



6/6/23

To: All Potential Respondents
From: Construction Procurement
Subject: RFQ933500-01 Oran Pape Intel Operations Room Remodel

Request for Quote

The State of Iowa is conducting a Request for Quote for a contractor to perform work at the Oran Pape Building as outlined in the contract documents. This includes but is not limited to the construction of a new intel operations conference room and office space. See Exhibit B for additional detail.

The work shall be substantially completed no later than September 29, 2023.

The Project is located at 215 E 7th St Des Moines IA 50319.

Please email your quote using the Exhibit A pricing form to construction.procurement@iowa.gov prior to June 22, 2023 at 2:00 PM (CT).

All questions regarding this solicitation must be received by email by June 16, 2023 at 2:00 PM (CT). Questions should be directed to [onstruction.procurement@iowa.gov](mailto:construction.procurement@iowa.gov).

Contract Terms and Conditions

This procurement will result in a Consensus 802 Agreement. By submitting a quote, respondent agrees to the contract terms and conditions available at:

<https://das.iowa.gov/sites/default/files/procurement/pdf/ConsensusDoc802.pdf>

Performance Bond

Respondents must provide Performance and Payment Bonds in accordance with Section 10.8 of Consensus 802 Agreement.

Insurance Requirements

See sample Certificate of Insurance attached as Exhibit D for required limits, additional insured requirements and waiver of subrogation.

Warranties

Respondent must provide a one-year warranty from the date of substantial completion, in addition to any other warranties required by the technical specifications in Exhibit C

Exhibit A Pricing Form
Oran Pape Intel Operations Room Remodel
Request for Quote RFQ933500-01

Due June 22, 2023 at 2:00 PM

Please submit this completed form with your Quote to:
Attention: Jeff Just
Iowa Department of Administrative Services - Central Procurement
construction.procurement@iowa.gov

This form is to be completed in ink or typewritten.
Only pricing on this form or an exact copy of this form will be accepted.
Pricing Form shall be signed by an officer of the firm with authority to bind Respondent to Contract.

Freight Terms: FOB Destination, Freight Pre-Paid

The State reserves the right to reject any or all quotes without penalty and to waive minor deficiencies and informalities if, in the judgment of the State, its best interests will be served.

Respondents must submit pricing for all scope of work items indicated per the attached Exhibit B. The State reserves the right to evaluate pricing. The State intends to make one Award for this project.

Bid Package #01 Total \$ _____

Bid Package #02 Total \$ _____

Bid Package #02 Alternate #01 Total \$ _____

Bid Package #03 Total \$ _____

Please note all pricing is to be delivered price. That is why we are stating FOB Destination, Freight Pre-Paid.

Signature _____

Name (Print) _____

Title _____

Company _____

Address _____

City, St., Zip _____

Phone # _____ **Fax #** _____

E-mail _____

Exhibit B Scope of Work

Oran Pape Intel Operations Room Remodel

Request for Quote RFQ933500-01

Due June 22, 2023 at 2:00 PM

A. Scope Applicable to All Bid Packages:

1. The Contractor's Work includes all labor, supervision, materials, equipment, services, supplies, tools, facilities, transportation, hoisting, storage, receiving, licenses, inspections, certifications, overhead, profit, or other items required or reasonably inferable to properly and timely perform and complete all work and services to be performed by the Contractor pursuant to this Agreement. Unless specifically stated otherwise, incidental work required to accomplish the work of this Bid Package shall be included the bid. This would include, but not be limited to, temporary facilities, protection of the work, security of equipment, materials, and work in progress, etc. Contractor's Work shall be performed in accordance with the Drawings, Specification Divisions 00 and 01, and Specification sections applicable to each Contractor's scope.
2. Contractor is responsible for all labor and equipment to unload, account for all material delivered, stock, and delivery for this scope of work. Storage and delivery of materials and equipment at the Site shall be permitted only to the extent approved in advance by the Construction Manager, and if anything so stored obstructs the progress of any portion of the work, it shall be promptly removed or relocated by the Contractor without reimbursement.
3. On site supervision by Prime Contractor at all times work by that contractor or their subcontractors/suppliers is taking place.
4. Provide all temporary facilities required for this scope of work including trailer, trailer power, telephone, secured storage, temporary power for work, temporary and task lighting for work, etc. as determined necessary by the Contractor. Coordinate location of trailers, material storage and utility lines with Construction Manager. Limited space is available, and permission to bring any such facility or excess materials on to the site shall be approved by the Construction Manager.
5. Contractor shall provide all equipment and tools for Contractor's own cleanup. Clean up shall be done at end of every shift or more frequently if required for the Contractor to perform their work, for other Contractors to perform their work, as required by the Owner's operations, and at the discretion of the Construction Manager.
6. Protect adjacent existing building elements from damage from Scope of work. Repair existing building elements damaged during Contractor's Scope of work.

1.02 WORK HOUR RESTRICTIONS

- A. Work hours are from 7:00 AM to 5:00 PM, Monday through Friday unless arrangements are made in advance.

1.03 CONTRACTOR USE OF SITE AND PREMISES

- A. Construction Operations: Limited to areas noted on Drawings.
- B. Provide access to and from site as required by law and Owner:
1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
 2. Do not obstruct roadways, sidewalks, or other public ways without permission of Owner and permit if required.
- C. Facility will be occupied at all times during the duration of work. Contractor personnel shall conduct themselves in an agreeable manner at all times. Failure to do so may result in removal from the work site.

1.04 OWNER OCCUPANCY

- A. Owner intends to occupy the Project upon Substantial Completion.

- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.

1.05 RULES FOR CONSTRUCTION WORKERS

- A. The staff of the State of Iowa has a responsibility to protect the public by providing a secure environment. All work site rules must be followed to the letter, at all times.
- B. All construction workers must have a background check completed prior to entering the space to perform work.
- C. Hot Work Permit Processes and Fire Watch, when necessary, will be adhered to for this project.
- D. All State properties are tobacco free. No smoking will be permitted or tolerated on campus unless in designated areas.
- E. You are permitted access only to the work site and no other area of the institution.
- F. No drugs, alcohol, or firearms are allowed on the work site.
- G. Company and personal vehicles are to be parked and locked in designated or authorized area of the work.
- H. Secure all tools at the end of the day.
- I. Maintain control of all tools, supplies, and debris at all times during the work.

1.06 BID PACKAGE INSTRUCTIONS

- A. **Bid Package #01** – General Construction: Trade Contractor shall include all of the following, but not limited to, as part of the contract:
 - 1. This contractor shall be responsible for the demolition and construction of a new intel operations room, office space and corridor as outlined in the contract documents. This includes but is not limited to ceiling modifications, wall demolition as required and painting.
 - 2. Contractor shall be responsible for the disassembly of the existing office furniture walls and turnover to Owner.
 - 3. This contractor shall remove and salvage existing wood doors for relocation. Contractor shall field verify hinge and strike locations on the existing doors for new frames
 - 4. This contractor shall provide and install new frames and hardware for existing doors to remain. The contractor is responsible to make sure all new hardware works with existing doors.
 - 5. This contractor shall protect existing items which includes but is not limited to; equipment, plumbing fixtures, carpet and server room equipment during demolition and construction.
 - 6. This contractor shall demolish the existing cloud ceiling as outlined in the contract documents. Where specified, salvage light fixtures, diffusers etc for reinstallation.
 - 7. This contractor shall be responsible for storage and protection of all salvage items.
 - 8. This contractor shall patch the floor with matching carpet as needed from owner furnished attic stock as outlined in the contract documents.
 - 9. This contractor shall be responsible for providing new wall base as needed to create uniform finish conditions.
 - 10. This contract shall provide and install surface mounted plywood, painted black, as outlined in the contract documents. Contractor shall coordinate the final monitor location with the owner.
- B. **Bid Package #02** – Electrical: Trade Contractor shall include all of the following, but not limited to, as part of the contract:
 - 1. This contractor shall be responsible for all electrical and low voltage scope per the contract documents.
 - 2. This contractor shall be responsible for all electrical and low voltage disconnects and removals prior to the start of demolition. This shall include, but not be limited to, electrical and low voltage in walls, ceilings, and furniture walls.
 - 3. This contractor is responsible for the removal of existing electrical systems including conduit, boxes, wire, cable, supports, wiring devices, safety switches, fire alarm equipment, speakers, telephone outlets and light fixtures. See electrical drawings
 - 4. Contractor shall provide and install end caps at existing luminaires not to be removed or to be relocated.

5. This contractor shall be responsible for removing and salvaging existing in ceiling devices, including but not limited, to light fixtures, existing signs and other electrical or communication devices.
 6. This contractor shall connect relocated luminaries to existing lighting circuit and controls currently serving the office, intel ops room, and corridor area as outlined in the contract documents
 7. This contractor shall provide two new light switches in the new intel ops room. One switch controls the front row of lights with the second switch controlling the remaining lights.
 8. This contractor shall provide and install new electrical and data receptacles at locations identified in the contract documents.
 9. Power connection to VAV 509A shall be completed by this bid package. VAV procurement and installation by bid package #03.
 1. This contractor shall be responsible for obtaining an electrical permit and providing a copy to the Construction Manager.
 - a. **Bid Package #02 Alternate #01** – New LED Lighting : Trade Contractor shall include all of the following, but not limited to, as part of the contract:
 - 1) This contractor shall provide a cost to demo existing lighting and replace it with new 2' x 4' Troffer Type T1 LED lights as outlined in the contract documents.
 - 2) Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 3) Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
 - 4) Execute accepted alternates under the same conditions as other work of the Contract.
- C. **Bid Package #03** – Mechanical: Trade Contractor shall include all of the following, but not limited to, as part of the contract:
1. This contractor shall be responsible for the complete mechanical scope per the contract documents.
 2. This contractor is responsible for the removal of existing HVAC to include ductwork, hangers, grilles, diffusers, etc. See mechanical drawings
 3. This contractor shall install new VAV box, thermostat and associated connections to provide temperature control for new office space as outlined in the contract documents
 4. This contractor will be responsible to coordinate their work with the work provided by Siemens to ensure a complete system per the drawings and specifications is provided under this bid package. Include a lump sum allowance of \$5,600.00 for controls subcontract. Contractor to submit invoices, delivery slips, and/or time sheets to show actual quantities to be signed off by construction manager at time of execution/delivery.
 5. Contract shall be responsible for the installation of new supply duct, grilles, and volume dampers.
 6. This contractor shall install existing thermostats in new locations as outlined in contract documents
 7. This contractor shall install temperature sensor as shown in the contract documents
 8. This contractor shall be responsible for installation of the transfer grilles and ducts as outlined in the contract documents.
- D. **Work Performed by Owner:** Department of Public Safety will perform the following work items:
1. Relocate all moveable furniture, fixtures and equipment (FF&E), including window treatments; and personal materials from each sequenced work area prior to demolition and construction activities and after new construction is completed.
- E. **Owner Furnished Products:** Department of Public Safety will provide the following materials for installation by the contractor:
1. Owner will provide the televisions, mounting, installation and all associated hardware and software for the video wall.

PART 2 - PRODUCTS – NOT USED
PART 3 - EXECUTION – NOT USED

END OF SECTION

Exhibit C Technical Specifications
Oran Pape Intel Operations Room Remodel
Request for Quote RFQ933500-01

Due June 22, 2023 at 2:00 PM

SECTION 02 4100 - DEMOLITION

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Selective demolition of building elements for alteration purposes.

1.2. RELATED REQUIREMENTS

- A. Section 00 3100 - Available Project Information: Existing building survey conducted by Owner; information about known hazardous materials.
- B. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.
- C. Section 01 6000 - Product Requirements: Handling and storage of items removed for salvage and relocation.
- D. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products.

1.3. REFERENCE STANDARDS

- A. 29 CFR 1926 - Safety and Health Regulations for Construction Current Edition.
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations 2022, with Errata (2021).

1.4. SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Site Plan: Indicate:
 - 1. Areas for temporary construction and field offices.
- C. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.1. GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Use of explosives is not permitted.
 - 3. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 4. Provide, erect, and maintain temporary barriers and security devices.
 - 5. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
 - 6. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 7. Do not close or obstruct roadways or sidewalks without permits from authority having jurisdiction.

- 8. Conduct operations to minimize obstruction of public and private entrances and exits. Do not obstruct required exits at any time. Protect persons using entrances and exits from removal operations.
- 9. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon, or limit access to their property.
- B. Do not begin removal until receipt of notification to proceed from Owner.
- C. Do not begin removal until built elements to be salvaged or relocated have been removed.
- D. Protect existing structures and other elements to remain in place and not removed.
 - 1. Provide bracing and shoring.
 - 2. Prevent movement or settlement of adjacent structures.
 - 3. Stop work immediately if adjacent structures appear to be in danger.
- E. Minimize production of dust due to demolition operations. Do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.

3.2. EXISTING UTILITIES

- A. Coordinate work with utility companies. Notify utilities before starting work, comply with their requirements, and obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

3.3. SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Existing construction and utilities indicated on drawings are based on casual field observation and existing record documents only.
 - 1. Verify construction and utility arrangements are as indicated.
 - 2. Report discrepancies to Architect/Engineer before disturbing existing installation.
 - 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Separate areas in which demolition is being conducted from areas that remain occupied.
 - 1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 5000 in locations indicated on drawings.
 - 2. Provide sound retardant partitions of construction and in locations indicated on drawings.
- C. Remove existing work as indicated and required to accomplish new work.
 - 1. Remove items indicated on drawings.
- D. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove existing systems and equipment as indicated.

1. Maintain existing active systems to remain in operation, and maintain access to equipment and operational components.
 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 3. See Section 01 1000 - Summary for limitations on outages and required notifications.
 4. Verify that abandoned services serve only abandoned facilities before removal.
 5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings. Remove back to source of supply where possible, otherwise cap stub and tag with identification.
- E. Protect existing work to remain.
1. Prevent movement of structure. Provide shoring and bracing as required.
 2. Perform cutting to accomplish removal work neatly and as specified for cutting new work.
 3. Repair adjacent construction and finishes damaged during removal work.
 4. Patch to match new work.
- 3.4. DEBRIS AND WASTE REMOVAL
- A. Remove debris, junk, and trash from site.
 - B. Leave site in clean condition, ready for subsequent work.
 - C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

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SECTION 06 1000 - ROUGH CARPENTRY

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Fire retardant treated wood materials.
- B. Communications and electrical room mounting boards.
- C. Concealed wood blocking, nailers, and supports.

1.2. RELATED REQUIREMENTS

- A. Section 09 2116 - Gypsum Board Assemblies: Gypsum-based sheathing.

1.3. REFERENCE STANDARDS

- A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware 2016a.
- B. ASTM D2898 - Standard Practice for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing 2010 (Reapproved 2017).
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2022.
- D. AWPA U1 - Use Category System: User Specification for Treated Wood 2022.
- E. PS 2 - Performance Standard for Wood Structural Panels 2018.
- F. PS 20 - American Softwood Lumber Standard 2021.
- G. SPIB (GR) - Standard Grading Rules 2021.

1.4. SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Manufacturer's Certificate: Certify that wood products supplied for rough carpentry meet or exceed specified requirements.

1.5. DELIVERY, STORAGE, AND HANDLING

- A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.
- B. Fire Retardant Treated Wood: Prevent exposure to precipitation during shipping, storage, and installation.

1.6. WARRANTY

- A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.
- B. Correct defective work within a two-year period commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.1. GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. Species: Douglas Fir-Larch, unless otherwise indicated.
 - 2. If no species is specified, provide species graded by the agency specified; if no grading agency is specified, provide lumber graded by grading agency meeting the specified requirements.
 - 3. Grading Agency: Grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee at www.alsc.org, and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

2.2. DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Sizes: Nominal sizes as indicated on drawings, S4S.
- B. Moisture Content: S-dry or MC19.

2.3. CONSTRUCTION PANELS

- A. Wall Sheathing, For communications and electrical mounting boards: Plywood, PS 2 type, with factory-applied fire-retardant treatment.
 - 1. Bond Classification: Exterior.
 - 2. Grade: Structural I Sheathing.
 - 3. Span Rating: 24.
 - 4. Performance Category: 3/4 PERF CAT.
 - 5. Edge Profile: Square edge.

2.4. ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.

2.5. FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
 - 1. Fire-Retardant Treated Wood: Mark each piece of wood with producer's stamp indicating compliance with specified requirements.
- B. Fire Retardant Treatment:
 - 1. Products:
 - a. Lonza Group: www.wolmanizedwood.com/#sle.
 - b. Hoover Treated Wood Products, Inc: www.frtw.com.
 - c. Koppers, Inc: www.koppersperformancechemicals.com/#sle.
 - d. Viance, LLC; D-Blaze: www.treatedwood.com/#sle.
 - 2. Interior Type A: AWPA U1, Use Category UCFA, Commodity Specification H, low temperature (low hygroscopic) type, chemically treated and pressure impregnated; capable of providing a maximum flame spread index of 25 when tested in accordance with ASTM E84, with no evidence of significant combustion when test is extended for an additional 20 minutes.
 - a. Kiln dry wood after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood.
 - b. Interior rough carpentry items are to be fire retardant treated.
 - c. Treat rough carpentry items as indicated .
 - d. Do not use treated wood in applications exposed to weather or where the wood may become wet.

PART 3 EXECUTION

3.1. PREPARATION

- A. Coordinate installation of rough carpentry members specified in other sections.

3.2. INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.

- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
- C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

3.3. INSTALLATION OF CONSTRUCTION PANELS

- A. Sheathing/ Plywood: Secure panels with long dimension perpendicular to framing members, with ends staggered and over firm bearing.
 - 1. Nail panels to framing; staples are not permitted.
- B. Wall Sheathing: Secure with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using nails, screws, or staples.

3.4. TOLERANCES

- A. Framing Members: 1/4 inch from true position, maximum.
- B. Surface Flatness of Floor: 1/8 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.
- C. Variation from Plane, Other than Floors: 1/4 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.

3.5. FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements for additional requirements.

END OF SECTION

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SECTION 08 1213 - HOLLOW METAL FRAMES

PART 1 GENERAL

1.1. Section Includes

- A. Non-fire-rated hollow metal frames for non-hollow metal doors.

1.2. Related Requirements

- A. Section 08 7100 - Door Hardware: Hardware, silencers, and weatherstripping.

1.3. Reference Standards

- A. AAMA/WDMA/CSA 101/I.S.2/A440 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights 2022.
- B. ADA Standards - 2010 ADA Standards for Accessible Design 2010.
- C. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors 2022.
- D. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100) 2017.
- E. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames 2020.
- F. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2022.
- G. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable 2021a.
- H. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength 2018a.
- I. BHMA A156.115 - Hardware Preparation in Steel Doors and Steel Frames 2016.
- J. ICC A117.1 - Accessible and Usable Buildings and Facilities 2017.
- K. NAAMM HMMA 830 - Hardware Selection for Hollow Metal Doors and Frames 2002.
- L. NAAMM HMMA 831 - Hardware Locations for Hollow Metal Doors and Frames 2011.

1.4. Submittals

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes.
- C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and identifying location of different finishes, if any.

PART 2 PRODUCTS

2.1. Manufacturers

- A. Hollow Metal Frames:
 - 1. Ceco Door, an Assa Abloy Group company: www.assaabloydss.com/#sle.
 - 2. Curries, an Assa Abloy Group company: www.assaabloydss.com/#sle.
 - 3. Republic Doors, an Allegion brand: www.republicdoor.com/#sle.
 - 4. Steelcraft, an Allegion brand: www.allegion.com/#sle.

5. Substitutions: See Section 01 6000 - Product Requirements.

2.2. Performance Requirements

- A. Hollow Metal Frames: AAMA/WDMA/CSA 101/I.S.2/A440 requirements for specific frame type:
 - 1. Performance Class (PC): AW.
- B. Door Frame Type: Provide hollow metal door frames with integral casings.
 - 1. Interior Doors: Use frames with integral casings.
- C. Steel Sheet: Comply with one or more of the following requirements; galvanized steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
- D. Accessibility: Comply with ICC A117.1 and ADA Standards.
- E. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior frame that is also indicated as being sound-rated must comply with the requirements specified for exterior frames and for sound-rated frames; where two requirements conflict, comply with the most stringent.
- F. Hardware Preparations, Selections and Locations: Comply with BHMA A156.115, NAAMM HMMA 830, NAAMM HMMA 831 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

2.3. Hollow Metal Door Frames With Integral Casings

- A. Interior Door Frames, Non-Fire Rated: Knock-down type.
 - 1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
 - a. Level 1 - Standard-duty.
 - b. Physical Performance Level C, 250,000 cycles; in accordance with ANSI/SDI A250.4.
 - c. Frame Metal Thickness: 18 gauge, 0.042 inch, minimum.

2.4. Finishes

- A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

2.5. Accessories

- A. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center mullion of pairs, and two on head of pairs without center mullions.

PART 3 EXECUTION

3.1. Examination

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Verify that finished walls are in plane to ensure proper door alignment.

3.2. Installation

- A. Install frames in accordance with manufacturer's instructions and related requirements of specified frame standards or custom guidelines indicated.
- B. Coordinate frame anchor placement with wall construction.
- C. Install door hardware as specified in Section 08 7100.

END OF SECTION

SECTION 09 2116 - GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Performance criteria for gypsum board assemblies.
- B. Metal stud wall framing.
- C. Metal channel ceiling framing.
- D. Acoustic insulation.
- E. Gypsum sheathing.
- F. Cementitious backing board.
- G. Gypsum wallboard.
- H. Joint treatment and accessories.

1.2. REFERENCE STANDARDS

- A. AISI S100 - North American Specification for the Design of Cold-Formed Steel Structural Members 2016, with Supplement (2020).
- B. AISI S220 - North American Standard for Cold-Formed Steel Nonstructural Framing 2020.
- C. AISI S240 - North American Standard for Cold-Formed Steel Structural Framing 2015, with Errata (2020).
- D. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2022.
- E. ASTM A1003/A1003M - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members 2015.
- F. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board 2017 (Reapproved 2022).
- G. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing 2017.
- H. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products 2020.
- I. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board 2020.
- J. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness 2022.
- K. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs 2022.
- L. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base 2019.
- M. ASTM C1396/C1396M - Standard Specification for Gypsum Board 2017.
- N. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements 2009 (Reapproved 2016).
- O. ASTM E413 - Classification for Rating Sound Insulation 2022.
- P. GA-216 - Application and Finishing of Gypsum Panel Products 2021.

Q. the Gypsum Handbook, Seventh Ed. - the Gypsum Handbook Seventh.

1.3. SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Product Data:

1. Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements.

PART 2 PRODUCTS

2.1. GYPSUM BOARD ASSEMBLIES

A. Provide completed assemblies complying with ASTM C840 and GA-216.

B. Interior Partitions: Provide completed assemblies with the following characteristics:

1. Acoustic Attenuation: STC of 45-49 calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.

C. Steel Sheet: ASTM A1003/A1003M, subject to the ductility limitations indicated in AISI S240.

2.2. METAL FRAMING MATERIALS

A. Nonstructural Framing System Components: AISI S220; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/120 at 5 psf.

1. Studs: C-shaped with knurled or embossed faces.
2. Runners: U shaped, sized to match studs.
3. Ceiling Channels: C-shaped.
4. Furring Members: Hat-shaped sections, minimum depth of 7/8 inch.

B. Partition Head to Structure Connections: Provide mechanical anchorage devices that accommodate deflection and prevent rotation of studs while maintaining structural performance of partition.

1. Structural Performance: Maintain lateral load resistance and vertical movement capacity required by applicable code, when evaluated in accordance with AISI S100.
2. Material: ASTM A653/A653M steel sheet, SS Grade 50/340, with G60/Z180 hot-dipped galvanized coating.
3. Provide components UL-listed for use in UL-listed fire-rated head of partition joint systems of fire rating and movement required.

2.3. BOARD MATERIALS

A. Manufacturers - Gypsum-Based Board:

1. American Gypsum Company.
2. CertainTeed Corporation.
3. LaFarge North America, Inc.
4. National Gypsum Company.
5. USG Corporation.
6. Substitutions: See Section 01 6000 - Product Requirements.

B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.

1. Application: Use for vertical surfaces, unless otherwise indicated.
2. Thickness:
 - a. Vertical Surfaces: 5/8 inch.

2.4. GYPSUM BOARD ACCESSORIES

- A. Acoustic Insulation: ASTM C665; preformed mineral-fiber, friction fit type, unfaced; thickness as required for STC.
- B. Beads, Joint Accessories, and Other Trim: ASTM C1047, galvanized steel or rolled zinc, unless noted otherwise.
 - 1. Corner Beads: Low profile, for 90 degree outside corners.
- C. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
- D. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inches in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion-resistant.

PART 3 EXECUTION

3.1. EXAMINATION

- A. Verify that project conditions are appropriate for work of this section to commence.

3.2. FRAMING INSTALLATION

- A. Metal Framing: Install in accordance with ASTM C754 , the Gypsum Handbook, Seventh Ed. and manufacturer's instructions.
- B. Studs: Space studs at 16 inches on center.
 - 1. Extend partition framing to structure where indicated and to ceiling in other locations maximum spacing.
 - 2. Partitions Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections; do not leave studs unattached to track.
- C. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.

3.3. ACOUSTIC ACCESSORIES INSTALLATION

- A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.
- B. Acoustic Sealant: Install in accordance with manufacturer's instructions.
 - 1. Place one bead continuously on substrate before installation of perimeter framing members.
 - 2. Seal around all penetrations by conduit, pipe, ducts, and rough-in boxes, except where firestopping is provided.

3.4. BOARD INSTALLATION

- A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Nonrated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
 - 1. Exception: Tapered edges to receive joint treatment at right angles to framing.
- C. Double-Layer, Nonrated: Use gypsum board for first layer, placed parallel to framing or furring members, with ends and edges occurring over firm bearing. Use glass mat faced gypsum board at exterior walls and at other locations as indicated. Place second layer perpendicular to framing or

furring members. Offset joints of second layer from joints of first layer.

3.5. JOINT TREATMENT

- A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
 - 1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
- B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
 - 1. Feather coats of joint compound so that camber is maximum 1/32 inch.
- C. Fill joints between floor slab and wall board that are greater than 1/4" with sealant.

END OF SECTION

SECTION 09 5100 - ACOUSTICAL CEILINGS

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Suspended metal grid ceiling system.
- B. Acoustical units.

1.2. REFERENCE STANDARDS

- A. ASTM C635/C635M - Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings 2022.
- B. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels 2019.
- C. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions 2022.
- D. ASTM E1264 - Standard Classification for Acoustical Ceiling Products 2022.
- E. UL (FRD) - Fire Resistance Directory Current Edition.

1.3. ADMINISTRATIVE REQUIREMENTS

- A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Do not install acoustical units until after interior wet work is dry.

1.4. SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Shop Drawings: Indicate grid layout and related dimensioning, junctions with other ceiling finishes, mechanical and electrical items installed in the ceiling, and sprinklers installed in the ceiling.
- C. Product Data: Provide data on suspension system components and acoustical units.
- D. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 6000 - Product Requirements, for additional provisions.
 - 2. Extra Acoustical Units: Quantity equal to 5 percent of total installed.

