ADDENDUM NO. 2 **05/19/25**

RE: **Richmond Police Department**
457 Northgate Drive Richmond, KY 40475
Project No. 22133

FROM: **Brandstetter Carroll Inc.**
2360 Chauvin Drive
Lexington, Kentucky 40517
Phone 859-268-1933
Fax 859-268-3341

TO: **Plan Holders**

This addendum forms a part of the Construction Documents and modifies the original bidding documents dated March 28, 2025. Each bidder shall acknowledge receipt of this addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of six (6) pages, plus Attachments.

GENERAL:

1. No REVIT or AUTOCAD Files will be given out during the Bidding Process. Drawing Files will be given only to the awarded contractor and sub-contractors after they are contracted with the owner and an Electronic Files Disclaimer has been signed by all contractors.
2. Interpretations, corrections, changes, answers to questions, etc., regarding the bid will be made via Addenda only. Any other manner will not be binding, and bidders shall not rely upon them.
3. Site fencing and gates to be per specification section 323119. At the memorial garden the fencing is to be privacy fencing on both sides.

SUBSTITUTION REQUEST:

All substitutions are still bound by criteria set forth within specifications and the drawings. No deviations from requirements will be accepted because of product substitutions. The Contractor is responsible for burden of proof of compliance with specifications.

1. WR Meadows Air Shield LSR is an acceptable provider of Air Barriers for Specification section 072726 Air Barrier.
2. Mckeon is an acceptable provider of Overhead Coiling Doors for Specification section 083323 - Overhead Coiling Doors .
3. Henry is an acceptable provider of Bituminous Dampproofing for Specification section 071113 Bituminous Dampproofing.
4. Henry is an acceptable provider of Thermal Insulation, below grade for Specification section 072100 Thermal Insulation.
5. Varco Pruden, Spirco, Ceco, Metallic, and Star are acceptable providers of Metal Building Systems for Specification section 133419 Metal Building Systems.
6. MPI, De La Fontaine, Ambico, and Steelcraft are not an acceptable provider of Hollow Metal Doors and Frames for Specification section 081113 Hollow Metal Doors and Frames.

7. Institutional Casework Inc. is an acceptable provider of Metal Laboratory Casework for Specification section 12553.13 Metal Laboratory Casework.
8. Fastsigns of Louisville is an acceptable provider of Signage for Specification section 101400 Signage.
9. National Gypsum DEXcell is an acceptable provider of roofing protection boards for 075423 Thermoplastic Polyolefin (TPO) Roofing System.

CHANGES TO SPECIFICATIONS:

1. Refer to Specification 001113 - Advertisement for Bids:
    a. Revise section 1.2 Bid Submittal and Opening, as follows.
        i. Bid Date: Thursday May 29, 2025
        ii. Bid Time: 2:30 p.m., local time.
        iii. Location: Richmond City Hall; 239 W. Main Street; Richmond, KY 40475
2. Refer to Specification 004323 - Alternates Form:
    a. Revised section 1.4 Schedule of Alternates to add, Alternate #02 Custom operable partitions. Refer to 004323 - Alternates Form attached to this addendum.
3. Refer to Specification 004113 - Bid Form - Stipulated Sum (Single-Prime Contract):
    a. Revised section 1.3 Certificates and Base Bid, to add, Alternate #02 Custom operable partitions. Refer to 004113 - Bid Form - Stipulated Sum (Single-Prime Contract attached to this addendum.
    b. Corrected allowance amount text for the Radio Communication Enhancement System to seventy five thousand five hundred dollars.
4. Refer to Specification 042000 Unit Masonry:
    a. Revise section 2.4.B. Face Brick as follows,
        i. Brick type 1: Basis of design color Belden Modular Commodore Velour.
        ii. Brick type 2: Basis of design color Belden Modular English Gray Velour.
5. Refer to Specification Section 064116 Casework:
    a. Revise section 1.4 Quality Assurance to remove the AWI certification program and license requirements.
6. Added Specification 102226 Custom Operable Partitions:
    a. Add specification section to specification index.
7. Refer to Specification Section 23 09 00 – Instrumentation and Control for HVAC:
    a. Refer to Section 2.2A
        i. Add Trane Technologies as an acceptable manufacturer.
8. Add Specification Section 23 21 13 – Hydronic Piping and Valves
    a. Add specification section to specification index.
9. Refer to Specification Section 23 72 24 - Packaged Rooftop Equipment:
    a. Refer to Section 2.1A
        i. Add Greenheck as an acceptable manufacturer.
10. Refer to Specification Section 26 32 13 Packaged Generator and Transfer Switches:
    a. Reissuing section to reflect the change from Diesel to Natural Gas powered generator.

CHANGES TO DRAWINGS:

1. Refer to Sheet S-104: Revised support building.
2. Refer to Sheet S-407: Revised hairpin details.
3. Refer to Sheet A-801: Revised support building.

4. Refer to Sheet A-802: Revised support building.
5. Refer to Sheet A-803: Revised support building.
6. Refer to Sheet A-804: Revised support building.
7. Added Sheet A.2-101: Mezzanine Training Alternate #02.
8. Refer to Sheet F102: Replace sheet with F102 attached to this addendum.
9. Refer to Sheet U101: Replace sheet with U101 attached to this addendum.
10. Refer to Sheet P101: Replace sheet with P101 attached to this addendum.
11. Refer to Sheet P102: Replace sheet with P102 attached to this addendum.
12. Refer to Sheet P103: Replace sheet with P103 attached to this addendum.
13. Refer to Sheet P104: Replace sheet with P104 attached to this addendum.
14. Refer to Sheet P204: Replace sheet with P204 attached to this addendum.
15. Refer to Sheet P507: Refer to water heater piping details. Add additional check valve in CW line to TMVs.
16. Refer to Sheet P601: Refer to Plumbing Fixture Schedule:
    a. Add RD1 Roof Drain
        i. Manufacturer: Josam
        ii. Model: 24700
        iii. Waste: 4"
17. Refer to Sheet P602:
    a. Refer to updated Connected Gas Load Schedule below

CONNECTED GAS LOAD SCHEDULE

EQUIPMENT	LOCATION (ROOM NO.)	INPUT CFH EA.	QTY.	TOTAL CFH
POLICE BUILDING				
GWH-0-01	MECHANICAL 1029	300	1	300
GWH-0-02	MECHANICAL 1029	300	1	300
RANGE	KITCHEN 1109	60	1	60
RTU-01	ROOF	200	1	200
ERU-01	ROOF	300	1	300
GUH-0-01	SALLYPORT 1068	45	1	45
GUH-0-02	SALLYPORT 1068	45	1	45
		TOTAL CONNECTED LOAD:		**1,250**
SUPPORT BUILDING				
GWH-1-01	SUPPORT MEZZ	300	1	300
GDH-01	SUPPORT MEZZ	125	1	125
GDH-02	SUPPORT MEZZ	125	1	125
INCINERATOR	SITE	750	1	750
		TOTAL CONNECTED LOAD:		**1,300**
STORAGE BUILDING				
GUH-2-01	BAYS 500	45	1	45
GUH-2-02	BAYS 500	45	1	45
GUH-2-03	BAYS 500	45	1	45
GUH-2-04	BAYS 500	45	1	45
		TOTAL CONNECTED LOAD:		**180**
GENERATOR				
GEN	SITE	5,600	1	5,600
		TOTAL CONNECTED LOAD:		**5,600**

REMARKS:
1. COORDINATE LOCATIONS OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR.
2. VERIFY MIN. AND MAX. GAS PRESSURE FOR EACH PIECE OF EQUIPMENT PRIOR TO PURCHASING REGULATORS.
3. ALL INDIVIDUAL PIECES OF EQUIPMENT SHALL HAVE REGULATOR, LUBRICATED PLUG COCK SHUT-OFF VALVE, AND DIRT LEG UNLESS NOTED OTHERWISE. REFER TO EQUIPMENT CONNECTION DETAIL.

18. Refer to Sheet M102: Refer to HP-0-09. Tag to be renamed to HP-10.
19. Refer to Sheet M103: Refer to EF-10. Tag to be renamed to EF-0-09.
20. Refer to Sheet M104: Replace sheet with M104 attached to this addendum.
21. Refer to Sheet M202: Refer to HP-0-09. Tag to be renamed to HP-10.
22. Refer to M503: Refer to Make-up Water Station Detail. Replace filter note with the following:
    a. AQUA-PURE FILTER MODEL # SST1HA WITH STAINLESS STEEL SUMP AND BRASS HEAD (8 GPM FLOW RATE). CARTRIDGE FILTERS SHALL BE # AP110; 5 MICRON TYPE. FURNISH WITH TWO SPARE CARTRIDGES.
23. Refer to Sheet M601: Replace sheet with M601 attached to this addendum. Note the following changes:
    a. Refer to Gravity Hood Schedule. Add GH-1-01 and GH-1-02.
    b. Refer to Louver Schedule. Update L-1-01 as listed.
24. Refer to Sheet M602: Replace sheet with M602 attached to this addendum. Note the following changes:
    a. Added Gas Fired Unit Heater Schedule.
    b. Refer to Air Device Schedule. Add transfer grille T-3.
    c. Refer to Fan Schedule:
        i. Update EF-0-03 with listed fan.
        ii. Add EF-1-05:
25. Refer to Sheet U301:
    a. Addition of sheet notes 35-45.
    b. Adjusted site signage lighting and underground fiber for back feeding existing police station to align with updated site plan.
    c. Remove upper canopy lighting from site plan. It is now shown on the lighting floor plan sheet E101.
    d. Added circuit SBP-1-47 for site lighting.
    e. Reworked electrical utility feed for the 3 buildings on site. This was required through the changes made by utility and will include the addition of one more transformer and a junction/pull box.
    f. Generator size reduced to now show the foot print of a natural gas power generator.
26. Refer to Sheet E101:
    a. Added type E2 exit sign to door 1006A.
    b. Lobby and entrance lighting now DMX controlled and lower canopy lighting now includes emergency lighting for egress.
    c. Added callout to show exterior lighting on both the lower and upper canopy at the main entrance to the building.
    d. Added two (2) fixture to the vestibule.

e. Added to sheet note 4 and added sheet note 5 and 6.

27. Refer to sheet E102:
    a. Added type E2 exit sign to corridor 1013.
    b. Renamed fixture type "T' to BB in chief conference room. Along with sheet keynote tag 4.
28. Refer to Sheet E103:
    a. Removal of type "A" lighting control switch in the mezzanine.
    b. Adjustment of fixture spacing to account for the building size increase.
29. Refer to sheet E201:
    a. addition of receptacle in various locations on the floor plan.
30. Refer to sheet E202:
    a. Sheet keynote tag 16
31. Refer to Sheet E204:
    a. Adjustment of receptacle and circuiting to account for the building size increase.
32. Refer to sheet E205:
    a. Moved panel "STBP"
    b. Changed circuit for welding outlet
33. Refer to sheet E301:
    a. Addition of data receptacles in various locations on the floor plan.
    b. Sheet keynote 9
34. Refer to sheet E302:
    a. Addition of data receptacles in various locations on the floor plan.
    b. Sheet keynote 8 and 9.
35. Refer to Sheet E303:
    a. Adjustment of systems to account for the building size increase.
36. Refer to sheet E401:
    a. Changes to enlarged views
37. Refer to sheet E501:
    a. Modifications to details
38. Refer to sheet E502:
    a. Modifications to details
39. Refer to sheet E503:
    a. Modifications to details and schedules
40. Refer to sheet E504:
    a. Modifications to details and adding lighting control details
41. Refer to sheet E601:

a. Rework of one-line to show transformers from utility changes
b. Graphical rework of bypass isolation transfer switch.

42. Refer to sheet E602:
    a. Modifications of panel schedules to reflect changes
43. Refer to sheet E603:
    a. Modifications of panel schedules to reflect changes

END OF ADDENDUM NO. 2

DOCUMENT 004113 - BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)

1.1 BID INFORMATION

A. Bidder: _____.

B. Project Name: City of Richmond Police Station.

C. Project Location: 457 Northgate Drive Richmond, KY 40475.

D. Owner: City of Richmond 239 West Main Street Richmond, KY 40475.

E. Architect: Brandstetter Carroll, Inc.

F. Architect Project Number: 22133

1.2 CERTIFICATIONS AND BASE BID

A. Police (Main) Building and all Site Improvements Base Bid, Single-Prime (All Trades) Contract: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by Brandstetter Carroll, Inc. and the Architect's consultants, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:

_____ Dollars ($_____).

B. Police (Support) Building Base Bid, Single-Prime (All Trades) Contract: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by Brandstetter Carroll, Inc. and the Architect's consultants, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:

_____ Dollars ($_____).

C. Allowance #1 Contingency Allowance:

Seven hundred and fifty thousand dollars. *Numeral $750,000.00*

D. Allowance #2 Signage Allowance:

Twenty thousand dollars. *Numeral $20,000.00*

E. Allowance #3 Emergency Radio Communications Enhancement System Allowance:

Seventy-five thousand five hundred dollars. *Numeral $75,500.00*

F. Alternate Bid #1: Pre-engineered metal storage building.

Written Amount *Numeral $*

G. Alternate Bid #2: Custom operable partitions.

Written Amount *Numeral $*

This offer shall be open to acceptance and is irrevocable for sixty days from the bid closing date.

If the Owner accepts this bid within the time period stated above, we will:

- Execute the Agreement within seven days of receipt of Notice of Award.
- Furnish the required bonds within seven days of receipt of Notice of Award in the form described in Supplementary Conditions.

If this bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required Bond(s), the security deposit shall be forfeited as damages to the Owner by reason of our failure, limited in amount to the lesser of the face value of the security deposit or the difference between this bid and the bid upon which a Contract is signed.

In the event our bid is not accepted within the time stated above, the required security deposit shall be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

1.3 BID GUARANTEE

A. The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within 10 days after a written Notice of Award, if offered within 60 days after receipt of bids, and on failure to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, in the following amount constituting five percent (5%) of the Base Bid amount above:

1. _____ Dollars ($_____).

B. In the event Owner does not offer Notice of Award within the time limits stated above, Owner will return to the undersigned the cash, cashier's check, certified check, U.S. money order, or bid bond.

1.4 TIME OF COMPLETION

A. The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a written Notice to Proceed to be issued by Architect and shall fully complete the Work within **456** calendar days.

1.5 ACKNOWLEDGEMENT OF ADDENDA

A. The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:

1. Addendum No. 1, dated _____.
2. Addendum No. 2, dated _____.
3. Addendum No. 3, dated _____.
4. Addendum No. 4, dated _____.

1.6 BID SUPPLEMENTS

A. The following supplements are a part of this Bid Form and are attached hereto.

1. Bid Form Supplement - Alternates.
2. Bid Form Supplement - Unit Prices.
3. Bid Form Supplement - Allowances.
4. Bid Form Supplement - Bid Bond Form (AIA Document A310).
5. Bid Form Supplement – List of Unit Prices.

1.7 CONTRACTOR'S LICENSE

A. The undersigned further states that it is a duly licensed contractor, for the type of work proposed, in Richmond (city) and Kentucky (state), and that all fees, permits, etc., pursuant to submitting this proposal have been paid in full.

1.8 SUBMISSION OF BID

A. Respectfully submitted this ____ day of _____, 2025.

B. Submitted By_____(Name of bidding firm or corporation).

C. Authorized Signature:_____(Handwritten signature).

D. Signed By:_____(Type or print name).

E. Title:_____(Owner/Partner/President/Vice President).

F. Witness By:_____(Handwritten signature).

G. Attest:_____(Handwritten signature).

H. By:_____(Type or print name).

I. Title:_____(Corporate Secretary or Assistant Secretary).

J. Street Address:_____.

K. City, State, Zip_____.

L. Phone:_____.

M. License No.:_____.

N. Federal ID No.:_____(Affix Corporate Seal Here).

END OF DOCUMENT 004113

DOCUMENT 004323 - ALTERNATES FORM

1.1 BID INFORMATION

A. Bidder: _____.

B. Prime Contract: _____.

C. Project Name: City of Richmond Police Station.

D. Project Location: 457 Northgate Drive Richmond, KY 40475.

E. Owner: City of Richmond 239 West Main Street Richmond, KY 40475.

F. Architect: Brandstetter Carroll, Inc.

G. Architect Project Number: 22133

1.2 BID FORM SUPPLEMENT

A. This form is required to be attached to the Bid Form.

1.3 DESCRIPTION

A. The undersigned Bidder proposes the amount below be added to or deducted from the Base Bid if particular alternates are accepted by Owner. Amounts listed for each alternate include costs of related coordination, modification, or adjustment.

1. Cost-Plus-Fee Contract: Alternate price given below includes adjustment to Contractor's Fee.

B. If the alternate does not affect the Contract Sum, the Bidder shall indicate "NO CHANGE."

C. If the alternate does not affect the Work of this Contract, the Bidder shall indicate "NOT APPLICABLE."

D. The Bidder shall be responsible for determining from the Contract Documents the affects of each alternate on the Contract Time and the Contract Sum.

E. Owner reserves the right to accept or reject any alternate, in any order, and to award or amend the Contract accordingly within [**60**] days of the Notice of Award unless otherwise indicated in the Contract Documents.

F. Acceptance or non-acceptance of any alternates by the Owner shall have no affect on the Contract Time unless the "Schedule of Alternates" Article below provides a formatted space for the adjustment of the Contract Time.

1.4 SCHEDULE OF ALTERNATES

A. Alternate No. 01: Pre-engineered metal storage building, refer to drawings and specifications section 33419 - metal building systems:

1. ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.
2. _____ Dollars ($_____).
3. ADD____ DEDUCT____ calendar days to adjust the Contract Time for this alternate.

B. Alternate No. 02: Custom operable partitions, refer to drawings and specifications section 102226 Custom Operable Partitions:

1. ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.
2. _____ Dollars ($_____).
3. ADD____ DEDUCT____ calendar days to adjust the Contract Time for this alternate.

1.5 SUBMISSION OF BID SUPPLEMENT

A. Respectfully submitted this ____ day of _____, 2025.

B. Submitted By:_____(Name of bidding firm or corporation).

C. Authorized Signature:_____(Handwritten signature).

D. Signed By:_____(Type or print name).

E. Title:_____(Owner/Partner/President/Vice President).

END OF DOCUMENT 004323

SECTION 102226 CUSTOM OPERABLE PARTITIONS (Alternate #02)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   a. Tactical Training Area Custom Operable Partitions.

1.4 SUBMITTALS

A. Product Data: Material descriptions, construction details, finishes, installation details, and operating instructions for each type of operable panel partition, component, and accessory specified. Include data on surface-burning characteristics and third-party face material durability.

B. Shop Drawings: Show location and extent of movable operable panel partitions. Include plans, elevations, sections, details, numbered panel installation sequence, attachments to other construction, and accessories. Indicate dimensions; weights; conditions at openings and for storage; and required installation, storage, and operating clearances. Indicate location and installation requirements for hardware and track, and direction of travel. Show required blocking to be provided by others. Include the following:

   1. Calculations: Calculate requirements for supporting operable panel partitions and verify capacity of carriers and track components to support loads; indicate deflection limits for partition and adjacent construction.

C. Setting Drawings: For embedded items and cutouts required in other work, including support beam punching template.

D. Sample: Submit samples of actual panel construction, finishes, and all track, trolley, and hardware components.

E. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below and of same thickness and material indicated for the Work. If finishes involve normal color pattern and texture variations, include sample sets showing the full range of variations expected.

   1. Panel Face Material: Manufacturer’s standard-size unit, not less than 3 inches square.
   2. Panel Edge Material: Not less than full width by 3 inches long.

F. Product Certificates: Signed by manufacturers of operable panel partitions and testing authorities certifying that products furnished comply with requirements.

G. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other specified information.

H. Field Test Reports: Indicate and interpret test results for compliance with performance requirements.

I. Product Test Reports: From a qualified testing agency indicating that each operable panel partition complies with requirements, based on comprehensive testing of current products.
   a. Fire Rating tests – surface materials.

J. Maintenance Data: For the following to include in maintenance manuals specified in Division 1:

   1. Panel face finishes and finishes for exposed trim and accessories. Include precautions for cleaning materials and methods that could be detrimental to finishes and performance.
   2. Seals, hardware, track, carriers, and other operating components.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who is certified in writing by the operable panel partition manufacturer as qualified to install the manufacturer's partition systems for work similar in material, design, and extent to that indicated for this Project.

B. Fire-Test-Response Characteristics: Provide operable panel partitions with the following fire-test-response characteristics, as determined by testing identical products per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.
   1. Surface-Burning Characteristics: As follows, per ASTM E 84:
      a. Flame Spread: 25 or less.
      b. Smoke Developed: 450 or less.
   2. Fire Growth Contribution: Textile wall coverings complying with the acceptance criteria of UBC Standard B-2.

1.7 WARRANTY

A. Warranties: Manufacturer agrees to repair or replace operable partition systems or components that fail in materials or workmanship within specified warranty period.
   a. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PRODUCTS AND MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Kwik-Wall Co., 4650 Industrial Ave., Springfield, IL 62703.
2. Hufcor, Inc., 2101 Kennedy Road, Janesville, WI 53545.
3. Or approved equals.

2.2 MATERIALS

A. Steel Frame: Frames shall be precision welded of minimum 16 gauge with 3" [76mm] minimum profile.

B. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use, corrosion resistance, and finish indicated; ASTM E 221 (ASTM E 221M) for extrusions; manufacturer's standard strengths and thickness for type of use.

1. Frame Reinforcing: Manufacturer's standard steel or aluminum

C. Face Sheets: High-Pressure Laminate (HPL) with manufacture's standard medium density fiberboard (MDF) backing. MDF faces required for rigidity and impact resistance. Faces must be replaceable onsite in the event of extended damage during the life of system.

2.3 OPERABLE PANEL PARTITIONS

A. Panel Construction: Provide top reinforcement as required to support panel from suspension components and provide reinforcement for hardware attachment. Fabricate panels with tight hairline joints and concealed fasteners. Fabricate panels so finished in-place partition is rigid; level; plumb; aligned, with tight joints and uniform appearance; and free of bow, warp, twist, deformation, and surface and finish irregularities. Panel face shall be continuous full height face with horizontal splices or joints in panel faces allowed at top of pass doors legs.

B. Dimensions: Fabricate operable panel partitions, from manufacturer's standard sizes, to form an assembled system of dimensions indicated on Drawings and verified by field measurements. Panels not to exceed 48" wide.

B. Partitions must have aluminum or steel protective vertical and horizontal edges trim and must be integral part of frame or mechanically fastened to panel edges. Plastic, glued or taped edge trims not accepted. "Trimless" or monolithic panels are not acceptable.

C. Vertical and Horizontal protective edge trim finished as follows:

1. Manufacture's standard color selection: Grey

F. Hardware: Manufacturer's standard as required to operate operable panel partition and accessories; with decorative, protective finish to match horizontal trim.

2.4 SEALS

A. General: Provide types of acoustical and stabilizing seals indicated that produce operable panel partitions complying with performance requirements and the following:

1. Seals made from materials and profiles that minimize vertical light leakage when panels are set in place.

B. Vertical Seals: Vertical PVC seals must allow panels to pass through 90-degree intersections without disassembly of adjacent panels allowing for interchangeable and multiple set-up locations for all panels. Seals must provide enough mass and durability so to block simunitions rounds from penetrating between panels.

C. Horizontal Top Seals: None required.

D. Horizontal Bottom Seals: Mechanical, retractable, constant-force-contact seal exerting uniform constant downward force pressure on the floor of 100 pounds minimum when extended, ensuring horizontal and vertical sealing and resisting panel movement.

1. Mechanically Operated: Extension and retraction of bottom seal by waist high operating handle, operating range not less than: 2-inch operating clearance between retracted seal and floor finish. Bottom mechanical seal sets with 190-degree turn of the removable operating handle or "key." Seal activation requiring multiple cranks of operating handle or "automatic plunger"/bayonette seals shall not be allowed.
2. Panels containing pass through doors shall have retractable bottom seals. Bottom seal shall be equipped to provide a minimum of 100 lb seal pressure per pass door leg for stability and proper door operation. All panels, including pass doors, must remain stable without being interlocked with adjacent panels.
3. Bottom seals must provide stability without the use of floor bolts or penetrations into the floor. Face applied foot bolt stabilizers are not acceptable.

2.5 FINISH FACING

A. General: Provide finish facings that comply with indicated fire-test-response characteristics and that are factory applied to operable panel partitions with appropriate backing, using mildew-resistant nonstaining adhesive as recommended by facing manufacturer's written instructions.

1. Apply seamless facings free from air bubbles, wrinkles, blisters, and other defects. Tightly secure and conceal raw and selvage edges of facing for finished appearance.

B. Manufacture's standard High-Pressure Laminate (HPL). Color selected from standard manufacturer's options.

C. Panels with Window Inserts:
   a. Provide six (6) total Panels with windows inserts.
   b. Window insert must be of smooth, extruded aluminum and finished to match vertical and horizontal trim color - grey. No glass is required in window panels and all faux glass stops are to be mechanically fastened into panels allowing both materials, equipment and trainees to pass through open windows. Window openings must be reinforced and blocked to support the weight of trainees.

2.6 SUSPENSION SYSTEMS

A. Overhead Support System: Traditional steel I-beam support by others.
B. Optional Overhead Support: Unispan by Kwik-Wall overhead support truss systems.
   1. The supporting truss shall be factory fabricated of steel and aluminum. Unispan is attached to the building structure for lateral support only. The load of the truss and partition is supported by the Unispan column posts. Bolt together truss has anodized aluminum top and bottom cords with integral anodized aluminum track and steel web-members.
   2. Posts. End columns shall be 2-1/2" x 5" [63.5 x 127] clear anodized aluminum posts. Posts shall be attached to the truss with steel brackets and bolts. Posts shall be anchored to the floor with concealed fasteners. Posts shall be located approximately 1-1/2" [38] from adjacent wall surfaces.
   3. Ceiling anchors provide lateral support and shall be set at intervals across the span of the beam.
   4. Weight of the system
      a. The horizontal truss shall weigh 10-12 lbs. per lineal foot of width.
      b. The support columns shall weigh 3.5 lbs. per foot of height each.
      c. The floor shall support a maximum of 360 psi at each post.
   5. Finishes
      a. Exposed trim and track shall be of clear anodized architectural grade extruded aluminum alloy 6063-T6.
      b. Posts shall be of clear anodized architectural grade extruded aluminum alloy 6063-T6.
C. Suspension Tracks: Clear anodized structural aluminum with adjustable steel hanger rods for overhead support, designed for type of operation, size, and weight of operable panel partition indicated. Size track to support partition operation and storage without damage to suspension system, operable panel partitions, or adjacent construction. Limit track deflection to no more than 0.10 inch between bracket supports. Provide a continuous system of track sections and accessories to accommodate configuration and layout indicated for partition operation and storage. Track alignment must provide smooth running surface at the intersections. Steel track with single carrier systems is not acceptable.
D. Carriers: Trolley system as required for configuration type, size, and weight of partition and for easy operation; with self-lubricating, ball-bearing wheels.

D. Track Intersections: As required for type of operation, storage, track configuration, and layout indicated for operable panel partition, and compatible with partition assembly specified. Fabricate track intersections clear anodized structural aluminum.

E. Aluminum Finish: Manufacturer's clear anodized finish.

F. Track & Carriers must support weight of panel and an additional 300lbs due to window entry exercises when trainee's weight is applied to track and carriers as they pass through window panels.

2.6 ACCESSORIES

A. Pass Doors: Swinging door built into and matching panel materials, construction, acoustical qualities and thickness, complete with frames and operating hardware. Hinges finished matching other exposed hardware.

1. Single Pass Door assemblies: Provide three (3) left hand and three (3) right hand, 32 by 80 inches single, with the following:
   a. Door Seals: Bottom 2", vinyl sweep seals required. Floor bolts mounted to panel face are not acceptable.
   b. Door face material must be made of HPL backed with ½" MDF and additional layer of a minimum 20 ga. steel to withstand breach impacts.
   c. Adjustable, concealed door closers required.
   d. Roller latch hardware required allowing doors to be breached open during forced entry exercises. Doors must also contain a positive latch latching hardware so that doorknobs and lever activate latches.
      a. Each passdoor must contain both a lever (commercial style) handle on one side of the door and a knob (residential) twist style handle.
      b. The lever must be adjustable to allow passdoor panel to pass between adjacent panels at intersections and not interfere with the vertical sweep seals.
   e. Exit Signs (not required)
   f. Thresholds are not acceptable.
   g. No face activated seal actuators allowed.
   h. Door Finish:
      a. General: Manufacture's standard vinyl with wood appearance to mimic the look of wood doors.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine flooring, structural support, and opening, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of operable panel partitions. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Comply with manufacturer's written installation, drawings, and shop drawings.

B. Install operable panel partitions and accessories after other finishing operations, including painting, have been completed.

C. Match operable panel partitions for color and pattern and grain by installing panels from marked packages in numbered sequence indicated on Shop Drawings.

D. Broken, cracked, chipped, deformed, or unmatched panels are not acceptable.

3.3 FIELD QUALITY CONTROL

A. Installer qualifications: Installer shall be trained in the installation of operable partition systems and shall have a minimum of 5 years of experience in the installation of systems of similar nature and scope as required for this project. If requested by Architect, submit evidence of satisfactory installations of similar work within this period.

3.4 ADJUSTING

A. Adjust operable panel partitions to operate smoothly, easily, and quietly, free from binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Lubricate hardware other moving parts.

B. Pass Doors: Adjust to operate smoothly and easily, without binding or warping.
Check and readjust operating hardware. Confirm that roller latches and concealed door closures engage accurately and securely without forcing or binding.

3.5 CLEANING AND PROTECTION

A. Clean soiled surfaces, fabric facing, and metal surfaces on completing installation of operable panel partitions, to remove dust, loose fibers, fingerprints, adhesives, and other foreign materials according to manufacturer's written instructions.

B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and installer, which ensures operable panel partitions are without damage or deterioration at the time of Substantial Completion.

C. Replace panels that cannot be cleaned and repaired, in a manner approved by Architect-Owner before the time of Substantial Completion.

3.6 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's personnel to adjust, operate, and maintain operable panel partitions.

1. Test and adjust seals, hardware, carriers, tracks, pass doors, pocket doors, exit signs, controls, and other operable components. Replace damaged or malfunctioning operable components.
2. Train Owner's personnel on procedures and schedules for starting and stopping, troubleshooting, servicing, and maintaining equipment and schedules.
3. Review data in maintenance manuals. Refer to "Project Closeout".
4. Review data in maintenance manuals. Refer to "Operation and Maintenance Data".
5. Schedule training with Owner with at least seven days' advance notice.
6. Review specific Safety and Operation Manual.

END OF SECTION 102226

SECTION 23 21 13 – HYDRONIC PIPING AND VALVES

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Pipe and pipe fittings

B. Valves

1.2 RELATED DOCUMENTS

A. The General and Special Conditions, Division 01 Specification Sections, and all other Contract Documents (ESPECIALLY DIVISIONS 21, 22, 23 AND 26) are applicable to work under this section of the specifications. All the work under this section of the specifications shall be governed by any alternates and unit prices called for in the FORM OF PROPOSAL insofar as they affect this portion of the work.

B. Section 230100 - GENERAL PROVISION FOR MECHANICAL WORK

C. Section 230719 - HVAC PIPING INSULATION

D. Section 232118 - HYDRONIC PIPING SPECIALTIES

1.3 ACTION SUBMITTALS

A. Shop Drawings:

1. Product Data: For each type of product.

2. Welder Certificates.

1.4 WELDING AND BRAZING

A. Welders Qualification

1. Welder's qualifications shall specify results of test, or retest, positions qualified and type of welding in which qualified.

2. All welds shall be of sound metal thoroughly fused to the base metal at all points, free from cracks; and reasonably free from oxidation, blow holes, and non-metallic inclusions. No fins or weld metal shall project within the pipe; and should they occur shall be removed. All pipe beveling shall be done by machine. The surface of all parts to be welded shall be thoroughly cleaned free from paint, oil, rust, or scale, at the time of welding except that a light coat of oil may be used to preserve the beveled surfaces from rust.

3. All pipe and fittings shall be carefully aligned with adjacent parts and this alignment must be preserved in a rigid manner during the process of welding.

4. It is required that all welding of piping covered by this specification, regardless of conditions of service, be installed as follows:

a. Pipe welding shall comply with the provision of the latest revisions of the applicable code whether ASME "Boiler Construction Code", ANSI "Code for Pressure Piping", AWS and/or Kentucky KRS-236 "Boiler Safety Law". The contractor shall make arrangements for inspection visits by the state boiler inspector as required by KRS-236.

b. The Contractor's welding procedure shall clearly set forth P-numbers of parent metal to be welded, rod or filter metal to be used and positions required.

c. Before any pipe welding is performed, the Contractor shall submit to the Architect a copy of his welding procedure specifications together with proof of its qualification as outlined and required by the most recent issue of the code having jurisdiction.

d. Before any operator shall perform any pipe welding, the Contractor shall also submit to the Architect, the operator's qualification record in conformance with provisions of the Code having jurisdiction, showing that the operator was tested under the approved procedure specification submitted by the Contractor.

e. Welding work shall not be performed by welders who are not approved by the Architect and any such work performed shall be summarily removed and replaced without further recourse by the Contractor.

f. Standard Procedure Specifications and operators qualified by the National Certified Pipe Welding Bureau shall be considered as conforming to the requirements of the specifications.

g. Each manufacturer or Contractor shall be responsible for the quality of welding done by his organization and shall repair any work not in accordance with these specifications.

h. Brazing, when specified or indicated on the contract drawings, shall be in accordance with Part UB of Section VIII of the ASME Code. Filler metal shall conform to AWS B260, Class B AG-1 or B AG-2. Procedure and performance qualification requirements for brazing shall be the same as for welding, as required above.

1.5 STRUCTURAL DRAWINGS AND SPECIFICATIONS

A. Each Contractor shall refer to the Structural Drawings and Specifications for the general construction of the building, for floor and ceiling heights, for location of walls, partitions, beams, grade beams, foundations, footings etc., and shall be guided accordingly for the setting of all sleeves and equipment.

B. Under no circumstances shall a Contractor scale the Drawings for the locations of equipment and work.

C. The contractor is responsible for reviewing all below slab / underground piping with structural components and coordinating all stepped footings or sleeves where required.

PART 2 - PRODUCTS

2.1 HEAT PUMP WATER PIPING

A. High Density Polypropylene Pipe (PP-R, Aquatherm Blue): For sizes ½” to 18”, minimum SDR11. Pipe shall be manufactured from a PP-R resin (Fusiolen) meeting the short-term properties and long-term strength requirements of ASTM F 2389 or CSA B137.11. The pipe and fittings shall contain no rework or recycled materials except that generated in the manufacturer's own plant from resin of the same specification from the same raw material. All pipe and fittings shall be made in an extrusion process. Hydronic hot water and heating piping shall contain a fiber layer (faser) to restrict thermal expansion. All pipe shall comply with the rated pressure requirements of ASTM F 2389

or CSA B137.11. All pipe shall be certified by NSF International as complying with NSF 14, and ASTM F 2389 or CSA B137.11.

1. Fittings shall be manufactured from a PP-R resin (Fusiolen) meeting the short-term properties and long-term strength requirements of ASTM F 2389, minimum SDR11.

2. Joints: Joining shall be by the socket fusion, or butt fusion method in accordance with manufacturer's Heat Fusion Qualification Guide. The operator shall be properly trained and shall have executed quality fusion joints.

3. See Section 232113.33 - GROUND LOOP HEAT PUMP PIPING for additional information.

2.2 EQUIPMENT DRAINS, CONDENSATE DRAINS AND OVERFLOWS

A. Steel Pipe: ASTM A53 or A120, Schedule 40 galvanized.

1. Fittings: Galvanized cast iron, or ANSI/ASTM B16.3 malleable iron.

2. Joints: Screwed or grooved mechanical couplings.

B. Stainless Steel Pipe: ASTM A312, Type 304/304L, full finish annealed pipe, certified for use with Vic Press 304™ joints.

1. Fittings: Precision cold drawn austenitic stainless steel, Type 304/304L, complete with synthetic rubber grade EPDM O-rings.

2. Joints: Vic Press 304™.

C. Copper Tubing: ASTM B88, Type L, M or DWV hard drawn.

1. Fittings: ANSI/ASME B16.18 bronze sand castings, ANSI B16.22 wrought copper, ANSI/ASME B16.23 cast brass, or ANSI/ASME B16.29 solder wrought copper.

2. Grooved joint fittings, as manufactured by Victaulic, or equal, shall be manufactured to copper tubing sizes, with grooved ends designed to accept grooved end couplings of the same manufacturer. Flaring of tube and fitting ends to IPS dimensions is not allowed.

3. Joints: ASTM B32, solder, Grade 95TA or grooved joints with EPDM gaskets.

D. PVC Pipe: ASTM D1785, Schedule 40 and Schedule 80.

1. Fittings: ASTM D2466 for Schedule 40 pipe, or ASTM D2467 for Schedule 80 pipe.

2. Joints: ASTM D2564 and ASTM D2855, solvent weld.

E. Condensate drain lines from cooling equipment shall be pitched and installed with plug cleanouts at each change in direction and/or at 20' intervals.

2.3 FLANGES, UNIONS, AND COUPLINGS

A. Pipe Size 2 Inches and Under: 150 psig malleable iron unions for threaded ferrous piping; 300 psig stainless steel, threaded type with Vic Press 304™ ends for stainless steel pipe; bronze unions for copper pipe, soldered joints.

1. Mechanical Couplings: Victaulic SDIR Installation-Ready fittings for plain end carbon steel piping. Fittings shall consist of a ductile iron housing confirming to

ASTM A-536 with Installation-Ready ends. Fittings complete with pre-lubricated Grade EPDM gasket. System rated for 300 PSI working pressure.

B. Pipe Size Over 2 Inches: 150 psig forged steel slip-on flanges for ferrous piping; bronze flanges for copper piping; 1/16-inch-thick preformed neoprene.

C. Grooved and Shouldered Pipe End Couplings: Ductile iron housing clamps to engage and lock, designed to permit some angular deflection, contraction, and expansion, where required; C-shape elastomer composition sealing gasket for operating temperature range from -30 degrees F to 250 degrees F; steel bolts, nuts, and washers; galvanized couplings for galvanized pipe.

1. IPS Steel Piping:

a. Rigid Type: Couplings housings cast with offsetting, angle-pattern bolt pads shall be used to provide system rigidity and support and hanging in accordance with ANSI B31.1 and B31.9. Victaulic Style 107N/W07.

b. Flexible Type: Use in locations where vibration attenuation and stress relief are required. Victaulic Style 177. Three flexible couplings may be used in lieu of flexible connectors at equipment connections and shall be placed in close proximity to vibration source. Use adequate numbers of grooved, flexible style couplings in header piping to accommodate thermal growth and contraction, and as required for the elimination of expansion loops. (In accordance with manufacturer's recommendations and as approved by the Engineer.) Where expansion loops are required in grooved piping systems, use flexible style couplings on the loop(s).

c. Flange Adapter: Flat face, for direct connection to ANSI Class 125 or 150 flanged components. Victaulic Style 741.

2. Hard Copper Tube: Housings cast with offsetting, angle-pattern bolt pads. Housings coated with copper colored alkyd enamel. Manufactured to copper tube dimensions, with Grade "EHP" EPDM QuickVic type gasket or equal with a maximum temperature rating of 250 deg F. Victaulic Style 607 QuickVic, Victaulic 608N butterfly valve may be used in conjunction with Victaulic couplings.

2.4 DIELECTRIC FITTINGS

A. Description: Combination fitting of copper alloy and ferrous materials with threaded, solder joint, plain or weld-neck and connections that match piping system materials.

2.5 ESCUTCHEONS

A. Escutcheons shall be Beaton and Caldwell; Carpenter and Patterson; Fee and Mason or approved equivalent. Chromium-plated iron or chromium-plated brags, either one piece or split patterns, held in place by internal spring tension or set screw that completely covers opening.

2.6 PROTECTIVE COATING FOR PIPE AND FITTINGS

A. Protective Coating for Pipe and Fittings: Metallic pipe and fittings, except cast iron and copper, that are installed underground shall be provided with a field- or shop-applied coal-tar coating and wrapping or a shop-applied extruded polyethylene sheath. The coating shall consist of a coat of coal-tar primer, a coat of coal-tar enamel, a second coat of coal-tar enamel, a second wrapper of coal-tar saturated felt, and a wrapper of Kraft paper applied in the order named and conforming to the requirements of AWWA

Standard C203 for materials, thicknesses, methods of application, tests, and handling, except that interior lining will not be required. Upon completion of satisfactory tests hereinafter specified, the joints shall be hand-wrapped with hot-applied preformed coal-tar tape. Preparation of surface and hand-applied wrapping shall be done in such a manner that a covering equal in effectiveness to that of the shop-applied coating will be produced. When extruded polyethylene sheath is used for the protective coating, fittings and joints shall be covered in the manner and with the materials recommended by the manufacturer of the sheath.

2.7 GATE VALVES

A. Up to 2 Inches: Class 125, ASTM B-62 bronze body, bronze trim, rising stem, handwheel, screwed bonnet, ASTM B-62 bronze solid wedge disc, solder, or threaded ends.

B. Over 2 Inches: Class 125, ASTM A-126 iron body, bronze trim, rising stem, handwheel, bolted bonnet, OS & Y, solid wedge disc, flanged or grooved ends.

C. Manufactured by Crane, Nibco, Stockham, Keystone or Watts.

2.8 GLOBE VALVES

A. Up to 2 Inches: Class 125, ASTM B-62 bronze body, bronze trim, rising stem, handwheel, screwed bonnet, renewable composition disc, solder, or screwed ends, with back seating capacity.

B. Over 2 Inches: Class 125, ASTM B-62 iron body, bronze trim, rising stem, handwheel, bolted bonnet, OS & Y, plug-type disc, flanged ends, renewable bronze seat and disc.

C. Manufactured by Crane, Nibco, Stockham, Keystone or Watts.

2.9 BALL VALVES

A. Up to 2 Inches:

1. 150 psig WSP/600 psig WOG, conventional port bronze two-piece body, hard chrome plated forged brass ball, Teflon seats and stuffing box ring, lever handle, adjustable stem packing nut, blow-out proof stem, solder, or threaded ends.

2. Forged brass two-piece body, chrome plated brass ball and stem, Teflon seats, lever handle, Vic Press 304™ ends, 300 PSIG CWP, Victaulic Series 589.

3. Manufactured by Crane, Nibco, Stockham, Victaulic, Keystone or Watts.

B. Over 2 Inches:

1. 200 psig CWP, cast steel body, chrome plated steel ball, Teflon seat and stuffing box seals, lever handle.

2. 300 psig CWP, ductile iron body, chrome plated carbon steel ball and stem, Teflon seat, lever handle.

3. Manufactured by Crane, Nibco, Stockham, Victaulic, Keystone or Watts.

C. Ball valves shall have extended stem assembly to clear thickness of pipe insulation.

2.10 PLUG COCKS

A. Up to 2 Inches: 175 psig WOG, semi-steel, lubricated, Teflon packing, threaded ends, with one wrench operator for every ten plug cocks.

B. Over 2 Inches: 175 psig WOG, semi-steel body and plug, pressure lubricated, Teflon packing, flanged ends, with wrench operator with set screw.

C. Manufactured by Nordstrom, Powell, or Walworth.

2.11 BUTTERFLY VALVES

A. 125 psig WOG, iron body, bronze disc, resilient replaceable EPDM seat for service to 180 degrees F, wafer or lug ends, extended neck, 100 percent shut off lever with memory stop.

1. Ductile iron body, offset electroless nickel plated ductile iron disc, pressure responsive seat, Type 416 stainless steel stem and TFE lined fiberglass bearings. Victaulic Vic®-300 MasterSeal™.

2. Manufactured by Crane, Nibco, Stockham, Victaulic, Keystone or Watts.

2.12 SWING CHECK VALVES

A. Up to 2 inches: Class 125, ASTM B-62 bronze body, threaded cap, horizontal swing type, ASTM B-62 bronze disc, threaded or soldered ends.

B. Over 2 inches: Class 125 iron body, bronze mounted trim, horizontal swing type, flanged ends.

C. 2 inches to 4 inches: 300 psig CWP, ductile iron body, type 316 stainless steel clapper, horizontal swing type with grooved ends. Victaulic Series 712 or equal.

D. Manufactured by Crane, Nibco, Stockham, Victaulic or Watts.

2.13 SPRING LOADED WAFER CHECK VALVES

A. Less than 2 inches: Class 125, ASTM A-126, cast iron body, stainless steel spring, ASTM B-62 bronze disc, Buna-N seal.

B. 2 inches to 3 inches: 365 psig CWP, ductile iron body, stainless steel disc and spring, brass shaft, plated nickel seat, grooved ends. Victaulic Series 716H or equal.

C. 4 inches to 12 inches: 300 psig CWP, ductile iron body, synthetic rubber coated ductile iron disc, stainless steel spring, brass shaft, welded-in nickel seat, grooved ends. Victaulic Series 716 and Series 779 or equal.

D. Manufactured by Crane, Nibco, Stockham, Victaulic or Watts.

PART 3 - EXECUTION

3.1 PREPARATION

A. Ream pipe and tube ends. Remove burrs. Bevel or groove plain end ferrous pipe.

B. Remove scale and dirt on inside and outside before assembly.

C. Prepare piping connections to equipment with flanges, couplings, or unions.

D. After completion, fill, clean, and treat systems.

3.2 INSTALLATION

A. Pipe shall be cut accurately to measurements established at the jobsite and worked into place without springing or forcing, properly clearing all windows, doors, and other openings.

B. Route piping in orderly manner, plumb and parallel to building structure, and maintain gradient.

C. Ferrous piping and copper piping shall be electrically isolated from each other with dielectric couplings or fittings.

D. Do not use bull-headed tee fittings.

E. Install piping to conserve building space, and not interfere with use of space and other work. Do not change the designed path of piping, add excessive turns or offsets, or change pipe sizes without first consulting the Engineer.

F. Group piping whenever practical at common elevations.

G. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.

H. Provide clearance for installation of insulation, and access to valves and fittings.

I. Provide access where valves and fittings are not exposed.

J. Slope piping and arrange systems to drain at low points. Use eccentric reducers to maintain top of pipe level.

K. Condensate drain lines from cooling equipment shall be pitched and installed with plug cleanouts at each change in direction and/or at 20' intervals.

L. Where pipe support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc rich primer to welding.

M. Prepare pipe, fittings, supports, and accessories for finish painting. Refer to Section Painting.

N. Install valves with stems upright or horizontal, not inverted.

O. Grooved joint piping systems shall be installed in accordance with the manufacturer's guidelines and recommendations. All grooved couplings, fittings, valves, and specialties shall be the products of a single manufacturer. Grooving tools shall be of the same manufacturer as the grooved components. The gasket style and elastomeric material (grade) shall be verified as suitable for the intended service as specified. Grooved end shall be clean and free of indentations, projections and roll marks in the area from pipe end to groove for proper gasket sealing. A factory trained field representative shall provide on-site training to contractor's field personnel in the proper use of grooving tools and the installation of grooved piping products. Factory trained representative shall periodically review the product installation. Contractor shall remove and replace any improperly installed products.

1. Any other manufacturer than Victaulic must be submitted to engineer for review and approval. If approved, the contractor will be required to provide a written report on each fitting ensuring that fitting has been properly tightened to manufacturer's required Bolt Torque, and that fittings have required equal gaps on each side of coupling. Report will include fitting number and a plan will be labeled showing where fitting is located in piping. Fitting shall be labeled to reference the system where it is installed. The report will show required torque and indicate that bolts have been tested for toque. (Sample Report Header below) Engineer and commissioning agent will sample fittings to ensure that proper torque and gaps are provided per manufacturer's instructions.

Fitting #	Pipe Size	Torque Setting (ft-lbs)	Torque Actual (ft-lbs)	Equal Gaps	Initials	Date
XX	X"	100-130	100	Yes	XX	XX/XX/XXXX

P. At engineer or owner's request, a manufacturer's factory trained inspector shall visit the job site and review all grooved joint product installation. The products must be inspected prior to insulation being applied and is contractor's responsibility to coordinate with manufacture. The installing contractor shall remove and replace any improperly installed products. Upon completion of the manufacturer's inspection of the installation, the manufacturer will supply the owner with an extended warranty on the inspected products.

Q. Escutcheons shall be provided at all finished surfaces where exposed piping, bare or insulated, passes through floors, walls, or ceilings. Escutcheons shall be fastened securely to pipe sleeves or to extensions of sleeves without any part of sleeves being visible. Where sleeves project slightly from floors, special deep-type escutcheons shall be used.

3.3 APPLICATION

A. Use grooved mechanical couplings and fasteners in accessible locations or where approved by the engineer.

B. Install unions or grooved joint couplings downstream of valves and at equipment or apparatus connections.

C. Install brass male adapters each side of valves in copper piped system. Sweat solder adapters to pipe.

D. Install gate or ball valves for shut-off and to isolate equipment, part of systems, or vertical risers.

E. Install globe or ball valves for throttling, bypass, or manual flow control services.

F. Provide spring loaded check valves on discharge of condenser water pumps.

G. Use plug cocks for throttling service.

H. Use only butterfly valves in heat pump and cooling tower water systems interchangeably with gate and globe valves.

I. Use only butterfly valves in condenser water systems for throttling and isolation service.

J. Use lug or grooved end butterfly valves to isolate equipment.

K. Provide 3/4-inch gate or ball drain valves at main shut-off valves, low points of piping, bases of vertical risers, and at equipment. Pipe to nearest drain.

L. Provide automatic air vents, piped per details on drawings, at all high points of piping and at end of hydronic supply mains.

M. Do not install above grade piping in areas subject to freezing. When such an area is encountered, notify the engineer for further instructions.

3.4 TESTS

A. Piping: After cleaning, all piping shall be hydrostatically tested at a pressure equal to 150 percent of the total system operating pressure but not less than 100 psi for a period sufficient to inspect every joint in the system and in no case less than 2 hours. No loss of pressure will be allowed. Leaks found during tests shall be repaired by re-welding or replacing pipe or fittings. Caulking or peening of joints or fittings will not be permitted. Concealed and insulated piping shall be tested in place before covering or concealing.

END OF SECTION 23 21 13

SECTION 26 32 13 – PACKAGED GENERATOR AND TRANSFER SWITCHES

PART 1 - GENERAL

1.1 SUMMARY

A. Refer to the General Requirements Specification, Section 260500.

B. This Section includes packaged engine-generator set for Standby power supply and automatic transfer switches.

1.2 DEFINITIONS

A. Operational Bandwidth: The total variation from the lowest to highest value of a parameter over a range of conditions indicated, expressed as a percentage of the nominal value of the parameter.

B. NG: Natural Gas.

C. Standby Rating: Power output rating equal to the power the generator set delivers continuously under normally varying load factors for the duration of the power outage.

1.3 SUBMITTALS

A. Product Data: For each type of packaged engine generator and automatic transfer switch indicated. Include rated capacities, operating characteristics, and furnished specialties and accessories. In addition, include the following:

1. Thermal Damage curve for generator.

2. Time-current characteristic of curves for generator protective device.

3. Fuel consumption in (gallons per hour OR cubic feet per hour) at .8 power factor at .5, .75 and 1.0 times generator capacity.

B. Shop Drawings: Detailed equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.

1. Dimensioned outline plan and elevation drawing of engine-generator set and other components specified.

2. Wiring Diagrams: Power, signal, and control wiring.

1.4 PERMITS

A. The contractor shall obtain and pay for all required permits. This shall include, but not limited to, the permit application to install emergency power stand-by power systems from the Division of Fire Prevention – Hazardous materials section (fuel tank permit) and air permits from the Division for Air Quality.

1.5 QUALIFICATIONS

A. Qualification Data

1. The generator and transfer switch(es) shall be manufactured by an entity who has been regularly engaged in the production of engine-generator sets and associated controls for a minimum of twenty years, thereby identifying one source of supply and responsibility.

2. The manufacturer shall provide factory-trained service and parts support through a factory authorized dealer/supplier that is regularly doing business in the area of installation.

3. The manufacturer shall have printed literature and brochures describing the standard system specified, not a one of a kind fabrication.

4. As part of qualification process, an authorized dealer/supplier, herein known as the dealer shall represent the manufacturer. To qualify as the dealer/supplier, it must be a "Full Product Line Sales and Service Dealer and shall have 24-hour service availability. The dealer/supplier must have certified generator service technicians, inventory of parts to support after sales service and can prove 5 years of experience in the engine-generator field.

B. Source quality-control test reports.

1. Certified summary of prototype-unit test report.

2. Certified Test Reports: For components and accessories that are equivalent, but not identical, to those tested on prototype unit.

3. Report of factory test on units to be shipped for this Project, showing evidence of compliance with specified requirements.

4. Report of sound generation.

5. Report of exhaust emissions showing compliance with applicable regulations.

6. Certified Torsional Vibration Compatibility: Comply with NFPA 110.

C. Field quality-control test reports

D. Warranty: Special warranty specified in this Section

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For packaged engine-generator sets and transfer switch(es) to include in emergency, operation, and maintenance manuals. Include the following:

1. List of tools and replacement items recommended to be stored at the Project for ready access. Including part and drawing numbers, and source of supply.

2. List of items requiring routine maintenance and recommended maintenance schedules.

1.7 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.

1. Maintenance Proximity: Not more than six (6) hours normal travel time from Installer's place of business to Project site.

B. Source Limitations: Obtain packaged engine-generator sets, transfer switch(es) and auxiliary components through one source from a single manufacturer.

C. Comply with ASME B15.1.

D. Comply with NFPA 37.

E. Comply with NFPA 30.

F. Comply with NFPA 110 requirements for Level 1 emergency power supply system.

G. Comply with UL 2200.

H. Engine Exhaust Emissions: Comply with applicable state and local government requirements.

1.8 PROJECT CONDITIONS

A. Interruption of Existing Electrical Service: Do not interrupt electrical service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary electrical service according to requirements indicated:

1. Notify Architect, Construction Manager and Owner no fewer than three (3) days in advance of proposed interruption of electrical service.

2. Do not proceed with interruption of electrical service without Owner's permission.

B. Environmental Conditions: Engine-generator system shall withstand the following environmental conditions without mechanical or electrical damage or degradation of performance capability:

1. Minimum Temperature: 0 °F

2. Maximum Temperature: 100 °F

3. Relative Humidity: 0 - 95 percent

4. Altitude: 1000 feet

1.9 COORDINATION

A. Coordinate size and location of concrete bases for package engine-generator sets. Cast anchor-bolt inters into bases. Install concrete, reinforcement, and formwork in accordance with manufacturer's recommendations.

1.10 WARRANTY

A. First Year Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of packaged engine-generator sets, automatic transfer switch(es) and associated auxiliary components that fail in materials or workmanship for one year from date of substantial completion. The warranty shall include parts and labor.

1. Extended Warranty: Starting from one year after the date of substantial completion and extending for one year, the manufacturer agrees to repair or replace components of the packaged engine generator sets, automatic transfer switch(es) and associated components that fail in material or workmanship. The warranty shall include parts and labor (mileage and travel time is excluded).

1.11 MAINTENANCE SERVICE

A. Initial Maintenance Service: Beginning at Substantial Completion, provide one year full maintenance by skilled employees of manufacturer's designated service organization. Include quarterly exercising to check for proper starting, load transfer, and running under load. Include routine preventive maintenance as recommended by manufacturer and adjusting as required for proper operation. Provide parts and supplies same as those used in the manufacture and installation of original equipment.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Caterpillar; Engine Div.
2. Onan/Cummins Power Generation; Industrial Business Group.
3. Generac
4. Kohler

2.2 ENGINE-GENERATOR SET

A. Packaged engine generator set shall be a coordinated assembly of compatible components. Refer to the drawings for Voltage/Phase/KW requirements.

B. Factory-assembled and -tested, engine-generator set.

C. Mounting Frame: Maintain alignment of mounted components without depending on concrete foundation; and have lifting attachments.

D. Capacities and Characteristics:

1. Power Output Ratings: Nominal ratings as indicated, with capacity as required to operate as a unit as evidence by records of prototype testing.
2. Nameplates: For each major system component to identify manufacturer's name and address, and model and serial number of component.

E. Generator-Set Performance with permanent magnet excitation:

1. Steady-State Voltage Operational Bandwidth: 1 percent of rated output voltage from no load to full load.
2. Transient Voltage Performance: Not more than 20 percent variation for 50 percent step-load increase or decrease. Voltage shall recover and remain within the steady-state operating band within three to four seconds.
3. Steady-State Frequency Operational Bandwidth: 0.25 percent of rated frequency from no load to full load.
4. Steady-State Frequency Stability: When system is operating at any constant load within the rated load, there shall be no random speed variations outside the steady-state operational band and no hunting or surging of speed.
5. Transient Frequency Performance: Less than 5 percent variation for 50 percent step-load increase or decrease. Frequency shall recover and remain within the steady-state operating band within five seconds.
6. Start Time: Comply with NFPA 110, Type 10, system requirements.
7. Excitation System: Performance shall be unaffected by voltage distortion caused by non-linear load.

2.3 ENGINE

A. Rated Engine Speed: 1800 rpm.

B. Alternator: Engine mounted belt drive 28v and 55 amp.

C. Lube Oil System: Forced-feed lubrication system with piston cooling, Lube oil circulating pump with safety valve, Lube oil filter, Lube oil heat exchanger, Filler neck, Dip stick and Closed crankcase breather system.

D. Combustion Air System: Exhaust turbo chargers, Intercooler integrated in radiator, Set of dry type air filters with contamination indicator and Air intake pipe work.

E. Cooling System: Coolant circulation pump, Engine mounted fan drive and Pusher fan.

F. Governor: Electronic Control through ECU, with speed sensing.

G. Coolant Jacket Heater: An electric water heater with integral thermostatic control. Comply with NFPA 110 requirements for Level 1 equipment for heater capacity.

1. Cooling system: Closed loop, liquid cooled, with radiator factory mounted on engine-generator set mounting frame and integral engine-driven coolant pump.

2. Solution of 50 percent ethylene-glycol-based antifreeze and 50 percent water, with anticorrosion additives as recommended by engine manufacturer.

3. Size of radiator: Adequate for continuous operation at the installation site altitude and ambient temperature.

4. Temperature Control: Self-contained, thermostatic-control valve modulates coolant flow automatically to maintain optimum constant coolant temperature as recommended by engine manufacturer.

5. Coolant Hose: Flexible assembly with inside surface of nonporous rubber.

a. Rating: 50-psig maximum working pressure with coolant at 180 deg F, and non-collapsible under vacuum.

b. End Fittings: Flanges or steel pipe nipples with clamps to suit piping and equipment connections.

H. Muffler/Silencer: The silencer shall be critical grade.

1. An Exhaust silencer shall be furnished of industrial standard construction, all welded, for stationary engine application. Long radius, low restriction fittings will be used throughout, and pipe size will be sufficiently large to handle the engine exhaust flow at full load without causing back pressure in excess of that allowed by the engine manufacturer.

I. Air-Intake Filter: Standard-duty, engine-mounted air cleaner with replaceable dry-filter element and “blocked filter” indicator.

J. Starting System: 12 or 24 volt electric, with negative ground.

1. Components: Sized so they will not be damaged during a full engine-cranking cycle with ambient temperature at maximum specified in Part 1 “Project Conditions” Article.

2. Cranking Motor: Heavy-duty unit that automatically engages and releases from engine flywheel without binding.

3. Cranking Cycle: As required by NFPA 110 for system level specified.

4. Battery: Lead-acid with capacity within ambient temperature range specified to provide cranking cycle at least three times without recharging.

5. Battery Cable: Sized as recommended by engine manufacturer for cable length indicated. Include required interconnecting conductors and connection accessories.

6. Battery Compartment: Plastic battery box which includes cover. Include accessories required to support and fasten batteries in place.

   a. Provide with battery heater.

7. Battery Charger: 12 or 24VDC, current-limiting, automatic-equalizing, and float-charging type. Unit shall comply with UL 1236 and include the following features:

   a. Operation: Minimum equalizing-charging rate of 10 amps shall be initiated automatically after battery has lost charge until and adjustable equalizing voltage is achieved at battery terminals. Unit shall then be automatically switched to a lower float-charging mode and shall continue to operate in that mode until battery is discharged again.

   b. Automatic Temperature Compensation: Must be equipped with temperature compensation to assure correct charging in all conditions.

   c. Automatic Voltage Regulation: Maintain constant output voltage regardless of input voltage variations up to plus or minus 5 percent.

   d. Ammeter and Voltmeter: Digital display shall indicate charging rates.

   e. Safety Functions: Sense abnormally low battery voltage and close contacts providing low battery voltage indication on control and monitoring panel. Sense high battery voltage and loss of AC input or DC output of battery charger. Either condition shall close contacts that provide a battery-charger malfunction indication at system control and monitoring panel.

   f. Enclosure and Mounting: NEMA-1.

2.4 GASEOUS FUEL SYSTEM

A. Gas Train: Comply with NFPA 37.

B. Engine Fuel System
   1. Natural-Gas:
      a. Carburetor.
      b. Fuel-Shutoff Solenoid Valves: NRTL-listed, normally closed, safety shutoff valves; one for each fuel source.
      c. Fuel filters.
      d. Manual Fuel Shutoff Valves:
      e. Flexible Fuel Connectors:
      f. LP-gas flow adjusting valve.
      g. Fuel change gas pressure switch.

2.5 CONTROLS AND MONITORING

A. Automatic Starting System Sequence of Operation: When mode-selector switch on the control and monitoring panel is in the automatic position, remote-control contacts in one or more separate automatic transfer switches initiate starting and stopping of generator set. When mode-selector switch is switched to the on position, the generator set starts. The off

position of same switch initiates generator-set shutdown. When generator set is running, specified system or equipment failures or derangements automatically shut down generator set and initiate alarms. Operation of a remote emergency-stop switch also shuts down generator set.

B. Provide a minimum run time control set per NFPA 110. Override shall be provided only by a remote emergency stop switch.

C. Configuration: Operating and safety indications, protective devices, basic system controls, engine gages, instrument transformers, generator disconnect switch or circuit breaker, and other indicated components shall be grouped in a combination control and power panel rigidly mounted to the generator set. Panel shall be powered from the engine-generator set battery.

D. Digital Generator Controller

1. Generator Mounted Control Panel: Provide a generator mounted control panel.

2. Communications: USB and internal industrial grade Modem with dial out and dial in capability, SAE J1939 engine ECU capability and separate RS485 for providing communications to a remote display panel for NFPA 110 indication.

3. Ethernet communication [Serial-Ethernet gateway shall be provided for BacNET IP protocol.

4. Generator Control Panel Protection Features: KWH/KVARH meter, Engine (Over speed, Battery Over/Under Voltage, Auxiliary Excitation and Speed/Frequency Mismatch), Generator (Over/Under Voltage, Over/Under Frequency, Unbalanced Voltage, Dead Bus Detection, Overload, Reverse/Reduced Power, Definite Over Current and Time Over Current, Inverse Time Over Current, Measured Ground Fault, Phase Rotation)

5. Environmental:

a. Temperature: Operating: -40 to 158°F, Storage: -40 to 185°F

b. Humidity: IEC 68-2-38

c. Salt Fog: ASTM B 17-73, IEC 68-2-11 (tested while operational)

d. Ingress Protection: IEC IP54 for front panel

e. Shock: 15 G in 3 perpendicular planes

f. Vibration:

1) 5 to 29 to 5 Hz: 1.5 G peak for 5 min.

2) 29 to 52 to 29 Hz: 0.036" DECS-A for 2.5 min.

3) 52 to 500 to 52 Hz: 5 G peak for 7.5 min.

6. Engine Control:

a. Cranking Control: Cycle or Continuous (Quantity and Duration Fully Programmable)

b. Engine Cool down

c. Successful Start Counter: Counts and records successful engine starts

d. Timers including, but not limited to:

1) Engine Cool down Timer
2) Engine Maintenance Timer
3) Pre-Alarm Time Delays for Weak/Low Battery Voltage
4) Alarm Time Delay for Over speed
5) Alarm Time Delay for Sender Failure.
6) Arming Time Delays after Crank Disconnect:
    a) Low Oil Pressure
    b) High Coolant Temperature

E. Indicating Devices: As required by NFPA 110 for Level 1 system including the following:

1. AC voltmeter.
2. AC ammeter.
3. AC frequency meter
4. EPS supplying load indicator
5. Ammeter and voltmeter phase-selector switches.
6. DC voltmeter (alternating battery charging).
7. Engine coolant temperature gage.
8. Engine lubricating oil pressure gage.
9. Running zone meter.

F. Protective Devices and Controls in Local Control Panel: Shutdown devices and common visual alarm indication as required by NFPA 110 for level 1 system, including the following:

1. Overcrank shutdown device
2. Overspeed shutdown devices
3. Coolant high temperature shutdown device
4. Low oil pressure shutdown device
5. Coolant low level shutdown device
6. Overcrank alarm
7. Overspeed alarm
8. Coolant high temperature alarm
9. Coolant low temperature alarm
10. Coolant low level alarm
11. Low oil pressure alarm
12. Lamp test
13. Contacts for local and remote common alarm
14. Main fuel tank low level alarm.

15. Shutdown engine when fuel level is below 10%
16. Run-off-auto switch
17. Control switch not in automatic position alarm
18. Low cranking voltage alarm
19. Battery charger malfunction alarm
20. Battery low voltage alarm
21. Battery high voltage alarm
22. Generator overcurrent protective device not closed alarm

G. 4-Relay: The 4-relay board includes (4) 10 amp form C relays customizable for user defined functionality requirements. Standard outputs as follows:

1. Engine Run
2. Engine Fail
3. Minor Alarm
4. Spare

H. Supporting Items: Include sensors, transducers, terminals, relays, and other devices and include wiring required to support specified items. Locate sensors and other supporting items on engine or generator, unless otherwise indicated.

I. Remote Alarm Annunciator: Designed for compliance with NFPA 110. LEDs labeled with proper alarm conditions identify each alarm as well as an audible signal for each alarm condition. Silencing switch in face of panel silences signal without altering visual indication. Connect so that after an alarm is silenced, cleaning of initiating condition will reactivate alarm until silencing switch is reset. Cabinet and faceplate are surface or flush-mounting type as indicated on the drawings to suit mounting conditions indicated.

1. LED indications are provided for the following:
    a. Low Coolant Level
    b. High Engine Temperature
    c. Low Oil Pressure
    d. Overcrank
    e. Overspeed
    f. Emergency Stop Activated
    g. Coolant low-temperature alarm
    h. Low fuel tank alarm
    i. Low cranking voltage alarm
    j. Contacts for local and remote alarm
    k. High engine temperature pre-alarm
    l. Low Coolant Temperature
    m. Battery Overvoltage

n. Battery low voltage

o. Battery charger Failure

p. Run-off-auto switch

q. Display Panel On

r. EPS Supplying Load

s. Control switch not in automatic position alarm

J. Remote Emergency-Stop Switch: Flush; wall mounted, unless otherwise indicated; and labeled. Push button to be protected from accidental operation.

2.6 GENERATOR OVERCURRENT AND FAULT PROTECTION

A. Generator Circuit Breaker: LSI adjustable electronic-trip type; 80 percent rated; complying with NEMA AB 1 and UL 489.

1. Tripping Characteristic: Designed specifically for generator protection.

2. Trip Rating: Refer to the one-line diagram on the contract drawings.

3. Mounting: On generator set in an enclosure.

B. Generator Protector: Microprocessor-based unit shall continuously monitor current level in each phase of generator output, integrate generator heating effect over time, and predict when thermal damage of alternator will occur. When signaled by generator protector or other generator-set protective devices, a shunt-trip device in the generator disconnect switch shall open the switch to disconnect the generator from load circuits. Protector shall perform the following functions:

1. Initiates a generator overload alarm when generator has operated at an overload equivalent to 110 percent of full-rated load for 60 seconds. Indication for this alarm is integrated with other generator-set malfunction alarms.

2. Under single or three-phase fault conditions, regulates generator to 300 percent of rated full-load current for up to 10 seconds.

3. As overcurrent heating effects on the generator approaches the thermal damage point of the unit, protector switches the excitation system off, opens the generator disconnect device, and shuts down the generator set.

4. Senses clearing of a fault by other overcurrent devices and controls recovery of rated voltage to avoid overshoot.

2.7 GENERATOR, EXCITER, AND VOLTAGE REGULATOR

A. Comply with NEMA MG 1.

B. Drive: Generator shaft shall be directly connected to the engine shaft. Exciter shall be rotated integrally with generator rotor.

C. Electrical Insulation: Class H or Class F.

D. Stator-Winding Leads: Brought out to terminal box to permit future reconnection for other voltages if required.

E. Construction shall prevent mechanical, electrical, and thermal damage due to vibration, overspeed up to 125 percent of rating, and heat during operation at 110 percent of rated capacity.

F. Enclosure: Drip proof.

G. Instrument Transformers: Mounted within generator enclosure.

H. Voltage Regulator: Analog voltage controller regulates voltage on 50 or 60 hertz brushless generators. The controllers include frequency compensation, over-excitation shutdown, solid-state buildup circuitry, and EMI filtering. Adjustment potentiometers are located on the terminals and components side of the controller. If remote adjustment of the generator output is desired, the Voltage Adjust Rheostat jumper must be replaced with a user-supplied rheostat. A 1000 ohm, ½-watt rheostat will provide adequate voltage adjustment range for most applications.

2.8 OUTDOOR GENERATOR-SET ENCLOSURE

A. Description:

1. Construction: Weatherproof formed and/or welded steel.

2. Hinged doors for access with lockable latches.

3. Louvered and/or baffled air inlet. Grated air outlet.

4. Enclosure shall be sound attenuated type rated Level 2 / Critical Grade.

5. Choice of standard colors. Custom colors available upon request.

2.9 VIBRATION ISOLATION DEVICES

A. Neoprene Pad

1. ¼ inch thick elastomeric pad in square shape to be placed under the base frame at each of the pre-drilled isolator mounting holes.

2. Helps to prevent sliding of the unit as well as reducing the transmission of sound and vibration into the floor.

2.10 AUTOMATIC TRANSFER SWITCH

A. General Construction

1. The automatic transfer switch shall be furnished by the manufacturer of the engine-generator set so as to maintain system compatibility and local service responsibility for the complete emergency power system.

2. ASCO and Russelectric switches are acceptable equivalent manufacturers in addition to the manufacturers listed in this specification under section 2.1, A.

3. Transfer switches shall be UL1008 listed for their application in their intended enclosures at 100% continuous ampere rating and shall meet or exceed UL1008 endurance test criteria to include rate of operation and number of operation cycles.

a. The transfer switch shall be designed and intended for switching the load connection between two power sources.

b. The transfer switch shall include electrical and mechanical interlocks to prevent unintentional paralleling of the power sources.

c. The transfer switch shall be of double throw construction and the electrical operator shall be a reliable solenoid mechanism, momentarily energized.

d. There shall be a direct mechanical coupling to facilitate completion of an open in-phase transition such that any inrush current is equal to or less than normal starting current for inductive loads.

e. The transfer switch main contacts shall be of silver composition, electrically operated and mechanically held in position. Inspection of the main contacts shall be possible from the front of the transfer switch without major disassembly.

f. The transfer switch shall include removable arc chutes, housed within an arc chamber constructed of high-dielectric high-strength material, that are mounted over each set of main contacts. Arc chutes shall be constructed of metal plates and a baffle cover designed to extinguish an electrical arc and protect the main contacts.

g. The transfer switch shall include colored, mechanical position indication of the main contacts for source 1 and source 2.

h. The transfer switch will be supplied with a handle for manual operation and shall only be performed with the transfer switch de-energized to allow exercising the main contacts through their full range of motion for inspection.

4. Transfer switches shall be open transition and provide a time delay in the "neutral position" adjustable from 0 to 120 seconds that will permit a delayed transition and provide an in-phase monitor that will permit an in-phase transition between two live sources that have a phase angle difference of +/- 8 degrees or less. In the event that the sources do not synchronize to complete an in-phase transition within a time delay period adjustable from 1 to 60 minutes, the transfer switch shall be capable of defaulting to a delayed transition adjustable from 0 to 120 seconds.

5. The transfer switch shall include a means of deriving control power for electrical operation. Control power transformers shall be multi-tap for ease of voltage adjustment in the field. Control power for all transfer operations shall be derived from the line side of the source to which the load is being transferred.

6. Transfer switches shall be 4-pole design. The fourth pole shall be identical to the other power poles.

7. Each transfer switch shall be provided in a NEMA 1 enclosure suitable for use in environments indicated in the drawings.

8. Provide a 200KA surge protection device.

9. The transfer switch shall be rated for use in a circuit capable of delivering the short-circuit current shown on the contract drawings.

B. Service entrance rated transfer switches shall meet the following:

1. UL1008 listed as a complete assembly to include the transfer switch, service disconnect, and overcurrent protection device(s). UL1008 listed transfer switches with an adjacent compartment or enclosure (used to house service disconnect or overcurrent protection devices), that are listed to UL891 only, will not be accepted.

2. UL1008 listed and marked "continuous load current not to exceed 100 percent of switch rating". Transfer switches marked as 80 percent will not be accepted.

3. Provide overcurrent protection in the form of a molded case circuit breaker(s) equipped with an electronic trip unit (LSI adjustable). The electronic trip unit shall be configured with energy-reducing maintenance switching as a method to reduce arc energy and clearing time when the trip setting is rated or can be adjusted to 1200A or higher. A door-mounted light (blue) shall provide indication when energy-reducing maintenance switching is enabled.

4. Provide compartmentalized construction (steel barrier or equivalent) separating the transfer switch and overcurrent protection device(s).

5. Include a door-mounted, removable keyed switch that when rotated will disconnect the transfer switch load from the normal power source, trip the circuit breaker, and inhibit the remote engine start circuit.

6. Provide ground fault protection for use with solidly grounded wye electric services of more than 150 volts to ground where the service disconnect rating is 1000A or more.

C. Bypass Isolation Automatic Transfer Switches

1. The bypass isolation automatic transfer switch shall be constructed of an automatic transfer switch (ATS) and a Bypass Switch.

2. The ATS and the bypass switch shall both be draw-out and front accessible. Field configurable bus links shall be provided to allow any combination of cable termination at the top and bottom for source 1, source 2, and load. The factory cable termination connections shall be with source 1 and load connections at top and source 2 connections at bottom.

3. Both the ATS and Bypass Switch shall be capable of automatically transferring the load, in either direction, between the power sources. Automatic operation shall be self-acting and managed by the automatic controller. With the ATS isolated or removed, the Bypass Switch shall be capable of automatically initiating and completing a transfer. With the Bypass Switch isolated or removed, the ATS shall be capable of automatically initiating and completing a transfer.

4. Transitioning the load between the ATS and bypass switch shall be accomplished without an interruption of power to the load and without opening the enclosure door. Designs that incorporate a cutout in the enclosure to accommodate handles, and do not provide a continuous steel barrier for worker safety, will not be accepted.

5. The bypass isolation transfer switch shall be constructed with two (2) doors and include the following:

   a. The ATS and Bypass Switch shall be housed in separate compartments, with steel barrier, that are isolated from each other to facilitate safety and ease of maintenance. Each compartment shall include a door with pad-lockable handle.

   b. A dedicated compartment, with steel barrier, that provides separation from the power conductor connections, ATS and bypass switch. Control wiring shall be harnessed with keyed disconnect plugs for ease of maintenance and customer connections shall be wired to a terminal block mounted inside the compartment.

6. A simple control panel with operator instruction shall include the following:

a. A 2-position selector switch, labeled ‘ATS – Bypass’, shall be provided for transitioning the load between the ATS and Bypass Switch.

b. A 3-position selector switch, labeled ‘Source 1 - Off – Source 2’, shall be provided to control non-automatic operation of the ATS or Bypass Switch

c. A 3-position selector switch, labeled ‘‘Test – Off - Manual Bypass’, shall be provided.

1) The ‘Test’ position shall enable exercising or testing the ATS while in the isolated position. The 3-position selector switch, labeled ‘Source 1 – Off – Source 2’, shall be used to manually control electrical operation of the ATS while in the isolated position.

2) The ‘Manual Bypass’ position shall disable the automatic controller when operating in the bypass mode. The 3-position selector switch, labeled ‘Source 1 – Off – Source 2’, shall be used to manually control electrical operation of the bypass switch.

7. A racking mechanism shall be provided that is capable of moving the ATS into three different positions: ‘connected’, ‘isolated’, and ‘disconnected’.

a. When in the ‘connected’ position, the ATS shall be fully racked-in and connected to the main power bus and control power.

b. When in the ‘isolated’ position the ATS will be disconnected from the main power bus, but remain connected to control power, and shall be capable of being electrically operated (without interruption of power to the load) for test and exercise purposes.

c. When in the ‘disconnected’ position, the ATS will be fully racked-out and disconnected from the main power bus and control power. When in the ‘disconnected’ position, the ATS shall be capable of being removed from the enclosure for inspection or maintenance.

8. The Bypass Switch shall be capable of functioning as a non-automatic transfer switch and the operator shall have the ability to manually initiate a load transfer between the power sources, with the ATS connected, isolated, or disconnected.

9. The ATS shall be capable of being racked-out to the isolated position with the enclosure door closed. A LED light shall be mounted on the control panel to indicate ATS racking position status. Safety interlocks shall be provided to prevent connecting or disconnecting the ATS from the main power bus with the main contacts closed.

10. A racking mechanism shall be provided that is capable of moving the Bypass Switch into two different positions: ‘connected’, and ‘disconnected’.

a. When in the ‘connected’ position, the Bypass Switch shall be fully racked-in and connected to the main power bus and control power.

b. When in the ‘disconnected’ position, the Bypass Switch will be fully racked-out and disconnected from the main power bus and control power. When in ‘disconnected’ position, the Bypass Switch shall be capable of being removed from the enclosure for inspection or maintenance.

11. The ATS shall be capable of functioning as a non-automatic transfer switch and the operator shall have the ability to manually initiate a load transfer between the power sources, with the Bypass Switch connected or removed.

12. The ATS or bypass switch shall be capable of manual operation when racked-out to the disconnected position.

13. The ATS and the bypass switch shall be constructed to carry full load current, and factory interconnected with silver plated copper bus.

D. Controller

1. Operation of the transfer switch and monitoring of both sources shall be managed by the controller. The controller shall be hardened against transient voltages.

2. The controller shall have an operating temperature range from -20 to +70 degrees C (-4 to +158 degrees F) and a storage temperature range from -30 to +85 degrees C (-22 to +185 degrees F). The controller faceplate shall be UV resistant.

3. The controller shall be capable of accepting 120Vac supply power from two (2) different sources.

4. The controller faceplate shall be UV resistant and include a 2-line, 16-character, backlit display. The controller shall be capable of displaying transfer switch status, parameters, setpoints, and diagnostic data. All set point parameters shall be password protected.

5. The controller shall include one (1) unit status LED and a mimic power bus consisting of four (4) LED's for indicating the following:

   a. Availability status of Source 1

   b. Availability status of Source 2

   c. Connection status of Load to Source 1

   d. Connection status of Load to Source 2

   e. The controller keypad shall include the following pushbutton controls:

   f. ENGINE TEST, for use with a generator source.

   g. PREVOUS, and NEXT for ease of navigation

   h. INCREMENT, DECREMENT, and ENTER for programming.

   i. HELP/LAMP TEST, for operator assistance and diagnostics

   j. BYPASS TIMER, to bypass time delay countdown

   k. The controller shall display voltage and frequency for source 1, source 2, and the load.

   l. The controller shall display the voltage dropout and pickup setpoints, for source 1 and source 2, in volts.

   m. The controller shall display the frequency dropout and pickup setpoints, for source 1 and source 2, in hertz.

6. The controller shall monitor voltage and frequency for source 1 and source 2.

7. The controller shall have a voltage range of 0-790 Vrms with an accuracy of +/- 1%. Nominal voltage shall be adjustable in 1 volt increments from 120 to 600 Vac.

8. The controller shall have a frequency range of 40-70 Hz with an accuracy of +/- 0.3 Hz. Nominal frequency shall be adjustable as 50 or 60Hz.

9. The normal and emergency sources shall include phase reversal protection. The preferred rotation is programmable as ABC or CBA.

