

# WTCC FACILITIES OPERATIONS & WAREHOUSE COMPLEX OFFICE

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CONSULTANTS:  
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PROJECT No.: 2413

**WTCC FACILITIES OPERATIONS & WAREHOUSE COMPLEX OFFICE**  
RALEIGH, NC  
**WTCC**  
RALEIGH, NC

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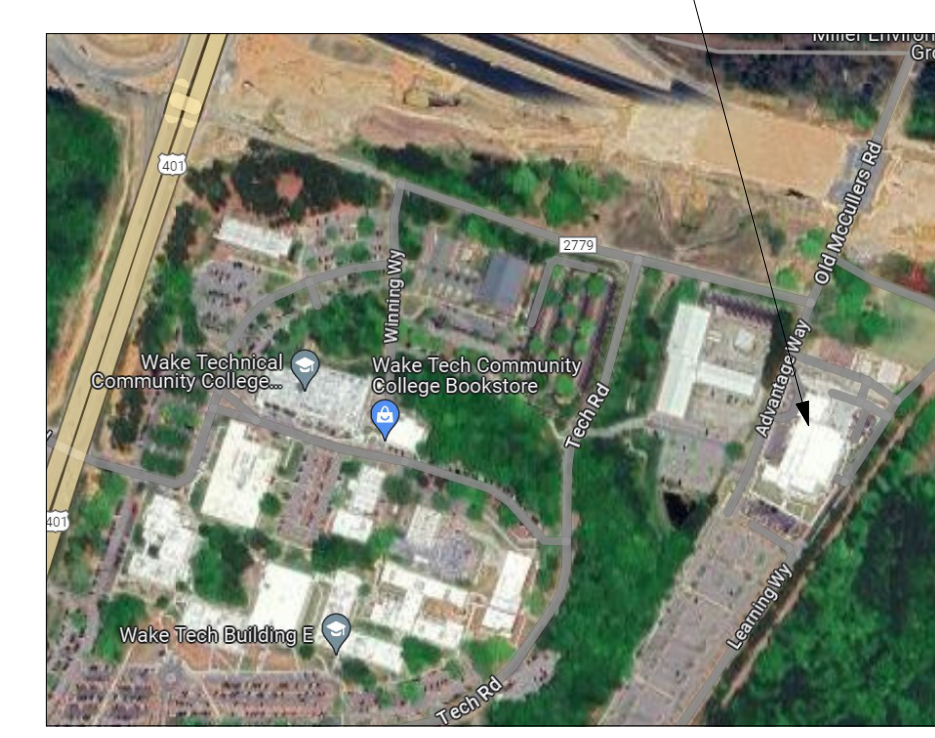
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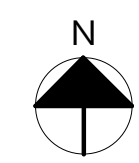
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### PROJECT LOCATION



**9A** LOCATION MAP  
NTS



SEALS:



08/29/2024

ISSUE: CONSTRUCTION  
DATE: 8/29/2024  
DRAWN BY: PVM  
REVISIONS:

NO.	DESCRIPTION

COVER

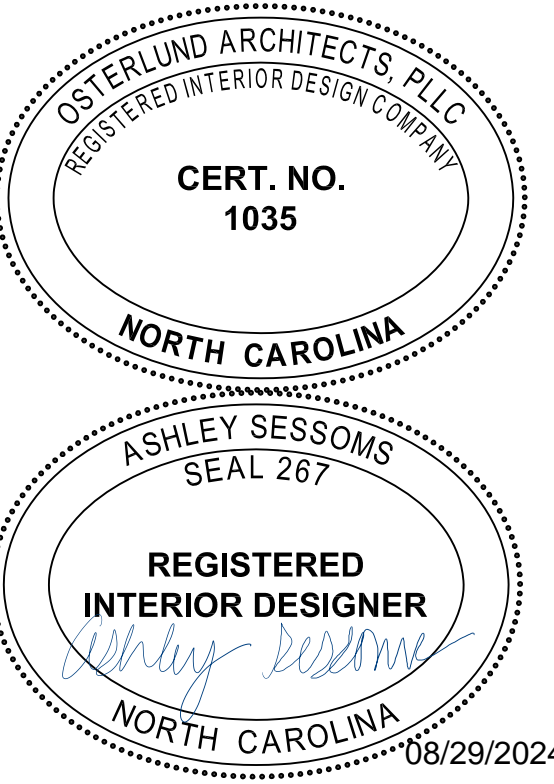
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WTCC FACILITIES OPERATIONS & WAREHOUSE COMPLEX OFFICE SPECIFICATIONS

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

DIVISION 01 - GENERAL REQUIREMENTS

DIVISION -02 - EXISTING CONDITIONS

024119 SELECTIVE DEMOLITION

- 1. GENERAL: Includes demolition & removal; removal and salvage. a. Arrange selective demolition schedule... b. Conduct a pre-demolition meeting... c. Owner will occupy portions of building... d. Owner will remove furniture and equipment... e. Notify Architect of discrepancies... f. It is not expected that hazardous materials... 2. PRODUCTS: a. Comply with EPA regulations... 3. EXECUTION: a. Record existing conditions... b. Design, provide, and maintain shoring... c. Provide temporary barricades... d. Cover and protect furniture... e. Existing services/systems to remain... f. Demolish and remove existing construction... g. If hot work is required... h. Do not close or obstruct streets... i. Remove demolition waste materials... j. Clean areas of dust, dirt and debris...

DIVISION -07 - THERMAL AND MOISTURE PROTECTION

079200 JOINT SEALANTS

- 1. GENERAL: Acoustical joint sealant. a. Submittals: Submit Product data. 2. PRODUCTS: a. Acoustical Sealant for exposed and concealed joints... i. Manufacturers: Subject to compliance with requirements... ii. Color: As selected by Architect... 3. EXECUTION: a. Examine joints and proceed with installation... b. Clean joints and prime joint substrates... c. Comply with acoustical joint-sealant manufacturer's written installation instructions.

DIVISION -08 - OPENINGS

081416 FLUSH WOOD DOORS

- 1. GENERAL: Includes solid-core, factory-finished doors with wood-veneer faces. a. Submittals: Submit product data... b. Special Warranty: Warranty Period for life of installation. 2. PRODUCTS: a. Quality Standard: In addition to requirements specified... b. Basis-of-Design Product: Subject to compliance with requirements... c. Veneer-Faced Doors for Transparent Finish: Interior Solid-Core Doors... i. Grades: Custom (Grade A faces)... ii. Species: Select white maple... iii. Cut: Plain sliced (flat sliced)... iv. Match Between Veneer Leaves: Book match... v. Assembly of Veneer leaves on Door Faces: Balance match... vi. Room match: Match door faces in the area of work... vii. Exposed Vertical Edges: Same species as faces - edge Type A... viii. Core: Manufacturers Standard... ix. Construction: Manufacturers Standard. d. Light Frames i. Provide manufacturer's standard wood beads... e. Factory machine doors for hardware that is not surface applied. f. Openings: Factory cut and trim openings through doors... g. Factory transparent finish: Finish faces and all edges... i. Grades: Premium... ii. Finish: AWI System TR-6 catalyzed polyurethane... iii. Effect: Open-grain finish... iv. Sheen: Satin. 3. EXECUTION: a. Examine doors and installed door frames... b. Hardware: For installation see "087100 Door Hardware"... c. Operation: Rehang or replace doors... d. Finished Doors: Replace doors that are damaged...

084110 ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

- 1. GENERAL: Includes Aluminum-framed entrance and storefront systems. a. Submittals: Submit product data... b. Special Warranty: For total system, Installer, and finish, Warranty Period 5 years from date of Final Acceptance. 2. PRODUCTS: Obtain all components of aluminum-framed entrance and storefront system... a. Storefront systems to withstand movements of supporting structure... b. No buckling; stress on glass; sealant failure; excess stress on framing... c. Manufacturers: Subject to compliance with requirements... d. Manufacturer's extruded- or formed-aluminum framing members... i. EFCO... ii. Kawneer North America... iii. TRACO... iv. Tubelite... v. United States Aluminum... vi. Vistawall Architectural Products. 3. EXECUTION: a. Interior Framing Construction: Nonthermal... b. Glazing retained mechanically with gaskets... c. Glazing Plane: Center to match existing... d. Finish: Clear anodic finish to match existing... e. Field-fabricated stick system.

087100 DOOR HARDWARE

- 1. GENERAL: Includes interior office door hardware. a. Submittals: Submit product data and door hardware schedule. 2. PRODUCTS: a. Basis-of-Design Products: Subject to compliance with requirements... b. Hinges: Hager, McKinney, Stanley... c. Locks: Sargent, Best. 3. EXECUTION: a. Examine doors and frames... b. Comply with door and hardware manufacturers' written instructions... c. Mount door hardware units at heights indicated... d. Install each door hardware item to comply with manufacturer's written instructions... e. Adjust and check each operating item... f. Clean adjacent surfaces... g. Door Hardware Schedule: i. Manufacturer List: Code Name IV Ives SC Schlage ii. Hardware Set 1: 3 Hinges 5B81 4 1/2 x 4 1/2 652 IV 1 Lockset L9050T 03A 50-231 626 SC 1 Cylinder Core 23-030 EVEREST D-RESTRICTED XWY GMK 628 SC 1 Wall Bumper WS406/407CCV US32D IV

088000 GLAZING

- 1. GENERAL: Includes glass products, glazing tapes and miscellaneous glazing materials. a. Submittals: Submit product data... 2. PRODUCTS: a. Safety Glazing: Where safety glazing is indicated... b. Comply with NGA "Glazing Manual"... c. Safety Glazing Labeling... d. Where glass thickness is indicated... e. Fully Tempered Float Glass... 3. EXECUTION: a. Examine framing, glazing channels and stops... b. Clean glazing channels... c. Comply with combined written instructions... d. Protect glass edges from damage... e. Do not exceed edge pressures... f. Install tapes, sealants and gaskets... g. Protect glass from contact... h. Remove and replace glass that is damaged during construction period.

088700 ARCHITECTURAL WINDOW FILMS

- 1. GENERAL: Includes architectural window film. a. Submittals: Submit Product Data to confirm match to existing window film. 2. PRODUCTS:

DIVISION -09 - FINISHES

092216 NON-STRUCTURAL METAL FRAMING

- 1. GENERAL: Includes nonstructural steel framing. a. Submittals: Submit product data... 2. PRODUCTS: a. Horizontal Deflection: For wall assemblies... b. Framing members... c. Studs and Track... d. Minimum Base Steel Thickness... e. Minimum Yield Strength... f. Depth: As indicated... g. Slip-Type Head Joints... h. Provide auxiliary materials... i. Fasteners for Steel Framing... ii. Anchors and Hangers... iii. Blocking: Noncombustible material... 3. EXECUTION: a. Examine areas, substrates, and conditions... b. Installation Standard... c. Install framing and accessories... d. Install supplementary framing... e. Install bracing... f. Do not bridge building control... g. Install framing system components... h. Install studs so flanges... i. Slip-Type Head Joints: Where framing extends to overhead structural supports... ii. Door Openings: Screw vertical studs at jamb to jamb anchor clips...

092900 GYPSUM BOARD

- 1. GENERAL: includes interior gypsum board. a. Submittals: Submit Product Data for each type of product. 2. PRODUCTS: a. Size: Provide panel products in maximum lengths and widths... b. Gypsum Board, Type X: ASTM C1396/C1396M. i. Thickness: As indicated on Drawings... ii. Long Edges: Tapered and featured... c. Trim Accessories:

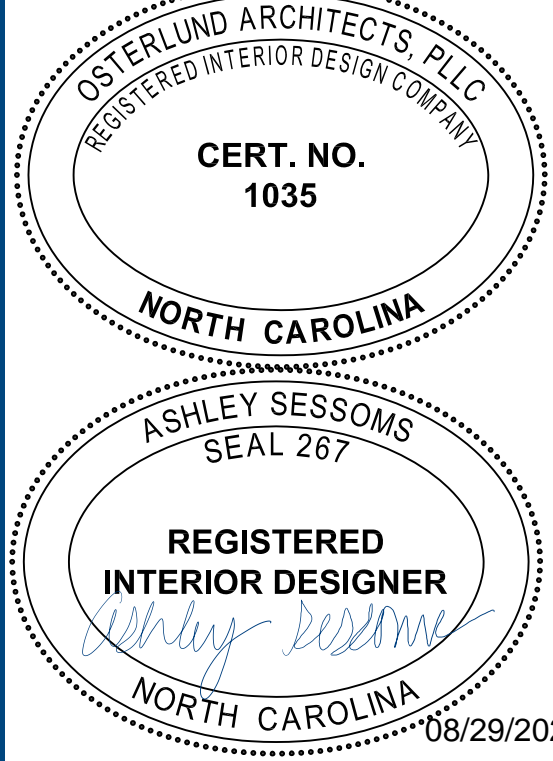
095113 ACOUSTICAL PANEL CEILINGS

- 1. GENERAL: a. Section Includes: i. Acoustical Panels ii. Metal suspension system iii. Metal edge moldings and trim. b. Submit product data... 2. PRODUCTS: a. Acoustical Ceiling Panels (ACT-1) i. Basis-of-Design Product: Subject to compliance with requirements... ii. USG Ceilings: Mars High NRC Item # 84346 iii. Acoustical Panel Standard: Acoustical Panel Standard: Provide manufacturer's standard panels... i. Type IV, Form 2, Pattern E. 2. Texture: Smooth. 3. Color: White.

WTCC FACILITIES OPERATIONS & WAREHOUSE COMPLEX OFFICE

WTCC RALEIGH, NC

SEALS:



ISSUE: CONSTRUCTION DATE: 8/29/2024 DRAWN BY: SNC REVISIONS:

INTERIOR SPECIFICATIONS

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- 4. Edge/ Joint Detail: Reveal. 5. Thickness: 7/8 inch. 6. Modular Size: 24 inch by 24 inch. 7. NRC: Not less than 0.80. 8. CAC: Not less than 35. 9. Antimicrobial Treatment: Manufacturer's standard broad spectrum, antimicrobial formulation that inhibits fungus, mold, mildew, and gram-negative bacteria and showing no mold, mildew, or bacterial growth when tested in accordance with ASTM D3273, ASTM D3274, or ASTM G21 and evaluated in accordance with ASTM D3274 or ASTM G21. 10. Product must be VOC free. b. Metal Suspension System (ACT-1) i. Basis of Design Product: Subject to compliance with requirements, provide Certain Teed 15/16" EZ Stab Classic System Acoustical Suspension System or comparable product by one of the following: 1. Armstrong Ceilings: Prelude 15/16 Grid. 2. Donn Ceilings: DX 15/16 Grid. ii. Metal Suspension-System Standard: Provide manufacturer's standard, direct-hung, metal suspension system and accessories in accordance with ASTM C635/C635M and designated by type, structural classification, and finish indicated. iii. Wide-Face, Capped, Double-Web, Steel Suspension System: Main and cross runners roll formed from cold-rolled steel sheet; prepainted, electrolytically zinc coated, or hot-dip galvanized, G30 coating designation; with prefinished 15/16-inch-wide metal caps on flanges. 1. Structural Classification: Heavy-duty system. 2. End Condition of Cross Runners: Over-ride (stepped) type. 3. Face Design: Flat, flush. 4. Cap Finish: Painted White iv. Main Runners: EZCS12-12-15 v. Cross Tees: EZCS2-12-12 and EZCS4-12-12 c. Metal Edge Moldings and Trim (ACT-1) i. Basis of Design - Certainteed, Shadow Molding SM1050. ii. Roll-Formed, Sheet-Metal Edge Moldings and Trim: Type and profile indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations that comply with seismic design requirements; formed from sheet metal of same material, finish, and color as that used for exposed flanges of suspension-system runners.

094613 RESILIENT BASE AND ACCESSORIES

- 1. GENERAL a. Section includes: i. Resilient Wall Base. b. Submit product data, shop drawings and samples to confirm wall base and accessories are matching existing adjacent office areas. 2. PRODUCTS: a. Resilient Base (RB-1) i. Basis of Design Product: Subject to compliance with requirements, provide Roppa 700 Series TP Rubber Wall Base or a comparable product by one of the following: 1. Mannington Commercial 2. Marley Flexco (USA) Inc. ii. Standard Coved Toe Base iii. Height: 4 inches. iv. Lengths: Manufacturer's Standard 120 ft. coils. v. Outside Corners: Preformed vi. Inside Corners: Job formed vii. Performance Standard: ASTM F 1861 Type TP (Rubber, Thermoplastic). viii. Colors: P175 Slate b. Installation Materials: i. Trowelable Leveling and Patching Compounds: Latex-modified, portland-cement-based or blended hydraulic-cement-based formulation provided or approved by resilient-product manufacturer for applications indicated. ii. Adhesives: Water-resistant type recommended by resilient-product manufacturer for resilient products and substrate conditions indicated. a. Basis of Design Product: Chapco Safe-Set 4 Cove Base Adhesive. iii. Transition Strips (carpet to concrete transitions): Roppa Profile #43 Custom Carpet Edging; Color P175 "Slate".

094613 TILE CARPETING

- 1. GENERAL a. Section includes: Modular Carpet Tile. b. Submit product data, shop drawings and samples to confirm new carpet and accessories is matching existing adjacent office areas. 2. PRODUCTS: Carpet Tile (CPT-1) a. Basis of Design Product: Subject to compliance with requirements provide Interface AE310 Aerial or comparable product by one of the following: i. Mannington Carpet ii. Shaw Contract Carpet b. Color: Greige c. Fiber Modification Ratio: 1.9 to 2.2 d. Soil Stain Protection: Protect e. Preservation protection: Interspet f. Size: 19.69 in x 19.69 in g. Traffic Classification: Heavy h. Carpet Backing: GlasBac i. Installation Accessories: i. Adhesives: Water resistant, mildew resistant, nonstaining, pressure sensitive type to suit products and subfloor conditions indicated, that comply with flammability requirements for installed carpet tile, and are recommended by

- 4. Secure flat, angle, channel, and rod hangers to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices that are secure and appropriate for both the structure to which hangers are attached and the type of hanger involved. Install hangers in a manner that will not cause them to deteriorate or fail due to age, corrosion, or elevated temperatures. 5. Space hangers not more than 48 inches o.c. along each member supported directly from hangers unless otherwise indicated; provide hangers not more than 8 inches from ends of each member. iii. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical panels. 1. Screw attach moldings to substrate at intervals not more than 16 inches o.c. and not more than 3 inches from ends. Miter corners accurately and connect securely. iv. Install suspension-system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members. v. Install acoustical panels with undamaged edges and fit accurately into suspension-system runners and edge moldings. Scribe and cut panels at borders and penetrations to provide precise fit. 1. Arrange directionally patterned acoustical panels as follows: a. As indicated on reflected ceiling plans. vi. For square-edged panels, install panels with edges fully hidden from view by flanges of suspension-system runners and moldings. d. Cleaning i. Clean exposed surfaces of acoustical panel ceilings, including trim, edge moldings, and suspension-system members. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage. ii. Remove and replace ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage. c. Installation i. General: Comply with the Carpet and Rug Institute's CRI 104, Section 10, "Carpet Tile" and with carpet tile manufacturer's written installation instructions. ii. Installation Method: As recommended in writing by carpet tile manufacturer Glue down; install every tile with full-spread, releasable, pressure-sensitive adhesive. Match existing carpet installation for other offices. iii. Protect installed carpet tile to comply with the Carpet and Rug Institute's CRI 104, Section 13.7.

099123 INTERIOR PAINTING

- 1. GENERAL a. Section includes: Primers and water based finish coatings. b. Submit product data, shop drawings and samples to confirm new paint color and finish is matching existing adjacent office areas. 2. PRODUCTS: Interior Paint (PNT-1) a. Basis of Design Product: Subject to compliance with requirements provide Sherwin Williams (S-W) or comparable product by one of the following: i. ICI Paint Stores (ICI) ii. Benjamin Moore Interior Paints (BM) b. Products: Subject to compliance with requirements, provide product listed in the Interior Painting Schedule for the paint category indicated. c. Color: SW-7015 Repose Gray EXECUTION: a. Examination i. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work. ii. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows: 1. Gypsum Board: 12 percent. iii. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers. iv. Proceed with coating application only after unsatisfactory conditions have been corrected. 1. Application of coating indicates acceptance of surfaces and conditions. b. Preparation i. Comply with manufacturer's written instructions and recommendations applicable to substrates and paint systems indicated. ii. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting. 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any. iii. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants. c. Installation i. Apply paints according to manufacturer's written instructions.

101423 INTERIOR PANEL SIGNAGE

- 1. GENERAL a. Section includes: Panel Signs. b. Submit product data, shop drawings and samples to confirm signage and finish is matching WTCC signage standard and signage in offices nearby. 2. PRODUCTS: Panel Signage (Type A) a. Accessibility Standard: Comply with applicable provisions in the USDOJ's "2010 ADA Standards for Accessible Design" and ICC A117.1. b. Basis of Design Product: APCO Signs, "Elevate Series" with Backer, or comparable product by one of the following: i. ACE Sign Systems, Inc. ii. ASI Sign Systems, Inc iii. Best Sign Systems, Inc. iv. Mohawk Sign Systems c. Sign Materials - Match Basis of Design: APCO Elevate Series with backer; Sign Type Code EV; VTMFH Acrylic Backer w/Printed Pattern: Part Code: 341A; Size: As scheduled; Color: PMS 302C Wake Tech Blue Sign Inserts: Part Code: EV-ALU-DPT Part Color: Natural Satin Direct Print Tactile (DPT) Graphics: Copy: Gotham Rounded Size: As scheduled Color: PMS 302C Wake Tech Blue Copy: Gotham Rounded Light Size: As scheduled Color: A14 Medium Grey Copy: Gotham Rounded Medium Size: As scheduled Color: A14 Medium Grey d. Fabrication i. Tactile Graphics and Text: 1. Signage font: Signage Font: As Indicated on Drawings 2. Fabrication process: Provide tactile copy and grade 2 Braille raised 1/32 inch minimum from plaque first surface by manufacturer's vacuum formed embossing process. 3. Provide lettering and graphics precisely formed, uniformly opaque to comply with relevant ADA regulations and requirements indicated for size, style, spacing, content, position, and colors. ii. Mounting Panel: 1. 0.080 inch thick matte finished acrylic. iii. Background Appearance: 1. Solid color: Select from manufacturer's standard range.

- ii. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks d. Cleaning and Protection i. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site. ii. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces. iii. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition. iv. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces. e. Interior Painting Schedule i. Gypsum Board Substrates: 1. Latex System: a. Prime Coat: Primer, latex, interior at 4.0 mils (0.102 mm) wet, 1.0 mils (0.025 mm) dry: i. S-W ProMar 200 Zero VOC Latex Primer, B28W2600. ii. ICI: 6970 Lifemaster Pro iii. BM: 534 Ultraspec 500 Primer b. Intermediate Coat: Latex, interior, matching topcoat. c. Topcoat: Latex, interior, low sheen eggshell: i. S-W ProMar 200 Zero VOC Latex Eg-She, B41W01951, at 4.0 mils (0.102 mm) wet, 1.7 mils (0.043 mm) dry. ii. ICI: 6970 Lifemaster Pro iii. BM: 537 Ultra Spec 500 Low Sheen Eggshell

- 3. EXECUTION a. Examination i. General: Install signs using mounting methods indicated and according to manufacturer's written instructions. 1. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work. 2. Verify that sign-support surfaces are within tolerances to accommodate signs without gaps or irregularities between backs of signs and support surfaces unless otherwise indicated. 3. Proceed with installation only after unsatisfactory conditions have been corrected. b. Installation: i. General: Install signs using mounting methods indicated and according to manufacturer's written instructions. 1. Install signs level, plumb, true to line, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance. 2. Install signs so they do not protrude or obstruct according to the accessibility standard. 3. Before installation, verify that sign surfaces are clean and free of materials or debris that would impair installation. ii. Accessible Signage: Install in locations on walls as indicated on Drawings and according to the accessibility standard. iii. Wall-Mounted Panel Signs: Attach Panel Signs to wall surfaces using methods indicated below: 1. Vinyl-Tape Mounting: Use double-sided foam tape to mount signs to smooth, nonporous surfaces. 2. Where panel signs are scheduled or indicated to be mounted on glass, provide matching plate on opposite side of glass to conceal mounting materials. c. Cleaning and Protection i. Remove and replace damaged or deformed signs and signs that do not comply with specified requirements. Replace signs with damaged or deteriorated finishes or components that cannot be successfully repaired by finish touchup or similar minor repair procedures. ii. Remove temporary protective coverings and stripable films as signs are installed. iii. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions, and touch up minor nicks and abrasions in finish. Maintain signs in a clean condition during construction and protect from damage until acceptance by Owner. d. Sign Schedule i. Signage Schedule is included on Drawing Sheet I601.

