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713.874.6404
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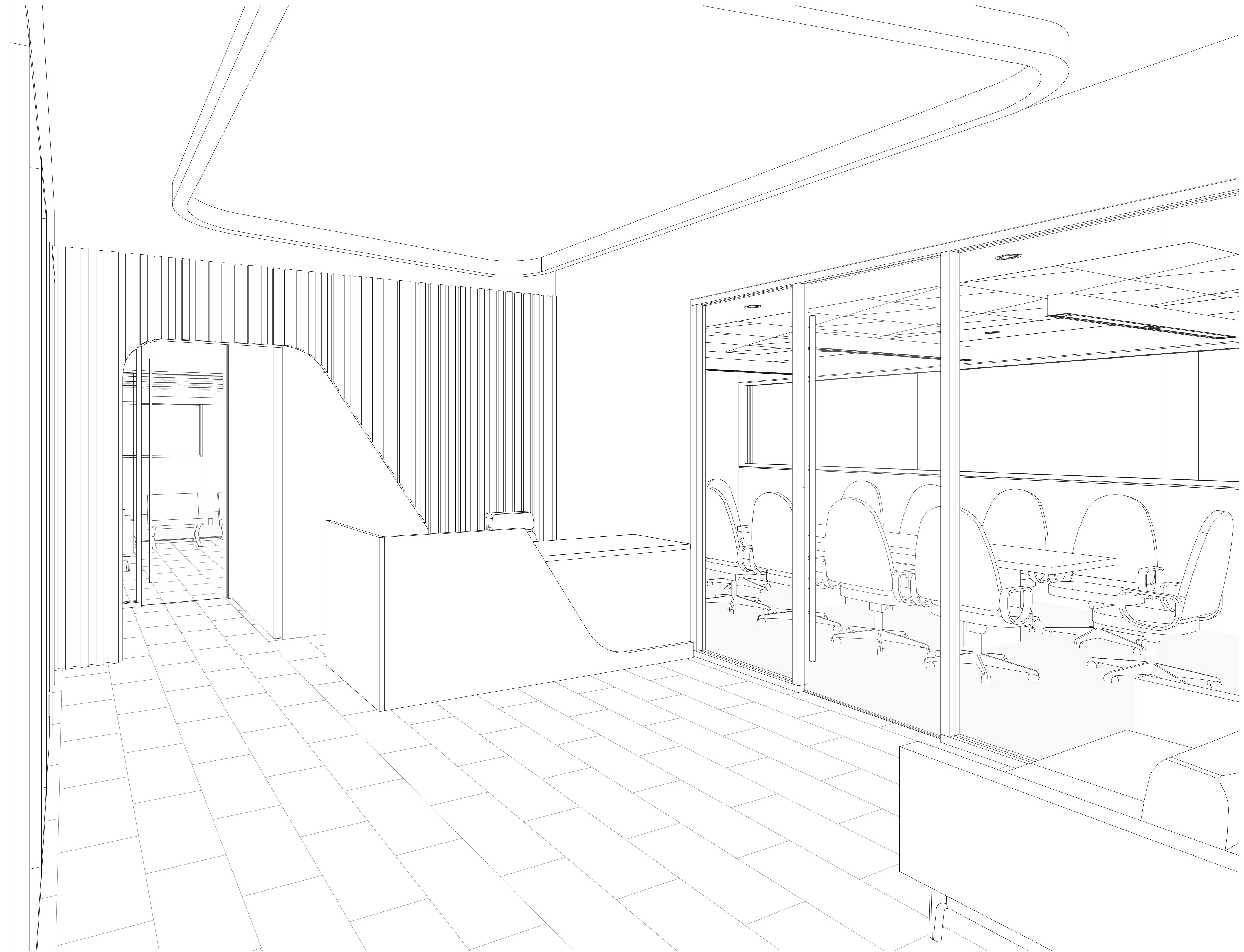
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TRAMONTE DESIGN STUDIO
4203 YOAKUM BLVD, SUITE 450
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713.874.6404
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TANYA@MIRASAFETY.COM



OFFICE REMODEL

MIRA SAFETY 1713 HUR INDUSTRIAL BLVD, CEDAR PARK, TX 78613

tramonte
design | studio
4203 Yoakum Blvd, Suite 450 Houston, TX 77006



12/01/2023

MIRA SAFETY
1713 Hur Industrial Blvd
Cedar Park, TX 78613

ISSUE FOR PERMIT 12/01/23

△ Issues

Project Number 23-01-014

Drawn By JO

Checked By OS

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G-001

COVER SHEET

ABBREVIATIONS:

ABV	ABOVE	DISP	DISPENSER/ DISPOSER	HB	HOSE BIB	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED	SEC	SECTION
AC	AIR CONDITIONING	DIV	DIVIDER DIVISION	HC	HOLLOW CORE	SD	SLIDING GLASS DOOR	SGD	SLIDING GLASS DOOR
ACC	ACCESS	DL	DEAD LOAD	HD	HEAVY DUTY	OFF	OFFICE	SHT	SHEET
ACM	ALUMINUM COMPOSITE METAL	DN	DOWN	HDBD	HARDBOARD	OFF	OFFICE	SHTG	SHEATHING
ACT	ACOUSTICAL CEILING TILE	DR	DOOR	HDR	HEADER	OFPI	OWNER FURNISHED OWNER INSTALLED	SM	SIMILAR
AD	AREA DRAIN	DTP	DOWNSPOUT DETAILS	HWH	HARDWARE	OH	OVERHEAD/ OPPOSITE HAND	SKLT	SKYLIGHT
ADJ	ADJACENT ADJUSTABLE	DUP/L	DUPLICATE	HWD	HARDWOOD	OP	OPERABLE PARTITION OPENING	SLV	SLEEVE
AFJ	Above FINISHED FLOOR	DWG	DRAWING	HM	HOLLOW METAL	OP	OPERABLE PARTITION OPENING	SPCL	SPECIAL SPECIFICATION(S)
ALU	AIR HANDLING UNIT	DWR	DRAWER	HT	HEIGHT	OPG	OPENING	SPKR	SPEAKER
ALT	ALTERNATE	E	EAST	HTG	HEATING	OPH	OPPOSITE HAND	SQ	SQUARE
ALUM	ALUMINUM	EA	EACH	HVAC	HEATING VENTILATION AIR CONDITIONING	OPP	OPPOSITE	SS	SOLID SURFACE MATERIAL
ANOD	ANODIZED	EB	EXPANSION BOLT	HW	HOT WATER	ORD	OVERFLOW ROOF DRAIN ORIGINAL	STA	STATION
APPROX	APPROXIMATE	EJ	EXPANSION JOINT	HYD	HYDRANT	ORIG	ORIGINAL	STC	SOUND TRANSMISSION CLASS
ARCHITECT	ARCHITECTURAL	ELEV	ELEVATOR	INSUL	INSULATION	OS	OVERFLOW SCUPPER	STD	STANDARD
ASPH	ASPHALT	EIFS	EXTERIOR FINISH SYSTEM	INT	INTERIOR	OSB	ORIENTED STRAND BOARD	STL	STEEL
AUTO	AUTOMATIC	ENCL	ENCLOSURE/ ENCLOSURE	INT	INTERIOR	P/L	PROPERTY LINE	STOR	STORAGE
AV	AUDIO VISUAL	ENR	ENTRANCE	INCL	INCANDESCENT INCLUDED(ED), (ING)	PART	PARTITION	STRUC	STRUCTURE/ STRUCTURAL
AVE	AVENUE	ELEC	ELECTRIC ELECTRICAL	INCL	INCLUDED(ED), (ING)	PC	PRECAST	SUBST	SUBSTRATE
AVG	AVERAGE	ELEV	ELEVATOR	EMERG	EMERGENCY	PCF	POUNDS PER CUBIC FOOT	SURF	SURFACE
BD	BOARD	ENCL	ENCLOSURE/ ENCLOSURE	INT	INTERIOR	PCLP	PORTLAND CEMENT PLASTER	SUSP	SUSPENDED
BE	BELOW	ENR	ENTRANCE	IPS	INSIDE PIPE SIZE	PE	PEDESTAL	SW	SHEET VINYL SWITCH
BLDG	BUILDING LINE	EPS	EXPANDED POLYSTYRENE	JAN	JANITOR	PEMB	PRE-ENGINEERED METAL BUILDING	SYN	SYMMETRICAL
BLK	BLOCK	EQUIP	EQUIPMENT	JST	JOIST	PERF	PERFORATED(ED)	TECH	TECHNICAL
BLM	BLOCKING	ESC	ESCALATOR	JT	JOINT	PERM	PERMANENT	SYM	SYMMETRICAL
BK	BENCH MARK	EST	ESTIMATE/ ESTIMATED	KIT	KITCHEN	PERP	PERPENDICULAR	SYSP	SOUTHERN YELLOW PINE SYSTEM
BO	BOTTOM OF	EWC	ELECTRIC WATER COOLER	KO	KNOCKOUT	PKG	PARKING	T&G	TONGUE AND GROOVE
BR	BRICK	EW	ELECTRIC WATER HEATER	PL	PLATE	PL	PLATE	TAN	TANGENT
BRG	BEARING	EXC	EXCAVATE/ EXCAVATION	LAB	LABORATORY	PLAM	PLASTIC LAMINATE	TB	TACK BOARD
BSMT	BASEMENT	EXH	EXHAUST	LAM	LAMINATE(ED)	PLAS	PLASTER	TBD	TO BE DETERMINED
BTM	BOTTOM	EXIST	EXISTING	LAV	LAVATORY	PLAST	PLASTIC	TECH	TECHNICAL
BTM	BETWEEN	EXP	EXPANSION/ EXPANDED	LDR	LADDER	PLBG	PLUMBING	TEL	TELEPHONE
BUL	BULB UP ROOFING	EXTR	EXTRUDED(ED)	LL	LEFT HAND	PLF	POUNDS PER LINEAR FOOT	THK	THICKNESS
BVR	BEVELED/ BEVEL	LL	LIVE LOAD	PLYWD	PLYWOOD	PLYWD	PLYWOOD	THRES	THRESHOLD
C IN	CUBIC INCH	FA	FIRE ALARM	LNTL	LINTEL	PNL	PANEL	TL	TILE
C J	CONTROL JOINT	FAB	FABRICATED(ED)	LOUV	LOUVER	PNT	PAINT(ED)	TOC	TOP OF CURB
C TO C	CENTER TO CENTER	FABR	FABRICATION	LWT	LIGHTWEIGHT	POS	POSTIVE	TOL	TOLERANCE
CAB	CABINET	FD	FLOOR DRAIN	LV	LEVEL	PR	PAIR	TOP	TOP OF PARAPET
CER	CEMENT	FDN	FOUNDATION	LWT	LIGHTWEIGHT	PREFAB	PREFABRICATED(ED)	TOSC	TOP OF STEEL
CEM	CERAMIC	FE	FIRE EXTINGUISHER	MANIT	MAINTENANCE	PREFIN	PREFINISHED(ED)	TOS	TOP OF STRUCTURAL SUB
CF	CUBIC FOOT	FEC	FIRE EXTINGUISHER CABINET	MANJ	MANUAL	PROJ	PROJECT	TPD	TOILET PAPER DISPENSER
CFM	COLD FORMED METAL FRAMING	FF	FINISH FLOOR	MAS	MASONRY	PSF	POUNDS PER SQUARE FOOT	TR	TREAD
CG	CORNER GUARD	FF	FINISHED FLOOR	MATL	MATERIAL(S)	PSI	POUNDS PER SQUARE INCH	TRNS	TRANSPARENT
CI	CAST IRON	ELEV	ELEVATION	MAX	MAXIMUM	PT	POST TENSIONED	TRTD	TREATED
OP	CAST IN PLACE	FIN	FINISH FINISHED	MEM	MEMBER	PT	POINT	TST	TUBE STEEL
CIRCUM	CIRCUMFERENCE	FX	FIXTURE	MECH	MECHANICAL	PT	POINT	TYP	TELEVISION TYPICAL
CL	CENTERLINE	FLX	FLEXIBLE	MED	MEDIUM	PVC	PAPER TOWEL DISPENSER	UNFIN	UNFINISHED
CLG	CEILING	FLR	FLOOR	MEMB	MEMBRANE	POLYVINYL	POLYVINYL CHLORIDE	UNFN	UNFINISHED
CLO	CLOSE	FLOR	FLUORESCENT	MEZZ	MEZZANINE	QT	QUARRY TILE	UR	URN
CLR	CLEAR CLEARANCE	FOC	FACE OF CONCRETE	MH	MANHOLE	RA	RETURN AIR	VAR	VARIABLES
CM	CONSTRUCTION MANAGER	FOF	FACE OF FINISH	MIN	MINIMUM	RAD	RADIUS	VCT	VINYL COMPOSITION TILE
CMU	CONCRETE MASONRY UNITS	FOM	FACE OF MASONRY	MIR	MIRROR	RCP	REFLECTED CEILING PLAN	VEN	VENEER
COL	COLUMN	FOS	FACE OF STUDS	MISC	MISCELLANEOUS	MDO	MOLDING	VEN	VENEER
COMB	COMBINED, (ION), (BLE) COMPOSITION/ COMPOSITE	FRM	FRAME	MDO	MOLDING	MO	MASONRY OPENING	REC	RECEPTACLE
CONC	CONCRETE	FRM	FRAME	MOD	MODULAR	REF	REFRIGERATOR	REFL	REFLECTED
CONF	CONFERENCE	FRM	FRAME	MOV	MOVABLE	REFL	REFLECTED	REG	REGISTER
CONN	CONNECTION	FRT	FIRE RETARDANT TREATED	MRT	MOISTURE RESISTANT	RENF	REINFORCED(ED), (ING)	RENT	REINFORCE(ED), (ING)
CONST	CONSTRUCTION CONTINUED)	FTG	FOOTING	MT	MOUNT	RENO	REMOVE	REQ	REQUIRED
CONTR	CONTRACT CONTRACTOR	FUT	FUTURE	MTD	MOUNTED	RESIL	RESILIENT	W	WEST
COORD	COORDINATE	FV	FIELD VERIFY	MTG	MOUNTING	MTL	METAL	WTH	WITH
COOR	CORRIDOR	FWC	FABRIC WALL COVERING	MUL	MULLION	REV	REVERSE(REVEISED)	W/O	WITHOUT
CORR	CORROSION	FWP	FABRIC WRAPPED PANELS	MULT	MULTIPLE	RFG	ROOFING	WB	WOOD BASE
CPT	CARPET	GALV	GALVANIZED	N	NORTH	RH	RIGHT HAND ROOM	WC	WATER CLOSET
CT	CERAMIC TILE	GB	GRAB BAR	NAT	NATURAL	RO	ROUGH OPENING	WD	WOOD
CTR	CENTER	GC	GENERAL CONTRACTOR	NIC	NOT IN CONTRACT	ROW	RIGHT OF WAY	WV	WROUGHT IRON
CW	COLD/ CHILLED WATER CUBIC YARD	GI	GALVANIZED IRON	NO	NO. OF	S	SOUTH	WR	WATER PROOFING
D	DRAIN	GL	GLASS	NOM	NOMINAL	S STL	STAINLESS STEEL	WP	WATER PROOFING
DBL	DOUBLE	GMP	GUARANTEED MAXIMUM PRICE	NRC	NOISE REDUCTION COEFFICIENT	SAD	SUPPLY AIR DIFFUSER	WS	WATER STOP
DEMO	DEMOLITION	GR	GRADE	NTS	NOT TO SCALE	SABF	SOUND ATTENUATING FIRE BLANKET	WT	WINDOW TREATMENT
DEPT	DEPARTMENT	GRT	GROUT	OA	OUTSIDE AIR ON CENTER	SCR	SCREEN	WV	WOOD VENEER
DF	DRINKING FOUNTAIN	GYP	GYP/ GYPSUM BOARD	OD	OUTSIDE DIAMETER	SDG	SIDING	WTF	WELDED WIRE FABRIC
DIA	DIAMETER	DM	DIMENSION					XFM	TRANSFORMER

SUBMITTALS:

GENERAL REQUIREMENTS:

- ALL WORK TO BE REVIEWED BY THE GENERAL CONTRACTOR PRIOR TO BEING TRANSMITTED TO THE ARCHITECT. APPLICABLE LOCAL, STATE, AND NATIONAL REGULATIONS, ORDINANCES AND BUILDING CODE STANDARDS, WHERE DIFFERING RESTRICTIONS OCCUR, THE MORE STRINGENT WILL GOVERN. DIRECT ALL QUESTIONS REGARDING SUCH COMPLIANCE TO THE ARCHITECT FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK IN QUESTION.
- ALL SUBMITTALS MUST BE REVIEWED BY THE GENERAL CONTRACTOR PRIOR TO BEING TRANSMITTED TO THE ARCHITECT FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK IN QUESTION. ALL MATERIALS AND INSTALLATIONS MUST BE IN CONFORMANCE WITH ALL REQUIREMENTS OF THE GENERAL CONTRACTOR AND PAY FEES FOR ALL NECESSARY PERMITS, LICENSES, CERTIFICATIONS, TESTING, ETC.

BUILDING AND LOAD:

- THE CONTRACTOR SHALL COORDINATE WITH THE BUILDING OWNER/PROPERTY MANAGER REGARDING ALL ISSUES RELATING TO STAGING AREA, USE OF LOADING DOCK, DUMPSTER AREAS, USE OF ELEVATOR AND/OR STAIR, AND ANY OTHER EXISTING FACILITIES DURING CONSTRUCTION PERIOD.
- THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION SEQUENCING WITH THE BUILDING OWNER/PROPERTY MANAGER AND SCHEDULE ALL SERVICE INTERRUPTIONS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE ALL ITEMS IDENTIFIED AS BUILDING STANDARD W/ BASE BUILDING SPECIFICATIONS PROVIDED BY BUILDING OWNER/PROPERTY MANAGER.

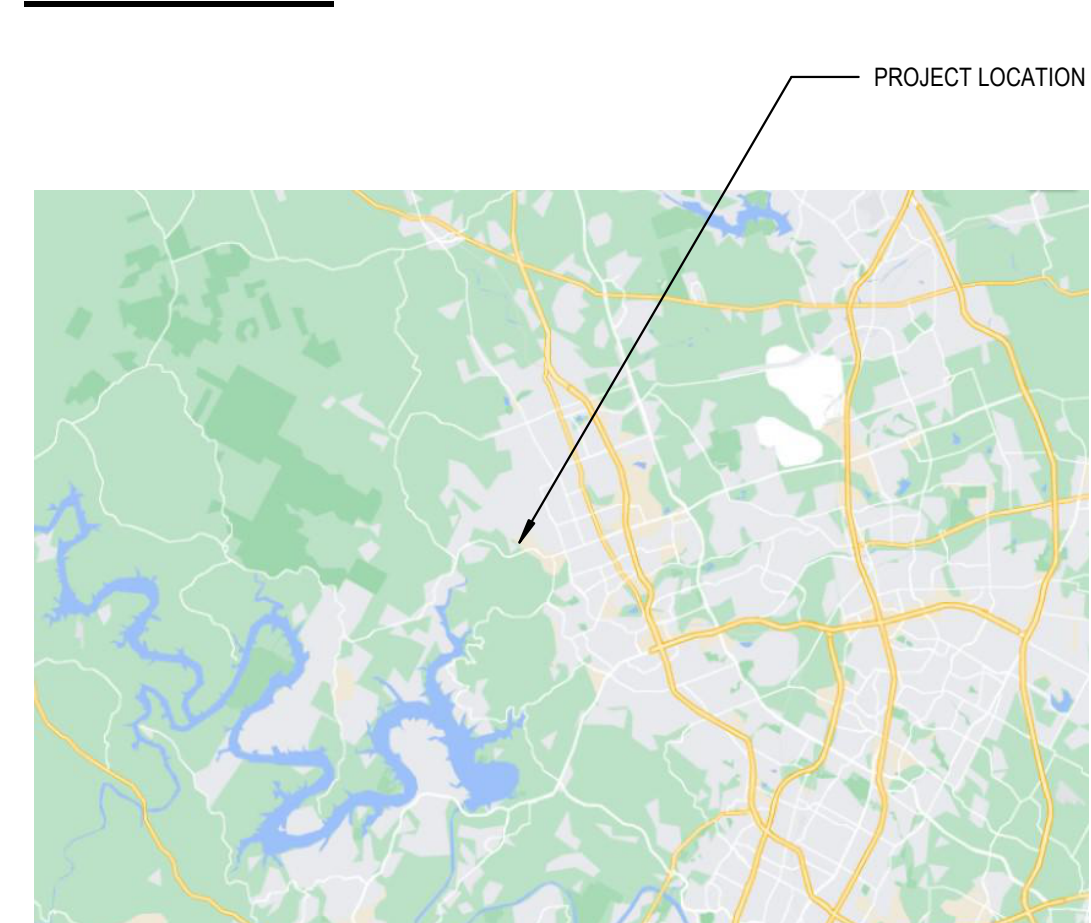
DRAWINGS:

- DO NOT DISASSEMBLE SETS OF CONSTRUCTION DRAWINGS OR SEPARATE FROM SPECIFICATIONS. DRAWINGS AND SPECIFICATIONS ARE INTERRELATED.
- THESE DOCUMENTS ARE NOT TO BE REPRODUCED OR USED FOR ANY PURPOSE OTHER THAN ORIGINALLY ISSUED UNLESS AUTHORIZED IN WRITING BY ARCHITECT.
- THE CONTRACTOR SHALL FURNISH ADDITIONAL DETAIL DRAWINGS WHICH SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, WITHOUT INTENDED CHANGE IN THE CONTRACT TIME OR CONTRACT SUM. PRIOR TO PROCEEDING, THE CONTRACTOR SHALL INDICATE ACCEPTANCE OF SUCH ADDITIONAL DETAIL DRAWINGS WHICH SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, WITHOUT INTENDED CHANGE IN THE CONTRACT TIME OR CONTRACT SUM. PRIOR TO PROCEEDING, THE CONTRACTOR SHALL INDICATE ACCEPTANCE OF SUCH ADDITIONAL DETAIL DRAWINGS WHICH SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, WITHOUT INTENDED CHANGE IN THE CONTRACT TIME OR CONTRACT SUM.
- TEXT SCALES CORRESPOND TO THEIR ASSIGNED DRAWINGS ON FULL SIZE SHEETS ONLY.

CLARIFICATIONS AND COORDINATION:

- THE CONTRACTOR SHALL CHECK ALL DRAWINGS AND SPECIFICATIONS IMMEDIATELY UPON THEIR RECEIPT. IN CASE OF DISCREPANCY, OR CONFLICT IN DETAILS OR GENERAL NOTES AND TYPICAL DETAILS, THE MATTER SHALL BE PROMPTLY SUBMITTED TO THE ARCHITECT FOR CLARIFICATION. ANY CLARIFICATION BY THE CONTRACTOR WITHOUT SUCH CLARIFICATION SHALL BE AT HIS/HER RISK AND EXPENSE.
- NOTIFY ARCHITECT IN CASE OF PLAN LOCATION CONFLICTS BETWEEN DISCIPLINES.
- ANYTHING MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, SHALL BE OF LIKE EFFECT AS IF SHOWN OR MENTIONED IN BOTH. IN CASE OF DIFFERENCES BETWEEN SPECIFICATIONS AND DRAWINGS, THE MORE RESTRICTIVE OR PREMIUM ITEM SHALL GOVERN.
- ALL DRAWING REFERENCES TO MATERIALS ARE GENERAL IN NATURE. MATERIAL CALL-OUTS ON DRAWINGS REFER TO COMPLETE MATERIAL SYSTEMS. REFERENCE SPECIFICATIONS OR FURTHER CONDITIONS, UNO.

AREA MAP:



GENERAL NOTES:

REGULATIONS AND PERMITS:

- ALL WORK TO BE COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND NATIONAL REGULATIONS, ORDINANCES AND BUILDING CODE STANDARDS, WHERE DIFFERING RESTRICTIONS OCCUR, THE MORE STRINGENT WILL GOVERN. DIRECT ALL QUESTIONS REGARDING SUCH COMPLIANCE TO THE ARCHITECT FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK IN QUESTION.
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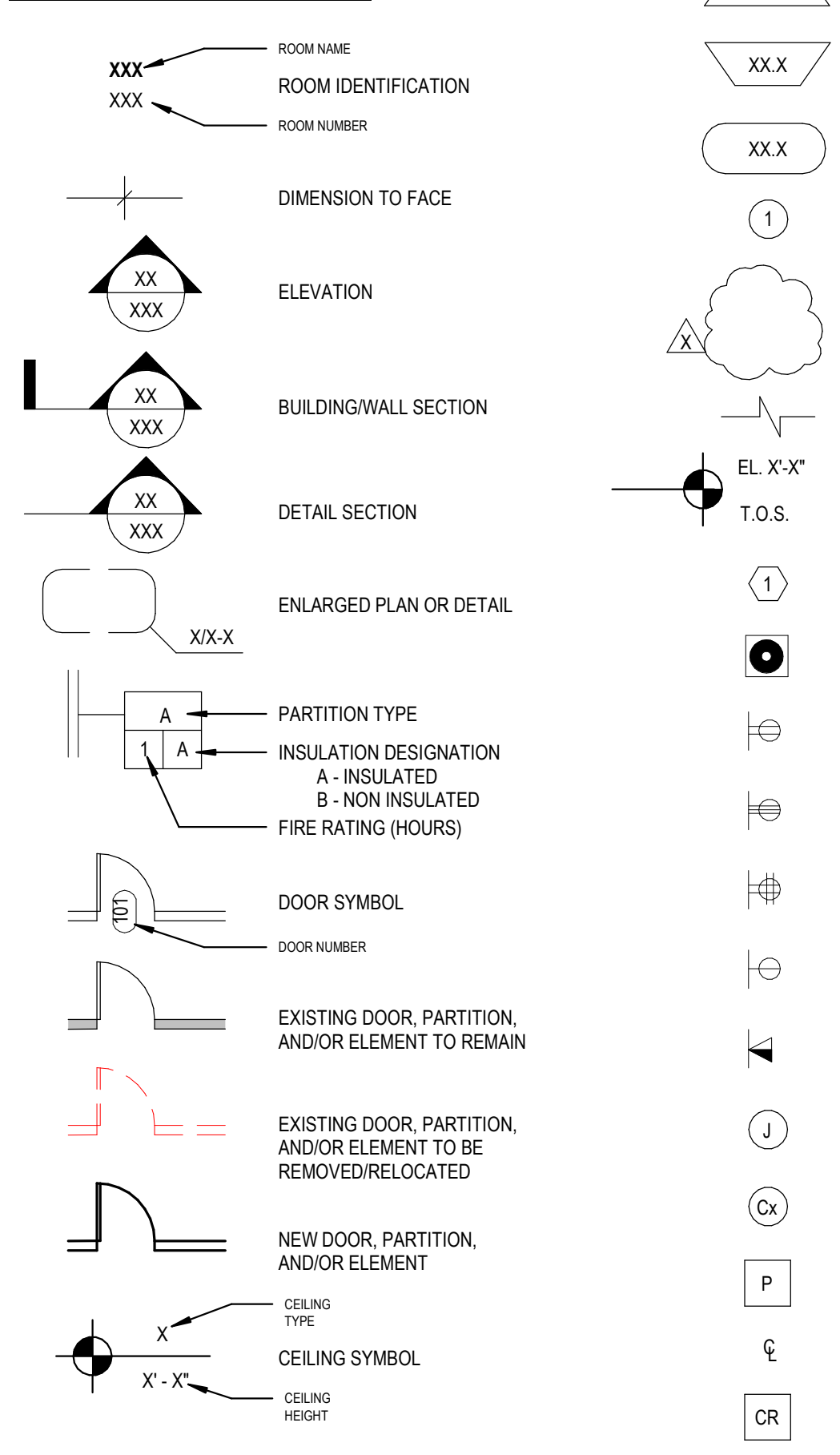
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SITE EXISTING CONDITIONS:

- THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL REVIEW THE CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND PERFORM DUE DILIGENCE INSPECTION OF ALL EXISTING CONDITIONS AND ACCURATELY ACQUAINT THEMSELVES WITH THE EXISTING CONDITIONS. GENERAL CONTRACTOR SHALL BRING ALL CONFLICTS TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND SUBMITTAL OF PROPOSAL. SUBMITTAL OF A PROPOSAL SHALL BE CONSIDERED CONFIRMATION THAT SUCH INSPECTION HAS BEEN MADE, AND NO FURTHER COMPENSATION SHALL BE DUE TO THE CONTRACTOR FOR CLAIMS ARISING AS A RESULT OF FAILURE TO PERFORM SUCH INSPECTION.
- ALL MEASUREMENTS ARE SUBJECT TO VERIFICATION IN THE FIELD BY THE CONTRACTOR, AND HE SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO FABRICATION OR CONSTRUCTION. THE CONTRACTOR SHALL COMPILE ALL DRAWINGS AND VERIFY ALL INFORMATION ON THE DRAWINGS BEFORE LAYING OUT THE WORK, AND REPORT ANY DISCREPANCIES OR OMISSIONS TO ARCHITECT PRIOR TO COMMENCING ANY AFFECTED WORK. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ERRORS, WHICH MAY HAVE BEEN AVOIDED THEREBY.

PLAN SYMBOLS:



CLIENT SIGN OFF:

NAME _____ DATE _____

SHEET INDEX:

GENERAL	
G-001	COVER SHEET
G-002	GENERAL INFORMATION
G-003	TAS SHEET
G-004	SPECIFICATIONS
G-005	SPECIFICATIONS
G-006	SPECIFICATIONS
G-007	CODE REVIEW & EGRESS PLAN
ARCHITECTURE	
A-001	DEMOLITION PLAN - LVL 01
A-100	SITE PLAN
A-110	FLOOR PLANS
A-120	REFLECTED CEILING PLANS
A-130	POWER / FURNITURE PLANS
A-140	FINISH PLANS
A-150	ROOF PLAN
A-200	EXTERIOR ELEVATIONS
A-210	INTERIOR ELEVATIONS
A-301	BUILDING SECTIONS
A-350	WALL SECTIONS
A-351	SECTION AND PLAN DETAILS
A-400	ENLARGED PLANS
A-450	ENLARGED STAIR PLAN & ELEVATIONS
A-451	ENLARGED STAIR PLAN & ELEVATIONS
A-452	STAR DETAILS
A-502	MILLWORK DETAILS
A-503	MILLWORK DETAILS
A-504	PARTITION TYPES
A-610	WINDOW WALL TYPES
STRUCTURAL	
S100	STRUCTURAL NOTES
S201	FOUNDATION PLAN
S202	FRAMING PLANS
S300	FOUNDATION DETAILS
S400	FRAMING DETAILS
MECHANICAL	
M001	GENERAL NOTES AND LEGENDS
M111	MECHANICAL PLANS
M601	MECHANICAL DETAILS
M601	MECHANICAL SCHEDULES AND DIAGRAMS
M701	MECHANICAL SPECIFICATIONS
ELECTRICAL	
E001	GENERAL NOTES AND LEGENDS
E111	POWER PLANS
E121	LIGHTING PLANS
E501	ELECTRICAL DETAILS
E501	ELECTRICAL SCHEDULES AND DIAGRAMS
E701	ELECTRICAL SPECIFICATIONS
E702	ELECTRICAL SPECIFICATIONS
PLUMBING	
P001	PLUMBING NOTES, LEGENDS, AND SPECIFICATIONS
P111	PLUMBING PLANS
P401	PLUMBING ENLARGED WASTE AND VENT PLANS
P402	PLUMBING ENLARGED WATER AND GAS PLANS
P501	PLUMBING DETAILS
P801	PLUMBING RISERS

DEFERRED SUBMITTALS:

- CANOPES AND/OR AWNINGS
- PREFAB STEEL STAIRS

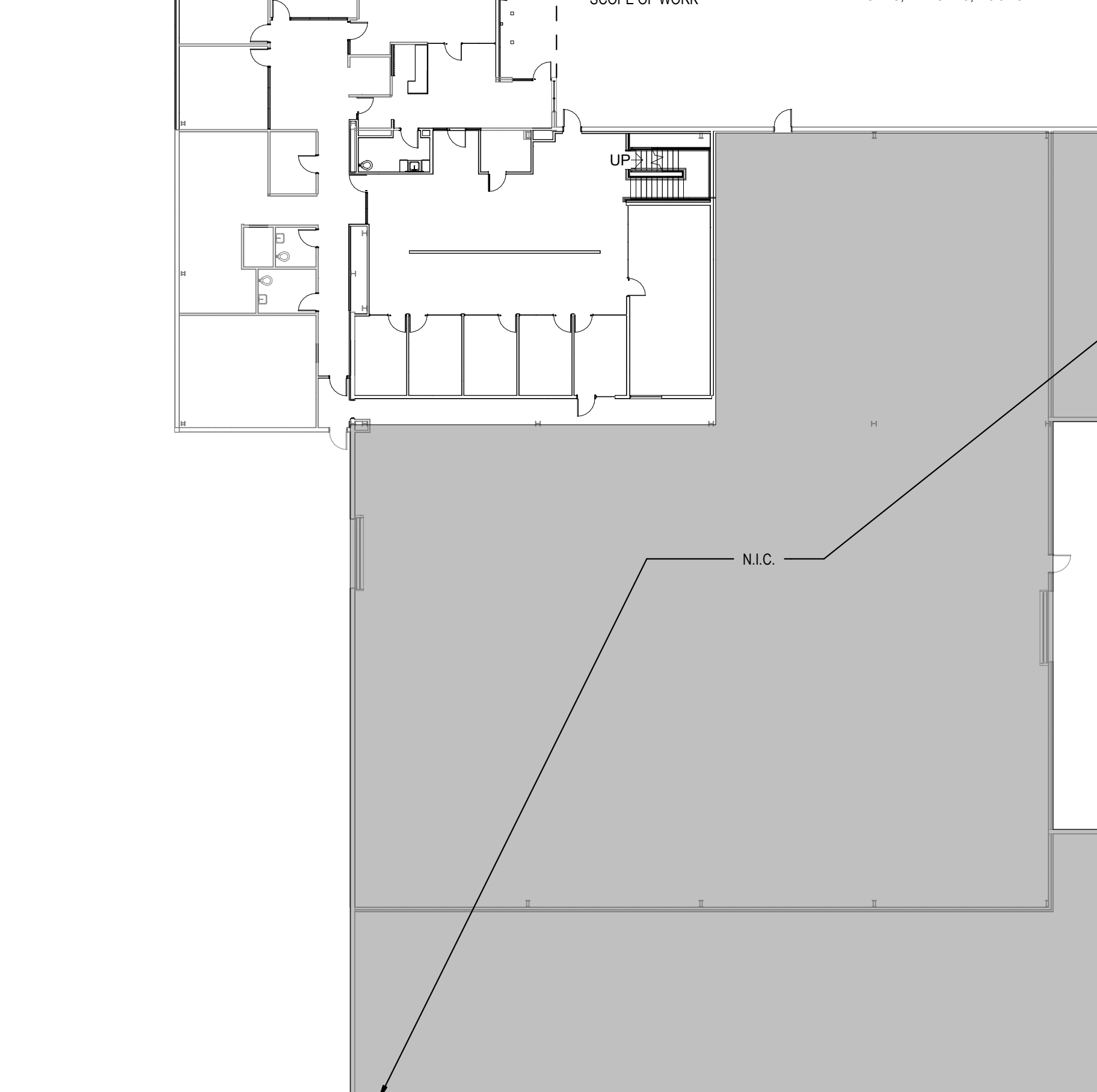
SEPARATE PERMIT:

- FIRE SPRINKLERS

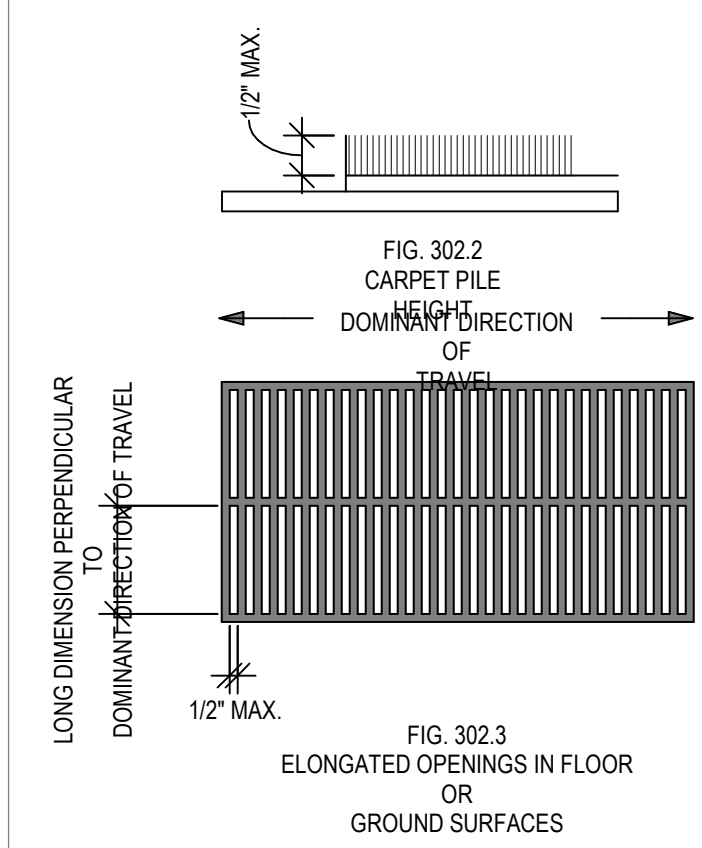
TEXAS DEPT. OF LICENSING AND REGULATION ARCHITECTURAL BARRIERS PROJECT NUMBER: TABS2024006289

SCOPE OF WORK:

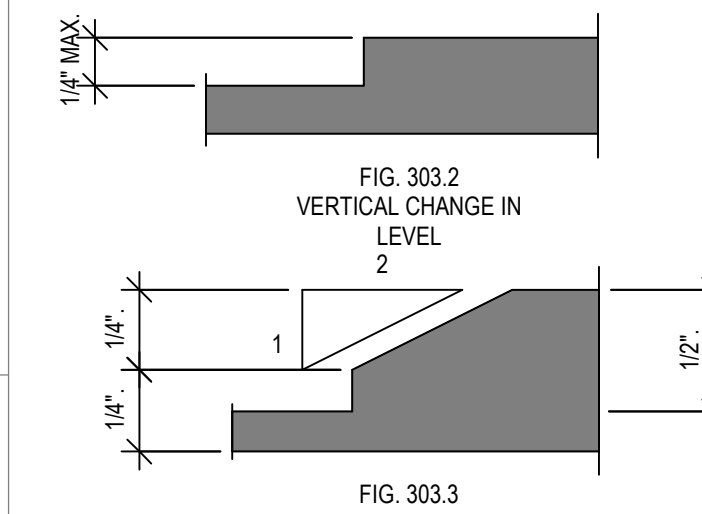
THE SCOPE OF WORK FOR THE MIRA SAFETY PROJECT INCLUDES: SITE UPDATES WITH PARKING EXTERIOR LIGHTING, UPDATE EXTERIOR METAL WALL PANELS AT SPECIFIED LOCATIONS WITH EXISTING STRUCTURE TO REMAIN, ADD FLOOR DECK TO EXISTING MEZZANINE SPACE WITHIN THE WAREHOUSE AND ENCLOSE SPACE FOR OFFICE USE. PROJECT WILL INCLUDE UPDATING ALL FINISHES, FIXTURES, DOORS AND HARDWARE WITHIN PROJECT SCOPE OF WORK.



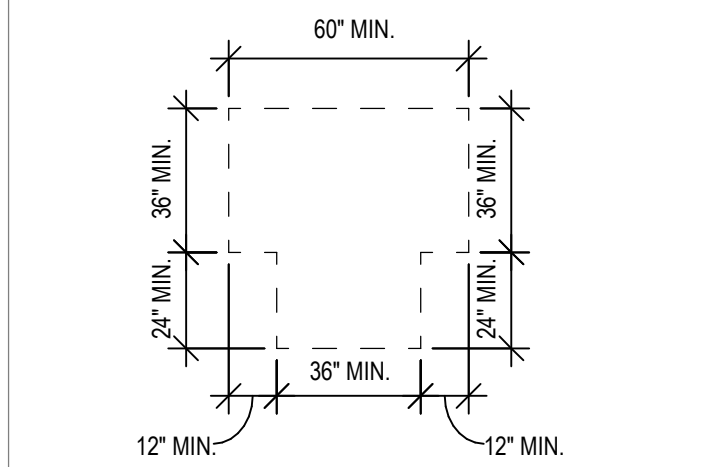
302 FLOOR OR GROUND SURFACES



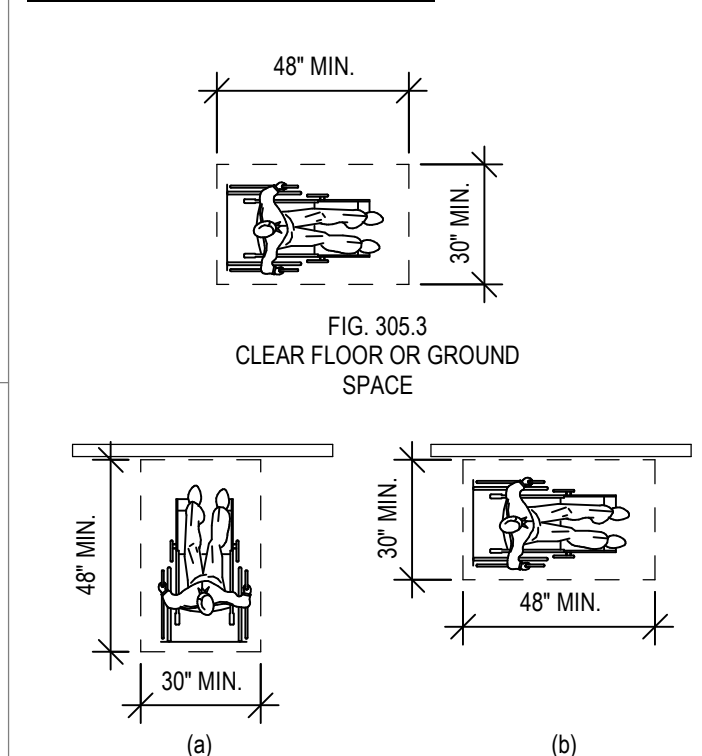
303 CHANGES IN LEVEL



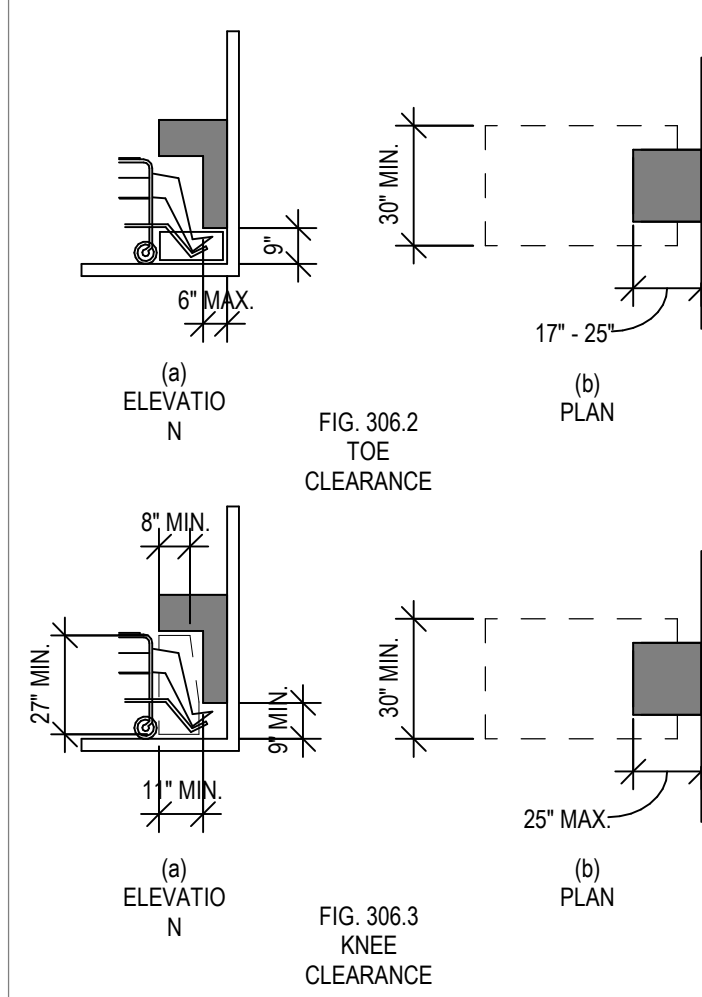
304 TURNING SPACE



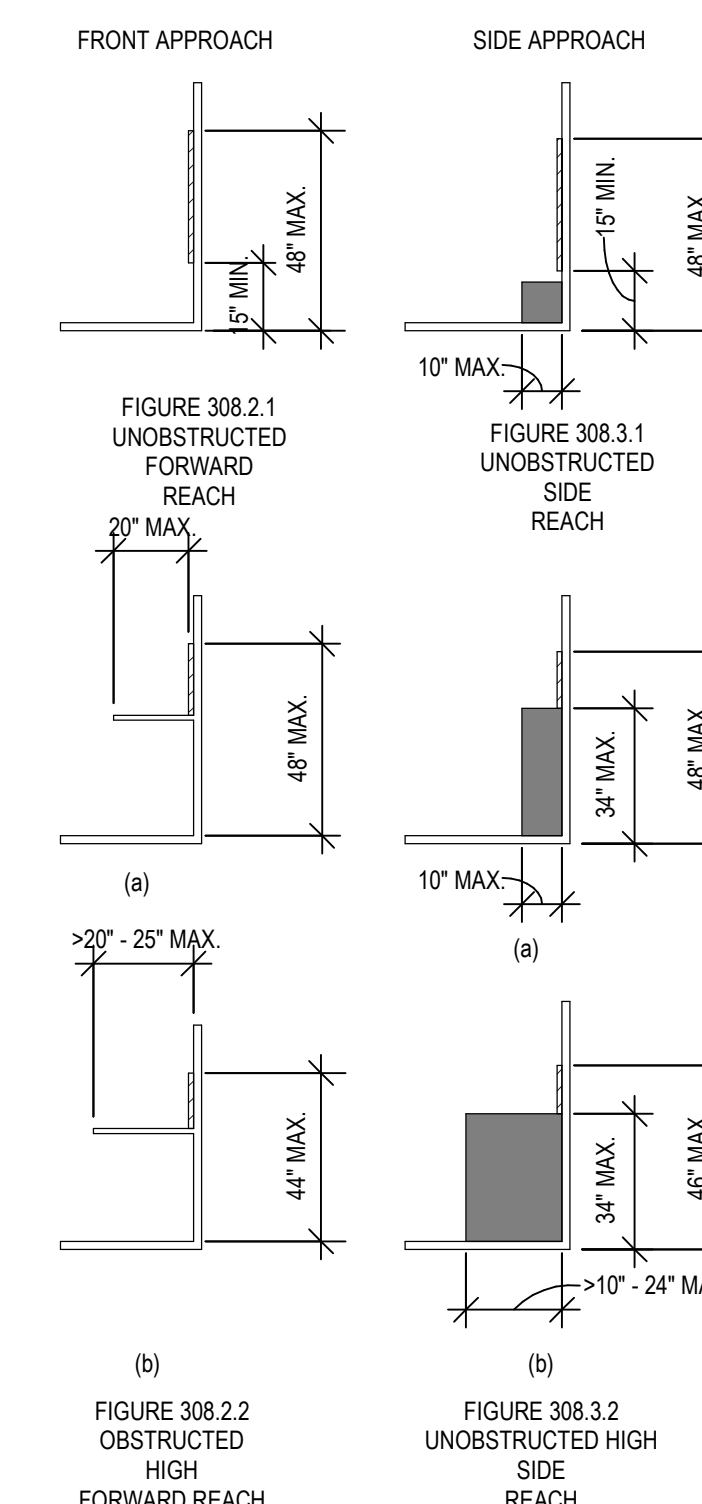
305 CLEAR FLOOR OR GROUND SPACE



306 KNEE AND TOE CLEARANCE



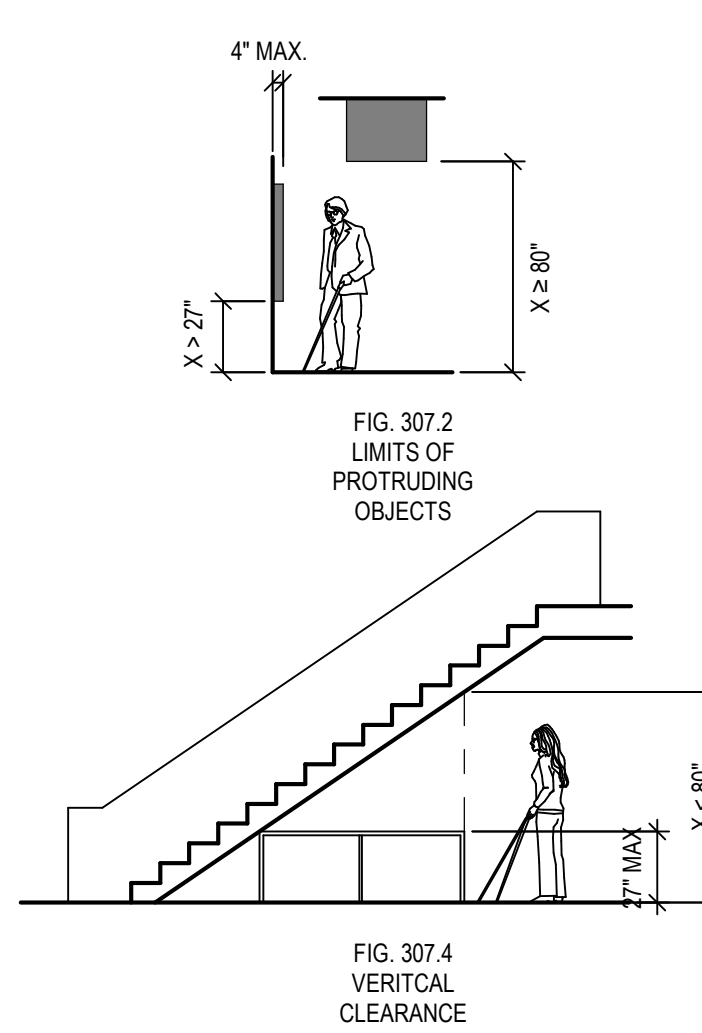
308 REACH RANGES



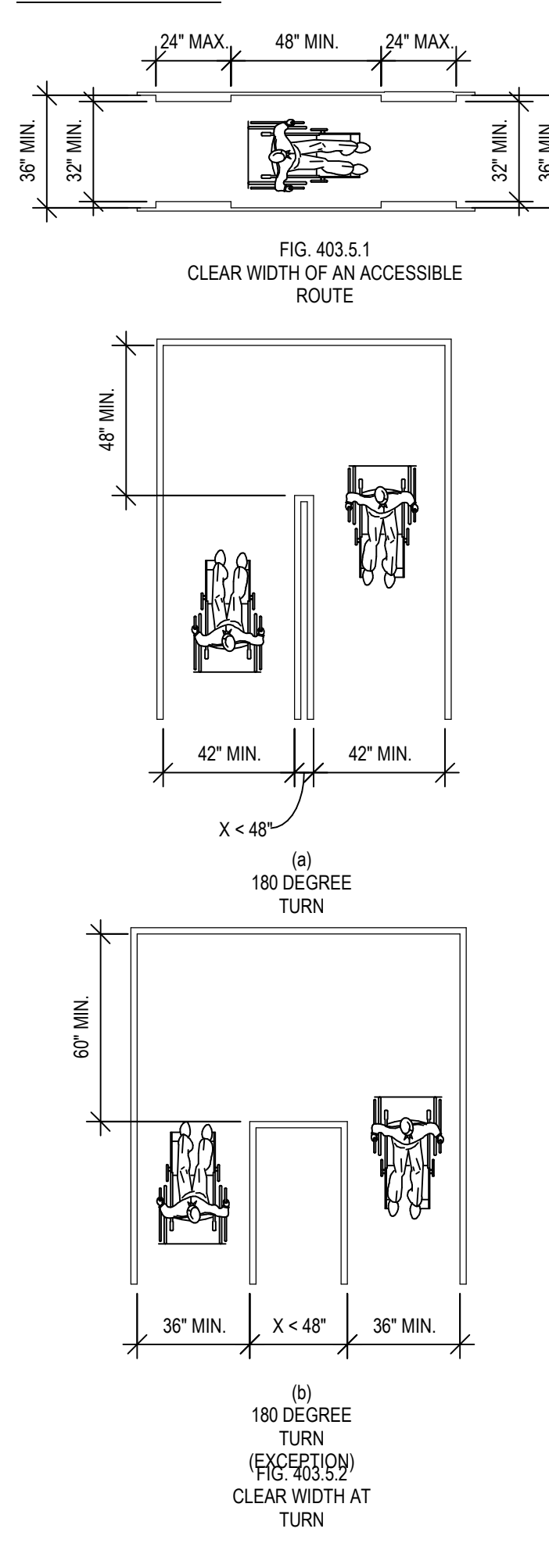
CHILDREN'S REACH RANGES

FORWARD OR SIDE REACH	AGES 3-4	AGES 5-8	AGES 9-12
HIGH (MAXIMUM)	36 in.	40 in.	44 in.
LOW (MINIMUM)	20 in.	18 in.	16 in.

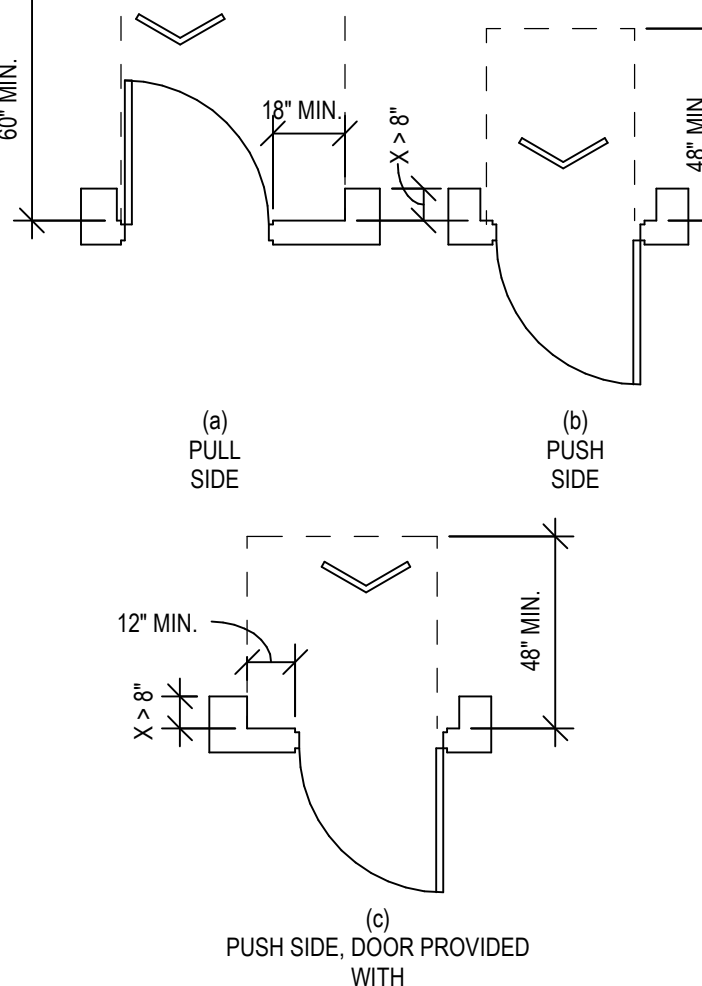
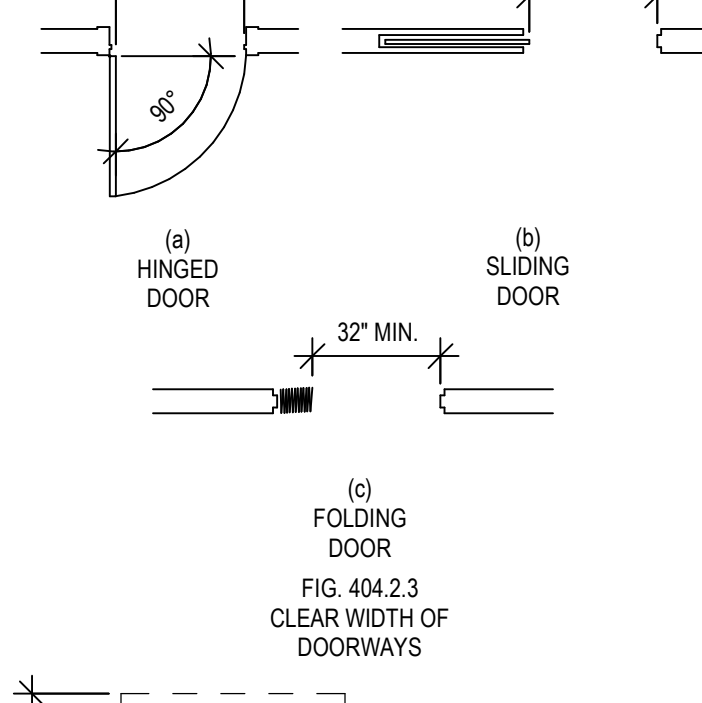
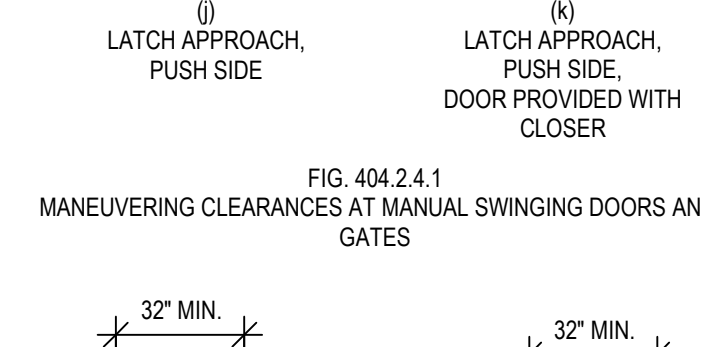
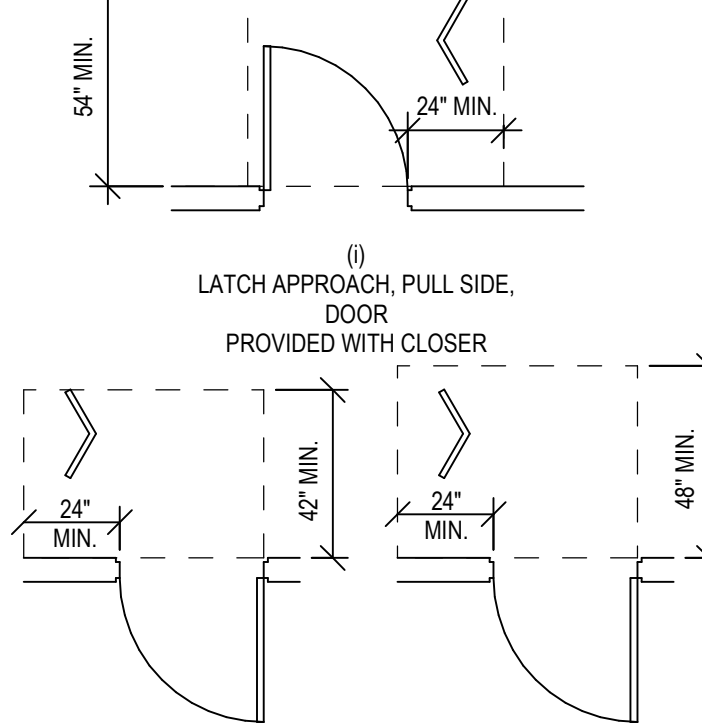
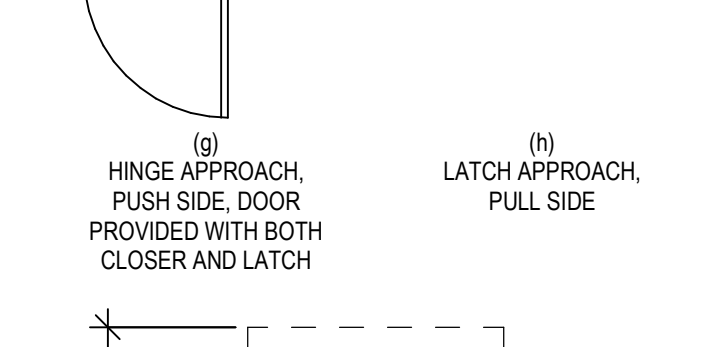
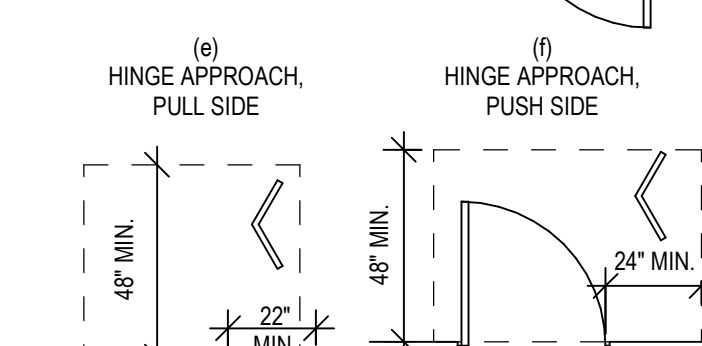
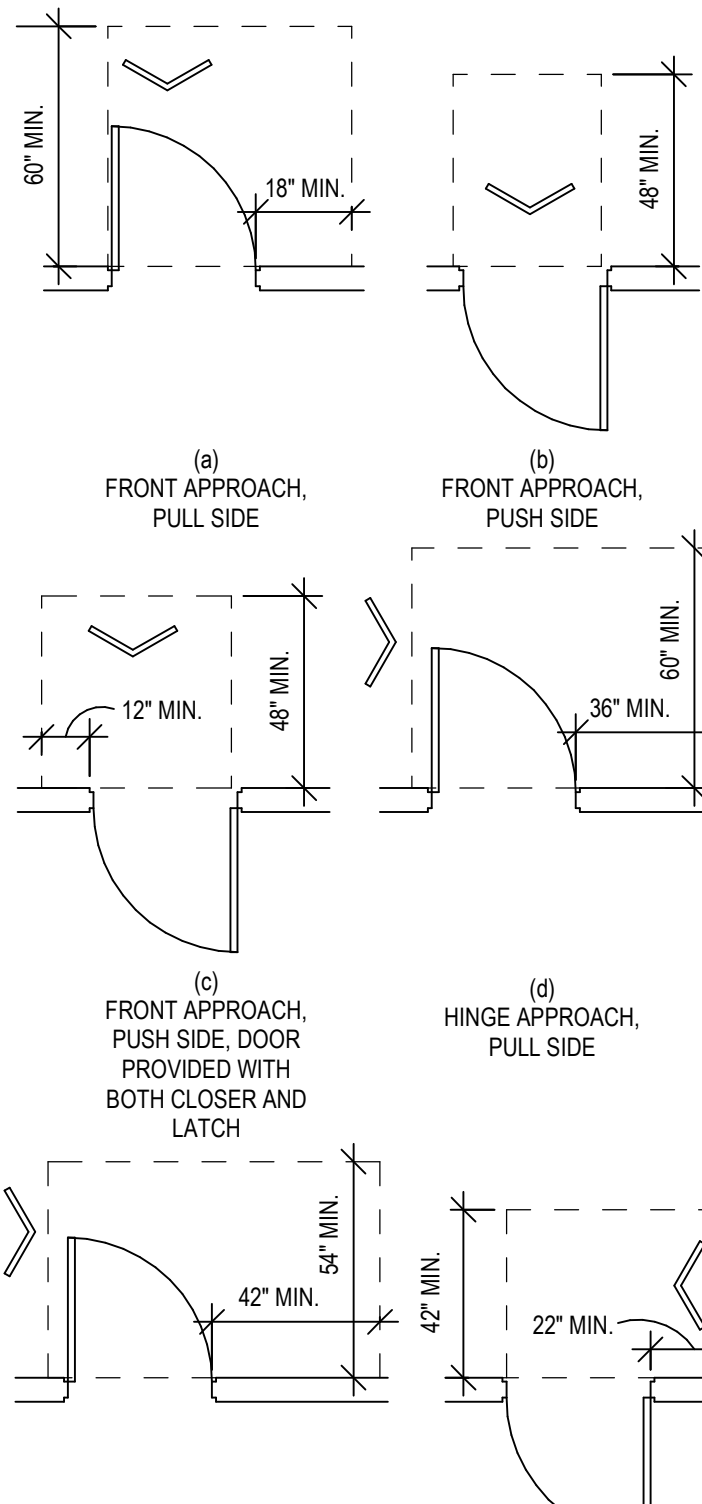
307 PROTRUDING OBJECTS



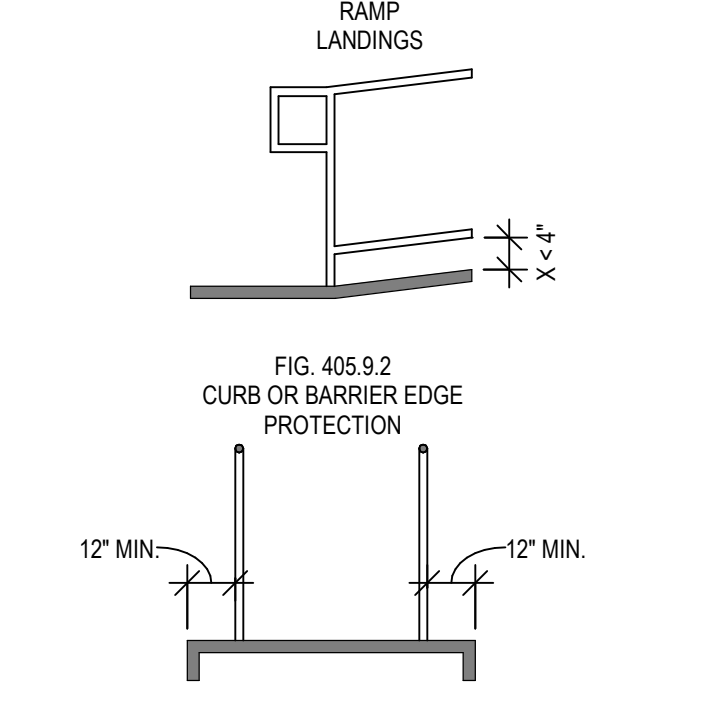
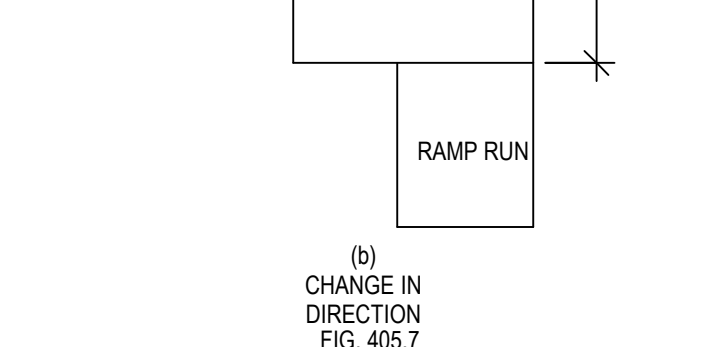
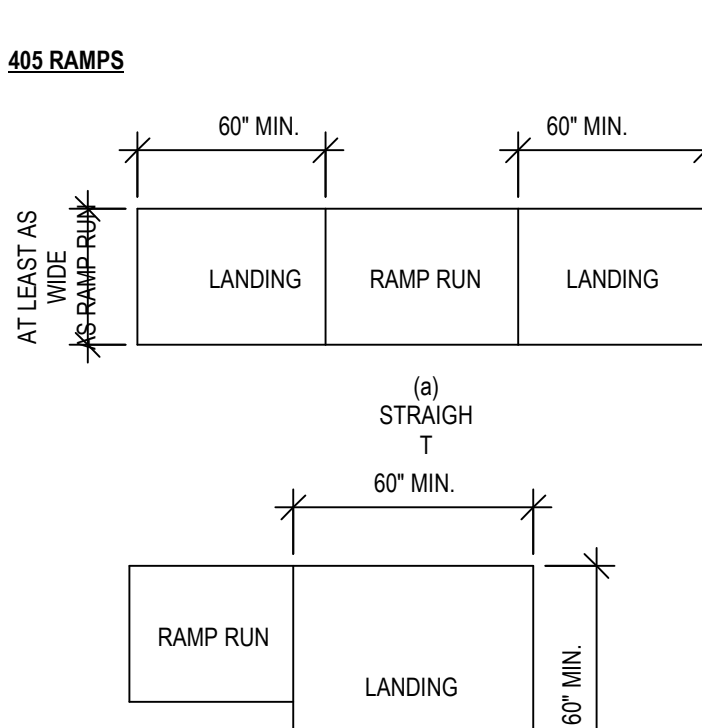
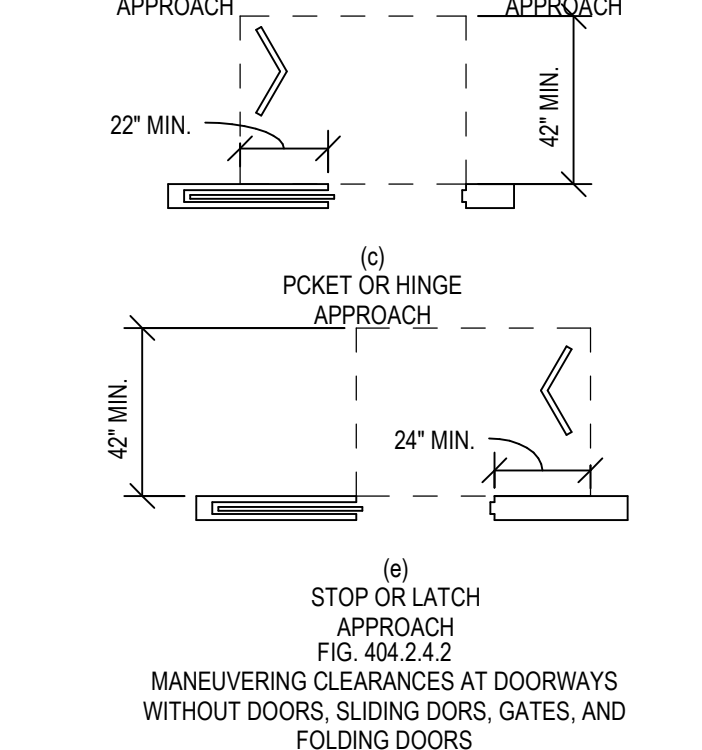
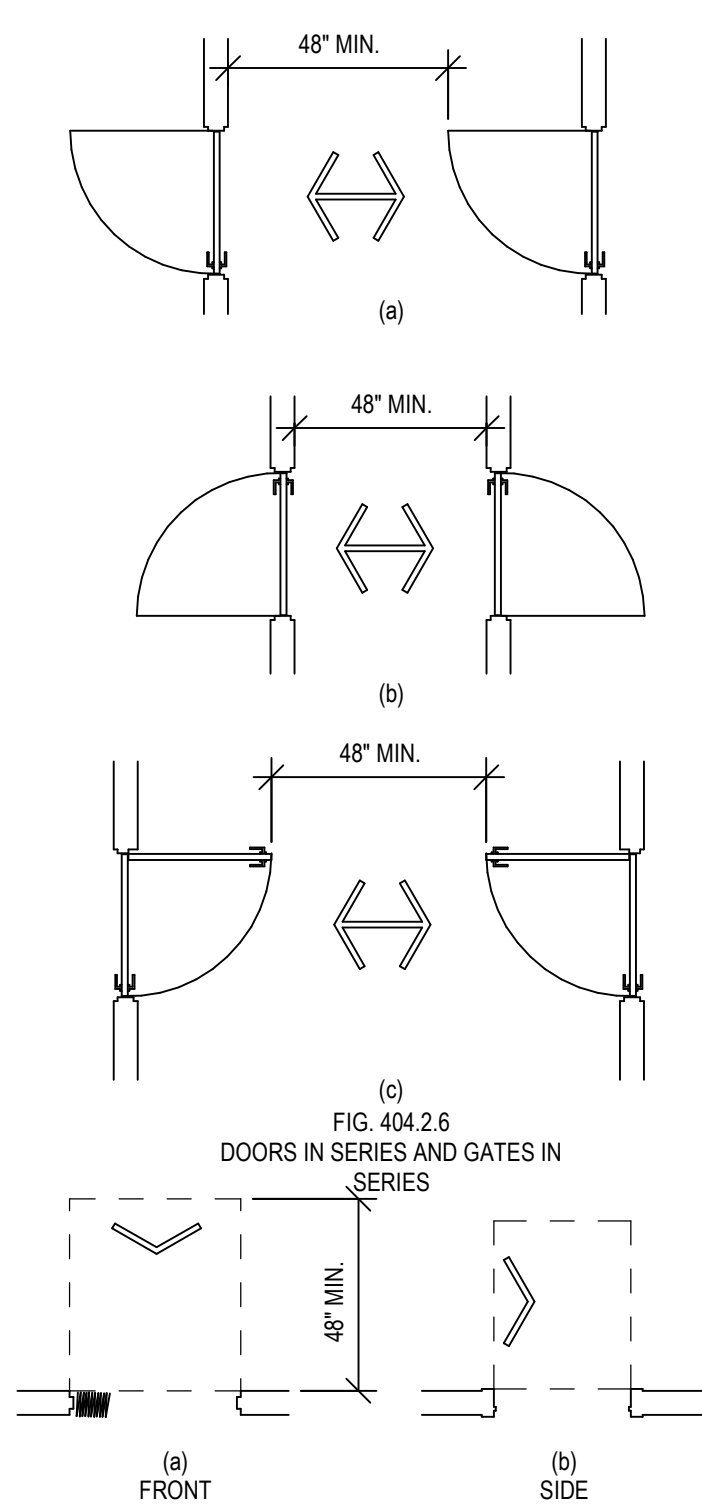
403 WALKING SURFACES



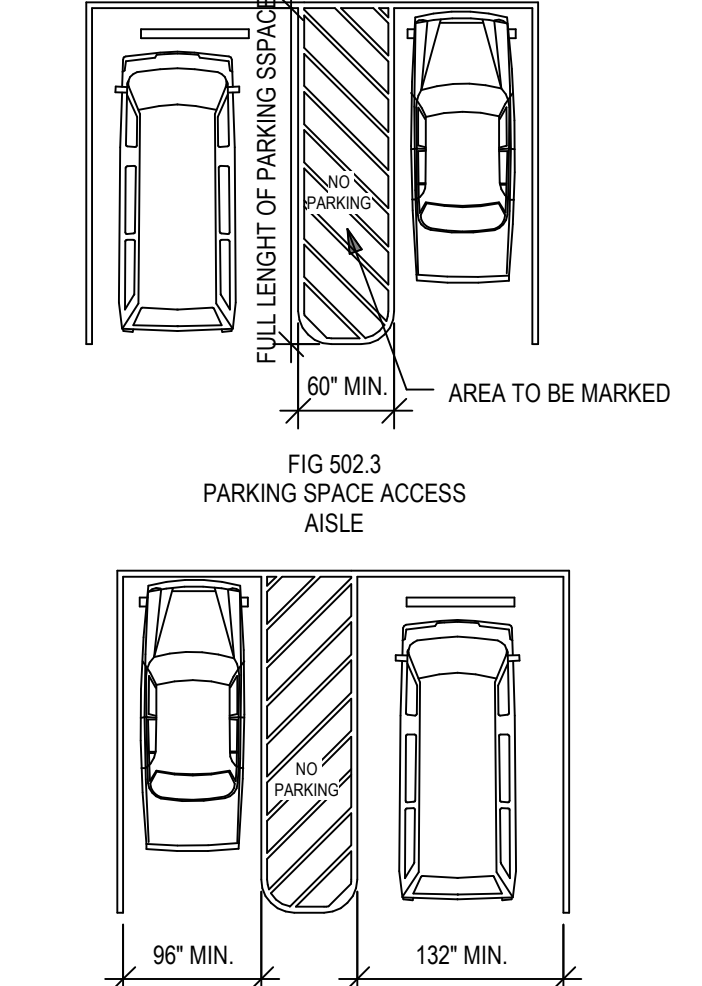
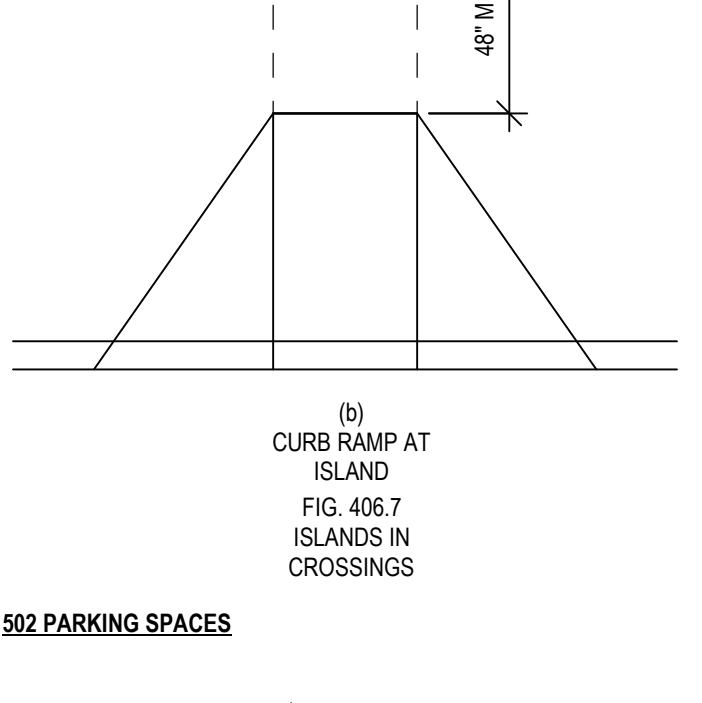
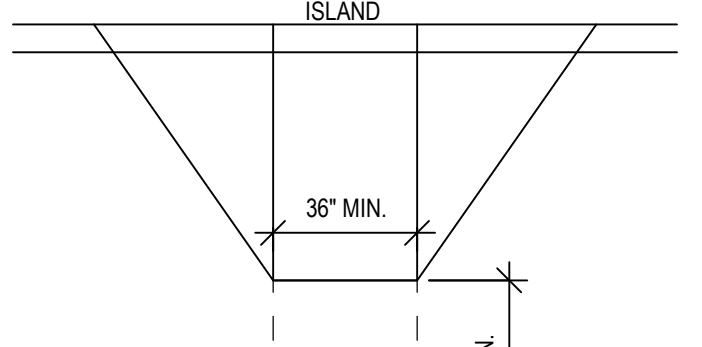
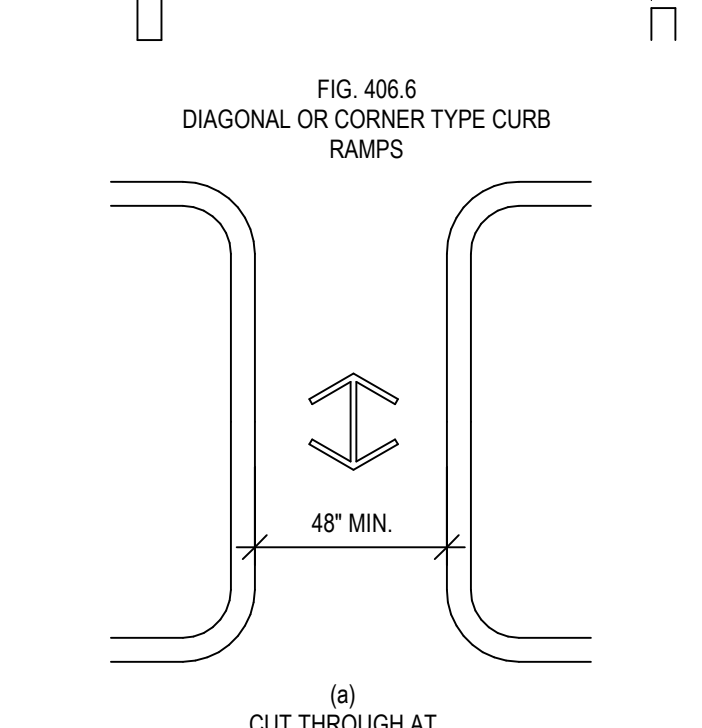
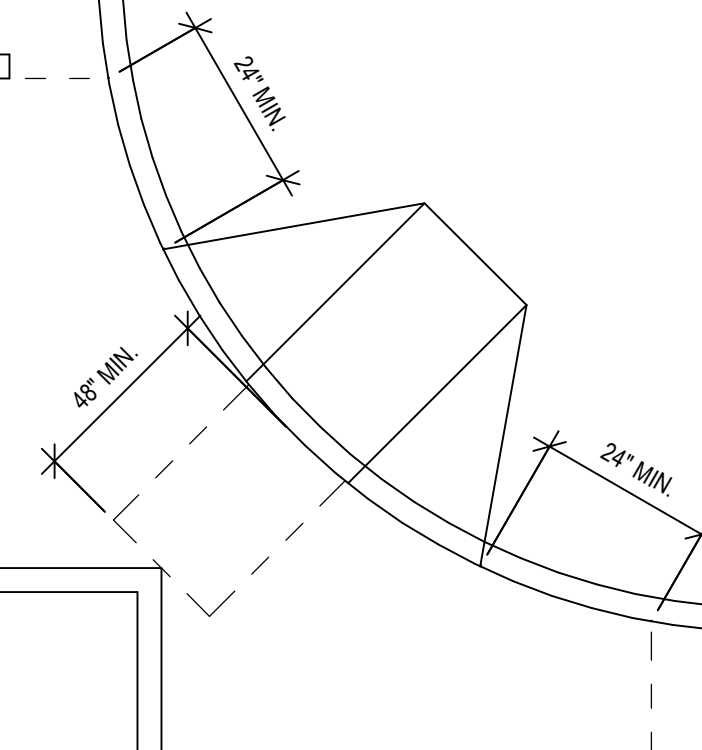
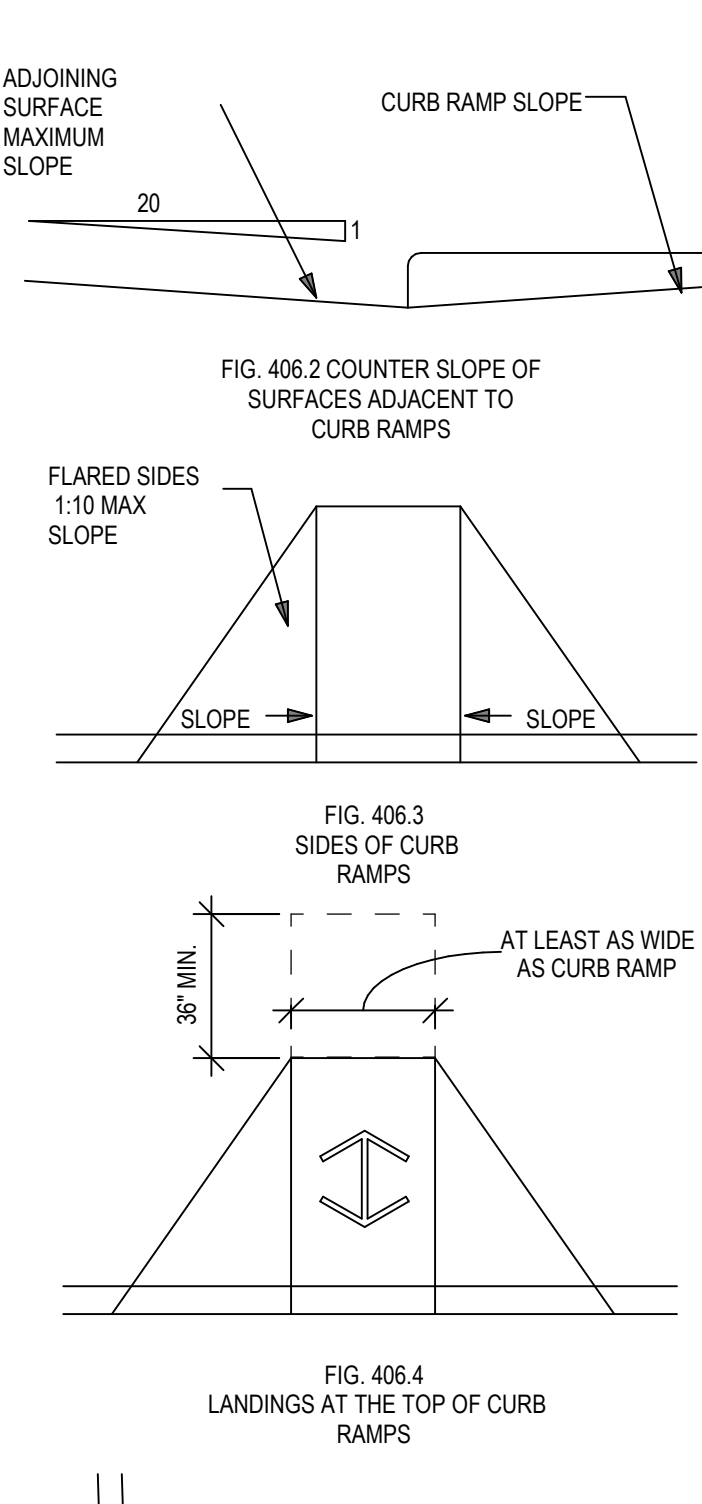
404 DOORS, DOORWAYS, & GATES



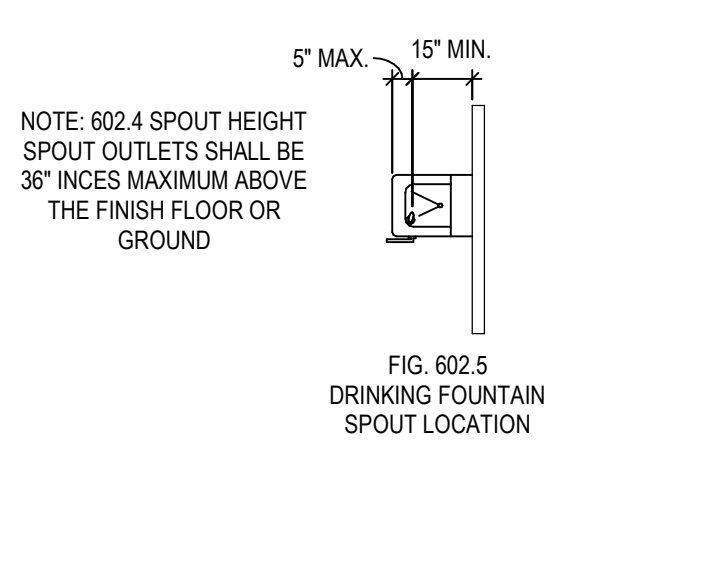
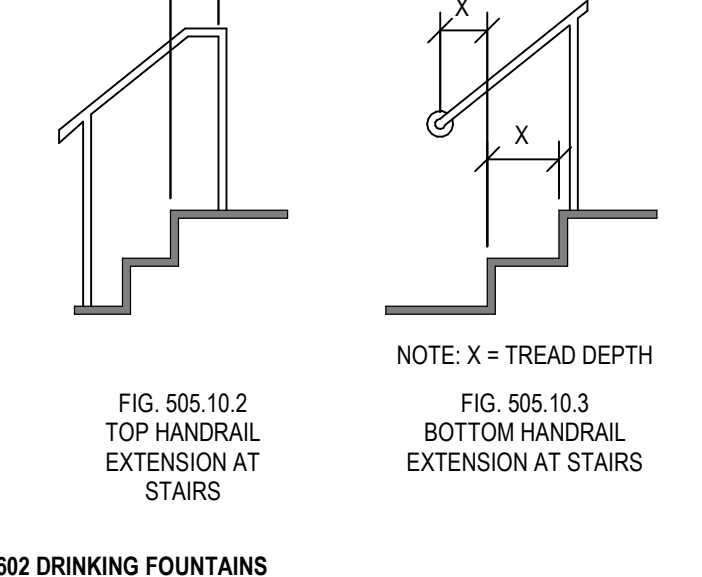
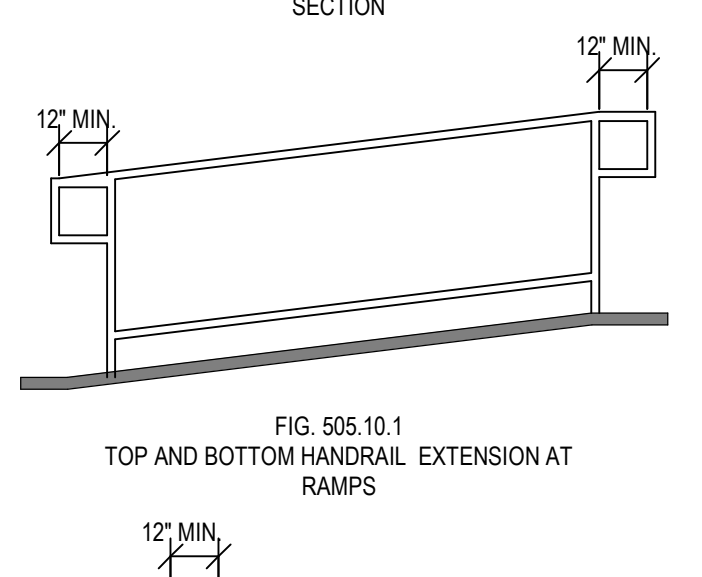
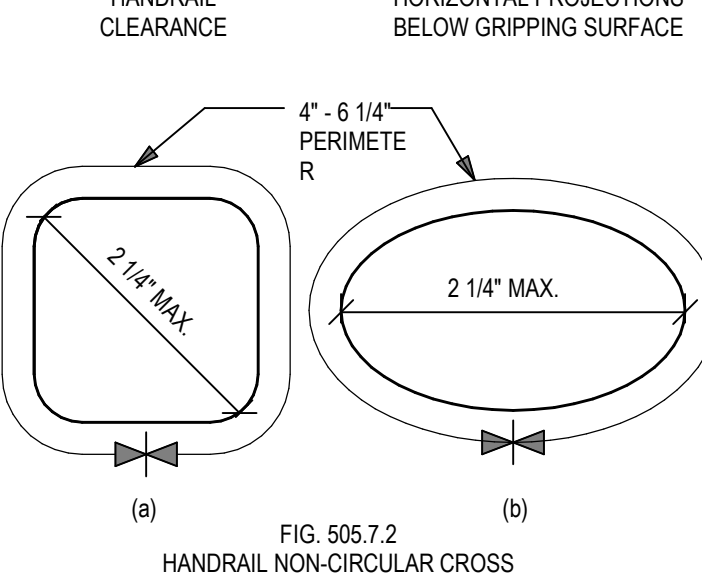
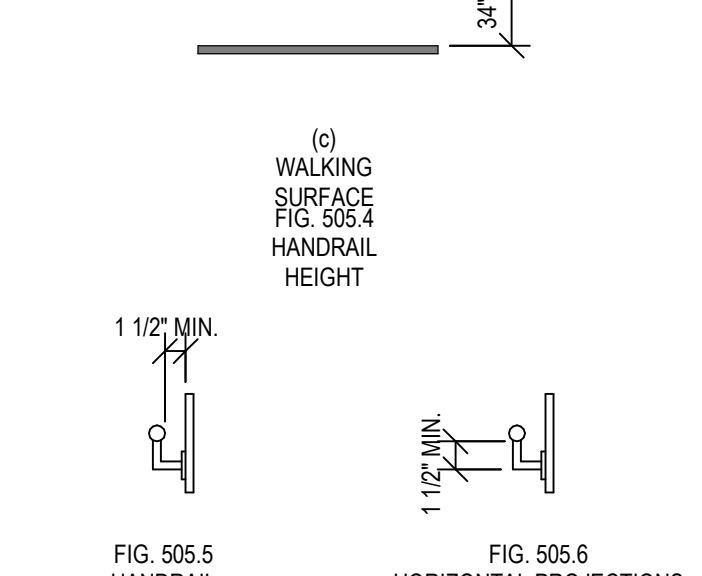
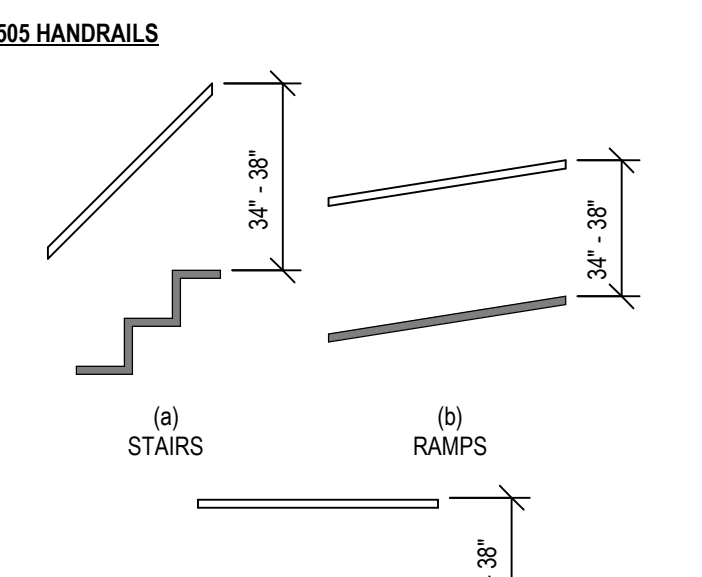
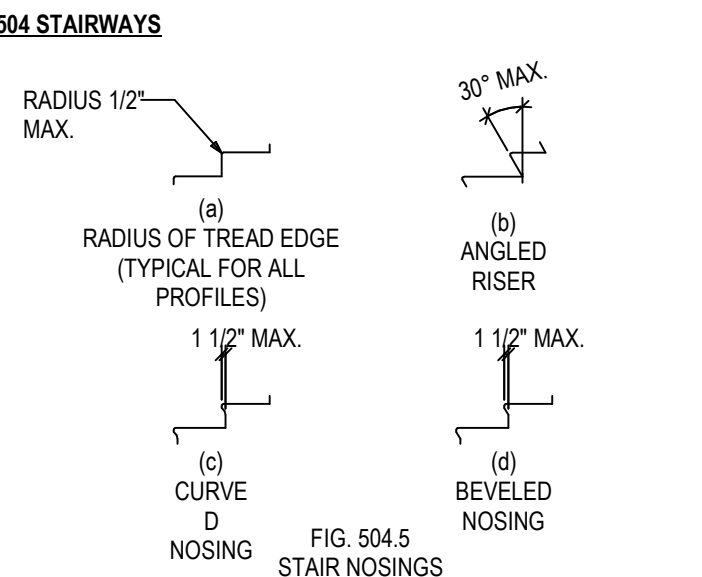
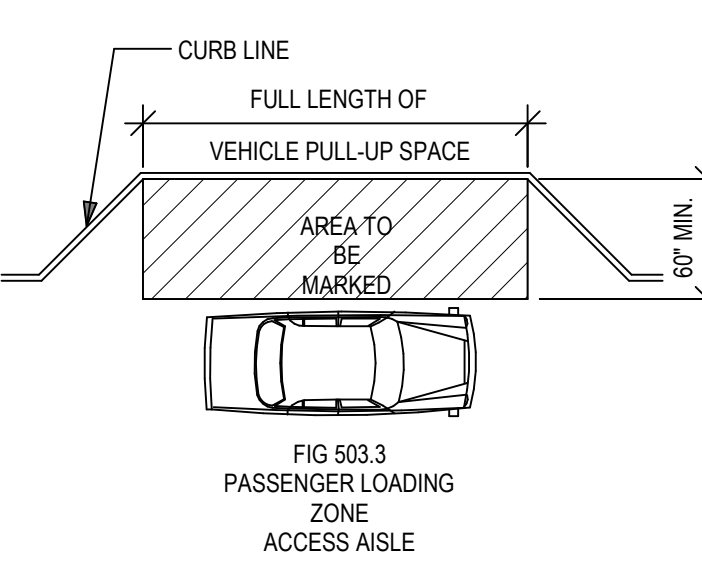
404 DOORS, DOORWAYS, & GATES (CONT.)



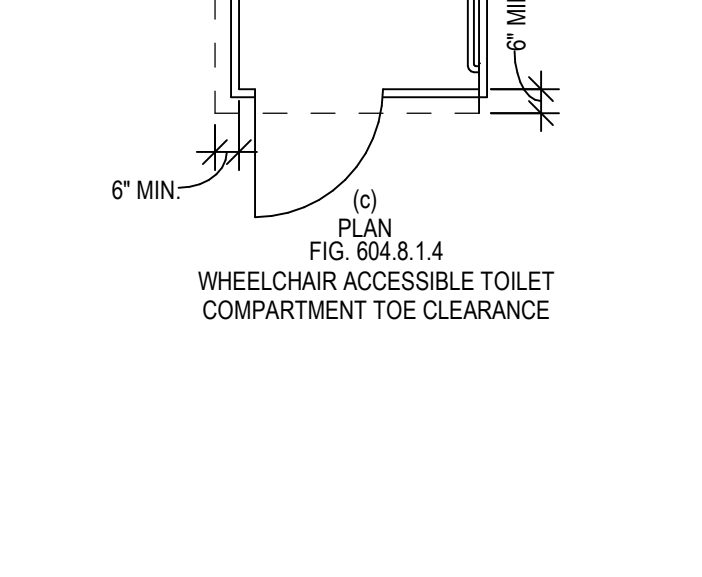
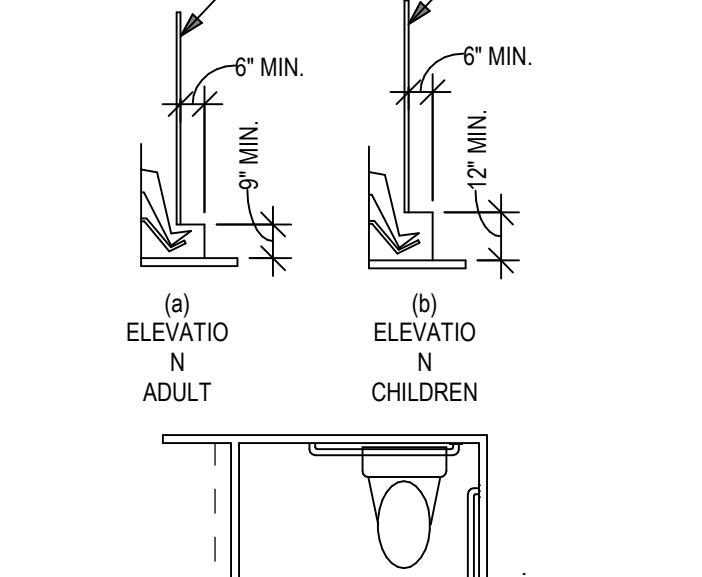
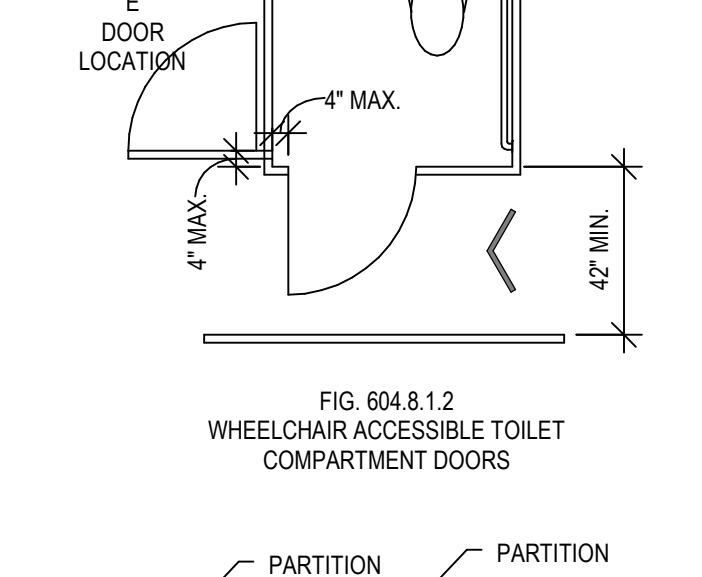
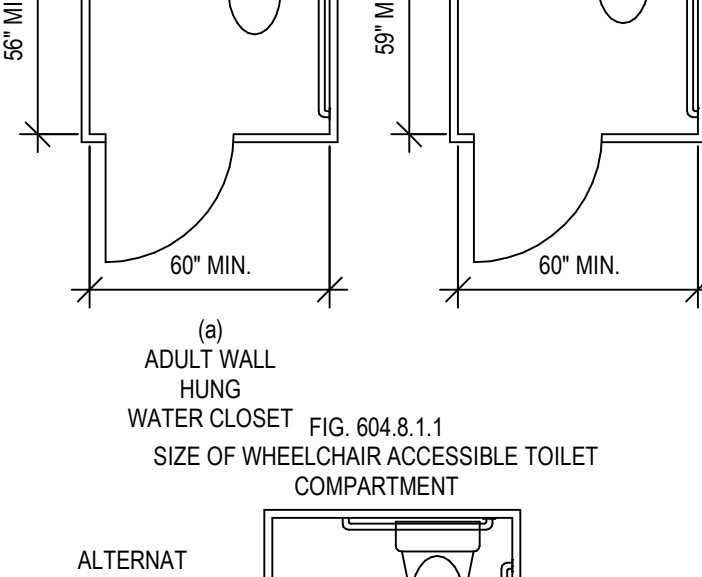
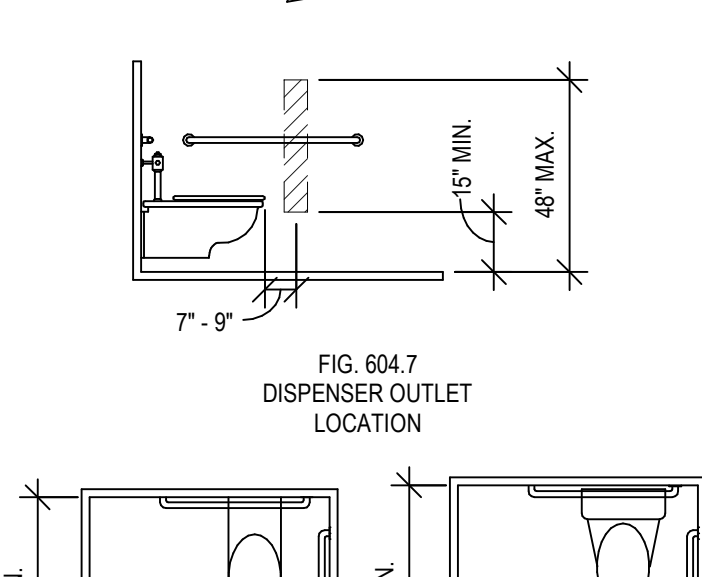
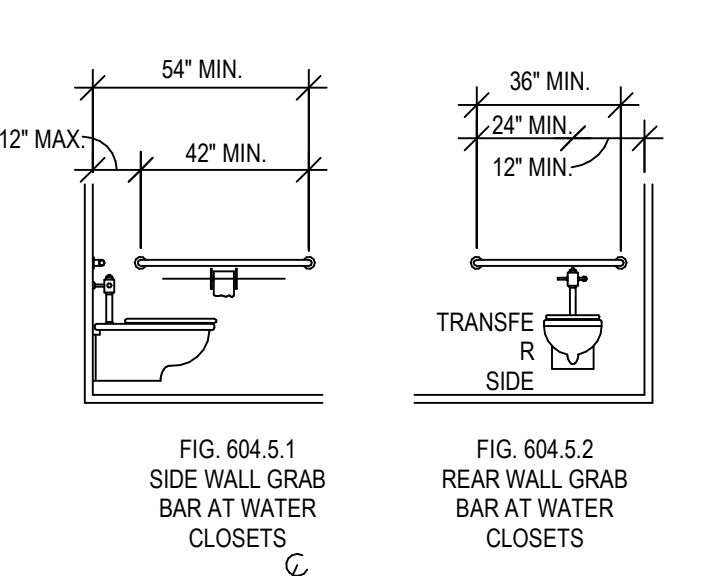
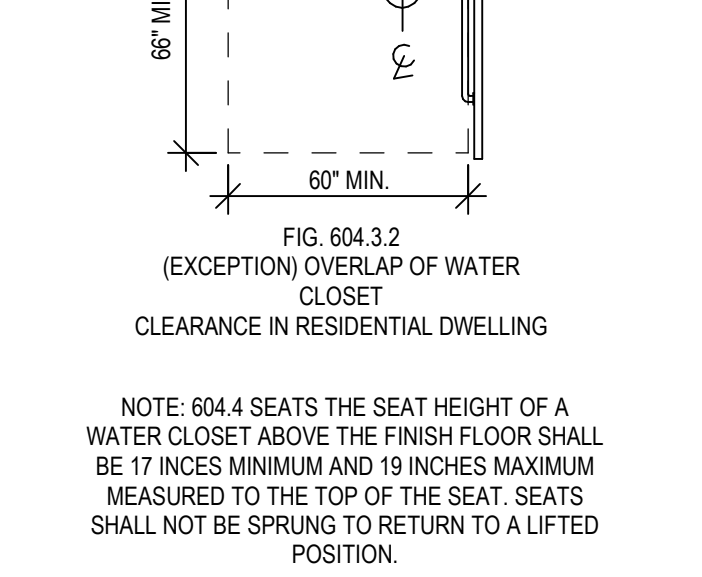
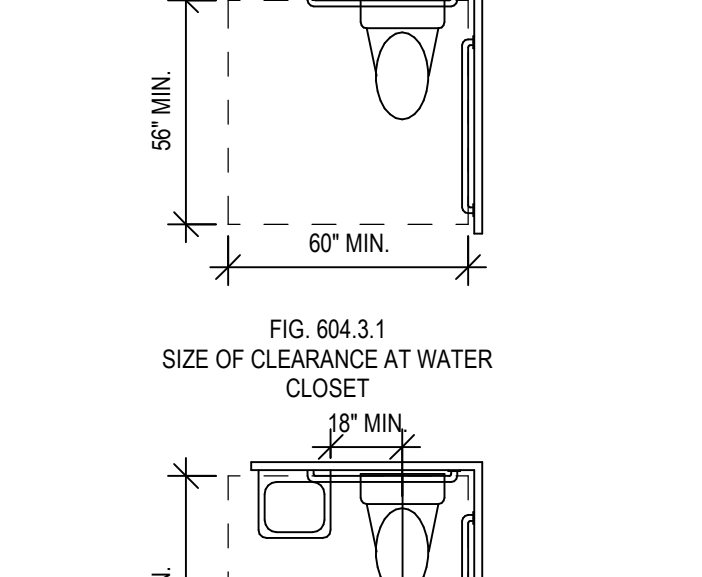
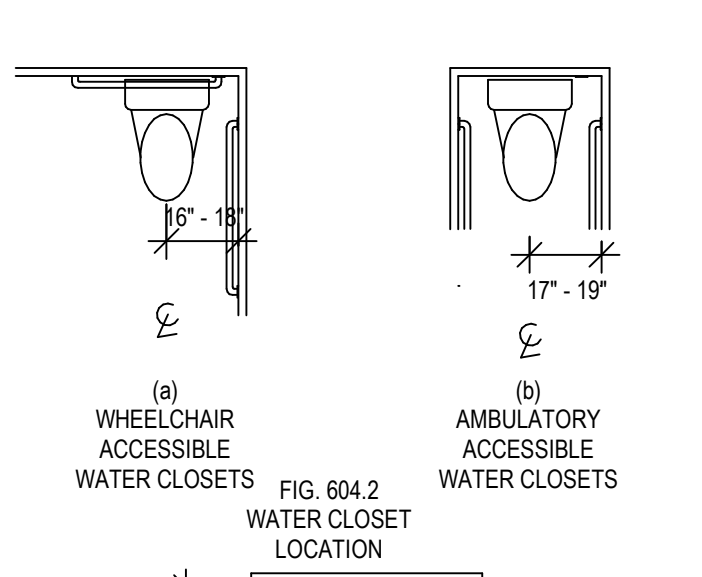
406 CURB RAMPS



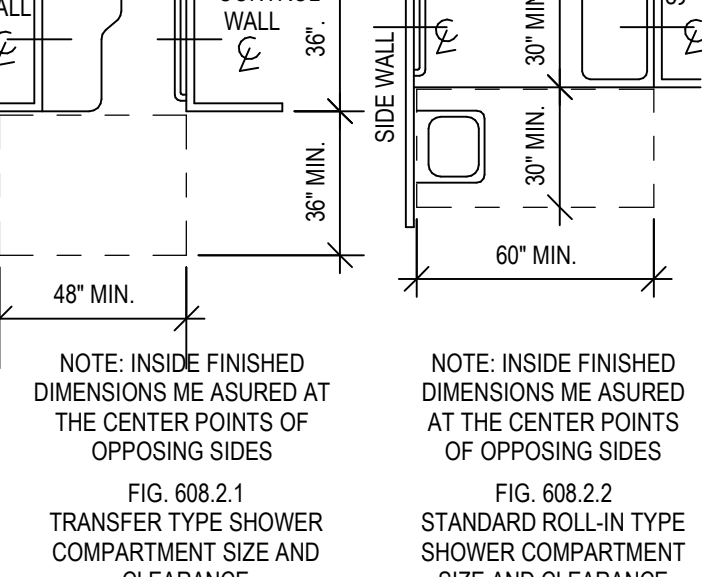
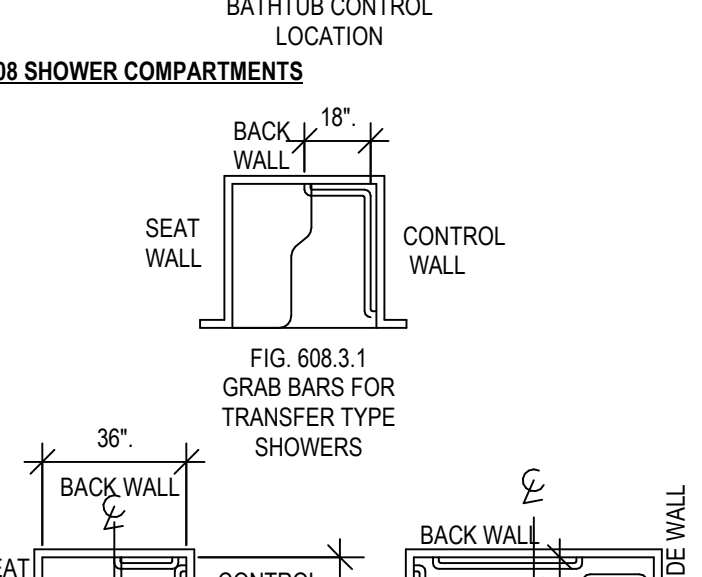
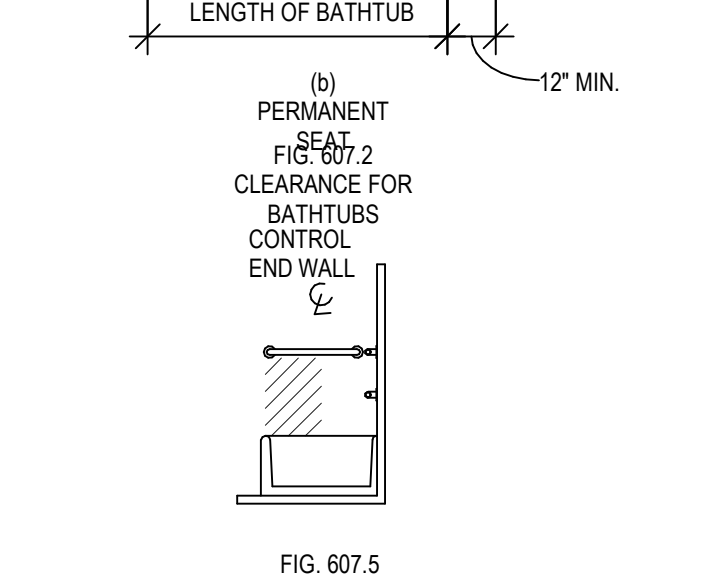
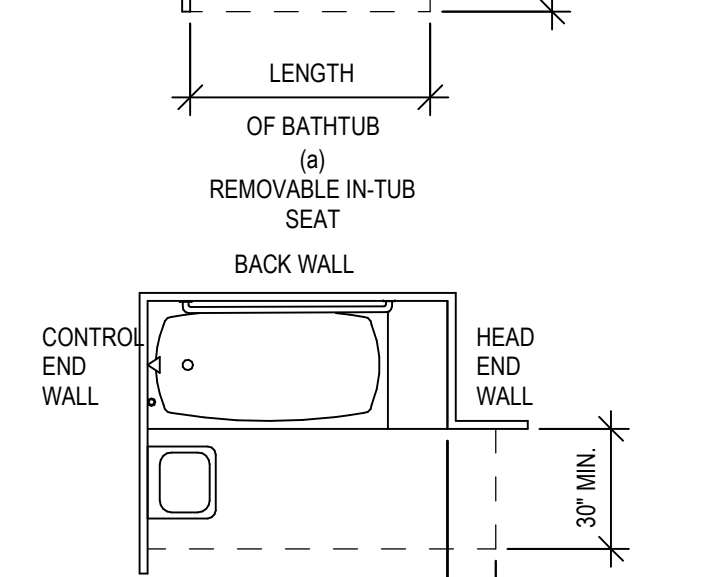
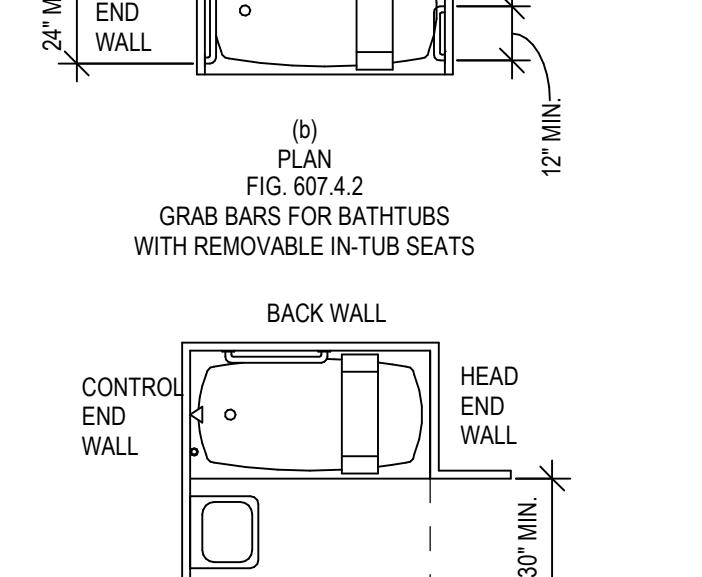
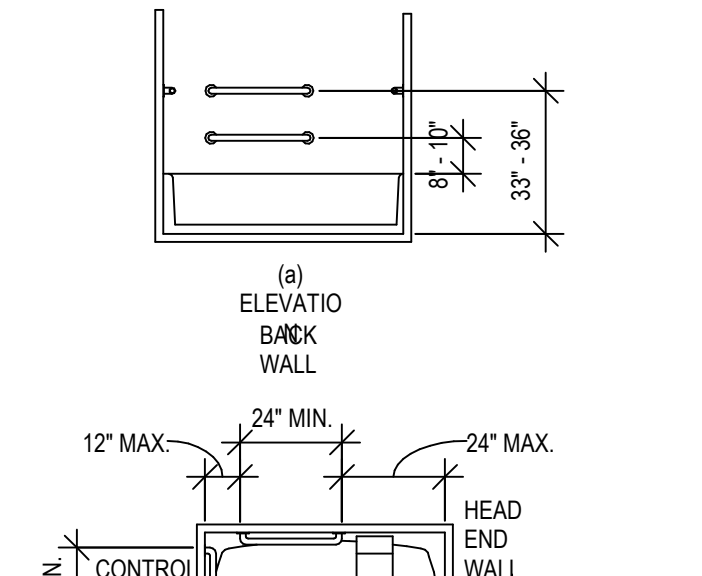
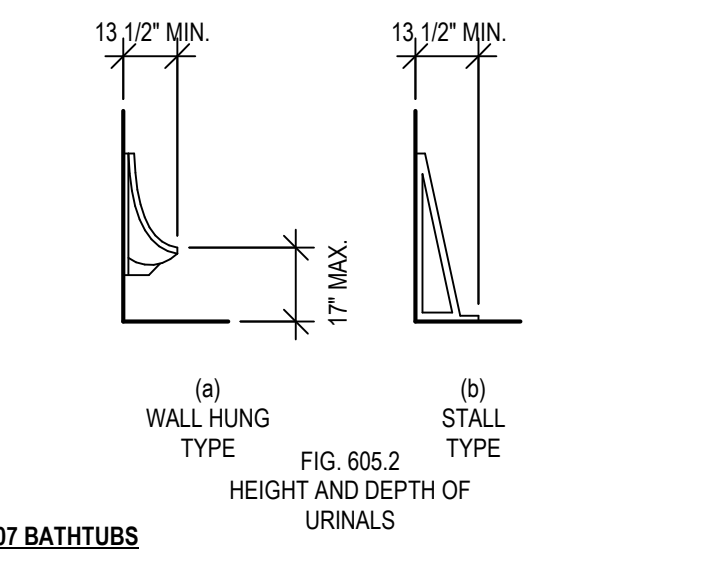
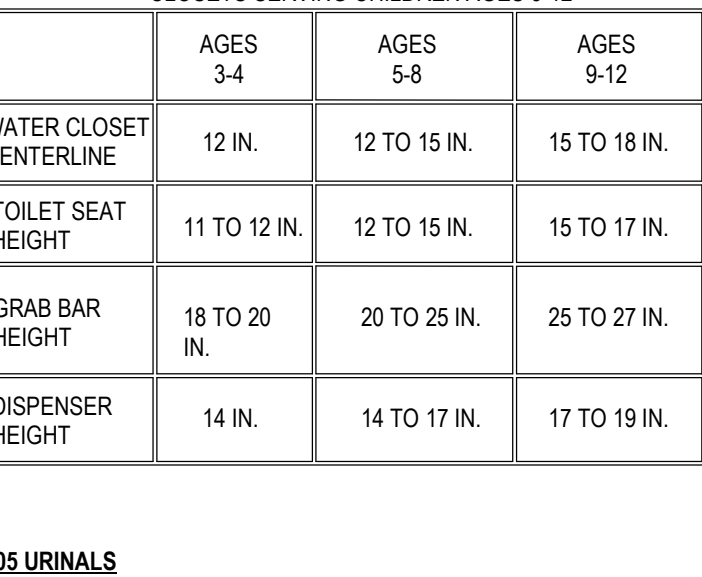
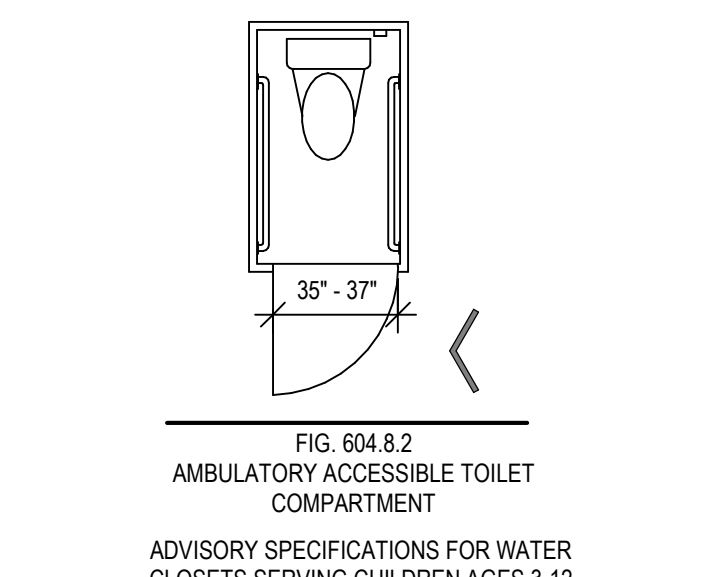
503 PASSENGER LOADING ZONES



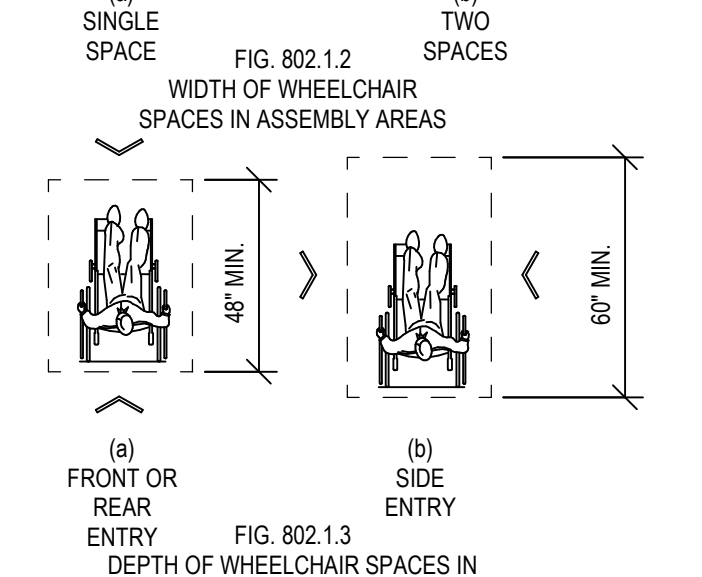
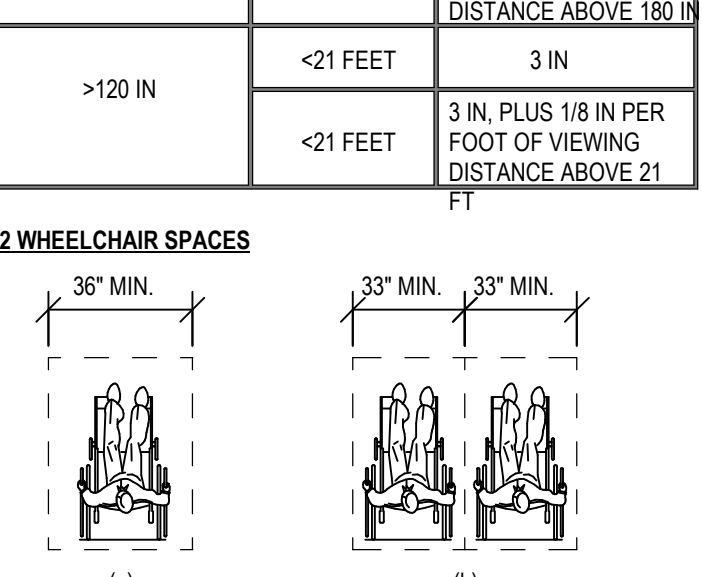
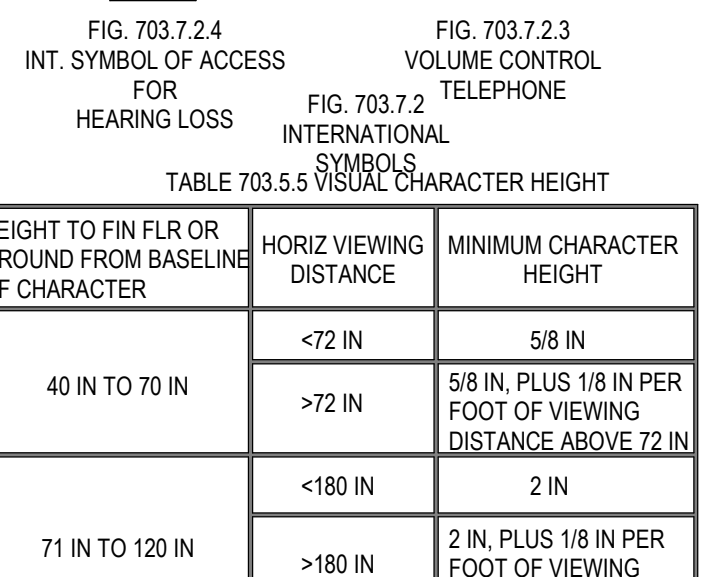
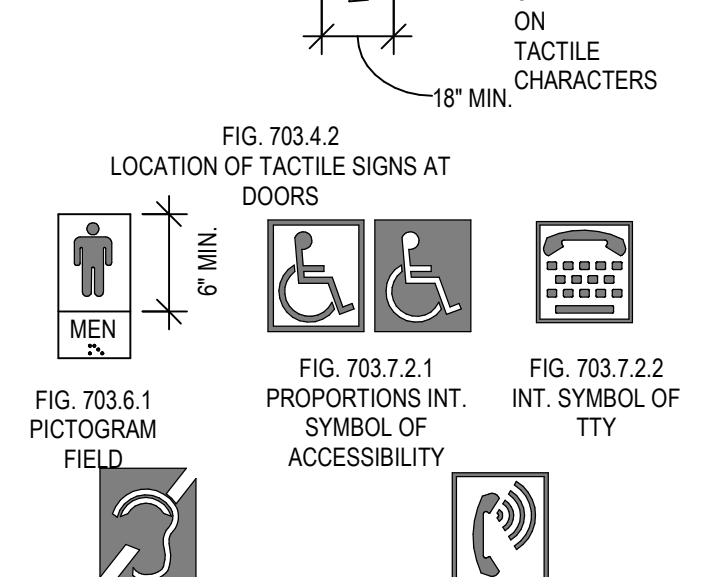
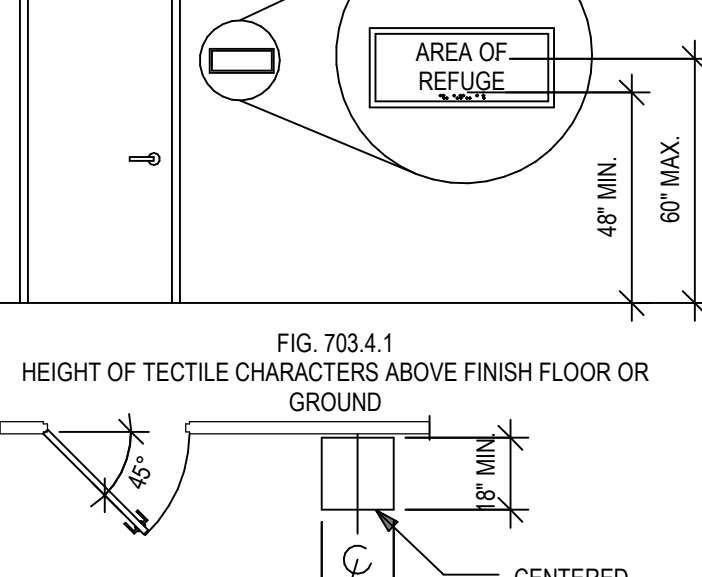
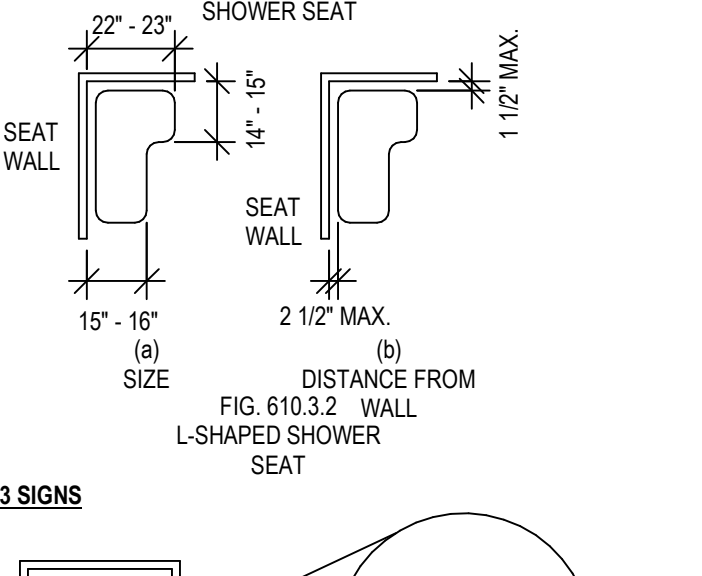
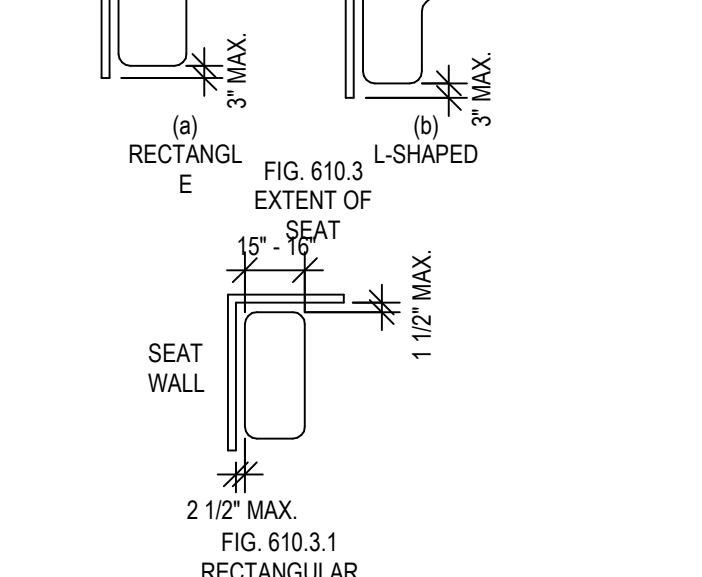
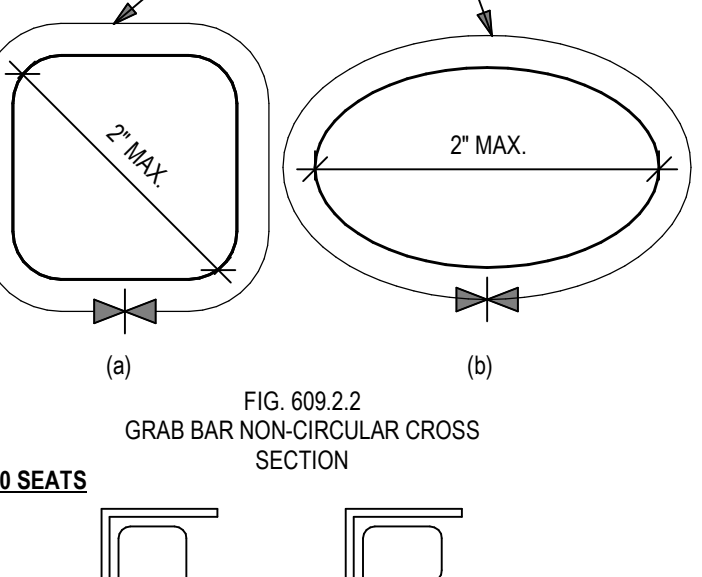
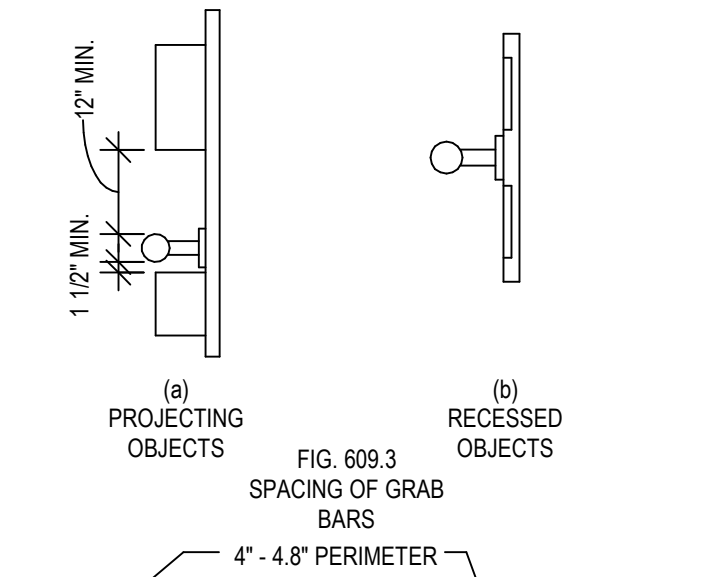
604 TOILET AND BATH ROOMS



604 TOILET AND BATH ROOMS (CONT.)



606 GRAB BARS



DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

The following Conditions of Contract are included as if bound with this document:

AIA A105-2017, Standard Form of Agreement Between Owner and Contractor for a Small Project, Stipulated Sum, and AIA A205-2017, General Conditions of the Contract for a Small Project.

Technical and administrative requirements for the Project are divided into 10 of the CSI MasterFormat 2004 49 Divisions. Division 01 General Requirements apply to all work for the Project.

END OF DIVISION

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 00 00 - GENERAL REQUIREMENTS

- Summary: 1. The Project consists of a renovation of the existing office space and extending that office space into the existing warehouse via an existing mezzanine structure. Project to include MEP upgrades as well.
- Project Requirements: 1. Requirements for Sequence of Work, Phasing, and Occupancy: None
2. Prior or Concurrent Work by Owner or Others: None.
3. Existing Site Conditions and Restrictions: None
4. Contractor's Use of Premises and Adjacent Facilities: Full use of facilities as required to complete project.
5. Pre-purchased and Preordered Items: None
6. Owner-Furnished and Owner-Installed Items: None
7. Special Mock-Ups: As indicated in the individual Specifications Sections text.
8. Related Future Work: None
9. Owner's Building Standards: None.
- Permits: 1. Apply for, obtain, and pay for building permits, other permits, and utility company backcharges required to perform the work. Submit copies to Architect.
- Intent: 1. Drawings and specifications are intended to provide the basis for the proper completion of the Project suitable for the intended use of the Owner.
2. Items not expressly set forth but which are reasonably implied or necessary for the proper performance of this work shall be included.
- Coordination: 1. Coordinate the work of all trades.
2. Prepare coordination drawings for areas above ceilings where close tolerances are required between building elements and mechanical and electrical work.
3. Verify location of utilities and existing conditions. Notify Architect of conditions differing from those indicated on the Drawings.
4. Verify dimensions on Drawings with dimensions at the Project. Do not scale Drawings.
- Cutting and Patching: 1. Provide cutting and patching work to properly complete the Project.
2. Do not remove or alter structural components without written approval.
3. Cut with tools appropriate for materials to be cut.
4. Patch with materials and methods to produce patch which is not visible from a distance of five feet.
5. Do not cut and patch in a manner that would result in a failure of the work to perform as intended, decrease fire performance, decrease acoustical performance, decrease energy performance, decrease operational life, or decrease safety factors.
- Selective Demolition: 1. Provide at least [72] hours notice to Owner if shutdown of utility service is required during Selective Demolition.
2. Cut with tools appropriate for materials to be cut.
3. Remove and Reinstall the following items: Brick masonry.
4. Remove and Salvage the following items: Brick masonry.
5. Promptly dispose of demolished materials in a legal manner.
6. Provide dustproof barriers where needed to control migration of dust, with negative air pressure in the construction zones.
- Engineering: 2. Survey and layout improvements, utilities, structures, and components.
- Project Meetings: 1. Arrange for a preconstruction conference prior to start of construction. Meeting shall be attended by Owner, Architect, Contractor, and major subcontractors.
2. Arrange for progress meetings once a month during construction, prior to application for payment. Record minutes and distribute promptly.
- Submittals: 1. Submit a project schedule and update at least monthly.
2. Submit for approval all submittals listed in individual sections with the following number of copies: Shop drawings, reviewed and annotated by the Contractor, 3 copies plus reproducible sepi; product data, 3 copies; samples, 3 sets plus range samples where applicable; test reports, 3 copies; warranties, 3 copies; other submittals, 3 copies.
3. Include details of construction and adjacent construction in shop drawings. Clearly indicate any deviations from requirements of the contract documents. Fabricate materials from approved shop drawings only.
- Quality Assurance: 1. Comply with applicable codes, regulations, ordinances and requirements of authorities having jurisdiction, including accessibility guidelines where applicable. Submit copies of inspection reports, notices and similar documents to Architect.
2. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for 3 years.
3. Use experienced installers. Furnish evidence of experience if requested.
4. Deliver, handle, and store materials in strict accordance with manufacturer's instructions.
5. Use of any supplier or subcontractor is subject to Owner's approval.
6. Engage and pay for testing agencies as required. Refer to individual sections for additional requirements.
- Temporary Facilities: 1. Provide temporary facilities and connections as required for the proper completion of the project.
2. Provide and maintain temporary utility services.
3. Owner will pay for utility service consumed. Do not waste.
4. Provide temporary protection for adjacent areas to prevent contamination by construction dust and debris.
5. Provide temporary barricades as necessary to ensure protection of the public.
6. Provide suitable waste disposal units and empty regularly. Do not permit accumulation of trash and waste materials.
7. Provide temporary sanitary facilities.
8. Maintain egress within and around construction areas.
9. Maintain fire alarm systems in operation during construction.
10. Provide fire extinguishers in work areas during construction.
11. Provide temporary protection for adjacent construction. Promptly repair any damage at no additional cost to the Owner.
- Products and Substitutions: 1. Provide products and materials specified. Request Architect's selection of colors and accessories in sufficient time to avoid delaying progress of the work.
2. Submit requests for substitutions shall be in writing, including reasons. Submit sufficient information for Architect to evaluate proposed substitution.
3. Remove and replace work which does not conform to the contract documents at no additional expense to the Owner.
- Installation: 1. Inspect substrates and report unsatisfactory conditions in writing.
2. Do not proceed until unsatisfactory conditions have been corrected.
3. Take field measurements prior to fabrication where practical. Form to required shapes and sizes with true edges, lines and angles. Provide inserts and templates as needed for work of other trades.
4. Install materials in exact accordance with manufacturer's instructions and approved submittals.
5. Install materials in proper relation with adjacent construction and with proper appearance.
6. Restore units damaged during installation. Replace units which cannot be restored at no additional expense to the Owner.
7. Refer to additional installation requirements and tolerances specified under individual specification sections.
- Closeout: 1. Prepare punchlist for remaining work for review by the Architect. Complete punchlist items promptly at no additional expense to the Owner.
2. Submit accurate record documents of building and site.
3. Submit operating manuals, maintenance manuals, and warranty information.
4. Obtain and submit copy of occupancy permits.
5. Train Owner in use of building systems.

- 7. Remove temporary facilities and provide final cleaning and touch-up.
8. Restore portions of building, site improvements, landscaping and other items damaged by construction operations to the satisfaction of the Architect at no additional expense to the Owner.

END OF DIVISION

DIVISION 04 - MASONRY

SECTION 04 20 00 - UNIT MASONRY

- Summary: 1. Provide Unit Masonry Construction:
a. Brick veneer cavity wall on metal studs.
- Submittals: 1. Submit product data, samples, shop drawings, 4 foot by 4 foot mockup, test reports.
- Products: 1. Products:
a. Brick to match existing
2. Face Brick:
a. Standard modular size, 3-5/8 inches thick by 2-1/4 inches high by 7-5/8 inches long.
f. Grade: ASTM C 216, Grade SW, severe weathering type areas subject to freeze-thaw and ASTM C 216, Grade MW, moderate weathering type elsewhere.
g. Type: ASTM C 216, Type FBX, for general use in exposed masonry requiring minimum variations in size and color range masonry.
h. Special Shapes: As required by building configuration.
i. Bond Pattern: To match existing.
3. Mortar and Grout:
a. Mortar Mix: ASTM C 270, Type S, for reinforced masonry, masonry below grade and masonry in contact with earth and ASTM C 270, Type N, for above-grade loadbearing and nonloadbearing walls and parapet walls and for interior loadbearing and nonloadbearing partitions.
b. Mortar Materials: Portland cement, ASTM C 150, Type I or II materials.
c. Mortar Aggregate: Natural color, ASTM C 144.
d. Grout Aggregate: ASTM C 404.
e. Hydrated Lime: ASTM C 207, Type S.
f. Color: Natural color.
4. Reinforcing Steel:
a. Reinforcing Bars: ASTM A 615, Grade 60.
b. Deformed Reinforcing Wire: ASTM A 496.
c. Plain Welded Wire Fabric: ASTM A 185.
5. Joint Reinforcing: Welded wire with deformed side rods.
a. Steel Wire: 9 gage (.1875 inch) galvanized wire.
b. Type: Ladder or truss type.
6. Ties and Anchors:
a. Bent Wire Ties: Galvanized steel.
b. Rigid Anchors: Galvanized steel straps.
c. Masonry to Concrete Frame: Two-piece galvanized steel anchor.
d. Masonry to Steel Frame: Anchor with crimped wire anchor section for welding to steel.
e. Adjustable Masonry Veneer Anchors: Screw-attached two-piece galvanized triangular or rectangular wire tie and metal anchor.
f. Screws for Steel Studs: ASTM C 954 organic polymer coated steel drill screws.
g. Unit Type Masonry Inserts in Concrete: Malleable iron.
h. Dovetail Slots: Galvanized sheet metal.
i. Anchor Bolts: ASTM A 307, Grade A, galvanized.
j. Post-Installed Anchors: Chemical or expansion anchors.
7. Masonry Accessories:
a. Nonmetallic expansion joint strips.
b. Preformed control joint gaskets.
c. Bond breaker strips.
d. Weep sash and tubes
- Installation: 1. Comply with requirements of Section 01 00 00 - Project Requirements.
2. Comply with PCA Recommended Practices for Laying Concrete Block, Brick Institute of America Tech Notes, and NCMA TEK Bulletins.
3. Comply with cold weather and warm weather protection procedures as recommended in BIA Tech Notes.
4. Provide fire-rated assemblies complying with ASTM E 119.
5. Sawcut units when required. Maintain uniform joint width. Provide full bed, head and collar joints except at weepholes.
6. Install lintels and accessories in masonry construction.
7. Coordinate installation of flashings.
8. Comply with applicable codes and regulations for spacing of ties and horizontal reinforcing.
9. Provide expansion and control joints in accordance with referenced publications.
10. Remove and replace damaged units.
11. Clean concrete masonry by dry brushing, NCMA TEK No. 28.

DIVISION 05 - METALS

SECTION 05 12 00 - STRUCTURAL STEEL FRAMING - Refer Structural Drawings

SECTION 05 21 00 - STEEL JOIST FRAMING - Refer Structural Drawings

SECTION 05 31 00 - STEEL DECKING - Refer Structural Drawings

SECTION 05 40 00 - COLD-FORMED METAL FRAMING

- Summary: 1. Provide Cold Formed Metal Framing Units:
a. Exterior load-bearing steel-stud walls.
b. Interior load-bearing steel-stud walls.
c. Steel joists.
d. Steel trusses.
2. Design for deflection criteria not to exceed L/600 for masonry.
3. Tolerances: Fabrication tolerance 1/8 inch in 10 feet; erection tolerance, 1/16 inch.
- Submittals: 1. Submit product data, shop drawings. Delegated design submittal by Structural Engineer licensed in the State of Texas. Refer Structural Drawings and notes.
- Products: 1. Wall Framing: C-shaped load-bearing steel studs.
2. Joist Framing: C-shaped load-bearing steel joists.
3. Units 16 gage (0.598 inch) and heavier: ASTM A 446, yield point 50,000 psi.
4. Units 18 gage (0.0358 inch): ASTM A 446, yield point 37,000 psi.
5. Units 20 gage (0.0329 inch): ASTM A 446, yield point 33,000 psi.
6. Framing accessories, including bracing, bridging, solid blocking, plates, hangers, closers, reinforcement plates, anchors, clips, fasteners.
- Installation: 1. Comply with requirements of Section 01 00 00 - Project Requirements.
2. Comply with AISC codes and specifications and with AWS Structural Welding Code.

