



ORCHARD VIEW SCHOOL DISTRICT
COMMUNITY EDUCATION CENTER
RENOVATIONS - BID PACKAGE NO. 1
1765 ADA AVENUE
MUSKEGON, MI 49442

1/31/2023

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DATE	DESCRIPTION
12/14/2022	BID PACKAGE - WINDOWS
1/24/2023	BID PACKAGE #1 - QA/QC/OWNER REVIEW
1/31/2023	BID PACKAGE #1 - BIDS

PROJECT LOCATION MAP



1/31/2023 11:44:03 AM

DRAWING NUMBER

G000

PROJECT SCOPE

RENOVATIONS TO COMMUNITY EDUCATION CENTER CONSISTS OF UPGRADES TO THE MAIN ENTRY WITH NEW EXTERIOR WALL CLADDING, NEW CANOPY, NEW STEPS AND RAMP, AND NEW EXTERIOR WINDOWS AT A PORTION OF THE FRONT EXTERIOR. INTERIOR RENOVATIONS INCLUDE RENOVATING THE ENTRY VESTIBULE, RENOVATING A FORMER CLASSROOM INTO A NEW MAIN OFFICE AREA AND RENOVATING TWO FORMER OFFICES INTO ONE OFFICE WITH NEW FINISHES. THE WORK ALSO INCLUDES A NEW RTU TO PROVIDE HVAC TO THE NEW OFFICE AREA AND MINI-SPLIT UNITS TO THE REMAINDER OF THE BUILDING THAT IS CURRENTLY NOT AIR CONDITIONED.

APPLICABLE BUILDING CODES

BUILDING CODE: 2015 MICHIGAN BUILDING CODE
2015 MICHIGAN REHABILITATION CODE
BUILDING CODE (MI FIRE SAFETY STATE RULES): NFPA 11-2012
MECHANICAL CODE: 2015 MICHIGAN MECHANICAL CODE
ELECTRICAL CODE: 2015 NATIONAL ELECTRICAL CODE & MICHIGAN PART 8 ELECTRICAL RULES
PLUMBING CODE: 2018 MICHIGAN PLUMBING CODE
ENERGY CODE: 2015 MICHIGAN ENERGY CODE
ACCESSIBILITY: BARRIER FREE - ICC / ANSI-117

BUILDING DATA

TOTAL BUILDING AREA: 34,845 SQ FT
TOTAL RENOVATION AREA: 7,300 SQ FT

CONSTRUCTION TYPE = II-B "NON-COMBUSTIBLE"
NON-SPRINKLERED

USE AND OCCUPANCY

BUILDING IS CLASSIFIED AS EDUCATIONAL "E"
MBC SECTION 305.1
BUSINESS "B"
MBC SECTION 304.1

AREAS OF RENOVATION ARE CLASSIFIED AS BOTH "E" AND "B"

BUILDING CODE SUMMARY

PROJECT INFORMATION: PROJECT NAME: COMMUNITY EDUCATION CENTER, PROJECT NUMBER: 016600.00, PREPARED BY: E POST, CHECKED BY: D. HOLTROP, DATE: 1/11/23

REHABILITATION OF EXISTING STRUCTURES: PER THE 2015 MICHIGAN RAHABILITATION CODE FOR EXISTING BUILDINGS (2015 EIBC), ALTERATIONS - LEVEL 1, ALTERATIONS - LEVEL 2, ALTERATIONS - LEVEL 3, CHANGE OF OCCUPANCY, FORMER OCCUPANCY CLASSIFICATION(S), NEW OCCUPANCY CLASSIFICATION(S), PARTIAL CHANGE OF OCCUPANCY, SEPARATED ADDITION, HISTORIC BUILDING, RELOCATED BUILDING, ACCESSIBILITY UPGRADES.

OCCUPANCY CLASSIFICATION AND MIXED OCCUPANCIES: SINGLE, MIXED OCCUPANCY, ACCESSORY - GROUP, SEPARATED, NON-SEPARATED, COMBINATION, IF SEPARATED, FIRE RESISTANCE RATING OF FIRE BARRIER, OCCUPANCY CLASSIFICATION(S), USES.

AUTOMATIC SPRINKLER SYSTEM PROVIDED THROUGHOUT BUILDING: YES, NO, PARTIAL/LIMITED-AREA SPRINKLER SYSTEM: YES, NO, NFPA STANDARD: 13, 13R, ALT. FIRE PROTECTION SYSTEM.

CONSTRUCTION TYPE: II-B SECTION 601, FIRE RESISTANCE OF BUILDING ELEMENTS: TABLE WITH COLUMNS FOR BUILDING ELEMENTS, REQUIRED, PROVIDED, SECTION.

INTERIOR FINISH: WALL AND CEILING, OCCUPANCY: BUSINESS, FINISH CLASS, LOCATION, TABLE WITH CHECKBOXES FOR EXITS, CORRIDORS/EXIT ACCESS, ROOMS/SPACES.

OCCUPANCY: EDUCATIONAL, FINISH CLASS, LOCATION, TABLE WITH CHECKBOXES FOR EXITS, CORRIDORS/EXIT ACCESS, ROOMS/SPACES.

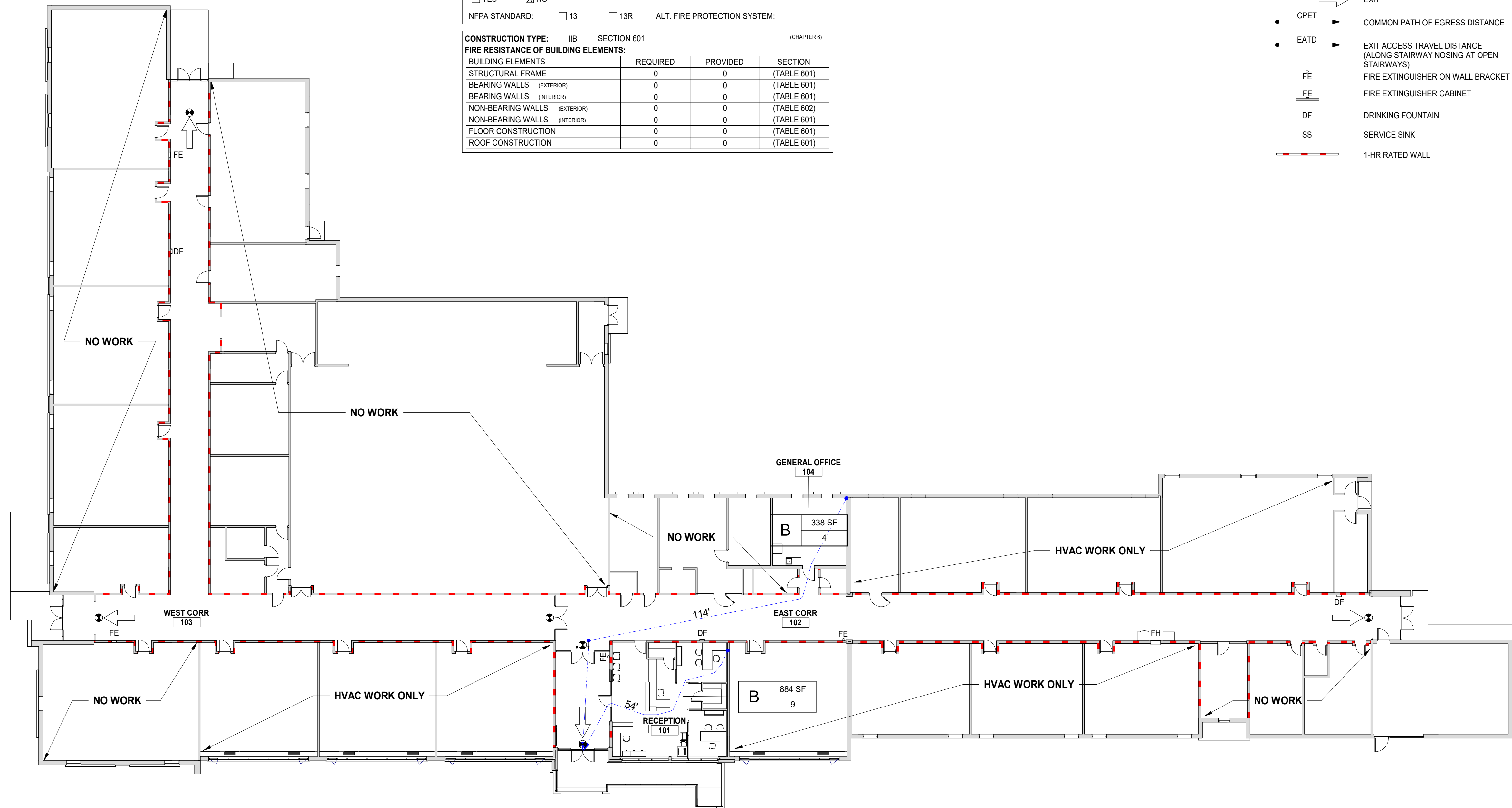
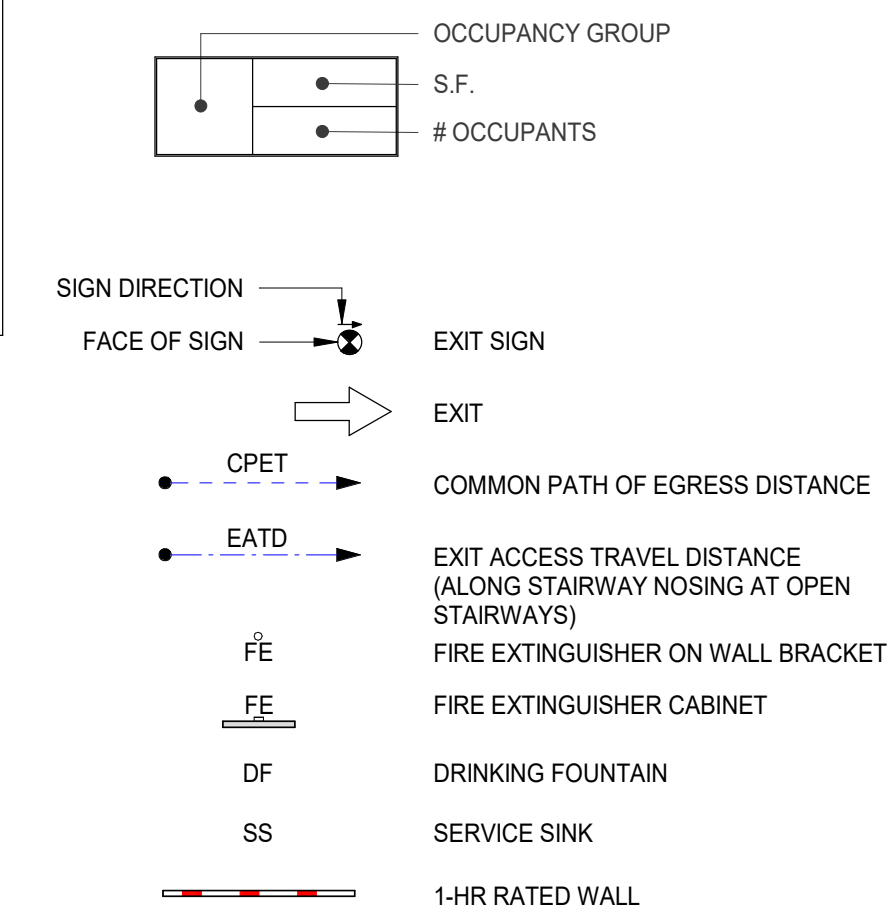
CONSTRUCTION SAFETY COMPLIANCE WITH: CHAPTER 33 SAFE GUARDS DURING CONSTRUCTION OF THE IBC, CHAPTER 33 FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION OF THE IFC

ADDITIONAL NOTES: COMPLIANCE: PROVIDE FIRE EXTINGUISHERS IN CONFORMANCE WITH THE INTERNATIONAL FIRE CODE SECTION 906 AND COORDINATE WITH FIRE MARSHAL PRIOR TO INSTALLATION. CERTIFICATIONS: THE ARCHITECTS CERTIFICATION IS ONLY FOR THE WORK SHOWN TO BE DONE. IT DOES NOT CONSTITUTE APPROVAL OF PRE-EXISTING CONDITIONS OR REVIEW OF THOSE CONDITIONS FOR CODE COMPLIANCE.

GENERAL NOTES

- 1. APPLICABLE CODES: WORK SHALL CONFORM TO FEDERAL, STATE AND LOCAL CODES AS INTERPRETED BY THE AUTHORITY HAVING JURISDICTION.
2. COMPLIANCE: PROVIDE FIRE EXTINGUISHERS IN CONFORMANCE WITH THE FIRE CODE SECTION 906 AND COORDINATE WITH FIRE MARSHAL PRIOR TO INSTALLATION.
3. CERTIFICATIONS: THE ARCHITECTS CERTIFICATION IS ONLY FOR THE WORK SHOWN TO BE DONE. IT DOES NOT CONSTITUTE APPROVAL OF PRE-EXISTING CONDITIONS OR REVIEW OF THOSE CONDITIONS FOR CODE COMPLIANCE.

LEGEND



1 CODE COMPLIANCE DIAGRAM - FIRST FLOOR
SCALE: 1/16" = 1'-0"



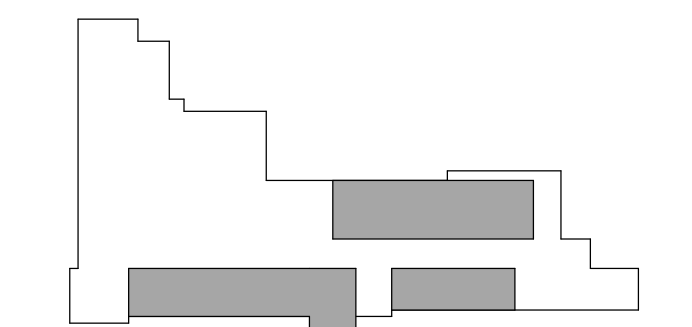
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Revision table with columns: Date Revised, Description. Includes entries for 1/24/2023 and 1/31/2023.



Key Plan

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Project Manager, Discipline Lead, Designer, Reviewer, Date Issued, Project Number table.

Sheet Name

CODE COMPLIANCE & LIFE SAFETY PLANS

Drawing Number

G001

STRUCTURAL GENERAL NOTES

GENERAL

- 1. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE GOVERNING LOCAL MUNICIPAL CODES AND SPECIFICATIONS... 2. THE STRUCTURAL DRAWINGS ARE INTENDED TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS... 3. THE CONTRACTOR SHALL NOT MAKE DEVIATIONS FROM THE DESIGN DOCUMENTS WITHOUT WRITTEN APPROVAL...

STRUCTURAL STEEL:

- 1. STRUCTURAL STEEL SHALL CONFORM TO AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", AND SHALL COMPLY WITH ALL LOCAL LAWS AND ORDINANCES... 2. PROVIDE NEW MATERIAL CONFORMING TO THE FOLLOWING REQUIREMENTS FOR ALL STRUCTURAL STEEL... 3. A QUALITY CONTROL PROGRAM OF SHOP AND FIELD TESTING AND INSPECTION SHALL BE PERFORMED ON STRUCTURAL STEEL...

COLD FORMED STEEL FRAMING (DELEGATED)

- 1. ALL COLD FORMED STEEL FRAMING MEMBERS SHALL BE DESIGNED, FABRICATED AND ERRECTED IN ACCORDANCE WITH AISI S100 "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS"... 2. ALL COLD FORMED STEEL FRAMING SHOWN ON THE DRAWINGS HAS BEEN SPECIFIED ACCORDING TO THE AISI FOUR PART IDENTIFICATION CODE SYSTEM...

CAST-IN-PLACE CONCRETE:

- 1. CAST-IN-PLACE CONCRETE WORK SHALL CONFORM TO THE ACI-318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE"... 2. ALL CONCRETE SHALL BE CONTROLLED CONCRETE, PROPORTIONED, MIXED AND PLACED IN THE PRESENCE OF A REPRESENTATIVE OF AN APPROVED TESTING AGENCY...

Table with columns: TYPE, EXPOSURE CLASS (F, S, W, C), AIR CONTENT, MIN 28 DAY COMP STRENGTH, FOOTINGS/PIERS, F, S1, W0, C1, 1.0% - 3.0%, 4000 PSI

- 5. UNLESS NOTED OTHERWISE, ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE (144 PCF +/-) WITH ALL CEMENT CONFORMING TO ASTM C150, TYPE I/II... 6. CONTRACTOR SHALL SUBMIT A CONCRETE MIX DESIGN IN ACCORDANCE WITH ACI 318... 7. THE USE OF HIGH EARLY STRENGTH CONCRETE MAY BE REQUESTED BY THE CONTRACTOR...

CONCRETE REINFORCEMENT:

- 1. DETAILING, FABRICATION, AND INSTALLATION OF REINFORCEMENT SHALL CONFORM TO ACI-318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"... 2. STEEL REINFORCEMENT, UNLESS NOTED OTHERWISE, SHALL CONFORM TO THE FOLLOWING: BARS, TIES, AND STIRRUPS ASTM A615 GRADE 60... 3. CONTRACTOR SHALL SUBMIT REBAR SHOP DRAWINGS FOR APPROVAL...

COMPONENT AND CLADDING WIND LOAD SCHEDULE

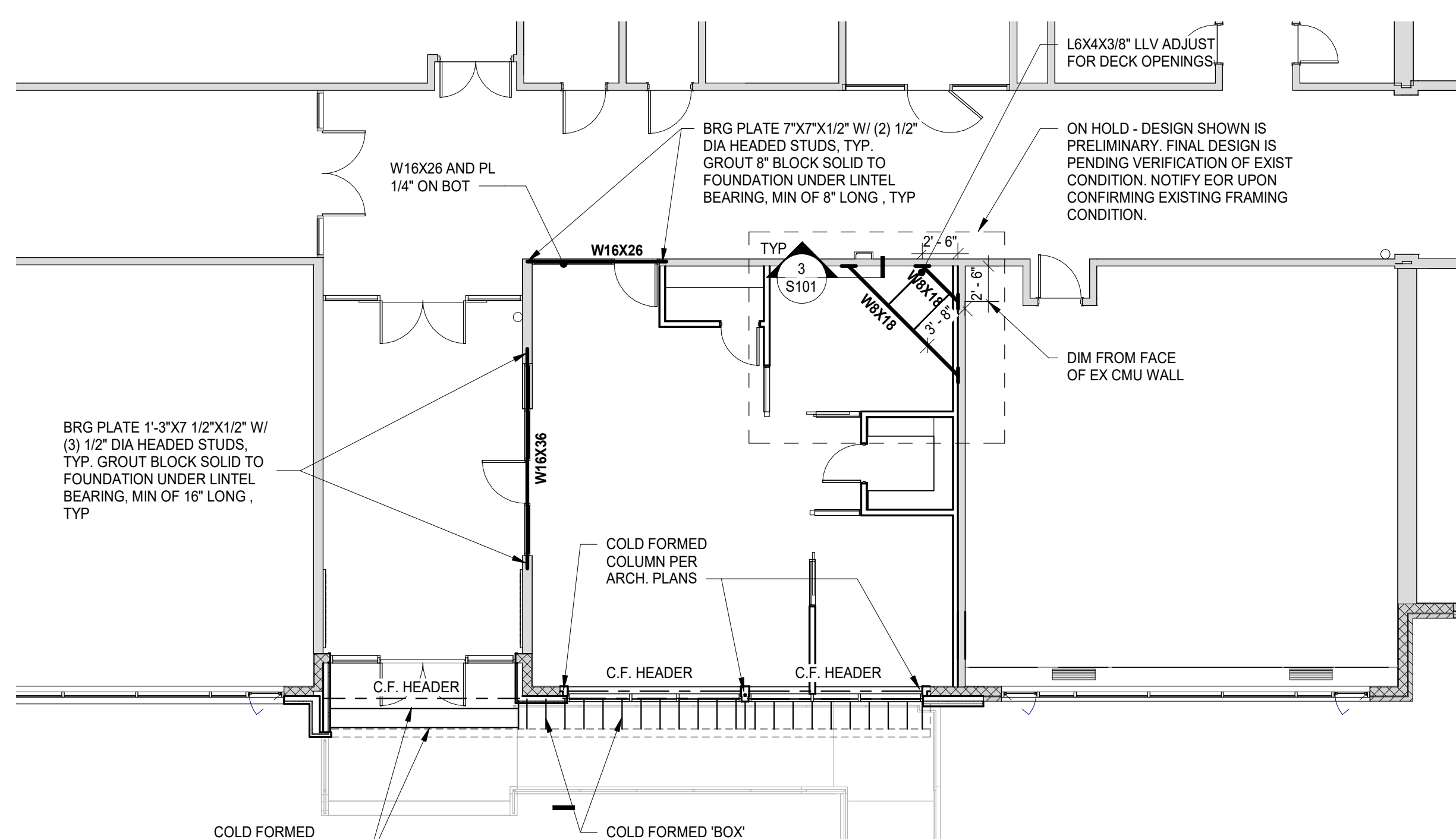
Table with columns: EFFECTIVE WIND AREA (SQ. FT.), ROOF (INTERIOR (1), EDGE (2), CORNER (3)), WALL (INTERIOR (4), EDGE (5)), and values for various wind areas.

NOTES:

- 1. SEE ASCE 7-10, CHAPTER 30, PART 3. BUILDINGS WITH H < 60 FT FOR DESIGN METHOD USED TO CALCULATE ULTIMATE COMPONENT AND CLADDING WIND LOADS... 2. PER ASCE 7-10, CHAPTER 30, SECTION 30.2.2, THE MINIMUM ULTIMATE COMPONENT AND CLADDING DESIGN WIND PRESSURES SHALL NOT BE LESS THAN A NET PRESSURE OF 16.0 PSF ACTING IN EITHER DIRECTION NORMAL TO THE SURFACE...

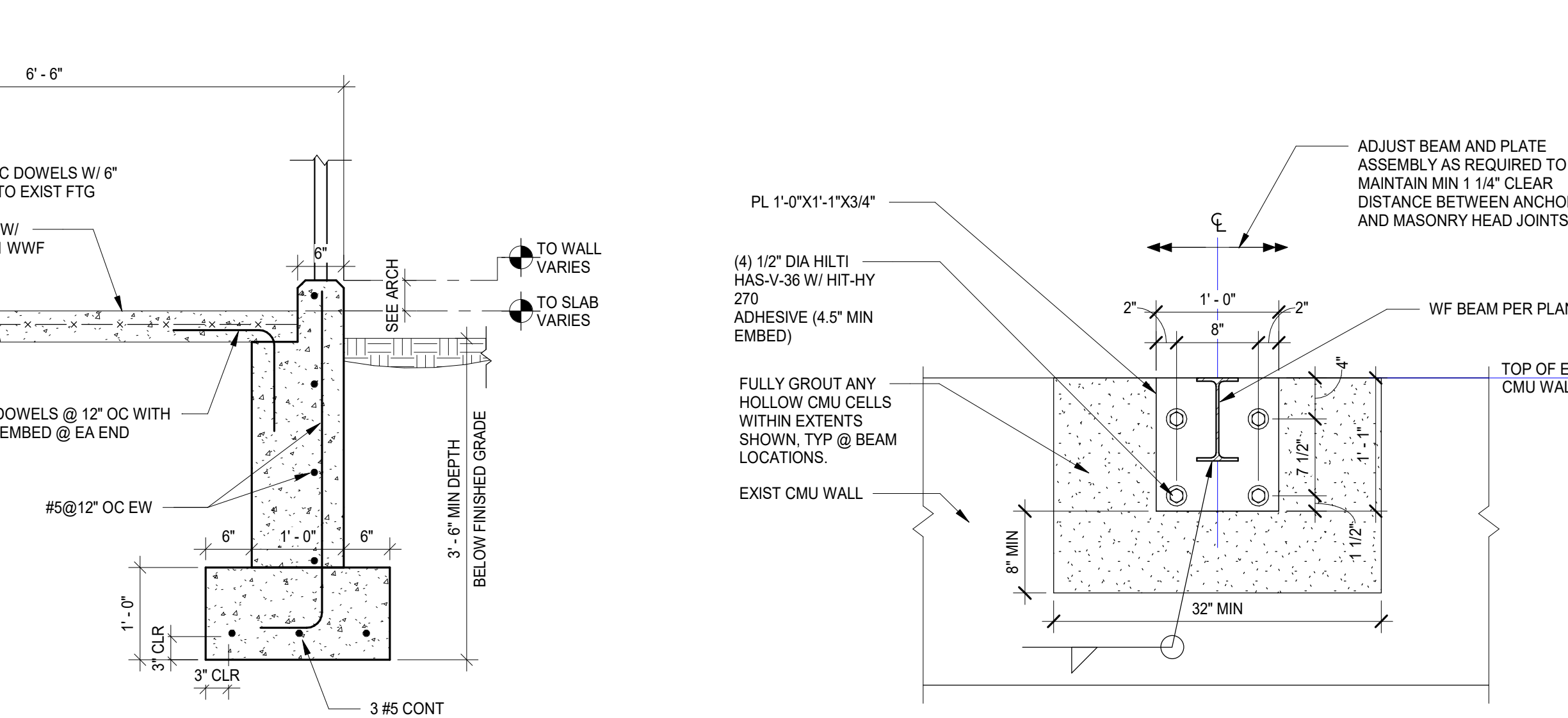
FOUNDATION PLAN

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



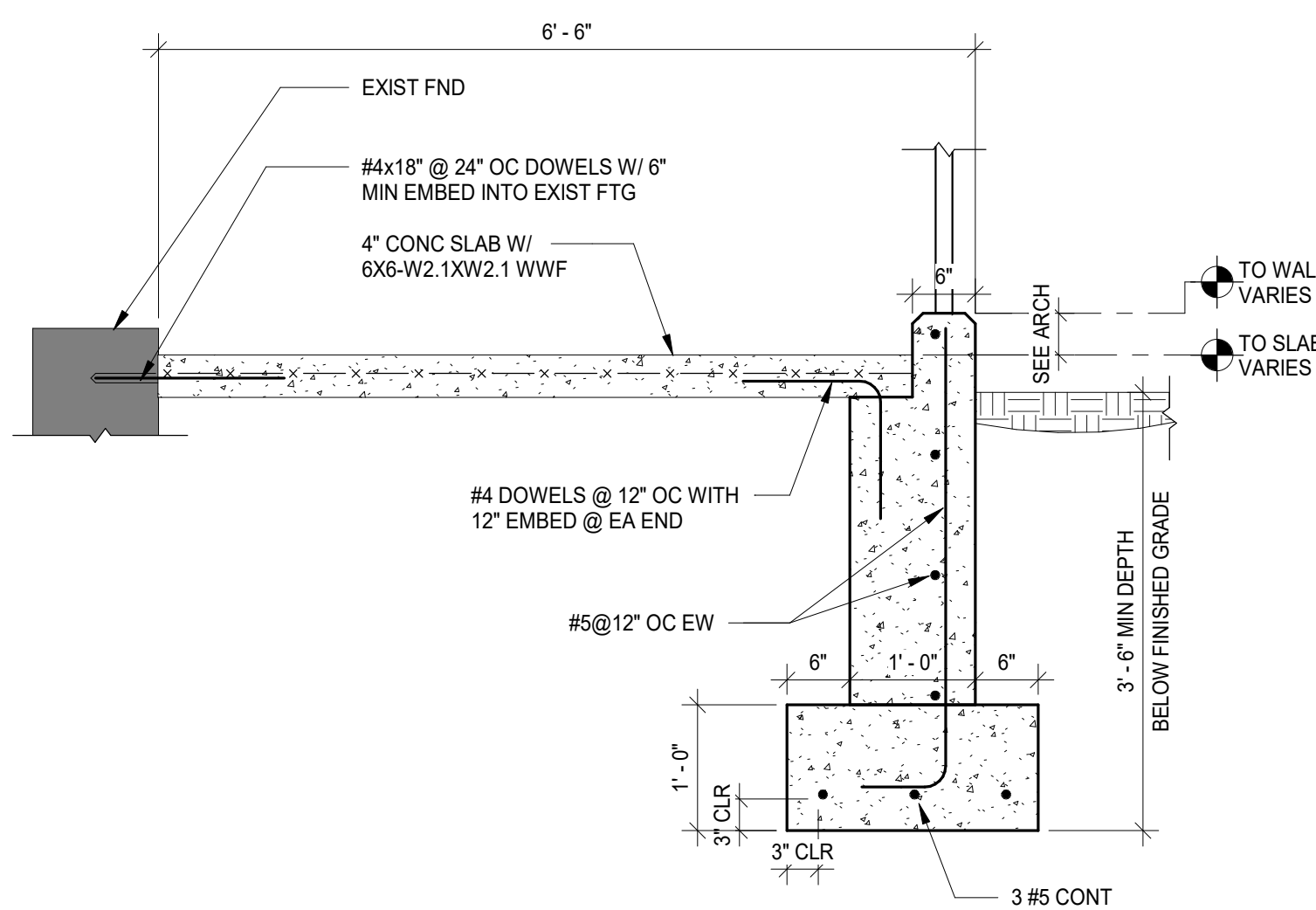
FIRST FLOOR ENLARGED PLAN

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



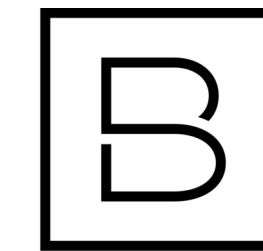
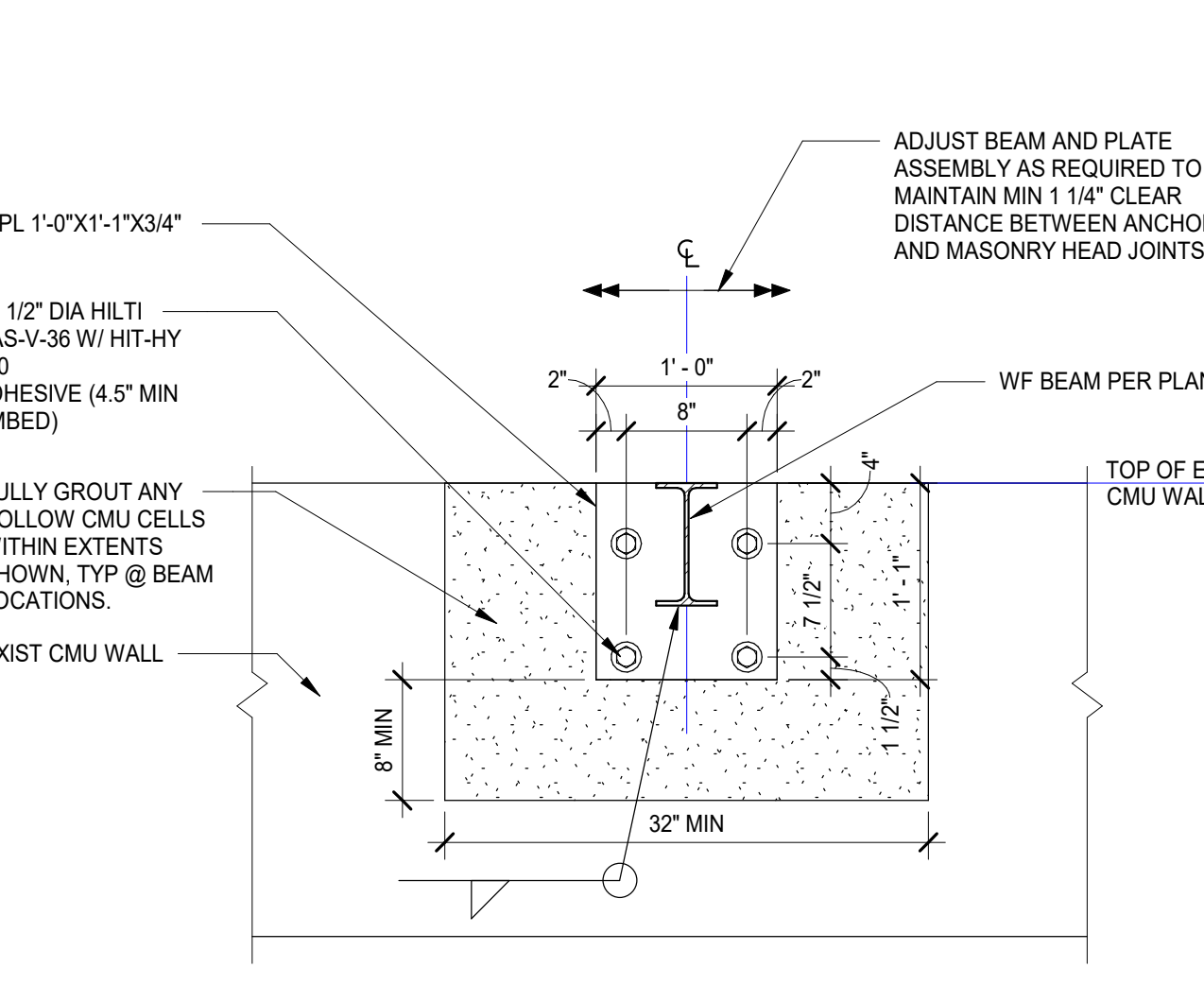
RAMP DETAIL

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



CMU WALL MOUNT DETAIL

SCALE: 1" = 1'-0"



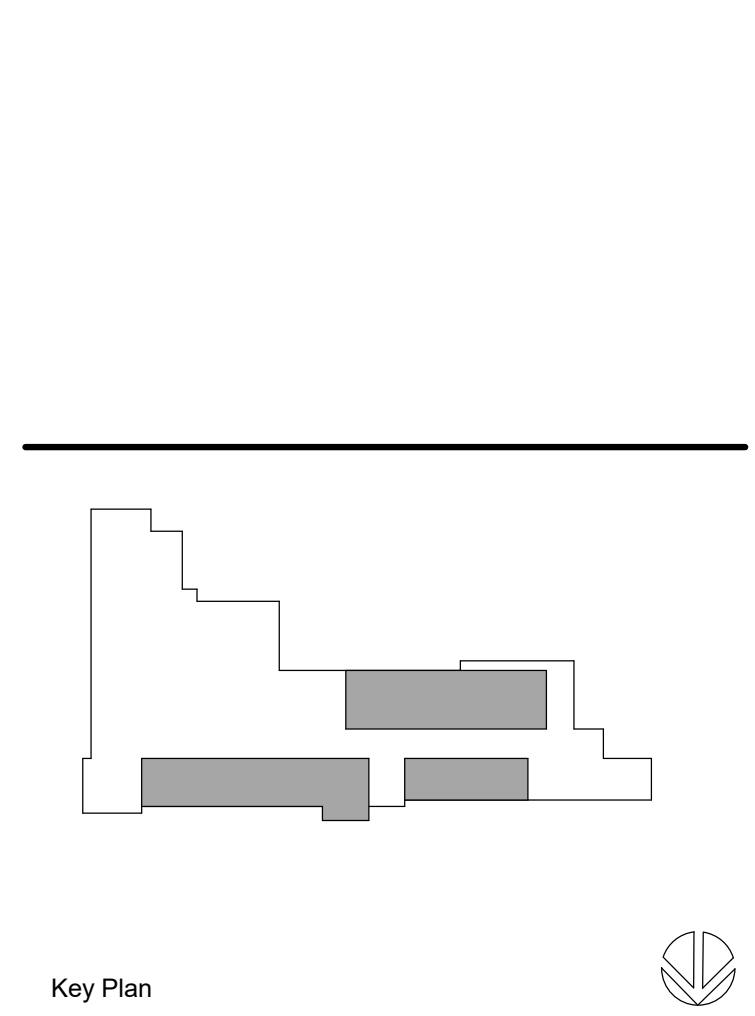
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Table with columns: Project Manager, Discipline Lead, Designer, Reviewer, Date Issued, Project Number, and Sheet Name.

STRUCTURAL DETAILS

Drawing Number

S101

DRAWING SYMBOLS

Table with drawing symbols for View Title, Section Marker, Detail Section, Detail Callout, Elevation Marker, and Accessory Marker.

MATERIAL INDICATORS

Table showing material indicators for earth, stone, concrete, steel, insulation, brick, plywood, wood, and existing materials.

WALL STYLES

Table showing wall styles for existing brick wall, CMU wall, stud wall, and existing wall removal.

ABBREVIATIONS

Large table of abbreviations for architectural components like air conditioning, interior diameter, tread, and various materials.

GENERAL NOTES:

- GENERAL
1. DEFINITIONS: 'PROVIDE' MEANS FURNISH AND INSTALL. SUPPLY LABOR AND MATERIALS TO RESULT IN A FINISHED AND/OR OPERABLE SYSTEM.
2. CONTRACTOR RESPONSIBILITIES:
A. MATERIALS, CONSTRUCTION METHODS INCLUDING BUT NOT LIMITED TO LAYOUT, COORDINATION, SCHEDULE AND CONSTRUCTION SITE ACCESS AND WORK.
B. DAILY CLEANING: KEEP SITE FREE FROM WASTE, RUBBISH, AND DEBRIS. REMOVE DAILY. WHEN WORK IS COMPLETE, LEAVE THE PREMISES BROOM CLEAN AND CLEAN FINISHED SURFACES, FIXTURES, GLASS, STOREFRONT, ETC.
C. FINAL CLEANING: PRIOR TO PUNCHLIST INSPECTION BROOM CLEAN ALL HARD SURFACE FLOORS, VACUUM ALL CARPETING AND WIPE DOWN ALL HORIZONTAL AND GLASS SURFACES PROVIDING A DUST FREE SURFACE.
D. TEMPORARY PROTECTION IS REQUIRED TO MAINTAIN ONGOING BUILDING OPERATIONS, EXITING PATHS, DUST CONTROL AND OCCUPANT SAFETY. IDENTIFY THE REQUIREMENTS FOR TEMPORARY PROTECTION AND PROJECT PHASING. COORDINATE WITH OWNER FOR OTHER REQUIREMENTS.
E. COORDINATE STARTUP AND ADJUSTING OF EQUIPMENT AND OPERATING COMPONENTS. START EQUIPMENT AND OPERATING COMPONENTS AND TEST TO CONFIRM PROPER OPERATION AND CONTROL. REMOVE MALFUNCTIONING UNITS, REPLACE WITH NEW UNITS, AND RETEST.
F. CLOSEOUT DOCUMENTS, CERTIFICATE OF RELEASE FROM THE AUTHORITY OF JURISDICTION AND INSURANCE FOR CONTINUING COVERAGE, WARRANTIES, TEST & INSPECTION RESULTS AND OPERATION, EMERGENCY & MAINTENANCE MANUALS.
3. EXISTING CONDITIONS: REVIEW EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING WORK AND REPORT DISCREPANCIES TO THE ARCHITECT IMMEDIATELY.
4. CONTRACT DOCUMENTS:
A. PLANS, ELEVATIONS, SECTIONS, DETAILS AND SCHEDULES ARE COMPLEMENTARY. PLAN DRAWINGS WILL TAKE PRECEDENCE OVER ELEVATION, SECTION AND DETAILS DRAWINGS IN ANY CONFLICTS OF HORIZONTAL DIMENSIONS. DETAIL PLAN DRAWINGS WILL TAKE PRECEDENCE OVER LARGER SCALE PLANS IN ANY CONFLICTS WITH HORIZONTAL DIMENSIONS. WALL AND BUILDING SECTIONS WILL TAKE PRECEDENCE OVER PLAN DRAWING AND DETAILS IN ANY CONFLICTS WITH VERTICAL DIMENSIONS. DETAILS AND WALL SECTIONS WILL TAKE PRECEDENCE OVER ELEVATION AND PLAN DRAWINGS IN ANY CONFLICTS WITH MATERIAL DESCRIPTION. SCHEDULES WILL TAKE PRECEDENCE OVER OTHER ARCHITECTURAL DRAWINGS IN AND CONFLICTS WITH WALL, FLOOR AND CEILING FINISHES AND DOOR, DOOR HARDWARE AND FENESTRATION INFORMATION.
B. DRAWINGS PREPARED BY THE ARCHITECT ARE INSTRUMENTS OF THE ARCHITECT'S SERVICE FOR USE SOLELY WITH RESPECT TO THIS PROJECT AND, UNLESS OTHERWISE PROVIDED, BERGMANN SHALL BE DEEMED THE AUTHOR OF THESE DOCUMENTS AND RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING THE COPYRIGHT.
C. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDUM.

FIELD CONDITIONS

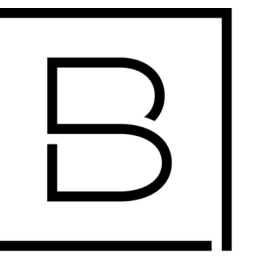
- 1. REPAIR: EXISTING SURFACES TO REMAIN IMPACTED BY DEMOLITION TO MATCH EXISTING ADJACENT SURFACES.
2. DISCREPANCIES: NOTIFY ARCHITECT OF EXISTING DAMAGED OR DETERIORATED BUILDING ELEMENTS REVEALED DURING DEMOLITION OR CONSTRUCTION PRIOR TO PROCEEDING WITH ADDITIONAL WORK IN THE AREA.
3. HAZARDOUS MATERIALS: A PRE-DEMOLITION ASBESTOS SURVEY IS REQUIRED PRIOR TO DEMOLITION OF SUSPECT BUILDING MATERIALS IN ACCORDANCE WITH OSHA 29 DFR 1926.1101, AND USEPA 40 CRF 61.145. ALL SUSPECT ASBESTOS CONTAINING MATERIALS INCLUDING THERMAL SYSTEMS INSULATIONS AND SURFACING MATERIALS (PACMI) UNLESS PROVEN OTHERWISE BY APPROPRIATE BULK SAMPLING AND LABORATORY ANALYSIS CONDUCTED BY APPROVED LICENSED COMPANIES AND PERSONNEL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL REGULATIONS. THE OWNER IS REQUIRED TO PROVIDE COPIES OF ANY ASBESTOS SURVEYS OR ASBESTOS OPERATIONS AND MAINTENANCE PLANS THEY HAVE ON FILE AT THE REQUEST OF THE CONTRACTOR. A COMPLETE ASBESTOS SURVEY FOR THE PROPOSED WORK TO BE PERFORMED IS THE RESPONSIBILITY OF THE BUILDING OWNER. BERGMANN DOES NOT WARRANT THE COMPLETENESS OF DOCUMENTS AND REPORTS PROVIDED BY OTHERS. NO EXEMPTION TO THE REQUIREMENT TO CONDUCT AN ASBESTOS SURVEY SHALL EXEMPT ANY PERSON, ASBESTOS CONTRACTOR, PROPERTY OWNER OR BUSINESS ENTITY FROM THE INSPECTION OR ASBESTOS SURVEY REQUIREMENTS OF EPA AND OSHA.
4. SAFETY: FOLLOW THE OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR 1926.62. LEAD EXPOSURE IN CONSTRUCTION REGULATION. MATERIALS HAVING A CONCENTRATION EQUAL OR GREATER THAN 0.5% BY WEIGHT IN LEAD ARE CONSIDERED TO BE LEAD BASED. HOWEVER, OSHA CONSIDERS ANY AMOUNT OF LEAD ENCOUNTERED DURING CONSTRUCTION TO BE OF CONCERN. THE REGULATION STATES THAT THE EMPLOYER SHALL ASSURE THAT NO EMPLOYEE IS EXPOSED TO LEAD AT CONCENTRATIONS GREATER THAN FIFTY MICROGRAMS PER CUBIC METER OF AIR (50 MG/M³) AVERAGED OVER AN 8-HOUR PERIOD. CONTRACTORS SHALL DETERMINE AND TAKE APPROPRIATE MEASURES IF THEY SUSPECT THE PRESENCE OF LEAD.