10. Voltage and frequency dropout and pickup setpoints, for source 1 and source 2, shall be adjustable as a percentage of nominal per the table below. Pickup and dropout setpoints for overvoltage, underfrequency, overfrequency, and voltage unbalance / phase loss shall be capable of being disabled.

Setpoint	Sources	Dropout	Pickup
Undervoltage	Source1 and 2	70 – 97%	(DO + 2%) - 99%
Overvoltage	Source 1 and 2	105 – 110%	103% - (DO – 2%)
Underfrequency	Source 1 and 2	90 – 97%	(DO + 1Hz) – 99%
Overfrequency	Source 1 and 2	103 – 105%	101% - (DO – 1Hz)
Voltage Unbalance	Source 1 and 2	5 – 20%	3% to (DO – 2%)

11. A time delay shall be provided for transfer from source 1 to source 2, adjustable from 0 to 1800 seconds.

12. A time delay shall be provided on retransfer from source 2 to source 1, adjustable from 0 to 1800 seconds.

13. A time delay shall be provided for actuation of an engine start signal, adjustable from 0 to 120 seconds, for overriding momentary power fluctuations.

14. A time delay shall be provided allowing the load connection to remain in the “neutral position” (disconnected from source 1 and source 2), adjustable from 0 to 120 seconds.

15. A time delay shall be provided that allows the generator to run unloaded, adjustable from 0 to 0-1800 seconds, for cool-off prior to shut down.

16. A time delay shall be provided to postpone the generator source from being declared unavailable, fixed at 6 seconds, for overriding momentary power fluctuations.

17. A time delay shall be provided for actuation of a pre-transfer signal, adjustable from 0 to 120 seconds. The contact shall be a form-c contact rated for 10-Amp at 250-Vac and 10-Amp at 30-Vdc.

18. A time delay shall be provided to allow synchronization of sources, adjustable from 0 to 60 minutes (0 to 600 seconds), for use with in-phase transition transfer.

19. A time delay shall be provided for voltage unbalance, adjustable from 10 to 30 seconds.

20. All time delays shall be programmable, using the controller keypad, without the use of special tools.

21. A setpoint shall be provided for entering a four-digit password, adjustable from 0000-9999, for controlling user access to programmable time delays, inputs, outputs, and other system settings.

22. A setpoint shall be provided for configuring retransfer operation mode, adjustable as [automatic, manual].

23. A setpoint shall be provided to change date, time, and enable daylight saving time (DST).

24. A setpoint shall be provided for configuring in-phase transition operation, adjustable as [disabled, enabled].

25. A setpoint shall be provided for configuring a frequency difference range between sources for in-phase transition, adjustable from 0 to 3 hertz nominal.

26. A setpoint shall be provided for configuring serial communication baud rate [9600-19200] and Modbus address [1-247].

27. The controller shall record, store, and display a cumulative counter history of the following parameters. Each counter shall have the ability to be reset and indicate the last reset date.

    a. Source 1 Available time

    b. Source 2 Available time

    c. Source 1 Connected time

    d. Source 2 Connected time

    e. Engine Run time

    f. Load Energized Time

    g. Number of Transfers

    h. Date, Time and Reason for Last Sixteen (16) transfers

28. The controller shall provide a programmable engine plant exerciser.

    a. A failsafe shall initiate an automatic retransfer to source 1 if source 2 should fail during an engine test.

    b. Each engine plant exerciser shall provide the following user programmable setpoints that are only applicable during an engine test:

        1) Test schedule, adjustable to [disabled, daily, 7-day interval, 14-day interval, 28-day interval].

        2) Start time in hours and minutes, AM or PM.

        3) Day of the week (Sun, Mon, Tues, Wed, Thurs, Fri, Sat)

        4) Test mode, adjustable to [disabled, no load transfer, loaded transfer].

        5) Run time, adjustable from 0 to 600 minutes (0 to 6000 seconds).

29. The controller shall include two (2) dedicated inputs for monitoring the position of the main contacts (source 1 and source 2).

a. The controller shall include five (5) control inputs that provide 10mA @ 24-Vdc. Each input shall be capable of accepting an external dry contact and will be configured with following functionality:

1) Monitor mode – disable automatic operation of the controller while continuing to display status information and allow set point programming.

2) Lockout – disable automatic operation of the controller and lock-out an integral overcurrent protection device (circuit breaker).

3) Manual retransfer - remotely initiate a retransfer from source 2 to source 1.

4) Go to emergency - initiate a transfer of the load to the emergency source (source 2). A failsafe shall initiate an automatic retransfer to source 1 if source 2 should fail.

5) Emergency inhibit/shed – remotely inhibit transfer of the load to the emergency source (source 2) or shed the load from the emergency source (source 2) if already connected.

30. The controller shall provide four (4) dedicated Form A relay outputs for controlling the power switch device.

a. The controller shall provide one (1) dedicated Form A relay output for an engine start signal, for use with a generator source. The contact shall be rated for 5A @ 250-Vac / 5A @ 30-Vdc.

b. The controller shall provide one (1) dedicated Form C relay output for Pre-transfer and the contacts shall be rated for 10A @ 250-Vac / 10A @ 30-Vdc.

c. The controller shall provide one (1) dedicated Form C relay output for General Alarm and the contacts shall be rated for 10A @ 250-Vac / 10A @ 30-Vdc.

31. Serial communication (RS-485) with support for BacNET IP protocol shall be provided.

a. Ethernet communication [Serial-Ethernet gateway] shall be provided.

2.11 GENERATOR DOCKING STATION

A. Acceptable Manufacturers:

1. ASCO (Basis of Design)
2. Power Temp
3. Trystar
4. Approved Equivalent.

B. Requirements:

1. Refer to the drawings for voltage, phase, ampacity, AIC and SCCR requirements.
2. UL 1008 or ETL Listed to UL 1008 Standards.
3. Comply with NEC 700.3(F).

4. Single breaker docking station, pass through style, with hardwired and kirk keyed breaker. Kirk key interlock breaker to permanent generator.
5. Integrated Circuit Breakers:
    a. Circuit breakers shall be manufactured by Square D, Eaton, or Siemens.
    b. LSI adjustable trip.
    c. UL 489.
    d. Provide mechanical lugs on silver-plated copper busbar for line and lead connections.
6. Camlocks:
    a. Provide camlocks for the portable generator.
    b. Camlocks shall be protected with spring-loaded weatherproof flip covers that are clear in color to allow for easy viewing of phase color and gender.
    c. Color-coded according to the specified voltage.
7. Enclosures:
    a. Pad-mount, Bottom Cable Entry, NEMA 3R rain-tight, aluminum (non-corrosive) or stainless steel enclosure with rake system for cable entry at the bottom.
    b. Cable entry area at the bottom of the enclosure shall be covered by a hinged trap door.
        1) It shall be possible to close and lock the front door to the enclosure with the trap door open, and power cables connected through the bottom of the enclosure. The enclosure shall maintain NEMA 3R integrity with power cables connected.
    c. Front Cover:
        1) Hinged.
        2) Gasketed.
        3) Pad-lockable latch.
    d. Finishes:
        1) Paint after fabrication. Powder coated Hammer Gray.
8. Phase, Neutral, and Ground Buses:
    a. Silver-plated copper.
    b. Ground bus shall be bonded to box.
    c. Ground and neutral buses shall be rated 100 percent of phase bus.
    d. Provide round edges on bus.
9. All hardware shall be stainless steel including all bolts, nuts, and hinges.
10. Lockable rake system with reinforced support struts to reduce cable theft.
11. Permanent generator connectors shall be broad range set-screw type, located behind an aluminum barrier.

12. Phase rotation meter shall be included and shall have LED's to annunciate improper phase rotation.
13. Extra depth shall be provided on all docking stations with pad mount leg kits to accommodate bottom cable entry.
14. Portable Generator block heater receptacle (208, Single Phase, 30A, GFCI protected)
15. Portable Generator Battery Charger receptacle L5-30R, 120V, 20 amp. Receptacle shall be protected by a GFCI breaker.
16. Integral Strip Heater with thermostat adjustable to approximately 75° F. 208V, 1-phase, 20 amp.
17. Generator Annunciation Panel to meet NEC.700.3(F)
    a. Audible Alarm
    b. Alarm Light
    c. Silence Button
18. Terminal block for Temporary Generator Auto Start Circuit from the associated ATS.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas, equipment bases, and conditions, with Installer present, for compliance with requirements for installation and other conditions affecting packaged engine-generator set performance.

B. Examine roughing-in of piping systems and electrical connections. Verify actual locations of connections before packaged engine-generator installation.

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

3.2 INSTALLATION

A. Comply with packaged engine-generator manufacturers' written installation and alignment instructions and with NFPA 110.

B. Install packaged engine generator to provide access, without removing connections or accessories, for periodic maintenance.

C. Install generator on concrete pad. Construct concrete pad in accordance with the manufacturer's recommendations.

D. Electrical Wiring: Install electrical devices furnished by equipment manufacturers but not specified to be factory mounted.

E. Contractor shall install the complete electrical generating system including all fuel connections in accordance with the manufacturer's recommendations. Connect all piping to generator that is required for the system to operate. Install according to the manufacturer's instructions.

F. Generator Docking Station:

1. Install docking station annunciation panel adjacent to permanent generator annunciation panel.

2. Provide connection between the ATS and docking station for auto-start of temporary generator.

3.3 CONNECTIONS

A. Connect fuel, cooling-system, and exhaust-system piping adjacent to packaged engine generator to allow service and maintenance.

B. Connect fuel piping to engines with a gate valve and union and flexible connector.

C. Ground equipment according to the manufacturer's instructions and the NEC.

D. Connect wiring according to Division 26 Section "Low-Voltage Electrical Power Conductors and Cables" and the NEC.

3.4 IDENTIFICATION

A. Label all piping associated with the generator with painted stencil or adhesive wrap.

3.5 FACTORY TESTING

A. Before shipment of the equipment, the engine-generator set shall be tested under rated load for performance and proper functioning of control and interfacing circuits. Tests shall include:

1. Verifying all safety shutdowns are functioning properly.

2. Verify single step load pick-up per NFPA 110.

3. Verify transient and voltage dip responses and steady state voltage and speed (frequency) checks.

B. Before shipment of the transfer switch shall be tested under operating conditions for performance and proper functioning of control and interfacing circuits. Tests shall include:

1. Verify all timing sequences operate properly and are set to factory settings.

2. Verify the transfer mechanism operates properly.

3. Verify all manual operations and indicators are functioning properly.

3.6 STARTUP AND CHECKOUT

A. The supplier of the electric generating plant and associated items covered herein shall provide factory trained technicians to check out the completed installation and to perform an initial startup inspection to include:

1. Ensuring the engine starts (both hot and cold) within the specified time.

2. Verification of engine parameters within specification.

3. Verify no load frequency and voltage, adjusting if required.

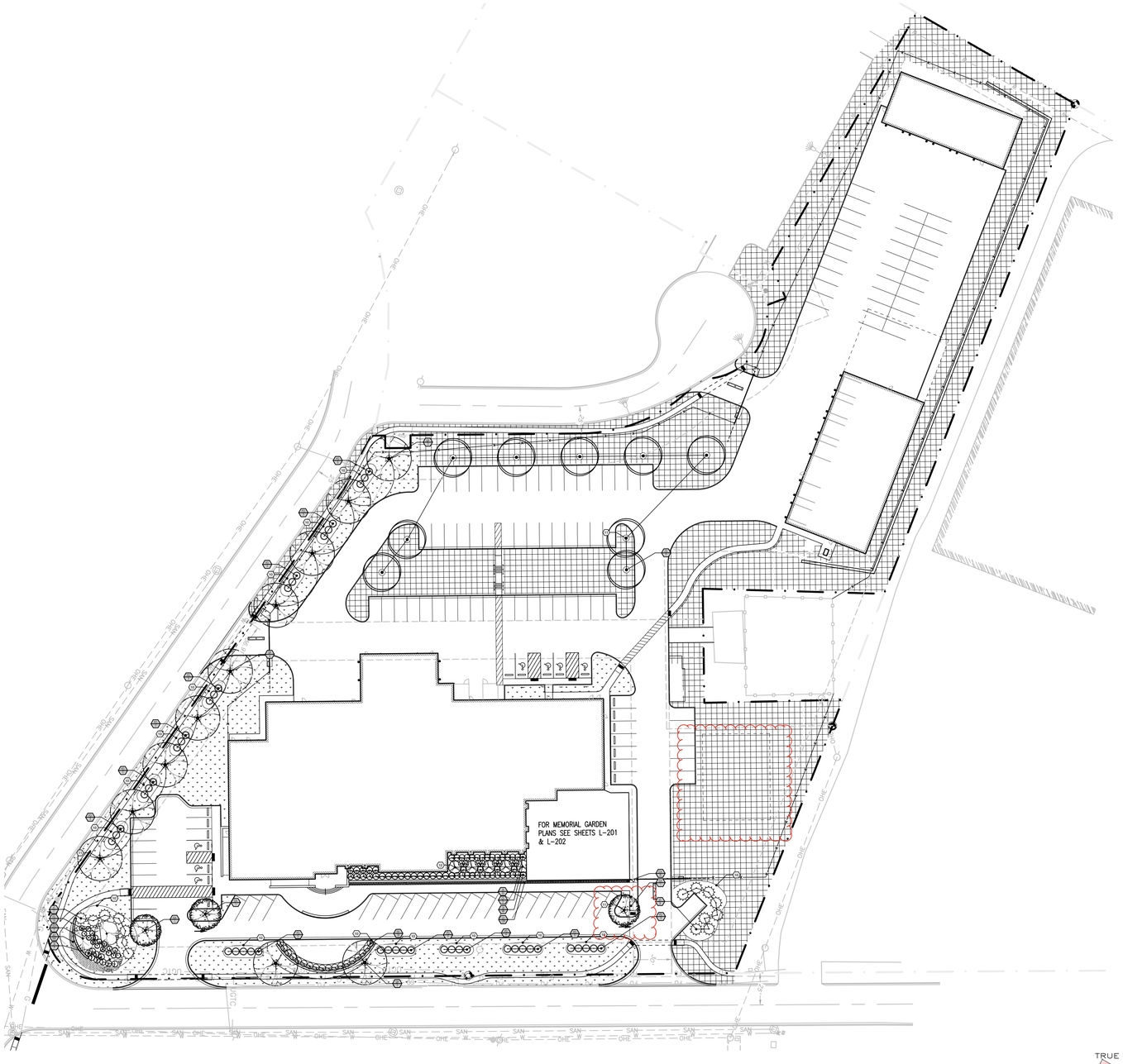
4. Test all automatic shutdowns of the engine-generator.

5. Perform a load test of the electric plant, ensuring full load frequency and voltage are within specification by using building load.

3.7 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain packaged engine generators. Document training attendees and video record training. Provide owner with a copy of the training video.

END OF SECTION 26 32 13



Site Landscape Planting Plan
1"=40'-0"

General Notes

1. GENERAL MUD, GRAVEL, OR DEBRIS WILL NOT BE ALLOWED ON ANY OF THE ROADWAYS LEAVING THE SITE AREA. CONTRACTOR SHALL CLEAN DEBRIS, MUD, GRAVEL, ETC. FROM THE STREET AS IT OCCURS.
2. IF, DURING THE CONSTRUCTION, INTERFERENCE ARISES WITH EXISTING UTILITIES IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE UTILITY COMPANY INVOLVED. THE CONTRACTOR SHALL NOTIFY, AT LEAST (7) SEVEN DAYS BEFORE BREAKING GROUND, ALL PUBLIC SERVICE CORPORATIONS HAVING WIRES, POLES, PIPES, CONDUITS, MANHOLES, OR OTHER STRUCTURES THAT MAY BE AFFECTED BY THIS OPERATION, INCLUDING ALL STRUCTURES WHICH ARE AFFECTED AND NOT SHOWN ON THESE PLANS. THERE WILL BE NO DELAYS ALLOWED FOR UTILITY INTERFERENCES.
3. ALL AREAS DISTURBED OR DAMAGED OUTSIDE THE LIMITS OF CONSTRUCTION SHALL BE REPAIRED AT NO COST TO THE OWNER AND TO THE SATISFACTION OF THE OWNER.
4. ALL DISTURBED AREAS SHALL BE SODDED OR SEEDED AS SHOWN ON THIS PLAN.
5. ALL GROUND SURFACE AREAS THAT HAVE BEEN BROUGHT TO FINISH GRADE AND ARE NOT TO BE DISTURBED FURTHER, SHALL BE REVEGETATED AS SOON AS POSSIBLE. ALL OTHER GROUND SURFACES DISTURBED DURING CONSTRUCTION SHALL BE BROUGHT TO ORIGINAL GRADE OR SHALL CONFORM TO NEW GRADES IN AS SMOOTH AND CONSISTENT A MANNER AS POSSIBLE AND REVEGETATED.
6. PLANT QUANTITIES ON PLANT SCHEDULE ARE FOR REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL PLANTINGS SHOWN ON THIS PLAN.
7. ALL PLANTING BEDS SHALL BE MULCHED WITH 3" SHREDDED HARDWOOD MULCH UNLESS OTHERWISE NOTED.

Legend

SOD – REFER TO SPECIFICATIONS

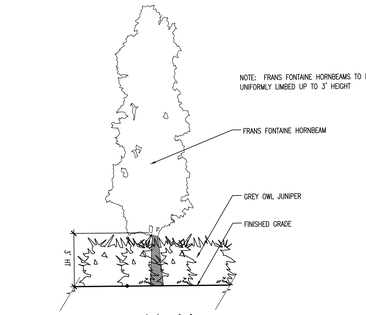
SEED AND STRAW – REFER TO SPECIFICATIONS

Coded Notes

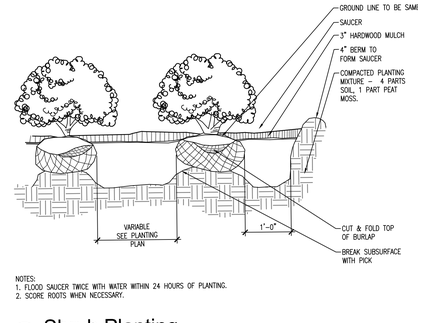
CODE	DESCRIPTION
10	3" SHREDDED HARDWOOD MULCH BED
11	MULCH RING AROUND TRUNK, 2.5' RADIUS. TYP.
12	FRANS FONTAINE HORNBEAMS TO BE LIMBED UP TO 3' ABOVE FINISHED GRADE – SEE A3/L-101. CONTACT THE LANDSCAPE ARCHITECT WITH ANY QUESTIONS OR CONCERNS.

Plant Schedule

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
TREES							
	CF	5	CARPINUS BETULUS 'FRANS FONTAINE'	FRANS FONTAINE HORNBEAM	3" CAL.	B&B	SPECIMEN. ALL TREES TO HABE UNIFORM HABIT – MATCHING, FULL
	CK	9	CLADRASTIS KENTUKEA	AMERICAN YELLOWWOOD	2.5" CAL.	B&B	UNIFORM HABIT
	CKO	3	CORNUS KOUSA	KOUSA DOGWOOD	8' HT.	B&B	UNIFORM HABIT. SPECIMEN. MULTI-TRUNK. FULL TO BASE
	GA	3	GINKGO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD MAIDENHAIR TREE	2.5" CAL.	B&B	FULL. UNIFORM HABIT.
	QP	11	QUERCUS PHELLOS	WILLOW OAK	2.5" CAL.	B&B	FULL. UNIFORM HABIT.
SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	H X W	REMARKS
SHRUBS							
	CA	41	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	3 GAL.	POT	FULL.
	FG	16	FOTHERGILLA GARDENII	DWARF FOTHERGILLA	3 GAL.		
	HV	18	HYDRANGEA PANICULATA 'RENNY'	VANILLA STRAWBERRY™ PANICLE HYDRANGEA	5 GAL.		SIMILAR HABIT. FULL.
	JC	17	JUNIPERUS VIRGINIANA 'CANAERTII'	CANAERTI EASTERN REDCEDAR	7' HT.	B&B	SIMILAR HABIT
	JX	97	JUNIPERUS X 'GREY OWL'	GREY OWL JUNIPER	3 GAL.	POT	5–7 BIBB. SIMILAR HABIT. SPACE UNIFORMLY.
	LV	140	LIRIOPE MUSCARI 'VARIEGATA'	VARIEGATED LILYTURF	4"	5–7 BIBB.	FULL. UNIFORM HABIT
	PO	45	PRUNUS LAUROCERASUS 'OTTO LUYKEN'	OTTO LUYKEN ENGLISH LAUREL	10 GAL.		SIMILAR HABIT.
SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
GROUND COVERS							
	AC	265	AJUGA REPTANS 'CATLIN'S GIANT'	CATLIN'S GIANT CARPET BUGLE	4"	POT	

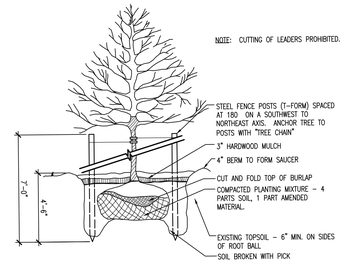


A3 Hornbeam Limbing
1/4"=1'-0"



NOTES:
1. FLOOD SAUCER TWICE WITH WATER WITHIN 24 HOURS OF PLANTING.
2. SCORE ROOTS WHEN NECESSARY.

A4 Shrub Planting
3/4"=1'-0"



A5 Deciduous Tree Planting
1/4"=1'-0"

BRANDSTETTER CARROLL INC
ARCHITECTS•ENGINEERS•PLANNERS
2360 Chaumin Drive, Lexington, KY 40517
p. 859.268.1933 www.brandstettercarroll.com
Lexington Cincinnati Cleveland Dallas Charleston

STATE OF KENTUCKY
PATRICK T. HOAGLAND
316
REGISTERED
LANDSCAPE ARCHITECT

Revisions: Addendum 1
Issue Date:4/14/2025
Plot Date: April 11, 2025

Richmond, KY Police Dept.
457 Northgate Dr
Richmond, KY 40475

Landscape Planting Plan

Project No. 22133

L-101

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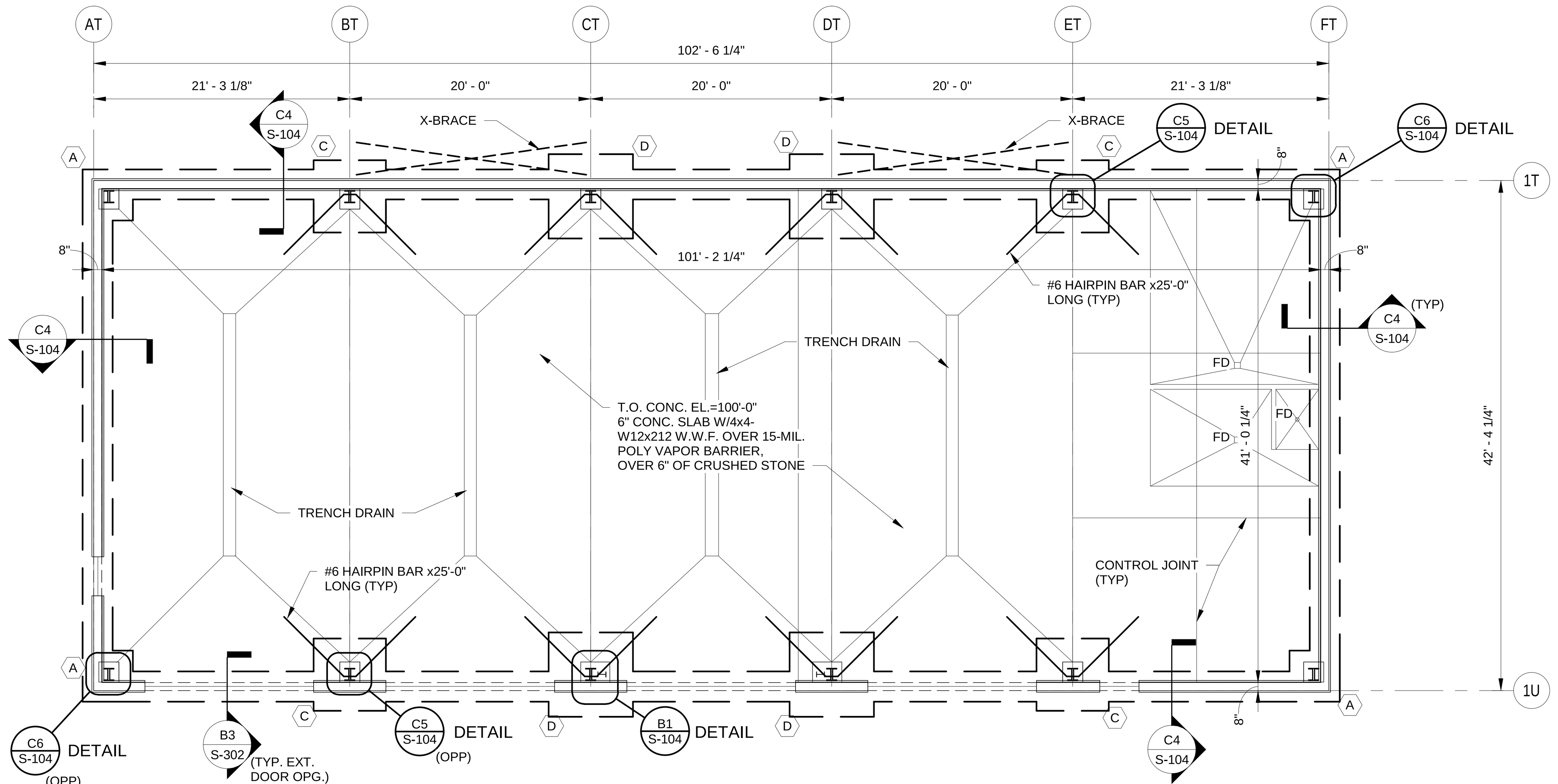
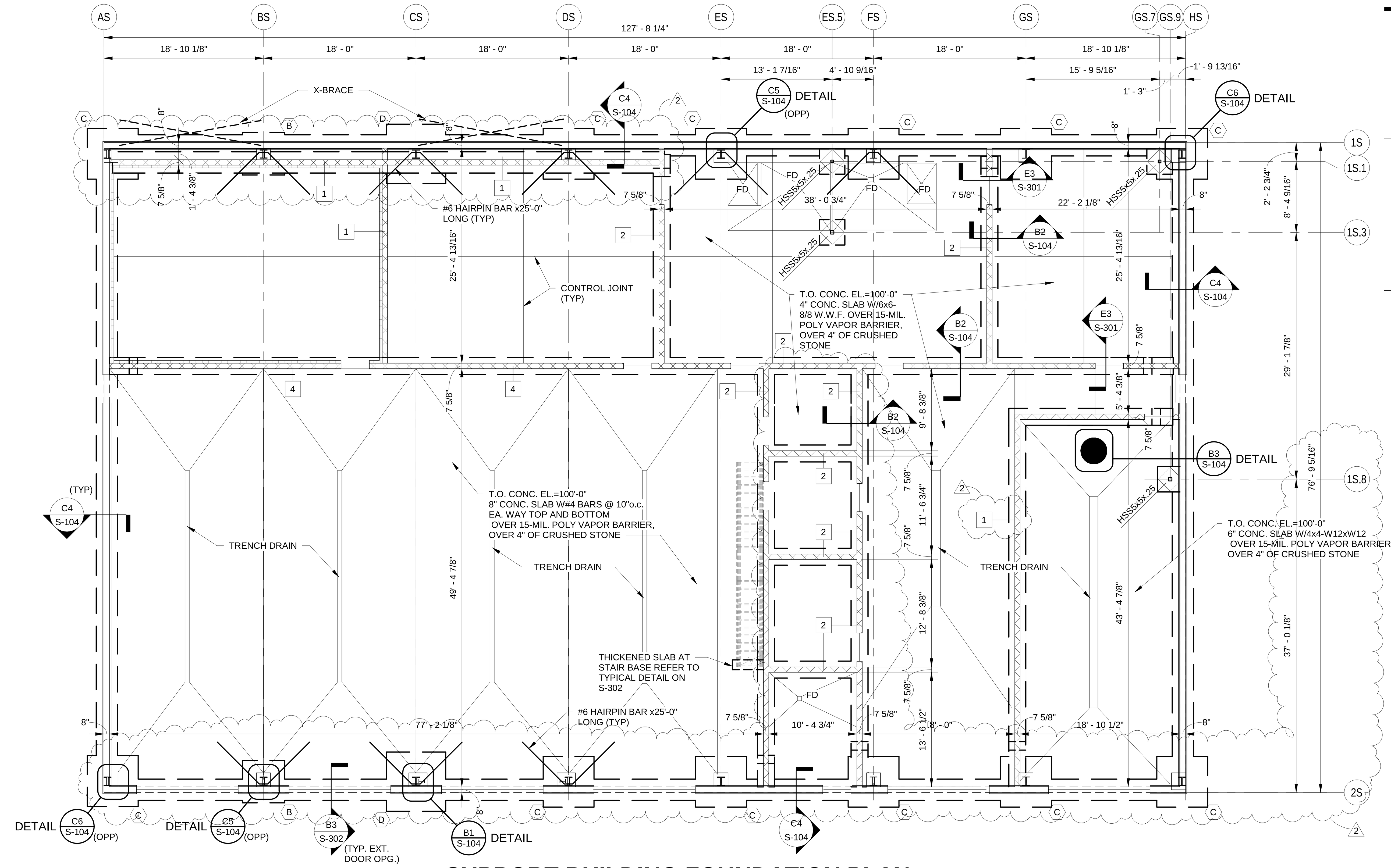


STORAGE BUILDING FOUNDATION PLAN

SCALE: 1/8"=1'-0"

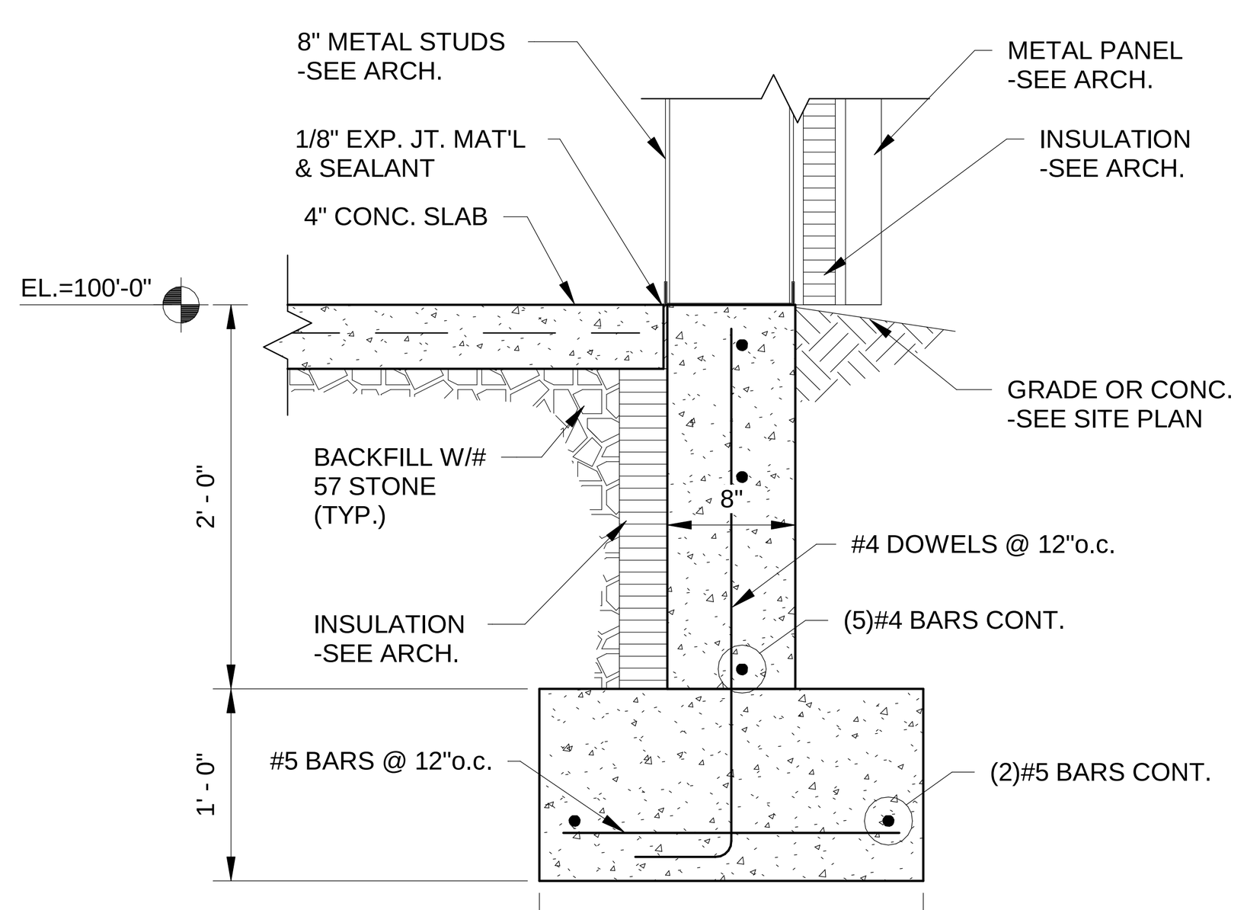
DATUM ELEV.=960.5ft=100'-0"



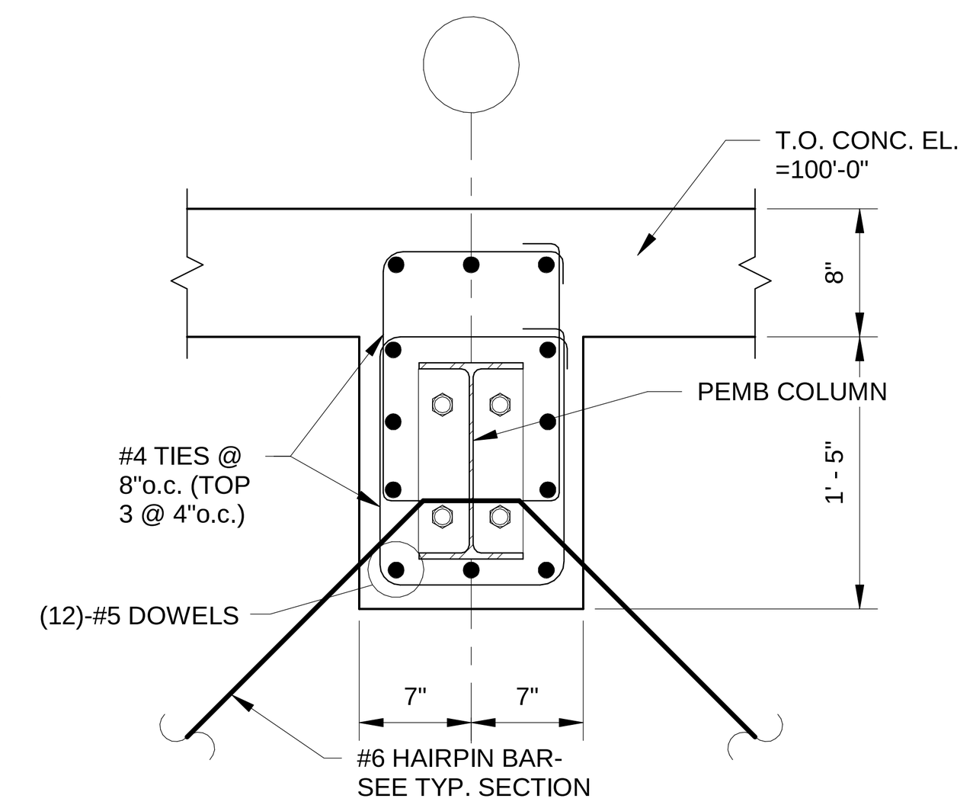
SUPPORT BUILDING FOUNDATION PLAN

SCALE: 1/8"=1'-0"

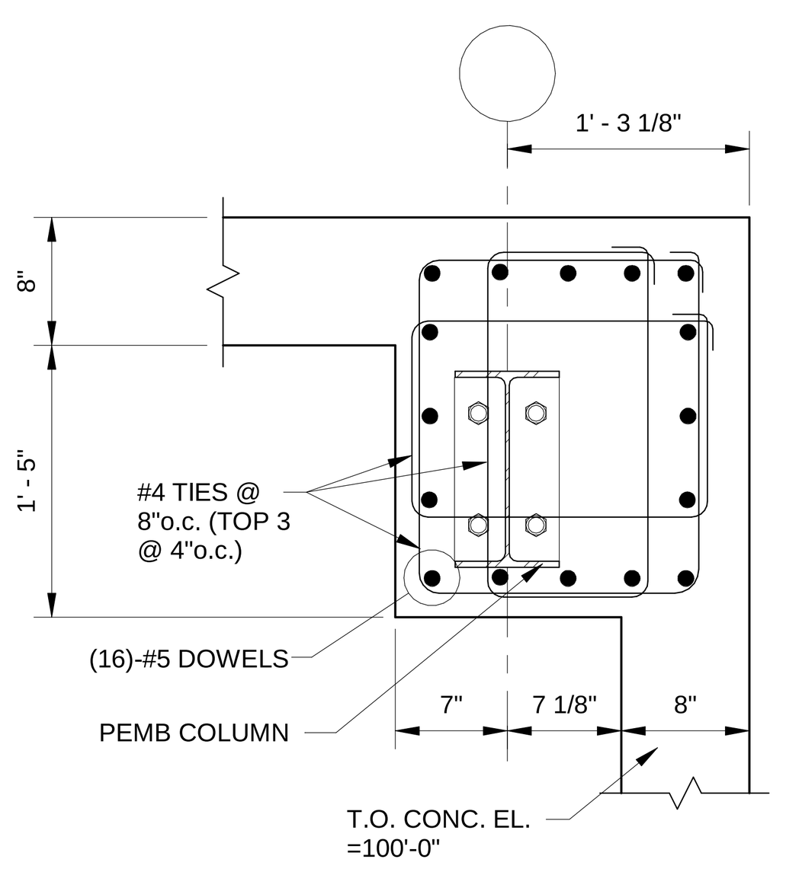
DATUM ELEV.=960.75ft.=100'-0"



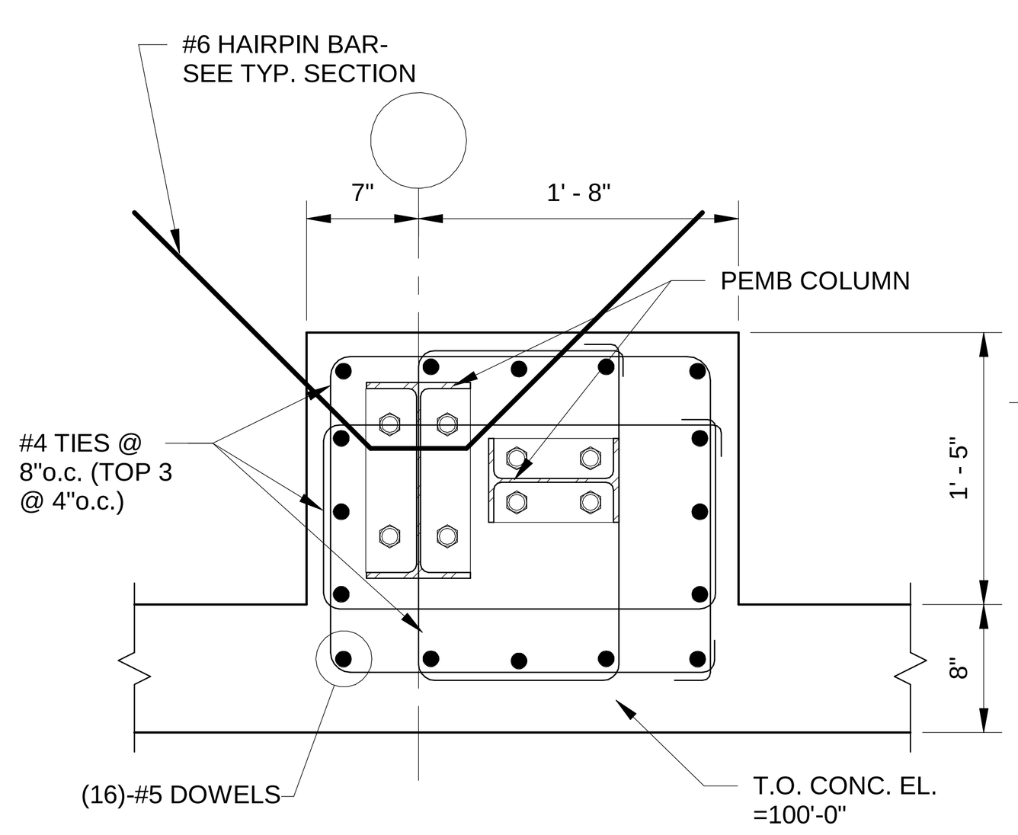
SECTION C4 S-104



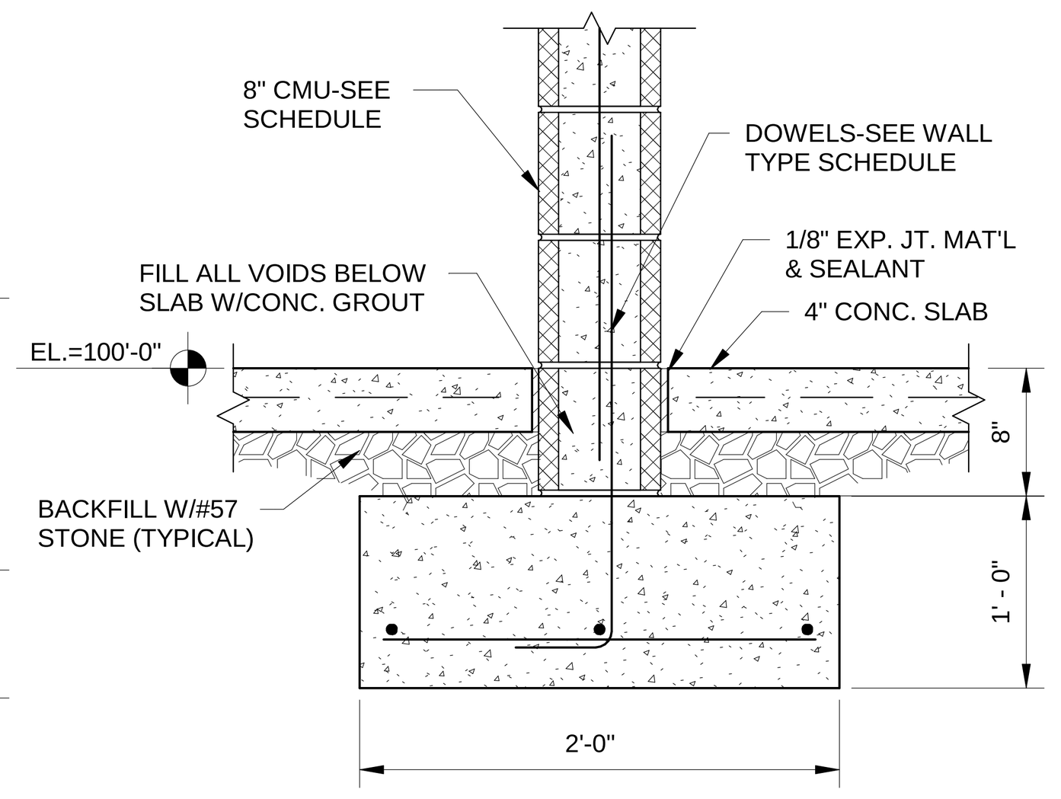
DETAIL C5 S-104



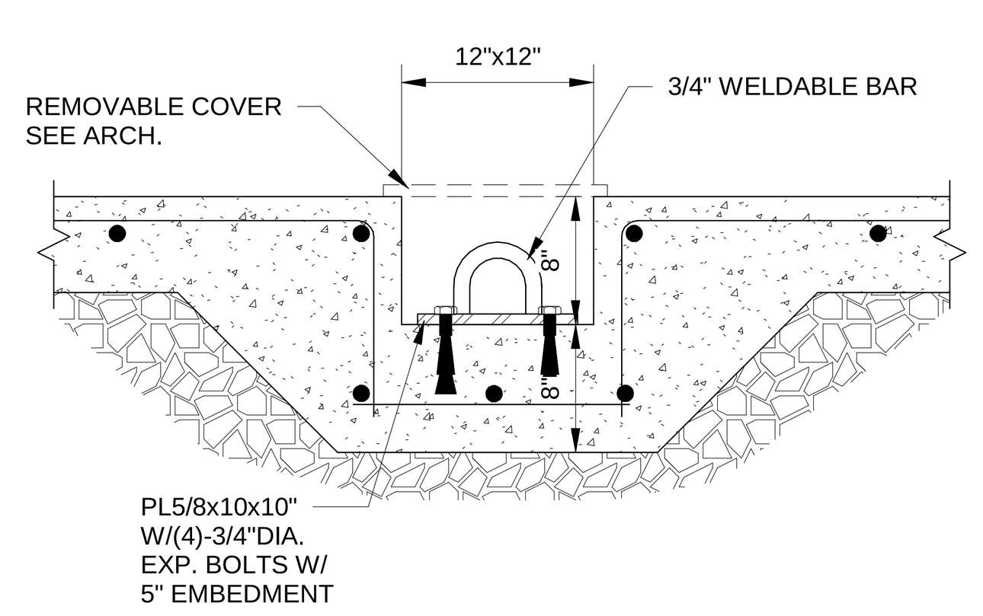
DETAIL C6 S-104



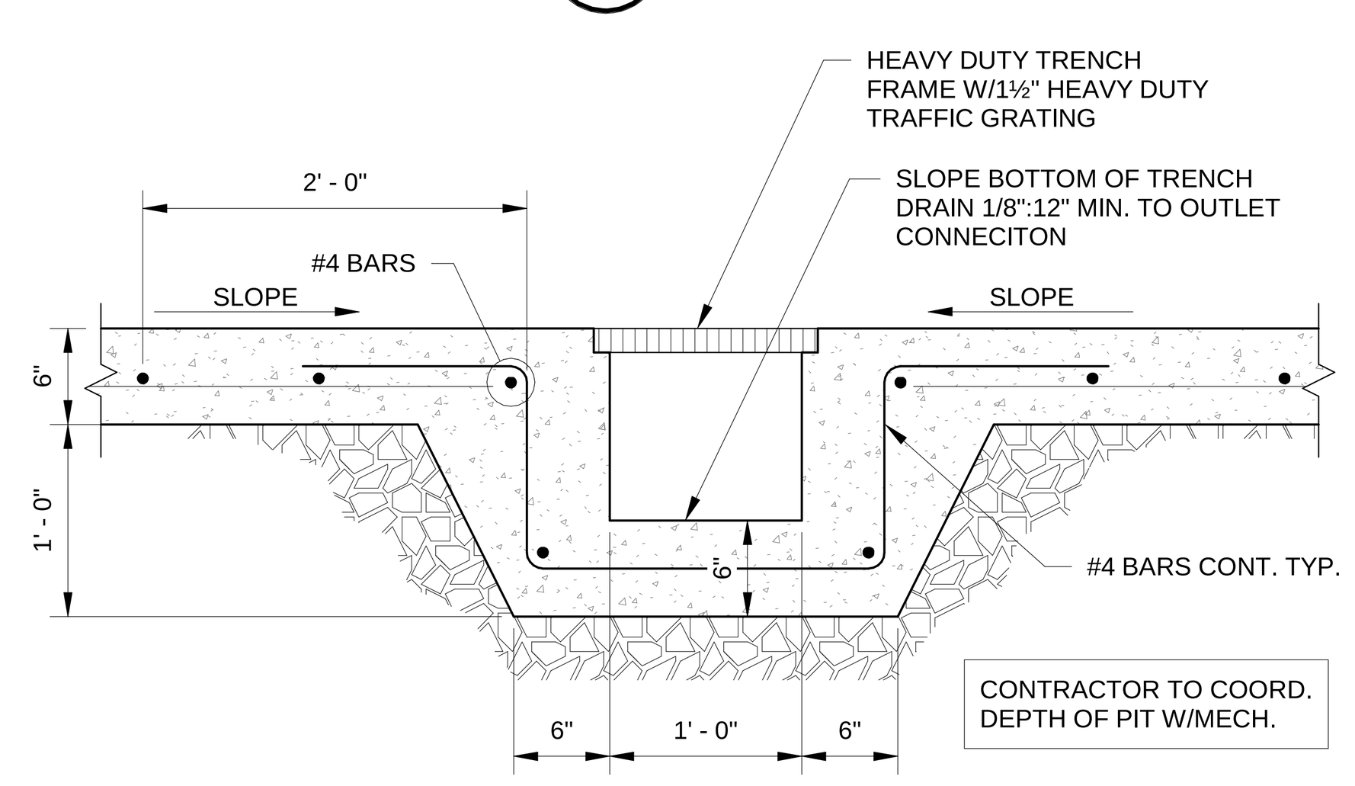
DETAIL B1 S-104



DETAIL B2 S-104



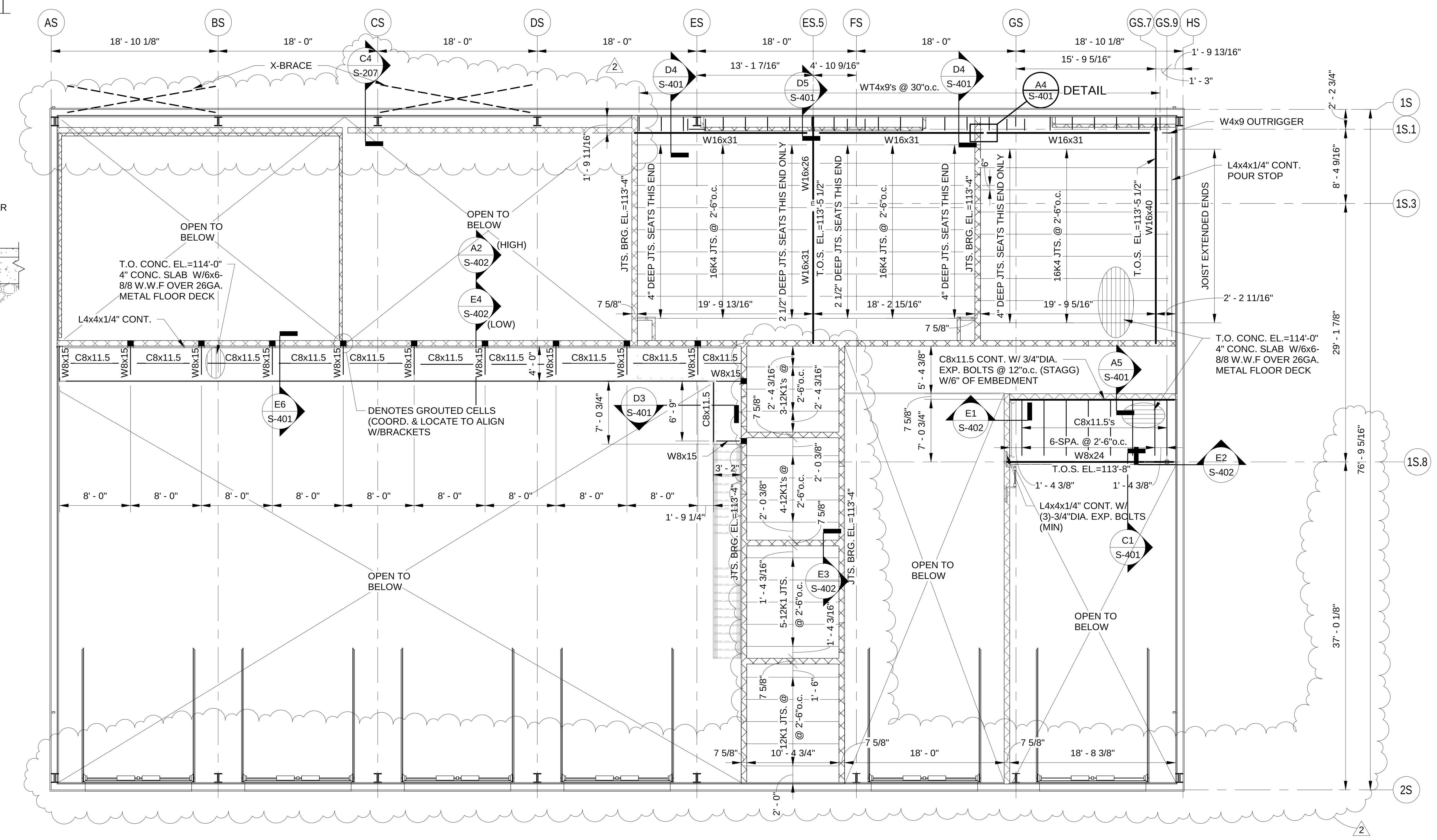
DETAIL B3 S-104



TRENCH DRAIN DETAIL

FOOTING SCHEDULE

MARK	SIZE	REINFORCING STEEL
A	4'-0"x4'-0"x12"	5-#5 BARS EA. WAY
B	5'-0"x5'-0"x12"	6-#5 BARS EA. WAY
C	6'-0"x6'-0"x12"	7-#5 BARS EA. WAY
D	7'-0"x7'-0"x12"	8-#5 BARS EA. WAY



SUPPORT BUILDING MEZZANINE FLOOR FRAMING PLAN

SCALE: 1/8"=1'-0"

BRANDSTETTER CARROLL INC
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2360 Chauvin Drive, Lexington, KY 40517
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Revisions: #2 APRIL 25, 2025
Issue Date: MARCH 28, 2025

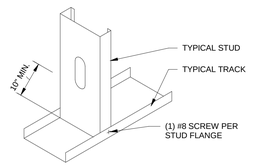
Richmond Police Department

Address
Richmond, KY 40475

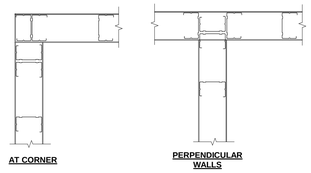
SUPPORT & STORAGE BLDG. FOUNDATION PLANS

Project No.
22133
(P24155)

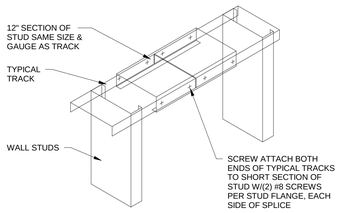
S-104



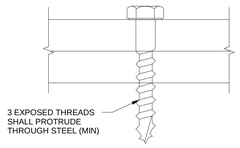
DETAIL AT HOLES IN STUDS



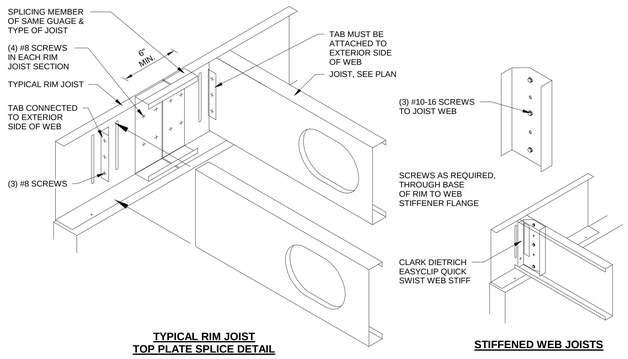
TYPICAL WALL INTERSECTION PLAN DETAILS



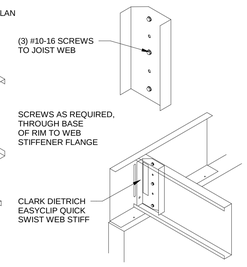
TYPICAL STUD WALL TOP PLATE SPLICE DETAIL



SCREW CONNECTION REQUIREMENTS



TYPICAL RIM JOIST TOP PLATE SPLICE DETAIL



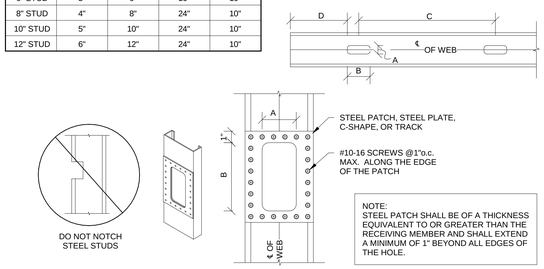
STIFFENED WEB JOISTS

TYPICAL METAL STUD FRAMING DETAILS

MAXIMUM HOLE SIZE W/O REINFORCING WALL FRAMING				
STUD SIZE	MAX. HOLE DEPTH (A)	MAX. HOLE LENGTH (B)	MAX. HOLE SPACING (C)	MAX. HOLE EDGE DIST. (D)
3 5/8" STUD	1 1/2"	4"	7"	10"
6" STUD	1 1/2"	4"	11"	10"
8" STUD	1 1/2"	4"	18"	10"
10" STUD	1 1/2"	4"	20"	10"
12" STUD	1 1/2"	4"	24"	10"

MAXIMUM HOLE SIZE W/ REINFORCING WALL FRAMING				
STUD SIZE	MAX. HOLE DEPTH (A)	MAX. HOLE LENGTH (B)	MAX. HOLE SPACING (C)	MAX. HOLE EDGE DIST. (D)
3 5/8" STUD	1 3/4"	6"	16"	10"
6" STUD	3"	6"	16"	10"
8" STUD	4"	8"	24"	10"
10" STUD	5"	10"	24"	10"
12" STUD	6"	12"	24"	10"

MAXIMUM HOLE SIZE W/O REINFORCING JOIST FRAMING				
STUD SIZE	MAX. HOLE DEPTH (A)	MAX. HOLE LENGTH (B)	MAX. HOLE SPACING (C)	MAX. HOLE EDGE DIST. (D)
6" STUD (20,18,16, 14,12 GA.)	1 1/2"	4"	7"	10"
8" STUD (18,16,14, 12 GA.)	1 1/2"	4"	11"	10"
10" STUD (16,14,12 GA.)	1 1/2"	4"	16"	10"
12" STUD (16 GA.)	1 1/2"	4"	20"	10"
12" STUD (14 & 12 GA.)	1 1/2"	4"	24"	10"

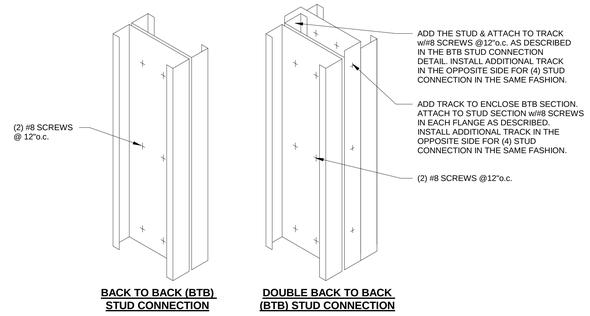


STUD HOLE PENETRATION

TYPICAL WALL FASTENING SCHEDULE FOR CFS WALLS	
CONNECTION	**FASTENING**
WALL BOTTOM TRACK TO FLOOR	#8 SCREWS @12"o.c.
WALL BOTTOM TRACK TO FOUNDATION	1/2"Ø ANCHOR BOLTS @24"o.c.
WALL BOTTOM TRACK TO WOOD SILL PLATE	STEEL PLATE SPACED @4'-0"o.c. w/(4) #8 SCREWS & (4) 10d NAILS OR (6) 8d COMMON NAILS
WALL STUD TO TOP OR BOTTOM TRACK	(2) #8 SCREWS AT EACH END PER FLANGE
STRUCTURAL PANELS, SUBFLOORS, & ROOFS (NAIL & GLUE SUBFLOORS)	#10 SCREWS @6"o.c. ALONG ALL EDGES & @12"o.c. ALONG INTERMEDIATE MEMBERS
* SHEARWALLS	N/A
*NON-STRUCTURAL WALLS (GYPSUM BOARD ON FRAMING)	#6 SCREWS @12"o.c.
NOTE: ALL WOOD STRUCTURAL PANELS SHALL BE ATTACHED TO STEEL FRAMING w/FLAT-HEAD SELF-DRILLING TAPPING SCREWS w/MINIMUM HEAD DIAMETER OF 0.292 IN (8MM)	

COLD FORMED STEEL HEADERS - (U.N.O.)					
OPENING SIZE	WALL TYPE	WEB MEMBERS	TRACKS	JACK STUDS[2]	KING STUDS[2]
0'-8" to 6'-0"	6" CFS WALL	(2)800S162-18GA	(2)600T200-18GA	(2)600S162-18GA(BTB)	(2)600S162-18GA(BTB)
6'-0" to 13'-0"	6" CFS WALL	(2)1000S162-16GA	(2)600T300-16GA	(2)600S162-16GA(BTB)	(2)600S162-16GA(BTB)
0'-8" to 6'-0"	8" CFS WALL	(2)1000S162-18GA	(2)800T200-18GA	(2)800S162-18GA(BTB)	(2)800S162-18GA(BTB)
6'-0" to 13'-0"	8" CFS WALL	(2)1200S162-16GA	(2)800T300-16GA	(2)800S162-16GA(BTB)	(2)800S162-16GA(BTB)

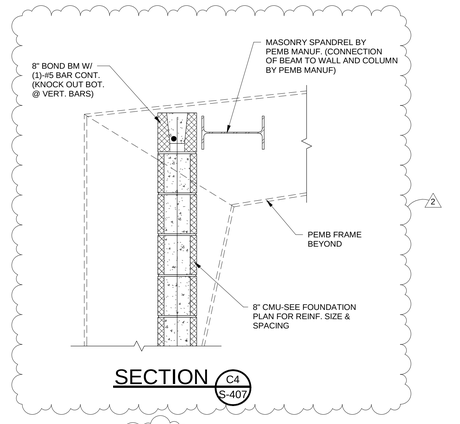
NOTES: (BTB) = BACK-TO-BACK
1. FOR CONNECTION INFORMATION REFER TO CFS DETAILS ON FOLLOWING 'SECTIONS & DETAILS' SHEETS.
2. JACK & KING STUDS SHALL MATCH THE GAUGE & TYPE OF STUD WALL WHERE THE OPENINGS ARE LOCATED.



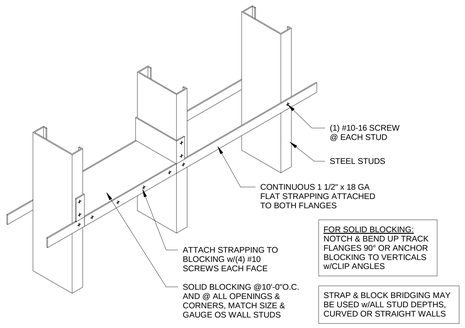
BACK TO BACK (BTB) STUD CONNECTION

DOUBLE BACK TO BACK (BTB) STUD CONNECTION

TYPICAL FASTENING PATTERN FOR MULTIPLE CFS STUDS

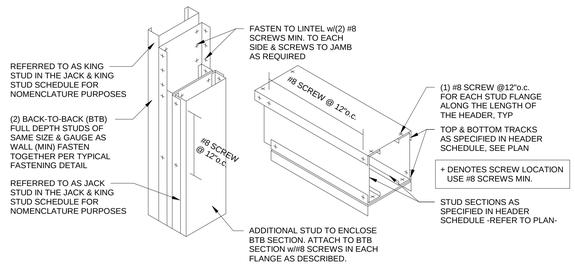


SECTION C4 / S-407

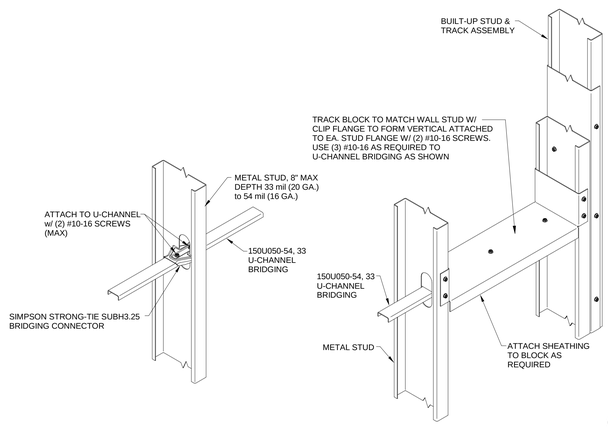


LOAD BEARING WALL BRIDGING

(FOR WALLS WITH SHEATHING PLACED PERPENDICULAR TO FRAMING)

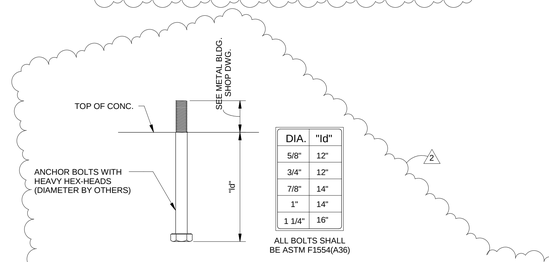


TYPICAL HEADER-JAMB CONNECTION



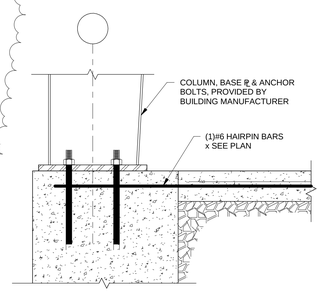
EXTERNAL WALL BRIDGING

(BRIDGE EXTERIOR WALL AT MID-HEIGHT)

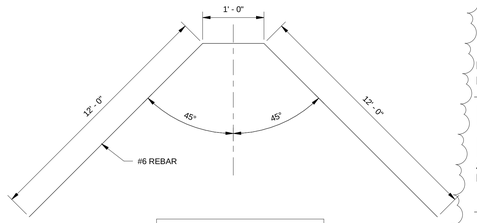


DIA.	"ld"
5/8"	12"
3/4"	12"
7/8"	14"
1"	14"
1 1/4"	16"

EMBEDMENT DETAIL



TYPICAL HAIRPIN CONNECTION



HAIPIN NOTES:
1. PROVIDE HAIRPIN IN A SINGLE BAR (DO NOT SPLICE LEGS)
2. INSTALL HAIRPINS BEHIND OUTER MOST COLUMN ANCHOR BOLT (NEAREST THE OUTMOST WALL)
3. CENTER HAIRPIN BAR IN SLAB

TYPICAL HAIRPIN DETAILS

BRANDSTETTER CARROLL INC
ARCHITECTS + ENGINEERS + PLANNERS
2360 Chauvin Drive, Lexington, KY 40517
p. 859.268.1933 www.brandstettercarroll.com

POAGE ENGINEERS & ASSOCIATES
880 Sparta Court Suite 200 Lexington, Ky 40504
Phone: (859) 255-9034 Fax: (859) 252-3130

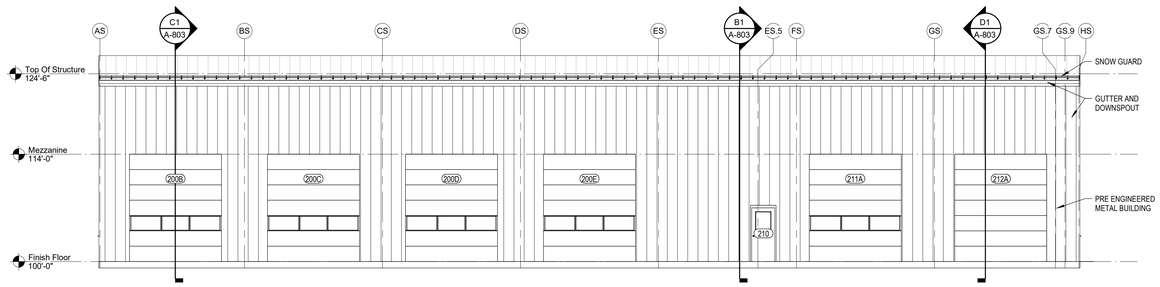
Revisions: #2 APRIL 25, 2025
Issue Date: MARCH 28, 2025

Richmond Police Department
Address:
Richmond, KY 40475

SECTIONS & DETAILS

Project No. 22133 (P24155)

S-407



E1 Support Building South Elevation

1/8" = 1'-0"

Legend - Floor Plan

ROOM NAME 101 — ROOM NUMBER	2 HOUR RATED WALL
101A — DOOR NUMBER	BALLISTIC RATED WALL
ISF10 — WINDOW ASSEMBLY	STC RATED WALL
INDICATES DOOR	METAL MESH ALONG FACE OF STUD FRAMING
W8.8-x — WALL TYPES, REF A-001 & A-002	
AC — ACCESS CONTROL	

General Notes - Doors

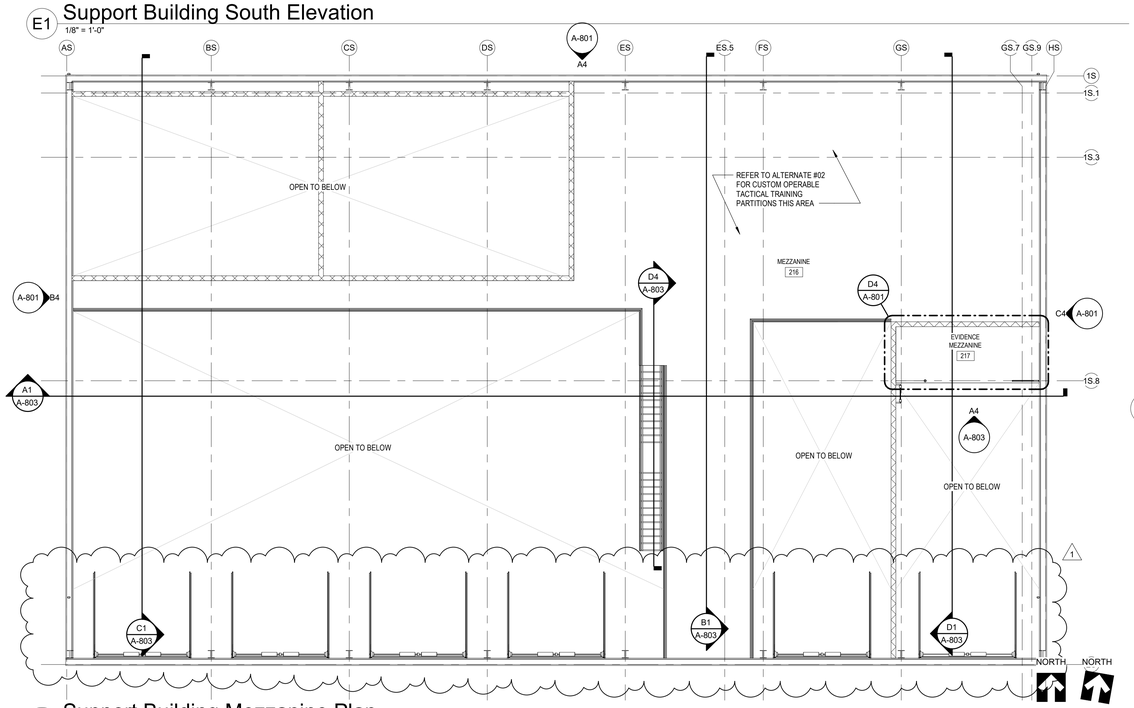
1. DO NOT SCALE DRAWINGS, WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DRAWINGS. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATION WITH THE ARCHITECT BEFORE CONTINUING WITH CONSTRUCTION.
2. DOORS LOCATED IN METAL STUD PARTITIONS SHALL BE LOCATED 6" FROM WALL ON HINGED SIDE UNLESS NOTED OTHERWISE. DOORS LOCATED IN MASONRY WALLS SHALL BE LOCATED 8" FROM WALL ON HINGED SIDE UNLESS NOTED OTHERWISE.
3. ALL GLAZING AT EXTERIOR WALL ASSEMBLIES AND ASSOCIATED FRAMES TO BE INSULATED.
4. ALL GLAZING BELOW 60" A.F.F. TO BE SAFETY (TEMPERED) GLAZING.
5. EXTERIOR HOLLOW METAL DOORS TO BE GALVANIZED AND INSULATED.

General Notes

1. REFER TO BASE SCOPE FOR STORAGE BUILDING, ELECTRICAL, PLUMBING AND SITE.
2. REFER TO SEPCIFICAIONS FOR DO NOT SCALE DRAWINGS, WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
3. ALL DIMENSIONS ARE TO FACE OF STUDS, MASONRY, OR CENTERLINE OF STRUCTURAL STEEL UNLESS OTHERWISE INDICATED.
4. REFER TO STRUCTURAL FRAMING PLANS FOR SLOPING OF BEAMS AND JOISTS.
5. MECHANICAL, PLUMBING, AND ELECTRICAL ITEMS ARE SOWN FOR THE SOLE PURPOSE OF INDICATING THEIR RESPECTIVE LOCATIONS. REFER TO THE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR SIZE, TYPE, AND OTHER REQUIREMENTS PERTAINING SPECIFICALLY TO THESE ITEMS.
6. ALL MECHANICAL, PLUMBING, AND ELECTRICAL ROOF PENETRATIONS ARE SHOWN GRAPHICALLY, COORDINATE WITH MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR LOCATIONS. ALL PENETRATIONS ARE TO BE PAINTED TO MATCH ROOF COLOR.
7. PROVIDE DRIP EDGE, FLASHING, AND COUNTER-FLASHING DETAILS FOR ALL ROOF ACCESSORIES.
8. PROVIDE WALKING PADS AROUND THE PERIMETER OF ALL NEW CURB MOUNTED EQUIPMENT, AT THE ROOF HATCH DISCHARGE POINT, AND THE TOP AND BOTTOM OF ALL LADDERS.
9. ALL CRICKETS AND SADDLES SHALL SLOPE MINIMUM 1/2":12". PROVIDE CRICKETS AT THE HIGH SIDE OF ANY CURB OR ELEVATED PENETRATION IN A SLOPED FACE.
10. ALL DOWNSPOUTS, INCLUDING CANOPIES, ARE TO TIE INTO STORM DRAINAGE SYSTEM. PROVIDE CAST IRON DOWNSPOUT BOOTS AT EACH LOCATION.

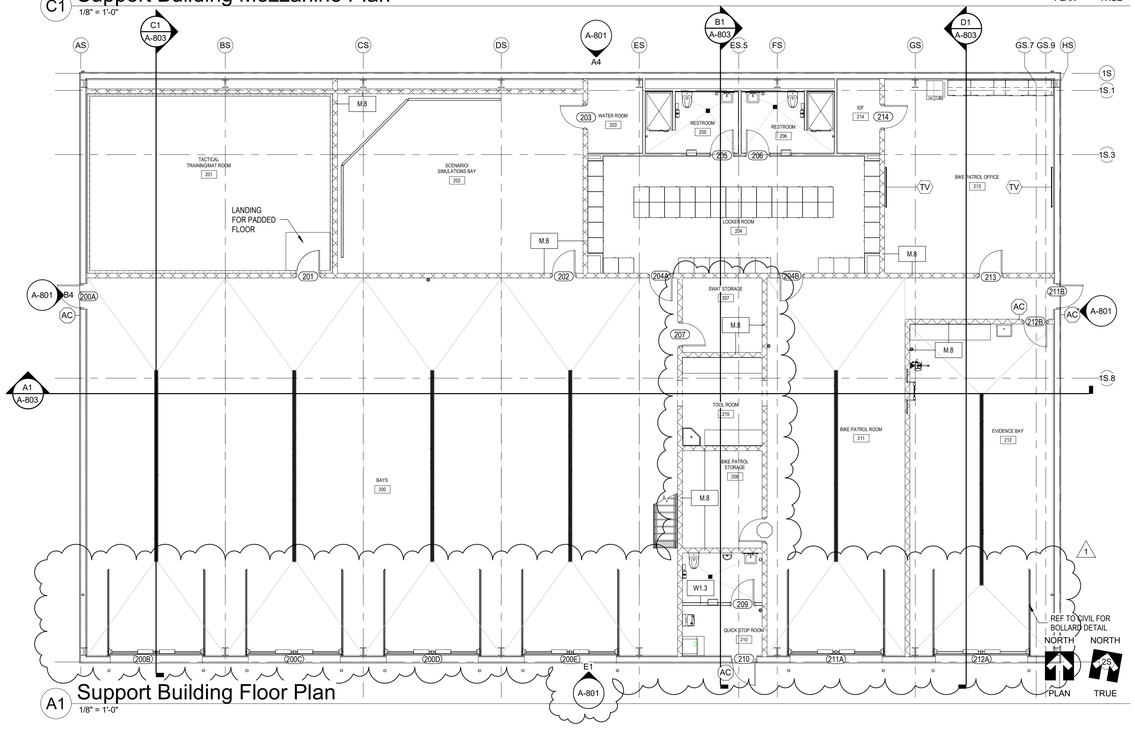
BRANDSTETTER CARROLL INC
ARCHITECTS + ENGINEERS + PLANNERS
2360 Chauvin Drive, Lexington, KY 40517
p. 859.268.1933 www.brandstettercarroll.com

STATE OF KENTUCKY — ERIC M CHAMBERS 6882 — REGISTERED ARCHITECT



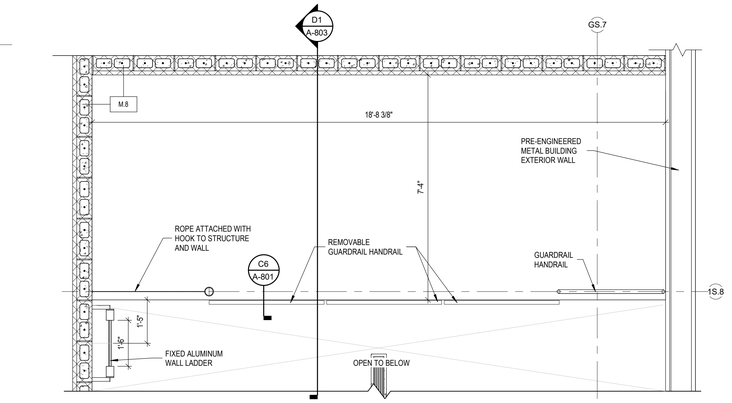
C1 Support Building Mezzanine Plan

1/8" = 1'-0"



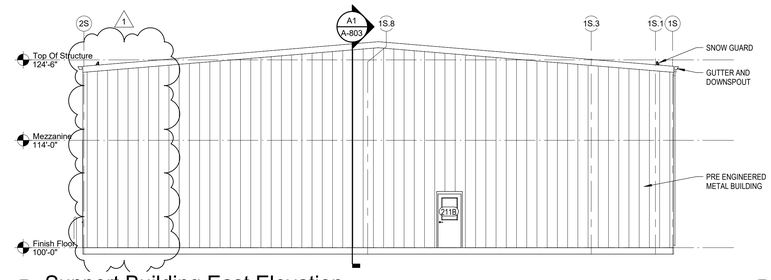
A1 Support Building Floor Plan

1/8" = 1'-0"



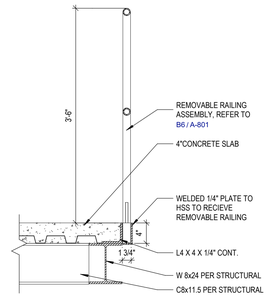
D4 Storage Platform Plan Detail

1/2" = 1'-0"



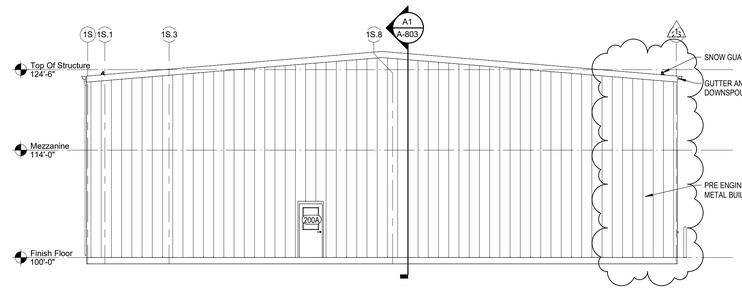
C4 Support Building East Elevation

1/8" = 1'-0"



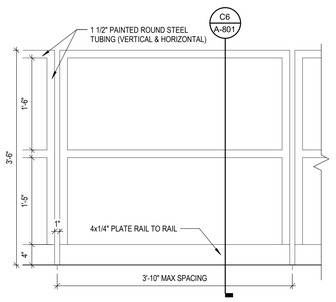
C6 Removable Guardrail Detail

1" = 1'-0"



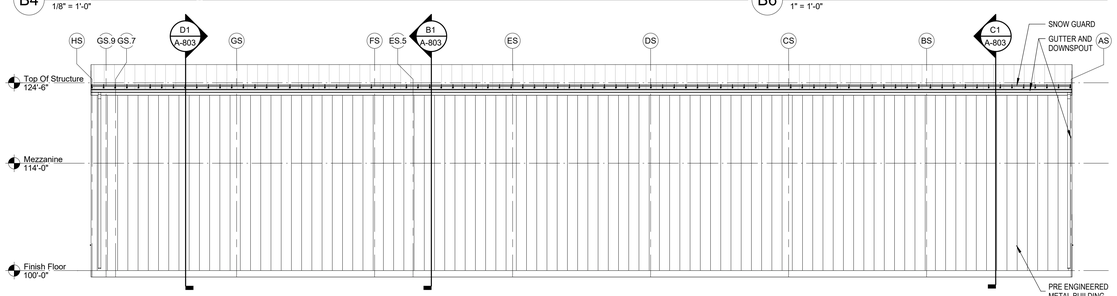
B4 Support Building West Elevation

1/8" = 1'-0"



B6 Removable Guardrail/Handrail

1" = 1'-0"



A4 Support Building North Elevation

1/8" = 1'-0"

Revisions: 1 04.25.25 ADD 02
NUMBER DATE DESCRIPTION

Issue Date: March 28,2025

Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Support Building Plans and Elevations

Project No. 22133

A-801

General Notes

1. REFER TO BASE SCOPE FOR STORAGE BUILDING, ELECTRICAL, PLUMBING AND SITE.
2. REFER TO SEPCIFICAIONS FOR DO NOT SCALE DRAWINGS, WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
3. ALL DIMENSIONS ARE TO FACE OF STUDS, MASONRY, OR CENTERLINE OF STRUCTURAL STEEL UNLESS OTHERWISE INDICATED.
4. REFER TO STRUCTURAL FRAMING PLANS FOR SLOPING OF BEAMS AND JOISTS.
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10. ALL DOWNSPOUTS, INCLUDING CANOPIES, ARE TO TIE INTO STORM DRAINAGE SYSTEM. PROVIDE CAST IRON DOWNSPOUT BOOTS AT EACH LOCATION.

