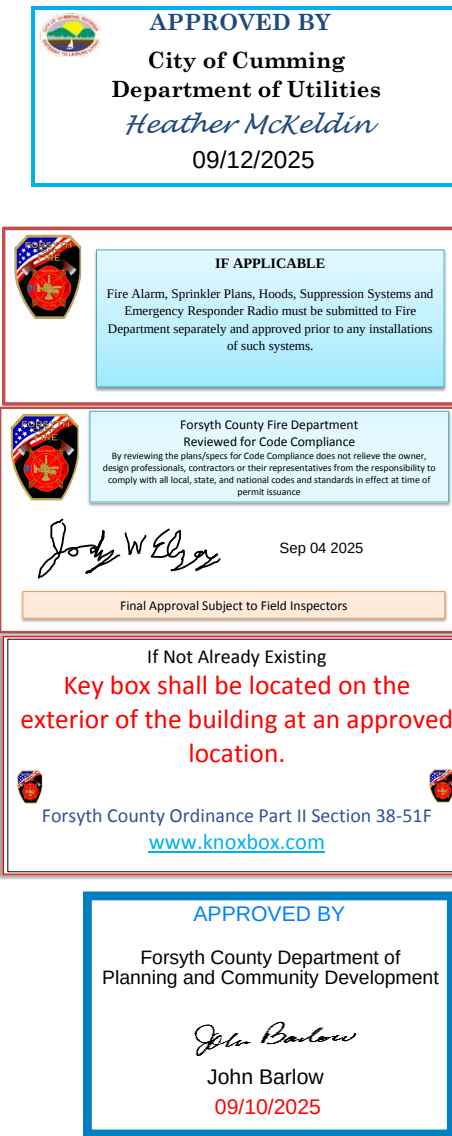




INTERIOR BUILDING RENOVATION WITH SOME MINOR EXTERIOR ADDITIONS THAT INCLUDE A COVERED CONCRETE PAD AND A NEW CHAIN-LINK FENCE AND GATE. BUILDING WILL CHANGE USE FROM AN EXISTING FIRE STATION TO A COUNTY FLEET MAINTENANCE BUILDING.

1



FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

PRINT RECORD

[illegible]

Drawn By	Checked By
----------	------------

RA JDG

Date _____ Job No. _____

08/01/2025 25018

Sheet Title

COVER SHEET

COVER SHEET

Sheet No.

CC 1 01

CS-1.01

CONCLUSIONS

RELEASED FOR PERMIT



*2 - Per Plumbing Code Section 403.1 - "For business and mercantile classifications with an occupancy load of 15 or fewer, service sinks shall not be required."

CONWAY
& OWEN

FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

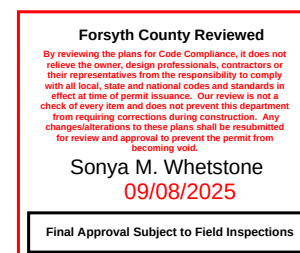
[illegible]

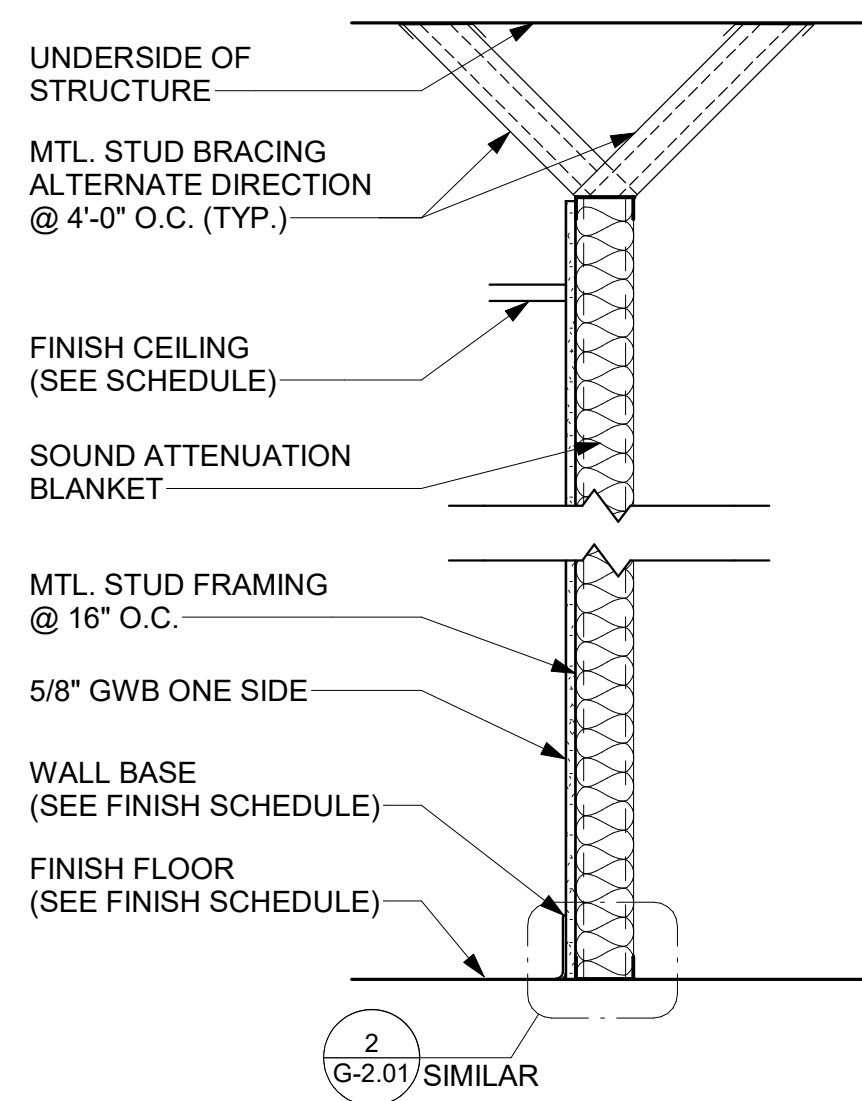
Drawn By RA	Checked By JDG
Date 08/01/2025	Job No. 25018

Sheet No.

LS-1.01

RELEASED FOR PERMIT

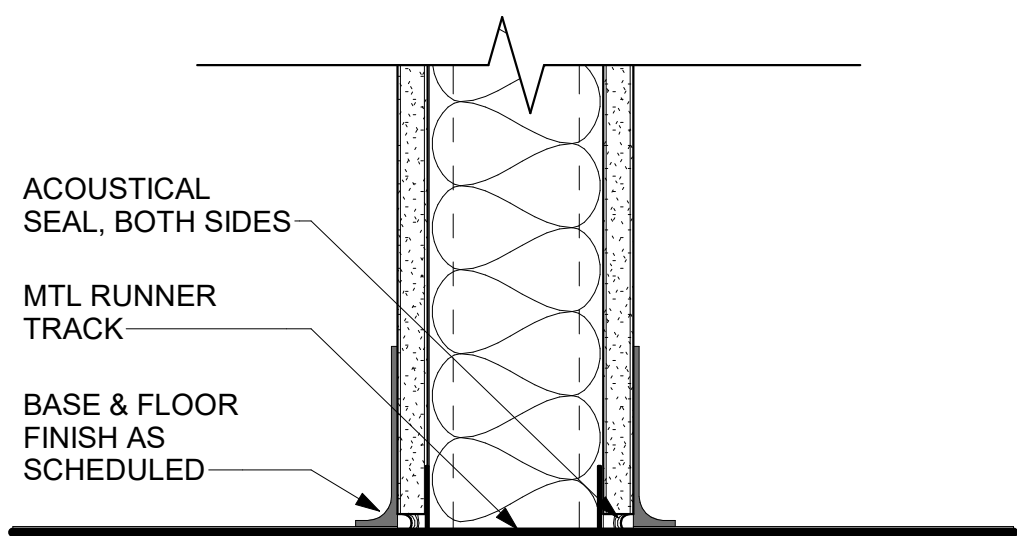




MTL. STUD FURRING TO 6" ABOVE CEILING				
WALL TYPE	DESCRIPTION	FIRE RATING	U.L. #	STC
H1	7/8" HAT CHANNELS (NO ACOUSTIC BATTING)	N/A	N/A	N/A

WALL TYPE H

SCALE: 1" = 1'-0"



BOTTOM OF WALL DETAIL

SCALE: 3" = 1'-0"

1. STUD DESIGN CRITERIA: ALL INTERIOR, NON-LOAD BEARING METAL STUDS SHALL BE 20 GAUGE (MIN) UNLESS OTHERWISE NOTED. PROVIDE 5 PSF MIN. APPLIED LATERAL LOAD, L/240 MAX. DEFLECTION.
2. ALL FIRE RATED PARTITIONS MUST EXTEND AND SEAL TO STRUCTURE ABOVE.
3. INSTALLATION OF GYPSUM BOARD, BACKER BOARD AND BASE BOARD SHALL CONFORM TO REQUIREMENTS FOR FIRE RATINGS AND ACOUSTICAL RATINGS.
4. PARTITIONS ARE TO BE TESTED TO THE GYPSUM BOARD FIRE RESISTANCE RATING ARE NOTED IN ROOM FINISH SCHEDULE TO RECEIVE CERAMIC OR PORCELAIN TILE FINISH INCLUDING RESTROOMS.
5. PROVIDE 5/8" GYPSUM BOARD UNLESS OTHERWISE NOTED.
6. PROVIDE 5/8" TYPE X GYPSUM BOARD AT FIRE RATED PARTITIONS.
7. METAL STUD GAUGE (IF NOTED) AND THE FINISHES WILL VARY DEPENDING ON THE MANUFACTURER OF COMPONENTS ACTUALLY USED.
8. PENETRATIONS IN RATED PARTITIONS AND CONNECTIONS OF THE PARTITIONS TO OTHER STRUCTURES SHALL BE MADE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED DETAILS AND IN COMPLIANCE WITH APPLICABLE TESTING AGENCY REQUIREMENTS.
9. INSTALL BLOCKING OR BACKER MATERIAL FOR ATTACHMENT / MOUNTING OF WALL HUNG ITEMS, ACCESSORIES, FIXTURES, FURNITURE OR EQUIPMENT DESCRIBED IN THE DOCUMENTS.
10. PROVIDE BLOCKING TO MATCH THE OVERALL HEIGHT AND WIDTH OF ALL WALL MOUNTED MONITORS AND TVS.
11. WHEN INSTALLING GYPSUM BOARD, CONTRACTOR SHALL COMPLY WITH REQUIREMENTS OF THE MOST CURRENT EDITION OF THE GYPSUM ASSOCIATION "GA-400" FIRE RESISTANCE RATING MANUAL, AND THE MOST CURRENT EDITION OF THE UL FIRE RESISTANCE DIRECTORY.
12. PARTITIONS THAT ARE REQUIRED TO EXTEND TO THE DECK ABOVE SHALL HAVE THE GYPSUM BOARD CUT TO FIT WITHIN A 1/4" MAXIMUM TOLERANCE TO THE SHAPE OF THE DECK ABOVE. GYPSUM BOARD SHALL BE CONTINUOUSLY SEALED FOR THE FULL DEPTH OF THE GYPSUM BOARD WITH FLEXIBLE SEALANT.
13. GYPSUM BOARD SHALL BE CUT SO THAT THE CLEARANCE BETWEEN METALLIC ELECTRICAL OUTLET BOXES AND THE GYPSUM BOARD DOES NOT EXCEED 1/8".
14. PARTITIONS OF OR ABOVE THE DECK ABOVE SHALL BE SEALED BE 1/4" MINIMUM AND 1/2" MAXIMUM ABOVE THE CONCRETE FLOOR SLAB AND SHALL BE SEALED FOR THE FULL DEPTH OF THE GYPSUM BOARD WITH FLEXIBLE SEALANT.
15. REFER TO THE LIFE SAFETY FLOOR PLANS FOR EXTENT OF FIRE WALL RATINGS.
16. ALL PARTS OF ACOUSTIC RATED PARTITIONS SHALL EXTEND TO ROOF STRUCTURE OR FLOOR DECK ABOVE.
17. PARTITION TYPES DESCRIBE GENERAL REQUIREMENTS FOR PARTITIONS. REFER TO THE MANUFACTURER'S SPECIFICATIONS AND REQUIREMENTS OF APPLICABLE TESTING AGENCIES FOR DETAILS OF PARTITION TYPES.
18. WHERE A CLEAR DIMENSION OR OPENING IS REQUIRED OR NOTED, MEASURE DIMENSION TO FACE OF PARTITION FINISH.
19. REPAIR TO INTERIOR FINISH SCHEDULE FOR ALL WALL FINISHES.
20. ALL FIRE RATED SMOKE BARRIER OR WALLS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING ABOVE A DECORATIVE CEILING AND OR IN CONCEALED SPACES WITH LETTERS A MINIMUM OF TWO (2) INCHES HIGH ON A CONTRASTING BACKGROUND AND SPACING OF TWO (2) INCHES. THE SIGN SHALL BE A MINIMUM OF ONE PER WALL OR BARRIER IN ACCORDANCE WITH MODIFICATIONS OF THE 2018 STANDARD FIRE PREVENTION CODE, 120-3.3, CHAPTER 5 OF THE RULES AND REGULATIONS OF THE FIRE SAFETY COMMISSIONER. THE HOURLY RATING SHALL BE INCLUDED ON ALL RATED BARRIERS OR WALLS. SUGGESTED WORDING () HOUR FIRE AND SMOKE BARRIER - PROTECT ALL OPENINGS.



FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

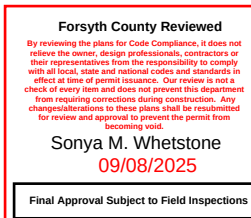
1525 BUFORD HWY
CUMMING, GA

[illegible]

Sheet Title
PARTITION TYPES

G-2.01

RELEASED FOR PERMIT



SECTION 000102 PROJECT INFORMATION
PART 1 GENERAL
1.01 PROJECT IDENTIFICATION
A. Project Name: 25018 Fire Station #15 Renovation, located at: 1525 Buford Hwy, Cumming, Georgia 30041.
B. Architect's Project Number: 25018. Forsyth County Cumming, Georgia 30041.
C. The Owner, hereinafter referred to as Owner: Forsyth County, Georgia.
D. Owner's Project Manager: Melody Fontana, 470-822-9695, mfontana@forsythco.com.
1.02 PROJECT DESCRIPTION
A. Summary Project Description: Renovation of the existing Fire Station #15 into a county fleet maintenance facility for Forsyth, Georgia.
1.03 PROCUREMENT TIMETABLE
A. The Owner reserves the right to change the schedule or terminate the entire procurement process at any time.
1.04 PROCUREMENT DOCUMENTS
A. Availability of Documents: Complete sets of procurement documents may be obtained:
1. From Owner at the Project Manager's address listed above.
PART 2 PRODUCTS (NOT USED)
PART 3 EXECUTION (NOT USED)
END OF SECTION 000102

SECTION 000110 TABLE OF CONTENTS

PROCUREMENT AND CONTRACTING REQUIREMENTS

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

000102 - Project Information

000110 - Table of Contents

SPECIFICATIONS

DIVISION 01 - GENERAL REQUIREMENTS

011000 - Summary

012000 - Price and Payment Procedures

012500 - Substitution Procedures

012500.01 - Substitution Request Form

013000 - Administrative Requirements

013216 - Construction Progress Schedule

014000 - Quality Requirements

014100 - Regulatory Requirements

014216 - Definitions

016000 - Product Requirements

017000 - Execution and Closeout Requirements

017416 - Construction Waste Management and Disposal

017610 - Temporary Protective Coverings

017800 - Closeout Submittals

017900 - Demonstration and Training

DIVISION 02 - EXISTING CONDITIONS

020342 - Removal and Salvage of Period Construction Materials

024100 - Demolition

024119 - Selective Demolition

DIVISION 03 - CONCRETE (NOT USED)

DIVISION 04 - MASONRY (NOT USED)

DIVISION 05 - METALS (NOT USED)

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES

061053 - Miscellaneous Rough Carpentry

064100 - Architectural Wood Casework

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

075000 - Joint Sealants

DIVISION 08 - OPENINGS

081416 - Flush Wood Doors

DIVISION 09 - FINISHES

092116 - Gypsum Board Assemblies

092216 - Non-Structural Metal Framing

093000 - Tiles

095100 - Acoustical Ceilings

096500 - Resilient Flooring

099123 - Interior Painting

DIVISION 10 - SPECIALTIES

101423 - Panel Signage

102800 - Toilet, Bath, and Laundry Accessories

104300 - Emergency Aid Specialties

104400 - Fire Protection Specialties

107313 - Metal Canopies

DIVISION 11 - EQUIPMENT

113013 - Residential Appliances

DIVISION 12 - FURNISHINGS

123600 - Countertops

124813 - Entrance Floor Mats and Frames

DIVISION 13 - SPECIAL CONSTRUCTION (NOT USED)

DIVISION 14 - CONVEYING EQUIPMENT (NOT USED)

DIVISION 21 - FIRE SUPPRESSION (NOT USED)

DIVISION 22 - PLUMBING

REFERENCE PLUMBING DRAWINGS

DIVISION 23 - HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC) (NOT USED)

DIVISION 25 - INTEGRATED AUTOMATION (NOT USED)

DIVISION 26 - ELECTRICAL

REFERENCE ELECTRICAL DRAWINGS

DIVISION 32 - EXTERIOR IMPROVEMENTS

323113 - Chain Link Fences and Gates

DIVISION 33 - UTILITIES (NOT USED)

SECTION 01000 SUMMARY

PART 1 GENERAL

1.01 PROJECT

A. Project Name: 25018 FIRE STATION #15 RENOVATION, located at 1525 Buford Hwy, Cumming, Georgia 30041.

B. Owner's Name: Forsyth County

C. Owner's Project Manager: Melody Fontana

Address: 514 WEST MAPLE STREET, SUITE 1021

City, State, Zip: Cumming, Georgia 30040.

Phone/Fax: 470-822-9695

Email: mfontana@forsythco.com

C. Architect's Name: Jericho Design Group

D. Architect's Project Number: 25018

D. Project Consultants: As indicated on drawings.

1.02 PROJECT DESCRIPTION

A. Summary Project Description: Renovation of the existing Fire Station #15 into a county fleet maintenance facility for Forsyth, Georgia.

1.03 CONTRACT DESCRIPTION

A. Use Form AIA G702 - Agreement and Conditions of Contract between Owner and Contractor.

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 CONTRACTOR USE OF SITE AND PREMISES

A. Provide access to and from site as required by law and by Owner.

B. 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.

C. Do not obstruct roadways, sidewalks, or other public ways without permit.

END OF SECTION 01000

SECTION 012000 PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Procedures for preparation and submittal of applications for progress payments.

B. Documentation of changes in Contract Sum and Contract Time.

C. Change procedures.

D. Correlation of Contractor submittals based on changes.

E. Procedures for preparation and submittal of application for final payment.

1.02 SCHEDULE OF VALUES

A. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.

B. Forms filled out by hand will not be accepted.

1.03 APPLICATIONS FOR PROGRESS PAYMENTS

A. Payment Period: Submit at intervals stipulated in the Agreement.

B. Use Form AIA G702 and Form AIA G703, edition stipulated in the Agreement.

C. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit separate to Architect for approval.

D. Forms filled out by hand will not be accepted.

E. Execute certification by signature of authorized officer.

F. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.

G. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.

H. Submit one electronic and three hard-copies of each Application for Payment.

I. Include the following with the application:

1. Transmittal letter as specified for submittals in Section 013000.

2. Construction progress schedule, revised and current as specified in Section 013216.

3. Current construction photographs specified in Section 015000.

4. Partial release of liens from major subcontractors and vendors.

J. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and item by number and description.

1.04 MODIFICATION PROCEDURES

A. Submit name of the individual authorized to receive change documents and who will be responsible for informing others in Contractor's company or subcontractors of changes to Contract Documents.

B. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.

C. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.

1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.

2. Promptly execute the change.

D. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change and supplementary drawings and specifications, a change order, and a schedule of values for the proposed change.

E. For any overtime work required and the period of time during which the requested price will be considered valid, Contractor shall prepare and submit a fixed price quotation within _____ days.

F. Contractor may propose a change by submitting a request for change to Architect, describing the proposed change and its full effect on the work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation. Document any requested substitutions in accordance with Section 012000.

G. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.

F. For change requested by Architect for work falling under a fixed price contract, the amount will be based on Contractor's price quotation.

G. For change requested by Contractor, the amount will be based on the Contractor's request for a Change Order as approved by Architect.

H. For pre-determined unit prices and quantities, the amount will be based on the fixed unit prices.

I. For change ordered by Architect without action from Contractor, the amount will be determined by Architect based on the Contractor's substantiation of costs as specified in Time and Material work.

G. Substantiation of Costs: Provide full information required for evaluation.

1. On request, provide the following data:

a. Quantities of products, labor, and equipment.

b. Taxes, insurance, and bonds.

c. Overhead and profit.

d. Justification for any change in Contract Time.

e. Credit for deletions from Contract, similarly documented.

2. Support each claim for additional costs with additional information:

a. Origin and date of claim.

b. Dates and times work was performed, and by whom.

c. Invoices and receipts for products, equipment, and subcontractors, similarly documented.

3. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.

H. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

I. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.

J. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.

K. Promptly enter changes in Project Record Documents.

1.05 APPLICATION FOR FINAL PAYMENT

A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.

B. Application for Final Payment will not be considered until the following have been accomplished:

1. All closeout procedures specified in Section 017000.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 012000

SECTION 012500 SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Availability of Documents: Complete sets of procurement documents may be obtained:

1. From Owner at the Project Manager's address listed above.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 012500

SECTION 012500 SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Availability of Documents: Complete sets of procurement documents may be obtained:

1. From Owner at the Project Manager's address listed above.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 012500

SECTION 012500 SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Availability of Documents: Complete sets of procurement documents may be obtained:

1. From Owner at the Project Manager's address listed above.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 012500

SECTION 012500 SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Availability of Documents: Complete sets of procurement documents may be obtained:

1. From Owner at the Project Manager's address listed above.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 012500

SECTION 012500 SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Availability of Documents: Complete sets of procurement documents may be obtained:

1. From Owner at the Project Manager's address listed above.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 012500

SECTION 012500 SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Availability of Documents: Complete sets of procurement documents may be obtained:

1. From Owner at the Project Manager's address listed above.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 012500

SECTION 012500 SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Availability of Documents: Complete sets of procurement documents may be obtained:

1. From Owner at the Project Manager's address listed above.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 012500

SECTION 012500 SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Availability of Documents: Complete sets of procurement documents may be obtained:

1. From Owner at the Project Manager's address listed above.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 012500

SECTION 012500 SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Availability of Documents: Complete sets of procurement documents may be obtained:

1. From Owner at the Project Manager's address listed above.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 012500

SECTION 012500 SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Availability of Documents: Complete sets of procurement documents may be obtained:

1. From Owner at the Project Manager's address listed above.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 012500

SECTION 012500 SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Availability of Documents: Complete sets of procurement documents may be obtained:

1. From Owner at the Project Manager's address listed above.

PART 2 PRODUCTS (NOT USED)

SECTION 016000	PRODUCT REQUIREMENTS
PART 1 GENERAL	
1.01 SECTION INCLUDES	
A. Transposition, handling, storage and protection.	
B. Product option requirements.	
C. Substitution limitations.	
D. Maintenance materials, including extra materials, spare parts, tools, and software.	
1.02 SUBMITTALS	
A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information specific to this Project.	
B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.	
C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.	
1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.	
PART 2 PRODUCTS	
1.01 NEW PRODUCTS	
A. Provide new products unless specifically required or permitted by Contract Documents.	
B. Use any products having any of the following characteristics is not permitted:	
1. Made of wood from newly cut old growth timber.	
2. Containing lead, cadmium, or asbestos.	
C. Where other criteria are met, Contractor shall give preference to products that:	
1. If used on interior, have lower emissions, as defined in Section 016116.	
2. If wet-applied, have lower VOC content, as defined in Section 016116.	
2.02 PRODUCT OPTION	
A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.	
B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.	
C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.	
2.03 MAINTENANCE MATERIALS	
A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.	
B. Deliver to Project site; obtain receipt after final payment.	
PART 3 EXECUTION	
3.01 TRANSPORTATION AND HANDLING	
A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.	
B. Inspection procedures are required, attach instructions prominently and legibly on outside of packaging.	
C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.	
D. Transport and handle products in accordance with manufacturer's instructions.	
E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.	
F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.	
G. Provide equipment to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.	
H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.	
3.02 STORAGE AND PROTECTION	
A. Designate receiving and storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misplacement. See Section 017419.	
1. Structural Loading Limitations: Handle and store products and materials so as not to exceed static and dynamic load-bearing capacities of project floor and roof areas.	
B. Store and protect products in accordance with manufacturers' instructions.	
C. Store with seals and labels intact and legible.	
D. Arrange storage of materials and products to allow for visual inspection for the purpose of determination of quantities, amounts, and unit counts.	
E. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.	
F. For exterior storage of fabricated products, place on sloped supports above ground.	
G. Provide off-site storage and protection when site does not permit on-site storage or protection.	
H. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.	
I. Comply with manufacturer's warranty conditions, if any.	
J. Do not store products directly on the ground.	
K. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.	
L. Prevent contact with material that may cause corrosion, discoloration, or staining.	
M. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.	
N. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in accordance with Section 016000.	
END OF SECTION 016000	

SECTION 017000	EXECUTION AND CLOSEOUT REQUIREMENTS
PART 1 GENERAL	
1.01 SECTION INCLUDES	
A. Examination, preparation, and general installation procedures.	
B. Pre-installation meetings.	
C. Cutting and patching.	
D. Surveying for laying out the work.	
E. Cleaning and protection.	
F. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.	
G. General requirements for maintenance service.	
1.02 SUBMITTALS	
A. Product Data: For each type of cleaning agent.	
B. Survey work: Submit name, address, and telephone number of Surveyor before starting survey work.	
C. For request, submit documentation verifying accuracy of survey work.	
2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in compliance with Contract Documents.	
3. Submit surveys and survey logs for the project record.	
C. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:	
1. Structural integrity of any element of Project.	
2. Integrity of weather exposed or moisture resistant element.	
3. Efficiency, maintenance, or safety of any operational element.	
4. Visual qualities of sight exposed elements.	
5. Work of Owner or separate Contractor.	
6. Include in request:	
a. Identification of Project.	
b. Location and description of affected work.	
c. Necessity for cutting or alteration.	
d. Description of proposed work and products to be used.	
e. Effect on work of Owner or separate Contractor.	
f. Written permission of affected separate Contractor.	
g. Date and time work will be executed.	
D. Project Record Documents: Accurately record actual locations of capped and active utilities.	
E. Maintenance Material Schedule: For maintenance materials specified in other Sections.	
F. Closeout Submittals:	
1. Certificates of Release: From authorities having jurisdiction.	
2. Certificate of Insurance: For continuing coverage.	
3. Field Report: For post control inspection.	
1.03 QUALIFICATIONS	
A. For surveying work, employ a land surveyor registered in the State in which the Project is located and acceptable to Architect. Submit evidence of surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate. Employ only individual(s) trained and experienced in collecting and recording accurate data relevant to ongoing construction activities.	
1.04 PROJECT CONDITIONS	
C. Use of explosives is not permitted.	
D. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.	
E. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere.	
F. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.	
G. Pest and Rodent Control: Provide methods, means, and facilities to prevent pests and insects from damaging the work.	
H. Pollution Control: Establish and maintain procedures and facilities to prevent and minimize fire, smoke, and noxious gas discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.	
1.05 COORDINATION	
A. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.	
B. Notify affected utility companies and comply with their requirements.	
C. Verify that utility requirements and characteristics of existing work are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.	
D. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated for pipes, ducts, and conduits. Coordinate and install runs parallel with lines of building. Utilize space efficiently to maximize acceptance for other installations, for maintenance, and for repairs.	
E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and equipment.	
F. Coordinate completion and clean-up of work of separate sections.	
G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.	
PART 2 PRODUCTS	
2.01 PATCHING MATERIALS	
A. New Materials: As specified in Product sections; match existing products and work for patching and extending work.	
B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.	
C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 016000 - Product Requirements.	
PART 3 EXECUTION	
3.01 EXAMINATION	
A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.	
B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.	
C. Examine and verify specific conditions described in individual specification sections.	
D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.	
E. Verify that utility services are available, of the correct characteristics, and in the correct locations.	
F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After completion of cutting work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.	
3.02 PREPARATION	
A. Clean substrate surfaces prior to applying next material or substance.	
B. Seal cracks or openings of substrate prior to applying next material or substance.	
C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.	
3.03 PREINSTALLATION MEETINGS	
A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.	
B. Require attendance of parties directly affected, or affected by, work of the specific section.	
C. Notify Architect four days in advance of meeting date.	
D. Prepare agenda and preside at meeting:	
1. Review conditions of examination, preparation and installation procedures.	
2. Review coordination with related work.	
E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.	
3.04 LAYING OUT THE WORK	
A. Verify locations of survey control points prior to starting work.	
B. Promptly notify Architect of any discrepancies discovered.	
C. Protect survey control points prior to starting site work; preserve permanent reference points during construction.	
D. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other variations.	
E. Replace displaced survey control points based on original survey control. Make no changes without prior written notice to Architect.	
F. Utilize recognized engineering survey practices.	
G. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:	
1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations; and	
2. Grid or axis for structures.	
3. Building foundation, column locations, ground floor elevations, and _____.	
H. Periodically verify layouts by same means.	
I. Maintain a complete and accurate log of control and survey work as it progresses.	
3.05 GENERAL INSTALLATION REQUIREMENTS	
A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.	
B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.	
C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.	
D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.	
E. Make neat transitions between different surfaces, maintaining texture and appearance.	

3.06 CUTTING AND PATCHING

A Whenever possible, execute the work by methods that avoid cutting or patching.

B Perform whatever cutting and patching is necessary to:

1 Complete the work.

2 Fit products together to integrate with other work.

3 Provide openings for penetration of mechanical, electrical, and other services.

4 Match work that has been cut to adjacent work.

5 Repair areas adjacent to cuts to required condition.

6 Repair new work damaged by subsequent work.

7 Remove samples of installed work for testing when requested.

8 Remove and replace defective and non-complying work.

C Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.

D Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

E Cut rigid material using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

F Restrain work with new products in accordance with requirements of Contract Documents.

G Fit work air tight to pipes, sleeves, ducts, and conduit, and other penetrations through surfaces.

H At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 070400, to full thickness of the penetrated element.

I Patching:

1 Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refrain to intersect or interfere with natural break. For an assembly, refinish entire unit.

2 Match color, texture, and appearance.

3 Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.07 REPAIR OF THE WORK

A Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.

B Repair or remove and replace, defective construction.

C Repair includes, but is not limited to, replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.

D Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.

E Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.

F Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that show evidence of repair or restoration.

G Do not paint over "UL" and other required labels and identification including mechanical and electrical nomenclatures. Remove paint applied to required labels and identification.

H Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.

I Replace burned-out lamps, lamps noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor lighting systems to comply with requirements for.

3.08 PROGRESS CLEANING

A Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface(s) to be cleaned.

1 Do not use cleaning agent that is potentially hazardous to health or property or that might damage finished surfaces.

B Employ experienced workers or professional cleaners for final cleaning.

1 Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program.

2 Comply with manufacturer's written instructions.

C Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

D Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

E Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

F Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.09 PROTECTION OF INSTALLED WORK

A Protect installed work from damage by construction operations.

B Provide special protection where specified in individual specification sections.

C For exterior storage of fabricated products, place on sloped supports above ground.

D Provide protective and removable protection for installed products. Control activity in immediate work area to prevent damage.

E Avoid disturbing natural weathering of exterior surfaces.

F Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

G Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

H Remove products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

3.10 ADJUSTING

A Adjust operating products and equipment to ensure smooth and unhindered operation.

3.11 FINAL CLEANING

A Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface(s) to be cleaned.

1 Do not use cleaning agent that is potentially hazardous to health or property or that might damage finished surfaces.

B Clean Project site, yard, and grounds, in areas disturbed by construction activities including landscape development areas of rubbish, waste material, litter, and other foreign substances.

C Paved Areas: Sweep paved areas broom clean and remove petrochemical spills, stains, and other foreign deposits.

D Rate grounds that are not planted, mulched, or paved to a smooth, even-textured surface.

E Remove tools, construction equipment, machinery, and surplus material from Project site.

F Remove snow and ice to provide safe access to building.

G Clean exposed exterior and interior, hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances.

H Avoid disturbing natural weathering of exterior surfaces.

I Restore reflective surfaces to their original condition.

J Remove debris and surface dust from limited access spaces including, but not limited to, roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.

K Sweep concrete floors broom clean in unoccupied spaces.

L Vacuum carpets and similar soft surfaces to remove debris and excess nap. Clean according to manufacturer's recommendations if visible soil or stains remain.

M Clean transparent materials including mirrors and glass in doors and windows.

1 Remove glazing compounds and other noticeable, vision-obscuring materials.

2 Polish mirrors and glass taking care not to scratch surfaces.

N Remove labels that are not permanent.

O Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment.

1 Remove excess lubrication, paint and mortar droppings, and other foreign substances.

P Clean plumbing fixtures to a sanitary condition, free of stains including stains resulting from water exposure.

Q Replace disposable air filters and clean permanent air filters.

R Clean exposed surfaces of diffusers, registers, and grills.

S Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter upon removal or separate Contractor.

T Clean luminaires, lamps, globes, and reflectors to function with full efficiency.

U Leave Project clean and ready for occupancy.

V Contractor Waste Disposal: Comply with waste disposal requirements in 017419 - Construction Waste Management and Disposal.

3.12 CONTRACTOR'S LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A List of incomplete items (Punch List): Prepare and submit list of items to be completed and corrected indicating the value of each item on the list and reason(s) why the work is incomplete.

1 Organization of List: Include name and identification of each space and area affected by construction operations, incomplete items and items needing correction, including areas disturbed by Contractor that are outside the limits of construction.

a List spaces in sequential order starting with exterior areas and then proceeding from lowest floor to highest floor.

b Organize items in each space by major element including, but not limited to, ceiling, individual walls, floors, equipment, and building systems.

c Include the following at the top of each page:

1 Project name.

2 Project number.

3 Date of list.

4 Name of Architect.

5 Name of Contractor.

6 Page number.

d Submit list of incomplete items in MS Excel electronic file format. Architect will return annotated file.

3.13 SUBSTITUTION PROCEDURES

A Request for Substantial Completion Inspection: Minimum 10 days prior to submitting request for inspection to determine date of Substantial Completion, submit the following that are incomplete:

1 Certificate of Release: Released from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities, occupancy permits operating facilities, and similar releases.

2 Closeout Submittals: Including, but not limited to, the following:

a Certificate of Insurance: For continuing coverage.

b Field Report: For post control inspection.

c Warranties, workmanship bonds, maintenance service agreements, final certifications, and similar information.

D Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit list to Architect.

1 Indicate value of each item and reasons why work is incomplete.

3.14 FINAL COMPLETION PROCEDURES

A Request for Final Completion Inspection: Prior to submitting request for inspection to determine date of Final Completion, submit the following:

1 Final Application for Payment.

2 Final Correction Punch List: Certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect stating that each item has been completed or otherwise resolved for acceptance.

3 Certificate of Insurance: Evidence of final, continuing insurance coverage complying with insurance requirements.

4 Pest control final inspection report.

5 Final completion photographic documentation.

B Final Completion Inspection: Minimum 10 days prior to date the Work will be complete and ready for final inspection and testing, submit a request for inspection to determine date of final inspection to determine acceptance.

1 Upon receipt of request, Architect will either proceed with inspection or notify Contractor of incomplete items.

2 After inspection, Architect will prepare the Certificate for Payment or will notify Contractor of items that must be completed or corrected before Certificate will be issued.

3 Request inspection when the work identified in previous inspections as incomplete or uncorrected is complete or corrected is completed or corrected.

4 Results of completed inspection will be the basis of requirements for final completion.

D Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit list to Architect.

1 Indicate value of each item and reasons why work is incomplete.

3.15 CLOSEOUT PROCEDURES

A Make submittals that are required by governing or other authorities.

B Acknowledge Project Contractor any discrepancies discovered.

C Notify Architect when work is considered ready for Architect's Substantial Completion inspection.

D Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.

E Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.

F Notify Architect when work is considered ready for Architect's Substantial Completion final inspection.

G Complete items of work identified by Architect listed in previous inspections as incomplete or uncorrected is complete or corrected is completed or corrected.

3.16 MAINTENANCE

A Provide service and maintenance of components indicated in specification sections.

B Maintenance Period: As indicated in specification sections or, if not indicated, not less than one year from the date of substantial completion or the length of the specified warranty, whichever is longer.

C Examine systems components at a frequency consistent with manufacturer's instructions for operation, clean, adjust, and lubricate as required.

D Perform preventive maintenance, systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.

E Replace services shall not be assigned or transferred to any agents or subcontractor without prior written consent of the Owner.