FINISHES

- A. GENERAL: FINISHED FLOORS EXTEND INTO TOE SPACES, UNDER CASEWORK ON LAB PROJECTS, CLOSETS, DOOR REVEALS AND SIMILAR OPENINGS.
B. PRODUCTS:
A. INSTALL MATERIALS USING MANUFACTURER'S APPROVED ADHESIVES AND METHODS, U.N.O.
B. PAINT DESIGNATIONS INDICATE COLOR ONLY, REFER TO SPECIFICATION FOR FINISH TYPE.
C. PROVIDE SELF LEVELING TROWELABLE UNDERLAYMENT WHERE REQUIRED TO OBTAIN FINISH MANUFACTURER'S REQUIRED SUBFLOOR CONDITION.
D. PROVIDE THE REQUIRED TRANSITIONS BASED ON TYPES IDENTIFIED ON DRAWINGS AT EACH FINISH TRANSITION LOCATION.
C. EXECUTION:
A. ADHERE TO MATERIAL OR SYSTEM MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND TOLERANCES. ANY VARIATIONS FROM WRITTEN INSTALLATION AND INSTRUCTIONS MUST RECEIVE WRITTEN APPROVAL FROM THE MANUFACTURER AND MAINTAIN MANUFACTURER'S WARRANTIES.
B. PRIOR TO STARTING THE INSTALLATION OF A MATERIAL OR SYSTEM, VERIFY THE SUBSTRATE IS WITHIN THE MANUFACTURER'S REQUIRED TOLERANCES AND REQUIRED CLEARANCES ARE PROVIDED. NOTIFY THE CONSTRUCTION MANAGER OR GENERAL CONTRACTOR AND DESIGN PROFESSIONAL IN WRITING WHEN THE SUBSTRATE IS NOT WITHIN MANUFACTURER'S TOLERANCE OR REQUIRED CLEARANCES ARE NOT PROVIDED. PROCEEDING WITH INSTALLATION SIGNIFIES ACCEPTANCE OF THE SUBSTRATE AND CLEARANCES.
C. PROVIDE MANUFACTURER'S REQUIRED ENVIRONMENTAL TESTS FOR MOISTURE, VAPOR DRIVE, RELATIVE HUMIDITY AND TEMPERATURE TO VERIFY THESE ARE WITHIN THE MATERIAL MANUFACTURER'S TOLERANCE PRIOR TO INSTALLING MATERIALS.
D. MATERIAL AND INSTALLATION SHALL CONFORM WITH LOCAL, STATE AND NATIONAL BUILDING CODES AND CONSTRUCTION STANDARDS ENFORCED BY THE AUTHORITY HAVING JURISDICTION.
E. REQUIRED DOCUMENTATION:
1. SAFETY DATA SHEETS.
2. PROVIDE SAMPLES WHEN SPECIFICALLY REQUESTED IN THESE DOCUMENTS.
3. PROVIDE SHOP DRAWINGS OF MATERIALS AND SYSTEMS, WHICH WILL BE BUILT INTO AND MUST BE COORDINATED WITH OTHER CONSTRUCTION. SHOP DRAWINGS SHALL CONSIST OF PLAN, ELEVATION, SECTION VIEWS AND DETAILS AS REQUIRED TO COMMUNICATE FINAL APPEARANCE AND CONNECTION TO ADJOINING CONSTRUCTION.
F. PROTECT ADJACENT SURFACES DURING WORK.
G. REMOVE ADHESIVE OR PAINT SPOTS FROM FINISHED FLOORS, WALLS, GLASS OR OTHER SURFACES. FINISHES TO MEET OR EXCEED CODE REQUIREMENTS.
H. FILL MINOR DRYWALL IRREGULARITIES WITH SPACKLING COMPOUND AND SAND TO A SMOOTH LEVEL SURFACE. EXERCISE CARE TO AVOID RAISING THE NAP OF PAPER.
I. DO NOT PERFORM PAINTING AND OTHER FINISHING WORK UNDER CONDITIONS UNSUITABLE FOR EXECUTION OF PAINTING WORK. AIR SHALL BE FREE FROM DUST AND DIRT TO PREVENT LODGING OF FOREIGN MATTER IN FRESH PAINT. FLOORS TO BE BROOM CLEAN BEFORE PAINTING IS STARTED.
J. EDGES OF PAINT ADJOINING OTHER COLORS OR MATERIALS TO BE SHARP AND CLEAN WITHOUT OVERLAP.
K. WHENEVER NECESSARY TO OBTAIN REQUIRED RESULTS, REFINISH AN ENTIRE WALL RATHER THAN SPOT FINISHING WHERE A PORTION OF THE FINISH HAS BEEN DAMAGED OR IS UNSATISFACTORY.
L. WHEN INSTALLING CARPET FOLLOW THE CARPET AND RUG INSTITUTE METHODS OF INSTALLATION AND MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS.
M. WHEN INSTALLING TILE FOLLOW THE TILE COUNCIL OF NORTH AMERICA'S INSTALLATION SPECIFICATIONS AND MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS.
N. CENTER FLOOR MATERIAL TRANSITIONS ON DOOR ABOVE.
O. FLOOR MATERIAL TRANSITIONS SHALL OCCUR BELOW THE DOOR.

WALLS

- A. DIMENSIONS:
a. STUD WALLS ARE TO FACE OF STUD, UNLESS OTHERWISE INDICATED IN A.C. OR A.D. BELOW.
b. MASONRY WALLS ARE TO FACE OF MASONRY.
c. EXISTING CONSTRUCTION ARE TO FINISHED FACE OF CONSTRUCTION.
d. WHERE NOTED AS "CLR" DIMENSIONS ARE TO FINISHED SURFACE AND ARE CRITICAL FOR ACCESSIBILITY REQUIREMENTS OR BUILT-IN FURNISHINGS.
B. TYPES:
a. WALLS NOT INDICATED WITH A WALL TYPE SHALL BE TYPE M30.
b. COLUMN ENCLOSURES, CHASES AND ENCLOSED UNINHABITABLE SPACES SHALL BE WALL TYPE M31, UNLESS NOTED OTHERWISE.
c. BRACING: PROVIDE CHANNEL COLD ROLLED STEEL (CRSS) BRACING AT ALL METAL STUD WALLS. INSTALL TWO ROWS OF BRACING 4'-0" O.C. FOR WALLS UP TO 13'-0" HIGH.
d. PROVIDE (2) #10-7/16" HEX HEAD SHEET METAL SCREWS AT EACH STUD/TRACK CONNECTION AT ALL WALLS, BULK HEADS & SOFFITS NOT EXTENDING FLOOR TO DECK.
e. PROVIDE DEFLECTION TRACK OR CLIP AT TOP OF METAL STUD WALLS THAT EXTEND TO THE UNDERSIDE OF STRUCTURAL MEMBERS OR FLOOR/ROOF DECK.
f. METAL STUD WALLS IN WHICH STUDS DO NOT EXTEND TO DECK ABOVE SHALL BE LATERALLY BRACED AT 45 DEGREES TO THE STRUCTURE ABOVE WITH 3/5" X 20 GA. STUDS @ 48" O.C. MAX. AND AT ENDS OF SUCH WALLS WHICH DO NOT INTERSECT OTHER WALLS.
g. PROVIDE FULL HEIGHT DOUBLE STUDS AT DOOR AND WINDOW JAMBS.
h. FIRE-RESISTANT JOINT SYSTEMS: AT FIRE-RESISTANT RATED WALLS, FLOORS OR FLOOR/CEILING ASSEMBLIES, AND ROOFS OR ROOF/CEILING ASSEMBLIES, PROVIDE AN APPROVED TESTED JOINT ASSEMBLY PROVIDING THE MINIMUM TIME AND TEMPERATURE RISE AT THE WALL, FLOOR, OR ROOF SUITABLE FOR THE CONSTRUCTION WHERE THE SYSTEM IS TO BE INSTALLED.
i. THE BOTTOM EDGE OF GYPSUM WALL BOARD SHALL BE INSTALLED 3/8" ABOVE THE FLOOR AND SEALED AS NOTED IN WALL TYPES.
C. RATINGS:
a. SMOKE WALLS AND SMOKE BARRIERS: SMOKE WALLS AND SMOKE BARRIERS MUST FORM A COMPLETE BARRIER TO LIMIT THE TRANSFER OF SMOKE, INCLUDING PERIMETER DETAILS, PENETRATIONS, AND AS REQUIRED BETWEEN WALLS AND DOOR JAMBS, OR SIDELIGHT FRAMES. THE MEMBRANE IS TO BE CONTINUOUS THROUGH ALL CONCEALED SPACES.
1. RECESSED CABINETS, OUTLET BOXES, AND OTHER PENETRATIONS MUST BE SEALED.
2. OPENINGS AROUND PENETRATIONS ARE TO BE SEALED.
3. ALL EXPOSED JOINTS, ANGLES, AND ABUTMENTS IN THE SYSTEM, INCLUDING FLOOR AND ABOVE CEILING MUST BE TAPE AND FINISHED.
4. SEAL THE INTERFACE BETWEEN WALLS AND DOOR JAMBS, OR SIDELIGHT FRAMES.
b. FIRE WALLS AND FIRE BARRIERS: FIRE WALLS AND FIRE BARRIERS MUST BE SIMILARLY CONSTRUCTED AS A COMPLETE BARRIER TO RESIST THE SPREAD OF SMOKE AND FIRE. PENETRATIONS MUST BE SEALED AND LABELED WITH AN APPROVED FIRE RESISTANT JOINT SYSTEM. INSTALL A FIRE RESISTANT JOINT SYSTEM AT THE HEAD AND FLOOR CONDITION OF FIRE RATED WALLS AND BARRIERS.
c. FIRE AND SMOKE WALL / BARRIER / WALLS LABELING: PROVIDE LABELS ABOVE ACOUSTICAL CEILINGS IN LETTERS AT LEAST 2-INCHES IN HEIGHT AND NO MORE THAN 10-LINEAL FEET ALONG THE WALL. LABELS SHALL BE PLACED IN SUCH A MANNER AS TO BE OBVIOUS TO WORKERS IN THE CONCEALED SPACE ON BOTH SIDES OF THE WALL AND WILL READ AS FOLLOWS: "X" HR. FIRE [SMOKE] WALL [BARRIER] WALL. PENETRATIONS MUST BE FIRE [SMOKE] STOPPED. PROVIDE LABELING AT 12'-0" O.C. SPACING. ELECTRICAL, MECHANICAL OR PLUMBING PENETRATIONS THROUGH FIRE-RATED WALL OR FLOOR ASSEMBLIES SHALL BE SEALED WITH A U.L. APPROVED THROUGH-PENETRATION FIRESTOP SYSTEM APPROPRIATE FOR THE RATING OF THE WALL BEING PENETRATED. SUBMIT PROPOSED U.L. NUMBERS AND DETAILS TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
d. ACOUSTICAL WALLS: WALLS INDICATED WITH ACOUSTICAL BATT, AND/OR A GIVEN AN STC RATING, SHALL BE CONSTRUCTED TO MINIMIZE SOUND TRANSMISSION AS FOLLOWS:
1. PROVIDE ACOUSTICAL SEALANT AT ALL FLOOR AND HEAD LEVELS, EACH SIDE OF THE WALLS.
2. SET TRACK IN 3 CONTINUOUS BEADS OF ACOUSTICAL SEALANT.
3. EXTEND SOUND BATTS THROUGH ANY INTERSECTING WALLS.
4. STAGGER OUTLETS A MINIMUM OF 24 INCHES HORIZONTAL. DO NOT INSTALL MORE THAN ONE OUTLET IN A COMMON STUD CAVITY. SEAL JOINTS AROUND OUTLETS WITH ACOUSTICAL SEALANT.
D. GYPSUM BOARD WALL COMPONENTS AND ACCESSORIES:
a. WALL TYPES DO NOT INDICATE FINAL FINISHES. REFER TO FINISH PLANS AND FINISH SCHEDULE.
b. GYPSUM BOARD SHALL BE TYPE "X" FIRE RATED WITH:
1. LEVEL 1 FINISH AT JOINTS WHICH WILL REMAIN CONCEALED. PROVIDE GALVANIZED STEEL CORNER BEADS AT CORNERS.
2. LEVEL 3 FINISH WHERE WALLS EXPOSED TO VIEW SCHEDULED FOR PAINT IN SERVICE SPACES (eg. TELE / DATA CLOSETS, MECHANICAL ROOMS, JANITOR CLOSETS, STORAGE ROOMS).
3. LEVEL 4 FINISH WHERE EXPOSED TO VIEW UPON PROJECT COMPLETION U.N.O.
4. LEVEL 5 FINISH AT GRAPHIC CORRIDOR, AS WELL AS DRY ERASE AND CHALK BOARD PAINTED AREAS. REFER TO FINISH LOCATION ON PLANS, AND COORDINATE WITH DESIGNER IN THE FIELD.
c. PROVIDE MOISTURE / MOLD / ABUSE RESISTANT GYPSUM BOARD AT WALLS IN TOILET ROOMS, JANITORS CLOSETS AND ANY ROOM WHERE MOISTURE CONDITIONS WILL OCCUR AND NOT RECEIVING TILE FINISH.
d. PROVIDE GLASS MATT GYPSUM BOARD AT WALLS DIRECTLY ADJACENT TO LIVING WALL ELEMENT AND AT ALL WET AREAS (SHOWER ROOMS, COMMUNAL KITCHEN/DISHWASHER, ETC.) GLASS MATT GYPSUM BOARD SHALL RECEIVE FIBERGLASS TAPE AND FINISH AS RECOMMENDED BY MANUFACTURER.
e. METAL TRIM:
1. EXPOSED METAL J-TRIM TO BE COMPLETELY COVERED WITH SKIM COAT
2. NON-METALIC J-TRIM OR OTHER SHAPES ARE NOT ACCEPTABLE, UNLESS OTHERWISE NOTED
f. LOCATIONS WHERE GYPSUM BOARD WALLS TERMINATE AT DISSIMILAR MATERIALS, PROVIDE A FINISH-ABLE METAL END TRIM AND A 1/4" GAP BETWEEN TRIM AND ADJACENT MATERIAL. FILL GAP WITH BACKER ROD AND SEALANT.
g. PROVIDE SOLID FIRE TREATED WOOD BLOCKING IN WALL AND CEILING CONSTRUCTION AS REQUIRED TO SUPPORT WALL MOUNTED MILLWORK AND CASEWORK, FURNISHINGS, RAILINGS, GRAB BARS, TOILET & BATH ACCESSORIES OR ANY OTHER WALL MOUNTED ITEMS INDICATED ON THESE DRAWINGS REQUIRING BLOCKING.
h. PROVIDE PAPER FACED "L" SHAPED TAPE ON TRIM AT THE TOP OF ALL GYP. BD. THAT ABUTS SUSPENDED CEILING AND EXPOSED STRUCTURE.
E. CONTROL JOINTS:
a. PROVIDE IN GYPSUM WALL BOARD CONSTRUCTION AS FOLLOWS:
1. PROVIDE CONTROL JOINTS IN EXPANSES OF WALLS AT MAXIMUM 25-FOOT INTERVALS, AND FULL HEIGHT. CONTROL JOINTS ARE RECOMMENDED AT DOOR JAMBS, EXTENDING FROM DOOR HEAD TO TOP OF WALL.
2. CONTROL JOINTS ARE REQUIRED IN CEILINGS TO LIMIT AREAS TO 2,500 SQUARE FEET. INSTALL CONTROL JOINTS IN CEILINGS TO LIMIT DIMENSIONS IN EITHER DIRECTION TO 50 FEET MAXIMUM WITH PERIMETER RELIEF, 30 FEET MAXIMUM OTHERWISE. INSTALL CONTROL JOINTS WHERE CEILING FRAMING OR FURRING CHANGES DIRECTION.
3. PROVIDE CONTROL JOINTS IN GYPSUM WALL BOARD WHERE THE UNDERLYING STRUCTURE CONTAINS A CONTROL OR MOVEMENT JOINT.
4. IN AN ACOUSTICALLY RATED ASSEMBLY, PROVIDE ACOUSTICALLY TESTED CONTROL JOINT ASSEMBLY WITH A STC RATING MINIMALLY EQUAL TO THE WALLS STC RATING. COORDINATE REQUIRED LOCATIONS ON FEATURE WALLS WITH DESIGNER IN THE FIELD. METAL TRIM: EXPOSED METAL OR NON-METALLIC J-MOLD IS NOT ACCEPTABLE.
5. PROVIDE CONTROL JOINTS AT ALL BUILDING CONTROL OR EXPANSION JOINTS.
b. IN MASONRY WALLS, PROVIDE FULL-HEIGHT CONTROL JOINTS AT MAXIMUM 30-FOOT INTERVALS. CONTROL JOINTS ARE RECOMMENDED AT DOOR JAMBS OF OPENINGS EXTENDING FULL HEIGHT OF WALL.



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Table with 2 columns: Date Revised, Description. Includes entries for 1/24/2023 and 1/31/2023.

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Table with 2 columns: Project Manager, Discipline Lead. Lists D. HOLTRÖP and B. HUYLER.

GENERAL NOTES AND LEGENDS

Drawing Number

A001

GENERAL REQUIREMENTS:

ALLOWANCES:

- AT THE EARLIEST PRACTICAL DATE AFTER AWARD OF THE CONTRACT, ADVISE ARCHITECT OF THE DATE WHEN FINAL SELECTION, OR PURCHASE AND DELIVERY, OF EACH PRODUCT OR SYSTEM DESCRIBED BY AN ALLOWANCE MUST BE COMPLETED BY THE OWNER TO AVOID DELAYING THE WORK.
- OBTAIN PROPOSALS FOR EACH ALLOWANCE FOR USE IN MAKING FINAL SELECTIONS. INCLUDE RECOMMENDATIONS THAT ARE RELEVANT TO PERFORMING THE WORK.
- SUBMIT PROPOSALS FOR PURCHASE OF PRODUCTS OR SYSTEMS INCLUDED IN ALLOWANCES IN THE FORM OF SPECIFIED FOR CHANGE ORDERS. THIS ALLOWANCE INCLUDES MATERIAL COST, RECEIVING, HANDLING, AND INSTALLATION AND CONTRACTOR OVERHEAD AND PROFIT.
- COORDINATE QUANTITY ALLOWANCE ADJUSTMENT WITH CORRESPONDING UNIT-PRICE REQUIREMENTS "UNIT PRICES."
 - QUANTITY ALLOWANCE NO. 1: INCLUDE 120 SF OF LANDSCAPING AND 300 SF OF TURF GRASS FOR THE AMOUNT OF \$2,000.00.

UNIT PRICES:

- UNIT PRICE IS AN AMOUNT INCORPORATED INTO THE AGREEMENT, APPLICABLE DURING THE DURATION OF THE WORK AS A PRICE PER UNIT OF MEASUREMENT FOR MATERIALS, EQUIPMENT, OR SERVICES, OR A PORTION OF THE WORK, ADDED TO OR DEDUCTED FROM THE CONTRACT SUM BY APPROPRIATE MODIFICATION, IF THE SCOPE OF WORK OR ESTIMATED QUANTITIES OF WORK REQUIRED BY THE CONTRACT DOCUMENTS ARE INCREASED OR DECREASED.
- UNIT PRICES INCLUDE ALL NECESSARY MATERIAL, PLUS COST FOR DELIVERY, INSTALLATION, INSURANCE, OVERHEAD, AND PROFIT.
- MEASUREMENT AND PAYMENT: SEE QUANTITY ALLOWANCE FOR WORK THAT REQUIRES ESTABLISHMENT OF UNIT PRICES. UNITS OF MEASUREMENT AND PAYMENT FOR UNIT PRICES ARE LISTED IN THAT SECTION.
- OWNER RESERVES THE RIGHT TO REJECT CONTRACTOR'S MEASUREMENT OF WORK-IN-PLACE THAT INVOLVES USE OF ESTABLISHED UNIT PRICES AND TO HAVE THIS WORK MEASURED, AT OWNER'S EXPENSE, BY AN INDEPENDENT SURVEYOR ACCEPTABLE TO CONTRACTOR.
- UNIT PRICE NO. 1 - QUANTITY ALLOWANCE NO. 1: PROVIDE COST PER UNIT LISTED FOR ADDING TO OR DEDUCTING FROM THE CONTRACT AMOUNT.

ALTERNATES:

- ALTERNATES ARE AN AMOUNT PROPOSED BY BIDDERS AND STATED ON THE BID PROM FOR CERTAIN WORK DEFINED IN THE BIDDING REQUIREMENTS THAT MAY BE ADDED TO OR DEDUCTED FROM THE BASE BID AMOUNT IF THE OWNER DECIDES TO ACCEPT A CORRESPONDING CHANGE EITHER IN THE AMOUNT OF CONSTRUCTION TO BE COMPLETED OR IN THE PRODUCTS, MATERIALS, EQUIPMENT, SYSTEMS, OR INSTALLATION METHODS DESCRIBED IN THE CONTRACT DOCUMENTS.
- INCLUDE AS PART OF EACH ALTERNATE, MISCELLANEOUS DEVICES, ACCESSORY OBJECTS, AND SIMILAR ITEMS INCIDENTAL TO OR REQUIRED FOR A COMPLETE INSTALLATION WHETHER INDICATED AS PART OF ALTERNATE. EXECUTE ACCEPTABLE ALTERNATE UNDER THE SAME CONDITIONS AS OTHER WORK OF THE CONTRACT.
- PROVIDE ALTERNATE PRICING AS FOLLOWS:
 - ALTERNATE NO. 1: BASE BID, SINGLE ZONE HEAT PUMP CONDENSING UNITS AS SHOWN ON DRAWING M101. ALTERNATE BID, BASE BID SINGLE ZONE HEAT PUMP CONDENSING UNITS HPCU-3 & HPCU-4 TO BE CHANGED TO A SINGLE 4 TON MULTIZONE UNIT WITH TWO HEADS (32 MCA/40 MOC/208-230V/1PH) AS NOTED IN KEYED MECHANICAL NOTE M6. ADDITIONALLY, BASE BID SINGLE ZONE HEAT PUMP CONDENSING UNITS HPCU-7 & HPCU-8 TO BE CHANGED TO A SINGLE 4 TON MULTIZONE UNIT WITH TWO HEADS (32 MCA/40 MOC/208-230V/1PH) AS NOTED IN KEYED MECHANICAL NOTE M7.

SUBSTITUTION PROCEDURES:

- SUBSTITUTIONS FOR CAUSE: CHANGES PROPOSED BY CONTRACTOR THAT ARE REQUIRED DUE TO CHANGED PROJECT CONDITIONS, SUCH AS UNAVAILABILITY OF PRODUCT, REGULATORY CHANGES, OR UNAVAILABILITY OF REQUIRED WARRANTY TERMS.
- SUBSTITUTIONS FOR CONVENIENCE: CHANGES PROPOSED BY CONTRACTOR OR OWNER THAT ARE NOT REQUIRED IN ORDER TO MEET OTHER PROJECT REQUIREMENTS BUT MAY OFFER ADVANTAGE TO CONTRACTOR OR OWNER. SUBSTITUTIONS FOR CONVENIENCE ARE ALLOWED ONLY BY APPROVAL OF THE OWNER OR OWNER'S AGENT.
- SUBMIT REQUEST FOR CONSIDERATION. IDENTIFY PRODUCT OR FABRICATION OR INSTALLATION METHOD TO BE REPLACED. INCLUDE PRODUCT, MATERIAL OR SYSTEM NAME AND AFFECTED DRAWING NUMBERS AND TITLES.
- EXECUTE ACCEPTED SUBSTITUTIONS UNDER THE SAME CONDITIONS AS OTHER WORK OF THE CONTRACT.
- DOCUMENTATION: SHOW COMPLIANCE WITH REQUIREMENTS FOR SUBSTITUTIONS AND THE FOLLOWING, AS APPLICABLE:
 - COST INFORMATION, INCLUDING A PROPOSAL OF CHANGE, IF ANY, IN THE CONTRACT SUM.
 - CONTRACTOR'S CERTIFICATION THAT PROPOSED SUBSTITUTION COMPLIES WITH REQUIREMENTS IN THE CONTRACT DOCUMENTS, EXCEPT AS INDICATED IN SUBSTITUTION REQUEST, IS COMPATIBLE WITH RELATED MATERIALS AND IS APPROPRIATE FOR APPLICATIONS INDICATED.
 - STATEMENT INDICATING WHY SPECIFIED PRODUCT OR FABRICATION, OR INSTALLATION METHOD CANNOT BE PROVIDED, IF APPLICABLE.
 - COORDINATION OF INFORMATION, INCLUDING A LIST OF CHANGES OR REVISIONS NEEDED TO OTHER PARTS OF THE WORK AND TO CONSTRUCTION PERFORMED BY OWNER AND SEPARATE CONTRACTORS THAT WILL BE NECESSARY TO ACCOMMODATE PROPOSED SUBSTITUTION.
 - PRODUCT DATA, INCLUDING DRAWINGS AND DESCRIPTIONS OF PRODUCTS AND FABRICATION AND INSTALLATION PROCEDURES. INCLUDE DETAILED COMPARISON OF SIGNIFICANT QUALITIES OF PROPOSED SUBSTITUTIONS WITH THOSE OF THE WORK SPECIFIED. SIGNIFICANT QUALITIES MAY INCLUDE ATTRIBUTES, SUCH AS PERFORMANCE, WEIGHT, SIZE, DURABILITY, VISUAL EFFECT, SUSTAINABLE DESIGN CHARACTERISTICS, WARRANTIES, AND SPECIFIC FEATURES AND REQUIREMENTS INDICATED. INDICATE DEVIATIONS, IF ANY, FROM THE WORK SPECIFIED.
 - CONTRACTOR'S WAIVER OF RIGHTS TO ADDITIONAL PAYMENT OR TIME THAT MAY SUBSEQUENTLY BECOME NECESSARY BECAUSE OF FAILURE OF PROPOSED SUBSTITUTION TO PRODUCE INDICATED RESULTS.
- ARCHITECT'S ACTION: IF NECESSARY, ARCHITECT WILL REQUEST ADDITIONAL INFORMATION OR DOCUMENTATION FOR EVALUATION WITHIN 7 DAYS OF RECEIPT OF A REQUEST FOR SUBSTITUTION. ARCHITECT WILL NOTIFY CONTRACTOR OF ACCEPTANCE OR REJECTION OF PROPOSED SUBSTITUTION WITHIN 14 DAYS OF RECEIPT OF REQUEST, OR 7 DAYS OF RECEIPT OF ADDITIONAL INFORMATION OR DOCUMENTATION.
- ARCHITECT WILL CONSIDER CONTRACTOR'S REQUEST FOR SUBSTITUTION WHEN THE LISTED REQUIREMENTS ARE SATISFIED. IF THE LISTED REQUIREMENTS ARE NOT SATISFIED, ARCHITECT WILL RETURN REQUESTS WITHOUT ACTION, EXCEPT TO RECORD NONCOMPLIANCE WITH LISTED REQUIREMENTS.
- FORMS OF ACCEPTANCE: CHANGE ORDER, CONSTRUCTION CHANGE DIRECTIVE, OR ARCHITECT'S SUPPLEMENTAL INSTRUCTIONS FOR MINOR CHANGES IN THE WORK.

SUBMITTAL REQUIREMENTS:

- PREPARE SUBMITTAL SCHEDULE: SUBMIT, AS AN ACTION SUBMITTAL, A LIST OF SUBMITTALS, ARRANGED IN CHRONOLOGICAL ORDER BY DATES REQUIRED BY CONSTRUCTION SCHEDULE. INCLUDE TIME REQUIRED FOR REVIEW, ORDERING, MANUFACTURING, FABRICATION, AND DELIVERY WHEN ESTABLISHING DATES. INCLUDE ADDITIONAL TIME REQUIRED FOR MAKING CORRECTIONS OR REVISIONS TO SUBMITTALS NOTED BY ARCHITECT AND CONTRACTOR AND ADDITIONAL TIME FOR HANDLING AND REVIEWING SUBMITTALS REQUIRED BY THOSE CORRECTIONS.
- PREPARE AND SUBMIT SUBMITTALS AS INCLUDED IN THE SUBMITTAL SCHEDULE.
- EMAIL: PREPARE SUBMITTALS AS PDF PACKAGE AND TRANSMIT TO ARCHITECT BY SENDING VIA EMAIL. INCLUDE PDF TRANSMITTAL FORM. INCLUDE INFORMATION IN EMAIL SUBJECT LINE AS REQUESTED BY ARCHITECT.
- WEB-BASED PROJECT MANAGEMENT SOFTWARE: PREPARE SUBMITTALS IN PDF FORM, AND UPLOAD TO WEB-BASED PROJECT MANAGEMENT SOFTWARE WEBSITE. ENTER REQUIRED DATA IN WEB-BASED SOFTWARE SITE TO FULLY IDENTIFY SUBMITTAL.
- ACTION SUBMITTALS AND INFORMATIONAL SUBMITTALS: REVIEW EACH SUBMITTAL AND CHECK FOR COORDINATION WITH OTHER WORK OF THE CONTRACT AND FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. NOTE CORRECTIONS AND FIELD DIMENSIONS. MARK WITH APPROVAL STAMP BEFORE SUBMITTING TO ARCHITECT.
- USE FOR CONSTRUCTION: RETAIN COMPLETE COPIES OF SUBMITTALS ON PROJECT SITE. USE ONLY FINAL ACTION SUBMITTALS THAT ARE MARKED WITH APPROVAL NOTATION FROM ARCHITECT'S AND CONTRACTOR'S ACTION STAMP.
- SUBMITTAL INFORMATION: INCLUDE THE FOLLOWING INFORMATION IN EACH SUBMITTAL:
 - PROJECT NAME, DATE AND INDICATION OF FULL OR PARTIAL SUBMITTAL.
 - ARCHITECT'S AND CONTRACTOR'S AND/OR CONSTRUCTION MANAGER'S, FIRM OR ENTITY THAT PREPARED SUBMITTAL AND SUBCONTRACTOR, MANUFACTURER, AND SUPPLIER NAMES.
 - NUMBER AND TITLE OF SPECIFICATION SECTION, WITH PARAGRAPH NUMBER AND GENERIC NAME FOR EACH OF MULTIPLE ITEMS
 - MATERIAL OR SYSTEM NAME AND DRAWING NUMBER AND DETAIL REFERENCES, AS APPROPRIATE.
 - IDENTIFY OPTIONS REQUIRING SELECTION BY ARCHITECT.
 - LOCATION(S) WHERE PRODUCT IS TO BE INSTALLED, AS APPROPRIATE AND OTHER NECESSARY INFORMATION.
 - ON EACH SUBMITTAL, CLEARLY INDICATE DEVIATIONS FROM REQUIREMENTS IN THE CONTRACT DOCUMENTS, INCLUDING MINOR VARIATIONS AND LIMITATIONS, INCLUDE RELEVANT ADDITIONAL INFORMATION AND REVISIONS, OTHER THAN THOSE REQUESTED BY ARCHITECT AND CONTRACTOR OR ON PREVIOUS SUBMITTALS. INDICATE BY HIGHLIGHTING ON EACH SUBMITTAL OR NOTING ON ATTACHED SEPARATE SHEET.
- INCOMPLETE SUBMITTALS ARE UNACCEPTABLE. WILL BE CONSIDERED NONRESPONSIVE, AND WILL BE RETURNED FOR RESUBMITTAL WITHOUT REVIEW.
- ARCHITECT'S ACTION: ARCHITECT WILL REVIEW INFORMATION OR DOCUMENTATION NOTIFY CONTRACTOR OF ACCEPTANCE REQUEST FOR MORE INFORMATION OR REJECTION WITHIN 14 DAYS OF RECEIPT. ARCHITECT WILL REVIEW RESUBMITTAL WITHIN 7 DAYS OF RECEIPT.
- SUBMITTALS NOT REQUIRED BY THE CONTRACT DOCUMENTS WILL BE RETURNED BY ARCHITECT WITHOUT ACTION.

QUALITY REQUIREMENTS:

- CONFLICTING STANDARDS AND OTHER REQUIREMENTS: IF COMPLIANCE WITH TWO OR MORE STANDARDS OR REQUIREMENTS IS SPECIFIED AND THE STANDARDS OR REQUIREMENTS ESTABLISH DIFFERENT OR CONFLICTING REQUIREMENTS FOR MINIMUM QUANTITIES OR QUALITY LEVELS, INFORM THE ARCHITECT REGARDING THE CONFLICT AND OBTAIN CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK. REFER CONFLICTING REQUIREMENTS THAT ARE DIFFERENT, BUT APPARENTLY EQUAL, TO ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING.
- PREPARE AND SUBMIT CERTIFIED WRITTEN REPORTS REQUIRED. INCLUDE THE FOLLOWING:
 - PROJECT TITLE AND NUMBER AND DATE OF ISSUE. RECORD OF TEMPERATURE AND WEATHER CONDITIONS AT TIME OF SAMPLE TAKING AND TESTING AND INSPECTION. NAME AND SIGNATURE OF LABORATORY INSPECTOR.
 - NAME, ADDRESS, TELEPHONE NUMBER, AND EMAIL ADDRESS OF TESTING AGENCY
 - DATES AND LOCATIONS OF SAMPLES AND TESTS OR INSPECTIONS.
 - TEST AND INSPECTION RESULTS AND AN INTERPRETATION OF TEST RESULTS. COMMENTS OR PROFESSIONAL OPINION ON WHETHER TESTED OR INSPECTED WORK COMPLIES WITH THE CONTRACT DOCUMENT REQUIREMENTS. RECOMMENDATIONS ON RETESTING AND REINSPECTING.
- MANUFACTURER QUALIFICATIONS: A FIRM EXPERIENCED IN MANUFACTURING PRODUCTS OR SYSTEMS SIMILAR TO THOSE INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE, AS WELL AS SUFFICIENT PRODUCTION CAPACITY TO PRODUCE REQUIRED UNITS. AS APPLICABLE, PROCURE PRODUCTS FROM MANUFACTURERS ABLE TO MEET QUALIFICATION REQUIREMENTS, WARRANTY REQUIREMENTS, AND TECHNICAL OR FACTORY-AUTHORIZED SERVICE REPRESENTATIVE REQUIREMENTS.
- FABRICATOR QUALIFICATIONS: A FIRM EXPERIENCED IN PRODUCING PRODUCTS SIMILAR TO THOSE INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE, AS WELL AS SUFFICIENT PRODUCTION CAPACITY TO PRODUCE REQUIRED UNITS.
- INSTALLER QUALIFICATIONS: A FIRM OR INDIVIDUAL EXPERIENCED IN INSTALLING, ERECTING, APPLYING, OR ASSEMBLING WORK SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT, WHOSE WORK HAS RESULTED IN CONSTRUCTION WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.
- TESTING AND INSPECTING AGENCY QUALIFICATIONS: AN NRTL, AN NVLAP, OR AN INDEPENDENT AGENCY WITH THE EXPERIENCE AND CAPABILITY TO CONDUCT TESTING AND INSPECTION INDICATED, AS DOCUMENTED ACCORDING TO ASTM E329; AND WITH ADDITIONAL QUALIFICATIONS REQUIRED BY THE CONSTRUCTION DOCUMENTS; AND, WHERE REQUIRED BY AUTHORITIES HAVING JURISDICTION, THAT IS ACCEPTABLE TO AUTHORITIES.
- PRECONSTRUCTION TESTING: WHERE TESTING AGENCY IS INDICATED TO PERFORM PRECONSTRUCTION TESTING FOR COMPLIANCE WITH SPECIFIED REQUIREMENTS FOR PERFORMANCE AND TEST METHODS, COMPLY WITH THE FOLLOWING:
 - CONTRACTOR RESPONSIBILITIES INCLUDE THE FOLLOWING: PROVIDE TEST SPECIMENS REPRESENTATIVE OF PROPOSED PRODUCTS AND CONSTRUCTION. SUBMIT SPECIMENS IN A TIMELY MANNER WITH SUFFICIENT TIME FOR TESTING AND ANALYZING RESULTS TO PREVENT DELAYING THE WORK. WHEN TESTING IS COMPLETE, REMOVE TEST SPECIMENS AND TEST ASSEMBLIES, AND MOCKUPS UNLESS NOTED OTHERWISE; DO NOT REUSE PRODUCTS ON PROJECT.
 - TESTING AGENCY RESPONSIBILITIES: SUBMIT A CERTIFIED WRITTEN REPORT OF EACH TEST, INSPECTION, AND SIMILAR QUALITY-ASSURANCE SERVICE TO ARCHITECT, CONTRACTOR, INTERPRET TESTS AND INSPECTIONS AND STATE IN EACH REPORT WHETHER TESTED AND INSPECTED WORK COMPLIES WITH OR DEVIATES FROM THE CONTRACT DOCUMENTS.
- MOCKUPS: BEFORE INSTALLING PORTIONS OF THE WORK REQUIRING MOCKUPS, BUILD MOCKUPS FOR EACH FORM OF CONSTRUCTION AND FINISH REQUIRED TO COMPLY WITH THE FOLLOWING REQUIREMENTS, USING MATERIALS INDICATED FOR THE COMPLETED WORK, TO SIZE AND LOCATION INDICATED. DEMONSTRATE THE PROPOSED RANGE OF AESTHETIC EFFECTS AND WORKMANSHIP. NOTIFY ARCHITECT, CONTRACTOR 7 DAYS IN ADVANCE OF DATES AND TIMES WHEN MOCKUPS WILL BE CONSTRUCTED AND ALLOW 7 DAYS FOR REVIEW AND APPROVAL. OBTAIN THE APPROVAL FROM ARCHITECT, CONTRACTOR BEFORE STARTING CORRESPONDING WORK, FABRICATION, OR CONSTRUCTION. MAINTAIN MOCKUPS DURING CONSTRUCTION IN AN UNDISTURBED CONDITION AS A STANDARD FOR JUDGING THE COMPLETED WORK. DEMOLISH AND REMOVE MOCKUPS WHEN DIRECTED UNLESS OTHERWISE INDICATED.
- QUALITY CONTROL:
 - CONTRACTOR RESPONSIBILITIES: TESTS AND INSPECTIONS ARE CONTRACTOR'S RESPONSIBILITY. PERFORM ADDITIONAL QUALITY-CONTROL ACTIVITIES, WHETHER SPECIFIED OR NOT, TO VERIFY AND DOCUMENT THAT THE WORK COMPLIES WITH REQUIREMENTS. ENGAGE A QUALIFIED TESTING AGENCY TO PERFORM QUALITY-CONTROL SERVICES. NOTIFY TESTING AGENCIES AT LEAST (72) HOURS IN ADVANCE OF TIME WHEN WORK THAT REQUIRES TESTING OR INSPECTION WILL BE PERFORMED. COOPERATE WITH AGENCIES AND REPRESENTATIVES PERFORMING REQUIRED TESTS, INSPECTIONS, AND SIMILAR QUALITY-CONTROL SERVICES, AND PROVIDE REASONABLE AUXILIARY SERVICES AS REQUESTED.
 - TESTING AGENCY RESPONSIBILITIES: COOPERATE WITH ARCHITECT AND CONTRACTOR IN PERFORMANCE OF DUTIES. PROVIDE QUALIFIED PERSONNEL TO PERFORM REQUIRED TESTS AND INSPECTIONS. INTERPRET TESTS AND INSPECTIONS AND STATE IN EACH REPORT WHETHER TESTED AND INSPECTED WORK COMPLIES WITH OR DEVIATES FROM REQUIREMENTS. NOTIFY ARCHITECT AND CONTRACTOR PROMPTLY OF IRREGULARITIES OR DEFICIENCIES OBSERVED IN THE WORK DURING PERFORMANCE OF ITS SERVICES.
 - CONTRACTOR AND TESTING AGENCY SHALL COORDINATE SEQUENCE OF ACTIVITIES TO ACCOMMODATE REQUIRED QUALITY-ASSURANCE AND QUALITY-CONTROL SERVICES WITH A MINIMUM OF DELAY AND TO AVOID NECESSITY OF REMOVING AND REPLACING CONSTRUCTION TO ACCOMMODATE TESTING AND INSPECTION.
- SPECIAL TESTS AND INSPECTIONS: OWNER WILL ENGAGE A QUALIFIED **TESTING AGENCY** OR **SPECIAL INSPECTOR** TO CONDUCT SPECIAL TESTS AND INSPECTIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION AS THE RESPONSIBILITY OF OWNER AS INDICATED IN THE STATEMENT OF SPECIAL INSPECTIONS, AND AS FOLLOWS:
 - VERIFYING THAT MANUFACTURER MAINTAINS DETAILED FABRICATION AND QUALITY-CONTROL PROCEDURES AND REVIEWING THE COMPLETENESS AND ADEQUACY OF THOSE PROCEDURES TO PERFORM THE WORK.
 - NOTIFY ARCHITECT AND CONTRACTOR PROMPTLY OF IRREGULARITIES OR DEFICIENCIES OBSERVED IN THE WORK DURING PERFORMANCE OF ITS SERVICES.
 - SUBMITTING A CERTIFIED WRITTEN REPORT OF EACH TEST, INSPECTION, AND SIMILAR QUALITY-CONTROL SERVICE TO ARCHITECT AND CONTRACTOR WITH COPY TO CONTRACTOR AND TO AUTHORITIES HAVING JURISDICTION. SUBMIT A FINAL REPORT OF SPECIAL TESTS AND INSPECTIONS AT SUBSTANTIAL COMPLETION, WHICH INCLUDES A LIST OF UNRESOLVED DEFICIENCIES.
 - RETESTING AND REINSPECTING CORRECTED WORK.
- ALL RETESTING/REINSPECTING: REGARDLESS OF WHETHER ORIGINAL TESTS OR INSPECTIONS WERE CONTRACTOR'S RESPONSIBILITY OR THE OWNER'S SPECIAL INSPECTIONS, PROVIDE QUALITY-CONTROL SERVICES, INCLUDING RETESTING AND REINSPECTING, FOR CONSTRUCTION THAT REPLACED WORK THAT FAILED TO COMPLY WITH THE CONTRACT DOCUMENTS.

CONSTRUCTION WASTE MANAGEMENT:

- DEVELOP A WASTE MANAGEMENT PLAN AND SUBMIT PLAN FOR APPROVAL WITHIN 14 DAYS OF DATE ESTABLISHED FOR COMMENCEMENT OF THE WORK.
- DISTRIBUTE AND IMPLEMENT APPROVED WASTE MANAGEMENT PLAN. PROVIDE HANDLING, CONTAINERS, STORAGE, SIGNAGE, TRANSPORTATION, AND OTHER ITEMS AS REQUIRED TO IMPLEMENT WASTE MANAGEMENT PLAN DURING THE ENTIRE DURATION OF THE CONTRACT.
- TRAIN WORKERS, SUBCONTRACTORS, AND SUPPLIERS ON PROPER WASTE MANAGEMENT PROCEDURES, AS APPROPRIATE FOR THE WORK.
- SITE ACCESS AND TEMPORARY CONTROLS: CONDUCT WASTE MANAGEMENT OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, WALKWAYS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES. DESIGNATE AND LABEL SPECIFIC AREAS ON PROJECT SITE NECESSARY FOR SEPARATING MATERIALS THAT ARE TO BE SALVAGED AND RECYCLED.

CLOSEOUT PROCEDURES:

- CONTRACTOR'S LIST OF INCOMPLETE ITEMS: PREPARE AND SUBMIT A LIST OF ITEMS TO BE COMPLETED AND CORRECTED (CONTRACTOR'S "PUNCH LIST"), INDICATING THE VALUE OF EACH ITEM ON THE LIST AND REASONS WHY THE WORK IS INCOMPLETE.
- SUBMITTALS PRIOR TO SUBSTANTIAL COMPLETION: COMPLETE THE FOLLOWING A MINIMUM OF 10 DAYS PRIOR TO REQUESTING INSPECTION FOR DETERMINING DATE OF SUBSTANTIAL COMPLETION.
 - SUBMIT A FINAL APPLICATION FOR PAYMENT.**
 - CERTIFICATE OF INSURANCE: SUBMIT EVIDENCE OF FINAL, CONTINUING INSURANCE COVERAGE.
 - CERTIFIED LIST OF INCOMPLETE ITEMS: SUBMIT CERTIFIED COPY OF ARCHITECT'S SUBSTANTIAL COMPLETION INSPECTION LIST OF ITEMS TO BE COMPLETED OR CORRECTED (PUNCH LIST), ENDORSED AND DATED BY ARCHITECT. CERTIFIED COPY OF THE LIST SHALL STATE THAT EACH ITEM HAS BEEN COMPLETED OR OTHERWISE RESOLVED FOR ACCEPTANCE.
 - CERTIFICATES OF RELEASE: OBTAIN AND SUBMIT RELEASES FROM AUTHORITIES HAVING JURISDICTION, PERMITTING OWNER UNRESTRICTED USE OF THE WORK AND ACCESS TO SERVICES AND UTILITIES. INCLUDE OCCUPANCY PERMITS, OPERATING CERTIFICATES, AND SIMILAR RELEASES.
 - SUBMIT CLOSEOUT SUBMITTALS AS REQUIRED, INCLUDING SPECIFIC WARRANTIES, WORKMANSHIP BONDS, MAINTENANCE SERVICE AGREEMENTS, FINAL CERTIFICATIONS, AND SIMILAR DOCUMENTS.
 - SUBMIT MAINTENANCE MATERIAL SUBMITTALS SPECIFIED IN INDIVIDUAL SECTIONS, INCLUDING TOOLS, SPARE PARTS, EXTRA MATERIALS, AND SIMILAR ITEMS, AND DELIVER TO LOCATION DESIGNATED BY OWNER OR OWNER'S AGENT. LABEL WITH MANUFACTURER'S NAME AND MODEL NUMBER.
 - SUBMIT TESTING, ADJUSTING, AND BALANCING RECORDS.
 - SUBMIT CHANGEOVER INFORMATION RELATED TO OWNER'S OCCUPANCY, USE, OPERATION, AND MAINTENANCE.

C. FINAL CLEANING

- EMPLOY EXPERIENCED WORKERS OR PROFESSIONAL CLEANERS FOR FINAL CLEANING. CLEAN EACH SURFACE OR UNIT TO CONDITION EXPECTED IN AN AVERAGE COMMERCIAL BUILDING CLEANING AND MAINTENANCE PROGRAM. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
- USE CLEANING PRODUCTS THAT COMPLY WITH GREEN SEAL'S GS-37, OR IF GS-37 IS NOT APPLICABLE, USE PRODUCTS THAT COMPLY WITH THE CALIFORNIA CODE OF REGULATIONS MAXIMUM ALLOWABLE VOC LEVELS.
- CLEAN EXPOSED EXTERIOR AND INTERIOR HARD-SURFACED FINISHES TO A DIRT-FREE CONDITION, FREE OF STAINS, FILMS, AND SIMILAR FOREIGN SUBSTANCES. AVOID DISTURBING NATURAL WEATHERING OF EXTERIOR SURFACES. RESTORE REFLECTIVE SURFACES TO THEIR ORIGINAL CONDITION.
- VACUUM CARPET AND SIMILAR SOFT SURFACES, REMOVING DEBRIS AND EXCESS NAP; CLEAN ACCORDING TO MANUFACTURER'S RECOMMENDATIONS IF VISIBLE SOIL OR STAINS REMAIN.
- CLEAN TRANSPARENT MATERIALS, INCLUDING MIRRORS AND GLASS IN DOORS AND WINDOWS. REMOVE GLAZING COMPOUNDS AND OTHER NOTICEABLE, VISION-OBSCURING MATERIALS. POLISH MIRRORS AND GLASS, TAKING CARE NOT TO SCRATCH SURFACES.
- CLEAN PLUMBING FIXTURES TO A SANITARY CONDITION, FREE OF STAINS, INCLUDING STAINS RESULTING FROM WATER EXPOSURE.