General Ceiling Notes

1. ALL LIGHTS, SPRINKLERS AND DIFFUSERS ARE TO BE COORDINATED WITH CEILING GRIDS PRIOR TO INSTALLATION. GRIDS & TILES SHOULD BE ADJUSTED TO BE CENTERED OR BE EQUALLY SPACED WITHIN ROOM.
2. ALL DIMENSIONS ARE TO FACE OF CMU OR STUD UNLESS IS NOTED OTHERWISE.
3. ALL SUSPENDED CEILINGS TO BE AT 10'-0" UNLESS NOTED OTHERWISE.
4. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
5. SPRINKLER HEADS SHALL BE INSTALLED IN CENTER OF ALL CEILING PANELS.
6. ALL EXPOSED STRUCTURE IS TO BE PAINTED.
7. ALL BULKHEADS SHALL BE 2" BELOW THE FINISHED CEILING UNLESS NOTED OTHERWISE.
8. SOFFIT FRAMING IS TO EXTEND TO THE DECK ABOVE UNLESS NOTED OTHERWISE.
9. REFER TO THE CODE PLANS FOR RATED ENCLOSURES.
10. REFER TO THE CODE PLANS FOR RATED VERTICAL AND HORIZONTAL ASSEMBLY LOCATIONS AND DETAILS.

Legend

- EXPOSED PAINTED STUCTURE, PIPING, CONDUITS, DUCTWORK, ETC.
- GYPSUM BOARD CEILING
- 2X2 ACOUSTICAL TILE CEILING
- MOISTURE RESISTANT GYPSUM BOARD

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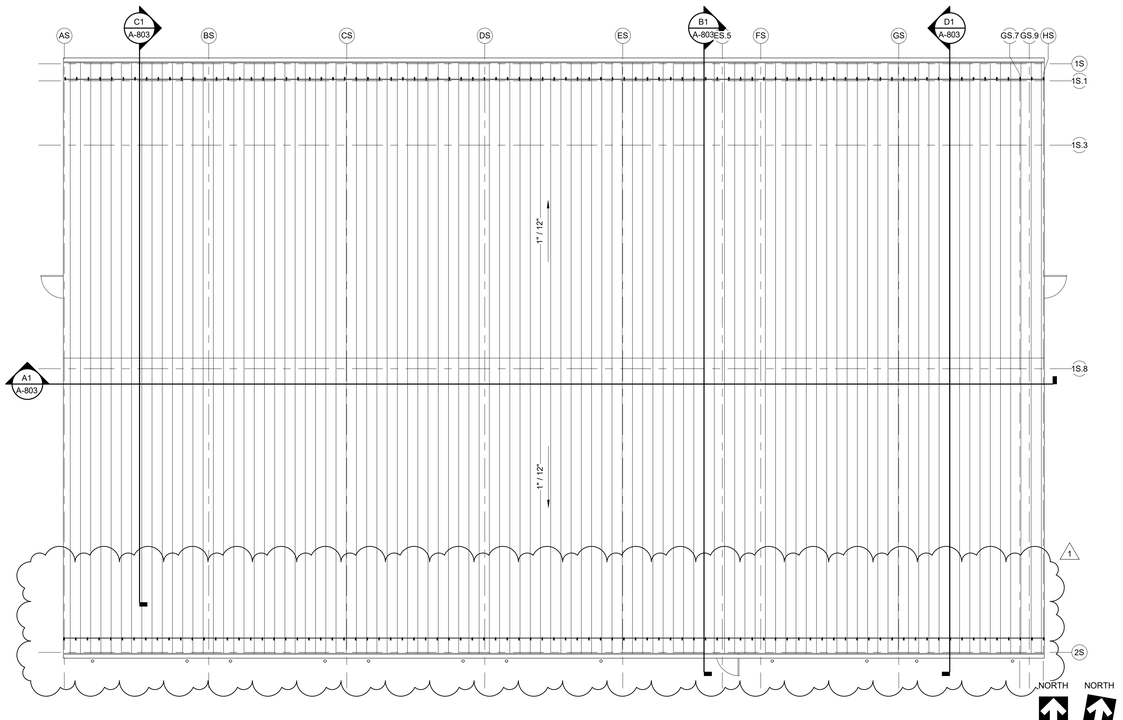
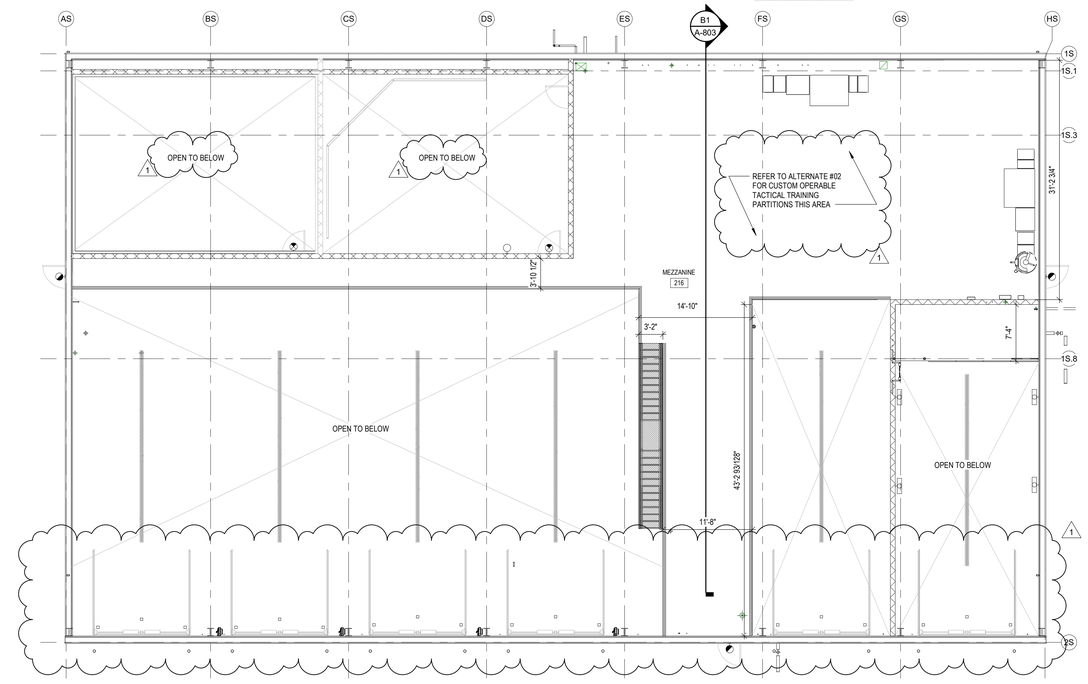
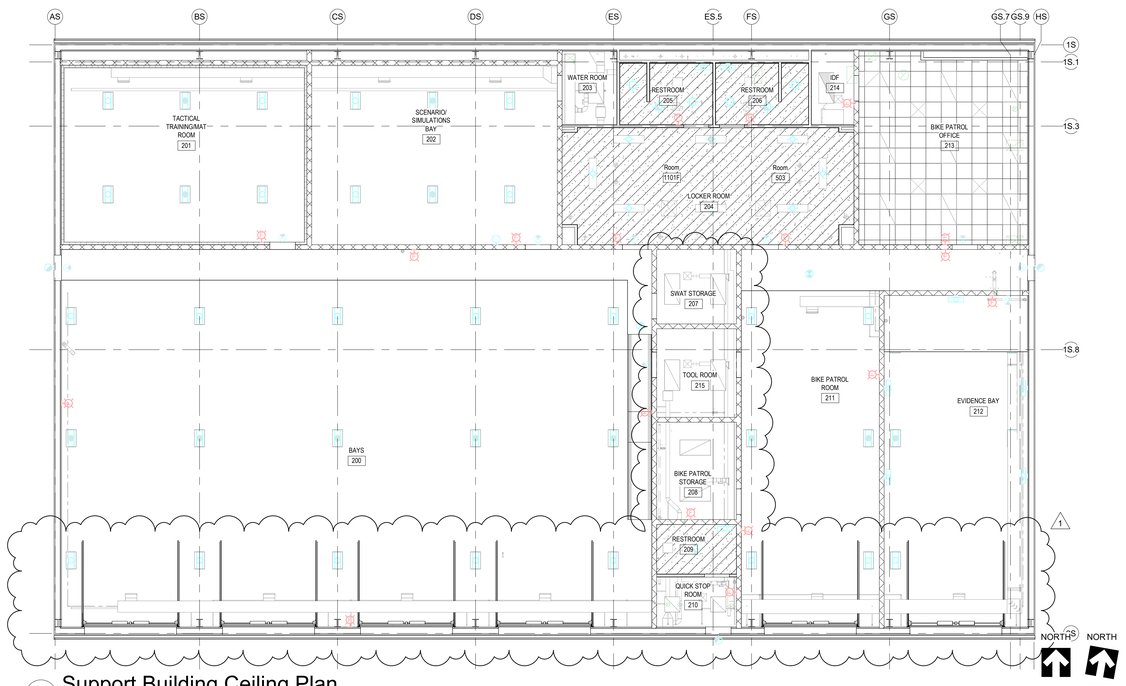
STATE OF KENTUCKY
ERIC M CHAMBERS 6882
REGISTERED
ARCHITECT



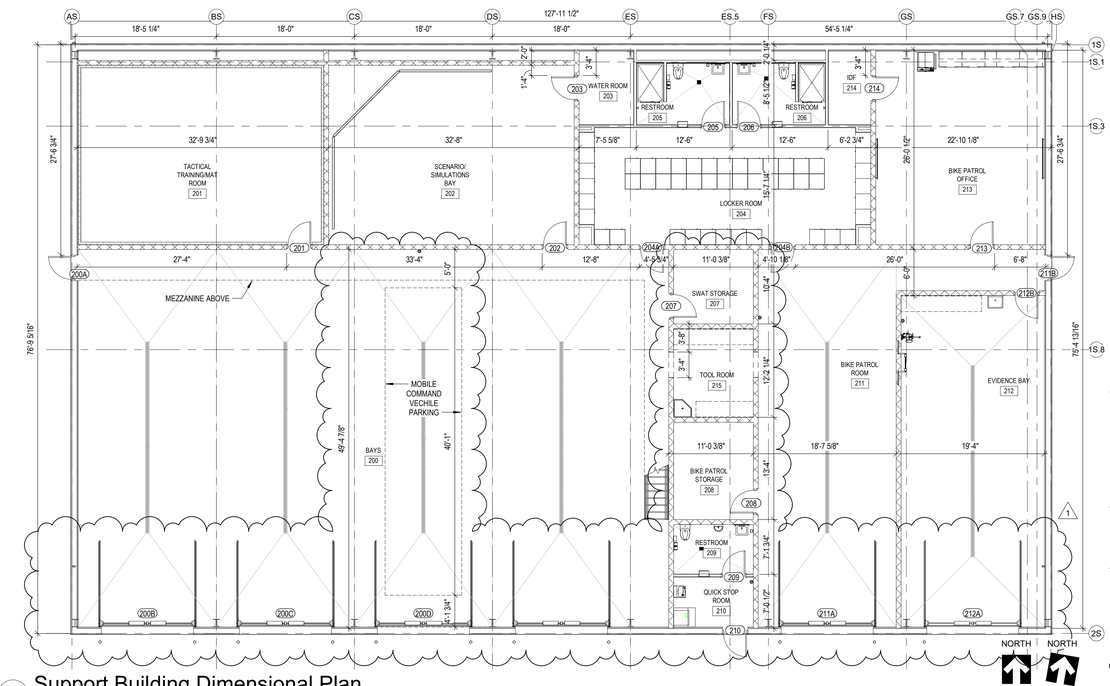
C1 Support Building Roof Plan
1/8" = 1'-0"



C4 Support Building Mezzanine Dimensional Plan
1/8" = 1'-0"



A1 Support Building Ceiling Plan
1/8" = 1'-0"



A4 Support Building Dimensional Plan
1/8" = 1'-0"

Revisions: 1 NUMBER 04.25.25 DATE ADD 02 DESCRIPTION
Issue Date: March 28, 2025

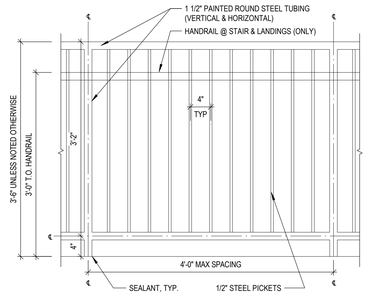
Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

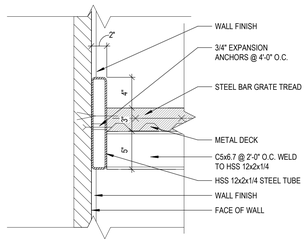
Support Building Plans

Project No. 22133

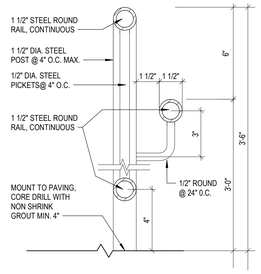
A-802



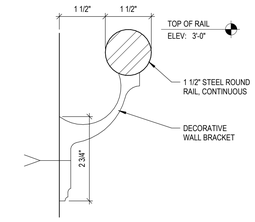
E1 Guardrail Detail, Typ.
1" = 1'-0"



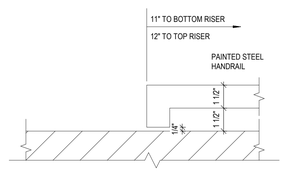
E2 Stair to Wall Detail
1 1/2" = 1'-0"



E3 Stair Rail Section
3" = 1'-0"



E4 Wall Mounted Rail Section
6" = 1'-0"



E5 Stair Handrail Return
3" = 1'-0"

General Notes

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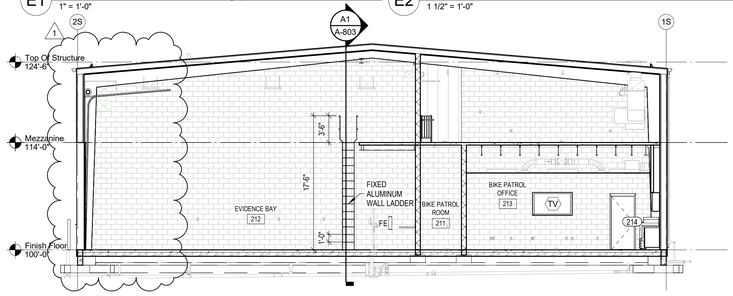
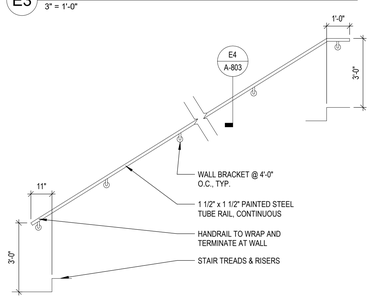
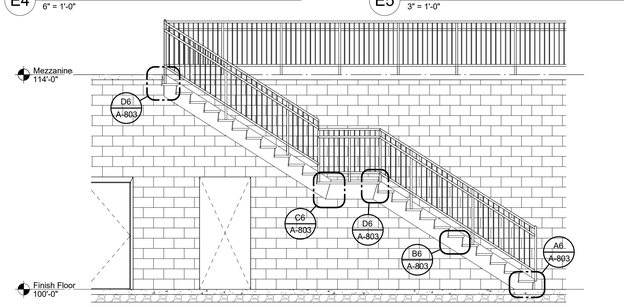


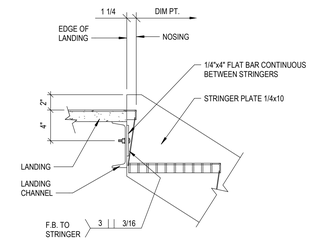
D1 Support Building Section
1/8" = 1'-0"



D3 Stair Handrail Elevation
3/8" = 1'-0"



D4 Stair Section
1/4" = 1'-0"



D6 Top Stair Landing Connection
1 1/2" = 1'-0"

C1 Support Building Section
1/8" = 1'-0"

C3 Interior HM Door Head @ Mtl Std
1 1/2" = 1'-0"

C4 Interior Door Head @ CMU
1 1/2" = 1'-0"

C5 Exterior HM Door Head @ PEMB
1 1/2" = 1'-0"

C6 Bottom Stair Landing Connection
1 1/2" = 1'-0"

B1 Support Building Section
1/8" = 1'-0"

B3 Interior HM Door Jamb @ Mtl Std
1 1/2" = 1'-0"

B4 Interior Door Jamb @ CMU
1 1/2" = 1'-0"

B5 Exterior HM Door Jamb @ PEMB
1 1/2" = 1'-0"

B6 Tread/Riser Detail
1 1/2" = 1'-0"

A1 Support Building Section
1/8" = 1'-0"

A4 Storage Platform Railing Elevation
1/2" = 1'-0"

A6 Stair Floor Connection
1 1/2" = 1'-0"

BRANDSTETTER CARROLL INC
ARCHITECTS + ENGINEERS + PLANNERS
2360 Chauvin Drive, Lexington, KY 40517
p. 859.268.1933 www.brandstettercarroll.com

STATE OF KENTUCKY · ERIC M CHAMBERS · 6882 · REGISTERED ARCHITECT

Revisions: 1 NUMBER 04.25.25 DATE ADD 02 DESCRIPTION
Issue Date: March 28,2025

Richmond Police Department
457 Northgate Drive
Richmond, KY 40475

Support Building Sections & Details

Project No. 22133

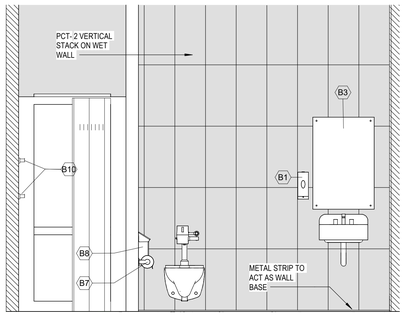
A-803

FF&E SCHEDULE

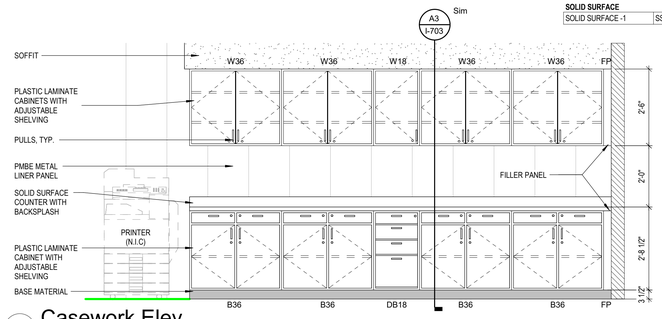
Type Mark	Type	Owner Provided and Installed	Owner Provided and Contractor Installed	Comments
A1	ADA LOCKER ROOM BENCH			
A2	LOCKER ROOM BENCH			
AED	AUTOMATED EXTERNAL DEFIBRILLATOR		X	
D-1	DRYER - RESIDENTIAL	X		
D-2	DRYER - COMMERCIAL		X	
E1	PASS THROUGH LOCKER - REFRIGERATED		X	
E2	PASS THROUGH LOCKER - 5 DOORS			
E3	PASS THROUGH LOCKER - 10 DOORS			
E4	PASS THROUGH LOCKER - 8 DOORS			
E5	PASS THROUGH LOCKER - 8 EQ DOORS			
E6	EVIDENCE LOCKER - 2 DOOR			
E7	EVIDENCE LOCKER - 10 DOOR			
ED	EVIDENCE DRYING CABINET		X	
F-1	FREEZER	X		
F-2	FUME HOOD		X	
F-3	FUME CHAMBER	X		
F-4	SOLVENT CABINET			
H-1	RANGE OVEN			
I-1	ICE MACHINE STAND	X		
I-2	ICE MAKER		X	
L1	PERSONAL LOCKERS 24 x 24 x 90			
L2	ADA PERSONAL LOCKERS 24 x 24 x 90			
L3	PERSONAL WEAPON LOCKER		X	
PS	Powder Station			
R-1	REFRIGERATOR WITH ICE AND WATER DISPENSER	X		
R-2	REFRIGERATOR	X		
S-1	SIMULATOR	X		
T-1	LABORATORY PEGBOARD WITH DRIP THROUGH		X	
TV	TV / WALL MONITOR	X		
U-1	MOP/BROOM HOLDER			
UC-1	UNDER COUNTER FRIDGE	X		
UC-2	UNDER COUNTER FRIDGE - ADA	X		
V-1	VENDING MACHINE	X		
W-1	WASHER - RESIDENTIAL	X		
W-2	WASHER - COMMERCIAL		X	

RESTROOM ACCESSORY LEGEND

Type Mark	Description
B1	Automatic Wall Mounted Liquid Soap Dispenser
B2	Recessed Convertible Automatic, Universal Roll Towel Dispenser Equipped with LED Light/Waste Receptacle
B3	Wall Hung Mirror 24" X 36"
B7	Toilet Tissue Dispenser
B8	Surface Mounted Napkin Disposals, White epoxy finish
B10	Robe Hooks, provide two (2) hooks at each location, refer to mounting heights on sheet G-001
B14	Vinyl Shower Curtain w/Rod



C1 Support Restroom Elevation
1/2" = 1'-0"



C2 Casework Elev.
1/2" = 1'-0"

Support Building Door Schedule

Door Number	Room Name	Doors				Frames		Details		Access Control	Ballistic Rated	Comments
		Door Size (WxH)	Door Type	Door Material	Glazing Type	Frame Type	Frame Material	Detail Head	Detail Jamb			
200A	BAYS	3'-0" x 7'-0"	D2	HM	GL-2	F1	HM	C5/A-803	B5/A-803	AC		1/2 HEIGHT KICKPLATE
200B	BAYS	12'-0" x 14'-0"	D9	MFR.	GL-2	MFR.	MFR.	D5/A-804	D6/A-804			BAYS
200C	BAYS	12'-0" x 14'-0"	D9	MFR.	GL-2	MFR.	MFR.	D5/A-804	D6/A-804			BAYS
200D	BAYS	12'-0" x 14'-0"	D9	MFR.	GL-2	MFR.	MFR.	D5/A-804	D6/A-804			BAYS
200E	BAYS	12'-0" x 14'-0"	D9	MFR.	GL-2	MFR.	MFR.	D5/A-804	D6/A-804			BAYS
201	TACTICAL TRAINING/MAT ROOM	3'-0" x 7'-0"	D1	HM	-	F1	HM	C4/A-803	B4/A-803			LOCK
202	SCENARIO/ SIMULATIONS BAY	3'-0" x 7'-0"	D1	HM	-	F1	HM	C4/A-803	B4/A-803			LOCK
203	SCENARIO/ SIMULATIONS BAY	3'-0" x 7'-0"	D1	HM	-	F1	HM	C4/A-803	B4/A-803			LOCK
204A	BAYS	3'-0" x 7'-0"	D1	HM	-	F1	HM	C4/A-803	B4/A-803			
204B	BIKE PATROL ROOM	3'-0" x 7'-0"	D1	HM	-	F1	HM	C4/A-803	B4/A-803			
205	RESTROOM	3'-0" x 7'-0"	D1	HM	-	F2	HM	C3/A-803	B3/A-803			IN-USE LOCK
206	RESTROOM	3'-0" x 7'-0"	D1	HM	-	F2	HM	C3/A-803	B3/A-803			IN-USE LOCK
207	SWAT STORAGE	3'-0" x 7'-0"	D1	HM	-	F1	HM	C4/A-803	B4/A-803	AC		1/2 HEIGHT KICKPLATE
208	BIKE PATROL STORAGE	3'-0" x 7'-0"	D1	HM	-	F1	HM	C4/A-803	B4/A-803			LOCK / 1/2 HEIGHT KICKPLATE
209	RESTROOM	3'-0" x 7'-0"	D1	HM	-	F2	HM	C3/A-803	B3/A-803			IN-USE LOCK / 1/2 HEIGHT KICKPLATE
210	QUICK STOP ROOM	3'-0" x 7'-0"	D2	HM	-	F1	HM	C4/A-803	B4/A-803	AC		1/2 HEIGHT KICKPLATE
211A	BIKE PATROL ROOM	12'-0" x 14'-0"	D9	MFR.	GL-2	MFR.	MFR.	D5/A-804	D6/A-804	AC		BIKE PATROL ROOM
211B	BIKE PATROL ROOM	3'-0" x 7'-0"	D2	HM	GL-2	F1	HM	C5/A-803	B5/A-803	AC		1/2 HEIGHT KICKPLATE
212A	EVIDENCE BAY	12'-0" x 14'-0"	D8	MFR.	-	MFR.	MFR.	D5/A-804	D6/A-804	AC		EVIDENCE BAY
212B	EVIDENCE BAY	3'-0" x 7'-0"	D1	HM	-	F1	HM	C4/A-803	B4/A-803	AC		EVIDENCE BAY / 1/2 HEIGHT KICKPLATE
213	BIKE PATROL OFFICE	3'-0" x 7'-0"	D1	HM	-	F1	HM	C4/A-803	B4/A-803			LOCK
214	BIKE PATROL OFFICE	3'-0" x 7'-0"	D1	HM	-	F1	HM	C4/A-803	B4/A-803			PASSAGE

Support Building Finish Material Legend

PRODUCT	KEY	MANUFACTURER	COLLECTION	COLOR	FINISH	SIZE	COMMENTS
LUXURY VINYL TILE							
LUXURY VINYL TILE	LVT	J & J FLOORING	STEP BY STEP 5mm	BLUE DENIM	-	18 X 36	ASHLAR
RUBBER FLOORING							
RUBBER TILES	RT	SEE SPEC.	-	-	-	-	-
TRAINING MATS							
PADDED FLOORING	PAD	SEE SPEC.	-	-	-	-	-
CONCRETE							
SEALED CONCRETE	SC	SEE SPEC.	-	-	-	-	-
PORCELAIN TILE							
PORCELAIN TILE -2	PCT-2	ATLAS CONCORDE	HERO	LEAD	MATTE	12 X 24	-
WALL BASE							
RESILIENT WALL BASE	RB	JOHNSONITE	-	-	-	-	-
TILE BASE	TB	REFER TO SPEC.	-	-	-	-	-
PLASTIC LAMINATE							
PLASTIC LAMINATE -1	PLAM-1	WILSONART	-	WALNUT HEIGHTS	SOFT...	-	-
SOLID SURFACE							
SOLID SURFACE -1	SS-1	CORIAN	-	EVEREST	-	-	-

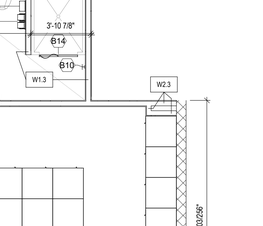
General Notes - Doors

1. DO NOT SCALE DRAWINGS, WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DRAWINGS. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATION WITH THE ARCHITECT BEFORE CONTINUING WITH CONSTRUCTION.
2. DOORS LOCATED IN METAL STUD PARTITIONS SHALL BE LOCATED 6" FROM WALL ON HINGED SIDE UNLESS NOTED OTHERWISE. DOORS LOCATED IN MASONRY WALLS SHALL BE LOCATED 8" FROM WALL ON HINGED SIDE UNLESS NOTED OTHERWISE.
3. ALL GLAZING AT EXTERIOR WALL ASSEMBLIES AND ASSOCIATED FRAMES TO BE INSULATED.
4. ALL GLAZING BELOW 60" A.F.F. TO BE SAFETY (TEMPERED) GLAZING.
5. EXTERIOR HOLLOW METAL DOORS TO BE GALVANIZED AND INSULATED.

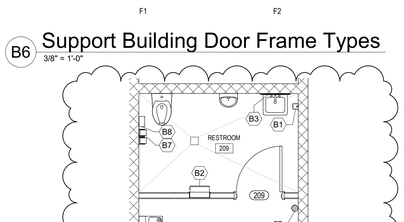
Legend - Glazing PEMB

GL-# GLAZING LEGEND

TYPE DESCRIPTION
EXTERIOR INSULATING GLASS:
GL-2: 1" TEMPERED INSULATED GLAZING



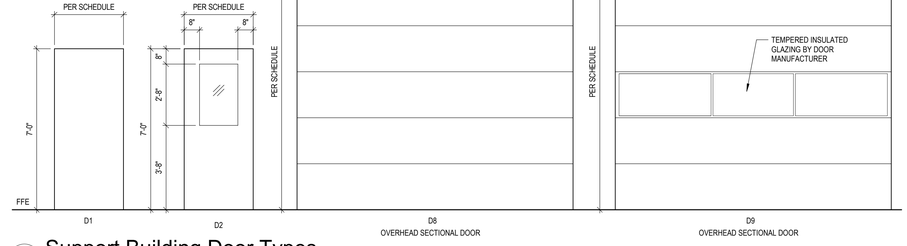
D5 Sectional Door Head @ PEMB
1 1/2" = 1'-0"



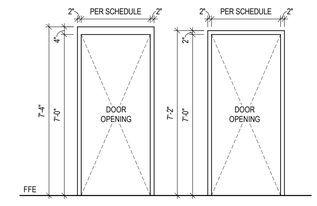
D6 Sectional Door Jamb @ PEMB
1 1/2" = 1'-0"

General Notes

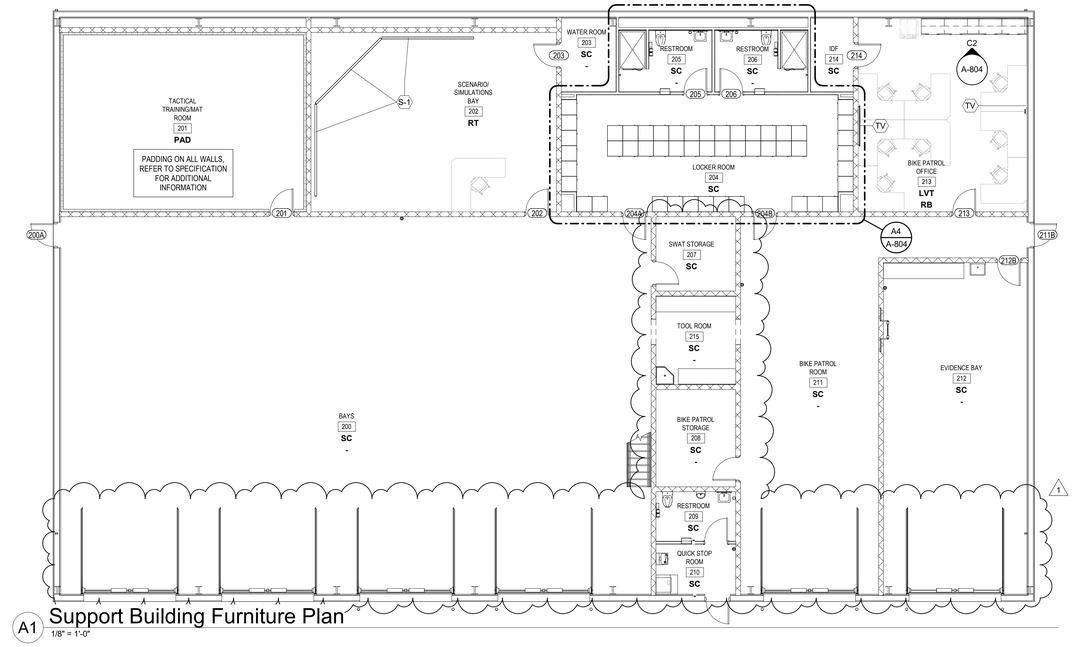
1. REFER TO BASE SCOPE FOR STORAGE BUILDING, ELECTRICAL, PLUMBING AND SITE.
2. REFER TO SEPCIFICAIONS FOR DO NOT SCALE DRAWINGS, WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
3. ALL DIMENSIONS ARE TO FACE OF STUDS, MASONRY, OR CENTERLINE OF STRUCTURAL STEEL UNLESS OTHERWISE INDICATED.
4. REFER TO STRUCTURAL FRAMING PLANS FOR SLOPING OF BEAMS AND JOISTS.
5. MECHANICAL, PLUMBING, AND ELECTRICAL ITEMS ARE SOWN FOR THE SOLE PURPOSE OF INDICATING THEIR RESPECTIVE LOCATIONS. REFER TO THE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR SIZE, TYPE, AND OTHER REQUIREMENTS PERTAINING SPECIFICALLY TO THESE ITEMS.
6. ALL MECHANICAL, PLUMBING, AND ELECTRICAL ROOF PENETRATIONS ARE SHOWN GRAPHICALLY, COORDINATE WITH MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR LOCATIONS. ALL PENETRATIONS ARE TO BE PAINTED TO MATCH ROOF COLOR.
7. PROVIDE DRIP EDGE, FLASHING, AND COUNTER-FLASHING DETAILS FOR ALL ROOF ACCESSORIES.
8. PROVIDE WALKING PADS AROUND THE PERIMETER OF ALL NEW CURB MOUNTED EQUIPMENT, AT THE ROOF HATCH DISCHARGE POINT, AND THE TOP AND BOTTOM OF ALL LADDERS.
9. ALL CRICKETS AND SADDLES SHALL SLOPE MINIMUM 1/2":12". PROVIDE CRICKETS AT THE HIGH SIDE OF ANY CURB OR ELEVATED PENETRATION IN A SLOPED FACE.
10. ALL DOWNSPOUTS, INCLUDING CANOPIES, ARE TO TIE INTO STORM DRAINAGE SYSTEM. PROVIDE CAST IRON DOWNSPOUT BOOTS AT EACH LOCATION.



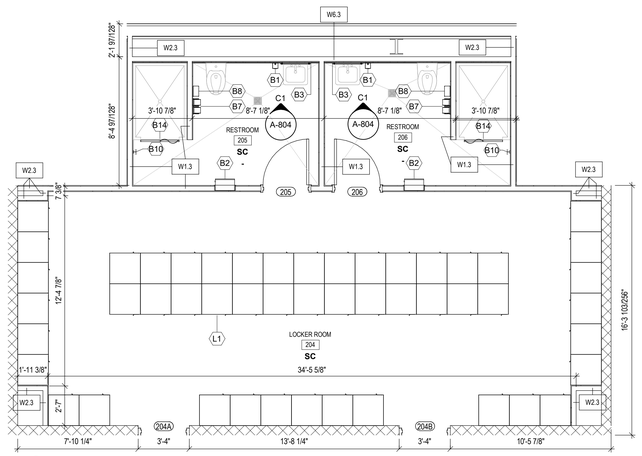
C4 Support Building Door Types
3/8" = 1'-0"



B6 Support Building Door Frame Types
3/8" = 1'-0"



A1 Support Building Furniture Plan
1/8" = 1'-0"



A4 Support Building Enlarged Restroom
1/4" = 1'-0"

A6 Support Building Quick Restroom
1/4" = 1'-0"

BRANDSTETTER CARROLL INC
ARCHITECTS + ENGINEERS + PLANNERS
2360 Chauvin Drive, Lexington, KY 40517
p. 859.268.1933 www.brandstetterarroll.com

STATE OF KENTUCKY ERIC M CHAMBERS 6882 REGISTERED ARCHITECT

Revisions: 1 NUMBER 04.25.25 DATE ADD 02 DESCRIPTION
Issue Date: March 28,2025

Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Support Building Details

Project No. 22133

A-804

General Notes

1. REFER TO BASE SCOPE FOR STORAGE BUILDING, ELECTRICAL, PLUMBING AND SITE.
2. REFER TO SEPCIFICAIONS FOR DO NOT SCALE DRAWINGS, WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
3. ALL DIMENSIONS ARE TO FACE OF STUDS, MASONRY, OR CENTERLINE OF STRUCTURAL STEEL UNLESS OTHERWISE INDICATED.
4. REFER TO STRUCTURAL FRAMING PLANS FOR SLOPING OF BEAMS AND JOISTS.
5. MECHANICAL, PLUMBING, AND ELECTRICAL ITEMS ARE SOWN FOR THE SOLE PURPOSE OF INDICATING THEIR RESPECTIVE LOCATIONS. REFER TO THE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR SIZE, TYPE, AND OTHER REQUIREMENTS PERTAINING SPECIFICALLY TO THESE ITEMS.
6. ALL MECHANICAL, PLUMBING, AND ELECTRICAL ROOF PENETRATIONS ARE SHOWN GRAPHICALLY, COORDINATE WITH MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR LOCATIONS. ALL PENETRATIONS ARE TO BE PAINTED TO MATCH ROOF COLOR.
7. PROVIDE DRIP EDGE, FLASHING, AND COUNTER-FLASHING DETAILS FOR ALL ROOF ACCESSORIES.
8. PROVIDE WALKING PADS AROUND THE PERIMETER OF ALL NEW CURB MOUNTED EQUIPMENT, AT THE ROOF HATCH DISCHARGE POINT, AND THE TOP AND BOTTOM OF ALL LADDERS.
9. ALL CRICKETS AND SADDLES SHALL SLOPE MINIMUM 1/2":12". PROVIDE CRICKETS AT THE HIGH SIDE OF ANY CURB OR ELEVATED PENETRATION IN A SLOPED FACE.
10. ALL DOWNSPOUTS, INCLUDING CANOPIES, ARE TO TIE INTO STORM DRAINAGE SYSTEM. PROVIDE CAST IRON DOWNSPOUT BOOTS AT EACH LOCATION.

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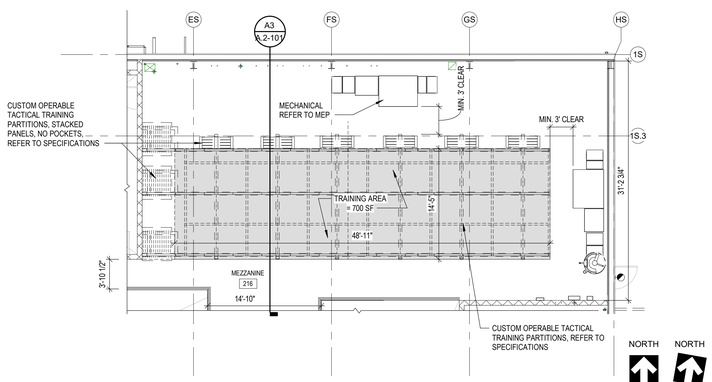
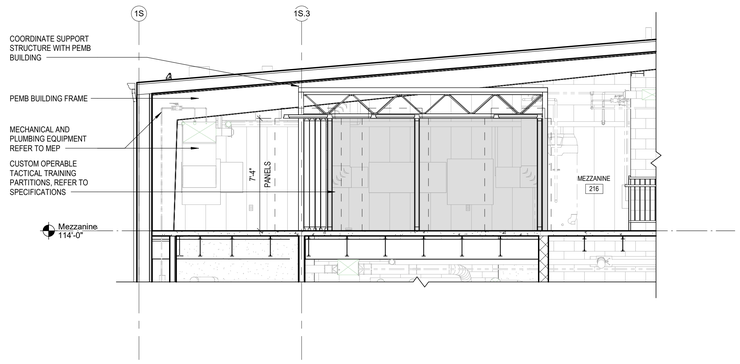
STATE OF KENTUCKY
ERIC V. CHAMBERS
6882
REGISTERED
ARCHITECT



A1 Mezzanine Floor Plan - Alternate #02
1/8" = 1'-0"



A3 Support Building Section - Alternate #02
1/4" = 1'-0"

Revisions:

NUMBER	DATE	DESCRIPTION
1	04.25.25	ADD 02

Issue Date: March 28,2025

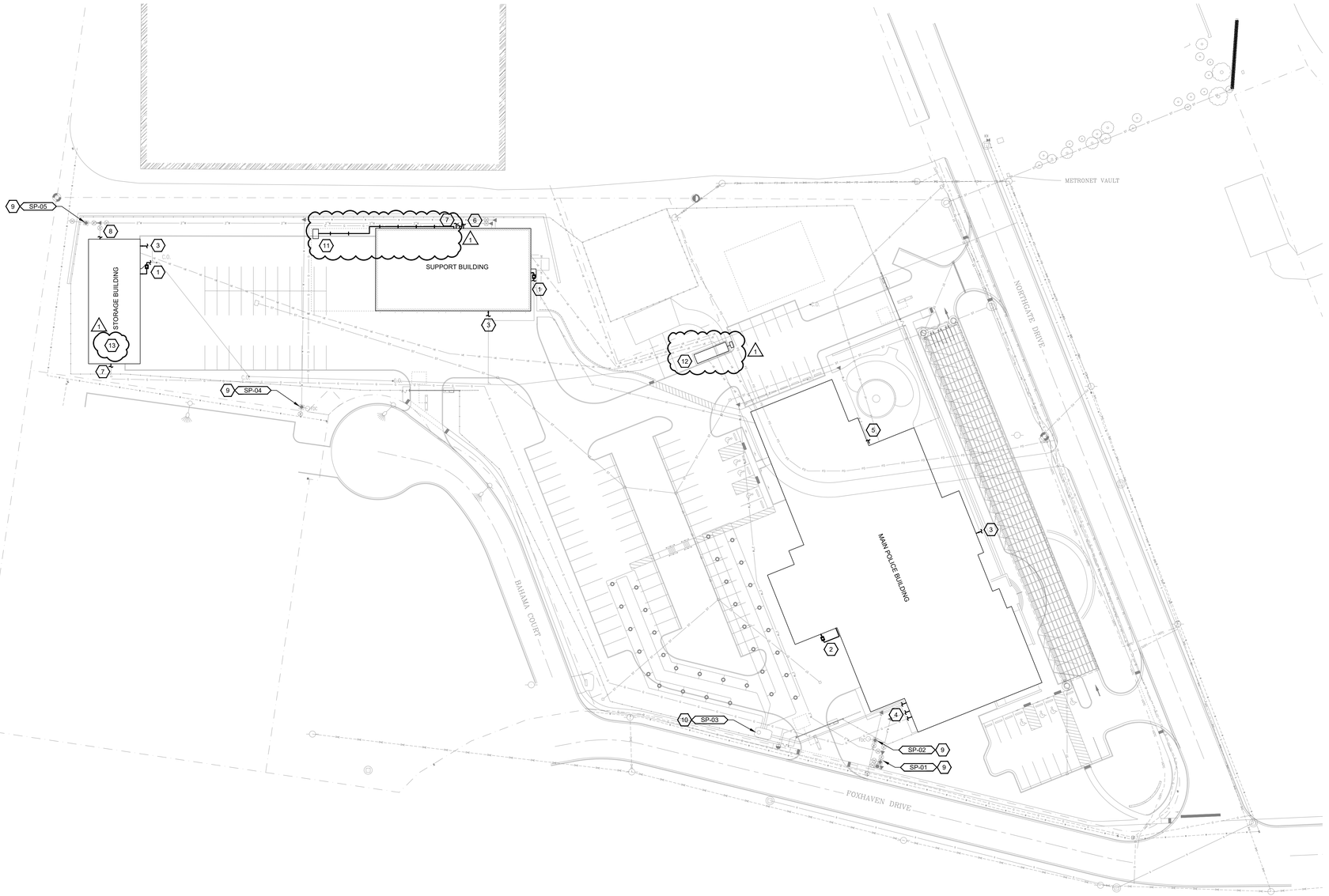
Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

1 Mezzanine Training - Alternate #02

Project No. 22133

A.2-101



PLAN NORTH

0 40' 80'

PLUMBING SITE PLAN

SCALE: 1"=40'-0"

"KY BUD" BEFORE YOU DIG: (811)

UNDERGROUND UTILITY LOCATIONS WERE DETERMINED FROM SITE SURVEY AND VISUAL INSPECTION OF THE PROPERTY AND SHOULD BE CONSIDERED APPROXIMATE ONLY. CONTACT ALL INDIVIDUAL UTILITY COMPANIES AND "KY BUD" PRIOR TO BEGINNING ANY EXCAVATION.

GENERAL NOTES:

A. REFER TO SHEET P001 FOR PLUMBING LEGEND AND GENERAL NOTES.

SHEET KEYNOTES:

1. 4" SANITARY EXIT FROM OIL WATER SEPARATOR. REFER TO PLUMBING PLANS FOR MORE INFORMATION. REFER TO CIVIL SITE UTILITIES PLAN FOR FINAL CONNECTION LOCATION.
2. 4" SANITARY EXIT FROM OIL WATER SEPARATOR. SANITARY ROUTED BACK INSIDE BUILDING. REFER TO PLUMBING PLANS FOR MORE INFORMATION.
3. 4" SANITARY SEWER EXIT FROM BUILDING. REFER TO CIVIL SITE UTILITIES PLAN FOR FINAL CONNECTION LOCATION.
4. 4" DOMESTIC WATER ENTRANCE, 6" FIRE PROTECTION ENTRANCE, AND 2" NATURAL GAS ENTRANCE INTO CENTRAL MECHANICAL ROOM. REFER TO PLUMBING PLANS FOR MORE INFORMATION. REFER TO CIVIL SITE UTILITIES PLAN FOR FINAL CONNECTION LOCATIONS.
5. 2" DOMESTIC WATER ENTRANCE INTO STORM SHELTER WATER ROOM. REFER TO PLUMBING PLANS FOR MORE INFORMATION. REFER TO CIVIL SITE UTILITIES PLAN FOR FINAL CONNECTION LOCATION.
6. 2" DOMESTIC WATER ENTRANCE AND 4" FIRE PROTECTION ENTRANCE. REFER TO PLUMBING PLANS FOR MORE INFORMATION. REFER TO CIVIL SITE UTILITIES PLAN FOR FINAL CONNECTION LOCATIONS.
7. 2" NATURAL GAS ENTRANCE. REFER TO PLUMBING PLANS FOR MORE INFORMATION. REFER TO CIVIL SITE UTILITIES PLAN FOR FINAL CONNECTION LOCATION.
8. 1-1/2" DOMESTIC WATER ENTRANCE. REFER TO PLUMBING PLANS FOR MORE INFORMATION. REFER TO CIVIL SITE UTILITIES PLAN FOR FINAL CONNECTION LOCATIONS.
9. INSTALL SUMP PUMP IN WATER VAULT. COORDINATE WITH CIVIL DRAWINGS AND VAULT DETAILS.
10. INSTALL SUMP PUMP IN GEOTHERMAL VAULT. REFER TO MECHANICAL SITE UTILITIES DRAWINGS.

1

11. ROUTE 2" LOW PRESSURE GAS LINE FROM AFTER GAS REGULATOR TO SERVICE INCINERATOR. COORDINATE EXACT LOCATION WITH OWNER/INSTALLER.
12. PROVIDE GAS REGULATOR DOWN TO LOW PRESSURE TO SERVICE NATURAL GAS GENERATOR. INSTALL PER MANUFACTURER REQUIREMENTS. REFER TO CIVIL SITE PLAN FOR NATURAL GAS ROUTE.
13. ALL WORK FOR STORAGE BUILDING TO BE INCLUDED UNDER ALTERNATE #1.

BRANDSTETTER CARROLL INC
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BRADLEY NATION 37713
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Lexington – Louisville – Charleston
www.stweng.com

Revisions: 1 NUMBER 2025.04.25 DATE ADD 2 DESCRIPTION

Issue Date: March 28, 2025

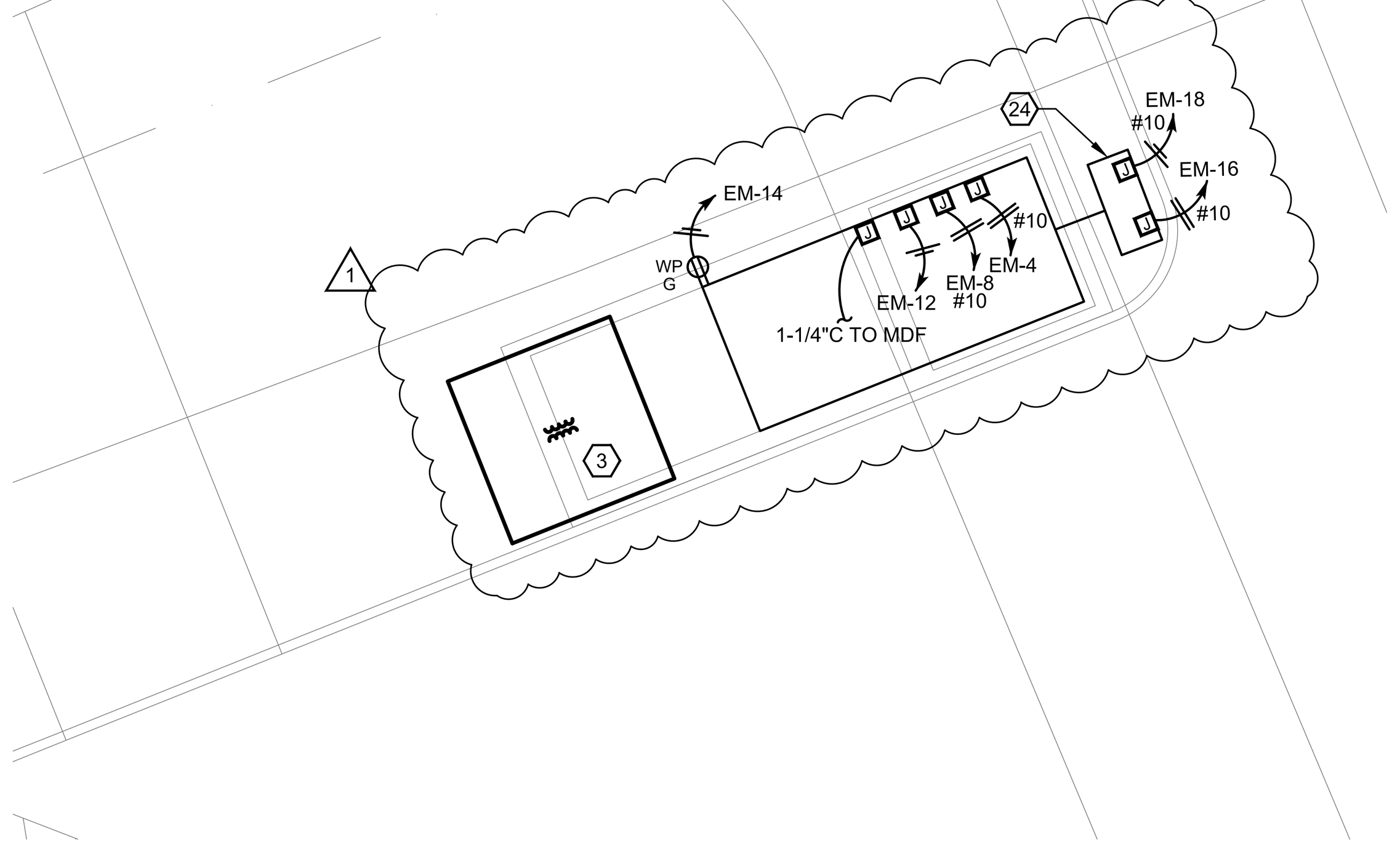
Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Plumbing Site Plan

Project No. 22133

U101



ENLARGED GENERATOR VIEW

SCALE: 1/8"=1'-0"

GENERAL NOTES:

A. COORDINATE ALL SITE UTILITY WORK WITH THE FOLLOWING:

KENTUCKY UTILITIES: TRINA BURTON

O: (859) 626 - 3372

M: (859) 582 - 2447

SPECTRUM: (859) 519-3434

B. ANY CHARGES ASSOCIATED WITH SERVICE INSTALLATION FROM THE UTILITY COMPANIES LISTED ABOVE SHALL BE PAID BY THE OWNER.

C. KY B.U.D: BEFORE YOU DIG PHONE 1-800-752-6007. THE UNDERGROUND UTILITIES SHOWN ON THESE DRAWINGS ARE FROM SITE SURVEYS, RECORD DRAWINGS AND FROM VISUAL SITE INSPECTIONS. UTILITY LOCATIONS ARE APPROXIMATE AND THERE MAY BE OTHER UNDERGROUND UTILITIES IN THE AREA. CONTACT ALL UTILITY COMPANIES PRIOR TO BEGINNING ANY EXCAVATION.

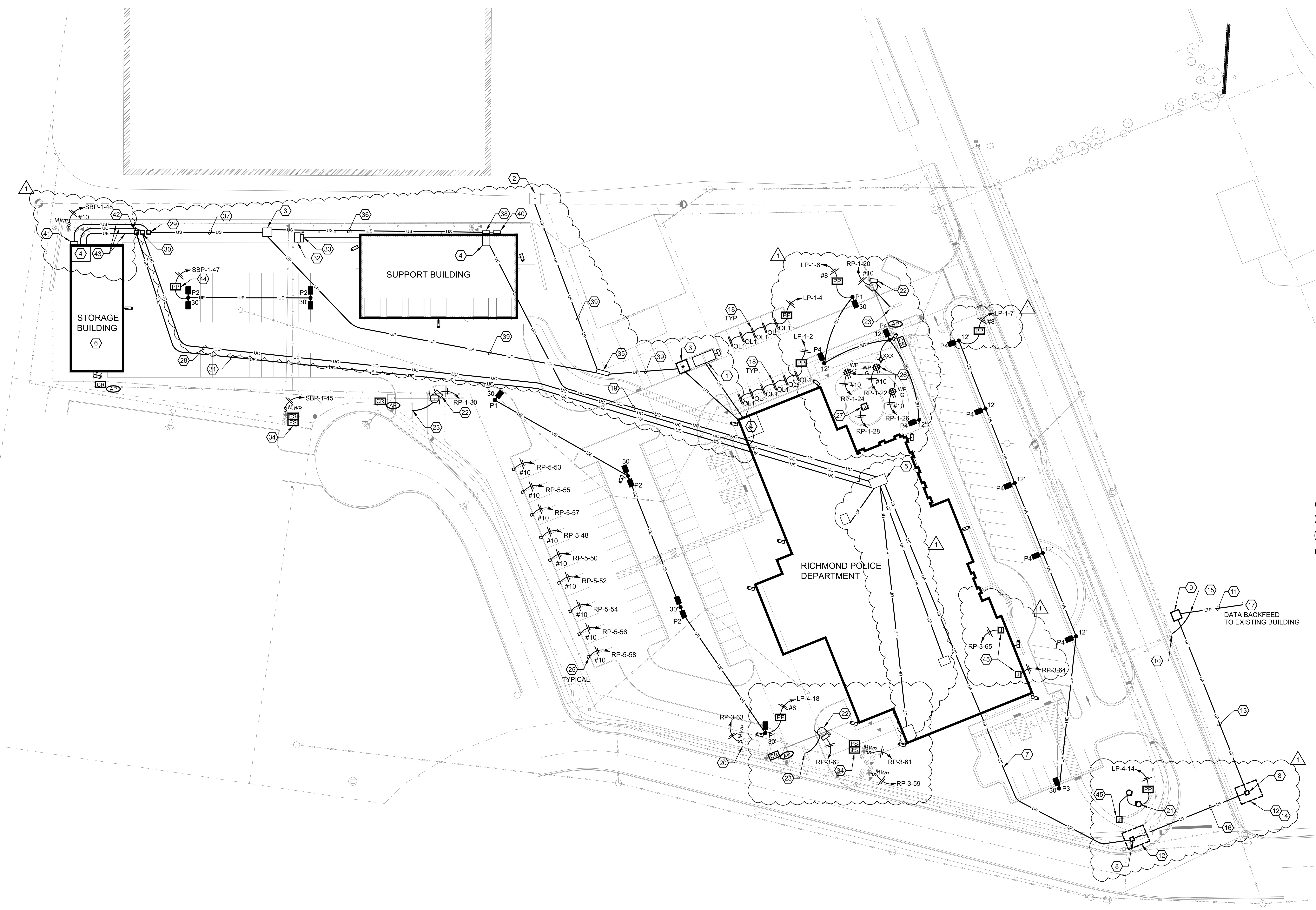
D. IF ANY CHARTED, UNCHARTED OR MISLOCATED UTILITY SERVICE IS INTERRUPTED, THE CONTRACTOR WILL WORK CONTINUOUSLY TO RESTORE SERVICE TO THE SATISFACTION OF THE OWNER/ARCHITECT.

E. COORDINATE ALL ELECTRICAL SITE WORK WITH THE NEW SITE GRADING.

F. UNDERGROUND CONDUITS SHALL BE BURIED A MINIMUM OF 30-INCHES BELOW GRADE UNLESS OTHERWISE NOTED.

SHEET KEYNOTES:

1. EMERGENCY GENERATOR WITH SOUND ATTENUATED OUTDOOR ENCLOSURE AND CONCRETE PAD EXTENDING 4" BEYOND ENCLOSURE ON ALL SIDES; SEE ONE-LINE DIAGRAM SHEET E601 SPECIFICATIONS, AND ENLARGED GENERATOR VIEW ON THIS SHEET FOR GENERATOR AND FEEDER REQUIREMENTS.
2. EXISTING UTILITY TRANSFORMER
3. NEW UTILITY TRANSFORMER MINIMUM 5 FEET OF CLEARANCE ON ALL SIDES. COORDINATE EXACT LOCATION WITH UTILITY COMPANY.
4. APPROXIMATE LOCATION OF MAIN ELECTRICAL ROOM
5. APPROXIMATE LOCATION OF MDF ROOM.
6. STORAGE BUILDING TO BE BID AS ALTERNATE #1.
7. ROUTE TWO (2) 4" CONDUITS UNDERGROUND TO SERVE COMMUNICATION. REFER TO TOPOLOGY DIAGRAM.
8. FOLLOWING JACK AND BORE CROSSING UNDER ROADWAY, PROVIDE HAND HOLE AT GRADE TO SERVE COMMUNICATIONS FIBER. REFER TO HAND HOLE DETAIL AND TOPOLOGY DIAGRAM.
9. PROVIDE HAND HOLE AT GRADE TO SERVE COMMUNICATIONS FIBER.
10. FOLLOWING NEW FACILITY'S COMMUNICATIONS UTILITY GOING LIVE AND SERVICE AVAILABLE, COORDINATE WITH UTILITY AND OWNER TO DISCONNECT AND REMOVE EXISTING COMMUNICATIONS CONNECTIONS FROM EXISTING POLICE BUILDING.
11. EXISTING CONDUIT ROUTED UNDERGROUND FROM EXISTING UTILITY POLE SERVING UTILITY COMMUNICATIONS TO EXISTING POLICE BUILDING. CONDUIT TO BE REUSED FOR NEW FIBER RUN FOLLOWING UTILITY DISCONNECTION.
12. APPROXIMATE LOCATION OF JACK-AND-BORE PIT. COORDINATE WITH AUTHORITIES HAVING JURISDICTION AND PROVIDE CROSSING OF UNDERGROUND COMMUNICATIONS CONDUIT USING JACK-AND-BORE. REFER TO DETAILS.
13. PROVIDE TWO (2) 4" CONDUITS BURIED AT 48" BELOW FINISHED GRADE (BELOW ASPHALT DRIVE) TO SERVE COMMUNICATIONS. INSTALL CONDUITS USING DIRECTIONAL BORING.
14. COORDINATE WITH ARCHITECT AND OWNER TO ACCESS/UTILIZE EXISTING ADJACENT PARKING LOT AS NECESSARY TO FACILITATE JACK-AND-BORE.
15. INTERCEPT AND EXTEND EXISTING COMMUNICATIONS CONDUIT TO NEW HAND HOLE.
16. PROVIDE THREE(3) 4" CONDUITS USING JACK-AND -BORE UNDER EXISTING ROADWAY BETWEEN HAND HOLES FOR COMMUNICATIONS.
17. UTILIZE EXISTING UNDERGROUND RACEWAY TO EXISTING MDF ROOM AND ROUTE NEW COMMUNICATIONS CABLING. ASSUME 200' FROM EXISTING POLICE BUILDING MDF TO NEW HAND HOLE IDENTIFIED BY KEYNOTE #9.
18. SURFACE MOUNT LIGHT FIXTURES ON THE UNDERSIDE OF COVERED PARKING CANOPY.
19. PROVIDE UNDERGROUND COMMUNICATIONS IN 2" CONDUIT FROM MDF TO RACK IN SUPPORT BUILDING IDF ROOM 214. SEE DIAGRAM ON SHEET E502 FOR MORE INFORMATION.
20. PROVIDE A 20A MANUAL MOTOR STARTER IN A LOCKABLE NEMA 3R ENCLOSURE AND HARD WIRE CONNECTION TO SUMP PUMP IN ADJACENT GEOTHERMAL VAULT. CIRCUIT TO BE 2#6, #8G, IN 1"C. MOUNT DISCONNECT ON UNISTRUT FRAME ADJACENT TO SITE LIGHTING POLE BASE.
21. GROUND MOUNTED FLOOD LIGHT FOR RICHMOND POLICE DEPARTMENT FLAG POLE. COORDINATE EXACT LOCATION WITH ARCHITECT. SEE DETAIL ON SHEET E504 FOR MORE INFORMATION.
22. PROVIDE 30A/2P NEMA 3R DISCONNECT WITH FREESTANDING SUPPORT FRAME AND CONNECTION TO GATE OPERATOR. COORDINATE ROUGH-IN AND WIRING REQUIREMENTS WITH GATE CONTRACTOR AND GENERAL CONTRACTOR. PROVIDE 3/4"C WITH PULL STRING FROM CONTROLLER UNDERGROUND TO MDF ROOM.
23. PROVIDE STANCHION POST FOR INTERCOM/CARD READER, SEE DETAIL SHEET E502 WITH 3/4"C UNDER GROUND TO MDF ROOM.
24. PROVIDE MOBILE GENERATOR DOCKING STATION WITH FREESTANDING SUPPORT FRAME AND CONCRETE PAD, SEE ONE-LINE DIAGRAM AND SPECIFICATIONS FOR REQUIREMENTS.
25. PROVIDE GFCI DUPLEX RECEPTACLE IN OUTDOOR NEMA 3R ENCLOSURE. TAYMAC PARKPOST PP55GG OR EQUIVALENT. ARCHITECT TO VERIFY COLOR/FINISH.
26. PROVIDE (3) 20A, 120V QUADRUPLEX GFCI, WEATHER PROOF RECEPTACLES IN MEMORIAL GAREN. COORDINATE EXACT LOCATION WITH OWNER.
27. PROVIDE POWER CONNECTION TO MEMORIAL FOUNTAIN. COORDINATE WIRING CONNECTION WITH INSTALLER.
28. PROVIDE 2" EMPTY CONDUIT WITH PULL STRING FROM MDF ROOM 1127B TO COMMUNICATIONS HAND HOLE.
29. PROVIDE POWER HAND HOLE. REFER TO HAND HOLE DETAIL.
30. PROVIDE COMMUNICATIONS HAND HOLE. REFER TO HAND HOLE DETAIL.
31. PROVIDE 1 1/4" EMPTY CONDUIT WITH PULL STRING FROM FIRE ALARM CONTROL PANEL TO FIRE ALARM HAND HOLE.
32. POLICE DEPARTMENT INCINERATOR, COORDINATE EXACT LOCATION WITH OWNER/INSTALLER.
33. PROVIDE A 20A MANUAL MOTOR STARTER IN A LOCKABLE NEMA 3R ENCLOSURE AND HARD WIRE CONNECTION TO INCINERATOR. CIRCUIT TO BE 2#10, #8G, IN 3/4"C. MOUNT DISCONNECT ON UNISTRUT FRAME ADJACENT TO INCINERATOR.
34. PROVIDE CONNECTION TO FIRE SUPPRESSION SYSTEM ALARM FLOW AND SUPERVISORY SWITCH FROM ASSOCIATED FIRE ALARM SYSTEM; COORDINATE DEVICE QUANTITY AND LOCATION WITH INSTALLER. SEE CIVIL SITE PLAN FOR MORE INFORMATION.
35. JUNCTION/SPLICE BOX FURNISHED BY UTILITY AND SHALL BE INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE EXACT REQUIREMENTS WITH UTILITY COMPANY.
36. PROVIDE ONE (1) 3" CONDUIT WITH CONDUCTORS BURIED AT 30" BELOW FINISHED GRADE. SEE ONE-LINE DIAGRAM FOR CONDUCTOR INFORMATION.
37. BASE BID: PROVIDE ONE (1) 3" CONDUIT WITH PULL STRING BURIED AT 30" BELOW FINISHED GRADE. ALTERNATE #1: PROVIDE CONDUCTORS; SEE ONE-LINE DIAGRAM FOR CONDUCTOR INFORMATION.
38. PROVIDE UTILITY C.T. ENCLOSURE CABINET MOUNTED TO OUTSIDE OF BUILDING. COORDINATE EXACT REQUIREMENTS WITH UTILITY COMPANY.
39. PROVIDE ONE (1) 4" CONDUIT WITH PULL STRING BURIED AT 42" BELOW FINISHED GRADE.
40. PROVIDE METER BASE WITH 1" C EXTENDED TO CT CABINET. COORDINATE EXACT REQUIREMENTS WITH UTILITY COMPANY.
41. METER BASE COORDINATE EXACT REQUIREMENTS WITH UTILITY COMPANY.
42. PROVIDE HAND HOLE FOR FIRE ALARM. REFER TO HAND HOLE DETAIL FOR MORE INFORMATION.
43. RACEWAYS AND CONDUCTOR FROM HAND HOLE TO STORAGE BUILDING ARE TO BE BID AS ALTERNATE #1.
44. ROUTE CIRCUIT THROUGH EXTERIOR LIGHTING CONTROL POWER PACK. SEE LIGHTING CONTROL SCHEDULE FOR MORE INFORMATION.
45. PROVIDE HARD WIRE CONNECTION FOR INTERNALLY LIT LED SIGNAGE. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN. ROUGH CIRCUIT THROUGH DEDICATED EXTERIOR LIGHTING CONTROL POWER PACK. FIELD COORDINATE EXACT LOCATION PRIOR TO INSTALLATION.



ELECTRICAL SITE PLAN

SCALE: 1"=40'-0"

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Lexington – Louisville – Charleston
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Revisions:	NUMBER	DATE	DESCRIPTION
	1	2025.04.25	ADD 2

Issue Date: March 28, 2025

Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Electrical Site Plan

Project No. 22133

U301

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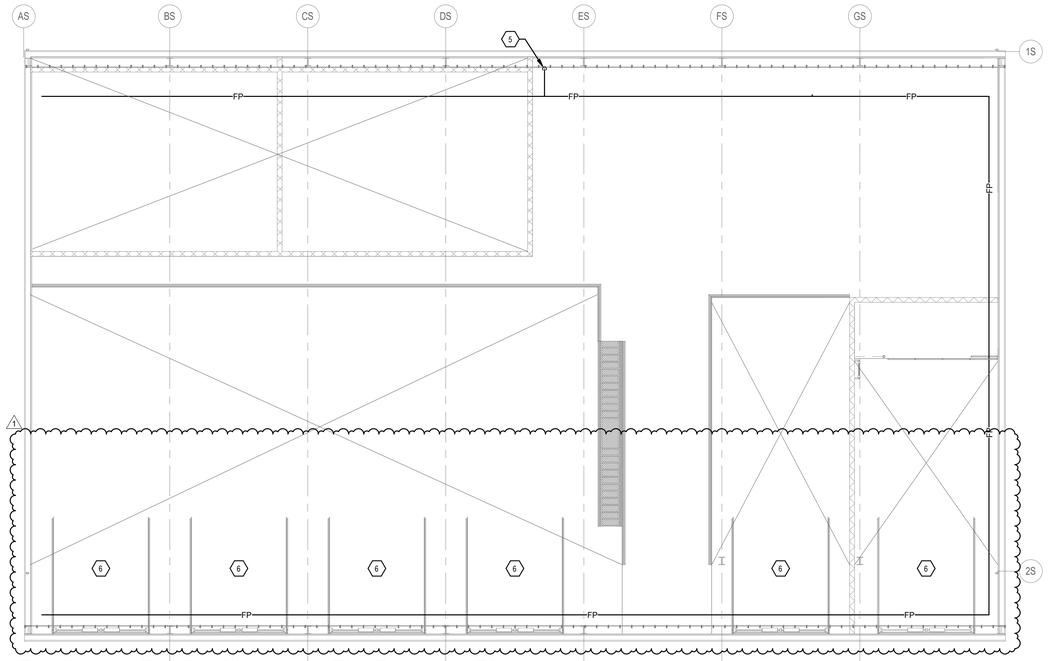
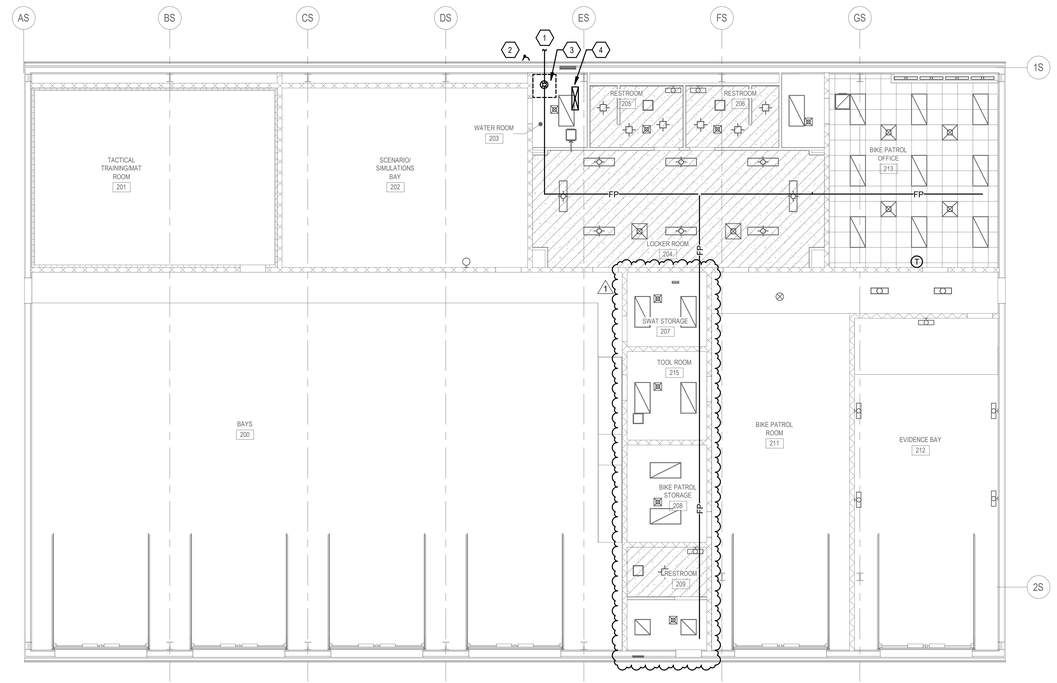


2 Support Building Mezzanine Fire Protection Plan

SCALE: 1/8" = 1'-0"

0 4' 8' 16'



1 Support Building First Floor Fire Protection Plan

SCALE: 1/8" = 1'-0"

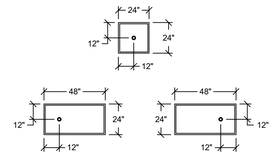
0 4' 8' 16'

GENERAL NOTES

A. REFER TO DRAWING F101 FOR FIRE PROTECTION GENERAL NOTES.

⬡ SHEET KEYNOTES

1. REFER TO CIVIL SITE UTILITIES PLAN FOR CONTINUATION.
2. ELECTRIC ALARM BELL. MOUNT AT 8'-0" AFG.
3. FIRE PROTECTION RISER. REFER TO DETAIL THIS SHEET. PIPE TO CONTINUE UP TO MEZZANINE LEVEL AFTER RISER.
4. DOMESTIC WATER ENTRANCE BACKFLOW PREVENTER. SEE PLUMBING PLANS.
5. FIRE PROTECTION UP FROM FIRST FLOOR. COORDINATE PENETRATION AND ROUTE WITH STRUCTURE.
6. COORDINATE FIRE PROTECTION WITH OVERHEAD GARAGE DOOR.



HEAD PLACEMENT
IN ACOUSTICAL TILE

HEAD TYPES

ALL SPRINKLER HEADS TO BE QUICK RESPONSE TYPE.

ROOMS WITH GYPSUM CEILINGS SHALL HAVE CONCEALED SPRINKLER HEADS. COLOR/FINISH SHALL BE SELECTED BY ARCHITECT.

ROOMS WITH ACOUSTICAL TILE (ACT) LAY-IN CEILINGS SHALL HAVE SEMI-RECESSED SPRINKLERS. COLOR/FINISH SHALL BE SELECTED BY ARCHITECT.

ROOM WITH NO CEILINGS (MECHANICAL ROOMS, ETC.) SHALL BE UPRIGHT SPRINKLER HEADS.

REFER TO ARCHITECTURAL CEILING PLANS. COORDINATE SPRINKLER PIPING WITH DUCTWORK, DIFFUSERS, LIGHTING, STRUCTURAL AND ALL OTHER TRADES PRIOR TO INSTALLATION.

BUILDING SHALL BE 100% SPRINKLERED IN COMPLIANCE WITH NFPA 13, AS APPLICABLE AND AS PART OF A DELEGATED DESIGN.

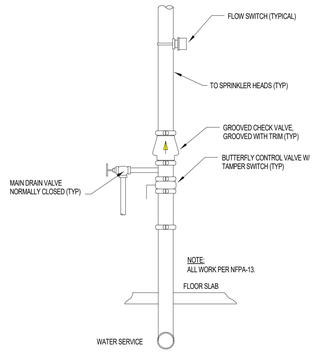
FLOW TEST

STATIC PRESSURE	68 PSI
RESIDUAL PRESSURE	66 PSI
FLOW	1000 GPM
DATE	11/01/2024

FLOW TEST RESULTS PROVIDED BY: RICHMOND UTILITIES

THE FIRE SUPPRESSION CONTRACTOR SHALL CONDUCT HIS OWN FLOW TEST FOR USE IN SHOP DRAWING / HYDRAULIC CALCULATIONS. THE TEST SHALL BE FULLY COORDINATED WITH THE OWNER. UTILITY COMPANY AND WITNESSED BY THE ARCHITECT/ENGINEER.

Kentucky 811



Entrance Detail - Support

SCALE: NTS

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Bradley Nation

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Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Support Building Fire Protection Plan

Project No. 22133

F102

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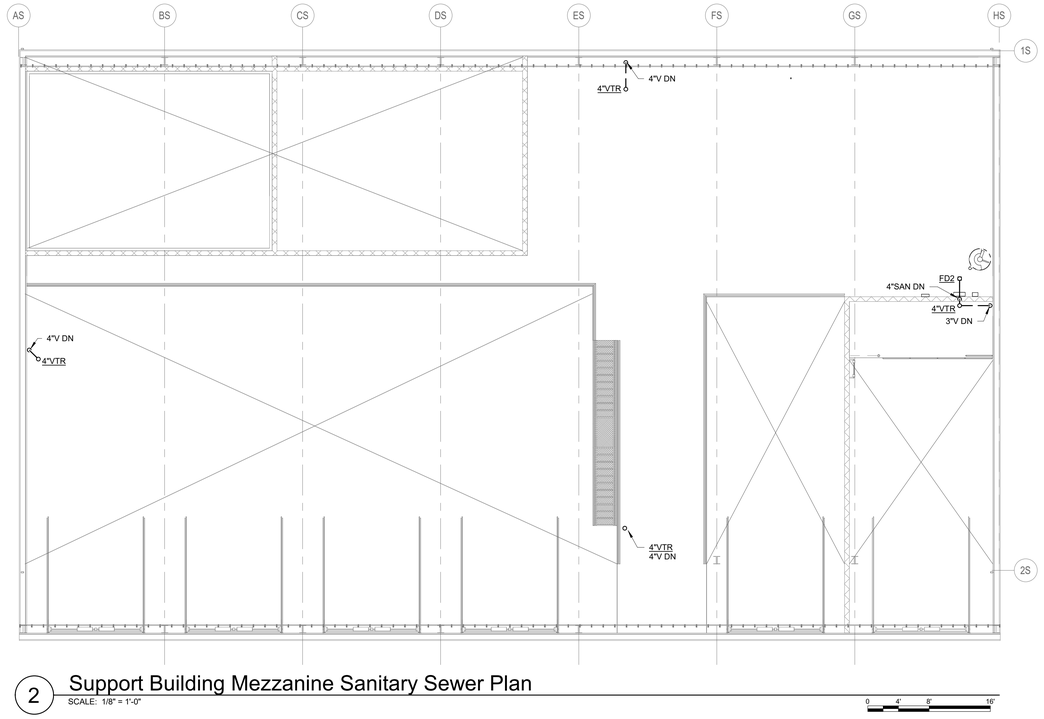
GENERAL NOTES

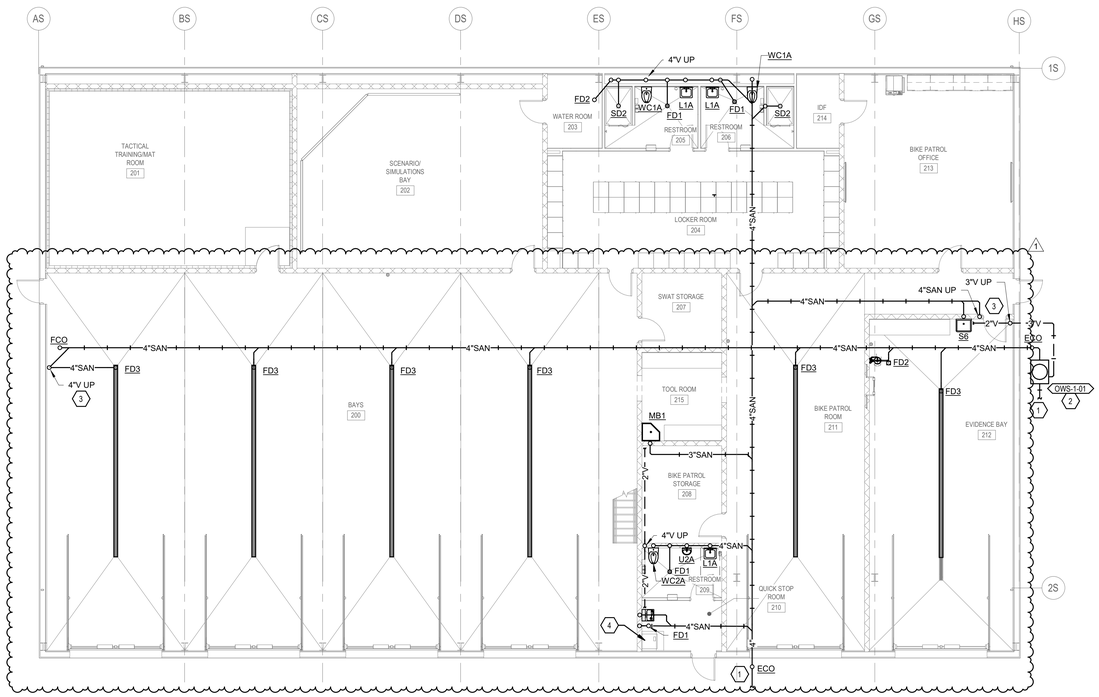
A. REFER TO SHEET P001 FOR PLUMBING LEGEND AND GENERAL NOTES.

