUIRED FOR MAINTENANCE. COORDINATE WITH MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION CONTRACTOR. PROVIDE SECURITY ACCESS PANELS IN SECURITY AREAS. SEE AF103 AND AF104 FOR SECURITY AREAS.

(NN.) SECURITY SEALANT: PROVIDE SECURITY TYPE SEALANT AT ALL DISSIMILAR MATERIAL IN SECURITY AREAS, SEE AF103 AND AF104 FOR SECURITY AREAS. ALL MASONRY CONTROL JOINTS ARE TO RECEIVE FLEXIBLE SECURITY SEALANTS IN SECURITY AREAS. ALL RATED ASSEMBLIES ARE TO RECEIVE RATED SECURITY SEALANT FROM THE SAME MANUFACTURER. SECURITY SEALANT TO BE TO 10' ABOVE FINISHED LEVEL WHERE INMATES WILL BE PRESENT, @ 10' AFF PROVIDE COMMERCIAL GRADE JOINT SEALANT OR FIRE RATED JOINT SYSTEM. ALL STEEL CELLS TO FLOOR JOINTS SHALL HAVE DYNAPOXY OR EQUAL SECURITY CAULKING.

(OO.) PROVIDE AN 8" STEEL PIPE BOLLARD FILLED WITH CONCRETE TO 2'-6" A.F.F. BOLLARDS ARETO BE PROVIDED AT EACH OVERHEAD DOOR LOCATION, TWO AT EACH JAMB ON BOTH EXTERIOR AND INTERIOR SIDE OF THE JAMB. PAINT EACH BOLLARD SAFETY YELLOW

(PP.) PROVIDE MOISTURE RESISTANT GYPSUM BOARD AT ALL TILE WALL LOCATIONS

(QQ.) MASONRY CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CLEAN AND TOOLED JOINTS AT ALL LOCATIONS, INCLUDING BUT NOT LIMITED TO DETENTION AREAS. THE MASONRY CONTRACTOR WILL ALSO BE RESPONSIBLE FOR CLEAN AND TOOLED JOINTS AT BASE OF MASONRY AND SLAB CONDITION. ANY POCKETS OR GAPS SHALL REQUIRE SECURITY CAULKING IN DETENTION AREAS AND SHALL BE THE RESPONSIBILITY OF THE MASONRY CONTRACTOR.

(RR.) CLEAN ALL WALL SURFACES PRIOR TO FINISHING AND ANY GROUT OR DEBRIS STUCK ON WALL SURFACES MUST BE REMOVED PRIOR TO APPLYING FINISHES. ANY DEBRIS AND GROUT WHICH IS LEFT AND PAINTED OVER WILL BE REQUIRED TO BE REMOVED AND REFINISHED AT CONTRACTORS EXPENSE.

(SS.) ALL COMMERCIAL PLUMBING ADA FIXTURES ARE TO RECEIVE ALL REQUIRED GRAB BARS AS OUTLINED BY ICC A117.1 (MOST CURRENT EDITION AT THE BEGINNING OF PROJECT CONSTRUCTION). INCLUDE ALL HORIZONTAL AND VERTICAL GRAB BARS, PROVIDE BLOCKING OR MANUFACTURED EQUIVALENT AT ALL GRAB BAR LOCATIONS. ALL SECURITY GRAB BARS TO RECEIVE PRE MANUFACTURED ANTI-LIGATURE PLATE WITH WEEPS. HEIGHT OF ALL GRAB BARS SHALL BE PER ICC A117.1 (36" TO TOP OF GRIPPING SURFACE).

(TT.) ALL EXPANSION JOINT COVERS THROUGH RATED WALLS/CEILING/FLOOR ASSEMBLIES SHALL MEET THE RATING REQUIREMENTS OF EACH ASSEMBLY PER THE FIRE AND LIFE SAFETY PLANS.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929

Designed By: Designer

Drawn By: Author

Checked By: Checker

Date: 11.21.2025

MICHAEL FRANCIS GARDNER REGISTERED No. 10700168 STATE OF INDIANA ARCHITECT

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UNIT A

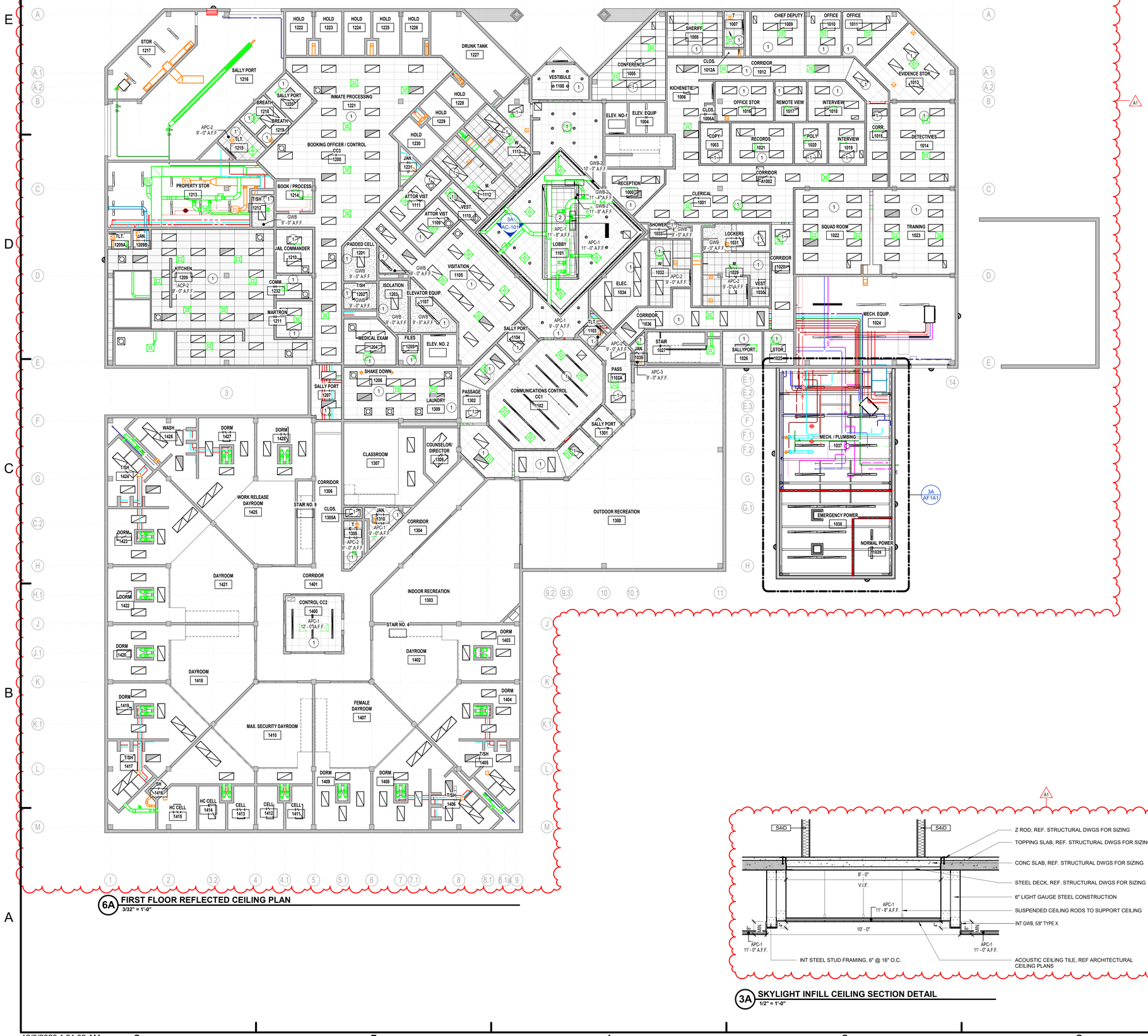
UNIT B

N

OVERALL SECOND FLOOR PLAN

A-102

12/5/2025 1:30:51 AM



6A FIRST FLOOR REFLECTED CEILING PLAN
3/32" = 1'-0"

3A SKYLIGHT INFILL CEILING SECTION DETAIL
1/2" = 1'-0"

REFL. CEILING PLAN NOTES

1. ALL GRIDS ARE CENTERED IN ROOMS, UNLESS NOTED OTHERWISE.
2. COORDINATE BULKHEAD SIZES W/ MECHANICAL DUCTWORK.
3. REFER TO MEP DRAWINGS FOR CEILING FIXTURES/EQUIPMENT AND COORDINATE W/ ALL TRADES.
4. ALL EXPOSED DUCTWORK, PIPING ETC. SHALL BE PAINTED. COLOR SELECTED BY ARCHITECT.
5. LOCATE SPRINKLER HEADS IN CENTER OF CEILING PANEL - WHERE APPLICABLE.
6. ALL CEILINGS ARE AT 9'-0" AFF, UNLESS NOTED OTHERWISE.
7. ALL BULKHEADS ARE AT 8'-10" AFF, UNLESS NOTED OTHERWISE.
8. ALL NEW GRID SHALL BE APC-1 UNLESS NOTED OTHERWISE.
9. ALL RETENTION CLIPS ARE TO BE SPRINGLOADED CLIPS
10. ALL COMMERCIAL CEILINGS & GRIDS TO BE REPLACED WITH APC-3 TYPICAL, UNLESS OTHERWISE NOTED. NEW CEILING ASSEMBLIES MATCHING THE EXISTING CEILING HEIGHTS, UNLESS OTHERWISE NOTED.
11. ALL RESTROOMS, TOILET ROOMS, SHOWERS, LOCKER ROOMS, AND KTICHEN CEILINGS & GRIDS TO BE REPLACED WITH APC-2 TYPICAL, UNLESS OTHERWISE NOTED. NEW CEILING ASSEMBLIES MATCHING THE EXISTING CEILING HEIGHTS UNLESS OTHERWISE NOTED.
12. HOLD DOWN CLIPS USED IN ALL DETENTION CEILING LOCATIONS.

5.4.120 - CEILING PLAN NOTES

Key	Note
1	REPLACE ALL EXISTING CEILING ASSEMBLIES, GRIDS, AND BULKHEADS WITH NEW, TO MATCH EXISTING CEILING CONFIGURATION. FULL EXTENTS OF NEW CEILING ASSEMBLIES BASED ON DISCRETION OF CONTRACTOR, INCLUDING ALL WORK DONE ABOVE CEILING. REFERENCE S-SERIES AND M-SERIES DRAWINGS. COORDINATE WITH LIGHTING AS NEEDED.
2	NEW CONSTRUCTION 2X2 ACT CEILINGS, GRIDS, AND BULKHEADS TO BE PLACED FLUSH TO ADJACENT CEILINGS, FOR SKYLIGHT INFILL SCOPE. REFER TO M SERIES, S SERIES, AND LIGHTING DRAWINGS FOR COORDINATION.

REFLECTED CEILING PLAN LEGEND

APC-1	2' X 2' ACOUSTICAL PANEL CEILING	LIGHT FIXTURE (REFERENCE E-SERIES DWGS)
APC-2	2' X 2' WASHABLE ACOUSTICAL PANEL CEILING	RETURN AIR (REFERENCE M-SERIES DWGS)
APC-3	2' X 4' ACOUSTICAL PANEL CEILING	
Walls to Deck		SUPPLY AIR (REFERENCE M-SERIES DWGS)

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929
Designed By: CPW
Drawn By: CPW
Checked By: SP
Date: 11.21.2025

MICHAEL FRANCIS GARDNER REGISTERED No. 10700168 STATE OF INDIANA ARCHITECT

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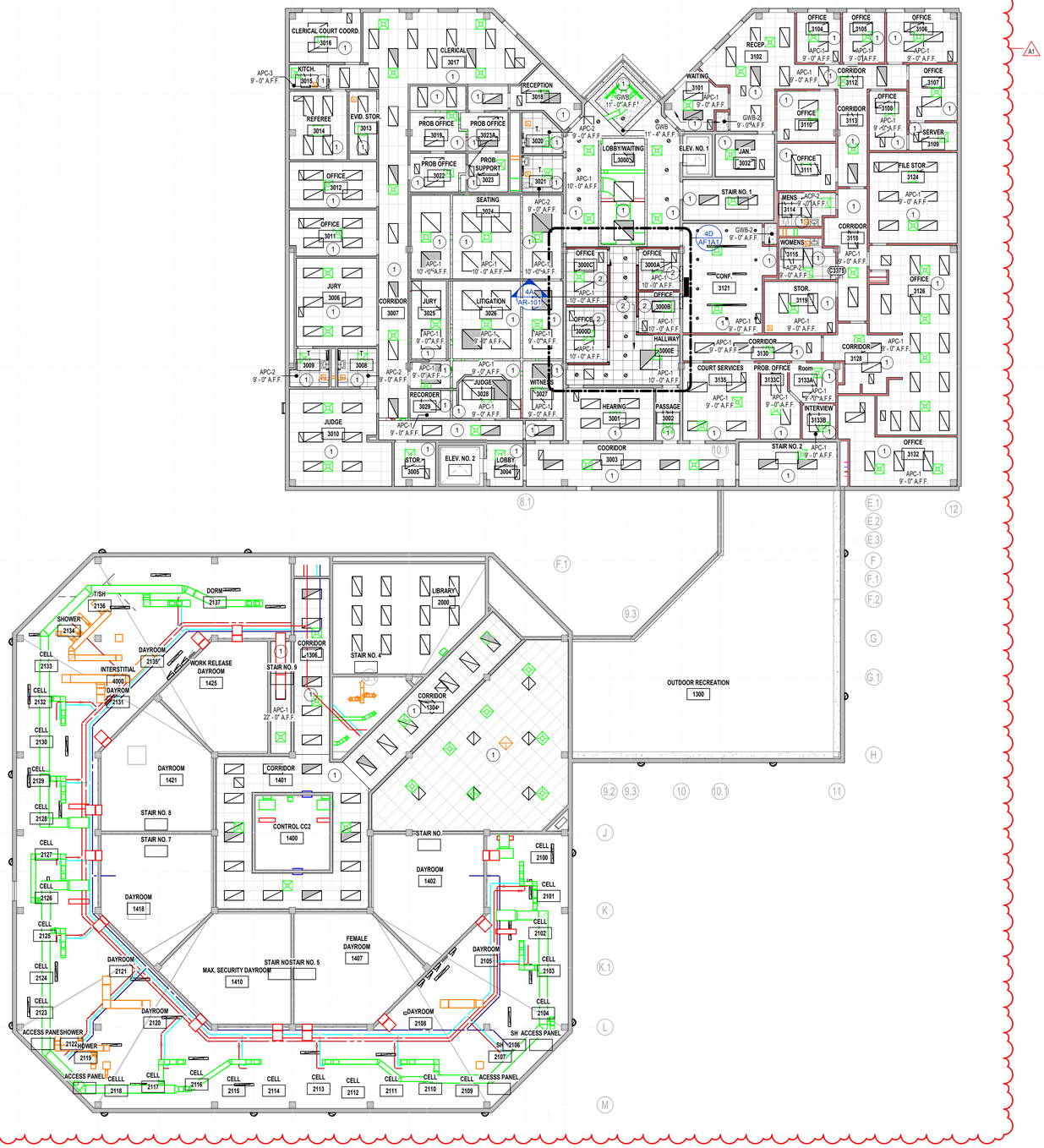
UNIT A
UNIT B

N

FIRST FLOOR REFLECTED CEILING PLAN

AC-101

12/5/2025 1:31:09 AM



1 SECOND FLOOR REFLECTED CEILING PLAN
3/32" = 1'-0"

REFL. CEILING PLAN NOTES

1. ALL GRIDS ARE CENTERED IN ROOMS, UNLESS NOTED OTHERWISE.
2. COORDINATE BULKHEAD SIZES W/ MECHANICAL DUCTWORK.
3. REFER TO MEP DRAWINGS FOR CEILING FIXTURES/EQUIPMENT AND COORDINATE W/ ALL TRADES.
4. ALL EXPOSED DUCTWORK, PIPING ETC. SHALL BE PAINTED. COLOR SELECTED BY ARCHITECT.
5. LOCATE SPRINKLER HEADS IN CENTER OF CEILING PANEL - WHERE APPLICABLE.
6. ALL CEILINGS ARE AT 9'-0" AFF, UNLESS NOTED OTHERWISE.
7. ALL BULKHEADS ARE AT 8'-10" AFF, UNLESS NOTED OTHERWISE.
8. ALL NEW GRID SHALL BE APC-1 UNLESS NOTED OTHERWISE.
9. ALL RETENTION CLIPS ARE TO BE SPRINGLOADED CLIPS
10. ALL COMMERCIAL CEILINGS & GRIDS TO BE REPLACED WITH APC-3 TYPICAL, UNLESS OTHERWISE NOTED. NEW CEILING ASSEMBLIES MATCHING THE EXISTING CEILING HEIGHTS, UNLESS OTHERWISE NOTED.
11. ALL RESTROOMS, TOILET ROOMS, SHOWERS, LOCKER ROOMS, AND KTICHEN CEILINGS & GRIDS TO BE REPLACED WITH APC-2 TYPICAL, UNLESS OTHERWISE NOTED. NEW CEILING ASSEMBLIES MATCHING THE EXISTING CEILING HEIGHTS UNLESS OTHERWISE NOTED.
12. HOLD DOWN CLIPS USED IN ALL DETENTION CEILING LOCATIONS.

5.4.120 - CEILING PLAN NOTES

Key	Note
1	REPLACE ALL EXISTING CEILING ASSEMBLIES, GRIDS, AND BULKHEADS WITH NEW, TO MATCH EXISTING CEILING CONFIGURATION. FULL EXTENTS OF NEW CEILING ASSEMBLIES BASED ON DISCRETION OF CONTRACTOR, INCLUDING ALL WORK DONE ABOVE CEILING. REFERENCE S-SERIES AND M-SERIES DRAWINGS. COORDINATE WITH LIGHTING AS NEEDED.
2	NEW CONSTRUCTION 2X2 ACT CEILINGS, GRIDS, AND BULKHEADS TO BE PLACED FLUSH TO ADJACENT CEILINGS, FOR SKYLIGHT INFILL SCOPE. REFER TO M SERIES, S SERIES, AND LIGHTING DRAWINGS FOR COORDINATION.

REFLECTED CEILING PLAN LEGEND

APC-1	2' X 2' ACOUSTICAL PANEL CEILING		LIGHT FIXTURE (REFERENCE E-SERIES DWGS)
APC-2	2' X 2' WASHABLE ACOUSTICAL PANEL CEILING		RETURN AIR (REFERENCE M-SERIES DWGS)
APC-3	2' X 4' ACOUSTICAL PANEL CEILING		
Walls to Deck			SUPPLY AIR (REFERENCE M-SERIES DWGS)

RQAW

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Designed By: CPW
Drawn By: CPW
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MICHAEL FRANCIS GARDNER
REGISTERED
No. 10700168
STATE OF INDIANA
ARCHITECT

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UNIT A
UNIT B

N

SECOND FLOOR REFLECTED CEILING PLAN

AC-102

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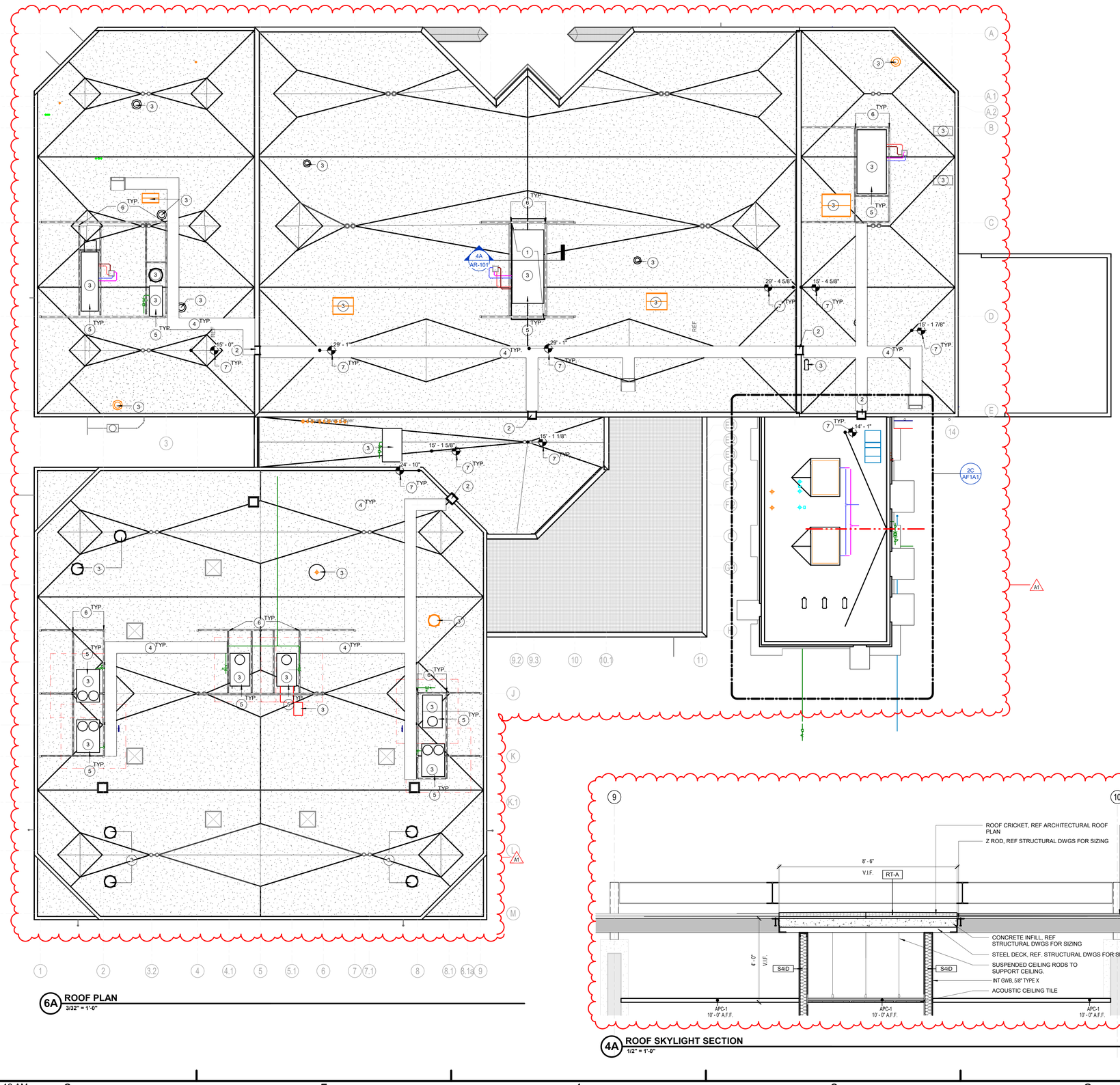
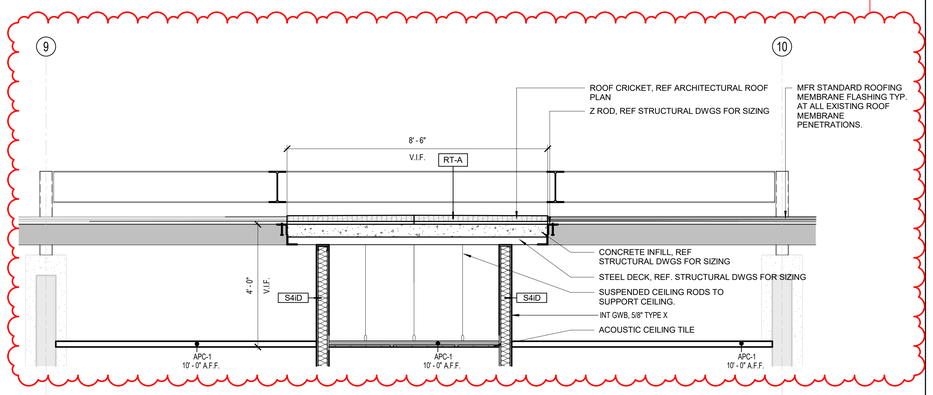


6A **ROOF PLAN**
3/32" = 1'-0"



4A **ROOF SKYLIGHT SECTION**
1/2" = 1'-0"

GENERAL ROOF PLAN NOTES

1. TAPERED INSULATION SHALL BE INSTALLED TO ACHIEVE POSITIVE DRAINAGE WITH A MINIMUM RESULTANT SLOPE OF 1/4" PER FOOR, UNLESS INDICATED OTHERWISE.
2. LOW SLOPE ROOF AREAS SHALL HAVE A MINIMUM OF 4" RIGID INSULATION OVER ROOF DECK. SADDLES, CRICKETS, AND SLOPE PORTIONS OF FLAT ROOF DECK SHALL BE FORMED BY TAPERED INSULATION. AREAS WHERE TAPERED INSULATION IS ANTICIPATED HAVE BEEN INDICATED, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. IT IS CONTRACTOR'S RESPONSIBILITY TO PROVIDE SLOPED SURFACES TO ACHIEVE PROPER DRAINAGE.
3. ROOF PENETRATIONS AND EQUIPMENT SHOWN SHALL NOT BE CONSIDERED ALL INCLUSIVE. COORDINATE WITH MECHANICAL, PLUMBING AND ELECTRICAL DOCUMENTS TO CONFIRM PENETRATIONS AND EQUIPMENT LOCATIONS. FLASH ALL ROOF PENETRATIONS IN ACCORDANCE WITH ROOFING MANUFACTURER'S RECOMMENDATIONS. PROVIDE CRICKETS TO ALLOW FOR PROPER DRAINAGE AROUND UNITS.
4. ROOF WALKWAY PADS OR BLOCKS SHALL BE INSTALLED IN ACCORDANCE WITH ROOFING MANUFACTURER'S RECOMMENDATION WHERE INDICATED AND AROUND ENTIRE PERIMETER OF ROOFTOP EQUIPMENT.
5. ALL ROOF SYSTEMS ARE "ROOF TYPE A" EXCEPT WHERE NOTED OTHERWISE.

5.4.140 - ROOF PLAN NOTES

Key	Note
1	NEW ROOF CRICKETS TO INFILL EXISTING SKYLIGHT, MAINTAIN POSTIVE ROOF DRAINAGE AND PROPERLY SEAL AROUND INFILL.
2	ROOF ACCESS LADDER(S), MANUFACTURER TO VERIFY PARAPET HEIGHT IN FIELD, PRIOR TO FABRICATION. REF DETAIL SC / A-601.
3	NEW MEP EQUIPMENT, REFER TO S-SERIES AND M-SERIES DRAWINGS FOR EXACT EXTENT AND LOCATIONS.
4	RUBBER MEMBRANE APPROVED ROOF WALK PADS TO ALL MECHANICAL EQUIPMENT SHOWN ON ROOF.
5	PROVIDE ROOF CRICKETS FOR ALL NEW ROOF CURBS ASSOCIATED WITH MECH EQUIPMENT, DUCTWORK PENETRATIONS, AND PIPING PENETRATIONS.
6	MFR STANDARD ROOFING MEMBRANE FLASHING TYP. AT ALL EXISTING ROOF MEMBRANE PENETRATIONS.
7	VERIFY ROOF ELEVATION IN FIELD PRIOR TO FABRICATION.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

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UNIT A
UNIT B

N

ARCHITECTURAL ROOF PLAN

AR-101

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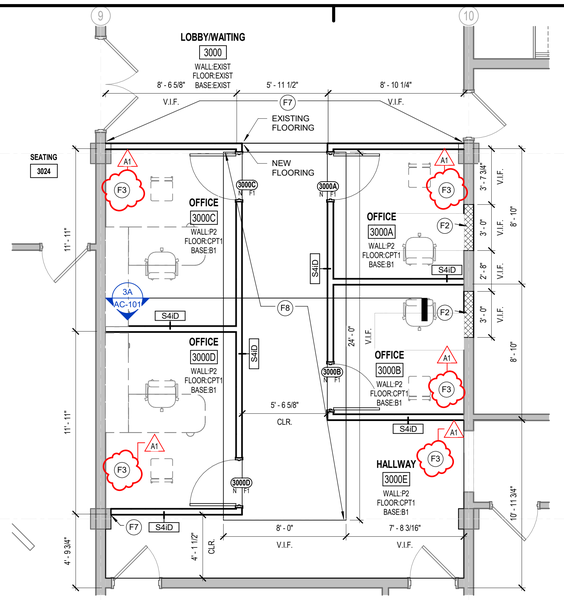
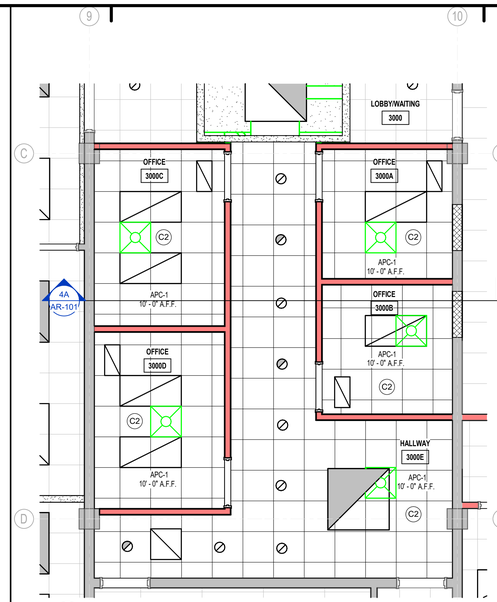


6D **NEW OFFICES SECOND FLOOR PLAN**
1/4" = 1'-0"



4D **NEW OFFICES REFLECTED CEILING PLAN**
1/4" = 1'-0"

DOOR & FRAME SCHEDULE

MARK	DOOR PANEL TYPE	MATL	GLA Z	SIZE H	SIZE W	SIZE TH	FRAME MARK	FRAME MATL	FRAME GLA Z	LABEL	HDWR SET	MARK	Comments
1024	OH	ST	--	10' - 0"	10' - 0"	2"	--	ST	--		95.90.OHD	1024	DPS
1026	N	HM	SG2	7' - 0"	3' - 0"	1 3/4"	F2	EXIST	EXIST		DURING CONSTRUCTION	1026	REPLACE DETENTION GRADE DOOR PANEL WITHIN EXISTING DOOR FRAME.
1037	F	HM	--	7' - 0"	6' - 0"	1 3/4"	F1	HM	--		15.04/10CVR.43.1.DP S	1037	PANIC HARDWARE
1038.1	F	HM	--	7' - 0"	6' - 0"	1 3/4"	F1	HM	--		15.04/10CVR.43.1.DP S	1038.1	PANIC HARDWARE
1038.2	F	HM	--	7' - 0"	3' - 0"	1 3/4"	F2	HM	--		15.04/10CVR.43.1.DP S	1038.2	PANIC HARDWARE
1039.1	F	HM	--	7' - 0"	6' - 0"	1 3/4"	F1	HM	--		15.04/10CVR.43.1.DP S	1039.1	PANIC HARDWARE
1039.2	F	HM	--	7' - 0"	3' - 0"	1 3/4"	F2	HM	--		15.04/10CVR.43.1.DP S	1039.2	PANIC HARDWARE
1207	N	HM	SG2	7' - 0"	3' - 0"	1 3/4"	F2	EXIST	EXIST		DURING CONSTRUCTION	1207	REPLACE DETENTION GRADE DOOR PANEL WITHIN EXISTING DOOR FRAME.
1216	N	HM	SG2	7' - 0"	3' - 0"	1 3/4"	F2	EXIST	EXIST		DURING CONSTRUCTION	1216	REPLACE DETENTION GRADE DOOR PANEL WITHIN EXISTING DOOR FRAME.
3000A	N	WD	TG	7' - 0"	3' - 0"	1 3/4"	F1	HM	--		55.05.50	3000A	
3000B	N	WD	TG	7' - 0"	3' - 0"	1 3/4"	F1	HM	--		55.05.50	3000B	
3000C	N	WD	TG	7' - 0"	3' - 0"	1 3/4"	F1	HM	--		55.05.50	3000C	
3000D	N	WD	TG	7' - 0"	3' - 0"	1 3/4"	F1	HM	--		55.05.50	3000D	

GENERAL NOTES

A. THIS DOOR SCHEDULE(S) IS FURNISHED FOR WHATEVER ASSISTANCE IT MAY AFFORD THE CONTRACTOR. DO NOT CONSIDER IT AS ENTIRELY INCLUSIVE. CAREFULLY EXAMINE THE DRAWINGS (ESPECIALLY THE FLOOR PLANS) AND THE SPECIFICATIONS TO DETERMINE THE EXTENT OF DOOR AND FRAME QUANTITIES REQUIRED (INCLUDING INTERIOR BORROWED LITE OR SIDELITE OPENINGS). SHOULD ANY PARTICULAR DOOR, FRAME, OR INTERIOR BORROWED LITE OR SIDELITE SHOWN ON THE DRAWINGS BE INADVERTENTLY OMITTED FROM THIS SCHEDULE, SUPPLY SAME AS REQUIRED FOR SIMILAR OPENINGS.

B. VERIFY LOCKSETS WITH THE OWNER DURING SUBMITTALS.

C. ALL COMMERCIAL 4'-0" WIDE DOORS TO HAVE CONTINUOUS HINGES. ALL SECURITY 4'-0" WIDE DOORS TO HAVE 4 HINGES

ABBREVIATIONS

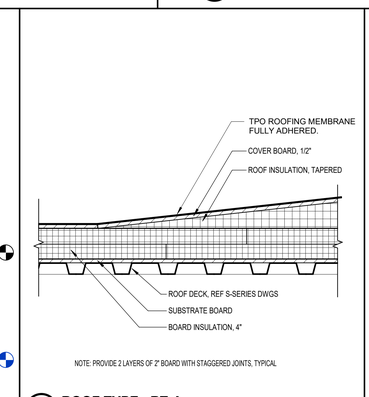
AL	ALUMINUM	TG	1/4" TEMPERED GLAZING
HM	HOLLOW METAL	IG	1" INSULATED GLAZING
SHM	SECURITY HOLLOW METAL	LG	LAMINATED GLAZING
ST	STEEL	FG	FROSTED GLAZING
WD	WOOD	SP	SPANDREL PANEL

PLAN NOTES

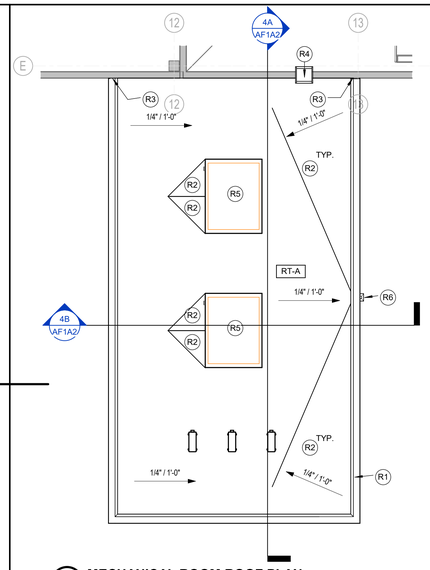
Key	Note
C1	PAINT STRUCTURE ABOVE.
C2	NEW CONSTRUCTION 2X2 ACT CEILINGS USED FOR SKYLIGHT INFILL, OFFICES, AND HALLWAY. REFER TO M SERIES, S SERIES, AND LIGHTING FOR COORDINATION.
E1	SPLIT FACE CMU, ARCHITECT TO SELECT COLOR.
E2	INSULATED METAL PANEL, ARCHITECT TO SELECT COLOR.
E3	HOLLOW METAL DOOR AND FRAME, SEE DOOR SCHEDULE.
E4	MANUFACTURED METAL COPING, ARCHITECT TO PICK COLOR.
E5	EXPANSION JOINT.
E6	ROOF SCUPPER AND DOWNSPOUT, REFER TO P-SERIES DRAWINGS.
F1	INFILL WALL OPENING WITH NEW OVERHEAD DOOR.OVERHEAD COILING DOOR ASSEMBLY WITH ELECTRONICALLY MOTORIZED OPERATOR.
F2	INFILL EXISTING WALL OPENING WITH NEW CMU. PAINT FINISH TO MATCH ADJACENT WALL CONDITIONS.
F3	PREP AND PREPARE SUBFLOOR AS REQUIRED FOR INSTALLATION OF NEW CARPET.
F4	2-HOUR FIRE BARRIER.
F5	INFILL EXISTING LOUVER OPENINGS WITH NEW MASONRY INFILL PAINT NEW MASONRY TO MATCH ADJACENT EXISTING PRECAST EXTERIOR WALLS.
F6	REPLACE EXISTING SINKS AND COUNTERTOP WITH NEW, SS1 COUNTERTOP AND UNDERMOUNTED SINKS. REFER TO P-SERIES DRAWINGS.
F7	ALIGN NEW STUD WALL WITH FACE OF STRUCTURAL COLUMN.
F8	SEE S SERIES FOR FLOOR INFILL. PREP AND PREPARE NEW SUBFLOOR FOR CARPET FINISH.
F9	6" STEEL BOLLARD, CONCRETE FILLED. TO BE PRIMED AND PAINTED SAFTEY YELLOW.
R1	MANUFACTURED METAL COPING, ARCHITECT TO PICK COLOR.
R2	ROOF CRICKETS TO MAINTAIN POSITIVE ROOF DRAINAGE.
R3	EXPANSION JOINT.
R4	ROOF TO ROOF LADDER.
R5	CHILLERS, REFER TO M SERIES DRAWINGS.
R6	ROOF SCUPPER AND DOWNSPOUT, REFER TO ARCHITECTURAL ROOF PLAN AND DETAIL 1A / AF1A3.

INTERIORS FINISH LEGEND

CARPET	
CPT1	MFR: PATCRAFT FINISH / STYLE SELECTED FROM MFR STANDARD RANGE COLOR SELECTED FROM MFR STANDARD RANGE
SEALED CONCRETE	
SC1	REFER TO SPECIFICATIONS
PAINT	
P1	MFR: SHERWIN-WILLIAMS COLOR SELECTED FROM MFR STANDARD RANGE FINISH SELECTED FROM MFR STANDARD RANGE
P2	MFR: SHERWIN-WILLIAMS COLOR SELECTED FROM MFR STANDARD RANGE FINISH SELECTED FROM MFR STANDARD RANGE
VINYL BASE	
B1	MFR: TARKETT COLOR SELECTED FROM MFR STANDARD RANGE
SOLID SURFACE	
SS1	MFR: CORIAN COLOR SELECTED FROM MFR STANDARD RANGE



3E **HOLLOW METAL FRAME ELEVATIONS**
1/4" = 1'-0"

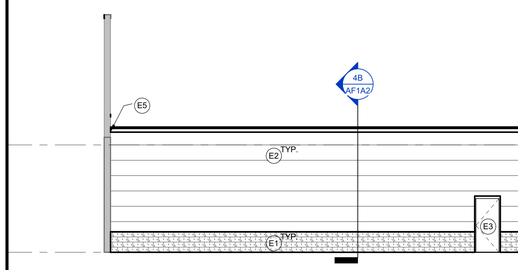


2C **MECHANICAL ROOM ROOF PLAN**
1/8" = 1'-0"

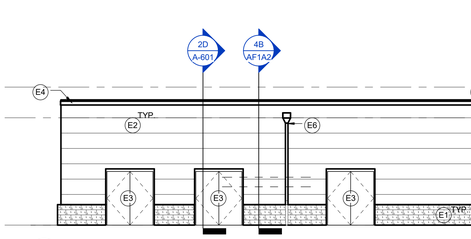
6C **SOUTH ELEVATION**
1/8" = 1'-0"

NOTE: PROVIDE 2 LAYERS OF 2" BOARD WITH STAGGERED JOINTS, TYPICAL

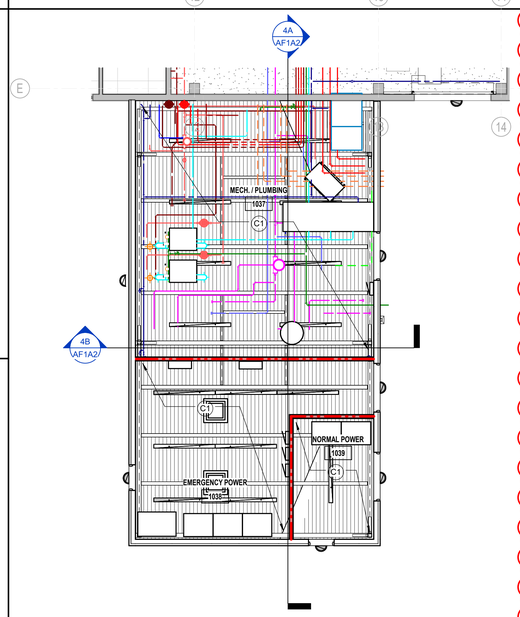
5C **ROOF TYPE - RT-A**
1 1/2" = 1'-0"



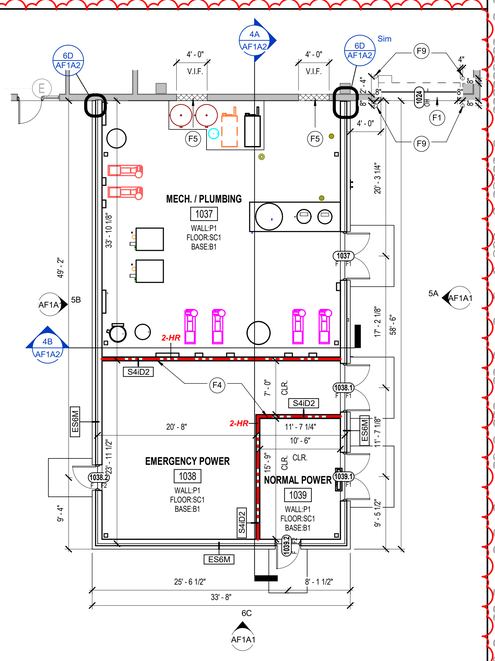
5B **WEST ELEVATION**
1/8" = 1'-0"



5A **EAST ELEVATION**
1/8" = 1'-0"



3A **MECHANICAL ROOM REFLECTED CEILING PLAN**
1/8" = 1'-0"



2A **MECHANICAL ROOM FIRST FLOOR PLAN**
1/8" = 1'-0"

GENERAL PLAN NOTES

(A) DRAWINGS ESTABLISH THE DESIGN INTENT OF WORK TO BE PERFORMED. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HIGHEST INDUSTRY STANDARDS. ALL PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL TRADES SHALL CAREFULLY COORDINATE WORK OF ALL OTHER TRADES. ANY DISCREPANCIES OR CONFLICTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND THE OWNER PRIOR TO FABRICATION OR INSTALLATION.

(B) CONTRACTORS SHALL BE RESPONSIBLE FOR CHECKING THE CONTRACT DOCUMENTS FOR COORDINATION BETWEEN ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, ELECTRICAL, PLUMBING, SECURITY AND LANDSCAPING. CONTRACTORS SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS AND FOR VERIFYING THEM WITH THE CONTRACT DOCUMENTS. ANY DISCREPANCY IN THE CONTRACT DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE NOTICE OF THE ARCHITECT PRIOR TO ANY FABRICATION OR CONSTRUCTION.

(C) PLAN NOTES INDICATE ONE GRAPHIC REPRESENTATION TYPICAL. THE CONTRACTOR SHALL USE THE GRAPHIC REPRESENTATIONS FOR THE COUNT, NOT THE KEYED PLAN NOTES. THE ABSENCE OF A KEYED PLAN NOTE ON THE PLAN DOES NOT ABSOLVE THE CONTRACTOR FROM PROVIDING THE FEATURE GRAPHICALLY REPRESENTED ON THE DRAWING.

(D) ALL DIMENSIONS SHOWN ARE TO FACE OF STUD OR MASONRY, UNLESS NOTED OTHERWISE. DIMENSIONS DESIGNATED AS "CLR OR "CLEAR" INDICATE A CLEAR DIMENSION FROM FACE OF FINISH TO FACE OF FINISH. DIMENSIONS OF EXTERIOR WALLS ARE TO OUTSIDE EDGE OF EXTERIOR FINISH.

(E) DIMENSIONS FOR ALL OPENINGS FOR MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL ETC. SHALL BE COORDINATED WITH THE VENDORS AND SHALL BE FIRE STOPPED AT EACH FLOOR/ROOF AND RATED WALL PENETRATION PER THE CODE COMPLIANCE PLAN AND APPLICABLE CODES.

(F) PROVIDE BRACING AND BLOCKING AS REQUIRED IN WALLS SUPPORTING CASEWORK, TACKBOARDS, MARKERBOARDS, TELEVISIONS, RESTROOM ACCESSORIES, AND ANY ADDITIONAL WALL MOUNTED EQUIPMENT. COORDINATE WALL MOUNTED EQUIPMENT WITH MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS.

(G) ALL COMMERCIAL DOOR FRAMES ARE LOCATED 4" FROM ADJACENT WALL, UNLESS NOTED OTHERWISE.

(H) ALL EXPOSED OUTSIDE CORNERS OF CMU SHALL BE BULLNOSE.

(I) SEAL ALL JOINTS BETWEEN DISSIMILAR MATERIALS.

(J) ALL GYPSUM WALLBOARD IS 5/8" TYPE "X", UNLESS NOTED OTHERWISE.

(K) ALL INTERIOR STUD WALLS ARE TYPE "SAVO" UNLESS NOTED OTHERWISE.

(L) BASE ELEVATION OF ADDITION IS 0'-0" = XXX (UNITED STATES GEOLOGICAL SURVEY DATA). COORDINATE WITH CIVIL DRAWINGS

(M) ALL WALLS GOING TO DECK ARE TO BE SECURED TO DECK/STRUCTURE ABOVE AS REQUIRED. PROVIDE ADDITIONAL BRACING AS REQUIRED.

(N) ALL WALLS THAT HAVE THE DESIGNATION "C" AND ARE A SPACE WITH NO CEILING WILL BE 10'FT TALL.

(O) ALL CORRIDOR SURFACES SHALL BE FLUSH. AT JUNCTIONS OF MASONRY AND STUD WALLS, MASONRY WALL LOCATIONS SHALL HOLD TRUE AND MTL STUDS SHALL BE MOVED AS REQUIRED TO PROVIDE FLUSH CONNECTION BETWEEN GYP. BD. AND MASONRY. VERIFY NO. OF LAYERS OF GYP. BD. W/ WALL TYPES. RELOCATION OF WALL SHALL BE APPROVED BY ARCHITECT PRIOR TO CONST. AT TRANSITIONS FROM 1 LAYER GYP. BD. TO 2 LAYERS OF GYP. ON MTL STUDS A MIN. CORRIDOR WIDTH OF 5'-0" FROM FACE OF STUDS SHALL BE MAINTAINED.

(P) ALL BUILDING MATERIALS (INCLUDING BUT NOT LIMITED TO METAL FLASHING, VAPOR BARRIERS, AIR/WATER RESISTANT BARRIERS, THRU-WALL FLASHING, ETC.) SHALL BE LAPPED TO SHED WATER TO THE OUTSIDE OF THE BUILDING ENVELOPE.

(Q) SEE CODE COMPLIANCE PLAN G-101 AND G-102 FOR FIRE RATED WALLS.

(R) SEE WALL TYPE LEGEND A-002 AND A-003 FOR WALLS AND CONSTRUCTION REQUIREMENTS.

(S) SEE STRUCTURAL/ARCHITECTURAL FOR CONTROL/EXPANSION JOINT LOCATIONS.

(T) SLOPE CONCRETE SLABS TO FLOOR DRAINS AT 1/8" MIN. PER FT.

(U) ALL EXPOSED PIPES, DUCTS CONDUITS IN SECURITY AREAS SHALL BE ENCLOSED WITH SECURITY BULKHEAD/COVERPLATES. PROVIDE TAMPER RESISTANT ANCHORS.

(V) WHEREVER VOLUME DAMPERS (V.D.) ARE LOCATED ABOVE SECURITY CEILINGS, PROVIDE 2'-0"x2'-0" ACCESS PANELS IN THE CEILING. REFER TO MECHANICAL DRAWINGS FOR NUMBER AND LOCATION. COORDINATE WITH ELECTRICAL DRAWINGS. PANELS SHALL BE SECURITY TYPE TO MATCH ADJACENT CEILING.

(W) ALL CHASE WALLS SHALL BE FULL HEIGHT UNLESS NOTED OTHERWISE.

(X) ALL INTERIOR AND EXTERIOR EXPOSED STEEL TO BE PAINTED. COLOR TO BE SELECTED BY ARCHITECT.

(Y) SUFFIXES WITHIN SPECIFICATION REFERENCES (I.e. 10 11 33.W or 10 11 33.M) IN THE DRAWINGS CAN BE IGNORED. THESE SUFFIXES ARE A SORTING MECHANISM USED IN PREPARING THESE DRAWINGS.

(Z) ALL ROUGH OPENINGS (R.O.) SHALL BE VERIFIED WITH SELECTED WINDOW AND DOOR MANUFACTURER. ANY CHANGES FROM THE BASIS OF DESIGN WILL BE COORDINATED WITH ALL TRADES AND ROUGH OPENINGS ADJUSTED AS REQUIRED. ANY DISCREPANCIES FOUND WILL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO CONSTRUCTION. ANY CHANGES AND REVISIONS WILL BE AT CONTRACTORS' EXPENSE.

(AA) ALL CONCEALED PLUMBING FIXTURES IS REQUIRED TO BE COORDINATED WITH SELECTED MANUFACTURERS. ADJUST WALLS AS REQUIRED TO ACCOMMODATE THE INSTALLATION OF THE SELECTED MANUFACTURERS PLUMBING FIXTURES. ANY CHANGES AND REVISIONS WILL BE DONE AT CONTRACTORS' EXPENSE.

(BB) BUILDING ENVELOPE CONTINUITY WILL BE MONITORED BY A COMMISSIONING AGENT. TRANSITIONS BETWEEN BUILDING SYSTEMS (I.E. ROOF TO WALL, CURTAINWALL TO EXTERIOR WALL ETC.) SHALL INCLUDE CONTINUOUS AIRTIGHT AIR BARRIER SYSTEM. ALL PENETRATIONS IN THE BUILDING ENVELOPE (INCLUDING WINDOWS, DOORS, STOREFRONT, ETC.) SHALL BE SEALED WITH AIR TIGHT WEATHER SEALS. AT ANY LOCATION WHERE MASONRY TIES OR OTHER MATERIALS PENETRATE THE AIR BARRIER, EACH PENETRATION SHALL BE SEALED AIRTIGHT.

(CC) ALL EXPOSED FASTENERS IN DETENTION/SECURITY AREAS (INCLUDING BUT NOT LIMITED TO DOOR HARDWARE, ELECTRICAL, PLUMBING, MECHANICAL ETC.) ARE TO BE SECURITY TAMPER RESISTANT TYPE.