1.5. QUALITY ASSURANCE

- A. Suspension System Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- B. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.6. FIELD CONDITIONS

- A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

PART 2 PRODUCTS

2.1. MANUFACTURERS

- A. Acoustic Tiles/Panels:

9335.00 Oran Pape Intel Operations Room Remodel

Acoustical Ceilings

1. Armstrong World Industries, Inc: www.armstrong.com.
2. Acoustic Ceiling Products, Inc: www.acpideas.com/#sle.
3. CertainTeed Corporation: www.certainteed.com/ceilings-and-walls/#sle.
4. USG Corporation: www.usg.com/ceilings/#sle.
5. Substitutions: See Section 01 6000 - Product Requirements.

- B. Suspension Systems:
1. Same as for acoustical units.

2.2. ACOUSTICAL UNITS

- A. Acoustical Units - General: ASTM E1264, Class A.
- B. Source Limitations: Obtain each type of acoustical ceiling panel and supporting suspension system from single source from single manufacturer
- C. Acoustical Tile (Typical): Painted mineral fiber, ASTM E1264 Type III, with the following characteristics:
1. Size: 24 by 24 inches.
 2. Thickness: 15/16 inches.
 3. Light Reflectance: 0.85 percent, determined in accordance with ASTM E1264.
 4. NRC Range: Not less than 0.75, determined in accordance with ASTM E1264.
 5. Articulation Class (AC): 170, determined in accordance with ASTM E1264.
 6. Ceiling Attenuation Class (CAC): 35, determined in accordance with ASTM E1264.
 7. Joint: Reveal sized to fit flange of exposed suspension-system members..
 8. Edge: Beveled tegular.
 9. Products:
 - a. Basis-of-Design Product: Armstrong World Industries, Inc. Cirrus High NRC #556.
 - b. Or comparable from listed manufacturers meeting Basis of Design specifications.

2.3. SUSPENSION SYSTEM(S)

- A. Metal Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with perimeter moldings, hold down clips, stabilizer bars, clips, and splices as required.
- B. Exposed Steel Suspension System: Formed galvanized steel, commercial quality cold rolled; intermediate-duty.
1. Products:
 - a. Armstrong World Industries, Inc.; Prelude XL.
 - b. Or comparable from listed manufacturers.

2.4. ACCESSORIES

- A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.
- B. Hanger Wire: 12 gauge, 0.08 inch galvanized steel wire.
- C. Perimeter Moldings: Same metal and finish as grid.
- D. Touch-up Paint: Type and color to match acoustical and grid units.

PART 3 EXECUTION

3.1. EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that layout of hangers will not interfere with other work.

3.2. INSTALLATION - SUSPENSION SYSTEM

- A. Install suspension system in accordance with ASTM C636/C636M, ASTM E580/E580M, and manufacturer's instructions and as supplemented in this section.
- B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
- C. Locate system on room axis according to reflected plan.
- D. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
 - 1. Use longest practical lengths.
- E. Suspension System, Non-Seismic: Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- F. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- G. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- H. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.
- I. Do not eccentrically load system or induce rotation of runners.
- J. Install light fixture boxes constructed of gypsum board above light fixtures in accordance with fire rated assembly requirements and light fixture ventilation requirements.

3.3. INSTALLATION - ACOUSTICAL UNITS

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Lay directional patterned units with pattern parallel to longest room axis.
- D. Fit border trim neatly against abutting surfaces.
- E. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- F. Cutting Acoustical Units:
 - 1. Make field cut edges of same profile as factory edges.

3.4. TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.
- B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

END OF SECTION

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SECTION 09 9123 - INTERIOR PAINTING

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints.
- C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.
 - 1. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.
 - 2. Mechanical and Electrical:
 - a. In finished areas, paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment, unless otherwise indicated.
 - b. In finished areas, paint shop-primed items.
- D. Do Not Paint or Finish the Following Items:
 - 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
 - 5. Stainless steel, anodized aluminum, bronze, terne-coated stainless steel, and lead items.
 - 6. Floors, unless specifically indicated.
 - 7. Ceramic and other tiles.
 - 8. Glass.
 - 9. Concrete masonry units in utility, mechanical, and electrical spaces.
 - 10. Acoustical materials, unless specifically indicated.
 - 11. Concealed pipes, ducts, and conduits.

1.2. RELATED REQUIREMENTS

- A. Section 05 5000 - Metal Fabrications: Shop-primed items.
- B. Section 05 5100 - Metal Stairs: Shop-primed items.
- C. Section 09 9113 - Exterior Painting.
- D. Section 09 9600 - High-Performance Coatings.

1.3. REFERENCE STANDARDS

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency current edition.
- B. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials 2020.
- C. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association Current Edition.
- D. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual Current Edition.
- E. SSPC V1 (PM1) - Good Painting Practice: Painting Manual Volume 1 2016.

- F. SSPC V2 (PM2) - Systems and Specifications: Steel Structures Painting Manual Volume 2 2021.
- G. SSPC-SP 1 - Solvent Cleaning 2015, with Editorial Revision (2016).
- H. SSPC-SP 2 - Hand Tool Cleaning 2018.
- I. SSPC-SP 3 - Power Tool Cleaning 2018.
- J. SSPC-SP 6 - Commercial Blast Cleaning 2007.
- K. SSPC-SP 13 - Surface Preparation of Concrete 2018.

1.4. SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide complete list of products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g., "alkyd enamel").
 - 2. MPI product number (e.g., MPI #47).
 - 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
- C. Samples: Submit one paper "draw down" sample, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.
 - 1. Where sheen is specified, submit samples in only that sheen.
 - 2. Where sheen is not specified, discuss sheen options with Architect/Engineer before preparing samples, to eliminate sheens not required.
 - 3. Allow 30 days for approval process, after receipt of complete samples by Architect/Engineer.
 - 4. Paint color submittals will not be considered until color submittals for major materials not to be painted, such as masonry, have been approved.
- D. Manufacturer's Instructions: Indicate special surface preparation procedures.
- E. Maintenance Data: Submit data including product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 6000 - Product Requirements, for additional provisions.
 - 2. Extra Paint and Finish Materials: Furnish an additional 5 percent, but not less than 1 gallon of each color; from the same product run, store where directed.
 - 3. Label each container with color in addition to the manufacturer's label.

1.5. QUALITY ASSURANCE

- A. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems indicated.

1.6. DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.7. FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Do not apply materials when relative humidity exceeds 85 percent, at temperatures less than 5 degrees F above the dew point, or to damp or wet surfaces.
- D. Minimum Application Temperatures for Paints: 50 degrees F for interiors unless required otherwise by manufacturer's instructions.
- E. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

PART 2 PRODUCTS

2.1. MANUFACTURERS

- A. Provide paints and finishes from the same manufacturer to the greatest extent possible.
- B. Paints:
 - 1. Basis of Design Manufacturer: Sherwin-Williams Company: www.sherwin-williams.com or system matching performance and product information for the basis of design product identified below.
- C. Primer Sealers: Same manufacturer as top coats.

2.2. PAINTS AND FINISHES - GENERAL

- A. Paints and Finishes: Ready-mixed, unless intended to be a field-catalyzed paint.
 - 1. Where MPI paint numbers are specified, provide products listed in Master Painters Institute Approved Product List, current edition available at www.paintinfo.com, for specified MPI categories, except as otherwise indicated.
 - 2. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 - 3. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
 - 4. Supply each paint material in quantity required to complete entire project's work from a single production run.
 - 5. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
- B. Volatile Organic Compound (VOC) Content:
 - 1. Provide paints and finishes that comply with the most stringent requirements specified in the following:
 - a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
 - b. Architectural coatings VOC limits of the State in which the Project is located.
 - 2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.

- C. Flammability: Comply with applicable code for surface burning characteristics.
- D. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect/Engineer from the manufacturer's full line.
- E. Colors: As indicated on drawings.
 - 1. Extend colors to surface edges; colors may change at any edge as directed by Architect/Engineer.
 - 2. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling under which they are mounted.
 - 3. In utility areas, finish equipment, piping, conduit, and exposed duct work in colors according to the color coding scheme indicated.

2.3. PAINT SYSTEMS - INTERIOR

- A. Ferrous Metals, Unprimed, Alkyd, 3 Coat:
 - 1. One coat of alkyd primer.
 - 2. Semi-gloss: Two coats of alkyd enamel; B53W01151 Pro Industrial Water-Based Alkyd Urethane Semi-Gloss.
- B. Ferrous Metals, Primed, Alkyd, 2 Coat:
 - 1. Touch-up with alkyd primer.
 - 2. Semi-gloss: Two coats of alkyd enamel; B53W01151 Pro Industrial Water-Based Alkyd Urethane Semi-Gloss.
- C. Galvanized Metals, Alkyd, 3 Coat:
 - 1. One coat galvanize primer.
 - 2. Semi-gloss: Two coats of alkyd enamel; B53W01151 Pro Industrial Water-Based Alkyd Urethane Semi-Gloss.
- D. Gypsum Board/Plaster, Latex, 3 Coat:
 - 1. One coat of latex primer sealer; B28W2600 ProMar 200 Zero VOC Interior Latex Primer.
 - 2. Eggshell: Two coats of latex enamel; B20W12651 ProMar 400 Zero VOC Interior Latex Eg-Shel .

PART 3 EXECUTION

3.1. EXAMINATION

- A. Do not begin application of paints and finishes until substrates have been adequately prepared.
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- D. Test shop-applied primer for compatibility with subsequent cover materials.
- E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces is below the following maximums:
 - 1. Gypsum Wallboard: 12 percent.
 - 2. Interior Wood: 15 percent, measured in accordance with ASTM D4442.

3.2. PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

- C. Remove or repair existing paints or finishes that exhibit surface defects.
- D. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- E. Seal surfaces that might cause bleed through or staining of topcoat.
- F. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- G. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.
- H. Galvanized Surfaces:
 - 1. Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
- I. Ferrous Metal:
 - 1. Solvent clean according to SSPC-SP 1.
 - 2. Remove rust, loose mill scale, and other foreign substances using methods recommended in writing by paint manufacturer and blast cleaning according to SSPC-SP 6 Commercial Blast Cleaning. Protect from corrosion until coated.
- J. Wood Surfaces to Receive Opaque Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats. Back prime concealed surfaces before installation.

3.3. APPLICATION

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- C. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.
- D. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- E. Apply each coat to uniform appearance in thicknesses specified by manufacturer.
- F. Sand wood and metal surfaces lightly between coats to achieve required finish.
- G. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- H. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.4. CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.5. PROTECTION

- A. Protect finishes until completion of project.
- B. Touch-up damaged finishes after Substantial Completion.

3.6. Interior Ceilings and Soffits:

- A. Prime Coat(s): Primer Sealer, Latex, MPI #50.
- B. Top Coat: Latex, Interior Flat, (Gloss Level 1)

1. Sherwin Williams, B30W04651 ProMar 400 Zero VOC Interiors Latex, Flat, B30
- C. Interior Walls:
1. Prime Coat(s): Primer Sealer, Latex, MPI #50.
 - a. Sherwin Williams, B28W04600 ProMar 400 Zero VOC Interior Latex Primer
 2. Intermediate Coat: Latex, Interior matching topcoat.
 3. Top Coat: Latex, Interior Semi-Gloss, (Gloss Level 5)
 - a. Sherwin Williams, B20W12651 ProMar 400 Zero VOC Interior Latex Eg-Shel
 4. Locations: Areas with plumbing fixtures and high use areas including, but not limited to, maintenance, mechanical, janitor, electrical, storage, entry/vestibule, stairwells, exam, procedure, toilet rooms, medical supply/records, red bag, receiving and laboratory.

END OF SECTION

Exhibit D Drawings

Oran Pape Intel Operations Room Remodel
Request for Quote RFQ933500-01

Due June 22, 2023 at 2:00 PM

Iowa State Capitol Complex

ORAN PAPE CONFERENCE ROOM

215 E. 7TH Street, Des Moines, IA

LOCATION MAP

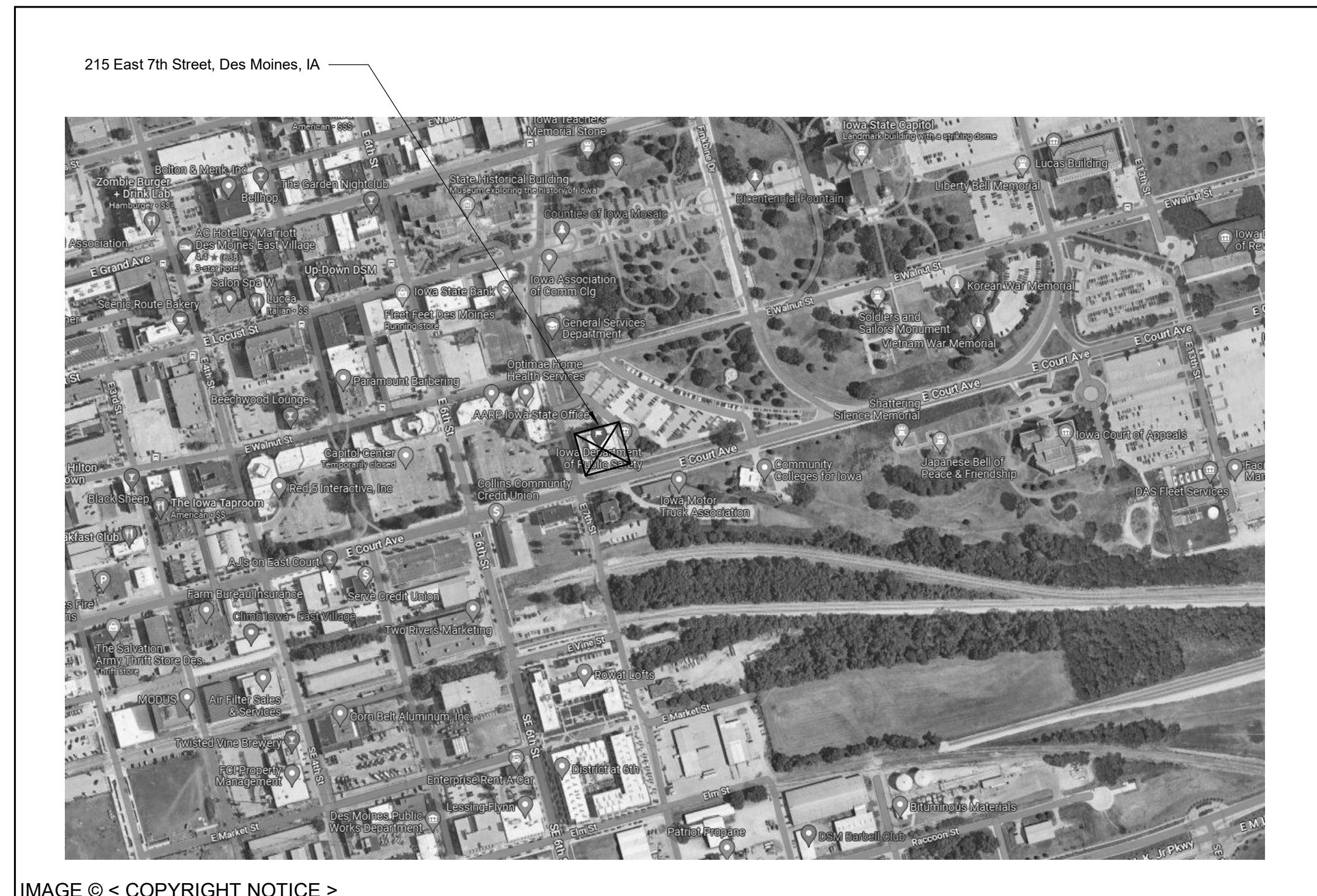
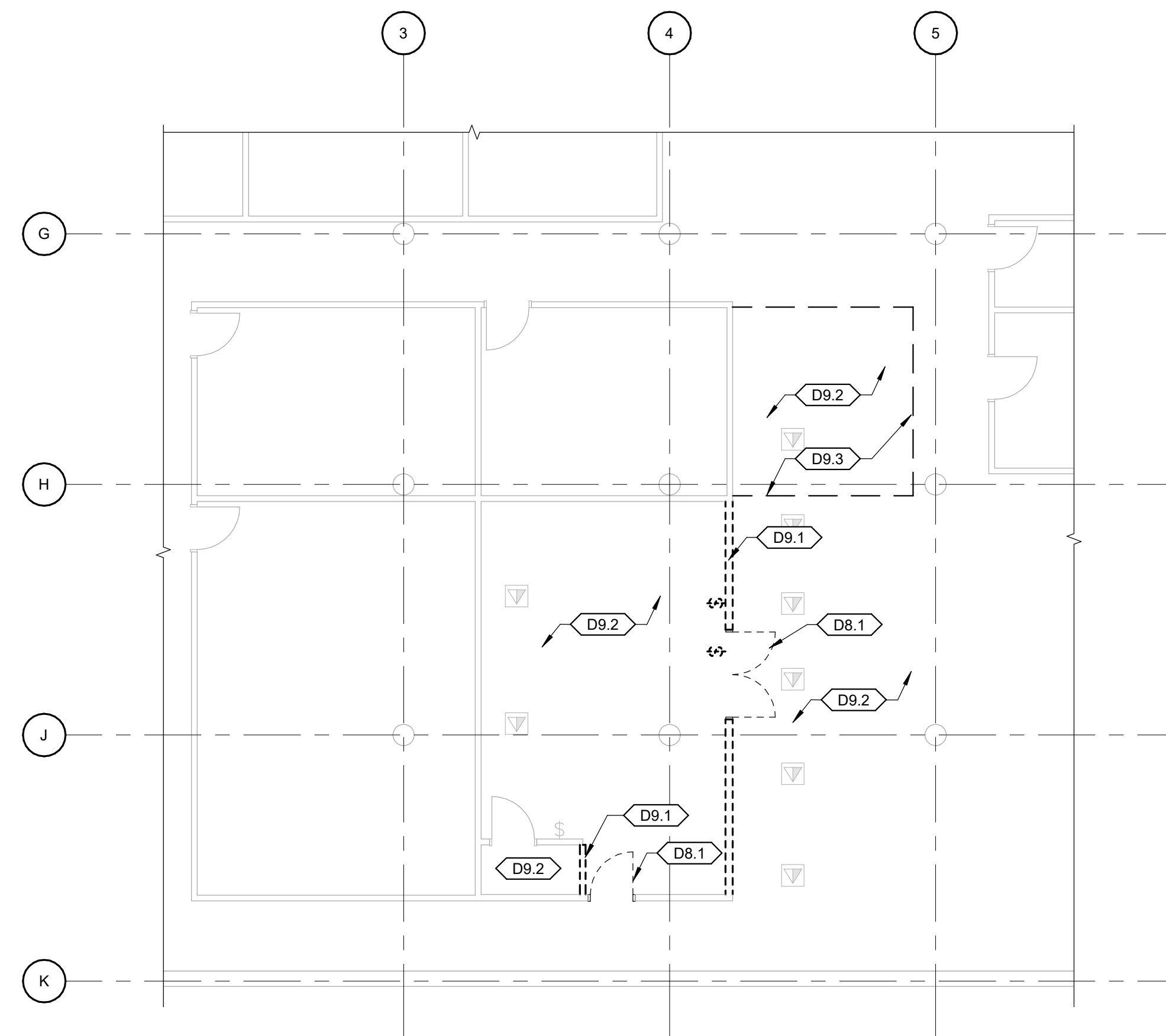
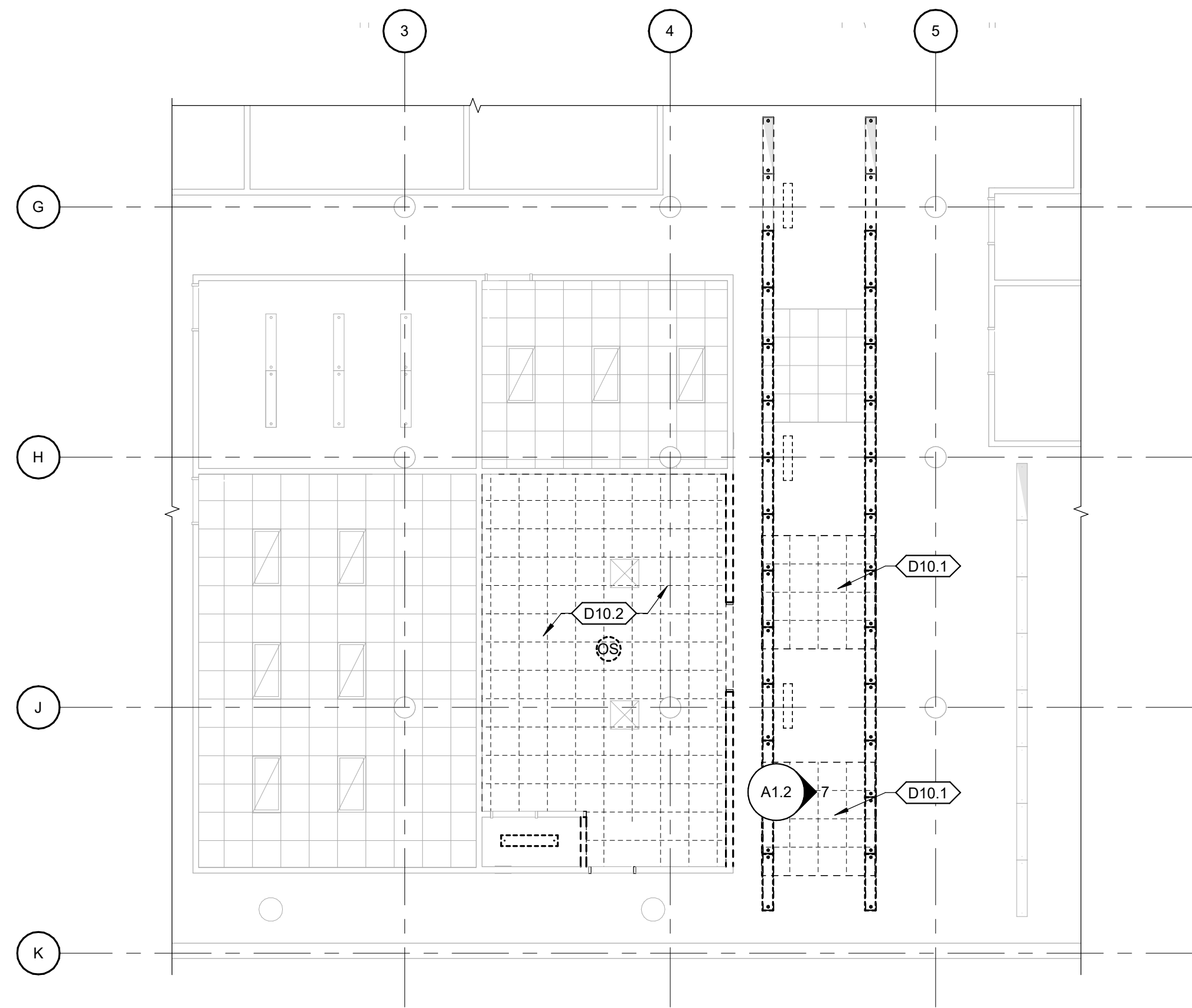