SHEET KEYNOTES

1. SEE SITE UTILITIES PLAN FOR CONTINUATION.
2. OIL WATER SEPARATOR INSTALLED AT GRADE. REFER TO SCHEDULE AND DETAILS FOR ADDITIONAL REQUIREMENTS.
3. VENT PIPED UP FROM SLAB AND ROUTED TO ROOF. HOLD VENT UP AGAINST WALL. ROUTE TO VTR SHOWN.
4. ROUTE DRAIN LINE OF ICE MAKER TO NEARBY FLOOR DRAIN. INSTALL PER MANUFACTURERS INSTRUCTIONS.



2 Support Building Mezzanine Sanitary Sewer Plan
SCALE: 1/8" = 1'-0"



1 Support Building First Floor Sanitary Sewer Plan
SCALE: 1/8" = 1'-0"

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Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Support Building Sanitary Sewer Plan

Project No. 22133

P104

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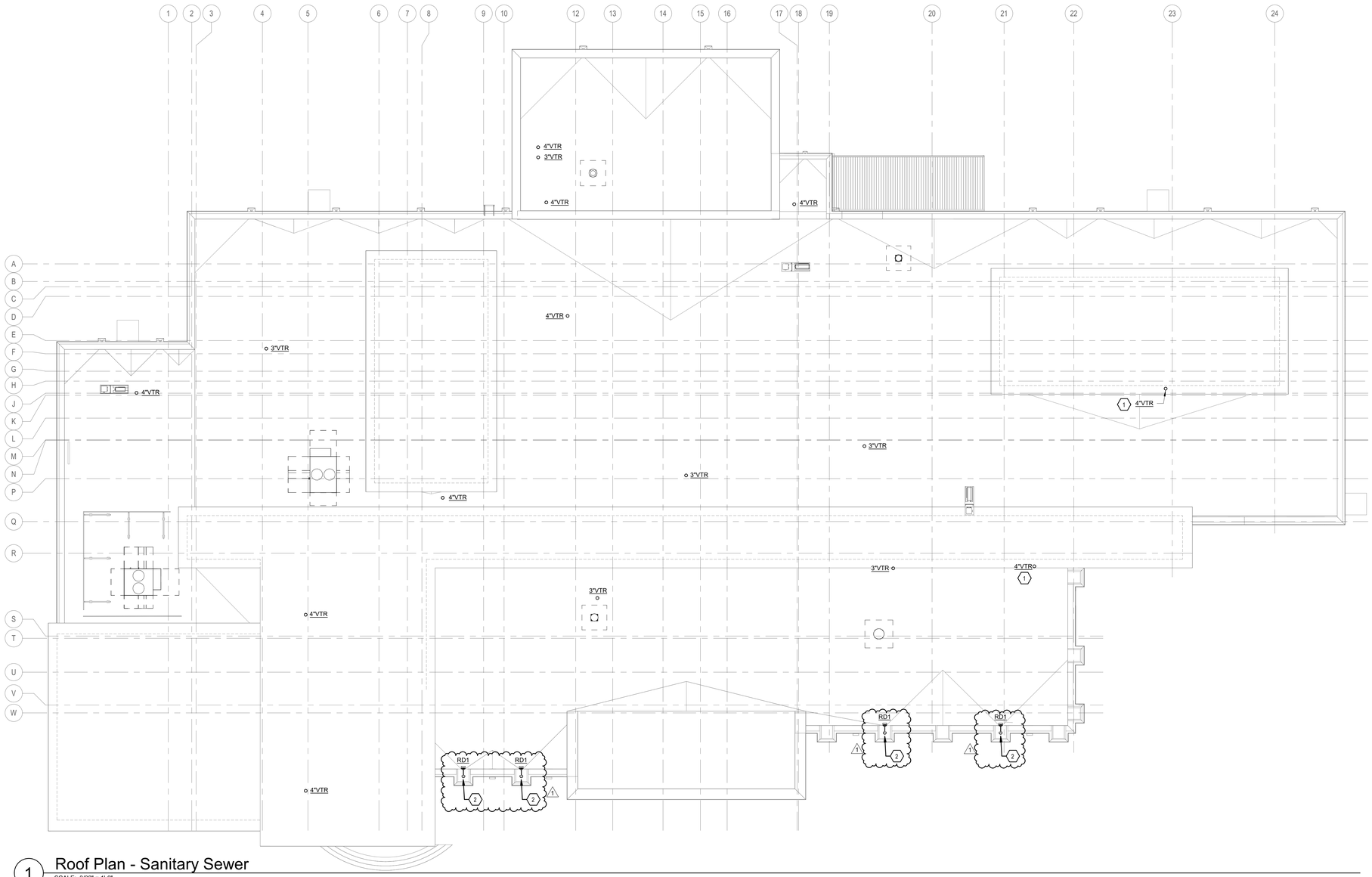
GENERAL NOTES

A. REFER TO SHEET P001 FOR PLUMBING LEGEND AND GENERAL NOTES.

B. ENSURE ALL SANITARY VENTS ARE MINIMUM 10'-0" FROM ALL OUTSIDE AIR OPENINGS AND INTAKES.

SHEET KEYNOTES

1. PROVIDE STORM SHELTER PROTECTED VTR VIA CYCLONE MODEL CVTR OR EQUIVALENT VENT THROUGH ROOF ASSEMBLY.
2. PROVIDE PARAPET ROOF DRAIN AT CORNER OF ROOF EDGE. ROUTE 4" STORM WATER PIPING WITHIN PILASTER. REFER TO FIRST FLOOR PLANS FOR CONTINUATION.



1 Roof Plan - Sanitary Sewer
SCALE: 3/32" = 1'-0"

0 8" 16" 32"

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Richmond, KY 40475

Roof Sanitary Sewer Plan

Project No. 22133

P103

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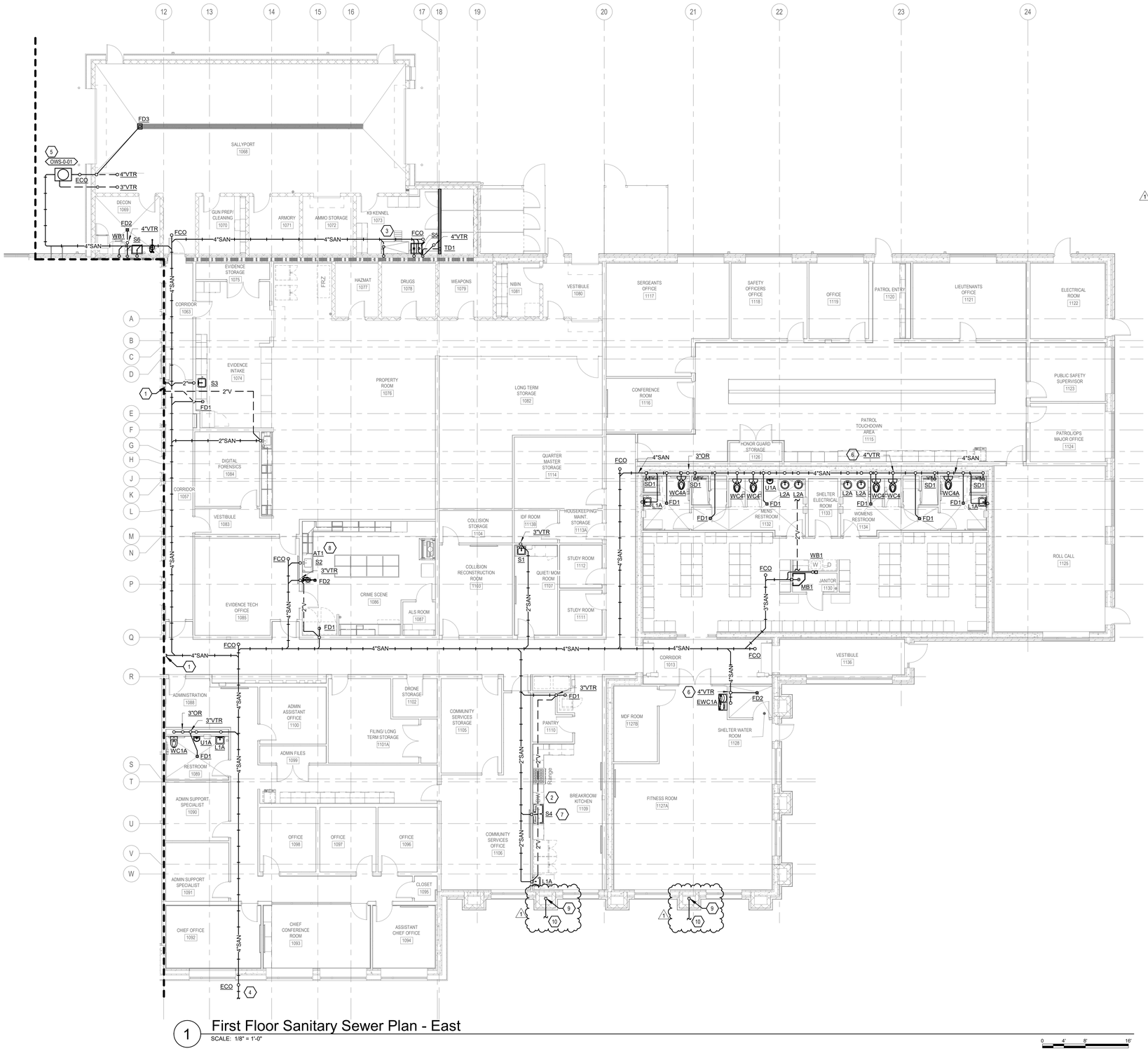

1 First Floor Sanitary Sewer Plan - East

SCALE: 1/8" = 1'-0"

0 4' 8' 16'

GENERAL NOTES

A. REFER TO SHEET P001 FOR PLUMBING LEGEND AND GENERAL NOTES.

SHEET KEYNOTES

1. SEE SHEET P101 FOR CONTINUATION.
2. ROUTE DISHWASHER TO TRAP OF NEARBY SINK.
3. DOG WASH STATION PROVIDED BY OTHERS. WASH STATION TO BE PROVIDED WITH DRAIN. PLUMBER TO CONNECT DRAIN WITH 2" TRAP AND VENT IN WALL.
4. REFER TO CIVIL SITE UTILITIES PLAN FOR CONTINUATION.
5. OIL WATER SEPARATOR INSTALLED AT GRADE. REFER TO SCHEDULE AND DETAILS FOR ADDITIONAL REQUIREMENTS.
6. PROVIDE STORM SHELTER PROTECTED VTR VIA CYCLONE MODEL CVTR OR EQUIVALENT VENT THROUGH ROOF ASSEMBLY.
7. GARBAGE DISPOSAL D-0-01 TO BE INSTALLED UNDER COUNTER OF SINK. REFER TO SCHEDULE.
8. INSTALL ACID TRAP AT1 IN CASEWORK UNDER SINK. INSTALL PER MANUFACTURERS RECOMMENDATIONS. REFER TO SCHEDULE.
9. 4" STORM LINE DOWN WITHIN PILASTER. ROUTE TO EXTERIOR OF BUILDING.
10. 4" STORM EXIT. REFER TO CIVIL SITE PLAN FOR CONTINUATION.

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Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

First Floor Sanitary Sewer Plan - East

Project No. 22133

P102

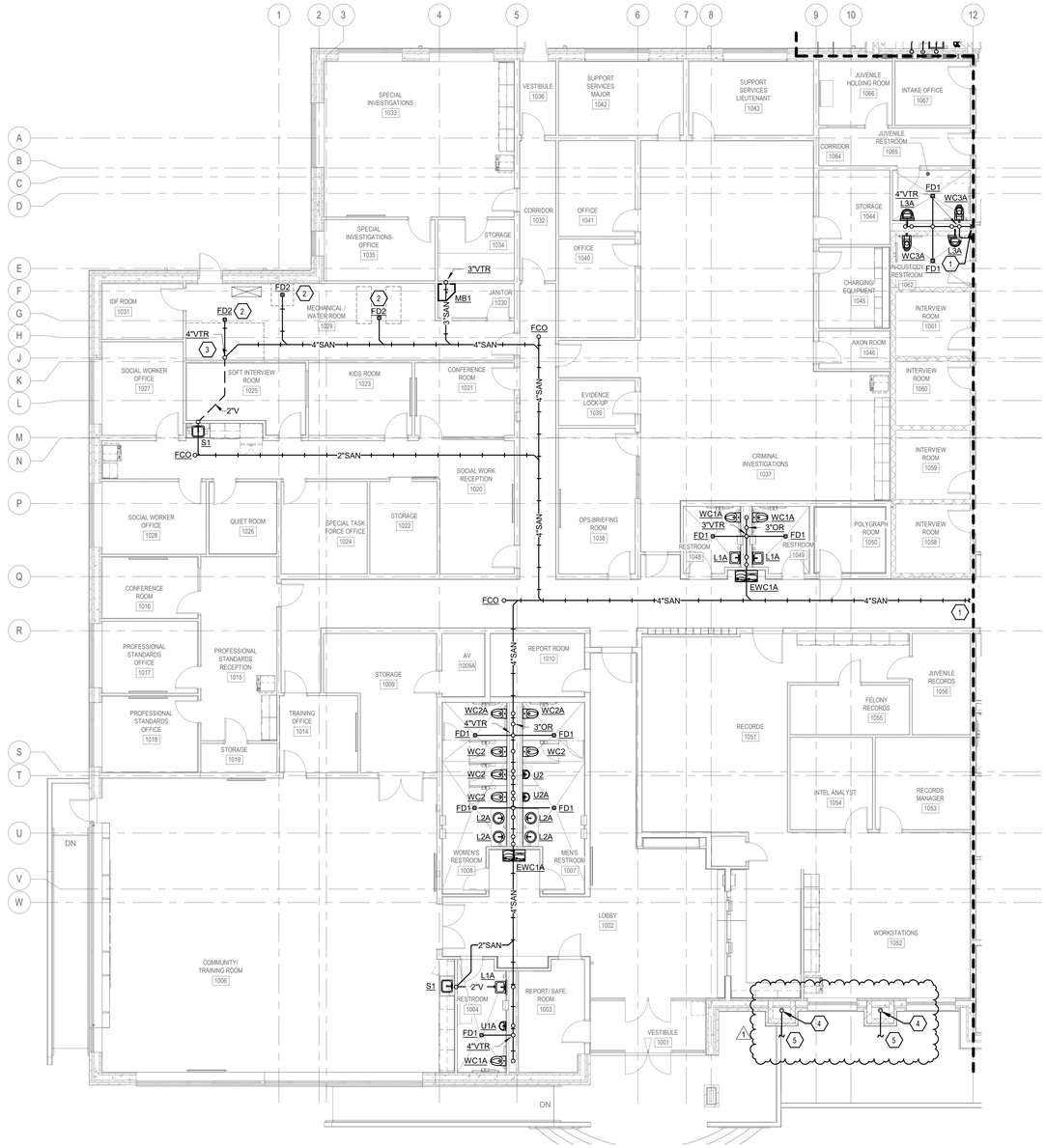
4/25/2025 12:51:49 PM

GENERAL NOTES

A. REFER TO SHEET P001 FOR PLUMBING LEGEND AND GENERAL NOTES.

SHEET KEYNOTES

1. SEE SHEET P102 FOR CONTINUATION.
2. COORDINATE FLOOR DRAIN INSTALL WITH OTHER TRADES BEFORE SLAB IS POURED.
3. PROVIDE STACK CLEANOUT IN EXPOSED VENT.
4. 4" STORM LINE DOWN WITHIN PILASTER. ROUTE TO EXTERIOR OF BUILDING.
5. 4" STORM EXIT. REFER TO CIVIL SITE PLAN FOR CONTINUATION.



1 First Floor Sanitary Sewer Plan - West

SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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First Floor Sanitary Sewer Plan - West

Project No. 22133

P101

GAS FIRED UNIT HEATER SCHEDULE - ADDENDUM #2

MARK	MANUFACTURER	MODEL	CFM	GAS INFORMATION		TEMP RISE (F)	PRESSURE DROP (inWC)	FLUE SIZE	ELECTRICAL			REMARKS
				INPUT (MBH)	OUTPUT (MBH)				V/Ø/Hz	MCA	MOCP	
GDH-01	MODINE	DFP125	2800	125	101.25	34.0	0.07	4"	120/1/60	2.2	15	ALL
GDH-02	MODINE	DFP125	2800	125	101.25	34.00	0.07	4"	120/1/60	2.2	15	ALL

REMARKS:
1. HORIZONTAL GAS FIRED DUCT HEATER
2. NATURAL GAS WITH RETRY INGNITION, SINGLE STAGE
3. PROVIDE CONCENTRIC FLUE PER MANUFACTURER AND ROUTE STRAIGHT UP TO ROOF
4. INTEGRATE HEATER TO ASSOCIATED SPLIT SYSTEM.
OTHER ACCEPTABLE MANUFACTURERS INCLUDE: TRANE, REZNOR, STERLING. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

AIR DEVICE SCHEDULE

MARK	MANUFACTURER	MODEL	MODULE	NECK	MAX CFM	S.P.	OBD	MAX NC	MOUNTING	COLOR	REMARKS
S-1	PRICE	ASCD	12x12	6" RD.	50	.01"	NO	20	LAY-IN	WHITE	1,2
S-1S	PRICE	ASCD	12x12	6" RD.	50	.01"	NO	20	SURFACE	WHITE	1,2
S-2	PRICE	ASCD	24x24	6" RD.	100	.01"	NO	20	LAY-IN	WHITE	1,2
S-2S	PRICE	ASCD	24x24	6" RD.	100	.01"	NO	20	SURFACE	WHITE	1,2
S-3	PRICE	ASCD	24x24	8" RD.	200	.02"	NO	20	LAY-IN	WHITE	1,2
S-3S	PRICE	ASCD	24x24	8" RD.	200	.02"	NO	20	SURFACE	WHITE	1,2
S-4	PRICE	ASCD	24x24	10" RD.	375	.03"	NO	20	LAY-IN	WHITE	1,2
S-5	PRICE	ASCD	24x24	12" RD.	600	.04"	NO	20	LAY-IN	WHITE	1,2
S-6	PRICE	RCD	8" RD.	8" RD.	210	.06"	NO	20	SURFACE	WHITE	1
S-7	PRICE	RCD	10" RD.	10" RD.	330	.06"	NO	20	SURFACE	WHITE	1
S-8	PRICE	HCD	6x18	6x18	400	.11"	YES	20	DUCT	WHITE	
S-9	PRICE	TBD3	48"	8" RD.	100	.07"	NO	20	SURFACE	SEE NOTE	10
S-10	PRICE	610	10x6	8x4	55	.025"	YES	20	SURFACE	WHITE	6,9
S-11	PRICE	610	16x12	14x10	325	.025"	YES	20	SURFACE	SEE NOTE	10
S-12	PRICE	610	20x12	18x10	430	.025"	YES	20	SURFACE	SEE NOTE	10
S-13	PRICE	SDG	12x6	10x4	100	.03" @ 0°	YES	20	SPIRAL DUCT	WHITE	8
S-14	PRICE	SDG	14x8	12x6	200	.03" @ 0°	YES	20	SPIRAL DUCT	WHITE	8
R-1	PRICE	85	12x12	10x10	400	.068"	NO	16	LAY-IN	WHITE	3,4
R-2	PRICE	85	24x24	22x22	1000	.044"	NO	20	LAY-IN	WHITE	3,4
R-3	PRICE	85	24x24	22x22	1000	.044"	NO	20	LAY-IN	WHITE	3,4,7
R-4	PRICE	630	26x18	24x16	1200	.069"	YES	30	SURFACE	SEE NOTE	6,9,10
R-5	PRICE	630	32x20	30x18	1800	.069"	YES	30	SURFACE	SEE NOTE	6,9,10
R-6	PRICE	630	32x16	30x14	1400	.069"	YES	30	DUCT	WHITE	6,9
E-1	PRICE	85	12x12	10x10	400	.068"	NO	16	LAY-IN	WHITE	3,4
E-1S	PRICE	85	12x12	10x10	400	.068"	NO	16	SURFACE	WHITE	3,4
E-2	PRICE	85	24x24	22x22	1000	.044"	NO	20	LAY-IN	WHITE	3,4
E-2S	PRICE	85	24x24	22x22	1000	.044"	NO	20	SURFACE	WHITE	3,4
E-3	PRICE	630	10x6	8x4	55	.025"	YES	20	DUCT	WHITE	6,9
T-1	PRICE	85	24x24	22x22	1000	.044"	NO	20	SURFACE	WHITE	3,4
T-2	PRICE	630	10x6	8x4	55	.025"	YES	20	DUCT	WHITE	6,9
T-3	PRICE	630	24x14	22x12	640	.069"	NO	20	SURFACE	WHITE	6,9

REMARKS:
1. COORDINATE AIR DEVICE LOCATIONS WITH REFLECTED CEILING PLANS PRIOR TO INSTALLATION. LIGHTING HAS PRIORITY OVER HVAC
2. 4-WAY THROW.
3. PROVIDE SQUARE TO ROUND ADAPTER AS REQUIRED.
4. 45 DEGREE CORE EGG CRATE.
5. DOUBLE DEFLECTION GRILLE
6. HORIZONTAL FRONT BLADES
7. HINGED FILTER GRILLE WITH MINIMUM TWO THUMB SCREWS.
8. INSTALL AIR DEVICE AT 45 DEGREES BELOW HORIZONTAL UNLESS OTHERWISE INDICATED.
9. 45 DEGREE DEFLECTION, 3/4 IN BLADE SPACING.
10. COLOR TO BE SELECTED BY ARCHITECT.
OTHER ACCEPTABLE MANUFACTURERS INCLUDE: KRUEGER, TITUS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

FAN SCHEDULE

MARK	MANUFACTURER	MODEL	CFM	ESP (IN H20)	SONES	DRIVE TYPE	RPM	ELECTRICAL				REMARKS
								V/Ø/Hz	HP	MCA	MOCP	
EF-0-01	GREENHECK	SE1-16-428-VG	1650	0.5	12.6	DIRECT	1496	115/1/60	3/4	12.5	20	1,2,3,6,7
EF-0-02	GREENHECK	SP-A90	75	0.2	0.3	DIRECT	900	115/1/60	16 W	0.21	15	1,2,3,4,5
EF-0-03	GREENHECK	SP-A200	150	0.2	1.2	DIRECT	714	115/1/60	26 W	0.6	15	1,2,3,4,5
EF-0-04	GREENHECK	SP-A90	75	0.2	0.3	DIRECT	900	115/1/60	16 W	0.21	15	1,2,3,4,5
EF-0-05	GREENHECK	SP-A90	75	0.2	0.3	DIRECT	900	115/1/60	16 W	0.21	15	1,2,3,4,5
EF-0-06	GREENHECK	SP-A90	75	0.2	0.3	DIRECT	900	115/1/60	16 W	0.21	15	1,2,3,4,5
EF-0-07	GREENHECK	SP-A90	75	0.2	0.3	DIRECT	900	115/1/60	16 W	0.21	15	1,2,3,4,5
EF-0-08	GREENHECK	CUE-080-G	200	0.5	7.4	DIRECT	1,323	115/1/60	1/10	1.9	15	1,2,3,10,11
EF-0-09	GREENHECK	G-095-VG	300	0.5	7.3	DIRECT	1,352	115/1/60	1/6	3.5	15	1,2,3,10,12
EF-1-01	GREENHECK	SP-A90	75	0.2	0.3	DIRECT	900	115/1/60	16 W	0.21	15	1,2,3,4,5
EF-1-02	GREENHECK	SP-A110	100	0.2	0.5	DIRECT	950	115/1/60	17 W	0.24	15	1,2,3,4,5
EF-1-03	GREENHECK	SP-A110	100	0.2	0.5	DIRECT	950	115/1/60	17 W	0.24	15	1,2,3,4,5
EF-1-04	GREENHECK	SQ-90-VG	300	0.25	4.7	DIRECT	1,086	115/1/60	1/6	3.50	15	1,3,5,8
EF-1-05	GREENHECK	SP-A70	50	0.2	0.3	DIRECT	850	115/1/60	13 W	0.2	15	1,2,3,4,11
ISF-01	GREENHECK	SQ-98-VG	400	0.75	12.6	DIRECT	1,653	115/1/60	1/4	4.8	15	1,2,3,8,9
ISF-02	GREENHECK	SQ-98-VG	400	0.75	12.6	DIRECT	1,653	115/1/60	1/4	4.8	15	1,2,3,8,9
IEF-01	GREENHECK	SQ-98-VG	400	0.75	12.6	DIRECT	1,653	115/1/60	1/4	4.8	15	1,2,3,8,9
IEF-02	GREENHECK	SQ-98-VG	400	0.75	12.6	DIRECT	1,653	115/1/60	1/4	4.8	15	1,2,3,8,9

REMARKS:
1. PROVIDE WITH UNIT MOUNTED DISCONNECT
2. PROVIDE WITH UNIT MOUNTED SPEED CONTROL
3. PROVIDE WITH APPROPRIATE BACKDRAFT DAMPER
4. CEILING MOUNTED EXHAUST FAN WITH APPROPRIATE CEILING GRILLE. SUPPORT FROM STRUCTURE.
5. INTERLOCK WITH WALL SWITCH, COORDINATE WITH ELECTRICAL CONTRACTOR.
6. WALL MOUNTED EXHAUST FAN WITH BIRD SCREEN AND 90 DEG WEATHER HOOD.
7. FAN TO BE CONTROLLED BY THERMOSTAT AND CARBON MONOXIDE SENSOR. REFER TO DRAWINGS.
8. INLINE FAN MOUNTED ABOVE CEILING. SUPPORT FROM STRUCTURE.
9. FOR EMERGENCY USE ONLY IN STORM SHELTER.
10. ROOF MOUNTED EXHAUST FAN. PROVIDE WITH 14" TALL INSULATED ROOF CURB.
11. 24/7 OPERATION FOR CONTINOUS VENTILATION.
12. EXHAUST FAN TO BE INTERLOCKED WITH HP-09.
OTHER ACCEPTABLE MANUFACTURERS INCLUDE: CARNES, COOK. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

ELECTRIC HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	TYPE	CFM	BTUH	ELECTRICAL				REMARKS
						V/Ø/Hz	KW	MCA	MOCP	
EUH-0-01	MARKEL	3480 SERIES	CEILING MOUNTED HEATER	200	6,800	208/3/60	2.0	7.0	15	ALL

REMARKS:
1. INTEGRAL THERMOSTAT AND DISCONNECT
2. PROVIDE REQUIRED MOUNTING BRACKET FOR MOUNTING AS INDICATED ON PLANS
OTHER ACCEPTABLE MANUFACTURERS INCLUDE: Q-MARK, REDDI. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

EXPANSION TANK SCHEDULE

MARK	MANUFACTURER	MODEL	LOCATION	TANK VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	REMARKS
ET-01	TACO	CA90-125	MECH. 1029	23	23	ALL

REMARKS:
1. ASME RATED
2. VERTICAL BLADDER TYPE
3. 100 PSIG PRESSURE RATING
4. INSTALL ON 4" CONCRETE PAD
5. REFER TO DETAILS
OTHER ACCEPTABLE MANUFACTURERS INCLUDE: BELL & GOSSETT, WESSELS, WATTS.
REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

POT FEEDER / FILTER SCHEDULE

MARK	MANUFACTURER	MODEL	INLET/OUTLET CONNECTIONS	FLOW GPM	REMARKS
PF-01	SHELCO	4F0S1SB-304-0-2F-GP-B	2"/2"	20	ALL

REMARKS:
1. 304L STAINLES STEEL CONSTRUCTION
2. (4) 10" DOUBLE OPEN-ENDED CARTRIDGES
3. SWING BOLT CLOSURE
4. FLANGED INLET / OUTLET
5. HEAVY-DUTY STAINLESS STEEL MOUNTING LEGS
6. 150 PSIG MAXIUMUM OPERATING PRESSURE @ 300DEG F
7. PROVIDE (1) EXTRA SET OF CARTRIDGES AT SUBSTANTIAL COMPLETION
8. PROVIDE DRAIN CONNECTION TO NEAREST FLOOR DRAIN

AIR SEPARATOR SCHEDULE

MARK	MANUFACTURER	MODEL	INLET/OUTLET CONNECTIONS	FLOW GPM	REMARKS
AS-01	TACO	4904AD-125	4"/4"	200	ALL

REMARKS:
1. ASME RATED COMPLETE WITH INTERNAL STRAINER AND AUTOMATIC AIR VENT
2. PROVIDE DRAIN LINE ROUTED TO NEAREST FLOOR DRAIN.
3. REFER TO AIR SEPARATOR DETAIL.
OTHER ACCEPTABLE MANUFACTURERS INCLUDE: ARMSTRONG. BELL & GOSSETT. WESSELS

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Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Mechanical Schedules

Project No. 22133

M602

DEDICATED OUTDOOR AIR SYSTEM SCHEDULE

MARK	MANUFACTURER	MODEL	UNIT: ELECTRICAL V/Ø/Hz	MCA (A)	MOCP (A)	SCCR (kA)	OUTSIDE AIR AMOUNT (CFM)	SUPPLY FAN AIRFLOW (CFM)	ESP (IN H²O)	MOTOR SIZE (HP)	RETURN/EXHAUST FAN AIRFLOW (CFM)	ESP (IN H²O)	MOTOR SIZE (HP)	PRIMARY FILTER TYPE	ENERGY RECOVERY WHEEL: WINTER AMBIENT EDB (F)	EWB (F)	SUPPLY LDB (F)	LWB (F)	RETURN EDB (F)	EWB (F)	SUMMER AMBIENT EDB (F)	EWB (F)	SUPPLY LDB (F)	LWB (F)	RETURN EDB (F)	EWB (F)	DX COOLING EDB (F)	LDB (F)	LWB (F)	TOTAL CAPACITY (MBH)	COMPRESSOR QTY	REFRIGERANT TYPE	GAS HEATING INPUT (MBH)	CAPACITY (MBH)	EDB/LDB (F)	TEMP RISE (F)	HOT GAS REHEAT AIRFLOW (CFM)	EAT DB/WB (°F)	LAT DB/WB (°F)	TOTAL CAPACITY (MBH)	REMARKS
ERU-01	DAIKIN	DPSC12B	208/3/60	99.2	125	65	2800	2520	2	7	2520	1.5	4.4	2" MERV 8	0.0	-1.0	45.6	38.8	68.0	53.0	95.0	78.0	81.0	68.6	75.0	63.0	81.0	51.7	51.7	138.4	1	R32	300	243	40.2/123.4	80	2800	51.7/51.7	72.0/59.5	61.6	ALL

REMARKS:
1. COOLING AMBIENT DESIGN CONDITIONS: 95F DB / 78F WB. HEATING AMBIENT DESIGN CONDITIONS: 0F DB / -2F WB.
2. DX COOLING WITH GAS HEAT
3. WITH 14" TALL, INSULATED ROOF CURB.
4. WITH HOT GAS REHEAT FOR DEHUMIDIFICATION
5. SINGLE POINT POWER CONNECTION WITH FACTORY-INSTALLED DISCONNECT SWITCH
6. ENERGY RECOVERY WHEEL
7. FAN CYCLING CONTROL OPTION
8. HIGH AND LOW PRESSURE SWITCH
9. COMPRESSOR SHORT CYCLE TIMER
10. WITH FACTORY-MOUNTED CONTROLS. INTEGRATE TO CENTRAL CONTROLLER AND EXPOSE ALL POINTS.
11. PROVIDE UNIT WITH 2", MERV 8, PLEATED MEDIA FILTERS ON BOTH SUPPLY AND EXHAUST AIR TUNNELS.
12. VFD ON SUPPLY AND RETURN FANS.
13. PROVIDE WITH PHASE PROTECTION, SMOKE DETECTOR SHUT DOWN AND 120V UNIT-POWERED CONVENIENCE OUTLET.
14. UNIT SHALL BE PROGRAMMED TO OPERATE WHEN BUILDING IS OCCUPIED (24/7)
15. WITH 10% PURGE ACROSS WHEEL.
16. WITH BYPASS DAMPER FOR RECIRCULATION AND DEHUMIDIFICATION MODE.

REFER TO SPECIFICATIONS FOR ACCEPTABLE MANUFACTURERS AND ADDITIONAL REQUIREMENTS.

ROOFTOP UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	UNIT: ELECTRICAL V/Ø/Hz	MCA (A)	MOCP (A)	SCCR (kA)	OUTSIDE AIR AMOUNT (CFM)	SUPPLY FAN AIRFLOW (CFM)	ESP (IN H²O)	MOTOR SIZE (HP)	PRIMARY FILTER TYPE	DX COOLING SECTION EDB DEG F	EWB DEG F	LDB DEG F	LWB DEG F	TOTAL CAPACITY (MBH)	COMPRESSOR QTY	REFRIGERANT TYPE	GAS HEAT SECTION TYPE	INPUT MBH	EDB DEG F	LDB DEG F	CAPACITY MBH	HOT GAS REHEAT AIRFLOW (CFM)	EAT DB (°F)	LAT DB (°F)	TOTAL CAPACITY (MBH)	REMARKS
RTU-01	DAIKIN	DPSC10B	208/3/60	68.5	100	65	720	4000	1	4.4	2" MERV 8	78.6	65.2	54.5	54.5	125.1	2	R32	GAS	200	54.3	91.6	162.0	4000	54.5	70	67.1	ALL

REMARKS:
1. COOLING AMBIENT DESIGN CONDITIONS: 95F DB / 78F WB. HEATING AMBIENT DESIGN CONDITIONS: 0F DB / -1F WB.
2. AIR-SOURCE COOLING, GAS HEATING
3. WITH 14" TALL, INSULATED ROOF CURB.
4. WITH HOT GAS REHEAT FOR DEHUMIDIFICATION
5. SINGLE POINT POWER CONNECTION WITH FACTORY-INSTALLED DISCONNECT SWITCH
6. WITH BYPASS DAMPER FOR RECIRCULATION AND DEHUMIDIFICATION MODE.
7. FAN CYCLING CONTROL OPTION
8. HIGH AND LOW PRESSURE SWITCH
9. COMPRESSOR SHORT CYCLE TIMER
10. WITH FACTORY-MOUNTED CONTROLS.
11. PROVIDE UNIT WITH 2", MERV 8, PLEATED MEDIA FILTERS ON BOTH SUPPLY AND EXHAUST AIR TUNNELS.
12. VFD ON SUPPLY FAN.
13. PROVIDE WITH PHASE PROTECTION, SMOKE DETECTOR SHUT DOWN AND 120V UNIT-POWERED CONVENIENCE OUTLET.
14. UNIT SHALL BE INTEGRATED TO CONTROLS CENTRAL CONTROLLER. REFER TO POINTS LIST.

REFER TO SPECIFICATIONS FOR ACCEPTABLE MANUFACTURERS AND ADDITIONAL REQUIREMENTS.

WATER-SOURCE HEAT PUMP UNIT SCHEDULE

MARK (HP-#)	MANUFACTURER	MODEL	NOMINAL TONNAGE	ESP (IN H_2O)	AIRFLOW (CFM)	FLUID FLOW (GPM)	WPD (FT H_2O)	COOLING CAPACITIES LWT (°F)	LDB (°F)	TOTAL (MBH)	SENSIBLE (MBH)	HEAT OF REJECTION (MBH)	HEATING CAPACITIES LWT (°F)	LDB (°F)	TOTAL (MBH)	HEAT EXTRACTION (MBH)	ELECTRICAL V/Ø/Hz	TOTAL UNIT FLA	MCA	MOCP	REMARKS
HP-01	WATER FURNACE	V5AH060	5	0.7	2000	15	13.6	94.53	54.6	56.79	44.08	71.5	39.36	96	56.07	42.3	208/3/60	21.4	24.9	35	1,3,4,5,7,8,9,10,11
HP-02	WATER FURNACE	V5AH048	4	0.7	1600	12	9	94.18	53.8	44.69	35.05	55.1	38.97	98.3	46.74	36.2	208/3/60	19.5	22.5	30	1,3,4,5,7,8,9,10
HP-03	WATER FURNACE	V5AH030	2.5	0.6	1000	7.5	8.4	94.84	53.8	30.34	23.09	36.9	38.81	97.8	30.27	23.2	208/3/60	12	14	20	1,3,4,5,7,8,9,10
HP-04	WATER FURNACE	V5AH036	3	0.7	1200	9	8.4	94.67	54.1	35.58	27.84	43.5	38.98	96.3	34.93	27.1	208/3/60	14	16.5	25	1,3,4,5,7,8,9,10
HP-05	WATER FURNACE	V5AH030	2.5	0.6	1000	7.5	8.4	94.84	53.8	30.34	23.09	36.9	38.81	97.8	30.27	23.2	208/3/60	12	14	20	1,3,4,5,7,8,9,10
HP-06	WATER FURNACE	V5AH048	4	0.7	1600	12	9	94.18	53.8	44.69	35.05	55.1	38.97	98.3	46.74	36.2	208/3/60	19.5	22.5	30	1,3,4,5,7,8,9,10
HP-07	WATER FURNACE	V5AH015	1.25	0.4	500	3.75	5.2	94.55	53.2	14.75	12.35	17.9	38.71	96.2	14.86	11.8	208/1/60	11.8	13.7	20	1,3,4,5,6,9,10
HP-08	WATER FURNACE	V5AH012	1	0.4	400	3	3	94.6	53.9	11.79	9.35	14.4	39.27	95.5	11.3	8.6	208/1/60	7.74	9.4	15	1,3,4,5,6,9,10
HP-09	WATER FURNACE	V5AH036	3	0.7	1200	9	8.4	94.67	54.1	35.58	27.84	43.5	38.98	96.3	34.93	27.1	208/3/60	14	16.5	25	1,3,4,5,7,8,9,10
HP-10	WATER FURNACE	V5AH009	0.75	0.35	300	2.25	10.6	95.84	51	9.71	7.01	12.2	38.87	103.3	9.71	6.9	208/1/60	6.94	8.4	15	1,3,4,5,6,9,10
HP-11	WATER FURNACE	V5AH048	4	0.7	1600	12	9	94.18	53.8	44.69	35.05	55.1	38.97	98.3	46.74	36.2	208/3/60	19.5	22.5	30	1,3,4,5,7,8,9,10
HP-12	WATER FURNACE	V5AH018	1.5	0.4	600	4.5	8.2	94.33	53.4	17.04	13.69	21	39.09	97.2	17.25	13.3	208/1/60	14.3	16.9	25	1,3,4,5,6,9,10
HP-13	WATER FURNACE	V5AH030	2.5	0.6	1000	7.5	8.4	94.84	53.8	30.34	23.09	36.9	38.81	97.8	30.27	23.2	208/3/60	12	14	20	1,3,4,5,7,8,9,10
HP-14	WATER FURNACE	V5AH036	3	0.7	1200	9	8.4	94.67	54.1	35.58	27.84	43.5	38.98	96.3	34.93	27.1	208/3/60	14	16.5	25	1,3,4,5,7,8,9,10
HP-15	WATER FURNACE	V5AH030	2.5	0.6	1000	7.5	8.4	94.84	53.8	30.34	23.09	36.9	38.81	97.8	30.27	23.2	208/3/60	12	14	20	1,3,4,5,7,8,9,10
HP-16	WATER FURNACE	V5AH036	3	0.7	1200	9	8.4	94.67	54.1	35.58	27.84	43.5	38.98	96.3	34.93	27.1	208/3/60	14	16.5	25	1,3,4,5,7,8,9,10
HP-17	WATER FURNACE	V5AH048	4	0.7	1600	12	9	94.18	53.8	44.69	35.05	55.1	38.97	98.3	46.74	36.2	208/3/60	19.5	22.5	30	1,3,4,5,7,8,9,10
HP-18	WATER FURNACE	V5AH060	5	0.7	2000	15	13.6	94.53	54.6	56.79	44.08	71.5	39.36	96	56.07	42.3	208/3/60	21.4	24.9	35	1,3,4,5,7,8,9,10,11
HP-19	WATER FURNACE	V5AH030	2.5	0.6	1000	7.5	8.4	94.84	53.8	30.34	23.09	36.9	38.81	97.8	30.27	23.2	208/3/60	12	14	20	1,3,4,5,7,8,9,10
HP-20	WATER FURNACE	V5AH024	2	0.7	800	6	7	94.7	55.8	23.57	18.84	29.1	39.7	94.4	21.35	15.9	208/3/60	10.4	12	15	1,3,4,5,7,8,9,10
HP-21	WATER FURNACE	V5AH030	2.5	0.6	1000	7.5	8.4	94.84	53.8	30.34	23.09	36.9	38.81	97.8	30.27	23.2	208/3/60	12	14	20	1,3,4,5,7,8,9,10
HP-22	WATER FURNACE	V5AH015	1.25	0.4	500	3.75	5.2	94.55	53.2	14.75	12.35	17.9	38.71	96.2	14.86	11.8	208/1/60	11.8	13.7	20	1,3,4,5,6,9,10

REMARKS:
1. HORIZONTAL UNIT
2. VERTICAL UNIT
3. PROVIDE WITH FLEXIBLE DUCT CONNECTIONS
4. PROVIDE UNIT CONNECTION SIZE HOSE KITS
5. PROVIDE PROPER VIBRATION ISOLATION FOR SUPPORT FROM STRUCTURE
6. SINGLE STAGE UNIT
7. TWO STAGE UNIT
8. PROVIDE WITH HOT GAS REHEAT
9. UTILIZE FACTORY FILTER RACK.
10. DISCONNECT PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.
11. PROVIDE WITH RETURN AIR SMOKE DETECTOR. COORDINATE WITH EC.

SELECTIONS BASED ON THE FOLLOWING CONDITIONS: COOLING FULL CAPACITY 75 EDB / 63 EWB, 85 EWT. HEATING FULL CAPACITY 68 EDB, 65 EWT.
OTHER ACCEPTABLE MANUFACTURERS INCLUDE: WATER FURNACE / JOHNSON CONTROLS / DAIKIN / FLORIDA HEAT PUMP. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

SPLIT SYSTEM SCHEDULE

MARK	MANUFACTURER	MODEL	CFM	IEER	EER	COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	ELECTRICAL V/Ø/Hz	RLA	MCA	MOCP	WEIGHT (LBS.)	REMARKS
OUTDOOR UNIT													
OU-01	DAIKIN	DH6TE09030A	-	16.0	11.4	92.0	52.0	208/3/60	14.1	38.7	50	415.0	1,2,3,4,5,6
INDOOR UNIT													
AHU-01	DAIKIN	DAQ09033A	2800		-	-	-	-	-	-	-	430.0	1,7,8
OUTDOOR UNIT													
OU-02	DAIKIN	DH6TE09030A	-	16.0	11.4	92.0	52.0	208/3/60	14.1	38.7	50	415.0	1,2,3,4,5,6
INDOOR UNIT													
AHU-02	DAIKIN	DAQ09033A	2800		-	-	-	-	-	-	-	430.0	1,7,8

REMARKS
1. INSTALL PER MANUFACTURER'S INSTRUCTIONS. MAINTAIN MANUFACTURER'S CLEARANCES.
2. COOLING CAPACITY IS BASED ON 80 DB/67 WB INDOOR AIR TEMP AND 95 DB AMBIENT OUTDOOR.
3. PROVIDE SINGLE POINT ELECTRICAL CONNECTION FOR INDOOR AND OUTDOOR UNIT.
4. R-32 REFRIGERANT. SIZE ALL REFRIGERANT PIPING PER MANUFACTURER'S INSTRUCTIONS. REVIEW PIPING RUNS WITH MANUFACTURER.
5. PROVIDE WITH WIND BAFFLE FOR COOLING RANGE OF 0 DB - 115 DB AMBIAENT OUTDOOR RANGE.
6. PROVIDE CONCRETE EQUIPMENT PAD FOR CONDENSING UNIT MOUNTING.
7. PROVIDE INDOOR UNIT WITH WASHABLE FILTER.
8. POWER INDOOR UNIT FROM OUTDOOR UNIT.

OTHER ACCEPTABLE MANUFACTURERS INCLUDE: SAMSUNG, MITSUBISHI, TRANE, JCI, LG. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

GRAVITY HOOD SCHEDULE

MARK	MANUFACTURER	MODEL	INTAKE / EXHAUST	CFM	S.P. DROP	HOOD VELOCITY	THROAT SIZE LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	AREA (SQ.FT)	REMARKS
GH-0-01	GREENHECK	GRSR	EXHAUST	75	0.004	200 FPM	8	8	19.25	0.44	ALL
GH-0-02	GREENHECK	GRSR	EXHAUST	400	0.029	488 FPM	12	12	22	1.00	ALL
GH-1-01	GREENHECK	GRSI	INTAKE	400	0.029	488 FPM	12	12	22	1.00	ALL
GH-1-02	GREENHECK	GRSI	INTAKE	200	0.029	541 FPM	8	8	19.25	0.44	ALL

REMARKS:
1. UNIT TO INCLUDE 12" HIGH ROOF CURB. CONFIRM ROOF SLOPES PRIOR TO ORDERING
2. ALUMINUM HIGH EFFICIENCY GRAVITY HOOD

OTHER ACCEPTABLE MANUFACTURERS INCLUDE: CARNES, COOK, UNITED ENERTECH. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

LOUVER SCHEDULE

MARK	MANUFACTURER	MODEL	INTAKE / EXHAUST	SIZE WIDTH	HEIGHT	DEPTH	CFM	PRESSURE DROP (IN)	FREE AREA (SQ.FT)	VELOCITY (FPM)	REMARKS
L-0-01	GREENHECK	ESD-635	INTAKE	30	30	6	1650	0.04	3.1	535	1,2,3,4,5,6,7
L-0-02	GREENHECK	AFL-601	INTAKE	48	12	6	400	0.087	0.9	468	1,2,3,4,5,6,8
L-0-03	GREENHECK	AFL-601	EXHAUST	48	12	6	400	0.085	0.9	468	1,2,3,4,5,6,7
L-0-04	GREENHECK	AFL-601	INTAKE	48	12	6	400	0.087	0.9	468	1,2,3,4,5,6,8
L-0-05	GREENHECK	AFL-601	EXHAUST	48	12	6	400	0.085	0.9	468	1,2,3,4,5,6,7
L-1-01	GREENHECK	ESD-202	EXHAUST	16	10	2	125	0.03	0.3	456	1,2,3,4,5
L-1-02	GREENHECK	ESD-403	EXHAUST	24	16	4	300	0.03	1	449	1,2,3,4,5

REMARKS:
1. LOUVER COLOR SELECTED BY ARCHITECT
2. COORDINATE ALL LOUVER LOCATIONS WITH ARCHITECT AND ENGINEER PRIOR TO INSTALLATION
3. ALUMINUM CONSTRUCTION
4. DRAINABLE BLADES
5. MAXIMUM NC LEVEL OF 25
6. PROVIDE BIRD SCREEN AS PERMITTED BY CURRENT INTERNATIONAL MECHANICAL CODE (IMC).
7. PROVIDE WITH FACTORY MOUNTED DAMPER ACTUATOR. CONTROLS CONTRACTOR SHALL PROVIDE REQUIRED POWER TO ACTUATOR.
8. PROVIDE WITH HEAVY DUTY TORNADO DAMPER HTOD-330 DIRECTLY BEHIND LOUVER.
9. PROVIDE WITH HEAVY DUTY TORNADO DAMPER HTOD-331 DIRECTLY BEHIND LOUVER.

OTHER ACCEPTABLE MANUFACTURERS INCLUDE: RUSKIN, UNITED ENERTECH. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

GAS FIRED UNIT HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	CFM	GAS INFORMATION INPUT (MBH)	OUTPUT (MBH)	FAN MOTOR ELECTRICAL HP	RPM	AMPS	FLUE SIZE	ELECTRICAL V/Ø/Hz	MCA	MOCP	REMARKS
GUH-0-01	STERLING	GG	550	45	37.35	1/20	1650	1.9	4"	120/1/60	3.7	15	ALL
GUH-0-02	STERLING	GG	550	45	37.35	1/20	1650	1.9	4"	120/1/60	3.7	15	ALL
GUH-2-01	STERLING	GG	550	45	37.35	1/20	1650	1.9	4"	120/1/60	3.7	15	ALL
GUH-2-02	STERLING	GG	550	45	37.35	1/20	1650	1.9	4"	120/1/60	3.7	15	ALL
GUH-2-03	STERLING	GG	550	45	37.35	1/20	1650	1.9	4"	120/1/60	3.7	15	ALL
GUH-2-04	STERLING	GG	550	45	37.35	1/20	1650	1.9	4"	120/1/60	3.7	15	ALL
GUH-2-05	STERLING	GG	370	30	24.90	1/20	1650	1.9	4"	120/1/60	3.7	15	ALL

REMARKS:
1. HORIZONTAL GAS FIRED UNIT HEATER
2. PROVIDE CONCENTRIC FLUE PER MANUFACTURER AND ROUTE STRAIGHT UP TO ROOF
3. PROVIDE WALL MOUNTED THERMOSTAT

OTHER ACCEPTABLE MANUFACTURERS INCLUDE: TRANE, REZNOR, MODINE. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

MINI-SPLIT SYSTEM SCHEDULE

MARK	MANUFACTURER	MODEL	CFM (HI/LO)	SEER	EER	COOLING CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	HEATING CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	ELECTRICAL V/Ø/Hz	RLA	MCA	MOP	WEIGHT (LBS.)	REMARKS
OUTDOOR UNIT															
CU-01	DAIKIN	RX12AXVJU	-	19	12.5	8.9	8.0	10.0	10.0	208/1/60	7.5	7.8	15	57.0	1,2,3,4,5,6
INDOOR UNIT															
WMU-01	DAIKIN	FTX12AXVJU	431/219	-	-	-	-	-	-	-	-	-	-	20.0	1,7,8,9
OUTDOOR UNIT															
CU-02	DAIKIN	RK24AXVJU	-	19	12.2	21.2	15.7	N/A	N/A	208/1/60	13	13.4	20	106.0	1,2,3,4,5,6
INDOOR UNIT															
WMU-02	DAIKIN	FTK24AXVJU	716/467	-	-	-	-	-	-	-	-	-	-	31.0	1,7,8,9
OUTDOOR UNIT															
CU-03	DAIKIN	RX12AXVJU	-	19	12.5	8.9	8.0	10.0	10.0	208/1/60	7.5	7.8	15	57.0	1,2,3,4,5,6
INDOOR UNIT															
WMU-03	DAIKIN	FTX12AXVJU	431/219	-	-	-	-	-	-	-	-	-	-	20.0	1,7,8,9

REMARKS
1. INSTALL PER MANUFACTURER'S INSTRUCTIONS. MAINTAIN MANUFACTURER'S CLEARANCES.
2. COOLING CAPACITY IS BASED ON 80 DB/67 WB INDOOR AIR TEMP AND 95 DB AMBIENT OUTDOOR.
3. PROVIDE SINGLE POINT ELECTRICAL CONNECTION FOR INDOOR AND OUTDOOR UNIT.
4. R-410A REFRIGERANT. SIZE ALL REFRIGERANT PIPING PER MANUFACTURER'S INSTRUCTIONS. REVIEW PIPING RUNS WITH MANUFACTURER.
5. PROVIDE WITH WIND BAFFLE FOR COOLING RANGE OF 0 DB - 115 DB AMBIAENT OUTDOOR RANGE.
6. PROVIDE WITH ROOF CURB FOR CONDENSING UNIT MOUNTING. SEE DETAILS.
7. PROVIDE INDOOR UNIT WITH WASHABLE FILTER.
8. PROVIDE INDOOR UNIT WITH CONDENSATE PUMP.
9. POWER INDOOR UNIT FROM OUTDOOR UNIT.

OTHER ACCEPTABLE MANUFACTURERS INCLUDE: SAMSUNG, MITSUBISHI, TRANE, JCI, LG. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

PUMP SCHEDULE

MARK	MANUFACTURER	MODEL	FLOW (GPM)	HEAD (FT)	RPM	EFFICIENCY %	IMPELLER (IN)	CONNECTIONS INLET	OUTLET	ELECTRICAL HP	V / Ø / Hz	FLA	MOCP	REMARKS
P-01	TACO	FI2511D	200	85	1760	72.0	9.55	3	2.5	7.5	208/3/60	25.3	50	1,2,3,4,5,6,7,8
P-01A	TACO	FI2511D	200	85	1760	72.0	9.55	3	2.5	7.5	208/3/60	25.3	50	1,2,3,4,5,6,7,8,9

REMARKS:
1. BASE MOUNTED END SUCTION PUMP. MOUNT ON 4" HIGH CONCRETE EQUIPMENT PAD.
2. PROVIDE WITH LINE SIZE SUCTION DIFFUSER OR BASKET STRAINER AND LINE SIZE TRIPLE DUTY VALVE.
3. PUMP SHALL BE RATED FOR CONTINUOUS DUTY.
4. PROVIDE WITH SHAFT GROUNDING RING.
5. PROVIDE WITH 150 PSI FLANGED CONNECTIONS.
6. PROVIDE WITH BEARING AND SHAFT GUARD / HOUSING.
7. PREMIUM EFFICIENCY MOTORS, NON-OVERLOADING, FOR USE WITH VFD. VFD TO BE PROVIDED BY TEMPERATURE CONTROLS CONTRACTOR.
8. PROVIDE WITH PHASE FAILURE RELAY.
9. BACK-UP PUMP.

OTHER ACCEPTABLE MANUFACTURERS INCLUDE: BELL & GOSSETT, ARMSTRONG, WEINMAN. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

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Revisions: 1 NUMBER 2025.04.25 DATE ADD 2 DESCRIPTION

Issue Date: March 28, 2025

Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Mechanical Schedules

Project No. 22133

M601

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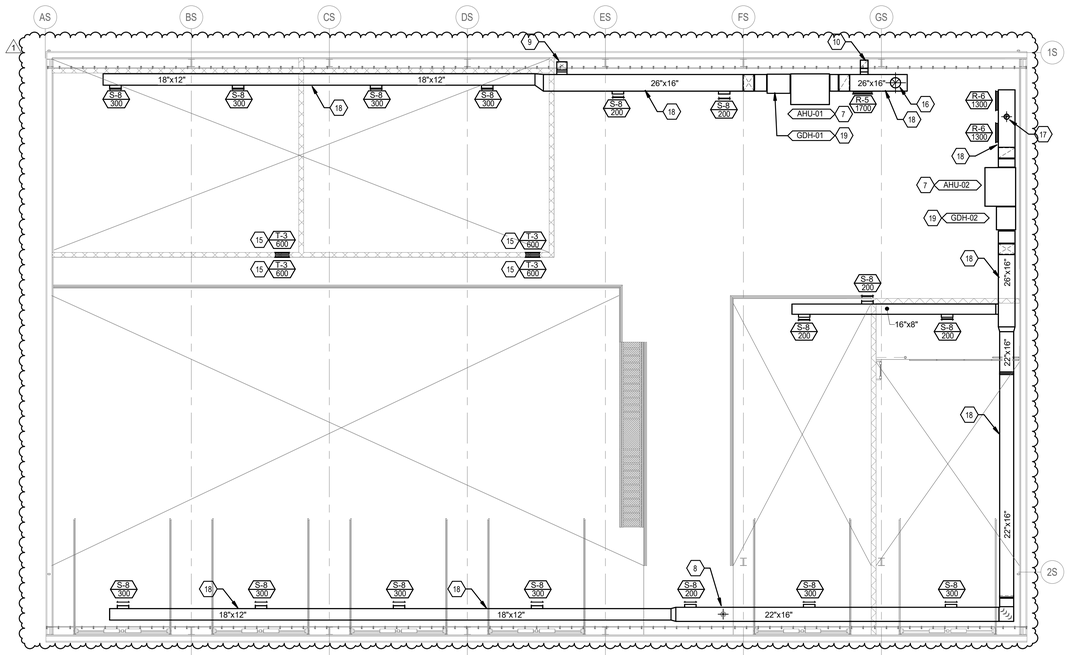
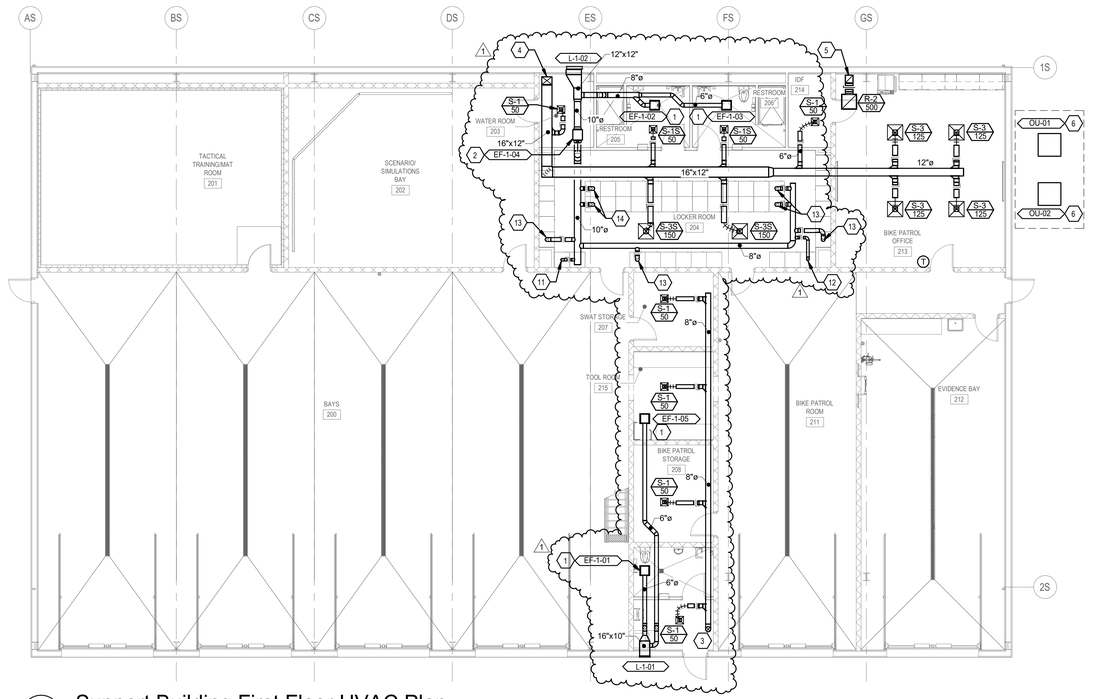


2 Support Building Mezzanine HVAC Plan

SCALE: 1/8" = 1'-0"

0 4' 8' 16'



1 Support Building First Floor HVAC Plan

SCALE: 1/8" = 1'-0"

0 4' 8' 16'

GENERAL NOTES

A. REFER TO SHEET M001 FOR MECHANICAL LEGEND AND GENERAL NOTES.

SHEET KEYNOTES

1. PROVIDE NEW CEILING MOUNTED EXHAUST FAN. POWER WITH NEARBY WALL SWITCH. REFER TO SCHEDULE.
2. PROVIDE NEW INLINE EXHAUST FAN. POWER WITH WALL SWITCH IN LOCKER ROOM. REFER TO SCHEDULE.
3. 8"ø SUPPLY DUCT DOWN FROM MEZZANINE LEVEL. REFER TO CONTINUATION THIS SHEET.
4. 16"x12" SUPPLY DUCT DOWN FROM MEZZANINE LEVEL. REFER TO CONTINUATION THIS SHEET.
5. 12"x12" RETURN DUCT UP TO MEZZANINE LEVEL. REFER TO CONTINUATION THIS SHEET.
6. SPLIT SYSTEM OUTDOOR UNIT. MOUNT ON CONCRETE EQUIPMENT PAD. MAINTAIN ALL MANUFACTURER CLEARANCES BETWEEN BUILDING AND OTHER UNITS. ROUTE REFRIGERANT PIPING ALONG EXTERIOR WALL INTO MEZZANINE LEVEL.
7. SPLIT SYSTEM INDOOR UNIT. MOUNT ON ELEVATED EQUIPMENT SUPPORT STAND. MAINTAIN ALL MANUFACTURER CLEARANCES. ROUTE REFRIGERANT PIPING ALONG INTERIOR WALL OUT TO CONDENSING UNITS. ROUTE CONDENSATE TO FLOOR DRAIN IN CORNER OF MEZZANINE.
8. 8"ø SUPPLY DUCT DOWN TO FIRST FLOOR. REFER TO CONTINUATION THIS SHEET.
9. 16"x12" SUPPLY DUCT DOWN DOWN TO FIRST FLOOR. REFER TO CONTINUATION THIS SHEET.
10. 12"x12" RETURN DUCT DOWN TO FIRST FLOOR. REFER TO CONTINUATION THIS SHEET.
11. 4"ø EXHAUST DUCT DOWN TO VENTED LOCKER PLENUM. EACH LOCKER TO BE BALANCED TO 6 CFM. BALANCE ASSOCIATED BRANCH LINE DAMPER TO 12 CFM. ALL DUCTWORK CONNECTIONS AND AIRFLOW BALANCING UNDER SCOPE OF MECHANICAL CONTRACTOR.
12. 4"ø EXHAUST DUCT DOWN TO VENTED LOCKER PLENUM. EACH LOCKER TO BE BALANCED TO 6 CFM. BALANCE ASSOCIATED BRANCH LINE DAMPER TO 18 CFM. ALL DUCTWORK CONNECTIONS AND AIRFLOW BALANCING UNDER SCOPE OF MECHANICAL CONTRACTOR.
13. 6"ø EXHAUST DUCT DOWN TO VENTED LOCKER PLENUM. EACH LOCKER TO BE BALANCED TO 6 CFM. BALANCE ASSOCIATED BRANCH LINE DAMPER TO 36 CFM. ALL DUCTWORK CONNECTIONS AND AIRFLOW BALANCING UNDER SCOPE OF MECHANICAL CONTRACTOR.
14. 6"ø EXHAUST DUCT DOWN TO VENTED LOCKER PLENUM. EACH LOCKER TO BE BALANCED TO 6 CFM. BALANCE ASSOCIATED BRANCH LINE DAMPER TO 42 CFM. ALL DUCTWORK CONNECTIONS AND AIRFLOW BALANCING UNDER SCOPE OF MECHANICAL CONTRACTOR.
15. INSTALL TRANSFER GRILLE WITH BOTTOM OF GRILLE AT 8'-9" ABOVE MEZZANINE LEVEL.
16. 10"ø OUTSIDE AIR DUCT DOWN INTO RETURN OF UNIT. PROVIDE BALANCE DAMPER INLINE OF DUCTWORK AND BALANCE TO 400 CFM. DUCT TO TERMINATE AT ROOF WITH GH-1-01.
17. 8"ø OUTSIDE AIR DUCT DOWN INTO RETURN OF UNIT. PROVIDE BALANCE DAMPER INLINE OF DUCTWORK AND BALANCE TO 200 CFM. DUCT TO TERMINATE AT ROOF WITH GH-1-02.
18. ROUTE DUCTWORK AS HIGH AS POSSIBLE. COORDINATE WITH ALL OTHER DISCIPLINES.
19. PROVIDE AND INSTALL GAS DUCT HEATER INLINE OF SPLIT SYSTEM AIR HANDLER. HEATER TO INTERFACE WITH SLIT SYSTEM. PROVIDE FLUE INTAKE AND EXHAUST AS REQUIRED PER MANUFACTURERS INSTRUCTIONS. REFER TO PLUMBING PLANS FOR GAS ROUTES AND SIZES. REFER TO SCHEDULE FOR MORE INFORMATION.

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Revisions:

NUMBER	DATE	DESCRIPTION
1	2025.04.25	ADD 2

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Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Support Building HVAC Plan

Project No. 22133

M104

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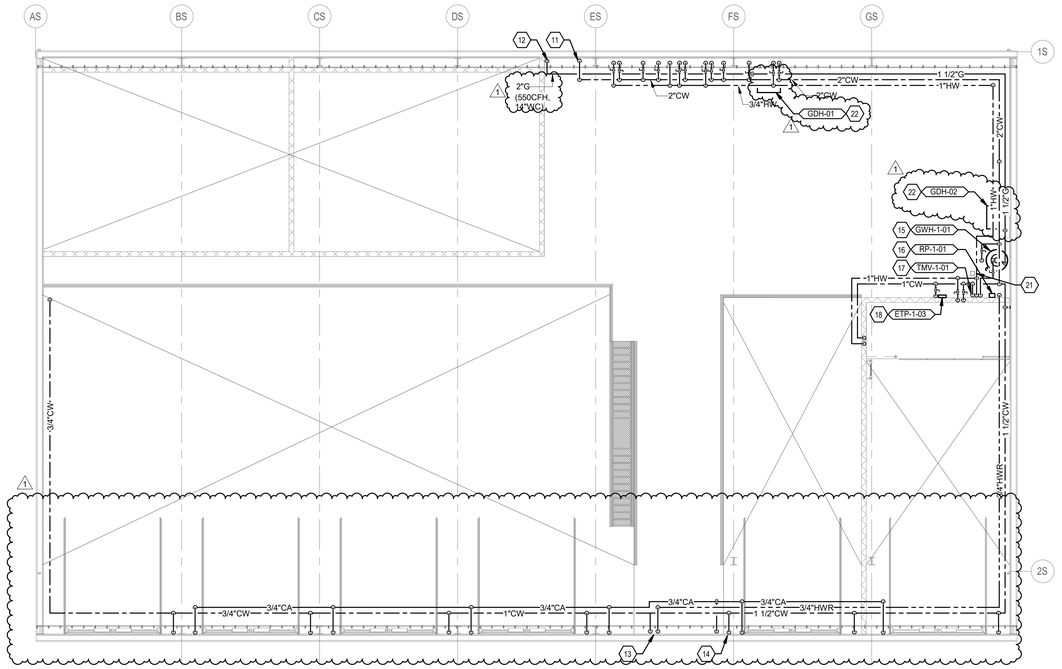
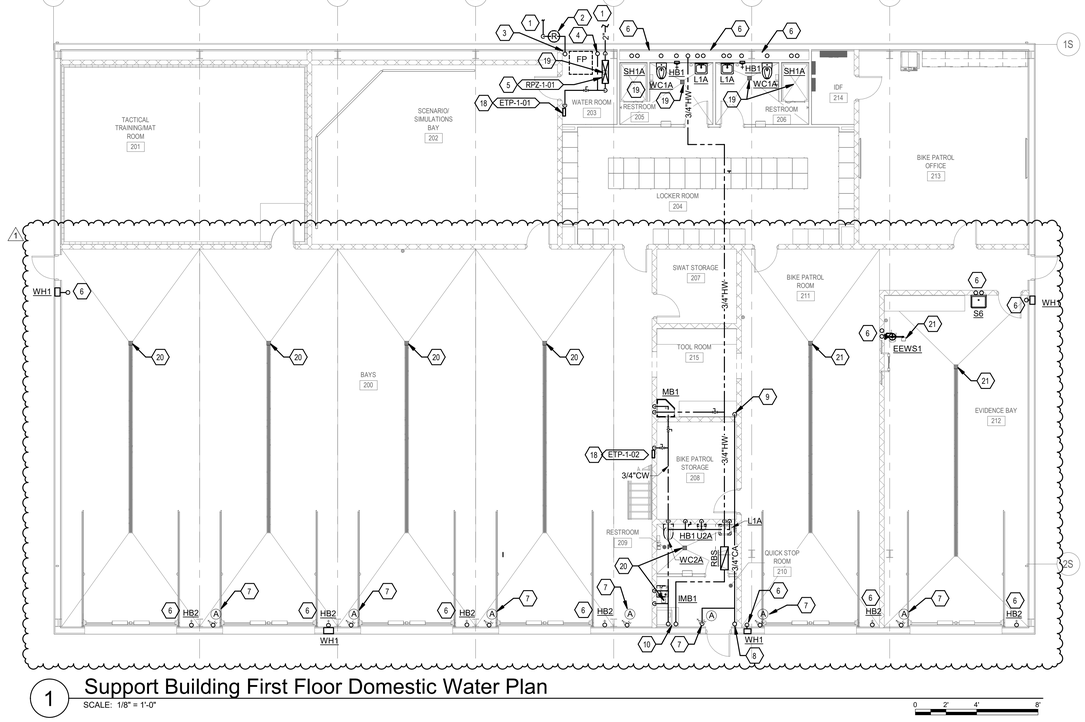


2 Support Building Mezzanine Domestic Water Plan

SCALE: 1/8" = 1'-0"

0 2' 4' 8'



1 Support Building First Floor Domestic Water Plan

SCALE: 1/8" = 1'-0"

0 2' 4' 8'

GENERAL NOTES

A. REFER TO SHEET P001 FOR PLUMBING LEGEND AND GENERAL NOTES.

SHEET KEYNOTES

1. REFER TO CIVIL SITE UTILITIES PLAN FOR CONTINUATION.
2. PROVIDE STEP DOWN GAS REGULATOR ON EXTERIOR OF BUILDING. PRESSURE TO BE SET TO 14"WC. INSTALL PER GAS COMPANY REQUIREMENTS.
3. 2" GAS UP TO MEZZANINE LEVEL. HOLD PIPING TIGHT TO CORNER.
4. 2" CW UP TO MEZZANINE LEVEL.
5. 2" REDUCED PRESSURE ZONE BACKFLOW ASSEMBLY. REFER TO SCHEDULE AND DETAILS.
6. DOMESTIC PIPING FED FROM MEZZANINE AREA/SECOND STORY. SEE CONTINUATION THIS SHEET.
7. 3/4" COMPRESSED AIR PIPING DOWN FROM ABOVE TO BALL VALVE WITH QUICK CONNECT FITTING AND DIRT LEG AT 48" AFF.
8. 3/4" COMPRESSED AIR PIPING UP TO SECOND STORY LEVEL. REFER TO MEZZANINE FLOOR PLAN THIS SHEET.
9. COMPRESSED AIR PIPING DOWN TO AIR COMPRESSOR PROVIDED BY OWNER.
10. 1-1/2"CW AND 3/4"HWR UP TO SECOND STORY LEVEL. REFER TO MEZZANINE FLOOR PLAN THIS SHEET.
11. 2" CW UP FROM FIRST FLOOR LEVEL. REFER TO FIRST FLOOR PLAN THIS SHEET.
12. 2" GAS PIPING UP FROM FIRST FLOOR LEVEL. REFER TO FIRST FLOOR PLAN THIS SHEET.
13. 1-1/2"CW AND 3/4"HWR UP FROM FIRST FLOOR LEVEL. REFER TO FIRST FLOOR PLAN THIS SHEET.
14. 3/4" COMPRESSED AIR PIPING UP FROM FIRST FLOOR LEVEL. REFER TO FIRST FLOOR PLAN THIS SHEET.
15. PROVIDE AND INSTALL GAS WATER HEATER. REFER TO SCHEDULE AND DETAILS FOR ADDITIONAL REQUIREMENTS.
16. PROVIDE AND INSTALL HOT WATER RECIRCULATION PUMP. REFER TO SCHEDULE AND DETAILS FOR ADDITIONAL REQUIREMENTS.
17. PROVIDE AND INSTALL THERMOSTATIC MIXING VALVE. REFER TO SCHEDULE AND DETAILS FOR ADDITIONAL REQUIREMENTS.
18. PROVIDE AND INSTALL ELECTRONIC TRAP PRIMER PER MANUFACTURER'S INSTRUCTIONS. REFER TO SCHEDULE AND DETAILS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
19. 1/2" TRAP PRIMER CONNECTION ROUTED FROM TRAP PRIMER ETP-1-01.
20. 1/2" TRAP PRIMER CONNECTION ROUTED FROM TRAP PRIMER ETP-1-02.
21. 1/2" TRAP PRIMER CONNECTION ROUTED FROM TRAP PRIMER ETP-1-03.
22. 1" GAS LINE DROP TO SERVE GAS DUCT HEATER. PROVIDE GAS CONNECTION TO UNIT. PROVIDE STEP DOWN PRESSURE REGULATOR AS REQUIRED. REFER TO GAS EQUIPMENT CONNECTION DETAIL.

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Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Support Building Domestic Water Plan

Project No. 22133

P204

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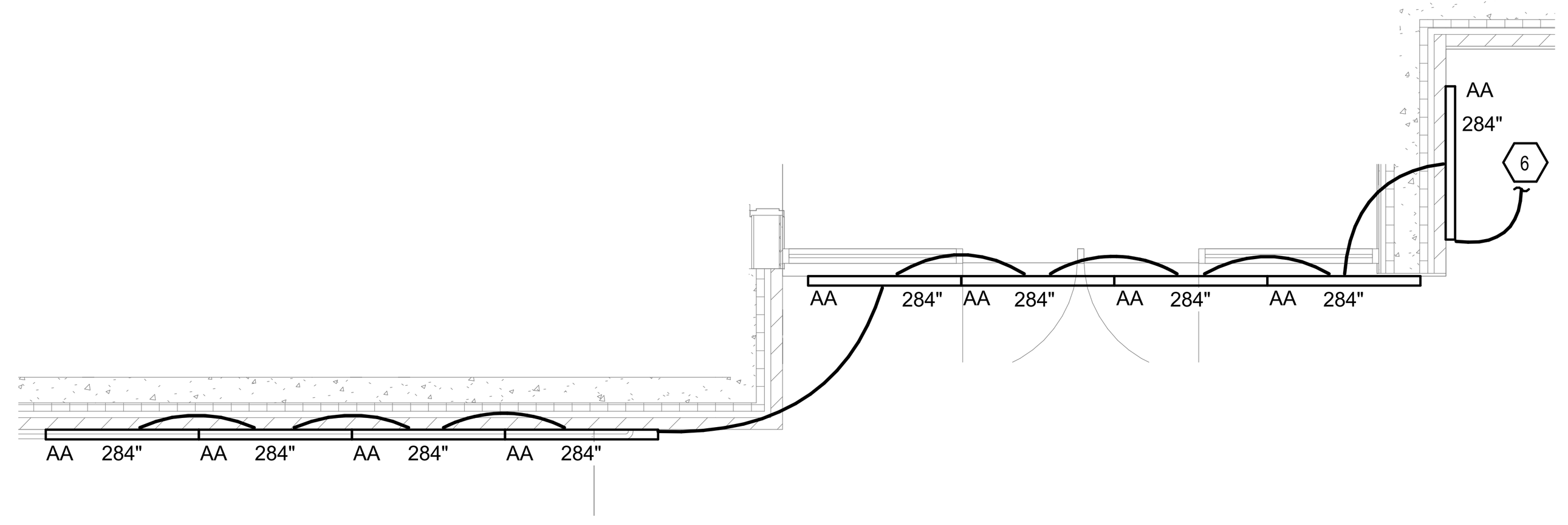


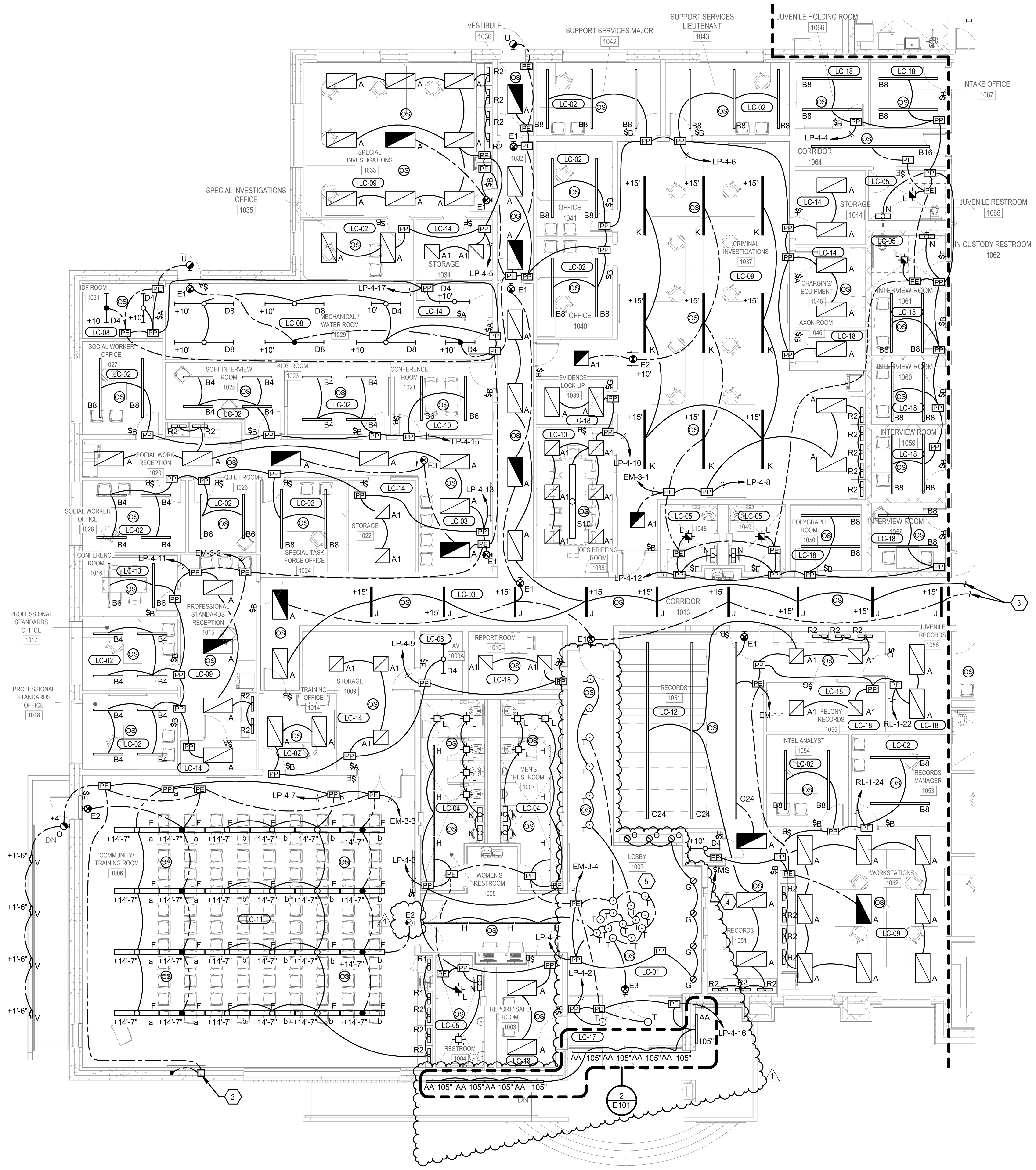
2 First Floor Lighting Plan - West - Upper Canopy
SCALE: 1/4" = 1'-0"

GENERAL NOTES

A. REFER TO DRAWING E0.2 FOR ADDITIONAL GENERAL NOTES.

SHEET KEYNOTES

1. MOUNT FIXTURE CENTERED ABOVE DOOR AND BELOW CANOPY.
2. PROVIDE CONNECTION TO PRE-ENGINEERED ILLUMINATED SIGNAGE, COORDINATE EXACT LOCATION AND REQUIREMENTS WITH ARCHITECT.
3. CONNECTION CONTINUES TO PAGE E101.
4. MASTER LIGHTING CONTROL STATION (DMX INTERFACE), COORDINATE EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION. PROVIDE REQUIRED POWER PACK AND ASSOCIATED CONTROLLER ABOVE ACCESSIBLE CEILING. REFER TO DETAILS. CIRCUIT FOR EMERGENCY CONTROL LIGHITNG SHALL BE PULL FROM THE NEXT AVAILBE CIRCUIT IN PANEL EM-1. SEE DETAIL ON SHEET E504 FOR MORE INFORMATION.
5. ALL TYPE T FIXTURES AND TYPE AA FIXTURES SHALL BE CONTROLLED VIA DMX CONTROLLER FOR COLOR CHANGING CAPABILITIES. REFER TO KEYNOTE #4 AND DETAIL.
6. CIRCUIT FOR UPPER CANOPY FIXTURES EXSTENDS TO LOWER CANOPY "AA" FIXTURES. REFER TO SHEET NOTE 5 FOR DMX CONTROL OF FIXTURES.