END OF SECTION 071000

SECTION 024100 DEMOLITION
PART 1 GENERAL
1.01 SECTION INCLUDES
A. Building demolition excluding removal of hazardous materials and toxic substances.
B. Abandonment and removal of existing utilities and utility structures.
1.02 DEFINITIONS
A. Demolition: Dismantle, raze, destroy or wreck any building or structure or any part thereof.
B. Remove: Detach or dismantle items from existing construction and dispose of them off site, unless items are indicated to be salvaged or reinstalled.
C. Remove and Salvage: Detach or dismantle items from existing construction in a manner to prevent damage. Clean, package, label and deliver salvaged items to Owner in ready-for-use condition.
D. Remove and Reinstall: Detach or dismantle items from existing construction in a manner to prevent damage. Clean and prepare for reuse and reinstall where indicated.
E. Existing to Remain: Designation for existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.
1.03 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).
1.04 SUBMITTALS
A. Site Plan: Indicate:
1. Vegetation to be protected.
2. Areas for temporary construction and field offices.
3. Areas for temporary and permanent placement of removed materials.
B. Demolition Plan: Submit demolition plan as required by OSHA and local AHJs.
1. Indicate extent of demolition, removal sequencing, bracing and shoring, and location and construction of barricades and fences.
2. Summary of safety procedures.
C. Demolition firm qualifications.
D. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.
PART 2 PRODUCTS
2.01 MATERIALS
A. Fill Material: See Section 312023.
PART 3 EXECUTION
3.01 DEMOLITION
A. Remove the entire building designated:
1. Remove existing structure.
2. Remove paving and curbs required to accomplish new work.
3. Remove all other paving and curbs within site boundaries.
4. Break up paving within site boundaries to permit natural moisture drainage; leave pieces not larger than 1 square yard (1 square meter).
5. Within area of new construction, remove foundation walls and footings to minimum 2 feet (600mm) below finished grade.
6. Outside area of new construction, remove foundation walls and footings to minimum 2 feet (600mm) below finished grade.
7. Remove concrete slabs on grade within site boundaries.
8. Break up concrete slabs on grade within site boundaries to permit natural moisture drainage; leave pieces not larger than 1 square yard (1 square meter).
9. Remove underground tanks.
J. Remove underground tanks that contain or once contained petroleum products; fill and bury other types of tanks.
K. Remove manholes and manhole covers, curb inlets and catch basins.
L. Remove fences and gates.
M. Remove creosote-treated wood utility poles.
N. Remove other items indicated, for salvage, relocation, recycling, and.
O. Fill excavations, open pits, and holes in ground areas generated as result of removals, using specified fill; compact fill as specified in Section 312020.
3.02 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. Comply with applicable codes and regulations of NFPA 241.
3. Use of explosives is not permitted.
4. 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.
5. Provide, erect, and maintain temporary barriers and security devices.
6. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
7. Do not conduct operations to minimize effects on and interference with adjacent structures and occupants.
8. Do not close or obstruct roadways or sidewalks without permits from authority having jurisdiction.
9. Conduct operations to minimize obstruction of public and private entrances and exits. Do not obstruct required exits at any time.
10. 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 bulk elements to be salvaged or relocated have been removed.
D. Do not begin removal until vegetation to be relocated has been removed and vegetation to remain has been protected from damage.
E. 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.
F. 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.
G. Hazardous Materials:
1. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCBs, and mercury.
2. Hazardous Materials: Comply with 29 CFR 1926 and state and local regulations.
H. Perform demolition in a manner that maximizes salvage and recycling of materials.
1. Dismantle existing construction and separate materials.
2. Set aside reusable, recyclable, and salvagable materials; store and deliver to collection point or point of reuse.
I. Partial Removal of Paving and Curbs: Neatly saw cut at right angle to surface.
J. Underground Storage Tanks: Remove and dispose of as specified in Section 026500.
3.03 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.
H. Prepare building demolition areas by disconnecting and capping utilities outside the demolition zone. Identify and mark, in same manner as other utilities to remain, utilities to be reconnected.
3.04 DEBRIS AND WASTE REMOVAL
A. Remove debris, junk, and trash from site.
B. Remove materials not to be reused on site; comply with requirements of Section 017419-Waste Management.
C. Leave site in clean condition, ready for subsequent work.
D. Clean up spillage and wind-blown debris from public and private lands.
END OF SECTION 024100

SECTION 024119 SELECTIVE DEMOLITION
PART 1 GENERAL
1.01 SECTION INCLUDES
A. Selective demolition of built site elements.
B. Building demolition of building elements to be removed for alteration purposes.
C. Abandonment and removal of existing utilities and utility structures.
1.02 DEFINITIONS
A. Demolition: Dismantle, raze, destroy or wreck any building or structure or any part thereof.
B. Remove: Detach or dismantle items from existing construction and dispose of them off site, unless items are indicated to be salvaged or reinstalled.
C. Remove and Salvage: Detach or dismantle items from existing construction in a manner to prevent damage. Clean, package, label and deliver salvaged items to Owner in ready-for-use condition.
D. Remove and Reinstall: Detach or dismantle items from existing construction in a manner to prevent damage. Clean and prepare for reuse and reinstall where indicated.
E. Existing to Remain: Designation for existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.
1.03 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).
1.04 SUBMITTALS
A. Site Plan: Indicate:
1. Vegetation to be protected.
2. Areas for temporary construction and field offices.
3. Areas for temporary and permanent placement of removed materials.
B. Demolition Plan: Submit demolition plan as required by OSHA and local AHJs.
1. Indicate extent of demolition, removal sequencing, bracing and shoring, and location and construction of barricades and fences.
2. Summary of safety procedures.
C. Demolition firm qualifications.
D. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.
1.05 QUALITY ASSURANCE
A. Demolition Firm Qualifications: Company specializing in the type of work required.
1. Minimum of _____ years of documented experience.
PART 2 PRODUCTS—NOT USED
PART 3 EXECUTION
3.01 DEMOLITION
A. Remove portions of existing buildings in the following sequence:
1. Remove existing structure.
2. Remove paving and curbs required to accomplish new work.
3. Remove concrete slabs on grades indicated on drawings.
4. Remove fences and gates.
5. Remove other items indicated, for salvage, relocation, recycling, and.
3.02 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. Provide, erect, and maintain temporary barriers and security devices.
4. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
5. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
6. Do not close or obstruct roadways or sidewalks without permits from authority having jurisdiction.
7. Conduct operations to minimize obstruction of public and private entrances and exits. Do not obstruct required exits at any time.
8. 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. 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.
D. 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.
E. Hazardous Materials:
1. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCBs, and mercury.
2. Hazardous Materials: Comply with 29 CFR 1926 and state and local regulations.
F. Perform demolition in a manner that maximizes salvage and recycling of materials.
1. Dismantle existing construction and separate materials.
2. Set aside reusable, recyclable, and salvagable materials; store and deliver to collection point or point of reuse.
3.03 EXISTING UTILITIES
A. Protect existing utilities to remain from damage.
B. 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.
C. 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.
D. 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.
E. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.
F. Prepare building demolition areas by disconnecting and capping utilities outside the demolition zone. Identify and mark, in same manner as other utilities to remain, utilities to be reconnected.
3.04 SELECTIVE DEMOLITION FOR ALTERATIONS
A. Existing construction and drawings are based on casual field observation and existing record documents only.
1. Verify construction and utility arrangements as are indicated.
2. Report discrepancies to Architect 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 015000 in locations indicated on drawings.
2. Provide sound retardant partitions of construction and in locations indicated on drawings.
C. Maintain weatherproof exterior building enclosure, except for interruptions required for replacement or modifications; prevent water and humidity damage.

D. Remove existing work as indicated and required to accomplish new work.
1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction indicated.
2. Remove items indicated on drawings.
E. Equipment 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. Remove existing active systems and equipment to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
3. Verify that abandoned services serve only abandoned facilities before removal.
4. 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.
F. 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.
3.05 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 024119
SECTION 061053 MISCELLANEOUS ROUGH CARPENTRY
PART 1 GENERAL
1.01 SECTION INCLUDES
A. Preservative-treated wood materials.
B. Fire retardant treated wood materials.
C. Communications and electrical room mounting boards.
D. Concealed wood blocking, nailers, and supports.
E. Miscellaneous wood nailers, furring, and grounds.
1.02 REFERENCE STANDARDS
A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.
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; 2023.
D. AWPA U1 - Use Category System: Use Specification for Treated Wood; 2023.
E. PS 1 - Structural Plywood; 2019.
F. PS 20 - American National Standard for Plywood; 2021.
1.03 SUBMITTALS
A. Product Data: Provide technical data on wood preservative materials and application instructions.
1.04 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.
PART 2 PRODUCTS
2.01 GENERAL REQUIREMENTS
A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
1. If fire 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.
2. Grading Agency: Grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
2.02 DIMENSION LUMBER
A. Sizes: Nominal sizes as indicated on drawings, S4S.
B. Moisture Content: S-dry or MC19.
C. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
1. Lumber: S4S, No. 2 or Standard Grade.
2. Boards: Standard or No.3.
2.03 CONSTRUCTION PANELS
A. Communications and Electrical Room Mounting Boards: PS 1, A-D plywood, or medium density fiberboard; 3/4 inch (19 mm) thick; flame spread index of 25 or less, smoke developed index of 450 or less, when tested in accordance with ASTM E84.
2.04 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 conditions, unfinished steel elsewhere.
2.05 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.
2. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALCSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.
B. Fire Retardant Treatment:
1. Exterior Type: AWPA U1, Category UCFB, Commodity Specification H, 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 with test is extended for additional 20 minutes both before and after accelerated weathering test performed in accordance with ASTM D2898.
a. Kiln dry wood after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood.
b. Treat exterior rough carpentry.
c. Do not use treated wood in direct contact with ground.
2. Interior Type A: AWPA U1, Use Category UCFB, 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.
2.06 PRESERVATIVE TREATMENT
A. Preservative Pressure Treatment of Lumber Above Grade: AWPA U1, Use Category UC3B, Commodity Specification A.
a. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
B. Preservative Pressure Treatment of Plywood Above Grade: AWPA U1, Use Category UC2 and UC3B, Commodity Specification F.
a. Kiln dry plywood after treatment to maximum moisture content of 19 percent.
PART 3 EXECUTION
3.01 PREPARATION
A. Coordinate installation of rough carpentry members specified in other sections.
3.02 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: studs, 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.
3.03 BLOCKING, NAILERS, AND SUPPORTS
A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
B. In metal stud walls, provide continuous blocking around door and window openings for anchorage of frames, securely attached to stud owner.
3.04 ROOF-RELATED CARPENTRY
A. Coordinate installation of roofing carpentry with deck construction, framing of roof openings, and roofing assembly installation.
B. Provide wood curb at roof openings except where prefabricated curbs are specified and where specifically indicated otherwise. Form corners by alternating lapping side members.
3.05 INSTALLATION OF CONSTRUCTION PANELS
A. Communications and Electrical Room Mounting Boards: Secure with screws to studs with edges over firm bearing; space fasteners at maximum 24 inches (610 mm) on center on edges and into studs in field of board.
1. At fire-rated walls, install board over wall board indicated as part of the fire-rated assembly.
2. Where boards are installed over full floor-to-ceiling height, install with long edge of board parallel to studs.
3. Install adjacent boards without gaps.
4. Size and Location: As indicated on drawings.
3.06 SITE APPLIED WOOD TREATMENT
A. Apply preservative treatment compatible with factory applied treatment at site-sawn cuts, complying with manufacturer's instructions.
B. Allow preservative to dry prior to erecting members.
3.07 CLEANING
A. Waste Disposal: See Section 017419 - Construction Waste Management and Disposal.
1. Comply with applicable regulations.
2. Do not burn scrap on project site.
3. Do not burn scraps that have been pressure treated.
4. Do not send materials treated with pentachlorophenol, COA, or ACA to co-generation facilities or "waste-to-energy" facilities.
B. Product Data: Provide data for hardware accessories.
C. Prevent sawdust and wood shavings from entering the storm drainage system.
END OF SECTION 061053

SECTION 064100 ARCHITECTURAL WOOD CASEWORK
PART 1 GENERAL
1.01 SECTION INCLUDES
A. Manufacturer Qualifications:
1. Specially fabricated cabinet units.
B. Hardware.
1.02 REFERENCE STANDARDS
A. ANSI A208.2 - Medium Density Fiberboard (MDF) for Interior Applications; 2022.
B. AIA/AMCA/NA/ (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
C. ANIA/AMCA/ (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.
D. BHMA A156.9 - Cabinet Hardware; 2020.
E. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.
1.03 SUBMITTALS
A. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
1. Scale of Drawings: 1-1/2 inch to 1 foot (125 mm to 1 m), minimum.
B. Product Data: Provide data for hardware accessories.
C. Samples: Submit actual samples of architectural cabinet construction, minimum 12 inches (300 mm) square, illustrating proposed cabinet, countertop, and shelf unit substrate and finish.
D. Samples: Submit actual samples of proposed pulls, hinges, shelf standards, and locksets, demonstrating hardware design, quality, and finish.
1.04 QUALITY ASSURANCE
A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.
1. Company with at least one project in the past 5 years with value of woodwork within 20 percent of cost of woodwork for this Project.
2. Single source of responsibility for design and install this work from single fabricator.
1.05 DELIVERY, STORAGE, AND HANDLING
A. Product units from moisture damage.
1.06 FIELD CONDITIONS
A. During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.
PART 2 PRODUCTS
2.01 CABINETS
A. Quality Standard: Custom Grade, in accordance with AIA/AMCA/NA/ (AWS) or AIA/AMCA/NA/ (NAAWS), unless noted otherwise.
1. Finish - Exposed Exterior Surfaces: Decorative laminate.
2. Finish - Exposed Interior Surfaces: Decorative laminate.
3. Finish - Semi-Exposed Surfaces: Decorative laminate.
4. Finish - Concealed Surfaces: Manufacturer's option.
5. Door and Drawer Front Edge Profiles: Square edge with thick applied band.
6. Grained Face Layout for Cabinet and Door Fronts: Flush panel.
a. Custom Grade: Doors, drawer fronts and false fronts wood grain to run and match vertically within each cabinet unit.
b. Adjusted Shelf Loading: 40 psf (19.5 g/mq) max.
c. Deflection: L/144.
d. Cabinet Style: Flush overlay.
e. Cabinet Doors and Drawer Fronts: Flush style.
10. Drawer Side Construction: Multiple-dovetailed.
11. Drawer Construction Technique: Dovetail joints.
2.02 WOOD-BASED COMPONENTS
A. Wood fabricated from old growth timber is not permitted.
2.03 PANEL CORE MATERIALS
A. Panel Thickness: 1/2 inch (12.7 mm).
1. Grade: 115 moisture resistance: MR10.
2. Panel Thickness: 1 inch (25.4 mm).
2.04 THERMALLY FUSED LAMINATE PANELS
A. Thermally Fused Laminate (TFL): Melamine- or polyester-resin-saturated decorative papers; for fusion to composite wood substrates under heat and pressure.
1. Test in accordance with NEMA LD 3 Section 3.
2. Panel Core Substrate: Particleboard.
3. Color: White.
2.05 LAMINATE MATERIALS
A. Manufacturers:
1. Arborite: www.arborite.com/#file.
2. Formica Corporation: www.formica.com/#file.
3. Panolan Industries International, Inc.: www.panolan.com/#file.
4. Wilsonart LLC: www.wilsonart.com/#file.
B. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications.
C. Provide specific types as indicated.
1. Horizontal Systems: High-pressure laminate, 0.048 inch (1.22 mm) nominal thickness, colors as indicated, finish as indicated.
2. Vertical Surfaces: VGS, 0.028 inch (0.71 mm) nominal thickness, colors as indicated, finish as indicated.
3. Cabinet Liner: CLS, 0.020 inch (0.51 mm) nominal thickness, colors as indicated, finish as indicated.
4. Laminate Backer: BKU, 0.020 inch (0.51 mm) nominal thickness, undecorated, for application to concealed backside of panels faced with high pressure decorative laminate.
2.06 COUNTERTOPS
A. Countertops: See Section 123800.
2.07 ACCESSORIES
A. Adhesive: Type recommended by fabricator to suit application.
B. Plastic Edge Banding: Extruded PVC, flat shaped; smooth, shiny; self locking serrated tongue; of width to match component thickness.
1. Color: As selected by Architect from manufacturer's standard range.
C. Fasteners: Size and type to suit application.
D. Bolts, Nuts, Washers, Lags, and Screws: Of size and type to suit application; galvanized or chrome-plated finish in concealed locations and stainless steel or chrome-plated finish in exposed locations.
E. Concealed Joint Fasteners: Threaded steel.
F. Grommets: Standard plastic grommets for cut-outs, in color to match adjacent surface.
2.08 HARDWARE
A. Hardware: BHMA A156.9, types as recommended by fabricator for quality grade specified.
B. Metal 2-Shaped Wall Cabinet Support Clips: Paired, canted, structural anchorage components applied to back of cabinets and walls for wall cabinet mounting.
1. Material: Extruded Aluminum.
2. Products:
a. Eagle Mouldings, Inc.: Eagle Z-Clips: www.eagle-aluminum.com/#file.
C. Adjustable Shelf Supports: Standard side-mount system using recessed metal shelf standards and coordinated self rests, polished chrome finish, for nominal 1 inch (25 mm) spacing adjustments.
D. Drawer and Door Pulls: To BE MOCKET DP55A STAINLESS STEEL OR APPROVED EQUALS, must be ADA compliant.
E. Drawer Slides:
1. Type: Full extension.
2. Static Load Capacity: Commercial grade, heavy duty.
3. Mounting: Side mounted.
4. Stops: Integral type.
5. Features: Provide self closing/day closed type.
6. Manufacturers:
a. Accuride International, Inc.: www accuride.com/#file.
b. Blum, Inc.: www.blum.com/#file.
c. Grass America Inc.: www.grassusa.com/#file.
d. Hettich America, LP: www.hettich.com/#file.
e. Knappe & Vogt Manufacturing Company: www.knappeandvogt.com/#file.
f. Sugatsune America, Inc.: www.sugatsune.com/#file.
G. Hinges: Hinged style concealed self-closing type, steel with nickel-plated finish.
1. Manufacturers:
a. Blum, Inc.: www.blum.com/#file.
b. Grass America Inc.: www.grassusa.com/#file.
c. Hettich America, LP: www.hettich.com/#file.
d. Sugatsune America, Inc.: www.sugatsune.com/#file.
2.09 FABRICATION
A. Assembly: Shop assemble cabinets for delivery to site in units easily handled and to permit passage through building openings.
B. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.
C. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scriming and site cutting.
D. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufacturer's sizes. Fit corners and joints carefully; secure with concealed fasteners. Slightly bevel angles. Locate counter butt joints minimum 2 feet from sink cut-outs. (Locate counter butt joints minimum 600 mm from sink cut-outs.)
1. Apply laminate backing sheet to reverse side of plastic laminate finished surfaces.
2. Cap exposed plastic laminate finish edges with plastic laminate.
E. Mechanically fasten back splash to countertops as recommended by laminate manufacturer at 16 inches (400 mm) on center.
F. Provide cutouts for plumbing fixtures. Verify locations of cutouts from on-site dimensions. Prime paint cut edges.
PART 3 EXECUTION
3.01 EXAMINATION
A. Verify adequacy of backing and support framing.
B. Verify location and sizes of utility rough-in associated with work of this section.
3.02 INSTALLATION
A. Install work in accordance with AIA/AMCA/NA/ (AWS) or AIA/AMCA/NA/ (NAAWS) requirements for grade indicated.
B. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level.
C. Use fixture attachments in concealed locations for wall mounted components.
D. Use concealed joint fasteners to align and secure adjoining cabinet units.
E. Carefully scribe casework abutting other components with maximum gaps of 1/32 inch (0.79 mm). Do not use additional overlay trim for this purpose.
F. Secure cabinets to floor using appropriate angles and anchors.
G. Counterank anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.
3.03 ADJUSTING
A. Adjust leveling and sizes of utility rough-in associated with work of this section.
B. Adjust moving or operating parts to function smoothly and correctly.
3.04 CLEANING
A. Clean casework, counters, shelves, hardware, fittings, and fixtures.
END OF SECTION 064100

SECTION 073200 JOINT SEALANTS
PART 1 GENERAL
1.01 SECTION INCLUDES
A. Non-fire-rated sealant joint sealants.
B. Self-leveling pourable joint sealants.
C. Joint backings and accessories.
D. Owner-provided field quality control.
1.02 REFERENCE STANDARDS
A. ASTM C661 - Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer; 2015 (Reapproved 2022).
B. ASTM C834 - Standard Specification for Latex Sealants; 2017 (Reapproved 2023).
C. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2016.
D. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2019 (Reapproved 2023).
E. ASTM C1248 - Standard Test Method for Staining of Porous Substrate by Joint Sealants; 2022.
F. ASTM A153/A153M - Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints; 2019 (Reapproved 2020).
1.03 SUBMITTALS
A. Product Data: Submit manufacturer's technical data sheets for each product to be used; include the following:
1. Physical characteristics including physical properties, installation, hardness, cure time, and color availability.
2. List of backing materials approved for use with the specific product.
3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
4. Substrates the product should not be used on.
5. Substrates for which use of primer is required.
6. Substrates for which laboratory adhesion and/or compatibility testing is required.
7. Installation instructions, including precautions, limitations, and recommended backing materials and tools.
8. Size and actual backing material used.
9. Sample product warranty.
B. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation, and curing instructions.
C. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.
D. Samples for Verification: Where custom sealant color is specified, obtain directions from Architect and submit at least two physical samples for verification of color of each required sealant.
E. Preconstruction Laboratory Test Reports: Submit at least four weeks prior to start of installation.
F. Installation Plan: Prior to start of installation, submit field of Field Quality Control Log as required.
G. Preinstallation Field Adhesion Test Plan: Submit at least two weeks prior to start of installation.
H. Field Quality Control Plan: Submit at least two weeks prior to start of installation.
I. Preinstallation Field Adhesion Test Log: Submit field of Field Quality Control Log as required.
J. Installation Log: Submit filled-out log for each length or instance of sealant installed, within 10 days after completion of inspections/tests; include bagged test samples and photographic records, if any.
K. Field Quality Control Log: Submit filled-out log for each length or instance of sealant installed, within 10 days after completion of inspections/tests; include bagged test samples and photographic records, if any.
L. Manufacturer's qualification statement.
M. Installer's qualification statement.
N. Executed warranty.
1.04 QUALITY ASSURANCE
A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
B. Installer Qualifications: Company specializing in performing the work of this section and with at least three years of documented experience.
C. Installation Plan: Include schedule of sealed joints, including the following:
1. Joint width indicated in Contract Documents.
2. Joint depth indicated in Contract Documents; to face of backing material at centerline of joint.
3. Approximate date of installation, for evaluation of thermal movement influence.
4. Installation Log Form: Include the following data fields, with known information filled out.
a. Unique identification of each length or instance of sealant installed.
b. Location on project.
c. Substrates.
d. Sealant used.
e. Stated movement capability of sealant.
f. Primer to be used, or indicate no primer is used.
g. Size and actual backing material used.
h. Date of installation.
i. Name of installer.
j. Actual joint width; provide space to indicate maximum and minimum width.
k. Actual joint depth to face of backing material at centerline of joint.
l. Air temperature.
D. Preinstallation Field Adhesion Test Plan: Include destructive field adhesion testing of one sample of each combination of sealant type and substrate, except interior acrylic latex sealants, and include the following for each tested sample.
1. Identification of testing agency.
2. Preinstallation Field Adhesion Test Log Form: Include the following data fields, with known information filled out.
a. Substrate; if more than one type of substrate is involved in a single joint, provide two entries on form, for testing each substrate side separately.
b. Sealant used.
c. Location on project.
d. Sealant used.
e. Stated movement capability of sealant.
f. Test method used.
g. Date of installation of field sample to be tested.
h. Date of test.
i. Copy of test method documents.
j. Age of sealant upon date of testing.
K. Test results, modeled after the following form in the test method document.
1. Indicate use of photographic record of test.
E. Owner will employ an independent testing agency to perform the field quality control plan and testing as referenced in PART 3 of this section and as follows, to prepare and submit the field quality control plan and log, and to provide recommendations of remedies in the case of failure.
1. Contractor shall cooperate with testing agency and repair failures discovered and destructive test location damage.
F. Field Quality Control Plan:
1. Visual inspection of entire length of sealant joints.
2. Destructive field adhesion testing of sealant joints, except interior acrylic latex sealant.
a. For each different sealant, allow for one test every 100 feet (30 m) in the first 1,000 linear feet (305 linear m), and one test per 1,000 linear feet (305 linear m) thereafter, or once per floor on each evaluation.
b. If any failures occur in the first 1,000 linear feet (305 linear m), continue testing at frequency of one test per 500 linear feet (152 linear m) at no extra cost to Owner.
3. Field testing agency's qualifications.
4. Field Quality Control Log Form: Show same data fields as on Preinstallation Field Adhesion Test Log, with known information filled out and lines for multiple tests per sealant type and substrate, including visual inspection and specified field testing; allow for possibility that more tests than minimum specified may be necessary.
G. Field Adhesion Test Procedures:
1. Allow sealants to fully cure as recommended by manufacturer before testing.
2. Have a copy of the test method document available during tests.
3. Take photographs or make video records of each test, with joint identification provided in the photos/videos; for example, provide small easel whiteboard positioned next to joint.

4. Record the type of failure that occurred, other information required by test method, and the information required on the Field Quality Control Log.
5. When performing destructive tests, also inspect the opened joint for proper installation characteristics recommended by manufacturer, and report any deficiencies.
6. Deliver the samples removed during destructive tests in separate sealed plastic bags, identified with project, location, test date, and test results, to Owner.
7. If any combination of sealant type and substrate does not show evidence of minimum adhesion or shows cohesion failure before minimum adhesion, report results to Architect.
H. Destructive Field Adhesion Test: Test for adhesion in accordance with ASTM C1521, using Destructive Trail Procedure.
1. Sample: At least 18 inches (457 mm) long.
2. Minimum Elongation Without Adhesive Failure: Consider the tail at rest, not under any elongation stress; multiply the stated movement capability of the sealant in percent by two, then multiply 1 inch (25.4 mm) by that percentage; if adhesion failure occurs before the 1-inch mark is that distance from the tail end.
3. If either adhesive or cohesive failure occurs before minimum elongation, take necessary measures to correct conditions and retest; record each modification to products or installation procedures.
4. Record results on Field Quality Control Log.
5. Repair failed portions of joints.
I. Field Adhesion Tests of Joints: Test for adhesion using most appropriate method in accordance with ASTM C1521, or another applicable method as recommended by manufacturer.
1.05 WARRANTY
A. Manufacturer Warranty: Provide 2-year manufacturer warranty for installed sealants and accessories that fail to achieve a watertight seal, exhibit loss of adhesion or cohesion, or do not cure. Complete forms in Owner's name and register with manufacturer.
B. Extended Correction Period: Correct defective work within 2-year period commencing on Date of Substantial Completion.
PART 2 PRODUCTS
2.01 JOINT SEALANT APPLICATIONS
A. Scope:
1. Exterior Joints: NOT USED.
2. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items.
a. Joints between door, window, and other frames and adjacent construction.
b. In sound-rated wall and ceiling assemblies, gaps at electrical outlets, wiring devices, piping, and other openings; between wallcovering and other construction; and other flanking sound paths.
1) Exception: Through-penetrations in sound-rated assemblies that are also fire-rated.
3. Do not seal the following types of joints.
a. Intentional weep holes in masonry.
b. Joints indicated to be treated with manufactured expansion joint cover, or some other type of sealing device.
c. Joints where sealant is specified to be provided by manufacturer and not by product to be sealed.
d. Joints where installation of sealant is specified in another section.
e. Joints between suspended panel ceiling/gird and walls.
B. Exterior Joints: NOT USED.
C. Interior Joints: Use nonsag latex or silicone sealant, unless otherwise indicated.
1. Wall and Ceiling Joints in Nonwet Areas: Acrylic emulsion latex sealant.
2. Floor Joints in Wet Areas: Nonsag polyurethane non-traffic-grade sealant suitable for continuous liquid immersion.
3. Wall, Walling, and Floor Joints Where Tamper-Resistance is Required: Nonsag tamper-resistant silyl-terminated polyurethane sealant.
4. Joints between Tile in Wet Areas and Floors, Walls, and Ceilings: Mildew-resistant silicone sealant; white.
5. In Sound-Rated Assemblies: Acrylic emulsion latex sealant.
D. Interior Wet Areas: restrooms and kitchens; fixtures in wet areas include plumbing fixtures, countertops, cabinets, and other similar items.
E. Sound-Rated Assemblies: Walls and ceilings identified as STC-rated sound-rated, or acoustical.
F. Areas Where Tamper-Resistance is Required: As indicated on drawings.
2.02 JOINT SEALANTS - GENERAL
A. Sealants and Primers: Provide products with acceptable levels of volatile organic compound (VOC) content; see Section 016116.
B. Colors: As indicated on drawings.
2.03 NONSAG JOINT SEALANTS
A. Nonsagging Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
1. Movement Capability: Plus 100 percent and minus 50 percent, minimum.
2. Nonstaining to Porous Stone: Nonstaining to light-colored natural stone when tested in accordance with ASTM C1248.
3. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.
4. Color: To be selected by Architect from manufacturer's standard range.
5. Service Temperature Range: Minus 20 to 180 degrees F (Minus 25 to 82 degrees C).
B. Mildew-Resistant Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic.
1. Color: White.
2. Tamper and Silyl-Terminated Polyurethane (STPU) Sealant: ASTM C920, Grade NS, Uses M and A; single component; not expected to withstand continuous water immersion (water immersion).
1. Movement Capability: Plus and minus _____ percent, minimum.
2. Hardness Range: 25 to 55 Shore A, when tested in accordance with ASTM C661.
D. Nonsag Traffic-Grade Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multi-component; explicitly approved by manufacturer for continuous water immersion and traffic without the necessity to recess sealant below traffic surface.
1. Movement Capability: Plus and minus 25 percent, minimum.
2. Hardness Range: 20 to 30, Shore A, when tested in accordance with ASTM C661.
E. Acrylic Emulsion Latex: Water-based; ASTM C834, single component, nonstaining, nonbleeding, nonsagging; not intended for exterior use.
1. Color: To be selected by Architect from manufacturer's standard range.
F. Noncuring Butyl Sealant: Solvent-based; single component, nonsag, nonskinning, nonhardening, nonbleeding, nonvapour permeable; intended for fully concealed application.
2.04 SELF-LEVELING JOINT SEALANTS
A. Self-Leveling Polyurethane Sealant: ASTM C920, Grade P, Uses M and A; single or multicomponent; explicitly approved by manufacturer for use exposed; not expected to withstand continuous water immersion.
1. Movement Capability: Plus and minus 25 percent, minimum.
2. Hardness Range: 35 to 55, Shore A, when tested in accordance with ASTM C661.
3. Color: To be selected by Architect from manufacturer's standard range.
2.05 ACCESSORIES
A. Backer Rod: Cylindrical closed foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
1. Type for Joints Not Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type C - Closed Cell Polyethylene.
2. Type for Joints Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type C - Closed Cell Polyethylene.
B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.
C. Masking Tape: Self-adhesive, nonabsorbent, nonstaining, removable without adhesive residue, and compatible with surfaces adjacent to sealant.
D. Joint Cleaner: Noncorrosive and nonstaining type, recommended by sealant manufacturer; compatible with joint forming materials.
E. Primers: Type recommended by sealant manufacturer to suit application; nonstaining.
PART 3 EXECUTION
3.01 EXAMINATION
A. Verify that joints are ready to receive work.
B. Verify that backing materials are compatible with sealants.
C. Verify that backer rods are of the correct size.
D. Preinstallation Adhesion Testing: Submit field of Field Quality Control Log as required.
1. Test each sample as specified in PART 1 under QUALITY ASSURANCE article.
2. Notify Architect of date and time that tests will be performed, at least seven days in advance.
3. Record each test on Preinstallation Adhesion Test Log as indicated.
4. If any sample fails, review products and installation procedures, consult manufacturer, or take other measures that are necessary to ensure adhesion; retest in a different location; if unable to obtain satisfactory adhesion, report to Architect.
5. After completion of tests, remove remaining sample material and prepare joints for new sealant installation.
3.02 PREPARATION
A. Remove loose materials and foreign matter that could impair adhesion of sealant.
B. Clean joints, and primers as necessary, in accordance with manufacturer's instructions.
C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
D. Mask elements and surfaces adjacent to joints from