OPERATIONS AND MAINTENANCE DATA:

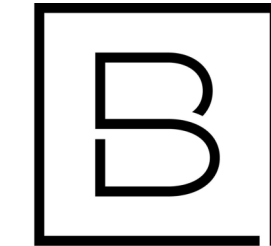
- SUBMIT EACH MANUAL IN FINAL FORM PRIOR TO REQUESTING INSPECTION FOR SUBSTANTIAL COMPLETION AND AT LEAST 10 DAYS BEFORE COMMENCING DEMONSTRATION AND TRAINING.
- CORRECT OR REVISE EACH MANUAL TO COMPLY WITH ARCHITECT'S COMMENTS. SUBMIT COPIES OF EACH CORRECTED MANUAL WITHIN 10 DAYS OF RECEIPT OF ARCHITECT'S COMMENTS AND PRIOR TO COMMENCING DEMONSTRATION AND TRAINING.
- SUBMIT ON DIGITAL MEDIA ACCEPTABLE TO ARCHITECT BY UPLOADING TO WEB-BASED PROJECT SOFTWARE SITE OR BY EMAIL TO ARCHITECT, IF WEB-BASED SOFTWARE IS NOT UTILIZED. ENABLE REVIEWER COMMENTS ON DRAFT SUBMITTALS.
 - ELECTRONIC FILES: USE ELECTRONIC FILES PREPARED BY MANUFACTURER WHERE AVAILABLE. WHERE SCANNING OF PAPER DOCUMENTS IS REQUIRED, CONFIGURE SCANNED FILE FOR MINIMUM READABLE FILE SIZE.
 - BOOKMARK INDIVIDUAL DOCUMENTS BASED ON FILE NAMES. NAME DOCUMENT FILES TO CORRESPOND TO SYSTEM, SUBSYSTEM, AND EQUIPMENT NAMES USED IN MANUAL DIRECTORY AND TABLE OF CONTENTS. GROUP DOCUMENTS FOR EACH SYSTEM AND SUBSYSTEM INTO INDIVIDUAL COMPOSITE BOOKMARKED FILES; THEN CREATE COMPOSITE MANUAL, SO THAT RESULTING BOOKMARKS REFLECT THE SYSTEM, SUBSYSTEM, AND EQUIPMENT NAMES IN A READILY NAVEGATED FILE TREE. CONFIGURE ELECTRONIC MANUAL TO DISPLAY BOOKMARK PANEL ON OPENING FILE.
- ORGANIZATION OF MANUALS: UNLESS OTHERWISE INDICATED, ORGANIZE EACH MANUAL INTO A SEPARATE SECTION FOR EACH SYSTEM AND SUBSYSTEM, AND A SEPARATE SECTION FOR EACH PIECE OF EQUIPMENT NOT PART OF A SYSTEM. PROVIDE A TITLE PAGE AND TABLE OF CONTENTS.
 - TITLE PAGE SHALL INCLUDE:
 - SUBJECT MATTER INCLUDED IN MANUAL.
 - DATE OF SUBMITTAL.
 - NAME AND CONTACT INFORMATION FOR CONTRACTOR AND CONSTRUCTION MANAGER WHEN APPLICABLE.
 - NAME AND CONTACT INFORMATION FOR COMMISSIONING AUTHORITY.
 - EMERGENCY MANUAL: ASSEMBLE A COMPLETE SET OF EMERGENCY INFORMATION INDICATING PROCEDURES FOR USE BY EMERGENCY PERSONNEL AND BY OWNER'S OPERATING PERSONNEL FOR TYPES OF EMERGENCIES INDICATED.
- SYSTEMS AND EQUIPMENT OPERATION MANUAL: ASSEMBLE A COMPLETE SET OF DATA INDICATING OPERATION OF EACH SYSTEM, SUBSYSTEM, AND PIECE OF EQUIPMENT NOT PART OF A SYSTEM. INCLUDE INFORMATION REQUIRED FOR DAILY OPERATION AND MANAGEMENT, OPERATING STANDARDS, AND ROUTINE AND SPECIAL OPERATING PROCEDURES.
- SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS: ASSEMBLE A COMPLETE SET OF DATA INDICATING MAINTENANCE OF EACH SYSTEM, SUBSYSTEM, AND PIECE OF EQUIPMENT NOT PART OF A SYSTEM. INCLUDE MANUFACTURER'S MAINTENANCE DOCUMENTATION, PREVENTIVE MAINTENANCE PROCEDURES AND FREQUENCY, REPAIR PROCEDURES, WIRING AND SYSTEMS DIAGRAMS, LISTS OF SPARE PARTS, AND WARRANTY INFORMATION.
- PRODUCT MAINTENANCE MANUAL: ASSEMBLE A COMPLETE SET OF MAINTENANCE DATA INDICATING CARE AND MAINTENANCE OF EACH PRODUCT, MATERIAL, AND FINISH INCORPORATED INTO THE WORK.

PROJECT RECORD DOCUMENTS:

- RECORD PRINTS: MAINTAIN ONE SET OF MARKED-UP PAPER COPIES OF THE CONTRACT DRAWINGS AND SHOP DRAWINGS, INCORPORATING NEW AND REVISED DRAWINGS AS MODIFICATIONS ARE ISSUED.
- MAINTAIN ONE COPY OF EACH SUBMITTAL DURING THE CONSTRUCTION PERIOD FOR PROJECT RECORD DOCUMENT PURPOSES. POST CHANGES AND REVISIONS TO PROJECT RECORD DOCUMENTS AS THEY OCCUR; DO NOT WAIT UNTIL END OF PROJECT.
- RECORD DIGITAL DATA FILES: IMMEDIATELY BEFORE INSPECTION FOR CERTIFICATE OF SUBSTANTIAL COMPLETION, REVIEW MARKED-UP RECORD DOCUMENTS WITH ARCHITECT AND CONTRACTOR. WHEN AUTHORIZED, PREPARE A FULL SET OF CORRECTED DIGITAL DATA FILES OF THE CONTRACT DOCUMENTS. SEE OPERATIONS AND MAINTENANCE DATA SECTION ABOVE FOR SUBMISSION FORMAT REQUIREMENTS.

DEMONSTRATION AND TRAINING:

- FACILITATOR: CONTRACTOR OR CONSTRUCTION MANAGER SHALL PREPARE INSTRUCTION PROGRAM AND TRAINING MODULES, TO COORDINATE INSTRUCTORS, AND TO COORDINATE BETWEEN CONTRACTOR AND OWNER FOR NUMBER OF PARTICIPANTS, INSTRUCTION TIMES, AND LOCATION.
- ENGAGE QUALIFIED INSTRUCTORS TO INSTRUCT OWNER'S PERSONNEL TO ADJUST, OPERATE, AND MAINTAIN SYSTEMS, SUBSYSTEMS, AND EQUIPMENT NOT PART OF A SYSTEM.
- PROVIDE INSTRUCTION AT MUTUALLY AGREED-ON TIMES. FOR EQUIPMENT THAT REQUIRES SEASONAL OPERATION, PROVIDE SIMILAR INSTRUCTION AT START OF EACH SEASON.
- TRAINING LOCATION AND REFERENCE MATERIAL: CONDUCT TRAINING ON-SITE IN THE COMPLETED AND FULLY OPERATIONAL FACILITY USING THE ACTUAL EQUIPMENT IN-PLACE. CONDUCT TRAINING USING FINAL OPERATION AND MAINTENANCE DATA SUBMITTALS.
- EVALUATION: AT CONCLUSION OF EACH TRAINING MODULE, ASSESS AND DOCUMENT EACH PARTICIPANT'S MASTERY OF MODULE BY USE **A DEMONSTRATION** PERFORMANCE-BASED TEST.
- COLLECT USED AND LEFT-OVER EDUCATIONAL MATERIALS AND **GIVE TO OWNER**. REMOVE INSTRUCTIONAL EQUIPMENT, RESTORE SYSTEMS AND EQUIPMENT TO CONDITION EXISTING BEFORE INITIAL TRAINING USE.



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MUSKEGON, MI 49442

Date Revised	Description
1/24/2023	BID PACKAGE #1 - QA/QC/OWNER REVIEW
1/31/2023	BID PACKAGE #1 - BIDS

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D HOLTROP	B HUYLER
Designer	Reviewer
E POST	D HOLTROP
Date Issued	Project Number
1/31/2023	16600.00
Sheet Name	

GENERAL REQUIREMENTS

Drawing Number

A002

SPECIFICATIONS:**1. ALUMINUM FRAMED ENTRANCES AND STOREFRONTS - PER OWNER AGREEMENT WITH VOS GLASS**

- A. MANUFACTURER: TUBELITE.
- B. PRODUCTS:
- TYPE A: TUBELITE T14000 (4-1/2" DEPTH FRAME).
 - TYPE B: TUBELITE TU24650 (6-1/2" DEPTH FRAME).
- C. FRAMING MEMBERS: EXTERIOR FRAMING TO BE THERMALLY BROKEN. INTERIOR VESTIBULE FRAMING TO BE NONTHERMAL.
- D. FINISH: EXTERIOR TO BE COLOR ANODIC FINISH AAMA 611, AA-M12C22A42/A44, CLASS 1, MINIMUM 0.7 MIL THICKNESS, DARK BRONZE. INTERIOR VESTIBULE TO BE CLEAR ANODIC FINISH AAMA 611, AA-M12C22A41, CLASS II, MINIMUM 0.4 MIL THICKNESS.
- E. INFILL: 1" AT EXTERIOR AND 1/4" AT INTERIOR.
- F. FABRICATION METHOD: FIELD FABRICATED STICK SYSTEM.

2. ALUMINUM FRAMED OPERABLE WINDOWS - PER OWNER AGREEMENT WITH VOS GLASS

- A. MANUFACTURER: TUBELITE.
- B. PRODUCT: CW3700 PROJECT OUT CASEMENT WINDOW.
- C. FRAMING MEMBERS: EXTRUSIONS ARE 2" IN DEPTH WITH 2-3/4" SIGHTLINE. FRAMES HAVE SCREW-SPLINE CONNECTIONS, MITERED CORNERS.
- D. FINISH: COLOR ANODIC FINISH AAMA 611, AA-M12C22A42/A44, CLASS 1, MINIMUM 0.7 MIL THICKNESS, DARK BRONZE.
- E. HARDWARE: HEAVY DUTY SURFACE HINGES AND ROTO-CRANK OPERATED. EMERGENCY EGRESS HINGE HARDWARE.
- F. SCREENS: FIBERGLASS WITH ALUMINUM FRAME, FINISH TO MATCH WINDOWS.
- G. INFILL: 1" AT EXTERIOR.

3. ALUMINUM DOORS - PER OWNER AGREEMENT WITH VOS GLASS

- A. MANUFACTURER: TUBELITE.
- B. PRODUCT: THERMLBACK, MEDIUM STYLE WITH 5" VERTICAL STILES, 4" TOP RAIL, AND 10" BOTTOM RAIL.
- C. DOOR CONSTRUCTION:
- 1-3/4" OVERALL THICKNESS, WITH MIN. 0.125" THICK EXTRUDED ALUMINUM TUBULAR MEMBERS, MECHANICALLY FASTEN WITH CONCEALED THE ROODS.
 - TOP/BOTTOM DOOR TO RECEIVE 1/8" THICK CAP FOR FURTHER SEAL AND TO TRIM THE TOP AND BOTTOM OF THE DOOR.
 - GLAZING STOPS AND GASKETS: SQUARE, SNAP-ON, EXTRUDED ALUMINUM STOPS AND PREFORMED GASKETS, NONREMOVABLE AT OUTSIDE DOOR.
 - EXTERIOR DOORS: AT PAIRS OF DOORS PROVIDE SLIDING-TYPE WEATHER STRIPPING RETAINED IN ADJUSTABLE STRIP AND MORTISED INTO DOOR EDGE.
- D. FINISH: EXTERIOR TO BE COLOR ANODIC FINISH AAMA 611, AA-M12C22A42/A44, CLASS 1, MINIMUM 0.7 MIL THICKNESS, DARK BRONZE. INTERIOR VESTIBULE TO BE CLEAR ANODIC FINISH AAMA 611, AA-M12C22A41, CLASS II, MINIMUM 0.4 MIL THICKNESS.
- E. INFILL: 1" AT EXTERIOR AND 1/4" AT INTERIOR.

4. GLAZING

- A. GLAZING FOR ALUMINUM COMPONENTS NOTED ABOVE TO BE PER OWNER AGREEMENT WITH VOS GLASS.
- B. MONOLITHIC GLASS:
- HEAT STRENGTHENED FULLY TEMPERED FLOAT GLASS.
 - MINIMUM 6 MM THICK.
 - LOCATION: INTERIOR, NON-FIRE RATED LOCATIONS UNLESS OTHERWISE NOTED.
- C. FIRE-RESISTANCE-RATED GLAZING
- LISTED AND LABELED BY A TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, FOR FIRE-RESISTANCE RATINGS INDICATED, BASED ON TESTING IN ACCORDANCE WITH ASTM E119 OR UL 263.
 - FRAMING AND DOORS: FIRE-RESISTANCE-RATED GLAZING WITH 60, 90, 120-MINUTE RATINGS REQUIRES FRAMING AND DOORS FROM GLASS SUPPLIER, TESTED AS AN ASSEMBLY COMPLYING WITH ASTM E119 OR UL 263.
 - LAMINATED GLASS WITH INTUMESCENT INTERLAYERS: LAMINATED GLASS MADE FROM MULTIPLE PLIES OF UNCOATED, CLEAR FLOAT GLASS, WITH INTUMESCENT INTERLAYERS, COMPLYING WITH 16 CFR 1201, CATEGORY II.
 - MANUFACTURERS: PILKINGTON NORTH AMERICA, SAFTI FIRST FIRE RATED GLAZING SOLUTIONS, TECHNICAL GLASS PRODUCTS OR VETROTECH SAINT-GOBAIN.
 - GLAZING ACCESSORIES: GLAZING GASKETS, GLAZING SEALANTS, GLAZING TAPES, SETTING BLOCKS, SPACERS, EDGE BLOCKS, AND OTHER GLAZING ACCESSORIES THAT ARE COMPATIBLE WITH GLAZING PRODUCTS AND EACH OTHER AND ARE APPROVED BY TESTING AGENCIES THAT LISTED AND LABELED FIRE-RESISTANT GLAZING PRODUCTS WITH WHICH PRODUCTS ARE USED FOR APPLICATIONS AND FIRE-PROTECTION RATINGS INDICATED.
 - GLAZING SEALANTS FOR FIRE-RATED GLAZING PRODUCTS: NEUTRAL-CURING SILICONE GLAZING SEALANT COMPLYING WITH ASTM C920, TYPE S, GRADE NS, CLADD 50, USE NT.
 - MANUFACTURERS: GE CONSTRUCTION SEALANTS, THE DOW CHEMICAL COMPANY OR TREMCO INCORPORATED.
- D. INSULATED GLASS - VISION
- CONFORMANCE: ASTM E 2190.
 - BASIS OF DESIGN: GUARDIAN GLASS, SUNGUARD SN 68.
 - OVERALL THICKNESS: 1 INCH.
 - MINIMUM THICKNESS OF EACH GLASS LITE: 6 MM.
 - OUTDOOR LITE: HEAT-STRENGTHENED FLOAT GLASS.
 - INTERSPACE CONTENT: AIR OR ARGON AS REQUIRED TO MEET SPECIFIED U-FACTOR.
 - INDOOR LITE: CLEAR FLOAT GLASS.
 - LOW-E COATING: SPATTERED ON NO. 2 SURFACE.
 - WINTER NIGHTTIME U-FACTOR: 0.29 MAXIMUM.
 - SUMMER DAYTIME U-FACTOR: 0.28 MAXIMUM.
 - VISIBLE LIGHT TRANSMITTANCE: 68 PERCENT
 - LOCATIONS: EXTERIOR UNLESS OTHERWISE INDICATED.
- E. INSULATED GLASS - SPANDREL
- CONFORMANCE: ASTM E 2190.
 - BASIS OF DESIGN: GUARDIAN GLASS, SUNGUARD SN 68.
 - OVERALL THICKNESS: 1 INCH.
 - MINIMUM THICKNESS OF EACH GLASS LITE: 6 MM.
 - OUTDOOR LITE: HEAT-STRENGTHENED FLOAT GLASS.
 - INTERSPACE CONTENT: AIR OR ARGON AS REQUIRED TO MEET SPECIFIED U-FACTOR.
 - INDOOR LITE: CLEAR FLOAT GLASS.
 - LOW-E COATING: SPATTERED ON NO. 2 SURFACE.
 - GUARDIAN DECO HT IN WARM GRAY ON NO. 4 SURFACE.
 - LOCATIONS: EXTERIOR WHERE INDICATED.

5. HOLLOW METAL FRAMES

- A. FIRE-RATED, BORROWED-LITE ASSEMBLIES: ASSEMBLIES COMPLYING WITH NFPA 80 AND LISTED AND LABELED BY A QUALIFIED TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, FOR FIRE-PROTECTION RATINGS INDICATED, BASED ON TESTING ACCORDING TO NFPA 257 OR UL9.
- B. FLUSH WOOD DOORS
- A. ACCEPTABLE MANUFACTURERS: EGGERS INDUSTRIES, OSHKOSH DOOR COMPANY, AND VT INDUSTRIES.
- B. INTERIOR DOORS: SOLID-CORE FIVE-PLY FLUSH WOOD VENEER-FACED DOORS FOR TRANSPARENT FINISH.
- PERFORMANCE GRADE: ANSIWDMA I.S. 1A EXTRA HEAVY DUTY.
 - FACES: PLAIN SLICED RED OAK, CENTER-BALANCE MATCH.
 - EXPOSED VERTICAL AND TOP EDGES: SAME SPECIES AS FACES, ARCHITECTURAL WOODWORK STANDARDS EDGE TYPE A.
 - FIRE RATED DOORS: PROVIDE EDGE CONSTRUCTION WITH INTUMESCENT SEALS CONCEALED BY OUTER STILE.
 - CORE FOR FIRE-RATED DOORS: AS REQUIRED TO ACHIEVE FIRE-PROTECTION RATING INDICATED ON SCHEDULE.
- C. FINISH: FACTORY FINISH, TRANSPARENT, SATIN, STAIN COLOR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS.

7. HARDWARE SETS

- A. MANUFACTURERS/PRODUCTS
- HINGES: IVES 58B SERIES, ALSO ACCEPTABLE: HAGER BB1191/1279 SERIES OR MCKINNEY TB SERIES.
 - CYLINDRICAL LOCKS: GRADE 1, SCHLAGE ND SERIES, NO SUBSTITUTION.
 - EXIT DEVICES: VON DUPRIN 98/35A SERIES, NO SUBSTITUTION.
 - POWER SUPPLIES: SCHLAGE/VON DUPRIN PS900, NO SUBSTITUTION.
 - CYLINDERS: CORBIN-RUSSWIN, NO SUBSTITUTION. ALL CYLINDERS/CORES AND KEYING SHALL BE PURCHASED THROUGH ARCHITECTURAL HARDWARE COMPANY, MUSKEGON, MI AND INCLUDED IN BASE BID.
 - ELECTRO-HYDRAULIC AUTOMATIC OPERATOR: LCN 4600 SERIES, NO SUBSTITUTION.
 - DOOR TRIM: IVES, ALSO ACCEPTABLE BURNS AND ROCKWOOD.
 - PROTECTION PLATES: IVES, ALSO ACCEPTABLE BURNS AND ROCKWOOD.
 - OVERHEAD STOPS: GLYNN-JOHNSON, NO SUBSTITUTION.
 - DOOR STOPS: IVES, ALSO ACCEPTABLE BURNS AND ROCKWOOD.
 - THRESHOLDS, SEALS, GASKETING: ZERO INTERNATIONAL, ALSO ACCEPTABLE NATIONAL GUARD AND REESE.
 - SILENCERS: IVES, ALSO ACCEPTABLE BURNS AND ROCKWOOD.
- B. KEYING
- CONSTRUCTION KEYING:
 - PROVIDE CONSTRUCTION CORES THAT PERMIT VOIDING CONSTRUCTION KEYS WITHOUT CYLINDER REMOVAL, FURNISHED IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.
 - SPLIT KEY OR LOST BALL CONSTRUCTION KEYING SYSTEM.
 - 3 CONSTRUCTION CONTROL KEYS, AND EXTRACTOR TOOLS OR KEYS AS REQUIRED TO VOID CONSTRUCTION KEYING.
 - 12 CONSTRUCTION CHANGE (DAY) KEYS.
 - OWNER OR OWNER'S REPRESENTATIVE WILL VOID OPERATION OF TEMPORARY CONSTRUCTION KEYS.
 - PERMANENT KEYING:
 - PROVIDE PERMANENT CYLINDERS/CORES KEYED BY THE MANUFACTURER ACCORDING TO THE FOLLOWING KEY SYSTEM.
 - MASTER KEYING SYSTEM AS DIRECTED BY THE OWNER.
 - FORWARD BITTING LIST AND KEYS SEPARATELY FROM CYLINDERS, BY MEANS AS DIRECTED BY OWNER. FAILURE TO COMPLY WITH FORWARDING REQUIREMENTS WILL BE CAUSE FOR REPLACEMENT OF CYLINDERS/CORES INVOLVED AT NO ADDITIONAL COST TO OWNER.
 - PROVIDE KEYS WITH THE FOLLOWING FEATURES:
 - MATERIAL: NICKEL SILVER, MINIMUM THICKNESS OF .107-INCH (2.3MM)
 - PATENT PROTECTION: KEYS AND BLANKS PROTECTED BY ONE OR MORE UTILITY PATENT(S).
 - IDENTIFICATION:
 - MARK PERMANENT CYLINDERS/CORES AND KEYS WITH APPLICABLE BLIND CODE FOR IDENTIFICATION. DO NOT PROVIDE BLIND CODE MARKS WITH ACTUAL KEY CUTS.
 - IDENTIFICATION STAMPING PROVISIONS MUST BE APPROVED BY THE ARCHITECT AND OWNER.
 - STAMP CYLINDERS/CORES AND KEYS WITH OWNER'S UNIQUE KEY SYSTEM FACILITY CODE AS ESTABLISHED BY THE MANUFACTURER, KEY SYMBOL AND EMBOSSED OR STAMPED WITH "DO NOT DUPLICATE" ALONG WITH THE "PATENTED" OR PATENT NUMBER TO ENFORCE THE PATENT PROTECTION.
 - FAILURE TO COMPLY WITH STAMPING REQUIREMENTS WILL BE CAUSE FOR REPLACEMENT OF KEYS INVOLVED AT NO ADDITIONAL COST TO OWNER.
 - FORWARD PERMANENT CYLINDERS/CORES TO OWNER, SEPARATELY FROM KEYS, BY MEANS AS DIRECTED BY OWNER.
 - QUANTITY: FURNISH THE FOLLOWING QUANTITIES.
 - CHANGE (DAY) KEYS: 3 PER CYLINDER/CORE.
 - MASTER KEYS: 7.
 - KEYING FOR DOOR 100A: KEYED SEPARATELY FROM REMAINDER OF BUILDING. PROVIDE 7 KEYS.
- C. HARDWARE SET #01 (DOOR 101C)
- (3) HINGES - 58B1 4.5 X 4.5 NRP - FINISH 652 - MFR IVE
 - (1) CLASSROOM LOCK - ND70LD RHO - FINISH 626 - MFR SCH
 - (1) K-H CYLINDER - KEYED TO EXISTING SYSTEM, COORDINATE W/OWNER - FINISH 626 - MFR C-R
 - (1) WALL STOP - WS406/407CCV - FINISH 630 - MFR IVE
 - (3) SILENCER - SR64 - FINISH GRY - MFR IVE
- D. HARDWARE SET #02 (DOOR 101D)
- (3) HINGES - 58B1 4.5 X 4.5 NRP - FINISH 652 - MFR IVE
 - (1) CLASSROOM LOCK - ND70LD RHO - FINISH 626 - MFR SCH
 - (1) K-H CYLINDER - KEYED TO EXISTING SYSTEM, COORDINATE W/OWNER - FINISH 626 - MFR C-R
 - (1) OH STOP - 410S - FINISH 630 - MFR GLY
 - (3) SILENCER - SR64 - FINISH GRY - MFR IVE
- E. HARDWARE SET #04 (DOOR 102)
- (3) HINGES - 58B1 4.5 X 4.5 - FINISH 652 - MFR IVE
 - (1) CLASSROOM LOCK - ND70LD RHO - FINISH 626 - MFR SCH
 - (1) K-H CYLINDER - KEYED TO EXISTING SYSTEM, COORDINATE W/OWNER - FINISH 626 - MFR C-R
 - (1) SURFACE CLOSER - 4040XP RW/PA FULL SIDE - FINISH 689 - MFR LCN
 - (1) KICK PLATE - 8400 10" X 2" LDW B-CS - FINISH 630 - MFR IVE
 - (1) WALL STOP - WS406/407CCV - FINISH 630 - MFR IVE
 - (1) GASKETING - 488S - FINISH BK - MFR ZER
- F. HARDWARE SET #05 (DOOR 100C)
- (3) HINGES - 58B1 4.5 X 4.5 NRP - FINISH 652 - MFR IVE
 - (1) CLASSROOM LOCK - ND70LD RHO - FINISH 626 - MFR SCH
 - (1) K-H CYLINDER - KEYED TO EXISTING SYSTEM, COORDINATE W/OWNER - FINISH 626 - MFR C-R
 - (1) SURFACE CLOSER - 4040XP SCUSH - FINISH 689 - MFR LCN
 - (1) KICK PLATE - 8400 10" X 2" LDW B-CS - FINISH 630 - MFR IVE
 - (1) GASKETING - 488S - FINISH BK - MFR ZER
- G. HARDWARE SET #06 (DOOR 100B)
- (1) CONT. HINGE - 112HD - FINISH 628 - MFR IVE
 - (1) CONT. HINGE - 112HD EPT - FINISH 628 - MFR IVE
 - (1) POWER TRANSFER - EPT10 - FINISH 689 - MFR VON
 - (1) REMOVABLE MULLION - KR4954 STAB - FINISH 689 - MFR VON
 - (1) PANIC HARDWARE - 98-EO - FINISH 313 - MFR VON
 - (1) ELEC PANIC HARDWARE - HD-QEL-98-NL-OP-110MD - RHRA - FINISH 626 - MFR VON
 - (1) RIM CYLINDER - KEYED TO EXISTING SYSTEM, COORDINATE W/OWNER - FINISH 626 - MFR C-R
 - (1) MORTISE CYLINDER - KEYED TO EXISTING SYSTEM, COORDINATE W/OWNER - FINISH 626 - MFR C-R
 - (2) DOOR PULL - BF157 - FINISH 628 - MFR ROC
 - (2) OVERHEAD STOP - 100S - FINISH 630 - MFR GLY
 - (1) SURFACE CLOSER - 4040XP EDA - FINISH 689 - MFR LCN
 - (1) SURFACE AUTO OPERATOR - 4642 WMS - FINISH 689 - MFR LCN
 - (1) PA MOUNTING PLATE - 4040XP-18PA (AS REQ'D) - FINISH 689 - MFR LCN
 - (1) BLADE STOP SPACER 4040XP-61 (AS REQ'D) - FINISH 689 - MFR LCN
 - (2) ACTUATOR, WALL MOUNT - 8310-853T - FINISH 630 - MFR LCN
 - (2) SURFACE MOUNT BOX - 8310-867S - MFR LCN
 - (1) CARD READER - PROVIDED BY SECURITY CONTRACTOR
 - (1) DOOR RELEASE BUTTON - 660-PB - FINISH 628 - MFR SCE
 - (1) POWER SUPPLY - PS902 900-4RL - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER - MFR VON
 - WEATHERSTRIP BY DOOR/FRAME MANUFACTURER.
 - OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS W/OWNER, ARCHITECT AND RELATED TRADES.
 - DOORS NORMALLY CLOSED AND LOCKED. PRESENTING A VALID CREDENTIAL TO THE READER OR PRESSING DOOR RELEASE BUTTON AT RECEPTION DESK WILL MOMENTARILY RETRACT THE PANIC DEVICE LATCH ALLOWING ACCESS AND MOMENTARILY ENABLE THE EXTERIOR ACTUATOR BUTTON, PUSHING THE ENABLED EXTERIOR ACTUATOR BUTTON WILL CAUSE THE AUTOMATIC OPERATOR TO MOMENTARILY OPEN THE DOOR. THE INTERIOR ACTUATOR BUTTON TO BE ENABLED AT ALL TIMES. PUSHING THE INTERIOR ACTUATOR BUTTON WILL MOMENTARILY RETRACT THE PANIC DEVICE LATCH AND CAUSE THE AUTOMATIC OPERATOR TO MOMENTARILY OPEN THE DOOR. DOORS TO REMAIN LOCKED WITH LOSS OF POWER, FREE EGRESS AT ALL TIMES.
- H. HARDWARE SET #07 (DOOR 100A)
- (2) CONT. HINGE - 112HD - FINISH 313AN - MFR IVE
 - (1) REMOVABLE MULLION - KR4954 STAB - FINISH 695 - MFR VON
 - (1) PANIC HARDWARE - 98-EO - FINISH 313 - MFR VON
 - (1) PANIC HARDWARE - 98-NL-OP-110MD - RHRA - FINISH 313 - MFR VON
 - (1) RIM CYLINDER - KEYED TO EXISTING SYSTEM, COORDINATE W/OWNER - FINISH 613 - MFR C-R
 - (1) MORTISE CYLINDER - KEYED TO EXISTING SYSTEM, COORDINATE W/OWNER - FINISH 613 - MFR C-R
 - (2) DOOR PULL - BF157 - FINISH 313 - MFR ROC
 - (2) OVERHEAD STOP - 100S - FINISH 695 - MFR GLY
 - (1) SURFACE CLOSER - 4040XP EDA - FINISH 695 - MFR LCN
 - (1) SURFACE AUTO OPERATOR - 4642 WMS - FINISH 695 - MFR LCN
 - (1) PA MOUNTING PLATE - 4040XP-18PA (AS REQ'D) - FINISH 695 - MFR LCN
 - (1) BLADE STOP SPACER - 4040XP-61 (AS REQ'D) - FINISH 695 - MFR LCN
 - (1) WEATHER RING - 8310-801 - MFR LCN
 - (2) ACTUATOR, WALL MOUNT - 8310-853T - FINISH 630 - MFR LCN
 - (1) MULLION SEAL - 8780N - FINISH BK - MFR ZER
 - (2) DOOR SWEEP - 8192D - FINISH D - MFR ZER
 - (1) THRESHOLD - 655A - FINISH A - MFR ZER
 - WEATHERSTRIP BY DOOR/FRAME MANUFACTURER.
 - OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS W/OWNER, ARCHITECT AND RELATED TRADES.
 - BOTH ACTUATOR BUTTONS ARE ENABLED WHEN THE OPERATOR IS TURNED ON. PUSHING EITHER ENABLED ACTUATOR BUTTON WILL CAUSE THE AUTOMATIC OPERATOR TO MOMENTARILY OPEN THE DOOR WHEN THE PANIC DEVICES ARE DOGGED DOWN (LATCHES IN RETRACTED POSITION), FREE EGRESS AT ALL TIMES.
- J. HARDWARE SET # 08 (DOOR 105)
- (1) DOOR RELEASE BUTTON - 660-PB - FINISH 628 - MFR SCE
 - BALANCE OF HARDWARE TO REMAIN.
- K. HARDWARE SET #09 (DOORS 101A AND 101B)
- (1) MORTISE CYLINDER - KEYED TO EXISTING SYSTEM, COORDINATE W/OWNER - FINISH 626 - MFR C-R
 - BALANCE OF HARDWARE BY DOOR MANUFACTURER.
 - NOTE: VERIFY CYLINDER COMPATIBILITY W/DOOR MANUFACTURER PRIOR TO ORDER.

8. FIBER-CEMENT SIDING

- A. MANUFACTURER: NICHHA CORPORATION, WWW.NICHHA.COM.
- B. PRODUCT: VINTAGE WOOD.
- COLOR: CEDAR.
 - PROFILE: WOOD PLANK TEXTURE W/THREE, 3/8" GROOVES RUNNING LENGTHWISE, SPACED 5-5/8" APART.
- C. ACCESSORY/COMPONENTS:
- MANUFACTURERS: CORBIN-RUSSWIN WITH 3-1/2" RETURNS FOR EACH PROFILE COLOR.
 - ALUMINUM TRIM OPTIONS: CORNER KEY, OPEN OUTSIDE CORNER, H-MOLD, J-MOLD, COMPRESSION JOINT, INSIDE CORNER
 - FINISH: CEDAR
 - ESSENTIAL FLASHING SYSTEM: STARTER, OVERHANG.
 - FINISH: MATTE BLACK.
- D. DIMENSIONS:
- AWP-1818: 455MM (17-7/8") (H) X 1,818 MM (71-9/16") (L).
 - PANEL THICKNESS: 16MM (5/8")
 - WEIGHT: 35.27 LBS. PER PANEL
 - COVERAGE: 8.88 SQ FT PER PANEL
 - FACTORY SEALED ON SIX (6) SIDES
- E. INSTALLATION COMPONENTS
- ULTIMATE CLIP SYSTEM:
 - STARTER TRACK:
 - HORIZONTAL PANEL INSTALLATIONS - FA 700 - 3.030 MM (L) GALVALUME COATED STEEL.
 - PANEL CLIPS: JEL 778 "ULTIMATE CLIP II" (10 MM RAINSCREEN FOR 16 MM AWP) - ZINC-ALUMINUM-MAGNESIUM ALLOY COATED STEEL.
 - JOINT TAB ATTACHMENTS (INCLUDED) - USED AT ALL PANEL TO PANEL VERTICAL JOINTS.
 - CORNER CLIPS: JE 777C (10 MM RAINSCREEN FOR 5/8" AWP MANUFACTURED CORNERS) - ZINC-ALUMINUM-MAGNESIUM ALLOY COATED STEEL.
 - SINGLE FLANGE SEALANT BACKER - FHK 1015 R (10 MM) - 6.5" (L) FLUORINE COATED GALVALUME.
 - DOUBLE FLANGE SEALANT BACKER - FH 1015 R (10 MM) - 10" (L) FLUORINE COATED GALVALUME.
 - CORRUGATED SPACER - FS 1005 (5 MM), FS 1010 (10 MM) - 4" (L).
 - ALUMINUM TRIM (OPTIONAL): PAINT PRIMED TRIM AS SPECIFIED IN FINISH SCHEDULE.
 - ESSENTIAL FLASHING SYSTEM (OPTIONAL):
 - STARTER: MAIN SEGMENTS (3.030 MM), INSIDE CORNERS, OUTSIDE CORNERS
 - OVERHANG - MAIN SEGMENTS (3.030 MM), INSIDE CORNERS, OUTSIDE CORNERS, JOINT CLIPS
 - FASTENERS: CORROSION RESISTANT FASTENERS, SUCH AS HOT-DIPPED GALVANIZED SCREWS APPROPRIATE TO LOCAL BUILDING CODES AND PRACTICES MUST BE USED. USE STAINLESS STEEL FASTENERS IN HIGH HUMIDITY AND HIGH-MOISTURE REGIONS. PANEL MANUFACTURER IS NOT LIABLE FOR CORROSION RESISTANCE OF FASTENERS. DO NOT USE ALUMINUM FASTENERS, STAPLES, OR FASTENERS THAT ARE NOT DESIGNED FOR INTENDED USE. SEE MANUFACTURER'S INSTRUCTIONS FOR APPROPRIATE FASTENERS FOR CONSTRUCTION METHOD USED.
 - FLASHING: FLASH ALL AREAS SPECIFIED IN MANUFACTURER'S INSTRUCTIONS. DO NOT USE RAW ALUMINUM FLASHING. FLASHING MUST BE GALVANIZED, ANODIZED, OR PVC COATED.
 - SEALANT: SEALANT SHALL COMPLY WITH ASTM C920, CLASS 35.

9. ALUMINUM METAL PLATE WALL PANELS

- A. MANUFACTURER: DRI-DESIGN, WWW.DRI-DESIGN.COM
- B. PRODUCT: EN-V
- C. FINISH: SUPERIOR PERFORMANCE ORGANIC COATING SYSTEM
- COMPLY WITH NAAMM'S - METAL FINISHES MANUAL FOR ARCHITECTURAL AND METAL PRODUCTS, FOR RECOMMENDATIONS OF DESIGNATING FINISHES.
 - AAMA 2605 MULTIPLE COAT, THERMALLY CURED POLYVINYLIDENE FLUORIDE (PVDF) RESIN SYSTEM.
 - TWO-COAT FLUOROPOLYMER:
 - AAMA 2605 FLUOROPOLYMER FINISH CONTAINING NOT LESS THAN 70 PERCENT PVDF RESIN BY WEIGHT IN COLOR COAT. PREPARE, PRE-TREAT, AND APPLY COATING TO EXPOSED METAL SURFACES TO COMPLY WITH COATING AND RESIN MANUFACTURERS' INSTALLATION INSTRUCTIONS.
 - TWO-COAT MICA FLUOROPOLYMER:
 - AAMA 2605 FLUOROPOLYMER FINISH WITH SUSPENDED MICA FLAKES CONTAINING NOT LESS THAN 70 PERCENT PVDF RESIN BY WEIGHT IN COLOR COAT. PREPARE, PRE-TREAT, AND APPLY COATING TO EXPOSED SURFACES TO COMPLY WITH COATING AND RESIN MANUFACTURERS' INSTALLATION INSTRUCTIONS.
 - FIELD TOUCH-UP MATERIALS: AS RECOMMENDED BY COATING MANUFACTURER FOR FIELD APPLICATION.
- D. COLOR:
- DARK BRONZE ANODIZED (OR SIMILAR - DARK BRONZE EN-V-007)
 - CLEAR ANODIZED (OR SIMILAR - SILVER EN-V-025)
 - CUSTOM COLOR: SHERWIN-WILLIAMS
 - SW 6314 LUXURIOUS RED
- E. ACCESSORIES: PROVIDE COMPONENTS REQUIRED FOR A COMPLETE METAL PLATE WALL PANEL ASSEMBLY INCLUDING TRIM, COPINGS, FASCIA, MULLIONS, SILLS, CORNER UNITS, FLASHINGS, AND SIMILAR ITEMS. MATCH MATERIALS AND FINISH OF PANELS UNLESS OTHERWISE INDICATED.
- PROVIDE INTEGRAL DRAINAGE SYSTEM AND MANUFACTURERS' STANDARD EXTRUSIONS AT TERMINATION OF DISSIMILAR MATERIALS.
 - FLASHING AND TRIM: MATCH MATERIAL, FINISH, AND COLOR OF ADJACENT WALL PANELS.
 - THICKNESS: AT LEAST 0.040 INCH.
 - PANEL FASTENERS: DESIGNED TO WITHSTAND DESIGN LOADS, WITH AT LEAST 7/16 INCH DIAMETER HEAD AND NEOPENRE WASHER.
 - ALUMINUM WALL PANEL MATERIAL: PROVIDE STAINLESS STEEL FASTENERS, OR COATED FASTENER APPROVED BY PANEL MANUFACTURER OR PROJECT WALL CONSULTANT.
 - SUB-GRITS: GALVANIZED, PROVIDE SIZE AND GAGE IN ACCORDANCE WITH PROJECT REQUIREMENTS.
 - FURRING CHANNEL: PROVIDE HATE, C, U, OR Z TYPE AS RECOMMENDED BY MANUFACTURER.
 - FLAT STRAP: AT LEAST 14 GAUGE, 0.0747 INCH (1.90 MM) THICK.
 - SUBSTRATE WALL SHEATHING: PL WYWOOD, PS 1, GRADE C-D, EXPOSURE 1, AT LEAST 5/8 INCH THICK.
 - WEATHER BARRIERS: PROVIDE CLIMATE-SPECIFIC WEATHER BARRIER WITH PERFORMANCE CHARACTERISTICS FOR AIR PENETRATION, WATER VAPOR TRANSMISSION, AND WATER PENETRATION RESISTANCE.
- F. SEALANTS: AS RECOMMENDED BY METAL PANEL MANUFACTURER FOR OPENINGS WITHIN WALL PANELS AND PERIMETER CONDITIONS.

10. INTERIOR ALUMINUM PARTITIONS

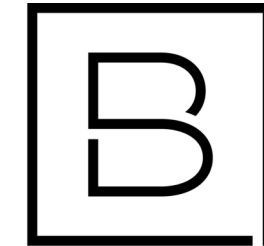
- A. MANUFACTURER: WILSON PARTITIONS OR APPROVED COMPARABLE PRODUCT AND MANUFACTURER.
- B. PRODUCT: SNAP-ON TRIM PROFILE FLUSH SLIDER, SERIES 500.
- C. FRAMES: RECTILINEAR DESIGN, 1-1/2" TRIM, 4-7/8" THROAT, TRACK, FASCIA, AND FLOOR GUIDE INCLUDED, SOFT OPEN/CLOSE ROLLERS RATED UP TO 260 LBS, LOCKING HARDWARE.
- D. DOORS: 1-3/4" DOORS, TUBULAR DESIGN, 1/2" GLASS STOPS FOR 1/4" GLASS, 3-1/2" MEDIUM STILE, 3-1/4" TOP AND 10" BOTTOM RAIL.
- E. GLAZING: PER GLAZING SPECIFICATION.
- F. FINISH: CLEAR ANODIC COATING, COMPLY WITH AAMA 611, AAM12C22A21 ANODIZED COATING.

11. SHELF STANDARDS AND BRACKETS

- A. MANUFACTURER: KNAPE & VOGT, WWW.KV.COM
- B. PRODUCT: 82 SERIES STANDARDS AND 182 SERIES BRACKETS.
- STANDARDS: 1-1/16" W, X 11/16" D, X 94" L, 14 GA. STEEL.
 - BRACKETS: 14-1/2" D. FOR 16" D. SHELVES, 16 GA. STEEL, VERTICALLY ADJUSTABLE IN 1-1/4" INCREMENTS.
 - FINISH: TITANIUM.
 - ACCESSORIES AS REQUIRED FOR A COMPLETE INSTALLATION.

12. MULLION TRIM CAPS

- A. MANUFACTURER: MULL-IT-OVER PRODUCTS.
- B. PRODUCT: CLASSIC SOUND BARRIER MULLION TRIM CAP, STC 60.



