

MAIN STREET BUILDING IMPROVEMENTS

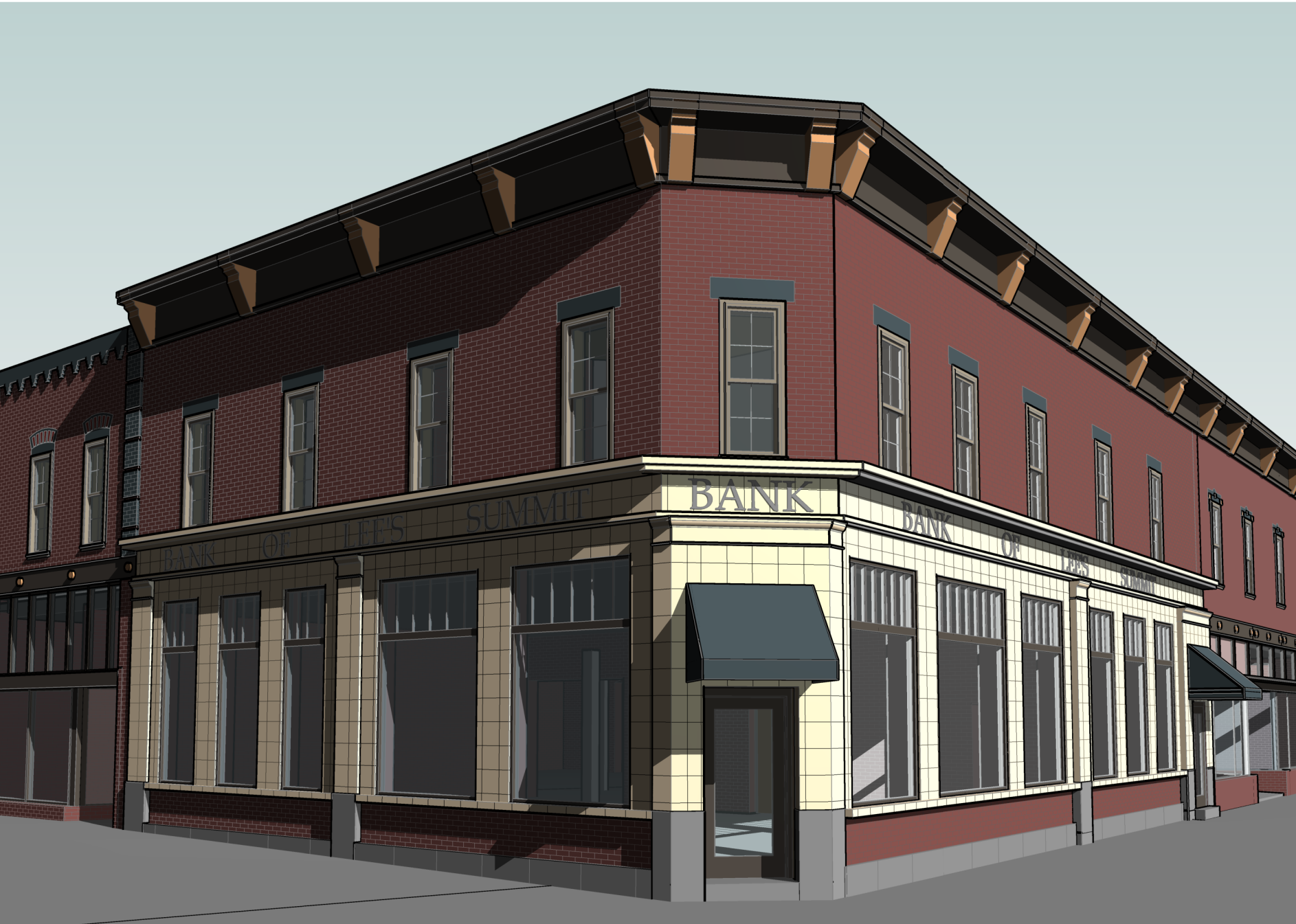
230 SW MAIN ST.
LEE'S SUMMIT, MO 64063

PERMIT DOCUMENTS

21 APRIL, 2022

COLLINS WEBB #: 21121

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OWNER

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ARCHITECT

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CIVIL ENGINEER

ENGINEERING SOLUTIONS
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STRUCTURAL ENGINEER

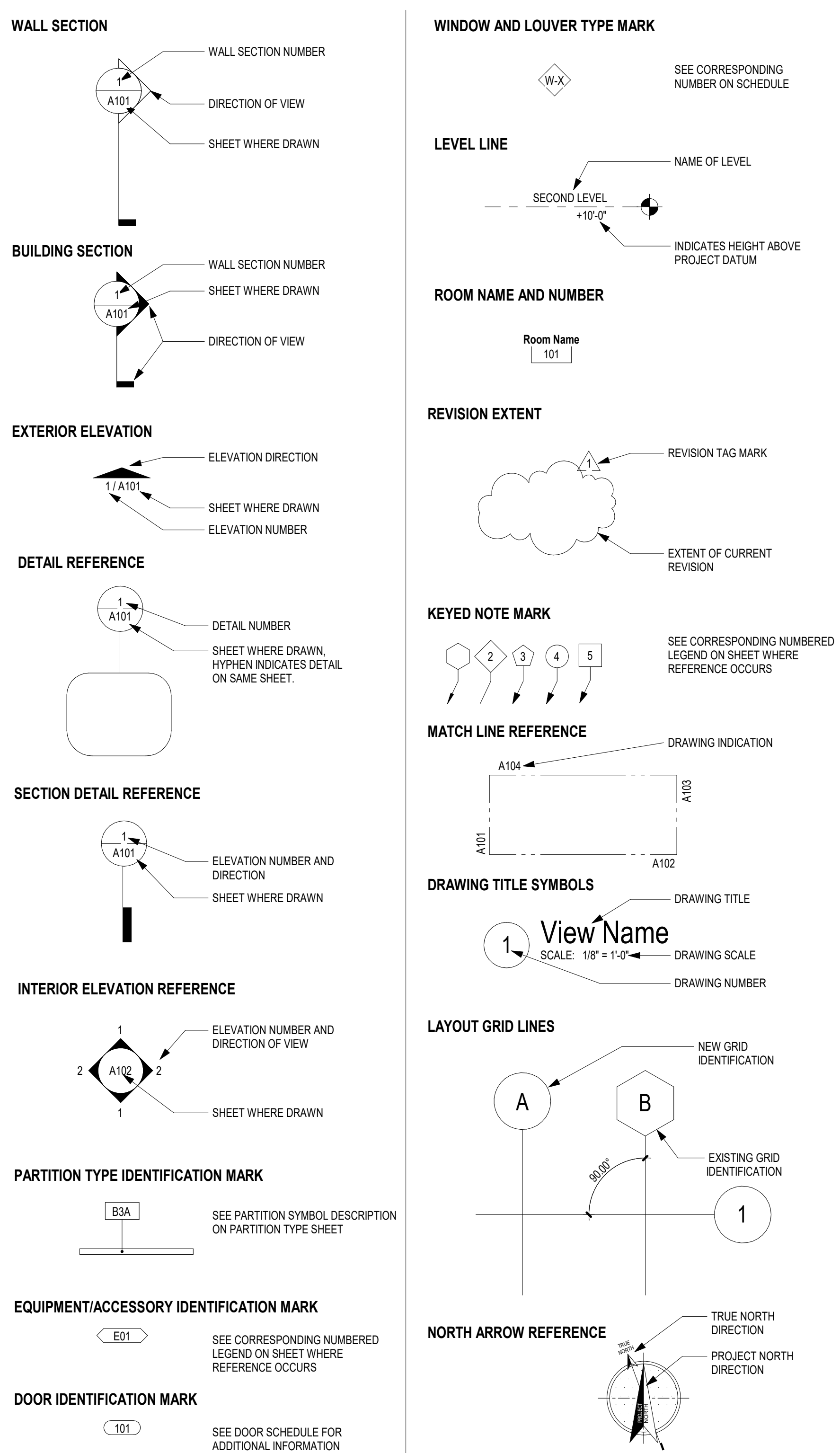
LEIGH & O'KANE
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MEP ENGINEER

PKMR ENGINEERS
13300 W 98TH ST
LENEXA, KS 66215
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www.pkmreng.com

A		E		I		P		S	
AB	AND ANGLE	EA	EAST EACH	IN	INSIDE DIAMETER INCH	PA	PART PARTIAL	SPKLR	SPRINKLER