1 First Floor Lighting Plan - West
SCALE: 1/8" = 1'-0"

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1	2025.04.25	ADD 2

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First Floor Lighting Plan - West

Project No. 22133

E101

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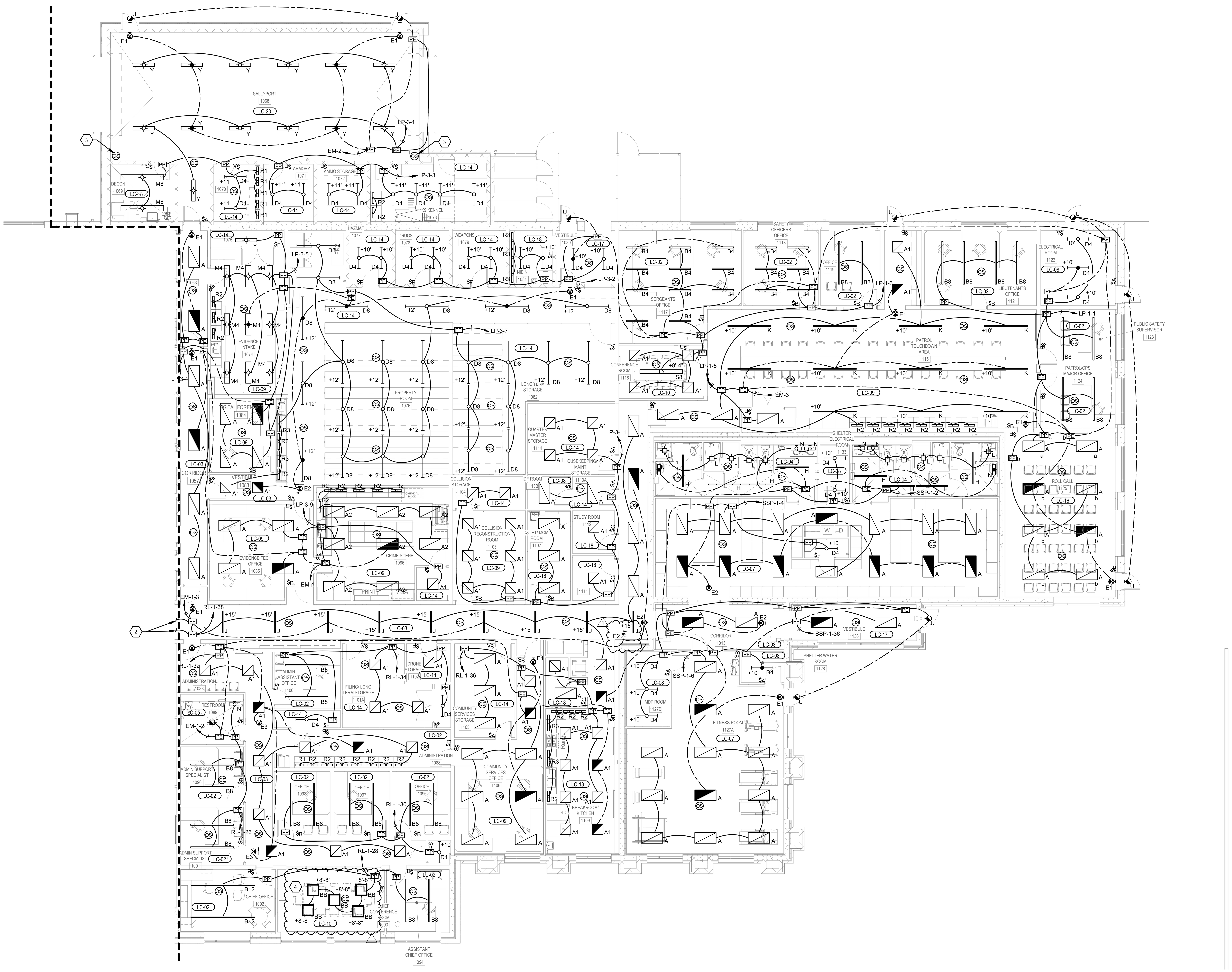
GENERAL NOTES

A. REFER TO DRAWING E0.2 FOR ADDITIONAL GENERAL NOTES.

SHEET KEYNOTES

1. PROVIDE DIGITAL TIME CLOCK AND ASSOCIATED POWER SUPPLY COMPATIBLE WITH LIGHTING CONTROL SYSTEM FOR TIME OF DAY FUNCTIONS.
2. CONNECTION CONTINUES TO PAGE E102
3. OCCUPANCY SENSOR CORNER WALL MOUNTED AT 10'AFF, ROUTE WIRING THRU WALL TO ABOVE CEILING OF ADJACENT SPACE. ALL WIRING AND CONNECTORS SHALL BE CONCEALED FROM VIEW ABOVE CEILING OR IN FLUSH MOUNTED BOX.
4. CORRDINATE EXACT FIXTURE LOCATION AND MOUNTING HEIGHT IN THE ROOM WITH ACOUSTIC LAYOUT AND ARCHITECT.

1



1 First Floor Lighting Plan - East

SCALE: 1/8" = 1'-0"

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First Floor Lighting Plan - East

Project No. 22133

E102

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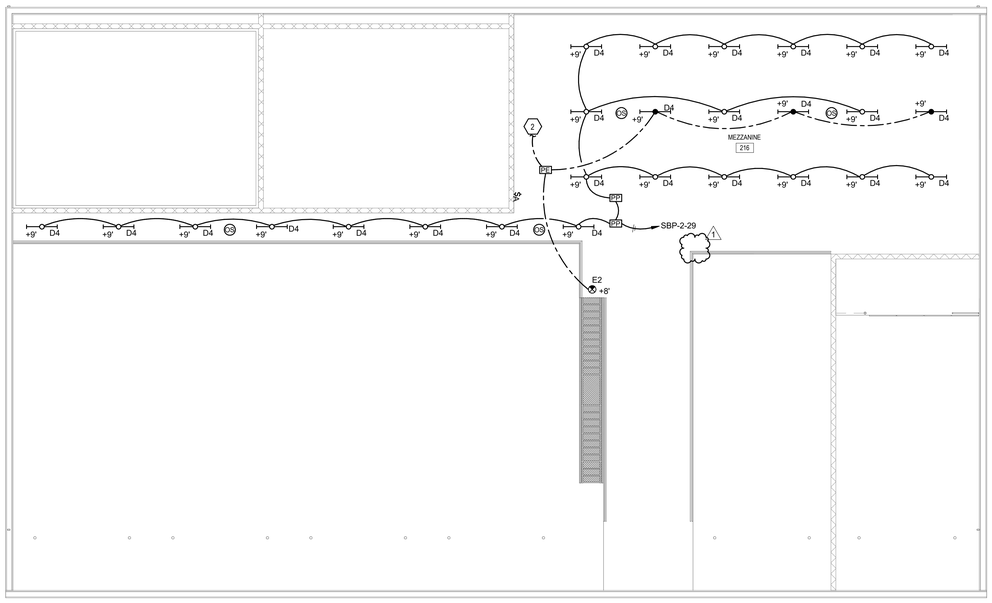
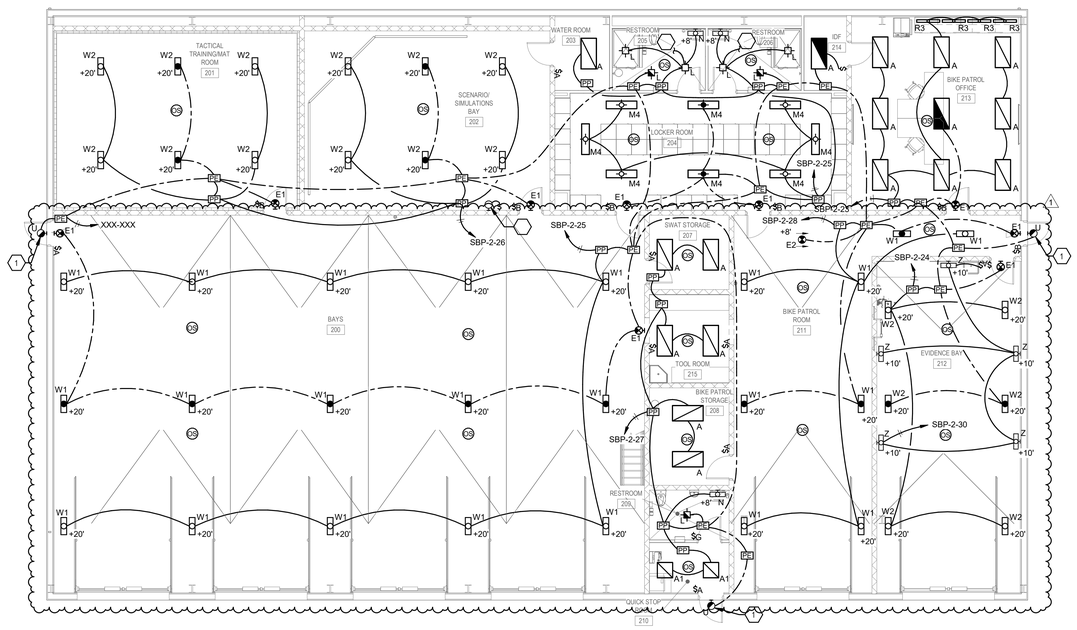


2 Support Building Mezzanine Lighting Plan

SCALE: 1/8" = 1'-0"

0 4" 8" 16"



1 Support Building First Floor Lighting Plan

SCALE: 1/8" = 1'-0"

0 4" 8" 16"

GENERAL NOTES

A. REFER TO DRAWING E0.2 FOR ADDITIONAL GENERAL NOTES.

SHEET KEYNOTES

1. MOUNT FIXTURE CENTERED ABOVE DOOR AND BELOW CANOPY.
2. CONTINUE EMERGENCY CIRCUIT TO FLOOR BELOW.

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Support Building Lighting Plan

Project No. 22133

E103

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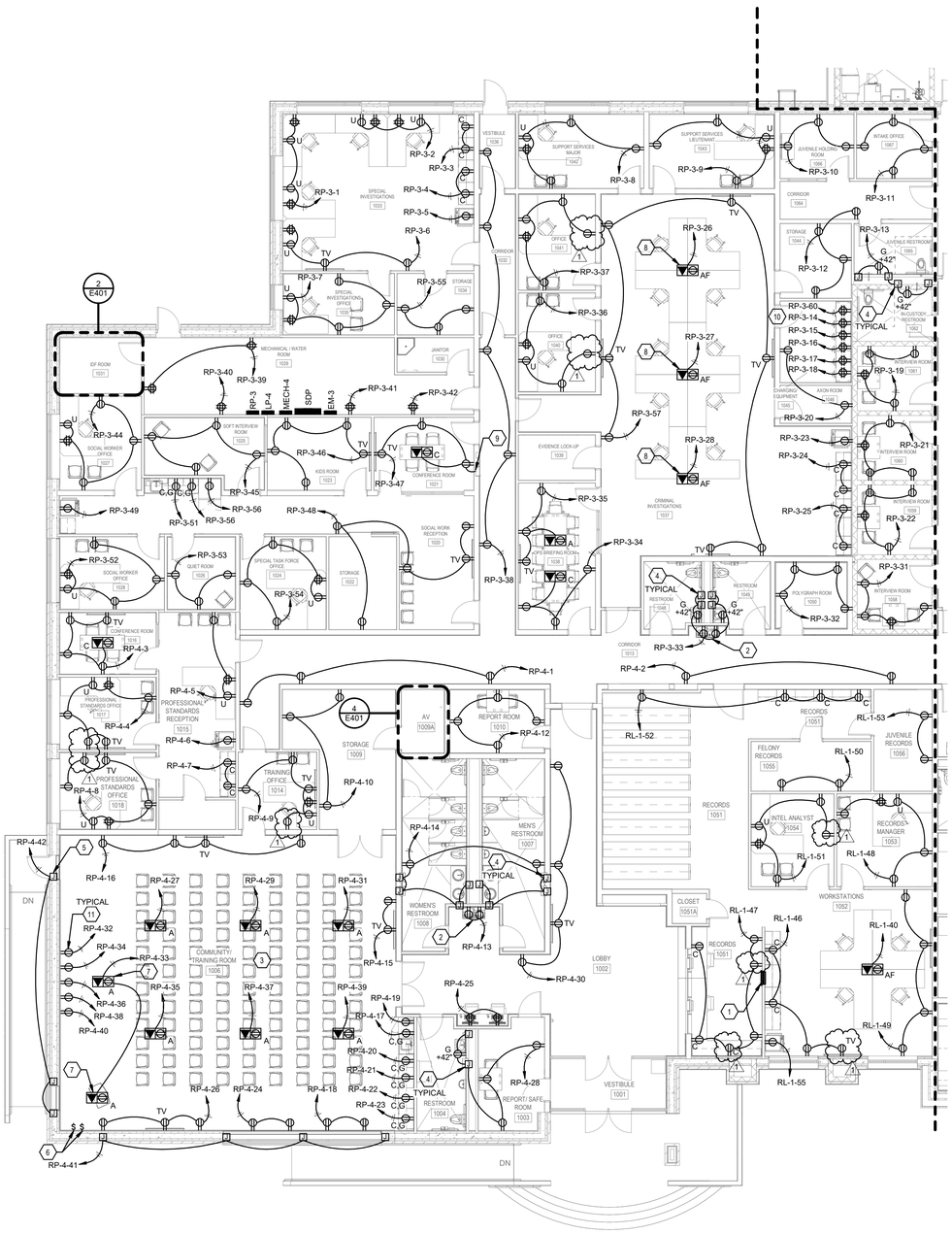

1 First Floor Power Plan - West

SCALE: 1/8" = 1'-0"

0 4' 8' 16'

GENERAL NOTES

A. REFER TO DRAWING E0.2 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE CLEAR AND UNOBSTRUCTED WORKING SPACE FOR SAFETY SWITCHES IN ACCORDANCE WITH NEC ARTICLE 110.26. LOCATIONS OF SWITCHES ON THE PLAN ARE SHOWN FOR DRAWING CLARITY ONLY. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION LOCATION OF THE SAFETY SWITCHES WITH ALL OTHER TRADES TO ENSURE THE REQUIRED WORKING SPACE CLEARANCES ARE MAINTAINED.

SHEET KEYNOTES

1. PROVIDE EMERGENCY GENERATOR REMOTE ANNUNCIATOR WITH CIRCUITING AS REQUIRED TO EMERGENCY GENERATOR; COORDINATE WIRING REQUIREMENTS WITH MANUFACTURER.
2. PROVIDE RECEPTACLE FOR WATER FOUNTAIN, COORDINATE ROUGH-IN LOCATION WITH MANUFACTURER TO PROVIDE CONCEALED CONNECTION (GFCI PROTECTION PROVIDED AT CIRCUIT BREAKER).
3. LOCATION AND QUANTITY OF FLOOR BOXES ARE TO BE CONFIRMED WITH OWNER BEFORE INSTALLATION IN ROOM.
4. PROVIDE POWER CONNECTION TO AUTOMATIC SOAP AND PAPER TOWEL DISPENSER.
5. PROVIDE POWER CONNECTION TO POWERED SHADES. COORDINATE REQUIREMENTS, LOCATION OF SYSTEMS CONTROLS, AND SHADES WITH INSTALLED/MANUFACTURER.
6. PROVIDE CONNECTION TO SWITCH FOR POWERED SHADES COORDINATE EXACT LOCATION WITH OWNER/ARCHITECT.
7. FLOOR BOX FOR PRESENTATION CONNECTION. COORDINATE EXACT LOCATION WITH OWNER/ARCHITECT.
8. FLOOR BOX TO PROVIDE POWER AND DATA FOR OWNER FURNISHED FURNITURE SYSTEM. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH OWNER AND FURNITURE CONTRACTOR.
9. PROVIDE POWER FOR OWNER PROVIDED AED. COORDINATE REQUIREMENTS WITH OWNER AND MANUFACTURER.
10. REFER TO ARCHITECTUARAL ELEVATION FOR RECEPTACLE CONFIGURATION IN CHARGING/EQUIPMENT ROOM NUMBER 1045. CONFIRM EXACT RECEPTACLE LOCATIONS WITH OWNER AND ARCHITECT BEFORE ROUGH-IN AND RECEPTACLE INSTALLATION.
11. PROVIDE RECESSED DUPLEX RECEPTACLE. FIELD COORDINATE EXACT MOUNTING HEIGHT OF RECEPTACLE. RECEPTACLES ON THIS WALL ARE TO BE CONCEALED BEHIND DIRECT LED DISPLAY WALL.

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First Floor Power Plan - West

Project No. 22133

E201

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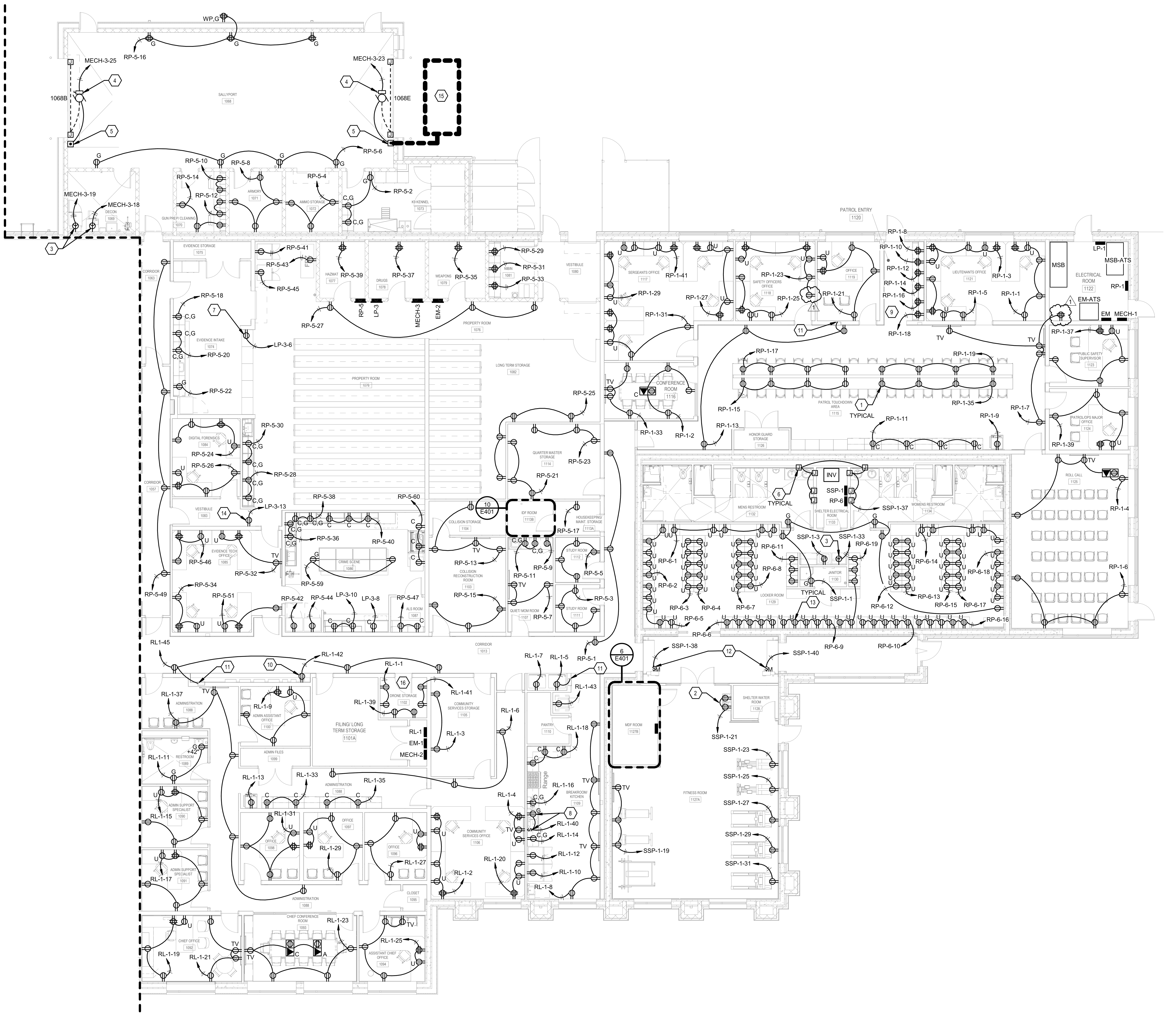

1 First Floor Power Plan - East
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

GENERAL NOTES

A. REFER TO DRAWING E0.2 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE CLEAR AND UNOBSTRUCTED WORKING SPACE FOR SAFETY SWITCHES IN ACCORDANCE WITH NEC ARTICLE 110.26. LOCATIONS OF SWITCHES ON THE PLAN ARE SHOWN FOR DRAWING CLARITY ONLY. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION LOCATION OF THE SAFETY SWITCHES WITH ALL OTHER TRADES TO ENSURE THE REQUIRED WORKING SPACE CLEARANCES ARE MAINTAINED.

SHEET KEYNOTES

1. INSTALL OUTLETS ABOVE COUNTER HORIZONTALLY.
2. PROVIDE RECEPTACLE FOR WATER FOUNTAIN, COORDINATE ROUGH-IN LOCATION WITH MANUFACTURER TO PROVIDE CONCEALED CONNECTION (GFCI PROTECTION PROVIDED AT CIRCUIT BREAKER).
3. PROVIDE DEDICATED RECEPTACLE FOR EACH PIECE OF DECON EQUIPMENT, 48" AFF WITH 3#10, 1#10G, 3/4"C. COORDINATE PLUG OR DISCONNECT CONFIGURATION WITH OWNER AND EQUIPMENT MANUFACTURER.
4. PROVIDE 30A DISCONNECT SWITCH AND CONNECTION TO OVERHEAD DOOR OPERATOR. INSTALL REMOTE PUSH BUTTON CONTROL STATION FURNISHED WITH OPERATOR. PROVIDE CONDUIT AND WIRING TO SAFETY SENSORS AT FLOOR ON EACH SIDE AF DOOR. COORDINATE ROUGH-IN AND WIRING REQUIREMENTS WITH MANUFACTURER.
5. PROVIDE POWER CONNECTION TO OVERHEAD DOOR CONTROLS PER MANUFACTURER'S REQUIREMENTS.
6. PROVIDE POWER CONNECTION TO AUTOMATIC SOAP AND PAPER TOWEL DISPENSER.
7. PROVIDE RECEPTACLE FOR REFRIGERATED EVIDENCE PASS THROUGH LOCKER. COORDINATE EXACT LOCATION WITH OWNER AND MANUFACTURER.
8. PROVIDE ADA ACCESSIBLE WALL SWITCH (WITH LABEL) ABOVE COUNTER AND DIRECT WIRED CONNECTION TO DISPOSAL, COORDINATE EXACT LOCATION WITH ARCHITECT.
9. REFER TO ARCHITECTUARAL ELEVATION FOR RECEPTACLE CONFIGURATION IN PATROL ENTRY ROOM NUMBER 1120. CONFIRM EXACT RECEPTACLE LOCATIONS WITH OWNER AND ARCHITECT BEFORE ROUGH-IN AND RECEPTACLE INSTALLATION.
10. PROVIDE RECEPTACLE FOR KEY SYSTEM. RECEPTACLE SHALL BE LOCATED SO THAT IT CAN BE CONCELED BY THE KEY SYSTEM. CONFIRM EXACT LOCATION WITH OWNER AND ARCHITECT BEFORE ROUGH-IN AND RECPTACLE INSTALLATION.
11. PROVIDE POWER FOR OWNER PROVIDED AED. COORDINATE REQUIREMENTS WITH OWNER AND MANUFACTURER.
12. PROVIDE DISCONNECT SWITCH AND CONNECTION TO STORM SHELTER EMERGENCY BUTTON. COORDINATE ROUGH-IN, WIRING, AND DISCONNECTING REQUIREMENTS WITH INSTALLER AND MANUFACTURER.
13. PROVIDE RECEPTACLE FOR LOCKER. COORDINATE EXACT LOCATION FOR ROUGH-IN WITH OWNER AND LOCKER MANUFACTURER.
14. PROVIDE RECEPTACLE FOR PASS THROUGH LOCKER, COORDINATE EXACT LOCATION WITH OWNER AND MANUFACTURER.
15. PROVIDE CONDUIT STUB OUT FOR DETECTION LOOP WIRING BELOW PAVEMENT. COORDINATE LOCATION AND WIRING REQUIREMENTS PRIOR TO ROUGH-IN.
16. REFER TO ARCHITECTURAL ELEVATION FOR RECEPTACLE CONFIGURATION IN DRONE STORAGE ROOM NUMBER 1102. CONFIRM EXACT RECEPTACLE LOCATIONS WITH OWNER AND ARCHITECT BEFORE ROUGH-IN AND RECEPTACLE INSTALLATION.

1

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Revisions:	NUMBER	DATE	DESCRIPTION
	1	2025.04.25	ADD 2

Issue Date: March 28, 2025

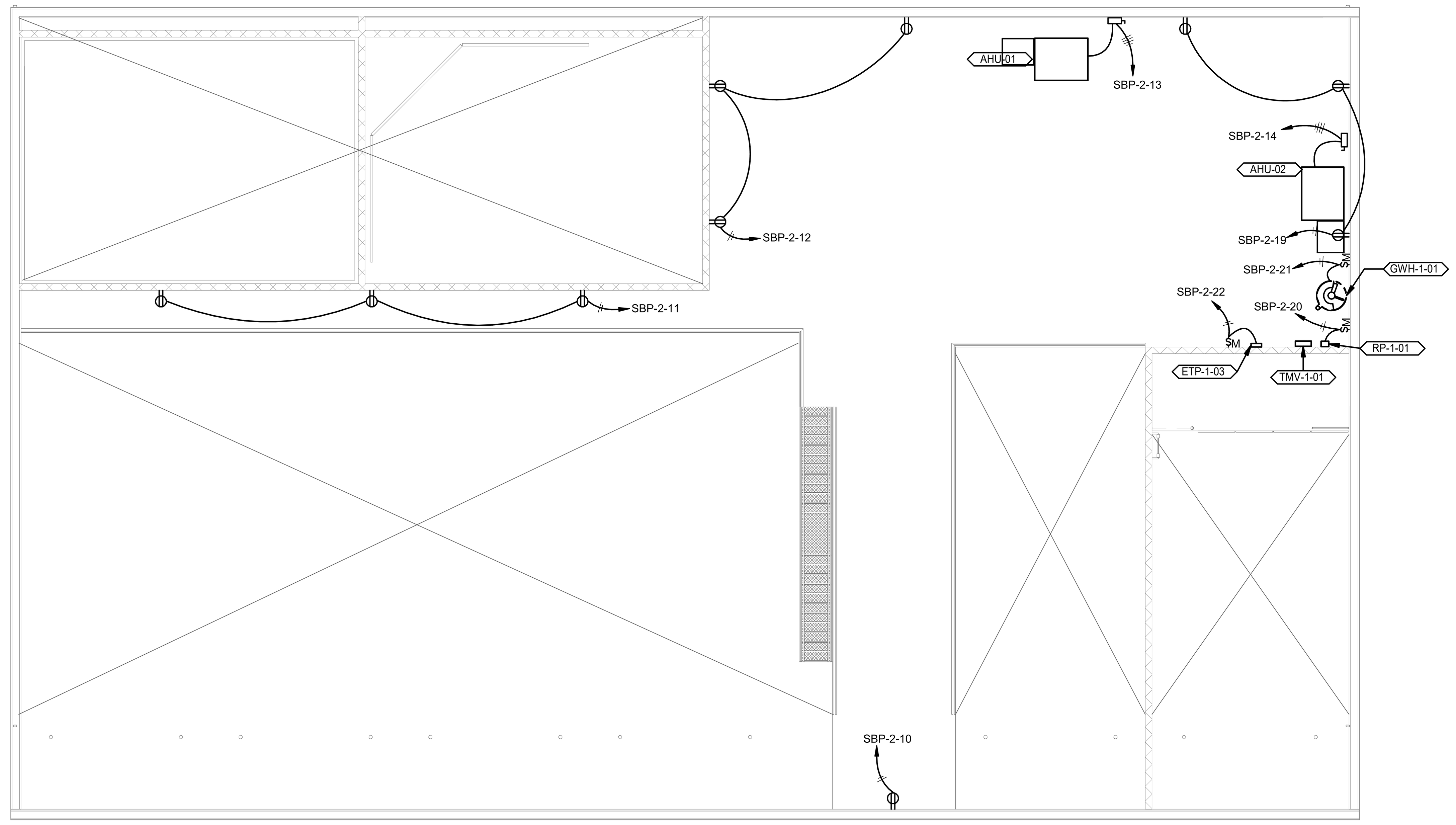
Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

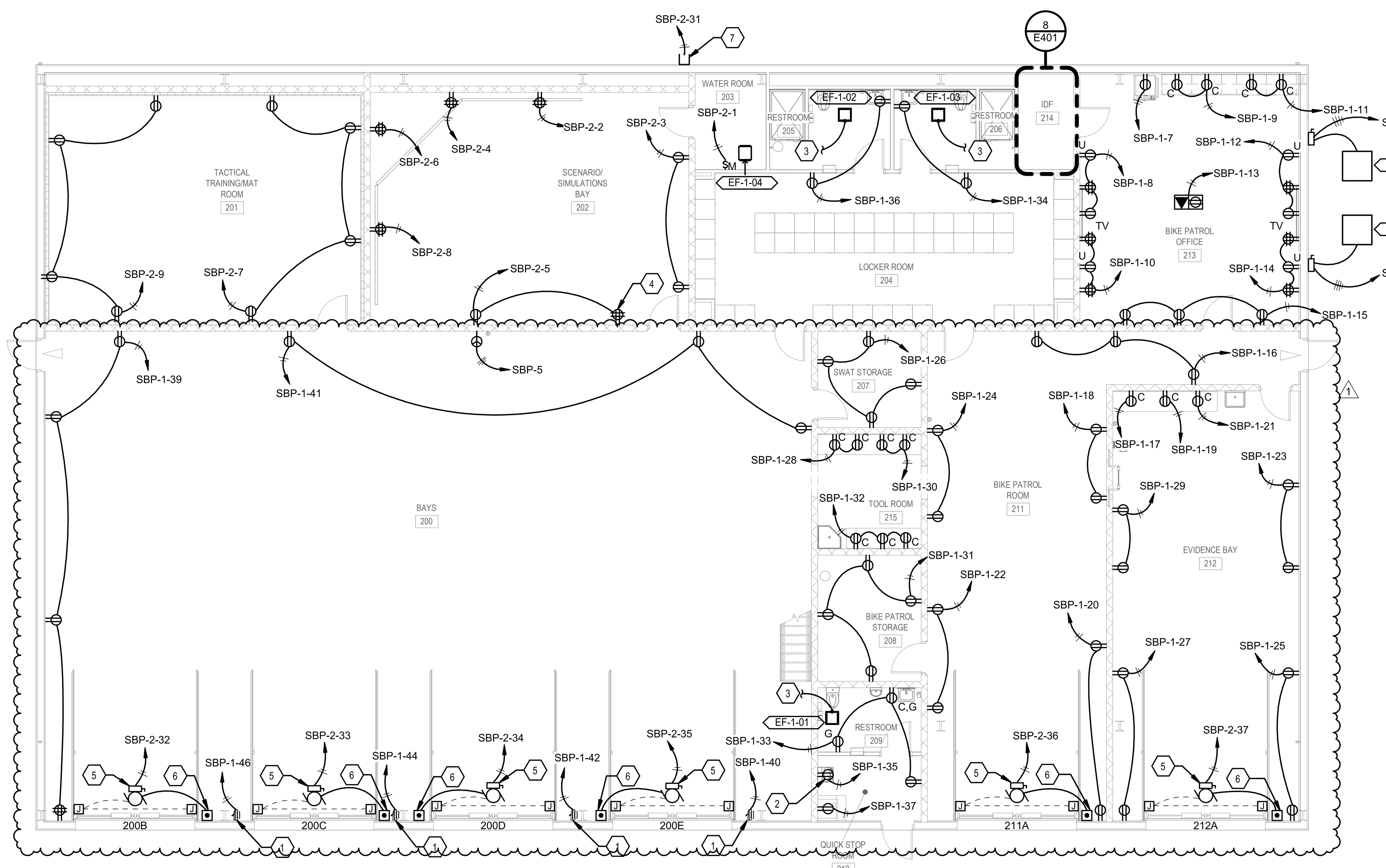
First Floor Power Plan - East

Project No.
22133

E202



2 Support Building Mezzanine Power Plan
SCALE: 1/8" = 1'-0"



1 Support Building First Floor Power Plan
SCALE: 1/8" = 1'-0"

GENERAL NOTES

A. REFER TO DRAWING E0.2 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE CLEAR AND UNOBSTRUCTED WORKING SPACE FOR SAFETY SWITCHES IN ACCORDANCE WITH NEC ARTICLE 110.26. LOCATIONS OF SWITCHES ON THE PLAN ARE SHOWN FOR DRAWING CLARITY ONLY. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION LOCATION OF THE SAFETY SWITCHES WITH ALL OTHER TRADES TO ENSURE THE REQUIRED WORKING SPACE CLEARANCES ARE MAINTAINED.

SHEET KEYNOTES

1. PROVIDE 50' RETRACTABLE CORD REEL MOUNTED 3' AFF ON WALL WITH 120V, 20A, GFCI CONNECTOR; COORDINATE LOCATION WITH OWNER PRIOR TO INSTALLATION. HUBBELL HBL45123C OR EQUIVALENT.
2. PROVIDE RECEPTACLE FOR WATER FOUNTAIN, COORDINATE ROUGH-IN LOCATION WITH MANUFACTURER TO PROVIDE CONCEALED CONNECTION (GFCI PROTECTION PROVIDED AT CIRCUIT BREAKER).
3. PROVIDE CONNECTION TO EXHAUST FAN INTERLOCK WITH LIGHTING CONTROL IN ROOM, SEE LIGHTING CONTROL DETAIL.
4. PROVIDE RECEPTACLE FOR SIMULATION INSTRUCTOR STATION. COORDINATE EXACT LOCATION WITH OWNER BEFORE ROUGH-IN.
5. PROVIDE 30A DISCONNECT SWITCH AND CONNECTION TO OVERHEAD DOOR OPERATOR. INSTALL REMOTE PUSH BUTTON CONTROL STATION FURNISHED WITH OPERATOR. PROVIDE CONDUIT AND WIRING TO SAFETY SENSORS AT FLOOR ON EACH SIDE OF DOOR. COORDINATE ROUGH-IN AND WIRING REQUIREMENTS WITH MANUFACTURER.
6. PROVIDE POWER CONNECTION TO OVERHEAD DOOR CONTROLS PER MANUFACTURER'S REQUIREMENTS.
7. PROVIDE CONNECTION TO FIRE ALARM BELL. COORDINATE LOCATION AND WIRING REQUIREMENTS WITH INSTALLER.

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Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Support Building Power Plan

Project No. 22133

E204

4/25/2025 1:22:08 PM

GENERAL NOTES

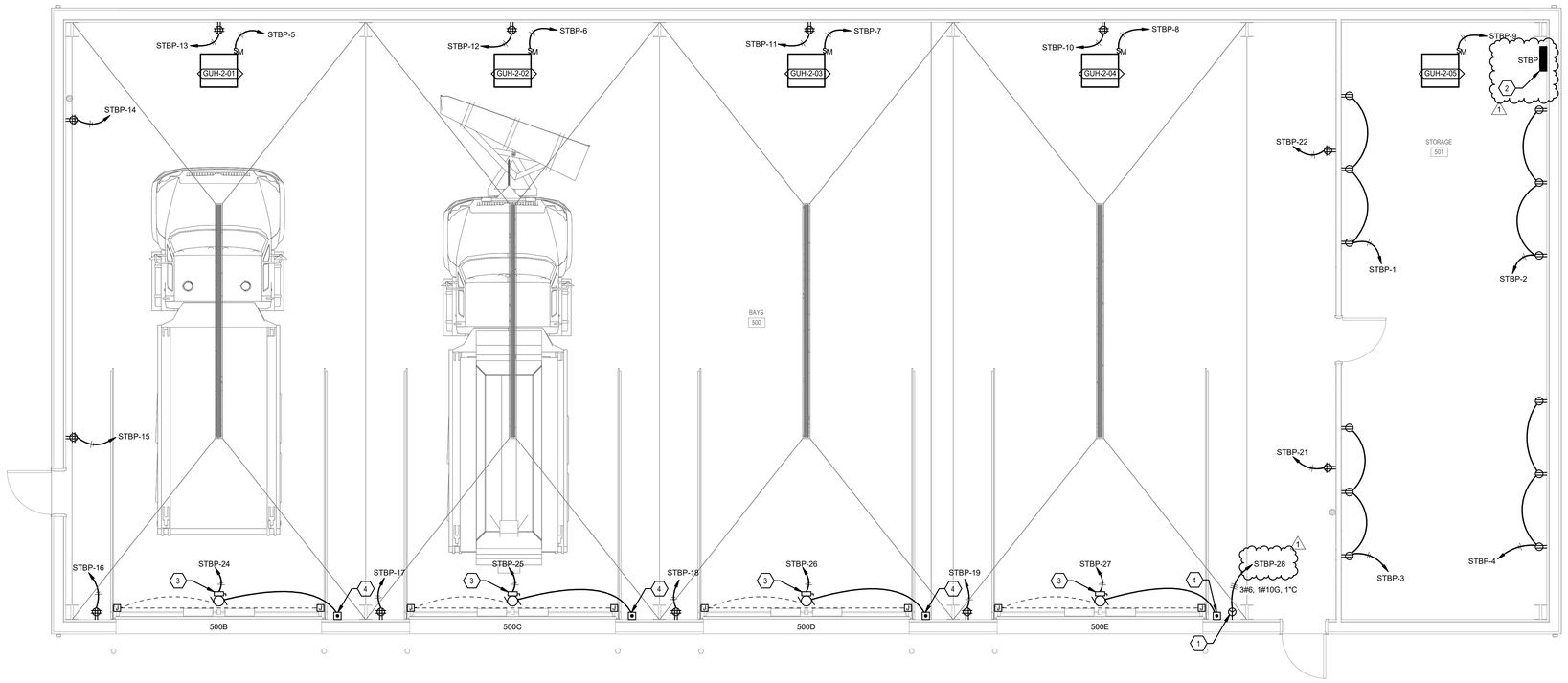
A. REFER TO DRAWING E0.2 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE CLEAR AND UNOBSTRUCTED WORKING SPACE FOR SAFETY SWITCHES IN ACCORDANCE WITH NEC ARTICLE 110.26. LOCATIONS OF SWITCHES ON THE PLAN ARE SHOWN FOR DRAWING CLARITY ONLY. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION LOCATION OF THE SAFETY SWITCHES WITH ALL OTHER TRADES TO ENSURE THE REQUIRED WORKING SPACE CLEARANCES ARE MAINTAINED.

C. ALL WORK SHOWN ON THIS SHEET TO BE BID UNDER ALTERNATE NO. 01 UNLESS NOTED OTHERWISE.

SHEET KEYNOTES

1. PROVIDE RECEPTACLE FOR WELDER. COORDINATE RECEPTACLE NEMA CONFIGURATION WITH OWNER.
2. PROVIDE PANEL FOR STORAGE BUILDING, SEE RISER DIAGRAM FOR PANEL SIZE, FEEDER SIZE, AND LOCATION. SEE SITE PLAN FOR HAND HOLE CONNECTION INFORMATION.
3. PROVIDE 30A DISCONNECT SWITCH AND CONNECTION TO OVERHEAD DOOR OPERATOR. INSTALL REMOTE PUSH BUTTON CONTROL STATION FURNISHED WITH OPERATOR. PROVIDE CONDUIT AND WIRING TO SAFETY SENSORS AT FLOOR ON EACH SIDE OF DOOR. COORDINATE ROUGH-IN AND WIRING REQUIREMENTS WITH MANUFACTURER.
4. PROVIDE POWER CONNECTION TO OVERHEAD DOOR CONTROLS PER MANUFACTURER'S REQUIREMENTS.



1 Storage Building Power Plan

SCALE: 1/4" = 1'-0"

0 2' 4' 8'

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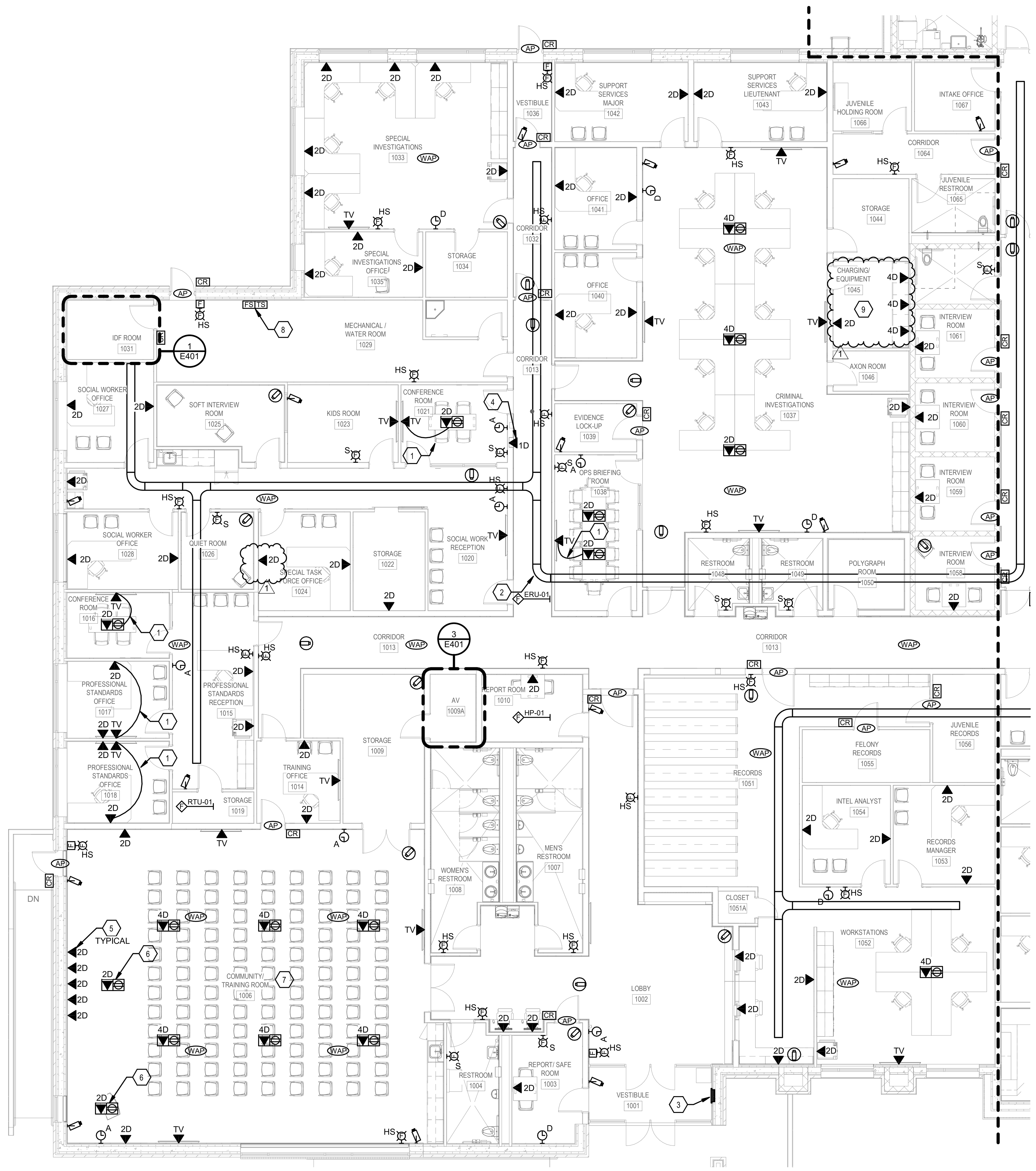
Storage Building Power Plan

Project No. 22133

E205

4/25/2025 1:22:12 PM



1 First Floor Systems Plan - West

SCALE: 1/8" = 1'-0"

0 4' 8' 16'

GENERAL NOTES

A. REFER TO DRAWING E0.2 FOR ADDITIONAL GENERAL NOTES.

SHEET KEYNOTES

1. PROVIDE ONE 1-1/4"C WITH PULL STRING WITH LOW VOLTAGE COMPARTMENT TO WALL MOUNTED TV OUTLET.
2. PROVIDE 12"x4" BASKET CABLE TRAY SUSPENDED WITH BOTTOM 6" ABOVE CEILING; COORDINATE ROUTE AND OTHER TRADES TO MAINTAIN EQUIPMENT AND CABLE TRAY ACCESS.
3. FIRE ALARM REMOTE ANNUNCIATOR, FLUSH MOUNTED IN WALL; FIELD VERIFY LOCATION WITH AHJ AND ARCHITECT PRIOR TO ROUGH-IN.
4. PROVIDE DATA OUTLET FOR OWNER PROVIDED AED DEVICE. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH OWNER AND MANUFACTURER. DATA OUTLET MUST BE FULLY CONCEALED BY AED DEVICE.
5. PROVIDE DATA OUTLET, FIELD COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH DISPLAY WALL INSTALLER AND MANUFACTURER. OUTLETS ON THIS WALL ARE TO BE CONCEALED BEHIND DIRECT LED DISPLAY WALL.
6. FLOOR BOX FOR PRESENTATION CONNECTION. PROVIDE A DUPLEX DATA OUTLET ALONG WITH ONE (1) 1-1/4"C WITH PULL STRING FROM AV 1009A TO LOW VOLTAGE COMPARTMENT. COORDINATE EXACT LOCATION WITH OWNER/ARCHITECT.
7. LOCATION AND QUANTITY OF FLOOR BOXES ARE TO BE CONFIRMED WITH OWNER BEFORE INSTALLATION IN ROOM.
8. PROVIDE CONNECTION TO FIRE SUPPRESSION SYSTEM ALARM FLOW AND SUPERVISORY SWITCHES FROM FIRE ALARM SYSTEM; COORDINATE DEVICE QUANTITY AND LOCATIONS WITH INSTALLER. SEE ENTRANCE DETAIL ON SHEET F101 FOR MORE DETAILS.
9. REFER TO ARCHITECTURAL ELECATION FOR DATA CONNECTION CONFIGURATION IN CHARGING/EQUIPMENT ROOM NUMBER 1045. CONFIRM EXACT DATA CONNECTION LOCATIONS WITH OWNER AND ARCHITECT BEFORE ROUGH-IN AND DATA CONNECTION INSTALLATION.

1

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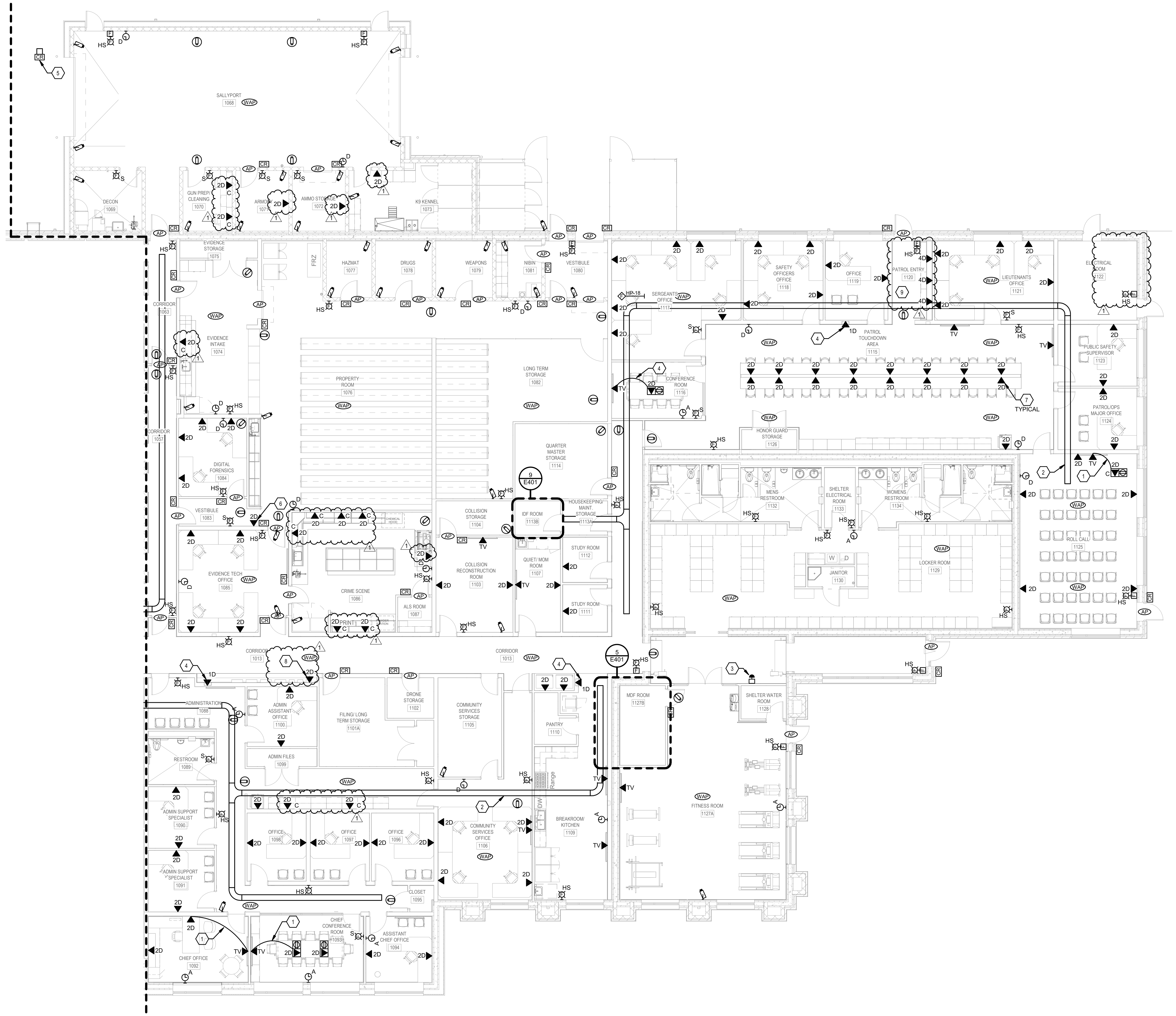
First Floor Systems Plan - West

Project No. 22133

E301

4/25/2025 1:22:16 PM



1 First Floor Systems Plan - East
SCALE: 1/8" = 1'-0"

GENERAL NOTES

A. REFER TO DRAWING E0.2 FOR ADDITIONAL GENERAL NOTES.

SHEET KEYNOTES

1. PROVIDE ONE 1-1/4"C FROM LOW VOLTAGE COMPARTMENT TO WALL MOUNTED TV OUTLET.
2. PROVIDE 12"x4" BASKET CABLE TRAY SUSPENDED WITH BOTTOM 6" ABOVE CEILING; COORDINATE ROUTE AND OTHER TRADES TO MAINTAIN EQUIPMENT AND CABLE TRAY ACCESS.
3. PROVIDE SHIELDED MANUAL PUSH BUTTON FOR EMERGENCY STORM SHELTER VENTILATION ACTIVATION, WATER SHUTDOWN, AND GAS SHUTDOWN. COORDINATE ALL WATER REQUIREMENTS WITH MECHANICAL CONTRACTOR. COORDINATE EXACT LOCATION WITH ARCHITECT. PUSH BUTTON TO BE SAFETY TECHNOLOGY INTERNATIONAL MODEL: SS2-3-4-9-ZA-EN OR EQUAL. PROVIDE ENGRAVED NAMEPLATE 'EMERGENCY STORM SHELTER".
4. PROVIDE DATA OUTLET FOR OWNER PROVIDED AED DEVICE. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH OWNER AND MANUFACTURER. DATA OUTLET MUST BE FULLY CONCEALED BY AED DEVICE.
5. PROVIDE CARD READER FOR ACCESS CONTROL FOR SALLYPORT OVERHEAD DOOR. COORDINATE EXACT ROUGH-IN LOCATION AND REQUIREMENTS WITH OVERHEAD DOOR MANUFACTURER AND OWNER.
6. PROVIDE DATA OUTLET FOR PASS THROUGH LOCKER, COORDINATE EXACT LOCATION WITH OWNER AND MANUFACTURER.
7. INSTALL DATA OUTLETS ABOVE COUNTER HORIZONTALLY.
8. PROVIDE DATA CONNECTION FOR KEY SYSTEM. DATA CONNECTION SHALL BE LOCATED SO THAT IT CAN BE CONCEALED BY THE KEY SYSTEM. CONFIRM EXACT LOCATION WITH OWNER AND ARCHITECT BEFORE ROUGH-IN AND DATA CONNECTION INSTALLATION.
9. REFER TO ARCHITECURAL ELEVATION FOR DATA CONNECTION CONFIGURATION IN PATROL ENTRY ROOM NUMBER 1120. CONFIRM EXACT DATA CONNECTION LOCATIONS WITH OWNER AND ARCHITECT BEFORE ROUGH-IN AND DATA CONNECTION CONFIGURATION.

1

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Richmond Police Department

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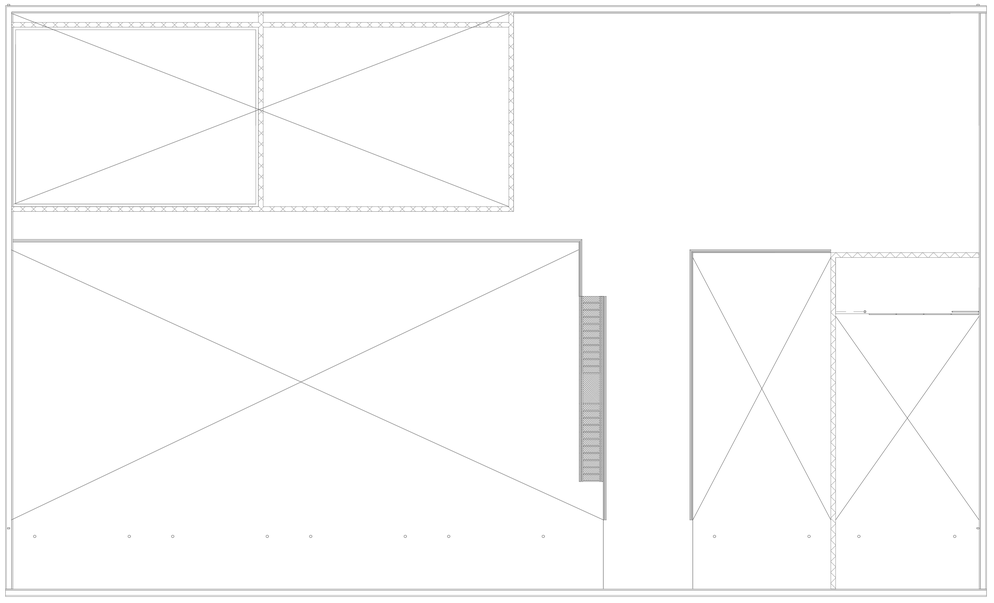
First Floor Systems Plan - East

Project No. 22133

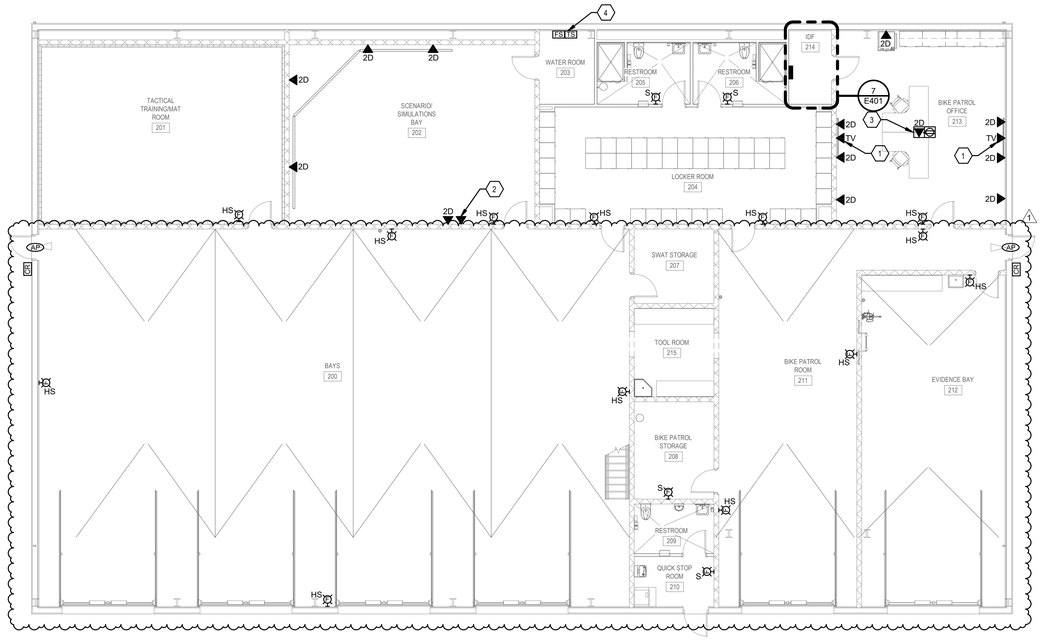
E302

4/25/2025 1:22:17 PM



2 Support Building Mezzanine Systems Plan
SCALE: 1/8" = 1'-0"

0 4' 8' 16'



1 Support Building First Floor Systems Plan
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

GENERAL NOTES

A. REFER TO DRAWING E0.2 FOR ADDITIONAL GENERAL NOTES.

SHEET KEYNOTES

1. PROVIDE 1-GANG RECESSED OUTLET BOX WITH 1"C STUB OUT TO CABLE TRAY FOR TV, 60"AFF; FIELD VERIFY MOUNTING HEIGHT AND LOCATION WITH OWNER PRIOR TO ROUGH-IN
2. PROVIDE 1-1/4"C WITH PULL STRING FROM SIMULATION COMPUTER TO INSTRUCTOR STATION. COORDINATE EXACT LOCATION WITH OWNER BEFORE ROUGH-IN.
3. COMBINATION FLOOR BOX. SEE POWER PLAN. PROVIDE ONE 1-1/4"C FROM LOW VOLTAGE COMPARTMENT TO WALL MOUNTED TV OUTLET AND ONE 1-1/4C TO IDF ROOM 214.
4. PROVIDE CONNECTION TO FIRE SUPPRESSION SYSTEM ALARM FLOW AND SUPERVISORY SWITCH FROM FIRE ALARM SYSTEM; COORDINATE DEVICE QUANTITY AND LOCATION WITH INSTALLER. SEE ENTRANCE DETAIL ON SHEET F102 FOR MORE DETAILS.

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Revisions: 1 2025.04.25 ADD 2
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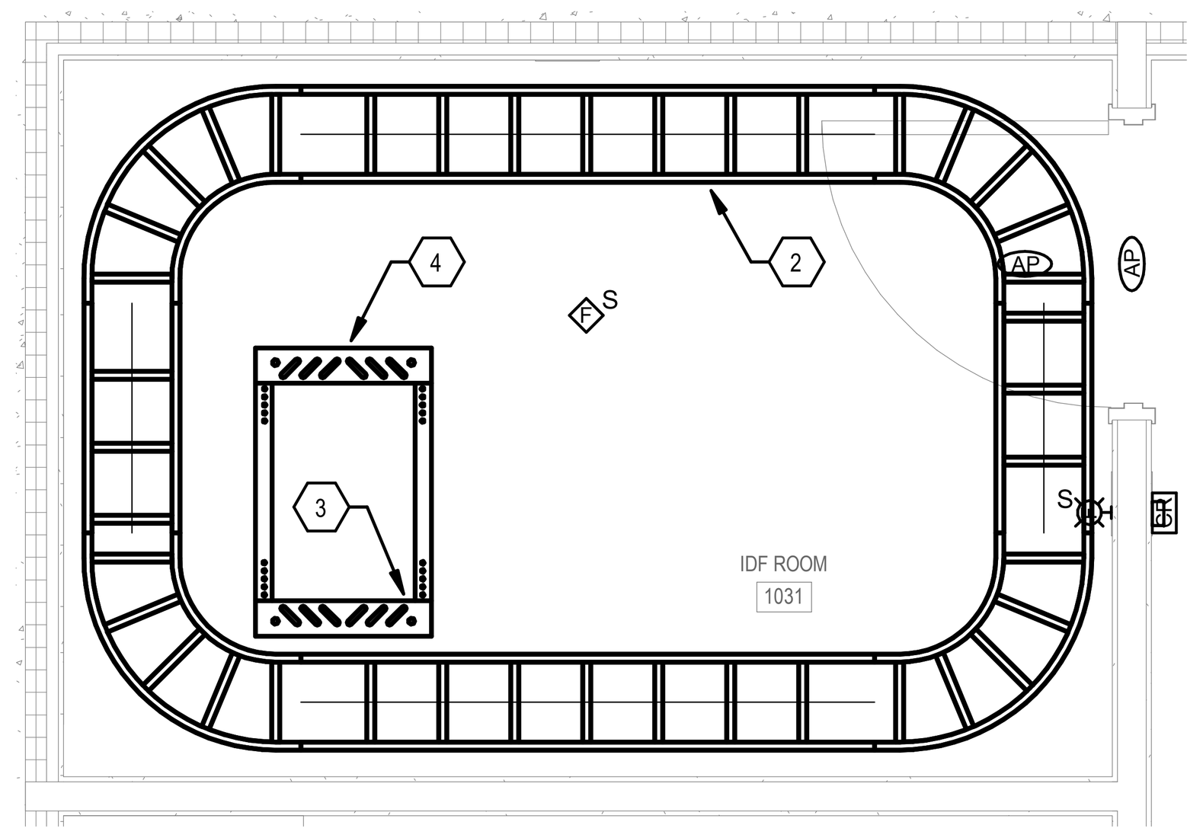
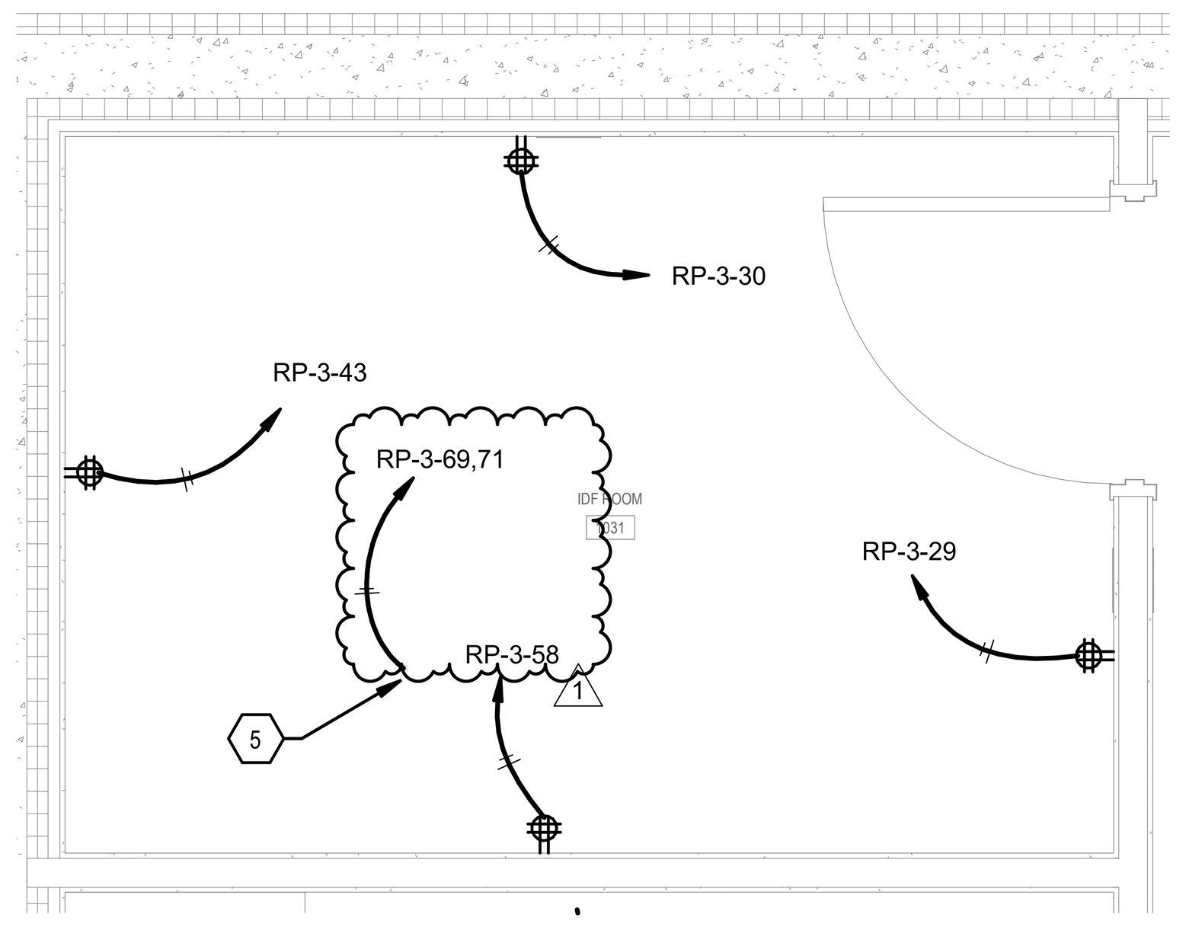
Support Building Systems Plan

Project No. 22133

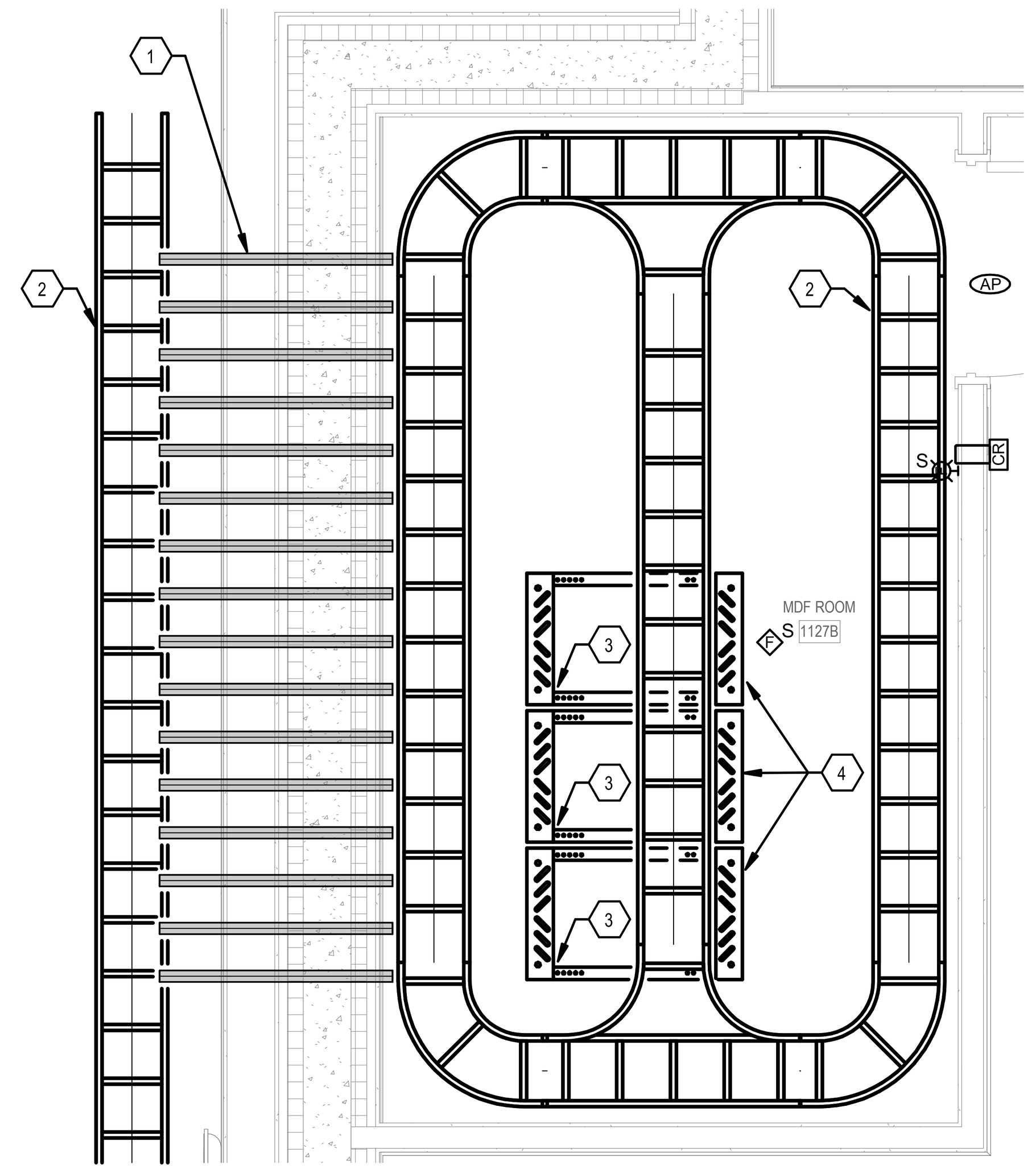
E303



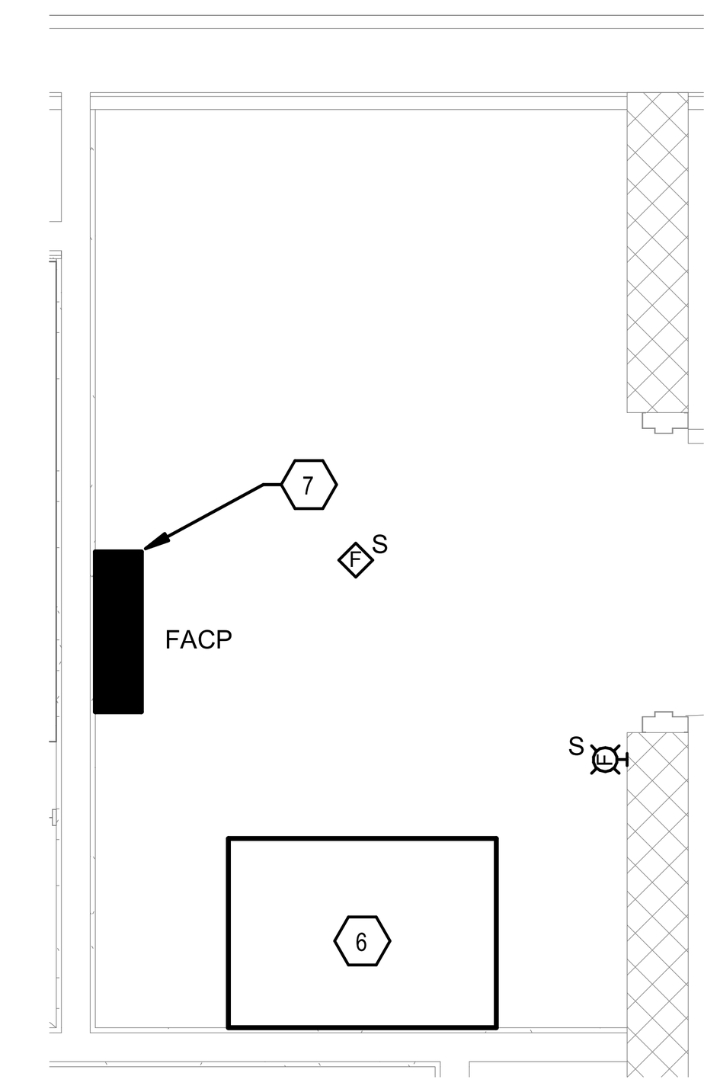
1 ENLARGED IDF ROOM - 1031 - SYSTEMS
SCALE: 1/2" = 1'-0"



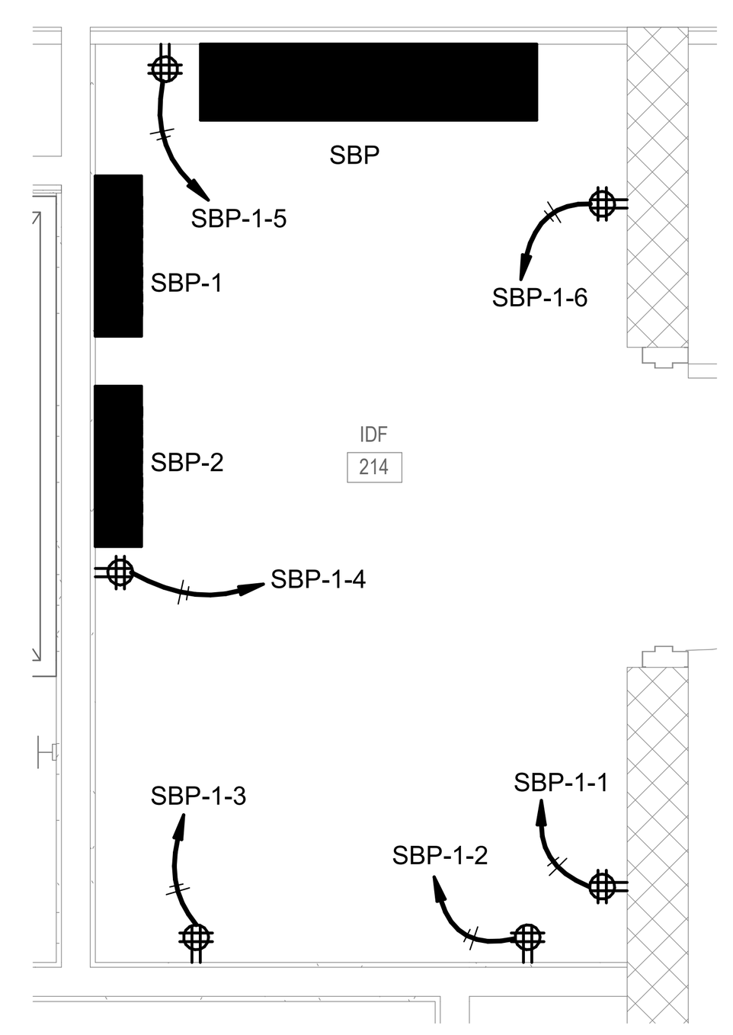
2 ENLARGED IDF ROOM - 1031 - POWER
SCALE: 1/2" = 1'-0"



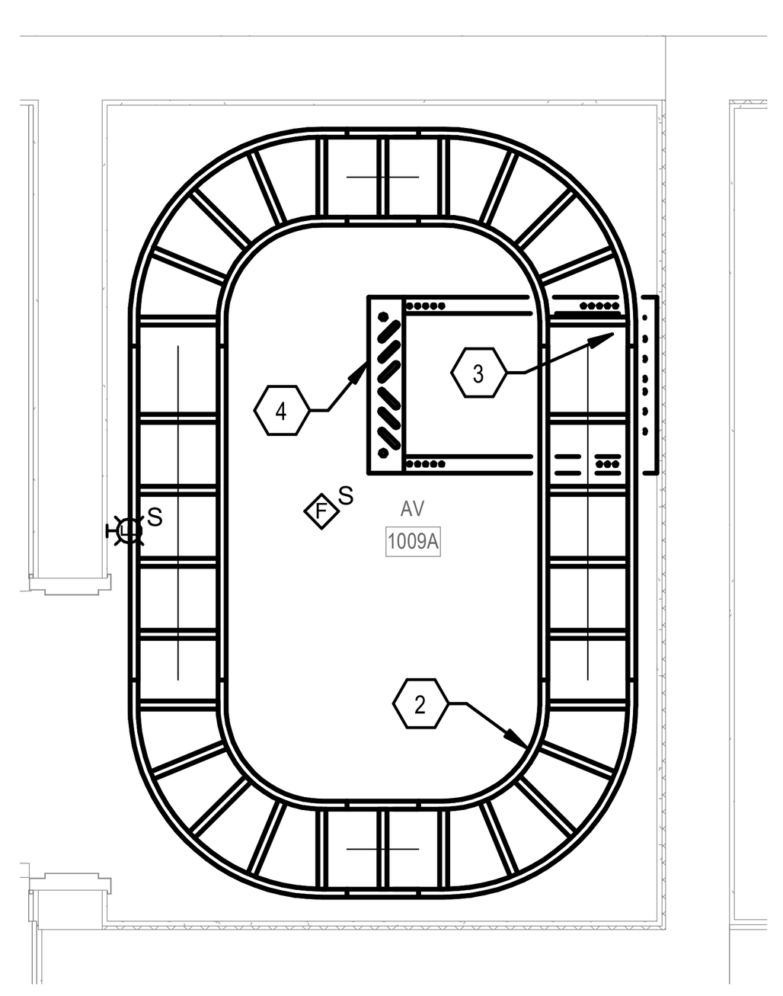
5 ENLARGED MDF ROOM - 1127B - SYSTEMS
SCALE: 1/2" = 1'-0"



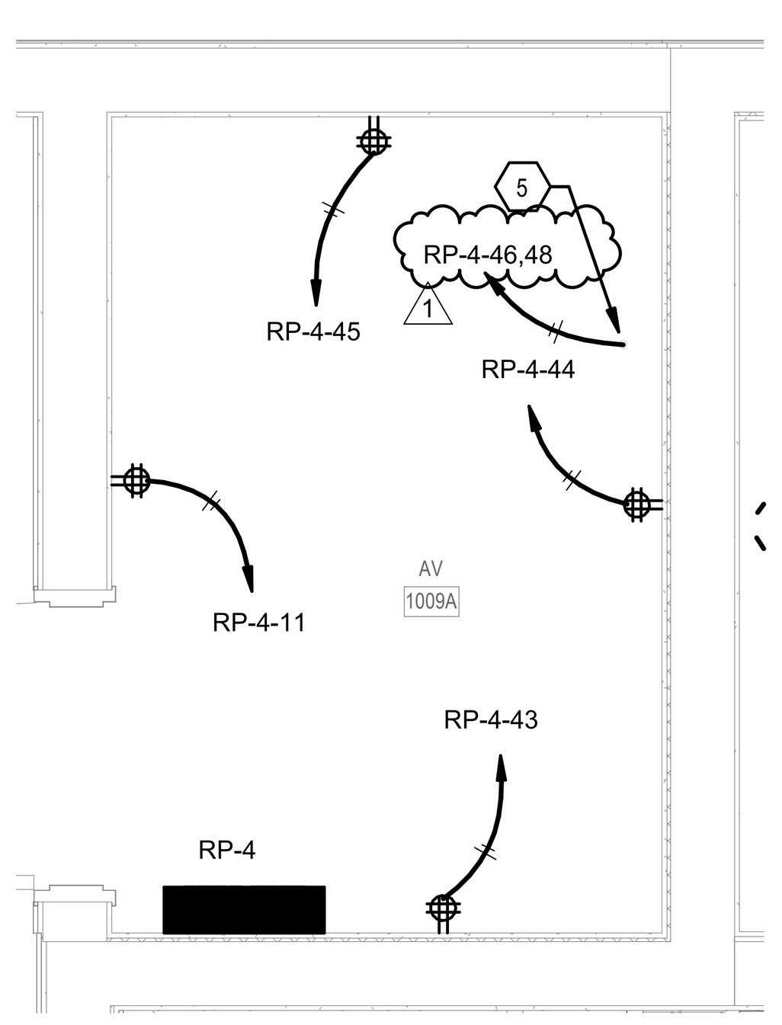
7 ENLARGED IDF ROOM - 214 - SYSTEMS
SCALE: 1/2" = 1'-0"



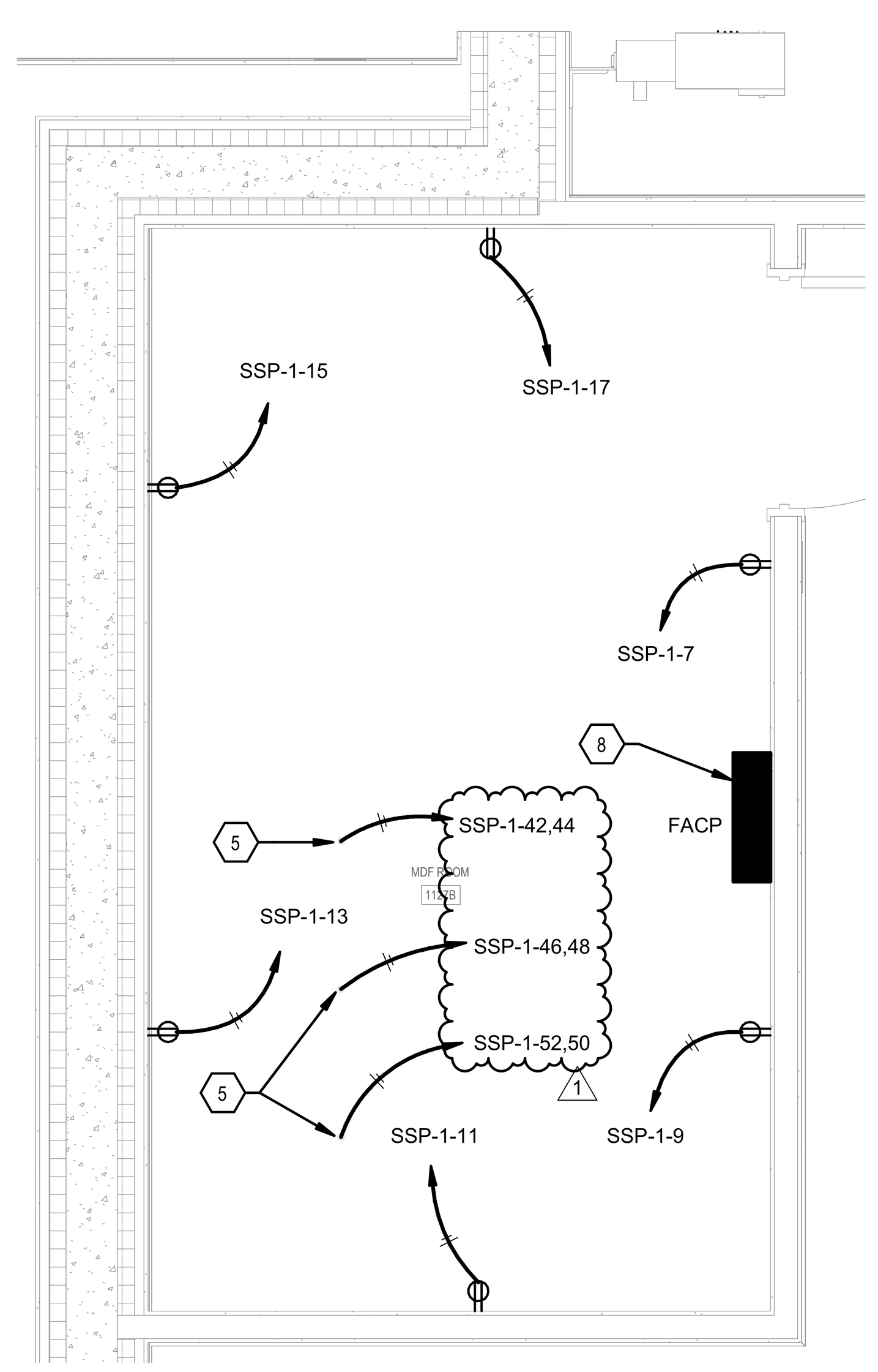
8 ENLARGED IDF ROOM - 214 - POWER
SCALE: 1/2" = 1'-0"



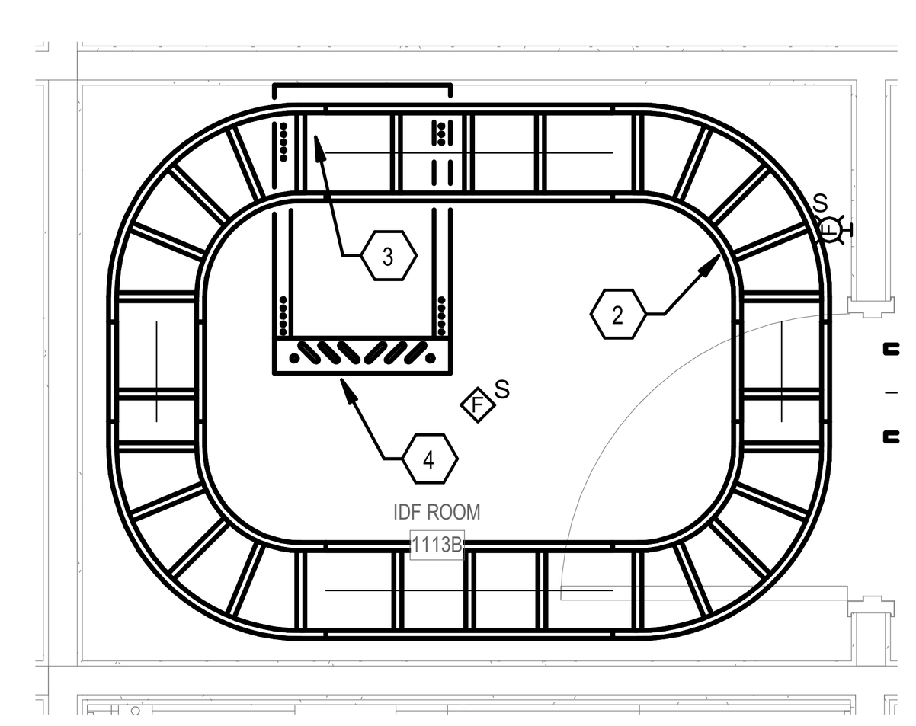
3 ENLARGED AV ROOM - 1009A - SYSTEMS
SCALE: 1/2" = 1'-0"



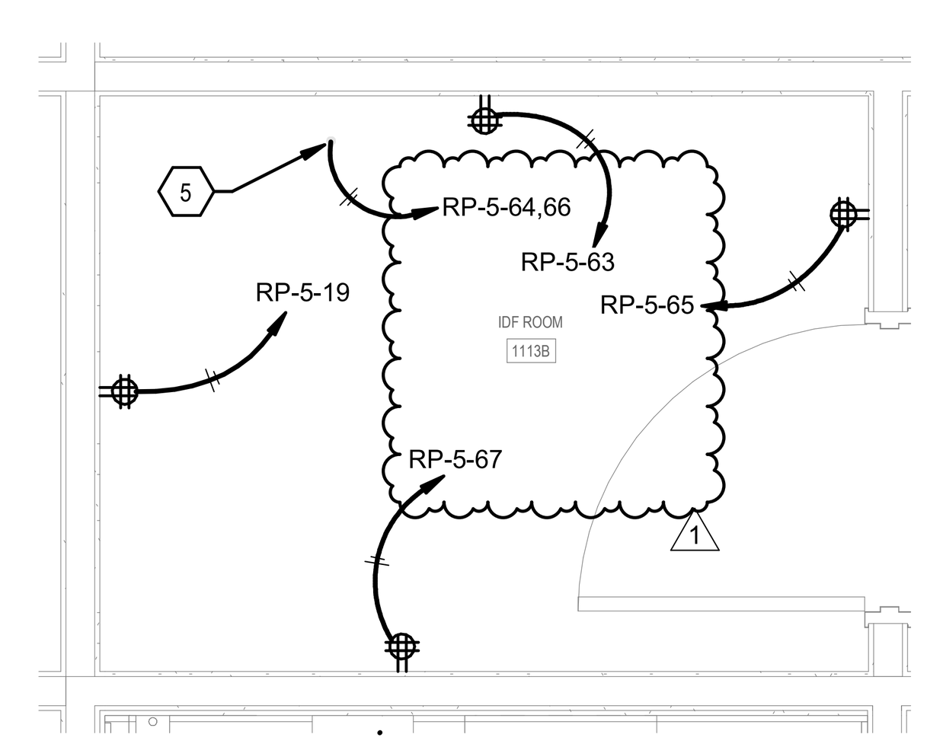
4 ENLARGED AV ROOM - 1009A - POWER
SCALE: 1/2" = 1'-0"



6 ENLARGED MDF ROOM - 1127B - POWER
SCALE: 1/2" = 1'-0"



9 ENLARGED IDF ROOM - 1113B - SYSTEMS
SCALE: 1/2" = 1'-0"



10 ENLARGED IDF ROOM - 1113B - POWER
SCALE: 1/2" = 1'-0"

GENERAL NOTES

A. REFER TO DRAWING E0.2 FOR ADDITIONAL GENERAL NOTES.

B. MOUNT ALL RECEPTACLES LOCATED WITHIN MDF/IDF ROOMS AT 48" AFF.

SHEET KEYNOTES

1. PROVIDE 1-1/2"C FROM CORRIDOR CABLE TRAY TO CABLE TRAY WITHIN MDF FOR LOW VOLTAGE WIRING (TYPICAL). SPACE CONDUITS AT 8" ON CENTER. NOTE: IF CORE DRILLING HOLES FOR CONDUITS AFTER STORM SHELTER WALL IS POURED, HOLES SHALL NOT EXCEED 2" DIAMETER.
2. PROVIDE 12"X4" BASKET CABLE TRAY SUSPENDED WITH 4" SPACING OFF PERIMETER WALLS. COORDINATE ROUTE AND OTHER TRADES TO MAINTAIN EQUIPMENT AND CABLE TRAY ACCESS AS WELL AS REQUIRED CLEAR SPACES.
3. PROVIDE DUAL CIRCUIT MULTI OUTLET STRIP MOUNTED VERTICALLY WITHIN THE BACK OF THE DATA FRAME TO SERVE FRAME MOUNTED EQUIPMENT.
4. PROVIDE 4-POST DATA FRAME, FRONT FACING TOWARD KEYNOTE ARROW. WHERE SHOWN ADJACENT TO ANOTHER DATA FRAME, FRAMES SHALL BE BOLTED TOGETHER.
5. PROVIDE TWO CIRCUIT POWER CONNECTION TO MULTI-OUTLET STRIP MOUNTED VERTICALLY WITHIN DATA FRAME.
6. PROVIDE ENCLOSED AND VENTED 24U COMMUNICATION CABINET MOUNTED ON WALL AT 66" TO TOP. PROVIDE CABINET WITH LOCKABLE HINGED DOOR.
7. PROVIDE FIRE ALARM CONTROL PANEL FOR SUPPORT BUILDING.
8. PROVIDE FIRE ALARM CONTROL PANEL FOR MAIN RICHMOND POLICE DEPARTMET BUILDING.