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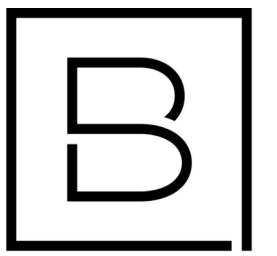
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Project Manager	Discipline Lead
D HOLTROP	B HUYLER
Designer	Reviewer
E POST	D HOLTROP
Date Issued	Project Number
1/31/2023	16600.00
Sheet Name	

SPECIFICATIONS

Drawing Number

A003



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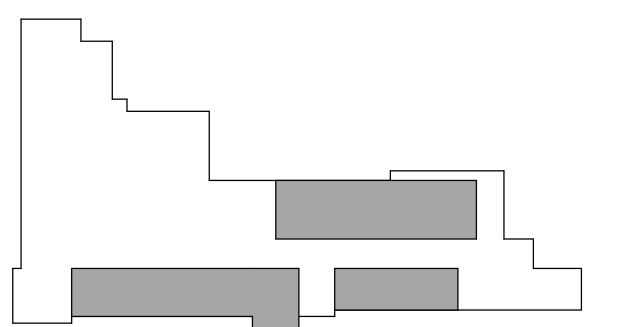
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Key Plan



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E POST	R KEUNEKE
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1/31/2023	16600.00

Sheet Name

FIRST FLOOR DEMOLITION PLAN

Drawing Number

AD101

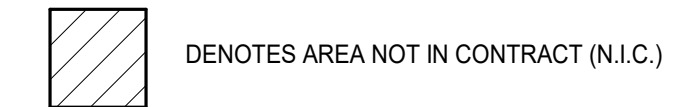
KEYNOTES

- D1 DEMO EXISTING WALL AS REQUIRED FOR NEW CONSTRUCTION. REPAIR EXISTING WALLS AND FLOOR INDICATED TO REMAIN AS REQUIRED.
- D2 DEMO EXISTING DOOR, FRAME, AND HARDWARE & ALL ASSOCIATED COMPONENTS.
- D3 REMOVE EXISTING CASEWORK, COUNTERTOP, SUPPORTS, AND SHELVING.
- D4 DEMO EXISTING DOOR. PREPARE AREA FOR INFILL TO MATCH EXISTING
- D5 REMOVE EXISTING PLUMBING.
- D6 REMOVE EXISTING EXTERIOR CONCRETE STOOP, STAIRS, RAMP AND HANDRAILS.
- D7 REMOVE EXISTING UNIT VENTILATOR & ALL ADJACENT CASEWORK.
- D8 REMOVE EXISTING CARPET. PREPARE FLOOR FOR NEW FLOOR FINISH. SEE PLANS.
- D9 REMOVE EFIS & STUD INFILL, WINDOWS, WOOD STOOL. PREPARE OPENING FOR NEW CONSTRUCTION AS INDICATED.
- D10 REMOVE EXISTING BRICK VENEER FULL HEIGHT, INCLUDING ABOVE & BELOW OPENINGS. BREAK OFF TIES FLUSH WITH BACK-UP.
- D11 COMPLETELY REMOVE EXISTING ENTRY SYSTEM, FULL HEIGHT INCLUDING DOORS, SIDELIGHTS, TRANSOMS, TRIM, AND ALL ASSOCIATED COMPONENTS.
- D12 SAW CUT & REMOVE PORTION OF EXISTING CMU WALL AS REQUIRED FOR NEW OPENING. SHORE EXISTING OVERHEAD STRUCTURE AS REQUIRED FOR INSTALLATION OF NEW LINTEL WHERE INDICATED.
- D13 DEMO EXISTING PASSAGE FRAME AND SIDELIGHTS TO WALL. PREPARE OPENING FOR NEW DOOR AND SIDELIGHTS.
- D14 REMOVE AND PREPARE TO RELOCATE EXISTING MINI-SPLIT. SEE MECHANICAL AND ELECTRICAL DRAWINGS.
- D15 DEMO BENCH SEATING AND RAISED BASE.
- D16 REMOVE EXISTING WALL TILE. DISCONNECT & REMOVE EXISTING WALL MOUNTED DEVICES (SWITCHES, FIRE ALARM PULLS, ETC.) & PREPARE FOR EXTENSION TO NEW WALL FINISH.
- D17 COMPLETELY REMOVE EXISTING WALL BASE IN ROOM.
- D18 REMOVE BULLETIN DISPLAY AND FRAME. PREP OPENING FOR INFILL TO MATCH EXISTING.
- D19 REMOVE EXISTING WALL FINISHES (CERAMIC TILE, ACOUSTIC TILES, ETC.) AND WOOD TRIM DOWN TO SUBSTRATE. PREPARE AS REQUIRED FOR NEW FINISHES.
- D20 DEMO RAISED FLOOR TO BE LEVEL WITH THE REST OF THE ROOM AND CORRIDOR.
- D21 REMOVE WALL PANELING, PATCH WALL AND PREP FOR NEW PAINT.
- D22 REMOVE EXISTING WALL PARTITION SYSTEM, FLOOR TO CEILING.
- D23 REMOVE PLAQUE AND SALVAGE FOR REINSTALLATION PER OWNER
- D24 COMPLETELY REMOVE EXISTING ENTRANCE CANOPY SYSTEM, SOFFIT, DOWNSPOUTS & ALL ASSOCIATED COMPONENTS.
- D25 DEMO EX MASONRY WALL/PIER.
- D26 REMOVE EXISTING CONCRETE WALK.
- D27 EXG. VCT TO BE REMOVED BY OWNER. PREPARE SUBSTRATE AS REQUIRED FOR NEW FLOORING
- D28 REMOVE EXISTING CEILING, FRAMING, LIGHTS & EXHAUST FAN.
- D29 REMOVE EXISTING FLOOR TILE. PREPARE SURFACES AS REQUIRED FOR NEW FINISHES.
- D30 EXISTING WIRE MOULDING AT HEAD OF TRANSOM TO REMAIN. TEMPORARILY SUPPORT AS REQUIRED.

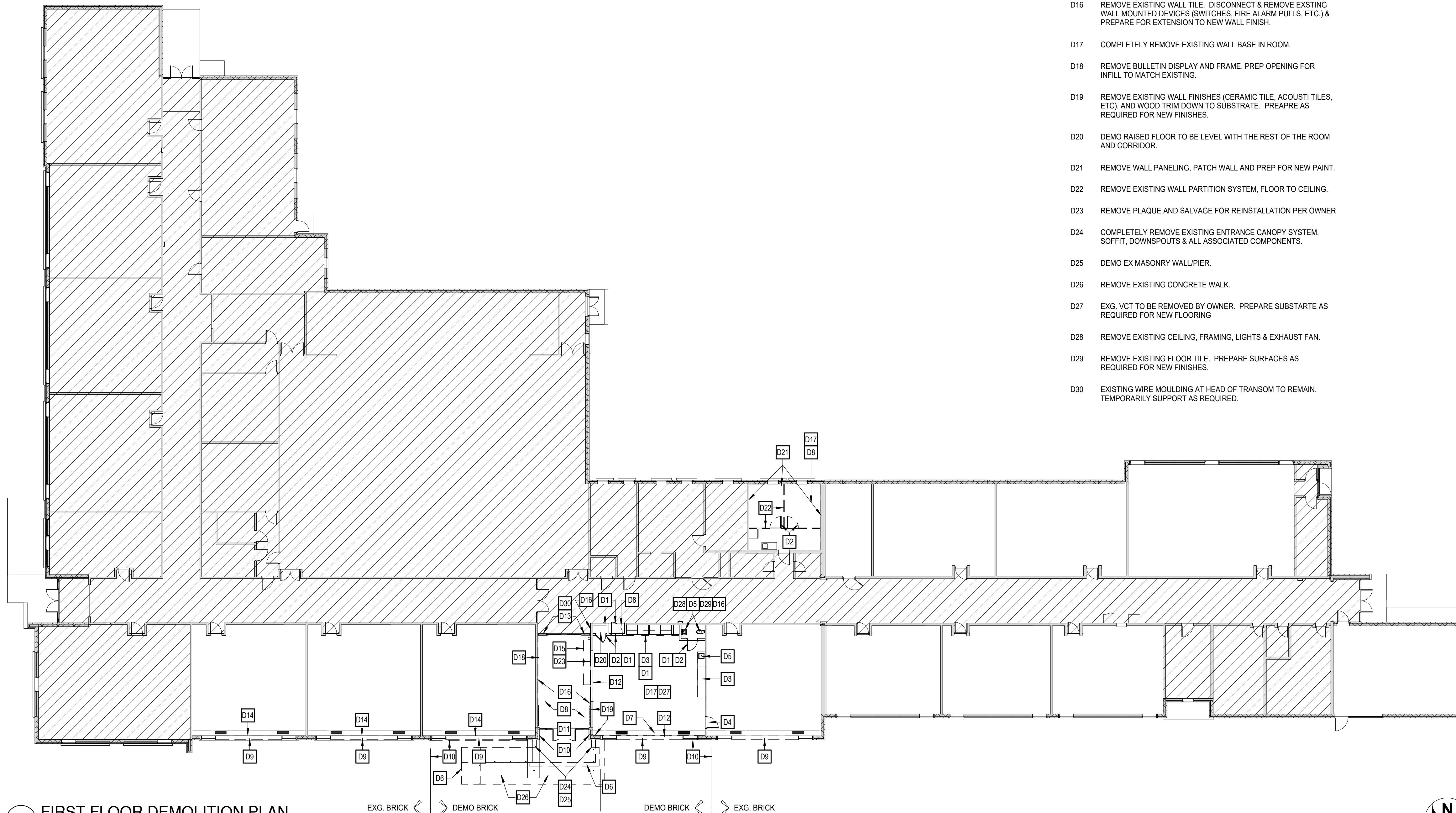
GENERAL DEMOLITION NOTES

- A. CONTRACTOR SHALL COORDINATE REMOVAL OF FLOORS, WALLS AND CEILINGS WITH MECHANICAL, ELECTRICAL AND PLUMBING TRADES. ALL POWER, MECHANICAL AND PLUMBING LINES SHALL BE REMOVED BACK TO NEAREST MAIN BRANCH LINE OR PANEL.
- B. CONTRACTOR SHALL PROTECT EXISTING CONSTRUCTION AND EQUIPMENT NOTED TO REMAIN FROM DAMAGE RESULTING FROM DEMOLITION ACTIVITIES. ANY DAMAGE TO EXISTING PROPERTY RESULTING FROM DEMOLITION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- C. CONTRACTOR SHALL PROTECT ADJACENT SURFACES IN PREPARATION OF SAW CUTTING REQUIRED FOR DEMOLITION ACTIVITIES.
- D. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL LAWN AND LANDSCAPE AREAS THAT ARE DAMAGED DURING CONSTRUCTION (INCLUDING NEW TOP SOIL, SEED, AND LANDSCAPE).
- E. SEE MECHANICAL DRAWINGS FOR ADDITIONAL CLASSROOM SPECIFIC DEMOLITION ITEMS.
- F. FIELD VERIFY EXISTING CONDITIONS PRIOR TO DEMOLITION. INFORM ARCHITECT OF DISCREPANCIES. EXISTING DRAWINGS ARE NOT AVAILABLE THEREFORE DESIGN IS BASED UPON VISUAL OBSERVATION AND ASSUMPTIONS.

DEMOLITION LEGEND

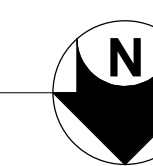


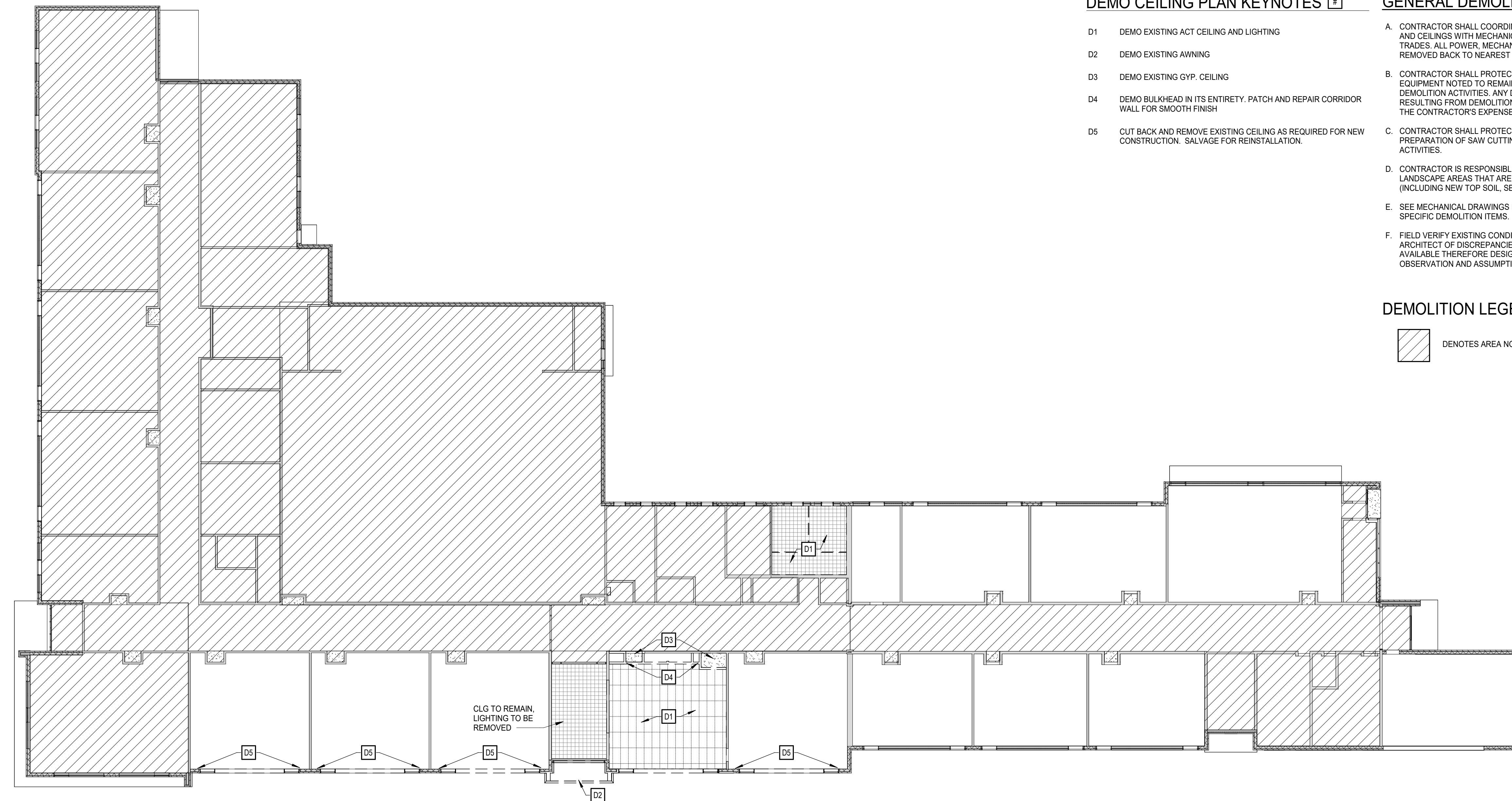
DENOTES AREA NOT IN CONTRACT (N.I.C.)



1 FIRST FLOOR DEMOLITION PLAN
SCALE: 1/16" = 1'-0"

EXG. BRICK ← DEMO BRICK DEMO BRICK → EXG. BRICK





2 FIRST FLOOR DEMOLITION RCP
SCALE: 1/16" = 1'-0"

DEMO CEILING PLAN KEYNOTES

- D1 DEMO EXISTING ACT CEILING AND LIGHTING
- D2 DEMO EXISTING AWNING
- D3 DEMO EXISTING GYP. CEILING
- D4 DEMO BULKHEAD IN ITS ENTIRETY. PATCH AND REPAIR CORRIDOR WALL FOR SMOOTH FINISH
- D5 CUT BACK AND REMOVE EXISTING CEILING AS REQUIRED FOR NEW CONSTRUCTION. SALVAGE FOR REINSTALLATION.

GENERAL DEMOLITION NOTES

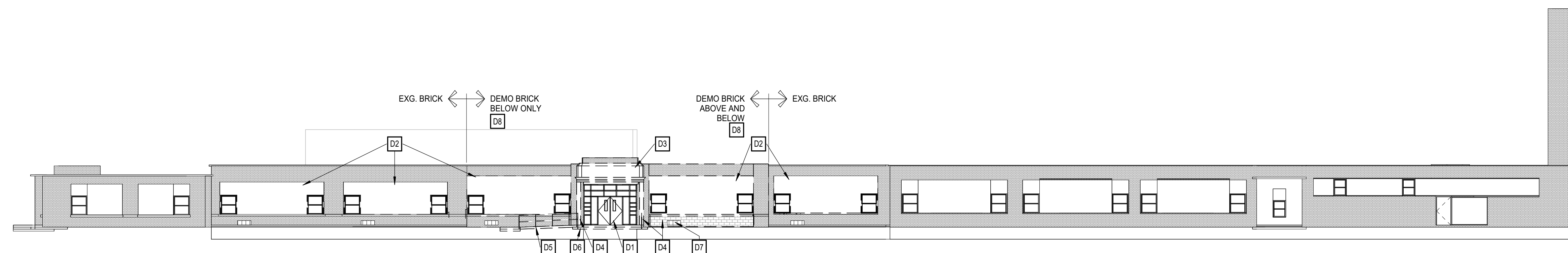
- A. CONTRACTOR SHALL COORDINATE REMOVAL OF FLOORS, WALLS AND CEILINGS WITH MECHANICAL, ELECTRICAL AND PLUMBING TRADES. ALL POWER, MECHANICAL AND PLUMBING LINES SHALL BE REMOVED BACK TO NEAREST MAIN BRANCH LINE OR PANEL.
- B. CONTRACTOR SHALL PROTECT EXISTING CONSTRUCTION AND EQUIPMENT NOTED TO REMAIN FROM DAMAGE RESULTING FROM DEMOLITION ACTIVITIES. ANY DAMAGE TO EXISTING PROPERTY RESULTING FROM DEMOLITION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- C. CONTRACTOR SHALL PROTECT ADJACENT SURFACES IN PREPARATION OF SAW CUTTING REQUIRED FOR DEMOLITION ACTIVITIES.
- D. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL LAWN AND LANDSCAPE AREAS THAT ARE DAMAGED DURING CONSTRUCTION (INCLUDING NEW TOP SOIL, SEED, AND LANDSCAPE).
- E. SEE MECHANICAL DRAWINGS FOR ADDITIONAL CLASSROOM SPECIFIC DEMOLITION ITEMS.
- F. FIELD VERIFY EXISTING CONDITIONS PRIOR TO DEMOLITION. INFORM ARCHITECT OF DISCREPANCIES. EXISTING DRAWINGS ARE NOT AVAILABLE THEREFORE DESIGN IS BASED UPON VISUAL OBSERVATION AND ASSUMPTIONS.

DEMOLITION LEGEND

DENOTES AREA NOT IN CONTRACT (N.I.C.)

DEMO ELEVATION KEYNOTES

- D1 REMOVE EXISTING ENTRY DOOR AND WINDOW SYSTEM. PREPARE OPENING TO RECEIVE NEW ENTRY SYSTEM (SEE PLANS).
- D2 REMOVE EXISTING EIFS WALL AND WINDOWS UP TO BRICK SURROUND AND SILL. PREPARE OPENING TO RECEIVE NEW INFILL AND WINDOWS (SEE PLANS).
- D3 REMOVE EXISTING CANOPY/AWNING AND ANY FASTENERS/ATTACHMENTS.
- D4 REMOVE ENTIRE PORTION OF MASONRY WALL AS NOTED.
- D5 REMOVE EXISTING CONCRETE RAMP AND RAILING. PREPARE GROUND BELOW TO RECEIVE NEW LANDSCAPING.
- D6 DEMO EXISTING EXTERIOR LANDING, STAIRS, AND RAILING. PREPARE AREA TO RECEIVE NEW PER PLANS.
- D7 REMOVE EX LOUVER. SEE MECHANICAL
- D8 REMOVE EXISTING BRICK VENEER, INCLUDING ABOVE & BELOW OPENINGS WHERE NOTED ON ELEVATIONS. BREAK OFF TIES FLUSH WITH BACK-UP.



1 NORTH ELEVATION DEMO
SCALE: 1/16" = 1'-0"



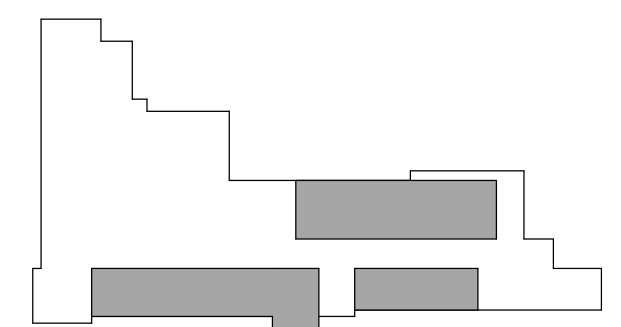
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Key Plan

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Project Manager	Discipline Lead
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Designer	Reviewer
E POST	R KEUNEKE
Date Issued	Project Number
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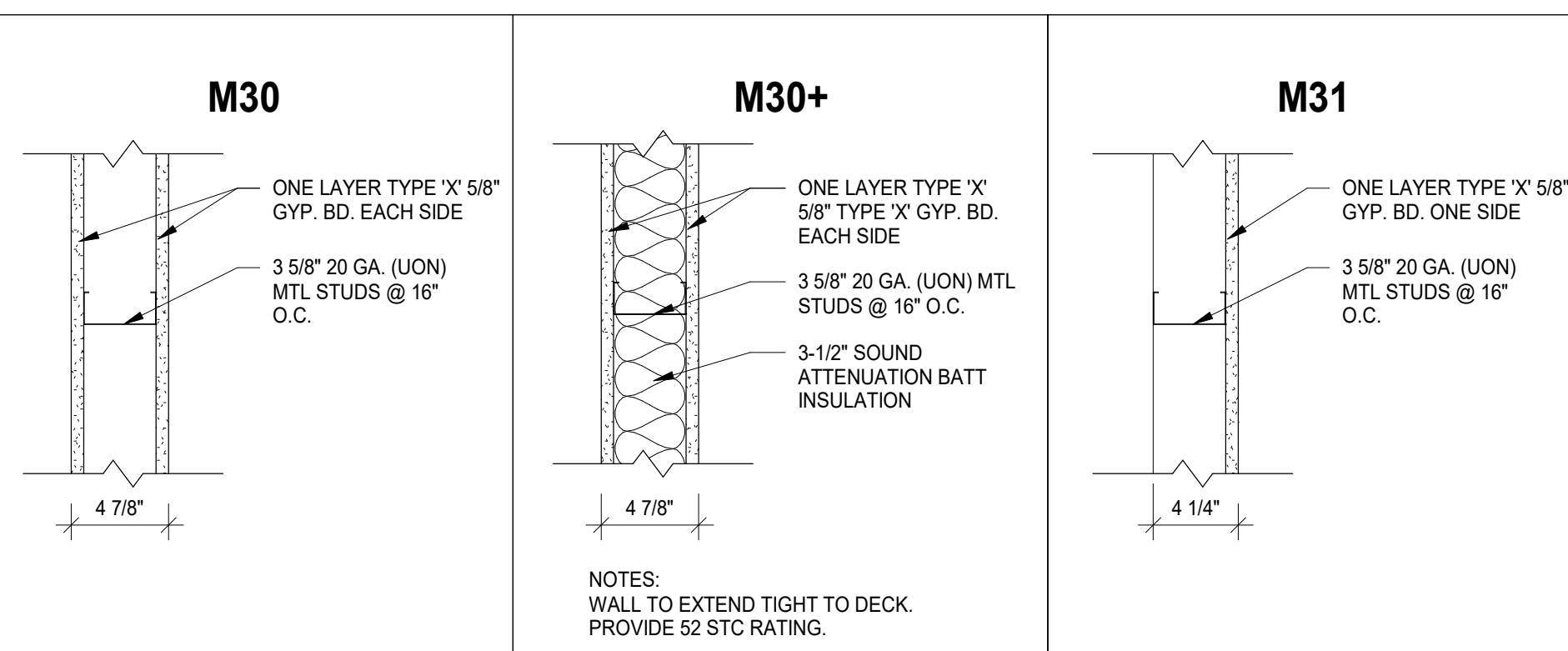
**FIRST FLOOR DEMOLITION
CEILING PLAN AND
EXTERIOR ELEVATION**

Drawing Number

AD121

WALL TYPES

NOTE: SEE TYPICAL WALL SECTIONS FOR ADDITIONAL INFORMATION AT FLOOR AND DECK ABOVE CONDITIONS.



WALL LEGEND

WALL MATERIAL	WALL SIZES
C = CONCRETE MASONRY UNITS	4 = 4" NOMINAL, 3 5/8" ACTUAL 6 = 6" NOMINAL, 5 5/8" ACTUAL 8 = 8" NOMINAL, 7 5/8" ACTUAL
F = FURRING CHANNEL	1 = 7/8" METAL HAT CHANNEL @ 24" O.C. 2 = 1-1/2" METAL HAT CHANNEL @ 24" O.C.
M = METAL STUD	1 = 1-5/8" METAL STUDS @ 16" O.C. 2 = 2-1/2" METAL STUDS @ 16" O.C. 3 = 3-5/8" METAL STUDS @ 16" O.C. 6 = 6" METAL STUDS @ 16" O.C.
WALL INFORMATION	
1 = WALL HEIGHT STUD FRAMING AND GYP BOARD FINISH TO DECK ABOVE 2 = GYP BOARD FINISH TO 8" ABOVE CEILING 3 = SOUND ATTENUATION CAVITY BATT INSULATION FULL HEIGHT, FLOOR TO DECK	
COLUMN ENCLOSURES, CHASES AND ENCLOSED UNINHABITABLE SPACES ARE TO BE WALL TYPE M31, UNLESS NOTED OTHERWISE.	

REF WALL TYPES AND DETAILS; SEE THIS SHEET

KEYNOTES

- F1 16" ADJUSTABLE WALL SHELVING W/ 2 STANDARDS EACH WALL ON BRACKETS. MELAMINE FINISH.
- F2 INFILL OPENING FROM BULLETIN/DISPLAY REMOVAL W/ GYP ON METAL STUDS TO CREATE FLUSH CONDITION W/ EXISTING WALL. WALL CONSTRUCTION TO MAINTAIN EXISTING FIRE RATING.
- F3 NEW WALL INFILL AT DOOR REMOVAL. MATCH FINISH OF ADJACENT WALLS.
- F4 TYPE X DRYWALL ON 3/4" HAT CHANNEL ON EXISTING WALL. MAINTAIN FIRE RATING.
- F5 NEW LAYER OF TYPE X GYP ON 3/4" HAT CHANNEL FURRING ON ENTIRE LENGTH OF EXISTING MASONRY WALL FOR SMOOTH SURFACE FINISH. MAINTAIN FIRE RATING.
- F6 NEW ADA PUSH BUTTONS EITHER SIDE OF ENTRANCE.
- F7 BULKHEAD ABOVE
- F8 5/8" GYP BD ON 2" LT GA METAL FURRING. EXTEND TO 8" (MIN) OR FIRST COURSE OF EXISTING TILE REMOVED FROM EXISTING WALL.
- F9 PAINT EXISTING UNIT VENT COVER TO MATCH WALL FINISH COLOR.

GENERAL NOTES

- A. REFER TO A001 FOR GENERAL NOTES AND LEGENDS.
- B. REFER TO A120 SERIES DRAWINGS FOR REFLECTED CEILING PLANS AND DETAILS. (FUTURE BP)
- C. REFER TO A140 SERIES DRAWINGS FOR FINISH PLANS, SCHEDULES, AND DETAILS. (FUTURE BP)
- D. REFER TO A600 SERIES DRAWINGS FOR DOOR SCHEDULE, WINDOW SCHEDULE, DETAILS, AND BASIS OF DESIGN.
- E. ALL DOORS TO BE LOCATED 4" FROM DRYWALL ADJACENT WALL UNLESS OTHERWISE NOTED.
- F. ALIGN FACES OF MASONRY AND STUD WALLS INDICATED IN THE SAME PLANE ON PLANS, U.O.N.

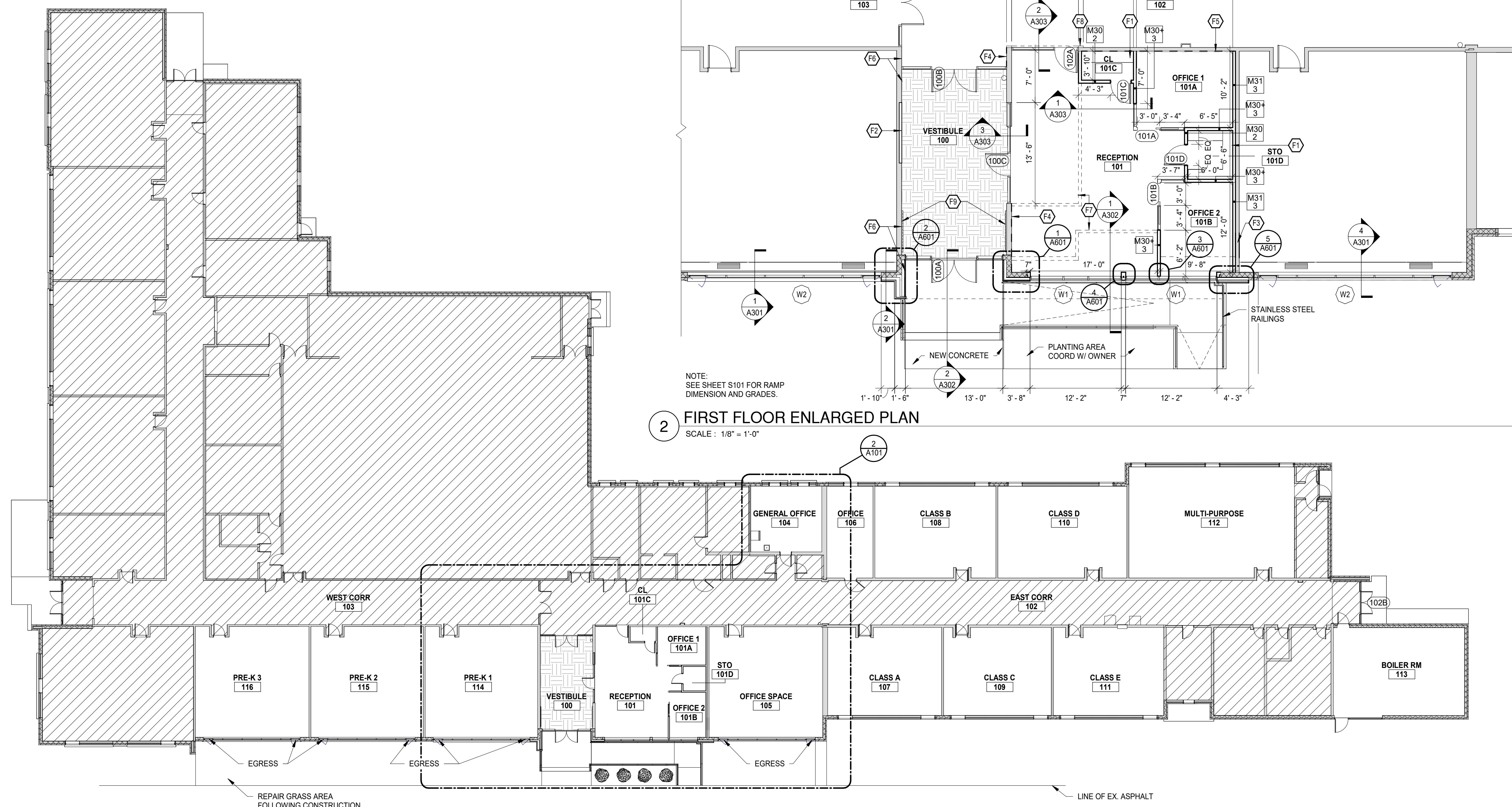
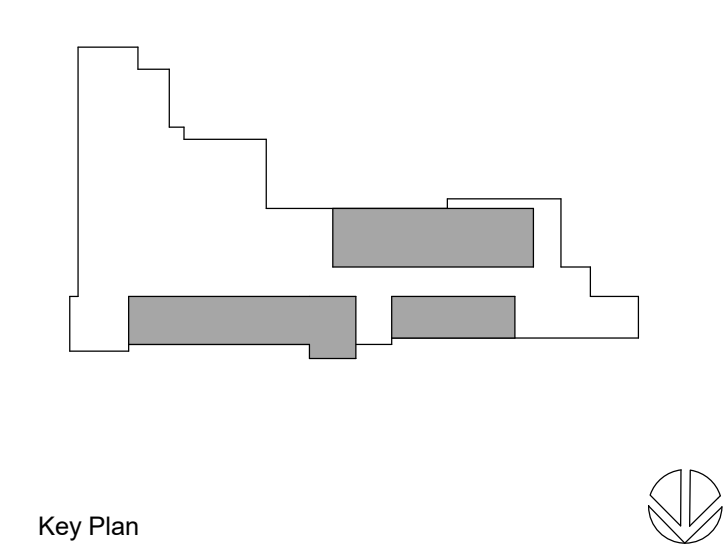


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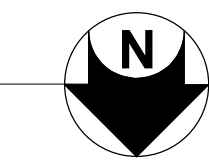
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2 FIRST FLOOR ENLARGED PLAN
SCALE: 1/8" = 1'-0"

1 FIRST FLOOR PLAN
SCALE: 1/16" = 1'-0"



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Project Manager D HOLTROP	Discipline Lead B HUYLER
Designer E POST	Reviewer R KEUNEKE
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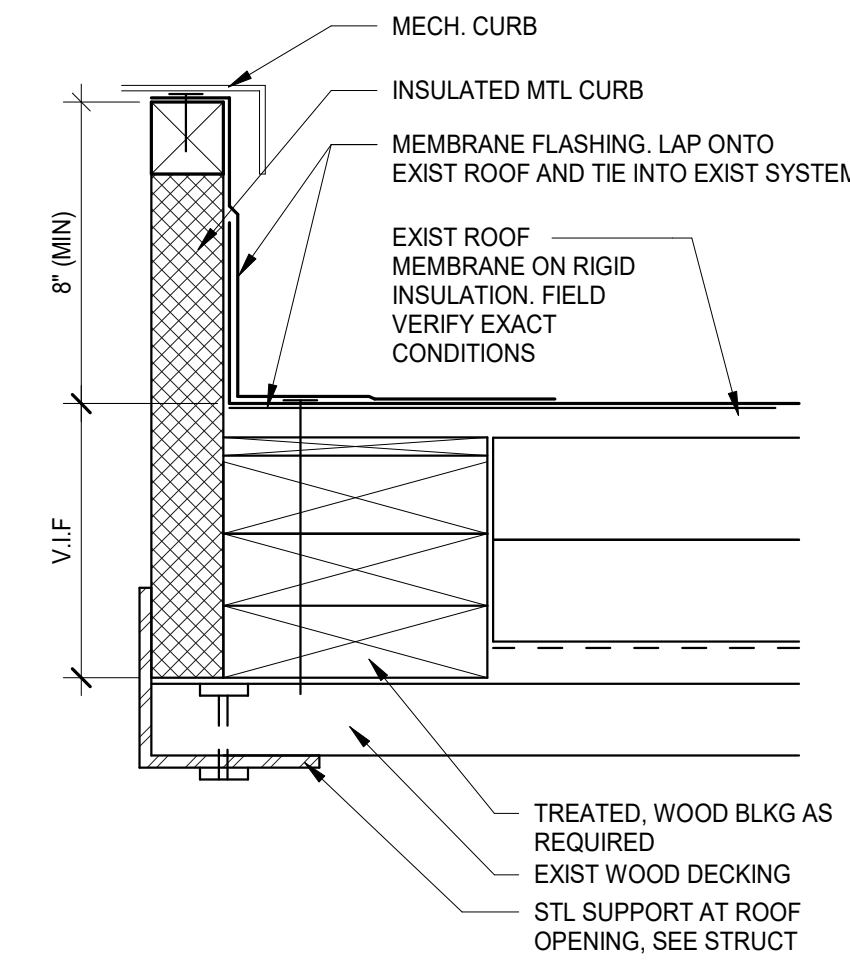
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Drawing Number

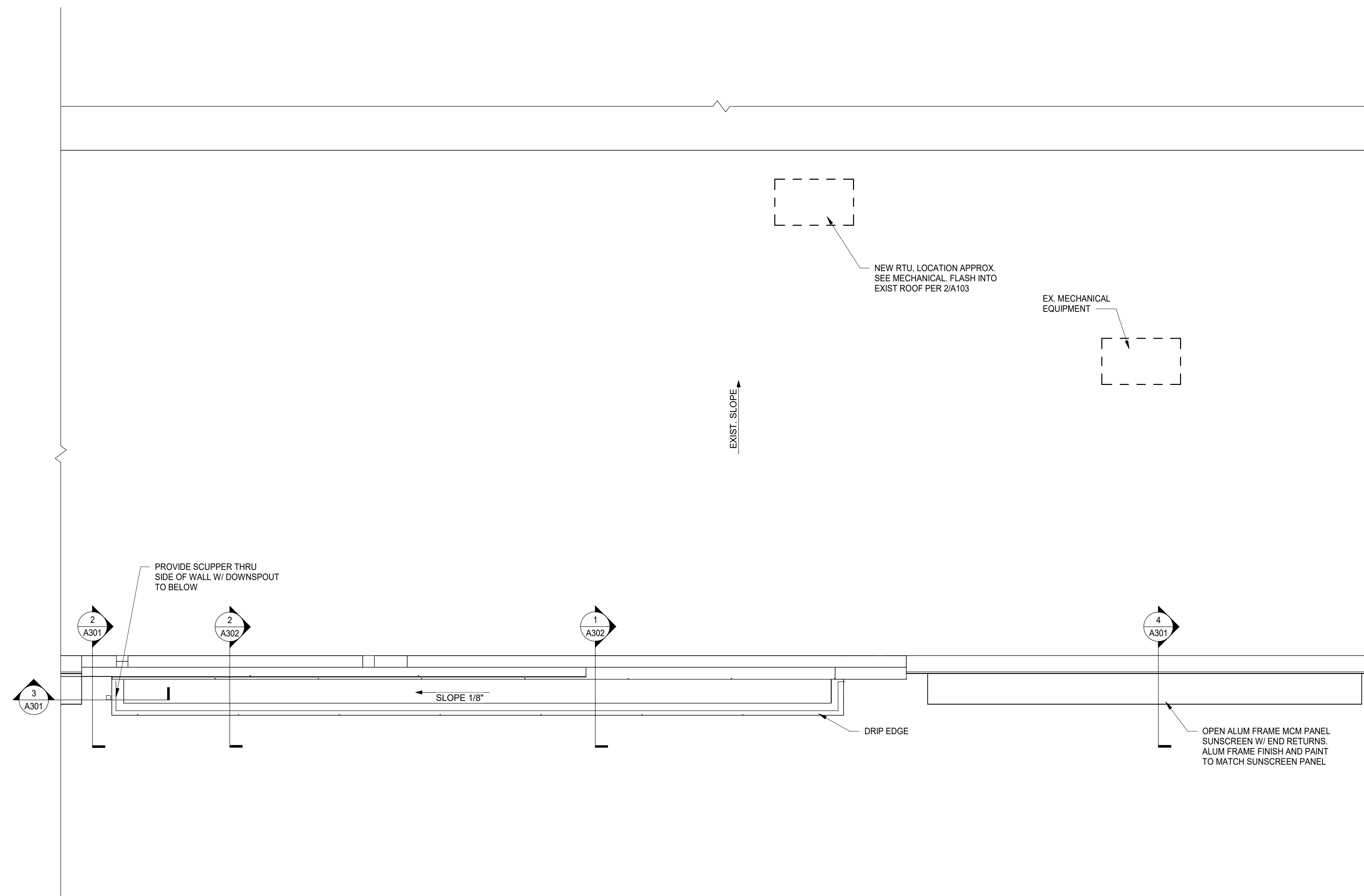
A101

GENERAL ROOF PLAN NOTES

- A. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR THEM.
- B. FLASH ALL NEW PENETRATIONS INTO EXISTING ROOF TO MAINTAIN A WATER TIGHT SYSTEM.
- C. ALL MECHANICAL ITEMS ARE SHOWN FOR GENERAL LAYOUT ONLY. VERIFY EXACT SIZE AND LOCATION WITH MECHANICAL.
- D. EXISTING ROOF WARRANTY: THERE IS AN EXISTING MANUFACTURER'S WARRANTY IN EFFECT. THIS WARRANTY MUST BE MAINTAINED THROUGHOUT THE DURATION OF ALTERATIONS TO THE EXISTING ROOF SYSTEM. UPON COMPLETION, PROVIDE CERTIFIED STATEMENT FROM EXISTING ROOF MEMBRANE MANUFACTURER STATING THAT EXISTING ROOF WARRANTY HAS NOT BEEN AFFECTED BY WORK PERFORMED UNDER THIS SECTION.



2 ROOF EQUIPMENT CURB FLASHING DETAIL, TYP
SCALE : 3" = 1'-0"



1 ROOF PLAN - ENLARGED AREA OF WORK
SCALE : 1/4" = 1'-0"



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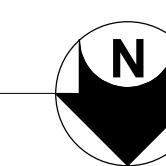
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Designer	Reviewer
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ROOF PLAN

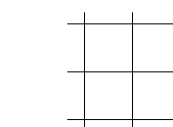
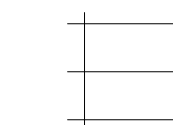

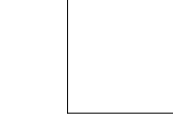
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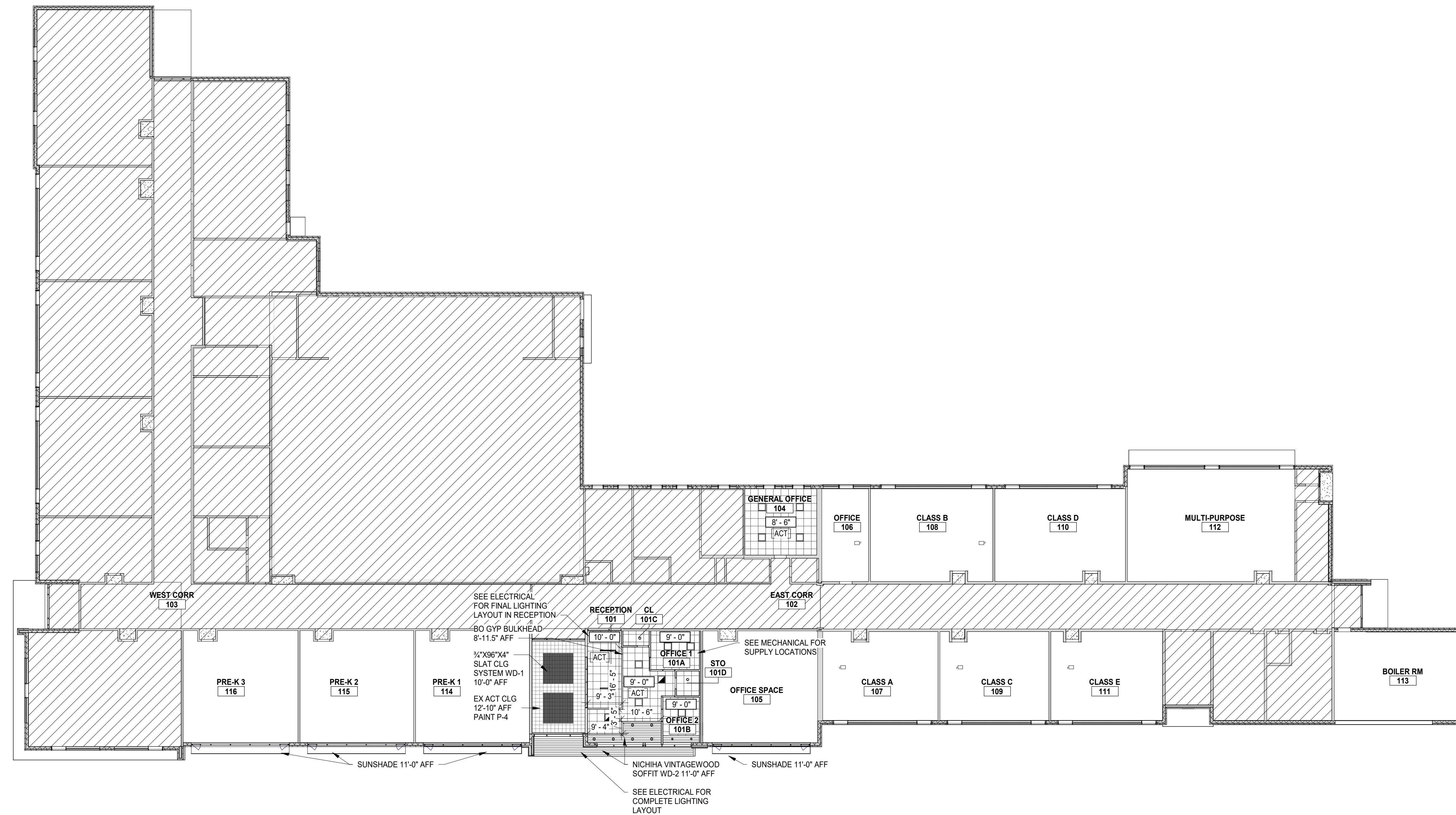
A103



LEGEND

NOTE: SEE OTHER DISCIPLINE DRAWINGS (E.G. MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS) FOR ASSOCIATED SYSTEMS AND INFORMATION ABOUT SYMBOLS NOT INDICATED IN THIS LEGEND.