(DD) ALL EXPOSED STRUCTURE TO BE PRIMED AND PAINTED WITH HIGH PERFORMANCE PAINT.

(EE) NON-PREFINISHED INTERIOR SURFACES (MASONRY/DRYWALL/STEEL) IN DETENTION AREAS SHALL RECEIVE HIGH PERFORMANCE EPOXY COATING, AND SHOULD BE PROTECTED DURING CONSTRUCTION. ANY DAMAGE TO PREFINISHED SURFACES DURING CONSTRUCTION SHALL BE REPAIRED AT CONTRACTORS EXPENSE.

(FF) PROVIDE SHOWER CURTAINS IN ALL SHOWER LOCATIONS.

(GG) ALL ADA SHOWER UNITS ARE TO RECEIVE BUILT IN SHOWER SEAT AND CODE COMPLIANT GRAB BARS, UNLESS NOTED OTHERWISE

(HH) ALL ELECTRICAL DEVICES TO BE COORDINATED WITH ALL CASEWORK LOCATION. ADJUST DEVICE LOCATIONS AS REQUIRED TO AVOID CONFLICT. ANY CONFLICT NEEDS TO BE DIRECTED AND APPROVED BY ARCHITECT/ENGINEER PRIOR TO INSTALLATION.

(II) PROVIDE STAINLESS STEEL FINISH PANEL ABOVE ALL SECURITY SHOWER UNITS. EXTEND TO CEILING FLUSH ON ALL SIDES. SECURE AS REQUIRED WITH SECURITY FASTENERS.

(JJ) PROVIDE WATER MANAGEMENT SYSTEM AT DETENTION PLUMBING FIXTURES - SEE PLUMBING.

(KK) SECURITY PLUMBING FIXTURE ACCESSORIES: ALL SECURITY PLUMBING TOILET/SINK COMBO UNITS ARE TO RECEIVE A SINGLE LIGATURE PROOF HOOK AND STAINLESS STEEL MIRROR. ALL SECURITY PLUMING ADA TOILET/SINK COMBO UNITS ARE TO RECEIVE A SINGLE LIGATURE PROOF HOOK, (2) STAINLESS STEEL MIRRORS, 42" HORIZONTAL AND 18" VERTICAL LIGATURE PROOF GRAB BARS, SECURITY TOILET PAPER HOLDER RECESSED IN THE ADJACENT WALL. ALL NON ADA SECURITY SHOWERS ARE TO RECEIVE A SINGLE LIGATURE PROOF HOOK AND A SHOWER CURTAIN. ALL ADA SECURITY SHOWERS ARE TO RECEIVE A SINGLE LIGATURE PROOF HOOK, A SHOWER CURTAIN, AND ADA HORIZONTAL AND VERTICAL GRAB BARS. REVIEW PLANS FOR ADDITIONAL ACCESSORIES.

(LL) ALL COMMERCIAL AND SECURITY HOLLOW METAL FRAMES IN STUD WALL CONSTRUCTION TO BE WRAP AROUND WALL DEPTH. ALL COMMERCIAL HOLLOW METAL FRAMES IN CMU CONSTRUCTION TO BE 5-3/4" DEEP CENTRALLY LOCATED IN THE WALL ASSEMBLY WITH BULLNOSE CMU CORNERS. ALL SECURITY HOLLOW METAL FRAMES IN CMU/PRECAST WALLS TO BE 7-5/8" DEEP, CENTRALLY LOCATED OR AT EXTERIOR APPLICATION 7" FROM THE EXTERIOR FACE.

(MM) PROVIDE ADDITIONAL ACCESS PANELS AT ALL LOCATIONS REQUIRED FOR MAINTENANCE. COORDINATE WITH MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION CONTRACTOR. PROVIDE SECURITY ACCESS PANELS IN SECURITY AREAS. SEE AF103 AND AF104 FOR SECURITY AREAS.

(NN) SECURITY SEALANT: PROVIDE SECURITY TYPE SEALANT AT ALL DISSIMILAR MATERIAL IN SECURITY AREAS. SEE AF103 AND AF104 FOR SECURITY AREAS. ALL MASONRY CONTROL JOINTS ARE TO RECEIVE FLEXIBLE SECURITY SEALANTS IN SECURITY AREAS. ALL RATED ASSEMBLIES ARE TO RECEIVE RATED SECURITY SEALANT FROM THE SAME MANUFACTURER. SECURITY SEALANT TO BE TI 10 ABOVE FINISHED LEVEL WHERE INMATES WILL BE PRESENT. @ 10' AFF PROVIDE COMMERCIAL GRADE JOINT SEALANT FOR RATED JOINT SYSTEM. ALL STEEL CELLS TO FLOOR JOINTS SHALL HAVE EMPOXY OR EQUAL SECURITY CAULKING.

(OO) PROVIDE 4x4 8" STEEL PIPE BOLLARD FILLED WITH CONCRETE TO 3'-6" A.F.F. BOLLARDS ARE TO BE PROVIDED AT EACH OVERHEAD DOOR LOCATION, TWO AT EACH JAMB ON BOTH EXTERIOR AND INTERIOR SIDE OF THE JAMB. PAINT EACH BOLLARD SAFETY YELLOW

(PP) PROVIDE MOISTURE RESISTANT GYPSUM BOARD AT ALL TILE WET WALL LOCATIONS

(QQ) MASONRY CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CLEAN AND TOOLED JOINTS AT ALL LOCATIONS, INCLUDING BUT NOT LIMITED TO DETENTION AREAS. THE MASONRY CONTRACTOR WILL ALSO BE RESPONSIBLE FOR CLEAN AND TOOLED JOINTS AT BASE OF MASONRY AND SLAB CONDITION. ANY POCKETS OR GAPS SHALL REQUIRE SECURITY CAULKING IN DETENTION AREAS AND SHALL BE THE RESPONSIBILITY OF THE MASONRY CONTRACTOR.

(RR) CLEAN ALL WALL SURFACES PRIOR TO FINISHING AND ANY GROUT OR DEBRIS STUCK ON WALL SURFACES MUST BE REMOVED PRIOR TO APPLYING FINISHES. ANY DEBRIS AND GROUT WHICH IS LEFT AND PAINTED OVER WILL BE REQUIRED TO BE REMOVED AND REFINISHED AT CONTRACTORS EXPENSE.

(SS) ALL COMMERCIAL PLUMBING ADA FIXTURES ARE TO RECEIVE ALL REQUIRED GRAB BARS AS OUTLINED BY ICC A117.1 (MOST CURRENT EDITION AT THE BEGINNING OF PROJECT CONSTRUCTION). INCLUDE ALL HORIZONTAL AND VERTICAL GRAB-BARS. PROVIDE BLOCKING OR MANUFACTURED EQUIVALENT AT ALL GRAB BAR LOCATIONS. ALL SECURITY GRAB-BARS TO RECEIVE PRE-MANUFACTURED ANTI-LIGATURE PLATE WITH WEEPS. HEIGHT OF ALL GRAB BARS SHALL BE PER ICC A117.1 (36" TO TOP OF GRIPPING SURFACE).

(TT) ALL EXPANSION JOINT COVERS THROUGH RATED WALL/CEILING/FLOOR ASSEMBLIES SHALL MEET THE RATING REQUIREMENTS OF EACH ASSEMBLY PER THE FIRE AND LIFE SAFETY PLANS.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929

Designed By: CPW

Drawn By: CPW

Checked By: SP

Date: 11.21.2025

MICHAEL FRANCIS GARDNER No. 10700168 STATE OF INDIANA ARCHITECT

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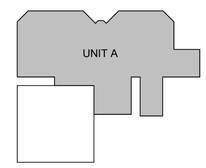
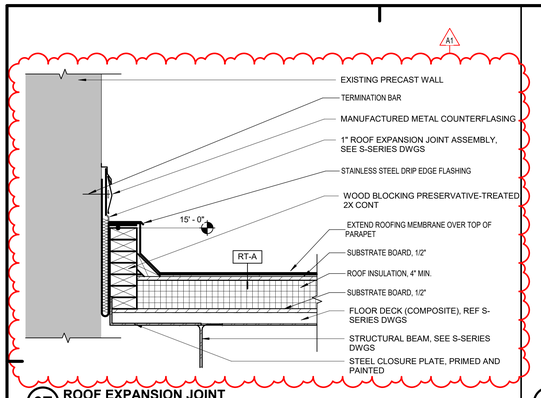


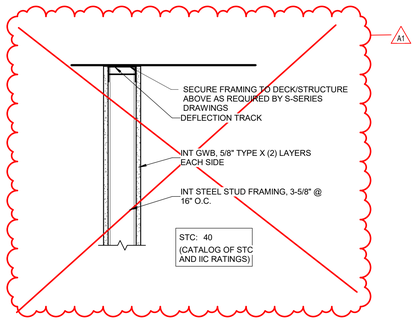
NEW CONSTRUCTION UNIT PLANS

AF1A1

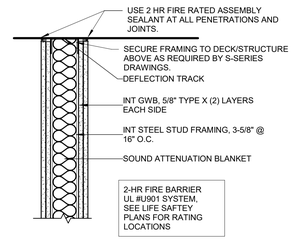
12/5/2025 8:43:04 AM



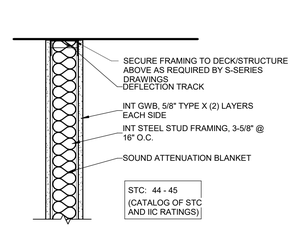
6E ROOF EXPANSION JOINT
1 1/2" = 1'-0"



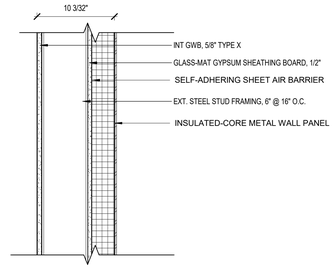
5E S4-D WALL TYPE
1 1/2" = 1'-0"



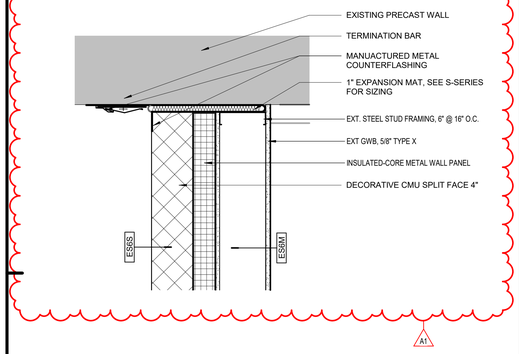
3E S4iD2 WALL TYPE
1 1/2" = 1'-0"



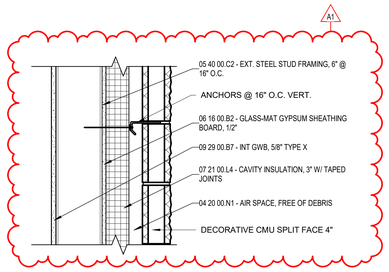
2E S4iD WALL TYPE
1 1/2" = 1'-0"



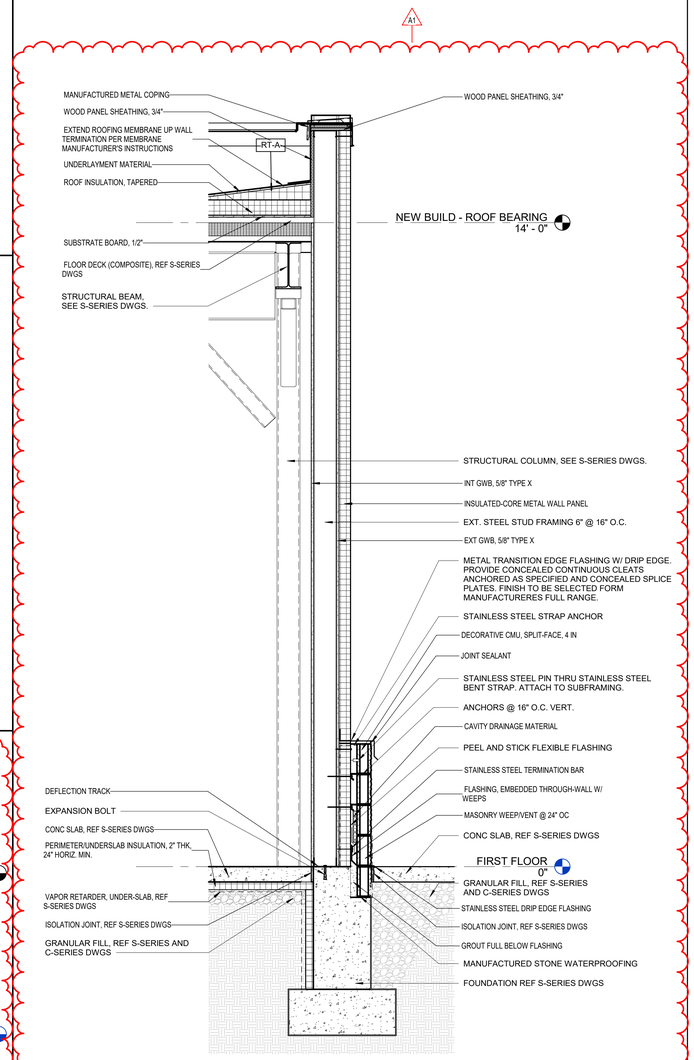
1E ES6M
1 1/2" = 1'-0"



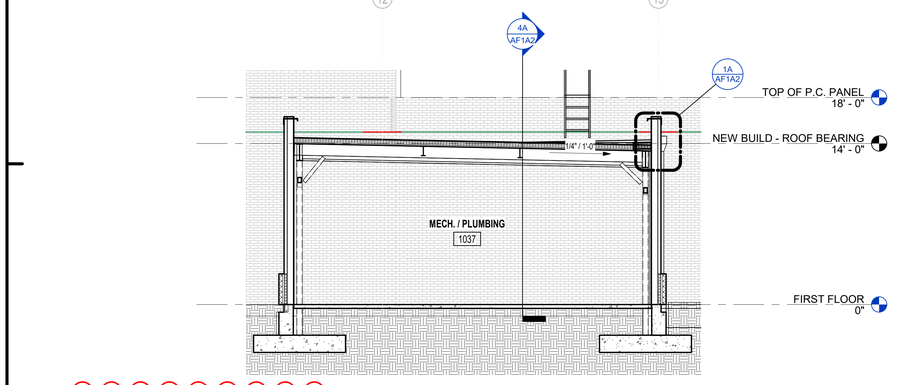
6D PLAN DETAIL EXPANSION JOINT
1 1/2" = 1'-0"



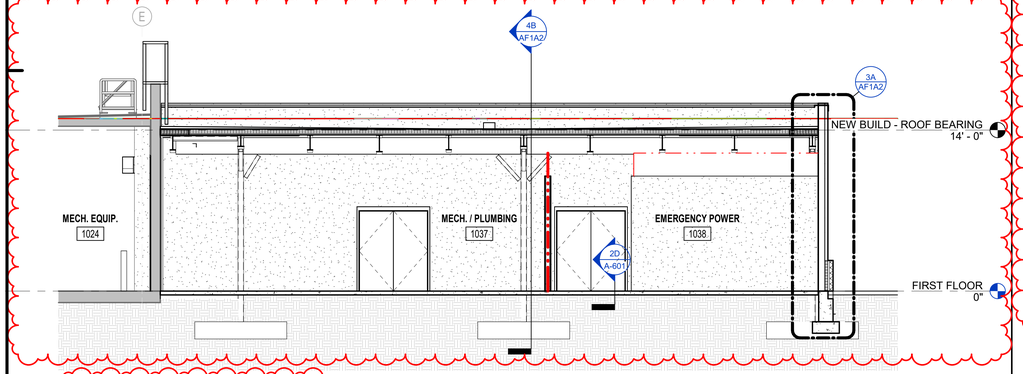
5D ES6S WALL TYPE
1 1/2" = 1'-0"



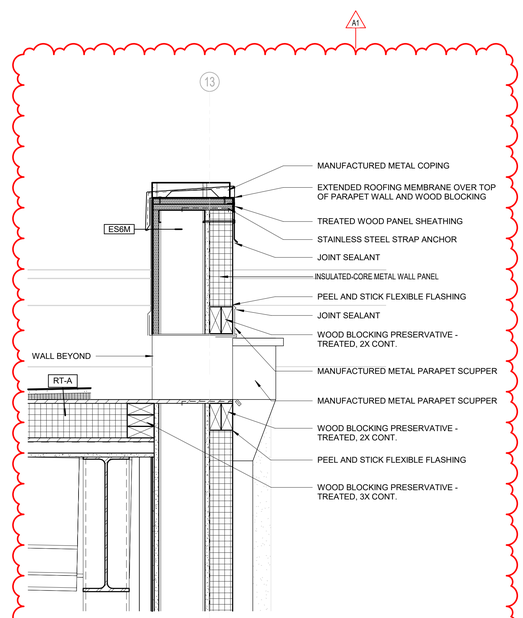
3A MECHANICAL ROOM WALL SECTION
3/4" = 1'-0"



4B MECHANICAL ROOM SECTION 2
3/16" = 1'-0"



4A MECHANICAL ROOM SECTION 1
3/16" = 1'-0"



1A THROUGH WALL SCUPPER DETAIL
1 1/2" = 1'-0"

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929
Designed By: CPW
Drawn By: CPW
Checked By: SP
Date: 11.21.2025

MICHAEL FRANCIS GARDNER
No. 10700168
STATE OF INDIANA
REGISTERED ARCHITECT

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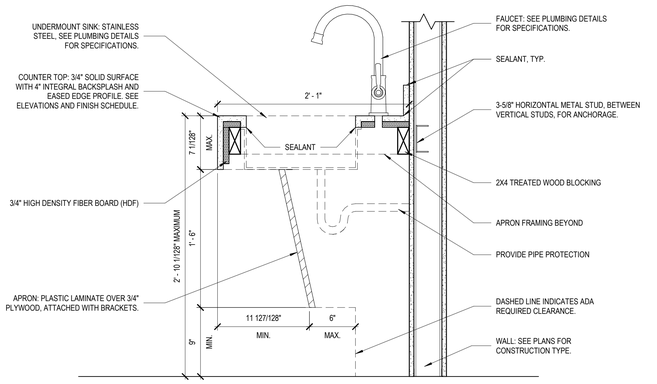
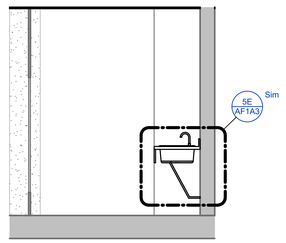
NEW CONSTRUCTION UNIT PLANS

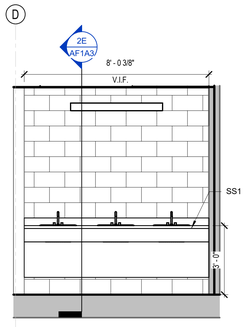
AF1A2



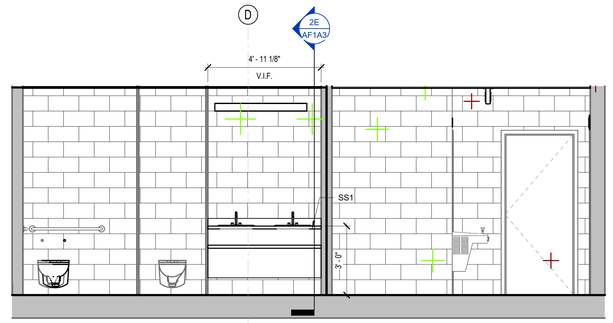
5E CASEWORK (BASE) - UNDERMOUNT SINK (ADA) TYP.
1 1/2" = 1'-0"



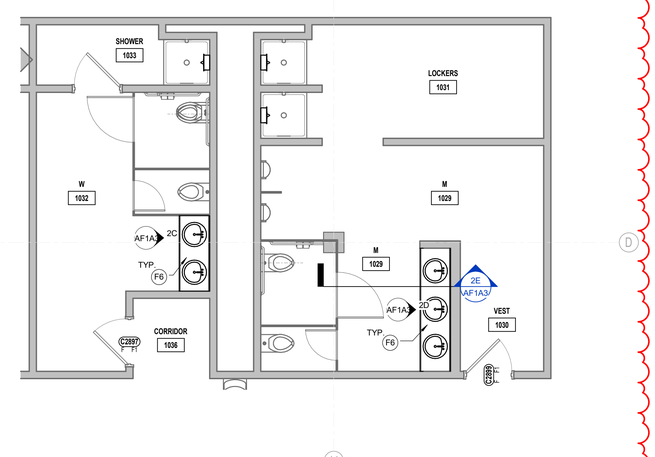
2E COUNTER TOP SECTION TYP.
3/8" = 1'-0"



2D ARCHITECTURE INTERIOR ELEVATION 2
3/8" = 1'-0"



2C ARCHITECTURE INTERIOR ELEVATION 1
3/8" = 1'-0"



2A LOCKER ROOMS NEW CONSTRUCTION
1/4" = 1'-0"

GENERAL NOTES

A. THIS DOOR SCHEDULE(S) IS FURNISHED FOR WHATEVER ASSISTANCE IT MAY AFFORD THE CONTRACTOR. DO NOT CONSIDER IT AS ENTIRELY INCLUSIVE. CAREFULLY EXAMINE THE DRAWINGS (ESPECIALLY THE FLOOR PLANS) AND THE SPECIFICATIONS TO DETERMINE THE EXTENT OF DOOR AND FRAME QUANTITIES REQUIRED (INCLUDING INTERIOR BORROWED LITE OR SIDELITE OPENINGS). SHOULD ANY PARTICULAR DOOR, FRAME, OR INTERIOR BORROWED LITE OR SIDELITE SHOWN ON THE DRAWINGS BE INADVERTENTLY OMITTED FROM THIS SCHEDULE, SUPPLY SAME AS REQUIRED FOR SIMILAR OPENINGS.

B. VERIFY LOCKSETS WITH THE OWNER DURING SUBMITTALS.

C. ALL COMMERCIAL 4'-0" WIDE DOORS TO HAVE CONTINUOUS HINGES. ALL SECURITY 4'-0" WIDE DOORS TO HAVE 4 HINGES

ABBREVIATIONS

AL	ALUMINUM	TG	1/4" TEMPERED GLAZING
HM	HOLLOW METAL	IG	1" INSULATED GLAZING
SHM	SECURITY HOLLOW METAL	LG	LAMINATED GLAZING
ST	STEEL	FG	FROSTED GLAZING
WD	WOOD	SP	SPANDREL PANEL

PLAN NOTES

Key	Note
C1	PAINT STRUCTURE ABOVE.
C2	NEW CONSTRUCTION 2X2 ACT CEILINGS USED FOR SKYLIGHT INFILL, OFFICES, AND HALLWAY. REFER TO M SERIES, S SERIES, AND LIGHTING FOR COORDINATION.
E1	SPLIT FACE CMU, ARCHITECT TO SELECT COLOR.
E2	INSULATED METAL PANEL, ARCHITECT TO SELECT COLOR.
E3	HOLLOW METAL DOOR AND FRAME, SEE DOOR SCHEDULE.
E4	MANUFACTURED METAL COPING. ARCHITECT TO PICK COLOR.
E5	EXPANSION JOINT.
E6	ROOF SCUPPER AND DOWNSPOUT, REFER TO P-SERIES DRAWINGS.
F1	INFILL WALL OPENING WITH NEW OVERHEAD DOOR.OVERHEAD COILING DOOR ASSEMBLY WITH ELECTRONICALLY MOTORIZED OPERATOR.
F2	INFILL EXISTING WALL OPENING WITH NEW CMU. PAINT FINISH TO MATCH ADJACENT WALL CONDITIONS.
F3	PREP AND PREPARE SUBFLOOR AS REQUIRED FOR INSTALLATION OF NEW CARPET.
F4	2-HOUR FIRE BARRIER
F5	INFILL EXISTING LOUVER OPENINGS WITH NEW MASONRY INFILL.PAINT NEW MASONRY TO MATCH ADJACENT EXISTING PRECAST EXTERIOR WALLS.
F6	REPLACE EXISTING SINKS AND COUNTERTOP WITH NEW, SS1 COUNTERTOP AND UNDERMOUNTED SINKS. REFER TO P-SERIES DRAWINGS.
F7	ALIGN NEW STUD WALL WITH FACE OF STRUCTURAL COLUMN.
F8	SEE S SERIES FOR FLOOR INFILL. PREP AND PREPARE NEW SUBFLOOR FOR CARPET FINISH.
F9	6" STEEL BOLLARD, CONCRETE FILLED. TO BE PRIMED AND PAINTED SAFTEY YELLOW.
R1	MANUFACTURED METAL COPING. ARCHITECT TO PICK COLOR.
R2	ROOF CRICKETS TO MAINTAIN POSITIVE ROOF DRAINAGE.
R3	EXPANSION JOINT.
R4	ROOF TO ROOF LADDER.
R5	CHILLERS, REFER TO M-SERIES DRAWINGS.
R6	ROOF SCUPPER AND DOWNSPOUT, REFER TO ARCHITECTURAL ROOF PLAN AND DETAIL 1A / AF1A2

GENERAL PLAN NOTES

(A.) DRAWINGS ESTABLISH THE DESIGN INTENT OF WORK TO BE PERFORMED. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HIGHEST INDUSTRY STANDARDS. ALL PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL TRADES SHALL CAREFULLY COORDINATE WORK OF ALL OTHER TRADES. ANY DISCREPANCIES OR CONFLICTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND THE OWNER PRIOR TO FABRICATION OR INSTALLATION.
(B.) CONTRACTORS SHALL BE RESPONSIBLE FOR CHECKING THE CONTRACT DOCUMENTS FOR COORDINATION BETWEEN ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, ELECTRICAL, PLUMBING, SECURITY AND LANDSCAPING. CONTRACTORS SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS AND FOR VERIFYING THEM WITH THE CONTRACT DOCUMENTS. ANY DISCREPANCY IN THE CONTRACT DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE NOTICE OF THE ARCHITECT PRIOR TO ANY FABRICATION OR CONSTRUCTION.
(C.) PLAN NOTES INDICATE ONE GRAPHIC REPRESENTATION TYPICAL. THE CONTRACTOR SHALL USE THE GRAPHIC REPRESENTATIONS FOR THE COUNT, NOT THE KEYED PLAN NOTES. THE ABSENCE OF A KEYED PLAN NOTE ON THE PLAN DOES NOT ABSOLVE THE CONTRACTOR FROM PROVIDING THE FEATURE GRAPHICALLY REPRESENTED ON THE DRAWING.
(D.) ALL DIMENSIONS SHOWN ARE TO FACE OF STUD OR MASONRY. UNLESS NOTED OTHERWISE, DIMENSIONS DESIGNATED AS "CLR OR "CLEAR" INDICATE A CLEAR DIMENSION FROM FACE OF FINISH TO FACE OF FINISH. DIMENSIONS OF EXTERIOR WALLS ARE TO OUTSIDE EDGE OF EXTERIOR FINISH.
(E.) DIMENSIONS FOR ALL OPENINGS FOR MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL ETC. SHALL BE COORDINATED WITH THE VENDORS AND SHALL BE FIRE STOPPED AT EACH FLOOR/ROOF AND RATED WALL PENETRATION PER THE CODE COMPLIANCE PLAN AND APPLICABLE CODES
(F.) PROVIDE BRACING AND BLOCKING AS REQUIRED IN WALLS SUPPORTING CASEWORK, TACKBOARDS, MARKERBOARDS, TELEVISIONS, RESTROOM ACCESSORIES, AND ANY ADDITIONAL WALL MOUNTED EQUIPMENT. COORDINATE WALL MOUNTED EQUIPMENT WITH MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS.
(G.) ALL COMMERCIAL DOOR FRAMES ARE LOCATED 4" FROM ADJACENT WALL, UNLESS NOTED OTHERWISE.
(H.) ALL EXPOSED OUTSIDE CORNERS OF CMU SHALL BE BULLNOSE.
(I.) SEAL ALL JOINTS BETWEEN DISSIMILAR MATERIALS.
(J.) ALL GYPSUM WALLBOARD IS 5/8" TYPE "X", UNLESS NOTED OTHERWISE.
(K.) ALL INTERIOR STUD WALLS ARE TYPE "3642" UNLESS NOTED OTHERWISE.
(L.) BASE ELEVATION OF ADDITION IS 0'-0" = XXX' (UNITED STATES GEOLOGICAL SURVEY DATA). COORDINATE WITH CIVIL DRAWINGS
(M.) ALL WALLS GOING TO DECK ARE TO BE SECURED TO DECK/STRUCTURE ABOVE AS REQUIRED. PROVIDE ADDITIONAL BRACING AS REQUIRED.
(N.) ALL WALLS THAT HAVE THE DESIGNATION "C", AND ARE IN A SPACE WITH NO CEILING WILL BE 10FT TALL.
(O.) ALL CORRIDOR SURFACES SHALL BE FLUSH. AT JUNCTIONS OF MASONRY AND STUD WALLS, MASONRY WALL LOCATIONS SHALL HOLD TRUE AND MTL STUDS SHALL BE MOVED AS REQUIRED TO PROVIDE FLUSH CONNECTION BETWEEN GYP. BD. AND MASONRY. VERIFY NO. OF LAYERS OF GYP. BD. W/ WALL TYPES. RELOCATION OF WALL SHALL BE APPROVED BY ARCHITECT PRIOR TO CONST. AT TRANSITIONS FROM 1 LAYER GYP. BD. TO 2 LAYERS OF GYP. ON MTL STUDS A MIN. CORRIDOR WIDTH OF 5'-0" FROM FACE OF STUDS SHALL BE MAINTAINED.
(P.) ALL BUILDING MATERIALS (INCLUDING BUT NOT LIMITED TO METAL FLASHING, VAPOR BARRIERS, AIR/WATER RESISTANT BARRIERS, THRU-WALL FLASHING, ETC.) SHALL BE LAPPED TO SHED WATER TO THE OUTSIDE OF THE BUILDING ENVELOPE.
(Q.) SEE CODE COMPLIANCE PLAN G-101 AND G-102 FOR FIRE RATED WALLS.
(R.) SEE WALL TYPE LEGEND A-002 AND A-003 FOR WALLS AND CONSTRUCTION REQUIREMENTS.
(S.) SEE STRUCTURAL/ARCHITECTURAL FOR CONTROL/EXPANSION JOINT LOCATIONS.
(T.) SLOPE CONCRETE SLABS TO FLOOR DRAINS AT 1/16" MIN. PER FT.
(U.) ALL EXPOSED PIPES, DUCTS CONDUITS IN SECURITY AREAS SHALL BE ENCLOSED WITH SECURITY BULKHEAD/COVERPLATES. PROVIDE TAMPER RESISTANT ANCHORS
(V.) WHEREVER VOLUME DAMPERS (V.D.) ARE LOCATED ABOVE SECURITY CEILINGS, PROVIDE 2'-0"x2'-0" ACCESS PANELS IN THE CEILING. REFER TO MECHANICAL DRAWINGS FOR NUMBER AND LOCATION. COORDINATE WITH ELECTRICAL DRAWINGS. PANELS SHALL BE SECURITY TYPE TO MATCH ADJACENT CEILING.
(W.) ALL CHASE WALLS SHALL BE FULL HEIGHT UNLESS NOTED OTHERWISE
(X.) ALL INTERIOR AND EXTERIOR EXPOSED STEEL TO BE PAINTED. COLOR TO BE SELECTED BY ARCHITECT.
(Y.) SUFFIXES WITHIN SPECIFICATION REFERENCES (e.g. 10 11 33.XX or 10 11 33.A1) IN THE DRAWINGS CAN BE IGNORED. THESE SUFFIXES ARE A SORTING MECHANISM USED IN PREPARING THESE DRAWINGS.
(Z.) ALL ROUGH OPENINGS (R.O.) SHALL BE VERIFIED WITH SELECTED WINDOW AND DOOR MANUFACTURER. ANY CHANGES FROM THE BASIS OF DESIGN WILL BE COORDINATED WITH ALL TRADES AND ROUGH OPENINGS ADJUSTED AS REQUIRED. ANY DISCREPANCIES FOUND WILL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO CONSTRUCTION. ANY CHANGES AND REVISIONS WILL BE AT CONTRACTORS' EXPENSE.
(AA.) ALL CONSTRUCTION AROUND PLUMBING FIXTURES IS REQUIRED TO BE COORDINATED WITH SELECTED MANUFACTURERS. ADJUST WALLS AS REQUIRED TO ACCOMMODATE THE INSTALLATION OF THE SELECTED MANUFACTURERS PLUMBING FIXTURES. ANY CHANGES AND REVISIONS WILL BE DONE AT CONTRACTORS' EXPENSE.
(BB.) BUILDING ENVELOPE CONTINUITY WILL BE MONITORED BY A COMMISSIONING AGENT. TRANSITIONS BETWEEN BUILDING SYSTEMS (E. ROOF TO WALL, CURTAINWALL TO STOREFRONT, ETC.) SHALL INCLUDE CONTINUOUS AIRTIGHT AIR BARRIER SYSTEM. ALL PENETRATIONS IN THE BUILDING ENVELOPE (INCLUDING WINDOWS, DOORS, STOREFRONT, ETC.) SHALL BE SEALED WITH AIR TIGHT WEATHER SEALS. AT ANY LOCATION WHERE MASONRY TIES OR OTHER MATERIALS PENETRATE THE AIR BARRIER, EACH PENETRATION SHALL BE SEALED AIRTIGHT.
(CC.) ALL EXPOSED FASTENERS IN DETENTION/SECURITY AREAS (INCLUDING BUT NOT LIMITED TO DOOR HARDWARE, ELECTRICAL, PLUMBING, MECHANICAL ETC. ARE TO BE SECURITY TAMPER RESISTANT TYPE.
(DD.) ALL EXPOSED STRUCTURE TO BE PRIMED AND PAINTED WITH HIGH PERFORMANCE PAINT.
(EE.) NON-PREFINISHED INTERIOR SURFACES (MASONRY/DRYWALL/STEEL) IN DETENTION AREAS SHALL RECEIVE HIGH PERFORMANCE EPOXY COATING, AND SHOULD BE PROTECTED DURING CONSTRUCTION. ANY DAMAGE TO PREFINISHED SURFACES DURING CONSTRUCTION SHALL BE REPAIRED AT CONTRACTORS EXPENSE.
(FF.) PROVIDE SHOWER CURTAINS IN ALL SHOWER LOCATIONS.
(GG.) ALL ADA SHOWER UNITS ARE TO RECEIVE BUILT IN SHOWER SEAT AND CODE COMPLIANT GRAB BARS, UNLESS NOTED OTHERWISE
(HH.) ALL ELECTRICAL DEVICES TO BE COORDINATED WITH ALL CASEWORK LOCATION. ADJUST DEVICE LOCATIONS AS REQUIRED TO AVOID CONFLICT, ANY CONFLICT NEEDS TO BE DIRECTED AND APPROVED BY ARCHITECT/ENGINEER PRIOR TO INSTALLATION.
(II.) PROVIDE STAINLESS STEEL FINISH PANEL ABOVE ALL SECURITY SHOWER UNITS. EXTEND TO CEILING FLUSH ON ALL SIDES. SECURE AS REQUIRED WITH SECURITY FASTENERS.
(JJ.) PROVIDE WATER MANAGEMENT SYSTEM AT DETENTION PLUMBING FIXTURES - SEE PLUMBING
(KK.) SECURITY PLUMBING FIXTURES ACCESSORIES: ALL SECURITY PLUMBING TOILET/SINK COMBO UNITS ARE TO RECEIVE A SINGLE LIGATURE PROOF HOOK AND STAINLESS STEEL MIRROR. ALL SECURITY PLUMING ADA TOILET/SINK COMBO UNITS ARE TO RECEIVE A SINGLE LIGATURE PROOF HOOK, (2) STAINLESS STEEL MIRRORS: 42" HORIZONTAL AND 18" VERTICAL LIGATURE PROOF GRAB BARS, SECURITY TOILET PAPER HOLDER RECESSED IN THE ADJACENT WALL. ALL NON ADA SECURITY SHOWERS ARE TO RECEIVE A SINGLE LIGATURE PROOF HOOK AND A SHOWER CURTAIN. ALL ADA SECURITY SHOWERS ARE TO RECEIVE A SINGLE LIGATURE PROOF HOOK, A SHOWER CURTAIN, AND ADA HORIZONTAL AND VERTICAL GRAB BARS. REVIEW PLANS FOR ADDITIONAL ACCESSORIES
(LL.) ALL COMMERCIAL HOLLOW METAL FRAMES IN STUD WALL CONSTRUCTION TO BE WRAP AROUND WALL DEPTH. ALL COMMERCIAL HOLLOW METAL FRAMES IN CMU CONSTRUCTION TO BE 5-3/4" DEEP CENTRALLY LOCATED IN THE WALL ASSEMBLY WITH BULLNOSE CMU CORNERS. ALL SECURITY HOLLOW METAL FRAMES IN CMU/PRECAST WALLS TO BE 7-3/8" DEEP, CENTRALLY LOCATED OR AT EXTERIOR APPLICATION 3" FROM THE EXTERIOR FACE.
(MM.) PROVIDE ADDITIONAL ACCESS PANELS AT ALL LOCATIONS REQUIRED FOR MAINTENANCE. COORDINATE WITH MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION CONTRACTOR. PROVIDE SECURITY ACCESS PANELS IN SECURITY AREAS. SEE AF103 AND AF104 FOR SECURITY AREAS.
(NN.) SECURITY SEALANT: PROVIDE SECURITY TYPE SEALANT AT ALL DISSIMILAR MATERIAL IN SECURITY AREAS. SEE AF103 AND AF104 FOR SECURITY AREAS. ALL MASONRY CONTROL JOINTS ARE TO RECEIVE FLEXIBLE SECURITY SEALANTS IN SECURITY AREAS. ALL RATED ASSEMBLIES ARE TO RECEIVE RATED SECURITY SEALANT FROM THE SAME MANUFACTURER. SECURITY SEALANT TO BE TO 10' ABOVE FINISHED LEVEL WHERE INMATES WILL BE PRESENT, @ 10' AFF PROVIDE COMMERCIAL GRADE JOINT SEALANT OR FIRE RATED JOINT SYSTEM. ALL STEEL CELLS TO FLOOR JOINTS SHALL HAVE DYNAPOXY OR EQUAL SECURITY CAULKING.
(OO.) PROVIDE AN 8" STEEL PIPE BOLLARD FILLED WITH CONCRETE TO 2'-9" A.F.F. BOLLARDS ARE TO BE PROVIDED AT EACH OVERHEAD DOOR LOCATION, TWO AT EACH JAMB ON BOTH EXTERIOR AND INTERIOR SIDE OF THE JAMB. PAINT EACH BOLLARD SAFETY YELLOW
(PP.) PROVIDE MOISTURE RESISTANT GYPSUM BOARD AT ALL TILE WET WALL LOCATIONS
(QQ.) MASONRY CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CLEAN AND TOOLED JOINTS AT ALL LOCATIONS, INCLUDING BUT NOT LIMITED TO DETENTION AREAS. THE MASONRY CONTRACTOR WILL ALSO BE RESPONSIBLE FOR CLEAN AND TOOLED JOINTS AT BASE OF MASONRY AND SLAB CONDITION. ANY POCKETS OR GAPS SHALL REQUIRE SECURITY CAULKING IN DETENTION AREAS AND SHALL BE THE RESPONSIBILITY OF THE MASONRY CONTRACTOR.
(RR.) CLEAN ALL WALL SURFACES PRIOR TO FINISHING AND ANY GROUT OR DEBRIS STUCK ON WALL SURFACES MUST BE REMOVED PRIOR TO APPLYING FINISHES. ANY DEBRIS AND GROUT WHICH IS LEFT AND PAINTED OVER WILL BE REQUIRED TO BE REMOVED AND REFINISHED AT CONTRACTORS EXPENSE.
(SS.) ALL COMMERCIAL PLUMBING ADA FIXTURES ARE TO RECEIVE ALL REQUIRED GRAB BARS AS OUTLINED BY ICC A117.1 (MOST CURRENT EDITION AT THE BEGINNING OF PROJECT CONSTRUCTION). INCLUDE ALL HORIZONTAL AND VERTICAL GRAB BARS. PROVIDE BLOCKING OR MANUFACTURERS EQUIVALENT AT ALL GRAB BAR LOCATIONS. ALL SECURITY GRAB BARS TO RECEIVE PRE MANUFACTURED ANTI-LIGATURE PLATE WITH WEEPS. HEIGHT OF ALL GRAB BARS SHALL BE PER ICC A117.1 (36" TO TOP OF GRIPPING SURFACE).
(TT.) ALL EXPANSION JOINT COVERS THROUGH RATED WALLS/CEILING/FLOOR ASSEMBLIES SHALL MEET THE RATING REQUIREMENTS OF EACH ASSEMBLY PER THE FIRE AND LIFE SAFETY PLANS.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929
Designed By: CPW
Drawn By: CPW
Checked By: SP
Date: 11.21.2025

MICHAEL FRANCIS GARDNER REGISTERED No. 10700168 STATE OF INDIANA ARCHITECT

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NEW CONSTRUCTION UNIT PLANS

AF1A3

12/5/2025 1:31:01 AM

GENERAL SYMBOLS

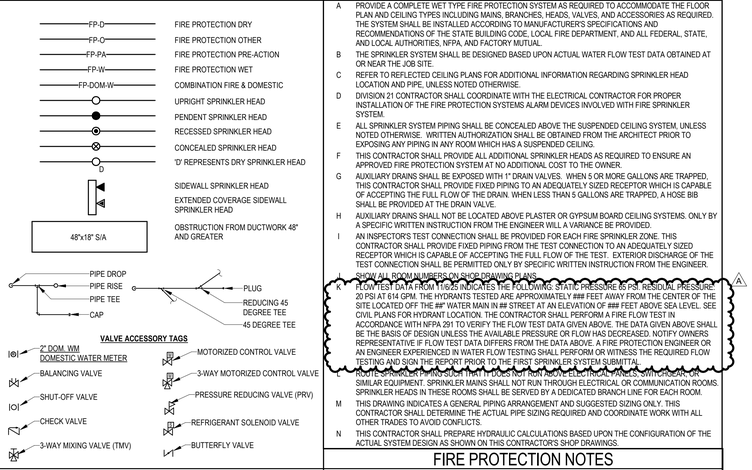
ABBREVIATIONS

Ø	ROUND	LVR	LOUVER
ABV	ABOVE	LWT	LEAVING WATER TEMPERATURE
AC	AIR CONDITIONING	M/A	MIXED AIR
AD	AREA DRAIN	MAX	MAXIMUM
ADD	ADDENDUM	MBH	ONE THOUSAND BTU PER HOUR
AFF	ABOVE FINISHED FLOOR	MCF	ONE THOUSAND CUBIC FEET
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MD	MOTORIZED DAMPER
ALT	ALTERNATE	MECH	MECHANICAL
AP	ACCESS PANEL	MFR	MANUFACTURER
ARCH	ARCHITECT/ARCHITECTURAL	MIN.	MINIMUM
BFF	BELOW FINISHED FLOOR	MISC	MISCELLANEOUS
BLW	BELOW	MTR	MOTOR
BTU	BRITISH THERMAL UNITS	MU/A	MAKE-UP/AIR
BTUH	BRITISH THERMAL UNITS PER HOUR	NC	NOISE CRITERIA
CAP	CAPACITY	NC	NORMALLY CLOSED
CB	CATCH BASIN	NIC	NOT IN CONTRACT
CFM	CUBIC FEET PER MINUTE	NO	NUMBER
CLG	CEILING	NO	NORMALLY OPEN
CO	CLEAN OUT	NTS	NOT TO SCALE
CW	COLD WATER	O	OXYGEN
D	DEGREE	O/A	OUTSIDE AIR
DB	DRY BULB	ORD	OVERFLOW ROOF DRAIN
DIA	DIAMETER	PD	PRESSURE DROP
DN	DOWN	PIV	POST INDICATOR VALVE
DW	DISTILLED WATER	PLBG	PLUMBING
EA	EACH	PRESS	PRESSURE
EAT	ENTERING AIR TEMPERATURE	PRV	PRESSURE REDUCING VALVE
ELEC	ELECTRICAL	PSI	POUNDS PER SQUARE INCH
EQUIP	EQUIPMENT	PSIG	POUNDS PER SQUARE INCH GAUGE
EWC	ELECTRIC WATER COOLER	PWR	POWER
EWT	ENTERING WATER TEMPERATURE	R	DUCT RISER
E/A	EXHAUST AIR	R/A	RETURN AIR
EXIST	EXISTING	RCP	RADIANT CEILING PANEL
F	DEGREES FAHRENHEIT	RD	ROOF DRAIN
FCO	FLOOR CLEAN OUT	REC	RECESSED
FD	FLOOR DRAIN	RED	REDUCER
FD	FIRE DAMPER	RH	RELATIVE HUMIDITY
FDV	FIRE DEPARTMENT VALVE	RL/A	RELIEF AIR
FL	FLOOR	RM	ROOM
FO	FUEL OIL	RPM	REVOLUTIONS PER MINUTE
FOV	FUEL OIL VENT	RW	RAIN WATER
FOR	FUEL OIL RETURN	SF	SQUARE FOOT
FOS	FUEL OIL SUPPLY	S/A	SUPPLY AIR
FPM	FEET PER MINUTE	SAN	SANITARY
FS	FLOOR SINK	SF	SQUARE FOOT
FT	FOOT/FEET	SD	SMOKE DAMPER
FTR	FIN TUBE RADIATION	SM	SURFACE MOUNT
GAL	GALLON	SP	STANDPIPE
GC	GENERAL CONTRACTOR	SP	STATIC PRESSURE
GPM	GALLONS PER MINUTE	STM	STEAM
GW	GREASE WASTE	T	THERMOSTAT
HB	HOSE BIB	TD	TEMPERATURE DROP
HP	HORSE POWER	TDR	TRENCH DRAIN
HTG	HEATING	TEMP	TEMPERATURE
HTR	HEATER	TYP	TYPICAL
HW	HOT WATER	UG	UNDERGROUND
HYD	HYDRANT	VAC	VACUUM
ID	INDIRECT	V	VENT
IN	INCH	VAV	VARIABLE AIR VOLUME
INV	INVERT	VENT	VENTILATION
LB	POUND	VTR	VENT THROUGH ROOF
LB/HR	POUNDS PER HOUR	W	WASTE
LAT	LEAVING AIR TEMPERATURE	WB	WET BULB
LP	LOW PRESSURE	WCO	WALL CLEAN OUT
LPG	LIQUEFIED PETROLEUM GAS	WH	WALL HYDRANT

EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT	ET	EXPANSION TANK
ACCU	AIR COOLING CONDENSING UNIT	EWH	ELECTRIC WATER HEATER
AHU	AIR HANDLING UNIT	FCU	FAN COIL UNIT
AS	AIR SEPARATOR	FP	FIRE PUMP
B	BOILER	GI	GREASE INTERCEPTOR
CH	CHILLER	GRV	GRAVITY ROOF VENTILATOR
CT	COOLING TOWER	HWP	HEATING WATER PUMP
CUH	CABINET UNIT HEATER	HRU	HEAT RECOVERY UNIT
CHWP	CHILLED WATER PUMP	PRV	POWER ROOF VENTILATOR
DBP	DOMESTIC WATER BOOSTER PUMP	RE	RETURN/EXHAUST FAN
DC	DUCT MOUNTED COIL	RTU	ROOFTOP UNIT
DCP	DOMESTIC WATER CIRCULATING PUMP	SP	SUMP PUMP
EF	EXHAUST FAN	UH	UNIT HEATER
EDC	ELECTRIC DUCT COIL	WH	WATER HEATER

FIRE PROTECTION SYMBOLS



FIRE PROTECTION GENERAL NOTES

A. PROVIDE A COMPLETE WET TYPE FIRE PROTECTION SYSTEM AS REQUIRED TO ACCOMMODATE THE FLOOR PLAN AND CEILING TYPES INCLUDING MAINS, BRANCHES, HEADS, VALVES, AND ACCESSORIES AS REQUIRED. THE SYSTEM SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS OF THE STATE BUILDING CODE, LOCAL FIRE DEPARTMENT, AND ALL FEDERAL, STATE, AND LOCAL AUTHORITIES, NFPA, AND FACTORY MUTUAL.

B. THE SPRINKLER SYSTEM SHALL BE DESIGNED BASED UPON ACTUAL WATER FLOW TEST DATA OBTAINED AT OR NEAR THE JOB SITE.

C. REFER TO REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION REGARDING SPRINKLER HEAD LOCATION AND PIPE, UNLESS NOTED OTHERWISE.

D. DIVISION 21 CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR PROPER INSTALLATION OF THE FIRE PROTECTION SYSTEMS ALARM DEVICES INVOLVED WITH FIRE SPRINKLER SYSTEM.

E. ALL SPRINKLER SYSTEM PIPING SHALL BE CONCEALED ABOVE THE SUSPENDED CEILING SYSTEM, UNLESS NOTED OTHERWISE. WRITTEN AUTHORIZATION SHALL BE OBTAINED FROM THE ARCHITECT PRIOR TO EXPOSING ANY PIPING IN ANY ROOM WHICH HAS A SUSPENDED CEILING.

F. THIS CONTRACTOR SHALL PROVIDE ALL ADDITIONAL SPRINKLER HEADS AS REQUIRED TO ENSURE AN APPROVED FIRE PROTECTION SYSTEM AT NO ADDITIONAL COST TO THE OWNER.

G. AUXILIARY DRAINS SHALL BE EXPOSED WITH 1" DRAIN VALVES. WHEN 5 OR MORE GALLONS ARE TRAPPED, THIS CONTRACTOR SHALL PROVIDE FIXED PIPING TO AN ADEQUATELY SIZED RECEPTOR WHICH IS CAPABLE OF ACCEPTING THE FULL FLOW OF THE DRAIN. WHEN LESS THAN 5 GALLONS ARE TRAPPED, A HOSE BIB SHALL BE PROVIDED AT THE DRAIN VALVE.

H. AUXILIARY DRAINS SHALL NOT BE LOCATED ABOVE PLASTER OR GYPSUM BOARD CEILING SYSTEMS. ONLY BY A SPECIFIC WRITTEN INSTRUCTION FROM THE ENGINEER WILL A VARIANCE BE PROVIDED.