4. Mesker, domakaha Group: www.meskerengrpingroup.com/files.
5. Republic Doors, an Allegion brand: www.republicdoor.com/#file.
6. Steelcraft, an Allegion brand: www.allegion.com/#file.
- B. Detention Security Hollow Metal Doors and Frames:
1. Fleming Door Products, an Assa Abloy Group company: www.assaabloy.com/#file.
 2. Mesker, domakaha Group: www.meskerengrpingroup.com/#file.
- C. Hurricane-Resistant Hollow Metal Doors and Frames:
1. Krieger Specialty Products: www.kriegerproducts.com/#file.
 2. Premier Steel Doors and Frames: www.trustrimenter.com/#file.
 3. Republic Doors, an Allegion brand: www.republicdoor.com/#file.
- 2.02 PERFORMANCE REQUIREMENTS
- A. Requirements for Hollow Metal Doors and Frames:
1. Steel Sheet Piling: Minimum thickness of the coating: galvalnealed 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.
 2. Accessibility: Comply with ICA A117.1 and ADA Standards.
 3. Door Top Closures: Flush end closure channel, with top and door faces aligned.
 4. Door Edge Profile: Manufacturers standard for application indicated.
 5. Typical Door Face Sheets: Flush.
 6. Glazed Lites: Nonremovable stops on non-secure side; sizes and configurations as indicated on drawings. Style: Manufacturer's standard.
- B. Hardware Preparations, Selections and Locations: Comply with NAAMM HMMMA 830 and NAAMM HMMMA 831 or BHMA A156.115 and ANSI/AIA A250.8 (SDI-100) in accordance with specified requirements.
8. Zinc Coating for Typical Interior and/or Exterior Locations: Provide metal components zinc-coated (galvanized) and/or zinc-iron alloy-coated (galvalnealed) by the hot-dip process in accordance with ASTM A653/A653M, with manufacturer's standard coating thickness, unless noted otherwise for specific hollow metal doors and frames.
- a. Based on SDI Standards: Provide at least A40ZF120 (galvalnealed) when necessary, coating not required for typical interior door applications, and at least A60ZF180 (galvalnealed) for corrosive locations.
- B. 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 door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors, where two requirements conflict, comply with the most stringent.
- 2.03 HOLLOW METAL DOORS
- A. Door Finish: Factory primed and field finished.
- B. Exterior Door Finish:
1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
 - a. Level 3 - Extra Heavy-Duty.
 - b. Physical Performance Level A, 1,000,000 cycles; in accordance with ANSI/SDI A250.4.
 - c. Model 2 - Seamless.
 - d. Door Face Metal Thickness: 16 gauge, 0.053 inch (1.3 mm), minimum.
 - e. Zinc Coating: A60ZF180 galvalnealed coating ASTM A653/A653M.
2. Door Core Material: Polyurethane, 1.8 lb/cu ft minimum density.
- a. Foam Plastic Insulation: Manufacturer's standard board insulation with maximum flame spread index (FSI) of 75, and maximum smoke developed index (SDI) of 450 in accordance with ASTM E84, and completely enclosed within interior of door.
3. Door Thermal Resistance: R-Value of 8.7, minimum, for installed thickness of polyurethane.
4. Door Thickness: 1-3/4 inches (44.5 mm), nominal.
5. Weatherstripping: Refer to Section 087100.
- C. Interior Doors, Non-Fire-Rated:
1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
 - a. Level 2 - Heavy-duty.
 - b. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
 - c. Model 2 - Seamless.
 - d. Door Face Metal Thickness: 18 gauge, 0.042 inch (1.0 mm), minimum.
 - e. Door Core Material: Manufacturers standard core material/construction and in compliance with requirements.
 - f. Door Thickness: 1-3/4 inches (44.5 mm), nominal.
- D. Detention Security Doors, Interior:
1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
 - a. Level 4 - Maximum-duty.
 - b. Physical Performance Level A, 1,000,000 cycles; in accordance with ANSI/SDI A250.4.
 - c. Model 2 - Seamless.
 - d. Door Face Metal Thickness: 14 gauge, 0.067 inch (1.7 mm), minimum.
 - e. Door Core Material: Manufacturers standard core material/construction in compliance with requirements.
 - f. Door Core Material: As required to meet requirements indicated.
 - g. Hinge Rail and Reinforcement: Non-beveled edge, reinforced with continuous steel channel, 12 gauge, 0.093 inch (2.3 mm) minimum metal thickness, welded at 5 inch (127mm) on center maximum, and compatible with 4-1/2 inch (114 mm) full mortise template and continuous geared hinges.
- E. Hurricane-Resistant Doors:
1. Design and size door and frame components to withstand the specified load requirements without damage or permanent set, when tested in accordance with ASTM E330/E330M.
 - a. Design Wind Loads: Comply with requirements of authorities having jurisdiction.
 - b. Wind-Borne Debris Resistance: Door and frame components shall have FLA (PAD) approval for Large and Small Missile impact and pressure cycling at design wind loads.
 2. Hurricane Shelter Application: Comply with ICC 500 standard.
 - a. Commercial: Designed and tested to comply with FEMA P-361 community shelter door assembly guidelines.
 3. Door Core Material: Manufacturers standard core material/construction and in compliance with requirements.
 - f. Door Thickness: 1-3/4 inches (44.5 mm), nominal.
- 2.04 HOLLOW METAL FRAMES
- A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.
- B. Frame Finish: Factory primed and field finished.
- C. Exterior Door Frames: Full profile/continuously welded type.
1. Galvalizing: Components hot-dipped zinc-coated (galvalnealed) in accordance with ASTM A653/A653M, with A40ZF120
 2. Frame Metal Thickness: 14 gauge, 0.067 inch (1.7 mm), minimum.
 3. Weatherstripping: Separate, see Section 087100.
- D. Interior Door Frames, Non-Fire Rated: Full profile/continuously welded type.
1. Frame Metal Thickness: 16 gauge, 0.053 inch (1.3 mm), minimum.
 2. Interior Security-Resistant Door Frames: With same security resistance as door; face welded or full profile/continuously welded construction, ground smooth, fully prepared and reinforced for hardware installation.
 1. Frame Metal Thickness: 16 gauge, 0.053 inch (1.3 mm), minimum.
- F. Hurricane-Resistant Door Frames: With same hurricane resistance as door; face welded or full profile/continuously welded construction; ground smooth, fully prepared and reinforced for hardware installation.
- G. Frames for Wood Doors: Comply with frame requirements in accordance with corresponding door.
- H. Burwood Lites Glass in Frames: Conforming to applicable standards, and as indicated on drawings.
- I. Frames in Masonry Walls: Size to suit masonry coursing with head member 4 inches (102 mm) high to fill opening without cutting masonry units.
- J. Frames Wider than 48 inches (1219 mm): Reinforce with steel channel fitted tightly into frame head, flush with top.
- 2.05 FINISHES
- A. Primer: Anti-rust inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.
- B. Continuous Coatings: Gold-applied equal to 15 mil (0.015 inch (0.4 mm)) dry film thickness (DFT) per coat; provide inert-type noncorrosive compound free of asbestos fibers, sulfur compounds, and other deleterious impurities.
- 2.06 ACCESSORIES
- A. Door Window Frames: Door window frames with glazing security fasteners within door opening.
1. Size: As indicated on drawings.
 2. Frame Material: 16 gauge, 0.0476 inch (1.21 mm), galvanized steel.
 3. Glazing: As specified in Section 068000, factory installed.
- C. Removable Stops: Formed sheet steel, shape as indicated on drawings, imbedded or butted corners; prepared for countersink type lamper proof screws.
- D. Adhesives for Double Doors: Specified in Section 087100.
- E. Mechanical Fasteners for Concealed Metal-to-Metal Connections: Self-drilling, self-tapping, steel with electroplated zinc finish.
- F. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center of mullion of pairs, and two on each of pairs without center mullions.
- G. Temporary Frame Spreaders: Provide for factory- or shop-assembled frames.
- PART 3 EXECUTION
- 3.01 EXAMINATION
- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Verify that finished walls are in place to ensure proper door alignment.
- 3.02 INSTALLATION
- A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.
- B. Coordinate frame anchor placement with wall construction.
- C. Install door hardware as specified in Section 087100.
1. Comply with recommended practice for hardware placement of doors and frames in accordance with ANSI/SDI A250.6 or NAAMM HMMMA 861.
- D. Comply with glazing installation requirements of Section 088000.
- E. Coordinate installation of electrical connections to electrical hardware items.
- F. Touch up damaged factory finishes.
- 3.03 TOLERANCES
- A. Coordinate Between Door and Frame: Comply with related requirements of specified frame standards or custom guidelines indicated in accordance with SDI 117 or NAAMM HMMMA 861.
- B. Maximum Diagonal Distortion: 1/16 inch (1.6 mm) measured with straight edge, corner to corner.
- 3.04 ADJUSTING
- A. Adjust for smooth and balanced door movement.
- END OF SECTION 087113
- SECTION 081416 FLUSH WOOD DOORS
- PART 1 GENERAL
- 1.01 SECTION INCLUDES
- A. Flush wood doors; flush configuration; non-rated.
- 1.02 REFERENCE STANDARDS
- A. AIAWAMACWI (AWS): Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
- B. AIAWAMCWI (NAAWS) - North American Architectural Woodwork Standards, 2021, with Errata.
- 1.03 SUBMITTALS
- A. Product Data: Indicate door core materials and construction; veneer species, type and characteristics.
- B. Shop Drawings: Show doors and frames, elevations, sizes, hinges, swings, undercuts, beveling, blocking for hardware, factory machining, factory finishing, and other details.
- C. Samples: Submit two samples of door construction, nominal 8 by 10 inches (203 by 254 mm) in size cut from top corner of door.
- D. Samples: Submit two samples of door veneer, nominal 8 by 10 inches (203 by 254 mm) in size illustrating wood grain, stain color, and sheen.
- E. Manufacturer's Installation Instructions: Include specific installation instructions.
- F. Manufacturer's qualification statement.
- G. Installer's qualification statement.
- H. Specimen warranty.
- I. Warranty, executed in Owner's name.
- 1.04 QUALITY ASSURANCE
- A. Maintain one copy of the specified door quality standard on site for review during installation and finishing.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section, with not less than three years of documented experience.
- C. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than three years of documented experience.
- 1.05 DELIVERY, STORAGE, AND HANDLING
- A. Package, deliver and store doors in accordance with specified quality standard.
- B. Accept doors on site in manufacturer's packaging, and inspect for damage.
- C. Protect doors with resilient packaging sealed with heat shrink plastic; do not store in damp or wet areas or areas where sunlight might bleach veneer; seal top and bottom edges with tied steel if stored more than one week, and break seal on site to permit ventilation.
- 1.06 WARRANTY
- A. Manufacturer Warranty: Provide manufacturer's warranty on interior doors for the life of the installation. Complete forms in Owner's name and register with manufacturer.
1. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.
- PART 2 PRODUCTS
- 2.01 MANUFACTURERS
- A. Wood Veneer Faced Doors:
1. Krieger Specialty Products: www.kriegerproducts.com/#file.
 2. Masonite Architectural: www.architectural.masonite.com/#file.
 3. Oregon Door: www.oregondoor.com/#file.
 4. VT Industries, Inc.: www.vtindustries.com/#file.
- 2.02 DOORS AND PANELS
- A. Doors: See drawings for locations and additional requirements.
1. Quality Standard: Custom Grade, Heavy Duty performance, in accordance with AIAWAMACWI (AWS) or AIAWAMCWI (NAAWS), unless noted otherwise.
 2. Wood Veneer Faced Doors: 5-ply unless otherwise indicated.
- B. Interior Doors: 1-3/4 inches (44 mm) thick unless otherwise indicated; flush construction.
- a. Provide solid core doors at each location.
 - b. Wood veneer facing with factory transparent finish as indicated on drawings.
- 2.03 DOOR AND PANEL CORES
- A. Non-Rated Solid Core and 20 Minute Rated Doors: Type particleboard core (P), plys and faces as indicated.
- 2.04 DOOR FACING
- A. Veneer Facing for Transparent Finish: Natural birch, veneer grade in accordance with quality standard indicated, plain sliced (flat cut), with book match between leaves of veneer, running match of spliced veneer leaves assembled on door or panel face.
- 2.1. Turning Edges: Any option allowed by quality standard for grade.
- 2.2. Vertical Match: Each pair of doors and doors in close proximity to each other.
- 2.3. Facing Adhesive: Type I - waterproof.
- 2.06 DOOR CONSTRUCTION
- A. Fabricate doors in accordance with door quality standard specified.
- B. Cores Constructed with stiles and rails:
1. Provide solid blocks at lock edge for hardware reinforcement.
 2. Provide solid blocking for other thoughtbolted hardware.
- C. Factory machine doors for face allowing the other surface-mounted hardware, in accordance with hardware requirements and dimensions.
- D. Factory fabric doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.
- E. Provide edge clearances in accordance with the quality standard specified.
- 2.07 FINISHES - WOOD VENEER DOORS
- A. Finish work in accordance with AIAWAMACWI (AWS) or AIAWAMCWI (NAAWS), Section 5 - Finishing for grade specified and as follows:
- a. Transparent:
 - i. System - 11, Polyurethane, Catalyzed.
 - i. Stain: As selected by Architect.
 - i. Sheen: Flat.
 - b. Factory finish doors in accordance with approved sample.
 - c. Seal door top edge with color sealer to match door facing.
- 2.07 ACCESSORIES
- A. Hollow Metal Door Frames: See Section 087113.
- PART 3 EXECUTION
- 3.01 EXAMINATION
- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size of alignment.
- 3.02 INSTALLATION
- A. Install doors in accordance with manufacturer's instructions and specified quality standard.
- B. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is not correct, replace door.
- C. Use machine tools to cut or drill for hardware.
- D. Coordinate installation of doors with installation of frames and hardware.
- 3.03 TOLERANCES
- A. Comply with specified quality standard for fit and clearance tolerances.
- B. Comply with specified quality standard for telegraphing, warp, and squariness.
- 3.04 ADJUSTING
- A. Adjust doors for smooth and balanced door movement.
- B. Adjust doors for full closure.
- END OF SECTION 081416
- SECTION 087100 - DOOR HARDWARE
- PART 1 - GENERAL
- 1.1 RELATED DOCUMENTS
- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- 1.2 SUMMARY
- A. This Section includes commercial door hardware for the following:
- a. Swinging doors.
 - b. Door hardware includes, but is not necessarily limited to, the following:
 - i. Mechanical door hardware.
 - i. Cylinders specified for doors in other sections.
 - c. Related Sections:
 - i. Division 08 Section "Hollow Metal Doors and Frames".
 - i. Division 08 Section "Flush Wood Doors".
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
2. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
3. Door Hardware: Designed and tested to comply with FEMA P-361 community shelter door assembly guidelines.
4. Door Core Material: Manufacturers standard core material/construction and in compliance with requirements.
5. Door Thickness: 1-3/4 inches (44.5 mm), nominal.
6. Weatherstripping: Refer to Section 087100.
- 2.4 HOLLOW METAL FRAMES
- A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.
- B. Frame Finish: Factory primed and field finished.
- C. Exterior Door Frames: Full profile/continuously welded type.
1. Galvalizing: Components hot-dipped zinc-coated (galvalnealed) in accordance with ASTM A653/A653M, with A40ZF120
 2. Frame Metal Thickness: 14 gauge, 0.067 inch (1.7 mm), minimum.
 3. Weatherstripping: Separate, see Section 087100.
- D. Interior Door Frames, Non-Fire Rated: Full profile/continuously welded type.
1. Frame Metal Thickness: 16 gauge, 0.053 inch (1.3 mm), minimum.
 2. Interior Security-Resistant Door Frames: With same security resistance as door; face welded or full profile/continuously welded construction, ground smooth, fully prepared and reinforced for hardware installation.
 1. Frame Metal Thickness: 16 gauge, 0.053 inch (1.3 mm), minimum.
- F. Hurricane-Resistant Door Frames: With same hurricane resistance as door; face welded or full profile/continuously welded construction; ground smooth, fully prepared and reinforced for hardware installation.
- G. Frames for Wood Doors: Comply with frame requirements in accordance with corresponding door.
- H. Burwood Lites Glass in Frames: Conforming to applicable standards, and as indicated on drawings.
- I. Frames in Masonry Walls: Size to suit masonry coursing with head member 4 inches (102 mm) high to fill opening without cutting masonry units.
- J. Frames Wider than 48 inches (1219 mm): Reinforce with steel channel fitted tightly into frame head, flush with top.
- 2.05 FINISHES
- A. Primer: Anti-rust inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.
- B. Continuous Coatings: Gold-applied equal to 15 mil (0.015 inch (0.4 mm)) dry film thickness (DFT) per coat; provide inert-type noncorrosive compound free of asbestos fibers, sulfur compounds, and other deleterious impurities.
- 2.06 ACCESSORIES
- A. Door Window Frames: Door window frames with glazing security fasteners within door opening.
1. Size: As indicated on drawings.
 2. Frame Material: 16 gauge, 0.0476 inch (1.21 mm), galvanized steel.
 3. Glazing: As specified in Section 068000, factory installed.
- C. Removable Stops: Formed sheet steel, shape as indicated on drawings, imbedded or butted corners; prepared for countersink type lamper proof screws.
- D. Adhesives for Double Doors: Specified in Section 087100.
- E. Mechanical Fasteners for Concealed Metal-to-Metal Connections: Self-drilling, self-tapping, steel with electroplated zinc finish.
- F. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center of mullion of pairs, and two on each of pairs without center mullions.
- G. Temporary Frame Spreaders: Provide for factory- or shop-assembled frames.
- PART 3 EXECUTION
- 3.01 EXAMINATION
- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Verify that finished walls are in place to ensure proper door alignment.
- 3.02 INSTALLATION
- A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.
- B. Coordinate frame anchor placement with wall construction.
- C. Install door hardware as specified in Section 087100.
1. Comply with recommended practice for hardware placement of doors and frames in accordance with ANSI/SDI A250.6 or NAAMM HMMMA 861.
- D. Comply with glazing installation requirements of Section 088000.
- E. Coordinate installation of electrical connections to electrical hardware items.
- F. Touch up damaged factory finishes.
- 3.03 TOLERANCES
- A. Coordinate Between Door and Frame: Comply with related requirements of specified frame standards or custom guidelines indicated in accordance with SDI 117 or NAAMM HMMMA 861.
- B. Maximum Diagonal Distortion: 1/16 inch (1.6 mm) measured with straight edge, corner to corner.
- 3.04 ADJUSTING
- A. Adjust for smooth and balanced door movement.
- END OF SECTION 087113
- SECTION 081416 FLUSH WOOD DOORS
- PART 1 GENERAL
- 1.01 SECTION INCLUDES
- A. Flush wood doors; flush configuration; non-rated.
- 1.02 REFERENCE STANDARDS
- A. AIAWAMACWI (AWS): Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
- B. AIAWAMCWI (NAAWS) - North American Architectural Woodwork Standards, 2021, with Errata.
- 1.03 SUBMITTALS
- A. Product Data: Indicate door core materials and construction; veneer species, type and characteristics.
- B. Shop Drawings: Show doors and frames, elevations, sizes, hinges, swings, undercuts, beveling, blocking for hardware, factory machining, factory finishing, and other details.
- C. Samples: Submit two samples of door construction, nominal 8 by 10 inches (203 by 254 mm) in size cut from top corner of door.
- D. Samples: Submit two samples of door veneer, nominal 8 by 10 inches (203 by 254 mm) in size illustrating wood grain, stain color, and sheen.
- E. Manufacturer's Installation Instructions: Include specific installation instructions.
- F. Manufacturer's qualification statement.
- G. Installer's qualification statement.
- H. Specimen warranty.
- I. Warranty, executed in Owner's name.
- 1.04 QUALITY ASSURANCE
- A. Maintain one copy of the specified door quality standard on site for review during installation and finishing.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section, with not less than three years of documented experience.
- C. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than three years of documented experience.
- 1.05 DELIVERY, STORAGE, AND HANDLING
- A. Package, deliver and store doors in accordance with specified quality standard.
- B. Accept doors on site in manufacturer's packaging, and inspect for damage.
- C. Protect doors with resilient packaging sealed with heat shrink plastic; do not store in damp or wet areas or areas where sunlight might bleach veneer; seal top and bottom edges with tied steel if stored more than one week, and break seal on site to permit ventilation.
- 1.06 WARRANTY
- A. Manufacturer Warranty: Provide manufacturer's warranty on interior doors for the life of the installation. Complete forms in Owner's name and register with manufacturer.
1. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.
- PART 2 PRODUCTS
- 2.01 MANUFACTURERS
- A. Wood Veneer Faced Doors:
1. Krieger Specialty Products: www.kriegerproducts.com/#file.
 2. Masonite Architectural: www.architectural.masonite.com/#file.
 3. Oregon Door: www.oregondoor.com/#file.
 4. VT Industries, Inc.: www.vtindustries.com/#file.
- 2.02 DOORS AND PANELS
- A. Doors: See drawings for locations and additional requirements.
1. Quality Standard: Custom Grade, Heavy Duty performance, in accordance with AIAWAMACWI (AWS) or AIAWAMCWI (NAAWS), unless noted otherwise.
 2. Wood Veneer Faced Doors: 5-ply unless otherwise indicated.
- B. Interior Doors: 1-3/4 inches (44 mm) thick unless otherwise indicated; flush construction.
- a. Provide solid core doors at each location.
 - b. Wood veneer facing with factory transparent finish as indicated on drawings.
- 2.03 DOOR AND PANEL CORES
- A. Non-Rated Solid Core and 20 Minute Rated Doors: Type particleboard core (P), plys and faces as indicated.
- 2.04 DOOR FACING
- A. Veneer Facing for Transparent Finish: Natural birch, veneer grade in accordance with quality standard indicated, plain sliced (flat cut), with book match between leaves of veneer, running match of spliced veneer leaves assembled on door or panel face.
- 2.1. Turning Edges: Any option allowed by quality standard for grade.
- 2.2. Vertical Match: Each pair of doors and doors in close proximity to each other.
- 2.3. Facing Adhesive: Type I - waterproof.
- 2.06 DOOR CONSTRUCTION
- A. Fabricate doors in accordance with door quality standard specified.
- B. Cores Constructed with stiles and rails:
1. Provide solid blocks at lock edge for hardware reinforcement.
 2. Provide solid blocking for other thoughtbolted hardware.
- C. Factory machine doors for face allowing the other surface-mounted hardware, in accordance with hardware requirements and dimensions.
- D. Factory fabric doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.
- E. Provide edge clearances in accordance with the quality standard specified.
- 2.07 FINISHES - WOOD VENEER DOORS
- A. Finish work in accordance with AIAWAMACWI (AWS) or AIAWAMCWI (NAAWS), Section 5 - Finishing for grade specified and as follows:
- a. Transparent:
 - i. System - 11, Polyurethane, Catalyzed.
 - i. Stain: As selected by Architect.
 - i. Sheen: Flat.
 - b. Factory finish doors in accordance with approved sample.
 - c. Seal door top edge with color sealer to match door facing.
- 2.07 ACCESSORIES
- A. Hollow Metal Door Frames: See Section 087113.
- PART 3 EXECUTION
- 3.01 EXAMINATION
- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size of alignment.
- 3.02 INSTALLATION
- A. Install doors in accordance with manufacturer's instructions and specified quality standard.
- B. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is not correct, replace door.
- C. Use machine tools to cut or drill for hardware.
- D. Coordinate installation of doors with installation of frames and hardware.
- 3.03 TOLERANCES
- A. Comply with specified quality standard for fit and clearance tolerances.
- B. Comply with specified quality standard for telegraphing, warp, and squariness.
- 3.04 ADJUSTING
- A. Adjust doors for smooth and balanced door movement.
- B. Adjust doors for full closure.
- END OF SECTION 081416
- SECTION 087100 - DOOR HARDWARE
- PART 1 - GENERAL
- 1.1 RELATED DOCUMENTS
- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- 1.2 SUMMARY
- A. This Section includes commercial door hardware for the following:
- a. Swinging doors.
 - b. Door hardware includes, but is not necessarily limited to, the following:
 - i. Mechanical door hardware.
 - i. Cylinders specified for doors in other sections.
 - c. Related Sections:
 - i. Division 08 Section "Hollow Metal Doors and Frames".
 - i. Division 08 Section "Flush Wood Doors".
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
2. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
3. Door Hardware: Designed and tested to comply with FEMA P-361 community shelter door assembly guidelines.
4. Door Core Material: Manufacturers standard core material/construction and in compliance with requirements.
5. Door Thickness: 1-3/4 inches (44.5 mm), nominal.
6. Weatherstripping: Refer to Section 087100.
- 2.4 HOLLOW METAL FRAMES
- A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.
- B. Frame Finish: Factory primed and field finished.
- C. Exterior Door Frames: Full profile/continuously welded type.
1. Galvalizing: Components hot-dipped zinc-coated (galvalnealed) in accordance with ASTM A653/A653M, with A40ZF120
 2. Frame Metal Thickness: 14 gauge, 0.067 inch (1.7 mm), minimum.
 3. Weatherstripping: Separate, see Section 087100.
- D. Interior Door Frames, Non-Fire Rated: Full profile/continuously welded type.
1. Frame Metal Thickness: 16 gauge, 0.053 inch (1.3 mm), minimum.
 2. Interior Security-Resistant Door Frames: With same security resistance as door; face welded or full profile/continuously welded construction, ground smooth, fully prepared and reinforced for hardware installation.
 1. Frame Metal Thickness: 16 gauge, 0.053 inch (1.3 mm), minimum.
- F. Hurricane-Resistant Door Frames: With same hurricane resistance as door; face welded or full profile/continuously welded construction; ground smooth, fully prepared and reinforced for hardware installation.
- G. Frames for Wood Doors: Comply with frame requirements in accordance with corresponding door.
- H. Burwood Lites Glass in Frames: Conforming to applicable standards, and as indicated on drawings.
- I. Frames in Masonry Walls: Size to suit masonry coursing with head member 4 inches (102 mm) high to fill opening without cutting masonry units.
- J. Frames Wider than 48 inches (1219 mm): Reinforce with steel channel fitted tightly into frame head, flush with top.
- 2.05 FINISHES
- A. Primer: Anti-rust inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.
- B. Continuous Coatings: Gold-applied equal to 15 mil (0.015 inch (0.4 mm)) dry film thickness (DFT) per coat; provide inert-type noncorrosive compound free of asbestos fibers, sulfur compounds, and other deleterious impurities.
- 2.06 ACCESSORIES
- A. Door Window Frames: Door window frames with glazing security fasteners within door opening.
1. Size: As indicated on drawings.
 2. Frame Material: 16 gauge, 0.0476 inch (1.21 mm), galvanized steel.
 3. Glazing: As specified in Section 068000, factory installed.
- C. Removable Stops: Formed sheet steel, shape as indicated on drawings, imbedded or butted corners; prepared for countersink type lamper proof screws.
- D. Adhesives for Double Doors: Specified in Section 087100.
- E. Mechanical Fasteners for Concealed Metal-to-Metal Connections: Self-drilling, self-tapping, steel with electroplated zinc finish.
- F. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center of mullion of pairs, and two on each of pairs without center mullions.
- G. Temporary Frame Spreaders: Provide for factory- or shop-assembled frames.
- PART 3 EXECUTION
- 3.01 EXAMINATION
- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Verify that finished walls are in place to ensure proper door alignment.
- 3.02 INSTALLATION
- A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.
- B. Coordinate frame anchor placement with wall construction.
- C. Install door hardware as specified in Section 087100.
1. Comply with recommended practice for hardware placement of doors and frames in accordance with ANSI/SDI A250.6 or NAAMM HMMMA 861.
- D. Comply with glazing installation requirements of Section 088000.
- E. Coordinate installation of electrical connections to electrical hardware items.
- F. Touch up damaged factory finishes.
- 3.03 TOLERANCES
- A. Coordinate Between Door and Frame: Comply with related requirements of specified frame standards or custom guidelines indicated in accordance with SDI 117 or NAAMM HMMMA 861.
- B. Maximum Diagonal Distortion: 1/16 inch (1.6 mm) measured with straight edge, corner to corner.
- 3.04 ADJUSTING
- A. Adjust for smooth and balanced door movement.
- END OF SECTION 087113
- SECTION 081416 FLUSH WOOD DOORS
- PART 1 GENERAL
- 1.01 SECTION INCLUDES
- A. Flush wood doors; flush configuration; non-rated.
- 1.02 REFERENCE STANDARDS
- A. AIAWAMACWI (AWS): Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
- B. AIAWAMCWI (NAAWS) - North American Architectural Woodwork Standards, 2021, with Errata.
- 1.03 SUBMITTALS
- A. Product Data: Indicate door core materials and construction; veneer species, type and characteristics.
- B. Shop Drawings: Show doors and frames, elevations, sizes, hinges, swings, undercuts, beveling, blocking for hardware, factory machining, factory finishing, and other details.
- C. Samples: Submit two samples of door construction, nominal 8 by 10 inches (203 by 254 mm) in size cut from top corner of door.
- D. Samples: Submit two samples of door veneer, nominal 8 by 10 inches (203 by 254 mm) in size illustrating wood grain, stain color, and sheen.
- E. Manufacturer's Installation Instructions: Include specific installation instructions.
- F. Manufacturer's qualification statement.
- G. Installer's qualification statement.
- H. Specimen warranty.
- I. Warranty, executed in Owner's name.
- 1.04 QUALITY ASSURANCE
- A. Maintain one copy of the specified door quality standard on site for review during installation and finishing.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section, with not less than three years of documented experience.
- C. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than three years of documented experience.
- 1.05 DELIVERY, STORAGE, AND HANDLING
- A. Package, deliver and store doors in accordance with specified quality standard.
- B. Accept doors on site in manufacturer's packaging, and inspect for damage.
- C. Protect doors with resilient packaging sealed with heat shrink plastic; do not store in damp or wet areas or areas where sunlight might bleach veneer; seal top and bottom edges with tied steel if stored more than one week, and break seal on site to permit ventilation.
- 1.06 WARRANTY
- A. Manufacturer Warranty: Provide manufacturer's warranty on interior doors for the life of the installation. Complete forms in Owner's name and register with manufacturer.
1. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.
- PART 2 PRODUCTS
- 2.01 MANUFACTURERS
- A. Wood Veneer Faced Doors:
1. Krieger Specialty Products: www.kriegerproducts.com/#file.
 2. Masonite Architectural: www.architectural.masonite.com/#file.
 3. Oregon Door: www.oregondoor.com/#file.
 4. VT Industries, Inc.: www.vtindustries.com/#file.
- 2.02 DOORS AND PANELS
- A. Doors: See drawings for locations and additional requirements.
1. Quality Standard: Custom Grade, Heavy Duty performance, in accordance with AIAWAMACWI (AWS) or AIAWAMCWI (NAAWS), unless noted otherwise.
 2. Wood Veneer Faced Doors: 5-ply unless otherwise indicated.
- B. Interior Doors: 1-3/4 inches (44 mm) thick unless otherwise indicated; flush construction.
- a. Provide solid core doors at each location.
 - b. Wood veneer facing with factory transparent finish as indicated on drawings.
- 2.03 DOOR AND PANEL CORES
- A. Non-Rated Solid Core and 20 Minute Rated Doors: Type particleboard core (P), plys and faces as indicated.
- 2.04 DOOR FACING
- A. Veneer Facing for Transparent Finish: Natural birch, veneer grade in accordance with quality standard indicated, plain sliced (flat cut), with book match between leaves of veneer, running match of spliced veneer leaves assembled on door or panel face.
- 2.1. Turning Edges: Any option allowed by quality standard for grade.
- 2.2. Vertical Match: Each pair of doors and doors in close proximity to each other.
- 2.3. Facing Adhesive: Type I - waterproof.
- 2.06 DOOR CONSTRUCTION
- A. Fabricate doors in accordance with door quality standard specified.
- B. Cores Constructed with stiles and rails:
1. Provide solid blocks at lock edge for hardware reinforcement.
 2. Provide solid blocking for other thoughtbolted hardware.
- C. Factory machine doors for face allowing the other surface-mounted hardware, in accordance with hardware requirements and dimensions.
- D. Factory fabric doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.
- E. Provide edge clearances in accordance with the quality standard specified.
- 2.07 FINISHES - WOOD VENEER DOORS
- A. Finish work in accordance with AIAWAMACWI (AWS) or AIAWAMCWI (NAAWS), Section 5 - Finishing for grade specified and as follows:
- a. Transparent:
 - i. System - 11, Polyurethane, Catalyzed.
 - i. Stain: As selected by Architect.
 - i. Sheen: Flat.
 - b. Factory finish doors in accordance with approved sample.
 - c. Seal door top edge with color sealer to match door facing.
- 2.07 ACCESSORIES
- A. Hollow Metal Door Frames: See Section 087113.
- PART 3 EXECUTION
- 3.01 EXAMINATION
- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size of alignment.
- 3.02 INSTALLATION
- A. Install doors in accordance with manufacturer's instructions and specified quality standard.
- B. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is not correct, replace door.
- C. Use machine tools to cut or drill for hardware.
- D. Coordinate installation of doors with installation of frames and hardware.
- 3.03 TOLERANCES
- A. Comply with specified quality standard for fit and clearance tolerances.
- B. Comply with specified quality standard for telegraphing, warp, and squariness.
- 3.04 ADJUSTING
- A. Adjust doors for smooth and balanced door movement.
- B. Adjust doors for full closure.
- END OF SECTION 081416
- SECTION 087100 - DOOR HARDWARE
- PART 1 - GENERAL
- 1.1 RELATED DOCUMENTS
- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- 1.2 SUMMARY
- A. This Section includes commercial door hardware for the following:
- a. Swinging doors.
 - b. Door hardware includes, but is not necessarily limited to, the following:
 - i. Mechanical door hardware.
 - i. Cylinders specified for doors in other sections.
 - c. Related Sections:
 - i. Division 08 Section "Hollow Metal Doors and Frames".
 - i. Division 08 Section "Flush Wood Doors".
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
2. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
3. Door Hardware: Designed and tested to comply with FEMA P-361 community shelter door assembly guidelines.
4. Door Core Material: Manufacturers standard core material/construction and in compliance with requirements.
5. Door Thickness: 1-3/4 inches (44.5 mm), nominal.
6. Weatherstripping: Refer to Section 087100.
- 2.4 HOLLOW METAL FRAMES
- A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.
- B. Frame Finish: Factory primed and field finished.
- C. Exterior Door Frames: Full profile/continuously welded type.
1. Galvalizing: Components hot-dipped zinc-coated (galvalnealed) in accordance with ASTM A653/A653M, with A40ZF120
 2. Frame Metal Thickness: 14 gauge, 0.067 inch (1.7 mm), minimum.
 3. Weatherstripping: Separate, see Section 087100.
- D. Interior Door Frames, Non-Fire Rated: Full profile/continuously welded type.
1. Frame Metal Thickness: 16 gauge, 0.053 inch (1.3 mm), minimum.
 2. Interior Security-Resistant Door Frames: With same security resistance as door; face welded or full profile/continuously welded construction, ground smooth, fully prepared and

3.03 ACoustic ACCESSORIES INSTALLATION

A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and under electrical and mechanical items within partitions and light fixtures passing through partitions.

B. Sound Isolation Tape: Apply to vertical studs and top and bottom track/runners in accordance with manufacturer's instructions.

C. Acoustic Sealant: Install in accordance with manufacturer's instructions.

D. Place continuous bead at perimeter of each layer of gypsum board.

E. Seal around all penetrations by conduit, pipe, ducts, and rough-in boxes, except where firestopping is provided.

3.04 BOARD INSTALLATION

A. Single-Layer Nonrated: Install Gypsum Board, GA-216, and manufacturer's Instructions. Install to minimize butt ends, especially in highly visible locations.

B. Single-Layer Nonrated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.

C. Double-Layer, Nonrated: Install gypsum board for first layer, placed parallel to framing or furring members, with ends and edges occurring over firm bearing. Use the same gypsum board for 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.

D. Fire-Resistance-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.

E. Exterior Sheathing: Use gypsum board with minimum 5/8" thickness, installed vertically, with edges butt joint and corners cut over firm bearing.

F. Install joints, cut edges, and holes with water-resistant sealant.

G. Installation on Metal Framing: Use screws for attachment of gypsum board except face layer of nonrated double-layer assemblies, which may be installed with nails.

3.05 INSTALLATION OF TRIM AND ACCESSORIES

A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.

B. Not more than 30 feet (10 meters) apart on walls and ceilings over 50 feet (15 meters) long.

C. Corner Beads: Install at all external corners, using longest practical lengths.

D. Edge Trim: Install at all locations where gypsum board abuts dissimilar materials and as indicated.

3.06 JOINT TREATMENT

A. Glass Mat Face Gypsum Board and Exterior Glass Mat Face Sheathing: Use fiberglass joint tape, embed and finish with setting type compound.

B. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:

1. Level 5: Walls and ceilings to receive semi-gloss or gloss paint finish and other areas specifically indicated.

2. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.

3. Level 3: In utility areas, behind cabinetry, and on backing board to receive tile finish.

4. Level 1: Fire-resistance-rated wall areas above finished ceilings, which are not or not accessible in the completed construction.

C. Tape: Use standard joint compound on joints, edges, and areas to be prepared to receive finishes.

D. Feather coats: Joint compound so that camber is maximum 1/32 inch (0.8 mm).

E. Taping, filling, and sanding: are not required at base layer of double-layer applications.

F. Drivers: Level 5 finish: Apply spray applied high build drywall surface over entire surface after joints have been properly treated; achieve a flat and tool mark-free finish.

3.07 TOLERANCES

A. Maximum Installation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet (3 mm in 3 m) in any direction.

END OF SECTION 092116

SECTION 092216 NON-STRUCTURAL METAL FRAMING
PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Metal partition, ceiling, and soffit framing.
- B. Framing accessories.

1.02 REFERENCE STANDARDS

- A. ASTM A594/A594M - Standard Specification for Carbon Structural Steel, 2019.
- B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvalume) by the Hot-Dip Process, 2023.
- C. ASTM A1032/A1032M - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members, 2015.
- D. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members, 2018.
- E. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products, 2020.

1.03 SUBMITTALS

- A. Product Data: Provide data describing framing member materials and finish, product criteria, load charts, and limitations.
- B. Product Data: Provide manufacturer's data on partition head to structure connections, showing conditions with requirements.
- C. Shop Drawings:
 - 1. Indicate component details, stud layout, framed openings, anchorage to structure, acoustic details, type and location of fasteners, accessories, and items of other related work.
- D. Describe method for securing studs to tracks, splicing, and for blocking and reinforcement of framing connections.
- D. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing the work of this section with minimum five years documented experience and approved by manufacturer.

PART 2 PRODUCTS

- A. Metal Framing, Connectors, and Accessories:
 - 1. ClankDriTech: www.clankdrietch.com/#file.
 - 2. Jaimes Industries: www.jaimesind.com/#file.
 - 3. MarinoWARE: www.marinoware.com/#file.
 - 4. Restud: www.restud.com/#file.
 - 5. SCAFCO Corporation: www.scafco.com/#file.
 - 6. Substitutions: See Section 016000 - Product Requirements.

2.02 FRAMING MATERIALS

- A. Fire-Resistance-Rated Assemblies: As indicated on Drawings.
 - 1. Non-Load-Bearing Framing System Components: ASTM C645; galvanized steel sheet, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/240 or 5 p/8 (L/240 at 240 p/8).
 - 2. Studs: C-shaped with knurled or embossed faces.
 - 3. Runners: U-shaped, sized to match studs.
 - 4. Ceiling Channels: C-shaped.
 - 5. Furring:
 - a. Hat-shaped sections, minimum depth of 7/8 inch (22 mm).
 - b. Zee-shaped sections, minimum depth of 1 inch (25 mm).
 - 6. Resilient Furring Channels: Single or double leg configuration, 1/2 inch (12 mm) channel depth.
 - 7. Resilient Sound Isolation Clips: Steel resilient clips with molded rubber isolators; attaches to framing; improves noise isolation for areas between gypsum board assemblies and adjacent wall, ceiling, or floor.
 - 8. Partition Hent to Structure Connections: Provide track fastened to structure with legs of sufficient length to accommodate deflection, for friction fit of studs cut short and braced with continuous bridging on both sides.
 - 9. Deflection-Freestop Track: Intumescent strip factory-applied to track flanges expands when exposed to heat or flames to provide a perimeter seal joint.
- E. Non-Load-Bearing Framing Accessories:
 - 1. Ceiling Hangers: Type and size as specified in ASTM C754 for spacing required.
 - 2. Partial Hent Wall Framing Support: Provides stud reinforcement and anchored connection to floor.
 - 3. Materials: ASTM A653/A653M steel sheet support member with factory-applied zinc coating; 30x30x103M steel plate base.
 - 4. Framing Connectors: ASTM A653/A653M steel galvanized steel clips; secures cold rolled channel to wall studs for lateral bracing.
 - 4. Flexible Wood Backing: Fire-retardant-treated wood with steel sheet connectors.
 - 5. Stud-to-Track Connections: Provide clips to fasten studs to structure using hangers with

PART 3 EXECTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that rough-in utilities are in proper location.

3.02 INSTALLATION OF STUD FRAMES

A. Comply with requirements of ASTM C754.

B. Extend partition framing to structure in all locations.

C. Partitions Terminating at Ceiling. Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.

D. Partitions Terminating at Structure. Attach top runner to structure, maintain clearance between top of studs and structure, and brace both flanges of studs as indicated.

E. Align and secure top and bottom runners at 24 inches (600 mm) on center.

F. At partitions indicated with an acoustic rating:

1. Place one bead of acoustic sealant between runners and substrate, studs and adjacent construction.

2. Place one bead of acoustic sealant between studs and adjacent vertical surfaces.

G. Fit runners under and above openings; secure intermediate studs to same spacing as adjacent studs.

H. Install studs vertically at 16 inches (400 mm) on center.

I. Align stud with openings horizontally.

J. Secure studs to tracks using crimping method. Do not weld.

K. Stud spacing is not permitted.

L. Fabricate corners using a minimum of three studs.

M. Install double studs at wall openings, door and window jacks, not more than 2 inches (50 mm) from each side of openings.

N. Brace stud framing system rigidly.

O. Coordinate erection of studs with requirements of door frames, electrical supports and attachments.

P. Complete installation of bulkheads, anchors, and blocking with electrical, mechanical, and other work to be placed within or behind stud framing.

Q. Blocking: Use wood blocking secured to studs. Provide blocking for support of plumbing fixtures, toilet partitions, wall cabinets, toilet accessories, hardware, and opening frames.

R. Sound Location Clips: Mechanically attach to framing or structure with fasteners recommended by clip manufacturer. Install at spacing indicated on drawings.

S. Framing: Install at spacing and locations shown on drawings. Lap splices a minimum of 6 inches (150 mm).

3.04 CEILING AND SOFFIT FRAMING

- A. Comply with requirements of ASTM C754.
- B. Install furring after work above ceiling or soffit is complete. Coordinate the location of hangers with other work.
- C. Install furring independent of walls, columns, and above-ceiling work.
- D. Securely anchor hangers to structural members or embed them in structural slab. Space hangers as required to limit deflection to criteria indicated. Use rigid hangers at exterior soffits.
- E. Space main carrying channels at maximum 72 inches (1 800 mm) on center, and not more than 6 inches (150 mm) from wall surfaces.

Lat. bracing

- A. Securely fix carrying channels to hangers to prevent turning or twisting and to transmit full load to hangers.
- B. Place furring channels perpendicular to carrying channels, not more than 2 inches (50 mm) from perimeter walls, and rigidly secure. Lat. bracing
- H. Reinforce openings in suspension system that interrupt main carrying channels with furring channels with lateral channel bracing. Extend bracing minimum 24 inches (600 mm) past each opening.
- I. Laterally brace suspension system.

3.04 TOLERANCES

- A. Maximum Variation From True Position: 1/8 inch in 10 feet (3 mm in 3 m).
- B. Maximum Variation From Plumb: 1/8 inch in 10 feet (3 mm in 3 m).

END OF SECTION 092216

SECTION 933000 TILING
PART 1 GENERAL
 1.01 SECTION INCLUDES
 A. Tile for floor applications.
 B. Tile for wall applications.
 C. Cementitious backer board as tile substrate.
 D. Ceramic accessories.
 E. Non-ceramic trim.
 1.02 REFERENCE STANDARDS
 A. ANSI A108.1/18A.136 - American National Standard Specifications for the Installation of Ceramic Tile (Compendium); 2019.
 B. ANSI A108.1A - American National Standard Specifications for Installation of Ceramic Tile in the Wet-Set Method, with Portland Cement Mortar; 2017 (Reaffirmed 2022).
 C. ANSI A108.1b - Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set, Modified Dry-Set, or Improved Modified Dry-Set Cement Mortar.
 D. ANSI A108.1c - Contractor's Option: Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar or Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set, Modified Dry-Set, or Improved Modified Dry-Set Cement Mortar; 2019.
 E. ANSI A108.2 - American National Standard General Requirements: Materials, Environmental and Workmanship; 2019.
 F. ANSI A108.4 - American National Standard Specifications for Installation of Ceramic Tile with Organic Adhesive or Water Cleanable Tile-Setting Epoxy Adhesive.
 G. ANSI A108.5 - Setting of Ceramic Tile with Dry-Set Cement Mortar, Modified Dry-Set Cement Mortar, EGP (Exterior Gue Plywood) Modified Dry-Set Cement Mortar, or Improved Modified Dry-Set Cement Mortar; 2023.
 H. ANSI A108.16 - American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant, Water Cleanable Tile-Setting and -Grout Epoxy; 2023.
 I. ANSI A108.19 - American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant Furan Resin Mortar and Grout; 1999 (Reaffirmed 2024).
 J. ANSI A108.9 - American National Standard Specifications for Installation of Ceramic Tile with Modified Epoxy Emulsion Mortar/Grout; 2020.
 K. ANSI A108.10 - American National Standard Specifications for Installation of Grout in Tilework; 2017 (Reaffirmed 2022).
 L. ANSI A108.11 - American National Standard Specifications for Interior Installation of Cementitious Backer Units; 2018.
 M. ANSI A108.12 - Installation of Ceramic Tile with EGP (Exterior Gue Plywood) Modified Dry-Set Mortar; 2023.
 N. ANSI A108.13 - American National Standard for Installation of Lead Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone; 2008 (Reaffirmed 2021).
 O. ANSI A108.14 - American National Standard Specifications for Interior Installation of Gauged Porcelain Tiles and Gauged Porcelain Tile Panels/Slabs by the Thin-Bed Method Bonded with Modified Dry-Set Cement Mortar or Improved Modified Dry-Set Cement Mortar; 2020.
 P. ANSI A108.20 - American National Standard Specifications for Exterior Installation of Gauged Porcelain Tiles and Gauged Porcelain Tile Panels/Slabs by the Thin-Bed Method Bonded with Modified Dry-Set Cement Mortar or Improved Modified Dry-Set Cement Mortar; 2020.
 Q. ANSI A118.7 - American National Standard Specifications for High Performance Cement Grouts for Tile Installation; 2019.
 R. American National Standard Specifications for Test Methods and Specifications for Cementitious Backer Units; 2019.
 S. ANSI A118.2 - American National Standard Specifications for Crack Isolation Membranes for Thin-Set Ceramic Tile and Dimension Stone Installation; 2014 (Reaffirmed 2019).
 T. American National Standard Specifications for Improved Modified Dry-Set Cement Mortar; 2019.
 U. ASTM F710 - Standard Practices for Preparing Concrete Floors to Receive Resilient Flooring; 2022.

V. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.

W. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2019.

X. TCNA (HB) - Handbook for Ceramic, Glass, and Stone Tile Installation; 2023.

1.0.3 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene a preinstallation meeting one week before starting work in this section; require attendance by affected installers.

1.0.4 SUBMITTALS

A. Product Data: Provide manufacturer's data sheets on tile, mortar, grout, and accessories. Include instructions for using grouts and adhesives.

B. Shop Drawings: Indicate tile layout, patterns, color arrangement, perimeter conditions, junctions with dissimilar materials, control and expansion joints, ceramic accessories, and setting details.

C. Samples: Mount tile and apply grout on two plywood panels, minimum 18 by 18 inches (457 by 457 mm) in size illustrating pattern, color variations, and grout joint size variations.

D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

E. Master Grade Certificate: Submit for each type of tile, signed by the tile manufacturer and tile installer.

F. Installer's Qualification Statement

1. Submit documentation of National Tile Contractors Association (NTCA) or Tile Contractors' Association of America (TCAA) accreditation.

2. Submit documentation of completion of apprenticeship and certification programs.

3. Submit documentation of Natural Stone Institute Accreditation.

G. Maintenance Data: Include recommended cleaning methods, cleaning materials, and stain removal methods.

1. Maintenance Manual: Furnish the following for Owner's use: maintenance of project.

H. Extra Tile: 10 square feet (1 square meters) of each size, color, and surface finish combination.

1.0.5 MATERIALS

A. Maintain one copy of ANSI A108/A118/A136 and TCNA (HB) on site.

B. Manufacturer Qualifications: Company specializing in manufacturing the types of products specified in this section, with minimum five years of documented experience.

C. Installer Qualifications: Natural Stone Institute (NSI) Accredited Commercial B Contractor (light commercial); www.naturalstoneinstitute.org/nsi.

D. Installer Qualifications

1. Company specializing in performing tile installation, with minimum of five years of documented experience.

a. Accredited Five-Star member of the National Tile Contractors Association (NTCA) or Trowel of Excellence member of the Tile Contractors' Association of America (TCAA).

2. Installer Certification

a. Ceramic Tile Education Foundation (CTEF): Certified Tile Installer (CTI).

b. Apprenticeship Program: Installer has achieved Journeyworker status through an apprenticeship from the International Union of Bricklayers and Allied Craftworkers (IBAC) or a U.S. Department of Labor (DOL)-recognized program.

c. Certified Tile Contractors (CTC): Certification in the field of tile installation, membranes, and grout.

d. International Masonry Training and Education Foundation (IMTEF): Superior Certification Program (SCP).

- A. Construct tile mock-up where indicated on drawings, incorporating all components specified for the location.
 - 1. Minimum Size of Mock-Up: 5 ft by 5 ft (1524 mm by 1524 mm) minimum, for each type of tile.
 - 2. Demise mock-up when directed by Architect, and remove debris from the site.
- 1.07 DELIVERY, STORAGE, AND HANDLING
 - A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.
- 1.08 FIELD CONDITIONS
 - A. Do not install solvent-based products in an unventilated environment.
 - B. Maintain ambient and substrate temperature above 50 degrees F. (10 degrees C) and below 100 degrees F. (38 degrees C) during installation and curing of setting materials.
- PART 2 PRODUCTS
 - 2.01 TILE
 - A. Manufacturers:
 - 1. Basis of Design: As indicated on drawings.
 - 2. Substitutions: See Section 01600 - Product Requirements.
 - 2.02 TRIM AND ACCESSORIES
 - A. Ceramic Trim: Matching bullnose and cove base ceramic shapes in sizes coordinated with field tile.
 - 1. Applications:
 - a. Open Edges: Bullnose.
 - b. Inside Corners: Jointed.
 - c. Floor to Wall Joints: Cove base.
 - 2. Manufacturers: Same as for tile.
 - B. Non-Ceramic Trim: Satin natural anodized extruded aluminum, style and dimensions as indicated on drawings, for setting using tile mortar or adhesive.
 - 1. Applications:
 - a. Open edges of wall tile.
 - b. Open edges of floor tile.
 - c. Wall corners, outside and inside.
 - d. Transition between floor finishes of different heights.
 - e. Thresholds at door openings.
 - f. Expansion and control joints, floor and wall.
 - g. Floor to wall joints.
 - h. Borders and other trim as indicated on drawings.
 - 2. Manufacturers:
 - a. Basis of Design: Schluter-Systems: www.schluter.com/81e.