- iv. Tactile Lettering and Graphics Color Options: Select from 3M standard vinyl colors. v. Overall panel size: Per Drawings. vi. Shape: Rectangular (per Drawings). vii. Letter style[s], color[s], letter size[s] and layout position: Per Drawings. viii. Graphic Content and Style: Provide sign copy that complies with requirements indicated on Drawings for size, style, spacing, content, mounting height and location, material, finishes, and colors of signage. ix. Tactile and Braille Copy: Manufacturer's standard process for producing copy complying with "Accessibility Guidelines for Buildings and Facilities (ADAAG)." Text shall be accompanied by Grade 2 Braille. Produce precisely formed characters with square cut edges free from burrs and cut marks. 1. Panel Material: Opaque acrylic sheet. 2. Raised-Copy Thickness: Not less than 1/32 inch (0.76 mm). x. Applied Copy: Die-cut characters from vinyl film of nominal thickness of 3 mils (0.076 mm) with pressure-sensitive adhesive backing. Apply copy to exposed face of panel sign. 1. Panel Material: Opaque acrylic sheet. xi. Colored Coatings for Acrylic Sheet: For copy and background colors, provide Pantone Matching System (PMS) colored coatings, including inks and paints, that are recommended by acrylic manufacturers for optimum adherence to acrylic surface and are nonfading for application intended. e. Accessories: 1. Mounting Methods: Use concealed fasteners where substrate permits, silicone adhesive when mounting to glass fabricated from materials that are not corrosive to sign material and mounting surface.

## GENERAL NOTES DEMOLITION PLANS

- A. FIELD VERIFY EXISTING CONDITIONS. NOTIFY ARCHITECT OF DISCREPANCIES PRIOR TO STARTING DEMOLITION.
- B. DIMENSIONS SHOWN ARE FOR GENERAL REFERENCE ONLY.
- C. DASHED LINES INDICATE DEMOLITION.
- D. PREPARE SURFACES TO RECEIVE NEW FINISHES.

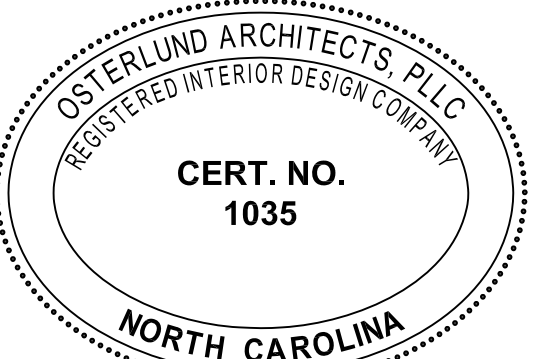
## FIRE RESISTANCE RATINGS

--- 1-HR FIRE BARRIER

## I-KEYNOTES DEMOLITION

- |    |  |
|----|--|
| 01 | SALVAGE STOREFRONT, DOOR, AND HARDWARE FOR REUSE   |
| 02 | REMOVE CARPET TRANSITION STRIP                     |
| 03 | DEMOLISH PORTION OF CARPET, SALVAGE FOR REUSE      |
| 04 | SEE ELECTRICAL DRAWINGS FOR LIGHTING DEMOLITION    |
| 05 | PROTECT EXISTING CARPET DURING CONSTRUCTION.       |
| 06 | REMOVE GWB TO PREPARE WALL FOR BLOCKING BEHIND TV. |
| 07 | PROVIDE TEMPORARY CONSTRUCTION PARTITION.          |
| 08 | SALVAGE EXISTING ROOM SIGNAGE                      |

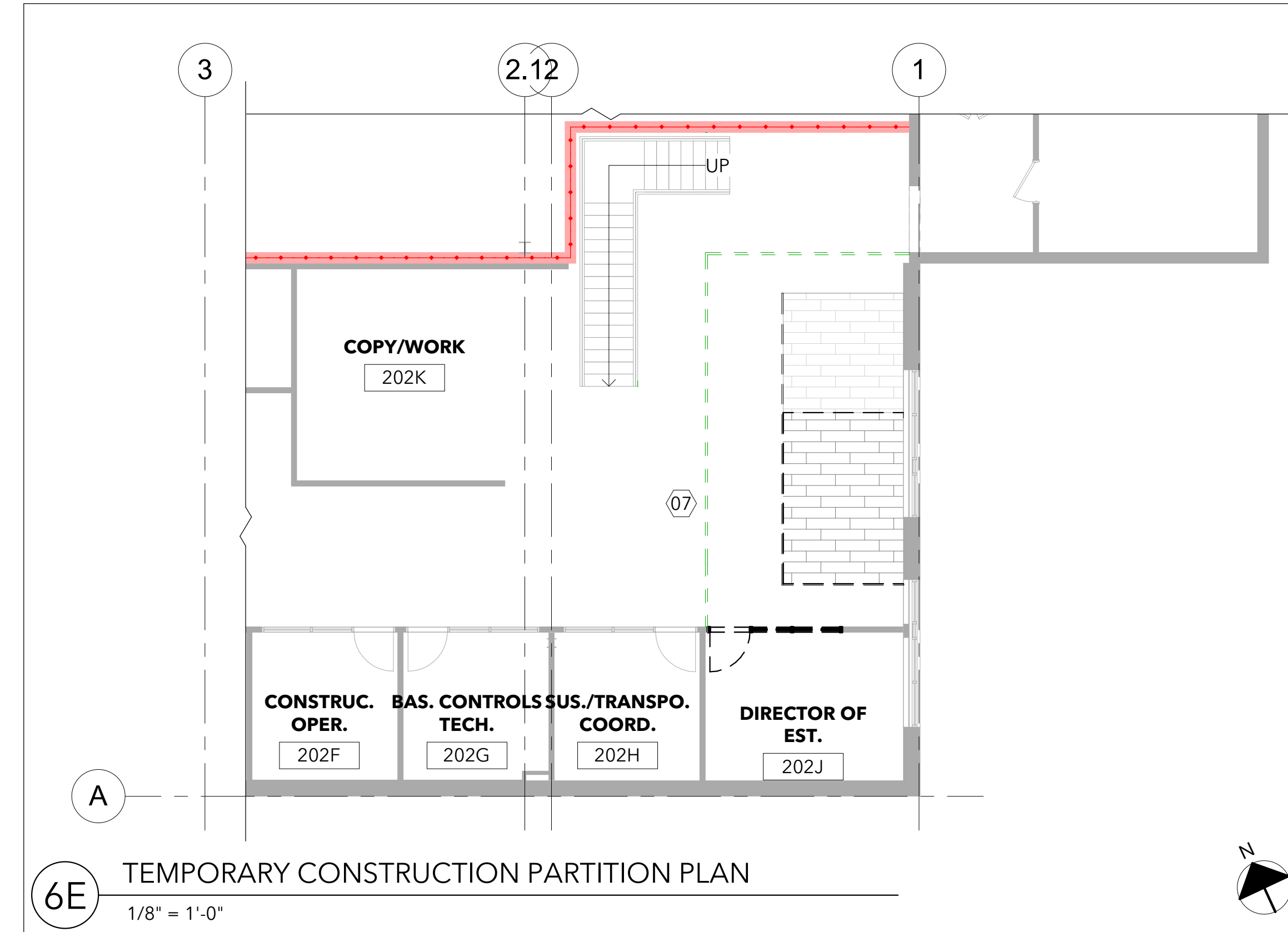
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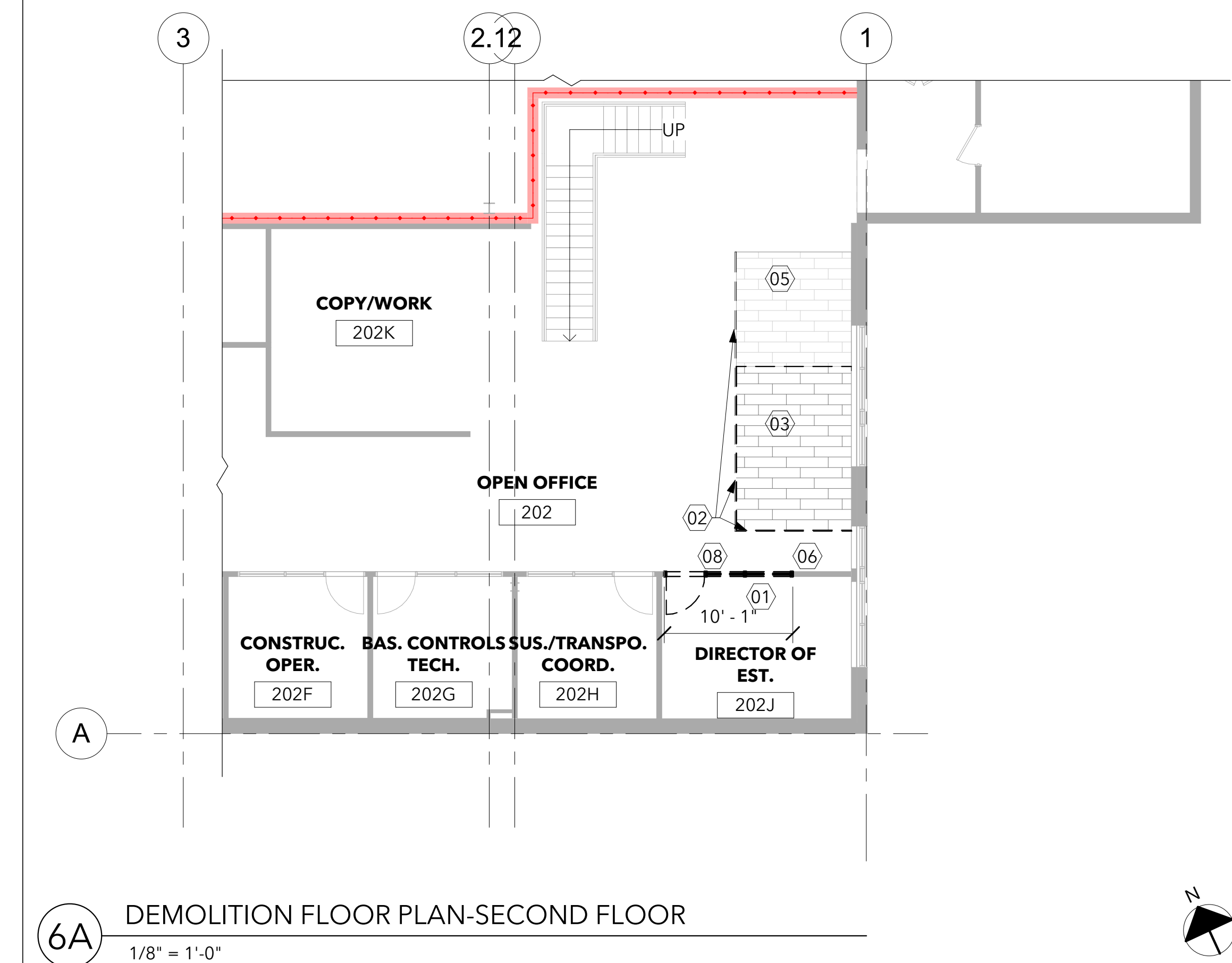
ISSUE: CONSTRUCTION  
DATE: 8/29/2024  
DRAWN BY: SNC  
REVISIONS:


DEMOLITION PLANS

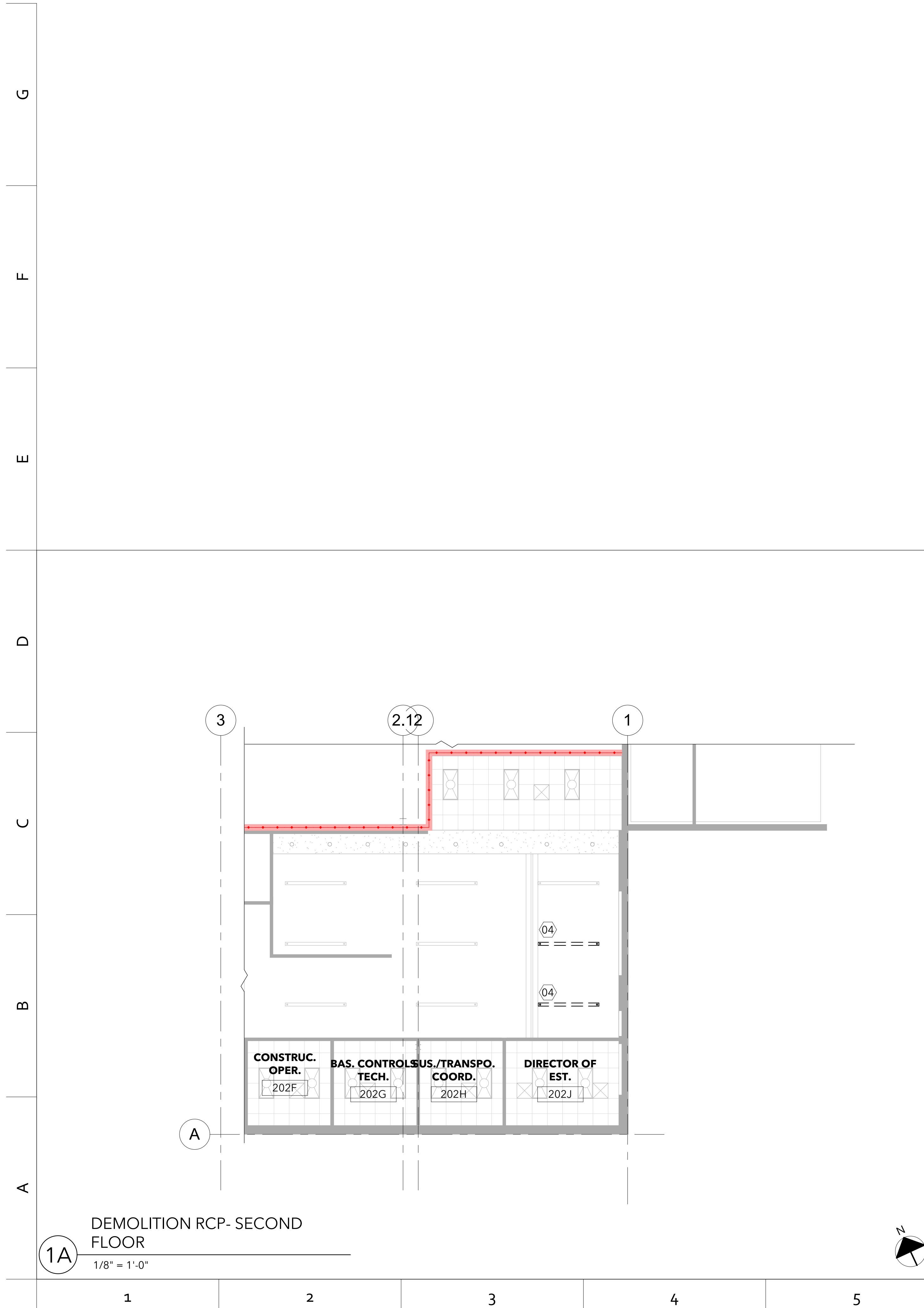
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**6E** TEMPORARY CONSTRUCTION PARTITION PLAN  
1/8" = 1'-0"



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



**1A** DEMOLITION RCP- SECOND FLOOR  
1/8" = 1'-0"

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CONSULTANTS:  
 SIGMA ENGINEERED SOLUTIONS

PROJECT No.: 2413

## WTCC FACILITIES OPERATIONS & WAREHOUSE COMPLEX OFFICE

RALEIGH, NC  
**WTCC**  
 RALEIGH, NC

### GENERAL NOTES FLOOR PLANS

- A. DIMENSIONS ARE TO FACE OF STUDS.
- B. NEW PARTITIONS SHALL BE TYPE P5-3, TYP. UNO. SEE STRUCTURAL DRAWINGS.

### FIRE RESISTANCE RATINGS

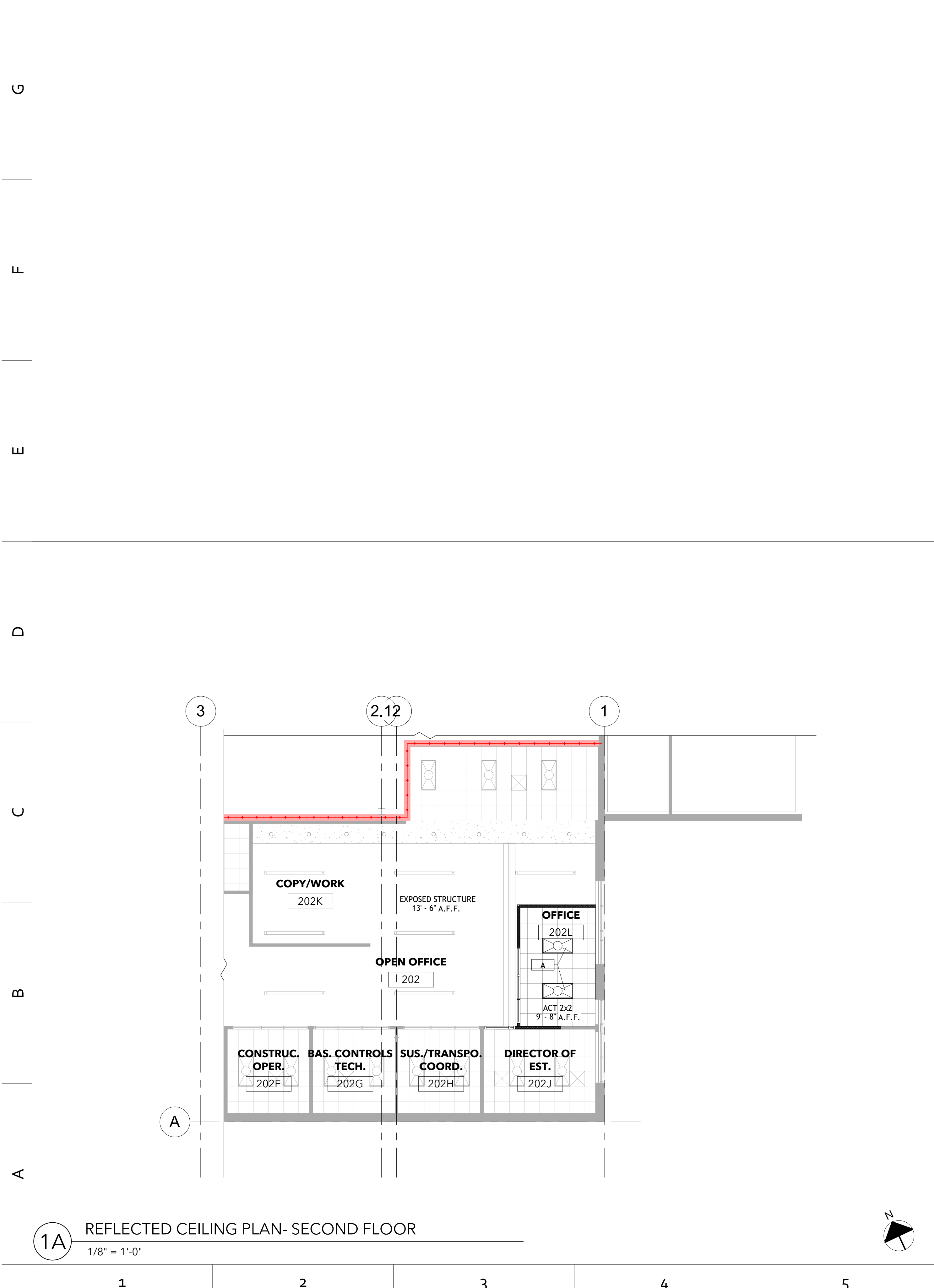
1-HR FIRE BARRIER

### I-KEYNOTES NEW CONSTR.

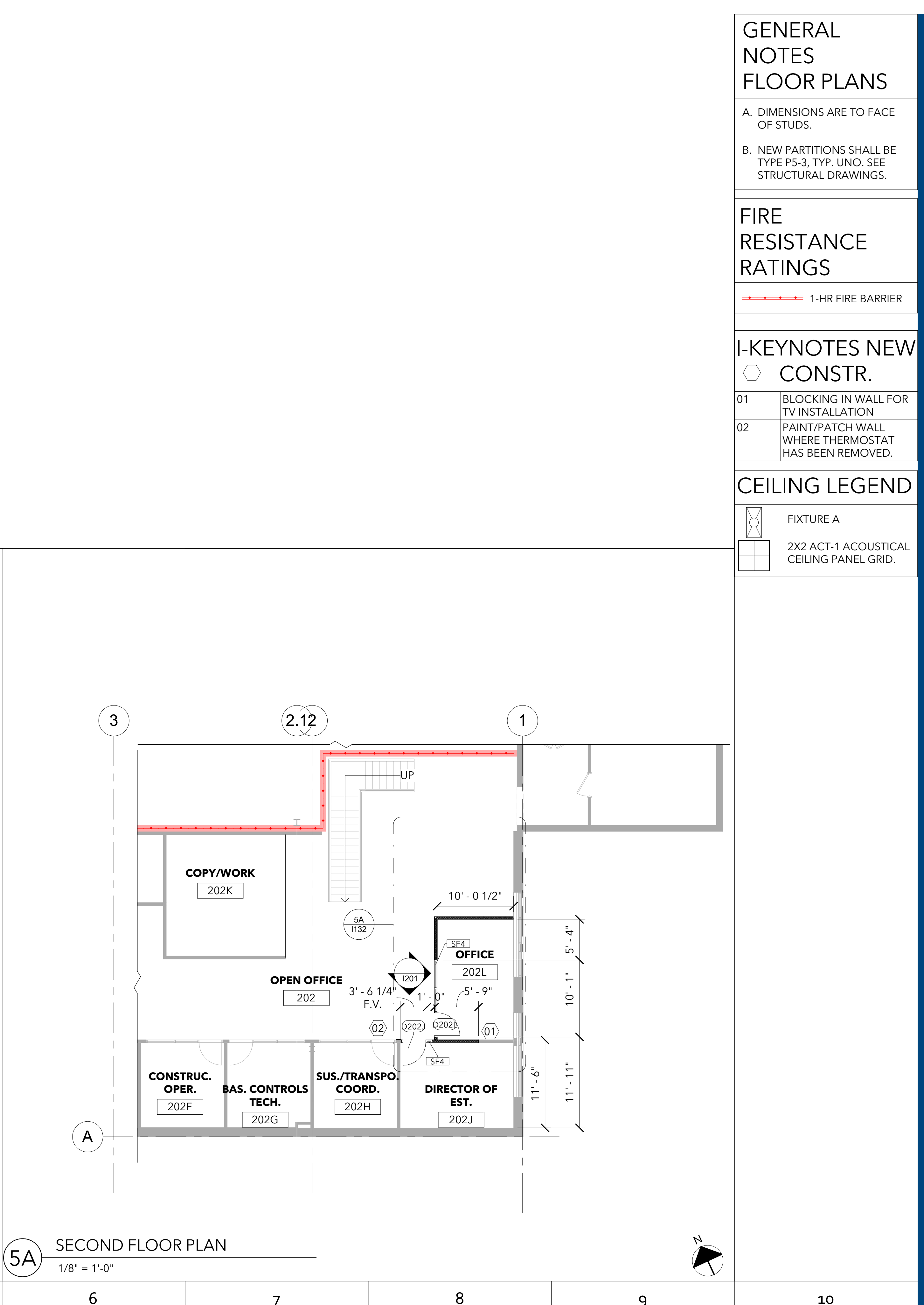
01	BLOCKING IN WALL FOR TV INSTALLATION
02	PAINT/PATCH WALL WHERE THERMOSTAT HAS BEEN REMOVED.

### CEILING LEGEND

	FIXTURE A
	2X2 ACT-1 ACOUSTICAL CEILING PANEL GRID.

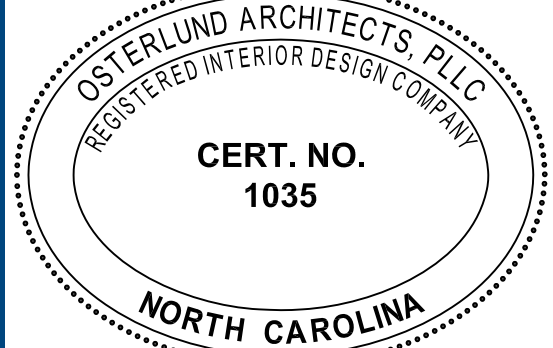


**1A** REFLECTED CEILING PLAN- SECOND FLOOR  
 1/8" = 1'-0"



**5A** SECOND FLOOR PLAN  
 1/8" = 1'-0"

SEALS:



ISSUE: CONSTRUCTION  
 DATE: 8/29/2024  
 DRAWN BY: SNC  
 REVISIONS:


FLOOR AND REFLECTED CEILING PLANS

## GENERAL NOTES FLOOR PLANS

- A. DIMENSIONS ARE TO FACE OF STUDS.
- B. NEW PARTITIONS SHALL BE TYPE P5-3, TYP. UNO. SEE STRUCTURAL DRAWINGS.