I. AN INSPECTOR'S TEST CONNECTION SHALL BE PROVIDED FOR EACH FIRE SPRINKLER ZONE. THIS CONTRACTOR SHALL PROVIDE FIXED PIPING FROM THE TEST CONNECTION TO AN ADEQUATELY SIZED RECEPTOR WHICH IS CAPABLE OF ACCEPTING THE FULL FLOW OF THE TEST. EXTERIOR DISCHARGE OF THE TEST CONNECTION SHALL BE PERMITTED ONLY BY SPECIFIC WRITTEN INSTRUCTION FROM THE ENGINEER. SHOW ALL ROOM NUMBERS ON FIRE DRAWING PLANS.

J. FLOW TEST DATA FROM TIDS INDICATES THE FOLLOWING: STATIC PRESSURE 65 PSI RESIDUAL PRESSURE 20 PSI AT 614 GPM. THE HYDRANTS TESTED ARE APPROXIMATELY ### FEET AWAY FROM THE CENTER OF THE SITE LOCATED OFF THE ## WATER MAIN IN ## STREET AT AN ELEVATION OF ### FEET ABOVE SEA LEVEL. SEE CIVIL PLANS FOR HYDRANT LOCATION. THE CONTRACTOR SHALL PERFORM A FIRE FLOW TEST IN ACCORDANCE WITH NFPA 291 TO VERIFY THE FLOW TEST DATA GIVEN ABOVE. THE DATA GIVEN ABOVE SHALL BE THE BASIS OF DESIGN UNLESS THE AVAILABLE PRESSURE OR FLOW HAS DECREASED. NOTIFY OWNERS REPRESENTATIVE IF FLOW TEST DATA DIFFERS FROM THE DATA ABOVE. A FIRE PROTECTION ENGINEER OR AN ENGINEER EXPERIENCED IN WATER FLOW TESTING SHALL PERFORM OR WITNESS THE REQUIRED FLOW TESTING AND SIGN THE REPORT PRIOR TO THE FIRST SPRINKLER SYSTEM SUBMITTAL.

K. ROUTE SPRINKLER PIPING SUCH THAT IT DOES NOT RUN ABOVE ELECTRICAL PANELS, SWITCHGEAR, OR SIMILAR EQUIPMENT. SPRINKLER MAINS SHALL NOT RUN THROUGH ELECTRICAL OR COMMUNICATION ROOMS. SPRINKLER HEADS IN THESE ROOMS SHALL BE SERVED BY A DEDICATED BRANCH LINE FOR EACH ROOM.

M. THIS DRAWING INDICATES A GENERAL PIPING ARRANGEMENT AND SUGGESTED SIZING ONLY. THIS CONTRACTOR SHALL DETERMINE THE ACTUAL PIPE SIZING REQUIRED AND COORDINATE WORK WITH ALL OTHER TRADES TO AVOID CONFLICTS.

N. THIS CONTRACTOR SHALL PREPARE HYDRAULIC CALCULATIONS BASED UPON THE CONFIGURATION OF THE ACTUAL SYSTEM DESIGN AS SHOWN ON THIS CONTRACTOR'S SHOP DRAWINGS.

FIRE PROTECTION NOTES

A. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE NOT INTENDED TO SHOW THE EXACT LOCATIONS OF COMPONENTS, NOR SHOW ALL SYSTEM COMPONENTS. CONTRACTOR SHALL PROVIDE AII ADDITIONAL OFFSETS OR FITTINGS REQUIRED FOR PROPER INSTALLATION.

B. ALL PENETRATIONS THROUGH FIRE RATED CONSTRUCTION SHALL BE PROVIDED WITH A RATED FIRESTOP ASSEMBLY GREATER THAN OR EQUAL TO THE RATING OF THE PENETRATED BARRIER.

C. CONTRACTOR SHALL BE RESPONSIBLE FOR AVOIDING ALL CONFLICTS WITH LIGHTING FIXTURES, HVAC DIFFUSERS, GRILLS, DUCTWORK, STRUCTURAL MEMBERS, MECHANICAL EQUIPMENT AND PIPING. SPRINKLERS INSTALLED IN PROXIMTY TO OBSTRUCTIONS SHALL BE LOCATED TO MINIMIZE OBSTRUCTIONS TO THE SPRINKLER DISCHARGE PATTERN IN ACCORDANCE WITH NFPA 13 AND INDIANA FIRE CODE.

D. SPRINKLERS SHALL BE PROVIDED THROUGHOUT BUILDING INCLUDING, BUT NOT LIMITED TO: ELECTRIC ROOMS, TEL/DATA CLOSETS AND ELEVATOR SHAFTS. STAIRWELLS AT THE MAIN LANDING UTILIZING UPRIGHT SPRINKLERS.

E. INSTALL UPRIGHT SPRINKLERS BELOW DUCTWORK OR OTHER OBSTRUCTIONS GREATER THAN 48" WIDE.

F. ALL SPRINKLER SYSTEM VALVES SHALL BE OF THE INDICATING TYPE AND PROVIDED WITH ELECTRICAL SUPERVISORY (TAMPER) SWITCHES INTERCONNECTED WITH THE BUILDING FIRE ALARM SYSTEM. FLOW SWITCHES SHALL ALSO BE INTERCONNECTED WITH THE BUILDING FIRE ALARM SYSTEM.

G. SPRINKLERS SHALL BE LOCATED IN CENTER OF TILES WHERE APPLICABLE. SPRINKLERS SHALL BE LOCATED TO MAINTAIN A SYMMETRICAL PATTERN FOR AN AESTHETICALLY PLEASING APPEARANCE.. PROVIDE ADDITIONAL SPRINKLERS BEYOND CODE REQUIRED MINIMUMS TO PROVIDE SYMMETRICAL LAYOUTS.

H. ELECTRIC ROOMS, IT / DATA ROOMS AND OTHER SIMILAR AREAS SHALL HAVE SIDEWALL TYPE SPRINKLERS INSTALLED, UNLESS OTHERWISE NOTED.

I. INSTALL SPRINKLER GUARDS ON SPRINKLERS SUSCEPTIBLE TO MECHANICAL DAMAGE INCLUDING, BUT NOT LIMITED TO SPRINKLERS IN ALL MECHANICAL ROOMS AND ACTIVITY ROOMS.

J. SEE ARCHITECTURAL FIRE AND LIFE SAFETY PLAN.

K. SEE ARCHITECTURAL DEMOLITION PLANS.

L. SEE ARCHITECTURAL FLOOR AND CEILING PLANS.

NOTE:

ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.
THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929

Designed By: K.I.

Drawn By: D.M.

Checked By: K.I.

Date: 11.21.2025

DUSTIN E. BARTH
REGISTERED
No. 12200401
STATE OF
INDIANA
PROFESSIONAL ENGINEER

Dustin Barth

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FIRE PROTECTION SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES

F001

12/5/2025 11:39:00 AM

PLAN NOTES

#	NOTE
1	INSTALL UPRIGHT TYPE SPRINKLER HEAD IN THIS AREA.
2	NEW INCOMING 4" FIRE SERVICE MAIN DOWN.
3	MODIFY EXISTING SPRINKLER HEADS AND PIPING AS REQUIRED IN THIS AREA. COORDINATE LOCATIONS WITH LIGHTS, DUCTWORK, PIPING, AND ALL OTHER SYSTEMS. COORDINATE WITH ALL OTHER TRADE SYSTEMS AND CONFIRM EXACT SCOPE OF WORK REQUIRED PRIOR TO START OF CONSTRUCTION.
4	THIS AREA TO BE PROTECTED BY A CLEAN AGENT SYSTEM. SEE DETAIL 7/F600. COORDINATE ALL NEW EQUIPMENT LAYOUT WITH THE EXISTING ROOM LAYOUT PRIOR TO START OF CONSTRUCTION.
5	NO SPRINKLERS REQUIRED IN THIS AREA IN ACCORDANCE WITH NFPA 13 - 8.15.10.3. REFER TO ARCHITECTURAL PLANS FOR 2-HR FIRE RATING. NO WATER PIPING SHALL BE ROUTED ABOVE THIS DEDICATED AREA.
6	SEE DRAWING F210B FOR UNIT B ADDITIONAL FIRE PROTECTION SCOPE OF WORK.
7	NEW 4" FDC. COORDINATE EXACT LOCATION WITH FIRE DEPARTMENT.
8	NEW 4" WET SYSTEM ALARM RISERS.
9	CONNECT TO NEAREST EXISTING FIRE SPRINKLER WET SYSTEM MAINS IN THIS AREA. CONTRACTOR TO VERIFY EXACT SIZE AND LOCATIONS PRIOR TO START OF CONSTRUCTION.
10	NEW 4" DOUBLE CHECK DETECTOR ASSEMBLY.
11	INSTALL NEW CONCEALED PENDENT TYPE SPRINKLER HEADS (MATCH EXISTING) AND PIPING AS REQUIRED IN THIS AREA. THIS SPRINKLER SYSTEM SHALL EXTEND FROM THE EXISTING MAINS IN THIS AREA AND MODIFY AS NEEDED. COORDINATE LOCATIONS WITH LIGHTS, DUCTWORK, PIPING, AND ALL OTHER SYSTEMS. COORDINATE WITH ALL OTHER TRADE SYSTEMS AND CONFIRM EXACT SCOPE OF WORK REQUIRED PRIOR TO START OF CONSTRUCTION.

1 FIRST FLOOR FIRE PROTECTION PLAN - UNIT A
F210A 1/8" = 1'-0"
0 4' 8' 16'

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UNIT A

N

FIRST FLOOR FIRE PROTECTION PLAN - UNIT A

F210A

12/5/2025 11:39:28 AM

PLAN NOTES

#	NOTE
1	MODIFY EXISTING SPRINKLER HEADS AND PIPING AS REQUIRED IN THIS AREA. COORDINATE LOCATIONS WITH LIGHTS, DUCTWORK, PIPING, AND ALL OTHER SYSTEMS. COORDINATE WITH ALL OTHER TRADE SYSTEMS AND CONFIRM EXACT SCOPE OF WORK REQUIRED PRIOR TO START OF CONSTRUCTION.
2	INSTALL NEW CONCEALED PENDENT TYPE SPRINKLER HEADS (MATCH EXISTING) AND PIPING AS REQUIRED IN THIS AREA. THIS SPRINKLER SYSTEM SHALL EXTEND FROM THE EXISTING MAINS IN THIS AREA AND MODIFY AS NEEDED. COORDINATE LOCATIONS WITH LIGHTS, DUCTWORK, PIPING, AND ALL OTHER SYSTEMS. COORDINATE WITH ALL OTHER TRADE SYSTE,S AND CONFIRM EXACT SCOPE OF WORK REQUIRED PRIOR TO START OF CONSTRUCTION.
3	SEE DRAWING F220B FOR UNIT B ADDITIONAL FIRE PROTECTION SCOPE OF WORK.

A1

1 F220A **SECOND FLOOR FIRE PROTECTION PLAN - UNIT A**
1/8" = 1'-0"
0 4' 8' 16'

12/5/2025 11:39:36 AM

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HARRISON COUNTY JAIL MEP RENOVATION

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UNIT A

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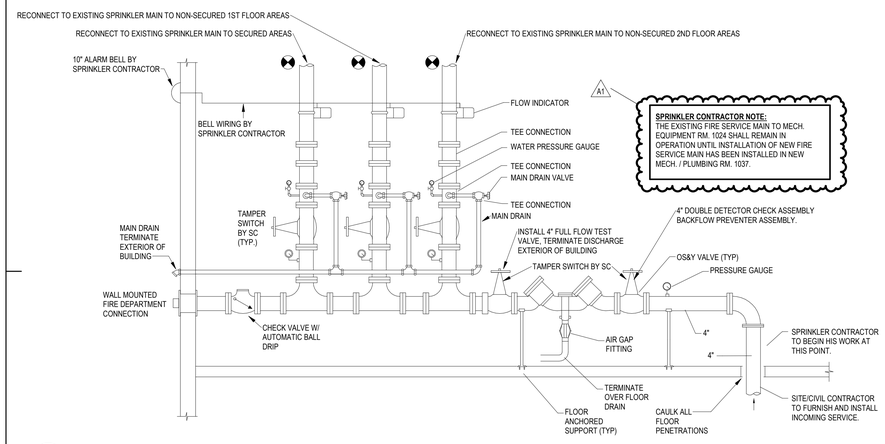
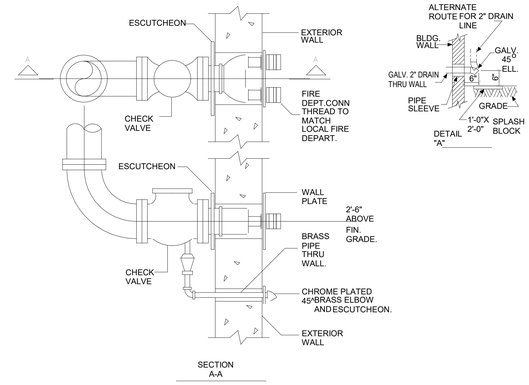
SECOND FLOOR FIRE PROTECTION PLAN - UNIT A

F220A

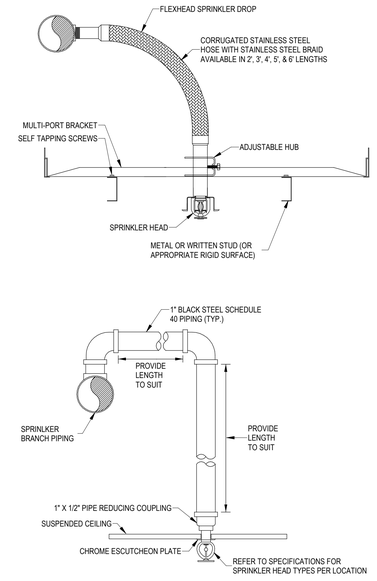


1 FIRE RISER DETAIL
NOT TO SCALE

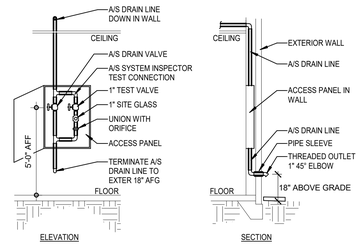


NOTE: PACK WALL OPENING WITH GLASS WOOL INSULATION AFTER INSTALLATION OF PIPING.

2 FIRE DEPARTMENT WALL MOUNTED CONNECTION
NOT TO SCALE

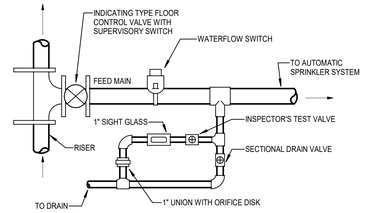


3 SPRINKLER CONNECTION DETAIL
NOT TO SCALE

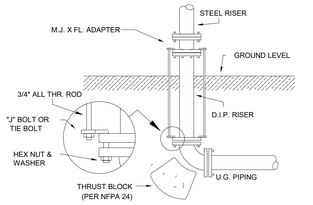


NOTE:
ACCESS PANEL WITH LABEL AUTOMATIC SPRINKLER DRAIN AND INSPECTOR TEST VALVE TO BE INSTALLED WHEN LOCATED IN A FINISHED AREA.

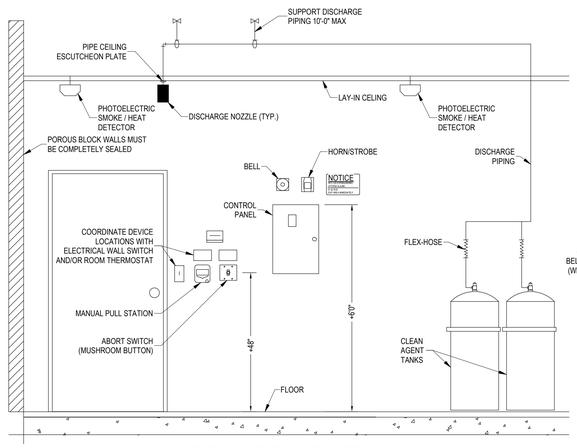
4 INSPECTOR'S TEST STATION DETAIL
NOT TO SCALE



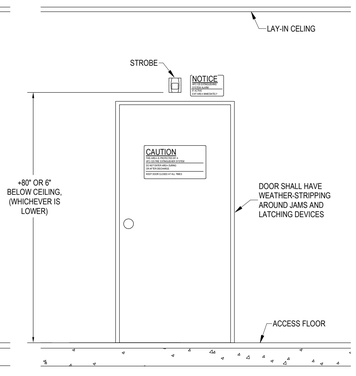
5 SPRINKLER SYSTEM ZONE CONTROL VALVE DETAIL
NOT TO SCALE



6 UNDERGROUND STUB-UP W/ ROD
NOT TO SCALE



TYPICAL ELEVATION DETAIL OF EXIT FORM ROOM



TYPICAL ELEVATION DETAIL OF ENTRANCE TO ROOM

OPERATION OF FIRE SUPPRESSION SYSTEM

SMOKE DETECTION ACTIVATION
A. FIRST DETECTOR IN ALARM IN THE ROOM AREA.
   1. ALARM BELL SOUNDS
   2. DAMPERS CLOSE

B. SECOND DETECTOR IN ALARM IN THE ROOM AREA.
   1. PRE-DISCHARGE HORN / STROBES SOUND & FLASH.
   2. TIME DELAY (30 SECONDS) IS STARTED.
   3. ABORT STATION CAN BE PUSHED AT THIS TIME TO HALT DISCHARGE

C. TIME DELAY (30 SECONDS) EXPIRES.
   1. DISCHARGE HORNS SOUND AND STROBES FLASH.
   2. CLEAN EXTINGUISHING AGENT WILL DISCHARGE VIA THE NOZZLES.

MANUAL STATION ACTIVATION
D. MANUAL PULL STATION IS ACTIVATED.
   1. BELLS SOUND AND STROBES FLASH.
   2. DAMPERS CLOSE.
   3. CLEANS AGENT WILL DISCHARGE IMMEDIATELY VIA THE NOZZLES.

7 CLEAN AGENT DETAIL
NOT TO SCALE

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HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929
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Drawn By: D.M.
Checked By: K.I.
Date: 11.21.2025

DUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER

Dustin Barth

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N

FIRE PROTECTION DETAILS

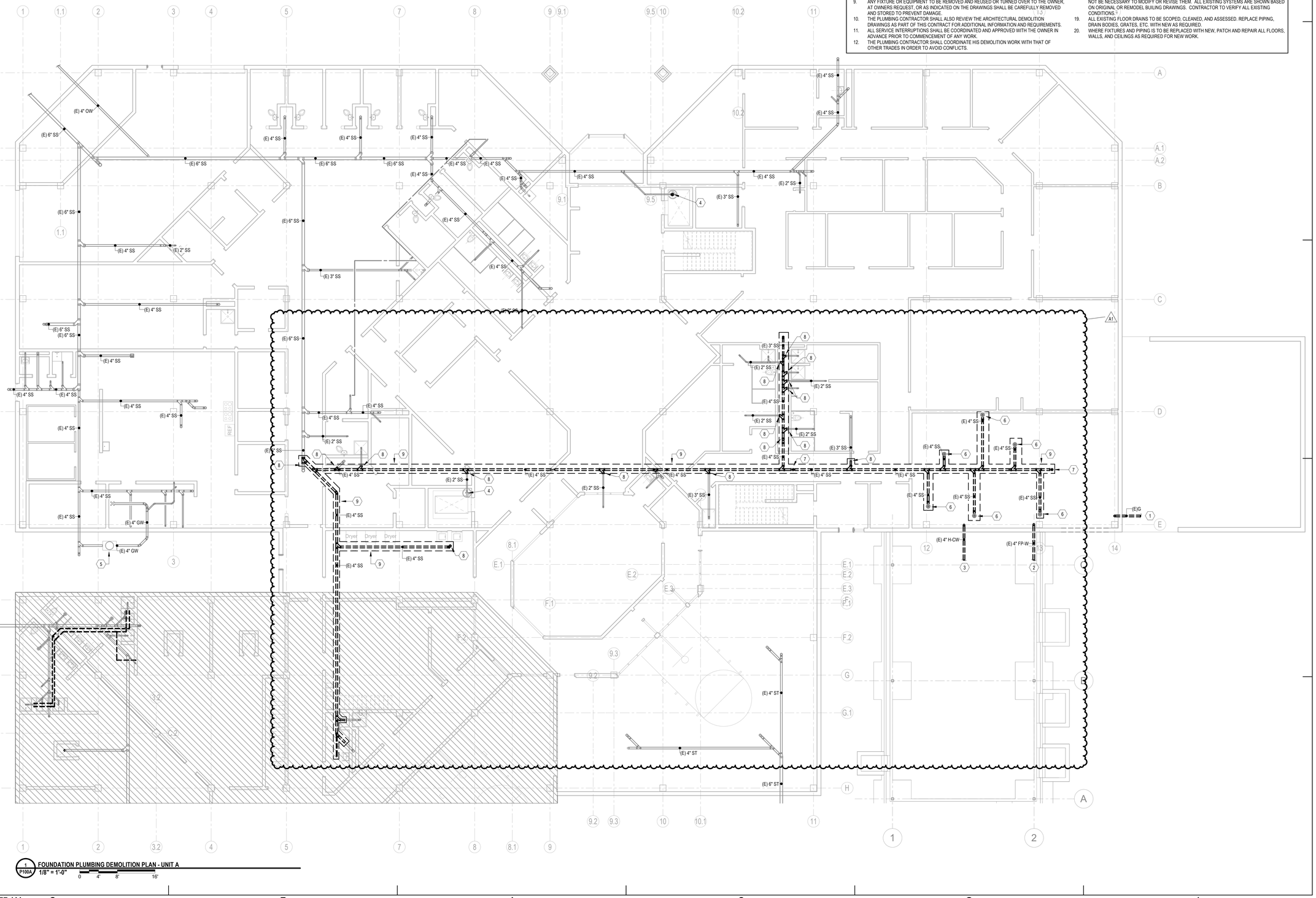
F800

PLAN NOTES

#	NOTE
1	DEMOLISH EXISTING INCOMING GAS LINE FOR RELOCATION. SEE SITE/CIVIL DRAWINGS FOR CONTINUATION AND COORDINATION.
2	DEMOLISH EXISTING INCOMING FIRE SUPPRESSION LINE FOR RELOCATION. SEE SITE/CIVIL DRAWINGS FOR CONTINUATION AND COORDINATION.
3	DEMOLISH EXISTING INCOMING DOMESTIC WATER LINE FOR RELOCATION. SEE SITE/CIVIL DRAWINGS FOR CONTINUATION AND COORDINATION.
4	DEMOLISH EXISTING SUMP PUMP AND WASTE PIPING WITHIN BASIN. PREPARE LATERAL AND EXISTING BASIN FOR INSTALLATION OF NEW SUMP PUMP.
5	EXISTING GREASE TRAP TO REMAIN. OWNER TO SCHEDULE MAINTENANCE PUMPING AND FLUSHING OF EXISTING TRAP AND PIPES.
6	DEMOLISH EXISTING FLOOR DRAIN AND ASSOCIATED PIPING B.F.F.
7	DEMOLISH EXISTING FLOOR CLEANOUT AND ASSOCIATED PIPING B.F.F.
8	DISCONNECT, CUT BACK & CAP EXISTING PIPING B.F.F. FOR FUTURE CONNECTION.
9	SAW CUT LINE OF CONCRETE FLOOR FOR FUTURE CONNECTIONS

PLUMBING PLAN DEMOLITION NOTES

1. THE PLUMBING CONTRACTOR SHALL REMOVE ALL PLUMBING FIXTURES, CARRIERS, TRIM, ACCESSORIES, EQUIPMENT, FLOOR DRAINS AND PIPING AS SHOWN OR INDICATED ON THE DRAWINGS.
2. ALL PIPING TO BE REMOVED SHALL BE REMOVED COMPLETELY OR AS OTHERWISE SHOWN OR INDICATED ON DRAWINGS ALL PIPE HANGERS, SLEEVES, RISER CLAMPS, ETC SHALL BE REMOVED COMPLETELY WITH PIPING NO EXISTING HANGER SYSTEMS SHALL BE REUSED FOR NEW PIPING.
3. ALL PIPING TO BE REMOVED SHALL BE REMOVED COMPLETELY OR AS OTHERWISE SHOWN OR INDICATED ON DRAWINGS ALL PIPE HANGERS, SLEEVES, RISER CLAMPS, ETC SHALL BE REMOVED COMPLETELY WITH PIPING NO EXISTING HANGER SYSTEMS SHALL BE REUSED FOR NEW PIPING.
4. NO EQUIPMENT OR DEVICES THAT HAVE BEEN DISCONNECTED AND OR ABANDONED SHALL REMAIN.
5. ALL EXISTING PIPING AND EQUIPMENT SHOWN HAS BEEN TAKEN FROM THE BEST AVAILABLE EXISTING INFORMATION THE DRAWINGS ARE DIAGRAMMATIC AND ALL FIXTURES, PIPING, AND DEVICES MAY NOT BE SHOWN THE INTENT OF THESE DRAWINGS IS THAT IN ALL AREAS OF RENOVATION THAT THEY ARE REMOVED, WHETHER OR NOT SHOWN.
6. THE PLUMBING CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING SYSTEMS AND CONDITIONS IN AREAS OF RENOVATION.
7. ANY SYSTEMS OR EQUIPMENT TO REMAIN ACTIVE DURING RENOVATION SHALL BE KEPT IN OPERATION BY PROVIDING TEMPORARY PIPING CONNECTIONS AS REQUIRED UNTIL NEW SYSTEMS ARE INSTALLED AND OPERATIONAL.
8. THE PLUMBING CONTRACTOR SHALL COORDINATE WITH THE OWNER, CM, AND OR GENERAL CONTRACTOR ANY AND ALL PHASING OF THE PLUMBING DEMOLITION WORK IN ORDER TO SATISFY THE CONSTRUCTION SCHEDULE AND OWNERS OCCUPANCY REQUIREMENTS.
9. ANY FIXTURE OR EQUIPMENT TO BE REMOVED AND REUSED OR TURNED OVER TO THE OWNER, AT OWNERS REQUEST, OR AS INDICATED ON THE DRAWINGS SHALL BE CAREFULLY REMOVED AND STORED TO PREVENT DAMAGE.
10. THE PLUMBING CONTRACTOR SHALL ALSO REVIEW THE ARCHITECTURAL DEMOLITION DRAWINGS AS PART OF THIS CONTRACT FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
11. ALL SERVICE INTERRUPTIONS SHALL BE COORDINATED AND APPROVED WITH THE OWNER IN ADVANCE PRIOR TO COMMENCEMENT OF ANY WORK.
12. THE PLUMBING CONTRACTOR SHALL COORDINATE HIS DEMOLITION WORK WITH THAT OF OTHER TRADES IN ORDER TO AVOID CONFLICTS.
13. REMOVAL OF EXISTING FIXTURES AND EQUIPMENT WILL REQUIRE ISOLATING THE PIPING RISERS OR MAINS VIA SHUT-OFF VALVES. INSTALL NEW ISOLATION VALVES WHERE REQUIRED FOR COMPLETION OF WORK.
14. REMOVAL OF EXISTING PLUMBING FIXTURES AND EQUIPMENT, ETC. WILL REQUIRE CAPPING AND SEALING EXISTING MAINS OR BRANCHES AS NECESARY AND REQUIRED TO ALLOW THE REMAINING SYSTEMS TO FULLY OPERATE WITHOUT DEGRADATION. CONTRACTOR SHALL PROVIDE PROTECTIVE PLASTIC DROP CLOTHS TO PROTECT THE EXISTING OCCUPIED AREAS AND EQUIPMENT FROM DUST AND DEBRIS DURING THE CONSTRUCTION WORK, AND SHALL CLEAN THE AREAS OF ALL CONSTRUCTION DIRT DAILY, AND UPON COMPLETION OF THE WORK. REFER TO CONDITIONS AND DIVISION 1 SECTIONS IN THE SPECIFICATIONS.
15. EXISING PIPING AND EQUIPMENT, ETC., NOT TO BE UTILIZED IN THE COMPLETED BUILDING SHALL BE DISCONTINUED OR REMOVED AS REQUIRED. ALL ENDS OF DISCONTINUED PIPING SHALL BE CAPPED IN THE NEAREST WALL, CEILING OR FLOOR SO THAT THEY ARE COMPLETELY CONCEALED. OPENINGS LEFT IN WALLS, CEILINGS ETC., WHERE EQUIPMENT AND PIPE, ETC., ARE REMOVED AND NOT REPLACED, SHALL BE PATCHED NEATLY WITH SIMILAR MATERIALTO ADJACENT CONSTRUCTION. REFER TO DRAWINGS DELINEATING NEW WORK FOR ADDITIONAL INFORMATION REGARDING SYSTEMS OR PORTIONS OF SYSTEMS WHERE USE IS TO BE DISCONTINUED.
16. ALL CUTTING AND CHANNELING OF EXISTING BUILDING SHALL BE ACCOMPLISHED IN A NEAT AND WORKMANLIKE MANNER WITHOUT REMOVAL OF EXCESS MATERIALS. THIS CONTRACTOR SHALL PATCH AND REPLACE WITH MATERIAL SIMILAR MATERIAL TO ADJACENT CONSTRUCTION.
17. WHERE EXISTING PIPING AND EQUIPMENT, ETC., THAT ARE TO BE UTILIZED IN THE COMPLETED PROGRAM CONFLICT WITH NEW CONSTRUCTION AND THE REQUIRED DEMOLITION, THEY SHALL BE RELOCATED AND RECONNECTED TO MAINTAIN THE DESIRED SERVICE.
18. PORTIONS OF THE EXISTING SYSTEMS MAY BE SHOWN FOR CLARITY EVEN THOUGH IT MAY NOT BE NECESSARY TO MODIFY OR REVISE THEM. ALL EXISTING SYSTEMS ARE SHOWN BASED ON ORIGINAL OR REMODEL BUILING DRAWINGS. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS.
19. ALL EXISTING FLOOR DRAINS TO BE SCOPED, CLEANED, AND ASSESSED. REPLACE PIPING, DRAIN BODIES, GRATES, ETC. WITH NEW AS REQUIRED.
20. WHERE FIXTURES AND PIPING IS TO BE REPLACED WITH NEW, PATCH AND REPAIR ALL FLOORS, WALLS, AND CEILINGS AS REQUIRED FOR NEW WORK.



1 FOUNDATION PLUMBING DEMOLITION PLAN - UNIT A
P100A 1/8" = 1'-0"
0 4' 8' 16'

12/5/2025 11:57:57 AM

RQAW

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BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

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A1	ADDENDUM 1	12/05/2025

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UNIT A

N

FOUNDATION PLUMBING DEMOLITION PLAN - UNIT A

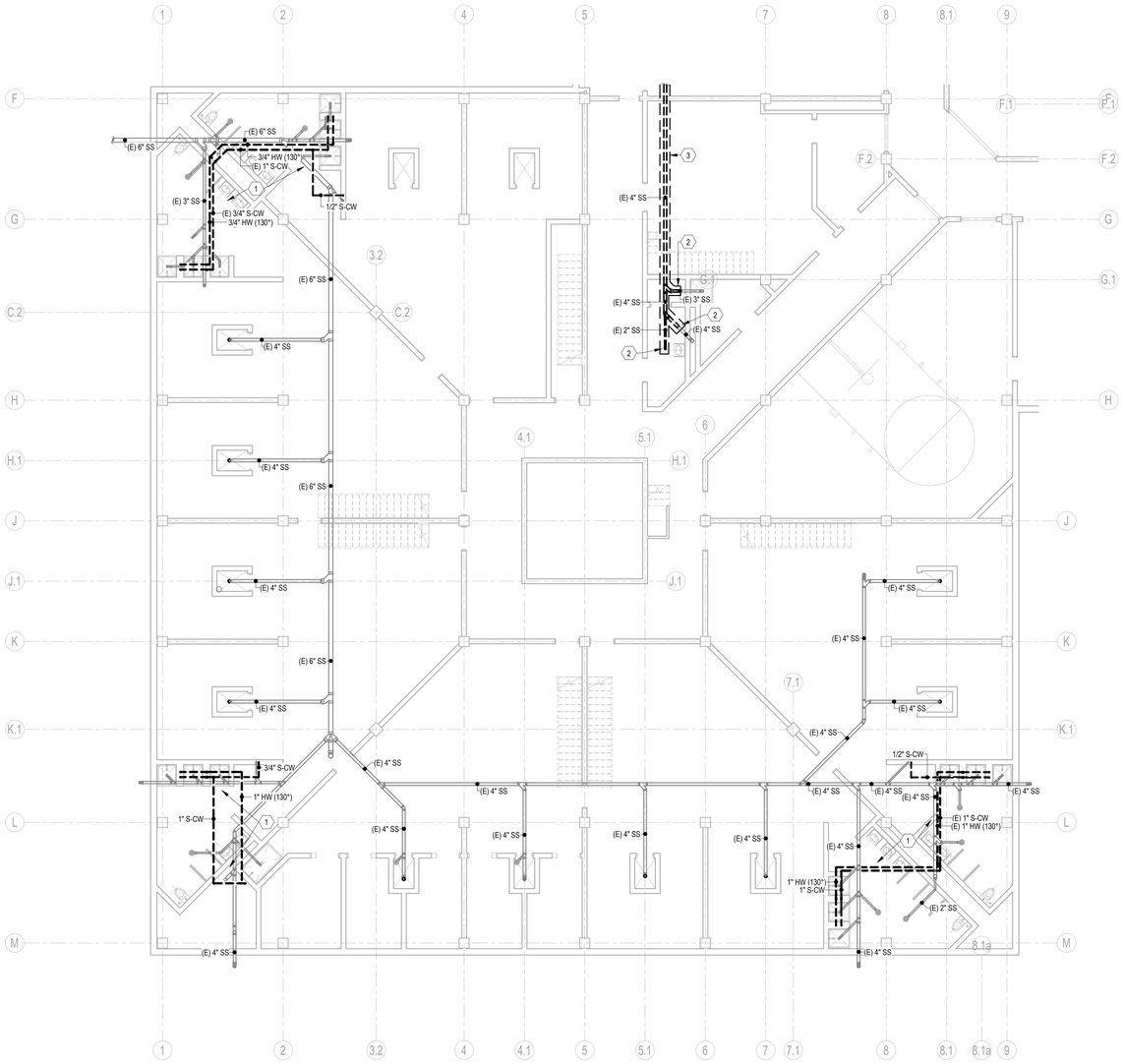
P100A

PLAN NOTES

#	NOTE
1	EXISTING WATER LINES UNDER SLAB ARE TO BE ABANDONED IN PLACE AND CAPPED ABOVE FINISH
2	DISCONNECT, CUT BACK & CAP EXISTING PIPING B.F.F. FOR FUTURE CONNECTION.
3	SAW CUT LINE OF CONCRETE FLOOR FOR FUTURE CONNECTIONS

PLUMBING PLAN DEMOLITION NOTES

1. THE PLUMBING CONTRACTOR SHALL REMOVE ALL PLUMBING FIXTURES, CARRIERS, TRIM, ACCESSORIES, EQUIPMENT, FLOOR DRAINS AND PIPING AS SHOWN OR INDICATED ON THE DRAWINGS.
2. ALL PIPING TO BE REMOVED SHALL BE REMOVED COMPLETELY OR AS OTHERWISE SHOWN OR INDICATED ON DRAWINGS ALL PIPE HANGERS, SLEEVES, RISER CLAMPS, ETC SHALL BE REMOVED COMPLETELY WITH PIPING NO EXISTING HANGER SYSTEMS SHALL BE REUSED FOR NEW PIPING.
3. ALL PIPING TO BE REMOVED SHALL BE REMOVED COMPLETELY OR AS OTHERWISE SHOWN OR INDICATED ON DRAWINGS ALL PIPE HANGERS, SLEEVES, RISER CLAMPS, ETC SHALL BE REMOVED COMPLETELY WITH PIPING NO EXISTING HANGER SYSTEMS SHALL BE REUSED FOR NEW PIPING.
4. NO EQUIPMENT OR DEVICES THAT HAVE BEEN DISCONNECTED AND OR ABANDONED SHALL REMAIN.
5. ALL EXISTING PIPING AND EQUIPMENT SHOWN HAS BEEN TAKEN FROM THE BEST AVAILABLE EXISTING INFORMATION THE DRAWINGS ARE DIAGRAMMATIC AND ALL FIXTURES, PIPING, AND DEVICES MAY NOT BE SHOWN THE INTENT OF THESE DRAWINGS IS THAT IN ALL AREAS OF RENOVATION THAT THEY ARE REMOVED, WHETHER OR NOT SHOWN.
6. THE PLUMBING CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING SYSTEMS AND CONDITIONS IN AREAS OF RENOVATION.
7. ANY SYSTEMS OR EQUIPMENT TO REMAIN ACTIVE DURING RENOVATION SHALL BE KEPT IN OPERATION BY PROVIDING TEMPORARY PIPING CONNECTIONS AS REQUIRED UNTIL NEW SYSTEMS ARE INSTALLED AND OPERATIONAL.
8. THE PLUMBING CONTRACTOR SHALL COORDINATE WITH THE OWNER, CM, AND OR GENERAL CONTRACTOR ANY AND ALL PHASING OF THE PLUMBING DEMOLITION WORK IN ORDER TO SATISFY THE CONSTRUCTION SCHEDULE AND OWNERS OCCUPANCY REQUIREMENTS.
9. ANY FIXTURE OR EQUIPMENT TO BE REMOVED AND REUSED OR TURNED OVER TO THE OWNER, AT OWNERS REQUEST, OR AS INDICATED ON THE DRAWINGS SHALL BE CAREFULLY REMOVED AND STORED TO PREVENT DAMAGE.
10. THE PLUMBING CONTRACTOR SHALL ALSO REVIEW THE ARCHITECTURAL DEMOLITION DRAWINGS AS PART OF THIS CONTRACT FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
11. ALL SERVICE INTERRUPTIONS SHALL BE COORDINATED AND APPROVED WITH THE OWNER IN ADVANCE PRIOR TO COMMENCEMENT OF ANY WORK.
12. THE PLUMBING CONTRACTOR SHALL COORDINATE HIS DEMOLITION WORK WITH THAT OF OTHER TRADES IN ORDER TO AVOID CONFLICTS.
13. REMOVAL OF EXISTING FIXTURES AND EQUIPMENT WILL REQUIRE ISOLATING THE PIPING RISERS OR MAINS VIA SHUT-OFF VALVES. INSTALL NEW ISOLATION VALVES WHERE REQUIRED FOR COMPLETION OF WORK.
14. REMOVAL OF EXISTING PLUMBING FIXTURES AND EQUIPMENT, ETC. WILL REQUIRE CAPPING AND SEALING EXISTING MAINS OR BRANCHES AS NECESARY AND REQUIRED TO ALLOW THE REMAINING SYSTEMS TO FULLY OPERATE WITHOUT DEGRADATION. CONTRACTOR SHALL PROVIDE PROTECTIVE PLASTIC DROP CLOTHS TO PROTECT THE EXISTING OCCUPIED AREAS AND EQUIPMENT FROM DUST AND DEBRIS DURING THE CONSTRUCTION WORK, AND SHALL CLEAN THE AREAS OF ALL CONSTRUCTION DIRT DAILY, AND UPON COMPLETION OF THE WORK. REFER TO CONDITIONS AND DIVISION 1 SECTIONS IN THE SPECIFICATIONS.
15. EXISING PIPING AND EQUIPMENT, ETC., NOT TO BE UTILIZED IN THE COMPLETED BUILDING SHALL BE DISCONTINUED OR REMOVED AS REQUIRED. ALL ENDS OF DISCONTINUED PIPING SHALL BE CAPPED IN THE NEAREST WALL, CEILING OR FLOOR SO THAT THEY ARE COMPLETELY CONCEALED. OPENINGS LEFT IN WALLS, CEILINGS ETC., WHERE EQUIPMENT AND PIPE, ETC., ARE REMOVED AND NOT REPLACED, SHALL BE PATCHED NEATLY WITH SIMILAR MATERIAL TO ADJACENT CONSTRUCTION. REFER TO DRAWINGS DELINEATING NEW WORK FOR ADDITIONAL INFORMATION REGARDING SYSTEMS OR PORTIONS OF SYSTEMS WHERE USE IS TO BE DISCONTINUED.
16. ALL CUTTING AND CHANNELING OF EXISTING BUILDING SHALL BE ACCOMPLISHED IN A NEAT AND WORKMANLIKE MANNER WITHOUT REMOVAL OF EXCESS MATERIALS. THIS CONTRACTOR SHALL PATCH AND REPLACE WITH MATERIAL SIMILAR MATERIAL TO ADJACENT CONSTRUCTION.
17. WHERE EXISTING PIPING AND EQUIPMENT, ETC., THAT ARE TO BE UTILIZED IN THE COMPLETED PROGRAM CONFLICT WITH NEW CONSTRUCTION AND THE REQUIRED DEMOLITION, THEY SHALL BE RELOCATED AND RECONNECTED TO MAINTAIN THE DESIRED SERVICE.
18. PORTIONS OF THE EXISTING SYSTEMS MAY BE SHOWN FOR CLARITY EVEN THOUGH IT MAY NOT BE NECESSARY TO MODIFY OR REVISE THEM. ALL EXISTING SYSTEMS ARE SHOWN BASED ON ORIGINAL OR REMODEL BUILING DRAWINGS. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS.
19. ALL EXISTING FLOOR DRAINS TO BE SCOPED, CLEANED, AND ASSESSED. REPLACE PIPING, DRAIN BODIES, GRATES, ETC. WITH NEW AS REQUIRED.
20. WHERE FIXTURES AND PIPING IS TO BE REPLACED WITH NEW, PATCH AND REPAIR ALL FLOORS, WALLS, AND CEILINGS AS REQUIRED FOR NEW WORK.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PLAN NOTES

#	NOTE
1	DEMOLISH ALL PIPING MAINS, HANGERS, INSULATION, AND OTHER FITTINGS. COORDINATE DEMOLITION WITH PHASING OF NEW PLUMBING LINES.
2	DEMOLISH EXISTING INCOMING DOMESTIC WATER SERVICE. BACKFLOW PREVENTER, HANGERS, AND ALL OTHER ASSOCIATED PIPING AND MATERIALS COMPLETE FOR RELOCATION. PATCH AND REPAIR FLOORING AND WALLS AS REQUIRED.
3	DEMOLISH EXISTING WATER SOFTENER SYSTEM INCLUDING RESIN TANKS, BRINE TANK, ALL ASSOCIATED PIPING, HANGERS, VALVES, AND CONCRETE PADS. PATCH AND REPAIR WALLS, FLOORS, AND CEILINGS AS REQUIRED.
4	DEMOLISH EXISTING WATER HEATING SYSTEM INCLUDING WATER HEATERS, EXPANSION TANK, ALL ASSOCIATED PIPING, HANGERS, VALVES, AND CONCRETE PADS. PATCH AND REPAIR WALLS, FLOORS, AND CEILINGS AS REQUIRED.
5	DEMOLISH EXISTING THERMOSTATIC MIXING VALVE, ALL ASSOCIATED PIPING, HANGERS AND, VALVES. PATCH AND REPAIR WALLS, FLOORS, AND CEILINGS AS REQUIRED.
6	DEMOLISH EXISTING HOT WATER RECIRCULATION PUMP, ALL ASSOCIATED PIPING, HANGERS AND, VALVES. PATCH AND REPAIR WALLS, FLOORS, AND CEILINGS AS REQUIRED.
7	DEMOLISH EXISTING INCOMING GAS SERVICE, METER, HANGERS, AND ALL OTHER ASSOCIATED PIPING AND MATERIALS COMPLETE FOR RELOCATION. PATCH AND REPAIR FLOORING AND WALLS AS REQUIRED.
8	ASSESS WALL HYDRANT AND DEMOLISH IF REQUIRED. IF HYDRANT IS TO BE REPLACED, PREPARE WALLS, CEILINGS, AND ANY PENETRATIONS FOR NEW FIXTURE. WALL HYDRANT IS TO BE CONNECTED TO A NEW DEDICATED HARD COLD WATER LINE WITH SHUTOFF VALVE.
9	DEMOLISH ALL EXISTING CW, HW, AND GAS PIPING, VALVES, AND ACCESSORIES COMPLETE. PREPARE ROOF PENETRATION FOR NEW GAS LINE INSTALLATION. SCOPE AND ASSESS TRENCH DRAIN AND GRATING. REPLACE WITH NEW AS NECESSARY.
10	DEMOLISH ALL EXISTING KITCHEN FIXTURES, CW, HW, GAS PIPING, VALVES, AND ACCESSORIES COMPLETE. PREPARE ROOF PENETRATION FOR NEW GAS LINE INSTALLATION. SCOPE AND ASSESS FLOOR DRAINS AND FLOOR SINKS. REPLACE WITH NEW AS NECESSARY.

PLAN NOTES

#	NOTE
11	FIXTURES TO REMAIN AS IS. DEMO CW AND HW LINES TO A POINT OF CONNECTING TO NEW MAINS. SCOPE ALL FLOOR DRAINS AND REPLACE DRAIN BODIES, PIPING, AND GRATES AS REQUIRED.
12	DEMOLISH ALL EXISTING GAS PIPING, VALVES, AND ACCESSORIES COMPLETE. REPLACE WITH NEW AS NECESSARY.
13	DEMO FLUSH VALVES, TMVS, ALL VISIBLE CW, HW, WASTE, AND VENT PIPING AND PREPARE TO REPLACE WITH NEW.
14	EXISTING GREASE INTERCEPTOR TO REMAIN AS IS. DEMOLISH AND REWORK ANY GREASE WASTE PIPING AS REQUIRED FROM KITCHEN CHANGES.
15	DEMOLISH EXISTING DIESEL STORAGE TANK, EQUIPMENT PAD, PIPING, AND ANY OTHER RELATIONS TO STORAGE TANK. STORAGE TANK AND PIPING TO REMAIN IN OPERATION UNTIL NEW GEN SET IS OPERABLE.
16	DEMOLISH FIXTURE AND PREPARE WALL, CW, WASTE, AND VENT PIPING TO REPLACE WITH NEW.
17	DEMOLISH EXISTING FLUSH VALVES AND PREPARE TO REPLACE WITH NEW.
18	DEMOLISH EXISTING WATER CLOSET AND FLUSH VALVE. PREPARE WALL AND PLUMBING LINES FOR NEW FIXTURE AS REQUIRED. ASSESS CARRIER AND REPLACE AS NECESSARY.
19	DEMOLISH EXISTING URINAL AND FLUSH VALVE. PREPARE WALL AND PLUMBING LINES FOR NEW FIXTURE AS REQUIRED. ASSESS CARRIER AND REPLACE AS NECESSARY.
20	DEMOLISH EXISTING SHOWER CABINET. PREPARE WALL AND PLUMBING LINES FOR NEW FIXTURE AS REQUIRED. SCOPE SHOWER DRAIN TO ASSESS ANY DAMAGE AND REPLACE AS NECESSARY.
21	DEMOLISH EXISTING LAVATORY, FAUCET, TMV, AND ASSOCIATED TRIM. PREPARE WALL AND PLUMBING LINES FOR NEW FIXTURE AS REQUIRED.
22	DEMOLISH EXISTING FLOOR SINK AND SCOPE DRAIN AND PIPING. PREPARE FLOORING FOR NEW FLOOR SINK.

PLAN NOTES

#	NOTE
23	ALTERNATE #02: IF ACCEPTED: COMBINATION LAVITOILET FIXTURE AND FLUSH VALVE AND LAVATORY VALVES TO BE REMOVED AND REPLACED WITH NEW COMBINATION FIXTURE. SEE P210B FOR DETAILS.

A1

PLUMBING PLAN DEMOLITION NOTES

1. THE PLUMBING CONTRACTOR SHALL REMOVE ALL PLUMBING FIXTURES, CARRIERS, TRIM, ACCESSORIES, EQUIPMENT, FLOOR DRAINS AND PIPING AS SHOWN OR INDICATED ON THE DRAWINGS.
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15. EXISING PIPING AND EQUIPMENT, ETC., NOT TO BE UTILIZED IN THE COMPLETED BUILDING SHALL BE DISCONTINUED OR REMOVED AS REQUIRED. ALL ENDS OF DISCONTINUED PIPING SHALL BE CAPPED IN THE NEAREST WALL, CEILING OR FLOOR SO THAT THEY ARE COMPLETELY CONCEALED. OPENINGS LEFT IN WALLS, CEILINGS ETC., WHERE EQUIPMENT AND PIPE, ETC., ARE REMOVED AND NOT REPLACED, SHALL BE PATCHED NEATLY WITH SIMILAR MATERIALTO ADJACENT CONSTRUCTION. REFER TO DRAWINGS DELINEATING NEW WORK FOR ADDITIONAL INFORMATION REGARDING SYSTEMS OR PORTIONS OF SYSTEMS WHERE USE IS TO BE DISCONTINUED.
16. ALL CUTTING AND CHANNELING OF EXISTING BUILDING SHALL BE ACCOMPLISHED IN A NEAT AND WORKMANLIKE MANNER WITHOUT REMOVAL OF EXCESS MATERIALS. THIS CONTRACTOR SHALL PATCH AND REPLACE WITH MATERIAL SIMILAR MATERIAL TO ADJACENT CONSTRUCTION.
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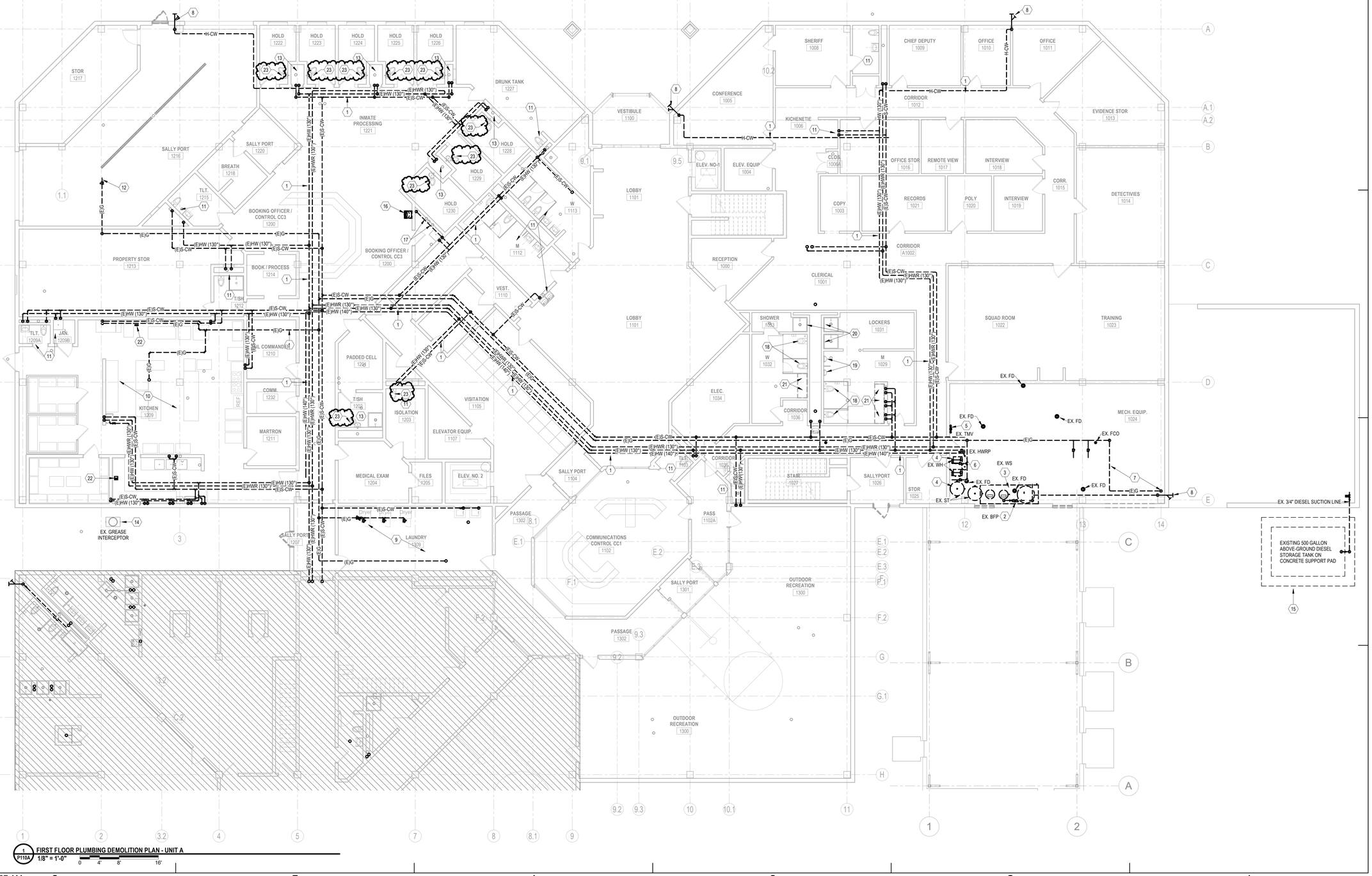
19. ALL EXISTING FLOOR DRAINS TO BE SCOPED, CLEANED, AND ASSESSED. REPLACE PIPING, DRAIN BODIES, GRATES, ETC. WITH NEW AS REQUIRED.
20. WHERE FIXTURES AND PIPING IS TO BE REPLACED WITH NEW, PATCH AND REPAIR ALL FLOORS, WALLS, AND CEILINGS AS REQUIRED FOR NEW WORK.