SECTION 05 50 00 - METAL FABRICATIONS

- Summary: 1. Provide metal fabrications:
a. Rough hardware.
b. Ladders.
c. Loose bearing and leveling plates.
d. Loose steel lintels.
e. Miscellaneous steel trim.
2. Tolerances: Fabrication tolerance 1/8 inch in 10 feet; erection tolerance, 1/16 inch.
- Submittals: 1. Submit product data, shop drawings.
- Products: 1. Steel Plates, Shapes and Bars: ASTM A 36.
2. Steel Tubing: ASTM A 500 or A 501.
3. Steel Pipe, Black Finish: ASTM A 53.
4. Stainless Steel Bar Stock: ASTM A 276, Type 302 or 304.
5. Stainless Steel Plate: ASTM A 167, Type 302 or 304.
6. Stainless Steel Tubing: ASTM A 554, Grade TP 304 or TP 316.
7. Aluminum Extruded Bars and Shapes: ASTM B 221 aluminum alloy.
8. Steel Finish: Primed finish.
9. Fasteners: non-corrosive, suitable for service intended.
10. Zinc-Coating: Hot-dip galvanized coating for materials in exterior assemblies or exterior walls.
11. Aluminum Finish: Fluoropolymer finish.
12. Stainless Steel Finish: No. 6 satin directional polish
- Installation: 1. Comply with requirements of Section 01 00 00 - Project Requirements.
2. Comply with ASTM E 985 for handrail and railing structural performance.
3. Comply with AISC codes and specifications and with AWS Structural Welding Code.

END OF DIVISION

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES

SECTION 06 10 00 - ROUGH CARPENTRY

- Summary: 1. Provide Rough Carpentry:
a. Framing with dimension lumber.
b. Wood grounds, nailers, and blocking.
c. Wood furring.
d. Backing panels.
e. Sheathing.
- Submittals: 1. Submit product data.
- Products: 1. Lumber Standards and Grade Stamps: PS 20, American Softwood Lumber Standard and inspection agency grade stamps.
2. Construction Panel Standards: PS 1, U.S. Product Standard for Construction and Industrial Plywood; APA PRP-108.
3. Wood Framing Standards: NFPA House Framing Manual.
a. Exterior Wall Framing, 2x6: 2 inch by 6 inch nominal studs, 24 inches on center.
b. Exterior Wall Framing, 2x4: 2 inch by 4 inch nominal studs, 16 inches on center.
c. Interior Wall Framing: 2 inch by 4 inch studs, 16 inches on center.
4. Preservative Treatment: AWPA U1 for lumber and for plywood; waterborne pressure treatment. Comply with AWPA use categories U1 user specification and treatment standard T1.
5. Fire-Retardant Treatment: Tested in accordance with ASTM E84 or UL 723 with a listed flame index of 25 or less. All fire treated lumber and structural panels shall be fully labeled with the name of the fire-retardant treatment for both interior and exterior uses.
6. Dimension Lumber:
a. Light Framing: Stud, No. 3 or Standard grade.
b. Structural Framing: No. 2 grade.
c. Species: Any species of grade indicated.
d. Exposed Framing: Appearance grade.
7. Boards:
a. Exposed Boards: 15 percent moisture content.
b. Concealed Boards: 19 percent moisture content.
8. Miscellaneous Lumber, Blocking and Nailers:
a. Moisture Content: 19 percent.
b. Grade: Standard grade light framing.
9. Construction Panels:
a. Wall Sheathing: APA Sheathing, Exposure 1 sheathing.
d. Roof Sheathing: APA Sheathing, Exposure 1 sheathing.
e. Plywood Backing Panels: APA C-D Plugged Exposure 1 with exterior glue, fire-retardant treated.
10. Gypsum Sheathing:
a. Gypsum Material: Gypsum sheathing board with water-resistant core.
b. Surfaced Gypsum Material: Glass-fiber-surfaced gypsum sheathing board.
c. Type: Regular and Type X fire-resistant where required ASTM C 79.
11. Auxiliary Materials:
a. Sill Sealer Gaskets: Glass fiber strip resilient insulation.
b. Framing Anchors and Fasteners: Non-corrosive, suitable for load and exposure.
- Installation: 1. Comply with requirements of Section 01 00 00 - Project Requirements.
2. Comply with APA Design and Construction Guide, Residential and Commercial Construction.
3. Provide nailers, blocking and grounds where required. Set work plumb, level and accurately cut.
4. Comply with manufacturer's requirements for treated materials.

SECTION 06 16 00 - SHEATHING

- Submittals: Model code evaluation reports for preservative-treated plywood and fire-retardant-treated plywood. Product Data for gypsum wall sheathing.
- Products: 2.1 WOOD PANEL PRODUCTS, GENERAL
A. Plywood: DOC PS 1.
2.2 TREATED PLYWOOD
A. Preservative-Treated Plywood: AWPA C9.
1. Use treatment containing no arsenic or chromium.
2. Kiln-dry plywood after treatment to a maximum moisture content of 15%.
B. Provide preservative treated plywood for all plywood, unless otherwise indicated.
C. Fire-Retardant-Treated Plywood: Comply with performance requirements in AWPA C27, labeled by a testing and inspecting agency acceptable to authorities having jurisdiction.
1. Use Exterior type for exterior locations and where indicated.
2. Use Interior Type A, High Temperature (HT) for roof sheathing and where indicated.
3. Use Interior Type A, unless otherwise indicated.
4. Identify with appropriate classification marking of a testing and inspecting agency acceptable to authorities having jurisdiction.
D. Provide fire-retardant treated plywood for all plywood.
2.3 WALL SHEATHING
A. Plywood Wall Sheathing: Exterior, Structural I sheathing, 5/8" thick.
B. Gypsum Wall Sheathing:
1. Glass-Mat Gypsum Wall Sheathing: ASTM C 1177/1177M.
a. CertainTeed Corporation; GlasRoc.
b. G-P Gypsum Corporation; Dens-Glass Gold.
c. National Gypsum Company; Gold Bond e(2)XP.
d. Temple-Inland Inc.; GreenGlass.
e. United States Gypsum Co.; Securock.
2. Type and Thickness: Regular, 5/8 inch thick.
3. Size: 48 by 96 inches, 48 by 108 inches, or 48 by 120 inches for vertical installation.
- 2.4 MISCELLANEOUS PRODUCTS
A. Fasteners: Size and type indicated.
1. For roof and wall sheathing, provide fasteners of Type 304 stainless steel.
2. Power-Driven Fasteners: CABO NER-272.
B. Sheathing Joint-and-Penetration Treatment Materials:
1. Sealant for Gypsum Sheathing Board: Joint sealant recommended by weather barrier manufacturer for application indicated.
2. Sheathing Tape for Gypsum Sheathing Board: Self-adhering glass-fiber tape recommended by weather barrier manufacturer for application indicated.
C. Flexible Flashing: As required by Div 07 - Fluid Applied Membrane Air Barrier and Self-Adhered Sheet Waterproofing.
- Installation: A. Securely attach to substrates, complying with the following:
1. CABO NER-272 for power-driven fasteners.
B. Fastening Methods:
1. Screw to cold-formed metal framing.
2. Apply fasteners so heads bear tightly against face of sheathing, but do not cut into facing.

END OF SECTION

SECTION 06 40 23 - INTERIOR ARCHITECTURAL WOODWORK

- Summary: 1. Provide Interior Architectural Woodwork:
a. Standing and running trim and rails.
b. Casework and countertops.
g. Shelving.
- Submittals: 1. Submit product data, samples, mockup of each type.
- Products: 1. AWI Standards: Architectural Woodwork Institute (AWI) "Architectural Woodwork Quality Standards."
2. Preservative Treatment: AWPA U1 for lumber and for plywood; waterborne pressure treatment. Comply with AWPA use categories U1 user specification and treatment standard T1.
3. Fire-Retardant Treatment: Tested in accordance with ASTM E84 or UL 723 with a listed flame index of 25 or less. All fire treated lumber and structural panels shall be fully labeled with the name of the fire-retardant treatment for both interior uses.
4. Interior Plastic Laminate Clad Casework:
a. Laminate: High pressure decorative laminate, NEMA LD-3.
b. Grade: Premium.
c. Face Style: Flush overlay.
d. Frame Fabrication: Frameless.
5. Casework Hardware and Auxiliary Materials:
a. Hardware Standards: ANSI/BHMA A156.9.
b. Hardware Finish and Base Metal: Black.
c. Glass: Clear tempered glass, ASTM C 1048.
6. Solid Surfacing Material Countertops and Trim:

- a. Type: Quartz as indicated on Finish Schedule.
b. Grade: Premium.
c. Edge: Decorative as indicated.
d. Special Fabrication: Decorative assemblies as indicated.
7. Auxiliary Materials:
a. Screws: FS FF-S-111, countersunk.
b. Nails: FS FF-N-105, countersunk.
c. Anchors: Type required for secure anchorage.
Installation: 1. Comply with requirements of Section 01 00 00 - Project Requirements.
2. Comply with standards referenced.
3. Backprime work before installation.
4. Provide trim for scribing and site cutting.
5. Install work plumb, level and in proper alignment.
6. Provide work free from tool marks and blemishes.
7. Securely fasten to substrates.
8. Install in lengths to minimize joints and seams.
9. Touch-up damaged or abraded finishes.

END OF DIVISION

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

SECTION 07 21 00 - THERMAL BUILDING INSULATION

- Summary: 1. Provide Building Insulation and Vapor Retarders:
a. Thermal insulation in exterior cavity walls, board type.
b. Thermal insulation in exterior walls, blanket type.
c. Thermal insulation at underside of roofs, over heated spaces and over soffits, blanket type.
d. Acoustic insulation at interior partitions, blanket type.
- Submittals: 1. Submit product data.
- Products: 1. Board Insulation:
a. Glass fiber board, semi-rigid, ASTM C 553, Class B-4.
2. Blanket/Batt Insulation:
a. Glass fiber, ASTM C 665, Type I (unfaced).
3. Sound Attenuation Batts: Unfaced sound attenuation batts friction fit between studs and direct lay on suspended ceilings systems.
4. Accessories:
a. Adhesives and mechanical anchors.
b. Protection board.
c. Crack sealers and tapes.
- Installation: 1. Comply with requirements of Section 01 00 00 - Project Requirements.
2. Install insulation and vapor barriers with continuous coverage to provide optimum performance.

SECTION 07 26 16 - BELOW-GRADE VAPOR RETARDERS - Refer Structural.

SECTION 07 27 26 - FLUID APPLIED MEMBRANE AIR BARRIER

- Summary: 1. Section includes fluid-applied, vapor-permeable membrane air barriers.
- Submittals: 1. Submit product data and shop drawings.
- Products: 1. Manufacturer: Henry Company; 999 N Sepulveda Blvd, Suite 800, El Segundo, CA 90245; (800) 598 7663; www.Henry.com
a. Henry Company; Air-Bloc 17MR.
2. Accessory Materials: As recommended by air-barrier manufacturer to produce a complete air-barrier assembly and compatible with primary air-barrier material and not limited to the following:
a. Primer.
b. Counterflashing strip.
c. Joint reinforcing strip.
d. Substrate patching membrane.
e. Adhesive and tape.
f. Stainless steel flashing Type 304.
g. Sprayed Polyurethane Foam Sealant.
h. Modified Bituminous Transition Strip.
i. Preformed Silicone-Sealant Extrusion.
- Installation: 1. Comply with requirements of Section 01 00 00 - General Requirements.

SECTION 07 42 44 - ALUMINUM COMPOSITE PANEL SYSTEM

- Summary: 1. Provide manufactured composite panels of two sheets of aluminum bonded to a thermoplastic core.
- Submittals: 1. Submit product data, shop drawings, and samples.
2. submit 20-year finish warranty.
- Products: 1. Aluminum Face Sheets: Arconic, Reynobond ASTM B 209 for alloy 3003, Pre-Painted both faces over an FR core.
a. Thickness: 0.51 mm
2. Finishes
a. Front Side Finish: Fluorocarbon Coating System: 2 coat thermocured system. (Colorweld 500/500XL coating.)
b. Rear Side Finish: Washcoat, Manufacturer's standard.
c. Color: As selected by Architect. Refer to drawings.
3. Miscellaneous Materials: fasteners, accessories, bituminous coatings
4. Panel Thickness: 4mm
5. Fire Classification: ASTM E84; Flame Spread <25, Smoke Develop <450
- Installation: 1. Comply with requirements of Section 01 00 00 - Project Requirements.

SECTION 07 50 00 - MEMBRANE ROOFING

- Summary: 1. Provide adhered single-ply membrane roofing (TPO) and roof insulation.
2. Membrane Roofing Warranty: Manufacturer's 20 year warranty.
- Submittals: 1. Submit product data, shop drawings, 20 year warranty, maintenance data.
- Products: 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following: Carlisle SynTec Incorporated, Firestone Building Products, GAF Materials Corporation, Johns Manville, Prestone Building Products, GA&F Materials Corporation, Johns Manville.
2. Membrane Roofing: Totally adhered type.
3. TPO Membrane: Fabric-Reinforced TPO Sheet: ASTM D 6878, internally fabric- or scrim-reinforced, uniform, flexible fabric-backed TPO sheet.
a. Thickness: 60 mils.
b. Color: White.
4. Tapered Insulation: Provide factory-tapered Polysocyanurate insulation boards fabricated to slope of 1/4 inch per 12 inches (1:48) unless otherwise indicated
5. Cover Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate, 1/2 inch (13 mm) thick.
a. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Global 4470, designed for fastening substrate board to roof deck.
6. Sheet Metal Accessories: SMACNA and NRCA recommendations.
7. Walkway Protection Board: Compatible with membrane.
8. Pedestal Pads: Provide precut 10"x10" TPO protection pads in quantity as determined and installed by Deck Paver System Contractor. Contractor shall coordinate. Refer Section 07 76 16 Roof Deck Pavers
- Installation: 1. Comply with requirements of Section 01 00 00 - Project Requirements.
2. Coordinate membrane roofing installation with flashings and metal accessories to shed water properly.



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Table with 2 columns: Field (Project Number, Drawn By, Checked By) and Value (23-01-014, JO, OS)

DIVISION 08 - OPENINGS

SECTION 07 62 00 - SHEET METAL FLASHING AND TRIM

- Summary: Provide Flashing and Sheet Metal: a. Metal counterflashing and base flashing. b. Exterior wall flashing and expansion joints. c. Built-in metal valleys, gutters, and scuppers. d. Gutters and downspouts. e. Scuppers. f. Exposed metal trim and fascia units. g. Elastic flashing. h. Elastic roof and wall expansion joint systems. i. Laminated composition flashing. j. Sheet metal accessories. k. Ridge vents. l. Soffit vents. Submittals: 1. Submit product data, samples, shop drawings. Products: 1. Sheet Metal Flashing and Trim: a. Metallic-Coated Steel Sheet (fascia, copings, gutters & downspouts, canopy flashings): Provide aluminum-zinc alloy-coated steel sheet according to ASTM A 792/A 792M, Class AZ50 (Class AZM150) coating designation, Grade 40 (Grade 275), prepainted by coil-coating process to comply with ASTM A 755/A 755M. 1. Surface: Smooth, flat. 2. Exposed Coil-Coated Finish: Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions. 3. Color: As selected by Architect from full range custom color. 4. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with minimum total dry film thickness of 0.5 mil (0.013 mm). b. Stainless Steel (wall and roof flashings): AISI Type 302/304, ASTM A 167, 2D annealed finish, 28 gage (.0156 inch). c. Sheet Aluminum (window and door flashings): ASTM B 209, alloy 3003, color selected by architect to match storefront windows, 20 gage (.0359 inch). d. Extruded Aluminum (window and door flashings): 6063-T52, color selected by architect, 0.080 inches for primary legs of extrusion. As required. 2. Flexible Sheet Membrane Flashing: Nonreinforced flexible black elastic sheet, 50 to 65 mils thick, butyl synthetic rubber sheet. 3. Laminated Composition Sheet Flashing: 3 ounce copper sheet laminated between 2 layers of bituminous impregnated Kraft paper or saturated fabric. 4. Fabricated Units: Compliance with SMACNA Architectural Sheet Metal Manual. 5. Elastic Expansion Joints: Factory-fabricated metal-flanged edges to fit curbs and curb substrate. 7. Soffit Vents: Continuous aluminum strip vents. 8. Auxiliary Materials: a. Solder compatible with metal. b. Bituminous isolation coating. c. Mastic and elastomeric sealants. d. Epoxy seam sealer. e. Rosin-sized building paper slip sheet. f. Polyethylene underlayment. g. Reglets and metal accessories. h. Gutter and conductor head guards. i. Roofing adhesive for TPO roofing. Installation: 1. Comply with requirements of Section 01 00 00 - Project Requirements. 2. Install flashing and sheet metal with provision for expansion and contraction. 3. Install flashing and sheet metal to shed water properly. 4. Install gutters and downspouts to drain water properly. 5. Isolate dissimilar metals with bituminous coating.

SECTION 07 72 00 - ROOF ACCESSORIES

- Summary: 1. Provide Roof Curbs and Equipment Supports. Submittals: 1. Submit product data, samples, shop drawings. Products: 1. ROOF ACCESSORIES a. Roof Curbs and Equipment Supports: Fabricate from [0.052-inch- (1.32-mm-) thick, metallic-coated steel with welded or sealed mechanical corner joints] [0.079-inch- (2.0-mm-) thick, metallic-coated steel with welded or sealed mechanical corner joints] [0.090-inch- (2.28-mm-) thick aluminum with welded corner joints]. b. Products: Provide one of the following manufacturers: 1. Curbco 2. Complete Curb Products. 3. LM Curbs. 4. Metallic Products Corp. 5. McDaniel Metals 6. Milcor Inc., Commercial Products Group of Hart & Cooley, Inc. 7. Thybar Corporation. Provide units with cant strips and base profile coordinated with roof insulation thickness and roof deck slope. c. Provide preservative-treated wood nailers at tops of curbs. Provide manufacturer's standard rigid or semirigid insulation. Delete subparagraph below if units are unfinished. Finish: [Prime painted] [Baked enamel] [High-performance organic coating]. Installation: 1. Comply with requirements of Div 01 - Project Requirements 2. Unless otherwise indicated, install roof accessory items according to construction details of NRCA's "Roofing and Waterproofing Manual." Coordinate with installation of roof deck, vapor barriers, roof insulation, roofing, and flashing to ensure combined elements are secure, waterproof, and weathertight.

SECTION 07 92 00 - JOINT SEALANTS

- Summary: 1. Provide joint sealers at interior and exterior vertical and horizontal joints. Submittals: 1. Submit product data, mockup of each joint type, adhesion test results for each joint type. Products: 1. Silicone Elastomeric Joint Sealants: a. Type and Application: One-part nonacid-curing silicone sealant, ASTM C 920, for vertical and horizontal joints, modulus as required for application, exterior and interior use. b. Type and Application: One-part mildew-resistant silicone sealant, ASTM C 920, for sanitary applications, interior use. 2. Latex Joint Sealants: a. Acrylic Type: Acrylic-emulsion, ASTM C 834. b. Silicone Type: Silicone emulsion, ASTM C 834, and ASTM C 920. c. Application: Interior joints in vertical and overhead surfaces with limited movement. 7. Fire-Resistive Joint Sealers: a. Types: One part fire-stopping sealant. b. Application: Penetrations in fire-rated floor and wall assemblies. 8. Specialty Sealants: a. Type and Application: Synthetic rubber for acoustical sealant for concealed joints. b. Type and Application: Butyl-polyisobutylene sealant and tape sealant for concealed joints. 9. Paving Sealant and Joint Fillers: a. Sealant for Exterior Traffic-Bearing Joints, Where Slope Allows Use of Pourable Sealant: b. Single-component, pourable urethane sealant, ASTM C 920, Type S; Grade P, Class 25. c. Closed cell polyurethane filler. d. Application: Filler for exterior paving joints. 10. Auxiliary Materials: Supply joint fillers in the shape, size and type shown on Drawings. a. Plastic foam joint fillers. b. Elastomeric tubing backer rods. c. Bond breaker tape. Installation: 1. Comply with requirements of Section 01 00 00 - Project Requirements. 2. Test sealant adhesion for each substrate required. 3. Install in proper relation with adjacent work. 4. Clean adjacent surfaces sanded with sealant immediately. END OF DIVISION

SECTION 08 11 13 - HOLLOW METAL DOORS AND FRAMES

- Summary: 1. Provide Steel Doors and Frames: a. Exterior doors and frames. b. Interior doors and frames. Submittals: 1. Submit product data, shop drawings. Products: 1. Products: Door Pro, Commercial Doors of Texas, Premier Steel Doors and Frames, American Door Products, Lunsford Door & Service, Inc. Standards: ANSI/SDI-100, Recommended Specifications for Standard Steel Doors and Frames. 2. Fire-Rated Assemblies: NFPA 80, and acceptable testing agency listing. 4. Steel Doors: Standard seamless steel doors with hollow or composite construction. a. Exterior Doors: ANSI/SDI-100, Grade III, extra-heavy-duty, minimum 16 gage galvanized sheet steel, 1-3/4 inches thick. Finish: Factory primed and field painted. 5. Steel Frames: a. Exterior Frames: Welded type, 16 gage galvanized sheet steel, mitered or coped corners. b. Accessories: Door silencers and plaster guards. c. Finish: Factory primed and field painted. Installation: 1. Comply with requirements of Section 01 00 00 - Project Requirements. 2. Comply with SDI-100, and NFPA 80 for fire-rated assemblies.

SECTION 08 14 16 - FLUSH WOOD DOORS

- Summary: 1. Provide Flush Wood Doors: a. Interior solid core flush doors. Submittals: 1. Submit product data, samples, shop drawings, warranty. Products: 1. Products: Allegheny Wood Works, Inc., Algoma Hardwoods, Inc., Bison Doors, Door Masters of Texas, VT Industries, Inc. and as selected by Architect complying with the following. a. AWI Quality Standards: NWWDA I.S. 1-A, and AWI Architectural Quality Standards. b. Fire Rated Wood Doors: Meeting ASTM E 152 requirements. 2. Interior Solid Core Doors for Plastic Laminate Finish: a. Grade: Premium grade. b. Construction: Particleboard or glued-block core. c. Faces: GP-50, 0.050 inch thick plastic laminate. 3. Fitting and Finish: a. Fitting: Factory-primed and premachine doors. b. Site Finish: Shop prime and site finish. Installation: 1. Comply with requirements of Section 01 00 00 - Project Requirements. 2. Comply with NWMA IS-1 and AWI Quality Standards. 3. Prefit doors to frames, premachine doors for hardware, and factory bevel. 4. Install with not more than 1/8 inch clearance at top and sides, 1/4 inch at bottom unless undercut is required. 5. Comply with NFPA 80 for rated assemblies.

SECTION 08 31 13 - ACCESS DOORS AND FRAMES

- Summary: 1. Provide access doors for walls and ceilings. Submittals: 1. Submit product data. Products: 1. Products: Babcock-Davis, Jensen Industries; Div. of Broan-Nutone, LLC, J. L. Industries, Inc.; Div. of Activar Construction Products Group, Larsen's Manufacturing Company, Mikor Inc. 2. Frames: 16 gage sheet steel with flange suitable for adjacent material. 3. Doors: 14 gage sheet steel doors. 4. Door Type: Flush panel. 5. Locking Devices: Cylinder locks. 6. Fire Rating: NFPA 80. 7. Finish for Sheet Steel Access Doors: Factory primed. Installation: 1. Comply with requirements of Section 01 00 00 - Project Requirements.

SECTION 08 41 26 - ALL-GLASS ENTRANCES AND STOREFRONTS

- Summary: 1. Interior and exterior swinging all-glass entrance doors. Submittals: 1. Submit product data, shop drawings. 2. Warranty Period: Two years from date of Substantial Completion. Five years from date of Substantial Completion for concealed closures. 3. Delegated Design: Engage a qualified professional engineer, as defined in Section 01 40 00 "Quality Requirements," to design all-glass entrances and storefronts. Structural loads as indicated. Submit engineered review with shop drawings. Products: 1. Subject to compliance with requirements, provide products as follows: a. Blumcraft of Pittsburgh; C.R. Laurence Co. Inc. 1301 Series Entrance System, Aluminum: ASTM B 221 (ASTM B 221M), with strength and durability characteristics of not less than Alloy 6063-T5. b. Rating: Aluminum 3/4 inch at top & bottom with end caps. c. Overhead doorstop. d. Center-housing lock. e. Weather Stripping: Pile type; replaceable without removing all-glass entrance doors from pivots. 2. Glass: ASTM C 1048, Kind FT (fully tempered), Condition A (uncoated surfaces), Type I (transparent), tested for surface and edge compression per ASTM C 1048 and for impact strength per 16 CFR 1201 for Category II materials. Exterior Glass use: Vitro Solargray + Solarban 60(3) Clear. a. Class 1: Clear monolithic. b. Thickness Exterior : 5/8 inch (16 mm). Thickness Interior : 1/2 inch (13 mm) c. Exposed Edges: Machine ground and flat polished. Butt Edges: Flat ground. Corner Edges: Lap-joint corners with exposed edges polished. 3. Hardware: As indicated on Drawings. 4. Miscellaneous: a. Butt Glazed Sealants: Single-Component, Nonsag, Acid-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 25, for Uses NT, G, and A. Installation: 1. Comply with requirements of Section 01 00 00 - Project Requirements. 2. Anchor securely in place; install plumb, level and in true alignment. 3. Isolate dissimilar metals. 4. Coordinate with glazing work and hardware requirements.

SECTION 08 44 13 - GLAZED ALUMINUM CURTAIN WALLS

- Summary: 1. Provide glazed aluminum curtain walls, unit-and-mullion system installation. a. Hurricane-Resistance Test Performance: Comply with the South Florida Building Code, 1994 Edition for Dade County, for the locations where the pressure requirements as determined by ASCE 7-95 "Minimum Design Loads for Buildings and other Structures", do not exceed the Design Pressure Rating values in Section 7 and within the limitations contained in Section 3. Submittals: 1. Product Data, Shop Drawings, Samples, Test Reports, Structural Analysis Data and 5 year warranty. 2. Delegated-Design Submittal: For glazed aluminum curtain walls indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation. Products: 1. Materials. a. Aluminum: ASTM B 209 for sheet and plate; ASTM B 221 for extruded bars, rods, shapes, and tubes; ASTM B 429 for extruded structural pipe and tube. b. Steel Reinforcement: ASTM A 36 for structural shapes, plates, and bars; ASTM A 611 for cold-rolled sheet and strip; A 570 for hot-rolled sheet and strip. Apply corrosion-resistant protective coating. c. Glazing: specified in Division 8 Section "Glazing". d. Glazing Accessories: dry glazing gaskets. 2. Manufacturers: Subject to compliance with requirements, provide products by the following: a. Kawneer: North America: Kawneer 1600 Curtain Wall System 2. b. Source Limitations: Obtain all components of curtain wall system, including framing entrancons and accessories, from single manufacturer.

- 2. Components and Features: a. Size: 2 1/2" x 6" as indicated. b. Thermally broken. c. Tested to high performance air, water, structural, seismic, thermal and acoustical standards. d. Concealed fastener joinery. e. Shear block fabrication method. f. Anchors and Fasteners: corrosion-resistant materials. g. Concealed Flashing: corrosion-resistant flashing. 3. Finishes as selected by Architect. a. Black Anodic Finish: Class 1. Fabrication: 1. Factory-Assembled Frame Units: a. Install glazing to comply with requirements in Section 08 80 00 "Glazing." b. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

- Installation: 1. Comply with requirements of Section 01 00 00 - Project Requirements. 2. Fit joints to produce hairline joints free of burrs and distortion. 4. Rigidly secure nonmovement joints. 5. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration and to prevent impeding movement of moving joints. 6. Where welding is required, weld components in concealed locations to minimize distortion or discoloration of finish. Protect glazing surfaces from welding. 7. Seal joints watertight unless otherwise indicated. 8. Install components to drain water passing joints, condensation occurring within framing members, and moisture migrating within glazed aluminum curtain wall to exterior. 9. Install components plumb and true in alignment with established lines and grades. 10. Protect system materials against galvanic action and corrosion. 11. Perform water spray testing of glazed curtain wall system.

SECTION 08 71 00 - DOOR HARDWARE

- Summary: 1. Provide hardware for swinging, sliding doors. 2. Comply with code and accessibility requirements. Submittals: 1. Submit product data, samples, proposed hardware schedule, maintenance data. Products: 1. Products: As selected by Architect complying with the following. 2. Product Requirements: a. Hardware for Fire-Rated Openings: NFPA 80, and local requirements. b. Handicapped Accessibility: ANSI A117.1, ADAAG, and local requirements. c. Materials and Application: ANSI A156 series standards. d. Quality Level: Residential type. 3. Locksets and Latchesets: Cylinder type. 4. Lock Cylinders: Interchangeable type. 5. Keying: Owner's requirements keying and key control system. 6. Hinges and Butts: Full-mortise type with nonremovable pins at exterior , entrance and security doors. 7. Closers: Low frequency and Barrier-free type. 8. Exit Devices: Low frequency type. 9. Hardware Finishes: As selected by Architect finish on exposed surfaces. 12. Door Trim Units: Kickplates, armor plates, edge trim, and related trim. 13. Stops for each door. 14. Silencers. 15. Overhead door holders. 16. Flush bolts with dustproof strikes. 17. Coordinators. 18. Automatic door bottoms. 19. Interior sliding door hardware. 20. Interior bifold door hardware. 21. Interior pocket door hardware. 22. Coat hooks. 23. Soundstripping. 24. Weatherstripping. 25. Threshholds.

- Installation: 1. Comply with requirements of Section 01 00 00 - Project Requirements. 2. Comply with DHI "Recommended Locations for Builder's Hardware" and hardware manufacturers instructions. 3. ((Refer to the door schedule for hardware sets.))

SECTION 08 80 00 - GLAZING

- Summary: 1. Provide glass and glazing for units not factory glazed. 2. Hurricane-Resistance Test Performance: Comply with the South Florida Building Code, 1994 Edition for Dade County, for the locations where the pressure requirements as determined by ASCE 7-93 "Minimum Design Loads for Buildings and other Structures", do not exceed the Design Pressure Rating values in Section 7 and within the limitations contained in Section 3. Submittals: 1. Submit product data, samples, shop drawings, warranty, maintenance data. Products: 1. Products: Drawing Indications. a. Exterior Glass: 1 inch Vitro Solargray + Solarban 60(3) Clear Glass: a. Primary Glass Products: Clear float, glass, ASTM C 1036. b. Heat-Treated Glass Products: Heat-strengthened, tempered, coated, glass, ASTM C 1048. c. Sealed Insulating Glass Units: ASTM E 774, Class A. See Products list and Drawings. d. Mirrors: Silvering and protective coatings. e. High-Performance Coatings: Low e (low emissivity) type. See Products listed. 3. Glazing: Elastomeric glazing sealant filler rods. 5. Setting blocks, spacers, and compressible filling rods. Installation: 1. Comply with requirements of Section 01 00 00 - Project Requirements. 2. Comply with FGMA Glazing Manual and manufacturer's recommendations. 3. Set mirrors on stainless steel channels and adhere to wall with mastic.

END OF DIVISION

DIVISION 09 - FINISHES

SECTION 09 22 16 - NON-STRUCTURAL METAL FRAMING

- 1.1 SECTION REQUIREMENTS A. Submittals: Product Data. B. Fire-Resistance-Rated Assemblies: Provide materials and construction identical to those tested in assemblies per ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction. C. STC-Rated Assemblies: Provide materials and construction identical to those tested in assemblies per ASTM E 90 and classified per ASTM E 413 by a qualified independent testing and inspecting agency. PART 2 - PRODUCTS 2.1 METAL FRAMING AND SUPPORTS A. Steel Framing Members, General: ASTM C 754. 1. Steel Sheet Components: ASTM C 645. Thickness specified is minimum uncoated base-metal thickness. 2. Protective Coating: ASTM A 653/A 653M, G60 (Z180), hot-dip galvanized zinc coating. B. Suspended Ceiling and Soffit Framing: 1. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, and 0.0625-inch (1.59-mm) diameter, or double strand of 0.0475-inch- (1.21-mm-) diameter wire. 2. Wire Hangers: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, and 0.162-inch (4.12-mm) diameter. 3. Carrying Channels: Cold-rolled steel, 0.0538 inch (1.37 mm) thick, [2- 1/2 inches (63.5 mm)] [2 inches (50.8 mm)] [1-1/2 inches (38.1 mm)] deep. 4. Furring Channels: 3/4-inch- (19.1-mm-) deep, cold-rolled channels, 0.0538 inch (1.37 mm) thick; [Steel studs, 0.0179 inch (0.454 mm) thick, in depth indicated] [Steel studs, 0.0296 inch (0.752 mm) thick, in depth indicated; Steel, rigid hat-shaped channels; 7/8 inch (22.2 mm) deep, 0.0296 inch (0.752 mm) thick; Resilient furring channels, 1/2 inch (12.7 mm) deep, with single- or double-leg configuration. 5. Grid Suspension System for Interior Ceilings: Interlocking, direct-hung system.

- C. Partition and Soffit Framing: 1. Studs and Runners: In depth indicated and 0.0296 inch (0.752 mm) thick unless otherwise indicated. In depth indicated and 0.0396 inch (1.005 mm) thick at walls supporting cabinets, millwork, handrails and grab bars unless otherwise indicated. 2. Flat Strap and Backing: 0.0296 inch (0.752 mm) thick. 3. Rigid Hat-Shaped Furring Channels: In depth indicated and 0.0296 inch (0.752 mm) thick. 4. Resilient Furring Channels: 1/2 inch (12.7 mm) deep, with single- or double-leg configuration. 5. Cold-Rolled Furring Channels: 0.0538 inch (1.37 mm) thick, 3/4 inch (19.1 mm) deep. 6. Z-Furring: In depth required by insulation, 1-1/4-inch (31.8-mm) face flange, 7/8-inch (22.2-mm) wall-attachment flange, and 0.0179 inch (0.454 mm) thick. D. Grid Suspension System for Gypsum Board Ceilings: ASTM C 645, direct-hung system composed of main beams and cross-furring members that interlock. Provide components, moldings and trims for a complete flat and curved ceiling systems. 1. Products: Subject to compliance with requirements, provide one of the following: 2. Armstrong World Industries, Inc.; Drywall Grid Systems. 3. Chicago Metallic Corporation; Drywall Grid System. 4. USG Corporation; Drywall Suspension System.

2.2 ACCESSORIES

- A. General: Comply with referenced installation standards. 1. Fasteners for Metal Framing: In depth indicated, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates. B. Acoustical Sealant for Concealed Joints: Nonsag, latex sealant complying with ASTM C 834.

- Installation: A. Install steel framing to comply with ASTM C 754 and with ASTM C 840 requirements that apply to framing installation and with United States Gypsum's "Gypsum Construction Handbook." 1. Gypsum Plaster Assemblies: Also comply with ASTM C 841. 2. Portland Cement Plaster Assemblies: Also comply with ASTM C 1063. 3. Gypsum Veneer Plaster Assemblies: Also comply with ASTM C 844. B. Install supplementary framing, and blocking support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction. C. Isolate steel framing from building structure, except at floor, to prevent transfer of loading imposed by structural movement. 1. Where studs are installed directly against exterior walls, install asphalt-felt or foam-gasket isolation strip between studs and wall. D. Fire-Resistance-Rated Assemblies: Comply with requirements of listed assemblies.

SECTION 09 24 00 - PORTLAND CEMENT PLASTERING

- Summary: 1. Provide Portland cement plaster and lath systems for exterior walls and ceilings. Submittals: 1. Submit product data, Mockup to demonstrate aesthetic effects and set quality standards for materials and execution. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion. Products: 1. Products: a. Dryvit Systems, Inc.; Dryvit TAFS. b. LaHabra, a brand of ParexLaHabra, Inc.; Acrylic Finish. c. Senergy, BASF Wall Systems, Inc.; Senerflex. d. Sto Corp.; Powerwall Finish. 2. Portland Cement Plaster: a. Application: 3 coats over metal lath type. b. Base Coats (Scratch & Brown Coat) Cements: Portland cement, ASTM C 150, Type I or II material. c. Finish Coat: Acrylic-Based Finish Coatings: Factory-mixed acrylic-emulsion coating systems, formulated with colorfast mineral pigments and fine aggregates; for use over Portland cement plaster base coats. Include manufacturer's recommended primers and sealing topcoats for acrylic-based finishes. Custom Color to be selected by Architect. d. Finish: Troweled finish. 3. Lath and Plaster Support Systems: a. Metal Supports for Suspended and Furred Ceilings: ASTM C 1063, for Portland cement plaster installations. b. Steel Studs and Runners, Non-Load (Axial) Bearing: ASTM C 645, 20 gage (.0329 inch) steel studs, 2-1/2 inch, 3-5/8 inch, 4 inch and 6 inch typical depth. Refer Division 05 for Cold Formed Metal Framing. c. Vertical Metal Furring: Channel furring and braces, 2-furring members, and furring brackets. d. Expanded Metal Lath: ASTM C 847, self-furring diamond mesh or rib lath. Paper Backing: FS UU-B-790, Type I, Grade M, Style 2, vapor-permeable paper. 4. Auxiliary Materials: a. Zinc and Zinc-Coated (Galvanized) Accessories: Corner beads, casing bead, and control joints. b. Bonding compounds and agents. c. Acoustical sealant. Installation: 1. Comply with requirements of Section 01 00 00 - Project Requirements. 2. Install gypsum plaster in accordance with ASTM C 847. 3. Install Portland cement plaster in accordance with ASTM C 926. 4. Install metal trim at perimeters and joints. 5. Provide control and expansion joints as recommended by manufacturer.

SECTION 09 29 00 - GYPSUM BOARD

- Summary: 1. Provide Gypsum Board Assemblies: a. Interior walls, partitions, and ceilings for tape and joint compound finish. d. Cementitious backer units for application of tile. e. Glass-reinforced gypsum fabrications. 2. Gypsum Board Attachment: a. Gypsum board screw-attached to steel framing and furring. Submittals: 1. Submit product data, 4 foot by 4 foot mockup showing joint treatment. Products: 1. Products: United States Gypsum Company, Georgia Pacific, National Gypsum Company, Certain Teed. 2. Gypsum Board: a. Gypsum Wallboard: ASTM C 36, regular and fire-rated types, 5/8 inch typical thickness. b. Water-Resistant Gypsum Backing Board: ASTM C 630, regular and fire-rated types, 5/8 inch typical thickness. c. Joint Treatment: ASTM C 475 and ASTM C 840, 3-coat system. d. Installation Standard: ASTM C 840. 3. Glass-Mat Water-Resistant Gypsum Backing Board: a. Type: ASTM C 1178, Type X, 5/8 inch thick type. 6. Cementitious Backer Units: a. Type: ANSI A 118.9, cement-coated Portland cement panels. b. Thickness: 5/8 inch nominal. 7. Trim Accessories: a. Material: Metal trim. b. Types: Cornerbead, edge trim, and control joints. c. Decorative Profiles: Aluminum reveals and channels. 8. Steel Framing for Walls and Partitions:



12/01/2023

MIRA SAFETY

1713 Hur Industrial Blvd Cedar Park, TX 78613

ISSUE FOR PERMIT 12/01/23

Issues

Project Number 23-01-014

Drawn By JO

Checked By OS

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G-005

SPECIFICATIONS

- a. Steel Studs and Runners: ASTM C 645, 20 gage (.0329 inch) 25 gage (.0179 inch) steel studs, 2-1/2 inch, 3-5/8 inch, 4 inch, 6 inch typical depth.
 - b. Furring Channels: ASTM C 645, 20 gage (.0329 inch), 25 gage (.0179 inch).
 - c. Auxiliary Framing Components: Furring brackets, resilient furring channels, Z-furring members, and non-corrosive fasteners.
 - d. Installation Standard: ASTM C 754.
 - 9. Steel Framing for Suspended and Furred Ceilings:
 - a. Furring Channels: ASTM C 645, 20 gage (.0329 inch) standard channels.
 - b. Steel Studs: Match steel studs used for walls.
 - c. Accessories: Hangers and inserts.
 - d. Installation Standard: ASTM C 754.
 - 10. Auxiliary Materials:
 - a. Gypsum board screws, ASTM C 1002.
 - b. Gypsum board nails, ASTM C 514.
 - c. Fastening adhesive.
 - d. Concealed acoustical sealant.
 - e. Mineral fiber sound attenuation blankets.
- Installation:
1. Comply with requirements of Section 01 00 00 - Project Requirements.
 2. Comply with standards referenced above and ASTM C 840 and GA 216.
 3. Install joints only over framing members. Do not allow butt-to-butt joints.
 4. Provide blocking for items such as railings, grab bars, casework, toilet accessories, and similar items.
 5. Provide acoustical sealant at runner tracks, wall perimeters, openings, expansion, and control joints.
 6. Install gypsum board assemblies true, plumb, level and in proper relation to adjacent surfaces.
 7. Provide 3-coat joint treatment such that, after finishing, joints are not visible.
 8. Sand and leave ready for finish painting and wall treatment.

SECTION 09 30 13 - CERAMIC TILING

- Summary:
1. Provide tile for the following applications:
 - a. Wall tile over gypsum wallboard.
 - b. Wall tile over tile backer board at wet areas.
 - c. Provide 5 percent attic stock for each tile type.
- Submittals:
1. Submit product data, samples, 4 foot by 4 foot mockup.
- Products:
1. Products: As Indicated on Finish Schedule.
 2. Tile Materials: ANSI A 118 series standard specifications.
 3. **1-1, Glazed Wall Tile: Matte Finish, VERIFY**
 - a. Type: Interior type body, flat tile.
 - b. Face: 2 by 10 inches, 2 x 24 inches.
 - c. Thickness: 8/7 mm nominal thickness.
 - d. Face: Plain face with modified square edge.
 9. **1-2, Glazed Paver Tile: VERIFY**
 - a. Type: Porcelain flat tile.
 - b. Size: 12 by 24 inches.
 - c. Thickness: 1/2 inch nominal.
 - d. Face: Plain face with cushion edges.
 11. Setting Materials:
 - a. Water Absorption: Equal or Less than 0.5%.
 - b. Latex-Portland cement mortar, ANSI A118.4.
 12. Grout:
 - a. Latex-Portland cement grout, ANSI A118.6.
 - b. Chemical-resistant epoxy grout, ANSI A118.3.
 13. Setting Accessories:
 - a. Membrane waterproofing under tile as indicated.
 - b. Cementitious tile backer board.
 14. Elastomeric Sealants:
 - a. One-part mildew-resistant silicone sealant for non-traffic areas.
 - b. Multi-part pourable urethane sealant for traffic areas.
 - c. Chemical-resistant sealant at chemical-resistant flooring.
- Installation:
1. Comply with requirements of Section 01 00 00 - Project Requirements.
 2. Comply with ANSI 108 series standard specifications and Tile Council of North America, Handbook for Ceramic Tile Installation.
 3. Layout tile in grid pattern with alignment of grids, to provide uniform joint width, and to minimize cutting.
 4. Grout, cure, clean and protect tile surfaces.

SECTION 09 30 39 - THIN BRICK TILING

- Summary:
1. Provide thin brick tiles for the following applications:
 - a. Thin brick tile over fiber cement underlayment.
 - b. Provide 5 percent attic stock.
- Submittals:
1. Submit product data, samples, 4 foot by 4 foot mockup showing the proposed color range, texture, bond mortar, workmanship, cleaning and water repellents where required.
- Products:
1. Products: All brick shown on contract documents as indicated shall be color, texture as manufactured by General Shale, PO Box 3547, 3015 Bristol Highway, Johnson City, TN 37602-3547.
 2. Materials: ASTM C-1088 latest edition, Exterior Grade, Type TBX (except for chips).
 3. Brick Tests: ASTM C-67 latest edition.
 - a. Size: 1/2"x 2 1/4"x 7 5/8" (W x H x L).
 - b. Face: Plain face with cushion edges.
 4. Accessories:
 - a. Where special shapes are shown on architectural drawings, manufacturer shall provide shop drawings for architect's approval prior to manufacturing shapes.
 5. Setting Materials: Mortar shall be type consisting by proportion.
 - a. Part Portland cement (ASTM C-150 Type I or II)
 - b. Part hydrated lime (ASTM C-207)
 - c. Parts sand (ASTM C-144)12.
 6. Grout: Grout shall conform to ASTM C-476 for fine grout mix. Slump shall be 10". Part Portland cement (ASTM C-150, Type I or II). 1/4 to 3 parts sand (ASTM C-404).
 13. Setting Accessories:
 - a. Membrane waterproofing under tile as indicated.
 - b. Cementitious tile backer board.
 14. Elastomeric Sealants:
 - a. One-part mildew-resistant silicone sealant for non-traffic areas.
- Installation:
1. Comply with requirements of Section 01 00 00 - Project Requirements.
 2. Bond - Bond shall be running bond unless otherwise shown on contract documents.
 3. Jointing - Mortar joints shall be concave and struck with a smooth steel tool.
 4. Construction - All construction strictly adheres to (ACI 530)
 5. Cleaning - Cleaning shall conform to Technical Bulletin 4: Section #200, Brick Cleaning Recommendations and to SIA Technical Note #20-R. Contact manufacturer for recommendations.
 6. Water Repellent & Coatings - Where water repellents are specified

SECTION 09 51 00 - ACOUSTICAL CEILINGS

- Summary:
1. Provide acoustical lay-in ceilings, trim, and metal suspension system.
 2. Provide 5% attic stock ceiling panels.
- Submittals:
1. Submit product data, samples.
- Products:
1. Products: As Indicated on Drawings.
 2. APC, Acoustical Panel Ceilings:
 - a. Size: 24 by 24 inches by 15/16 inch thick.
 - b. Edge Detail: Angled Tegular edge.
 - c. Pattern: Heavily textured pattern.
 - d. Type and Finish: Scrubbable and scratch resistant finish, ASTM E 1264.
 - e. Fire Performance: Class A (UL) fire resistive.
 3. Suspension Systems:
 - a. Exposed grid suspension system, ASTM C 635 intermediate duty classification, narrow profile.
 - c. Fire-Rating: Fire-resistance rated suspension system.
 - d. Suspension System Accessories: Attachment devices and hangers, ASTM C 635.
 - e. Cap Material: Painted steel finish.
 - f. Edge molding and trim.
- Installation:
1. Comply with requirements of Section 01 00 00 - Project Requirements.
 2. Measure and layout acoustical ceilings to avoid less than 1/2 panel units whenever practical.
 3. Install suspension systems in accordance with ASTM C 636.
 4. Install panels with pattern or grain running one-way.

SECTION 09 51 00 - ACOUSTICAL CEILINGS

- Summary:
1. Provide acoustical lay-in ceilings, trim, and metal suspension system.
 2. Provide 5% attic stock ceiling panels.
- Submittals:
1. Submit product data, samples.
- Products:
1. Products: As Indicated on Drawings.
 2. APC, Acoustical Panel Ceilings:
 - a. Size: 24 by 24 inches by 15/16 inch thick.
 - b. Edge Detail: Angled Tegular edge.
 - c. Pattern: Heavily textured pattern.
 - d. Type and Finish: Scrubbable and scratch resistant finish, ASTM E 1264.
 - e. Fire Performance: Class A (UL) fire resistive.
 3. Suspension Systems:
 - a. Exposed grid suspension system, ASTM C 635 intermediate duty classification, narrow profile.
 - c. Fire-Rating: Fire-resistance rated suspension system.
 - d. Suspension System Accessories: Attachment devices and hangers, ASTM C 635.
 - e. Cap Material: Painted steel finish.
 - f. Edge molding and trim.
- Installation:
1. Comply with requirements of Section 01 00 00 - Project Requirements.
 2. Measure and layout acoustical ceilings to avoid less than 1/2 panel units whenever practical.
 3. Install suspension systems in accordance with ASTM C 636.
 4. Install panels with pattern or grain running one-way.

SECTION 09 65 00 - RESILIENT FLOORING

- Summary:
1. Provide resilient flooring.
 2. Provide 5 percent attic stock for each tile type.
- Submittals:
1. Submit product data, samples, 4 foot by 4 foot mockup, maintenance data and warranty information.
- Products:
1. Products: As indicated on Finish Schedule.
 2. Tile Flooring:
 - a. VCT-1, Vinyl Composition Tile as indicated: ASTM F 1066, ASTM E 648 Composition 1, nonasbestos formulated, Class 1, 12 by 12 inches by 1/8 inch thick.
 - b. LVT-1, Luxury Vinyl Tile as indicated: Commercial Luxury Vinyl Tile with Acoustic Backing - square edge, dry back, direct glue down. Passes Smoke density (ASTM E662), Radiant Panel (ASTM E648) Class 1.
 - c. SDT-1, Static Dissipative Tile as indicated: ASTM F 1066; Static resistance/generation/dissipation ANSI/ESD STM 7.1, 97.1 and 97.2; ASTM F-150. Static dissipative tile adhesive required S-202. Static dissipative tile polish required: Armstrong S-392.
 6. Auxiliary Materials:
 - a. Edge strips and terminations.
 - b. Feature strips and inlaid borders.
 - c. Adhesives: LVT use Shaw 4100 or Lokworx + Resil; VCT use Armstrong S-100 or S-515.
- Installation:
1. Comply with requirements of Section 01 00 00 - Project Requirements.
 2. Prepare surfaces by cleaning, leveling and priming.
 3. Level to 1/8 inch in 10 feet tolerance.
 4. Install tile with tight joints and required patterns.

SECTION 09 65 13 - RESILIENT BASE AND ACCESSORIES

- Summary:
1. Provide resilient wall base, resilient stair accessories, resilient flooring accessories, resilient carpet accessories.
 2. Provide 5 percent attic stock.
- Submittals:
1. Submit product data, samples, mockup.
- Products:
1. Products: As indicated on Finish Schedule.
 2. Resilient Wall Base:
 - a. RB, Rubber Wall Base: FS SS-W-40, Type I, 0.125 inches thick.
 - b. Vinyl Wall Base: FS SS-W-40, Type II, 0.125 inches thick.
 - c. Heights: 2-1/2 inches.
 - d. Type: Straight type with no toe at carpet installations, cove type with topset toe elsewhere.
 4. Resilient Accessories:
 - a. RA, Rubber accessories.
 - 5. Installation Accessories:
 - a. Concrete Slab Primer: Nonstaining type.
 - b. Travelable Underlayment and Patching Compounds: Latex-modified, Portland-cement-based formulation.
 - c. Adhesives: Water-resistant type.
- Installation:
1. Comply with requirements of Section 01 00 00 - Project Requirements.

SECTION 09 68 13 - TILE CARPETING

- Summary:
1. Provide carpet tile and floor preparation.
 2. Provide 5 percent attic stock.
- Submittals:
1. Submit product data, samples, mockup, warranty, maintenance data.
- Products:
1. CPT-1, Products: As indicated on Finish Schedule.
 2. Auxiliary Materials:
 - a. Edge guards: Refer Floor Transition Details.
 - b. Adhesives, cements and fasteners: Shaw 5100, 4151, 3800, 5036 or Lokworx+ Carpet Tile Adhesive.
 - 3. Carpet Tile Installation Method: Glue-down installation.
- Installation:
1. Comply with requirements of Section 01 00 00 - Project Requirements.
 2. Install with tight seams and carpet tile grain running in same direction.
 3. Provide cutouts for floor outlets and similar penetrations.
 4. Provide edge guards at change of flooring materials.

SECTION 09 72 00 - WALL COVERINGS

- Summary:
1. Provide wall coverings and surface preparation.
 2. Provide 5% attic stock for each product.
- Submittals:
1. Submit product data, samples, 4 foot by 4 foot mockup.
- Products:
1. Products: As indicated
 2. WC-1, 100% Vinyl Wall Covering:
 - a. Type: FS CCC-W-408A, 20 oz. Type II medium duty wall covering. ASTM E 84 Adhered as stocked, Class A FS-5 SD:10.
 - b. Cleaning Code: WS. Water based cleaning agents or foam.
 - c. Backing: Cotton Scrim.
 3. WC-2, 100% Xorel Wall Covering; 9.7 oz. 85% biobased PE, 15% PE.
 - a. Type: ASTM E 84 Class A/Class 1; Meets UL 1286 Flammability for Office Furnishings.
 - b. Cleaning Code: WS & BC - Water/solvent and bleach cleanable.
 - c. Backing: Unbacked.
 - d. Application: Wrap-around cork faced backer board for tackable surface. Refer Drawings.
- Installation:
1. Comply with requirements of Section 01 00 00 - Project Requirements.

SECTION 09 91 00 - PAINTING

- Summary:
1. Provide painting and surface preparation for interior and exterior unfinished surfaces as scheduled.
 2. Provide painting and surface preparation of exposed mechanical and electrical piping, conduit, ductwork, and equipment.
 3. Provide painting of entire surface where patch painting is required.
 4. Provide 5 gallons paint attic stock for each type and color used.
- Submittals:
1. Submit product data, samples, 4 foot by 4 foot mockup of each color, extra stock consisting of 1 unopened gallon of each type of paint used.
- Products:
1. Manufacturers:
 - a. Benjamin Moore & Co.
 - b. PPG Industries, Inc.
 - c. Sherwin-Williams Co.
 - d. Flood (Preservative).
 2. Regulations: Compliance with VOC and environmental regulations.
 3. First-line commercial-quality products for all coating systems.
- Installation:
1. Comply with requirements of Section 01 00 00 - Project Requirements.
 2. Provide field-applied mock-ups of each color and finish selected on actual surfaces to be painted.

3. Test sample area for adhesion for each type of paint.
 4. Remove cover plates and protect hardware and adjacent surfaces.
 5. Sand before painting until smooth and flat and sand between coats.
 6. Apply paint to achieve manufacturer's recommended dry film thicknesses.
 7. Paint entire surface where patch painting is required.
 8. Recoat areas which show bleed-through or defects.
 9. Clean paint spatter from adjacent surfaces and glass.
 10. Touch-up damaged surfaces at completion of construction.
- Schedule:
1. Provide paint systems complying with the following schedule.

INTERIOR PAINT SCHEDULE

Gypsum Drywall Walls	LES, Eggshell	1 coat latex primer 2 coats latex finish
Gypsum Drywall Ceilings	FL, Flat	1 coat latex primer 2 coats latex finish
Gypsum Drywall to Receive Wallcovering	--	1 coat latex primer
Wood for Painted Finish	OSG, Semi Gloss	1 coat interior alkyd enamel undercoat 2 coats alkyd enamel
Ferrous Metals	OSG, Semi Gloss	1 coat rust-inhibiting primer 2 coats alkyd enamel

EXTERIOR PAINT SCHEDULE

Wood for Preservative Finish	Clear	2 coats, clear acrylic sealer, UV/Fade Resistant, Waterproof.
Wood for Painted Finish	Semi Gloss	1 coat exterior primer 2 coats acrylic latex enamel
Concrete and Stucco	Flat Gloss	1 coat latex primer 2 coats acrylic latex finish
Ferrous Metal	Semi Gloss	1 coat, rust-inhibiting primer 2 coats alkyd enamel finish
Galvanized Metal	Semi Gloss	1 coat, galvanized metal primer 2 coats alkyd enamel finish

END OF DIVISION

DIVISION 10 - SPECIALTIES

SECTION 10 44 00 - FIRE-PROTECTION SPECIALTIES DELETE SINCE NOT REQ'D

- Summary:
1. Provide fire extinguishers and cabinets
 - a. Fire extinguishers.
 - b. Fire extinguisher cabinets.
 - c. Fire extinguisher mounting brackets.
- Submittals:
1. Submit product data.
- Products:
1. Products: Larsens's Manufacturing Company.
 2. Standards: UL and FM listed products.
 3. Fire Extinguishers:
 - a. Type: Multipurpose dry chemical type.
 - b. Rating: Sized for project requirements.
 - c. Public Area Mounting: Cabinet mounted.
 - d. Service Area Mounting: Metal brackets.
 4. Cabinets:
 - a. Mounting: Semirecessed mounting.
 - b. Trim: Exposed trim.
 - c. Doors: Enameled steel, baked enamel finish.
 - d. Doors: Enameled steel, baked enamel doors.
 - e. Accessories: Glass breaker or fire handle.
- Installation:
1. Comply with requirements of Section 01 00 00 - Project Requirements.

END OF DIVISION

DIVISION 11 - EQUIPMENT

SECTION 11 01 00 - SUANA ROOM

- Summary:
1. Provide a site installed sauna.
- Submittals:
1. Submit product data, shop drawings, warranty, and maintenance data.
- Products:
1. Manufactures: Subject to compliance with requirements, provide products from: Saunatec, Inc.
 - a. Infrared Saunas: S-Series - Model #S-840 by Finnleo
- Installation Requirements:
1. Comply with requirements of Section 01 00 00 - Project Requirements.
 2. Coordinate installation in accordance with product data.
 3. Refer to drawings for installation location.

Section 11 03 01 - COLD PLUNGE

- Summary:
1. Install an ice bath.
- Submittals:
1. Submit product data, warranty, and maintenance data.
- Products:
1. Manufactures: Subject to compliance with requirements, provide products from: Plunge, Reboot Labs, LLC.
 - a. Plunge Pro Commercial
- Installation Requirements:
1. Comply with requirements of Section 01 00 00 - Project Requirements.
 2. Coordinate installation in accordance with product data.
 3. Refer to drawings for installation location.

Section 11 10 01 - RED LIGHT THERAPY

- Summary:
1. Section for Red Light Therapy lighting fixture.
- Submittals:
1. Submit product data, warranty, and maintenance data.
- Products:
1. Manufacture: Subject to compliance with requirements, provide products from: PlatinumLED Therapy Lights
 - a. Biomax 900
 - b. Biomax Wall Mount Bracket
- Installation Requirements:
1. Comply with requirements of Section 01 00 00 - Project Requirements.
 2. Refer to drawings for install locations.

END OF DIVISION



12/01/2023

MIRA SAFETY
1713 Hur Industrial Blvd
Cedar Park, TX 78613

ISSUE FOR PERMIT 12/01/23

Project Number	23-01-014
Drawn By	JO
Checked By	OS

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1.0 DEVELOPER AND SITE INFORMATION:

PROJECT: MIRA SAFETY - RENOVATION & MEZZANINE ADDITION
 BUILDING OWNER / DEVELOPER: -
 PRIMARY CONTACT: -
 PHONE: -
 EMAIL: -
 SITE ADDRESS: 1713 HUR INDUSTRIAL BLVD
 CEDAR PARK, TX 78641
 COUNTY: - TRAVIS COUNTY
 www.traviscountytx.gov
 LEGAL DESCRIPTION: - LOT 2 BLK A HUR INDUSTRIAL PARK II SEC 1
 LOT SIZE: 3.807 ACRES
 ACCESSOR ACCOUNT NUMBER: - 487030
 https://stage.travisprodtycad.com/property-detail/487030
 PARCEL NUMBER: - 0500400532
 PIN (GIS MAPPING NUMBER): - 050147

4.0 OCCUPANCY / EXITING REQUIREMENTS:

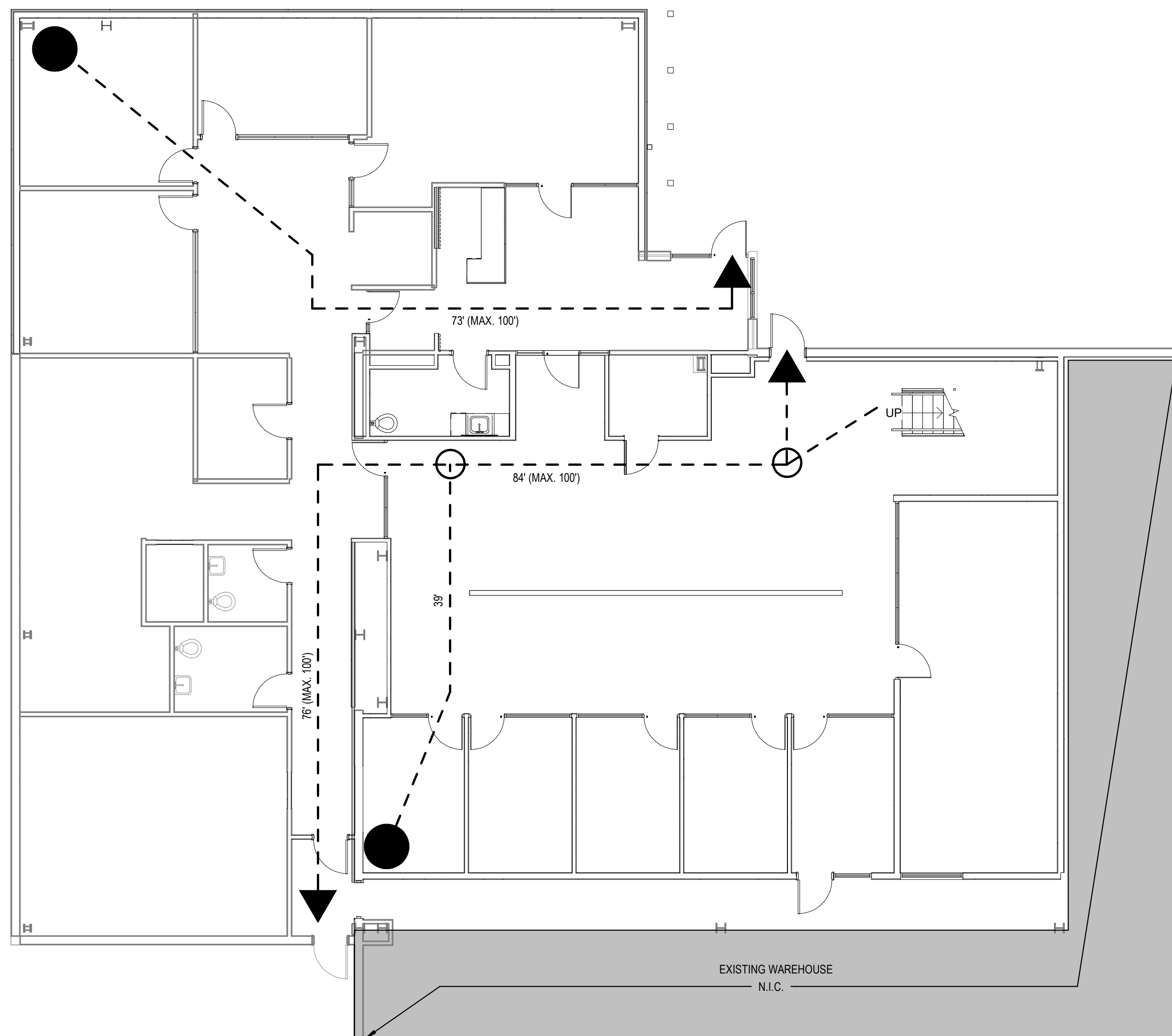
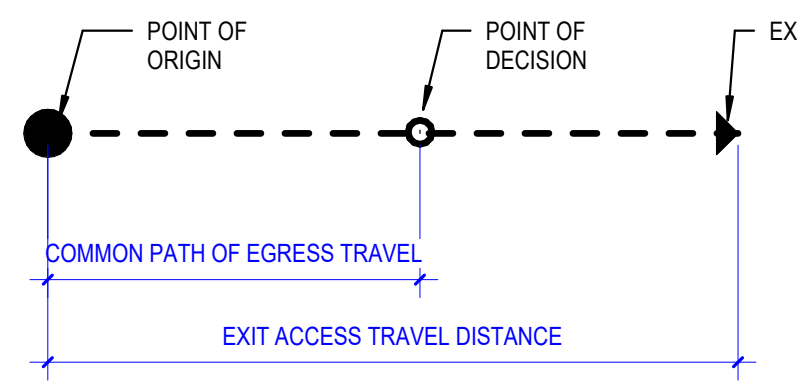
OCCUPANCY CALCULATION:
 "B" LEVEL 1: (1 PER 150) = 40 OCCUPANTS
 "B" MEZZANINE: (1 PER 150) = 19 OCCUPANTS
 "S": (1 PER 300) = 86 OCCUPANTS
 TOTAL: = 145 OCCUPANTS (IBC TABLE 1004.1.1)

EXITING REQUIREMENTS: (IBC CHAPTER 10)
 MIN. EGRESS WIDTH: (IBC TABLE 1005.3)
 STAIRWAYS: 3 INCHES PER OCCUPANT
 STAIR 1: 3' x 19' (MEZZANINE OCC.) = 5.7" CLEAR (5P WIDE STAIR PROVIDED)
 OTHER EGRESS COMPONENTS: 2 INCHES PER OCCUPANT
 EXIT DOORS @ MAIN ENTRY: 7.8' CLEAR REQUIRED (1/2 OF TOTAL OCCUPANT LOAD)
 (ONE 3'-0" DOORS PROVIDED)
 MIN. 1 FOOT-CANDLE (11 LUX) AT WALKING SURFACE (SEC. 1006)
 EGRESS ILLUMINATION: (IBC TABLE 1006.2.1; "B" OCCUPANCY WITH SPRINKLERS)
 COMMON PATH LIMIT: 100 FEET
 DEAD ENDS: 0 FEET
 EXIT ACCESS TRAVEL DISTANCE: 100 FEET
 CORRIDOR FIRE-RESISTANCE RATING: 0-HOUR (IBC TABLE 1017.1; "B" OCCUPANCY WITH SPRINKLERS)

6.0 EGRESS / LIFE-SAFETY PLAN:

EGRESS LEGEND

XX' / XXX' XX' = COMMON PATH OF EGRESS TRAVEL (MAX. ALLOWED = 100' - SPRINKLED)
 XXX' = EXIT ACCESS TRAVEL DISTANCE (MAX. ALLOWED = 300' - SPRINKLED)



A1 EGRESS PLAN - LV 01
 1/8" = 1'-0"

2.0 BUILDING CODE INFORMATION:

BUILDING CODE ENFORCEMENT: CEDAR PARK - DEVELOPMENT SERVICES
 450 CYPRESS CREEK ROAD, BUILDING #1
 CEDAR PARK, TX 78613
 PHONE: (512) 401-6100
 www.cedarparktx.gov
 BUILDING CODES: 2021 INTERNATIONAL BUILDING CODE (IBC) W/ LOCAL AMENDMENTS
 2021 INTERNATIONAL PLUMBING CODE (IPC) W/ LOCAL AMENDMENTS
 2021 INTERNATIONAL MECHANICAL CODE (IMC) W/ LOCAL AMENDMENTS
 2021 INTERNATIONAL FUEL & GAS CODE (IF&GC) W/ LOCAL AMENDMENTS
 2020 NATIONAL ELECTRIC CODE (NEC) W/ LOCAL AMENDMENTS
 FIRE CODES: 2021 INTERNATIONAL FIRE CODE (IFC) W/ LOCAL AMENDMENTS
 ACCESSIBILITY CODES: 2012 TEXAS ACCESSIBILITY STANDARDS (TAS)

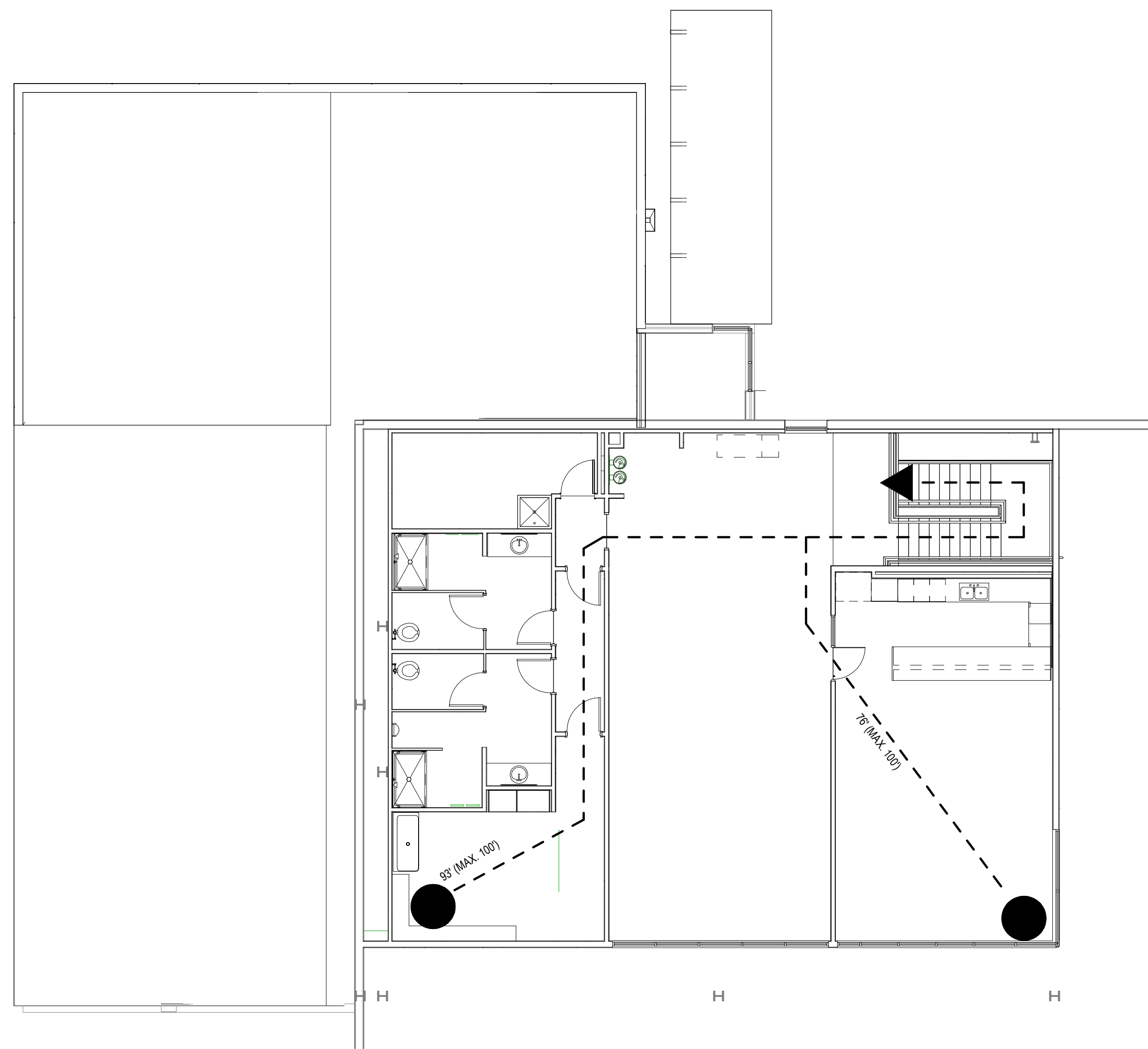
5.0 PLUMBING FIXTURE REQUIREMENTS:

(BASED ON OCCUPANT LOAD SUMMARY & MINIMUM PLUMBING FIXTURES TABLE 2902.1)

WATER CLOSETS	OCCUPANTS	FIXTURE COUNT
BUSINESS = 1 PER 25, FIRST 50 & 1 PER 50 REMAINDER EXCEEDING 50	86	4
STORAGE = 1 PER 100		1
LAVATORIES	OCCUPANTS	FIXTURE COUNT
BUSINESS = 1 PER 40, FIRST 80 & 1 PER 80 REMAINDER EXCEEDING 80	86	4
STORAGE = 1 PER 100		1
DRINKING FOUNTAIN	OCCUPANTS	FIXTURE COUNT
BUSINESS = 1 PER 100	86	1
STORAGE = 1 PER 1,000		1
SERVICE SINK	FIXTURE COUNT	
BUSINESS = 1 SERVICE SINK		1
STORAGE = 1 SERVICE SINK		1

3.0 FIRE CODE REVIEW:

OCCUPANCY CLASSIFICATION:
 space: "B" / BUSINESS (SECT. 306.2)
 space: "S-1" / STORAGE (SECT. 304)
 OCCUPANCY SEPARATION: NO SEPARATION REQUIREMENT (TABLE 508.4)
 CONSTRUCTION TYPE: II-B (IBC TABLE 503 & SECT. 602.2)
 STRUCTURAL DESIGN LOADS: SEE STRUCTURAL SHEETS
 AUTOMATIC SPRINKLER SYSTEM: NFPA 13 / SPRINKLERED THROUGHOUT (SECT. 903.2.4)
 STANDPIPES: NOT REQUIRED (SECT. 405)
 AUTOMATIC FIRE DETECTION: [verify]
 ALLOWABLE HEIGHT: 3 STORIES / 75 FEET (TABLE 503 (BASED ON " " OCCUPANCY))
 (BASED ON MOST RESTRICTIVE OCCUPANCY TYPE (IBC SECT. 508.3.2))
 2 STORIES / APPROXIMATELY 29'-6"
 ACTUAL HEIGHT:
 ALLOWABLE AREA (PER FLOOR):
 BASIC: 70,000 SF PER LEVEL (TABLE 503 (BASED ON "S-1" OCCUPANCY))
 (BASED ON MOST RESTRICTIVE OCCUPANCY TYPE (IBC SECT. 508.3.2))
 W/ INCREASE (SEE CALC.):
 GROSS FLOOR AREA:
 GROUND LEVEL (GROSS): "B" / BUSINESS = 5,925 SQ. FT.
 "S-1" / STORAGE = 25,625 SQ. FT.
 TOTAL GROSS AREA: = 31,550 SQ. FT.
 AREA CHECK: 28,000 SQ. FT. (GROUND LEVEL) < 31,550 SQ. FT. (ALLOWED)
 THEREFORE OKAY
 FIRE-RESISTANCE RATINGS: 0 HOUR (IBC TABLE 601, 602 & 704.8)
 STRUCTURAL FRAME: 0-HOUR
 EXTERIOR WALLS (BEARING OR NON):
 SEPARATION < 5' = 0-HOUR (NOT APPLICABLE TO PROJECT)
 5' < SEPARATION < 10' = 0-HOUR (NOT APPLICABLE TO PROJECT)
 10' < SEPARATION = 0-HOUR (SEPARATION ON THIS PROJECT IS GREATER THAN 30')
 INTERIOR WALLS (BEARING OR NON): 0-HOUR
 FLOOR CONSTRUCTION: 0-HOUR
 ROOF CONSTRUCTION: 0-HOUR
 STAIRWELL: 0-HOUR

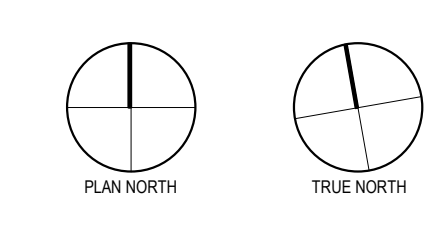


A3 EGRESS PLAN - LV 02
 1/8" = 1'-0"



12/01/2023

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 Cedar Park, TX 78613



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Project Number	23-01-014
Drawn By	JO
Checked By	OS

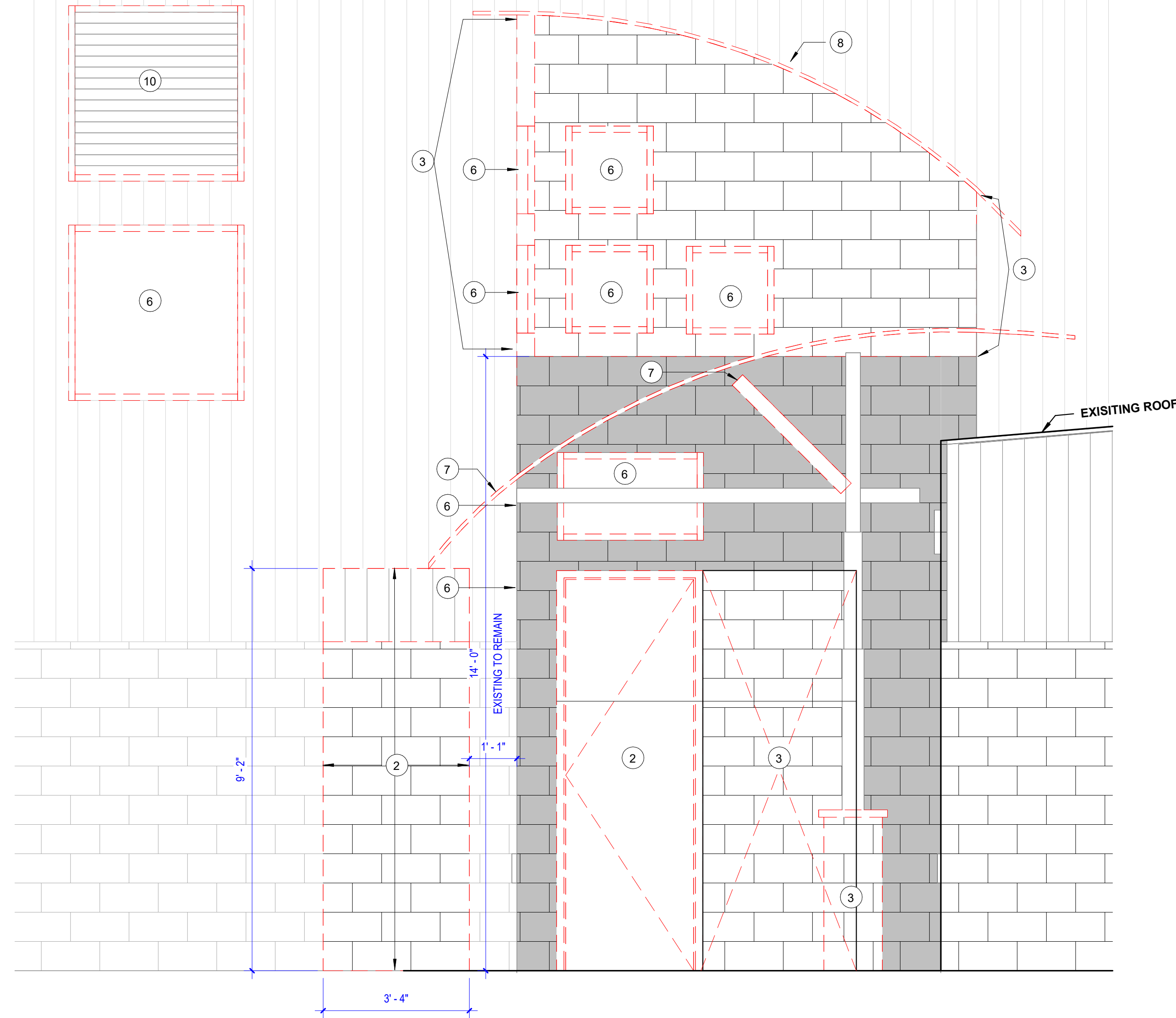
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G-007

CODE REVIEW & EGRESS PLAN

GENERAL NOTES: DEMOLITION

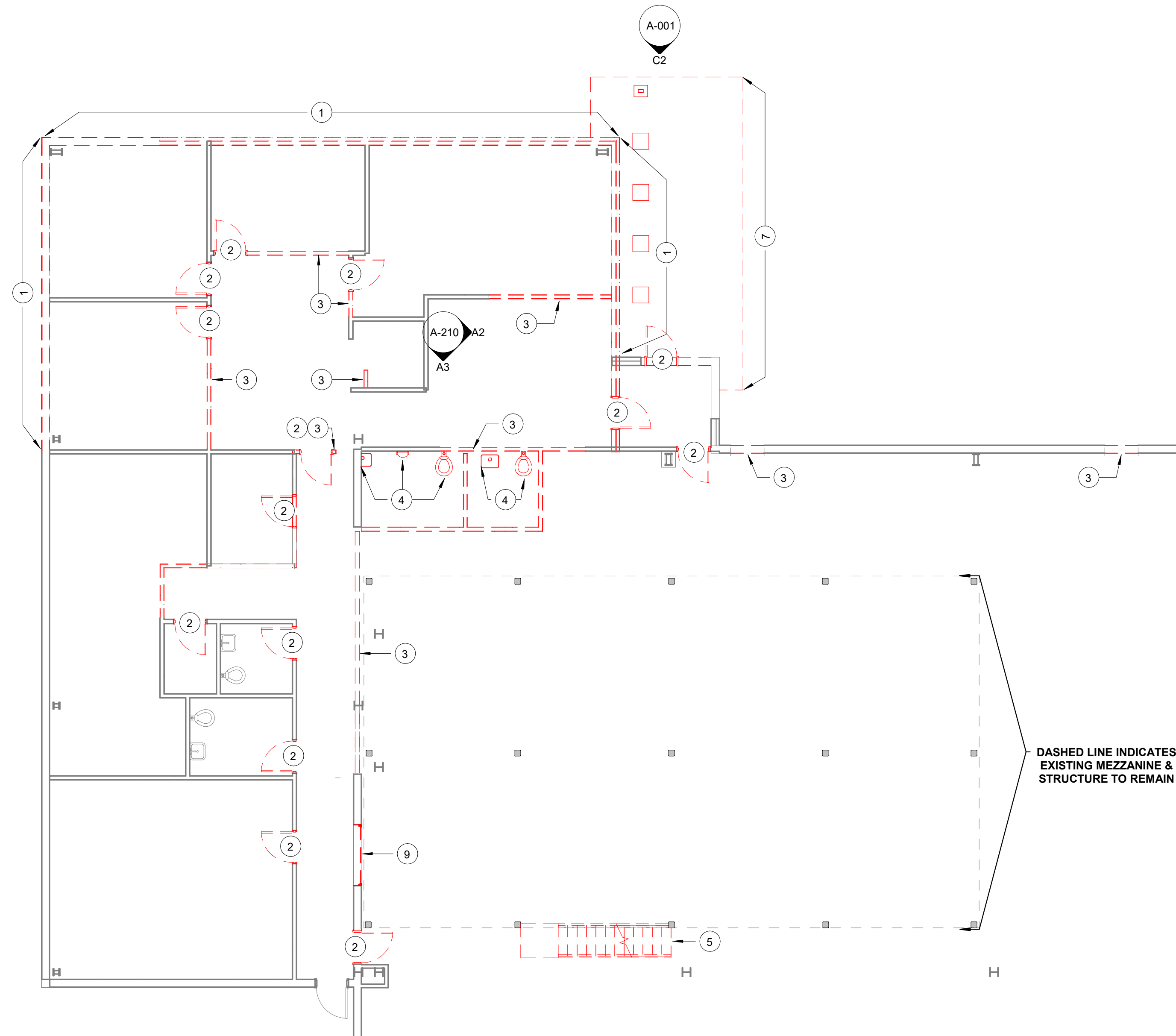
- A. ALL DEMOLITION WORK SHALL COMPLY WITH AND BE EXECUTED IN CONFORMANCE WITH ALL APPLICABLE CODES AND AS SET FORTH BY ALL GOVERNING AUTHORITIES, INCLUDING THE REGULATIONS OF THE ENVIRONMENTAL PROTECTION AGENCY, STATE DEPARTMENT OF HEALTH, AND REQUIREMENTS OF NFPA 241. GENERAL CONTRACTOR TO REQUEST MSDS SHEETS IDENTIFYING ALL ASBESTOS CONTAINING BUILDING MATERIALS FROM PROPERTY MANAGEMENT COMPANY.
- B. SEPARATE AREAS IN WHICH DEMOLITION IS BEING CONDUCTED FROM OTHER AREAS THAT ARE STILL OCCUPIED, PROVIDE, ERECT, AND MAINTAIN TEMPORARY DUSTPROOF BARRIERS, MINIMIZE EFFECTS ON AND INTERFERENCE WITH ADJACENT STRUCTURES AND OCCUPANTS, CONDUCT OPERATIONS TO MINIMIZE OBSTRUCTION OF PUBLIC AND PRIVATE ENTRANCES AND EXITS, DO NOT OBSTRUCT REQUIRED EXITS AT ANY TIME, PROTECT PERSONS USING ENTRANCES AND EXITS FROM REMOVAL OPERATIONS.
- C. IF HAZARDOUS MATERIALS ARE DISCOVERED DURING REMOVAL OPERATIONS, STOP WORK AND NOTIFY ARCHITECT AND OWNER, HAZARDOUS MATERIALS INCLUDE REGULATED ASBESTOS CONTAINING MATERIALS, LEAD, PCB'S, AND MERCURY.
- D. FIELD VERIFY EXISTING FIELD CONDITIONS AND NOTIFY THE ARCHITECT IMMEDIATELY IF ANY WORK INDICATED IN THE CONSTRUCTION DOCUMENTS THAT CANNOT BE PERFORMED DUE TO EXISTING FIELD CONDITIONS. DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION AND EXISTING RECORD DOCUMENTS ONLY. REPORT DISCREPANCIES TO ARCHITECT BEFORE DISTURBING EXISTING INSTALLATION. BEGINNING OF DEMOLITION WORK CONSTITUTES ACCEPTANCE OF EXISTING CONDITIONS THAT WOULD BE APPARENT UPON EXAMINATION PRIOR TO STARTING DEMOLITION.
- E. NO WORK SHALL BE PERFORMED WITHIN THE BUILDING CORE OR OTHER NOT IN CONTRACT (NIC) AREAS, UNLESS NOTED OTHERWISE.
- F. GENERAL CONTRACTOR SHALL PROVIDE ALL MATERIAL, LABOR, EQUIPMENT, AND SERVICES REQUIRED TO COMPLETE THE REMOVAL OF ALL ITEMS AS INDICATED ON THE CONSTRUCTION DOCUMENTS.
- G. GENERAL CONTRACTOR SHALL MAINTAIN THE JOB SITE IN SUCH A MANNER TO REDUCE EXCESSIVE DUST AND DEBRIS DURING DEMOLITION/CONSTRUCTION.
- H. GENERAL CONTRACTOR SHALL COMPLY WITH ALL TEMPORARY LIGHTING REQUIREMENTS SET FORTH BY ALL GOVERNING AUTHORITIES.
- I. REMOVE EXISTING CONSTRUCTION AS INDICATED. TYPICAL WALL REMOVAL INCLUDES MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS CONTAINED THEREIN. REMOVE DOORS, WINDOWS, FRAMES, AND OTHER ATTACHED FIXTURES AS REQUIRED. CONTRACTOR TO REMOVE MEP SYSTEMS TO THE GREATEST EXTENT POSSIBLE WHILE MAINTAINING THE ABILITY TO COMPLETE THE NEW SCOPE OF WORK.
- J. GENERAL CONTRACTOR TO PATCH AND RESTORE PREVIOUS FIRE RATINGS IN ALL WALLS AND FLOORS AS REQUIRED BY ALL GOVERNING AUTHORITIES.
- K. REMOVE ALL EXISTING LIGHTING UNLESS NOTED OTHERWISE IN SEPARATE CEILING DEMOLITION PLAN OR AS SHOWN ON THE REFLECTED CEILING PLAN.
- L. GENERAL CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO THE EXISTING BUILDING AND GROUNDS ARISING FROM DEMOLITION PROCESS. GC SHALL NOTIFY THE ARCHITECT AND PROPERTY MANAGER / OWNER OF ANY ITEMS SHOWN TO REMAIN THAT, IN THE OPINION OF THE GC, WILL BE DAMAGED OR DESTROYED BY THE WORK SHOWN ON THE PLANS. THE GC SHALL TAKE APPROPRIATE MEASURES TO PROTECT ALL ITEMS TO REMAIN INCLUDING, BUT NOT LIMITED TO, EXISTING PARTITIONS, CEILINGS, FLOORING, WINDOWS, SUN SHADE DEVICES, ELEVATORS, HVAC EQUIPMENT, ELECTRICAL, DOORS AND FRAMES.
- M. GENERAL CONTRACTOR TO REMOVE ALL EXISTING UNUSED DEBRIS INCLUDING, ABANDONED DUCT, WIRING, CONDUIT, AND CABLING WITHIN THE CEILING PLENUM.
- N. GENERAL CONTRACTOR TO COORDINATE WITH PROPERTY MANAGER ALL ITEMS TO BE RETURNED TO BUILDING STOCK.
- O. REMOVE ALL WALL COVERING, ABANDONED NAILS, MOUNTING DEVICES, AND OTHER HINDRANCES FROM WALLS TO RECEIVE NEW FINISHES, UNLESS NOTED OTHERWISE. REFER TO FINISH PLANS FOR WALL FINISHES.
- P. REMOVAL OF DOORS INCLUDES REMOVAL OF DOOR FRAMES, AND HARDWARE, UNLESS NOTED OTHERWISE.
- Q. GENERAL CONTRACTOR TO COORDINATE DISABLING ANY FIRE ALARM DEVICES WITH THE PROPERTY MANAGER.
- R. RELOCATION OF MEP SYSTEMS TO REMAIN IN ORDER TO MAINTAIN CONFLICT WITH NEW CONSTRUCTION IS THE RESPONSIBILITY OF THE GC AND MEP SUBCONTRACTORS.



C2 DEMOLITION ELEVATION - ENTRY / VESTIBULE
1/2" = 1'-0"

KEYED NOTES - DEMOLITION PLAN

- 1 DEMOLISH EXISTING EXTERIOR WALL AND WINDOWS, INCLUDE METAL PANEL, BRICK, AND SUBSTRATE. METAL BUILDING STRUCTURE TO REMAIN. REFER TO DEMO ELEVATION FOR DETAILED INFORMATION ON ITEMS TO BE REMOVED.
- 2 DEMOLISH EXISTING DOOR AND FRAME IN ITS ENTIRETY
- 3 DEMOLISH EXISTING WALL TO EXTENTS SHOWN. COORDINATE WITH BUILDBACK REQUIREMENTS, RE: A-110
- 4 REMOVE EXISTING PLUMBING FIXTURES AND PIPING TO THE EXTENT REQUIRED BY NEW LAYOUT. REFER TO FLOOR AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
- 5 DEMOLISH EXISTING STAIR IN ITS ENTIRETY
- 6 DEMOLISH EXISTING WINDOW
- 7 DEMOLISH EXISTING CANOPY & PARTIAL OF EXISTING STRUCTURE. REFER TO NEW ELEVATIONS AND DETAILS FOR FULL INTENT OF CANOPY STRUCTURE
- 8 DEMOLISH EXISTING ROOF AND STRUCTURE
- 9 DEMOLISH EXISTING WINDOW AND FRAME IN ITS ENTIRETY. PREP WALL FOR INFILL.
- 10 DEMOLISH EXISTING LOUVER IN IT ENTIRETY. PREP WALL TO RECEIVE SCHEDULED STOREFRONT

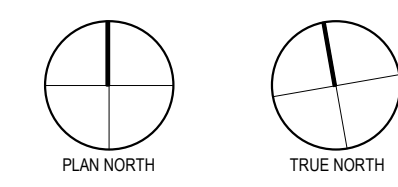


A2 DEMOLITION PLAN
1/8" = 1'-0"



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A-001

DEMOLITION PLAN -
LVL. 01

PARKING ANALYSIS:

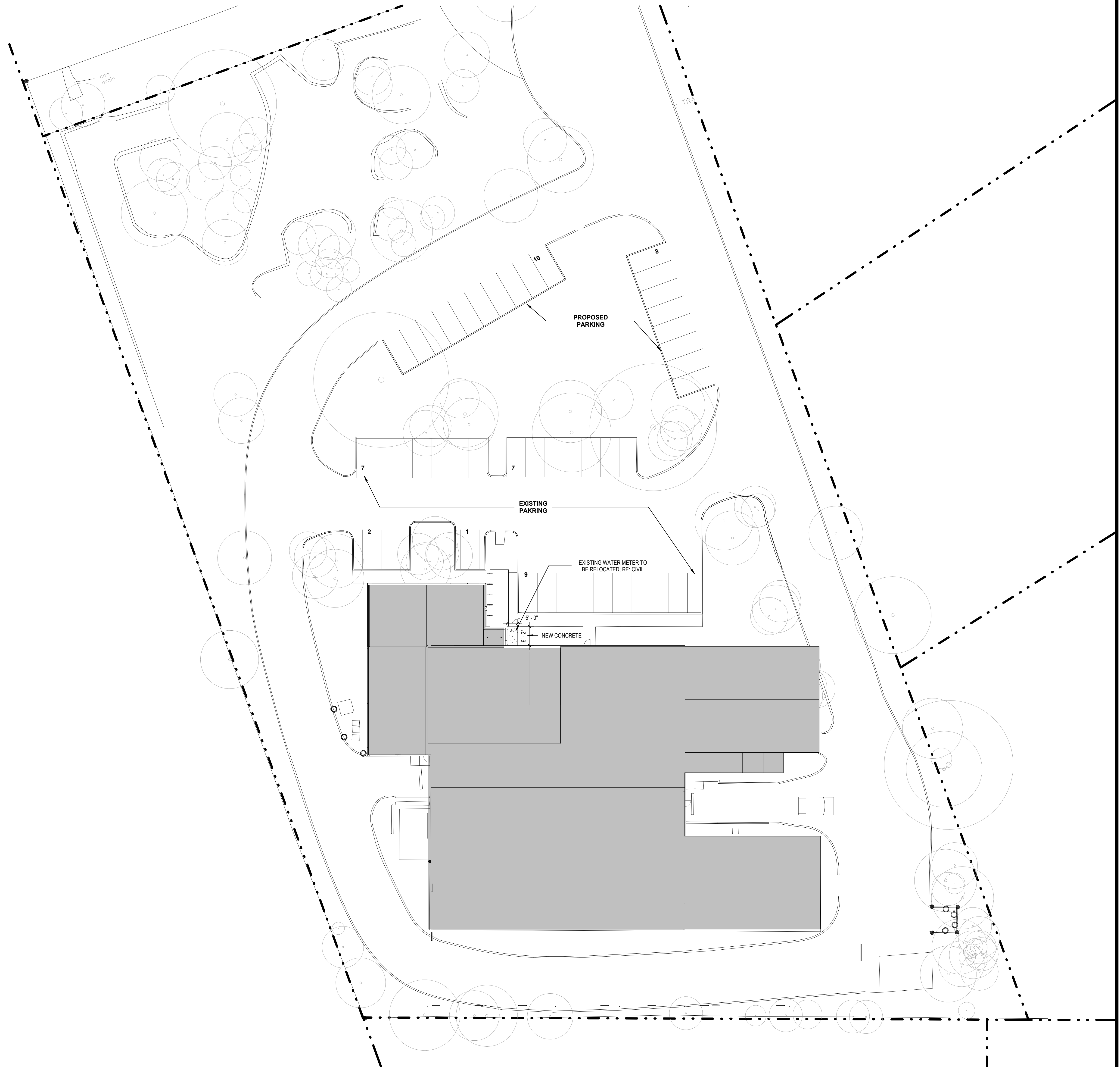
GROSS FLOOR AREA:

GROUND LEVEL (GROSS):	"B" / BUSINESS	= 5,925 SQ. FT.
	"S-1" / STORAGE	= 25,625 SQ. FT.
MEZZANINE:	"B" / BUSINESS	= 2,775 SQ. FT.
TOTAL GROSS AREA:		= 34,060 SQ. FT.

RE: CEDAR PARK CITY CODE, SECTION 14.05.005(j)(2)

WAREHOUSE (1 PER 2000 SQ. FT.)	25,625 SQ FT / 2000	= 12.8 (OR 13 PARKING SPACES)
OFFICE (1 PER 300 SQ. FT.)	8,200 SQ FT. / 300	= 27.3 (OR 28 PARKING SPACES)
TOTAL REQUIRED PARKING		= 41 TOTAL PARKING

EXISTING PARKING TOTAL	= 26
PROPOSED PARKING	= 18
TOTAL	44

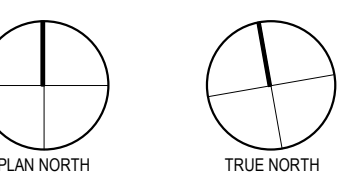


A2 SITE PLAN
3/64" = 1'-0"



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A-100

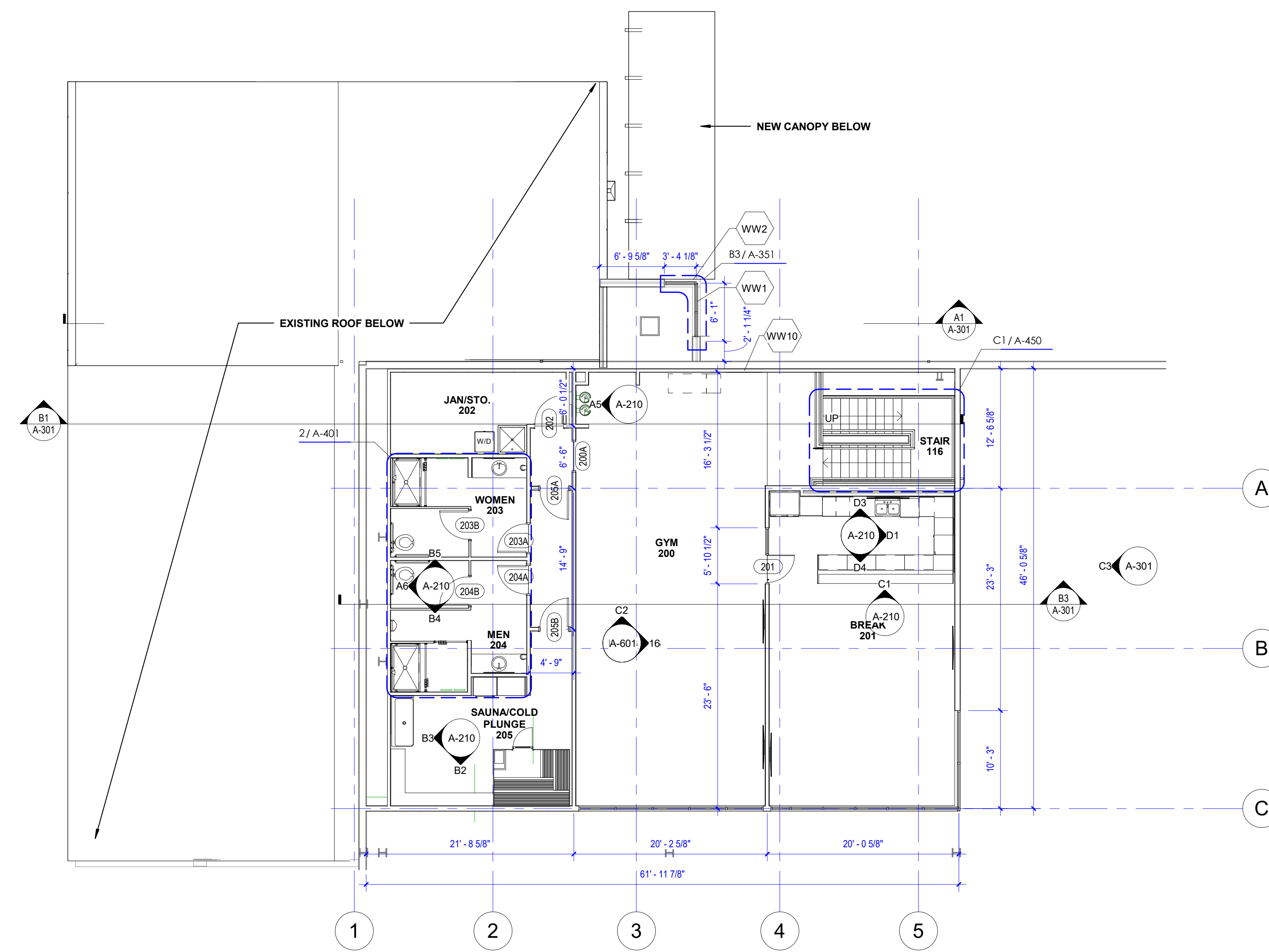
SITE PLAN

GENERAL NOTES: FLOOR

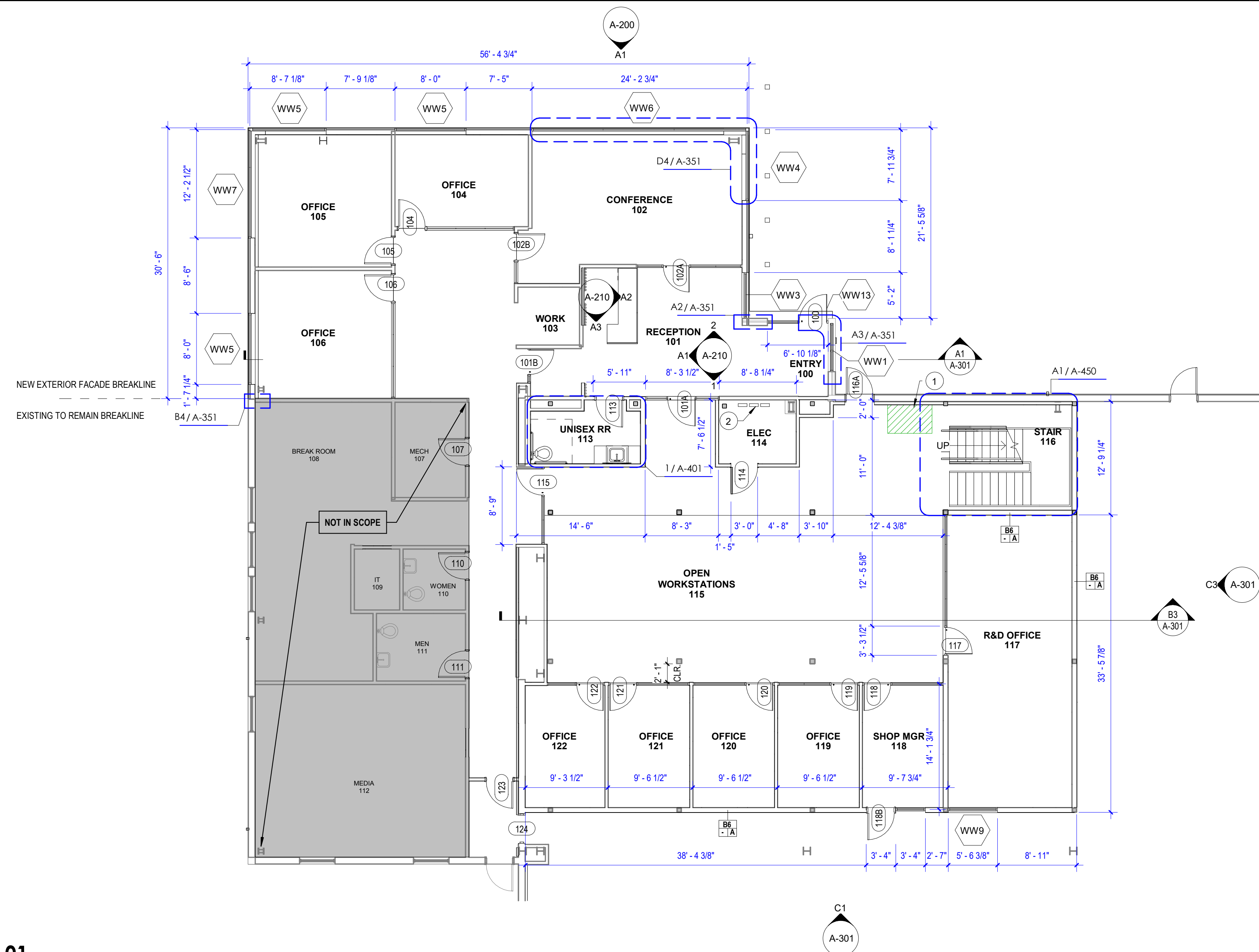
- A. ALL NEW PARTITIONS TO BE TYPE 'B' WITH FULL BATT INSULATION, UNLESS NOTED OTHERWISE. REFER TO PARTITION SCHEDULE FOR ADDITIONAL INFORMATION.
- B. ALL DIMENSIONS ARE FROM FINISH FACE OF PARTITIONS, UNLESS NOTED OTHERWISE.
- C. ALL AREAS SHOWN WITH A HALFTONE POCHÉ ARE NOT IN CONTRACT, AND NO WORK SHALL BE EXECUTED IN THESE AREAS, UNLESS NOTED OTHERWISE.
- D. ALL PARTITIONS SHOWN WITH A DARK GREY POCHÉ INFILL ARE EXISTING TO REMAIN. PATCH PARTITIONS WHERE INTERSECTING PARTITIONS OR OTHER ITEMS HAVE BEEN REMOVED, AND WHERE PARTITION IS SCHEDULED TO RECEIVE NEW FINISH.
- E. NO WORK SHALL BE EXECUTED ON THE CORE AREA (SHOWN SHADED), UNLESS NOTED OTHERWISE.
- F. FLOOR AREAS ARE TO BE PREPARED FOR FINISH MATERIALS IN ACCORDANCE WITH MANUFACTURER'S SPECIFIC REQUIREMENTS. RESPONSIBILITY INCLUDES FLASH PATCHING TO LEVEL AND SMOOTH FLOOR TO 1" IN 20' 0" NON-CUMULATIVE AND 1/4" PER 10' 0" AT CRITICAL AREAS UNDER MILLWORK, FLES, SPECIAL FINISH MATERIALS, AND TRANSITIONS.
- G. NEW CONSTRUCTION THAT MEETS EXISTING CONSTRUCTION IN THE SAME PLANE SHALL BE FLUSH WITHOUT VISIBLE JOINT, UNLESS OTHERWISE NOTED.
- H. ALL NEW PARTITIONS ARE TO BE PERPENDICULAR OR PARALLEL WITH CORE OR EXTERIOR WINDOW WALL ELEMENTS, UNLESS NOTED OTHERWISE. CENTER PARTITIONS ON COLUMNS OR MULLIONS, UNLESS NOTED OTHERWISE.
- I. ALL DOOR JAMBS ARE TO BE LOCATED 4" FROM AN INSIDE CORNER, UNLESS NOTED OTHERWISE.
- J. ALL WOODWORK, BLOCKING, AND MOUNTED BOARDS SHALL BE FIRE-RETARDANT-TREATED FOR USE IN NON-COMBUSTIBLE CONSTRUCTION.
- K. PROVIDE ACOUSTIC SOUND SEAL AT ALL PARTITION/MULLION AND PARTITION/COLUMN CONDITIONS.
- L. GENERAL CONTRACTOR TO VERIFY THAT ALL ELEVATOR CALL BUTTONS, CALL LATERNS, BRAILLE CHARACTERS, AND CAB CONTROL ARE TAS COMPLIANT AS SHOWN ON SHEET G-002. NOTIFY ARCHITECT IF DISCREPANCIES ARE FOUND.
- M. PROTECT EXISTING WINDOW COVERINGS TO REMAIN DURING CONSTRUCTION. COORDINATE WITH PROPERTY MANAGER LOCATIONS THAT NEED TO BE REPLACED.
- N. PROVIDE FIRE STOPPING FOR ALL PENETRATIONS OF FIRE RATED WALLS AND HORIZONTAL ASSEMBLIES WHERE REQUIRED. REFER TO FIRE STOPPING SPECIFICATIONS ON G-103.L ASSEMBLIES WHERE REQUIRED. REFER TO FIRE STOPPING SPECIFICATIONS ON G-103.

KEYED NOTES - FLOOR PLAN

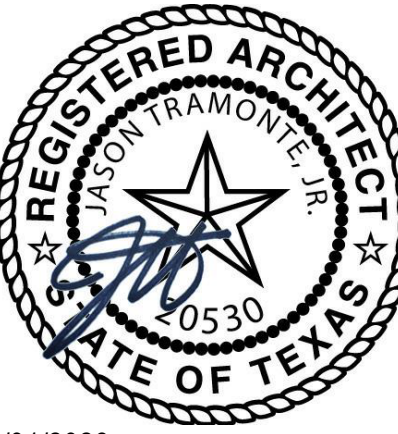
- 1. EXISTING FIRE RISER, GC TO MODIFY AS NECESSARY TO AVOID CONFLICT WITH STAIR
- 2. EXISTING ELECTRICAL PANELS TO REMAIN, RE: ELEC.



C2 FLOOR PLAN - LV 02
1/8" = 1'-0"

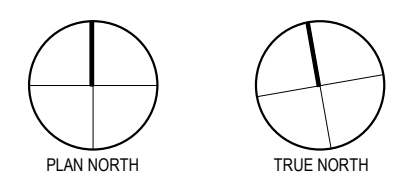


A2 FLOOR PLAN - LV 01
1/8" = 1'-0"



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A-110

FLOOR PLANS

GENERAL NOTES: REFLECTED CEILING PLAN

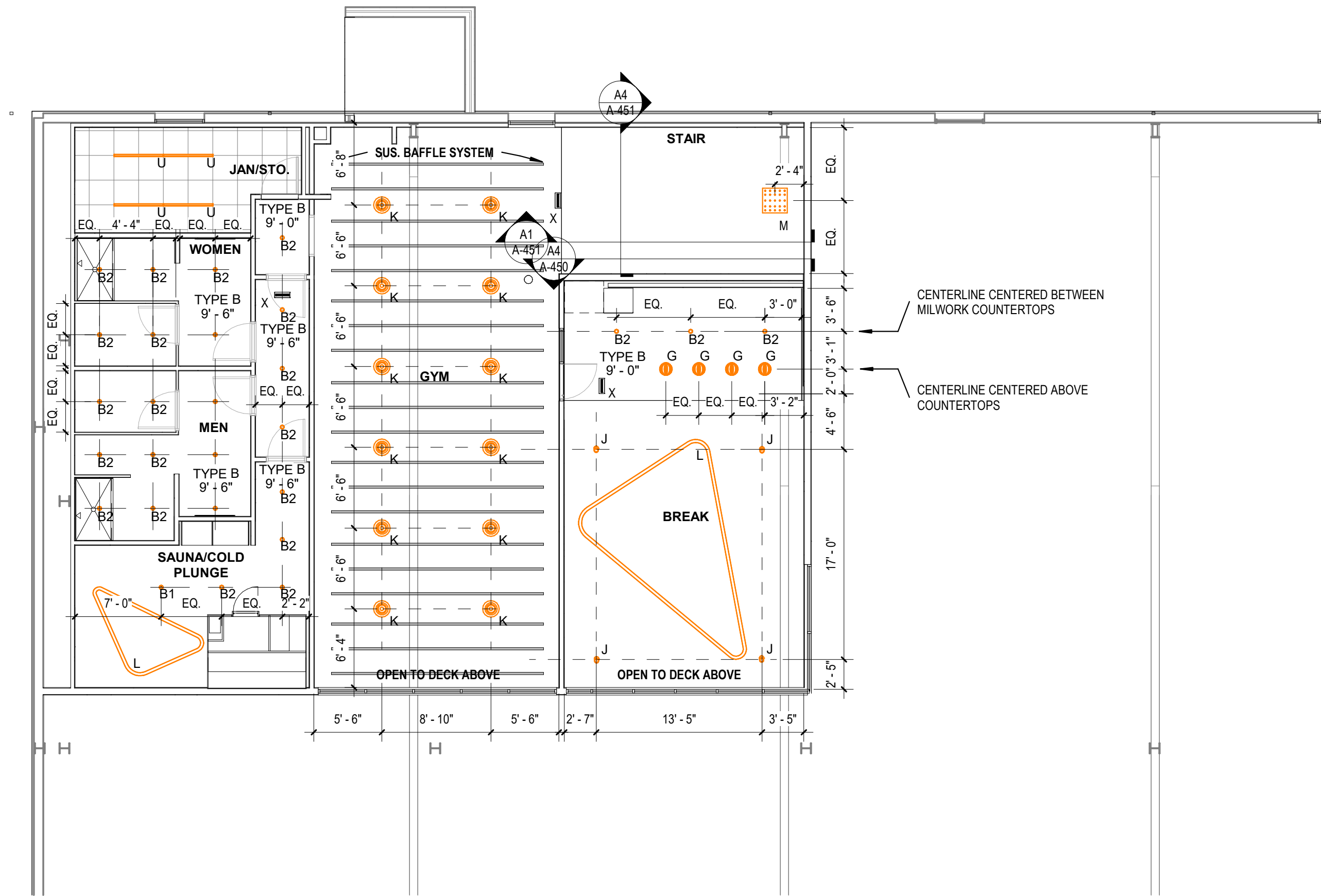
- A. TYPICAL CEILING TO BE TYPE C @ 9'-0" A.F.F. U.N.O. CONTRACTOR TO FIELD VERIFY ADEQUATE CLEARANCE IS MAINTAINED ABOVE FLENUM. NOTIFY ARCHITECT IMMEDIATELY FOR CLARIFICATION OF DISCREPANCIES OR EXISTING CONFLICTS PRIOR TO PROCEEDING WITH WORK IN QUESTION. NEW STRUCTURAL ELEMENTS OR EQUIPMENT (HVAC UNITS, DUCTWORK, PLUMBING, ETC.) SHALL BE LOCATED AS TO NOT INTERFERE WITH ANY OTHER PORTION OF NEW CONSTRUCTION AS SHOWN.
- B. LIGHT FIXTURES, HVAC DEVICES AND OTHER CEILING-MOUNTED ELEMENT LOCATIONS ON ARCHITECTURAL REFLECTED CEILING PLANS TAKE PRECEDENCE OVER LOCATIONS SHOWN ON MEP DRAWINGS.
- C. EXISTING PERIMETER SLOT DIFFUSERS TO BE TOUCHED UP TO APPEAR "LIKE-NEW". NO AIR DIFFUSER SHALL STRADDLE OVER PARTITIONS. PROVIDE NEW BLANK-OFF PLATES AT INTERSECTIONS WITH PARTITIONS AND WHERE NO AIR DEVICE OCCURS. FINISH TO MATCH SLOT DIFFUSER SPECIFICATION.
- D. REFER TO ENGINEER'S DRAWINGS FOR FIRE ALARMS, ADA VISUAL STROBES, SMOKE DETECTORS, AND EXIT SIGN LOCATIONS. COMPLETE LIFE SAFETY SYSTEMS INSTALLATION AND TYS REQUIREMENTS TO BE COORDINATED BY THE GENERAL CONTRACTOR. COORDINATE CEILING DEVICE LOCATIONS WITH ARCHITECT FOR ALL GYP. BD., PREMIUM, AND UPGRADED CEILING SPACES.
- E. REFER TO MECHANICAL PLAN FOR SUPPLY REGISTERS AND RETURN AIR GRILLE LOCATIONS.
- F. ALL PRIVATE OFFICES AND CONFERENCE ROOMS SHALL BE INDIVIDUALLY SWITCHED, UNLESS NOTED OTHERWISE.
- G. REFLECTED CEILING PLANS ARE FOR LIGHTING LOCATION AND ARCHITECTURAL NOTES ONLY. REFER TO ENGINEER'S ELECTRICAL LIGHTING PLAN FOR SWITCHING, CIRCUITING, AND SPECIFICATIONS.
- H. ALL LAMPS TO BE OF CONSISTENT COLOR AND SHALL MATCH BUILDING STANDARD, UNLESS NOTED OTHERWISE.
- I. CENTER ALL CEILING-MOUNTED DEVICES IN UPGRADED CEILING WITH LIGHT FIXTURES.
- J. CENTER ALL DOWNLIGHTS, WALL WASHERS, AND OTHER CEILING DEVICES IN CEILING TILE, UNLESS OTHERWISE NOTED OR DIMENSIONED ON PLAN.
- K. ALL UNDER- AND ABOVE-CABINET LIGHTING TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR, WITH LAMPS MATCHING ALL OTHERS. CONDUIT TO BE COMPLETELY CONCEALED FROM VIEW.
- L. NEW LIGHT SWITCHES SHALL BE GANGED IF MORE THAN ONE IS NOTED.
- M. GENERAL CONTRACTOR SHALL PROVIDE SUBMITTALS AND SHOP DRAWINGS TO ARCHITECT FOR WRITTEN APPROVAL ON ALL EQUIPMENT, FIXTURES, LIGHTING DEVICES, AND SPECIALTY ITEMS PROVIDED BY THE GENERAL CONTRACTOR PRIOR TO ORDERING.
- N. ALL ROOM WITH MULTIPLE FIXTURE TYPES ARE TO BE SWITCHED WITH SEPARATE LIGHT SWITCHES PER FIXTURE TYPE.
- O. WHERE EXISTING CEILING REMAINS, SUSPENSION SYSTEM TO REMAIN CONTINUOUS THROUGHOUT, UNLESS OTHERWISE NOTED. NO MAIN TEES SHALL BE CUT UNLESS NOTED ON DRAWINGS. NOTIFY ARCHITECT IF LIGHTING CONFLICT OCCURS. REPAIR DAMAGED GRID WHERE SAGGING OR BROKEN TO LIKE-NEW CONDITION.
- P. COORDINATE WITH PROPERTY MANAGER TO REPAIR LEAKS AT AND ABOVE CEILING.
- Q. ACCESS PANELS IN GYP. BD. CEILINGS ARE TO BE FLOATABLE ACCESS PANELS. WIND-LOCK STEALTH ACCESS PANEL OR EQUAL.

LIGHT FIXTURE LEGEND:

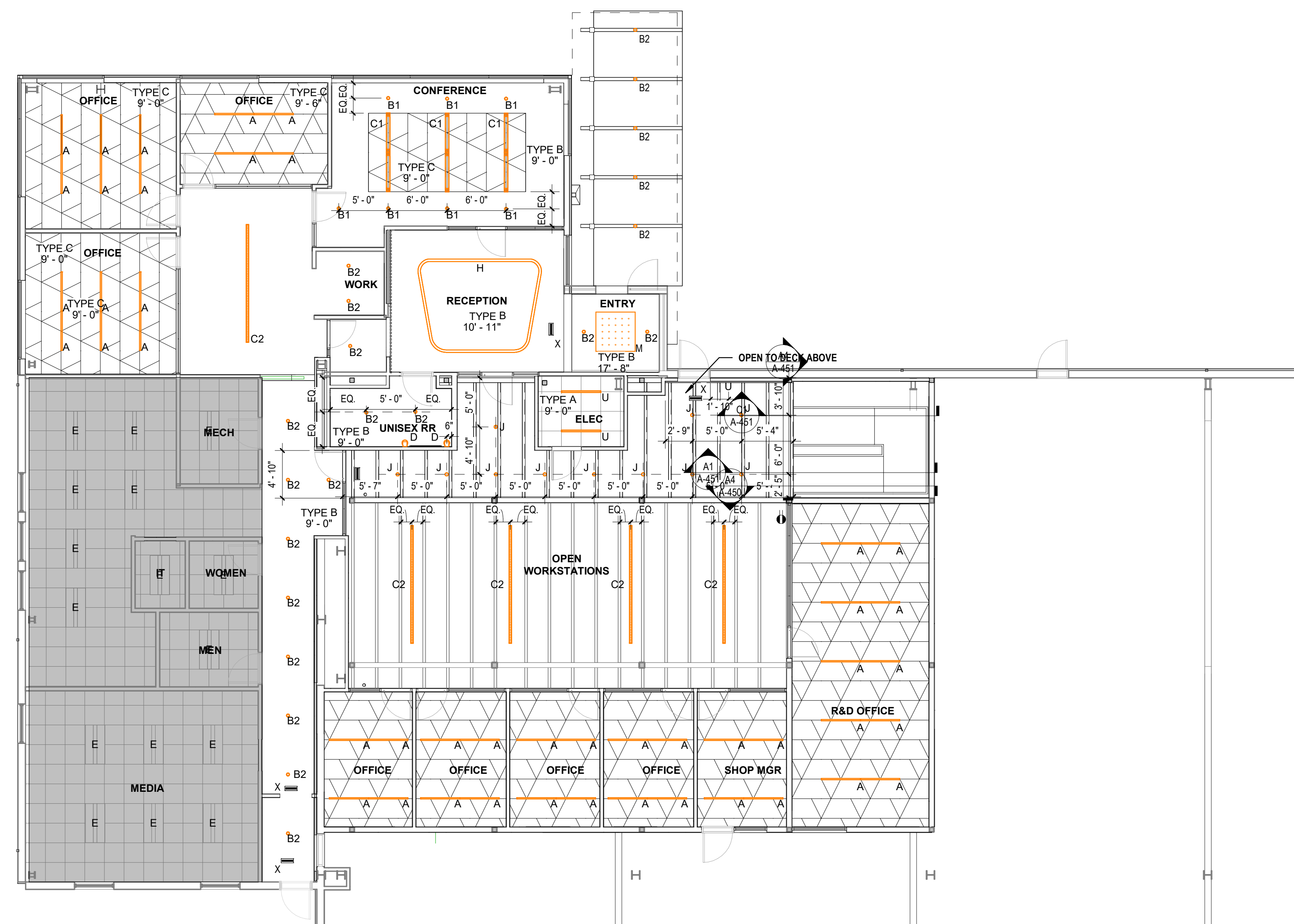
- A 48" APERTURE SLOT LED LUMINAIRE FIXTURE
- B1 4" RECESSED DOWNLIGHT, LOW OUTPUT
- B2 4" RECESSED DOWNLIGHT, MEDIUM OUTPUT
- C1 8" LINEAR SUSPENSION MOUNT
- C2 12" LINEAR SUSPENSION MOUNT
- D DECORATIVE WALL SCONCE
- J 4" CYLINDER PENDANT SUSPENSION MOUNT FIXTURE
- G DECORATIVE PENDANT FIXTURE
- H SUSPENSION MOUNT WITH CURVED CORNERS FIXTURE
- L SUSPENSION MOUNT WITH CURVED CORNERS FIXTURE
- K GYM HIGHBAY SUSPENSION MOUNT FIXTURE
- U LED STRIP LIGHT FIXTURE
- M CEILING MOUNTED MODULAR PENDANT FIXTURE
- E EXISTING RECESSED 2X4 FIXTURE (OUT OF SCOPE)
- X CEILING MOUNTED EMERGENCY EXIT SIGNAGE

CEILING TYPE LEGEND:

- TYPE A
ACOUSTICAL CEILING TILE
TILE - ARMSTRONG, DUINE, 24" X 24", WHITE
GRID - SUPRAFINE XL, WHITE
- TYPE B
SUSPENDED GYP. BD. CEILING
USE DRYWALL SUSPENSION SYSTEM (OR EQUAL), STANDARD DETAILS.
PREPARE SURFACE TO RECEIVE DRYFALL FLAT PAINT (PT-1)
- TYPE C
TRAPEZOID ACOUSTICAL CEILING TILE
TILE - ARMSTRONG, DESIGNFLEX SHAPES - PATTERN SH 31
Lyna 9'10" Square Tegular 60Deg, 24in Base Triangle, Lyna 9'10" Square Tegular 60Deg, 48in Base Trapezoid
GRID - SUPRAFINE IDHD, COLOR: WHITE



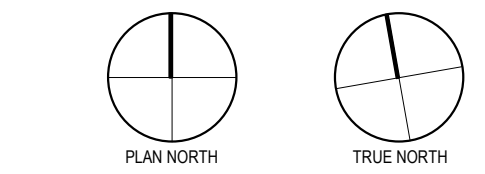
C2 REFLECTED CEILING PLAN - LV 02
1/8" = 1'-0"



A2 REFLECTED CEILING PLAN
1/8" = 1'-0"



12/01/2023
MIRA SAFETY
1713 Hur Industrial Blvd
Cedar Park, TX 78613



ISSUE FOR PERMIT 12/01/23

Project Number	23-01-014
Drawn By	JO
Checked By	OS

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EQUIPMENT SCHEDULE

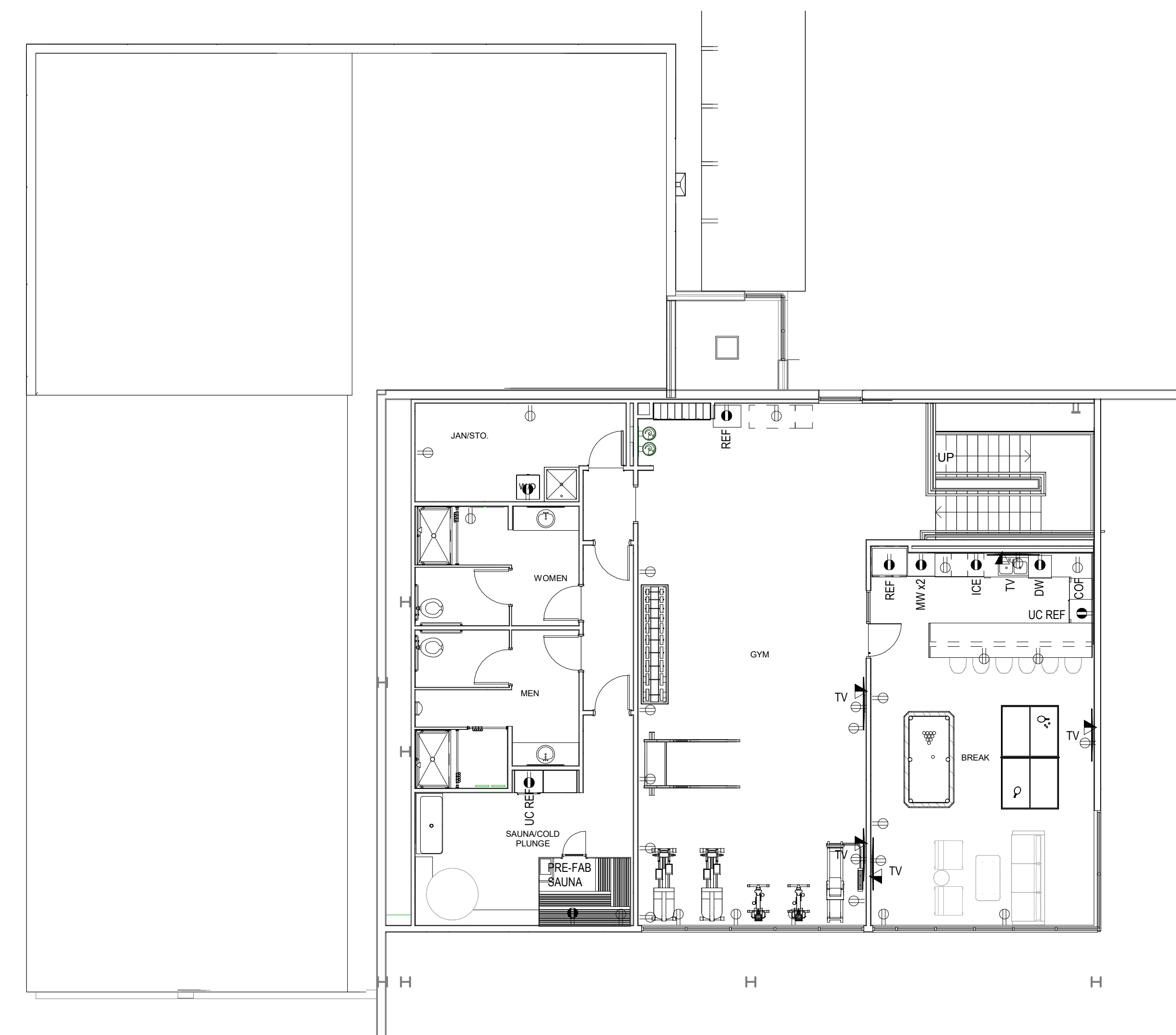
DESIGNATION	TYPE	MANUFACTURER	MODEL #	GC PROVIDED	FINISH	SIZE (WxHxD)	NOTES
COF	COFFEE			-			GC TO COORD PLUMBING REQUIREMENTS
COP	COPPER			-			GC TO COORD NEMA CONFIGURATION WITH TENANT
DW	DISHWASHER	GE	QD1796DSS	YES	STAINLESS STEEL	24" x 32 1/2" x 24"	
FCT	FAUCET	ELKAY	LKLFH031	YES	BRUSHED NICKEL		SINGLE HOLE
ICE	ICE MAKER	HOSHIZAKI	C-101BAHAD	YES	STAINLESS STEEL	14.88" x 31.5" x 20"	
MW	MICROWAVE	GE PROFILE SERIES	PEB7226FSS	YES	STAINLESS STEEL		
PLOT	PLOTTER			-			GC TO COORD NEMA CONFIGURATION WITH TENANT
REF	REFRIGERATOR	GE	GYZ2KSHSS	YES	STAINLESS STEEL		
SHADE	MOTORIZED ROLLER SHADE	MECHOSHADOE		YES			
SHRED	PAPER SHRED BINS			-			
SK	SINK	ELKAY	ECTRU01179	YES	STAINLESS STEEL	31.5" x 18.5" x 9"	WITH FAUCET
TR	TRASH	ULINE	S-13327	YES	GRAY		
TV	FLAT SCREEN DISPLAY			-			PROVIDE RECESSED 'ENTERTAINMENT BOX' FOR POWER, DATA, CABLE, ETC.
WID	WASHER & DRYER			-			WASHER & DRYER (STACKED)

GENERAL NOTES: POWER

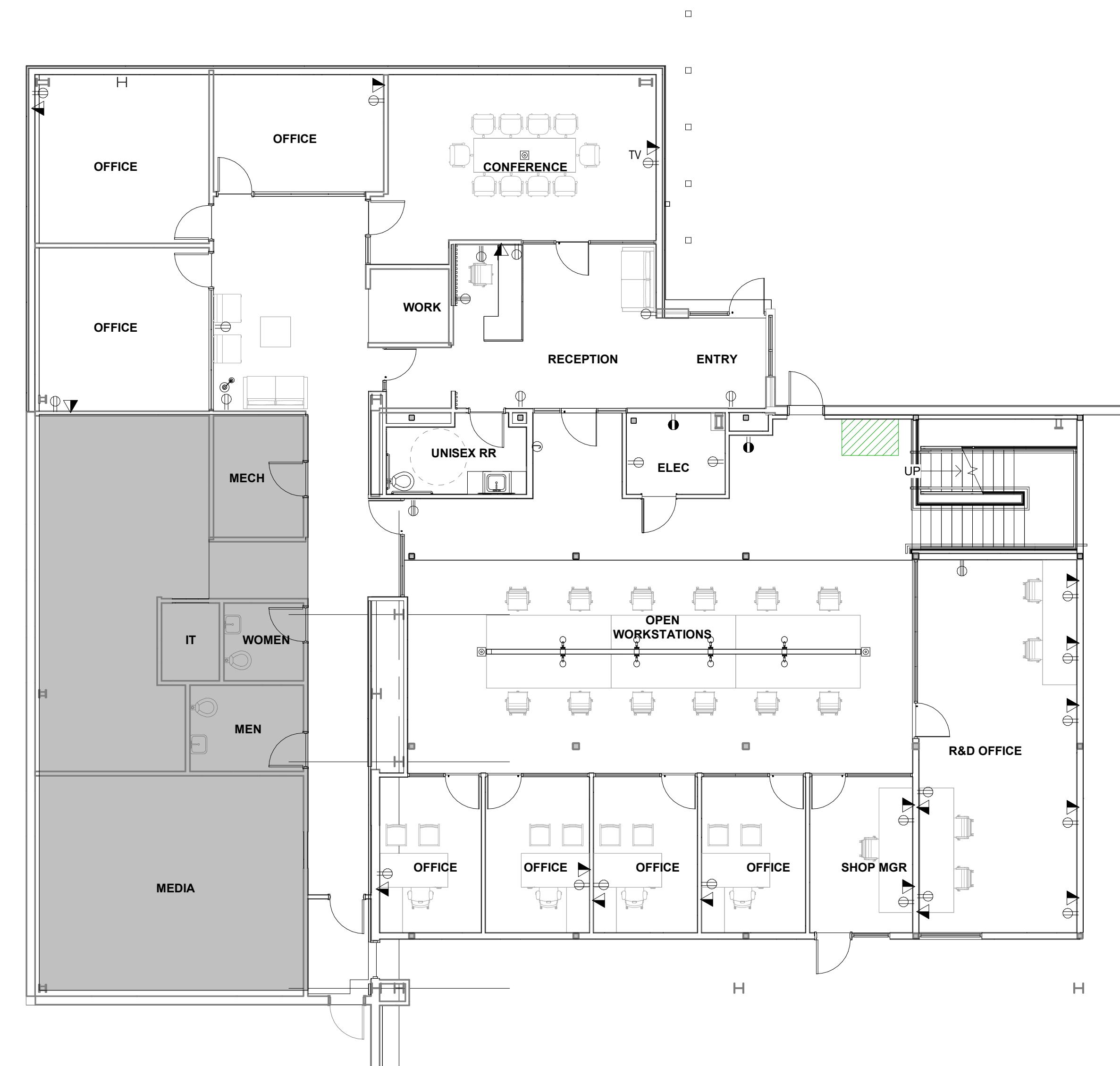
- THIS PLAN IS FOR LOCATION OF OUTLETS, FURNISHINGS, EQUIPMENT, AND RELATED ARCHITECTURAL NOTES. REFER TO ENGINEER'S ELECTRICAL PLAN FOR CIRCUITING. STOP WORK AND NOTIFY ARCHITECT IF ANY DISCREPANCIES EXIST BETWEEN ARCHITECTURAL, ENGINEERING, AND EXISTING CONDITIONS. ANY WORK DONE PRIOR TO ARCHITECT'S WRITTEN AUTHORIZATION TO PROCEED SHALL BE AT THE GENERAL CONTRACTOR'S RISK.
- GENERAL CONTRACTOR TO PROVIDE EMPTY OUTLET BOX AND PULL STRING TO CEILING PLENUM ABOVE AT ALL COMMUNICATIONS, THERMOSTAT, SECURITY, AND MISC. CONTROL OUTLETS AS SHOWN ON THIS PLAN, ENGINEERED DRAWINGS, MECHANICAL DRAWINGS, AND OTHER PLANS & DRAWINGS AS PROVIDED BY OTHER VENDORS AND CONSULTANTS. WHERE THESE LOCATIONS OCCUR IN INSULATED PARTITIONS, CONTRACTOR TO PROVIDE CONDUIT AND PULL STRING TO CEILING PLENUM. TENANT'S CABLING VENDOR TO PROVIDE AND INSTALL ALL NECESSARY CABLING.
- ALL ELECTRICAL DEVICES AND COVER PLATES SHALL BE FLUSH, PLUMB, AT SAME HEIGHT AND OF CONSISTANT COLOR THROUGHOUT, UNLESS NOTED OTHERWISE.
- GC TO COORDINATE COLOR OF ALL COVER PLATES FOR SWITCHES AND ELECTRICAL OUTLETS ON ALL NONE WHITE WALLS WITH ARCHITECT. STYLE SHOULD BE RECTANGULAR AND SCREWLESS, UNLESS OTHERWISE NOTED.
- CONTACT ARCHITECT OR TENANT WHERE OUTLETS CAN NOT BE INSTALLED AS SHOWN ON DRAWINGS DUE TO CONFLICTS WITH BUILDING STRUCTURAL, MECHANICAL, OR ELECTRICAL ELEMENTS. DO NOT PROCEED WITH WORK IN THESE AREAS UNTIL CLARIFICATION IS OBTAINED.
- INSTALL WALL OUTLETS OCCURRING ON OPPOSITE SIDES OF A PARTITION WITH A MINIMUM SPACING OF 2'-0" O.C., UNLESS DIMENSIONED OTHERWISE.
- INSTALL ADJACENT TELEPHONE AND ELECTRICAL OUTLETS 6" ON CENTER, U.N.O.
- INSTALL WALL OUTLETS SO THAT CENTERLINE OF OUTLET IS 18" A.F.F., UNLESS NOTED OTHERWISE.
- TURN OUTLET BOXES MARKED AT 42" OR HIGHER (INCLUDING THOSE THAT OCCUR ABOVE COUNTER TOPS AND BACKSPASH) TO HORIZONTAL POSITION FOR INSTALLATION. INSTALL WITH OUTLET BOX AT 42" TO CENTERLINE OF BOX.
- DUPLEX RECEPTACLES MOUNTED ABOVE COUNTER TOPS IN WET AREAS SHALL BE GFI TYPE AS REQUIRED BY CODE.
- GENERAL CONTRACTOR TO VERIFY ALL CORE DRILLS IN FIELD TO AVOID ANY EXISTING STRUCTURAL, ELECTRICAL, OR MECHANICAL ELEMENTS. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO PROCEEDING. CONTRACTOR TO X-RAY AND/OR VERIFY STRUCTURAL COMPONENTS AS REQUIRED BY FIELD CONDITIONS AND/OR PROPERTY MANAGER.
- ELECTRICAL SUBCONTRACTOR SHALL PROVIDE A RATED ASSEMBLY TO MATCH ADJACENT CONDITIONS AT ALL NEW, EXISTING, OR ABANDONED WALL AND FLOOR PENETRATIONS. WHERE FLOOR OUTLETS ARE REMOVED, PROVIDE ABANDONMENT CAP AND SEAL TO MAINTAIN FIRE RATING AND IN SUCH A MANNER WITHOUT NOTICEABLE DEFLECTION OR RISE IN CARPET OR FINISHED FLOOR SURFACE.
- EVERY OFFICE AND WORKSTATION HAS ONE PERSONAL COMPUTER. PC OUTLETS TO BE DESIGNATED WITH GRAY RECEPTACLES.

FURNITURE COORDINATION

FURNITURE SHOWN FOR COORDINATION ONLY, AND IS NIC. HOLD TO DIMENSIONS FOR POWER/ELECTRICAL AND DATA IN ALL PRIVATE OFFICES. DIMENSIONS TO BE PROVIDED BY FURNITURE VENDOR. ALL FLOOR CORE DEVICE LOCATIONS SHALL BE COORDINATED WITH FURNITURE VENDOR. CONTRACTOR IS RESPONSIBLE FOR COORDINATING LOCATIONS OF BASE END FEEDS WITH FURNITURE VENDOR.



C1 FURNITURE / POWER PLAN - LV 02
1/8" = 1'-0"

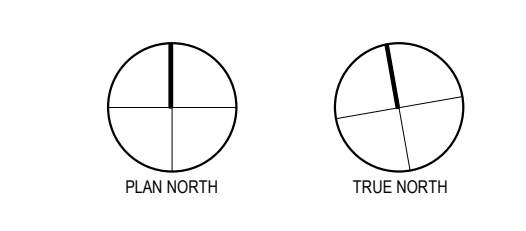


A1 FURNITURE / POWER PLAN - LV 01
1/8" = 1'-0"



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POWER / FURNITURE PLANS

FINISH SCHEDULE

MARK	MATERIAL	MANUFACTURER	STYLE	COLOR	SIZE	LOCATION	ADDITIONAL COMPONENTS	FLAME SPREAD	NOTES
AC-1	ACOUSTICAL FELT PANELING	HUSH ACOUSTICS		APRICOT		OPENWORKSTATION CEILING	CORE:		
CPT-1	CARPET	INTERFACE	NIGHT FLIGHT	106471 TITANIUM	50CM X 50CM	OPEN WORKSTATIONS / OFFICES / CONFERENCE		ASTM E 648, CLASS 1	
PL-1	PLASTIC LAMINATE	FELIX	STANDARD	J0724 GRIGIO BROMO		RECEPTION DESK / BREAKROOM MILLWORK			
PL-2	PLASTIC LAMINATE	WILSONART	RIDGEWOOD TEXTURE FINISH	VALLEY FORGE ELM 8231K-79		RECEPTION WOOD SLATS			
PT-1	PAINT	SHERWIN WILLIAMS	EGGSHELL	SNOWBOUND SW 7004		TYPICAL PAINT UNLESS NOTED OTHERWISE			
PT-2	PAINT	BENJAMIN MOORE	EGGSHELL	AFTER MIDNIGHT CSP-630		REF. ELEVATIONS			
PT-3	PAINT	BENJAMIN MOORE	EGGSHELL	CITY SHADOW CSP-60		REF. ELEVATIONS			
RB-1	RUBBER BASE	ROPPE	2.5" BASE	TBD	2.5" TALL	BASE FOR ALL WALLS WITH TYPICAL PAINT			
RF-1	RUBBER FLOORING	CENTAUR FLOOR SYSTEMS	WORKOUT	CS21 TERRACOTTA 10		GYM RUBBER FLOORING			
SS-1	SOLID SURFACE	SILESTONE	POLISHED	DESERT SILVER		RECEPTION DESK			
SS-2	SOLID SURFACE	SILESTONE	SUEDE	CHARCOAL SOAPSTONE		BREAKROOM COUNTER			
T-1	PORCELAIN TILE	CONCEPT SURFACES	LONDON	ATHRACITE	12X24	FIRST FLOOR TILE	GROUT:		
T-2	PORCELAIN TILE	CONCEPT SURFACES	HARMONY - MATTE	ASH	12X24	SPA FLOOR TILE	GROUT:		
WC-1	WALL COVERING	MOMENTUM / TRIKES	LOUIS	LIQUORICE LV-LU-14		REF. ELEVATIONS		ASTM E 84, CLASS A	
WC-2	WALL COVERING	CARNEGIE	XOREL	TBD		TACKABLE SURFACE AT RECEPTION DESK		ASTM E 84, CLASS A	
WD-1	WOOD FLOORING	DUCHATEAU	BETTONVINYLV DELUXE LUXETECH 20 COLLECTION	BETTONY		BREAKROOM FLOORING			
WT-1	WALL TILE	CONCEPT SURFACES	HARMONY - RIBBED	ASH	12X24	SPA WALL TILE	GROUT:		FINISH: NATURAL
WT-2	WALL TILE	STONESOURCE	SEGMENTS - LARGE	ICE (MATTE)		BREAKROOM BACKSPLASH			

GENERAL NOTES: FINISH

- NO SUBSTITUTIONS OF GRADE, QUALITY, OR MANUFACTURER SHALL BE ALLOWED WITHOUT WRITTEN APPROVAL FROM ARCHITECT OR TENANT.
- REFER TO FINISH PLAN, REFLECTED CEILING PLAN, ELEVATIONS, AND DETAILS FOR ACCENT FINISH LOCATIONS, APPLICATION, AND TERMINATION.
- ALL FLOORING FINISH TRANSITIONS TO BE MADE AT CENTERLINE OF DOORS AND CASED OPENING FRAMES, UNLESS NOTED OTHERWISE.
- FLOORING TO HAVE ANTI-FRACTURE MEMBRANE APPLIED TO SUBFLOOR AT TILE LOCATIONS.
- LEVELING COMPOUND TO BEGIN SLOPE 4'-0" FROM EDGE OF TRANSITION STRIP. SLOPE NOT TO EXCEED 1/16" PER FOOT.
- PAINT ALL EXPOSED CONDUIT AT UNDER CABINET TASK LIGHTING TO MATCH CABINET FINISH.
- WALL TEXTURE TO BE "LIGHT ROLLER STIPPLE". CUT IN STIPPLE WITHIN 1/4" OF FRAMES, CORNERS, AND OTHER ITEMS.
- SURFACES WHICH ARE TO RECEIVE FINISHES ARE TO BE CLEAN, TRUE, AND FREE FROM IRREGULARITIES.
- CONTRACTOR TO SUBMIT TWO SAMPLES OF EACH FINISH TO ARCHITECT FOR APPROVAL. SUBMITTALS TO BE IDENTIFIED WITH FINISH CODE, NAME, DATE, NUMBER, FORMULA, SHEEN, AND TEXTURE AS REQUIRED. CONTRACTOR TO PLACE FULL ORDER ONLY AFTER WRITTEN APPROVAL OR ACCEPTANCE IS RECEIVED. GENERAL CONTRACTOR TO ALLOW ADEQUATE TIME FOR REVIEW AND RE-SUBMITTAL AS REQUIRED.
- PROVIDE 8' X 8' (MINIMUM) MOCK-UP OF EACH WALL PAINT ON-SITE WITH FINAL LIGHTING FOR ARCHITECT AND TENANT'S APPROVAL.
- CARPET SHALL LAY IN SAME DIRECTION, UNLESS OTHERWISE SHOWN. CARPET TO RECEIVE A MINIMUM OF SEAMS WITH NO CROSS-JOINTS. AVOID SEAMING NEAR DOORS AND CORNERS. CONTRACTOR SHALL PROVIDE TWO COPIES OF SEAMING SUBMITTALS TO ARCHITECT FOR APPROVAL PRIOR TO PLACING ORDER. CARPET SHALL BE TRIMMED EVENLY AND NEATLY FOR A TIGHT FIT. FINAL INSTALLATION SHALL BE FREE FROM RIPPLES AND PUNCTURES AND PER MANUFACTURER'S AND INDUSTRY STANDARDS.
- REFER TO MANUFACTURER'S INSTRUCTION FOR TEMPERATURE OF SURFACES TO BE PAINTED AND OF SURROUNDING AIR. DO NOT APPLY MATERIALS WHEN RELATIVE HUMIDITY EXCEEDS 85% AND DO NOT APPLY TO DAMP OR WET SURFACES.
- ALL CARPETED AREAS TO BE CLEANED AND VACUUMED PRIOR TO FINAL INSPECTION. ALL VCT, WOOD, TILE, STONE, SEALED CONCRETE, OR OTHER HARD SURFACE FLOOR FINISHES TO BE CLEANED AND WAXED PER MANUFACTURER'S RECOMMENDATIONS PRIOR TO FINAL INSPECTION.
- PAINT ALL SIDE EDGES OF CUT CEILING TILES TO MATCH FINISH FACE.
- PROVIDE EPOXY GROUT AT ALL WET LOCATIONS. REFER TO FINISH SCHEDULE FOR COLOR.
- ALL FLOORS TO BE CPT-1 UNLESS NOTED OTHERWISE.
- ALL WALLS TO BE TL-1 UNLESS NOTED OTHERWISE.
- ALL BASE TO BE RB-1 UNLESS NOTED OTHERWISE.