-  2' x 2' SUSPENDED CEILING TILE
-  2' x 4' SUSPENDED CEILING TILE
-  GYPSUM BOARD CEILING/SOFFIT
-  OPEN TO DECK



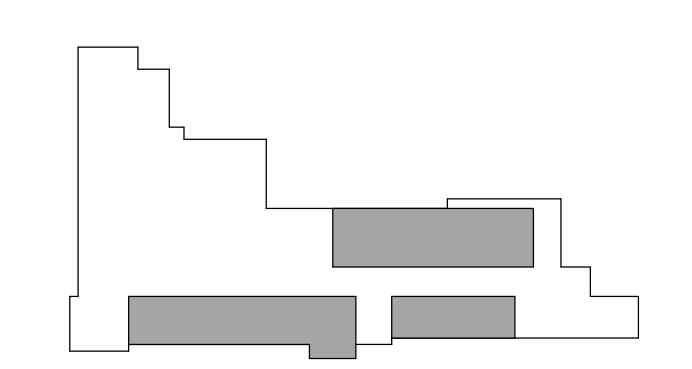
1 FIRST FLOOR REFLECTED CEILING PLAN
SCALE: 1/16" = 1'-0"

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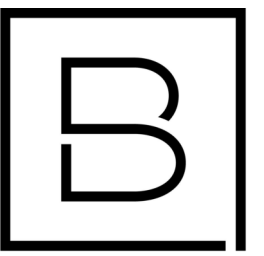
FIRST FLOOR CEILING PLAN

Drawing Number

A121

GENERAL NOTES

- A. REFER TO A600 SERIES FOR WINDOW SCHEDULE AND DETAILS
- B. REFER TO SPECIFICATIONS FOR EXTERIOR MATERIAL INFORMATION
- C. CONTRACTOR TO FIELD VERIFY ALL EXISTING OPENINGS



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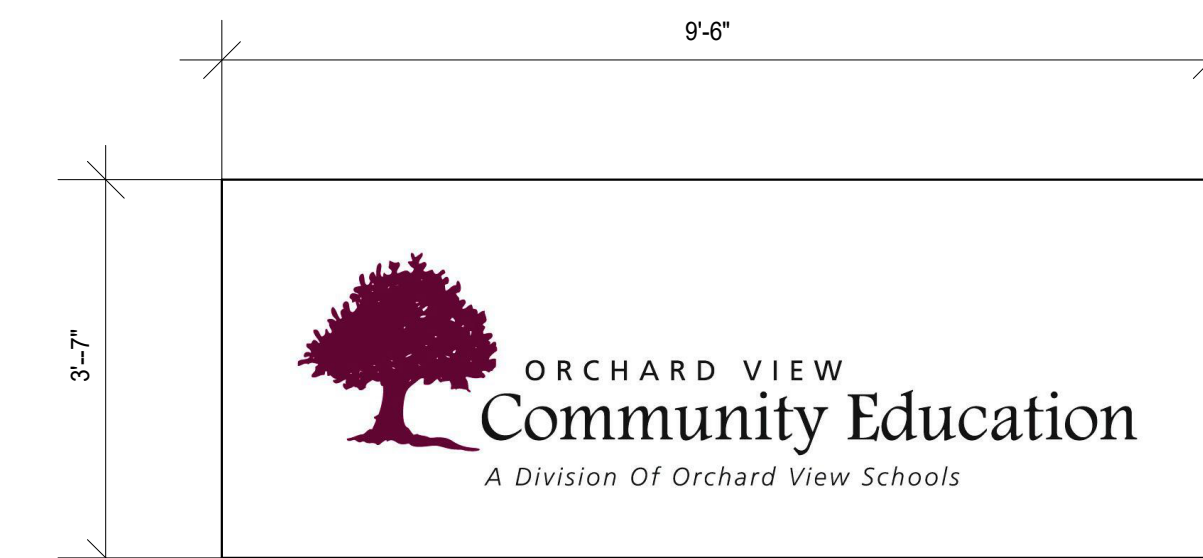
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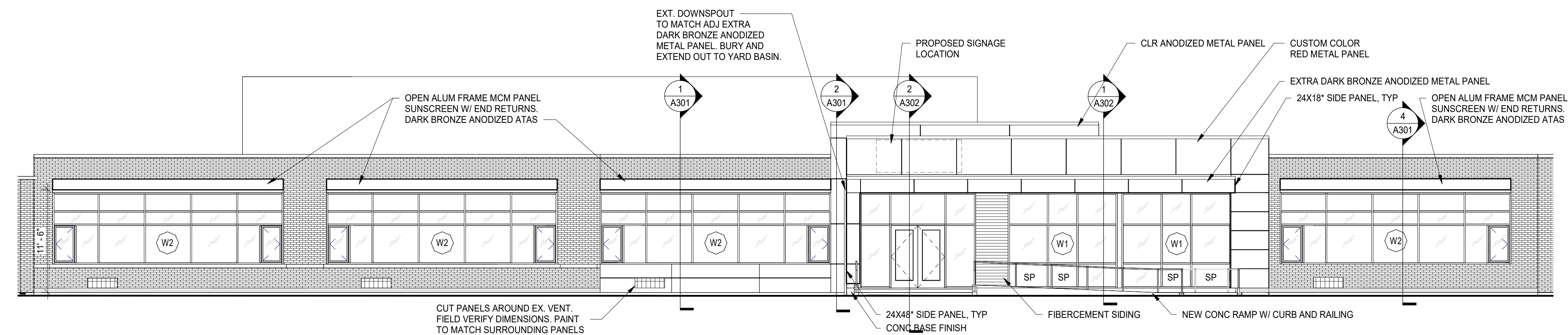
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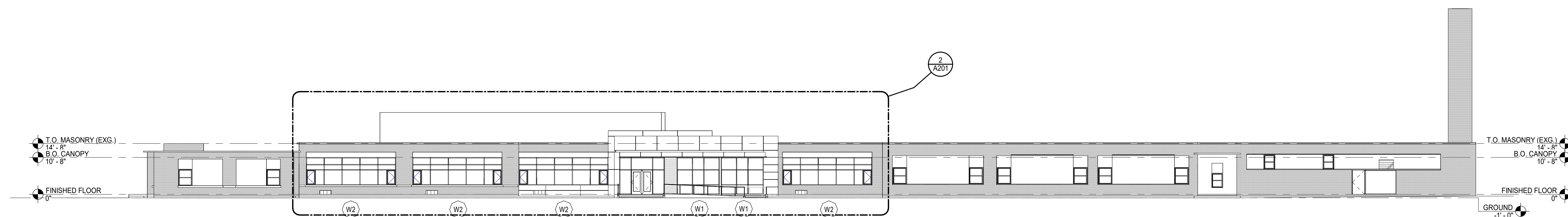
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PROPOSED SIGNAGE (BY OWNER)
<35 SF



2 NORTH ELEVATION - ENLARGED AREA OF WORK
SCALE : 1/8" = 1'-0"



1 NORTH ELEVATION
SCALE : 1/16" = 1'-0"

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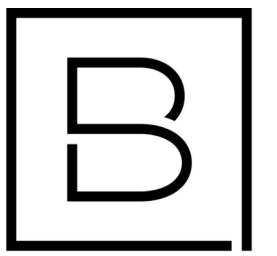
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Designer	Reviewer
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Date Issued	Project Number
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EXTERIOR ELEVATIONS

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A201

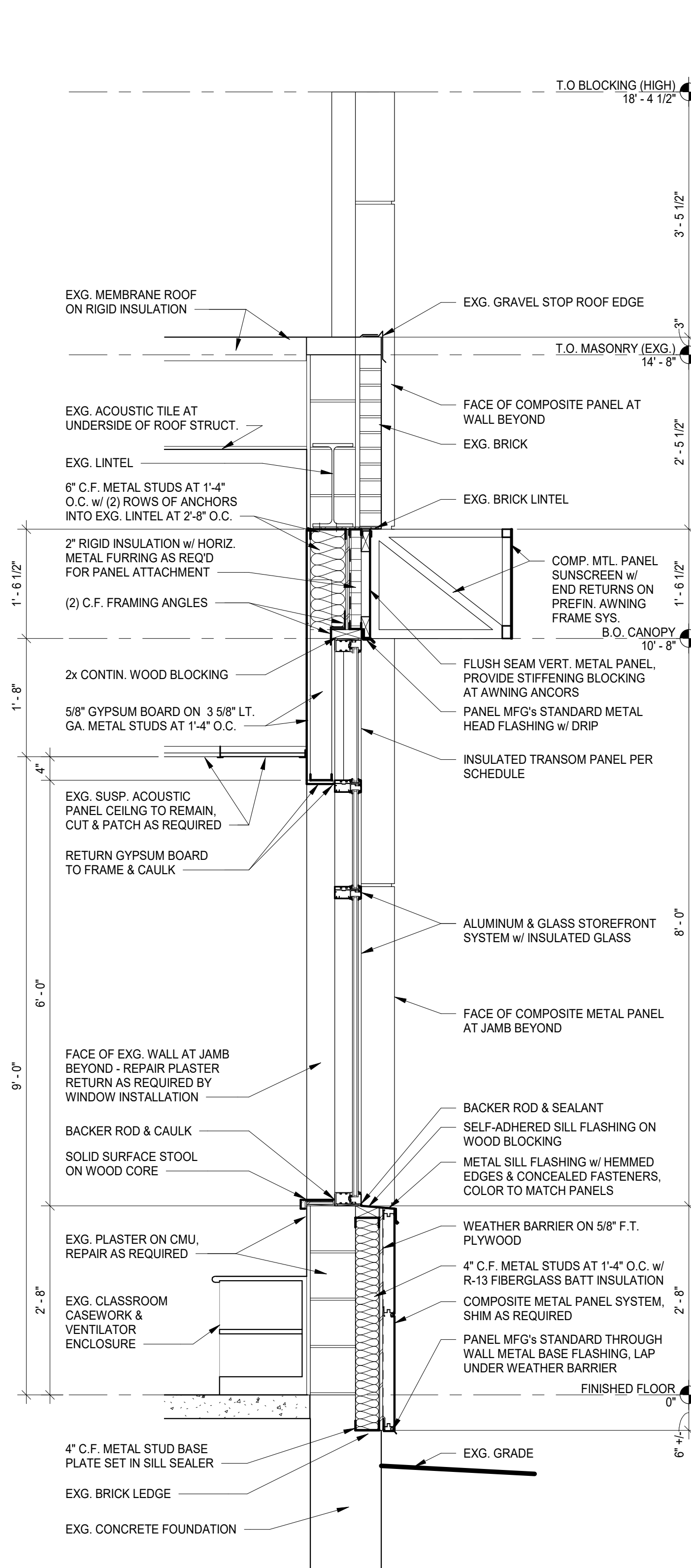


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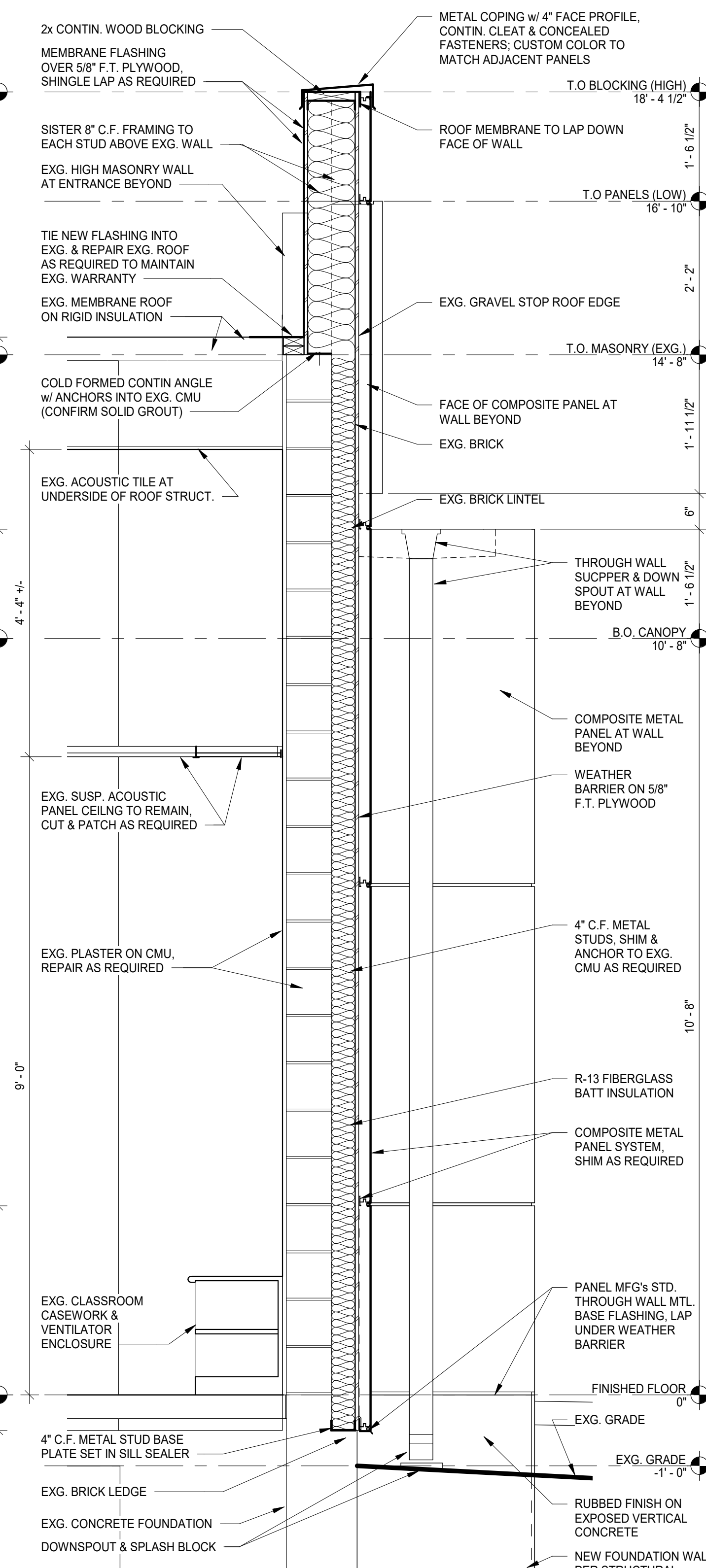
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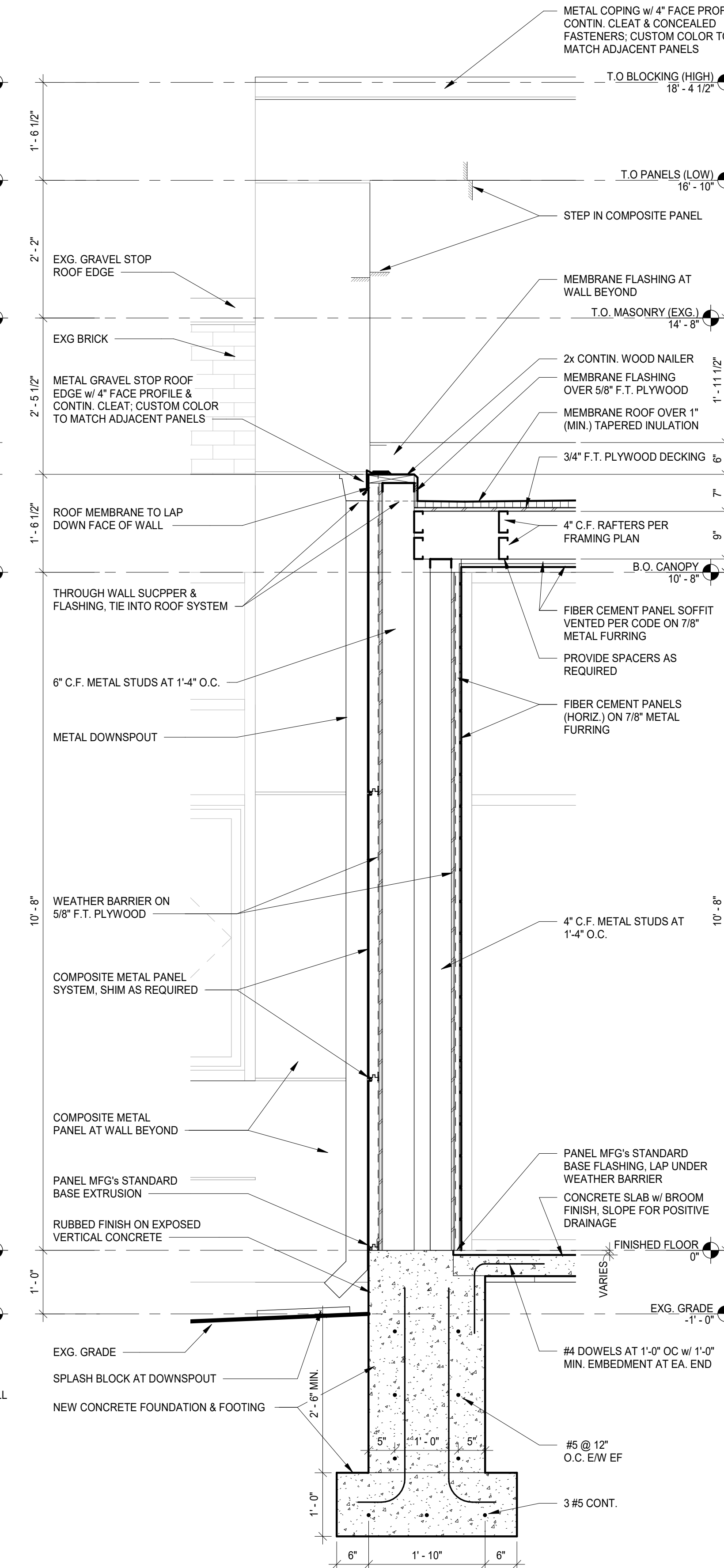
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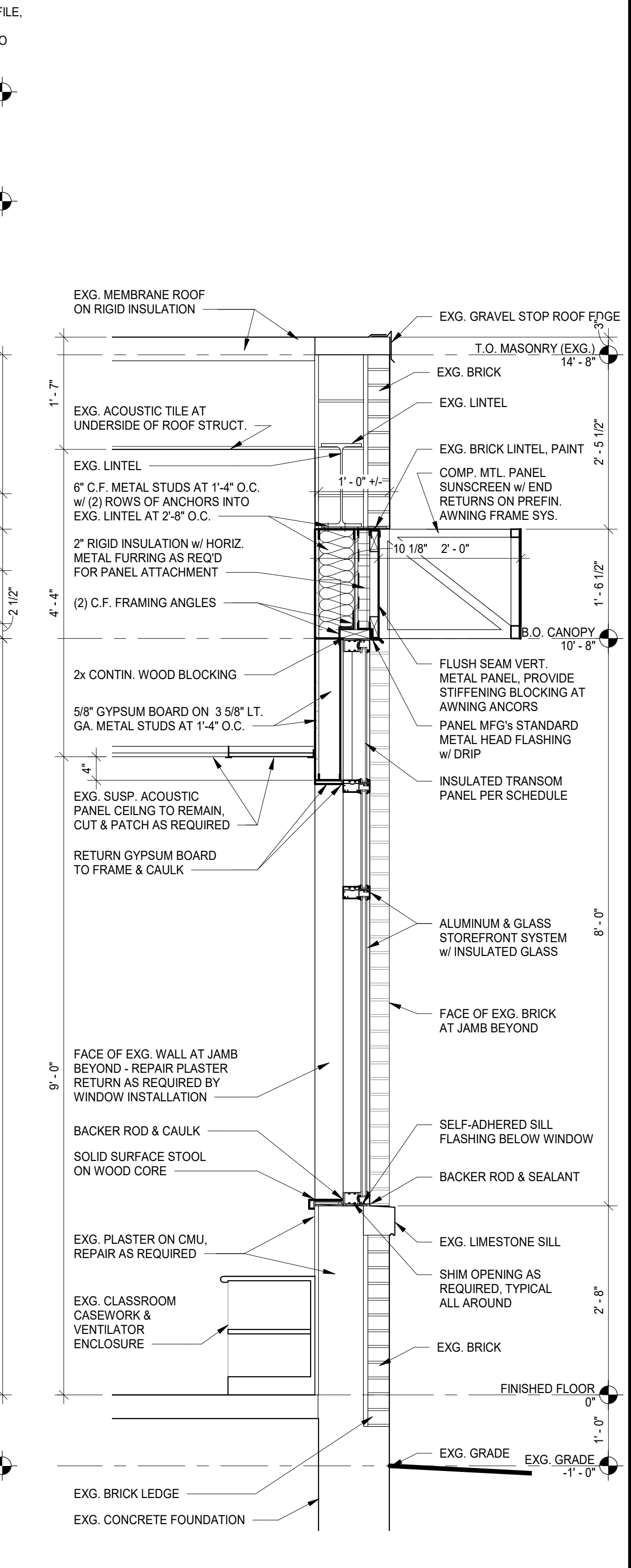
1 WALL SECTION
SCALE : 3/4" = 1'-0"



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



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



4 WALL SECTION (TYPICAL CLASSROOM)
SCALE : 3/4" = 1'-0"

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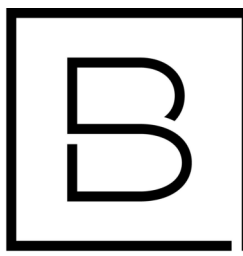
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Designer	Reviewer
R. KEUNEKE	R. KEUNEKE
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Sheet Name

WALL SECTIONS

Drawing Number

A301

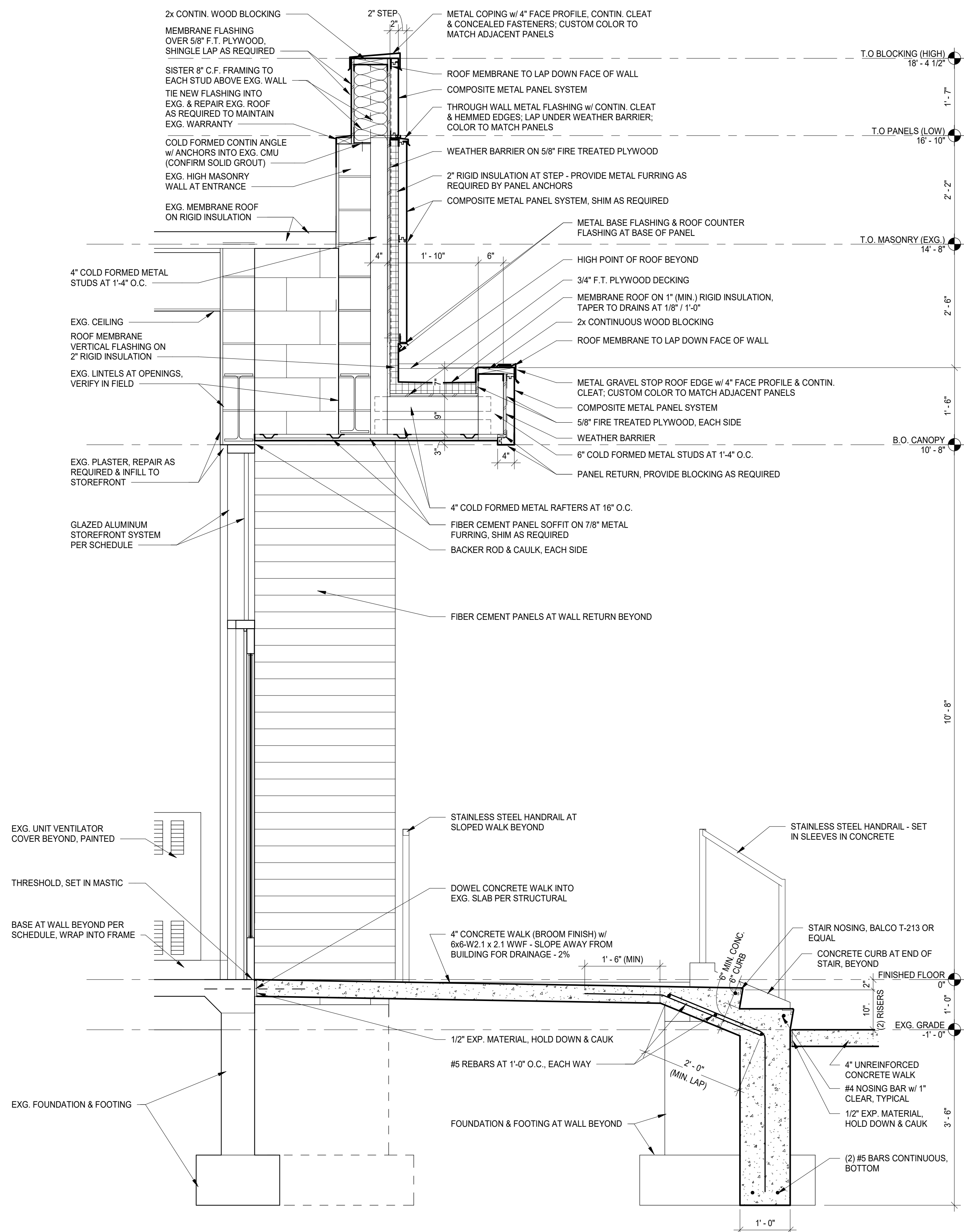


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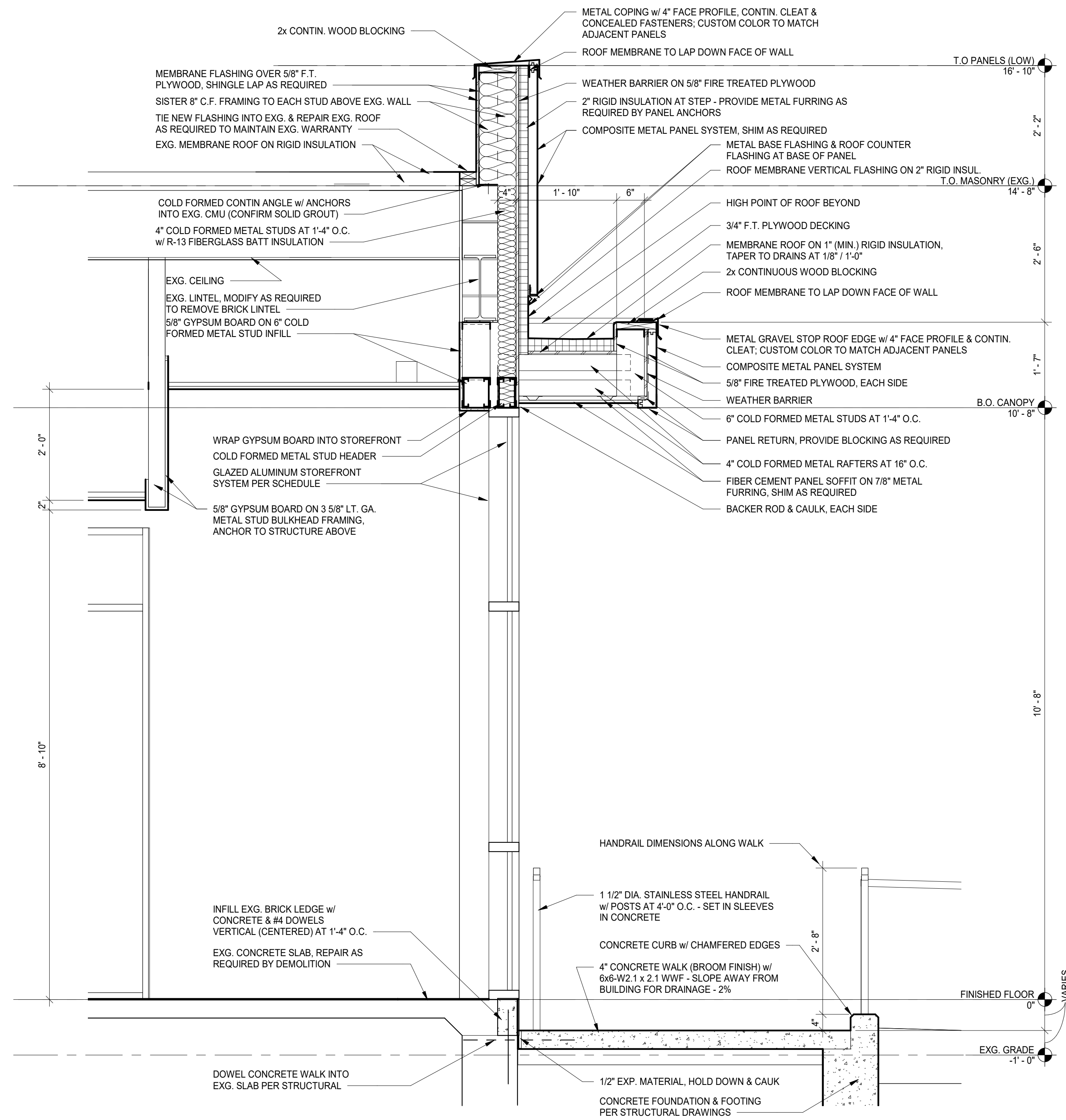
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2 WALL SECTION
SCALE : 3/4" = 1'-0"



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

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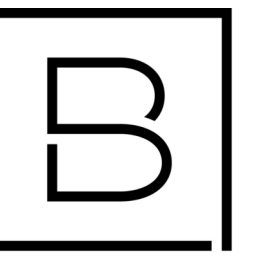
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D HOLTRUP	B HUYLER
Designer	Reviewer
R KEUNEKE	R KEUNEKE
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Sheet Name

WALL SECTIONS

Drawing Number

A302



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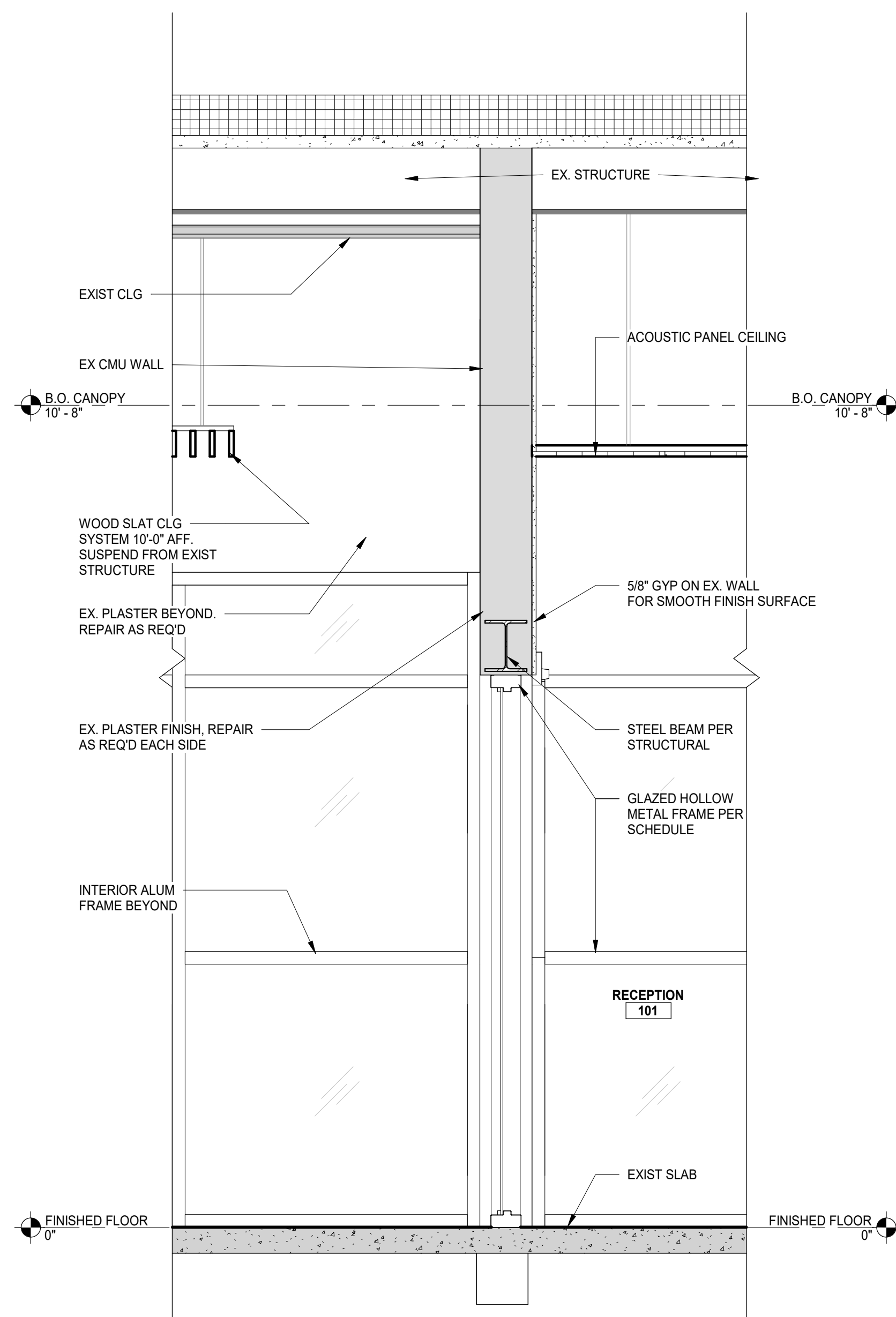
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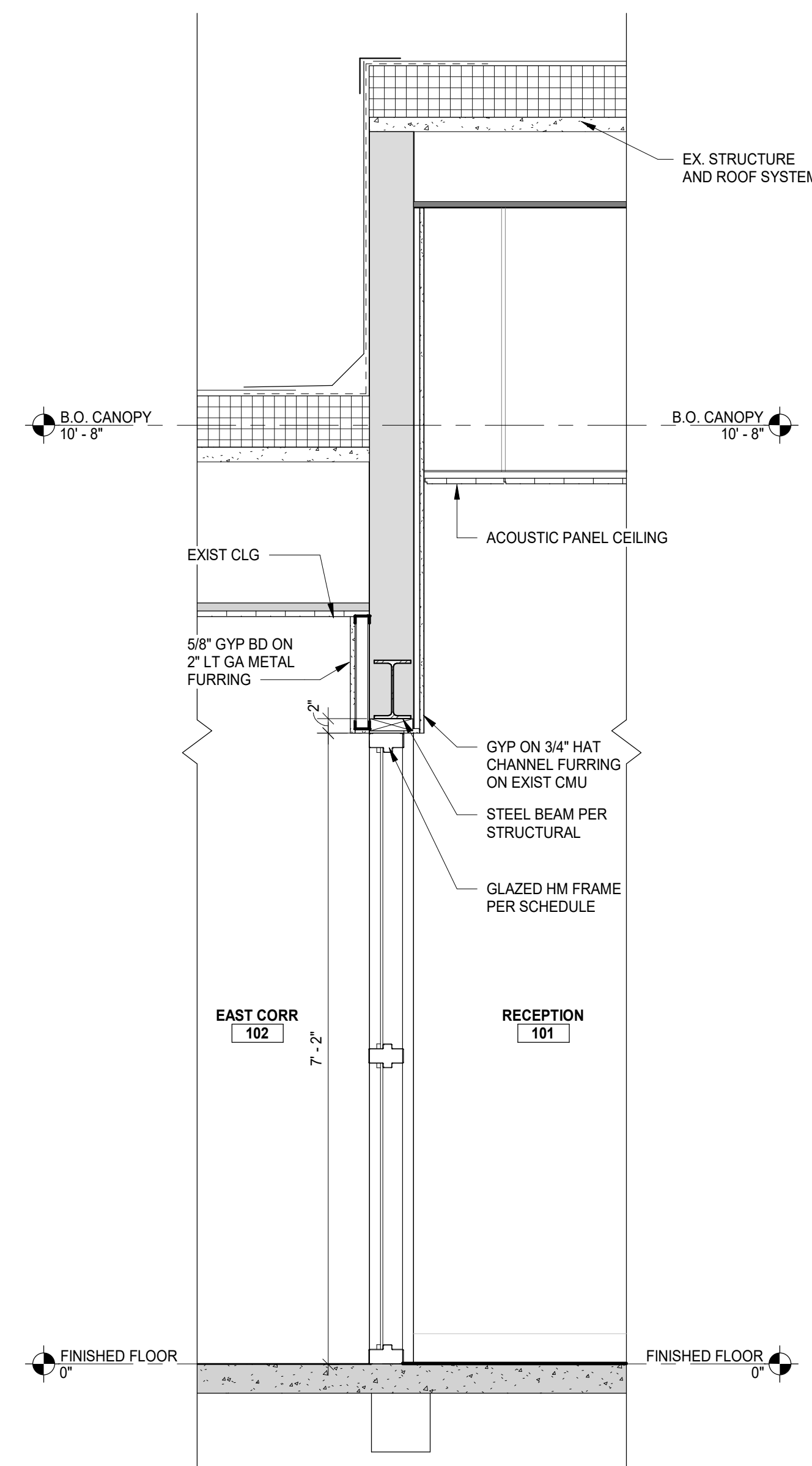
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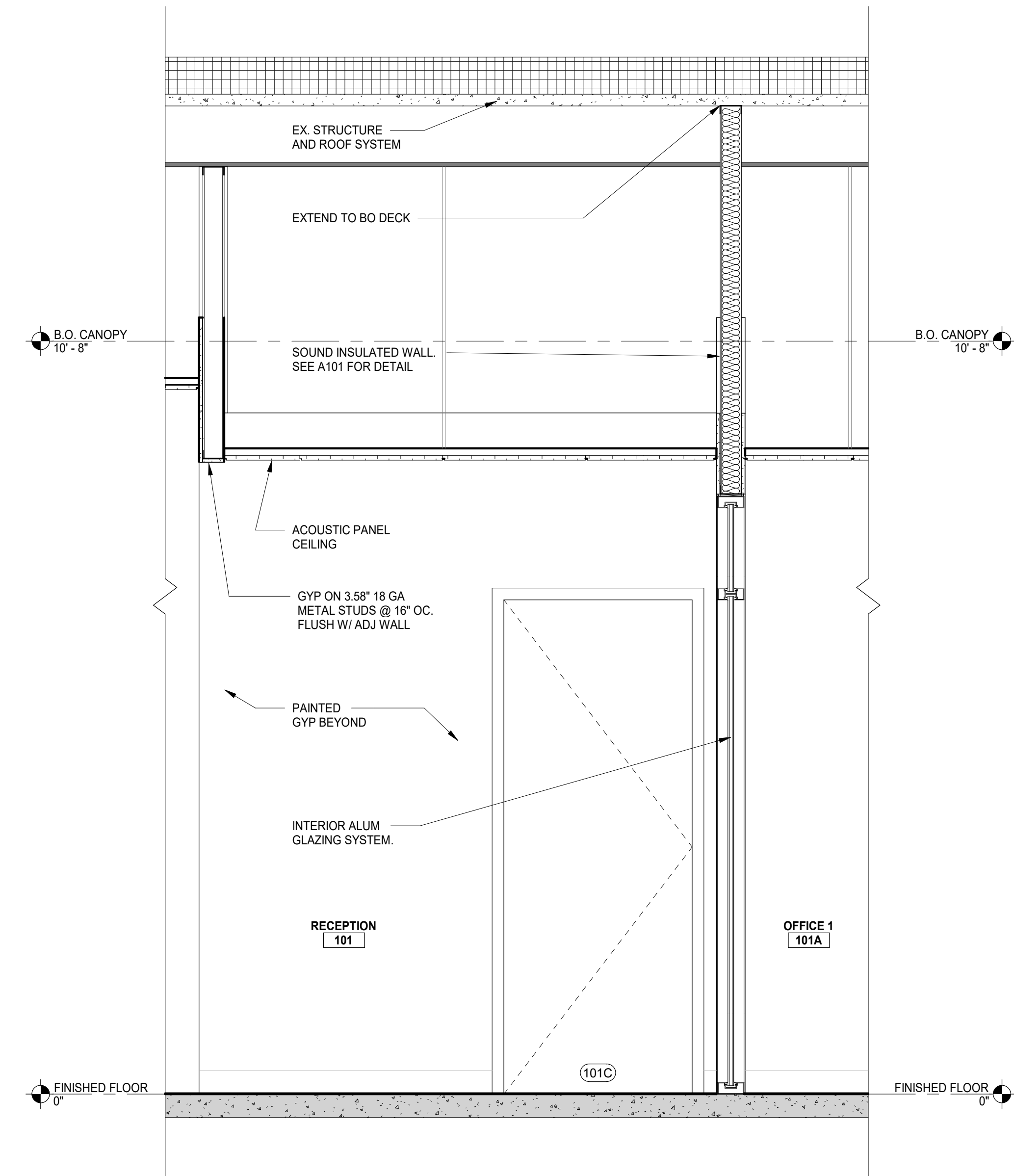
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3 VESTIBULE OPENING TO OFFICE
SCALE : 3/4" = 1'-0"



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



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

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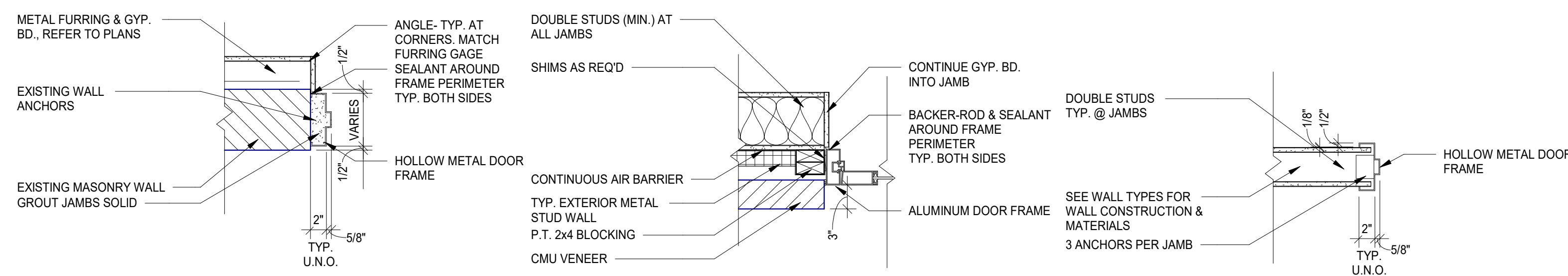
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D HOLTROP	B HUYLER
Designer	Reviewer
E POST	
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WALL SECTIONS

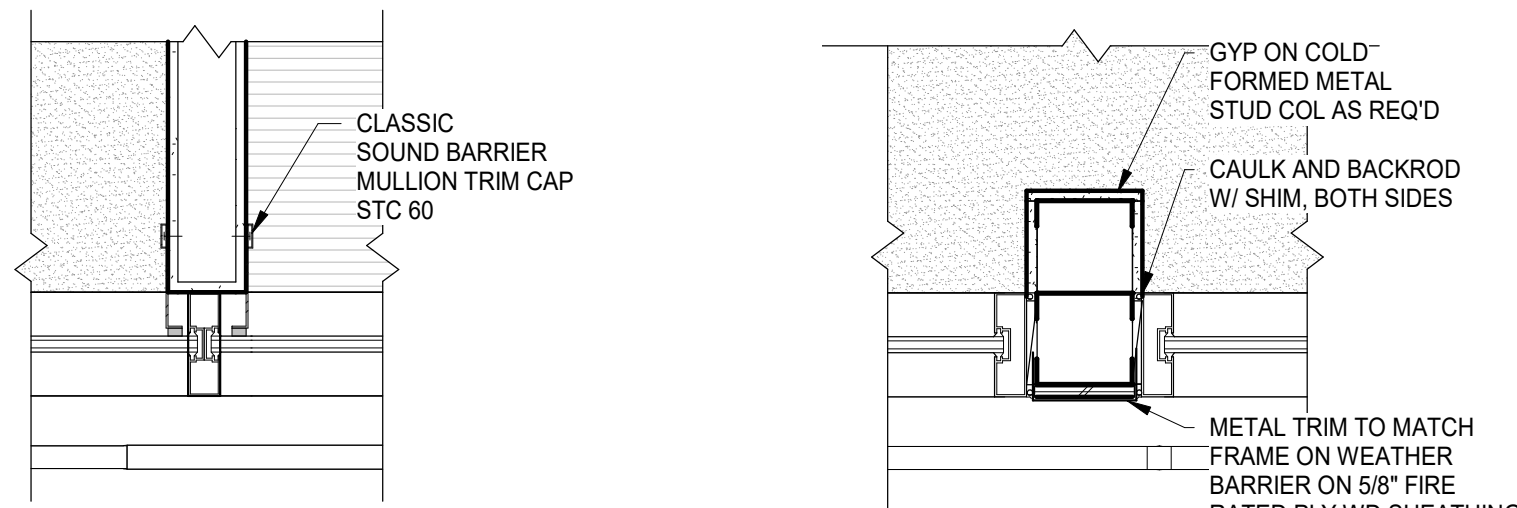
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A303



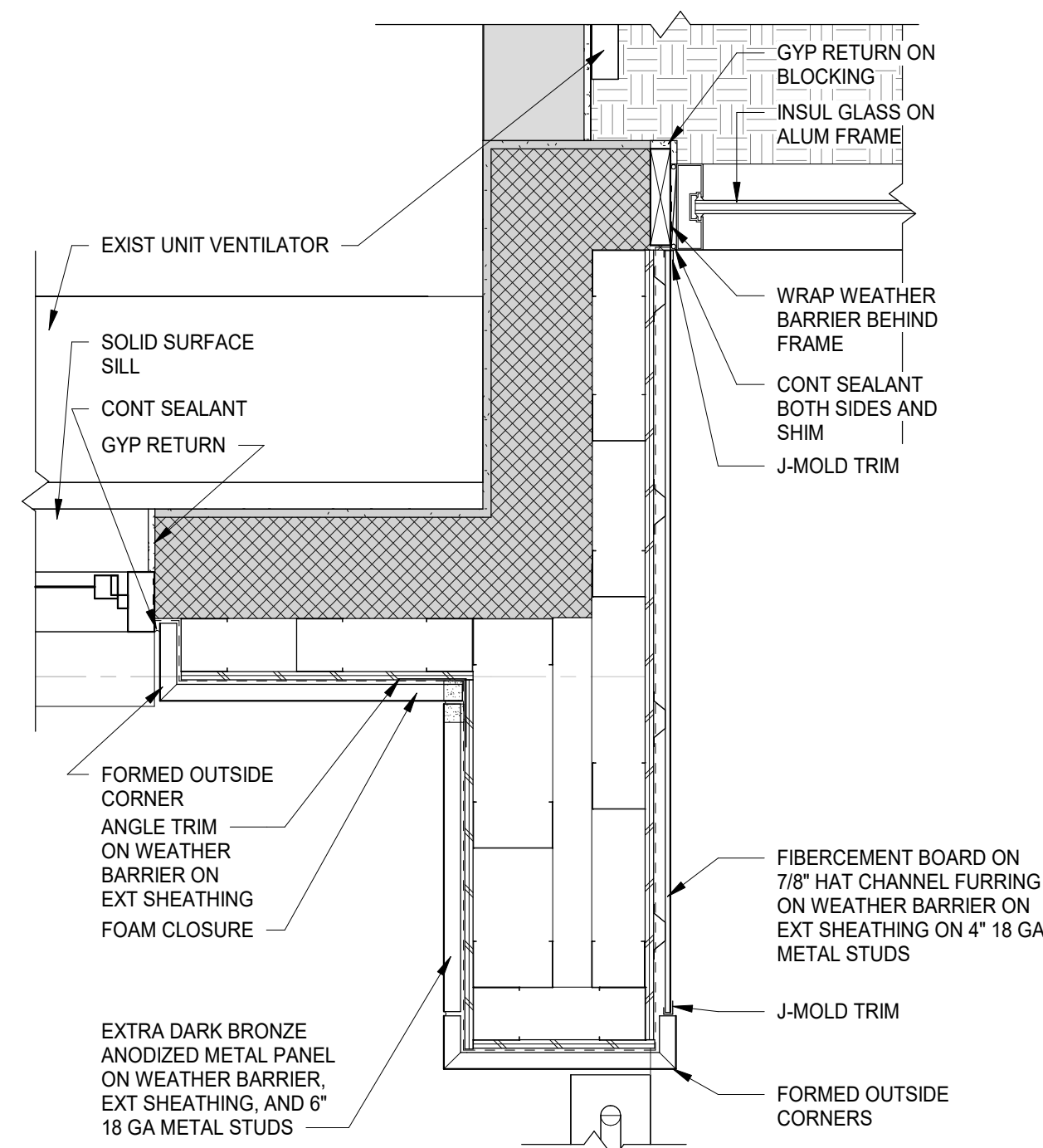
NOTE:
PROVIDE 4" FRAME @ HEAD OF CMU OPENINGS AS NOTED
ON DOOR FRAME ELEVATIONS

JAMB DETAILS (HEAD DETAIL SIM.)