1 P110A FIRST FLOOR PLUMBING DEMOLITION PLAN - UNIT A
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BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929
Designed By: K.I.
Drawn By: D.M.
Checked By: K.I.
Date: 11.21.2025

DUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER

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UNIT A

N

FIRST FLOOR PLUMBING DEMOLITION PLAN - UNIT A

P110A

PLAN NOTES

#	NOTE
1	DEMO ALL VISIBLE CW, HW, WASTE, AND VENT PIPING AND PREPARE TO REPLACE WITH NEW.
2	DEMO ALL VISIBLE WASTE AND VENT PIPING AND PREPARE TO REPLACE WITH NEW.
3	ABANDON EXISTING CW AND HW LINES FROM UNDER SLAB. DEMO EXISTING SHOWER VALVE, TRIM, AND HEAD COMPLETE. PATCH AND REPAIR WALLS AND FLOORS AS REQUIRED TO PREPARE FOR NEW INSTALLATION.
4	DEMO FIXTURE AND ALL VISIBLE CW, HW, WASTE, AND VENT PIPING PREPARE TO REPLACE WITH NEW FIXTURE.
5	DISCONNECT WATER LINES GOING UNDER SLAB FROM WATER MAIN LINES AND CAP.
6	DEMO ALL PIPING MAINS, HANGERS, INSULATION, AND OTHER FITTINGS. COORDINATE DEMOLITION WITH PHASING OF NEW PLUMBING LINES.
7	ALTERNATE #02: IF ACCEPTED: COMBINATION LAV/TOILET FIXTURE AND FLUSH VALVE AND LAVATORY VALVES TO BE REMOVED AND REPLACED WITH NEW COMBINATION FIXTURE. SEE P210B FOR DETAILS.

PLUMBING PLAN DEMOLITION NOTES

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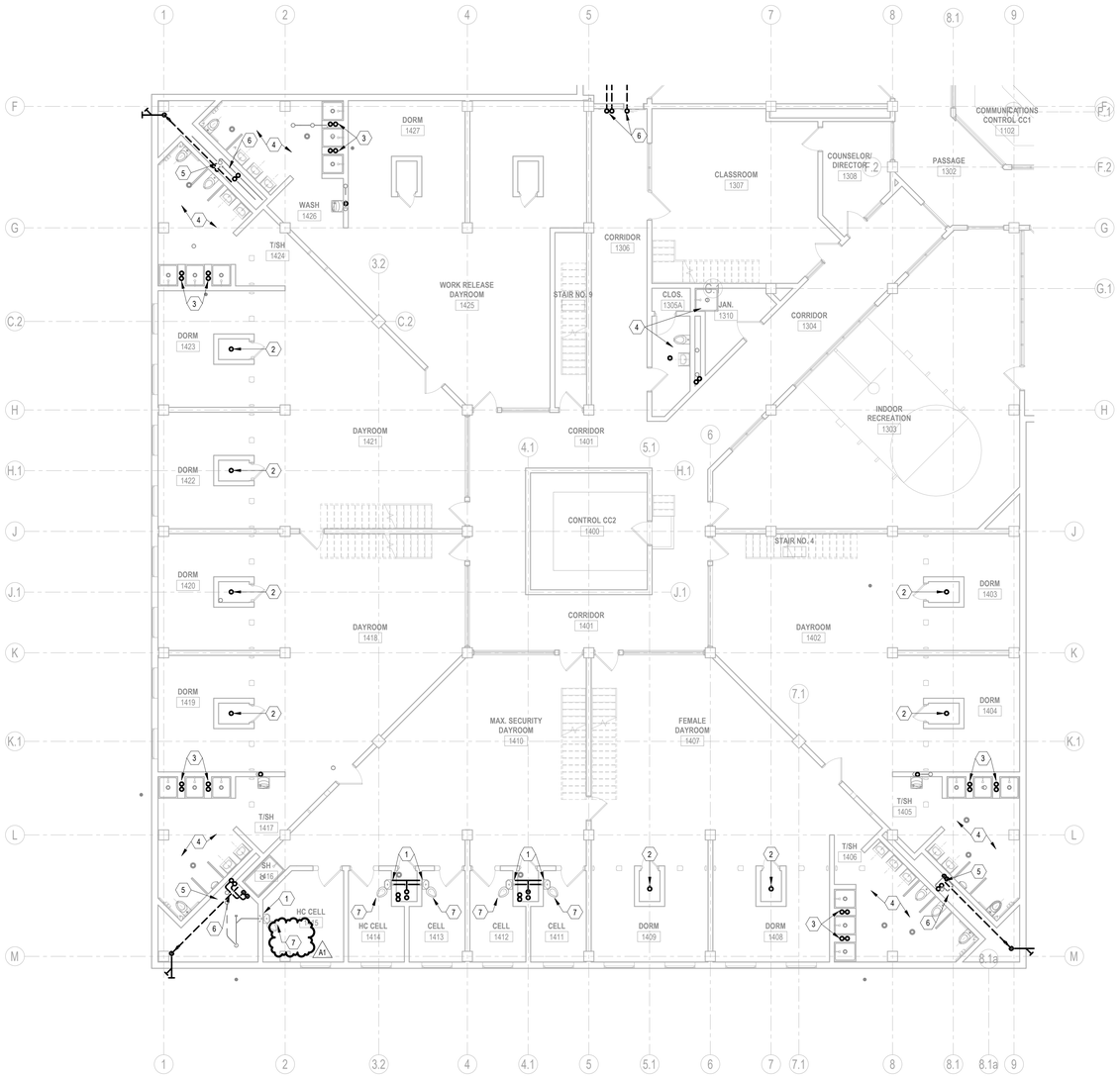

1 P110B **FIRST FLOOR PLUMBING DEMOLITION PLAN - UNIT B**
1/8" = 1'-0"
0 4' 8' 16'

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929
Designed By: K.I.
Drawn By: D.M.
Checked By: K.I.
Date: 11.21.2025

DUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER
Dustin Barth

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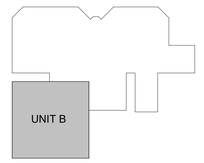


FIRST FLOOR PLUMBING DEMOLITION PLAN - UNIT B

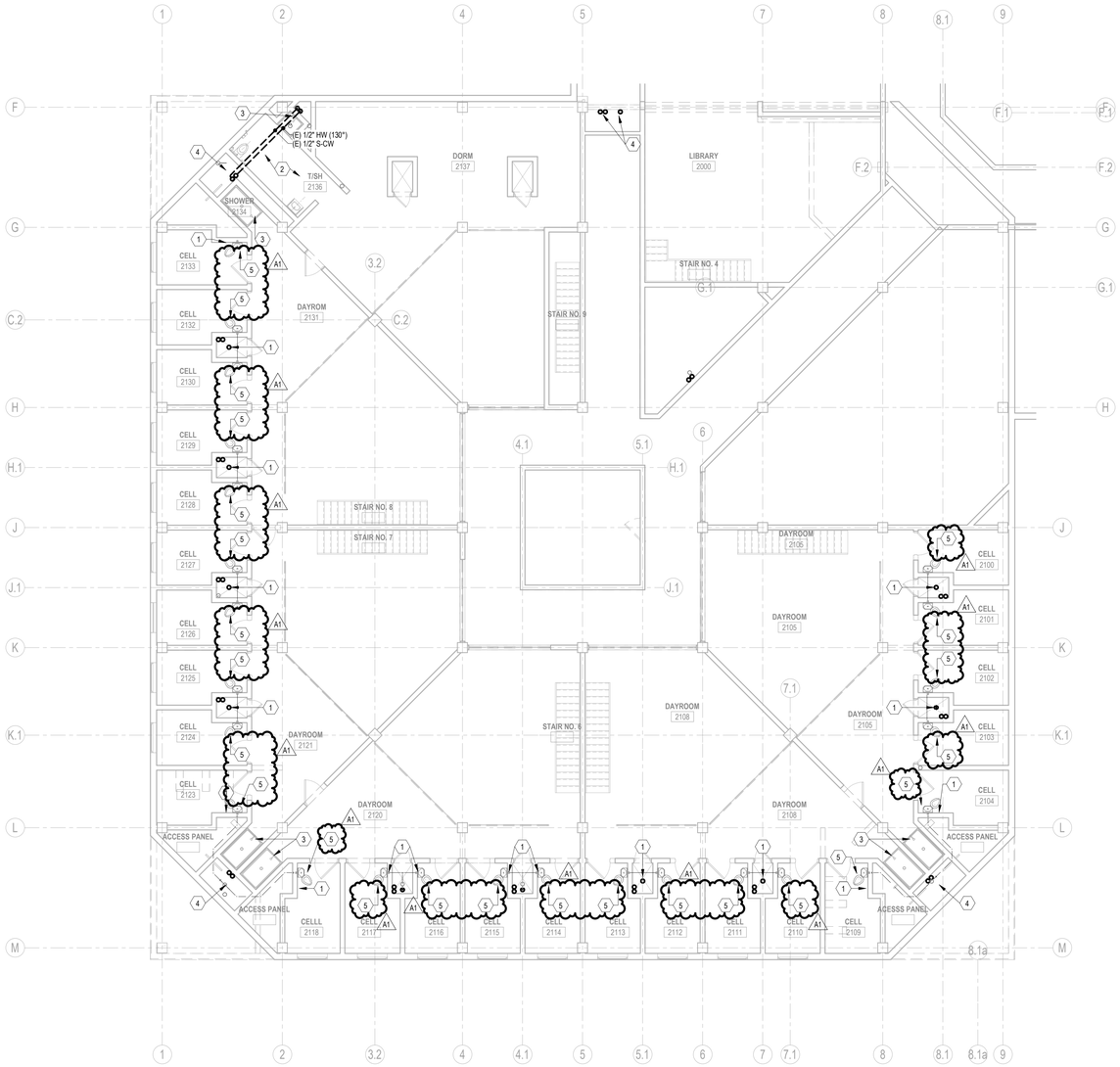
P110B

PLAN NOTES

1	DEMO ALL VISIBLE CW, HW, WASTE, AND VENT PIPING AND PREPARE TO REPLACE WITH NEW.
2	DEMO PLUMBING FIXTURES AND ALL VISIBLE CW, HW, WASTE, AND VENT PIPING AND PREPARE TO REPLACE WITH NEW. SCOPE ALL FLOOR DRAINS AND REPLACE DRAIN BODIES, PIPING AND GRATES AS REQUIRED.
3	DEMO ALL VISIBLE CW, HW, WASTE, AND VENT PIPING AND PREPARE TO REPLACE WITH NEW. IF REQUIRED, PROVIDE NEW FIXTURE WITH HEAD, VALVES, AND TRIM. SCOPE SHOWER DRAINS AND REPLACE DRAIN BODIES, PIPING, AND GRATES AS REQUIRED.
4	DEMOLISH ALL PIPING MAINS, HANGERS, INSULATION, AND OTHER FITTINGS. COORDINATE DEMOLITION WITH PHASING OF NEW PLUMBING LINES.
5	ALTERNATE #02: IF ACCEPTED: COMBINATION LAVITOILET FIXTURE AND FLUSH VALVE AND LAVATORY VALVES TO BE REMOVED AND REPLACED WITH NEW COMBINATION FIXTURE. IF NOT ACCEPTED, FIXTURE TO REMAIN AS-IS. SEE P210B FOR DETAILS.

PLUMBING PLAN DEMOLITION NOTES

1. THE PLUMBING CONTRACTOR SHALL REMOVE ALL PLUMBING FIXTURES, CARRIERS, TRIM, ACCESSORIES, EQUIPMENT, FLOOR DRAINS AND PIPING AS SHOWN OR INDICATED ON THE DRAWINGS.
2. ALL PIPING TO BE REMOVED SHALL BE REMOVED COMPLETELY OR AS OTHERWISE SHOWN OR INDICATED ON DRAWINGS ALL PIPE HANGERS, SLEEVES, RISER CLAMPS, ETC. SHALL BE REMOVED COMPLETELY WITH PIPING NO EXISTING HANGER SYSTEMS SHALL BE REUSED FOR NEW PIPING.
3. ALL PIPING TO BE REMOVED SHALL BE REMOVED COMPLETELY OR AS OTHERWISE SHOWN OR INDICATED ON DRAWINGS ALL PIPE HANGERS, SLEEVES, RISER CLAMPS, ETC. SHALL BE REMOVED COMPLETELY WITH PIPING NO EXISTING HANGER SYSTEMS SHALL BE REUSED FOR NEW PIPING.
4. NO EQUIPMENT OR DEVICES THAT HAVE BEEN DISCONNECTED AND OR ABANDONED SHALL REMAIN.
5. ALL EXISTING PIPING AND EQUIPMENT SHOWN HAS BEEN TAKEN FROM THE BEST AVAILABLE EXISTING INFORMATION THE DRAWINGS ARE DIAGRAMMATIC AND ALL FIXTURES, PIPING, AND DEVICES MAY NOT BE SHOWN THE INTENT OF THESE DRAWINGS IS THAT IN ALL AREAS OF RENOVATION THAT THEY ARE REMOVED, WHETHER OR NOT SHOWN.
6. THE PLUMBING CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING SYSTEMS AND CONDITIONS IN AREAS OF RENOVATION.
7. ANY SYSTEMS OR EQUIPMENT TO REMAIN ACTIVE DURING RENOVATION SHALL BE KEPT IN OPERATION BY PROVIDING TEMPORARY PIPING CONNECTIONS AS REQUIRED UNTIL NEW SYSTEMS ARE INSTALLED AND OPERATIONAL.
8. THE PLUMBING CONTRACTOR SHALL COORDINATE WITH THE OWNER, CM, AND OR GENERAL CONTRACTOR ANY AND ALL PHASING OF THE PLUMBING DEMOLITION WORK IN ORDER TO SATISFY THE CONSTRUCTION SCHEDULE AND OWNERS OCCUPANCY REQUIREMENTS.
9. ANY FIXTURE OR EQUIPMENT TO BE REMOVED AND REUSED OR TURNED OVER TO THE OWNER, AT OWNERS REQUEST, OR AS INDICATED ON THE DRAWINGS SHALL BE CAREFULLY REMOVED AND STORED TO PREVENT DAMAGE.
10. THE PLUMBING CONTRACTOR SHALL ALSO REVIEW THE ARCHITECTURAL DEMOLITION DRAWINGS AS PART OF THIS CONTRACT FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
11. ALL SERVICE INTERRUPTIONS SHALL BE COORDINATED AND APPROVED WITH THE OWNER IN ADVANCE PRIOR TO COMMENCEMENT OF ANY WORK.
12. THE PLUMBING CONTRACTOR SHALL COORDINATE HIS DEMOLITION WORK WITH THAT OF OTHER TRADES IN ORDER TO AVOID CONFLICTS.
13. REMOVAL OF EXISTING FIXTURES AND EQUIPMENT WILL REQUIRE ISOLATING THE PIPING RISERS OR MAINS VIA SHUT-OFF VALVES. INSTALL NEW ISOLATION VALVES WHERE REQUIRED FOR COMPLETION OF WORK.
14. REMOVAL OF EXISTING PLUMBING FIXTURES AND EQUIPMENT, ETC. WILL REQUIRE CAPPING AND SEALING EXISTING MAINS OR BRANCHES AS NECESARY AND REQUIRED TO ALLOW THE REMAINING SYSTEMS TO FULLY OPERATE WITHOUT DEGRADATION. CONTRACTOR SHALL PROVIDE PROTECTIVE PLASTIC DROP CLOTHS TO PROTECT THE EXISTING OCCUPIED AREAS AND EQUIPMENT FROM DUST AND DEBRIS DURING THE CONSTRUCTION WORK, AND SHALL CLEAN THE AREAS OF ALL CONSTRUCTION DIRT DAILY, AND UPON COMPLETION OF THE WORK. REFER TO CONDITIONS AND DIVISION 1 SECTIONS IN THE SPECIFICATIONS.
15. EXISING PIPING AND EQUIPMENT, ETC., NOT TO BE UTILIZED IN THE COMPLETED BUILDING SHALL BE DISCONTINUED OR REMOVED AS REQUIRED. ALL ENDS OF DISCONTINUED PIPING SHALL BE CAPPED IN THE NEAREST WALL, CEILING OR FLOOR SO THAT THEY ARE COMPLETELY CONCEALED. OPENINGS LEFT IN WALLS, CEILINGS ETC., WHERE EQUIPMENT AND PIPE, ETC., ARE REMOVED AND NOT REPLACED, SHALL BE PATCHED NEATLY WITH SIMILAR MATERIALTO ADJACENT CONSTRUCTION. REFER TO DRAWINGS DELINEATING NEW WORK FOR ADDITIONAL INFORMATION REGARDING SYSTEMS OR PORTIONS OF SYSTEMS WHERE USE IS TO BE DISCONTINUED.
16. ALL CUTTING AND CHANNELING OF EXISTING BUILDING SHALL BE ACCOMPLISHED IN A NEAT AND WORKMANLIKE MANNER WITHOUT REMOVAL OF EXCESS MATERIALS. THIS CONTRACTOR SHALL PATCH AND REPLACE WITH MATERIAL SIMILAR MATERIAL TO ADJACENT CONSTRUCTION.
17. WHERE EXISTING PIPING AND EQUIPMENT, ETC., THAT ARE TO BE UTILIZED IN THE COMPLETED PROGRAM CONFLICT WITH NEW CONSTRUCTION AND THE REQUIRED DEMOLITION, THEY SHALL BE RELOCATED AND RECONNECTED TO MAINTAIN THE DESIRED SERVICE.
18. PORTIONS OF THE EXISTING SYSTEMS MAY BE SHOWN FOR CLARITY EVEN THOUGH IT MAY NOT BE NECESSARY TO MODIFY OR REVISE THEM. ALL EXISTING SYSTEMS ARE SHOWN BASED ON ORIGINAL OR REMODEL BUILING DRAWINGS. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS.
19. ALL EXISTING FLOOR DRAINS TO BE SCOPED, CLEANED, AND ASSESSED. REPLACE PIPING, DRAIN BODIES, GRATES, ETC. WITH NEW AS REQUIRED.
20. WHERE FIXTURES AND PIPING IS TO BE REPLACED WITH NEW, PATCH AND REPAIR ALL FLOORS, WALLS, AND CEILINGS AS REQUIRED FOR NEW WORK.



1 P120B SECOND FLOOR PLUMBING DEMOLITION PLAN - UNIT B
1/8" = 1'-0"
0' 4' 8' 16'

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929
Designed By: K.I.
Drawn By: D.M.
Checked By: K.I.
Date: 11.21.2025

DUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER

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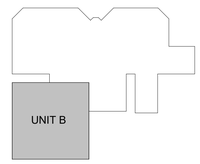

SECOND FLOOR PLUMBING DEMOLITION PLAN - UNIT B

P120B

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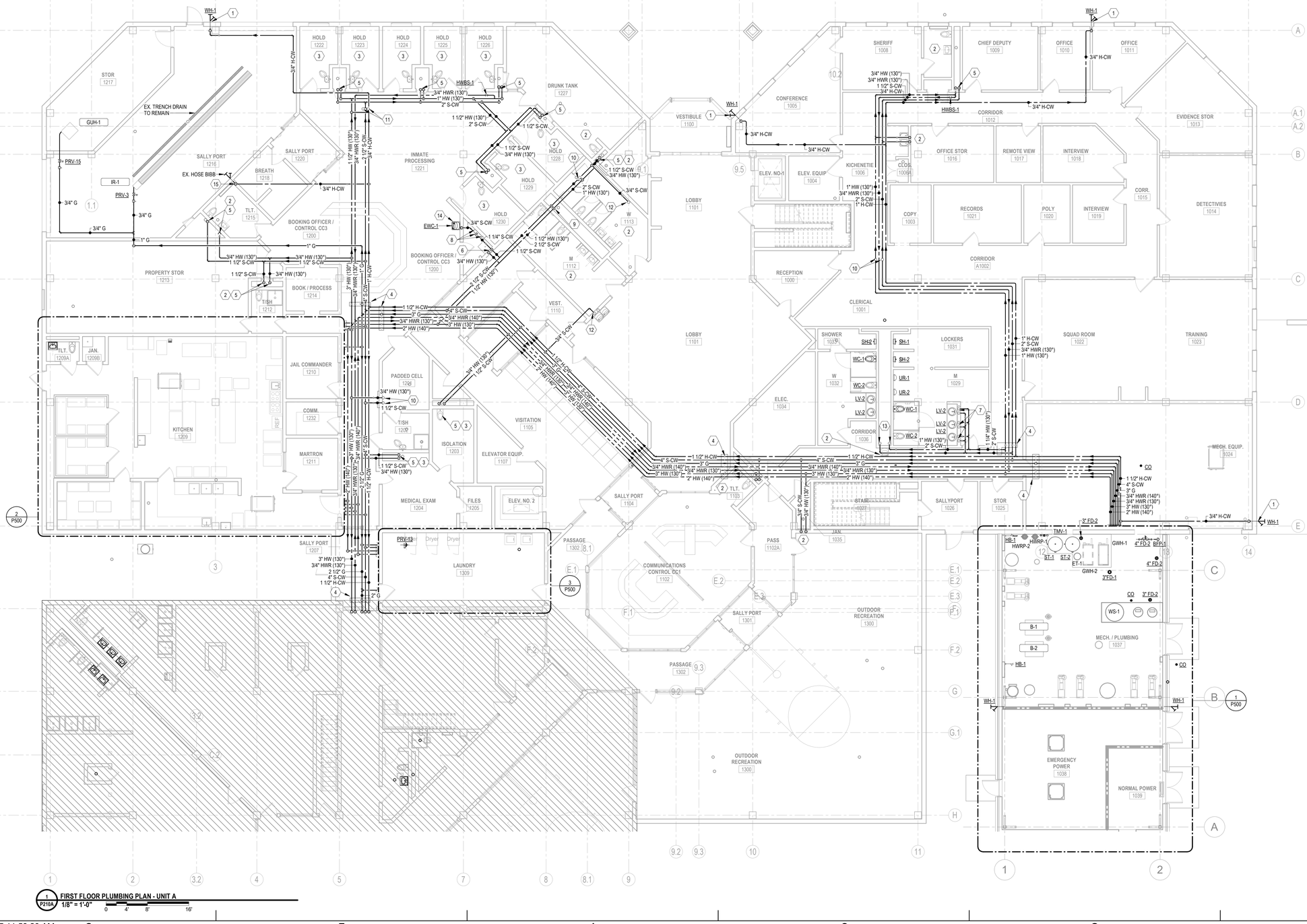
PLAN NOTES

#	NOTE
1	ASSESS WALL HYDRANT AND DEMOLISH IF REQUIRED. IF HYDRANT IS TO BE REPLACED, PREPARE WALLS, CEILINGS, AND ANY PENETRATIONS FOR NEW FIXTURE. WALL HYDRANT IS TO BE CONNECTED TO A NEW DEDICATED HARD COLD WATER LINE WITH SHUTOFF VALVE.
2	EXISTING PLUMBING FIXTURES TO REMAIN AS IS. CONNECT EXISTING CW AND HW PIPE TO NEW WATER MAIN. ENSURE ADEQUATE SHUT OFF VALVES.
3	ALTERNATE #2: IF ACCEPTED, NEW COMBINATION LAV/TOILET FIXTURE. PROVIDE WITH ELECTRONIC CONTROL VALVES AND PUSH BUTTONS. ALL MODIFICATIONS SHALL BE INTERCONNECTED WITH THE WATER MANAGEMENT SYSTEM.
4	PHASING: ALL PLUMBING SYSTEMS WITHIN PHASE TO REMAIN IN OPERATION UNTIL TRANSITION. COORDINATE PHASING WITH CLIENT AND ALL TRADES.
5	1 1/2" S-CW AND 3/4" HW(130°F) DROP IN CHASE. PROVIDE NEW ACCESSIBLE SHUT OFF VALVES.
6	3/4" S-CW AND 3/4" HW(130°F) DROP. PROVIDE NEW ACCESSIBLE SHUT OFF AND CHECK VALVES.
7	1/2" S-CW AND 1/2" HW(130°F) DROP. PROVIDE NEW ACCESSIBLE SHUT OFF VALVES.
8	1 1/4" S-CW DROP TO FLUSH VALVE FOR FLOOR DRAINS IN ROOMS 1227 AND 1201. PROVIDE NEW FLUSH VALVE AND SHUT OFF VALVES FOR EACH LINE GOING UNDER SLAB.
9	2 1/2" S-CW AND 1" HW(130°F) DROP IN CHASE. PROVIDE NEW ACCESSIBLE SHUT OFF VALVES.
10	CONNECT 1 1/2" S-CW AND 3/4" HW(130°F) TO EXISTING LINES. PROVIDE NEW ACCESSIBLE SHUT OFF VALVES. ASSESS WASTE AND VENT PIPING AND REPLACE AS REQUIRED.
11	CONNECT 1/2" S-CW AND 1/2" HW(130°F) TO EXISTING LINES. PROVIDE NEW ACCESSIBLE SHUT OFF VALVES. ASSESS WASTE AND VENT PIPING AND REPLACE AS REQUIRED.

PLAN NOTES

#	NOTE
12	CONNECT 3/4" S-CW TO EXISTING LINE. PROVIDE NEW ACCESSIBLE SHUT OFF VALVE.
13	2" S-CW AND 1" HW(130°F) DROP IN CHASE. PROVIDE NEW ACCESSIBLE SHUT OFF VALVES.
14	CONNECT NEW EWC-1 TO EXISTING WASTE, VENT, AND S-CW LINES.
15	EXISTING HOSE BIBB TO REMAIN. REFEED WITH HARD COLD WATER.



1 P210A **FIRST FLOOR PLUMBING PLAN - UNIT A**
1/8" = 1'-0"
0 4' 8' 16'

12/5/2025 11:58:20 AM

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

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A1	ADDENDUM 1	12/05/2025

Project #: 800-71929
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DUSTIN E. BARTH
REGISTERED
No. 12200401
STATE OF INDIANA
PROFESSIONAL ENGINEER
Dustin Barth

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UNIT A

N

FIRST FLOOR PLUMBING PLAN - UNIT A

P210A

PLUMBING FIXTURE SCHEDULE

TAG	FIXTURE DESCRIPTION	MANUFACTURER	MODEL #
WC-1	WATER CLOSET: ADA COMPLIANT, VITREOUS CHINA, WALL-MOUNTED ELONGATED BOWL, 1-1/2" INLET TOP SPUD, LOW-CONSUMPTION 1.1-1.6 GPF, DIRECT-FED SIPHON JET ACTION, FULLY-GLAZED 2-1/8" TRAPWAY, 10"x12" WATER, SURFACE AREA.	AMERICAN STANDARD	3351.101
	FLUSH VALVE: 1.28 GPF, POLISHED CHROME FINISH, FIXTURE CONNECTION TOP SPUD, SINGLE FLUSH, BATTERY, G2 EXPOSED SENSOR WATER CLOSET FLUSHOMETER.	SLOAN	G2 8111-1.28
	SEAT: HEAVY WEIGHT AND INJECTION-MOLDED OF SOLID PLASTIC, OPEN FRONT LESS COVER FOR ELONGATED BOWL AND FEATURE EXCLUSIVE, FOUR LARGE MOLDED-IN BUMPERS, CONCEALED CHECK HINGES WITH STAINLESS STEEL POSTS.	CHURCH	295CT
	CARRIER: ADJUSTABLE, SIPHON JET WATER CLOSET WITH HUB & SPIGOT CONNECTIONS. CAST IRON MAIN FITTING, WITH 2" VENT, ADJUSTABLE GASKETED FACE PLATE, UNIVERSAL FLOOR MOUNTED FOOT SUPPORTS, CORROSION RESISTANT ADJUSTABLE COUPLING WITH INTEGRAL TEST CAP, FIXTURE BOLTS, TRIM, AND STUD PROTECTORS. REAR ANCHOR TIE DOWN AND BONDED GASKET.	ZURN	SERIES Z1200
WC-2	WATER CLOSET: VITREOUS CHINA, WALL-MOUNTED ELONGATED BOWL, 1-1/2" INLET TOP SPUD, LOW-CONSUMPTION 1.6 GPF, DIRECT-FED SIPHON JET ACTION, FULLY-GLAZED 2-1/8" TRAPWAY.	AMERICAN STANDARD	3351.101
	FLUSH VALVE: 1.28 GPF, POLISHED CHROME FINISH, FIXTURE CONNECTION TOP SPUD, SINGLE FLUSH, BATTERY, G2 EXPOSED SENSOR WATER CLOSET FLUSHOMETER.	SLOAN	G2 8111-1.28
	SEAT: HEAVY WEIGHT AND INJECTION-MOLDED OF SOLID PLASTIC, OPEN FRONT LESS COVER FOR ELONGATED BOWL AND FEATURE EXCLUSIVE, FOUR LARGE MOLDED-IN BUMPERS, CONCEALED CHECK HINGES WITH STAINLESS STEEL POSTS.	CHURCH	295CT
	CARRIER: ADJUSTABLE, SIPHON JET WATER CLOSET WITH HUB & SPIGOT CONNECTIONS. CAST IRON MAIN FITTING, WITH 2" VENT, ADJUSTABLE GASKETED FACE PLATE, UNIVERSAL FLOOR MOUNTED FOOT SUPPORTS, CORROSION RESISTANT.	ZURN	SERIES Z1200
UR-1	URINAL: ADA, VITREOUS CHINA, WALL-MOUNTED, 3/4" INLET TOP SPUD, LOW CONSUMPTION 0.5 GPF + MOUNT FIXTURE 17" A.F.F.	AMERICAN STANDARD	6590.001EC
	FLUSH VALVE: 0.5 GPF, POLISHED CHROME FINISH, FIXTURE CONNECTION TOP SPUD, SINGLE FLUSH, BATTERY, G2 EXPOSED SENSOR URINAL FLUSHOMETER.	SLOAN	G2 8186-0.5
	CARRIER: ADJUSTABLE, FLOOR MOUNTED.	ZURN	Z1221
UR-2	URINAL: VITREOUS CHINA, WALL-MOUNTED, 3/4" INLET TOP SPUD, LOW CONSUMPTION 0.5 GPF.	AMERICAN STANDARD	6590.001EC
	FLUSH VALVE: 0.5 GPF, POLISHED CHROME FINISH, FIXTURE CONNECTION TOP SPUD, SINGLE FLUSH, BATTERY, G2 EXPOSED SENSOR URINAL FLUSHOMETER.	SLOAN	G2 8186-0.5
	CARRIER: ADJUSTABLE, FLOOR MOUNTED.	ZURN	Z1221
LV-1	LAVATORY: WALL HUNG, 20-1/2" X 18-1/4", VITREOUS CHINA, FRONT OVERFLOW, SELF-DRAINING DECK AREA WITH CONTOURED BACK AND SIDE SPLASH SHIELDS, FAUCET LEDGE, FAUCET HOLES ON 4" CENTERS.	AMERICAN STANDARD	0355.012
	FAUCET: ELECTRONIC SENSOR, BATTERY-POWERED , 0.5 GPM PRESSURE COMPENSATING AERATOR OUTLET.	SLOAN	EBF-750
	TRIM: SUPPLY PIPE WITH LOOSE KEY STOPS. CAST BRASS P-TRAP WITH CLEAN-OUT. DRAIN WITH CHROME PLATED CAST BRASS SOLID TOP, OPEN GRID, P.O. PLUG. CHROME PLATED BRASS 17 GAUGE TAILPIECE.	MCGUIRE	165LK, 8902, 149
LV-2	LAVATORY: ADA, UNDERCOUNTER MOUNTED - 19-1/4" X 15-3/4", VITREOUS CHINA, REAR OVERFLOW, MOUNTING KIT, UNGLAZED RIM	AMERICAN STANDARD	9482.00
	FAUCET: ELECTRONIC SENSOR, BATTERY-POWERED, DECK MOUNTED0.5 GPM FLOW RATE, LAMINAR SPRAY.	SLOAN	EBF-615
	TRIM: SUPPLY PIPE WITH LOOSE KEY STOPS. CAST BRASS P-TRAP WITH CLEAN-OUT. DRAIN WITH CHROME PLATED CAST BRASS SOLID TOP, OPEN GRID, P.O. PLUG. CHROME PLATED BRASS 17 GAUGE TAILPIECE.	MCGUIRE	165LK, 8902, 149
SH-1	SHOWER: ADA, WALL MOUNTED STAINLESS STEEL CABINET STYLE -	WILLOUGHBY	-
SH-2	SHOWER: WALL MOUNTED STAINLESS STEEL CABINET STYLE -	WILLOUGHBY	-
MS-1	MOP SINK: 24" SQUARE, MOLDED STONE MOP SERVICE BASIN 10" DEEP, INTEGRAL DRAIN IS MOLDED INTO A ONE PIECE UNIT AND DESIGNED TO CONNECT TO A 3" DRAIN PIPE. INCLUDES 830AA FAUCET, 832AA HOSE AND BRACKET, 889CC MOP HANGER BRACKET, 894CC SERVICE MOLDING	FIAT	MSBIDTG2424
EWC-1	ELECTRIC WATER COOLER AND ELECTRONIC BOTTLE FILLER, FILTERED, REFRIGERATED. WALL MOUNTED	OASIS	PG8FEBF

A1

CORRECTIONAL PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	MODEL #	MOUNTING	FINAL CONNECTION SIZES			VENT (MIN.)	GPM	NOTES
					CW	HW	WASTE			
CFSH-1	SHOWER	WILLOUGHBY	WRS-FA	WALL	1/2"	1/2"	2"	--	1.5 GPM	FRONT ACCESS WALL MOUNTED SHOWER PANEL, FURNISHED AND INSTALLED BY PLUMBING CONTRACTOR. IF ALTERNATE #2 IS ACCEPTED, FIXTURE IS CONTROLLED BY ELECTRONIC WATER MANAGEMENT SYSTEM.
CFC-1	15" COMBO UNIT	WILLOUGHBY	1546	FLOOR	1"	1/2"	4"	2"	1.28 GPF	REAR ACCESS UNIT-FURNISHED BY PLUMBING CONTRACTOR. IF ALTERNATE #2 IS ACCEPTED, FIXTURE TO BE CONTROLLED BY ELECTRONIC MANAGEMENT SYSTEM.
CFLV-1	LAVATORY	WILLOUGHBY	HS-1013	WALL	1/2"	1/2"	2"	1 1/2"	0.5 GPM	FRONT ACCESS WALL MOUNTED LAVATORY. FURNISHED AND INSTALLED BY PLUMBING CONTRACTOR. IF ALTERNATE #2 IS ACCEPTED, FIXTURE IS CONTROLLED BY ELECTRONIC WATER MANAGEMENT SYSTEM.
CFWC-1	WATER CLOSET	WILLOUGHBY	ETWS-1490	WALL	1"	--	4"	2"	1.28 GPF	REAR ACCESS UNIT-FURNISHED BY PLUMBING CONTRACTOR. IF ALTERNATE #2 IS ACCEPTED, FIXTURE TO BE CONTROLLED BY ELECTRONIC MANAGEMENT SYSTEM.
CFWC-2	WATER CLOSET	WILLOUGHBY	ETWS-1490	WALL	1"	--	4"	2"	1.28 GPF	REAR ACCESS UNIT-FURNISHED BY PLUMBING CONTRACTOR. IF ALTERNATE #2 IS ACCEPTED, FIXTURE TO BE CONTROLLED BY ELECTRONIC MANAGEMENT SYSTEM.
CFUR-1	URINAL	WILLOUGHBY	UW-1317	WALL	3/4"	--	2"	1 1/2"	0.5 GPF	FRONT ACCESS UNIT-FURNISHED BY PLUMBING CONTRACTOR. IF ALTERNATE #2 IS ACCEPTED, FIXTURE TO BE CONTROLLED BY ELECTRONIC MANAGEMENT SYSTEM.

WATER HAMMER ARRESTOR SCHEDULE

NOTES: CONTRACTOR TO VERIFY FIXTURE UNITS CONNECTED

PDI SYMBOL	FIXTURE UNITS CONNECTED	CONNECTION SIZE
A	1-11	1/2"
B	12-32	3/4"
C	33-60	1"
D	61-113	1"
E	114-154	1"
F	155-330	1"

PLUMBING FIXTURE ROUGH-IN SCHEDULE

FIXTURE	WASTE	TRAP	VENT	COLD	HOT
WC-1	4"	INTEGRAL	2"	1"	--
WC-2	4"	INTEGRAL	2"	1"	--
UR-1	2"	INTEGRAL	1-1/2"	3/4"	--
UR-2	2"	INTEGRAL	1-1/2"	3/4"	--
MS-1	3"	3"	1-1/2"	3/4"	3/4"
LV-1	2"	1-1/4"	1-1/2"	1/2"	1/2"
LV-2	2"	1-1/4"	1-1/2"	1/2"	1/2"
SH-1	2"	2"	1-1/2"	1/2"	1/2"
SH-2	2"	2"	1-1/2"	1/2"	1/2"
EWC-1	1-1/2"	N/A	1-1/2"	1/2"	--

DRAIN SCHEDULE

TAG	FLOOR DRAIN DESCRIPTION	MANUFACTURER	MODEL #
FD-1	FLOOR DRAIN: ADJUSTABLE CAST IRON BODY, ROUND NICKEL BRONZE STRAINER. CAULK OUTLET. SURESEAL INLINE FLOOR DRAIN TRAP SEALER.	J.R. SMITH	2005-Y02-NB
FD-2	FLOOR DRAIN: CAST IRON BODY WITH 3" WASTE CONNECTION, 5" STRAINER AND 4" FUNNEL.	J.R. SMITH	2041S
FS-1	12" SQUARE BODY WITH FLANGE, 10" DEEP, PORCELAIN ENAMEL, ACID RESISTANT, COATED CAST IRON BODY AND 1/2 GRATE.	J.R. SMITH	345-Y03

BACK FLOW PREVENTOR SCHEDULE

TAG	SERVICE	SIZE	TYPE	MANUFACTURER	MODEL #	LOCATION	NOTES
BFP-1	DOMESTIC WATER	4"	REDUCED PRESSURE ZONE ASSEMBLIES	WATTS	SERIES LF909	MECH/PLUMBING 1037	INSTALL WITH STRAINER, AIR GAP, ELBOWS, TEST COCKS AND NON-RISING STEAM GATE VALVES.
BFP-2	MAKEUP WATER	1"	REDUCED PRESSURE ZONE ASSEMBLIES	WATTS	SERIES LF909	MECH/PLUMBING 1037	INSTALL WITH AIR GAP, ELBOWS, TEST COCKS AND FULL PORT QUARTER-TURN VALVES.
BFP-3	FIRE SERVICE	4"	DOUBLE CHECK DETECTOR ASSEMBLY	WATTS	SERIES LF774DCDA	MECH/PLUMBING 1037	INSTALL WITH AIR GAP, ELBOWS, TEST COCKS AND OS&Y GATE VALVES.

GAS-FIRED DOMESTIC WATER HEATER SCHEDULE

TAG	ELECTRICAL		LOAD (BTU/HR)	MINIMUM EFFICIENCY	GALLON CAPACITY	RECOVERY AT 100°F	EXHAUST SIZE	INTAKE SIZE	LOCATION NAME/#	MANUFACTURER	MODEL #	NOTES
	VOLT	PHASE										
GWH-1	120	1	999,000	98%	-	1187	6"	4"	MECH/PLUMBING 1037	LOCHINVAR	AWH1000NPM	PROVIDE WITH CONDENSATE NEUTRALIZATION KIT
GWH-2	120	1	999,000	98%	-	1187	6"	4"	MECH/PLUMBING 1037	LOCHINVAR	AWH1000NPM	PROVIDE WITH CONDENSATE NEUTRALIZATION KIT

WATER SOFTENER SCHEDULE

TAG	LOCATION	MAX. EXCHANGE CAP. (GRAINS)	MIN. EXCHANGE CAP. (GRAINS)	CONT. FLOW RATE (GPM)	PEAK FLOW RATE (GPM)	BACK WASH FLOW RATE (GPM)	CU.FT. OF RESIN PER TANK	SALT STORAGE (LBS)	PIPE SIZE	MANUFACTURER	MODEL #	NOTES
DWS-1	MECH/PLUMBING 1037	900,000	600,000	200	268	45	30	-	4"	PURITAN	CAT90-3900NXT2	DOUBLE RESIN TANK WITH BRINE TANK

EXPANSION TANK SCHEDULE

TAG	TOTAL TANK VOLUME	LOCATION NAME/#	INLET	ACCEPTANCE VOLUME	MANUFACTURER	MODEL #	NOTES
ET-1	14	MECH ROOM	1"	11.3	B&G	PT-30V	VERTICAL TANK: CHARGE TO INCOMING WATER PRESSURE AFTER REDUCED PRESSURE BACKFLOW PREVENTER.

PUMP SCHEDULE

TAG	ELECTRIC			POWER	GPM	FEET OF HEAD	MANUFACTURER	MODEL #	NOTES
	LOCATION	VOLT	PHASE						
HWRP-1	MECH/PLUMBING 1037	120	1	125 WATTS	4	22	BELL & GOSSET	NBF-36	PART #103418LF, FLANGE CONNECTION 3/4, 1-1/4", 1-1/2"
HWRP-2	MECH/PLUMBING 1037	120	1	125 WATTS	2	12	BELL & GOSSET	NBF-25	PART #103418LF, FLANGE CONNECTION 3/4, 1-1/4", 1-1/2"
SP-1	ELEVATOR PITS	115	1	3/4 HP	50	25	LIBERTY PUMPS	290 SERIES	PROVIDE WITH PLUG, CORD, AND CHECK VALVE.
CP-1	MECH/PLUMBING 1037	120	1	3/4 HP	-	-	LOCHINVAR	AWH0800-1000	CIRCULATING PUMP. PROVIDED BY WATER HEATER MANUFACTURER, INSTALLED EXTERNAL OF HEATER.
CP-2	MECH/PLUMBING 1037	120	1	3/4 HP	-	-	LOCHINVAR	AWH0800-1000	CIRCULATING PUMP. PROVIDED BY WATER HEATER MANUFACTURER, INSTALLED EXTERNAL OF HEATER.

PLUMBING EQUIPMENT SCHEDULE

TAG	DESCRIPTION	MANUFACTURER / MODEL # / CAPACITY	ELECTRICAL REQUIREMENTS	REMARKS (SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)
WH-1	WALL HYDRANT	J.R. SMITH # 5509-QT	-	WHERE INDICATED ON PLUMBING DRAWINGS, MOUNT BOX IN EXTERIOR BRICK, MIN. OF 24" ABOVE FIN. GRADE
HB-1	HOSE BIBB	J.R. SMITH # 5672	-	WHERE INDICATED ON PLUMBING DRAWINGS
HB-2	HOSE BIBB	J.R. SMITH # 5675-H	-	LOCATED IN CELL CHASE

THERMOSTATIC MIXING VALVE SCHEDULE

TAG	MAXIMUM GPM	PRESSURE DROP (PSI)	COLD INLET SIZE	HOT INLET SIZE	MIXED OUTLET SIZE	MANUFACTURER	MODEL #	NOTES
TMV-1	60	7	1 1/4"	1 1/4"	1 1/2"	LAWLER	803	SET DISCHARGE TEMPERATURE TO 130°F
TMV-2	4	7	1/2"	1/2"	1/2"	LAWLER	61-15	SET DISCHARGE TEMPERATURE TO 105°F

HOT WATER STORAGE TANK SCHEDULE

TAG	LOCATION NAME/#	TYPE	GALLON CAPACITY	TANK WIDTH	TANK HEIGHT	WEIGHT	MANUFACTURER	MODEL #	NOTES
ST-1	MECH/PLUMBING 1037	VERTICAL	257	34	91"	904 lb	LOCHINVAR	RJA257	
ST-2	MECH/PLUMBING 1037	VERTICAL	257	34	91"	904 lb	LOCHINVAR	RJA257	

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929

Designed By: K.I.

Drawn By: D.M.

Checked By: K.I.

Date: 11.21.2025

DUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER

Dustin Barth

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N

PLUMBING SCHEDULES

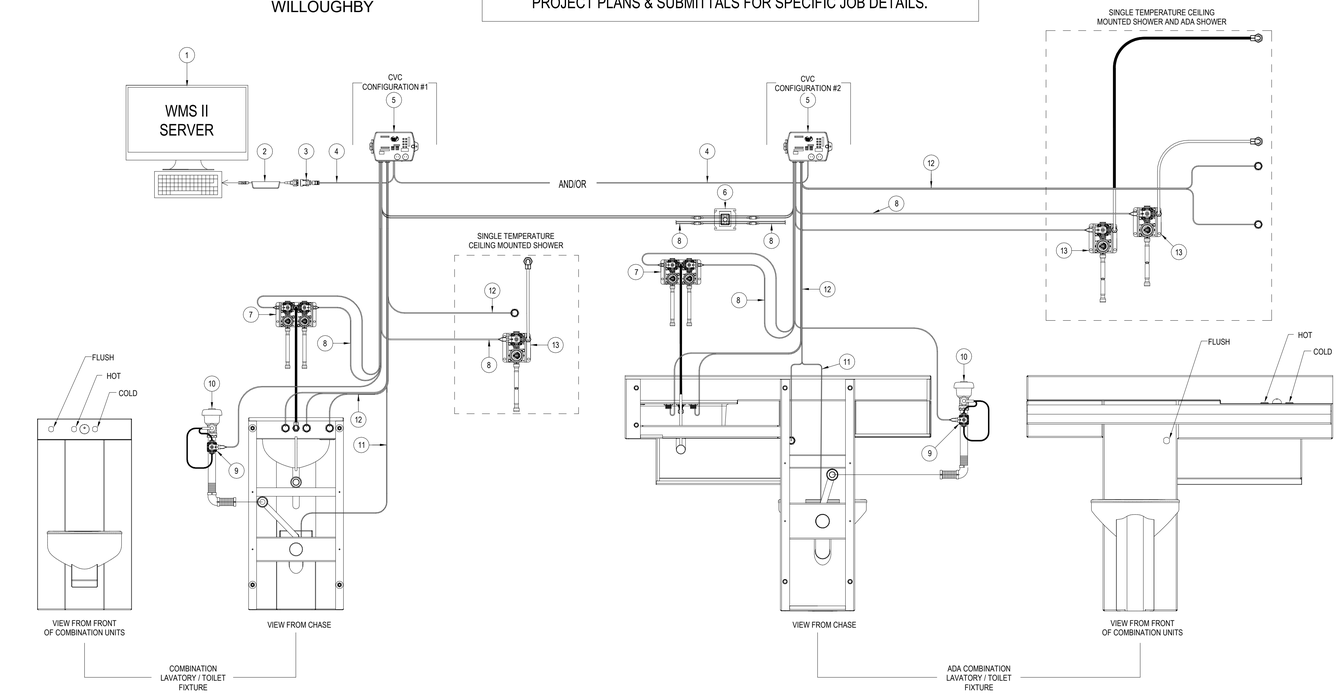
P600

WILLOUGHBY

WILLOUGHBY WATER MANAGEMENT

TYPICAL WILLOUGHBY WMSII WATER MANAGEMENT SYSTEM INSTALLATION DETAILS FOR STEELCELL SHOWN. INSTALLATION AND CVC CONFIGURATION MAY VARY PER SCOPE OF SPECIFIED PROJECT. TYPICAL INSTALL DETAILS ARE FOR REFERENCE ONLY. CONSULT SPECIFIED PROJECT PLANS & SUBMITTALS FOR SPECIFIC JOB DETAILS.