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	1	2025.04.25	ADD 2

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Richmond Police Department

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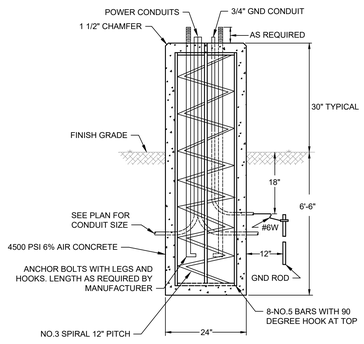
Enlarged Electrical Plans

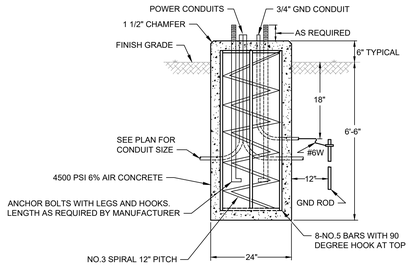
Project No. 22133

E401



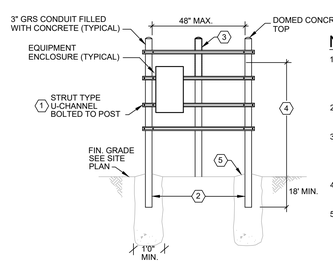
POLE BASE DETAIL TYPE 1

NOT TO SCALE



SHORT POLE BASE DETAIL

NOT TO SCALE

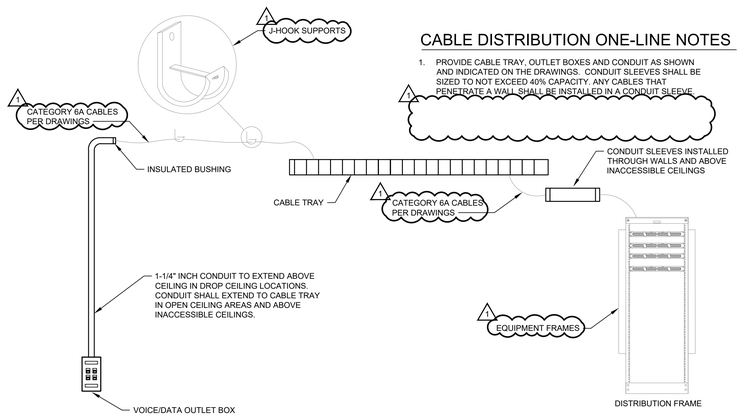


TYPICAL FREESTANDING EQUIPMENT SUPPORT

NOT TO SCALE

NOTES

1. FURNISH AND INSTALL MINIMUM (4) U-CHANNEL SPANS BETWEEN POSTS AND ADD ADDITIONAL AS REQUIRED FOR SUPPORT OF EQUIPMENT AND CONDUITS.
2. PAINT RGS POSTS WITH MIN. 2 COATS OF BITUMASTIC WHERE IN CONTACT WITH CONCRETE.
3. FURNISH AND INSTALL ADDITIONAL SUPPORT POST WITH CONCRETE BASE WHERE SPAN EXCEEDS 48" AND ADDITIONAL POSTS AS REQUIRED SUCH THAT NO SPAN BETWEEN POSTS EXCEEDS 48".
4. 6'-6" MAXIMUM HEIGHT TO TOP OF ELECTRICAL EQUIPMENT
5. FURNISH AND INSTALL 18" DIAMETER BY 30" DEEP CONCRETE BASE FOR EACH SUPPORT POST REQUIRED. BASES SHALL BE A SINGLE HOMOGENEOUS CONCRETE POUR.

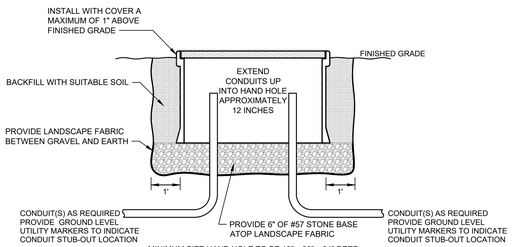


TYPICAL CABLE DISTRIBUTION ONE-LINE DIAGRAM

NOT TO SCALE

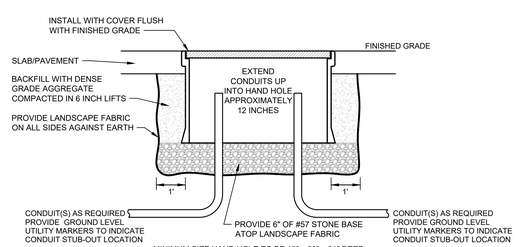
CABLE DISTRIBUTION ONE-LINE NOTES

1. PROVIDE CABLE TRAY, OUTLET BOXES AND CONDUIT AS SHOWN AND INDICATED ON THE DRAWINGS. CONDUIT SLEEVES SHALL BE SIZED TO NOT EXCEED 40% CAPACITY. ANY CABLES THAT PENETRATE A WALL SHALL BE INSTALLED IN A CONDUIT SLEEVE.



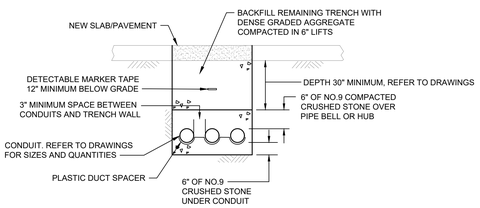
HANDHOLE DETAIL INSTALLED IN EARTH

NOT TO SCALE



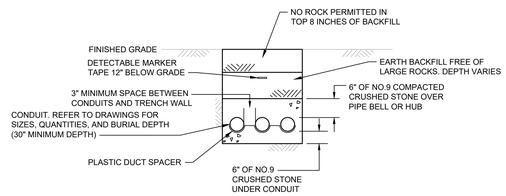
HANDHOLE DETAIL INSTALLED IN PAVEMENT

NOT TO SCALE



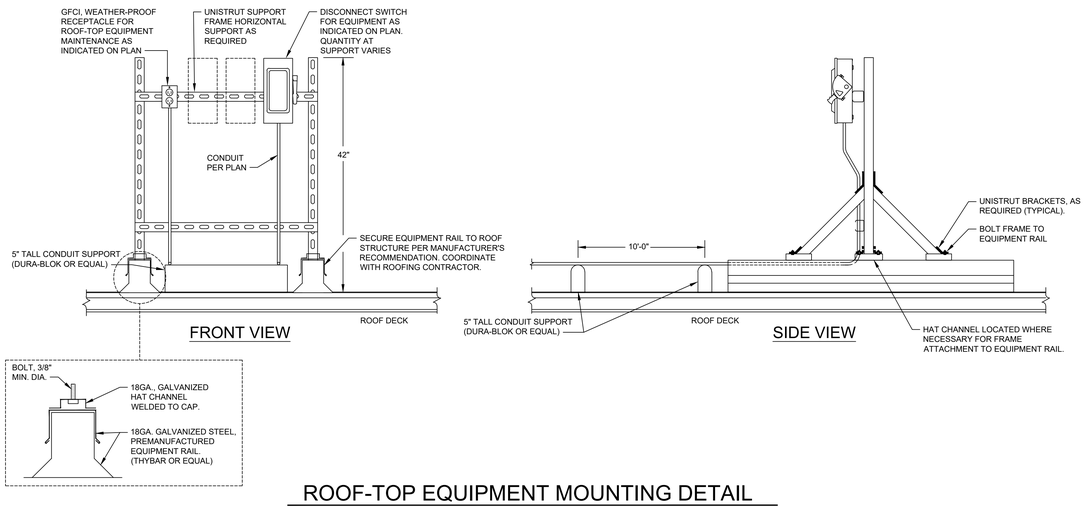
TRENCH DETAIL FOR NEW SLAB/PAVEMENT

NOT TO SCALE



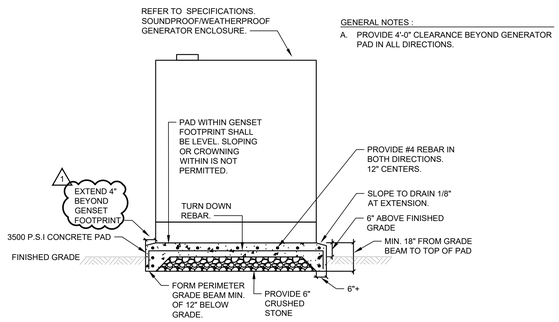
TRENCH DETAIL FOR EARTH COVER

NOT TO SCALE



ROOF-TOP EQUIPMENT MOUNTING DETAIL

NOT TO SCALE



GENERATOR CONCRETE PAD DETAIL

NOT TO SCALE

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Revisions:

NUMBER	DATE	DESCRIPTION
1	2025.04.25	ADD 2

Issue Date: March 28, 2025

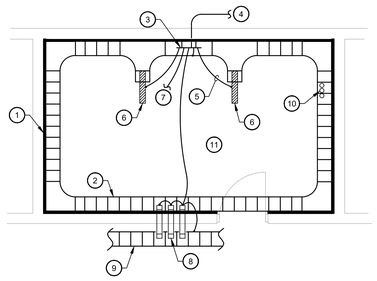
Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Electrical Details

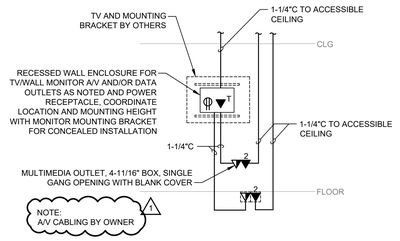
Project No. 22133

E501



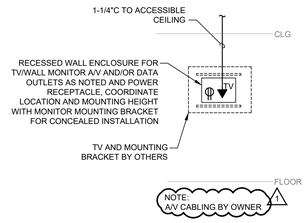
DETAIL NOTES

1. INSTALL 3/4 INCH THICK, FIRE RETARDANT PLYWOOD AROUND THE PERIMETER WALLS.
2. INSTALL CABLE RUNWAY AROUND THE PERIMETER WALLS. MOUNT ABOVE TOP OF DOOR FRAME. REFER TO SYSTEM DRAWINGS FOR ADDITIONAL DETAIL.
3. INSTALL COPPER GROUNDING BUSBAR ADJACENT TO THE COMMUNICATION RACK(S). BUSBAR SHALL BE A MINIMUM OF 1/4 INCH THICK BY 4 INCHES WIDE BY 20 INCHES LONG.
4. INSTALL A #4 MINIMUM INSULATED GROUNDING CONDUCTOR IN CONDUIT TO THE ELECTRICAL SERVICE GROUNDING SYSTEM.
5. INSTALL A MINIMUM #6 INSULATED BONDING CONDUCTOR TO THE COMMUNICATION RACK(S), CONDUIT SLEEVES, CABLE RUNWAY, AND CABLE TRAY.
6. COMMUNICATION RACK SHOWN FOR REFERENCE ONLY. REFER TO THE FLOOR PLAN FOR THE EXACT LOCATION AND QUANTITY OF RACKS TO BE INSTALLED.
7. INSTALL BONDING CONDUCTOR TO TELEPHONE AND DATA SERVICE ENTRANCE. COORDINATE REQUIREMENTS WITH THE UTILITY COMPANY. REFER TO THE FLOOR PLANS FOR SERVICE ENTRANCE LOCATIONS.
8. INSTALL EMT CONDUIT SLEEVES WITH INSULATED GROUNDING BUSHINGS ON THE CLOSET SIDE AND NON-GROUNDING INSULATED BUSHINGS ON THE OPPOSITE SIDE. INSTALL SLEEVES BETWEEN THE COMMUNICATIONS CLOSET AND CABLE TRAY. REFER TO THE FLOOR PLANS FOR CABLE TRAY LOCATIONS. INSTALL QUANTITY OF CONDUITS AS REQUIRED TO MAINTAIN A 40% FILL RATIO. REFER TO SYSTEM DRAWINGS FOR ADDITIONAL DETAIL.
9. CABLE TRAY. REFER TO THE FLOOR PLANS FOR LOCATION.
10. INSTALL COMMUNICATION SERVICE ENTRANCE CONDUITS. INSTALL CONDUITS TO 4 INCHES ABOVE FINISHED FLOOR. REFER TO THE FLOOR PLANS FOR THE SERVICE ENTRANCE LOCATION, QUANTITY, AND SIZE OF CONDUITS.
11. THIS DETAIL DESCRIBES THE GENERAL CONSTRUCTION REQUIREMENTS FOR ALL COMMUNICATION CLOSETS. REFER TO THE FLOOR PLANS FOR ADDITIONAL REQUIREMENTS.



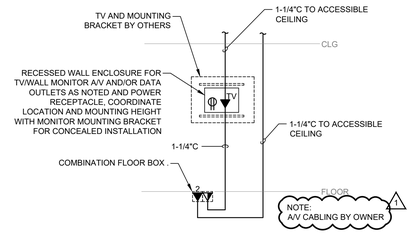
ROLL CALL 026 - A/V ROUGH-IN

NOT TO SCALE



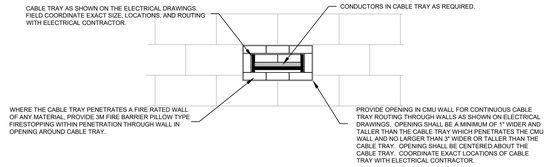
TYPICAL TV/VIDEO DISPLAY

NOT TO SCALE



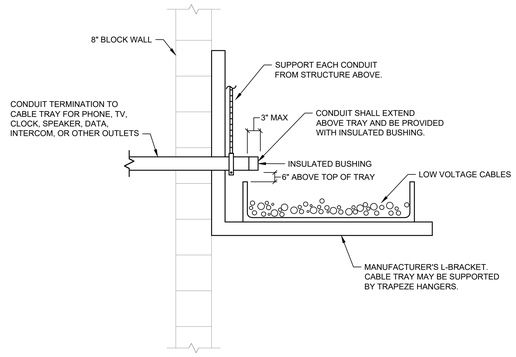
TYPICAL CONFERENCE ROOM - A/V ROUGH-IN

NOT TO SCALE



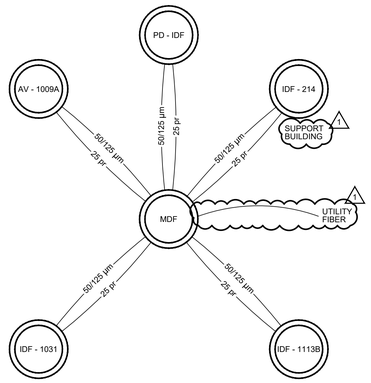
CABLE TRAY WALL PENETRATION DETAIL

NOT TO SCALE



CONDUIT/CABLE TRAY DETAIL

NOT TO SCALE



LEGEND:

50/125 µm — 50/125 µm — 12 STRAND MULTIMODE

25 pr — 25 pr — 25 PAIR COPPER

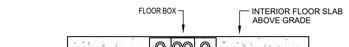
PD - IDF: IDF IN EXISTING POLICE STATION

ALL FIBER AND COPPER CONDUCTORS SHOWN IN THIS DIAGRAM TO BE INSTALLED IN NEW UNDERGROUND CONDUITS. REFER TO SITE PLAN FOR UNDERGROUND COMMUNICATIONS FOR UNDERGROUND COMMUNICATIONS CONDUIT ROUTING.

(NAME) — DATA FRAME

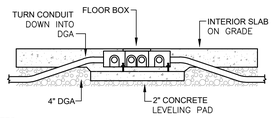
COMMUNICATION BACKBONE CONSTRUCTION DETAIL

NOT TO SCALE



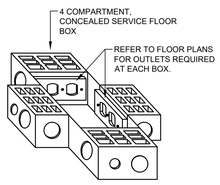
NOTE:

1. FLOOR BOX SHALL BE CONSTRUCTED TO ALLOW FOR WIRING BETWEEN ADJACENT COMPARTMENTS WITHIN BOX.
2. FLOOR BOXES IN ABOVE GRADE CONCRETE SLAB SHALL BE MAXIMUM 2-1/2" DEEP; BOXES IN SLAB ON GRADE SHALL BE 3-1/2" DEEP.



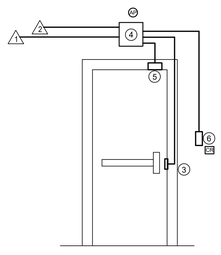
NOTES

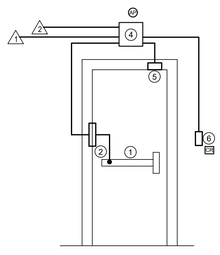
1. POOR 2" PAD BELOW FLOOR BOX TO SECURE AND LEVEL BOX PIOR TO POURING SLAB.
2. TURN CONDUITS DOWN INTO DGA GRAVEL BELOW VAPOR BARRIER. WORK CONDUIT DOWN INTO DGA, DO NOT LEAVE VOIDS BETWEEN CONDUIT, DGA AND VAPOR BARRIER.
3. CONDUIT SHALL BE PVC BELOW SLAB AND TRANSITION TO RGS PRIOR TO TURNING ABOVE SLAB.
4. CONDUIT LARGER THAN 1" SHALL ENTER FROM BOTTOM OF BOX
5. CONDUITS SHALL NOT BE EMBEDDED IN CONCRETE SLABS ABOVE OR ON GRADE.

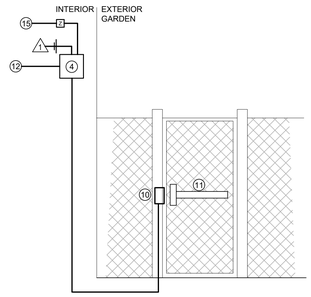


FLOOR BOX INSTALLATION

NOT TO SCALE







R5 (NOT TO SCALE) DOOR RISER - GATE - HARDWARE SETS E11/E11A

APPLIES TO DOOR(S): A123.3, A138.2, A145.2

GENERAL DOOR RISER NOTES:

A. PROVIDE 3/4" CONDUIT TO ALL DEVICES SHOWN WITH PULL STRING FOR CABLE INSTALLATION BY DOOR HARDWARE INSTALLER OR OWNER'S ACCESS/SECURITY CONTROL VENDOR.

B. COORDINATE WITH DOOR HARDWARE SUPPLIER FOR WIRING AND INTERFACE WITH ELECTRIFIED HARDWARE AND ACCESSORIES. SEE SECTION 087100 FOR HARDWARE AND OPERATIONAL REQUIREMENTS FOR EACH DOOR.

ELECTRICAL SERVICE NOTES: (A)

1. ACCESS CONTROL CABLE FROM HEAD END IN MDF ROOM.
2. ACCESS CONTROL SYSTEM AND CABLING BY OWNER

DOOR RISER NOTES: (#)

1. ELECTRIFIED EXIT DEVICE
2. EPT - ELECTRIC POWER TRANSFER (FRAME TO DOOR); PROVIDE 3/4"C STUB OUT TO ACCESSIBLE CEILING OR CABLE TRAY
3. ELECTRIC STRIKE WITH LATCHBOLT MONITOR, PROVIDE 3/4"C STUB OUT TO ACCESSIBLE CEILING OR CABLE TRAY
4. POWER SUPPLY AND DOOR CONTROL MODULE CENTRALLY LOCATED IN IT CLOSET, COORDINATE CONNECTION REQUIREMENTS WITH SUPPLIER. AT APPARATUS BAY DOORS PROVIDE APPROPRIATELY SIZED FLUSH MOUNTED JUNCTION BOX IN WALL ABOVE EACH DOOR FOR CONDUIT TERMINATION AND EXTEND MINIMUM 1-3/4"C TO NEAREST ACCESSIBLE CEILING SPACE FOR POWER AND CONTROL CABLING; COORDINATE REQUIREMENTS WITH SUPPLIER.
5. CONCEALED DOOR POSITION SWITCH (DPDT) PROVIDE 1/2"C; STUB OUT TO ACCESSIBLE CEILING OR CABLE TRAY
6. CARD READER - PROVIDE SINGLE GANG OUTLET BOX AND 3/4"C STUB OUT TO ACCESSIBLE CEILING OR CABLE TRAY

DOOR CONTROLS

NOT TO SCALE

FLOOR BOX SCHEDULE				
TYPE	DESCRIPTION	SERVICES	MFG MODEL	NOTES
A	COMBINATION SIX COMPARTMENT FLOOR BOX WITH CONCEALED SERVICE DOOR TRIM FLUSH WITH FINISHED FLOOR. AUTO CLOSE CABLE EGRESS DOORS	- TWO (2) DUPLEX RECEPTACLES - DATA JACKS WITH FACEPLATE AND CABLING, QTY AS INDCATED ON PLAN	WIREMOLD RFB6-OG SERIES OR EQUIVALENT	1
B	COMBINATION SIX COMPARTMENT FLOOR BOX WITH CONCEALED SERVICE DOOR TRIM FLUSH WITH FINISHED FLOOR. AUTO CLOSE CABLE EGRESS DOORS	- THREE (3) DUPLEX RECEPTACLES - DATA JACKS WITH FACEPLATE AND CABLING, QTY AS INDCATED ON PLAN	WIREMOLD RFB6-OG SERIES OR EQUIVALENT	1
C	COMBINATION SIX COMPARTMENT FLOOR BOX WITH CONCEALED SERVICE DOOR TRIM FLUSH WITH FINISHED FLOOR. AUTO CLOSE CABLE EGRESS DOORS	- TWO (2) DUPLEX RECEPTACLES - DATA JACKS WITH FACEPLATE AND CABLING QTY AS INDCATED BY # ON SYSTEMS PLAN - ONE (1) HDMI JACK WITH FACEPLATE AND CABLE ROUTED TO ASSOCIATED VIDEO DISPLAY DEVICE AS INDICATED ON SYSTEMS PLAN	WIREMOLD RFB6-OG SERIES OR EQUIVALENT	1,2
A/F	SIMIILIAR TO TYPE "B" EXCEPT WITH FURNITURE FEED TRIM AND CONNECTION TO OWNER FURNISHED FURNITURE SYSTEM			

NOTES

1 PROVIDE MINIMUM OF ONE (1) 1-1/4"C FROM LV COMPARTMENT TO NEAREST MDF/IDF/AV ROOM FOR COMMUNICATION CABLING; FOR LOCATIONS INDICATED TO HAVE >5 COMMUNICATION CABLES PROVIDE MINIMUM OF TWO 1-1/4" CONDUITS

2 PROVIDE SEPARATE 1-1/4"C FROM LV COMPARTMENT TO ASSOCIATED VIDEO DISPLAY OUTLET

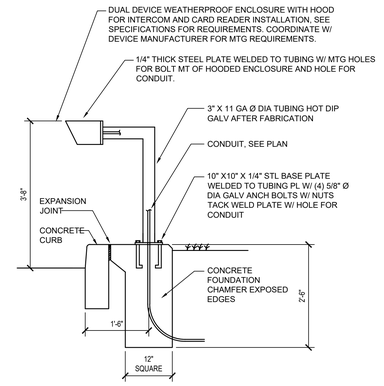
GENERAL NOTES

1 FIELD VERIFY ALL FLOOR BOX LOCATIONS WITH A/E PRIOR TO ROUGH-IN, DIMENSIONS (WHERE SHOWN ON PLAN) ARE FOR REFERENCE ONLY

2 COORDINATE TRIM WITH FLOOR FINSH: CARPET - PROVIDE FLANGED TRIM WITH CARPET INSERT DOOR; PROVIDE TRIM FINISH AS SELECTED BY ARCHITECT FROM MFG FULL RANGE

3 PROVIDE ALL COVERS, DEVICE MOUNTING PLATES, COMPONENTS AND ACCESSORIES NECESSARY FOR COMPLETE INSTALLATION OF DEVICES INDICATED

4 ALL UTP CABLING FOR SLAB ON GRADE APPLICATIONS SHALL BE WET LOCATION RATED.



STANCHION POST - GATE/DOOR CONTROL

NOT TO SCALE

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Revisions:

NUMBER	DATE	DESCRIPTION
1	2025.04.25	ADD 2

Issue Date: March 28, 2025

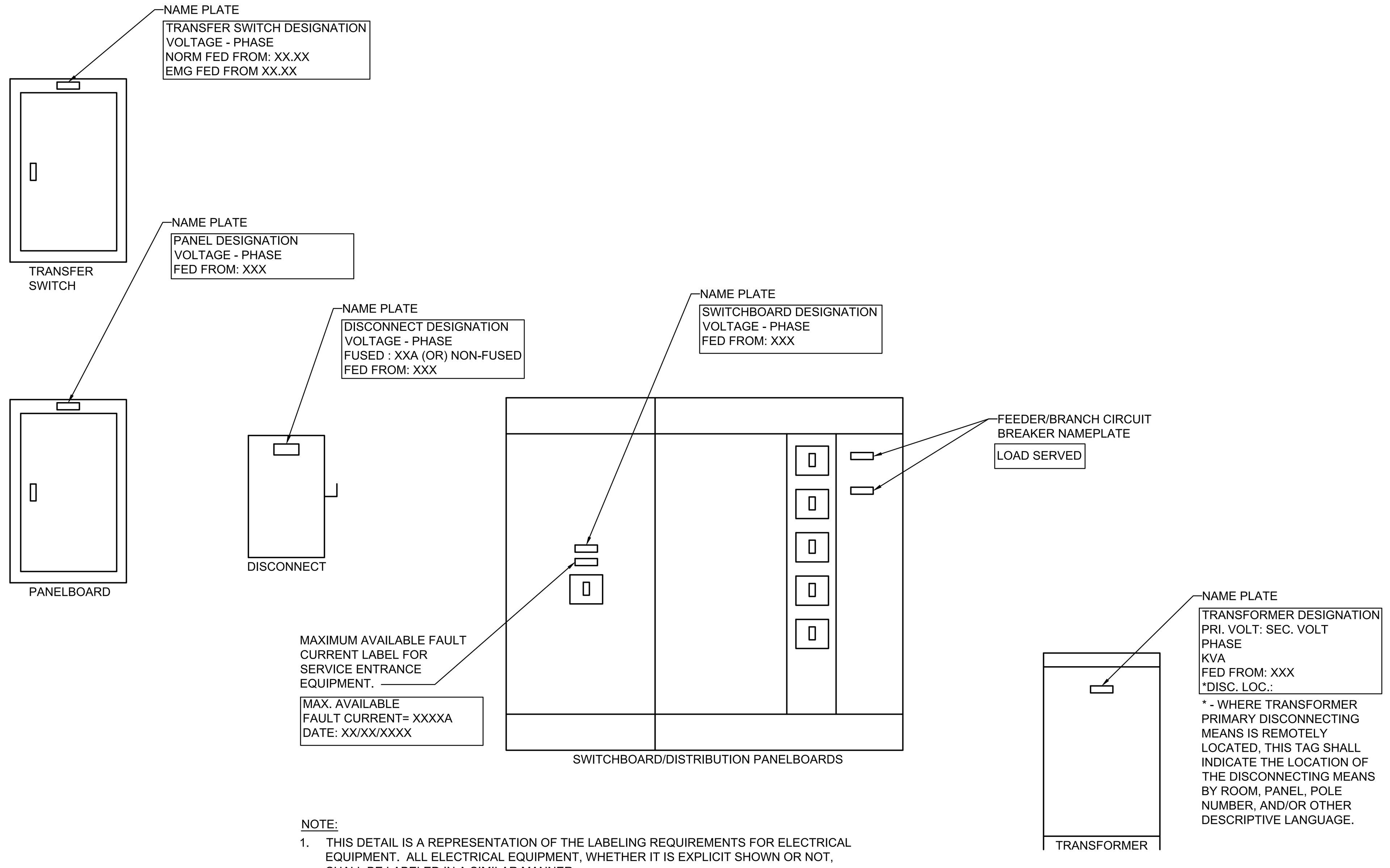
Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Electrical Details

Project No. 22133

E502

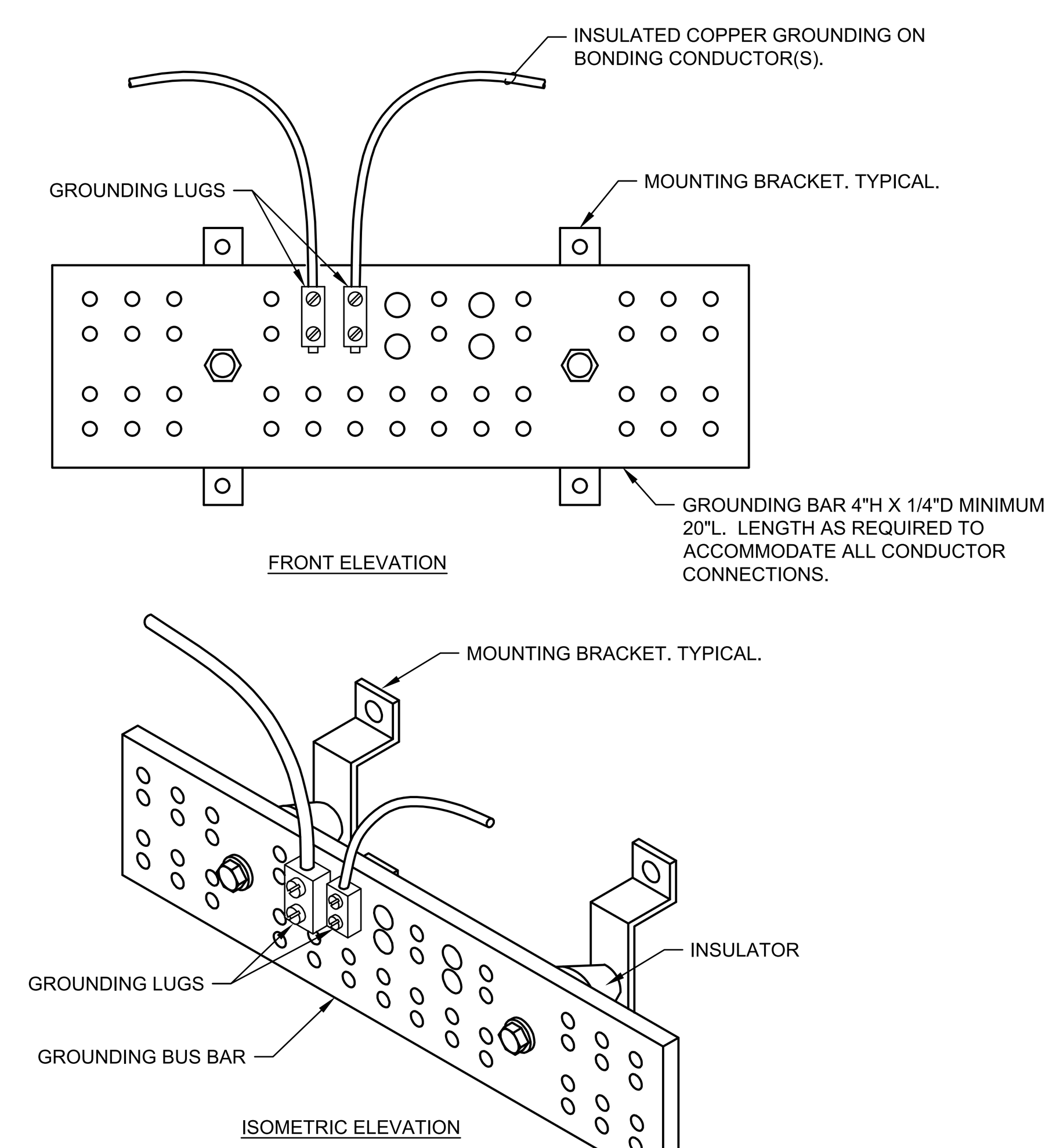


NOTE:

1. THIS DETAIL IS A REPRESENTATION OF THE LABELING REQUIREMENTS FOR ELECTRICAL EQUIPMENT. ALL ELECTRICAL EQUIPMENT, WHETHER IT IS EXPLICIT SHOWN OR NOT, SHALL BE LABELED IN A SIMILAR MANNER.
2. ALL LABELS SHALL BE ENGRAVED LAMINATED ACRYLIC. THE EQUIPMENT DESIGNATION SHALL HAVE A MINIMUM TEXT HEIGHT OF 3/8". THE REMAINING TEXT SHALL HAVE A MINIMUM HEIGHT OF 1/8".
3. LABELS FOR EQUIPMENT CONNECTED TO THE NORMAL POWER SYSTEM SHALL BE BLACK WITH WHITE TEXT. LABELS FOR EQUIPMENT CONNECTED TO THE EMERGENCY POWER SYSTEM SHALL BE RED WITH WHITE TEXT.
4. NAMEPLATES FOR EQUIPMENT LOCATED IN THE INTERIOR OF THE BUILDING SHALL BE ATTACHED WITH 3M SELF-ADHESIVES. EQUIPMENT INSTALLED AT EXTERIOR OF THE BUILDING SHALL BE ATTACHED WITH SCREWS AND THE LABEL SHALL HAVE PRE-PUNCHED OR PREDRILLED HOLES.

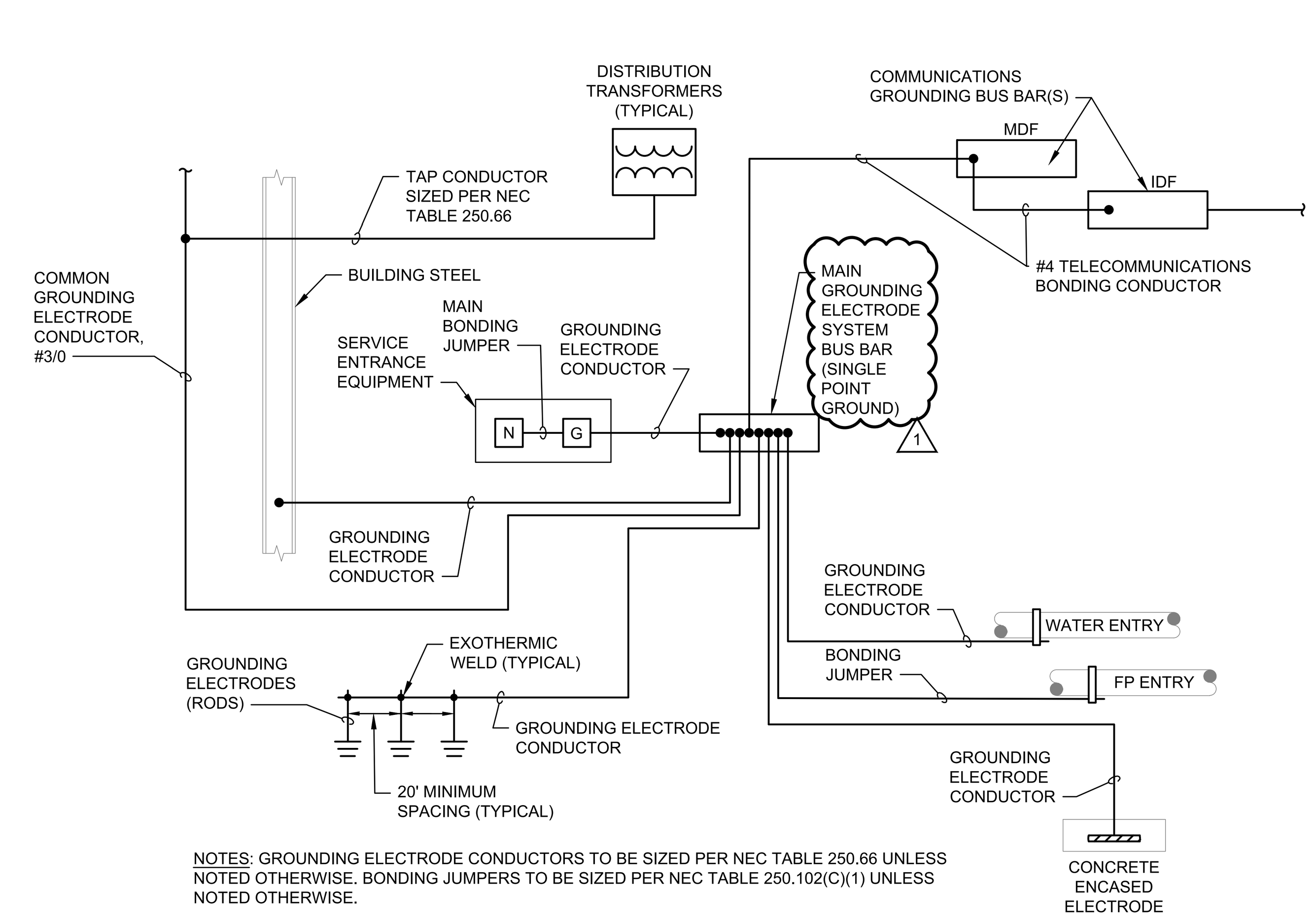
ELECTRICAL EQUIPMENT IDENTIFICATION

NOT TO SCALE



GROUNDING BUS BAR DETAIL

NOT TO SCALE



NOTES: GROUNDING ELECTRODE CONDUCTORS TO BE SIZED PER NEC TABLE 250.66 UNLESS NOTED OTHERWISE. BONDING JUMPERS TO BE SIZED PER NEC TABLE 250.102(C)(1) UNLESS NOTED OTHERWISE.

ELECTRICAL SYSTEM GROUNDING DETAIL

NOT TO SCALE

LIGHTING

GENERAL NOTES

1. LIGHTING CONTROL RISERS SHOW TYPICAL CONNECTIONS BETWEEN DEVICES AND LIGHT FIXTURES. COORDINATE QUANTITY OF DEVICES, LIGHT FIXTURES, AND ZONES WITH FLOOR PLANS.
2. BASIS-OF-DESIGN = nLIGHT, WATTSTOPPER AND HUBBELL EQUIVALENTS.

SYMBOL	DESCRIPTION
$^A	ON/OFF (nLIGHT nPODM)
$^B	ON/OFF, RAISE/LOWER (nLIGHT nPODM DX)
$^C	2-ZONE, ON/OFF (nLIGHT nPODM 2P)
$^E	2-ZONE, ON/OFF, RAISE/LOWER (nLIGHT nPODM 2P DX)
$^F	OCCUPANCY SENSOR, ON/OFF (nLIGHT nWSX PDT LV)
$^G	OCCUPANCY SENSOR, ON/OFF, RAISE/LOWER (nLIGHT nWSX PDT LV DX)
$^H	4-ZONE, ON/OFF, RAISE/LOWER (nLIGHT nPODM 4P DX)
$^L	LOW VOLTAGE (SWITCH)
PP a	POWER PACK - 'a' SUBSCRIPT INDICATES ZONE (nLIGHT nPP16D)
PE a	EMERGENCY POWER PACK - 'a' SUBSCRIPT INDICATES ZONE (nLIGHT nPP16D ER)
PL a	PLUG LOAD CONTROL POWER PACK - 'a' SUBSCRIPT INDICATES ZONE (nLIGHT nPP20 PL)
SC	SYSTEM CONTROLLER (nLIGHT ECLYPSE nECY)
UC	USER CONTROLLER (nLIGHT GATEWAY nGWY2 GFX)
NB	NETWORK BRIDGE (nLIGHT BRIDGE nBRG8)
a	LIGHT FIXTURE DRIVER. REFER TO LIGHT FIXTURE SCHEDULE - 'a' SUBSCRIPT INDICATES ZONE CONTROL.
S	RJ45 SPLITTER
PS	POWER SUPPLY - (nLIGHT PS150)
OS	360 DEGREE DUAL TECHNOLOGY OCCUPANCY SENSOR (nLIGHT nCM PDT9)
OS LT	LOW TEMP/HIGH HUMIDITY OCCUPANCY SENSOR
OS	CORNER MOUNTED, DUAL TECHNOLOGY OCCUPANCY SENSOR (nLIGHT...)
DL	DAYLIGHT SENSOR (nLIGHT nCM PDT9 ADCX)
– – – – – –	2#18 DIMMING CONDUCTOR CABLE
—-–—-–	CATEGORY 5E UTP NETWORK CABLE

LIGHTING CONTROL SEQUENCE OF OPERATION

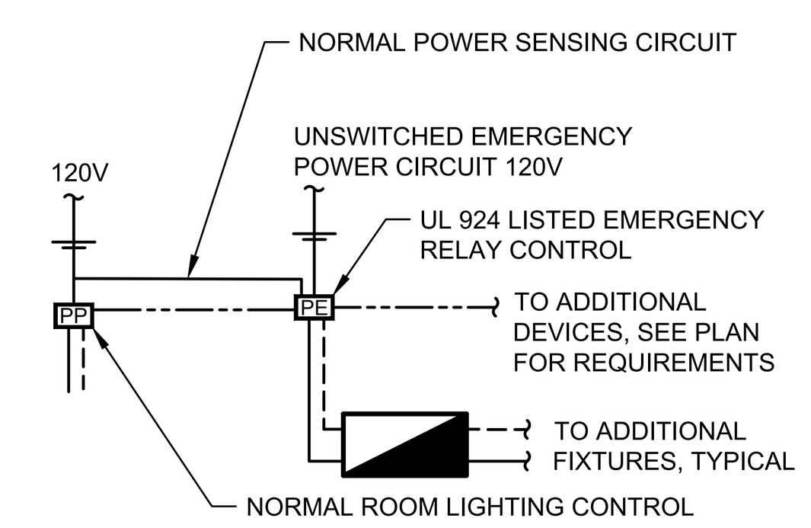
LC-T	SPACE TYPE/FUNCTION	OCCUPANCY SENSOR				TIME OF DAY FUNCTIONS				WALL SWITCH							DAYLIGHT				OTHER				ZONE CONTROL	NOTES
		VACANCY MODE	OCCUPANCY MODE	SENSOR TIMEOUT PERIOD (MINUTES)	DUAL TECHNOLOGY	OCCUPIED HOURS	SCHEDULED ON AT	SCHEDULED OFF AT	SCHEDULE OVERRIDE SWITCH	MANUAL (ON/OFF) - LV	MANUAL DIMMING (0-10V)	KEY SWITCH - LV MOMENTARY	PRESET SCENE CONTROL	ZONE CONTROL	GRAPHICAL TOUCHSCREEN	COLOR TUNING	SWITCHING (ON/OFF)	DIMMING	TARGET LIGHT LEVEL	EXTERIOR LOCATION	EM NIGHT LIGHT DIMMING	RGBW CONTROL	EXHAUST FAN	PLUG LOAD CONTROLS		
LC-01	LOBBY	-	X	30-MIN	X	7:00AM 6:00PM M-F	-	-	X	-	-	-	-	-	X	X	-	-	-	-	X	-	-	-	TIME OF DAY (T.O.D.) CONTROLLED DURING OCCUPIED HOURS AUTO ON/OFF BY OCCUPANCY SENSOR DURING UNOCCUPIED HOURS	1
LC-02	OFFICE	X	-	30-MIN	X	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	X	MANUAL ON/OFF, AUTO OFF AFTER 30 MINUTE DELAY	
LC-03	CORRIDOR	-	X	30-MIN	X	7:00AM 6:00PM M-F	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	T.O.D. CONTROLLED DURING OCCUPIED HOURS AUTO ON/OFF BY OCCUPANCY SENSOR DURING UNOCCUPIED HOURS	1
LC-04	GANG RESTROOM	-	X	30-MIN	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-		1
LC-05	SINGLE RESTROOM	-	X	30-MIN	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-		
LC-07	LOCKERROOM/FITNESS ROOM	X	-	30-MIN	X	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-		
LC-08	MECHANICAL/ELECTRICAL	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	MECHANICAL/ELECTRICAL - MANUAL CONTROL	
LC-09	WORKSPACE	X	-	30-MIN	X	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-		
LC-10	CONFERENCE ROOM	X	-	30-MIN	X	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-		
LC-11	COMMUNITY/TRAINING ROOM	X	-	30-MIN	X	-	-	-	-	X	X	-	-	X	-	-	-	-	-	-	-	-	-	-		3
LC-12	RECORDS	X	-	30-MIN	X	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
LC-13	BREAKROOM/KITCHEN	X	-	30-MIN	X	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-		
LC-14	STORAGE	X	-	30-MIN	X	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
LC-16	TRAINING ROOM	X	-	30-MIIN	X	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-		
LC-17	VESTIBULE	-	X	30-MIN	X	7:00AM 6:00PM M-F	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	T.O.D. CONTROLLED DURING OCCUPIED HOURS AUTO ON/OFF BY OCCUPANCY SENSOR DURING UNOCCUPIED HOURS	1,4
LC-18	SMALL ROOM	X	-	30-MIN	X	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-		
LC-20	SALLYPORT	-	X	-	X	7:00AM 6:00PM M-F	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	T.O.D. CONTROLLED DURING OCCUPIED HOURS, AUTOMATIC OVERRIDE AUTO ON BY OCCUPANCY SENSOR DURING UNOCCUPIED HOURS, MANUAL OFF	5
LC-22	JANITOR/CLOSET	X	-	-	X	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
LC-XX	EXTERIOR LIGHTING	-	-	-	-	-	DUSK	DAWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	AUTOMATIC ASTRONOMIC TIME OF DAY CONTROL	
LC-XX	EXTERIOR EGRESS DOOR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		2

GENERAL NOTES

- A BASIS OF DESIGN: Nlight; WATTSTOPPER AND HUBBELL EQUIVALENTS
- B PROVIDE ALL MATERIAL AND LABOR NECESSARY TO PERFORM ZONE CONTROL FUNCTIONS DESCRIBED ABOVE
- C PROVIDE DETAILED LIGHTING CONTROL FLOOR PLANS AT PLAN SCALE, RISERS, ETC WITH SHOP DRAWING SUBMITTALS
- D LIGHTING CONTROL RISER SHOW TYPICAL TYPICAL CONNECTIONS BETWEEN DEVICES AND LIGHT FIXTURES, COORDINATE QUANTITY OF DEVICES, FIXTURES, ZONES, ETC WITH CONTRACT FLOOR PLANS
- E SEE DRAWINGS FOR AREAS WITH EMERGENCY CIRCUIT, SEE DETAIL LC-EM FOR ADDITIONAL EMERGENCY CIRCUIT WIRING AND CONTROL REQUIREMENTS
- F LIGHTING ZONES DESIGNATED WITH EM NIGHT LIGHT DIMMING SHALL NEVER TURN COMPLETELY OFF. CONTRACTOR TO DETERMINE LOWEST TRIM ON ALL FIXTURES TO MAINTAIN A 1 FOOTCANDLE MINIMUM FOR ALL EGRESS PATHS.

NOTES

1. EMERGENCY CIRCUIT DIMMED TO 50% UPON COMMAND DURING OCCUPIED HOURS, 10% DURING UNOCCUPIED HOURS; OVERRIDE TO OFF AVAILABLE AT MASTER STATION
2. LIGHTS AT THE EXTERIOR EGRESS DOORS DESIGNATED AS TYPE 'U' SHALL ONLY BE TURNED ON IN THE EVENT OF SENSED POWER FAILURE PER THE EMERGENCY RELAY. LIGHTS SHALL NOT BE CONTROLED BY TIME CLOCK.
3. COORDINATE ALL ZONE AND/OR SCENE CONTROLS WITH OWNER.
4. INTERFACING WITH DMX CONTROLLER AS REQUIRED FOR COLOR CHANGING CAPABILITIES.
5. SALLY PORT SHALL NEVER TURN COMPLETELY OFF. CONTRACTOR TO DETERMINE LOWEST TRIM ON ALL FIXTURES TO MAINTAIN A 20 FOOTCANDLE MINIMUM.

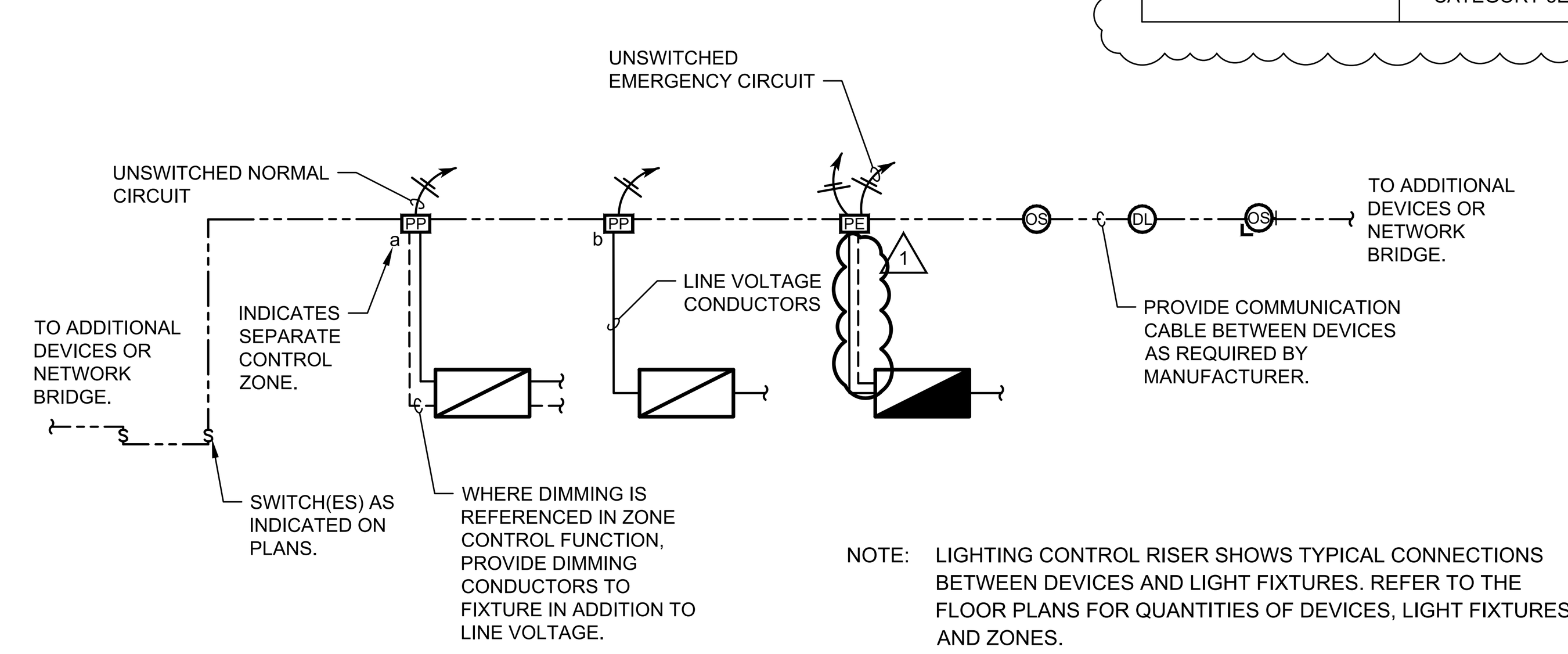


TYPICAL EMERGENCY LIGHTING CONTROL

LC-EM

NOT TO SCALE

ZONE CONTROL:
1. EMERGENCY CIRCUIT FIXTURE AUTOMATICALLY CONTROLLED (AND DIMMED AS APPLICABLE) WITH WITH NORMAL POWER FIXTURES IN ROOM
2. EMERGENCY CIRCUIT FIXTURE AUTOMATICALLY GOES TO 100% OUTPUT UPON LOSS OF SENSING CIRCUIT POWER.
3. PROVIDE NIGHT LIGHT LEVEL DIMMED TO 10% WHERE NOTED ON PLAN OR AT LOCATIONS DIRECTED IN FIELD, COORDINATE WITH A/E PRIOR TO SYSTEM PROGRAMMING. (PROVIDE DIMMING CONTROL CONDUCTORS TO ALL EMERGENCY FIXTURES REGARDLESS IF NORMAL ROOM LIGHTS HAVE DIMMING OR NOT)



NOTE: LIGHTING CONTROL RISER SHOWS TYPICAL CONNECTIONS BETWEEN DEVICES AND LIGHT FIXTURES. REFER TO THE FLOOR PLANS FOR QUANTITIES OF DEVICES, LIGHT FIXTURES, AND ZONES.

TYPICAL LIGHTING CONTROL RISER

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Lexington - Louisville - Charleston
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Revisions: NUMBER	DATE	DESCRIPTION
1	2025.04.25	ADD 2

Issue Date: March 28, 2025

Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Electrical Details

Project No. 22133

E503

LIGHT FIXTURE SCHEDULE

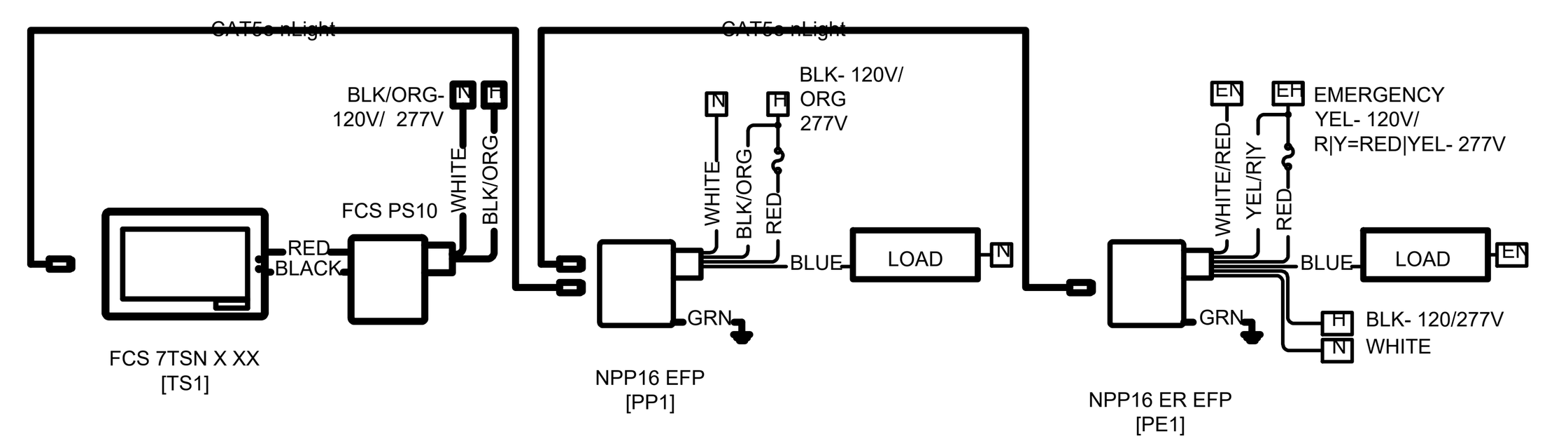
FIXTURE TYPE	DESCRIPTION	LAMPS						VOLTS	MOUNTING TYPE	MANUFACTURER - MODEL NUMBER	NOTES
		TYPE	CRI	DIMMING	COLOR TEMP	LUMENS	WATTS				
A	2'X4' LED RECESSED GRID TROFFER WITH CURVED LUMINOUS SURFACE,SUITABLE FOR DAMP LOCATIONS, L80 RATED FOR 60,000 HOURS, 5YEAR WARRANTY	LED	>80	0-10V, @ 1%	4000K	4000	33	MVOLT	RECESSED	LITHONIA ENVX2X4HRG METALUX 24 RTC; COLUMBIA LCAT24 SERIES;	
A1	2'X2' LED RECESSED GRID TROFFER WITH CURVED LUMINOUS SURFACE, SUITABLE FOR DAMP LOCATIONS L80 RATED FOR 60,000 HOURS, 5YEAR WARRANTY	LED	>80	0-10V, @ 1%	4000K	4000	36	MVOLT	RECESSED	LITHONIA ENVX2X2HRG METALUX EQUIVALENT; COLUMBIA EQUIVALENT;	
A2	2'X4' LED RECESSED GRID TROFFER WITH CURVED LUMINOUS SURFACE, SUITABLE FOR DAMP LOCATIONS, L80 RATED FOR 60,000 HOURS, 5YEAR WARRANTY	LED	>80	0-10V, @ 1%	4000K	72000	64	MVOLT	RECESSED	LITHONIA ENVX2X4HRG METALUX 24 RTC; COLUMBIA LCAT24 SERIES;	
B#	4" WIDE RECESSED LINEAR, '#' SPECIFIES THE LENGTH OF THE FIXTURE, POLYESTER POWDER COAT PAINTED FINISH, FLUSH LENS, RATED L80 FOR 65,000 HOURS, 5-YEAR WARRANTY	LED	>80	0-10V, @ 1%	4000K	800LMF	8WF	MVOLT	RECESSED	MARK SL4L4FLP	
C#	4" WIDE RECESSED LINEAR, '#' SPECIFIES THE LENGTH OF THE FIXTURE, POLYESTER POWDER COAT PAINTED FINISH, FLUSH LENS, RATED L80 FOR 65,000 HOURS, 5-YEAR WARRANTY	LED	>80	0-10V, @ 1%	4000K	600LMF	6WF	MVOLT	RECESSED	MARK SL4L4FLP	
D4	4' LONG 4" WIDE SUSPENDED LINEAR FITXTURE, AIRCRAFT CABLING, 5-YEAR WARRANTY	LED	>80	0-10V, @ 1%	4000K	3000	26	MVOLT	SUSPENDED	LITHONIA LL4	3
D8	8' LONG 4" WIDE SUSPENDED LINEAR FITXTURE, AIRCRAFT CABLING, 5-YEAR WARRANTY	LED	>80	0-10V, @ 1%	4000K	6000	50	MVOLT	SUSPENDED	LITHONIA LL8	3
E1	EDGE-LIT SINGLE FACE EXIT SIGN WITH ULTRASONICALLY WELDED INJECTION-MOLDED ACRYLIC WEDGE SHAPE PANELS, GREEN LETTERING RECESS MOUNT UNIVERSAL ROUGH-IN 20 GAUGE DIE-FORMED GALVANIZED STEEL SECTION INCLUDING T-BAR MOUNTING HANGERS AND CLIPS, EXTRUDED ALUMINUM HOUSING TRIM, BRUSHED ALUMINUM HOUSING FINISH, PLUG-IN POWER CONNECTORS, THREE YEAR UNCONDITIONAL WARRANTY, LED LAMP ASSEMBLY, SOLID-STATE ELECTRONICS. PANEL LETTERS SHALL BE MOLDED AND TEXTURED 6" HIGH WITH 3/4" STROKE.	LED	>80	NA	NA	NA	3	MVOLT	REFER TO DRAWINGS	LITHONIA LRP 1 RC 120/277 SURELITES EQUAL DUALITE EQUAL	2
E2	EDGE-LIT DOUBLE FACE EXIT SIGN WITH ULTRASONICALLY WELDED INJECTION-MOLDED ACRYLIC WEDGE SHAPE PANELS, GREEN LETTERING RECESS MOUNT UNIVERSAL ROUGH-IN 20 GAUGE DIE-FORMED GALVANIZED STEEL SECTION INCLUDING T-BAR MOUNTING HANGERS AND CLIPS, EXTRUDED ALUMINUM HOUSING TRIM, BRUSHED ALUMINUM HOUSING FINISH, PLUG-IN POWER CONNECTORS, THREE YEAR UNCONDITIONAL WARRANTY, LED LAMP ASSEMBLY, SOLID-STATE ELECTRONICS. PANEL LETTERS SHALL BE MOLDED AND TEXTURED 6" HIGH WITH 3/4" STROKE.	LED	>80	NA	NA	NA	3	MVOLT	REFER TO DRAWINGS	LITHONIA LRP 2 RMR 120/277 SURELITES EQUAL DUALITE EQUAL	2
E3	SINGLE FACE EXIT SIGN SUITABLE FOR WET LOCATIONS AND HIGH ABUSE APPLICATIONS WITH UNIVERSAL MOUNTING KIT, LOW-PROFILE CAST ALUMINUM HOUSING, UV-STABLE POLYCARBONATE HOUSING SECURED WITH TORX T20 TAMPER-RESISTANT SCREWS WITH CENTER PIN, FIVE YEAR WARRANTY	LED	>80	NA	NA	NA	2.3	UNV	REFER TO DRAWINGS	LITHONIA LV S 1 120/277 UM SURELITES EQUAL DUALITE EQUAL	2
F	12" TALL, 2 3/4" WIDE, 6' LONG SUSPENDED LINEAR FIXTURE, '#' SPECIFIES THE LENGTH OF THE FIXTURE, FLUSH SPOTLESS DIRECT LENS, BATWING INDIRECT LENS, ACOUSTIC FABRIC AROUOND FIXTURE	LED	>80	0-10V, @ 1%	4000K	1040LMF	11WF	MVOLT	SUSPENDED	AXIS SCIDSZ-640--400	5
G	6" ROUND RECESSED DOWNLIGHT, OPEN TRIM, L70 / 60,000 HOURS, GALZANIZED STEEL MOUNTING,	LED	>80	0-10V, @ 1%	4000K	1500	17.5	MVOLT	RECESSED	LITHONIA LDN6	
H	2" WIDE 6' LONG CYLINDRICAL SURFACE MOUNTED FIXTURE,	LED	>80	0-10V, @ 1%	4000K	4511	42	MVOLT	SURFACE	SPI SIW12169	
I	4" DIAMETER 4' LONG CYLINDRICAL PENDANT LIGHTING, L70 / 50,000	LED	>80	0-10V, @ 1%	4000K	5862	53	MVOLT	PENDANT	SPI SIP12125	
J	2" WIDE 4' LONG SUSPENDED FIXTURE, FLUSH LENS, 5 YEAR WARRENTY	LED	>80	0-10V, @ 1%	4000K	6000	52.3	MVOLT	SUSPENDED	MARK S2PD	3
K	2" WIDE 8' LONG SUSPENDED FIXTURE, FLUSH LENS, 5 YEAR WARRENTY	LED	>80	0-10V, @ 1%	4000K	9600	78.8	MVOLT	SUSPENDED	MARK S2PD	3
L	13" DIAMETER SURFACE MOUNTED, NONCONDUCTIVE FIXTURE, L70 / 50,000 HOURS	LED	>80	0-10V, @ 1%	4000K	1800	20.2	MVOLT	SURFACE	JUNO JSF	
M4	6" WIDE 4' LONG SURFACE MOUNTED LIGHT FIXTURE, L80 / 60,000 HOURS, 5 YEAR WARRANTY	LED	>80	0-10V, @ 1%	4000K	6000	49.3	MVOLT	SURFACE	LITHONIA BLWP4	
M8	6" WIDE 8' LONG SURFACE MOUNTED LIGHT FIXTURE, L80 / 60,000 HOURS, 5 YEAR WARRANTY	LED	>80	0-10V, @ 1%	4000K	10000	81.4	MVOLT	SURFACE	LITHONIA BLWP8	
N	2" WIDE, 23.5" LONG CYLINDRICAL VANITY	LED	>80	0-10V, @ 1%	4000K	1000	14	MVOLT	WALL	VISA CV4140 VOILA	4
O	6" SQUARE LED DOWNLIGHT, LM-70 / 50,000,	LED	>80	0-10V, @ 1%	4000K	550	7	MVOLT	FLUSH MOUNT	TILT LFMSS40W	
OL1	8' LONG 5" WIDE LINEAR LIGHT FIXTURE	LED	>81	0-10V, @ 1%	4000K	6000	49	MVOLT	SURFACE	LITHONIA CSVT L96	
P1	D-SERIES SIZE 1 AREA LUMINARE P6 PERFORMANCE PACKAGE 4000K CCT 80 CRI TYPE 3 MEDIUM, SINGLE LAMP MOUNTED ON THE POLE	LED	>80	NA	4000K	18845	165.25	MVOLT	POLE	LITHONIA DSX1 LED P6 40K 80CRI T3M	6
P2	D-SERIES SIZE 1 AREA LUMINARE P6 PERFORMANCE PACKAGE 4000K CCT 80 CRI TYPE 3 MEDIUM, TWO LAMPS MOUNTED ON THE POLE	LED	>80	NA	4000K	37,690	330.5	MVOLT	POLE	LITHONIA DSX1 LED P6 40K 80CRI T3M	6
P3	D-SERIES SIZE 1 AREA LUMINARE P6 PERFORMANCE PACKAGE 4000K CCT 80 CRI TYPE 4 MEDIUM, SINGLE LAMP MOUNTED ON THE POLE	LED	>80	NA	4000K	19126	165.25	MVOLT	POLE	LITHONIA DSX1 LED P6 40K 80CRI T4M	6
P4	RADEAN POST-TOP WITH P4 4000K ASYMMETRIC DISTRIBUTION	LED	>80	NA	4000K	10995	85.68	MVOLT	POLE	LITHONIA RADPT P4 40K ASY	6
Q	2' LONG EXTERIOR WALL SCONCE, UNSHIELDED LIGHT DISTRIBUTION, VERTICALLY INSTALLED, BLACK POWDER COAT FINISH, IP RATING OF 65, L70 OF 60000 HOURS	LED	>80	0-10V, @ 1%	4000K	1946	19.6	MVOLT	WALL	BEGA B24591 BLK	
R1	1.5' LONG UNDER CABINET LIGHT FIXTURE, EXTRUDED MERINE GRADE ALUMIMUM HOUSING, 5 YEAR WARRANTY	LED	>80	0-10V, @ 1%	4000K	1100LMF	11WF	120	SURFACE	STRATALUME AUCLED	11
R2	2' LONG UNDER CABINET LIGHT FIXTURE, EXTRUDED MERINE GRADE ALUMIMUM HOUSING, 5 YEAR WARRANTY	LED	>80	0-10V, @ 1%	4000K	1100LMF	11WF	120	SURFACE	STRATALUME AUCLED	11
R3	3' LONG UNDER CABINET LIGHT FIXTURE, EXTRUDED MERINE GRADE ALUMIMUM HOUSING, 5 YEAR WARRANTY	LED	>80	0-10V, @ 1%	4000K	1100LMF	11WF	120	SURFACE	STRATALUME AUCLED	11
S#	1.5" WIDE SUSPENDED LINEAR FIXTURE, '#' SPECIFIES THE LENGTH OF THE FIXTURE, 5 YEAR WARRANTY	LED	>80	0-10V, @ 1%	4000K	587LMF	4.75WF	MVOLT	SUSPENDED	FLUXWERX VU1AA40	3
T	2'X2' SQUARE SHAPE PENDANT LIGHT FIXTURE, ACOUSTIC FABRICINCORPORATED IN THE FIXTURE	LED	>80	0-10V, @ 1%	4000K	3200	32	MVOLT	PENDANT	AXIS SSZSF SQ90 DSO 400	3
U	30.8" MARINE GRADE WALL MOUTED LED, EXTRUDED UV STABILIZED OPAL POLYCARBONATE, L70 OF 130,000 HOURS,CSA LISTING FOR WET LOCATIONS, 10 YEAR WARRANTY	LED	>80	0-10V	4000K	2006	20	277V	WALL	BLD 36IN MIN10 2DRV 20 40K 277 DP BLK SPITZER EQUAL FOCALPOINT EQUAL	
V	RECESSED WALL LUMINARE WITH ASYMETRIC FORWARD THROW DISTRIBUTION. BLK FINISH	LED	>80	N/A	4000K	557	8.7	MVOLT	WALL	BEGA B24591 BLK	
W1	IBG LED HIGH BAY, 12 INCH, 15000 LUMENS, HIGH EFFICEINCY, ACRYLIC FROSTED LENS, GENERAL DISTRIBUTION	LED	>80	0-10V	4000K	15000	86.2	MVOLT	SUSPENDED	LIHTONIA IBG 15000 HEF	3
W2	IBG LED HIGH BAY, 12 INCH, 12000 LUMENS, HIGH EFFICEINCY, ACRYLIC FROSTED LENS, GENERAL DISTRIBUTION	LED	>80	0-10V	4000K	12000	68.5	MVOLT	SUSPENDED	LITHONIA IBG 12000 HEF	3
X	6" DIAMETER CANLESS DOWNLIGHT, EDGE LIT LED, MATTE WHITE TRIM, SWITABLE WHITE WITH 5 TEMPERATURE CHOICES, WET LOCATION LISTED, 5 YEAR WARRANTY, L70 FOR 50,000 HOURS	LED	>90	0-10V, @ 10%	4000K	970	13	MVOLT	RECCESSED	LITHONIA WF6	
Y	SURFACE MOUNTED 8.75" X 48" ARCHITECTURAL LED WITH COLD ROLLED STEEL HOUSING, POLYESTER POWDER COAT FINSH. EXTRUDED UV STABILIZED POLUCARBONATE LENS WITH INTEGRAL PRISMS, DIE CAST ALUMINUM LENS CLAMPS, SCULPTED END CAPS, AND UL WET LOCATION LISTING.	LED	>80	0-10V	4000K	10214	115	MVOLT	SURFACE	LUMINAIRE VPF8 4 100WHP 40K CP WHT WET FAILSAFE EQUAL KENALL EQUAL	
Z	2' LOW-PROFILE ENCLOSED AND GASKETED INDUSTRIAL STRIP, ACRYLIC LENS, MEDIUM DISTRIBUTION, SURFACE MOUNT BRACKET.	LED	>80	0-10V, @ 10%	4000K	3000	20	MVOLT	WALL	LITHONIA FEM L24 IMACD MD 40K EQUAL EQUAL	
AA	2' FLUSH SURFACE MOUNTED LIGHT, POLYMER LENS, WIDE WALL GLAZE DISTRIBUTION.	LED	>80	0-10V	3500K	5039	42	MVOLT	FLUSH SURFACE	PRUDENTIAL BPRO2-TMW-WGZ-LP-SC-X1-DM01 EQUAL EQUAL	

NOTES:

1 ARCHITECT TO VERIFY COLOR/FINISH
2 SINGLE OR DOUBLE FACE, DIRECTIONAL ARROWS AND MOUNTING CONFIGURATION AS INDICATED ON DRAWINGS; MOUNT CENTERED OVER DOOR (WHERE APPLICABLE);
3 AIRCRAFT CABLE SUSPENSION, MOUNTING HEIGHT VARIES, FIELD VERIFY HEIGHTS WITH A/E
4 CENTERED 6" ABOVE MIRROR(S), SEE ARCHITECTURAL ELEVATIONS
5 LENGTH AND CONFIGURATION AS INDICATED ON DRAWINGS; FIXTURE SHALL BE MOUNTED END-TO-END IN CONTINOUS FASHION, CORNERS (WHERE APPLICABLE) SHALL BE ILLUMINATED
6 PROVIDE WITH CONCRETE BASE, SEE POLE DETAIL 1 (SHEET 501)
7 PROVIDE POLE WITH ADDITIONAL HANDHOLE AT 15' AND THREADED 1/2" COUPLING FOR FUTURE CAMERA MOUNT AS INDICATED ON PLAN, CONTRACTOR TO PROVIDE FIELD INSTALLED RACEWAY FOR LV WIRING SEPERATION
8 INSTALL INGRADE FIXTURE WITH POSITIVE DRAINAGE, INSTALL FLUSH EITH FINISHED GRADE IN ACCORDANCE WITH MFG RECOMMENDATIONS
9 INSTALL RECESSED STEP LIGHT FLUSH IN RAISED PLANTER WALL, COORDINATE INSTALLATION ROUGH-IN WITH WALL CONSTRUCTION
10 FIXTURE SURFACE MOUNTED TO STOREFRONT MULLON, COORDINATE WIRING/RACEWAY ROUGH-IN WITH STOREFRONT FRAMING INSTALLATION FOR CONCEALMENT
11 PROVIDE WITH DIRECT WIRE JUNCTION BOX FOR CONCEALED FEED WIRING CONNECTION(S), CONNECTORS/JUMPER CABLES AND ALL ACCESSORIES NECESSARY FOR COMPLETE INSTALLATION. MULTIPLE FIXTURE MODULES SHALL BE EVENLY SPACED ALONG FULL LENGTH OF CABINET. FIELD COORDINATE WITH CABINET CONFIGURATION AND CONSTRUCTION PRIOR TH ROUGH-IN.
12 COORDINATE OVERALL RUN LENGTHS WITH LAYOUT SHOWN ON PLAN WITH EMERGENCY CIRCUIT AND ZONE CONTROL AS INDICATED

GENERAL:

1 FOR ALL PENDANT LIGHT FIXTURES, REFER TO DRAWINGS FOR SUSPENSION HEIGHT. CONTRACTOR HEIGHT SHALL BE RESPONSIBLE FOR ALL CUTTING/MODIFICATIONS TO STEMS, RODSM OR OTHER SUPPORTS AS NECESSARY TO ACHIEVE MOUNTING REQUIREMENTS.
2 ALL FIXTURES SHALL HAVE A MINIMUM 5 YEAR WARRANTY, RATED L70/50,000HR LIFE AND UL LISTING UNLESS OTHERWISE NOTED
3 SEE SPECIFICATIONS FOR EQUIVALENT FIXTURE AND SUBSTITUTION REQUIREMENTS. BASIS OF DESIGN FIXTURES ARE DESCRIBED IN THE SCHEDULE WITH CORRESPONDING MODEL CATALOG NUMBERS; EQUIVALENT MANUFACTURERS LISTED IN THE SCHEDULE WITHOUT CATALOG NUMBERS ARE RESPONSIBLE FOR MEETING THE QUALITY STANDARDS AND PERFORMANCE ESTABLISHED BY THE BASIS OF DESIGN PRODUCT.