2.03 SETTING MATERIALS

A. Provide setting and grout materials from same manufacturer.

B. Manufacturers:

1. ARDEX Engineered Cements: [www.ardecxemics.com/!\\$file](http://www.ardecxemics.com/!$file)

2. CUSTUM BUILDING PRODUCTS: [www.custumbuildingproducts.com/!\\$file](http://www.custumbuildingproducts.com/!$file)

3. LATCRETE International, Inc: [www.latcrete.com/!\\$file](http://www.latcrete.com/!$file)

4. Substitutions: See Section 016000 - Product Requirements

C. Improved Latex-Portland Cement Mortar Bond Coat: ANSI A118.15

1. Applications: Use this type of bond coat where Large and Heavy LITE (LHT) mortar is indicated.

2. Products:

a. ARDEX Engineered Cements: S 28: [www.ardecxemics.com/!\\$file](http://www.ardecxemics.com/!$file)

b. CUSTUM BUILDING PRODUCTS: Complete Contact Form 17 Premium Rapid Setting Large Format LITE Mortar, with Multi-Surface Bonding Primer: [www.custumbuildingproducts.com/!\\$file](http://www.custumbuildingproducts.com/!$file)

c. LATCRETE International, Inc: MULTIMAX LITE: [www.latcrete.com/!\\$file](http://www.latcrete.com/!$file)

d. Substitutions: See Section 016000 - Product Requirements

- 2.0 GROUITS
 - A. Provide setting and grout materials from same manufacturer.
 - B. Manufacturers:
 - 1. ARDEX Engineered Cement: www.ardexcement.com/#file.
 - 2. Custom Building Products: www.custombuildingproducts.com/#file.
 - 3. LATICRETE International Inc: www.laticrete.com/#file.
 - 4. Substitutions: See Section 016000 - Unit/Pavement Requirements.
 - C. High Performance Polymer Modified Grout: ANSI A118.7 polymer modified cement grout.
 - Applications: Use this type of grout where indicated and where no other type of grout is indicated.
 - Use unsanded grout for joints 1/8 inch (3.2 mm) wide and larger; use unsanded grout for joints less than 1/8 inch (3.2 mm) wide.
 - D. Color(s): As indicated on drawings.
 - E. Products:
 - a. ARDEX Engineered Cement: www.ardexcement.com/#file.
 - b. Custom Building Products: Prism Color Consistent Grout: www.custombuildingproducts.com/#file.
 - c. LATICRETE International Inc: LATICRETE PERMA-BOND GR Grout: www.laticrete.com/#file.

2.05 Materials: See Section 01000 - Product Requirements.

A. Tile Sealant: Gummalse, silicone, silicized acrylic, or urethane sealant; moisture and mildew resistant type.

1. Applications: In and around plumbing fixtures.

2. Colors(s): As selected by Architect from manufacturer's full line.

3. Products:

a. ARDEX Engineered Cement: ARDEX-SX. www.ardexcement.com/#file.

b. Custom Building Products: Commercial 100% Silicone. www.custombuildingproducts.com/#file.

c. LATICRETE International Inc.: LATICRETE LATA-SIL. www.laticrete.com/#file.

4. Substitutions: See Section 01000 - Product Requirements.

B. Grout Sealant: Liquid-applied, moisture and stain protection for existing or new Portland cement grout.

1. Composition: Water-based colorless silicone.

2. Colors(s): As selected by Architect from manufacturer's full line.

C. Grout Release: Temporary, water-soluble pre-grout coating.

1. Products:

a. Custom Building Products: Aqua Mix Grout Release. www.custombuildingproducts.com/#file.

b. Substitutions: See Section 01000 - Product Requirements.

2. CUSTOM ACCESSORIES AND SUBSTITUTIONS:

A. Concrete Floor Slab Crack Isolation Membrane: Material complying with ANSI A118.2 not intended as waterproofing.

1. Crack Resistance: No failure at 1/8 inch (3.2 mm) gap, minimum.

2. Fluid or Trowel Applied Types:

a. Material: Synthetic rubber or Acrylic.

b. Thickness: 20 mils (0.5 mm), maximum.

3. Products:

1) LATICRETE International, Inc.; LATICRETE 916 92 Anti-Fracture Membrane: www.laticrete.com/Intl

2) Substitutions: See Section 016000 - Concrete

B. Backer Board: Cementitious type complying with ANSI A118.9, high density, glass fiber reinforced, 7/16 inch thick; 2 inch (51 mm) wide coated glass fiber tape for joints and corners.

1. Products:

a. Custom Building Products; WonderBoard Lite Backerboard: www.custombuildingproducts.com/Intl

PART 3 EXECUTION
3.01 EXAMINATION
 A. Verify that subfloor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive tile.
 B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive tile.
 C. Verify that subfloor surfaces are dust free and free of substances that could impair bonding of setting materials to subfloor surfaces.
 D. Cementitious Subfloor Surfaces: Verify that substrates are ready for tile installation by testing for moisture and alkalinity (pH).
 1. Test as follows:
 a. Alkalinity (pH): ASTM F710.
 b. Internal Relative Humidity: ASTM F2170.
 c. Moisture Vapor Emission: ASTM F1869.
 2. Obtain instructions for test results or when not within limits recommended by tiling material manufacturer and setting material manufacturer.

4. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

- A. Protect surrounding work from damage.
- B. Vacuum clean surfaces and damp clean.
- C. Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.
- D. Install backer board in accordance with ANSI A108.1 and 1 board manufacturer's instructions. Tape joints and corners, cover with skim coat of setting material to a feather edge.
- E. Prepare substrate surfaces for adhesive installation in accordance with adhesive manufacturer's instructions.

3.03 INSTALLATION - GENERAL

- A. Install tile and grout in accordance with applicable requirements of ANSI A108. 1A through ANSI A108.20, manufacturer's instructions, and TCNA (HB) recommendations.
- B. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.
- C. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neat. Avoid floor joints.
- D. Place tile joints uniform in width, satisfying in tolerance allowed in place. Make floor joints between walls, cracks, crosses, miter or excess grout, or too little grout.
- E. Form internal angles square and external angles bulboused.
- F. Install non-ceramic trim in accordance with manufacturer's instructions.
- G. Sound tile after setting. Replace hollow sounding units.
- H. Keep control and expansion joints free of mortar, grout, and adhesive.
- I. Prior to grouting, allow installation to completely cure, minimum of 48 hours.
- J. Grout tile joints unless otherwise indicated. Use latex-portland cement grout unless otherwise indicated.
- K. At changes in plane and below tile-control joints, use the sealant instead of grout, with either bond breaker tape or backer rod as appropriate to prevent three sided bonding.

3.04 INSTALLATION - FLOORS - THIN-SET METHODS

- A. Over interior concrete substrates, install in accordance with TCNA (HB) Method F113, dry-set or latex-Portland cement bond coat, with high modulus epoxy adhesive, unless otherwise indicated.
- B. Use uncoupling membrane under all the tiles unless otherwise underlayment is indicated.
- C. Install tile to floor movement joints in accordance with TCNA (HB) Methods as follows:
 - 1. Control or Contraction Joints: EJ171B.
 - 2. Expansion Joints: EJ171D.
 - 3. Perimeter Joints: EJ171G.

3.05 INSTALLATION - WALL TILE

- A. Over cementitious backer units on studs, install in accordance with TCNA (HB) Method W244, using membrane at showers in accordance with TCNA (HB) Method W244F.

3.06 CLEANING

- A. Clean tile and grout surfaces.

3.07 PROTECTION

- A. Do not permit traffic over finished floor surface for 4 days after installation.

END OF SECTION 093000

SECTION 09510 ACoustical Ceilings

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Suspended metal grid ceiling system.
- B. Acoustical units.
- C. Supplementary insulation above ceiling.

1.02 REFERENCE STANDARDS

- A. ASTM C636/C636M - Standard Specification for Installation of Metal Suspension Systems for Acoustical Tile and Lay-in Panels: 2019.
- B. ASTM E580/E580M - Standard Specification for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels: 2019.
- C. Subject to Earthquake Ground Motions; 2022.
- D. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2023.

1.03 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.

1.04 SUBMITTALS

- A. Product Data: Provide data on suspension system components and acoustical units.
- B. Drawings: Indicate grid layout and related dimensions.
- C. Evaluation Service Reports: Show compliance with specified requirements.
- D. Samples: Submit two samples 6 by 6 inch (152 by 152 mm) in size illustrating material and finish of acoustical units.
- E. Manufacturer's Installation Instructions: Include special procedures and preconditions requiring special attention.
- F. Designer's qualification statement.
- G. Manufacturer's qualification statement.
- H. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

- 1. Extra Acoustical Units: Quantity equal to 5 percent of total installed.

1.05 QUALITY ASSURANCE

- A. Designer Qualifications for Seismic Design: Perform under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed at the State in which the Project is located.
- B. Designation of Inspection Agency: Select a firm experienced in inspecting construction. Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- C. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.06 FIELD CONDITIONS

- A. Maintain indoor temperature of minimum 60 degrees F (16 degrees C), and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

2.01 MANUFACTURERS

- A. Acoustic Panels

 - 1. Armstrong World Industries, Inc. www.armstrongceilings.com/usa.
 - 2. Rockfon: www.rockfon.com/usa.
 - 3. USG Corporation: www.usg.com/ceilings/usa.
 - 4. Substitutions: See Section 016000 - Product Requirements.

- B. Suspension Systems

 - 1. Same as for acoustical units.
 - 2. Substitutions: See Section 016000 - Product Requirements.

2.02 ACoustical UNITS

- A. Acoustical Units - General: ASTM E1264, Class A.
- B. Acoustical Panels: Painted mineral fiber, with the following characteristics:

 - 1. Basis of Design: As indicated on the Drawings.
 - 2. Profile: Tee, 15/16 inch (24 mm) face width.
 - 3. Color: White.
 - 4. Suspension System: 15/16-inch (24 mm) exposed grid.

- C. Suspension System (SUSPENSION SYSTEMS)

 - A. Metal Suspension Systems - General: Complying with ASTM C636/C636M; the die cut interlocking components, with perimeter molding, hold-down clips, and spacers as required.
 - B. Exposed Suspension Systems: Hot-dipped galvanized steel with steel cap.

 - 1. Structural Classification: Intermediate-duty, when tested in accordance with ASTM C635/C635M.
 - 2. Profile: Tee, 15/16 inch (24 mm) face width.
 - 3. Finish: Baked enamel.
 - 4. Color: White.

 - C. Suspension Systems for ACC-1 and ACC-2: As specified in this Section.

2.04 ACCESSORIES

- A. Supply Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system features and requirement specified.
- B. Hanger Wire: 12 gauge, 0.08 inch (2 mm) galvanized steel wire.
- C. Hold-Down Clips: Manufacturer's standard clips to suit application.
- D. Seismic Clips: Manufacturer's standard clips for seismic conditions and to suit application.
- E. Perimeter Moldings: Same metal and finish as grid.

 - 1. Size: As required for installation conditions and specified Seismic Design Category.
 - 2. Profile: L-shaped, for mounting at same elevation as face of grid.

- F. Acoustical Sealant For Perimeter Moldings: Non-hardening, non-skimming, for use in conjunction with suspended ceiling and acoustical units.

3.01 EXECUTION

- A. Thickness: 25 (1 mm).
- B. Touch-up Paint: Type and color to match acoustical and grid units.

3.02 PREPARATION

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

3.03 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. Rigidity secure system, including integral mechanical and electrical components, for maximum deflection of 1/300.
- C. Lay out system to a balanced grid design with edge units no less than 50 percent of acoustical unit size.
- D. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.

 - 1. Install in bed of acoustical sealant.
 - 2. Use longest practical lengths.
 - 3. Overlap and level corners.

- E. Suspension System, Non-Seismic: Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid vertical displacement of face plane of adjacent members.
- F. Seismic Design System: Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid vertical displacement of face plane of adjacent members.

 - 1. Maintain a 3/8 inch (9 mm) clearance between grid ends and hangers.
 - 2. Where grid ends and other members are not equal 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 fasteners used in supplying hangers/ hangers located within 6 inches (152 mm) of each corner, or support components independently.
- I. Do not accidentally load system or induce rotation of runners.
- J. Run expansion joints at designated points to accommodate plus or minus 1 inch (25 mm) movement. Maintain visual closure.

3.04 INSTALLATION - ACoustical UNITS

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Run expansion joints at designated points to accommodate plus or minus 1 inch (25 mm) movement. Maintain visual closure.
- C. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- 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. Cut to fit irregular grid and perimeter edge trim.
 - 2. Make field cut edges of same profile as face edge layers.
 - 3. Double cut and field point exposed reveal edges.
 - 4. Where round obstructions occur, provide preformed closures to match perimeter molding.
 - 5. Install hold-down clips for a distance of 48 inches (1219 mm) either side of acoustical panels as indicated.
 - 6. Install hold-down clips on panels within 20 ft (6 m) of an exterior door.
 - 7. Coordinate with fire detection and suppression systems and to comply with applicable codes.

3.05 TOLERANCES

- A. Maximum Variation from Flat and Level Surfaces: 1/8 inch in 10 feet (3 mm in 3 m).
- B. Maximum Variation from Plumb of Grid Members: Caused by Eccentric Loads: 2 degrees.

3.06 CLEANING

- A. Clean surfaces.
- B. Replace damaged or abraded components.

END OF SECTION (GENERAL SECTION)

SECTION 06500 RESILIENT FLOORING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Resilient tile flooring
- B. Resilient base
- C. Installation accessories.

1.02 REFERENCE STANDARDS

- A. ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source; 2019a, with Editorial Revision (2020).
- B. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2022.
- C. ASTM F1056 - Standard Specification for Vinyl Composition Floor Tile; 2004 (Reapproved 2018).
- D. ASTM F1861 - Standard Specification for Resilient Wall Base; 2021.
- E. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2010.
- F. ASTM F2210 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2019a.
- G. NFPA 253 - Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source; 2020.

1.03 SUBMITTALS

- A. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.
- B. Shop Drawings: Indicate seaming plans and floor patterns.
- C. Verification Samples: Submit two samples, 12 by 12 inch (305 by 305 mm) in size illustrating color and pattern for each resilient flooring product specified.
- D. Concrete Subfloor Test Report: Submit a copy of the moisture and alkalinity (pH) test reports.
- E. Certification: Prior to installation of flooring, submit written certification by flooring manufacturer and adhesive manufacturer that condition of subfloor is acceptable.
- F. Installer's Qualification Statement.
- G. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.
- H. Maintenance Materials: Furnish the following for Owner's use in maintenance of product.

- 1. One full, unopened box of each type and color.
- 2. Extra wall Base: 100 linear feet (30.4 linear meters) of each type and color.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing specified flooring with minimum three years documented experience.
- B. Installer Qualifications: Company specializing in installing specified flooring with minimum three years documented experience.
- C. Testing Agency Qualifications: Independent firm specializing in performing concrete slab moisture testing and inspections of the type specified in this section.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Upon receipt, immediately remove any shrink-wrap and check materials for damage and the correct style, color, quantity and run numbers.
- B. Store all materials off of the floor in an acclimatized, weather-tight space.
- C. Maintain temperature in storage area between 55 degrees F (13 degrees C) and 90 degrees F (72 degrees C).
- D. Protect roll materials from damage by storing on end.
- E. Do not double stack pallets.

1.06 FIELD CONDITIONS

- A. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F (21 degrees C) to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F (13 degrees C).

PART 2 PRODUCTS

2.01 PLANK TILE FLOORING

- A. Vinyl Plank Tile: Printed film type, with transparent or translucent wear layer; acoustic interlayer or backing.

- 1. Manufacturers:
- a. Basis of Design: As indicated on D
 - b. Substitutions: See Section 01600 - Product Requirements.
- 2. Minimum Requirements: Comply with ASTM F1066, of Class corresponding to type specified.
- 3. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E648 or NFPA 253.
- 4. Total Thickness: 0.125 inch (3.2 mm).
- 5. Color and Pattern: As indicated on drawings.

2.02 RESILIENT BASE

- A. Resilient Base: ASTM F1861, Type TBS, rubber, vulcanized thermostat. Style B, Cove.

- 1. Manufacturers:
- a. Basis of Design: As indicated on Drawings.
 - b. Substitutions: See Section 01600 - Product Requirements.
- 2. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E648 or NFPA 253.
- 3. Height: 4 inches (100 mm).
- 4. Thickness: 0.125 inch (3.2 mm).
- 5. Finish: Satin
- 6. Length: Roll.
- 7. Color: As indicated on drawings.

2. ACCESSORIES

A. Subfloor Finish: White premix latex, type recommended by adhesive material manufacturer.

B. Primers, Adhesives, and Seam Sealers: Waterproof, types recommended by flooring manufacturer.

C. Adhesive for Vinyl Flooring:

1. Manufacturers:
- a. Basis of Design: H.B. Fuller Construction Products, Inc.; TFC Flexera HT - High Tack Premium Universal PSA
Adhesive: www.tecscapacity.com/Isite
- b. Substitutions: Section 010600 - Product Requirements.

D. Moldings, Transition and Edge Strips: Same material as flooring.

E. Filler for Coved Base: Plastic.

3. PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.

B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive resilient base.

C. Resilient Subfloor Surfaces: Verify that substrates are ready for resilient floor installation by testing for moisture and alkalinity (pH).

1. Test as follows:
- a. Alkalinity (ASTM F710)
- b. Internal Relative Humidity: ASTM F1270
- c. Moisture Vapor Emission: ASTM F1899
2. Conduct tests by an independent testing agency acceptable to Owner.
3. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.
4. Follow moisture and alkalinity remediation procedures in Section 090501.

3.02 PREPARATION

A. Prepare floor substrates as recommended by flooring and adhesive manufacturers.

B. Remove subfloor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with subfloor filler to achieve smooth, flat, hard surface.

C. Prohibit traffic until filler is fully cured.

D. Clean substrate.

E. Apply primer as required to prevent "bleed-through" or interference with adhesion by substances that cannot be removed.

3.03 INSTALLATION - GENERAL

A. Starting installation constitutes acceptance of subfloor conditions.

B. Install in accordance with manufacturer's written instructions.

C. Adhesive-Applied Installation:

1. Fit joints and butt seams tightly.
2. Set flooring in place, press with heavy roller to attain full adhesion.
- D. Where type of floor finish, pattern or color is different on opposite sides of door, terminate flooring under centerline of door.
- E. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated.
1. Metal Strips: Attach to substrate before installation of flooring using stainless steel screws.
2. Resilient Strips: Attach to substrate using adhesive.
- F. Scuff flooring to walls, columns, cabinets, floor outlets, and other appearances to produce tight joints.
- G. Install flooring in recessed floor access covers, mounting floor pattern.
- H. At movable partitions, install flooring under partitions without interrupting floor pattern.

3.04 INSTALLATION - TILE FLOORING

A. Mix tile from containers to ensure shade variations are consistent when tile is placed, unless otherwise indicated in manufacturer's installation instructions.

B. Install plank tile with a random offset of at least 6 inches (152 mm) from adjacent rows.

3.05 INSTALLATION - RESILIENT BASE

A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches (45 mm) between joints.

B. Miter internal corners. At external corners, use preformed units. At exposed ends, use preformed units.

C. Install base on solid backing. Bond tightly to wall and floor surfaces.

D. Scuff tile and fit to door frames and other interruptions.

3.06 CLEANING

A. Remove excess adhesive from floor, base, and wall surfaces without damage.

B. Clean in accordance with manufacturer's written instructions.

3.07 PROTECTION

A. Prohibit traffic on resilient flooring for 48 hours after installation.

END OF SECTION 090500

SECTION 09123 INTERIOR PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation
- B. Field application of paints
- C. Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
 - 1. Aluminum and galvanized metal
 - 2. Structural steel columns, joists, trusses, beams, miscellaneous and ornamental iron, structural iron, and ferrous metal
 - 3. Wood
 - 4. Gypsum board
 - 5. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment
- D. Mechanical and Electrical
 - 1. In finished areas, paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment and unless otherwise indicated
 - 2. In finished areas, paint shop-drawn items
 - 3. Paint interior surfaces of air ducts that are visible through grilles and louvers with one coat of flat black paint to visible surfaces. Paint dampers exposed behind louvers, grilles, to match face panels.

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. Acoustical materials, unless specifically indicated
- 10. Concealed pipes, ducts, and conduits

1.02 DEFINITIONS

A. Comply with ASTM D16 for interpretation of terms used in this section.

1.03 REFERENCE STANDARDS

- A. ACI 909.59, Support D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition
- B. ASTM D1442 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2023
- C. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials
- D. MPI (APM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition
- E. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016)
- F. SSPC-SP 2 - Hand Tool Cleaning; 2024
- G. SSPC-SP 6 - Commercial Blast Cleaning; 2007

1.04 SUBMITTALS

A. 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 products to be used in project; include description of each system
- 4. Manufacturers' installation instructions

B. Samples: Submit four paper "draw down" samples: 8-1/2 by 11 inches (216 by 279 mm) 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 before preparing samples, to eliminate sheens not required.
- 3. Allow 30 days for approval process, after receipt of complete samples by Architect.

C. Color and color submittals will be color color and color submittals for major materials not to be painted, such as masonry, have been approved.

D. Certification: By manufacturer that paints and finishes comply with VOC limits specified.

E. Manufacturer's Instructions: Indicate specific surface preparation procedures.

F. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, 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.

G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

- 1. Extra Paint and Finish Materials: 1 gal (4 L) of each color; from the same product run, store where directed.

QUALITY ASSURANCE

A. **Applicator Qualification** – Company specializing in performing the type of work specified with minimum three years experience.

1.06 MOCKUP

A. Provide one accent wall as directed by Architect to demonstrate color and finish.

B. Provide three (3) frame assembly illustrating paint color, texture, and finish.

C. Locate where directed by Architect.

D. Mockup may remain as part of the work.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Contain 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 (7 degrees C) and a maximum of 90 degrees F (32 degrees C). Seal all materials, and store as required by manufacturer's instructions.

D. Handling: Maintain a clean, dry storage area to prevent contamination or damage to materials.

1.08 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. Provide lighting level of 80 fc (860 lux) measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Provide paints and finishes used in any individual system from the same manufacturer, no exceptions.

B. **Paints:**

- 1. Behr Process Corporation: www.behr.com
- 2. Pittsburgh Paints: www.ppgpaints.com
- 3. Sherwin-Williams Company: www.sherwin-williams.com/files

C. Primer Sealers: Same manufacturer as top coats.

D. Substitutions: See Section 016000 - Product Requirements.

2.02 PAINTS AND FINISHES - GENERAL

A. **Paints and Finishes:** Ready-mixed, unless intended to be a field-catalyzed paint.

- 1. 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 sag.
- 2. Provide finishes and colors that are compatible with the substrates and substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
- 3. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with the exception as base coat.
- 4. Supply each paint material in quantity required to complete entire project's work from a single production run.
- 5. Do not reduce, tint, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

B. **Volatile Organic Compound (VOC) Control:**

- 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.
 - c. Volatile content of VOC in each coating and paint equipment the same color as the walling under which they are mounted.
- 2. Colorants added to a tint base and applied at site or, or other method approved to authorities having jurisdiction.

C. **Flammability:** Comply with applicable code for surface burning characteristics.

D. **Colors:** Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.

E. **Colors:** To be selected from manufacturer's full range of available colors.

- 1. Selection to be made by Architect after award of contract.
- 2. Allow for minimum of three colors for each system, unless otherwise indicated, without additional cost to Owner.
- 3. Extend colors to surface edges; colors may change at any edge as directed by Architect.
- 4. In finished areas, finish and color of the walling and paint equipment the same color as the walling under which they are mounted.
- 5. In utility areas, finish equipment, piping, conduit, and exposed duct work in colors according to the color coding scheme indicated.

2.03 PAINT SYSTEMS - INTERIOR

A. **Metals:** Structural steel, joists, trusses, beams, miscellaneous and ornamental iron, structural iron, and ferrous metal.

- 1. **Luxes Systems:** One primer coat and two top coats.
 - a. Primer: Sherwin-Williams Company, Pro Industrial Pro-Cry Universal Primer, B6601310 Series.
 - b. Top Coats: Primer: Sherwin-Williams Company, Pro Industrial Acrylic Semi-Gloss, B65-50 Series.
- 2. **Wood:** Trim for Oak/Finish.

 - 1. One primer coat and two top coats.
 - 2. Primer: Sherwin-Williams Company, Premium Wall and Wood Primer, B2BWB111
 - 3. Top Coats: Primer: Sherwin-Williams Company, Scuff Tuff Interior Waterbased Enamel, Semi-Gloss, S26-S-05 Series.

2.03 PAINT SYSTEMS - EXTERIOR

A. **Metals:** Structural steel, joists, trusses, beams, miscellaneous and ornamental iron, structural iron, and ferrous metal.

- 1. **Luxes Systems:** One primer coat and two top coats.
 - a. Primer: Sherwin-Williams Company, Pro Industrial Pro-Cry Universal Primer, B6601310 Series.
 - b. Top Coats: Primer: Sherwin-Williams Company, Pro Industrial Acrylic Semi-Gloss, B65-50 Series.
- 2. **Wood:** Trim for Oak/Finish.

 - 1. One primer coat and two top coats.
 - 2. Primer: Sherwin-Williams Company, Premium Wall and Wood Primer, B2BWB111
 - 3. Top Coats: Primer: Sherwin-Williams Company, Scuff Tuff Interior Waterbased Enamel, Semi-Gloss, S26-S-05 Series.

2.03 PAINT SYSTEMS - EXTERIOR

A. **Metals:** Structural steel, joists, trusses, beams, miscellaneous and ornamental iron, structural iron, and ferrous metal.

- 1. **Luxes Systems:** One primer coat and two top coats.
 - a. Primer: Sherwin-Williams Company, Pro Industrial Pro-Cry Universal Primer, B6601310 Series.
 - b. Top Coats: Primer: Sherwin-Williams Company, Pro Industrial Acrylic Semi-Gloss, B65-50 Series.
- 2. **Wood:** Trim for Oak/Finish.

 - 1. One primer coat and two top coats.
 - 2. Primer: Sherwin-Williams Company, Premium Wall and Wood Primer, B2BWB111
 - 3. Top Coats: Primer: Sherwin-Williams Company, Scuff Tuff Interior Waterbased Enamel, Semi-Gloss, S26-S-05 Series.

2.03 PAINT SYSTEMS - EXTERIOR

A. **Metals:** Structural steel, joists, trusses, beams, miscellaneous and ornamental iron, structural iron, and ferrous metal.

- 1. **Luxes Systems:** One primer coat and two top coats.
 - a. Primer: Sherwin-Williams Company, Pro Industrial Pro-Cry Universal Primer, B6601310 Series.
 - b. Top Coats: Primer: Sherwin-Williams Company, Pro Industrial Acrylic Semi-Gloss, B65-50 Series.
- 2. **Wood:** Trim for Oak/Finish.

 - 1. One primer coat and two top coats.
 - 2. Primer: Sherwin-Williams Company, Premium Wall and Wood Primer, B2BWB111
 - 3. Top Coats: Primer: Sherwin-Williams Company, Scuff Tuff Interior Waterbased Enamel, Semi-Gloss, S26-S-05 Series.

2.03 PAINT SYSTEMS - EXTERIOR

A. **Metals:** Structural steel, joists, trusses, beams, miscellaneous and ornamental iron, structural iron, and ferrous metal.

- 1. **Luxes Systems:** One primer coat and two top coats.
 - a. Primer: Sherwin-Williams Company, Pro Industrial Pro-Cry Universal Primer, B6601310 Series.
 - b. Top Coats: Primer: Sherwin-Williams Company, Pro Industrial Acrylic Semi-Gloss, B65-50 Series.
- 2. **Wood:** Trim for Oak/Finish.

 - 1. One primer coat and two top coats.
 - 2. Primer: Sherwin-Williams Company, Premium Wall and Wood Primer, B2BWB111
 - 3. Top Coats: Primer: Sherwin-Williams Company, Scuff Tuff Interior Waterbased Enamel, Semi-Gloss, S26-S-05 Series.

2.03 PAINT SYSTEMS - EXTERIOR

A. **Metals:** Structural steel, joists, trusses, beams, miscellaneous and ornamental iron, structural iron, and ferrous metal.

- 1. **Luxes Systems:** One primer coat and two top coats.
 - a. Primer: Sherwin-Williams Company, Pro Industrial Pro-Cry Universal Primer, B6601310 Series.
 - b. Top Coats: Primer: Sherwin-Williams Company, Pro Industrial Acrylic Semi-Gloss, B65-50 Series.
- 2. **Wood:** Trim for Oak/Finish.

 - 1. One primer coat and two top coats.
 - 2. Primer: Sherwin-Williams Company, Premium Wall and Wood Primer, B2BWB111
 - 3. Top Coats: Primer: Sherwin-Williams Company, Scuff Tuff Interior Waterbased Enamel, Semi-Gloss, S26-S-05 Series.

2.03 PAINT SYSTEMS - EXTERIOR

A. **Metals:** Structural steel, joists, trusses, beams, miscellaneous and ornamental iron, structural iron, and ferrous metal.

- 1. **Luxes Systems:** One primer coat and two top coats.
 - a. Primer: Sherwin-Williams Company, Pro Industrial Pro-Cry Universal Primer, B6601310 Series.
 - b. Top Coats: Primer: Sherwin-Williams Company, Pro Industrial Acrylic Semi-Gloss, B65-50 Series.
- 2. **Wood:** Trim for Oak/Finish.

 - 1. One primer coat and two top coats.
 - 2. Primer: Sherwin-Williams Company, Premium Wall and Wood Primer, B2BWB111
 - 3. Top Coats: Primer: Sherwin-Williams Company, Scuff Tuff Interior Waterbased Enamel, Semi-Gloss, S26-S-05 Series.

2.03 PAINT SYSTEMS - EXTERIOR

A. **Metals:** Structural steel, joists, trusses, beams, miscellaneous and ornamental iron, structural iron, and ferrous metal.

- 1. **Luxes Systems:** One primer coat and two top coats.
 - a. Primer: Sherwin-Williams Company, Pro Industrial Pro-Cry Universal Primer, B6601310 Series.
 - b. Top Coats: Primer: Sherwin-Williams Company, Pro Industrial Acrylic Semi-Gloss, B65-50 Series.
- 2. **Wood:** Trim for Oak/Finish.

 - 1. One primer coat and two top coats.
 - 2. Primer: Sherwin-Williams Company, Premium Wall and Wood Primer, B2BWB111
 - 3. Top Coats: Primer: Sherwin-Williams Company, Scuff Tuff Interior Waterbased Enamel, Semi-Gloss, S26-S-05 Series.

2.03 PAINT SYSTEMS - EXTERIOR

A. **Metals:** Structural steel, joists, trusses, beams, miscellaneous and ornamental iron, structural iron, and ferrous metal.

- 1. **Luxes Systems:** One primer coat and two top coats.
 - a. Primer: Sherwin-Williams Company, Pro Industrial Pro-Cry Universal Primer, B6601310 Series.
 - b. Top Coats: Primer: Sherwin-Williams Company, Pro Industrial Acrylic Semi-Gloss, B65-50 Series.
- 2. **Wood:** Trim for Oak/Finish.

 - 1. One primer coat and two top coats.
 - 2. Primer: Sherwin-Williams Company, Premium Wall and Wood Primer, B2BWB111
 - 3. Top Coats: Primer: Sherwin-Williams Company, Scuff Tuff Interior Waterbased Enamel, Semi-Gloss, S26-S-05 Series.

2.03 PAINT SYSTEMS - EXTERIOR

A. **Metals:** Structural steel, joists, trusses, beams, miscellaneous and ornamental iron, structural iron, and ferrous metal.

- 1. **Luxes Systems:** One primer coat and two top coats.
 - a. Primer: Sherwin-Williams Company, Pro Industrial Pro-Cry Universal Primer, B6601310 Series.
 - b. Top Coats: Primer: Sherwin-Williams Company, Pro Industrial Acrylic Semi-Gloss, B65-50 Series.
- 2. **Wood:** Trim for Oak/Finish.

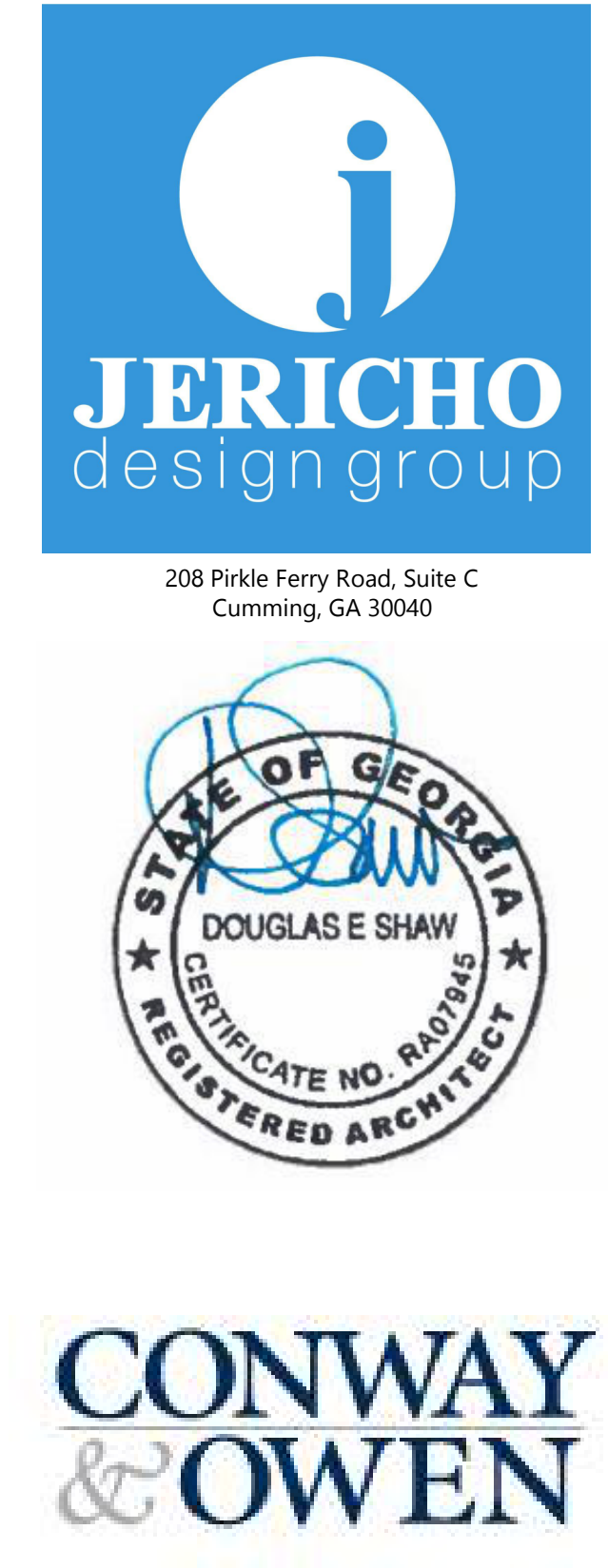
 - 1. One primer coat and two top coats.
 - 2. Primer: Sherwin-Williams Company, Premium Wall and Wood Primer, B2BWB111
 - 3. Top Coats: Primer: Sherwin-Williams Company, Scuff Tuff Interior Waterbased Enamel, Semi-Gloss, S26-S-05 Series.