ALTERNATE #02
CORRECTIONAL FIXTURES & WATER MANAGEMENT SYSTEM



1 WILLOUGHBY WMSII INSTALLATION DETAIL

NOT TO SCALE

SCOPE OF WORK (RECOMMENDED)

ELECTRICAL CONTRACTOR

- ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL DAISY-CHAINED CAT 3 CAN BUS NETWORK COMMUNICATION WIRING FROM WILLOUGHBY WMSII OPERATING WORKSTATION TO CVC (CELL VALVE CONTROLLER). IF LOCAL CODE REQUIRES CONDUIT, CONDUIT IS TO BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. A1
- ELECTRICAL CONTRACTOR TO PROVIDE & CONNECT 120V POWER TO CHASE MOUNTED TRANSFORMER. TRANSFORMER PROVIDED BY ELECTRICAL CONTRACTOR.
- ELECTRICAL CONTRACTOR TO PROVIDE & CONNECT MALE RJ45 CONNECTOR TO NETWORK COMMUNICATION WIRING AT WMSII OPERATING WORKSTATION AS SHOWN IN NETWORK TERMINATION DETAIL.
- ELECTRICAL CONTRACTOR IS TO INSTALL WILLOUGHBY WMSII OPERATING WORKSTATION WITH WILLOUGHBY WMSII SOFTWARE, USB-TO-CAN INTERFACE AND NETWORK ADAPTER. WILLOUGHBY WMSII OPERATING WORKSTATION WITH WILLOUGHBY WMSII SOFTWARE, USB-TO-CAN INTERFACE AND NETWORK ADAPTER PROVIDED BY PLUMBING CONTRACTOR.

NOTE: RECOMMENDED THAT CVC TRANSFORMER BE CONNECTED TO EMERGENCY BACK-UP POWER A1

PLUMBING CONTRACTOR

- PLUMBING CONTRACTOR TO INSTALL WILLOUGHBY ELECTRONIC FLUSH, LAVATORY, SHOWER VALVES IN CHASE WITH NO LONGER THAN 1" SCREWS AND MOUNT WILLOUGHBY CVC CELL VALVE CONTROLLER AND 150VA / 24V TRANSFORMER TO CHASE WALL.
- PLUMBING CONTRACTOR TO CONNECT WIRING FROM PUSHBUTTONS TO CVC AND FROM CVC BACK TO ELECTRONIC LAVATORY, SHOWER AND FLUSH VALVES.
- PLUMBING CONTRACTOR IS TO PROVIDE WILLOUGHBY WMSII ELECTRONIC WATER MANAGEMENT SYSTEM; INCLUDING WMSII OPERATING WORKSTATION W/ WMSII SOFTWARE, USB-TO-CAN INTERFACE AND NETWORK ADAPTER, CVC CELL VALVE CONTROLLERS, 150VA / 24V TRANSFORMER, ELECTRONIC PUSHBUTTONS, ELECTRONIC FLUSH, LAVATORY AND SHOWER VALVES, WIRING FROM PUSHBUTTONS TO CVC AND FROM CVC TO ELECTRONIC VALVES.

  PLUMBING CONTRACTOR TO INSTALL ELECTRONIC PUSHBUTTONS TO WILLOUGHBY PLUMBING FIXTURE.

NOTE: FOR AREAS OUTSIDE OF POD CELLS INCLUDING, BUT NOT LIMITED TO, HOLDING CELLS, PADDED CELL, R.R. AND ISOLATION CELL

PLUMBING CONTRACTOR A1

- PLUMBING CONTRACTOR TO INSTALL WILLOUGHBY ELECTRONIC FLUSH, LAVATORY, SHOWER VALVES IN CHASE WITH NO LONGER THAN 1" SCREWS AND MOUNT WILLOUGHBY CVC CELL VALVE CONTROLLER AND 40VA / 24V TRANSFORMER TO CHASE WALL.
- PLUMBING CONTRACTOR TO CONNECT WIRING FROM PUSHBUTTONS TO CVC AND FROM CVC BACK TO ELECTRONIC LAVATORY, SHOWER AND FLUSH VALVES.

NOTE: FOR DORM RESTROOMS.

PLUMBING CONTRACTOR

- PLUMBING CONTRACTOR TO INSTALL WILLOUGHBY ELECTRONIC FLUSH, LAVATORY, SHOWER VALVES IN CHASE WITH NO LONGER THAN 1" SCREWS AND MOUNT WILLOUGHBY CVC CELL VALVE CONTROLLER AND 150VA / 24V TRANSFORMER TO CHASE WALL.
- PLUMBING CONTRACTOR TO CONNECT WIRING FROM PUSHBUTTONS TO CVC AND FROM CVC BACK TO ELECTRONIC LAVATORY, SHOWER AND FLUSH VALVES.

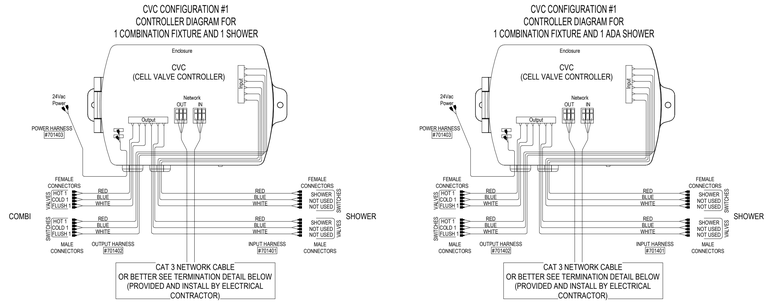
WMSII COMPONENTS

1. WMS II SERVER/MONITOR
2. USB-TO-CAN INTERFACE
3. NETWORK ADAPTER ASSEMBLY
4. NETWORK CABLE
5. CVC (CELL VALVE CONTROLLER)
6. 150 VA / 24V TRANSFORMER (OUTPUT WIRING FROM MAX. OF 4 CELLS)
7. DUAL TEMPERATURE ELECTRONIC LAVATORY VALVE
8. OUTPUT WIRING
9. ELECTRONIC FLUSH VALVE ACTUATOR
10. BRASS BODIED HYDRAULIC FLUSH VALVE**
11. TOILET OVERFLOW PREVENTION TUBE
12. INPUT WIRING
13. SINGLE TEMPERATURE ELECTRONIC SHOWER VALVE

** BRASS BODIED HYDRAULIC FLUSH VALVE REQUIRED OTHER TYPES NOT PERMITTED

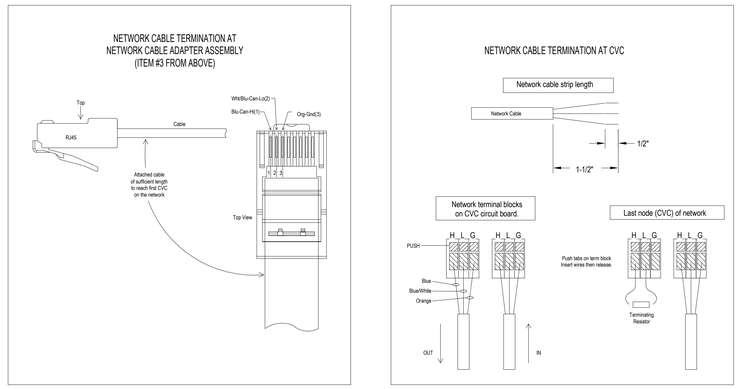
SYSTEM CAPABILITIES

EACH WMSII SERVER SHALL BE CAPABLE OF CONTROLLING UP TO 4 NETWORKS, EACH CONSISTING OF A MAXIMUM OF 127 CVC'S AND UP TO 3000 FEET OF NETWORK WIRING. TWISTED 3-PAIR OF CAT 3 RATING SHALL BE USED FOR ALL NETWORK WIRING (PROVIDED AND INSTALLED BY OTHERS). STAND-ALONE CVC'S NOT CONNECTED TO A NETWORK SHALL BE PROGRAMMED VIA AN OPTIONAL PORTABLE DEVICE OR PROGRAMMED AT THE FACTORY. STANDARD WIRING FOR PUSHBUTTONS TO CVC SHALL NOT EXCEED 200 FEET AND VALVES TO CVC SHALL NOT EXCEED 50 FEET. WIRING FOR CVC POWER SHALL NOT EXCEED 25 FEET.



2 WILLOUGHBY WMSII INPUT/OUTPUT WIRE CONNECTIONS

NOT TO SCALE

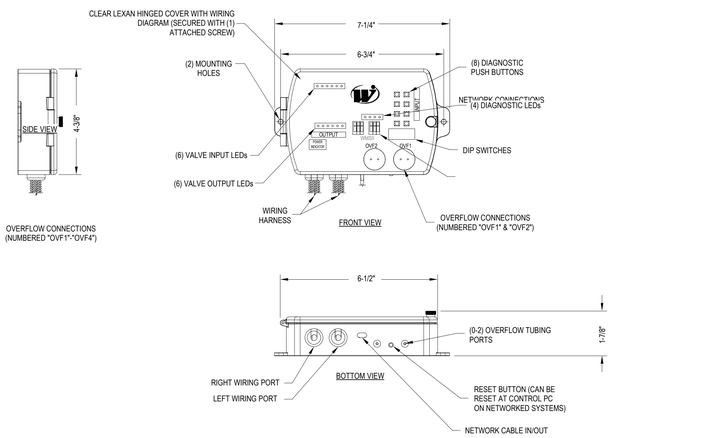


* NETWORK CABLE AND ANY REQUIRED CONDUIT TO BE INSTALLED AND PROVIDED BY ELECTRICAL CONTRACTOR

3 WILLOUGHBY WMSII NETWORK CABLE TERMINATIONS

NOT TO SCALE

NOTE:
ALLOW 6" MIN. CLEARANCE UNDER EACH (CVC) FOR ACCESS TO RESET BUTTON AND WIRING/TUBING CONNECTIONS



4 WILLOUGHBY WMSII CVC PHYSICAL DIMENSIONS AND IDENTIFICATION

NOT TO SCALE

RQAW

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BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
A1	ADDENDUM 1	12/05/2025

Project #: 800-71929

Designed By: K.I.

Drawn By: D.M.

Checked By: K.I.

Date: 11.21.2025

DUSTIN E. BARTH
REGISTERED
No. 12200401
STATE OF INDIANA
PROFESSIONAL ENGINEER
Dustin Barth

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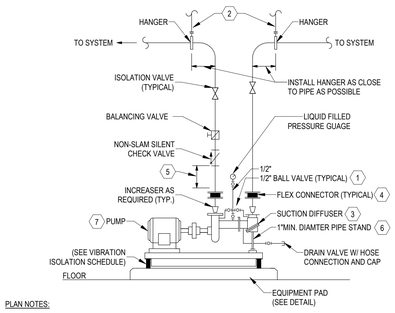
PLUMBING DETAILS - WILLOUGHBY

P800

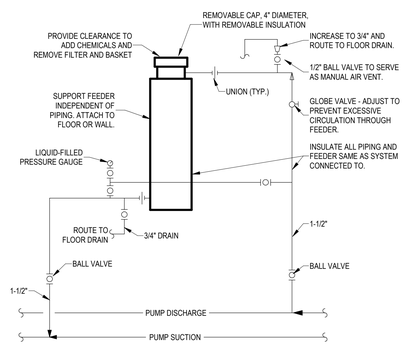
12/5/2025 11:58:40 AM



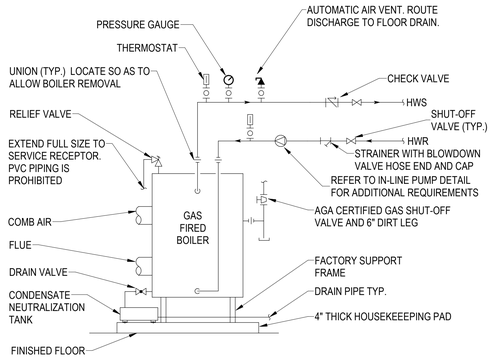
PLAN NOTES:

1. PRESSURE TAP CONNECTIONS SHALL CONNECT TO PORTS ON THE SUCTION AND DISCHARGE FLANGES OF THE PUMP.
2. PROVIDE SPRING ISOLATOR HANGERS FOR THE FIRST 3 HANGERS IN EACH DIRECTION.
3. CONFIRM SPECIFIED SUCTION DIFFUSER STRAINER AND ALLOW FOR STRAINER REMOVAL.
4. CONFIRM USAGE OF STAINLESS AND RUBBER FLEXIBLE CONNECTORS BY SYSTEM WITH THE SPECIFICATIONS.
5. MAINTAIN MINIMUM THREE FEET BETWEEN FLEX CONNECTOR AND CHECK VALVE.
6. WHERE INERTIA BASES ARE PROVIDED, PIPE STAND IS TO BE ANCHORED TO THE INERTIA BASE.
7. ALIGN PUMP AND GROUT IN ACCORDANCE WITH SPECIFICATION. INSULATE PUMP HOUSING AND COMPONENTS IN ACCORDANCE WITH SPECIFICATIONS.

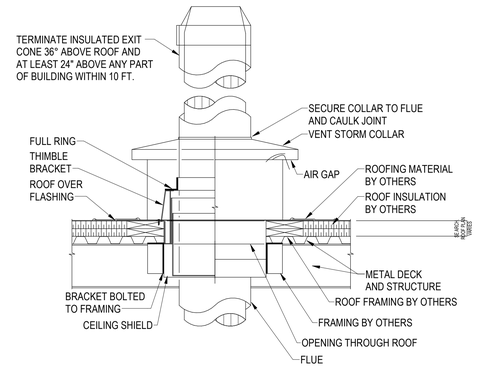
1 M - DETAIL - BASE-MOUNTED VFC-DRIVEN CENTRIFUGAL PUMP PIPING
NOT TO SCALE



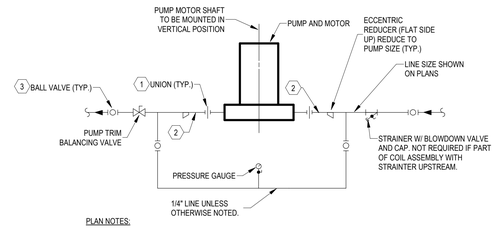
2 M - DETAIL - FILTER FEEDER PIPING
NOT TO SCALE



3 M - DETAIL - BOILER INSTALLATION WITH PUMP
NOT TO SCALE



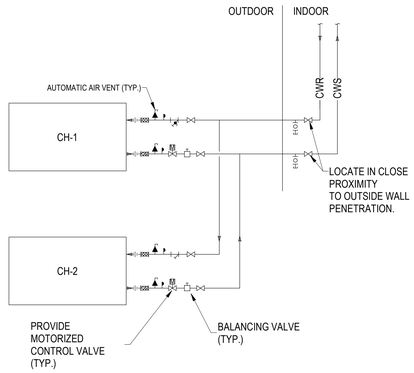
4 M - DETAIL - BOILER FLUE ROOF PENETRATION
NOT TO SCALE



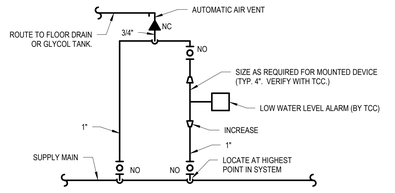
PLAN NOTES:

1. UNIONS ARE NOT REQUIRED WHEN PUMP IS CONNECTED TO PIPING WITH FLANGE CONNECTIONS.
2. SUPPORT WITH SPRING HANGERS EACH SIDE AS CLOSE TO PUMP AS POSSIBLE.
3. FOR PIPE SIZES OVER 2", BUTTERFLY VALVES SHALL BE USED IN LIEU OF BALL VALVES.

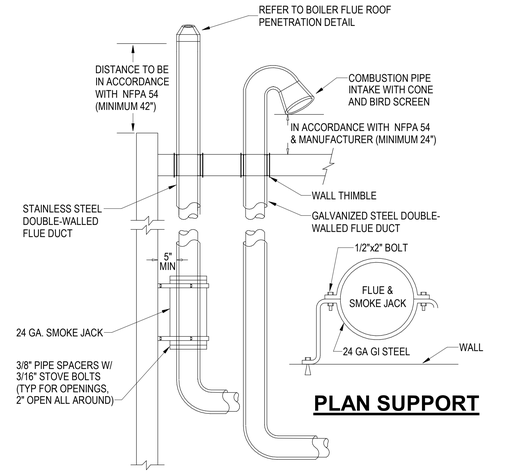
5 M - DETAIL - IN-LINE PUMP PIPING
NOT TO SCALE



6 M - DETAIL - AIR COOLED CHILLER
NOT TO SCALE



7 M - DETAIL - GLYCOL SYSTEM LOW LEVEL ALARM
NOT TO SCALE

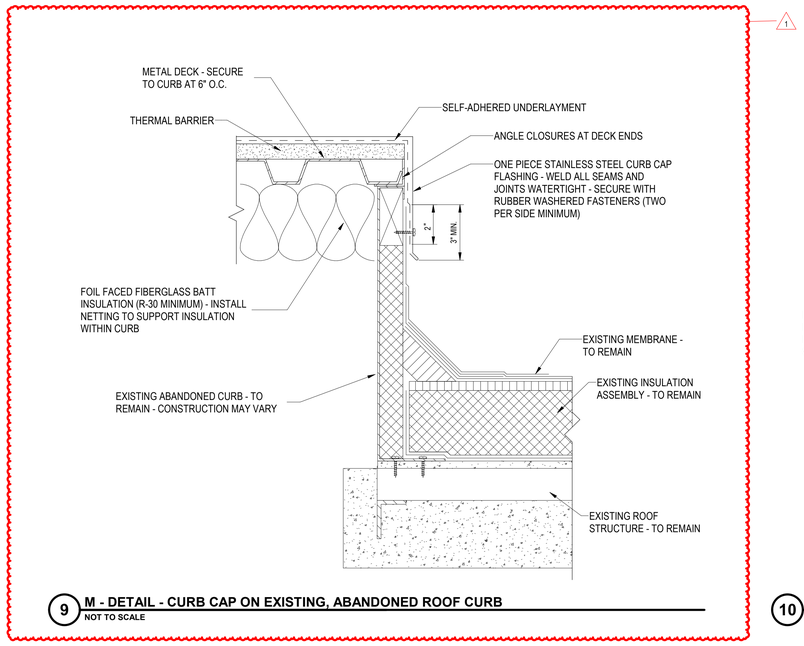


PLAN SUPPORT

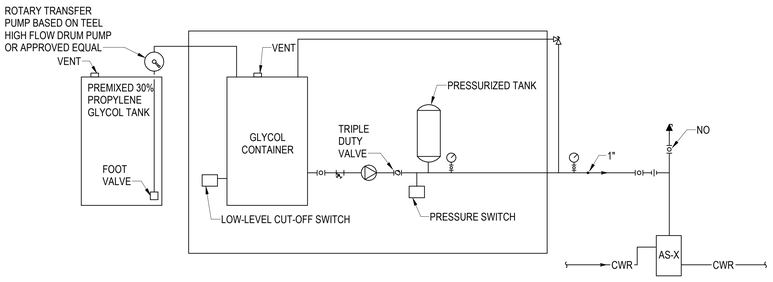
NOTES:

1. INSTALL PIPES IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS FOR CLEARANCE BETWEEN INTAKE AND COMBUSTION FLUE PIPES. PIPES SHALL BE STAINLESS STEEL IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. INTAKE SHALL BE MINIMUM 24" ABOVE TOP OF ROOF MEMBRANE.

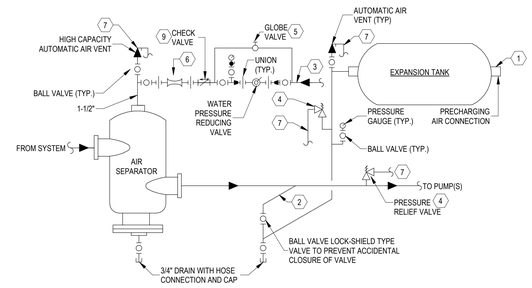
8 M - DETAIL - FLUE STACK AND COMBUSTION AIR
NOT TO SCALE



9 M - DETAIL - CURB CAP ON EXISTING, ABANDONED ROOF CURB
NOT TO SCALE



10 M - DETAIL - GLYCOL FILL SYSTEM - GLYCOL TANK AND EXPANSION TANK
NOT TO SCALE



PLAN NOTES:

1. TANK CONNECTION LOCATION MAY VARY DEPENDING ON TANK SIZE AND MODEL. LOCATE TANK AS NOTED ON PLANS AND SEISMICALLY RESTRAIN AS REQUIRED.
2. PROVIDE ANTI-THERMOSYPHON LOOP TO PREVENT GRAVITY HEATING OF TANK. 12" MIN. DROP.
3. THE COLD WATER MAKE-UP. SEE PLUMBING DRAWINGS.
4. "UV" STAMPED SAFETY VALVE WITH RESILIENT SEAT SUITABLE FOR 250°F. WITH PACKED LEVER (LIQUID SERVICE ASME SEC. VIII) AND STAINLESS SPRING (SIZED FOR 60 GPM OR 1200 PPH STEAM) AT 60°F (90% RATED AT 10% OVER PRESSURE). SET TO RELIEVE AT 125 PSIG OR AS REQUIRED BY ASME CODE. NO VALVES BETWEEN SAFETY VALVE AND VESSEL BEING PROTECTED. LOCATE SAFETY VALVE BELOW 10'-0" AFF.
5. BYPASS TO BE SAME SIZE AS MAKE-UP LINE, 3/4" MINIMUM.
6. 3/4" TOTALIZING FLOW METER (20 GPM CAPACITY) TO MEASURE MAKE-UP WATER VOLUME. PROVIDE REMOTE-READING REGISTER FOR METER WHICH IS MORE THAN 8'-0" AFF.
7. ROUTE DISCHARGE TO 6" ABOVE FLOOR DRAIN.
8. ADJUSTMENT RANGE SHALL BE TANK PRECHARGE PLUS OR MINUS 10 PSIG.
9. CHECK VALVE SHALL BE PROVIDED IN ADDITION TO THE BACKFLOW PREVENTOR ON THE PLUMBING SYSTEM.

11 M - DETAIL - AIR SEPARATOR AND EXPANSION PIPING
NOT TO SCALE

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	Addendum #1	12.05.25

Project #: 800-71929
Designed By: R.W.T./ N.H.
Drawn By: R.W.T./ N.H.
Checked By: D.B.
Date: 11.21.2025

DUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER

Dustin Barth

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UNIT A
UNIT B

N

EQUIPMENT DETAILS - MECHANICAL

M803

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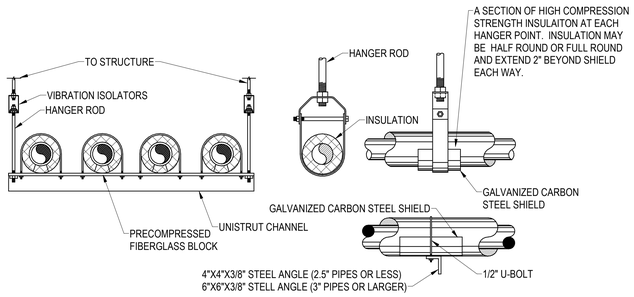
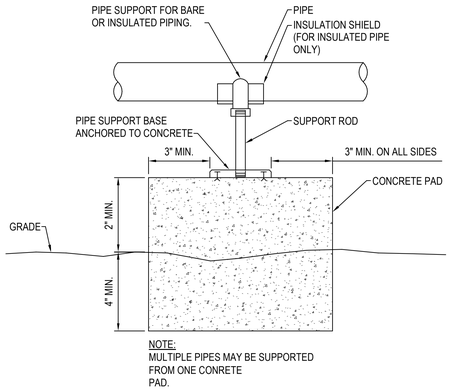
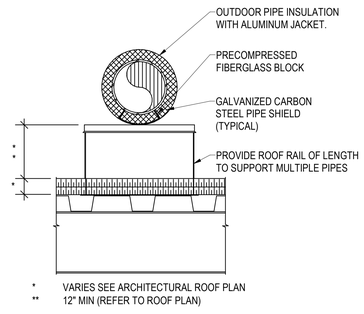


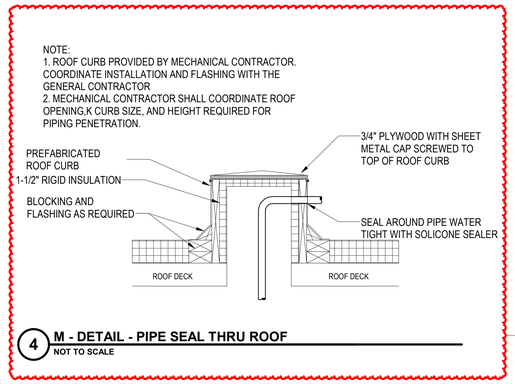
1 **M - DETAIL - TYPICAL HANGER**
NOT TO SCALE



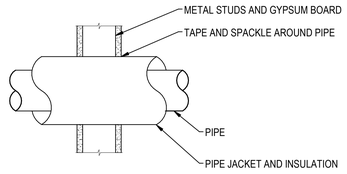
2 **M - DETAIL - EXTERIOR ABOVE GROUND PIPE SUPPORT**
NOT TO SCALE



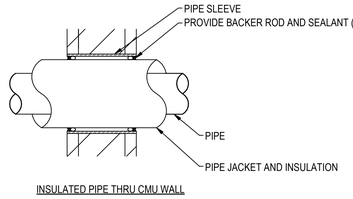
3 **M - DETAIL - PIPE ROOF SUPPORT**
NOT TO SCALE



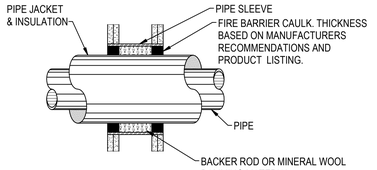
4 **M - DETAIL - PIPE SEAL THRU ROOF**
NOT TO SCALE



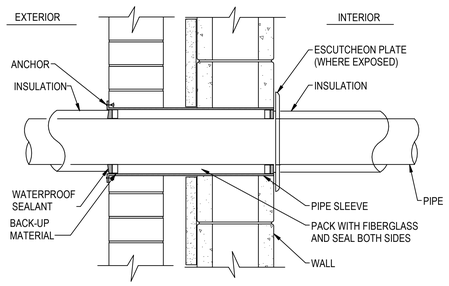
INSULATED PIPE THRU GYPSUM BOARD WALL



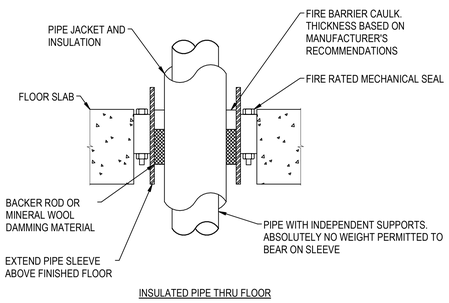
INSULATED PIPE THRU CMU WALL



INSULATED PIPE THRU FIRE RATED WALL

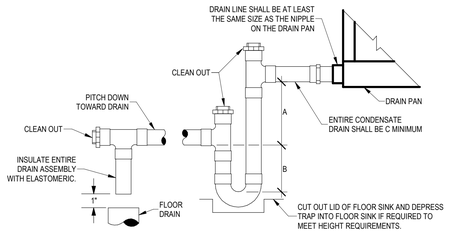


INSULATED PIPE WITH SLEEVE THRU EXTERIOR WALL



INSULATED PIPE THRU FLOOR

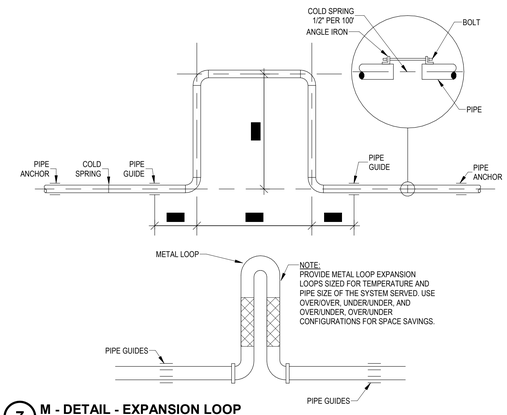
5 **M - DETAIL - PIPE THROUGH WALL**
NOT TO SCALE



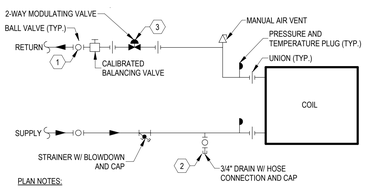
UNIT TYPE	A	B
DRAW THROUGH	P + 1	P/2 + 1
BLOW THROUGH	2" MIN.	2P

P = STATIC PRESSURE AT DRAIN PAN

6 **M - DETAIL - CONDENSATE DRAIN TRAP**
NOT TO SCALE



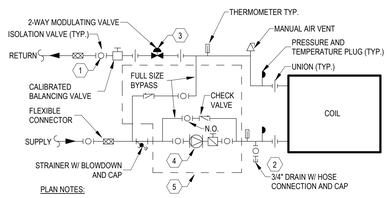
7 **M - DETAIL - EXPANSION LOOP**
NOT TO SCALE



PLAN NOTES:

1. PROVIDE BUTTERFLY VALVES IN LIEU OF BALL VALVES WHEN PIPE SIZES ARE ABOVE 2", (TYP.)
2. INSTALL AT LOWEST POINT IN PIPING
3. INSTALL MODULATING VALVE SO THAT STEM IS VERTICAL.

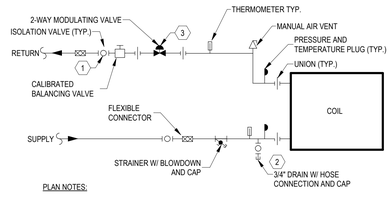
8 **M - DETAIL - VAV / FCU WATER COIL PIPING**
NOT TO SCALE



PLAN NOTES:

1. PROVIDE BUTTERFLY VALVES IN LIEU OF BALL VALVES WHEN PIPE SIZES ARE ABOVE 2", (TYP.)
2. INSTALL AT LOWEST POINT IN PIPING
3. INSTALL MODULATING VALVE SO THAT STEM IS VERTICAL.
4. REFER TO INLINE PUMP DETAIL FOR ADDITIONAL ACCESSORIES NOT SHOWN HERE.
5. INLIN PUMP AND BYPASS LINES ONLY REQUIRED IF PUMP IS CALLED FOR ON FLOOR PLANS.

9 **M - DETAIL - AHU HEATING WATER COIL PIPING**
NOT TO SCALE



PLAN NOTES:

1. PROVIDE BUTTERFLY VALVES IN LIEU OF BALL VALVES WHEN PIPE SIZES ARE ABOVE 2", (TYP.)
2. INSTALL AT LOWEST POINT IN PIPING
3. INSTALL MODULATING VALVE SO THAT STEM IS VERTICAL.

10 **M - DETAIL - AHU CHILLED WATER COIL PIPING**
NOT TO SCALE

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	Addendum #1	12.05.25

Project #: 800-71929
Designed By: R.W.T./ N.H.
Drawn By: R.W.T./ N.H.
Checked By: D.B.
Date: 11.21.2025

DUSTIN E. BARTH
REGISTERED
No. 12200401
STATE OF INDIANA
PROFESSIONAL ENGINEER

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UNIT A
UNIT B

N

PIPING DETAILS - MECHANICAL

M804

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PLAN NOTES

#	NOTE
1	EXISTING OVERHEAD DOOR OPERATOR MOTOR, UP/DOWN CONTROL SWITCH, SAFETY SENSORS AND LOW VOLTAGE WIRING TO REMAIN. DISCONNECT LINE VOLTAGE CIRCUIT AND REMOVE DISCONNECT SWITCH.
2	EXISTING DETENTION ACCESS CONTROL RELAY PANEL TO REMAIN. ALL RELAYS AND CONTROL WIRING TO REMAIN.

1 E110A FIRST FLOOR ELECTRICAL DEMOLITION PLAN - UNIT A
1/8" = 1'-0"
0 4' 8' 16'

CEILING MOUNTED EXISTING TO REMAIN DEVICES TO BE SUPPORTED DURING THE REMOVAL OF CEILINGS AND PROTECTED FROM DUST AND CONSTRUCTION DEBRIS THEN REINSTALLED INTO NEW CEILINGS AND LEVELED, AIMED AND/OR CALIBRATED TO COMPLETE A FINISHED LOOK AND BE FULLY OPERATIONAL. THESE ITEMS INCLUDE BUT ARE NOT LIMITED TO CAMERAS, SMOKE DETECTORS, SPEAKERS AND WIRELESS ACCESS POINTS. IN SOME CASES THESE DEVICES MAY NEED TO REMAIN IN SERVICE DURING CONSTRUCTION. THE EXISTING CABLING MUST BE PROTECTED TO RETAIN ITS PERFORMANCE SPECIFICATIONS AND NOT BE USED AS A HANGER TO HOLD UP THE DEVICE

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM 1	12/05/25

Project #: 01-700-070
Designed By: SGD
Drawn By: SGD
Checked By: JAF
Date: 11.21. 2025

DUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER

Dustin Barth

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UNIT A

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FIRST FLOOR ELECTRICAL DEMOLITION PLAN - UNIT A

E110A

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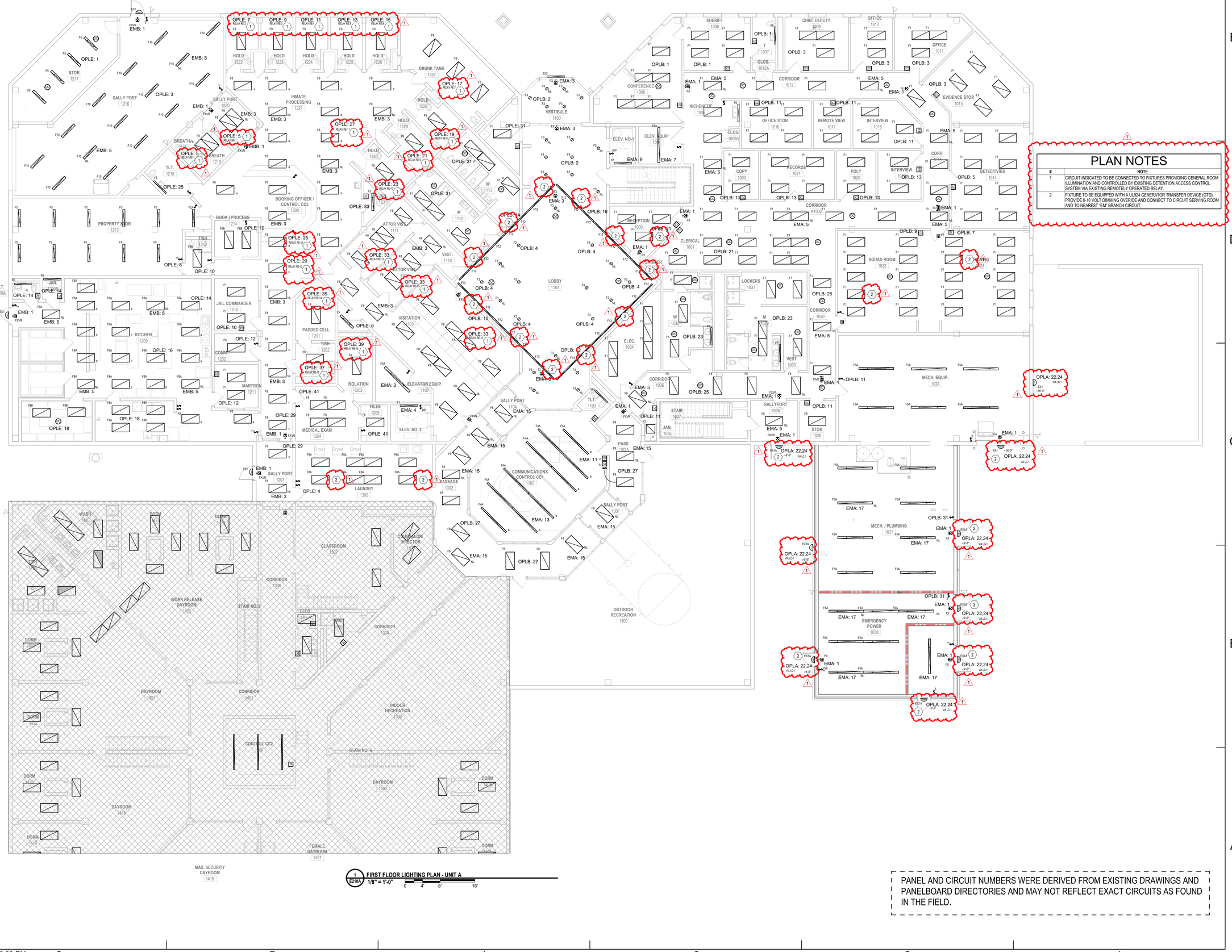

PLAN NOTES

#	NOTE
1	CIRCUIT INDICATED TO BE CONNECTED TO FIXTURES PROVIDING GENERAL ROOM ILLUMINATION AND CONTROLLED BY EXISTING DETENTION ACCESS CONTROL SYSTEM VIA EXISTING REMOTELY OPERATED RELAY.
2	FIXTURE TO BE EQUIPPED WITH A UL924 GENERATOR TRANSFER DEVICE (GTD). PROVIDE 0-10 VOLT DIMMING OVERIDE AND CONNECT TO CIRCUIT SERVING ROOM AND TO NEAREST "EM" BRANCH CIRCUIT.

E210A FIRST FLOOR LIGHTING PLAN - UNIT A
1/8" = 1'-0"
0 4' 8' 16'

PANEL AND CIRCUIT NUMBERS WERE DERIVED FROM EXISTING DRAWINGS AND PANELBOARD DIRECTORIES AND MAY NOT REFLECT EXACT CIRCUITS AS FOUND IN THE FIELD.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM 1	12/05/25

Project #: 01-700-070

Designed By: SGD

Drawn By: SGD

Checked By: JAF

Date: 11.21. 2025

DUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER

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UNIT A

N

FIRST FLOOR LIGHTING PLAN - UNIT A

E210A

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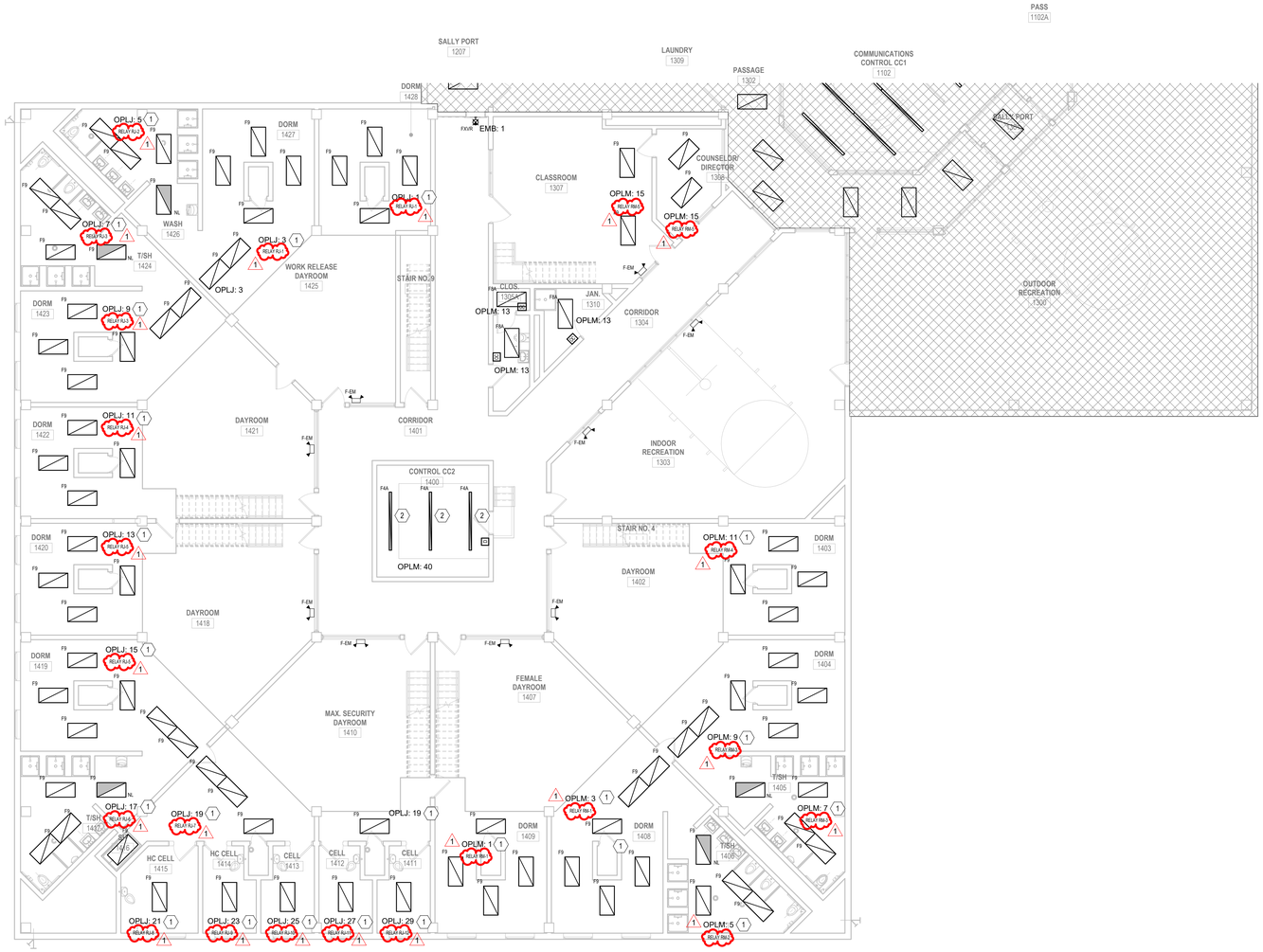

1 E210B **FIRST FLOOR LIGHTING PLAN - UNIT B**
1/8" = 1'-0"
0 4' 8' 16'

GENERAL NOTES - LIGHTING:

A. REFER TO SHEET E-001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON TOTAL CIRCUIT DISTANCE.

C. CONNECT ALL EXIT AND EGRESS LIGHTING WITH A MINIMUM OF #10AWG UNLESS NOTED OTHERWISE.

D. PROVIDE ALL OCCUPANCY/VACANCY SENSOR, POWER PACKS, AND ADDITIONAL RELAYS, ETC. AS REQUIRED FOR FULL COVERAGE OF ROOMS/AREAS INDICATED TO HAVE SUCH CONTROL.

E. WALL MOUNTED EXIT LIGHTS SHALL BE MOUNTED AT LEAST 1'-0" ABOVE EXIT OPENING UNLESS NOTED OTHERWISE. CONTRACTOR TO VERIFY HEIGHT OF EXIT OPENING PRIOR TO ROUGH-IN.

F. ALL OCCUPANCY SENSOR SHALL BE DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASONIC) UNLESS NOTED OTHERWISE.

G. SCHEDULE A MEETING WITH THE OWNER PRIOR TO PROGRAMMING OF LIGHTING CONTROL DEVICES TO DETERMINE DESIRED CONTROL, TIME DELAY SETTINGS, OCCUPANCY, ETC.

H. ALL RECESSED LIGHTING FIXTURES IN LAY-IN CEILINGS SHALL BE INSTALLED WITH A FLEXIBLE METAL CONDUIT WITH MAXIMUM LENGTH OF 6 FEET.

I. LIGHT FIXTURES THAT ARE INSTALLED WITHIN A FIRE-RATED CEILING SHALL BE PROVIDED WITH FIRE RATED COVERS IN ORDER TO MAINTAIN THE CEILING FIRE RATINGS. FIRE RATED COVERS SHALL BE COVERS SUCH AS TENMAT FIRE PROTECTION SOLUTIONS OR SIMILAR. REFER TO ARCHITECTURAL DRAWINGS FOR ALL FIRE RATED CEILING LOCATIONS AND PROVIDE COVERS ACCORDINGLY.

PLAN NOTES

#	NOTE
1	CIRCUIT INDICATED TO BE CONNECTED TO FIXTURES PROVIDING GENERAL ROOM ILLUMINATION AND CONTROLLED BY EXISTING DETENTION ACCESS CONTROL SYSTEM VIA EXISTING REMOTELY OPERATED RELAY.
2	FIXTURE TO BE EQUIPPED WITH A UL924 GENERATOR TRANSFER DEVICE (GTD). PROVIDE 0-10 VOLT DIMMING OVERIDE AND CONNECT TO CIRCUIT SERVING ROOM AND TO NEAREST "EM" BRANCH CIRCUIT.

PANEL AND CIRCUIT NUMBERS WERE DERIVED FROM EXISTING DRAWINGS AND PANELBOARD DIRECTORIES AND MAY NOT REFLECT EXACT CIRCUITS AS FOUND IN THE FIELD.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM 1	12/05/25

Project #: 01-700-070
Designed By: SGD
Drawn By: SGD
Checked By: JAF
Date: 11.21. 2025

DUSTIN E. BARTH
REGISTERED
No. 12200401
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UNIT B

N

FIRST FLOOR LIGHTING PLAN - UNIT B

E210B

12/5/2025 2:37:01 PM

GENERAL NOTES - LIGHTING:

A. REFER TO SHEET E-001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON TOTAL CIRCUIT DISTANCE.

C. CONNECT ALL EXIT AND EGRESS LIGHTING WITH A MINIMUM OF #10AWG UNLESS NOTED OTHERWISE.

D. PROVIDE ALL OCCUPANCY/VACANCY SENSOR, POWER PACKS, AND ADDITIONAL RELAYS, ETC. AS REQUIRED FOR FULL COVERAGE OF ROOMS/AREAS INDICATED TO HAVE SUCH CONTROL.

E. WALL MOUNTED EXIT LIGHTS SHALL BE MOUNTED AT LEAST 1'-0" ABOVE EXIT OPENING UNLESS NOTED OTHERWISE. CONTRACTOR TO VERIFY HEIGHT OF EXIT OPENING PRIOR TO ROUGH-IN.

F. ALL OCCUPANCY SENSOR SHALL BE DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASONIC) UNLESS NOTED OTHERWISE.

G. SCHEDULE A MEETING WITH THE OWNER PRIOR TO PROGRAMMING OF LIGHTING CONTROL DEVICES TO DETERMINE DESIRED CONTROL, TIME DELAY SETTINGS, OCCUPANCY, ETC.

H. ALL RECESSED LIGHTING FIXTURES IN LAY-IN CEILINGS SHALL BE INSTALLED WITH A FLEXIBLE METAL CONDUIT WITH MAXIMUM LENGTH OF 6 FEET.

I. LIGHT FIXTURES THAT ARE INSTALLED WITHIN A FIRE-RATED CEILING SHALL BE PROVIDED WITH FIRE RATED COVERS IN ORDER TO MAINTAIN THE CEILING FIRE RATINGS. FIRE RATED COVERS SHALL BE COVERS SUCH AS TENMAT FIRE PROTECTION SOLUTIONS OR SIMILAR. REFER TO ARCHITECTURAL DRAWINGS FOR ALL FIRE RATED CEILING LOCATIONS AND PROVIDE COVERS ACCORDINGLY.

PLAN NOTES

#	NOTE
1	FIXTURE TO BE EQUIPPED WITH A UL924 GENERATOR TRANSFER DEVICE (GTD). PROVIDE 0-10 VOLT DIMMING OVERIDE AND CONNECT TO CIRCUIT SERVING ROOM AND TO NEAREST "EM" BRANCH CIRCUIT.

PANEL AND CIRCUIT NUMBERS WERE DERIVED FROM EXISTING DRAWINGS AND PANELBOARD DIRECTORIES AND MAY NOT REFLECT EXACT CIRCUITS AS FOUND IN THE FIELD.

1 E220A SECOND FLOOR LIGHTING PLAN - UNIT A
1/8" = 1'-0"
0 4' 8' 16'

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM 1	12/05/25

Project #: 01-700-070
Designed By: SGD
Drawn By: SGD
Checked By: JAF
Date: 11.21. 2025

JUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER

Justin Barth

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UNIT A

N

SECOND FLOOR LIGHTING PLAN - UNIT A

E220A

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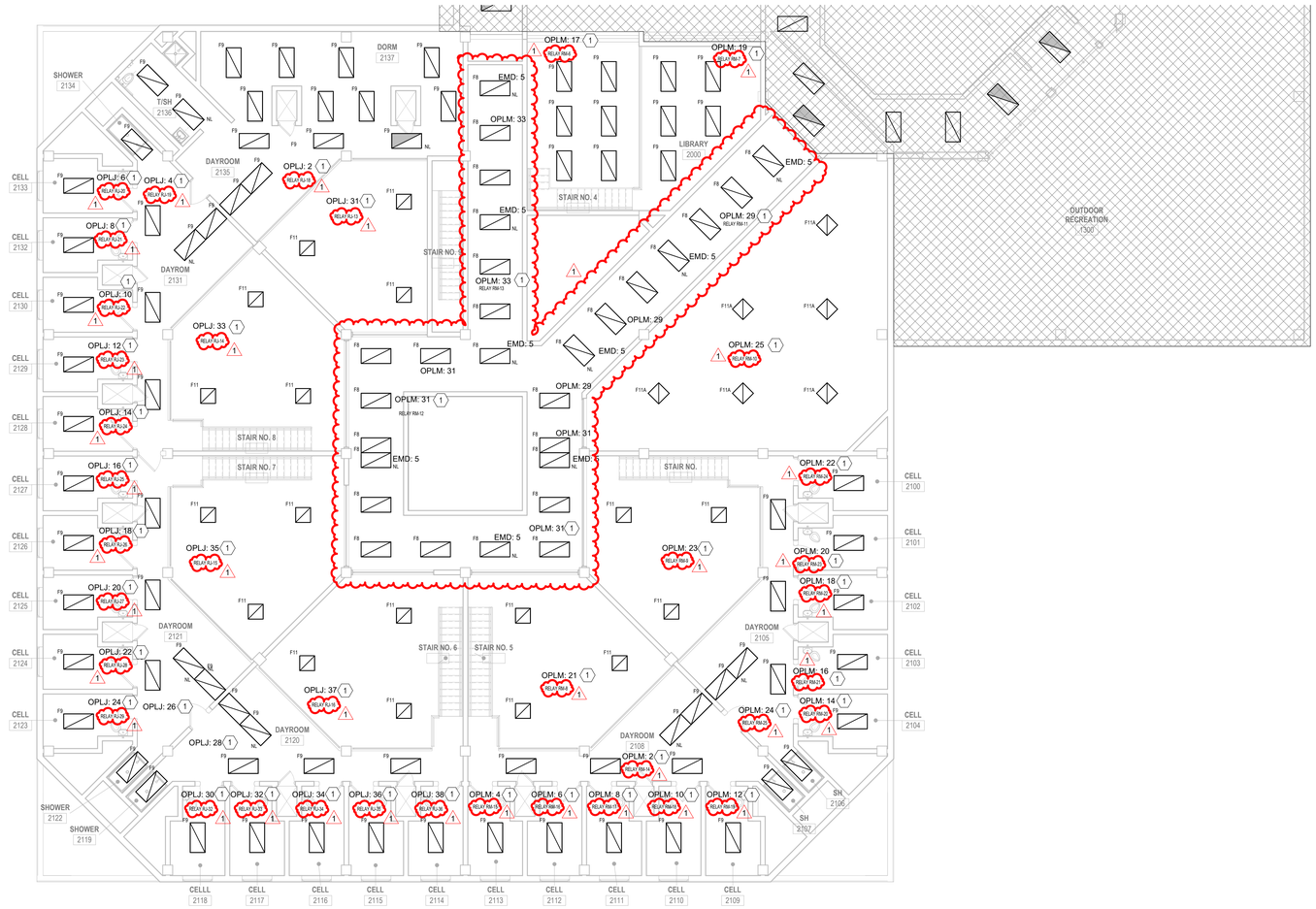

1 E220B **SECOND FLOOR LIGHTING PLAN - UNIT B**
1/8" = 1'-0"
0 4' 8' 16'

GENERAL NOTES - LIGHTING:

A. REFER TO SHEET E-001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON TOTAL CIRCUIT DISTANCE.

C. CONNECT ALL EXIT AND EGRESS LIGHTING WITH A MINIMUM OF #10AWG UNLESS NOTED OTHERWISE.

D. PROVIDE ALL OCCUPANCY/VACANCY SENSOR, POWER PACKS, AND ADDITIONAL RELAYS, ETC. AS REQUIRED FOR FULL COVERAGE OF ROOMS/AREAS INDICATED TO HAVE SUCH CONTROL.