KEYED NOTES - FINISH PLAN

1 HELLO I'M A FINISH NOTE

PLACE ME INSIDE OF YOUR ACTIVE PLAN VIEW, DUPLICATE AND RENAME TO MAKE ADDITIONAL, AND THEN DELETE THIS NOTE

TYPICAL KEYED NOTES. COPY AND PASTE US IF NEEDED.

- START POINT OF TILE, THIS LOCATION.
- FINISH TRANSITION TO ALIGN WITH FACE OF COLUMNS, TYP.
- THIS WALL TO RECEIVE SPECIAL FINISH OR GRAPHICS, RE: ELEVATIONS. REFER TO FLOOR PLAN FOR WALL FINISHING REQUIREMENTS.
- PAINT TENANT SIDE OF BUILDING DOOR AND FRAME, P-1.

2 FINISH PLAN - LV 02

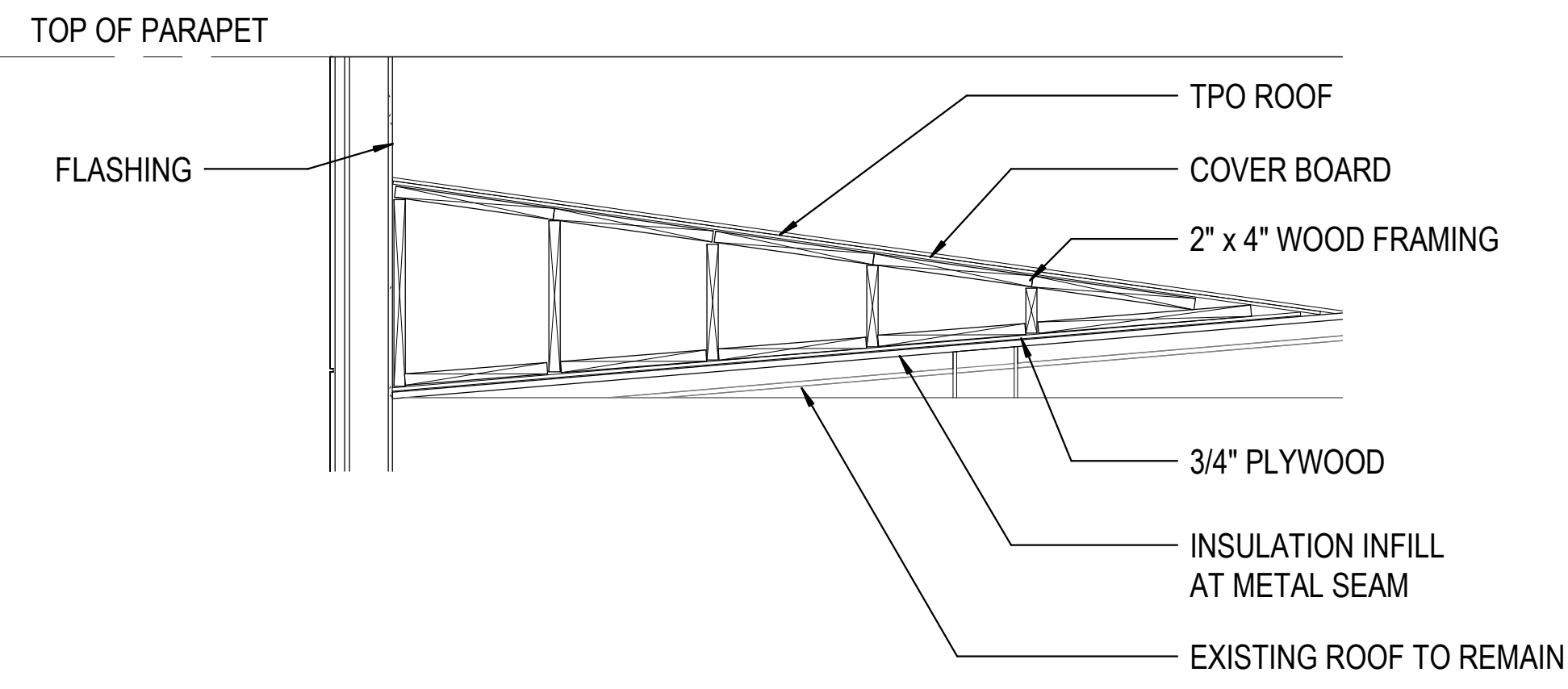
1/8" = 1'-0"



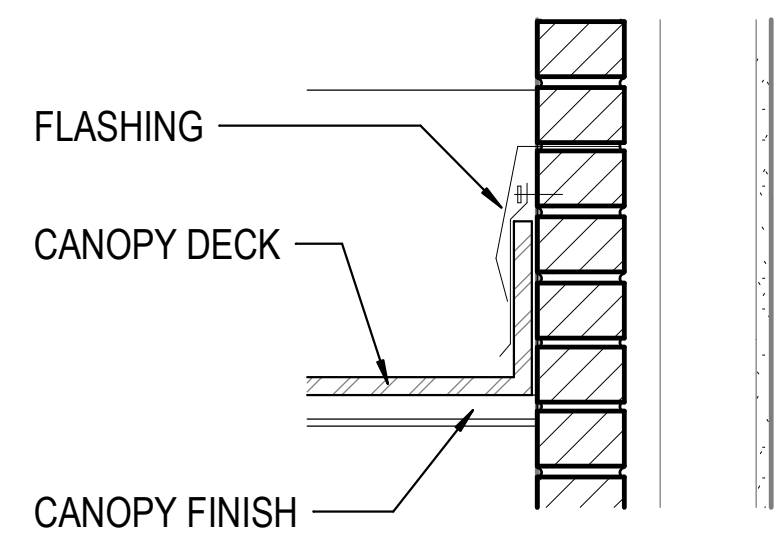
1 FINISH PLAN - LV 01

1/8" = 1'-0"

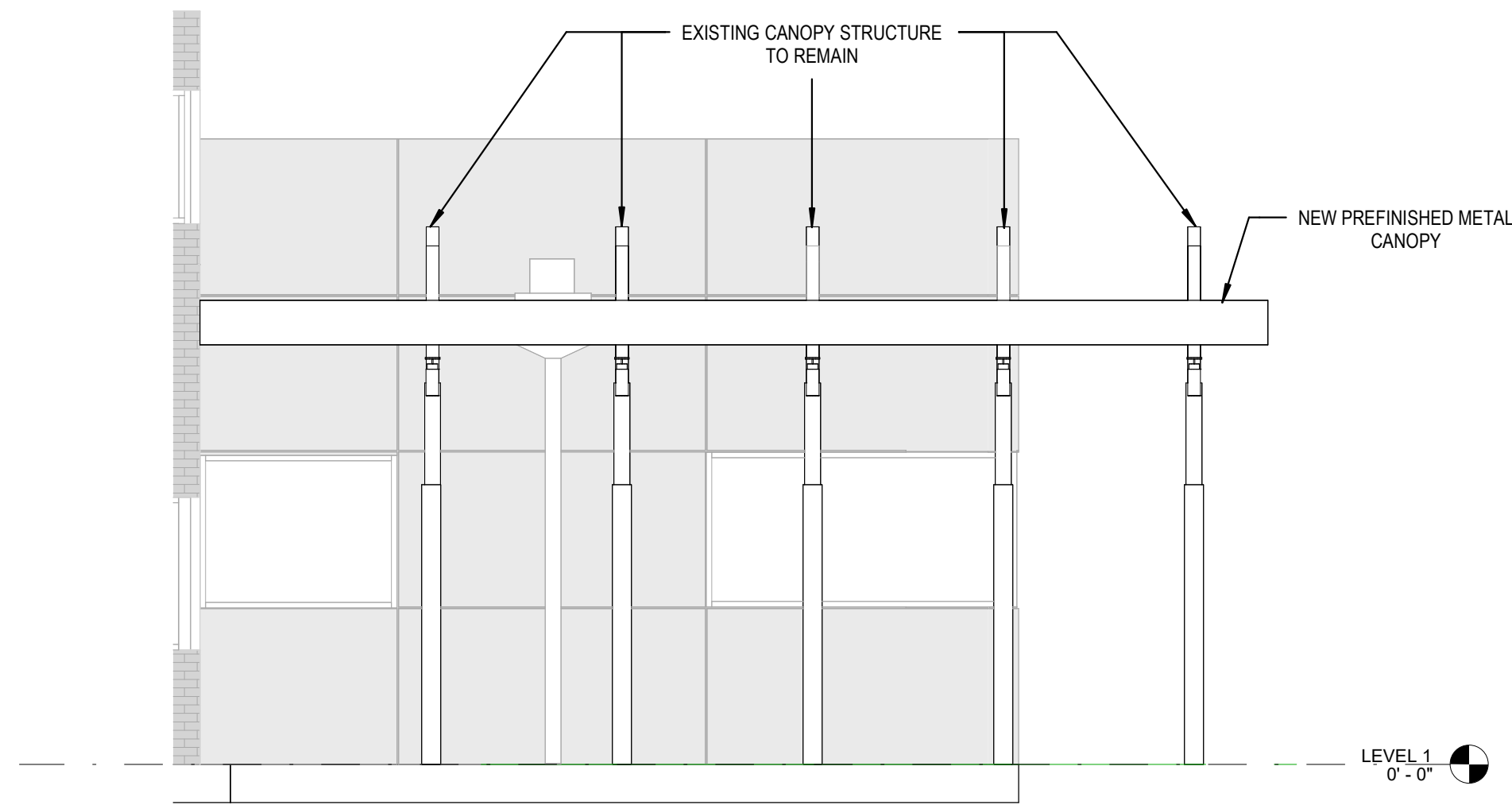




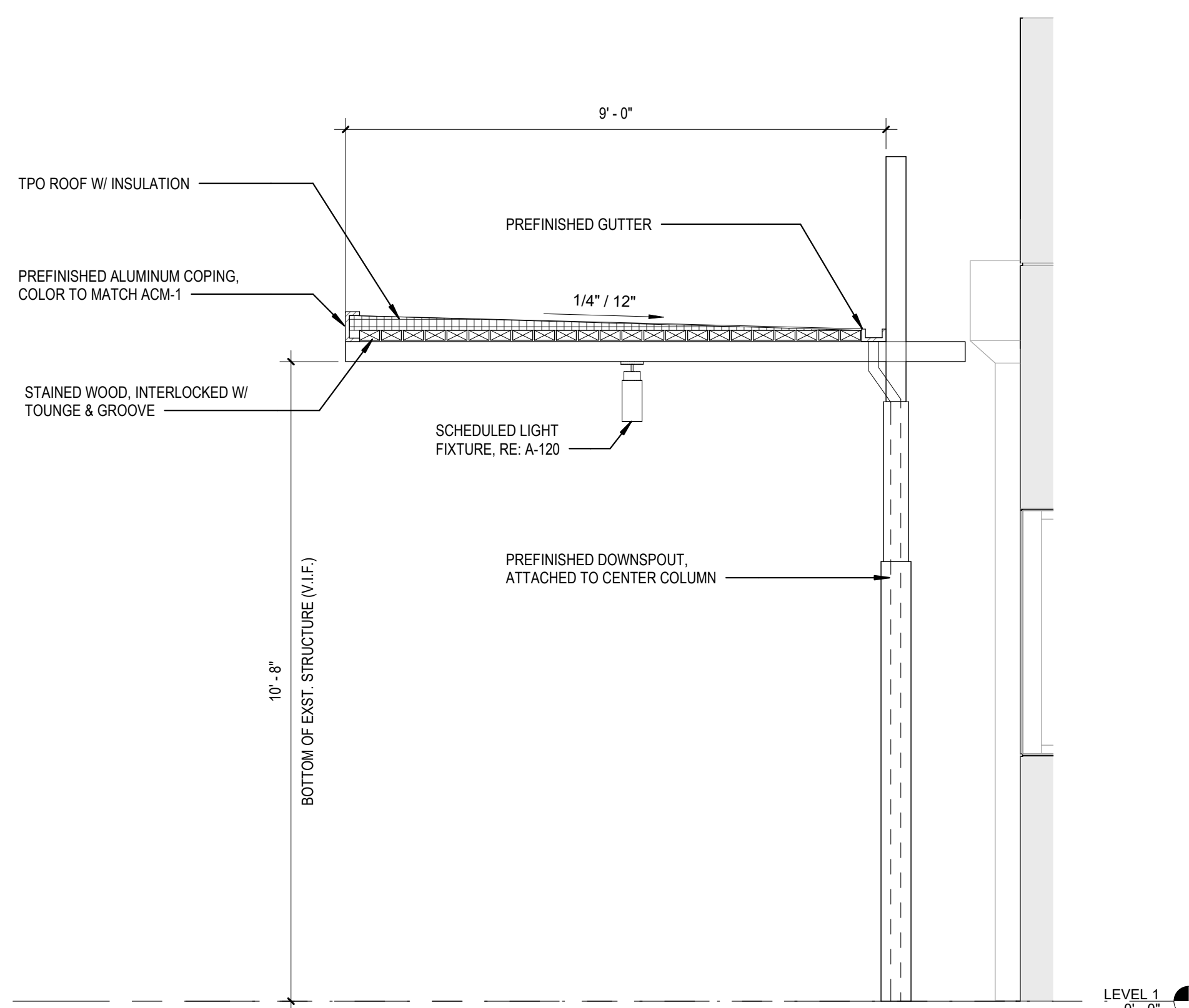
D1 CRICKET FRAMING DETAIL
1/2" = 1'-0"



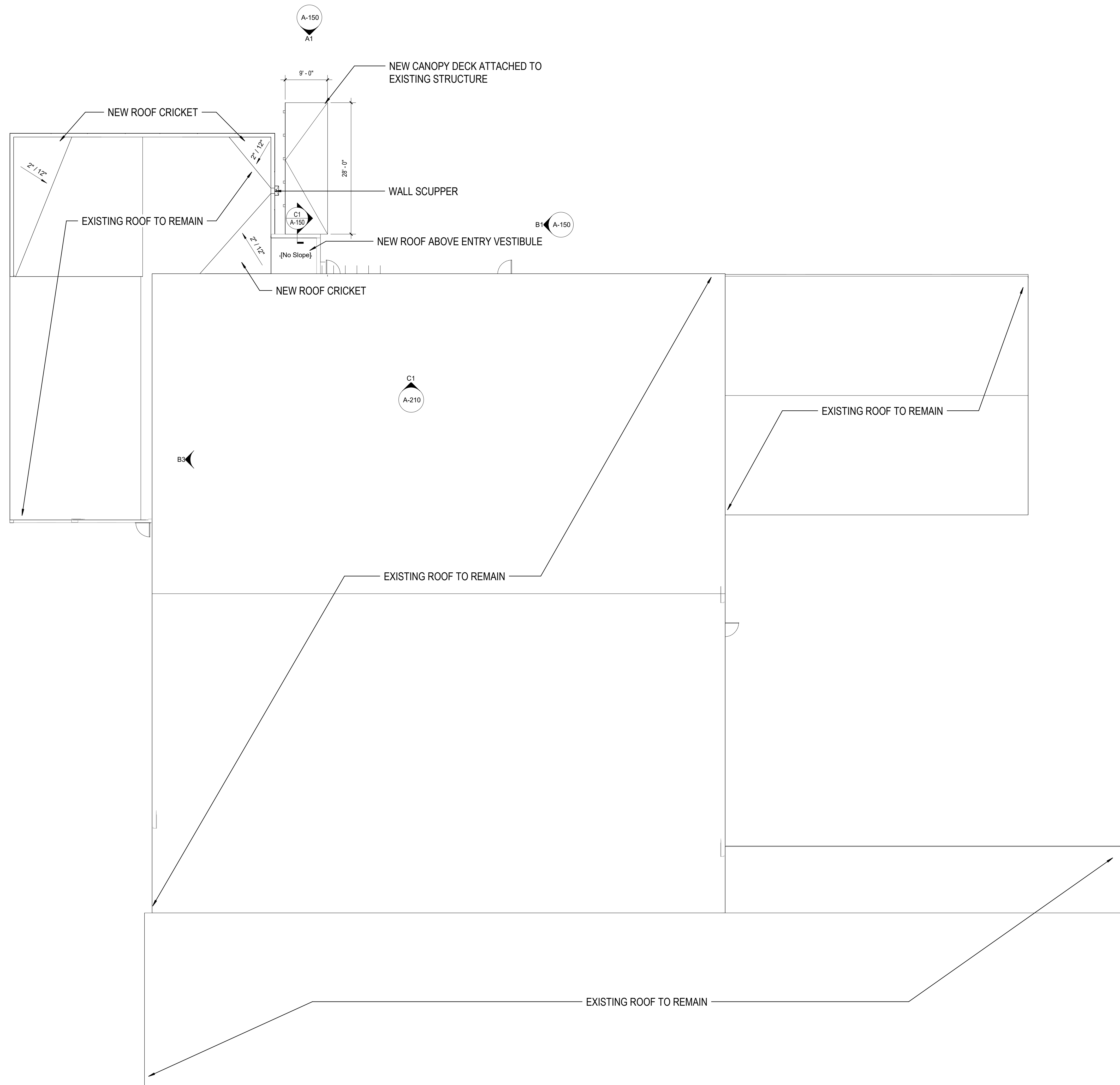
C1 Section 14
1 1/2" = 1'-0"



B1 CANOPY ELEVATION - EAST
1/4" = 1'-0"



A1 CANOPY ELEVATION - NORTH
1/2" = 1'-0"

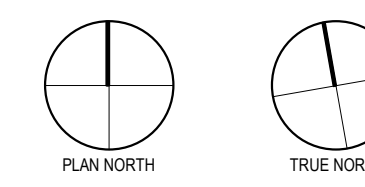


A2 ROOF PLAN
3/32" = 1'-0"



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ROOF PLAN



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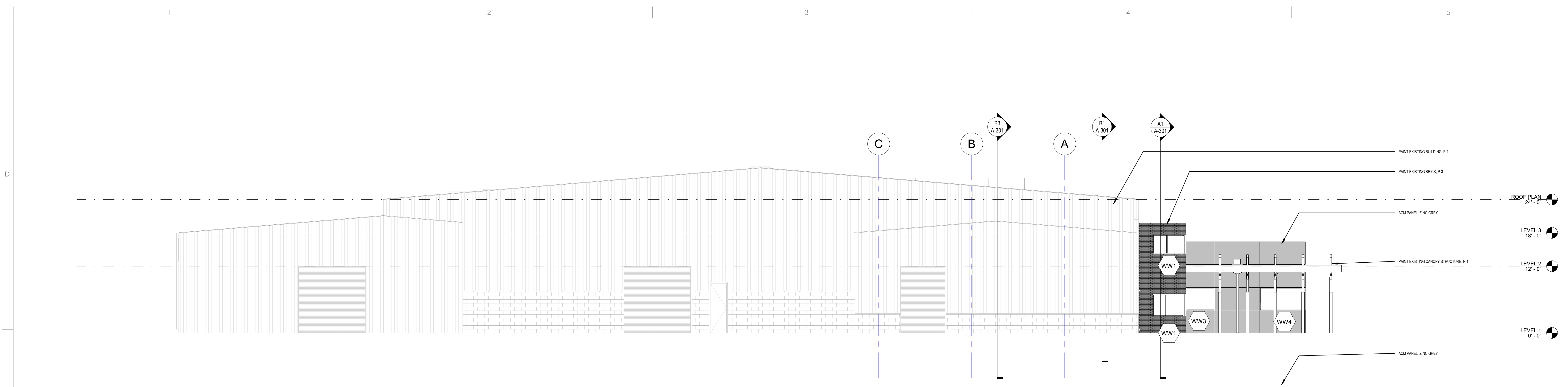
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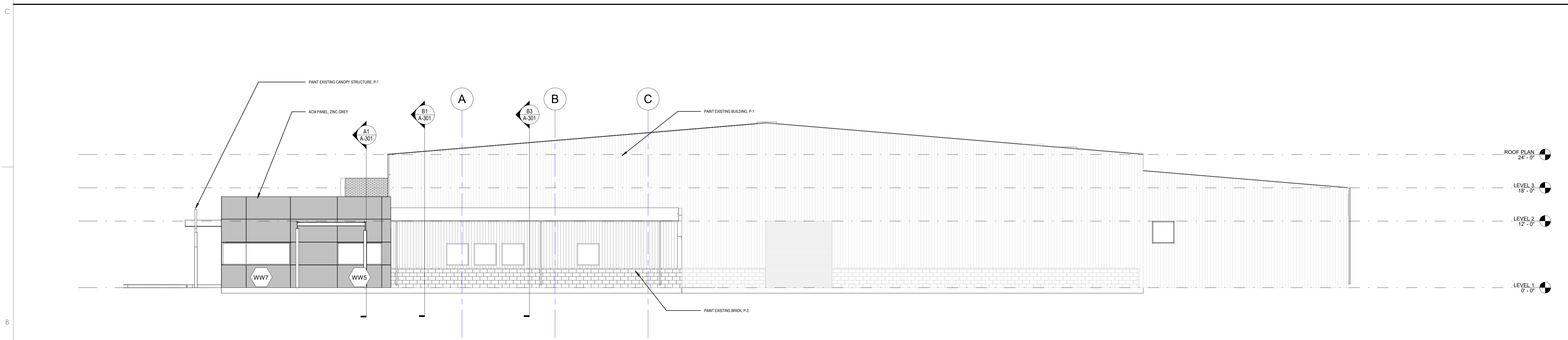
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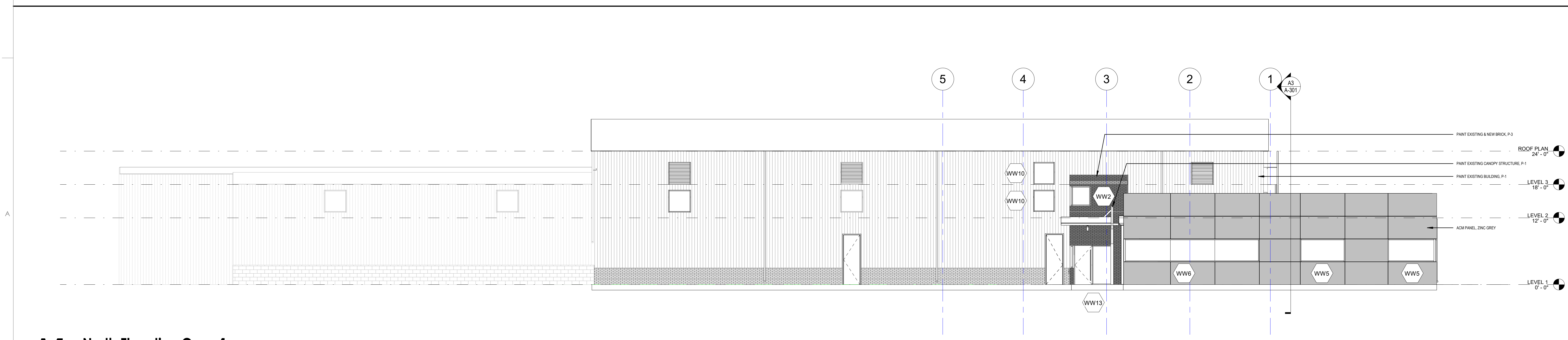
EXTERIOR
ELEVATIONS



C1 East Elevation Copy 1
1/8" = 1'-0"



B1 West Elevation Copy 1
1/8" = 1'-0"

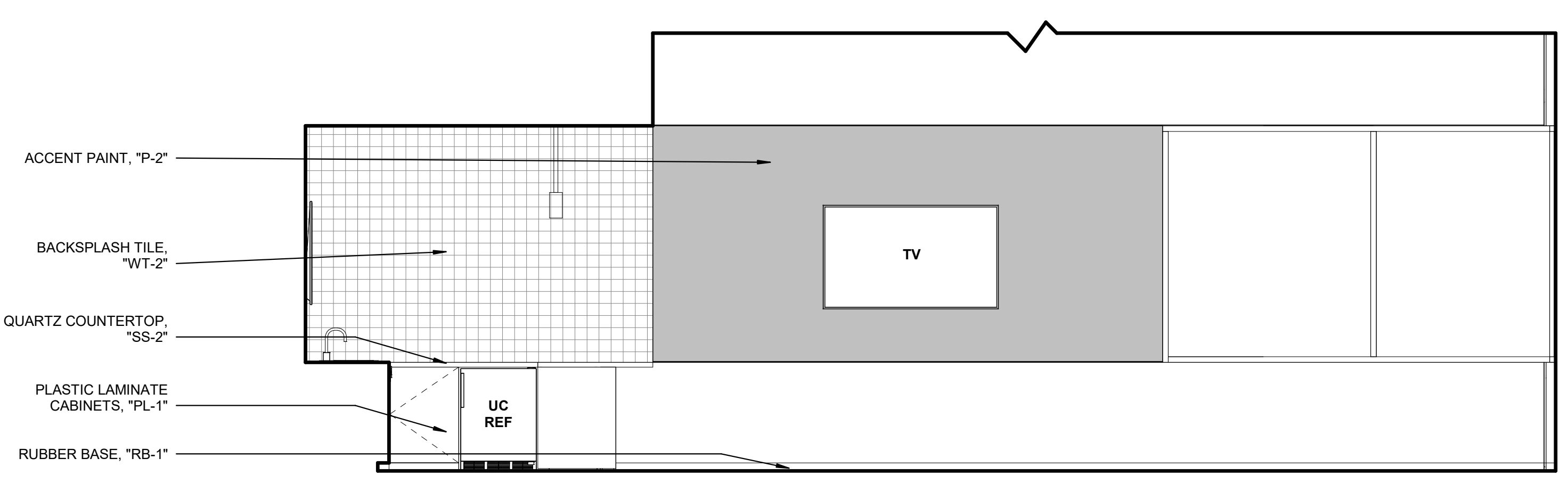


A1 North Elevation Copy 1
1/8" = 1'-0"

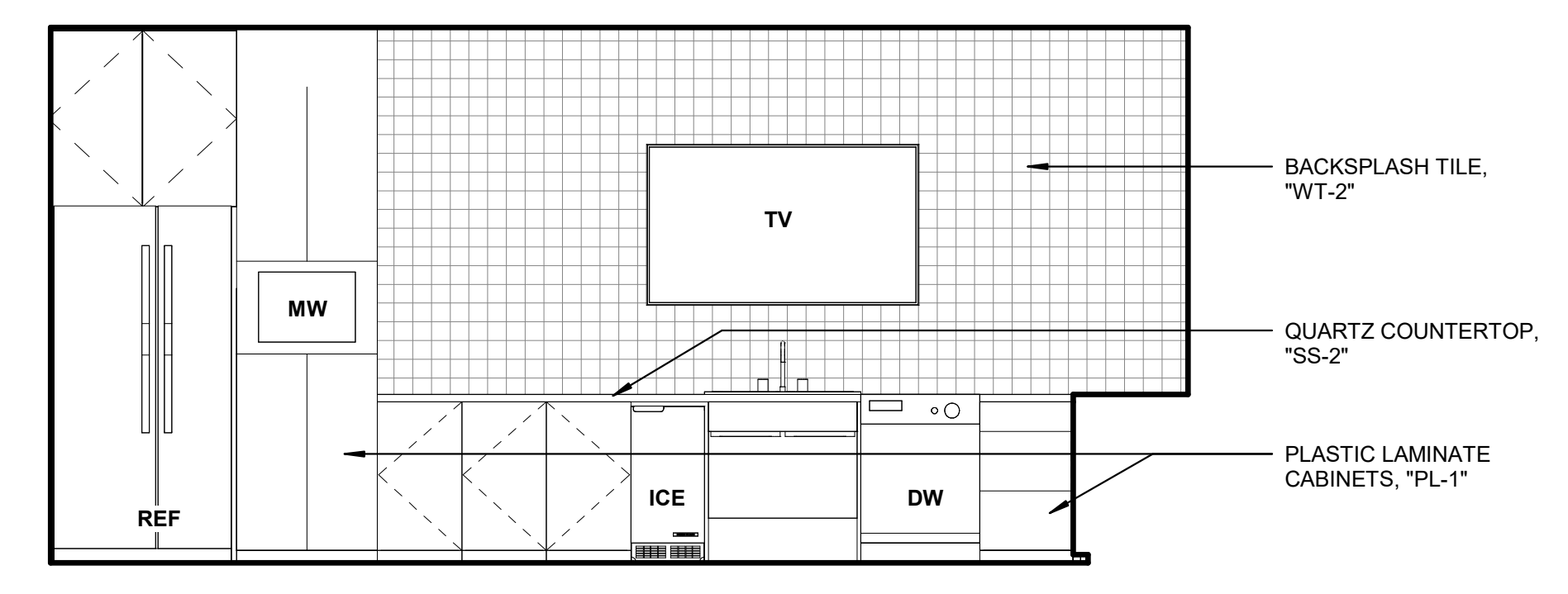


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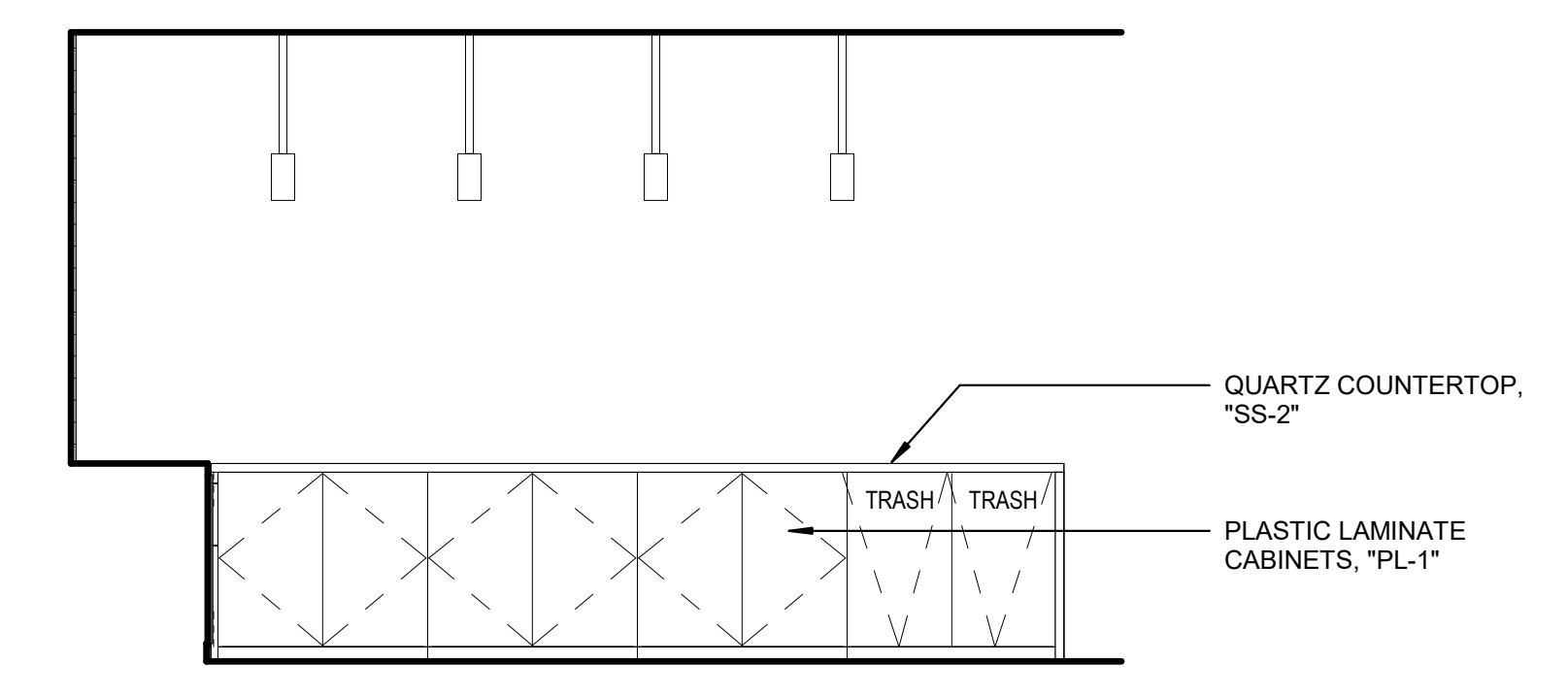
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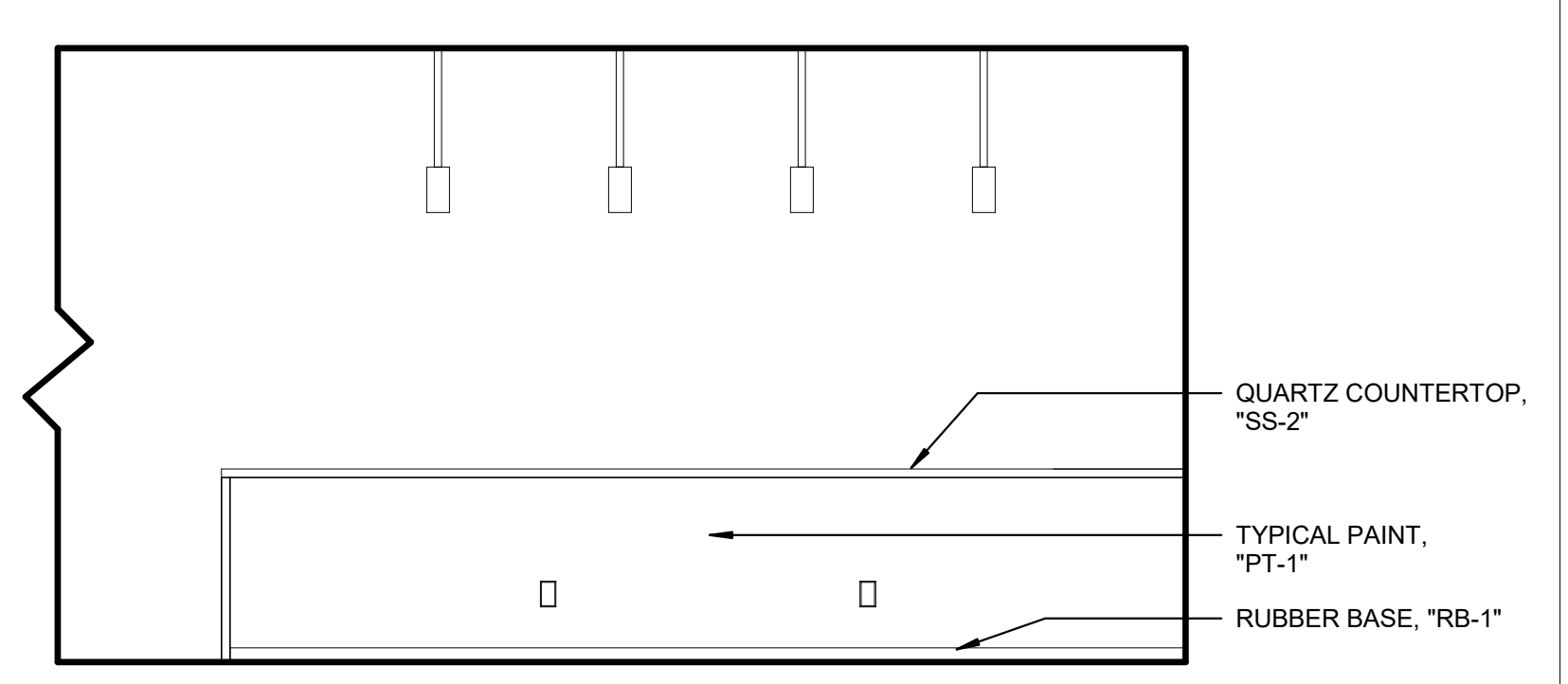
D1 BREAKROOM - EAST Copy 1
3/8" = 1'-0"



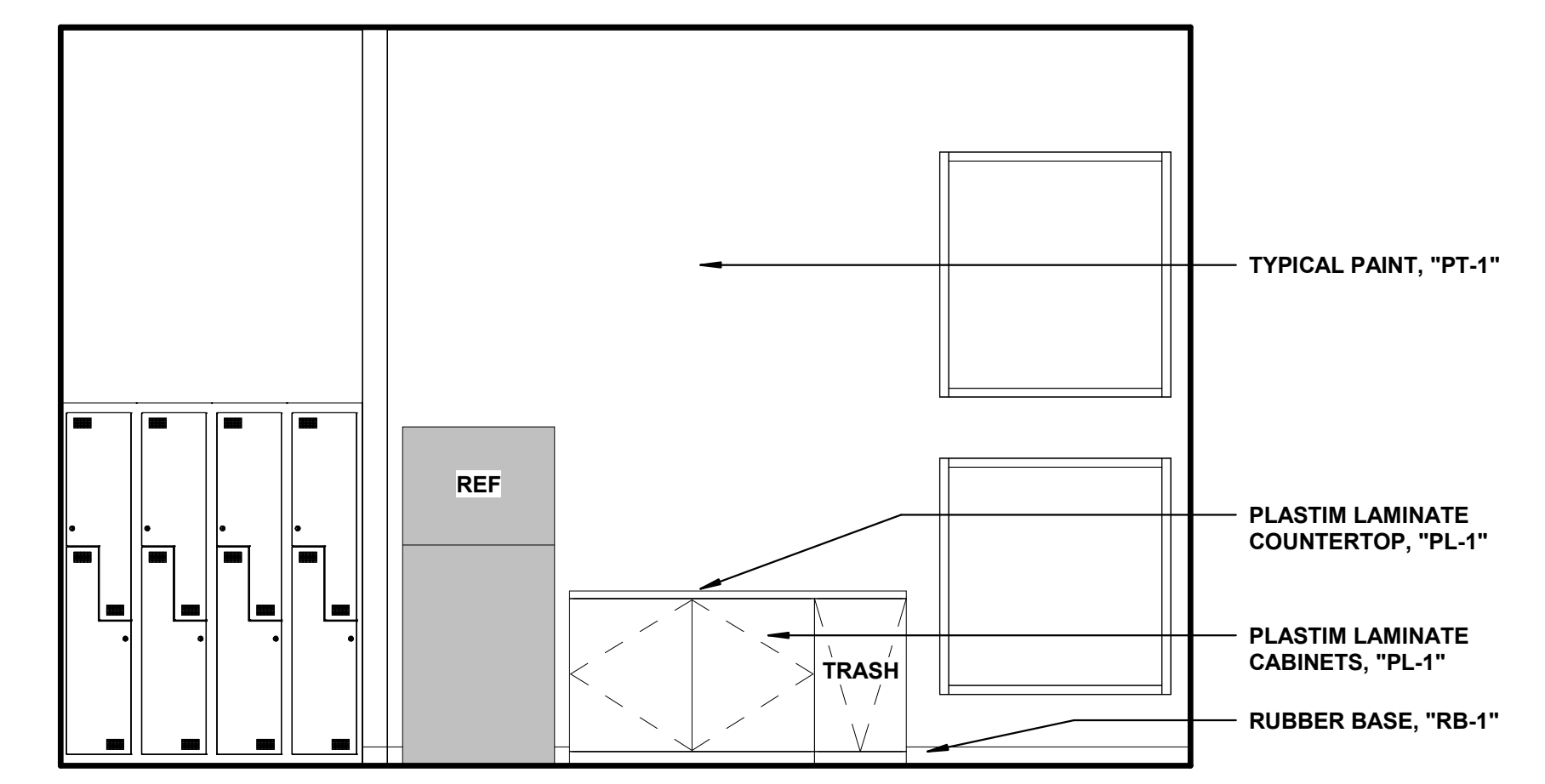
D3 BREAKROOM - NORTH Copy 1
3/8" = 1'-0"



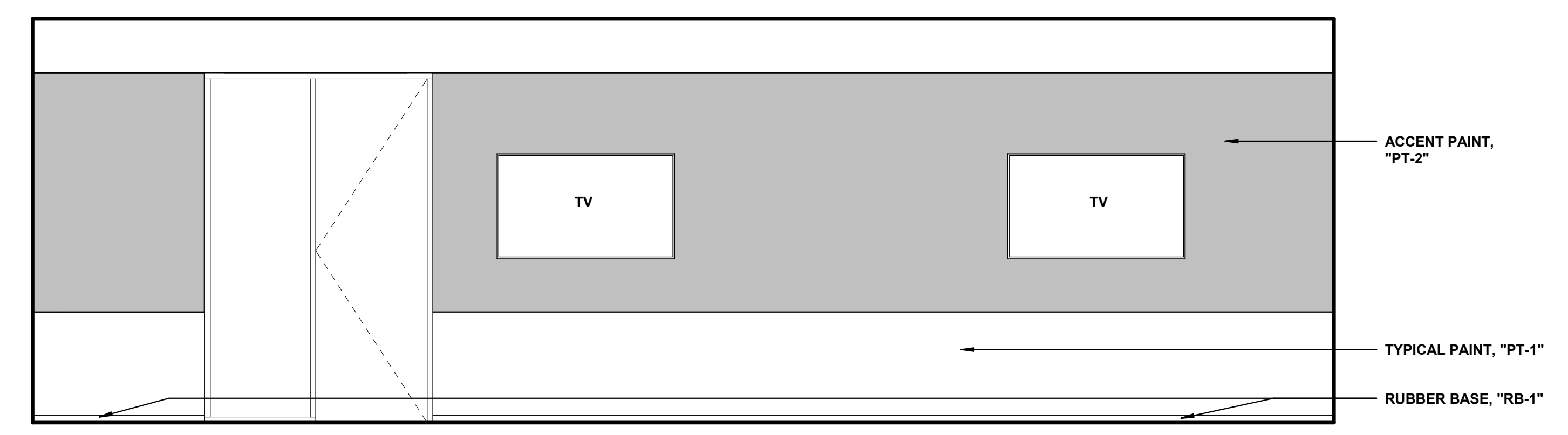
D4 BREAKROOM - SOUTH Copy 1
3/8" = 1'-0"



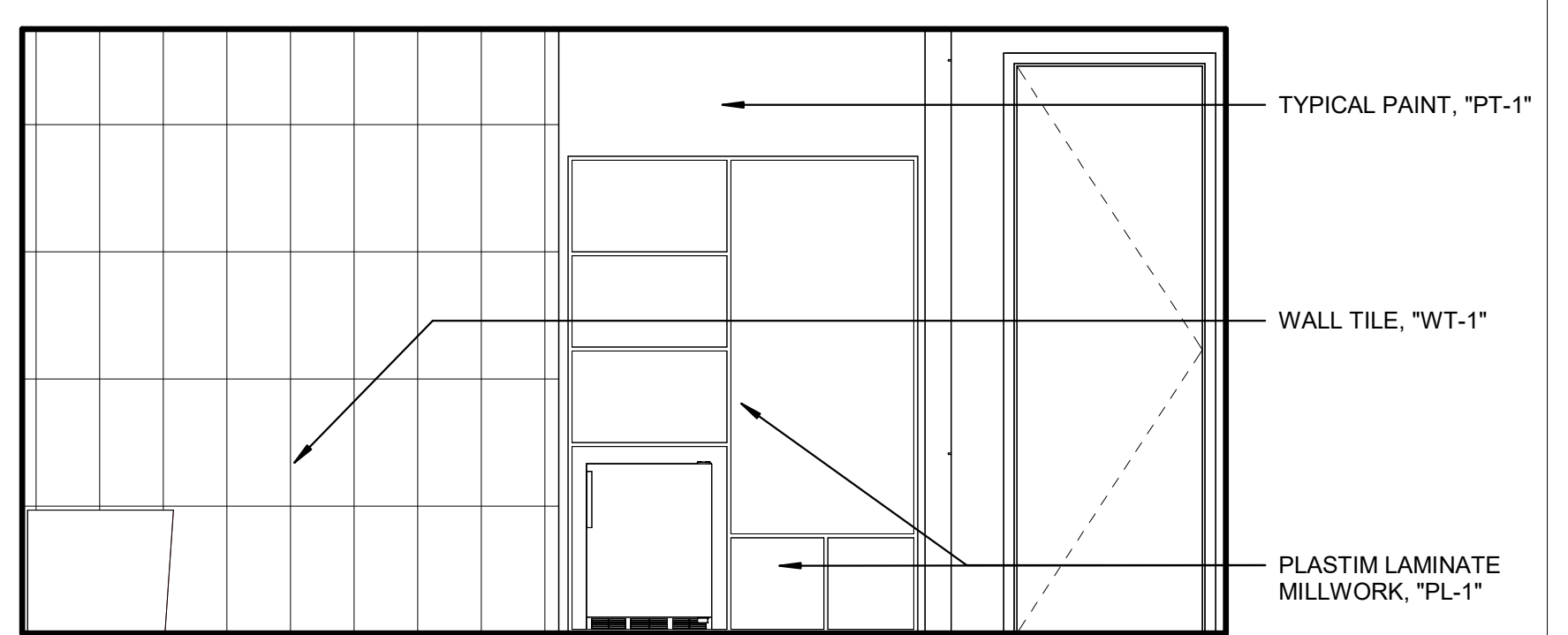
C1 BREAKROOM ISLAND - NORTH
3/8" = 1'-0"



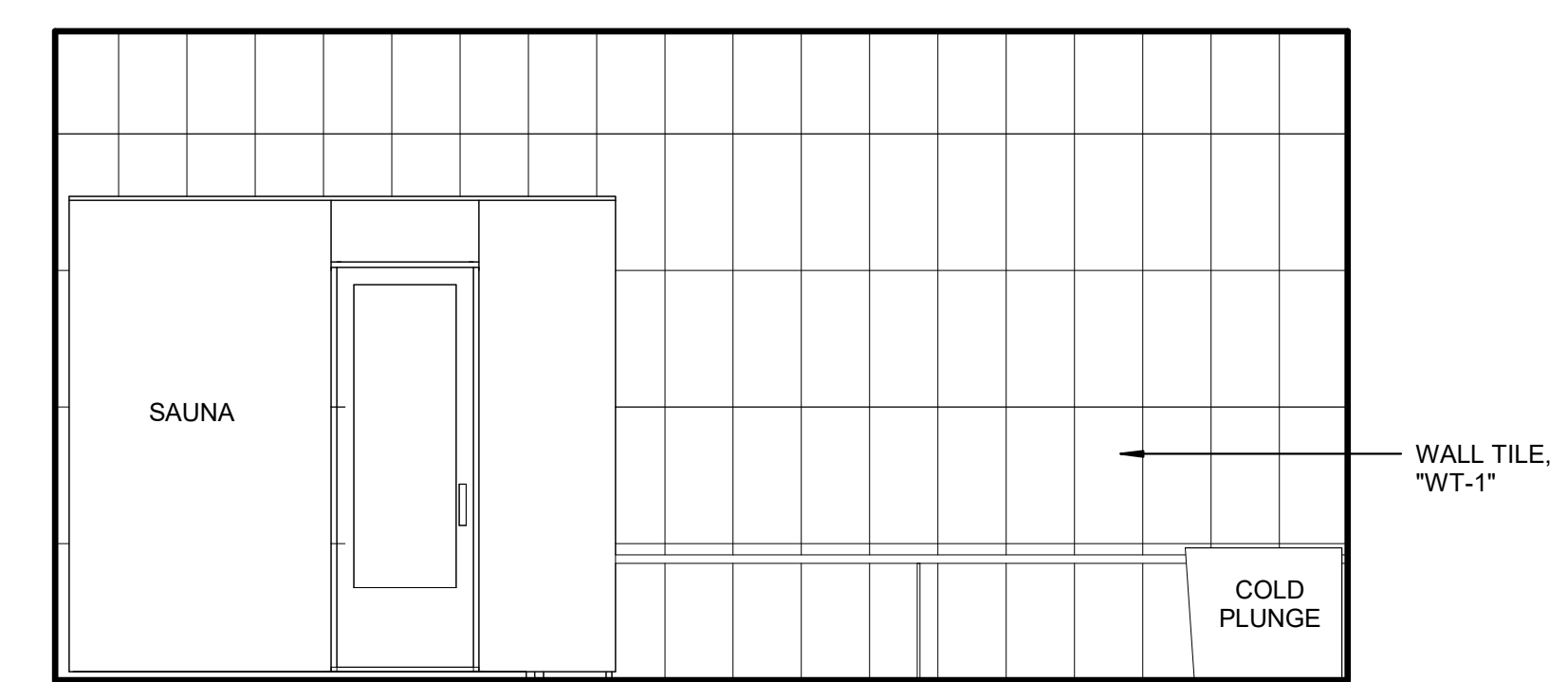
C2 GYM - NORTH ELEVATION Copy 1
3/8" = 1'-0"



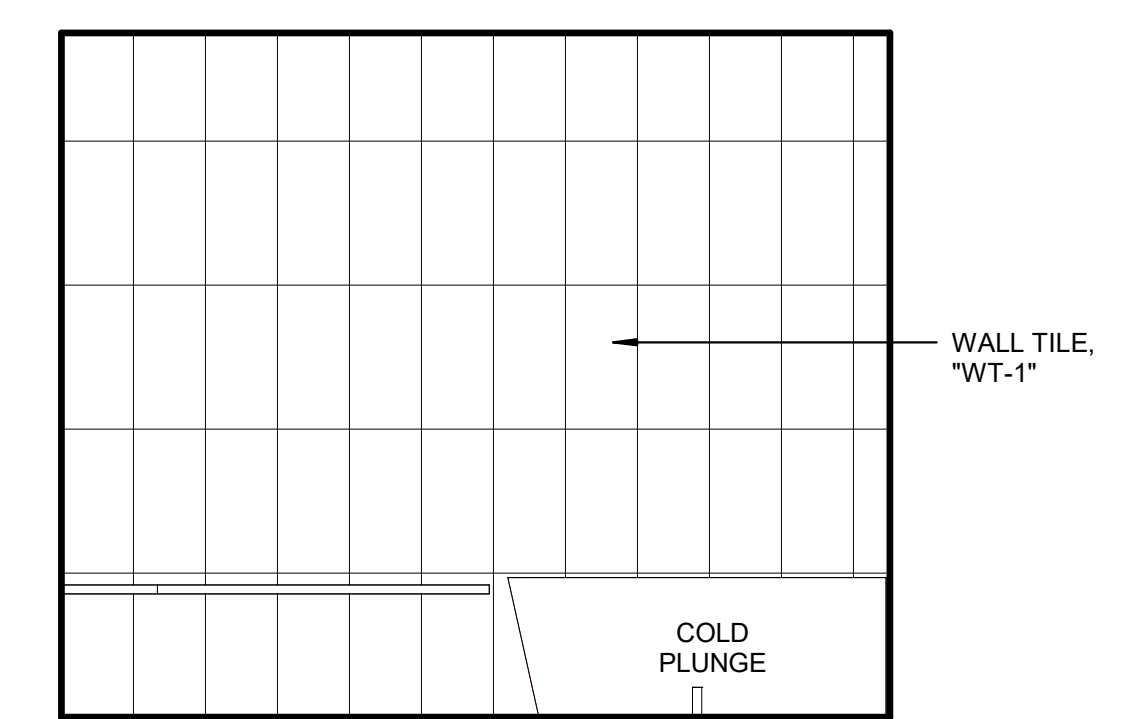
C3 GYM - EAST ELEVATION Copy 1
3/8" = 1'-0"



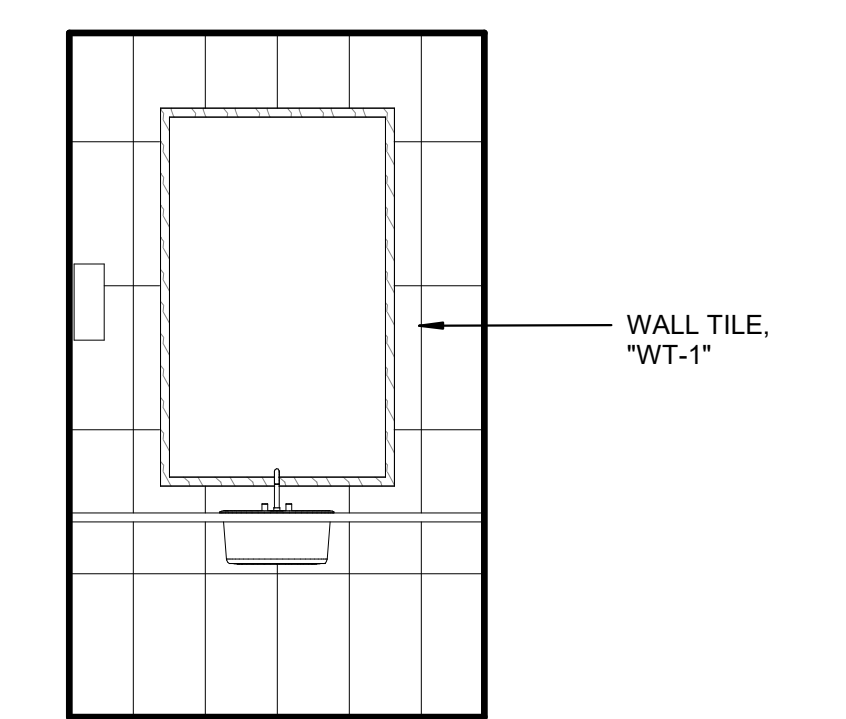
B1 SAUNA ELEVATION - NORTH
3/8" = 1'-0"



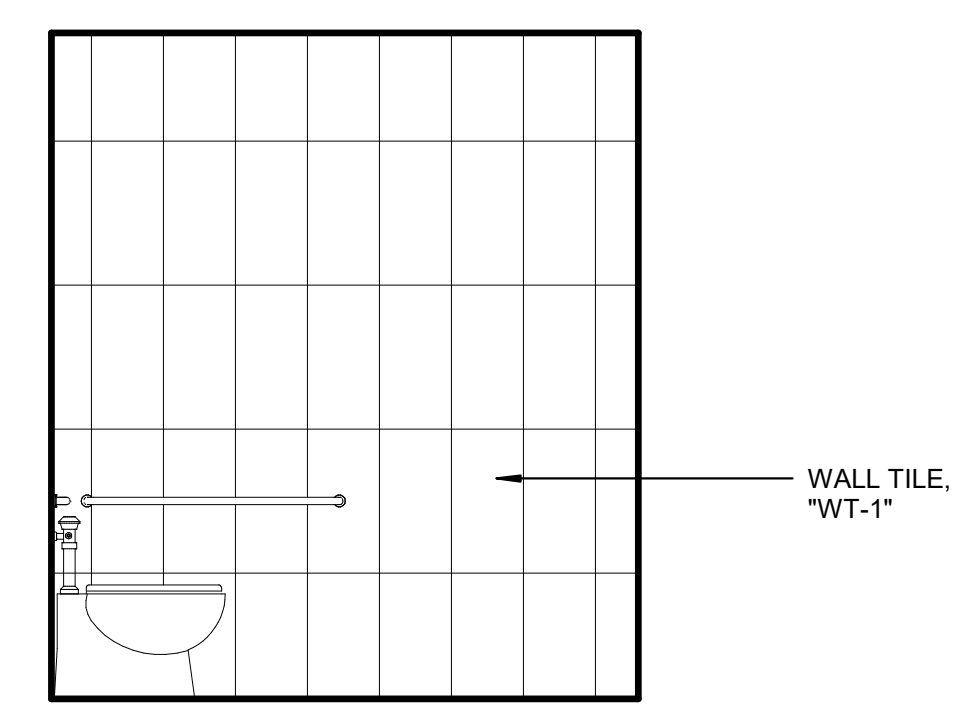
B2 SPA ELEVATION Copy 1
3/8" = 1'-0"



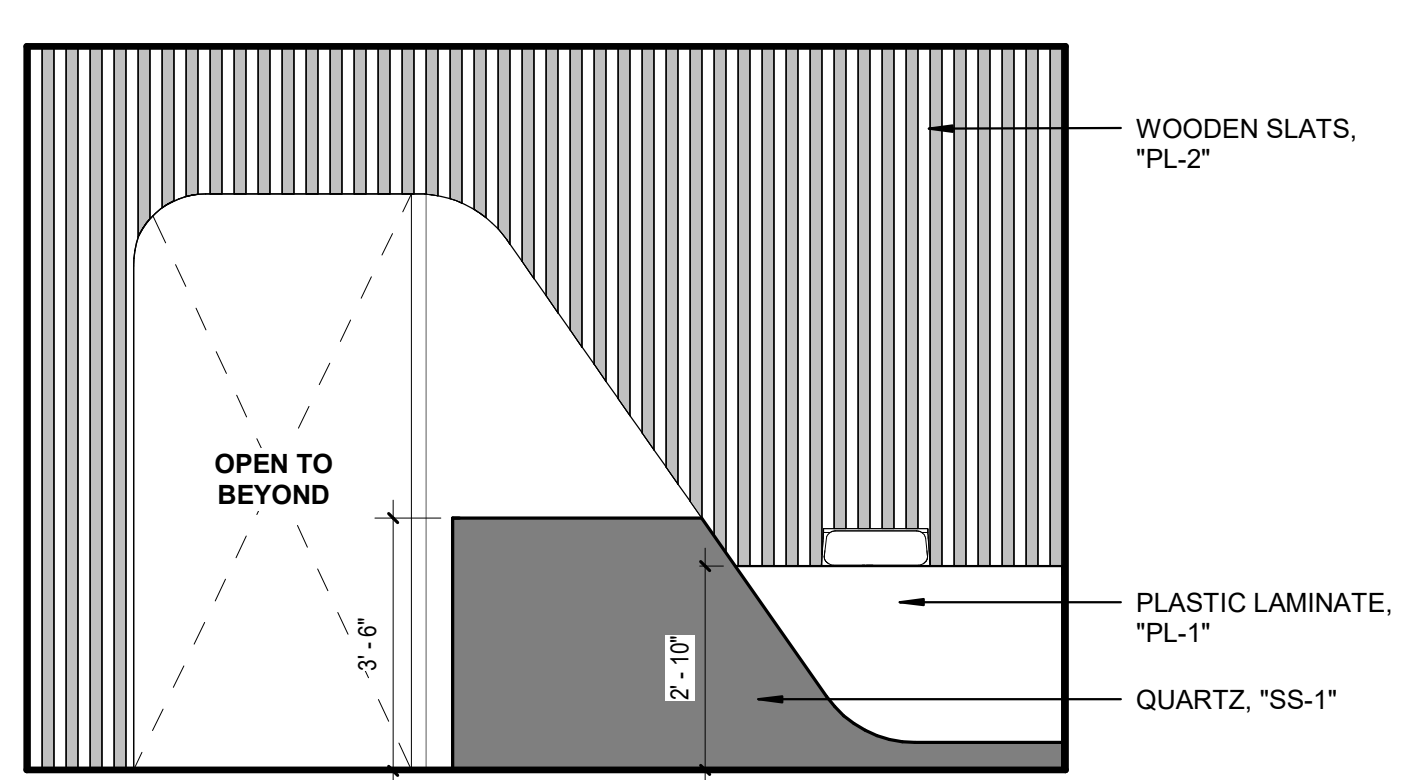
B3 SAUNA - WEST
3/8" = 1'-0"



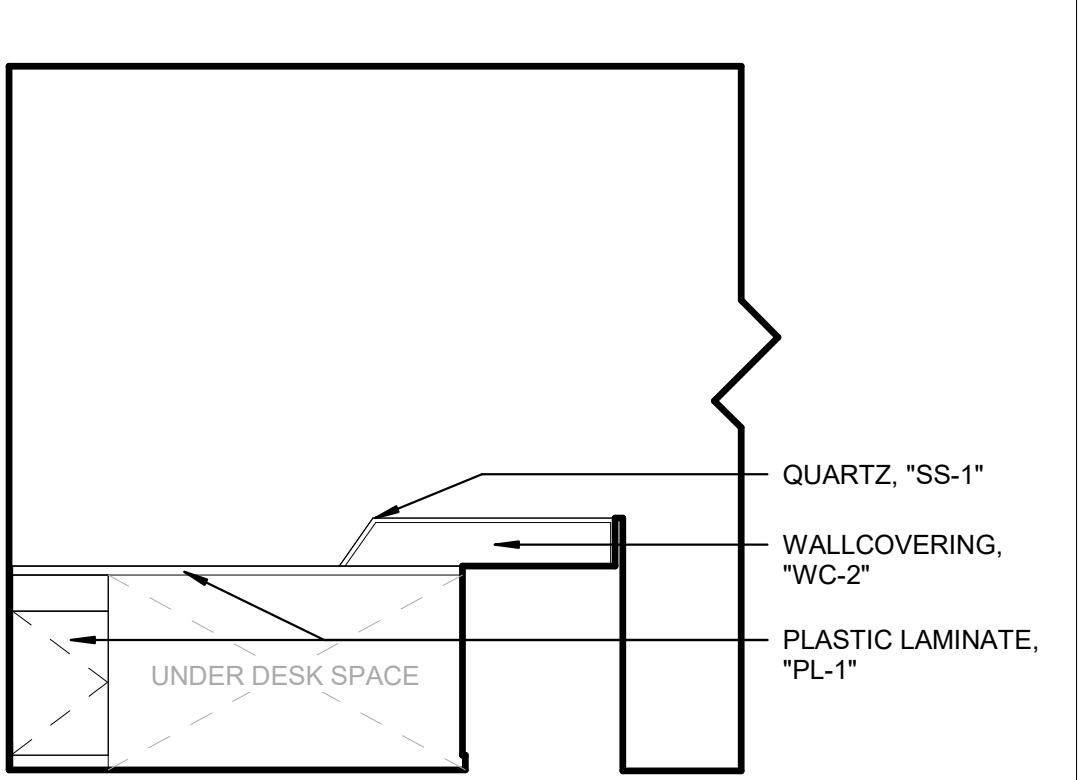
B4 LEVEL 2 RESTROOM VANITY
3/8" = 1'-0"



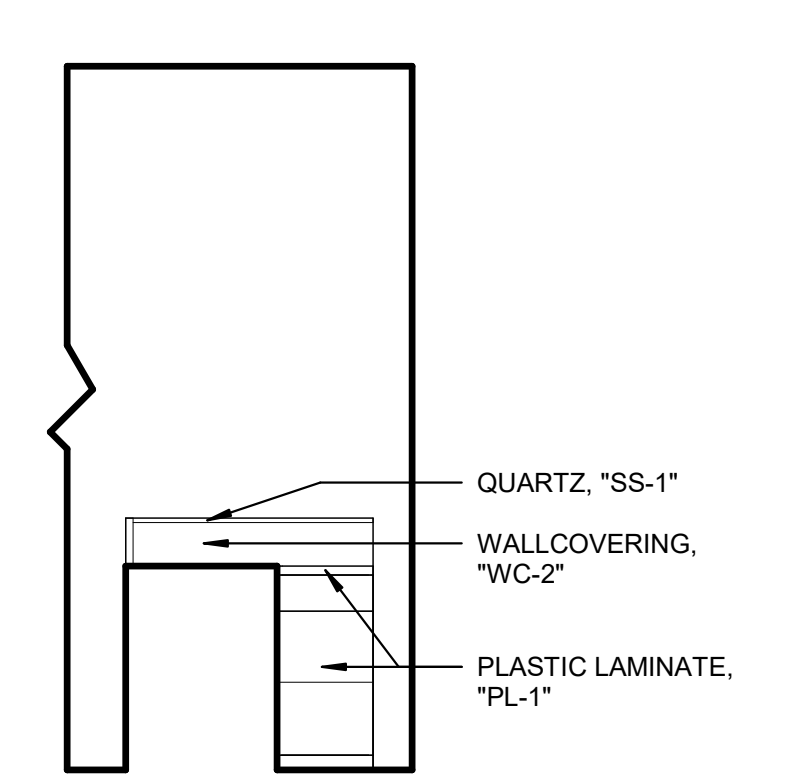
B5 LEVEL 2 RESTROOM - NORTH
3/8" = 1'-0"



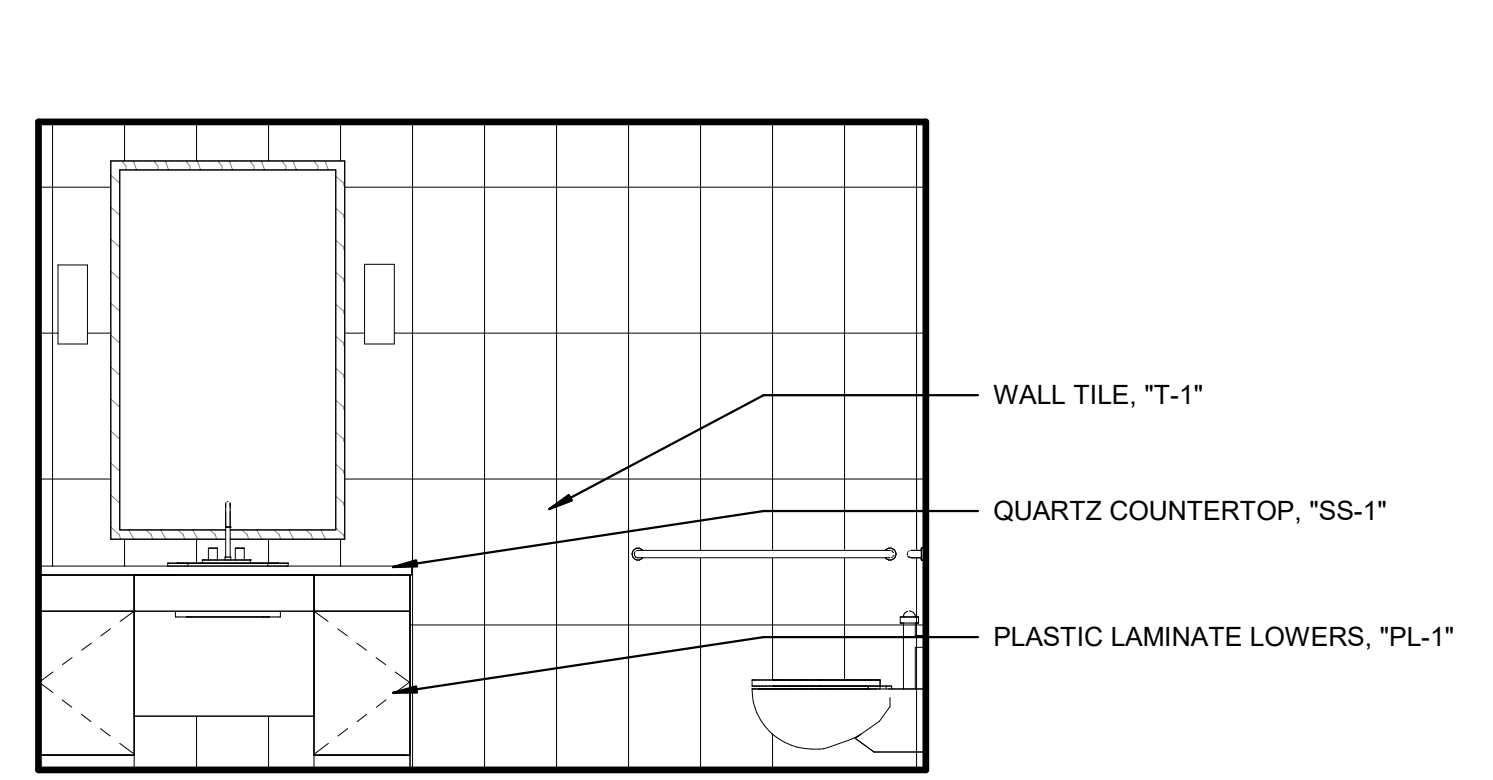
A1 RECEPTION DESK Copy 1
3/8" = 1'-0"



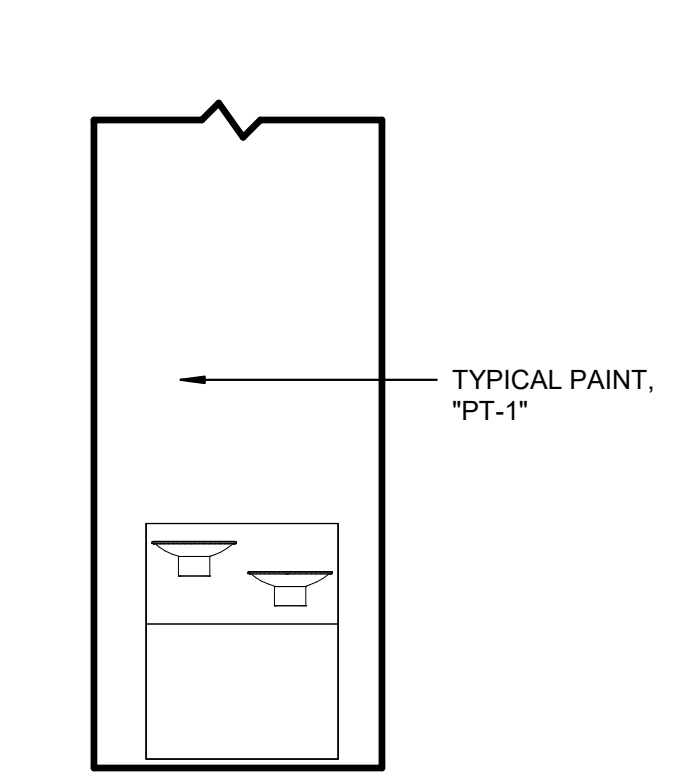
A2 RECEPTION DESK - EAST
3/8" = 1'-0"



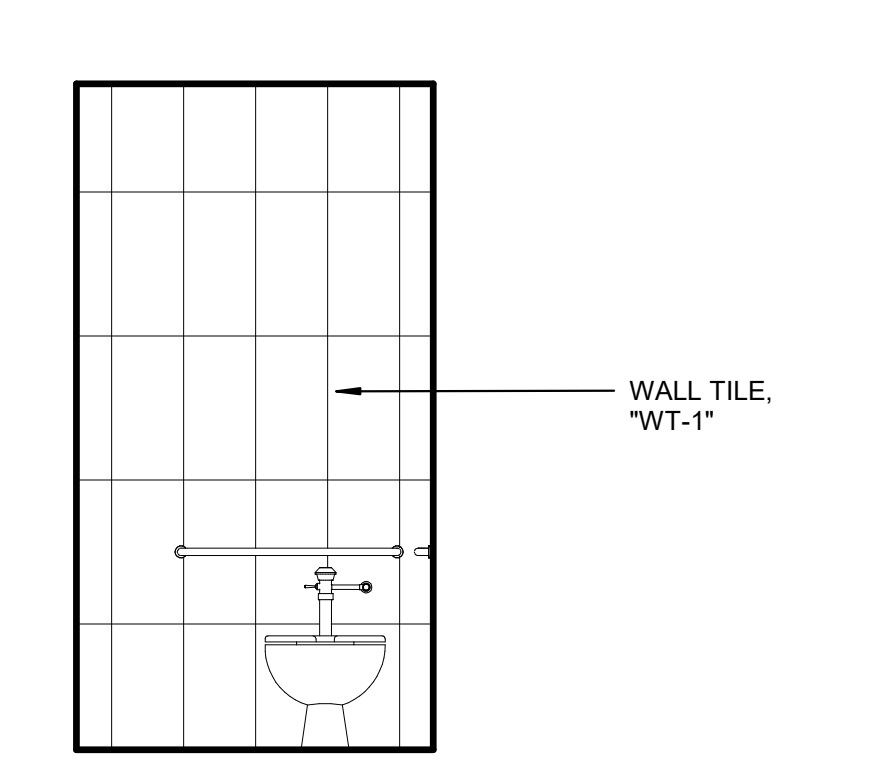
A3 RECEPTION DESK - SOUTH
3/8" = 1'-0"



A4 RESTROOM - LEVEL 1 Copy 1
3/8" = 1'-0"



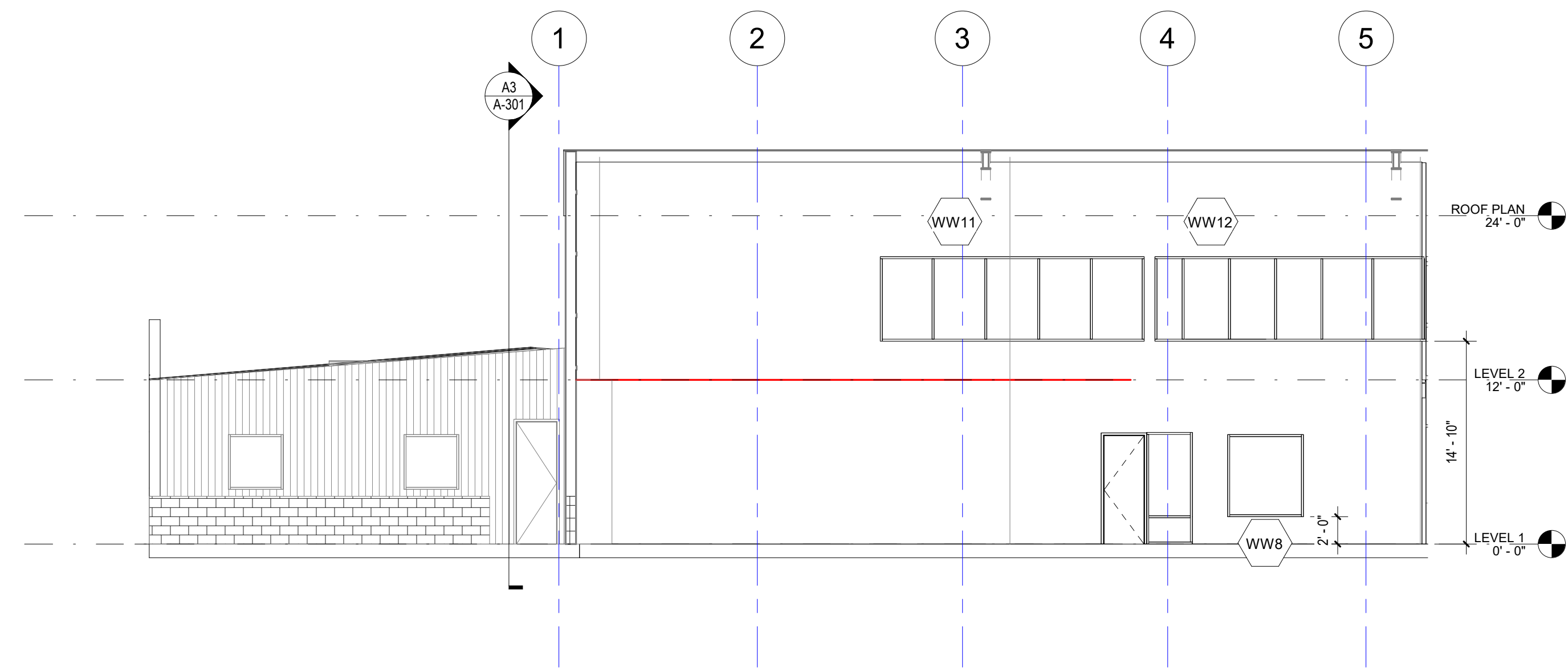
A5 DRINKING FOUNTAINS
3/8" = 1'-0"



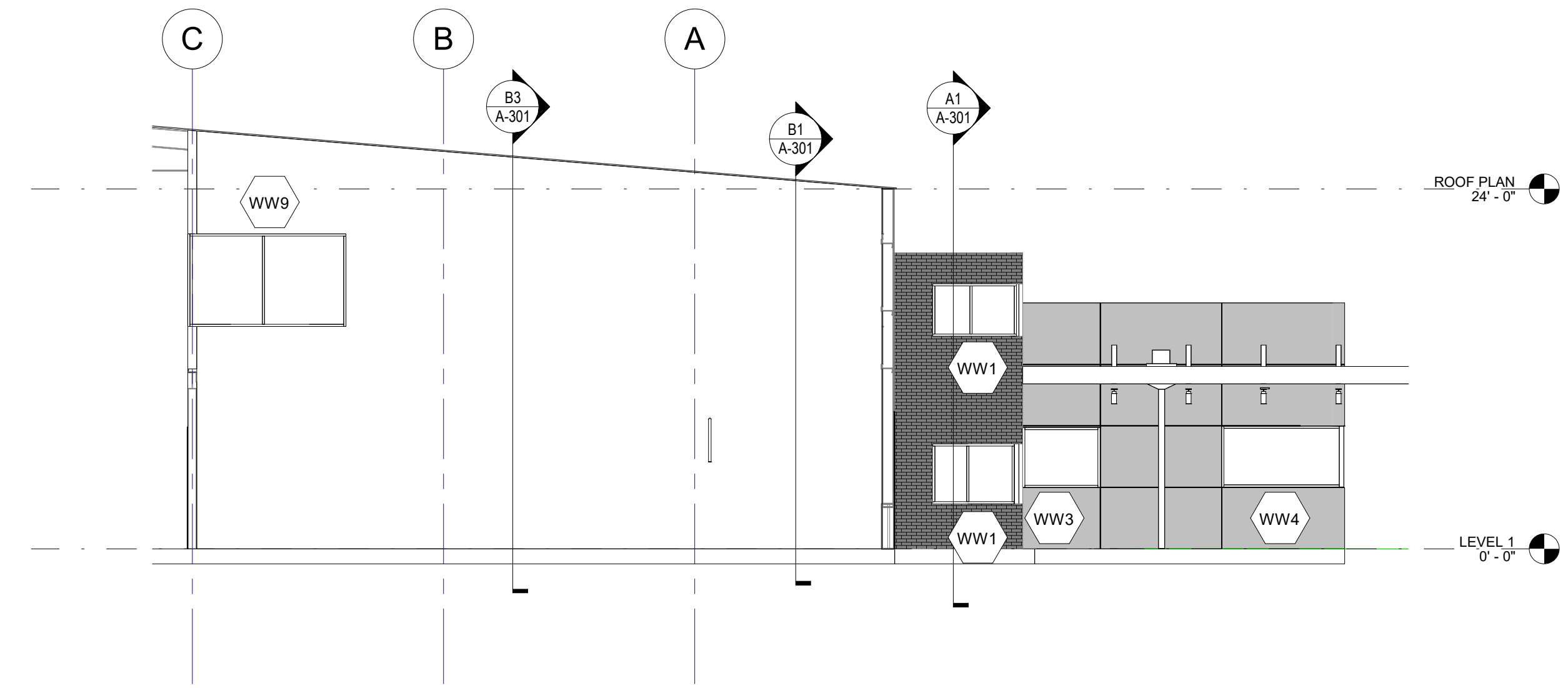
A6 LEVEL 2 RESTROOM - WEST
3/8" = 1'-0"

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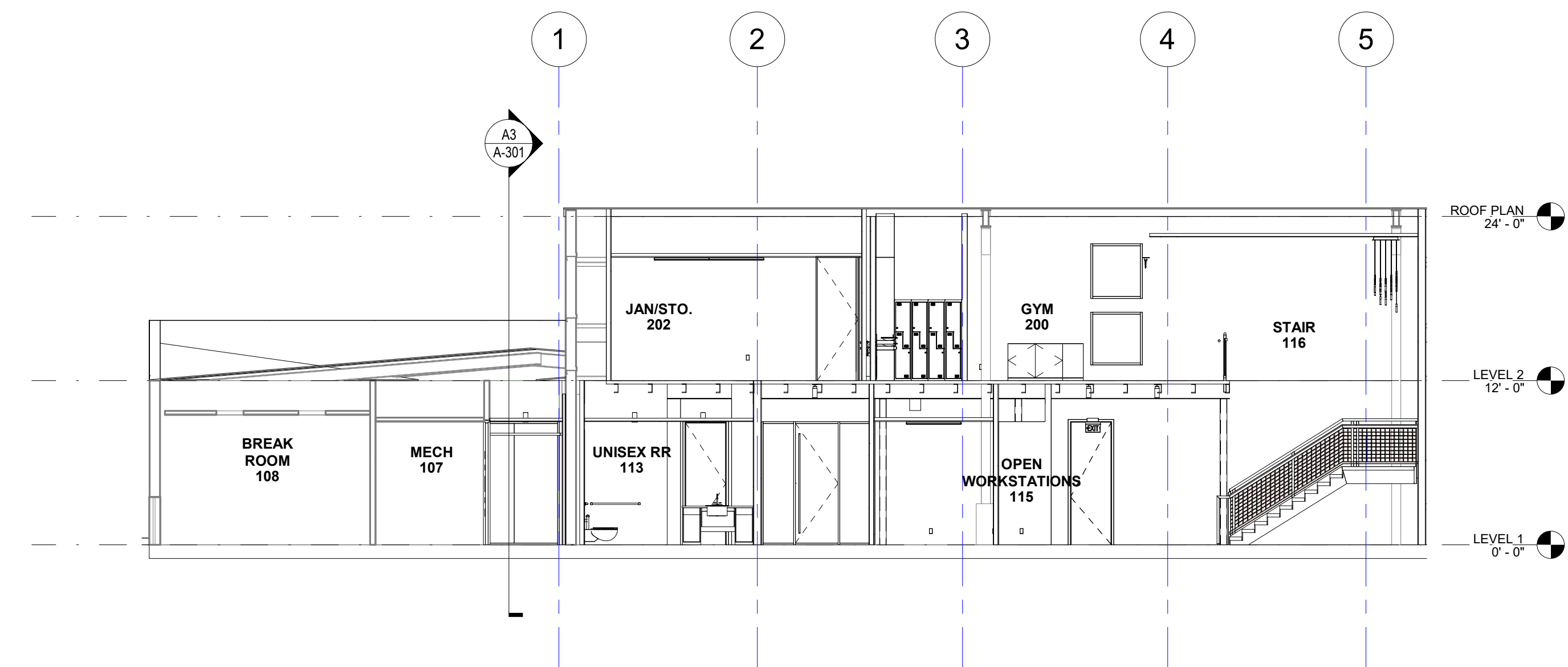
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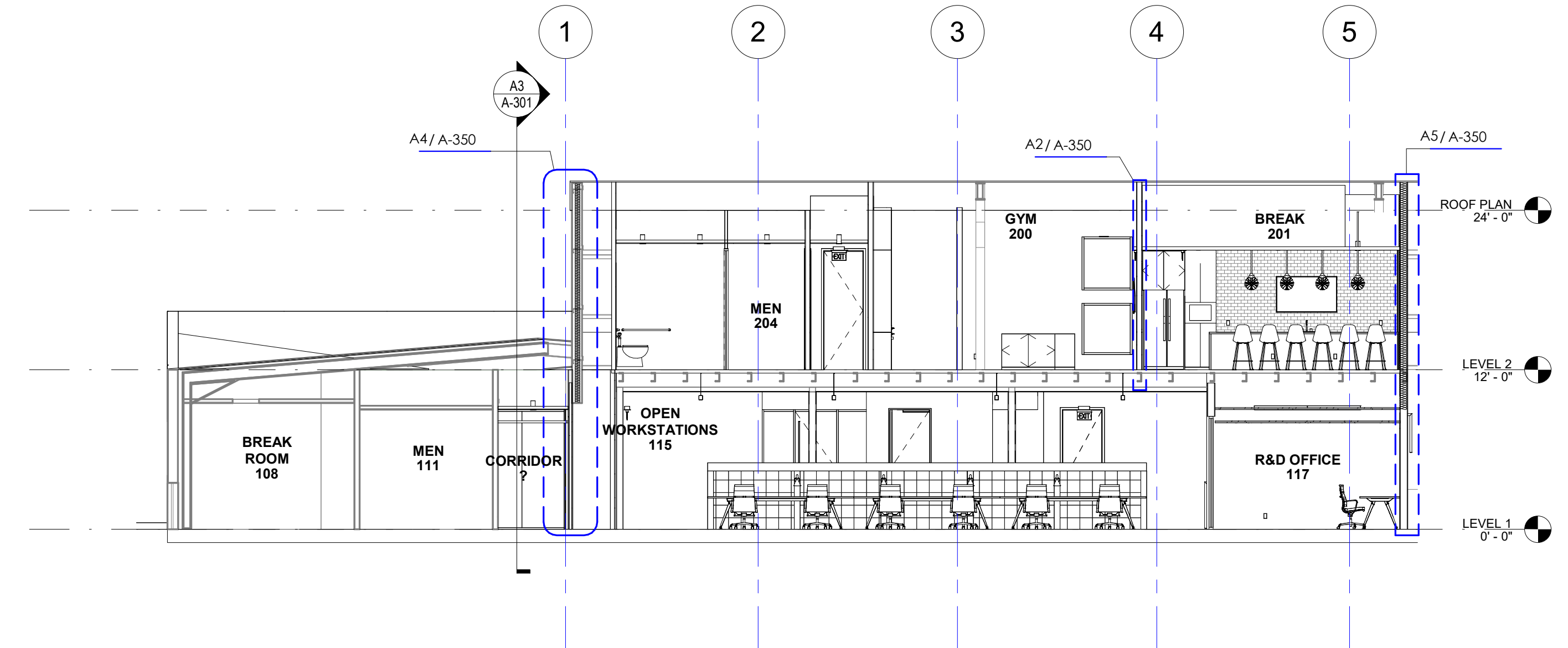
C1 Elevation 6 - a
1/8" = 1'-0"



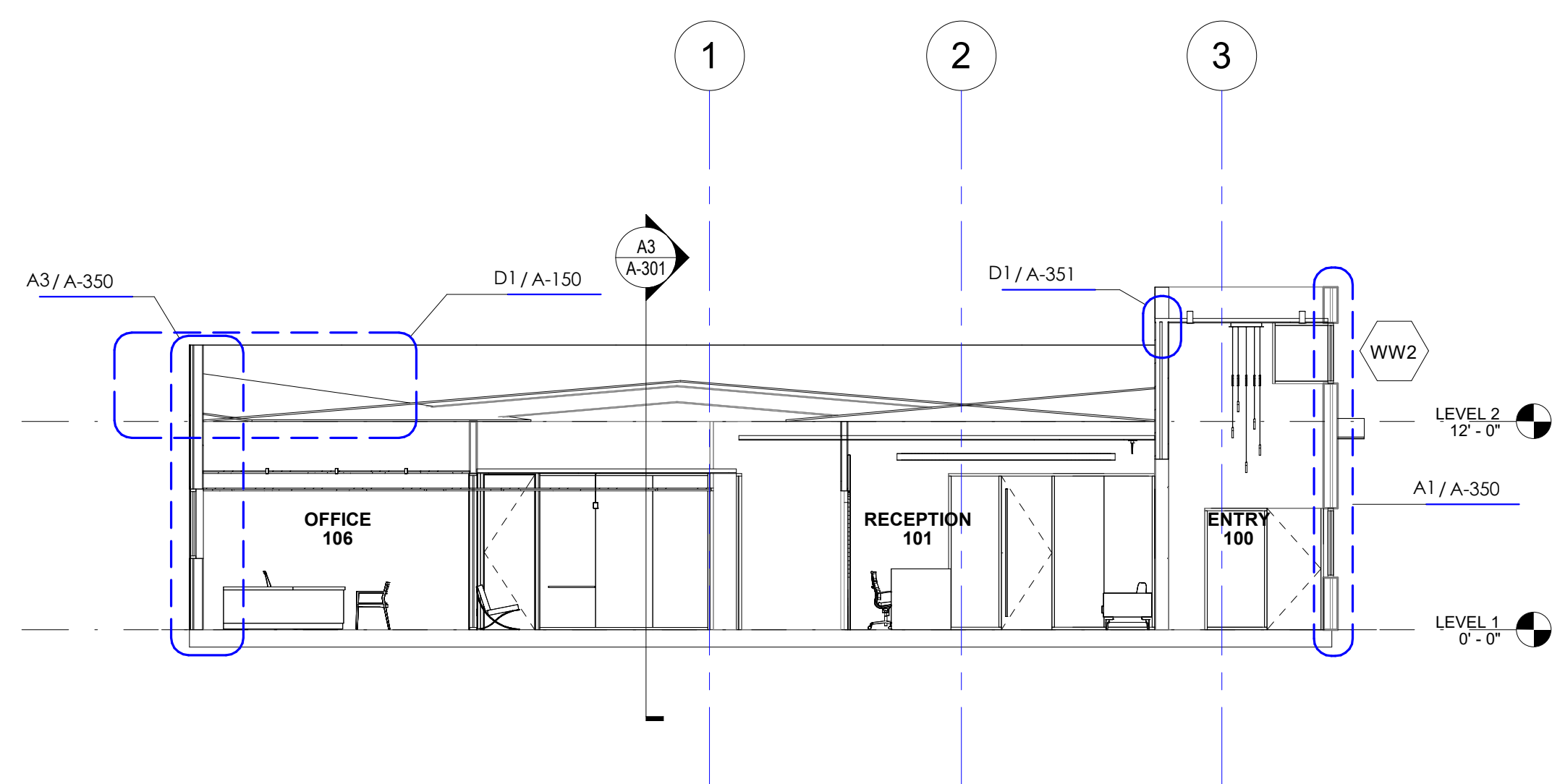
C3 Elevation 7 - a
1/8" = 1'-0"



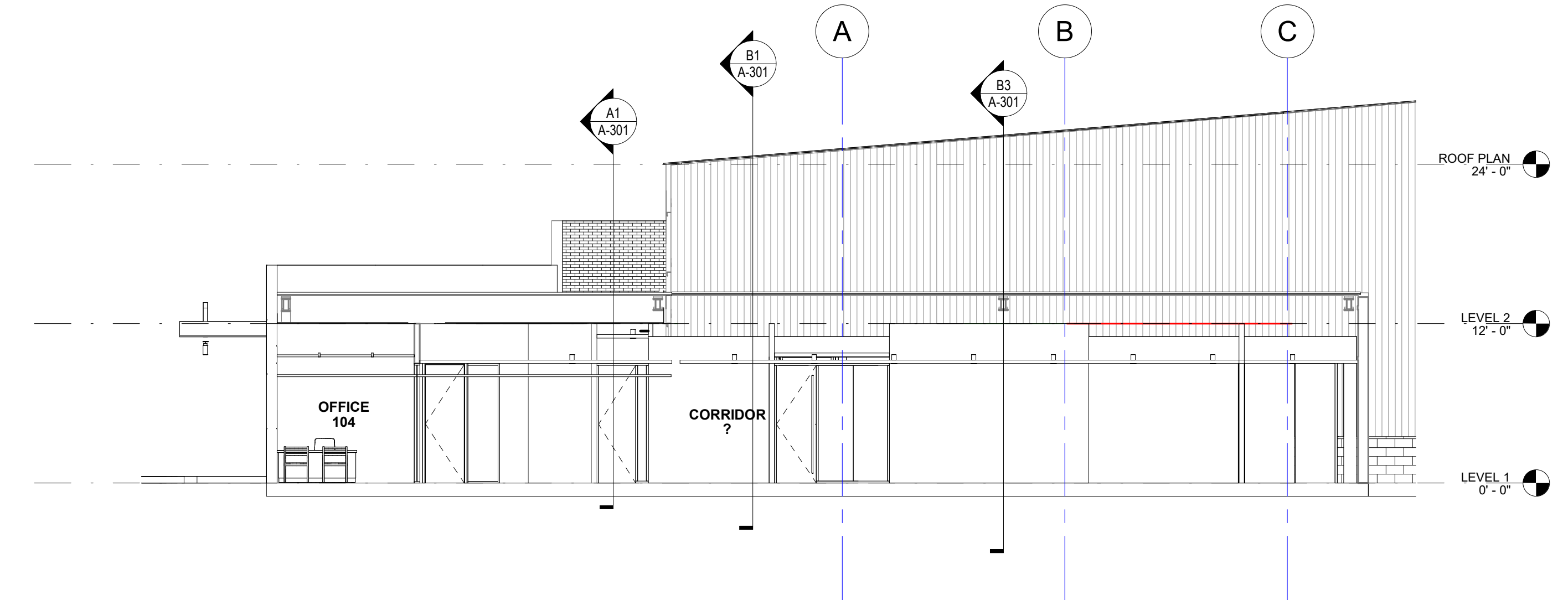
B1 Section 6
1/8" = 1'-0"



B3 Section 3
1/8" = 1'-0"



A1 Section 4
1/8" = 1'-0"



A3 Section 1
1/8" = 1'-0"



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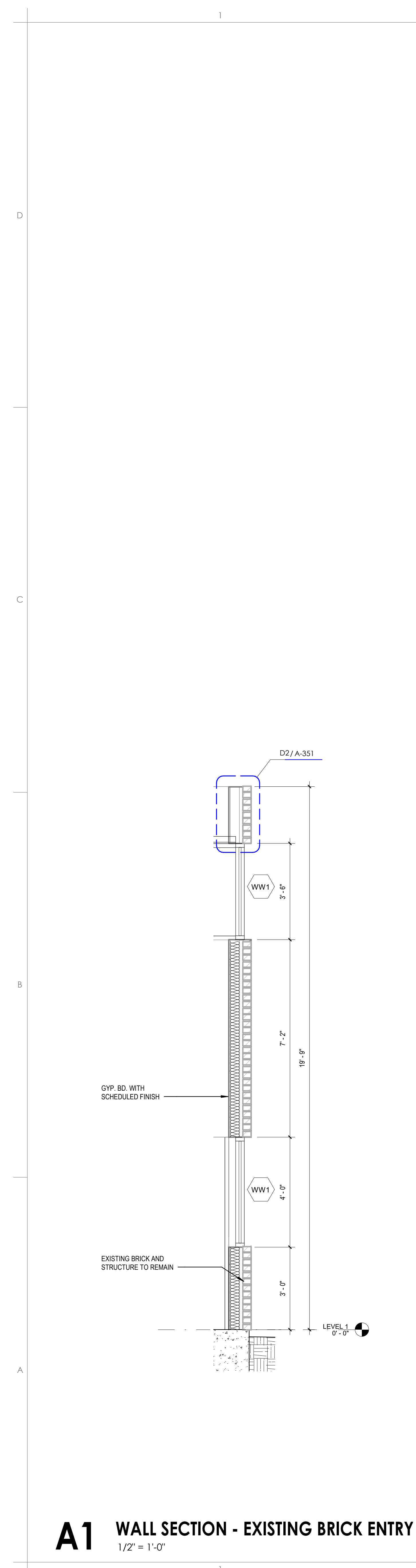
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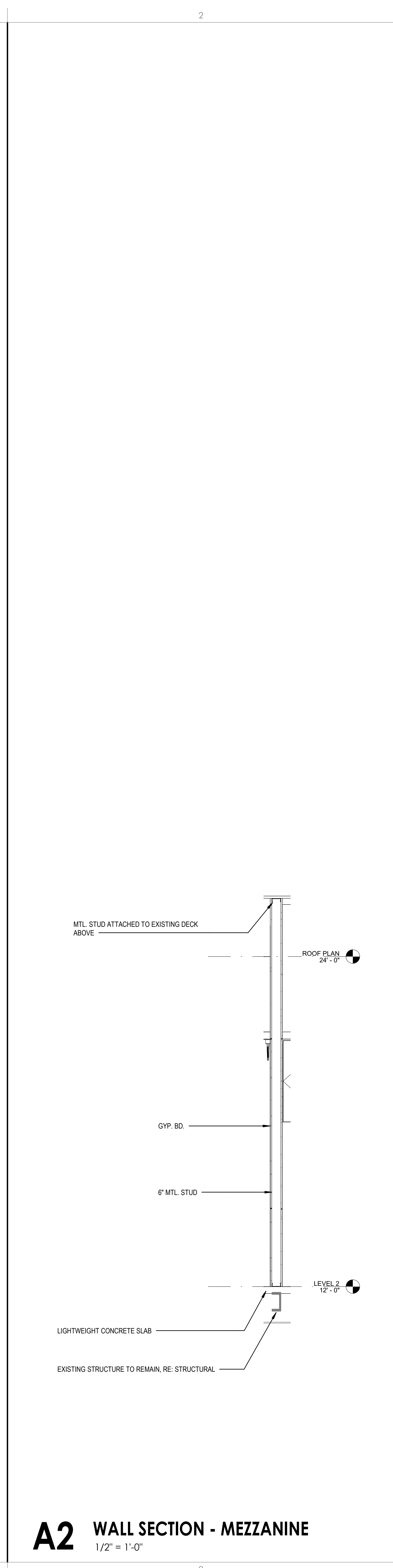
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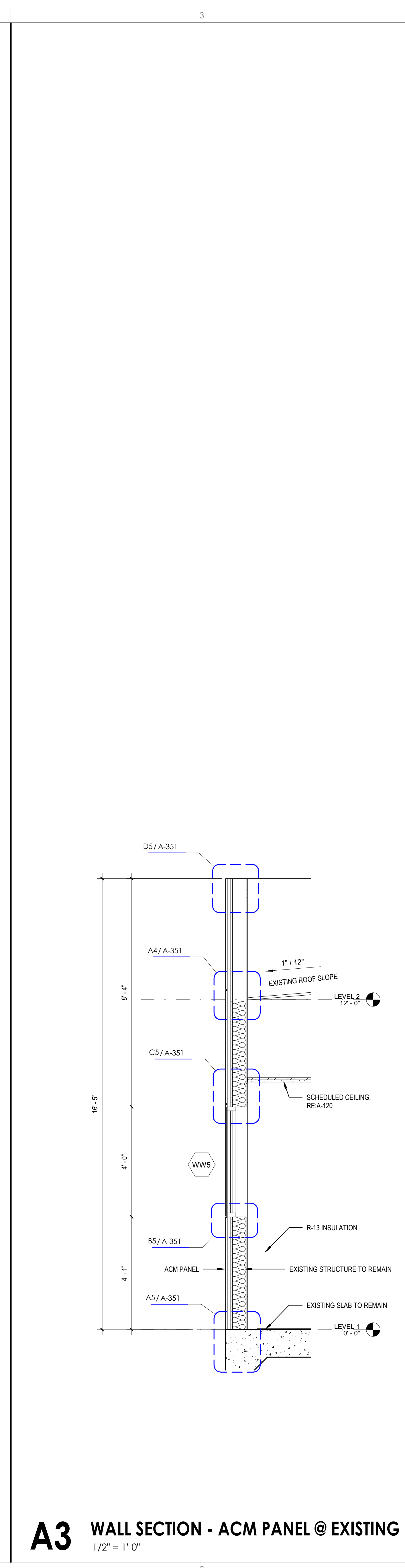
A-350
WALL SECTIONS



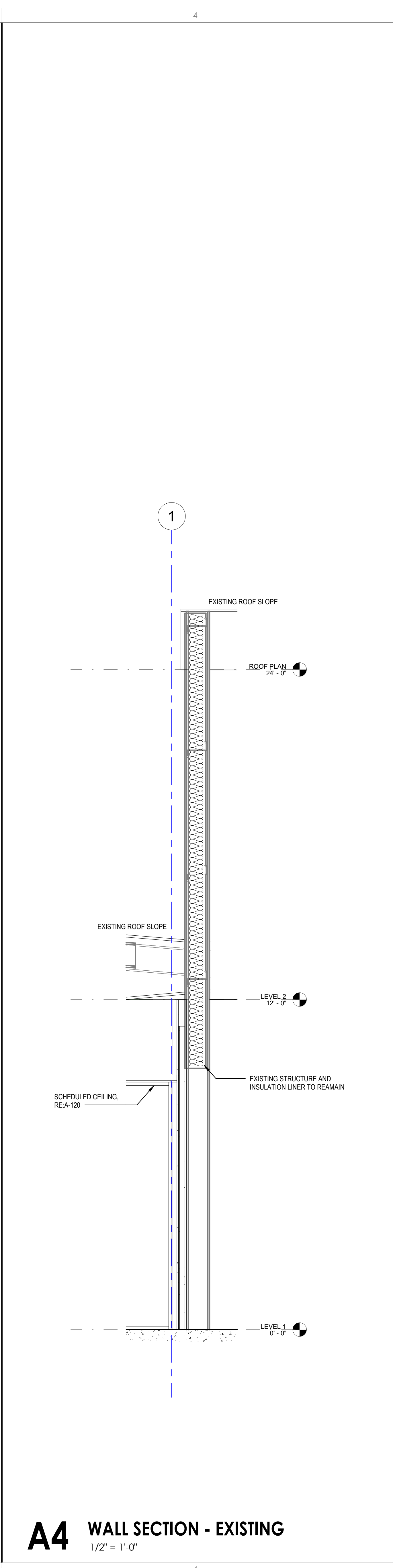
A1 WALL SECTION - EXISTING BRICK ENTRY
1/2" = 1'-0"



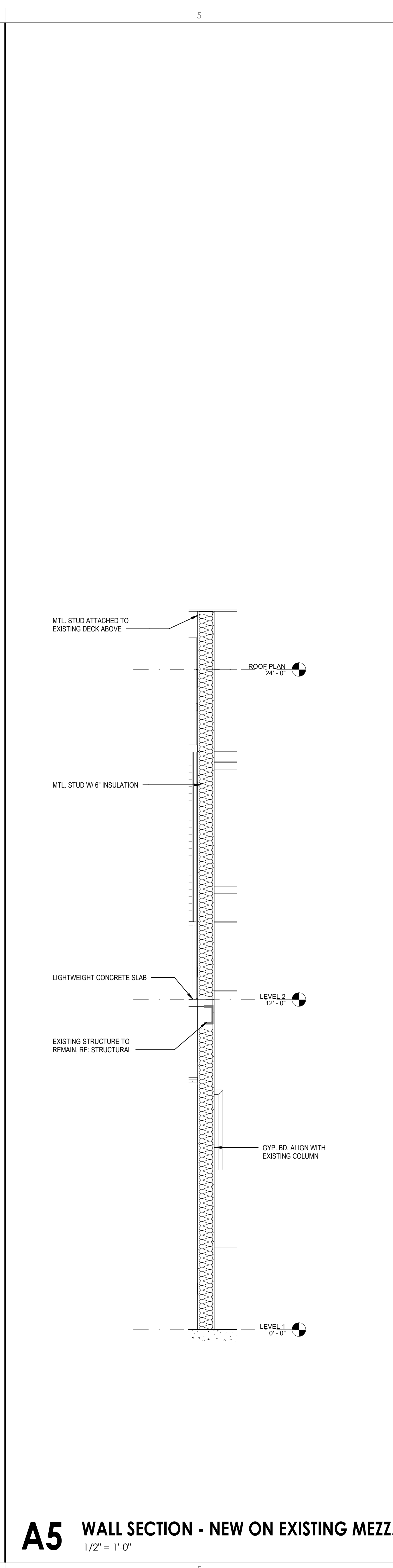
A2 WALL SECTION - MEZZANINE
1/2" = 1'-0"



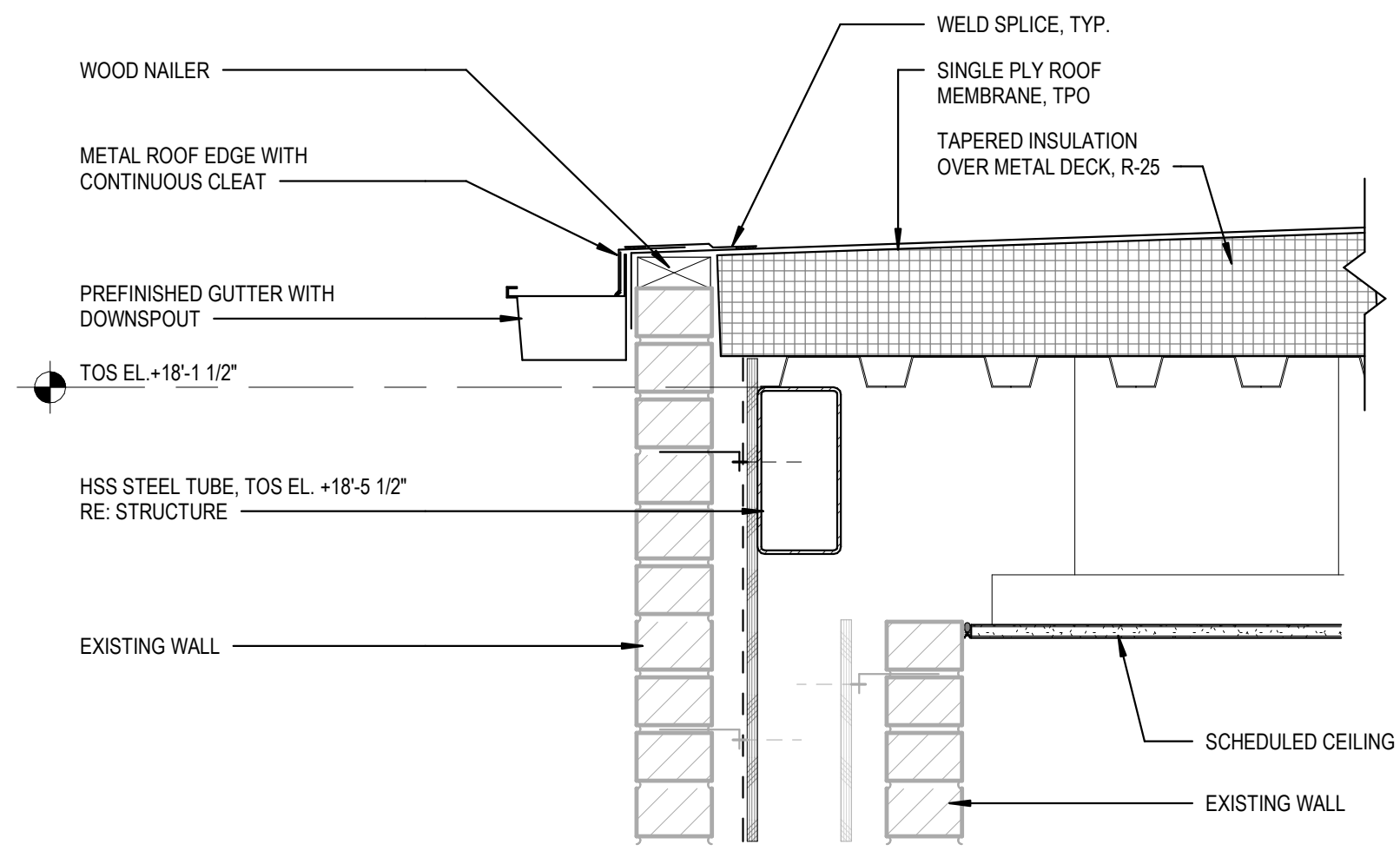
A3 WALL SECTION - ACM PANEL @ EXISTING
1/2" = 1'-0"



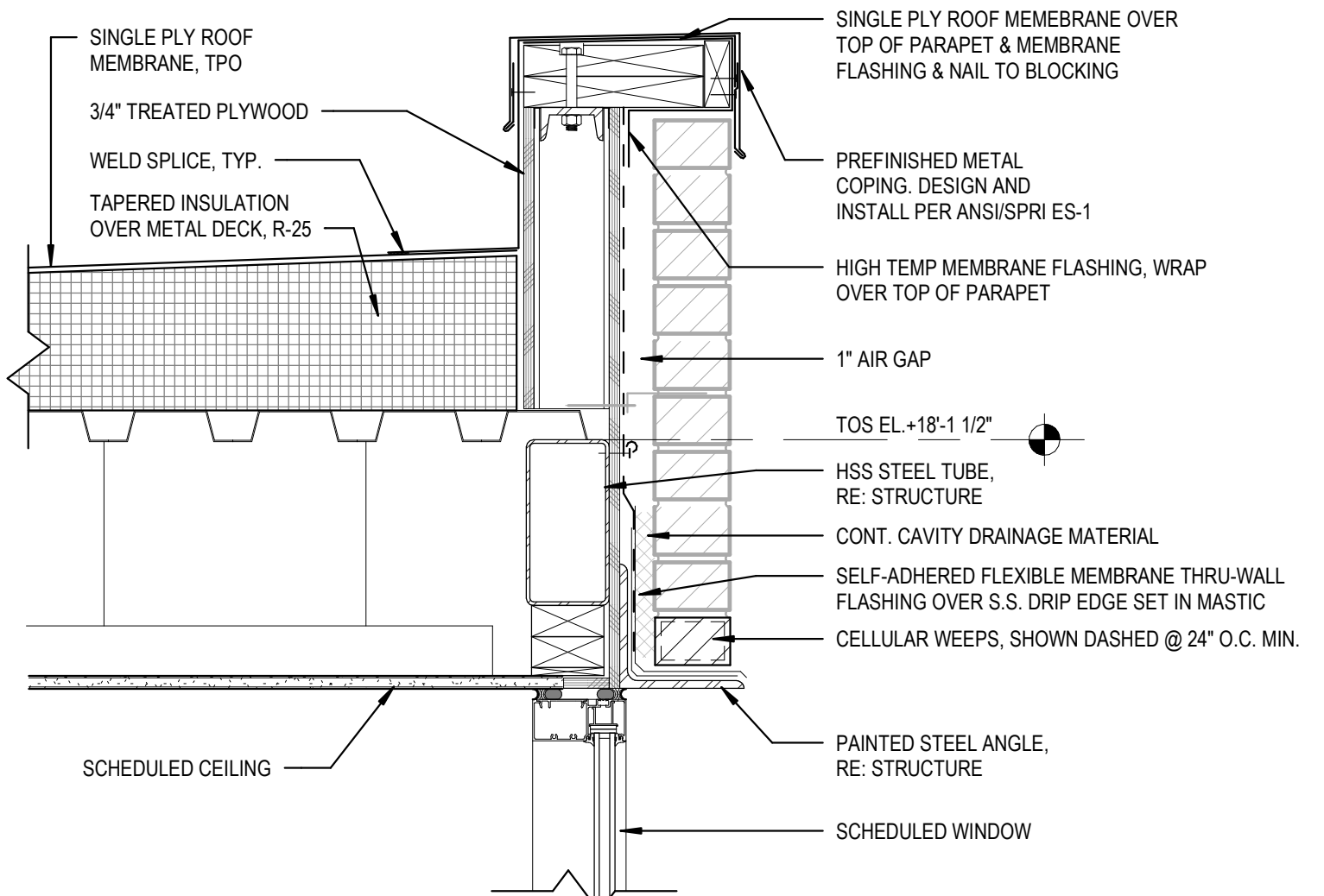
A4 WALL SECTION - EXISTING
1/2" = 1'-0"



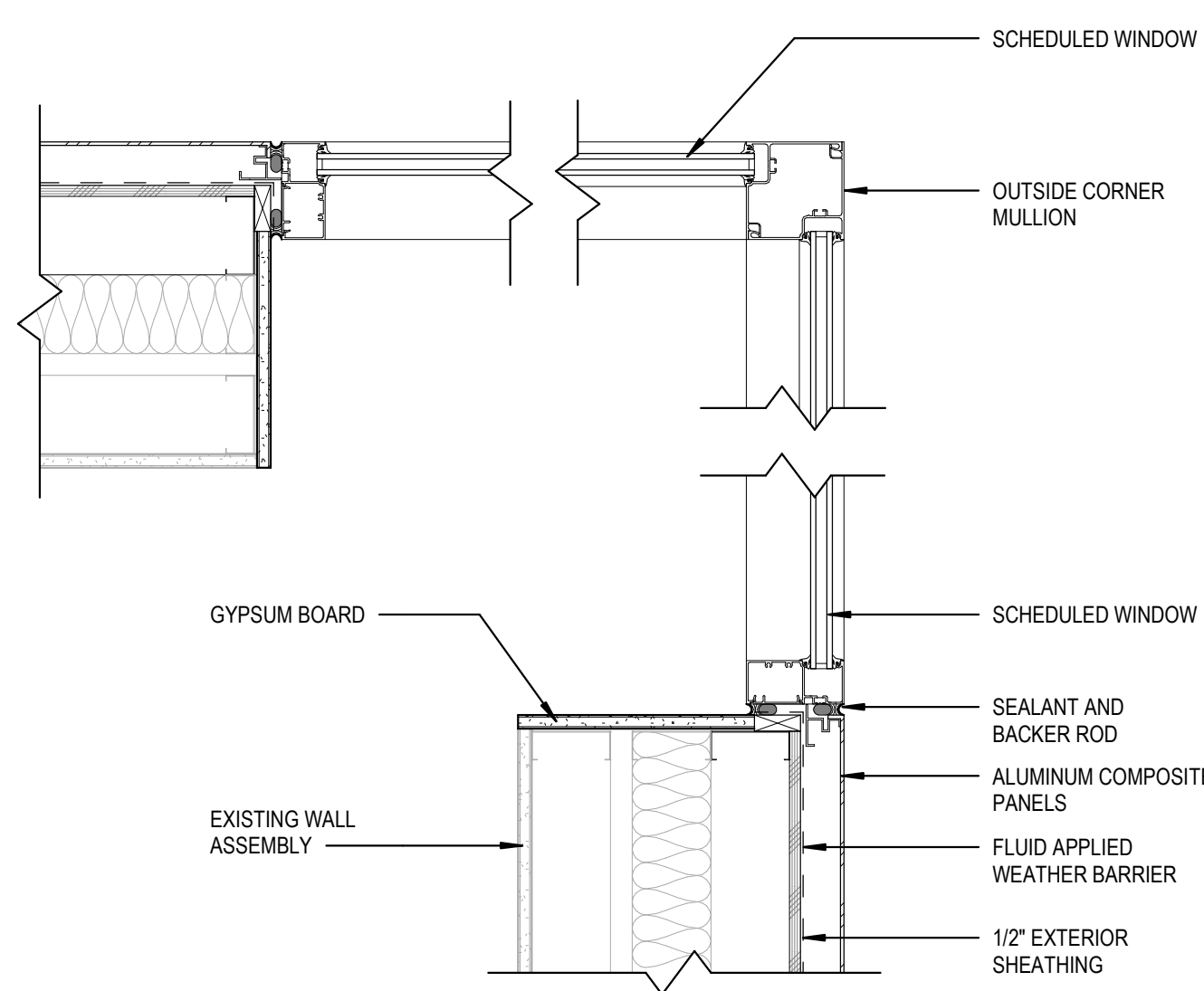
A5 WALL SECTION - NEW ON EXISTING MEZZ.
1/2" = 1'-0"



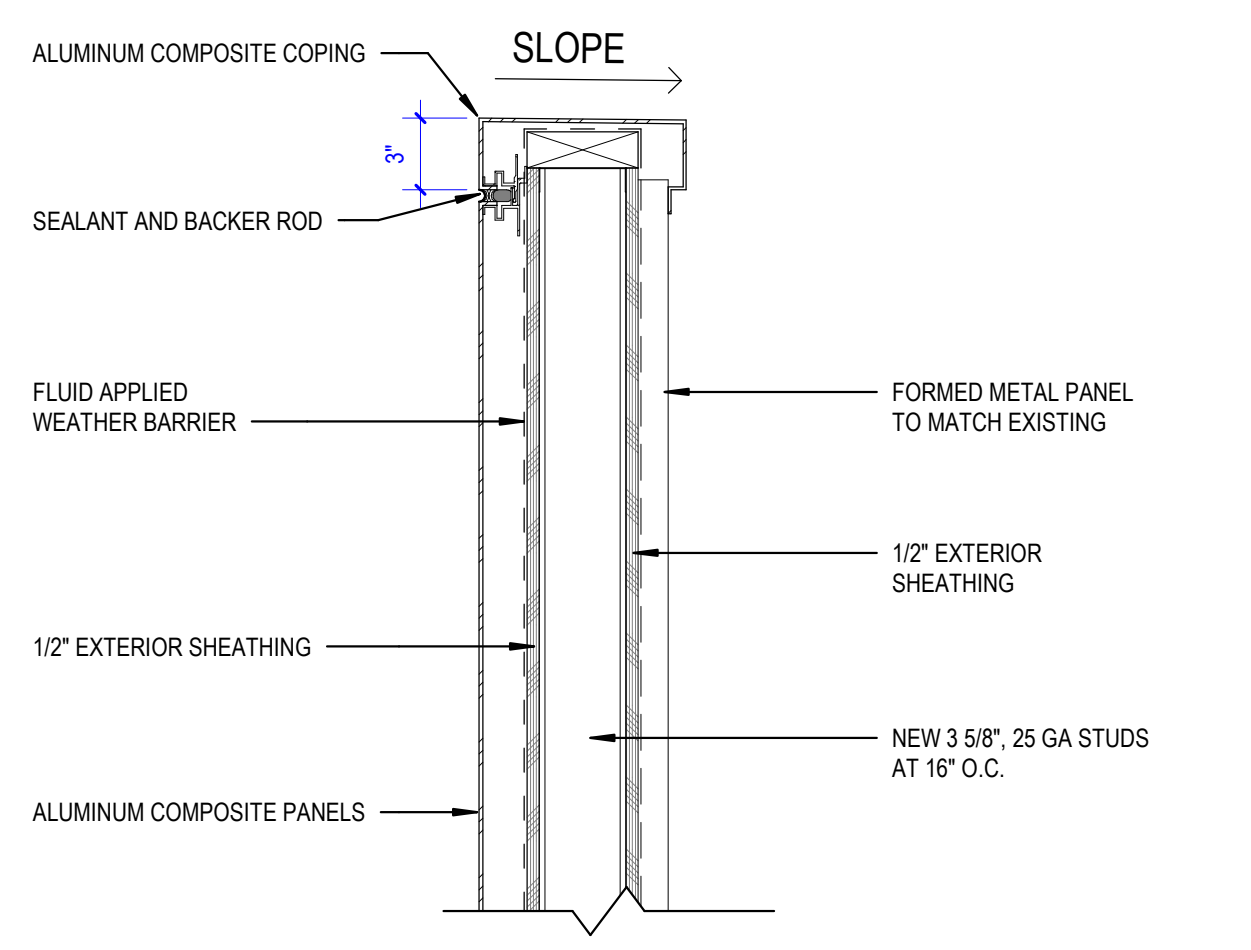
D1 GUTTER AT EXT. BRICK
1 1/2" = 1'-0"



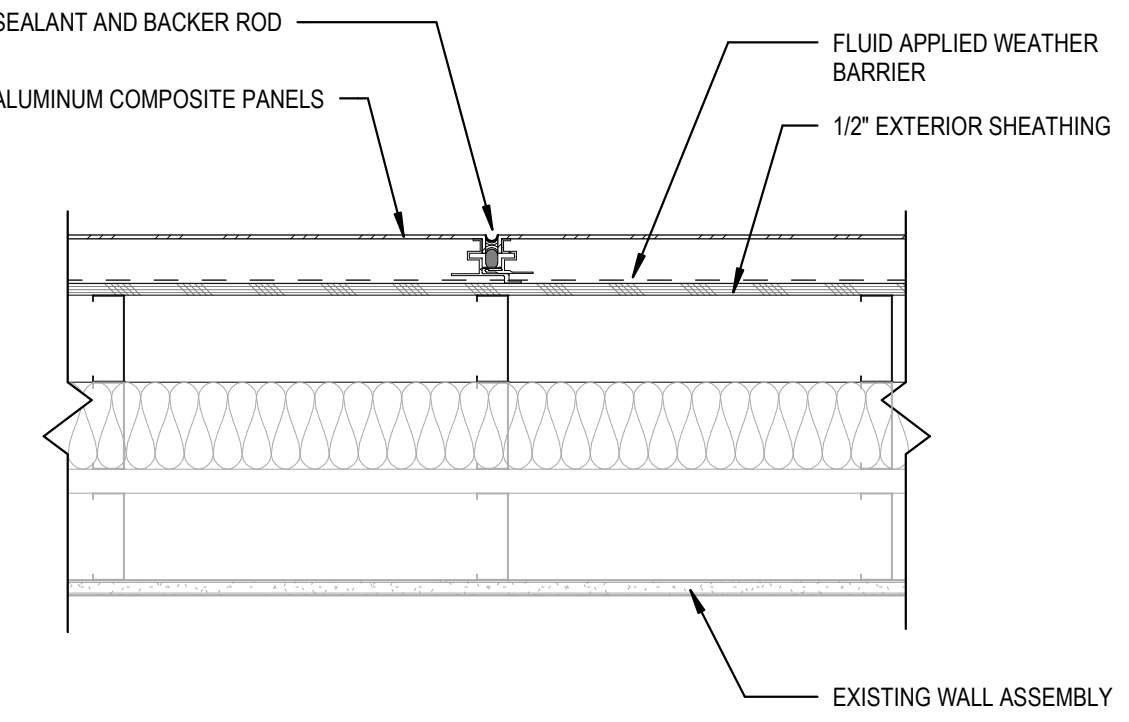
D2 PARAPET @ EXT. BRICK
1 1/2" = 1'-0"



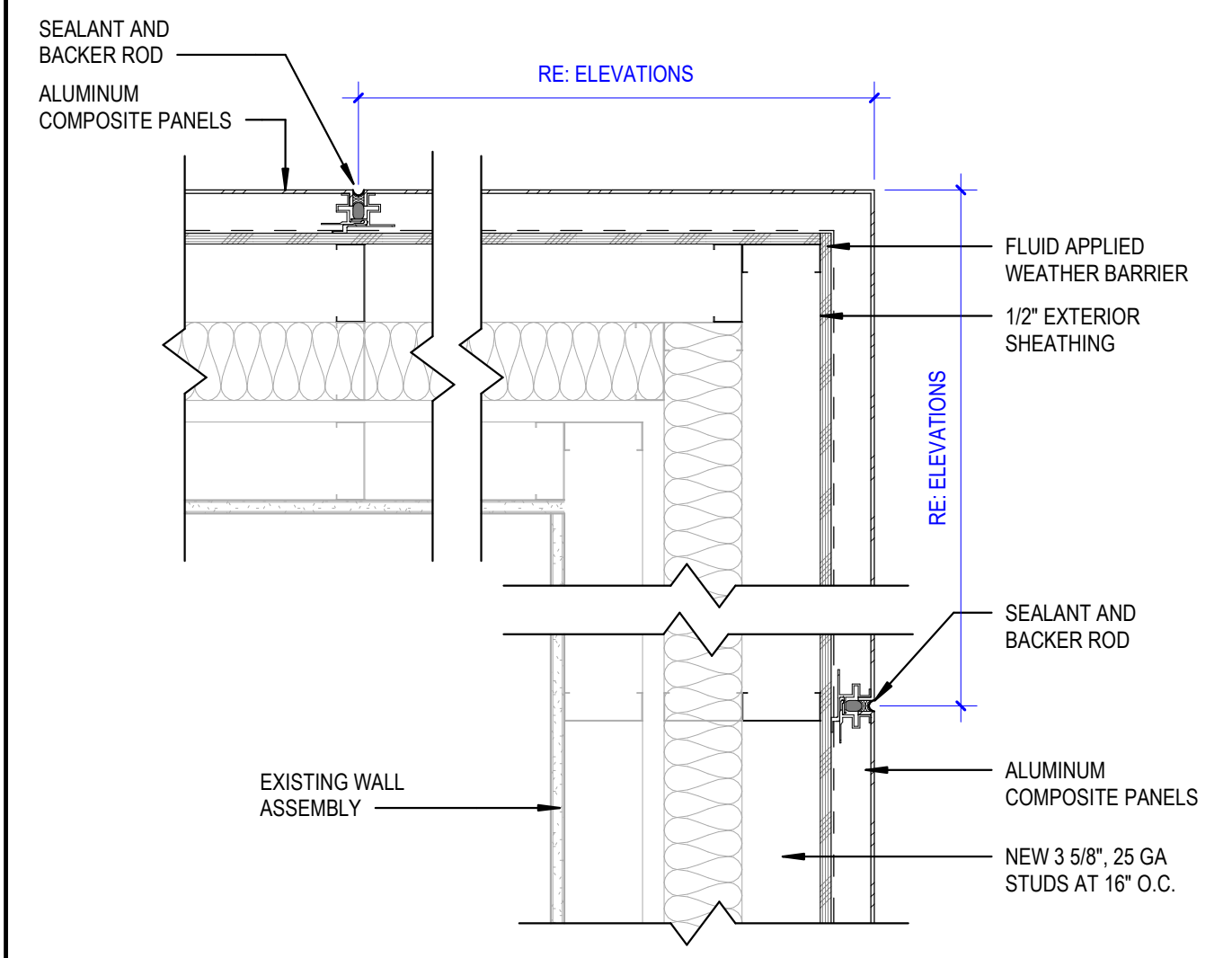
D4 WINDOW JAMB AT ACM PANEL
1 1/2" = 1'-0"



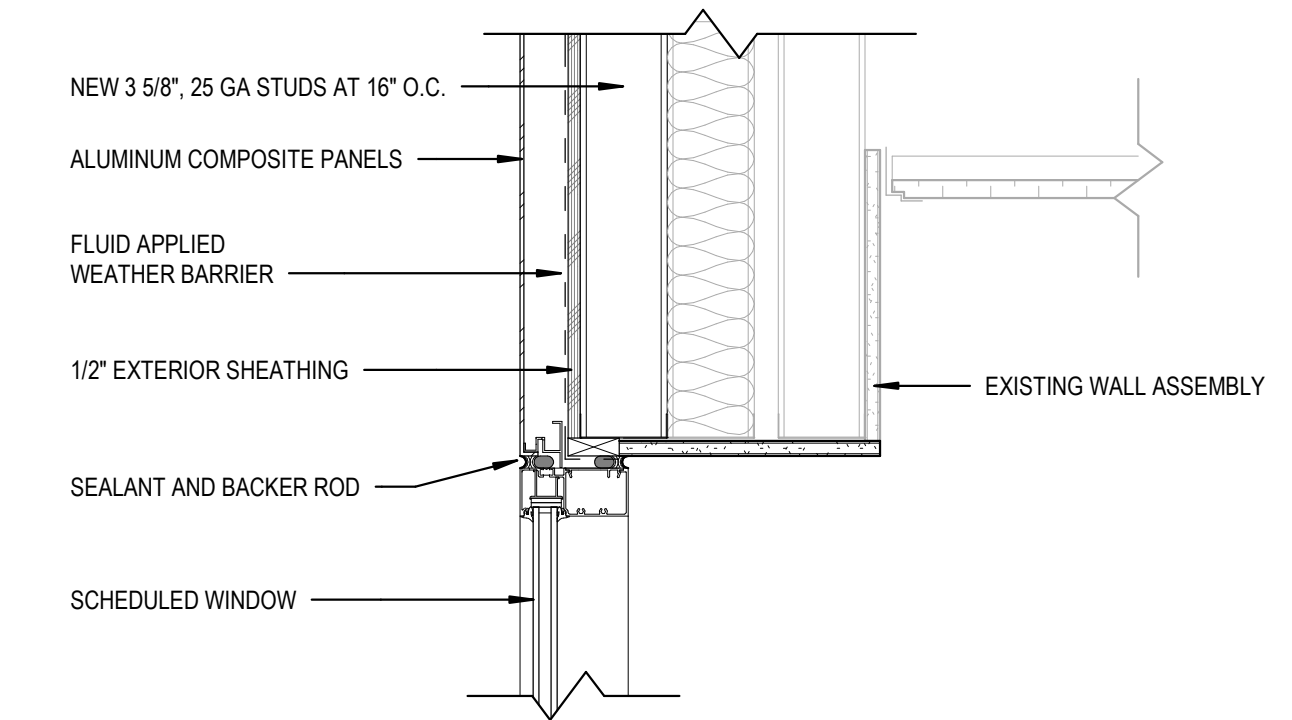
D5 ACM PANEL AT COPING
1 1/2" = 1'-0"



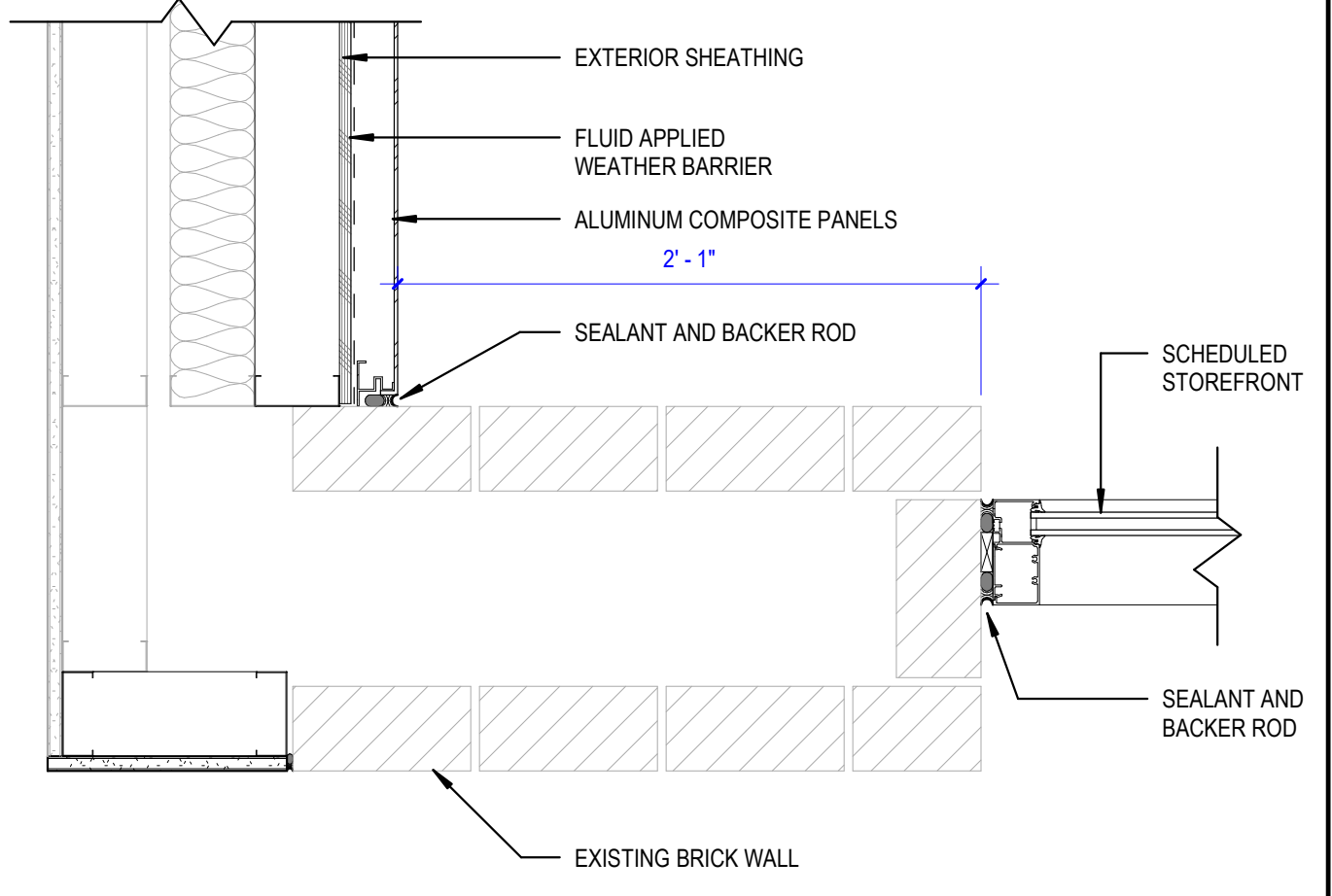
C3 ACM PANEL AT VERTICAL JOINT
1 1/2" = 1'-0"



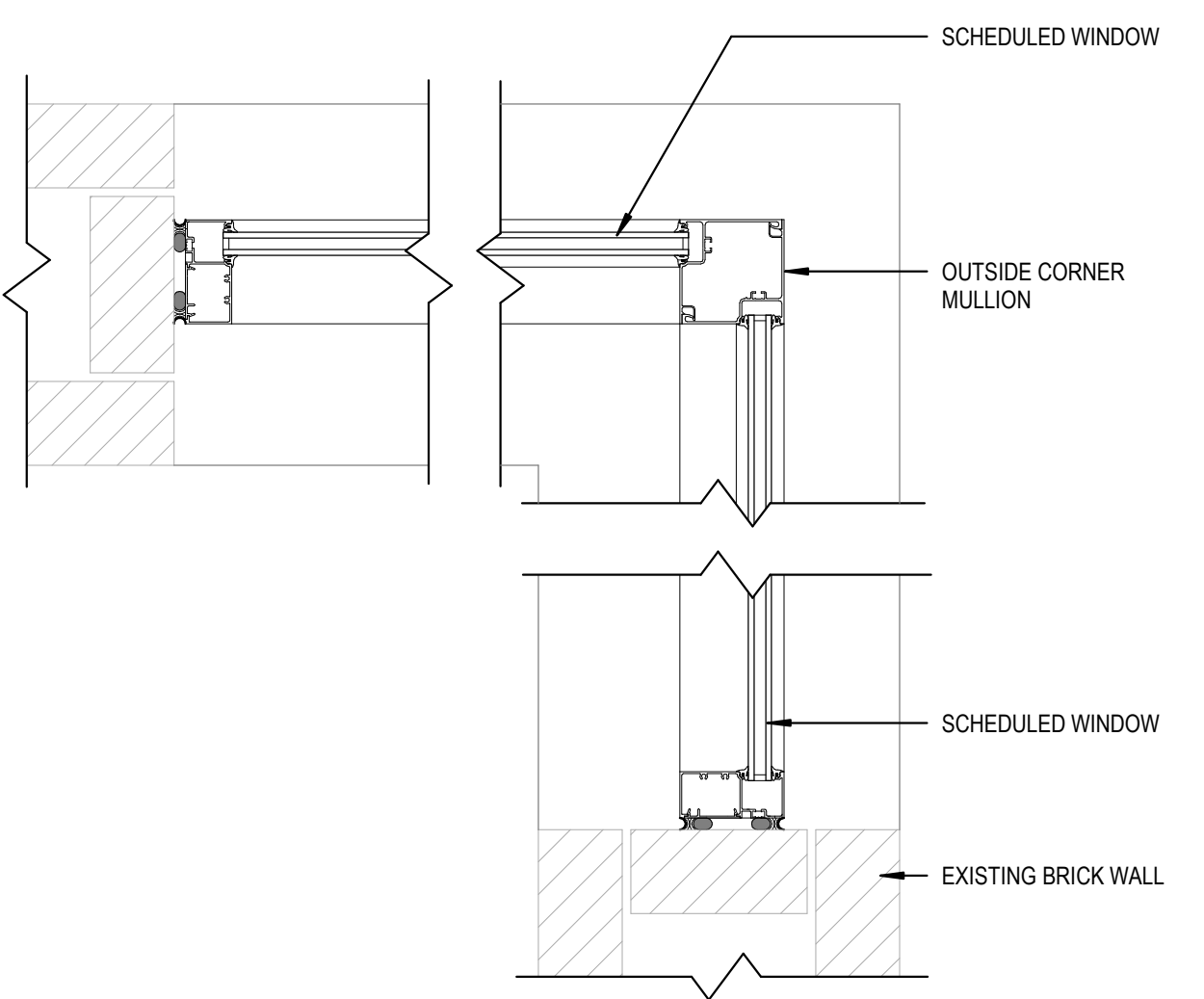
C4 ACM PANEL AT CORNER
1 1/2" = 1'-0"



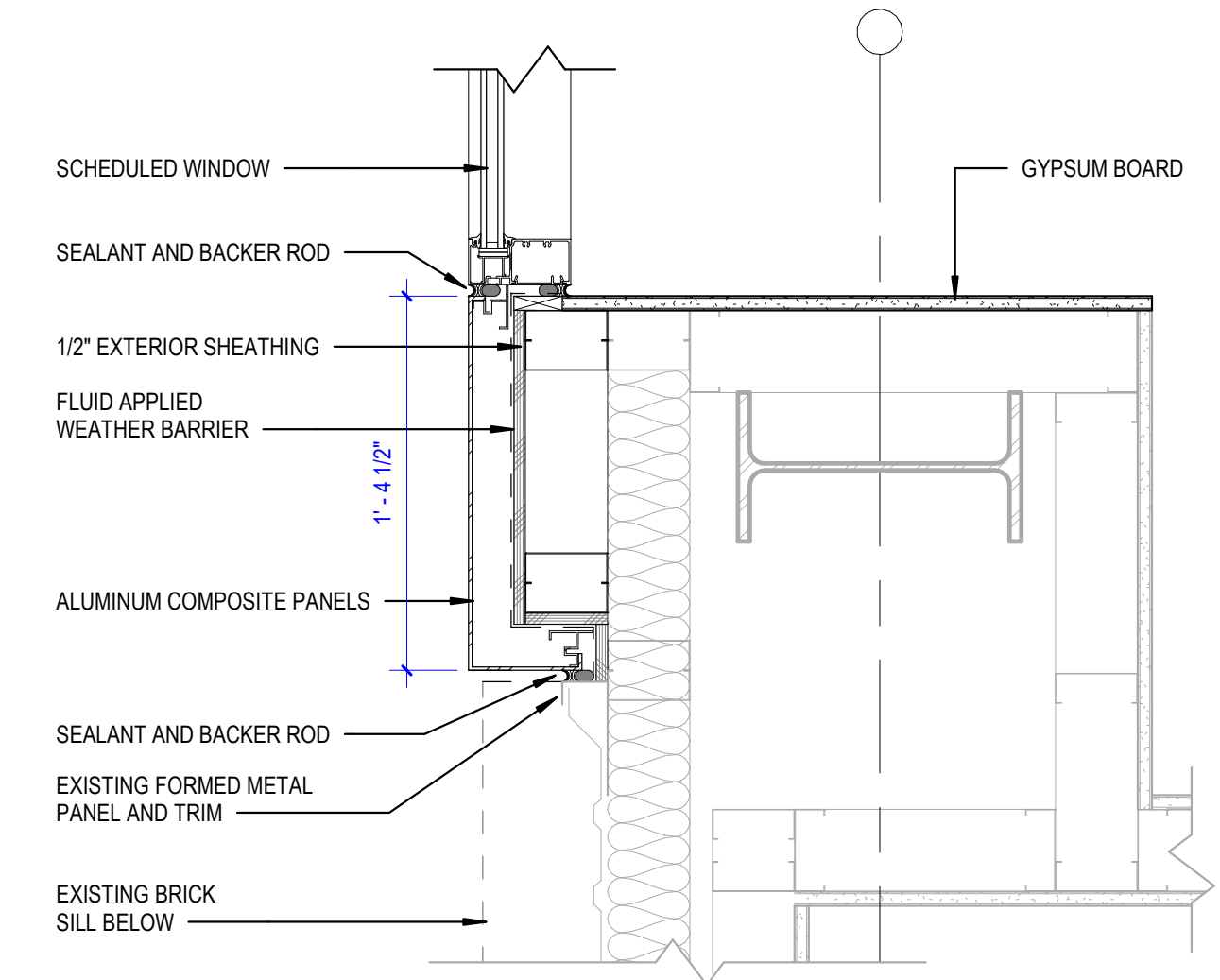
C5 ACM PANEL AT WINDOW HEAD
1 1/2" = 1'-0"



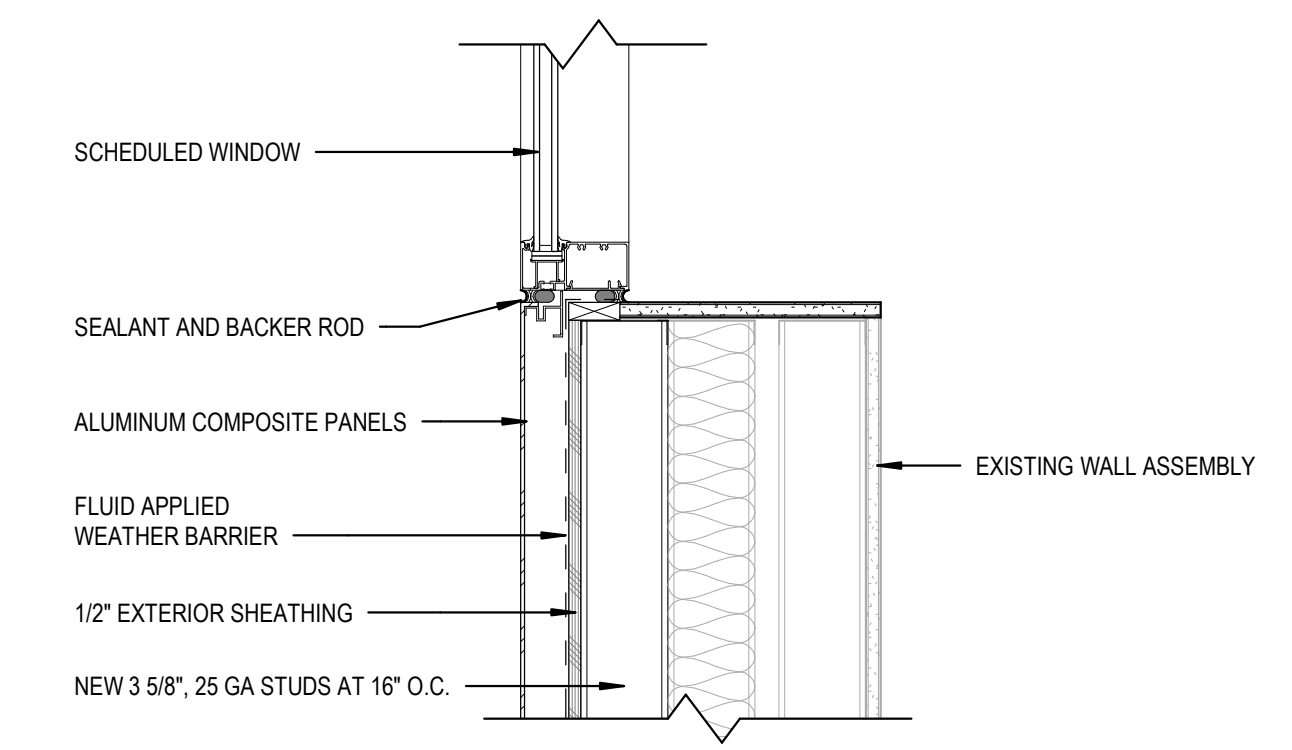
B2 ACM PANEL AT EXT. BRICK
1 1/2" = 1'-0"