## FIRE RESISTANCE RATINGS

1-HR FIRE BARRIER

## I-KEYNOTES NEW CONSTR.

03	INSTALL SALVAGED CARPET PLANKS AND TIE INTO EXISTING CARPET TO REMAIN
04	INSTALL RUBBER TRANSITION TO MATCH EXISTING
05	SEE KEY NOTE 4 ON 6A/E100 FOR WIP DETAILS

## FURNITURE SCHEDULE

MARK	DESCRIPTION	PROVIDED BY	INSTALLED BY
FN1	CUBICLE	OWNER	OWNER
FN2	DESK W/ ROUNDED EDGE	OWNER	OWNER
FN3	60" DESK	OWNER	OWNER
FN4	TASK CHAIR	OWNER	OWNER
FN6	42" D WORK TABLE	OWNER	OWNER
FN7	66" TV	OWNER	OWNER
FN8	33" FILE CABINET	OWNER	OWNER
FN9	SIDE CHAIR	OWNER	OWNER
FN10	84" CUBICLE DESK	OWNER	OWNER
FN11	64" CUBICLE DESK	OWNER	OWNER
FN12	UPPER STORAGE CABINET	OWNER	OWNER
FN13	90" CUBICLE DESK	OWNER	OWNER

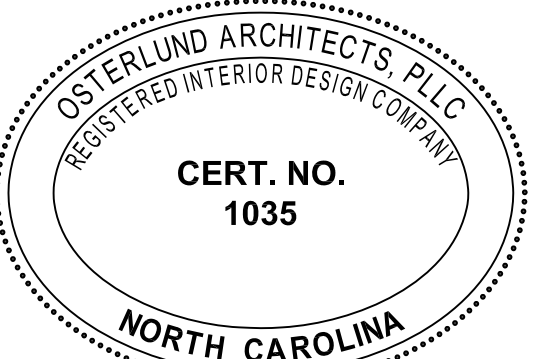
## FINISH KEY

	EXISTING CARPET		CARPET-1 SQUARE CARPET TILE TO MATCH EXSTING IN PRIVATE OFFICES.
	SALVAGED CARPET PLANK		

## POWER AND DATA KEY

	OUTLET
	DATA
	WIP

SEALS:



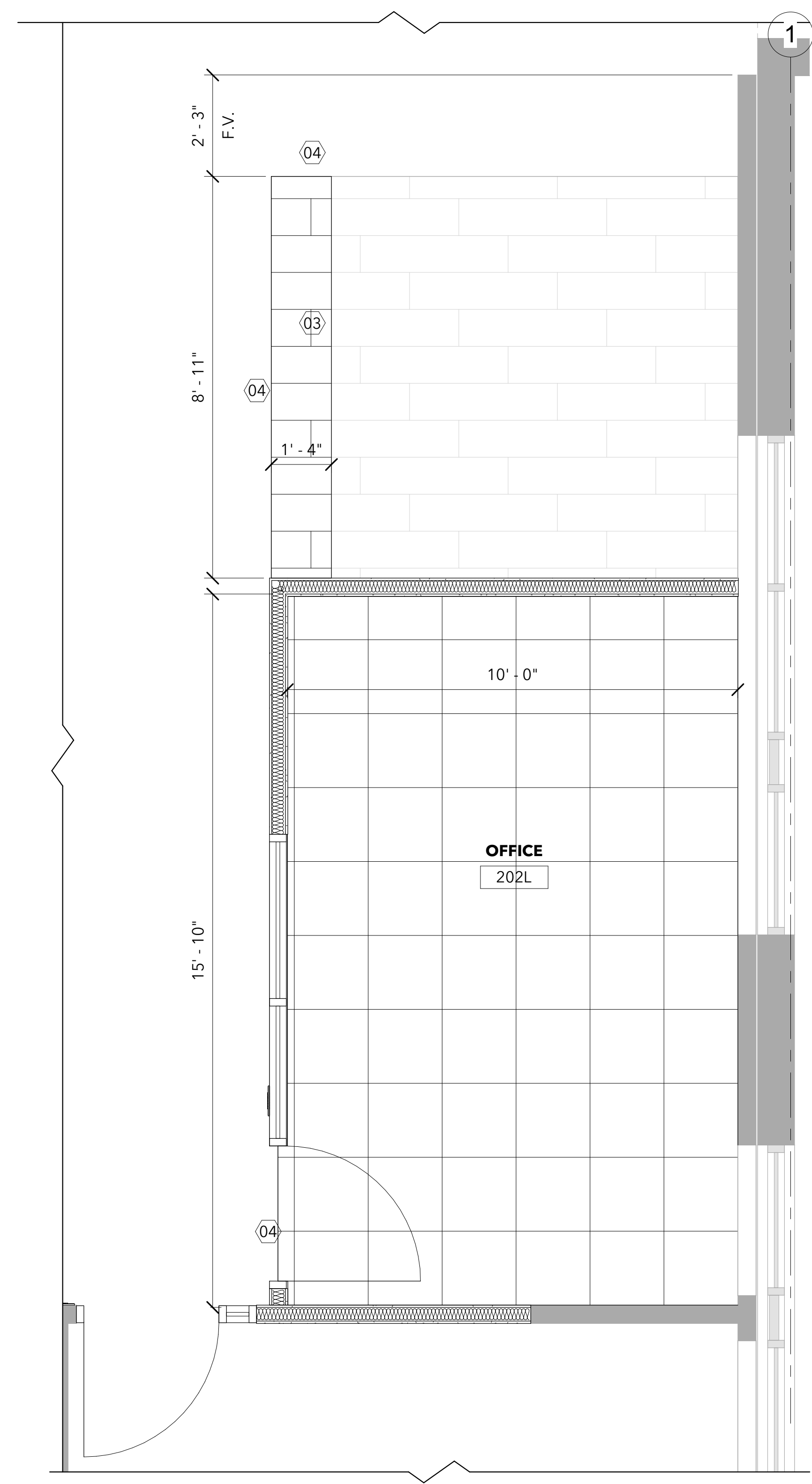
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REVISIONS:

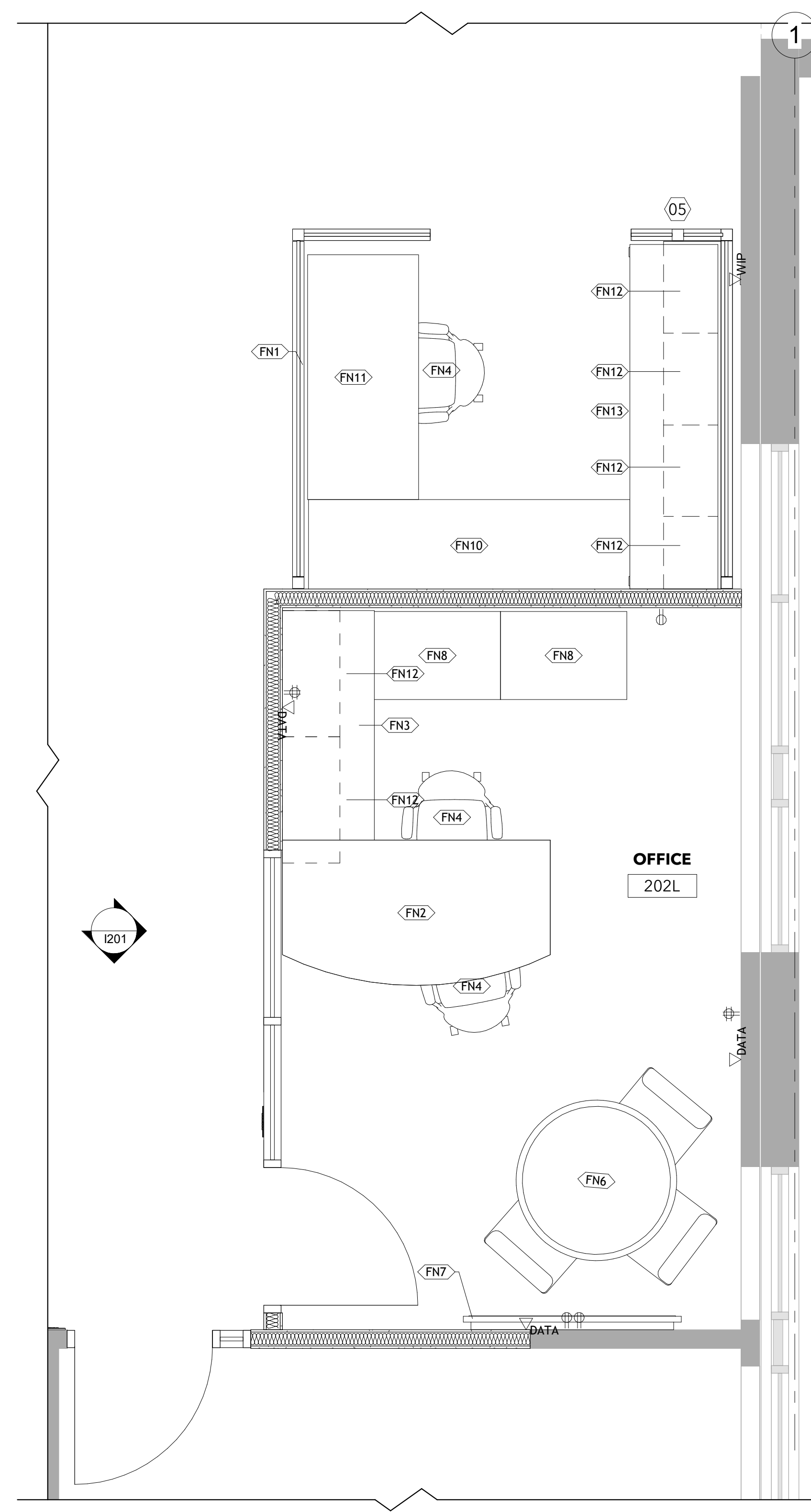
FURNITURE AND FINISH PLAN

A B C D E F G

**2A** FINISH PLAN- SECOND FLOOR  
1/2" = 1'-0"



**5A** FURNITURE PLAN- SECOND FLOOR  
1/2" = 1'-0"



1 2 3 4 5 6 7 8 9 10



8/29/2024 4:32:11 PM ARCH D (36.00 x 24.00 Inches), 1:1

5 W Hargett Street 310  
 Raleigh, NC 27601  
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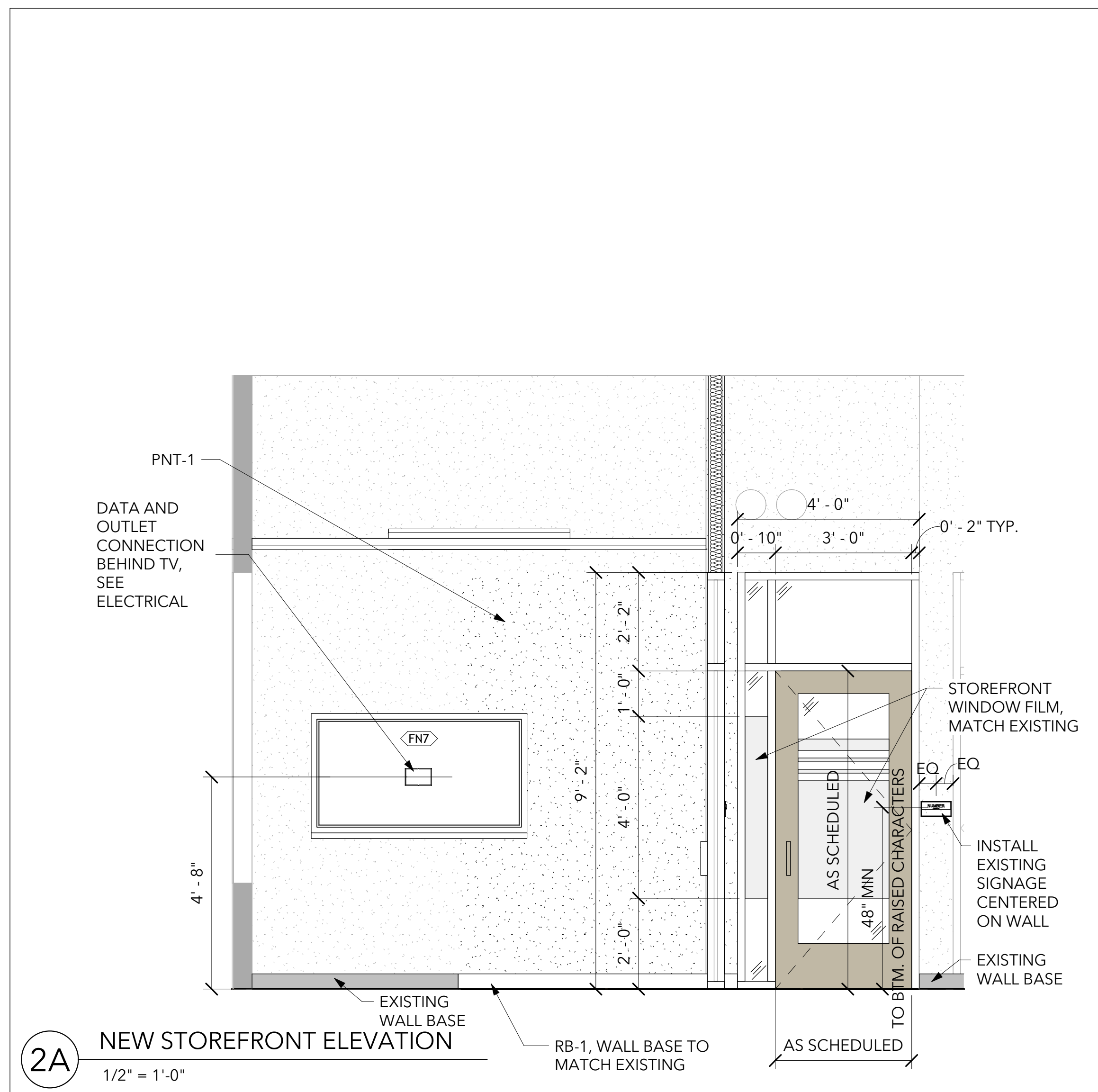
CONSULTANTS:  
 SIGMA ENGINEERED SOLUTIONS

PROJECT No.: 2413

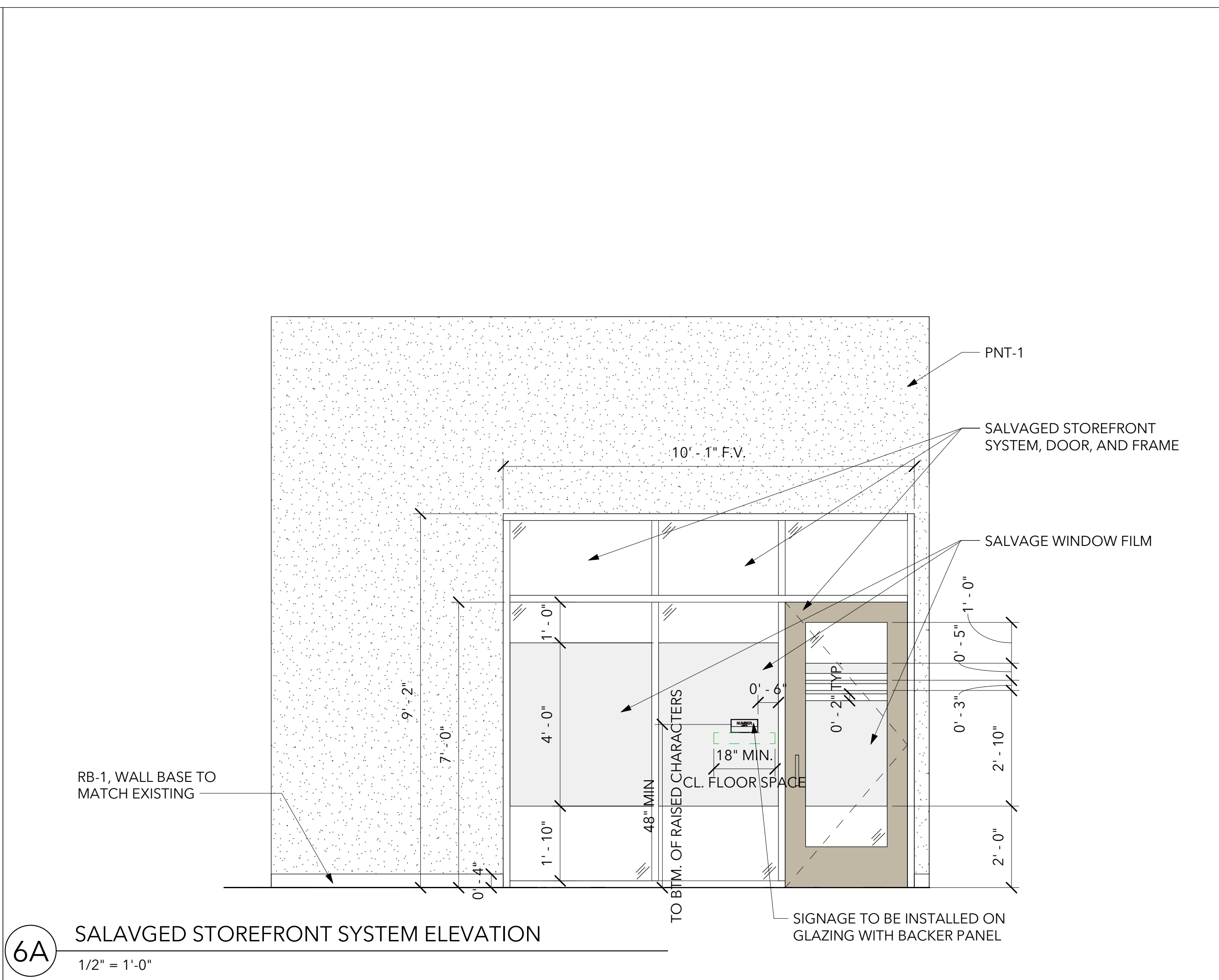
## WTCC FACILITIES OPERATIONS & WAREHOUSE COMPLEX OFFICE

RALEIGH, NC  
**WTCC**  
 RALEIGH, NC

A B C D E F G

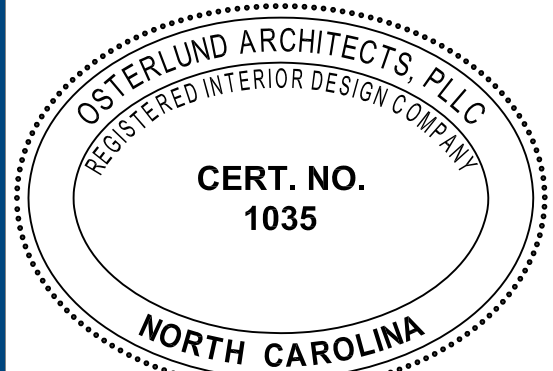


**2A** NEW STOREFRONT ELEVATION  
 1/2" = 1'-0"



**6A** SALAVGED STOREFRONT SYSTEM ELEVATION  
 1/2" = 1'-0"

SEALS:



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NO.	DESCRIPTION

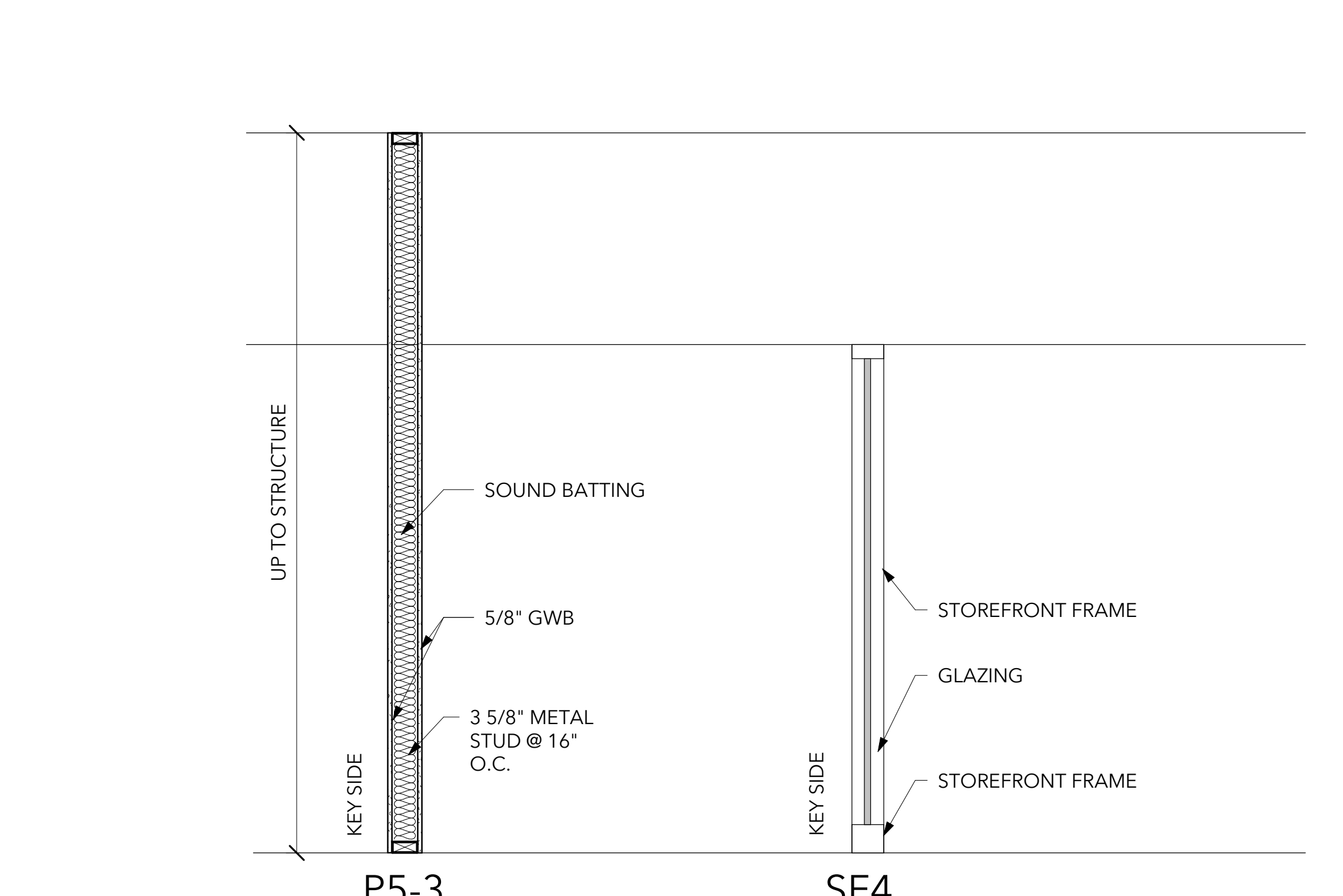
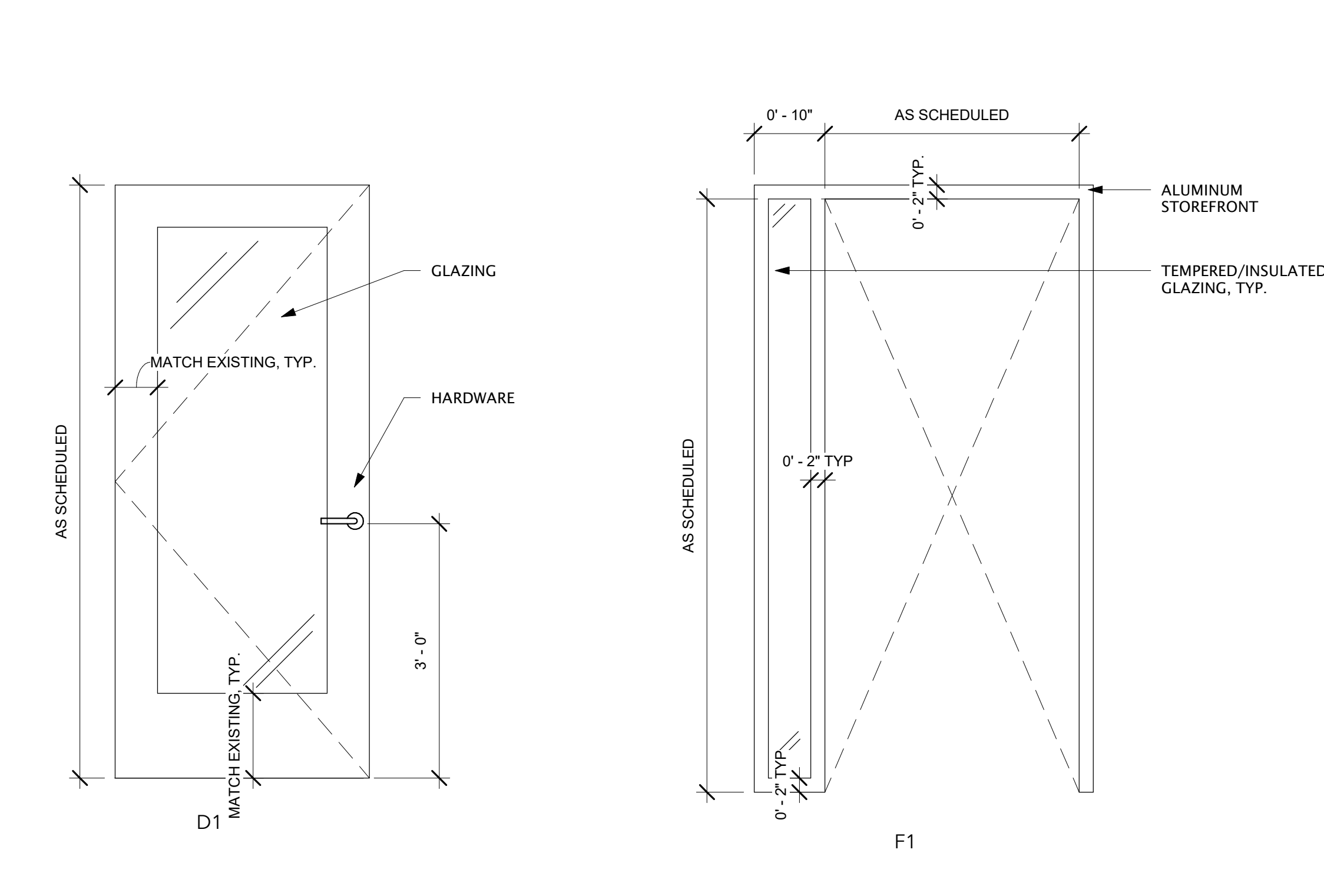
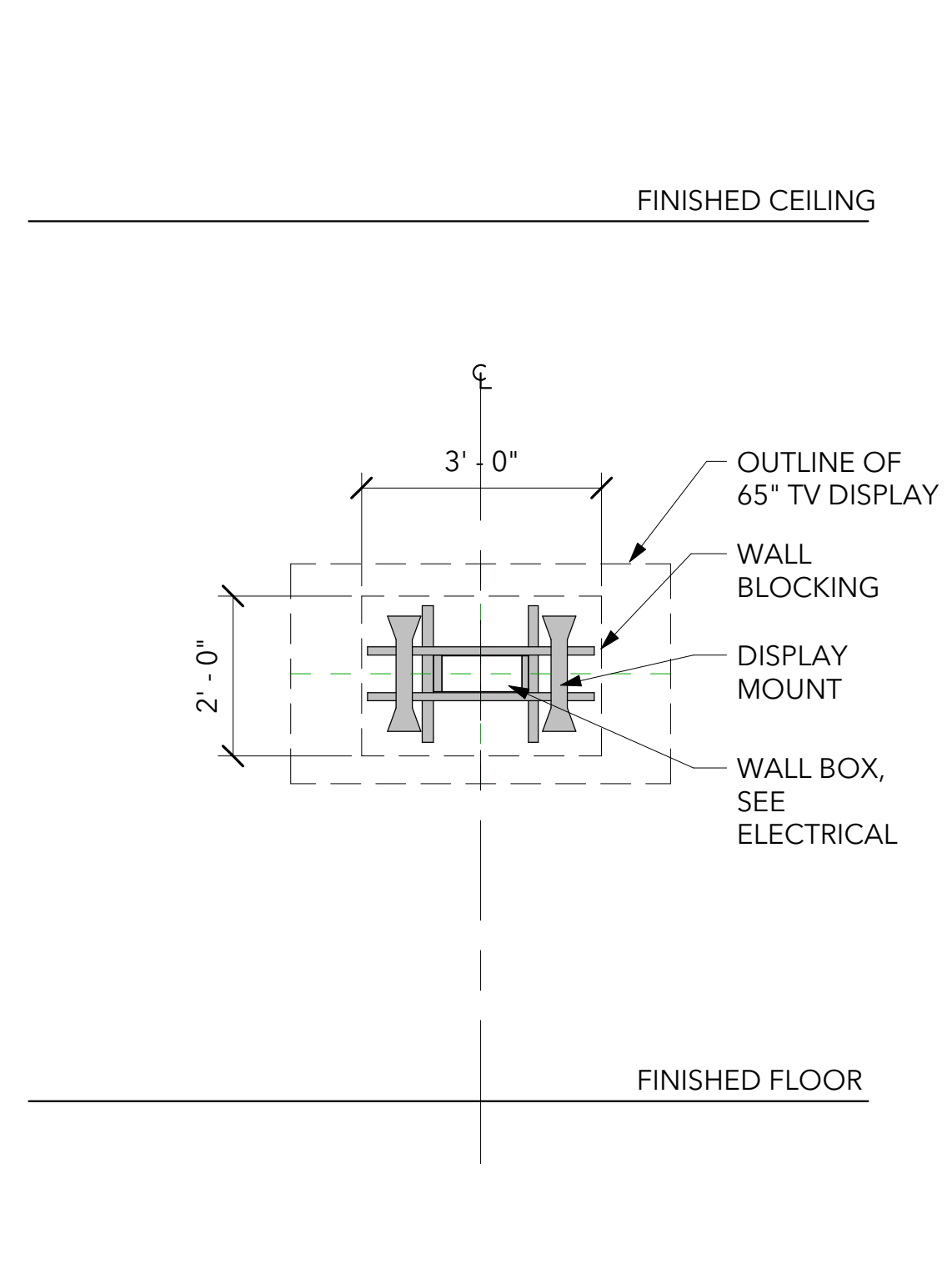
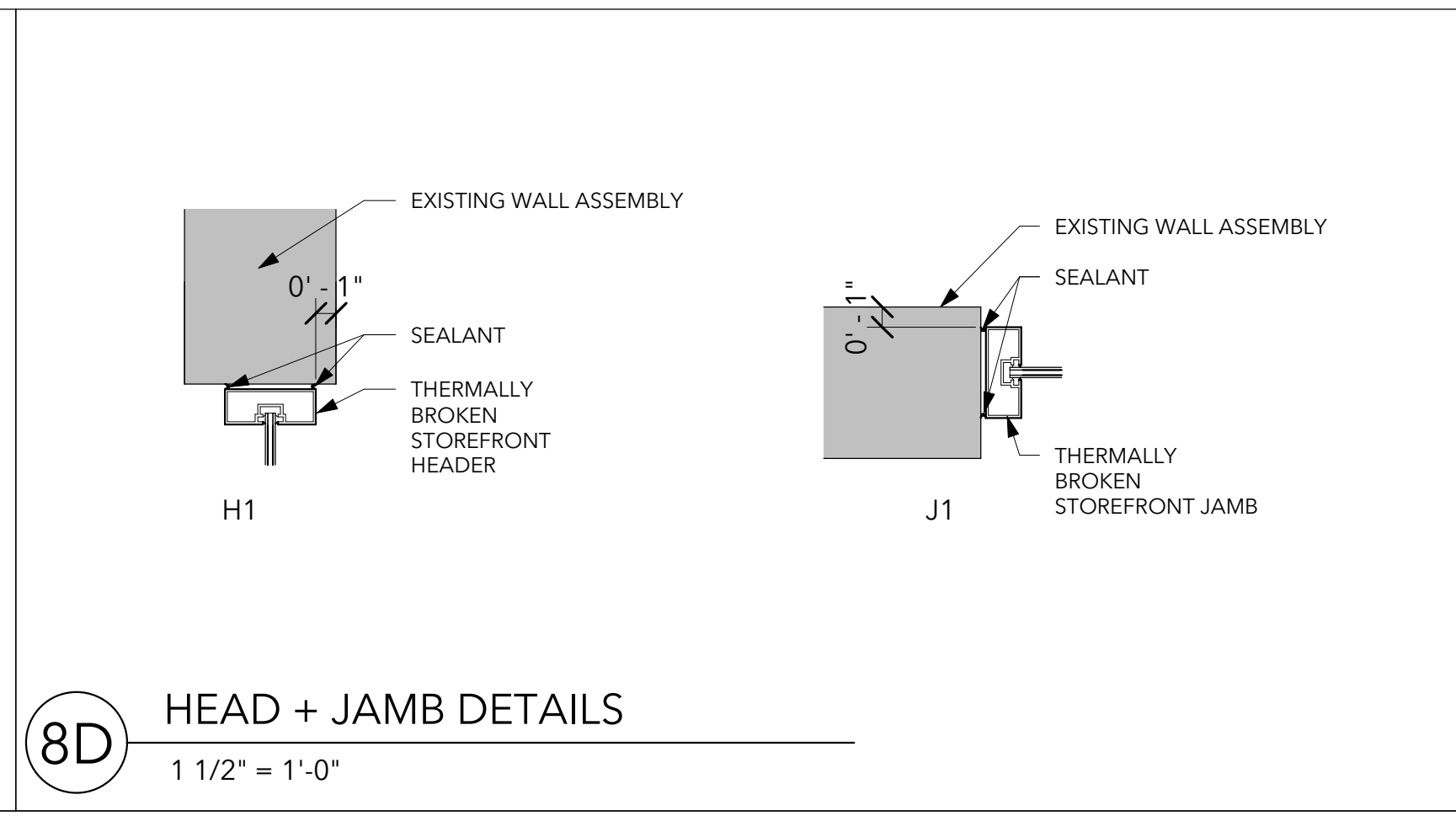
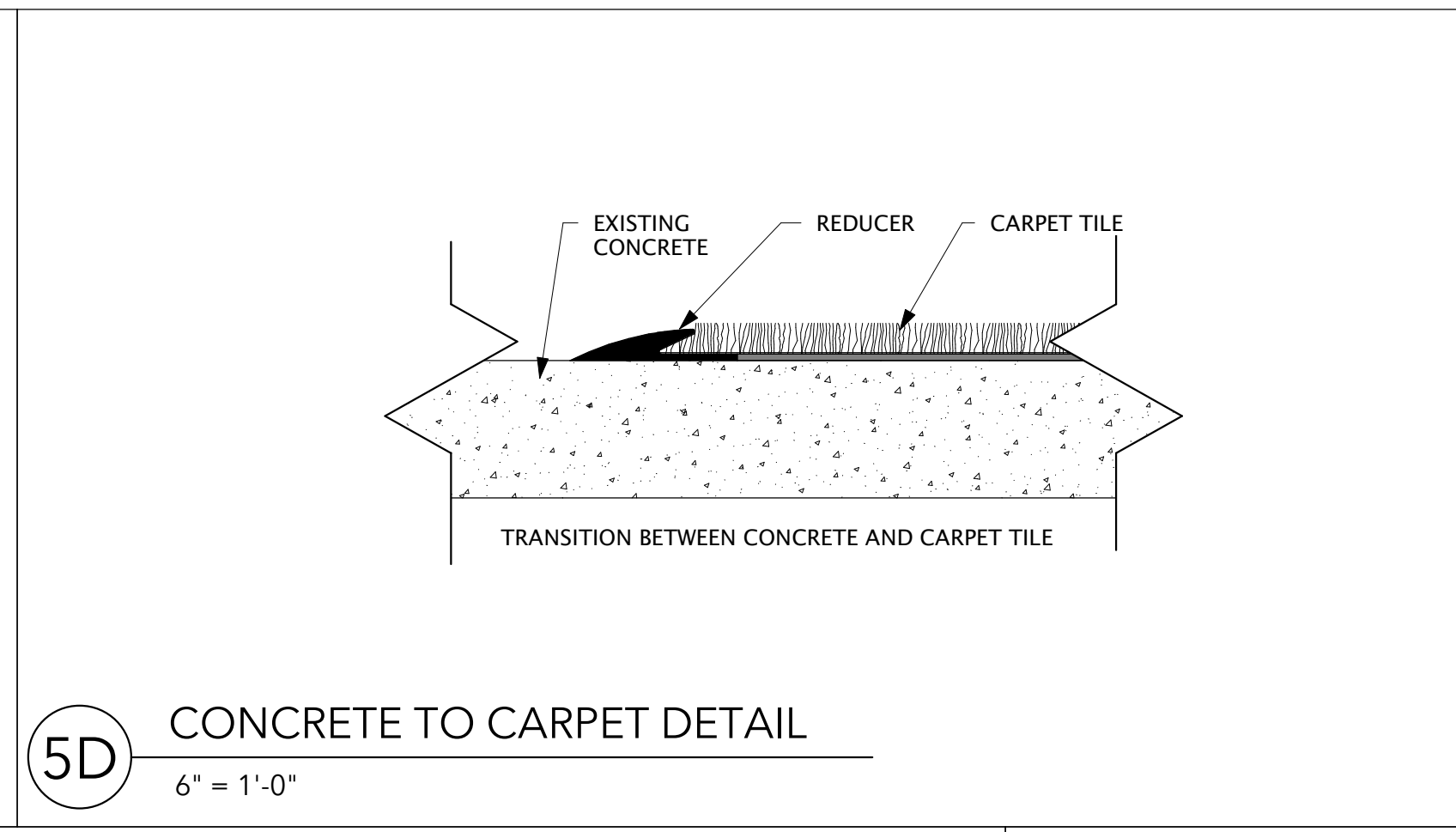
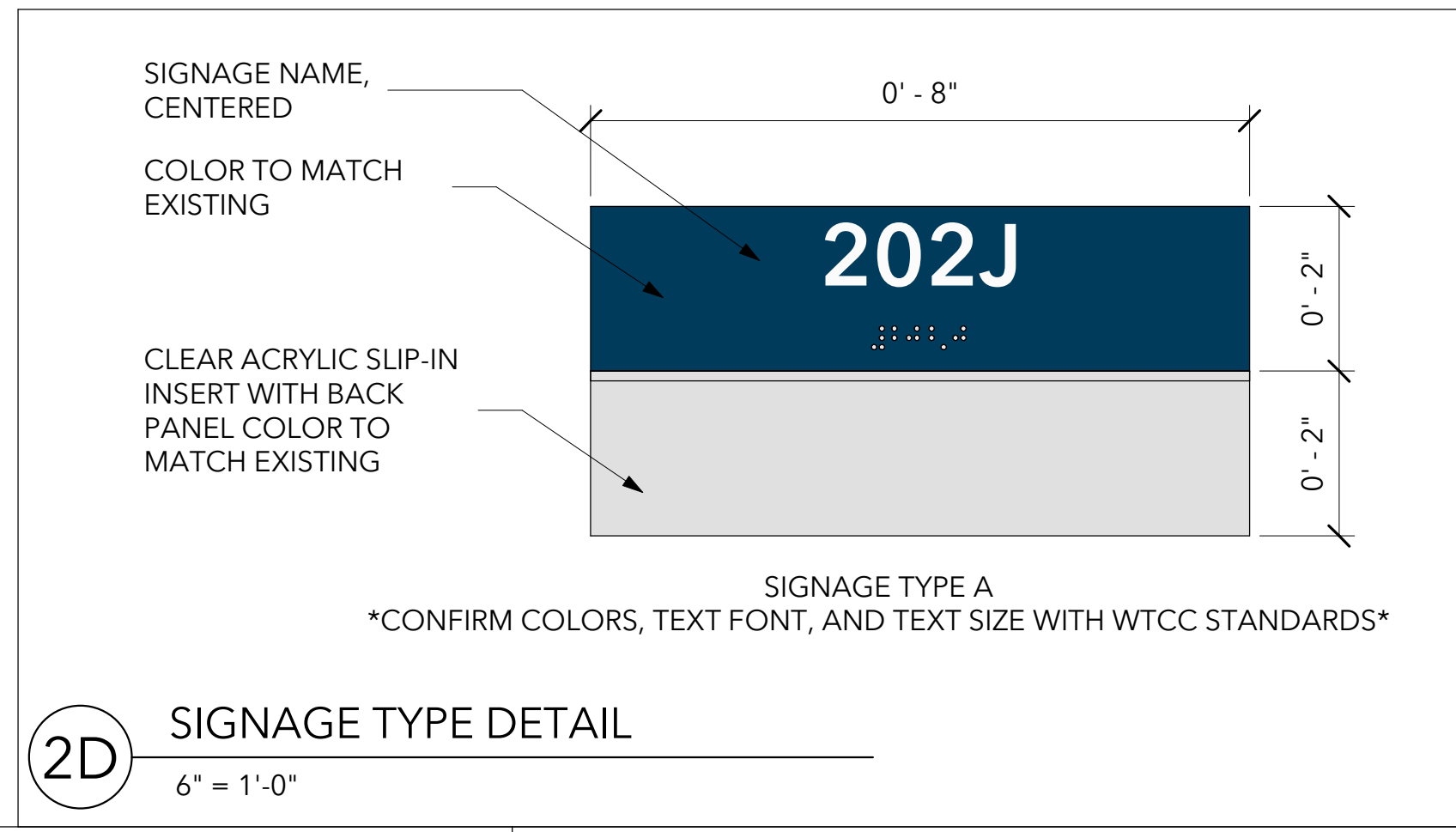
INTERIOR ELEVATIONS

### DOOR AND FRAME SCHEDULE

MARK	DOOR						FRAME						FIRE RATING	HARDWARE		SIGNAGE		NOTES			
	SIZE			MATL	EL	GLZ	LOUVER			MATL	EL	GLZ		HEAD	JAMB	SILL	SET NO.		KEYSIDE RM NO	SIGN TYPE	NAME
	W	HT	THK				W	HT	TEMPERED												
D202J	3' - 0"	7' - 0"	0' - 1 5/8"	ALUM.	D1	TEMPERED	-	-	ALUM.	F1	TEMPERED	H1	J1	-	-	-	A	202J	SALVAGED	202J	
D202L	3' - 0"	7' - 0"	0' - 1 5/8"	EXISTING	-	EXISTING	-	-	EXISTING	-	EXISTING	-	-	-	-	-	EXISTING	202L	A	202L	

### ROOM FINISH SCHEDULE

ROOM NO	ROOM NAME	FLOOR	BASE	WALLS				CEILING		NOTES
				N	E	S	W	MATL	HEIGHT	
202	OPEN OFFICE	EXISTING, SALVAGED CARPET PLANKS	RB-1, RUBBER BASE	EXIST.	PNT TO MATCH EXIST.	PNT TO MATCH EXIST.	EXIST.	OPEN TO STRUCTURE		NEW FINISHES ONLY ON NEW WALLS, EXISTING TO REMAIN ON WALLS UNTOUCHED BY RENOVATION
202J	DIRECTOR OF EST.	EXISTING	RB-1, RUBBER BASE	PNT TO MATCH EXISTING	EXIST.	EXIST.	EXIST.	EXIST.		NEW FINISHES ONLY ON NEW WALLS, EXISTING TO REMAIN ON WALLS UNTOUCHED BY RENOVATION
202L	OFFICE	CPT-1 CARPET TILE	RB-1, RUBBER BASE	PNT TO MATCH EXISTING	EXIST.	PNT TO MATCH EXISTING	PNT TO MATCH EXISTING	ACT-1	9' - 8"	NEW FINISHES ONLY ON NEW WALLS, EXISTING TO REMAIN ON WALLS UNTOUCHED BY RENOVATION



SEALS:

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NO.	DESCRIPTION	DATE

INTERIOR SCHEDULES AND DETAILS

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F  
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CONSULTANTS:  
SIGMA  
5909 Falls of Neuse Rd Ste 101  
Raleigh, NC 27609  
License #: C-2490

PROJECT No.: 2413

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WAREHOUSE COMPLEX OFFICE  
RALEIGH, NC  
WTCC  
RALEIGH, NC

SEALS:

Elton L. Smith  
Digitally signed by Elton L. Smith  
Date: 2024.08.29 09:46:53 -04'00'

ISSUE: CONSTRUCTION  
DATE: 8/29/2024  
DRAWN BY: ELS  
REVISIONS:


# FP001

### FIRE PROTECTION GENERAL NOTES

- THIS CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS REQUIRED FOR A COMPLETE WORKING SYSTEM WHICH SHALL COMPLY FULLY WITH NFPA #13, 2013 EDITION, STANDARD FOR INSTALLATION OF AUTOMATIC SPRINKLER SYSTEMS, THE NORTH CAROLINA STATE BUILDING CODE, 2018 EDITION, REQUIREMENTS OF ALL LOCAL FIRE MARSHALL AUTHORITIES. FINAL ACCEPTANCE IS CONTINGENT UPON APPROVAL OF ALL WORK AND COMPLETION OF THE CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FORM 85A.
- THIS CONTRACTOR SHALL PROVIDE ENGINEERED SHOP DRAWINGS FOR THE PROPOSED BUILDING. THE DRAWINGS SHALL INCLUDE THE FULLY AUTOMATIC WET PIPE SPRINKLER SYSTEM WITH ALL PIPING, SPRAY HEADS OF EVERY TYPE REQUIRED, FITTINGS, VALVES, DEVICES, ACCESSORIES, HANGERS AND SUPPORTS, ALARM CHECK VALVES, WATER MOTOR GONGS AND CONNECTIONS. THE WORK SHALL INCLUDE HYDRAULIC CALCULATIONS FOR THE AUTOMATIC WET PIPE SPRINKLER SYSTEMS MOST REMOTE AREAS (APPLY 10PSI REDUCTION ON STATIC AND RESIDUAL PRESSURES AND A 10% REDUCTION ON FLOW) SEE SPRINKLER DESIGN DATA ON THIS SHEET. SUBMIT TO ENGINEER FOR APPROVAL AND FORWARD TO STATE CONSTRUCTION OFFICE.
- ALL MATERIALS AND EQUIPMENT SHALL BE NEW, UL LISTED AND FM APPROVED FOR THE INTENDED USE AND SHALL BE INSTALLED IN FULL COMPLIANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- THE FIRE SPRINKLER SYSTEM FOR THE OCCUPIED AND HEATED AREAS SHALL BE AN AUTOMATIC WET PIPE SYSTEM.
- SPRINKLER HEADS SHALL BE SPACED AS PER N.F.P.A. 13, 2013 EDITION.
- ALL SYMBOLS AND ABBREVIATIONS MAY NOT BE UTILIZED FOR THIS PROJECT.
- ALL PIPING AND/OR CONDUIT PENETRATIONS THRU FIRE RATED FLOORS AND/OR WALLS SHALL BE MADE/SEALED IN ACCORDANCE WITH UL LISTED SYSTEMS.
- UNLESS OTHERWISE INDICATED THIS CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING, CORE DRILLING AND PATCHING REQUIRED TO INSTALL FIRE PROTECTION WORK.
- ALL SPRINKLER HEADS SHALL BE LOCATED IN CENTER OF CEILING TILES WHERE LAY-IN CEILINGS OCCUR UNLESS SHOWN OR NOTED OTHERWISE.
- REFER TO ALL ARCHITECTURAL/GENERAL CONSTRUCTION CONTRACT SPECIFICATIONS AND DRAWING DOCUMENTS FOR PROJECT REQUIREMENTS.
- IT IS TOTALLY THIS CONTRACTOR'S RESPONSIBILITY TO COORDINATE HANGERS & SUPPORTS WITH OTHER TRADES. ANY DAMAGE INCURRED ON EXISTING FIREPROOFING MATERIAL DUE TO INSTALLATION OF HANGERS BY THIS CONTRACTOR, SHALL BE REPAIRED BY THE FIREPROOFING SUBCONTRACTOR AT THE FIRE PROTECTION CONTRACTOR'S EXPENSE.
- ALL PIPE LARGER THAN 2" SHALL BE BLACK STEEL SCH. 10 WITH GROOVED ENDS JOINED BY GROOVE FITTINGS. USE RIGID COUPLINGS WITH ALL 2" BRANCH LINES TO PREVENT PIPE ROTATION.
- ALL PIPE 2" AND SMALLER SHALL BE BLACK STEEL SCH. 40 WITH THREADED ENDS JOINED BY THREADED FITTINGS.
- FINAL PIPE SIZING SHALL BE BASED ON HYDRAULIC CALCULATIONS FOR APPROPRIATE HAZARD AND A WATER FLOW TEST OF FIRE HYDRANT FLOW NEAREST TO THE SITE. THE TEST SHALL BE PROVIDED BY DIVISION 21.
- ALL ARMOVERS SHALL BE 1", ARMOVERS EXCEEDING 1"X 2"-0" SHALL BE SUPPORTED WITH A HANGER PER NFPA #13.
- ALL INTERIOR SPRINKLER PIPING SHALL BE PRESSURE TESTED FOR 2 HOURS AT 200 PSI OR 90 PSI ABOVE THE MAXIMUM SYSTEM WORKING PRESSURE, WHICHEVER IS GREATER.
- AUTOMATIC SPRINKLERS SHALL BE PROVIDED UNDER DUCTS OF 48" AND GREATER WIDTH AND UNDER LESSER WIDTH DUCTS WHERE SPRAY HEADS CANNOT BE LOCATED TO COMPLY WITH THE CLEARANCE GUIDELINES OF NFPA # 13.
- ALL WELDING SHALL BE PERFORMED BY WELDERS CERTIFIED FOR THE PROCEDURES USED. ALL SLAG CAUSED BY WELDING OR CUTTING PROCEDURES SHALL BE REMOVED FROM PIPING BEFORE INSTALLATION OF PIPING.
- FLUSHING CONNECTIONS SHALL BE PROVIDED AT THE ENDS OF EACH CROSS MAIN.
- A PERMANENT METAL PLACARD SHALL BE PROVIDED AT THE BASE OF THE RISER INDICATING THE DESIGN CRITERIA AND SYSTEM DEMANDS.
- PROVIDE FLOW SWITCHES FOR SYSTEM MAIN AND ZONES AND TAMPER SWITCHES FOR ALL ABOVE GROUND GATE, WAFER, AND BALL VALVES ABOVE GROUND AND INSIDE THE BUILDING.
- WIRING FROM TAMPER SWITCHES AND FLOW SWITCHES TO FIRE ALARM PANEL SHALL BE BY ELECTRICAL CONTRACTOR.
- ALL PENETRATIONS OF RATED WALLS AND FLOORS SHALL BE FIRE STOPPED IN ACCORDANCE WITH THE SCHEDULE AND DETAILS ON THIS SHEET.
- ALL SPRINKLER PIPING, AS SHOWN, IS DIAGRAMMATIC WITH APPROXIMATE PIPE LOCATIONS, ELEVATIONS, ROUTING, ETC., AND IS PROVIDED FOR INFORMATIONAL PURPOSES. EVERY FITTING, ELL, TEE AND LENGTH OF PIPE MAY NOT BE SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE CONTRACT DRAWINGS AND COORDINATE THE FIRE PROTECTION SYSTEM INSTALLATION WITH THE BUILDING STRUCTURAL, MECHANICAL AND ELECTRICAL SYSTEMS. THE FIRE PROTECTION CONTRACTOR SHALL CREATE A FABRICATION DRAWING SHOWING ALL PIPE SIZES, LOCATION, ROUTING, HANGERS & ELEVATIONS THAT IS A RESULT OF THIS COORDINATION EFFORT. NECESSARY OFFSETS IN PIPING REQUIRED TO PROPERLY INSTALL THE FIRE PROTECTION SYSTEM AS TO TAKE UP MINIMUM SPACE SHALL BE FURNISHED AND INSTALL BY THE CONTRACTOR WITH NO ADDITIONAL EXPENSE TO THE OWNER.