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ABBREVIATIONS	SYMBOLS LEGEND	GENERAL NOTES	DRAWING LIST			
<p>ACT ACOUSTIC(AL) TILE ADJ ADJUSTABLE BD BOARD BLDG BUILDING BLKG BLOCKING CLG CEILING CLR CLEAR COL COLUMN CONC CONCRETE CONST CONSTRUCTION CONT CONTINUOUS CPT CARPET DEMO DEMOLITION DET/DTL DETAIL DIA DIAMETER DIM DIMENSION DN DOWN DWG(S) DRAWING(S) E EAST ELEV ELEVATION ELEC ELECTRICAL ELEV ELEVATOR EMER EMERGENCY EQ EQUAL EQUIP EQUIPMENT EXIST EXISTING FFE FINISH FLOOR ELEVATION FV FIELD VERIFY GYP GYPSUM HM HOLLOW METAL HT HEIGHT HVAC HEATING/VENTILATION/AIR CONDITIONING</p>	<p>MECH MECHANICAL MFR MANUFACTURER MIN MINIMUM MTL METAL N NORTH NTS NOT TO SCALE NOM NOMINAL OC ON CENTER PNT PAINT PR PAIR PTD PAINTED PWR POWER RB RUBBER BASE REINF REINFORCED REQ'D REQUIRED REV REVISED (REVISION) RM ROOM S SOUTH SF SQUARE FEET SS STAINLESS STEEL SIM SIMILAR SPEC SPECIFICATIONS SQ SQUARE STD STANDARD STL STEEL STOR STORAGE STRUCT STRUCTURAL TYP TYPICAL UNFIN UNFINISHED UNO UNLESS NOTED OTHERWISE VERT VERTICAL W WEST W/ WITH</p>	<p>NOTE: NOT ALL SYMBOLS ARE USED IN CONSTRUCTION DOCUMENTS</p> <p>1 A8.1 WALL SECTION SHEET #</p> <p>1 A8.1 DETAIL SECTION SHEET #</p> <p>1 A8.1 INTERIOR ELEVATION SHEET #</p> <p>1 A8.1 ENLARGED CALLOUT</p> <p>ELEVATION 0'-0" ELEVATION</p> <p>MATL 1'-0" CEILING/ SOFFIT HEIGHT</p> <p>XX.X COLUMN GRID</p> <p>#.# TYPICAL KEYNOTE</p> <p>D#.# DEMOLITION KEYNOTE</p> <p>ROOM NAME 101 ROOM DESIGNATION</p> <p>101-1 DOOR NUMBER</p> <p># WALL TYPE</p> <p>BREAK LINE</p> <p>? REVISION NOTE</p>	<p>GENERAL NOTES</p> <p>A. CONTRACTOR TO PROVIDE ALL ADDITIONAL FRAMING NECESSARY FOR ALL OPENINGS AND SUPPLEMENTAL FRAMING ABOVE PARTITIONS.</p> <p>B. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES FOR SYSTEM RELATED PENETRATIONS NOT SHOWN.</p> <p>C. PROJECTS SHALL REMAIN IN COMPLIANCE WITH ALL ASPECTS OF ALL GOVERNING CODES AND ORDINANCES DURING THE COURSE OF CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, EXITING, FIRE ALARM SYSTEM(S), SMOKE/FIRE DETECTION SYSTEM(S), SPRINKLER SYSTEM(S).</p> <p>D. TEMPORARY BARRICADES AS PERTAINING TO CONTRACTOR'S ACTIVITIES SHALL BE INSTALLED TO PREVENT POSSIBLE INJURY TO PERSONS IN AND AROUND DEMOLITION AND CONSTRUCTION AREAS IN ACCORDANCE WITH OSHA REQUIREMENTS. COORDINATE WITH OWNER.</p> <p>E. ALL AREAS TO BE DEMOLISHED OR DISTURBED BY ANY DEMOLITION ARE TO BE PATCHED AND PAINTED (OR PREPARED FOR OTHER SCHEDULED FINISH). IF PAINTING IS REQUIRED, ENTIRE WALL SHALL RECEIVE PAINT TO AVOID MISMATCH OF COLOR.</p> <p>F. ALL OPENINGS AND VOIDS LEFT BY THE REMOVAL OF EXISTING CONSTRUCTION, EQUIPMENT, PIPING, DUCTS, ETC. SHALL BE PROPERLY PATCHED AND CLOSED OFF TO MAINTAIN PROPER FIRE RATING IN AFFECTED WALL, FLOOR, OR ROOF. PREPARE PATCHED AREAS TO RECEIVE NEW FINISHES AS SCHEDULES (OR MATCH EXISTING FINISHES IF NOT OTHERWISE IDENTIFIED).</p> <p>G. WHEN PATCH OF EXISTING FLOOR IS REQUIRED, SLOPING OR RAMPING IN EXCESS OF CONTRACT TOLERANCES WILL NOT BE ALLOWED (1/8" PER 10 FEET MAXIMUM).</p> <p>H. UPON REMOVAL OF TEMPORARY PARTITIONS, CONTRACTOR IS RESPONSIBLE FOR PATCHING TO MATCH EXISTING ADJACENT CONSTRUCTION.</p> <p>I. AT CONSTRUCTION ACCESS, CONTRACTOR TO PROVIDE LABOR AND MATERIALS TO REPAIR ALL DISTURBED ELEMENTS.</p> <p>J. IT IS THE RESPONSIBILITY OF EACH CONTRACTOR TO PROVIDE COMPLETE WORKING SYSTEMS FOR ALL NEW ELEMENTS AND TO COORDINATE THEIR WORK WITH ALL OTHER TRADES.</p> <p>K. ALL CONTRACTORS SHALL PROVIDE NEW, UNDAMAGED MATERIALS UNLESS OTHERWISE SPECIFIED.</p> <p>L. STORE MATERIALS IN SUCH A MANNER AS NOT TO OVERSTRESS, OVERLOAD, OR OTHERWISE PUT AN UNSAFE LOAD ON ANY STRUCTURE DURING CONSTRUCTION.</p> <p>M. INSTALL ALL WORK IN ACCORDANCE WITH CURRENT APPLICABLE CODES, PUBLISHED STANDARDS, AND ACCEPTABLE CONSTRUCTION STANDARDS.</p> <p>N. DETAILS ARE GENERALLY TYPICAL AND ARE NOT TO BE CONSTRUED AS LIMITED TO THOSE AREAS SPECIFICALLY INDICATED. REVIEW ANY QUESTIONS OR CONFLICTING INFORMATION WITH THE DESIGN PROFESSIONAL PRIOR TO FABRICATION OR INSTALLATION.</p> <p>O. CONTRACTOR SHALL VERIFY DIMENSIONS IN FIELD PRIOR TO BEGINNING CONSTRUCTION.</p> <p>P. HINGE SIDE OF DOOR JAMBS TO BE LOCATED 4" FROM NEAREST WALL INTERSECTION UNLESS OTHERWISE NOTED.</p>	<p>DRAWING LIST</p> <p>ARCHITECTURAL A1.1 DEMOLITION, FLOOR, AND REFLECTED CEILING PLANS A1.2 SCHEDULES, ELEVATIONS AND DETAILS</p> <p>MECHANICAL M1.1 FIFTH FLOOR VENTILATION PLAN</p> <p>ELECTRICAL E0.1 GENERAL INFORMATION E0.2 GENERAL INFORMATION E0.3 SPECIFICATIONS E1.5 FIFTH FLOOR LIGHTING PLAN E2.5 FIFTH FLOOR POWER PLAN E3.5 FIFTH FLOOR SYSTEMS PLAN E5.1 ELECTRICAL SCHEDULES AND DETAILS</p>		
<p>PROFESSIONAL REGISTRATIONS</p> <table border="0"> <tr> <td style="text-align: center;"> THE PORTION OF THIS TECHNICAL SUBMISSION DESCRIBED BELOW WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION. I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF IOWA. SIGNATURE: _____ NAME: Robert C. Ridgway DATE: _____ LICENSE RENEWAL DATE: 06/30/2023 PAGES OR DIVISIONS COVERED: _____ A-Series </td> <td style="text-align: center;"> THE PORTION OF THIS TECHNICAL SUBMISSION DESCRIBED BELOW WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION. I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF IOWA. SIGNATURE: _____ NAME: Steven F. Wagner DATE: _____ LICENSE RENEWAL DATE: 12/31/2023 PAGES OR DIVISIONS COVERED: _____ E-Series </td> <td style="text-align: center;"> THE PORTION OF THIS TECHNICAL SUBMISSION DESCRIBED BELOW WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION. I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF IOWA. SIGNATURE: _____ NAME: Timothy A. Kiefer DATE: _____ LICENSE RENEWAL DATE: 12/31/2023 PAGES OR DIVISIONS COVERED: _____ M-Series </td> </tr> </table>				 THE PORTION OF THIS TECHNICAL SUBMISSION DESCRIBED BELOW WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION. I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF IOWA. SIGNATURE: _____ NAME: Robert C. Ridgway DATE: _____ LICENSE RENEWAL DATE: 06/30/2023 PAGES OR DIVISIONS COVERED: _____ A-Series	 THE PORTION OF THIS TECHNICAL SUBMISSION DESCRIBED BELOW WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION. I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF IOWA. SIGNATURE: _____ NAME: Steven F. Wagner DATE: _____ LICENSE RENEWAL DATE: 12/31/2023 PAGES OR DIVISIONS COVERED: _____ E-Series	 THE PORTION OF THIS TECHNICAL SUBMISSION DESCRIBED BELOW WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION. I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF IOWA. SIGNATURE: _____ NAME: Timothy A. Kiefer DATE: _____ LICENSE RENEWAL DATE: 12/31/2023 PAGES OR DIVISIONS COVERED: _____ M-Series
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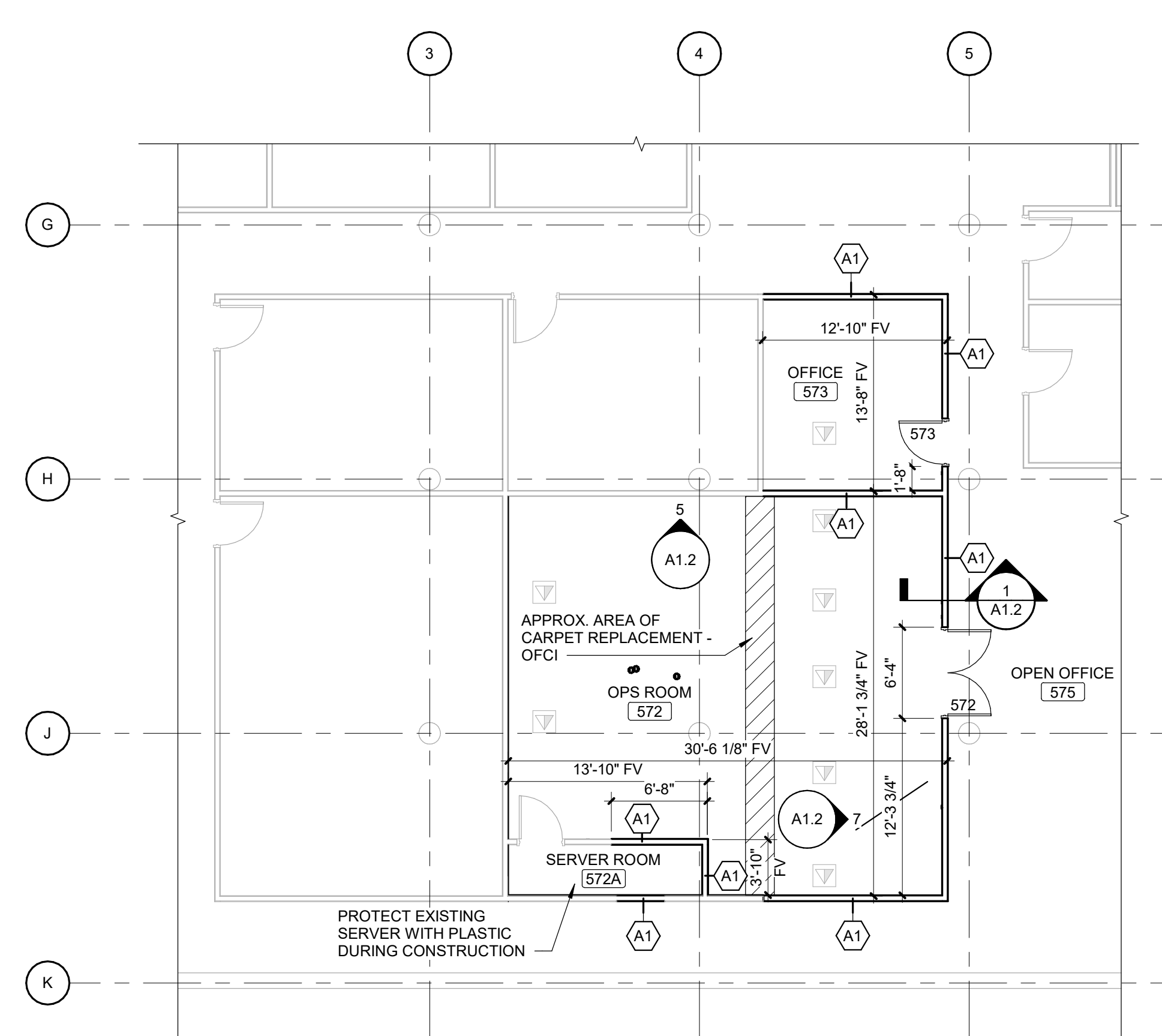
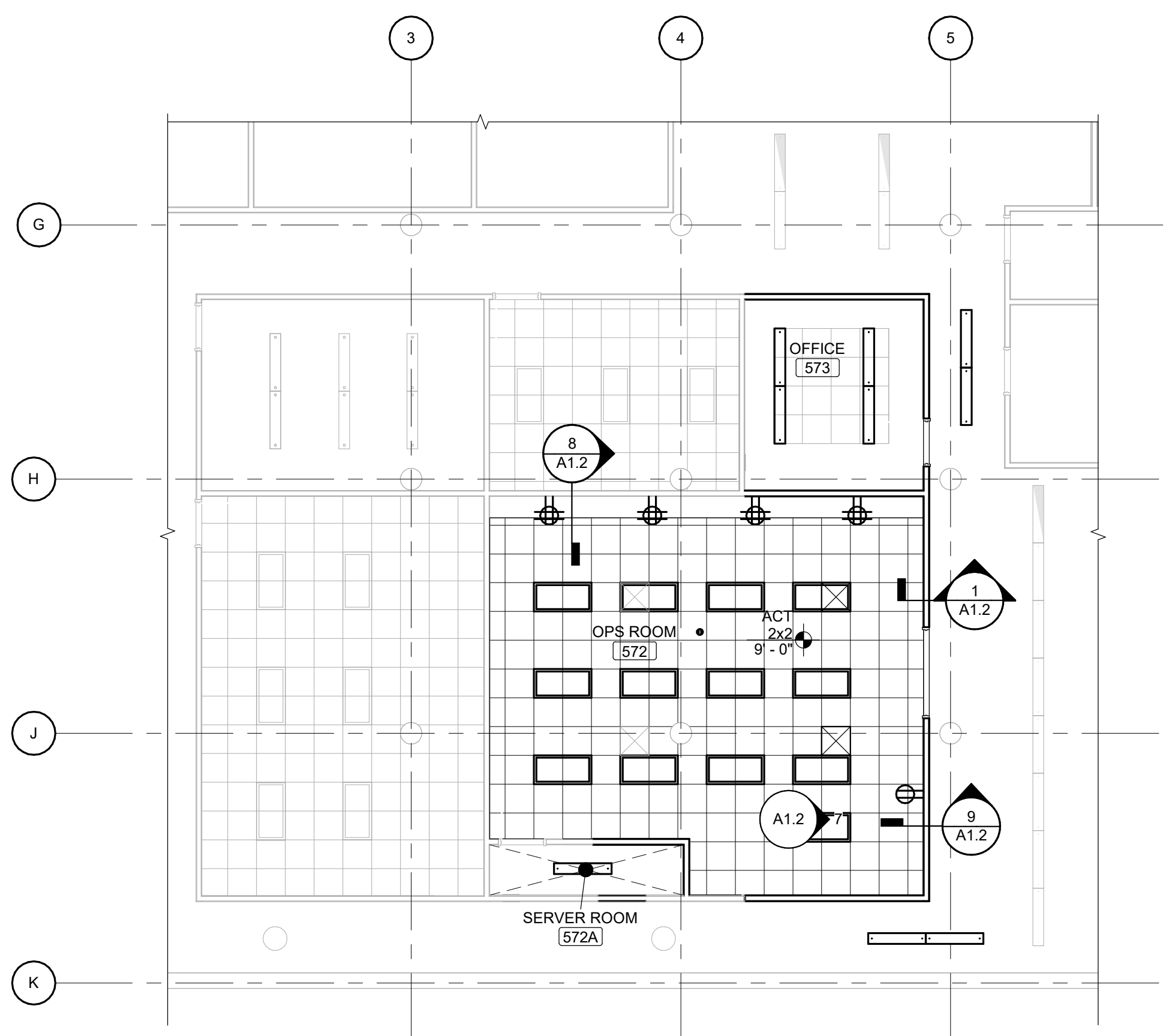
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Iowa State Capitol Complex



4 FIRST FLOOR REFLECTED CEILING DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

2 FIFTH FLOOR - DEMOLITION FLOOR PLAN
SCALE: 1/8" = 1'-0"



3 FIFTH FLOOR REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

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

DEMOLITION GENERAL NOTES

- A. EXISTING CONSTRUCTION SHOWN DASHED IS TO BE DEMOLISHED - COORDINATE WITH NEW CONSTRUCTION
- B. ALL ITEMS INDICATED TO BE DEMOLISHED SHALL BE REMOVED AS TO FULLY ALLOW FOR THE PROPER FURNISHING AND INSTALLATION OF ALL SCHEDULED NEW WORK. THIS SHALL INCLUDE DEMOLITION OF ADJACENT ITEMS, ACCESSORIES, AND APPURTENANCES AS NECESSARY.
- C. DEMOLITION DRAWINGS ILLUSTRATE MAJOR ITEMS TO BE REMOVED. CONTRACTOR SHALL COORDINATE THESE DRAWINGS WITH NEW WORK DRAWINGS AND SHALL BE RESPONSIBLE FOR OTHER ITEMS REQUIRED TO BE DEMOLISHED TO ACCOMMODATE NEW WORK.
- D. THE CONTRACTOR IS RESPONSIBLE FOR RETAINING AND RELOCATING ALL SUPPORT SYSTEMS, CEILING TILES, LIGHT FIXTURES, GRILLES, DIFFUSERS, EXIST SIGNS, AND OTHER ELECTRICAL OR COMMUNICATION DEVICES.
- E. THE CONTRACTOR IS RESPONSIBLE FOR STORAGE AND PROTECTION OF ALL SALVAGE ITEMS.
- F. EXISTING ITEMS, EQUIPMENT, PLUMBING FIXTURES, ETC. TO REMAIN IN PLACE SHALL BE PROTECTED FROM DIRT AND DAMAGE DURING DEMOLITION AND CONSTRUCTION.
- G. PROTECT ALL FINISHES TO REMAIN FROM DAMAGE DURING DEMOLITION AND CONSTRUCTION.
- H. PRIOR TO DEMOLITION, ENSURE THE STABILITY OF ANY WALLS TO REMAIN.
- I. REMOVE ACOUSTICAL CEILING INCLUDING, BUT NOT LIMITED TO, RELATED SUPPORT SYSTEMS, CEILING TILES, LIGHT FIXTURES, GRILLES, DIFFUSERS, EXIST SIGNS, AND OTHER ELECTRICAL OR COMMUNICATION DEVICES.
- J. DEMOLITION OF FLOOR FINISHES INCLUDES REMOVAL OF ADHESIVES, GROUTING BEDS, RESILIENT BASE, ETC.
- K. REMOVAL OF EXISTING HVAC TO INCLUDE DUCTWORK, HANGERS, GRILLES, DIFFUSERS, ETC. SEE MECHANICAL DRAWINGS.
- L. REMOVAL OF EXISTING ELECTRICAL SYSTEMS TO INCLUDE CONDUIT, BOXES, WIRE, CABLE, SUPPORTS, WIRING DEVICES, SAFETY SWITCHES, FIRE ALARM EQUIPMENT, SPEAKERS, TELEPHONE OUTLETS AND LIGHT FIXTURES. SEE ELECTRICAL DRAWINGS.
- M. HAZARDOUS MATERIALS INCLUDING, BUT NOT LIMITED TO, ASBESTOS AND/OR LEAD PAINT, IS ENCOUNTERED ON THE PROJECT SITE, THE OWNER SHALL ENGAGE A TESTING COMPANY TO IDENTIFY AREAS AND PROVIDE APPROPRIATE ABATEMENT. DEMOLITION CONTRACTOR SHALL COORDINATE ALL ACTIVITIES WITH ABATEMENT CONTRACTOR.

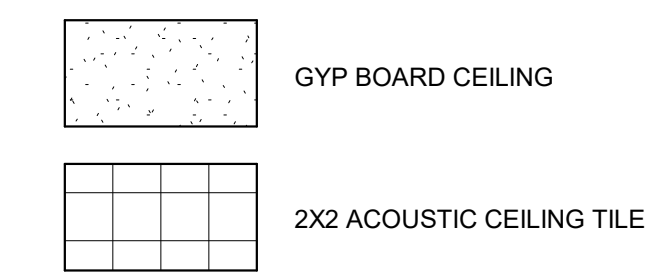
DEMOLITION KEYNOTES (BY DIVISION)

DIVISION 00	DESCRIPTION
D8.1	REMOVE DOOR AND FRAME, SALVAGE DOOR FOR RELOCATION.
D9.1	DEMOLISH WALL IN ITS ENTIRETY.
D9.2	PROTECT EXISTING CARPET TO REMAIN.
D9.3	SALVAGE EXISTING SYSTEMS FURNITURE - TURN OVER TO OWNER.
D10.1	DEMOLISH EXISTING CLOUD CEILING AND ASSOCIATED LIGHT FIXTURE IN ITS ENTIRETY.
D10.2	DEMOLISH EXISTING CEILING, SALVAGE LIGHT FIXTURES, DIFFUSERS, ETC. FOR REINSTALLATION.

PLAN GENERAL NOTES

- A. ALL DIMENSIONS ARE TO FACE OF STUD, CMU AND/OR CONCRETE UNLESS NOTED OTHERWISE.
- B. ALL WOOD IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED.
- C. ALL NEW WORK SHALL BE PLUMB TRUE, AND LEVEL UNLESS OTHERWISE NOTED.
- D. EXTEND FIRE RESISTANT CONSTRUCTION TO STRUCTURE ABOVE. EXTEND PARTITIONS AROUND EQUIPMENT, CABINETS, AND OTHER ITEMS THAT PENETRATE THESE PARTITIONS AND FILL VOIDS IN PARTITIONS ABOVE CEILING TO MAINTAIN DESIGNATED FIRE RESISTANCE. SEE LIFE SAFETY SHEET(S) FOR FURTHER FIRE AND SMOKE RESISTANCE INFORMATION.
- E. DISSIMILAR FLOOR MATERIALS SHALL MEET UNDER CENTER OF DOOR LEAF

REFLECTED CEILING PLAN LEGEND



REFLECTED CEILING PLAN GENERAL NOTES

- A. CEILING MOUNTED LIGHT FIXTURES AND DIFFUSERS ARE SHOWN FOR COORDINATION PURPOSES. EXIT SIGNAGE, SPRINKLER HEADS, SMOKE DETECTORS AND OTHER DEVICES ARE NOT SHOWN. ALL CEILING MOUNTED DEVICES SHALL BE CENTERED IN THE CEILING PANEL IN WHICH THEY OCCUR. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS FOR DEVICES NOT SHOWN. CONTRACTOR TO REVIEW CEILING LAYOUT AND NOTIFY DESIGN PROFESSIONAL OF ANY CONFLICTS BEFORE PROCEEDING WITH CONSTRUCTION.
- B. PAINT CUT EDGES OF ACOUSTIC CEILING TILES TO MATCH CEILING TILE WHERE EXPOSED EDGES ARE VISIBLE.
- C. CONTROL JOINTS SHALL BE INSTALLED; AT ALL CONSTRUCTION CHANGES WITHIN PLANE OF CEILING WHERE CEILING DIMENSIONS EXCEED 30'-0" IN EITHER DIRECTION WITH PERIMETER RELIEF AND 30'-0" WITHOUT. AT WINGS OF "L" AND "T" SHAPED CEILING AREAS, AND AT BUILDING EXPANSION OR CONTROL JOINTS. REFER TO PUBLISHED CONTROL JOINT DETAILS

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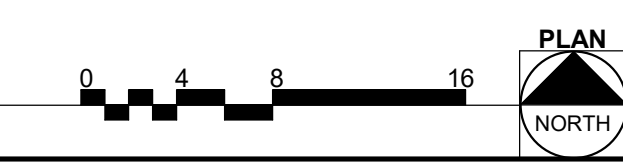
PROJECT:
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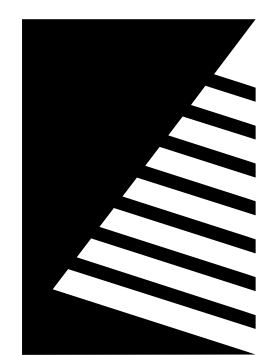
215 E. 7TH Street, Des Moines, IA
DATE: 05/05/2023
DESIGNED: DESIGNER
DRAWN: SD
REVIEWED: SLH

SHEET TITLE:
DEMOLITION, FLOOR, AND REFLECTED CEILING PLANS

SHEET NUMBER:
A1.1
PROJECT NO.: 0230377.00

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PROJECT:
Iowa State Capitol Complex

ORAN PAPE CONFERENCE ROOM

215 E. 7TH Street, Des Moines, IA

DATE: 05/05/2023

DESIGNED: DESIGNER

DRAWN: SD

REVIEWED: SLH

SCHEDULES, ELEVATIONS AND DETAILS

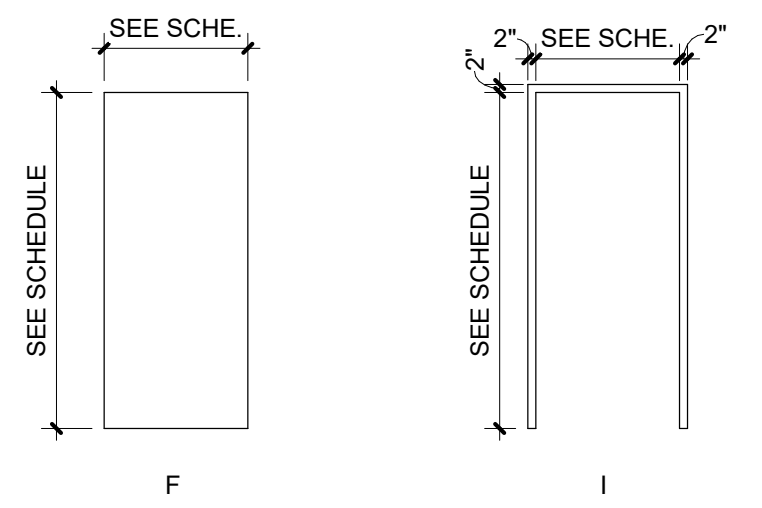
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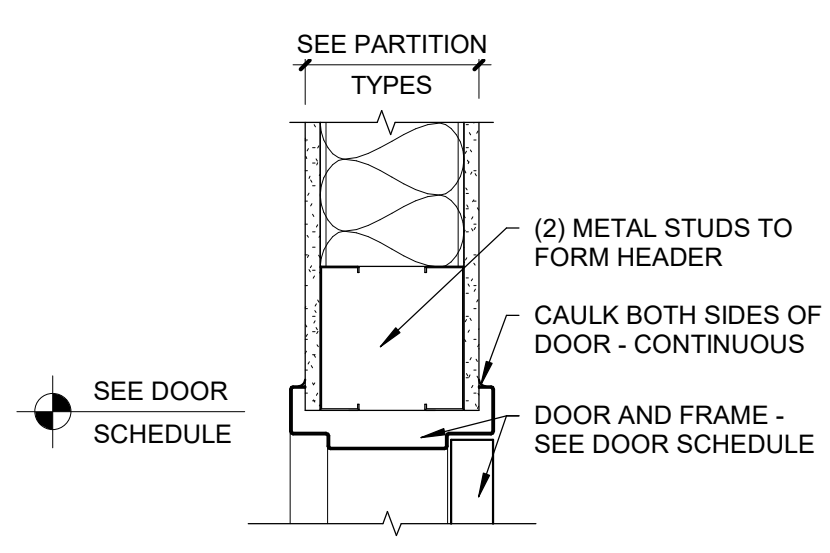
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PARTITION TYPE NOTES

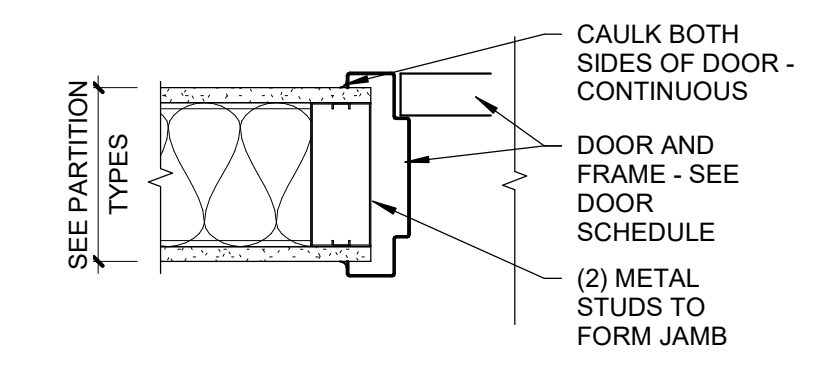
- A. AT THE BASE AND HEAD OF ALL WALLS REQUIRING SOUND ATTENUATION INSULATION, ENSURE THAT THE GYPSUM WALL PANELS ARE NOT OFFSET FROM THE SUBFLOOR OR THE STRUCTURE ABOVE MORE THAN 1/2". IF CONSTRUCTION CONDITIONS REQUIRE THE GYPSUM WALL PANELS TO BE OFFSET MORE THAN 1/2", PROVIDE A CONTINUOUS BEAD OF BACKER ROD AND SEALANT TO PREVENT THE WALL BASE FROM DEFLECTING INTO THE CAVITY.
- B. PROVIDE RED ROSIN PAPER OR SIMILAR MATERIAL BETWEEN DISSIMILAR MATERIALS
- C. PROVIDE CONTINUOUS STIFFENER CHANNELS AT 4'-0" MAXIMUM VERTICAL SPACING, TYPICAL. ALSO PROVIDE AT MIDPOINT BETWEEN BOTTOM OF STRUCTURE AND HEAD OF INTERIOR WINDOWS AND DOORS AS WELL AS HINGE MIDPOINT AT DOORS. IF DOOR OPENING IS OVER 4'-0" LONG, PROVIDE STIFFENER CHANNELS AT ALL HINGE POINTS FOR MINIMUM OF 2 STUD SPACES HORIZONTALLY.