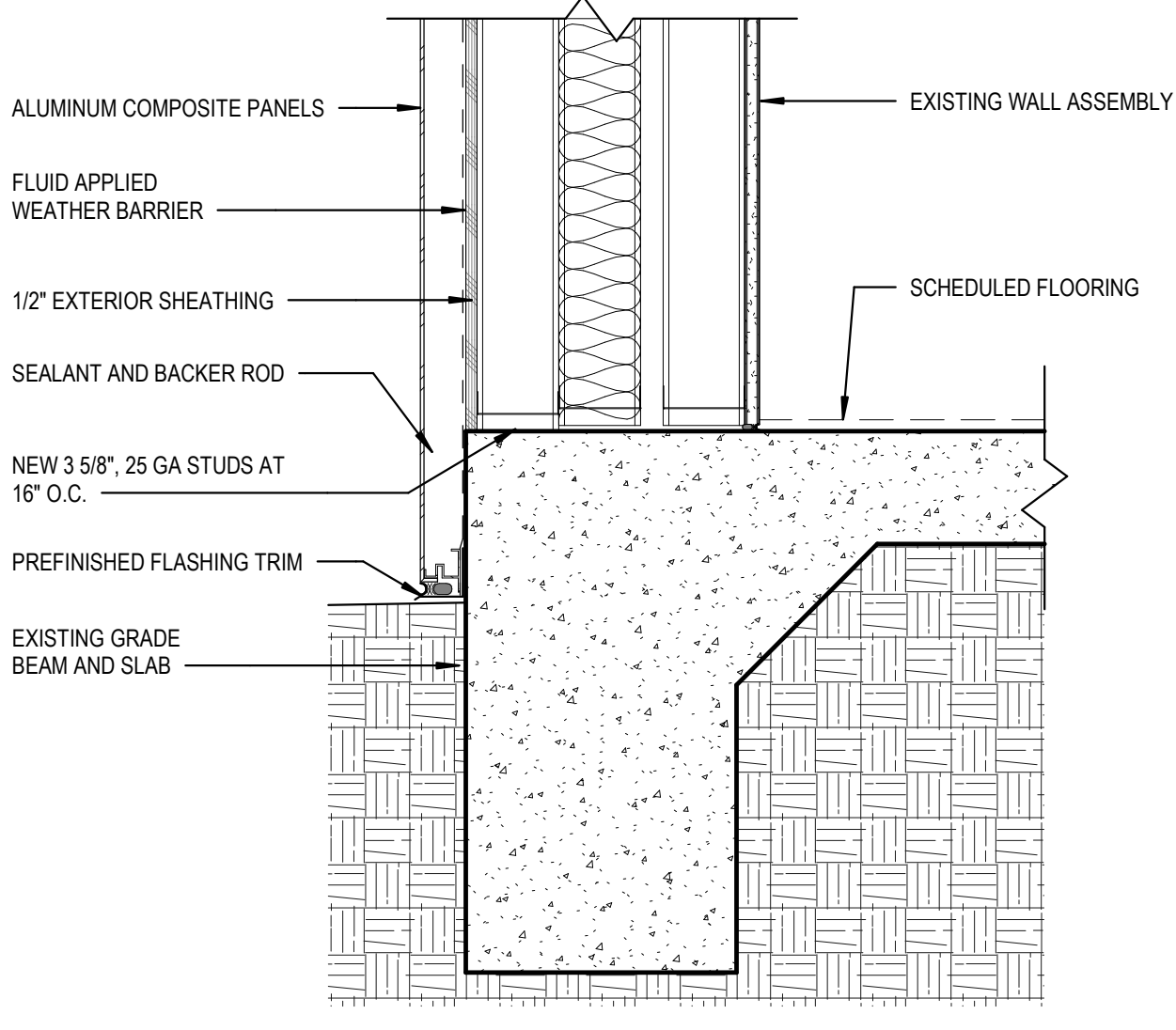
B3 WINDOW JAMB AT EXT. BRICK
1 1/2" = 1'-0"



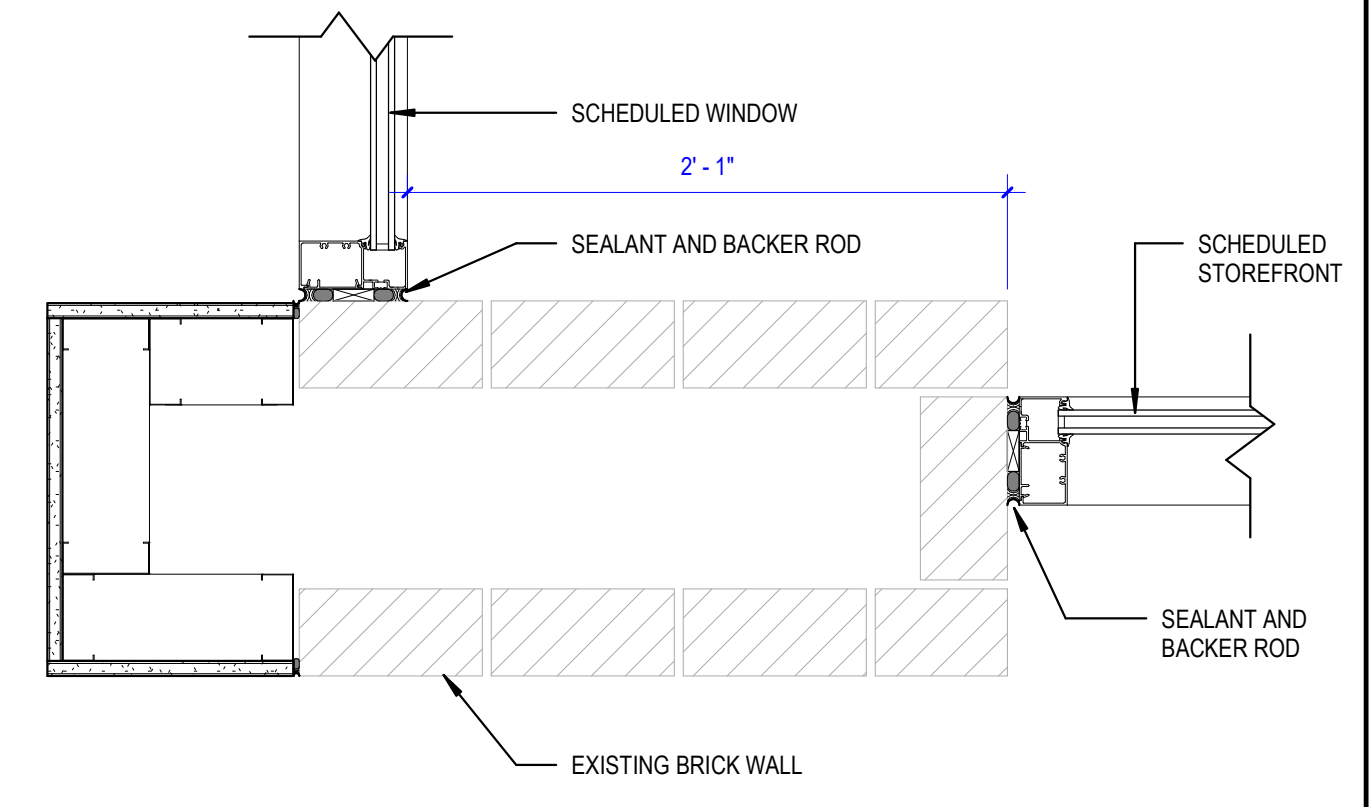
B4 ACM PANEL AT EXT. METAL PANEL
1 1/2" = 1'-0"



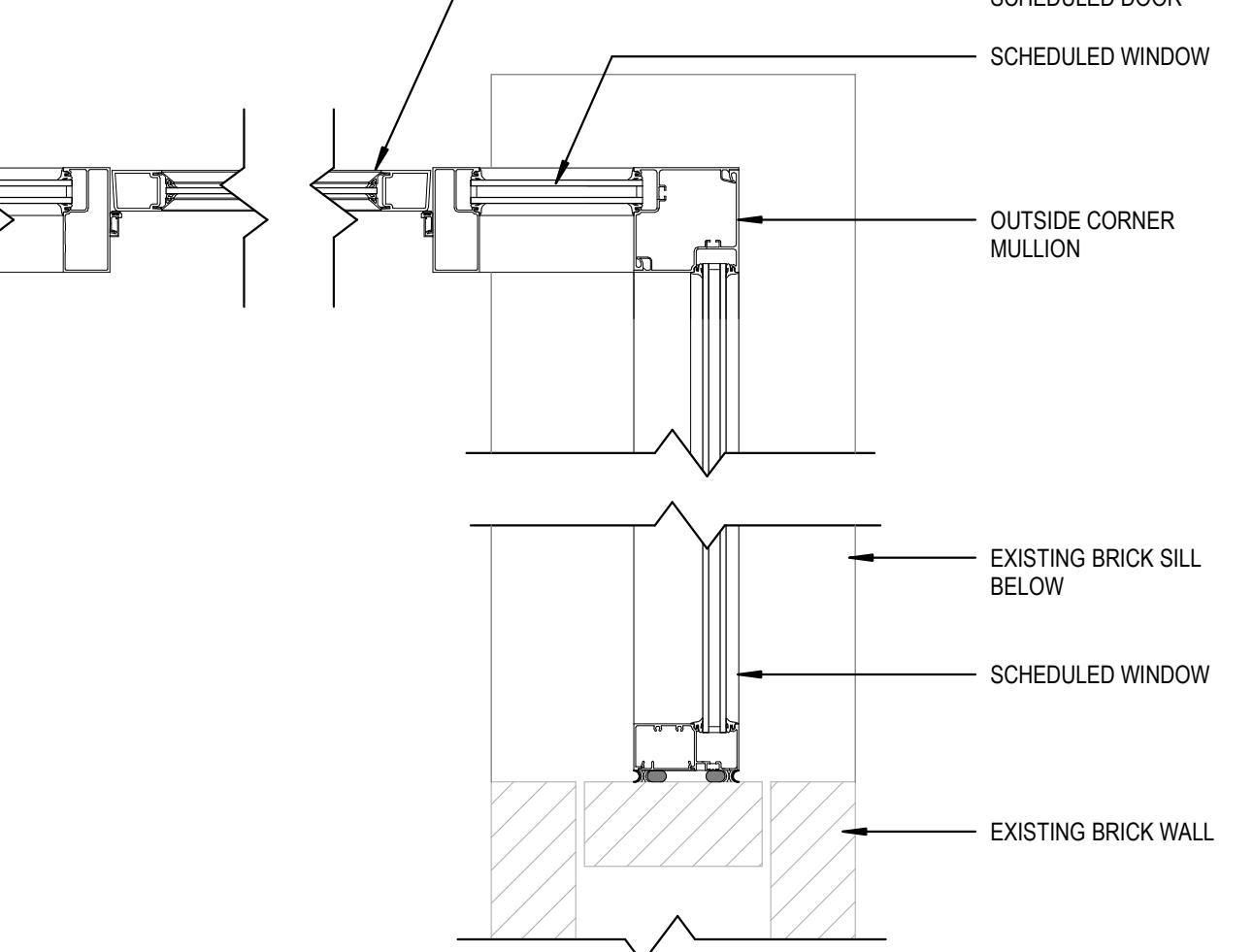
B5 ACM PANEL AT WINDOW SILL
1 1/2" = 1'-0"



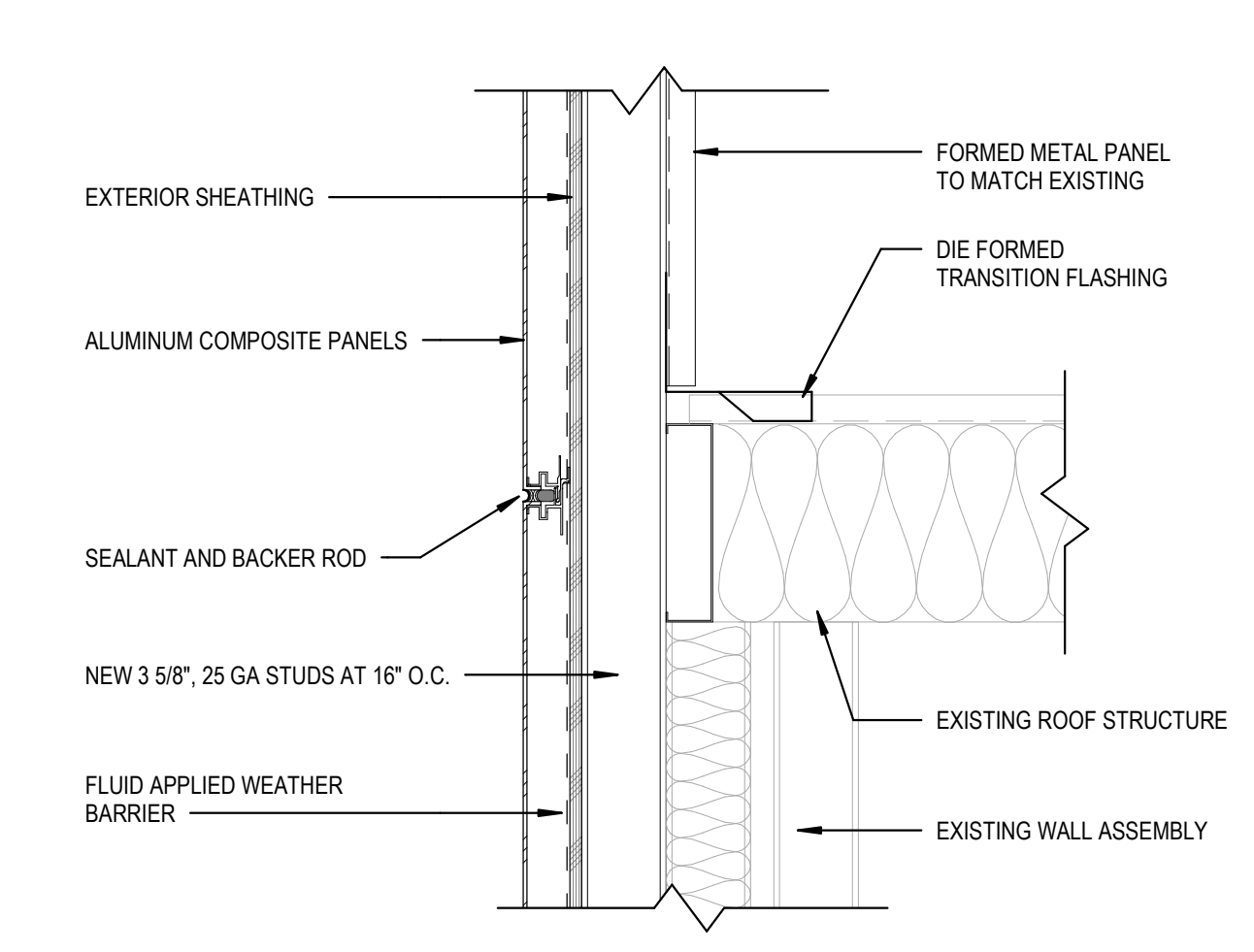
A1 ACM PANEL AT SILL Copy 1
1 1/2" = 1'-0"



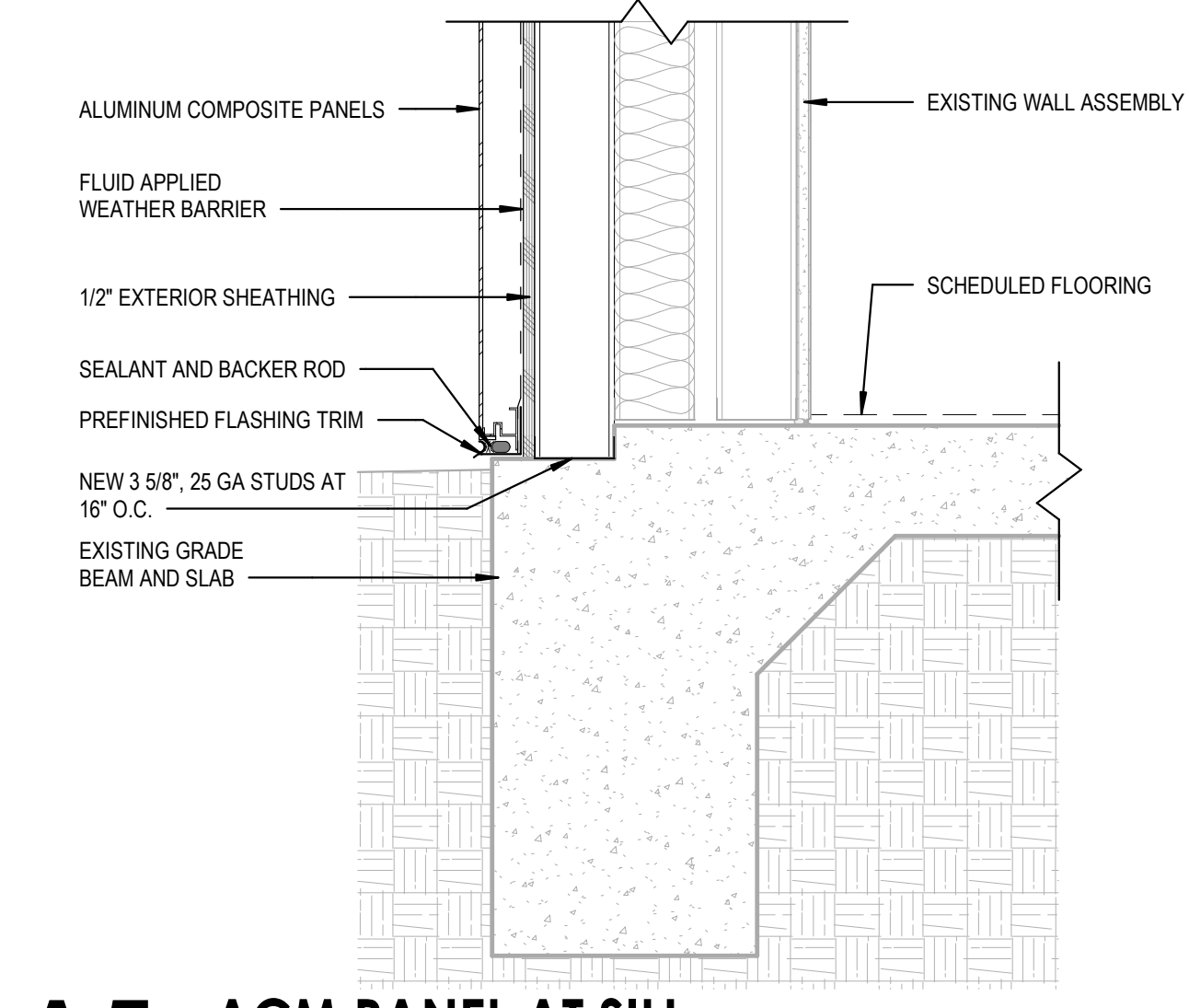
A2 WINDOW JAMB AT EXT. BRICK
1 1/2" = 1'-0"



A3 WINDOW JAMB AT EXT. BRICK
1 1/2" = 1'-0"



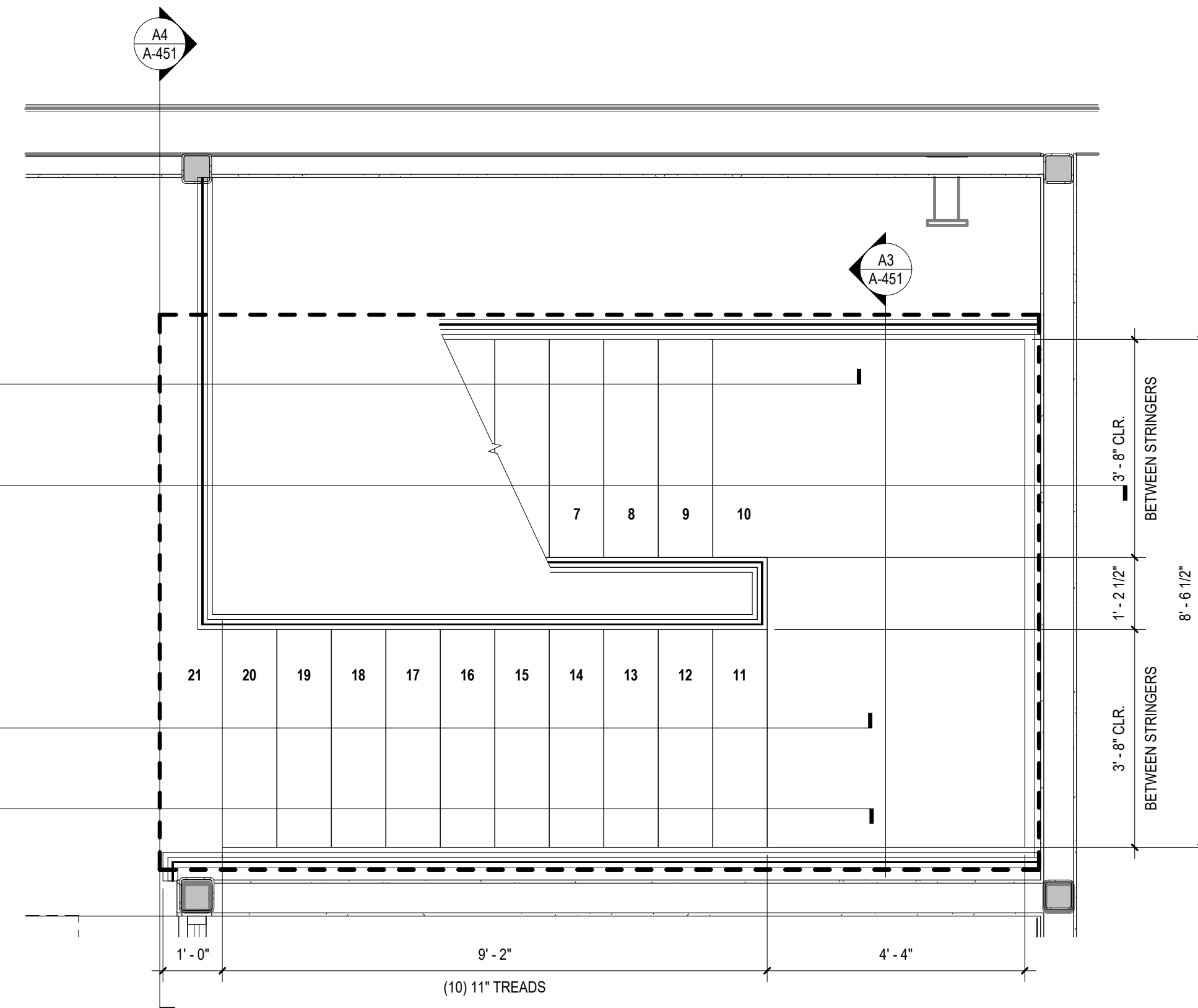
A4 ACM PANEL AT EXT. ROOF STRUCTURE
1 1/2" = 1'-0"



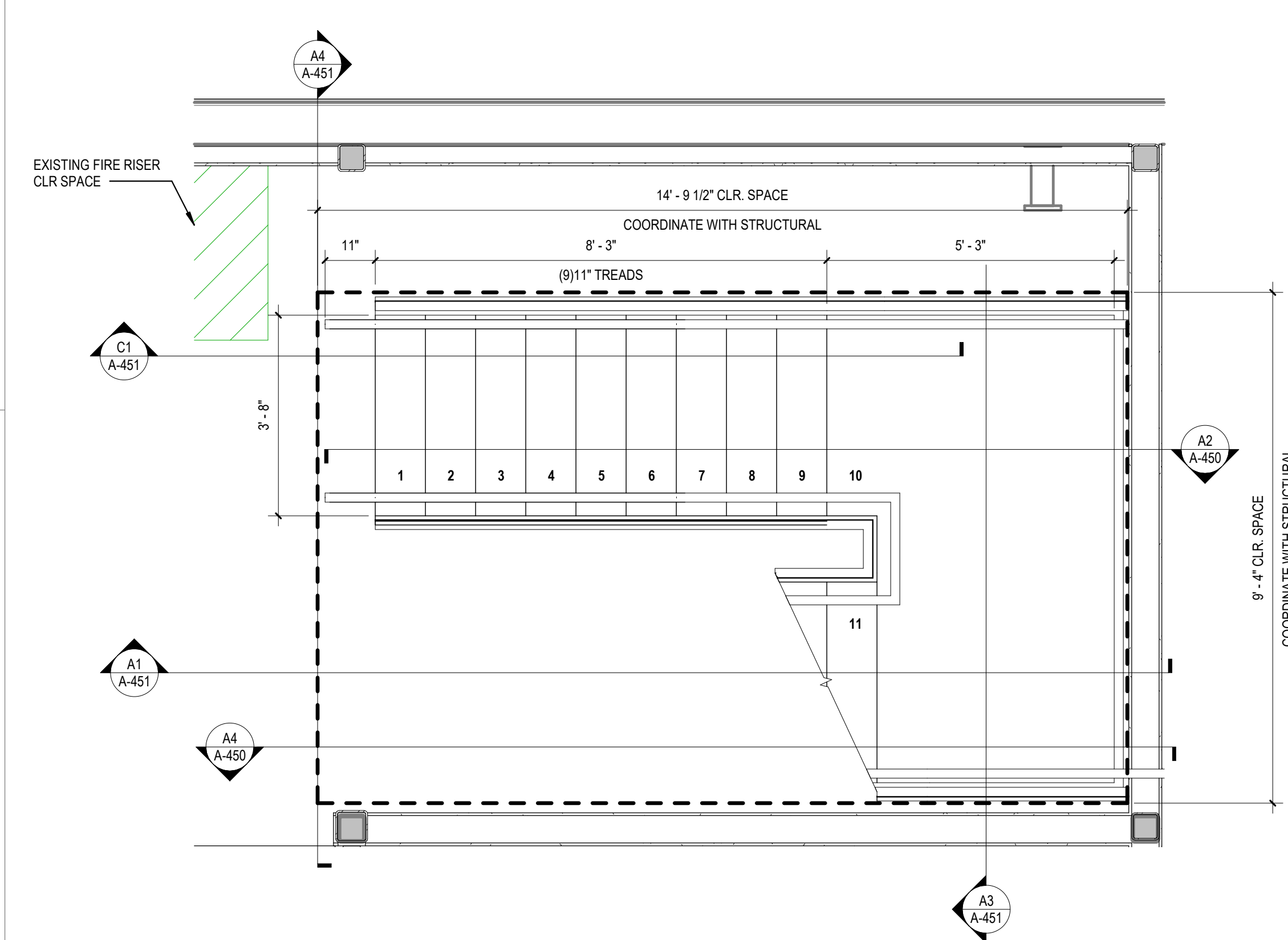
A5 ACM PANEL AT SILL
1 1/2" = 1'-0"

GENERAL NOTES: STAIRS

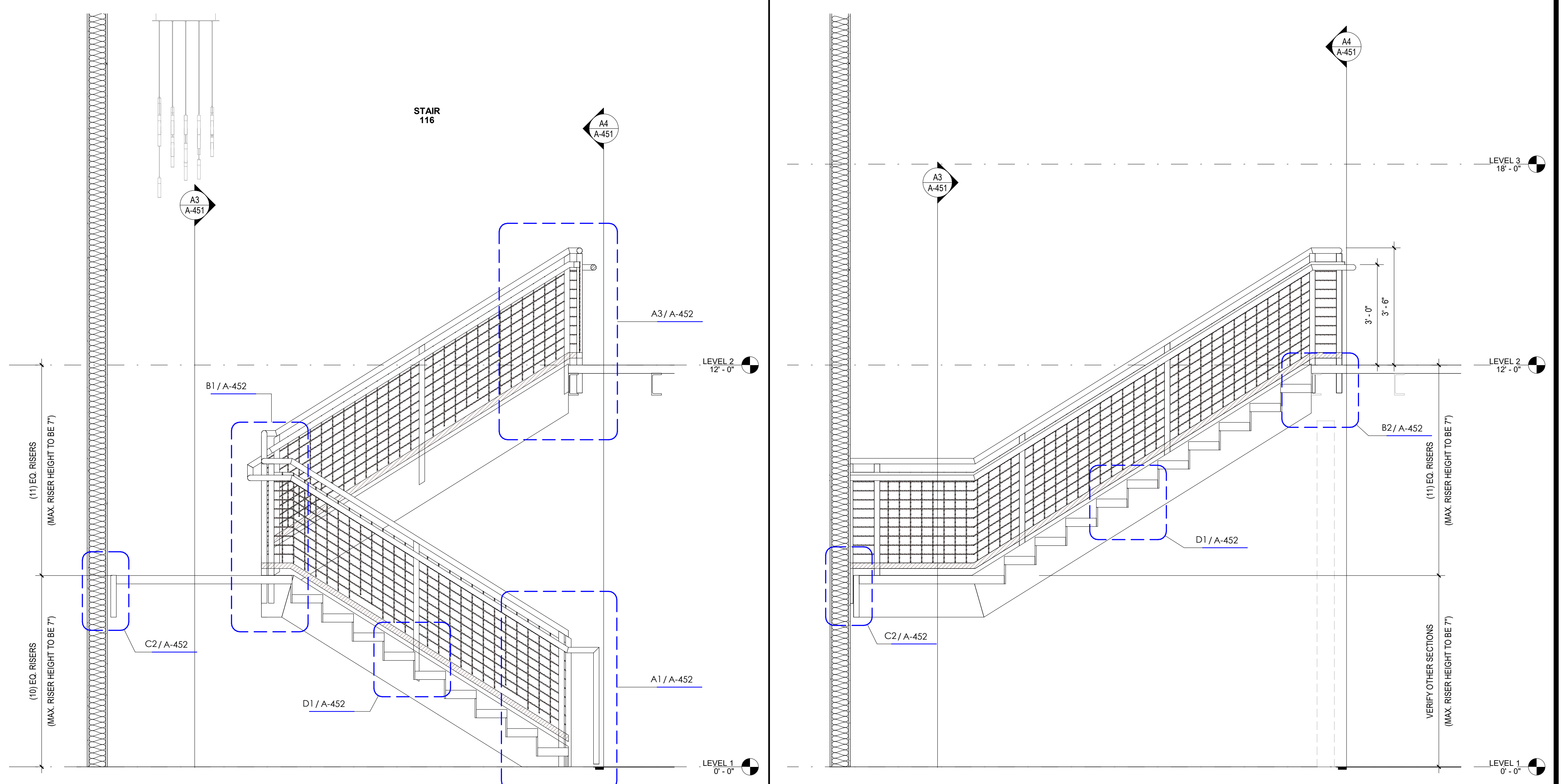
- A. METAL PAN STAIRS AND RAILINGS ARE DESIGN BUILD BY FABRICATOR, TYP. - SEE STRUCTURAL SHEETS FOR ADDITIONAL INFORMATION.
- B. STAIR FABRICATOR TO SUBMIT SHOP DRAWINGS AND CALCULATIONS SEALED BY A LICENSED TEXAS ENGINEER TO THE ARCHITECT AND BUILDING STRUCTURAL ENGINEER FOR REVIEW AND COMMENT PRIOR TO FABRICATION.
- C. SIZES OF ALL STAIR, HANDRAIL, AND GUARDRAIL MEMBERS SHOWN ARE MINIMUM AND SHOWN FOR DESIGN INTENT ONLY. FABRICATOR SHALL BE RESPONSIBLE FOR DETERMINING MEMBER SIZES TO COMPLY WITH CODE REQUIRED LOADING CRITERIA.
- D. STAIR FABRICATOR TO FIELD VERIFY EXISTING SITE CONDITIONS PRIOR TO FABRICATION OF STAIRS.
- E. COORDINATE SUPPORT MEMBERS WITH STRUCTURAL DRAWINGS.
- F. COORDINATE STAIR OPENINGS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO FABRICATION.
- G. INTERIOR AND EXTERIOR STAIRS TO COMPLY WITH THE FOLLOWING MINIMUM REQUIREMENTS ESTABLISHED BY THE 2006 INTERNATIONAL BUILDING CODE (IBC) WITH CITY OF HOUSTON AMENDMENTS REQUIREMENTS AND THE 2012 TEXAS ACCESSIBILITY STANDARDS (TAS), WHERE DIMENSIONS GIVEN IN THE STAIR PLANS, SECTIONS AND DETAILS EXCEED THESE MINIMUM REQUIREMENTS, THE DIMENSIONS GIVEN IN THE STAIR PLANS, SECTIONS AND DETAILS GOVERN.
 - STAIR WIDTH (IBC SEC. 1009.3 / OR AS REQUIRED BY IBC SEC. 1009.1): 44" MINIMUM CLEAR.
 - HEADROOM (IBC SEC. 1009.2): 80" MINIMUM CLEAR HEADROOM MEASURED VERTICALLY FROM A LINE CONNECTING THE EDGE OF THE NOSINGS.
 - STAIR RISE (IBC SEC. 1009.3 / TAS SEC. 504.2): 7" MAXIMUM AND 4" MINIMUM.
 - STAIR RUN (IBC SEC. 1009.3 / TAS SEC. 504.2): 11" MINIMUM.
 - STAIR DIM. UNIFORMITY (IBC SEC. 1009.2): 0.375" MAXIMUM RISER OR TREAD DIMENSIONAL DIFFERENTIAL.
 - STAIR PROFILE (IBC SEC. 1009.3 / TAS SEC. 504.5): 1/2" MAXIMUM RADIUS OR BEVEL OF STAIR NOSING, CLOSED RISERS, VERTICAL OR SLOPED (30 DEGREE MAXIMUM).
 - STAIR LANDINGS (IBC SEC. 1009.4): REQUIRED AT TOP AND BOTTOM OF EACH STAIR RUN, MINIMUM LANDING WIDTH NOT TO BE LESS THAN WIDTH OF STAIR.
 - STAIR CONSTRUCTION (IBC SEC. 1009.5): STAIRWAYS SHALL BE BUILT OF MATERIALS CONSISTENT WITH THE TYPES PERMITTED FOR THE TYPE OF CONSTRUCTION OF THE BUILDING.
 - STAIR WALKING SURFACE (IBC SEC. 1009.5.1 / TAS SEC. 302 & 504.4): INTERIOR STAIRS SHALL HAVE LEVEL TREADS. EXTERIOR STAIRS SHALL HAVE SLOPED TREADS TO PREVENT WATER ACCUMULATION (2% MAX.).
 - STAIR VERTICAL RISE (IBC SEC. 1009.6): MAXIMUM VERTICAL RISE SHALL BE LIMITED TO 12' BETWEEN LANDINGS.
 - CURVED STAIRWAYS (IBC SEC. 1009.7): NOT APPLICABLE TO THIS PROJECT.
 - SPIRAL STAIRWAYS (IBC SEC. 1009.8): NOT APPLICABLE TO THIS PROJECT.
 - ALTERNATING TREAD DEVICES (IBC SEC. 1009.9): NOT APPLICABLE TO THIS PROJECT.
 - STAIR HANDRAILS (IBC SEC. 1009.10): UNLESS EXCEPTIONS ALLOW, STAIRS SHALL BE PROVIDED WITH HANDRAILS ON EACH SIDE.
- H. ADDITIONAL EXTERIOR STAIR NOTES. NOT APPLICABLE TO THIS PROJECT.
 - PROVIDE CONCRETE PAD AT BASE OF EXTERIOR STAIRS. - SEE CIVIL/LANDSCAPE SHEETS FOR ADDITIONAL INFORMATION.
 - EXPOSED CONCRETE TREAD COLOR TO MATCH ADJACENT HARDSCAPE COLOR. - SEE LANDSCAPE/CIVIL DRAWINGS.
- I. INTERIOR AND EXTERIOR RAMPS TO COMPLY WITH THE FOLLOWING MINIMUM REQUIREMENTS ESTABLISHED BY THE 2006 INTERNATIONAL BUILDING CODE (IBC) WITH CITY OF HOUSTON AMENDMENTS REQUIREMENTS AND THE 2012 TEXAS ACCESSIBILITY STANDARDS (TAS), WHERE DIMENSIONS GIVEN IN THE STAIR PLANS, SECTIONS AND DETAILS EXCEED THESE MINIMUM REQUIREMENTS, THE DIMENSIONS GIVEN IN THE STAIR PLANS, SECTIONS AND DETAILS GOVERN.
 - RAMP SLOPE (IBC SEC. 1010.2 / TAS 406.1): RUNNING SLOPE SHALL NOT BE STEEPER THAN ONE UNIT VERTICAL IN 12 UNITS HORIZONTAL (8-PERCENT SLOPE).
 - RAMP CROSS SLOPE (IBC SEC. 1010.3 / TAS 406.3): CROSS SLOPE SHALL NOT BE STEEPER THAN ONE UNIT VERTICAL IN 48 UNITS HORIZONTAL (2-PERCENT SLOPE).
 - RAMP VERTICAL RISE (IBC SEC. 1010.4 / TAS 406.6): THE RISE FOR ANY RAMP RUN SHALL NOT EXCEED 30 INCHES.
 - RAMP CLEAR WIDTH (IBC SEC. 1010.5.1 / TAS 406.5): CLEAR WIDTH BETWEEN HANDRAILS TO BE NO LESS THAN 36" OR AS NEEDED FOR EGRESS WIDTH, WHICHEVER IS LARGER.
 - RAMP HEADROOM (IBC SEC. 1010.5.2 / TAS 407.4): MINIMUM CLEAR HEADROOM SHALL NOT BE LESS THAN 80".
 - RAMP WIDTH RESTRICTIONS (IBC SEC. 1010.5.3): RAMPS USED AS MEANS OF EGRESS SHALL NOT REDUCE IN WIDTH IN THE DIRECTION OF EGRESS TRAVEL. DOORS OPENING INTO LANDINGS SHALL NOT REDUCE THE CLEAR WIDTH TO LESS THAN 42".
 - RAMP LANDINGS SLOPE (IBC SEC. 1010.6.1 / TAS 407.1): LANDINGS SHALL NOT HAVE A SLOPE STEEPER THAN ONE UNIT VERTICAL IN 48 UNITS HORIZONTAL (2-PERCENT SLOPE). CHANGES IN LEVEL ARE NOT PERMITTED.
 - RAMP LANDING WIDTH (IBC SEC. 1010.6.2 / TAS 407.2): LANDINGS SHALL BE AT LEAST AS WIDE AS THE WIDEST RAMP RUN ADJOINING THE LANDING.
 - RAMP LANDING LENGTH (IBC SEC. 1010.6.3 / TAS 407.3): LANDINGS SHALL HAVE A CLEAR LENGTH NOT LESS THAN 60".
 - RAMP LANDINGS WITH CHANGE IN DIRECTION (IBC SEC. 1010.6.4 / TAS 407.4): WHERE CHANGES IN DIRECTION OCCUR AT LANDINGS, LANDINGS SHALL HAVE A MINIMUM CLEAR DIMENSION OF 60" X 60".
 - DOORWAYS AT RAMP LANDINGS (IBC SEC. 1010.6.5 / TAS 407.5): WHERE DOORWAYS ARE LOCATED ADJACENT TO RAMP LANDINGS, REQUIRED DOOR CLEARANCES MAY OVERLAP WITH THE REQUIRED LANDING AREA.
 - RAMP CONSTRUCTION (IBC SEC. 1010.7): RAMPS SHALL BE BUILT OF MATERIALS CONSISTENT WITH THE BUILDING CONSTRUCTION TYPE.
 - RAMP SURFACE (IBC SEC. 1010.7.1): RAMP SURFACES SHALL BE SLIP-RESISTANT.
 - OUTDOOR RAMPS (IBC SEC. 1010.7.2 / TAS 406.10): OUTDOOR RAMPS AND OUTDOOR APPROACHES TO RAMPS SHALL BE DESIGNED SO THAT WATER DOES NOT ACCUMULATE ON WALKING SURFACES.
 - RAMP HANDRAILS (IBC SEC. 1010.8 / TAS 406.9): RAMPS RUNS WITH A RISE GREATER THAN 8" SHALL HAVE HANDRAILS.
 - RAMP EDGE PROTECTION (IBC SEC. 1010.9 / TAS 406.9): RAMP EDGE PROTECTION REQUIRED UNLESS RAMP IS NOT REQUIRED TO HAVE HANDRAILS AND SIDES ARE FLARED. RAMP LANDINGS EDGE PROTECTION REQUIRED UNLESS 1) SIDE OF LANDING SERVES AN ADJOINING RAMP OR STAIRWAY OR 2) RAMP LANDINGS HAVE A VERTICAL DROP OF NO MORE THAN 0.5' WITHIN 10' OF THE REQUIRED LANDING AREA. EDGE PROTECTION SHALL CONSIST OF 1) A CURB, RAIL, WALL OR BARRIER THAT PREVENTS THE PASSAGE OF A 4" SPHERE WHERE ANY PORTION OF THE SPHERE IS WITHIN 4" OF THE FLOOR OR GROUND SURFACE OR 2) THE ADJACENT GROUND SURFACE OF THE RAMP RUN OR LANDINGS EXTENDS A MINIMUM OF 12" BEYOND THE INSIDE FACE OF THE REQUIRED HANDRAIL.
 - RAMP GUARDS (IBC SEC. 1010.10): WHERE GUARDRAILS ARE REQUIRED BY OTHER CODE PROVISIONS, GUARDS SHALL COMPLY WITH GUARDRAIL REQUIREMENTS.
 - HANDRAILS TO COMPLY WITH THE FOLLOWING MINIMUM REQUIREMENTS ESTABLISHED BY THE 2006 INTERNATIONAL BUILDING CODE (IBC) WITH CITY OF HOUSTON AMENDMENTS REQUIREMENTS AND THE 2012 TEXAS ACCESSIBILITY STANDARDS (TAS), WHERE DIMENSIONS GIVEN IN THE STAIR PLANS, SECTIONS AND DETAILS EXCEED THESE MINIMUM REQUIREMENTS, THE DIMENSIONS GIVEN IN THE STAIR PLANS, SECTIONS AND DETAILS GOVERN.
 - HANDRAIL STRENGTH (IBC SEC. 1012.1 & 1607.7): HANDRAIL ASSEMBLIES AND GUARDS SHALL BE DESIGNED TO RESIST A LOAD OF 50 plf (0.73 kN/m) APPLIED IN ANY DIRECTION AT THE TOP AND TO TRANSFER THIS LOAD THROUGH THE SUPPORTS TO THE STRUCTURE. GLASS HANDRAILS SHALL COMPLY WITH SEC. 2407.
 - WHERE REQUIRED (IBC SEC. 1012.1): HANDRAILS SHALL BE REQUIRED AT ALL STAIRS AND RAMPS WITH A RISE GREATER THAN 6".
 - HANDRAIL HEIGHT (IBC SEC. 1012.2 / TAS 505.4): TOP OF HANDRAIL SHALL BE 34" TO 38" ABOVE NOSING OF TREADS, LANDINGS AND RAMP SURFACE.
 - HANDRAIL GRASPABILITY (IBC SEC. 1012.3 / TAS 505.7): HANDRAILS TO HAVE A CIRCULAR CROSS SECTIONAL OUTSIDE DIAMETER OF 1-1/4" TO 2" NONE CIRCULAR CROSS SECTION HANDRAILS SHALL HAVE A PERIMETER OF AT LEAST 4" BUT NOT GREATER THAN 6.25" AND SHALL HAVE A MAXIMUM CROSS-SECTION DIMENSION OF 2.25". EDGES SHALL HAVE A MINIMUM RADIUS OF 0.01".
 - HANDRAIL CONTINUITY (IBC SEC. 1012.4): UNLESS EXCEPTIONS ALLOW, HANDRAIL GRIPPING SURFACE SHALL BE CONTINUOUS, WITHOUT INTERRUPTION.
 - HANDRAIL EXTENSIONS (IBC SEC. 1012.5 / TAS 505.10): HANDRAILS SHALL RETURN TO A WALL, GUARD OR THE WALKING SURFACE OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT STAIR FLIGHT OR RAMP RUN. WHERE STAIR HANDRAILS TERMINATE, THE HANDRAIL SHALL EXTEND HORIZONTALLY AT LEAST 12" BEYOND THE TOP RISER AND SHALL CONTINUE TO SLOPE FOR THE DEPTH OF ONE TREAD BEYOND THE BOTTOM RISER. WHERE RAMP HANDRAILS TERMINATE, THE HANDRAIL SHALL EXTEND HORIZONTALLY ABOVE THE LANDING 12" MINIMUM BEYOND THE TOP AND BOTTOM OF RAMP RUNS.
 - HANDRAIL CLEARANCE (IBC SEC. 1012.6 / TAS 505.5 & 505.6): CLEAR SPACE BETWEEN HANDRAIL AND ADJACENT SURFACES SHALL BE A MINIMUM OF 1.5".
 - HANDRAIL PROJECTIONS (IBC SEC. 1012.7 / TAS 405.5): ON RAMPS, THE CLEAR WIDTH BETWEEN HANDRAILS SHALL BE 36" MINIMUM. PROJECTIONS INTO THE REQUIRED WIDTH OF STAIRWAYS AND RAMPS AT EACH HANDRAIL SHALL NOT EXCEED 4.5" AT OR BELOW THE HANDRAIL HEIGHT. PROJECTIONS INTO THE REQUIRED WIDTH SHALL NOT BE LIMITED ABOVE THE MINIMUM HEADROOM HEIGHT REQUIREMENT.
 - INTERMEDIATE HANDRAILS (IBC SEC. 1012.8): INTERMEDIATE HANDRAILS REQUIRED WHERE STAIR WIDTH EXCEEDS 60".
 - SURFACES (TAS 505.8): HANDRAIL GRIPPING SURFACE AND ANY SURFACE ADJACENT TO THEM SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS AND SHALL HAVE ROUNDED EDGES.
 - FITTINGS (TAS 505.9): HANDRAILS SHALL NOT ROTATE WITH THEIR FITTINGS.
 - K. GUARDRAILS TO COMPLY WITH THE FOLLOWING MINIMUM REQUIREMENTS ESTABLISHED BY THE 2006 INTERNATIONAL BUILDING CODE (IBC) WITH CITY OF HOUSTON AMENDMENTS REQUIREMENTS. WHERE DIMENSIONS GIVEN IN THE STAIR PLANS, SECTIONS AND DETAILS EXCEED THESE MINIMUM REQUIREMENTS, THE DIMENSIONS GIVEN IN THE STAIR PLANS, SECTIONS AND DETAILS GOVERN.
 - GUARDRAIL STRENGTH (IBC SEC. 1013.1 & 1607.7): HANDRAIL ASSEMBLIES AND GUARDS SHALL BE DESIGNED TO RESIST A LOAD OF 50 plf (0.73 kN/m) APPLIED IN ANY DIRECTION AT THE TOP AND TO TRANSFER THIS LOAD THROUGH THE SUPPORTS TO THE STRUCTURE. GLASS HANDRAILS SHALL COMPLY WITH SEC. 2407.
 - WHERE REQUIRED (IBC SEC. 1013.1): UNLESS EXCEPTIONS ALLOW, GUARDS SHALL BE LOCATED ALONG OPEN-SIDED WALKING SURFACES, MEZZANINES, INDUSTRIAL EQUIPMENT PLATFORMS, STAIRWAYS, RAMPS AND LANDINGS LOCATED MORE THAN 30" ABOVE THE FLOOR OR GRADE BELOW.
 - GUARDRAILS HEIGHT (IBC SEC. 1013.2): TOP OF GUARDRAIL TO BE NOT LESS THAN 42" HIGH, MEASURED VERTICALLY ABOVE THE LEADING EDGE OF THE TREAD, ADJACENT WALKING SURFACE OR ADJACENT SEATBOARD.
 - OPENING LIMITATIONS (IBC SEC. 1013.3): UNLESS EXCEPTIONS ALLOW, FROM FLOOR LEVEL TO A HEIGHT OF 34", GUARDS SHALL NOT ALLOW A 4" SPHERE TO PASS THROUGH. FROM A HEIGHT OF 34" TO 42" ABOVE THE FLOOR LEVEL, GUARDS SHALL NOT ALLOW A 6" SPHERE TO PASS THROUGH. THE TRIANGULAR OPENING FORMED BY THE RISER, TREAD AND BOTTOM RAIL AT THE OPEN SIDE OF A STAIRWAY SHALL BE OF MAXIMUM SIZE SUCH THAT A SPHERE 6" IN DIAMETER CANNOT PASS THROUGH.
 - L. STAIR FINISHES
 - ALL EXPOSED METAL STAIR MEMBERS SHALL RECEIVE PRIMER AND FINISH PAINT, UNLESS NOTED OTHERWISE.
 - INTERIOR STAIR FINISHES TO BE PER INTERIOR DESIGNER.



C1 ENLARGED STAIR PLAN - LV 02
1/2" = 1'-0"

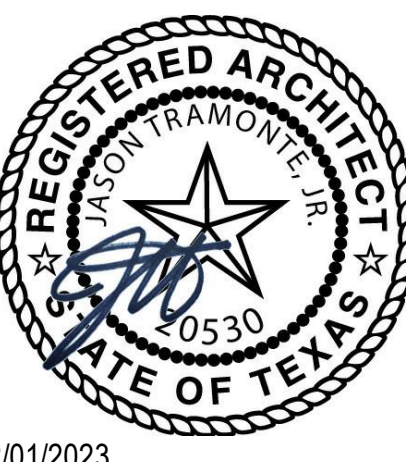


A1 ENLARGED STAIR PLAN - LV 01
1/2" = 1'-0"



A2 LANDING SECTION
1/2" = 1'-0"

A4 UPPER RUN SECTION
1/2" = 1'-0"



12/01/23

MIRA SAFETY
1713 Hur Industrial Blvd
Cedar Park, TX 78613

ISSUE FOR PERMIT 12/01/23

Project Number	23-01-014
Drawn By	Author
Checked By	Checker

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A-450
ENLARGED STAIR PLAN & ELEVATIONS



12/01/2023

MIRA SAFETY
1713 Hur Industrial Blvd
Cedar Park, TX 78613

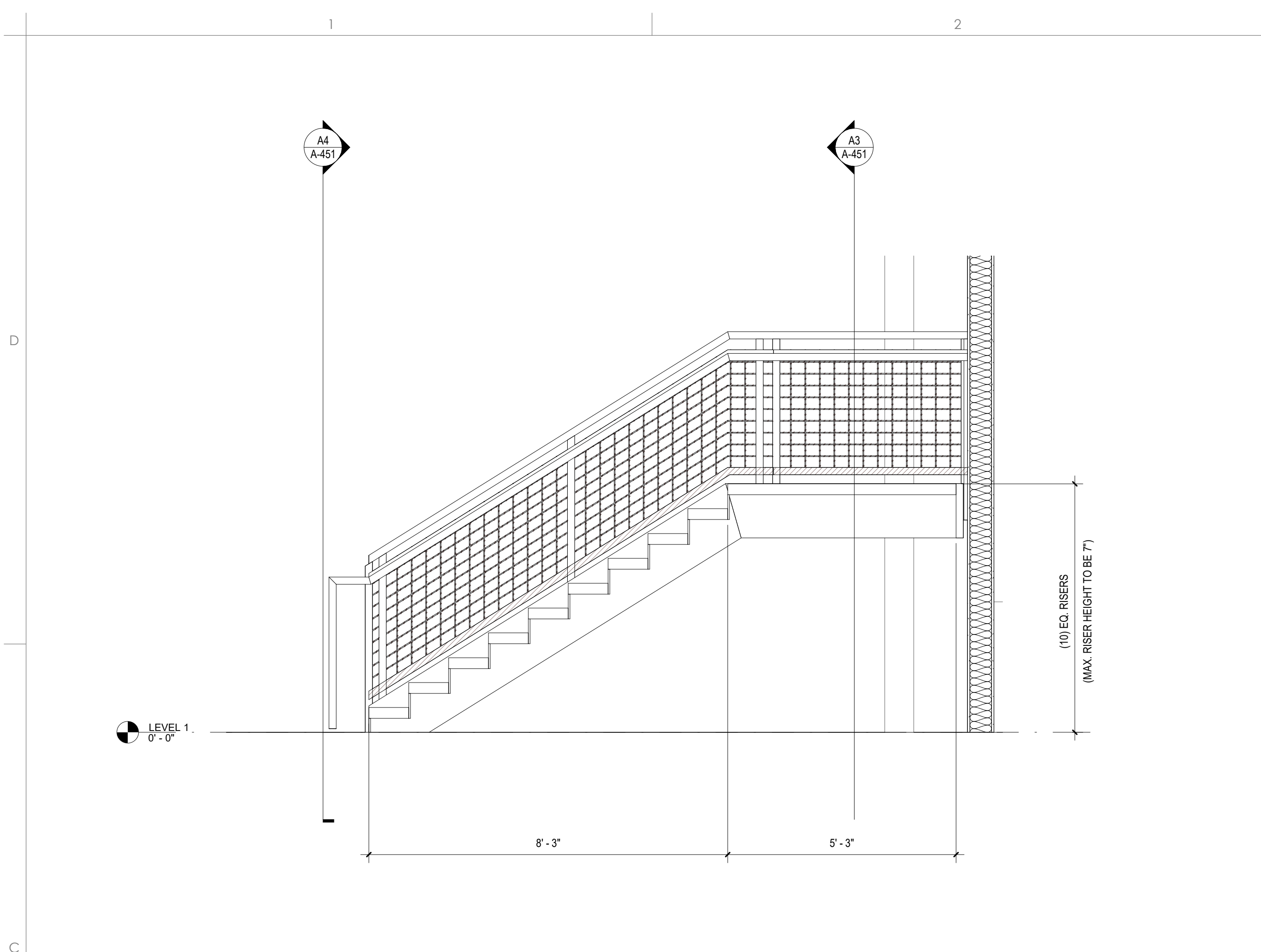
ISSUE FOR PERMIT 12/01/23

Project Number	23-01-014
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Checked By	Checker

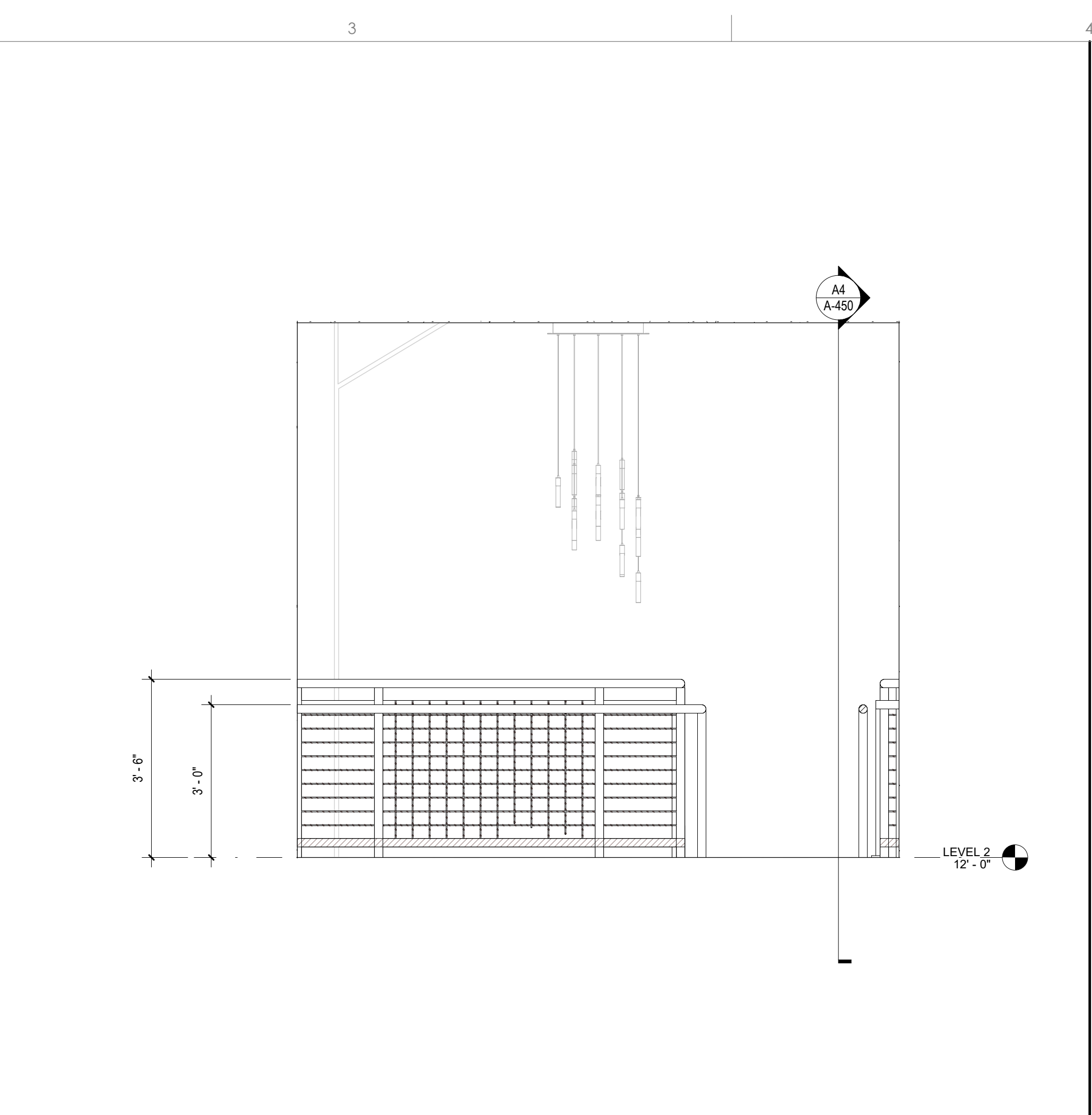
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A-451

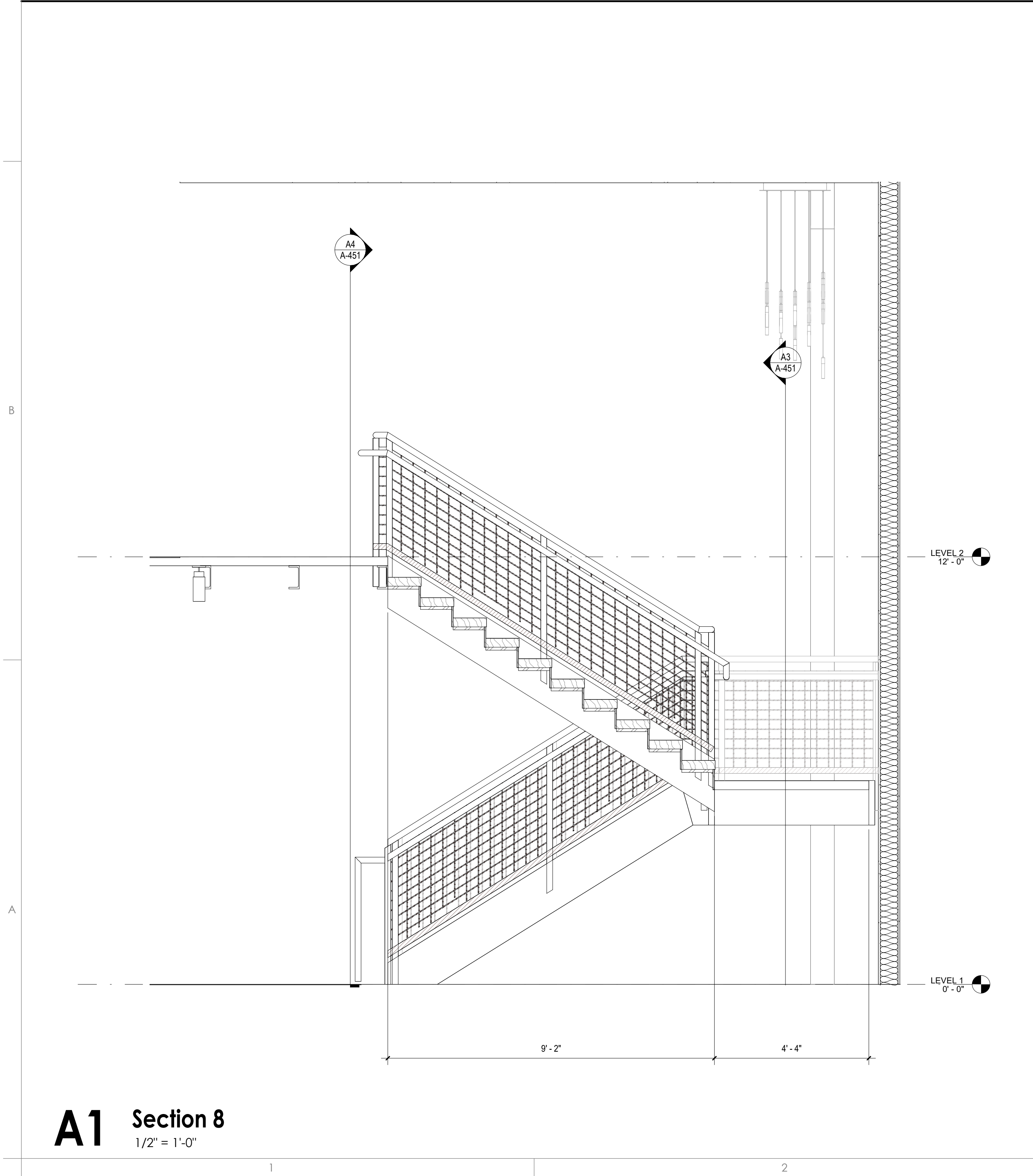
ENLARGED STAIR
PLAN & ELEVATIONS



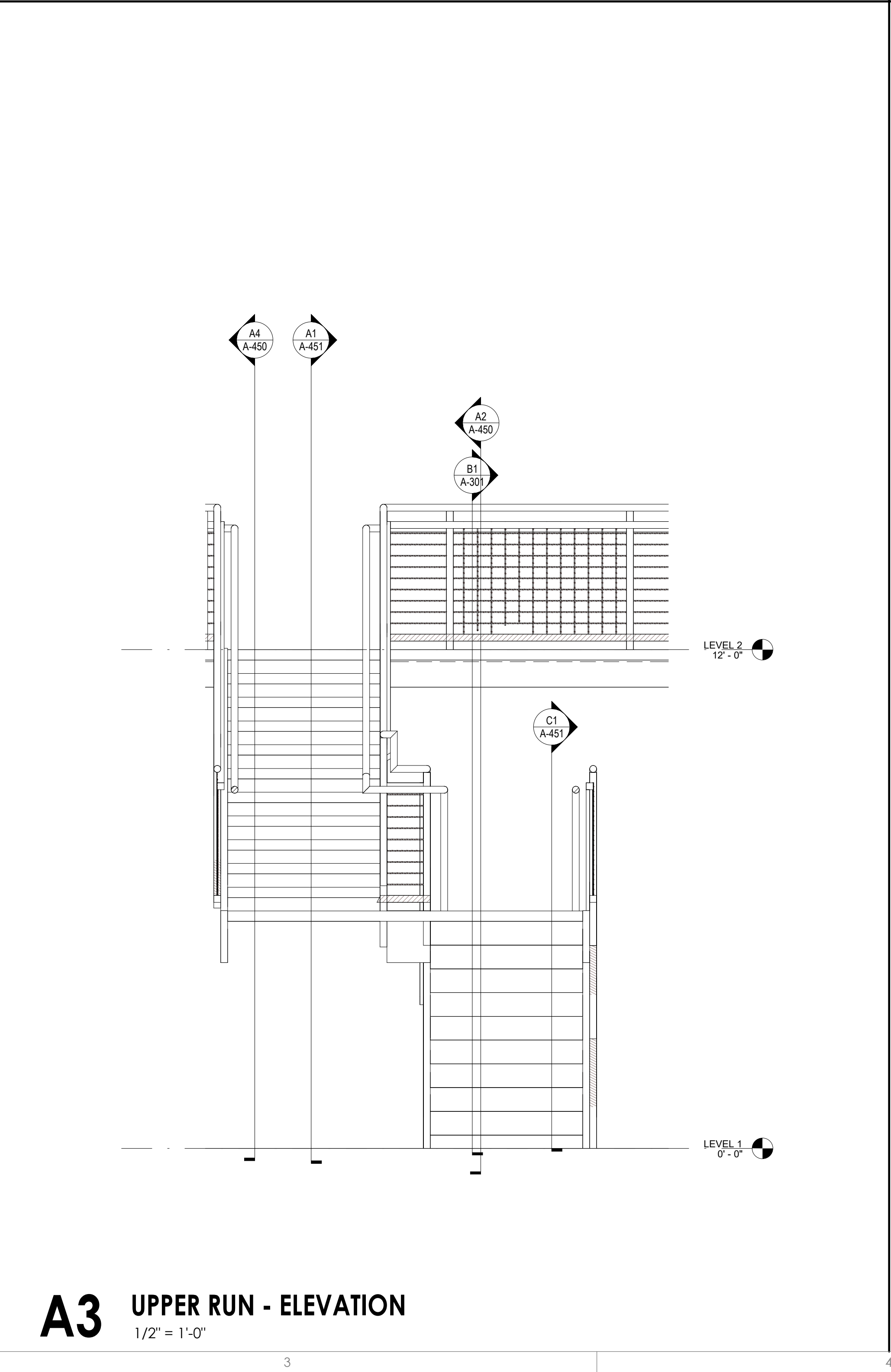
C1 LOWER RUN - SECTION
1/2" = 1'-0"



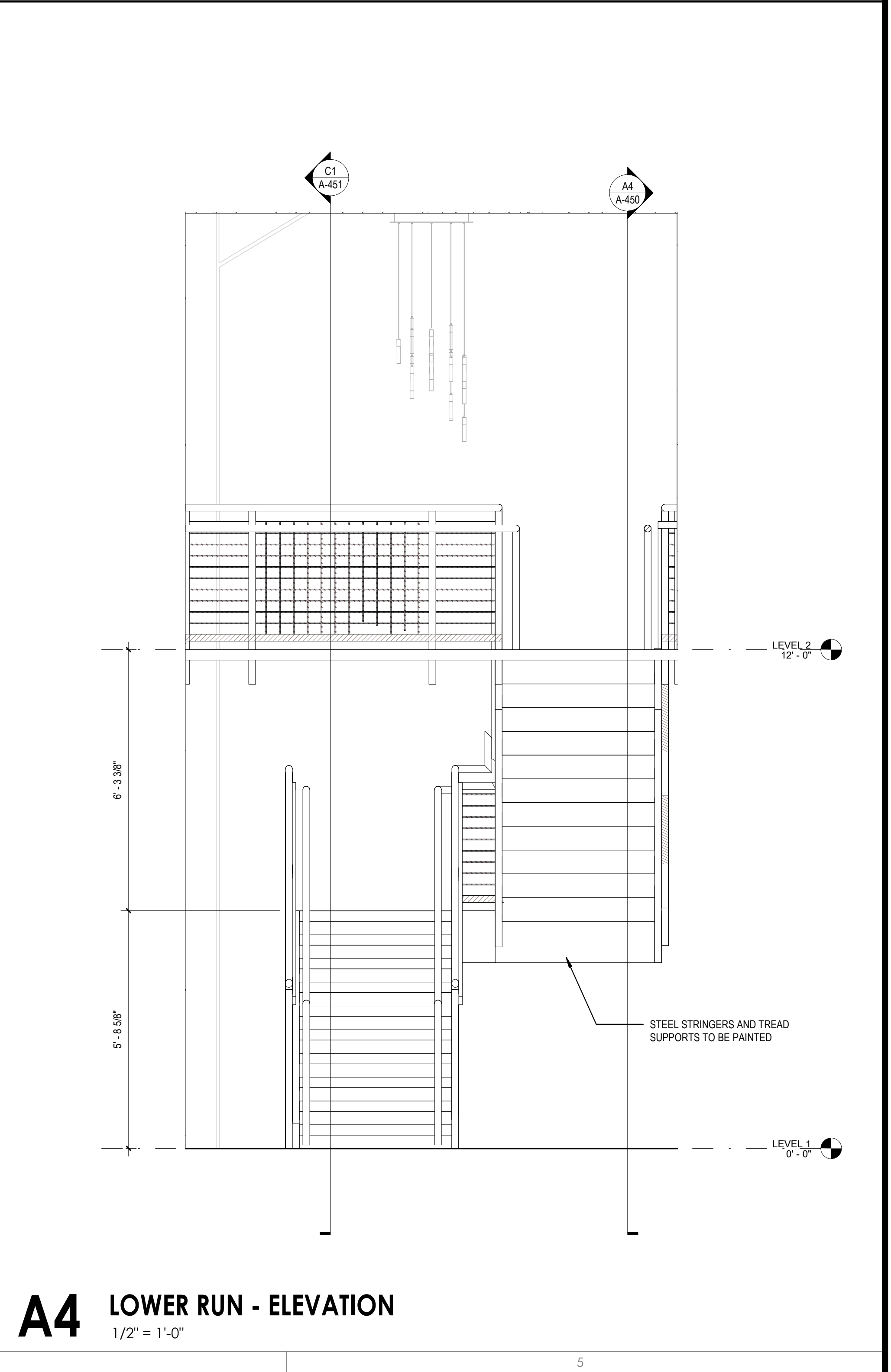
C3 TOP LANDING GUARD & HANDRAIL
1/2" = 1'-0"



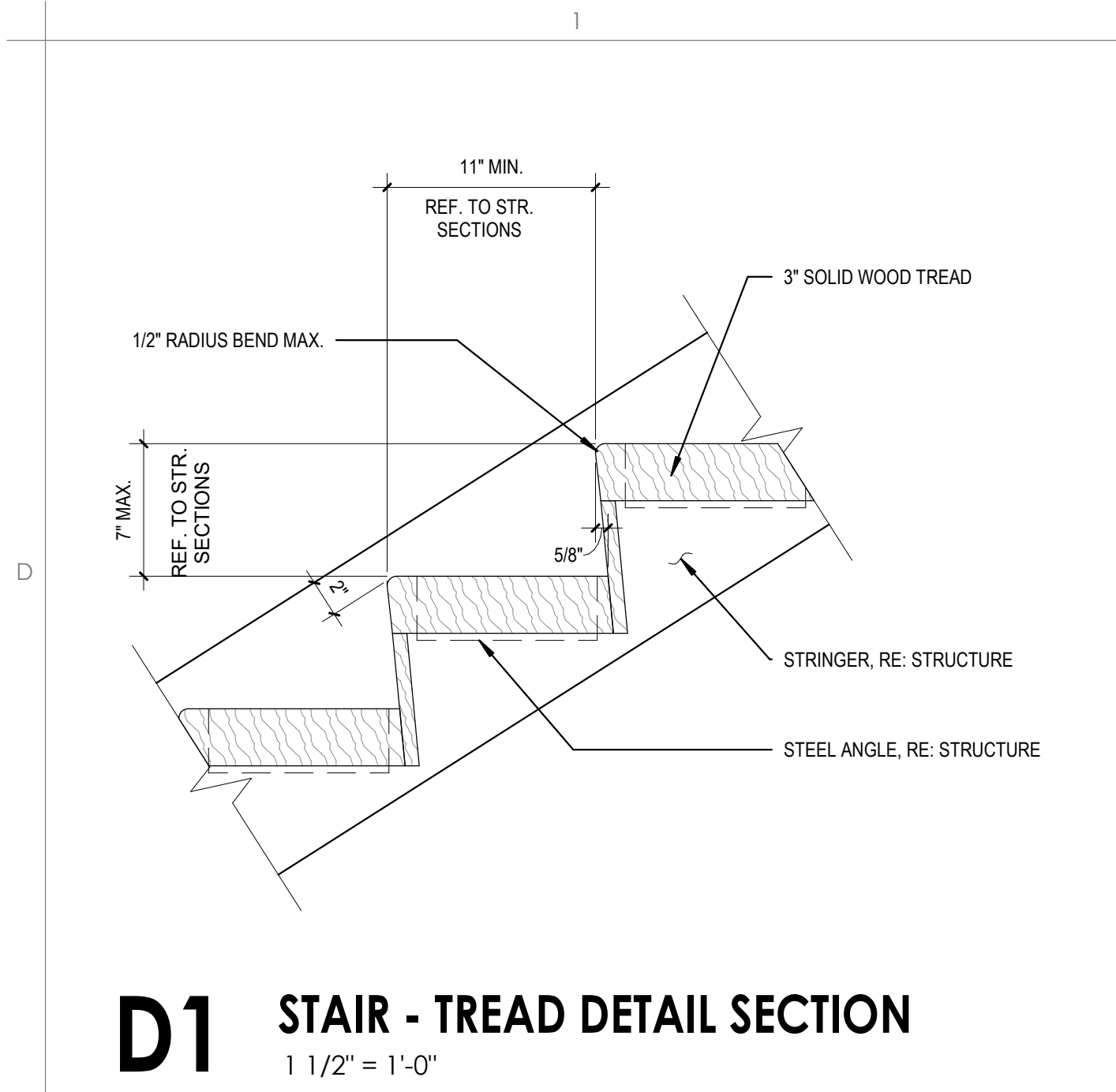
A1 Section 8
1/2" = 1'-0"



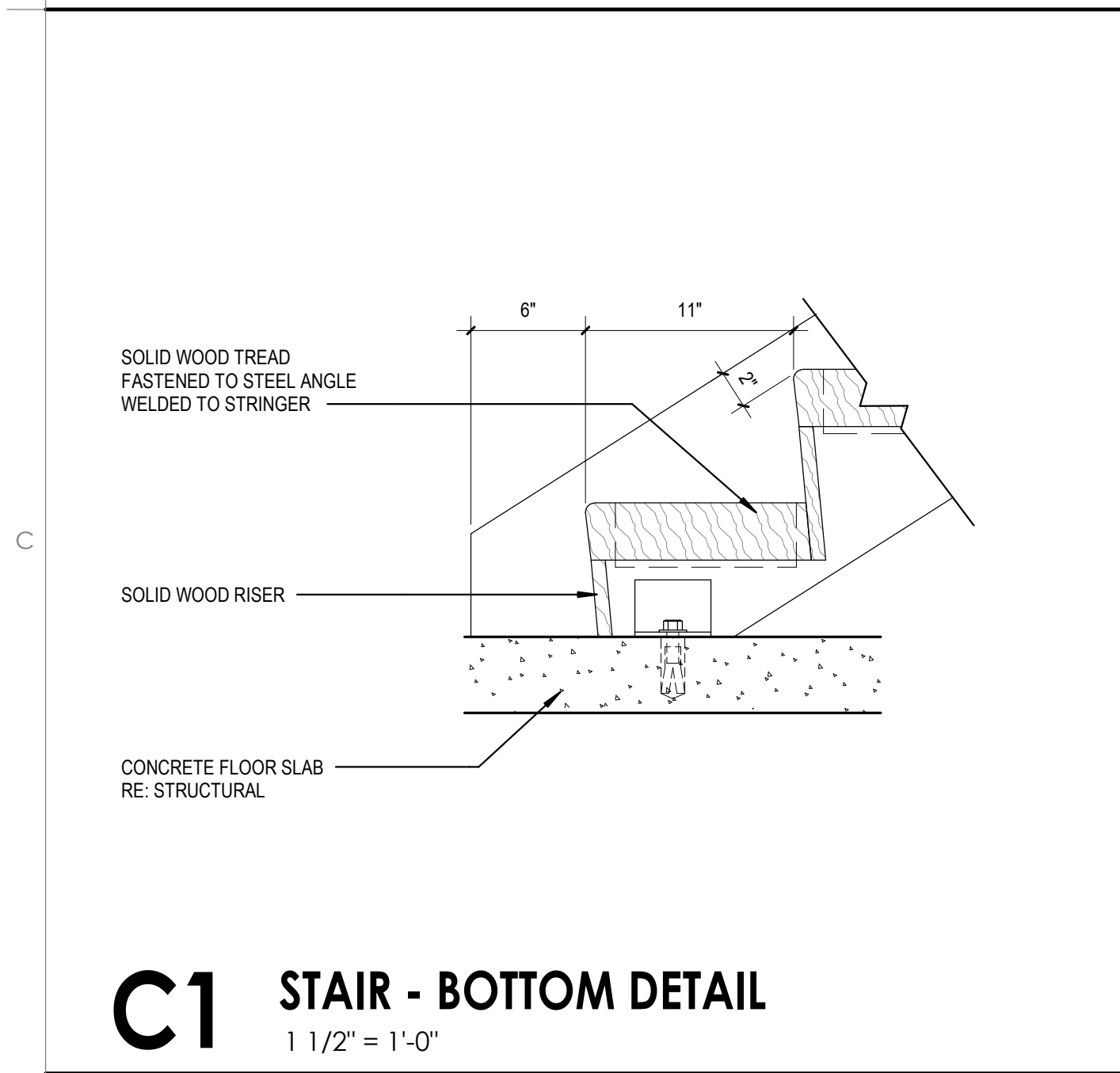
A3 UPPER RUN - ELEVATION
1/2" = 1'-0"



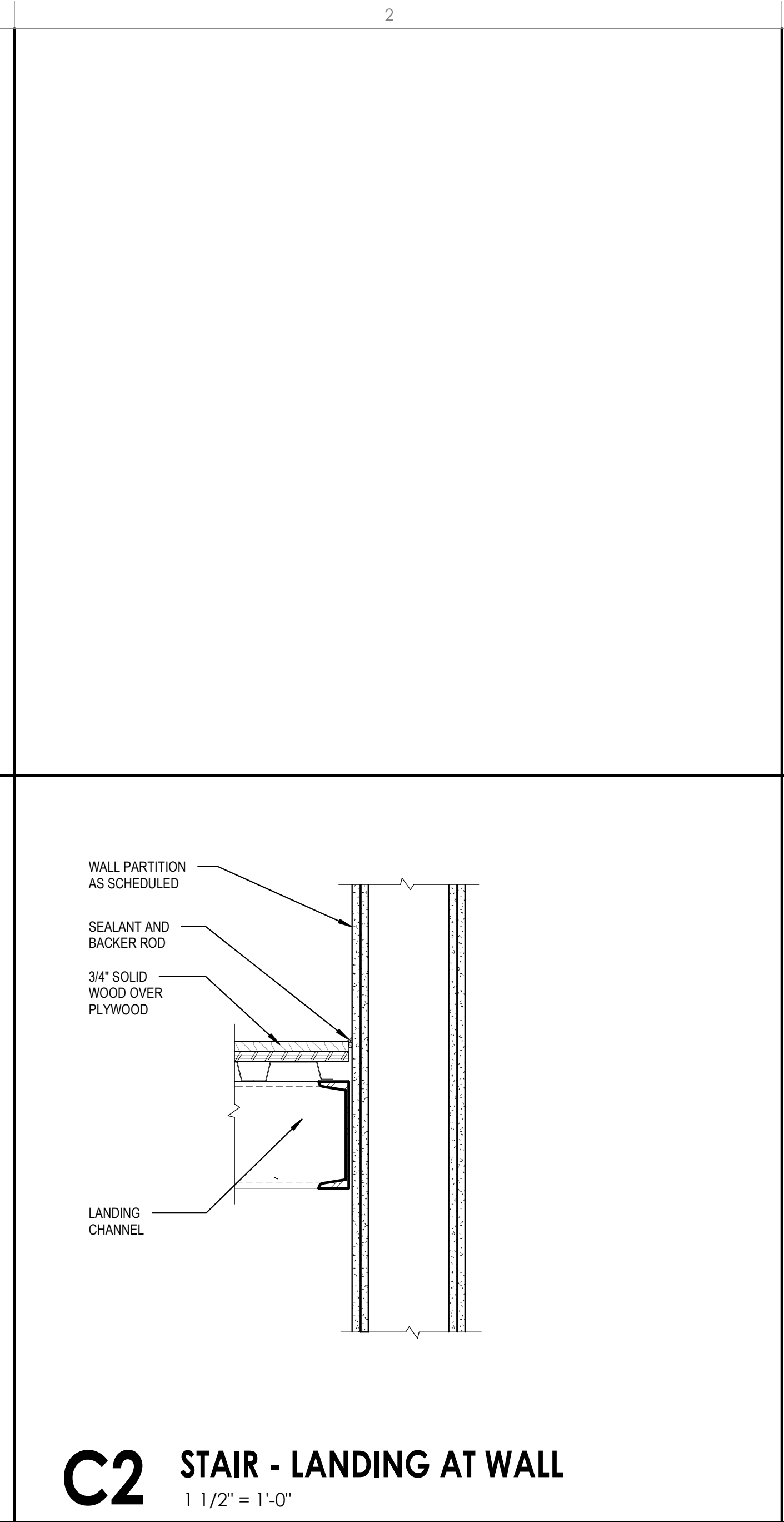
A4 LOWER RUN - ELEVATION
1/2" = 1'-0"



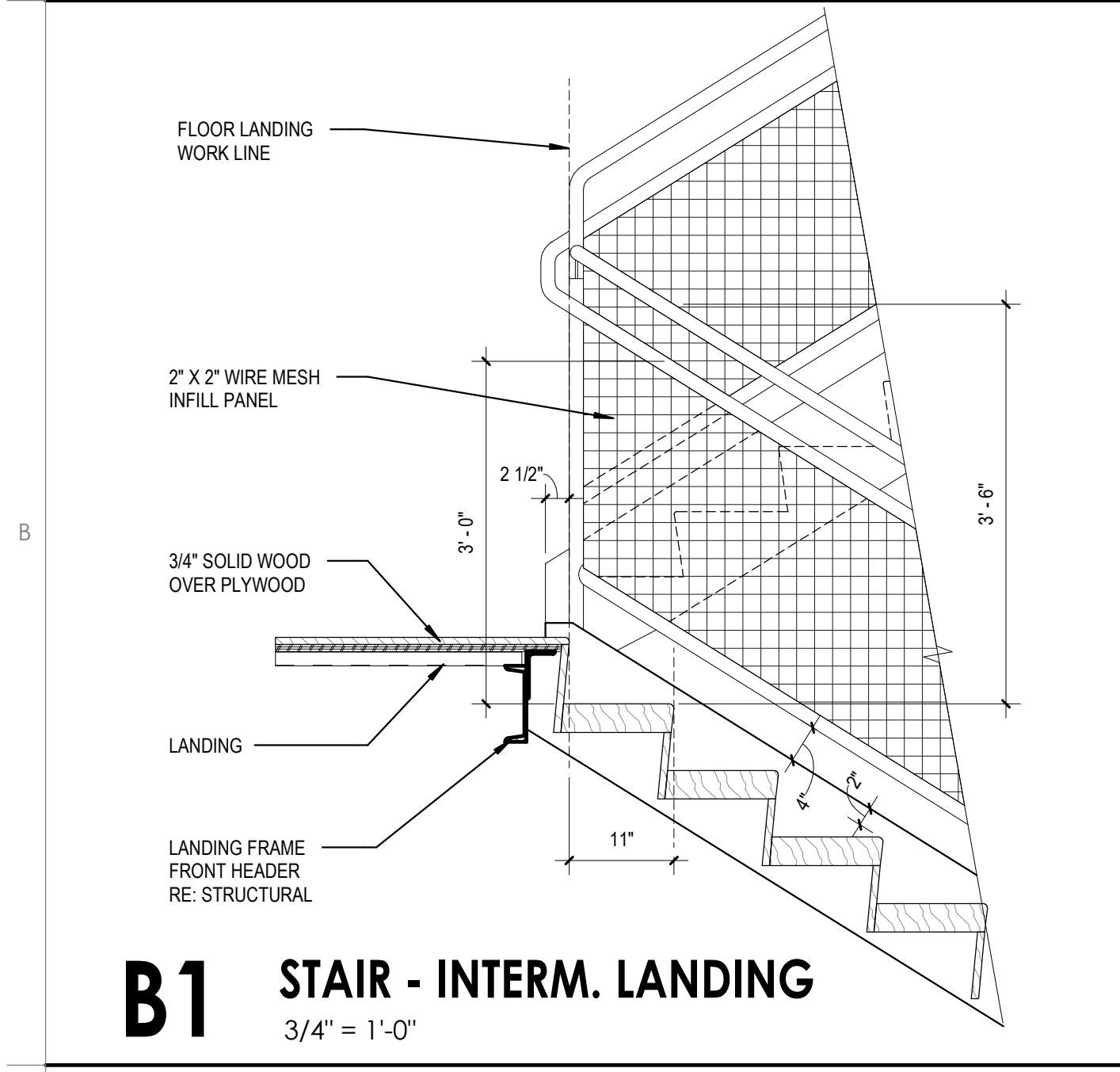
D1 STAIR - TREAD DETAIL SECTION
1 1/2" = 1'-0"



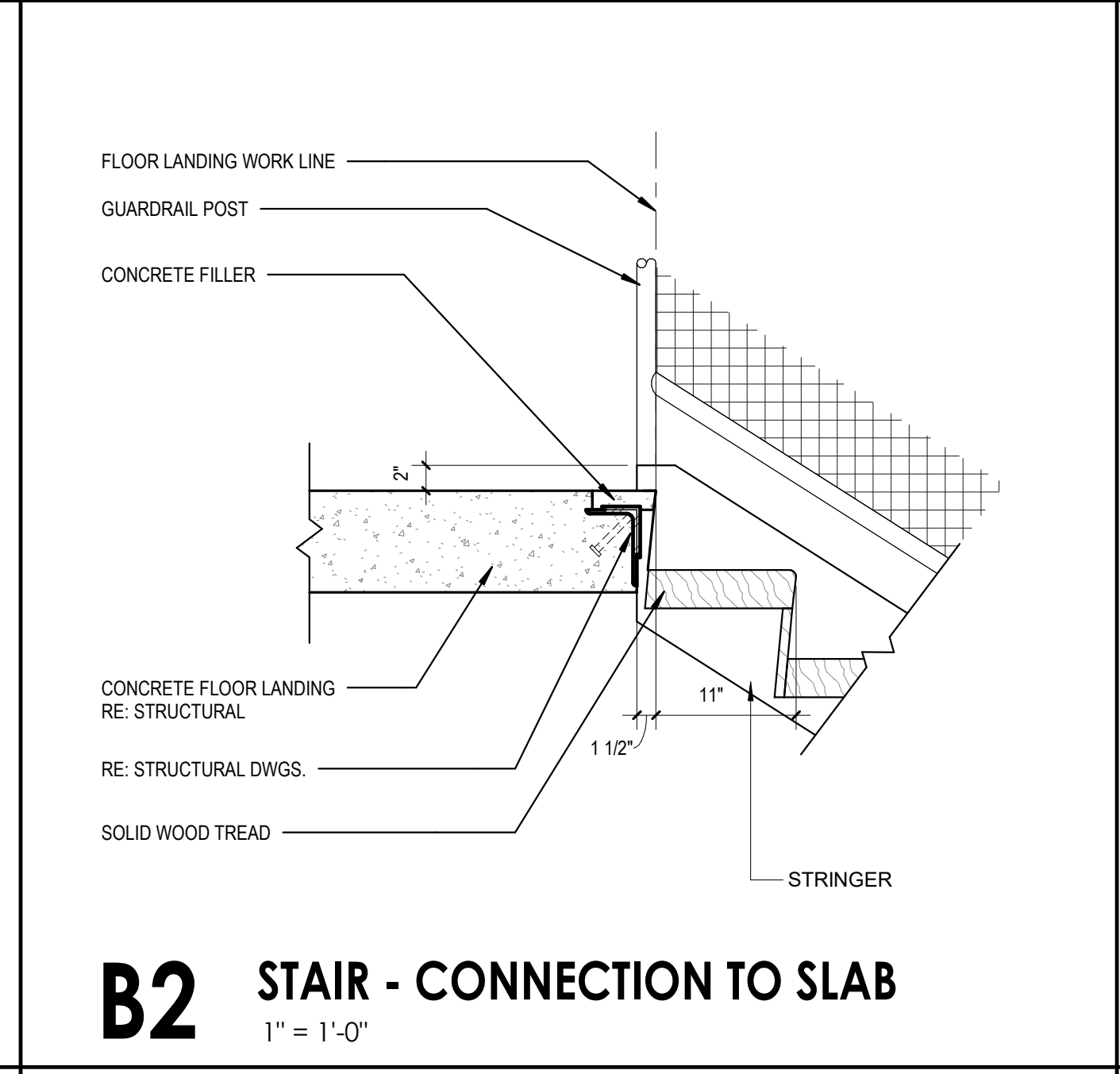
C1 STAIR - BOTTOM DETAIL
1 1/2" = 1'-0"



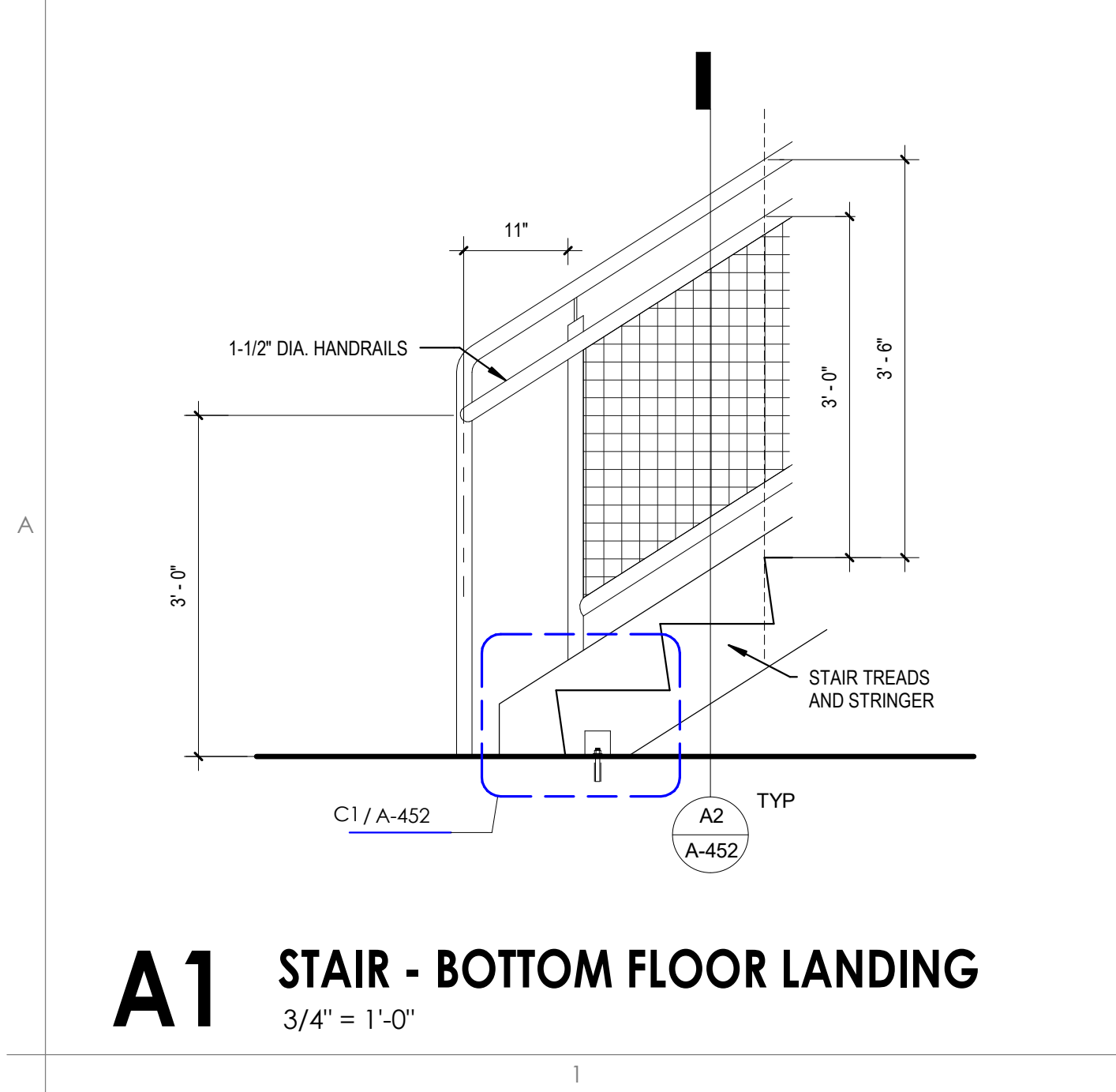
C2 STAIR - LANDING AT WALL
1 1/2" = 1'-0"



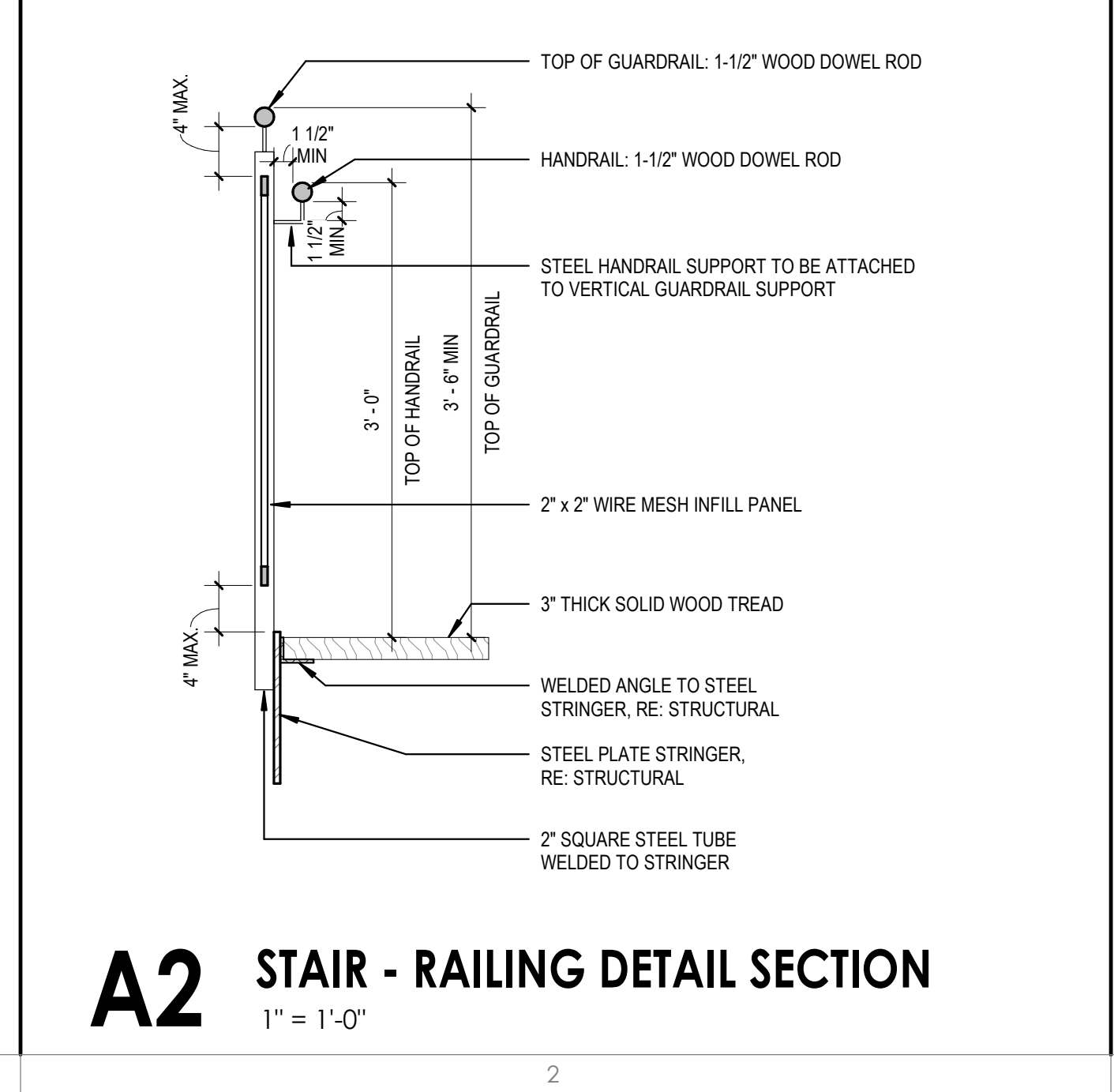
B1 STAIR - INTERM. LANDING
3/4" = 1'-0"



B2 STAIR - CONNECTION TO SLAB
1" = 1'-0"



A1 STAIR - BOTTOM FLOOR LANDING
3/4" = 1'-0"



A2 STAIR - RAILING DETAIL SECTION
1" = 1'-0"



A3 STAIR - TOP FLOOR LANDING
3/4" = 1'-0"



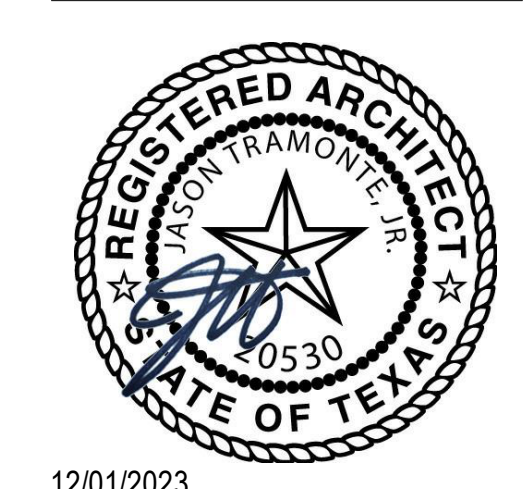
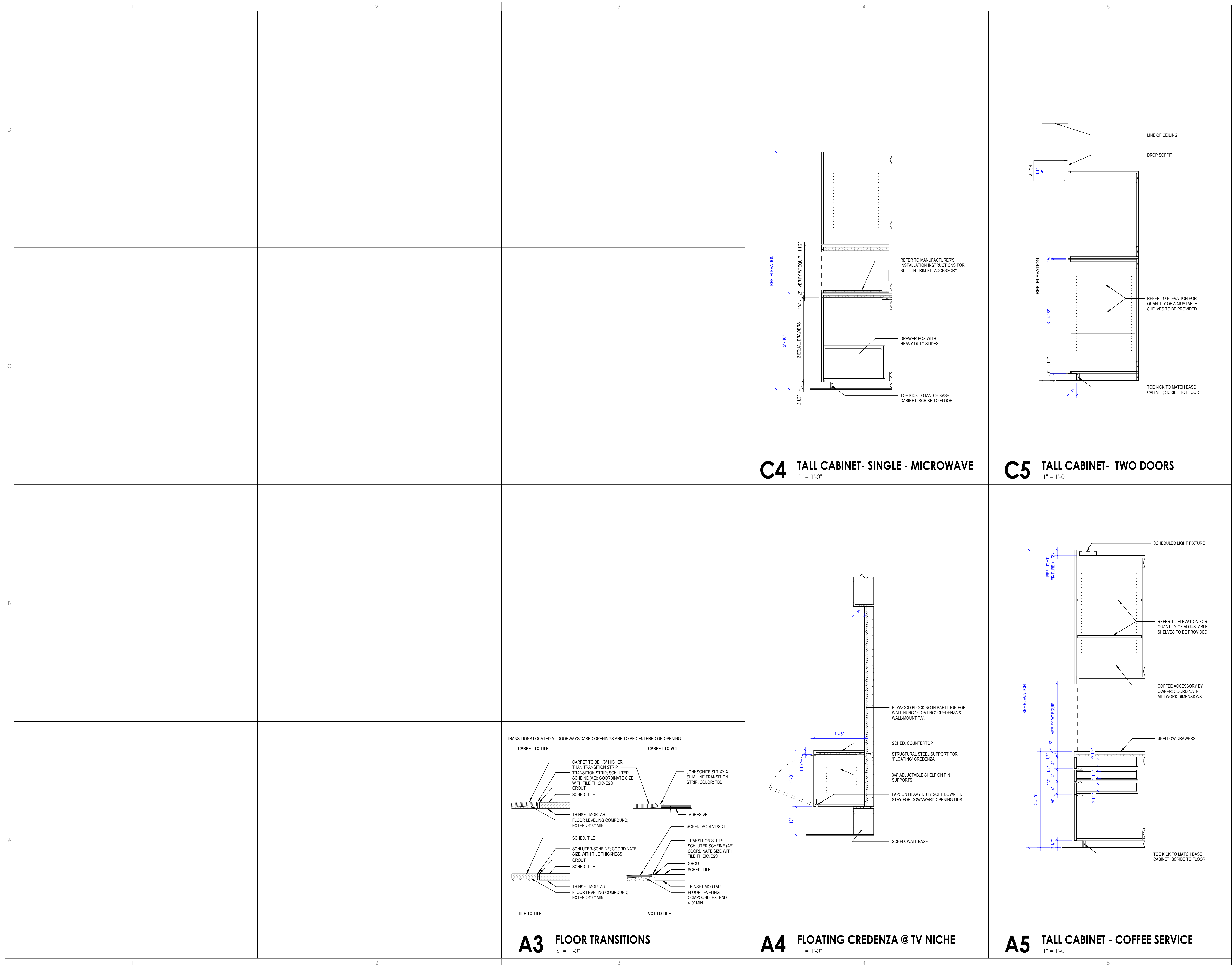
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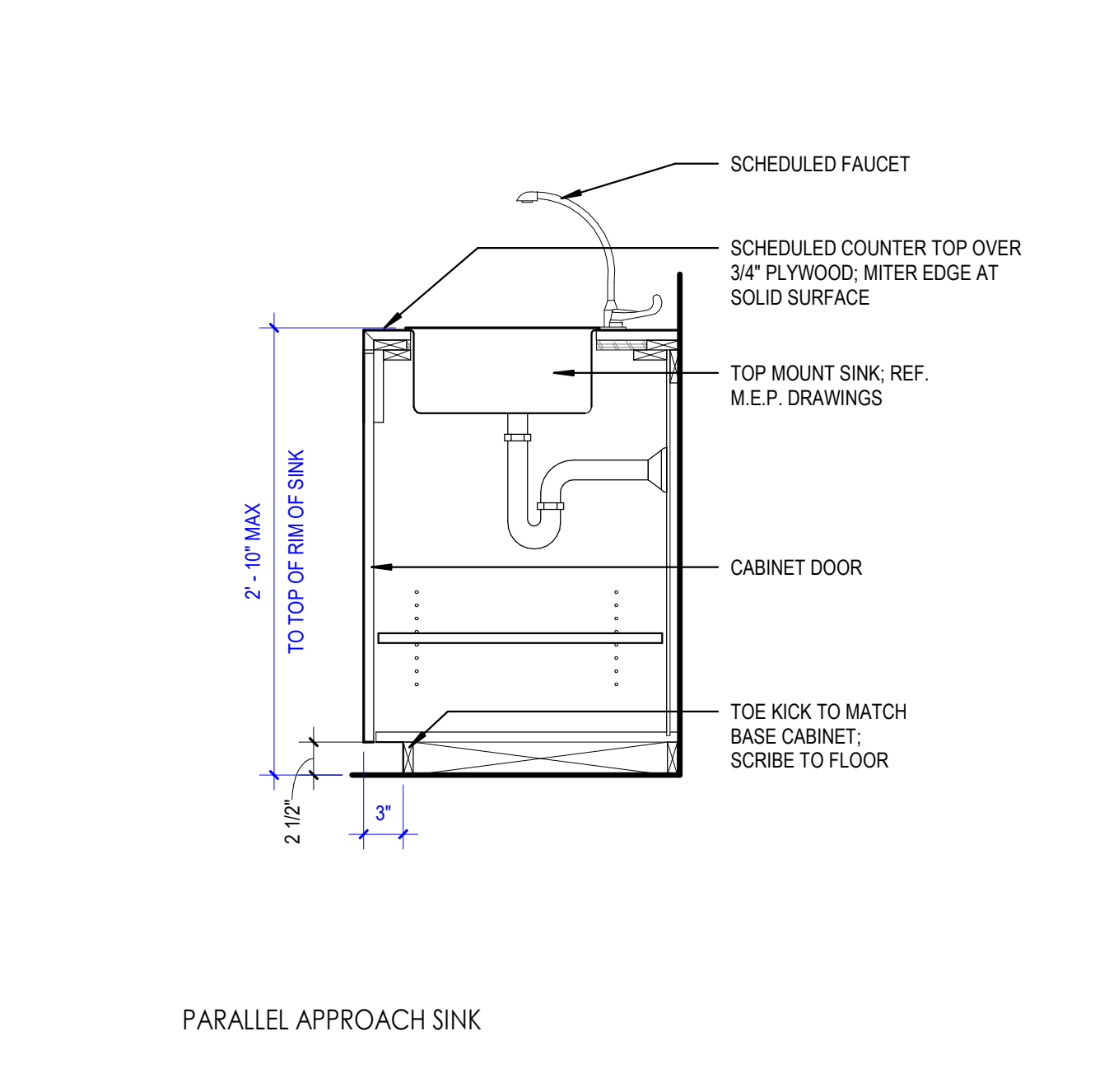
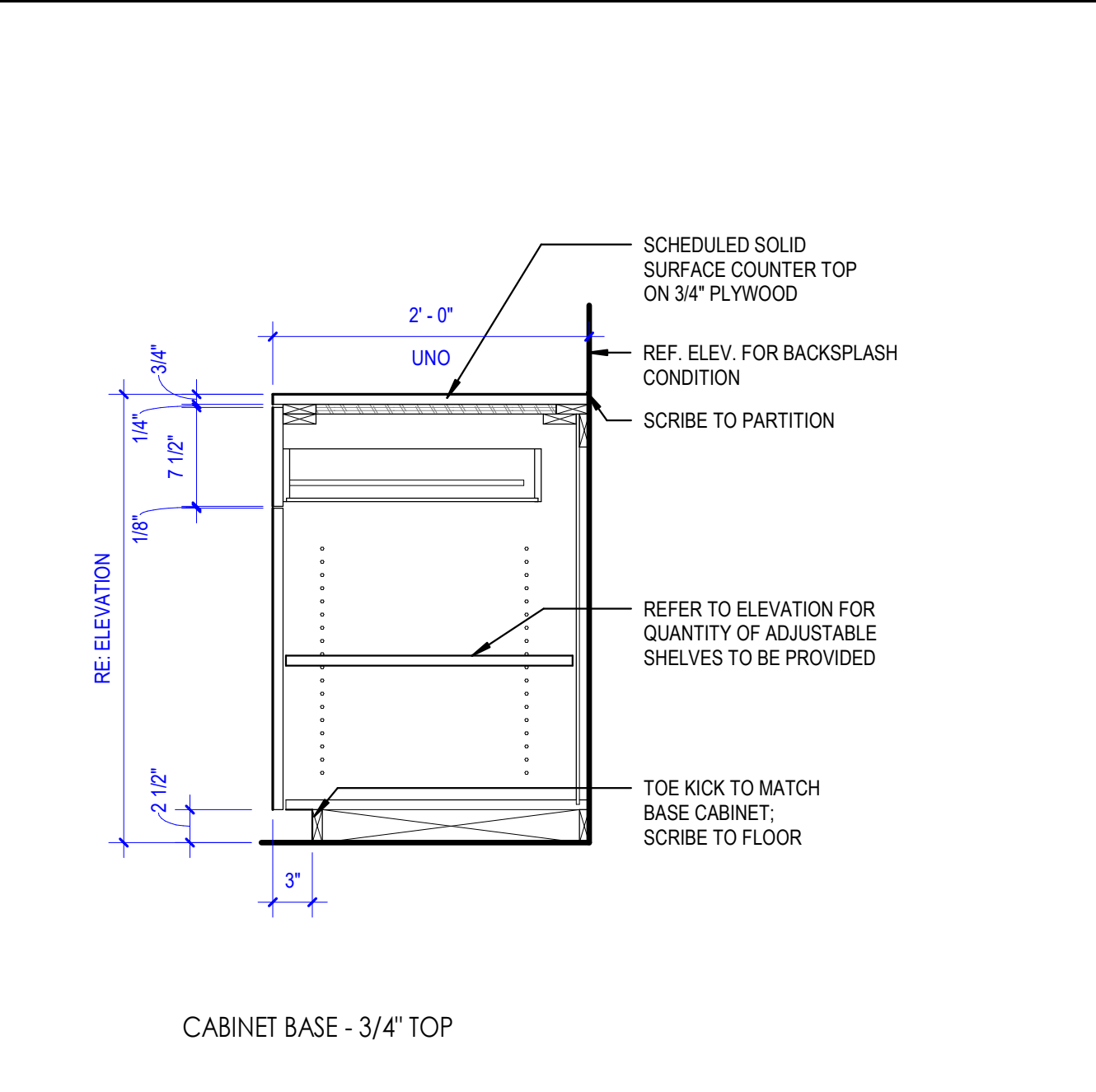
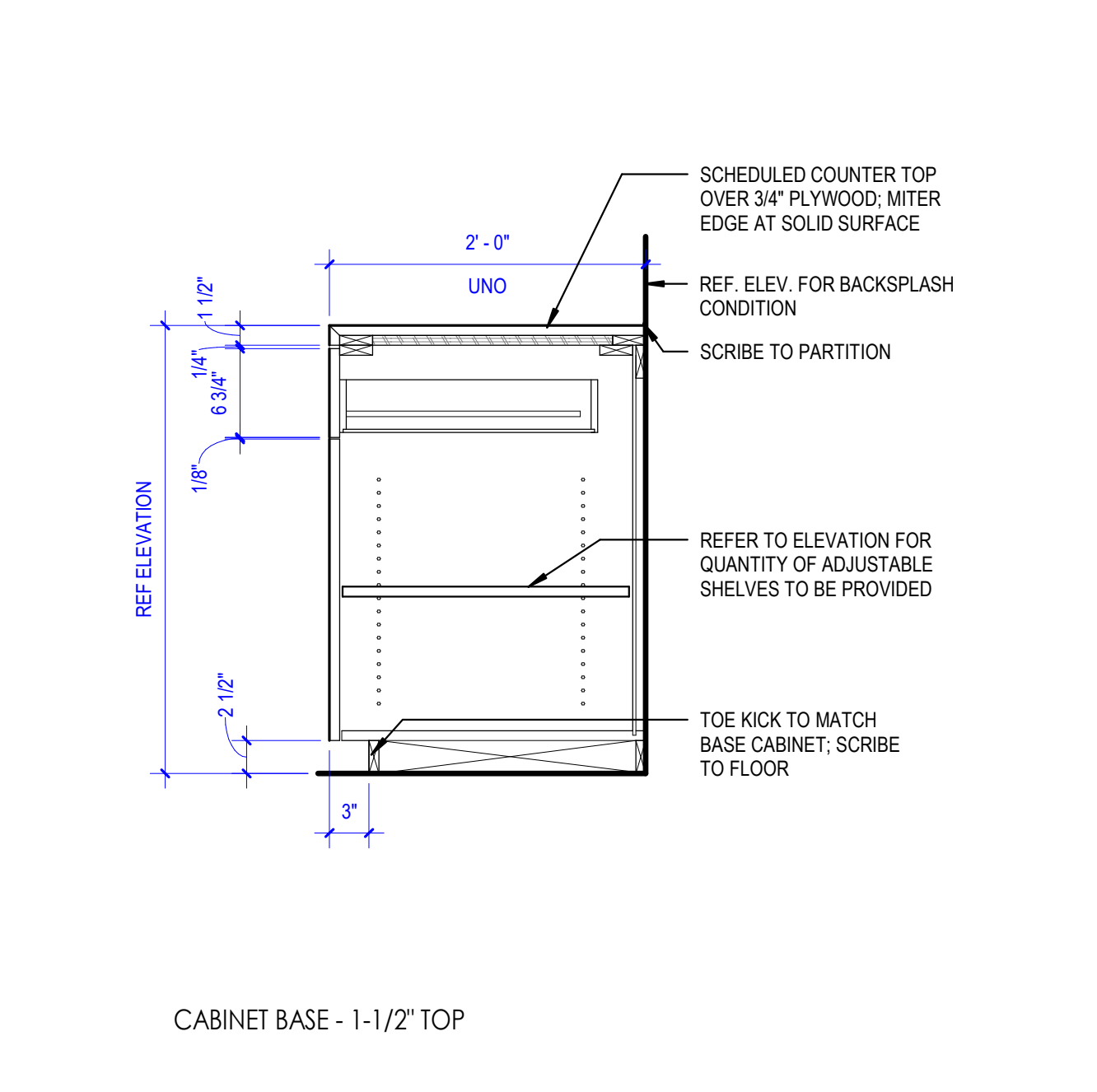
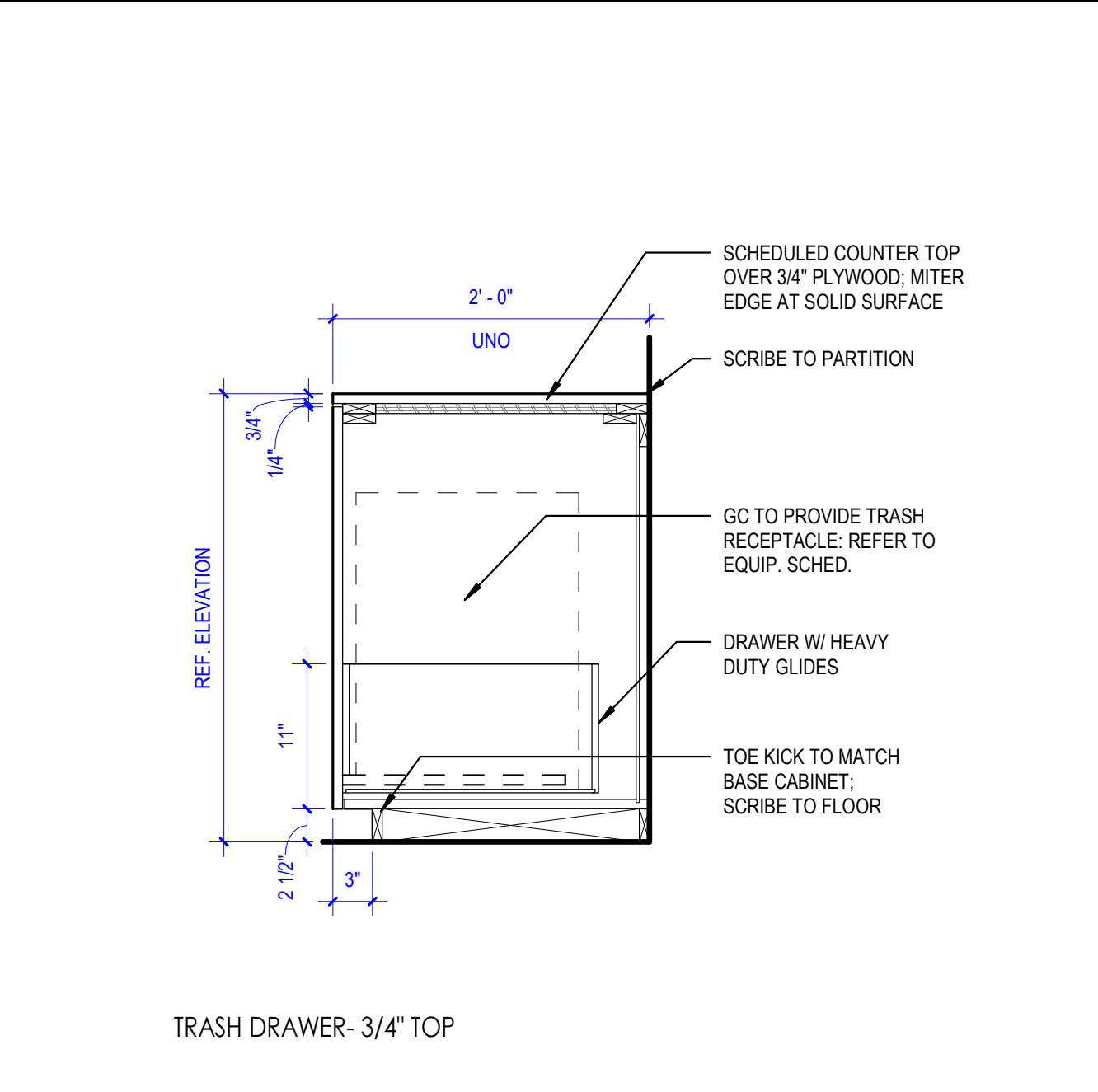
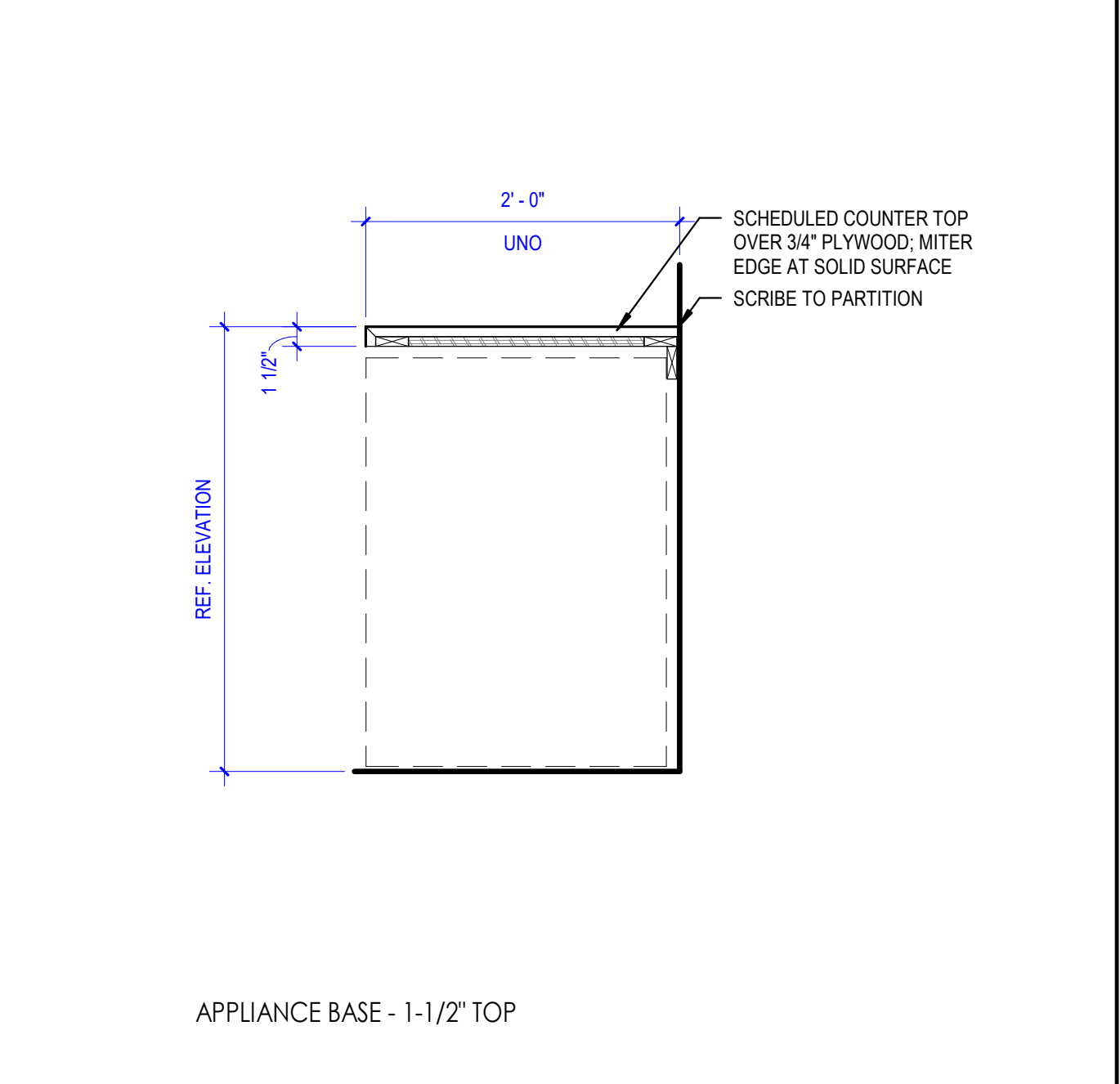
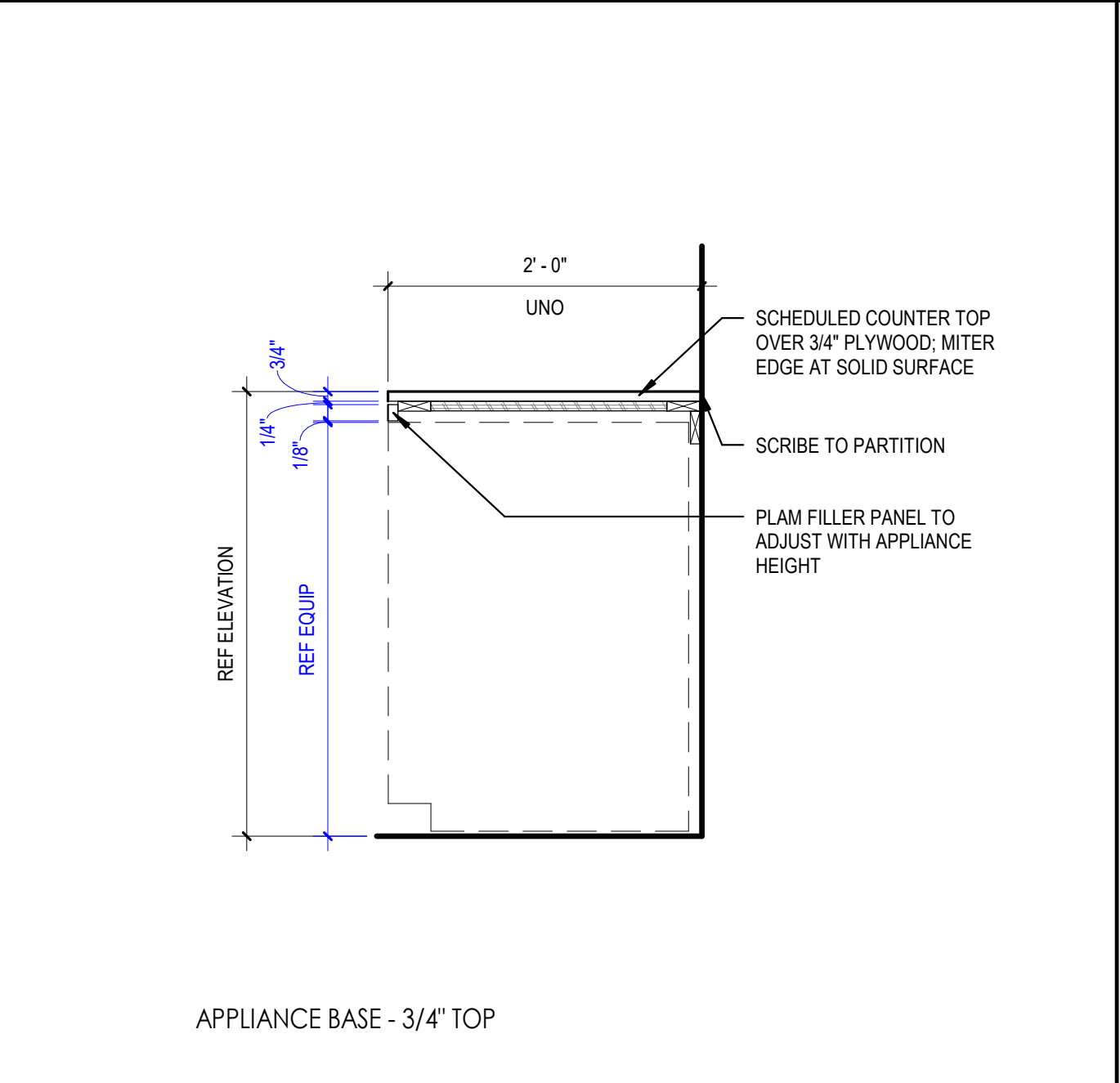
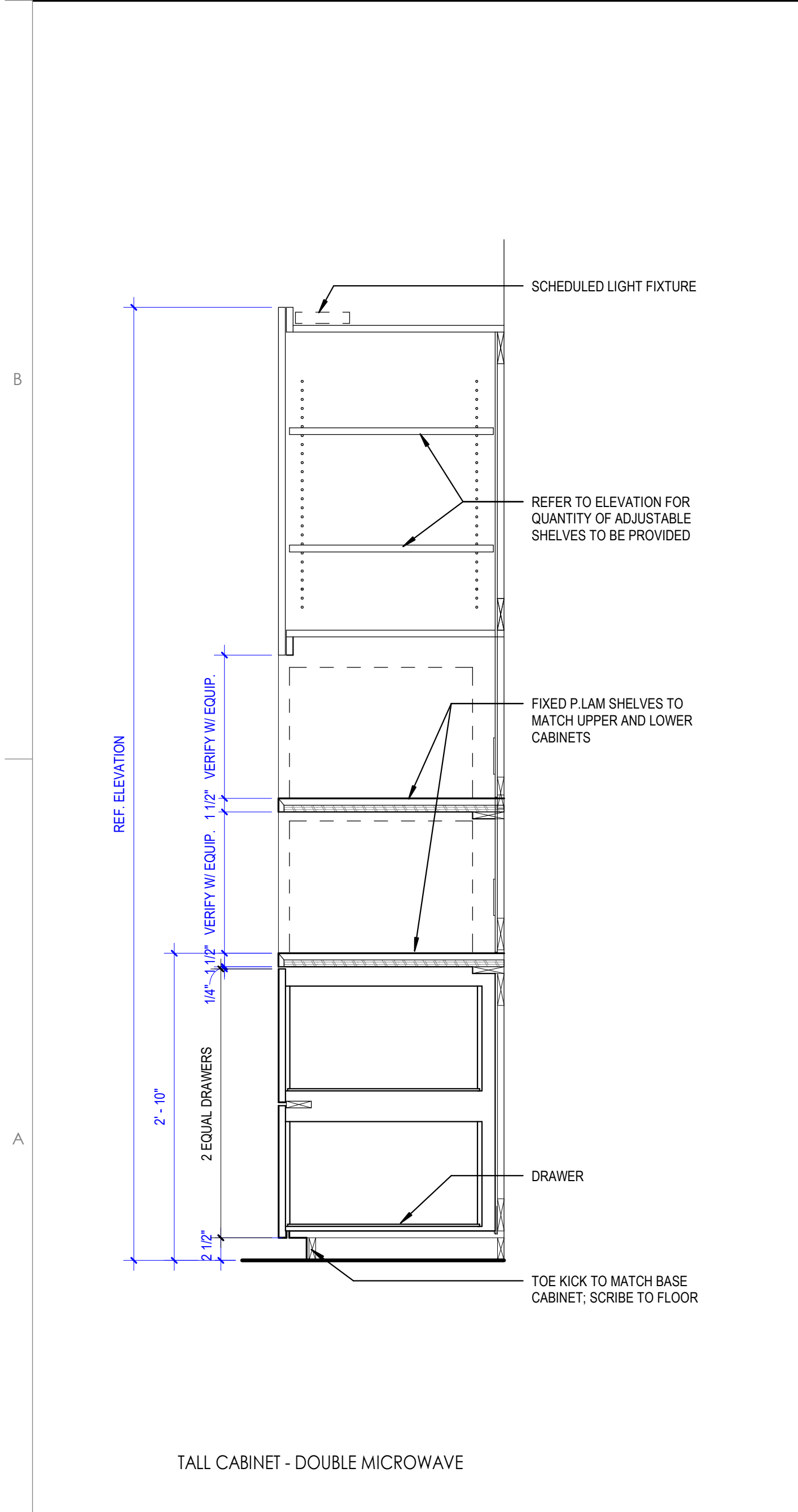
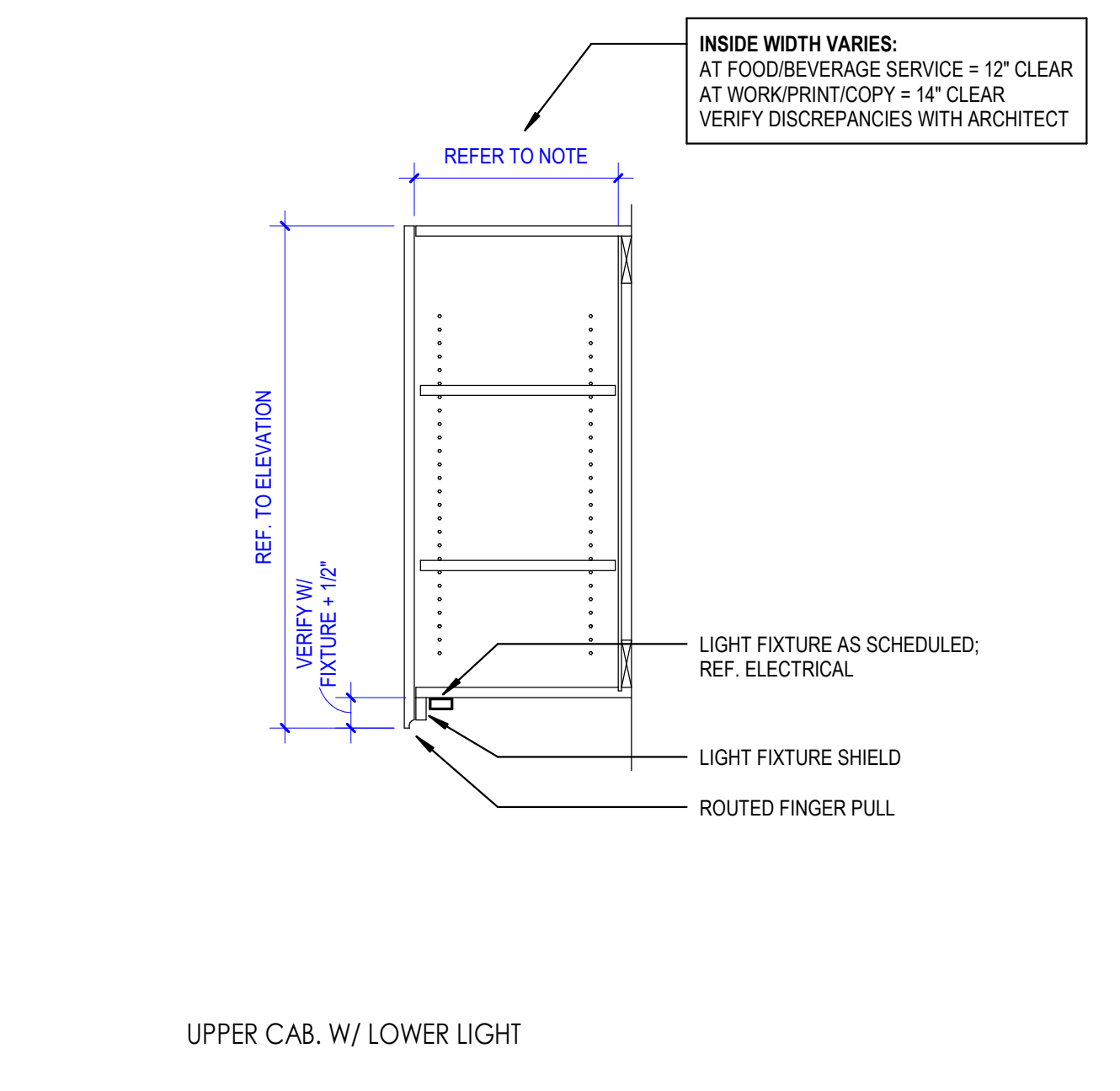
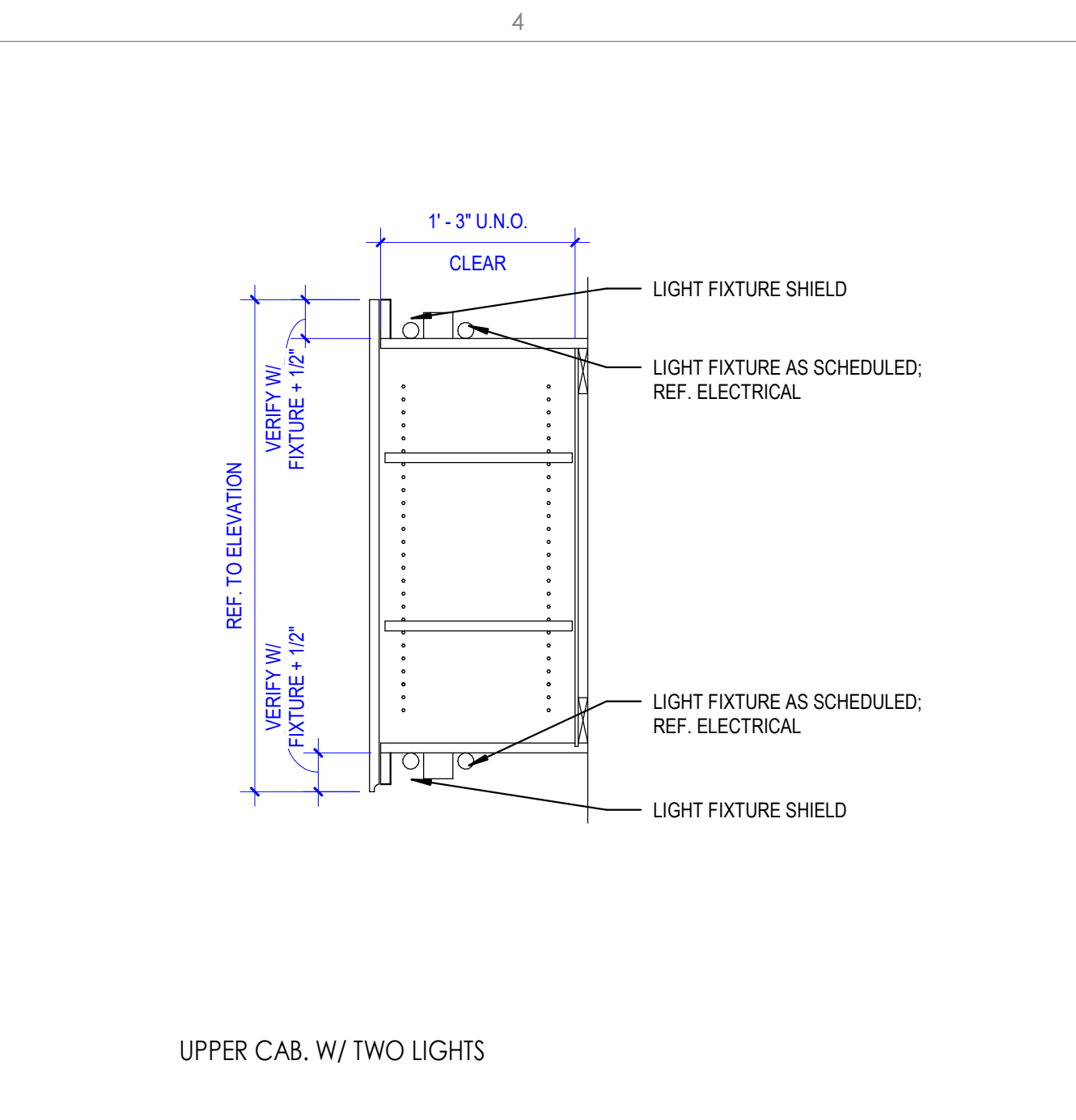
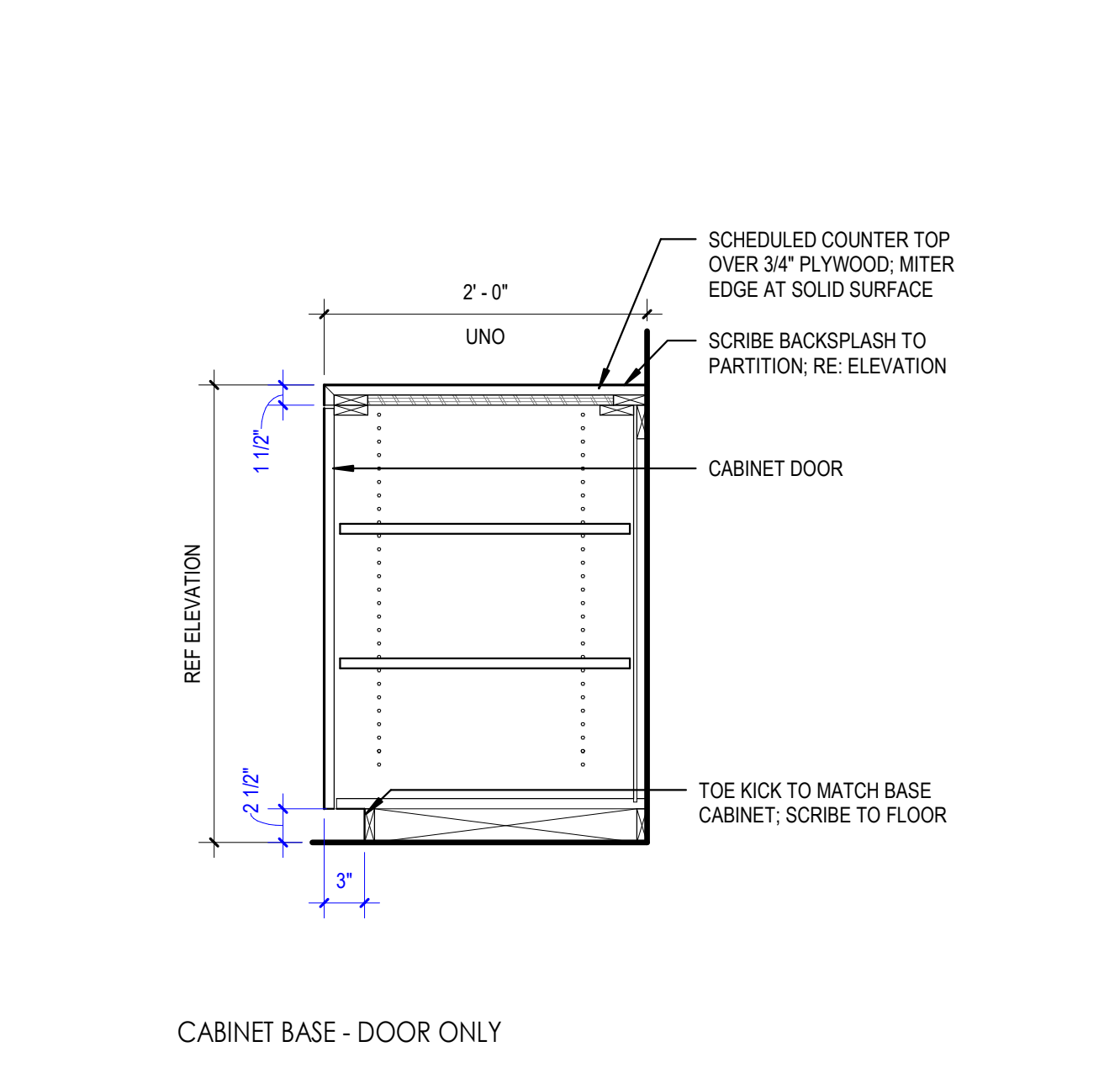
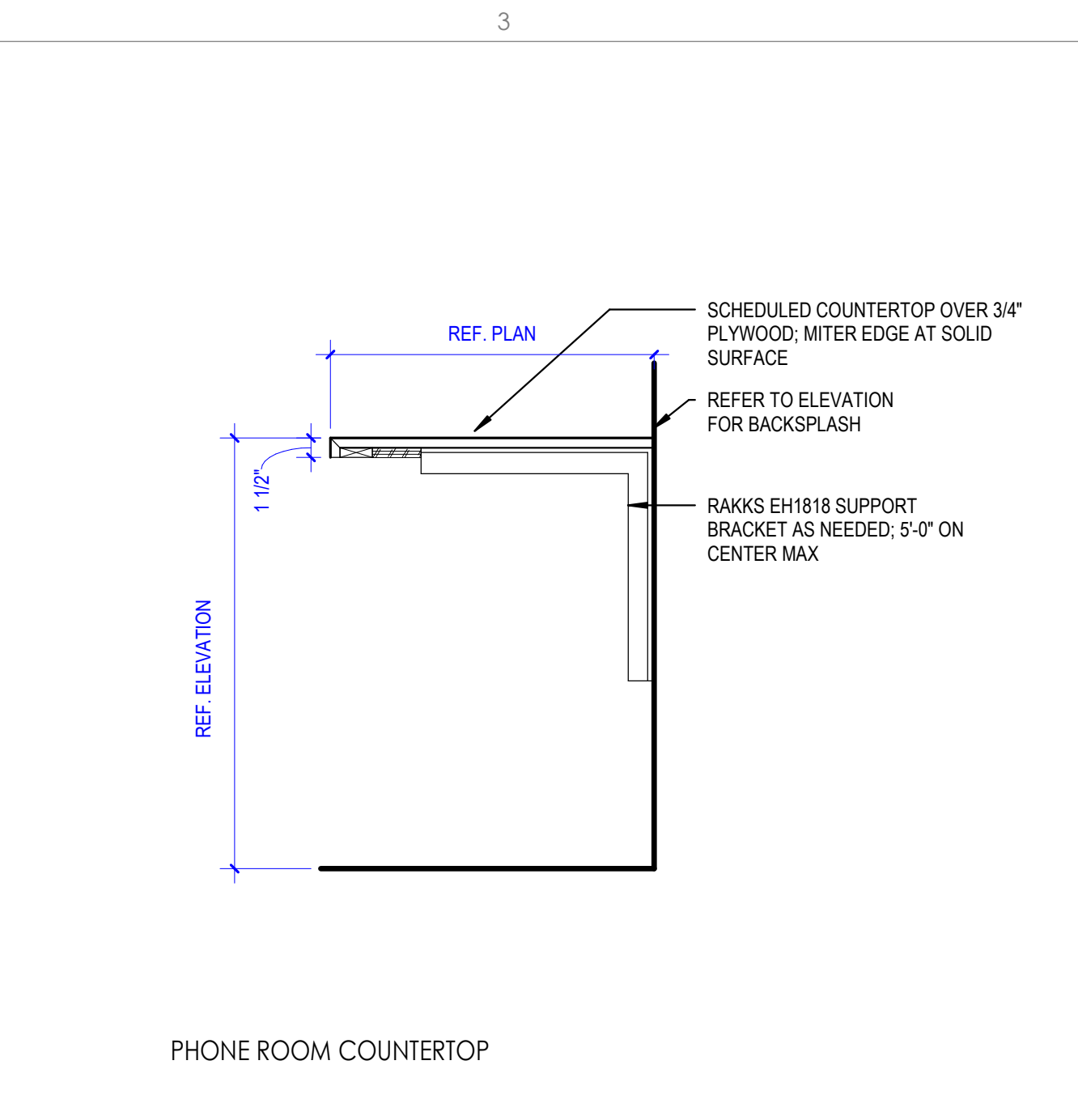
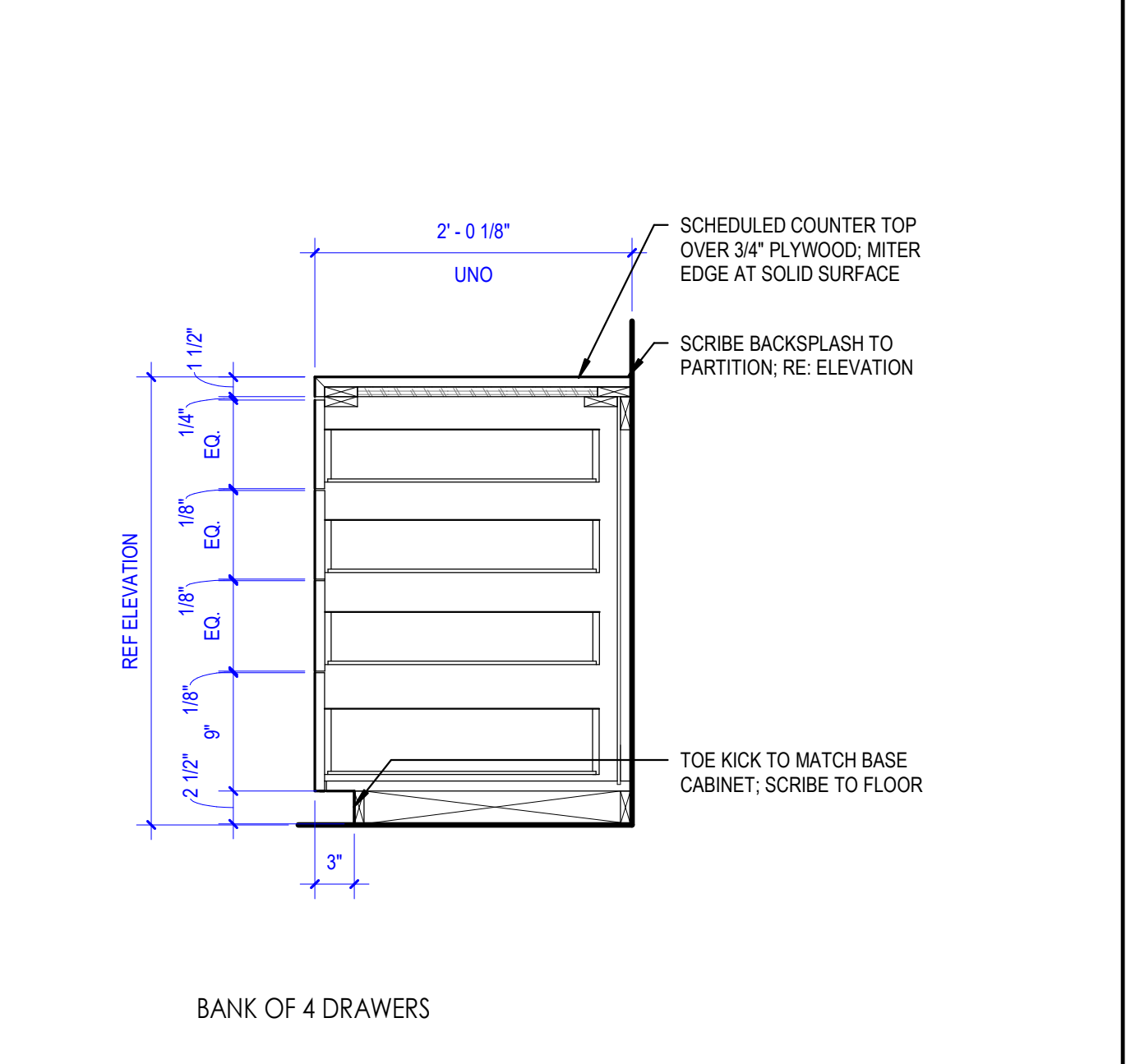
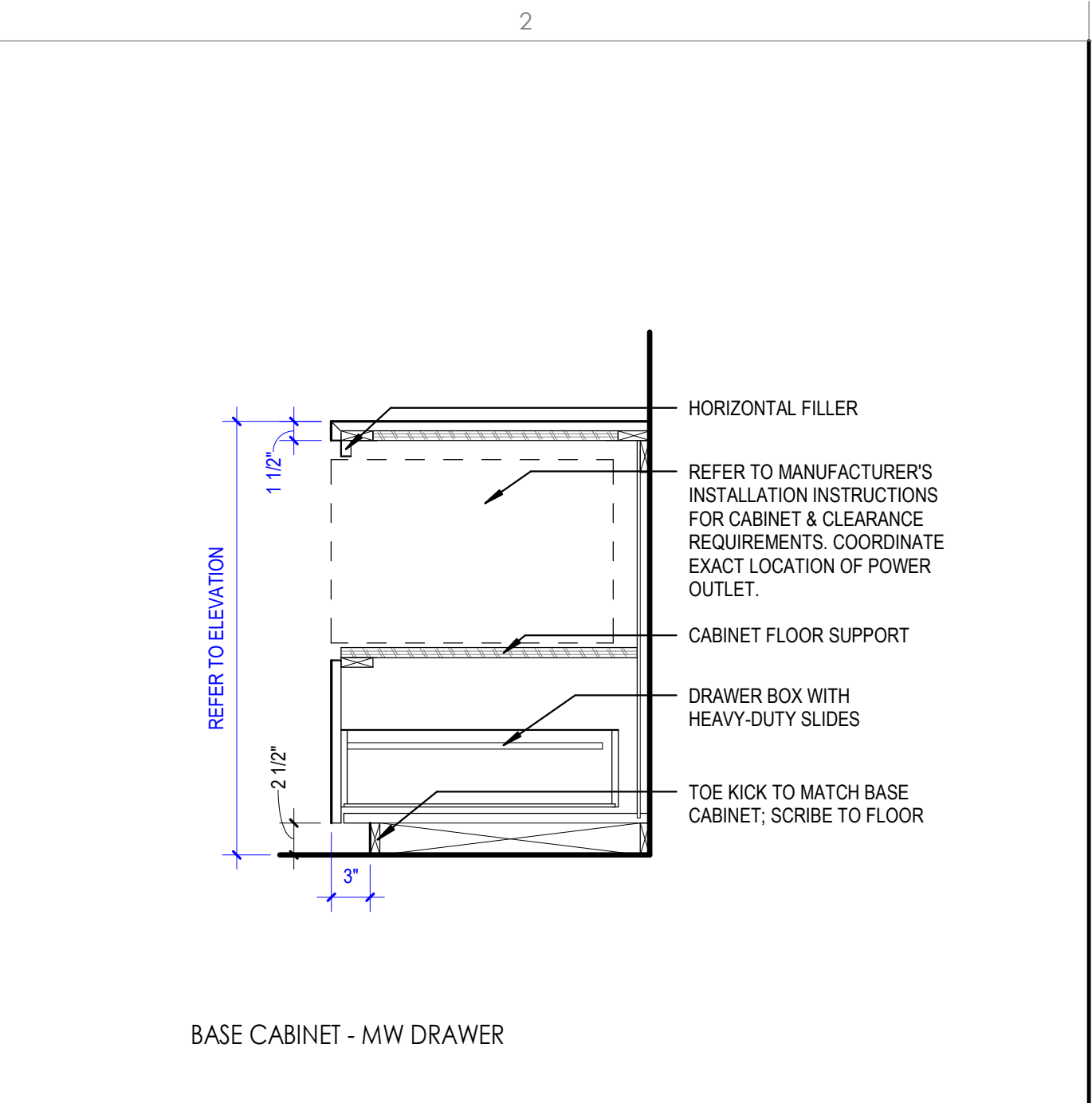
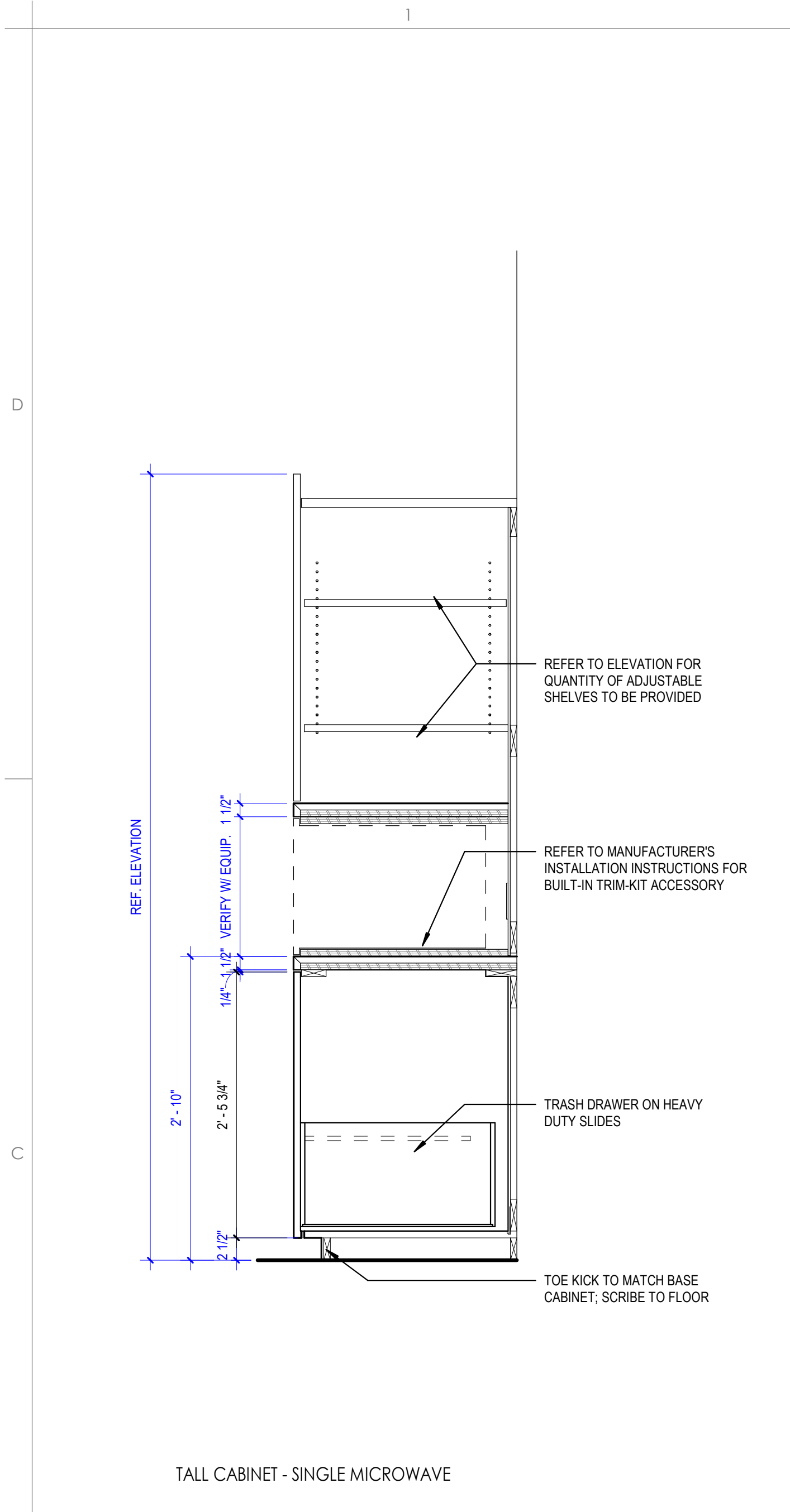
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GENERAL NOTES: MILLWORK

A. UNLESS NOTED OTHERWISE, ALL CABINET CONSTRUCTION SHALL BE PLASTIC LAMINATE CLAD, AND SHALL MEET THE REQUIREMENTS OF AIA SECTION 400, CUSTOM GRADE, FLUSH OVERLAY CONSTRUCTION. ALL WOOD VENEER GLAD CABINET CONSTRUCTION SHALL MEET THE REQUIREMENTS OF AIA SECTION 400, PREMIUM GRADE, FLUSH OVERLAY CONSTRUCTION. COUNTERTOPS SHALL MEET THE REQUIREMENTS OF AIA SECTION 400 WITH EDGE DETAILS AS INDICATED ON THE DRAWINGS.

B. FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO SUBMITTING SHOP DRAWINGS FOR ARCHITECT'S REVIEW.

C. ALL OPEN SHELVING SHALL CONFORM TO AIA SECTION 400B, CUSTOM GRADE. UNLESS NOTED OTHERWISE, ALL SHELVES SHALL BE PAINTED. SHELVING STANDARDS SHALL BE EQUAL TO KV NO. 82 AND BRACKETS SHALL BE EQUAL TO KV NO. 182. UNLESS MORE STRINGENT REQUIREMENTS ARE NOTED. PROVIDE PROPER FIRE-RETARDANT BLOCKING WITH PARTITIONS ON WHICH SHELVING IS INSTALLED.

D. PROVIDE EXTERIOR-GRADE OR WATER-RESISTANT SUBSTRATE TOE KICKS AT SINKS, LAVATORIES, AND FLOOR TILE LOCATIONS.

E. CABINET BODY CONSTRUCTION TO BE VENEER-CORE PLYWOOD OR MDF. EXCEPT AT WET AREAS, USE WATER-RESISTANT SUBSTRATE.

F. INTERIOR CONSTRUCTION TO BE WHITE MELAMINE @ NON-WOOD GRAIN PLAM CABINETS, W/ BLACK MELAMINE @ WOOD GRAIN PLAM & WOOD VENEER CABINETS.

G. ALL EXPOSED SURFACES TO BE CLAD IN PLAM, UNLESS OTHERWISE NOTED.

H. PROVIDE SHOP DRAWINGS FOR ALL MILLWORK FOR REVIEW PRIOR TO BEGINNING FABRICATION OF ANY MILLWORK ITEMS.

I. UNDERSIDE OF OVERHEAD CABINETS TO MATCH CABINET FINISH.

J. ALL FINISHES SHALL BE AS INDICATED IN THE FINISH SCHEDULE AND FINISH KEY. UNLESS NOTED OTHERWISE.

K. UNLESS INDICATED OTHERWISE, BASE CABINETS ARE TO BE ELUSL WITH COUNTERTOP, UPPER CABINETS ARE 1'-3" INSIDE CLEAR.

L. MILLWORKER TO COORDINATE ALL MILLWORK INSTALLATIONS WITH OTHER SUBCONTRACTORS AND APPLIANCES AND SHALL BEAR ANY COST ASSOCIATED WITH THE RECONFIGURATION OF MILLWORK IN CONFLICT WITH OTHER TRADES.

M. ALL INSTALLED CABINETS SHALL BE SCRIBED TO WALL OR CEILING WITHOUT ADDITIONAL OVERLAYS. GAUJK ALL JOINTS TO WALLS.

N. UNLESS NOTED OTHERWISE, HARDWARE MINIMUM REQUIREMENTS ARE AS FOLLOWS. CONFIRM FINISH WITH ARCHITECT PRIOR TO ORDERING.

a. PULLS: 3" TAB PULL, DOUG MOCKETT DP3A OR EQUAL

b. HINGES: CONCEALED, SOFT-CLOSING, BLUM CLIP 125 OR EQUAL

c. DRAWER GUIDES: ACCURIDE, CS-3833-20" BLACK ZINC, FULL EXTENSION SLIDE, 100 LBS CAPACITY

d. SHELF SUPPORT: HAFELE, 282.04.711, NICKEL

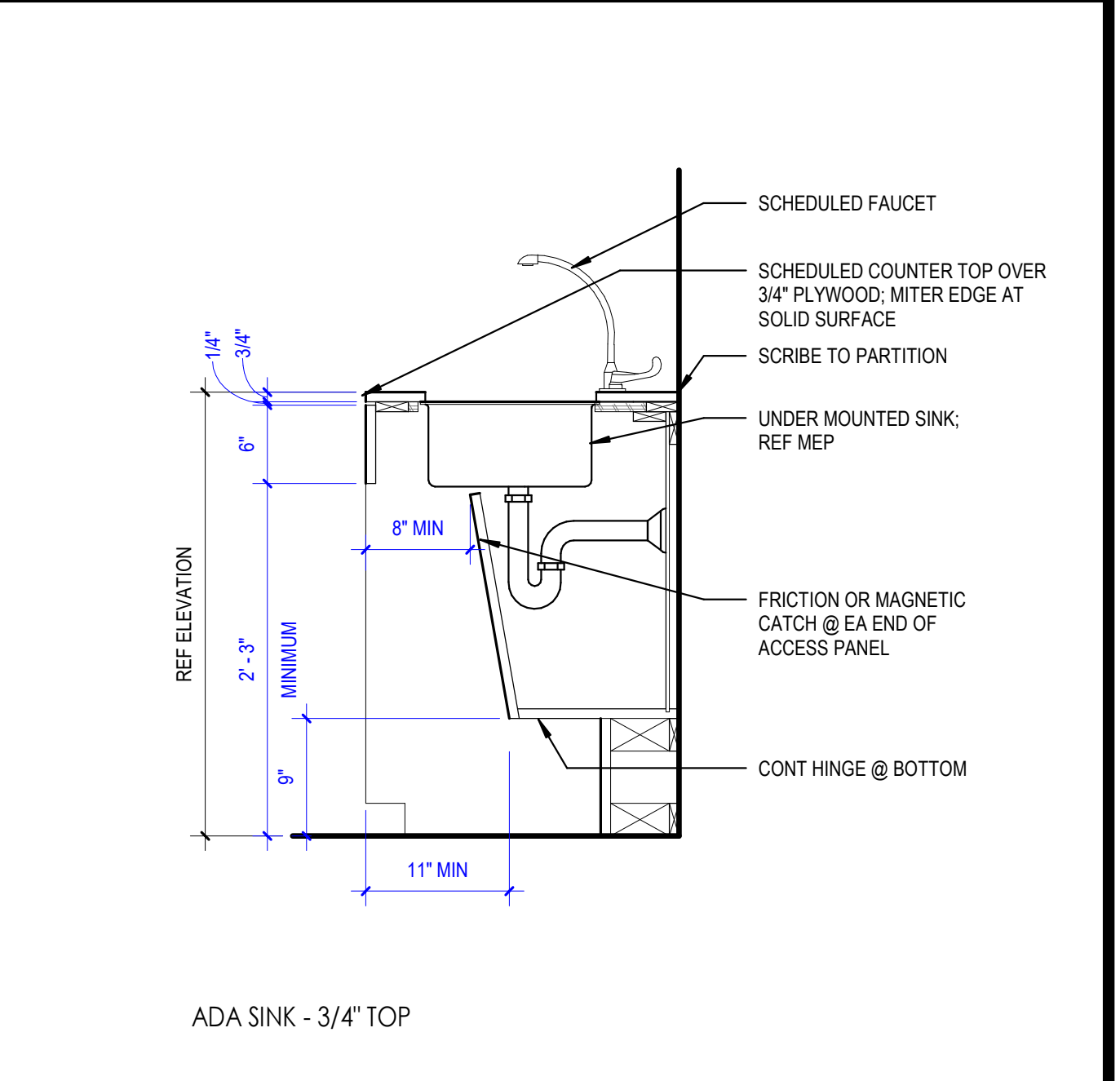
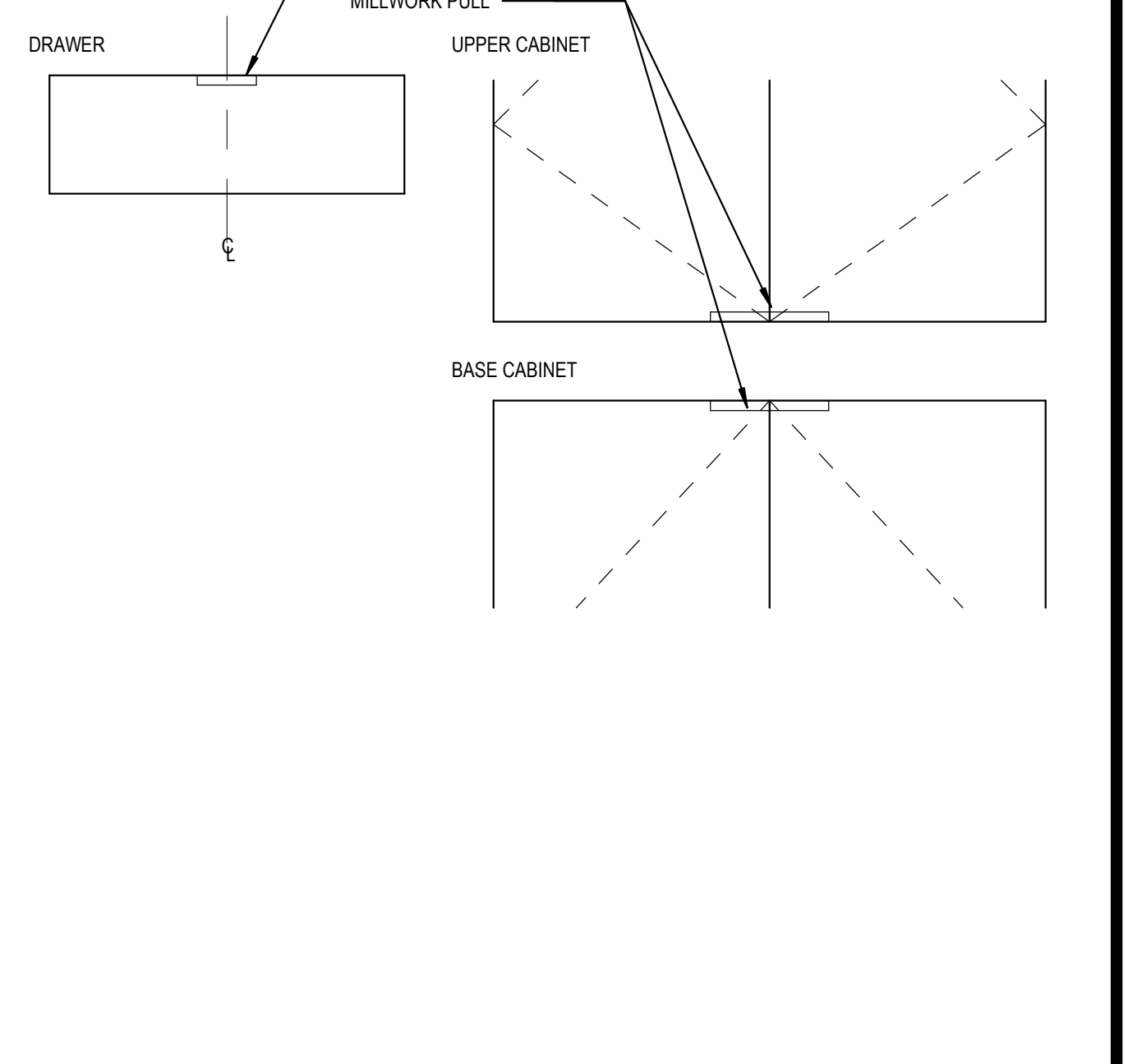
e. BUMPERS: BLUM #TP1950 CLEAR PLASTIC RESILIENT. PROVIDE AT ALL DOORS & DRAWERS

f. ELBOW CATCHES: 1/8" x 1/2" CHROME

g. LOCKS: HAFELE, 235.08.054

h. TOUCH LATCH: FERAM, FE484N ROLLER TOUCH LATCH

i. GROMMET: DOUG MOCKETT, EDP SERIES 2.5" HOLE



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MIRA SAFETY

REGISTERED ARCHITECT
MIRIAM TRAMONTE
0530
STATE OF TEXAS

12/01/2023

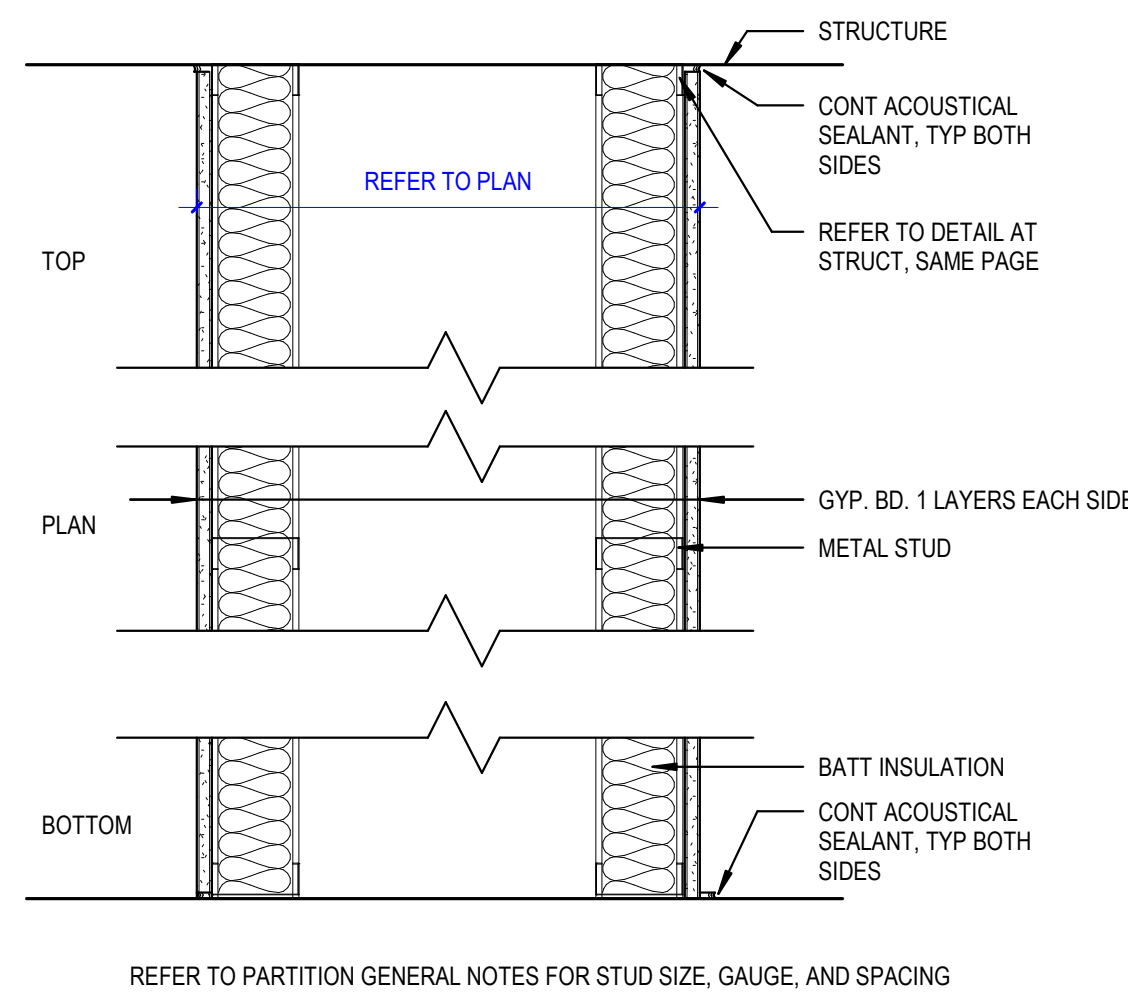
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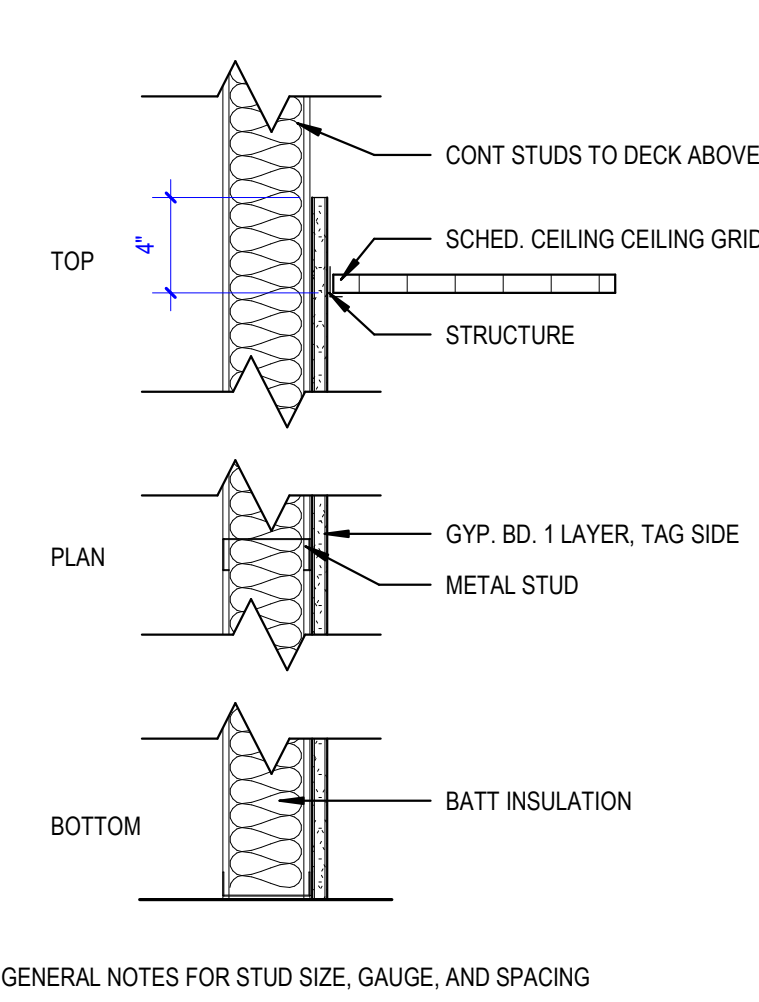
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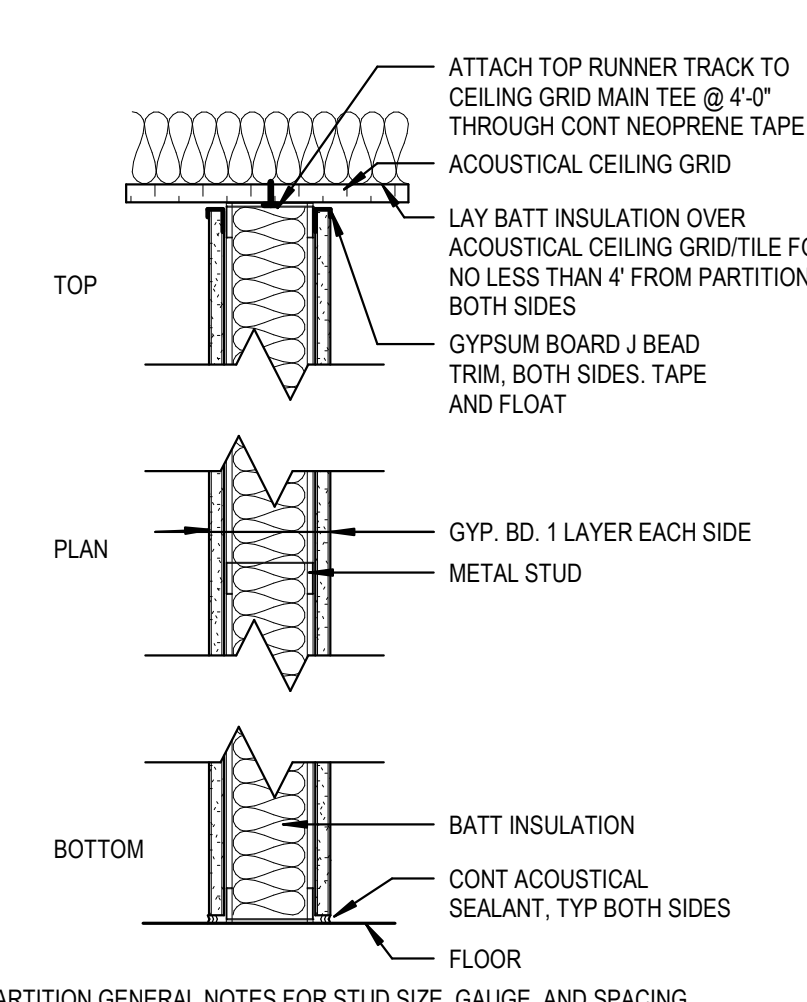
A-503
MILLWORK DETAILS



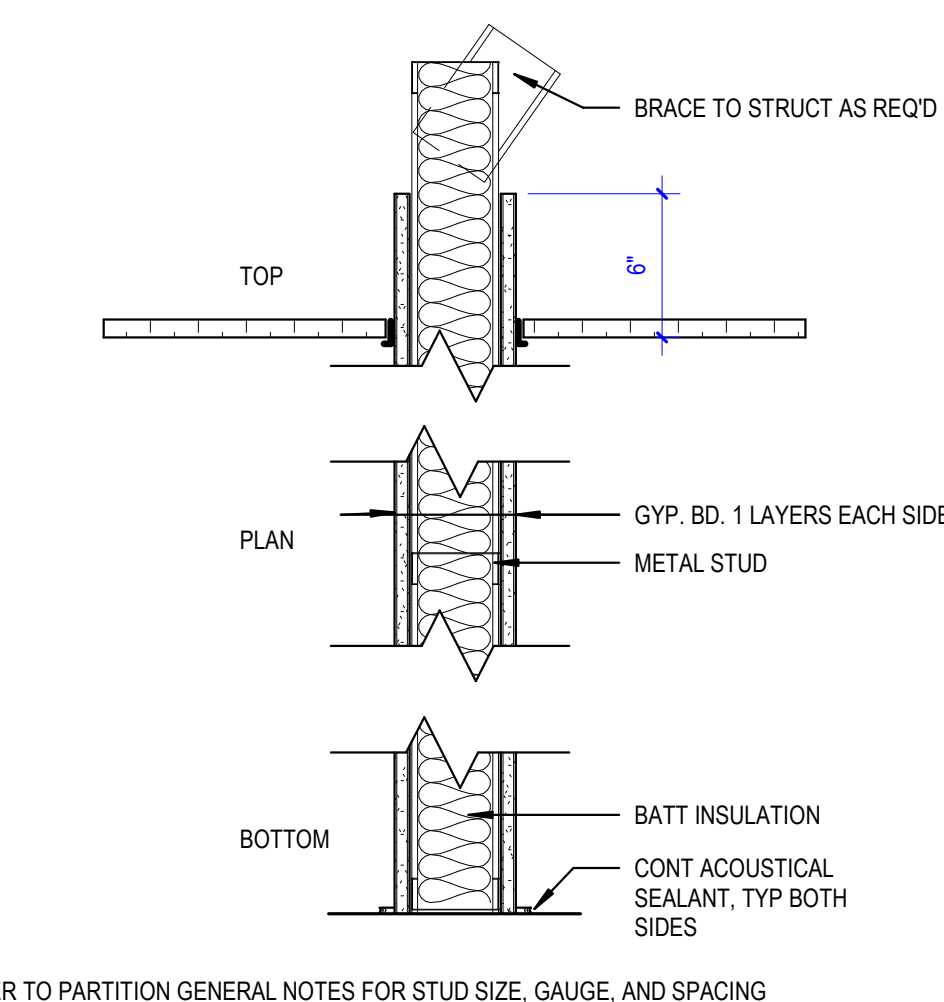
D2 PARTITION TYPE J
1 1/2" = 1'-0"



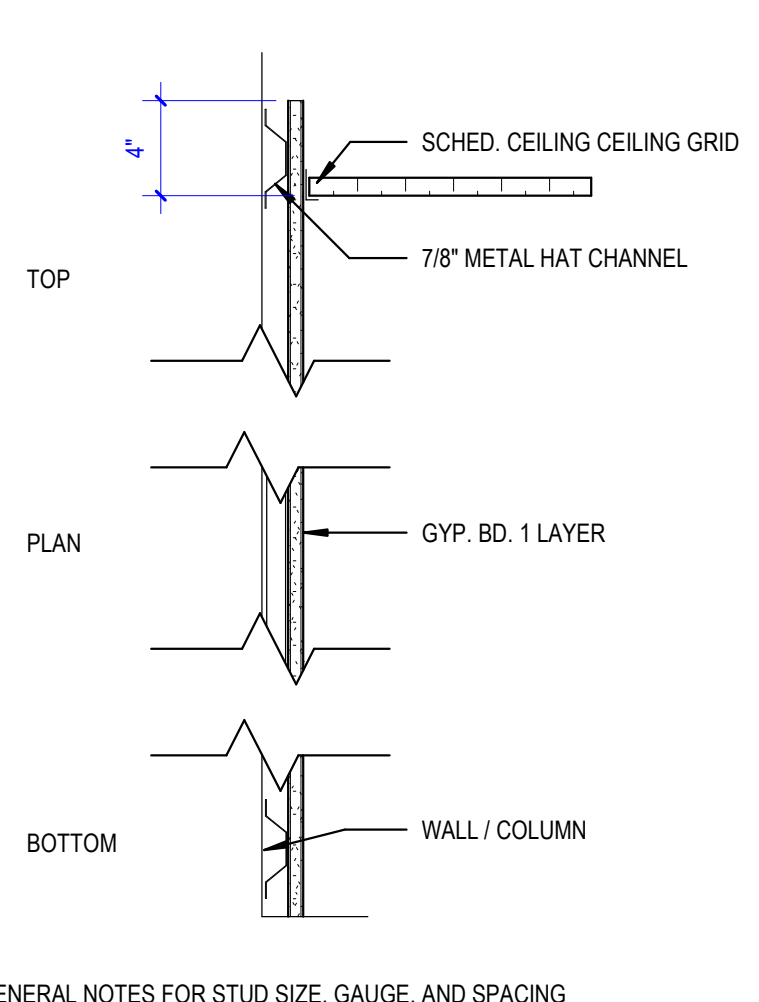
D3 PARTITION TYPE E
1 1/2" = 1'-0"



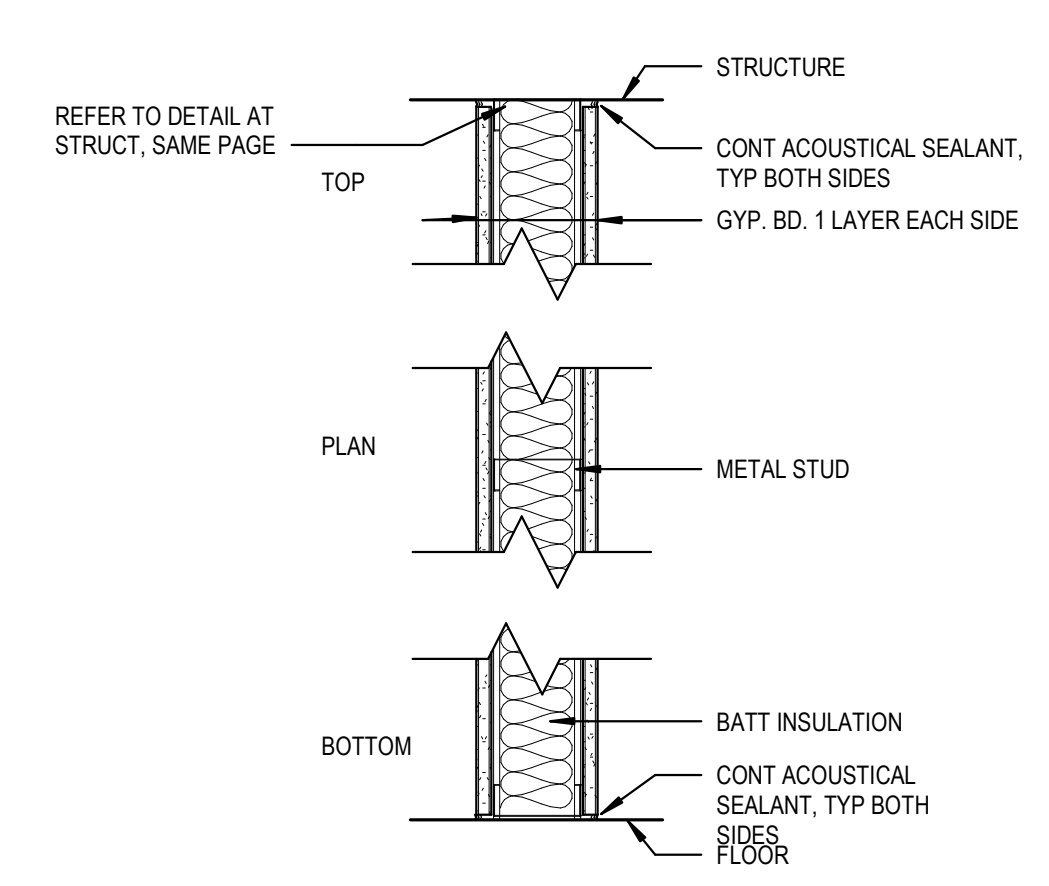
D4 PARTITION TYPE A
1 1/2" = 1'-0"



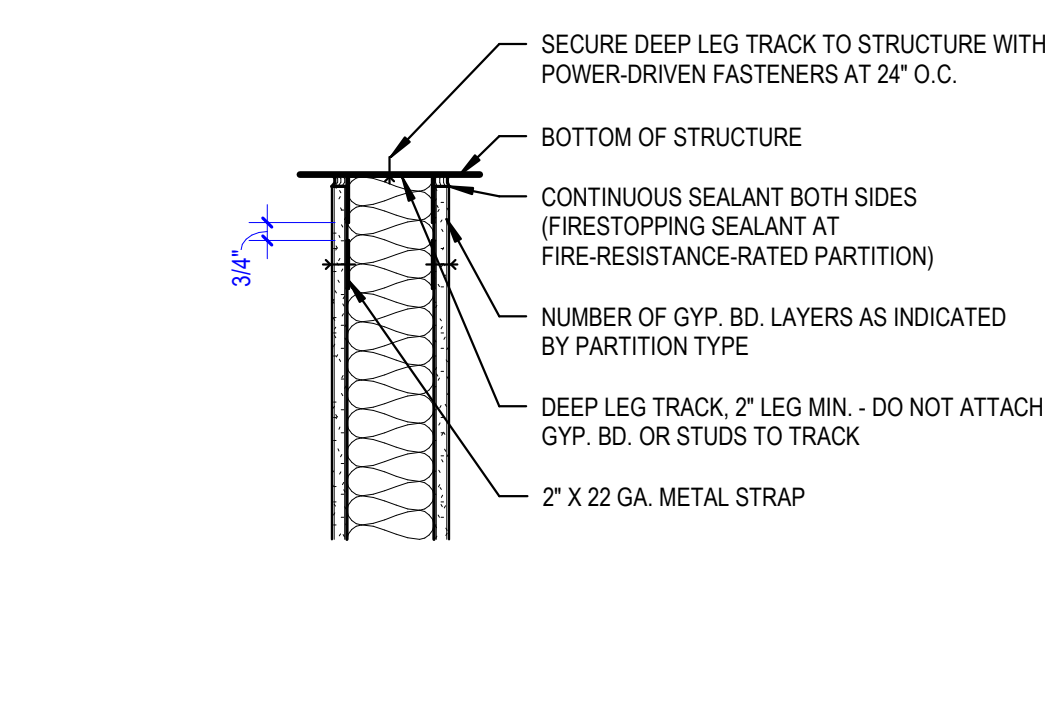
C2 PARTITION TYPE K
1 1/2" = 1'-0"



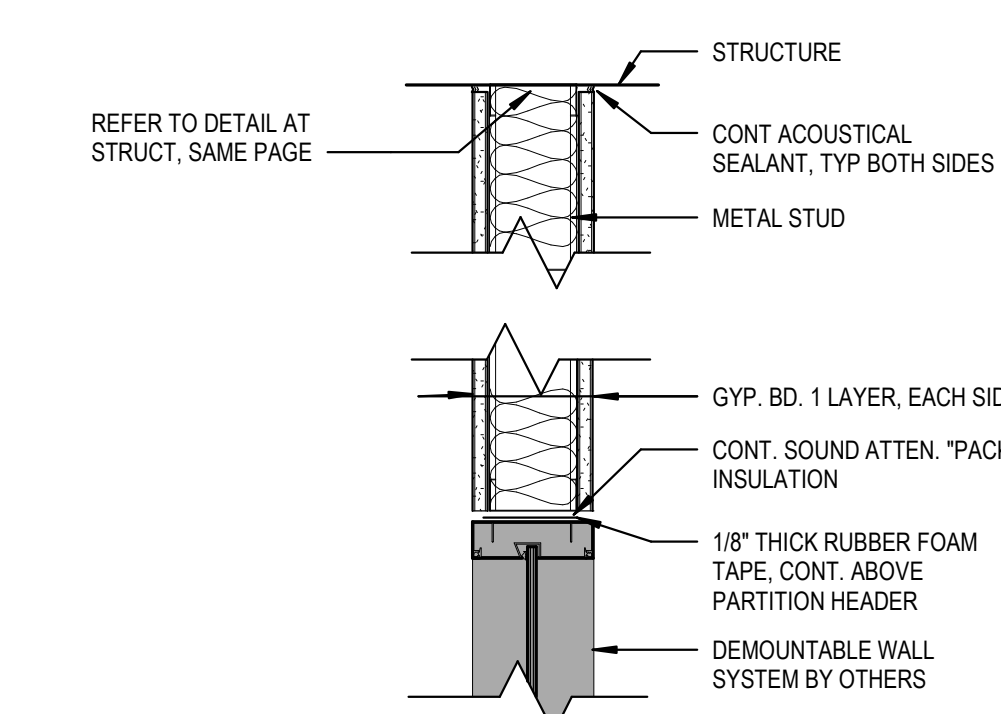
C3 PARTITION TYPE F
1 1/2" = 1'-0"



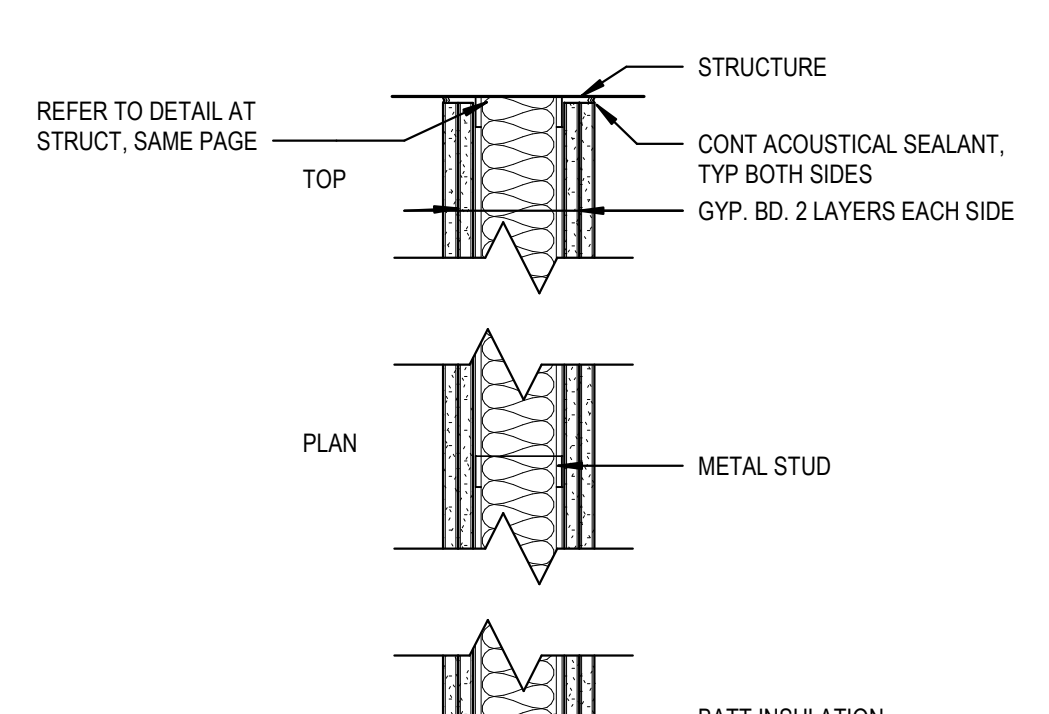
C4 PARTITION TYPE B
1 1/2" = 1'-0"



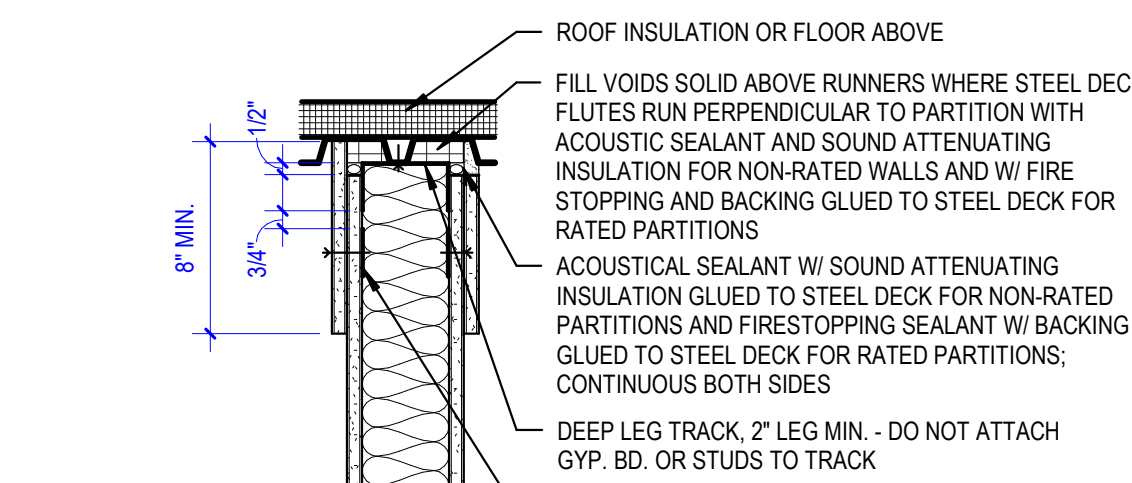
C5 DETAIL AT STRUCT - CONCRETE
1 1/2" = 1'-0"



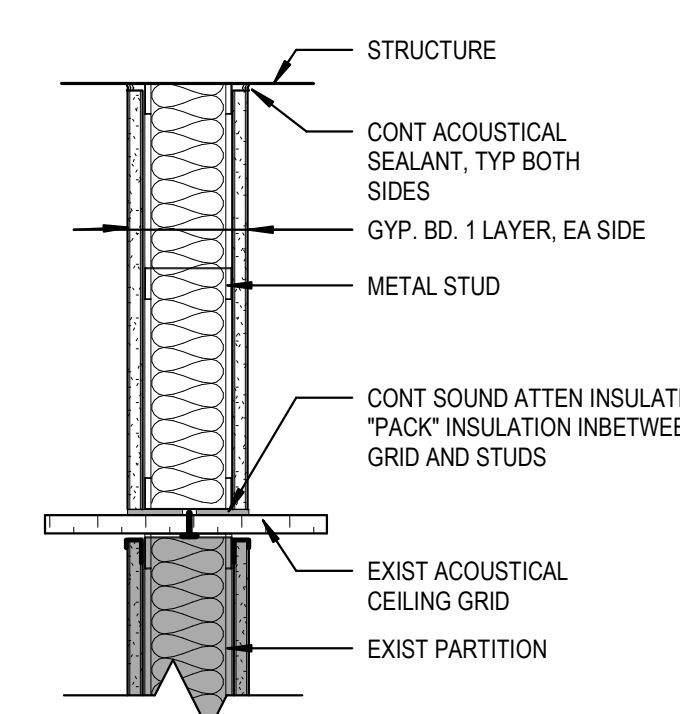
B3 PARTITION TYPE G
1 1/2" = 1'-0"



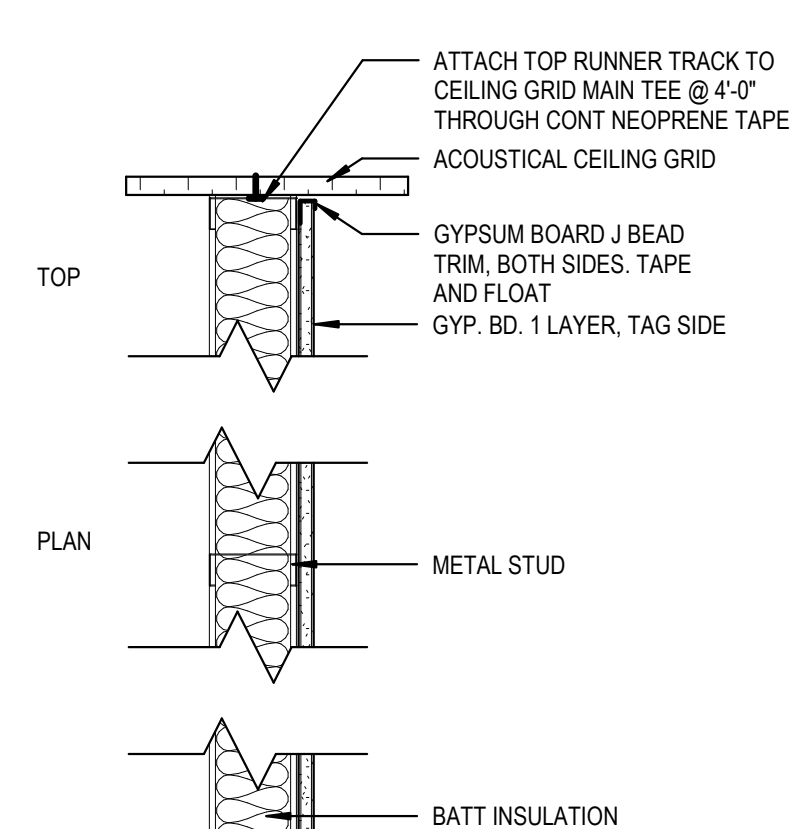
B4 PARTITION TYPE C
1 1/2" = 1'-0"



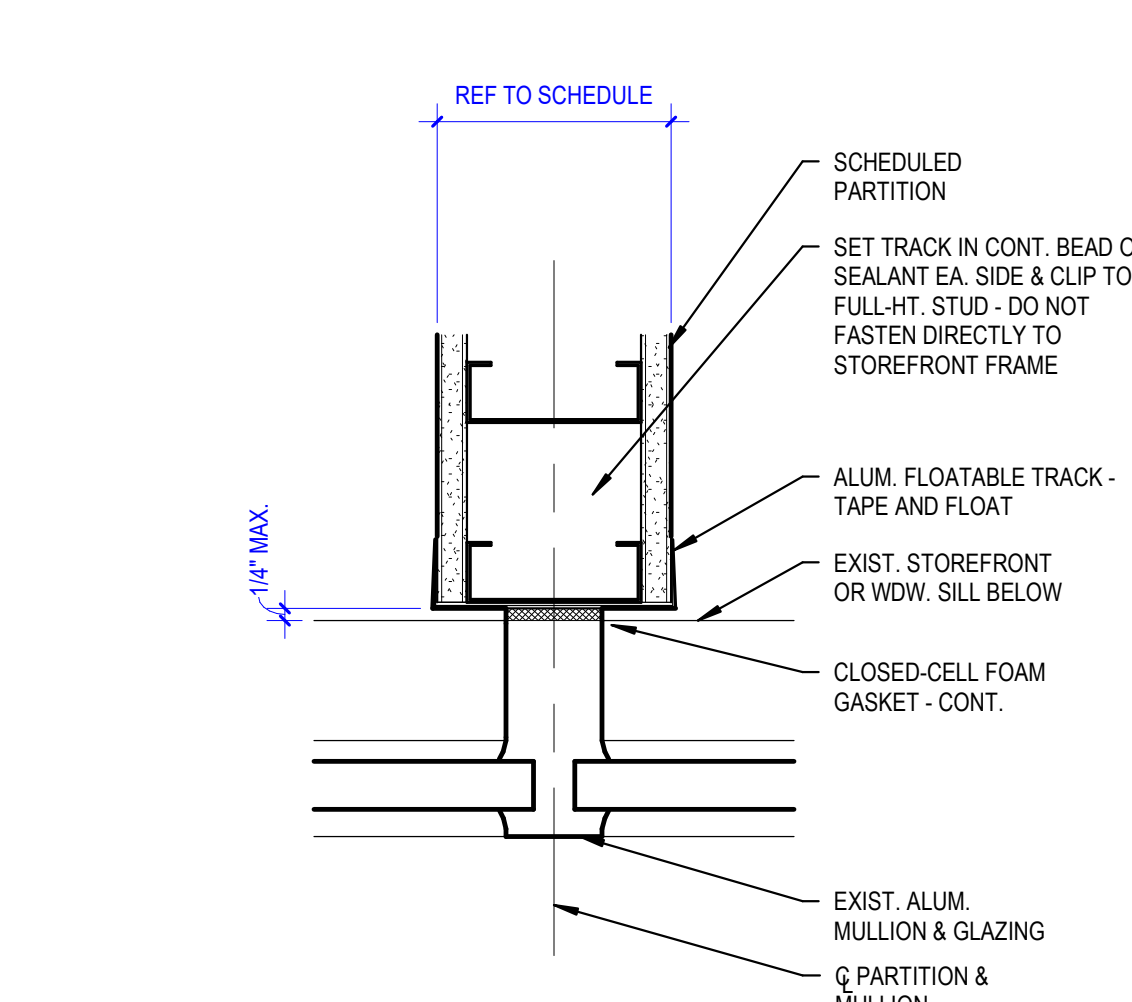
B5 DETAIL AT STRUCT - MTL DECK
1 1/2" = 1'-0"



A3 PARTITION TYPE H
1 1/2" = 1'-0"



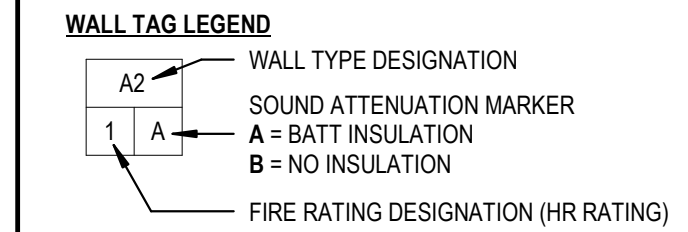
A4 PARTITION TYPE D
1 1/2" = 1'-0"



A5 PARTITION TO MULLION
3" = 1'-0"

GENERAL NOTES: PARTITIONS

- A. UNLESS NOTED OTHERWISE, ALL METAL STUDS ARE 3/8" DEEP. STUD SIZES OTHER THAN 3 5/8" ARE NOTED WITH A NUMERICAL SUFFIX: 1-1 1/8", 2-2 1/2", 4-4", 6-6", 8-8"
- B. UNLESS NOTED OTHERWISE, ALL METAL STUDS ARE 26 GAUGE, UNLESS CONDITIONS REQUIRE HEAVIER GAUGE MATERIAL DUE TO VERTICAL UNBRACED SPAN OR IMPOSED LOADS FROM WALL CABINETS AND SHELVING.
- C. UNLESS NOTED OTHERWISE, ALL METAL STUDS ARE 18" O.C.
- D. PROVIDE CONTINUOUS METAL STUDS FULL HEIGHT OF PARTITION. NO SPLICING IS PERMITTED.
- E. THE MAXIMUM ALLOWABLE DEFLECTION DESIGN CRITERIA RATIO IS L/240, AND L/360 FOR CONDITIONS THAT INCLUDE TILE OR STONE. IF THE PROJECT CONDITIONS NEED TO EXCEED THIS LIMIT, IT IS THE CONTRACTOR'S OPTION TO PROVIDE HEAVIER GAUGE STUDS, LESS SPACE BETWEEN STUDS, OR PROVIDE SUPPLEMENTAL BRACING ABOVE PLENUM AS TO NOT IMPED THE ORIGINAL DESIGN INTENT.
- F. UNLESS NOTED OTHERWISE, ALL GYPSUM BOARD IS 5/8" TYPE X, PROVIDE 5/8" CEMENT FIBER BACKER BOARD AT ALL SHOWER WALLS AND ALL ADJACENT PARTITIONS. PROVIDE 5/8" WATER RESISTANT TYPE X GYPSUM BOARD AT ALL WET WALLS PER SPECIFICATIONS.
- G. TAPE AND FLOAT ALL JOINTS FOR ENTIRE HEIGHT OF PARTITIONS.
- H. PROVIDE AND INSTALL CONTROL JOINTS IN ACCORDANCE WITH GA-216 IN ALL PARTITIONS AND CEILINGS. CONTROL JOINTS LOCATED IN FIRE RATED PARTITIONS SHALL BE CONSTRUCTED TO MAINTAIN THE INTEGRITY OF THE RATING CLASSIFICATION.
- I. FIRE-RESISTANCE-RATED PARTITIONS SHALL BE IN ACCORDANCE WITH THE LISTED ASSEMBLY. ALL ELEMENTS OF THE COMPLETE ASSEMBLY MUST BE IN STRICT COMPLIANCE WITH THE UNDERWRITERS LABORATORY AND OTHER TESTING AGENCY REQUIREMENTS.
- J. PARTITION TYPE DESIGNATIONS ARE SHOWN ON THE FLOOR PLANS, AND WHERE APPLIES, THE ENLARGED FLOOR PLANS.
- K. ANY PENETRATION IN TENANT DEMISING PARTITIONS, BELOW OR ABOVE THE FINISHED CEILING, MUST BE FULLY SEALED TO PREVENT SOUND LEAKAGE.
- L. PROVIDE OPENINGS FOR RETURN AIR MOVEMENT AS REQUIRED IN PARTITIONS TO DECK. REFER TO MEP DRAWINGS.
- M. SOUND INSULATION TO BE EITHER MINERAL WOOL OR GLASS FIBER INSULATION. CERTAINTED "THERMAFIBER" SOUND ATTENUATION BLANKETS OR EQUAL APPROVED BY ARCHITECT.
- N. BACKING BOARD FOR WET AREAS (SINK & TOILET WALLS, SHOWERS, AND PLUMBED APPLIANCE WALLS): WATER-RESISTANT GYPSUM BACKING BOARD AS DEFINED IN ASTM C1396/C1398M, SIZED TO MIN JOINTS IN PLACE.
- O. BACKING BOARD FOR WET AREAS PRODUCTS: CERTAINTED CORP. PROTECK BRAND MOISTURE & MOLD RESISTANT GYPSUM BOARD, GEORGIA-PACIFIC GYPSUM, TOUGHROCK MOLD-GUARD GYPSUM BOARD, GREENBOARD & DENSHELD TILE BACKER, NATIONAL GYPSUM CO. GOLD BOND BRAND XP GYPSUM BOARD, USG CORP. SHEETROCK BRAND MOLD TOUGH GYPSUM PANELS.



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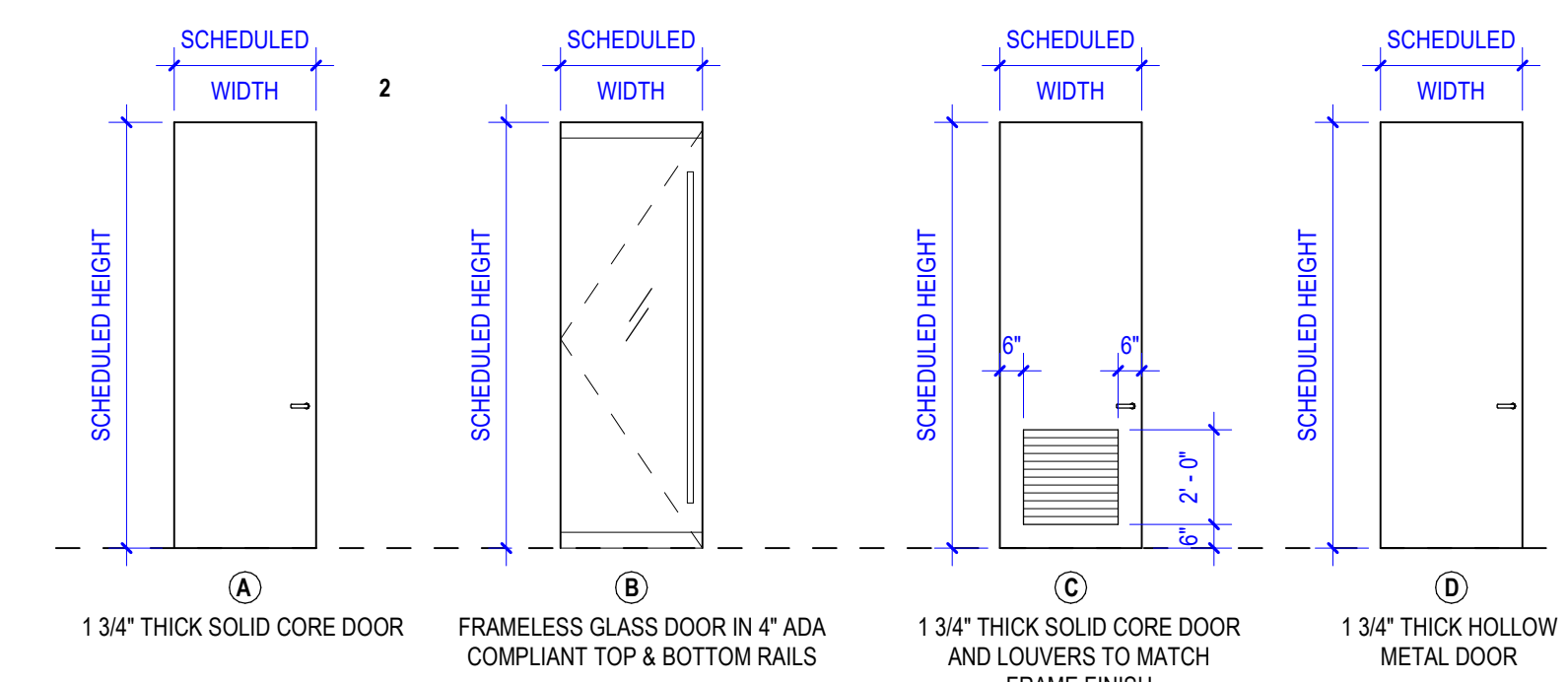
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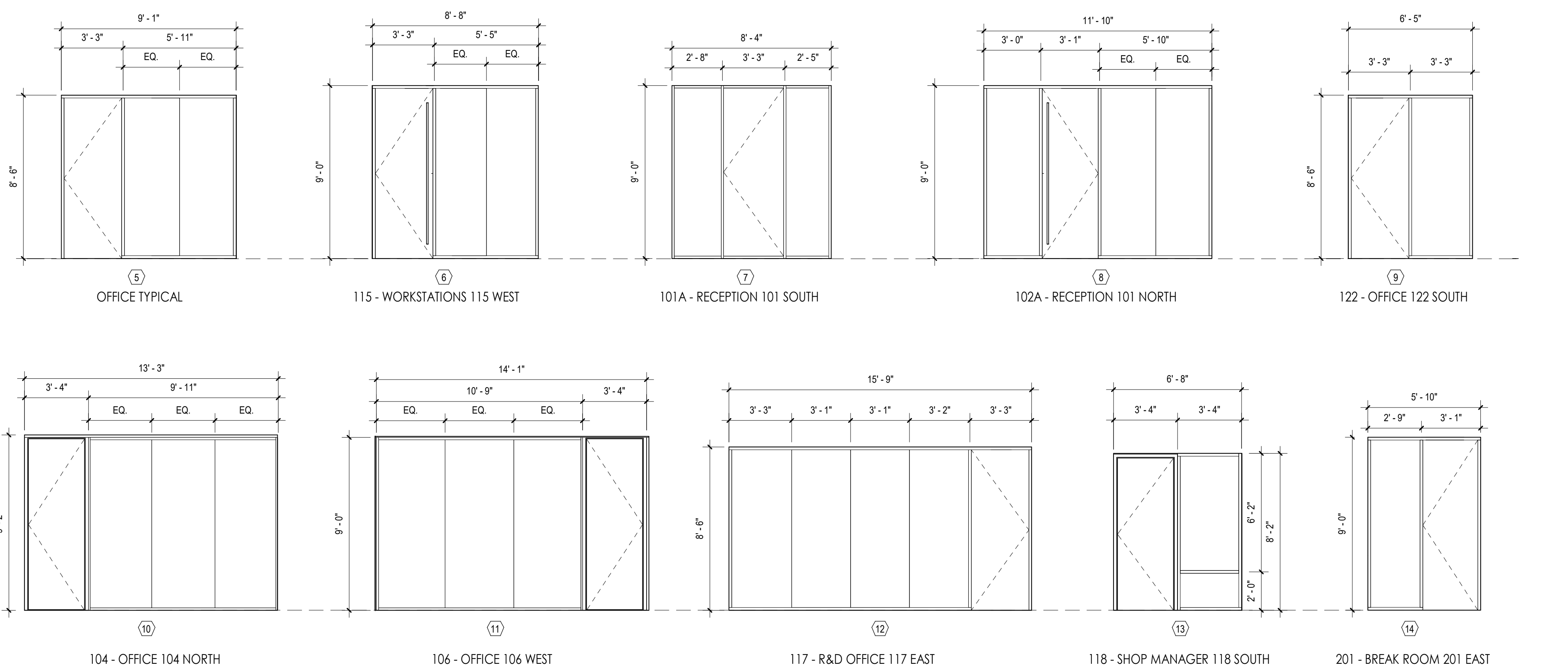
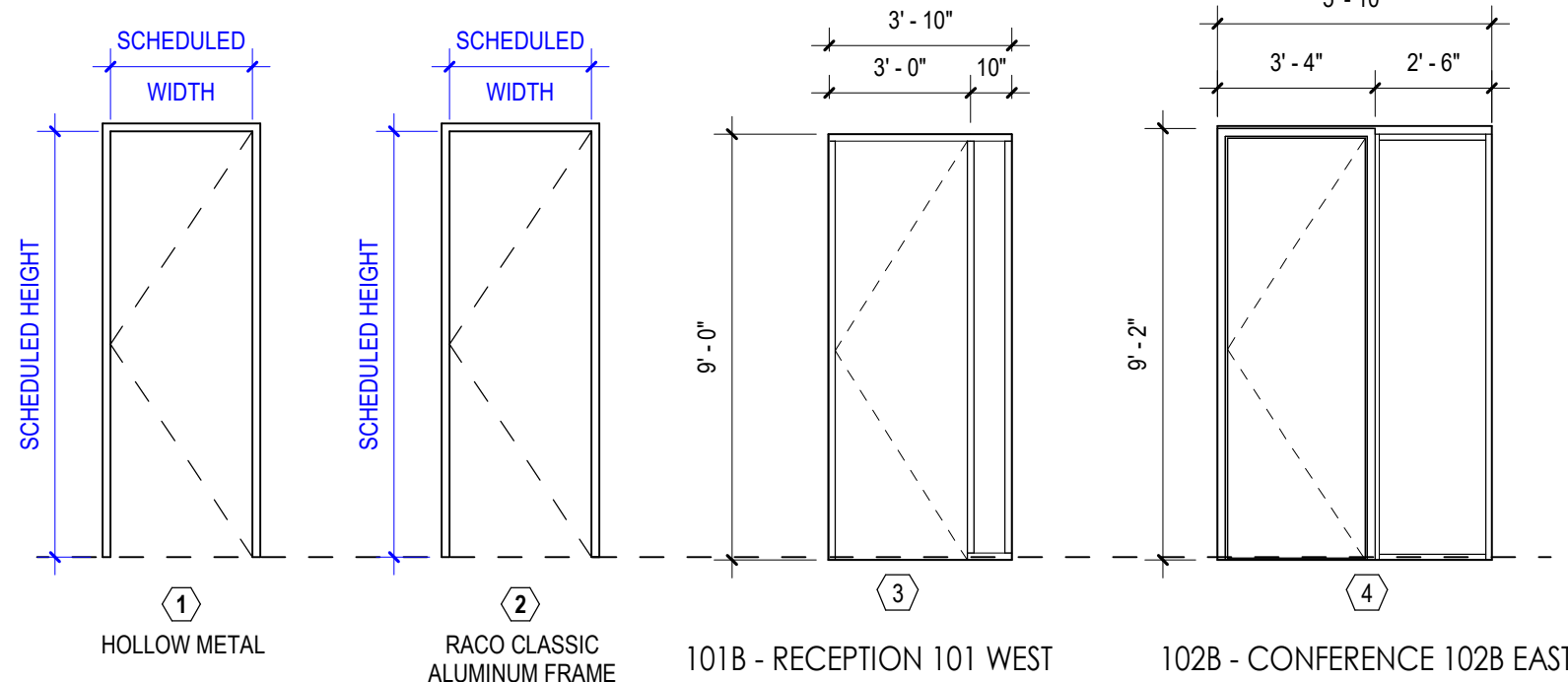
DOOR + FRAME SCHEDULE

DOOR NUMBER	ROOM NAME	DOOR		DOOR		DOOR		FRAME		HARDWARE	COMMENTS
		#	WIDTH	HEIGHT	TYPE	MATERIAL	FINISH	TYPE	MATERIAL		
100	ENTRY		3'-13 3/8"	7'-0"	B					1 OR 2.5	RE: D1A-610 WINDOW WALL TYPE
101A	RECEPTION		3'-1 1/2"	8'-9"	B					7	
101B	RECEPTION		2'-9 1/2"	8'-10 1/4"	B					2	
102A	CONFERENCE		2'-11"	8'-10 1/4"	B					8	
102B	CONFERENCE		3'-0"	9'-0"	A					4	
104	OFFICE		3'-0"	9'-0"	A					10	
105	OFFICE		3'-0"	9'-0"	A					2	
106	OFFICE		3'-0"	9'-0"	A					11	
113	UNSEXRR		3'-0"	9'-0"	A					2	
114	ELEC		3'-0"	9'-0"	C					5	
115	OPEN WORKSTATIONS		3'-0"	8'-10 1/4"	B					6	
116A	OPEN WORKSTATIONS		3'-0"	9'-0"	D					7	
117	R&D OFFICE		3'-0"	8'-4 1/4"	B					12	
118	SHOP MGR		3'-0"	8'-4 1/4"	B					5	OPH
118B	SHOP MGR		3'-0"	8'-0"	A					13	
119	OFFICE		3'-0"	8'-4 1/4"	B					5	
120	OFFICE		3'-0"	8'-4 1/4"	B					5	
121	OFFICE		3'-0"	8'-4 1/4"	B					2	OPH
122	OFFICE		3'-0"	8'-4 1/4"	B					9	
123	CORRIDOR		3'-0"	9'-0"	A					2	
124			3'-0"	9'-0"							CASED OPENING
200A	GYM		2'-0"	9'-0"							CASED OPENING
201	GYM		2'-10 3/8"	8'-10 1/4"	B					14	
202	JANSTO.		3'-0"	9'-0"	C					2	
203A	WOMEN		3'-0"	9'-0"	A					2	
203B	WOMEN		3'-0"	9'-0"	A					2	
204A	MEN		3'-0"	9'-0"	A					2	
204B	MEN		3'-0"	9'-0"	A					2	
205A	GYM		3'-0"	9'-0"	A					2	
205B	SAUNACOLD PLUNGE		3'-0"	9'-0"	A					3	

DOOR NOTES:
 1. UNDERCUT AT DOORS NOT TO EXCEED 1/2"
 2. FRAMELESS GLASS TO BE 1/2" CLEAR TEMPERED, UNO
 3. FRAMED GLASS TO BE 3/8" CLEAR TEMPERED, UNO



FRAME NOTES:
 1. ALL FRAMES TO BE CLEAR ANODIZED ALUMINUM WITH GRAY FELT AND GLAZING VINYL UNO
 2. SIDELIGHTS TO ALIGN WITH TOP OF DOOR FRAMES
 3. SIDELIGHT GLASS TO BE 3/8" CLEAR TEMPERED, UNO
 4. BUTT JOINTS 1/8" MAX TO HAVE CLEAR EXTRUDED POLYMER GASKET, REDDIPLEX I-JOINT OR EQUAL
 5. MANUFACTURER DEVIATIONS ARE NOT ALLOWED UNLESS WRITTEN APPROVAL BY ARCHITECT IS GRANTED PRIOR TO BIDDING.



HARDWARE NOTES:
 1. PROVIDE STANDARD WEIGHT HINGES AT ALUMINUM FRAMES, U.N.O.
 2. PROVIDE 4 EACH HINGES AT OPENINGS OVER 90 INCHES IN HEIGHT.
 3. MOUNT CLOSERS ON ROOM SIDE WITH ALL NECESSARY BRACKETS.
 4. COORDINATE KEYING REQUIREMENTS WITH OWNER/TENANT
 5. FINISH: BRUSHED CHROME US260 AND SATIN STAINLESS STEEL US320, U.N.O.
 6. MANUFACTURER DEVIATIONS ARE NOT ALLOWED UNLESS WRITTEN APPROVAL BY ARCHITECT AND BUILDING OWNER IS GRANTED PRIOR TO BIDDING.
 7. WHERE SPECIFICATIONS DIFFERS FROM BUILDING STANDARD, PROVIDE BUILDING STANDARD.
 8. LEVERS AND PULLS TO MEET TAS COMPLIANCE.

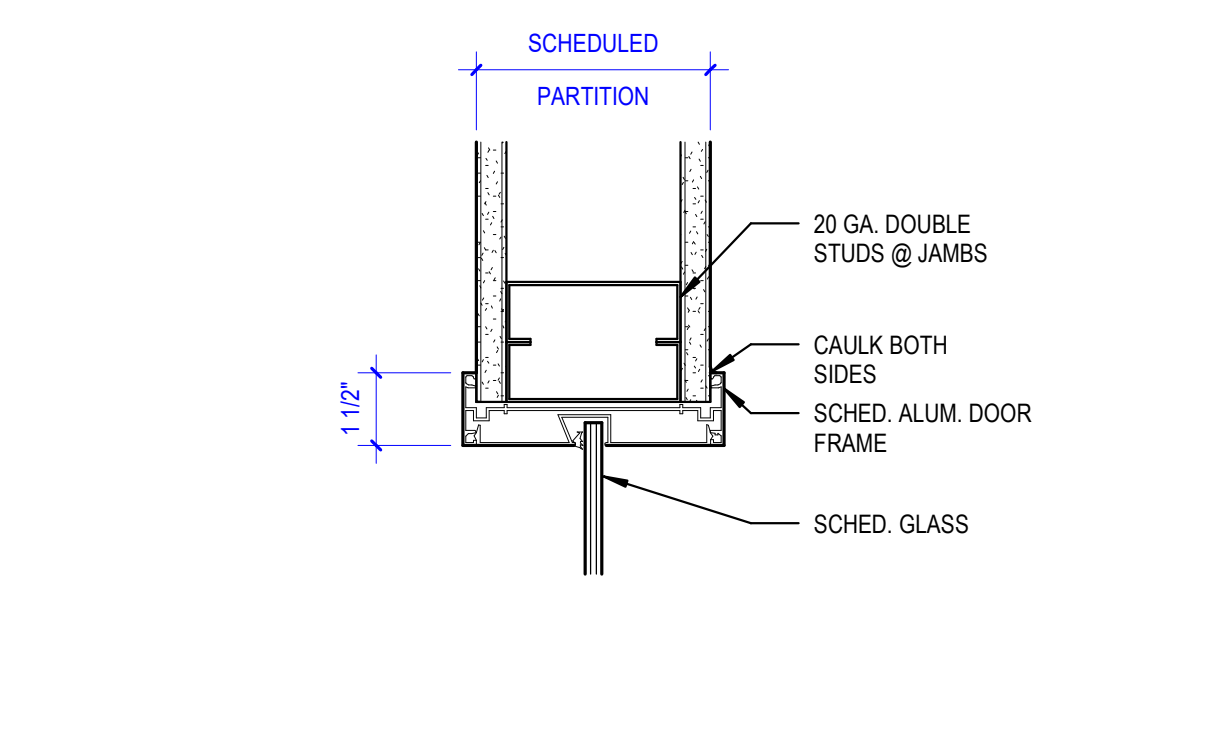
NOTE: THE HARDWARE SPECIFIED IN THE HARDWARE SETS IS TO BE CONSIDERING THE INTENT OF APPLICABLE FUNCTIONS FOR A COMPLETE OPENING SOLUTION AS REQUIRED BY THE USE AND FUNCTIONS OF THE OPENING. THE HARDWARE SETS SPECIFIED ARE TO BE CONSIDERED THE BASE BID.

HARDWARE TYPES:

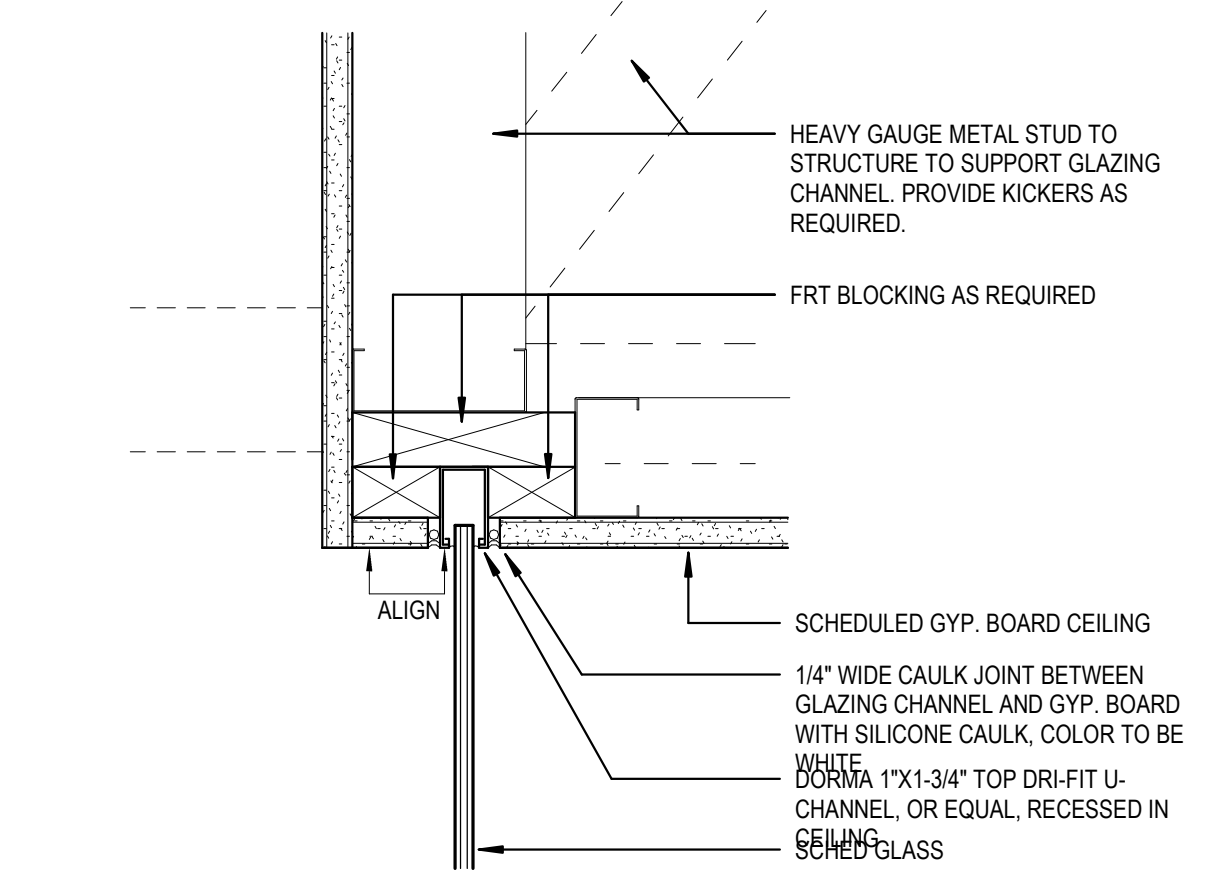
<p>HW.1 DOUBLE - GLASS</p> <p>4 EA. P1 PULLS 2 SETS C1 CONCEALED CLOSER & PIVOT SET 2 EA. S1 FLOOR STOP 2 EA. S2 ANGLE STOP</p> <p>SECURITY SYSTEM BY OTHERS - PERMITTED SEPARATELY</p> <p>HW.2 SINGLE - GLASS</p> <p>2 EA. P1 PULLS 1 SET C1 CONCEALED CLOSER & PIVOT SET 1 EA. S1 FLOOR STOP 1 EA. S2 ANGLE STOP</p> <p>SECURITY SYSTEM BY OTHERS - PERMITTED SEPARATELY</p> <p>HW.3 SINGLE - PASSAGE</p> <p>4 EA. H1 BUTT HINGES 1 SET L1 PASSAGE SET 1 EA. S1 FLOOR STOP</p>	<p>HW.4 SINGLE - LOCK</p> <p>4 EA. H1 BUTT HINGES 1 SET L2 LOCK SET 1 EA. S1 FLOOR STOP</p> <p>HW.5 SINGLE - STORAGE</p> <p>4 EA. H1 BUTT HINGES 1 SET L3 STOREROOM SET 1 EA. S1 FLOOR STOP 1 EA. C2 SURFACE MOUNTED CLOSER</p> <p>HW.6 SINGLE - CONFERENCE</p> <p>4 EA. H1 BUTT HINGES 1 SET L1 PASSAGE SET 1 EA. S1 FLOOR STOP</p> <p>HW.7 SINGLE - SECURE</p> <p>3 EA. H1 BUTT HINGES 1 EA. H2 ELEC HINGE 1 SET L6 ELEC LEVER SET 1 EA. S1 FLOOR STOP 1 EA. C2 SURFACE MOUNTED CLOSER</p> <p>SECURITY SYSTEM BY OTHERS - PERMITTED SEPARATELY</p>	<p>HW.8 DOUBLE - GLASS</p> <p>4 EA. P1 PULLS 2 SETS C1 CONCEALED CLOSER & PIVOT SET 2 EA. S1 FLOOR STOP 2 EA. S2 ANGLE STOP</p> <p>HW.9 PAIR - STORAGE</p> <p>4 EA. H1 BUTT HINGES 1 SET L3 STOREROOM SET 1 SET L5 DUMMY LEVER 1 SET L1 FLUSH BOLT @ INACTIVE LEAF 2 EA. S1 FLOOR STOP</p> <p>HW.10 RESTROOM</p> <p>4 EA. H1 BUTT HINGES 1 EA. P2 PUSH PLATE 1 EA. S1 FLOOR STOP 1 EA. C2 SURFACE MOUNTED CLOSER</p>	<p>HW.11 PRIVACY</p> <p>4 EA. H1 BUTT HINGES 1 SET L4 PRIVACY SET 1 SET L3 STOREROOM SET 1 EA. S1 FLOOR STOP 1 EA. C2 SURFACE MOUNTED CLOSER</p> <p>HW.12 SINGLE - SECURE (@ FM200 SYSTEM)</p> <p>3 EA. H1 BUTT HINGES 1 EA. H2 ELEC HINGE 1 SET L3 STOREROOM SET 1 EA. S1 FLOOR STOP 1 EA. C2 SURFACE MOUNTED CLOSER 1 EA. M2 DROP SEAL 1 EA. M3 SEALS</p> <p>COMPLETELY SEAL TO PREVENT AIR LEAKAGE SECURITY SYSTEM BY OTHERS - PERMITTED SEPARATELY</p>
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HARDWARE SPECS:

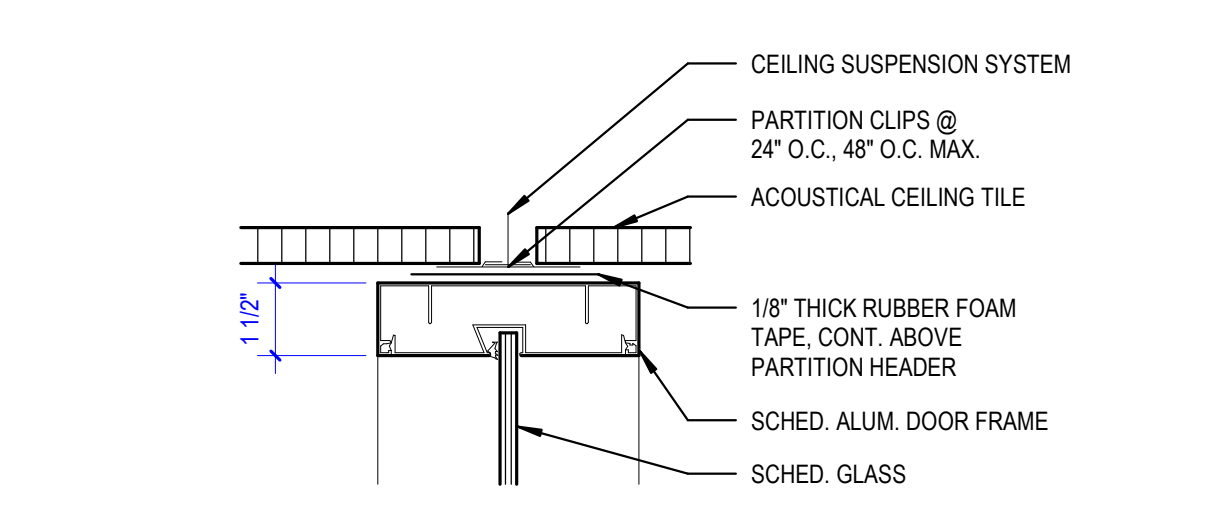
<p>C1 - CONCEALED OVERHEAD CLOSER & CENTER HUNG PIVOT W/ EXTENDED SPINDLE DORMA R238 TOP PIVOT - PT22 BOTTOM PIVOT - PT10 PROVIDE COVER ON HEADER</p> <p>C2 - SURFACE MOUNTED CLOSER LOW 1411 - STANDARD COVER US320</p> <p>H1 - BUTT HINGE (TO MATCH BUILDING STANDARD) MCKINNEY - TA 2714 4.5X4.5 US320</p> <p>H2 - ELEC HINGE (TO MATCH BUILDING STANDARD) MCKINNEY - TA 2714 QCB 4.5X4.5 US320</p> <p>L1 - PASSAGE SET (TO MATCH BUILDING STANDARD) CORBIN RUSSWIN - CL3310 - ARMSTRONG BHMA 630</p> <p>L2 - LOCK SET (TO MATCH BUILDING STANDARD) CORBIN RUSSWIN - CL3351 - ARMSTRONG BHMA 630</p> <p>L3 - STOREROOM SET (TO MATCH BUILDING STANDARD) CORBIN RUSSWIN - CL3357 - ARMSTRONG BHMA 630</p> <p>L4 - PRIVACY SET (TO MATCH BUILDING STANDARD) CORBIN RUSSWIN - ML2600 ECL SERIES BHMA 630</p> <p>L5 - DUMMY LEVER SET (TO MATCH BUILDING STANDARD) CORBIN RUSSWIN - CL3370 - ARMSTRONG BHMA 630</p> <p>L6 - ELEC LEVER SET (TO MATCH BUILDING STANDARD) CORBIN RUSSWIN - ML2600 ECL SERIES BHMA 630</p> <p>L7 - EXIT LOCK SET (RE-ENTER WITH KEY ONLY) CORBIN RUSSWIN - CL3372 - ARMSTRONG BHMA 630</p>	<p>P1 - PULL ROCKWOOD - RM300 48" MTD 8TB US250</p> <p>P2 - PUSH PLATE (TO MATCH BUILDING STANDARD) ROCKWOOD - 70E US250</p> <p>P3 - PULL PLATE (TO MATCH BUILDING STANDARD) ROCKWOOD - 111X70C US250</p> <p>S1 - FLOOR STOP (TO MATCH BUILDING STANDARD) ROCKWOOD - RM650 US260</p> <p>S2 - ANGLE STOP (TO MATCH BUILDING STANDARD) RIXSON - 60131 US260</p> <p>M1 - COAT HOOK NOT USED</p> <p>M2 - AUTOMATIC DROP SEAL NSP - ZS5 ALUM</p> <p>M3 - SEAL NSP - 1105A ALUM</p> <p>F1 - FLUSHBOLT (TO MATCH BUILDING STANDARD) ROCKWOOD - 550 US250</p>
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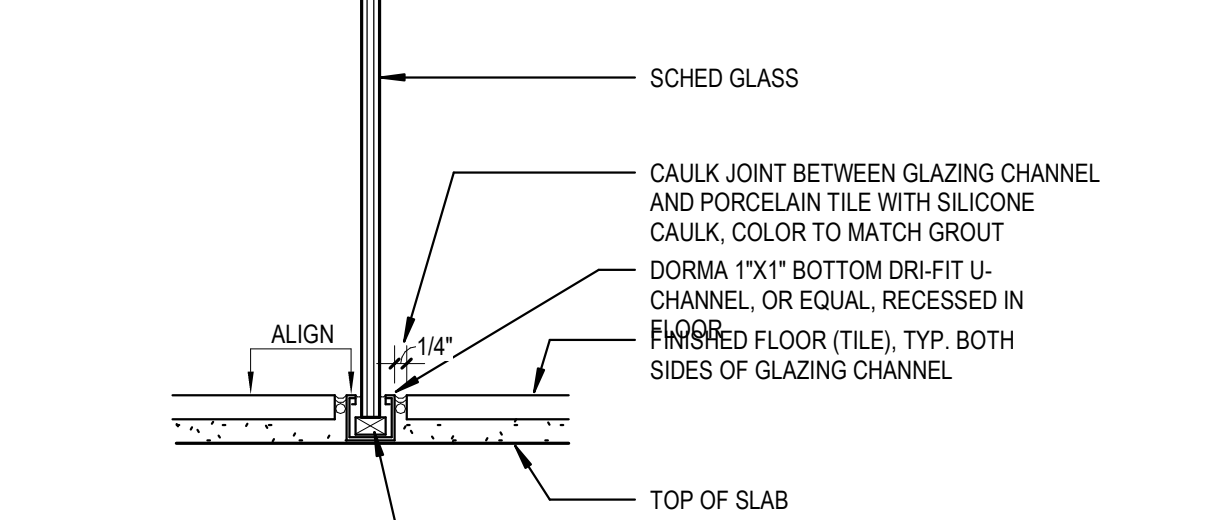
D4 ALUM FRAME - GLASS JAMB
 3" = 1'-0"



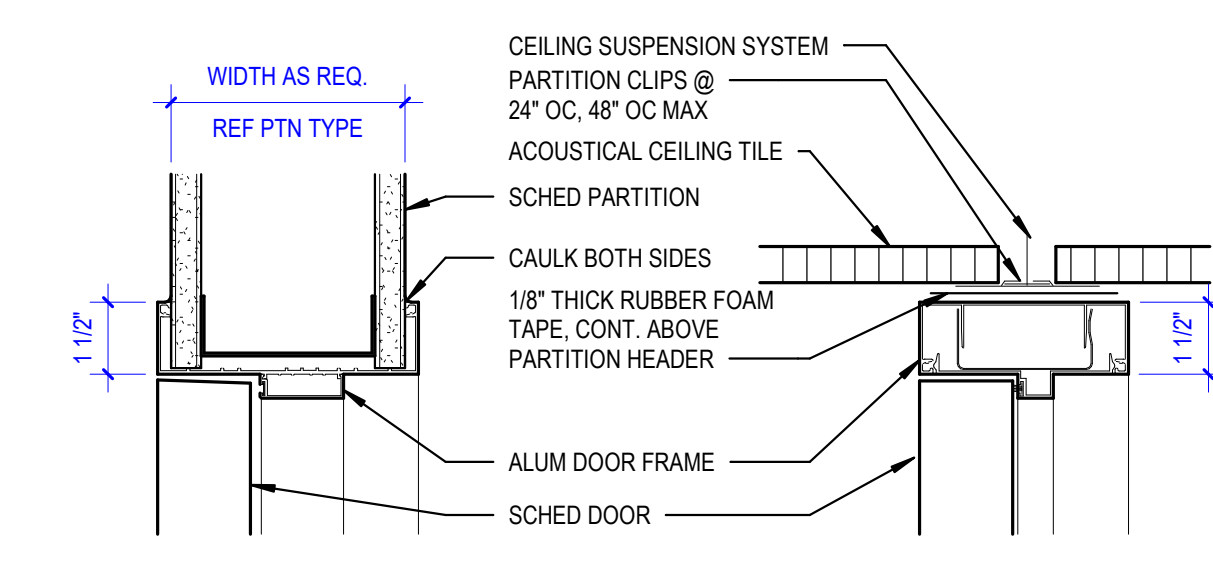
D5 FRAMELESS GLASS SIDELITE @ HEAD
 3" = 1'-0"



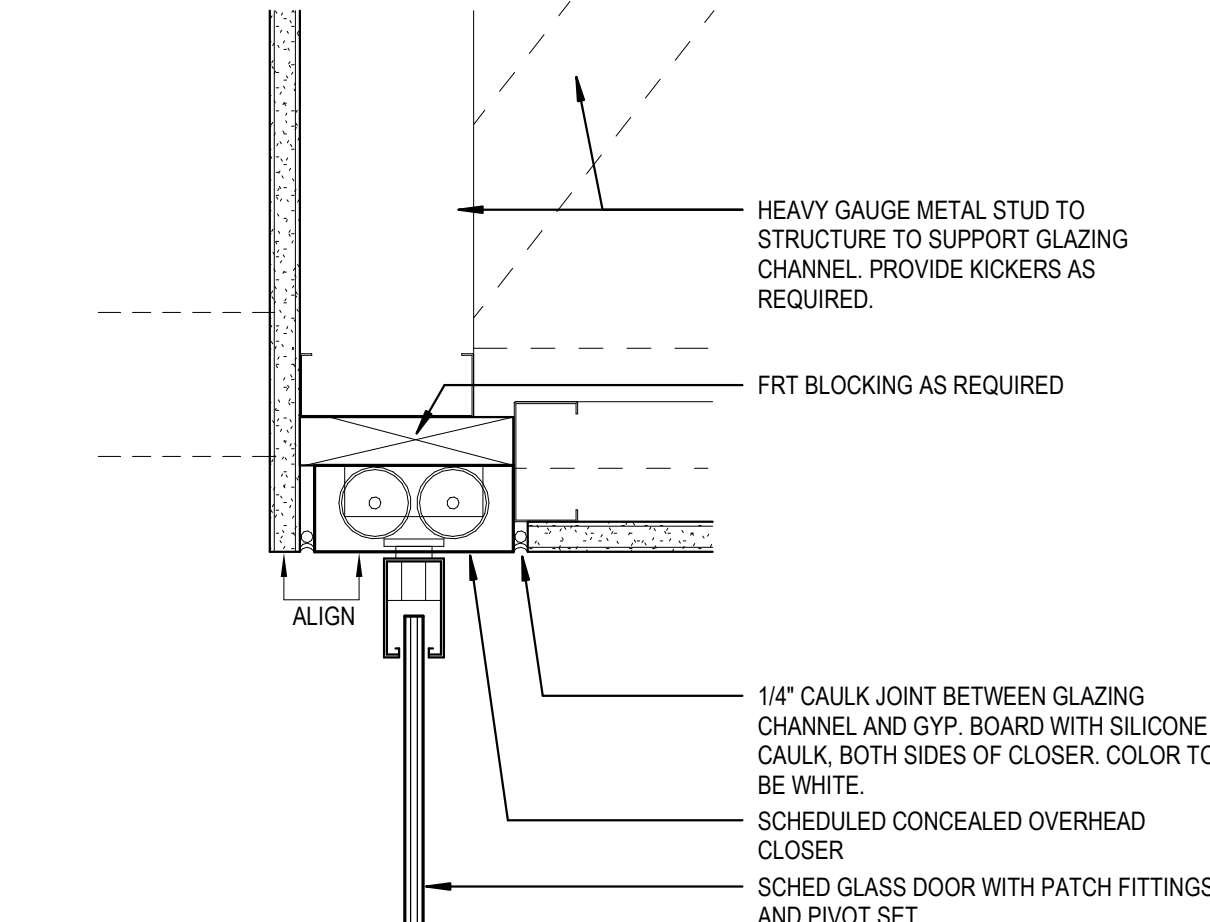
C4 ALUM FRAME - GLASS HEAD
 3" = 1'-0"



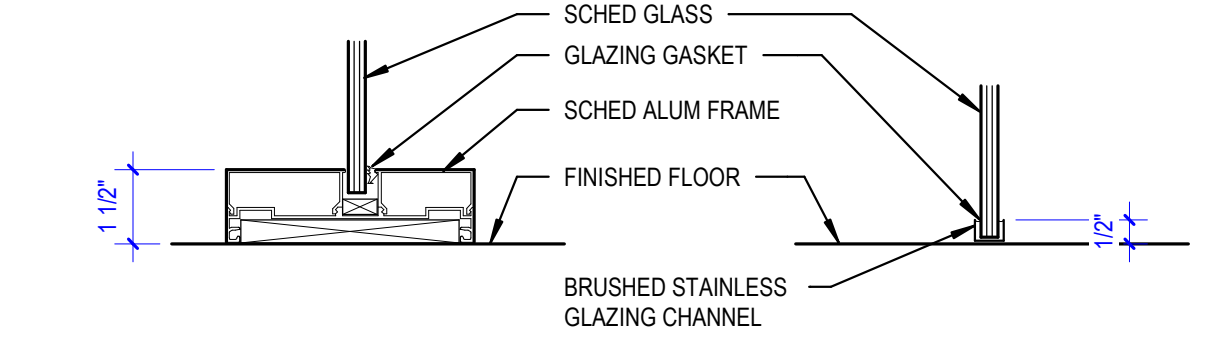
C5 FRAMELESS GLASS SIDELITE @ SILL
 3" = 1'-0"



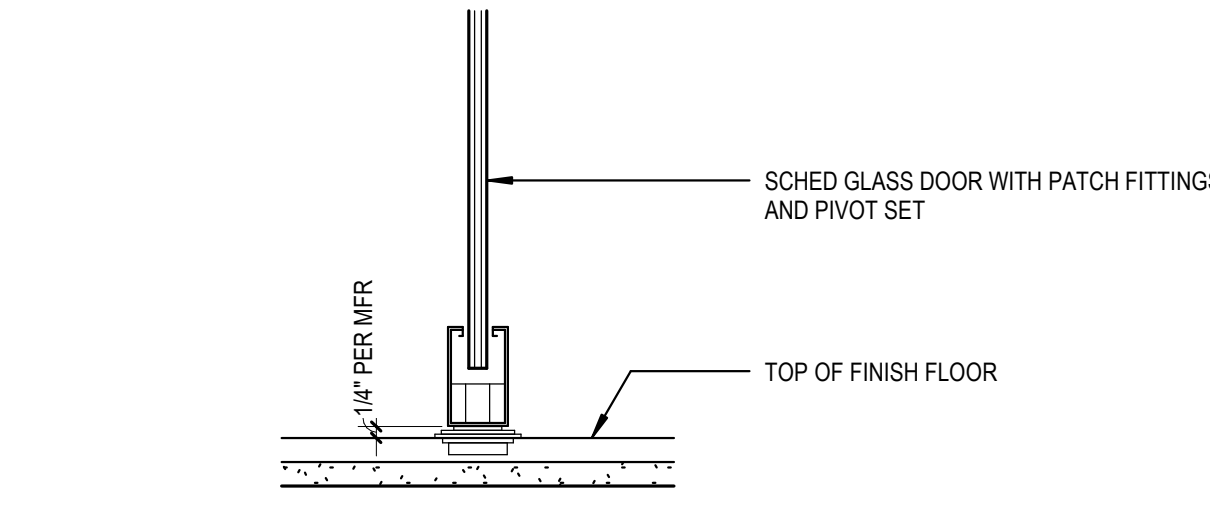
B4 ALUM FRAME - DOOR HEAD
 3" = 1'-0"



B5 FRAMELESS GLASS DOOR @ HEAD
 3" = 1'-0"



A4 ALUM FRAME - GLASS SILL
 3" = 1'-0"



A5 FRAMELESS GLASS DOOR @ SILL
 3" = 1'-0"



12/01/2023
MIRA SAFETY
 1713 Hur Industrial Blvd
 Cedar Park, TX 78613

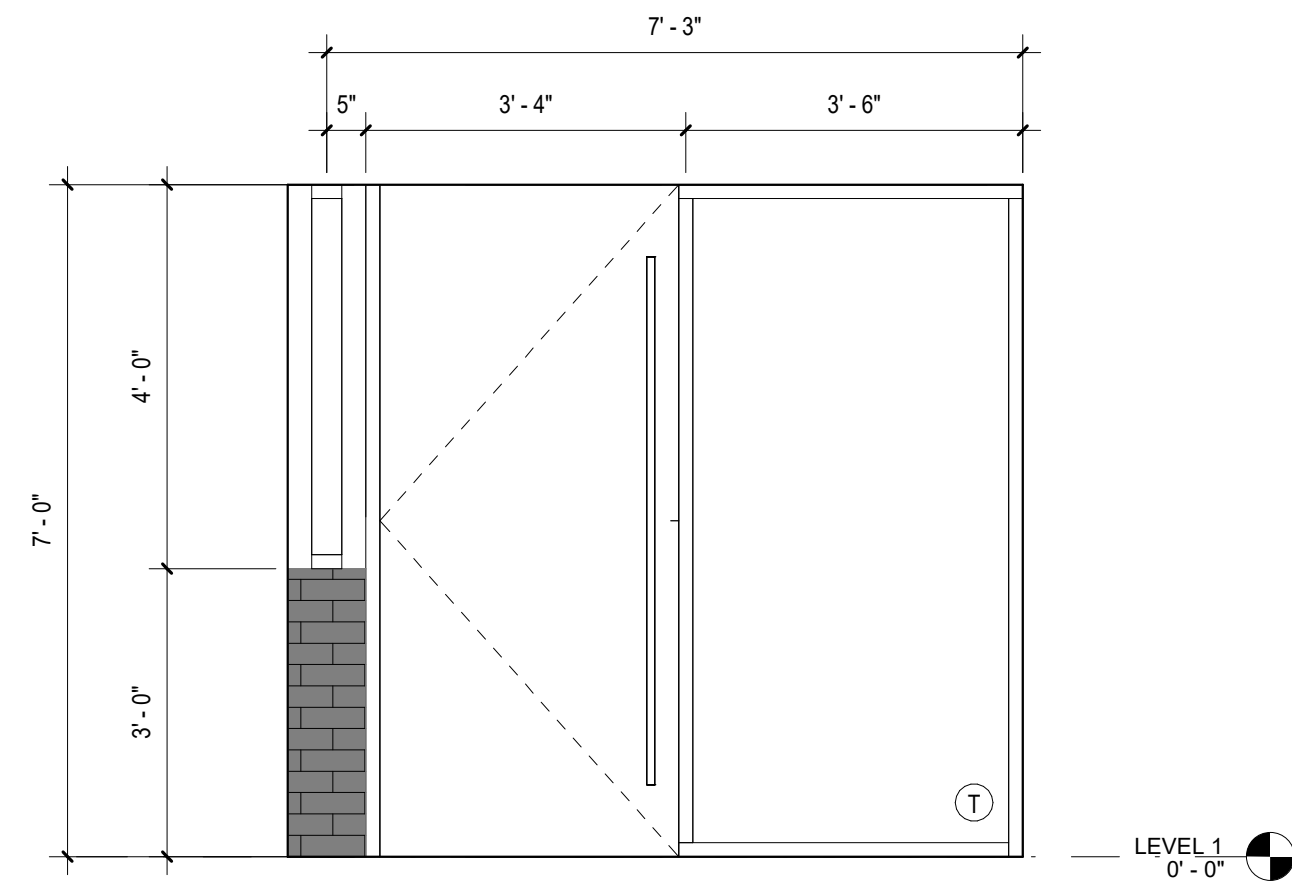
ISSUE FOR PERMIT 12/01/23

Project Number	23-01-014
Drawn By	JO
Checked By	OS

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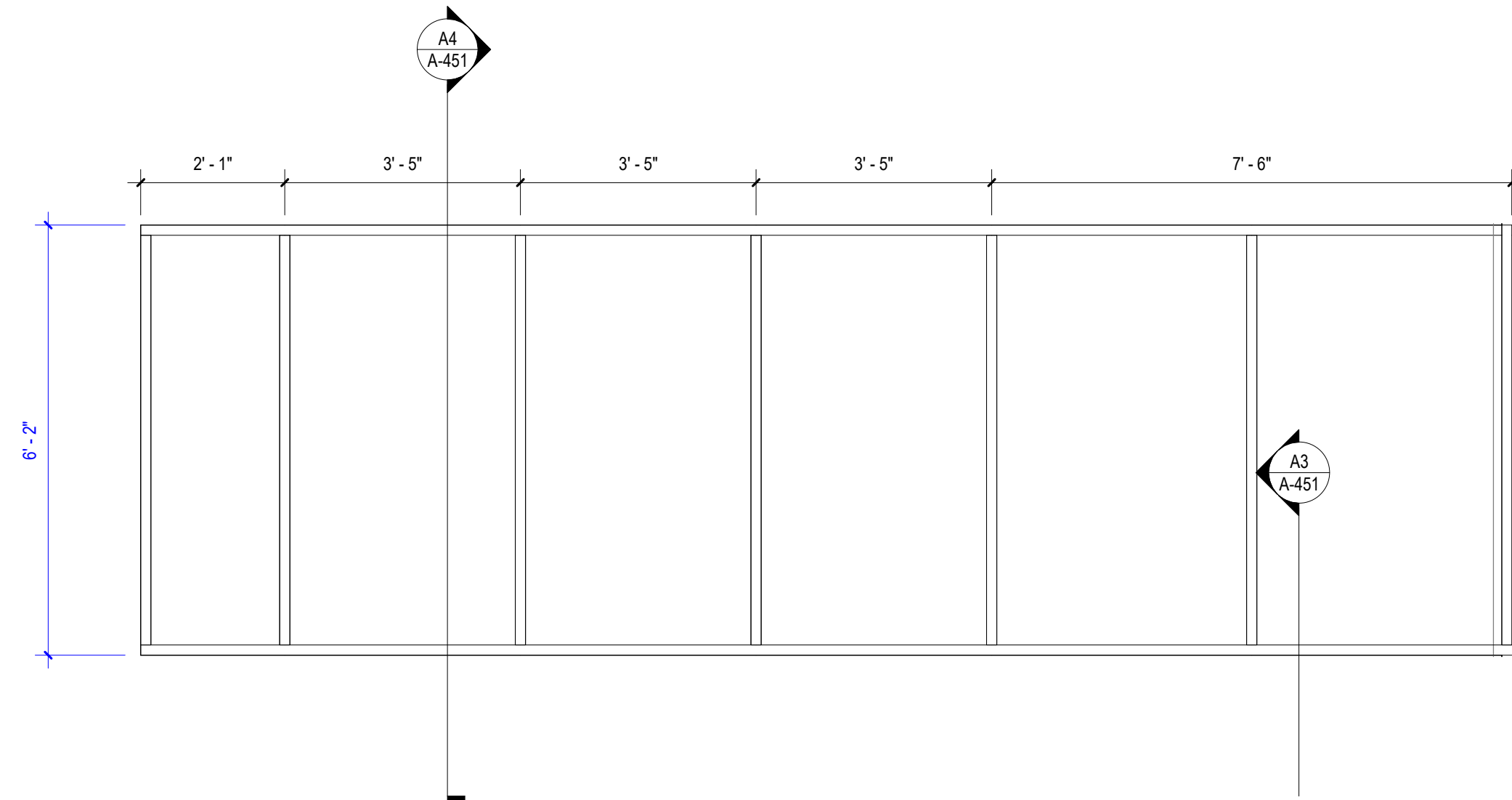
A-601

DOOR TYPES & SCHEDULE

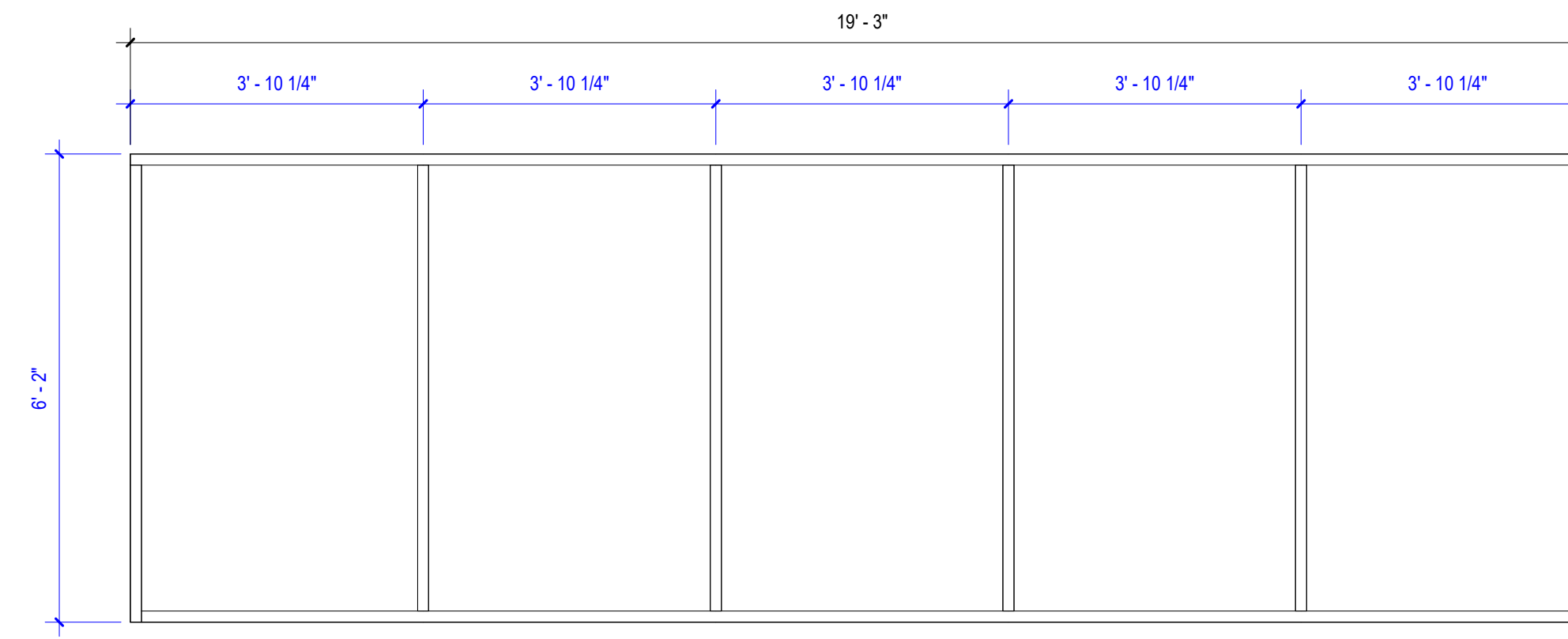


D1 WINDOW WALL TYPE - WW13
1/2" = 1'-0"

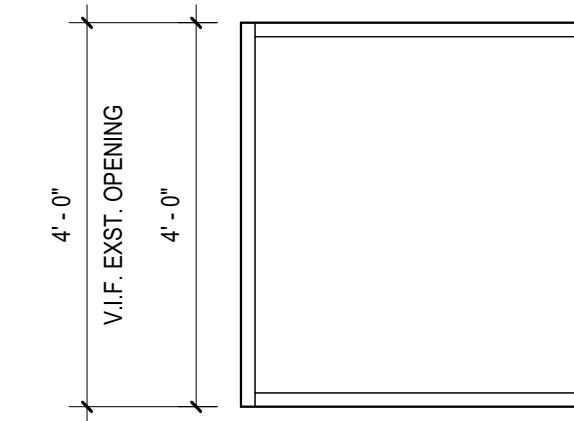
GLASS LEGEND
 (T) TEMPERED GLASS
 GLASS PERFORMANCE:
 SOLARGRAY + SOLARBAN 60 (3) CLEAR
 VLT - 35
 SHGC - 0.29



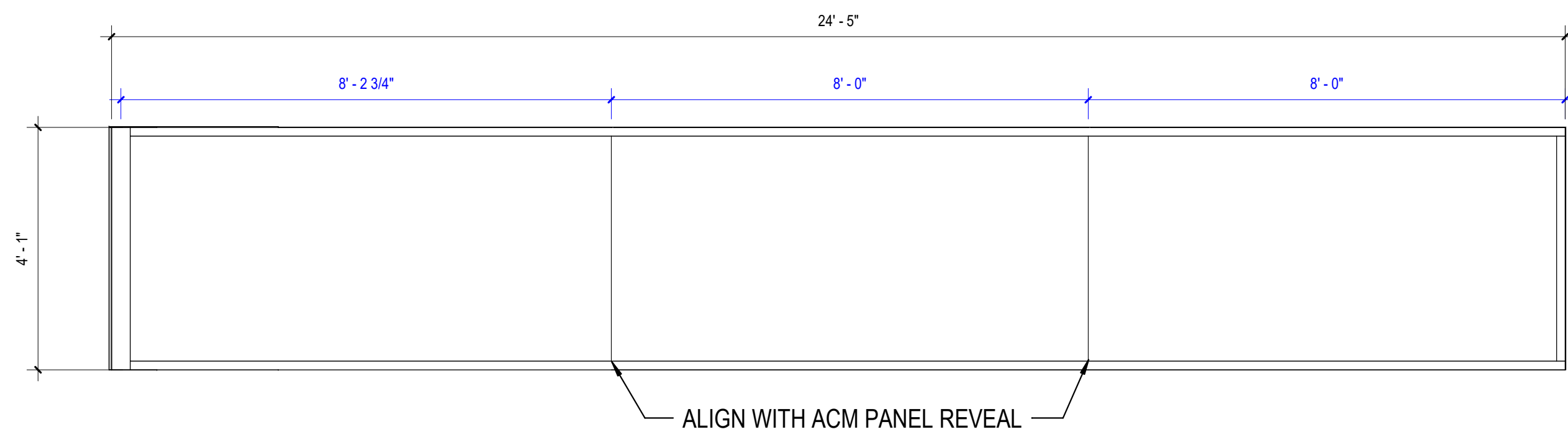
C1 WINDOW WALL TYPE - WW12
1/2" = 1'-0"



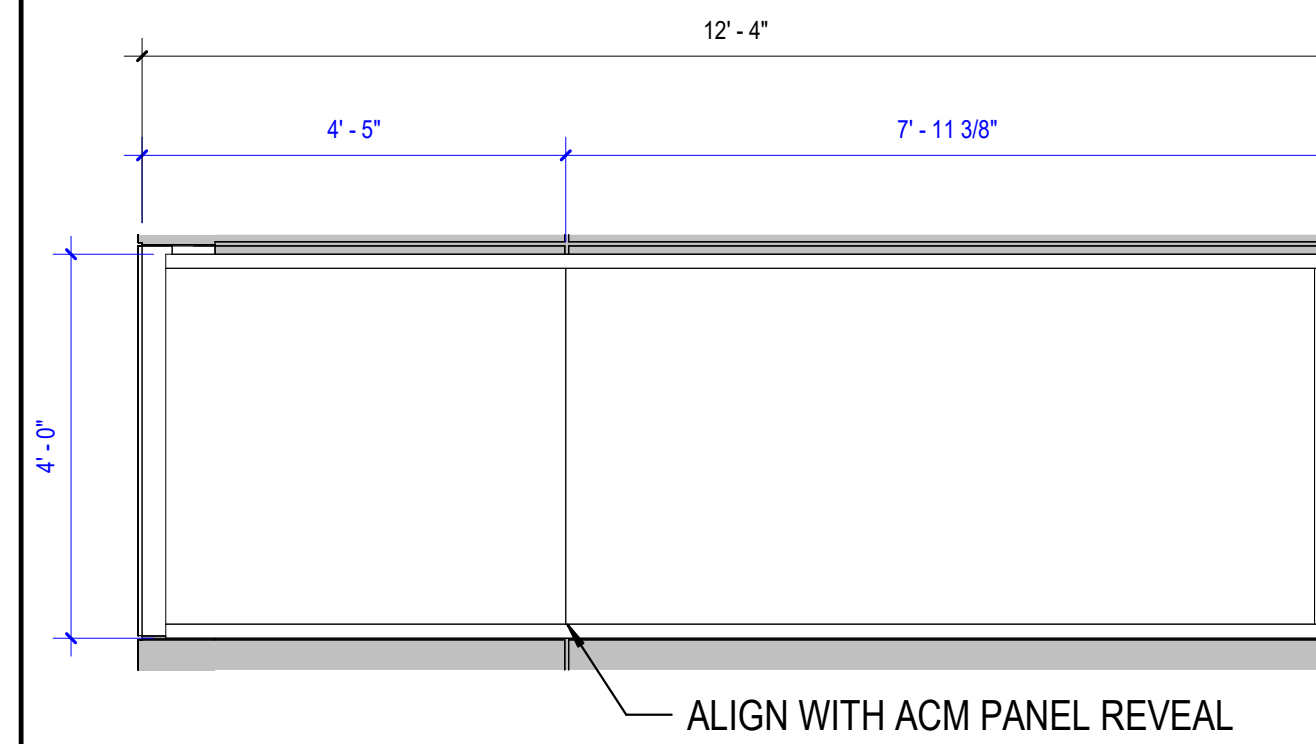
C3 WINDOW WALL TYPE - WW11
1/2" = 1'-0"



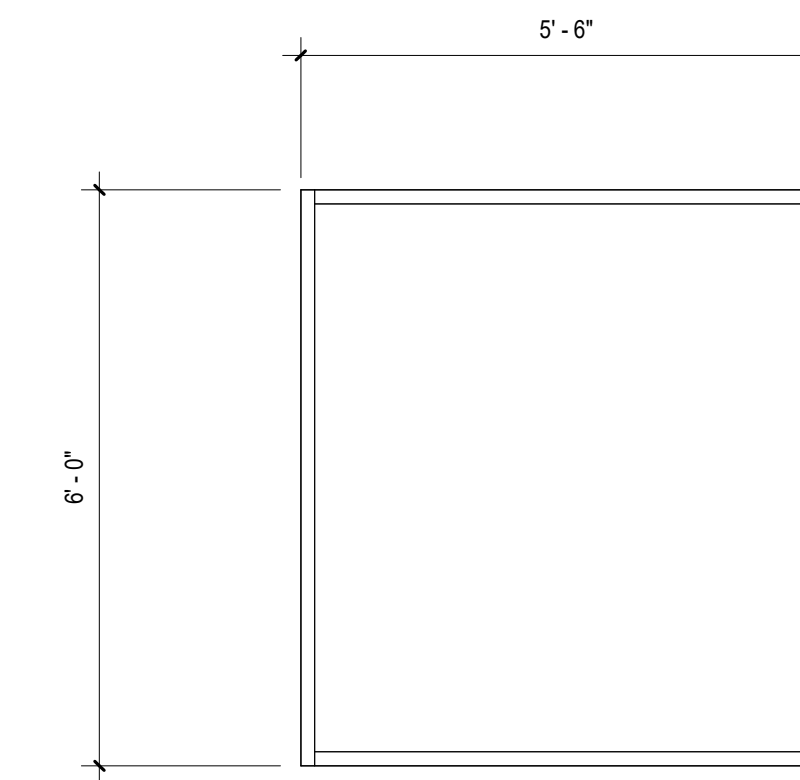
C5 WINDOW WALL TYPE - WW10
1/2" = 1'-0"



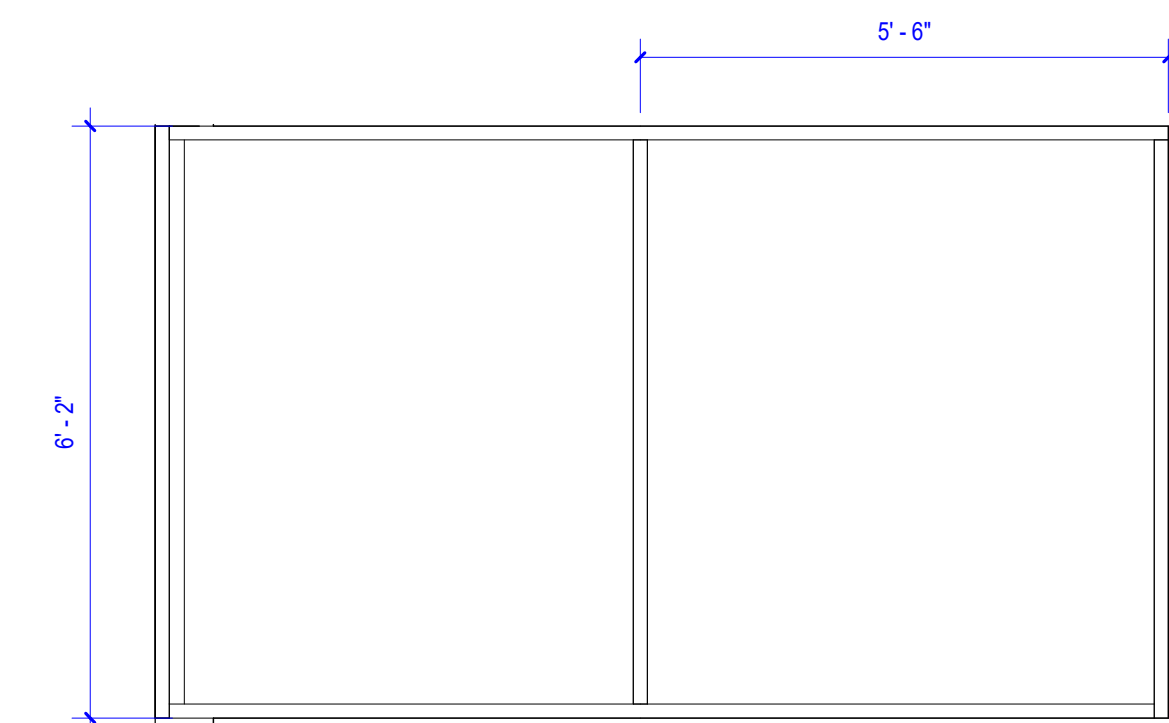
B1 WINDOW WALL TYPE - WW6
1/2" = 1'-0"



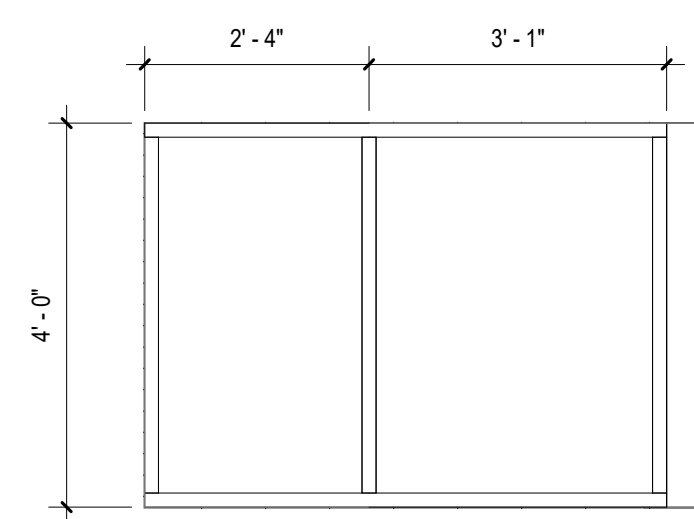
B3 WINDOW WALL TYPE - WW7
1/2" = 1'-0"



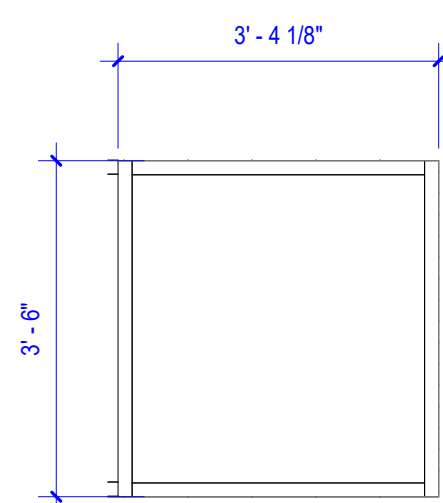
B4 WINDOW WALL TYPE - WW8
1/2" = 1'-0"



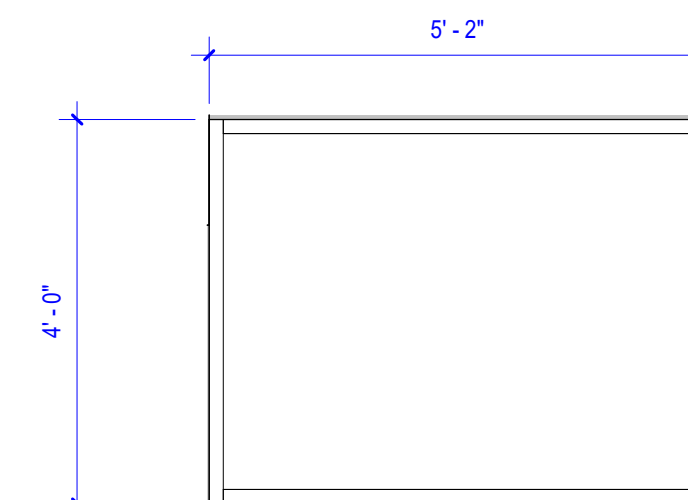
B5 WINDOW WALL TYPE - WW9
1/2" = 1'-0"



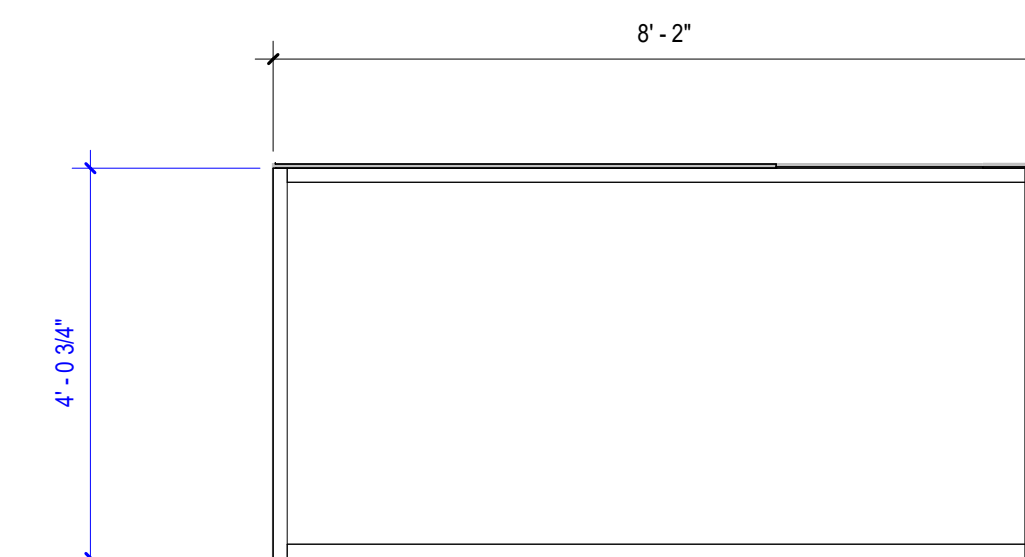
A1 WINDOW WALL TYPE - WW1
1/2" = 1'-0"



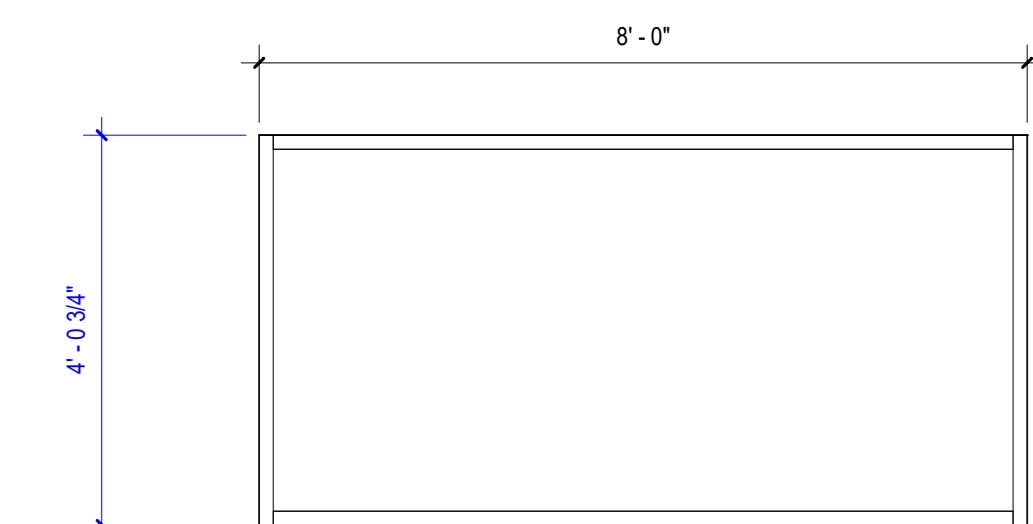
A2 WINDOW WALL TYPE - WW2
1/2" = 1'-0"



A3 WINDOW WALL TYPE - WW3
1/2" = 1'-0"



A4 WINDOW WALL TYPE - WW4
1/2" = 1'-0"



A5 WINDOW WALL TYPE - WW5
1/2" = 1'-0"

STRUCTURAL NOTES

A. GENERAL

- 1. THE GENERAL CONTRACTOR AND SUB-CONTRACTORS SHALL DETERMINE THE SCOPE OF THE STRUCTURAL WORK FOR BIDDING AND CONSTRUCTION FROM THE CONTRACT DOCUMENTS TAKEN AS A WHOLE. DUE CONSIDERATION SHALL BE GIVEN TO OTHER STRUCTURAL WORK OR IMPLIED BY THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, CIVIL AND LANDSCAPE DRAWINGS.
2. THE STRUCTURE HAS BEEN DESIGNED FOR THE IN-SERVICE LOADS ONLY. METHODS, PROCEDURES, AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
3. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING DETAILS AND ACCURACY OF THE WORK, FOR CONFIRMING AND CORRELATING ALL QUANTITIES, DIMENSIONS AND EXISTING CONDITIONS, AND FOR PERFORMING WORK IN A SAFE AND SECURE MANNER PER OSHA AND DOSH STANDARDS.
4. WHERE CONFLICTS EXIST AMONG VARIOUS PARTS OF THE STRUCTURAL AND ARCHITECTURAL DRAWINGS, GENERAL NOTES AND SPECIFICATIONS, THE STRICTEST REQUIREMENTS AS INDICATED BY THE ENGINEER SHALL GOVERN. REPORT ANY DISCREPANCY TO THE ARCHITECT AND ENGINEER PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.
5. CONDITIONS DESCRIBED BY DETAILS, SECTIONS, NOTES AND SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS SHALL ALSO APPLY TO SIMILAR CONDITIONS NOT SPECIFICALLY INCLUDED. IF CONDITIONS ARE FOUND NOT TO BE APPLICABLE, THE STRUCTURAL ENGINEER OF RECORD AND ARCHITECT SHALL BE NOTIFIED BEFORE PROCEEDING WITH WORK.
6. THE REPRODUCTIVE USE OF THE STRUCTURAL CONTRACT DOCUMENTS OR ELECTRONIC FILES AS STRUCTURAL SHOP DRAWING DOCUMENTS BY THE CONTRACTOR OR SUB-CONTRACTORS IS AT THEIR OWN RISK. FRACTAL, LLC ASSUMES NO LIABILITY AS THE RESULT OF THE REPRODUCTIVE USE OF THE STRUCTURAL CONTRACT DOCUMENTS FOR SHOP DRAWINGS.
7. SCALES NOTED ON THE DRAWINGS ARE FOR GENERAL REFERENCE ONLY. NO DIMENSIONAL INFORMATION SHALL BE OBTAINED FROM THE DRAWINGS.
8. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL RESULTING REVISIONS TO THE STRUCTURAL SYSTEM OR OTHER SYSTEMS AS A RESULT OF ACCEPTANCE OF CONTRACTOR PROPOSED ALTERNATIVES OR SUBSTITUTIONS.
9. PRINCIPAL OPENINGS IN THE STRUCTURE ARE INDICATED ON THE CONTRACT DOCUMENTS. REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR SLEEVES, CURBS, INSERTS, ETC. NOT HEREIN INDICATED. THE LOCATION OF SLEEVES OR OPENINGS IN STRUCTURAL MEMBERS SHALL BE SUBMITTED TO FRACTAL LLC FOR REVIEW.
10. ARCHITECTURAL ITEMS OR PREFABRICATED ITEMS SHOWN ON THE STRUCTURAL DRAWINGS ARE REFERENCED FOR GENERAL COORDINATION PURPOSES ONLY.

B. DESIGN CRITERIA

- 1. THE STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE 2021 INTERNATIONAL BUILDING CODE WITH LOCAL AMENDMENTS.
2. THE DESIGN GRAVITY LOADS ARE AS FOLLOWS:
SUPERIMPOSED DEAD LOADS (INCLUDED BUT NOT LIMITED TO THE FOLLOWING):
MECHANICAL AND CEILING 6 PSF
BUILT UP ROOF 4 PSF
FINISHES AS REQUIRED
MECHANICAL AND PIPING LOADS AS NOTED ON PLANS
(THE CONTRACTOR SHALL DISTRIBUTE THE CONCENTRATED LOADS FROM PIPES, DUCTS AND CEILING TO THE STRUCTURAL MEMBERS IN SUCH A FASHION TO AVOID EXCEEDING SPECIFIED PERMISSIBLE VALUES. CASES WHERE THE PERMITTED DISTRIBUTED LOAD IS EXCEEDED SHALL BE SUBMITTED TO THE ENGINEER OF RECORD AND ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.
LIVE LOADS:
ROOF 20 PSF
GYM 100 PSF
LOUNGE 100 PSF
LOBBIES, STAIRS & ASSEMBLY AREAS 100 PSF
MECHANICAL EQUIPMENT AND PADS ACTUAL WEIGHTS
3. CONTRACTOR SHALL PROVIDE COMPLETE STRUCTURAL DESIGN OF STEEL FRAMED STAIRS, LANDING PLATFORMS, TREADS, HANDRAILS, GUARDS, BRACING, BRIDGING AND CONNECTIONS TO BUILDING STRUCTURE. PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS. CONTRACTOR SHALL SUBMIT CALCULATIONS AND SHOP DRAWINGS BEARING THE SEAL AND SIGNATURE OF THE RESPONSIBLE PROFESSIONAL ENGINEER.
4. HANDRAILS AND GUARDS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION 1607.7 AND TABLE 1607.1 OF THE INTERNATIONAL BUILDING CODE AS FOLLOWS:
A. HANDRAIL ASSEMBLIES AND GUARDS SHALL BE DESIGNED TO SUPPORT A LOAD OF 200 LB APPLIED IN ANY DIRECTION AT ANY POINT ALONG THE TOP. THESE LOADS NEED NOT BE ASSUMED TO ACT CUMULATIVELY WITH THOSE IN NOTE (A) ABOVE.
B. INTERMEDIATE RAILS, BALUSTERS, AND PANEL FILLS SHALL BE DESIGNED TO SUPPORT A HORIZONTALLY APPLIED NORMAL LOAD OF 50 POUNDS ON AN AREA EQUAL TO ONE SQUARE FOOT, INCLUDING OPENINGS AND SPACE BETWEEN RAILS. REACTIONS DUE TO THIS LOADING ARE NOT REQUIRED TO BE SUPERIMPOSED WITH THOSE IN NOTE (A) OR (B) ABOVE.
5. STAIR TREADS AND STRINGERS SHALL BE DESIGNED FOR A UNIFORM LOAD OF 100 PSF. INDIVIDUAL STAIR TREADS SHALL ALSO BE DESIGNED TO SUPPORT A 300 LB LOAD ON A 4 SQUARE INCH AREA IN A POSITION THAT WILL CAUSE MAXIMUM STRESS.
6. FLOOR LIVE LOADS ARE REDUCED FOR SLAB SYSTEMS, BEAMS, GIRDERS, COLUMNS, PIERS, WALLS, AND FOUNDATIONS IN ACCORDANCE WITH SECTION 1607.9 OF THE INTERNATIONAL BUILDING CODE.
7. THE STRUCTURE HAS BEEN DESIGNED TO WITHSTAND THE WIND PRESSURES SPECIFIED IN CHAPTER 16, SECTION 1609, OF THE INTERNATIONAL BUILDING CODE, ACCORDING TO THE FOLLOWING INFORMATION:
ULTIMATE DESIGN WIND SPEED, V(W) 106 MPH
WIND DIRECTIONALITY FACTOR 0.65
BUILDING CATEGORY II
EXPOSURE CATEGORY B
8. THE FLOOR SYSTEM HAS BEEN DESIGNED TO WITHSTAND A CONCENTRATED LOAD OF 2000 POUNDS PLACED UPON ANY SPACE 2'-6" SQUARE, IN ACCORDANCE WITH SECTION 1607.4 OF THE IBC.

C. EXISTING BUILDING

- 1. INSTALL TEMPORARY SUPPORTS AND OTHER MEASURES AS REQUIRED TO PREVENT DAMAGE TO THE EXISTING BUILDING DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, INSTALLATION AND FINAL CLEARANCE OF REQUIRED BRACING, SHORING, UNDERPINNING OR BRACING OF THE EXISTING BUILDING.
2. FIELD VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS AND CONDITIONS WHICH AFFECT THE NEW CONSTRUCTION PRIOR TO THE START OF WORK. EXISTING CONDITIONS SHOWN ON THE DRAWINGS ARE BASED ON THE ORIGINAL CONSTRUCTION DRAWINGS PROVIDED BY THE ARCHITECT AND HAVE NOT BEEN CONFIRMED, ARE NOT GUARANTEED AND MAY CONFLICT WITH THE NEW WORK REQUIRED.
3. FIELD VERIFY THAT THE EXISTING FRAMING AFFECTED BY THE NEW WORK IS IN SOUND CONDITION AND DOES NOT DISPLAY VISIBLE SIGNS OF DISTRESS OR DETERIORATION OR HAS BEEN PREVIOUSLY MODIFIED OR ALTERED.
4. IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE INFORMATION SHOWN ON THE DRAWINGS AND ACTUAL FIELD CONDITIONS. DO NOT PROCEED WITH THAT PORTION OF WORK UNTIL ALL DISCREPANCIES HAVE BEEN RESOLVED. THE CONTRACTOR SHALL SUBMIT A FIELD SURVEY SHOWING ALL DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND THE NEW WORK, BASED ON THE REPORTED FIELD CONDITIONS. THE ARCHITECT WILL SUBMIT SUPPLEMENTAL INSTRUCTIONS FOR ALL WORK (NEW OR EXISTING) REQUIRING MODIFICATION.

D. FOUNDATION AND SLAB ON GRADE

- 1. THE CONTRACTOR SHALL PERFORM EXCAVATIONS, FOOTING CONSTRUCTION, AND PREPARATION OF THE SUB-GRADE UNDER THE SLAB ON GRADE IN ACCORDANCE WITH THE REQUIREMENTS NOTED IN THESE DRAWINGS AND SECTION 1804 OF THE IBC.
2. THE FOUNDATION (SHALLOW SPREAD FOOTINGS) FOR THE STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING ALLOWABLE SOIL BEARING PRESSURES PER TABLE 1802.2 OF THE IBC. THE SOIL MATERIAL AT THE SITE CONSISTS OF SANDY SILTY CLAY (CL(M), SANDY LEAN CLAY (CL), FAT CLAY (CH):
VERTICAL FOUNDATION PRESSURE 1,500 PSF
LATERAL BEARING PRESSURE 100 PSF/FT BELOW NATURAL GRADE
LATERAL SLIDING RESISTANCE 130 PSF COHESION*
* COHESION VALUE TO BE MULTIPLIED BY THE CONTACT AREA, AS LIMITED BY SECTION 1806.3.2 F
3. DRILLED PIERS SHALL BE EXCAVATED, CLEANED, REINFORCED AND THE CONCRETE SHALL BE PLACED ON THE SAME DAY. DRILLED PIERS WITH LESS THAN 2'-0" CLEAR BETWEEN BELLS OR SHAFTS SHALL BE EXCAVATED AND CONCRETE PLACED A MINIMUM OF 24 HOURS APART. IF BELLS CANNOT BE FORMED WITHOUT CAVING OF THE SOIL, THE ARCHITECT, GEOTECHNICAL ENGINEER AND FRACTAL LLC SHALL BE NOTIFIED BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.
4. EXCAVATIONS FOR FOOTINGS SHALL BE CLEANED AND BOTTOM TAMPED TO A UNIFORM SURFACE. FOOTING EXCAVATIONS SHALL HAVE THE SIDES AND BOTTOMS TEMPORARILY LINED WITH 6 MIL VISQUEEN IF PLACEMENT OF CONCRETE DOES NOT OCCUR WITHIN 24 HOURS OF THE EXCAVATION OF THE FOOTING.
5. FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION, WHICH DIFFER FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT SHALL BE REPORTED TO THE ARCHITECT, GEOTECHNICAL ENGINEER AND FRACTAL LLC BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.
6. REINFORCEMENT PLACEMENT SEQUENCE FOR FOOTINGS IS NOTED ONLY FOR MAJOR REINFORCEMENT BAR LAYERS. IN SPREAD FOOTINGS AND MATS THE CONTRACTOR SHALL SEQUENCE ALL OTHER BAR PLACEMENTS AS REQUIRED TO CONFORM TO THE CONTRACT DOCUMENTS.
7. GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT AND FRACTAL LLC, 48 HOURS PRIOR TO PLACEMENT OF CONCRETE IN THE FOOTINGS.
8. SUBGRADE UNDER SLABS ON FILL SHALL HAVE A PLASTICITY INDEX BETWEEN 7 AND 15 PERCENT AND SHALL BE PREPARED, PLACED, AND COMPACTED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT.
9. THE FOUNDATION EXCAVATIONS AND FLOOR SUBGRADE SHALL BE PROPERLY COMPACTED AND FREE OF STANDING WATER, MUD, AND FROZEN SOIL.
10. A VAPOR BARRIER WITH A PERFORMANCE EQUIVALENT TO A 15 MIL STEGOWRAP SHALL BE PLACED BENEATH THE SLAB ON GRADE.
11. WHERE THE SLAB IS TO RECEIVE SENSITIVE ARCHITECTURAL FLOOR FINISHES, ALL JOINTS IN THE SLAB CONSTRUCTION SHALL BE PLACED TO ALIGN WITH JOINTS IN THE FLOOR FINISHES.
12. THE SLAB ON GRADE SHALL HAVE CONSTRUCTION JOINTS OR CRACK CONTROL JOINTS AT EACH COLUMN LINE IN EACH DIRECTION. ADDITIONAL CRACK CONTROL JOINTS SHALL BE PROVIDED USING THE FOLLOWING GUIDELINES (SEE 53.00 FOR ADD'L DETAILS AND REINFORCEMENT):
A. NO AREA BOUNDED BY CONTROL JOINTS SHALL CONTAIN MORE THAN 225 SQUARE FEET.
B. THE SPACING OF THE JOINTS SHALL NOT EXCEED 36 TIMES THE SLAB THICKNESS.
C. MAXIMUM ASPECT RATIO (LENGTH/WIDTH) = 1.5.
D. NO RE-ENTRANT CORNERS.