### FIRE PROTECTION DESIGN DATA

Project Name:	WAKE TECHINCAL COMMUNITY COLLEGE BUILDING ST OFFICE UPGRADE	System:	WET
Project Location:	RALEIGH, NC	Sys. Sq. Ft.:	+/-
Suite:	---	Floor#:	2
Designed By:	SIGMA ENGINEERED SOLUTIONS	Phone#:	(919) 840-9300
Occupancy:	OFFICE	Hazard:	LIGHT HAZARD
		Calling Hgt.:	VARIES
		Total Bldg. Hgt.:	38'-11" MAXIMUM

### FIRE PROTECTION DESIGN SUMMARY

Design Method	System #1				
Design Area #	CALCULATED				
Location	RIA-10 EXISTING				
Type of System	OFFICE				
Hazard Class	WET				
Criteria From	LIGHT				
Design Area	NFPA 13				
Sprinkler Spacing	1500 SQ FT				
Density	225 SQ FT				
K-Factor	0.1				
Hose Allowance	5.6				
# Design Sprinkl's.	100 GPM				
Special App Spikr	TBD				
Req @ BOR	N/A				
G.P.M. Req'd	TBD				
P.S.I. Req'd	TBD				
Req @ PUMP					
G.P.M. Req'd	N/A				
P.S.I. Req'd	N/A				
Safety Factor@Test	TBD				
Dry Sys. Vol. (gal)	N/A				

### SPRINKLER HEAD LEGEND

- CONCEALED PENDENT SPRINKLER HEAD, QR, CHROME BODY, WHITE COVER PLATE, 1/2", 155", K=5.6.
- UPRIGHT SPRINKLER HEAD, QR, SSU BRASS BODY, 1/2", 155", K=5.6.
- SEMI-RECESSED PENDENT SPRINKLER HEAD, QR, SSP BRASS BODY, 1/2", 155", K=5.6.
- ▼ SIDEWALL SPRINKLER HEAD, QR CHROME BODY, 1/2", 155", SSS, K=5.6.
- ▽ DRY TYPE SIDEWALL SPRINKLER HEAD, QR CHROME BODY, 1/2", 155", SSS, K=5.6.

**NOTE:**  
ALL SPRINKLER HEAD SPECIFICATION INFORMATION LISTED ABOVE IS TYPICAL UNLESS OTHERWISE INDICATED ON THE DRAWINGS AND/OR AS OTHERWISE REQ'D. BY CODE (ORIFICE SIZES, TEMP. RATINGS, ETC.).

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CONSULTANTS:  
 SIGMA  
 5909 Falls of Neuse Rd Ste 101  
 Raleigh, NC 27609  
 License #: C-2490

PROJECT No.: 2413

**WTCC FACILITIES OPERATIONS & WAREHOUSE COMPLEX OFFICE**  
 RALEIGH, NC  
**WTCC**  
 RALEIGH, NC

SEALS:

Elton L. Smith  
 C. Digitally signed  
 by Elton L. Smith  
 Date: 2024.08.29  
 09:47:21 E-04'00'

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**FIRE RESISTANCE RATINGS**  
 1-HR FIRE BARRIER

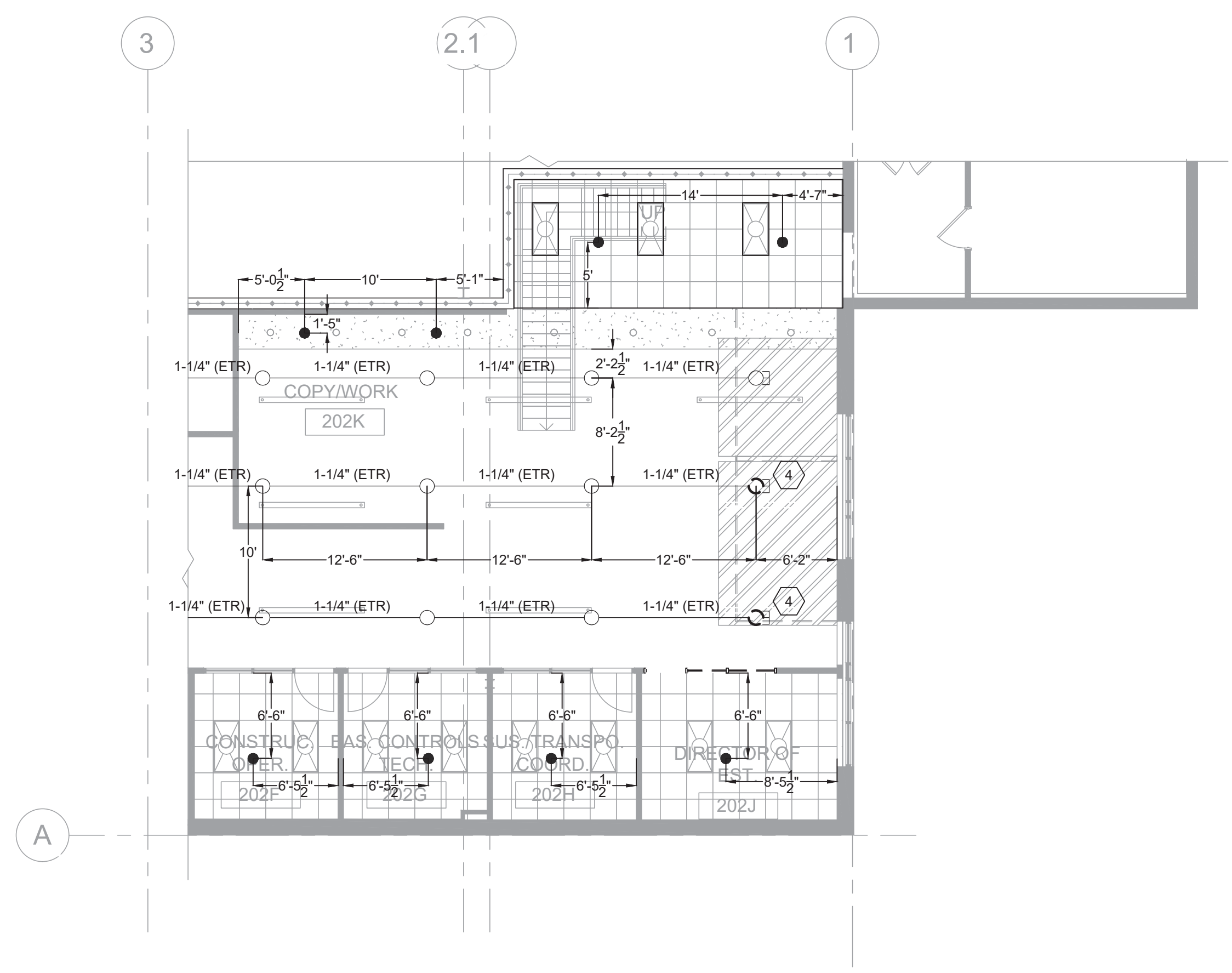
# FP100

**GENERAL NOTES:**

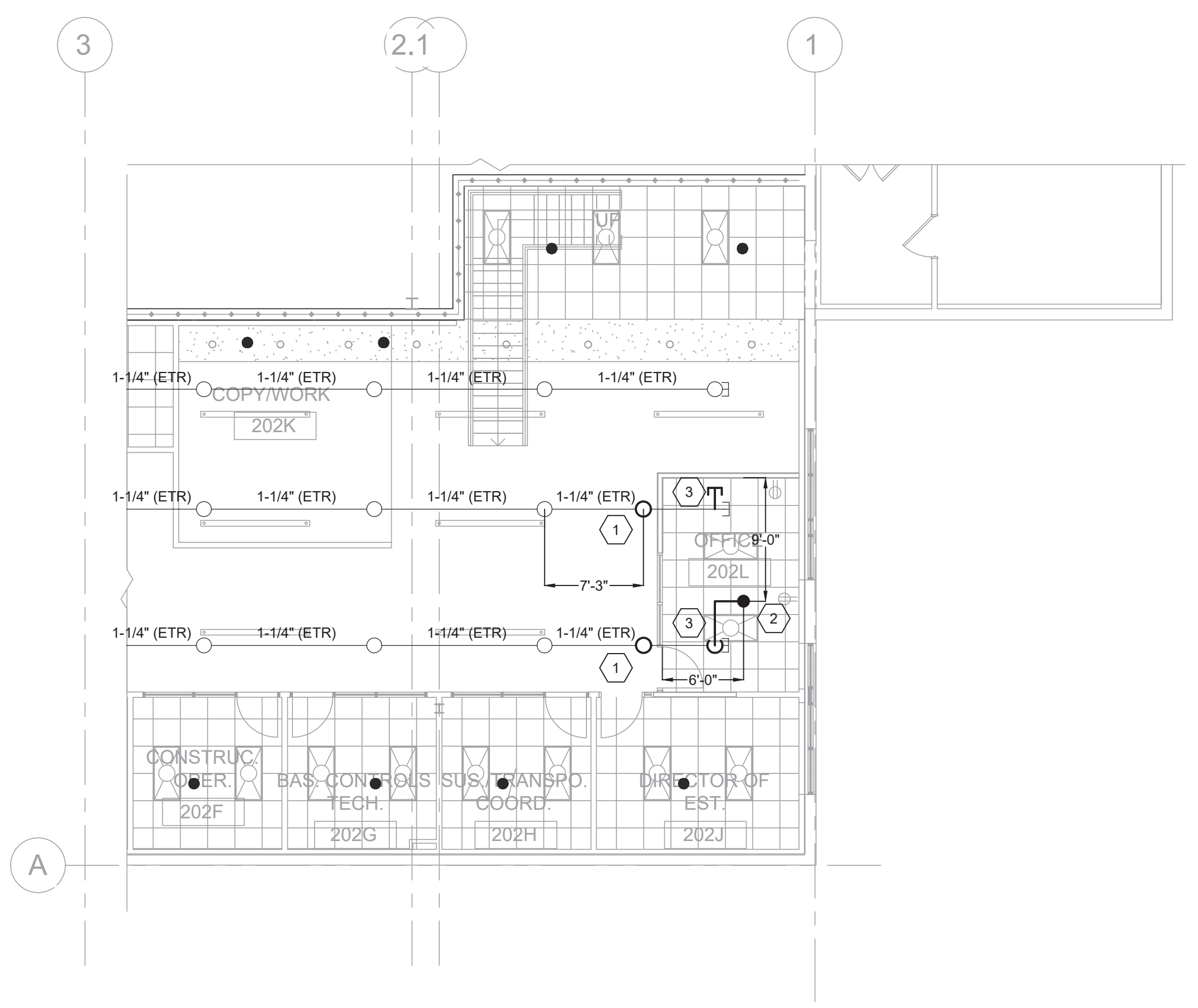
1. THE SPRINKLER CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION (LIGHTS, DUCT, PIPING).
2. THE SPRINKLER CONTRACTOR SHALL COORDINATE SHUT-OFF TIMES WITH OWNER.
3. THE SPRINKLER CONTRACTOR SHALL BE A LICENSED SPRINKLER CONTRACTOR.
4. ALL HEADS ARE TO BE CENTERED IN TILES.

**KEYED NOTES:**

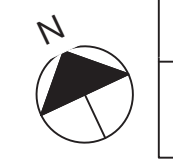
- 1 NEW WET UPRIGHT SPRINKLER HEAD. CONNECT TO EXISTING PIPE.
- 2 NEW WET CONCEALED SPRINKLER HEAD. CONNECT TO EXISTING PIPE.
- 3 PLUG EXISTING SPRINKLER LOCATION TO BE REMOVED.
- 4 EXISTING UPRIGHT SPRINKLER HEAD TO BE REMOVED, PROVIDE PLUG AT TAKE-OFF, AND TURN HEAD OVER TO OWNER.



**1 PARTIAL FIRE PROTECTION FLOOR PLAN - EXISTING**  
 SCALE: 1/8" = 1'-0"



**2 PARTIAL FIRE PROTECTION FLOOR PLAN - NEW**  
 SCALE: 1/8" = 1'-0"



ARCH D (36.00 x 24.00 Inches), 1:1

A B C D E F G

1 2 3 4 5 6 7 8 9 10

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ARCH D (36.00 x 24.00 inches), 1:1

G  
L  
E  
D  
C  
B  
A

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Raleigh, NC 27601  
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5909 Falls of Neuse Rd Ste 101  
Raleigh, NC 27609  
License #: C-2490

PROJECT No.: 2413

WTCC FACILITIES OPERATIONS &  
WAREHOUSE COMPLEX OFFICE  
RALEIGH, NC  
WTCC  
RALEIGH, NC

SEALS:

Elton L. Smith  
Digital signed  
by Elton L. Smith  
Date: 2024.08.29  
10:48:14 -0400'  
Professional Engineer  
ELTON L. SMITH

ISSUE: CONSTRUCTION  
DATE: 8/29/2024  
DRAWN BY: ELS  
REVISIONS:


# M001

### MECHANICAL SYSTEMS ENERGY CODE COMPLIANCE

PRESCRIPTIVE:  ENERGY COST BUDGET:

THERMAL ZONE: 4A

EXTERIOR DESIGN CONDITIONS:  
WINTER DRY BULB: 14°F  
SUMMER DRY BULB: 94°F  
SUMMER WET BULB: 76°F

INTERIOR DESIGN CONDITIONS:  
WINTER DRY BULB: 70°F  
SUMMER DRY BULB: 75°F

AREA HEAT LOAD: EXISTING

AREA COOLING LOAD: EXISTING

MECHANICAL CONDITIONING SYSTEM:  
DESCRIPTION OF UNIT: AIR COOLED CHILLER & HOT WATER  
HOT WATER BOILER  
TERMINAL UNITS WITH  
HOT WATER REHEAT

HEATING OUTPUT: EXISTING  
COOLING OUTPUT: EXISTING

BOILER OUTPUT: 2 AT 960 MBH EACH EXITING  
CHILLER TOTAL CAPACITY: 115 TONS EXISTING

DESIGNER STATEMENT:  
TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT REQUIREMENTS OF THE NORTH CAROLINA STATE BUILDING CODE, 2018 ENERGY CONSERVATION CODE.

SIGNED: \_\_\_\_\_  
NAME: ELTON L. SMITH, PE  
TITLE: MECHANICAL ENGINEER

### MECHANICAL LEGEND

#### DUCTWORK SYMBOLS

NOTES:  
ALL DUCT DIMENSIONS SHOWN ARE IN INCHES  
AND ARE SHEET METAL SIZES UNLESS OTHERWISE SHOWN.

21X12 RECTANGULAR DUCT  
12"Ø ROUND DUCT

— SIDEWALL DIFFUSER, GRILLE OR REGISTER

☒ EXHAUST GRILLE OR REGISTER

☒ SUPPLY GRILLE OR DIFFUSER

☒ RETURN GRILLE OR REGISTER

☒ DIFFUSER TYPE

☒ GRILLE, REGISTER OR DIFFUSER DESIGNATION

→ AIRFLOW DIRECTION

#### MISCELLANEOUS SYMBOLS AND ABBREVIATIONS

Ⓢ THERMOSTAT OR TEMPERATURE INDICATOR

DEVICES WITH OPERABLE CONTROLS SUCH AS THERMOSTATS SHALL BE MOUNTED BETWEEN 44" AND 48" A.F.F. COMPLIANT WITH ADA HEIGHTS COORDINATE WITH OTHER DEVICES.

Ⓡ REVISION NOTES

Ⓢ SPECIFIC OR NEW WORK NOTES

● CONNECT TO EXISTING

● POINT OF DEMOLITION

□ SUBJECT OF DEMOLITION

### MECHANICAL ABBREVIATIONS

AC	Air Conditioning	LAT	Leaving Air Temperature
ACH	Air Changes per Hour	LL	Low Limit
AEE	Association of Energy Engineers	LON	Local Operating Network
AFD	Adjustable Frequency Drive	LP	Low Pressure
AFUE	Annual Fuel Efficiency Ratio	LRA	Locked Rotor Amps
AHU	Air Handling Unit	LWBT	Leaving Wet Bulb Temperature
BI	Backward Incline	LWT	Leaving Water Temperature
BTU	British Thermal Unit	M&V	Measurement and Verification
BTUH	British Thermal Units / Hour	MA	Mixed Air
CAV	Constant Air Volume	MAT	Mixed Air Temperature
CFC	ChloroFluoroCarbon	MC	Mechanical Contrator (Div 23)
CC	Cooling Coil	MCC	Motor Control Center
CFM	Cubic Feet per Minute	MUA	Make-up Air Unit
COP	Coefficient Of Performance	MVD	Manual Volume Damper
CRAC	Computer Room Air Conditioner	MZ	Multi-Zone
CV	Constant Volume	N/A	Not Applicable
DA	Discharge Air	NEMA	National Electrical Manufacturers Association
DB	Dry Bulb	OA	Outside Air
DH	Duct Heater	OAT	Outside Air Temperature
DN	Down	OC	On Center
DP	Dew Point	ODP	Open Drip Proof
DX	Direct Expansion	PC	Plumbing Contrator (Div 22)
EAT	Entering Air Temperature	PH	Pre-Heat
EC	Electrical Contrator (Div 26, 27 or 28)	PHC	Pre-heat Coil
ECM	Electronically Commutated Motor	PTAC	Packaged Terminal Air Conditioner
EDH	Electric Duct Heater	QTY	Quantity
EER	Energy Efficiency Ratio	RA	Return Air
EF	Exhaust Fan	REF	Refrigerant
EH	Electric Heater	RF	Return Fan
EHC	Electric Heating Coil	RH	Reheat
ESP	External Static Pressure	RH	Relative Humidity
ETR	Existing to Remain	RHC	Re-heat Coil
EUH	Electric Unit Heater	RPM	Revolutions Per Minute
EX	Existing	RTD	Resistance Temperature Detector
FC	Forward Curve	RTU	Roof Top Unit
FCU	Fan Coil Unit	SA	Supply Air
FLA	Full Load Amps	SAT	Supply Air Temperature
FPM	Feet Per Minute	SC	Shading Coefficient
FW	Feed Water	SEER	Seasonal Energy Efficiency Ratio
GC	General Contractor	SF	Supply Fan
GPM	Gallons Per Minute	SHFG	Solar Heat Gain Factor
GUI	Graphical User Interface	TEV	Thermostatic Expansion Valve
HCFC	Hydrochlorofluorocarbon	TSP	Total Static Pressure
HEPA	High Efficiency Particulate Arresting	TXV	Thermostatic Expansion Valve
HFC	HydroFluoroCarbon	UC	Undercut
HL	High Limit	UH	Unit Heater
HP	Horsepower	UV	UltraViolet
HR	Heat Recovery	UV	Unit Ventilator
HRU	Heat Recovery Unit	VAV	Variable Air Volume
HRV	Heat Recovery Ventilator	VFD	Variable Frequency Drive
HSPF	Heating Seasonal Performance Factor	VSD	Variable Speed Drive
HVAC	Heating Ventilation and Air Conditioning	WB	Wet Bulb
HX	Heat Exchanger	WC	Water Column
I/O	Input Output	XFER	Transfer
IAQ	Indoor Air Quality		
IR	Infra-Red		

#### GENERAL NOTES:

- THE DRAWINGS SHOW THE GENERAL ARRANGEMENT AND LOCATION OF EQUIPMENT, DUCTWORK, PIPING, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE MECHANICAL INSTALLATION WITH THE STRUCTURE AND OTHER TRADES AND SHALL PROVIDE ADDITIONAL OFFSETS AND FITTINGS AS NECESSARY.
- PRIOR TO BIDDING, THE CONTRACTOR AND HIS SUBCONTRACTORS SHALL VISIT THE JOB SITE AND SHALL FAMILIARIZE THEMSELVES WITH ALL CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED AND SHALL INCLUDE IN THE BID ALL WORK REQUIRED FOR A COMPLETE JOB. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND EXISTING FIELD CONDITIONS A MINIMUM OF FIVE DAYS PRIOR TO BID.
- THE HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS SHALL COMPLY WITH THE 2018 NORTH CAROLINA MECHANICAL CODE AND NFPA 90A.
- DUCT DIMENSIONS ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS.
- THE CONTRACTOR SHALL CHECK AND VERIFY ALL CLEARANCES PRIOR TO FABRICATION OR INSTALLATION OF EQUIPMENT, DUCTWORK, AND PIPING SYSTEMS. WHERE CONDITIONS REQUIRE A CHANGE IN DUCT OR PIPE ROUTING, NOTIFY THE ENGINEER FOR AN ACCEPTABLE ALTERNATIVE METHOD. AVOID ROUTING DUCTWORK DIRECTLY OVER LIGHT FIXTURES, DIFFUSERS, AND OTHER CEILING MTD. DEVICES. LOCATE ALL MECHANICAL EQUIPMENT SO THAT FILTERS AND COMPONENTS REQUIRING ACCESS (SERVICE AND MAINTENANCE) ARE FULLY ACCESSIBLE.
- PROVIDE CURVED RADIUS ELBOW AT FIRST SUPPLY & RETURN FITTING FOR ALL HVAC UNITS. PROVIDE TURNING VANES IN ALL 90 DEGREE ELBOWS IN ALL RECTANGULAR SUPPLY/RETURN/EXHAUST DUCT SYSTEMS. ANY OFFSETS REQUIRED IN DUCT SYSTEMS SHALL BE INSTALLED PER SMACNA STANDARDS. SHARP ANGLED TRANSITIONS OR OFFSETS WILL NOT BE ALLOWED. PROVIDE DUCT ACCESS DOORS AT LOCATIONS SPECIFIED.
- INSTALL ALL DUCT MOUNTED DEVICES (DAMPERS, ACCESS DOORS, ETC.) AND PIPING SPECIALTIES IN EASILY ACCESSIBLE LOCATIONS. ADVISE THE ENGINEER IN ADVANCE OF INSTALLATION IF ACCESS WILL BE HINDERED SO AN ALTERNATE LOCATION CAN BE SELECTED.
- ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS WITH PRESCRIBED CLEARANCES FOR SERVICE AND MAINTENANCE. THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER IF RECOMMENDED CLEARANCES ARE NOT POSSIBLE BEFORE INSTALLING EQUIPMENT.
- ALL ROTATING MECHANICAL EQUIPMENT SHALL BE PROVIDED WITH VIBRATION ISOLATION. PROVIDE FLEXIBLE NEOPRENE DUCT CONNECTORS BETWEEN DUCTWORK AND ISOLATED MECHANICAL EQUIPMENT.
- THE CONTRACTOR SHALL FIRESTOP ALL PENETRATIONS OF FIRE RATED WALLS/FLOORS/CEILINGS BY DUCTWORK PIPING, ETC., WITH U.L. LISTED FIRE STOPPING MATERIAL TO MAINTAIN FIRE RATING OF THE BARRIER.
- BALANCE ALL AIR DISTRIBUTION DEVICES, EXHAUST FANS, AND OUTSIDE AIR QUANTITIES AS SCHEDULED OR SHOWN ON THE DRAWINGS. PROVIDE MARKERS AT ALL DAMPER LOCATIONS SHOWING FULL OPEN/CLOSED POSITIONS AND DAMPER SETTING FOR REQUIRED AIRFLOW. PROVIDE FINAL TEST AND BALANCE REPORT ALONG W/ SCHEMATIC DRAWINGS SHOWING DIFFUSER LOCATION W/ DESIGN AND ACTUAL CFM. THE DIFFUSER TAGS ON THE DRAWINGS SHALL CORRESPOND TO THE DIFFUSER TAGS ON THE REPORT. THIS REPORT SHALL BE SUBMITTED BEFORE THE FINAL INSPECTION IS PERFORMED. SEE SPECIFICATION SECTIONS FOR FURTHER INFORMATION. DO NOT BALANCE FOR DIVERSITY.
- WHERE PIPING CONTAINING FLAMMABLE AND COMBUSTIBLE GAS IS TO BE REMOVED, PROCEDURE OF NCGC 406.7.1.1 ALONG WITH NFPA 54 7.2.7 AND 8.3.1 SHALL BE OBSERVED. THE LINE SHALL BE FIRST DISCONNECTED FROM ALL SOURCES OF GAS PRESSURE, VENTED TO THE OUTDOORS, AND THEN THOROUGHLY PURGED WITH AIR, WATER, OR INERT GAS BEFORE ANY CUTTING OR WELDING IS DONE.
- THERMOSTATS AND SENSORS CONTAINING MERCURY SHALL BE DISPOSED IN ACCORDANCE WITH EPA RESOURCE CONSERVATION AND RECOVERY ACT (RCRA). CONTRACTOR SHALL REFER TO EPA WEBSITE FOR HANDLING PROCEDURES FOR DISPOSAL AND SPILL MANAGEMENT OF PRODUCTS CONTAINING MERCURY.
- IN THE AREA OF WORK, ANY 'OPEN' DUCTWORK INCLUDING INLET AND OUTLET REGISTERS AND DIFFUSERS SHALL BE COVERED WITH FILTRATING MATERIAL OR VISQUINE TO PROTECT INSIDE OF THE SYSTEM AGAINST DUST AND DEBRIS.
- ANY DAMAGE OF EXTERIOR PIPE AND DUCT INSULATION CAUSED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED AND RESTORED AT NO EXTRA COST TO THE OWNER.