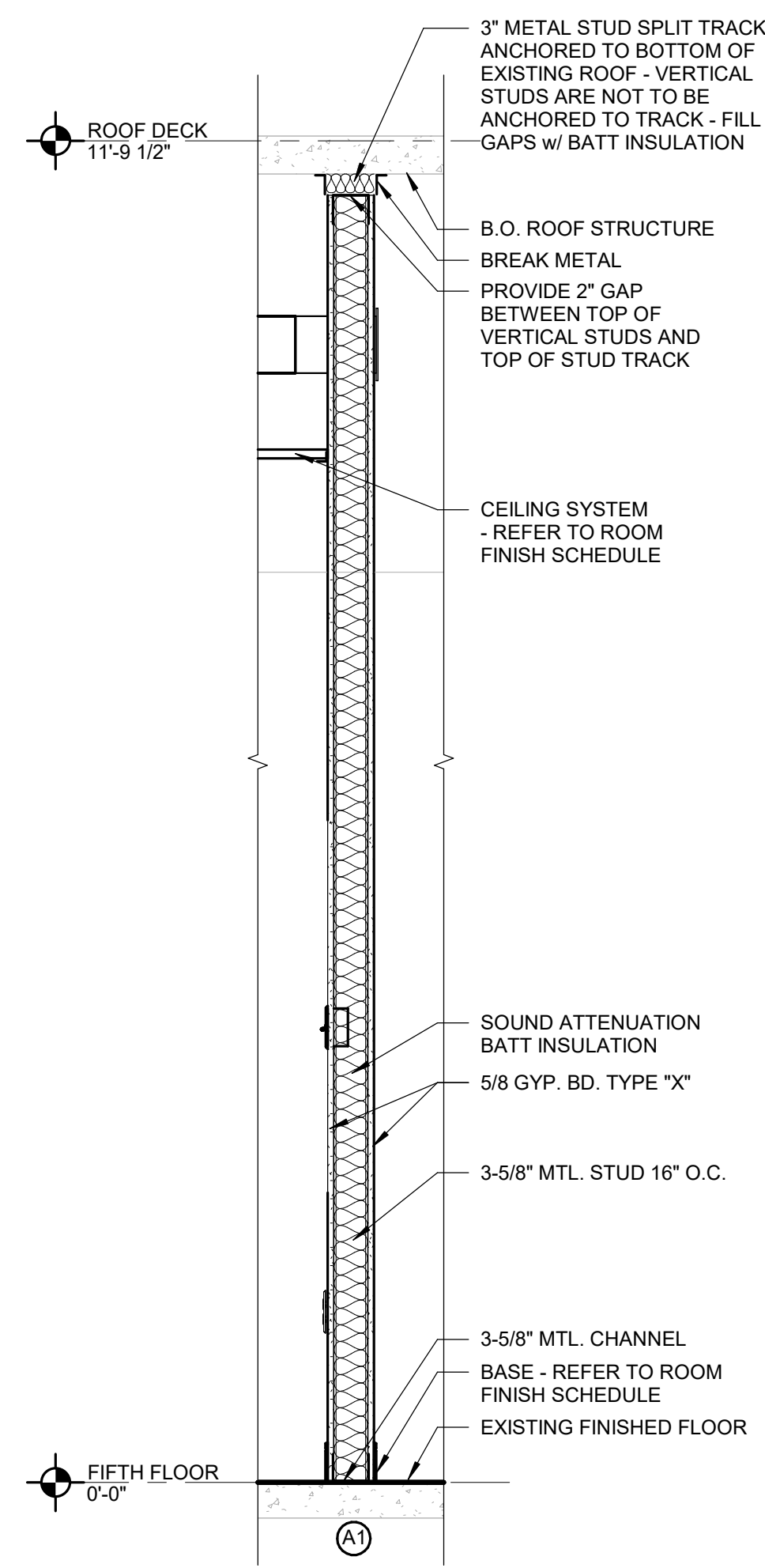
4 DOOR AND FRAME ELEVATION
SCALE: 1/4" = 1'-0"



3 HEAD DETAIL @ METAL STUD
SCALE: 1 1/2" = 1'-0"



2 JAMB DETAIL @ METAL STUD
SCALE: 1 1/2" = 1'-0"



1 WALL SECTION
SCALE: 3/4" = 1'-0"

DOOR SCHEDULE

DOOR NO.	LEAF	DOOR					DOOR FRAME			HEAD DETAIL NO.	JAMB DETAIL NO.	THRESH DETAIL NO.	HDWR SET	NOTES	
		WIDTH	HEIGHT	THICK	MAT'L	FINISH	ELEV	MAT'L	FINISH						ELEV
FIFTH FLOOR															
572	2	6'-0"	7'-0"	1 3/4"	EX	PF	F	HM	PNT	I	1/A7.2	2/A7.2	--	EX	NOTE 1, 2, 3
573	1	3'-0"	7'-0"	1 3/4"	EX	PF	F	HM	PNT	I	1/A7.2	2/A7.2	--	EX	NOTE 1, 2, 3

NOTES:
 1. SALVAGED DOOR TO BE RELOCATED.
 2. ADD OVERHEAD STOP TO EXISTING HARDWARE SET.
 3. FIELD VERIFY HINGE AND STRIKE LOCATION FOR EXISTING DOOR AND NEW FRAME.

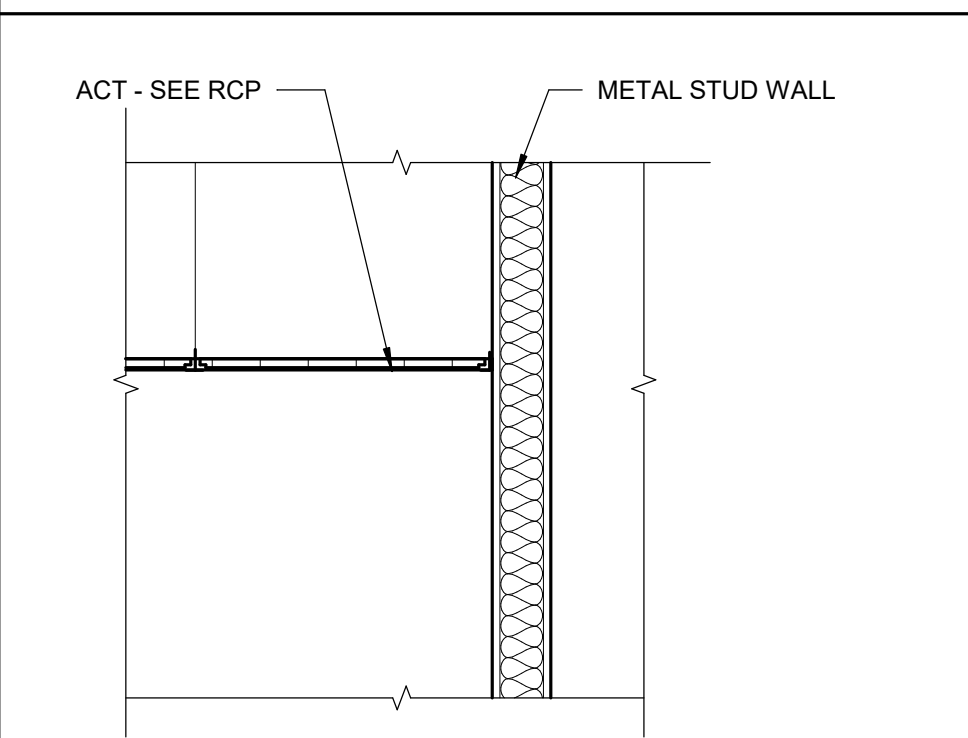
EXIST= EXISTING
 HM= HOLLOW METAL
 PF= PREFINISHED
 PNT= PAINT
 WD= WOOD

ROOM FINISH SCHEDULE

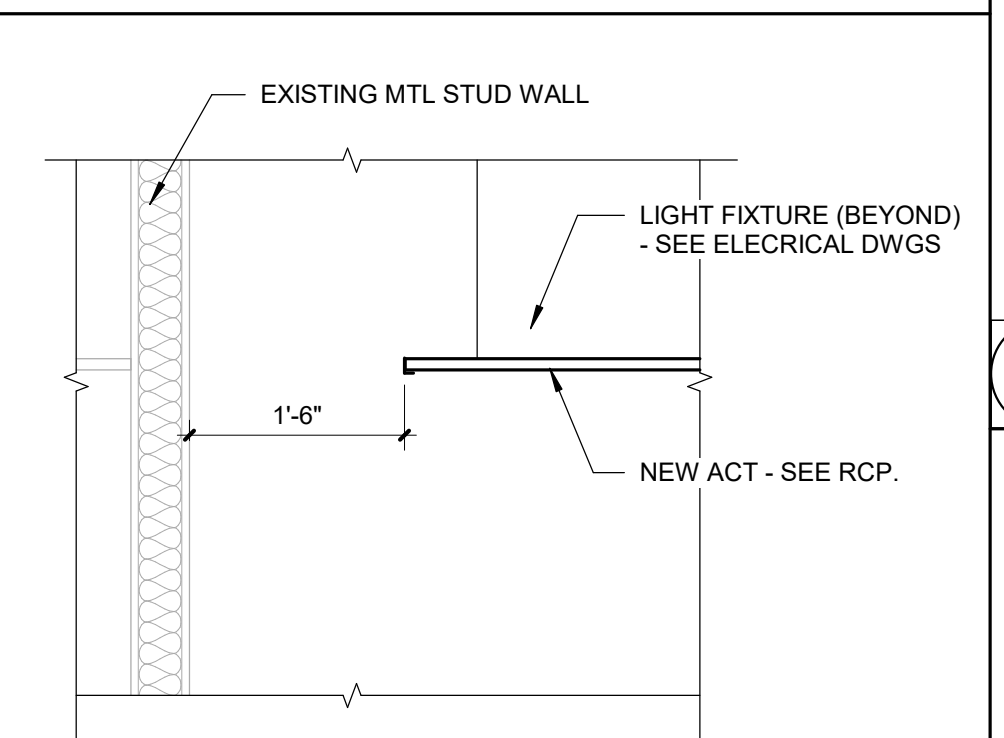
ROOM NO.	NAME	FLOOR	BASE	WALLS								CEILING		REMARKS
				EAST		NORTH		SOUTH		WEST		FIN	HEIGHT	
				MAT'L	FIN	MAT'L	FIN	MAT'L	FIN	MAT'L	FIN			
FIFTH FLOOR														
573	OFFICE	EX	EX/RB	GWB	PNT	GWB	PNT	GWB	PNT	EX	PNT	--	EX	NOTE 1, 2
572	OPS ROOM	EX/CPT	EX/RB	GWB	PNT	EX/GWB	PNT	EX/GWB	PNT	EX	PNT	ACT	9'-0"	NOTE 1, 2
572A	SERVER ROOM	EX	EX/RB	GWB	PNT	EX/GWB	PNT	EX/GWB	PNT	EX	PNT	EXP	--	NOTE 2
575	OPEN OFFICE	EX/CPT	EX/RB	--	--	--	--	--	--	GWB	PNT	--	EX	NOTE 1, 2

NOTES:
 1. PATCH FLOOR WITH MATCHING CARPET AS NEEDED - OFCI.
 2. PROVIDE NEW BASE AS NEEDED TO CREATE UNIFORM FINISH CONDITION.

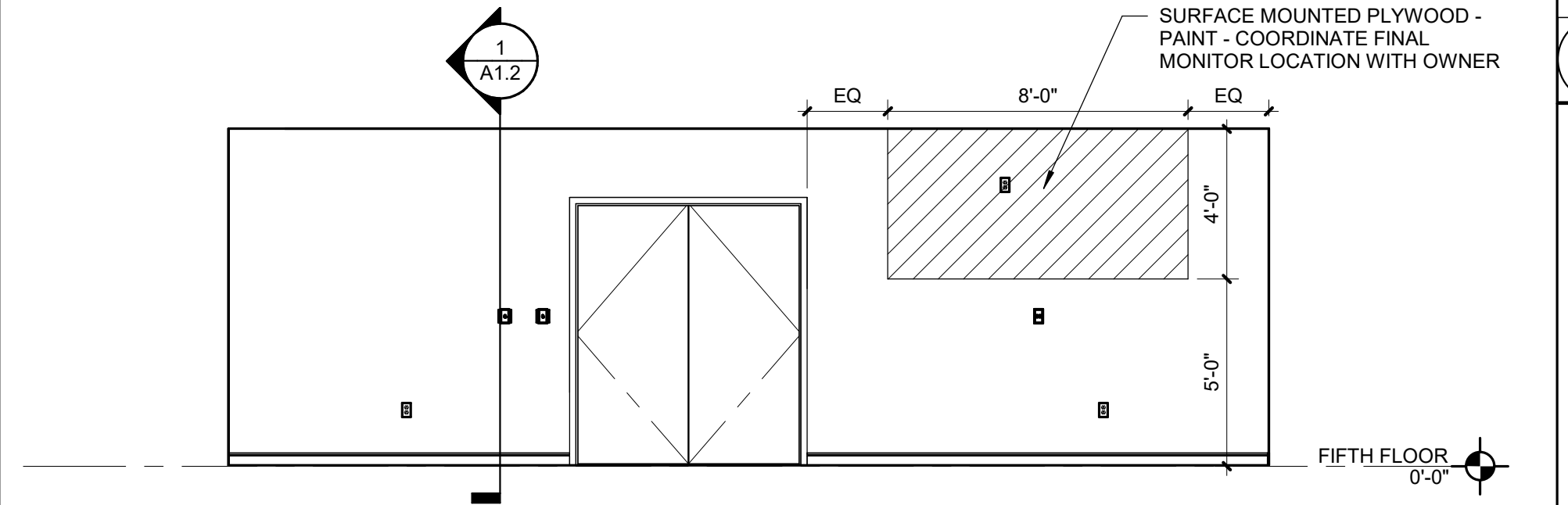
ACT= ACOUSTICAL CEILING TILE
 CPT= CARPET TILE
 EX= EXISTING
 GWB= GYPSUM WALL BOARD
 RB= RUBBER BASE
 PNT= PAINT



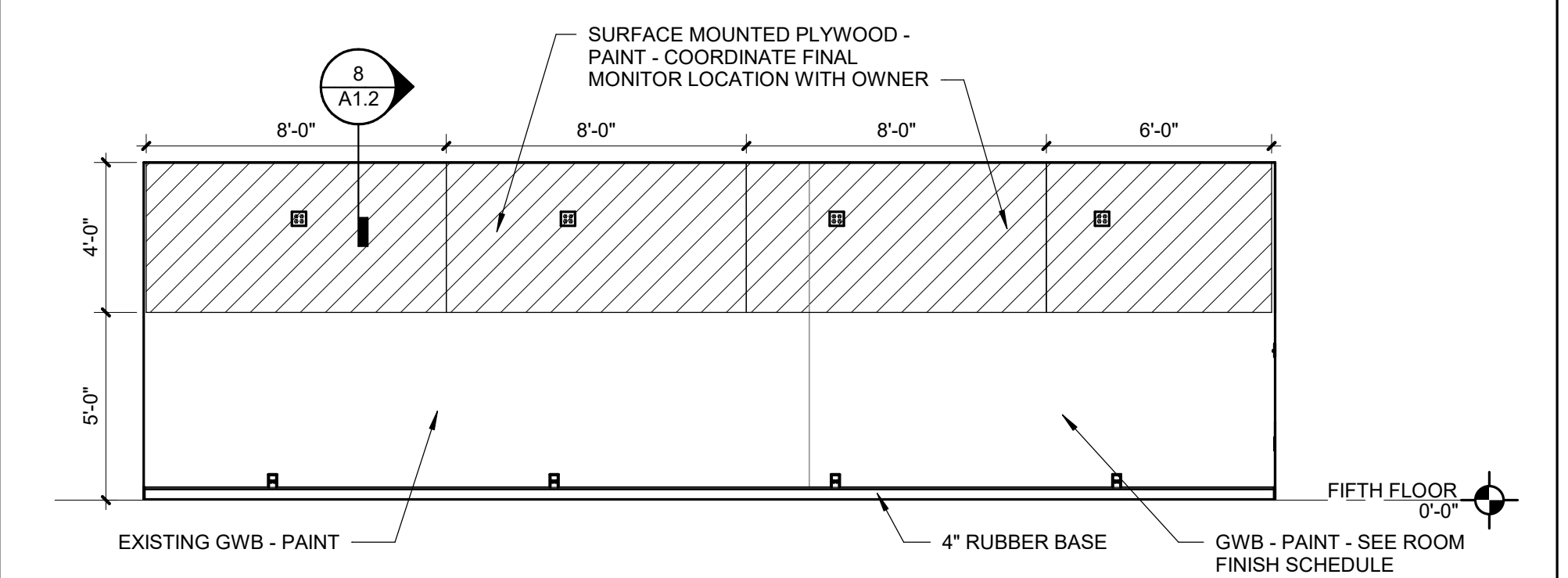
9 TYPICAL CEILING DETAIL
SCALE: 3/4" = 1'-0"



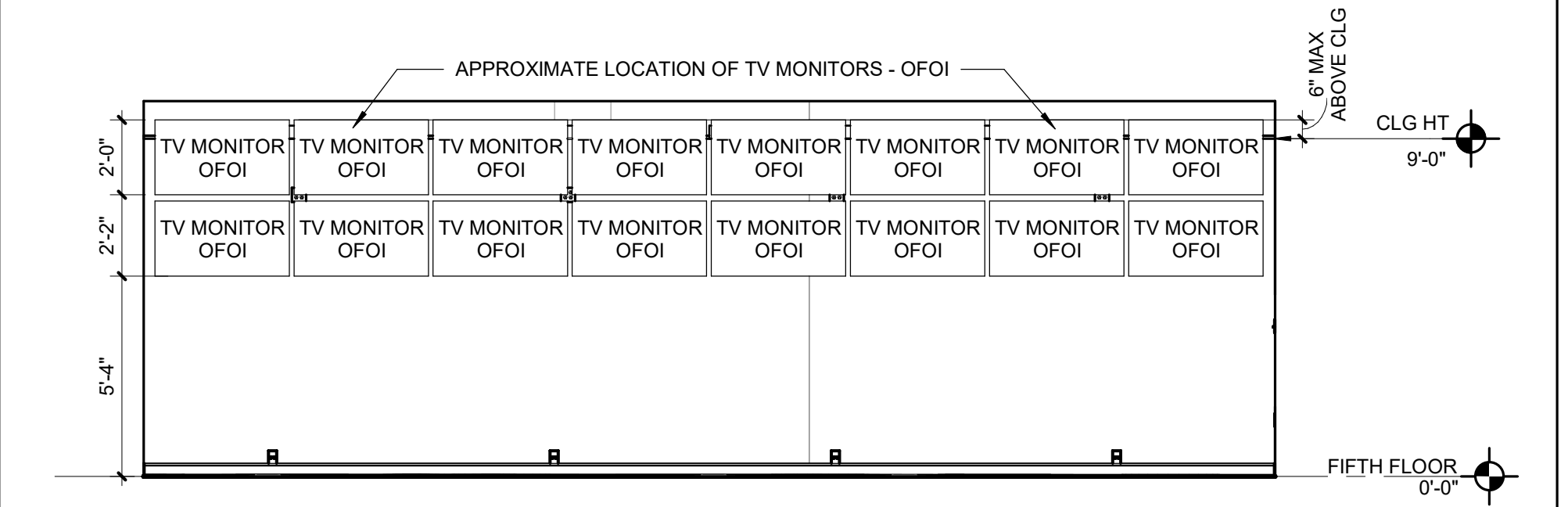
8 CEILING DETAIL
SCALE: 3/4" = 1'-0"



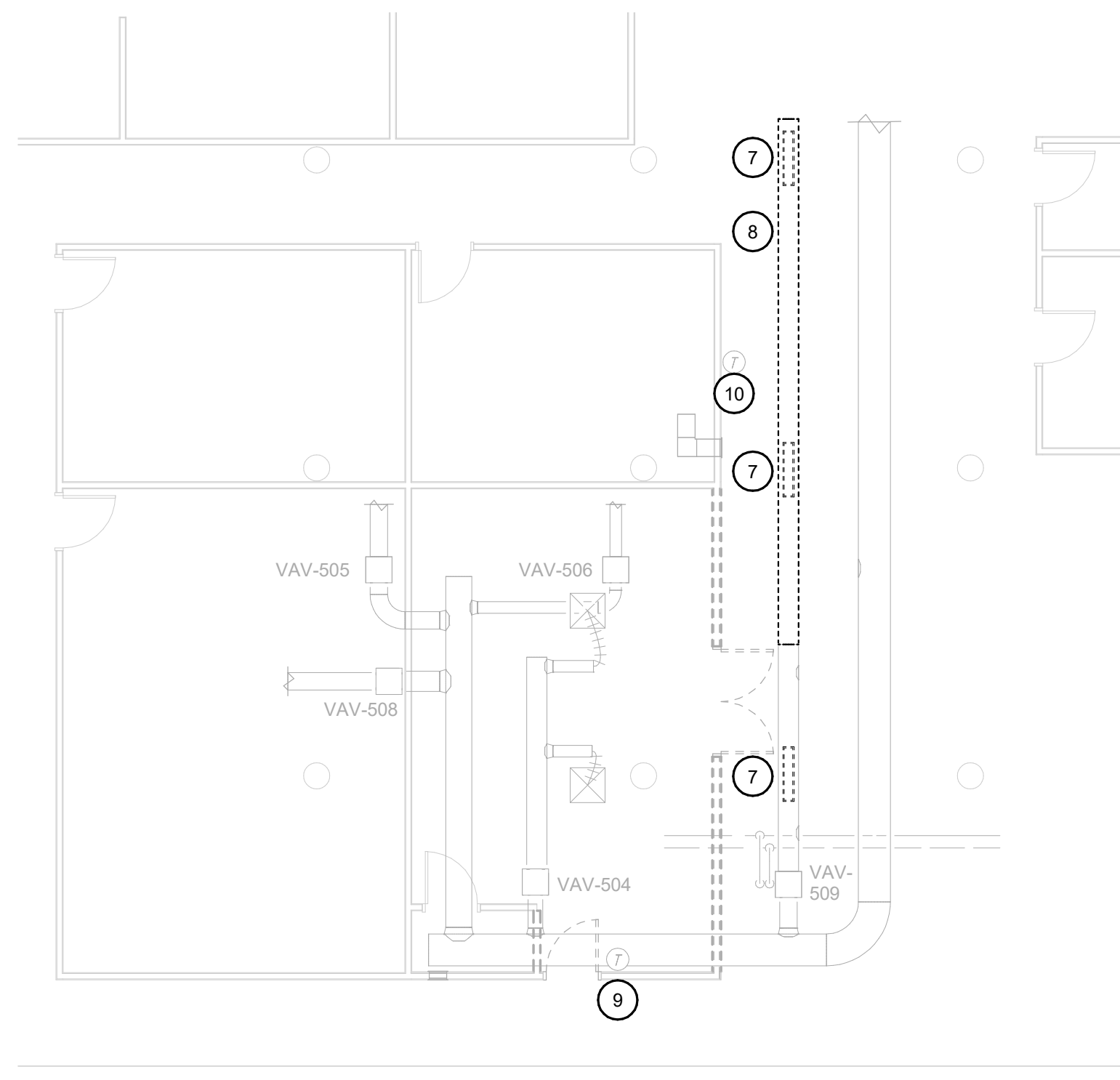
7 572 - EAST ELEVATION
SCALE: 1/4" = 1'-0"



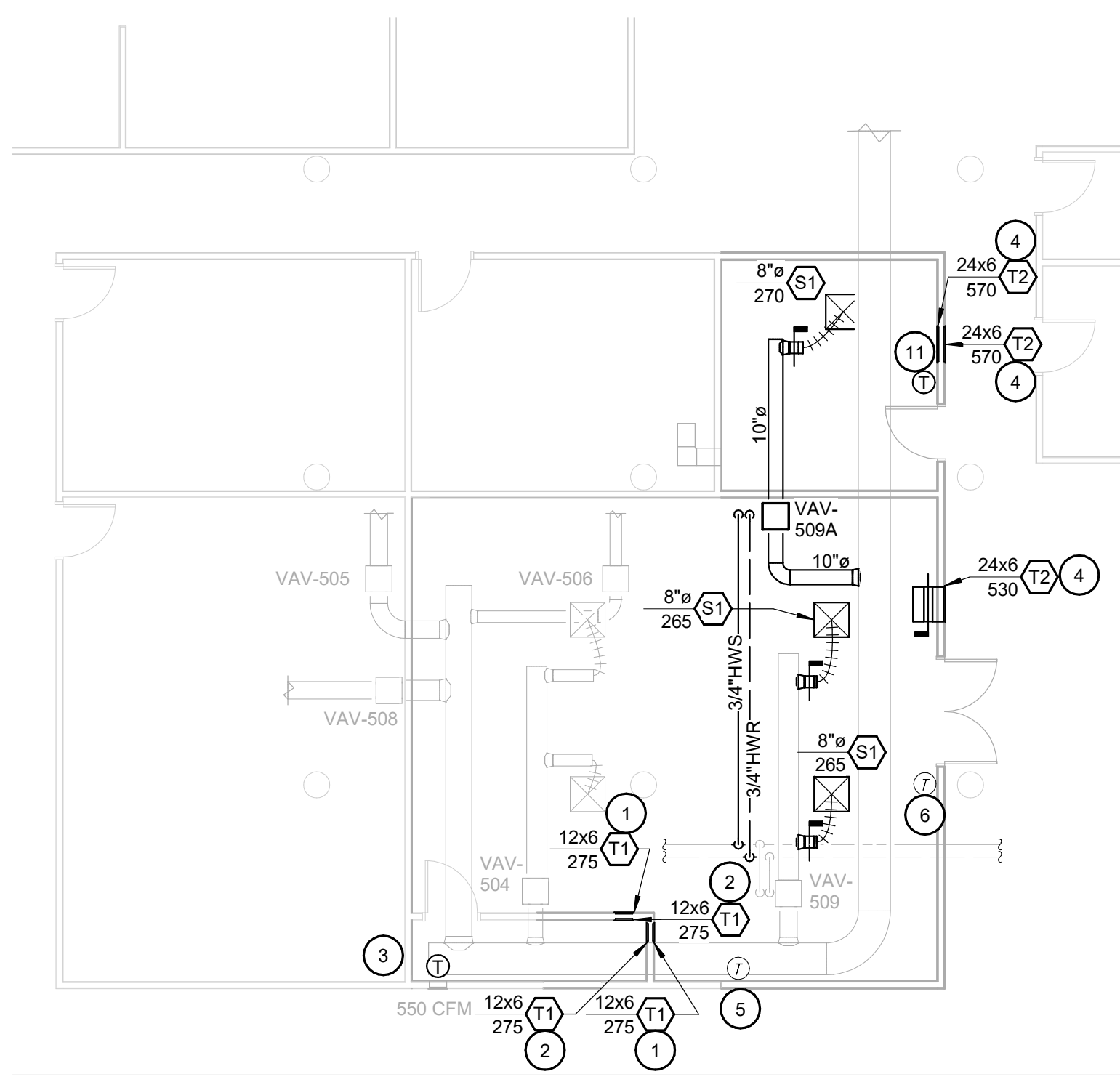
6 572 - NORTH ELEVATION
SCALE: 1/4" = 1'-0"



5 572 - NORTH ELEVATION - EQUIPMENT LAYOUT (FOR REFERENCE)
SCALE: 1/4" = 1'-0"



2 MECHANICAL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



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



AIR DEVICE SCHEDULE

MARK	MANUFACTURER	MODEL	SERVICE	STYLE	MAX. N.C.	MAX. AIR P.D. (IN. W.C.)	FACE SIZE	FRAME	FINISH	MATERIAL	REMARKS
S1	TITUS	OMNI-AA	SUPPLY	PLAQUE	30	0.1	24x24	LAY-IN	WHITE	ALUMINUM	
T1	TITUS	50F	TRANSFER	GRILLE	30	0.05	12x6	SURFACE	WHITE	ALUMINUM	
T2	TITUS	50F	TRANSFER	GRILLE	30	0.05	24x6	SURFACE	WHITE	ALUMINUM	