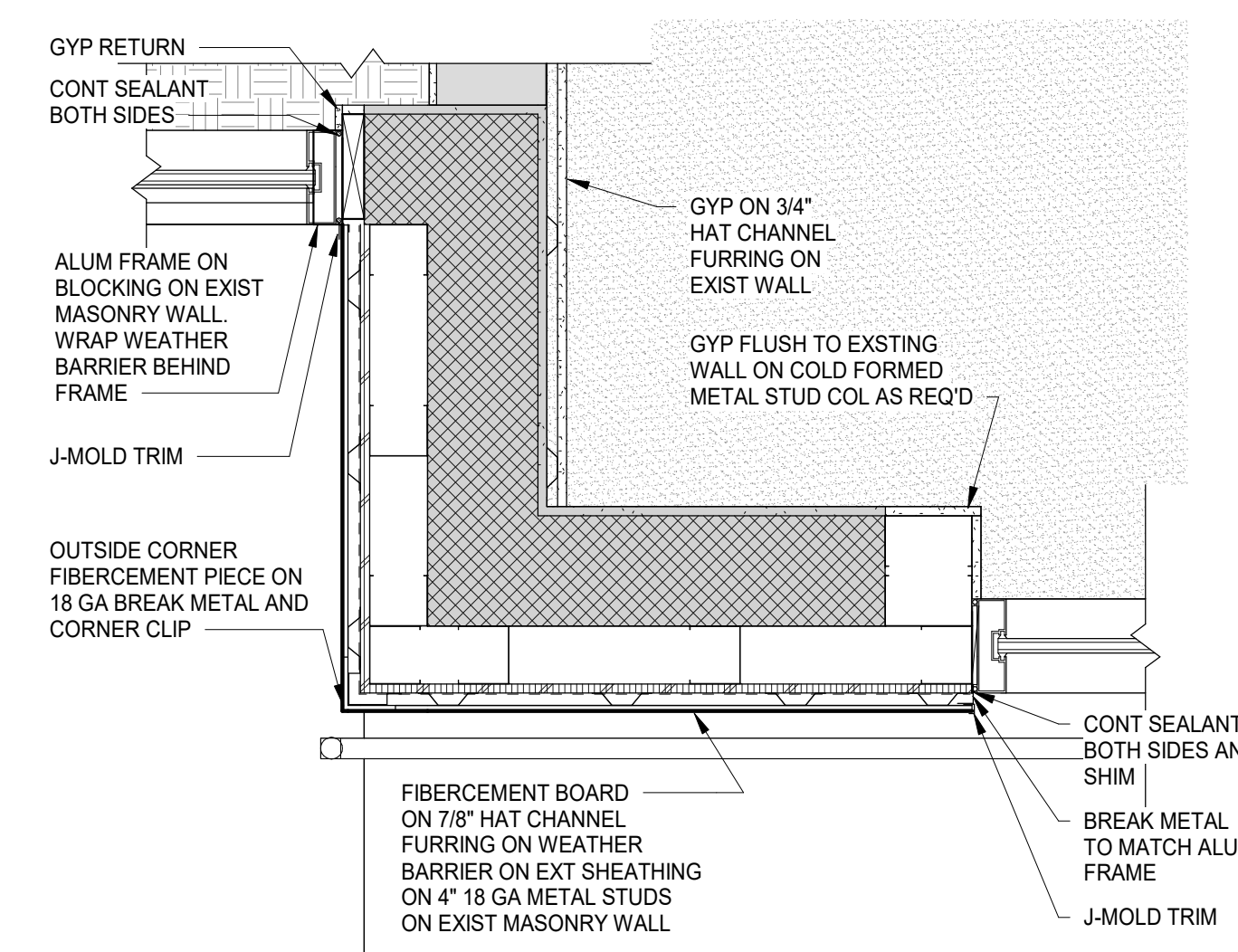


3 WALL TO WINDOW DETAIL
SCALE: 1" = 1'-0"

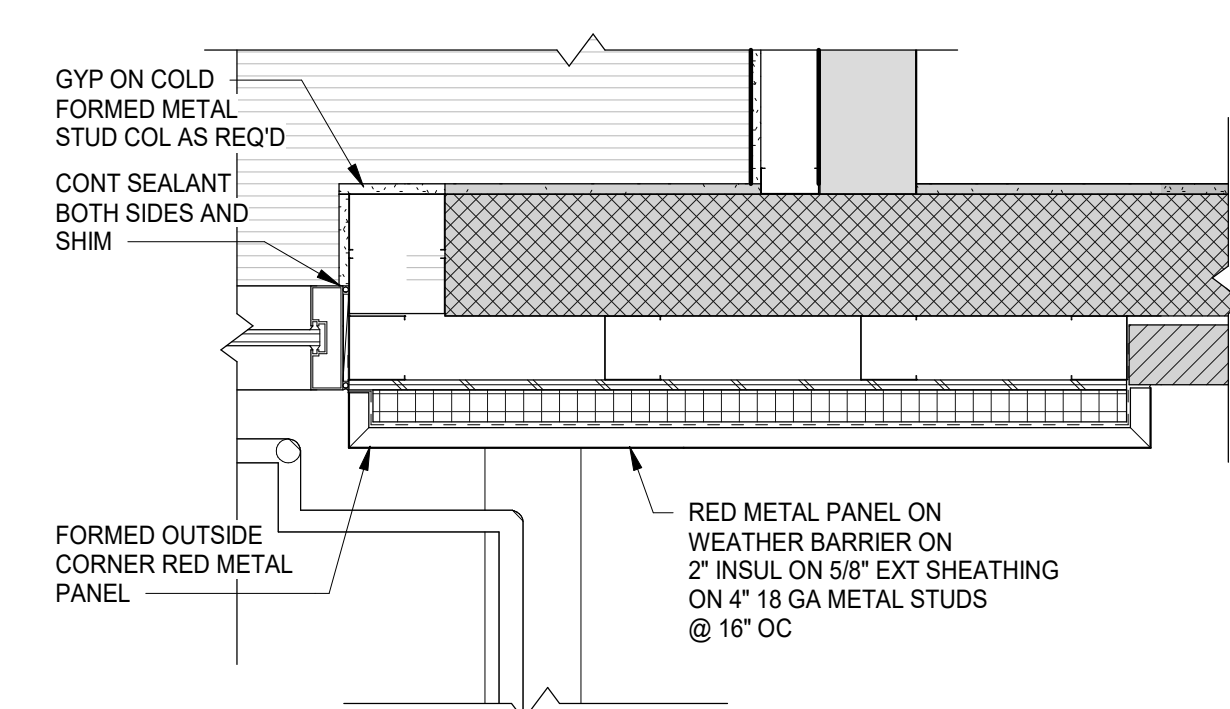
4 CENTER COL, WINDOW DETAIL
SCALE: 1" = 1'-0"



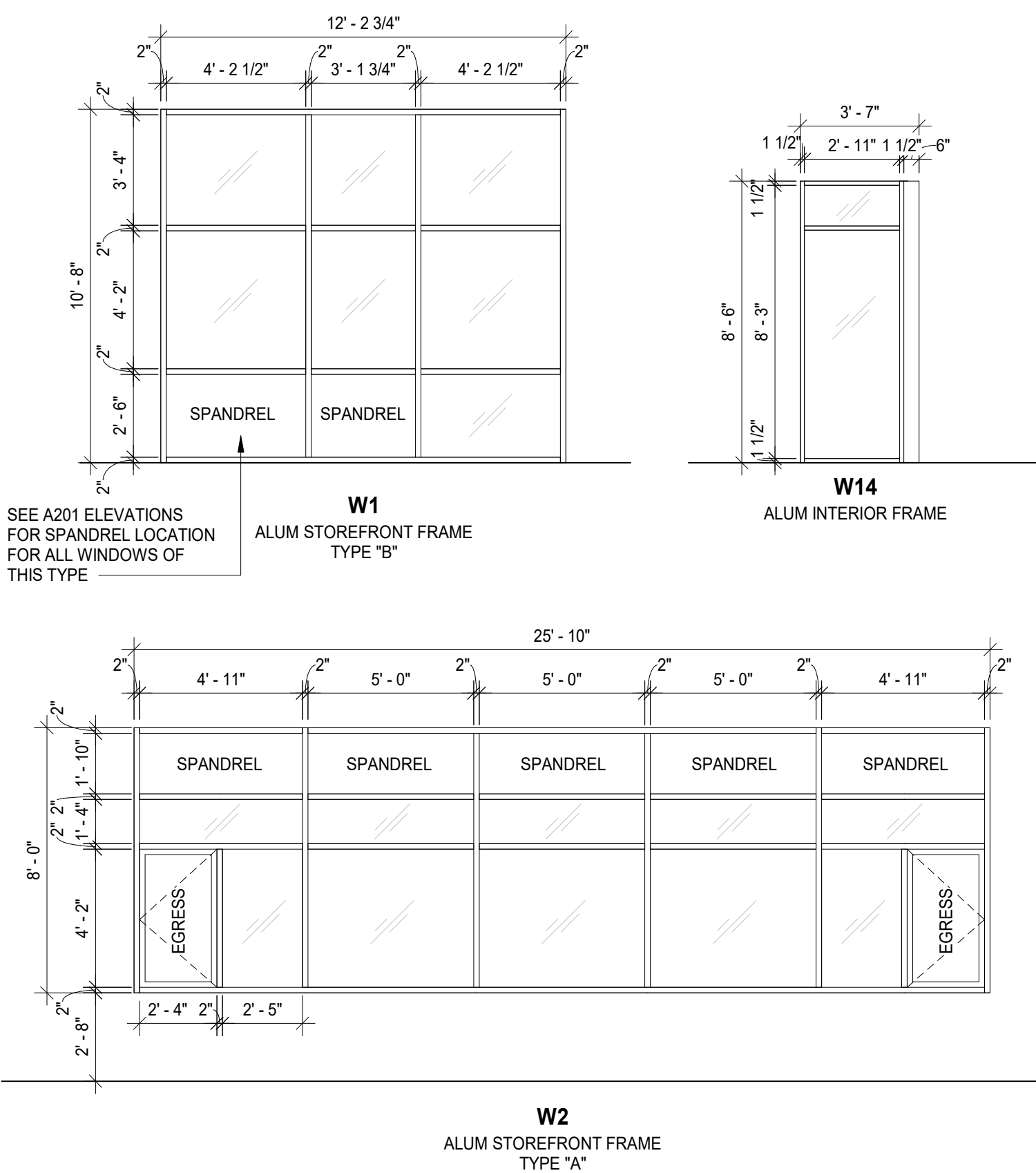
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SCALE: 1" = 1'-0"



1 PLAN DETAIL A
SCALE: 1" = 1'-0"

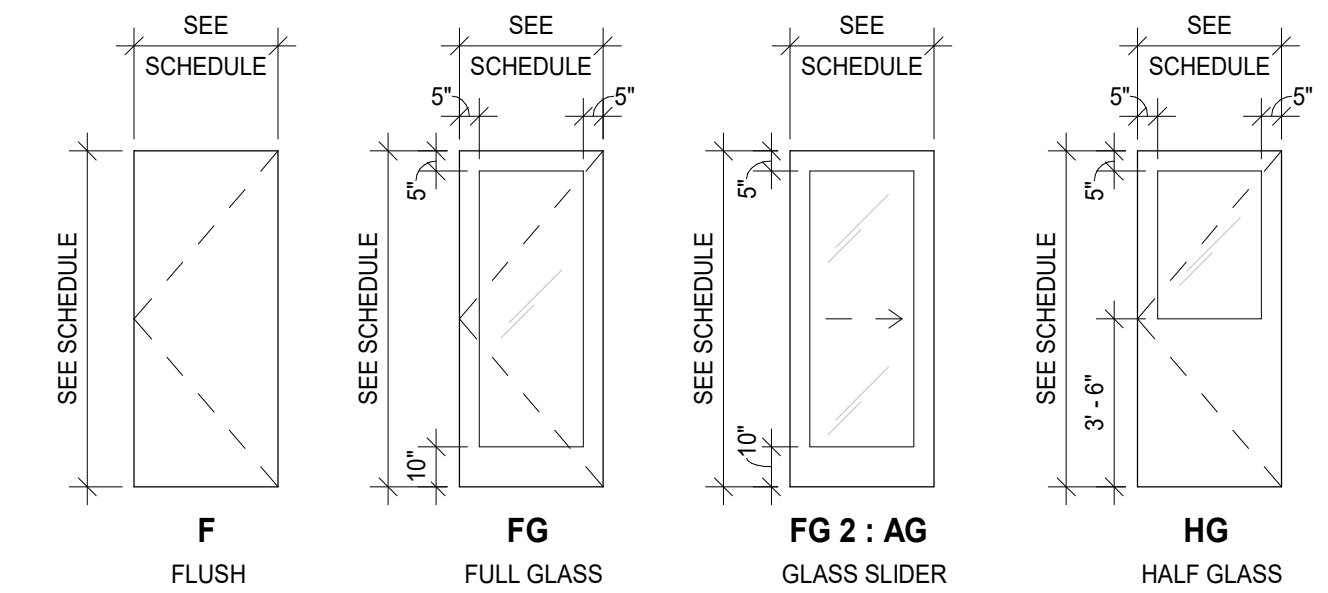


5 PLAN DETAIL C
SCALE: 1" = 1'-0"

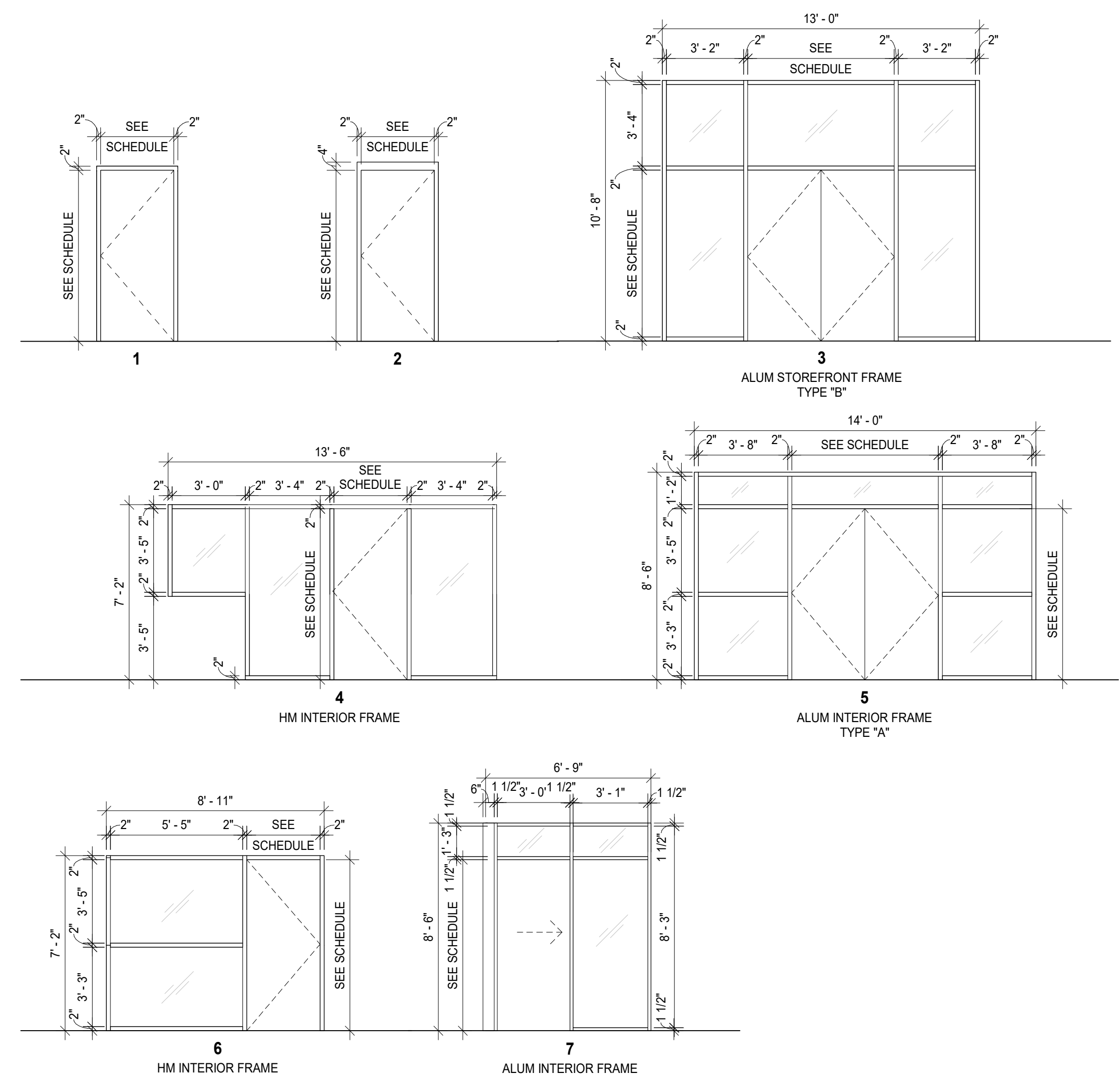


WINDOW - FRAME TYPES

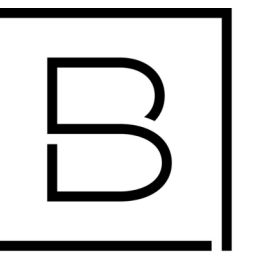
DOOR SCHEDULE												
DOOR #	DOOR				FRAME			GENERAL				DOOR #
	WIDTH	HEIGHT	THK.	TYPE	MAT-FIN	TYPE	MAT-FIN	DETAIL	HDWR	RATING	REMARKS	
Existing												
102B	6' - 0"	7' - 0"	1 3/4"	HG	Phase - Exist	-	Phase - Exist	-	08	-	EXISTING DOOR AND FRAME TO RECEIVE HARDWARE	102B
Phase 1												
100B	6' - 0"	7' - 0"	1 3/4"	FG	ALUM - FF	5	ALUM - FF	B*	06			100B
100C	3' - 0"	7' - 0"	1 3/4"	FG	WD - ST	4	HM - PT	A	05	20 MIN	45 MIN SIDELIGHT	100C
101A	3' - 1 1/2"	7' - 0"	2"	FG 2 : AG		7	ALUM - FF	B*	09		PERIMETER SOUND SEALS	101A
101D	2' - 8"	7' - 0"	1 3/4"	F	WD - ST	1	HM - PT	C	02			101D
101C	2' - 8"	7' - 0"	1 3/4"	F	WD - ST	1	HM - PT	C	01			101C
101B	3' - 1 1/2"	7' - 0"	2"	FG 2 : AG		7	ALUM - FF	B*	09		PERIMETER SOUND SEALS	101B
102A	3' - 0"	7' - 0"	1 3/4"	HG	WD - ST	6	HM - PT	A	04	20 MIN	45 MIN SIDELIGHT	102A
100A	6' - 0"	7' - 0"	1 3/4"	FG	HM - PT	3	ALUM - FF	1, 2/A601	07			100A



DOOR - TYPES



DOOR - FRAME TYPES



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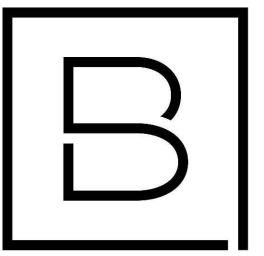
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Designer	Reviewer
E POST	R KEUNEKE
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**SCHEDULES, DOOR AND
WINDOW DETAILS**

Drawing Number

A601



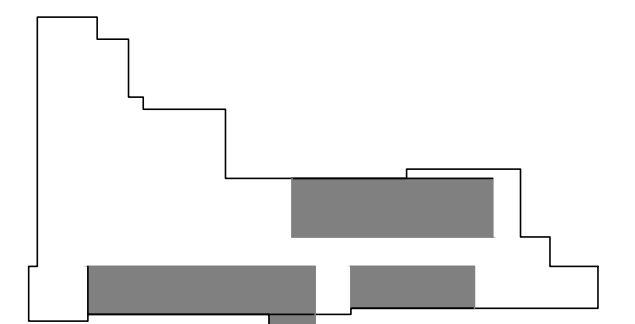
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MI - REGISTRATION# 6201643863
EXP. DATE# 4/14/2023



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D. HOLTROP	B. HUYLER
Designer	Reviewer
C. SCHOLTEN	C. NOLAN
Date Issued	Project Number
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**FIRST FLOOR
MECHANICAL & PLUMBING
DEMOLITION PLAN**

Drawing Number

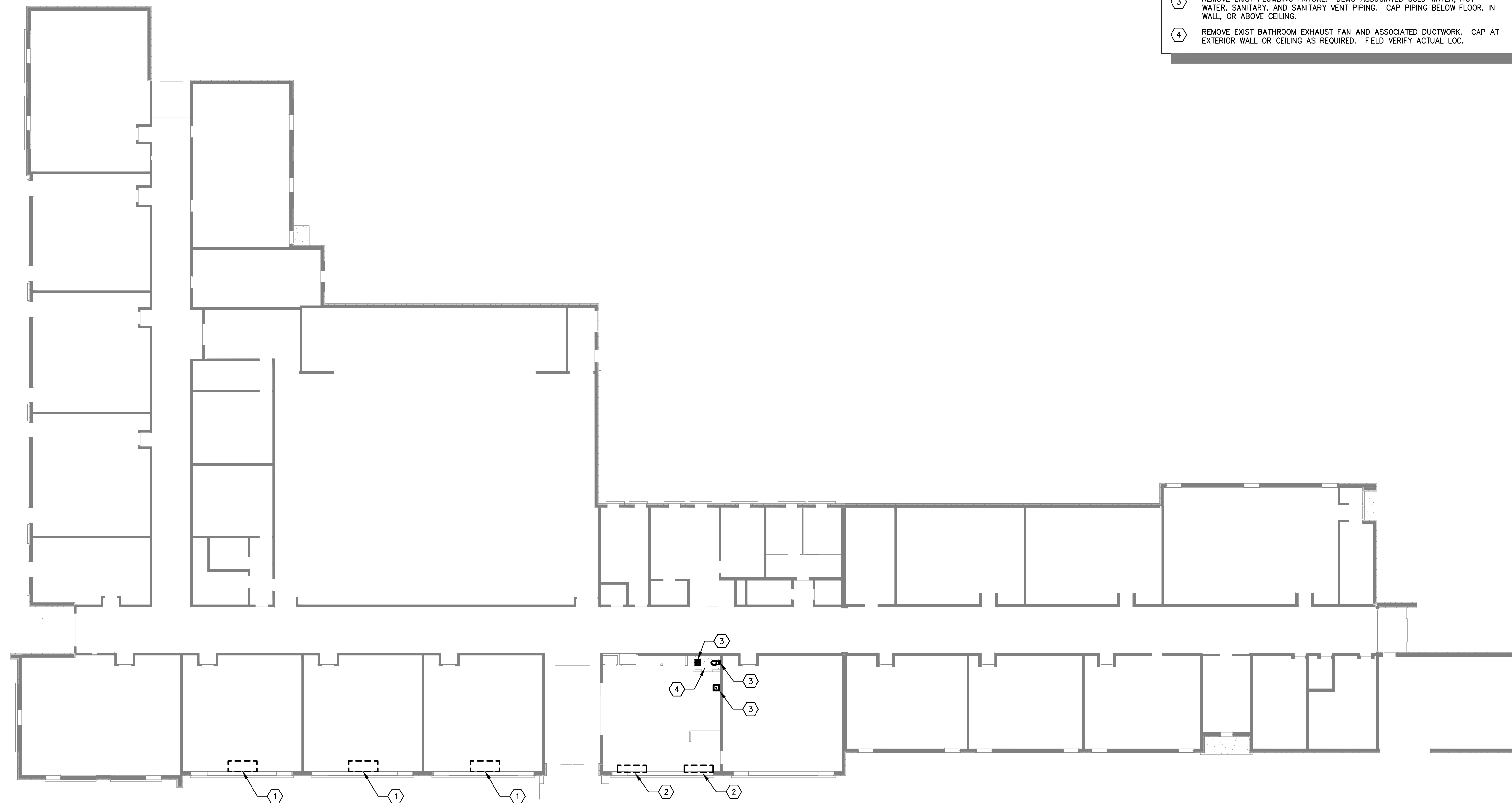
MD01

GENERAL HVAC AND PLUMBING DEMOLITION NOTES:

1. ALL EXISTING FIXTURES, PIPING, AND EQUIPMENT SHOWN AS DASHED SHALL BE REMOVED. PROTECT EXISTING WORK WHICH IS TO REMAIN IN PLACE FOR REUSE WITH TEMPORARY COVERS, SHORING, BRACING, AND SUPPORTS.
2. ALL EQUIPMENT TO BE REMOVED SHALL BE INSPECTED AND REVIEWED BY THE OWNER FOR POSSIBLE REUSE. EXCEPT WHERE INDICATED OTHERWISE, ALL MATERIALS AND EQUIPMENT REMOVED AND NOT REUSED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE OWNERS PROPERTY.
3. DO NOT INTERRUPT OR CONNECT INTO ANY SERVICE PIPING, ELECTRICAL, OR INSTRUMENTATION WORK WITHOUT PRIOR APPROVAL FROM THE OWNERS REPRESENTATIVE.
4. CONTRACTOR SHALL FIELD VERIFY LOCATION(S) OF EXISTING FIXTURES, PIPING, OR EQUIPMENT TO BE REMOVED.
5. COORDINATE WITH GENERAL CONTRACTOR FOR WALL, ROOF, AND FLOOR REPAIR WORK LEFT BY REMOVED ITEMS.

KEYED HVAC AND PLUMBING DEMOLITION NOTES:

1. REMOVE EXIST WALL HUNG HEAT PUMP CASSETTE FOR RELOCATION TO INTERIOR WALL. REROUTE REFRIGERATION AND CONDENSATE PIPING AS NEEDED.
2. REMOVE EXISTING UNIT VENTILATOR AND ALL ASSOCIATED COMPONENTS. CAP PIPING BELOW FLOOR.
3. REMOVE EXIST PLUMBING FIXTURE. DEMO ASSOCIATED COLD WATER, HOT WATER, SANITARY, AND SANITARY VENT PIPING. CAP PIPING BELOW FLOOR, IN WALL, OR ABOVE CEILING.
4. REMOVE EXIST BATHROOM EXHAUST FAN AND ASSOCIATED DUCTWORK. CAP AT EXTERIOR WALL OR CEILING AS REQUIRED. FIELD VERIFY ACTUAL LOC.



**FIRST FLOOR MECHANICAL AND
PLUMBING DEMOLITION PLAN**



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

HEAT PUMP CONDENSING UNIT SCHEDULE

MARK	SERVICE	MODEL	NOM TONS	DX REFR TYPE	CLG MBH	SEER	HTG MBH	HPSF	ELECTRICAL			CONTROLS		DISCONNECT		REMARKS
									VOLT	MCA	MOC	TYPE	BY	TYPE	BY	
HPCU-1	HP-1	AJ020BX3CH/AA	1.5	R-410A	21		2,200		208-230V/1PH	25.5	30	NOTE 3	DIV 23	NFDS WP	DIV 26	4, 2.
HPCU-3	HP-3	AC024BXADCH/AA	2	R-410A	24	19.5	27	8.5	208-230V/1PH	24.1	30	NOTE 3	DIV 23	NFDS WP	DIV 26	1, 2.
HPCU-4	HP-4	AC024BXADCH/AA	2	R-410A	24	19.5	27	8.5	208-230V/1PH	24.1	30	NOTE 3	DIV 23	NFDS WP	DIV 26	1, 2.
HPCU-5	HP-5	AC036BXADCH/AA	3	R-410A	36	19.2	40	8.5	208-230V/1PH	24.5	35	NOTE 3	DIV 23	NFDS WP	DIV 26	1, 2.
HPCU-6	HP-6	AC018BXADCH/AA	1.5	R-410A	18	20.1	20	8.1	208-230V/1PH	20.1	25	NOTE 3	DIV 23	NFDS WP	DIV 26	1, 2.
HPCU-7	HP-7	AC018BXADCH/AA	1.5	R-410A	18	20.1	20	8.1	208-230V/1PH	20.1	25	NOTE 3	DIV 23	NFDS WP	DIV 26	1, 2.
HPCU-8	HP-8	AC018BXADCH/AA	1.5	R-410A	18	20.1	20	8.1	208-230V/1PH	20.1	25	NOTE 3	DIV 23	NFDS WP	DIV 26	1, 2.

1. BASED ON SAMSUNG SINGLE ZONE AIR COOLED HEAT PUMP W/ WIRED THERMOSTAT, INVERTER DRIVE COMPRESSOR
2. POWER FOR INDOOR UNIT DERIVED FROM OUTDOOR UNIT, DIV 26 TO PROVIDE LOCAL DISCONNECT AS REQUIRED BY NEC
3. REFER TO INDOOR UNIT SCHEDULE FOR CONTROLS NOTES.
4. BASED ON SAMSUNG MULTI-ZONE AIR COOLED HEAT PUMP W/ WIRED THERMOSTAT, INVERTER DRIVE COMPRESSOR

HEAT PUMP CASSETTE SCHEDULE

MARK	LOCATION	MODEL	NOM TONS	CFM	DX REFR TYPE	NOMINAL COOLING CAPACITY (MBTUH)	NOMINAL HEATING CAPACITY (MBTUH)	CONTROL MEANS		DISCONNECT		REMARKS
								TYPE	BY	TYPE	BY	
HP-1-1	OFFICE	AR09BSFCMWNKCV	3/4	353/335/300	R410A	9	11	NOTE 3	DIV 23	NOTE 2	DIV 26	4.
HP-1-2	OFFICE	AR09BSFCMWNKCV	3/4	353/335/300	R410A	9	11	NOTE 3	DIV 23	NOTE 2	DIV 26	4.
HP-3	CLASSROOM	AC024BNADCH/AA	2	629/537/466	R410A	24	27	NOTE 3	DIV 23	NOTE 2	DIV 26	1.
HP-4	CLASSROOM	AC024BNADCH/AA	2	629/537/466	R410A	24	27	NOTE 3	DIV 23	NOTE 2	DIV 26	1.
HP-5	CLASSROOM	AC036BNTDCH/AA	3	830/752/699	R410A	36	40	NOTE 3	DIV 23	NOTE 2	DIV 26	1.
HP-6	CLASSROOM	AC018BNADCH/AA	1.5	615/540/441	R410A	18	20	NOTE 3	DIV 23	NOTE 2	DIV 26	1.
HP-7	CLASSROOM	AC018BNADCH/AA	1.5	615/540/441	R410A	18	20	NOTE 3	DIV 23	NOTE 2	DIV 26	1.
HP-8	CLASSROOM	AC018BNADCH/AA	1.5	615/540/441	R410A	18	20	NOTE 3	DIV 23	NOTE 2	DIV 26	1.

1. BASED ON SAMSUNG HEATING & COOLING SINGLE ZONE DUCTLESS WALL MOUNTED CASSETTE UNIT, PAIRED WITH OUTDOOR CONDENSER.
2. INDOOR UNIT POWER DERIVED FROM OUTDOOR UNIT, PROVIDE LOCAL DISCONNECT AS REQUIRED BY NEC
3. CONTROLLER PROVIDED WITH UNIT, PROVIDE ADDITIONAL HARD WIRED THERMOSTAT W/ INTEGRATION FOR FUTURE CONNECTION TO BMCS.
4. BASED ON SAMSUNG HEATING & COOLING MULTI-ZONE DUCTLESS WALL MOUNTED CASSETTE UNIT, PAIRED WITH OUTDOOR CONDENSER.

DIFFUSER, REGISTER & GRILLE SCHEDULE

MARK	SERVICE	MODEL	VOLUME CONTROL DAMPER	FINISH	REMARKS
CD-1	CEILING SUPPLY DIFFUSER	IMS	NO	STANDARD WHITE	1. ROUND NECK, 24x24 LAY-IN UNLESS NOTED OTHERWISE
SG-1	SIDEWALL SUPPLY DIFFUSER	300RL	YES	STANDARD WHITE	1. 3/4" SPACING, 35" FIXED, SURF
RG-1	EGGCRATE GRILLE	80	NO	STANDARD WHITE BAKED ENAMEL	1. 1 1/2" x 1 1/2" x 1 1/2", 24" x 24" LAY-IN UNLESS NOTED OTHERWISE
RG-2	RETURN GRILLE	350RL	YES	STANDARD WHITE BAKED ENAMEL	1. 3/4" SPACING, 45" FIXED, SURF

1. BASED ON TITUS.

ROOFTOP AIR CONDITIONER UNIT SCHEDULE

UNIT NO.	SERVES	TONS	MODEL	CFM	SP	HP	COOLING OUTPUT MBH	HEATING INPUT/OUTPUT	EER	POWER	KW	MCA	REC. FUSE	MIN. OA	OUTSIDE AIR DAMPER SETTING	REMARKS
RTU-1	ADMIN/VEST	3	YSC036E3R0MA**B000B6	1200	0.7"	0.75	37.0	81/65 MBH	12	208-230V/3PH	3	20	30	180	15%	1, 2, 600 LBS

1. BASED ON TRANE PRECEDENT DOWNFLOW UNIT WITH SINGLE COMPRESSOR AND HOT GAS REHEAT, 2-STAGE MEDIUM GAS HEAT, STANDARD EFFICIENCY, 0-50% MOTORIZED FRESH AIR DAMPER W/ BAROMETRIC RELIEF, STANDARD SERVICE PANELS, 2" MERV 8 FILTERS, STANDARD CONDENSER COIL, UNIT MOUNTED CIRCUIT BREAKER, 7-DAY PROGRAMMABLE T-STAT, & POWERED CONVENIENCE OUTLET.
2. TO BE PROVIDED WITH 14" ROOF CURB

VENTILATION SUMMARY: RTU-1

ROOM NAME	ROOM #	CLASSIFICATION	AREA (SF)	CEILING HEIGHT (FT)	OCCUPAN T DENSITY #/1000SF	#OCCUPANTS	CFM OA PER OCCUPAN	Rp VENT CFM	CFM OA PER SF AREA	Ra VENT FCM	BASE OA CFM	Ez	TOTAL REQ'D OA CFM	DESIGN SA CFM	PERCENT OA AT UNIT	DESIGN OA CFM	MEETS TABLE 403.3 REQUIREMENT
VESTIBULE		CORRIDOR	345	9	0.0	0	0	0.0	0.06	20.7	20.7	1.0	20.7	350	9%	32	YES
ADMIN AREA	101	OFFICE	880	9	5.0	4.4	5	22.0	0.06	52.8	74.8	1.0	74.8	850	9%	75	YES
			1225			4.4					95.5		95.5	1200	9%	106	YES

1. ALL VENTILATION AIR PROVIDED BY FRESH AIR DAMPER ON RTU-1; UNITS OPERATE WITH FAN ON CONTINUOUSLY DURING OCCUPIED PERIODS

MECHANICAL (DIVISION 23) SPECIFICATION:

GENERAL REQUIREMENTS

PROVIDE EQUIPMENT AND COMPONENTS INDICATED ON THE DRAWINGS, AND AS REQUIRED FOR A COMPLETE FUNCTIONING SYSTEM. CONTRACTOR WILL BE RESPONSIBLE FOR RECEIVING, RIGGING AND INSTALLING ALL EQUIPMENT PROVIDED PART OF THEIR WORK CATEGORY.

DEFINITIONS: FURNISH MEANS TO SUPPLY AND DELIVER TO PROJECT SITE, READY FOR INSTALLATION. INSTALL MEANS TO PLACE IN POSITION AND MAKE CONNECTIONS FOR SERVICE OR USE. PROVIDE MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR INTENDED USE. RECEIVE MEANS TO COORDINATE AND ACCEPT DELIVERY OF EQUIPMENT AT JOBSITE.

MECHANICAL EQUIPMENT IDENTIFICATION: PROVIDE ENGRAVED PLASTIC LAMINATE LABEL FOR EACH MAJOR ITEM OF MECHANICAL EQUIPMENT & EACH OPERATIONAL DEVICE. LETTERS TO BE A MINIMUM OF 1/2" HIGH.

OPERATIONS AND MAINTENANCE MANUALS (OMM): AT COMPLETION OF PROJECT PROVIDE A MINIMUM OF TWO OMM MANUALS IN THREE RING BINDERS TO THE OWNER/TENANT. MANUALS SHALL HAVE TABS LABELED WITH ALL SECTIONS SEPARATED WITH A CLEAR INDEX AT THE FRONT. PROVIDE A WARRANTY LETTER AT THE FRONT OF THE MANUAL STATING DATES OF WARRANTY (START DATE AND END DATE) AND CONTACTS WITH PHONE NUMBERS FOR WARRANTY WORK. PROVIDE A NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE INCLUDING RECOMMENDED SETPOINTS. MANUALS SHALL INCLUDE SUBMITTALS OF ALL EQUIPMENT, SIZE AND OPTIONS SELECTED. PROVIDE ALL BALANCING REPORTS. PROVIDE MANUFACTURER LITERATURE FOR OPERATIONS AND MAINTENANCE FOR ALL THE EQUIPMENT ON THE PROJECT. ALL PERIODIC AND ROUTINE MAINTENANCE SHALL BE CLEARLY IDENTIFIED. PROVIDE A CONTROLS SECTION LISTING SYSTEM OPERATING AND CONTROL INSTRUCTIONS, MAINTENANCE, CALIBRATION, WIRING DIAGRAMS, SCHEMATICS AND CONTROL SEQUENCE DESCRIPTIONS.

TESTING AND BALANCING: TEST AND ADJUST ALL MECHANICAL SYSTEMS AND EQUIPMENT TO ASSURE PROPER BALANCE AND OPERATION. PERFORM TESTS IN ACCORDANCE WITH THE MOST CURRENT NEBB OR AABC, AND ASHRAE STANDARDS. ELIMINATE OBJECTIONABLE NOISE AND VIBRATION, AND ASSURE PROPER FUNCTION OF CONTROLS. BALANCING CONTRACTOR SHALL BE AN INDEPENDENT CERTIFIED TEST AND BALANCE CONTRACTOR, WITH NEBB OR AABC CERTIFICATION. SUBMIT COMPLETED AND CERTIFIED TEST AND BALANCE REPORT TO OWNER'S REPRESENTATIVE. BALANCE ALL SYSTEMS TO WITHIN 5% OF AIR FLOWS AND WATER FLOWS INDICATED ON THE DRAWINGS.

GENERAL DUCT REQUIREMENTS

DUCT TURNING VANES: PROVIDE FABRICATED TURNING VANES AND VANE RUNNERS, CONSTRUCTED IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" AND MATCHING MATERIAL OF DUCT SYSTEM. PROVIDE TURNING VANES CONSTRUCTED OF CURVED BLADES, SUPPORTED WITH BARS PERPENDICULAR TO BLADES, AND SET INTO SIDE STRIPS SUITABLE FOR MOUNTING IN DUCTWORK. FOLLOW SMACNA GUIDELINES FOR SPACING, SUPPORT, AND CONSTRUCTION. ALL BLADES SHALL BE DOUBLE THICKNESS AIRFOIL TYPE.

DUCT INSULATION: INDOOR: PROVIDE INSULATION FOR ALL CONCEALED SUPPLY & OA DUCTWORK PROVIDE MINIMUM 1.5" THICK BLANKET TYPE FIBERGLASS INSULATION COMPLYING WITH ASTM C-553, TYPE II, WITH FACTORY APPLIED KRAFT BONDED TO ALUMINUM FOIL, REINFORCED WITH FIBERGLASS VAPOR BARRIER/JACKET. JACKET SHALL CONFORM TO ASTM C-1136, TYPE II. INSTALLED R-VALUE SHALL BE 4.2 OR HIGHER WITH A 3/4 PCF DENSITY -OR- PROVIDE MINIMUM 1" THICKNESS INTERNAL ACOUSTIC DUCT LINER (R3.5). INTERNAL DUCT LINER TO BE EQUAL TO JOHNS MANSVILLE LINACOUSTIC RC. NOTE: ALL RECTANGULAR RA & SA DUCTWORK TO BE LINED WITHIN 15' OF EQUIPMENT.

DUCT SEALANT: PROVIDE WATER BASED SYNTHETIC LATEX EMULSION PERMANENTLY FLEXIBLE HIGH VELOCITY DUCT SEALANT, DUCTMATE INDUSTRIES, INC. PRO SEAL OR EQUIVALENT. SEALANT TO BE LOW VOC LEED COMPLIANT CAPABLE OF 15" W.G., NFPA 90A AND 90B APPROVED, UL 1818-M LISTED AND UL 723 CLASSIFIED. INSTALL PER MANUFACTURER INSTRUCTIONS. SEALANT SHALL BE APPROVED FOR PLENUM INSTALLATIONS AND MEET FLAME SPREAD AND SMOKE DEVELOPMENT RATINGS FOR PLENUM APPLICATIONS.

SHEET METAL DUCT

SHEETMETAL DUCTWORK: PROVIDE SHEETMETAL DUCTWORK FABRICATED AND INSTALLED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS, FOR 2" W.G. PRESSURE CLASS, SEAL CLASS "A" (UNLESS OTHERWISE INDICATED ON DUCT SYSTEM SCHEDULE). SHEETMETAL SHALL BE GALVANIZED SHEET STEEL OF LOCK FORMING QUALITY, WITH G60 ZINC COATING. SHEET STEEL SHALL COMPLY WITH

GENERAL DUCT REQUIREMENTS CONTINUED

ASTM A653 STANDARD SPECIFICATION FOR STEEL SHEETMETAL, ALL ANGLE IRON USED FOR SUPPORT SHALL BE GALVANIZED. SEAL ALL DUCT SEAMS, TRANSVERSE AND LONGITUDINAL, AIR TIGHT. PROVIDE TURNING VANES AT ALL 90° ELBOWS.

RECTANGULAR VOLUME DAMPERS: PROVIDE MINIMUM 16 GAUGE GALV STEEL CONTROL FRAME, 16 GAUGE GALVANIZED STEEL BLADES, MINIMUM 1/2" HEXAGONAL AXLE, MOLDED SYNTHETIC BEARINGS, WITH 3/8" SQUARE PLATED STEEL CONTROL SHAFT. LINKAGES SHALL BE CONCEALED IN THE FRAME. OPERATING SHAFT SHALL EXTEND BEYOND FRAME AND DUCT TO A LOCKING QUADRANT WITH ADJUSTABLE LEVER. MAXIMUM BLADE WIDTH SHALL NOT EXCEED 6".

ROUND VOLUME DAMPERS: PROVIDE ROUND MANUAL BALANCING DAMPER AT ALL RUN OUTS TO CEILING SUPPLY AIR DIFFUSERS. PROVIDE MINIMUM 20 GAUGE GALVANIZED STEEL FRAME AND BLADES, MINIMUM 3/8" SQUARE STEEL AXLE, MOLDED SYNTHETIC BEARINGS, WITH LOCKING POSITION REGULATOR. REGULATOR SHALL BE POSITIONED WITH SHEETMETAL BRACKET BEYOND DUCT COVERING, WHERE POSITIONING REGULATOR IS NOT ACCESSIBLE. PROVIDE COUPLING AND EXTENSION ROD WITH REGULATOR FOR CEILING OR WALL INSTALLATION, AS REQUIRED.

FLEXIBLE DUCT CONNECTORS: PROVIDE U.L. LABELED 30 OUNCE NEOPRENE COATED FIBERGLASS FABRIC DUCT CONNECTORS AT DUCT CONNECTIONS TO ALL VIBRATING EQUIPMENT.

PIPING REQUIREMENTS

NATURAL GAS PIPING: NATURAL GAS PIPING: ALL NATURAL GAS PIPING SHALL BE SCH 40 STEEL PIPE, ASTM A53, WITH SCREWED JOINTS AND 150 LB MALLEABLE IRON FITTINGS FOR NPS 2" AND SMALLER, AND SCH 40 WELDED JOINTS AND FITTINGS FOR NPS 2-1/2" AND LARGER. PRESSURE TEST NEW GAS PIPE SYSTEMS TO 5 PSI FOR 30 MINUTES WITH NO LOSS OF PRESSURE BEFORE PLACING INTO SERVICE. LEAK TEST ALL GAS PIPE SCREWED JOINTS AND UNIONS BEFORE PLACING INTO SERVICE.

SHUTOFF/STOP VALVES: CWP RATED 125 PSIG BRONZE OR CAST IRON PLUG VALVE

APPLIANCE GAS VALES: CWP RATED 125 PSIG BRONZE OR CAST IRON PLUG VALVE.