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ARCH D (36.00 x 24.00 Inches), 1:1

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F  
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**MECHANICAL SPECIFICATIONS**

**A. GENERAL REQUIREMENTS:**

1. ALL WORK PERFORMED UNDER THIS DIVISION CONSISTS OF FURNISHING AND INSTALLING ALL MECHANICAL WORK INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREINAFTER. THE WORK PERFORMED UNDER THIS DIVISION INCLUDES THE SATISFACTORY COMPLETION OF HEATING, VENTILATING, AND AIR CONDITIONING WORK AS INDICATED IN THE CONTRACT DOCUMENTS.
2. ALL WORK TO BE PERFORMED UNDER THIS DIVISION SHALL BE IN COMPLIANCE WITH ALL APPLICABLE STATE AND LOCAL LAWS AND REGULATIONS GOVERNING STANDARDS OF DESIGN, CONSTRUCTION, WORKMANSHIP AND MATERIAL, INCLUDING BUT NOT LIMITED TO THE 2018 NORTH CAROLINA STATE BUILDING CODE AND 2018 NORTH CAROLINA STATE MECHANICAL CODE.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND FEES REQUIRED FOR THE INSTALLATION OF HIS WORK.

**B. BASIC MATERIALS AND METHODS:**

1. CUTTING AND PATCHING: ALL CUTTING AND PATCHING INCIDENTAL TO AND REQUIRED FOR THE PROPER INSTALLATION OF THE WORK OF THIS DIVISION SHALL BE PERFORMED BY THE GENERAL CONTRACTOR AND SHALL NOT BE INCLUDED IN THE WORK OF THIS DIVISION.

**C. SHOP FABRICATED DUCTWORK:**

1. ALL DUCTWORK SHALL BE FABRICATED WITHIN THE GUIDELINES ESTABLISHED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC. (SMACNA) "HVAC DUCT CONSTRUCTION STANDARDS," 1995 EDITION. STANDARDS NOT CERTIFIED BY SMACNA ARE NOT ACCEPTABLE. ALL DUCT WORK SHALL BE FABRICATED TO WITHSTAND THE PRESSURE AND VELOCITY REQUIRED ON THIS PROJECT. ALL COMPONENTS, FASTENERS, SEALANTS, ADHESIVES, ETC. IN THE CONDITIONED AIR STREAM OR EXPOSED IN ACTIVE OR NON-ACTIVE PLENUMS SHALL CONFORM TO THE ASTM E84 STANDARD FOR FLAME/SMOKE/FIRE CONTRIBUTION OF 25/50/0. ALL DUCTWORK SHALL CONFORM TO UL STANDARD UL 181 FACTORY MADE AIR DUCT MATERIALS AND DUCT CONNECTORS, LATEST EDITION. SHOP FABRICATED DUCTWORK SHALL COMPLY WITH APPLICABLE SECTIONS. ALL SEALED DUCTWORK SHALL BE DONE IN ACCORDANCE WITH CLASS B AS A MINIMUM STANDARD.

**D. CONCEALED DUCT INSULATION:**

1. 2" MINERAL FIBER DUCT BLANKET SHALL HAVE A FLAME-SPREAD INDEX OF 25, AND SMOKE DEVELOPED INDEX OF 50 ACCORDING TO ASTM E84.
2. 2" MINERAL FIBER DUCT BLANKET SHALL BE SUITABLE FOR INDOORS WITH VAPOR BARRIER. ALL SEAMS SHALL BE STAPLED, TAPED, AND SEALED AIR TIGHT.

**E. FLEXIBLE DUCTWORK:**

1. INSULATED, FLEXIBLE DUCT, UL 181, CLASS 1, MULTIPLE LAYER OF ALUMINUM LAMINATE SUPPORTED BY HELICALLY WOUND, SPRING-STEEL WIRE; FIBROUS-GLASS INSULATION (R-8 MINIMUM); ALUMINIZED VAPOR-BARRIER FILM. PRESSURE RATING 10"-WG POSITIVE AND 1"-WG NEGATIVE. MAXIMUM VELOCITY 4000 FPM. TEMPERATURE RATING: -20 TO PLUS 210 DEG. F. DUCT CONNECTORS TO BE NYLON STRAP IN SIZES TO SUIT DUCT SIZE.

**F. SHEET METAL ACCESSORIES:**

1. BALANCING DAMPERS: FABRICATE OF GALVANIZED STEEL, MINIMUM 16 GAUGE AND PROVIDE WITH QUADRANTS OR ADJUSTMENT ROD AND LOCK SCREW. FABRICATE SPLITTER DAMPERS OF DOUBLE THICKNESS SHEET METAL TO STREAMLINE SHAPE, PROPERLY STIFFENED TO AVOID VIBRATION.

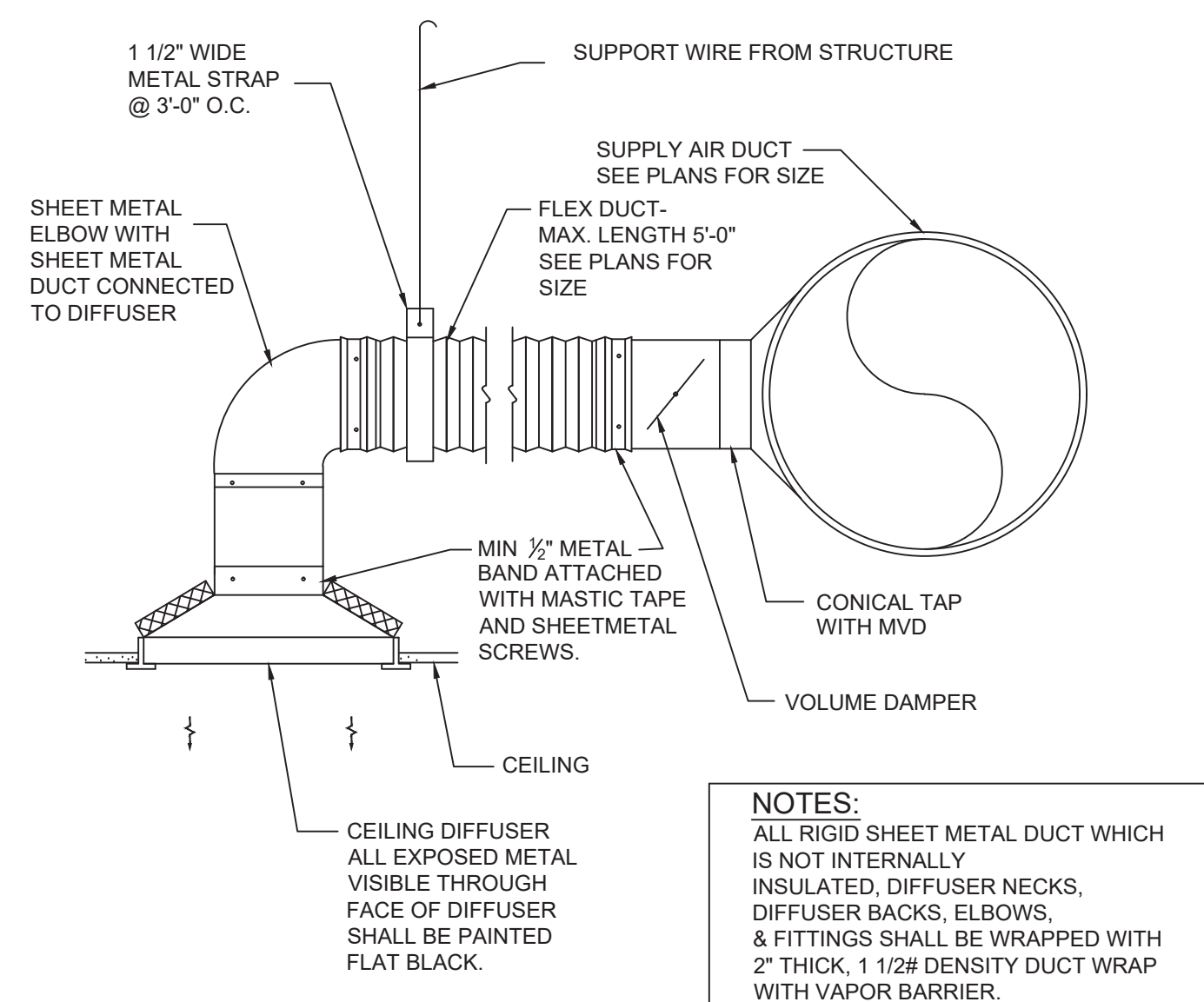
**G. TEST AND BALANCE:**

1. IT IS THE INTENT OF THE CONTRACT FOR THE MECHANICAL CONTRACTOR TO BALANCE THE AIR DISTRIBUTION TO THE INDICATED FLOW RATES ON THE DRAWINGS.
2. THIS WORK SHALL BE PERFORMED BY A QUALIFIED TEST AND BALANCE TECHNICIAN, AND REPORTED TO THE ENGINEER.
3. CONTRACTOR SHALL SUBMIT A CERTIFIED TEST AND BALANCE REPORT TO THE ARCHITECT.

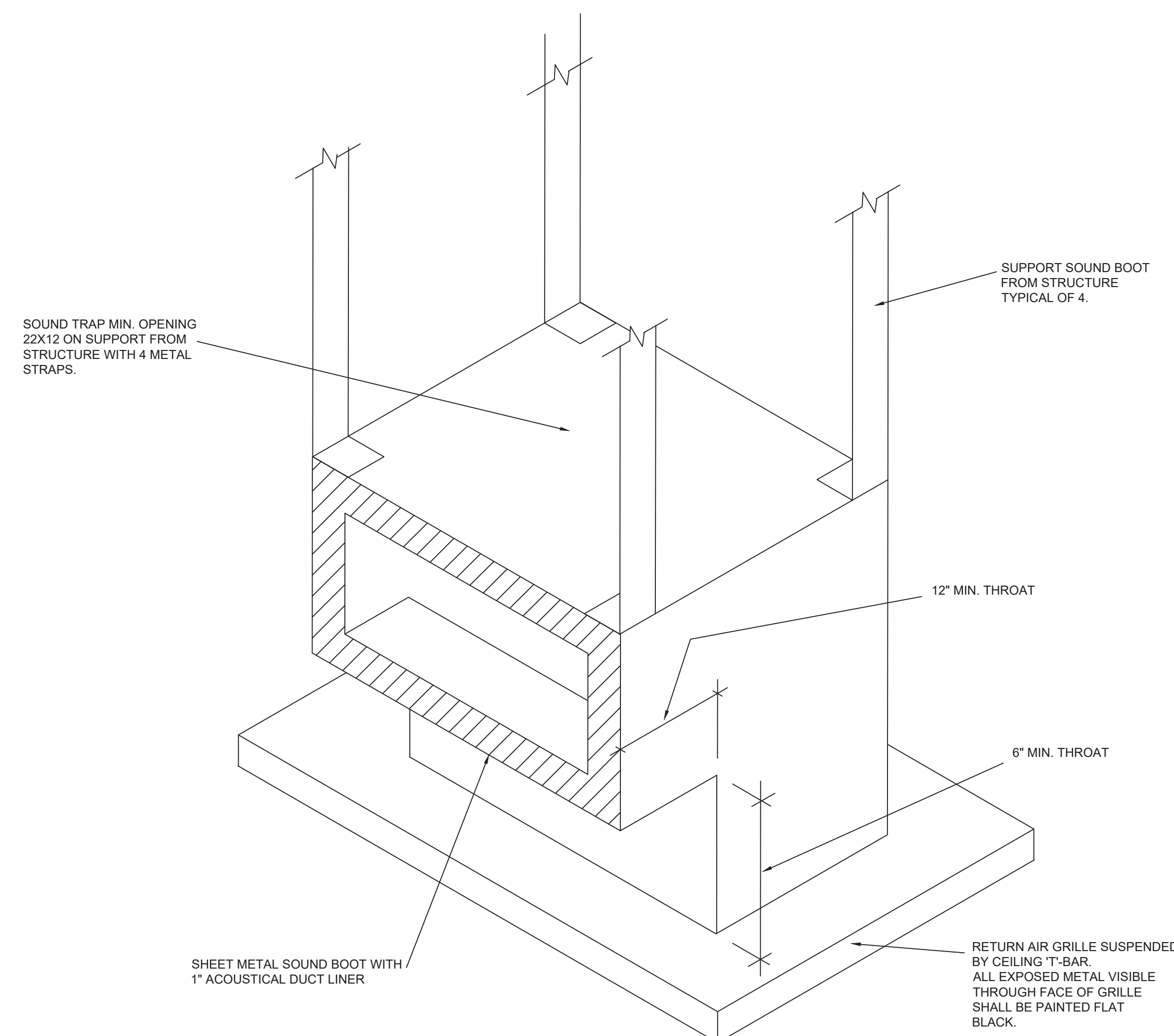
**AIR DISTRIBUTION SCHEDULE**

TAG	*MANUFACTURER/MODEL	FACE SIZE	MOUNT	MATERIAL	FINISH	DAMPER	TYPE	NC	NOTES
S1	KRUEGER 1400	24X24	ACT	STEEL	WHITE	NONE	LOUVERED	< 20	1, 2
R1	KRUEGER S80	24X24	ACT	STEEL	WHITE	NONE	LOUVERED	< 20	1, 2
T1	KRUEGER S80	18X8	SURFACE	STEEL	WHITE	NONE	LOUVERED	< 20	1, 2, 3

1. SEE PLANS FOR NECK SIZE
2. BALANCE DAMPER TO BE INSTALLED IN THE BRANCH TAKE-OFF.
3. COORDINATE MOUNTING HEIGHT WITH EXISTING SIDEWALL TRANSFER GRILLES.
4. ALL AIR DISTRIBUTION TO MATCH EXISTING MANUFACTURER MODEL AND COLOR.



**1 SUPPLY DIFFUSER RUNOUT DETAIL**  
Scale: NONE



**2 RETURN AIR GRILLE W/ SOUND BOOT**  
Scale: NONE

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RALEIGH, NC

SEALS:

Elton L. Smith  
Digital signed  
by Elton L. Smith  
Date: 2024.08.29  
42709:48:45 -04'00'

ISSUE: CONSTRUCTION  
DATE: 8/29/2024  
DRAWN BY: ELS  
REVISIONS:


**M002**

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SEALS:

Elton L. Smith  
 Digitally signed  
 By Elton L. Smith  
 Date: 2024.08.29  
 13:42:09 -0400  
 ENGINEER  
 ELTON L. SMITH

ISSUE: CONSTRUCTION  
 DATE: 8/29/2024  
 DRAWN BY: ELS  
 REVISIONS:

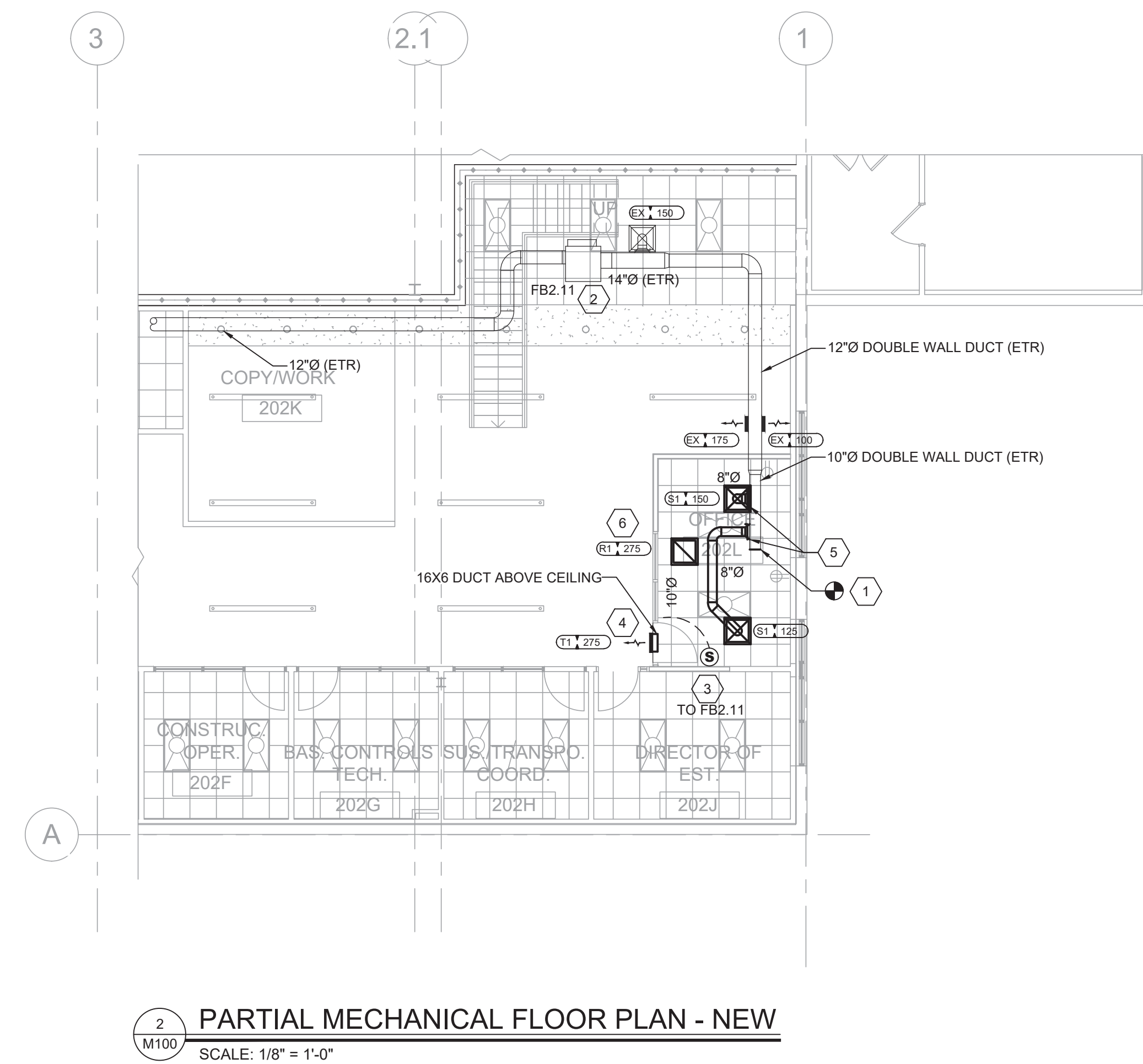
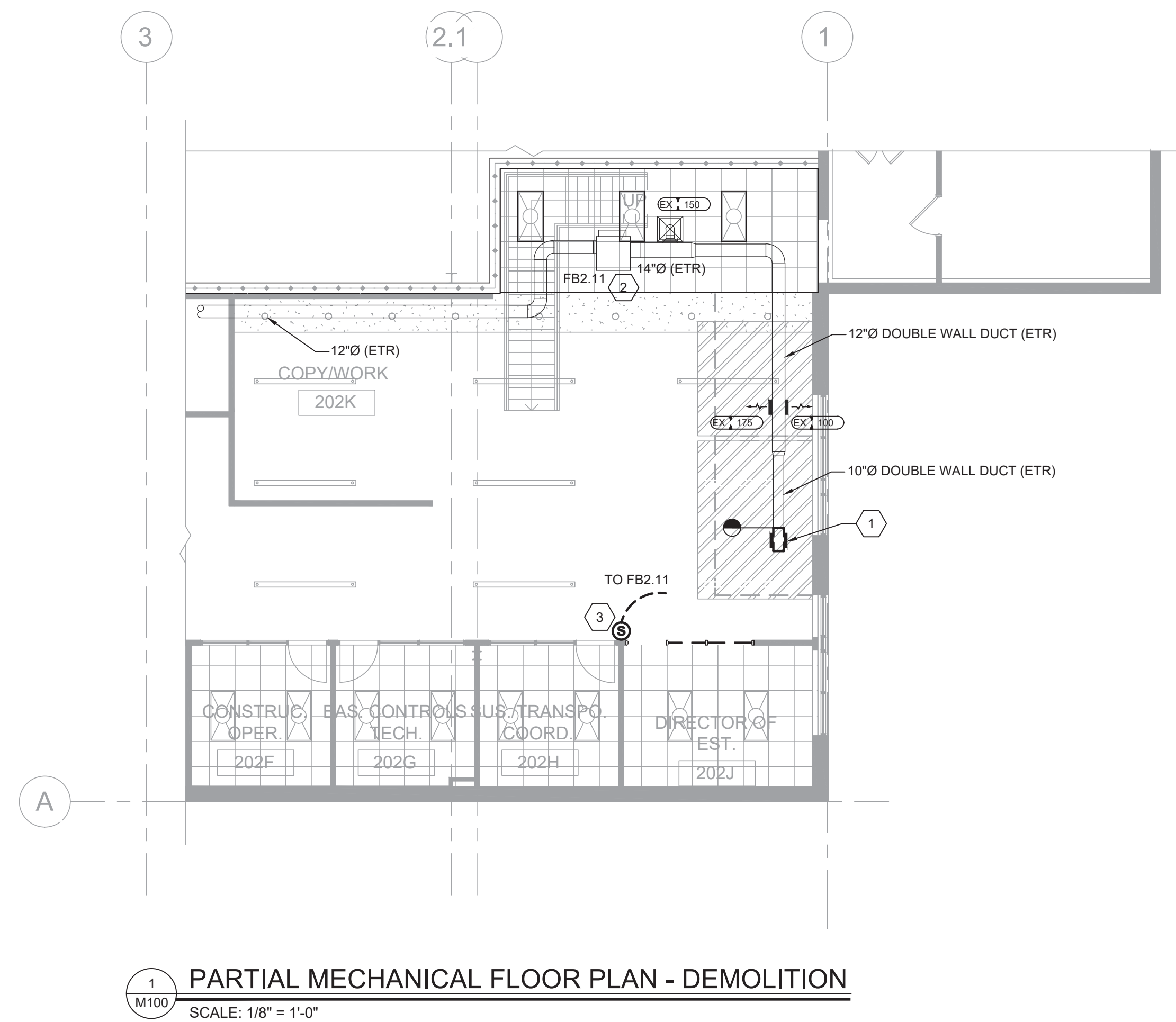

**M100**

**GENERAL NOTES:**

- DRAWINGS ARE DIAGRAMMATIC IN NATURE ONLY. CONTRACTOR SHALL FIELD VERIFY THE SIZE AND LOCATION OF DUCTS, DIFFUSERS, AND PIPES BEFORE THE START OF DEMOLITION.
- PRIOR TO BIDDING, THE CONTRACTOR AND HIS SUBCONTRACTORS SHALL VISIT THE JOB SITE AND SHALL FAMILIARIZE THEMSELVES WITH ALL CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED AND SHALL INCLUDE IN THE BID ALL WORK REQUIRED FOR A COMPLETE JOB. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND EXISTING FIELD CONDITIONS A MINIMUM OF SEVEN DAYS PRIOR TO BID.
- PROTECT FLOOR, WALL, AND CEILING FINISHES DURING ALL PHASES OF CONSTRUCTION.
- ALL DUCTWORK AND SHEET METAL VISIBLE THROUGH AIR DISTRIBUTION DEVICE SHALL BE PAINTED FLAT BLACK.