E. WALL MOUNTED EXIT LIGHTS SHALL BE MOUNTED AT LEAST 1'-0" ABOVE EXIT OPENING UNLESS NOTED OTHERWISE. CONTRACTOR TO VERIFY HEIGHT OF EXIT OPENING PRIOR TO ROUGH-IN.

F. ALL OCCUPANCY SENSOR SHALL BE DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASONIC) UNLESS NOTED OTHERWISE.

G. SCHEDULE A MEETING WITH THE OWNER PRIOR TO PROGRAMMING OF LIGHTING CONTROL DEVICES TO DETERMINE DESIRED CONTROL, TIME DELAY SETTINGS, OCCUPANCY, ETC.

H. ALL RECESSED LIGHTING FIXTURES IN LAY-IN CEILINGS SHALL BE INSTALLED WITH A FLEXIBLE METAL CONDUIT WITH MAXIMUM LENGTH OF 6 FEET.

I. LIGHT FIXTURES THAT ARE INSTALLED WITHIN A FIRE-RATED CEILING SHALL BE PROVIDED WITH FIRE RATED COVERS IN ORDER TO MAINTAIN THE CEILING FIRE RATINGS. FIRE RATED COVERS SHALL BE COVERS SUCH AS TENMAT FIRE PROTECTION SOLUTIONS OR SIMILAR. REFER TO ARCHITECTURAL DRAWINGS FOR ALL FIRE RATED CEILING LOCATIONS AND PROVIDE COVERS ACCORDINGLY.

PLAN NOTES

#	NOTE
1	CIRCUIT INDICATED TO BE CONNECTED TO FIXTURES PROVIDING GENERAL ROOM ILLUMINATION AND CONTROLLED BY EXISTING DETENTION ACCESS CONTROL SYSTEM VIA EXISTING REMOTELY OPERATED RELAY.

PANEL AND CIRCUIT NUMBERS WERE DERIVED FROM EXISTING DRAWINGS AND PANELBOARD DIRECTORIES AND MAY NOT REFLECT EXACT CIRCUITS AS FOUND IN THE FIELD.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM 1	12/05/25

Project #: 01-700-070

Designed By: SGD

Drawn By: SGD

Checked By: JAF

Date: 11.21. 2025

DUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER

Dustin Barth

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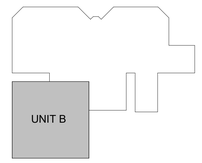

SECOND FLOOR LIGHTING PLAN - UNIT B

E220B

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GENERAL NOTES - LIGHTING:

A. REFER TO SHEET E-001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON TOTAL CIRCUIT DISTANCE.

C. CONNECT ALL EXIT AND EGRESS LIGHTING WITH A MINIMUM OF #10AWG UNLESS NOTED OTHERWISE.

D. PROVIDE ALL OCCUPANCY/VACANCY SENSOR, POWER PACKS, AND ADDITIONAL RELAYS, ETC. AS REQUIRED FOR FULL COVERAGE OF ROOMS/AREAS INDICATED TO HAVE SUCH CONTROL.

E. WALL MOUNTED EXIT LIGHTS SHALL BE MOUNTED AT LEAST 1'-0" ABOVE EXIT OPENING UNLESS NOTED OTHERWISE. CONTRACTOR TO VERIFY HEIGHT OF EXIT OPENING PRIOR TO ROUGH-IN.

F. ALL OCCUPANCY SENSOR SHALL BE DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASONIC) UNLESS NOTED OTHERWISE.

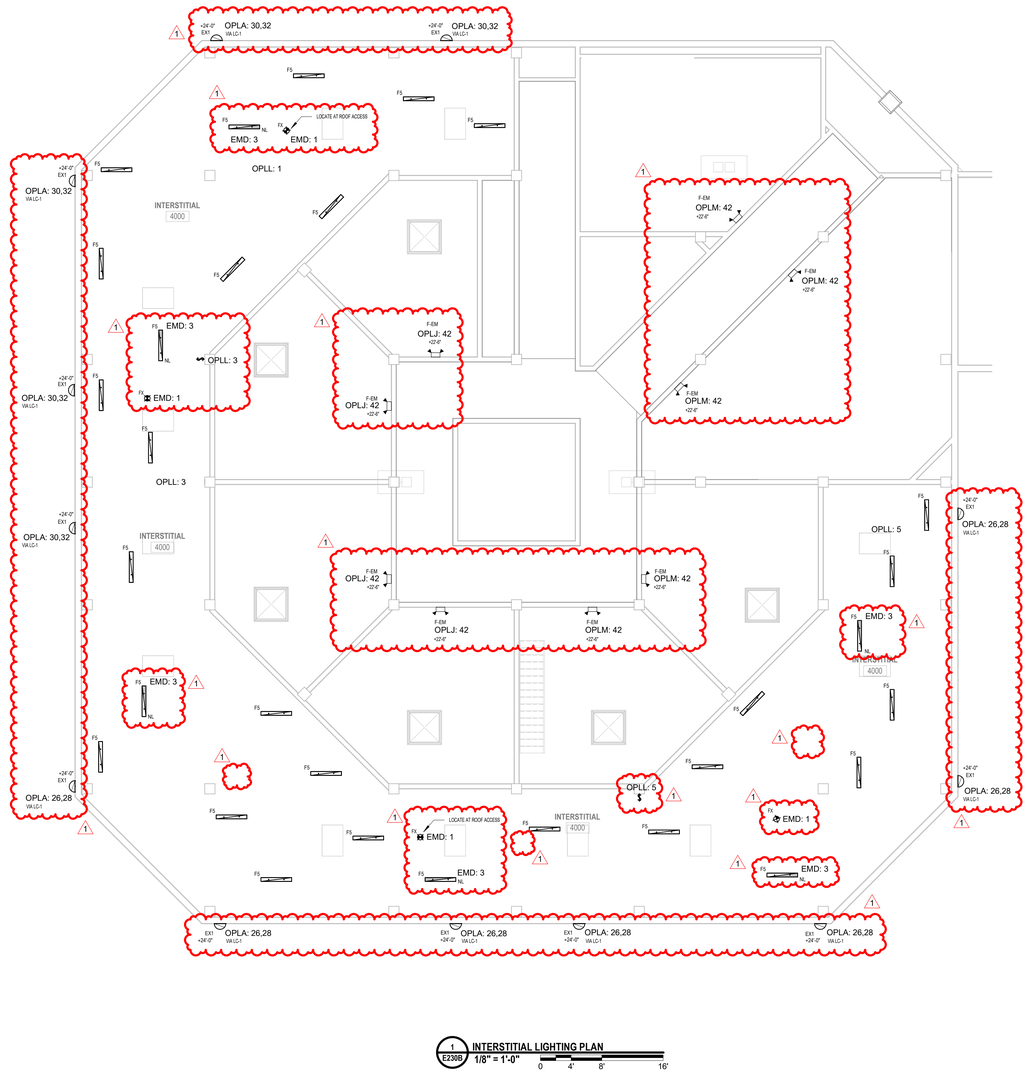
G. SCHEDULE A MEETING WITH THE OWNER PRIOR TO PROGRAMMING OF LIGHTING CONTROL DEVICES TO DETERMINE DESIRED CONTROL, TIME DELAY SETTINGS, OCCUPANCY, ETC.

H. ALL RECESSED LIGHTING FIXTURES IN LAY-IN CEILINGS SHALL BE INSTALLED WITH A FLEXIBLE METAL CONDUIT WITH MAXIMUM LENGTH OF 6 FEET.

I. LIGHT FIXTURES THAT ARE INSTALLED WITHIN A FIRE-RATED CEILING SHALL BE PROVIDED WITH FIRE RATED COVERS IN ORDER TO MAINTAIN THE CEILING FIRE RATINGS. FIRE RATED COVERS SHALL BE COVERS SUCH AS TENMAT FIRE PROTECTION SOLUTIONS OR SIMILAR. REFER TO ARCHITECTURAL DRAWINGS FOR ALL FIRE RATED CEILING LOCATIONS AND PROVIDE COVERS ACCORDINGLY.

PLAN NOTES

#	NOTE
1	FIXTURE TO BE EQUIPPED WITH A UL924 GENERATOR TRANSFER DEVICE (GTD). PROVIDE 0-10 VOLT DIMMING OVERIDE AND CONNECT TO CIRCUIT SERVING ROOM AND TO NEAREST "EM" BRANCH CIRCUIT.



1 E230B **INTERSTITIAL LIGHTING PLAN**
1/8" = 1'-0"
0 4' 8' 16'

PANEL AND CIRCUIT NUMBERS WERE DERIVED FROM EXISTING DRAWINGS AND PANELBOARD DIRECTORIES AND MAY NOT REFLECT EXACT CIRCUITS AS FOUND IN THE FIELD.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM 1	12/05/25

Project #: 01-700-070
Designed By: SGD
Drawn By: SGD
Checked By: JAF
Date: 11.21. 2025

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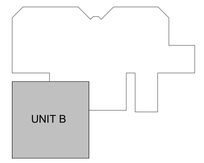

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INTERSTITIAL LIGHTING PLAN - UNIT B

E230B

12/5/2025 2:38:23 PM

GENERAL NOTES - POWER:

A. REFER TO SHEET E-001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. REFER TO MECHANICAL AND PLUMBING SERIES DRAWINGS FOR ADDITIONAL SCOPE OF WORK.

C. REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON THE TOTAL CIRCUIT DISTANCE.

D. ALL RECEPTACLES LOCATED WITHIN 6 FEET OF A SINK SHALL BE GFCI TYPE. ALL RECEPTACLES MAY NOT BE IDENTIFIED AS GFCI ON PLAN, BUT SHALL BE PROVIDED ACCORDING TO REQUIREMENT.

E. ALL SPECIAL TYPE RECEPTACLES SHALL BE NEMA 6-20R UNLESS NOTED OTHERWISE AND SHALL BE CIRCUITED WITH (2)#10 + (1)#10 NEUTRAL + (1)#10 GROUND. COORDINATE REQUIREMENTS WITH OWNER SUPPLIED EQUIPMENT PRIOR TO INSTALLATION.

F. REFER TO ARCHITECTURAL SCHEDULES, DETAILS, AND ELEVATIONS FOR ADDITIONAL INFORMATION ON DEVICE LOCATIONS PRIOR TO ROUGH-IN.

G. UNLESS NOTED OTHERWISE, ALL NEW DEVICES SHALL BE INSTALLED FLUSH IN WALL.

H. CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANELBOARD BREAKERS, REFER TO PANELBOARD SCHEDULES FOR ADDITIONAL INFORMATION.

PLAN NOTES

#	NOTE
1	CONNECT TO EXISTING OVERHEAD DOOR OPERATOR MOTOR, UP/DOWN CONTROL SWITCH, SAFETY SENSORS AND LOW VOLTAGE WIRING TO REMAIN.
2	CONNECT TO FACTORY INSTALLED DISCONNECT SWITCH.
3	PROVIDE A 120V/20A/1P NON FUSED DISCONNECT SWITCH
4	100A/3P/240V HEAVY DUTY FUSED DISCONNECT SWITCH FOR ELEVATOR MACHINE. CONNECT TO EXISTING ELEVATOR EQUIPMENT AND VERIFY EXISTING FUSE SIZE AND FUSE AT SAME SIZE.
5	30A/1P/240V HEAVY DUTY FUSED DISCONNECT SWITCH FOR ELEVATOR CAB LIGHTS AND VENTILATION. CONNECT TO EXISTING ELEVATOR CAB.
6	200A/3P/240V HEAVY DUTY FUSED DISCONNECT SWITCH FOR ELEVATOR MACHINE. CONNECT TO EXISTING ELEVATOR EQUIPMENT AND VERIFY EXISTING FUSE SIZE AND FUSE AT SAME SIZE.
7	OVER HEAD DOOR MOTOR OPERATOR, CONNECT TO PUSHBUTTON CONTROL AND SAFETY DEVICES.
8	INDOOR UNIT IS FED FROM OUTDOOR CONDENSING UNIT.

GENERAL NOTES - ELEVATOR:

A. PROVIDE THE FOLLOWING FOR THE ELEVATOR:

a. 3P-100A, 208V (ELEVATOR #1) 3P-200A, 208V (ELEVATOR #2) FUSIBLE DISCONNECT FUSED PER ELEVATOR MANUFACTURER. PROVIDE CONNECTION TO ELEVATOR EQUIPMENT AS REQUIRED. COORDINATE EQUIPMENT LOCATION WITH ELEVATOR.

b. 3P-200A, 208V CONTACTOR FOR ELEVATOR SHUT DOWN PRIOR TO SPRINKLER SYSTEM RELEASE. INTERLOCK CONTACTOR WITH FIRE ALARM SYSTEM AS REQUIRED. ROUTE POWER FOR ELEVATOR THRU CONTACTOR FOR CONTROL. PROVIDE RESET SWITCH IN COVER.

c. TELEPHONE CONNECTION TO ELEVATOR CONTROLLER. PROVIDE (2) CAT6 CABLES IN 1" CONDUIT FROM CONTROLLER TO DATA RACK LOCATION.

d. 2P-30A, 208V, FUSIBLE DISCONNECT FUSED PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS FOR ELEVATOR LIGHTING AND CONTROL. PROVIDE CONNECTION TO ELEVATOR EQUIPMENT AS REQUIRED. COORDINATE EQUIPMENT LOCATION WITH ELEVATOR.

e. FIRE ALARM RELAYS FOR ELEVATOR RECALL. PROVIDE CONTROL WIRING IN CONDUITS AS REQUIRED TO ELEVATOR CONTROLLER.

f. HEAT DETECTOR INSTALLED AT TOP OF ELEVATOR SHAFT. COORDINATE EXACT LOCATION WITH ELEVATOR PRIOR TO INSTALLATION.

g. SMOKE DETECTOR INSTALLED AT TOP OF ELEVATOR SHAFT. COORDINATE LOCATION WITH ELEVATOR.

h. WEATHERPROOF GFCI RECEPTACLE INSTALLED IN ELEVATOR HOISTWAY. COORDINATE EXACT LOCATION WITH ELEVATOR PRIOR TO INSTALLATION.

i. WEATHERPROOF ELEVATOR HOISTWAY LIGHTING SWITCH. LIGHTING LOCATIONS TO BE COORDINATED WITH ELEVATOR EQUIPMENT WITHIN HOISTWAY.

j. PROVIDE CONTROL WIRING IN CONDUIT FROM ATS TO ELEVATOR CONTROLLER TO SIGNAL CONTROLLERS WHEN ON EMERGENCY POWER.

k. FIRE / SMOKE DAMPER. PROVIDE DUCT DETECTOR, REMOTE TEST STATION, AND ADDRESSABLE RELAY AS REQUIRED. REMOTE TEST STATION SHALL BE MOUNTED AS DIRECTED BY LOCAL FIRE DEPARTMENT.

l. VERIFY AND COORDINATE THE ELEVATOR EQUIPMENT AND ELECTRICAL EQUIPMENT LAYOUT IN ELEVATOR MACHINE ROOM WITH ELEVATOR PRIOR TO ROUGH-IN. PROVIDE UNI-STRUT SUPPORT STRUCTURE AS REQUIRED.

PROVIDE NEW OVERHEAD CONDUITS FOR ALL RECEPTACLE BRANCH CIRCUITS AND ABANDON EXISTING UNDERGROUND CONDUITS SERVING BRANCH CIRCUITS.

PANEL AND CIRCUIT NUMBERS WERE DERIVED FROM EXISTING DRAWINGS AND PANELBOARD DIRECTORIES AND MAY NOT REFLECT EXACT CIRCUITS AS FOUND IN THE FIELD.

1 E310A FIRST FLOOR POWER PLAN - UNIT A
1/8" = 1'-0"
0 4' 8' 16'

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM 1	12/05/25

Project #: 01-700-070

Designed By: SGD

Drawn By: SGD

Checked By: JAF

Date: 11.21. 2025

DUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER

Dustin Barth

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UNIT A

N

FIRST FLOOR POWER PLAN - UNIT A

E310A

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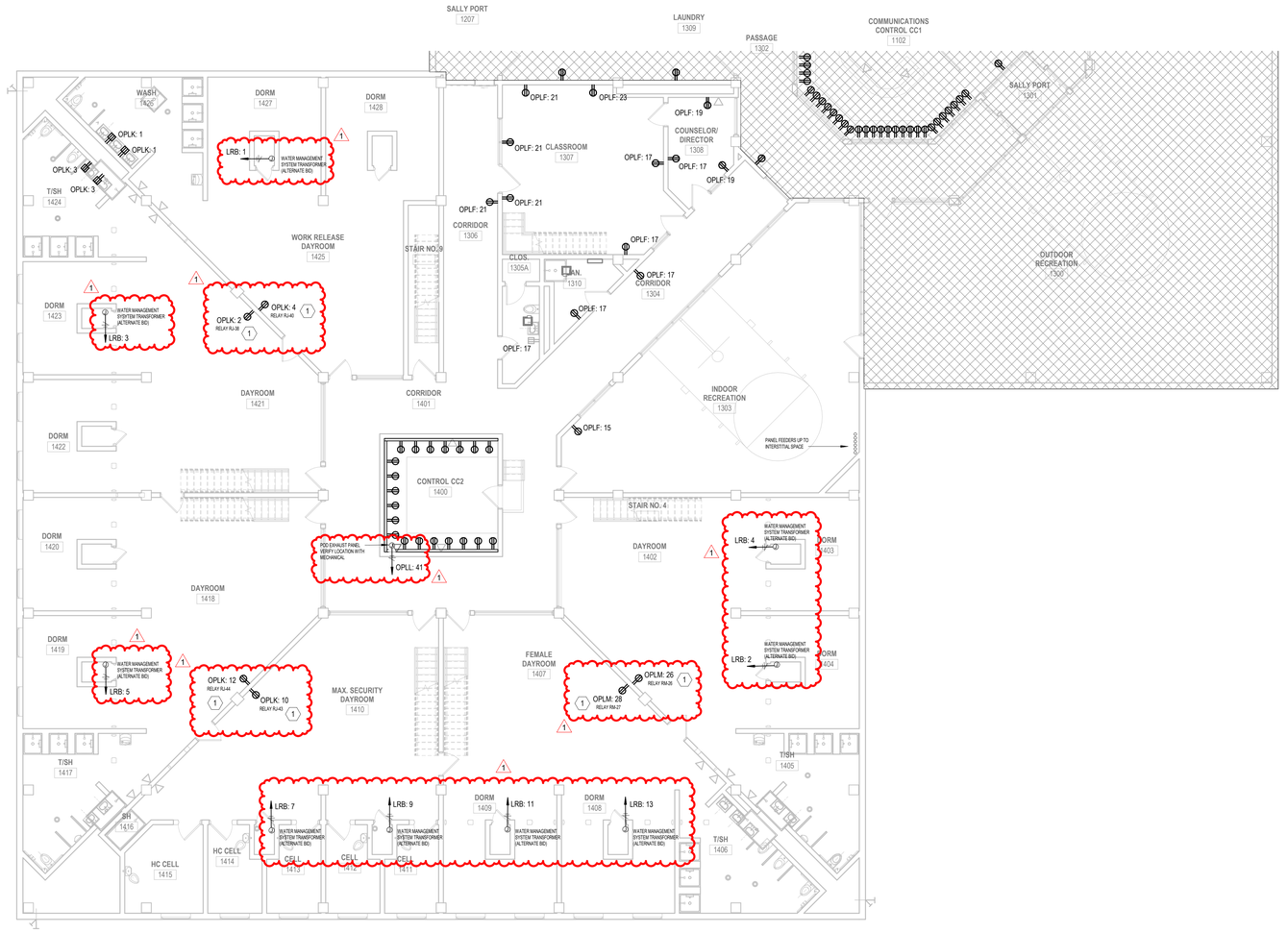

1 E310B **FIRST FLOOR POWER PLAN - UNIT B**
1/8" = 1'-0"
0 4' 8' 16'

GENERAL NOTES - POWER:

A. REFER TO SHEET E-001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. REFER TO MECHANICAL AND PLUMBING SERIES DRAWINGS FOR ADDITIONAL SCOPE OF WORK.

C. REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON THE TOTAL CIRCUIT DISTANCE.

D. ALL RECEPTACLES LOCATED WITHIN 6 FEET OF A SINK SHALL BE GFCI TYPE. ALL RECEPTACLES MAY NOT BE IDENTIFIED AS GFCI ON PLAN, BUT SHALL BE PROVIDED ACCORDING TO REQUIREMENT.

E. ALL SPECIAL TYPE RECEPTACLES SHALL BE NEMA 6-20R UNLESS NOTED OTHERWISE AND SHALL BE CIRCUITED WITH (2)#10 + (1)#10 NEUTRAL + (1)#10 GROUND. COORDINATE REQUIREMENTS WITH OWNER SUPPLIED EQUIPMENT PRIOR TO INSTALLATION.

F. REFER TO ARCHITECTURAL SCHEDULES, DETAILS, AND ELEVATIONS FOR ADDITIONAL INFORMATION ON DEVICE LOCATIONS PRIOR TO ROUGH-IN.

G. UNLESS NOTED OTHERWISE, ALL NEW DEVICES SHALL BE INSTALLED FLUSH IN WALL.

H. CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANELBOARD BREAKERS, REFER TO PANELBOARD SCHEDULES FOR ADDITIONAL INFORMATION.

PLAN NOTES

#	NOTE
1	CIRCUIT INDICATED TO BE CONNECTED TO FIXTURES PROVIDING GENERAL ROOM ILLUMINATION AND CONTROLLED BY EXISTING DETENTION ACCESS CONTROL SYSTEM VIA EXISTING REMOTELY OPERATED RELAY.

PANEL AND CIRCUIT NUMBERS WERE DERIVED FROM EXISTING DRAWINGS AND PANELBOARD DIRECTORIES AND MAY NOT REFLECT EXACT CIRCUITS AS FOUND IN THE FIELD.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM 1	12/05/25

Project #: 01-700-070
Designed By: SGD
Drawn By: SGD
Checked By: JAF
Date: 11.21. 2025

DUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER
Dustin Barth

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UNIT B

N

FIRST FLOOR POWER PLAN - UNIT B

E310B

12/5/2025 2:39:20 PM

GENERAL NOTES - POWER:

A. REFER TO SHEET E-001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. REFER TO MECHANICAL AND PLUMBING SERIES DRAWINGS FOR ADDITIONAL SCOPE OF WORK.

C. REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON THE TOTAL CIRCUIT DISTANCE.

D. ALL RECEPTACLES LOCATED WITHIN 6 FEET OF A SINK SHALL BE GFCI TYPE. ALL RECEPTACLES MAY NOT BE IDENTIFIED AS GFCI ON PLAN, BUT SHALL BE PROVIDED ACCORDING TO REQUIREMENT.

E. ALL SPECIAL TYPE RECEPTACLES SHALL BE NEMA 6-20R UNLESS NOTED OTHERWISE AND SHALL BE CIRCUITED WITH (2)#10 + (1)#10 NEUTRAL + (1)#10 GROUND. COORDINATE REQUIREMENTS WITH OWNER SUPPLIED EQUIPMENT PRIOR TO INSTALLATION.

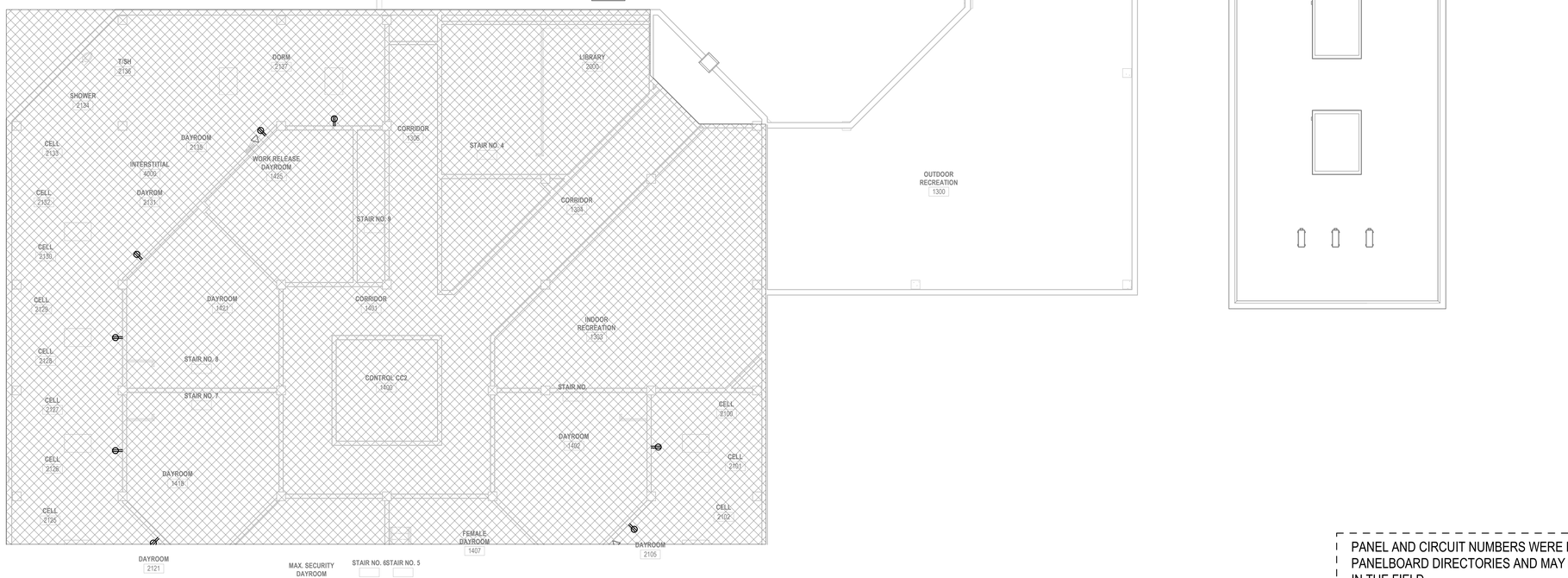
F. REFER TO ARCHITECTURAL SCHEDULES, DETAILS, AND ELEVATIONS FOR ADDITIONAL INFORMATION ON DEVICE LOCATIONS PRIOR TO ROUGH-IN.

G. UNLESS NOTED OTHERWISE, ALL NEW DEVICES SHALL BE INSTALLED FLUSH IN WALL.

H. CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANELBOARD BREAKERS, REFER TO PANELBOARD SCHEDULES FOR ADDITIONAL INFORMATION.

PLAN NOTES

#	NOTE



1 E320A SECOND FLOOR POWER PLAN - UNIT A
1/8" = 1'-0"
0 4' 8' 16'

PANEL AND CIRCUIT NUMBERS WERE DERIVED FROM EXISTING DRAWINGS AND PANELBOARD DIRECTORIES AND MAY NOT REFLECT EXACT CIRCUITS AS FOUND IN THE FIELD.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM 1	12/05/25

Project #: 01-700-070

Designed By: SGD

Drawn By: SGD

Checked By: JAF

Date: 11.21. 2025

JUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER

Justin Barth

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UNIT A

N

SECOND FLOOR POWER PLAN - UNIT A

E320A

12/5/2025 2:39:48 PM

GENERAL NOTES - POWER:

A. REFER TO SHEET E-001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. REFER TO MECHANICAL AND PLUMBING SERIES DRAWINGS FOR ADDITIONAL SCOPE OF WORK.

C. REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON THE TOTAL CIRCUIT DISTANCE.

D. ALL RECEPTACLES LOCATED WITHIN 6 FEET OF A SINK SHALL BE GFCI TYPE. ALL RECEPTACLES MAY NOT BE IDENTIFIED AS GFCI ON PLAN, BUT SHALL BE PROVIDED ACCORDING TO REQUIREMENT.

E. ALL SPECIAL TYPE RECEPTACLES SHALL BE NEMA 6-20R UNLESS NOTED OTHERWISE AND SHALL BE CIRCUITED WITH (2)#10 + (1)#10 NEUTRAL + (1)#10 GROUND. COORDINATE REQUIREMENTS WITH OWNER SUPPLIED EQUIPMENT PRIOR TO INSTALLATION.

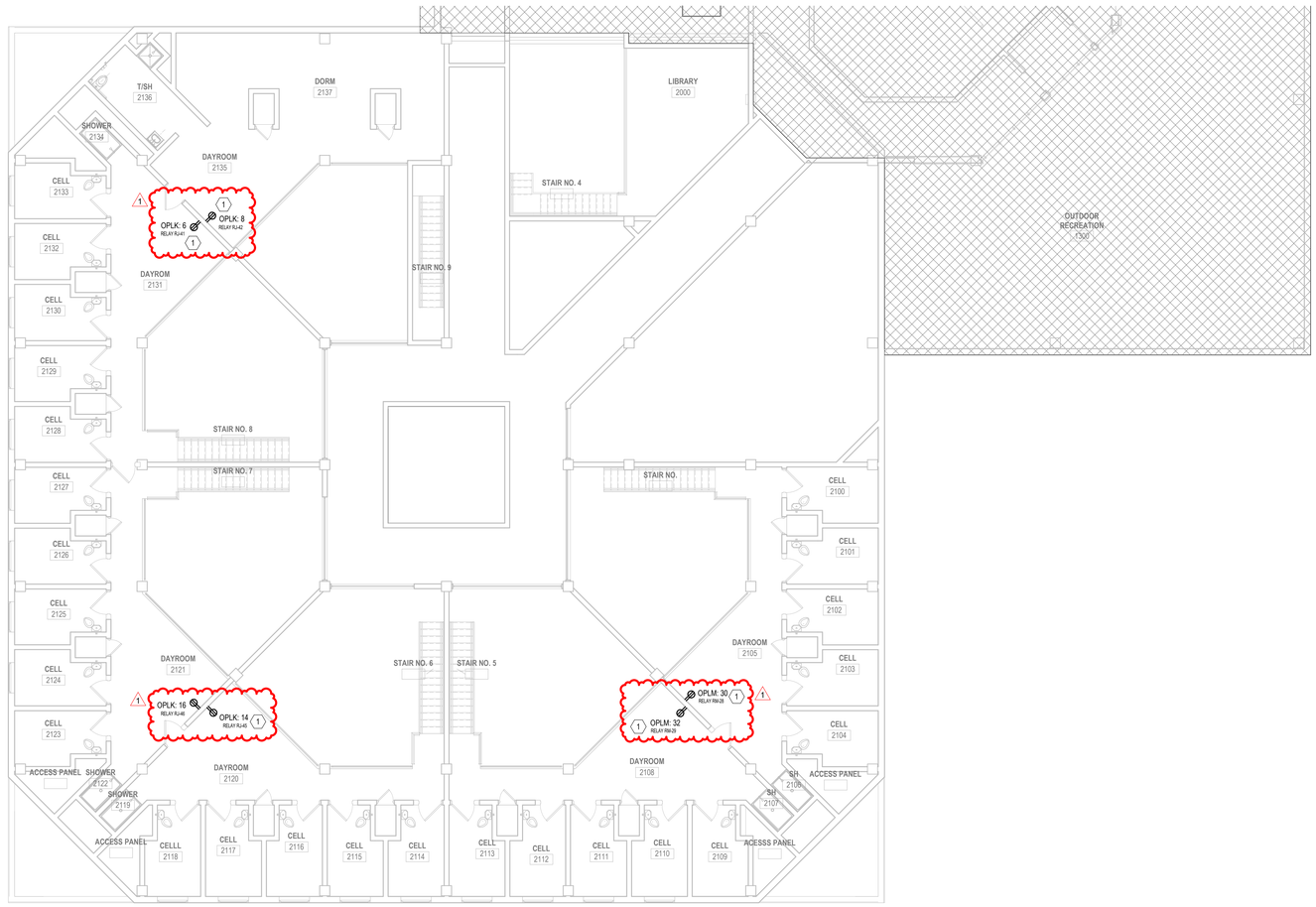
F. REFER TO ARCHITECTURAL SCHEDULES, DETAILS, AND ELEVATIONS FOR ADDITIONAL INFORMATION ON DEVICE LOCATIONS PRIOR TO ROUGH-IN.

G. UNLESS NOTED OTHERWISE, ALL NEW DEVICES SHALL BE INSTALLED FLUSH IN WALL.

H. CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANELBOARD BREAKERS, REFER TO PANELBOARD SCHEDULES FOR ADDITIONAL INFORMATION.

PLAN NOTES

#	NOTE
1	CIRCUIT INDICATED TO BE CONNECTED TO FIXTURES PROVIDING GENERAL ROOM ILLUMINATION AND CONTROLLED BY EXISTING DETENTION ACCESS CONTROL SYSTEM VIA EXISTING REMOTELY OPERATED RELAY.



1 E3206 SECOND FLOOR POWER PLAN - UNIT B
1/8" = 1'-0"
0 4' 8' 16'

PANEL AND CIRCUIT NUMBERS WERE DERIVED FROM EXISTING DRAWINGS AND PANELBOARD DIRECTORIES AND MAY NOT REFLECT EXACT CIRCUITS AS FOUND IN THE FIELD.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM 1	12/05/25

Project #: 01-700-070

Designed By: SGD

Drawn By: SGD

Checked By: JAF

Date: 11.21. 2025

DUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER

Dustin Barth

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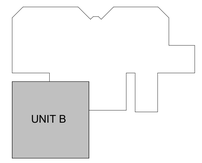

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SECOND FLOOR POWER PLAN - UNIT B

E320B

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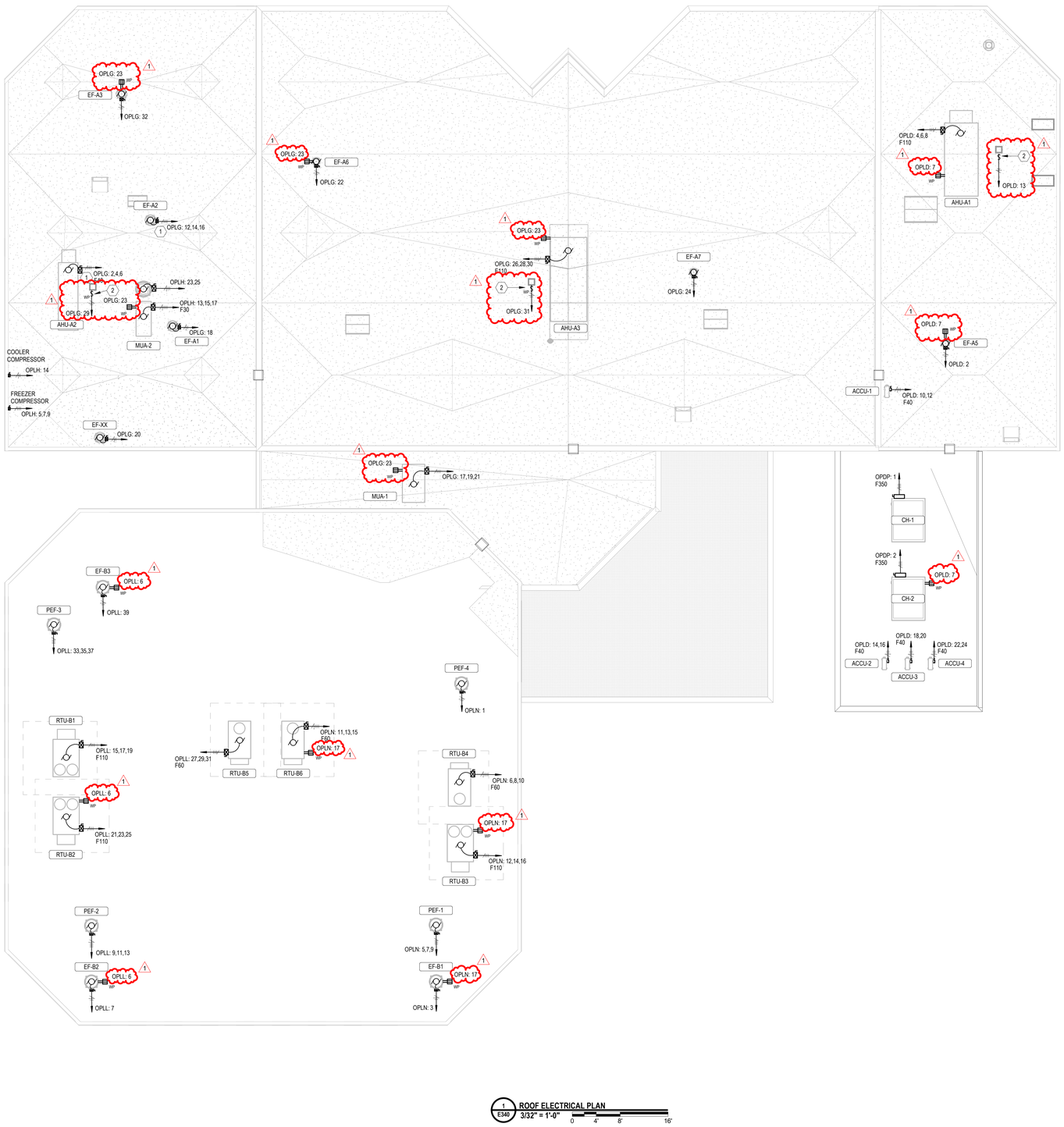

1 E340 ROOF ELECTRICAL PLAN
3/32" = 1'-0"
0 4' 8' 16'

GENERAL NOTES - POWER:

A. REFER TO SHEET E-001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. REFER TO MECHANICAL AND PLUMBING SERIES DRAWINGS FOR ADDITIONAL SCOPE OF WORK.

C. REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON THE TOTAL CIRCUIT DISTANCE.

D. ALL RECEPTACLES LOCATED WITHIN 6 FEET OF A SINK SHALL BE GFCI TYPE. ALL RECEPTACLES MAY NOT BE IDENTIFIED AS GFCI ON PLAN, BUT SHALL BE PROVIDED ACCORDING TO REQUIREMENT.

E. ALL SPECIAL TYPE RECEPTACLES SHALL BE NEMA 6-20R UNLESS NOTED OTHERWISE AND SHALL BE CIRCUITED WITH (2)#10 + (1)#10 NEUTRAL + (1)#10 GROUND. COORDINATE REQUIREMENTS WITH OWNER SUPPLIED EQUIPMENT PRIOR TO INSTALLATION.

F. REFER TO ARCHITECTURAL SCHEDULES, DETAILS, AND ELEVATIONS FOR ADDITIONAL INFORMATION ON DEVICE LOCATIONS PRIOR TO ROUGH-IN.

G. UNLESS NOTED OTHERWISE, ALL NEW DEVICES SHALL BE INSTALLED FLUSH IN WALL.

H. CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANELBOARD BREAKERS, REFER TO PANELBOARD SCHEDULES FOR ADDITIONAL INFORMATION.

PLAN NOTES

#	NOTE
1	SINGLE POINT CONNECTION TO MANUFACTURER PROVIDED DISCONNECT SWITCH/STARTER.
2	HEAT TRACING FOR HOT WATER SUPPLY AND RETURN PIPING.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM 1	12/05/25

Project #: 01-700-070

Designed By: SGD

Drawn By: SGD

Checked By: JAF

Date: 11.21. 2025

DUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER

Dustin Barth

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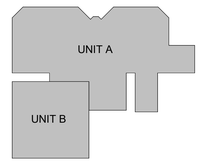

N

ROOF ELECTRICAL PLAN

E340

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GENERAL NOTES - SYSTEMS:

A. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. MAXIMUM NUMBER OF 4 INFORMATION OUTLET LOCATIONS PER CONDUIT HOME RUN TO MDF OR IDF IS PERMITTED. CONDUIT SHALL BE SIZED AS FOLLOWS:
   1. (1) INFORMATION OUTLET LOCATION: 1"C
   2. (2) INFORMATION OUTLET LOCATIONS: 1-1/4"C
   3. (3) INFORMATION OUTLET LOCATIONS: 1-1/2"C

C. ALL COMMUNICATIONS CABLES SHALL BE INSTALLED IN CONDUIT, CABLE TRAY, OR SUPPORTED BY CABLE HOOKS. PROVIDE BUSHINGS AT THE ENDS OF ALL CONDUIT WHERE STUBBED ABOVE ACCESSIBLE CEILINGS OR WHERE DROPPED INTO CABLE TRAY. PROVIDE CABLE HOOKS ABOVE ACCESSIBLE CEILINGS FOR CABLE INSTALLATION WHERE NOT INSTALLED IN CONDUIT OR CABLE TRAY.

D. WHERE CONDUIT IS STUBBED ABOVE ACCESSIBLE CEILING, CABLES SHALL BE INSTALLED WITH SERVICE LOOPS. SERVICE LOOPS SHALL BE APPROXIMATELY TWO WRAPS, OR ABOUT 16" EXTRA INCHES FOR LOOP.

E. ALL CABLEING SHALL BE CATEGORY 6.

GENERAL NOTES - FIRE ALARM:

A. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. THE FIRE ALARM PLANS ARE INTENDED TO DEPICT THE GENERAL PERFORMANCE OF THE SYSTEM. THE FIRE ALARM VENDOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE DESIGN PER EQUIPMENT LIMITATIONS. PROVIDE ALL NECESSARY EQUIPMENT, DEVICES, WIRING, ETC AS REQUIRED FOR A COMPLETE AND CODE COMPLIANT FIRE ALARM SYSTEM.

C. DO NOT LOCATE ANY DETECTION DEVICE WITHIN 3-FEET OF AN AIR DIFFUSER.

D. ADDRESSABLE RELAYS AND MONITOR MODULES SHALL BE INSTALLED WITHIN 3-FEET OF CONTROLLED OR MONITORED DEVICE.

E. A VISUAL INDICATOR SHALL BE PROVIDED FOR ALL INITIATING DEVICES LOCATED OUTSIDE OF NORMAL VIEWING.

PLAN NOTES

#	NOTE

ALL EXISTING LOW VOLTAGE LOCAL AREA NETWORK CABLING AND SECURITY ELECTRONICS LOW VOLTAGE WIRING SUCH AS ACCESS CONTROL (DETENTION AND NON-DETENTION AREAS), INTERCOMM, DETENTION LIGHTING AND RECEPTACLE CONTROL, CCTV AND OTHER CONTROL WIRING TO REMAIN INTACT AND IN SERVICE. THE ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR THE COST TO REPAIR OR REPLACE ANY DAMAGED CABLES.

E410A FIRST FLOOR SYSTEMS PLAN - UNIT A
1/8" = 1'-0"
0 4' 8' 16'

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

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1	ADDENDUM 1	12/05/25

Project #: 01-700-070
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UNIT A

N

FIRST FLOOR SYSTEMS PLAN - UNIT A

E410A

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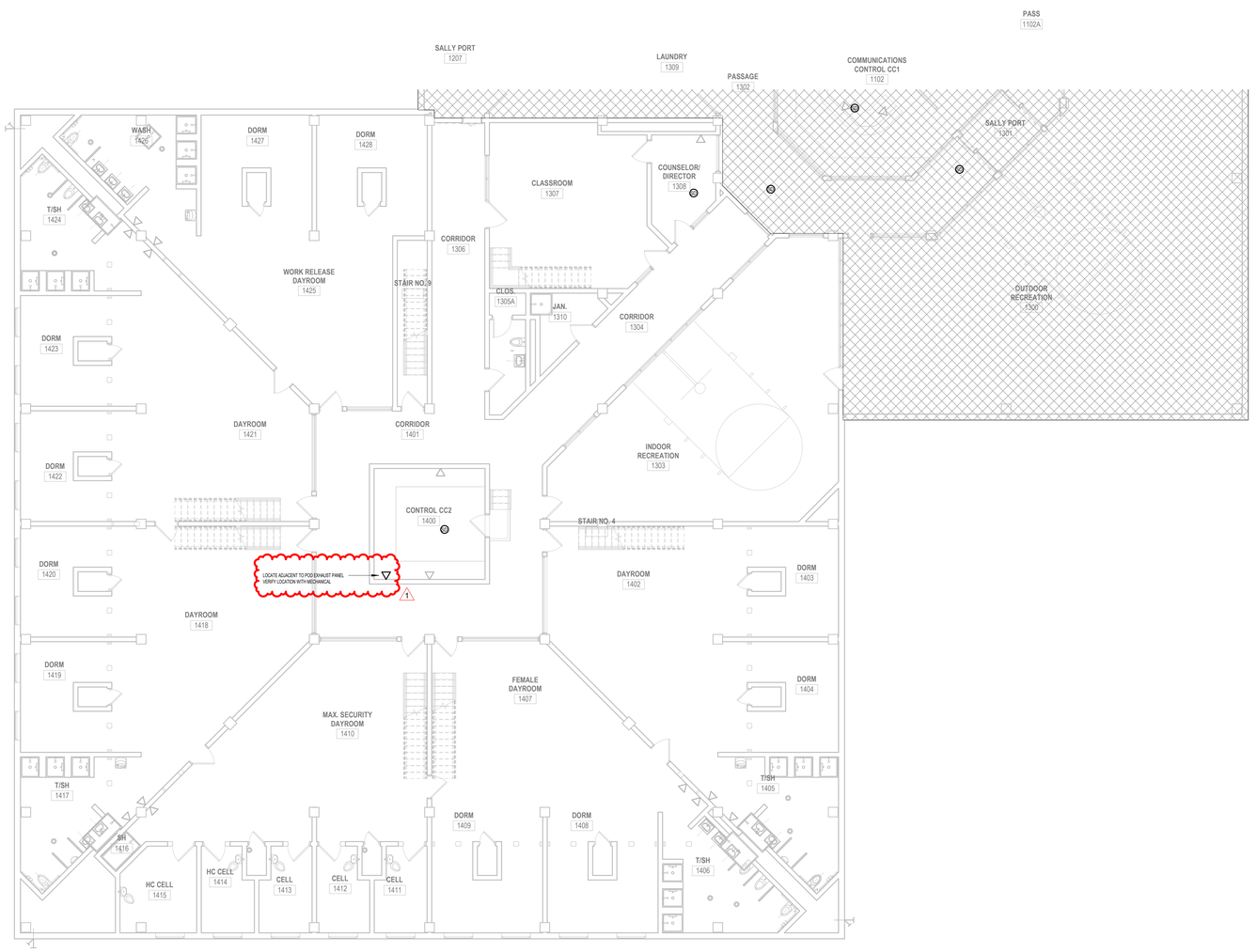

1 E410B FIRST FLOOR SYSTEMS PLAN - UNIT B
1/8" = 1'-0"
0 4' 8' 16'

GENERAL NOTES - SYSTEMS:

A. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. MAXIMUM NUMBER OF 4 INFORMATION OUTLET LOCATIONS PER CONDUIT HOME RUN TO MDF OR IDF IS PERMITTED. CONDUIT SHALL BE SIZED AS FOLLOWS:
   1. (1) INFORMATION OUTLET LOCATION: 1"C
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E. ALL CABLEING SHALL BE CATEGORY 6.

GENERAL NOTES - FIRE ALARM:

A. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. THE FIRE ALARM PLANS ARE INTENDED TO DEPICT THE GENERAL PERFORMANCE OF THE SYSTEM. THE FIRE ALARM VENDOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE DESIGN PER EQUIPMENT LIMITATIONS. PROVIDE ALL NECESSARY EQUIPMENT, DEVICES, WIRING, ETC AS REQUIRED FOR A COMPLETE AND CODE COMPLIANT FIRE ALARM SYSTEM.

C. DO NOT LOCATE ANY DETECTION DEVICE WITHIN 3-FEET OF AN AIR DIFFUSER.

D. ADDRESSABLE RELAYS AND MONITOR MODULES SHALL BE INSTALLED WITHIN 3-FEET OF CONTROLLED OR MONITORED DEVICE.

E. A VISUAL INDICATOR SHALL BE PROVIDED FOR ALL INITIATING DEVICES LOCATED OUTSIDE OF NORMAL VIEWING.

PLAN NOTES

#	NOTE

ALL EXISTING LOW VOLTAGE LOCAL AREA NETWORK CABLING AND SECURITY ELECTRONICS LOW VOLTAGE WIRING SUCH AS ACCESS CONTROL (DETENTION AND NON-DETENTION AREAS), INTERCOMM, DETENTION LIGHTING AND RECEPTACLE CONTROL, CCTV AND OTHER CONTROL WIRING TO REMAIN INTACT AND IN SERVICE. THE ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR THE COST TO REPAIR OR REPLACE ANY DAMAGED CABLES.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

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1	ADDENDUM 1	12/05/25

Project #: 01-700-070
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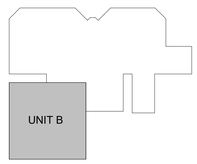

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FIRST FLOOR SYSTEMS PLAN - UNIT B

E410B

12/5/2025 2:41:34 PM

1 E420A SECOND FLOOR SYSTEMS PLAN - UNIT A
1/8" = 1'-0"
0 4' 8' 16'

GENERAL NOTES - SYSTEMS:

A. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. MAXIMUM NUMBER OF 4 INFORMATION OUTLET LOCATIONS PER CONDUIT HOME RUN TO MDF OR IDF IS PERMITTED. CONDUIT SHALL BE SIZED AS FOLLOWS:
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E. ALL CABLEING SHALL BE CATEGORY 6.