2.03 PAINT SYSTEMS - EXTERIOR</

For review and approval to represent the publisher, please email: permissions@wiley.com

Soryia M. Whetsel
09/08/2025

Final Approval Subject to Final Review



FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

[illegible]

Drawn By JDG

Date	Job No.
08/01/2025	25018

Sheet Title
SPECIFICATIONS

Sheet No. _____

G-3.05

RELEASED FOR PERMIT

C. Gypsum Board:
1. Latex Systems, Eggshell One primer coat and two top coats.
a. Primer: Sherwin-Williams Company: ProMar 200 Zero VOC Interior Latex Primer B28W/2600.
b. Top Coats: Sherwin-Williams Company: Scuff Tuff Interior Waterbased Enamel, Egg-Shel,S24-S50 Series.
2. Latex Systems, Semi-Gloss: One primer coat and two top coats.
a. Primer: Sherwin-Williams Company: ProMar 200 Zero VOC Interior Latex Primer B28W/2600.
b. Top Coats: Sherwin-Williams Company: Scuff Tuff Interior Waterbased Enamel, Semi-Gloss, S24-S50 Series.
D. Masonry: Graffiti-resistant Finish:
1. Sacrificial Anti-Graffiti Coating: Clear, wax emulsion for coating porous or painted surfaces; capable of being removed from substrate with only hot water.
2. Products DryWired:
a. Anti-Graffiti: www.drywired.com/isle.
b. Tex-Cote LLC: Sacrificial Graffiti Guard System: www.texcote.com/#/le.
c. Substitutions: See Section 016000-Product Requirements.
E. Masonry: Epoxy finish
1. Epoxy Systems, Water Based:
a. One primer coat and two top coats.
b. Primer: Sherwin-Williams Company: ProMar 200 Zero VOC Interior Latex Primer B28W/2600.
c. Top Coats: SSherrin-Williams Company: Pro Industrial Pre-Catalyzed Waterbased Epoxy, K46 Series.
2.04 ACCESSORY MATERIALS
A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.
B. Patching Material: Latex filler.
C. Fastener Head Cover Material: Latex filler.
PART 3 EXECUTION
3.01 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.
3.02 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 mask surface appearances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
D. Seal surfaces that might cause bleed through or staining of topcoat.
E. Gypsum Board: Fill minor blemishes with filler compound. Spot prime defects after filler application.
F. Galvanized Surfaces:
1. Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
2. Prepare surface according to SSPC-SP 2.
G. Ferrous Metal:
1. Solvent clean according to SSPC-SP 1.
2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop finished item.
3. 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.
H. Wood Surfaces to Receive Epoxy 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.
I. Metal Doors to Be Painted: Prime metal door top and bottom edge surfaces.
3.03 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 Standard".
C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
D. Apply each coat to uniform appearance in thickness specified by manufacturer.
E. Sand wood and metal surface lightly between coats to achieve required adhesion.
F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
G. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.
3.04 FINISHES
A. Colored waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.
3.05 PROTECTION
A. Protect surfaces until completion of project.
B. Touch-up damaged finishes after Substantial Completion.
END OF SECTION 099123

SECTION 10123 PANEL SIGNAGE
PART 1 GENERAL
1.01 SECTION INCLUDES
A. Panel signage.
1.02 REFERENCE STANDARDS
A. ADA Standards - 2010 ADA Standards for Accessible Design, 2010.
B. ICC A117.1 - Accessible and Usable Buildings and Facilities, 2017.
1.03 SUBMITTALS
A. Product Data: Manufacturer's product literature for each type of panel sign, indicating styles, font, foreground and background colors, locations, and overall dimensions of each sign.
B. Shop Drawings:
1. Include dimensions, locations, elevations, materials, text and graphic layout, attachment details, and schedules.
2. Schedule: Provide information sufficient to complete each panel sign for fabrication, including room number, room name, other text to be applied, sign and letter sizes, fonts, and colors.
3. When room signs differ from those on drawings, include the drawing room number on schedule.
4. When content of signs is indicated to be determined later, request such information from Owner through Architect at least 2 months prior to start of fabrication; upon request, submit preliminary schedule.
5. Submit for Owner approval through Architect prior to fabrication.
C. Samples: Submit two samples of each type of sign, of size similar to that required for project, indicating sign style, font, and method of attachment.
D. Manufacturer's Installation Instructions: Include installation templates and attachment devices.
1.04 DELIVERY, STORAGE, AND HANDLING
A. Package signs as required to prevent damage before installation.
B. Package room and door signs in sequential order of installation, labeled by floor or building.
C. Store under cover and elevated above grade.
1.05 FIELD CONDITIONS
A. Do not install tape adhesive when ambient temperature is lower than recommended by manufacturer.
B. Maintain minimum ambient temperature during and after installation.
PART 2 PRODUCTS
2.01 MANUFACTURERS
A. Panel Signage:
1. Best Sign Systems, Inc.: www.bestsigns.com/#/isle.
2. Inpro Corporation: www.inprocorp.com/#/isle.
3. Mohawk Sign Systems, Inc.: www.mohawksign.com/#/isle.
4. Seton Identification Products: www.setonid.com/#/isle.
5. Substitutions: See Section 016000 - Product Requirements.
2.02 REGULATORY REQUIREMENTS
A. Accessibility Requirements: Comply with ADA Standards and ICC A117.1 and applicable building codes, unless otherwise indicated; in the event of conflicting requirements, comply with the most restrictive requirements.
2.03 PANEL SIGNAGE
A. Panel Signage:
1. Application: Room and door signs.
2. Description: Flat signs with engraved panel media, tactile characters.
3. Sign Size: As indicated on drawings.
4. Total Thickness: 1/8 inch (3 mm).
5. Color and Font, unless otherwise indicated:
a. Character Font: Helvetica, Arial, or other sans serif font.
b. Character Case: Upper and lower case (title case).
c. Background Color: As scheduled.
d. Character Color: Contrasting color.
6. Material: Laminated colored plastic engraved through face to expose core as background color.
7. Profile: Flat panel in aluminum frame.
a. Frame Finish: Black.
b. Tactile Letters: Raised 1/32 inch minimum.
9. Braille: Grade II, ADA-compliant.
2.04 SIGNAGE APPLICATIONS
A. Room and Door Signs: As indicated on drawings.
PART 3 EXECUTION
3.01 EXAMINATION
A. Verify that substrate surfaces are ready to receive work.
B. Notify Architect if conditions are not suitable for installation of signs; do not proceed until conditions are satisfactory.
3.02 INSTALLATION
A. Install in accordance with manufacturer's instructions.
B. Install with horizontal edges level.
C. Locate panel signs and mount at heights indicated on drawings and in accordance with ADA Standards and ICC A117.1.
D. Protect from damage until: repair or replace damaged items.
END OF SECTION 101423

SECTION 102800 TOILET, BATH, AND LAUNDRY ACCESSORIES
PART 1 GENERAL
1.01 SECTION INCLUDES
A. Commercial toilet accessories.
B. Commercial shower and bath accessories.
C. Utility room accessories.
1.02 REFERENCE STANDARDS
A. ASTM A123A/123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
B. ASTM A269A/269M - Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service; 2022.
C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
D. ASTM A866 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2023.
E. ASTM B86 - Standard Specification for Zinc and Zinc-Aluminum (Zn-Al) Alloy Foundry and Die Castings; 2023.
F. ASTM B456 - Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium; 2017 (Reapproved 2022).
G. ASTM C1036 - Standard Specification for Flat Glass; 2021.
H. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2018.
I. ASTM C1103 - Standard Specification for Silvered Flat Glass Mirror; 2018.
1.03 ADMINISTRATIVE REQUIREMENTS
A. Coordinate the work with the placement of internal wall reinforcement and reinforcement of toilet partitions to receive anchor attachments.
1.04 SUBMITTALS
A. Product Data: Submit data on accessories describing size, finish, details of function, and attachment methods.
B. Samples: Submit two samples of each accessory, illustrating color and finish.
C. Manufacturer's Installation Instructions: Indicate special procedures and conditions requiring special attention.
PART 2 PRODUCTS
2.01 MANUFACTURERS
A. Commercial Toilet, Shower, and Bath Accessories:
1. American Specialties, Inc.: www.american-specialties.com/#/isle.
2. Bobrick Washroom Equipment, Inc.: www.bobrick.com.
3. Bradley Corporation: www.bradleycorp.com/#/isle.
4. Georgia-Pacific Professional: www.gppro.com/#/isle.
5. Seachrome Corporation: www.seachrome.com.
6. Tripp/T: www.trippnt.com.
7. Uline: www.uline.com.
8. Substitutions: Section 016000 - Product Requirements.
B. Diaper Changing Stations:
1. Bradley Corporation: www.bradleycorp.com/#/isle.
2. Koala Kids Products: www.koalabear.com/#/isle.
3. Substitutions: 016000 - Product Requirements.
C. Provide products of each category type by single manufacturer.
2.02 MATERIALS
A. Accessories - General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
1. Grind welded joints smooth.
2. Fabricate units made of metal sheet of seamless sheets with flat surfaces.
B. Keys: Provide two keys for each accessory to Owner; master key lockable accessories.
C. Stainless Steel Sheet: ASTM A686, Type 304.
D. Stainless Steel Tubing: ASTM A269A/269M, Grade TP304 or TP316.
E. Galvanized Steel Sheet: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G90/Z275 coating.
F. Zinc Alloy: Die cast, ASTM B86.

G. Mirror Glass: Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silversing, protective and physical characteristics complying with ASTM C1503.
H. Tempered Mirror Glass: Tempered safety glass, ASTM C1048; and ASTM C1036 Type I, Class 1, Quality Q2, with silversing as required.
I. Adhesive: Two-component epoxy type, waterproof.
J. Fasteners, Screws, and Bolts: Hot dip galvanized; tamper-proof; security type.
K. Expansion Shields: Fiber, lead, or rubber as recommended by accessory manufacturer for component and substrate.
2.03 FINISHES
A. Stainless Steel: Satin finish, unless otherwise noted.
B. Chrome/Nickel Plating: ASTM B456, SC 2, polished finish, unless otherwise noted.
C. Baked Epoxy Enamel: Apply to clean, smooth, and primed metal surfaces. Apply one coat primer and minimum two coats epoxy baked enamel.
D. Powder-Coated Steel: Clean, degrease, and neutralize. Follow immediately with a phosphating treatment, prime coat, and two finish coats of powder coat enamel.
E. Galvanizing for Steel and Other Metals: Sheet: Comply with ASTM A123A/123M; galvanize ferrous metal and fastening devices.
F. Shop Primed Ferrous Metals: Pretreat and clean, spray apply one coat primer and bake.
G. Back paint components where contact is made with building finishes to prevent electrolysis.
2.04 COMMERCIAL "TOILET ACCESSORIES"
A. Toilet Accessories: As indicated on Drawings.
B. Grab Bars: Stainless steel, smooth surface.
1. Standard Duty Grab Bars:
a. Push/Pull Point Load: 250 pound-force (1112 N), minimum.
b. Dimensions: 1-1/4 inch (32 mm) outside diameter, minimum 0.05 inch (1.3 mm) wall thickness, exposed flange mounting, 1-1/2 inch (38 mm) clearance between wall and inside of grab bar.
c. Finish: Satin.
d. Length and Configuration: As indicated on drawings.
2.05 COMMERCIAL SHOWER AND BATH ACCESSORIES
A. Shower and Bath Accessories: As indicated on Drawings.
2.06 UTILITY ROOM ACCESSORIES
A. Mop and Broom Holder: 0.05 inch (1.3 mm) thick stainless steel, Type 304, hat-shaped channel.
1. Holders: Three spring-loaded rubber cam holders.
2. Length: Manufacturer's standard length for number of holders.
3. Products:
a. Basis of Design: Bradley Corporation, Model 9554.
b. Substitutions: 016000 - Product Requirements.
PART 3 EXECUTION
3.01 EXAMINATION
A. Verify existing conditions before starting work.
B. Verify exact location of accessories for installation.
C. Verify that field measurements are as indicated on drawings.
3.02 PREPARATION
A. Deliver inserts and rough-in frames to site for timely installation.
B. Provide templates and rough-in measurements as required.
3.03 INSTALLATION
A. Install accessories in accordance with manufacturer's instructions in locations indicated on drawings.
B. Install plumb and level, securely and rigidly anchored to substrate.
C. Mounting Heights: As required by accessibility regulations and indicated on Drawings.
3.04 PROTECTION
A. Protect installed accessories from damage due to subsequent construction operations.
END OF SECTION 102800

SECTION 104000 FIRE PROTECTION SPECIALTIES
PART 1 GENERAL
1.01 SECTION INCLUDES
A. Fire extinguishers.
B. Fire extinguisher cabinets.
C. Accessories.
1.02 REFERENCE STANDARDS
A. FM (AQ) - FM Approval Guide, Current Edition.
B. NFPA 10 - Standard for Portable Fire Extinguishers; 2022.
C. UL (DIR) - Online Certifications Directory, Current Edition.
1.03 SUBMITTALS
A. Product Data: Provide extinguisher operational features, extinguisher ratings and classifications, color and finish, anchorage details, and installation instructions.
B. Shop Drawings: Indicate locations of cabinets, cabinet physical dimensions, and rough-in measurements for recessed cabinets.
C. Manufacturer's Installation Instructions: Indicate special criteria and wall opening coordination requirements.
D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
E. Maintenance Data: Include test, refill or recharge schedules and re-certification requirements.
1.04 FIELD CONDITIONS
A. Do not install extinguishers when ambient temperature may cause freezing of extinguisher ingredients.
PART 2 PRODUCTS
2.01 MANUFACTURERS
A. Fire Extinguishers:
1. Activar Construction Products Group, Inc. - J.L. Industries: www.activacpg.com/#/isle.
2. Annil, a Tyco Business: www.annil.com/#/isle.
3. Kidde, a unit of United Technologies Corporation: www.kidde.com/#/isle.
4. Nystrom, Inc.: www.nystrom.com/#/isle.
5. Pyro-Chem, a Tyco Business: www.pyrochem.com/#/isle.
6. Substitutions: See Section 016000 - Product Requirements.
B. Fire Extinguisher Cabinets and Accessories:
1. Activar Construction Products Group, Inc. - J.L. Industries: www.activacpg.com/#/isle.
2. Kidde, a unit of United Technologies Corporation: www.kidde.com/#/isle.
3. Larsen's Manufacturing Co.: www.larsensmf.com/#/isle.
4. Nystrom, Inc.: www.nystrom.com/#/isle.
5. Potter-Roemer: www.potterroemer.com/#/isle.
6. Substitutions: See Section 016000 - Product Requirements.
2.02 FIRE EXTINGUISHERS
A. Fire Extinguishers - General: Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.
B. Provide extinguishers labeled by UL (DIR) or FM (AQ) for purpose specified and as indicated.
C. Multipurpose Dry Chemical Type Fire Extinguishers: Carbon steel tank, pressure gauge.
1. Class: A-B-C type (4.5 kg).
2. Size: 10 pound (4.5 kg).
3. Finish: Baked polyester powder coat, color as selected.
4. Temperature range: Minus 40 degrees F (Minus 40 degrees C) to 120 degrees F (49 degrees C).
2.03 FIRE EXTINGUISHER CABINETS
A. Cabinet Construction: Non-fire rated.
1. Formed primed steel sheet, 0.036 inch (0.9 mm) thick base metal.
B. Cabinet Configuration: Semi-recessed and recessed type.
1. Size to accommodate accessories.
2. Projected Trim: Returned to wall surface, with 1-1/2 inch (39 mm) projection, and 1-1/2 inch (39 mm) wide face.
3. Provide cabinet enclosure with right angle inside corners and seams, and with formed perimeter trim.
C. Door: 0.036 inch (0.9 mm) metal thickness, reinforced for fitness and rigidity with nylon catch. Hinge doors for 180 degree opening with two butt hinges.
D. Door Glazing: Tempered glass, clear, 1/8 inch (3 mm) thick, and set in resilient channel glazing gasket.
E. Cabinet Mounting Hardware: Appropriate to cabinet, with pre-drilled holes for placement of anchors.
F. Fabrication: Weld, fill, and grind components smooth.
G. Finish of Cabinet Exterior Trim and Door: No.4 - Brushed stainless steel.
H. Finish of Cabinet Interior: White colored enamel.
2.04 ACCESSORIES
A. Extinguisher Brackets: Formed steel, chrome-plated.
B. Lettering: "FIRE EXTINGUISHER" decal, or vinyl self-adhering, prespaced black lettering in accordance with authorities having jurisdiction (AHJ).
PART 3 EXECUTION
3.01 EXAMINATION
A. Verify existing conditions before starting work.
B. Verify rough openings for cabinets are correctly sized and located.
3.02 INSTALLATION
A. Install in accordance with manufacturer's instructions.
B. Install cabinets plumb and level in wall openings, distance from finished floor to inside bottom of cabinet as indicated on drawings.
C. Secure rigidly in place.
D. Place extinguishers in cabinets.
3.03 MAINTENANCE
A. Provide a separate maintenance contract for specified maintenance service.
3.04 MAINTENANCE - SELF-SERVICE FIRE EXTINGUISHERS
A. Monthly Inspections: Inspect self-service fire extinguishers on monthly basis in accordance with manufacturer's instructions, and requirements of the authorities having jurisdiction (AHJ).
B. Annual Inspections: Inspect self-service fire extinguishers on annual basis in accordance with manufacturer's instructions, and requirements of the authorities having jurisdiction (AHJ).
C. Inspection Certification Tag: Provide new tag indicating acceptable condition of fire extinguisher, date of inspection, and name of self-service inspector for each inspection.
END OF SECTION 104000

SECTION 107316.13 METAL CANOPIES
PART 1 GENERAL
1.01 SECTION INCLUDES
A. Attached metal canopies.
1.02 REFERENCE STANDARDS
A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2022.
B. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures, Most Recent Edition Cited by Referring Code or Reference Standard.
C. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength; 2021.
D. ASTM A572A/572M - Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel; 2021, with Editorial Revision.
E. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2021a.
F. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2021.
G. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric); 2021.
H. ASTM B308/B308M - Standard Specification for Aluminum-Alloy 6061-T6 Standard Structural Profiles; 2020.
I. ASTM B429/B429M - Standard Specification for Aluminum-Alloy Extruded Structural Pipe and Tube; 2020.
J. ASTM F593 - Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs; 2022.
K. ASTM F125/F125M - Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, 1/2" to 1 1/2" Diameter, 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength; 2022.
L. AWS B2.18/2.1M - Standard Specification for Welding Procedure and Performance Qualification; 2021.
M. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2020, 11th Edition, 80933.
N. AWS D1.2/D1.2M - Structural Welding Code - Aluminum; 2014, with Errata (2020).
O. FM DS 1-26 - Wind Design; 2015, with Editorial Revision (2022).
1.03 SUBMITTALS
A. Product Data: Submit product data sheets, including material descriptions and finishes, and preparation instructions and recommendations.
B. Shop Drawings: Prior to commencement of fabrication, submit detailed shop drawings, showing profiles, sections of components, finishes, and fastening details.
C. Design Data: Submit comprehensive structural analysis of design for the specified loads. Stamp and sign calculations by professional engineer.
1. Indicate compliance with FM requirements.
D. Samples for Selection: Provide the following:
1. Coating Samples: 3-inch by 3-inch (75 by 75 mm) samples in manufacturer's standard colors.
2. Fascia and Louver/Infill: 6-inch (152 mm) long indicating profile and finish.
3. Decking: 6-inch (152 mm) long indicating profile and finish.
4. Outrigger Plate and Tube Frame: 6-inch (152 mm) long indicating louvers and supports.
E. Designer's Qualification Statement.
F. Manufacturer's Qualification Statement.
G. Erector's Qualification Statement.
H. Welder's Qualification Statement: Welders' certificates in accordance with AWS B2.18/2.1M and dated no more than 12 months before start of scheduled welding work.
I. Manufacturer's Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
1.04 QUALITY ASSURANCE
A. Designer Qualifications: Perform design under direct supervision of a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.
1. Comply with applicable code for submission of design calculations as required for acquiring permits.
2. Cooperate with regulatory agency or authorities having jurisdiction and provide data as requested.
B. Manufacturer Qualifications: Company specializing in the manufacture of products similar to those required for this project.
1. Not less than five years of documented experience.
2. Welder Qualifications: Welding processes and welding operators qualified in accordance with AWS D1.1/D1.1M and no more than 12 months before start of scheduled welding work.
1.05 DELIVERY, STORAGE, AND HANDLING
A. Deliver materials to project site ready for erection.
B. Package using methods that prevent damage during shipping and storage on site.
C. Store materials under cover and elevated above grade.

1.06 WARRANTY
A. Metal Canopies: Correct defective work within a two year period after Date of Substantial Completion.
B. Finish Warranty: Provide manufacturer's one year warranty on factory finish against cracking, peeling, and blistering.
PART 2 PRODUCTS
2.01 MANUFACTURERS
A. Metal Canopies:
1. MASA Architectural Canopies: www.architecturalcanopies.com.
2. Peachtree Protective Covers: www.peachtreecovers.com.
3. Substitutions: See Section 016000 - Product Requirements.
2.02 PERFORMANCE REQUIREMENTS
A. Factory Mutual Classification: Class 1 and windstorm resistance of 1-90, in accordance with FM DS 1-28.
B. Design and fabricate systems to resist wind, snow, and live loads without failure, damage, or permanent deflection in accordance with ASCE 7.
1. Loads: As indicated on drawings.
C. Thermal Movement: Thermal Movement: Design canopy system to accommodate thermal movement caused by ambient temperature range of 120 degrees F (49 degrees C) and wind speed of 180 degrees F (82 degrees C) without buckling, failure of joint seals, undue stress on fasteners or other detrimental effects on assembly components.
2.03 METAL CANOPIES
A. Shop Fabricated Aluminum Canopy
B. Configuration: Layout and dimensions, column layout, canopy clearance, fascia profile, and roof covering design as indicated on drawings.
1. Structural Framing System: Aluminum.
2. Covering Material: Aluminum.
3. Drainage Concept: Water collected in decking conducted into perimeter gutters and discharged through downspouts.
2.04 COMPONENTS
A. Structural Aluminum Framing: Alloy and temper 6063-T5, 6063-T6, or 6061-T6.
1. Extruded Shapes and Tubes: ASTM B221 (ASTM B221M).
2. Rolled or Extruded Structural Shapes: ASTM B308/B308M.
3. Extruded Structural Pipe and Tube: ASTM B429/B429M.
4. Sheet and Plate: Alloy 5052, 5005, or 6061-T6S1, ASTM B209/B209M.
B. Covering:
1. Aluminum Decking:
a. Interlocking extruded aluminum decking modules.
b. Extruded Decking: ASTM B221 (ASTM B221M), Alloy and temper 6005-T5, 6061-T6, or 6063-T6.
c. Decking Orientation: As indicated on drawings.
C. Anchor Bolts: ASTM A307 or ASTM A372/A372M, Grade A325, minimum 3/4 inch (19 mm) diameter.
D. Minimum exposed thread of 7 inches (178 mm) above footing and 20 inches (508 mm) minimum embedding.
2. Provide nuts and washers as required for column leveling and plumbing.
D. Exposed Gutters and Downspouts: Aluminum with AAMA superior organic coating, color to match canopy covering, manufacturer's recommended size for canopy specified.
2.05 SHOP FABRICATION
A. Provide a complete system ready for erection at project site.
B. Shop fabricate to the greatest extent possible; disassemble if necessary for shipping.
C. Weld aluminum members in accordance with AWS D1.2/D1.2M.
D. Fabricate connections for bolt, nut, and washer connectors.
2.06 FINISHES
A. Aluminum Framing and Decking:
1. Superior Performing Organic Coatings: AAMA 2605, multiple coats, thermally cured, polyvinylidene fluoride system.
2. Color: To be selected by Architect, in accordance with manufacturer's full range.
2.07 ACCESSORIES
A. Structural Bolts: ASTM F125/F125M, Grade A325, minimum 3/4 inch (19 mm) diameter.
B. Trim, Closure Pieces, and Glazing: As indicated on drawings.
C. Fasteners, Non-Structural: ASTM F593 stainless steel or ASTM A307 carbon steel.
PART 3 EXECUTION
3.01 EXAMINATION
A. Examine substrates and site area for conditions that might prevent satisfactory installation.
B. Verify that bearing surfaces are ready to receive this work.
C. Do not proceed with installation until all conditions are satisfactory.
3.02 INSTALLATION - FRAMING
A. Provide for erection and wind loads. Provide temporary bracing to maintain structure plumb and in alignment until completion of erection and installation.
B. Do not field cut or alter structural members without approval.
C. After erection, prime welds, abrasions, and surfaces not shop primed.
3.03 INSTALLATION - CANOPY COVERING
A. Install in accordance with manufacturer's instructions and NRCA (RM), NRCA (WM), and FMJ applicable requirements.
B. Fasten metal decking to metal support members, aligned level and plumb.
C. Install fascia panels, trim, flashing, and gutters and downspouts.
D. Separate dissimilar metals using concealed bimetallic paint.
E. Touch-up damaged finish leveling using material provided by manufacturer to match original coating.
3.04 TOLERANCES
A. Maximum Variation From Level: Plus/Minus 1/8 inch (3.175 mm).
3.05 CLEANING
A. Clean surfaces of dust and debris; follow manufacturer's cleaning instructions for the finish used.
3.06 PROTECTION
A. Protect canopy after installation to prevent damage due to other work until Date of Substantial Completion.
END OF SECTION 107316.13

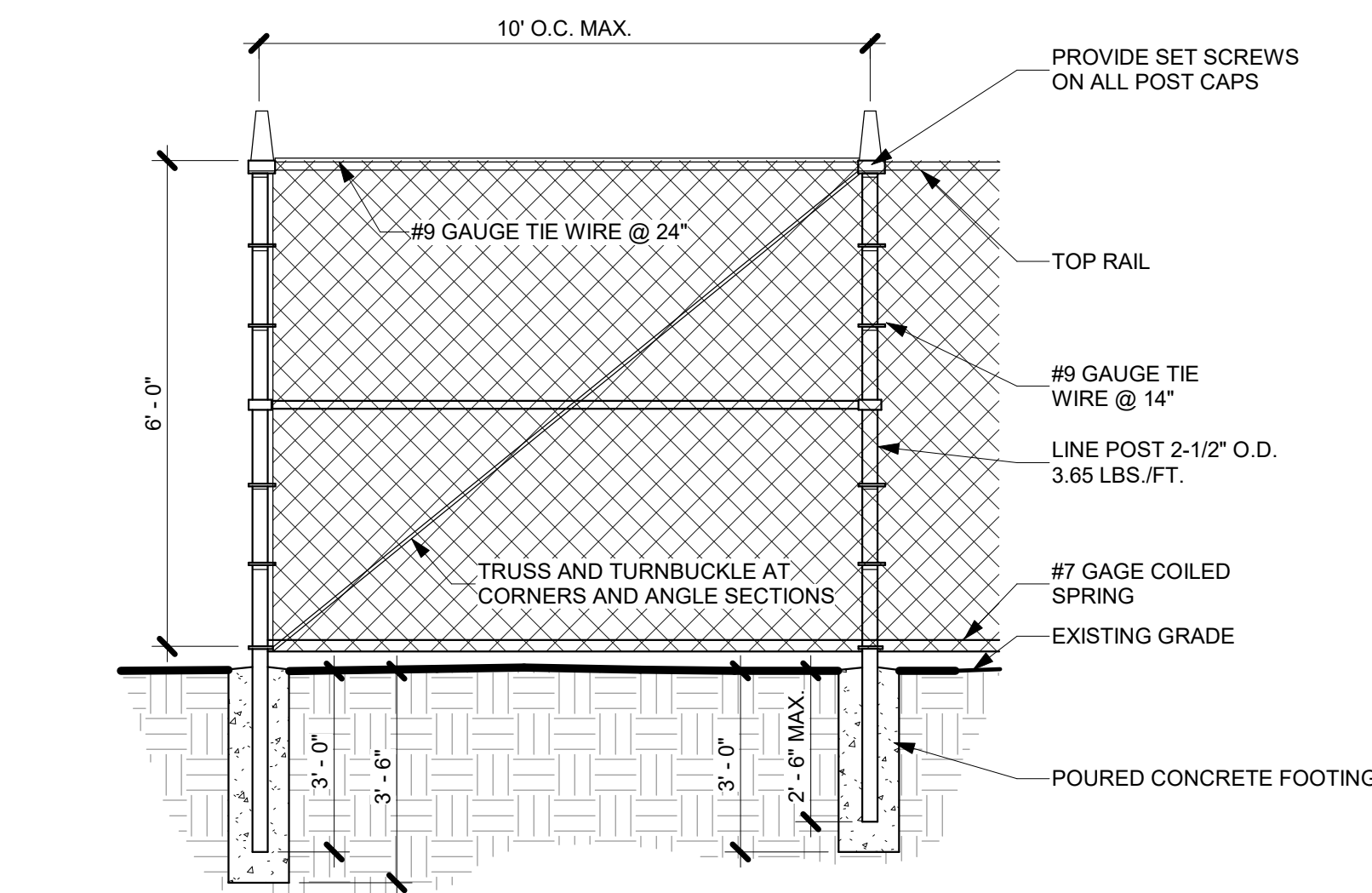
SECTION 110303 RESIDENTIAL APPLIANCES
PART 1 GENERAL
1.01 SECTION INCLUDES
1. Kitchen appliances.
REFERENCE STANDARDS
A. UL (DIR) - Online Certifications Directory, Current Edition.
SUBMITTALS
1. Product Data: Manufacturer's data indicating dimensions, capacity, and operating features of each piece of residential equipment specified.
2. Copies of Warranties: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
QUALITY ASSURANCE
1. Electric Appliances: Listed and labeled by UL (DIR) and complying with NEMA Standards (National Electrical Manufacturers Association).
1. Provide five (5) year manufacturer warranty on refrigeration system of refrigerators.
2. Provide ten (10) year manufacturer warranty on magnetron tube of microwave ovens.
PART 2 PRODUCTS
2.01 KITCHEN APPLIANCES
1. Appliances: As indicated on Drawings.
2. Installation:
a. Verify utility rough-ins are provided and correctly located.
b. Verify rough-in dimensions are correct.
3. Install in accordance with manufacturer's instructions.
ADJUSTING
1. Adjust equipment to provide efficient operation.
END OF SECTION 110303

SECTION 123600 COUNTERTOPS
PART 1 GENERAL
1.01 SECTION INCLUDES
A. Countertops for manufactured casework.
B. Wall-hung counters.
1.02 REFERENCE STANDARDS
A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023.
B. AWIAW/MAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
C. AWIAW/MAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.
D. ISFA 2-01 - Classification and Standards for Solid Surface Fabrication; 2013.
E. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.
1.03 SUBMITTALS
A. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Specimen warranty.
B. Shop Drawings: Complete details of materials and installation; combine with shop drawings of cabinets and casework specified in other sections.
C. Verification Samples: For each finish product specified, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
D. Test Reports: Chemical resistance testing, showing compliance with specified requirements.
E. Installer's qualification statement.
F. Installation Instructions: Manufacturer's installation instructions and recommendations.
G. Maintenance Data: Manufacturer's instructions and recommendations for maintenance and repair of countertop surfaces.
1.04 QUALITY ASSURANCE
A. Fabricator Qualifications: Natural Stone Institute (NSI) Accredited Natural Stone Fabricator; www.naturalstoneinstitute.org/#/isle.
B. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than three years of documented experience and approved by manufacturer.
1.05 DELIVERY, STORAGE, AND HANDLING
A. Store products in manufacturer's unopened packaging until ready for installation.
B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.
1.06 FIELD CONDITIONS
A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
2.01 COUNTERTOPS
A. Quality Standard: Custom Grade, in accordance with AWIAW/MAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
B. Plastic Laminate Countertops: High-pressure decorative laminate (HPL) sheet bonded to substrate.
1. Laminate Sheet: NEMA LD 3, Grade HGS, 0.048 inch (1.2 mm) nominal thickness.
a. Manufacturers:
1) Artonite: www.artonite.com/#/isle.
2) Formica Corporation: www.formica.com/#/isle.
3) Lamin-Art, Inc.: www.laminart.com/#/isle.
4) Panolan Industries International, Inc.: www.panolam.com/#/isle.
5) Wilsonart: www.wilsonart.com/#/isle.
b. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.
c. Finish: Matte or glossy, gloss rating of 5 to 20.
d. Surface Color and Pattern: As indicated on drawings.
2. Exposed Edge Treatment: Molded PVC edge with T-spine, sized to completely cover edge of panel.
a. Color: As indicated on drawings.
c. Back and End Splashes: Same material, same construction.
4. Fabricate in accordance with AWIAW/MAC/WI (AWS) or AWMAC/WI (NAAWS), Section 11 - Countertops, Custom Grade.
C. Solid Surfacing Countertops: Solid surfacing sheet or plastic resin casting over continuous substrate.
1. Flat Sheet Thickness: 1/2 inch (12 mm), minimum.
2. Coating Samples: 3-inch by 3-inch (75 by 75 mm) samples in manufacturer's standard colors.
a. Manufacturer by name:
1) Avonite Surfaces: www.avonitesurfaces.com/#/isle.
2) Dupont: www.corian.com/#/isle.
3) LG Hausys America, Inc.: www.lghausysusa.com/#/isle.
4) Wilsonart: www.wilsonart.com/#/isle.
b. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.
c. Finish on Exposed Surfaces: Polished, gloss rating of 55 to 80.
d. Color and Pattern: As indicated on drawings.
3. Other Components Thickness: 1/2 inch (12 mm), minimum.
4. Exposed Edge Treatment: Built up to minimum 1-1/4 inch (32 mm) thick; edge profile as indicated on drawings.
5. Back and End Splashes: Same sheet material, square top; minimum 4 inches (102 mm) high.
6. Fabricate in accordance with AWIAW/MAC/WI (AWS) or AWMAC/WI (NAAWS), Section 11 - Countertops, Premium Grade.
2.02 MATERIALS
A. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.
B. Joint Sealant: Mildew-resistant silicone sealant, clear.
2.03 ACCESSORIES
A. Fixed Top-Mounted Countertop Support Brackets:
1. Material: Steel.
2. Finish: Manufacturer's standard, factory-applied, textured powder coat.
3. Products:
a. Centerline Brackets; Front Mounting Countertop Support: www.countertopbracket.com/#/isle.

2.04 FABRICATION
A. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
1. Join lengths of tops using best method recommended by manufacturer.
2. Fabricate to overlap joints and end of cabinets 1 inch (25 mm) except where top butts against cabinet or fixture holes.
3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.
B. Provide back/end splash wherever corner edge abuts vertical surface unless otherwise indicated.
1. Secure to countertop with wall anchors and with contact surfaces set in waterproof glue.
2. Height: 4 inches (102 mm), unless otherwise indicated.
C. Solid Surfacing: Fabricate tops up to 144 inches (3,657 mm) long in one piece; join pieces with adhesive sealant in accordance with manufacturer's recommendations and instructions.
PART 3 EXECUTION
3.01 EXAMINATION
A. Do not begin installation until substrates have been properly prepared.
B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.
3.02 PREPARATION
A. Clean surfaces thoroughly prior to installation.
B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
3.03 INSTALLATION
A. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level, shin where required.
B. Attach plastic laminate countertops to cabinets using screws with minimum penetration into substrate board of 5/8 inch (16 mm).
C. Seal joint between back/end splashes and vertical surfaces.
3.04 TOLERANCES
A. Variation From Horizontal: 1/8 inch in 10 feet (3 mm in 3 m), maximum.
B. Offset From Wall, Countertops: 1/8 inch (3 mm) maximum; 1/8 inch (1.5 mm) minimum.
C. Field Joints: 1/8 inch (3 mm) wide, maximum.
3.05 CLEANING
A. Clean countertops surfaces thoroughly.
3.06 PROTECTION
A. Protect installed products until completion of project.
B. Touch-up, repair or replace damaged products before Date of Substantial Completion.
END OF SECTION 123600

SECTION 124813 ENTRANCE FLOOR MATS AND FRAMES
PART 1 GENERAL
1.01 SECTION INCLUDES
A. Extruded aluminum entrance floor grilles.
B. Recessed mat frames.
1.02 SUBMITTALS
A. Product Data: Provide data indicating properties of walk-off surface, component dimensions and recessed frame characteristics.
B. Shop Drawings: Indicate dimensions and details for recessed frame.
1. For recessed frames located in a dimensionally restricted area, show dimensions of space within which the frame will be installed.
C. Samples: Submit two samples, 12 by 12 inch (305 by 305 mm) in size illustrating pattern, color, finish, and edging.
D. Maintenance Data: Include cleaning instructions, and stain removal procedures.
PART 2 PRODUCTS
2.01 MANUFACTURERS
A. Entrances:
1. Activar Construction Products Group - J.L. Industries: Entrance Grilles: www.activacpg.com/#/isle.
2. Babcock-Davis: www.babcockdavis.com/#/isle.
3. Balcas: www.balcas.com/#/isle.
4. Construction Specialties, Inc.: www.csgroup.com/#/isle.
5. Pawling Corporation: www.pawling.com/#/isle.
6. Resur Enterprises, Inc.: www.resurusa.com/#/isle.
2. ENTRANCE FLOOR GRILLES AND GRATINGS - NOT USED
2.03 FABRICATION
A. Construct recessed mat frames square, light joints at corners, rigid. Coat surfaces with protective coating where in contact with cementitious materials.
PART 3 EXECUTION
3.01 EXAMINATION
A. Verify that floor opening for mats are ready to receive work.
3.02 PREPARATION
A. Mats: Verify size of floor recess before fabricating mats.
B. Vacuum clean floor recess.
3.03 INSTALLATION
A. Install frames to achieve flush plane with finished floor surface.
B. Install walk-off surface in floor recess flush with finish floor after clearing of finish flooring.
3.04 TOLERANCES
A. Maximum Gap Formed at Recessed Frame From Mat Size: 1/4 inch (6 mm).
END OF SECTION 124813

SECTION 323113 CHAIN LINK FENCES AND GATES
PART 1 GENERAL
1.01 SECTION INCLUDES
A. Posts, rails, and frames.
B. Wire fabric.
C. Concrete wire.
D. Concrete accessories.
1.02 REFERENCE STANDARDS
A. ASTM A123A/123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
B. ASTM A153A/153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.
C. ASTM A392 - Standard Specification for Zinc-Coated Steel Chain-Link Fence (Reapproved 2022).
D. 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; 2023.
E. ASTM F567 - Standard Practice for Installation of Chemical Type Fence.
F. ASTM F1043 - Standard Specification for Strength and Protective Coatings on Steel Industrial



SITE PLAN FOR GRAPHIC REPRESENTATION ONLY



JERICO
design group

208 Pirkle Ferry Road, Suite C
Cumming, GA 30040



CONWAY
& OWEN

FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

PRINT RECORD

[illegible]

Drawn By	Checked By
RA	JDG

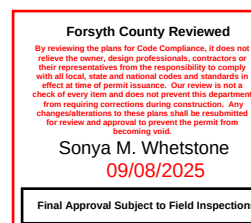
Date	Job No.
08/01/2025	25018

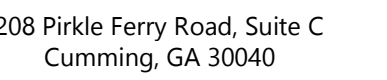
Sheet Title
SITE PLAN

Sheet No.

AS-1.01

RELEASED FOR PERMIT





FORSYTH COUNTY

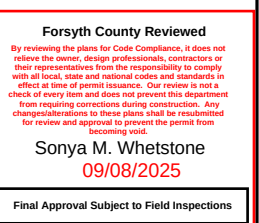
CUMMING, GA

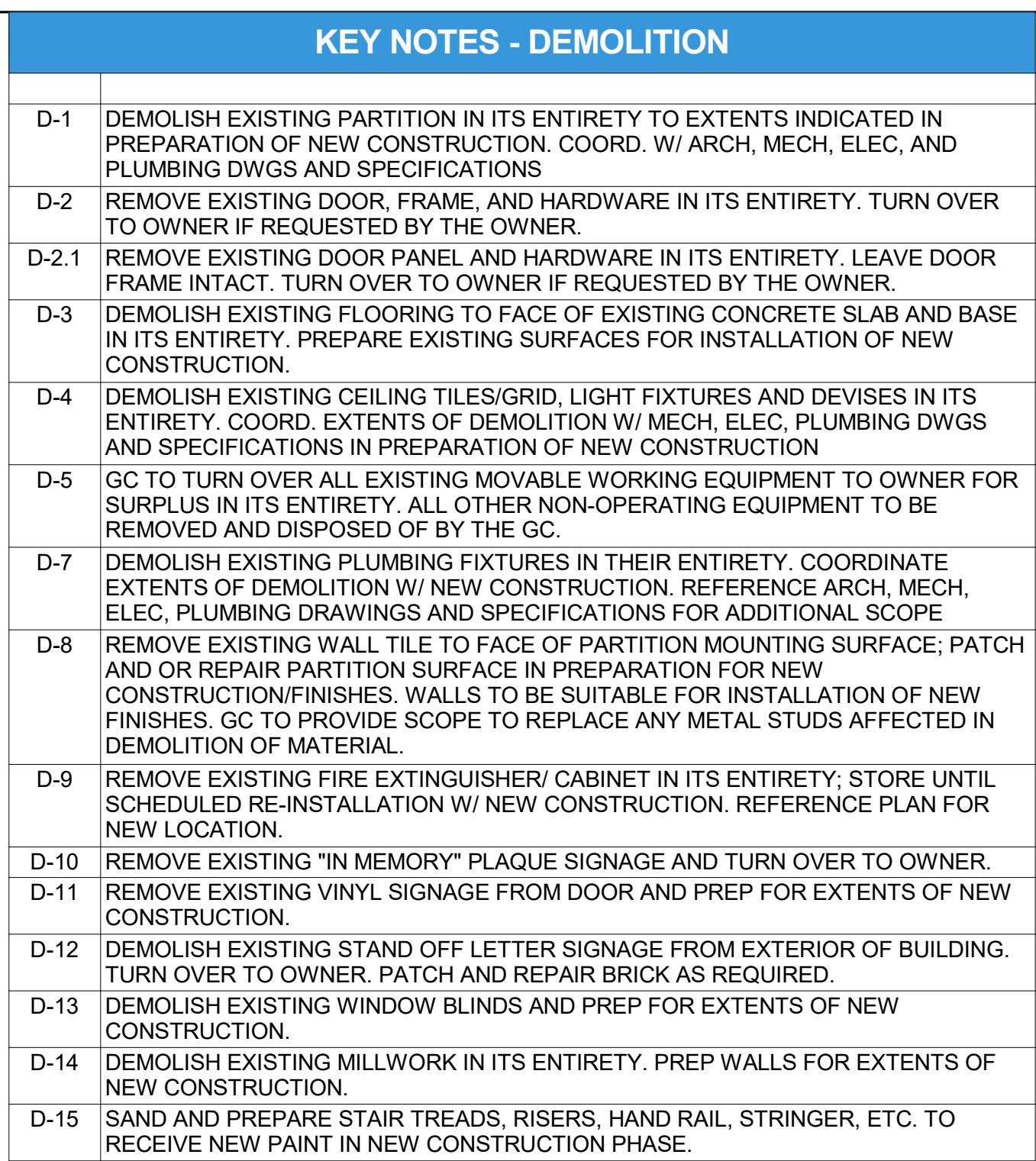
[illegible]

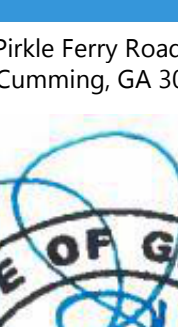
Sheet Title
**EXISTING PLANS -
LEVEL 1 & 2**

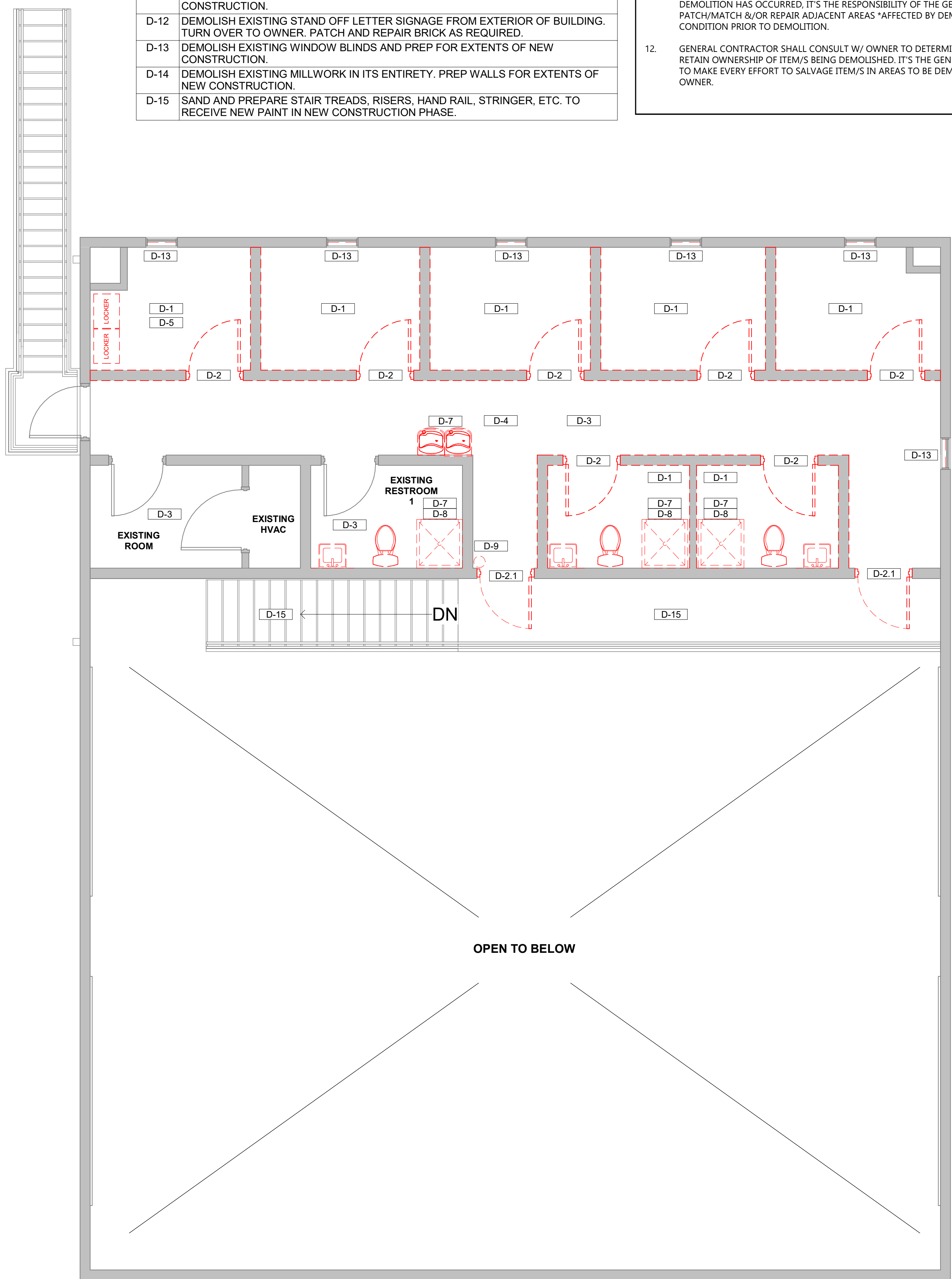
E-1.01

RELEASED FOR PERMIT





- 
- JERICHO**
design group
- 208 Pirkle Ferry Road, Suite C
Cumming, GA 30040
- 
- STATE OF GEORGIA
DOUGLAS E SHAW
NO. RA07845
REGISTERED ARCHITECT
- CONWAY**
& **OWEN**



FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

PRINT RECORD

[illegible]

Drawn By KB	Checked By JDG
Date 08/01/2025	Job No. 25018

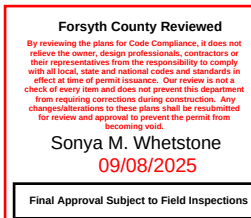
Sheet Title

**DEMOLITION PLANS -
LEVEL 1 & 2**

Sheet No.