**KEYED NOTES:**

- EXISTING SUPPLY DUCT WITH SUPPLY GRILLES TO BE REMOVED. CUT AND CAP DUCT AT POINT OF DISCONNECT. PROVIDE 10" Ø DOUBLE WALL CAP AND SEAL AIR TIGHT WITH WATER SOLUBLE DUCT SEALANT.
- EXISTING FAN POWERED TERMINAL UNIT FB2.11 WITH HOT WATER REHEAT TO REMAIN.
- EXISTING TEMPERATURE SENSOR TO FB2.11 TO BE RELOCATED TO OFFICE 202L. RECONNECT ALL WIRING AND CONFIRM OPERATION. RELOCATE MOUNTING BOX, AND ALL CONDUIT. PAINT ALL EXPOSED CONDUIT TO MATCH EXISTING. PATCH WALL TO MATCH EXISTING FINISHES. MOUNTING HEIGHT TO MATCH EXISTING SENSORS.
- NEW 18X8 TRANSFER GRILLE WITH 16X6 NECK. ELEVATION TO MATCH EXISTING TRANSFER GRILLES. ALL METAL VISIBLE THROUGH FACE OF GRILLE SHALL BE PAINTED FLAT BLACK.
- PROVIDE NEW 8" CONICAL TAP WITH MANUAL VOLUME DAMPER. BALANCE SUPPLY DIFFUSERS AS NOTED. TYPICAL OF 2.
- REFER TO RETURN GRILLE WITH SOUND BOOT DETAIL SHEET M002.



**FIRE RESISTANCE RATINGS**

1-HR FIRE BARRIER



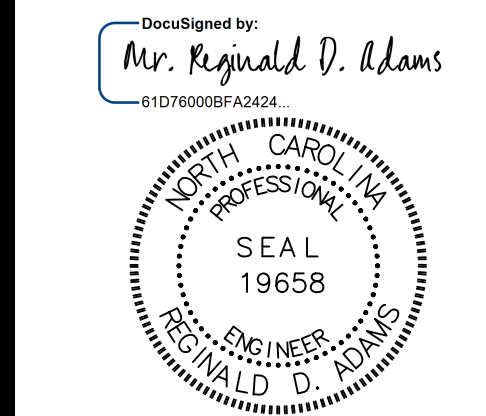
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**WTCC**  
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SEALS:



8/29/2024

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DRAWN BY: SDR  
REVISIONS:


ELECTRICAL LEGEND,  
SYMBOLS, NOTES

## E001

### ELECTRICAL SPECIFICATIONS

- 1.0 GENERAL
  - 1.01 THE CONTRACT DOCUMENTS APPLY TO THIS SECTION.
  - 1.02 IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL NECESSARY ITEMS FOR THE COMPLETE INSTALLATION OF A PROPERLY OPERATING ELECTRICAL SYSTEM AS SPECIFIED HEREIN, BASED ON THESE DRAWINGS, ALL APPLICABLE CODES AND THE INTENDED PURPOSE OF THE OWNER, INCLUDING BUT NOT NECESSARILY LIMITED TO:
    - A. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ALL REQUIREMENTS OF THE 2020 NATIONAL ELECTRICAL CODE.
    - B. ALL WORK SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THEIR TRADE.
    - C. ELECTRICAL WORK SHALL INCLUDE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES REQUIRED TO COMPLETE AND LEAVE READY FOR OPERATION ALL ELECTRICAL SYSTEMS AS SHOWN ON THESE DRAWINGS AND AS REQUIRED.
    - D. ALL MATERIALS AND EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE NEW AND ALL ELECTRICAL EQUIPMENT SHALL BE UL LISTED.
    - E. PROVIDE TESTING TO CONFIRM PROPER OPERATION OF ALL ELECTRICAL SYSTEMS.
    - F. MANUFACTURER'S REFERENCED TRADE NAMES ON THE DRAWINGS ARE SO STATED TO SET THE QUALITY OF THE EQUIPMENT. EQUIPMENT MANUFACTURED BY OTHERS MAY BE SUBSTITUTED IF IT IS APPROVED AS AN EQUAL.
    - G. CONTRACTOR SHALL INSTRUCT THE OWNER'S REPRESENTATIVES IN THE PROPER OPERATION AND CONTROL OF ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT.
    - H. CONTRACTOR SHALL GUARANTEE ANY AND ALL MATERIAL AND WORKMANSHIP ASSOCIATED WITH THIS CONTRACT AGAINST DEFECTS. CONTRACTOR SHALL REPLACE AT HIS OWN EXPENSE ANY WORK OR MATERIAL THAT IS SHOWN TO BE DEFECTIVE WITHIN A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF HIS WORK.
    - I. CONTRACTOR SHOULD VISIT THE SITE BEFORE BID DATE AND SHALL BE RESPONSIBLE FOR HAVING ASCERTAINED PERTINENT LOCAL CONDITIONS SUCH AS LOCATIONS, ACCESSIBILITY AND GENERAL CHARACTER OF THE SITE OR BUILDING, AND THE CHARACTER AND EXTENT OF EXISTING WORK WITHIN OR ADJACENT TO THE SITE. CLAIMS, AS A RESULT OF FAILURE TO DO SO, WILL NOT BE CONSIDERED BY THE OWNER.
  - 2.0 PRODUCTS
  - 2.01 THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ELECTRICAL MATERIAL INCLUDING BUT NOT NECESSARILY LIMITED TO:
    - A. FURNISH AND INSTALL UPDATED TYPED DIRECTORIES FOR ALL PANELS TO MATCH RECORD DRAWINGS.
    - B. ALL CONDUIT INSTALLED INDOORS ABOVE 4" AFF SHALL BE EMT WITH COMPRESSION FITTINGS.
    - C. ALL FITTINGS SHALL BE THOMAS & BETTS, OZ/GEDNEY OR APPROVED EQUAL DESIGNED FOR THE PURPOSE. EMT FITTINGS SHALL BE STEEL, COMPRESSION TYPE.
    - D. FLEXIBLE CONDUIT SHALL BE USED FOR ALL FINAL CONNECTIONS TO MOTORS.
    - E. ALL WIRING SIZED #8 AND SMALLER SHALL BE TYPE "THHN/THWN". ALL WIRING SIZES LARGER THAN #8 SHALL BE TYPE "THW", "XHHW", "THHN" OR "THWN".
    - F. ALL WIRING SHALL BE INCLUDE, BUT NOT LIMITED TO THE FOLLOWING: AFC CABLE SYSTEMS, INC. HUBBELL POWER SYSTEMS, INC. O-Z/GEDNEY, 3M, TYCO ELECTRONICS CORP., AND SHALL BE INSULATED FOR 600 VOLTS OR BETTER. POWER CONDUCTORS SHALL BE NO. 12 MINIMUM. CONTROL CONDUCTORS SHALL BE NO. 14 MINIMUM.
    - G. FURNISH AND INSTALL MECHANICAL FIRE STOP OR UL CLASSIFIED FOAM SEALANT FOR ALL CONDUIT PENETRATIONS OF FIRE-RATED WALLS AND FLOORS.
    - H. ALL WIRING DEVICES SHALL BE SPECIFICATIONS GRADE BY COOPER, HUBBELL, LEVITON, PASS & SEYMOUR, OR APPROVED EQUAL. GENERAL USE SNAP SWITCHES SHALL BE 20 AMP, 120/277 VOLT, QUIET TYPE. DUPLEX CONVENIENCE RECEPTACLES SHALL BE 20 AMP, 125 VOLT, GROUNDING TYPE, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
    - I. ENCLOSURES SHALL BE NEMA 1 INDOORS AND NEMA 3R OUTDOORS UNLESS OTHERWISE INDICATE ON THE DRAWINGS.
    - J. FURNISH AND INSTALL LIGHTING FIXTURES PROVIDED BY OWNER AS NOTED ON DRAWINGS, INCLUDING ALL REQUIRED SUPPORTS, BACKING AND BLOCKING.
    - K. FURNISH AND INSTALL OCCUPANCY SENSORS, RELAYS, OVER-RIDE SWITCHES AND SIMILAR ITEMS REQUIRED FOR CONTROL OF LIGHTING.
      1. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
        - a. HUBBELL LIGHTING.
        - b. LEVITON MFG. COMPANY INC.
        - c. SENSOR SWITCH, INC.
        - d. WATT STOPPER (THE).
      2. OPERATION: UNLESS OTHERWISE INDICATED, TURN LIGHTS ON WHEN COVERED AREA IS OCCUPIED AND OFF WHEN UNOCCUPIED; WITH A TIME DELAY FOR TURNING LIGHTS OFF, ADJUSTABLE OVER A MINIMUM RANGE OF 1 TO 15 MINUTES.
      3. SENSOR OUTPUT: CONTACTS RATED TO OPERATE THE CONNECTED RELAY, COMPLYING WITH UL 773A. SENSOR SHALL BE POWERED FROM THE RELAY UNIT.
      4. RELAY UNIT: DRY CONTACTS RATED FOR 20-A BALLAST LOAD AT 120- AND 277-V AC, FOR 13-A TUNGSTEN AT 120-V AC, AND FOR 1 HP AT 120-V AC. POWER SUPPLY TO SENSOR SHALL BE 24-V DC, 150-MA, CLASS 2 POWER SOURCE AS DEFINED BY NFPA 70.
      5. MOUNTING:
        - a. SENSOR: SUITABLE FOR MOUNTING IN ANY POSITION ON A STANDARD OUTLET BOX.
        - b. RELAY: EXTERNALLY MOUNTED THROUGH A 1/2-INCH (13-MM) KNOCKOUT IN A STANDARD ELECTRICAL ENCLOSURE.
        - c. TIME-DELAY AND SENSITIVITY ADJUSTMENTS: RECESSED AND CONCEALED BEHIND HINGED DOOR.
      6. INDICATOR: LED, TO SHOW WHEN MOTION IS BEING DETECTED DURING TESTING AND NORMAL OPERATION OF THE SENSOR.
      7. BYPASS SWITCH: OVERRIDE THE ON FUNCTION IN CASE OF SENSOR FAILURE.
        - a. DETECTOR SENSITIVITY: DETECT OCCURRENCES OF 6-INCH- (150-MM-) MINIMUM MOVEMENT OF ANY PORTION OF A HUMAN BODY THAT PRESENTS A TARGET OF NOT LESS THAN 36 SQ. IN. (232 SQ. CM).
        - b. DETECTION COVERAGE (ROOM): DETECT OCCUPANCY ANYWHERE IN A CIRCULAR AREA OF 1000 SQ. FT. (93 SQ. M) WHEN MOUNTED ON A 96-INCH- (2440-MM-) HIGH CEILING.
        - c. DETECTION COVERAGE (CORRIDOR): DETECT OCCUPANCY WITHIN 90 FEET (27.4 M) WHEN MOUNTED ON A 10-FOOT- (3-M-) HIGH CEILING.
  - 3.0 EXECUTION
  - 3.01 IN ADDITION TO THE INSTALLATION OF THE ELECTRICAL MATERIAL, THE CONTRACTOR SHALL:
    - A. LABEL AND IDENTIFY ALL CIRCUITS, PANELBOARDS, PULLBOXES, FEEDERS AND SIMILAR ITEMS.
    - B. PROVIDE ALL CUTTING, DRILLING AND PATCHING OF THE BUILDING STRUCTURE AS REQUIRED FOR THE WORK OF THIS DIVISION. PATCHING SHALL MATCH EXISTING SURROUNDING AREA.
    - C. BE RESPONSIBLE FOR THE CONSTRUCTION RECORD DRAWINGS AND SHALL SEE TO IT THAT THEY REFLECT ALL ADJUSTMENTS MADE TO THESE DRAWINGS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH CLEAR, CLEAN MARK-UPS OF THE RECORD CONDITIONS SO THAT THE ORIGINAL DRAWINGS CAN BE UPDATED.
    - D. THE PURPOSE OF THESE BID DOCUMENTS IS TO PROVIDE FOR COMPETITIVE BIDDING ON THE SCOPE OF WORK DESCRIBED HEREIN.
- END OF SPECIFICATIONS.

### ABBREVIATIONS

A	AMPERE, AMMETER
AFF	ABOVE FINISHED FLOOR
AIC	AMPERES INTERRUPTING CAPACITY
AHU	AIR HANDLING UNIT
ATS	AUTOMATIC TRANSFER SWITCH
BFG	BELOW FINISHED GRADE
C	CONDUIT
CATV	CABLE (COMMUNITY) ANTENNA TELEVISION
CU	COPPER
DISC	DISCONNECT
EC	ELECTRICAL CONTRACTOR
EGC	EQUIPMENT GROUNDING CONDUCTOR
EWC	ELECTRIC WATER COOLER
ETR	EXISTING TO REMAIN
FA, F/A	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
GEC	GROUNDING ELECTRODE CONDUCTOR
GC	GENERAL CONTRACTOR
G.GND	GROUND
GF, GFI	GROUND FAULT INTERRUPTER
HH	HANDHOLE
HP	HORSEPOWER
IG, ISG	ISOLATED GROUND
JB	JUNCTION BOX
KVA	KILOVOLT-AMPERES
KW	KILOWATTS
LC	LIGHTING CONTACTOR
LTG	LIGHTING
LV	LOW VOLTAGE
MB	MAIN BREAKER
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MH	MANHOLE
MLO	MAIN LUGS ONLY
NF	NON FUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
P	POLE, PHASE
PB	PULL BOX
PC	PLUMBING CONTRACTOR
P/B, PNL	PANELBOARD
PR	PAIR
SN	SOLID NEUTRAL
SW	SWITCH
SWBD	SWITCHBOARD
TYP	TYPICAL
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
V	VOLT
WP	WEATHERPROOF
XFMR	TRANSFORMER

### ELECTRICAL SYMBOLS

	<b>S</b>	FLUSH MTD TOGGLE SWITCH, S.P.S.T., 20A, 120/277V
	<b>S<sub>3</sub></b>	FLUSH MTD 3-WAY TOGGLE SWITCH, 20A, 120/277V
	<b>S<sub>4</sub></b>	FLUSH MTD 4-WAY TOGGLE SWITCH, 20A, 120/277V
	<b>S<sub>D</sub></b>	FLUSH MTD DIMMER SWITCH, SIZE AS NOTED
	<b>S<sub>M</sub></b>	MANUAL MOTOR STARTER SWITCH WITHOUT OVERLOAD HEATERS
	<b>S<sub>OS</sub></b>	SWITCH TYPE OCCUPANCY SENSOR WITH BUILT-IN OVERRIDE SWITCH
	<b>S<sub>R</sub></b>	WALL MOUNTED OVER-RIDE SWITCH FOR MANUAL CONTROL OF CEILING OCCUPANCY SENSOR.
	<b>S<sub>DR</sub></b>	WALL MOUNTED OVER-RIDE SWITCH WITH BUILT-IN DIMMING FOR MANUAL CONTROL OF CEILING OCCUPANCY SENSOR.

### ELECTRICAL SYMBOL NOTES

1. SYMBOLS AND ABBREVIATIONS MAY NOT ALL BE UTILIZED FOR THIS PROJECT.
2. SYMBOLS NOT LISTED IN THIS ELECTRICAL SYMBOL LEGEND ARE IDENTIFIED ON THE DRAWINGS WHERE THEY OCCUR.
3. MOUNTING HEIGHT GIVEN IN THE ELECTRICAL SPECIFICATIONS IS TO THE CENTERLINE OF THE DEVICE AND SHALL BE FOLLOWED UNLESS OTHERWISE INDICATED AT THE SYMBOL, ON ARCHITECTURAL ELEVATIONS OR CASEWORK DRAWINGS.

### NOTE TO ALL RECEPTACLES:

1. SUBSCRIPT SP INDICATES SURGE SUPPRESSION PROTECTED DUPLEX RECEPTACLE.
2. SUBSCRIPT WP INDICATES GROUND FAULT TYPE RECEPTACLE WITH STAINLESS STEEL WEATHERPROOF COVER.
3. SUBSCRIPT ISG INDICATES ISOLATED GROUND TYPE RECEPTACLE.
4. SUBSCRIPT GF INDICATES GROUND FAULT TYPE RECEPTACLE.
5. SUBSCRIPT TV INDICATES RECEPTACLE FOR TV MOUNTED IN BRACKET.
6. SUBSCRIPT S INDICATES SURFACE MOUNTED DEVICE
7. SUBSCRIPT EM INDICATES EMERGENCY DEVICE

### 2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS ELECTRICAL DESIGN (PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)

#### ELECTRICAL SUMMARY

#### ELECTRICAL SYSTEM AND EQUIPMENT

METHOD OF COMPLIANCE: ENERGY CODE  PERFORMANCE  PRESCRIPTIVE  
ASHRAE 90.1  PERFORMANCE  PRESCRIPTIVE

#### LIGHTING SCHEDULE

LAMP TYPE REQUIRED IN FIXTURE	NOT APPLICABLE
NUMBER OF LAMPS IN FIXTURE	NOT APPLICABLE
BALLAST TYPE USED IN THE FIXTURE	NOT APPLICABLE
NUMBER OF BALLASTS IN FIXTURE	NOT APPLICABLE
TOTAL WATTAGE PER FIXTURE	NOT APPLICABLE
TOTAL INTERIOR WATTAGE SPECIFIED VS ALLOWED	70W VS 137W
TOTAL EXTERIOR WATTAGE SPECIFIED VS ALLOWED	NOT APPLICABLE

#### ADDITIONAL EFFICIENCY PACKAGE OPTIONS (WHEN USING THE 2018 NCECC; NOT REQUIRED FOR ASHRAE 90.1)

- C406.2 MORE EFFICIENT HVAC EQUIPMENT PERFORMANCE
- C406.3 REDUCED LIGHTING POWER DENSITY
- C406.4 ENHANCED DIGITAL LIGHTING CONTROLS
- C406.5 ON-SITE RENEWABLE ENERGY
- C406.6 DEDICATED OUTDOOR AIR SYSTEM
- C406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING

#### DESIGNER STATEMENT:

TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE ELECTRICAL SYSTEM AND EQUIPMENT REQUIREMENT OF THE NORTH CAROLINA STATE BUILDING CODE

SIGNED:   
NAME: REGINALD ADAMS P.E.  
TITLE: ELECTRICAL ENGINEER



**GENERAL NOTES:**

- REFER TO SHEET E001 FOR SYMBOLS, ABBREVIATIONS, AND OTHER NOTES PERTAINING TO CONSTRUCTION.
- LIGHT FIXTURES, SWITCHES, RECEPTACLES, AND DATA OUTLETS SHOWN ON PLANS ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

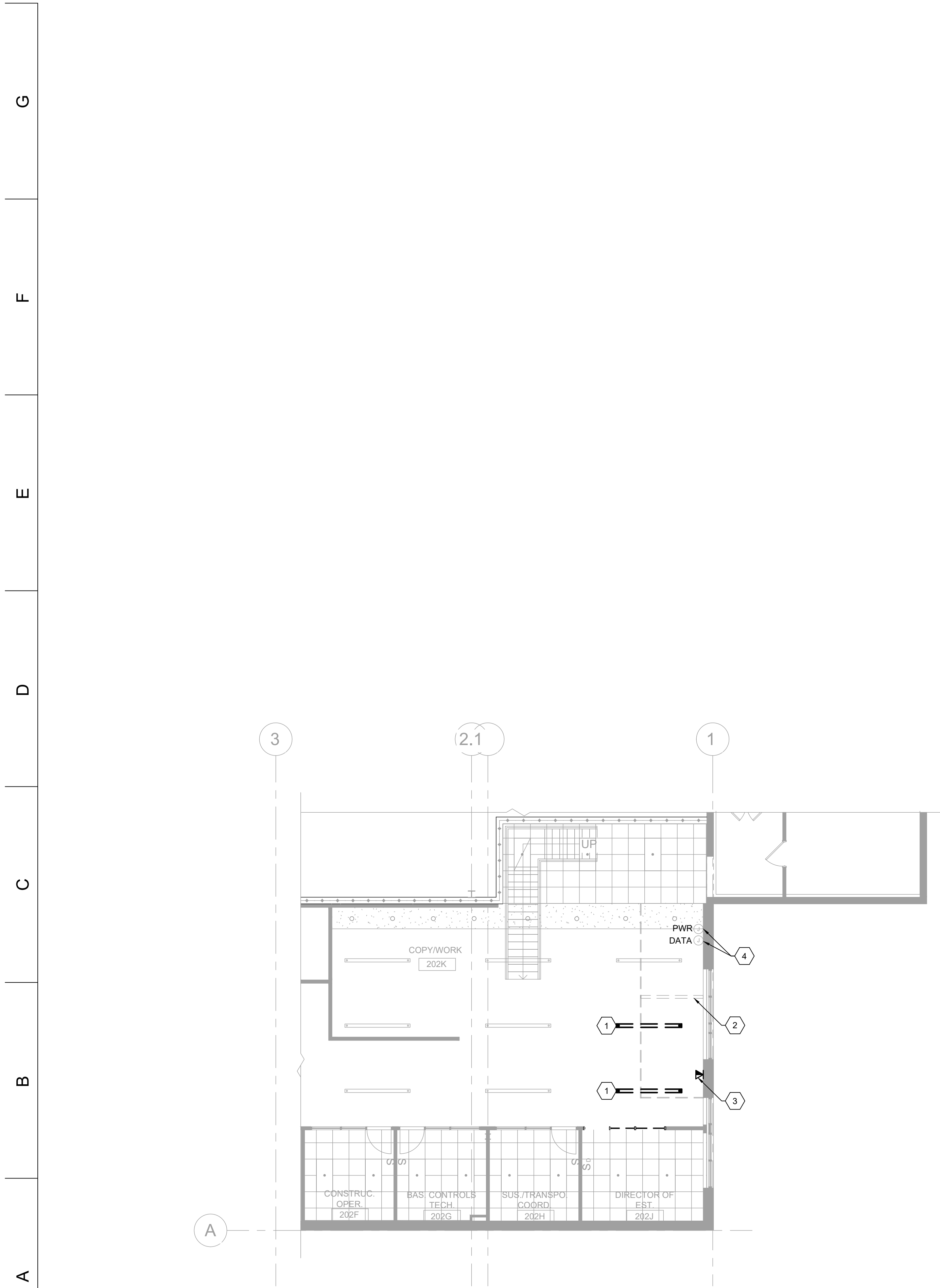
**NOTES KEYED TO DEMOLITION:**

- REMOVE EXISTING LIGHT FIXTURES AND TURN OVER TO OWNER. REMOVE EXISTING CIRCUIT BACK TO NEAREST REMAINING FIXTURE.
- DISCONNECT EXISTING POWER CIRCUIT CONNECTED TO DEMOLISHED SYSTEM FURNITURE. REMOVE WIRING AND RACEWAY BACK TO SOURCE.
- DISCONNECT DATA CABLING CONNECTED TO DEMOLISHED SYSTEMS FURNITURE. COIL WIRE BACK TO WALL AND KEEP FOR CONNECTION TO NEW DATA OUTLETS.
- POWER AND DATA WHIP FOR REMAINING CUBICLE SHALL BE PROTECTED DURING DEMOLITION AND SHALL REMAIN IN PLACE AND OPERATIONAL.