NLIGHT FACADE

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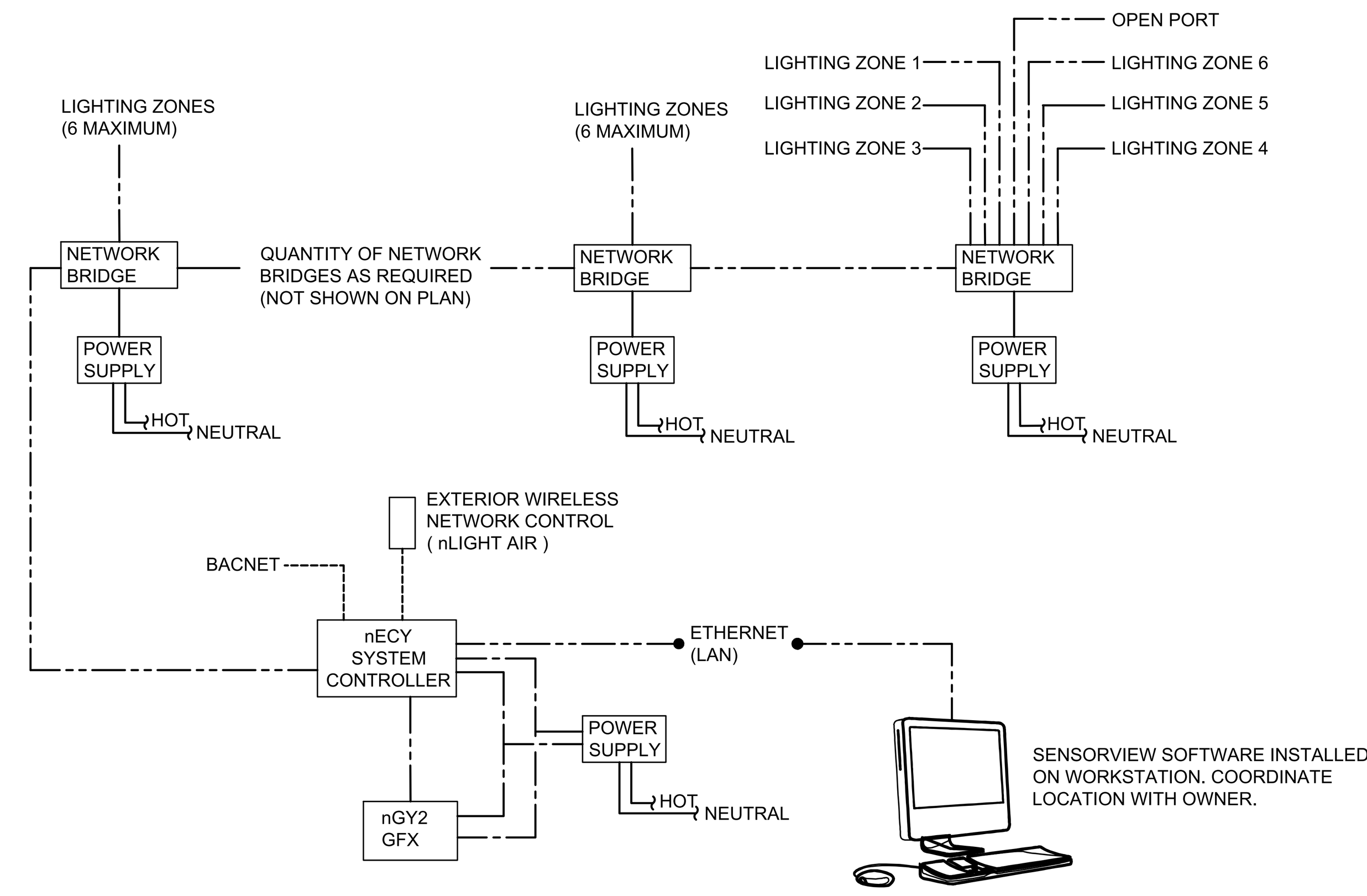

LIGHTING CONTROL SYSTEM NETWORK

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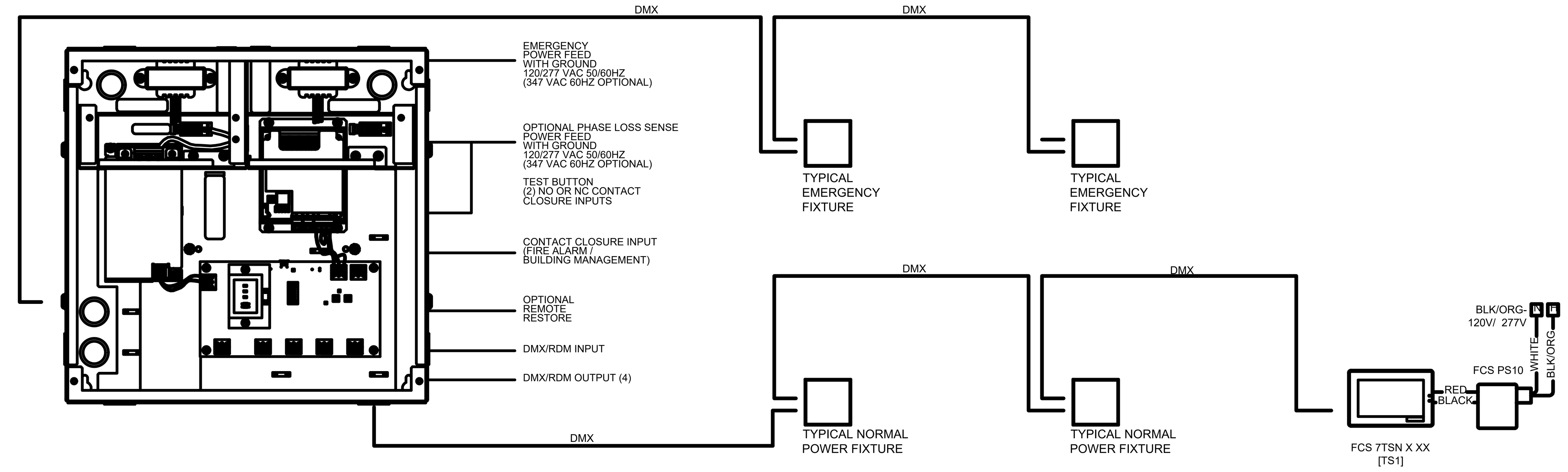

DMX CONTROL

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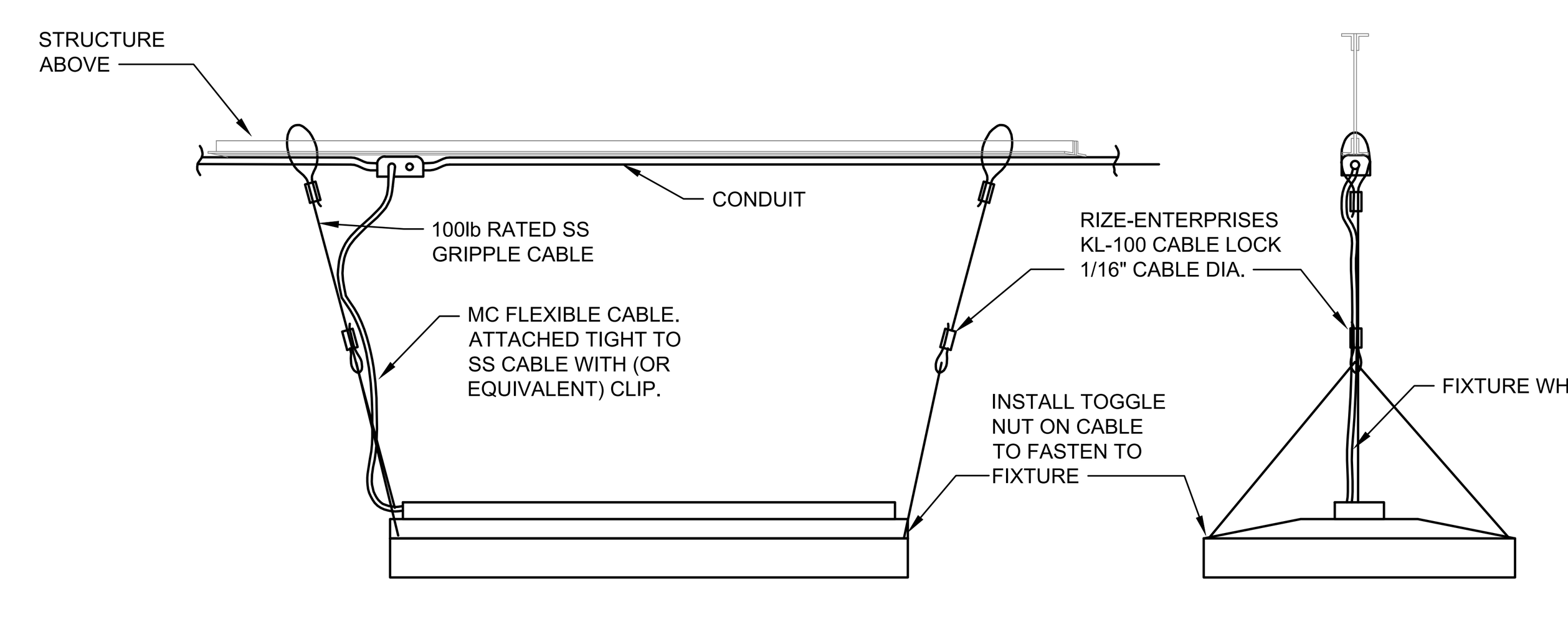
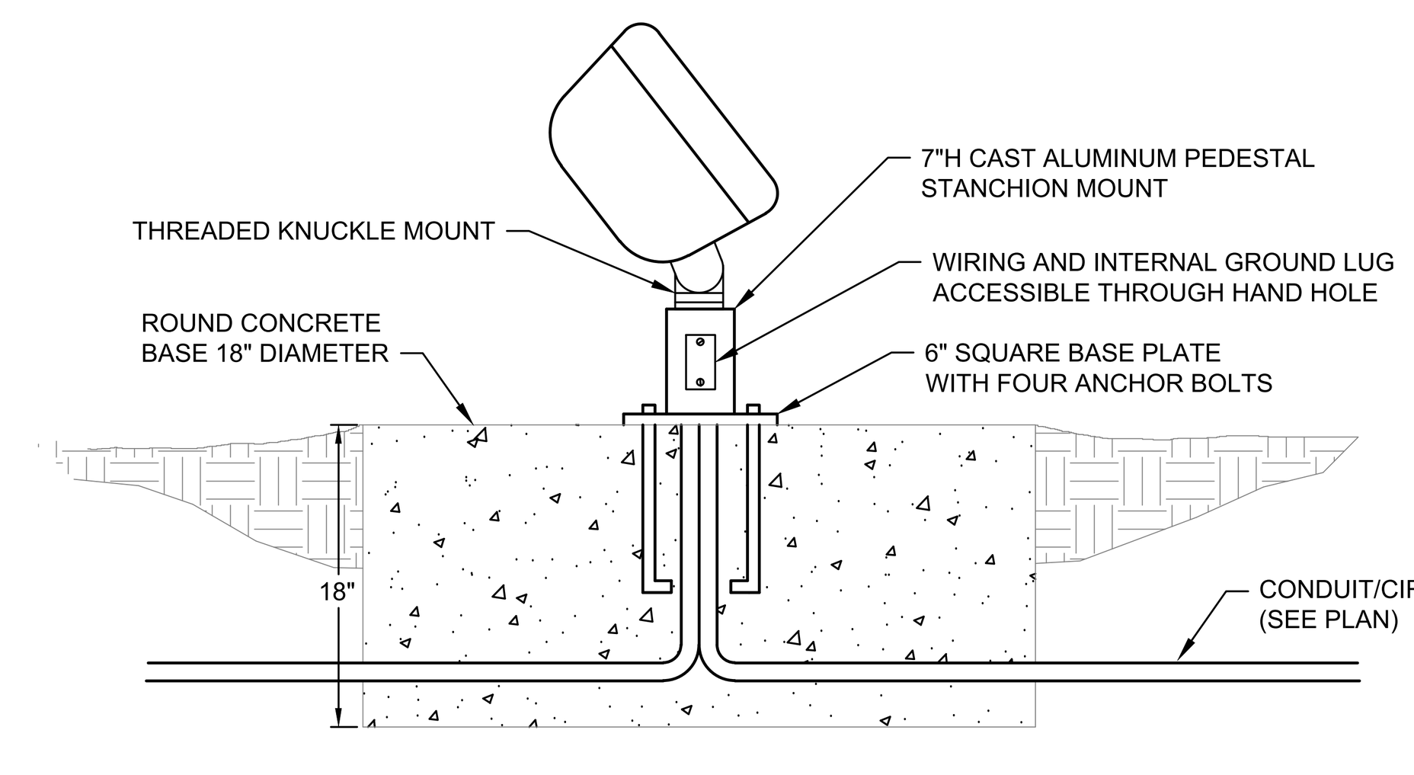


SUSPENDED LIGHT FIXTURE MOUNTING DETAIL

NOT TO SCALE



FLOODLIGHT MOUNTING DETAIL

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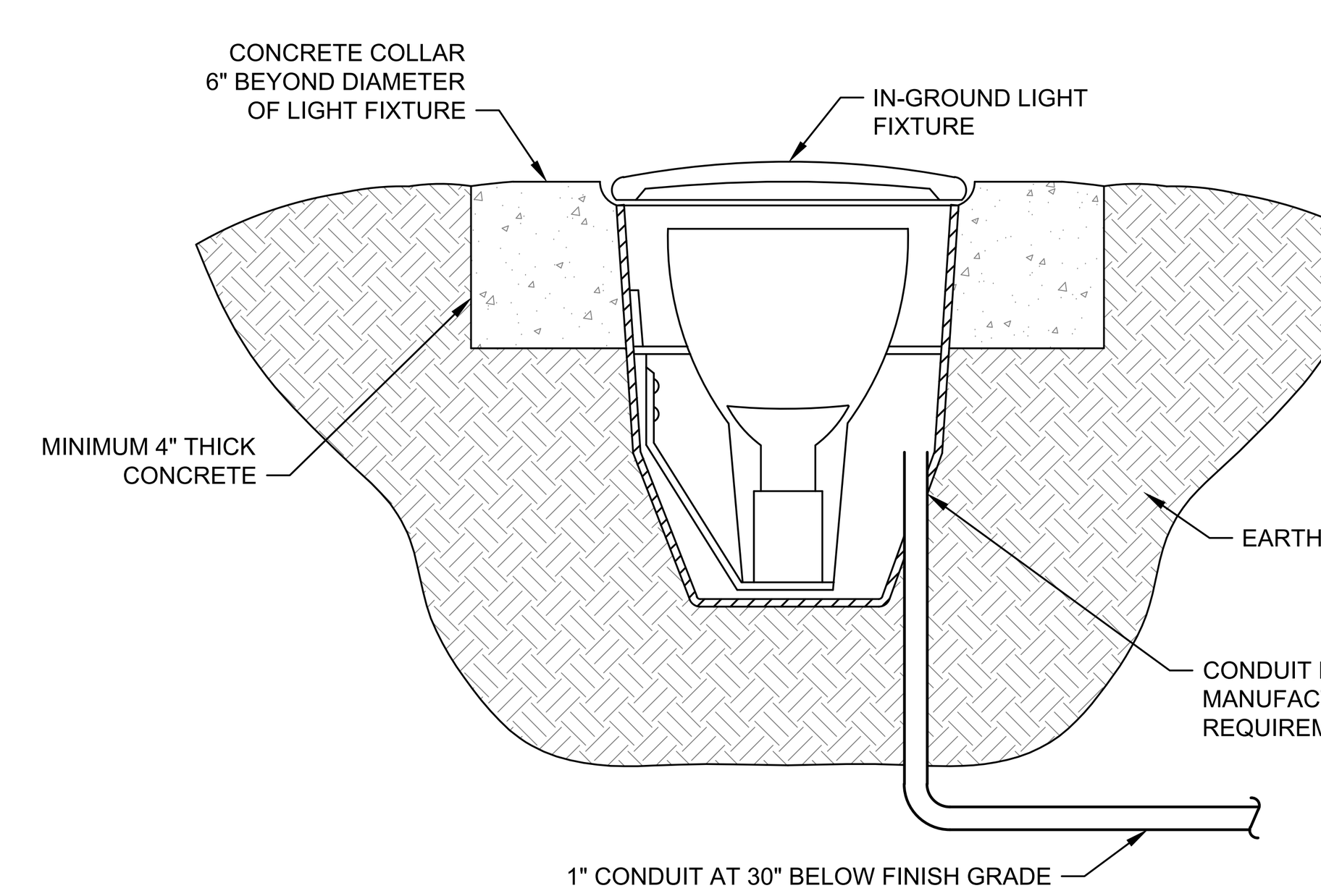

IN-GROUND LIGHT FIXTURE INSTALLATION

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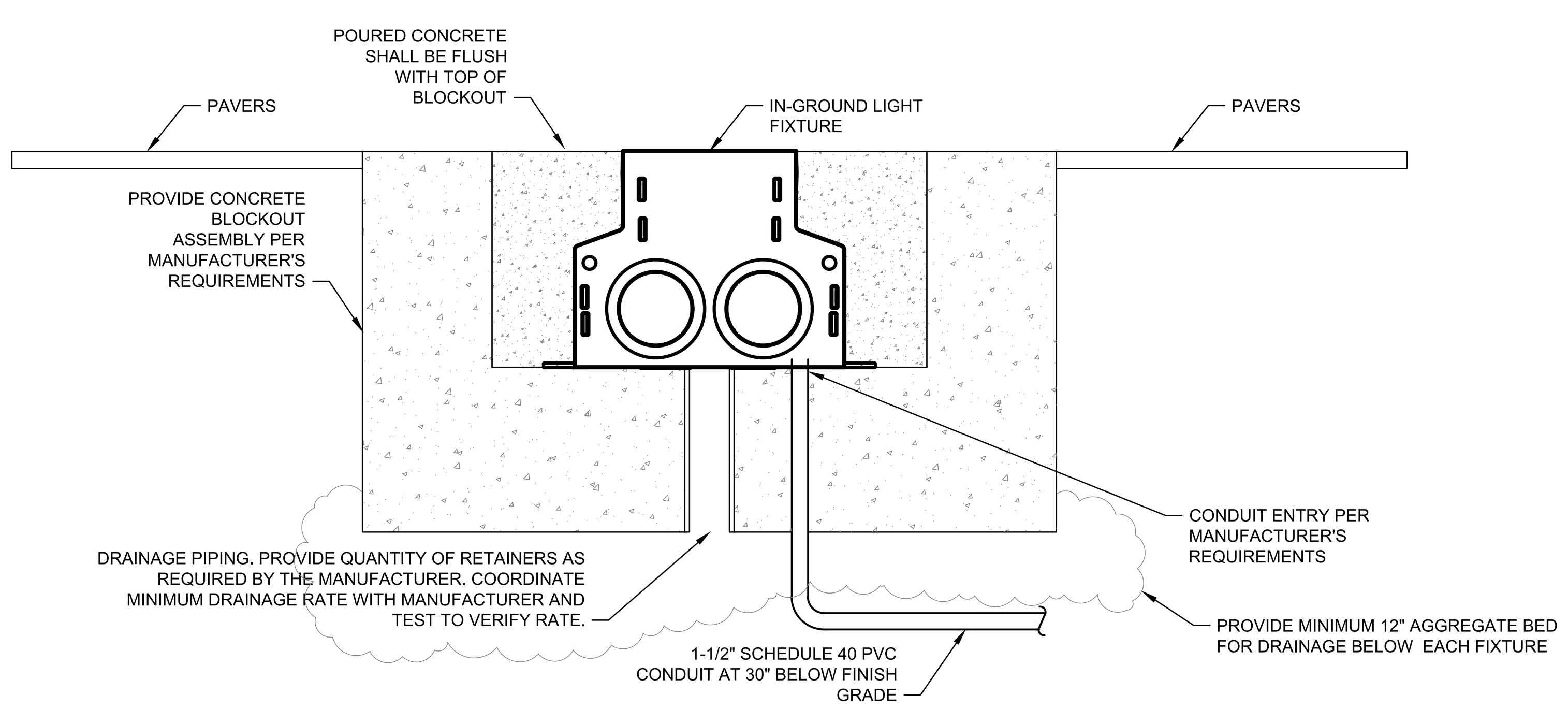

IN-GROUND LIGHT FIXTURE INSTALLATION

NOT TO SCALE

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Revisions:	NUMBER	DATE	DESCRIPTION
	1	2025.04.25	ADD 2

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Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

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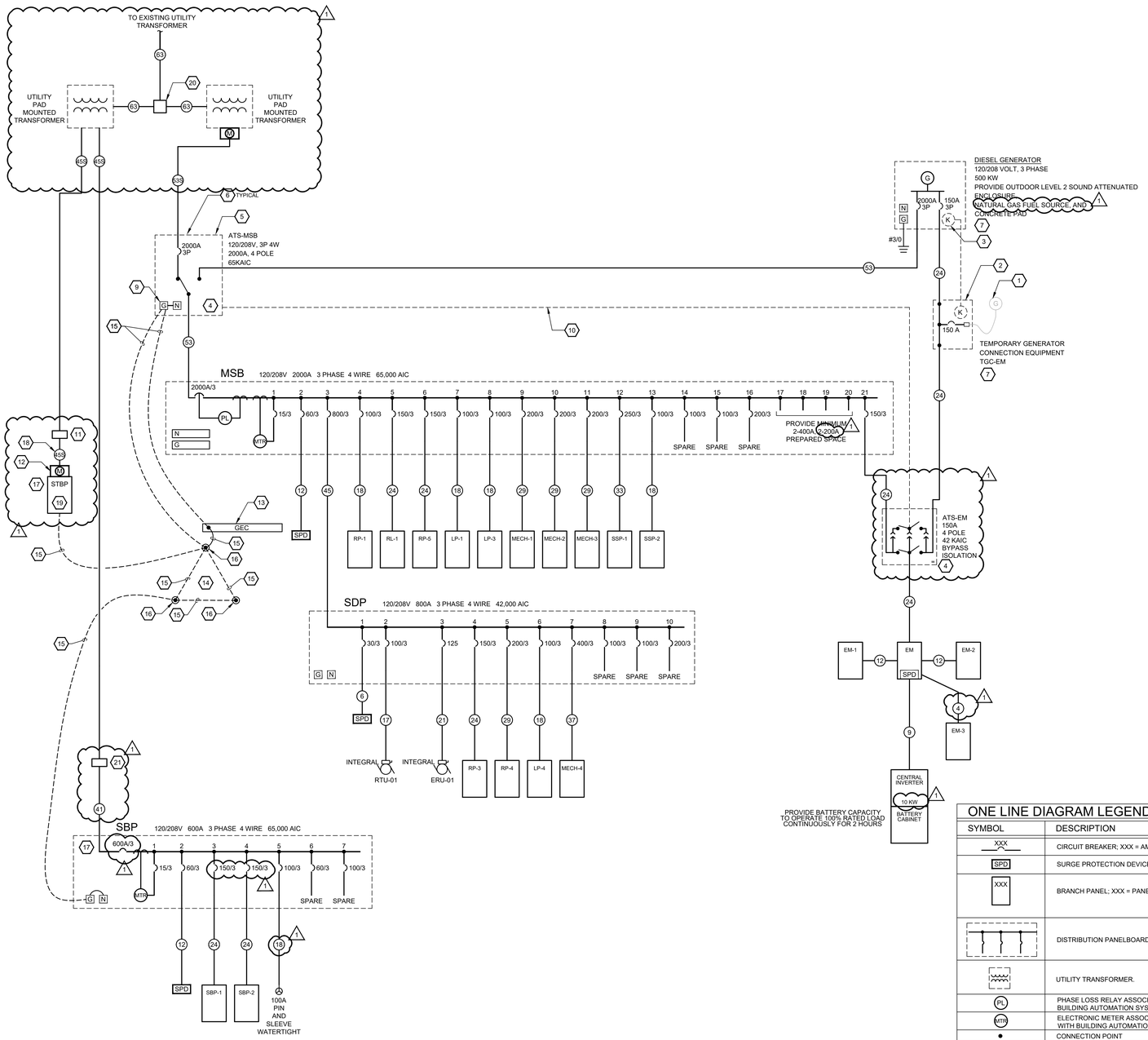
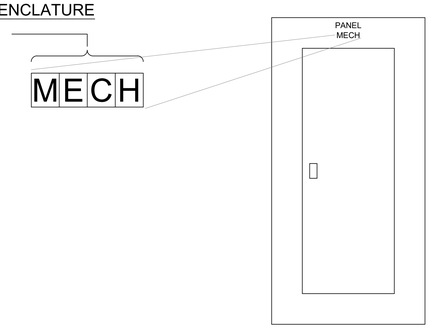
E504



ELECTRICAL PANEL NOMENCLATURE

DISTRIBUTION DESIGNATION:
- STBP - STORAGE BUILDING PANEL
- LP - LIGHTING PANEL
- RP - RECEPTACLE PANEL
- MECH - MECHANICAL EQUIPMENT PANEL
- EM - EMERGENCY PANEL
- SBP - SUPPORT BUILDING PANEL
- SSP - STORM SHELTER PANEL
- RL - RECEPTACLE AND LIGHTING PANEL



ONE LINE DIAGRAM LEGEND

SYMBOL	DESCRIPTION
XXX	CIRCUIT BREAKER; XXX = AMP RATING
SPD	SURGE PROTECTION DEVICE
XXX	BRANCH PANEL; XXX = PANEL NAME
	DISTRIBUTION PANELBOARD (I-LINE STYLE)
	UTILITY TRANSFORMER.
PL	PHASE LOSS RELAY ASSOCIATED WITH CIRCUIT BREAKER. INTERFACE WITH BUILDING AUTOMATION SYSTEM FOR STATUS.
MTR	ELECTRONIC METER ASSOCIATED WITH CIRCUIT BREAKER. INTERFACE METER WITH BUILDING AUTOMATION SYSTEM.
	CONNECTION POINT
N	NEUTRAL BUSS WITHIN EQUIPMENT
G	GROUND BUSS WITHIN EQUIPMENT
GEC	SINGLE POINT GROUND BAR
	GROUND ROD. 10' LONG, 3/4" DIAMETER, COPPER CLAD.
#	FEEDER SIZE IDENTIFIER. # INDICATED FEEDER IDENTIFICATION, REFER TO ONE-LINE DIAGRAM FEEDER SCHEDULE FOR FEEDER SIZING.
	AUTOMATIC TRANSFER SWITCH WITH BYPASS ISOLATION. RATINGS AS INDICATED WHERE EQUIPMENT IS SHOWN. INTERFACE AUTOMATIC TRANSFER SWITCH WITH BUILDING AUTOMATION SYSTEM.
XXXA 2xP	AUTOMATIC TRANSFER SWITCH WITH OVERCURRENT PROTECTION DEVICE ON UTILITY POWER SOURCE. RATINGS AS INDICATED WHERE EQUIPMENT IS SHOWN. INTERFACE AUTOMATIC TRANSFER SWITCH WITH BUILDING AUTOMATION SYSTEM.
XXX A	TEMPORARY GENERATOR CONNECTION / DOCKING STATION. OVERCURRENT PROTECTION AS INDICATED.
G	EMERGENCY POWER GENERATOR WITH DUAL OUTPUT CIRCUIT BREAKERS. RATINGS AS INDICATED WHERE EQUIPMENT IS SHOWN.
	DISCONNECT SWITCH (SIZE/FUSING/POLES/NEMA - OPTIONAL)
	MOTOR
	EQUIPMENT AS IDENTIFIED WHERE SHOWN.
	SPECIAL RECEPTACLE AS IDENTIFIED.

ELECTRICAL ONE-LINE DIAGRAM FEEDER SCHEDULE

TAG	DESCRIPTION (COPPER FEEDER REQUIREMENTS)
1	15 OR 20 AMP 2-WIRE CIRCUIT (2#12, 1#12G, 3/4"C)
2	15 OR 20 AMP 3-WIRE CIRCUIT (3#12, 1#12G, 3/4"C)
3	15 OR 20 AMP 4-WIRE CIRCUIT (4#12, 1#12G, 3/4"C)
4	30 AMP 2-WIRE CIRCUIT (2#10, 1#10G, 3/4"C)
5	30 AMP 3-WIRE CIRCUIT (3#10, 1#10G, 3/4"C)
6	30 AMP 4-WIRE CIRCUIT (4#10, 1#10G, 3/4"C)
7	40 OR 50 AMP 2-WIRE CIRCUIT (2#8, 1#10G, 3/4"C)
8	40 OR 50 AMP 3-WIRE CIRCUIT (3#8, 1#10G, 3/4"C)
9	40 OR 50 AMP 4-WIRE CIRCUIT (4#8, 1#10G, 1"C)
10	60 AMP 2-WIRE CIRCUIT (2#6, 1#10G, 3/4"C)
11	60 AMP 3-WIRE CIRCUIT (3#6, 1#10G, 1"C)
12	60 AMP 4-WIRE CIRCUIT (4#6, 1#10G, 1"C)
13	70 OR 80 AMP 2-WIRE CIRCUIT (2#4, 1#8G, 1"C)
14	70 OR 80 AMP 3-WIRE CIRCUIT (3#4, 1#8G, 1-1/4"C)
15	70 OR 80 AMP 4-WIRE CIRCUIT (4#4, 1#8G, 1-1/4"C)
16	90 OR 100 AMP 2-WIRE CIRCUIT (2#1, 1#8G, 1"C)
17	90 OR 100 AMP 3-WIRE CIRCUIT (3#1 1#8G, 1-1/4"C)
18	90 OR 100 AMP 4-WIRE CIRCUIT (4#1, 1#8G, 1-1/4"C)
19	110 AMP 3-WIRE CIRCUIT (3#2, 1#6G, 1-1/4"C)
20	110 AMP 4-WIRE CIRCUIT (4#2, 1#6G, 1-1/2"C)
21	125 AMP 3-WIRE CIRCUIT (3#1, 1#6G, 1-1/4"C)
22	125 AMP 4-WIRE CIRCUIT (4#1, 1#6G, 1-1/2"C)
23	150 AMP 3-WIRE CIRCUIT (3#1/0, 1#6G, 1-1/4"C)
24	150 AMP 4-WIRE CIRCUIT (4#1/0, 1#6G, 2"C)
25	175 AMP 3-WIRE CIRCUIT (3#2/0, 1#6G, 2"C)
26	175 AMP 4-WIRE CIRCUIT (4#2/0, 1#6G, 2"C)
27	200 AMP 2-WIRE CIRCUIT (2#3/0, 1#6G, 2"C)
28	200 AMP 3-WIRE CIRCUIT (3#3/0, 1#6G, 2"C)
29	200 AMP 4-WIRE CIRCUIT (4#3/0, 1#6G, 2"C)
30	225 AMP 3-WIRE CIRCUIT (3#4/0, 1#4G, 2-1/2"C)
31	225 AMP 4-WIRE CIRCUIT (4#4/0, 1#4G, 2-1/2"C)
32	250 AMP 3-WIRE CIRCUIT (3#250, 1#4G, 2-1/2"C)
33	250 AMP 4-WIRE CIRCUIT (4#250, 1#4G, 2-1/2"C)
34	300 AMP 3-WIRE CIRCUIT (3#350, 1#4G, 3"C)
35	300 AMP 4-WIRE CIRCUIT (4#350, 1#4G, 3"C)
36	400 AMP 3-WIRE CIRCUIT (3#500, 1#3G, 3-1/2"C)
37	400 AMP 4-WIRE CIRCUIT (4#500, 1#3G, 3-1/2"C)
37S	400 AMP 4-WIRE SERVICE (4#500, 3-1/2"C)
38	500 AMP 3-WIRE CIRCUIT (2 SETS[3#250, 1#2G, 2-1/2"C])
39	500 AMP 4-WIRE CIRCUIT (2 SETS[4#250, 1#2G, 2-1/2"C])
40	600 AMP 3-WIRE CIRCUIT (2 SETS[3#350, 1#1G, 3"C])
41	600 AMP 4-WIRE CIRCUIT (2 SETS[4#350, 1#1G, 3"C])
42	700 AMP 3-WIRE CIRCUIT (2 SETS[3#500, 1#1/0G, 3-1/2"C])
43	700 AMP 4-WIRE CIRCUIT (2 SETS[4#500, 1#1/0G, 3-1/2"C])
44	800 AMP 3-WIRE CIRCUIT (2 SETS[3#500, 1#1/0G, 3-1/2"C])
45	800 AMP 4-WIRE CIRCUIT (2 SETS[4#500, 1#1/0G, 3-1/2"C])
45S	ONE (1) 3" EMPTY CONDUITS WITH PULL STRINGS
46	1000 AMP 3-WIRE CIRCUIT (3 SETS[3#500, 1#2/0G, 3-1/2"C])
47	1000 AMP 4-WIRE CIRCUIT (3 SETS[4#500, 1#2/0G, 3-1/2"C])
48	1200 AMP 3-WIRE CIRCUIT (4 SETS[3#350, 1#3/0G, 3-1/2"C])
49	1200 AMP 4-WIRE CIRCUIT (4 SETS[4#350, 3-1/2"C])
50	1600 AMP 3-WIRE CIRCUIT (5 SETS[3#500, 1#4/0G, 3-1/2"C])
51	1600 AMP 4-WIRE CIRCUIT (5 SETS[4#500, 1#4/0G, 3-1/2"C])
52	2000 AMP 3-WIRE CIRCUIT (6 SETS[3#500, 1#350G, 3-1/2"C])
53	2000 AMP 4-WIRE CIRCUIT (6 SETS[4#500, 1#350G, 3-1/2"C])
53S	2000 AMP 4-WIRE SERVICE (6 SETS[4#500, 3-1/2"C])
54	2500 AMP 3-WIRE CIRCUIT (7 SETS[3#500, 1#350G, 3-1/2"C])
55	2500 AMP 4-WIRE CIRCUIT (7 SETS[4#500, 1#350G, 3-1/2"C])
56	3000 AMP 3-WIRE CIRCUIT (8 SETS[3#500, 1#400G, 3-1/2"C])
57	3000 AMP 4-WIRE CIRCUIT (8 SETS[4#500, 3-1/2"C])
58	3500 AMP 3-WIRE CIRCUIT (10 SETS[3#500, 1#500G, 3-1/2"C])
59	3500 AMP 4-WIRE CIRCUIT (10 SETS[4#500, 1#500G, 3-1/2"C])
60	4000 AMP 3-WIRE CIRCUIT (11 SETS[3#500, 1#500G, 3-1/2"C])
61	4000 AMP 4-WIRE CIRCUIT (11 SETS[4#500, 3-1/2"C])
62	1-1/2" EMPTY CONDUIT WITH PULL STRING
63	ONE (1) 4" EMPTY CONDUITS WITH PULL STRINGS
64	PROVIDE WIRING IN CONDUIT PER MANUFACTURER'S REQUIREMENTS
65	SDP:800 AMP 4-WIRE CIRCUIT (3 SETS[4#350, 1#3/0G, 3-1/2"C])

RISER DIAGRAM FEEDER SCHEDULE NOTES:
- ALL CONDUCTORS SHALL BE COPPER.

SHEET KEYNOTES:

1. TEMPORARY GENERATOR SHOWN FOR REFERENCE ONLY; NOT INCLUDED IN PROJECT PROCUREMENT.
2. PROVIDE GENERATOR DOCKING STATION WITH INTEGRAL KIRK KEY INTERLOCKED CIRCUIT BREAKER. TRYSTAR SINGLE BREAKER DOCKING STATION WITH KIRK KEY BREAKER OR APPROVED EQUAL. SEE SPECIFICATION SECTION 26 32 13 FOR MORE DETAILS. PROVIDE AUTOMATIC START SIGNAL CIRCUITING FROM ATS TO GENERATOR DOCKING STATION.
3. PROVIDE GENERATOR CIRCUIT BREAKER WITH KIRK KEY INTERLOCK. COORDINATE KEYS/LOCKS WITH GENERATOR DOCKING STATIONS AS SHOWN.
4. WCR RATING OF ATS TO BE VALID FROM THE NORMAL SUPPLY (MSB) AND EMERGENCY GENERATOR SUPPLY. CONTRACTOR TO COORDINATE BETWEEN SPECIFICATION SECTIONS 26 32 13 AND 26 24 13.
5. PROVIDE SERVICE ENTRANCE RATED AUTOMATIC TRANSFER SWITCH.
6. CONTRACTOR TO ADJUST CIRCUIT BREAKER SETTINGS BASED ON POWER SYSTEM STUDY (SPECIFICATION 26 05 73). NOTE APPLIES TO ALL ADJUSTABLE CIRCUIT BREAKERS IN PROJECT.
7. PROVIDE GENERATOR AND DOCKING STATION REMOTE ANNUCIATOR PANELS IN RECORDS ROOM 1051.
8. EACH SECONDARY IS TO BE SEPARATELY METER BY UTILITY, CONTRACTOR TO PROVIDE SUPPORT PEDESTAL AND CONDUIT IN ACCORDANCE WITH UTILITY REQUIREMENTS FOR EACH METER BASE.
9. SEE ELECTRICAL SYSTEM GROUNDING DETAIL SHEET E5.1 FOR GROUNDING AND BONDING REQUIREMENTS.
10. INTERLOCK AUTOMATIC TRANSFER SWITCH ATS-EM WITH ATS-MSB TO INHIBIT TRANSFER BACK TO NORMAL SOURCE POSITION WHILE MAIN SERVICE TRANSFER SWITCH IS CONNECTED TO THE EMERGENCY SOURCE.
11. POWER HAND HOLE, REFER TO SITE PLAN AND DETAIL SHEET.
12. ALTERNATE #1: UTILITY METER MOUNTED TO THE EXTERIOR OF THE STORAGE BUILDING. COORDINATE WITH UTILITY COMPANY FOR EXACT REQUIREMENTS.
13. PROVIDE SINGLE POINT GROUND BAR, 24" LONG X 4" WIDE X 1/4" PRE-DRILLED AT 2" FOR LUG ATTACHMENT.
14. PROVIDE GROUNDING ELECTRODE CONDUCTOR CONNECTIONS TO GROUNDING TRIAD. REFER TO SITE PLANS FOR GROUNDING TRIAD LOCATION. ALL GROUNDING ELECTRODE CONNECTIONS SHALL BE VIA NON-REVERSIBLE EXOTHERMIC WELDS.
15. #3/0 BARE COPPER GROUNDING ELECTRODE CONDUCTOR.
16. 3/4" X 10' COPPER CLAD GROUND ROD, SPACED 20' APART IN TRIANGULAR PATTERN. REFER TO SITE PLAN FOR EXACT LOCATION.
17. PROVIDE UPSIZE LUGS TO ACCOMMODATE FOR FEEDER (INCREASED FOR VOLTAGE DROP).
18. ALTERNATE #1: PROVIDE RACEWAY
19. ALTERNATE #1: PROVIDE PANEL IN STORAGE BUILDING.
20. UTILITY FURNISHED CONTRACTOR INSTALLED PULL BOX. SEE SITE PLAN FOR APPROXIMATE LOCATION AND MORE INFORMATION.
21. UTILITY FURNISHED CT CABINET AND METER, CONTRACTOR INSTALLED. SEE SITE PLAN FOR APPROXIMATE LOCATION AND MORE INFORMATION.

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Lexington – Louisville – Charleston
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Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Electrical One-Line

Project No. 22133

E601

RP-1

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	42	100	MLO	42	SURFACE

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	20	1	REC: LIEUTENANTS OFFICE 1121	1.1	1.8			0.7	REC: CONFERENCE ROOM 1116	20	1	2
3	20	1	REC: LIEUTENANTS OFFICE 1121	1.3		2.0		0.7	REC: ROLL CALL 1125	20	1	4
5	20	1	REC: LIEUTENANTS OFFICE 1121	0.9			1.6	0.7	REC: ROLL CALL 1125	20	1	6
7	20	1	REC: PATROL TOUCHDOWN AREA 1115	0.7	1.1			0.4	REC: PATROL ENTRY	20	1	8
9	20	1	REC: PATROL TOUCHDOWN AREA 1115	0.2		0.6		0.4	REC: PATROL ENTRY	20	1	10
11	20	1	REC: PATROL TOUCHDOWN AREA 1115	0.7			1.1	0.4	REC: PATROL ENTRY	20	1	12
13	20	1	REC: PATROL TOUCHDOWN AREA 1115	0.5	0.9			0.4	REC: PATROL ENTRY	20	1	14
15	20	1	REC: PATROL TOUCHDOWN AREA 1115	0.7		1.1		0.4	REC: PATROL ENTRY	20	1	16
17	20	1	REC: PATROL TOUCHDOWN AREA 1115	0.7			1.1	0.4	REC: PATROL ENTRY	20	1	18
19	20	1	REC: PATROL TOUCHDOWN AREA 1115	0.7	1.2			0.5	ACCESS CONTROL GATE	20	1	20
21	20	1	REC: OFFICE 1119	1.1		1.4		0.4	REC: OUTDOOR	20	1	22
23	20	1	REC: SAFETY OFFICERS OFFICE	1.3			1.6	0.4	REC: OUTDOOR	20	1	24
25	20	1	REC: SAFETY OFFICERS OFFICE	0.9	1.3			0.4	REC: OUTDOOR	20	1	26
27	20	1	REC: SERGEANTS OFFICE 1117	1.3		1.8		0.5	WATER FOUTAIN PUMP	20G	1	28
29	20	1	REC: SERGEANTS OFFICE 1117	1.3			1.8	0.5	ACCESS CONTROL GATE	20	1	30
31	20	1	REC: SERGEANTS OFFICE 1117	1.3	1.8			0.5	SPARE	20	1	32
33	20	1	REC: CONFERENCE ROOM 1116	0.7		1.2		0.5	SPARE	20	1	34
35	20	1	REC: PATROL TOUCHDOWN AREA 1115	0.7			1.2	0.5	SPARE	20	1	36
37	20	1	REC: PUBLIC SAFETY SUPERVISOR 1123	1.1	1.6			0.5	SPARE	20	1	38
39	20	1	REC: PATROL/OPS MAJOR OFFICE 1124	0.9		1.4		0.5	SPARE	20	1	40
41	20	1	REC: SERGEANTS OFFICE 1117	0.9			1.4	0.5	SPARE	20	1	42
			PHASE TOTALS:		9.6	9.5	9.8		TOTAL: 28.8	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

RL-1

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	72	150	MLO	22	SURFACE

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	20	1	REC: DRONE STORAGE 1102	0.4	1.6			1.3	REC: COMMUNITY SERVICES	20	1	2
3	20	1	REC: COMMUNITY SERVICE STORAGE 1105	0.4		1.1		0.7	REC: COMMUNITY SERVICES	20	1	4
5	20G	1	REC: BREAKROOM/KITCHEN 1109	0.2			0.8	0.6	REC: COMMUNITY SERVICES	20	1	6
7	20G	1	REC: BREAKROOM/KITCHEN 1110	0.2	1.3			1.1	REC: BREAKROOM KITCHEN	20G	1	8
9	20	1	REC: ADMIN ASSISTANT	1.1		1.6		0.5	REC: REFRIGERATOR	20G	1	10
11	20	1	REC: RR 1089	0.4			0.9	0.5	REC: REFRIGERATOR	20G	1	12
13	20	1	REC: ADMIN COPY	0.5	0.7			0.2	REC: BREAKROOM KITCHEN	20	1	14
15	20	1	REC: ADMIN SUPPORT OFFICE	1.1		1.6		0.5	REC: DISHWASHER	20G	1	16
17	20	1	REC: ADMIN SUPPORT OFFICE	1.1			1.7	0.6	REC: BREAKROOM KITCHEN	20	1	18
19	20	1	REC: CHIEF OFFICE 1092	0.9	1.6			0.7	REC: COMMUNITY SERVICES	20	1	20
21	20	1	REC: CHIEF OFFICE 1092	0.7		1.4		0.7	LTS: RECORDS 1051, 1055, 1056	20	1	22
23	20	1	REC: CHIEF CONFERENCE	0.7			1.3	0.6	LTS: 1052, 1053, 1054	20	1	24
25	20	1	REC:ASSISTANT CHIEF	1.3	1.6			0.3	LTS: 1089,1090,1091	20	1	26
27	20	1	REC: OFFICE 1096	1.1		1.6		0.5	LTS: 1092, 1093,1094	20	1	28
29	20	1	REC: OFFICE 1097	1.1			1.5	0.4	LTS: OFFICE 1096, 1097, 1098	20	1	30
31	20	1	REC: OFFICE 1098	1.1	1.6			0.5	LTS: ADMIN CORR 1088	20	1	32
33	20	1	REC: ADMINISTRATION	0.4		0.7		0.3	LTS: 1100, 1101A, 1102	20	1	34
35	20	1	REC: ADMINISTRATION	0.4			0.9	0.5	LTS: 1105, OFFICE 1106, BRKRM 1109	20	1	36
37	20	1	REC: ADMINISTRATION	0.9	1.7			0.8	LTS: 1013 CORR	20	1	38
39	20	1	REC: DRONE STORAGE 1102	0.4		0.6		0.2	GARBAGE DISPOSAL	20	1	40
41	20	1	REC: DRONE STORAGE 1103	0.4			0.6	0.2	KEY SYSTEM	20	1	42
43	20G	1	REC: ICE MACHINE	0.5	1.5			1.0	FB: WORKSTAION 1052	20	1	44
45	20	1	REC: CORR 1013	0.5		1.4		0.9	REC: WORKSTATIONS	20	1	46
47	20	1	REC: RECORDS	1.1			2.2	1.1	REC: RECORDS MANAGER	20	1	48
49	20	1	REC: WORKSTATIONS	0.7	1.1			0.4	REC: FELONY RECORDS	20	1	50
51	20	1	REC: INTEL ANALYST	1.1		1.6		0.5	REC: RECORDS	20	1	52
53	20	1	REC: JUVENILE RECORDS	0.4			0.9	0.5	SPARE	20	1	54
55	20	1	REC: PRINTER	0.5	1.0			0.5	SPARE	20	1	56
57	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	58
59	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	60
61	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	62
63	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	64
65	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	66
67	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	68
69	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	70
71	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	72
			PHASE TOTALS:		15.7	14.5	13.7		TOTAL: 43.9	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

RP-3

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	72	150	MLO	22	SURFACE

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	20	1	REC: SPECIAL INVESTIGATIONS	1.1	2.2			1.1	REC: SPECIAL INVESTIGATIONS	20	1	2
3	20	1	REC: SPECIAL INVESTIGATIONS	0.4		0.8		0.4	REC: SPECIAL INVESTIGATIONS	20	1	4
5	20	1	REC:PRINTER	0.5			1.4	0.9	REC: SPECIAL INVESTIGATIONS	20	1	6
7	20	1	REC: SPECIAL INVESTIGATIONS	1.1	2.2			1.1	REC: SUPPORT SERVICES	20	1	8
9	20	1	REC: SUPPORT SERVICES	1.1		1.6		0.5	REC: JUVENILE HOLDING	20	1	10
11	20	1	REC: INTAKE OFFICE	0.7			1.1	0.4	REC: CORRIDOR & STORAGE	20	1	12
13	20	1	REC: JUVE. & CUST. RESTROOM	0.8	1.2			0.4	REC: CHARGING/EQUIPMENT	20	1	14
15	20	1	REC: CHARGING/EQUIPMENT	0.4		0.8		0.4	REC: CHARGING/EQUIPMENT	20	1	16
17	20	1	REC: CHARGING/EQUIPMENT	0.4			0.8	0.4	REC: CHARGING/EQUIPMENT	20	1	18
19	20	1	REC: INTERVIEW ROOM	0.9	1.3			0.4	REC: AXON ROOM	20	1	20
21	20	1	REC: INTERVEW ROOM	0.9		1.8		0.9	REC: INTERVIEW ROOM	20	1	22
23	20	1	REC: PRINTER	0.5			0.9	0.4	REC: CRIMINAL INVESTIGATIONS	20	1	24
25	20	1	REC: CRIMINAL INVESTIGATIONS	0.4	0.9			0.5	FB: CRIMINAL INVESTIGATIONS	20	1	26
27	20	1	FB: CRIMINAL INVESTIGATIONS	1.0		2.0		1.0	FB: CRIMINAL INVESTIGATIONS	20	1	28
29	20	1	REC: IDF ROOM 1031	0.5			1.0	0.5	REC: IDF ROOM 1031	20	1	30
31	20	1	REC: INTERVIEW ROOM	0.9	1.6			0.7	REC: POLYGRAPH ROOM	20	1	32
33	20	1	REC: RR AND WATER COOLER	1.0		1.7		0.7	REC: OPS BRIEFING ROOM	20	1	34
35	20	1	REC: OPS BRIEFING ROOM	0.5			1.6	1.1	REC: OFFICE 1040	20	1	36
37	20	1	REC: OFFICE 1041	1.1	2.0			0.9	REC: CORRIDOR & VESTIBULE	20	1	38
39	20	1	REC: MECH/WATER ROOM	0.7		1.1		0.4	REC: MECH/WATER ROOM	20	1	40
41	20	1	REC: MECH/WATER ROOM	0.4			0.7	0.4	REC: MECH/WATER ROOM	20	1	42
43	20	1	REC: IDF ROOM	0.4	1.4			1.1	REC: SOCIAL WORKER OFFICE	20	1	44
45	20	1	REC: SOFT INTERVIEW ROOM	0.7		1.6		0.9	REC: KIDS ROOM	20	1	46
47	20	1	REC: CONFERENCE ROOM	0.7			1.3	0.5	REC: SOCIAL WORK RECEPTION	20	1	48
49	20	1	REC: PRINTER	0.5	0.9			0.4	REC: SOCIAL WORK RECEPTION	20	1	50
51	20	1	REC: SOCIAL WORK RECEPTION	0.2		1.3		1.1	REC: SOCIAL WORKER OFFICE	20	1	52
53	20	1	REC: QUIET ROOM	0.5			1.6	1.1	REC: SPECIAL TASK FORCE	20	1	54
55	20	1	REC: STORAGE	0.5	1.0			0.5	REC: REFRIGERATOR	20G	1	56
57	20	1	REC: CRIMINAL INVESTIGATIONS	1.0		1.5		0.5	REC: 1031 IDF ROOM	20	1	58
59	20	1	SUMP PUMP	0.5			0.9	0.4	REC: CHARGING EQUIPMENT	20	1	60
61	20	1	SUMP PUMP	0.5	1.0			0.5	ACCESS GATE POWER	20	1	62
63	20	1	SUMP PUMP	0.5		1.0		0.5	BUILDING SIGNAGE	20	1	64
65	20	1	BUILDING SIGNAGE	0.5			1.0	0.5	REC: ROOF TOP	20	1	66
67	20	1	REC: ROOF TOP	0.5	1.0			0.5	REC: ROOF TOP	20	1	68
69	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	70
71	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	72
			PHASE TOTALS:		16.6	16.2	13.3		TOTAL: 46.1	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

RP-4

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	72	200	MLO	22	SURFACE

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	20	1	REC: CORRIDOR	0.7	1.2			0.5	SPARE	20	1	2
3	20	1	REC: CONFERENCE ROOM	0.9		2.2		1.3	REC: PROF. STANDARDS OFFICE	20	1	4
5	20	1	REC: PROF. STANDARDS REC.	0.7			1.2	0.5	REC: PRINTER	20	1	6
7	20	1	REC: PROF. STANDARDS REC.	0.4	1.7			1.3	REC: PROF. STANDARDS OFFICE	20	1	8
9	20	1	REC: TRAINING OFFICE	1.3		1.8		0.5	REC: STORAGE 1009	20	1	10
11	20	1	REC: AV 1009A	0.4			1.1	0.7	REC: REPORT ROOM	20	1	12
13	20	1	REC: WATER COOLER	0.4	1.1			0.8	REC: RESTROOM	20	1	14
15	20	1	REC: COMM./TRAINING ROOM	0.4		1.1		0.7	REC: COMM./TRAINING ROOM	20	1	16
17	20	1	REC: COMM./TRAINING ROOM	0.7			1.1	0.4	REC: COMM./TRAINING ROOM	20	1	18
19	20	1	REC: FRIDGE TRAINING ROOM	0.5	0.7			0.2	REC: COMM./TRAINING ROOM	20	1	20
21	20	1	REC: COMM./TRAINING ROOM	0.2		0.4		0.2	REC: COMM./TRAINING ROOM	20	1	22
23	20	1	REC: COMM./TRAINING ROOM	0.2			0.5	0.4	REC: COMM./TRAINING ROOM	20	1	24
25	20	1	REC: COMPUTERS	0.4	0.9			0.5	REC: COMM./TRAINING ROOM	20	1	26
27	20	1	REC: FLOORBOX	0.4		1.1		0.7	REC: REPORT/SAFE ROOM	20	1	28
29	20	1	REC: FLOORBOX	0.4			1.1	0.7	REC: LOBBY	20	1	30
31	20	1	REC: FLOORBOX	0.4	0.9			0.5	DISPLAY WALL	20	1	32
33	20	1	REC: FLOORBOX	0.7		1.2		0.5	DISPLAY WALL	20	1	34
35	20	1	REC: FLOORBOX	0.4			0.9	0.5	DISPLAY WALL	20	1	36
37	20	1	REC: FLOORBOX	0.4	0.9			0.5	DISPLAY WALL	20	1	38
39	20	1	REC: FLOORBOX	0.4		0.9		0.5	DISPLAY WALL	20	1	40
41	20	1	ROLLER SHADES	0.7			1.2	0.5	ROLLER SHADES	20	1	42
43	20	1	REC: AV 1009A	0.5	1.0			0.5	REC: AV 1009A	20	1	44
45	20	1	REC: AV 1009A	0.5		1.0		0.5	SPARE	20	1	46
47	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	48
49	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	50
51	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	52
53	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	54
55	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	56
57	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	58
59	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	60
61	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	62
63	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	64
65	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	66
67	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	68
69	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	70
71	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	72
			PHASE TOTALS:		12.4	13.6	12.1		TOTAL: 38.1	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

RP-5

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	72	150	MLO	22	FLUSH

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	20	1	REC: CORRIDOR 1013	0.7	1.2			0.5	REC: K9 KENNEL 1073	20	1	2
3	20	1	REC: STUDY ROOM	0.7		1.2		0.5	REC: AMMO STORAGE	20	1	4
5	20	1	REC: STUDY ROOM	0.7			1.4	0.7	REC: SALLYPORT 1068	20	1	6
7	20	1	REC: QUIET/MOM ROOM	0.5	1.2			0.7	REC: ARMORY 1071	20	1	8
9	20G	1	REC: REFRIGERATOR	0.9		1.3		0.4	REC: GUN PREP/CLEANING	20	1	10
11	20	1	REC: QUIET/MOM RM COUNTER	0.4			0.8	0.4	REC: GUN PREP/CLEANING	20	1	12
13	20	1	REC: COLLISION RECONSTRUCTION	0.7	1.2			0.5	REC: GUN PREP/CLEANING	20	1	14
15	20	1	REC: COLLISION RECONSTRUCTION	0.5		1.6		1.1	REC: SALLYPORT 1068	20	1	16
17	20	1	REC: HOUSEKEEPING	0.2			0.6	0.4	REC: EVIDENCE INTAKE	20	1	18
19	20	1	REC: IDF ROOM	0.4	0.8			0.4	REC: EVIDENCE INTAKE	20	1	20
21	20	1	REC: QUARTER MASTER STORAGE	0.5		1.4		0.9	REC: DRYING CABINET	20	1	22
23	20	1	REC: QUARTER MASTER STORAGE	0.5			1.4	0.9	REC: DIGITAL FORENSICS	20	1	24
25	20	1	REC: LONG TERM STORAGE	0.7	1.6			0.9	REC: DIGITAL FORENSICS	20	1	26
27	20	1	REC: PROPERTY ROOM	0.5		0.9		0.4	REC: PROPERTY ROOM	20	1	28
29	20	1	REC: NIBIN 1081	0.4			0.8	0.4	REC: PROPERTY ROOM	20	1	30
31	20	1	REC: NIBIN 1081	0.4	1.1			0.7	REC: EVIDENCE TECH OFFICE	20	1	32
33	20	1	REC: NIBIN 1081	0.4		1.1		0.7	REC: EVIDENCE TECH OFFICE	20	1	34
35	20	1	REC: WEAPONS 1079	0.4			0.8	0.4	REC: CRIME SCENE	20	1	36
37	20	1	REC:DRUGS 1078	0.4	0.8			0.4	REC: CRIME SCENE	20	1	38
39	20	1	REC: HAZMAT 1077	0.4		0.9		0.5	REC: CHEMICAL CABINET	20G	1	40
41	20G	1	REC: REFRIGERATOR	0.9			1.9	1.0	REC: DRYING CABINET	20G	1	42
43	20G	1	REC: FREEZER	0.9	1.9			1.0	REC: DRYING CABINET	20G	1	44
45	20G	1	REC: REFRIGERATOR	1.0		1.7		0.7	REC: EVIDENCE TECH OFFICE	20	1	46
47	20	1	REC: ALS ROOM 1087	0.5			1.0	0.5	REC: PEDESTAL	20	1	48
49	20	1	REC: CORRIDOR 1057	0.7	1.2			0.5	REC: PEDESTAL	20	1	50
51	20	1	REC: EVIDENCE TECH OFFICE	0.7		1.2		0.5	REC: PEDESTAL	20	1	52
53	20	1	REC: PEDESTAL	0.5			1.0	0.5	REC: PEDESTAL	20	1	54
55	20	1	REC: PEDESTAL	0.5	1.0			0.5	REC: PEDESTAL	20	1	56
57	20	1	REC: PEDESTAL	0.5		1.0		0.5	REC: PEDESTAL	20	1	58
59	20	1	REC: CRIME SCENE	0.5			1.0	0.5	REC: CRIME SCENE	20	1	60
61	20	1	REC: ROOFTOP	0.5	1.0			0.5	REC: ROOF TOP	20	1	62
63	20G	1	REC: FUME CHAMBER	0.5		1.0		0.5	SPARE	20	1	64
65	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	66
67	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	68
69	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	70
71	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	72
			PHASE TOTALS:		14.0	14.4	12.7		TOTAL: 41.1	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

SSP-1

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	72	250	MLO	22	SURFACE

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	20	1	REC: SHELTER	1.2	1.8			0.6	LTS: 1132 - 1134	20	1	2
3	20	1	REC: SHELTER WASHER	0.2		0.7		0.5	LTS: 1129, 1013, 1136	20	1	4
5	20	1	SPARE	0.0			0.4	0.4	LTS: 1127A, 1127B, 1128	20	1	6
7	20	1	REC: MDF ROOM 1127B	0.2	1.6			1.4	HP-21	20	3	8
9	20	1	REC: MDF ROOM 1127B	0.2		1.6		1.4	-	-	-	10
11	20	1	REC: MDF ROOM 1127B	0.2			1.6	1.4	-	-	-	12
13	20	1	REC: MDF ROOM 1127B	0.2	1.4			1.2	HP-20	15	3	14
15	20	1	REC: MDF ROOM 1127B	0.2		1.4		1.2	-	-	-	16
17	20	1	REC: MDF ROOM 1127B	0.2			1.4	1.2	-	-	-	18
19	20	1	REC: FITNESS ROOM 1127A	0.6	0.7			0.1	RP-0-01	15	1	20
21	20	1	REC: FITNESS ROOM 1127A	0.1		4.2		4.1	EWH-0-01	60	3	22
23	20	1	REC: FITNESS ROOM 1127A	0.2			4.3	4.1	-	-	-	24
25	20	1	REC: FITNESS ROOM 1127A	0.2	4.3			4.1	-	-	-	26
27	20	1	REC: FITNESS ROOM 1127A	0.2		0.7		0.5	SPARE	20	1	28
29	20	1	REC: FITNESS ROOM 1127A	0.2			0.7	0.5	SPARE	20	1	30
31	20	1	REC: FITNESS ROOM 1127A	0.2	1.4			1.2	HP-22	20	2	32
33	20	2	REC: SHELTER DRYER	2.5		3.7		1.2	-	-	-	34
35	-	-	-	2.5			3.0	0.5	SPARE	20	1	36
37	20	1	AUTO VALVES 1132, 1134	0.8	1.3			0.5	STORM DOOR	20	1	38
39	20	1	ETP-0-04	0.1		0.6		0.5	STORM DOOR	20	1	40
41	15	3	SPARE	0.5			1.0	0.5	SPARE	20	1	42
43	-	-	-	0.5	1.0			0.5	SPARE	20	1	44
45	-	-	-	0.5		1.0		0.5	SPARE	20	1	46
47	20	3	SPARE	0.5			1.0	0.5	SPARE	20	1	48
49	-	-	-	0.5	1.0			0.5	SPARE	20	1	50
51	-	-	-	0.5		1.0		0.5	SPARE	20	1	52
53	20	2	SPARE	0.5			1.0	0.5	SPARE	20	1	54
55	-	-	-	0.5	1.0			0.5	SPARE	20	1	56
57	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	58
59	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	60
61	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	62
63	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	64
65	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	66
67	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	68
69	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	70
71	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	72
			PHASE TOTALS:		17.6	18.1	17.5		TOTAL: 53.2	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

INV

BRANCH CIRCUIT PANELBOARD - INTEGRAL TO INVERTER

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	12	35	MCB-S	22	SURFACE

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	20	1	LTS: SS - NORTH	0.5	1.5			1.0	ISF/IEF-01	20	1	2
3	20	1	LTS: SS - SOUTH	0.5		1.5		1.0	ISF/IEF-02	20	1	4
5	20	1	SPARE	0.2			0.4	0.2	SPARE	20	1	6
7	20	1	SPARE	0.2	0.4			0.2	SPARE	20	1	8
9	20	1	SPARE	0.2		0.4		0.2	SPARE	20	1	10
11	20	1	SPARE	0.2			0.4	0.2	SPARE	20	1	12
			PHASE TOTALS:		2.9	2.9	1.8		TOTAL: 7.6	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

LP-1

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	30	100	MLO	42	SURFACE

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	20	1	LTS: 1121 - 1125	0.8	1.1			0.3	LTS: COVERED PARKING	20	1	2
3	20	1	LTS: 1116 - 1119	0.7		1.0		0.3	LTS: PARKING	20	1	4
5	20	1	LTS: 1115, PATROL AREA	0.7			1.2	0.5	LTS: PARKING LOT	20	1	6
7	20	1	LTS: PARKING LOT	0.5	1.0			0.5	SPARE	20	1	8
9	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	10
11	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	12
13	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	14
15	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	16
17	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	18
19	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	20
21	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	22
23	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	24
25	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	26
27	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	28
			PHASE TOTALS:		5.1	5.0	4.2		TOTAL: 14.3	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

LP-3

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	30	100	MLO	22	FLUSH

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	20	1	LTS: 1068 SALLYPORT	1.0	1.3			0.3	LTS: 1077 - 1081	20	1	2
3	20	1	LTS: 1069, 1070, 1071, 1072, 1073	0.5		0.7		0.2	LTS: CORR 1057, 1063	20	1	4
5	20	1	LTS: 1074, 1084	0.7			1.6	0.9	REC: REFRIGERATOR	20G	1	6
7	20	1	LTS: PROPERTY RM 1076	1.4	1.6			0.2	REC: CRIME SCENE	20	1	8
9	20	1	LTS: 1085, 1086	0.5		0.9		0.4	REC: CRIME SCENE	20	1	10
11	20	1	LTS: 1103, 1104, 1107, 1111-114	0.7			1.1	0.4	REC: CRIME SCENE	20	1	12
13	20	1	REC: CRIME SCENE	0.5	1.0			0.5	SPARE	20	1	14
15	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	16
17	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	18
19	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	20
21	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	22
23	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	24
25	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	26
27	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	28
29	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	30
			PHASE TOTALS:		6.0	4.6	5.6		TOTAL: 16.2	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

LP-4

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	30	100	MLO	22	SURFACE

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	20	1	LTS: LOBBY 1002	0.9	1.0			0.1	LTS: ENTRANCE AWNING	20	1	2
3	20	1	LTS: 1003, 1004, 1007, 1008	0.5		0.8		0.3	LTS: 1059-1062, 1065	20	1	4
5	20	1	LTS: 1033, 1034, 1035	0.5			1.1	0.6	LTS: OFF. 1040-1046	20	1	6
7	20	1	LTS: 1006 BACK	0.9	1.6			0.7	LTS: INVESTIGATIONS 1037	20	1	8
9	20	1	LTS: 1009, 1010, 1014,	0.3		0.6		0.3	LTS: 1038, 1039	20	1	10
11	20	1	LTS: 1015-1018	0.5			1.0	0.5	LTS: 1048, 1049, 1050, 1058	20	1	12
13	20	1	LTS: 1020,1022, 1024, 1026, 1028	0.5	1.0			0.5	LTS: OUTDOOR SIGNAGE	20	1	14
15	20	1	LTS: 1021, 1023, 1025, 1027	0.5		0.9		0.4	LTS: MAIN ENTRANCE LOWER CANOPY	20	1	16
17	20	1	LTS: 1029 MECH RM	0.3			1.1	0.8	LTS: SITE LIGHTING	20	1	18
19	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	20
21	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	22
23	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	24
25	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	26
27	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	28
29	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	30
			PHASE TOTALS:		5.6	4.3	5.2		TOTAL: 15.0	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

EM

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	30	150	MCB	42	SURFACE

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	20	1	LTS: 1076-1086 PROP RM	0.5	1.0			0.5	LTS: 1068-1073 SALLYPORT	20	1	2
3	20	1	LTS: 1115-1125 PATROL	0.5		1.0		0.5	GENERATOR BLOCK HEATER	30	2	4
5	30	3	EM-1	2.0			2.5	0.5	-	-	-	6
7	-	-	-	2.0	2.5			0.5	GENERATOR ENCLOSURE HEATER	20	2	8
9	-	-	-	2.0		2.5		0.5	-	-	-	10
11	30	3	EM-2	2.0			2.5	0.5	GENERATOR BATTERY CHARGER	20	1	12
13	-	-	-	2.0	2.5			0.5	REC: GENERATOR	20	1	14
15	-	-	-	2.0		2.5		0.5	REC: TDS-EM	20	1	16
17	30	3	EM-3	2.0			2.5	0.5	REC: TDS-EM	20G	1	18
19	-	-	-	2.0	2.5			0.5	SPARE	20	1	20
21	-	-	-	2.0		2.5		0.5	SPARE	20	1	22
23	35	3	INV	2.5			3.0	0.5	SPARE	20	1	24
25	-	-	-	2.5	3.0			0.5	SURGE PROTECTION DEVICE	30	3	26
27	-	-	-	2.5		3.0		0.5	-	-	-	28
29	20	1	SPARE	0.5			1.0	0.5	-	-	-	30
			PHASE TOTALS:		11.5	11.5	11.5		TOTAL: 34.5	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

EM-1

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	12	30	MLO	22	SURFACE

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	20	1	LTS: 1051-1056	0.5	1.0			0.5	LTS: CORR 1088, OFFICE 1106	20	1	2
3	20	1	LTS: 1013 CORR	0.5		1.0		0.5	SPARE	20	1	4
5	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	6
7	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	8
9	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	10
11	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	12
			PHASE TOTALS:		2.0	2.0	2.0		TOTAL: 6.0	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
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2.

EM-2

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	12	30	MLO	22	FLUSH

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	2
3	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	4
5	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	6
7	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	8
9	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	10
11	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	12
			PHASE TOTALS:		2.0	2.0	2.0		TOTAL: 6.0	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
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EM-3

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	12	30	MLO	22	SURFACE

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	20	1	LTS: 1038-1067, CRIMINAL INVEST	0.5	1.0			0.5	LTS: 1015-1035, SPEC. INVEST.	20	1	2
3	20	1	LTS: 1006 TRAINING	0.5		1.0		0.5	LTS: 1002 LOBBY, RR	20	1	4
5	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	6
7	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	8
9	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	10
11	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	12
			PHASE TOTALS:		2.0	2.0	2.0		TOTAL: 6.0	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
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Revisions:	NUMBER	DATE	DESCRIPTION
	1	2025.04.25	ADD 2

Issue Date: March 28, 2025

Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Electrical Panel Schedules

Project No. 22133

E602

MECH-1

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	42	200	MLO	42	SURFACE

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	35	3	HP-18	2.6	4.0			1.4	HP-19	20	3	2
3	-	-	-	2.6		4.0		1.4	-	-	-	4
5	-	-	-	2.6			4.0	1.4	-	-	-	6
7	30	3	HP-17	2.3	2.8			0.5	SPARE	30	3	8
9	-	-	-	2.3		2.8		0.5	-	-	-	10
11	-	-	-	2.3			2.8	0.5	-	-	-	12
13	20	2	SPARE	0.5	1.0			0.5	SPARE	35	3	14
15	-	-	-	0.5		1.0		0.5	-	-	-	16
17	20	2	SPARE	0.5			1.0	0.5	-	-	-	18
19	-	-	-	0.5	1.0			0.5	SPARE	20	1	20
21	20	3	SPARE	0.5		1.0		0.5	SPARE	20	1	22
23	-	-	-	0.5			1.0	0.5	SPARE	20	1	24
25	-	-	-	0.5	1.0			0.5	SPARE	20	1	26
27	25	3	SPARE	0.5		1.0		0.5	SPARE	20	1	28
29	-	-	-	0.5			1.0	0.5	SPARE	20	1	30
31	-	-	-	0.5	1.0			0.5	SPARE	20	1	32
33	30	3	SPARE	0.5		1.0		0.5	SPARE	20	1	34
35	-	-	-	0.5			1.0	0.5	SPARE	20	1	36
37	-	-	-	0.5	1.0			0.5	SPARE	20	1	38
39	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	40
41	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	42
			PHASE TOTALS:		11.9	11.8	11.9		TOTAL: 35.6	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:

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MECH-2

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	42	200	MLO	22	SURFACE

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	20	3	HP-15	1.4	3.1			1.7	HP-14	25	3	2
3	-	-	-	1.4		3.1		1.7	-	-	-	4
5	-	-	-	1.4			3.1	1.7	-	-	-	6
7	20	3	HP-13	1.4	3.1			1.7	HP-09	25	3	8
9	-	-	-	1.4		3.1		1.7	-	-	-	10
11	-	-	-	1.4			3.1	1.7	-	-	-	12
13	20	2	SPARE	0.5	1.0			0.5	SPARE	30	3	14
15	-	-	-	0.5		1.0		0.5	-	-	-	16
17	25	2	SPARE	0.5			1.0	0.5	-	-	-	18
19	-	-	-	0.5	1.0			0.5	SPARE	30	3	20
21	20	3	SPARE	0.5		1.0		0.5	-	-	-	22
23	-	-	-	0.5			1.0	0.5	-	-	-	24
25	-	-	-	0.5	1.0			0.5	SPARE	35	3	26
27	25	3	SPARE	0.5		1.0		0.5	-	-	-	28
29	-	-	-	0.5			1.0	0.5	-	-	-	30
31	-	-	-	0.5	1.0			0.5	SPARE	20	1	32
33	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	34
35	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	36
37	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	38
39	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	40
41	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	42
			PHASE TOTALS:		11.3	11.2	11.2		TOTAL: 33.7	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:

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MECH-3

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	42	200	MLO	22	FLUSH

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	15	2	CU-1	0.8	2.5			1.7	HP-16	25	3	2
3	-	-	-	0.8		2.5		1.7	-	-	-	4
5	20	2	CU-2	1.1			2.8	1.7	-	-	-	6
7	-	-	-	1.1	2.6			1.5	HP-12	25	2	8
9	20	1	EF-0-01	1.2		2.6		1.5	-	-	-	10
11	15	1	GUH-0-01	0.1			2.4	2.3	HP-11	30	3	12
13	15	1	GUH-0-02	0.1	2.4			2.3	-	-	-	14
15	15	2	HP-10	0.7		3.1		2.3	-	-	-	16
17	-	-	-	0.7			1.2	0.5	DECON WASHER	20	3	18
19	20	2	DECON DRYER	0.5	1.0			0.5	-	-	-	20
21	-	-	-	0.5		1.0		0.5	-	-	-	22
23	20	1	OHD: SALLYPORT	0.5			1.0	0.5	SPARE	20	3	24
25	20	1	OHD: SALLYPORT	0.5	1.0			0.5	-	-	-	26
27	15	1	EF-0-08	0.3		0.8		0.5	-	-	-	28
29	15	1	EF-0-09	0.6			1.1	0.5	SPARE	25	3	30
31	20	2	SPARE	0.5	1.0			0.5	-	-	-	32
33	-	-	-	0.5		1.0		0.5	-	-	-	34
35	20	2	SPARE	0.5			1.0	0.5	SPARE	30	3	36
37	-	-	-	0.5	1.0			0.5	-	-	-	38
39	15	2	SPARE	0.5		1.0		0.5	-	-	-	40
41	-	-	-	0.5			1.0	0.5	SPARE	20	1	42
			PHASE TOTALS:		11.5	12.0	10.6		TOTAL: 34.1	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:

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MECH-4

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	54	400	MLO	22	SURFACE

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	15	2	CU-03	0.8	3.8			3.0	P-01	50	3	2
3	-	-	-	0.8		3.8		3.0	-	-	-	4
5	50	3	P-01A	3.0			6.1	3.0	-	-	-	6
7	-	-	-	3.0	3.5			0.5	GWH-0-01	20	1	8
9	-	-	-	3.0		3.5		0.5	GWH-0-02	20	1	10
11	20	3	HP-05	1.4			1.9	0.5	HVAC CONTROL PANEL	20	1	12
13	-	-	-	1.4	2.7			1.2	HP-07	20	2	14
15	-	-	-	1.4		2.7		1.2	-	-	-	16
17	30	3	HP-06	2.3			4.0	1.7	HP-04	25	3	18
19	-	-	-	2.3	4.0			1.7	-	-	-	20
21	-	-	-	2.3		4.0		1.7	-	-	-	22
23	15	2	HP-08	0.8			2.2	1.4	HP-03	20	3	24
25	-	-	-	0.8	2.2			1.4	-	-	-	26
27	30	3	HP-02	2.3		3.8		1.4	-	-	-	28
29	-	-	-	2.3			4.9	2.6	HP-01	35	3	30
31	-	-	-	2.3	4.9			2.6	-	-	-	32
33	15	2	SPARE	0.5		3.1		2.6	-	-	-	34
35	-	-	-	0.5			1.0	0.5	SPARE	25	3	36
37	20	1	AIR COMPRESSOR	0.5	1.0			0.5	-	-	-	38
39	20	1	ALARM BELL	0.5		1.0		0.5	-	-	-	40
41	25	2	SPARE	0.5			1.0	0.5	SPARE	30	3	42
43	-	-	-	0.5	1.0			0.5	-	-	-	44
45	15	3	EUH-0-01	0.7		1.2		0.5	-	-	-	46
47	-	-	-	0.7			1.2	0.5	SPARE	20	3	48
49	-	-	-	0.7	1.2			0.5	-	-	-	50
51	20	1	ETP-0-02	0.1		0.6		0.5	-	-	-	52
53	20	1	ETP-0-03	0.1			0.2	0.1	ETP-0-01	20	1	54
			PHASE TOTALS:		24.4	23.7	22.6		TOTAL: 70.7	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:

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SBP-1

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	54	150	MLO	22	SURFACE

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	20	1	REC: IDF ROOM 214	0.4	0.8			0.4	REC: IDF ROOM 214	20	1	2
3	20	1	REC: IDF ROOM 214	0.4		0.8		0.4	REC: IDF ROOM 214	20	1	4
5	20	1	REC: IDF ROOM 214	0.4			0.8	0.4	REC: IDF ROOM 214	20	1	6
7	20	1	REC: BIKE OFFICE PRINTER	0.2	0.9			0.7	REC: BIKE OFFICE GEN 213	20	1	8
9	20	1	REC: BIKE OFFICE CONTER	0.4		1.1		0.7	REC: BIKE OFFICE GEN 213	20	1	10
11	20	1	REC: BIKE OFFICE CONTER	0.4			1.1	0.7	REC: BIKE OFFICE GEN 213	20	1	12
13	20	1	FB: BIKE OFFICE	0.5	1.2			0.7	REC: BIKE OFFICE GEN 213	20	1	14
15	20	1	REC: BIKE OFFICE GEN	0.5		1.0		0.5	REC: BIKE ROOM CORR 211	20	1	16
17	20	1	REC: EVIDENCE COUNTER 212	0.2			0.6	0.4	REC: BIKE ROOM GEN 211	20	1	18
19	20	1	REC: EVIDENCE COUNTER 212	0.2	0.6			0.4	REC: BIKE ROOM GEN 211	20	1	20
21	20	1	REC: EVIDENCE COUNTER 212	0.2		0.6		0.4	REC: BIKE ROOM GEN 211	20	1	22
23	20	1	REC: EVIDENCE 212	0.4			0.8	0.4	REC: BIKE ROOM GEN 211	20	1	24
25	20	1	REC: EVIDENCE 212	0.4	1.1			0.7	REC: SWAT STORAGE	20	1	26
27	20	1	REC: EVIDENCE 212	0.4		0.9		0.5	REC: TOOL ROOM 215	20	1	28
29	20	1	REC: EVIDENCE 212	0.4			0.9	0.5	REC: TOOL ROOM 215	20	1	30
31	20	1	REC: BIKE STORAGE 208	0.7	1.4			0.7	REC: TOOL ROOM 215	20	1	32
33	20	1	REC: RR 209	0.5		1.0		0.5	REC: RR 206, LOCKER 204	20	1	34
35	20G	1	REC: WATER FOUNTAIN 210	0.2			0.7	0.5	REC: RR 205, LOCKER 204	20	1	36
37	20G	1	REC: ICE MACHINE	0.2	0.7			0.5	REC: CORD REEL 200	20	1	38
39	20	1	REC: BAYS 200	0.9		1.4		0.5	REC: CORD REEL 200	20	1	40
41	20	1	REC: BAYS 200	0.7			1.2	0.5	REC: CORD REEL 200	20	1	42
43	20	1	SPARE	0.5	1.0			0.5	REC: CORD REEL 200	20	1	44
45	20	1	SITE CIRCUIT	0.5		1.0		0.5	REC: CORD REEL 200	20	1	46
47	20	1	SITE LIGHTING	0.6			1.1	0.5	SITE CIRCUIT	20	1	48
49	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	50
51	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	52
53	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	54
			PHASE TOTALS:		8.7	8.8	8.2		TOTAL: 25.7	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:

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SBP-2

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	54	150	MLO	22	SURFACE

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	15	1	EF-1-04	0.2	0.6			0.4	REC: SIMS BAY 202	20	1	2
3	20	1	REC: SIMS BAY 202	0.5		0.9		0.4	REC: SIMS BAY 202	20	1	4
5	20	1	REC: SIMS BAY 202	0.5			0.9	0.4	REC: SIMS BAY 202	20	1	6
7	20	1	REC: TACTICAL RM 201	0.7	1.1			0.4	REC: SIMS BAY 202	20	1	8
9	20	1	REC: TACTICAL RM 201	0.7		1.2		0.5	REC: MEZZ 216	20	1	10
11	20	1	REC: MEZZ WALKWAY	0.5			1.0	0.5	REC: MEZZ GEN 216	20	1	12
13	20	3	AHU-01	1.0	2.0			1.0	AHU-02	20	3	14
15	-	-	-	1.0		2.0		1.0	-	-	-	16
17	-	-	-	1.0			2.0	1.0	-	-	-	18
19	20	1	REC: MEZZ GEN 216	0.5	1.0			0.5	RP-1-01	20	1	20
21	20	1	GWH-1-01	0.5		1.0		0.5	ETP-1-03	20	1	22
23	20	1	LTS: BIKE OFFICE 213	0.4			0.7	0.3	LTS: EVIDENCE 212	20	1	24
25	20	1	LTS: LOCKER RM 204, 205, 206	0.3	0.8			0.5	LTS: TACT 201, SIMS BAY 202	20	1	26
27	20	1	LTS: 207, 208, 209, 210, 215	0.4		0.7		0.3	LTS: BIKE PATROL 211	20	1	28
29	20	1	LTS: MEZZ 216	0.6			0.7	0.1	LTS: EVIDENCE BAY 212	20	1	30
31	20	1	ALARM BELL	0.5	1.0			0.5	OHD: SALLYPORT	20	1	32
33	20	1	OHD: SALLYPORT	0.5		1.0		0.5	OHD: SALLYPORT	20	1	34
35	20	1	OHD: SALLYPORT	0.5			1.0	0.5	OHD: SALLYPORT	20	1	36
37	20	1	OHD: SALLYPORT	0.5	4.2			3.7	OU-02	50	3	38
39	50	3	OU-01	3.7		4.2		0.5	-	-	-	40
41	-	-	-	3.7			4.2	0.5	-	-	-	42
43	-	-	-	3.7	3.9			0.2	SPARE	20	1	44
45	20	1	SPARE	0.2		0.4		0.2	SPARE	20	1	46
47	20	1	SPARE	0.2			0.4	0.2	SPARE	20	1	48
49	20	1	SPARE	0.2	0.4			0.2	SPARE	20	1	50
51	20	1	SPARE	0.2		0.4		0.2	SPARE	20	1	52
53	20	1	SPARE	0.2			0.4	0.2	SPARE	20	1	54
			PHASE TOTALS:		15.0	11.8	11.3		TOTAL: 38.2	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:

1.
2.