D-1.01

RELEASED FOR PERMIT





KEY NOTES - DEMOLITION REFLECTED CEILING PLAN	
KEY NOTE #	DESCRIPTION
DC-1	DEMOLISH EXISTING CEILING TILE, GRID, AND LIGHT FIXTURES. PREPARE FOR EXTENTS OF NEW CONSTRUCTION.
DC-2	EXISTING CEILING GRID AND TILES TO REMAIN. REPLACE WATER DAMAGED OR DISCOLORED TILES WITH EXISTING TILES FROM SPACE THAT ARE IN BETTER CONDITION. DEMOLISH EXISTING LIGHT FIXTURE. REPAIR AND PREPARE GRID FOR EXTENTS OF NEW CONSTRUCTION.
DC-3	REMOVE LAMPS NOT IN WORKING CONDITION. FIXTURES TO REMAIN.

- ## GENERAL DEMO NOTES
1. CONTRACTOR TO TAKE CARE IN REMOVAL OF ANY ITEMS SCHEDULED OR NOT SCHEDULED FOR REUSE, SUCH AS FIXTURES, CEILING TILES, DOORS, FLOOR, HARDWARE, ETC. ITEMS TO BE OFFERED TO BUILDING OWNER FOR STOCK.
 2. DEMOLITION SHALL BE COMPLETED DURING THE HOURS OUTLINED IN CONTRACT
 3. DUST FREE BARRIERS MUST BE MAINTAINED AND SECURED @ CEILING TO FLOOR BETWEEN OCCUPIED AREAS AND AREAS OF DEMOLITION EXCEPT @ ENTRANCE AND EXIT TO SPACE.
 4. ALL EXISTING SECURITY CAMERAS TO REMAIN. PROTECT DURING DEMOLITION.
 5. AREAS/WALLS DAMAGED BY CONSTRUCTION EFFORTS DUE TO DEMOLITION OF ADJACENT PARTITIONS SHALL BE PATCHED AND PREPARED FOR NEW FINISHES.
 6. SEE MECHANICAL, ELECTRICAL & PLUMBING DRAWINGS FOR FULL EXTENT OF DEMOLITION.
 7. GENERAL CONTRACTOR SHALL COORDINATE ANY HAZARDOUS ABATEMENT W/ OWNERS CONSULTANTS.
 8. GENERAL CONTRACTOR SHALL COORDINATE ALL PARTITION PENETRATIONS REQUIRED FOR INSTALLATION OF RENOVATION/NEW CONSTRUCTION. DEMOLITION PLANS ARE REPRESENTATIVE OF DEMOLITION PARAMETERS & ADDITIONAL WORK REQUIRED FOR PREPARATION OF EXISTING BUILDING SHALL BE COORDINATED W/ STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL & PLUMBING/FIRE PROTECTION DOCUMENTS.
 9. GENERAL CONTRACTOR SHALL COORDINATE "ALL DEMOLITION" W/ EXISTING MECHANICAL, ELECTRICAL, PLUMBING, STRUCTURAL & CIVIL.
 10. GENERAL CONTRACTOR SHALL COORDINATE EXACT EXTENTS OF DEMOLITION W/ RENOVATION & NEW CONSTRUCTION. SEE ARCHITECTURAL, MECHANICAL, PLUMBING & ELECTRICAL DRAWINGS, NARRATIVES & SPECIFICATIONS FOR ADDITIONAL DEMOLITION W/ RESPECT TO RENOVATION/NEW CONSTRUCTION.
 11. IF DOCUMENTS/SPECIFICATIONS DO NOT ADDRESS RENOVATION/NEW CONSTRUCTION WHERE DEMOLITION HAS OCCURRED, IT'S THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PATCH/MATCH &/OR REPAIR ADJACENT AREAS ("AFFECTED BY DEMOLITION") TO PRE-EXISTING CONDITION PRIOR TO DEMOLITION.
 12. GENERAL CONTRACTOR SHALL CONSULT W/ OWNER TO DETERMINE IF OWNER WISHES TO SALVAGE & RETAIN OWNERSHIP OF ITEM/S BEING DEMOLISHED. IT'S THE GENERAL CONTRACTOR'S RESPONSIBILITY TO MAKE EVERY EFFORT TO SALVAGE ITEM/S IN AREAS TO BE DEMOLISHED AT THE REQUEST OF THE OWNER.



FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

PRINT RECORD

[illegible]

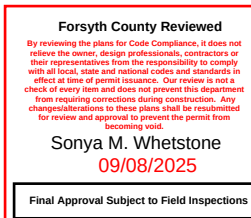
Drawn By HS	Checked By Checker
Date 08/01/2025	Job No. 25018

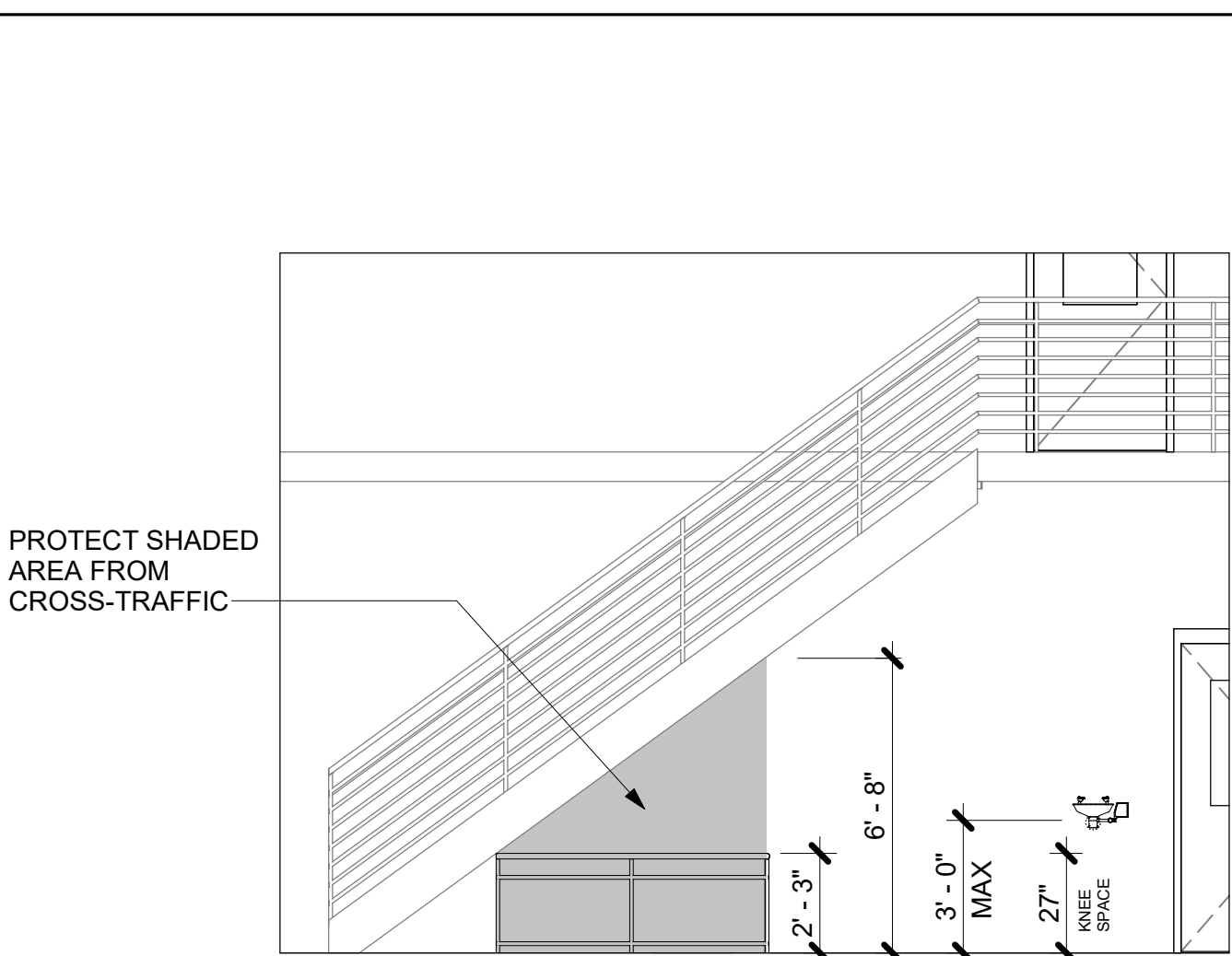
Sheet Title
**DEMOLITION RCP -
LEVEL 1 & 2**

Sheet No.

D-2.01

RELEASED FOR PERMIT





2 REFERENCE PLAN - LEVEL 2

-

1525 BUFORD HWY
CUMMING, GA

Drawn By RA	Checked By JDG
Date 08/01/2025	Job No. 25018

Sheet No.

A-1.01

RELEASED FOR PERMIT





RCP SHOWN ON THIS DOCUMENT IS FOR GRAPHIC ILLUSTRATION ONLY AND SHALL NOT BE USED AS AN ACCURATE REPRESENTATION OF MECHANICAL, ELECTRICAL AND PLUMBING SCOPE OF WORK. REFERENCE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS FOR SCOPE OF WORK.



CONWAY
& OWEN

FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

[illegible]

Drawn By HS	Checked By Checker
Date 08/01/2025	Job No. 25018

Sheet Title

**REFLECTED CEILING
PLANS - LEVEL 1 & 2**

Sheet No.

A-2.01

RELEASED FOR PERMIT



Diagram illustrating the cross-section of a door assembly with the following components and dimensions:

- HOLLOW METAL FRAME
- 2"
- 1/2"
- METAL STUDS - SEE PLANS FOR WALL TYPE
- DOOR AS SCHEDULED
- SEALANT BOTH SIDES
- 1/2"
- SOUND INSULATION
- 5/8" GYPSUM BOARD (BOTH SIDES)

DOOR ELEVATIONS

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

1

FRAME ELEVATIONS

<u>DOOR HARDWARE SCHEDULE - SEE SPECIFICATIONS 08 7100 FOR DETAILS</u>					
<u>SET 9.0 - RESTROOM</u>					
DOOR: E1.3, E2.8					
- 3 HINGE, FULL MORTISE	TA2714 (Size as Required)	US26D	MK		
- 1 SURFACE LOCK WITH INDICATOR	V33 10XUGS VSL	US26D	SA		
- 1 SURFACE CLOSER	7500 (mount as req'd per application)	689	NO		
- 1 KICK PLATE	K1050 10" high CSK BEV	US32D	RO		
- 1 MOP PLATE	K1050 4" high CSK BEV	US32D	RO		
- 1 FLOORWALL STOP (AS REQ'D)	403 (or) 446 (As Required)	US26D	RO		
- 3 SILENCER	608-RKW				
- 1 COAT HOOK	RM817	US15	RO		
Notes:					
-At existing openings with new hardware the supplier shall field inspect existing conditions prior to bidding to verify the specified hardware will work as required. Provide alternate solutions and proposals as needed.					
-Where possible install closer on door for optimum aesthetics.					
<u>SET 10.0 - HVAC</u>					
DOOR: E9					
- 3 HINGE, FULL MORTISE	TA2714 (Size as Required)	US26D	MK		
- 1 PASSAGE LATCH	10XU15 LMD	US26A	SA		
- 1 FLOORWALL STOP (AS REQ'D)	403 (or) 446 (As Required)	US26D	RO		
- 3 SILENCER	608-RKW		RO		
Notes:					
-At existing openings with new hardware the supplier shall field inspect existing conditions prior to bidding to verify the specified hardware will work as required. Provide alternate solutions and proposals as needed.					

3 HM JAMB DETAIL

SCALE: 3" = 1'-0"

This technical drawing shows a cross-section of a door jamb assembly. The assembly consists of a hollow metal frame with a door (labeled 'DOOR AS SCHEDULED') inserted into it. The frame is shown with a 1/2" gap between the door and the frame. The frame is surrounded by 5/8" gypsum board on both sides, which is sealed with sealant on both sides. The entire assembly is set into a wall, with sound insulation and a wood header (labeled 'WOOD HEADER - SEE STRUCTURAL') shown above the jamb. The drawing includes dimensions for the jamb (1/2" and 2 1/2") and the gypsum board (5/8").

Labels and dimensions:

- SOUND INSULATION
- WOOD HEADER - SEE STRUCTURAL
- 1/2"
- 2 1/2"
- METAL STUDS - SEE PLANS FOR WALL TYPE
- 5/8" GYPSUM BO. (BOTH SIDES)
- SEALANT BOTH SIDES
- HOLLOW METAL FRAME
- DOOR AS SCHEDULED

[illegible]

Drawn By	Checked By
RA/HS	JDG
Date	Job No.
08/01/2025	25018

Sheet Title

**EXTERIOR
ELEVATIONS AND
DOOR DETAILS**

Sheet No.

A-4.01

Forsyth County Reviewed
Revisiting the plans for Code Compliance, it does not reduce the number, design professional, contractors or their representatives from the responsibility to comply with all local, state and national codes and standards in effect at the time of construction. It is not a change of scope of work and does not prevent them from being required to comply with all applicable codes and standards. Any changes to the plans for Code Compliance, it is not a change of scope of work and does not prevent them from being required to comply with all applicable codes and standards. Any changes to the plans for Code Compliance, it is not a change of scope of work and does not prevent them from being required to comply with all applicable codes and standards.

Sonya M. Whetsone
09/08/2025

Final Approval Subject to Field Inspections

[illegible][illegible]



**TOILET ACCESSORIES PER FORSYTH COUNTY VERTICAL
CONSTRUCTION DESIGN STANDARDS, 6TH EDITION.**

KEY NOTES - FINISH PLAN	
IF-1	TRANSITION FROM SEALED CONCRETE TO LVP
IF-1.1	TRANSITION FROM EXTERIOR CONCRETE TO LVP
IF-2	TRANSITION FROM LVP TO TILE FLOOR
IF-3	PEG BOARD, B.O.D. PROWOOD SKT #109099. INSTALL BLOCKING AS REQUIRED. 24" W X 48" H BOARDS INSTALLED 3/4" AFF.
IF-4	INSTALL CORNER GUARDS PER DETAIL 3/D-1.01.
IF-5	INSTALL NEW WINDOW BLINDS AT ALL EXTERIOR WINDOWS AND EXTERIOR DOORS WITH LITES. PLEASE, SEE ID-1.01 FOR SPECIFICATION, WB-1.
IF-6	UNLESS NOTED OTHERWISE IN PLAN, INSTALL TILE BASE, TB-1, FOR BASE AND INSTALL WALL TILE, WT-1, UP TO 48" ABOVE TILE BASE. USE METAL TRIM, MT-1, TO FINISH EXPOSED TILE EDGE, PAINT P-1 ABOVE.
IF-7	UNLESS NOTED OTHERWISE IN PLAN, INSTALL RUBBER BASE, RB-1, WITH FRP-1 UP TO 48" ABOVE RUBBER BASE. SEE DETAIL 4/D-1.01, USE MANUFACTURER RECOMMENDED J.CAP, MT-1, TO FINISH EXPOSED FRP EDGE, PAINT P-1 ABOVE.
IF-8	PRIME AND PAINT STEEL PORTION OF EXISTING METAL STAIRS. SEE ID-1.01 FOR PAINT COLOR.
IF-9	GC TO PROVIDE IN WALL BLOCKING FOR ALL WALL MOUNTED DIGITAL DISPLAY SCREENS/TVS.



FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

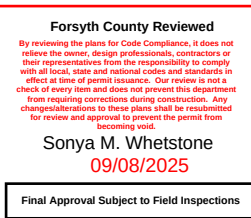
[illegible]

Drawn By	Checked By
HS	JDG
Date	Job No.
08/01/2025	25018

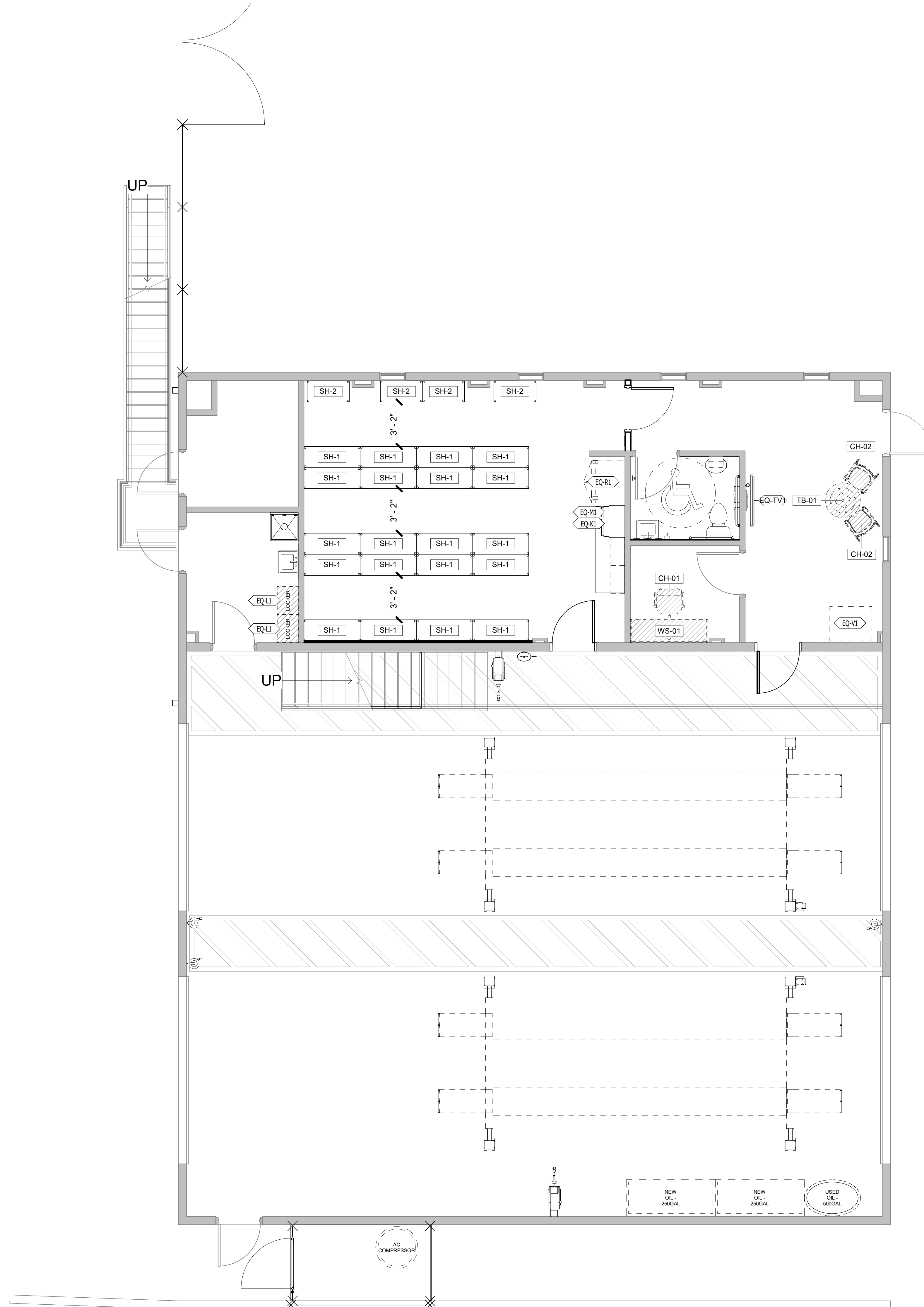
Sheet Title
**FINISH &
REFERENCE PLAN -
LEVEL 1 & LEVEL 2**

Sheet No.

ID-2.01
RELEASED FOR PERMIT

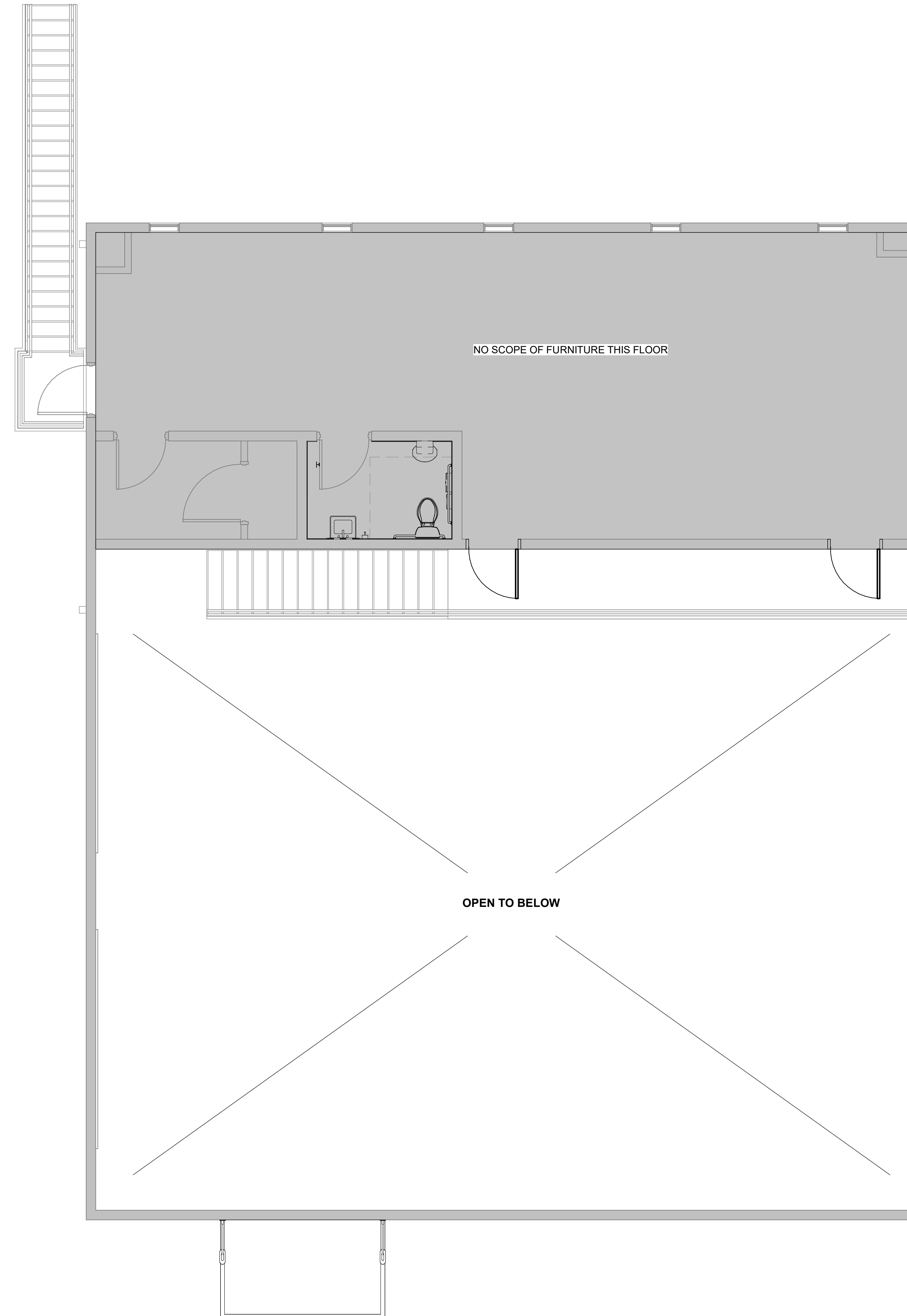


1. GENERAL CONTRACTOR TO COORDINATE SCHEDULED ITEMS WITH OWNER AND OWNER'S EQUIPMENT REPRESENTATIVE. THIS INCLUDES ELECTRICAL AND HIGH VOLTAGE EQUIPMENT. COORDINATION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING.
2. REPRESENTATIVE OWNER'S EQUIPMENT REPRESENTATIVE. U.N.O.
3. FURNITURE & EQUIPMENT SHOWN HATCHED IS TO BE PROVIDED BY OWNER.
4. GENERAL CONTRACTOR TO COORDINATE WITH OWNER/OWNER REPRESENTATIVE ON DELIVERY SCHEDULE AND INSTALLATION FOR ALL FFE.
5. FURNITURE TO RECEIVE FINAL CONNECTIONS FROM LOW-VOLTAGE CONTRACTOR TO ALL FURNITURE REQUIRING ELECTRICAL, SUCH AS TABLES, WORKSTATIONS, CONFERENCE TABLES, ETC.



1 FURNITURE PLAN - FIRST FLOOR

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



2 FURNITURE/EQUIPMENT PLAN - LEVEL 2

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

EQUIPMENT SCHEDULE (EQ-)						
TAG NO.	DESCRIPTION	FURNISHED BY		INSTALLED BY		NOTES
		CONTRACTOR	OWNER	CONTRACTOR	OWNER	
EQ-K1	KEURIG	X		X		
EQ-L1	EXISTING LOCKER		X	X		
EQ-M1	MICROWAVE	X		X		
EQ-R1	EXISTING REFRIGERATOR		X	X		
EQ-TV1	TV		X	X		CONTRACTOR TO STORE AND RELOCATE AT END OF PROJECT
EQ-V1	EXISTING DRINK VENDING MACHINE		X	X		CONTRACTOR TO STORE AND RELOCATE AT END OF PROJECT
FURNITURE SCHEDULE (F-)						
TAG NO.	DESCRIPTION	FURNISHED BY		INSTALLED BY		NOTES
		CONTRACTOR	OWNER	CONTRACTOR	OWNER	
CH-01	TASK CHAIR		X		X	NIC
CH-02	DINING CHAIR		X		X	NIC
SH-1	ULINE SHELVING, 18"D x 48"L - H-5188	X		X		
SH-2	ULINE SHELVING, 18"D x 36"L - H-5186	X		X		
TB-01	CAFE TABLE		X		X	NIC
WS-01	DESK		X		X	NIC



FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

PRINT RECORD

[illegible]

Drawn By	Checked By
HS	JDG

Date	Job No.
08/01/2025	25018

Sheet Title

**FURNITURE
EQUIPMENT PLANS -
LEVEL 1 & LEVEL 2**

Sheet No.

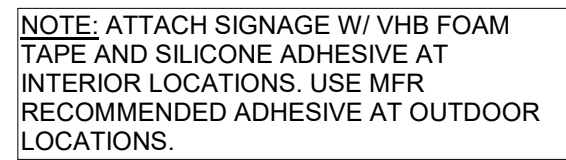
ID-6.01

RELEASED FOR PERMIT

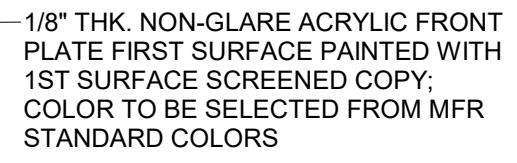
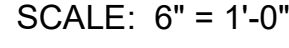




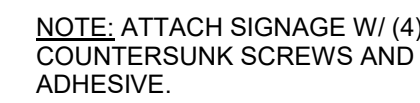
SCALE: 12" = 1'-0"



SCALE: 12" = 1'-0"



SCALE: 6" = 1'-0"



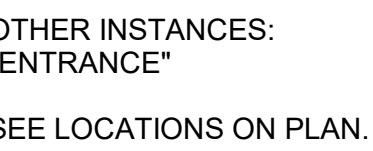
SCALE: 3" = 1'-0"



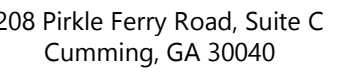
SCALE: 12" = 1'-0"



SCALE: 1 1/2" = 1'-0"



SCALE: 1 1/2" = 1'-0"



FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

PRINT RECORD

[illegible]

Drawn By	Checked By
HS	JDG

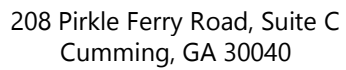
Date	Job No.
08/01/2025	25018

Sheet Title
SIGNAGE DIAGRAMS

Sheet No.

ID-7.00

RELEASED FOR PERMIT



FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

PRINT RECORD

[illegible]

Drawn By HS	Checked By JDG
-----------------------	--------------------------

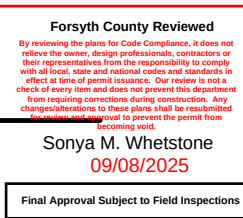
Date	Job No.
08/01/2025	25018

Sheet Title
**SIGNAGE PLANS -
LEVEL 1 & LEVEL 2**

Sheet No.

ID-7.01

RELEASED FOR PERMIT



VOICE/DATA AND SECURITY NOTES

1. PROVIDE OUTLET BOX WITH 1/2" EMPTY CONDUIT WITH PULL STRING (UNLESS NOTED OTHERWISE ON PLANS) TO 6" ABOVE ACCESSIBLE CEILING FOR ALL WALL MOUNTED VOICE/DATA AND SECURITY DEVICES.
2. PROVIDE POWER FOR SECURITY SYSTEM DEVICES AS REQUIRED.



FIRE ALARM/MASS NOTIFICATION LEGEND	
SYMBOL	DESCRIPTION
	MANUAL PULL STATION
	FIRE ALARM/MASS NOTIFICATION VISUAL NOTIFICATION ONLY - WALL MOUNTED / CEILING MOUNTED, 'V' INDICATES CANDELA
	FIRE ALARM HORN NOTIFICATION ONLY - WALL MOUNTED / CEILING MOUNTED
	FIRE ALARM/MASS NOTIFICATION SPEAKER NOTIFICATION ONLY - WALL MOUNTED / CEILING MOUNTED, 'V' INDICATES SPEAKER WATTAGE
	FIRE ALARM HORN & VISUAL NOTIFICATION - WALL MOUNTED / CEILING MOUNTED, 'V' INDICATES CANDELA
	FIRE ALARM/MASS NOTIFICATION SPEAKER & VISUAL NOTIFICATION - WALL MOUNTED / CEILING MOUNTED, 'V' INDICATES CANDELA, 'W' INDICATES SPEAKER WATTAGE
	SMOKE DETECTOR - CEILING MOUNTED, 'S' INDICATES TYPE OF SMOKE DETECTOR, 'AS' - AIR SAMPLING, 'I' - IONIZATION, 'P' - PHOTOELECTRIC, 'RB' - RELAY BASE, 'SB' - SOUNDER BASE
	SMOKE DETECTOR - DUCT MOUNTED (QUANTITY AS REQUIRED BY NFPA)
	SMOKE ALARM - CEILING MOUNTED
	COMBINATION SMOKE/HEAT DETECTOR - CEILING MOUNTED
	HEAT DETECTOR - CEILING MOUNTED, 'V' INDICATES TYPE OF HEAT DETECTOR, 'F' - FIXED, 'RC' - RATE COMPENSATION, 'R' - RATE OF RISE, 'R/F' - RATE OF RISE/FIXED, 'T' - THERMAL
	HEAT DETECTOR - LINE TYPE
	FLAME DETECTOR - CEILING MOUNTED, 'V' INDICATES TYPE OF FLAME DETECTOR, 'I' - INFRARED, 'U' - ULTRAVIOLET, 'UV' - ULTRAVIOLET/INFRARED, 'VR' - VISIBLE RADIATION
	GAS DETECTOR, 'V' INDICATES TYPE OF FLAME DETECTOR, 'CO' - CARBON MONOXIDE, 'CO2' - CARBON DIOXIDE, 'CH4' - METHANE, 'HCL' - HYDROGEN CHLORIDE
	FIREMAN'S PHONE, 'V' INDICATES TYPE OF FLAME DETECTOR, 'R' - RECESSED PHONE CABINET, 'S' - SURFACE MOUNTED PHONE CABINET, 'J' - FIREMAN'S JACK
	CONTROL MODULES - DOOR CLOSER AND MAGNETIC HOLD OPEN
	SUPERVISORY MODULES - FLOW SWITCH AND TAMPER SWITCH. COORDINATE QUANTITY AND LOCATION WITH FIRE SPRINKLER CONTRACTOR
	FIRE ALARM CONTROL PANEL
	FIRE ALARM ANNUNCIATOR PANEL
	FIRE SMOKE DAMPER - PROVIDE SMOKE DETECTOR AND CONTROL POWER AS REQUIRED. COORDINATE VOLTAGE AND CONNECTION REQUIREMENTS WITH EQUIPMENT BEING PROVIDED. PROVIDE CONTROL WIRING TO CONNECT RSD WITH FIRE ALARM SYSTEM FOR MONITORING AND CONTROL OF ASSOCIATED HVAC UNIT SERVING THE SPACE.

SHEET LIST ELECTRICAL	
SHEET NUMBER	SHEET NAME
E-01	ELECTRICAL LEGENDS AND NOTES
E-02	ELECTRICAL NOTES, AND DETAILS
E-03	GOFCHECK
E-04	DEMOLITION PLAN - ELECTRICAL
E-05	FLOOR PLAN - ELECTRICAL
E-06	FLOOR PLAN - LIGHTING
E-07	FLOOR PLAN - MECHANICAL AND FIRE ALARM
E-08	PANEL, SCHEDULES AND RISER DIAGRAM

ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE - WALL MOUNTED / CEILING MOUNTED / FLOOR MOUNTED
	GFCI DUPLEX / GFCI QUAD RECEPTACLE
	QUAD RECEPTACLE - WALL MOUNTED / CEILING MOUNTED / FLOOR MOUNTED
	DUPLEX / GFCI DUPLEX / QUAD / QUAD GFCI RECEPTACLE - WALL MOUNTED ABOVE COUNTER
	USB COMBO - DUPLEX / GFCI DUPLEX RECEPTACLE / QUAD / QUAD GFCI RECEPTACLE () USB CHARGING PORTS
	USB COMBO - DUPLEX / GFCI DUPLEX RECEPTACLE / QUAD / QUAD GFCI RECEPTACLE () USB CHARGING PORTS - WALL MOUNTED ABOVE COUNTER
	USB CHARGING PORT DEVICE
	ISOLATED GROUND DUPLEX / SWITCH CONTROLLED DUPLEX RECEPTACLE
	ISOLATED GROUND DUPLEX / SWITCH CONTROLLED DUPLEX RECEPTACLE - WALL MOUNTED ABOVE COUNTER
	JUNCTION BOX - WALL MOUNTED / CEILING MOUNTED / FLOOR MOUNTED - CONDUIT TO 6" ABOVE ACCESSIBLE CEILING AS REQUIRED
	SPECIAL VOLT/AMP RECEPTACLE
	SINGLE RECEPTACLE
	GFCI DEVICE
	MOTOR RATED SWITCH
	DATA OUTLET - WALL MOUNTED / CEILING MOUNTED / FLOOR MOUNTED - PROVIDE JUNCTION BOX W/ 114" CONDUIT TO 6" ABOVE ACCESSIBLE CEILING. PROVIDE 90° ELBOW ABOVE CEILING WITH PLASTIC GROMMET.
	COMBINATION DATA & CABLE OUTLET - WALL MOUNTED / CEILING MOUNTED / FLOOR MOUNTED - PROVIDE JUNCTION BOX W/ 114" CONDUIT TO 6" ABOVE ACCESSIBLE CEILING. PROVIDE 90° ELBOW ABOVE CEILING WITH PLASTIC GROMMET.
	DATA / COMBINATION DATA & CABLE OUTLET - WALL MOUNTED ABOVE COUNTER - PROVIDE JUNCTION BOX W/ 114" CONDUIT TO 6" ABOVE ACCESSIBLE CEILING. PROVIDE 90° ELBOW ABOVE CEILING WITH PLASTIC GROMMET.
	WIRELESS ACCESS POINT DATA OUTLET - CEILING MOUNTED - PROVIDE FLUSH MOUNTED JUNCTION BOX IN CEILING
	RECESSED RAIL PANEL ENCLOSURE WITH DUPLEX RECEPTACLE AND A/V DATA BOX. PROVIDE 1 1/4" CONDUIT FOR DATA AND 3/4" CONDUIT FOR CABLE TO 6" ABOVE ACCESSIBLE CEILING. PROVIDE 90° ELBOW ABOVE CEILING WITH PLASTIC GROMMET.
	POKE THRU - PROVIDE 125" CONDUIT TO NEAREST WALL AND THEN UP TO 6" ABOVE ACCESSIBLE CEILING. PROVIDE 90° ELBOW ABOVE CEILING WITH PLASTIC GROMMET FOR DATA
	RECEPTACLE AND DATA MULTI-SERVICE POKE THRU. PROVIDE 1 1/4" CONDUIT TO NEAREST WALL AND UP WALL TO 6" ABOVE ACCESSIBLE CEILING. PROVIDE 90° ELBOW ABOVE CEILING WITH PLASTIC GROMMET.
	MODULAR FURNITURE POKE THRU. COORDINATE ALL POWER REQUIREMENTS WITH MANUFACTURER FOR EXACT CONDUCTOR QUANTITY, CONDUCTOR CONFIGURATION AND CONNECTION REQUIREMENTS. SEE LV DRAWINGS FOR ADDITIONAL INFORMATION.
	RECEPTACLE AND DATA FLOOR BOX. PROVIDE 1" CONDUIT TO NEAREST WALL AND UP WALL TO 6" ABOVE ACCESSIBLE CEILING. PROVIDE 90° ELBOW ABOVE CEILING WITH PLASTIC GROMMET.
	RECEPTACLE AND A/V FLOOR BOX. PROVIDE 1 1/2" CONDUIT TO NEAREST WALL AND UP WALL TO 6" ABOVE ACCESSIBLE CEILING. PROVIDE 90° ELBOW ABOVE CEILING WITH PLASTIC GROMMET.
	MODULAR FURNITURE FLOOR BOX. COORDINATE ALL POWER REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN FOR EXACT CONDUCTOR QUANTITY, CONDUCTOR CONFIGURATION AND CONNECTION REQUIREMENTS. SEE LV DRAWINGS FOR ADDITIONAL INFORMATION.
	MODULAR FURNITURE WALL MOUNTED JUNCTION BOXES. COORDINATE ALL POWER REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN FOR EXACT CONDUCTOR QUANTITY, CONDUCTOR CONFIGURATION AND CONNECTION REQUIREMENTS. SEE LV DRAWINGS FOR ADDITIONAL INFORMATION.
	POWER POLE / COMBINATION POWER AND DATA POLE

Forsyth County Reviewed

By reviewing the plans for Cuth-Cumpleton, 4-draws and select the current, design professionals, institutions or their representatives from the responsibility to comply with all local, state and national codes and standards in office or on-site of project completion that includes a visit a check of every task and does not prevent this department from requiring corrections during construction, any change orders to these plans that are considered for review and approval to improve the project from increasing costs.