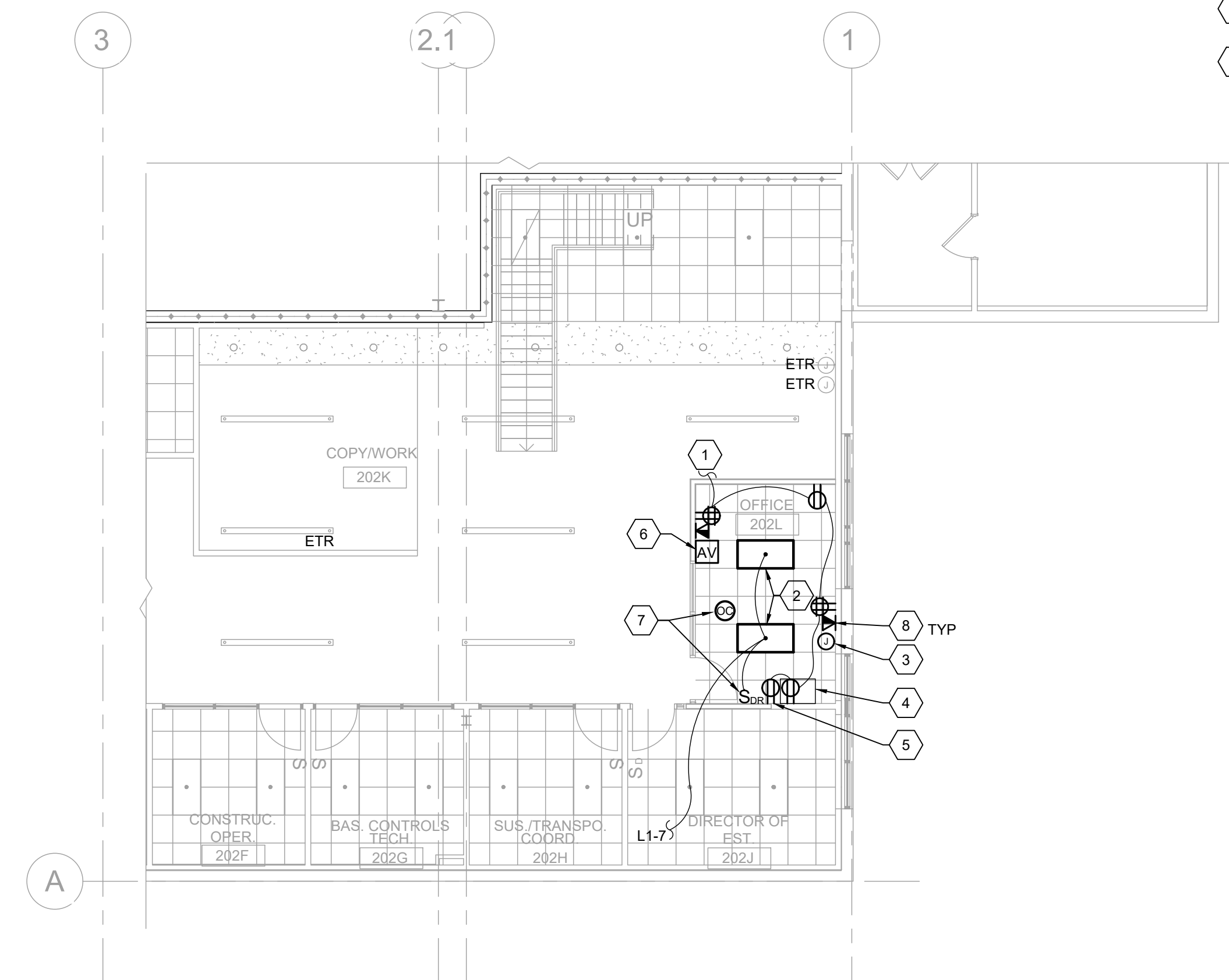
**NOTES KEYED TO NEW WORK:**

- CONNECT NEW RECEPTACLES INSIDE NEW OFFICE TO EXISTING RECEPTACLE CIRCUIT P2C-21. EXISTING PANEL IS LOCATED IN MECH. 211.
- INSTALL NEW LIGHT FIXTURES PROVIDED BY OWNER. CONNECT NEW FIXTURES TO EXISTING LIGHTING CIRCUIT FEEDING ADJACENT OFFICE. PROVIDE ADDITIONAL WIRING AND FIXTURE WHIPS AS NEEDED TO TERMINATE CIRCUIT TO NEW FIXTURES.
- PROVIDE BLANK COVERPLATE ON EXISTING DATA JUNCTION BOX.
- PROVIDE TWO-GANG RECESSED COMMERCIAL TV WALL BOX EQUAL TO FSR, INC. MODEL PWB-100-WHT. PROVIDE DUPLEX RECEPTACLE IN ONE COMPARTMENT CONNECTED TO CIRCUIT SHOWN AND PROVIDE 1.5" C. FROM AV COMPARTMENT TO AV BOX NEXT TO DESK IDENTIFIED BY KEYED NOTED 6. BOX SHALL BE MOUNTED 56" AFF. COORDINATE PLACEMENT OF WALL BOX WITH TV WALL MOUNT BRACKET.
- MOUNT DUPLEX RECEPTACLE 18" AFF FINISH DIRECTLY BELOW TV OUTLETS.
- PROVIDE CONDUIT ABOVE CEILING AND CONCEALED IN WALLS FROM TV BOX TO RECESSED JUNCTION BOX AT THIS LOCATION NEXT TO DESK. MOUNT ADJACENT TO POWER AND DATA OUTLETS.
- PROVIDE CEILING MOUNTED OCCUPANCY SENSOR WITH WALL MOUNTED OVERRIDE WITH DIMMABLE CONTROLS.
- PROVIDE RECESSED JUNCTION BOX FOR DATA WIRING. PROVIDE 1" CONDUIT FROM EXISTING DATA JUNCTION BOX TO NEW DEVICE. TYPICAL OF DATA OUTLETS SHOWN.

ARCH D (36.00 x 24.00 inches), 1:1

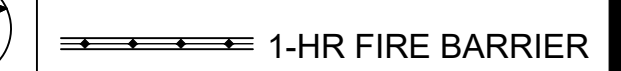


**6A** ELECTRICAL DEMOLITION PLAN - SECOND FLOOR  
1/8" = 1'-0"

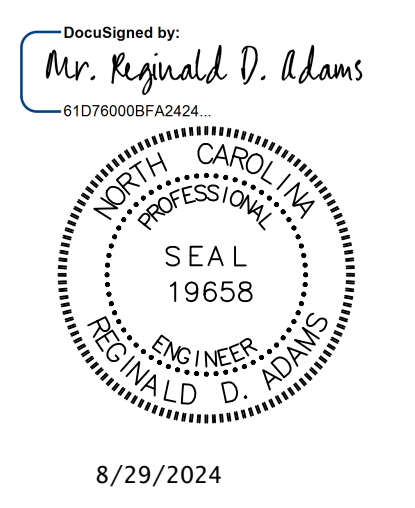


**6A** ELECTRICAL NEW WORK PLAN - SECOND FLOOR  
1/8" = 1'-0"

**FIRE RESISTANCE RATINGS**



SEALS:

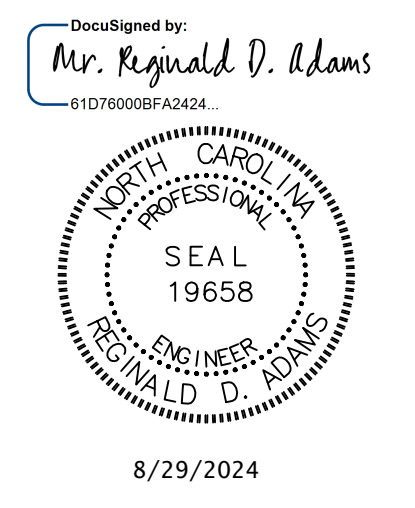


ISSUE: CONSTRUCTION  
DATE: 8/29/2024  
DRAWN BY: SDR  
REVISIONS:


ELECTRICAL FLOOR PLAN

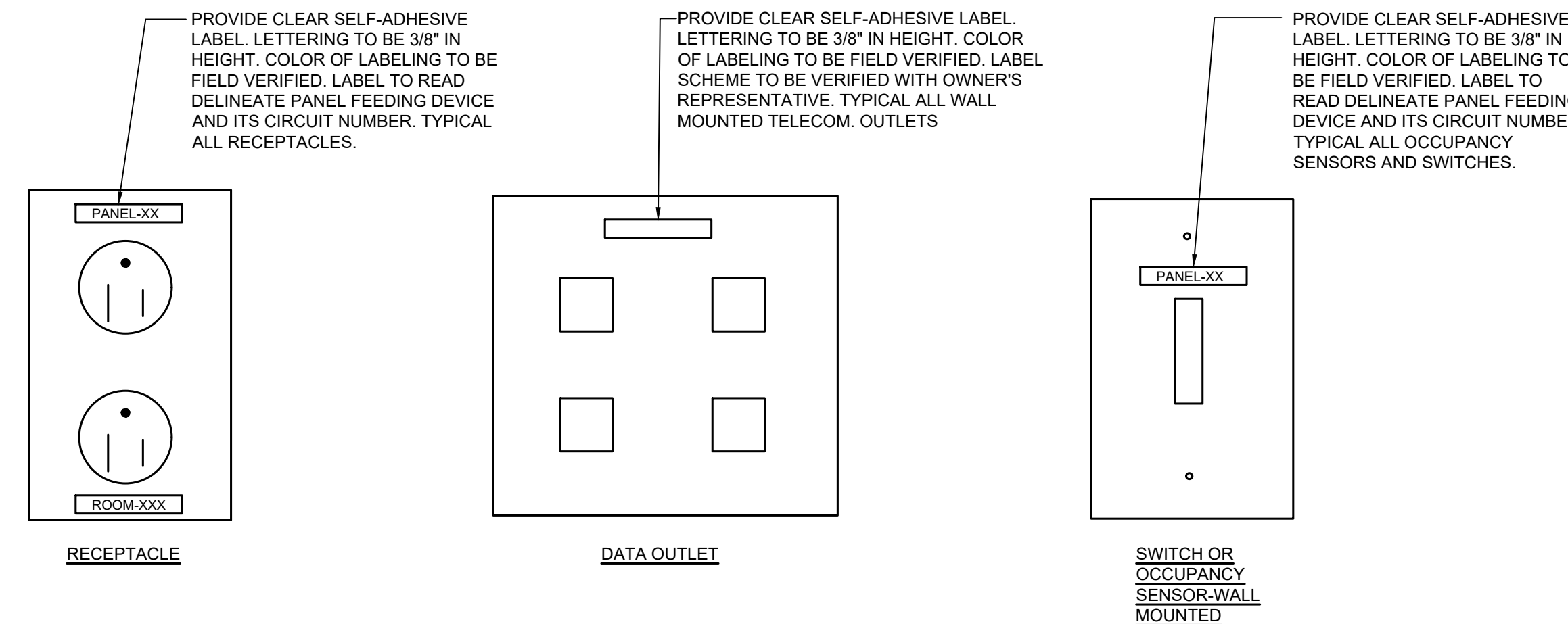
**E100**

SEALS:

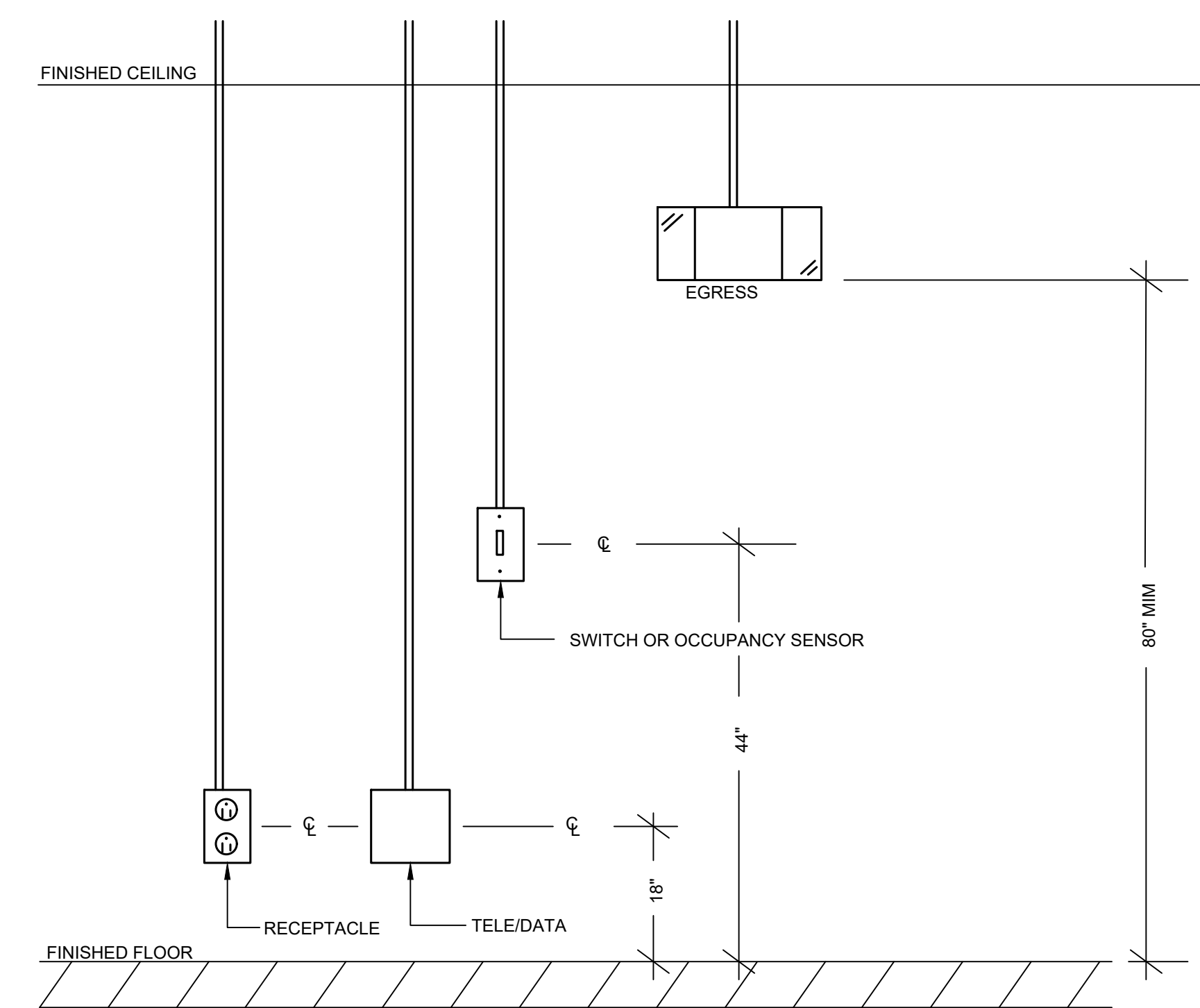


ISSUE: CONSTRUCTION  
DATE: 8/29/2024  
DRAWN BY: SDR  
REVISIONS:


ELECTRICAL DETAILS



**E4** DEVICE LABELING DETAILS  
1/8" = 1'-0"



**NOTE:**  
NOT ALL DEVICES MAY BE USED IN CONSTRUCTION.

**A4** NFPA 72 AND ADA MOUNTING HEIGHT DETAILS  
NO SCALE

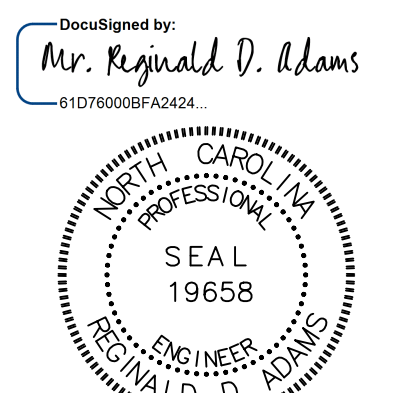
ARCH D (36.00 x 24.00 inches), 1:1

(C) 2023 OSTERLUND ARCHITECTS, PLLC

A B C D E F G

1 2 3 4 5 6 7 8 9 10

SEALS:



8/29/2024

ISSUE: CONSTRUCTION  
DATE: 8/29/2024  
DRAWN BY: SDR  
REVISIONS:

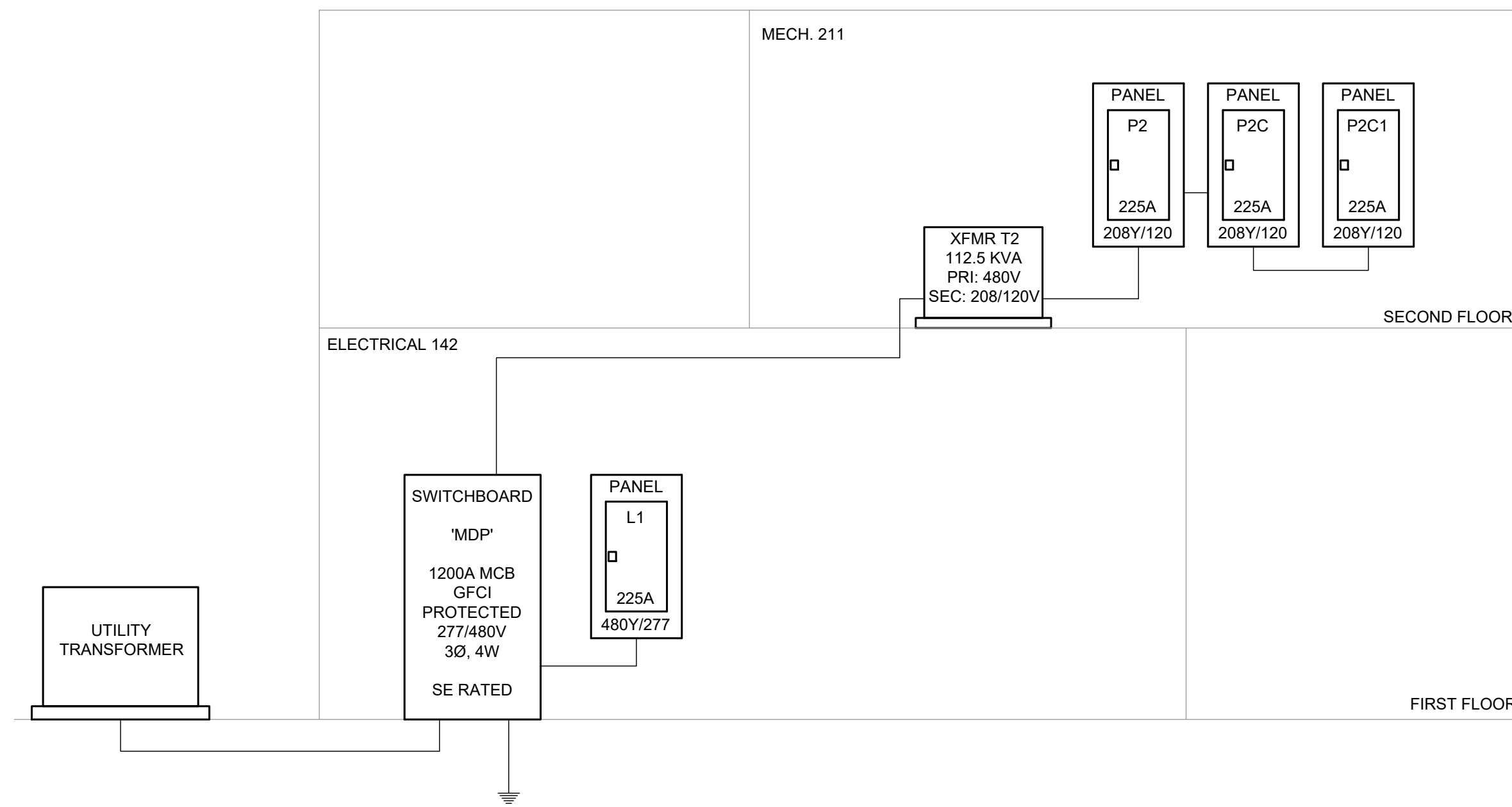
POWER RISER AND SCHEDULES

E300

ARCH D (36.00 x 24.00 inches), 1:1

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G  
F  
E  
D  
C  
B  
A



**1E** PARTIAL POWER RISER DIAGRAM  
NO SCALE

**GENERAL NOTES:**

1. ALL EQUIPMENT SHOWN IS EXISTING TO REMAIN AND SHOWN FOR REFERENCE ONLY.

EXISTING - BLDG ST PANEL "P2C"													PANEL TYPE: NQOD			MCB or MLO: MLO		
BUS SIZE: 100A													MOUNTING: SURFACE			MOUNTING: SURFACE		
VOLTAGE: 208Y/120V													MINIMUM AIC: 22,000			MINIMUM AIC: 22,000		
CKT	LOAD SERVED	TRIP	POLE	WIRE	GND	COND	KVA PER PHASE			KVA	COND	GND	WIRE	POLE	TRIP	LOAD SERVED	CKT	
							A	B	C									
1	RECEPT 200A	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR	1	20	RECEPT 201A	2	
3	RECEPT 200A	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR	1	20A	RECEPT 201A	4	
5	RECEPT 200.200CD	20	1	ETR	ETR	ETR					ETR	ETR	ETR	1	20A	RECEPT 201B	6	
7	RECEPT 202A	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR	1	20	RECEPT 201C	8	
9	RECEPT 202B	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR	1	20	RECEPT 201D	10	
11	RECEPT 202E	20	1	ETR	ETR	ETR					ETR	ETR	ETR	1	20	RECEPT 201E	12	
13	RECEPT 202F	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR	1	20	RECEPT 201F	14	
15	RECEPT 202G	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR	1	20	RECEPT 201G	16	
17	RECEPT 202H	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR	1	20	RECEPT 201H	18	
19	RECEPT 202J	20	1	ETR	ETR	ETR	0.00									SPACE	20	
21	CUBICLE 202L & OFFICE 202L	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR	1	20	CUBICLE 201	22	
23	RECEPT 202L	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR	1	20	CUBICLE 201	24	
25	RECEPT 202L, 203, 203B	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR	1	20	FUTURE 201	26	
27	COPIER 202K	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR	1	20	FUTURE 201	28	
29	PLOTTER 202K	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR	1	20	RECEPT 210, 210ABCD	30	
31	RECEPT 202CK	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	32	
33	RECEPT 202K	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	34	
35	RECEPT 202K	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	36	
37	UC REF 202K	20G	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR	3	100	PANEL P2C1	38	
39	UC REF 210A	20G	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR				40	
41	EWG 210	20G	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR				42	
TOTALS:							0.00	0.00	0.00									

CONNECTED LOAD (KVA)	DF	DEMAND LOAD (KVA)	NOTES
EXISTING FROM RECORD DOCUMENTS	22.93	100%	22.93
LIGHTING	125%	0.00	L-PROVIDE WITH LOCK OUT CLIP
FIRST 10K RECEIPTS	100%	0.00	G-GFCI PROTECTED
REMAINDER RECEPT	50%	0.00	A-AFCI PROTECTED
LARGEST MOTOR	125%	0.00	GF-GFPE PROTECTED
MOTOR	100%	0.00	S-SHUNT TRIP
ELEVATOR	100%	0.00	
KITCHEN	65%	0.00	
EVCS	125%	0.00	
MISC	100%	0.00	*PHASENEUTRAL
TOTAL (KVA)	22.93		22.93
TOTAL AMPS	64		64

ADDITIONAL NOTES:  
1. NO LOAD IS ADDED OR REMOVED FROM EXISTING PANEL. SHOWN FOR REFERENCE ONLY.  
2. \* DENOTES CIRCUIT DESCRIPTION REVISED TO OFFICE 202L.

**1A** PANELBOARD SCHEDULES  
NO SCALE

EXISTING - BLDG ST PANEL "L1"													PANEL TYPE: NEHB			MCB or MLO: MLO		
BUS SIZE: 250A													MOUNTING: SURFACE			MOUNTING: SURFACE		
VOLTAGE: 480Y/277													MINIMUM AIC: 14,000			MINIMUM AIC: 14,000		
CKT	LOAD SERVED	TRIP	POLE	WIRE	GND	COND	KVA PER PHASE			KVA	COND	GND	WIRE	POLE	TRIP	LOAD SERVED	CKT	
							A	B	C									
1	LTS 102AB,103,105ABC,107,108,108AB	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR	1	20	EXTERIOR LTS	2	
3	LTS 101,102,105,105DE	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR	1	20	SPARE	4	
5	LTS 200A,201A-H,210ABCD	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR	1	20	SPARE	6	
7	LTS 200, 210	20	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR	1	20	SPARE	8	
9	LTS 110A,118	15	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	10	
11	LTS 117AB	15	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	12	
13	LTS 130ABC	15	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	14	
15	LTS 130ABC	15	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	16	
17	LTS 130EFG,132AH,231	15	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	18	
19	LTS 118,118A,120,121,120AB,122,122BC,121	15	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	20	
21	LTS 117F,119	15	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	22	
23	SPA	15	1	ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	24	
25	SPACE			ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	26	
27	SPACE			ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	28	
29	SPACE			ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	30	
31				ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	32	
33				ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	34	
35				ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	36	
37				ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	38	
39				ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	40	
41				ETR	ETR	ETR	0.00				ETR	ETR	ETR			SPACE	42	
TOTALS:							0.00	0.00	0.00									

CONNECTED LOAD (KVA)	DF	DEMAND LOAD (KVA)	NOTES
EXISTING FROM RECORD DOCUMENTS	32.14	100%	32.14
FIRST 10K RECEIPTS	100%	0.00	G-GFCI PROTECTED
REMAINDER RECEPT	50%	0.00	A-AFCI PROTECTED
LARGEST MOTOR	125%	0.00	GF-GFPE PROTECTED
MOTOR	100%	0.00	S-SHUNT TRIP
ELEVATOR	100%	0.00	
KITCHEN	65%	0.00	
EVCS	125%	0.00	
MISC	100%	0.00	*PHASENEUTRAL
TOTAL (KVA)	32.14		32.14
TOTAL AMPS	39		39

ADDITIONAL NOTES:  
1. NO LOAD IS ADDED OR REMOVED FROM EXISTING PANEL. SHOWN FOR REFERENCE ONLY.