GENERAL NOTES - FIRE ALARM:

A. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. THE FIRE ALARM PLANS ARE INTENDED TO DEPICT THE GENERAL PERFORMANCE OF THE SYSTEM. THE FIRE ALARM VENDOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE DESIGN PER EQUIPMENT LIMITATIONS. PROVIDE ALL NECESSARY EQUIPMENT, DEVICES, WIRING, ETC AS REQUIRED FOR A COMPLETE AND CODE COMPLIANT FIRE ALARM SYSTEM.

C. DO NOT LOCATE ANY DETECTION DEVICE WITHIN 3-FEET OF AN AIR DIFFUSER.

D. ADDRESSABLE RELAYS AND MONITOR MODULES SHALL BE INSTALLED WITHIN 3-FEET OF CONTROLLED OR MONITORED DEVICE.

E. A VISUAL INDICATOR SHALL BE PROVIDED FOR ALL INITIATING DEVICES LOCATED OUTSIDE OF NORMAL VIEWING.

PLAN NOTES

#	NOTE

ALL EXISTING LOW VOLTAGE LOCAL AREA NETWORK CABLING AND SECURITY ELECTRONICS LOW VOLTAGE WIRING SUCH AS ACCESS CONTROL (DETENTION AND NON-DETENTION AREAS), INTERCOMM, DETENTION LIGHTING AND RECEPTACLE CONTROL, CCTV AND OTHER CONTROL WIRING TO REMAIN INTACT AND IN SERVICE. THE ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR THE COST TO REPAIR OR REPLACE ANY DAMAGED CABLES.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

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Project #: 01-700-070
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DUSTIN E. BARTH
REGISTERED
No. 12200401
STATE OF INDIANA
PROFESSIONAL ENGINEER
Dustin Barth

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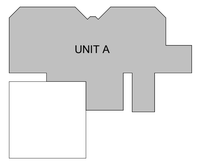

N

SECOND FLOOR SYSTEMS PLAN - UNIT A

E420A

12/5/2025 2:42:01 PM

GENERAL NOTES - SYSTEMS:

A. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. MAXIMUM NUMBER OF 4 INFORMATION OUTLET LOCATIONS PER CONDUIT HOME RUN TO MDF OR IDF IS PERMITTED. CONDUIT SHALL BE SIZED AS FOLLOWS:
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E. ALL CABLEING SHALL BE CATEGORY 6.

GENERAL NOTES - FIRE ALARM:

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B. THE FIRE ALARM PLANS ARE INTENDED TO DEPICT THE GENERAL PERFORMANCE OF THE SYSTEM. THE FIRE ALARM VENDOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE DESIGN PER EQUIPMENT LIMITATIONS. PROVIDE ALL NECESSARY EQUIPMENT, DEVICES, WIRING, ETC AS REQUIRED FOR A COMPLETE AND CODE COMPLIANT FIRE ALARM SYSTEM.

C. DO NOT LOCATE ANY DETECTION DEVICE WITHIN 3-FEET OF AN AIR DIFFUSER.

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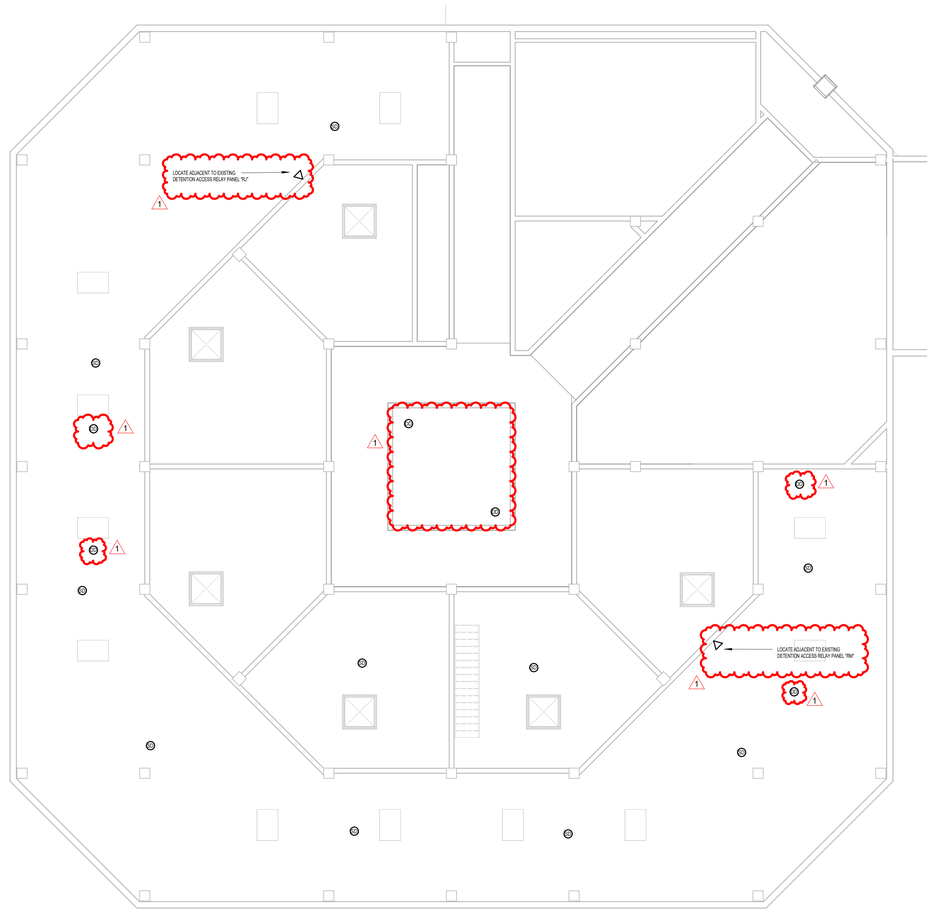
PLAN NOTES

#	NOTE



1 E430B INTERSTITIAL SYSTEM PLAN
1/8" = 1'-0"
0 4' 8' 16'

ALL EXISTING LOW VOLTAGE LOCAL AREA NETWORK CABLING AND SECURITY ELECTRONICS LOW VOLTAGE WIRING SUCH AS ACCESS CONTROL (DETENTION AND NON-DETENTION AREAS), INTERCOMM, DETENTION LIGHTING AND RECEPTACLE CONTROL, CCTV AND OTHER CONTROL WIRING TO REMAIN INTACT AND IN SERVICE. THE ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR THE COST TO REPAIR OR REPLACE ANY DAMAGED CABLES.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM 1	12/05/25

Project #: 01-700-070
Designed By: SGD
Drawn By: SGD
Checked By: JAF
Date: 11.21. 2025

DUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER

Dustin Barth

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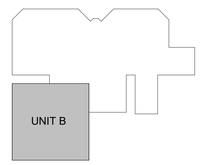

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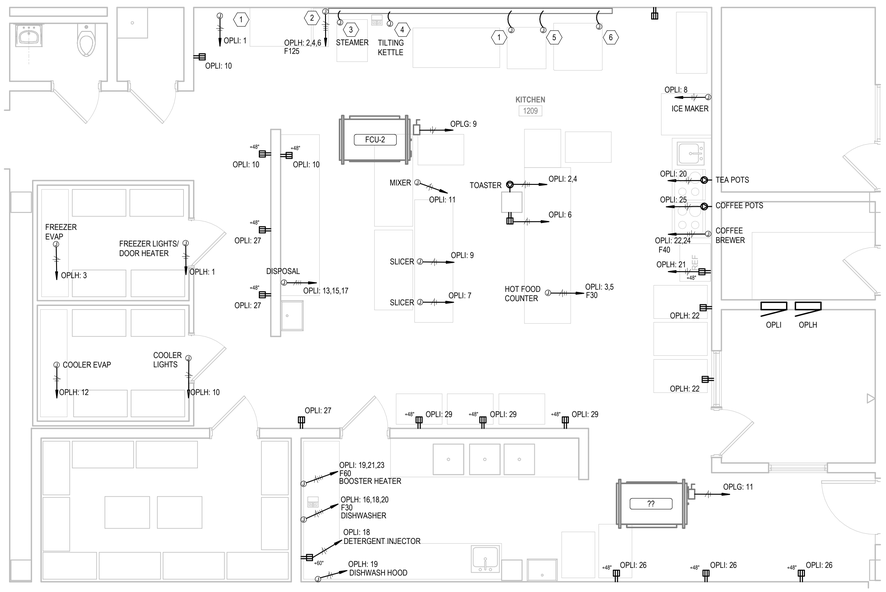
INTERSTITIAL SYSTEMS PLAN - UNIT B

E430B

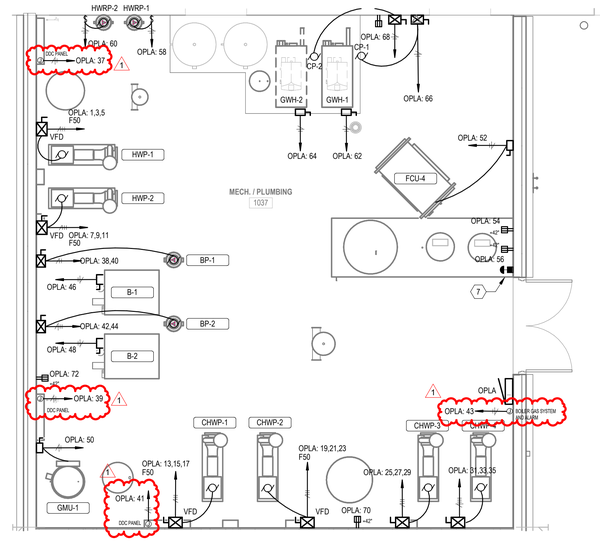
PLAN NOTES

#	NOTE
1	FIRE SUPPRESSION SYSTEM
2	UTILITY RACEWAY
3	(3) #12 AWG SEALITITE CONDUIT FROM UTILITY RACEWAY TO EQUIPMENT.
4	(4) #12 AWG SEALITITE CONDUIT FROM UTILITY RACEWAY TO EQUIPMENT.
5	(4) #6AWG SEALTITE FROM UTILITY RACEWAY TO EQUIPMENT.
6	(5) #12 3/4" SEALTITE FROM UTILITY RACEWAY TO EQUIPMENT.
7	EMERGENCY SHUTOFF FOR BOILERS CONNECTED TO SHUNT TRIP CIRCUIT BREAKER.
8	INDOOR UNIT IS FED FROM OUTDOOR CONDENSING UNIT.

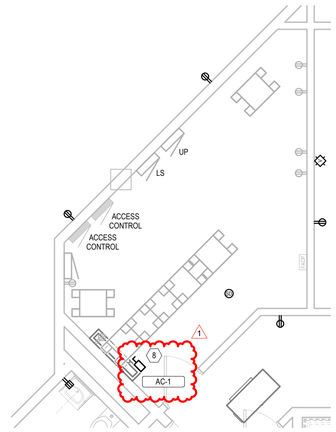


3 ENLARGED KITCHEN PLAN
1/4" = 1'-0"

KITCHEN EQUIPMENT LAYOUT, PANEL AND CIRCUIT NUMBERS WERE DERIVED FROM EXISTING DRAWINGS AND MAY NOT REFLECT LAYOUT AND EXACT CIRCUITS AS FOUND IN THE FIELD.



1 ENLARGED MECHANICAL/PLUMBING #1037
1/4" = 1'-0"



2 ENLARGED IT/SECURITY ELECTRONICS ROOM #1034
1/4" = 1'-0"

RQAW
DCCM

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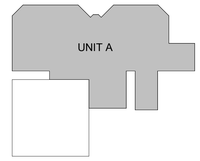

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ENLARGED ELECTRICAL PLANS

E500

Branch Panel: OPLA

Location: MECH. / PLUMBING 1037
Supplied From: OPDP
Mounting: Surface
Enclosure Type: Type 1

Voltage: 208Y/120
Phase: 3
Wire: 4
Ground: Equipment Ground Bus

Branch: OP
A.I.C. Rating: 1
Main Type: MCB
Main Rating: 400 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1				3 0			2	20 A	EXISTING FRONT PARKING LOT LIGHTING	2
3	HWP-1 MECH. / PLUMBING 1037	50 A	3		3 0					4
5						3 0	2	20 A	EXISTING FRONT PARKING LOT LIGHTING	6
7				3 0						8
9	HWP-2 MECH. / PLUMBING 1037	50 A	3		3 0		2	20 A	EXISTING FRONT PARKING LOT LIGHTING	10
11						3 0				12
13				3 0			2	20 A	EXISTING REAR PARKING LOT LIGHTING	14
15	CHWP-1 MECH. / PLUMBING 1037	50 A	3		3 0					16
17						3 0	2	20 A	SPARE	18
19				3 0						20
21	CHWP-2 MECH. / PLUMBING 1037	50 A	3		3 0.5		2	20 A	EXTERIOR WALL PACKS	22
23						3 0.5				24
25				1.3 0.2			2	20 A	EXTERIOR WALL PACKS	26
27	CHWP-3 MECH. / PLUMBING 1037	20 A	3		1.3 0.2					28
29						1.3 0.5	2	20 A	EXTERIOR WALL PACKS	30
31				1.3 0.2						32
33	CHWP-4 MECH. / PLUMBING 1037	20 A	3		1.3 0		2	20 A	EXISTING FLAG POLE LIGHTING	34
35						1.3 0				36
37	DDC PANEL MECH. / PLUMBING 1037	20 A	1	0.5 1.4			2	20 A	BP-1 MECH. / PLUMBING 1037	38
39	DDC PANEL MECH. / PLUMBING 1037	20 A	1		0.5 1.4					40
41	DDC PANEL MECH. / PLUMBING 1037	20 A	1			0.5 1.4				42
43	BOILER ALARM MECH. / PLUMBING 1037	20 A	1	0.5 1.4			2	20 A	BP-2 MECH. / PLUMBING 1037	44
45	SPARE	20 A	1		0 1.9					46
47	SPARE	20 A	1			0 1.9	1	20 A	B-1 MECH. / PLUMBING 1037	48
49	SPARE	20 A	1	0 1.2			1	20 A	B-2 MECH. / PLUMBING 1037	50
51	SPARE	20 A	1		0 1.4		1	20 A	GMU-1 MECH. / PLUMBING 1037	52
53	SPARE	20 A	1			0 1.9	1	20 A	FCU-4 MECH. / PLUMBING 1037	54
55	SPARE	20 A	1	0 1.9			1	20 A	WS-1 MECH. / PLUMBING 1037	56
57	SPARE	20 A	1		0 0.1		1	20 A	WS-2 MECH. / PLUMBING 1037	58
59	SPARE	20 A	1			0 0.1	1	20 A	HWRP-1 MECH. / PLUMBING 1037	60
61	SPARE	20 A	1	0 1.9			1	20 A	HWRP-2 MECH. / PLUMBING 1037	62
63	SPARE	20 A	1		0 1.9		1	20 A	GWH-1 MECH. / PLUMBING 1037	64
65	SPARE	20 A	1			0 1.7	1	20 A	GWH-2 MECH. / PLUMBING 1037	66
67	SPARE	20 A	1	0 1.7			1	20 A	CP-1 MECH. / PLUMBING 1037	68
69	SPARE	20 A	1		0 0.2		1	20 A	CP-2 MECH. / PLUMBING 1037	70
71	SPARE	20 A	1			0 0.2	1	20 A	Receptacle MECH. / PLUMBING 1037	72
73	SPARE	20 A	1	0 0			1	20 A	Receptacle MECH. / PLUMBING 1037	74
75	SPARE	20 A	1		0 0		1	20 A	SPARE	76
77	SPARE	20 A	1			0 0	1	20 A	SPARE	78
79	SPARE	20 A	1	0 0			1	20 A	SPARE	80
81	SPARE	20 A	1		0 0		1	20 A	SPARE	82
83	SPARE	20 A	1			0 0	1	20 A	SPARE	84
	Total Load:			25.7 kVA	23.0 kVA	23.2 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
LIGHTING	1740 VA	100.00%	1740 VA		
Motor	58210 VA	100.00%	58210 VA	**Total Conn. Load:**	71910 VA
Receptacle	11960 VA	91.81%	10980 VA	**Total Est. Demand:**	70930 VA
				Total Conn. Current:	200 A
				Total Est. Demand Current:	197 A

Remarks:

Branch Panel: OPLB

Location: EMERGENCY POWER 1038
Supplied From: OPDP
Mounting: Surface
Enclosure Type: Type 1

Voltage: 208Y/120
Phase: 3
Wire: 4
Ground: Equipment Ground Bus

Branch:
A.I.C. Rating: 1
Main Type: MCB
Main Rating: 225 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	LIGHTING Room 1005, 1008, 1007, 1009, 1010, 101...	20 A	1	0.5 0.3			1	20 A	LIGHTING Room 1100, 1101	2
3	LIGHTING Room 1014, 1017, 1018, 1020, 1019	20 A	1		0.6 0.3		1	20 A	LIGHTING LOBBY 1101	4
5	LIGHTING Room 1001, 1016, 1003, 1021, 1006	20 A	1			0.4 0	1	20 A	SPARE	6
7	LIGHTING Room 1022, 1023	20 A	1	0.5 0			1	20 A	SPARE	8
9	LIGHTING Room 1006, 1012, 1015, A1002	20 A	1		0.5 0.2		1	20 A	LIGHTING Room 1101, A862	10
11	LIGHTING Room 1032, 1029, 1033, 1031, 1030, 102...	20 A	1			0.8 0.2	1	20 A	LIGHTING Room 1101, A862	12
13	LIGHTING Room 1020, 1036	20 A	1	0.5 0.2			1	20 A	LIGHTING LOBBY 1101	14
15	SPARE	20 A	1		0 0.2		1	20 A	LIGHTING LOBBY 1101	16
17	LIGHTING Room 1006, 1012, 1015, A1002	20 A	1			0.3 0	1	20 A	SPARE	18
19	LIGHTING Room A1002, 1006	20 A	1	0.3 0			1	20 A	SPARE	20
21	LIGHTING Room 1001, 1000	20 A	1		0.6 0		1	20 A	SPARE	22
23	LIGHTING Room 1032, 1029, 1033, 1031, 1030	20 A	1			0.4 0	1	20 A	SPARE	24
25	LIGHTING Room 1020, 1036	20 A	1	0.2 0			1	20 A	SPARE	26
27	LIGHTING Room 1302, A846	20 A	1		0.3 0		1	20 A	SPARE	28
29	LIGHTING Room 1103, 1034	20 A	1			0.3 0	1	20 A	SPARE	30
31	LIGHTING Room 1037, 1038	20 A	1	0.4 0			1	20 A	SPARE	32
33					0		1	20 A	SPARE	34
35	SPARE	20 A	1			0 0	1	20 A	SPARE	36
37	SPARE	20 A	1	0 0			1	20 A	SPARE	38
39	SPARE	20 A	1		0 0		1	20 A	SPARE	40
41	SPARE	20 A	1			0 0	1	20 A	SPARE	42
	Total Load:			2.9 kVA	2.7 kVA	2.4 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
LIGHTING	7928 VA	100.00%	7928 VA		
				Total Conn. Load:	7928 VA
				Total Est. Demand:	7928 VA
				Total Conn. Current:	22 A
				Total Est. Demand Current:	22 A

Remarks:

Distribution Panel: EMDP

Location: EMERGENCY POWER 1038
Supplied From: MDP
Mounting:
Enclosure Type:

Voltage: 208Y/120
Phase: 3
Wire: 4
Ground: Equipment Ground Bus

Branch:
A.I.C. Rating: 1
Main Type: MCB
Main Rating: 400 A

General Panel Comments:

Circuit Number	Circuit Description	Breaker Information: Thermal Mag Fixed	Thermal Mag Adj. Inst	Electronic Trip L	S	I	G	100% Rated	Poles	Frame Size	Trip Rating	Load (kVA)	Remarks:
1	PANEL EMA			X	X	X		X	3	100 A	100 A	2.1	
2	PANEL EMB			X	X	X		X	3	100 A	100 A	0.8	
3	PANEL EMC			X	X	X		X	3	100 A	100 A	1.5	
4	PANEL EMD			X	X	X		X	3	100 A	100 A	0.7	
5	EXISTING PANEL LS			X	X	X		X	3	400 A	225 A	0.0	
6													
7													
8													
9													
10													
11													
12													
											Total Connected Load (kVA):	5.1	
											Total Connected Load (Amps):	14.0	

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
LIGHTING	4552 VA	100.00%	4552 VA		
Receptacle	500 VA	100.00%	500 VA	**Total Conn. Load:**	5052 VA
				Total Est. Demand:	5052 VA
				Total Conn. Current:	14 A
				Total Est. Demand Current:	14 A

Remarks:

Distribution Panel: LRDP

Location: EMERGENCY POWER 1038
Supplied From: MDP
Mounting: SURFACE
Enclosure Type: NEMA 1

Voltage: 208Y/120
Phase: 3
Wire: 4
Ground: Equipment Ground Bus

Branch: LR
A.I.C. Rating: 1
Main Type: Main Breaker
Main Rating: 200 A

General Panel Comments:

Circuit Number	Circuit Description	Breaker Information: Thermal Mag Fixed	Thermal Mag Adj. Inst	Electronic Trip L	S	I	G	100% Rated	Poles	Frame Size	Trip Rating	Load (kVA)	Remarks:
1	PANEL LRA			X	X	X		X	3	400 A	100 A	6.0	
2	PANEL LRB			X	X	X		X	3	400 A	100 A	7.0	
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
											Total Connected Load (kVA):	13.0	
											Total Connected Load (Amps):	36.1	

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	6012 VA	100.00%	6012 VA		
Receptacle	7000 VA	100.00%	7000 VA	**Total Conn. Load:**	13012 VA
				Total Est. Demand:	13012 VA
				Total Conn. Current:	36 A
				Total Est. Demand Current:	36 A

Remarks:

Distribution Panel: MDP

Location: Space A747
Supplied From:
Mounting:
Enclosure Type:

Voltage: 208Y/120
Phase: 3
Wire: 4
Ground: Equipment Ground Bus

Branch: NORMAL
A.I.C. Rating: 1
Main Type: MCB
Main Rating: 3000 A

General Panel Comments:
SERVICE ENTRANCE RATED; 100% RATED MAIN BREAKER FULLY ELECTRONIC ADJUSTABLE

Circuit Number	Circuit Description	Breaker Information: Thermal Mag Fixed	Thermal Mag Adj. Inst	Electronic Trip L	S	I	G	100% Rated	Poles	Frame Size	Trip Rating	Load (kVA)	Remarks:
1	PANEL OPDP			X	X	X		X	3	3000...	3000...	918.9	
2	PANEL EMDP			X	X	X		X	3	400 A	400 A	5.1	
3	PANEL LRDP			X	X	X		X	3	400 A	200 A	13.0	
4													
5													
6													
7													
8													
9													
10													
11													
12													
											Total Connected Load (kVA):	937.0	
											Total Connected Load (Amps):	2600.8	

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
LITES	189 VA	125.00%	236 VA		
LIGHTING	46266 VA	100.00%	46266 VA	**Total Conn. Load:**	536987 VA
Mechanical	5760 VA	70.00%	4032 VA	**Total Est. Demand:**	850327 VA
Miscellaneous	800 VA	70.00%	560 VA	**Total Conn. Current:**	2601 A
Motor	704492 VA	100.00%	704492 VA	**Total Est. Demand Current:**	2360 A
Receptacle	179480 VA	52.79%	94740 VA		

Remarks:

Distribution Panel: OPDP

Location: EMERGENCY POWER 1038
Supplied From: MDP
Mounting:
Enclosure Type:

Voltage: 208Y/120
Phase: 3
Wire: 4
Ground: Equipment Ground Bus

Branch: OP
A.I.C. Rating: 1
Main Type: MCB
Main Rating: 3000 A

General Panel Comments:
100% RATED MAIN BREAKER FULLY ELECTRONIC ADJUSTABLE

Circuit Number	Circuit Description	Breaker Information: Thermal Mag Fixed	Thermal Mag Adj. Inst	Electronic Trip L	S	I	G	100% Rated	Poles	Frame Size	Trip Rating	Load	Remarks:
1	CH-1			X	X	X		X	3	400 A	350 A	123.5	
2	CH-2			X	X	X		X	3	400 A	350 A	123.5	
3	ELEVATOR #2 ELEVATOR EQUIP. 1107		X					X	3	400 A	200 A	57.6	
4	ELEVATOR #1 ELEV. EQUIP 1004		X					X	3	400 A	100 A	28.8	
5	PANEL OPLA		X					X	3	400 A	400 A	71.9	
6	PANEL OPLB		X					X	3	400 A	225 A	7.9	
7	PANEL OPLC		X					X	3	400 A	225 A	21.3	
8	PANEL OPLD		X					X	3	400 A	225 A	58.0	
9	PANEL OPLE		X					X	3	400 A	225 A	6.1	
10	PANEL OPLF		X					X	3	400 A	225 A	16.1	
11	PANEL OPLG		X					X	3	400 A	225 A	61.4	
12	PANEL OPLH			X	X	X		X	3	400 A	400 A	90.0	
13	PANEL OPLI		X					X	3	400 A	225 A	8.2	
14	PANEL OPLJ		X					X	3	400 A	225 A	8.1	
15	PANEL OPLK		X					X	3	400 A	225 A	2.2	
16	PANEL OPLL			X	X	X		X	3	400 A	400 A	88.9	
17	PANEL OPLM		X					X	3	400 A	225 A	8.2	
18	PANEL OPLN		X					X	3	400 A	225 A	67.0	
19	PANEL OPLO		X					X	3	400 A	225 A	9.6	
20	PANEL OPLP		X					X	3	400 A	225 A	25.0	
21	PANEL OPLR		X					X	3	400 A	225 A	0.0	
22	PANEL OPLT		X					X	3	100 A	100 A	10.4	
23	OUT BUILDING		X					X	3	100 A	100 A	25.2	
24	SPARE	--	--	--	--	--	--	--	1	400 A	225 A	0.0	--
25	SPARE	--	--	--	--	--	--	--	1	400 A	225 A	0.0	--
26													
27													
28													
29													
30													
											Total Connected Load (kVA):	918.9	
											Total Connected Load (Amps):	2550.7	

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
LITES	189 VA	125.00%	236 VA		
LIGHTING	41714 VA	100.00%	41714 VA	**Total Conn. Load:**	918923 VA
Mechanical	5760 VA	70.00%	4032 VA	**Total Est. Demand:**	836012 VA
Miscellaneous	800 VA	70.00%	560 VA	**Total Conn. Current:**	2551 A
Motor	698480 VA	100.00%	698480 VA	**Total Est. Demand Current:**	2321 A
Receptacle	171980 VA	52.91%	90990 VA		

Remarks:

1

PLAN NOTES

#	NOTE
1	ALL ELECTRICAL EQUIPMENT SHALL BE RATED TO WITHSTAND THE AVAILABLE FAULT CURRENT FROM THE UTILITY. SERIES RATED DEVICES ARE NOT ACCEPTABLE. AVAILABLE FAULT CURRENT SHALL BE CONFIRMED WITH UTILITY AND FAULT ANALYSIS COMPLETE AS PER SPECIFICATIONS SECTION 26 05 73 PRIOR TO FINAL EQUIPMENT APPROVAL.

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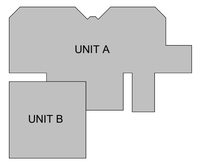

N

ELECTRICAL SCHEDULES

E601

Branch Panel: OPLG

Location: Space A799
Supplied From: OPDP
Mounting: Surface
Enclosure Type: Type 1

Voltage: 208Y/120
Phase: 3
Wire: 4
Ground: Equipment Ground Bus

Branch: OP
A.I.C. Rating: 1
Main Type: MCB
Main Rating: 225 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	GUH-1 STOR 1217	20 A	1	0.2 2.8			1	20 A		2
3	IR-1 SALLY PORT 1216	20 A	1		0.6 2.8		3	40 A	AHU-A2	4
5						0.4 2.8				6
7	EH-3 TLT. 1215	20 A	2	0.4 0			1	20 A	SPARE	8
9	FCU-2 PROPERTY STOR 1213	20 A	1		1.4 0		1	20 A	SPARE	10
11	FCU-1 KITCHEN 1209	20 A	1			1.4 0.8				12
13	FCU-3 SHAKE DOWN 1206	20 A	1	1.4 0.8			3	20 A	EF-A2	14
15	CUH-A1 VESTIBULE 1100	20 A	1		0.6 0.8					16
17						2.3 0.8	1	20 A	EF-A1	18
19	MUA-1	20 A	3	2.3 0.5			1	20 A	EF-A4	20
21					2.3 0.5		1	20 A	EF-A6	22
23	ROOF Receptacle	20 A	1			0.9 0.5	1	20 A	EF-A7	24
25	VAV PANEL STOR. 3045	20 A	1	0.5 7.8						26
27	Receptacle STOR. 3045	20 A	1		0.5 7.8		3	110 A	AHU-A3	28
29	HEAT TRACE	20 A	1			1.9 7.8				30
31	HEAT TRACE	20 A	1	1.9 0			1	20 A	EF-A3	32
33	SPARE	20 A	1		0 1.9		1	20 A	ELEVATOR #2 CAB LIGHTS / HVAC ELEV EQUIP. 1107	34
35	SPARE	20 A	1			0 0.2	1	20 A	Receptacle ELEVATOR EQUIP. 1107	36
37	SPARE	20 A	1	0 0.2			1	20 A	Receptacle ELEV. PIT	38
39	SPARE	20 A	1		0 1.9		1	20 A	O/H DOOR SALLY PORT 1216	40
41	SPARE	20 A	1			0 1.9	1	20 A	O/H DOOR SALLY PORT 1216	42
		Total Load:		18.7 kVA	21.0 kVA	21.6 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Mechanical	3840 VA	70.00%	2688 VA		
Miscellaneous	800 VA	70.00%	560 VA	**Total Conn. Load:**	61350 VA
Motor	54450 VA	100.00%	54450 VA	**Total Est. Demand:**	59958 VA
Receptacle	2260 VA	100.00%	2260 VA	**Total Conn. Current:**	170 A
				Total Est. Demand Current:	166 A

Remarks:

Branch Panel: OPLE

Location: Space A799
Supplied From: OPDP
Mounting: Surface
Enclosure Type: Type 1

Voltage: 208Y/120
Phase: 3
Wire: 4
Ground: Equipment Ground Bus

Branch: OP
A.I.C. Rating: 1
Main Type: MCB
Main Rating: 225 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	LIGHTING STOR 1217	20 A	1	0.2			1	20 A		2
3	LIGHTING SALLY PORT 1216	20 A	1		0.4 0.4		1	20 A	LIGHTING Room 1206, 1309	4
5	LIGHTING Room 1218, 1220	20 A	1			0.1 0	1	20 A	LIGHTING Space A799	6
7	LIGHTING HOLD 1222	20 A	1	0.1 0.5			1	20 A	LIGHTING PROPERTY STOR 1213	8
9	LIGHTING HOLD 1223	20 A	1		0.1 0.1		1	20 A	LIGHTING Room 1212, 1214, 1210	10
11	LIGHTING HOLD 1224	20 A	1			0.1 0.1	1	20 A	LIGHTING Room 1232, 1211	12
13	LIGHTING HOLD 1225	20 A	1	0.1 0.5			1	20 A	LIGHTING Room 1209, 1209A, 1209B	14
15	LIGHTING HOLD 1226	20 A	1		0.1 0.3		1	20 A	LIGHTING KITCHEN 1209	16
17	LIGHTING DRUNK TANK 1227	20 A	1			0.2 0.2	1	20 A	LIGHTING Room 1209, A757	18
19	LIGHTING HOLD 1228	20 A	1	0.1 0			1	20 A	SPARE	20
21	LIGHTING HOLD 1229	20 A	1		0.1 0		1	20 A	SPARE	22
23	LIGHTING HOLD 1230	20 A	1			0.1 0	1	20 A	SPARE	24
25	LIGHTING Room 1200, 1221	20 A	1	0.4 0			1	20 A	SPARE	26
27	LIGHTING Room 1221, 1200	20 A	1		0.3 0		1	20 A	SPARE	28
29	LIGHTING Room A886, 1200, 1207	20 A	1			0.3 0	1	20 A	SPARE	30
31	LIGHTING Room A827, 1113, 1112, 1111, 1110	20 A	1	0.3 0			1	20 A	SPARE	32
33	LIGHTING Room 1111, 1109, 1105	20 A	1		0.8 0		1	20 A	SPARE	34
35	LIGHTING PADDED CELL 1201	20 A	1			0.1 0	1	20 A	SPARE	36
37	LIGHTING T/SH 1202	20 A	1	0.1 0			1	20 A	SPARE	38
39	LIGHTING ISOLATION 1203	20 A	1		0.1 0		1	20 A	SPARE	40
41	LIGHTING Room 1204, 1205	20 A	1			0.2 0	1	20 A	SPARE	42
		Total Load:		2.0 kVA	2.7 kVA	1.4 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
LIGHTING	6052 VA	100.00%	6052 VA		
				Total Conn. Load:	6052 VA
				Total Est. Demand:	6052 VA
				Total Conn. Current:	17 A
				Total Est. Demand Current:	17 A

Remarks:

Branch Panel: OPLC

Location: EMERGENCY POWER 1038
Supplied From: OPDP
Mounting: Surface
Enclosure Type: Type 1

Voltage: 208Y/120
Phase: 3
Wire: 4
Ground: Equipment Ground Bus

Branch: OP
A.I.C. Rating: 1
Main Type: MLO
Main Rating: 225 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	Receptacle MECH. / PLUMBING 1037	20 A	1	0.2 0.5			1	20 A	Receptacle DETECTIVES 1014	2
3	Receptacle MECH. EQUIP. 1024	20 A	1		0.2 0.5		1	20 A	Receptacle TRAINING 1023	4
5	Receptacle MECH. EQUIP. 1024	20 A	1			0.2 0.5	1	20 A	Receptacle Room 1023, 1022	6
7	Receptacle Room 1027, 1025, 1026	20 A	1	0.7 0.4			1	20 A	Receptacle MECH. EQUIP. 1024	8
9	Receptacle Room A846, 1035, 1036, 1103	20 A	1		0.7 0.9		1	20 A	Receptacle EVIDENCE STOR 1013	10
11	Receptacle Room 1029, 1020, 1032	20 A	1			1.1 1.1	1	20 A	Receptacle DETECTIVES 1014	12
13	Receptacle LOBBY 1101	20 A	1	0.5 1.1			1	20 A	Receptacle Room 1022, 1023	14
15	Receptacle Room 1000, 1101, 1001	20 A	1		0.9 0.7		1	20 A	Receptacle Room 1009, 1008, 1007	16
17	Receptacle CLERICAL 1001	20 A	1			0.4 0.7	1	20 A	Receptacle Room 1009, 1010	18
19	Receptacle CLERICAL 1001	20 A	1	0.5 0.9			1	20 A	Receptacle Room 1010, 1011	20
21	Receptacle Room 1006, 1003	20 A	1		0.5 0.5		1	20 A	Receptacle CONFERENCE 1005	22
23	Receptacle Room 1003, 1021	20 A	1			0.4 0.5	1	20 A	Receptacle CONFERENCE 1005	24
25	Receptacle Room A1002, 1021	20 A	1	0.4 0.7			1	20 A	Receptacle Room 1008, 1005	26
27	Receptacle Room 1001, A1002	20 A	1		0.4 0.7		1	20 A	Receptacle Room 1017, 1016, 1012	28
29	Receptacle COPY 1003	20 A	1			0.2 0.7	1	20 A	Receptacle INTERVIEW 1018	30
31	Receptacle LOBBY 1101	20 A	1	0.4 0.9			1	20 A	Receptacle Room 1020, 1019	32
33	Receptacle LOBBY 1101	20 A	1		0 0.2		1	20 A	Receptacle KICHENETIE 1006	34
35	Receptacle LOBBY 1101	20 A	1			0.4 1.1	1	20 A	Receptacle Room 1017, 1016	36
37	SPARE	20 A	1	0 0			1	20 A	SPARE	38
39	SPARE	20 A	1		0 0.5		1	20 A	Receptacle Room 1020, 1018	40
41	SPARE	20 A	1			0 0	1	20 A	SPARE	42
		Total Load:		7.2 kVA	6.8 kVA	7.2 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	21320 VA	73.45%	15660 VA		
				Total Conn. Load:	21320 VA
				Total Est. Demand:	15660 VA
				Total Conn. Current:	59 A
				Total Est. Demand Current:	43 A

Remarks:

Branch Panel: OPLH

Location: MARTRON 1211
Supplied From: OPDP
Mounting: Recessed
Enclosure Type: Type 1

Voltage: 208Y/120
Phase: 3
Wire: 4
Ground: Equipment Ground Bus

Branch: OP
A.I.C. Rating: 1
Main Type: MCB
Main Rating: 400 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	FREEZER LIGHTS / DOOR HEATER	20 A	1	0.5 12						2
3	FREEZER EVAP	20 A	1		0.5 12		3	125 A	UTILITY RACEWAY KITCHEN 1209	4
5						1.9 12				6
7	FREEZER COMPRESSOR	20 A	3	1.9 0			1	20 A	SPARE	8
9					1.9 0.5		1	20 A	COOLER LIGHTS	10
11	SPARE	20 A	1			0 0.5	1	20 A	COOLER EVAP	12
13				13.6 0			1	20 A	COOLER COMPRESSOR	14
15	MUA-1	30 A	3		13.6 0.2					16
17						13.6 0.2	3	30 A	DISHWASHER KITCHEN 1209	18
19	DISHWASH HOOD KITCHEN 1209	20 A	1	0.5 0.2						20
21	REFRIDGERATOR KITCHEN 1209	20 A	1		0.2 0.4		1	20 A	Receptacle KITCHEN 1209	22
23	KITCHEN HOOD EXHAUST	20 A	2			2 0	1	20 A	SPARE	24
25				2 0			1	20 A	SPARE	26
27	SPARE	20 A	1		0 0		1	20 A	SPARE	28
29	SPARE	20 A	1			0 0	1	20 A	SPARE	30
31	SPARE	20 A	1	0 0			1	20 A	SPARE	32
33	SPARE	20 A	1		0 0		1	20 A	SPARE	34
35	SPARE	20 A	1			0 0	1	20 A	SPARE	36
37	SPARE	20 A	1	0 0			1	20 A	SPARE	38
39	SPARE	20 A	1		0 0		1	20 A	SPARE	40
41	SPARE	20 A	1			0 0	1	20 A	SPARE	42
		Total Load:		30.6 kVA	29.2 kVA	30.1 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	46560 VA	100.00%	46560 VA		
Receptacle	43440 VA	61.51%	26720 VA		
				Total Conn. Load:	90000 VA
				Total Est. Demand:	73280 VA
				Total Conn. Current:	250 A
				Total Est. Demand Current:	203 A

Remarks:

Branch Panel: OPLF

Location: Space A799
Supplied From: OPDP
Mounting: Surface
Enclosure Type: Type 1

Voltage: 208Y/120
Phase: 3
Wire: 4
Ground: Equipment Ground Bus

Branch: OP
A.I.C. Rating: 1
Main Type: MCB
Main Rating: 225 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	Receptacle Room 1217, 1216	20 A	1	0.7 0.1			2	20 A	DRYER Receptacle SHAKE DOWN 1206	2
3	Receptacle Room 1111, 1109, 1221, 1216	20 A	1		1.4 0.1					4
5	Receptacle Room A827, 1113, 1112	20 A	1			0.9 0.1	2	20 A	DRYER Receptacle SHAKE DOWN 1206	6
7	Receptacle LOBBY 1101	20 A	1	0.4 0.1						8
9	Receptacle Room 1105, 1101	20 A	1		0.7 0.1		2	20 A	DRYER Receptacle SHAKE DOWN 1206	10
11	Receptacle MARTRON 1211	20 A	1			0.7 0.1				12
13	Receptacle Room 1210, 1232, A886	20 A	1	0.9 0.2			1	20 A	Receptacle SHAKE DOWN 1206	14
15	Receptacle INDOOR RECREATION 1303	20 A	1		0.2 0.2		1	20 A	Receptacle SHAKE DOWN 1206	16
17	Receptacle Room A858, 1307, 1304, 1308, 1304A	20 A	1			1.1 1.1	1	20 A	VAV POWER JAN. 1231	18
19	Receptacle Room 1309, 1308, 1302	20 A	1	0.7 0.5			1	20 A	DDC PANEL JAN. 1231	20
21	Receptacle Room 1307, 1306	20 A	1		0.7					22
23	Receptacle Room 1309, 1307	20 A	1			0.5 0	1	20 A	SPARE	24
25	Receptacle Room 1204, 1205	20 A	1	0.9 0			1	20 A	SPARE	26
27	Receptacle Room 1213, 1216, 1215	20 A	1		0.7 0		1	20 A	SPARE	28
29	Receptacle Room 1219, 1218	20 A	1			0.4 0	1	20 A	SPARE	30
31	Receptacle Room 1219, 1200	20 A	1	0.4 0			1	20 A	SPARE	32
33	Receptacle Room 1213, 1209B, 1209A	20 A	1		0.7 0		1	20 A	SPARE	34
35	Receptacle BOOK / PROCESS 1214	20 A	1			0.4 0	1	20 A	SPARE	36
37	Receptacle BOOK / PROCESS 1214	20 A	1	0.4 0			1	20 A	SPARE	38
39	SPARE	20 A	1		0 0		1	20 A	SPARE	40
41	SPARE	20 A	1			0 0	1	20 A	SPARE	42
		Total Load:		5.2 kVA	4.9 kVA	6.1 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	16100 VA	81.06%	13050 VA		
				Total Conn. Load:	16100 VA
				Total Est. Demand:	13050 VA
				Total Conn. Current:	45 A
				Total Est. Demand Current:	36 A

Remarks:

Branch Panel: OPLD

Location: EMERGENCY POWER 1038
Supplied From: OPDP
Mounting: Surface
Enclosure Type: Type 1

Voltage: 208Y/120
Phase: 3
Wire: 4
Ground: Equipment Ground Bus

Branch: OP
A.I.C. Rating: 1
Main Type: MLO
Main Rating: 225 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	EH-2 STAIR A800	20 A	1	4 0.5			1	20 A	EF-A5	2
3	EH-1 1006	20 A	1		0.8 7.8					4
5	O/H DOOR MECH. EQUIP. 1024	20 A	1			1.9 7.8	3	110 A	AHU-A1	6
7	ROOF Receptacle	20 A	1	5 7.8						8
9	FCU-5 MECH. EQUIP. 1024	20 A	1		1.4 2.6					10
11	VAV POWER CLOS. 1006A	20 A	1			0.5 2.6	2	40 A	ACCU-1	12
13	HEAT TRACE	20 A	1	9 2.6						14
15	SPARE	20 A	1		0 2.6		2	40 A	ACCU-2	16
17	SPARE	20 A	1			0 2.6				18
19	SPARE	20 A	1	0 2.6			2	40 A	ACCU-3	20
21	SPARE	20 A	1		0 2.6					22
23	SPARE	20 A	1			0 2.6	2	40 A	ACCU-4	24
25	SPARE	20 A	1	0 1.9						26
27	SPARE	20 A	1		0 0.2		1	20 A	Receptacle ELEV. EQUIP 1004	28
29	SPARE	20 A	1			0 0.2	1	20 A	Receptacle ELEVATOR PIT	30
31	SPARE	20 A	1	0 0			1	20 A	SPARE	32
33	SPARE	20 A	1		0 0		1	20 A	SPARE	34
35	SPARE	20 A	1			0 0	1	20 A	SPARE	36
37	SPARE	20 A	1	0 0			1	20 A	SPARE	38
39	SPARE	20 A	1		0 0		1	20 A	SPARE	40
41	SPARE	20 A	1			0 0	1	20 A	SPARE	42
		Total Load:		21.8 kVA	18.0 kVA	18.2 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Mechanical	1920 VA	70.00%	1344 VA		
Motor	54688 VA	100.00%	54688 VA	**Total Conn. Load:**	58008 VA
Receptacle	1400 VA	100.00%	1400 VA	**Total Est. Demand:**	57432 VA
				Total Conn. Current:	161 A
				Total Est. Demand Current:	159 A

Remarks:

PLAN NOTES

#	NOTE
1	ALL ELECTRICAL EQUIPMENT SHALL BE RATED TO WITHSTAND THE AVAILABLE FAULT CURRENT FROM THE UTILITY. SERIES RATED DEVICES ARE NOT ACCEPTABLE. AVAILABLE FAULT CURRENT SHALL BE CONFIRMED WITH UTILITY AND FAULT ANALYSIS COMPLETE AS PER SPECIFICATIONS SECTION 26 05 73 PRIOR TO FINAL EQUIPMENT APPROVAL.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM 1	12/05/25

Project #: 01-700-070

Designed By: SGD

Drawn By: SGD

Checked By: JAF

Date: 11.21. 2025

DUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER

Dustin Barth

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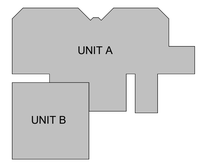

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ELECTRICAL SCHEDULES

E602

12/5/2025 2:43:29 PM

Branch Panel: OPLM

Location: DAYROOM 1402 | **Supplied From:** OPDP | **Mounting:** Surface | **Enclosure Type:** Type 1
Voltage: 208Y/120 | **Phase:** 3 | **Wire:** 4 | **Ground:** Equipment Ground Bus
Branch: OP | **A.I.C. Rating:** 1 | **Main Type:** MCB | **Main Rating:** 225 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	LIGHTING DORM 1409	20 A	1	0.2 0.3			1	20 A	LIGHTING DAYROOM 2108	2
3	LIGHTING Room 1408, 1407	20 A	1		0.3 0.1		1	20 A	LIGHTING CELL 2113	4
5	LIGHTING T/SH 1406	20 A	1			0.2 0.1	1	20 A	LIGHTING CELL 2112	6
7	LIGHTING T/SH 1405	20 A	1	0.2 0.1			1	20 A	LIGHTING CELL 2111	8
9	LIGHTING DORM 1402, 1404	20 A	1		0.3 0.1		1	20 A	LIGHTING CELL 2110	10
11	LIGHTING DORM 1403	20 A	1			0.2 0.1	1	20 A	LIGHTING CELL 2109	12
13	LIGHTING Room 1304A, 1305A, A858	20 A	1	0.1 0.1			1	20 A	LIGHTING CELL 2104	14
15	LIGHTING OFFICE 1308	20 A	1		0.2 0.1		1	20 A	LIGHTING CELL 2103	16
17	LIGHTING CLASS ROOM 1307	20 A	1			0.3 0.1	1	20 A	LIGHTING CELL 2102	18
19	LIGHTING LIBRARY 2000	20 A	1	0.3 0.1			1	20 A	LIGHTING CELL 2101	20
21	LIGHTING FEMALE DAYROOM 1407	20 A	1		0.8 0.1		1	20 A	LIGHTING CELL 2100	22
23	LIGHTING DAYROOM 1402	20 A	1			0.8 0.3	1	20 A	LIGHTING HC CELL 1416	24
25	LIGHTING INDOOR REC 1303	20 A	1	1.5 0.2			1	20 A	Receptacle DAYROOM 1402	26
27	SPARE	20 A	1		0 0.2		1	20 A	Receptacle FEMALE...	28
29	LIGHTING CORRIDOR 1304 1306 1401	20 A	1			0.2 0.1	1	20 A	Receptacle	30
31	LIGHTING	20 A	1	0.5 0.2			1	20 A	Receptacle	32
33	LIGHTING	20 A	1		0.2 0		1	20 A	SPARE	34
35	SPARE	20 A	1			0 0	1	20 A	SPARE	36
37	SPARE	20 A	1	0 0			1	20 A	SPARE	38
39	SPARE	20 A	1		0 0.1		1	20 A	LIGHTING CORRIDOR 1304 1306	40
41	SPARE	20 A	1			0 0.1	1	20 A	LITES Room 1402, 1303, 1407	42
		Total Load:		3.6 kVA	2.2 kVA	2.4 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
LITES	105 VA	125.00%	131 VA		
LIGHTING	7424 VA	100.00%	7424 VA	**Total Conn. Load:**	8249 VA
Receptacle	720 VA	100.00%	720 VA	**Total Est. Demand:**	8275 VA
				Total Conn. Current:	23 A
				Total Est. Demand Current:	23 A

Remarks:

Branch Panel: OPLK

Location: WORK RELEASE | **Supplied From:** OPDP | **Mounting:** Surface | **Enclosure Type:** Type 1
DAYROO...
Voltage: 208Y/120 | **Phase:** 3 | **Wire:** 4 | **Ground:** Equipment Ground Bus
Branch: OP | **A.I.C. Rating:** 1 | **Main Type:** MCB | **Main Rating:** 100 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	Receptacle WASH 1426	20 A	1	0.4 0.2			1	20 A	Receptacle DAYROOM 1421	2
3	Receptacle T/SH 1424	20 A	1		0.4 0.2		1	20 A	Receptacle WORK RELEASE DAYROOM 1425	4
5	SPARE	20 A	1			0 0.2	1	20 A	Receptacle	6
7	SPARE	20 A	1	0 0.2			1	20 A	Receptacle	8
9	SPARE	20 A	1		0 0.2		1	20 A	Receptacle MAX. SECURITY DAYROOM 1410	10
11	SPARE	20 A	1			0 0.2	1	20 A	Receptacle DAYROOM 1418	12
13	SPARE	20 A	1	0 0.2			1	20 A	Receptacle	14
15	SPARE	20 A	1		0 0.2		1	20 A	Receptacle	16
17	SPARE	20 A	1			0 0	1	20 A	SPARE	18
19	SPARE	20 A	1	0 0			1	20 A	SPARE	20
21	SPARE	20 A	1		0 0		1	20 A	SPARE	22
23	SPARE	20 A	1			0 0	1	20 A	SPARE	24
25	SPARE	20 A	1	0 0			1	20 A	SPARE	26
27	SPARE	20 A	1		0 0		1	20 A	SPARE	28
29	SPARE	20 A	1			0 0	1	20 A	SPARE	30
		Total Load:		0.9 kVA	0.9 kVA	0.4 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	2160 VA	100.00%	2160 VA		
				Total Conn. Load:	2160 VA
				Total Est. Demand:	2160 VA
				Total Conn. Current:	6 A
				Total Est. Demand Current:	6 A