APPLIANCE PRESSURE REGULATORS: CAST IRON OR DIE CAST ALUMINUM BODY, SPRING DIAPHRAGM TYPE, ANSI Z21.18, REFER TO PLANS FOR CAPACITY AND PRESSURE TURNDOWN REQUIREMENTS. STAINLESS STEEL VENT SCREEN, INSTALL IN ORIENTATION THAT PREVENTS WATER INTRUSION INTO VENT OPENING PER MFGR INSTRUCTIONS.

PROVIDE ADJUSTABLE CLEVIS STYLE HANGER FOR INDIVIDUAL HORIZONTAL PIPING LESS THAN 20 FT LONG. SUPPORT PIPE HANGERS WITH TREADED HANGER RODS: 1/4" TREADED HANGER RODS FOR PIPE SIZES UP TO 1-1/2". EXTERIOR PIPE SUPPORTS ON ROOF SHALL BE RUBBER BLOCK BASE STYLE WITH GALVANIZED STRUT WITH SLIP SHEET OF ROOFING MEMBRANE MATERIAL BETWEEN BASE AND ROOF; ATTACH PIPE TO UNISTRUT RAIL USING CUSHIONED PIPE/TUBE CLAMPS.

ALL BUILDING CONNECTIONS SHALL BE WITH BEAM CLAMPS TO TOP OF STRUCTURAL JOIST/TRUSS, OR TO BOTTOM FLANGE OF SOLID BEAM SHAPES.

REFRIGERANT PIPING: ALL REFRIGERATION PIPING SHALL BE TYPE ACR COPPER TUBE, ASTM B-88, WITH BRAZED OR FLARED JOINTS AND FITTINGS, INSTALLED PER MFG'S INSTRUCTION.

SERVICE AND ISOLATION VALVES: FORGED BRASS BODY AND CAP, PTFE SEATS & GASKETS, MALE SAE FLARE X FEMALE SAE FLARE, FULL PORT UNI-BODY DESIGN, 700 PSIG RATED, EQUIPPED WITH ACCESS FITTING FOR REFRIGERATION SERVICE, CAPABLE OFF VALVE OPERATION WITHOUT REMOVAL OF SEAL CAP.

PROVIDE AP ARMAFLEX BLACK LAPSEAL PRE-FORMED PIPE FLEXIBLE CLOSED CELL INSULATION FOR ALL INTERIOR AND EXTERIOR REFRIGERATION PIPING.

EXTERIOR PIPE INSULATION SHALL BE PROTECTED WITH EITHER:
1. VENTURE-CALD JACKETING
2. BRUSH APPLIED ARMAFLEX WB WHITE UV RESISTANT COATING.

MECH CODE COMPLIANCE NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF SYSTEM IN COMPLIANCE WITH 2015 MICHIGAN MECHANICAL CODE (MMC), ASHRAE 90.1-2013, AND ALL OTHER APPLICABLE STATE AND LOCAL CODES.
2. FOR CLASSROOMS AND OFFICES WITH NEW DUCTLESS SPLIT HEAT PUMP SYSTEM, ALL VENTILATION TO BE PROVIDED BY MECHANICAL MEANS USING EXISTING CLASSROOM UNIT VENTILATOR. MC TO VERIFY OPERATION OF EXISTING SYSTEMS IN AREAS OF NEW WORK.
3. VENTILATION FOR ADMIN AND VESTIBULE SPACE PROVIDED BY ROOFTOP UNIT WITH MOTORIZED FRESH AIR DAMPER, RATES PER 2015 MICHIGAN MECHANICAL CODE (MMC), REFER VENTILATION SCHEDULE ON THIS SHEET.
4. SYSTEMS AS DESIGNED AND EQUIPMENT AS SPECIFIED MEET OR EXCEED THE MINIMUM PRESCRIPTIVE REQUIREMENTS OF THE MICHIGAN ENERGY CODE ASHRAE 90.1-2013.
5. NO NEW HVAC SYSTEM ABOVE 2000 CFM; NO DUCT SMOKE DETECTORS WILL BE PROVIDED FOR HVAC SYSTEMS WITH CAPACITIES LESS THAN 2000 CFM PER 2015 MMC 606.2.1.
6. ALL NEW NATURAL GAS PIPING HAS BEEN SIZED BASED ON THE BRANCH LENGTH METHOD OF 2018 INTERNATIONAL FUEL GAS CODE (IFGC); CONTRACTOR SHALL INSTALL GAS PIPING SYSTEM SHOWN IN ACCORDANCE WITH 2015 IFGC. (SEE PLANS)

GENERAL NOTES:

1. CONTRACTOR SHALL INCLUDE ALL APPLICABLE SALES AND USE TAXES FOR MATERIAL AND EQUIPMENT PROVIDED AS REQUIRED.
2. CONTRACTOR RESPONSIBLE FOR CREATING OPENINGS THRU ANY ROOFS, CEILINGS AND WALLS FOR THEIR DUCT AND PIPING SYSTEMS; OVERSIZE OPENING AS REQUIRED TO ACCOUNT FOR THERMAL EXPANSION. UTILIZE PIPE ROOF JACK FOR ROOF PIPE PENETRATIONS THROUGH ROOF AND SEAL WEATHERTIGHT.
3. ALL DUCTWORK IS TO BE INSTALLED PER LATEST EDITION OF SMACNA "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE".
4. DUCTWORK DIMENSIONS SHOWN ARE CLEAR INSIDE DIMENSIONS.
5. ROUTE ALL DUCTWORK AND PIPE AT RIGHT ANGLES TO WALLS, INSTALL HORIZONTAL PIPE DEAD LINE UNLESS IDENTIFIED OTHERWISE.
6. CONTRACTOR SHALL FURNISH & INSTALL HANGERS AND BUILDING ATTACHMENTS AS REQUIRED FOR ALL DUCTWORK AND PIPING SYSTEMS.
7. ALL DUCT, PIPE AND CONDUIT PENETRATIONS OF THE OFFICE AREA WALLS AND CEILINGS SHALL BE SEALED AIRTIGHT WITH ZERO LIGHT TRESPASS AROUND OPENING.
8. PROVIDE 1 YEAR WARRANTY ON WORKMANSHIP.

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Date Revised	Description
1-24-2023	OWNER REVIEW
1-31-2023	BIDS

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Date Issued	Project Number
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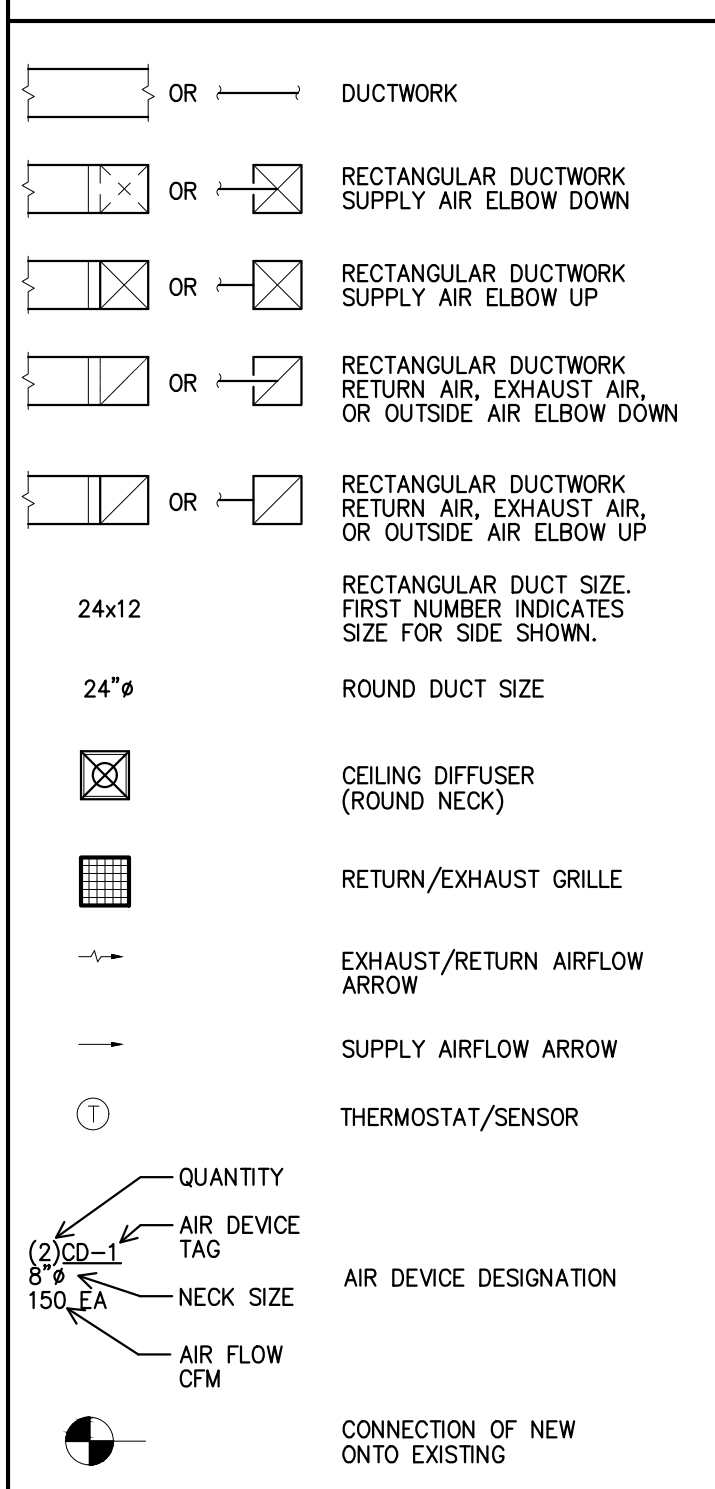
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GENERAL MECHANICAL INFORMATION

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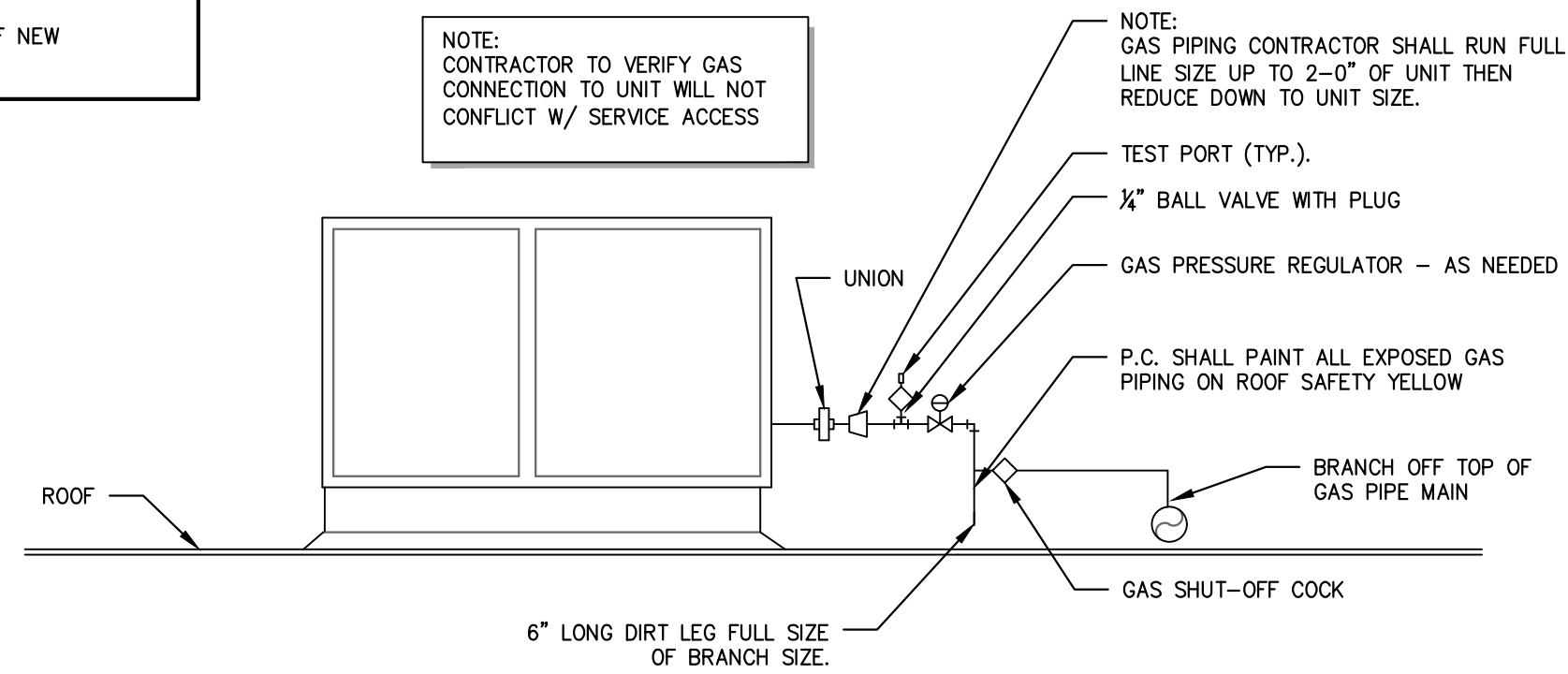
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HVAC LEGEND



HVAC ABBREVIATIONS

ACCU	AIR COOLED CONDENSING UNIT	HVAC	HEATING VENTILATING AND AIR CONDITIONING
AL	ACOUSTICALLY LINED	HTGS	HOT WATER HEATING SUPPLY
APPROX	APPROXIMATE	HTGR	HOT WATER HEATING RETURN
ARCH	ARCHITECTURAL	INSUL	INSULATION
CLG	CEILING	LAT	LEAVING AIR TEMPERATURE
CONC	CONCRETE	MC	MECHANICAL CONTRACTOR
CONN	CONNECTION	MECH	MECHANICAL
COORD	COORDINATION	MFG	MANUFACTURER
CP	CONDENSATE PUMP	MMS	MANUAL MOTOR STARTER
DB	DRY BULB	NFDS	NONUSED DISCONNECT SWITCH
DN	DOWN	OA	OUTSIDE AIR
DWG	DRAWING	RA	RETURN AIR
EA	EACH	RM	ROOM
EAT	ENTERING AIR TEMPERATURE	RTU	ROOF TOP UNIT
EC	ELECTRICAL CONTRACTOR	SA	SUPPLY AIR
EQUIP	EQUIPMENT	SH	SHEET
ESP	EXTERNAL STATIC PRESSURE	STOR	STORAGE
EXIST	EXISTING	TYP	TYPICAL
FDS	FUSED DISCONNECT SWITCH	W	WITH
FF	FINISHED FLOOR	W/O	WITHOUT
FLEX	FLEXIBLE	WB	WET BULB
FLR	FLOOR		
FPM	FEET PER MINUTE		
GALV	GALVANIZED		



UNIT GAS CONNECTION DETAIL

NOT TO SCALE

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ABBREVIATIONS

#	INCHES	BAS	BUILDING AUTOMATION SYSTEM	DP	DOUBLE POLE DAMPER	G	GIUAGE	KW	KILOWATT	NF	NON-FUSED SAFETY DISCONNECT SWITCH	(RE)	RELOCATED EXISTING REMOTE CONTROL	TTC	TELEPHONE TERMINAL CABINET
*	NUMBER	BATT	BATTERY	DS	SAFETY DISCONNECT SWITCH	GA	GALLON	KWH	KILOWATT HOUR	NFDS	NON-FUSED SAFETY DISCONNECT SWITCH	RC	RECEPTACLE	TV	TELEVISION
&	AND	BD	BOARD	DT	DOUBLE THROW DRAWING	GAL	GALVANIZED	L	LINEAR	NIC	NOT IN CONTRACT	REQD	REQUIRED	TVSS	TRANSIENT VOLT. SURGE SUPPRESSION
@	FEET	BFC	BELOW FINISHED CEILING	DWG	DRIVING	GC	GENERAL CONTRACTOR	LA	LIGHTING ARRESTOR	NL	NIGHT LIGHT - WIRE AHEAD OF SWITCH/CONTROL	RM	ROOM	TVTC	TELEVISION TERMINAL CABINET
1P	1 POLE (2P, 3P, 4P ETC.)	BKR	BREAKER	E	EXISTING TO REMAIN	GEN	GENERATOR	LOC	LOCATE OR LOCATION	No.	NUMBER	RMS	ROOT MEAN SQUARE	TYP	TYPICAL
@	AT	BLDG	BUILDING	(E)	EXISTING TO BE RELOCATED	GF	GROUND FAULT PROTECTOR	LT	LIGHT	NPF	NORMAL POWER FACTOR	RR	REMOVE AND REPLACE	U	UNDER COUNTER
CL	CENTERLINE	BMS	BUILDING MANAGEMENT SYSTEM	(ER)	EXISTING TO BE RELOCATED	GFP	GROUND FAULT PROTECTOR	LTG	LIGHTING	NRTL	NATIONALLY RECOGNIZED TESTING LABORATORY	RSC	RIGID STEEL CONDUIT	UC	UNDER COUNTER
PL	PLATE	BOC	BOTTOM OF CONCRETE	(E)	EXISTING TO BE RELOCATED	GND, G	GROUND	LV	LOW VOLTAGE	NTS	NOT TO SCALE	RTU	ROOF TOP UNIT	UE	UNDERGROUND ELECTRICAL
Y	WYE	C	CABINET	EF	EXHAUST FAN	GRS	GALVANIZED RIGID STEEL (CONDUIT)	M	MOMENTARY CONTACT	OC	ON CENTER	S	SOLID NEUTRAL	UG	UNDERGROUND ELECTRICAL
Ø	PHASE	CAB	CABINET	EGC	EQUIPMENT GROUND CONDUCTOR	GYP BD	GYPSUM BOARD	M/C	MILLIAMPERE	OC	OVERCURRENT PROTECTION DEVICE	SIN	STOP START PUSHBUTTONS	UGE	UNDERGROUND ELECTRICAL
Ø	DIAMETER	CAT	CATALOG	ELEV	ELEVATOR	H	HIGH INTENSITY DISCHARGE	MA	MAGNETIC STARTER	OC	OVERCURRENT PROTECTION DEVICE	SD	SECONDARY	UGT	UNDERGROUND TELEPHONE
Δ	DELTA	CCTV	CLOSED CIRCUIT TELEVISION	EMERG	EMERGENCY	HID	HIGH INTENSITY DISCHARGE	MAX	MAXIMUM	OC	OVERCURRENT PROTECTION DEVICE	SF	SUPPLY FAN	U	UNIT HEATER
A	AMPERE	CKT	CIRCUIT	EMSG	ENERGY MANAGEMENT SYSTEM	HOA	HANDS-OFF-AUTOMATIC SWITCH	MCB	MAIN CIRCUIT BREAKER	OH	OVERHEAD	SHT	SHEET	UON	UNLESS OTHERWISE NOTED
ABC	ABOVE COUNTER	CL	CIRCUIT LIMITING	EMT	ELECTRICAL METALLIC TUBING	HP	HORIZONTAL HORSEPOWER	MCC	MOTOR CONTROL CENTER	OL	OVERLOADS	SP	SPARE	UTL	UTILITY
AC	ABOVE COUNTER	CM	CEILING MOUNTED COMPRESSOR	EP	ELECTRICAL PNEUMATIC CONDUIT	HTG	HEATING	MDP	MAIN DISTRIBUTION PANEL	P	POLE	SPD	SURGE PROTECTION DEVICE	UV	UNIT VENTILATOR OR ULTRAVIOLET
AC	ALTERNATING CURRENT	CMR	CEILING MOUNTED COMPRESSOR	EP	ELECTRICAL PNEUMATIC CONDUIT	HTG	HEATING	MDP	MAIN DISTRIBUTION PANEL	PA	PUBLIC ADDRESS	P	POLE	SPEC	SPECIFICATION
ACLG	ABOVE CEILING	CND	CONDUIT	EPO	EMERGENCY POWER OFF EQUIP	ES	END SWITCH	MFR	MANUFACTURER	PB	PULL BOX OR PUSH BUTTON	SPR	SPEAKER	V	VOLT
AF	AMPERE FRAME RATING	COMB	COMBINATION INTERRUPTER	CONSTR	CONSTRUCTION CONTINUATION OR CONTINUOUS	ETR	EXISTING TO REMAIN	HP	HORSEPOWER	HP	HIGH POWER FACTOR	HPF	HIGH POWER FACTOR	M	MANIFOLD
AF	AMPERE FRAME RATING	COMB	COMBINATION INTERRUPTER	CONSTR	CONSTRUCTION CONTINUATION OR CONTINUOUS	ETR	EXISTING TO REMAIN	HP	HORSEPOWER	HP	HIGH POWER FACTOR	HPF	HIGH POWER FACTOR	M	MANIFOLD
AFG	ABOVE FINISH GRADE	COMB	COMBINATION INTERRUPTER	CONSTR	CONSTRUCTION CONTINUATION OR CONTINUOUS	ETR	EXISTING TO REMAIN	HP	HORSEPOWER	HP	HIGH POWER FACTOR	HPF	HIGH POWER FACTOR	M	MANIFOLD
AFI	ARC FAULT CIRCUIT INTERRUPTER	CONSTR	CONSTRUCTION CONTINUATION OR CONTINUOUS	ETR	EXISTING TO REMAIN	EHU	ELECTRIC UNIT HEATER	HWP	HYDRONIC WATER PUMP COOLER	HZ	HERTZ	I	INTERMEDIATE METAL CONDUIT	IG	ISOLATED GROUND
AHU	AUTHORITY HAVING JURISDICTION	CONSTR	CONSTRUCTION CONTINUATION OR CONTINUOUS	ETR	EXISTING TO REMAIN	EHU	ELECTRIC UNIT HEATER	HWP	HYDRONIC WATER PUMP COOLER	HZ	HERTZ	I	INTERMEDIATE METAL CONDUIT	IG	ISOLATED GROUND
AHU	AIR HANDLING UNIT	CONSTR	CONSTRUCTION CONTINUATION OR CONTINUOUS	ETR	EXISTING TO REMAIN	EHU	ELECTRIC UNIT HEATER	HWP	HYDRONIC WATER PUMP COOLER	HZ	HERTZ	I	INTERMEDIATE METAL CONDUIT	IG	ISOLATED GROUND
AL/ALUM	ALUMINUM	CONV	CONVECTOR	EW	ELECTRIC WATER HEATER	I	INTERMEDIATE METAL CONDUIT	IG	ISOLATED GROUND	IMC	INTERMEDIATE METAL CONDUIT	MTR	MOTOR, MOTORIZED	MTS	MANUAL TRANSFER SWITCH
ALT	ALTERNATE	CP	CIRCUIT PUMP OR CONTROL PANEL	EXH	EXHAUST	EXP	EXPLOSION PROOF	FA	FIRE ALARM	FACP	FIRE ALARM CONTROL PANEL	FBO	FURNISHED BY OTHERS	FCU	FAN CONTROL UNIT
AM	AMMETER	CP	CIRCUIT PUMP OR CONTROL PANEL	EXH	EXHAUST	EXP	EXPLOSION PROOF	FA	FIRE ALARM	FACP	FIRE ALARM CONTROL PANEL	FBO	FURNISHED BY OTHERS	FCU	FAN CONTROL UNIT
AMP	AMPERE	CP	CIRCUIT PUMP OR CONTROL PANEL	EXH	EXHAUST	EXP	EXPLOSION PROOF	FA	FIRE ALARM	FACP	FIRE ALARM CONTROL PANEL	FBO	FURNISHED BY OTHERS	FCU	FAN CONTROL UNIT
AMPL	AMPLIFIER	CRT	CATHODE-RAY TUBE	EXP	EXPLOSION PROOF	FA	FIRE ALARM	FACP	FIRE ALARM CONTROL PANEL	FBO	FURNISHED BY OTHERS	FCU	FAN CONTROL UNIT	FIXT	FIXTURE
ANUNLN	ANNUNCIATOR	CT	CURRENT TRANSFORMER	F	FUSED	FA	FIRE ALARM	FACP	FIRE ALARM CONTROL PANEL	FBO	FURNISHED BY OTHERS	FCU	FAN CONTROL UNIT	FIXT	FIXTURE
APPROX	APPROXIMATELY	CTR	CENTER OR COUNTER COPPER	F	FUSED	FA	FIRE ALARM	FACP	FIRE ALARM CONTROL PANEL	FBO	FURNISHED BY OTHERS	FCU	FAN CONTROL UNIT	FIXT	FIXTURE
AQ-STAT	AQUASTAT	CU	COPPER	F	FUSED	FA	FIRE ALARM	FACP	FIRE ALARM CONTROL PANEL	FBO	FURNISHED BY OTHERS	FCU	FAN CONTROL UNIT	FIXT	FIXTURE
ARCH	ARCHITECT	D	DIRECT CURRENT DOMESTIC WATER CIRCULATING PUMP	FBO	FURNISHED BY OTHERS	FCU	FAN CONTROL UNIT	FIXT	FIXTURE	FLOUR	FLOURESCENT FLOOR	FLR	FLOOR	FU	FUSE
AS	AMP SWITCH RATING	DCP	DIRECT CURRENT DOMESTIC WATER CIRCULATING PUMP	FBO	FURNISHED BY OTHERS	FCU	FAN CONTROL UNIT	FIXT	FIXTURE	FLOUR	FLOURESCENT FLOOR	FLR	FLOOR	FU	FUSE
AT	AMP TRIP RATING	DDCP	DIRECT DIGITAL CONTROL PANEL	FBO	FURNISHED BY OTHERS	FCU	FAN CONTROL UNIT	FIXT	FIXTURE	FLOUR	FLOURESCENT FLOOR	FLR	FLOOR	FU	FUSE
ATS	AUTOMATIC TRANSFER SWITCH	DDCP	DIRECT DIGITAL CONTROL PANEL	FBO	FURNISHED BY OTHERS	FCU	FAN CONTROL UNIT	FIXT	FIXTURE	FLOUR	FLOURESCENT FLOOR	FLR	FLOOR	FU	FUSE
AUTO	AUTOMATIC	DE	DUAL ELEMENT	FBO	FURNISHED BY OTHERS	FCU	FAN CONTROL UNIT	FIXT	FIXTURE	FLOUR	FLOURESCENT FLOOR	FLR	FLOOR	FU	FUSE
AUX	AUXILIARY	DEPT	DEPARTMENT	FBO	FURNISHED BY OTHERS	FCU	FAN CONTROL UNIT	FIXT	FIXTURE	FLOUR	FLOURESCENT FLOOR	FLR	FLOOR	FU	FUSE
AV	AUDIO VISUAL	DET	DETAIL	FBO	FURNISHED BY OTHERS	FCU	FAN CONTROL UNIT	FIXT	FIXTURE	FLOUR	FLOURESCENT FLOOR	FLR	FLOOR	FU	FUSE
AWG	AMERICAN WIRE GAUGE	DIA	DIAMETER	FBO	FURNISHED BY OTHERS	FCU	FAN CONTROL UNIT	FIXT	FIXTURE	FLOUR	FLOURESCENT FLOOR	FLR	FLOOR	FU	FUSE
B	BOTTOM OF	DISC	DISCONNECT	FVNR	FULL VOLTAGE NON-REVERSING	KV	KILOVOLT	KVA	KILOVOLT-AMPERE	KVAR	KILOVOLT-AMPERE REACTIVE	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION	R	REMOVE
B/	BOTTOM OF	DN	DOWN	FVNR	FULL VOLTAGE NON-REVERSING	KV	KILOVOLT	KVA	KILOVOLT-AMPERE	KVAR	KILOVOLT-AMPERE REACTIVE	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION	R	REMOVE

REFERENCE SYMBOLS

	EQUIPMENT IDENTITY (SEE MECH EQUIPMENT ABBREVIATION LIST), EQUIPMENT NUMBER (IF APPLICABLE)
	INDICATES PLAN & DETAIL NUMBER INDICATES DRAWING ON WHICH SECTION APPEARS
	INDICATES SECTION NUMBER INDICATES DRAWING ON WHICH SECTION APPEARS
	INDICATES MATCH LINE
	KEYNOTE INDICATOR
	KEYNOTE INDICATOR - DEMOLITION
	REVISION CLOUD

MOUNTING HEIGHTS

(UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TO CENTERLINE OF BOXES).

CARD READER	42" AFF
CLOCK HANGER OULETS	42" AFF
EXIT LIGHTS - FLOOR PROXIMITY	8" AFF TO BOTTOM OF SIGN, 4" FROM FRONT EDGE OF SIGN TO DOOR FRAME.
EXIT LIGHTS - WALL MOUNTED	ABOVE DOORS (MAX. 96" AFF)
FIRE ALARM HORN/STROBE	84" AFF
FIRE ALARM PULL STATION	44" AFF
LIGHT SWITCHES	42" AFF
MOTOR STARTERS	72" MAX TO OPERATING HANDLE
PANEL BOARDS (LIGHTING AND RECEPTACLE)	72" MAX TO TOP CIRCUIT BREAKER
RECEPTACLE - TYPICAL	18" AFF (U.O.N.)
SAFETY SWITCHES	72" MAX TO OPERATING HANDLE
TELEPHONE - DATA OUTLET	18" AFF
TELEPHONE - PAY STATION	48" AFF
TELEPHONE - WALL TYPE	48" AFF

NOTE: REFER TO ARCHITECTURAL DRAWINGS FOR ADA LOCATIONS. ALL DEVICES TO BE MOUNTED WITHIN A RANGE OF 34" TO BOTTOM OF DEVICE BACKBOX TO 48" AFF TO TOP OF DEVICE BACKBOX. PREFERRED MOUNTING HEIGHT IS 48" AFF TO TOP OF DEVICE BACKBOX. CONTRACTOR TO MOUNT AT LOWER HEIGHT WITHIN THE LISTED RANGE TO OVERCOME ANY INTERFERENCES WHERE REQUIRED.

NOTE
NOT ALL SYMBOLS AND ABBREVIATIONS INDICATED APPEAR ON THESE CONTRACT DRAWINGS. INDIVIDUAL DRAWINGS MAY HAVE SHEET LEGENDS FOR UNIQUE SYMBOLS AND FOR CONVENIENCE.



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ORCHARD VIEW SCHOOL DISTRICT

COMMUNITY EDUCATION CENTER

1765 ADA AVENUE
MUSKEGON, MI 49442

Date Revised	Description
1/24/2023	BID PACKAGE #1 - QA/QC/OWNER REVIEW
1/31/2023	BID PACKAGE #1 - BIDS

ELECTRICAL SYMBOL LIST

GENERAL	POWER	POWER	POWER	SIGNAL	SITE	GENERAL NOTES:
<p>— LIGHT LINE WEIGHT INDICATES EXISTING ITEMS TO REMAIN OR PROVIDED BY OTHERS.</p> <p>— HEAVY LINE WEIGHT INDICATES ITEMS TO BE PROVIDED BY E.C.</p> <p>--- HEAVY DASHED LINE INDICATES ITEMS TO BE REMOVED OR RELOCATED BY E.C.</p> <p>2 LIGHT FIXTURE UPPER CASE LETTERS INDICATE FIXTURE TYPE. REFER TO LUMINAIRE SCHEDULE FOR DETAILS. LOWER CASE LETTERS INDICATE SWITCHING ARRANGEMENT. NUMBER INDICATES BRANCH CIRCUIT. "EM" OR SHADING INDICATES EMERGENCY LIGHTING.</p> <p> EXIT SIGN LIGHT - WALL, CEILING OR PENDANT MOUNTED. LETTERS INDICATE FIXTURE TYPE. REFER TO LUMINAIRE SCHEDULE FOR DETAILS. ARROWS INDICATE DIRECTION. SHADING INDICATES NUMBER OF FACES.</p> <p> EXIT SIGN LIGHT WITH EMERGENCY LIGHT HEADS. LETTERS INDICATE FIXTURE TYPE. REFER TO LUMINAIRE SCHEDULE FOR DETAILS. SHADING INDICATES NUMBER OF FACES.</p> <p> DOCK LIGHT</p> <p> TRACK AND TRACK LIGHT</p> <p> EMERGENCY LIGHT HEADS - SINGLE HEAD AND DOUBLE HEADS</p> <p> EMERGENCY BATTERY LIGHTING UNIT. WIRE AHEAD OF LOCAL SWITCHING</p> <p> LIGHT ON CORD REEL</p> <p> LIGHT SWITCH 20A, 120/277V</p> <p>"K" - SINGLE POLE "3" - 3-WAY OPERATION "LVS" - LOW VOLTAGE "WP" - WEATHER PROOF "4" - 4-WAY OPERATION "S" - SWITCHING ARRANGEMENT "T" - TIMER "P" - PILOT LIGHT</p> <p>"OS" - DUAL TECHNOLOGY WALL SWITCH TYPE OCCUPANCY SENSOR "OS0S" - DUAL TECHNOLOGY WALL SWITCH TYPE OCCUPANCY SENSOR WITH 0-10V DIMMING "OS1" - DUAL RELAY WALL SWITCH TYPE OCCUPANCY SENSOR "OS2" - INFRARED WALL SWITCH TYPE OCCUPANCY SENSOR "D" - 0-10V WALL SWITCH DIMMER "VS" - WALL SWITCH TYPE VACANCY SENSOR "DVS" - WALL SWITCH TYPE VACANCY SENSOR WITH 0-10V DIMMING "DS" - WALL POD WITH PRESET SCENES AND 0-10V DIMMING</p> <p> OCCUPANCY SENSOR - CEILING MOUNTED "A" - 1000 SQ. FT. COVERAGE "B" - 2000 SQ. FT. COVERAGE "C" - HALLWAY TYPE "W" - WALL MOUNTED</p> <p> VACANCY SENSOR - CEILING MOUNTED "A" - 1000 SQ. FT. COVERAGE "B" - 2000 SQ. FT. COVERAGE "W" - WALL MOUNTED</p> <p>"PP" - POWER PACK "PC" - PHOTOCELL FOR LIGHTING CONTROL "RC" - ROOM CONTROLLER "TC" - TIME CLOCK</p> <p> LIGHT LEVEL SENSOR - TYPE DENOTED</p>	<p> POWER POLE</p> <p> LIGHTING ARRESTOR</p> <p> LIGHTNING PROTECTION AIR TERMINAL</p> <p> LIGHTNING PROTECTION CONDUCTOR SPLICE</p> <p> GROUND ROD</p> <p> GROUND ROD (PLAN VIEW)</p> <p> GROUND CONNECTION - EXOTHERMIC WELD</p> <p> GROUND TEST WELL</p> <p> GROUND CONNECTION TO STEEL OR STRUCTURE</p> <p> JUNCTION BOX CEILING/WALL MOUNTED "FA" - FURNITURE POWER "FD" - FURNITURE DATA "DA" - DOOR ACTUATOR "HD" - HAND DRYER</p> <p> PULL BOX</p> <p> BUILDING GROUND BAR</p> <p> TELECOM GROUND BAR</p> <p> PANELBOARD / DISTRIBUTION PANEL / SWITCHBOARD. SURFACE MOUNTED, FLUSH MOUNTED</p> <p> MEDIUM VOLTAGE DRAWOUT CIRCUIT BREAKER</p> <p> DRAWOUT CIRCUIT BREAKER</p> <p> DRAWOUT CIRCUIT BREAKER SPACE</p> <p> MOLDED CASE CIRCUIT BREAKER</p> <p> ENCLOSED CIRCUIT BREAKER</p> <p> GENERATOR</p> <p> MOTOR</p> <p> MANUAL MOTOR STARTER WITH THERMAL OVERLOAD</p> <p> MAG. MOTOR STARTER OR CONTACTOR</p> <p> COMB. MOTOR STARTER (NON-FUSED)</p> <p> COMB. MOTOR STARTER (FUSED)</p> <p> COMBINATION STARTER WITH RESET BUTTON, HAND OPERATED ACTUATOR, AND INDICATOR LIGHT</p>	<p> FUSE</p> <p> SAFETY DISC. SW. (NON-FUSED)</p> <p> SAFETY DISC. SW. (FUSED)</p> <p> VARIABLE FREQUENCY CONTROLLER</p> <p> BUS DUCT WITH PLUG UN DISCONNECT (FUSED)</p> <p> CONDUIT CONCEALED IN WALL OR OVERHEAD. CONDUIT SHOWN WITHOUT SLASH MARKS SHALL CONTAIN 2 #12 & 1 #12S CONDUCTORS IN 3/4" CONDUIT UNLESS SPECIFIC EQUIPMENT REQUIRES A DIFFERENT SIZE.</p> <p> CONDUIT SHOWN WITH SLASH MARKS SHALL CONTAIN 2 #12 & 1 #12S CONDUCTORS IN 3/4" CONDUIT UNLESS THE CONDUIT SIZE AND CONDUIT SIZE ARE SHOWN ADJACENT TO THE SLASH MARKS. SLASH MARK INDICATORS ARE: SHORT STRAIGHT-PHASE CONDUCTOR, LONG STRAIGHT-NEUTRAL CONDUCTOR, SHORT BENT ENDED-SWITCH LEGS, LONG STRAIGHT WITH A DOT-GROUND CONDUCTOR.</p> <p> CONDUIT CONCEALED</p> <p> CONDUIT EXPOSED</p> <p> SURFACE RACEWAY</p> <p> CONDUIT TRANSITION UP</p> <p> CONDUIT TRANSITION DOWN</p> <p> CONDUIT STUBBED OUT</p> <p> HEAT TRACE WIRING</p> <p> HOMERUN TO PANEL BOARD. LETTERS INDICATE PANEL NAME. ARROWS INDICATE NUMBER OF CIRCUITS. NUMBERS INDICATE CIRCUIT DESIGNATIONS IN PANEL.</p>	<p> SINGLE RECEPT. 120V, 20A, NEMA 5-20R UNLESS NOTED OTHERWISE</p> <p> DUPLEX RECEPT. 120V, 20A, NEMA 5-20R UNLESS NOTED OTHERWISE</p> <p>"WP" - WEATHERPROOF TYPE WITH WEATHER-PROOF WHILE IN USE COVER</p> <p>"GFI" - GROUND FAULT INTERRUPTER, 4-6mA TYPE</p> <p>"AC" - ABOVE COUNTER, 6" ABOVE COUNTER TO BOTTOM OF DEVICE</p> <p>"UC" - UNDER COUNTER</p> <p>"IC" - IN CABINTRY, RECESSED RECEPTACLE</p> <p>"DF" - MOUNTED WITHIN DRINKING FOUNTAIN CABINTRY. COORDINATE MOUNTING HEIGHT IN FIELD USING APPROVED MANUFACTURER CUT SHEETS</p> <p>"C" - CEILING MOUNTED</p> <p>"USB" - WITH USB</p> <p>"USB-C" - WITH USB TYPE C</p> <p>"TR" - TAMPER RESISTANT</p> <p>"CR" - CONTROLLED RECEPTACLE</p> <p> SPLIT DUPLEX RECEPT.</p> <p> ISOLATED GROUND RECEPT (DUPLEX)</p> <p> RECEPT ON EMERGENCY CKT (DUPLEX)</p> <p> QUADRUPLX RECEPT. 120V, 20A, NEMA 5-20R UNLESS NOTED OTHERWISE</p> <p> QUADRUPLX RECEPTACLE ON EMERGENCY CIRCUIT</p> <p> 240 VOLT RECEPT.</p> <p> FLOOR RECEPT. (DUPLEX SHOWN)</p> <p> RECEPT ON DROP CORD (DUPLEX SHOWN)</p> <p> RECEPT ON CORD REEL (DUPLEX SHOWN)</p> <p> SPECIAL RECEPTACLE. NEMA CONFIGURATION AND RATING AS INDICATED</p> <p> PIN & SLEEVE CONNECTOR / RECEPTACLE</p> <p> CONNECTION TO EQUIPMENT REFER TO EQUIPMENT SCHEDULE FOR DETAILS</p> <p> EQUIPMENT PLUG</p> <p> MULTIPLE SERVICE OUTLET</p> <p> MULTIPLE SERVICE FLR OUTLET</p> <p> MULTIOUTLET ASSEMBLY / PLUGMOLD</p> <p> EMERGENCY OFF PUSH BUTTON</p>	<p> "DI" - DOOR INTERLOCK OPERATOR</p> <p> "DO" - ELECTRIC DOOR OPERATOR</p> <p> "EH" - ELECTRIC HINGE</p> <p> "EL" - ELECTRIC LATCH</p> <p> "ES" - ELECTRIC STRIKE</p> <p> "MS" - MOTION SENSOR FOR ACCESS CONTROL</p> <p> "PS" - POWER SUPPLY FOR ACCESS CONTROL</p> <p> "RE" - REQUEST TO EXIT DEVICE</p> <p> "R" - RELAY</p> <p> "RS" - DOOR STATUS CONTACTS</p> <p> "ML" - MAGNETIC LOCK</p> <p> "DC" - DOOR CONTACTS</p> <p> "CR" - CARD READER</p> <p> "KP" - KEYPAD</p> <p> "WAP" - WIRELESS ACCESS POINT</p> <p> CCTV CAMERA F=FIXED, P=PAN, T=TILT, Z=ZOOM</p> <p> SPEAKER (WALL OR CEILING MT.)</p> <p> NURSE CALL DOME LIGHT (4 LAMP)</p> <p> NURSE CALL EMERG. STATION</p> <p> NURSE CALL CODE BLUE EMERG. STATION</p> <p> NURSE CALL DUTY STATION</p> <p> NURSE CALL STAFF STATION</p> <p> NURSE CALL PATIENT PULL STATION</p> <p> NURSE CALL SINGLE PATIENT STATION</p> <p> NURSE CALL DUAL PATIENT STATION</p> <p> NURSE CALL MASTER STATION</p> <p> NURSE CALL EQUIPMENT CABINET</p> <p> NURSE CALL ANNUNCIATOR PANEL</p> <p> VOLUME CONTROL</p> <p> HUMIDISTAT</p> <p> THERMOSTAT</p> <p> TELEPHONE OUTLET BOX</p> <p> TWO GANG JUNCTION BOX WITH 1' CONDUIT STUBBED TO 6' ABOVE NEAREST ACCESSIBLE CEILING, NYLON BUSHING ON CONDUIT END, AND ALL RACEWAYS, ALL CABLING, TERMINATIONS AND TESTING BY OTHERS.</p> <p> COMBINATION TELE/ DATA OUTLET BOX</p> <p> TWO GANG JUNCTION BOX WITH 1' CONDUIT STUBBED TO 6' ABOVE NEAREST ACCESSIBLE CEILING, NYLON BUSHING ON CONDUIT END, AND ALL RACEWAYS, ALL CABLING, TERMINATIONS AND TESTING BY OTHERS.</p> <p> TELEVISION OUTLET CEILING OR WALL MOUNT</p> <p> MULTIPLE SERVICE FLR OUTLET</p> <p> MULTIOUTLET ASSEMBLY CLOCK (WALL MOUNT)</p> <p> UNDERFLOOR RACEWAY SYSTEM</p> <p> CABLE TRAY. "FS" INDICATES FIRE STOP LOCATION</p> <p> CONDUIT SLEEVE</p> <p> POLE WITH STANCHION MOUNTED LIGHT FIXTURE. LETTERS INDICATED FIXTURE TYPE ON LIGHTING FIXTURE SCHEDULE. NUMBER INDICATES BRANCH CIRCUIT.</p> <p> BOLLARD LIGHTING FIXTURE. LETTER INDICATE FIXTURE TYPE ON LIGHTING FIXTURE SCHEDULE. NUMBER INDICATES BRANCH CIRCUIT.</p>	<p> EXTERIOR WALL MOUNTED LIGHTING FIXTURE. LETTERS INDICATE FIXTURE TYPE ON LIGHTING FIXTURE SCHEDULE. NUMBER INDICATES BRANCH CIRCUIT.</p> <p> UTILITY SERVICE POLE</p> <p>"UE" - UNDERGROUND ELECTRIC</p> <p>"UMVE" - UNDERGROUND MEDIUM VOLTAGE</p> <p>"UT" - UNDERGROUND TELEPHONE</p> <p>"UCOM" - UNDERGROUND COMMUNICATIONS CONTROLLER</p> <p>"UTV" - UNDERGROUND CABLE TELEVISION (CATV OR CCTV)</p> <p>"UFIBR" - UNDERGROUND FIBER OPTIC</p> <p>"AE" - AERIAL ELECTRIC LINE</p> <p>"OHT" - OVERHEAD TELEPHONE</p> <p>"OHE" - OVERHEAD ELECTRIC</p> <p>FIRE ALARM</p> <p> CONTROL UNIT (PANEL)</p> <p>"AMP" - AMPLIFIER RACK</p> <p>"FAA" - FIRE ALARM ANNUNCIATOR</p> <p>"FACP" - FIRE ALARM CONTROL PANEL</p> <p>"NAC" - NOTIFICATION CIRCUIT POWER BOOSTER EXTENDER PANEL</p> <p> INTERFACE AND SUPERVISORY DEVICES</p> <p>"DH" - DOOR HOLDER</p> <p>"EOL" - END OF LINE</p> <p>"F" - MANUAL PULL STATION</p> <p>"WF" - FLOW DETECTOR</p> <p>"VS" - VALVE SUPERVISORY SWITCH</p> <p> FIRE ALARM INDICATION DEVICE</p> <p>"AIM" - ADDRESSABLE INPUT MODULE</p> <p>"AOM" - ADDRESSABLE OUTPUT CONTROL MODULE</p> <p>"H" - HEAT DETECTION TYPE</p> <p>"RIF" - COMBINATION RISE/FIXED TEMPERATURE</p> <p>"F" - FIXED TEMPERATURE</p> <p>"R" - RATE OF RISE ONLY</p> <p>"S" - SMOKE DETECTOR/SENSOR</p> <p>"I" - IONIZATION</p> <p>"P" - PHOTOELECTRIC</p> <p>"BR" - BEAM RECEIVER</p> <p>"BT" - BEAM TRANSMITTER</p> <p>"SS" - SMOKE DETECTOR SINGLE STATION</p> <p> SMOKE DETECTOR/SENSOR FOR DUCT</p> <p> BELL TROUBLE</p> <p> COMBINATION HORN/VISIBLE "CD" CANDELA RATING-SETTING</p> <p> COMBINATION SPEAKER/VISIBLE "CD" CANDELA RATING-SETTING "C" = CEILING MOUNT</p> <p> HORN ONLY</p> <p> SPEAKER ONLY - WALL MOUNT "C" CEILING MOUNT</p> <p> RTS REMOTE ALARM INDICATING AND TEST SWITCH</p> <p> RI REMOTE INDICATOR</p>	

DIVISION 26

ELECTRICAL SPECIFICATIONS

DESCRIPTION OF WORK

WORK SHALL INCLUDE BUT NOT NECESSARILY BE LIMITED TO THE FOLLOWING:

1. WIRING METHODS.
2. NON-FUSED AND FUSED SWITCHES.
3. DEVICES.
4. PANELBOARDS
5. TRANSFER SWITCHES
6. MOTORS AND CONTROLS.
7. LIGHTING.
8. COMMUNICATIONS HORIZONTAL CABLING
9. TEMPORARY POWER AND LIGHTING

STANDARDS

MATERIALS AND EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS OF MBC, NEC, MIOSHA, NFPA, U.L., NEMA, A.D.A., AND RESPECTIVE PUBLICATIONS AND OTHER REQUIREMENTS SPECIFIED BELOW. ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER.