Sonya M. Whitestone
09/08/2025

Final Approval Subject to Field Inspections



FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

PRINT RECORD

[illegible]

Drawn By KG	Checked By CTB
-----------------------	--------------------------

Date	Job No.
08/01/2025	25092

Sheet Title

ELECTRICAL LEGENDS, AND NOTES

Sheet No.

E0.1

RELEASED FOR PERMIT



Energy Code:	2015 IECC
Project Title:	FOCO FIRE STATION 15
Project Type:	New Construction

Construction Site: 1525 BUFORD HWY CUMMING, GA 30040	Owner/Agent:	Designer/Contractor: Khaled Ghanawi Conway and Owen 1455 Bluegrass Lakes Pkwy Alpharetta, GA 30004 kghanawi@conway-owen.com
Additional Efficiency Package(s)		

Credits: 1.0 Required 0.0 Proposed

Credits: 1.0 Required 0.0 Proposed

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Workshop	4080	1.19	4855
		Total Allowed Watts =	4855

Figure 10. The effect of the initial concentration of the monomer on the polymerization of **1** in the presence of **2** at 60 °C.

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1: Workshop				
LED 1: A: LED Panel 33W:	1	5	27	135
LED 2: LED Panel 33W:	1	23	33	759
LED 3: LED Linear 33W:	1	2	25	50
		Total Proposed Watts =		944

Interior Lighting PASSES: Design 81% better than code

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Khaled Ghanawi
Name - Title


Signature

07/16/2025
Date

Project Title: FOCO FIRE STATION 15
Data filename: Untitled.cck

Report date: 07/16/25
Page 1 of 5



Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req. ID	Plan Review	Complies?	Comments/Assumptions
1103.2 (H4)	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐ Complies ☐ Does Not ☒ Not Observable ☐ Not Applicable	

Additional Comments/Assumptions:

Project Title: FOCO FIRE STATION 15 Report date: 07/16/25
 Data filename: Untitled.cck Page 2 of 5

Section # & Req. ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.1 [EL15] ¹	Lighting controls installed to uniformly reduce the lighting load by at least 50%.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.2.1 [EL18] ¹	Occupancy sensors installed in required spaces.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.2.1, C405.2.2 3 [EL23] ¹	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.2.2 1 [EL22] ¹	Automatic controls to shut off all building lighting installed in all buildings.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.2.3 [EL16] ¹	Daylight zones provided with individual controls that control the lights independent of general area lighting.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.2.3, C405.2.3 1, C405.2.3 2 [EL20] ¹	Primary sidelighted areas are equipped with required lighting controls.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.2.3, C405.2.3 1, C405.2.3 3 [EL21] ¹	Enclosed spaces with daylight area under skylights and rooftop monitors are equipped with required lighting controls.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.2.4 [EL4] ¹	Separate lighting control devices for specific uses installed per approved lighting plans.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.2.4 [EL8] ¹	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.3 [EL6] ¹	Exit signs do not exceed 5 watts per face.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	

Additional Comments/Assumptions:

Project Title: FOCO FIRE STATION 15 Report date: 07/16/25
 Data filename: Untitled.cck Page 3 of 5

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5, 2, (F117)?	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐ Complies ☒ Does Not ☐ Not Observable ☐ Not Applicable	
C405.4.1 (F118)?	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐ Complies ☒ Does Not ☐ Not Observable ☐ Not Applicable	See the Interior Lighting Fixture schedule for values.
C408.2.5, 1, (F116)?	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	☐ Complies ☒ Does Not ☐ Not Observable ☐ Not Applicable	
C408.3 (F133)?	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐ Complies ☒ Does Not ☐ Not Observable ☐ Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
------------------------	--------------------------	-----------------------

Project Title: FOCO FIRE STATION 15
Report date: 07/16/25

Data filename: Untitled.cck
Page 4 of 5



208 Pirkle Ferry Road, Suite C
Cumming, GA 30040



CONWAY
& OWEN

FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

PRINT RECORD

[illegible]

Drawn By KG	Checked By CTB
-----------------------	--------------------------

Date	Job No.
08/01/2025	25092

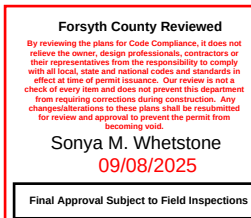
Sheet Title

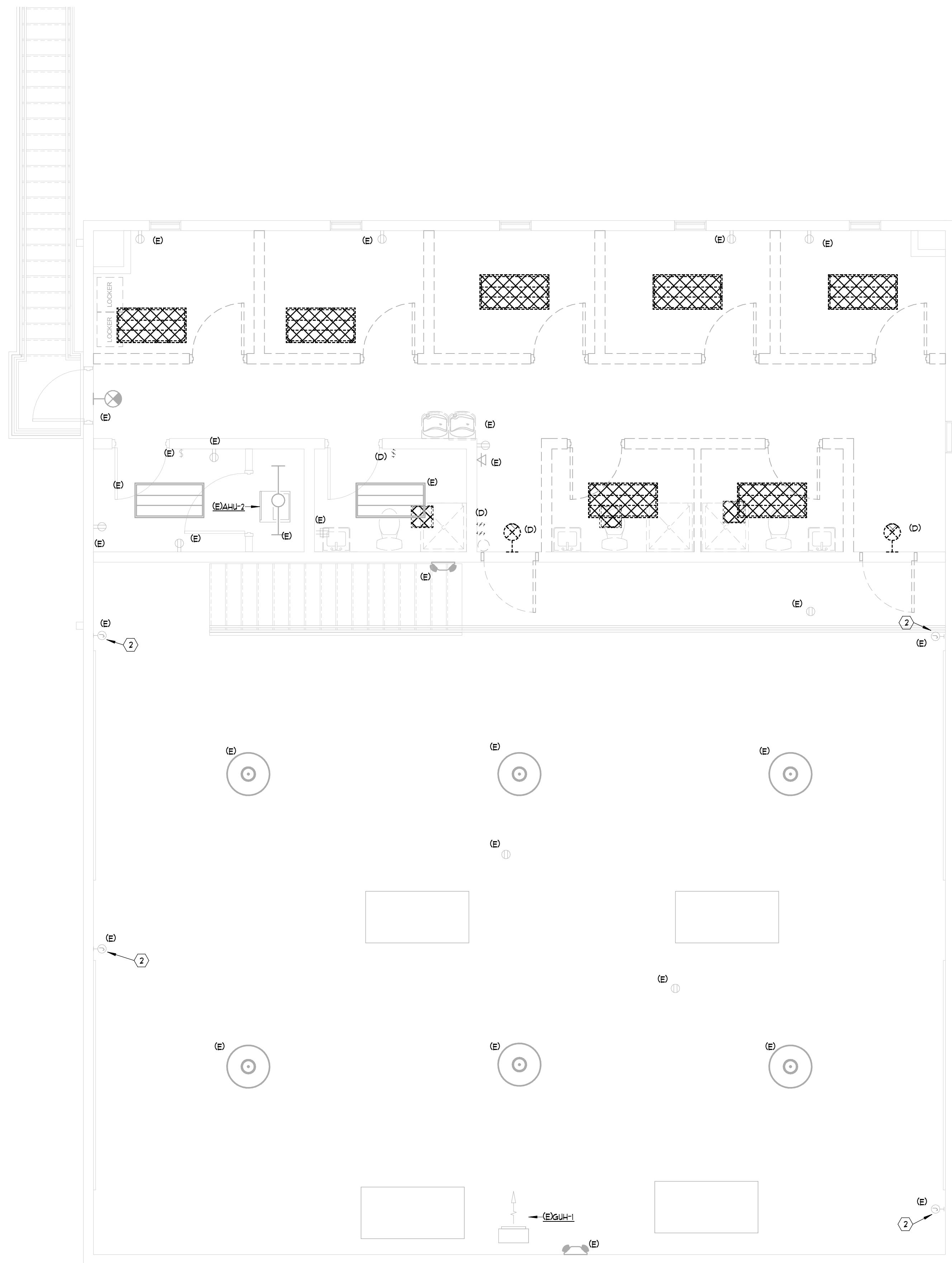
COMCHECK

Sheet No.

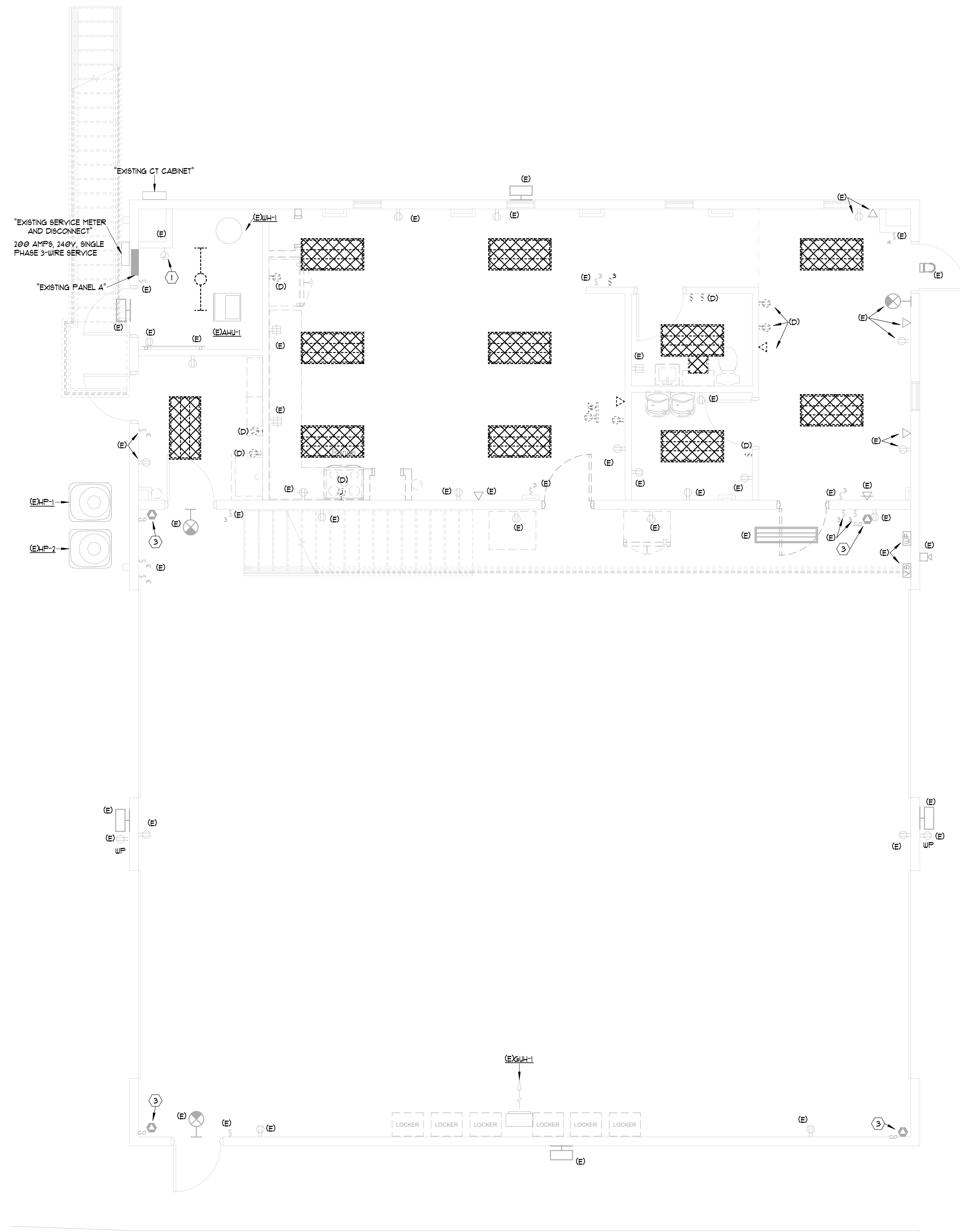
E0.3

RELEASED FOR PERMIT





SECOND FLOOR DEMOLITION PLAN - ELECTRICAL
 1/4" = 1'-0"
 ITEMS UNDERNEATH HATCHING TO BE DEMOLISHED.



 **FIRST FLOOR DEMOLITION PLAN - ELECTRICAL**
1/4" = 1'-0"

KEY NOTES:

- ① EXISTING CONTROL TIMER FOR OUTSIDE LIGHT PACKS TO REMAIN.
- ② EXISTING CONNECTION TO BAY DOOR MOTOR TO REMAIN.
- ③ EXISTING WALL MOUNTED CO DETECTORS AND CONTROL PANEL TO REMAIN.

PRINT RECORD

[illegible]

Drawn By KG	Checked By CTB
-----------------------	--------------------------

Date	Job No.
08/01/2025	25092

Sheet Title
**DEMOLITION PLAN -
ELECTRICAL**

Sheet No.

E1.1

RELEASED FOR PERMIT



1. COORDINATE EXACT LOCATION FOR ALL ELECTRICAL AND LIGHTING DEVICES WITH ARCHITECT PRIOR TO INSTALLATION
2. LABEL PANELBOARD SCHEDULES PER NEC 408.4
3. DO NOT MOUNT OUTLETS BACK TO BACK OFFSET TO NEXT STUD SPACE
4. RECEPTACLE MODIFIER "H" INDICATES DEVICE MOUNTED HORIZONTALLY IN COUNTER

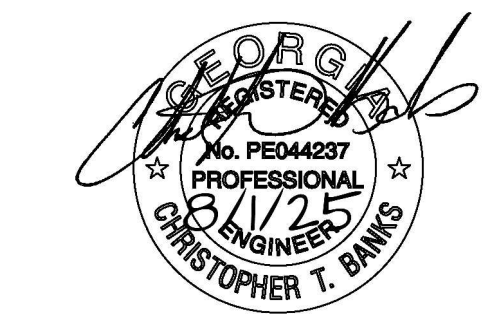
- ① ALL RECEPTABLES AND ELECTRICAL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 91 AND NFPA 30A, SECTION 8. ALL RECEPTABLES TO BE GFCI TYPE. ALL RACEWAYS SHALL BE AS SPECIFIED IN ARTICLE 91 AND SEALED WHERE SPECIFIED PER DIVISION AND CLASS.
- ② PROVIDE CONNECTION FOR VEHICLE LIFTS. COORDINATE FINAL LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
- ③ USE EXISTING RECEPTACLE AND CIRCUITS TO FEED ELECTRICAL REELS.
- ④ REPLACE ALL 120V, 350V SINGLE PHASE RECEPTABLES WITHIN GARAGE AREA WITH GFCI TYPE DEVICES. (TYPICAL)

Forsyth County Reviewed

By reviewing the plans for Code Compliance, I have not
reviewed the matter, design professionals, contractors or
their representatives. I am not responsible for the compliance
with all local, state and national codes and standards in
effect at the time of permit issuance. This review is not a
check of every detail and does not prevent the Department
from imposing sanctions during construction. Any
changerevisions to these plans will be considered for
review and approval. I warrant the permit has
issuance only.

Sonya M. Whetstone
09/08/2025

Final Approval Subject to Field Inspections



CONWAY
& OWEN

FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

PRINT RECORD

[illegible]

Drawn By KG	Checked By CTB
-----------------------	--------------------------

Date	Job No.
08/01/2025	25092

Sheet Title
**FLOOR PLAN -
ELECTRICAL**

Sheet No.

E1.2

RELEASED FOR PERMIT



GENERAL NOTES:

1. REFER TO ARCHITECTURAL CEILING PLAN FOR EXACT CEILING TYPE AND HEIGHT.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL TRIM AND "HUNTING WARDROBE" FOR EACH LIGHTING FIXTURE TO MATCH FINISH TO IN OR ON WHICH IS INSTALLED.
3. ELECTRICAL CONTRACTOR SHALL MATCH VOLTAGE OF ALL FIXTURES TO THE CIRCUIT WHICH THEY ARE CIRCLED.
4. ALL SURFACE MOUNTED CONDUIT INSTALLED ON CEILING SHALL BE RUN PERPENDICULAR AND OAKRLEAF TO STRUCTURE AND IN A MANNER THAT IS NEAT AND SECURE.
5. ALL EXPOSED CONDUIT RUNS SHALL BE PAINTED AS DIRECTED BY ARCHITECT.
6. ALL LIGHTING FIXTURE HEIGHTS LISTED ARE MEASURED TO THE BOTTOM OF THE FIXTURE TO OPERATE OCCUPANCY SENSORS.
7. ALL EXIT SIGNS ARE TYPE "X" UNLESS NOTED OTHERWISE.
8. ROUTE UNBUNDLED HOT CONDUCTORS FEEDING EMERGENCY LIGHTING THROUGH EXISTING CHASES, VENTILATORS AND EXISTING DUCTS TO MAINTAIN EXISTING CEILING HEIGHTS AND MAINTAIN EXISTING DOWN LIGHTING CONTROL RELAYS AND SWITCHES.

- 1 ALL LIGHT FIXTURES AND ELECTRICAL DEVICES TO BE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 910 AND NFPA 70A, SECTION 8. ALL LIGHT FIXTURES TO BE CFC TYPE. ALL RACEGLASS SHALL BE AS SPECIFIED IN ARTICLE 910 AND SEALED WHERE SPECIFIED PER DIVISION AND CLASS.
- 2 PROVIDE LED LAMPS FOR EXISTING LUMINANCE. MATCH LED LAMP LUMENS WITH EXISTING LUMINANCE. EXISTING CONTROL TO REMAIN.
- 3 CONNECT LIGHT FIXTURE TO NEW CIRCUIT. EXISTING CONTROL TO REMAIN.
- 4 CEILING MOUNTED OCCUPANCY SENSOR SHALL BE AUTO-OFF AFTER 10 MINUTES OF NO OCCUPANCY IN SPACE/AREA. (TYPICAL FOR ALL CEILING MOUNTED OCCUPANCY SENSORS).
- 5 EMERGENCY EGRESS FIXTURE WITH INTEGRAL BATTERY PACK. CONNECT TO UNBATTCHED HOT FROM LIGHTING CIRCUIT SERVING THE AREA FOR CHARGING AND CONTROL. (TYPICAL).

CONWAY
& OWEN

FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

PRINT RECORD

[illegible]

Drawn By KG	Checked By CTB
-----------------------	--------------------------

Date	Job No.
08/01/2025	25092

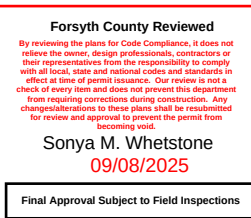
Sheet Title

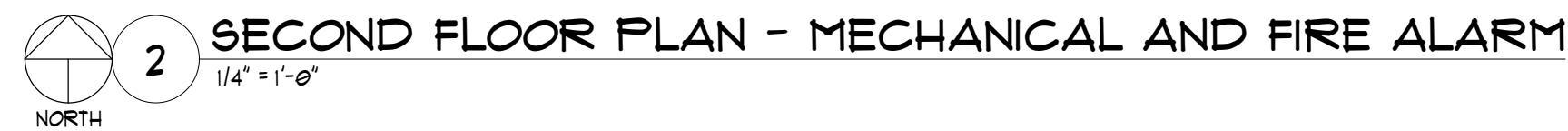
**FLOOR PLAN -
LIGHTING**

Sheet No.

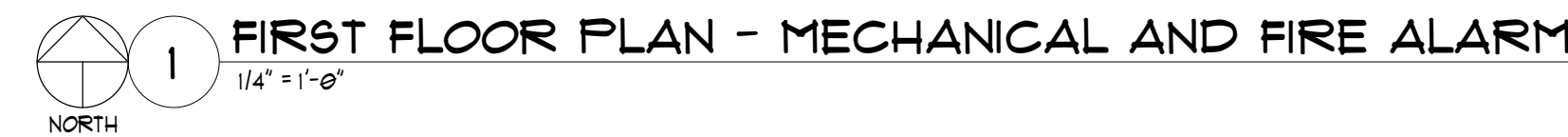
E1.3

RELEASED FOR PERMIT





MECHANICAL EQUIPMENT CONNECTION SCHEDULE NOTES	
NUMBER	NOTES
1	FAN TO BE CONTROLLED BY OCCUPANCY SENSOR.
2	CONNECT TO NEAREST UNSWITCHED 120V, 20A CONVENIENCE RECEPTACLE WITH 2#12, 1#12G., 3/4" C.
3	FAN TO RUN CONTINUOUSLY.
4	FAN TO BE CONTROLLED BY WALL MOUNTED LINE VOLTAGE THERMOSTAT.



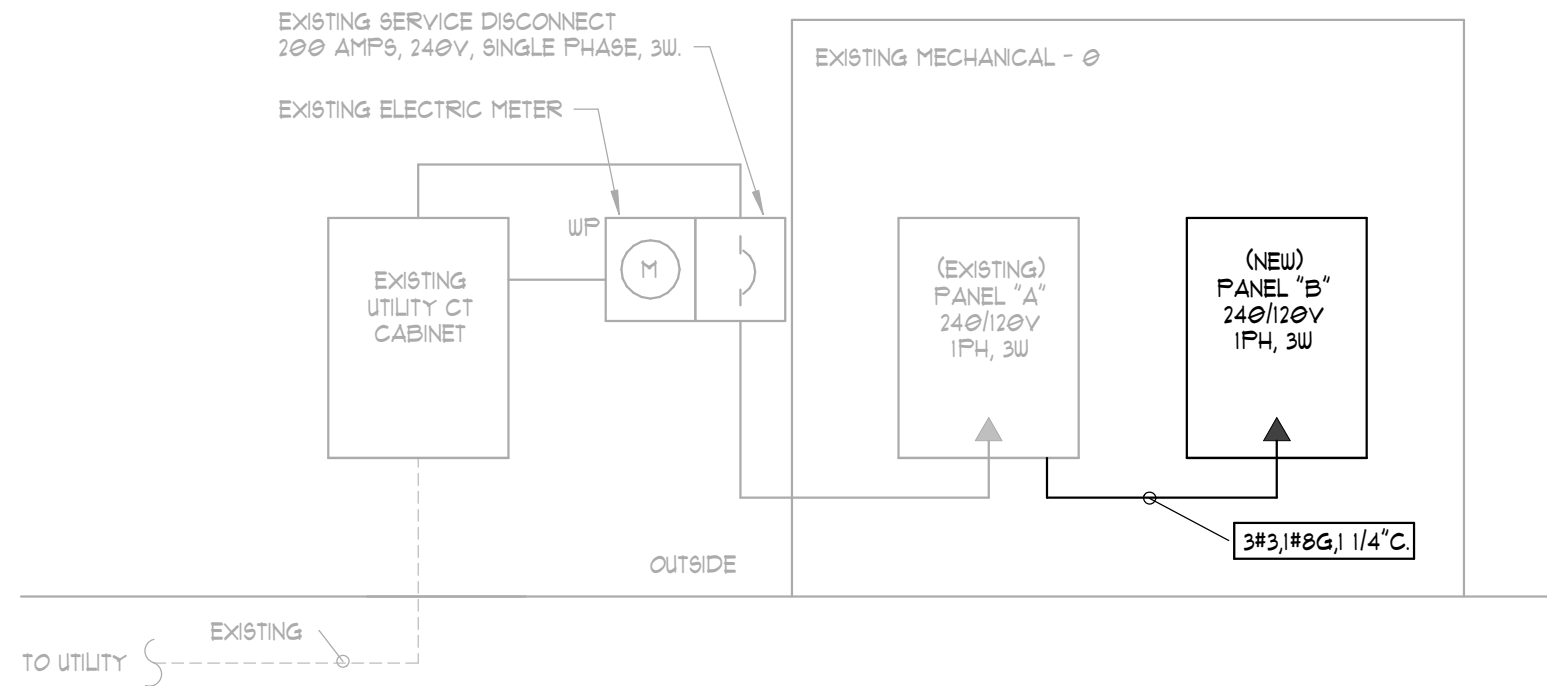
1. REFER TO FIRE ALARM NOTES ON SHEET E01.
2. PROVIDE A GFCI TYPE RECEPTACLE WITHIN 25' OF ALL MECHANICAL EQUIPMENT PER NEC 210.63(A)(B)(2), AND (E).

1 ALL RECEPTACLES AND ELECTRICAL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 511 AND NFPA 70A, SECTION 8. ALL RECEPTACLES TO BE GFCI TYPE. ALL RACEWAYS SHALL BE AS SPECIFIED IN ARTICLE 511 AND SEALED WHERE SPECIFIED PER DIVISION AND CLASS.

Drawn By KG	Checked By CTB
Date 08/01/2025	Job No. 25092

Sheet No. _____

E1.4
RELEASED FOR PERMIT



1. PANEL SCHEDULE INFORMATION TAKEN FROM EXISTING "AS BUILT" DRAWINGS AND SITE PHOTOS. CONTRACTOR TO VERIFY EXACT CONDITIONS PRIOR TO WORK.
2. CONTRACTOR TO RING OUT ALL CIRCUITS PRIOR TO NEW WORK, AND VERIFY AVAILABLE CIRCUITS FOR REUSE NOTIFY ENGINEER OF ANY DISCREPANCIES.

EXISTING PANELBOARD "A"

VOLTAGE		120 / 240		1 PHASE 3 WIRE			MAIN: 200A MLO		MOUNTING:									
BUS SIZE		225		AMPS			FAULT DUTY:		1Ø K		AIC		SURFACE					
CKT NO		DESCRIPTION						LOAD	NOTE	BKR	PHASE A B		BKR	NOTE	LOAD		DESCRIPTION	CKT NO
1		SEPTIC PUMP						2.5	2	3Ø/2	4.1			35/2	2	2.2	AC UPSTAIRS - AHU2	2
5A		UPSTAIRS LTS						1.0	1	2Ø/1	2.0			2Ø/1	2	1.0	US FURNACE	6A
5B		DOWNSTAIRS LTS						1.0	1	2Ø/1	2.0		1.7	2Ø/1	1	0.7	UPSTAIRS REC	6B
1A		UPSTAIRS REC						0.3	1	2Ø/1	1.9			2Ø/1	2	1.0	EXISTING BREAKER	8A
7A		FRT ON BAY REC						0.3	2Ø/1	2.0	2.0			2Ø/1	4	1.1	REFRIGERATOR STORAGE...	9A
9A		DAYRM, BATH REC						1.1	2	2Ø/1	2.1			2Ø/1	4	1.0	WATER FOUNTAIN	10
9B		REAR BAY DOOR						1.1	2	2Ø/1	2.0			2Ø/1	2	1.0	EXISTING BREAKER	12
11A		BAY LTS						1.5	2	2Ø/1	2.5			2Ø/1	4	1.0	COFFEE MACHINE	14A
11B		REC FRT & RR BAY						0.3	2	2Ø/1	1.9			2Ø/1	2	1.0	EXISTING BREAKER	14B
13								1.0		2.1				2Ø/1	4	1.1	MICROWAVE	16
15		BAY AIR CLEANER						1.0		2Ø/2	2.1			2Ø/1	4	1.1	VENDING MACHINE	18A
17								1.0		2.0				2Ø/1	2	1.0	REAR BAY DOOR	18B
19		BAY AIR CLEANER						1.0		2Ø/2	1.5			2Ø/1	2	0.5	BAY ENGINE LTS	20
21		PANEL B						6.9		3Ø/2	8.6			2Ø/2	2	1.7		
23								5.0			6.1			2Ø/1	2	1.7	AC DOWNSTAIRS - AHU1	22
25		F8AS						1.5	2	2Ø/1	2.5			2Ø/2	2	1.0	OUTSIDE LTS	24A
27		CORD REELS						1.0	2	2Ø/1	2.0			2Ø/1	2	1.0	CORD REELS	26B
29		MECH RM						0.5	2	2Ø/1	1.5			2Ø/1	2	1.0	GARAGE DOOR	28A
								0.0			1.0			2Ø/1	2	1.0	FRT RIGHT BAY DOOR	28B
								0.0			1.0			2Ø/1	2	1.0	DS FURNACE	30A
								0.0			1.0			2Ø/1	2	1.0	EXISTING BREAKER	30B
								3Ø/3		25.6								

LIGHTING: 5.0 × 125% = 6.3

RECEPT: 26.6 × NEC 220 44.3

MOTORS: 5.3 × 100% 5.3

A/C: 6.0 × 100% 6.0

HEATING: 1.1 × 100% 1.1

KITCHEN: 5.3 × NEC 220 56 3.4

NON-CONT.: 0.0 × 100% 0.0

TOTAL KVA 56.4 CALC KVA 47.6

TOTAL AMPS 235.2 CALC AMPS 138.1

NOTES:

1 EXISTING BREAKER, NEW LOAD

2 EXISTING BREAKER, EXISTING LOAD TO...

3 PROVIDE NEW BREAKER.

4 PROVIDE NEW GFI BREAKER.



CONWAY
& OWEN

FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

[illegible]

Drawn By KG	Checked By CTB
Date 08/01/2025	Job No. 25092

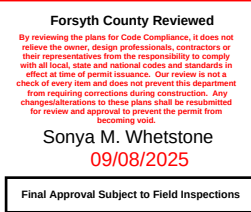
Sheet Title

**PANEL SCHEDULES
AND RISER DIAGRAM**

Sheet No.

E2.1

RELEASED FOR PERMIT



LEGEND - HVAC		
ABBV	SYMBOL	DESCRIPTION
ACC		AIR COOLED CONDENSER
A/C		ABOVE CEILING
AD		ACCESS DOOR
ADJ		ADJUSTABLE
AF		ABOVE FINISHED FLOOR
AHU		AIR HANDLING UNIT
AUTO		AUTOMATIC
BAL		BALANCING
BDD		BACKDRAFT DAMPER
BTFLY		BUTTERFLY
B/F		BELOW FLOOR
B/G		BELOW GRADE
BP		BRAKE HORSEPOWER
		CEILING SUPPLY AIR DIFFUSER
		CEILING RETURN AIR REGISTER / GRILLE OR EXHAUST REGISTER / GRILLE
CFM		CUBIC FEET PER MINUTE
CON		CONCENTRIC
		CONNECT TO EXISTING
CRAC		COMPUTER ROOM UNIT (INDOOR)
CU		CONDENSING UNIT
DB		DECIBELS
		DIRECTION OF AIRFLOW
DB		DRY BULB
DN		DOWN
DR		DRAIN
DSS		DUCTLESS SPLIT SYSTEM
DWG		DRAWING
		DUCTWORK - NEW
		DUCTWORK - EXISTING OR DIFFUSER TO REMAIN
		DUCT - SUPPLY OR OUTSIDE AIR UP
		DUCT - RETURN OR EXHAUST UP
		DUCT - SUPPLY OR OUTSIDE AIR DOWN
		DUCT - RETURN OR EXHAUST DOWN
		DUCT TRANSITION - SQUARE-TO-ROUND (OR OVAL)
		DUCT MOUNTED SMOKE DETECTOR (WIRED BY DIV. 16)
(E)		EXISTING
EA		EXHAUST AIR
EAT		ENTERING AIR TEMPERATURE
ECC		ECCENTRIC
ECH		ELECTRIC CEILING HEATER
EDH		ELECTRIC DUCT HEATER
EF		EXHAUST FAN
EFF		EFFICIENCY
ESP		EXTERNAL STATIC PRESSURE
ET		EXPANSION TANK
EH		ELECTRIC UNIT HEATER
EW		ELECTRIC WALL HEATER
EWT		ENTERING WATER TEMPERATURE
EA		EXHAUST AIR
F		FAHRENHEIT
FCU		FAN COIL UNIT
		FIRE DAMPER
FLO		FLOOR
F.O.		FLAT OVAL DUCT
FOB		FLAT ON BOTTOM
FOT		FLAT ON TOP
FFM		FEET PER MINUTE
FFS		FEET PER SECOND
		FIRE AND SMOKE DAMPER
FT		FEET
G		GAUGE

LEGEND - HYAC		
ABBRE	SYMBOL	DESCRIPTION
GPM		GALLONS PER MINUTE
HP		HEAT PUMP
HTG		HEATING
HX		HEAT EXCHANGER
HZ		HERTZ
ID	⊘	INSIDE DIMENSION
IN		INCHES
KW		KILOWATTS
KVA		KILO VOLT AMPS
LAT		LEAVING AIR TEMPERATURE
LB		POUNDS
	☉	LIMITS OF DEMOLITION
	▬	LINEAR SLOT DIFFUSER
MAX		MAXIMUM
MD		MANUAL DAMPER
MFR		MANUFACTURER
MIN		MINIMUM
MOD		MOTOR OPERATED DAMPER
MYD	┐	MANUAL VOLUME DAMPER
NC		NORMALLY CLOSED
NO		NORMALLY OPENED
NOM		NOMINAL
OA		OUTSIDE AIR
OPD		OPPOSED BLADE DAMPER
OD		OUTSIDE DIMENSION
PIU		POWERED INDUCTION UNIT
PRV		PRESSURE REDUCING VALVE
PSI		POUNDS PER SQUARE INCH
PTAC		PACKAGED TERMINAL AIR CONDITIONER
	→	RELOCATION
(R)		RELOCATED
RA		RETURN AIR
RAG		RETURN AIR GRILLE
RAT		RETURN AIR TRANSFER
RED		REDUCER
	R	REFRIGERANT SUCTION AND DISCHARGE TUBING (SERVICED TOGETHER)
RTU		ROOFTOP UNIT
SA		SUPPLY AIR
SCU		SELF CONTAINED UNIT
	SD →	SMOKE DAMPER
SEN		SENSIBLE
SF	⊘	SQUARE FEET
SF		SUPPLY FAN
SP		STATIC PRESSURE
SPS		STATIC PRESSURE SENSOR
SQ		SQUARE
SR	┐ →	SUPPLY REGISTER
	┐ →	SIDE-WALL OR DUCT MOUNTED RETURN OR EXHAUST AIR REGISTER / GRILLE
TEMP		TEMPERATURE
	Ⓙ	TEMPERATURE SENSOR
TG		TRANSFER GRILLE
TU		TERMINAL UNIT
	Ⓢ	THERMOSTAT
TYP		TYPICAL
UNO		UNLESS NOTED OTHERWISE
VAL		VALVE
VAV		VARIABLE AIR VOLUME
WB		WET BULB
WC		WATER COLUMN
WBHP		WATER SOURCE HEAT PUMP
WT		WEIGHT

DIFFUSER, REGISTER & GRILLE SCHEDULE																	
TAG	TYPE OF SERVICE	FACE SIZE	NECK SIZE	RUNOUT SIZE	# OF SLOTS	SLOT WIDTH	MAX ROOM NC	MAX SP (IN Wd)	INTEGRAL DAMPER	BASIS OF DESIGN	NECK SIZE SCHEDULE						NOTES
											6" Ø	8" Ø	10" Ø	12" Ø	14" Ø	16" Ø	
A	SA	24" x 24"	NOTE 3	NOTE 1	----	----	30	Ø 10	N	TIUUS PAS	Ø - 120 CFM	125 - 210 CFM	225 - 350 CFM	355 - 450 CFM	455 - 550 CFM	555 - CFM	2.5
B	RA/EA	24" x 24"	SEE PLANS	SEE PLANS	----	----	30	Ø 10	N	TIUUS PAR							2.5
C	SA	12" x 12"	NOTE 3	NOTE 1	----	----	30	Ø 10	N	TIUUS PAS	Ø - 120 CFM						2.5
X		----	----	----	----	----	30	Ø 10	----	EXISTING							4
NOTE: 1. RUNOUT SIZE SHALL BE EQUAL TO NECK SIZE, UNLESS NOTED OTHERWISE ON DRAWINGS. 2. FINISH FOR ALL DEVICES SHALL BE NO. 26 WHITE, UNLESS OTHERWISE INDICATED ON ARCHITECTURAL DRAWINGS. 3. SEE NECK SIZE SCHEDULE. 4. CONTRACTOR SHALL BALANCE DIFFUSER/GRILLE TO AIRFLOW LISTED ON PLANS. 5. SEE ARCHITECTURAL PLANS FOR CEILING TYPE. PROVIDE CORRECT BORDER TYPE FOR CEILING APPLICATION.																	

SPLIT SYSTEM AIR HANDLING UNIT SCHEDULE (INDOOR UNIT)															
TAG	SUPPLY CFM	O.A. CFM	EAT		LAT		O.A. A/B	SUPPLY FAN HP (WATTS)	EXT. ST. (IN W.G.)	AUX. HEATING CAP. (KW)	ELECTRICAL			BASIS OF DESIGN	NOTES
			DB (°F)	WB (°F)	DB (°F)	WB (°F)					DB (°F)	VOLTI/PH.	MCA		
EAHU-1	830	-	-	-	-	-	-	-	-	-	-	-	-	EXISTING	1
EAHU-2	850	-	-	-	-	-	-	-	-	-	-	-	-	EXISTING	1
NOTES: * EXISTING UNIT TO REMAIN. CONTRACTOR SHALL INSPECT EXISTING UNITS AND REPAIR AS REQUIRED FOR FULL OPERATION.															

SPLIT SYSTEM HEAT PUMP SCHEDULE (OUTDOOR UNIT)											
TAG	COOLING CAPACITY			HEATING CAPACITY		ELECTRICAL			NET WT. (LBS)	BASIS OF DESIGN	NOTES
	TONS (NOMINAL)	TOTAL (MECH)	SENS (MECH)	EER	MBH @ HIGH AIR	COP	VOLTS/PH	MCA			
EXHP-1	--	--	--	--	--	--	--	--	--	EXISTING	1
EXHP-2	--	--	--	--	--	--	--	--	--	EXISTING	1

NOTES:
1. EXISTING UNIT TO REMAIN. CONTRACTOR SHALL INSPECT EXISTING UNITS AND REPAIR AS REQUIRED FOR FULL OPERATION.

TAG	LOCATION	AIRFLOW (CFM)	ESP (N UG)	MOTOR POWER (WATTS OR HP)	DRIVE	VOLTØ	MAX FAN RPM	MAX SONES	TYPE OF FAN	BASIS OF DESIGN	NOTES
EF-1	3 - RR	1Ø	Ø5	16	DIRECT	12Ø1	113	3	CEILING CABINET EXHAUST FAN	GREENHECK- SP	1 2 3 4
EF-2	8 - RR	1Ø	Ø5	16	DIRECT	12Ø1	113	3	CEILING CABINET EXHAUST FAN	GREENHECK- SP	1 2 3 4
EF-3	1 - WASH STATION	1Ø	Ø5	16	DIRECT	12Ø1	113	3	CEILING CABINET EXHAUST FAN	GREENHECK- SP	1 2 3 5
EF-4	6 - WORK BAY	4,Ø1Ø	Ø5	1 HP	DIRECT	12Ø1	1,1Ø3	25	SIDEWALL DIRECT DRIVE EXHAUST FAN	GREENHECK- AER	1 2 3 6 7

NOTES:
 1. DISCONNECT PROVIDED BY ELECTRICAL CONTRACTOR
 2. PROVIDE WITH FACTORY SPEED CONTROLLER
 3. PROVIDE WITH BACKDRIFT DAMPER
 4. FAN TO BE CONTROLLED BY OCCUPANCY SENSOR
 5. FAN TO RUN CONTINUOUSLY
 6. FAN TO BE CONTROLLED BY WALL MOUNTED LINE VOLTAGE THERMOSTAT SET TO 8Ø°F (ADJ.)
 7. PROVIDE FAN WITH WEATHER HOOD, MOTOR GUARD, WALL SLEEVE TO MATCH EXISTING WALL THICKNESS.