Remarks:

Branch Panel: OPLI

Location: MARTRON 1211 | **Supplied From:** OPDP | **Mounting:** Recessed | **Enclosure Type:** Type 1
Voltage: 208Y/120 | **Phase:** 3 | **Wire:** 4 | **Ground:** Equipment Ground Bus
Branch: OP | **A.I.C. Rating:** 1 | **Main Type:** MCB | **Main Rating:** 225 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	FIRE SUPPRESSION SYSTEM KITCHEN 1209	20 A	1	0.5 0.1			2	30 A	TOASTER KITCHEN 1209	2
3	HOT FOOD COUNTER KITCHEN 1209	30 A	2		0.3 0.1					4
5						0.3 0.2	1	20 A	Receptacle KITCHEN 1209	6
7	SLICER KITCHEN 1209	20 A	1	0.5 0.5			1	20 A	ICE MAKER KITCHEN 1209	8
9	SLICER KITCHEN 1209	20 A	1		0.5 0.5		1	20 A	Receptacle KITCHEN 1209	10
11	MIXER KITCHEN 1209	20 A	1			0.5				12
13				0.2						14
15	DISPOSAL KITCHEN 1209	20 A	3		0.2					16
17						0.2 0.2	1	20 A	DETERGENT INJECTOR KITCHEN 1209	18
19				0.2 0.5			1	20 A	TEA KITCHEN 1209	20
21	BOOSTER HEATER KITCHEN 1209	60 A	3		0.2 0.3		2	40 A	COFFEE BREWER KITCHEN 1209	22
23						0.2 0.3				24
25	COFFEE KITCHEN 1209	20 A	1	0.5 0.5			1	20 A	Receptacle KITCHEN 1209	26
27	Receptacle KITCHEN 1209	20 A	1		0.5 0		1	20 A	SPARE	28
29	Receptacle KITCHEN 1209	20 A	1			0.5 0	1	20 A	SPARE	30
31	SPARE	20 A	1	0 0			1	20 A	SPARE	32
33	SPARE	20 A	1		0 0		1	20 A	SPARE	34
35	SPARE	20 A	1			0 0	1	20 A	SPARE	36
37	SPARE	20 A	1	0 0			1	20 A	SPARE	38
39	SPARE	20 A	1		0 0		1	20 A	SPARE	40
41	SPARE	20 A	1			0 0	1	20 A	SPARE	42
		Total Load:		3.5 kVA	2.5 kVA	2.2 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	8200 VA	100.00%	8200 VA		
				Total Conn. Load:	8200 VA
				Total Est. Demand:	8200 VA
				Total Conn. Current:	23 A
				Total Est. Demand Current:	23 A

Remarks:

Branch Panel: OPLN

Location: DAYROOM 1402 | **Supplied From:** OPDP | **Mounting:** Surface | **Enclosure Type:** Type 1
Voltage: 208Y/120 | **Phase:** 3 | **Wire:** 4 | **Ground:** Equipment Ground Bus
Branch: OP | **A.I.C. Rating:** 1 | **Main Type:** MCB | **Main Rating:** 225 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	PEF-4	20 A	1	0.8 0.4			1	20 A	Receptacle	2
3	EF-B1	20 A	1		0.8 0.7		1	20 A	Receptacle	4
5						0.8 4.9				6
7	PEF-1	20 A	3	0.8 4.9			3	60 A	RTU-B4	8
9					0.8 4.9					10
11						4.9 10.8				12
13	RTU-B6	60 A	3	4.9 10.8			3	110 A	RTU-B3	14
15					4.9 10.8					16
17	ROOF Receptacle	20 A	1			0.5 0	1	20 A	SPARE	18
19	SPARE	20 A	1	0 0			1	20 A	SPARE	20
21	SPARE	20 A	1		0 0		1	20 A	SPARE	22
23	SPARE	20 A	1			0 0	1	20 A	SPARE	24
25	SPARE	20 A	1	0 0			1	20 A	SPARE	26
27	SPARE	20 A	1		0 0		1	20 A	SPARE	28
29	SPARE	20 A	1			0 0	1	20 A	SPARE	30
31	SPARE	20 A	1	0 0			1	20 A	SPARE	32
33	SPARE	20 A	1		0 0		1	20 A	SPARE	34
35	SPARE	20 A	1			0 0	1	20 A	SPARE	36
37	SPARE	20 A	1	0 0			1	20 A	SPARE	38
39	SPARE	20 A	1		0 0		1	20 A	SPARE	40
41	SPARE	20 A	1			0 0	1	20 A	SPARE	42
		Total Load:		22.4 kVA	22.8 kVA	21.8 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	65376 VA	100.00%	65376 VA		
Receptacle	1620 VA	100.00%	1620 VA	**Total Conn. Load:**	66996 VA
				Total Est. Demand:	66996 VA
				Total Conn. Current:	186 A
				Total Est. Demand Current:	186 A

Remarks:

Branch Panel: OPLL

Location: WORK RELEASE | **Supplied From:** OPDP | **Mounting:** Surface | **Enclosure Type:** Type 1
DAYROO...
Voltage: 208Y/120 | **Phase:** 3 | **Wire:** 4 | **Ground:** Equipment Ground Bus
Branch: OP | **A.I.C. Rating:** 1 | **Main Type:** MCB | **Main Rating:** 400 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	LIGHTING INTERSITIAL SPACE	20 A	1	0.3 0.4			1	20 A	Receptacle INTERSTITIAL SPACE	2
3	LIGHTING INTERSITIAL SPACE	20 A	1		0.4 0.7		1	20 A	Receptacle INTERSTITIAL SPACE	4
5	LIGHTING INTERSITIAL SPACE	20 A	1			0.3 0.5	1	20 A	ROOF Receptacle	6
7	EF-B2	20 A	1	1.2 0			1	20 A	SPARE	8
9					0.8 0		1	20 A	SPARE	10
11	PEF-2	20 A	3			0.8 0	1	20 A	SPARE	12
13				0.8 0			1	20 A	SPARE	14
15					10.8 0		1	20 A	SPARE	16
17	RTU-B1	110 A	3			10.8 0	1	20 A	SPARE	18
19				10.8 0			1	20 A	SPARE	20
21					10.8 0		1	20 A	SPARE	22
23	RTU-B2	110 A	3			10.8 0	1	20 A	SPARE	24
25				10.8 0			1	20 A	SPARE	26
27					4.9 0		1	20 A	SPARE	28
29	RTU-B5	20 A	3			4.9 0	1	20 A	SPARE	30
31				4.9 0			1	20 A	SPARE	32
33					0.8 0		1	20 A	SPARE	34
35	PEF-3	20 A	3			0.8 0	1	20 A	SPARE	36
37				0.8 0			1	20 A	SPARE	38
39	EF-B3	20 A	1		0.8 0		1	20 A	SPARE	40
41	Receptacle	20 A	1			0.5 0	1	20 A	SPARE	42
		Total Load:		29.8 kVA	29.8 kVA	29.3 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
LIGHTING	984 VA	100.00%	984 VA		
Motor	85836 VA	100.00%	85836 VA	**Total Conn. Load:**	88940 VA
Receptacle	2120 VA	100.00%	2120 VA	**Total Est. Demand:**	88940 VA
				Total Conn. Current:	247 A
				Total Est. Demand Current:	247 A

Remarks:

Branch Panel: OPLJ

Location: WORK RELEASE | **Supplied From:** OPDP | **Mounting:** Surface | **Enclosure Type:** Type 1
DAYROO...
Voltage: 208Y/120 | **Phase:** 3 | **Wire:** 4 | **Ground:** Equipment Ground Bus
Branch: OP | **A.I.C. Rating:** 1 | **Main Type:** MCB | **Main Rating:** 225 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	LIGHTING DORM 1428	20 A	1	0.2 0.8			1	20 A	LIGHTING T/SH 2136	2
3	LIGHTING Room 1427, 1425	20 A	1		0.3 0.3		1	20 A	LIGHTING DAYROOM 2131	4
5	LIGHTING WASH 1426	20 A	1			0.2 0.1	1	20 A	LIGHTING T/SH-2 1424-2	6
7	LIGHTING T/SH-1 1424-1	20 A	1	0.2 0.1			1	20 A	LIGHTING CELL 2132	8
9	LIGHTING DORM 1421	20 A	1		0.3 0.1		1	20 A	LIGHTING CELL 2130	10
11	LIGHTING Space A895	20 A	1			0.2 0.1	1	20 A	LIGHTING CELL 2129	12
13	LIGHTING Space A897	20 A	1	0.2 0.1			1	20 A	LIGHTING CELL 2128	14
15	LIGHTING Room A896, 1418	20 A	1		0.3 0.1		1	20 A	LIGHTING DORM 1420	16
17	LIGHTING T/SH 1417	20 A	1			0.2 0.1	1	20 A	LIGHTING CELL 2126	18
19	LIGHTING Room 1416, A902, 1410	20 A	1	0.3 0.1			1	20 A	LIGHTING CELL 2125	20
21	LIGHTING HC CELL 1415	20 A	1		0.1 0.1		1	20 A	LIGHTING CELL 2124	22
23	LIGHTING HC CELL 1414	20 A	1			0.1 0.1	1	20 A	LIGHTING CELL 2123	24
25	LIGHTING CELL 1413	20 A	1	0.1 0.3			1	20 A	LIGHTING DAYROOM 2121	26
27	LIGHTING CELL 1412	20 A	1		0.1 0.3		1	20 A	LIGHTING DAYROOM 2120	28
29	LIGHTING CELL 1411	20 A	1			0.1 0.1	1	20 A	LIGHTING CELLL 2118	30
31	LIGHTING WORK RELEASE DAYROOM 1425	20 A	1	0.8 0.1			1	20 A	LIGHTING CELL 2117	32
33	LIGHTING DAYROOM 1421	20 A	1		0.8 0.1		1	20 A	LIGHTING CELL 2116	34
35	LIGHTING DAYROOM 1418	20 A	1			0.8 0.1	1	20 A	LIGHTING CELL 2115	36
37	LIGHTING DAYROOM 1410	20 A	1	0.8 0.1			1	20 A	LIGHTING CELL 2114	38
39	SPARE	20 A	1		0 0		1	20 A	SPARE	40
41	SPARE	20 A	1			0 0	1	20 A	LITES Room 1418, 1410, 1425, 1421	42
		Total Load:		3.7 kVA	2.6 kVA	1.8 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
LITES	84 VA	125.00%	105 VA		
LIGHTING	8000 VA	100.00%	8000 VA	**Total Conn. Load:**	8084 VA
				Total Est. Demand:	8105 VA
				Total Conn. Current:	22 A
				Total Est. Demand Current:	22 A

Remarks:

PLAN NOTES

#	NOTE
1	ALL ELECTRICAL EQUIPMENT SHALL BE RATED TO WITHSTAND THE AVAILABLE FAULT CURRENT FROM THE UTILITY. SERIES RATED DEVICES ARE NOT ACCEPTABLE. AVAILABLE FAULT CURRENT SHALL BE CONFIRMED WITH UTILITY AND FAULT ANALYSIS COMPLETE AS PER SPECIFICATIONS SECTION 26 05 73 PRIOR TO FINAL EQUIPMENT APPROVAL.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM 1	12/05/25

Project #: 01-700-070
Designed By: SGD
Drawn By: SGD
Checked By: JAF
Date: 11.21. 2025

DUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER

Dustin Barth

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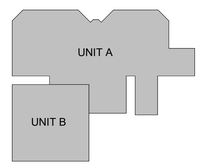

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ELECTRICAL SCHEDULES

E603

12/5/2025 2:43:50 PM

Branch Panel: EMA

Location: EMERGENCY POWER 1038
Supplied From: EMDP
Mounting: Surface
Enclosure Type: Type 1

Voltage: 208Y/120
Phase: 3
Wire: 4
Ground: Equipment Ground Bus

Branch: EM
A.I.C. Rating: 1
Main Type: MLO
Main Rating: 100 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	EXIT LIGHT Room 1024, 1036, 1026, A1002, 1006,...	20 A	1	0.1 0			1	20 A	LIGHTING ELEVATOR EQUIP. 1107	2
3	EXIT LIGHT Room 1101, 1100	20 A	1		0 0		1	20 A	LIGHTING ELEVATOR #2 PIT	4
5	LIGHTING Room 1006, 1012, 1015, A1002, 1020,...	20 A	1			0.5 0.5	1	20 A	FIRE ALARM CONTROL PANEL EMERGENCY POWE...	6
7	LIGHTING ELEV. EQUIP 1004	20 A	1	0 0			1	20 A	SPARE	8
9	LIGHTING Space A828	20 A	1		0 0		1	20 A	SPARE	10
11	LIGHTING COMMUNICATIONS CONTROL CC1 1102	20 A	1			0.2 0	1	20 A	SPARE	12
13	LIGHTING COMMUNICATIONS CONTROL CC1 1102	20 A	1	0.2 0			1	20 A	SPARE	14
15	LIGHTING Room 1104, 1302, 1301, A846	20 A	1		0.3 0		1	20 A	SPARE	16
17	LIGHTING Room 1037, 1038	20 A	1			0.2 0	1	20 A	SPARE	18
19	SPARE	20 A	1	0 0			1	20 A	SPARE	20
21	SPARE	20 A	1		0 0		1	20 A	SPARE	22
23	SPARE	20 A	1			0 0	1	20 A	SPARE	24
		Total Load:		0.3 kVA	0.4 kVA	1.4 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
LIGHTING	1610 VA	100.00%	1610 VA		
Receptacle	500 VA	100.00%	500 VA	**Total Conn. Load:**	2110 VA
				Total Est. Demand:	2110 VA
				Total Conn. Current:	6 A
				Total Est. Demand Current:	6 A

Remarks:

Branch Panel: OPLR

Location: JAN. 3039
Supplied From: OPDP
Mounting: Surface
Enclosure Type: Type 1

Voltage: None
Phase: Not Computed
Wire: Not Computed
Ground: Equipment Ground Bus

Branch:
A.I.C. Rating: 1
Main Type:
Main Rating: 225 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1										2
3										4
5										6
7										8
9										10
11										12
13										14
15										16
17										18
19										20
21										22
23										24
25										26
27										28
29										30
31										32
33										34
35										36
37										38
39										40
41										42
		Total Load:		0.0 kVA	0.0 kVA	0.0 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
				Total Conn. Load:	0 VA
				Total Est. Demand:	0 VA
				Total Conn. Current:	Not Computed
				Total Est. Demand Current:	Not Computed

Remarks:

Branch Panel: OPLO

Location: JAN. 3039
Supplied From: OPDP
Mounting: Surface
Enclosure Type: Type 1

Voltage: 208Y/120
Phase: 3
Wire: 4
Ground: Equipment Ground Bus

Branch: OP
A.I.C. Rating: 1
Main Type: MCB
Main Rating: 225 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	LIGHTING LOBBY/WAITING 3000	20 A	1	0.5 0			1	20 A	SPARE	2
3	LIGHTING LOBBY/WAITING 3000	20 A	1		0.5 0		1	20 A	SPARE	4
5	LIGHTING LOBBY/WAITING 3000	20 A	1			0 0.1	1	20 A	LIGHTING JAN. 3039	6
7	LIGHTING Room 3019, 3022, 3023, 3021, 3020	20 A	1	0.4 0			1	20 A	SPARE	8
9	LIGHTING Room 3017, 2144	20 A	1		0.5 0.4		1	20 A	LIGHTING CONF. 3044	10
11	LIGHTING Room 3017, 3007	20 A	1			0.4 0.6	1	20 A	LIGHTING OFFICE 3050	12
13	LIGHTING Room 3014, 3012	20 A	1	0.5 0.2			1	20 A	LIGHTING Room 3043, 3045	14
15	LIGHTING Room 3011, 3006	20 A	1		0.5 0.3		1	20 A	LIGHTING Room 3038, 3040, 3041	16
17	LIGHTING Room 3010, 3005, 3009, 3008	20 A	1			0.4 0.6	1	20 A	LIGHTING OFFICE 3052	18
19	LIGHTING SEATING 3024	20 A	1	0.7 0.5			1	20 A	LIGHTING Room 3036, 3035, 3053, 3037	20
21	LIGHTING LITIGATION 3026	20 A	1		0.7 0.6		1	20 A	LIGHTING Room 3032, 3033, 3034	22
23	LIGHTING Room 3026, 3028, 3027, 3029	20 A	1			0.6 0.2	1	20 A	LIGHTING Room 3030	24
25	LIGHTING Room 3003, 3001	20 A	1	0.3 0.2			1	20 A	LIGHTING Room 3046, 3051, 3042	26
27	SPARE	20 A	1		0 0		1	20 A	SPARE	28
29	SPARE	20 A	1			0 0	1	20 A	SPARE	30
31	SPARE	20 A	1	0 0			1	20 A	SPARE	32
33	SPARE	20 A	1		0 0		1	20 A	SPARE	34
35	SPARE	20 A	1			0 0				36
37	SPARE	20 A	1	0 0			3	20 A	SPARE	38
39	SPARE	20 A	1		0 0					40
41	SPARE	20 A	1			0 0	1	20 A	SPARE	42
		Total Load:		3.4 kVA	3.5 kVA	2.7 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
LIGHTING	9586 VA	100.00%	9586 VA		
				Total Conn. Load:	9586 VA
				Total Est. Demand:	9586 VA
				Total Conn. Current:	27 A
				Total Est. Demand Current:	27 A

Remarks:

Branch Panel: EMB

Location: PROPERTY STOR 1213
Supplied From: EMDP
Mounting: Surface
Enclosure Type: Type 1

Voltage: 208Y/120
Phase: 3
Wire: 4
Ground: Equipment Ground Bus

Branch: EM
A.I.C. Rating: 1
Main Type: MLO
Main Rating: 100 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	LIGHTING Room 1200, 1220, 1209, A886, 1105, 1216	20 A	1	0 0			1	20 A	SPARE	2
3	LIGHTING Room 1220, A886, 1200, 1221, 1207	20 A	1		0.5 0		1	20 A	SPARE	4
5	LIGHTING Room 1209, 1216	20 A	1			0.3 0	1	20 A	SPARE	6
7	SPARE	20 A	1	0 0			1	20 A	SPARE	8
9	SPARE	20 A	1		0 0		1	20 A	SPARE	10
11	SPARE	20 A	1			0 0	1	20 A	SPARE	12
13	SPARE	20 A	1	0 0			1	20 A	SPARE	14
15	SPARE	20 A	1		0 0		1	20 A	SPARE	16
17	SPARE	20 A	1			0 0	1	20 A	SPARE	18
19	SPARE	20 A	1	0 0			1	20 A	SPARE	20
21	SPARE	20 A	1		0 0		1	20 A	SPARE	22
23	SPARE	20 A	1			0 0	1	20 A	SPARE	24
		Total Load:		0.0 kVA	0.5 kVA	0.3 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
LIGHTING	782 VA	100.00%	782 VA		
				Total Conn. Load:	782 VA
				Total Est. Demand:	782 VA
				Total Conn. Current:	2 A
				Total Est. Demand Current:	2 A

Remarks:

Branch Panel: OPLT

Location: JAN. 3039
Supplied From: OPDP
Mounting: Surface
Enclosure Type: Type 1

Voltage: 208Y/120
Phase: 3
Wire: 4
Ground: Equipment Ground Bus

Branch: OP
A.I.C. Rating: 1
Main Type: MCB
Main Rating: 225 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	Receptacle RECEP. 3031	20 A	1	0.5 0.5			1	20 A	Receptacle STOR. 3045	2
3	Receptacle OFFICE 3032	20 A	1		0.7 0.5		1	20 A	Receptacle COURT SERVICES 3047	4
5	Receptacle OFFICE 3034	20 A	1			0.9 0.4	1	20 A	Receptacle COURT SERVICES 3047	6
7	Receptacle OFFICE 3037	20 A	1	0.5 0.5			1	20 A	Receptacle PROB. OFFICE 3048	8
9	Receptacle SERVER 3036	20 A	1		0.2 0.2		1	20 A	Receptacle Space 2166	10
11	Receptacle OFFICE 3040	20 A	1			0.7 0.4	1	20 A	Receptacle INTERVIEW 3049	12
13	Receptacle CORRIDOR 3042	20 A	1	0.4 0.9			1	20 A	Receptacle Room 3046, 3051, 3042	14
15	SPARE	20 A	1		0 0.4		1	20 A	Receptacle OFFICE 3052	16
17	SPARE	20 A	1			0 0.2	1	20 A	Receptacle OFFICE 3052	18
19	SPARE	20 A	1	0 0.4			1	20 A	Receptacle OFFICE 3052	20
21	SPARE	20 A	1		0 0.2		1	20 A	Receptacle OFFICE 3052	22
23	SPARE	20 A	1			0 0.4	1	20 A	Receptacle OFFICE 3052	24
25	SPARE	20 A	1	0 0.4			1	20 A	Receptacle OFFICE 3052	26
27	SPARE	20 A	1		0 0.2		1	20 A	Receptacle OFFICE 3052	28
29	SPARE	20 A	1			0 0.2	1	20 A	Receptacle OFFICE 3052	30
31	SPARE	20 A	1	0 0.2			1	20 A	Receptacle OFFICE 3052	32
33	SPARE	20 A	1		0 0.4		1	20 A	Receptacle OFFICE 3052	34
35	SPARE	20 A	1			0 0.4	1	20 A	Receptacle Room 3041, 3043	36
37	SPARE	20 A	1	0 0			1	20 A	SPARE	38
39	SPARE	20 A	1		0 0		1	20 A	SPARE	40
41	SPARE	20 A	1			0 0	1	20 A	SPARE	42
		Total Load:		4.3 kVA	2.7 kVA	3.4 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	10440 VA	97.89%	10220 VA		
				Total Conn. Load:	10440 VA
				Total Est. Demand:	10220 VA
				Total Conn. Current:	29 A
				Total Est. Demand Current:	28 A

Remarks:

Branch Panel: OPLP

Location: JAN. 3039
Supplied From: OPDP
Mounting: Surface
Enclosure Type: Type 1

Voltage: 208Y/120
Phase: 3
Wire: 4
Ground: Equipment Ground Bus

Branch: OP
A.I.C. Rating: 1
Main Type: MCB
Main Rating: 225 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	Receptacle Room 3010, 3007, 3005	20 A	1	1.1 0.4			1	20 A	Receptacle Room 3039, 3031	2
3	Receptacle Room 3010, 3009, 3008	20 A	1		0.7 0.9		1	20 A	Receptacle Room 3048, 3003	4
5	Receptacle JURY 3006	20 A	1			0.4 0.9	1	20 A	Receptacle Room 3001, 3003, 2163	6
7	Receptacle JURY 3006	20 A	1	0.5 0.5			1	20 A	Receptacle Room 3044, 3000	8
9	Receptacle Room 3007, 3012, 3011	20 A	1		0.7 1.3		1	20 A	Receptacle Room 3004, 3007, 3027, 3026, 3024, 3001,...	10
11	Receptacle Room 3014, 3012	20 A	1			0.7 0.8	1	20 A	Receptacle LITIGATION 3026	12
13	Receptacle Room 3017, 3014	20 A	1	0.9 0.4			1	20 A	Receptacle LOBBY/WAITING 3000	14
15	Receptacle CLERICAL COURT COORD. 3016	20 A	1		0.4 0.4		1	20 A	Receptacle LOBBY/WAITING 3000	16
17	Receptacle Room 3016, 3017	20 A	1			0.7 0.4	1	20 A	Receptacle JUDGE 3028	18
19	Receptacle Room 3017, 2144, 3000	20 A	1	1.6 0.4			1	20 A	Receptacle RECORDER 3029	20
21	Receptacle Room 3023, 3019, 3017, 2144	20 A	1		0.9 0.9		1	20 A	Receptacle Room 3054, 3047, 3057	22
23	Receptacle Room 3022, 3019	20 A	1			0.5 0.5	1	20 A	Receptacle OFFICE #3000C	24
25	Receptacle Room 3023, 3022	20 A	1	0.7 0.7			1	20 A	Receptacle OFFICE 3000D	26
27	Receptacle Room 3021, 3020	20 A	1		0.4 0.9		1	20 A	Receptacle OFFICE 3000A	28
29	Receptacle CLERICAL 3017	20 A	1			0.4 0.5	1	20 A	Receptacle OFFICE 3000B	30
31	Receptacle CLERICAL 3017	20 A	1	0.4 0.7			1	20 A	Receptacle OFFICE 3000	32
33	Receptacle CONF. 3044	20 A	1		1.3 0		1	20 A	SPARE	34
35	SPARE	20 A	1			0 0.4	1	20 A	Receptacle Room 3030, 3031	36
37	SPARE	20 A	1	0 0			1	20 A	SPARE	38
39	Receptacle OFFICE 3038	20 A	1		0.7 0.7		1	20 A	Receptacle OFFICE 3035	40
41	SPARE	20 A	1			0 0	1	20 A	SPARE	42
		Total Load:		8.3 kVA	10.1 kVA	6.6 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	25040 VA	69.97%	17520 VA		
				Total Conn. Load:	25040 VA
				Total Est. Demand:	17520 VA
				Total Conn. Current:	70 A
				Total Est. Demand Current:	49 A

Remarks:

PLAN NOTES

#	NOTE
1	ALL ELECTRICAL EQUIPMENT SHALL BE RATED TO WITHSTAND THE AVAILABLE FAULT CURRENT FROM THE UTILITY. SERIES RATED DEVICES ARE NOT ACCEPTABLE. AVAILABLE FAULT CURRENT SHALL BE CONFIRMED WITH UTILITY AND FAULT ANALYSIS COMPLETE AS PER SPECIFICATIONS SECTION 26 05 73 PRIOR TO FINAL EQUIPMENT APPROVAL.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM 1	12/05/25

Project #: 01-700-070

Designed By: SGD

Drawn By: SGD

Checked By: JAF

Date: 11.21. 2025

DUSTIN E. BARTH
REGISTERED
No. 12200401
STATE OF INDIANA
PROFESSIONAL ENGINEER
Dustin Barth

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UNIT A

UNIT B

N

ELECTRICAL SCHEDULES

E604

Branch Panel: LRB

Location: FEMALE DAYROO... **Voltage:** 208Y/120
Supplied From: LRDP **Phase:** 3
Mounting: Surface **Wire:** 4
Enclosure Type: Type 1 **Ground:** Equipment Ground Bus

Branch: LEGALLY REQUIRED
A.I.C. Rating: 1
Main Type: MCB
Main Rating: 100 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	Circuit Number
1	WATER MANAGEMENT XFMR Space A936	20 A	1	0.5	0.5					1	20 A	WATER MANAGEMENT XFMR Space A940	2
3	WATER MANAGEMENT XFMR Space A945	20 A	1			0.5	0.5			1	20 A	WATER MANAGEMENT XFMRSpace A939	4
5	WATER MANAGEMENT XFMR Space A943	20 A	1					0.5	0.5	1	20 A	WATER MANAGEMENT XFMRSpace A751	6
7	WATER MANAGEMENT XFMR Space A795	20 A	1	0.5	0.5					1	20 A	WATER MANAGEMENT XFMR Space A773	8
9	WATER MANAGEMENT XFMR Space A796	20 A	1			0.5	0.5			1	20 A	Receptacle Space A750	10
11	WATER MANAGEMENT XFMR Space A941	20 A	1					0.5	0	1	20 A	SPARE	12
13	WATER MANAGEMENT XFMR Space A942	20 A	1	0.5	0					1	20 A	SPARE	14
15	WATER MANAGEMENT XFMR Space A765	20 A	1			0.5	0			1	20 A	SPARE	16
17	WATER MANAGEMENT XFMR Space A799	20 A	1					0.5	0	1	20 A	SPARE	18
19	SPARE	20 A	1	0	0					1	20 A	SPARE	20
21	SPARE	20 A	1			0	0			1	20 A	SPARE	22
23	SPARE	20 A	1					0	0	1	20 A	SPARE	24
				Total Load:	0.5 kVA		0.5 kVA		0.0 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	7000 VA	100.00%	7000 VA		
				Total Conn. Load:	7000 VA
				Total Est. Demand:	7000 VA
				Total Conn. Current:	19 A
				Total Est. Demand Current:	19 A

Remarks:

Branch Panel: EMC

Location: JAN. 3039 **Voltage:** 208Y/120
Supplied From: EMDP **Phase:** 3
Mounting: Surface **Wire:** 4
Enclosure Type: Type 1 **Ground:** Equipment Ground Bus

Branch: EM
A.I.C. Rating: 1
Main Type: MCB
Main Rating: 100 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	Circuit Number
1	EXIT LIGHT Room 3003, 3000, 3046, 3051, 3042,...	20 A	1	0	0.4					1	20 A	LIGHTING Room 3017, 3007	2
3	EXIT LIGHT Room 3017, 3007, 3003	20 A	1			0	0.4			1	20 A	LIGHTING LOBBY/WAITING 3000	4
5	LIGHTING Room 3004, 3003, 2163, 3046, 3051, 304...	20 A	1					0.5	0	1	20 A	SPARE	6
7	LIGHTING Space 2179	20 A	1	0.1	0					1	20 A	SPARE	8
9	LIGHTING Space 2168	20 A	1			0.1	0			1	20 A	SPARE	10
11	SPARE	20 A	1					0	0	1	20 A	SPARE	12
13	SPARE	20 A	1	0	0					1	20 A	SPARE	14
15	SPARE	20 A	1			0	0			1	20 A	SPARE	16
17	SPARE	20 A	1					0	0	1	20 A	SPARE	18
19	SPARE	20 A	1	0	0					1	20 A	SPARE	20
21	SPARE	20 A	1			0	0			1	20 A	SPARE	22
23	SPARE	20 A	1					0	0	1	20 A	SPARE	24
				Total Load:	0.5 kVA		0.5 kVA		0.5 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
LIGHTING	1458 VA	100.00%	1458 VA		
				Total Conn. Load:	1458 VA
				Total Est. Demand:	1458 VA
				Total Conn. Current:	4 A
				Total Est. Demand Current:	4 A

Remarks:

Branch Panel: EMD

Location: FEMALE DAYROO... **Voltage:** 208Y/120
Supplied From: EMDP **Phase:** 3
Mounting: Surface **Wire:** 4
Enclosure Type: Type 1 **Ground:** Equipment Ground Bus

Branch: EM
A.I.C. Rating: 1
Main Type: MCB
Main Rating: 100 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	Circuit Number
1	LIGHTING	20 A	1	0	0					1	20 A	SPARE	2
3	LIGHTING	20 A	1			0.2	0			1	20 A	SPARE	4
5	LIGHTING	20 A	1					0.4	0	1	20 A	SPARE	6
7	SPARE	20 A	1	0	0					1	20 A	SPARE	8
9	SPARE	20 A	1			0	0			1	20 A	SPARE	10
11	SPARE	20 A	1					0	0	1	20 A	SPARE	12
13	SPARE	20 A	1	0	0					1	20 A	SPARE	14
15	SPARE	20 A	1			0	0			1	20 A	SPARE	16
17	SPARE	20 A	1					0	0	1	20 A	SPARE	18
19	SPARE	20 A	1	0	0					1	20 A	SPARE	20
21	SPARE	20 A	1			0	0			1	20 A	SPARE	22
23	SPARE	20 A	1					0	0	1	20 A	SPARE	24
				Total Load:	0.0 kVA		0.2 kVA		0.4 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
LIGHTING	703 VA	100.00%	703 VA		
				Total Conn. Load:	703 VA
				Total Est. Demand:	703 VA
				Total Conn. Current:	2 A
				Total Est. Demand Current:	2 A

Remarks:

Branch Panel: LRA

Location: EMERGENCY POWER 1038 **Voltage:** 208Y/120 **Branch:** LR
Supplied From: LRDP **Phase:** 3 **A.I.C. Rating:**
Mounting: Surface **Wire:** 4 **Main Type:** MLO
Enclosure Type: Type 1 **Ground:** Equipment Ground Bus **Main Rating:** 100 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	Circuit Number
1				2	0					1	20 A	SPARE	2
3	GRINDER PUMP	40 A	3			2	0			1	20 A	SPARE	4
5								2	0	1	20 A	SPARE	6
7	SPARE	20 A	1	0	0					1	20 A	SPARE	8
9	SPARE	20 A	1			0	0			1	20 A	SPARE	10
11	SPARE	20 A	1					0	0	1	20 A	SPARE	12
13	SPARE	20 A	1	0	0					1	20 A	SPARE	14
15	SPARE	20 A	1			0	0			1	20 A	SPARE	16
17	SPARE	20 A	1					0	0	1	20 A	SPARE	18
19	SPARE	20 A	1	0	0					1	20 A	SPARE	20
21	SPARE	20 A	1			0	0			1	20 A	SPARE	22
23	SPARE	20 A	1					0	0	1	20 A	SPARE	24
				Total Load:	2.0 kVA		2.0 kVA		2.0 kVA				

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	6012 VA	100.00%	6012 VA		
				Total Conn. Load:	6012 VA
				Total Est. Demand:	6012 VA
				Total Conn. Current:	17 A
				Total Est. Demand Current:	17 A

Remarks:

1

PLAN NOTES

#	NOTE
1	ALL ELECTRICAL EQUIPMENT SHALL BE RATED TO WITHSTAND THE AVAILABLE FAULT CURRENT FROM THE UTILITY. SERIES RATED DEVICES ARE NOT ACCEPTABLE. AVAILABLE FAULT CURRENT SHALL BE CONFIRMED WITH UTILITY AND FAULT ANALYSIS COMPLETE AS PER SPECIFICATIONS SECTION 26 05 73 PRIOR TO FINAL EQUIPMENT APPROVAL.

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM 1	12/05/25

Project #: 01-700-070

Designed By: SGD

Drawn By: SGD

Checked By: JAF

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JUSTIN E. BARTH
REGISTERED
No. 12200401
STATE OF
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UNIT A

UNIT B

N

ELECTRICAL SCHEDULES

E605

12/5/2025 2:44:31 PM

FEEDER SIZING TABLE

DESIGNATION	CONDUCTOR SIZE PER CONDUIT			CONDUIT SIZE AND QUANTITY					
FXXX	PHASE & NEUTRAL	ISOLATED GROUND	BUILDING GROUND	OR 1P, 1N, 1G 2P, 1G	OR 2P, 1N, 1G 3P, 1G	3P, 1N, 1G	3P, 3N, 1G	3P, 1N, 2G
F20	12	12	12	3/4"	3/4"	3/4"	3/4"	3/4"
F30	10	10	10	3/4"	3/4"	3/4"	3/4"	3/4"
F40-F50	8	10	10	3/4"	3/4"	3/4"	1"	3/4"
F60	6	10	10	3/4"	3/4"	1"	1"	1"
F70-F80	4	8	8	3/4"	1"	1-1/4"	1-1/4"	1-1/4"
F90-F100	3	8	8	1"	1"	1-1/4"	1-1/2"	1-1/4"
F110	2	6	6	1"	1-1/4"	1-1/4"	1-1/2"	1-1/4"
F125	1	6	6	1-1/4"	1-1/4"	1-1/2"	2"	1-1/2"
F150	1/0	6	6	1-1/4"	1-1/2"	1-1/2"	2"	2"
F175	2/0	6	6	1-1/4"	1-1/2"	2"	2-1/2"	2"
F200	3/0	6	6	1-1/4"	2"	2"	2-1/2"	2"
F225	4/0	4	4	1-1/2"	2"	2-1/2"	2-1/2"	2-1/2"
F250	250	4	4	2"	2"	2-1/2"	3"	2-1/2"
F300	350	4	4	2"	2-1/2"	3"	3-1/2"	3"
F301	350	2	2	2-1/2"	3"	3"	4"	3"
F350	500	3	3	2-1/2"	3"	3"	4"	3"
F400	3/0	3	3		(2) 2"	(2) 2-1/2"	(2) 3"	(2) 2-1/2"
F401	3/0	1/0	1/0		(2) 2-1/2"	(2) 3"	(2) 3-1/2"	(2) 3"
F450	4/0	2	2		(2) 2"	(2) 2-1/2"	(2) 3"	(2) 2-1/2"
F500	250	2	2		(2) 2"	(2) 2-1/2"	(2) 3"	(2) 2-1/2"
F600	350	1	1		(2) 2-1/2"	(2) 3"	(2) 3-1/2"	(2) 3"
F700	500	1/0	1/0		(2) 3"	(2) 3"	(2) 4"	(2) 3-1/2"
F800	350	1/0	1/0		(3) 2-1/2"	(3) 3"	(3) 3-1/2"	(3) 3"
F900	350	2/0	2/0		(3) 2-1/2"	(3) 3"	(3) 3-1/2"	(3) 3"
F1000	500	2/0	2/0		(3) 3"	(3) 3"	(3) 4"	(3) 3-1/2"
F1200	350	3/0	3/0		(4) 2-1/2"	(4) 3"	(4) 3-1/2"	(4) 3"
F1600	500	4/0	4/0		(5) 3"	(5) 3"	(5) 4"	(5) 3-1/2"
F2000	500	250	250		(6) 3"	(6) 3-1/2"	(6) 4"	(6) 3-1/2"
F2500	500	350	350		(7) 4"	(7) 4"	(7) 4"	(7) 4"
F3000	500	500	500		(8) 4"	(8) 4"	(8) 4"	(8) 4"

NOTES:

1. 20 A BRANCH CIRCUITS SHALL BE SIZED FOR VOLTAGE DROP. WIRE SIZES ARE NOT INDICATED ON THE DRAWINGS TO COMPENSATE FOR VOLTAGE DROP. FOR THESE CIRCUITS, CONTRACTOR SHALL UTILIZE WIRE SIZE SHOWN ABOVE FOR DISTANCES LISTED ABOVE.
2. VOLTAGE DROP WIRE SIZES WILL BE STRICTLY ENFORCED. CONTRACTOR SHALL SUBMIT A LIST OF CIRCUITS THAT WILL EXCEED THE DISTANCES ALLOWED AND INDICATE WIRE SIZE TO BE USED PRIOR TO ANY WIRE BEING INSTALLED.
3. DO NOT SHARE NEUTRAL CONDUCTORS FOR ANY BRANCH CIRCUITS. ALL BRANCH CIRCUIT SHALL HAVE SEPARATE, INDEPENDENT NEUTRAL CONDUCTORS.
4. ALL CONDUIT PENETRATIONS THRU THE FLOOR SLAB SHALL BE MADE WITH CAUTION. CONTRACTOR SHALL COORDINATE ALL HOLE LOCATIONS WITH STRUCTURAL ENGINEER PRIOR TO CUTTING ANY NEW HOLES. NEW HOLES SHALL BE ADJUSTED AS REQUIRED TO MISS REBAR AS DETERMINED BY THE STRUCTURAL ENGINEER.
5. VOLTAGE DROP IN NOT SHOWN ON THE DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL BRANCH CIRCUIT AND FEEDER SIZES TO COMPLY WITH STATE AND LOCAL VOLTAGE DROP REQUIREMENTS.
   A. VOLTAGE DROP ON ALL BRANCH CIRCUITS SHALL NOT EXCEED 3%.
   B. VOLTAGE DROP ON ALL FEEDERS SHALL NOT EXCEED 2%.

PLAN NOTES

#	NOTE
1	PROVIDE GROUNDING AS PER UTILITY REQUIREMENTS.
2	PROVIDE UTILITY METER AND CT CABINET AS REQUIRED. COORDINATE EXACT REQUIREMENTS WITH UTILITY.
3	GENERATOR SHALL BE PROVIDED WITH AN UPSIZED 200KW ALTERNATOR.
4	AUTOMATIC TRANSFER SWITCH SHALL BE CLOSED TRANSITION WITH BYPASS ISOLATION AND SOLID NEUTRALS. SHALL REQUIRE FRONT ACCESS ONLY.
5	PROVIDE GENERATOR START AND CONTROL WIRING FROM TRANSFER SWITCH TO GENERATOR. ROUTE ALL WIRING IN CONDUIT. QUANTITY AND SIZE OF WIRING AND CONDUIT AS RECOMMENDED BY MANUFACTURER.
6	PROVIDE WIRING FROM GENERATOR TO ANNUNCIATOR LOCATION. ROUTE ALL WIRING IN CONDUIT. QUANTITY AND SIZE OF WIRING AND CONDUIT AS RECOMMENDED BY MANUFACTURER.
7	PROVIDE WATER STOP SEALANT FOR ALL CONDUITS, INCLUDING SPARES, AT THE EXIT POINT FROM THE GENERATOR TO PREVENT WATER FROM ENTERING CONDUITS.
8	ALL EQUIPMENT SHALL BE RATED TO WITHSTAND THE AVAILABLE FAULT CURRENT FROM THE UTILITY. SERIES RATED DEVICES ARE NOT ACCEPTABLE. AVAILABLE FAULT CURRENT SHALL BE CONFIRMED WITH THE UTILITY AND FAULT ANALYSIS COMPLETE AS PER SPECIFICATIONS SECTION 26 05 73 PRIOR TO FINAL EQUIPMENT APPROVAL.
9	PROVIDE GENERATOR DOCKING STATION / CONNECTION CABINET ADJACENT TO GENERATOR FOR CONNECTION MEANS OF PORTABLE GENERATOR. DOCKING STATION SHALL INCLUDE INTEGRAL BREAKERS AS INDICATED, AND ACCESSORY RECEPTACLES FOR BLOCK HEATER AND BATTERY CHARGER. COORDINATE EXACT LOCATION WITH GENERATOR EQUIPMENT. MAINTAIN ALL REQUIRED CLEARANCES AND PROVIDE ACCORDINGLY.
10	PROVIDE SEPARATE COMPARTMENTS FOR FEEDER BREAKERS WITH SEPARATION BARRIERS IN ORDER TO MAINTAIN SEPARATION BETWEEN EMERGENCY AND OPTIONAL STANBY BRANCHES.
11	PROVIDE SEPARATE COMPARTMENTS FOR FEEDER BREAKERS WITH SEPARATION BARRIERS IN ORDER TO MAINTAIN SEPARATION BETWEEN EMERGENCY AND OPTIONAL STANBY BRANCHES.
12	PROVIDE INTEGRAL BREAKER WITH KIRK KEY INTERLOCK BETWEEN GENERATOR BREAKER AND BREAKER FOR PORTABLE GENERATOR CONNECTION.

VOLTAGE DROP FOR 20A BRANCH CIRCUITS

FEEDER SIZE TO USE	MAXIMUM DISTANCE ALLOWED	
	120V	277V
F20	100 FEET	200 FEET
F30	150 FEET	360 FEET
F40-50	240 FEET	550 FEET
F60	385 FEET	885 FEET

NOTES

1. CONDUCTORS FOR 20 AMP BRANCH CIRCUITS SHALL BE SIZED FOR VOLTAGE DROP. WIRE SIZES ARE NOT INDICATED ON THE DRAWINGS TO COMPENSATE FOR VOLTAGE DROP FOR THESE CIRCUITS. CONTRACTOR SHALL UTILIZE WIRE SIZE SHOWN ABOVE FOR THE DISTANCES LISTED ABOVE.
2. VOLTAGE DROP WIRE SIZES WILL BE STRICTLY ENFORCED. CONTRACTOR SHALL SUBMIT A LIST OF CIRCUITS THA WILL EXCEED THE DISTANCES ALLOWED AND INDICATE WIRE SIZE TO BE USED PRIOR TO ANY WIRE BEING INSTALLED.
3. PROVIDE SEPARATE, INDEPENDENT NEUTRAL CONDUCTORS FOR ALL BRANCH CIRCUITS. DO NOT SHARE NEUTRALS BETWEEN CIRCUITS.

GENERAL NOTES:

A. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. REFER TO PANEL SCHEDULES ON E600-SERIES DRAWINGS FOR BREAKER QUANTITIES, SPARES, AND SPACES.

C. ALL EQUIPMENT SHALL BE RATED TO WITHSTAND THE AVAILABLE FAULT CURRENT FROM THE UTILITY. EC SHALL COORDINATE THE AIC RATINGS OF ALL EQUIPMENT AND VERIFY THAT IT IS CORRECT PRIOR TO PURCHASE / INSTALLATION OF EQUIPMENT. SERIES RATINGS SHALL NOT BE ALLOWED FOR EQUIPMENT SERVING MOTOR LOADS, AND NOT ALLOWE EXCEPT AS PERMITTED IN THE PROJECT MANUAL. (NEC ART. 240.86(C))

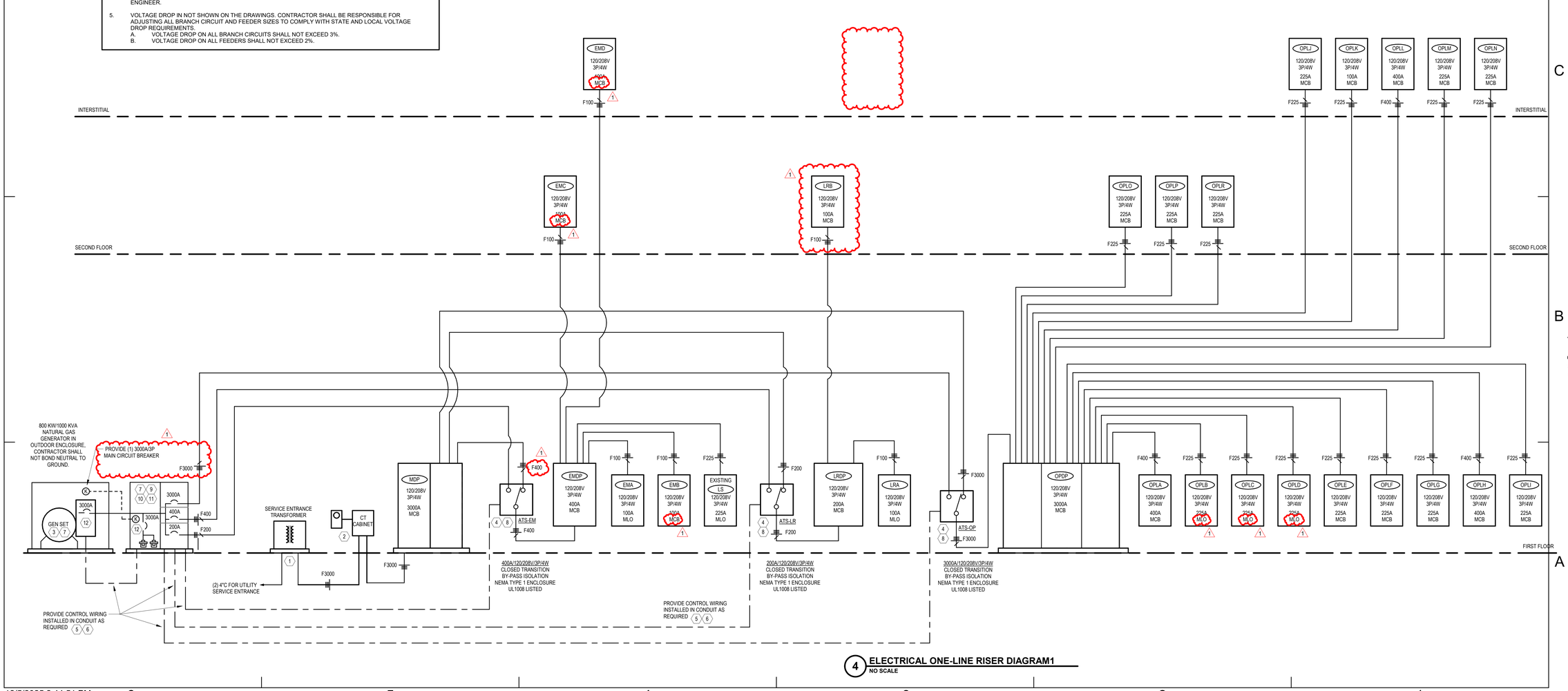
D. CONDUIT SIZES ARE MINIMUM GUIDELINES, AND MAY NOT COVER ALL INSTALLATIONS. IT IS ACCEPTABLE TO ADJUST CONDUIT SIZE BASED ON RACEWAY TYPE, PER NEC REQUIREMENTS.

E. EACH PARALLEL RUN SHALL BE ELECTRICALLY SIMILAR, AND CONTAIN THE SAME NUMBER OF CONDUCTORS / CABLES. COMPLY WITH ALL NEC REQUIREMENTS FOR PARALLEL INSTALLATIONS. (NEC ART. 310.10(H))

F. SEPARATELY DERIVED SYSTEMS SHALL HAVE A SUPPLY SIDE BONDING JUMPER INSTALLED PER NEC ART. 250.102(C), WHERE APPLICABLE. (NEC ART. 250.30(A)(2))

G. EMERGENCY SYSTEMS SHALL BE ISOLATED AND MARKED AS REQUIRED BY CODE. (NEC ART. 700.7(A) & NEC ART. 700.10)

H. WHERE GROUND FAULT PROTECTION AND/OR ARC ENERGY REDUCTION IS REQUIRED, FUNCTIONAL PERFORMANCE VERIFICATION TESTING SHALL BE PERFORMED AFTER THE EQUIPMENT IS INSTALLED, PRIOR TO BEING ENERGIZED BY THE SOURCE. UTILIZING A "PUSH TO TRIP" FEATURE IS NOT ALLOWED. TESTING SHALL BE PERFORMED UTILIZING A PRIMARY CURRENT INJECTION TEST SET AND PER THE MANUFACTURER'S INSTRUCTIONS. THE TESTING RESULTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD AND BE MADE AVAILABLE UPON REQUEST TO THE AHJ. IT IS THE RESPONSIBILITY OF THE EC TO DETERMINE IF THIRD PARTY TESTING IS REQUIRED BY THE AHJ. (NEC ART. 230.95, ART. 240.67, & ART. 240.87)



4 ELECTRICAL ONE-LINE RISER DIAGRAM1
NO SCALE

RQAW

DCCM

BID SET

HARRISON COUNTY BOARD OF COMMISSIONERS

HARRISON COUNTY JAIL MEP RENOVATION

1445 Gardner LN NW, Corydon, IN 47112

#	Revision	Date
1	ADDENDUM 1	12/05/25

Project #: 01-700-070

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Drawn By: SGD

Checked By: JAF

Date: 11.21. 2025

DUSTIN E. BARTH REGISTERED No. 12200401 STATE OF INDIANA PROFESSIONAL ENGINEER

Dustin Barth

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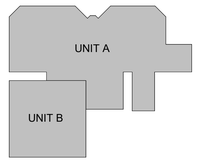

ELECTRICAL RISER DIAGRAM

E700