E. CONCRETE DECK ON STEEL FORMS

- 1. ELEVATED FLOOR SLABS SHALL BE NORMAL WEIGHT CONCRETE, THREE (3) INCHES THICK (7 7/8" W/ CONCRETE PLUS 9/16" DEEP STEEL DECK). STEEL DECK SHALL BE 24 (24 MIN) COLD FORMED STEEL CONFORMING TO ASTM A663, STRUCTURAL GRADE QUALITY 40 WITH COATING DESIGNATION G60 (GALVANIZED), COMPOSITE STEEL DECK SHALL BE 9/16 INCHES DEEP AND SHALL HAVE A MINIMUM SECTION MODULUS OF 0.07 INCHES CUBED PER FOOT OF WIDTH. REINFORCE SLAB WITH 6X6 - W2 - 1WV.2 WELDED WIRE FABRIC. DESIGN IS BASED ON VULCRAFT 0.8C AND THE INFORMATION PROVIDED IN THE VULCRAFT STEEL ROOF AND FLOOR DECK CATALOG, 2008 EDITION.
2. PROPERTIES AND ALLOWABLE STRESSES OF STEEL FLOOR DECKS SHALL BE BASED ON THE AMERICAN IRON AND STEEL INSTITUTE (AISI) "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS".
3. THE COMPOSITE STEEL DECK SHALL BE PLACED TO HAVE A THREE SPAN CONFIGURATION WHERE POSSIBLE AND AT LEAST A TWO SPAN CONFIGURATION UNLESS NOTED OTHERWISE. GENERAL CONTRACTOR SHALL COORDINATE WITH DECK SUPPLIER TO DETERMINE DECK GAGE REQUIRED FOR SINGLE SPAN CONDITIONS.
4. ATTACHMENT OF COMPOSITE STEEL DECK:
A. STEEL DECK UNITS SHALL BE WELDED TO SUPPORT MEMBERS WITH 5/8" DIAMETER PUDDLE WELDS AT EACH END OF SHEET AND EACH INTERMEDIATE SUPPORT AT EACH LOW FLUTE. U.N.O. MEMBERS PARALLEL TO DECK SPAN. SPACING OF PUDDLE WELDS SHALL BE 12" O.C. A SHEAR CONNECTOR WELDED THROUGH THE DECK CAN REPLACE A REQUIRED DECK WELD.
B. SIDE LAPS OF ADJACENT UNITS SHALL BE FASTENED AT MID-SPAN OR 36 INCH INTERVALS, WHICHEVER IS LESS. TEK SCREWS CAN BE SUBSTITUTED FOR WELDS AFTER THE APPROVAL OF THE ENGINEER.
5. DECK FLUTES SHALL BE ALIGNED AND DECK ENDS SHALL BE BUTTED OVER SUPPORTS. CLOSURE STRIPS SHALL BE USED AT DISCONTINUOUS ENDS ONLY.
6. IN ADDITION TO THE SPECIFICATIONS NOTED ELSEWHERE, THE FLOOR DECK CONCRETE SHALL CONFORM TO THE FOLLOWING:
MAXIMUM WATER CEMENT RATIO BY WEIGHT 0.45
MAXIMUM SLUMP PRIOR TO PLASTICIZERS 4.1/2 INCHES
MAXIMUM AGGREGATE SIZE 3/4 INCH
7. STEEL DECK SHALL BE FREE FROM OIL, DIRT, AND ANY OTHER DELETERIOUS MATERIALS THAT WOULD TEND TO REDUCE THE BOND BETWEEN THE CONCRETE AND THE STEEL DECK.
8. PROVIDE SUFFICIENT CHAIRS, BOLSTER BARS, ETC. TO MAINTAIN THE WELDED WIRE FABRIC AND REINFORCEMENT BARS AT THE DEPTH SPECIFIED.

F. STEEL ROOF DECK

- 1. ROOF DECK SHALL BE RIGID INSULATION BOARD ON GALVANIZED TYPE B STEEL ROOF DECK. TYPE B STEEL DECK SHALL BE 22 GAGE COLD FORMED STEEL CONFORMING TO ASTM A653, STRUCTURAL QUALITY GRADE 33. COATING DESIGNATION G60. STEEL ROOF DECK SHALL BE 1-1/2 INCHES DEEP WITH A MINIMUM SECTION MODULUS (S) OF 1.86 INCHES CUBED PER FOOT OF WIDTH. GENERAL CONTRACTOR SHALL COORDINATE ABILITY OF INSULATION BOARD TO SPAN OVER FLUTES OF TYPE B DECK.
2. PROPERTIES AND ALLOWABLE STRESSES OF STEEL ROOF DECKS SHALL BE BASED ON THE AMERICAN IRON AND STEEL INSTITUTE (AISI) "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS".
3. STEEL ROOF DECK SHALL BE PLACED TO HAVE A THREE SPAN CONFIGURATION WHERE POSSIBLE AND AT LEAST A TWO SPAN CONFIGURATION UNLESS NOTED OTHERWISE. GENERAL CONTRACTOR SHALL COORDINATE WITH DECK SUPPLIER TO DETERMINE DECK GAGE REQUIRED FOR SIMPLE SPAN CONFIGURATION.
4. PLUG WELD ROOF DECK TO SUPPORTING STEEL AND ADJOINING DECK SHEETS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE AMERICAN WELDING SOCIETY STANDARD D1.3. 36 INCH WIDE DECK SHEETS SHALL BE WELDED AT END LAPS, END SUPPORTS, AND INTERMEDIATE SUPPORTS USING 5/8" DIAMETER PUDDLE WELDS. DECK SHEETS SHALL BE WELDED WITH 36/7 PATTERN WITHIN 10 FEET OF THE PERIMETER OF THE BUILDING (7 WELDS, ONE AT EACH SIDELAP AND ONE AT EACH VALLEY) AND SIDE LAPS IN THESE AREAS SHALL BE FASTENED TOGETHER WITH 1/4" 10 TEK SCREWS AT MID SPAN BETWEEN SUPPORTS. IN OTHER AREAS, DECK SHEETS SHALL BE WELDED WITH 36/4 PATTERN (4 WELDS, ONE AT EACH SIDELAP AND ONE AT EVERY OTHER VALLEY) AND SIDE LAPS IN THESE AREAS SHALL BE FASTENED TOGETHER WITH 1/4" 10 TEK SCREW AT MID-SPAN BETWEEN SUPPORTS.

G. CONCRETE

- 1. ALL CONCRETE WORK SHALL CONFORM TO ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND ACI 301 "SPECIFICATION FOR STRUCTURAL CONCRETE".
2. CONCRETE SHALL HAVE NATURAL SAND FINE AGGREGATE AND NORMAL WEIGHT COARSE AGGREGATES CONFORMING TO ASTM C33. TYPE I PORTLAND CEMENT CONFORMING TO ASTM C150, AND SHALL HAVE THE FOLLOWING COMPRESSIVE STRENGTH (FC) AT 28 DAYS:
GRADE BEAMS AND PLINTHS 3000 PSI
SLAB ON GRADE 3000 PSI
SLABS ON STEEL DECK 4000 PSI
3. FLY ASH MAY BE USED AS A POZZOLAN TO REPLACE A PORTION OF THE PORTLAND CEMENT IN A CONCRETE MIX, SUBJECT TO THE APPROVAL OF THE GENERAL CONTRACTOR AND THE STRUCTURAL ENGINEER. FLY ASH, WHEN USED, SHALL CONFORM TO ASTM C618, TYPE C OR F. CONCRETE MIXES USING FLY ASH SHALL BE PROPORTIONED TO ACCOUNT FOR THE PROPERTIES OF THE SPECIFIC FLY ASH USED AND TO ACCOUNT FOR THE SPECIFIC PROPERTIES OF THE FLY ASH CONCRETE THIS RESULTING, THE RATIO OF THE AMOUNT OF THE FLY ASH TO THE TOTAL AMOUNT OF FLY ASH AND CEMENT IN THE MIX SHALL NOT EXCEED 25 PERCENT.
4. GROUT FOR BASE PLATES SHALL BE NONSHRINKABLE, NONMETALLIC, CONFORMING TO ASTM C937, AND SHALL HAVE A SPECIFIED COMPRESSIVE STRENGTH AT 28 DAYS OF 5000 PSI. PREGRouting OF BASE PLATES WILL NOT BE PERMITTED.
5. SLUMP TESTS SHALL BE MADE PRIOR TO THE ADDITION OF PLASTICIZERS. CONCRETE FOR THE PREPARATION OF TEST CYLINDERS SHALL BE TAKEN FROM THE HOSE END FOR CONCRETE PLACED BY PUMP.
6. WATER SHALL NOT BE ADDED TO THE CONCRETE AT THE JOBSITE UNLESS THE TOTAL WATER QUANTITY INCLUDING THE WATER ADDED AT THE JOBSITE DOES NOT EXCEED THE TOTAL WATER QUANTITY OF THE RECEIVED MIX DESIGN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE REQUIREMENTS OF THE CONCRETE SUPPLIER AND PUMPER TO MEET THIS REQUIREMENT AND TO ENSURE A PUMPABLE AND WORKABLE MIX. THE USE OF PLASTICIZERS, RETARDANTS, AND OTHER ADDITIVES SHALL BE AT THE OPTION OF THE CONTRACTOR SUBJECT TO THE APPROVAL OF FRACTAL LLC. FOLLOW THE RECOMMENDATIONS OF THE MANUFACTURER FOR THE PROPER USE OF ADDITIVES. THE USE OF CALCIUM CHLORIDE OR OTHER CHLORIDE BEARING SALTS IS NOT PERMITTED.
7. PLACE CONCRETE IN A MANNER SO AS TO PREVENT SEGREGATION OF THE MIX. DELAY FLOATING AND TROWELING OPERATIONS UNTIL THE CONCRETE HAS LOST SURFACE WATER SHEEN OR ALL FREE WATER. DO NOT SPRINKLE FINE CEMENT ON THE SLAB SURFACE. FINISHING OF SLAB SURFACES SHALL COMPLY WITH THE RECOMMENDATIONS OF ACI 302.1 AND 304.
8. PROVIDE CURING OF DECK IMMEDIATELY AFTER FINISHING. REFER TO THE SPECIFICATIONS FOR REQUIREMENTS. PROTECT THE CONCRETE SURFACE DURING FINISHING OPERATIONS ON HOT, DRY, OR WINDY DAYS OR ANY TIME PLASTIC SHRINKAGE CRACKS COULD DEVELOP BY USING WET BURLAP, PLASTIC MEMBRANES, OR FOGGING. PROTECT CONCRETE DECK AT ALL TIMES FROM RAIN, HAIL, OR OTHER INJURIOUS EFFECTS.
9. THE CONTRACTOR SHALL SUBMIT FOR REVIEW A MIX DESIGN FOR THE PROPOSED CONCRETE. MIX DESIGNS SHALL BE IN COMPLIANCE WITH THE METHODS PERMITTED IN IBC AND PROJECT SPECIFICATIONS. THE CONTRACTOR SHALL NOT VARY FROM THE MIX DESIGN WITHOUT THE APPROVAL OF FRACTAL LLC.
10. DETAILING AND PLACING OF CONCRETE REINFORCEMENT BARS AND ACCESSORIES SHALL CONFORM TO THE RECOMMENDATIONS OF ACI SP-66 "DETAILING MANUAL" AND CRSI "MANUAL OF STANDARD PRACTICE".
11. MINIMUM CONCRETE COVER PROTECTION FOR REINFORCEMENT BARS SHALL BE AS FOLLOWS (SEE ACI 318 SECTION 7.7 FOR CONDITIONS NOT NOTED):
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3 INCHES
CONCRETE EXPOSED TO EARTH OR WEATHER:
#6 BARS AND SMALLER 1-1/2 INCHES
ALL OTHER BARS 2 INCHES
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
SLABS, WALLS, JOISTS (#1 BARS AND SMALLER) 3/4 INCHES
SLABS, WALLS, JOISTS (ALL OTHER BARS) 1-1/2 INCHES
BEAMS AND COLUMNS 1-1/2 INCHES
PROVIDE STANDARD BAR CHAIRS AND SPACERS AS REQUIRED TO MAINTAIN CONCRETE PROTECTION SPECIFIED.
12. CONCRETE REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60.
13. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. FABRIC SHALL BE SUPPLIED IN FLAT SHEETS. FABRIC SHALL BE LAPPED TWO MESH AT SPLICES.
14. REINFORCEMENT BARS SHALL NOT BE TACK WELDED, WELDED, HEATED, OR CUT UNLESS INDICATED ON THE CONTRACT DOCUMENTS OR REVIEWED BY THE STRUCTURAL ENGINEER.
15. WELDING OF REINFORCEMENT BARS, WHEN ACCEPTED BY THE STRUCTURAL ENGINEER, SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STANDARD D1.4. ELECTRODES FOR SHOP AND FIELD WELDING OF REINFORCEMENT BARS SHALL CONFORM TO ASTM A233, CLASS E90X.
16. REINFORCEMENT DESIGNATED AS "CONTINUOUS" MAY BE SPLICED USING TYPE "B" SPLICES. REINFORCEMENT BAR SPLICE LENGTHS IN BEAMS WHICH ARE LOCATED AT THE CENTERLINE OF SUPPORTS FOR BOTTOM BARS AND AT MIDSPAN FOR TOP BARS MAY BE 36 BAR DIAMETERS, UNLESS NOTED OTHERWISE. PROVIDE STANDARD AD HOOKS FOR TOP AND BOTTOM BARS AT DISCONTINUOUS ENDS OF ALL GRADE BEAMS.
17. HORIZONTAL FOOTING AND HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE: 90 DEGREE BENDS AND EXTENSIONS; OR CORNER BARS OF EQUIVALENT SIZE LAPPED 36 BAR DIAMETERS; AT CORNERS AND INTERSECTIONS.
18. HORIZONTAL JOINTS WILL NOT BE PERMITTED IN CONCRETE CONSTRUCTION EXCEPT AS SHOWN ON THE CONTRACT DOCUMENTS. VERTICAL JOINTS MAY OCCUR AT CENTER OF SPANS & LOCATIONS REVIEWED BY FRACTAL LLC.
19. CONSTRUCTION JOINTS BETWEEN FOOTINGS AND THE FLOOR SYSTEM THEY SUPPORT SHALL BE PREPARED BY ROUGHENING THE CONTACT SURFACE TO A FULL AMPLITUDE OF APPROXIMATELY 1/4 INCH, LEAVING THE CONTACT SURFACE CLEAN AND FREE OF LANTANCE.
20. PROVIDE 1- NO. 4 REINFORCEMENT BAR X 4'-0" AT RE-ENTRANT CORNERS AND AROUND RECTANGULAR HOLES IN SLABS UNLESS NOTED OTHERWISE. PLACE BAR DIAGONAL TO CORNER WITH 1" CLEARANCE FROM THE TOP AND THE SIDE OF THE SLAB AT THE CORNER.
21. CONDUIT, PIPES, AND SLEEVES EMBEDDED IN CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 318, CHAPTER 6.3.

H. STRUCTURAL STEEL

- 1. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH CHAPTERS 16 AND 18 OF THE IBC, THE AMERICAN WELDING SOCIETY STANDARD D1.4, AND THE AISC 308 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
2. CONTRACTOR SHALL FABRICATE AND ERECT STEEL IN ACCORDANCE WITH LATEST OSHA SAFETY REQUIREMENTS, INCLUDING 29 CFR PART 1926 SAFETY STANDARDS FOR STEEL ERECTION.
3. STRUCTURAL STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS UNLESS NOTED OTHERWISE ON THE CONTRACT DOCUMENTS:
WIDE FLANGE SHAPES (W) ASTM A992 GRADE 50 (50 KSI)
CHANNELS AND ANGLES ASTM A36 (36 KSI)
SQUARE AND RECTANGULAR TUBES (HSS) ASTM A600 GRADE B (46 KSI)
ROUND TUBES (HSS) ASTM A500 GRADE B (42 KSI)
STEEL PIPE ASTM A63 GRADE B (36 KSI)
M, S AND MC SHAPES ASTM A36 (36 KSI)
PLATES AND BARS ASTM A36 (36 KSI)
ANCHOR BOLTS (ANCHOR RODS) ASTM F1554 OR ASTM A307 (36 KSI)
4. THE DETAILS ON THESE DRAWINGS INDICATE GENERAL CRITERIA FOR DESIGN AND DETAILING OF CONNECTIONS AND ARE NOT INTENDED TO CONVEY COMPLETE CONNECTION DESIGN. ALL CONNECTIONS, SPLICES AND ERECTION PIECES SHALL BE DESIGNED AND DETAILED BY THE FABRICATOR'S STRUCTURAL ENGINEER LICENSED IN THE JURISDICTION OF THE PROJECT. UNLESS CONNECTIONS ARE INDICATED AS BEING FULLY DESIGNED IN THE STRUCTURAL DRAWINGS, SHOP DRAWINGS SHALL BE SUBMITTED BEARING THE ENGINEER'S SEAL AND SIGNATURE. CALCULATIONS BEARING THE ENGINEER'S SEAL AND SIGNATURE SHALL BE AVAILABLE UPON REQUEST OF THE STRUCTURAL ENGINEER.
5. DESIGN ALL CONNECTIONS FOR FORCES INDICATED ON THE DRAWINGS. CONNECTION DESIGN FORCES INDICATED ON THE DRAWINGS ARE INFLUENCED IN U.O. WHERE THE REACTION IS OMITTED FROM THE DRAWINGS, DESIGN THE CONNECTION FOR ONE HALF OF THE MAXIMUM TOTAL UNIFORM LOAD AS DEFINED IN THE AISC STEEL CONSTRUCTION MANUAL, 13TH EDITION, TABLE 3.6. MOMENT CONNECTIONS SHALL BE DESIGNED FOR THE FULL PLASTIC MOMENT OF THE BEAM IF THE MOMENT IS OMITTED FROM THE DRAWINGS.
6. CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS SHALL BE HIGH STRENGTH BOLTS WHICH MEET OR EXCEED THE REQUIREMENTS OF ASTM A325, TYPE N, X, OR SC CLASS A. BOLTS SHALL BE DESIGNED AS BEARING TYPE BOLTS, EXCEPT AS NOTED. BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE "SNUG TIGHT" CONDITION AS OUTLINED IN THE "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS". BOLTS SHALL HAVE A HARDENED WASHER PLACED UNDER THE ELEMENT TO BE TIGHTENED.
7. NO CONNECTION SHALL CONSIST OF LESS THAN (2) 3/4" DIA. A325-N BOLTS OR WELDS DEVELOPING LESS THAN 12 KIPS. MINIMUM WELD SIZE SHALL BE 3/16" FILLET WELD.
8. DO NOT USE OVERSIZED OR SLOTTED HOLES FOR ANY CONNECTIONS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
9. PRIOR TO DETAILING CONNECTIONS FOR STRUCTURAL STEEL, THE STEEL FABRICATOR SHALL SUBMIT FOR APPROVAL REPRESENTATIVE DETAILS AND CALCULATIONS FOR EACH TYPE OF STRUCTURAL STEEL CONNECTION TO BE UTILIZED. AFTER APPROVAL, THE CONNECTIONS MAY BE INCORPORATED INTO THE SHOP DRAWINGS.
10. WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STANDARD D1.1. ELECTRODES FOR SHOP AND FIELD WELDS SHALL CONFORM TO AWS A5.1 OR AWS A5.5, CLASS E70XX, LOW HYDROGEN.
11. SPLICING OF STRUCTURAL STEEL MEMBERS WHERE NOT DETAILED ON THE CONTRACT DOCUMENTS IS PROHIBITED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER AS TO LOCATION, TYPE OF SPLICE AND CONNECTION TO BE MADE.
12. BEAMS SHALL BE CAMBERED UPWARD WHERE SHOWN ON THE CONTRACT DOCUMENTS. WHERE NO UPWARD CAMBER IS INDICATED, ANY MILL CAMBER SHALL BE DETAILED UPWARD IN THE BEAMS.
13. NO MISFABRICATED STRUCTURAL STEEL MAY BE ERECTED PRIOR TO REVIEW BY THE ENGINEER.
14. PENETRATIONS SHALL NOT BE CUT IN STRUCTURAL STEEL MEMBERS UNLESS SO INDICATED IN THE DRAWINGS OR AS REVIEWED BY THE ENGINEER.
15. HEADED CONCRETE ANCHORS SHALL BE NELSON OR KSM HEADED CONCRETE ANCHORS (OR ACCEPTABLE EQUAL), AND SHALL CONFORM TO ASTM A108, GRADES C-1010 THROUGH C-1020. ANCHORS SHALL BE AUTOMATICALLY END WELDED WITH SUITABLE STUD WELDING EQUIPMENT. WELDING SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE NELSON STUD WELDING COMPANY OR THE KSM WELDING SYSTEMS COMPANY.
16. DEFORMED BAR ANCHORS (D & B) SHALL BE NELSON OR KSM DEFORMED BAR ANCHORS (OR ACCEPTABLE EQUAL), AND SHALL BE MADE FROM COLD DRAWN WIRE PER ASTM A496 CONFORMING TO ASTM A108 WITH A MINIMUM YIELD STRENGTH OF 70 KSI. ANCHORS SHALL BE AUTOMATICALLY END WELDED WITH SUITABLE WELDING EQUIPMENT. WELDING SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE NELSON STUD WELDING COMPANY OR THE KSM WELDING SYSTEMS COMPANY.
17. WHERE INDICATED ON THE DRAWINGS, STRUCTURAL STEEL MEMBERS, FABRICATIONS, AND WELDED ASSEMBLIES SHALL BE GALVANIZED AFTER FABRICATION BY HOT DIP PROCESS IN ACCORDANCE WITH ASTM A123. WEIGHT OF ZINC COATING SHALL CONFORM TO THE REQUIREMENTS SPECIFIED UNDER "WEIGHT OF COATING" IN ASTM A123 OR ASTM A386, AS APPLICABLE. THE AFFECTED PORTIONS OF FIELD WELDED GALVANIZED ASSEMBLIES SHALL BE FIELD PAINTED WITH ZINC RICH CORROSION RESISTANT PAINT.
18. ARCHITECTUALLY EXPOSED STRUCTURAL STEEL MEMBERS AND CONNECTIONS SHALL CONFORM WITH THE REQUIREMENTS OF THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" FOR ARCHITECTUALLY EXPOSED STRUCTURAL STEEL (AESS), SECTION 10, UNLESS MORE STRINGENT REQUIREMENTS ARE SHOWN OR SPECIFIED ELSEWHERE.
19. STRUCTURAL STEEL MEMBERS TO RECEIVE FIREPROOFING SHALL NOT BE PRIMED NOR PAINTED FIREPROOFING MATERIAL THICKNESS SHALL BE INCREASED AS REQUIRED FOR STEEL MEMBERS NOT CONFORMING TO THE MINIMUM SIZES INDICATED IN THE U.L. FIRE RESISTANCE DIRECTORY VOLUME 1 AND FOR STEEL MEMBERS DETERMINED UNRESTRAINED.

ISSUE FOR PERMIT 12.01.2023

Issues

Project Number 23-01-014

Drawn By JA

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S1.00

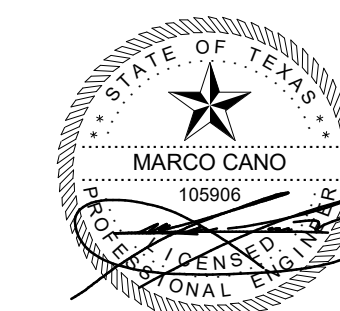
STRUCTURAL NOTES

tramonte design | studio
4203 Youkum Blvd, Suite 450 Houston, TX 77006



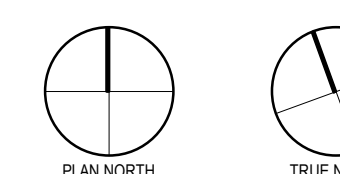
12/01/2023

MIRA SAFETY
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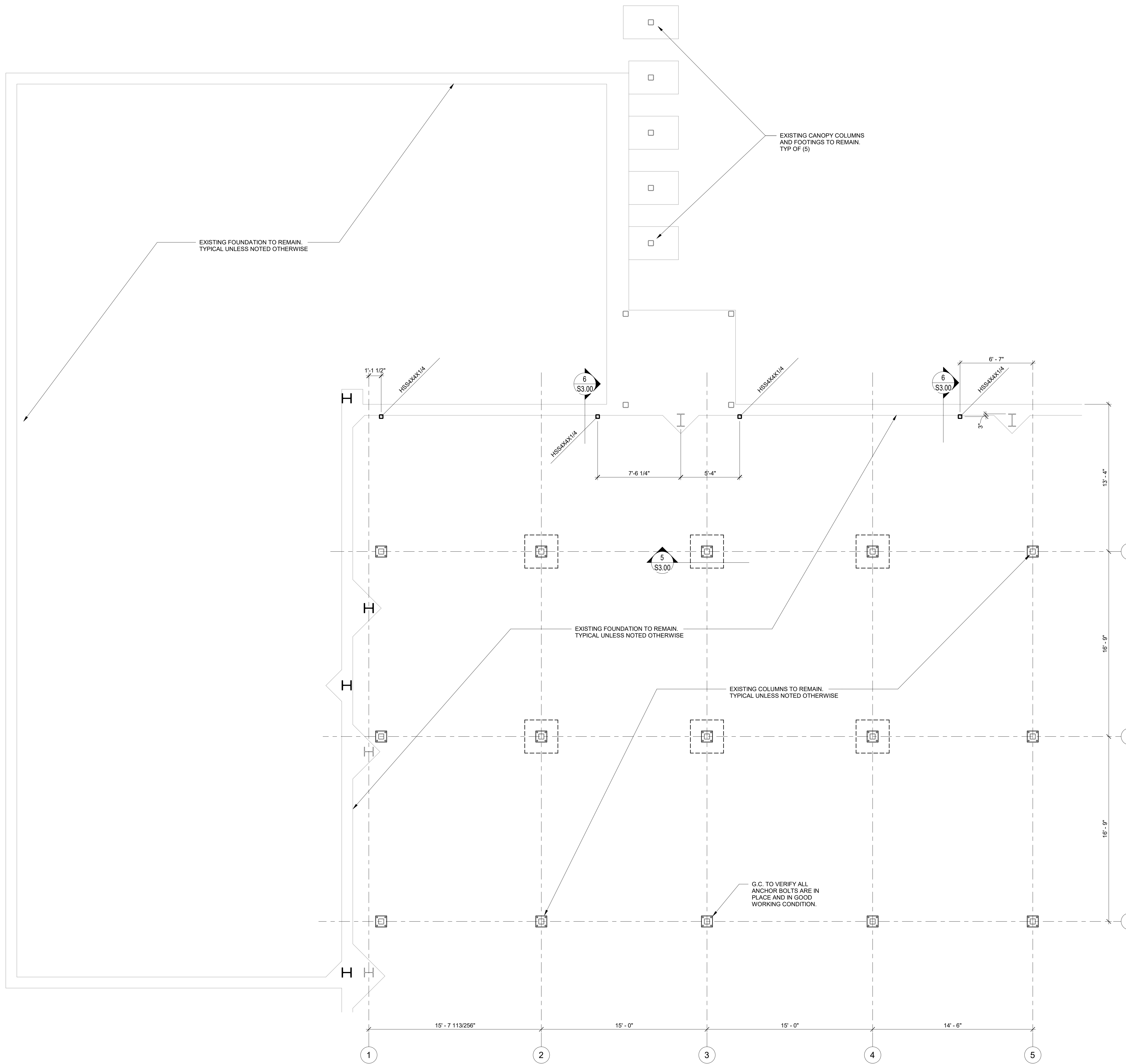
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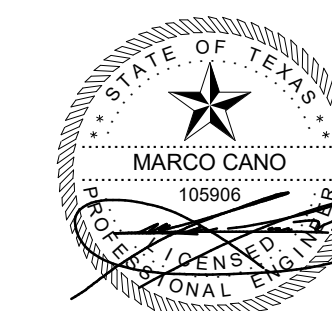
S2.01

FOUNDATION PLAN



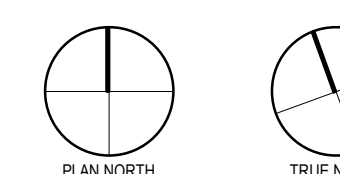
1 PARTIAL FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

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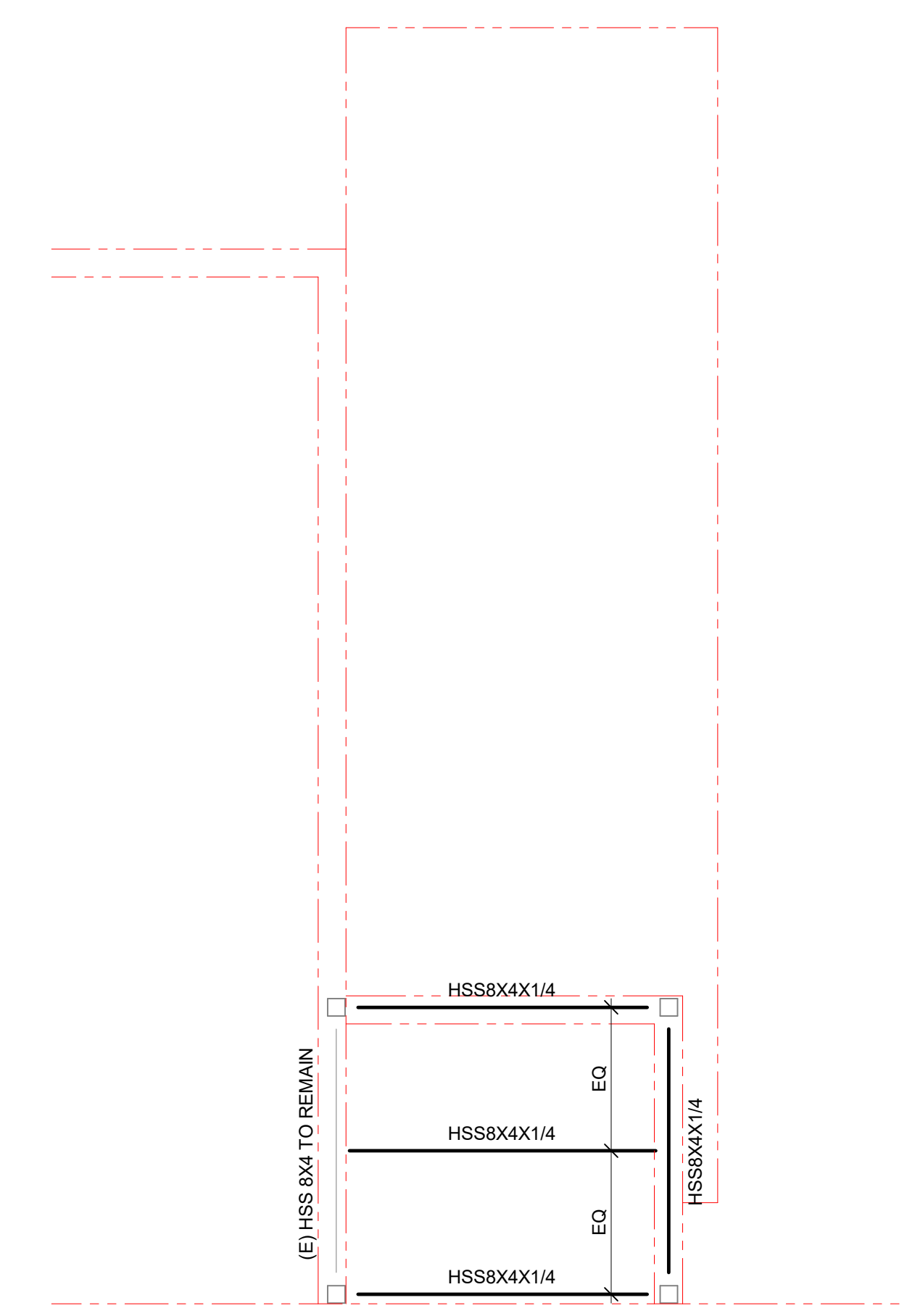
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S2.02

FRAMING PLANS

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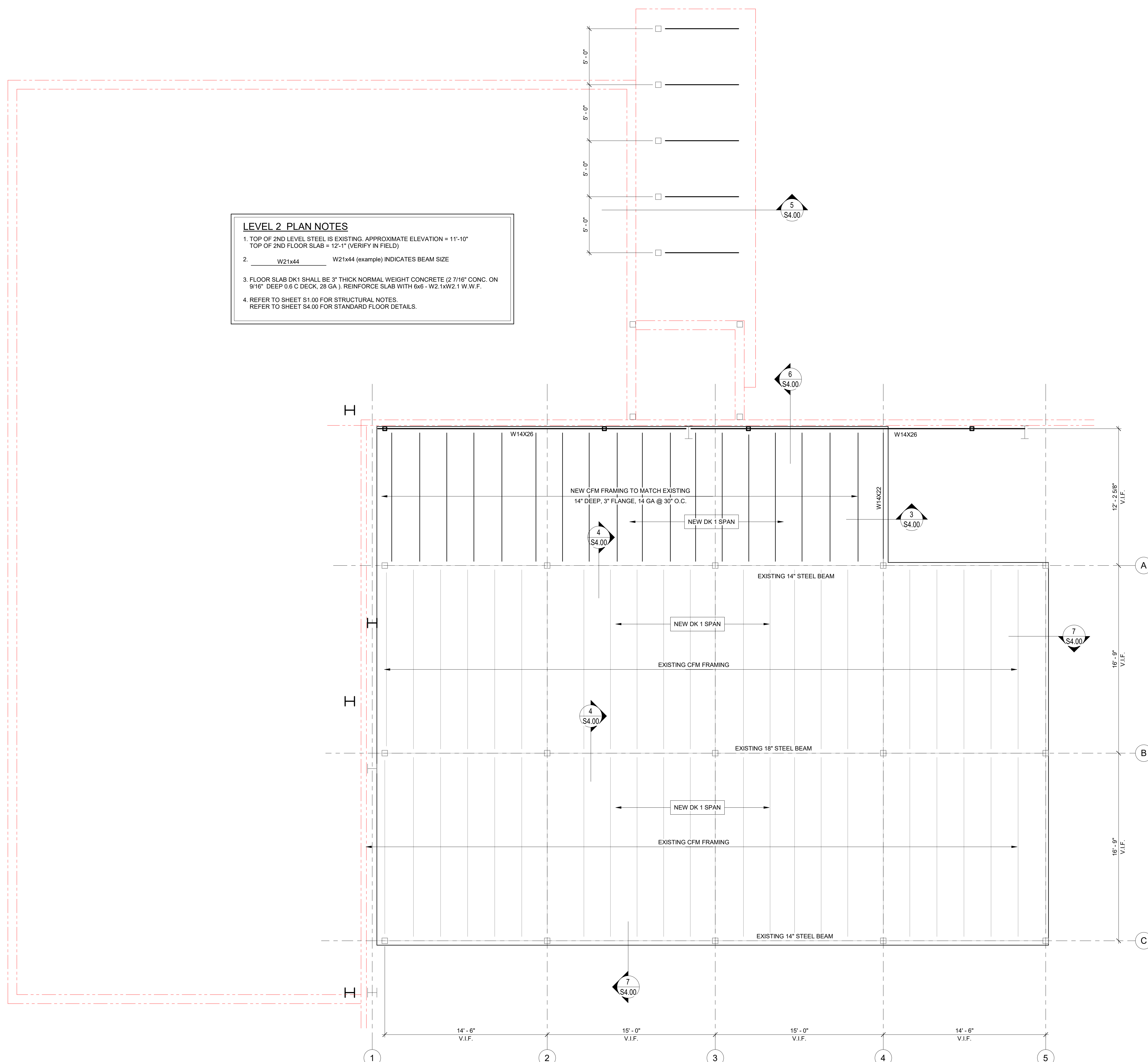
ROOF FRAMING PLAN NOTES

- SEE PLAN FOR B.O.D. ELEVATIONS, WITH RESPECT ELEVATION (+)0'-0"
EXAMPLE (B.O.D. = 31'-7 1/2")
- ROOF DECK SHALL BE 1 1/2" DEEP GALV., 22 GA. TYPE "B" ROOF DECK (U.N.O.).
SEE STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.
- REFER TO SHEET S1.00 FOR STRUCTURAL NOTES.
REFER TO SHEET S4.00 FOR ROOF FRAMING DETAILS.

2 PARTIAL ROOF FRAMIN PLAN
SCALE: 1/4" = 1'-0"

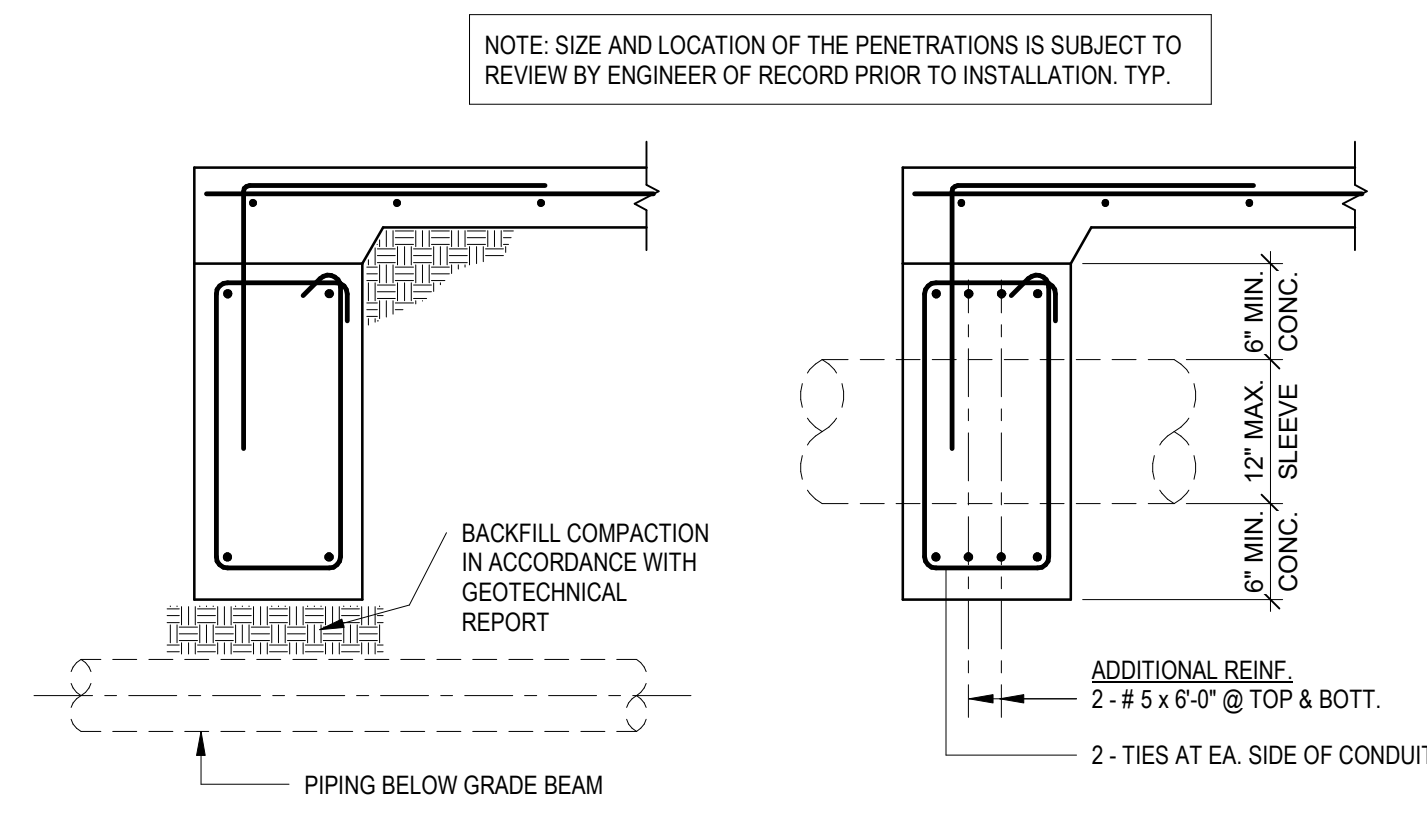
LEVEL 2 PLAN NOTES

- TOP OF 2ND LEVEL STEEL IS EXISTING. APPROXIMATE ELEVATION = 11'-10"
TOP OF 2ND FLOOR SLAB = 12'-1" (VERIFY IN FIELD)
- W21x44 W21x44 (example) INDICATES BEAM SIZE
- FLOOR SLAB DK1 SHALL BE 3" THICK NORMAL WEIGHT CONCRETE (2 7/16" CONC. ON
9/16" DEEP 0.6 C DECK, 28 GA.), REINFORCE SLAB WITH 6x6 - W2.1xW2.1 W.W.F.
- REFER TO SHEET S1.00 FOR STRUCTURAL NOTES.
REFER TO SHEET S4.00 FOR STANDARD FLOOR DETAILS.

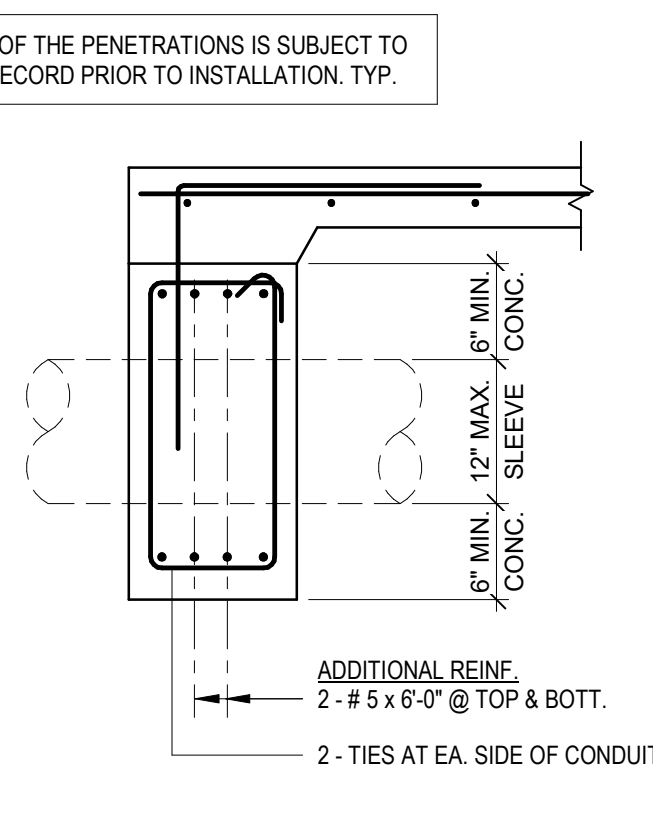


1 LOW ROOF AND MEZZANINE FRAMING PLAN
SCALE: 1/4" = 1'-0"

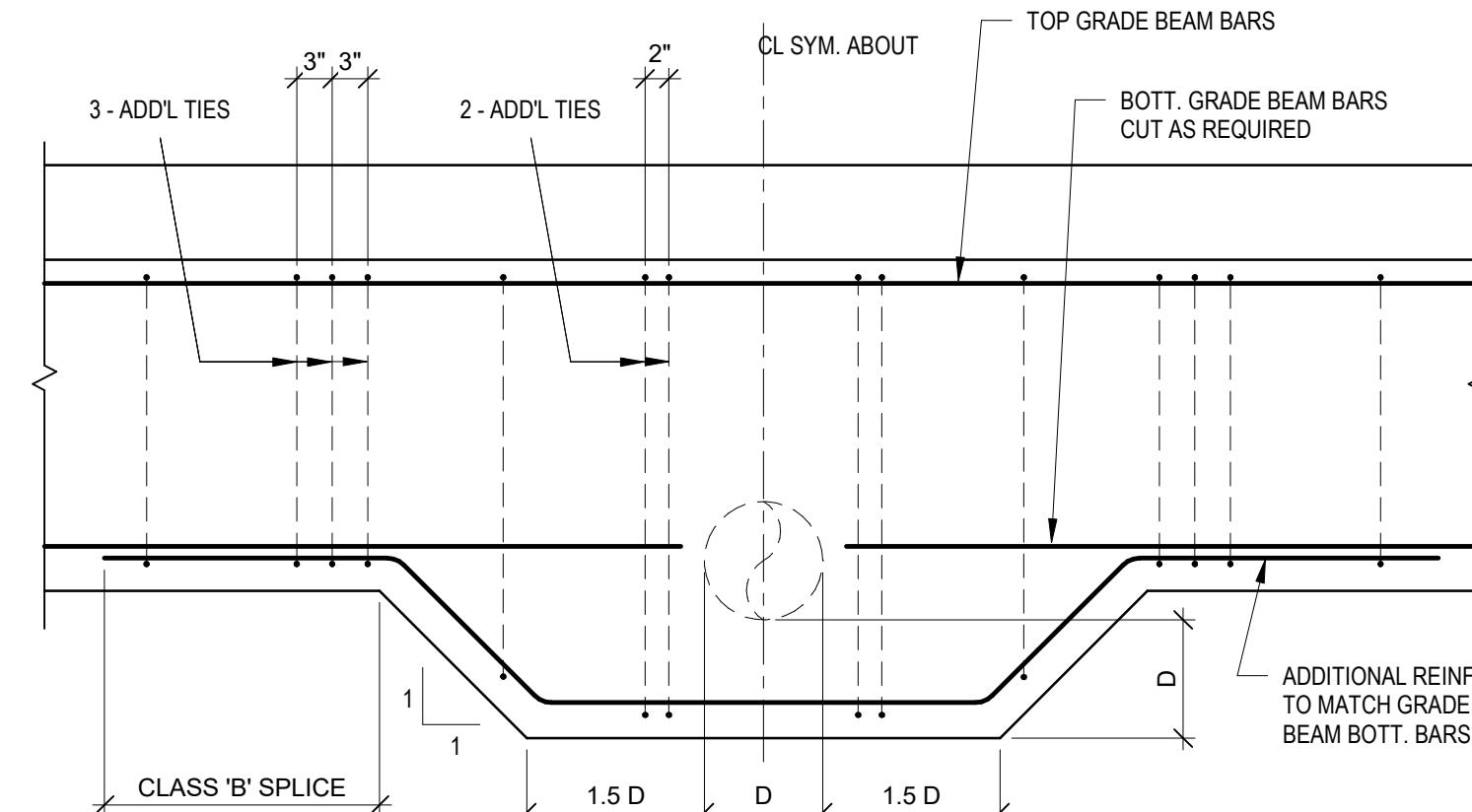
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A - CONDUIT BELOW GRADE BEAM

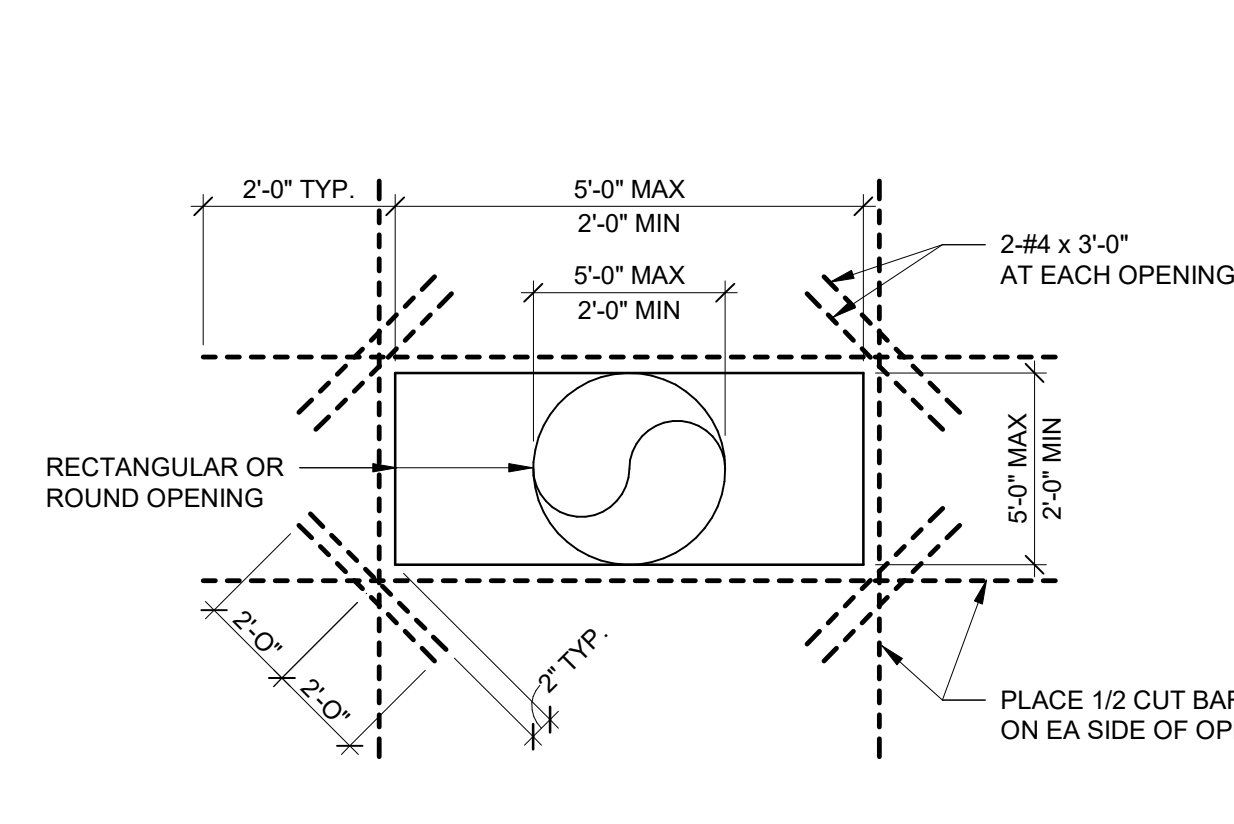


C - CONDUIT THRU GRADE BEAM

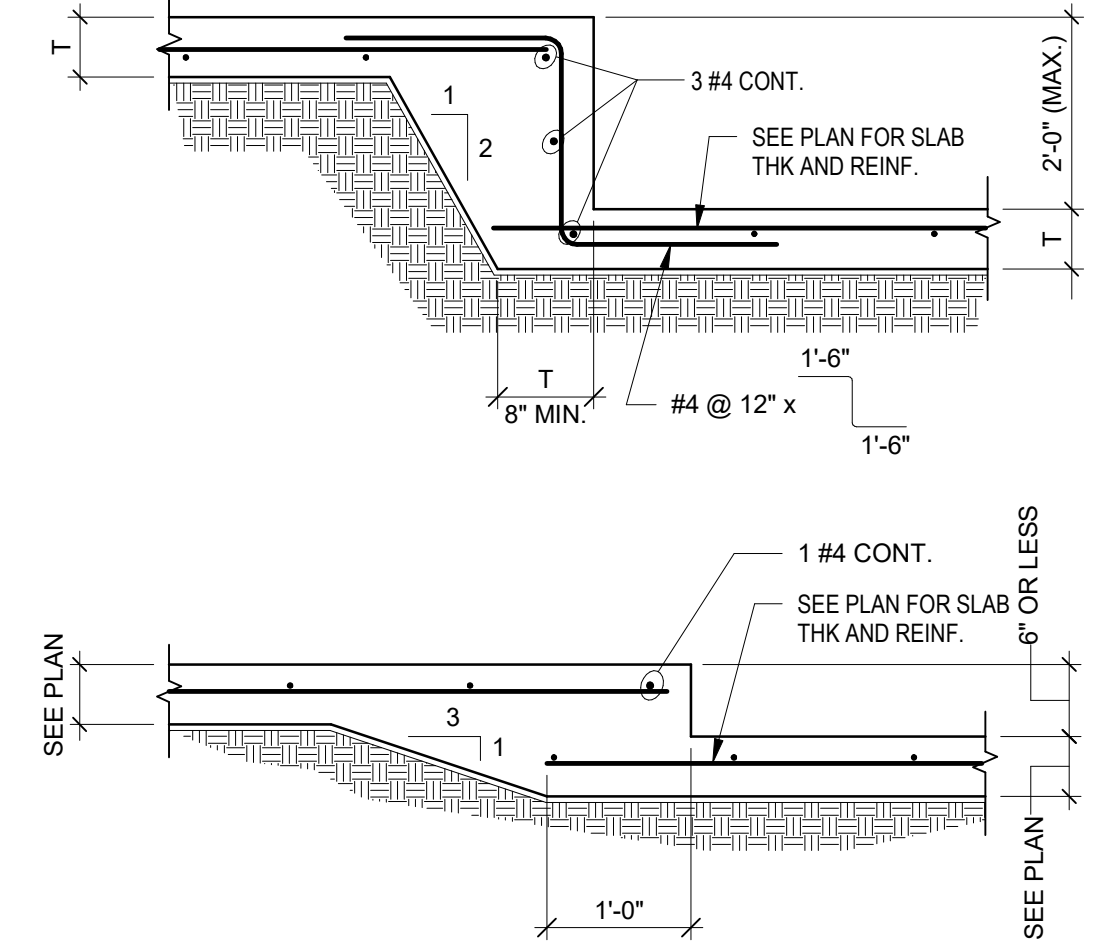


A - CONDUIT CLOSE TO BOTTOM OF GRADE BEAM

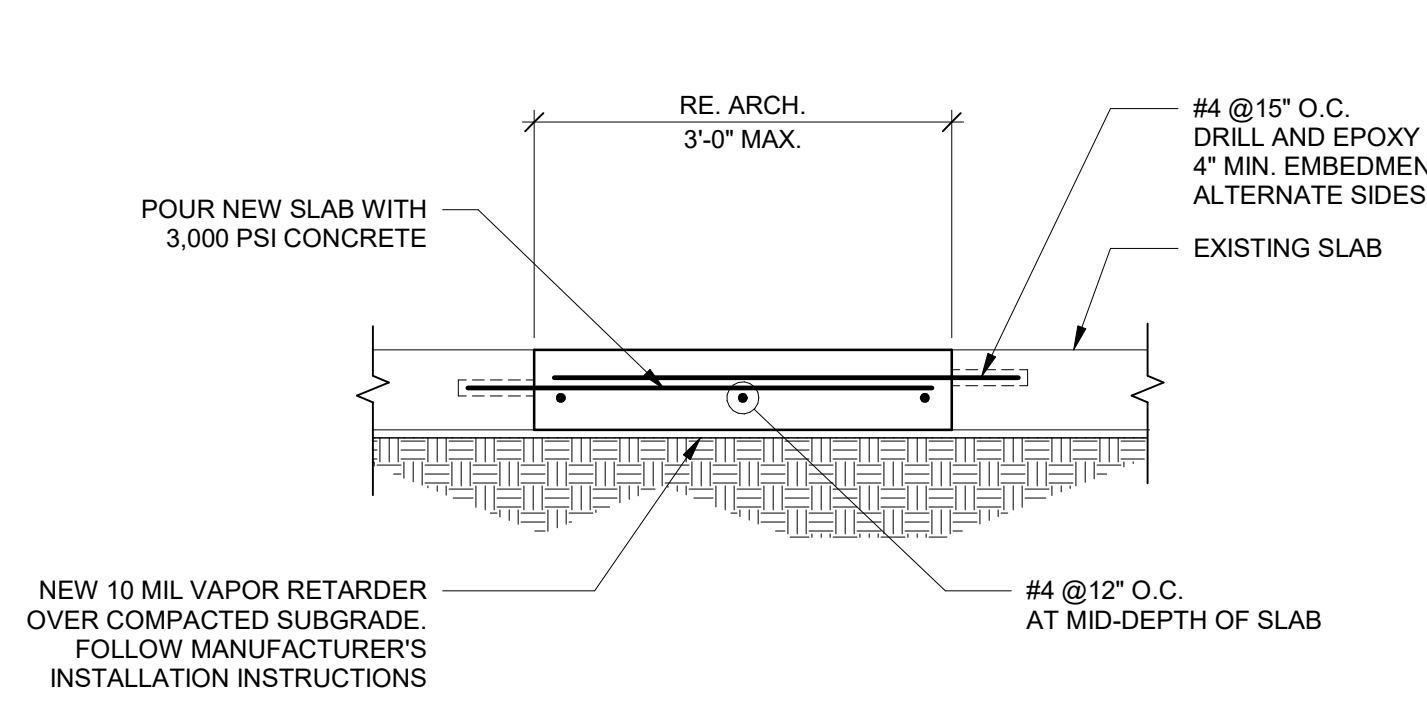
1 PIPE AND CONDUIT PENETRATION THRU GRADE BEAM
SCALE: 3/4" = 1'-0"



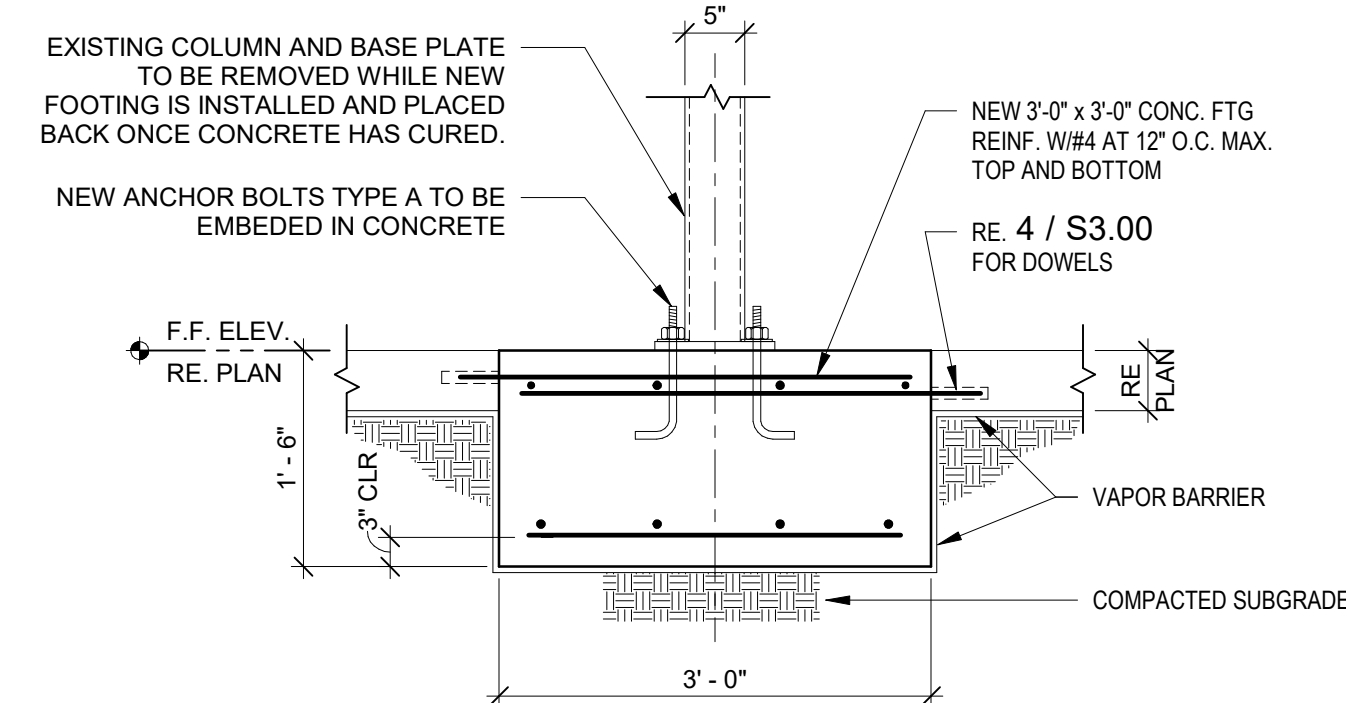
2 OPENING IN SLAB ON GRADE
SCALE: 3/4" = 1'-0"



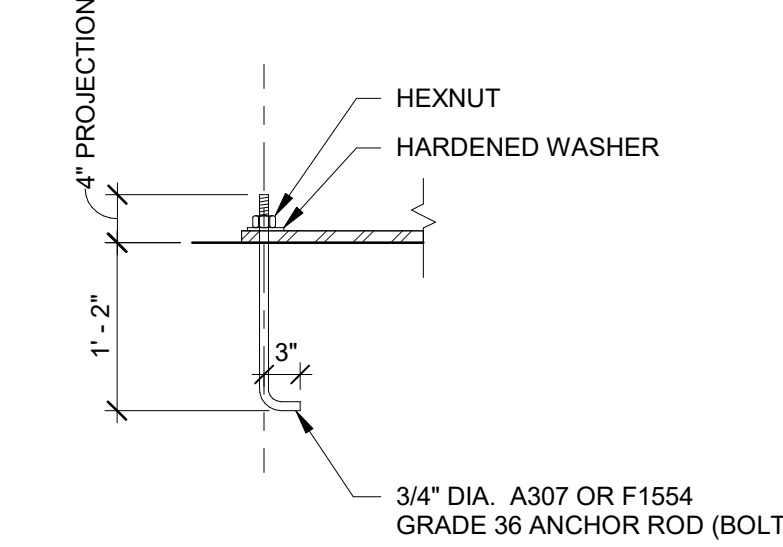
3 SLAB DEPRESSION
SCALE: 3/4" = 1'-0"



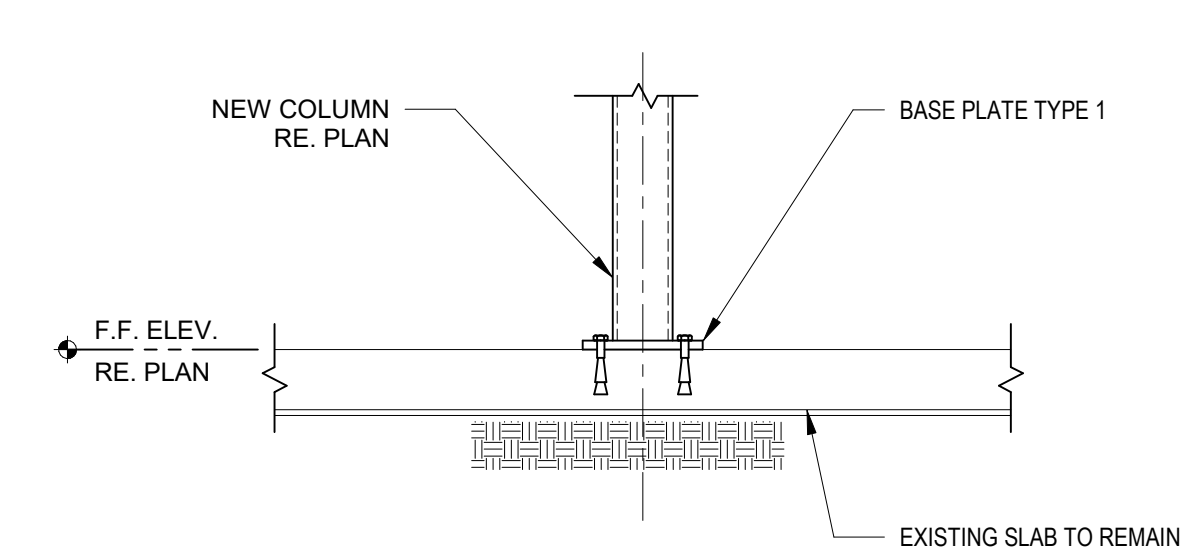
4 SLAB CUT OUT
SCALE: 1" = 1'-0"



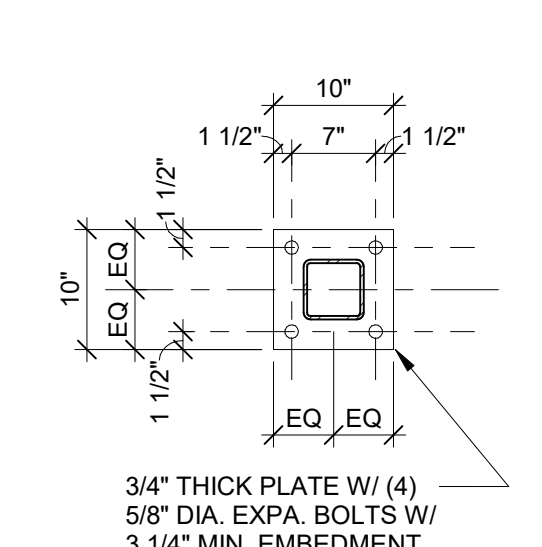
5 NEW FOOTING AT EXISTING COLUMN
SCALE: 3/4" = 1'-0"



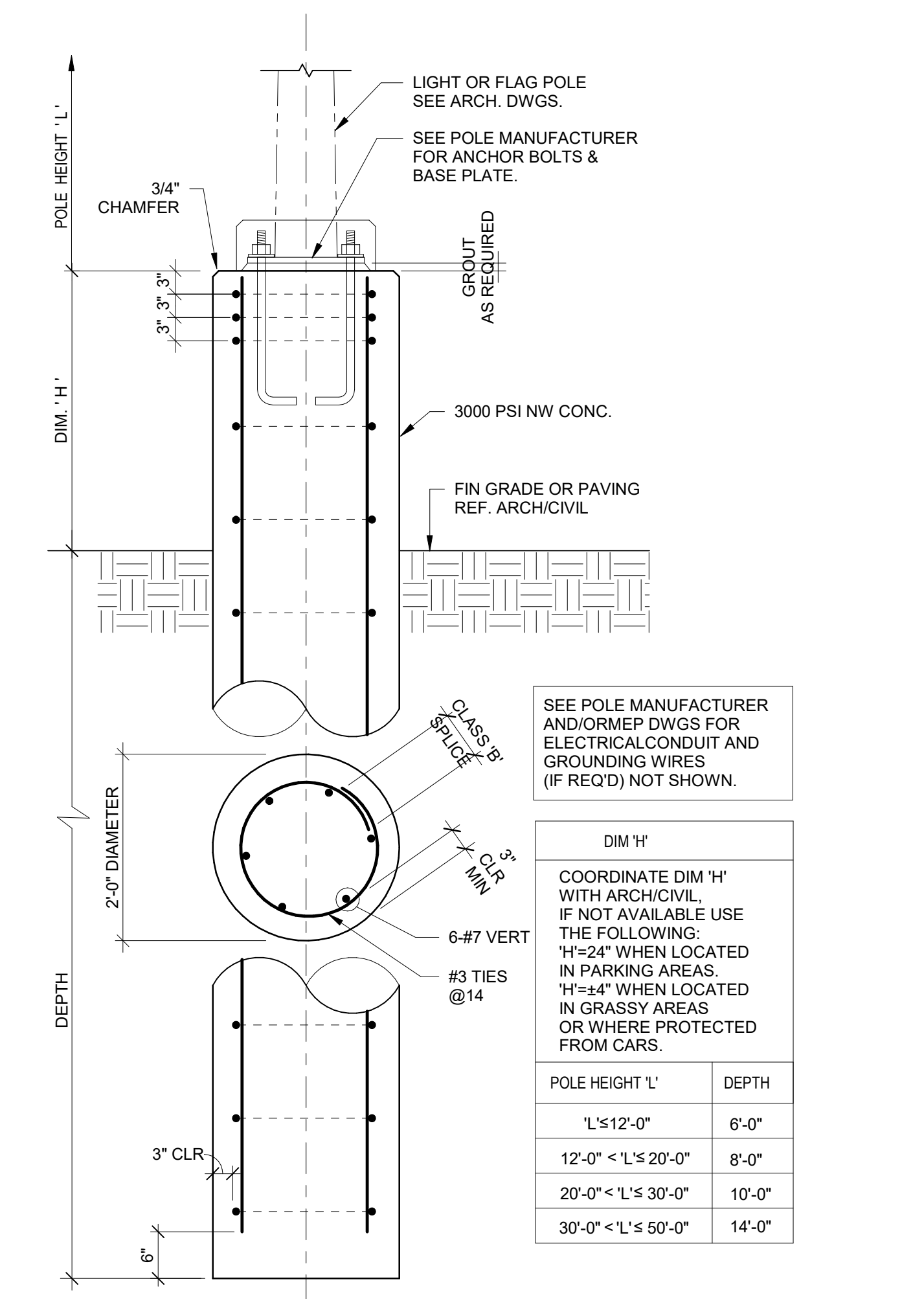
ANCHOR ROD TYPE A



6 NEW COLUMN BASE PLATE
SCALE: 3/4" = 1'-0"



BASE PLATE TYPE 1



8 TYP. LIGHT AND FLAG POLE FOUNDATION
SCALE: 3/4" = 1'-0"

SEE POLE MANUFACTURER AND/OR MEP DWGS FOR ELECTRICAL CONDUIT AND GROUNDING WIRES (IF REQ'D) NOT SHOWN.

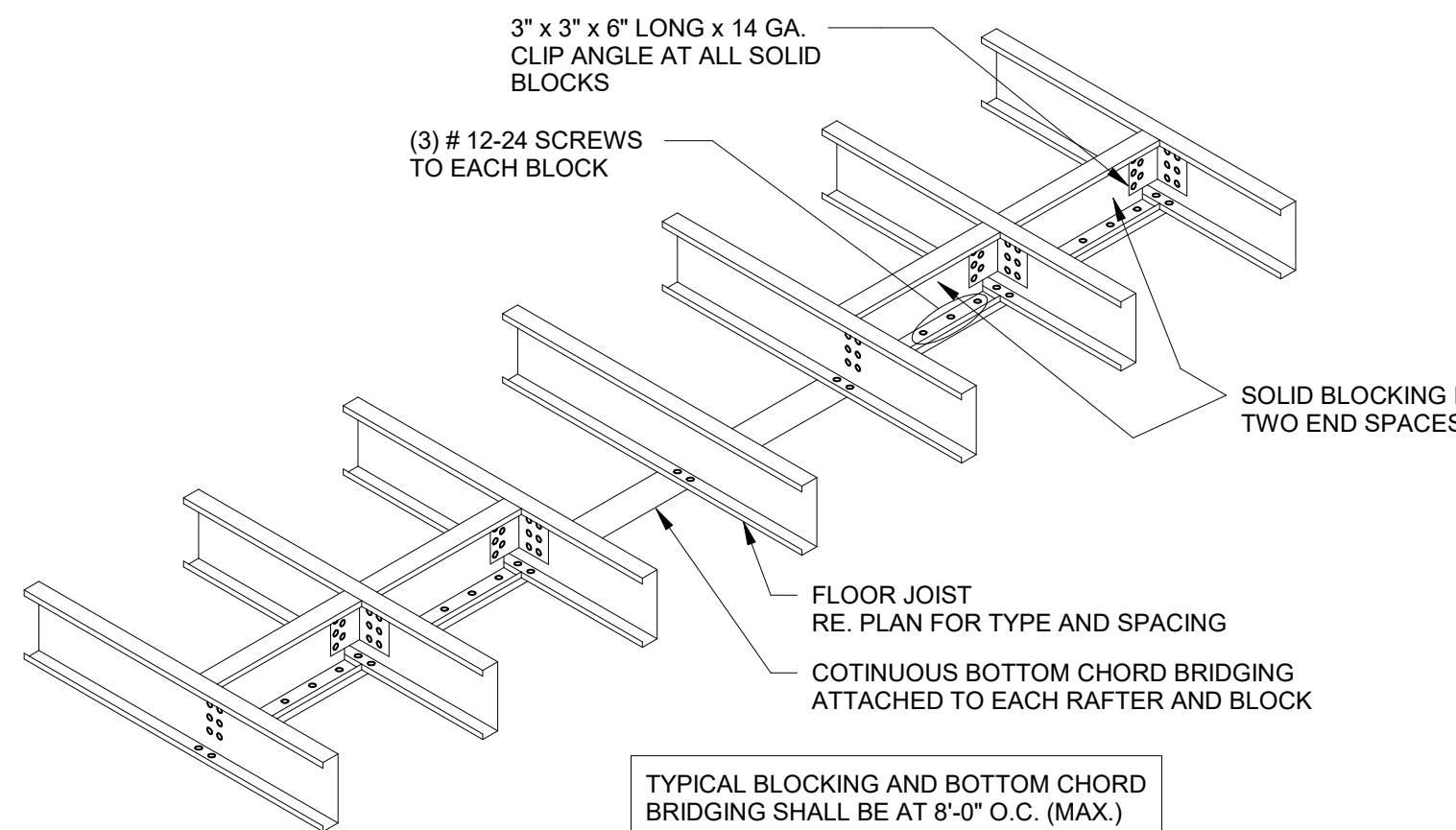
POLE HEIGHT 'L'	DEPTH
'L' ≤ 12'-0"	6'-0"
12'-0" < 'L' ≤ 20'-0"	8'-0"
20'-0" < 'L' ≤ 30'-0"	10'-0"
30'-0" < 'L' ≤ 50'-0"	14'-0"

MEMBER PROPERTIES - LIGHT GAUGE STEEL FRAMING MEMBERS								
MEMBER SIZE	DIM. 'A' IN.	DIM. 'B' IN.	DIM. 'C' IN.	AREA IN ²	I-X IN ⁴	S-X IN ³	I-Y IN ⁴	
3625162 - 33 (20 GA.) x 33 KSI	3.625	1.625	0.500	0.262	0.551	0.304	0.099	
3625162 - 43 (18 GA.) x 33 KSI	3.625	1.625	0.500	0.340	0.710	0.392	0.127	
3625162 - 54 (16 GA.) x 50 KSI	3.625	1.625	0.500	0.422	0.873	0.482	0.154	
3625162 - 68 (14 GA.) x 50 KSI	3.625	1.625	0.500	0.524	1.069	0.590	0.241	
6005162 - 33 (20 GA.) x 33 KSI	6.000	1.625	0.500	0.344	1.793	0.598	0.116	
6005162 - 43 (18 GA.) x 33 KSI	6.000	1.625	0.500	0.447	2.316	0.772	0.148	
6005162 - 54 (16 GA.) x 50 KSI	6.000	1.625	0.500	0.556	2.860	0.954	0.180	
6005162 - 68 (14 GA.) x 50 KSI	6.000	1.625	0.500	0.693	3.525	1.180	0.218	

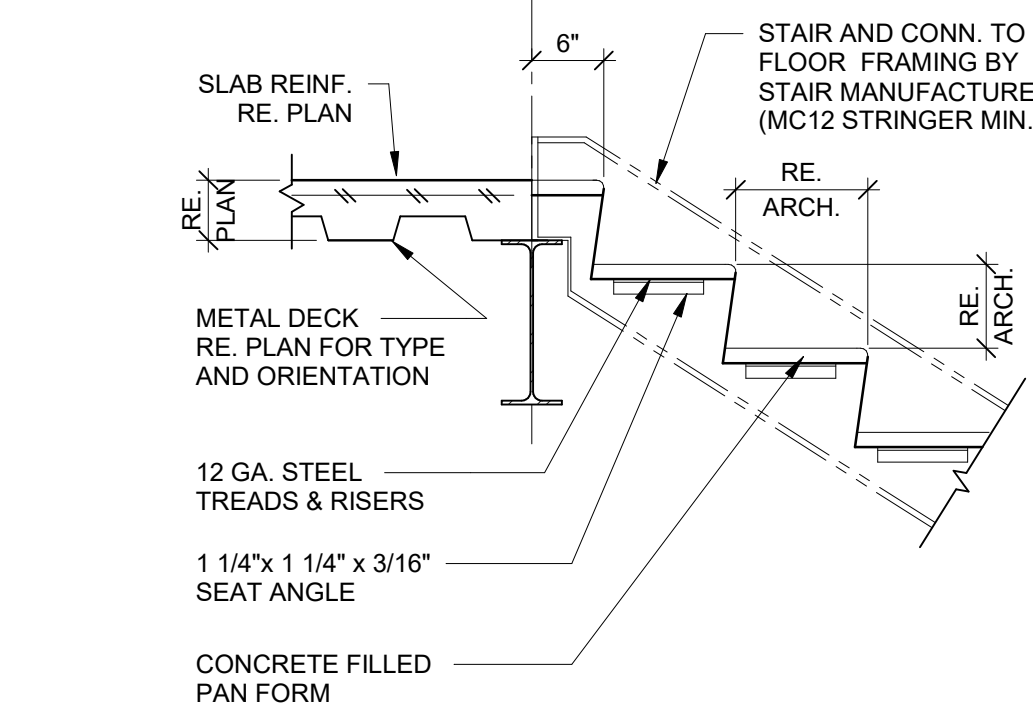
1. DIMENSION "A" SHALL BE CONSTANT (NO SUBSTITUTIONS).
2. ALL PROPERTIES SHOWN OTHER THAN DIMENSION "A" ARE MINIMUM ACCEPTABLE PROPERTIES.
3. ALL PROPERTIES & DIMENSIONS SHOWN ARE BASED ON STRUCTURAL PROPERTIES LISTED IN THE COLD-FORMED STEEL FRAMING CATALOG FROM CLARK DIETRICH, INC. IF DIFFERENT BRAND MATERIALS ARE USED, CONTRACTOR SHALL VERIFY THAT PROPERTIES MEET OR EXCEED VALUES LISTED IN TABLE.

NOTES:
 1. TYPICAL MEMBER SIZES ARE SHOWN.
 2. ALL MEMBER SIZES AND CONNECTIONS NOT FULLY DETAILED SHALL BE DESIGNED BY THE COLD-FORMED STEEL SUBCONTRACTOR.
 3. REFERENCE CLARK DIETRICH, INC.'S COLD FORMED STEEL FRAMING SYSTEMS TECHNICAL INFORMATION CATALOG FOR ADDITIONAL INFORMATION.

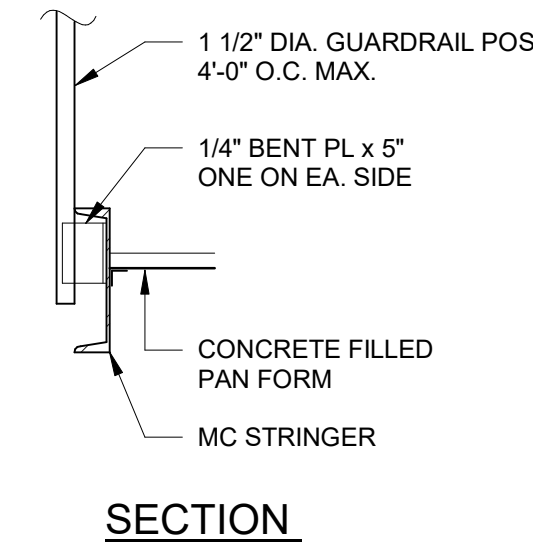
1 COLD FORMED STEEL MEMBER PROPERTY SCHEDULE
 SCALE: 3/4" = 1'-0"



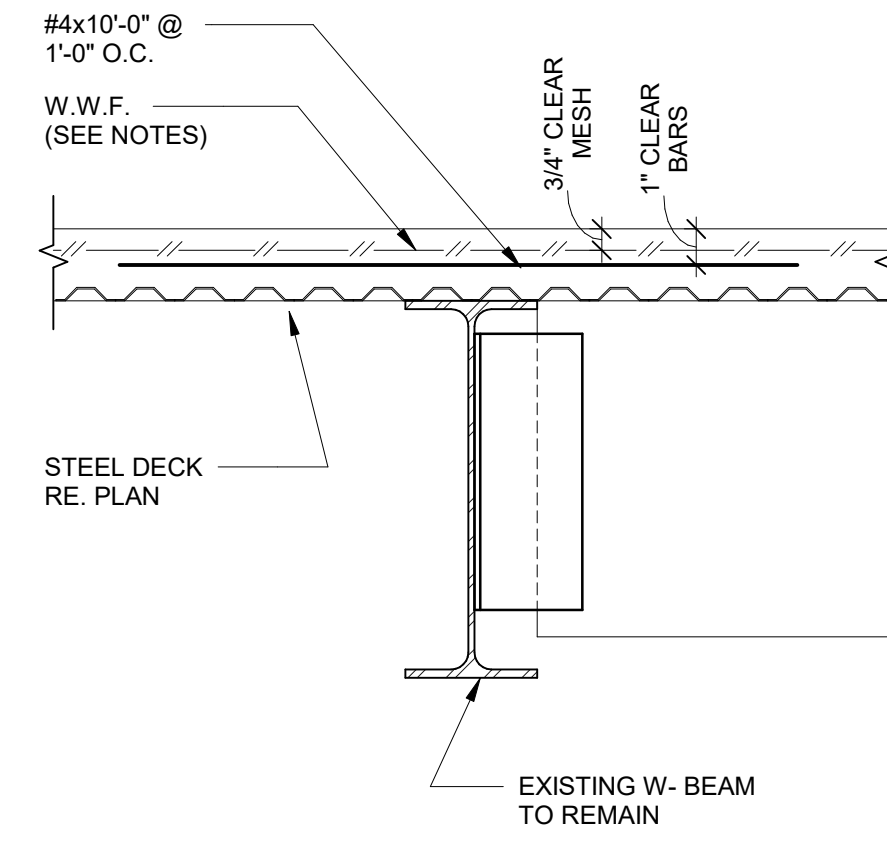
2 FLOOR JOIST BLOCKING AND BOTTOM CHORD BRIDGING
 SCALE: 3/4" = 1'-0"



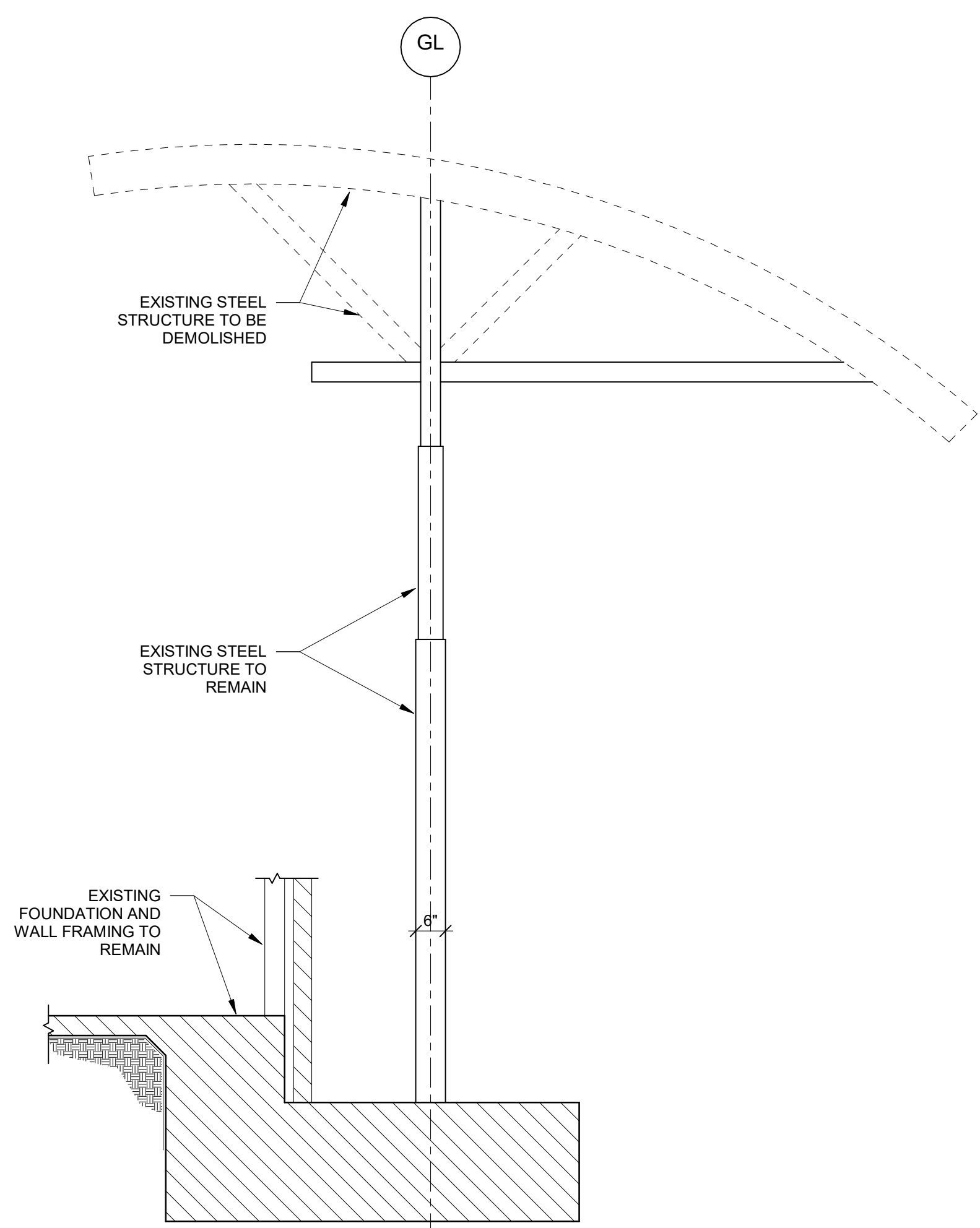
3 TYPICAL STAIR DETAIL
 SCALE: 3/4" = 1'-0"



SECTION

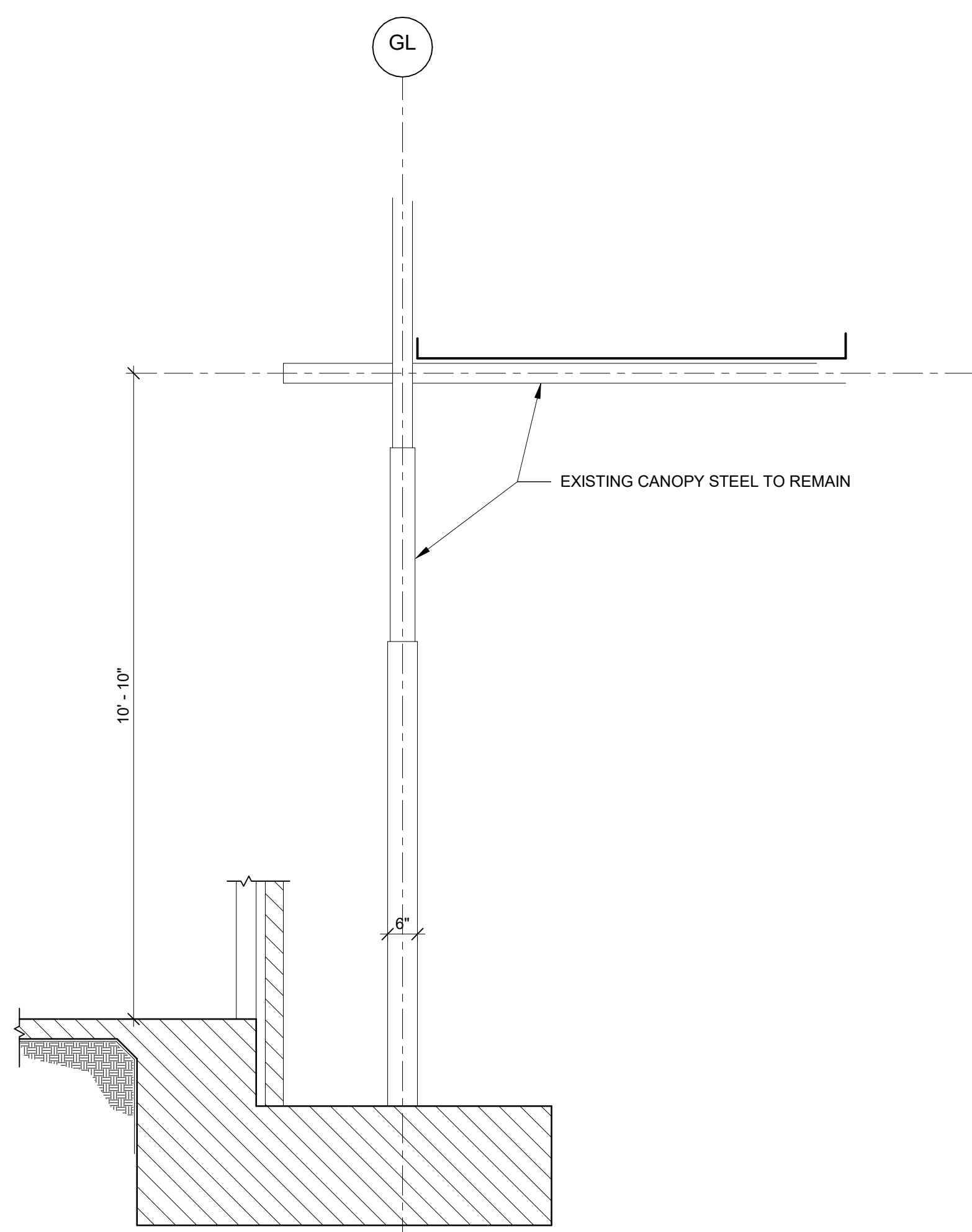


4 COMPOSITE GIRDER
 SCALE: 1 1/2" = 1'-0"

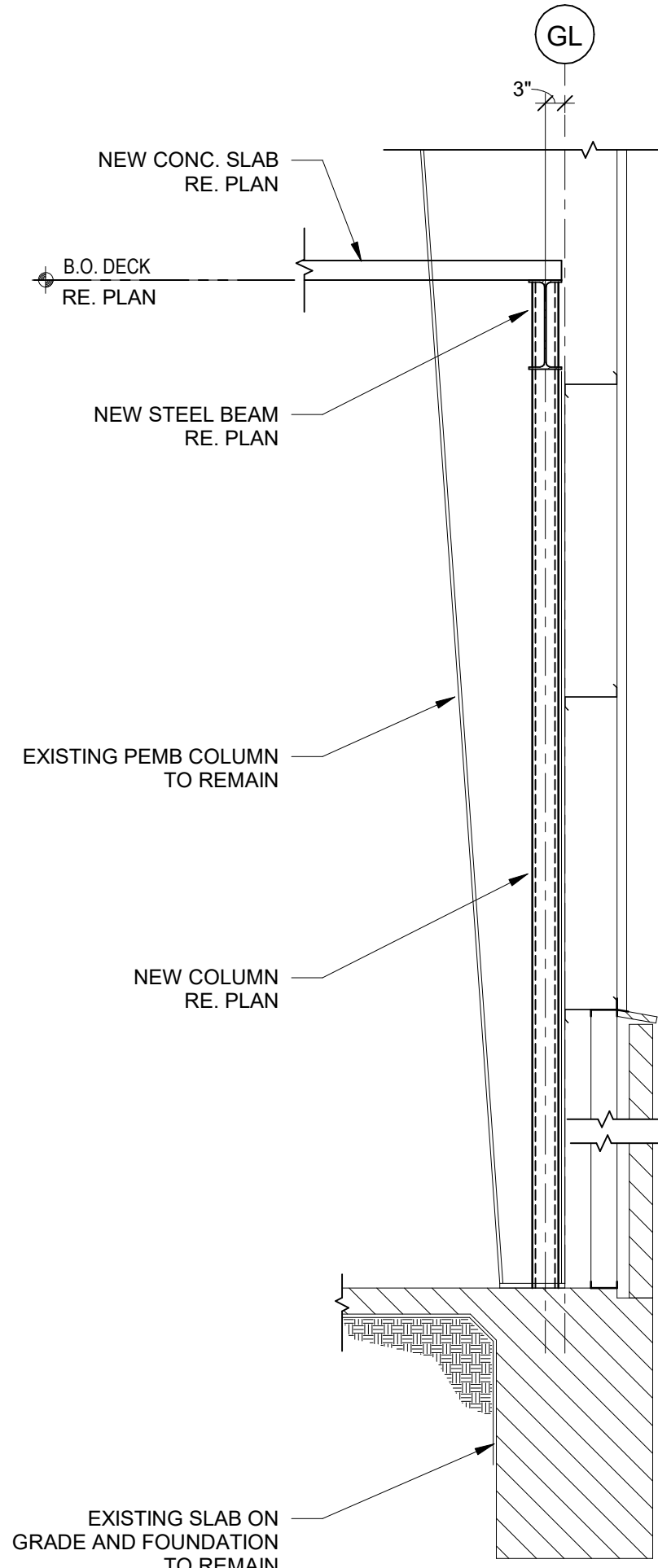


EXISTING STEEL CANOPY

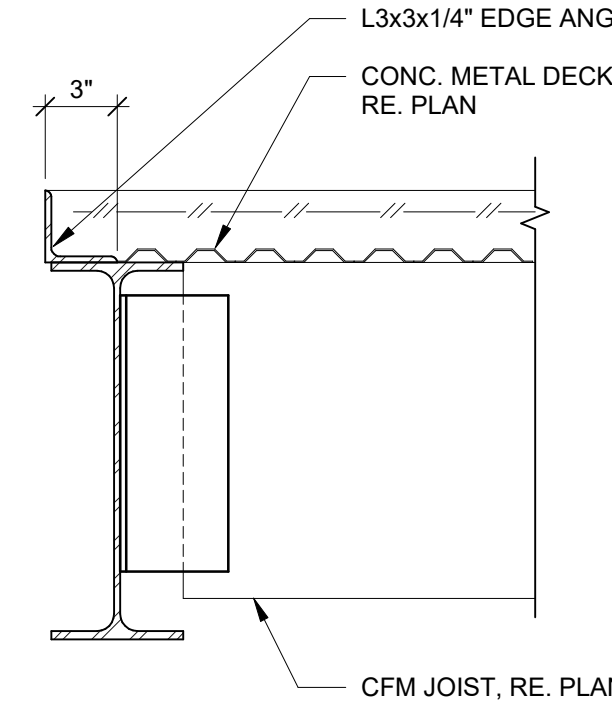
5 CANOPY DETAIL
 SCALE: 1/2" = 1'-0"



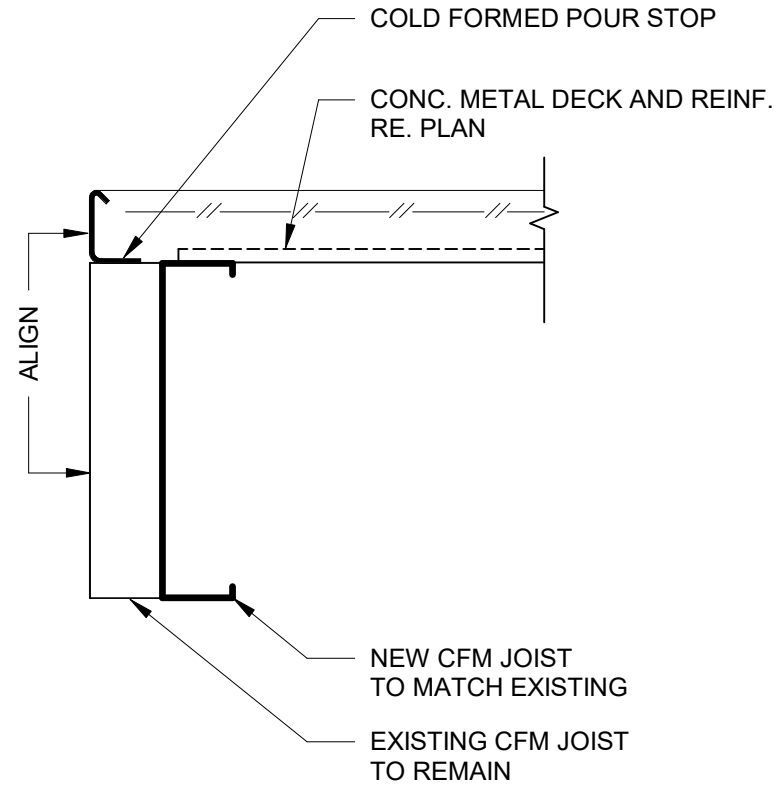
NEW STEEL CANOPY



6 NEW COLUMN ALONG BUILDING WALL
 SCALE: 1/2" = 1'-0"



AT STEEL BEAM



AT CFMF JOIST

7 SLAB EDGE DETAILS
 SCALE: 1 1/2" = 1'-0"

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MECHANICAL SYMBOLS AND ABBREVIATIONS

GRILLES/DIFFUSERS:	EQUIPMENT:
DUCT SYMBOLS:	GENERAL REFERENCES/NOTATIONS:
LINE TYPES:	
	HEATING HOT WATER SUPPLY
	HEATING HOT WATER RETURN
	CHILLED WATER SUPPLY
	CHILLED WATER RETURN
PIPE SYMBOLS:	
	PIPE TURNING UP/DOWN

SYMBOLS LEGEND NOTES:
 1. REFER TO PLANS AND SPECIFICATIONS FOR DETAILED DESCRIPTION OF ALL DEVICES SHOWN, PROVIDED BY THIS CONTRACTOR. PROJECT MAY NOT USE ALL SYMBOLS OR DEVICES INDICATED ON THIS LEGEND.

MECHANICAL GENERAL NOTES

- CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW CONSTRUCTION DOCUMENTS. INFORMATION REGARDING COMPLETE WORK IS DISPERSED THROUGHOUT DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO COMPLETE DOCUMENT SET.
- COORDINATE WITH WORK OF OTHER SECTIONS. EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF OWNER, AND WITH CONSTRAINTS OF EXISTING CONDITIONS OF PROJECT SITE. PROVIDE DUCT AND PIPE RISES AND DROPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF DISCREPANCIES BEFORE STARTING WORK.
- DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.
- ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING AUTHORITY. PURCHASE ALL PERMITS ASSOCIATED WITH WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- INSTALL EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS AND MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCE.
- INSTALL EXHAUST FANS DISCHARGE MINIMUM OF 10 FT FROM INTAKE AIR OPENINGS.

HVAC SEQUENCE OF OPERATIONS

PROVIDE ALL NECESSARY SENSORS, DAMPER ACTUATORS, CONTROL TRANSFORMERS WITH SECONDARY OVERLOAD PROTECTION, WIRING IN CONDUIT, AND ALL MISCELLANEOUS ITEMS TO ACCOMPLISH THE FOLLOWING SEQUENCE OF OPERATION:

- AIR HANDLING UNIT:**
 THE UNIT CONTROLLER SHALL BE SET TO DETERMINE OCCUPIED AND UNOCCUPIED HOURS OF OPERATION. HOURS SHALL BE COORDINATED WITH OWNER.
- OCCUPIED MODE:**
 SUPPLY FAN SHALL RUN CONTINUOUSLY AND OUTSIDE AIR DAMPER SHALL OPEN TO MINIMUM POSITION TO DELIVER SCHEDULED QUANTITY OF VENTILATION AIR.
- COOLING:**
 UPON SIGNAL FROM UNIT CONTROLLER, IF SPACE TEMPERATURE RISES 2 DEGREES OR MORE ABOVE SET POINT, COOLING SHALL BE ENERGIZED. WHEN TEMPERATURE FALLS 2 DEGREES BELOW SET POINT, COMPRESSOR SHALL BE DE-ENERGIZED.
- HEATING:**
 UPON SIGNAL FROM UNIT CONTROLLER, WHEN SPACE TEMPERATURE FALLS 2 DEGREES OR MORE BELOW SET POINT, GAS HEAT SHALL BE ENERGIZED AND OPERATE UNTIL SPACE TEMPERATURE IS SATISFIED. WHEN TEMPERATURE RISES 2 DEGREES ABOVE SET POINT, GAS HEAT SHALL BE DE-ENERGIZED.
- UNOCCUPIED MODE:**
COOLING:
 UPON SIGNAL FROM UNIT CONTROLLER, SUPPLY FAN SHALL BE DE-ENERGIZED AND OUTSIDE AIR DAMPER SHALL CLOSE. IF SPACE TEMPERATURE RISES 2 DEGREES OR MORE ABOVE UNOCCUPIED SET POINT, OUTSIDE AIR DAMPER SHALL REMAIN CLOSED. SUPPLY FAN SHALL BE ACTIVATED AND COOLING SHALL BE ENERGIZED. WHEN TEMPERATURE FALLS 2 DEGREES BELOW SET POINT, COMPRESSOR SHALL BE DE-ENERGIZED AND FAN SHALL SHUT OFF.
- HEATING:**
 UPON SIGNAL FROM UNIT CONTROLLER, WHEN SPACE TEMPERATURE FALLS 2 DEGREES OR MORE BELOW SET POINT, OUTSIDE AIR DAMPER SHALL REMAIN CLOSED. SUPPLY FAN SHALL BE ACTIVATED AND GAS HEAT SHALL BE ENERGIZED UNTIL SPACE TEMPERATURE IS SATISFIED. WHEN TEMPERATURE RISES 2 DEGREES ABOVE SET POINT, GAS HEAT AND SUPPLY FAN SHALL BE DE-ENERGIZED.
- SET POINTS:**
 OCCUPIED COOLING: 72°F
 OCCUPIED HEATING: 70°F
 UNOCCUPIED COOLING: 80°F
 UNOCCUPIED HEATING: 65°F
- SMOKE DETECTOR SHUT DOWN:**
 SMOKE DETECTOR SHALL DE-ENERGIZE SUPPLY FAN AND CLOSE OUTSIDE AIR DAMPER IN BOTH OCCUPIED AND UNOCCUPIED MODES WHENEVER SMOKE IS SENSED BY SMOKE DETECTOR.

REFRIGERANT PIPING NOTE

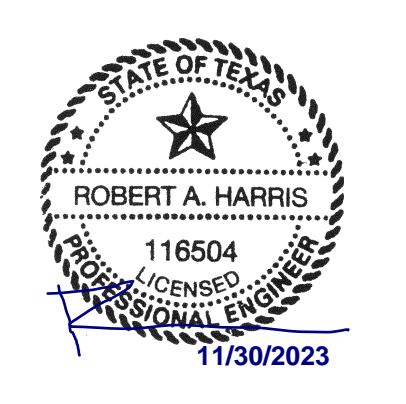
REFRIGERANT PIPE(S) SIZES SHALL BE DETERMINED BY THE COMPRESSORIZED EQUIPMENT MANUFACTURER OR THEIR REPRESENTATIVE, WHO SHALL ALSO DETERMINE THE NEED FOR DOUBLE SUCTION PIPE RISERS, ACCUMULATORS AND OTHER APPURTENANCES REQUIRED FOR PROPER LONG TERM OPERATION OF THE EQUIPMENT. REFRIGERANT PIPE(S) SIZING AND ROUTING SHALL MEET ALL SYSTEM OPERATING CONDITIONS. THE CONTRACTOR SHALL PROVIDE TO THE OWNER AND ENGINEER LETTERS AND DRAWINGS THAT ADEQUATELY DEPICT THE REFRIGERANT PIPING AND COMPONENTS, AND INDICATE THE RECOMMENDATIONS PROVIDED TO THEM BY THE MANUFACTURER OR THEIR REPRESENTATIVE.

MECHANICAL REMODEL NOTES

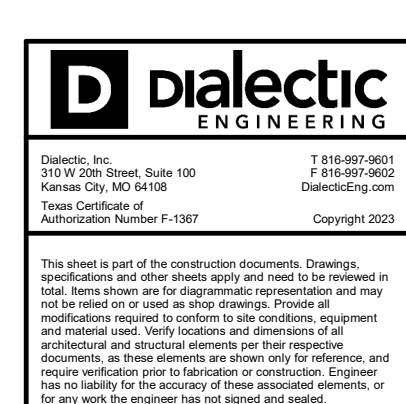
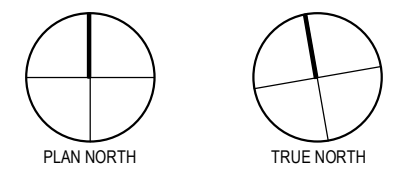
THIS DRAWING IS BASED ON BEST AVAILABLE INFORMATION AT TIME OF DESIGN AND MAY NOT REFLECT AS-BUILT CONDITIONS. ALL MECHANICAL INSTALLATIONS INDICATED ON THIS SHEET SHALL BE FIELD VERIFIED PRIOR TO BID AND DEMOLITION.

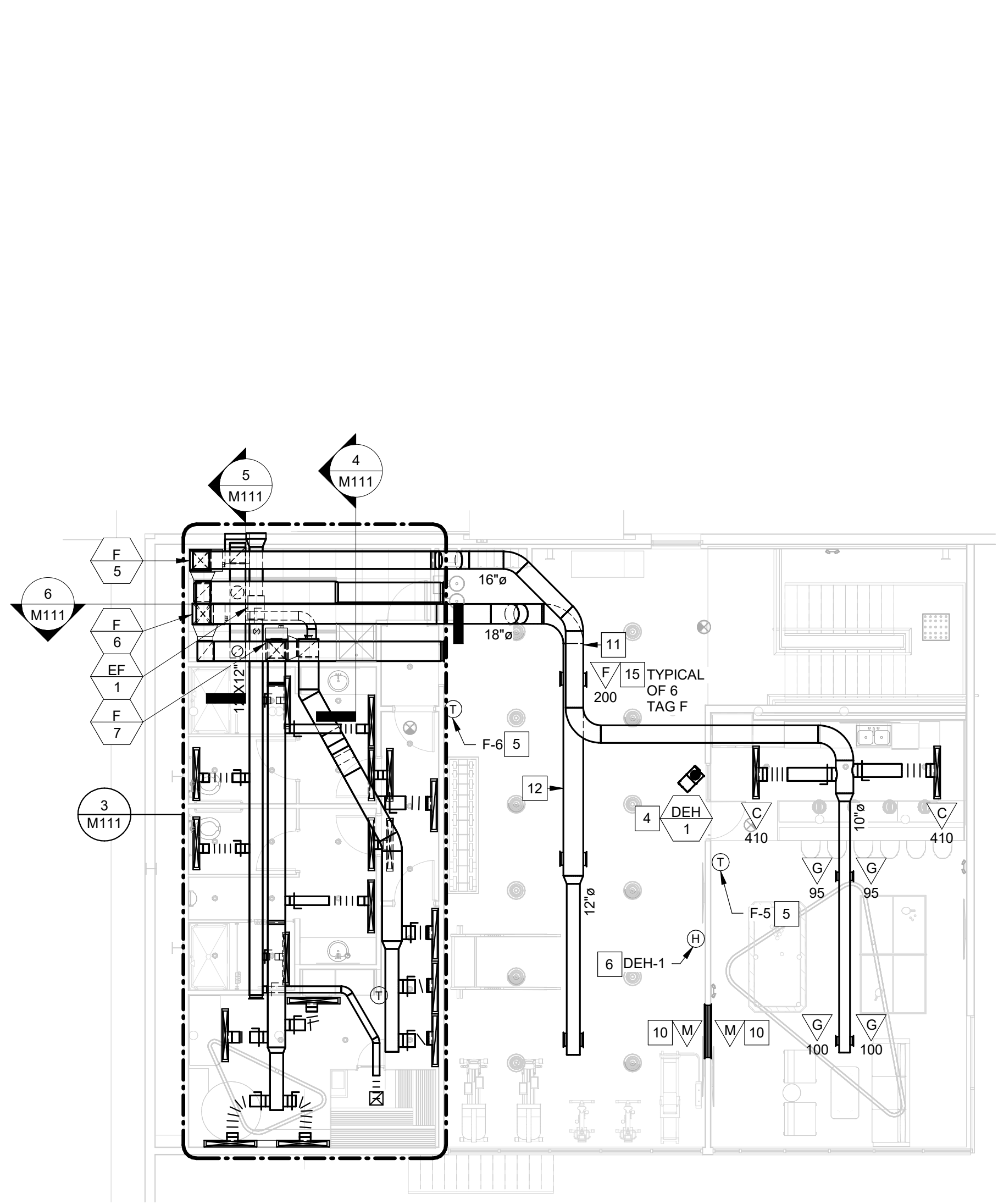
EXISTING DUCTWORK NOTES

REUSE AS MUCH OF THE EXISTING DUCTWORK AS POSSIBLE. DUCTWORK SIZES LISTED ON DUCTWORK SHOWN AS EXISTING ON DRAWING ARE MINIMUM REQUIRED DUCT SIZES FOR AIR FLOWS LISTED. FIELD VERIFY SIZES OF EXISTING DUCTWORK PRIOR TO BID. IF EXISTING DUCT SIZE DOES NOT MEET MINIMUM REQUIRED SIZE LISTED ON DRAWING, PROVIDE NEW.

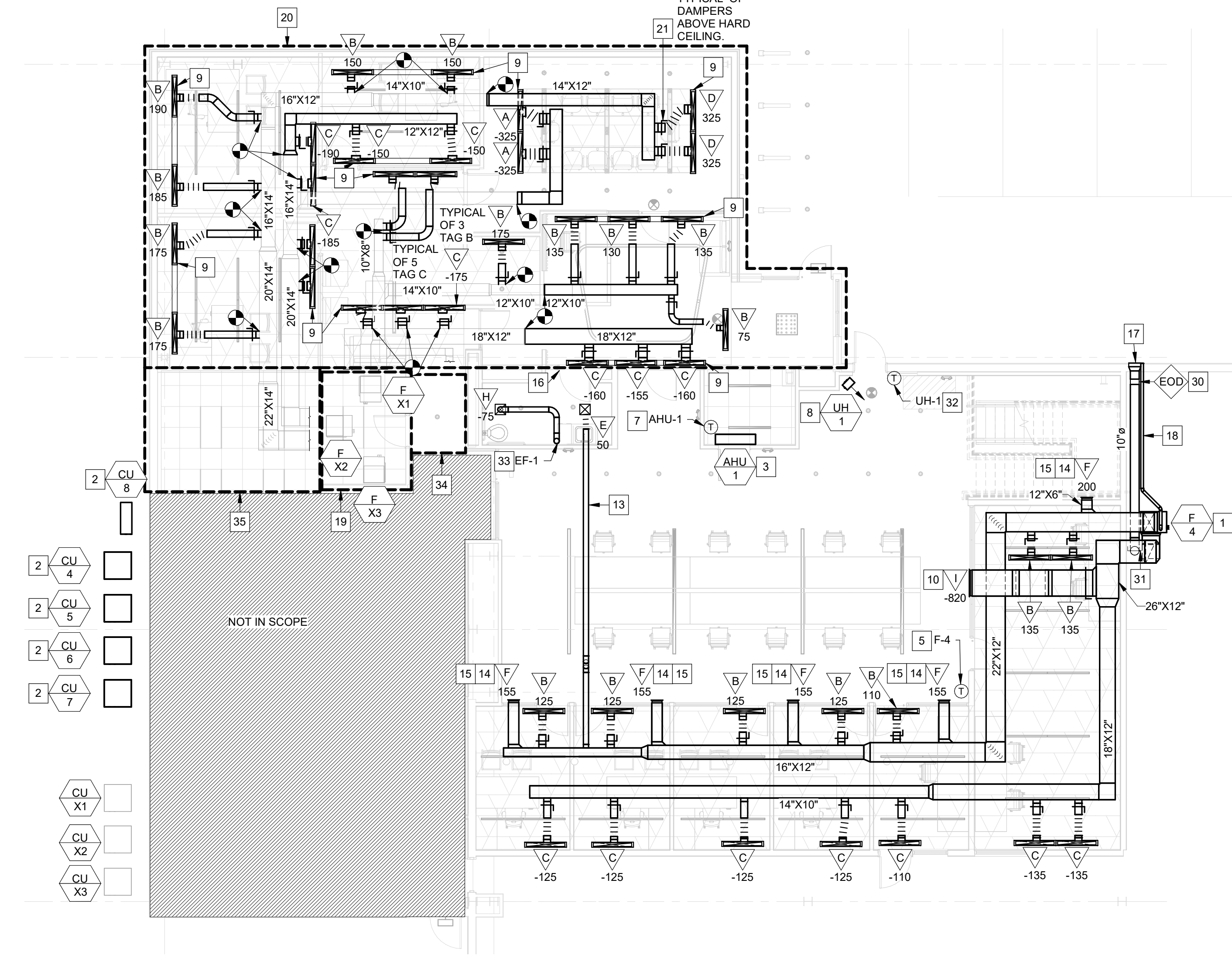


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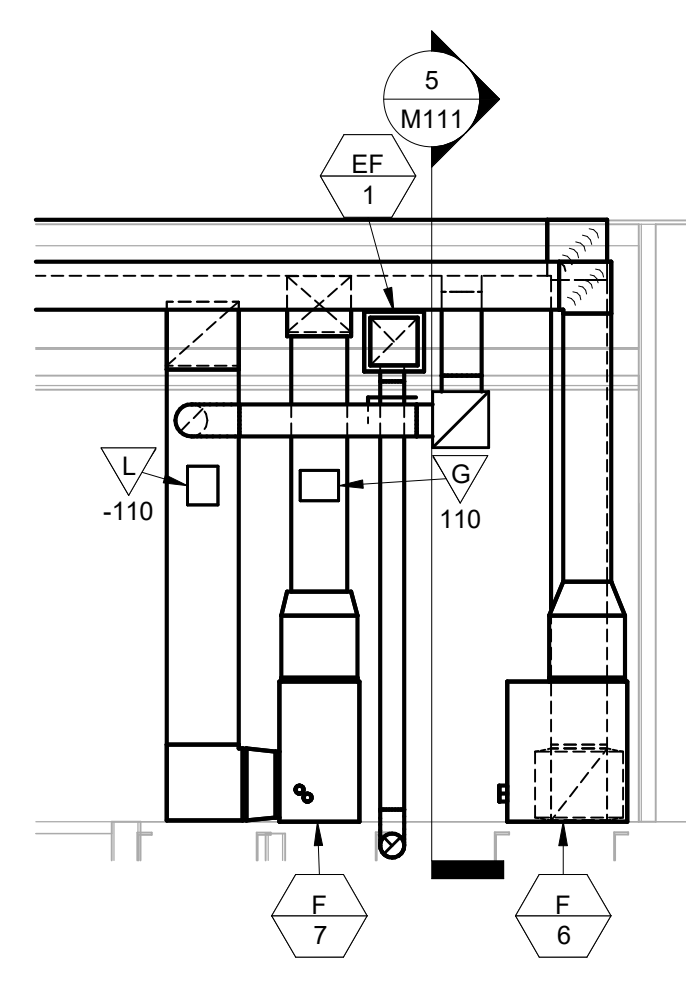




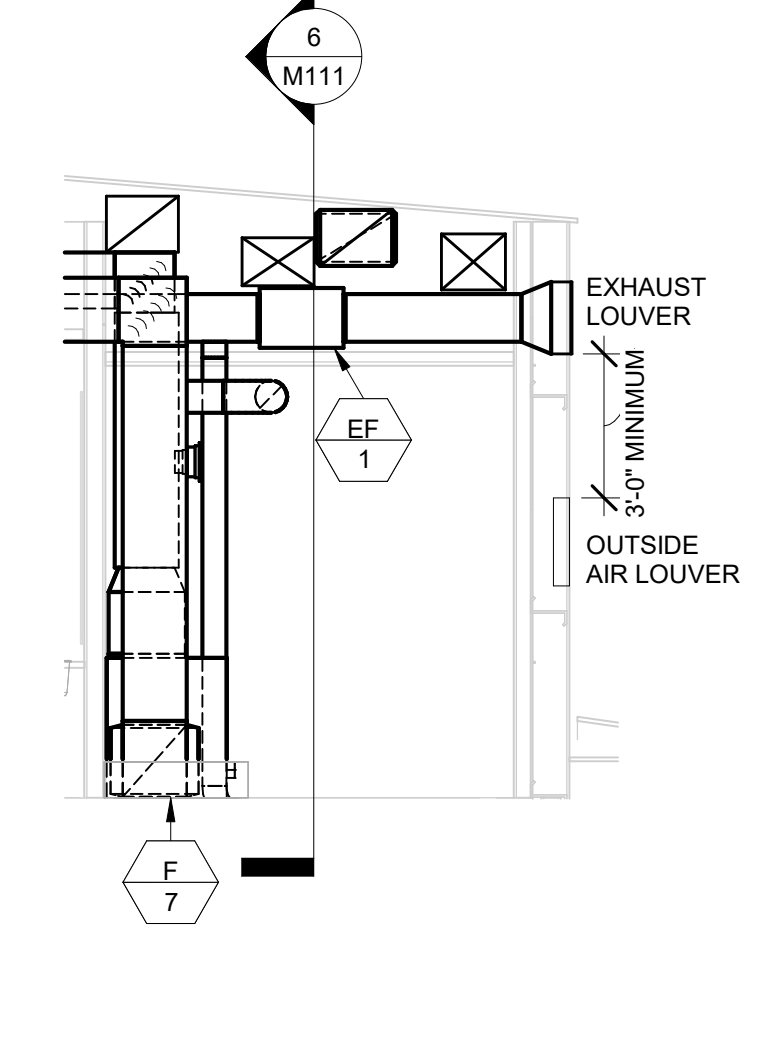
2 OVERALL MECHANICAL PLAN - LV 2
1/8" = 1'-0"



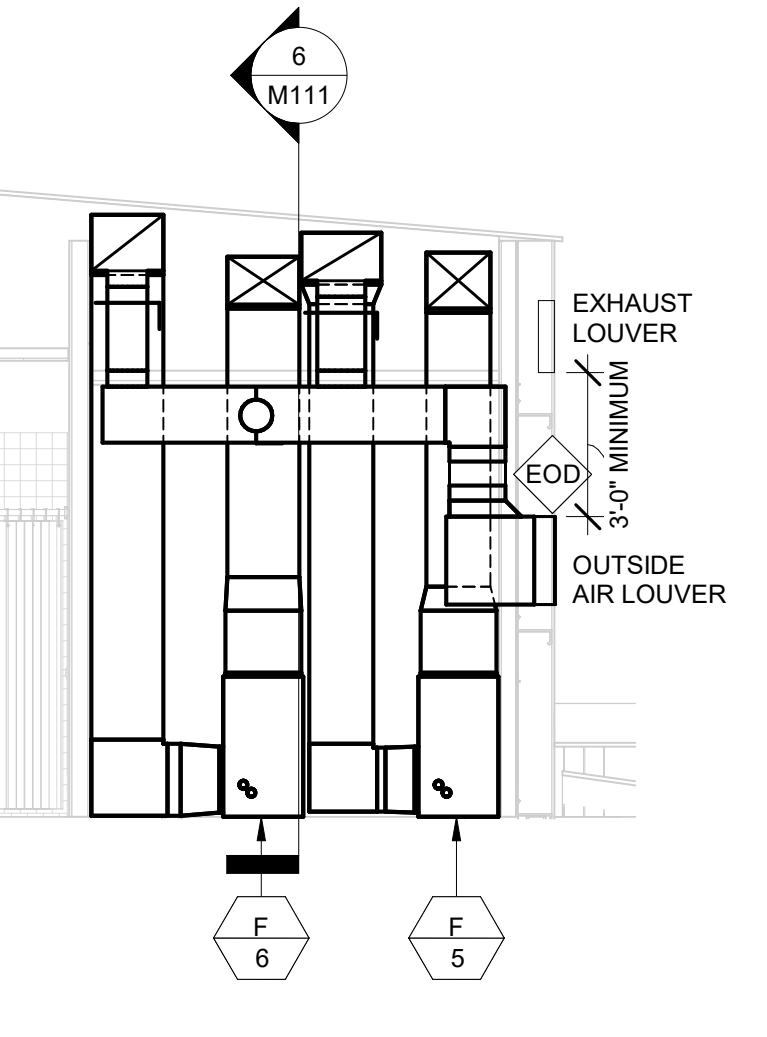
1 OVERALL MECHANICAL PLAN - LV 1
1/8" = 1'-0"



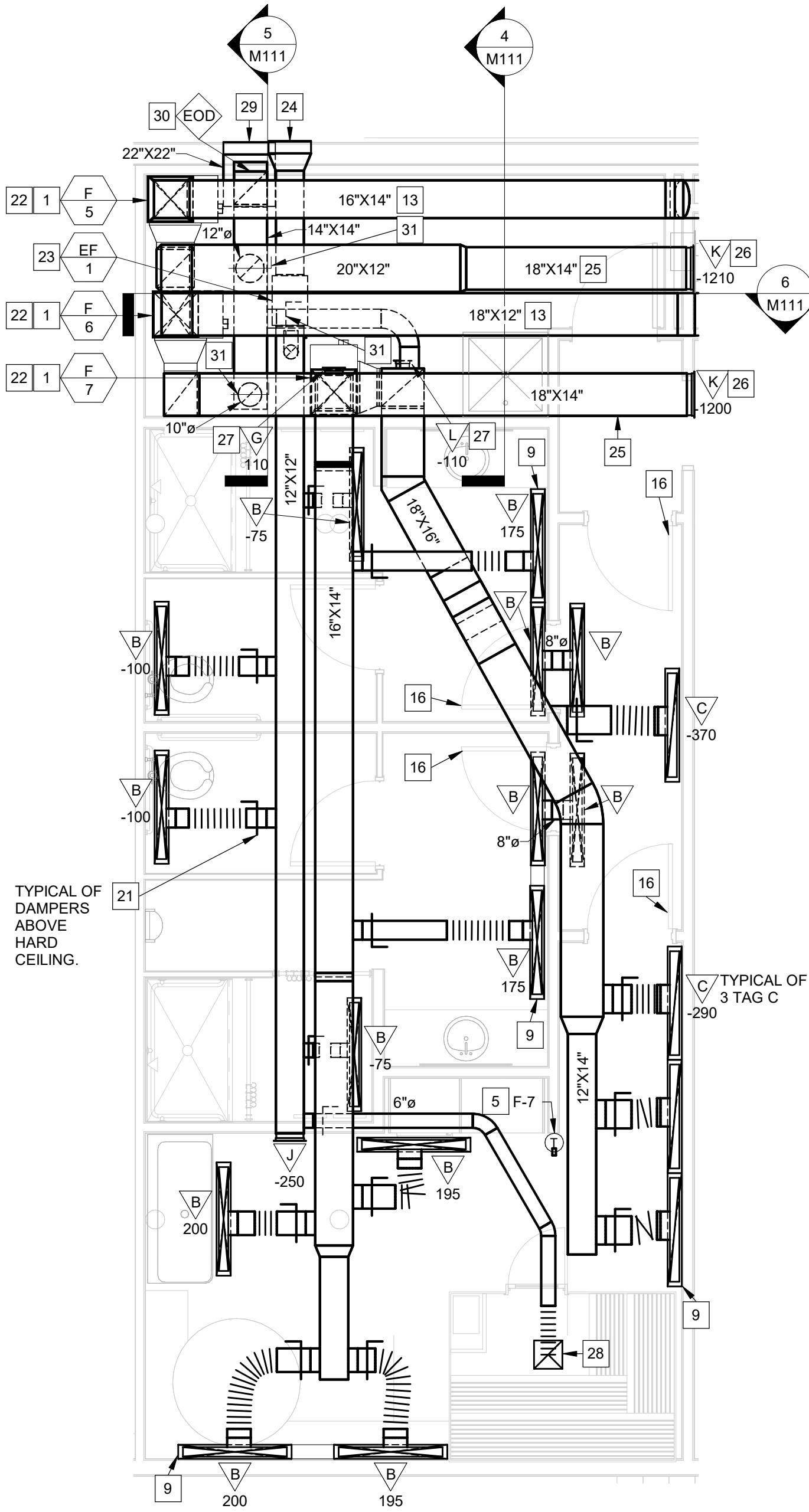
6 MECHANICAL JANITOR ROOM - SECTION 3
1/4" = 1'-0"



4 MECHANICAL JANITOR ROOM - SECTION 1
1/4" = 1'-0"



5 MECHANICAL JANITOR ROOM - SECTION 2
1/4" = 1'-0"



3 ENLARGED MECHANICAL PLAN - LV 2
1/4" = 1'-0"

- MECHANICAL KEY NOTES**
- PROVIDE FURNACE AND DIRECT EXPANSION COOLING COIL AND HOUSE KEEPING PAD. INSTALL UNIT LEVEL FOR PROPER CONDENSATE DRAINAGE. PROVIDE FLEXIBLE CONNECTORS ON THE SUPPLY AND RETURN AIR DUCT CONNECTIONS.
 - PROVIDE CONDENSING UNIT AND CONCRETE PAD. COORDINATE INSTALLATION LOCATION WITH OWNER REPRESENTATIVE. PROVIDE MANUFACTURER'S RECOMMENDED TYPE AND SIZE OF REFRIGERANT PIPING FROM AIR HANDLING UNIT TO CONDENSING UNIT. INSULATE SUCTION LINE WITH 1" THICK ARMAFLEX AP. PAINT INSULATION LOCATED OUTDOORS WITH ARMAFLEX WB FINISH. TRAP AND SLOPE LINES PER MANUFACTURER'S RECOMMENDATIONS.
 - PROVIDE WALL MOUNTED DUCTLESS SPLIT SYSTEM AIR HANDLING UNIT. INSTALL UNIT LEVEL FOR PROPER CONDENSATE DRAINAGE. PROVIDE WITH CONDENSATE PAN AND OVERFLOW SWITCH. MOUNT UNIT 2" ABOVE DOOR HEIGHT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 - PROVIDE DEHUMIDIFICATION UNIT. MOUNT BOTTOM OF DEHUMIDIFICATION UNIT 12'-0" ABOVE FINISHED FLOOR. INSTALL UNIT LEVEL FOR PROPER CONDENSATE DRAINAGE SUPPORT UNIT FROM STRUCTURE ABOVE WITH CHANNEL AND ALL-THREAD ROD WITH SPRING VIBRATION ISOLATORS.
 - PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT WITH AUTO-CHANGEOVER AND AUTOMATIC START CAPABILITY. MOUNT THERMOSTAT 48" ABOVE FINISHED FLOOR.
 - PROVIDE WALL MOUNTED DEH-3000 REMOTE MOUNTED DIGITAL CONTROLLER. MOUNT SENSOR AT 48" ABOVE FINISHED FLOOR.
 - PROVIDE WIRED REMOTE CONTROLLER FOR DUCTLESS SPLIT SYSTEM. MOUNT 48" ABOVE FINISHED FLOOR.
 - PROVIDE UNIT HEATER. MOUNT HEATER 10'-0" ABOVE FINISHED FLOOR FROM STRUCTURE ABOVE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. SUSPEND FROM STRUCTURE WITH STEEL CHANNEL AND THREADED ROD.
 - PROVIDE CONTINUOUS SLOT DIFFUSER. PROVIDE BLANK OFF SECTIONS AS REQUIRED TO PROVIDE CONTINUOUS LOOK.
 - MOUNT GRILLE AS HIGH AS POSSIBLE.
 - MOUNT DUCTWORK APPROXIMATELY 10'-1" ABOVE FINISHED FLOOR.
 - MOUNT DUCTWORK APPROXIMATELY 9'-5" ABOVE FINISHED FLOOR.
 - MOUNT DUCTWORK TIGHT TO STRUCTURE ABOVE.
 - MOUNT BOTTOM OF GRILLE/REGISTER ABOVE ADJACENT CEILING.
 - DIRECT SUPPLY GRILLE VANES 22.5° DOWNWARD WITH A 22.5° SPREAD.
 - UNDERCUT DOOR 1" FOR TRANSFER AIR.
 - PROVIDE 14"x14" WITH LOUVER IN WALL. LOUVER SHALL BE GREENHECK MODEL EVH-501 OR APPROVED EQUAL. LOUVER SHALL HAVE A MINIMUM 0.4 SF OF FREE AREA. MOUNT LOUVER APPROXIMATELY 8'-11" ABOVE GRADE. COORDINATE FINAL LOCATIONS WITH ARCHITECTURAL PLANS. PROVIDE WITH KYNAR FINISH, EXTENDED SILL AND BIRD SCREEN. ARCHITECT TO SPECIFY COLOR OF KYNAR.
 - PROVIDE CONCENTRIC VENT KIT THROUGH EXTERIOR WALL FOR GAS FURNACE COMBUSTION AIR INTAKE AND FLUE IN ACCORDANCE WITH FURNACE MANUFACTURER'S INSTALLATION INSTRUCTIONS. INSTALL CONCENTRIC VENT KIT PER MANUFACTURER'S INSTALLATION MANUAL. RUN FURNACE COMBUSTION AIR INTAKE AND FLUE FROM FURNACE TO TERMINATION LOCATION SHOWN AS EFFICIENTLY AS POSSIBLE TO STAY WITHIN FURNACE MANUFACTURER'S LENGTH LIMITATIONS. SIZE FURNACE COMBUSTION AIR INTAKE AND FLUE PER MANUFACTURER'S INSTRUCTIONS.

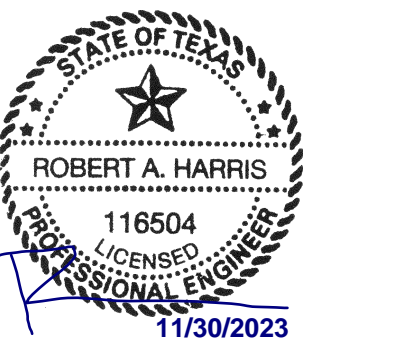
- MECHANICAL KEY NOTES**
- ALL EXISTING MECHANICAL EQUIPMENT, DUCTWORK, ACCESSORIES, ETC. IN AREA TO REMAIN. CLEAN AND REPAIR EQUIPMENT TO GOOD WORKING CONDITION.
 - DEMOLISH ALL EXISTING DIFFUSERS/GRILLE AND ASSOCIATED BRANCH DUCTWORK IN SHOWN AREA. PATCH, SEAL, AND CAP MAIN TRUNK DUCTWORK AS REQUIRED.
 - PROVIDE YOUNG REGULATOR MODEL 5022CC ROUND CABLE CONTROLLED OPPOSED BLADE BALANCING DAMPER, MODEL 270-301EZ BOWDEN CABLE CONTROL KIT, AND BCW CONTROL WIRE AND CASINGS. COORDINATE INSTALLATION LOCATION WITH ARCHITECT AND MOUNT CABLE CONTROLLER IN DIFFUSER PLENUM IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDE FOR ALL DAMPERS ABOVE HARD CEILING.
 - PROVIDE CONCENTRIC VENT KIT THROUGH EXTERIOR WALL FOR GAS FURNACE COMBUSTION AIR INTAKE AND FLUE IN ACCORDANCE WITH FURNACE MANUFACTURER'S INSTALLATION INSTRUCTIONS. INSTALL CONCENTRIC VENT KIT PER MANUFACTURER'S INSTALLATION MANUAL. RUN FURNACE COMBUSTION AIR INTAKE AND FLUE FROM FURNACE TO EXTERIOR WALL. PLAN WEST BEHIND UNIT AS EFFICIENTLY AS POSSIBLE TO STAY WITHIN FURNACE MANUFACTURER'S LENGTH LIMITATIONS. SIZE FURNACE COMBUSTION AIR INTAKE AND FLUE PER MANUFACTURER'S INSTRUCTIONS.
 - PROVIDE INLINE RESTROOM EXHAUST FAN. MOUNT BOTTOM OF INLINE FAN 9'-5" ABOVE FINISHED FLOOR. SUPPORT UNIT FROM STRUCTURE ABOVE WITH CHANNEL AND ALL-THREAD ROD WITH SPRINGS AND VIBRATION ISOLATORS. PROVIDE FLEXIBLE CONNECTIONS IN THE INLET AND OUTLET CONNECTIONS.
 - PROVIDE 18"x18" WITH LOUVER IN WALL. LOUVER SHALL BE GREENHECK MODEL EVH-501 OR APPROVED EQUAL. LOUVER SHALL HAVE A MINIMUM 0.5 SF OF FREE AREA. MOUNT LOUVER APPROXIMATELY 22'-3" ABOVE GRADE. COORDINATE FINAL LOCATIONS WITH ARCHITECTURAL PLANS. PROVIDE WITH KYNAR FINISH, EXTENDED SILL AND BIRD SCREEN. ARCHITECT TO SPECIFY COLOR OF KYNAR.
 - MOUNT DUCTWORK APPROXIMATELY 11'-1" ABOVE FINISHED FLOOR.
 - MOUNT BOTTOM OF GRILLE APPROXIMATELY 11'-1" ABOVE FINISHED FLOOR.
 - MOUNT BOTTOM OF GRILLE/REGISTER 7'-0" ABOVE FINISHED FLOOR.
 - CONNECT EXHAUST DUCTWORK TO SAUNA EXHAUST CONNECTION PER MANUFACTURER'S REQUIREMENTS. SIZE EXHAUST DUCTWORK AND BALANCE TO AIRFLOW RECOMMENDED BY MANUFACTURER. NOTIFY ENGINEER IMMEDIATELY IF AIRFLOW REQUIREMENT IS 100 CFM OR GREATER.
 - PROVIDE 22"x22" WITH LOUVER IN WALL. LOUVER SHALL BE GREENHECK MODEL EVH-501 OR APPROVED EQUAL. LOUVER SHALL HAVE A MINIMUM 1.4 SF OF FREE AREA. MOUNT LOUVER APPROXIMATELY 17'-5" ABOVE GRADE. COORDINATE FINAL LOCATIONS WITH ARCHITECTURAL PLANS. PROVIDE WITH KYNAR FINISH, EXTENDED SILL AND BIRD SCREEN. ARCHITECT TO SPECIFY COLOR OF KYNAR.
 - PROVIDE (1) 120 VOLT ELECTRICALLY OPERATED DAMPER (EOD) IN OUTSIDE AIR DUCT AS INDICATED. EOD SHALL FULLY OPEN DURING OCCUPIED HOURS AND FULLY CLOSE DURING UNOCCUPIED PERIODS.
 - PROVIDE (1) MANUAL DAMPER IN OUTSIDE AIR DUCT AS INDICATED. SET MANUAL DAMPER TO PROVIDE SCHEDULED OUTSIDE AIR FLOW.
 - PROVIDE THERMOSTAT FOR UNIT HEATER. INSULATE EXTERIOR WALL BEHIND THERMOSTAT AND CAULK WIRE PENETRATION THROUGH WALL. MOUNT THERMOSTAT 48" ABOVE FINISHED FLOOR.
 - CONTINUE EXHAUST DUCTWORK UP THROUGH FLOOR. CONNECT TO EXHAUST DUCTWORK MAIN SHOWN ON FLOOR 2.
 - BALANCE DIFFUSER/GRILLE AIRFLOW TO 150 CFM IN SHOWN AREA. FIELD VERIFY EXACT CONDITIONS PRIOR TO BID.
 - BALANCE AIRFLOW IN AREA TO 225 CFM. FIELD VERIFY EXACT CONDITIONS PRIOR TO BID.

ROUND DUCT SIZING

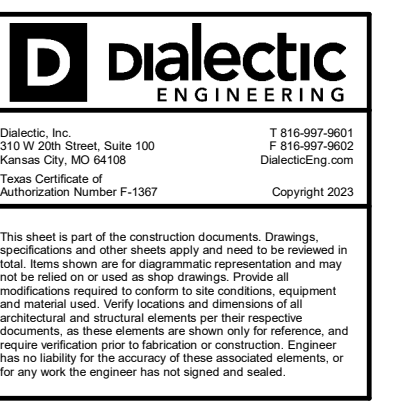
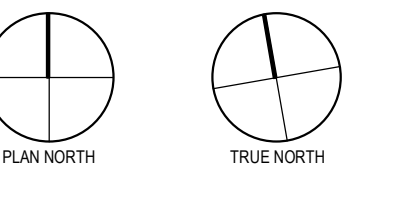
UNLESS NOTED OTHERWISE ON PLANS, THE FOLLOWING CHART SHALL APPLY TO ROUND DUCT SIZES FOR SUPPLY AIR*, RETURN AIR AND OUTSIDE AIR.

SUPPLY AND EXHAUST AIR CFM RANGE	DUCT SIZE	RETURN AIR CFM RANGE
0-100	6"	0-70
105-200	8"	75-155
205-395	10"	160-285
400-605	12"	290-465
610-920	14"	470-710
925-1200	16"	715-1015

* DIFFUSER NECK SIZES SHALL MATCH SUPPLY AIR DUCT SIZING.