NOTES:

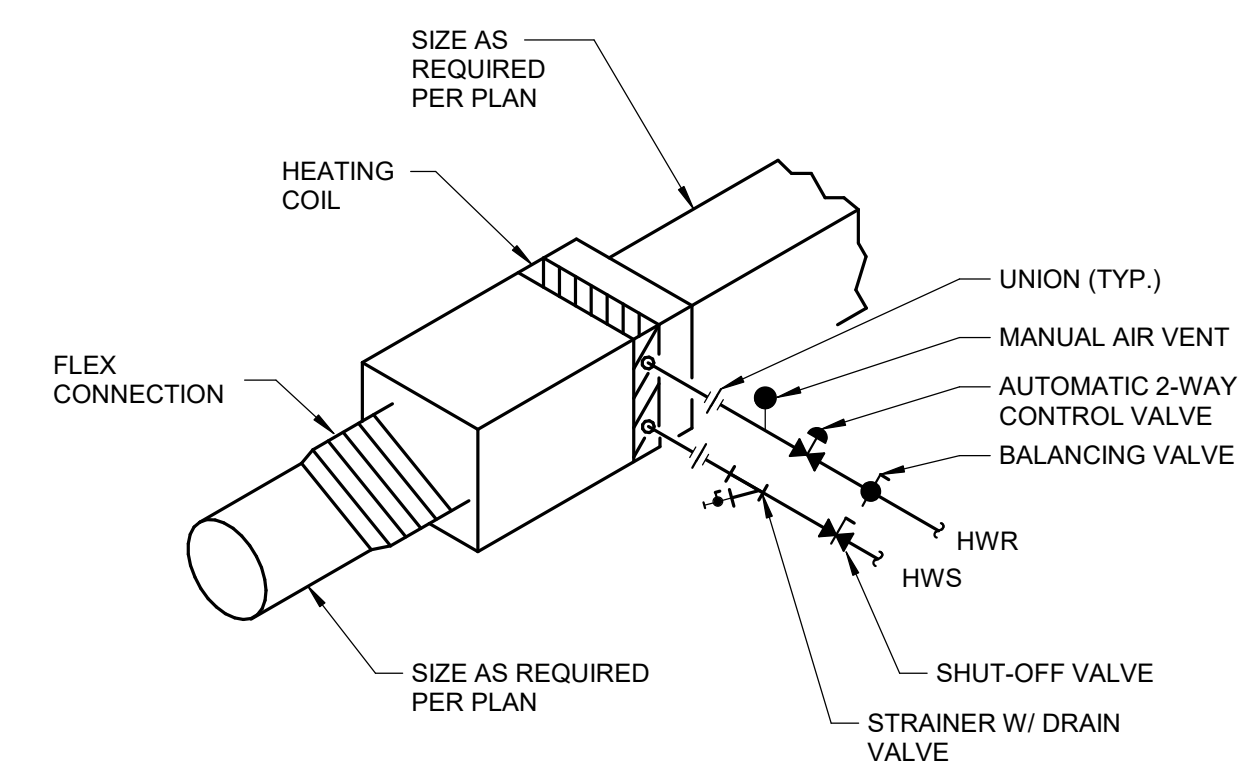
VARIABLE AIR VOLUME TERMINAL SCHEDULE

MARK	MANUFACTURER	MODEL	MAX. COOLING CFM	MIN. COOLING CFM	HEATING CFM	MAX. AIR P.D. (IN. W.C.)	MAX. N.C.	REHEAT COIL								PHYSICAL DATA			REMARKS	
								TOTAL CAP. (MBH)	FLOW (GPM)	MAX. FLUID P.D. (FT. W.C.)	EWT (%DF)	LWT (%DF)	EAT (%DF)	LAT (%DF)	INLET SIZE (IN.)	OUTLET SIZE (IN.)	L (IN.)	W (IN.)		H (IN.)
VAV-509A	TITUS	DESV	270	65	65	0.5	30	4.1	0.3	0.1	180	153.2	55	113	5	12X8	21	18.5	12.25	1

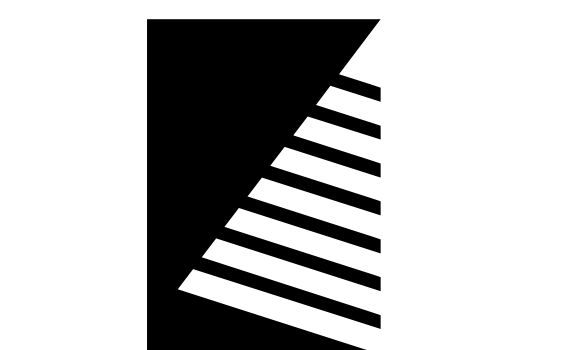
NOTES: 1. 2-WAY HEATING VALVE

KEYNOTES #

- MOUNT TRANSFER GRILLE 1'-6" ABOVE FINISHED FLOOR.
- MOUNT TRANSFER GRILLE 0'-6" ABOVE FINISHED FLOOR.
- INSTALL TEMPERATURE SENSOR WHERE SHOWN. THE FOLLOWING SHALL BE ADDED TO THE SEQUENCE OF OPERATION FOR VAV-504. WHEN THE SERVER ROOM TEMPERATURE IS GREATER THAN THE SERVER ROOM TEMPERATURE SETPOINT (85°F ADJ.) THE MINIMUM VAV BOX CFM SHALL MODULATE BETWEEN THE VAV BOX MINIMUM CFM TO THE VAV BOX MAXIMUM CFM UNTIL THE SERVER ROOM IS SATISFIED.
- MOUNT TRANSFER GRILLE 10'-0" ABOVE FINISHED FLOOR.
- NEW LOCATION OF EXISTING THERMOSTAT FOR VAV-504. INSTALL ASSOCIATED CONTROL WIRING BACK TO VAV BOX.
- NEW LOCATION OF EXISTING THERMOSTAT FOR VAV-509. INSTALL ASSOCIATED CONTROL WIRING BACK TO VAV BOX.
- REMOVE AND DISPOSE OF EXISTING SLOT DIFFUSER.
- REMOVE AND DISPOSE OF EXISTING DUCT AS SHOWN AND CAP.
- EXISTING LOCATION OF THERMOSTAT FOR VAV-504.
- EXISTING LOCATION OF THERMOSTAT FOR VAV-509.
- FURNISH AND INSTALL THERMOSTAT FOR VAV-509A. MOUNT 48" AFF.



3 VAV BOX CONNECTION
SCALE: No Scale



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ISSUE # DATE DESCRIPTION:

100% CD SET

PROJECT:
Iowa State Capitol Complex

ORAN PAPE CONFERENCE ROOM

215 E. 7TH Street, Des Moines, IA

DATE: 05/05/2023

DESIGNED: DAH

DRAWN: MB

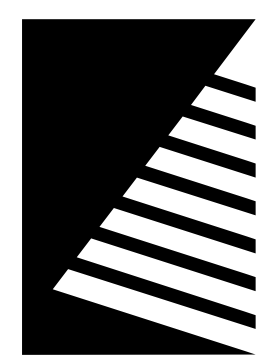
REVIEWED: DAH

SHEET TITLE:
FIFTH FLOOR VENTILATION PLAN

SHEET NUMBER:

M1.1

PROJECT NO.: 0230377.00



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ISSUE: # DATE: DESCRIPTION:

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PROJECT:
Iowa State Capitol Complex

ORAN PAPE CONFERENCE ROOM

215 E. 7TH ST.

DATE: 05/05/2023

DESIGNED: GVP

DRAWN: TMT

REVIEWED: SFW

GENERAL INFORMATION

SHEET NUMBER:

E0.1

PROJECT NO.: 0230377.00

SYMBOLS LEGEND

NOTE: NOT ALL SYMBOLS ARE USED IN CONSTRUCTION DOCUMENTS

GENERAL

	MECHANICAL EQUIPMENT CALL-OUT: REFER TO THE EQUIPMENT DATA SCHEDULE FOR DETAILS
	PLUMBING EQUIPMENT CALL-OUT: REFER TO THE EQUIPMENT DATA SCHEDULE FOR DETAILS
	KEYNOTE
	FEEDER CALL-OUT
	FOOD SERVICE EQUIPMENT DESIGNATION
	ROOM NUMBER
	REVISION CALL-OUT
	NEW EQUIPMENT (TYPICAL)
	EXISTING EQUIPMENT (TYPICAL)
	DEMOLITION EQUIPMENT (TYPICAL)
	WALL MOUNT BRACKET (TYPICAL)

WIRING AND CONDUITS

	CONDUIT - CONCEALED IN SUSPENDED CEILING OR WALL
	CONDUIT - EXPOSED
	CONDUIT - CONCEALED BELOW SLAB OR GRADE
	CONDUIT - TURNING UP
	CONDUIT - TURNING DOWN
	CONDUIT - UP AND DOWN (CHANGE IN ELEVATION)
	CONDUIT - CONTINUED
	CONDUIT - FLEXIBLE
	CONDUIT - CAPPED
	JUNCTION BOX
	JUNCTION BOX - EMERGENCY POWER
	CONDUIT FITTING (CONDULET)
	EXPANSION FITTING
	SEALING FITTING
	CABLE TRAY

COMMUNICATIONS (FOR ROUGH-IN ONLY - SEE DETAIL)

	TELEPHONE TERMINAL BACKBOARD (PROVIDE WITH 3/4" FIRE RATED PLYWOOD)
	TELEPHONE OUTLET - WALL MOUNTED
	T WALL MOUNTED
	T TOUCH TONE DEVICE FOR THE DEAF
	W WALL PHONE
	D DEDICATED TELEPHONE OUTLET
	TELEPHONE OUTLET - ABOVE COUNTER
	TELEPHONE OUTLET - FLUSH FLOOR MOUNTED
	TELEPHONE OUTLET - CEILING MOUNTED
	DATA OUTLET - WALL MOUNTED
	DATA OUTLET - ABOVE COUNTER
	DATA OUTLET - FLUSH FLOOR MOUNTED
	DATA OUTLET - CEILING MOUNTED
	COMBINATION TELEPHONE/DATA OUTLET - WALL MOUNTED
	COMBINATION TELEPHONE/DATA OUTLET - ABOVE COUNTER
	COMBINATION TELEPHONE/DATA OUTLET - FLUSH FLOOR MOUNTED
	COMBINATION TELEPHONE/DATA OUTLET - CEILING MOUNTED
	WAP WIRELESS ACCESS POINT

POWER

	BRANCH CIRCUIT PANELBOARD - SURFACE MOUNTED
	BRANCH CIRCUIT PANELBOARD - FLUSH MOUNTED
	DISTRIBUTION PANELBOARD OR SWITCHBOARD
	TRANSFORMER
	POLE MOUNTED TRANSFORMER
	MOTOR CONTROL CENTER
	CONTROL PANEL
	GROUND BAR
	UTILITY KILOWATT-HOUR METER
	SAFETY SWITCH - NON-FUSIBLE
	SAFETY SWITCH - FUSIBLE
	ENCLOSED CIRCUIT BREAKER
	MAGNETIC STARTER
	VFD COMBINATION STARTER VFD VARIABLE FREQUENCY DRIVE
	EQUIPMENT - MOTOR
	DUPLEX RECEPTACLE (NEMA 5-20)
	GFI GROUND FAULT CIRCUIT INTERRUPTER
	SS SURGE SUPPRESSOR (ISOLATED GROUND TYPE)
	WP WEATHERPROOF
	HS HOSPITAL GRADE
	TR TAMPER RESISTANT
	C CONTROLLED
	D DEDICATED
	USB STANDARD DUPLEX WITH 2 USB PORTS
	DUPLEX RECEPTACLE - ABOVE COUNTER
	DUPLEX RECEPTACLE - SPLIT WIRED
	DUPLEX RECEPTACLE - EMERGENCY POWER
	DUPLEX RECEPTACLE - CEILING MOUNTED
	DUPLEX RECEPTACLE - FLUSH FLOOR MOUNTED
	QUADRUPLEX RECEPTACLE
	QUADRUPLEX RECEPTACLE - ABOVE COUNTER
	QUADRUPLEX RECEPTACLE - FLUSH FLOOR MOUNTED
	SINGLE RECEPTACLE
	SPECIAL PURPOSE RECEPTACLE
	SPECIAL PURPOSE RECEPTACLE - CEILING MOUNTED
	SPECIAL PURPOSE RECEPTACLE - FLUSH FLOOR MOUNTED
	FLOOR BOX - SEE SPECS OR KEYED NOTES ON PLAN FOR DETAILS
	PP POWER POLE
	CEILING FAN
	HAND DRYER
	GENERATOR ANNUNCIATOR PANEL
	DEAD FRONT GFI WIRING DEVICE
	EMERGENCY POWER OFF PUSH BUTTON

LIGHTING

	LUMINAIRE TYPE
	LUMINAIRE - RECESSED (REFER TO LUMINAIRE SCHEDULE)
	LUMINAIRE - SURFACE MOUNTED
	RECESSED LUMINAIRE CONNECTED TO THE EMERGENCY POWER SYSTEM OR BALLAST/DRIVER
	OPEN INDUSTRIAL LUMINAIRE
	OPEN INDUSTRIAL LUMINAIRE EMERGENCY POWER SYSTEM OR BALLAST/DRIVER
	WALL MOUNTED LUMINAIRE
	RECESSED DOWNLIGHT - CEILING MOUNTED
	RECESSED DOWNLIGHT w/ EMERGENCY BALLAST/DRIVER - CEILING MTD.
	SURFACE MOUNTED DOWNLIGHT
	RECESSED ADJUSTABLE/WALLWASH - CEILING MOUNTED
	POLE MOUNTED SITE LIGHTING - SINGLE HEAD
	POLE MOUNTED SITE LIGHTING - DUAL HEAD
	POLE MOUNTED SITE LIGHTING - TRIPLE HEAD
	POLE MOUNTED SITE LIGHTING - QUAD HEAD
	LINEAR PENDANT
	PENDANT
	TRACK LIGHTING
	EXIT SIGN - SINGLE FACE, CEILING MOUNTED ARROW INDICATES DIRECTION OF EXIT
	EXIT SIGN - SINGLE FACE, WALL MOUNTED
	EXIT SIGN - DUAL FACE, CEILING MOUNTED
	EXIT SIGN - DUAL FACE, WALL MOUNTED
	EXIT SIGN WITH EMERGENCY LIGHT ARROW INDICATES DIRECTION OF EXIT
	EMERGENCY LIGHT
	TOGGLE SWITCH
	2 DOUBLE-POLE SINGLE-THROW (DPST)
	3 3-WAY
	4 4-WAY
	b LOWER CASE LETTER DENOTES LTG. SWITCH GROUP
	D DIMMER (WALL BOX TYPE)
	F FAN SPEED CONTROLLER
	K KEY OPERATED
	LV LOW VOLTAGE SWITCH
	MC MOMENTARY CONTACT SWITCH
	OS WALL BOX OCCUPANCY SENSOR
	OS2 WALL BOX OCCUPANCY SENSOR FOR TWO LEVEL SWITCHING
	P PILOT LIGHT
	T TIMER
	TC TEACHER CONTROLS STATION
	TE TEACHER ENTRY STATION
	VS WALL BOX VACANCY SENSOR
	WP WEATHERPROOF
	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR a LOWER CASE LETTER DENOTES LTG. SWITCH GROUP
	CEILING MOUNTED DAYLIGHT SENSOR a LOWER CASE LETTER DENOTES LTG. SWITCH GROUP
	CEILING MOUNTED DUAL TECHNOLOGY VACANCY SENSOR a LOWER CASE LETTER DENOTES LTG. SWITCH GROUP
	PHOTOCELL
	ROOM CONTROLLER
	LIGHTING CONTACTOR
	LIGHTING RELAY PANEL
	INVERTER

FIRE ALARM

	PANEL NAME-CIRCUIT NUMBER
	LPA-1
	FCP MAIN CONTROL PANEL (FCP) FCP F/A MAIN CONTROL PANEL FSA FIRE SYSTEM ANNUNCIATOR FTR F/A TRANSPONDER OR TRANSMITTER ESR ELEVATOR STATUS RECALL FRP F/A RELAY PANEL FAC F/A COMMUNICATOR FPS FIRE ALARM ANNUNCIATION CIRCUIT POWER SUPPLY
	P MANUAL PULL STATION
	S SMOKE DETECTOR P PHOTOELECTRIC PL PLENUM SMOKE DETECTOR S SOUNDER BASE
	D DUCT DETECTOR HOUSING AND SAMPLING TUBE
	R THERMAL (HEAT) DETECTOR R RATE OF RISE ONLY F FIXED TEMPERATURE L LINE TYPE FIXED TEMPERATURE CABLE ALL HEAT DETECTORS SHALL BE 135°, COMBINATION TYPE UNLESS INDICATED OTHERWISE.
	DP SUPERVISORY SWITCH - DRY-PIPE PRESSURE SWITCH
	TS SUPERVISORY SWITCH - TAMPER SWITCH
	WF SUPERVISORY SWITCH - WATER FLOW SWITCH
	CONTROL DEVICE - DOOR HOLD OPEN
	ADDRESSABLE INTERFACE MODULE C CONTROL M MONITORING S SIGNALLING V SOLENOID VALVE
	NOTIFICATION APPLIANCE C CHIME H HORN LF LOW FREQUENCY
	NOTIFICATION APPLIANCE - STROBE ONLY CANDELA VALUE AS SHOWN MINIMUM
	NOTIFICATION APPLIANCE WITH STROBE CANDELA VALUE AS SHOWN MINIMUM C CHIME H HORN LF LOW FREQUENCY
	SHUNT TRIP PUSH BUTTON
	NOTIFICATION APPLIANCE (CEILING) C CHIME STROBE H HORN STROBE LF LOW FREQUENCY CANDELA VALUE AS SHOWN MINIMUM
	CARBON MONOXIDE DETECTOR
	CEILING MOUNTED COMBINATION VOICE EVACUATION SPEAKER AND STROBE CANDELA VALUE AS SHOWN MINIMUM
	COMBINATION VOICE EVACUATION SPEAKER AND STROBE NOTIFICATION APPLIANCE CANDELA VALUE AS SHOWN MINIMUM
	CEILING MOUNTED VOICE EVACUATION SPEAKER
	VOICE EVACUATION SPEAKER NOTIFICATION APPLIANCE
	RTS REMOTE TEST SWITCH

SPECIAL SYSTEMS

	PANEL NAME-CIRCUIT NUMBER
	LPA-1
	ACCESS CONTROL CONTROL PANEL
	DVR AND RACK
	CR CARD READER - WITH 3/4" CONDUIT K WITH KEY PAD
	ES ELECTRIC STRIKE WITH 3/4" CONDUIT
	ML ELECTRO-MAGNETIC LOCK WITH 3/4" CONDUIT
	VM VIDEO MONITOR, FLAT SCREEN LCD WITH 3/4" CONDUIT
	DC DOOR STATUS SWITCH WITH 3/4" CONDUIT
	MS MOTION DETECTOR WITH 3/4" CONDUIT
	PS POWER SUPPLY FOR PTZ CAMERA WITH 3/4" CONDUIT
	PS4 4-CHANNEL CAMERA POWER SUPPLY WITH 3/4" CONDUIT
	INDOOR FIXED CAMERA WITH 3/4" CONDUIT PTZ PAN TILT ZOOM WP WEATHERPROOF
	TV OUTLET WITH 3/4" CONDUIT
	HANDICAP DOOR OPERATORS - SEE ARCHITECTURALS WITH 3/4" CONDUIT
	GLASS BREAK SENSOR WITH 3/4" CONDUIT
	VOLUME CONTROLLER - WITH 3/4" CONDUIT
	CEILING MOUNTED SPEAKER
	WALL MOUNTED SPEAKER
	INTERCOM MASTER STATION
	INTERCOM REMOTE STATION P PEDESTAL MOUNT S HIGH SECURITY G GENERAL USE
	PUSH BUTTON
	DOOR BELL SPEAKER/ CHIME
	CLOCK
	DOUBLE SIDED CLOCK
	REQUEST TO EXIT

GENERAL NOTES

COMMON REQUIREMENTS:

- A. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, ELEVATIONS, AND BUILDING DETAILS. VERIFY LOCATION OF ALL WALL OUTLETS, SWITCHES, ETC., WITH ARCHITECTURAL DRAWINGS AND ACTUAL CONDITIONS.
- B. PRIOR TO ROUGH-IN AND FINAL CONNECTION OF EQUIPMENT, VERIFY ELECTRICAL REQUIREMENTS OF EQUIPMENT WITH OTHER TRADES CONSTRUCTION DOCUMENTS AND FINALIZED SHOP DRAWINGS. VERIFICATION SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING: VOLTAGE, AMPERAGE, TOTAL LOAD, OVER-CURRENT PROTECTION REQUIREMENTS, MOUNTING HEIGHT OF ELECTRICAL CONNECTION, CABLE TYPE AND SIZE, WIRING DIAGRAMS.
- C. COORDINATE SCHEDULE OF CONSTRUCTION WITH THE OWNER, OTHER TRADES AND UTILITIES INVOLVED BEFORE TRENCHING AND INSTALLATION OF UNDERGROUND CONDUIT. USE EXTREME CAUTION DURING EXCAVATION TO LOCATE EXISTING UNDERGROUND PIPING, CONDUITS, ETC. LOCATE AND PROTECT ANY BURIED UTILITIES IN AREAS OF EXCAVATION.
- D. GROUT AND SEAL ALL CONDUIT PENETRATIONS OF WALLS AND FLOOR SLABS TO PRESERVE FIRE RATING AND WATERTIGHT INTEGRITY.
- E. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ACTUAL LAYOUT OF LUMINAIRES AND CEILING TYPES. VERIFY CEILING TYPES PRIOR TO ORDERING LUMINAIRES.
- F. REFER TO ARCHITECTURAL PLANS TO CONFIRM ALL FIRE-RATED CEILINGS AND WALLS.
 - 1. ALL PENETRATIONS OF FIRE-RESISTIVE FLOORS OR SHAFT WALLS SHALL BE PROTECTED BY MATERIALS AND INSTALLATION DETAILS THAT CONFORM TO UNDERWRITERS' LABORATORIES LISTINGS FOR "THROUGH-PENETRATION FIRE STOP SYSTEMS." THE CONTRACTOR SHALL SUBMIT SHOP DRAWING DETAILS, FURNISHED BY THE MANUFACTURER OF THE FIRE STOP MATERIAL, WHICH SHOW COMPLETE CONFORMANCE TO THE UL LISTING AND SHALL BE SPECIFIC FOR EACH PENETRATION WITH ALL VARIABLES DEFINED. THESE FINAL AND APPROVED DRAWINGS SHALL BE READILY AVAILABLE TO THE LOCAL INSPECTORS AT ALL TIMES AT THE PROJECT SITE.
- G. ALL LIGHT FIXTURES SHALL BE EQUIPPED WITH A GREEN GROUND WIRE BONDED TO THE HOUSING.
- J. THE ELECTRICAL CONTRACTOR SHALL BE HELD FINANCIALLY RESPONSIBLE FOR ANY AND ALL COSTS OF THE ENGINEERS TIME REQUIRED TO REVIEW AND RESEARCH NON-SPECIFIED EQUIPMENT SUBMITTED FOR SUBSTITUTION BY THE ELECTRICAL CONTRACTOR. THESE COSTS SHALL BE AUTOMATICALLY INVOICED TO THE CONTRACTOR UNLESS SUCH SUBSTITUTIONS FOLLOW THE GUIDELINES FOR SUBSTITUTION AND ARE WITHIN THE PROPER TIME FRAME AS OUTLINED IN OTHER SECTIONS OF THIS SPECIFICATION.
- K. FIELD ADJUST ALL LUMINAIRES REQUIRING AIMING WITH THE OWNER PRESENT AND TO THEIR SATISFACTION.
- L. ON LINEAR WALL SLOT LUMINAIRES, LAMPS SHALL BE CONTINUOUS INCLUDING CORNERS.
- M. PROVIDE UPDATED PANEL SCHEDULE FOR THE SCOPE OF WORK AFFECTED BY THIS CONTRACT. TYPEWRITTEN NEAT TWO-COLUMN CIRCUIT INDEX CARD SET UNDER PLASTIC COVERS ON INSIDE OF DOORS. EACH ODD-NUMBERED CIRCUIT SHALL BE IN SEQUENCE ON ONE COLUMN AND THE EVEN-NUMBERED CIRCUITS ON THE OTHER COLUMN (E.G. 1,3,5, 2,4,6...). EACH CIRCUIT SHALL BE IDENTIFIED AS TO THE USE AND ROOM NAME(S) OR AREA(S). THE CONTRACTOR SHALL CONFIRM ROOM NAMES AND/OR ROOM NUMBERS WITH THE ARCHITECT PRIOR TO PROJECT COMPLETION.
- O. PRIOR TO SUBMITTING BID PROPOSAL, BIDDER SHALL EXAMINE ALL GENERAL CONSTRUCTION DRAWINGS AND VISIT CONSTRUCTION SITE TO BE FAMILIAR WITH EXISTING CONDITIONS UNDER WHICH THEY WILL HAVE TO OPERATE AND WHICH WILL IN ANY WAY AFFECT THE WORK UNDER THIS CONTRACT. NO SUBSEQUENT ALLOWANCE WILL BE MADE IN THIS CONNECTION ON BEHALF OF THE CONTRACTOR FOR ANY ERROR OR NEGLIGENCE ON HIS PART.
- P. CONTRACTOR SHALL NOT SCALE DRAWING FOR QUANTITIES. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL MEASUREMENTS.
- Q. IF POSSIBLE, ALL NEWLY INSTALLED RECEPTACLES SHALL BE INSTALLED IN SEPARATE OR ADJACENT STUD SPACES, TO AVOID SOUND TRANSMISSION AND WALL INTEGRITY ISSUES. ALL NEWLY INSTALLED RECEPTACLES LOCATED IN COMMON STUD SPACES OF FIRE-RESISTANT WALLS SHALL BE EQUIPPED WITH FIRE-RESISTANT PUTTY PADS AT THE BACK OF EACH BOX IN ACCORDANCE WITH NEC.
- R. SECURE ALL LOW VOLTAGE DATA, SIGNALING AND CONTROL WIRING TO THE STRUCTURE AT INTERVALS NO MORE THAN 4 FEET.
- S. WHERE CONDUIT AND WIRING RUNS ARE NOT SHOWN ON FLOOR PLANS, THE CONTRACTOR SHALL DETERMINE AND PROVIDE THE REQUIRED CONDUIT AND WIRING FOR SPECIFIED CIRCUITING IN ACCORDANCE WITH NEC AND THE FOLLOWING MINIMUM REQUIREMENTS:
 - 1. MINIMUM CONDUIT SIZE SHALL BE 3/4".
 - 2. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG. #10 AWG SHALL BE USED FOR HOME RUNS OF 20 AMP BRANCH CIRCUITS OVER 100 FEET IN LENGTH.
 - 3. EACH RACEWAY SHALL CONTAIN AN INSULATED EQUIPMENT GROUNDING CONDUCTOR PER NEC.
 - 4. DERATING OF CONDUCTOR AMPACITY SHALL BE APPLIED PER NEC.
 - 5. NO SHARING OF NEUTRALS ALLOWED. CIRCUIT SHALL HAVE DEDICATED NEUTRAL CONDUCTORS, ONE CIRCUIT, ONE NEUTRAL.
 - 6. MAXIMUM SIX FOOT FLEXIBLE LUMINAIRE WHIP SHALL BE USED FOR FINAL CONNECTIONS TO LIGHT FIXTURES INSTALLED IN LAY-IN CEILINGS. MAXIMUM FOUR LUMINAIRE WHIPS SHALL BE CONNECTED FROM ONE JUNCTION BOX. FEED THRU BETWEEN LUMINAIRES SHALL NOT BE ALLOWED.
 - a. EXCEPTION: ALL RECESSED LUMINAIRES IN HARD CEILINGS SHALL HAVE FEED-THRU JUNCTION BOXES.