SSP-2

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	30	100	MLO	22	SURFACE

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	20	1	REC: LOCKER	0.9	1.8			0.9	REC: LOCKER	20	1	2
3	20	1	REC: LOCKER	0.9		1.8		0.9	REC: LOCKER	20	1	4
5	20	1	REC: LOCKER	0.9			1.8	0.9	REC: LOCKER	20	1	6
7	20	1	REC: LOCKER	0.9	1.8			0.9	REC: LOCKER	20	1	8
9	20	1	REC: LOCKER	0.9		1.8		0.9	REC: LOCKER	20	1	10
11	20	1	REC: LOCKER	0.9			1.8	0.9	REC: LOCKER	20	1	12
13	20	1	REC: LOCKER	0.9	1.8			0.9	REC: LOCKER	20	1	14
15	20	1	REC: LOCKER	0.9		1.8		0.9	REC: LOCKER	20	1	16
17	20	1	REC: LOCKER	0.9			1.8	0.9	REC: LOCKER	20	1	18
19	20	1	REC: LOCKER	0.9	1.4			0.5	SPARE	20	1	20
21	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	22
23	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	24
25	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	26
27	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	28
29	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	30
			PHASE TOTALS:		7.8	7.4	7.4		TOTAL: 22.6	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:

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2.

STBP

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	42	200	MCB	22	SURFACE

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	20	1	REC: STORAGE 501	0.5	1.1			0.5	REC: STORAGE 501	20	1	2
3	20	1	REC: STORAGE 501	0.5		1.1		0.5	REC: STORAGE 501	20	1	4
5	15	1	GUH-2-01	0.4			0.8	0.4	GUH-2-02	15	1	6
7	15	1	GUH-2-03	0.4	0.8			0.4	GUH-2-04	15	1	8
9	15	1	GUH-2-05	0.4		0.7		0.4	REC: BAYS 500	20	1	10
11	20	1	REC: BAYS 500	0.4			0.7	0.4	REC: BAYS 500	20	1	12
13	20	1	REC: BAYS 500	0.4	0.7			0.4	REC: BAYS 500	20	1	14
15	20	1	REC: BAYS 500	0.4		0.7		0.4	REC: BAYS 500	20	1	16
17	20	1	REC: BAYS 500	0.4			0.7	0.4	REC: BAYS 500	20	1	18
19	20	1	REC: BAYS 500	0.4	1.4			1.0	SPARE	20	1	20
21	20	1	REC: BAYS 500	0.4		0.7		0.4	REC: BAYS 500	20	1	22
23	20	1	SUMP PUMP	0.5			1.0	0.5	OHD: SALLYPORT	20	1	24
25	20	1	OHD: SALLYPORT	0.5	1.0			0.5	OHD: SALLYPORT	20	1	26
27	20	1	OHD: SALLYPORT	0.5		3.8		3.3	REC: WELDING STATION	50	3	28
29	20	1		0.4			3.7	3.3	-	-	-	30
31	20	1		0.7	4.0			3.3	-	-	-	32
33	20	1		0.5		1.0		0.5		20	1	34
35	20G	1		0.2			0.7	0.5		20	1	36
37	20G	1		0.2	0.7			0.5		20	1	38
39	20	1		0.7		1.2		0.5		20	1	40
41	20	1		0.9			1.4	0.5		20	1	42
			PHASE TOTALS:		9.7	9.3	9.0		TOTAL: 28.0	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:

1.
2.

MSB

DISTRIBUTION SWITCHBOARD

VOLTAGE	PHASE/WIRE	MAIN AMPS	MAIN TYPE	MIN. A.I. RATING
120/208	3 / 4	2000	MCB	65K

CKT NO.	AMP FRAME	AMP TRIP	NO. POLES	LOAD SERVED	KVA	NOTES
1	30	15	3	METER	0.0	
2	60	60	3	SURGE PROTECTION DEVICE	0.0	
3	800	800	3	PANEL: SDP	221.0	
4	100	100	3	PANEL: RP-1	29.8	
5	200	150	3	PANEL: RL-1	43.2	
6	200	150	3	PANEL: RP-5	41.1	
7	100	100	3	PANEL: LP-1	14.3	
8	100	100	3	PANEL: LP-3	16.2	
9	200	200	3	PANEL: MECH-1	35.6	
10	200	200	3	PANEL: MECH-2	35.7	
11	200	200	3	PANEL: MECH-3	34.7	
12	400	250	3	PANEL: SSP-1	54.3	
13	150	100	3	PANEL: SSP-2	22.6	
14	100	100	3	SPARE		
15	100	100	3	SPARE		
16	200	200	3	SPARE		
17	400	400	3	PREPARED SPACE		
18	400	400	3	PREPARED SPACE		
19	200	200	3	PREPARED SPACE		
20	200	200	3	PREPARED SPACE		
21	150	150	3	PANEL: EM	34.5	
				TOTAL:	583.0	KVA

NOTES:

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ABBREVIATIONS:
G - GFCI BREAKER
A - AFCI
L - LOCKOUT BREAKER
S - SHUNT TRIP BREAKER
C - COMBINATION GFCI/AFCI BREAKER
E - ELECTRONIC ADJUSTABLE TRIP BREAKER
MCB - MAIN CIRCUIT BREAKER

SBP

DISTRIBUTION PANELBOARD

VOLTAGE	PHASE/WIRE	MAIN AMPS	MAIN TYPE	MIN. A.I. RATING
120/208	3 / 4	600	MCB	65K

CKT NO.	AMP FRAME	AMP TRIP	NO. POLES	LOAD SERVED	KVA	NOTES
1	30	15	3	METER	0.0	
2	60	60	3	SURGE PROTECTION DEVICE	0.0	
3	200	150	3	PANEL: SBP-1	25.6	
4	200	150	3	PANEL: SBP-2	38.2	
5	100	100	3	REC: COMMANAD CENTER TRUCK	28.8	
6	60	60	3	SPARE	10.0	
7	100	100	3	SPARE	15.0	
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
				TOTAL:	117.6	KVA

NOTES:

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2.

ABBREVIATIONS:
G - GFCI BREAKER
A - AFCI
L - LOCKOUT BREAKER
S - SHUNT TRIP BREAKER
C - COMBINATION GFCI/AFCI BREAKER
E - ELECTRONIC ADJUSTABLE TRIP BREAKER
MCB - MAIN CIRCUIT BREAKER
MLO - MAIN LUG ONLY

SDP

DISTRIBUTION PANELBOARD

VOLTAGE	PHASE/WIRE	MAIN AMPS	MAIN TYPE	MIN. A.I. RATING
120/208	3 / 4	800	MLO	42K

CKT NO.	AMP FRAME	AMP TRIP	NO. POLES	LOAD SERVED	KVA	NOTES
1	30	30	3	SURGE PROTECTION DEVICE	0.0	
2	100	100	3	RTU-01	21.5	
3	200	125	3	ERU-01	31.6	
4	200	150	3	RP-3	45.5	
5	200	200	3	RP-4	37.6	
6	100	100	3	LP-4	14.8	
7	400	400	3	MECH-4	68.6	
8	100	100	3	SPARE	10.0	
9	100	100	3	SPARE	10.0	
10	200	200	3	SPARE	15.0	
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
				TOTAL:	254.6	KVA

NOTES:

1.
2.

ABBREVIATIONS:
G - GFCI BREAKER
A - AFCI
L - LOCKOUT BREAKER
S - SHUNT TRIP BREAKER
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Revisions:	NUMBER	DATE	DESCRIPTION
	1	2025.04.25	ADD 2

Issue Date: March 28, 2025

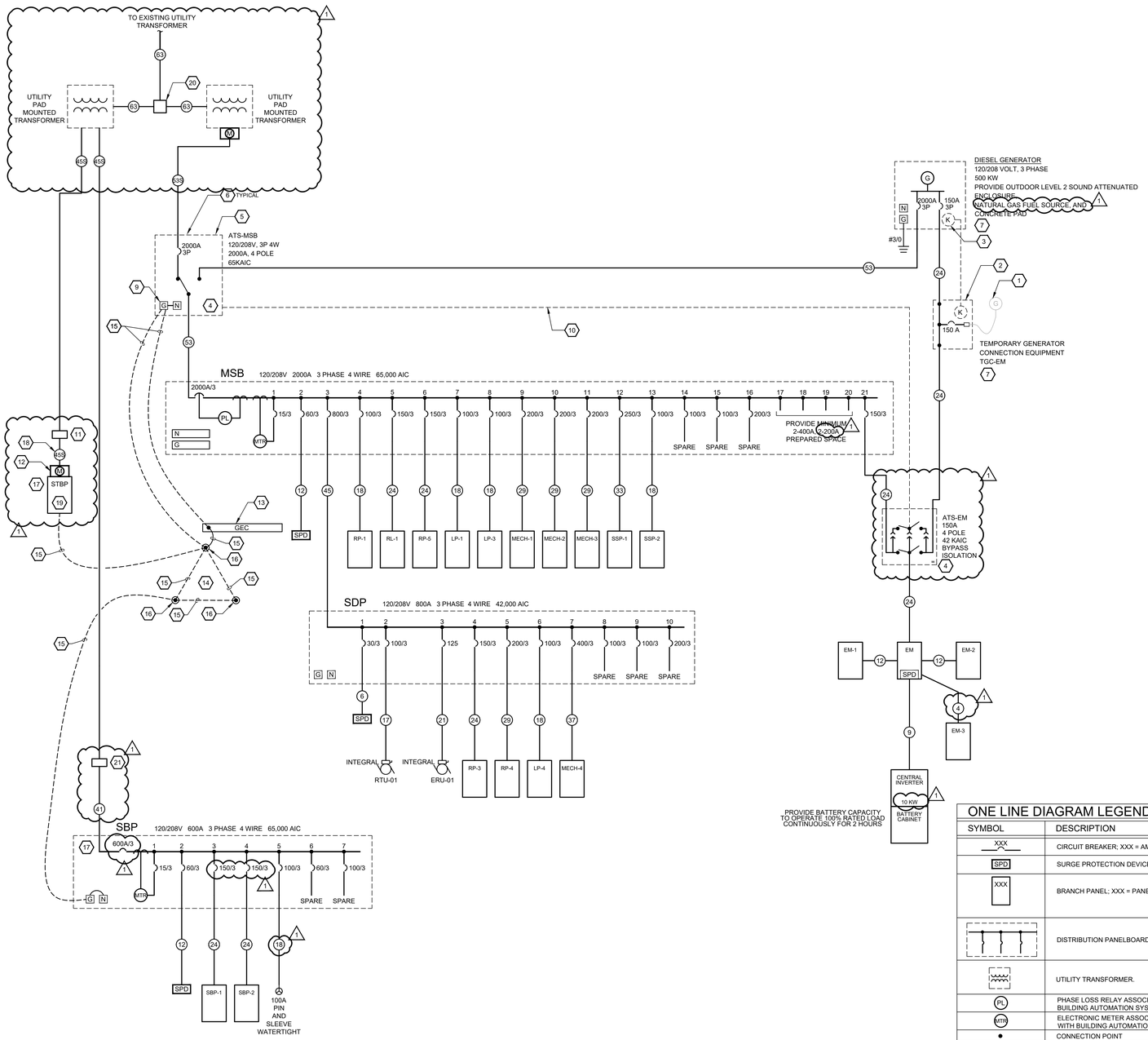
Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Electrical Panel Schedules

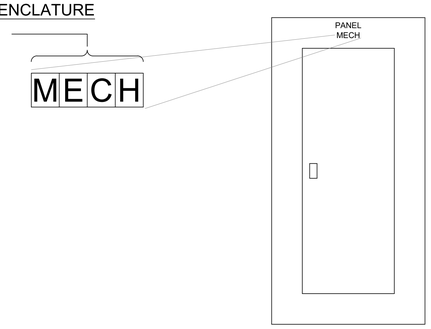
Project No. 22133

E603



ELECTRICAL PANEL NOMENCLATURE

DISTRIBUTION DESIGNATION:
- STBP - STORAGE BUILDING PANEL
- LP - LIGHTING PANEL
- RP - RECEPTACLE PANEL
- MECH - MECHANICAL EQUIPMENT PANEL
- EM - EMERGENCY PANEL
- SBP - SUPPORT BUILDING PANEL
- SSP - STORM SHELTER PANEL
- RL - RECEPTACLE AND LIGHTING PANEL



ONE LINE DIAGRAM LEGEND

SYMBOL	DESCRIPTION
XXX	CIRCUIT BREAKER; XXX = AMP RATING
SPD	SURGE PROTECTION DEVICE
XXX	BRANCH PANEL; XXX = PANEL NAME
	DISTRIBUTION PANELBOARD (I-LINE STYLE)
	UTILITY TRANSFORMER.
PL	PHASE LOSS RELAY ASSOCIATED WITH CIRCUIT BREAKER. INTERFACE WITH BUILDING AUTOMATION SYSTEM FOR STATUS.
MTR	ELECTRONIC METER ASSOCIATED WITH CIRCUIT BREAKER. INTERFACE METER WITH BUILDING AUTOMATION SYSTEM.
	CONNECTION POINT
N	NEUTRAL BUSS WITHIN EQUIPMENT
G	GROUND BUSS WITHIN EQUIPMENT
GEC	SINGLE POINT GROUND BAR
	GROUND ROD. 10' LONG, 3/4" DIAMETER, COPPER CLAD.
#	FEEDER SIZE IDENTIFIER. # INDICATED FEEDER IDENTIFICATION, REFER TO ONE-LINE DIAGRAM FEEDER SCHEDULE FOR FEEDER SIZING.
	AUTOMATIC TRANSFER SWITCH WITH BYPASS ISOLATION. RATINGS AS INDICATED WHERE EQUIPMENT IS SHOWN. INTERFACE AUTOMATIC TRANSFER SWITCH WITH BUILDING AUTOMATION SYSTEM.
XXXA 2xP	AUTOMATIC TRANSFER SWITCH WITH OVERCURRENT PROTECTION DEVICE ON UTILITY POWER SOURCE. RATINGS AS INDICATED WHERE EQUIPMENT IS SHOWN. INTERFACE AUTOMATIC TRANSFER SWITCH WITH BUILDING AUTOMATION SYSTEM.
XXX A	TEMPORARY GENERATOR CONNECTION / DOCKING STATION. OVERCURRENT PROTECTION AS INDICATED.
G	EMERGENCY POWER GENERATOR WITH DUAL OUTPUT CIRCUIT BREAKERS. RATINGS AS INDICATED WHERE EQUIPMENT IS SHOWN.
	DISCONNECT SWITCH (SIZE/FUSING/POLES/NEMA - OPTIONAL)
	MOTOR
	EQUIPMENT AS IDENTIFIED WHERE SHOWN.
	SPECIAL RECEPTACLE AS IDENTIFIED.

ELECTRICAL ONE-LINE DIAGRAM FEEDER SCHEDULE

TAG	DESCRIPTION (COPPER FEEDER REQUIREMENTS)
1	15 OR 20 AMP 2-WIRE CIRCUIT (2#12, 1#12G, 3/4"C)
2	15 OR 20 AMP 3-WIRE CIRCUIT (3#12, 1#12G, 3/4"C)
3	15 OR 20 AMP 4-WIRE CIRCUIT (4#12, 1#12G, 3/4"C)
4	30 AMP 2-WIRE CIRCUIT (2#10, 1#10G, 3/4"C)
5	30 AMP 3-WIRE CIRCUIT (3#10, 1#10G, 3/4"C)
6	30 AMP 4-WIRE CIRCUIT (4#10, 1#10G, 3/4"C)
7	40 OR 50 AMP 2-WIRE CIRCUIT (2#8, 1#10G, 3/4"C)
8	40 OR 50 AMP 3-WIRE CIRCUIT (3#8, 1#10G, 3/4"C)
9	40 OR 50 AMP 4-WIRE CIRCUIT (4#8, 1#10G, 1"C)
10	60 AMP 2-WIRE CIRCUIT (2#6, 1#10G, 3/4"C)
11	60 AMP 3-WIRE CIRCUIT (3#6, 1#10G, 1"C)
12	60 AMP 4-WIRE CIRCUIT (4#6, 1#10G, 1"C)
13	70 OR 80 AMP 2-WIRE CIRCUIT (2#4, 1#8G, 1"C)
14	70 OR 80 AMP 3-WIRE CIRCUIT (3#4, 1#8G, 1-1/4"C)
15	70 OR 80 AMP 4-WIRE CIRCUIT (4#4, 1#8G, 1-1/4"C)
16	90 OR 100 AMP 2-WIRE CIRCUIT (2#1, 1#8G, 1"C)
17	90 OR 100 AMP 3-WIRE CIRCUIT (3#1 1#8G, 1-1/4"C)
18	90 OR 100 AMP 4-WIRE CIRCUIT (4#1, 1#8G, 1-1/4"C)
19	110 AMP 3-WIRE CIRCUIT (3#2, 1#6G, 1-1/4"C)
20	110 AMP 4-WIRE CIRCUIT (4#2, 1#6G, 1-1/2"C)
21	125 AMP 3-WIRE CIRCUIT (3#1, 1#6G, 1-1/4"C)
22	125 AMP 4-WIRE CIRCUIT (4#1, 1#6G, 1-1/2"C)
23	150 AMP 3-WIRE CIRCUIT (3#1/0, 1#6G, 1-1/4"C)
24	150 AMP 4-WIRE CIRCUIT (4#1/0, 1#6G, 2"C)
25	175 AMP 3-WIRE CIRCUIT (3#2/0, 1#6G, 2"C)
26	175 AMP 4-WIRE CIRCUIT (4#2/0, 1#6G, 2"C)
27	200 AMP 2-WIRE CIRCUIT (2#3/0, 1#6G, 2"C)
28	200 AMP 3-WIRE CIRCUIT (3#3/0, 1#6G, 2"C)
29	200 AMP 4-WIRE CIRCUIT (4#3/0, 1#6G, 2"C)
30	225 AMP 3-WIRE CIRCUIT (3#4/0, 1#4G, 2-1/2"C)
31	225 AMP 4-WIRE CIRCUIT (4#4/0, 1#4G, 2-1/2"C)
32	250 AMP 3-WIRE CIRCUIT (3#250, 1#4G, 2-1/2"C)
33	250 AMP 4-WIRE CIRCUIT (4#250, 1#4G, 2-1/2"C)
34	300 AMP 3-WIRE CIRCUIT (3#350, 1#4G, 3"C)
35	300 AMP 4-WIRE CIRCUIT (4#350, 1#4G, 3"C)
36	400 AMP 3-WIRE CIRCUIT (3#500, 1#3G, 3-1/2"C)
37	400 AMP 4-WIRE CIRCUIT (4#500, 1#3G, 3-1/2"C)
37S	400 AMP 4-WIRE SERVICE (4#500, 3-1/2"C)
38	500 AMP 3-WIRE CIRCUIT (2 SETS[3#250, 1#2G, 2-1/2"C])
39	500 AMP 4-WIRE CIRCUIT (2 SETS[4#250, 1#2G, 2-1/2"C])
40	600 AMP 3-WIRE CIRCUIT (2 SETS[3#350, 1#1G, 3"C])
41	600 AMP 4-WIRE CIRCUIT (2 SETS[4#350, 1#1G, 3"C])
42	700 AMP 3-WIRE CIRCUIT (2 SETS[3#500, 1#1/0G, 3-1/2"C])
43	700 AMP 4-WIRE CIRCUIT (2 SETS[4#500, 1#1/0G, 3-1/2"C])
44	800 AMP 3-WIRE CIRCUIT (2 SETS[3#500, 1#1/0G, 3-1/2"C])
45	800 AMP 4-WIRE CIRCUIT (2 SETS[4#500, 1#1/0G, 3-1/2"C])
45S	ONE (1) 3" EMPTY CONDUITS WITH PULL STRINGS
46	1000 AMP 3-WIRE CIRCUIT (3 SETS[3#500, 1#2/0G, 3-1/2"C])
47	1000 AMP 4-WIRE CIRCUIT (3 SETS[4#500, 1#2/0G, 3-1/2"C])
48	1200 AMP 3-WIRE CIRCUIT (4 SETS[3#350, 1#3/0G, 3-1/2"C])
49	1200 AMP 4-WIRE CIRCUIT (4 SETS[4#350, 3-1/2"C])
50	1600 AMP 3-WIRE CIRCUIT (5 SETS[3#500, 1#4/0G, 3-1/2"C])
51	1600 AMP 4-WIRE CIRCUIT (5 SETS[4#500, 1#4/0G, 3-1/2"C])
52	2000 AMP 3-WIRE CIRCUIT (6 SETS[3#500, 1#350G, 3-1/2"C])
53	2000 AMP 4-WIRE CIRCUIT (6 SETS[4#500, 1#350G, 3-1/2"C])
53S	2000 AMP 4-WIRE SERVICE (6 SETS[4#500, 3-1/2"C])
54	2500 AMP 3-WIRE CIRCUIT (7 SETS[3#500, 1#350G, 3-1/2"C])
55	2500 AMP 4-WIRE CIRCUIT (7 SETS[4#500, 1#350G, 3-1/2"C])
56	3000 AMP 3-WIRE CIRCUIT (8 SETS[3#500, 1#400G, 3-1/2"C])
57	3000 AMP 4-WIRE CIRCUIT (8 SETS[4#500, 3-1/2"C])
58	3500 AMP 3-WIRE CIRCUIT (10 SETS[3#500, 1#500G, 3-1/2"C])
59	3500 AMP 4-WIRE CIRCUIT (10 SETS[4#500, 1#500G, 3-1/2"C])
60	4000 AMP 3-WIRE CIRCUIT (11 SETS[3#500, 1#500G, 3-1/2"C])
61	4000 AMP 4-WIRE CIRCUIT (11 SETS[4#500, 3-1/2"C])
62	1-1/2" EMPTY CONDUIT WITH PULL STRING
63	ONE (1) 4" EMPTY CONDUITS WITH PULL STRINGS
64	PROVIDE WIRING IN CONDUIT PER MANUFACTURER'S REQUIREMENTS
65	SDP:800 AMP 4-WIRE CIRCUIT (3 SETS[4#350, 1#3/0G, 3-1/2"C])

RISER DIAGRAM FEEDER SCHEDULE NOTES:
- ALL CONDUCTORS SHALL BE COPPER.

SHEET KEYNOTES:

1. TEMPORARY GENERATOR SHOWN FOR REFERENCE ONLY; NOT INCLUDED IN PROJECT PROCUREMENT.
2. PROVIDE GENERATOR DOCKING STATION WITH INTEGRAL KIRK KEY INTERLOCKED CIRCUIT BREAKER. TRYSTAR SINGLE BREAKER DOCKING STATION WITH KIRK KEY BREAKER OR APPROVED EQUAL. SEE SPECIFICATION SECTION 26 32 13 FOR MORE DETAILS. PROVIDE AUTOMATIC START SIGNAL CIRCUITING FROM ATS TO GENERATOR DOCKING STATION.
3. PROVIDE GENERATOR CIRCUIT BREAKER WITH KIRK KEY INTERLOCK. COORDINATE KEYS/LOCKS WITH GENERATOR DOCKING STATIONS AS SHOWN.
4. WCR RATING OF ATS TO BE VALID FROM THE NORMAL SUPPLY (MSB) AND EMERGENCY GENERATOR SUPPLY. CONTRACTOR TO COORDINATE BETWEEN SPECIFICATION SECTIONS 26 32 13 AND 26 24 13.
5. PROVIDE SERVICE ENTRANCE RATED AUTOMATIC TRANSFER SWITCH.
6. CONTRACTOR TO ADJUST CIRCUIT BREAKER SETTINGS BASED ON POWER SYSTEM STUDY (SPECIFICATION 26 05 73). NOTE APPLIES TO ALL ADJUSTABLE CIRCUIT BREAKERS IN PROJECT.
7. PROVIDE GENERATOR AND DOCKING STATION REMOTE ANNUCIATOR PANELS IN RECORDS ROOM 1051.
8. EACH SECONDARY IS TO BE SEPARATELY METER BY UTILITY, CONTRACTOR TO PROVIDE SUPPORT PEDESTAL AND CONDUIT IN ACCORDANCE WITH UTILITY REQUIREMENTS FOR EACH METER BASE.
9. SEE ELECTRICAL SYSTEM GROUNDING DETAIL SHEET E5.1 FOR GROUNDING AND BONDING REQUIREMENTS.
10. INTERLOCK AUTOMATIC TRANSFER SWITCH ATS-EM WITH ATS-MSB TO INHIBIT TRANSFER BACK TO NORMAL SOURCE POSITION WHILE MAIN SERVICE TRANSFER SWITCH IS CONNECTED TO THE EMERGENCY SOURCE.
11. POWER HAND HOLE, REFER TO SITE PLAN AND DETAIL SHEET.
12. ALTERNATE #1: UTILITY METER MOUNTED TO THE EXTERIOR OF THE STORAGE BUILDING. COORDINATE WITH UTILITY COMPANY FOR EXACT REQUIREMENTS.
13. PROVIDE SINGLE POINT GROUND BAR, 24" LONG X 4" WIDE X 1/4" PRE-DRILLED AT 2" FOR LUG ATTACHMENT.
14. PROVIDE GROUNDING ELECTRODE CONDUCTOR CONNECTIONS TO GROUNDING TRIAD. REFER TO SITE PLANS FOR GROUNDING TRIAD LOCATION. ALL GROUNDING ELECTRODE CONNECTIONS SHALL BE VIA NON-REVERSIBLE EXOTHERMIC WELDS.
15. #3/0 BARE COPPER GROUNDING ELECTRODE CONDUCTOR.
16. 3/4" X 10' COPPER CLAD GROUND ROD, SPACED 20' APART IN TRIANGULAR PATTERN. REFER TO SITE PLAN FOR EXACT LOCATION.
17. PROVIDE UPSIZE LUGS TO ACCOMMODATE FOR FEEDER (INCREASED FOR VOLTAGE DROP).
18. ALTERNATE #1: PROVIDE RACEWAY
19. ALTERNATE #1: PROVIDE PANEL IN STORAGE BUILDING.
20. UTILITY FURNISHED CONTRACTOR INSTALLED PULL BOX. SEE SITE PLAN FOR APPROXIMATE LOCATION AND MORE INFORMATION.
21. UTILITY FURNISHED CT CABINET AND METER, CONTRACTOR INSTALLED. SEE SITE PLAN FOR APPROXIMATE LOCATION AND MORE INFORMATION.

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Revisions: 1 2025.04.25 ADD 2
NUMBER DATE DESCRIPTION
Issue Date: March 28, 2025

Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Electrical One-Line

Project No. 22133

E601

RP-1

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	42	100	MLO	42	SURFACE

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	20	1	REC: LIEUTENANTS OFFICE 1121	1.1	1.8			0.7	REC: CONFERENCE ROOM 1116	20	1	2
3	20	1	REC: LIEUTENANTS OFFICE 1121	1.3		2.0		0.7	REC: ROLL CALL 1125	20	1	4
5	20	1	REC: LIEUTENANTS OFFICE 1121	0.9			1.6	0.7	REC: ROLL CALL 1125	20	1	6
7	20	1	REC: PATROL TOUCHDOWN AREA 1115	0.7	1.1			0.4	REC: PATROL ENTRY	20	1	8
9	20	1	REC: PATROL TOUCHDOWN AREA 1115	0.2		0.6		0.4	REC: PATROL ENTRY	20	1	10
11	20	1	REC: PATROL TOUCHDOWN AREA 1115	0.7			1.1	0.4	REC: PATROL ENTRY	20	1	12
13	20	1	REC: PATROL TOUCHDOWN AREA 1115	0.5	0.9			0.4	REC: PATROL ENTRY	20	1	14
15	20	1	REC: PATROL TOUCHDOWN AREA 1115	0.7		1.1		0.4	REC: PATROL ENTRY	20	1	16
17	20	1	REC: PATROL TOUCHDOWN AREA 1115	0.7			1.1	0.4	REC: PATROL ENTRY	20	1	18
19	20	1	REC: PATROL TOUCHDOWN AREA 1115	0.7	1.2			0.5	ACCESS CONTROL GATE	20	1	20
21	20	1	REC: OFFICE 1119	1.1		1.4		0.4	REC: OUTDOOR	20	1	22
23	20	1	REC: SAFETY OFFICERS OFFICE	1.3			1.6	0.4	REC: OUTDOOR	20	1	24
25	20	1	REC: SAFETY OFFICERS OFFICE	0.9	1.3			0.4	REC: OUTDOOR	20	1	26
27	20	1	REC: SERGEANTS OFFICE 1117	1.3		1.8		0.5	WATER FOUTAIN PUMP	20G	1	28
29	20	1	REC: SERGEANTS OFFICE 1117	1.3			1.8	0.5	ACCESS CONTROL GATE	20	1	30
31	20	1	REC: SERGEANTS OFFICE 1117	1.3	1.8			0.5	SPARE	20	1	32
33	20	1	REC: CONFERENCE ROOM 1116	0.7		1.2		0.5	SPARE	20	1	34
35	20	1	REC: PATROL TOUCHDOWN AREA 1115	0.7			1.2	0.5	SPARE	20	1	36
37	20	1	REC: PUBLIC SAFETY SUPERVISOR 1123	1.1	1.6			0.5	SPARE	20	1	38
39	20	1	REC: PATROL/OPS MAJOR OFFICE 1124	0.9		1.4		0.5	SPARE	20	1	40
41	20	1	REC: SERGEANTS OFFICE 1117	0.9			1.4	0.5	SPARE	20	1	42
			PHASE TOTALS:		9.6	9.5	9.8		TOTAL: 28.8	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
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RL-1

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	72	150	MLO	22	SURFACE

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	20	1	REC: DRONE STORAGE 1102	0.4	1.6			1.3	REC: COMMUNITY SERVICES	20	1	2
3	20	1	REC: COMMUNITY SERVICE STORAGE 1105	0.4		1.1		0.7	REC: COMMUNITY SERVICES	20	1	4
5	20G	1	REC: BREAKROOM/KITCHEN 1109	0.2			0.8	0.6	REC: COMMUNITY SERVICES	20	1	6
7	20G	1	REC: BREAKROOM/KITCHEN 1110	0.2	1.3			1.1	REC: BREAKROOM KITCHEN	20G	1	8
9	20	1	REC: ADMIN ASSISTANT	1.1		1.6		0.5	REC: REFRIGERATOR	20G	1	10
11	20	1	REC: RR 1089	0.4			0.9	0.5	REC: REFRIGERATOR	20G	1	12
13	20	1	REC: ADMIN COPY	0.5	0.7			0.2	REC: BREAKROOM KITCHEN	20	1	14
15	20	1	REC: ADMIN SUPPORT OFFICE	1.1		1.6		0.5	REC: DISHWASHER	20G	1	16
17	20	1	REC: ADMIN SUPPORT OFFICE	1.1			1.7	0.6	REC: BREAKROOM KITCHEN	20	1	18
19	20	1	REC: CHIEF OFFICE 1092	0.9	1.6			0.7	REC: COMMUNITY SERVICES	20	1	20
21	20	1	REC: CHIEF OFFICE 1092	0.7		1.4		0.7	LTS: RECORDS 1051, 1055, 1056	20	1	22
23	20	1	REC: CHIEF CONFERENCE	0.7			1.3	0.6	LTS: 1052, 1053, 1054	20	1	24
25	20	1	REC:ASSISTANT CHIEF	1.3	1.6			0.3	LTS: 1089,1090,1091	20	1	26
27	20	1	REC: OFFICE 1096	1.1		1.6		0.5	LTS: 1092, 1093,1094	20	1	28
29	20	1	REC: OFFICE 1097	1.1			1.5	0.4	LTS: OFFICE 1096, 1097, 1098	20	1	30
31	20	1	REC: OFFICE 1098	1.1	1.6			0.5	LTS: ADMIN CORR 1088	20	1	32
33	20	1	REC: ADMINISTRATION	0.4		0.7		0.3	LTS: 1100, 1101A, 1102	20	1	34
35	20	1	REC: ADMINISTRATION	0.4			0.9	0.5	LTS: 1105, OFFICE 1106, BRKRM 1109	20	1	36
37	20	1	REC: ADMINISTRATION	0.9	1.7			0.8	LTS: 1013 CORR	20	1	38
39	20	1	REC: DRONE STORAGE 1102	0.4		0.6		0.2	GARBAGE DISPOSAL	20	1	40
41	20	1	REC: DRONE STORAGE 1103	0.4			0.6	0.2	KEY SYSTEM	20	1	42
43	20G	1	REC: ICE MACHINE	0.5	1.5			1.0	FB: WORKSTAION 1052	20	1	44
45	20	1	REC: CORR 1013	0.5		1.4		0.9	REC: WORKSTATIONS	20	1	46
47	20	1	REC: RECORDS	1.1			2.2	1.1	REC: RECORDS MANAGER	20	1	48
49	20	1	REC: WORKSTATIONS	0.7	1.1			0.4	REC: FELONY RECORDS	20	1	50
51	20	1	REC: INTEL ANALYST	1.1		1.6		0.5	REC: RECORDS	20	1	52
53	20	1	REC: JUVENILE RECORDS	0.4			0.9	0.5	SPARE	20	1	54
55	20	1	REC: PRINTER	0.5	1.0			0.5	SPARE	20	1	56
57	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	58
59	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	60
61	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	62
63	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	64
65	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	66
67	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	68
69	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	70
71	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	72
			PHASE TOTALS:		15.7	14.5	13.7		TOTAL: 43.9	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

RP-3

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	72	150	MLO	22	SURFACE

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	20	1	REC: SPECIAL INVESTIGATIONS	1.1	2.2			1.1	REC: SPECIAL INVESTIGATIONS	20	1	2
3	20	1	REC: SPECIAL INVESTIGATIONS	0.4		0.8		0.4	REC: SPECIAL INVESTIGATIONS	20	1	4
5	20	1	REC:PRINTER	0.5			1.4	0.9	REC: SPECIAL INVESTIGATIONS	20	1	6
7	20	1	REC: SPECIAL INVESTIGATIONS	1.1	2.2			1.1	REC: SUPPORT SERVICES	20	1	8
9	20	1	REC: SUPPORT SERVICES	1.1		1.6		0.5	REC: JUVENILE HOLDING	20	1	10
11	20	1	REC: INTAKE OFFICE	0.7			1.1	0.4	REC: CORRIDOR & STORAGE	20	1	12
13	20	1	REC: JUVE. & CUST. RESTROOM	0.8	1.2			0.4	REC: CHARGING/EQUIPMENT	20	1	14
15	20	1	REC: CHARGING/EQUIPMENT	0.4		0.8		0.4	REC: CHARGING/EQUIPMENT	20	1	16
17	20	1	REC: CHARGING/EQUIPMENT	0.4			0.8	0.4	REC: CHARGING/EQUIPMENT	20	1	18
19	20	1	REC: INTERVIEW ROOM	0.9	1.3			0.4	REC: AXON ROOM	20	1	20
21	20	1	REC: INTERVEW ROOM	0.9		1.8		0.9	REC: INTERVIEW ROOM	20	1	22
23	20	1	REC: PRINTER	0.5			0.9	0.4	REC: CRIMINAL INVESTIGATIONS	20	1	24
25	20	1	REC: CRIMINAL INVESTIGATIONS	0.4	0.9			0.5	FB: CRIMINAL INVESTIGATIONS	20	1	26
27	20	1	FB: CRIMINAL INVESTIGATIONS	1.0		2.0		1.0	FB: CRIMINAL INVESTIGATIONS	20	1	28
29	20	1	REC: IDF ROOM 1031	0.5			1.0	0.5	REC: IDF ROOM 1031	20	1	30
31	20	1	REC: INTERVIEW ROOM	0.9	1.6			0.7	REC: POLYGRAPH ROOM	20	1	32
33	20	1	REC: RR AND WATER COOLER	1.0		1.7		0.7	REC: OPS BRIEFING ROOM	20	1	34
35	20	1	REC: OPS BRIEFING ROOM	0.5			1.6	1.1	REC: OFFICE 1040	20	1	36
37	20	1	REC: OFFICE 1041	1.1	2.0			0.9	REC: CORRIDOR & VESTIBULE	20	1	38
39	20	1	REC: MECH/WATER ROOM	0.7		1.1		0.4	REC: MECH/WATER ROOM	20	1	40
41	20	1	REC: MECH/WATER ROOM	0.4			0.7	0.4	REC: MECH/WATER ROOM	20	1	42
43	20	1	REC: IDF ROOM	0.4	1.4			1.1	REC: SOCIAL WORKER OFFICE	20	1	44
45	20	1	REC: SOFT INTERVIEW ROOM	0.7		1.6		0.9	REC: KIDS ROOM	20	1	46
47	20	1	REC: CONFERENCE ROOM	0.7			1.3	0.5	REC: SOCIAL WORK RECEPTION	20	1	48
49	20	1	REC: PRINTER	0.5	0.9			0.4	REC: SOCIAL WORK RECEPTION	20	1	50
51	20	1	REC: SOCIAL WORK RECEPTION	0.2		1.3		1.1	REC: SOCIAL WORKER OFFICE	20	1	52
53	20	1	REC: QUIET ROOM	0.5			1.6	1.1	REC: SPECIAL TASK FORCE	20	1	54
55	20	1	REC: STORAGE	0.5	1.0			0.5	REC: REFRIGERATOR	20G	1	56
57	20	1	REC: CRIMINAL INVESTIGATIONS	1.0		1.5		0.5	REC: 1031 IDF ROOM	20	1	58
59	20	1	SUMP PUMP	0.5			0.9	0.4	REC: CHARGING EQUIPMENT	20	1	60
61	20	1	SUMP PUMP	0.5	1.0			0.5	ACCESS GATE POWER	20	1	62
63	20	1	SUMP PUMP	0.5		1.0		0.5	BUILDING SIGNAGE	20	1	64
65	20	1	BUILDING SIGNAGE	0.5			1.0	0.5	REC: ROOF TOP	20	1	66
67	20	1	REC: ROOF TOP	0.5	1.0			0.5	REC: ROOF TOP	20	1	68
69	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	70
71	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	72
			PHASE TOTALS:		16.6	16.2	13.3		TOTAL: 46.1	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
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RP-4

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	72	200	MLO	22	SURFACE

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	20	1	REC: CORRIDOR	0.7	1.2			0.5	SPARE	20	1	2
3	20	1	REC: CONFERENCE ROOM	0.9		2.2		1.3	REC: PROF. STANDARDS OFFICE	20	1	4
5	20	1	REC: PROF. STANDARDS REC.	0.7			1.2	0.5	REC: PRINTER	20	1	6
7	20	1	REC: PROF. STANDARDS REC.	0.4	1.7			1.3	REC: PROF. STANDARDS OFFICE	20	1	8
9	20	1	REC: TRAINING OFFICE	1.3		1.8		0.5	REC: STORAGE 1009	20	1	10
11	20	1	REC: AV 1009A	0.4			1.1	0.7	REC: REPORT ROOM	20	1	12
13	20	1	REC: WATER COOLER	0.4	1.1			0.8	REC: RESTROOM	20	1	14
15	20	1	REC: COMM./TRAINING ROOM	0.4		1.1		0.7	REC: COMM./TRAINING ROOM	20	1	16
17	20	1	REC: COMM./TRAINING ROOM	0.7			1.1	0.4	REC: COMM./TRAINING ROOM	20	1	18
19	20	1	REC: FRIDGE TRAINING ROOM	0.5	0.7			0.2	REC: COMM./TRAINING ROOM	20	1	20
21	20	1	REC: COMM./TRAINING ROOM	0.2		0.4		0.2	REC: COMM./TRAINING ROOM	20	1	22
23	20	1	REC: COMM./TRAINING ROOM	0.2			0.5	0.4	REC: COMM./TRAINING ROOM	20	1	24
25	20	1	REC: COMPUTERS	0.4	0.9			0.5	REC: COMM./TRAINING ROOM	20	1	26
27	20	1	REC: FLOORBOX	0.4		1.1		0.7	REC: REPORT/SAFE ROOM	20	1	28
29	20	1	REC: FLOORBOX	0.4			1.1	0.7	REC: LOBBY	20	1	30
31	20	1	REC: FLOORBOX	0.4	0.9			0.5	DISPLAY WALL	20	1	32
33	20	1	REC: FLOORBOX	0.7		1.2		0.5	DISPLAY WALL	20	1	34
35	20	1	REC: FLOORBOX	0.4			0.9	0.5	DISPLAY WALL	20	1	36
37	20	1	REC: FLOORBOX	0.4	0.9			0.5	DISPLAY WALL	20	1	38
39	20	1	REC: FLOORBOX	0.4		0.9		0.5	DISPLAY WALL	20	1	40
41	20	1	ROLLER SHADES	0.7			1.2	0.5	ROLLER SHADES	20	1	42
43	20	1	REC: AV 1009A	0.5	1.0			0.5	REC: AV 1009A	20	1	44
45	20	1	REC: AV 1009A	0.5		1.0		0.5	SPARE	20	1	46
47	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	48
49	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	50
51	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	52
53	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	54
55	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	56
57	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	58
59	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	60
61	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	62
63	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	64
65	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	66
67	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	68
69	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	70
71	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	72
			PHASE TOTALS:		12.4	13.6	12.1		TOTAL: 38.1	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

RP-5

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	72	150	MLO	22	FLUSH

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	20	1	REC: CORRIDOR 1013	0.7	1.2			0.5	REC: K9 KENNEL 1073	20	1	2
3	20	1	REC: STUDY ROOM	0.7		1.2		0.5	REC: AMMO STORAGE	20	1	4
5	20	1	REC: STUDY ROOM	0.7			1.4	0.7	REC: SALLYPORT 1068	20	1	6
7	20	1	REC: QUIET/MOM ROOM	0.5	1.2			0.7	REC: ARMORY 1071	20	1	8
9	20G	1	REC: REFRIGERATOR	0.9		1.3		0.4	REC: GUN PREP/CLEANING	20	1	10
11	20	1	REC: QUIET/MOM RM COUNTER	0.4			0.8	0.4	REC: GUN PREP/CLEANING	20	1	12
13	20	1	REC: COLLISION RECONSTRUCTION	0.7	1.2			0.5	REC: GUN PREP/CLEANING	20	1	14
15	20	1	REC: COLLISION RECONSTRUCTION	0.5		1.6		1.1	REC: SALLYPORT 1068	20	1	16
17	20	1	REC: HOUSEKEEPING	0.2			0.6	0.4	REC: EVIDENCE INTAKE	20	1	18
19	20	1	REC: IDF ROOM	0.4	0.8			0.4	REC: EVIDENCE INTAKE	20	1	20
21	20	1	REC: QUARTER MASTER STORAGE	0.5		1.4		0.9	REC: DRYING CABINET	20	1	22
23	20	1	REC: QUARTER MASTER STORAGE	0.5			1.4	0.9	REC: DIGITAL FORENSICS	20	1	24
25	20	1	REC: LONG TERM STORAGE	0.7	1.6			0.9	REC: DIGITAL FORENSICS	20	1	26
27	20	1	REC: PROPERTY ROOM	0.5		0.9		0.4	REC: PROPERTY ROOM	20	1	28
29	20	1	REC: NIBIN 1081	0.4			0.8	0.4	REC: PROPERTY ROOM	20	1	30
31	20	1	REC: NIBIN 1081	0.4	1.1			0.7	REC: EVIDENCE TECH OFFICE	20	1	32
33	20	1	REC: NIBIN 1081	0.4		1.1		0.7	REC: EVIDENCE TECH OFFICE	20	1	34
35	20	1	REC: WEAPONS 1079	0.4			0.8	0.4	REC: CRIME SCENE	20	1	36
37	20	1	REC:DRUGS 1078	0.4	0.8			0.4	REC: CRIME SCENE	20	1	38
39	20	1	REC: HAZMAT 1077	0.4		0.9		0.5	REC: CHEMICAL CABINET	20G	1	40
41	20G	1	REC: REFRIGERATOR	0.9			1.9	1.0	REC: DRYING CABINET	20G	1	42
43	20G	1	REC: FREEZER	0.9	1.9			1.0	REC: DRYING CABINET	20G	1	44
45	20G	1	REC: REFRIGERATOR	1.0		1.7		0.7	REC: EVIDENCE TECH OFFICE	20	1	46
47	20	1	REC: ALS ROOM 1087	0.5			1.0	0.5	REC: PEDESTAL	20	1	48
49	20	1	REC: CORRIDOR 1057	0.7	1.2			0.5	REC: PEDESTAL	20	1	50
51	20	1	REC: EVIDENCE TECH OFFICE	0.7		1.2		0.5	REC: PEDESTAL	20	1	52
53	20	1	REC: PEDESTAL	0.5			1.0	0.5	REC: PEDESTAL	20	1	54
55	20	1	REC: PEDESTAL	0.5	1.0			0.5	REC: PEDESTAL	20	1	56
57	20	1	REC: PEDESTAL	0.5		1.0		0.5	REC: PEDESTAL	20	1	58
59	20	1	REC: CRIME SCENE	0.5			1.0	0.5	REC: CRIME SCENE	20	1	60
61	20	1	REC: ROOFTOP	0.5	1.0			0.5	REC: ROOF TOP	20	1	62
63	20G	1	REC: FUME CHAMBER	0.5		1.0		0.5	SPARE	20	1	64
65	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	66
67	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	68
69	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	70
71	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	72
			PHASE TOTALS:		14.0	14.4	12.7		TOTAL: 41.1	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

SSP-1

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	72	250	MLO	22	SURFACE

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	20	1	REC: SHELTER	1.2	1.8			0.6	LTS: 1132 - 1134	20	1	2
3	20	1	REC: SHELTER WASHER	0.2		0.7		0.5	LTS: 1129, 1013, 1136	20	1	4
5	20	1	SPARE	0.0			0.4	0.4	LTS: 1127A, 1127B, 1128	20	1	6
7	20	1	REC: MDF ROOM 1127B	0.2	1.6			1.4	HP-21	20	3	8
9	20	1	REC: MDF ROOM 1127B	0.2		1.6		1.4	-	-	-	10
11	20	1	REC: MDF ROOM 1127B	0.2			1.6	1.4	-	-	-	12
13	20	1	REC: MDF ROOM 1127B	0.2	1.4			1.2	HP-20	15	3	14
15	20	1	REC: MDF ROOM 1127B	0.2		1.4		1.2	-	-	-	16
17	20	1	REC: MDF ROOM 1127B	0.2			1.4	1.2	-	-	-	18
19	20	1	REC: FITNESS ROOM 1127A	0.6	0.7			0.1	RP-0-01	15	1	20
21	20	1	REC: FITNESS ROOM 1127A	0.1		4.2		4.1	EWH-0-01	60	3	22
23	20	1	REC: FITNESS ROOM 1127A	0.2			4.3	4.1	-	-	-	24
25	20	1	REC: FITNESS ROOM 1127A	0.2	4.3			4.1	-	-	-	26
27	20	1	REC: FITNESS ROOM 1127A	0.2		0.7		0.5	SPARE	20	1	28
29	20	1	REC: FITNESS ROOM 1127A	0.2			0.7	0.5	SPARE	20	1	30
31	20	1	REC: FITNESS ROOM 1127A	0.2	1.4			1.2	HP-22	20	2	32
33	20	2	REC: SHELTER DRYER	2.5		3.7		1.2	-	-	-	34
35	-	-	-	2.5			3.0	0.5	SPARE	20	1	36
37	20	1	AUTO VALVES 1132, 1134	0.8	1.3			0.5	STORM DOOR	20	1	38
39	20	1	ETP-0-04	0.1		0.6		0.5	STORM DOOR	20	1	40
41	15	3	SPARE	0.5			1.0	0.5	SPARE	20	1	42
43	-	-	-	0.5	1.0			0.5	SPARE	20	1	44
45	-	-	-	0.5		1.0		0.5	SPARE	20	1	46
47	20	3	SPARE	0.5			1.0	0.5	SPARE	20	1	48
49	-	-	-	0.5	1.0			0.5	SPARE	20	1	50
51	-	-	-	0.5		1.0		0.5	SPARE	20	1	52
53	20	2	SPARE	0.5			1.0	0.5	SPARE	20	1	54
55	-	-	-	0.5	1.0			0.5	SPARE	20	1	56
57	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	58
59	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	60
61	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	62
63	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	64
65	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	66
67	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	68
69	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	70
71	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	72
			PHASE TOTALS:		17.6	18.1	17.5		TOTAL: 53.2	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
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INV

BRANCH CIRCUIT PANELBOARD - INTEGRAL TO INVERTER

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	12	35	MCB-S	22	SURFACE

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	20	1	LTS: SS - NORTH	0.5	1.5			1.0	ISF/IEF-01	20	1	2
3	20	1	LTS: SS - SOUTH	0.5		1.5		1.0	ISF/IEF-02	20	1	4
5	20	1	SPARE	0.2			0.4	0.2	SPARE	20	1	6
7	20	1	SPARE	0.2	0.4			0.2	SPARE	20	1	8
9	20	1	SPARE	0.2		0.4		0.2	SPARE	20	1	10
11	20	1	SPARE	0.2			0.4	0.2	SPARE	20	1	12
			PHASE TOTALS:		2.9	2.9	1.8		TOTAL: 7.6	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

LP-1

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	30	100	MLO	42	SURFACE

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	20	1	LTS: 1121 - 1125	0.8	1.1			0.3	LTS: COVERED PARKING	20	1	2
3	20	1	LTS: 1116 - 1119	0.7		1.0		0.3	LTS: PARKING	20	1	4
5	20	1	LTS: 1115, PATROL AREA	0.7			1.2	0.5	LTS: PARKING LOT	20	1	6
7	20	1	LTS: PARKING LOT	0.5	1.0			0.5	SPARE	20	1	8
9	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	10
11	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	12
13	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	14
15	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	16
17	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	18
19	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	20
21	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	22
23	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	24
25	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	26
27	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	28
			PHASE TOTALS:		5.1	5.0	4.2		TOTAL: 14.3	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
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LP-3

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	30	100	MLO	22	FLUSH

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	20	1	LTS: 1068 SALLYPORT	1.0	1.3			0.3	LTS: 1077 - 1081	20	1	2
3	20	1	LTS: 1069, 1070, 1071, 1072, 1073	0.5		0.7		0.2	LTS: CORR 1057, 1063	20	1	4
5	20	1	LTS: 1074, 1084	0.7			1.6	0.9	REC: REFRIGERATOR	20G	1	6
7	20	1	LTS: PROPERTY RM 1076	1.4	1.6			0.2	REC: CRIME SCENE	20	1	8
9	20	1	LTS: 1085, 1086	0.5		0.9		0.4	REC: CRIME SCENE	20	1	10
11	20	1	LTS: 1103, 1104, 1107, 1111-114	0.7			1.1	0.4	REC: CRIME SCENE	20	1	12
13	20	1	REC: CRIME SCENE	0.5	1.0			0.5	SPARE	20	1	14
15	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	16
17	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	18
19	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	20
21	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	22
23	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	24
25	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	26
27	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	28
29	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	30
			PHASE TOTALS:		6.0	4.6	5.6		TOTAL: 16.2	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
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2.

LP-4

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	30	100	MLO	22	SURFACE

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	20	1	LTS: LOBBY 1002	0.9	1.0			0.1	LTS: ENTRANCE AWNING	20	1	2
3	20	1	LTS: 1003, 1004, 1007, 1008	0.5		0.8		0.3	LTS: 1059-1062, 1065	20	1	4
5	20	1	LTS: 1033, 1034, 1035	0.5			1.1	0.6	LTS: OFF. 1040-1046	20	1	6
7	20	1	LTS: 1006 BACK	0.9	1.6			0.7	LTS: INVESTIGATIONS 1037	20	1	8
9	20	1	LTS: 1009, 1010, 1014,	0.3		0.6		0.3	LTS: 1038, 1039	20	1	10
11	20	1	LTS: 1015-1018	0.5			1.0	0.5	LTS: 1048, 1049, 1050, 1058	20	1	12
13	20	1	LTS: 1020,1022, 1024, 1026, 1028	0.5	1.0			0.5	LTS: OUTDOOR SIGNAGE	20	1	14
15	20	1	LTS: 1021, 1023, 1025, 1027	0.5		0.9		0.4	LTS: MAIN ENTRANCE LOWER CANOPY	20	1	16
17	20	1	LTS: 1029 MECH RM	0.3			1.1	0.8	LTS: SITE LIGHTING	20	1	18
19	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	20
21	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	22
23	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	24
25	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	26
27	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	28
29	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	30
			PHASE TOTALS:		5.6	4.3	5.2		TOTAL: 15.0	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
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EM

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	30	150	MCB	42	SURFACE

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	20	1	LTS: 1076-1086 PROP RM	0.5	1.0			0.5	LTS: 1068-1073 SALLYPORT	20	1	2
3	20	1	LTS: 1115-1125 PATROL	0.5		1.0		0.5	GENERATOR BLOCK HEATER	30	2	4
5	30	3	EM-1	2.0			2.5	0.5	-	-	-	6
7	-	-	-	2.0	2.5			0.5	GENERATOR ENCLOSURE HEATER	20	2	8
9	-	-	-	2.0		2.5		0.5	-	-	-	10
11	30	3	EM-2	2.0			2.5	0.5	GENERATOR BATTERY CHARGER	20	1	12
13	-	-	-	2.0	2.5			0.5	REC: GENERATOR	20	1	14
15	-	-	-	2.0		2.5		0.5	REC: TDS-EM	20	1	16
17	30	3	EM-3	2.0			2.5	0.5	REC: TDS-EM	20G	1	18
19	-	-	-	2.0	2.5			0.5	SPARE	20	1	20
21	-	-	-	2.0		2.5		0.5	SPARE	20	1	22
23	35	3	INV	2.5			3.0	0.5	SPARE	20	1	24
25	-	-	-	2.5	3.0			0.5	SURGE PROTECTION DEVICE	30	3	26
27	-	-	-	2.5		3.0		0.5	-	-	-	28
29	20	1	SPARE	0.5			1.0	0.5	-	-	-	30
			PHASE TOTALS:		11.5	11.5	11.5		TOTAL: 34.5	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
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2.

EM-1

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	12	30	MLO	22	SURFACE

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	20	1	LTS: 1051-1056	0.5	1.0			0.5	LTS: CORR 1088, OFFICE 1106	20	1	2
3	20	1	LTS: 1013 CORR	0.5		1.0		0.5	SPARE	20	1	4
5	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	6
7	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	8
9	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	10
11	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	12
			PHASE TOTALS:		2.0	2.0	2.0		TOTAL: 6.0	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
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EM-2

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	12	30	MLO	22	FLUSH

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	2
3	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	4
5	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	6
7	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	8
9	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	10
11	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	12
			PHASE TOTALS:		2.0	2.0	2.0		TOTAL: 6.0	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
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EM-3

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	12	30	MLO	22	SURFACE

POLE	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE
NO.	TRIP	P		KVA	A	B	C	KVA		TRIP	P	NO.
1	20	1	LTS: 1038-1067, CRIMINAL INVEST	0.5	1.0			0.5	LTS: 1015-1035, SPEC. INVEST.	20	1	2
3	20	1	LTS: 1006 TRAINING	0.5		1.0		0.5	LTS: 1002 LOBBY, RR	20	1	4
5	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	6
7	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	8
9	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	10
11	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	12
			PHASE TOTALS:		2.0	2.0	2.0		TOTAL: 6.0	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
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Revisions:	NUMBER	DATE	DESCRIPTION
	1	2025.04.25	ADD 2

Issue Date: March 28, 2025

Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Electrical Panel Schedules

Project No.
22133

E602

MECH-1

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	42	200	MLO	42	SURFACE

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	35	3	HP-18	2.6	4.0			1.4	HP-19	20	3	2
3	-	-	-	2.6		4.0		1.4	-	-	-	4
5	-	-	-	2.6			4.0	1.4	-	-	-	6
7	30	3	HP-17	2.3	2.8			0.5	SPARE	30	3	8
9	-	-	-	2.3		2.8		0.5	-	-	-	10
11	-	-	-	2.3			2.8	0.5	-	-	-	12
13	20	2	SPARE	0.5	1.0			0.5	SPARE	35	3	14
15	-	-	-	0.5		1.0		0.5	-	-	-	16
17	20	2	SPARE	0.5			1.0	0.5	-	-	-	18
19	-	-	-	0.5	1.0			0.5	SPARE	20	1	20
21	20	3	SPARE	0.5		1.0		0.5	SPARE	20	1	22
23	-	-	-	0.5			1.0	0.5	SPARE	20	1	24
25	-	-	-	0.5	1.0			0.5	SPARE	20	1	26
27	25	3	SPARE	0.5		1.0		0.5	SPARE	20	1	28
29	-	-	-	0.5			1.0	0.5	SPARE	20	1	30
31	-	-	-	0.5	1.0			0.5	SPARE	20	1	32
33	30	3	SPARE	0.5		1.0		0.5	SPARE	20	1	34
35	-	-	-	0.5			1.0	0.5	SPARE	20	1	36
37	-	-	-	0.5	1.0			0.5	SPARE	20	1	38
39	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	40
41	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	42
			PHASE TOTALS:		11.9	11.8	11.9		TOTAL: 35.6	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
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2.

MECH-2

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	42	200	MLO	22	SURFACE

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	20	3	HP-15	1.4	3.1			1.7	HP-14	25	3	2
3	-	-	-	1.4		3.1		1.7	-	-	-	4
5	-	-	-	1.4			3.1	1.7	-	-	-	6
7	20	3	HP-13	1.4	3.1			1.7	HP-09	25	3	8
9	-	-	-	1.4		3.1		1.7	-	-	-	10
11	-	-	-	1.4			3.1	1.7	-	-	-	12
13	20	2	SPARE	0.5	1.0			0.5	SPARE	30	3	14
15	-	-	-	0.5		1.0		0.5	-	-	-	16
17	25	2	SPARE	0.5			1.0	0.5	-	-	-	18
19	-	-	-	0.5	1.0			0.5	SPARE	30	3	20
21	20	3	SPARE	0.5		1.0		0.5	-	-	-	22
23	-	-	-	0.5			1.0	0.5	-	-	-	24
25	-	-	-	0.5	1.0			0.5	SPARE	35	3	26
27	25	3	SPARE	0.5		1.0		0.5	-	-	-	28
29	-	-	-	0.5			1.0	0.5	-	-	-	30
31	-	-	-	0.5	1.0			0.5	SPARE	20	1	32
33	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	34
35	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	36
37	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	38
39	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	40
41	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	42
			PHASE TOTALS:		11.3	11.2	11.2		TOTAL: 33.7	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

MECH-3

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	42	200	MLO	22	FLUSH

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	15	2	CU-1	0.8	2.5			1.7	HP-16	25	3	2
3	-	-	-	0.8		2.5		1.7	-	-	-	4
5	20	2	CU-2	1.1			2.8	1.7	-	-	-	6
7	-	-	-	1.1	2.6			1.5	HP-12	25	2	8
9	20	1	EF-0-01	1.2		2.6		1.5	-	-	-	10
11	15	1	GUH-0-01	0.1			2.4	2.3	HP-11	30	3	12
13	15	1	GUH-0-02	0.1	2.4			2.3	-	-	-	14
15	15	2	HP-10	0.7		3.1		2.3	-	-	-	16
17	-	-	-	0.7			1.2	0.5	DECON WASHER	20	3	18
19	20	2	DECON DRYER	0.5	1.0			0.5	-	-	-	20
21	-	-	-	0.5		1.0		0.5	-	-	-	22
23	20	1	OHD: SALLYPORT	0.5			1.0	0.5	SPARE	20	3	24
25	20	1	OHD: SALLYPORT	0.5	1.0			0.5	-	-	-	26
27	15	1	EF-0-08	0.3		0.8		0.5	-	-	-	28
29	15	1	EF-0-09	0.6			1.1	0.5	SPARE	25	3	30
31	20	2	SPARE	0.5	1.0			0.5	-	-	-	32
33	-	-	-	0.5		1.0		0.5	-	-	-	34
35	20	2	SPARE	0.5			1.0	0.5	SPARE	30	3	36
37	-	-	-	0.5	1.0			0.5	-	-	-	38
39	15	2	SPARE	0.5		1.0		0.5	-	-	-	40
41	-	-	-	0.5			1.0	0.5	SPARE	20	1	42
			PHASE TOTALS:		11.5	12.0	10.6		TOTAL: 34.1	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

MECH-4

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	54	400	MLO	22	SURFACE

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	15	2	CU-03	0.8	3.8			3.0	P-01	50	3	2
3	-	-	-	0.8		3.8		3.0	-	-	-	4
5	50	3	P-01A	3.0			6.1	3.0	-	-	-	6
7	-	-	-	3.0	3.5			0.5	GWH-0-01	20	1	8
9	-	-	-	3.0		3.5		0.5	GWH-0-02	20	1	10
11	20	3	HP-05	1.4			1.9	0.5	HVAC CONTROL PANEL	20	1	12
13	-	-	-	1.4	2.7			1.2	HP-07	20	2	14
15	-	-	-	1.4		2.7		1.2	-	-	-	16
17	30	3	HP-06	2.3			4.0	1.7	HP-04	25	3	18
19	-	-	-	2.3	4.0			1.7	-	-	-	20
21	-	-	-	2.3		4.0		1.7	-	-	-	22
23	15	2	HP-08	0.8			2.2	1.4	HP-03	20	3	24
25	-	-	-	0.8	2.2			1.4	-	-	-	26
27	30	3	HP-02	2.3		3.8		1.4	-	-	-	28
29	-	-	-	2.3			4.9	2.6	HP-01	35	3	30
31	-	-	-	2.3	4.9			2.6	-	-	-	32
33	15	2	SPARE	0.5		3.1		2.6	-	-	-	34
35	-	-	-	0.5			1.0	0.5	SPARE	25	3	36
37	20	1	AIR COMPRESSOR	0.5	1.0			0.5	-	-	-	38
39	20	1	ALARM BELL	0.5		1.0		0.5	-	-	-	40
41	25	2	SPARE	0.5			1.0	0.5	SPARE	30	3	42
43	-	-	-	0.5	1.0			0.5	-	-	-	44
45	15	3	EUH-0-01	0.7		1.2		0.5	-	-	-	46
47	-	-	-	0.7			1.2	0.5	SPARE	20	3	48
49	-	-	-	0.7	1.2			0.5	-	-	-	50
51	20	1	ETP-0-02	0.1		0.6		0.5	-	-	-	52
53	20	1	ETP-0-03	0.1			0.2	0.1	ETP-0-01	20	1	54
			PHASE TOTALS:		24.4	23.7	22.6		TOTAL: 70.7	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

SBP-1

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	54	150	MLO	22	SURFACE

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	20	1	REC: IDF ROOM 214	0.4	0.8			0.4	REC: IDF ROOM 214	20	1	2
3	20	1	REC: IDF ROOM 214	0.4		0.8		0.4	REC: IDF ROOM 214	20	1	4
5	20	1	REC: IDF ROOM 214	0.4			0.8	0.4	REC: IDF ROOM 214	20	1	6
7	20	1	REC: BIKE OFFICE PRINTER	0.2	0.9			0.7	REC: BIKE OFFICE GEN 213	20	1	8
9	20	1	REC: BIKE OFFICE CONTER	0.4		1.1		0.7	REC: BIKE OFFICE GEN 213	20	1	10
11	20	1	REC: BIKE OFFICE CONTER	0.4			1.1	0.7	REC: BIKE OFFICE GEN 213	20	1	12
13	20	1	FB: BIKE OFFICE	0.5	1.2			0.7	REC: BIKE OFFICE GEN 213	20	1	14
15	20	1	REC: BIKE OFFICE GEN	0.5		1.0		0.5	REC: BIKE ROOM CORR 211	20	1	16
17	20	1	REC: EVIDENCE COUNTER 212	0.2			0.6	0.4	REC: BIKE ROOM GEN 211	20	1	18
19	20	1	REC: EVIDENCE COUNTER 212	0.2	0.6			0.4	REC: BIKE ROOM GEN 211	20	1	20
21	20	1	REC: EVIDENCE COUNTER 212	0.2		0.6		0.4	REC: BIKE ROOM GEN 211	20	1	22
23	20	1	REC: EVIDENCE 212	0.4			0.8	0.4	REC: BIKE ROOM GEN 211	20	1	24
25	20	1	REC: EVIDENCE 212	0.4	1.1			0.7	REC: SWAT STORAGE	20	1	26
27	20	1	REC: EVIDENCE 212	0.4		0.9		0.5	REC: TOOL ROOM 215	20	1	28
29	20	1	REC: EVIDENCE 212	0.4			0.9	0.5	REC: TOOL ROOM 215	20	1	30
31	20	1	REC: BIKE STORAGE 208	0.7	1.4			0.7	REC: TOOL ROOM 215	20	1	32
33	20	1	REC: RR 209	0.5		1.0		0.5	REC: RR 206, LOCKER 204	20	1	34
35	20G	1	REC: WATER FOUNTAIN 210	0.2			0.7	0.5	REC: RR 205, LOCKER 204	20	1	36
37	20G	1	REC: ICE MACHINE	0.2	0.7			0.5	REC: CORD REEL 200	20	1	38
39	20	1	REC: BAYS 200	0.9		1.4		0.5	REC: CORD REEL 200	20	1	40
41	20	1	REC: BAYS 200	0.7			1.2	0.5	REC: CORD REEL 200	20	1	42
43	20	1	SPARE	0.5	1.0			0.5	REC: CORD REEL 200	20	1	44
45	20	1	SITE CIRCUIT	0.5		1.0		0.5	REC: CORD REEL 200	20	1	46
47	20	1	SITE LIGHTING	0.6			1.1	0.5	SITE CIRCUIT	20	1	48
49	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	50
51	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	52
53	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	54
			PHASE TOTALS:		8.7	8.8	8.2		TOTAL: 25.7	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

SBP-2

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	54	150	MLO	22	SURFACE

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	15	1	EF-1-04	0.2	0.6			0.4	REC: SIMS BAY 202	20	1	2
3	20	1	REC: SIMS BAY 202	0.5		0.9		0.4	REC: SIMS BAY 202	20	1	4
5	20	1	REC: SIMS BAY 202	0.5			0.9	0.4	REC: SIMS BAY 202	20	1	6
7	20	1	REC: TACTICAL RM 201	0.7	1.1			0.4	REC: SIMS BAY 202	20	1	8
9	20	1	REC: TACTICAL RM 201	0.7		1.2		0.5	REC: MEZZ 216	20	1	10
11	20	1	REC: MEZZ WALKWAY	0.5			1.0	0.5	REC: MEZZ GEN 216	20	1	12
13	20	3	AHU-01	1.0	2.0			1.0	AHU-02	20	3	14
15	-	-	-	1.0		2.0		1.0	-	-	-	16
17	-	-	-	1.0			2.0	1.0	-	-	-	18
19	20	1	REC: MEZZ GEN 216	0.5	1.0			0.5	RP-1-01	20	1	20
21	20	1	GWH-1-01	0.5		1.0		0.5	ETP-1-03	20	1	22
23	20	1	LTS: BIKE OFFICE 213	0.4			0.7	0.3	LTS: EVIDENCE 212	20	1	24
25	20	1	LTS: LOCKER RM 204, 205, 206	0.3	0.8			0.5	LTS: TACT 201, SIMS BAY 202	20	1	26
27	20	1	LTS: 207, 208, 209, 210, 215	0.4		0.7		0.3	LTS: BIKE PATROL 211	20	1	28
29	20	1	LTS: MEZZ 216	0.6			0.7	0.1	LTS: EVIDENCE BAY 212	20	1	30
31	20	1	ALARM BELL	0.5	1.0			0.5	OHD: SALLYPORT	20	1	32
33	20	1	OHD: SALLYPORT	0.5		1.0		0.5	OHD: SALLYPORT	20	1	34
35	20	1	OHD: SALLYPORT	0.5			1.0	0.5	OHD: SALLYPORT	20	1	36
37	20	1	OHD: SALLYPORT	0.5	4.2			3.7	OU-02	50	3	38
39	50	3	OU-01	3.7		4.2		0.5	-	-	-	40
41	-	-	-	3.7			4.2	0.5	-	-	-	42
43	-	-	-	3.7	3.9			0.2	SPARE	20	1	44
45	20	1	SPARE	0.2		0.4		0.2	SPARE	20	1	46
47	20	1	SPARE	0.2			0.4	0.2	SPARE	20	1	48
49	20	1	SPARE	0.2	0.4			0.2	SPARE	20	1	50
51	20	1	SPARE	0.2		0.4		0.2	SPARE	20	1	52
53	20	1	SPARE	0.2			0.4	0.2	SPARE	20	1	54
			PHASE TOTALS:		15.0	11.8	11.3		TOTAL: 38.2	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

SSP-2

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	30	100	MLO	22	SURFACE

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	20	1	REC: LOCKER	0.9	1.8			0.9	REC: LOCKER	20	1	2
3	20	1	REC: LOCKER	0.9		1.8		0.9	REC: LOCKER	20	1	4
5	20	1	REC: LOCKER	0.9			1.8	0.9	REC: LOCKER	20	1	6
7	20	1	REC: LOCKER	0.9	1.8			0.9	REC: LOCKER	20	1	8
9	20	1	REC: LOCKER	0.9		1.8		0.9	REC: LOCKER	20	1	10
11	20	1	REC: LOCKER	0.9			1.8	0.9	REC: LOCKER	20	1	12
13	20	1	REC: LOCKER	0.9	1.8			0.9	REC: LOCKER	20	1	14
15	20	1	REC: LOCKER	0.9		1.8		0.9	REC: LOCKER	20	1	16
17	20	1	REC: LOCKER	0.9			1.8	0.9	REC: LOCKER	20	1	18
19	20	1	REC: LOCKER	0.9	1.4			0.5	SPARE	20	1	20
21	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	22
23	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	24
25	20	1	SPARE	0.5	1.0			0.5	SPARE	20	1	26
27	20	1	SPARE	0.5		1.0		0.5	SPARE	20	1	28
29	20	1	SPARE	0.5			1.0	0.5	SPARE	20	1	30
			PHASE TOTALS:		7.8	7.4	7.4		TOTAL: 22.6	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

STBP

BRANCH CIRCUIT PANELBOARD

VOLTAGE	3 PHASE	POLES	MAIN AMPS	MAIN TYPE	MIN. kAIC	MOUNTING
120/208	4 WIRE	42	200	MCB	22	SURFACE

POLE NO.	BREAKER		LOAD SERVED	PHASE LOADS					LOAD SERVED	BREAKER		POLE NO.
	TRIP	P		KVA	A	B	C	KVA		TRIP	P	
1	20	1	REC: STORAGE 501	0.5	1.1			0.5	REC: STORAGE 501	20	1	2
3	20	1	REC: STORAGE 501	0.5		1.1		0.5	REC: STORAGE 501	20	1	4
5	15	1	GUH-2-01	0.4			0.8	0.4	GUH-2-02	15	1	6
7	15	1	GUH-2-03	0.4	0.8			0.4	GUH-2-04	15	1	8
9	15	1	GUH-2-05	0.4		0.7		0.4	REC: BAYS 500	20	1	10
11	20	1	REC: BAYS 500	0.4			0.7	0.4	REC: BAYS 500	20	1	12
13	20	1	REC: BAYS 500	0.4	0.7			0.4	REC: BAYS 500	20	1	14
15	20	1	REC: BAYS 500	0.4		0.7		0.4	REC: BAYS 500	20	1	16
17	20	1	REC: BAYS 500	0.4			0.7	0.4	REC: BAYS 500	20	1	18
19	20	1	REC: BAYS 500	0.4	1.4			1.0	SPARE	20	1	20
21	20	1	REC: BAYS 500	0.4		0.7		0.4	REC: BAYS 500	20	1	22
23	20	1	SUMP PUMP	0.5			1.0	0.5	OHD: SALLYPORT	20	1	24
25	20	1	OHD: SALLYPORT	0.5	1.0			0.5	OHD: SALLYPORT	20	1	26
27	20	1	OHD: SALLYPORT	0.5		3.8		3.3	REC: WELDING STATION	50	3	28
29	20	1		0.4			3.7	3.3	-	-	-	30
31	20	1		0.7	4.0			3.3	-	-	-	32
33	20	1		0.5		1.0		0.5		20	1	34
35	20G	1		0.2			0.7	0.5		20	1	36
37	20G	1		0.2	0.7			0.5		20	1	38
39	20	1		0.7		1.2		0.5		20	1	40
41	20	1		0.9			1.4	0.5		20	1	42
			PHASE TOTALS:		9.7	9.3	9.0		TOTAL: 28.0	KVA		

BREAKER ABBREVIATIONS: G - GFCI; A - AFCI; L - LOCKOUT; S - SHUNT TRIP; C - COMBINATION GFCI/AFCI; E - ELECTRONIC ADJUSTABLE TRIP; MCB - MAIN CIRCUIT BREAKER; MLO - MAIN LUG ONLY

NOTES:
1.
2.

MSB

DISTRIBUTION SWITCHBOARD

VOLTAGE	PHASE/WIRE	MAIN AMPS	MAIN TYPE	MIN. A.I. RATING
120/208	3 / 4	2000	MCB	65K

CKT NO.	AMP FRAME	AMP TRIP	NO. POLES	LOAD SERVED	KVA	NOTES
1	30	15	3	METER	0.0	
2	60	60	3	SURGE PROTECTION DEVICE	0.0	
3	800	800	3	PANEL: SDP	221.0	
4	100	100	3	PANEL: RP-1	29.8	
5	200	150	3	PANEL: RL-1	43.2	
6	200	150	3	PANEL: RP-5	41.1	
7	100	100	3	PANEL: LP-1	14.3	
8	100	100	3	PANEL: LP-3	16.2	
9	200	200	3	PANEL: MECH-1	35.6	
10	200	200	3	PANEL: MECH-2	35.7	
11	200	200	3	PANEL: MECH-3	34.7	
12	400	250	3	PANEL: SSP-1	54.3	
13	150	100	3	PANEL: SSP-2	22.6	
14	100	100	3	SPARE		
15	100	100	3	SPARE		
16	200	200	3	SPARE		
17	400	400	3	PREPARED SPACE		
18	400	400	3	PREPARED SPACE		
19	200	200	3	PREPARED SPACE		
20	200	200	3	PREPARED SPACE		
21	150	150	3	PANEL: EM	34.5	
				TOTAL:	583.0	KVA

NOTES:
1.
2.

ABBREVIATIONS:
G - GFCI BREAKER
A - AFCI
L - LOCKOUT BREAKER
S - SHUNT TRIP BREAKER
C - COMBINATION GFCI/AFCI BREAKER
E - ELECTRONIC ADJUSTABLE TRIP BREAKER
MCB - MAIN CIRCUIT BREAKER

SBP

DISTRIBUTION PANELBOARD

VOLTAGE	PHASE/WIRE	MAIN AMPS	MAIN TYPE	MIN. A.I. RATING
120/208	3 / 4	600	MCB	65K

CKT NO.	AMP FRAME	AMP TRIP	NO. POLES	LOAD SERVED	KVA	NOTES
1	30	15	3	METER	0.0	
2	60	60	3	SURGE PROTECTION DEVICE	0.0	
3	200	150	3	PANEL: SBP-1	25.6	
4	200	150	3	PANEL: SBP-2	38.2	
5	100	100	3	REC: COMMANAD CENTER TRUCK	28.8	
6	60	60	3	SPARE	10.0	
7	100	100	3	SPARE	15.0	
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
				TOTAL:	117.6	KVA

NOTES:
1.
2.

ABBREVIATIONS:
G - GFCI BREAKER
A - AFCI
L - LOCKOUT BREAKER
S - SHUNT TRIP BREAKER
C - COMBINATION GFCI/AFCI BREAKER
E - ELECTRONIC ADJUSTABLE TRIP BREAKER
MCB - MAIN CIRCUIT BREAKER
MLO - MAIN LUG ONLY

SDP

DISTRIBUTION PANELBOARD

VOLTAGE	PHASE/WIRE	MAIN AMPS	MAIN TYPE	MIN. A.I. RATING
120/208	3 / 4	800	MLO	42K

CKT NO.	AMP FRAME	AMP TRIP	NO. POLES	LOAD SERVED	KVA	NOTES
1	30	30	3	SURGE PROTECTION DEVICE	0.0	
2	100	100	3	RTU-01	21.5	
3	200	125	3	ERU-01	31.6	
4	200	150	3	RP-3	45.5	
5	200	200	3	RP-4	37.6	
6	100	100	3	LP-4	14.8	
7	400	400	3	MECH-4	68.6	
8	100	100	3	SPARE	10.0	
9	100	100	3	SPARE	10.0	
10	200	200	3	SPARE	15.0	
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
				TOTAL:	254.6	KVA

NOTES:
1.
2.

ABBREVIATIONS:
G - GFCI BREAKER
A - AFCI
L - LOCKOUT BREAKER
S - SHUNT TRIP BREAKER
C - COMBINATION GFCI/AFCI BREAKER
E - ELECTRONIC ADJUSTABLE TRIP BREAKER
MCB - MAIN CIRCUIT BREAKER
MLO - MAIN LUG ONLY

BRANDSTETTER CARROLL INC
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SHROUT TATE WILSON
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Revisions:	NUMBER	DATE	DESCRIPTION
	1	2025.04.25	ADD 2

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Richmond Police Department

457 Northgate Drive
Richmond, KY 40475

Electrical Panel Schedules

Project No.
22133

E603