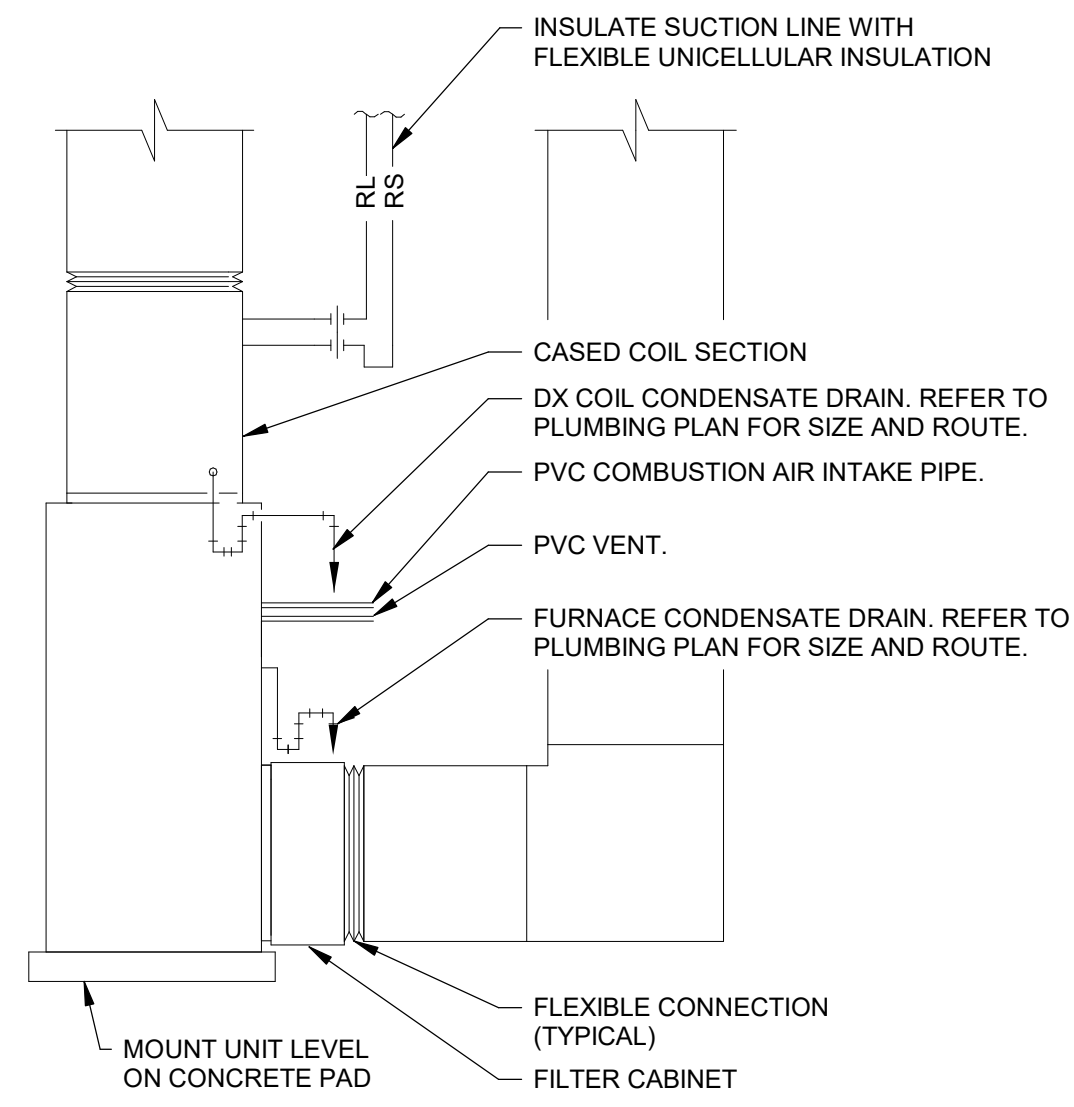


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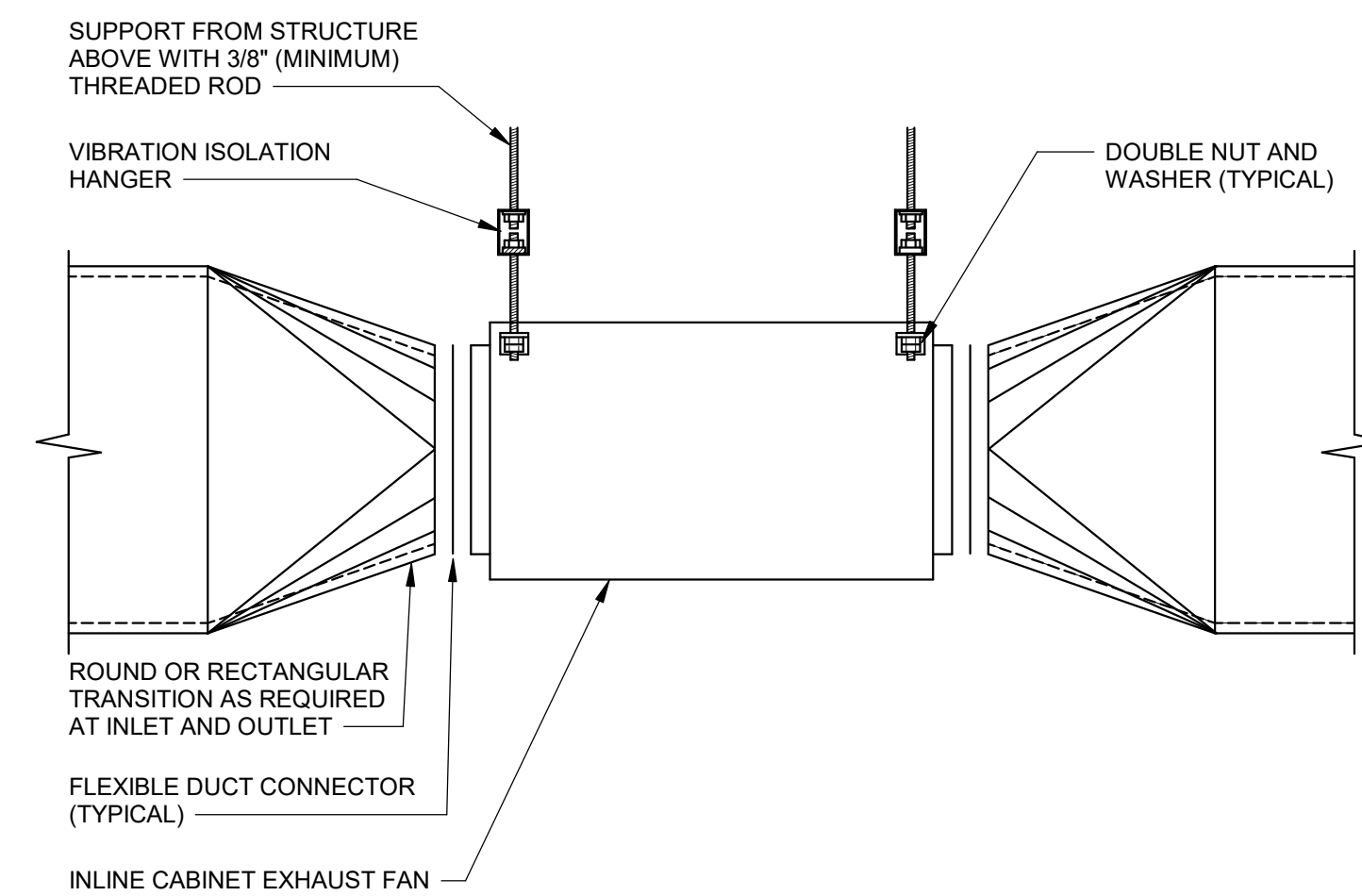


Issues

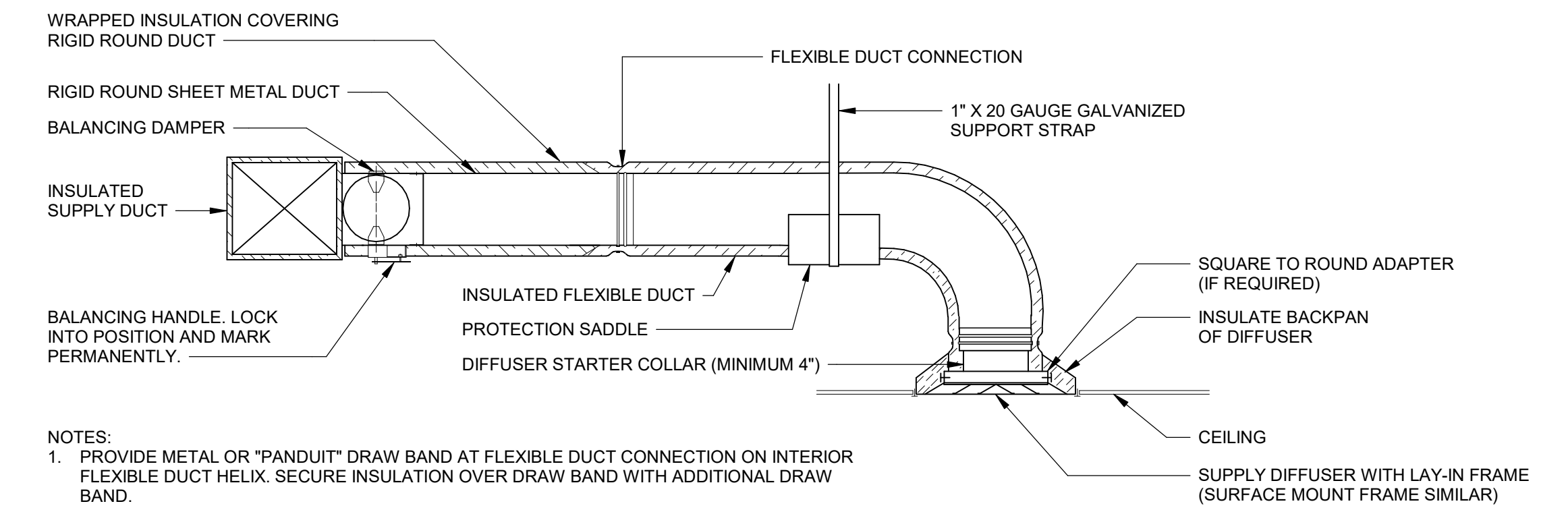
Project Number	23-01-014
Drawn By	XH
Checked By	EML



7 VERTICAL FURNACE INSTALLATION DETAIL
NOT TO SCALE

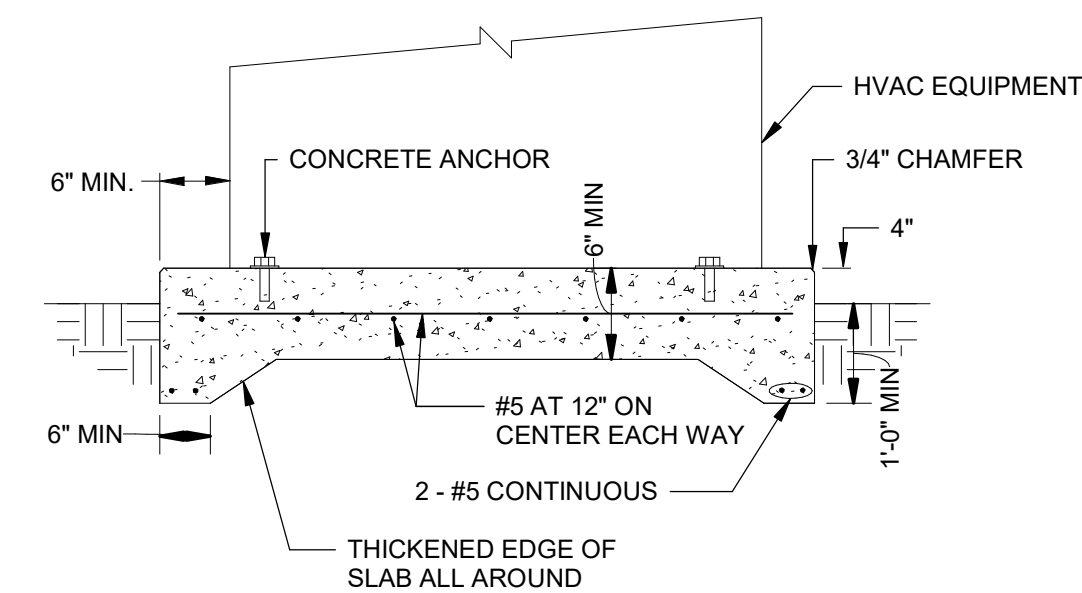


4 INLINE CABINET FAN DETAIL
NOT TO SCALE

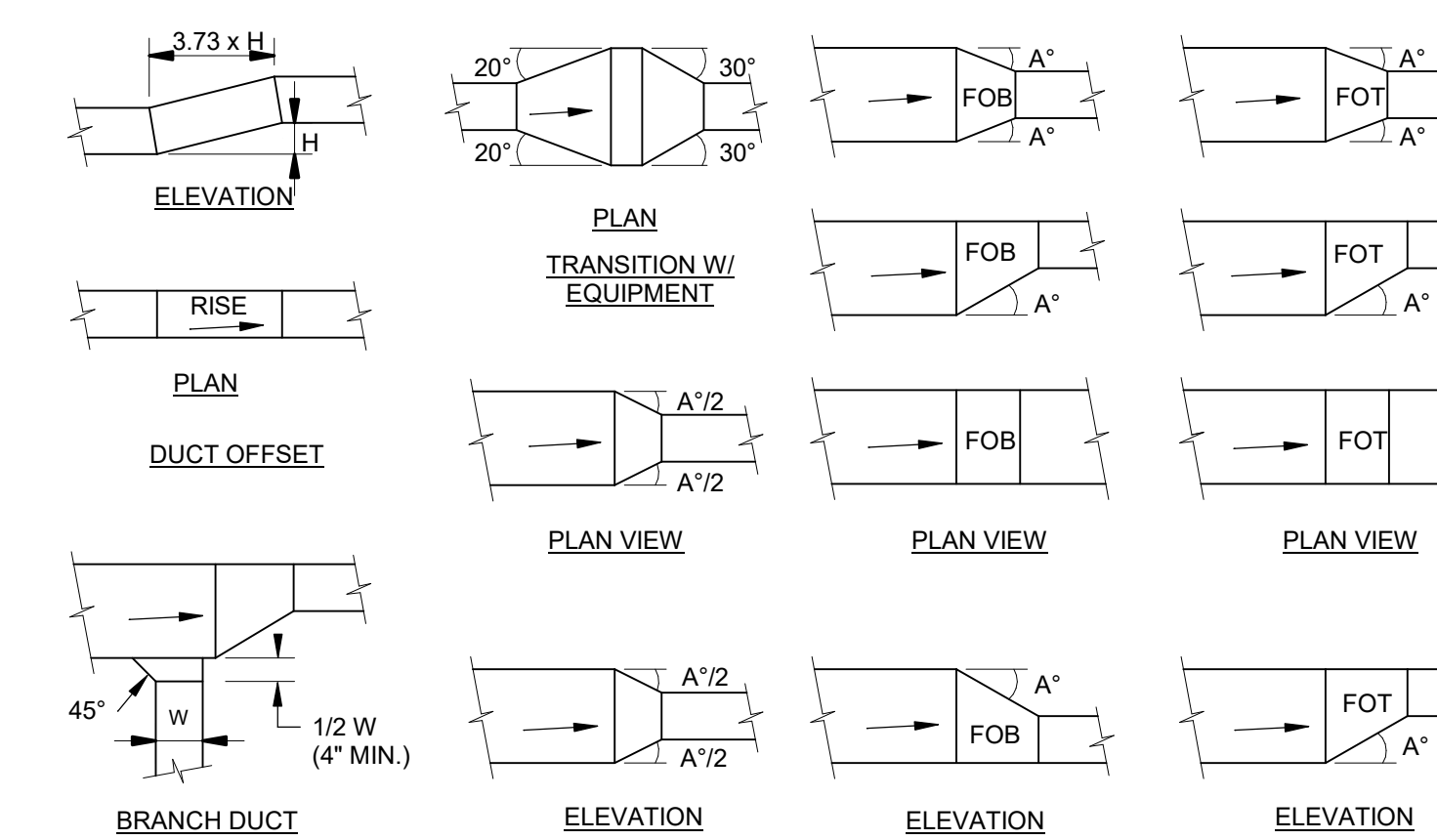


- NOTES:
1. PROVIDE METAL OR "PANDUIT" DRAW BAND AT FLEXIBLE DUCT CONNECTION ON INTERIOR FLEXIBLE DUCT HELIX. SECURE INSULATION OVER DRAW BAND WITH ADDITIONAL DRAW BAND.
 2. PROVIDE BEADING ON ROUND METAL DUCT 12" OR LARGER IN DIAMETER.
 3. PROVIDE MINIMUM 4" COLLARS FOR ATTACHMENT OF FLEXIBLE DUCT TO ROUND DUCT, DAMPERS, AND DIFFUSERS.
 4. BAND RIGID ROUND DUCT INSULATION TO DUCT AND PROVIDE TAPE FOR INSULATION OVERLAP.

1 DIFFUSER CONNECTION DETAIL - FLEX DUCT
NOT TO SCALE

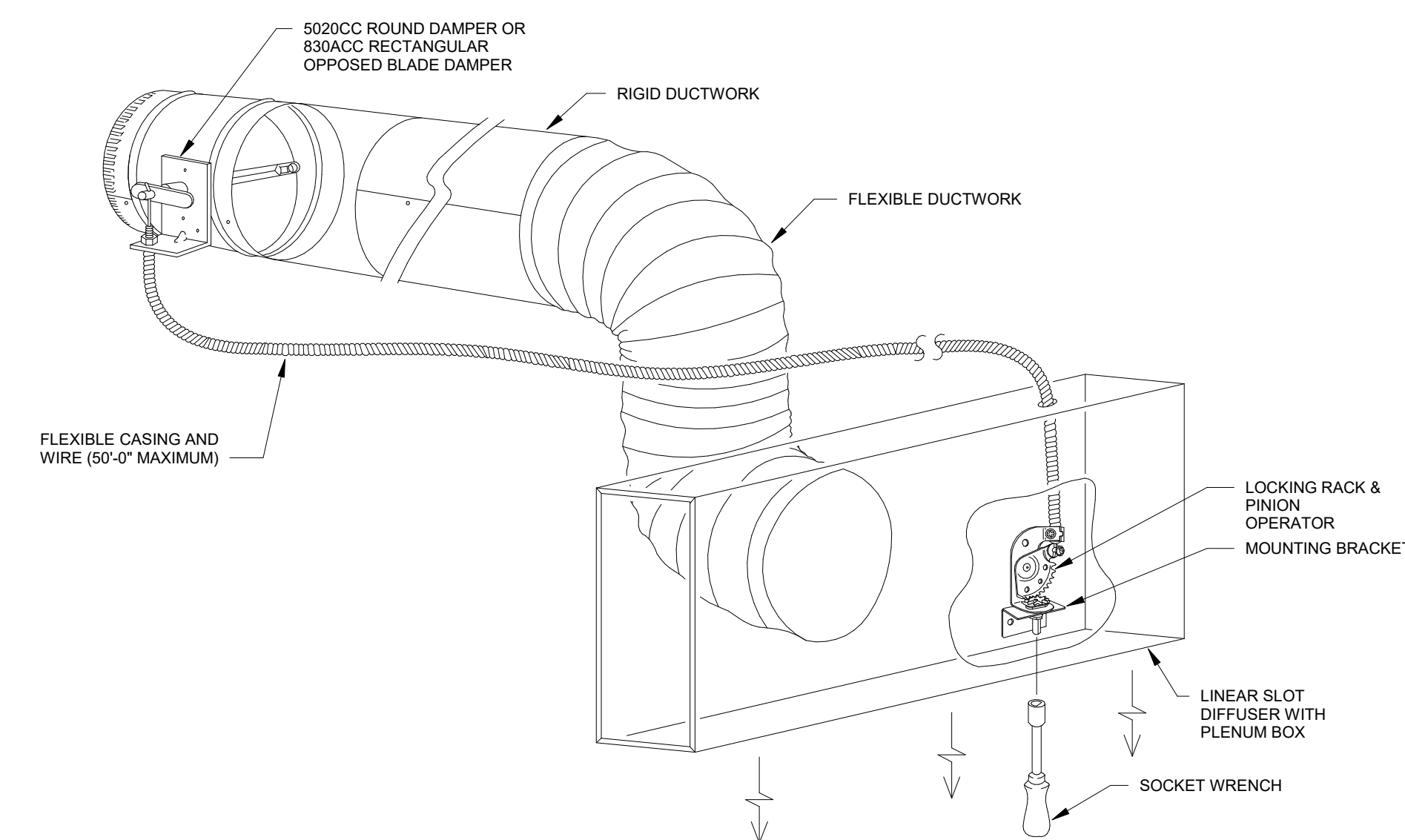


NOTE: INSTALL PAD LEVEL.
5 CU CONCRETE EQUIPMENT PAD
NOT TO SCALE



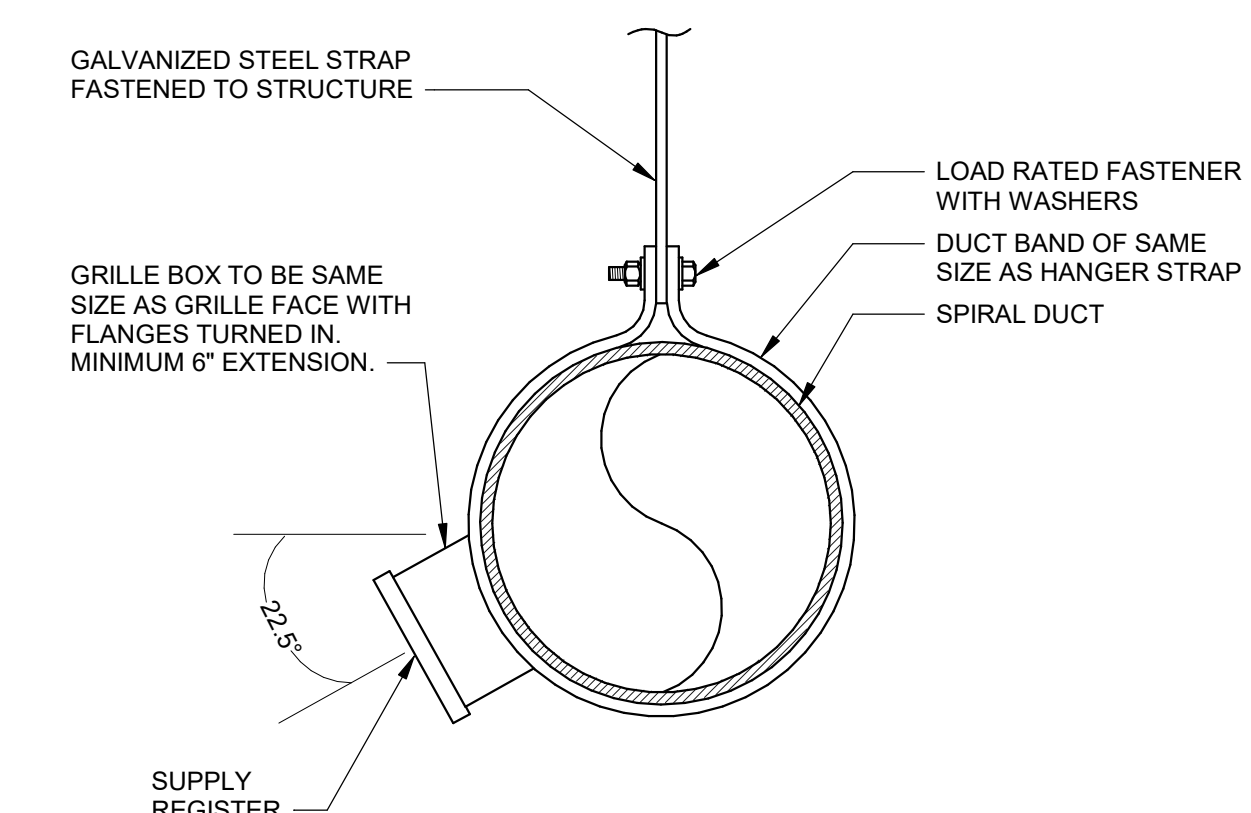
- NOTES:
- 1) ANGLE A = 30° WHEN AIR FLOWS IN DIRECTION OF ARROW (SUPPLY AIR).
 - 2) ANGLE A = 20° WHEN AIR FLOWS IN OPPOSITE DIRECTION OF ARROW (RETURN OR EXHAUST).

2 LOW VELOCITY DUCT FITTINGS DETAIL
NOT TO SCALE



- NOTES:
1. THE 270-275 BOWDEN CABLE CONTROL SYSTEM IS DESIGNED FOR USE WITH EXTERNALLY CONTROLLED ROUND OR RECTANGULAR DAMPERS, AND CAN BE MOUNTED IN A WIDE VARIETY OF LOCATIONS INCLUDING CEILING JOISTS, LAY-IN CEILINGS, BEHIND GRILLES, ON OR INSIDE OTHER VARIOUS TYPES OF DIFFUSERS, ETC.
 2. CABLE SHALL CONSIST OF BOWDEN CABLE 0.054" STAINLESS STEEL CONTROL WIRE ENCAPSULATED IN 1/16" FLEXIBLE GALVANIZED SPIRAL WIRE SHEATH.
 3. LOCKING RACK AND PINION GEAR DRIVE SHALL BE CONSTRUCTED OF 14 GAUGE STEEL AND SHALL BE USED TO CONVERT ROTARY MOTION INTO PUSH-PULL MOTION.
 4. CONTROL SHAFT SHALL BE "D"-STYLE FLATTENED 1/4" DIAMETE WITH 265° ROTATION PROVIDING 1-1/2" LINEAR TRAVEL CAPABILITY.

6 VERTICAL FURNACE INSTALLATION DETAIL
NOT TO SCALE



3 SPIRAL DUCT WITH REGISTER
NOT TO SCALE

MECHANICAL SPECIFICATIONS

PROVIDE EQUIPMENT INDICATED ON DRAWINGS, AND AS REQUIRED FOR A COMPLETE FUNCTIONING SYSTEM.

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.

WARRANTY: PROVIDE LABOR AND MATERIALS TO REPAIR OR REPLACE DEFECTIVE PARTS AND MATERIALS AS REQUIRED FOR ONE YEAR AFTER SUBSTANTIAL COMPLETION OR OWNER ACCEPTANCE OF COMPLETED PROJECT. PROVIDE SEPARATE LINE ITEM DEDUCT AMOUNT ON THE PROPOSAL FORM TO DELETE WARRANTY SERVICE, AT OWNER'S OPTION.

COORDINATION: COORDINATE WITH WORK OF OTHER TRADES. EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF OWNER, AND WITH CONSTRAINTS OF EXISTING CONDITIONS OF PROJECT SITE.

DUCT DIMENSIONS: UNLESS OTHERWISE NOTED, DUCT DIMENSIONS ON DRAWINGS ARE INSIDE CLEAR DIMENSIONS.

SHEET METAL DUCTWORK: PROVIDE SHEET METAL DUCTWORK FABRICATED AND INSTALLED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS. FOR 1" W.G. PRESSURE CLASS, SEAL CLASS "A", SHEET METAL SHALL BE GALVANIZED SHEET STEEL OF LOCK FORMING QUALITY, WITH G90 ZINC COATING. SHEET STEEL SHALL COMPLY WITH ASTM A653 STANDARD SPECIFICATION FOR STEEL SHEET METAL, ZINC COATED (GALVANIZED) OR ZINC-IRON ALLOY-COATED (GALVANNEALED) BY HOT DIP PROCESS, AND A242 STANDARD SPECIFICATION FOR GENERAL REQUIREMENTS FOR SHEET, METALLIC-COATED BY HOT DIP PROCESS. ALL ANGLE IRON USED FOR SUPPORT SHALL BE GALVANIZED. CONNECTIONS TO WALLS OR FLOOR SHALL BE AIR TIGHT WITH ANGLE IRON AND CAULKING. SEAL ALL DUCT SEAMS, TRANSVERSE AND LONGITUDINAL, AIR TIGHT. PROVIDE TURNING VANES AT ALL 90° ELBOWS.

REFRIGERANT PIPING: TYPE ACR HARD DRAWN COPPER TUBING MEETING THE REQUIREMENTS OF ASTM B280, WITH WROUGHT COPPER FITTINGS MEETING REQUIREMENTS OF ANSI B16.22, WITH BRAZED JOINTS MEETING REQUIREMENTS OF AWS A 5.8, USING BAG-1 (SILVER) FILLER MATERIAL. INSULATE SUCTION LINE PIPING WITH 1" THICK ARMAFLEX TYPE AP, PAINT INSULATION LOCATED OUTDOORS WITH ARMAFLEX WB FINISH.

ROUND SHEET METAL DUCT: PROVIDE SPIRAL SEAM (ALL SIZES) OR SNAP LOCK (CONCEALED DUCT SIZES UP TO 10") GALVANIZED STEEL, COMPLYING WITH SMACNA STANDARDS. SPIRAL SEAM DUCTWORK SHALL HAVE SMACNA SEAM TYPE RL-1.

FLEXIBLE DUCT: PROVIDE FACTORY ASSEMBLED CLASS 1 AIR DUCT (UL 181) WITH 1" THICK 1 PCF FIBERGLASS INSULATION AND REINFORCED OUTER PROTECTIVE COVER/VAPOUR BARRIER. FLEXIBLE DUCT SHALL MEET NFPA 914 WITH FLAME SPREAD UNDER 25, SMOKE DEVELOPED UNDER 50, AND SHALL BE RATED FOR MINIMUM 2" W.G. PRESSURE AND 0 TO 250°F TEMPERATURE. PROVIDE SCREW-OPERATED METAL ADJUSTABLE CLAMPING DEVICES. USE TWIST LOCK TAP COLLARS AT CONNECTIONS IN SHEET METAL DUCTWORK. MAXIMUM EXTENDED LENGTH OF FLEXIBLE DUCT SHALL NOT EXCEED 6 FEET.

EXPOSED DUCTWORK: EXPOSED DUCTWORK SHALL BE CLEANED OF DEBRIS AND OIL, THEN WIPED DOWN WITH VINEGAR OR OTHER SURFACE PREPARING CHEMICAL TO PREPARE DUCT FOR PAINT.

DUCT SEALANT FOR DUCTWORK LOCATED INDOORS: PROVIDE WATER BASED SYNTHETIC LATEX EMULSION PERMANENTLY FLEXIBLE HIGH VELOCITY DUCT SEALANT, DUCTMATE INDUSTRIES INC., PRO SEAL OR EQUAL. SEALANT TO BE LOW VOC LEED COMPLIANT CAPABLE OF 15" W.G., NFPA 90A AND 90B APPROVED, UL 181R-M LISTED AND UL 723 CLASSIFIED. INSTALL PER MANUFACTURER INSTRUCTIONS. SEALANT SHALL BE APPROVED FOR FLENUM INSTALLATIONS AND MEET FLAME SPREAD AND SMOKE DEVELOPED RATINGS FOR FLENUM APPLICATIONS.

DUCT INSULATION (ALL ROUND SUPPLY DUCT AND ROUND RETURN DUCT ABOVE CEILING): PROVIDE MINIMUM 1-1/2" THICK BLANKET TYPE FIBERGLASS INSULATION COMPLYING WITH ASTM C-553, TYPE II, WITH FACTORY APPLIED KRAFT BONDED TO ALUMINUM FOIL, REINFORCED WITH FIBERGLASS VAPOUR BARRIER/JACKET. JACKET SHALL CONFORM TO ASTM C-1158, TYPE II. INSTALLED R VALUE SHALL BE 4.2 OR HIGHER WITH 0.75 PCF DENSITY.

DUCT INSULATION (EXTERIOR DUCT): 2" THICK RIGID FIBERGLASS BOARD INSULATION PINNED TO DUCT SURFACE. THERMAL CONDUCTIVITY SHALL BE EQUAL TO OR LESS THAN 0.24 AT 75°F (MINIMUM R VALUE OF 4.2). FINISH EDGES OF INSULATION WITH REINFORCED INSULATING CEMENT OR REINFORCED MASTIC. INSULATION SHALL HAVE FOIL REINFORCED KRAFT OUTER JACKET. PROVIDE WEATHERPROOF OUTER JACKET EQUAL TO POLYSHIELD ALUMAGUARD OR EQUAL FLEXIBLE WEATHERPROOFING JACKET, SELF SEALING.

DUCT LINER (ALL RECTANGULAR SUPPLY AND RETURN DUCT, ALL EXPOSED ROUND DUCTWORK): PROVIDE MINIMUM 1" THICK, LONG TEXTILE FIBER TYPE DUCT LINER, WITH COATING ON AIR STREAM SIDE CONFORMING TO NFPA 914. DUCT LINER SHALL BE SECURED TO DUCT WITH BOTH ADHESIVE AND MECHANICAL FASTENERS. ADHESIVE SHALL BE LEED COMPLIANT LOW VOC AS RECOMMENDED BY DUCT LINER MANUFACTURER, AND SHALL COMPLY WITH ASTM C-916. DUCT LINER FASTENERS SHALL COMPLY WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS", LATEST EDITION, THERMAL CONDUCTIVITY SHALL BE EQUAL TO OR LESS THAN 0.24 AT 75°F (MINIMUM R-VALUE OF 4.2).

ROUND VOLUME DAMPERS: 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 SHEET METAL STAND-OFF BRACKET BEYOND DUCT COVERING, WHERE POSITIONING REGULATOR IS NOT ACCESSIBLE. PROVIDE COUPLING AND EXTENSION ROD WITH REGULATOR FOR CEILING OR WALL INSTALLATION, AS REQUIRED.

RECTANGULAR VOLUME DAMPERS: PROVIDE MINIMUM 16 GAUGE GALVANIZED STEEL CHANNEL 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 FRAME. OPERATING SHAFT SHALL EXTEND BEYOND FRAME AND DUCT TO A LOCKING QUADRANT WITH ADJUSTABLE LEVER. MAXIMUM BLADE WIDTH SHALL NOT EXCEED 6".

DUCT TURNING VANES: PROVIDE FABRICATED TURNING VANES AND VANE RUNNERS CONSTRUCTED IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS". 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.

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

DUCT ACCESS DOORS: PROVIDE HINGED ACCESS DOORS IN DUCTWORK WHERE REQUIRED FOR ACCESS TO EQUIPMENT. PROVIDE INSULATED ACCESS DOORS FOR INSULATED DUCTWORK. CONSTRUCT OF SAME OR THICKER GAUGE SHEET METAL AS DUCT IN WHICH IT IS INSTALLED. PROVIDE FLUSH FRAMES FOR UNINSULATED DUCTS, AND EXTENDED FRAMES FOR EXTERNALLY INSULATED DUCTS. PROVIDE CONTINUOUS HINGE ON ONE SIDE, WITH ONE HANDLE-TYPE LATCH FOR ACCESS DOORS 12" HIGH AND SMALLER, AND TWO HANDLE-TYPE LATCHES FOR LARGER ACCESS DOORS.

MECHANICAL PIPING IDENTIFICATION: PROVIDE PIPE MARKERS, FLOW ARROWS AND ENGRAVED PLASTIC-LAMINATE SIGNS FOR MECHANICAL PIPING AND VALVES TO COMPLY WITH ANSI A13.1. PROVIDE ONLY ONE TYPE OF PIPE MARKERS AND FLOW ARROWS FOR ALL SYSTEMS.

PRESSURE/TEMPERATURE TEST PLUGS (PETE'S PLUG): 1/4" NPT FITTINGS TO RECEIVE EITHER TEMPERATURE OR PRESSURE PROBE, 1/8" O.D. FITTING AND CAPS SHALL BE BRASS WITH VALVE CORE OF NORDREL, RATED AT 150 PSIG AT 0°F TO 200°F.

COMBINATION BALANCING AND SHUT-OFF VALVES: BELL & GOSSETT CIRCUIT SETTER WITH LOCKING SET POINT. PROVIDE CIRCUIT SETTER BALANCE WHEEL WITH O&M MANUAL. TACO OR HOMESTEAD ARE CONSIDERED AS EQUAL.

MECHANICAL EQUIPMENT IDENTIFICATION: PROVIDE ENGRAVED PLASTIC LAMINATE LABEL FOR EACH MAJOR ITEM OF MECHANICAL EQUIPMENT AND EACH OPERATIONAL DEVICE. LETTERS SHALL BE MINIMUM OF 1/2" HIGH. PROVIDE SIGNS TO INFORM OPERATOR OF OPERATIONAL REQUIREMENTS, TO INDICATE SAFETY AND EMERGENCY PRECAUTIONS, AND TO WARN OF HAZARDS AND IMPROPER OPERATION.

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 INDICATED ON THE DRAWINGS, AND REPORT DISCREPANCIES TO HVAC INSTALLER FOR CORRECTION. MARK FINAL BALANCE POSITIONS ON DAMPERS WITH PERMANENT MARKER.

OPERATIONS AND MAINTENANCE MANUALS (O&M): AT COMPLETION OF PROJECT PROVIDE A MINIMUM OF TWO O&M MANUALS IN THREE RING BINDERS TO OWNER/TENANT. MANUALS SHALL HAVE TABS LABELED WITH ALL SECTIONS SEPARATED WITH A CLEAR INDEX AT FRONT. PROVIDE WARRANTY LETTER AT FRONT OF MANUAL STATING DATES OF WARRANTY (START DATE AND END DATE) AND CONTACTS WITH PHONE NUMBERS FOR WARRANTY WORK. PROVIDE 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 EQUIPMENT ON PROJECT. ALL PERIODIC AND ROUTINE MAINTENANCE SHALL BE CLEARLY IDENTIFIED. PROVIDE CONTROLS SECTION LISTING SYSTEM OPERATING AND CONTROL INSTRUCTIONS, MAINTENANCE, CALIBRATION, WIRING DIAGRAMS, SCHEMATICS AND CONTROL SEQUENCE DESCRIPTIONS.

SHOP DRAWINGS/SUBMITTALS: SUBMIT ELECTRONIC SUBMITTALS AND SHOP DRAWINGS VIA EMAIL AS PDF ELECTRONIC FILES. PROVIDE SEPARATE PDF SUBMITTALS ON ALL MECHANICAL EQUIPMENT (INCLUDING CONTROLS PACKAGES), AIR DISTRIBUTION DEVICES, DUCTWORK, DAMPERS, AND INSULATION. SUBMITTALS AND SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING INFORMATION:

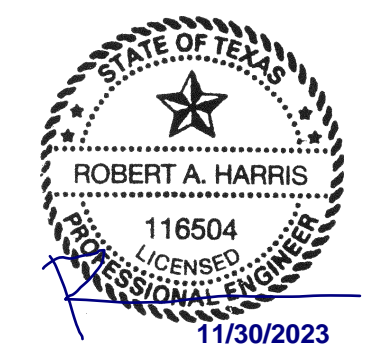
- PROJECT NAME
- DATE
- NAME AND ADDRESS OF ARCHITECT AND MEP ENGINEER
- NAME OF CONSTRUCTION MANAGER
- NAME OF CONTRACTOR
- NAME OF FIRM OR ENTITY THAT PREPARED SUBMITTAL
- NAMES OF SUBCONTRACTOR, MANUFACTURER, AND SUPPLIER
- CATEGORY AND TYPE OF SUBMITTAL
- SUBMITTAL PURPOSE AND DESCRIPTION
- MANUFACTURER NAME
- PRODUCT NAME
- DRAWING NUMBER AND DETAIL REFERENCES, AS APPROPRIATE
- INDICATION OF FULL OR PARTIAL SUBMITTAL
- TRANSMITTAL NUMBER
- REMARKS

IDENTIFY DEVIATIONS FROM THE CONTRACT DOCUMENTS ON SHOP DRAWINGS AND SUBMITTALS. FURNISH COPIES OF FINAL SUBMITTALS TO MANUFACTURERS, SUBCONTRACTORS, SUPPLIERS, FABRICATORS, INSTALLERS, AUTHORITIES HAVING JURISDICTION, AND OTHERS AS NECESSARY FOR PERFORMANCE OF CONSTRUCTION ACTIVITIES. SHOW DISTRIBUTION ON TRANSMITTAL FORMS.

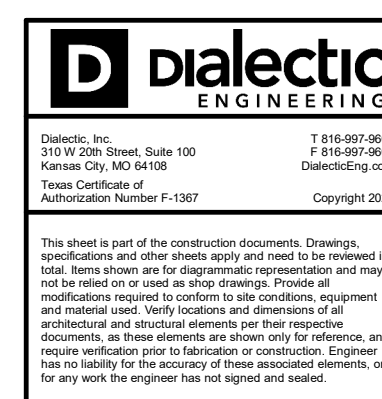
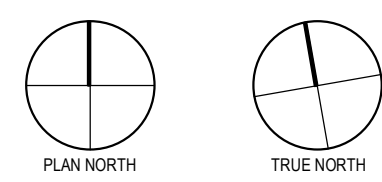
- SUBMITTALS SHALL INCLUDE (AS APPLICABLE):
- MANUFACTURER'S CATALOG CUTS
 - MANUFACTURER'S PRODUCT SPECIFICATIONS
 - STATEMENT OF COMPLIANCE WITH SPECIFIED REFERENCED STANDARDS
 - TESTING BY RECOGNIZED TESTING AGENCY
 - APPLICATION OF TESTING AGENCY LABELS AND SEALS
 - WIRING DIAGRAMS SHOWING FACTORY-INSTALLED WIRING
 - PERFORMANCE CURVES
 - OPERATIONAL RANGE DIAGRAMS
 - CLEARANCES REQUIRED TO OTHER CONSTRUCTION, IF NOT INDICATED ON SHOP DRAWINGS.

- FULL SIZE SHOP DRAWINGS SHALL INCLUDE (AS APPLICABLE):
- IDENTIFICATION OF PRODUCTS
 - SCHEDULES
 - COMPLIANCE WITH SPECIFIED STANDARDS
 - NOTATION OF COORDINATION REQUIREMENTS
 - NOTATION OF DIMENSIONS ESTABLISHED BY FIELD MEASUREMENT
 - RELATIONSHIP AND ATTACHMENT TO ADJOINING CONSTRUCTION CLEARLY INDICATED.

MECHANICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING DUCT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION AND INSTALLATION.



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IFP 12/01/23

Issues

Project Number 23-01-014

Drawn By XH

Checked By EML

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M701

MECHANICAL
SPECIFICATIONS

ELECTRICAL SYMBOLS LEGEND

	HOME RUN TO PANEL. CIRCUIT NUMBERS, PHASE, NEUTRAL, AND GROUND CONDUCTORS INDICATED ALONG WITH ISOLATED GROUND CONDUCTOR IF APPLICABLE.
	PARTIAL CIRCUIT
	CONDUIT INSTALLED CONCEALED ABOVE CEILING OR IN WALL
	CONDUIT INSTALLED CONCEALED BELOW FLOOR SLAB OR UNDERGROUND
	CONDUIT INSTALLED WITH DIRECT CURRENT POWER WIRING
	CONDUIT TURNED UP OR DOWN AS NOTED
	FLEXIBLE CONDUIT FOR FINAL CONNECTION TO EQUIPMENT
	GROUND CONNECTION
	SINGLE POLE SWITCH, +3'-10" OR AS NOTED
	THREE-WAY SWITCH, +3'-10" OR AS NOTED
	KEY OPERATED SWITCH, +3'-10" OR AS NOTED
	WEATHERPROOF TOGGLE SWITCH, +3'-10" OR AS NOTED
	WALL MOUNTED OCCUPANCY SENSOR, +3'-10" OR AS NOTED
	CEILING MOUNTED OCCUPANCY SENSOR
	WALL MOUNTED VACANCY SENSOR, +3'-10" OR AS NOTED
	CEILING MOUNTED VACANCY SENSOR
	CEILING MOUNTED INTERIOR DAYLIGHT HARVESTING PHOTOCELL SENSOR
	POWER PACK, INSTALLED ABOVE ACCESSIBLE CEILING
	SIMPLEX RECEPTACLE, +18" OR AS NOTED
	ISOLATED GROUND SIMPLEX RECEPTACLE, +18" OR AS NOTED
	DUPLEX RECEPTACLE, +18" OR AS NOTED
	ISOLATED GROUND DUPLEX RECEPTACLE, +18" OR AS NOTED
	CONTROLLED DUPLEX RECEPTACLE, +18" OR AS NOTED
	QUADRUPLEX RECEPTACLE, +18" OR AS NOTED
	ISOLATED GROUND QUADRUPLEX RECEPTACLE, +18" OR AS NOTED
	QUADRUPLEX RECEPTACLE WITH ONE OUTLET CONTROLLED, +18" OR AS NOTED
	GROUND FAULT INTERRUPTING RECEPTACLE, +18" OR AS NOTED
	TAMPER RESISTANT RECEPTACLE, +18" OR AS NOTED
	WEATHERPROOF GROUND FAULT INTERRUPTING RECEPTACLE, +18" OR AS NOTED
	RECEPTACLE INSTALLED HORIZONTALLY, BOTTOM AT +6" ABOVE COUNTER TOP
	RECEPTACLE INSTALLED FLUSH IN CEILING, # INDICATES NUMBER OF GANGS
	ISOLATED GROUND RECEPTACLE INSTALLED FLUSH IN CEILING, # INDICATES NUMBER OF GANGS
	SPECIAL RECEPTACLE, NEMA STYLE AS NOTED, +18" OR AS NOTED
	MULTI-OUTLET SYSTEM, INSTALL AS NOTED
	FLUSH FLOOR MOUNTED RECEPTACLE, # INDICATES NUMBER OF GANGS
	FLUSH FLOOR MOUNTED RECEPTACLE WITH DATA, # INDICATES NUMBER OF GANGS, LETTER INDICATES NUMBER OF PORTS (2 PORTS IF NONE INDICATED)
	POKE-THROUGH FLUSH FLOOR MOUNTED RECEPTACLE, # INDICATES NUMBER OF GANGS
	JUNCTION BOX
	DISCONNECT SWITCH, TOP AT +6'-0" OR AS NOTED
	DISCONNECT SWITCH PROVIDED WITH EQUIPMENT
	COMBINATION MOTOR STARTER/DISCONNECT SWITCH FURNISHED BY MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR
	EXTERIOR PHOTOCCELL, INSTALLED ON ROOF FACING NORTH
	MOTOR CONNECTION
	LIGHTING CONTACTOR, INSTALLED AS NOTED
	TIME CLOCK, +6'-2" OR AS NOTED
	CONTROL OR POWER RELAY, INSTALLED AS NOTED
	PLUG LOAD CONTROLLER, INSTALLED AS NOTED
	PUSHBUTTON, TOP AT +4'-6" OR AS NOTED
	DOOR BELL CHIME, +5'-0" OR AS NOTED
	CONTROL TRANSFORMER, INSTALLED AS NOTED
	THERMOSTAT, TEMPERATURE SENSOR, CARBON DIOXIDE SENSOR AND HUMIDISTAT PROVIDED BY MECHANICAL CONTRACTOR, +3'-10" OR AS NOTED
	ELECTRICALLY OPERATED DAMPER, PROVIDED BY MECHANICAL CONTRACTOR
	POWER COMPANY METER, TOP AT +6'-10" AFG OR AS NOTED
	TRANSFORMER, FLOOR MOUNTED OR SUSPENDED FROM STRUCTURE AS NOTED
	BRANCH CIRCUIT PANELBOARD, TOP AT +6'-0" OR AS NOTED
	DISTRIBUTION PANEL, TOP AT +6'-0" OR AS NOTED
	PLYWOOD PHONEBOARD, INSTALLED AS NOTED
	TELEPHONE OUTLET, +18" WITH 1/2" CONDUIT TO ABOVE CEILING
	TELEPHONE OUTLET, +6" ABOVE COUNTER WITH 1/2" CONDUIT TO ABOVE CEILING
	DATA OUTLET, +18" WITH 3/4" CONDUIT TO ABOVE CEILING
	DATA OUTLET, +6" ABOVE COUNTER WITH 3/4" CONDUIT TO ABOVE CEILING
	TELEPHONE/DATA OUTLET, +18" WITH 1" CONDUIT TO ABOVE CEILING
	TELEPHONE/DATA OUTLET, +6" ABOVE COUNTER WITH 1" CONDUIT TO ABOVE CEILING
	FIRE ALARM CONTROL PANEL, FLUSH MOUNTED, TOP AT +6'-0"
	FIRE ALARM SYSTEM REMOTE ANNUNCIATOR, TOP AT +6'-0"
	MANUAL FIRE ALARM PULL STATION, +3'-10" PER ADA
	FIRE ALARM HORN AND 75cd STROBE +80" TO BOTTOM OF DEVICE PER ADA
	STROBE ONLY (75cd UNO), +80" TO BOTTOM OF DEVICE PER ADA
	FIRE ALARM HORN AND 115cd STROBE, CEILING MOUNTED
	FIRE ALARM 115cd STROBE, CEILING MOUNTED
	120 VOLT DUCT TYPE SMOKE DETECTOR, PROVIDED BY MECHANICAL CONTRACTOR
	AREA TYPE PHOTOELECTRIC SMOKE DETECTOR, CEILING MOUNTED, OR AS NOTED
	FIRE ALARM SYSTEM RELAY
	SPRINKLER FLOW SWITCH, PROVIDED BY PLUMBING CONTRACTOR
	SPRINKLER TAMPER SWITCH, PROVIDED BY PLUMBING CONTRACTOR
	FIRE SPRINKLER SYSTEM BELL (GONG), +10'-0" AFG
	COMBINATION FIRE/SMOKE DAMPER PROVIDED BY MECHANICAL CONTRACTOR

GENERAL REFERENCES/NOTATIONS:

AC	MOUNT DEVICE +6" ABOVE TOP OF COUNTER TO BOTTOM OF DEVICE
+48"	MOUNTING HEIGHT ABOVE FINISHED FLOOR TO CENTERLINE OF DEVICE
03/E5	DETAIL OR SECTION REFERENCE
???	FOODSERVICE EQUIPMENT DESIGNATION
A	REVISION DESIGNATION
TYPE ?	EQUIPMENT DESIGNATION.

ABBREVIATIONS:

AFF/AFG	ABOVE FINISHED FLOOR/GRADE
AHJ	AUTHORITY HAVING JURISDICTION
BAS	BUILDING AUTOMATION SYSTEM
EC	ELECTRICAL CONTRACTOR
EM	EMERGENCY
ETR	EXISTING TO REMAIN
FA	FIRE ALARM
GC	GENERAL CONTRACTOR
MC	MECHANICAL CONTRACTOR
NEC	NATIONAL ELECTRICAL CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NL	NIGHT LIGHT
NF	NON-FUSED
PC	PLUMBING CONTRACTOR
SPD	SURGE PROTECTION DEVICE
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
WP	WEATHERPROOF

SYMBOLS LEGEND NOTES:

- REFER TO LIGHT FIXTURE SCHEDULE FOR SPECIFICATION AND INFORMATION ON ALL LUMINAIRES.
- REFER TO SPECIFICATIONS AND PLAN NOTES FOR DETAILED DESCRIPTION OF ALL DEVICES SHOWN IN THIS SCHEDULE, PROVIDED BY CONTRACTOR.
- MOUNTING HEIGHTS INDICATED ARE MEASURED FROM FINISHED FLOOR TO THE CENTERLINE OF THE DEVICE UNLESS NOTED OTHERWISE.

LIGHTING GENERAL NOTES

- CONNECT EXIT SIGNS, EMERGENCY AND NIGHT LIGHTS TO UNSWITCHED LIGHTING CIRCUIT, NOT CONTROLLED BY OCCUPANCY SENSORS, SWITCHES OR CONTACTORS.
- PROVIDE DEDICATED NEUTRAL WITH ALL DIMMING SYSTEM CIRCUITS. NO COMMON NEUTRALS SHALL BE ALLOWED.
- REFER TO "RECESSED LIGHTING FIXTURE SUPPORT DETAIL" FOR INFORMATION ON SUPPORT OF ALL RECESSED LIGHT FIXTURES.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLAN AND DETAILS FOR LOCATION OF ALL LIGHTING FIXTURES AND ALL OTHER EQUIPMENT INSTALLED IN THE CEILING SYSTEM. VERIFY MOUNTING HEIGHTS AND FINISHES WITH ARCHITECT PRIOR TO ROUGH-IN.
- REFER TO POWER PLANS FOR LOCATIONS OF ELECTRICAL EQUIPMENT.
- PROVIDE (2) ADDITIONAL #12 CONDUCTORS FOR ALL 0-10V DIMMING CIRCUITS.

POWER GENERAL NOTES

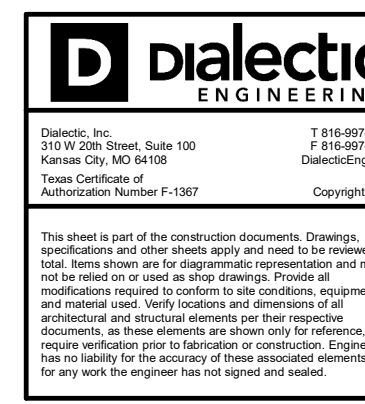
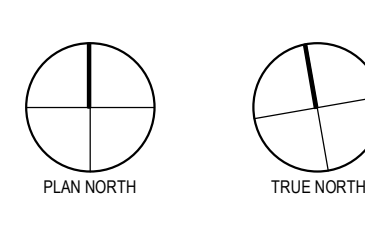
- VERIFY EXACT LOCATIONS OF HVAC AND PLUMBING EQUIPMENT, CONDUIT STUB-UPS AND POWER CONNECTIONS PRIOR TO ROUGH-IN.
- VERIFY EXACT LOCATION, MOUNTING HEIGHTS AND CONDUIT ROUTING FOR ALL THERMOSTATS, TEMPERATURE SENSORS, HUMIDISTATS AND CO₂ SENSORS PRIOR TO ROUGH-IN.
- REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR ADDITIONAL ELECTRICAL REQUIREMENTS. COORDINATE PROVISIONS FOR CONTROL CONDUIT AND WIRING AS REQUIRED FOR INTERLOCKING OF FANS, MOTORS, ETC. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- MOUNT DEVICES INSTALLED ON EQUIPMENT, ON NON-REMOVABLE PANEL. COORDINATE LOCATION PRIOR TO COMMENCING ROUGH-IN WORK.

GENERAL ELECTRICAL NOTES

- INCLUDE ALLOWANCE FOR UNFORESEEN CONDITIONS THAT MAY AFFECT THE SCOPE OF WORK. MINOR DEVIATIONS REQUIRED FOR ACCOMPLISHING THE INTENT OF THIS DESIGN SHALL BE INCLUDED IN THE ALLOWANCE.
- SWITCHBOARDS, PANELBOARDS, DISCONNECT SWITCHES, TRANSFORMERS AND CONTACTORS SHALL BE "LISTED" AND "IDENTIFIED" AS RATED FOR MINIMUM OF 75°C CONDUCTOR TERMINATION.
- ELECTRICAL DESIGN IS BASED ON INSTALLATION OF 75°C CONDUCTORS CONNECTED TO TERMINAL LUGS AND EQUIPMENT U.L. LISTED FOR MINIMUM 75°C. CONDUCTORS TERMINATED ON EQUIPMENT WITH LOWER RATING (60°C) OR NO RATING SHOWN SHALL HAVE CONDUCTOR SIZE INCREASED TO CONFORM TO ADOPTED ELECTRICAL CODE AND UL/CUL NO. 489 REQUIREMENTS.
- CONDUIT INSTALLED INDOORS SHALL BE ELECTRICAL METALLIC TUBING (EMT), MINIMUM 3/4" OR AS NOTED.
- CONDUIT INSTALLED BELOW SLAB SHALL BE RIGID STEEL, IMC, PVC OR HDPE. MINIMUM 3/4" PVC OR HDPE IS USED. TRANSITION TO RIGID STEEL BEFORE TURNING UP AND PENETRATING FLOOR SLAB.
- CONDUCTORS SHALL BE MINIMUM #12 THINWALL COPPER UNLESS NOTED OTHERWISE ON PLANS OR IN SPECIFICATIONS. BRANCH CIRCUITS SHALL BE PROVIDED WITH (2) #12 CONDUCTORS AND (1) #12 EQUIPMENT GROUND CONDUCTOR UNLESS NOTED OTHERWISE.
- BRANCH CIRCUITS SHOWN WITH TWO GROUNDING CONDUCTORS SHALL HAVE ONE EQUIPMENT GROUND CONDUCTOR (GREEN) AND ONE ISOLATED GROUND CONDUCTOR (GREEN/YELLOW STRIP) INSTALLED IN RACEWAY.
- DIRECT CURRENT WIRING SHALL BE (2) #10 IN 3/4" CONDUIT UNLESS NOTED OTHERWISE.
- CONTROL VOLTAGE WIRING SHALL BE PLENUM RATED OR INSTALLED IN CONDUIT.
- THERMOSTATS, TEMPERATURE SENSORS, CARBON DIOXIDE SENSORS AND HUMIDISTATS, UNLESS NOTED OTHERWISE, PROVIDE WALL BOX AT +3'-10" AFF WITH 3/4" CONDUIT STUBBED OUT TO ABOVE ACCESSIBLE CEILING WITH NYLON BUSHINGS AND PULLSTRING.
- PROVIDE FLEXIBLE CONNECTIONS ONLY FOR FINAL CONNECTION TO EQUIPMENT, 6'-0" MAXIMUM LENGTH. PROVIDE LIQUID TIGHT FLEXIBLE CONNECTION AT EXTERIOR LOCATIONS AND WHERE EXPOSURE TO MOISTURE IS POSSIBLE.
- ALL EMPTY CONDUITS SHALL BE PROVIDED WITH A PULL WIRE.
- ALL RACEWAYS SHALL CONTAIN A GROUNDING ELECTRODE SIZED PER THE ADOPTED ELECTRICAL CODE.
- COORDINATE WORK ABOVE THE CEILING WITH OTHER TRADES TO PROVIDE THE GREATEST POSSIBLE CLEARANCE. CONDUIT RUNS SHALL BE RUN THROUGH TRUSSES WHERE POSSIBLE.
- VERIFY EXACT PLACEMENT OF ALL DEVICES SHOWN ON CONSTRUCTION DOCUMENTS PRIOR TO FINAL PLACEMENT.
- ALL RECESSED PANELBOARDS SHALL BE INSTALLED WITH MINIMUM OF (3) 3/4" CONDUITS STUBBED UP TO ACCESSIBLE CEILING SPACE FOR FUTURE USE.
- ALL PANELBOARDS, SWITCHBOARDS AND LINE VOLTAGE CONTROL EQUIPMENT SHALL BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTING, SERVICING OR MAINTENANCE OF EQUIPMENT. MARKING SHALL BE SELF ADHESIVE, COMMERCIAL LABEL CONFORMING TO ADOPTED CODES.
- LIGHT SWITCHES, ELECTRICAL OUTLETS, THERMOSTATS AND OTHER ENVIRONMENTAL CONTROLS SHALL HAVE OPERABLE PARTS OF THE CONTROLS LOCATED NO HIGHER THAN 48" AND NO LOWER THAN 15" ABOVE THE FLOOR. IF THE REACH IS OVER AN OBSTRUCTION BETWEEN 20" AND 25" IN DEPTH, THE MAXIMUM HEIGHT IS REDUCED TO 44" FOR FORWARD APPROACH OR 46" FOR SIDE APPROACH, PROVIDED THE OBSTRUCTION IS NO MORE THAN 24" IN DEPTH. OBSTRUCTIONS SHALL NOT EXTEND MORE THAN 25" FROM THE WALL BENEATH A CONTROL.
- TERMS:
SHALL - ACTION THAT IS REQUIRED WITHOUT OPTION OR QUALIFICATION.
FURNISH - CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING.
INSTALL - CONTRACTOR SHALL BE RESPONSIBLE FOR LABOR AND CONSTRUCTION EQUIPMENT NECESSARY TO SET IN PLACE, CONNECT, CALIBRATE AND/OR TEST EQUIPMENT FURNISHED BY HIM OR OTHERS.
PROVIDE - CONTRACTOR SHALL FURNISH AND INSTALL.



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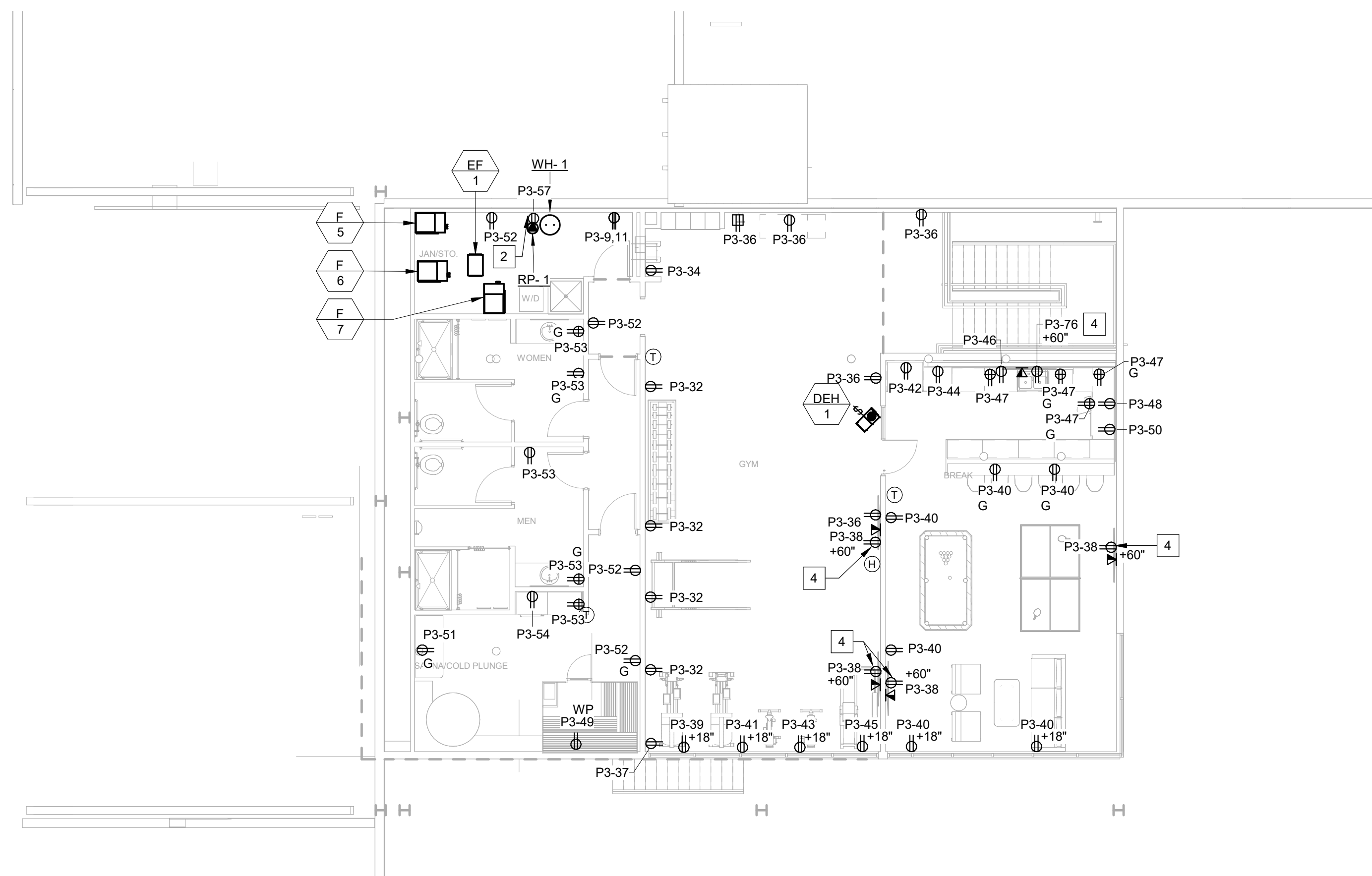


Issues	
Project Number	23-01-014
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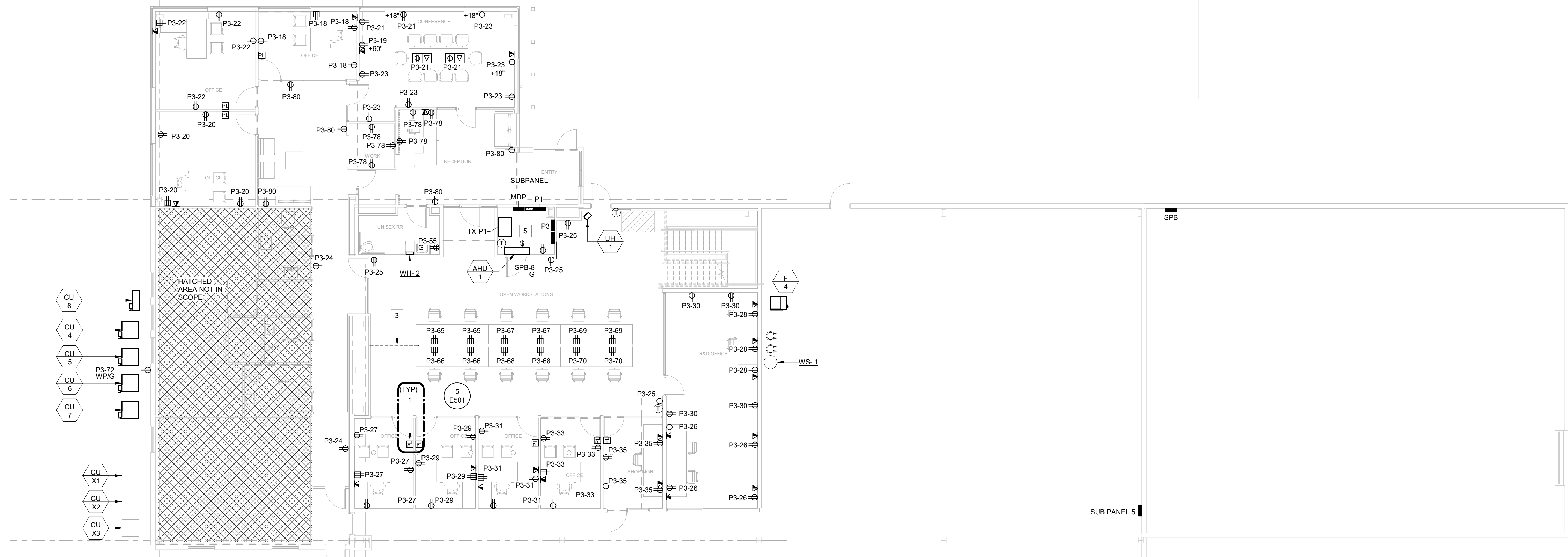
E001

ELECTRICAL KEY NOTES

- 1 ROUTE CIRCUIT THROUGH PLUGLOAD (PL) FOR CONTROLLED RECEPTACLE CIRCUIT. SEE DETAIL 9 ON SHEET E501 FOR WIRING DETAILS.
- 2 PROVIDE RECEPTACLE FOR RECIRCULATION PUMP. COORDINATE EXACT LOCATION WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.
- 3 PROVIDE CONDUIT IN SLAB FOR POWER TO GYP WALL AS REQUIRED. PROVIDE ALL SAW CUTTING AS REQUIRED.
- 4 COORDINATE FINAL MOUNTING HEIGHT WITH ARCHITECT PRIOR TO ROUGH-IN.
- 5 MAINTAIN ALL NEC CLEARANCES FOR NEW AND EXISTING EQUIPMENT WITHIN ELECTRICAL ROOM.



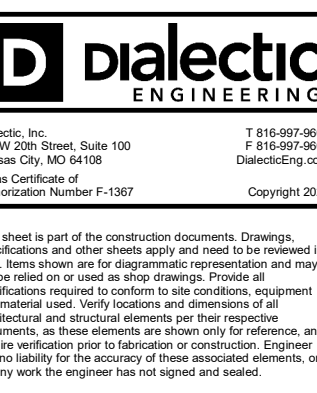
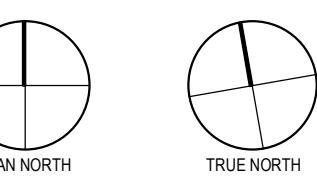
2 OVERALL POWER PLAN - LV 2
1/8" = 1'-0"



1 OVERALL POWER PLAN - LV 1
1/8" = 1'-0"



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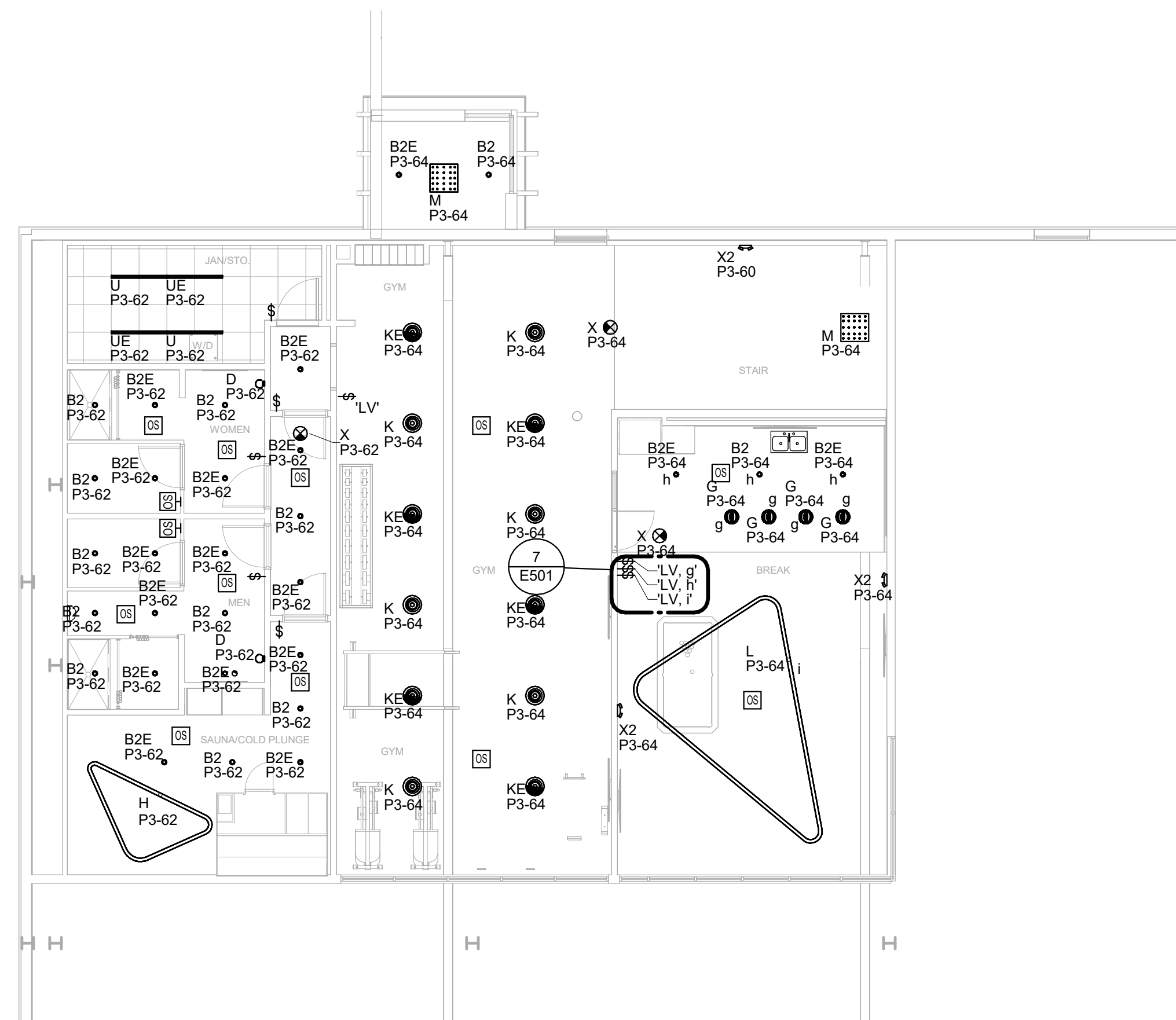
Issues	
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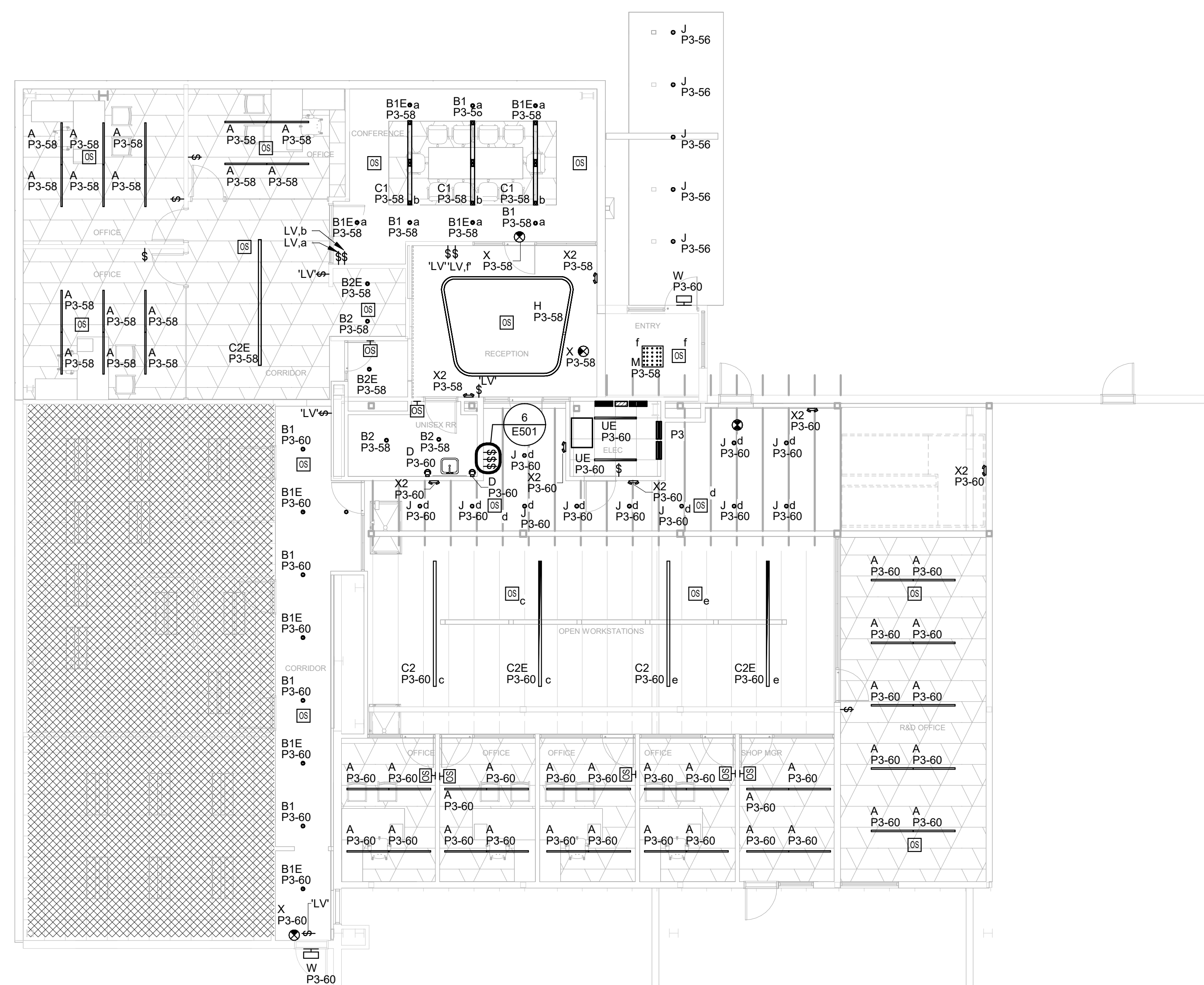
E111

POWER PLANS

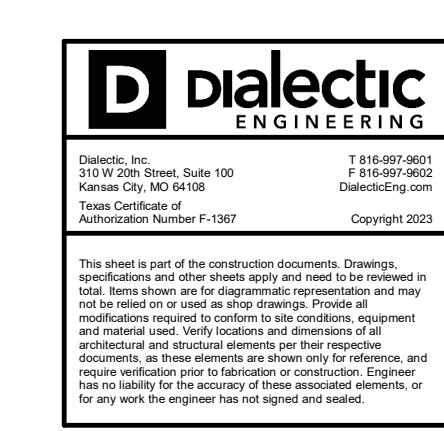
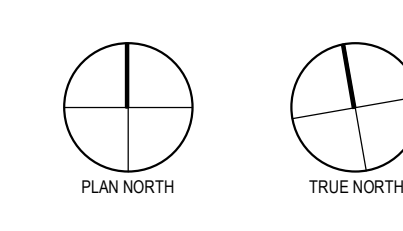
2 OVERALL LIGHTING PLAN - LV 2
1/8" = 1'-0"



1 OVERALL LIGHTING PLAN - LV 1
1/8" = 1'-0"



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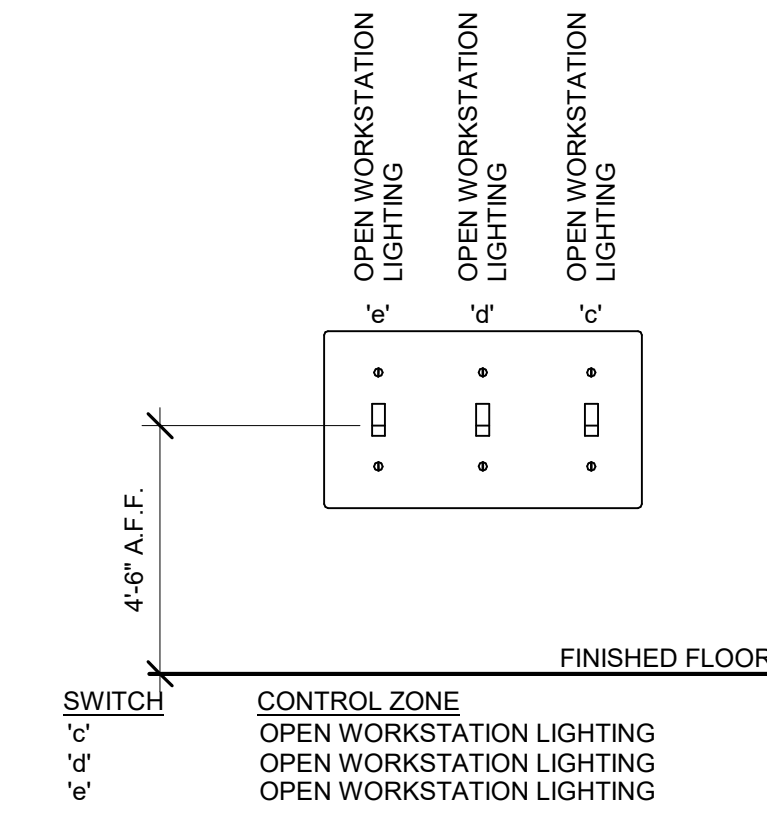
IFP 12/01/23

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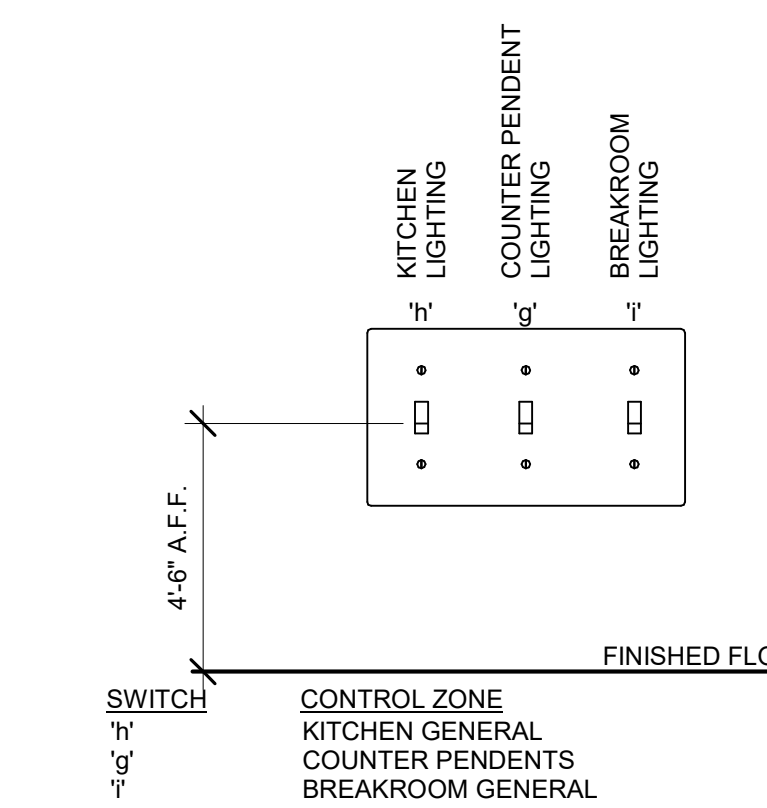
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E121

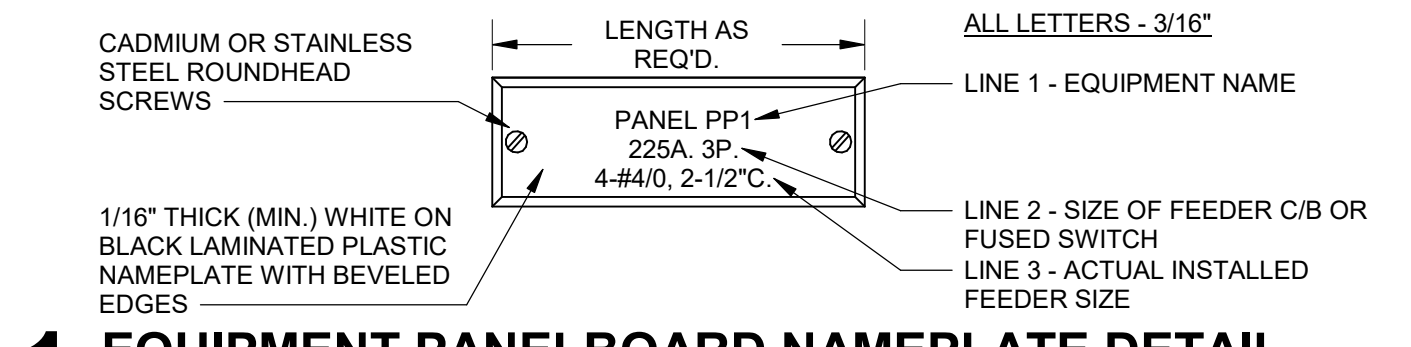
LIGHTING PLANS



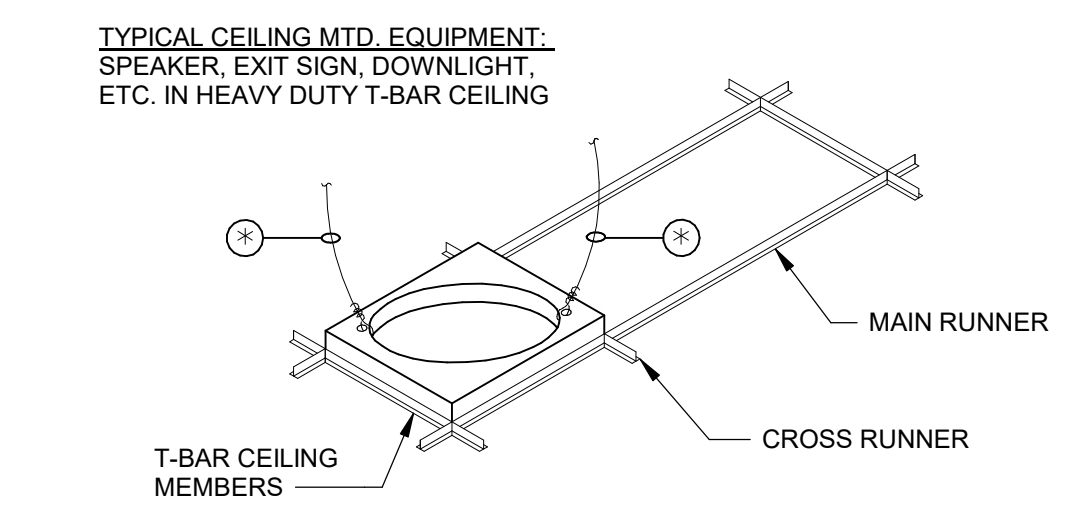
6 LIGHTING CONTROL SWITCHBANK DETAIL - OPEN OFFICE
1/4" = 1'-0"



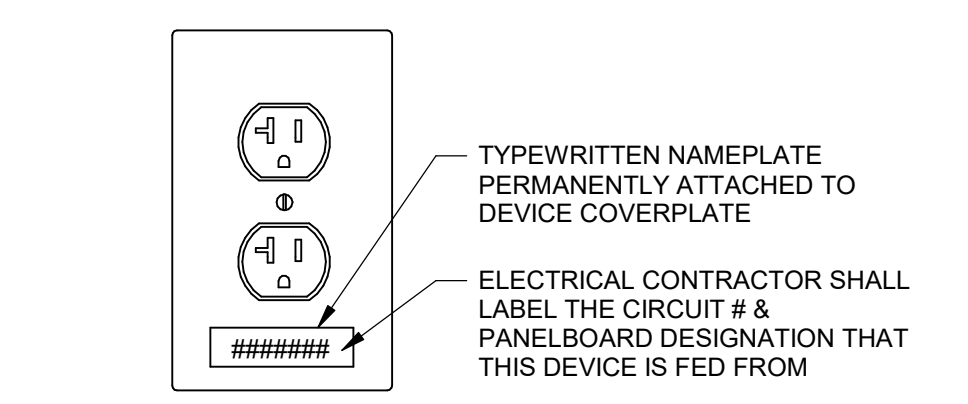
7 LIGHTING CONTROL SWITCHBANK DETAIL - BREAKROOM
1/4" = 1'-0"



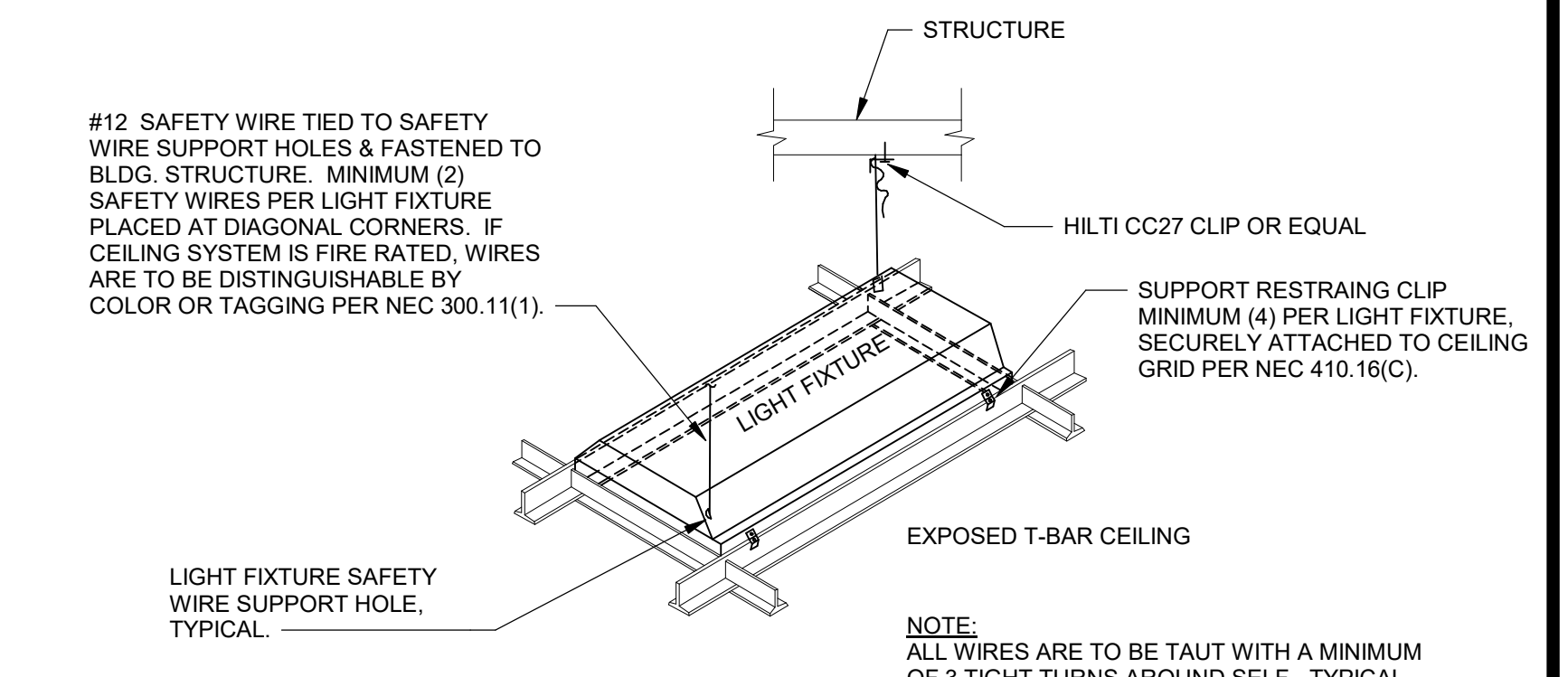
1 EQUIPMENT PANELBOARD NAMEPLATE DETAIL
1/4" = 1'-0"



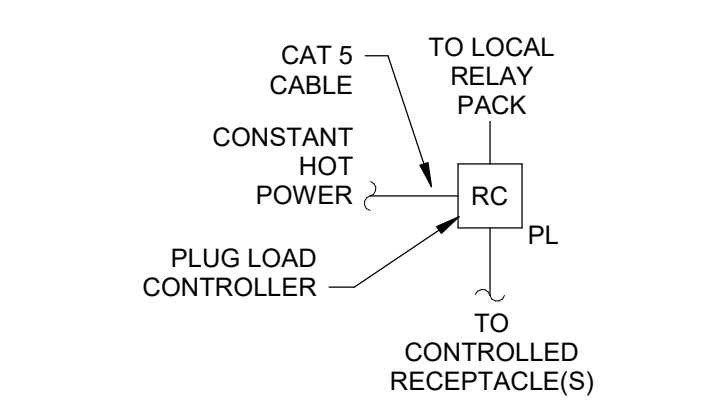
2 EQUIPMENT/FIXTURE MOUNTING
1/4" = 1'-0"



3 RECEPTACLE LABELING DETAIL
1/4" = 1'-0"



4 RECESSED LIGHTING FIXTURE SUPPORT DETAIL
1/4" = 1'-0"

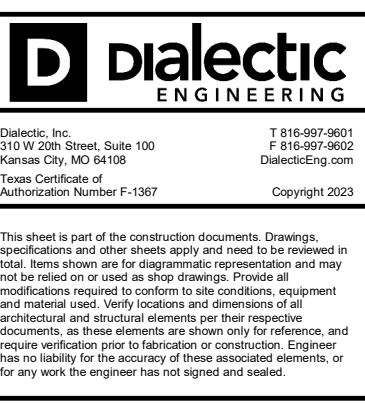
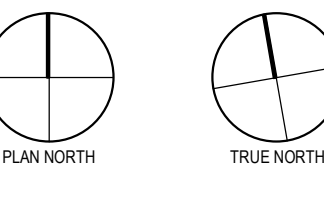


NOTES:
 NETWORKED LIGHTING CONTROLS SHALL BE EQUAL TO ACUITY BRANDS 'NLIGHT' CONTROLS
 REFER TO PLAN FOR DEVICE TYPE
 NOT ALL CONTROLS ARE SHOWN. THIS DIAGRAM IS INTENDED TO PROVIDE GENERAL WIRING AND CONTROL INTENT ONLY.
 PROVIDE ALL CONTROL WIRING FOR EACH DIMMING TYPE
 PROVIDE SUFFICIENT SPACING BETWEEN DIMMING SWITCHES PER MANUFACTURER'S INSTRUCTIONS.

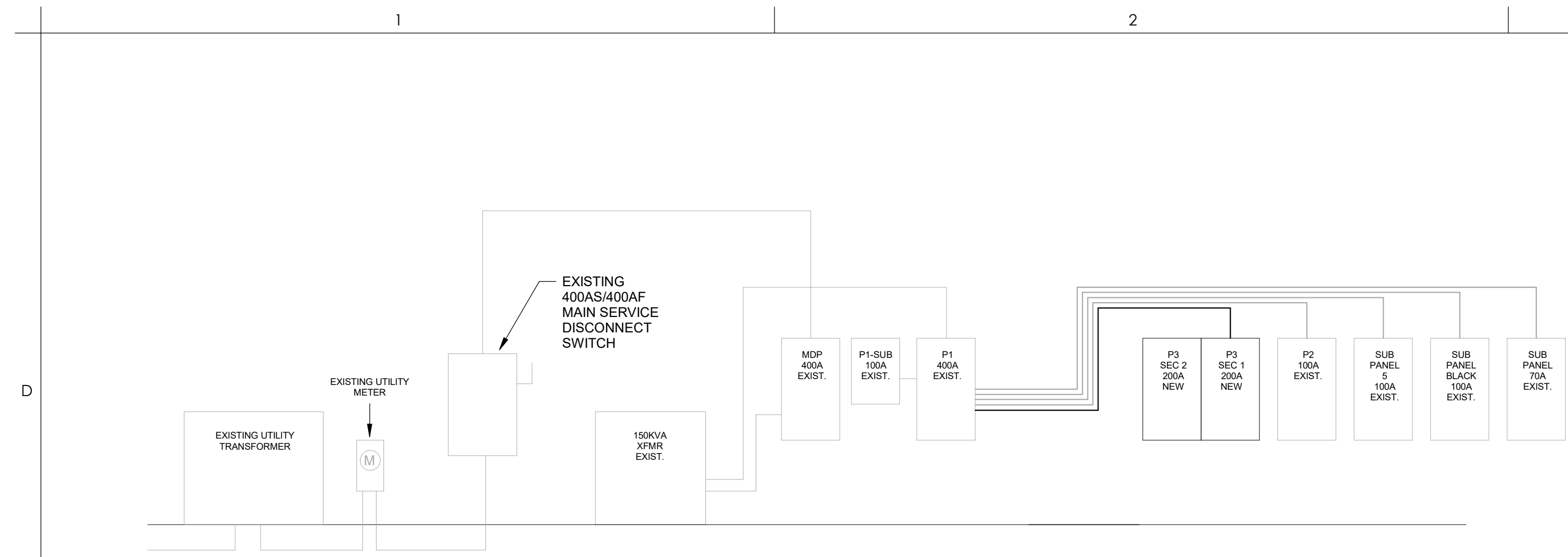
5 PLUG LOAD CONTROLLER
1/2" = 1'-0"



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1 One-Line
NOT TO SCALE

EQUIPMENT FEEDER SCHEDULE

MARK	EQUIPMENT TYPE	#	VOLTAGE PHASE	PANEL	CIRCUIT	MOCP	FEEDER	PROVIDER	SIZE-POLES	FUSES	NEMA	REMARKS
AHU	1	208V - 1P	P3	71.73	15 A	(2#12 & 1#12 G, 1/2"	CONTRACTOR 30A-2P	CONTRACTOR	30A-2P	NF	3R	
CU	4	208V - 1P	P3	2.4	40 A	(2#8 & 1#10 G, 3/4"	CONTRACTOR 30A-2P	CONTRACTOR	30A-1P	NF	3R	
CU	5	120/208V - 1P	P3	14.16	35 A	(2#10 & 1#10 G, 1/2"	CONTRACTOR 30A-2P	CONTRACTOR	30A-1P	NF	3R	
CU	6	120/208V - 1P	P3	6.8	35 A	(3#10 & 1#10 G, 3/4"	CONTRACTOR 30A-2P	CONTRACTOR	30A-2P	NF	3R	
CU	7	120/208V - 1P	P3	10.12	35 A	(3#10 & 1#10 G, 3/4"	CONTRACTOR 30A-2P	CONTRACTOR	30A-2P	NF	3R	
CU	8	208V - 1P	P3	15.17	30 A	(2#10 & 1#10 G, 1/2"	CONTRACTOR 30A-2P	CONTRACTOR	30A-2P	NF	3R	
DEH	1	120V - 1P	P3	7.4	15 A	(2#12 & 1#12 G, 1/2"	CONTRACTOR 20A-1P	INTEGRAL	20A-1P	NF		
EF	1	120V - 1P	P3	1	15 A	(2#12 & 1#12 G, 1/2"	INTEGRAL	INTEGRAL				
F	4	120V - 1P	P3	13	20 A	(2#12 & 1#12 G, 1/2"	INTEGRAL	INTEGRAL				
F	5	120V - 1P	P3	59	20 A	(2#12 & 1#12 G, 1/2"	INTEGRAL	INTEGRAL				
F	6	120V - 1P	P3	61	20 A	(2#12 & 1#12 G, 1/2"	INTEGRAL	INTEGRAL				
F	7	120V - 1P	P3	63	20 A	(2#12 & 1#12 G, 1/2"	INTEGRAL	INTEGRAL				
RP	1	120V - 1P	P3	57	20 A	(2#12 & 1#12 G, 1/2"	CONTRACTOR	CONTRACTOR				RECEPTACLE CONNECTION
UH	1	120/208V - 1P	P3	75.77	15 A	(3#12 & 1#12 G, 1/2"	INTEGRAL	INTEGRAL				
WH	1	480V - 3P	MDP	32.34/36	20 A	(3#12 & 1#12 G, 1/2"	CONTRACTOR 30A-3P	CONTRACTOR	30A-3P	NF		
WH	2	208V - 1P	P3	5.7	30 A	(2#10 & 1#10 G, 1/2"	CONTRACTOR 30A-2P	CONTRACTOR	30A-2P	NF		
WS	1	120V - 1P	P3	3	15 A	(2#12 & 1#12 G, 1/2"	INTEGRAL	INTEGRAL				

FEEDER SCHEDULE

EQUIPMENT MARK	RATING	PHASE	FEEDER	WIRE-CONDUIT SIZE	NOTES
MDP	400 A	277/480V - 3P	EXISTING		
P1	400 A	120/208V - 3P	EXISTING		
P2	400 A	120/208V - 3P	EXISTING		
P3	200 A	120/208V - 3P	(4#30 & 1#6 G, 2-1/2"		
SPB	100 A	120/208V - 3P	EXISTING		
SUB PANEL	70 A	120/208V - 3P	EXISTING		
SUB PANEL 5	100 A	120/208V - 3P	EXISTING		
TX-P1	200 A	480V - 3P	EXISTING		

VOLTAGE DROP

EQUIPMENT MARK	VOLTAGE - PHASE	FAULT CURRENT	VOLTAGE DROP	3PH	L-L	L-N	MTR
UTILITY	500kVA 277/480V-3P INFINITE	45262		46262	40248	46262	
MDP	277/480V-3P	23426	0.8%	23426	20334	15679	0
TX-P1 PRI	480V-3P	20547	0.9%	20547	17830	0	0
TX-P1	150kVA: 480V-3P to 120/208V-3P, CU	9298	0.9%	9298	8089	9298	0
TX-P1 SEC	120/208V-3P	9084	1.3%	9084	7902	8880	0
P1	120/208V-3P	8700	1.3%	8700	7567	8174	0
P3	120/208V-3P	8021	1.4%	8021	6974	7052	0

LIGHTING FIXTURE SCHEDULE

Type	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LAMPS	VOLTS	FIXTURE WATTS	REMARKS
A	PRUDENTIAL	BPR02-REC-FLSH-LED35-MO-XXX-XXX-BTW-SQ-UNV-XXX-XXX-DM01	2" RECESSED LINEAR FIXTURE	LED	120 V	22 VA	
B1	ALPHABET	NU4-RD-SW-10LM-35K-80-HE140-W-HWH-NC-UNV-DIM10	4" RECESSED DOWNLIGHT, LOW OUTPUT	LED	120 V	9 VA	
B1E	ALPHABET	NU4-RD-SW-10LM-35K-80-HE140-W-HWH-NC-UNV-DIM10-EM7	SAME AS TYPE B1 WITH EMERGENCY BATTERY BACKUP CAPABLE OF SUPPLYING EMERGENCY ILLUMINATION FOR 90 MINUTES.	LED	120 V	9 VA	EMERGENCY LIGHT
B2	ALPHABET	NU4-RD-SW-25LM-35K-80-HE160-W-HWH-NC-UNV-DIM10	4" RECESSED DOWNLIGHT, MEDIUM OUTPUT	LED	120 V	20 VA	
B2E	ALPHABET	NU4-RD-SW-25LM-35K-80-HE160-W-HWH-NC-UNV-DIM10-EM7	SAME AS TYPE B2 WITH EMERGENCY BATTERY BACKUP CAPABLE OF SUPPLYING EMERGENCY ILLUMINATION FOR 90 MINUTES.	LED	120 V	20 VA	
C1	FLUXWERX	APS-S-R-D-A-35-XXX-XXX-XXX-F2-M-XXX	SUSPENDED LINEAR, LOW OUTPUT	LED	120 V	34 VA	COORDINATE SUSPENSION LENGTH AND FINISHES WITH LIGHTING DESIGNER AND ARCHITECT.
C2	FLUXWERX	APS-S-R-D-C-35-XXX-XXX-XXX-F2-M-XXX	SUSPENDED LINEAR, MEDIUM OUTPUT	LED	120 V	52 VA	COORDINATE SUSPENSION LENGTH AND FINISHES WITH LIGHTING DESIGNER AND ARCHITECT.
C2E	FLUXWERX	APS-S-R-D-C-35-XXX-XXX-XXX-F2-M-XXX-B1	SAME AS TYPE B2 WITH EMERGENCY BATTERY BACKUP CAPABLE OF SUPPLYING EMERGENCY ILLUMINATION FOR 90 MINUTES.	LED	120 V	52 VA	EMERGENCY LIGHT, COORDINATE SUSPENSION LENGTH AND FINISHES WITH LIGHTING DESIGNER AND ARCHITECT.
D	ALW	CCS3-0590-35-55-DF-D-V01-R-GO-C-G	3.5" ROUND LED SCONE, DIRECT ONLY, ORANGE HEAT SINK, CHARCOAL GRAY SHELL	LED	120 V	7 VA	COORDINATE MOUNTING HEIGHT AND FINISHES WITH LIGHTING DESIGNER AND ARCHITECT.
G	ALW	CCP3-05-90-CCT-55-DF-D-V01-R-G-O-CG	3.5" ROUND LED PENDANT, DIRECT ONLY, ORANGE HEAT SINK, CHARCOAL GRAY SHELL	LED	120 V	7 VA	COORDINATE PENDENT LENGTH AND FINISHES WITH LIGHTING DESIGNER AND ARCHITECT.
H	XAL	CURVE2 5-XXX-OP-35K-C80-UNV-1-0V-0455LF-MOD	SUSPENSION MOUNT WITH CURVED CORNERS	LED	120 V	163 VA	COORDINATE SUSPENSION LENGTH AND FINISHES WITH LIGHTING DESIGNER AND ARCHITECT.
J	LUMENPULSE	LACY5-A-PMF-XXX-XXX-D-XXX-9-IT-G-DL20-35K-CR80-W-DA1-NA-B	SUSPENSION MOUNT DOWNLIGHT	LED	120 V	0 VA	COORDINATE PENDENT LENGTH AND FINISHES WITH LIGHTING DESIGNER AND ARCHITECT.
K	SPECTRUM	PRDDH16X-65L-35K-DS10X-XXX-DF-16-TF3-XXX	GYM HIGHBAY	LED	120 V	59 VA	COORDINATE MOUNTING HEIGHT AND FINISHES WITH LIGHTING DESIGNER AND ARCHITECT.
KE	SPECTRUM	PRDDH16X-65L-35K-DS10X-XXX-DF-16-TF3-XXX-EMEN	SAME AS TYPE K WITH EMERGENCY BATTERY BACKUP CAPABLE OF SUPPLYING EMERGENCY ILLUMINATION FOR 90 MINUTES.	LED	120 V	59 VA	EMERGENCY LIGHT
L	XAL	CURVE2 5-XXX-OP-35K-C80-UNV-1-0V-0455LF-MOD	SUSPENSION MOUNT WITH CURVED CORNERS	LED	120 V	202 VA	COORDINATE SUSPENSION LENGTH AND FINISHES WITH LIGHTING DESIGNER AND ARCHITECT.
M	BLACKJACK	MQ-2425-XXX-NV3LR02-4S-2-35K-XX	LARGE DECORATIVE PENDENT	LED	120 V	125 VA	
U	LITHONIA	CLX-L48-5000LM-SEF-RDL-MVOLT-GZ10-35K-80CRI-WH	BOH LED STRIP	LED	120 V	32 VA	
UE	LITHONIA	CLX-L48-5000LM-SEF-RDL-MVOLT-GZ10-35K-80CRI-WH-E10WLCF	SAME AS TYPE U WITH EMERGENCY BATTERY BACKUP CAPABLE OF SUPPLYING EMERGENCY ILLUMINATION FOR 90 MINUTES.	LED	120 V	32 VA	
W	LITHONIA	AFO-W-MVOLT-N-SD	EXTERIOR WALL PACK	LED	120 V	3 VA	MOUNT WALL PACK 10' 0" ABOVE GROUND.
X	LITHONIA	EDGR-XXX-XXX-R	EDGE LIT EXIT	LED	120 V	4 VA	
XZ	COOPER LIGHTING	AP25QLED Series	TWO SQUARE HEADS	LED	120 V	5 VA	EMERGENCY LIGHT

PANEL: MDP LOCATION: RECEPTION 101 NEMA ENCLOSURE: Type 1
SYSTEM: 277/480V - 3P BUS RATING: 400 A CABINET MOUNTING: Surface
FEEDER: SEE RISER DIAGRAM MAINS: 400 A - MLO LUGS:
OPTIONS: AIC RATING: 10000

LOAD DESCRIPTION	BKR SIZE	BKR PO.	NOTE	CKT NO.	A	B	C	CKT NO.	NOTE	BKR PO.	BKR SIZE	LOAD DESCRIPTION
OFFICE LIGHTS	20 A	1	EX	1	0	0		2	EX	1	20 A	WALL PACKS
OFFICE LIGHTS	20 A	1	EX	3				4	EX	1	20 A	WH LIGHTING
OFFICE LIGHTS	20 A	1	EX	5	0	0		6	EX	1	20 A	WH LIGHTING
WH LIGHTS	20 A	1	EX	7	0	0		8	EX	1	20 A	SPARE
WH LIGHTS	20 A	1	EX	9	0	0		10	EX	1	20 A	SPARE
WH LIGHTS	20 A	1	EX	11	0	0		12	EX	1	20 A	SPARE
OFFICE LIGHTS	20 A	1	EX	13	0	0		14	EX	1	20 A	SPARE
WH LIGHTS	20 A	1	EX	15	0	0		16	EX	1	20 A	SPARE
WH LIGHTS	20 A	1	EX	17	0	0		18	EX	1	20 A	SPARE
SPARE	20 A	1	EX	19	0	0		20	EX	1	20 A	SPARE
EMERGENCY LIGHTS	20 A	1	EX	21	0	0		22	EX	1	20 A	SPARE
SPARE	20 A	1	EX	23	0	0		24	EX	1	20 A	SPARE
SPACE	--	--	--	25	--	0		26	EX	1	20 A	SPARE
SPACE	--	--	--	27	--	0		28	EX	1	20 A	SPARE
AIR COMPRESSOR	80 A	3	EX	29	0	0		30	EX	1	20 A	SPARE
--	--	--	--	31	0	5000		32	N	3	20 A	WH-1
--	--	--	--	33	--	--		34	--	--	--	--
EXISTING EQUIPMENT	20 A	3	EX	35	0	5000		36	--	--	--	--
--	--	--	--	37	0	--		38	EX	1	--	SPACE
--	--	--	--	39	--	0		40	EX	1	--	SPACE
EXISTING 150 KVA XFMR	200 A	3	EX	41	0	--		42	EX	1	--	SPACE
--	--	--	--	43	0	--		44	1	--	--	EXTRA SPACE FOR SUB FEED
--	--	--	--	45	0	--		46	1	--	--	EXTRA SPACE FOR SUB FEED

PHASE A: 29376 W
 PHASE B: 29469 W
 PHASE C: 29899 W

CONNECTED: 88744 W
 DEMAND: 107 A
 76609 W
 92 A

PANEL: P1 LOCATION: ELEC 114 NEMA ENCLOSURE: Type 1
SYSTEM: 120/208V - 3P BUS RATING: 400 A CABINET MOUNTING: Surface
FEEDER: SEE RISER DIAGRAM MAINS: 400 A - MCB LUGS:
OPTIONS: AIC RATING: 10000

LOAD DESCRIPTION	BKR SIZE	BKR PO.	NOTE	CKT NO.	A	B	C	CKT NO.	NOTE	BKR PO.	BKR SIZE	LOAD DESCRIPTION
DOCK LEVELER	20 A	1	EX	1	0	180		2	EX	3	100 A	SUB PANEL BLACK (SPB)
EAST WALL REC	20 A	1	EX	3				4	--	--	--	--
FOCK LEVELER	20 A	1	EX	5				6	--	--	--	--
SOUTH WALL REC	20 A	1	EX	7	0	0		8	EX	3	100 A	P2
SOUTH WALL REC	20 A	1	EX	9	0	0		10	--	--	--	--
SUBPANEL 5	100 A	3	EX	11				12	--	--	--	--
--	--	--	--	13	0	0		14	EX	1	20 A	SPRINKLER ALARM
UNIT HEATER	20 A	1	EX	17	0	0		18	EX	1	20 A	UNIT HTR
SHIPPING DESK	20 A	1	EX	19	0	0		20	EX	3	70 A	LT SPRINKLER
ELEC HTR SPRINKLER RM	20 A	2	EX	21				22	--	--	--	--
--	--	--	--	23	--	--		24	--	--	--	--
DRYER	30 A	2	EX	25	0	0		26	EX	2	20 A	VENT FANS
--	--	--	--	27	0	0		28	--	--	--	--
EXISTING EQUIPMENT	20 A	1	EX	29	0	0		30	EX	2	20 A	VENT FANS
A/C	40 A	2	EX	31	0	0		32	--	--	--	--
--	--	--	--	33	0	0		34	EX	2	20 A	VENT FANS
NORTH WALL REC	20 A	1	EX	35				36	--	--	--	--
A/C	50 A	2	EX	37	0	0		38	EX	2	20 A	A/C
--	--	--	--	39	0	0		40	--	--	--	--
TIME CLOCKWORK LOUVERS	20 A	1	EX	41				42	1	--	--	SPARE
P3	200 A	3	EX	43	241	--		44	1	--	--	EXTRA SPACE
--	--	--	--	45	--	24469		46	1	--	--	EXTRA SPACE
--	--	--	--	47	--	--		48	1	--	--	EXTRA SPACE

PHASE A: 24376 W
 PHASE B: 24469 W
 PHASE C: 24899 W

CONNECTED: 73744 W
 DEMAND: 705 A
 18609 W
 171 A

EXISTING PEAK DEMAND OVER THE LAST 12 MONTHS IS 37.15 KW. NEW LOAD ADDED IS 95.39 KW. TOTAL LOAD ON EXISTING SYSTEM IS 132.54 KW.

PANEL: P3 LOCATION: OPEN WORKSTATIONS 115 NEMA ENCLOSURE: Type 1
SYSTEM: 120/208V - 3P BUS RATING: 200 A CABINET MOUNTING: Surface
FEEDER: SEE RISER DIAGRAM MAINS: 200 A - MLO LUGS:
OPTIONS: AIC RATING: 10000

LOAD DESCRIPTION	BKR SIZE	BKR PO.	NOTE	CKT NO.	A	B	C	CKT NO.	NOTE	BKR PO.	BKR SIZE	LOAD DESCRIPTION
FF-1	15 A	1	1	300	1758							

SECTION 20 00 00 - BASIC ELECTRICAL

- 1. THE WORK CONSISTS OF FURNISHING ALL LABOR, EQUIPMENT, SUPPLIES, AND MATERIALS... 2. COORDINATE WORK WITH OTHER TRADES... 3. ALL WORK SHALL COMPLY WITH THE LOCALLY ADOPTED ELECTRICAL CODE... 4. DRAWINGS INDICATE THE GENERAL EXTENT OF WORK... 5. ELECTRICAL DESIGN IS BASED ON FIELD INSPECTIONS... 6. FIELD VERIFY EXISTING UTILITIES... 7. ROOF PENETRATIONS SHALL COMPLY WITH "SMACNA" AND "NRC" STANDARDS... 8. ALL EQUIPMENT AND COMPONENTS FURNISHED AND/OR INSTALLED SHALL BE LISTED AND LABELED... 10. TEMPORARY ELECTRICAL SERVICE... 11. WARRANTIES... 12. CUTTING AND PATCHING...

SECTION 26 05 26 - GROUNDING

- 1. EXTENT OF ELECTRICAL GROUNDING AND BONDING WORK IS INDICATED BY DRAWINGS AND AS SPECIFIED HEREIN... 2. EXCEPT AS OTHERWISE INDICATED, PROVIDE ELECTRICAL GROUNDING AND BONDING SYSTEMS... 3. INSTALL ELECTRICAL GROUNDING AND BONDING SYSTEMS AS INDICATED... 4. RACEWAY SYSTEMS SHALL NOT BE USED AS GROUNDING METHOD... 5. INSTALLATION OF ELECTRICAL GROUNDING AND BONDING SYSTEMS... 6. GROUNDING ELECTRODE CONDUCTORS, WHERE NOT INSTALLED AS PART OF A BRANCH CIRCUIT OR FEEDER... 7. CONNECT GROUNDING ELECTRODE CONDUCTORS TO METAL, COLD WATER PIPE... 8. CONNECT TOGETHER SYSTEM NEUTRAL, SERVICE EQUIPMENT ENCLOSURES... 9. THE UTILITY COMPANY METER SOCKET SHALL BE GROUNDING TO A 1/2" X 10" COPPER CLAD STEEL GROUND ROD... 10. RAISED FLOOR GROUNDING... 11. THE NEUTRAL CONDUCTOR OF ALL SEPARATELY DERIVED SYSTEMS... 12. THE NEUTRAL CONDUCTOR OF ALL SEPARATELY DERIVED SYSTEMS...

SECTION 26 05 53 - IDENTIFICATION

- 1. ENGRAVED, PLASTIC-LAMINATED LABELS, SIGNS, AND INSTRUCTION PLATES... 2. CABLE TIES: FUNGUS-INERT, SELF-EXTINGUISHING, ONE-PIECE, SELF-LOCKING NYLON... 3. SELF ADHESIVE, COMMERCIALY AVAILABLE ARC FLASH HAZARD LABELS... 4. CONDUCTOR COLOR CODING... 5. APPLY EQUIPMENT IDENTIFICATION LABELS OF ENGRAVED PLASTIC-LAMINATE... 6. ALL PUBLIC AND PRIVATE PROPERTY DAMAGED AS A RESULT OF WORK PERFORMED UNDER THIS CONTRACT... 7. PROVIDE MULTIPLE SIGNS OR ONE CONSOLIDATED SIGN... 8. PROVIDE ENGRAVED SIGN AT THE SERVICE ENTRANCE EQUIPMENT... 9. ALL ELECTRICAL EQUIPMENT ON THIS PROJECT PROVIDED UNDER THIS DIVISION... 10. MECHANISMS OF ALL ELECTRICAL EQUIPMENT SHALL BE CHECKED, ADJUSTED AND TESTED... 11. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE OPERATION, SERVICE AND MAINTENANCE... 12. THIS CONTRACTOR SHALL MAINTAIN SERVICE AND EQUIPMENT FOR THE TESTING OF ELECTRICAL EQUIPMENT... 13. THE ELECTRICAL DISTRIBUTION DESIGN HAS BEEN PROVIDED WITH A LOAD-BALANCED ELECTRICAL SYSTEM...

SECTION 26 08 00 - TESTING

- 1. ALL ELECTRICAL EQUIPMENT ON THIS PROJECT PROVIDED UNDER THIS DIVISION AND ALL ELECTRICAL EQUIPMENT FURNISHED BY OTHERS SHALL BE ADJUSTED, ALIGNED AND TESTED... 2. MECHANISMS OF ALL ELECTRICAL EQUIPMENT SHALL BE CHECKED, ADJUSTED AND TESTED... 3. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE OPERATION, SERVICE AND MAINTENANCE... 4. THIS CONTRACTOR SHALL MAINTAIN SERVICE AND EQUIPMENT FOR THE TESTING OF ELECTRICAL EQUIPMENT... 5. THE ELECTRICAL DISTRIBUTION DESIGN HAS BEEN PROVIDED WITH A LOAD-BALANCED ELECTRICAL SYSTEM...

SECTION 26 05 19 - WIRES AND CABLES

- 1. CONDUCTORS: PROVIDE SOLID CONDUCTORS FOR POWER AND LIGHTING CIRCUITS NO. 10 AWG AND SMALLER... 2. CONDUCTOR MATERIAL: COPPER FOR ALL WIRES AND CABLES... 3. INSULATION: PROVIDE THIN/THIN INSULATION FOR ALL CONDUCTORS... 4. ALUMINUM CONDUCTORS... 5. VARIABLE FREQUENCY DRIVE CABLES... 6. INSTALLATION OF WIRES AND CABLES... 7. ALL BRANCH CIRCUIT WIRES, FEEDER CABLES, ETC., SHALL BE CONTINUOUS FROM OUTLET TO OUTLET... 8. TIGHTEN ELECTRICAL CONNECTORS AND TERMINALS... 9. TERMINALS ON SWITCHES AND CONVENIENCE OUTLETS... 10. CONDUIT SHALL BE INSTALLED AS A COMPLETE SYSTEM... 11. USE RACEWAY FITTINGS THAT ARE OF TYPES COMPATIBLE... 12. INSTALL PULL WIRES IN EMPTY RACEWAYS... 13. TELEPHONE AND SIGNAL SYSTEM RACEWAYS... 14. CONDUITS ABOVE LAY-IN CEILING SYSTEM... 15. PROVIDE 36" MINIMUM RADIUS RIGID STEEL CONDUIT ELBOWS... 16. CONDUITS CAPPED OUTSIDE OF BUILDING... 17. METAL CLAD (MC) AND ALUMINUM CLAD (AC) CABLES...

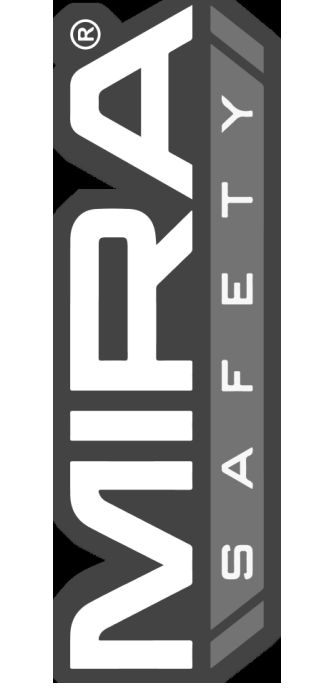
Table with 3 columns: 208Y/120V NORMAL, PHASE, 480Y/277V NORMAL. Rows include BLACK, RED, BLUE, WHITE, GREEN, GREEN W/ YELLOW STRIP, 208Y/120V - UPS, PHASE, BLACK W/ ORANGE STRIP, RED W/ ORANGE STRIP, BLUE W/ ORANGE STRIP, WHITE W/ ORANGE STRIP, GREEN W/ ORANGE STRIP, GREEN W/ YELLOW STRIP, IF THE SERVICE VOLTAGE IS 120/240V, THREE PHASE H-LEG, THEN THE PHASE "C" COLOR CODING SHALL BE "ORANGE".

SECTION 26 05 33 - RACEWAYS

- 1. THIS SECTION INCLUDES RACEWAYS FOR ELECTRICAL WIRING... 2. WIREWAYS... 3. SURFACE RACEWAYS... 4. WIRING METHOD... 5. CONDUIT SHALL BE INSTALLED AS A COMPLETE SYSTEM... 6. USE RACEWAY FITTINGS THAT ARE OF TYPES COMPATIBLE... 7. INSTALL PULL WIRES IN EMPTY RACEWAYS... 8. TELEPHONE AND SIGNAL SYSTEM RACEWAYS... 9. CONDUITS ABOVE LAY-IN CEILING SYSTEM... 10. PROVIDE 36" MINIMUM RADIUS RIGID STEEL CONDUIT ELBOWS... 11. CONDUITS CAPPED OUTSIDE OF BUILDING... 12. METAL CLAD (MC) AND ALUMINUM CLAD (AC) CABLES...

SECTION 26 05 33 - CABINETS, BOXES, AND FITTINGS

- 1. THIS SECTION INCLUDES CABINETS, BOXES, AND FITTINGS FOR ELECTRICAL INSTALLATIONS... 2. METAL OUTLET, DEVICE, AND SMALL WIRING BOXES... 3. PULL AND JUNCTION BOXES... 4. CABINETS... 5. STEEL ENCLOSURES WITH HINGED DOORS... 6. WEATHERPROOF PULL AND SPLICE BOXES... 7. FIRESTOP FOR RECESSED WALL BOXES... 8. FLOOR BOXES IN SLABS ON GRADE... 9. WHEN TWO OR MORE PHASES OF 277/480 VOLTS SYSTEM... 10. PULL AND SPLICE BOXES LOCATED OUTDOORS... 11. ELECTRICALLY GROUND METALLIC CABINETS, BOXES, AND ENCLOSURES... 12. METAL CLAD (MC) AND ALUMINUM CLAD (AC) CABLES...



MIRA SAFETY 1713 Hur Industrial Blvd Cedar Park, TX 78613

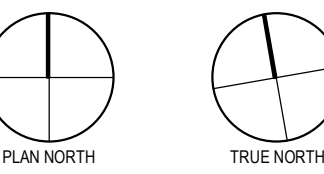


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SECTION 26 27 26 - WIRING DEVICES

- 1. THIS SECTION INCLUDES THE FOLLOWING:
A. RECEPTACLES
B. LIGHTING AND EQUIPMENT SWITCHES
C. WALL PLATE
D. FLOOR SERVICE OUTLETS
E. OCCUPANCY SENSORS
F. MANUAL DIMMERS
G. MULTI-OUTLET ASSEMBLIES
H. TELE-POWER POLES
2. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
A. WIRING DEVICES & ACCESSORIES:
1. COPPER WIRING DEVICES
2. CROUSE-HINDS CO.
3. HUBBELL INC.
4. LEVITON
5. PASS AND SEYMOUR INC.
B. FLOOR BOXES:
1. AMERICAN ELECTRIC, STEEL CITY
2. WALKER / WIREMOLD COMPANY
3. RACO, INC., HUBBELL INC.
4. RACEWAY COMPONENTS, INC.
C. DIMMERS:
1. HUBBELL INC.
2. LEVITON LIGHTING CONTROLS
3. LUTRON LIGHTING
D. PLUGMOLD AND TELE-POWER POLES:
1. WIREMOLD COMPANY
2. MONO SYSTEMS INC.
E. OCCUPANCY SENSOR LIGHTING CONTROL:
1. HUBBELL INC.
2. LEVITON MANUFACTURING INC.
3. WATT STOPPER INC.
4. SENSOR SWITCH
5. GREENGATE
F. NETWORK LIGHTING CONTROLS:
1. HUBBELL INC
2. GREENGATE
3. LIGHTING CONTROL AND DESIGN
4. WATT STOPPER INC.
3. WIRING DEVICES:
A. PROVIDE WIRING DEVICES, IN TYPES, CHARACTERISTICS, GRADES, COLORS, AND ELECTRICAL RATINGS FOR APPLICATIONS INDICATED WHICH ARE UL LISTED AND WHICH COMPLY WITH NEMA WD 1 AND OTHER APPLICABLE UL AND NEMA STANDARDS. ALL DEVICES SHALL BE SPECIFICATION GRADE (HEAVY DUTY UL GRADE), WITH GREEN HEXAGONAL EQUIPMENT GROUND SCREW, METAL PLASTER EARS AND SIDE TERMINAL SCREWS FOR BACK AND SIDE WIRING.
B. ALL WIRING DEVICES SHALL BE PROVIDED BY SAME MANUFACTURER UNLESS NOTED OTHERWISE.
C. ALL WIRING DEVICES AND COVERPLATES SHALL BE:
1. WHITE - (CONFIRM REQUIREMENTS WITH ARCHITECT)
2. WHITE - WHERE INSTALLED IN WHITE CEILINGS
3. BLACK - WHERE INSTALLED IN DARK CEILINGS
4. ORANGE - WHERE SUPPLYING A UPS CIRCUIT. (DEVICE ONLY, COVERPLATE SHALL BE AS ABOVE).
D. RECEPTACLES:
1. DUPLEX RECEPTACLE, 15 AMP, 125 VOLT, 2-POLE, 3-WIRE, GROUNDING TYPE WITH NEMA CONFIGURATION 5-15R, MEETS FEDERAL SPEC. WC-596-F. LEVITON #5252.
2. SINGLE RECEPTACLE, 20 AMP, 125 VOLT, 2-POLE, 3-WIRE, GROUNDING TYPE WITH NEMA CONFIGURATION 5-20R, MEETS FEDERAL SPEC. WC-596-F. LEVITON #5351.
3. DUPLEX RECEPTACLE, 20 AMP, 125 VOLT, 2-POLE, 3-WIRE, GROUNDING TYPE WITH NEMA CONFIGURATION 5-20R, MEETS FEDERAL SPEC. WC-596-F. LEVITON #5352.
4. GROUND FAULT INTERRUPTER RECEPTACLE, 20 AMP, 125 VOLT, 2-POLE, 3-WIRE, GROUNDING TYPE WITH NEMA CONFIGURATION 5-20R, UL943 APPROVED, SELF-TESTING, SOLID STATE GROUND FAULT SENSING LEVEL WITH 5 MILLIAMPERES GROUND FAULT TRIP LEVEL. LED INDICATOR LIGHT WITH TEST/RESET BUTTONS THAT MATCH THE COLOR OF THE FACE. LEVITON #G5362-WT.
5. USB RECEPTACLE, 20A, 125V, 2-POLE, 3-WIRE, GROUNDING TYPE WITH NEMA CONFIGURATION 5-20R, (2) VERTICAL USB PORTS WITH 3.6A CHARGING CAPACITY (MINIMUM), MEETS FEDERAL SPEC. WC-596-F. LEVITON #T5832. WHERE SHOWN AS QUAD RECEPTACLE ON PLANS, PROVIDE (2) USB RECEPTACLES AS SPECIFIED ABOVE.
6. WEATHERPROOF RECEPTACLE SHALL BE GROUND-FAULT INTERRUPTER WITH THOMAS & BETTS KOKOSU DIE-CAST ALUMINUM "SMALL" COVER PLATE. LOCATE BOX VERTICAL IN WALL. PLATE SHALL BE LISTED AND LABELED "SUITABLE FOR WET LOCATIONS WHILE IN USE.
7. ISOLATED GROUND DUPLEX RECEPTACLE, 20 AMP, 125 VOLT, 2-POLE, 3-WIRE, FACE WITH ORANGE TRIANGLE, GROUND SCREW ISOLATED FROM MOUNTING YOKE, NEMA CONFIGURATION 5-20RIG. LEVITON #6362-IG.
8. SURGE PROTECTED, ISOLATED GROUND, DUPLEX RECEPTACLE, 20 AMP, 125 VOLT, 2-POLE, 3-WIRE, FACE WITH ORANGE TRIANGLE, FOUR SERIES-PARALLEL, 130 VOLT 20 MM METAL OXIDE VARISTORS (MOV'S), AND BUILT-IN AUDIBLE AND VISUAL ALARM INDICATORS. DEVICE SHALL BE PROVIDED WITH NORMAL AND COMMON PROTECTION MODES, TRANSIENT SUPPRESSION OF 280 JOULES PEAK ENERGY, CLAMPING VOLTAGE OF 420, AND RESPONSE TIME OF APPROXIMATELY 5 NS. NEMA CONFIGURATION 5-20R. LEVITON #8380-IG.
9. CONTROLLED DUPLEX RECEPTACLE, 20 AMP, 125 VOLT, 2-POLE, 3-WIRE, GROUNDING TYPE WITH NEMA CONFIGURATION 5-20R, PERMANENTLY LABELED WITH CONTROLLED SYMBOL, MEETS FEDERAL SPEC. WC-596-F. LEVITON #6362-2. WHERE SHOWN AS QUAD RECEPTACLE ON PLANS, PROVIDE (1) CONTROLLED RECEPTACLE AND (1) DUPLEX RECEPTACLE AS SPECIFIED ABOVE.
10. HEAVY DUTY RECEPTACLES SHALL BE OF THE SAME MANUFACTURER AS THE CONVENIENCE OUTLETS AND HAVE THE RATINGS AND CHARACTERISTICS (VOLTAGE, AMPS, POLES, WIRES) AS SHOWN ON DRAWINGS.
E. SWITCHES:
1. TOGGLE TYPE SWITCH, 20 AMP, 120/277 VOLT AC SINGLE-POLE, QUIET TYPE, WITH MOUNTING YOKE INSULATED FROM MECHANISM, EQUIPPED WITH PLASTER EARS, SIDE-WIRED SCREW TERMINALS, MEETS FEDERAL SPEC WS-896. LEVITON #1121-2L, DOUBLE-POLE, 3-WAY, AND 4-WAY SWITCHES SHALL BE OF SAME MAKE AS FOR SINGLE-POLE.
2. KEY TYPE SWITCH, 20 AMP, 120/277 VOLT AC SINGLE-POLE, WITH MOUNTING YOKE INSULATED FROM MECHANISM, EQUIPPED WITH PLASTER EARS, SIDE-WIRED SCREW TERMINALS, POLISHED METAL TOP AND PROVIDE WITH ONE STEEL KEY. LEVITON #1121-2L, DOUBLE-POLE, 3-WAY, AND 4-WAY SWITCHES SHALL BE OF SAME MAKE AS FOR SINGLE-POLE.
3. WHEN LIGHTED HANDLE IS INDICATED WITH SWITCHING DEVICE, PROVIDE SWITCH DEVICE WITH 1/25 WATT NEON PILOT INTEGRAL WITH TOGGLE HANDLE, RATED 120/277 VOLT, GLOWS WHEN SWITCH IS "OFF", PASS & SEYMOUR #20AC1-CSL.
4. WHEN PILOT LIGHT IS INDICATED WITH SWITCHING DEVICE, PROVIDE SWITCH DEVICE WITH 1/25 WATT NEON PILOT INTEGRAL WITH TOGGLE HANDLE, RATED 120/277 VOLT, GLOWS WHEN SWITCH IS "ON", PASS & SEYMOUR #20AC1-RPL.

SECTION 26 27 26 - WIRING DEVICES (CONT.)

- F. FLOOR RECEPTACLES:
1. TYPE 'A': HUBBELL #B-2436, RECTANGULAR SINGLE-GANG, WATERTIGHT BOX WITH ONE 3/8"X2" DUPLEX FLAP COVER, BOX COVER PLATE SHALL BE BRASS. COVER SHALL BE PROVIDED WITH BRASS CARPET FLANGE FOR FLUSH INSTALLATION IN LINOLEUM, WOOD OR CARPET FLOORS. EACH FLOOR OUTLET SHALL BE COMPLETE WITH ONE 20 AMP, 125 VOLT DUPLEX BROWN RECEPTACLE AS SPECIFIED UNDER "RECEPTACLES".
2. TYPE 'B': HUBBELL #B-4233, RECTANGULAR DOUBLE-GANG, FULLY ADJUSTABLE, WATERTIGHT BOX WITH ONE 3/8"X2" DUPLEX FLAP COVER COMPLETE WITH ONE 20 AMP, 125 VOLT DUPLEX BROWN RECEPTACLE AS SPECIFIED UNDER "RECEPTACLES". ALSO PROVIDE ONE #S-2625 COVER PLATE WITH ONE #S-3067 SPLIT NOZZLE FOR PROTECTION OF TELEPHONE/COMPUTER CABLES. BOX COVER PLATES SHALL BE BRASS. COVER SHALL BE PROVIDED WITH BRASS CARPET FLANGE FOR FLUSH INSTALLATION IN LINOLEUM, WOOD OR CARPET FLOORS.
3. TYPE 'C': HUBBELL #B-2436, RECTANGULAR SINGLE-GANG BOX, BRASS PLATE #S2425 WITH 3/4" PLUG OPENING FOR CONNECTION OF FLEXIBLE CONDUIT FROM EQUIPMENT. COVER SHALL BE PROVIDED WITH BRASS CARPET FLANGE FOR FLUSH INSTALLATION IN LINOLEUM, WOOD OR CARPET FLOORS.
4. TYPE 'D': HUBBELL #B-2636, ROUND, WATERTIGHT BOX WITH ONE 3/8"X2" BRASS DUPLEX FLAP COVER, COVER SHALL BE PROVIDED WITH BRASS CARPET FLANGE FOR FLUSH INSTALLATION IN LINOLEUM, WOOD OR CARPET FLOORS. EACH FLOOR OUTLET SHALL BE COMPLETE WITH ONE 20 AMP, 125 VOLT DUPLEX BROWN RECEPTACLE AS SPECIFIED UNDER "RECEPTACLES".
5. TYPE 'E': HUBBELL #B-2636, ROUND, WATERTIGHT BOX WITH ONE #S-2625 BRASS COVER PLATE WITH ONE #S-3067 SPLIT NOZZLE FOR PROTECTION OF TELEPHONE/COMPUTER CABLES. COVER SHALL BE PROVIDED WITH BRASS CARPET FLANGE FOR FLUSH INSTALLATION IN LINOLEUM, WOOD OR CARPET FLOORS.
6. TYPE 'F': HUBBELL MODEL PTT ONE PIECE UNIT FOR FLOORS 2-1/2" - 7" THICK, FIRE RATED POKE THROUGH FITTINGS, PROVIDE UNIT WITH SERVICE FITTINGS DESIGNER NEEDS TO SPECIFY WHAT DEVICES ARE NEEDED, RECEPTACLES, TELEPHONE/DATA, ETC.
7. TYPE 'G': FIRE RATED POKE THROUGH FITTING FOR 4" CORE SHALL BE AS MANUFACTURED BY WALKER RC2001 SERIES OR EQUIVALENT EQUAL, ONE-PIECE UNIT FOR FLOORS 2-1/2" - 7" THICK, PROVIDE UNIT WITH (1) 20 AMP DUPLEX RECEPTACLE AND (2) CATEGORY 5 RJ45 OUTLETS, UNLESS OTHERWISE INDICATED ON DESIGN DRAWINGS. POKE THROUGH SHALL BE UL CLASSIFIED FOR FIRE RESISTANCE IN 1 THROUGH 4 HOUR RATED FLOORS.
G. WALL PLATES: SINGLE AND COMBINATION, OF TYPES, SIZES, AND WITH GANGING AND CUTOUTS AS INDICATED, PROVIDE PLATES WHICH MATE WITH WIRING DEVICES TO WHICH ATTACHED. PROVIDE METAL SCREWS FOR SECURING PLATES TO DEVICES WITH SCREW HEADS TO MATCH FINISH OF PLATES. PROVIDE WALL PLATES WITH ENGRAVED LEGEND WHERE INDICATED, CONFORM TO REQUIREMENTS OF SECTION "ELECTRICAL IDENTIFICATION."
H. OCCUPANCY SENSOR LIGHTING CONTROL:
1. WALL MOUNTED OCCUPANCY SENSOR SHALL BE PASSIVE INFRARED COVERING 1200 OR 900 SQUARE FEET, RATED FOR 120/277 VOLT, 1600 WATTS MAXIMUM LOAD OF INCANDESCENT OR FLUORESCENT LIGHT. SENSOR SHALL HAVE 180° FIELD OF VIEW, OFF/AUTO/ON SLIDE SWITCH, ADJUSTABLE TIME-OUT FROM 1 TO 20 MINUTES, AND LED MOVEMENT INDICATOR. SENSOR SHALL BE MOUNTED IN SINGLE-GANG WALL BOX AT SAME ELEVATION AS STANDARD WALL SWITCHES. WATT STOPPER #PW-100 SINGLE RELAY (OR #PW-200 DUAL RELAY).
2. CEILING MOUNTED OCCUPANCY SENSOR SHALL BE DUAL TECHNOLOGY WITH ULTRASONIC & PASSIVE INFRARED TYPE SENSORS. SENSORS SHALL HAVE TWO-WAY OR ONE-WAY DISTRIBUTION DEPENDENT ON MOUNTING LOCATION, AND SHALL BE CAPABLE OF ADJUSTING SENSITIVITY AND LENGTH OF OPERATION BASED ON PAST ACTIVITY LEVEL OF AREA'S OCCUPANTS. CUSTOM PERFORMANCE CONTROLS SHALL BE LOCATED BEHIND SENSOR LENS FOR FIELD MODIFICATION OF SENSOR. UNIT SHALL BE MOUNTED TO RECESSED JUNCTION BOX. WATT STOPPER #DT-355, 800W @ 120V (1200W @ 277V).
I. MANUAL DIMMERS:
1. PROVIDE A DIMMER CONTROLS FOR LIGHTING FIXTURES, 120 VOLT, 60 HERTZ, WITH PRESET SLIDE CONTROL AND PUSH-TON FOR ON/OFF CONTROL, SINGLE-POLE, WATTAGE SHALL BE AS INDICATED BELOW:
a. ID1 = 1000 WATTS, LEVITON #PH10-1LX (120/277V INCANDESCENT)
b. D1 = 1200/1500 VA, LEVITON #PF10-1FZ (120/277V LED)
c. LD2 = 400 VA, LEVITON #PE4-1LX (ELECTRONIC LOW VOLTAGE)
d. LD3 = 1000 VA, LEVITON #PM10-1LX (MAGNETIC LOW VOLTAGE)
e. FD1 = 1200/1500 VA, LEVITON #PF10-1LX (120/277V FLUORESCENT 0-10V)
f. FD2 = 1000 VA, LEVITON #PX10-10 (120V FLUORESCENT LINE VOLTAGE)
g. FD3 = 1200 VA, LEVITON #PX12-70 (277V FLUORESCENT LINE VOLTAGE)
J. MULTI-OUTLET ASSEMBLY:
1. MULTI-OUTLET, TWO COMPARTMENT ASSEMBLY WITH ISOLATED GROUND TYPE DUPLEX RECEPTACLES, 20 AMP, 125 VOLT AC, 2-POLE, 3-WIRE, GROUNDING TYPE WITH NEMA 5-20R CONFIGURATION AND WIREMOLD #G-4046B, 18" ON CENTER, WIREMOLD SERIES 4000 CONTINUOUS WIREWAY WITH INTERNAL DIVIDER AND VE-4000G WIREWAY COVER OR APPROVED EQUIVALENT OF MONO-SYSTEMS, INC.
2. PLUGMOLD ASSEMBLY SHALL CONSIST OF TWO-PIECE SURFACE METAL RACEWAY WITH 20 AMP, 120 VOLT, SINGLE RECEPTACLE WITH GRAY FACTORY PAINTED FINISH.
a. WIREMOLD #20GB06-G, SINGLE CIRCUIT, RECEPTACLE ON 6" CENTERS
b. WIREMOLD #20GB12-G, SINGLE CIRCUIT, RECEPTACLE ON 12" CENTERS
c. WIREMOLD #20GB18-G, SINGLE CIRCUIT, RECEPTACLE ON 18" CENTERS
d. WIREMOLD #20GB06-G, TWO CIRCUIT, RECEPTACLE ON 30" CENTERS
e. WIREMOLD #20GBA06-G, TWO CIRCUIT, RECEPTACLE ON 6" CENTERS
f. WIREMOLD #20GBA12-G, TWO CIRCUIT, RECEPTACLE ON 12" CENTERS
g. WIREMOLD #20GBA18-G, TWO CIRCUIT, RECEPTACLE ON 18" CENTERS
h. WIREMOLD #20GBA30-G, TWO CIRCUIT, RECEPTACLE ON 30" CENTERS.
K. TELE-POWER POLES:
1. SATIN ANODIZED ALUMINUM, 10"-5" TELE-POWER POLE WITH TWO SEPARATE WIREWAY COMPARTMENTS, ONE COMPARTMENT SHALL BE FOR POWER WIRING WITH TWO DUPLEX, 20 AMP, 125 VOLT RECEPTACLES IN COVER FACE AND POWER JUNCTION BOX AT TOP OF POLE. SECOND COMPARTMENT SHALL BE FOR COMMUNICATION WIRING WITH REMOVABLE COVER SECTION AT BOTTOM OF POLE FOR CABLE ACCESS, WIREMOLD #M07T-4.
2. POLE ASSEMBLY SHALL BE PROVIDED WITH ALL NECESSARY FITTINGS INCLUDING BUT NOT LIMITED TO ENTRANCE END FITTING FOR TOP OF ELECTRICAL CHANNEL, CEILING TRIM PLATE, POLE MOUNTING BRACKET, 1-BAR MOUNTING BRACKET, VELCRO CARPET GRIPPER AND ADHESIVE PAD.
L. NETWORK CONTROLS:
1. DIGITAL ROOM CONTROLLER: SELF-CONFIGURING, DIGITALLY ADDRESSABLE ONE, TWO OR THREE RELAY PLENUM-RATED CONTROLLERS FOR ON/OFF CONTROL. SELECTED MODELS INCLUDE 0-10 VOLT OR LINE VOLTAGE FORWARD PHASE CONTROL, DIMMING OUTPUTS AND INTEGRAL CURRENT MONITORING CAPABILITIES. WATTSTOPPER LMRJ-213.
2. DIGITAL DAYLIGHTING SENSORS - SINGLE-ZONE CLOSED LOOP, MULTI-ZONE OPEN LOOP AND SINGLE-ZONE DUAL LOOP DAYLIGHTING SENSORS WITH TWO-WAY ACTIVE INFRARED (IR) COMMUNICATIONS CAN PROVIDE SWITCHING, BI-LEVEL, TRI-LEVEL OR DIMMING CONTROL FOR DAYLIGHT HARVESTING. WATTSTOPPER LMRJ-400.
3. DIGITAL SWITCHES - SELF-CONFIGURING, DIGITALLY ADDRESSABLE PUSHBUTTON ON/OFF, DIMMING, AND SCENE SWITCHES WITH TWO-WAY ACTIVE INFRARED (IR) COMMUNICATIONS. WATTSTOPPER LMDM-101.
4. DIGITAL OCCUPANCY SENSORS - SELF-CONFIGURING, DIGITALLY ADDRESSABLE AND CALIBRATED OCCUPANCY SENSORS WITH LCD DISPLAY AND TWO-WAY ACTIVE INFRARED (IR) COMMUNICATIONS. WATTSTOPPER LMDC-100
5. RECEPTACLE CONTROLLER. WATTSTOPPER LMP1-101
6. PRE-TERMINATED CABLES FOR CONNECTIONS OF DIGITAL LIGHTING MANAGEMENT. WATTSTOPPER LMRJ SERIES.
4. INSTALLATION OF WIRING DEVICES AND ACCESSORIES:
A. GROUPS OF SWITCHES OR SWITCH AND OUTLET COMBINATIONS SHALL BE MOUNTED UNDER ONE COVER PLATE, COVER PLATES SHALL FIT DEVICES SECURELY AND SHALL COVER WALL OPENING COMPLETELY TO PROVIDE A NEAT AND FINISHED APPEARANCE FLUSH WITH SURROUNDING SURFACES.
B. TERMINALS ON ALL WIRING DEVICES SHALL NOT BE USED TO FEED-THROUGH TO THE NEXT DEVICES.
C. INSTALL WALL-MOUNTED RECEPTACLES WITH GROUND SLOT UP.
D. RECEPTACLE MOUNTED ABOVE COUNTER-TOP SHALL BE INSTALLED HORIZONTAL, WITH LONG DIMENSION PARALLEL TO FLOOR AND COUNTER-TOP.

SECTION 26 28 16 - DISCONNECTS, CONTACTS, STARTERS

- 1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
A. GENERAL ELECTRIC CO.
B. SQUARE D COMPANY,
C. EATON CORPORATION
D. SIEMENS, I.T.E.
E. ALLEN-BRADLEY CO.
F. FURNAS CO.
2. TEMPERATURE RATINGS: ALL CONDUCTOR TERMINALS AND EQUIPMENT ENCLOSURES SHALL BE UL LISTED FOR USE WITH MINIMUM 75°C RATED CONDUCTORS.
3. DISCONNECT SWITCHES:
A. PROVIDE CIRCUIT AND MOTOR DISCONNECT SWITCHES OF TYPES, SIZES AND ELECTRICAL CHARACTERISTICS INDICATED ON DRAWING, FUSIBLE OR NON-FUSED TYPE, RATED 250 OR 600 VOLTS, 60 HZ, 2- OR 3-POLES, SOLID NEUTRAL, AND INCORPORATING QUICK-MAKE, QUICK-BREAK TYPE SWITCHES, CONSTRUCT SO THAT SWITCH BLADES ARE VISIBLE IN OFF POSITION WITH DOOR OPEN. SWITCH SHALL HAVE DUAL, COVER INTERLOCK TO PREVENT UNAUTHORIZED OPENING OF SWITCH DOOR WHEN HANDLE IS IN "ON" POSITION, AND TO PREVENT CLOSING OF SWITCH MECHANISM WITH DOOR OPEN, EQUIP WITH OPERATING HANDLE WHICH IS INTEGRAL PART OF ENCLOSURE BASE AND WHOSE POSITION IS EASILY RECOGNIZABLE, AND IS PAD-LOCKABLE IN OFF POSITION. CONSTRUCT CURRENT CARRYING PARTS OF HIGH-CONDUCTIVITY COPPER, WITH SILVER-TUNGSTEN TYPE SWITCH CONTACTS, AND POSITIVE PRESSURE TYPE REINFORCED FUSE CLIPS. APPLICATIONS SHALL BE MOUNTED IN DIE-CAST ALUMINUM DEVICE BOX WITH GASKETED WEATHERPROOF COVER PLATE.
B. EQUIPMENT REQUIRING DISCONNECTING MEANS RATED FOR 120 OR 208 VOLT SINGLE PHASE, UP TO 30 AMPERES MAY BE PROVIDED WITH SNAP-SWITCH TYPE TOGGLE DEVICE AT EQUIPMENT, DEVICE SHALL HAVE AMPERE AND VOLTAGE RATING EQUAL TO OR GREATER THAN BRANCH CIRCUIT FEEDING EQUIPMENT. IF EQUIPMENT IS FOR RELATED, THEN SWITCH SHALL BE HORSEPOWER RATED. REFER TO SECTION 26 27 26 FOR MINIMUM SPECIFICATIONS FOR TOGGLE SWITCHES, SWITCHES LOCATED OUTDOORS OR IN COOLER/FREEZER APPLICATIONS SHALL BE MOUNTED IN DIE-CAST ALUMINUM DEVICE BOX WITH GASKETED WEATHERPROOF COVER PLATE.
4. RELAYS AND CONTACTORS:
A. GENERAL POWER PURPOSE RELAYS FOR CONTROL OF MISCELLANEOUS MOTORS, SHALL BE PROVIDED WITH SILVER ALLOY DOUBLE BREAK CONTACTS RATED FOR DRAWINGS. RELAY SHALL BE HORSEPOWER RATED FOR MOTOR LOAD TO WHICH IT CONTROLS. RELAY SHALL BE MOUNTED IN NEMA TYPE 1 ENCLOSURE.
B. LIGHTING CONTACTORS SHALL BE PROVIDED WITH NUMBER OF POLES, COIL VOLTAGE, AND LOAD CONTACT RATINGS AS SHOWN ON DRAWINGS. CONTACTORS SHALL BE PROVIDED WITH SILVER ALLOY DOUBLE BREAK CONTACTS RATED FOR TUNGSTEN AND BALLAST LIGHTING LOADS. CONTACTS SHALL BE CONVERTIBLE WITH NORMALLY OPEN AND NORMALLY CLOSED INDICATORS. RELAY SHALL BE MOUNTED IN A NEMA TYPE 1 ENCLOSURE.
5. MOTOR STARTERS:
A. MOTOR STARTER CHARACTERISTICS: COMPLY WITH NEMA STANDARDS AND ELECTRICAL CODE. PROVIDE TYPE I GENERAL PURPOSE ENCLOSURES WITH PADLOCK EARS, AND WITH FRAMES AND SUPPORTS FOR MOUNTING ON WALL, FLOOR OR PANEL AS INDICATED. PROVIDE TYPE AND SIZE OF STARTER RECOMMENDED BY MOTOR MANUFACTURER AND EQUIPMENT MANUFACTURER FOR APPLICABLE PROTECTION AND START-UP CONDITION. REFER TO INDIVIDUAL EQUIPMENT SECTIONS FOR BASIC LOAD REQUIREMENTS.
B. MANUAL MOTOR SWITCHES: PROVIDE MANUAL SWITCH AND GREEN PILOT LIGHT FOR MOTORS 3/4 HP AND SMALLER, EXCEPT WHERE INTERLOCK OR AUTOMATIC OPERATION IS INDICATED. PROVIDE MELTING ALLOY TYPE THERMAL OVERLOAD PROTECTION AS PART OF MANUAL STARTER SWITCH.
C. MAGNETIC STARTERS: PROVIDE MAGNETIC STARTERS FOR MOTORS INDICATED ON DRAWINGS. ALL STARTERS SHALL BE NEMA RATED, IEC RATED STARTERS ARE NOT ACCEPTABLE. INCLUDE THE FOLLOWING:
1. HAND-OFF-AUTO SELECTOR SWITCH AND RED & GREEN PILOT LIGHTS (OFF - RUN). PROPERLY ARRANGED FOR SINGLE-SPEED OR MULTI-SPEED OPERATION AS INDICATED.
2. SOLID-STATE OVERLOAD RELAY PROTECTION (BI-METAL AND METAL MELTING ALLOY NOT ACCEPTABLE)
3. INTERLOCKS CONTACTS AND SIMILAR DEVICES AS REQUIRED.
4. BUILT-IN 120 VOLT CONTROL CIRCUIT TRANSFORMER, FUSED FROM LINE SIDE, WHERE SERVICE EXCEEDS 240 VOLTS (WHERE REQUIRED).
5. EXTERNALLY OPERATED MANUAL RELAY.
6. NEMA 1 OR NEMA 3R ENCLOSURE AS INDICATED ON DRAWINGS.