RENOVATION NOTES:

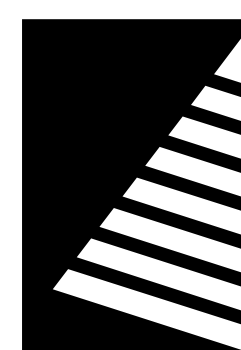
- A. RENOVATION OF ELECTRICAL FACILITIES WILL BE REQUIRED IN THE EXISTING BUILDING. EXISTING CONDUIT RUNS ARE GENERALLY NOT SHOWN, ALTHOUGH A FULL ATTEMPT HAS BEEN MADE TO SHOW SOME EXISTING CONDITIONS, OF WHICH INFORMATION HAS BEEN TAKEN FROM EXISTING RECORD DRAWINGS OF THIS PROJECT. THE DRAWINGS SHOWING LOCATION OF EXISTING EQUIPMENT, OUTLETS, LUMINAIRES, ETC., IN EXISTING AREAS ARE APPROXIMATE ONLY.
 - 1. DRAWINGS SHOW EXISTING CONDITIONS OF THE SITE. AN ATTEMPT HAS BEEN MADE TO SHOW EXISTING BUILDING, SITE DETAILS, ETC., BUT ACCURACY CANNOT BE GUARANTEED. VERIFY EXACT LOCATIONS OF ALL CIRCUITS, CONDUITS, PIPING, EQUIPMENT, ETC. VERIFY ALL SITE AND BUILDING DETAILS.
- B. BRANCH CIRCUITS SHALL BE REUSED WHERE PRACTICAL AND SHALL, IN ADDITION, BE REMODELED AS REQUIRED. THE CONTRACTOR SHALL CONCEAL ALL WORK WHERE POSSIBLE. WHERE EXPOSED WORK IS REQUIRED IN FINISHED AREAS, THE CONTRACTOR SHALL USE WIREMOLD RACEWAY WITH #800 BEING THE MINIMUM SIZE ACCEPTABLE.
- C. EXISTING ELECTRICAL WIRING WHICH WILL NOT BE MADE OBSOLETE AND WHICH WILL BE DISTURBED DUE TO CONSTRUCTION CHANGES REQUIRED BY THIS CONTRACT SHALL BE RESTORED TO OPERATING CONDITION, AS REQUIRED AND/OR DIRECTED. WHERE REQUIRED, SHOWN AND/OR DIRECTED. OUTLETS AND CONDUIT RUNS SHALL BE RELOCATED. IN SOME CASES IT MAY BE NECESSARY TO EXTEND CONDUITS AND PULL IN NEW WIRING OR INSTALL JUNCTION BOXES AND SPLICE IN NEW WIRING OR REPLACE OLD WIRING WITH NEW.
- D. OUTLETS FROM WHICH LUMINAIRES, SWITCHES, RECEPTACLES, AND/OR OTHER ELECTRICAL DEVICES ARE MOVED AND WHICH ARE NOT REPLACED OR REUSED SHALL BE REMOVED OR, IF IT IS NOT POSSIBLE TO REMOVE, PLACE A BLANK COVER ON THE OUTLET BOX. WHERE OUTLETS, BOXES, ETC., ARE COMPLETELY REMOVED, THE CONTRACTOR SHALL CUT OFF CONDUITS AND REMOVE WIRING.
- E. WHERE EXISTING LUMINAIRES ARE TO BE REUSED, THE ELECTRICAL CONTRACTOR SHALL CLEAN AND REPLACE LAMPS, REPAIR OR REPLACE DEFECTIVE PARTS, LENS, BALLAST, ETC. AS REQUIRED.
- F. WHERE EXISTING CONDUIT IS TO BE ABANDONED, THE CONDUIT SHALL BE REMOVED IF IT IS EXPOSED, IN A CRAWL SPACE OR IN AN ACCESSIBLE CEILING. WHERE IT IS IMPOSSIBLE TO REMOVE THE CONDUIT, IT SHALL BE CUT OFF AND CAPPED OR PLUGGED, THAT IT WILL NOT PROTRUDE BEYOND THE FINISHED SURFACE. WHERE CONDUITS EXTENDING THROUGH FLOORS ARE TO BE ABANDONED, THE CONTRACTOR SHALL CUT AND CAP OR PLUG CONDUIT, THAT IT WILL NOT PROTRUDE ABOVE THE FLOOR.
- G. THE CONTRACTOR SHALL BE HELD FULLY RESPONSIBLE FOR THE PROPER RESTORATION OF ALL EXISTING SURFACES REQUIRING PATCHING, PLASTERING, PAINTING AND/OR OTHER REPAIR DUE TO THE INSTALLATION OF ELECTRICAL WORK UNDER THE TERMS OF THIS SPECIFICATION. CLOSE ALL OPENINGS, REPAIR ALL SURFACES, ETC., AS REQUIRED. THE CONTRACTOR SHALL EMPLOY QUALIFIED AND EXPERIENCED WORKMEN FOR THIS WORK. ALL RESTORATION WORK SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT AND/OR THE OWNER.
- H. ALL TEMPORARY AND REMODELING WORK SHALL BE CONSIDERED A PART OF THIS CONTRACT AND NO EXTRA CHARGES WILL BE ALLOWED. THIS SHALL INCLUDE MINOR ITEMS OF MATERIAL OR EQUIPMENT NECESSARY TO MEET THE REQUIREMENTS AND INTENT OF THE PROJECT.
 - I. EXAMINE ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS AND SPECIFICATIONS TO DETERMINE THE SEQUENCE OF CONSTRUCTION THROUGHOUT THE PROJECT, INCLUDING EXISTING, TEMPORARY, REMODELED AND NEW AREAS.
 - J. ALL ELECTRICAL CONNECTIONS REQUIRING AN OUTAGE SHALL BE MADE DURING AN APPROVED TIME LIMIT. CHANGEOVERS SHALL BE AS SHORT A DURATION AS POSSIBLE AND SHALL NOT INTERFERE WITH NORMAL OPERATION OF THE OWNER'S FACILITIES. NOTICE SHALL BE REQUIRED IN ADVANCE OF A SHUTDOWN OF ANY ELECTRICAL CIRCUIT FOR CHANGEOVER, AND SUCH A CHANGEOVER SHALL BE DONE DURING HOURS AS DIRECTED BY OWNER. WORK SHALL BE SCHEDULED SO THAT AT NO TIME WILL ANY EMERGENCY FEEDER, CIRCUIT, OR FIRE ALARM ZONE BE OUT OF SERVICE. PROVIDE NECESSARY TEMPORARY FEEDERS TO ACCOMPLISH THIS REQUIREMENT.
- K. EXISTING LOW VOLTAGE WIRING WHICH WILL NOT BE MADE OBSOLETE AND WHICH WILL BE DISTURBED DUE TO CONSTRUCTION CHANGES REQUIRED BY THIS CONTRACT SHALL BE RESTORED TO CONDITION, OR POSITION, AS REQUIRED. PROPERLY RE-SECURE CABLE IN CHASES, CRAWL SPACES, TUNNELS, AND CEILING SPACES AS REQUIRED BY NEC. IN SOME CASES IT MAY BE NECESSARY TO ADD SUPPORTING HARDWARE TO ACCOMPLISH THIS REQUIREMENT.

DEMOLITION:

- A. RETURN REMOVED MATERIAL DEEMED SALVAGEABLE BY OWNER'S REPRESENTATIVE. MATERIALS DEEMED NOT SALVAGEABLE SHALL BE REMOVED FROM THE PREMISES.
- B. REMOVE ALL EXISTING WIRING DEVICES, LUMINAIRES, WIRE, CONDUIT, ETC., AS NOTED OR INDICATED WITHIN DEMOLITION AREA. (ALL ITEMS MAY NOT BE SHOWN). REWORK AS NECESSARY CIRCUITING WHICH REQUIRES CONTINUATION THROUGH THE AREA.
- C. ELECTRICAL CONTRACTOR TO PROVIDE ALL NECESSARY LABOR, CONDUIT, WIRE, CONNECTIONS, ETC., FOR DEVICES, LUMINAIRES, ETC., NOTED AS "EXISTING TO REMAIN" SUCH THAT EXISTING CIRCUIT CONTINUITY IS MAINTAINED.
- D. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK REQUIRED TO REMOVE/RELOCATE ANY EXISTING ELECTRICAL EQUIPMENT SUCH THAT ELECTRIC SHOCK HAZARDS TO WORKMEN ARE ELIMINATED DURING DEMOLITION AND NEW CONSTRUCTION.
- E. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK IN REMOVING AND REPLACING "EXISTING TO REMAIN" LUMINAIRES, DEVICES, ETC., AS REQUIRED SO THAT THESE DEVICES ARE NOT DAMAGED DURING DEMOLITION. RELOCATED TO NEAREST APPROPRIATE LOCATION TO AVOID CONFLICTS WITH OTHER TRADES' WORK. REPLACE WITH NEW ANY "EXISTING TO REMAIN" LUMINAIRE, DEVICE, ETC., NOT DEEMED SALVAGEABLE BY OWNER'S REPRESENTATIVE.
- F. REMOVED OR DAMAGED CONDUIT, WIRE, AND FITTINGS SHALL NOT BE REUSED FOR RELOCATED OR NEW DEVICES.
- G. MAKE AS-BUILTS WITH NEW TYPED DIRECTORIES FOR ALL PANELBOARDS, INDICATING CIRCUIT DESCRIPTION (USED OR SPARE), CIRCUIT BREAKERS AND CIRCUIT LOAD.
- H. WORK REQUIRED FOR EXISTING EQUIPMENT NOTED AS "EXISTING TO BE REMOVED" SHALL INCLUDE:
 - 1. REMOVAL OF FEEDER FROM EQUIPMENT TO POINT OF FEED.
 - 2. REMOVAL OR RE-CIRCUITING OF ALL BRANCH CIRCUITING.
 - 3. REMOVAL OF ALL FITTINGS, SUPPORTS, BRACKETS, ETC.
 - 4. PATCHING OF WALLS, FLOORS AND CEILINGS PER ARCHITECT'S INSTRUCTIONS.
 - 5. CAPPING OF FEEDER CONDUIT AT 6" ABOVE OR BELOW FLOOR/CEILING AS REQUIRED AND MARKING LOCATION OF POINT OF FEED WITH AN ENGRAVED BRASS TAG.
 - 6. REMOVAL OF FEEDER CONDUIT IF FOUND TO BE UNSALVAGEABLE BY ARCHITECT, ENGINEER OR OWNER'S REPRESENTATIVE.
- I. EXISTING EQUIPMENT NOT IMPLICITLY SHOWN ON THE DRAWINGS IS INTENDED TO BE "EXISTING TO REMAIN UNCHANGED", UNLESS NOTED OTHERWISE.

ABBREVIATIONS

%Z	IMPEDANCE	MCC	MOTOR CONTROL CENTER
(E)	EXISTING (ALSO COVERED BY TEXT WEIGHT)	MCP	MOTOR CIRCUIT PROTECTOR
(F)	FUTURE	MDF	MAIN DISTRIBUTION FRAME
(PART)	PARTIAL CIRCUIT	MDP	MAIN DISTRIBUTION PANEL
(R)	RELOCATE	MEPFP	MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION
A	AMPERES	MGB	MASTER GROUND BAR
AC	6" ABOVE COUNTER	MH	METAL HALIDE
ADA	AMERICANS WITH DISABILITIES ACT	MIN	MINIMUM
AF	AMPERES FRAME	MLO	MAIN LUG ONLY
AFCI	ARC FAULT CIRCUIT INTERRUPTER	MOCOP	MAXIMUM OVERCURRENT PROTECTION
AFF	ABOVE FINISHED FLOOR	MSB	MAIN SWITCHBOARD
AFG	ABOVE FINISHED GRADE	MTG	MOUNTING
AHJ	AUTHORITY HAVING JURISDICTION	MTS	MANUAL TRANSFER SWITCH
AIC	AMPERES INTERRUPTION CAPACITY	MVA	MEGAVOLT-AMPERES
AL	ALUMINUM	MW	MEGAWATT
AT	AMPERES TRIP	MWH	MEGAWATT-HOURS
ATS	AUTOMATIC TRANSFER SWITCH	N	NEUTRAL
AWG	AMERICAN WIRE GAUGE	N/A	NOT APPLICABLE
BMS	BUILDING MANAGEMENT SYSTEM	NC	NORMALLY CLOSED
C	CONDUIT	NEC	NATIONAL ELECTRIC CODE
CAM	CAMERA	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CB	CIRCUIT BREAKER	NF	NON-FUSED
CCTV	CLOSED CIRCUIT TELEVISION	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
COW	COUNTER CLOCKWISE	NIC	NOT IN CONTRACT
CKT	CIRCUIT	NL	NIGHT LIGHT
CL	CENTER LINE	NO	NORMALLY OPEN
CLG	CEILING	NP	NAMEPLATE
CO	CONDUIT ONLY	NTS	NOT TO SCALE
ORI	COLOR RENDERING INDEX	OC	ON CENTER
CT	CURRENT TRANSFORMER	OD	OUTSIDE DIAMETER
CJ	COPPER	OH	OVERHEAD
CU	CLOCKWISE	OWN	OWNER
D	DEDICATED	P	POLE
DIA	DIAMETER	PA	PUBLIC ADDRESS
DISC	DISCONNECT	PB	PULL BOX
DIST	DISTRIBUTION	PC	PLUMBING CONTRACTOR
DPDT	DOUBLE POLE DOUBLE THROW	PF	POWER FACTOR
DPST	DOUBLE POLE SINGLE THROW	PH	PHASE
DR	DUPLEX RECEPTACLE	PIR	PASSIVE INFRARED
DWG	DRAWING(S)	PLC	PROGRAMMABLE LOGIC CONTROLLER
EC	ELECTRICAL CONTRACTOR	PNL	PANEL
ELC	ELEVATOR CONTRACTOR	PR	PAIR
ELEC	ELECTRICELECTRICAL	PRI	PRIMARY
EM	EMERGENCY	PT	POTENTIAL TRANSFORMER
EMT	ELECTRICAL METALLIC TUBING	PTV	PHOTOVOLTAC
EQUIP	EQUIPMENT	PVC	POLYVINYL CHLORIDE
EWC	ELECTRIC WATER COOLER	PWC	PRE-WIRED CONTROLS
F	FUSED	PWR	POWER
FA	FIRE ALARM	RCPT	RECEPTACLE
FAA	FIRE ALARM ANNUNCIATOR	REQD	REQUIRED
FACP	FIRE ALARM CONTROL PANEL	RF	RADIO FREQUENCY
FC	FOOTCANDLE	RM	ROOM
FLA	FULL LOAD AMPERES	RMC	RIGID METAL CONDUIT
FMC	FLEXIBLE METAL CONDUIT	RNC	RIGID NON-METALLIC CONDUIT (SCH 40)
FO	FIBER OPTIC	RVAT	REDUCED VOLTAGE - AUTOTRANSFORMER
FPC	FIRE PROTECTION CONTRACTOR	SC	SHORT CIRCUIT
FS	FUSED SWITCH	SCC	SHORT CIRCUIT CURRENT RATING
FSC	FOOD SERVICE CONTRACTOR	SDP	SUBDISTRIBUTION PANEL
FSD	FIRE/SMOKE DAMPER	SEC	SECONDARY
FT	FOOT/FEET	SHLD	SHIELDED (AS IN CABLE)
FVNR	FULL VOLTAGE, NON-REVERSING	SHT	SHEET
FVR	FULL VOLTAGE, REVERSING	SPT	SURGE-PROTECTIVE DEVICE
G/GND	GROUND/GROUNDING	SPDT	SINGLE POLE DOUBLE THROW
GC	GENERAL CONTRACTOR	SPST	SINGLE POLE SINGLE THROW
GEN	GENERATOR	SR	SINGLE RECEPTACLE
GF	GROUND FAULT	SS	SURGE SUPPRESSOR (ISOLATED GROUND TYPE)
GF/GFCI	GROUND FAULT INTERRUPTER	ST	SHUNT TRIP
H	HORIZONTALLY MOUNTED	SW	SWITCH
HG	HOSPITAL GRADE	SWBD	SWITCHBOARD
HH	HANDHOLE	SWGR	SWITCHGEAR
HID	HIGH INTENSITY DISCHARGE	TBD	TO BE DETERMINED
HOA	HAND-OFF-AUTO	TC	TIMECLOCK
HP	HORSEPOWER	TEMP	TEMPERATURE CONTROLS
HPS	HIGH PRESSURE SODIUM	TR	TEMPERATURE
HZ	FREQUENCY	TT	TAMPER RESISTANT
I/O	INPUT/OUTPUT	TTB	THERMAL TRIP SWITCH
ID	INSIDE DIAMETER	TYP	TELEPHONE TERMINAL BOARD TYPICAL
IDF	INTERMEDIATE DISTRIBUTION FRAME	U	UTILITY
IG	ISOLATED GROUND	UG	UNDERGROUND
IMC	INTERMEDIATE METAL CONDUIT	UL	UNDERWRITERS LABORATORY
ISC	SHORT CIRCUIT CURRENT	UON	UNLESS OTHERWISE NOTED
JB	JUNCTION BOX	UPS	UNINTERRUPTABLE POWER SUPPLY
K	KELVIN (COLOR TEMPERATURE)	USB	STANDARD DUPLEX WITH 2 USB PORTS
KCML	1000 CIRCULAR MILS	V	VOLTS
KV	KILOVOLTS	VA	VOLT-AMPERES
KVA	KILVOLT-AMPERES	VAC	VOLTS ALTERNATING CURRENT
KW	KILOWATTS	VDC	VOLTS DIRECT CURRENT
KWH	KILOWATT-HOUR	VFD	VARIABLE FREQUENCY DRIVE
LAN	LOCAL AREA NETWORK	VND	VENDOR
LC	LIGHTING CONTACTOR	W	WATTS
LCP	LIGHTING CONTROL PANEL	W	WIRE
LED	LIGHT EMITTING DIODE	WHM	WATT-HOUR METER
LF	LINEAR FOOT	WP	WEATHERPROOF
LFMC	LIQUID-TIGHT FLEXIBLE METAL CONDUIT	XFMR	TRANSFORMER
LM	LUMEN	XP	EXPLOSION PROOF
LTG	LIGHTING		
LV	LOW VOLTAGE		
MAX	MAXIMUM		
MC	MECHANICAL CONTRACTOR		
MCA	MINIMUM CIRCUIT AMPERES		
MCB	MAIN CIRCUIT BREAKER		



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ISSUE #	DATE:	DESCRIPTION:
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100% CD Set

PROJECT:
Iowa State Capitol Complex

ORAN PAPE CONFERENCE ROOM

215 E. 7TH ST.

DATE: 05/05/2023

DESIGNED: GVP

DRAWN: TMT

REVIEWED: SFW

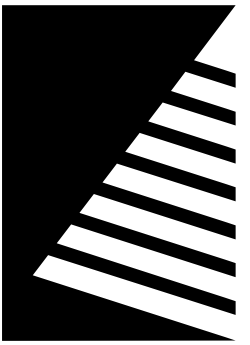
SHEET TITLE:

GENERAL INFORMATION

SHEET NUMBER:

E0.2

PROJECT NO.: 0230377.00



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PROJECT:
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ORAN PAPE CONFERENCE ROOM

215 E. 7TH ST.

DATE: 05/05/2023

DESIGNED: GVP

DRAWN: TMT

REVIEWED: SFW

SHEET TITLE:

SPECIFICATIONS

SHEET NUMBER:

E0.3

PROJECT NO.: 0230377.00

WORK INCLUDED

A. THE WORK TO BE PERFORMED UNDER THIS DIVISION OF THE SPECIFICATIONS SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, CONSTRUCTION, FACILITIES, AND INCIDENTALS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF ALL ELECTRICAL WORK AS SHOWN AND INDICATED ON THE CONTRACT DRAWINGS, AND/OR HEREIN SPECIFIED WITH THE INTENT THAT THE INSTALLATION SHALL BE COMPLETE IN EVERY RESPECT, READY FOR USE. COMPLY WITH THE LATEST EDITION IN FORCE OF THE NFPA CODES INCLUDING THE NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES.

SUBMITTALS

A. SUBMIT ELECTRONIC COPIES OF PRODUCT DATA, SHOP DRAWINGS, WIRING DIAGRAMS AND LITERATURE ON SYSTEMS INDICATED BELOW. LITERATURE SHALL BE MARKED TO INDICATE THE SIZE, TYPE OR MODEL BEING PROPOSED AND ALL ACCESSORIES TO BE PROVIDED.

HAND HOLES
IDENTIFICATION PRODUCTS
WIRING DEVICES/COVER PLATES/FLOOR BOXES
OCCUPANCY/VACANCY SENSORS
GROUNDING PRODUCTS
TRANSFORMERS
PANELBOARDS
SWITCHBOARDS
I-LINE PANELBOARDS
METER CENTERS
CT CABINETS
SAFETY SWITCHES
MOTOR CONTROLLERS
LIGHTING

B. SUBMIT ELECTRONIC COPIES OF OPERATING AND MAINTENANCE MANUAL/RECORD DOCUMENTS. MANUAL/RECORD DOCUMENTS SHALL CONSIST OF MANUFACTURER'S STANDARD PRODUCT DATA, MANUFACTURER'S CURRENT PRINTED OPERATING AND MAINTENANCE INSTRUCTIONS, LIST OF ORIGINAL SPARE PARTS, LIST OF SUPPLIERS DISTRIBUTING SPARE PARTS, RECOMMENDED QUANTITIES TO BE MAINTAINED IN STORAGE AND ALL WARRANTIES. MANUAL SHALL INCLUDE INFORMATION ON THE FOLLOWING:

HAND HOLES
IDENTIFICATION PRODUCTS
WIRING DEVICES/COVER PLATES/FLOOR BOXES
OCCUPANCY/VACANCY SENSORS
GROUNDING PRODUCTS
LIGHTING

C. SUBMIT ELECTRONIC COPIES OF OPERATING AND MAINTENANCE MANUAL/RECORD DOCUMENTS. MANUAL/RECORD DOCUMENTS SHALL CONSIST OF MANUFACTURER'S STANDARD PRODUCT DATA, MANUFACTURER'S CURRENT PRINTED OPERATING AND MAINTENANCE INSTRUCTION, LIST OF ORIGINAL SPARE PARTS, LIST OF SUPPLIERS DISTRIBUTING SPARE PARTS, RECOMMENDED QUANTITIES TO BE MAINTAINED IN STORAGE, TEST REPORTS AS REQUIRED BY CODE (IF SYSTEM REQUIRED), APPROVAL DOCUMENTATION OF THE AHI (IF SYSTEM REQUIRED), PROGRAMING INFORMATION STORED ON A FLASH DRIVE (FIRE ALARM ONLY). PAPER COPIES OF ALL DOCUMENTATION STORED IN THE FIRE ALARM DOCUMENT CABINET (FIRE ALARM ONLY). MANUAL SHALL INCLUDE INFORMATION ON THE FOLLOWING:

FIRE ALARM
NURSE CALL
LIGHTING CONTROL SYSTEMS
RELAY BASED LIGHTING CONTROLLERS

GENERAL

A. "APPROVED EQUAL" INDICATES THE SPECIFYING ENGINEER SHALL APPROVE ALL CONTRACTOR PROPOSED ALTERNATE MATERIAL OR MANUFACTURERS. ENGINEER'S DECISION IS FINAL.
B. THE ELECTRICAL CONTRACTOR SHALL BE HELD FINANCIALLY RESPONSIBLE FOR ANY AND ALL COSTS OF THE ENGINEER'S TIME REQUIRED TO REVIEW AND RESEARCH NON-SPECIFIED EQUIPMENT SUBMITTED FOR SUBSTITUTION BY THE ELECTRICAL CONTRACTOR. THESE COSTS SHALL BE AUTOMATICALLY INVOICED TO THE CONTRACTOR UNLESS SUCH SUBSTITUTIONS FOLLOW THE GUIDELINES FOR SUBSTITUTION AND ARE WITHIN THE PROPER TIME FRAME AS OUTLINED IN OTHER SECTIONS OF THIS SPECIFICATION.

WARRANTY

A. CONTRACTOR'S WARRANTY ON COMPLETE ELECTRICAL INSTALLATION SHALL BE FOR A TIME PERIOD OF ONE (1) YEAR FROM SUBSTANTIAL COMPLETION.
B. MANUFACTURER'S WARRANTY ON ALL EQUIPMENT SHALL BE FOR A TIME PERIOD OF ONE (1) YEAR FROM SUBSTANTIAL COMPLETION UNLESS NOTED OTHERWISE.

COORDINATION

A. IN GENERAL, COORDINATE WORK THOROUGHLY WITH OTHER TRADES, OWNER AND UTILITY COMPANIES TO PROVIDE EFFICIENT FLOW OF THE WORK AND TIMELY COMPLETION OF THE CONTRACT.
B. COORDINATE INSTALLATION OF SERVICE ENTRANCE THOROUGHLY WITH UTILITY COMPANY. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS RELATED TO SERVICE ENTRANCE WORK, INCLUDING ANY CHARGES FROM THE UTILITY COMPANY.

BASIC MATERIALS

A. IN GENERAL ALL MATERIALS SHALL BE: NEW, U.L. LISTED FOR THE SPECIFIC APPLICATION AS SPECIFIED OR AS REQUIRED, AND INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
B. IDENTIFICATION: LAMINATED PLASTIC LABELS ON ALL EQUIPMENT, SWITCHES, CONTROLS, ETC.
C. "APPROVED EQUAL" INDICATES THE SPECIFYING ENGINEER SHALL APPROVE ALL CONTRACTOR PROPOSED ALTERNATE MATERIAL OR MANUFACTURERS. ENGINEER'S DECISION IS FINAL.