CODES AND ORDINANCES

COMPLY WITH ALL CODES AND ORDINANCES. BIDDERS SHALL INFORM THEMSELVES OF CODE REQUIREMENTS.

PERMITS, INSPECTION FEES, AND CODES

THE CONTRACTOR SHALL OBTAIN AND PAY ALL PERMIT AND INSPECTION FEES. FINAL INSPECTION CERTIFICATES BY THE LOCAL ELECTRICAL INSPECTOR AND FIRE MARSHAL SHALL BE OBTAINED BY THE CONTRACTOR AND TURNED OVER IN DUPLICATE TO THE OWNER.

SUBMISSIONS

SUBMIT PRODUCT DATA, SHOP DRAWINGS, WIRING DIAGRAMS, AND DESCRIPTIVE LITERATURE ON ALL MATERIALS AND EQUIPMENT. MAKE SUBMITTALS WITHIN THIRTY (30) DAYS AFTER THE SIGNING OF THE CONTRACT. SHIPMENT SHALL NOT BE RELEASED UNTIL DRAWINGS AND LITERATURE HAVE BEEN FINALLY APPROVED.

AS-BUILTS – OPERATION & MAINTENANCE MANUALS

PROVIDE FOR EACH SYSTEM AND EQUIPMENT AS SPECIFIED FOR USE BY OPERATION AND MAINTENANCE PERSONNEL. THE OPERATING INSTRUCTIONS SHALL INCLUDE:

- WIRING DIAGRAMS, CONTROL DIAGRAMS, AND CONTROL SEQUENCE FOR EACH SYSTEM AND ITEM OF EQUIPMENT.
- START-UP, PROPER ADJUSTMENT, OPERATING, LUBRICATION, AND SHUTDOWN PROCEDURES.
- SAFETY PRECAUTIONS
- THE PROCEDURE IN THE EVENT OF EQUIPMENT FAILURE
- OTHER ITEMS OF INSTRUCTION AS RECOMMENDED BY THE MANUFACTURER OF EACH SYSTEM OR ITEM OF EQUIPMENT.

IDENTIFICATION OF SYSTEMS

OPERATING INSTRUCTIONS: PRINT OR ENGRAVE INSTRUCTIONS AND FRAME UNDER GLASS OR APPROVED LAMINATED PLASTIC. POST INSTRUCTIONS IN VIEW OF EQUIPMENT. PROVIDE WEATHER RESISTANT MATERIALS FOR EXTERIOR APPLICATIONS.

EQUIPMENT: PROVIDE NAMEPLATE FOR ALL EQUIPMENT IT SHALL BE A SELF-ADHESIVE, ENGRAVED, LAMINATED ACRYLIC OR MELAMINE LABEL. PROVIDE ADHESIVE BACK, WITH WHITE LETTERS ON A DARK GRAY BACKGROUND. MINIMUM LETTER HEIGHT SHALL BE 3/8-INCH.

WARNING SIGNS: PROVIDE A SELF-ADHESIVE WARNING LABEL THAT IS FACTORY PRINTED, MULTI-COLOR, PRESSURE SENSITIVE, ADHESIVE LABEL. COMPLY WITH N.E.C. 70 AND 29 CFR 1910.145. LABELS FOR MULTIPLE POWER SOURCES SHALL READ: "DANGER – ELECTRICAL SHOCK HAZARD – EQUIPMENT HAS MULTIPLE POWER SOURCES". LABELS FOR ALL OTHER EQUIPMENT REQUIRING WORKSPACE CLEARANCES SHALL READ: "WARNING – OSHA REGULATION – AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36-INCHES".

CONTRACTOR SHALL PROVIDE IDENTIFICATION ON ALL DEVICES. PROVIDE WHITE LABEL WITH BLACK LETTERING AND LOCATE ON DEVICE UNDER PLATE. CONTRACTOR SHALL IDENTIFY DEVICE WITH PANEL AND CIRCUIT NUMBER FEEDING DEVICE.

GUARANTEE

PROVIDE GUARANTEE FOR ALL LABOR AND MATERIALS FOR ONE (1) YEAR AFTER OWNER'S WRITTEN ACCEPTANCE OF THE PROJECT.

LAYOUT OF THE WORK

EXAMINE THE SITE AND ALL THE DRAWINGS BEFORE PROCEEDING WITH THE LAYOUT AND INSTALLATION OF THIS WORK. LOCATE ESSENTIALLY AS SHOWN ON THE DRAWINGS, BUT IN EXACT LAYOUT DETERMINED ON THE JOB, TO SUIT ACTUAL CONDITIONS. CONFER AND COOPERATE WITH OTHER TRADES ON THE JOB SO ALL PARTS WILL BE INSTALLED IN PROPER RELATIONSHIP. PRECISE LOCATION OF PARTS TO COORDINATE WITH OTHER WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.

DEMOLITION

CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND MATERIAL AS INDICATED ON THE DEMOLITION PLAN. ALL REMOVED AND UNUSED LIGHTS AND EQUIPMENT SHALL BE TURNED OVER TO THE OWNER; ALL OTHER ITEMS SHALL BE REMOVED FROM THE SITE. EXISTING CONDUIT HOMERUNS MAY BE REUSED WHENEVER POSSIBLE. CONTRACTOR SHALL PATCH EXISTING WALL AND CEILING OPENINGS IN FINISHED AREAS UPON REMOVAL OF ELECTRICAL EQUIPMENT. CONTRACTOR SHALL ALSO PROTECT ALL EXISTING ELECTRICAL EQUIPMENT TO REMAIN DURING CONSTRUCTION PERIOD.

CUTTING AND PATCHING

ALL NECESSARY CUTTING OF THE BUILDING CONSTRUCTION FOR THE NEW INSTALLATION OF THE WORK SHALL BE FURNISHED BY THE CONTRACTOR. NO STRUCTURAL MEMBERS OF THE BUILDING SHALL BE CUT WITHOUT PRIOR APPROVAL OF THE ARCHITECT. ALL NECESSARY PATCHING OF THESE SURFACES TO BE FURNISHED BY THIS CONTRACTOR.

ELECTRICAL PANELS

BRANCH PANELS SHALL BE SIMILAR AND EQUAL TO SQUARE D TYPE NOOD, CIRCUIT BREAKER TYPE, RECESSED OR FLUSH MOUNTED AS SHOWN, COPPER BUS, 10,000 AIC RATED MINIMUM, HINGED LOCKABLE DOOR, BOLT-IN BREAKERS WITH MAIN BREAKER OR MLO AS INDICATED ON RISER DIAGRAM.

WIRE AND CABLE

ALL WIRING SHALL STRANDED COPPER AND INSTALLED IN CONDUIT, TUBING, OR SURFACE METALLIC RACEWAY. CONDUCTORS SHALL BE CONTINUOUS BETWEEN OUTLETS OF JUNCTION BOXES WITH SPLICES MADE ONLY WITHIN SUCH BOXES. SOLDERLESS PRESSURE-TYPE CONNECTORS PROPERLY INSULATED SHALL BE USED FOR ALL JOINTS. NO WIRE SMALLER THAN #12 MAY BE USED UNLESS SPECIFICALLY SPECIFIED UNDER DESCRIPTIONS OF SPECIAL SYSTEMS. ALL INDIVIDUAL BRANCH CIRCUITS AND SINGLE POLE BRANCH CIRCUITS SHALL HAVE INDIVIDUAL NEUTRALS. EACH NEUTRAL SHALL BE IDENTIFIED AT ALL JUNCTION BOXES AND TERMINALS SAME AS ITS CORRESPONDING BRANCH CIRCUIT NUMBER.

CONDUIT

ALL CONDUIT SHALL BE 3/4-INCH MINIMUM UNLESS NOTED OTHERWISE. WIRING METHODS: EXTERIOR EXPOSED AND CONCEALED: RGC, INTERIOR EXPOSED/CONCEALED UNDER 2-INCHES: EMT, CONNECTIONS TO VIBRATING EQUIPMENT: LFMC. ALL CONDUIT AND WIRE IN FINISHED AREAS SHALL BE CONCEALED IN THE CONSTRUCTION WHERE PRACTICABLE. ALL RACEWAYS SHALL BE ROUTED WITHIN STRUCTURAL STEEL AND FURRED SPACES UTILIZING FACTORY MADE ELBOWS AS GOOD PRACTICE AND WORKMANSHIP ALLOWS. INSTALL SLEEVES THROUGH STRUCTURAL CONCRETE OR WHERE PENETRATING STRUCTURAL FLOOR DECKS. KEEP RACEWAYS AT LEAST 6-INCHES FROM PARALLEL RUNS OF FLUES, STEAM AND HOT WATER PIPING. INSTALL HORIZONTAL CONDUIT RUNS ABOVE WATER AND STEAM PIPING. INSTALL RACEWAYS LEVEL AND SQUARE AND AT PROPER ELEVATIONS.

OUTLET BOXES

A STANDARD GALVANIZED OUTLET BOX, COMPLETE WITH PLASTER RING, IF NECESSARY, SHALL BE INSTALLED FOR EACH AND EVERY FIXTURE AND OUTLET SHOWN. EACH OUTLET SHALL BE RIGIDLY SUPPORTED FROM THE BUILDING CONSTRUCTION (INDEPENDENT OF THE RACEWAY SYSTEM). CEILING OUTLET BOXES SHALL BE 4-INCH OCTAGON, 1-1/2 INCH DEEP, WITH FIXTURE HICKEY, AND SUPPORTED TO WITHSTAND 80 LBS.

EQUIPMENT GROUNDING CONDUCTOR

INSTALL EQUIPMENT GROUNDING CONDUCTOR IN RACEWAYS WITH CONDUCTORS FOR ALL FEEDER AND BRANCH CIRCUITS.

LIGHTING FIXTURES

ALL LIGHTING FIXTURES AND COMPONENTS THEREOF SHALL BE U.L. AND E.T.L. APPROVED.

COMMUNICATIONS HORIZONTAL CABLING

FURNISH ALL LABOR, MATERIALS, TOOLS, AND EQUIPMENT NECESSARY AND REASONABLY INCIDENTAL TO THE INSTALLATION OF ANY EMPTY CONDUIT SYSTEM CONSISTING OF CABINETS, CONDUIT, OUTLET BOXES, COVERS, AND PLATES FOR THE INSTALLATION OF TELEPHONE SYSTEM BY OTHERS.

WALL SWITCHES

SWITCHES SHALL BE SPECIFICATION GRADE TOGGLE TYPE, SINGLE-POLE, THREE-WAY TWO POSITION DEVICES RATED AT 20A.

CONVENIENCE OUTLETS

OUTLETS SHALL BE SPECIFICATION GRADE, 20A, 125VAC, 2-POLE, 3-WIRE DUPLEX CONFORMING TO NEMA WD 6, NEMA 5-20R UNLESS NOTED OTHERWISE.

WALL PLATES

ALL DEVICE PLATES SHALL BE NON-CONDUCTIVE, THERMOPLASTIC, COLOR TO MATCH DEVICES, AND MEET FEDERAL SPECIFICATION WP455-A.

FUSED/NON-FUSED SWITCHES

SWITCHES FOR 30 AMPERES TO 200 AMPERE OPERATION SHALL BE SQUARE D TYPE HD, OR EQUAL WITH ENCLOSURE, VOLTAGE, CURRENT RATING NUMBER OF POLES, AND FUSING AS INDICATED. SWITCH CONSTRUCTION SHALL BE SUCH THAT, WHEN THE SWITCH HANDLE IN THE "ON" POSITION, THE COVER OR DOOR CANNOT BE OPENED.

SUPPORTS AND HANGERS

PROVIDE AND INSTALL NECESSARY STEEL BRACKETS, RODS, CLAMPS, ETC., FOR SUPPORT OF ALL WIRE UNDER THIS CONTRACT.

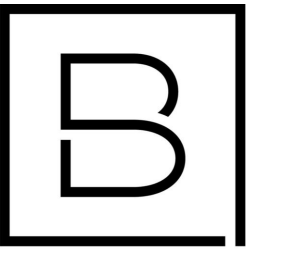
LIGHTING CONTROL

PROVIDE AUTOMATIC LIGHTING CONTROL AS SHOWN ON DRAWING.

FIRE ALARM

PROVIDE DEVICES AS SHOWN. EXTEND EXISTING FIRE ALARM SYSTEM AS REQUIRED.

END OF DIVISION 26



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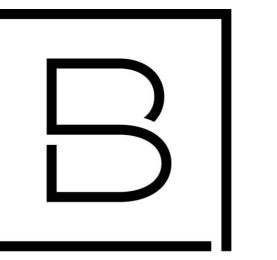
Project Manager	Discipline Lead
D HOLTROP	A ROBINSON
Designer	Reviewer
J BOK	A ROBINSON
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SPECIFICATIONS

Drawing Number

E002



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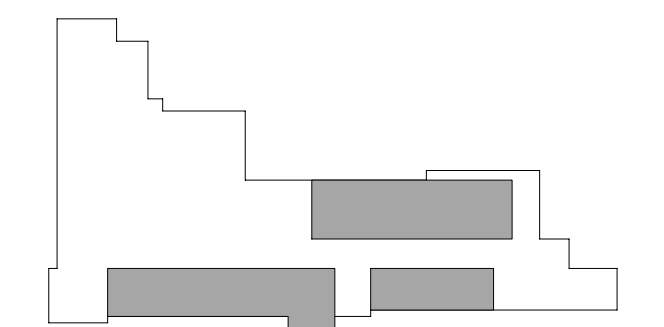
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Key Plan



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Project Manager	Discipline Lead
D HOLTROP	A ROBINSON
Designer	Reviewer
J BOIK	A ROBINSON
Date Issued	Project Number
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Sheet Name

**ELECTRICAL DEMOLITION
PLAN**

Drawing Number

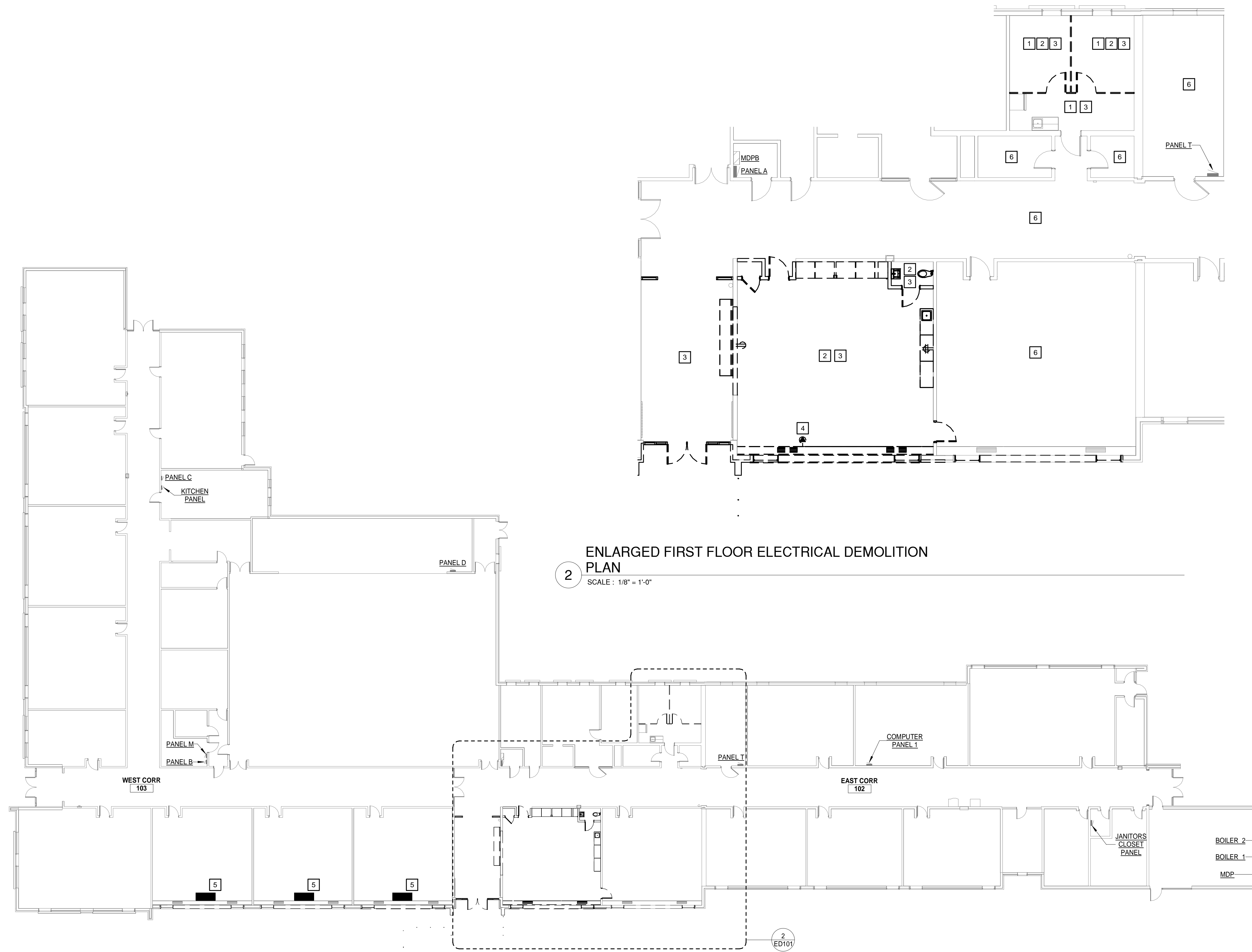
ED101

GENERAL NOTES:

- ANY EXISTING CONDITIONS INDICATED ARE BASED ON INFORMATION PROVIDED BY OTHERS AND POSSIBLE LIMITED FIELD VERIFICATION. THE CONTRACTOR SHALL ADJUST FOR THE ACTUAL FIELD CONDITIONS AT NO EXPENSE TO THE OWNER.
- THE CONTRACTOR SHALL VISIT THE PROJECT SITE, REVIEW EXISTING CONDITIONS AGAINST THE PLANS, AND FAMILIARIZE THEMSELVES WITH THE WORK PRIOR TO BIDDING AND START OF THE WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING EQUIPMENT, DEVICES, AND LUMINAIRES AS INDICATED AND/OR AS REQUIRED TO ALLOW FOR INSTALLATION AND CONSTRUCTION OF THE NEW WORK. REMOVE ALL EQUIPMENT, DEVICES, LUMINAIRES, CONDUITS, SUPPORTS, HANGERS, ECT. THAT ARE NOT SHOWN AND ARE REQUIRED TO BE REMOVED IN ORDER TO COMPLETE THE NEW WORK.
- CONTRACTOR SHALL DISCONNECT AND REMOVE ALL DEVICES IN WALLS BEING REMOVED. REMOVE BOXES, CONDUITS, AND WIRE TO SOURCE OR FIRST JUNCTION BOX TO MAINTAIN EXISTING DEVICES ON SAME CIRCUIT.
- MAINTAIN CONTINUITY OF EXISTING CIRCUITS AS REQUIRED TO PROVIDE POWER TO REMAINING EQUIPMENT, DEVICES, AND LUMINAIRES THAT ARE NOT BEING REMOVED.

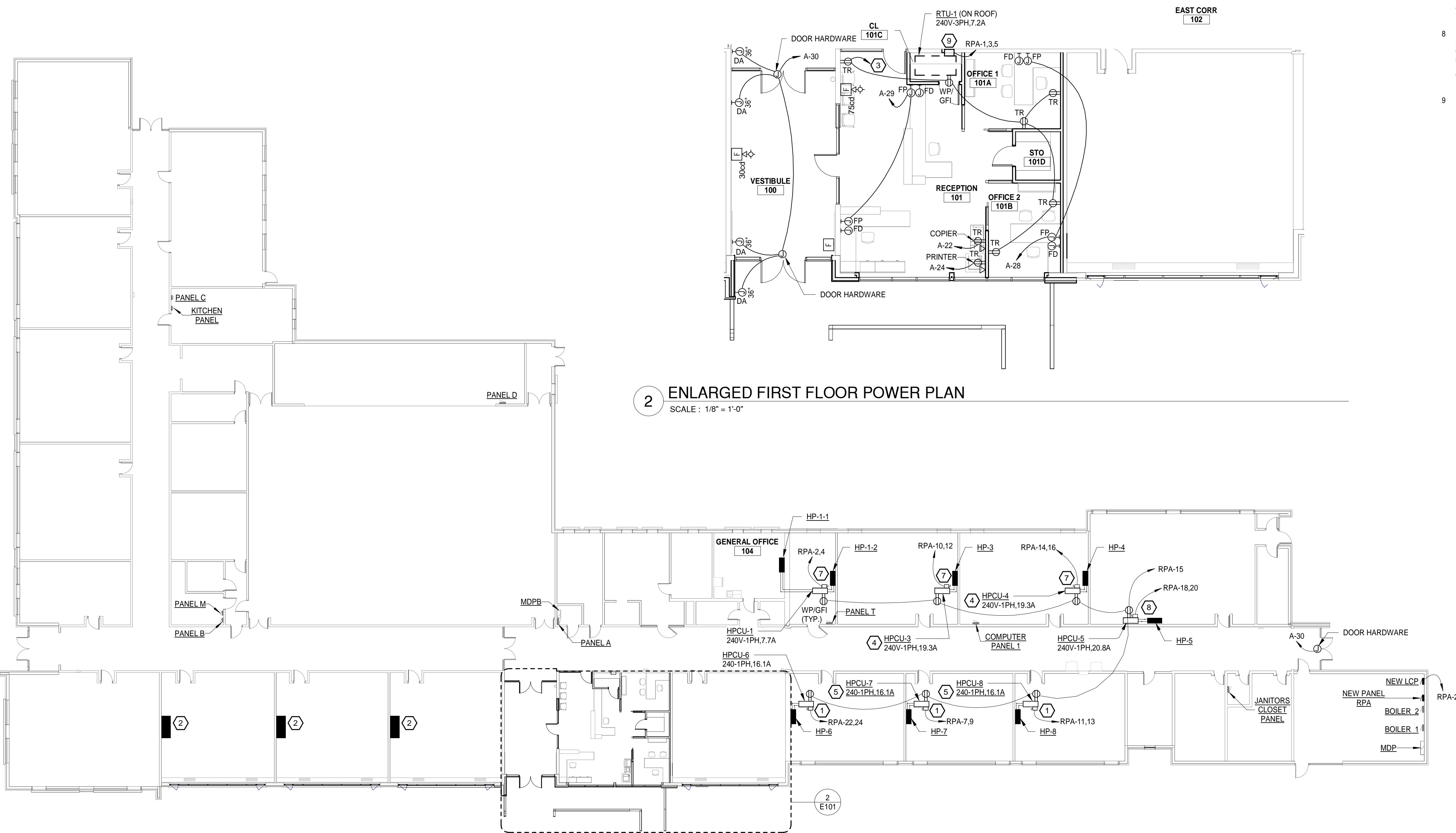
KEYNOTES #

- DEVICES ON EXTERIOR WALLS IN SPACE SHALL REMAIN UNLESS NOTED OTHERWISE
- DISCONNECT AND REMOVE ALL DEVICES IN SPACE. REMOVE ALL CONDUIT AND WIRE TO FIRST JUNCTION BOX. ALL DEVICES REMAINING ON CIRCUIT SHALL REMAIN ACTIVE.
- CONTRACTOR SHALL DISCONNECT AND REMOVE LIGHT FIXTURES IN SPACE. REFER TO NEW LIGHTING PLANS. REMOVE LUMINAIRE WHIP TO FIRST JUNCTION BOX. FEEDER CONDUIT AND WIRE MAY REMAIN FOR NEW WORK.
- DISCONNECT AND REMOVE WINDOW AC UNIT RECEPTACLE, CONDUIT, RACEWAY AND WIRE TO SOURCE. REMOVE BREAKER FROM PANEL.
- DISCONNECT HEAT PUMP FOR RELOCATION BY OTHERS. REFER TO NEW PLANS FOR NEW LOCATION.
- NO WORK IN SPACE UNLESS NOTED OTHERWISE.



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

1 FIRST FLOOR ELECTRICAL DEMOLITION PLAN
SCALE: 1/16" = 1'-0"

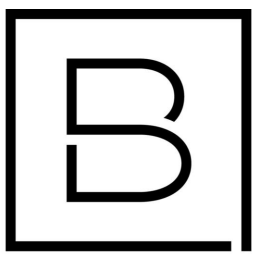


2 ENLARGED FIRST FLOOR POWER PLAN
SCALE: 1/8" = 1'-0"

1 FIRST FLOOR PLAN - POWER
SCALE: 1/16" = 1'-0"

KEYNOTES

- 1 PROVIDE 30A/3P NON-FUSED NEMA 3R DISCONNECT ON ROOF AND MOUNT ON SEPARATE SUPPORTS. PROVIDE AC POWER FEED DOWN TO FAN UNIT IN 3/4" CONDUIT. SEAL ALL PENETRATIONS TO MAINTAIN ROOF SYSTEM. PENETRATIONS AND EXPOSED CONDUIT SHALL BE RIGID CONDUIT WITH LFNC FOR FINAL CONNECTION.
- 2 RELOCATED SIDEWALL HEAT PUMP CASSETTE. EXTEND CONDUIT, WIRE, AND CONTROLS AS REQUIRED.
- 3 CIRCUIT NEW RECEPTACLES TO EXISTING CIRCUIT SERVING PREVIOUS RECEPTACLES IN SPACE.
- 4 ALTERNATE 1: DO NOT PROVIDE HPCU-3 AND HPCU-4 SPLIT SYSTEMS. INSTEAD PROVIDE A 240V-1PH, 40A CIRCUIT FROM PANEL RPA. PROVIDE A 40A/2P BREAKER, 2#8,#10EGC IN 3/4" CND TO ALTERNATE EQUIPMENT.
- 5 ALTERNATE 1: DO NOT PROVIDE HPCU-7 AND HPCU-8 SPLIT SYSTEMS. INSTEAD PROVIDE A 240V-1PH, 40A CIRCUIT FROM PANEL RPA. PROVIDE A 40A/2P BREAKER, 2#8,#10EGC IN 3/4" CND TO ALTERNATE EQUIPMENT.
- 7 PROVIDE 30A/3P NON-FUSED NEMA 3R DISCONNECT ON ROOF AND MOUNT ON SEPARATE SUPPORTS. PROVIDE 2#10,1#10EGC IN 3/4" CONDUIT. SEAL ALL PENETRATIONS TO MAINTAIN ROOF SYSTEM. PENETRATIONS AND EXPOSED CONDUIT SHALL BE RIGID CONDUIT WITH LFNC FOR FINAL CONNECTION.
- 8 PROVIDE 60A/3P NON-FUSED NEMA 3R DISCONNECT ON ROOF AND MOUNT ON SEPARATE SUPPORTS. PROVIDE 2#8,1#10EGC IN 3/4" CND. PROVIDE AC POWER FEED DOWN TO FAN UNIT IN 3/4" CONDUIT. SEAL ALL PENETRATIONS TO MAINTAIN ROOF SYSTEM. PENETRATIONS AND EXPOSED CONDUIT SHALL BE RIGID CONDUIT WITH LFNC FOR FINAL CONNECTION.
- 9 PROVIDE 30A/3P NON-FUSED NEMA 3R DISCONNECT SWITCH



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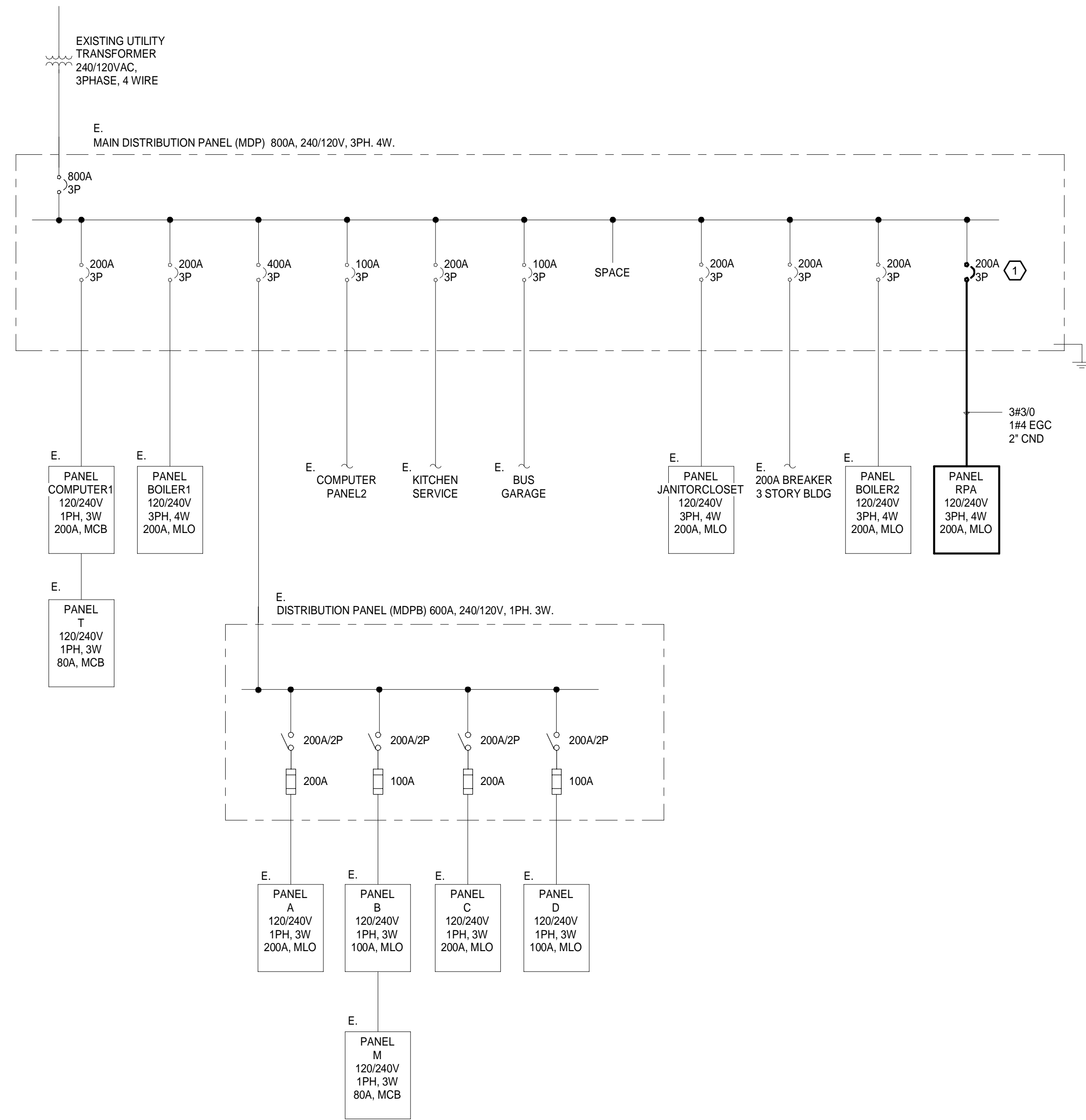
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D. HOLTROP	A. ROBINSON
Designer	Reviewer
J. BOIK	A. ROBINSON
Date Issued	Project Number
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Sheet Name

POWER PLAN

Drawing Number

E101



SINGLE LINE DIAGRAM NOTES:

- A. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- B. ALL GEAR, CONDUIT AND WIRE SHALL REMAIN UNLESS NOTED OTHERWISE.

KEYNOTES (1)

- 1. PROVIDE NEW 200A/3P BREAKER IN EXISTING SQUARE D I-LINE DISTRIBUTION PANEL

1 EXISTING ONE LINE DIAGRAM
SCALE: N.T.S.

NEC ELECTRICAL LOAD SUMMARY - 800A Service												
PANEL	CONNECTED LOADS						DEMAND LOADS					
	LARGEST MOTOR	MECH/MOTOR	LIGHTING	RECEPT.	KITCHEN	OTHER	LARGEST MOTOR	MECH	LIGHTING	RECEPT.	KITCHEN	OTHER
Existing Peak Demand						95200.0	6240.0	28143.0	0.0	0.0	0.0	95200.0
RTU-1		2991.0										
HPCU-1		2148.0										
HPCU-2		2148.0										
HPCU-3		4632.0										
HPCU-4		4632.0										
HPCU-5	4992.0											
HPCU-6		3864.0										
HPCU-7		3864.0										
HPCU-8		3864.0										
TOTAL	4992.0	28143.0	0.0	0.0	0.0	95200.0						
SYSTEM VOLTAGE	240.0	V	SYSTEM PHASE		3.0							
CONNECTED:	128335.0 VA											
DEMAND:	129583.0 VA											
CONNECTED:	309.1 A											
DEMAND:	312.1 A											

PEAK DEMAND PROVIDED BY UTILITY COMPANY: 9520 kWh



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ONE-LINE DIAGRAM

Drawing Number

E601

SEQUENCE OF OPERATION:

1. LIGHTING CONTROL INTENTION IS TO USE LIGHT FIXTURES WITH INTEGRATED CONTROLS AND ASSOCIATED LOW VOLTAGE SWITCHES, UNLESS NOTED OTHERWISE WITH ROOM CONTROLLERS. DEVIATION FROM THIS SOLUTION SHALL MEET CONTROL INTENTIONS AND COORDINATED WITH ELECTRICAL CONTRACTOR FOR ADDITIONAL WIRING AND INSTALLATION.
2. ALL SWITCHES WITH "LV" ARE LOW VOLTAGE WIRED CONTROL STATIONS. PROVIDE ON/OFF BUTTONS, PRE-PROGRAMMED SCENES, NETWORK ROOM CONTROLLER AND INTEGRATED CONTROLS TO SYSTEM FOR TIME OF DAY FEATURES
3. **LV1: ENCLOSED OFFICE:**
 - A. LIGHTING COME ON AUTOMATICALLY AT 50% UPON ENTRANCE TO SPACE.
 - B. LIGHTING SHALL REMAIN ON UNTIL 20-MINUTES AFTER NO ACTIVITY AND THEN TURN OFF.
 - C. LOCAL OVERRIDE STATIONS SHALL INCLUDE BUTTONS (LABEL: PROGRAMMING):
 - a. ON: LUMINAIRES 100%.
 - b. 50%: LUMINAIRES AT 50%
 - c. DIM UP
 - d. DIM DOWN
 - e. OFF: LUMINAIRES ALL OFF
4. **LV2: OPEN OFFICE:**
 - A. LIGHTING COME ON AUTOMATICALLY AT 50% UPON ENTRANCE TO SPACE.
 - B. LIGHTING SHALL REMAIN ON UNTIL 20-MINUTES AFTER NO ACTIVITY AND THEN TURN OFF.
 - C. LOCAL OVERRIDE STATIONS SHALL INCLUDE BUTTONS (LABEL: PROGRAMMING):
 - a. ON: LUMINAIRES 100%.
 - b. 50%: LUMINAIRES AT 50%
 - c. DIM UP
 - d. DIM DOWN
 - e. OFF: LUMINAIRES ALL OFF
6. **LV4: CORRIDORS/VESTIBULE:**
 - A. LIGHTING COME ON AUTOMATICALLY AT 50% DURING NORMAL OCCUPIED TIMES.
 - B. OCCUPANCY SENSOR SHALL DIM LIGHTS TO 100% UPON AREA OCCUPANCY
 - C. OCCUPANCY SENSOR SHALL DIM LIGHTS TO 50% UPON 30 MINUTES OF NO AREA OCCUPANCY
 - D. NETWORK TO SYSTEM FOR TIME OF DAY. SYSTEM SHALL TURN LIGHTING OFF DURING NON-OCCUPIED TIMES.
 - E. LOCAL OVERRIDE STATIONS SHALL INCLUDE BUTTONS (LABEL: PROGRAMMING):
 - a. ON: LUMINAIRES 100%.
 - b. 50%: LUMINAIRES AT 50%
 - c. DIM UP
 - d. DIM DOWN
 - e. OFF: LUMINAIRES ALL OFF
7. **LV5: STORAGE:**
 - A. PROVIDE SWITCH STYLE OCCUPANCY SENSOR.
 - B. LV7 STATIONS SHALL INCLUDE BUTTONS
 - A. ON
 - B. OFF

		LUMINAIRE SCHEDULE							
TYPE	LAMP	MANUFACTURER	MODEL NUMBER	BALLAST/DRIVER	MOUNTING	INPUT WATTAGE	DESCRIPTION	NOTE	
A	4000 LUMEN, 3500K, LED	METALUX	24C22-40-UNV-L835-CD1-SWPD1	0-10V	RECESSED GRID CEILING	29W	2x4 TROFFER. PROVIDE INTEGRAL OCCUPANCY SENSOR		
		COLUMBIA	LCAT-24-40-HL-G-ED-U-NXES						
		LITHONIA	2BLT4-40L-ADSM-EZ1-LP835-NESPD77ADCX						
		DAYBRITE	2EVO-G-43L-835-4-D-UNV-DIM-SWZG2						
AEM	4000 LUMEN, 3500K, LED	METALUX	24C22-40-UNV-L835-EL7W-CD1-SWPD1	0-10V	RECESSED GRID CEILING	29W	2x4 TROFFER. PROVIDE INTEGRAL OCCUPANCY SENSOR AND 7W EMERGENCY BATTERY.		
		COLUMBIA	LCAT-24-40-HL-G-ED-U-NXES-ELL14						
		LITHONIA	2BLT4-40L-ADSM-EZ1-LP835-NESPD77ADCX-EL7L						
		DAYBRITE	2EVO-G-43L-835-4-D-UNV-DIM-EMLED-SWZG2						
B	3100 LUMEN, 3500K, LED	METALUX	22C22-32HE-UNV-L835-SWPD1-SWPD1-CD1	0-10V	RECESSED CEILING GRID	23.5W	2x2 TROFFER. PROVIDE INTEGRAL OCCUPANCY SENSOR		
		COLUMBIA	LCAT-22-35-ML-G-ED-U-NXES						
		LITHONIA	2BLT4-33L-ADSM-EZ1-LP835-NESPD77ADCX						
		DAYBRITE	2EVO-G-45L-835-2-D-UNV-DIM-SWZG2						
BEM	3100 LUMEN, 3500K, LED	METALUX	22C22-32HE-UNV-L835-EL7W-CD1-SWPD1	0-10V	RECESSED CEILING GRID	23.5W	2x2 TROFFER. PROVIDE INTEGRAL OCCUPANCY SENSOR AND 7W EMERGENCY BATTERY.		
		COLUMBIA	LCAT-22-35-ML-G-ED-U-NXES-ELL14						
		LITHONIA	2BLT4-33L-ADSM-EZ1-LP835-NESPD77ADCX-EL7L						
		DAYBRITE	2EVO-G-45L-835-2-D-UNV-DIM-EMLED-SWZG2						
C1	2000 LUMEN, 3500K, LED	PRESCOLITE	LTR-6RD-SL-10L-DM1-NXE-LTR-6RD-T-SL-35K-8-MD-SS-WT-B24	0-10V	RECESSED CEILING GRID	22.1W	6" RECESSED CAN.		
		GOTHAM	EVO6-35/10-6AR-MD-LSS-MVOLT-GZ10-TRW-NPS80EZ						
		PORTFOLIO	LD6B-10-D010-EU6B-1020-80-35-6LB-M-0-H-HB26						
		CALCULITE	6R-N-C6L-10-8-35-M-Z10-U-C6-R-DL-CL						
C1EM	2000 LUMEN, 3500K, LED	PRESCOLITE	LTR-6RD-H-ML-DM1-NXE-EMR-LTR-6RD-T-ML-35K-8-MD-SS-WT-B24	0-10V	RECESSED CEILING GRID	22.1W	6" RECESSED CAN. PROVIDE REMOTE TEST SWITCH AND 10W EMERGENCY BATTERY.		
		GOTHAM	EVO6-35/20-6AR-MD-LSS-MVOLT-GZ10-TRW-NPS80EZ						
		PORTFOLIO	LD6B-20-D010-EU6B-1020-80-35-6LB-M-0-H-HB26						
		CALCULITE	6R-N-EM-C6L-20-8-35-M-Z10-U-C6-R-DL-CL						
C2	1100 LUMEN, 3500K, LED	PRESCOLITE	LTR-4RD-H-SL-DM1-NXE-LTR-4RD-T-SL-35K-8-MD-SS-WT-B24	0-10V	RECESSED CEILING GRID	12.7W	4" RECESSED CAN. PROVIDE INTEGRAL OCCUPANCY SENSOR.		
		GOTHAM	EVO4-35/10-4AR-MWD-LSS-MVOLT-GZ10-TRW-NPS80EZ						
		PORTFOLIO	LD4B-10-D010-EU4B-1020-80-35-6LB-M-1-H-HB26						
		CALCULITE	4R-N-C4L-10-8-35-M-Z10-U-C4-R-DL-CL						
C2EM	1100 LUMEN, 3500K, LED	PRESCOLITE	LTR-4SQD-H-SL-DM1-NXE-LTR-4SQD-T-SL-35K-8-MD-SS-WT-B24	0-10V	RECESSED CEILING GRID	12.7W	4" RECESSED SQUARE CAN. PROVIDE INTEGRAL OCCUPANCY SENSOR. PROVIDE PORT TO COMMUNICATE WITH ROOM FIXTURES WITH INTEGRAL SENSORS		
		GOTHAM							
		PORTFOLIO							
		CALCULITE	C4-S-A-CAL-15-8-35-M-Z10-U-C4-S-D-L-N-M-CL						
F1	2000 LUMEN, 3500K, LED	ALIGHT	ACL3ST-4-C75-35K-U-HE-S-B-NAIR-OFF	0-10V	SUSPENDED 10' AFF	40	4' X 2.25' SUSPENDED LINEAR		
F1EM	2000 LUMEN, 3500K, LED	ALIGHT	ACL3ST-4-C75-35K-U-HE-S-B-NAIR-OFF-E	0-10V	SUSPENDED 10' AFF	40	4' X 2.25' SUSPENDED LINEAR. PROVIDE EMERGENCY 12W BATTERY.		
F2	2000 LUMEN, 3500K, LED	ALIGHT	ACL5-T-LS-35-U-HE-X-W-D	0-10V	RECESSED CEILING GRID	40	4' X 2.25' RECESSED LINEAR		
F2EM	2000 LUMEN, 3500K, LED	ALIGHT	ACL5-T-LS-35-U-HE-X-W-D-E	0-10V	RECESSED CEILING GRID	40	4' X 2.25' RECESSED LINEAR. PROVIDE EMERGENCY 12W BATTERY.		
G	2588 LUMEN, 2700K, LED	LIGHTWAY	FWLA-96-LED-08C-3-P3-CSA-25-3K	0-10V	MOUNT ON AWNING	29.6	2' SIGN FLOODLIGHT		
X	LED	EVENLITE	CHY-AB-CN		UNIVERSAL	1W	DIE CAST ALUMINUM, BLACK HOUSING WITH BRUSHED ALUMINUM FACE, AND GREEN LETTERS.		
		LITHONIA	LESS-ELN						
		SURE-LITES	CXTG						
		COMPASS	CCESGE						

NEW PANEL "LCP"

DIMMER/ RELAY		DESCRIPTION	PANELBOARD		LOAD	LOAD TYPE	DIMMABLE	ON/OFF SWITCHING	NOTES	RELAY RATING
#	ZONE		NAME	CIR #						
1	1	EXTERIOR CAN LIGHTS			67W	LED		X	ASTROCLOCK	30A
2	2	EXTERIOR SIGN LIGHT			18W	LED		X	ASTROCLOCK	30A
3		SPARE								
4		SPARE								



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Date Revised	Description
1/24/2023	BID PACKAGE #1 - QA/QC/OWNER REVIEW
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01/31/2023	16600.00

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SCHEDULES

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