SECTION 26 24 16 - PANELBOARDS

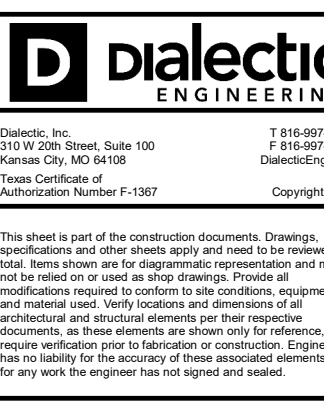
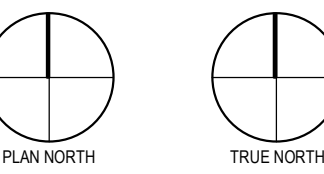
- 1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PANELBOARD PRODUCTS FROM ONE OF THE FOLLOWING (FOR EACH TYPE AND RATING OF PANELBOARD AND ENCLOSURE):
A. GENERAL ELECTRIC
B. SQUARE D
C. EATON CORPORATION
D. SIEMENS, I.T.E.
2. POWER DISTRIBUTION PANELS: PROVIDE DEAD-FRONT SAFETY-TYPE DISTRIBUTION PANELBOARDS RATED 208/120 OR 480/277 VOLT, 3-PHASE, 4-WIRE, SHORT CIRCUIT RATING OF PANEL AND DEVICES SHALL BE 22,000 RMS MINIMUM UNLESS NOTED OTHERWISE ON DRAWINGS. PROVIDE PANELBOARD SWITCHING AND PROTECTIVE DEVICES IN QUANTITIES, RATINGS, TYPE AND WITH ARRANGEMENT SHOWN, WITH ANTI-TURN SOLDERLESS PRESSURE-TYPE LINE SIDE CONNECTORS APPROVED FOR COPPER CONDUCTORS.
3. 480/277 VOLT LIGHTING PANELBOARDS: PROVIDE DEAD-FRONT SAFETY TYPE LIGHTING PANELBOARDS RATED 480/277, 3-PHASE, 4-WIRE, SHORT CIRCUIT RATING OF PANEL AND DEVICES SHALL BE 14,000 AIC MINIMUM UNLESS NOTED OTHERWISE ON DRAWINGS. PROVIDE PANELBOARD SWITCHING AND PROTECTIVE DEVICES IN QUANTITIES, RATINGS, TYPE AND WITH ARRANGEMENT SHOWN, WITH ANTI-TURN SOLDERLESS PRESSURE TYPE MAIN LUG CONNECTORS APPROVED FOR COPPER CONDUCTORS. EQUIP WITH COPPER, COPPER-PLATED OR ALUMINUM BUS BARS, AND FULL-SIZED NEUTRAL BUS, PROVIDE SUITABLE LUGS ON NEUTRAL BUS FOR OUTGOING FEEDERS REQUIRING NEUTRAL CONNECTIONS. PROVIDE MOLDED-CASE MAIN AND BRANCH CIRCUIT BREAKERS FOR EACH CIRCUIT, WITH TOGGLE HANDLES THAT INDICATE WHEN TRIPPED, WHERE MULTIPLE-POLE BREAKERS ARE INDICATED, PROVIDE WITH COMMON TRIP SO OVERLOAD ON ONE POLE WILL TRIP ALL POLES SIMULTANEOUSLY. PROVIDE BARE UNINSULATED GROUNDING BAR, SUITABLE FOR BOLTING TO ENCLOSURE.
4. 120/208 VOLT LIGHTING AND APPLIANCE PANELBOARDS: PROVIDE DEAD-FRONT SAFETY TYPE LIGHTING AND APPLIANCE PANELBOARDS AS INDICATED, WITH SWITCHING AND PROTECTIVE DEVICES IN QUANTITIES, RATINGS, TYPES AND ARRANGEMENTS SHOWN, WITH ANTI-TURN SOLDERLESS PRESSURE TYPE LUG CONNECTORS, APPROVED FOR USE WITH COPPER CONDUCTORS. CONSTRUCT UNIT FOR CONNECTING FEEDERS TO PANEL EQUIP WITH COPPER, COPPER PLATED OR ALUMINUM BUS BARS, FULL-SIZED NEUTRAL BAR, WITH BOLTING TYPE HEAVY-DUTY, QUICK-MAKE, QUICK-BREAK, SINGLE-POLE CIRCUIT-BREAKERS, WITH TOGGLE HANDLES THAT INDICATE WHEN TRIPPED. PROVIDE SUITABLE LUGS ON NEUTRAL BUS FOR EACH OUTGOING FEEDER REQUIRED. PROVIDE BARE UNINSULATED GROUNDING BARS SUITABLE FOR BOLTING TO ENCLOSURES. SELECT ENCLOSURES FABRICATED BY SAME MANUFACTURER AS PANELBOARDS, WHICH MATE AND MATCH PROPERLY WITH PANELBOARDS. MINIMUM INTERRUPTING CAPACITY OF MANUFACTURED PANELBOARDS SHALL BE 10,000 AIC, UNLESS NOTED OTHERWISE ON DRAWINGS.
5. MOLDED-CASE CIRCUIT BREAKERS: PROVIDE FACTORY ASSEMBLED, MOLDED CASE CIRCUIT BREAKERS OF FRAME SIZE INDICATED, PROVIDE BREAKERS WITH PERMANENT THERMAL AND INSTANTANEOUS MAGNETIC TRIPS IN EACH POLE AND AMPERE RATING AS INDICATED. CONSTRUCT WITH OVER CENTER, TRIP-FREE, TOGGLE TYPE OPERATING MECHANISMS WITH QUICK-MAKE, QUICK-BREAK ACTION AND POSITIVE HANDLE INDICATION. CONSTRUCT BREAKERS FOR MOUNTING AND OPERATING IN ANY PHYSICAL POSITION AND OPERATING IN AN AMBIENT TEMPERATURE OF 40°C. PROVIDE BREAKERS WITH MECHANICAL SCREW TYPE REMOVABLE CONNECTOR LUGS, ALCU RATED. ALL BREAKERS SHALL BE BOLT-IN TYPE CONSTRUCTION. ALL BREAKERS SHALL BE UL489 LISTED.
A. ALL SINGLE POLE BREAKERS SHALL BE RATED FOR "SWITCHING DUTY" (SWD) AND FOR OPERATION ON FLUORESCENT LIGHTING SOURCES.
B. ALL CIRCUIT BREAKERS PROTECTING HIGH INTENSITY DISCHARGE (HID) LIGHTING SHALL BE RATED AND LABELED "HID" FOR OPERATION ON HID LIGHTING SOURCES.
C. CIRCUIT BREAKERS USED FOR HEATING, AIR CONDITIONING, OR REFRIGERATION EQUIPMENT SHALL BE TYPE "HACR" AND UL LISTED FOR SUCH USE.
6. PANELBOARD MANUFACTURER SHALL PROVIDE A COMPLETE "COORDINATION STUDY" OF OVERCURRENT PROTECTION WITH ALL DOWN-STREAM OVERCURRENT DEVICES. COORDINATION STUDY SHALL BE USED TO ADVISE CONTRACTOR OF FINAL SETTINGS OF BREAKER EQUIPMENT FIELD ADJUSTMENTS. ALL SUBMITTALS WILL BE REJECTED UNLESS COORDINATION STUDY IS PROVIDED AT TIME OF SHOP DRAWING REVIEW.
7. PANELBOARD MANUFACTURER SHALL PROVIDE A COMPLETE "ARC FLASH STUDY" ALL SUBMITTALS WILL BE REJECTED UNLESS ARC FLASH STUDY IS PROVIDED AT TIME OF SHOP DRAWING REVIEW.

SECTION 16510 - LIGHTING FIXTURES

- 1. PROVIDE LIGHTING FIXTURES, OF SIZES, TYPES AND RATINGS INDICATED, COMPLETE WITH BUT NOT LIMITED TO, HOUSINGS, ENERGY EFFICIENT LAMPS, LAMP HOLDERS, REFLECTORS, ENERGY EFFICIENT BALLAST, STARTERS AND WIRING. SHOP FIXTURES FACTORY-ASSEMBLED, WITH THOSE COMPONENTS REQUIRED FOR A COMPLETE INSTALLATION. DESIGN FIXTURES WITH CONCEALED HINGES AND CATCHES, WITH METAL PARTS GROUNDING AS COMMON UNIT, AND SO CONSTRUCTED AS TO DAMPEN BALLAST GENERATED NOISE.
2. INSTALL LIGHTING FIXTURES AT LOCATIONS AND HEIGHTS AS INDICATED, IN ACCORDANCE WITH FIXTURE MANUFACTURER'S WRITTEN INSTRUCTIONS, APPLICABLE REQUIREMENTS OF NEC, NEMA'S STANDARD OF INSTALLATION, NEMA STANDARDS, AND WITH RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT LIGHTING FIXTURES FULFILL REQUIREMENTS.



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PLUMBING FIXTURE SCHEDULE									
ID	FIXTURE TYPE	MANUFACTURER	MODEL NO.	CONNECTION SIZES				DESCRIPTION	TRIM AND REMARKS
				CW	HW	WASTE	VENT		
SK-1	DOUBLE SINK	ELKAY	ECTRU3179T	1/2"	1/2"	2"	1 1/2"	DOUBLE BOWL UNDERMOUNT, 19 GA. STAINLESS STEEL SINK, 31-1/2" x 16-1/2" x 9" DEEP.	DELTA 9189-DST SINGLE HANDLE DECK MOUNT FAUCET WITH 2-FUNCTION PULL-DOWN SPRAYER, BRASS-CRAFT QUARTER TURN LOOSE KEY STOPS, OFFSET DRAIN, BRAIDED SUPPLIES, AND CHROME ESCUTCHEONS. MCQUIRE PW2125 INSULATION KIT.
DF-1	DRINKING FOUNTAIN	ELKAY	LVRCTL8WSK	1/2"		2"	1 1/2"	BIL-LEVEL WATER COOLER WITH SELF-CLOSING EASY-TOUCH CONTROLS ON FRONT, BOTTLE FILLER, CAPACITY OF 8.0 GPM FROM 80 TO 50 DEGREES FAHRENHEIT WITH AMBIENT TEMPERATURE OF 90 DEGREES FAHRENHEIT UTILIZING A 1/8 HP, 115V, 370W, 5A SINGLE-PHASE COMPRESSOR.	PROVIDE 1/4 TURN ANGLE BALL STOP WITH METAL HANDLE, P-TRAP WITH CLEANOUT AND WASTE ARM TO WALL, PROVIDE APRON FOR UPPER UNIT. COORDINATE MOUNTING HEIGHT AND COLOR WITH ARCHITECT.
FD-1	FLOOR DRAIN	JR SMITH	2010-NB			3"	1 1/2"	CAST IRON DRAIN WITH NICKEL BRONZE STRAINER, 1/2" TRAP PRIMER CONNECTION AND MEMBRANE FLASHING CLAMP.	PROVIDE OUTLET WITH P-TRAP AND CLEAN AND POLISH STRAINER TOP AFTER INSTALLATION. PROVIDE WITH 1/2" TRAP PRIMER CONNECTION WITH MEMBRANE FLASHING CLAMP.
FS-1	FLOOR SINK	JR SMITH	3411-AB			3"	1 1/2"	CAST IRON BODY, FLASHING CLAMP, ACID RESISTANT COATED INTERIOR AND CAST IRON GRATE, 8" SQUARE 1/2" GRATE AND ALUMINUM SEDIMENT BUCKET.	PROVIDE OUTLET WITH P-TRAP.
HB-1	HOSE BIBB	WOODFORD	MODEL 14	3/4"				ANTI-SIPHON, AUTOMATIC DRAINING QUARTER TURN WALL HYDRANT, NON-FREEZE INTEGRAL VACUUM BREAKER, ALL STAINLESS STEEL INTERIOR PARTS, 3/4" INLET.	MOUNT 18" (MINIMUM) ABOVE FINISHED FLOOR, PROVIDE BALL VALVE ACCESSIBLE FROM FLOOR FOR MAINTENANCE.
Lv-1	LAVATORY (ADA)	KOHLER	K-2882 "VERTICYL"	1/2"	1/2"	2"	1 1/2"	WHITE VITREOUS CHINA RECTANGULAR UNDERMOUNT BATHROOM SINK WITH OVERFLOW DRAIN.	PROVIDE SLOAN FAUCET #EAF-350-BAT-CP-0.35GPM-MLM-IR-IO-FCI BATTERY POWER SUPPLY, 0.35 GPM AERATOR, SINGLE HOLE MOUNTED, INFRARED SENSOR, PROVIDE SLOAN SOAP DISPENSER #ESD-2000-CP, BATTERY POWERED, INFRARED SENSOR ACTIVATED, SINGLE HOLE MOUNT. PROVIDE GRID STRAINER DRAIN WITH TAILPIECE, CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT, WASTE ARM TO WALL, WITH ESCUTCHEON AND 1/4 TURN ANGLE BALL STOPS WITH METAL HANDLE. INSULATE WATER AND WASTE PIPING UNDER LAVATORY WITH TRUBERO "LAW GUARDZ" #102E-2, RI 3/4" AFF TO RIM.
MS-1	MOP SINK	FIAT	TSB100	1/2"	1/2"	3"	1 1/2"	24"x24"x10" ONE-PIECE MOLDED STONE CONSTRUCTION WITH 3" STAINLESS STEEL DRAIN.	PROVIDE #MSG-2424 STAINLESS STEEL WALL GUARD ON TWO SIDES, #830-AA STAINLESS STEEL BUMPER GUARD ON TWO SIDES, #830-AA SERVICE FAUCET AND #832-AA 30" HOSE AND HOSE BRACKET.
SH-1	SHOWER	JR SMITH	210-13	1/2"	1/2"	3"	1 1/2"	SET SQUARE SHOWER DRAIN IN FLOOR PER PLANS. REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS.	PROVIDE MOEN #TL182EP SINGLE LEVER VALVE WITH 1.75 GPM SHOWERHEAD AND #35889P 1 TO GPM HAND SHOWER WITH 30" SLIDE BAR AND 69" SPIRAL HOSE. PROVIDE WITH ASSE1016 LISTED SHOWER VALVE.
MV	THERMAL MIXING VALVE	SYMMONS	7-225-CK "MAXLINE"	3/4"	3/4"			1/2" INLETS AND OUTLET, THERMOSTATIC CONTROLLER WITH INTEGRAL CHECKS, ALL BRASS BODY WITH DUAL STAINLESS STEEL STRAINER, VANDAL-RESISTANT TEMPERATURE ADJUSTMENT HANDLE.	MOUNT IN ACCESSIBLE LOCATION.
TP	TRAP PRIMER	PRECISION PLUMBING PRODUCTS	PR-500 "PRIME-RITE"	1/2"				AUTOMATIC OPERATION, 1/2" INLET AND OUTLET. SERVICE UP TO FOUR (4) FLOOR DRAINS WITH DISTRIBUTION UNIT.	INSTALL IN ACCESSIBLE LOCATION WITH TRAP PRIMER LOCATED MINIMUM OF 8" ABOVE FLOOD LEVEL OF FLOOR DRAIN RIM.
UR-1	URINAL (ADA)	AMERICAN STANDARD	6002.001 "PINTBROOK"	3/4"		2"	1 1/2"	WHITE VITREOUS CHINA, 0.125 GPF, WASHOUT FLUSH ACTION 3/4" TOP SPUD AND RIM AT 24" AFF. LOCATE HANDLE ON ACCESSIBLE SIDE.	AMERICAN STANDARD 6063.013.002 0.125 GPF BATTERY POWERED FLUSH VALVE, ZURN Z1222 URINAL CARRIER.
WMB-1	WASHING MACHINE BOX	SIoux CHIEF	696-1011	1/2"	1/2"	2"	1 1/2"	QUARTER TURN BALL VALVE WITH 3/8" COMPRESSION OUTLET AND 1/2" SUPPLY CONNECTION AND MINIRESTER WATER HAMMER. PVC/ABS SUPPLY BOX.	FRAME AND DEBRIS COVER. GALVANIZED STEEL BRACKET.
WB-1	WATER BOX	SIoux CHIEF	696-1011	1/2"				QUARTER TURN BALL VALVE WITH 3/8" COMPRESSION OUTLET AND 1/2" SUPPLY CONNECTION AND MINIRESTER WATER HAMMER. PVC/ABS SUPPLY BOX.	FRAME AND DEBRIS COVER. GALVANIZED STEEL BRACKET.
WC-1	WATER CLOSET	AMERICAN STANDARD	3351.101 "AFWALL"	1 1/4"		4"	2"	WHITE VITREOUS CHINA, 1.28 GPF, WALL MOUNTED ELONGATED SIPHON, JET BOWL, 1-1/2" TOP SPUD AND RIM AT 16-1/2" AFF. LOCATED HANDLE ON ACCESSIBLE SIDE.	AMERICAN STANDARD #6065.121.002 1.28 GPF SELECTRONIC BATTERY POWERED FLUSH VALVE, AMERICAN STANDARD #5901.110 STANDARD SEAT WITH EVERCLEAN, ZURN ZN1201 NARROW WATER CLOSET CARRIER.

PLUMBING EQUIPMENT SCHEDULE										
TYPE	MARK	FIXTURE TYPE	MANUFACTURER	MODEL	ELECTRICAL DATA				DESCRIPTION	TRIM AND REMARKS
					VOLT	PHASE	WATT	MOCP		
RP	1	RECIRCULATION PUMP	GRUNDFOS	ALPHA2	120 V	1	65 W	20 A	BRONZE BODY RECIRCULATING PUMP WITH "AUTODAPT" VARIABLE SPEED MOTOR, 115V-1P, 0.65A, VARIABLE 5-65W.	INSTALL NEAR WATER HEATER PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE WITH HONEYWELL L6006C SURFACE MOUNT AQUASTAT SET TO 5 DEGREES FAHRENHEIT BELOW WATER HEATER OPERATING TEMPERATURE.
WH	1	ELECTRIC WATER HEATER	AO SMITH	DRE-80	480 V	3	15000 W	20 A	80 GALLON STORAGE, 78 GPM RECOVERY AT 80 DEGREES FAHRENHEIT RISE, 19KW HEATING INPUT (3 SKW HEATING ELEMENTS) AT 480V-3P, 20A ELECTRICAL SERVICE, MEETING THE CURRENT EDITION OF ASHRAE STANDARD 90 AND LOCAL ENERGY CONSERVATION CODES.	PROVIDE WATER HEATER ON HOUSEKEEPING PAD PER "ELECTRIC WATER HEATER WITH PUMP" DETAIL. PROVIDE AMTROL #57-8 THERMAL EXPANSION TANK WITH A TOTAL VOLUME OF 3.2 GALLONS AND A MAX ACCEPTANCE VOLUME OF 1.9 GALLONS, 3/4" CONNECTION, INSTALL PER MANUFACTURER'S INSTRUCTIONS.
WH	2	INSTANTANEOUS WATER HEATER	EEMAX	AMOO7240T	208 V	1	5000 W	30 A	INSTANTANEOUS WATER HEATER WITH INTEGRATED ASSE 1070 MIXING VALVE TO SERVE SINGLE LAVATORY.	68 DEGREES FAHRENHEIT RISE AT 0.5 GPM WITH 0.3 GPM TURN ON AND 105-110 DEGREES FAHRENHEIT STAGED FACTORY SET TEMPERATURE. REFER TO "INSTANTANEOUS WATER HEATER" DETAIL.
WS	1	WATER SOFTNER	CULLIGAN	CTM-120-PF	120 V	1	600 W	15 A	WATER SOFTENER WITH DESIGN FLOW OF 70 GPM, 3500 GALLONS DAILY USAGE, 24" 50" BRINE DRAIN, NON-ELECTRIC CONTROL VALVE, DUAL MEDIA TANK, VOLUMETRIC, DEMAND-INITIATED AND COUNTER CURRENT REGISTRATION.	INSTALL PER MANUFACTURER'S INSTRUCTIONS AND CONTACT CHRISTINE WISKUR AT WISKUR@CULLIGAN.COM FOR FURTHER INSTALLATION QUESTIONS.

GAS SCHEDULE		
MARK	DESCRIPTION	CFH
F-4	MECHANICAL UNIT	76
F-5	MECHANICAL UNIT	51
F-6	MECHANICAL UNIT	51
F-7	MECHANICAL UNIT	64
TOTAL:		242

NOTE:
GAS SYSTEM DESIGNED BASED ON A SERVICE PRESSURE OF 7" WC WITH A PRESSURE DROP OF 0.5" WC AND A TOTAL DEVELOPED LENGTH OF 150 FEET. PIPE SIZING BASED ON THE 2021 IFGC TABLE 402.4(2).

PLUMBING SPECIFICATION

THE WORK INCLUDES MODIFICATION TO THE EXISTING PLUMBING SYSTEM AND PROVIDING NEW MATERIALS, FITTINGS AND ACCESSORIES NECESSARY FOR A COMPLETE FUNCTIONING PLUMBING SYSTEM. THE WORK ALSO INCLUDES ROUGH-IN AND FINAL CONNECTIONS TO FOOD SERVICE EQUIPMENT AND BEVERAGE DISPENSING EQUIPMENT PROVIDED BY OTHERS. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND/OR ORDINANCES AND IS SUBJECT TO INSPECTION.

HOOK-UP CHARGES, PERMITS AND ALL OTHER EXPENSES RELATED TO A COMPLETE AND FUNCTIONING PLUMBING SYSTEM ARE INCLUDED AS A PART OF THIS SECTION.

THE INTENT OF THE DRAWINGS IS TO INDICATE THE GENERAL EXTENT OF WORK REQUIRED FOR THE PROJECT. THE DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, FIXTURES AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALE FOR EXACT MEASUREMENTS. REFER TO MANUFACTURER'S STANDARD ROUGH-IN DRAWINGS FOR PLUMBING FIXTURE INSTALLATION REQUIREMENTS. COMPLY WITH ALL APPLICABLE ADA INSTALLATION REQUIREMENTS.

COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE.

PIPING SYSTEMS - GENERAL: ALL PIPING SHALL BE RUN PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION. ALL PIPING SHALL BE CONCEALED EXCEPT IN UNFINISHED SPACES. INSTALL AS REQUIRED TO MEET ALL CONSTRUCTION CONDITIONS AND TO ALLOW FOR INSTALLATION OF OTHER WORK SUCH AS DUCTS AND ELECTRICAL CONDUIT. AT ALL CONNECTIONS BETWEEN FERROUS PIPING AND NONFERROUS PIPING, PROVIDE AN ISOLATING DIELECTRIC LINER. ALL HANGERS SHALL BE COMPATIBLE WITH PIPING MATERIAL TO PREVENT CORROSION-FIT THE PROJECT SITE.

PROVIDE ALL FITTINGS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY TO FACILITATE THE PLUMBING SYSTEMS FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED.

FIXTURES/EQUIPMENT FURNISHED BY OTHERS: PLUMBING CONTRACTOR SHALL PROVIDE UTILITY CONNECTIONS REQUIRED SUCH AS WATER, GAS, AIR, SUPPLIES, WASTE OUTLET, TRAPS, ETCETERAS AT ALL PLUMBING TYPE FIXTURES OR EQUIPMENT FURNISHED BY OWNER, GENERAL CONTRACTOR, FOOD SERVICE CONTRACTOR, EQUIPMENT SUPPLIER, ETCETERA. INCLUDED ARE STOP VALVES, ESCUTCHEONS, AND CHROME PLATED BRASS TUBING WITH COMPRESSION FITTINGS.

SEWER AND WASTE PIPING: PROVIDE ALL DRAINS AND SEWERS WITHIN THE PROJECT SPACE WITH CONNECTION TO THE EXISTING DRAINAGE SYSTEMS ON-SITE. SANITARY WASTE AND GREASE WASTE DRAINAGE PIPING SHALL BE SERVICE-WEIGHT HUB AND SPIGOT TYPE CAST-IRON WITH NEOPRENE GASKET JOINT SYSTEM OR SERVICE-WEIGHT HUBLESS CAST-IRON PIPE AND FITTINGS AND CONNECTIONS. ALL JUMPED WASTE SHALL BE SOLVENT WELDED PVC PIPE FROM THE PUMP TO THE POINT OF CONNECTION WITH THE EXISTING BUILDING DRAIN. ALL GRAVITY DRAINAGE PIPING SHALL BE UNIFORMITY PITCHED, 1/4" PER FOOT FOR PIPE SIZES 3" AND SMALLER, 1/8" PER FOOT FOR PIPE SIZES 4" AND LARGER, UNLESS OTHERWISE REQUIRED BY EXISTING CONDITIONS, OR INDICATED ON THE DRAWINGS.

VENTS: PROVIDE ALL VENTS WITHIN THE PROJECT SPACE WITH CONNECTION TO THE EXISTING VENT SYSTEMS ON-SITE. VENT PIPING SHALL BE SERVICE-WEIGHT HUB AND SPIGOT TYPE CAST-IRON WITH NEOPRENE GASKET JOINT SYSTEM OR SERVICE-WEIGHT HUBLESS CAST-IRON PIPE AND FITTINGS AND CONNECTIONS.

CONDENSATE AND INDIRECT DRAIN PIPING: TYPE M COPPER TUBING.

CLEANOUTS: PROVIDE CLEANOUTS AT THE END OF EACH HORIZONTAL RUN, AND AT THE BASE OF ALL VERTICAL WASTE AND DRAIN PIPES. CLEANOUTS SHALL BE OF THE SAME SIZE AS THE PIPES THEY SERVE. REFER TO CODE REQUIREMENTS. PROVIDE SUITABLE WALL OR FLOOR CLEANOUTS WITH ACCESSORIES TO OBSCURE FROM VIEW.

WATER DISTRIBUTION PIPING: LAUNCH WATER PIPING SO THAT THE ENTIRE SYSTEM CAN BE DRAINED. ABOVE GRADE HOT AND COLD WATER PIPING SHALL BE 1/2" MINIMUM TYPE K COPPER TUBING WITH WROUGHT COPPER FITTINGS AND SWEAT CONNECTIONS OR GROUP OF FITTINGS WELDED PVC PIPE. BELOW GRADE HOT AND COLD WATER PIPING SHALL BE 1/2" MINIMUM TYPE K COPPER TUBING WITH WROUGHT COPPER FITTINGS, AND SWEAT CONNECTIONS OR CPVC WHERE ALLOWED BY AUI. PROVIDE WATER HAMMER ARRESTERS AT EACH FIXTURE OR GROUP OF FIXTURES AS REQUIRED. INSTALL CHROME PLATED BRASS ESCUTCHEON PLATES AT ALL PENETRATIONS THROUGH FINISHED SURFACES INCLUDING CABINET INTERIORS). USE TIN-ANTIMONY SOLDER, 95/5 FOR ALL SWEAT FITTINGS OF COPPER PIPING.

PIPE INSULATION: RIDGE ONE-PIECE FIBERGLASS PIPE INSULATION WITH REQUIREMENTS COMPLYING WITH ASTM C 547, SELF-SEALING ADHESIVE LAP LONGITUDINAL JOINTS AND BUTT STRIPS FOR TRANSVERSE JOINTS. JACKETING SHALL CONFORM TO ASTM C 1136. TYPE 1, MAXIMUM VAPOR TRANSMISSION RATING OF 0.02 PERM WHEN TESTED ACCORDING TO ASTM E 96, PROCEDURE A. (K VALUE) 0.25 BTU/IN.HR. * FT² * F AT 75°F MEAN TEMPERATURE WITH A R-VALUE OF R4. PROVIDE INSULATION THICKNESS AS INDICATED.

- DOMESTIC COLD WATER PIPING 1" AND SMALLER: 1/2" THICKNESS
- DOMESTIC COLD WATER PIPING 1-1/4" - 2" 3/4" THICKNESS
- DOMESTIC COLD WATER 2-1/2" AND LARGER: 1" THICKNESS
- CONDENSATE PIPING: 1/2" THICKNESS
- DOMESTIC HOT WATER PIPING 2" AND SMALLER: 1" THICKNESS
- DOMESTIC HOT WATER PIPING 2" AND LARGER: 1-1/2" THICKNESS
- HOT WATER AND WASTE PIPING BELOW HANDICAP LAVATORIES/SINKS

PIPE INSULATION: FLEXIBLE, ONE PIECE, EXPANDED CLOSED-CELL ELASTOMERIC PIPE INSULATION WITH REQUIREMENTS COMPLYING WITH ASTM C 518. SELF-SEALING WITH A MAXIMUM VAPOR TRANSMISSION RATING OF 0.20 PERM WHEN TESTED ACCORDING TO ASTM E 96. THERMAL CONDUCTIVITY (K VALUE) SHALL NOT EXCEED 0.27 BTU/IN.HR. * FT² * F AT 75°F MEAN TEMPERATURE, WITH A MINIMUM R-VALUE OF R3.1. INSULATION AND JACKET SHALL BE RATED FOR OPERATING TEMPERATURES FROM 40°F TO 180°F. PROVIDE INSULATION THICKNESS AS INDICATED.

- DOMESTIC COLD WATER PIPING 2" AND SMALLER: 1/2" THICKNESS
- CONDENSATE PIPING: 1/2" THICKNESS
- DOMESTIC HOT WATER PIPING 2" AND SMALLER: 1/2" THICKNESS

SHUTOFF VALVES, WITH UNIONS SHALL BE PROVIDED FOR SERVICE TO EACH PLUMBING FIXTURE, FOOD SERVICE EQUIPMENT ITEM OR OTHER EQUIPMENT ITEM, TO FACILITATE ISOLATION FOR REPAIR OR REPLACEMENT. VALVES SHALL BE EQUAL TO CRANE #9302-9322 BALL VALVE. CONSTRUCTION - TWO REG. BRONZE BODY, FULL PORTED, CHROME PLATED BRASS BALL REPLACEMENT "TEFLON OR TFE" SEATS AND SEALS, RATING - 150 PSI WSP, 600 PSI WOG, CONNECTIONS - SOLDER OR TREADED ENDS TO MATCH PIPING. STANDARDS COMPLIANCE - BRONZE OR BRASS VALVES: MSS-SP-110.

ACCESS PANELS SHALL BE PROVIDED WHERE CONCEALED CONTROL DEVICES, VALVES, ETCETERA ARE CONCEALED WITHIN WALLS, WHERE ACCESS FOR ADJUSTMENT AND MAINTENANCE IS POSSIBLE THROUGH LAY-IN SUSPENDED CEILING, ACCESS PANELS ARE NOT REQUIRED.

INSTALLATION: THOROUGHLY CLEAN ITEMS BEFORE INSTALLATION. CAP PIPE OPENINGS TO EXCLUDE DIRT UNTIL FIXTURES ARE INSTALLED AND FINAL CONNECTIONS HAVE BEEN MADE. PROCEED AS RAPIDLY AS CONSTRUCTION WILL PERMIT. SET FIXTURES LEVEL AND IN PROPER ALIGNMENT. INST. ALL SUPPLIES IN PROPER ALIGNMENT WITH FIXTURES. INSTALL SILICONE SEALANT BETWEEN FIXTURES AND ADJACENT MATERIAL, FOR SANITARY JOINT, AND OMIT ESCUTCHEONS.

REPAIR EXISTING PLUMBING SYSTEM COMPONENTS DAMAGED BY CONSTRUCTION OPERATIONS AND RESTORE TO ORIGINAL CONDITIONS.

TEST WATER SYSTEM UNDER 150 PSIG HYDROSTATIC PRESSURE, FOR FOUR (4) HOURS MINIMUM. WHEN TESTING INDICATES MATERIALS OR WORKMANSHIP IS DEFICIENT, REPLACE OR REPAIR AS REQUIRED, AND REPEAT TEST UNTIL STANDARDS ARE ACHIEVED.

TEST SANITARY DRAINAGE AND VENT SYSTEM BY FILLING WITH WATER, WITH ALL POINTS IN THE SYSTEM BEING SUBJECT TO PRESSURE OF AT LEAST 10' OF WATER. WATER LEVEL SHALL REMAIN STATIONARY FOR A PERIOD OF ONE HOUR, WITHOUT ANY PIPE OR JOINT LEAKAGE. IF TESTING INDICATES DEFICIENCIES REPLACE OR REPAIR AS REQUIRED, AND REPEAT TEST UNTIL STANDARDS ARE ACHIEVED.

PROVIDE A COMPLETE GAS PIPING SYSTEM TO SERVE KITCHEN EQUIPMENT FURNISHED BY OTHERS, AS NOTED ON THE DRAWINGS. PROVIDE EITHER THREADED STEEL OR MALLEABLE IRON PIPE WITH MALLEABLE FITTINGS OR WELDED STEEL. PROVIDE ALL UNIONS, SHUT-OFF VALVES AND DIRT LEGS REQUIRED BY NFPA-54 AND GOVERNING LOCAL CODES AND AT EACH GAS APPLIANCE CONNECTION. PROVIDE ALL TESTS, METERS, INSPECTIONS, HANGERS AND EQUIPMENT CONNECTIONS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM. PAINT GAS LINES COORDINATE COLOR WITH OWNER.

PLUMBING CONTRACTOR TO HAVE A MINIMUM OF 5 YEARS EXPERIENCE AND BE LICENSED.

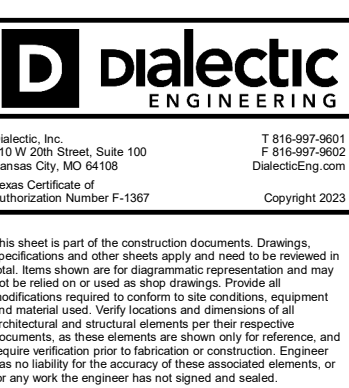
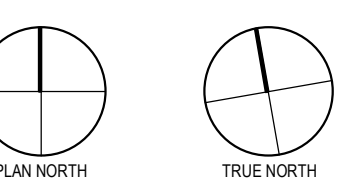
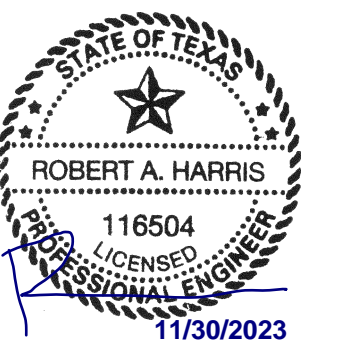
ALL SCHEDULING OF WORK ON SHUT DOWNS SHALL BE COORDINATED WITH THE BUILDING OWNERS/ENGINEER 72 HOURS IN ADVANCE OF ANY WORK BEING DONE.

GENERAL PLUMBING NOTES

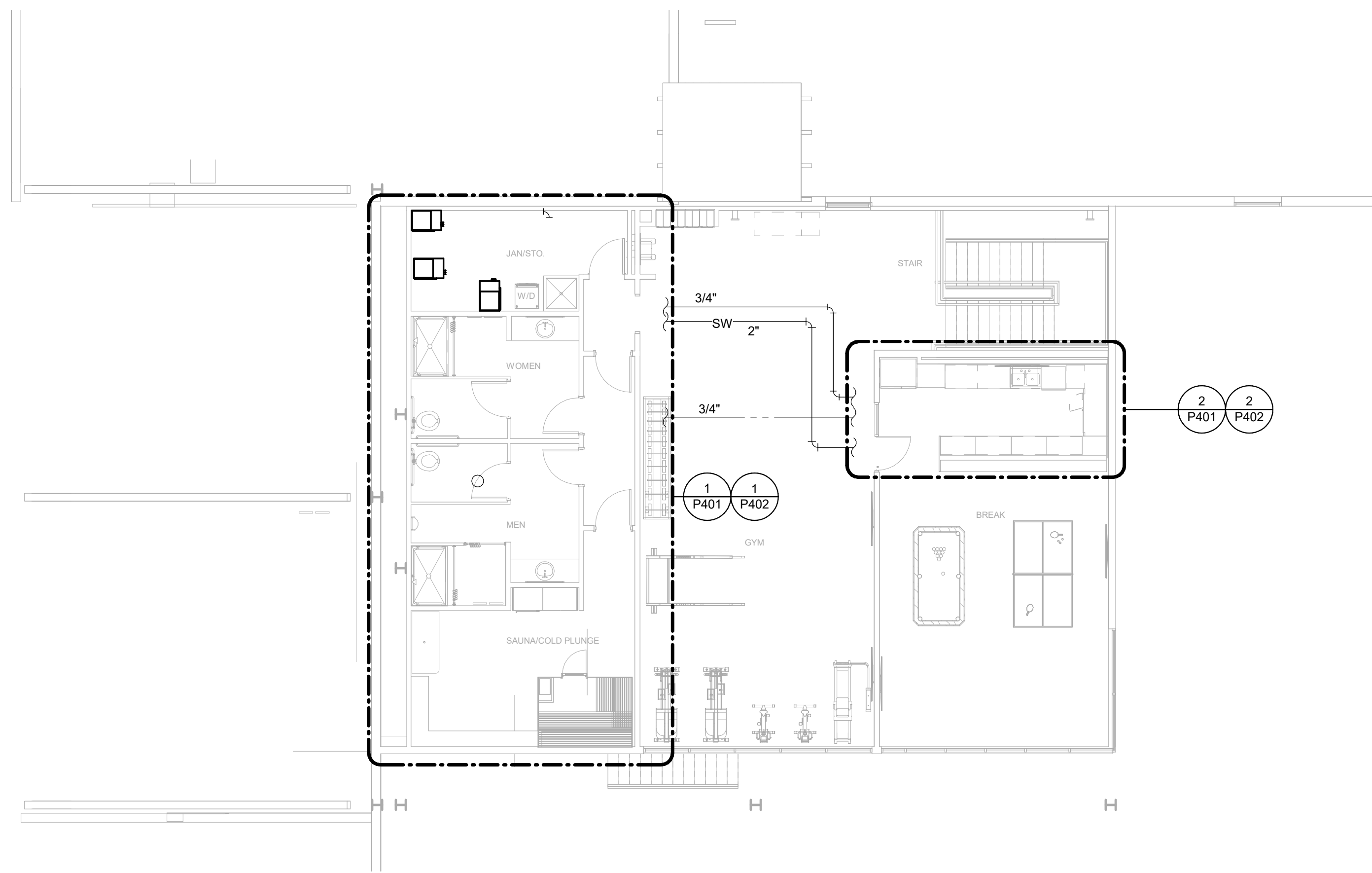
- REFER TO PLUMBING SPECIFICATION ELSEWHERE IN DRAWINGS FOR FURTHER INFORMATION AND REQUIREMENTS FOR PLUMBING CONTRACTOR.
- CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS, INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.
- COORDINATE WITH WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF OWNER, AND WITH CONSTRAINTS OF EXISTING CONDITIONS OF PROJECT SITE. PROVIDE PIPE RISES, DROPS, AND OFFSETS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF DISCREPANCIES BEFORE STARTING WORK.
- DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING GENERAL LOCATION, TYPE, LAYOUT AND EQUIPMENT REQUIRED. DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE PIPING, CONNECTIONS, FITTINGS, VALVES, OFFSETS AND ALL MATERIALS NECESSARY FOR A COMPLETE SYSTEM.
- ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING AUTHORITY. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- PROVIDE WATER HAMMER ARRESTORS THROUGHOUT WATER SYSTEMS AS REQUIRED PER "WATER HAMMER ARRESTERS" DETAIL.
- PROVIDE BACKFLOW PREVENTION DEVICES IN WATER LINES FEEDING PLUMBING FIXTURES AND EQUIPMENT AS SHOWN ON PLANS AND ELSEWHERE AS REQUIRED BY AUTHORITY HAVING JURISDICTION. USE DEVICES OF APPROVED MANUFACTURER AND TYPE IN ACCORDANCE WITH REQUIREMENTS OF AUTHORITY HAVING JURISDICTION.
- VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. IF PRESSURE AT BUILDING ENTRY PRIOR TO ALL LOCALLY REQUIRED DEVICES IS LESS THAN 80 PSIG STATIC, CONTACT OWNER'S REPRESENTATIVE. IF PRESSURE EXCEEDS 80 PSIG, PROVIDE PRESSURE REDUCING VALVE SET AT 80 PSIG.
- SUSPEND HORIZONTAL SERVICE PIPING FROM UNDERSIDE OF ROOF OR FLOOR STRUCTURE UNLESS OTHERWISE INDICATED. INSTALL PIPING AS HIGH AS POSSIBLE. EXTEND DOWN IN WALLS, PARTITIONS AND CHASES TO SERVE FIXTURES AND EQUIPMENT.
- VERIFY SERVICE CONNECTION POINTS, SIZES, ELEVATIONS AND METERING LOCATIONS FOR PROJECT WITH LOCAL UTILITY COMPANIES AND/OR CIVIL ENGINEER, AS APPLICABLE.
- USE OF COMBUSTIBLE MATERIALS IS NOT ALLOWED IN RETURN AIR PLENUMS. MATERIALS USED IN PLENUMS SHALL HAVE FLAME SPREAD RATING NOT TO EXCEED 25 AND SMOKE DEVELOPED RATING NOT TO EXCEED 50 WHEN TESTED IN ACCORDANCE WITH ASTM E84.
- WATER ENTRY SERVICE PIPING, NEW AND/OR REVISED, CONTRACTOR SHALL ENSURE AND PROVIDE MINIMUM 10'-0" LINEAR FEET OF METAL PIPING MATERIAL BELOW GRADE IN CONTACT WITH EARTH FOR CONNECTION OF ELECTRICAL SERVICE GROUNDING.
- ALL PLUMBING LINES SHALL BE JET SPRAYED, CLEANED AND DISINFECTED. ALL TRAPS SHALL BE PUMPED AND CLEANED. GC TO PROVIDE PROOF OF COMPLIANCE.

PLUMBING SYMBOLS LEGEND

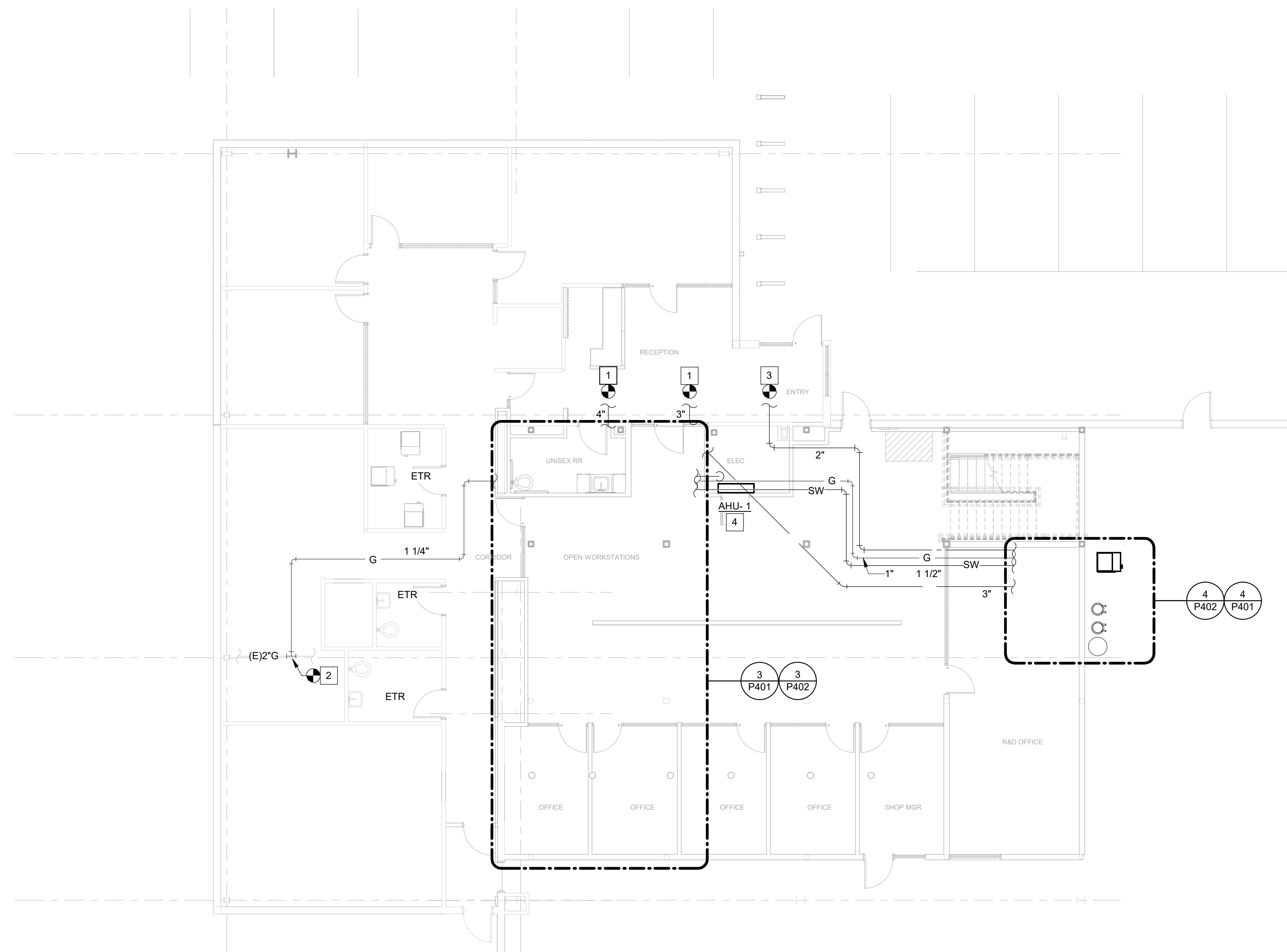
ABBREVIATIONS:	
AFF/AFG	ABOVE FINISHED FLOOR/GRADE
BFP	BACKFLOW PREVENTER
CO	CLEANOUT
FFCO/FGCO	FLUSH FLOOR/GRADE CLEANOUT
FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR
IW	INDIRECT WASTE
PC	PLUMBING CONTRACTOR
RI	ROUGH-IN
TP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VTR	VENT THRU ROOF
WCO	WALL CLEANOUT
(E)	EXISTING
LINETYPES:	
---	EXISTING PLUMBING LINE - SEE DRAWING
----	COLD WATER (CW)
----	COLD WATER (CW) - BELOW SLAB/GRADE
-FW-	FILTERED WATER SUPPLY (FW)
-SW-	SOFT COLD WATER (SW)
-F-	PIPE PROTECTION (F) (SPRINKLER/STANDPIPE)
----	HOT WATER (HW)
----	TEMPERED HOT WATER (TW)
----	HOT WATER RETURN (HWR)
-G-	GAS LINE (G)
-D-	CONDENSATE LINE (D)
----	PLUMBING VENT (V)
----	PLUMBING VENT (V) - BELOW SLAB/GRADE
----	SANITARY WASTE (SAN) - BELOW SLAB/GRADE
GENERAL REFERENCES/NOTATIONS:	
	CONNECT TO EXISTING
	PLAN NOTE DESIGNATION
	CIRCLE NOTE DESIGNATION
	FIXTURE/EQUIPMENT NOTE DESIGNATION
	FIRE SPRINKLER NOTE DESIGNATION
	REVISION DESIGNATION
	HVAC EQUIPMENT DESIGNATION
PIPE SYMBOLS:	
	PIPE TURNING UP/DOWN
	TEE TURNING UP/DOWN
	SHUT-OFF VALVE (BALL TYPE)
	CHECK VALVE
	BALANCING VALVE
	END CAP
SYMBOLS LEGEND NOTES:	
REFER TO SPECIFICATIONS AND PLAN NOTES FOR DETAILED DESCRIPTION OF ALL DEVICES SHOWN IN THIS SCHEDULE, PROVIDED BY THIS CONTRACTOR.	



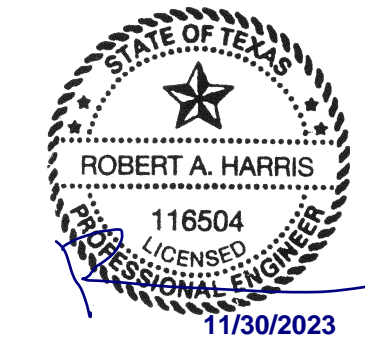
#	PLUMBING KEY NOTES
1	CONNECT NEW SANITARY PIPING TO EXISTING SANITARY PIPING. FIELD VERIFY EXACT LOCATION OF CONNECTION AND ROUTING REQUIREMENTS.
2	CONNECT NEW GAS PIPING TO EXISTING GAS PIPING. FIELD VERIFY EXACT LOCATION OF CONNECTION AND ROUTING REQUIREMENTS. GAS SYSTEM DESIGNED BASED ON A SERVICE PRESSURE OF 7" WC WITH A PRESSURE DROP OF 0.5" WC AND A TOTAL DEVELOPED LENGTH OF 150 FEET. PIPE SIZING BASED ON THE 2021 IFGC TABLE 402.2.
3	CONNECT NEW WATER PIPING TO EXISTING WATER PIPING. FIELD VERIFY EXACT LOCATION OF CONNECTION AND ROUTING REQUIREMENTS.
4	CONNECT TO AHU-1 PER "AIR HANDLING UNIT CONDENSATE" DETAIL.



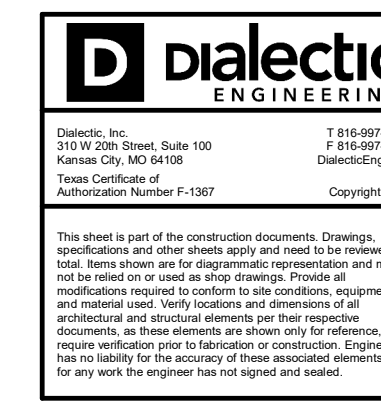
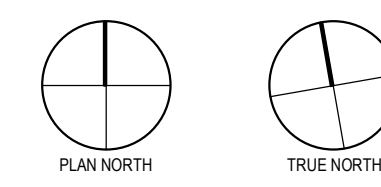
2 OVERALL PLUMBING PLAN - LV 2
1/8" = 1'-0"



1 OVERALL PLUMBING PLAN - LV 1
1/8" = 1'-0"



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IFP 12/01/23

Project Number	23-01-014
Drawn By	WRD
Checked By	JMB

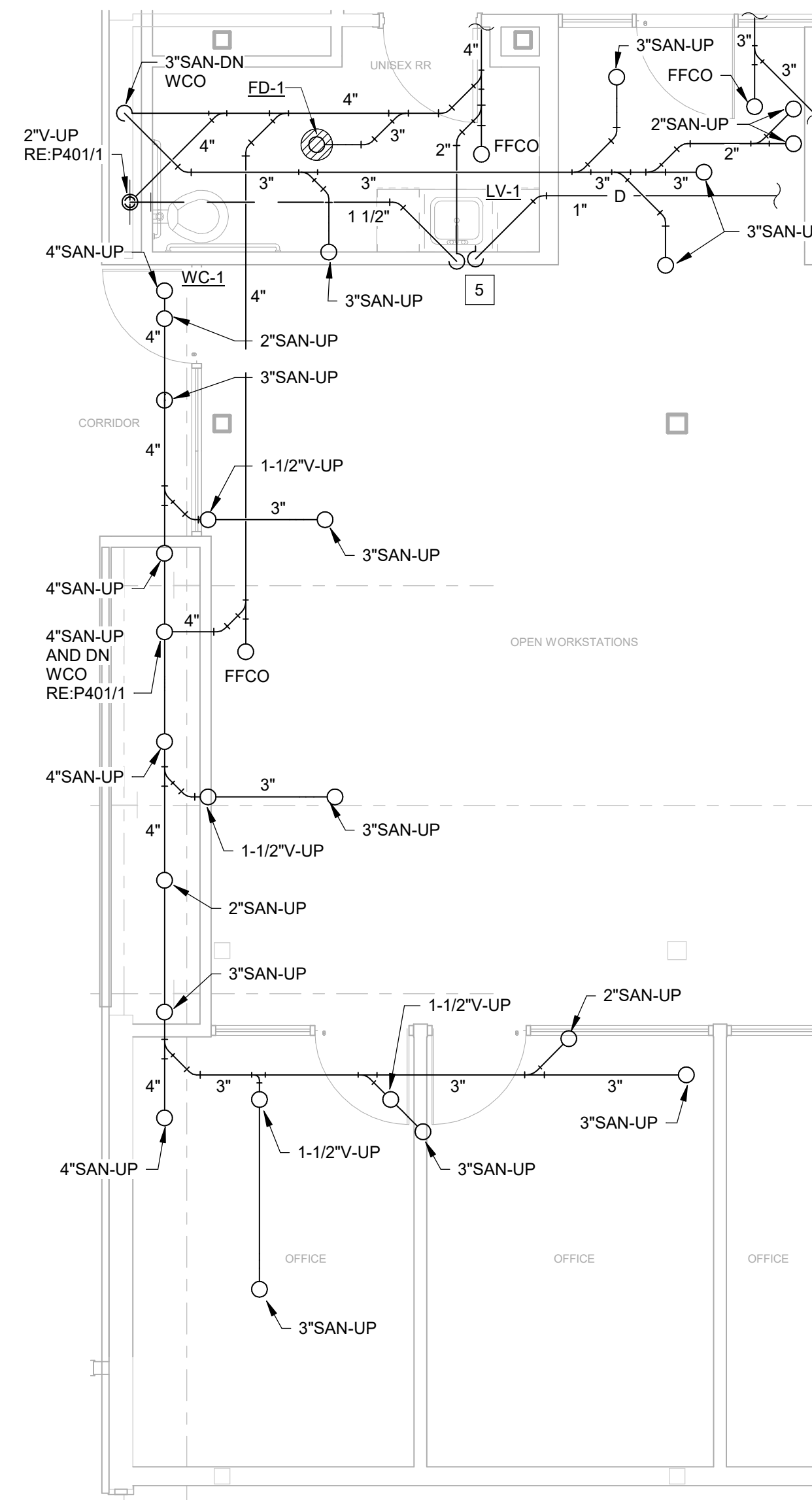
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P111

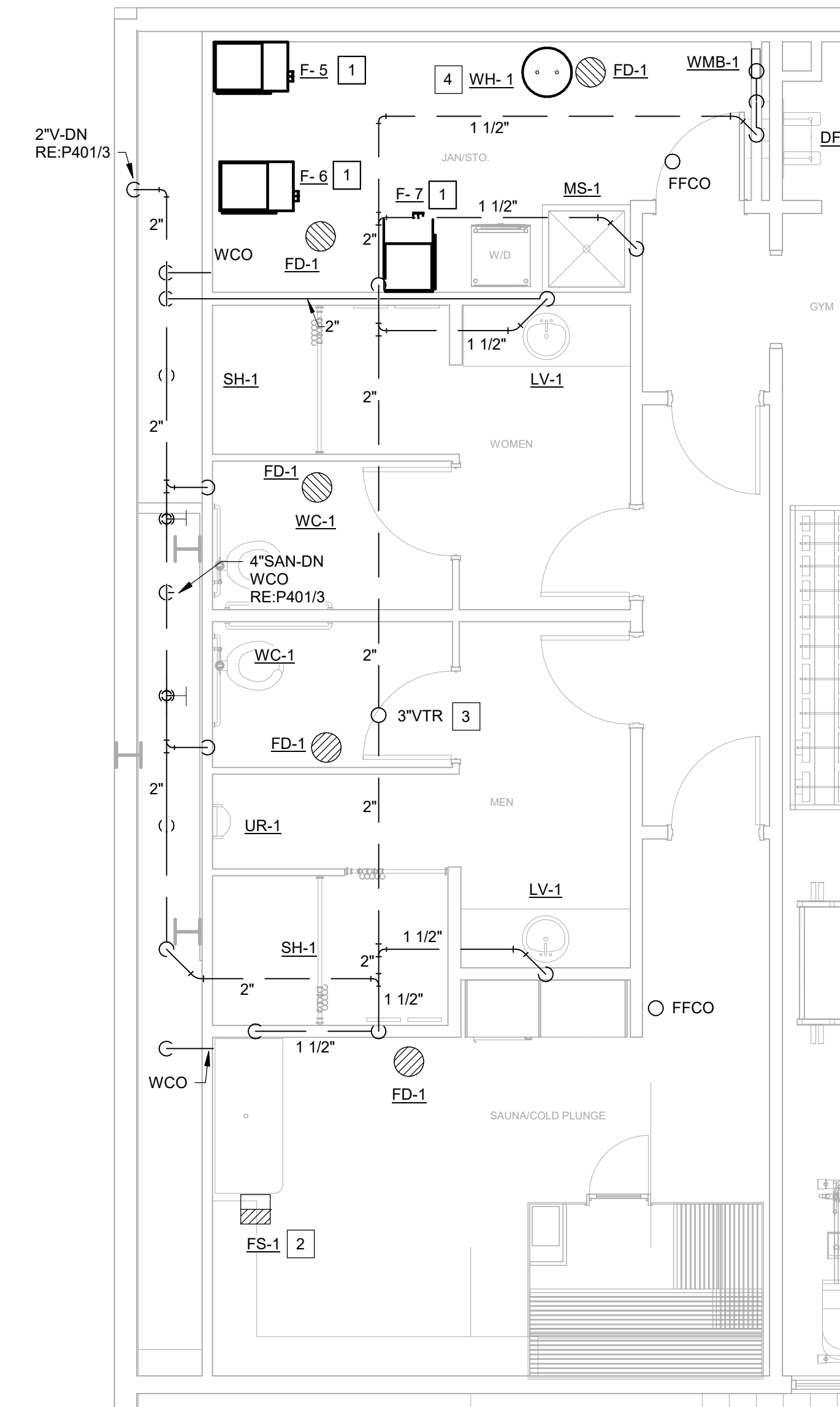
PLUMBING PLANS

PLUMBING KEY NOTES

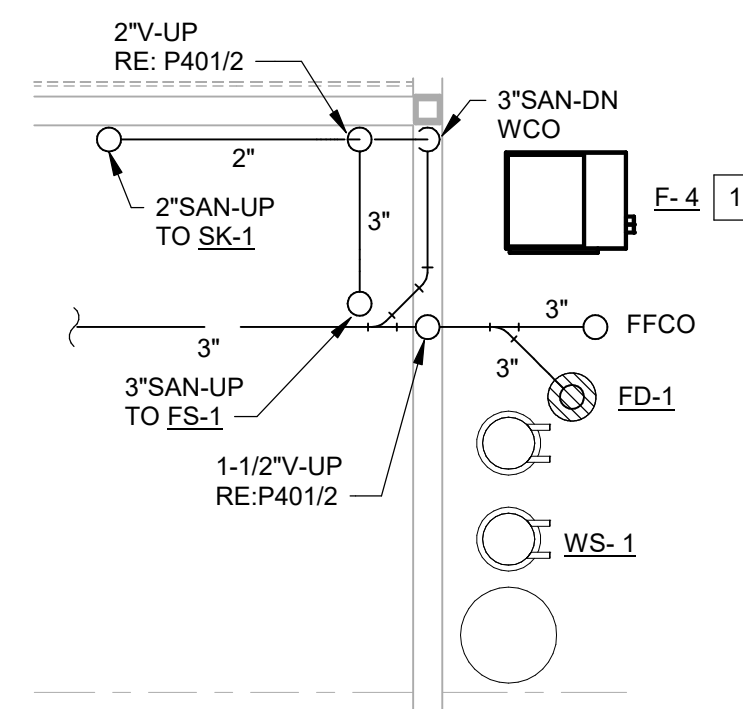
- 1 CONNECT CONDENSATE DRAIN TO FURNACE PER "GAS FURNACE CONNECTION" DETAIL. ROUTE CONDENSATE TO DRAIN TO NEAREST FLOOR DRAIN PER "INDIRECT DRAIN" DETAIL.
- 2 PROVIDE FLOOR SINK IN ACCESSIBLE LOCATION FOR COLD PLUNGE DRAIN.
- 3 PROVIDE SANITARY VENT THROUGH ROOF PER "VENT THRU ROOF VTRV" DETAIL. LOCATE VENT MINIMUM OF 30'-0" AWAY FROM AIR INTAKES ON ROOF, UNLESS APPROVED BY ENGINEER PRIOR TO INSTALLATION.
- 4 ROUTE WATER HEATER DRAINS TO DRAIN TO NEAREST FLOOR DRAIN PER "ELECTRIC WATER HEATER WITH PUMP" DETAIL.
- 5 ROUTE CONDENSATE TO SINK TAILPIECE PER "DISCHARGE TO TAILPIECE" DETAIL.
- 6 CONNECT TO DEH-1 PER "CONDENSATE DRAIN" DETAIL. FIELD VERIFY POINT OF CONNECTION TO UNIT AND ROUTING REQUIREMENTS. ROUTE CONDENSATE PIPING PER "INDIRECT DRAIN" DETAIL.



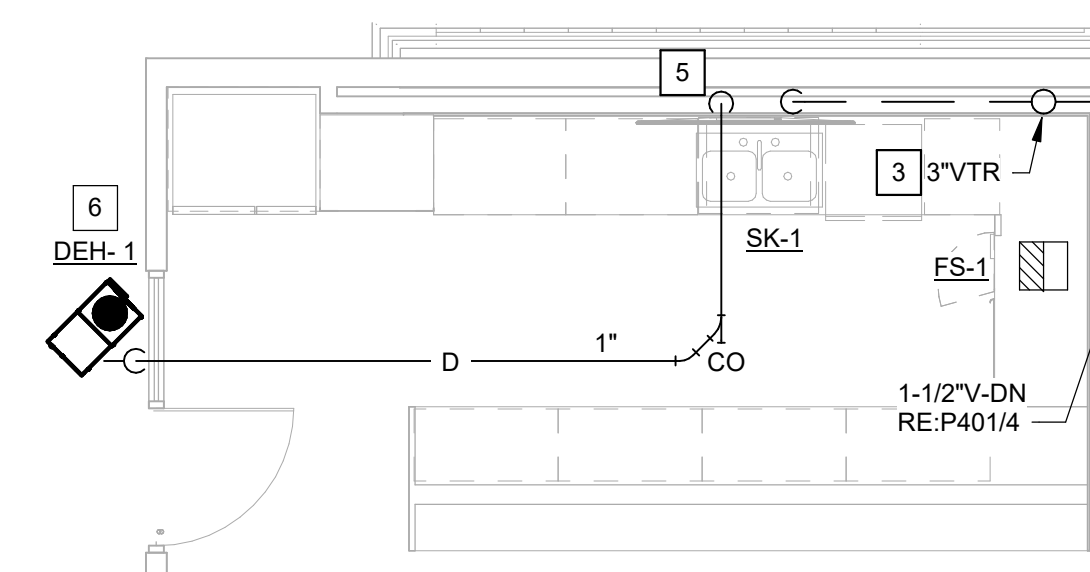
3 ENLARGED WASTE AND VENT PLAN - LV 1 - RESTROOMS
1/4" = 1'-0"



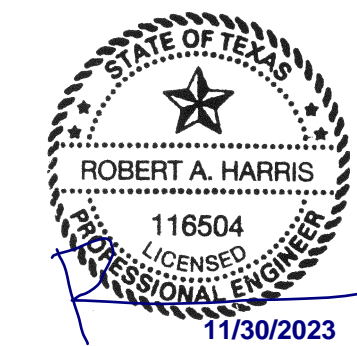
1 ENLARGED WASTE AND VENT PLAN - LV 2 - RESTROOMS
1/4" = 1'-0"



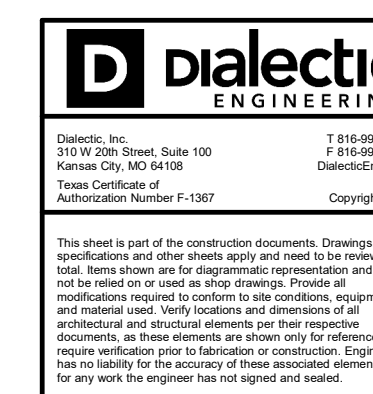
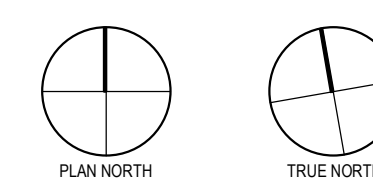
4 ENLARGED WASTE AND VENT PLAN - LV 1 - MECHANICAL ROOM
1/4" = 1'-0"



2 ENLARGED WASTE AND VENT PLAN - LV 2 - LOUNGE
1/4" = 1'-0"



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IFP 12/01/23

Issues

Project Number 23-01-014

Drawn By WRD

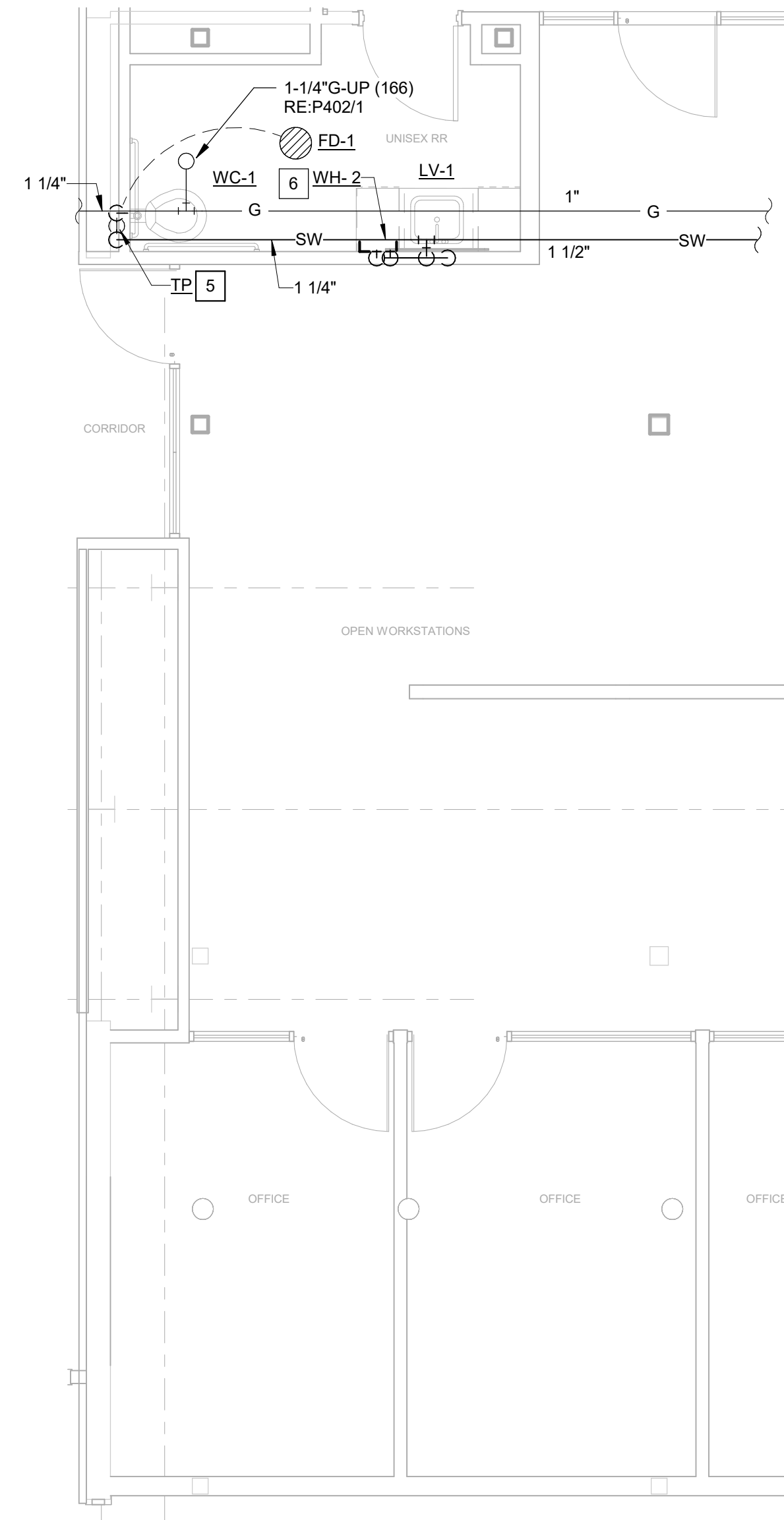
Checked By JMB

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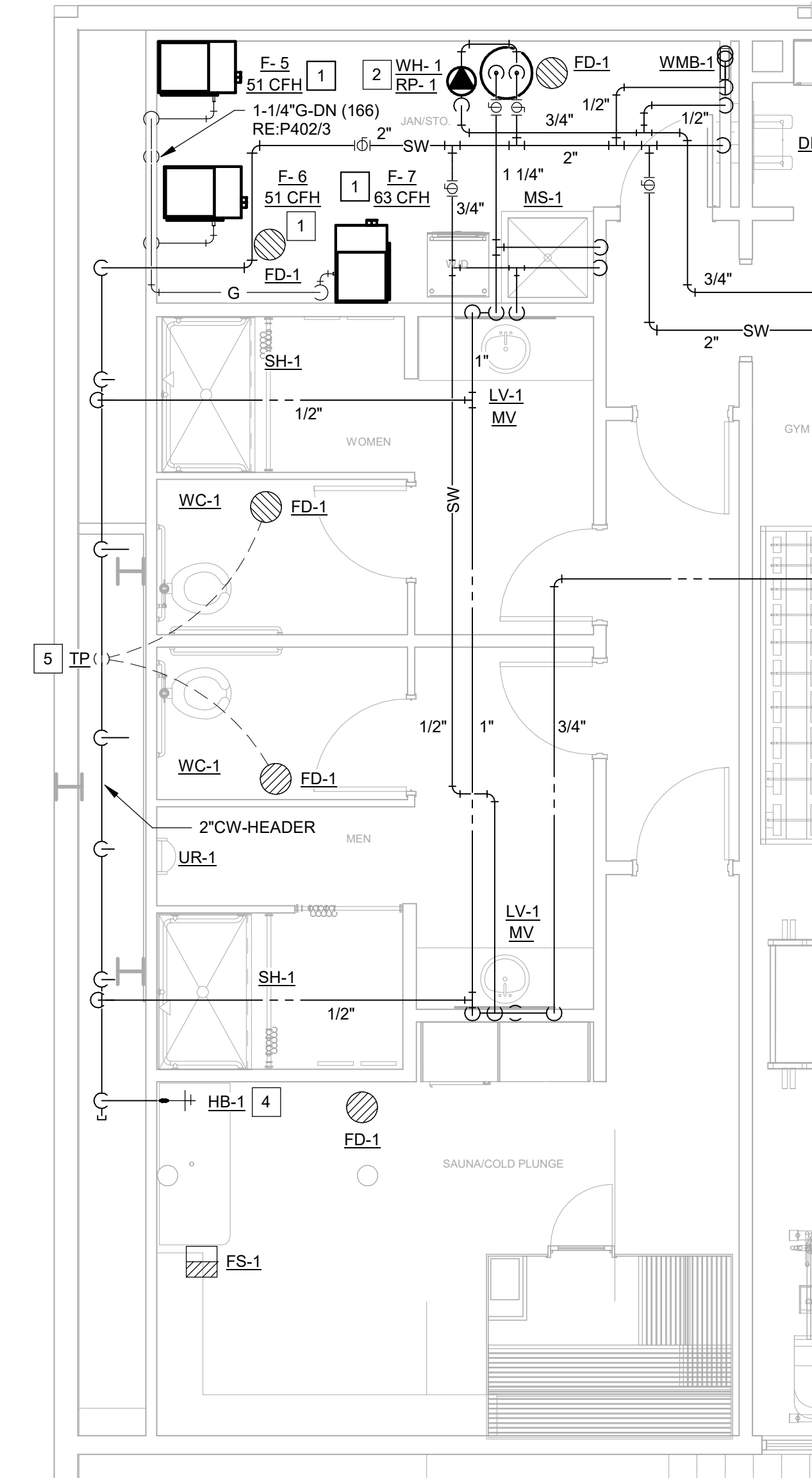
P401

**PLUMBING
ENLARGED WASTE
AND VENT PLANS**

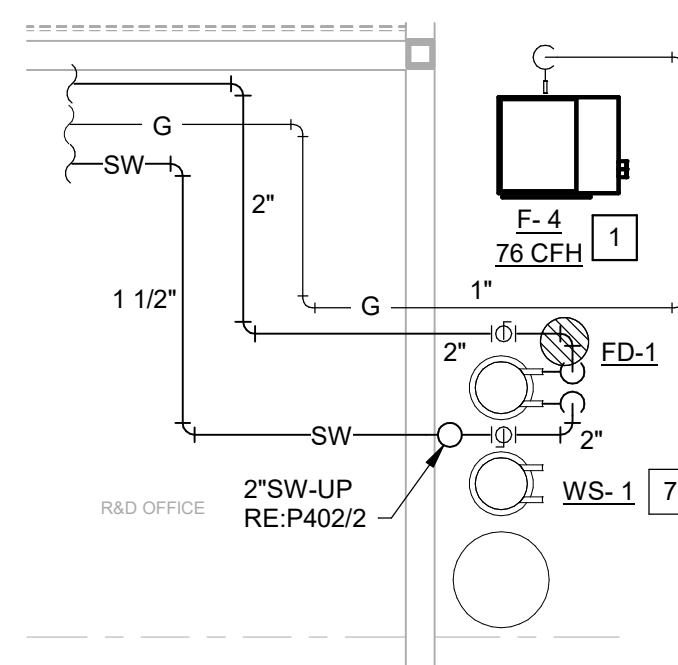
- # PLUMBING KEY NOTES**
- CONNECT GAS TO FURNACE PER "GAS FURNACE CONNECTIONS DETAIL. FIELD VERIFY CONNECTION REQUIREMENTS.
 - CONNECT TO WATER HEATER AND PUMP PER "ELECTRIC WATER HEATER WITH PUMP" DETAIL. ROUTE T&P RELIEF VALVE TO DRAIN TO NEAREST FLOOR DRAIN.
 - PROVIDE 1/2" HOT WATER LINE TO OWNER PROVIDED DISHWASHER.
 - MOUNT HOSE BIBB AT 30" AFF FOR FILLING THE COLD PLUNGE. VERIFY FINAL MOUNTING HEIGHT WITH OWNER PRIOR TO INSTALLATION.
 - CONNECT TO TRAP PRIMER PER "TRAP PRIMER" DETAIL.
 - CONNECT TO INSTANTANEOUS WATER HEATER PER "INSTANTANEOUS WATER HEATER" DETAIL.
 - CONNECT TO WATER SOFTENER PER "DUPLEX WATER SOFTENER" DETAIL.



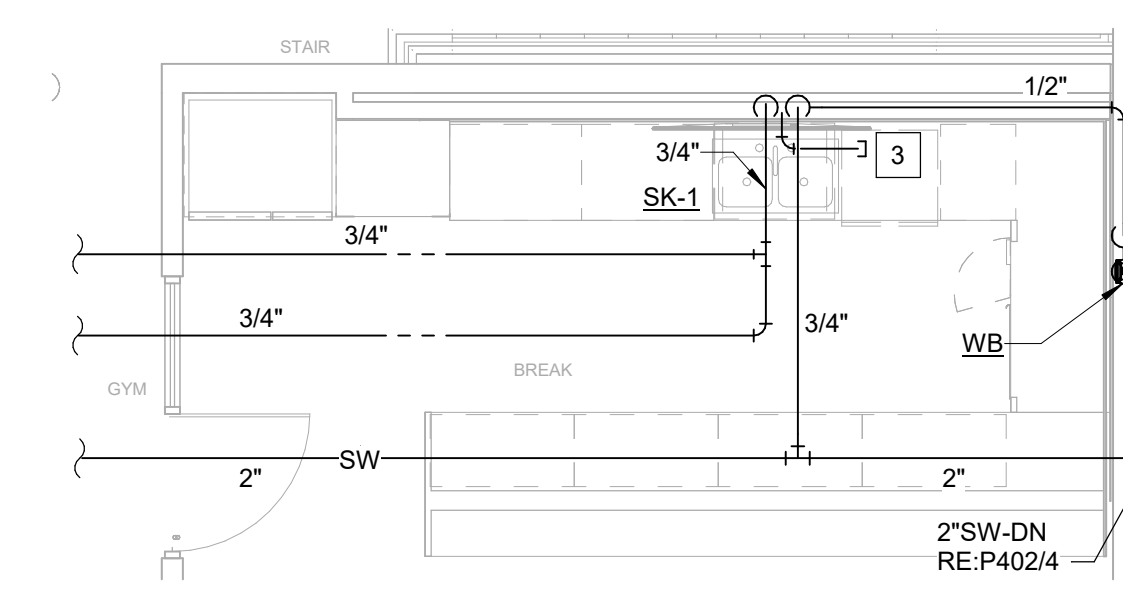
3 ENLARGED WATER AND GAS PLAN - LV 1 - RESTROOMS
1/4" = 1'-0"



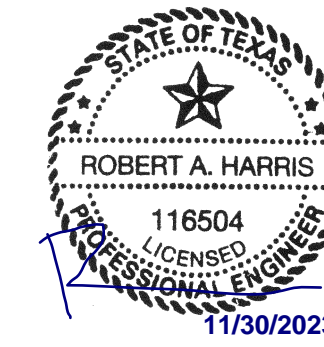
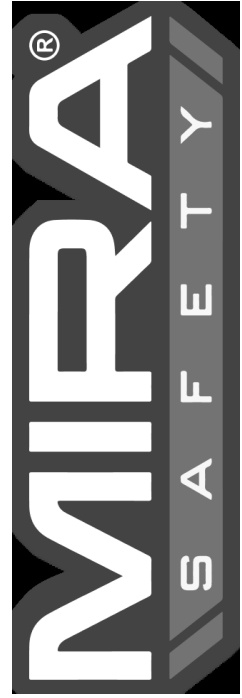
1 ENLARGED WATER AND GAS PLAN - LV 2 - RESTROOMS
1/4" = 1'-0"



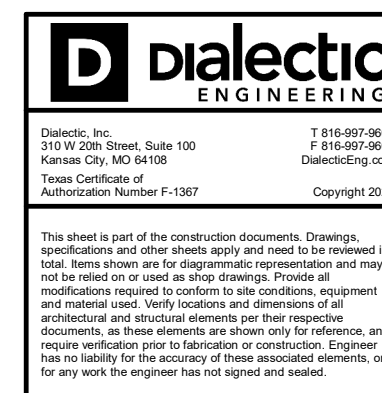
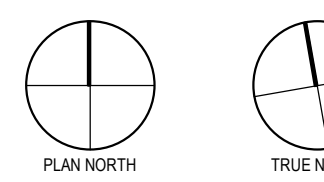
4 ENLARGED WATER AND GAS PLAN - LV 1 - MECHANICAL ROOM
1/4" = 1'-0"



2 ENLARGED WATER AND GAS PLAN - LV 2 - LOUNGE
1/4" = 1'-0"



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This sheet is part of the construction documents. Drawings, specifications and other documents are made to be read in conjunction with the project program and specifications. The contractor shall verify all dimensions, quantities, and materials with the architect and engineer before construction. All dimensions and materials shall be as shown on the drawings and specifications. The contractor shall be responsible for obtaining all necessary permits and approvals. The contractor shall be responsible for the accuracy of the information provided on this sheet. The contractor shall be responsible for the accuracy of the information provided on this sheet. The contractor shall be responsible for the accuracy of the information provided on this sheet.

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Issues

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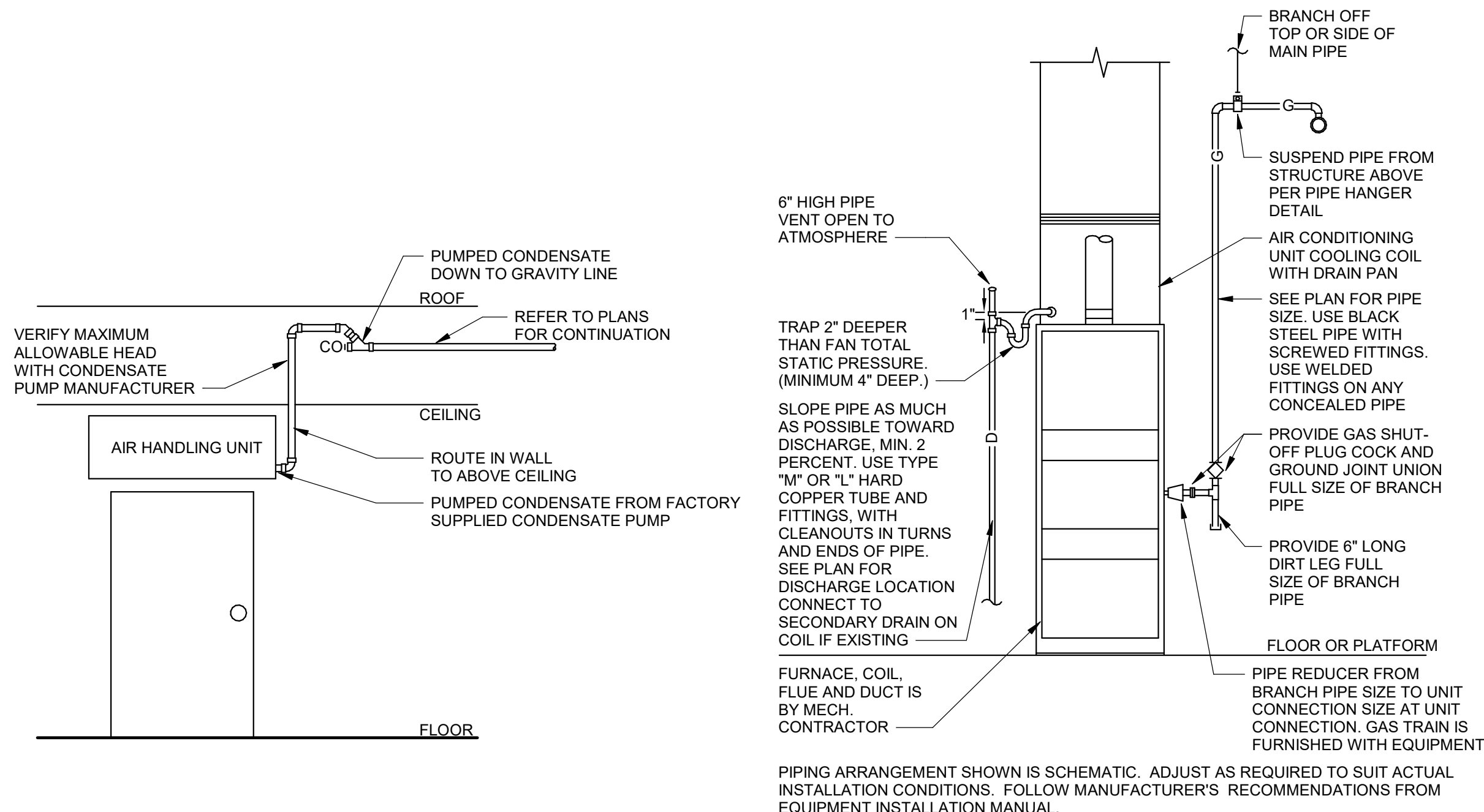
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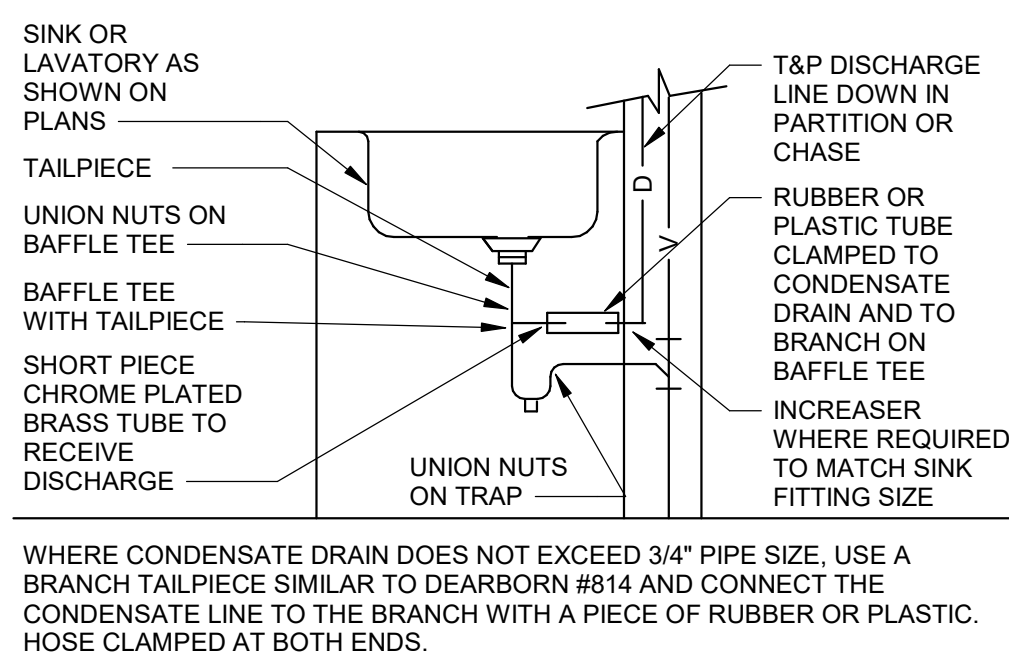
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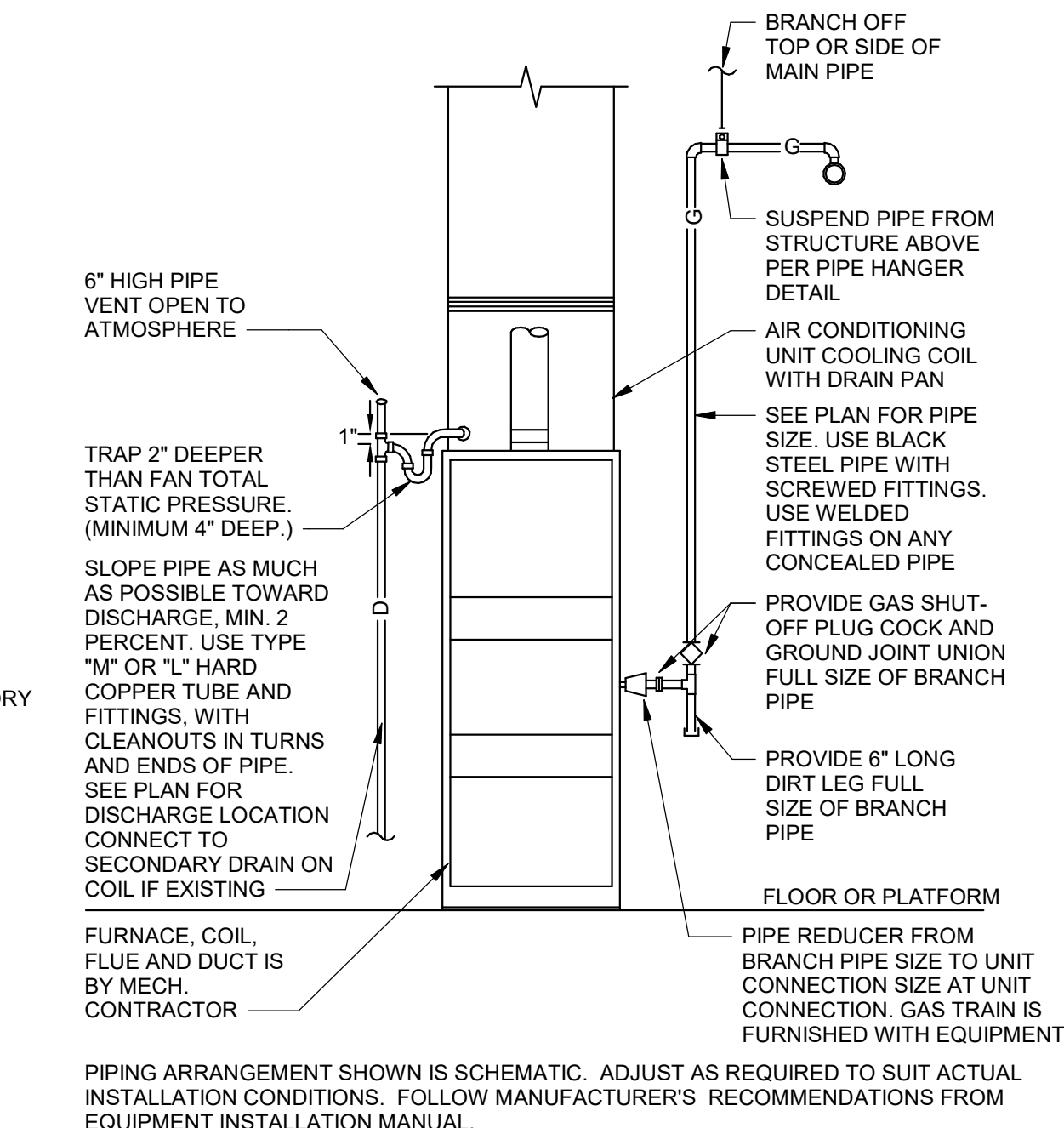
PLUMBING ENLARGED WATER AND GAS PLANS



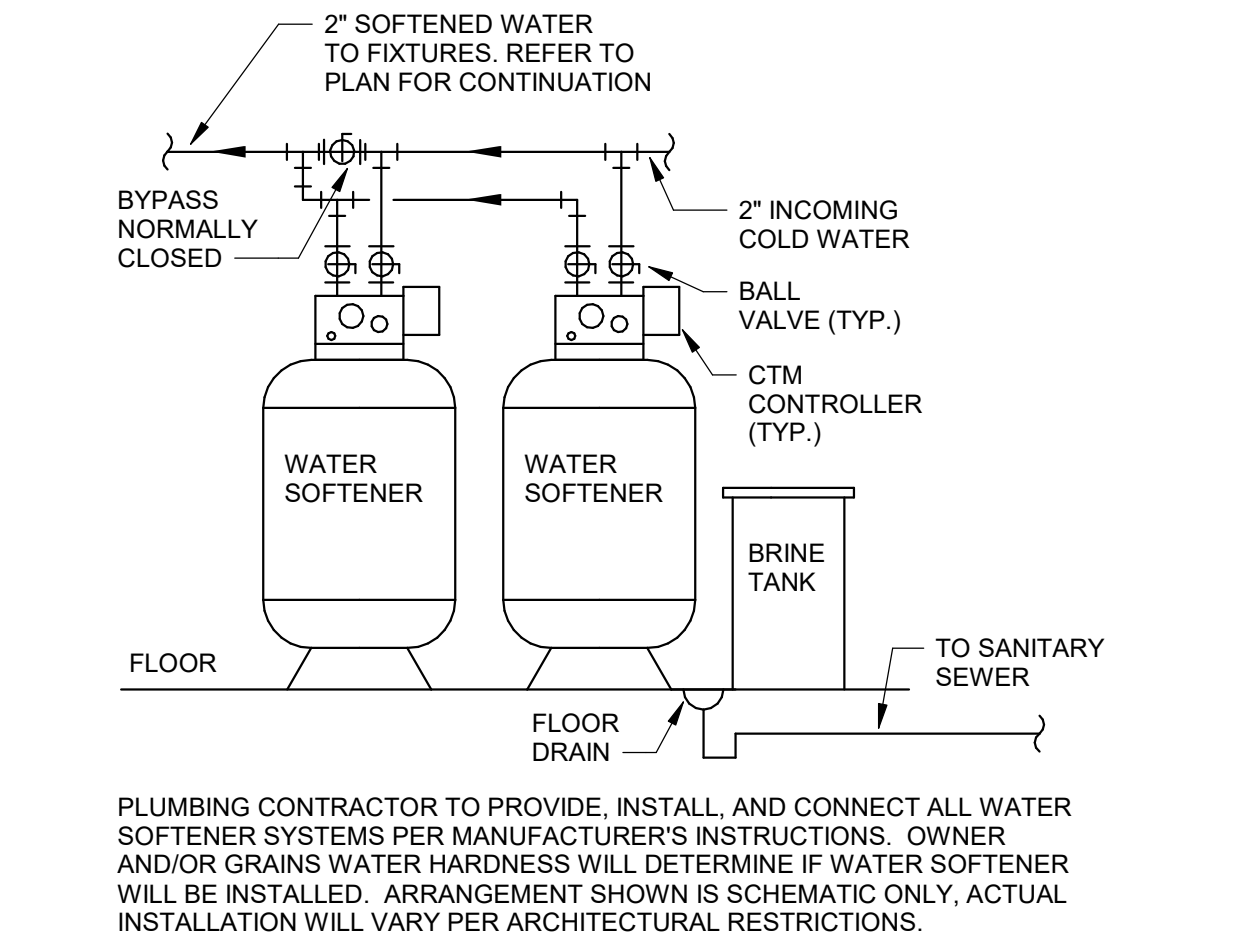
13 AIR HANDLING UNIT CONDENSATE
NOT TO SCALE



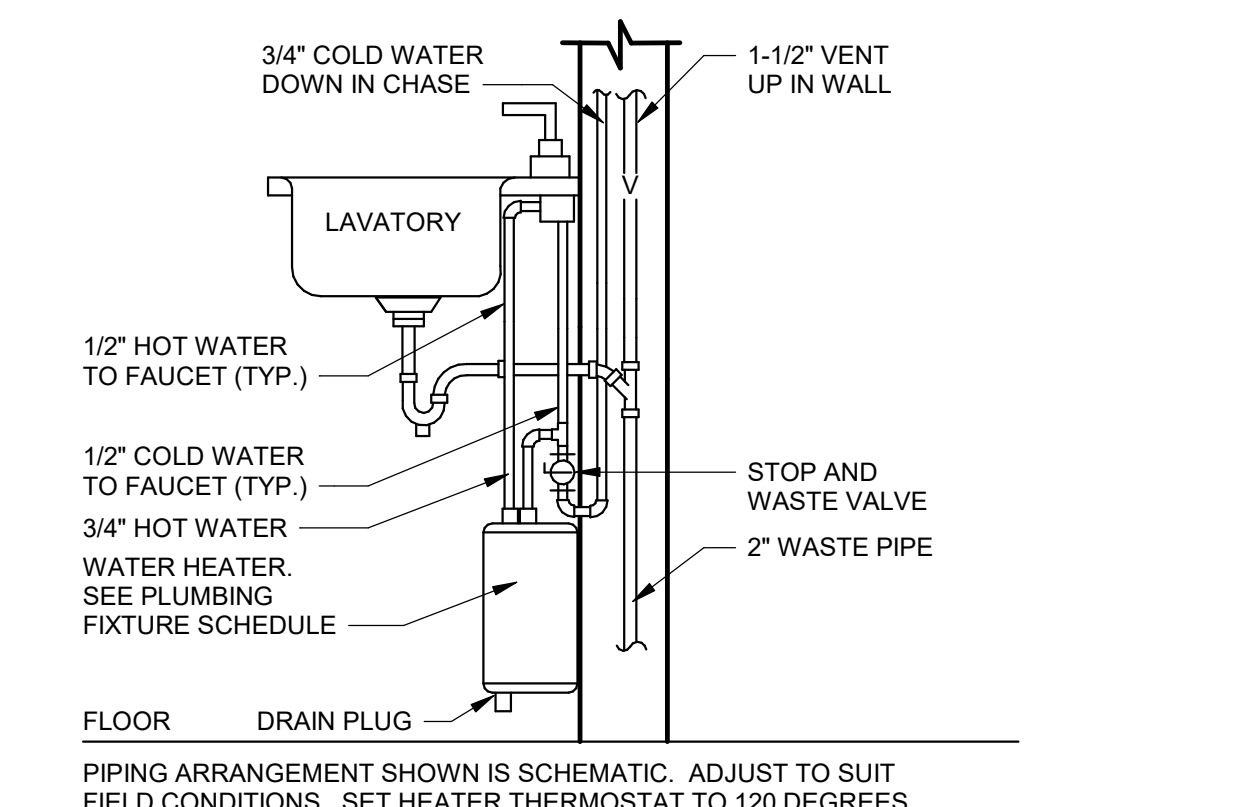
14 COND. DISCHARGE TO TAILPIECE
NOT TO SCALE



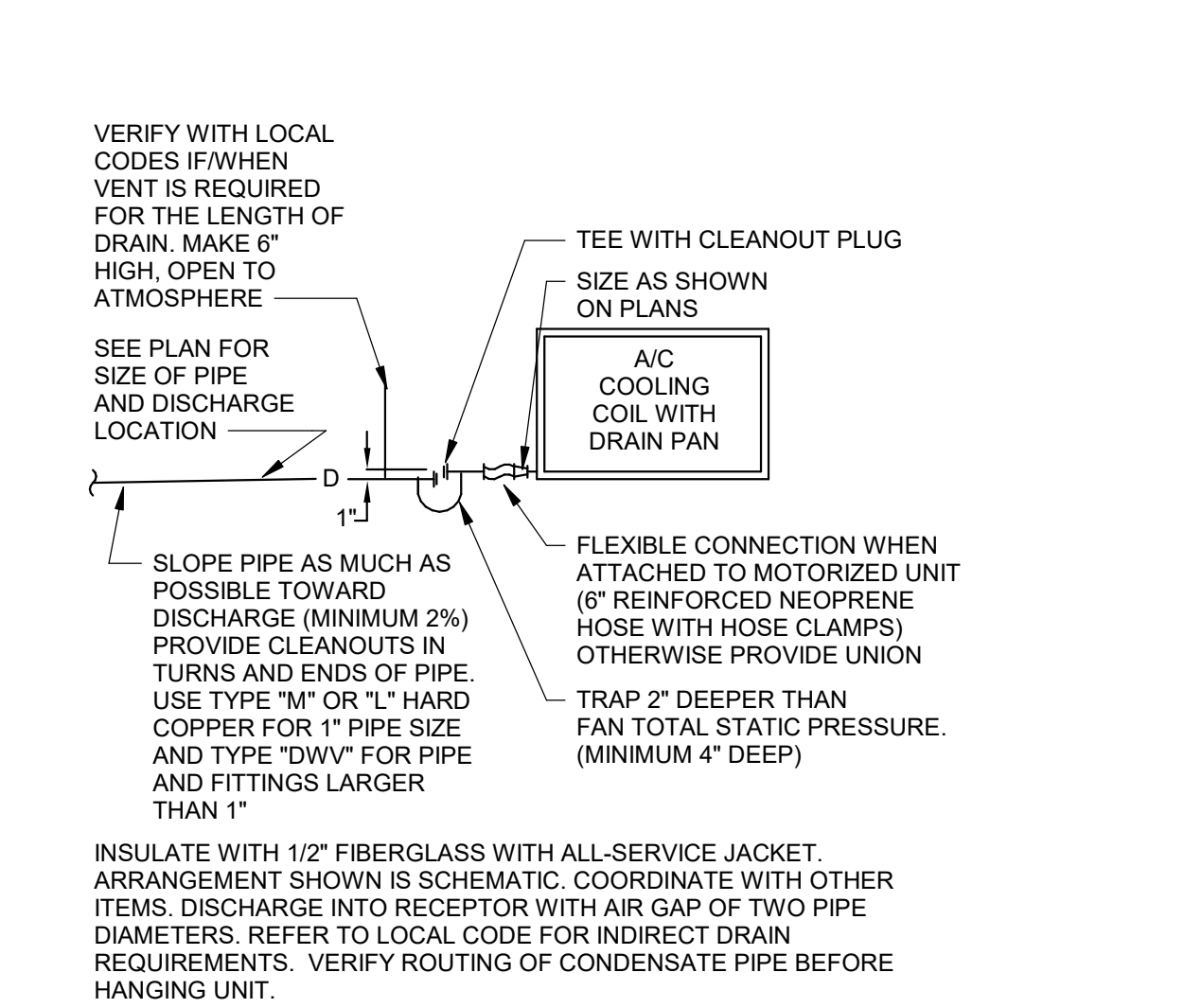
9 GAS FURNACE CONNECTIONS
NOT TO SCALE



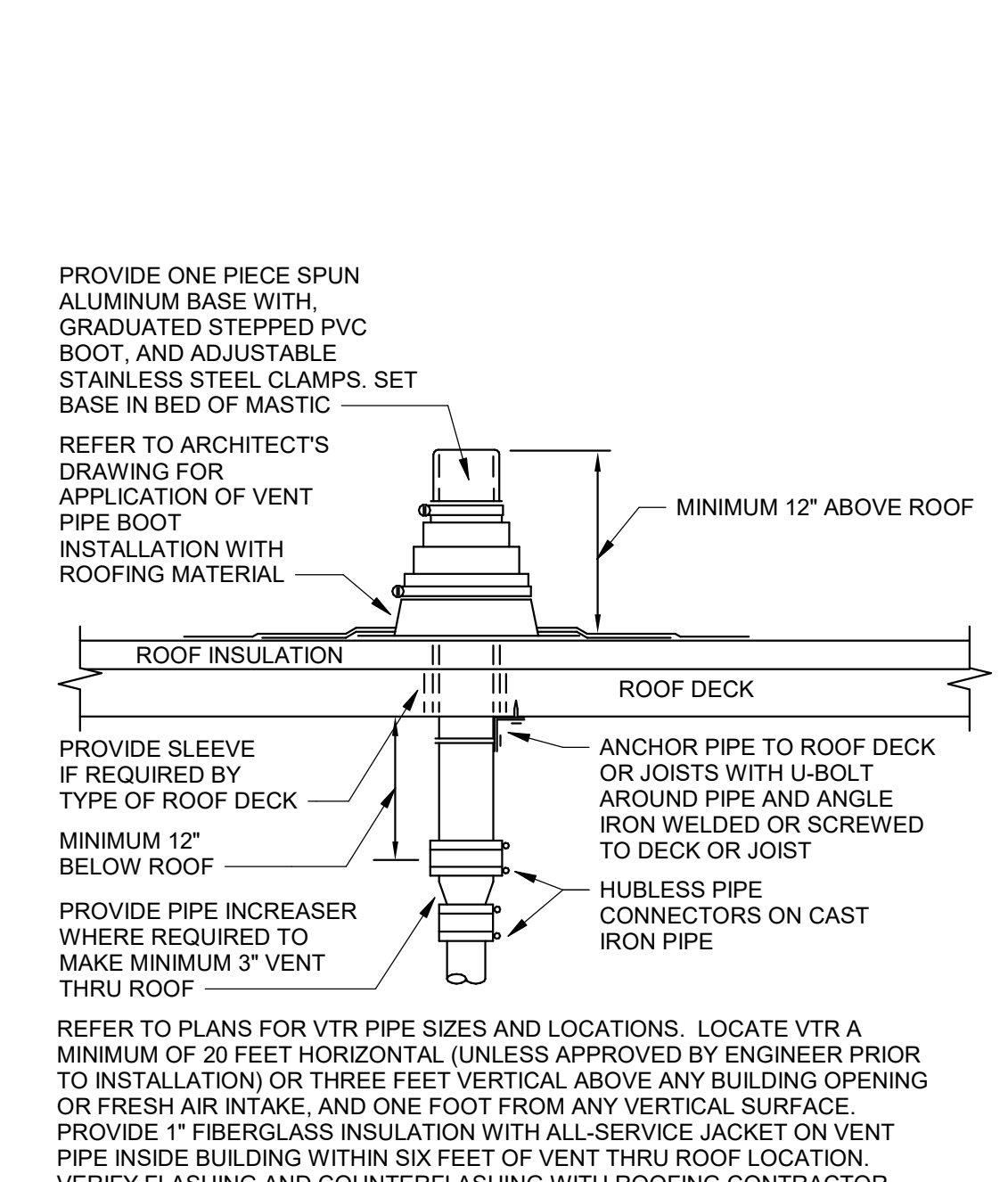
10 DUPLEX WATER SOFTENER
NOT TO SCALE



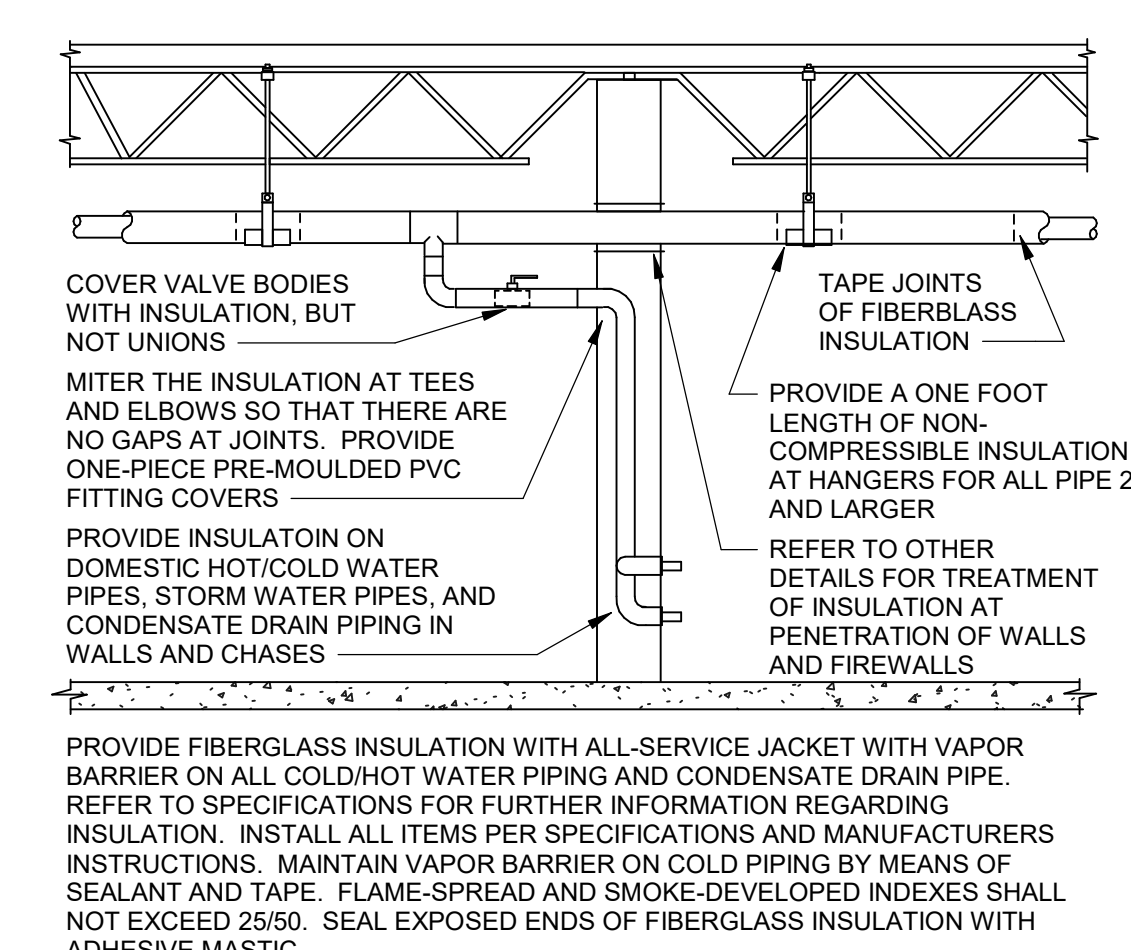
11 INSTANTANEOUS WATER HEATER
NOT TO SCALE



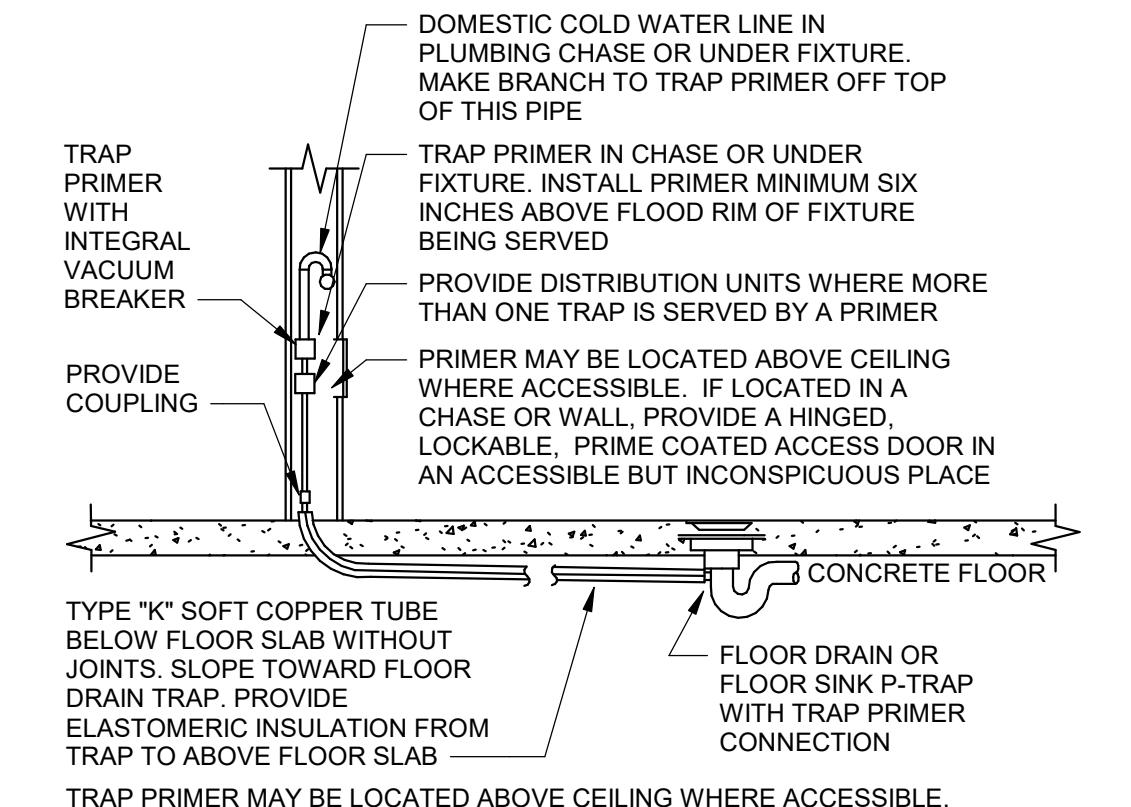
12 CONDENSATE DRAIN
NOT TO SCALE



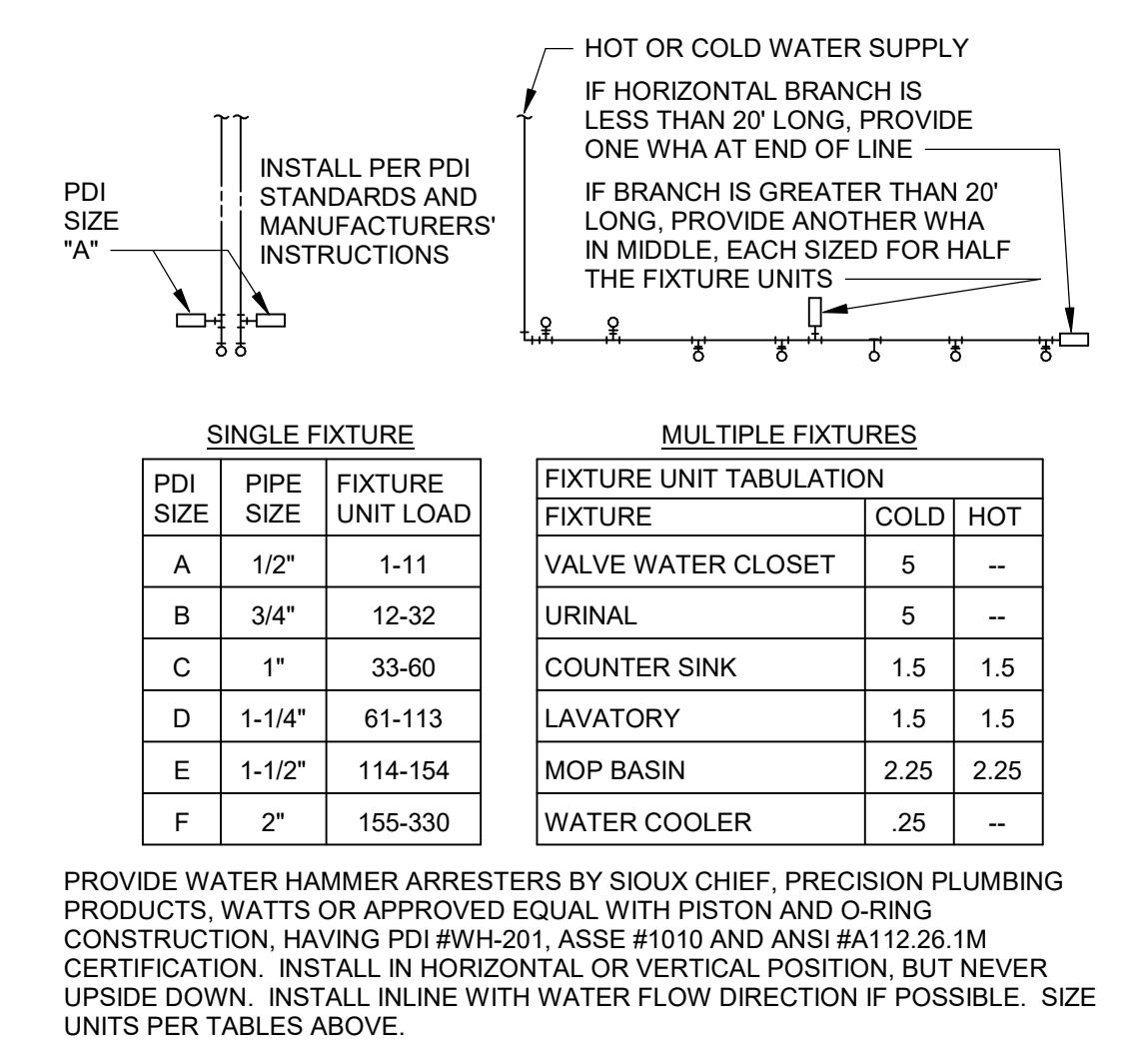
5 VENT THROUGH ROOF (VTR)
NOT TO SCALE



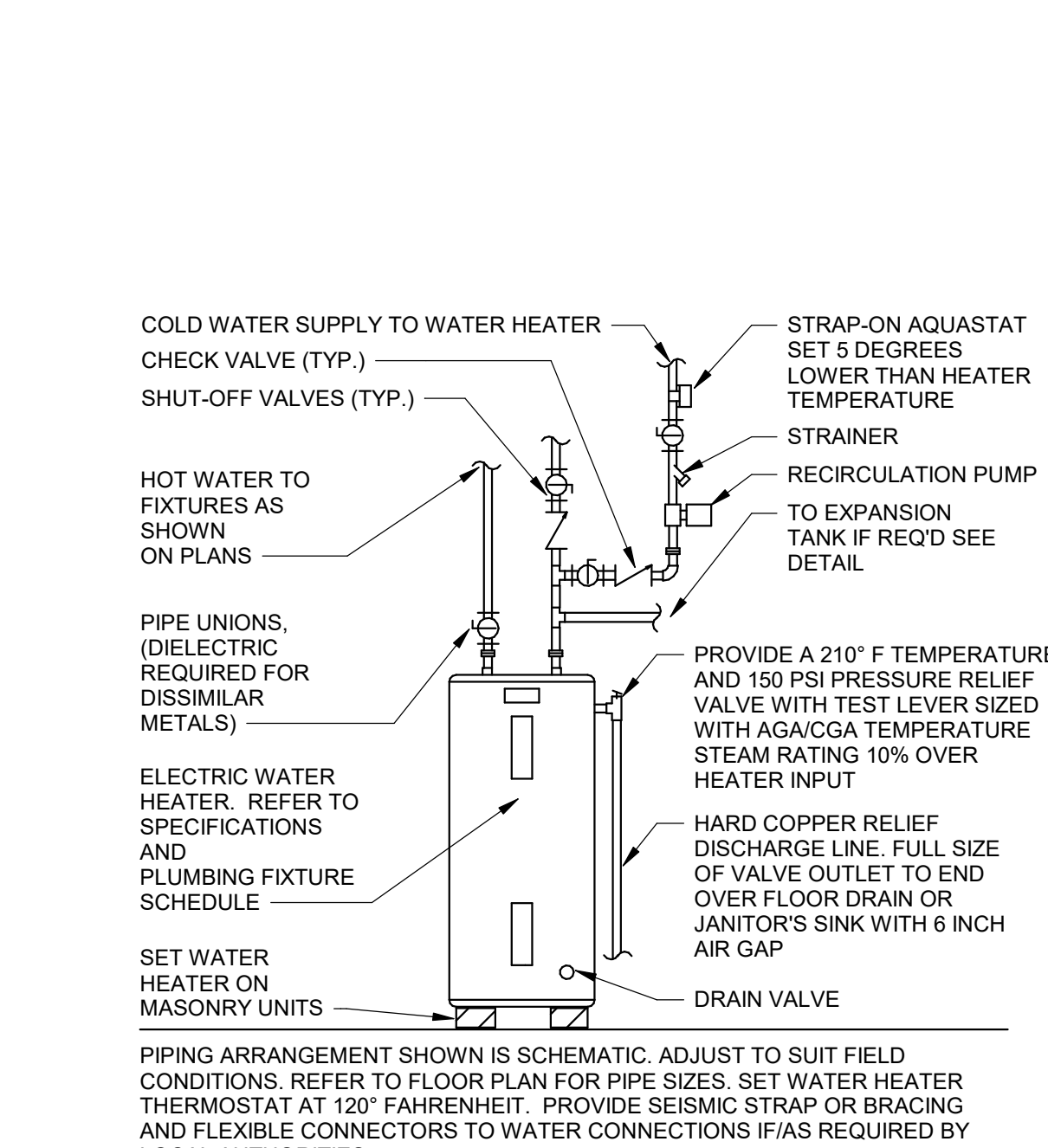
6 PIPE INSULATION DETAIL
NOT TO SCALE



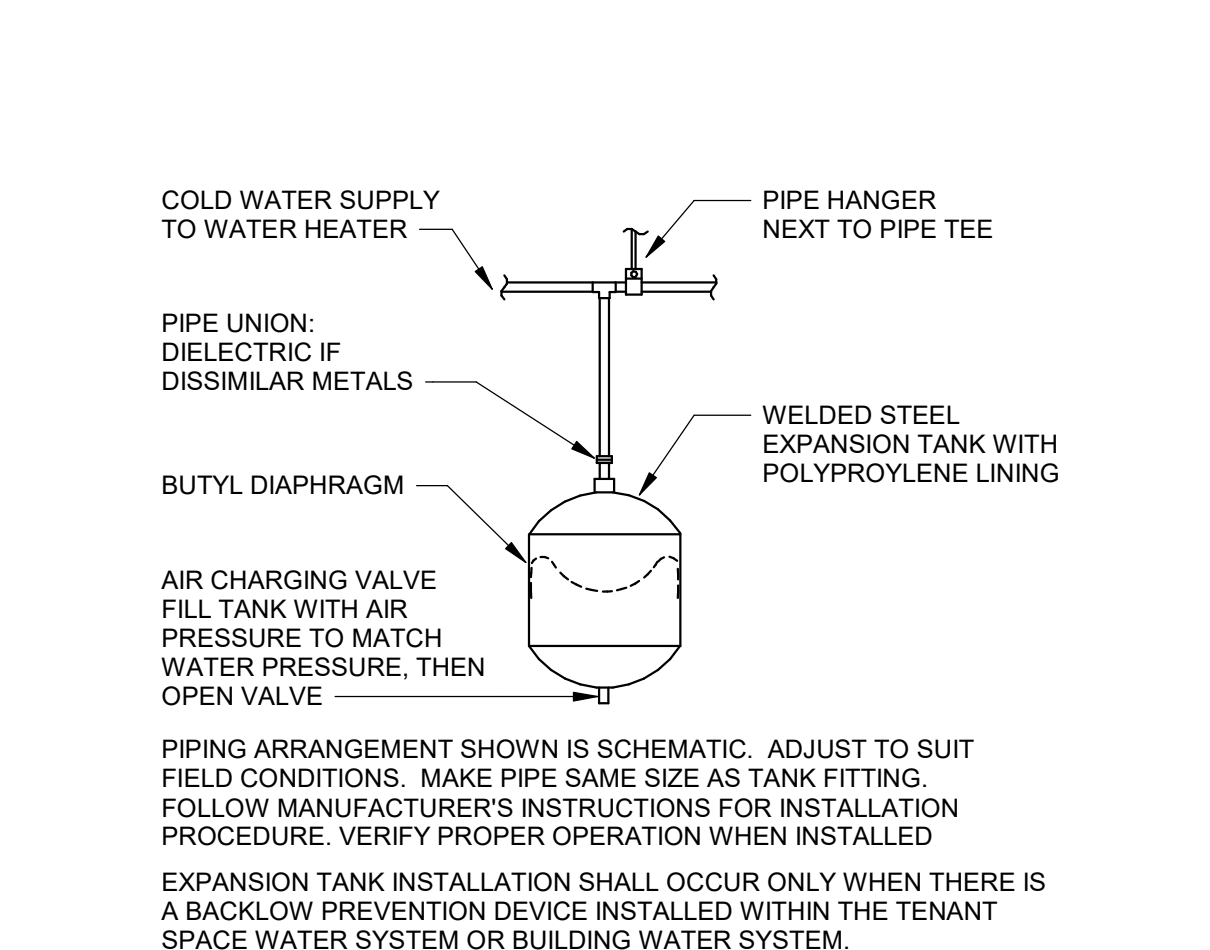
7 TRAP PRIMER
NOT TO SCALE



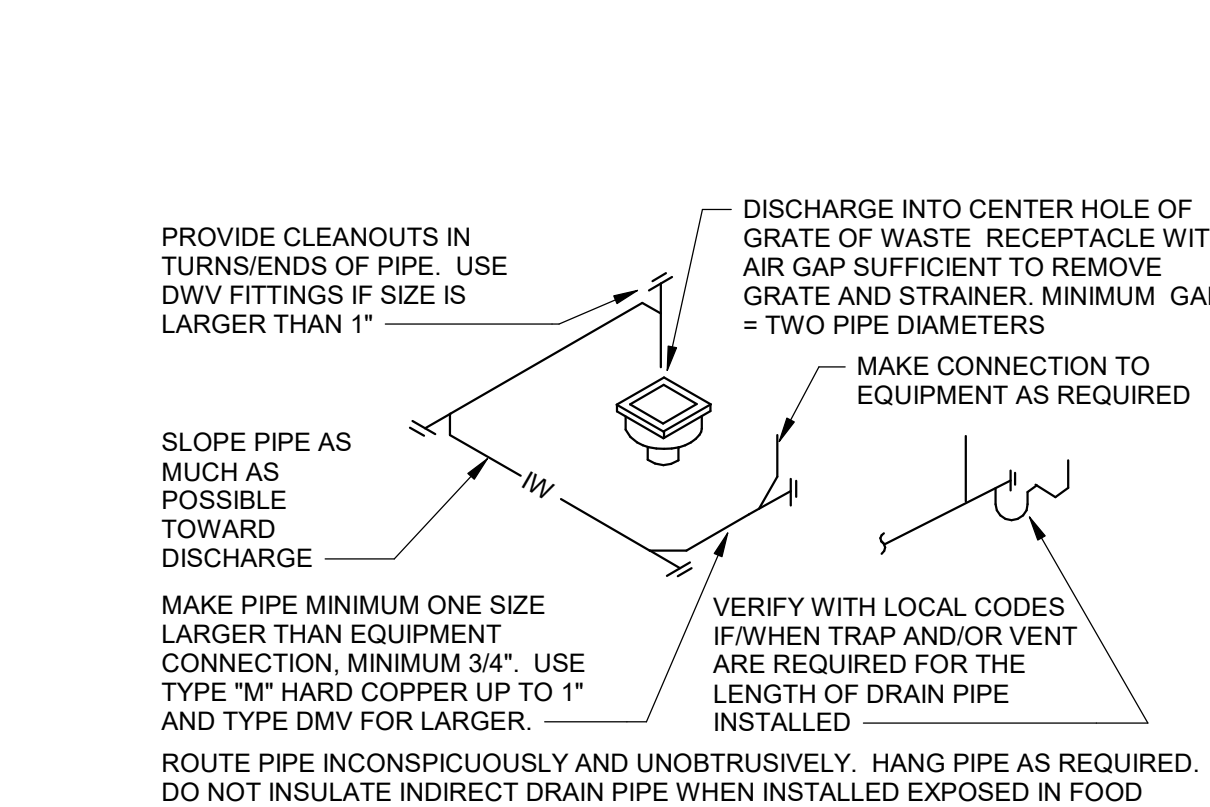
8 WATER HAMMER ARRESTORS
NOT TO SCALE



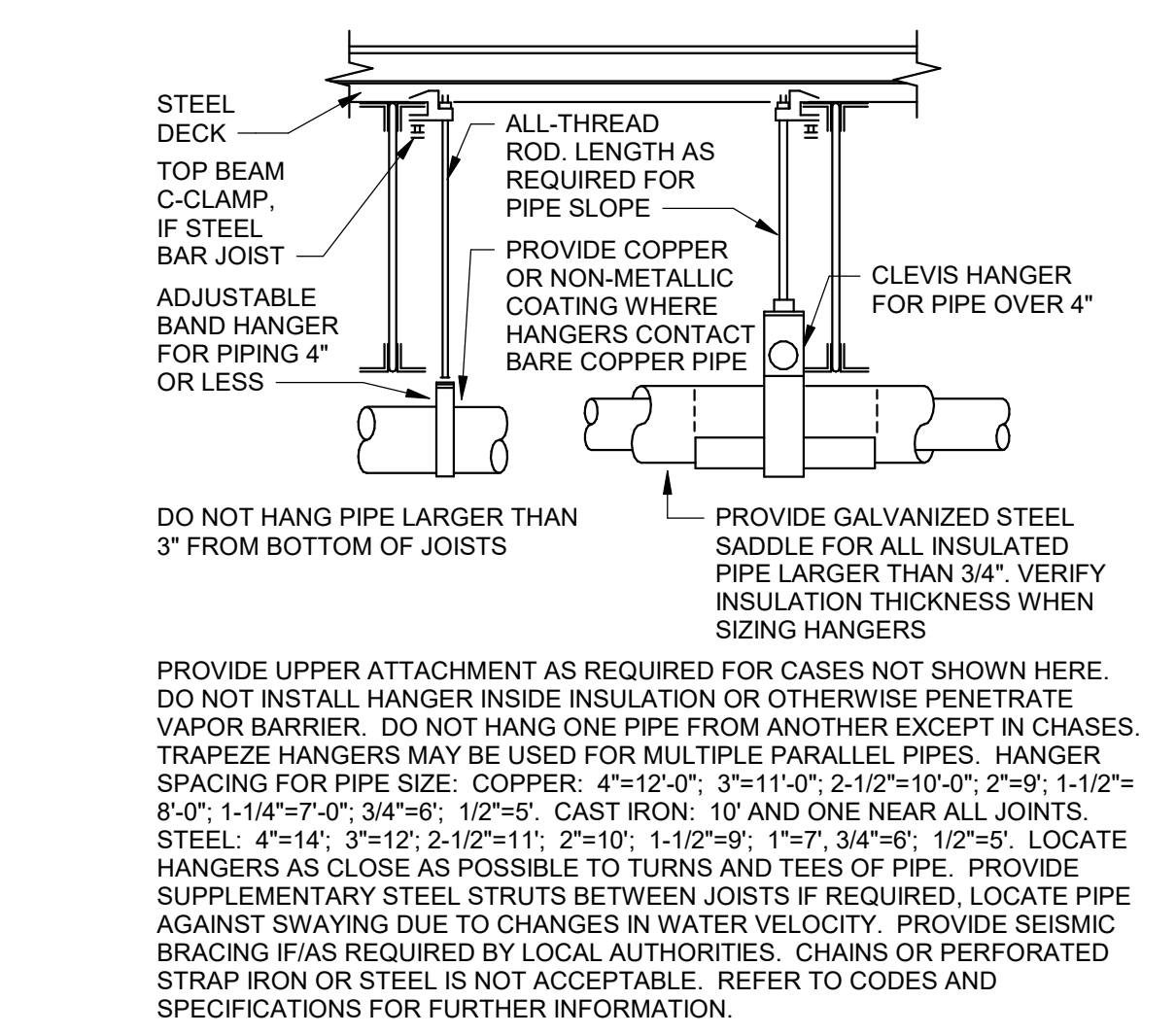
1 ELECTRIC WATER HEATER WITH PUMP
NOT TO SCALE



2 EXPANSION TANK
NOT TO SCALE



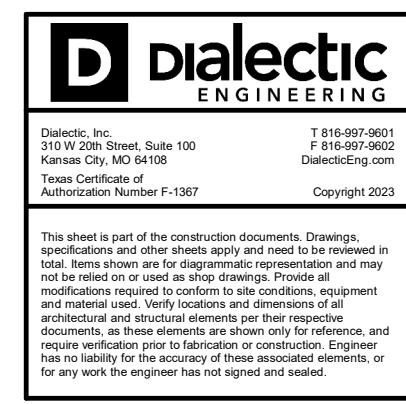
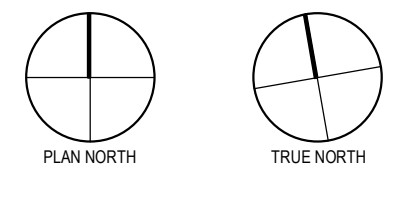
3 INDIRECT DRAIN
NOT TO SCALE



4 PIPE HANGERS
NOT TO SCALE



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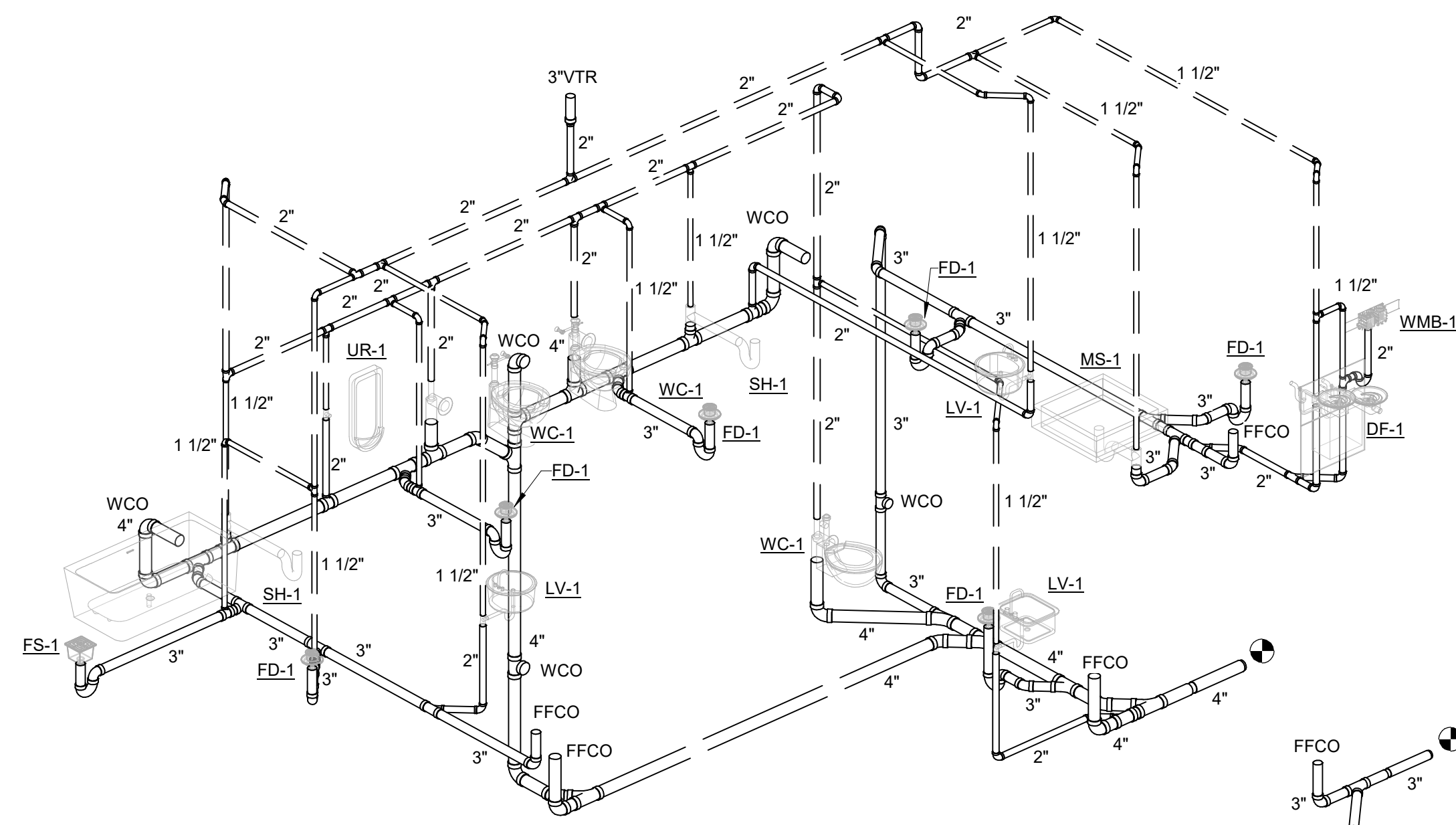


DO NOT HANG PIPE LARGER THAN 3\"/>

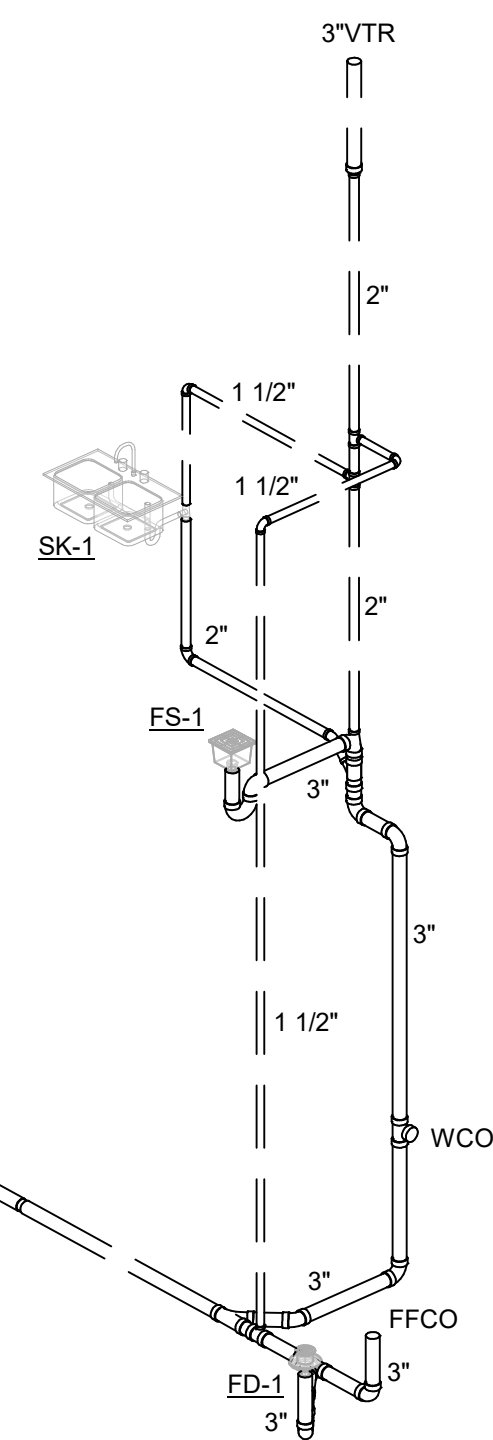
3 INDIRECT DRAIN
NOT TO SCALE



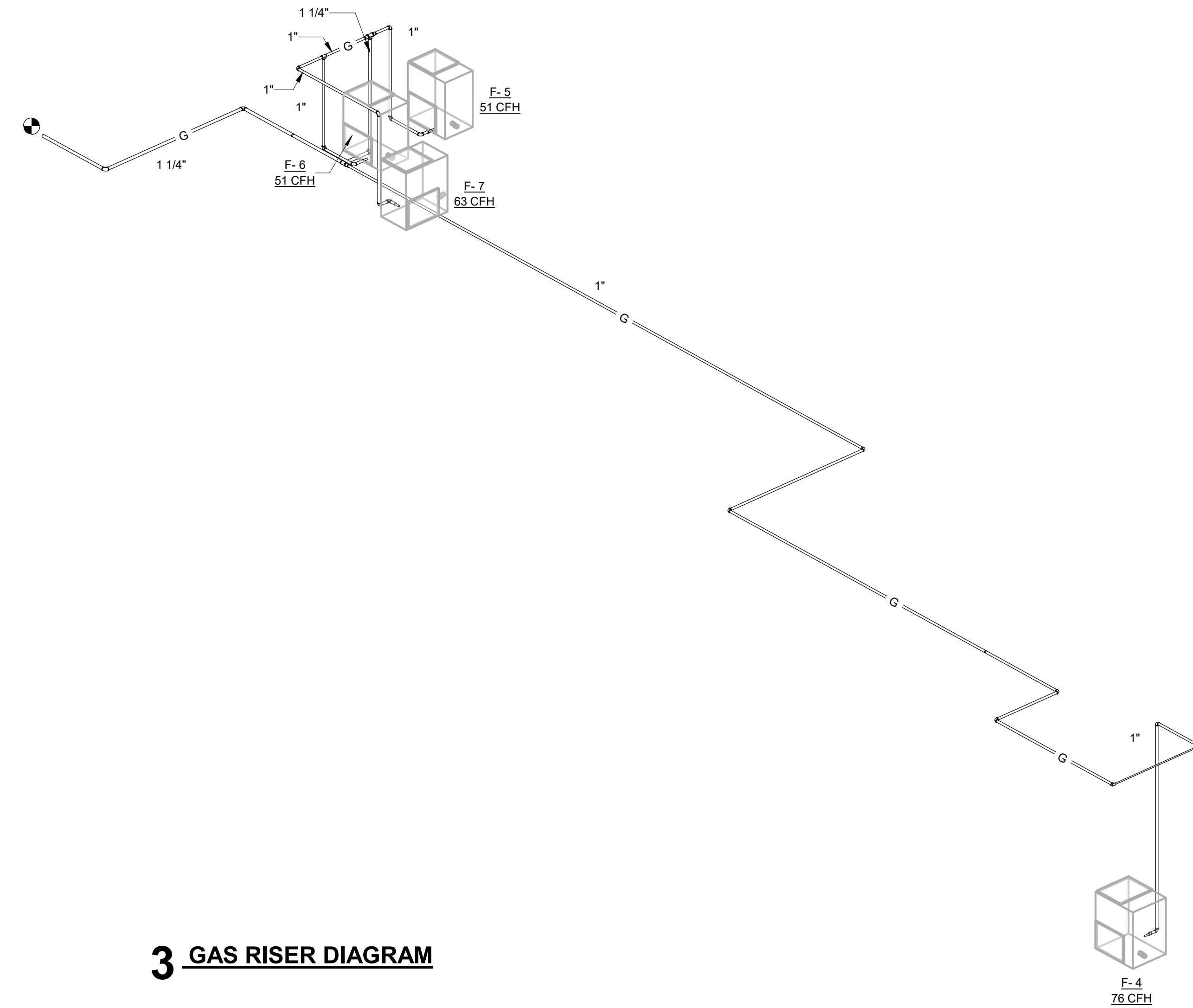
4 PIPE HANGERS
NOT TO SCALE



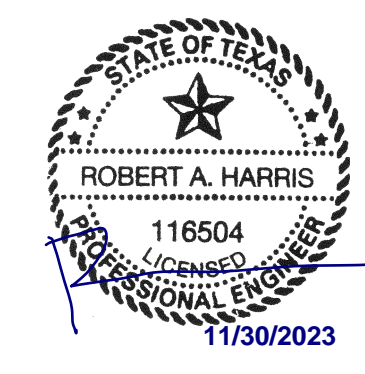
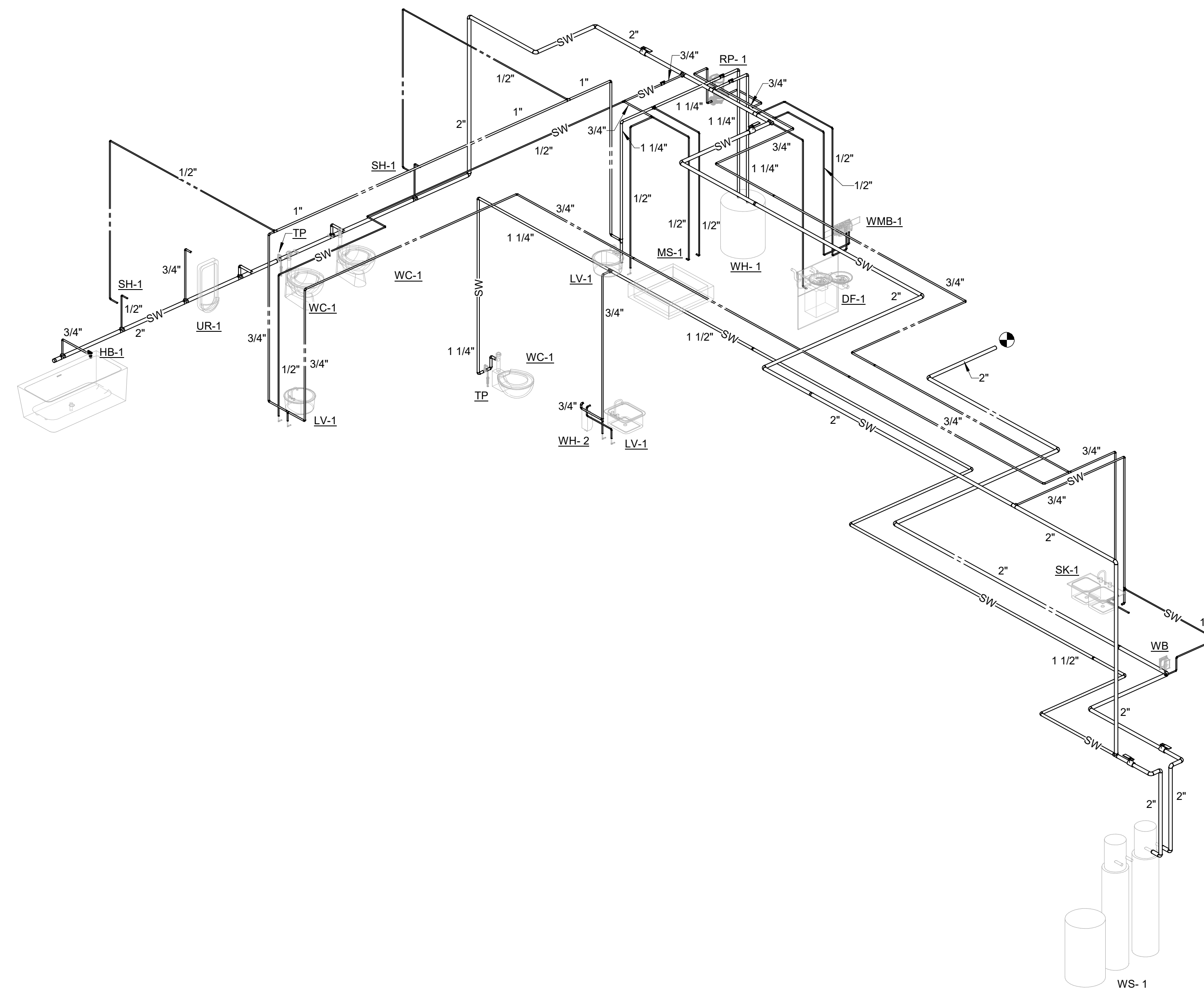
1 WASTE AND VENT RISER DIAGRAM



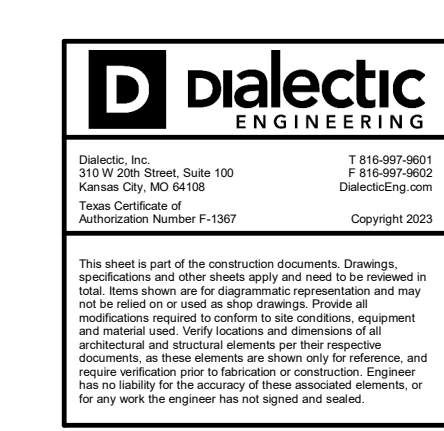
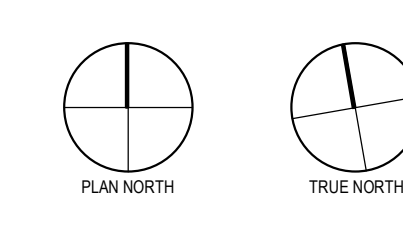
2 DOMESTIC WATER RISER DIAGRAM



3 GAS RISER DIAGRAM



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IFP 12/01/23

Project Number	23-01-014
Drawn By	WRD
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PLUMBING RISER
DIAGRAMS