CONDUIT

A. ELECTRICAL METALLIC TUBING (EMT): COMPLYING WITH ANSI C80.3 WITH COMPRESSION TYPE FITTINGS, SIZED AS SHOWN ON DRAWINGS OR IF NOT SIZED ON THE DRAWINGS, IN ACCORDANCE WITH NEC AND OTHER APPLICABLE PORTIONS OF CONTRACT DOCUMENTS.
B. RIGID GALVANIZED STEEL (RGS) CONDUIT: COMPLYING WITH ANSI C80.1, THREADED CONDUIT WITH APPROVED FITTINGS, SIZED AS SHOWN ON DRAWINGS OR IF NOT SIZED ON THE DRAWINGS, IN ACCORDANCE WITH NEC AND OTHER APPLICABLE PORTIONS OF THE CONTRACT DOCUMENTS.
C. RIGID NON-METALLIC (PVC) CONDUIT: SCHEDULE 40 PVC TYPE COMPLYING WITH NEMA TC2, U.L. 651, AND ARTICLE 347 OF NEC. FITTINGS SHALL BE PVC, CHEMICAL SOLVENT SEALING TYPE. SIZED AS SHOWN ON THE DRAWINGS OR IF NOT SIZED ON THE DRAWINGS, IN ACCORDANCE WITH NEC AND OTHER APPLICABLE PORTIONS OF THE CONTRACT DOCUMENTS.
D. FLEXIBLE METAL CONDUIT: FLEXIBLE STEEL CONDUIT WITH ZINC COATING AND APPROVED FITTINGS, SIZED AS SHOWN ON DRAWINGS OR IF NOT SIZED ON THE DRAWINGS, IN ACCORDANCE WITH NEC AND OTHER APPLICABLE PORTIONS OF THE CONTRACT DOCUMENTS.
E. LIQUIDTIGHT FLEXIBLE METAL (LT) CONDUIT: FLEXIBLE STEEL CONDUIT WITH PVC JACKET WITH APPROVED FITTINGS, SIZED AS SHOWN ON DRAWINGS OR IF NOT SIZED ON THE DRAWINGS, IN ACCORDANCE WITH NEC AND OTHER APPLICABLE PORTIONS OF THE CONTRACT DOCUMENTS.
F. MINIMUM CONDUIT SIZE SHALL BE 3/4".
G. EMT MAY BE USED WHERE PERMITTED BY NEC EXCEPT WHERE OTHER TYPE IS SPECIFIED HEREIN OR NOTED ON DRAWINGS.
H. RGS CONDUIT SHALL BE USED IN OUTDOOR EXPOSED LOCATIONS, INDOOR DAMP OR WET LOCATIONS, HAZARDOUS LOCATIONS, OR WHERE REQUIRED BY NEC AND WHERE NOTED ON DRAWINGS.
I. PVC CONDUIT SHALL BE USED IN UNDERGROUND INSTALLATIONS, BELOW CONCRETE FLOOR SLAB (WITH RGS CONDUIT STUB UPS), WHERE REQUIRED BY NEC AND WHERE NOTED ON THE DRAWINGS.
J. FLEXIBLE METAL CONDUIT SHALL BE USED FOR CONNECTION TO VIBRATING EQUIPMENT IN INDOOR DRY LOCATIONS, FOR CONNECTION TO INDOOR RECESSED LIGHT FIXTURES (SIX FOOT MAXIMUM LENGTH), WHERE REQUIRED BY NEC AND WHERE NOTED ON DRAWINGS.
K. LT CONDUIT SHALL BE USED FOR CONNECTION TO VIBRATING EQUIPMENT IN OUTDOOR LOCATIONS, IN DAMP OR WET INDOOR LOCATIONS, HAZARDOUS LOCATIONS, OR WHERE REQUIRED BY NEC AND WHERE NOTED ON THE DRAWINGS.
L. CONDUIT SHALL BE INSTALLED CONCEALED UNLESS NOTED OTHERWISE ON DRAWINGS.
M. WHEN NOTED ON DRAWINGS, CONDUIT SHALL BE INSTALLED EXPOSED WITH CONDUIT PARALLEL TO AND AT RIGHT ANGLES TO NEARBY SURFACES OR STRUCTURAL MEMBERS.
N. PROVIDE CONDUIT SEALING FITTINGS IN ACCORDANCE WITH NEC AND WHERE INDICATED ON DRAWINGS. LOCATE FITTINGS AT SUITABLE, APPROVED, ACCESSIBLE LOCATIONS AND FILL WITH U.L. LISTED SEALING COMPOUND. INSTALL SEALING FITTINGS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

SURFACE RACEWAY

A. PROVIDE COMPLETE AND FUNCTIONAL POWER AND COMMUNICATION OUTLET SYSTEM USING SURFACE RACEWAY. CONTRACTOR SHALL COORDINATE WITH SUPPLIER SO THAT ALL FITTINGS AND ACCESSORIES NEEDED FOR COMPLETE SYSTEM ARE FURNISHED.
B. SURFACE RACEWAY SYSTEM SHALL BE WIREMOLD 4000 SERIES METAL RACEWAY WITH TWO COMPARTMENT (POWER AND COMMUNICATION) BASE AND ASSOCIATED COVER. COORDINATE COLOR OF RACEWAY SYSTEM WITH OWNER.
C. SURFACE RACEWAY SYSTEM SHALL HAVE POWER AND COMMUNICATION OUTLETS AT 36" CENTERS. OUTLET SHALL CONSIST OF 120 VOLT DUPLEX RECEPTACLE WITH FACEPLATE FOR POWER, BLANK FACEPLATE FOR COMMUNICATION, ASSOCIATED DEVICE MOUNTING BRACKETS, TRIM PLATES, AND ACCESSORIES AS NEEDED. TRIM PLATE SHALL OVERLAP RACEWAY COVER TO PROVIDE A SEAMLESS TRANSITION BETWEEN COVER FITTINGS.
D. WHERE ELECTRICAL POWER IS SHOWN SUPPLIED TO THE RACEWAY SYSTEM ON THE DRAWINGS, A VERTICAL RISER OF SURFACE RACEWAY SHALL BE PROVIDED TO ABOVE THE SUSPENDED CEILING. ENTRANCE END FITTING SHALL BE PROVIDED ABOVE CEILING FOR COMMUNICATION CABLING AND POWER WIRING.
E. COORDINATE MOUNTING HEIGHT OF HORIZONTAL RUNS OF SURFACE RACEWAY WITH OWNER.
F. GROUND RACEWAY SYSTEM USING EQUIPMENT GROUNDING CONDUCTOR.

BOXES

A. ALL STANDARD INTERIOR OUTLET BOXES SHALL:
1. BE STAMPED, ONE PIECE, GALVANIZED STEEL.
2. BE OF PROPER SIZE AND SHAPE FOR CONDUITS ENTERING THEM.
3. BE U.L. LISTED AND NEC RATED FOR THEIR APPLICATION.
4. BE CAST TYPE FOR EXPOSED WORK BELOW 10'-0" AFF.
B. ALL PULL/JUNCTION BOXES AND ENCLOSURES SHALL:
1. BE NEMA TYPE 1 FOR INDOOR DRY LOCATIONS.
2. BE NEMA TYPE 3R OR NEMA TYPE 4 FOR INDOOR DAMP OR WET LOCATIONS AND OUTDOOR LOCATIONS.
3. BE OF PROPER SIZE AND SHAPE FOR CONDUITS ENTERING THEM.
4. BE U.L. LISTED AND LABELED FOR THEIR APPLICATION.
C. FLOOR BOXES:
1. BE CAST IRON, FULLY ADJUSTABLE (WITH INTERGRAL MEANS FOR LEVELING ADJUSTMENT PRIOR TO AND AFTER CONCRETE POUR).
2. PROVIDE COMPATIBLE FLOOR BOX SERVICE FITTINGS.
3. FURNISH WITH ALL COMPONENTS, ADAPTERS AND TRIMS REQUIRED FOR A COMPLETE INSTALLATION.

WIRE AND CABLES

A. ALL CONDUCTORS SHALL BE COPPER, 600 VOLT, TYPE THHN/THWN UNLESS OTHERWISE NOTED. MINIMUM WIRE SIZE SHALL BE #12 AWG FOR POWER WIRING AND #14 AWG FOR CONTROL WIRING.
B. ALL CONDUCTORS SHALL BE COLOR CODED WITH WIRE LABELS INSTALLED FOR EASY IDENTIFICATION.
C. ALL CONDUCTORS SIZE #10 AND SMALLER SHALL BE SOLID COPPER. CONDUCTORS SIZE #8 AND LARGER SHALL BE STRANDED.
D. ALL CONDUCTORS FOR BRANCH CIRCUITS SHALL BE COPPER.
E. MC CABLE SHALL NOT BE USED EXCEPT FOR FIXTURE WHIPS.

WIRE CONNECTIONS AND DEVICES

A. ALL CONNECTORS SHALL BE OF MATERIAL COMPATIBLE WITH THE MATERIAL OF THE CONDUCTORS TO PREVENT CORRODING. DIFFERENCES IN COEFFICIENTS OF EXPANSION AND ELECTROLYSIS AS MANUFACTURED BY IDEAL, BURNDY, THOMAS AND BETTS, AND 3-M.

IDENTIFICATION

A. ALL PANELBOARDS, SWITCHBOARDS, DISCONNECT DEVICES, CONTROLLERS, ETC., SHALL BE PROVIDED WITH A WHITE NAMEPLATE WITH BLACK ENGRAVED LETTERS MOUNTED IN A VISIBLE LOCATION ON THE DEVICE. PLATE SHALL INDICATE THE DEVICE TAG, THE SOURCE OF POWER AND THE CIRCUIT NUMBER.
B. ALL PANELBOARDS SHALL BE PROVIDED WITH A TYPEWRITTEN CIRCUIT DIRECTORY, LAMINATED AND MOUNTED INSIDE THE PANEL COVER.
C. RECEPTACLES SHALL HAVE ENGRAVED COVER PLATES IDENTIFYING THE PANEL AND CIRCUIT NUMBER.
D. WIRE SHALL BE COLOR CODED IN INDUSTRY STANDARD FORMAT, COLORED CONDUCTOR OR COLORED TAPE WRAPPING.
WIRE COLOR CODE FOR 120/208V, 3Ø, 4W WIRE COLOR CODE FOR 480V
PHASE A: BLACK PHASE A: BROWN
PHASE B: RED PHASE B: ORANGE
PHASE C: BLUE PHASE C: YELLOW
NEUTRAL: WHITE NEUTRAL: GRAY
GROUND: GREEN GROUND: GREEN
E. MARKERS FOR CONDUITS: USE FACTORY PRE-PRINTED SELF-ADHESIVE VINYL TYPE MARKERS.
1. EES CONDUITS IN HEALTHCARE FACILITIES SHALL HAVE MARKERS INSTALLED ON RACEWAYS PER NEC.
F. MARKERS FOR BOX AND EQUIPMENT ENCLOSURES: USE FACTORY PRE-PRINTED SELF-ADHESIVE VINYL OR SELF-ADHESIVE VINYL CLOTH TYPE MARKERS.

G. MINIMUM SIZE:
1. MARKERS FOR EQUIPMENT: 1 1/8 BY 4 1/2 INCHES (29 BY 110mm).
2. MARKERS FOR CONDUITS: AS RECOMMENDED BY MANUFACTURER FOR CONDUIT SIZE TO BE IDENTIFIED.
3. MARKERS FOR PULL BOXES: 1 1/8 BY 4 1/2 INCHES (29 BY 110mm).
4. MARKERS FOR JUNCTION BOXES: 1/2 BY 2 1/4 INCHES (13 BY 57mm).

H. LEGEND:

1. MARKERS FOR VOLTAGE IDENTIFICATION: HIGHEST VOLTAGE PRESENT
2. MARKERS FOR SYSTEM IDENTIFICATION:
a. EMERGENCY POWER SYSTEM: TEXT "EMERGENCY".
b. OTHER SYSTEMS: TYPE OF SERVICE.
3. COLOR: BLACK TEXT ON ORANGE BACKGROUND UNLESS OTHERWISE INDICATED.

WIRING DEVICES

A. PROVIDE PRODUCTS LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES INC. AS SUITABLE FOR THE PURPOSE SPECIFIED AND INDICATED.
B. APPROVED MANUFACTURERS:
1. HUBBELL WIRING DEVICES-KELLEMS
2. LEVITON
3. PASS & SEYMOUR/LEGRAND
C. COLOR SHALL BE DETERMINED BY THE DESIGN PROFESSIONAL DURING SHOP DRAWING REVIEW.
D. RECEPTACLES - GENERAL REQUIREMENTS: SELF-GROUNDING, COMPLYING WITH NEMA WD 1 AND NEMA WD 6, AND LISTED AS COMPLYING WITH UL 498, AND WHERE APPLICABLE, FS W-G-596; TYPES AS INDICATED ON THE DRAWINGS. WIRING PROVISIONS: TERMINAL SCREWS FOR SIDE WIRING OR SCREW ACTUATED BINDING CLAMP FOR BACK WIRING WITH SEPARATE GROUND TERMINAL SCREW.
1. STANDARD CONVENIENCE RECEPTACLES: INDUSTRIAL SPECIFICATION GRADE, 20A, 125V, NEMA 5-20R; SINGLE OR DUPLEX AS INDICATED ON THE DRAWINGS.
2. NEMA CONFIGURATIONS SPECIFIED ARE ACCORDING TO NEMA WD 6.

WIRING DEVICES (CONTINUED)

E. WALL SWITCHES - GENERAL REQUIREMENTS: AC ONLY, QUIET OPERATING, GENERAL-USE SNAP SWITCHES WITH SILVER ALLOY CONTACTS, COMPLYING WITH NEMA WD 1 AND NEMA WD 6, AND LISTED AS COMPLYING WITH UL 20 AND WHERE APPLICABLE, FS W-S-896; TYPES AS INDICATED ON THE DRAWINGS. STANDARD WALL SWITCHES: INDUSTRIAL SPECIFICATION GRADE, 20 A, 120/277 V WITH STANDARD TOGGLE TYPE SWITCH ACTUATOR AND MAINTAINED CONTACTS; SINGLE POLE SINGLE THROW, DOUBLE POLE SINGLE THROW, THREE WAY, OR FOUR WAY AS INDICATED ON THE DRAWINGS.
1. WIRING PROVISIONS: TERMINAL SCREWS FOR SIDE WIRING AND SCREW ACTUATED BINDING CLAMP FOR BACK.
2. WIRING WITH SEPARATE GROUND TERMINAL SCREW.
F. WALL PLATES: CONFIGURATION: ONE PIECE COVER AS REQUIRED FOR QUANTITY AND TYPES OF CORRESPONDING WIRING DEVICES. COMPLY WITH UL 514D. SIZE: STANDARD. SCREWS: METAL WITH SLOTTED HEADS, FINISHED TO MATCH COVER.
1. FINISH:
a. NYLON WALL PLATES: SMOOTH FINISH, HIGH-IMPACT THERMOPLASTIC. TO BE USED IN ALL FINISHED SPACES, COLOR TO MATCH DEVICE.
b. STAINLESS STEEL WALL PLATES: BRUSHED SATIN FINISH, TYPE 302 STAINLESS STEEL.
c. BRASS WALL PLATES: BRUSHED SATIN FINISH, FACTORY-COATED TO INHIBIT OXIDATION.
d. ALUMINUM WALL PLATES: SMOOTH SATIN FINISH, CLEAR ANODIZED, FACTORY-COATED TO INHIBIT OXIDATION.
e. CHROME WALL PLATES: SMOOTH FINISH, CHROME PLATED STEEL.
f. GALVANIZED STEEL WALL PLATES: ROUNDED CORNERS AND EDGES, WITH CORROSION RESISTANT SCREWS. TO BE USED IN ALL MECHANICAL ROOMS, ELECTRICAL ROOMS, ETC.

OCCUPANCY/VACANCY SENSORS

A. LIGHTING SYSTEM CONTROLS ARE DIAGRAMMATIC AND ARE GENERIC. SUCCESSFUL LIGHTING CONTROL SYSTEM VENDOR SHALL THOROUGHLY EXAMINE PLANS AND SHALL PROVIDE CONTRACTOR WITH DETAILED LAYOUT DRAWINGS AND BILL OF MATERIALS TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM WITHOUT REQUESTS FOR ADDITIONAL MONETARY COMPENSATION FOR "MISSING" COMPONENTS.
B. CEILING MOUNTED SYSTEMS
1. SYSTEMS SHALL BE LOW VOLTAGE WITH ALL COMPONENTS INTERCONNECTED VIA CAT 5 CABLE WITH RJ45 CONNECTORS.
a. CEILING SENSORS SHALL BE MULTI-TECHNOLOGY TYPE, 24 VDC, 20 mA, WITH 2 RJ45 PORTS, INDOOR USE, FCC PART 15 COMPLIANT AND UL LISTED WITH 5 YEAR WARRANTY
b. DIMMING DAY LIGHT SENSORS SHALL BE 0-10 VOLT DIMMING TYPE, 24 VDC, 30 mA, WITH 1 RJ45 PORT, INDOOR USE, FULL DIMMING RANGE (2 VDC TO 10 VDC), SET POINTS 20-60 FTC, FCC PART 15 COMPLIANT AND UL LISTED WITH 5 YEAR WARRANTY
c. DIMMING SWITCHES SHALL BE 1 BUTTON, COMPATIBLE WITH ROOM CONTROLLER AND DAYLIGHT SENSOR.
d. OVERRIDE SWITCHES SHALL BE TWO BUTTON (ON/OFF), COMPATIBLE WITH OCCUPANCY SENSOR
e. ROOM CONTROLLER SHALL BE MULTIVOLT INPUT/OUTPUT (120/230/277 VAC 50/60HZ) WITH THREE RJ45 PORTS, INDOOR USE, FCC PART 15 COMPLIANT AND UL LISTED WITH 5 YEAR WARRANTY
f. PROVIDE ONE HAND HELD REMOTE CONTROL SETUP CONTROLLER FOR USE DURING COMMISSIONING AND TURN OVER TO OWNER.
2. BUILDING LAYOUTS SHALL BE CONFIRMED BY VENDOR ULTIMATELY BY CONTRACTOR CHOSEN FOR PROJECT.
3. COMMISSIONING AND INITAL STARTUP WILL BE PROVIDED BY FACTORY TRAINED REPRESENTATIVE.
C. SWITCH HEIGHT WALL BOX OCCUPANCY SENSORS SHALL BE MULTI-TECHNOLOGY TYPE, SINGLE RELAY WITH MANUAL OVERRIDE BUTTON.
D. APPROVED MANUFACTURERS:
1. WATTSTOPPER
2. ACUITY CONTROLS
3. HUBBELL CONTROLS
4. EATON CONTROLS

GROUNDING AND BONDING

A. ELECTRICAL INSTALLATION SHALL BE A COMPLETELY GROUNDED SYSTEM. ALL ELECTRICAL EQUIPMENT, SUPPORTS, CABINETS, ENCLOSURES, ETC. SHALL BE GROUNDED IN ACCORDANCE WITH THE NEC, AS SPECIFIED HEREIN AND AS SHOWN ON THE DRAWINGS.
B. ALL ELECTRICAL EQUIPMENT SHALL BE GROUNDED USING A GREEN INSULATED, COPPER, EQUIPMENT GROUNDING CONDUCTOR. CONDUIT SHALL NOT BE USED AS AN EQUIPMENT GROUNDING CONDUCTOR. EQUIPMENT GROUNDING CONDUCTOR SHALL BE SIZED AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH THE NEC AS A MINIMUM.
C. ELECTRICAL SERVICE SHALL BE GROUNDED AS SPECIFIED HEREIN, AS SHOWN ON THE DRAWINGS, AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY AND NEC.
D. THE GROUNDED CONDUCTOR OF THE ELECTRICAL SYSTEM SHALL BE GROUNDED AT THE SERVICE DISCONNECT. PROVIDE GROUNDING ELECTRODE CONDUCTOR IN 3/4" CONDUIT FROM SERVICE DISCONNECT TO TEN FEET (10'-0") LONG, 5/8" DIAMETER, COPPERCLAD GROUND ROD. EXOTHERMIC WELD CONDUCTOR TO GROUND ROD. ADDITIONAL GROUND RODS SHALL BE PROVIDED AT 16 FOOT SPACINGS AS NEEDED TO COMPLY WITH THE MAXIMUM RESISTANCE ALLOWED (SEE TESTING). GROUNDING ELECTRODE CONDUCTOR SHALL BE SIZED AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH THE NEC AS A MINIMUM.

LUMINAIRE SCHEDULE									
TYPE	MANUFACTURER	LUMINAIRE SERIES	VOLTAGE	LOAD (VA)	LUMEN OUTPUT	FINISH	MOUNTING	DESCRIPTION	
S1	LITHONIA	CLX L48 5000LM SEF RDL WD	277 V	31.8	5000 LM 3500 K	WHITE	SUSPENDED	48" LINEAR LED LENSED STRIP LUMINAIRE WITH ROUND DIFFUSE LENS, WIDE DISTRIBUTION, 0-10V, 80 CRI	
T1	LITHONIA	2AVL4	277 V	47	4000 LM 3500 K	WHITE	RECESSED	2X4 LED RECESSED DIRECT/INDIRECT TROFFER W/CENTER BASKET, 0-10V DIMMING, AESTHETICS TO MATCH EXISTING BUILDING STANDARD	

NOTES: A. REMOVE ALL FINGER PRINTS FROM LENSES, REFLECTORS, AND LOUVERS FOLLOWING LIGHT FIXTURE INSTALLATION.

GENERAL NOTES

- A. IT HAS BEEN ASSUMED THAT THE WHOLE BUILDING IS ON THE CAMPUS'S GENERATOR POWER.
- KEYNOTES #**
- CONNECT RELOCATED LUMINAIRE(S) TO EXISTING LIGHTING CIRCUIT AND CONTROLS CURRENTLY SERVING CORRIDOR AREA. TOTAL LOAD REMOVED ON 20A 277V LIGHTING CIRCUIT IS 768VA, NEW LOAD ADDED 256VA.
 - EXISTING LUMINAIRES TO BE RELOCATED. PROTECT EXISTING 20A 277V LIGHTING CIRCUIT CURRENTLY SERVING THIS AREA FOR RE-USE.
 - REMOVE LIGHTING FIXTURES AND ASSOCIATED CIRCUIT BACK TO THE LIGHTING FIXTURE NOT REMOVED IN THIS PROJECT. VERIFY THAT REMAINING LIGHT FIXTURES NOT REMOVED IN THIS PROJECT ARE OPERATIONAL.
 - LIGHT FIXTURES TO REMAIN. INSTALL ENDCAPS TO LUMINAIRES. LUMINAIRES NOT TO BE REMOVED ARE TO REMAIN CIRCUITED AND VERIFY POWERED.
 - LIGHT SWITCH TO BE REMOVED.
 - EXISTING OCCUPANCY SENSOR TO BE RELOCATED.
 - PROVIDE AND INSTALL ENDCAPS FOR RELOCATED LUMINAIRES. MOUNT LUMINAIRES TO MATCH EXISTING LUMINAIRE HEIGHT.
 - EXISTING R2 TYPE LUMINAIRE TO BE INSTALLED IN GRID CEILING. PROVIDE REQUIRED ACCESSORIES FOR RELOCATED LUMINAIRE PREVIOUSLY SUSPENDED MOUNTED.
 - CONNECT RELOCATED FIXTURES TO EXISTING 277V LIGHTING CIRCUIT ORIGINALLY SERVING LIGHT FIXTURES IN OPS ROOM. ELECTRICAL CONTRACTOR TO VERIFY THE TOTAL LOAD ON 20A 277V LIGHTING CIRCUIT DOES NOT EXCEED 4,432VA.
 - NIGHT LIGHT - CONNECT RELOCATED FIXTURE TO UNSWITCHED LEG OF THE EXISTING 20A 277V LIGHTING CIRCUIT CURRENTLY SERVING CORRIDOR AREA.
 - CONNECT RELOCATED LUMINAIRE TO EXISTING CIRCUIT AND LIGHTING CONTROLS PROTECTED DURING DEMOLITION. RELOCATED LUMINAIRE TO BE CENTERED IN THE ROOM.
 - CONNECT RELOCATED LUMINAIRE(S) TO EXISTING LIGHTING CIRCUIT CURRENTLY SERVING CORRIDOR AREA. TOTAL LOAD REMOVED ON 20A 277V LIGHTING CIRCUIT IS 768VA, NEW LOAD ADDED 256VA.
 - REMOVE RECEPTACLE, CONDUIT, CONDUCTORS AND ALL OTHER APPURTENANCES BACK TO THE PANELBOARD OR TO THE NEXT DEVICE NOT REMOVED IN THIS PROJECT. CONTRACTOR TO VERIFY THAT ANY DEVICES NOT REMOVED ARE OPERATIONAL AT THE COMPLETION OF THIS PROJECT.
 - CONNECT NEW FIXTURES TO EXISTING 277V LIGHTING CIRCUIT ORIGINALLY SERVING LIGHT FIXTURES IN OPS ROOM. ELECTRICAL CONTRACTOR TO VERIFY THE TOTAL LOAD ON 20A 277V LIGHTING CIRCUIT DOES NOT EXCEED 4,432VA.
 - PROVIDE NEW CEILING MOUNT DUAL TECHNOLOGY OCCUPANCY SENSOR WATTSTOPPER DT-355 OR EQUAL. VERIFY EXISTING BUILDING STANDARD FOR LIGHTING CONTROL SYSTEMS WITH OWNER REPRESENTATIVE PRIOR TO PURCHASE AND ROUGH IN.
 - PROVIDE ALTERNATE PRICING FOR NEW 2X4 LED TROFFER TYPE T1.
 - CONNECT NEW FIXTURES TO EXISTING 277V LIGHTING CIRCUIT PROTECTED DURING DEMOLITION. ELECTRICAL CONTRACTOR TO VERIFY THE TOTAL LOAD ON 20A 277V LIGHTING CIRCUIT DOES NOT EXCEED 4,432VA.
 - ELECTRICAL CONTRACTOR TO VERIFY IF EXISTING STORAGE ROOM HAS EXISTING OCCUPANCY SENSOR. IF REQUIRED, PROVIDE NEW WALL MOUNT PASSIVE INFRARED OCCUPANCY SENSOR TO MEET LOCAL IECC CODE REQUIREMENTS.



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PROJECT:
Iowa State Capitol Complex

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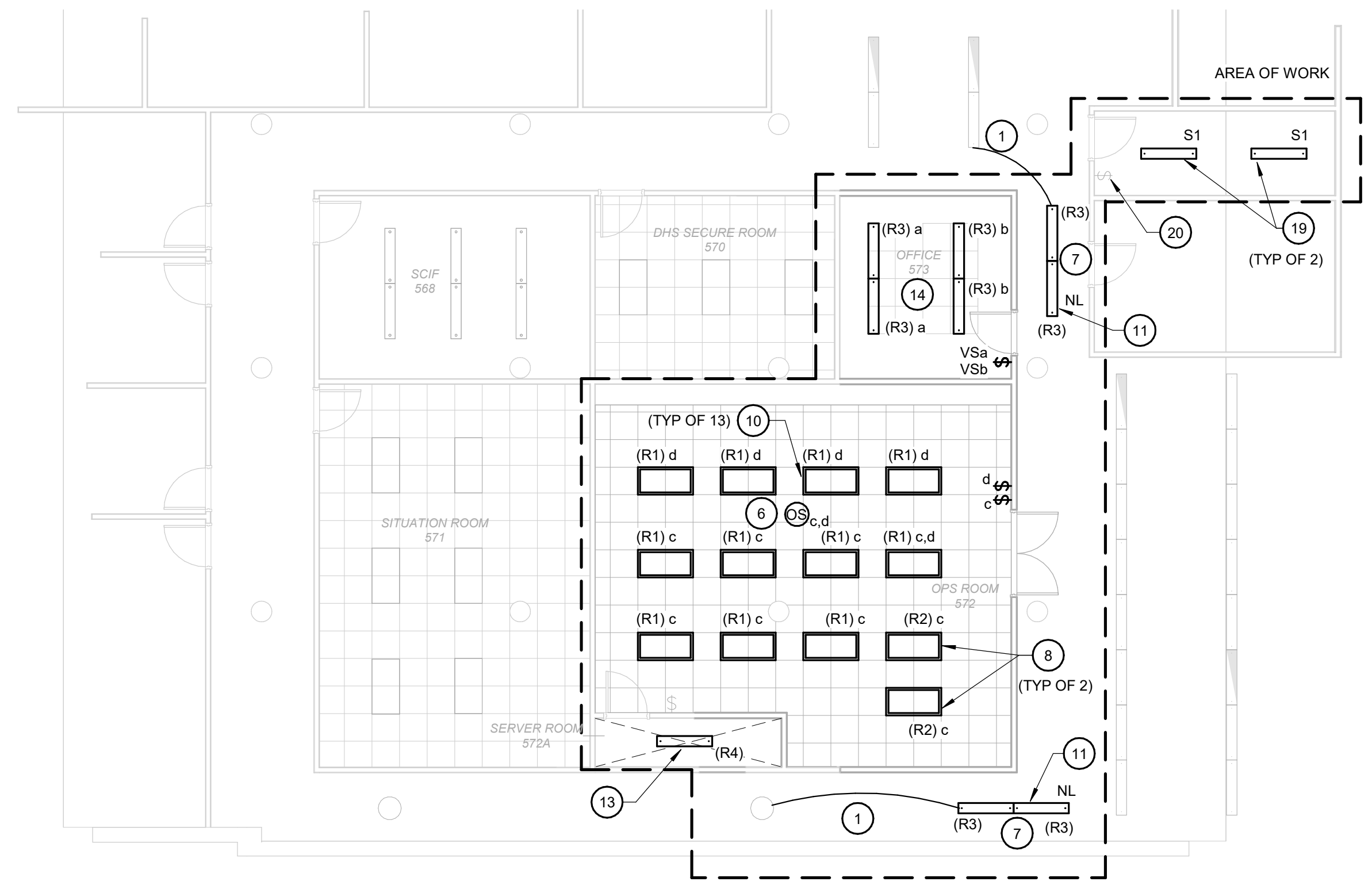
215 E. 7TH ST.