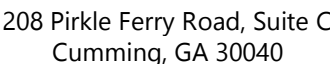
BE ADVISED ANY CHANGES TO GAS PIPING
OR REPLACEMENT OF UNIT HEATER WILL
REQUIRE INSPECTION~SMW

GAS UNIT HEATER SCHEDULE									
TAG	DESCRIPTION	CAPACITY (MBH)	OUTPUT (MBH)	CFM	FAN MOTOR HP	WEIGHT LBS.	HEATER TYPE	BASIS OF DESIGN	NOTES
EGXH-1	GAS UNIT HEATER	-	-	-	-	-	GAS, CEILING SUSPENDED	EXISTING	1
NOTES: 1) CONTRACTOR TO REPAIR AND REPLACE AS NEEDED TO BRING UNIT TO FULL OPERATION									

TAG	CAPACITY (CPM)	MAX PD (N LG)	DIMENSIONS		SQ FT FREE AREA (GQ FT)	SERVICE	BASIS OF DESIGN	NOTES
			WIDTH	HEIGHT				
LY-1	4.0*10	0.05	44	44	15	INTAKE	GREENGLASS ESD	1 2 3

NOTES:
 1 PROVIDE INSECT SCREEN FOR LOUVER
 2 LOUVER SHALL BE PAINTED TO MATCH BRICK EXTERIOR. LANDLOARD SHALL APPROVE COLOR & LOCATION PRIOR TO PURCHASE
 3 HORIZONTAL DAMPER TO BE INTERLOCKED WITH EF-4 OPERATION. OPEN WHEN EF-4 IS ON AND CLOSED WHEN EF-4 IS OFF.

SHEET LIST HVAC	
SHEET NUMBER	SHEET NAME
M-0.01	LEGENDS AND SCHEDULES - HVAC
M-0.02	SPECIFICATIONS
M-0.03	DETAILS - HVAC
M-1.00	DEMOLITION PLANS - HVAC
M-1.01	FLOOR PLANS - HVAC



CONWAY
& OWEN

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

[illegible]

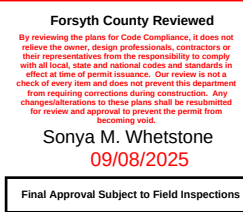
Checked By
KB

Job No.
25092

Sheet Title
**LEGENDS AND
SCHEDULES - HVAC**

Sheet No.

M-0.01
RELEASED FOR PERMIT



[illegible]

CONWAY
& OWEN

FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

[illegible]

Drawn By BS	Checked By KB
-----------------------	-------------------------

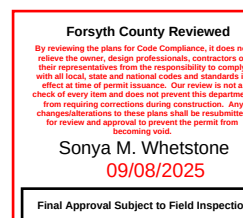
Date	Job No.
08/01/2025	25092

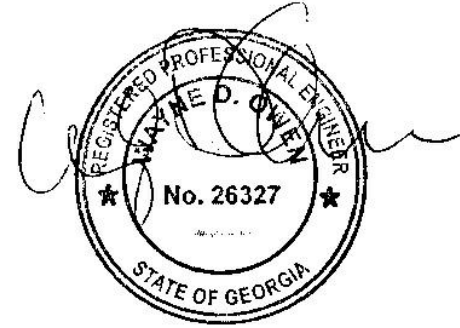
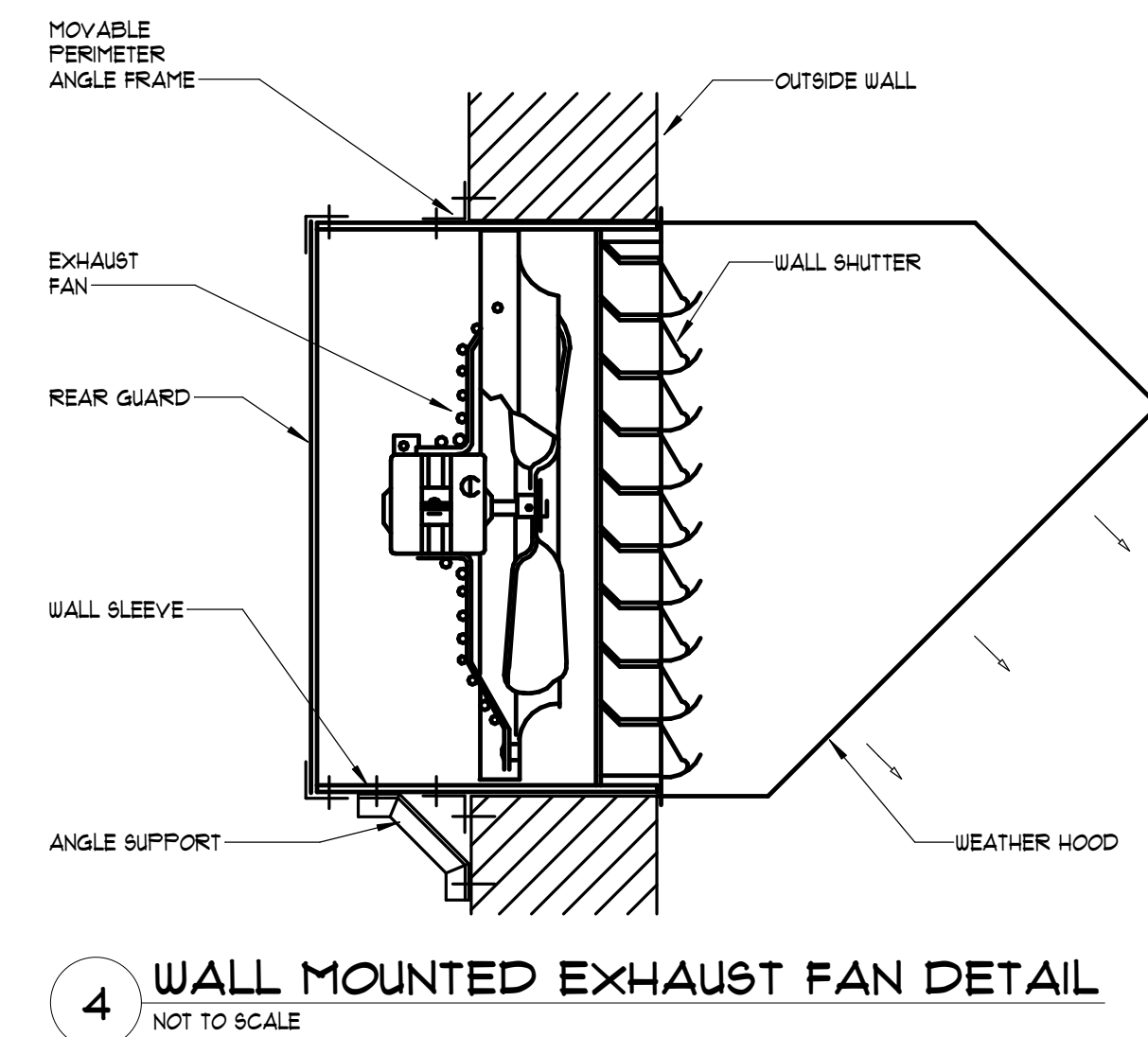
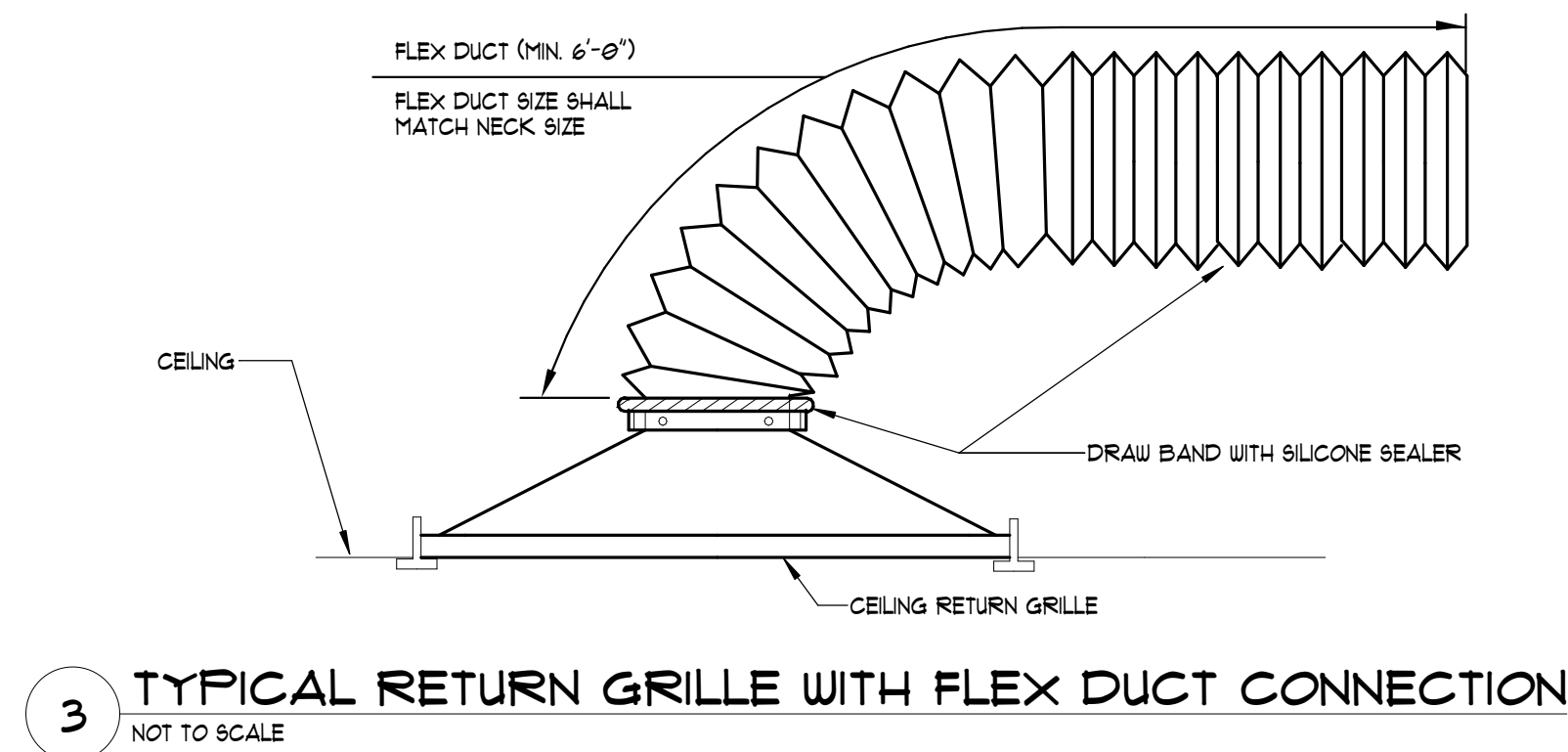
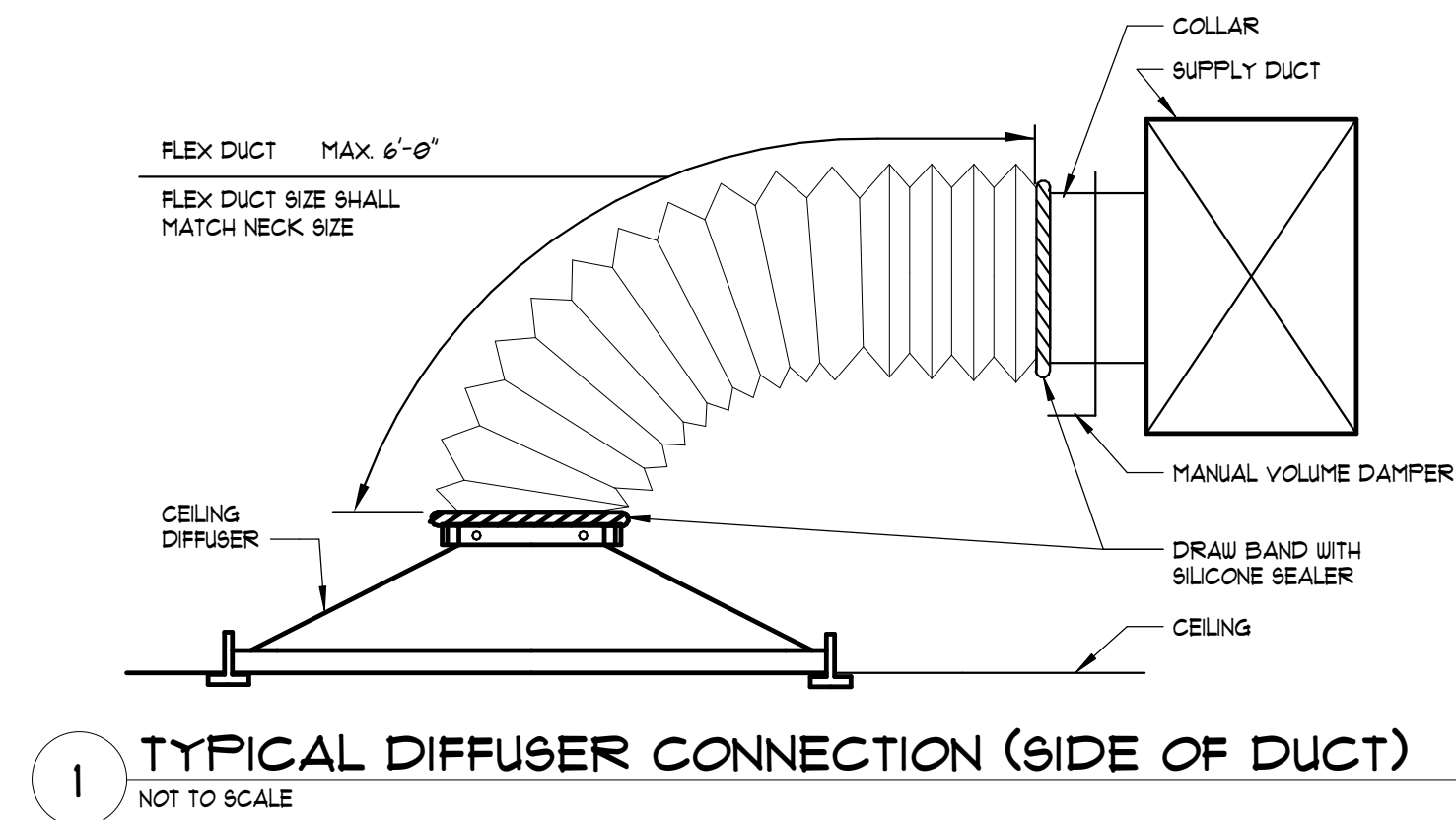
Sheet Title
SPECIFICATIONS

Sheet No.

M-0.02

RELEASED FOR PERMIT





CONWAY
& OWEN

FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

PRINT RECORD

[illegible]

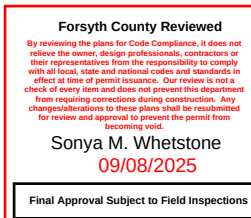
Drawn By BS	Checked By KB
Date 08/01/2025	Job No. 25092

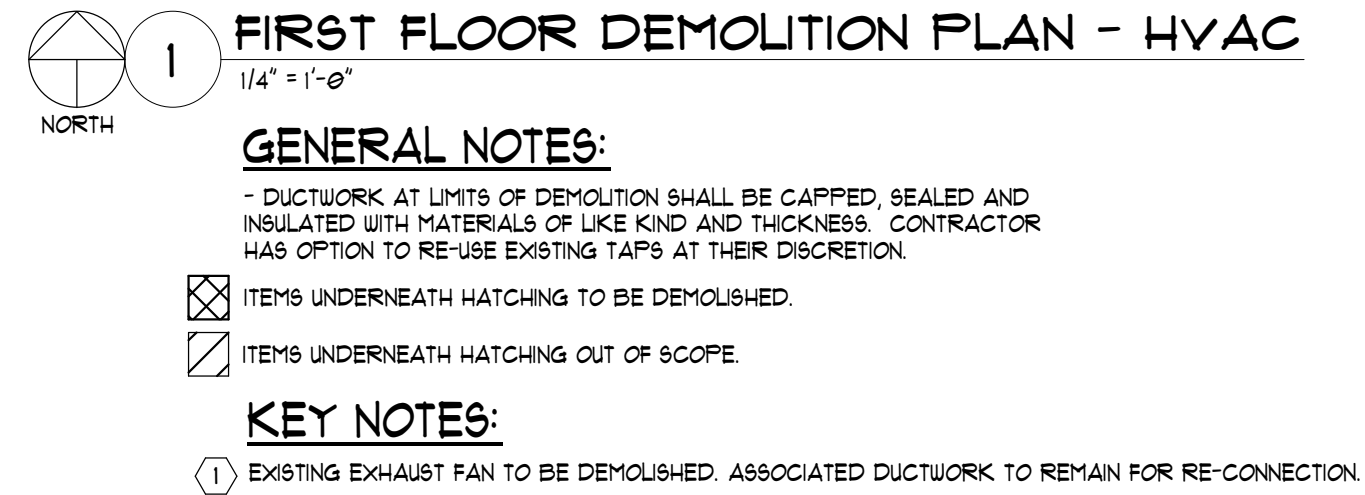
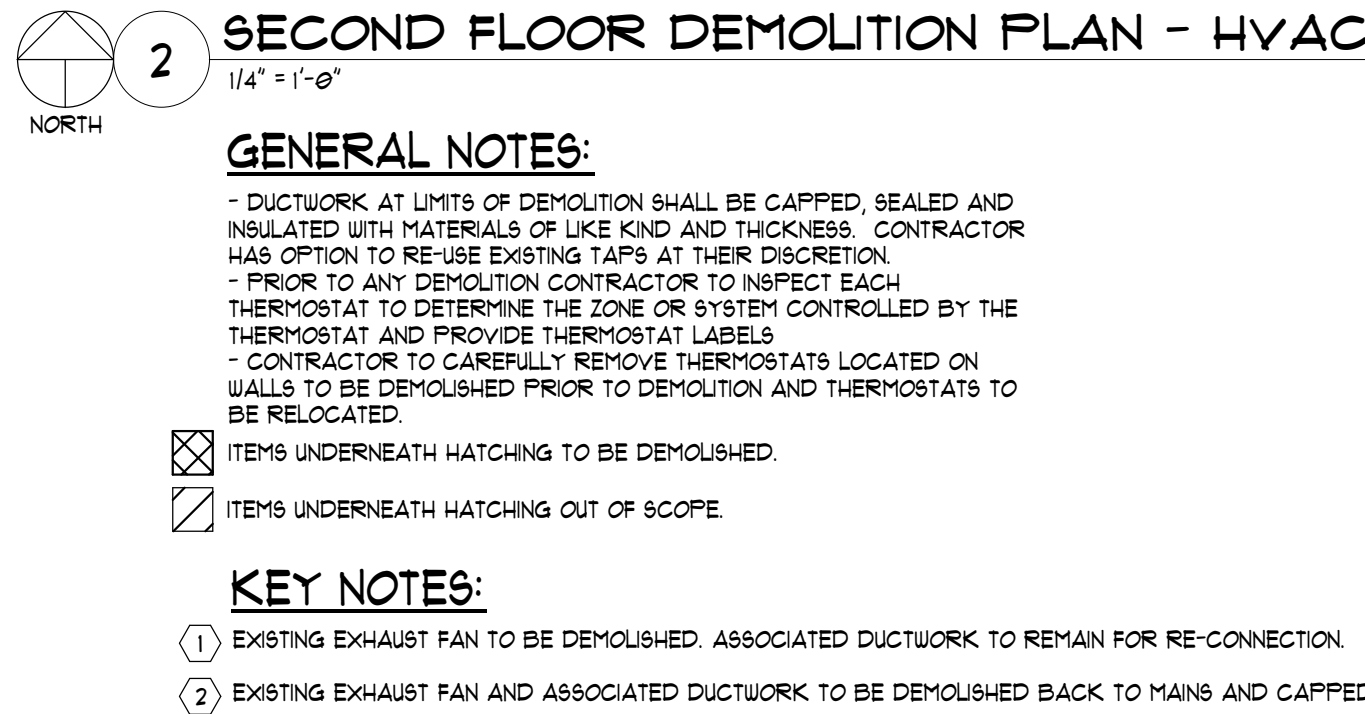
Sheet Title
DETAILS - HVAC

Sheet No.

M-0.03

RELEASED FOR PERMIT





CONWAY
& OWEN

FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

[illegible]

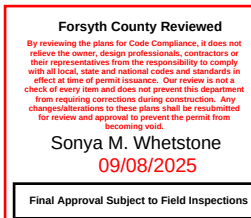
Drawn By	Checked By
BS	KB
Date	Job No.
08/01/2025	25092

Sheet Title
**DEMOLITION PLANS -
HVAC**

Sheet No.

M-1.00

RELEASED FOR PERMIT





SECOND FLOOR PLAN - HVAC

$$1/4^* = 1' - \Theta^*$$

KEY NOTES:

- ① EF-2 TO BE TIED INTO EXISTING EXHAUST DUCTWORK. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF RE-CONNECTION.
- ② EXISTING AIR FILTRATION UNITS TO REMAIN. REPAIR/REPLACE AS NEEDED TO BRING TO FULL OPERATION.
- ③ EF-4 TO BE PLACED ON EXTERIOR WALL AT A MINIMUM ELEVATION OF 15' AFF.
- ④ LV-1 TO BE INTERLOCKED WITH EF-4. WHEN EF-4 IS ON LV-1 TO BE OPEN. WHEN EF-4 IS OFF LV-1 TO BE CLOSED.
- ⑤ EF-4 TO BE CONTROLLED BY THERMOSTAT MOUNTED ON COLUMN.



FIRST FLOOR PLAN - HVAC

$$1/4^{\circ} = 1' - 6''$$

KEY NOTES:

- ① CONTRACTOR TO REPAIR/REPLACE GAS UNIT HEATER AS NEEDED TO BRING TO FULL OPERATION.
- ② EXHAUST FAN TO BE TIED INTO EXISTING EXHAUST DUCTWORK. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF RE-CONNECTION.

BE ADVISED ANY CHANGES TO GAS PIPING
OR REPLACEMENT OF UNIT HEATER WILL
REQUIRE INSPECTION-SMW

[illegible]

Drawn By BS	Checked By KB
Date 08/01/2025	Job No. 25092

Sheet Title
**FLOOR PLANS -
HVAC**

Sheet No.

M-1.01

RELEASED FOR PERMIT



CONWAY
& OWEN

FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

Forsyth County Reviewed

By reviewing the efforts for Code Compliance, it does not reflect the action, design, professional, contractors to their representatives. From the responsibility is clearly only of local, state and national government, it is not an official of public insurance. that while it is a check of every task and does not prevent this department from requiring compliance. During construction, any change or additions to these plans will be considered for review and approval to prevent the project from becoming void.

Soryia M. Whetsstone
09/08/2025

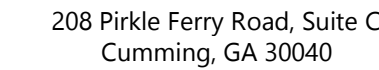
Final Approval Subject to Field Inspections

SHEET LIST PLUMBING	
SHEET NUMBER	SHEET NAME
P0.01	LEGENDS & SCHEDULES - PLUMBING
P0.02	DETAILS - PLUMBING
P1.00	DEMOLITION PLUMB - PLUMBING
PL.01	FLOOR PLANS - DOMESTIC WATER, COMPRESSED AIR, & OIL
PL.02	FLOOR PLANS - SANITARY AND VENT
PL.03	ISOMETRIC VIEW - SANITARY & VENT

PLUMBING NOTES:
SEE SHEET M-0.02 FOR PLUMBING GENERAL NOTES.

PLUMBING STANDARD NOTES:

- ALL BACKFLOW ARE TO BE TESTED, AND RESULTS SENT TO CROSS CONNECTION SPECIALIST AT FORTSH COUNTY WATER
- CONTACT MICHAEL BURGESS AT (710)-205-4559 WHEN RPZ BACKFLOW ARE INSTALLED AND READY FOR INSPECTION
- IF PLUMBING INSPECTOR REQUIRES INTERNAL DEVICE (RPZ OR DOUBLE CHECK), DEVICE MUST BE EASILY ACCESSIBLE: NO HIGHER THAN 1'
- NO CONDENSATE ALLOWED IN SANITARY SEWER



CONWAY
& OWEN

FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

[illegible]

Drawn By
BS

Checked By
KB

Date	Job No.
08/01/2025	25092

Sheet Title
**LEGENDS &
SCHEDULES -
PLUMBING**

Sheet No.

P0.01

RELEASED FOR PERMIT




$$1/4^v = 1' - \theta^v$$

- PIPING AT LIMITS OF DEMOLITION SHALL BE CAPPED, SEALED AND INSULATED WITH MATERIALS OF LIKE KIND AND THICKNESS.

- KEY NOTES:

EXISTING PLUMBING FIXTURES AND ASSOCIATED PIPING TO BE DEMOLISHED BACK TO MAIN AND CAPPED

- 2 EXISTING DRINKING FOUNTAIN TO BE DEMOLISHED. ASSOCIATED PIPING TO BE DEMOLISHED BACK TO MAIN AND CAPPED.

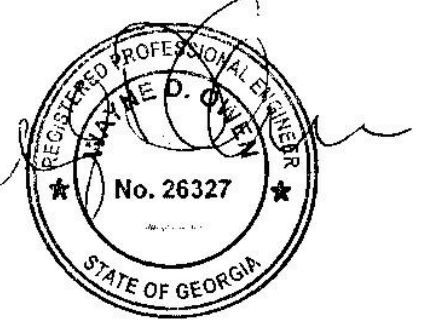

$$1/4' = 1' - \theta$$

- PIPING AT LIMITS OF DEMOLITION SHALL BE CAPPED, SEALED AND INSULATED WITH MATERIALS OF LIKE KIND AND THICKNESS.

- ☒ KEY NOTE

EXISTING PLUMBING FIXTURE TO BE DEMOLISHED. ASSOCIATED PIPING TO BE
DEMOLISHED BACK TO MAINS AND CAPPED.

208 Pirkle Ferry Road, Suite C
Cumming, GA 30040



**CONWAY
& OWEN**

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

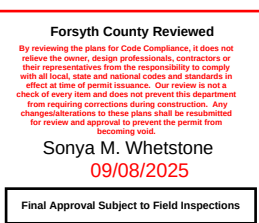
[illegible]

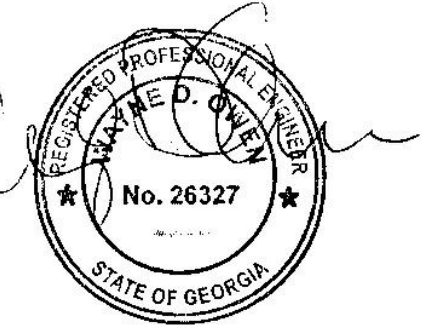
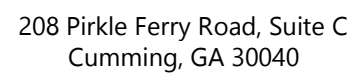
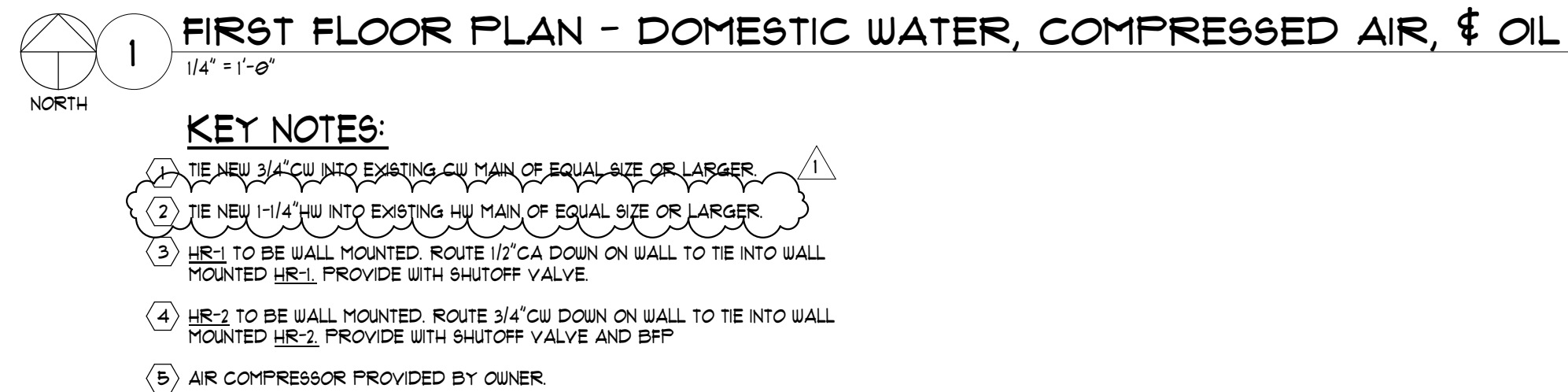
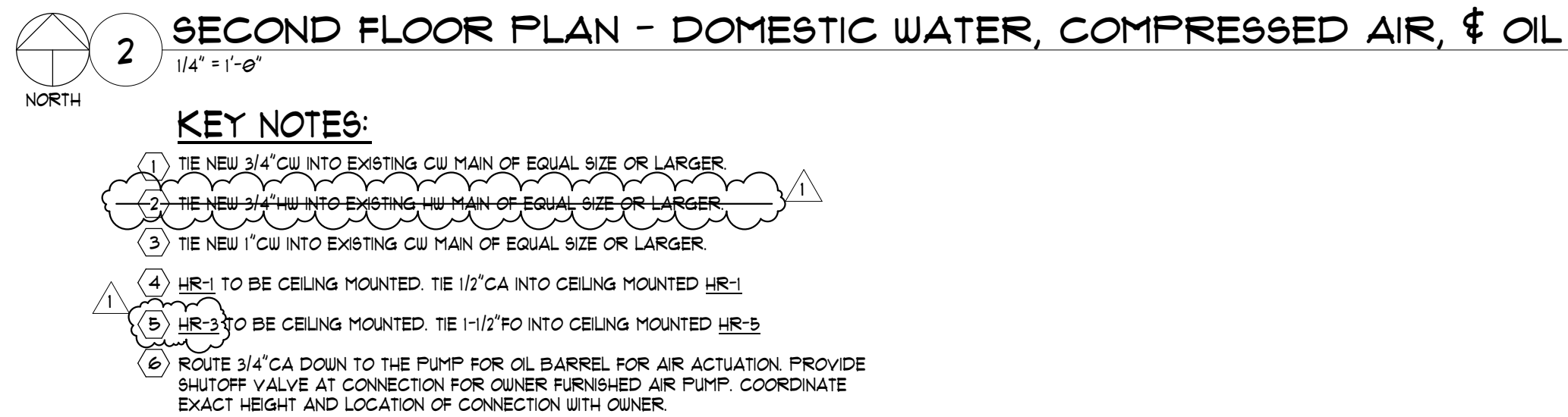
Date	Job No.
08/01/2025	25092

Sheet No.

P1.00

RELEASED FOR PERMIT





CONWAY
& OWEN

FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

PRINT RECORD

[illegible]

Drawn By
BS

Checked By
KB

Date	Job No.
08/01/2025	25092

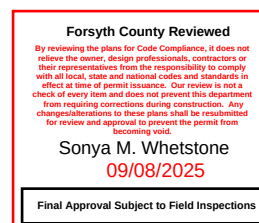
Sheet Title

FLOOR PLANS - DOMESTIC WATER, COMPRESSED AIR, & OIL

Sheet No.

P1.01

RELEASED FOR PERMIT





- SANITARY PIPING:**
CONTRACTOR TO FIELD VERIFY ACTUAL SIZE,
LOCATION, DIRECTION OF FLOW AND DEPTH OF
EXISTING SANITARY PIPING BELOW FLOOR.



- SANITARY PIPING:**
CONTRACTOR TO FIELD VERIFY ACTUAL SIZE,
LOCATION, DIRECTION OF FLOW AND DEPTH OF
EXISTING SANITARY PIPING BELOW GRADE.



FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

PRINT RECORD

[illegible]

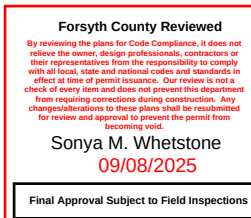
Date	Job No.
08/01/2025	25092

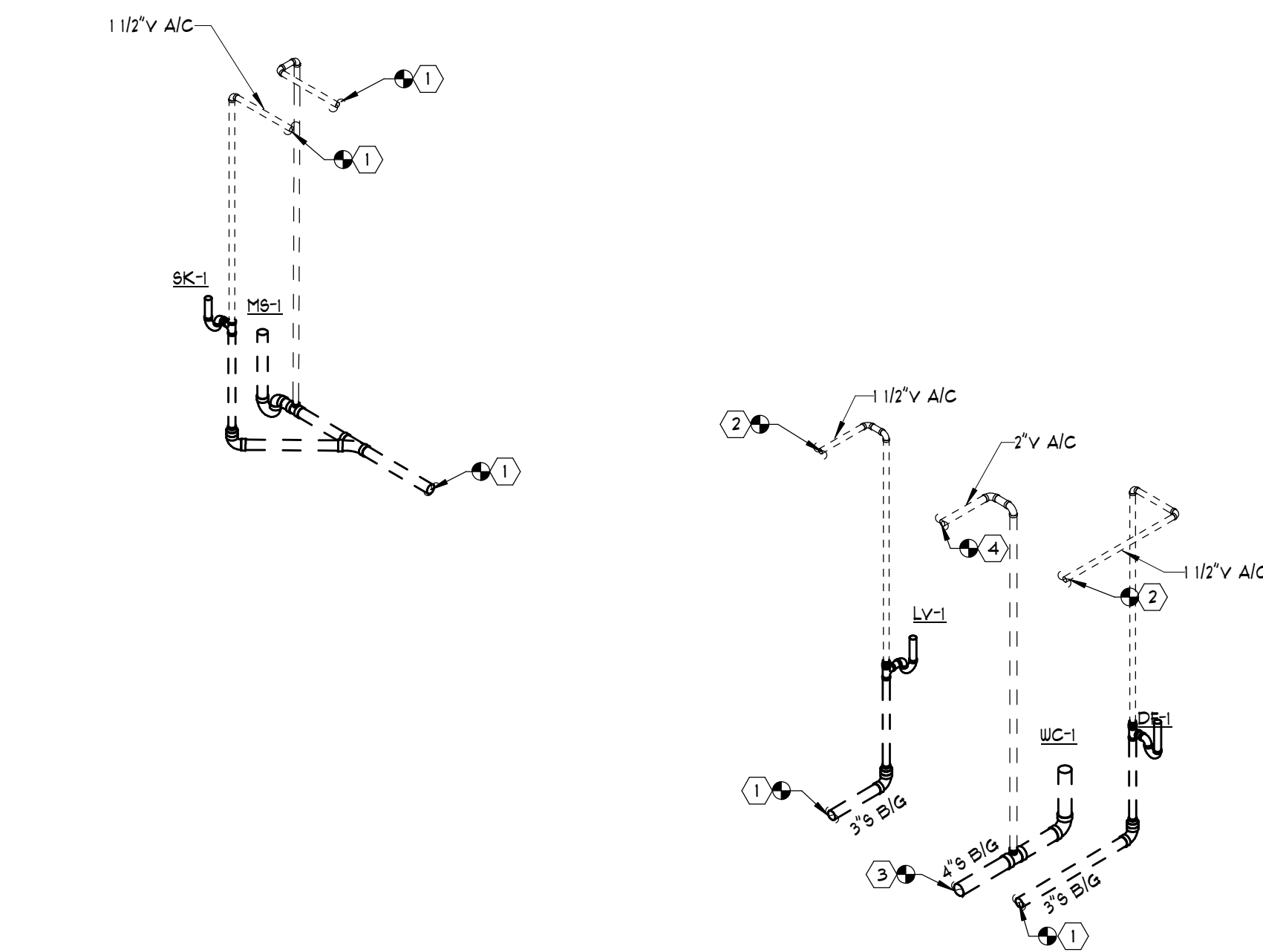
Sheet Title
**FLOOR PLANS -
SANITARY AND VENT**

Sheet No.

P1.02

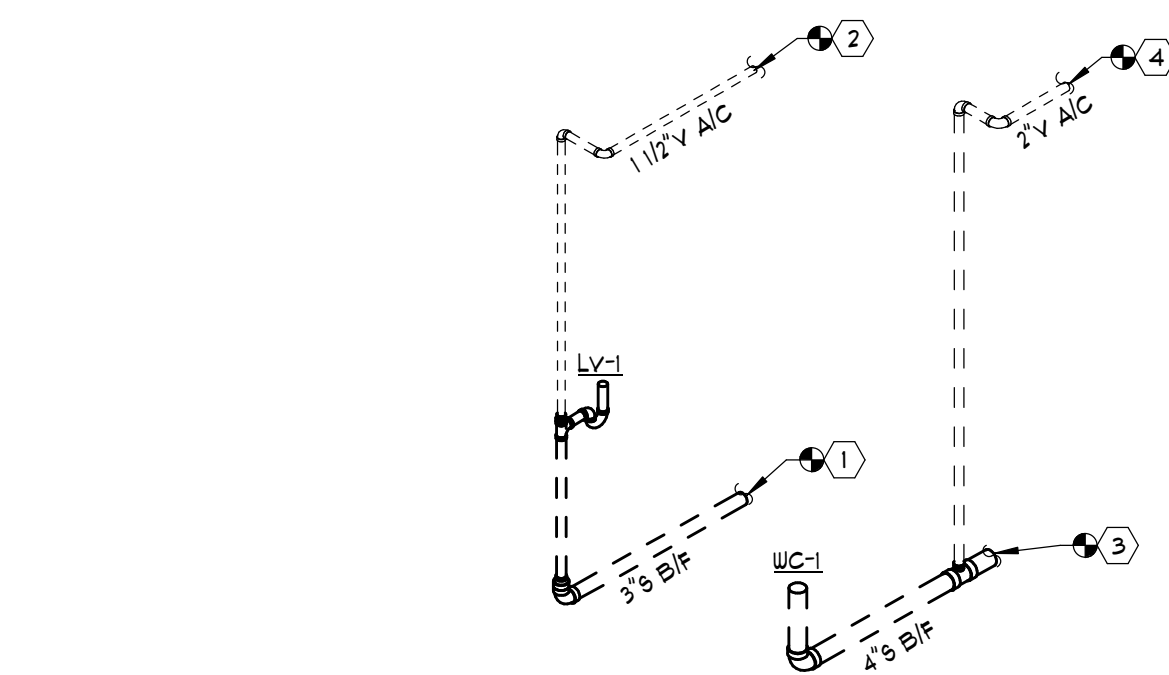
RELEASED FOR PERMIT





 1 FIRST FLOOR ISOMETRIC VIEW - SANITARY & VENT

- ① TIE NEW 3" B/G INTO EXISTING SANITARY MAIN OF EQUAL SIZE OR LARGER.
- ② TIE NEW 1-1/2" A/C INTO EXISTING VENT MAIN OF EQUAL SIZE OR LARGER.
- ③ TIE NEW 4" B/G INTO EXISTING SANITARY MAIN OF EQUAL SIZE OR LARGER.
- ④ TIE NEW 2" A/C INTO EXISTING VENT MAIN OF EQUAL SIZE OR LARGER.



2 SECOND FLOOR ISOMETRIC VIEW - SANITARY & VENT



CONWAY
& OWEN

FOCO FIRE STATION 15 RENOVATIONS

FORSYTH COUNTY

1525 BUFORD HWY
CUMMING, GA

PRINT RECORD

[illegible]

Drawn By BS	Checked By KB
-----------------------	-------------------------

Date	Job No.
08/01/2025	25092

Sheet Title

**ISOMETRIC VIEW -
SANITARY & VENT**

Sheet No.

P1.03

RELEASED FOR PERMIT