DATE: 05/05/2023
 DESIGNED: GVP
 DRAWN: TMT
 REVIEWED: SFW

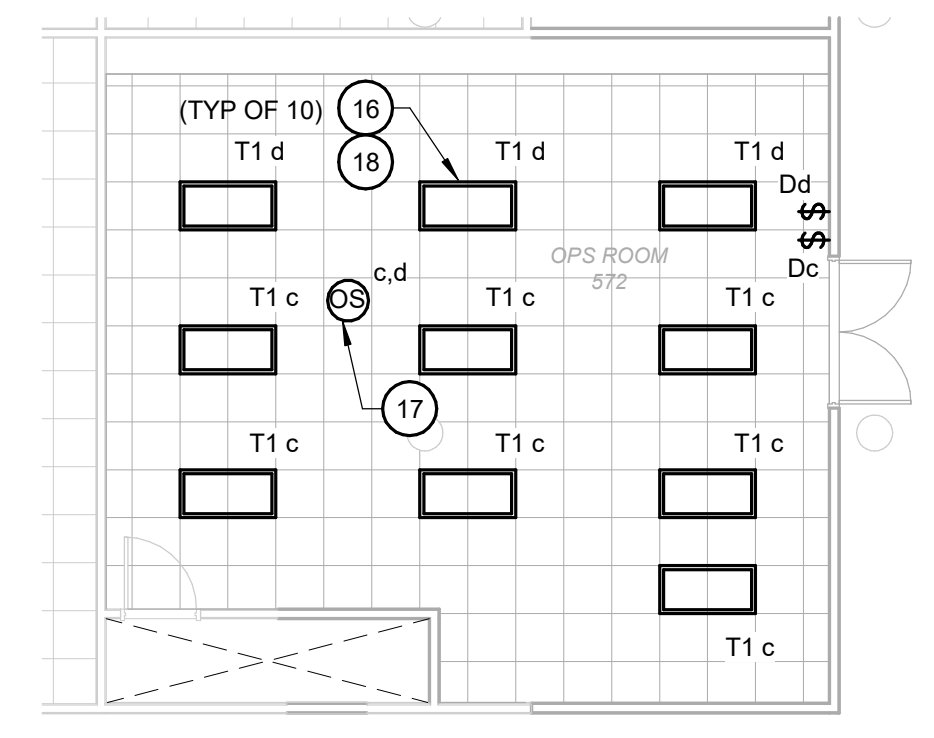
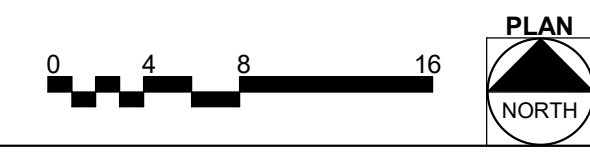
SHEET TITLE:
FIFTH FLOOR LIGHTING PLAN

SHEET NUMBER:
E1.5

PROJECT NO.: 0230377.00

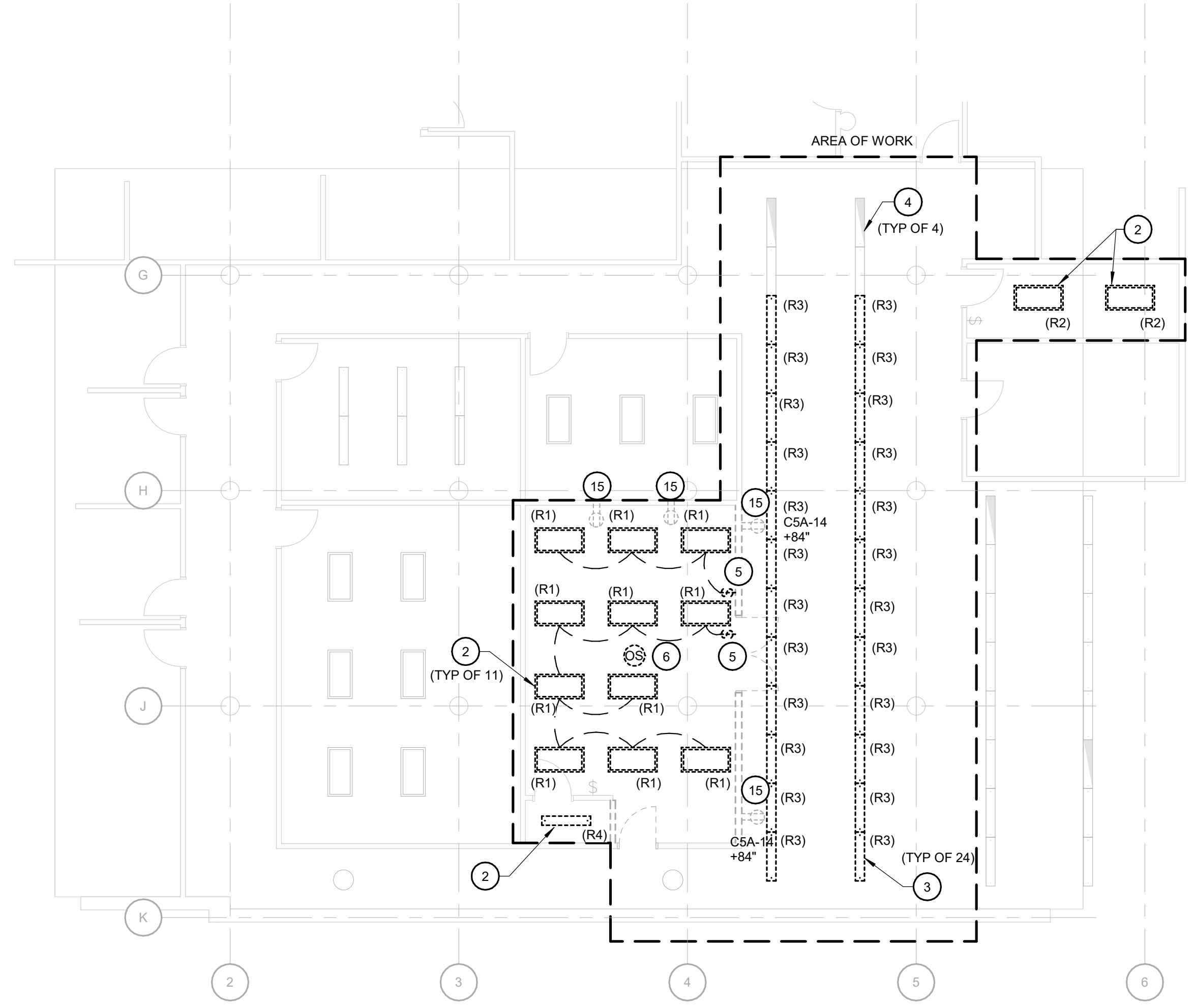


OPS ROOM 572 - ALTERNATE LIGHTING PLAN
 SCALE: 1/8" = 1'-0"

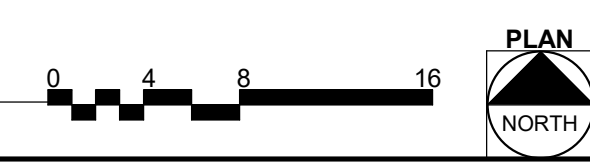


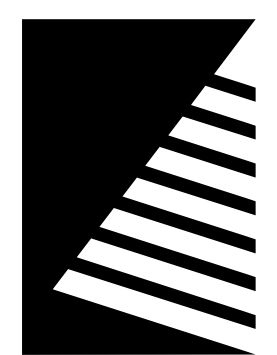
1 FIFTH FLOOR LIGHTING PLAN
 SCALE: 1/8" = 1'-0"

3
 SCALE: 1/8" = 1'-0"



2 FIFTH FLOOR ELECTRICAL DEMOLITION PLAN
 SCALE: 1/8" = 1'-0"





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SHEET TITLE: FIFTH FLOOR POWER PLAN

SHEET NUMBER:

E2.5

PROJECT NO.: 0230377.0

GENERAL NOTES

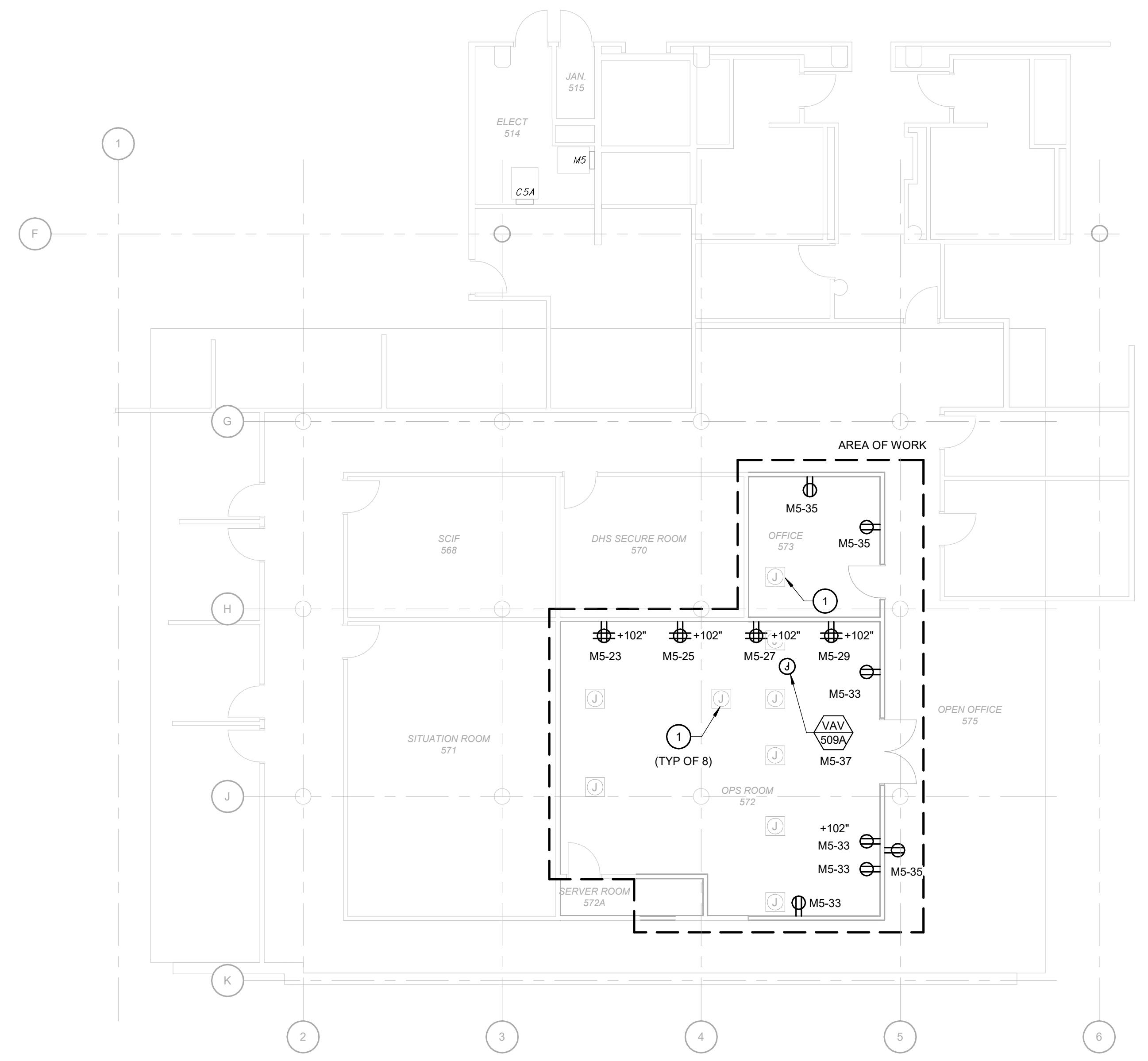
A. NOT USED

KEYNOTES

1 EXISTING COMBINATION POWER AND DATA FLOOR BOX.

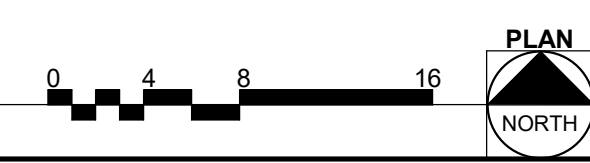
EQUIPMENT DATA SCHEDULE													
DESCRIPTION				LOAD DATA			DISCONNECT AT EQUIP.						
MARK	EQUIPMENT	FURNISHED BY	INSTALLED BY	LOCATION	LOAD	VOLTAGE	PHASE	DISC. TYPE	DISC. SIZE	FURNISHED BY	INSTALLED BY	WIRE & CONDUIT	REMARKS
VAV 509A	VARIABLE AIR VOLUME BOX	MC	MC	OPS ROOM 572	50 VA	120	1	SW		EC	EC	2#12, 1-#12G, 3/4"	

EQUIPMENT DATA NOTES:
GENERAL NOTES:
A.
REMARKS:
1. INSTALL DISCONNECT SWITCH ON THE SIDE OF THE EQUIPMENT HOUSING.
2. PROVIDE DISCONNECT LOCKABLE IN ACCORDANCE WITH NEC 110.25.
3. FUSE PER MANUFACTURER'S RECOMMENDATIONS.
4. INTERIOR UNIT ELECTRICALLY FED FROM EXTERIOR UNIT BY MANUFACTURER PROVIDED CABLE. COORDINATE RACEWAY REQUIREMENTS WITH EQUIPMENT MANUFACTURER.

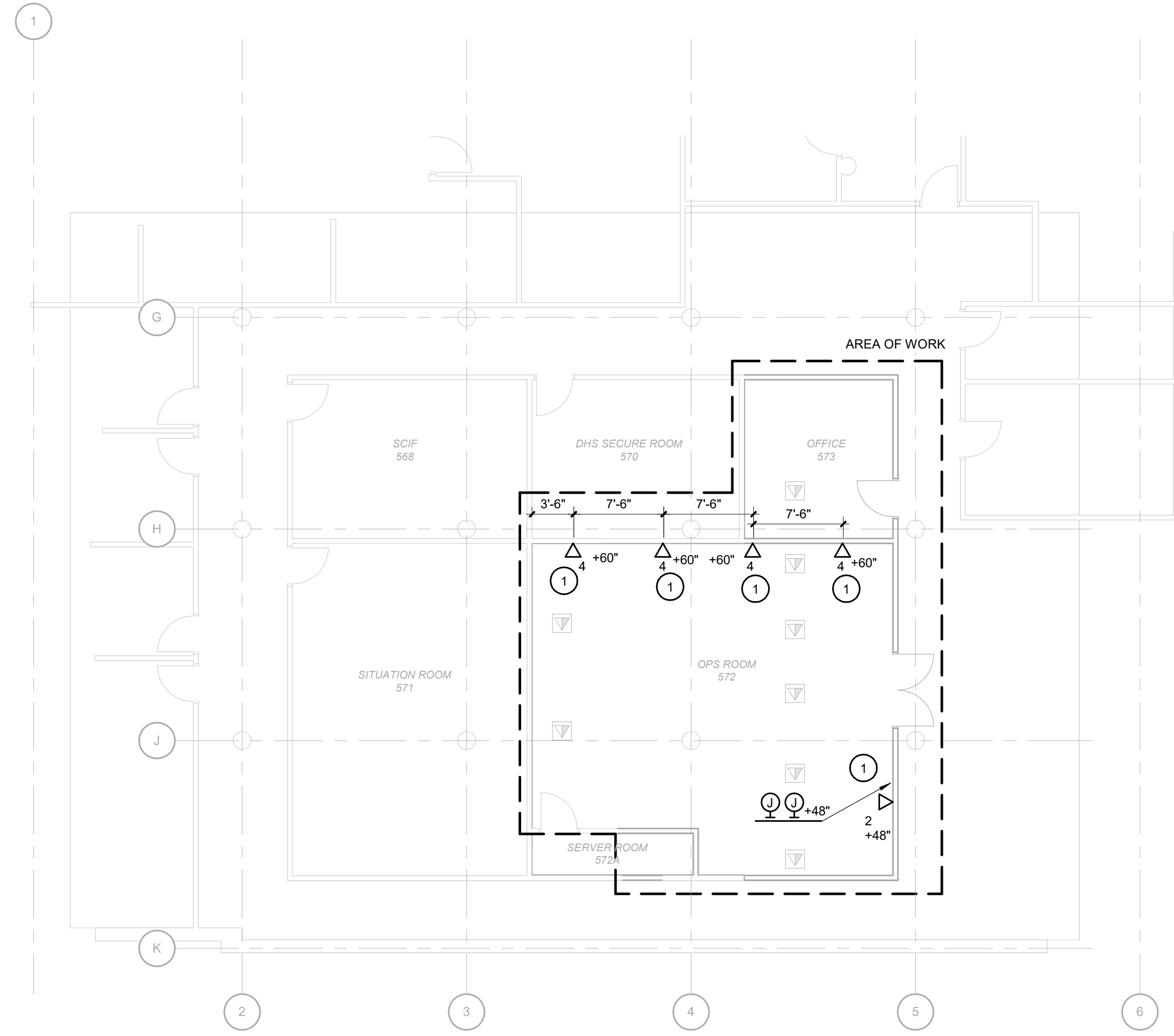


1 FIRST FLOOR POWER PLAN

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



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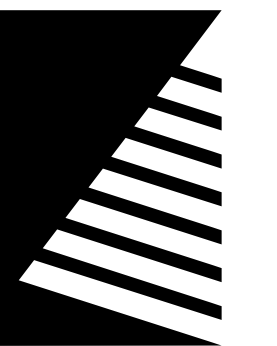


GENERAL NOTES

A. NOT USED

KEYNOTES #

1 ROUTE 1" CONDUIT TO SERVER ROOM (ROOM 527A).



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FIFTH FLOOR SYSTEMS PLAN

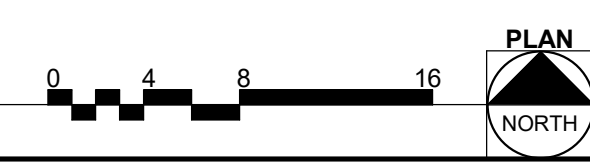
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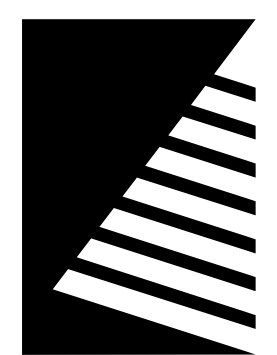
E3.5

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





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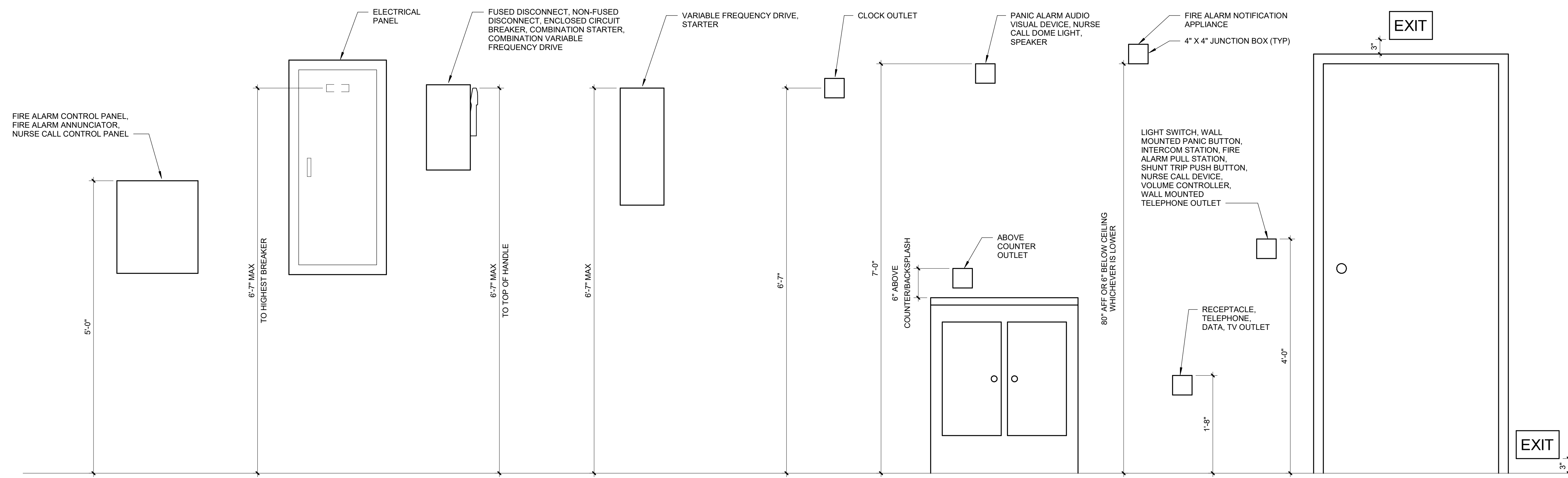
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ISSUE # DATE DESCRIPTION

EXISTING PANELBOARD M5													
VOLTAGE: 208/120V				CONNECTED LOAD PER PHASE				ISOLATED GROUND BUS (Y/N):				N	
PHASE / WIRE: 3Ø / 4W				A				B				SEE SPEC	
RATED AMPERAGE: 150 A				10870 VA				11968 VA				MOUNTING: RECESSED	
MAIN: MCB				91 A				100 A				MCB GROUND FAULT PROTECTION (Y/N):	
SCC RATING (SYM): EXISTING				1080 VA				9520 VA				N	
FED FROM: PANEL MDP				79 A				MCB SHUNT TRIP (Y/N):				N	
				MCB 100% RATED (Y/N):								N	
CKT	IDENTIFICATION	TYPE (*)	BKR SIZE	POLES	A	B	C	POLES	BKR SIZE	TYPE (*)	IDENTIFICATION	CKT	
1	RM 522, 505		20	1	1080	1080		1	20		RM 530, 532	2	
3	RM 523, 524, 530		20	1		1080	1080	1	20		RM 554	4	
5	RM 508, 530		20	1			1080	1080	1	20	RM 550, 554, 555, 579	6	
7	RM 576		20	1	1080	1080		1	20		RM 570, 575	8	
9	RM 576		20	1		1080	1080	1	20		RM 561, 566, 572, 573, 578	10	
11	RM 576		20	1			1080	1080	1	20	RM 514, 540, 547, 561	12	
13	RM 547		20	1	1080	1080		1	20		RM 503, 510, 511, 512	14	
15	RM 547		20	1		1080	500	1	20		DRINKING FOUNTAIN RM 510	16	
17	RM 514		30	1			1080	0	1	20	SPARE	18	
19	ELEV SMOKE DOOR		20	1	480	2300		1	30		HAND DRYER RM 511	20	
21	HAND DRYER RM 512		30	1		2300	0	1	20		SPARE	22	
23	RM 572 QUAD RCPT 1		20	1			800	0	1	20	SPARE	24	
25	RM 572 QUAD RCPT 2		20	1	800	0			1	20	SPARE	26	
27	RM 572 QUAD RCPT 3		20	1		800	0		1	20	SPARE	28	
29	RM 572 QUAD RCPT 4		20	1			800	480	1	20	FIRE SMOKE DAMPER	30	
31	FIRE SMOKE DAMPER		20	1	760	0			1	20	SPARE	32	
33	RM 572 RCPTS		20	1		720	1748		1	20	VAV POWER	34	
35	RM 573 RCPTS/OPEN OFFICE 575		20	1			540	1000	1	20	EX FANS	36	
37	VAV 508A OPS ROOM 572		20	1	50	0			1	20	SPARE	38	
39	SPARE		20	1		0	500		1	20	SECURITY CAMERAS	40	
41	SPARE		20	1			0	500	1	20	CARD READER	42	

NOTES:
1. ALL BREAKERS ARE STANDARD UNLESS OTHERWISE NOTED
2. (*) NUMBER INDICATES BREAKER TYPE: 1 = AFCI, 2 = CLASS A 5mA GFCI, 3 = 30mA GFPE, 4 = SHUNT TRIP ACTIVATED, 5 = PANELBOARD FEEDER SERVING UNIT SHALL BE LOCKABLE USING A PADLOCK, IN ACCORDANCE WITH OSHA LOCK-OUT-TAG RULES, 6 = NEW BREAKER

PANEL	A	B	C	TOTAL CONN.	% DIVERSITY	DEMAND LOAD (W)
PHASE	0	0	0	0	1.25	0
LIGHTING=1					**	15870
RECEPTACLES=2	7280	6920	7540	21740	1.25	950
MOTOR, LARGEST=3	760	0	0	760	1.00	1480
MOTOR=4	0	0	1480	1480	1.00	0
KITCHEN EQUIPMENT=5****	0	0	0	0	1.25	0
ELECTRIC HEAT=6	0	0	0	0	1.25	2248
OTHER CONTINUOUS=7	50	1748	0	1798	1.00	6580
OTHER NON-CONTINUOUS=8	2780	3300	500	6580	1.00	0
	0	0	0	0	1.00	0
	0	0	0	0	1.00	0
	0	0	0	0	1.00	0
	0	0	0	0	1.00	0
TOTAL CONNECTED LOAD (W)				32358		
*** SPARES				6472		
TOTAL DEMAND LOAD (W)						27128



1 TYPICAL MOUNTING HEIGHT DETAIL
SCALE: 1" = 1'-0"

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ELECTRICAL SCHEDULES AND DETAILS

SHEET NUMBER:

E5.1

PROJECT NO.: 0230377.00

Exhibit E Sample Certification of Insurance
Oran Pape Intel Operations Room Remodel
Request for Quote RFQ933500-01

Due June 22, 2023 at 2:00 PM

See example on following page