AC	ANCHOR BOLT	EDR	EQUIPMENT DRAWING	INCD	INCANDESCENT	PBD	PARTICLEBOARD	SPKR	SPEAKER
ACCUACUS	ACOUSTICAL	EGJ	EDGE GUARD	INCL	INCLUDE, INCLUDING	PBX	PRIVATE TELEPHONE EXCHANGE	SS	SANITARY SEWER
ACT	ACOUSTICAL CEILING TIE	EJF	EXTERIOR INSULATION FINISH SYSTEM	INFO	INFORMATION	PBS	POUNDS PER CUBIC FOOT	SSK	SERVICE SINK
ACP	ACCESS PANEL	EPJ	EXPANSION JOINT	INSUL	INSULATION	PCI	POUNDS PER CUBIC INCH	SST	STAINLESS STEEL
ACS PNL	AREA PANEL	ELEV	ELEVATION	INTR	INTERIOR	PERF	PERFORATED	ST	STREET
ADD	ADDED	ELAST	ELASTOMER	INVT	INVERT	PERM	PERMETER	STATION	STATION
ADH	ADDITIONAL	ELEC	ELECTRICAL	IVT	INTRAVENOUS TRACK	PERM	PERMANENT	STAG	STAGGERED
ADH	ADHESIVE	ELEV	ELEVATOR			PERP	PERPENDICULAR	STC	STANDARD TRANSMISSION COEFFICIENT
ADJ	ADJUSTABLE	EMER	EMERGENCY			P	POINT OF INTERSECTION	STD	STANDARD
ADJACENT		ENCL	ENCLOSURE	J		PL		STL	STEEL
AF	ABOVE FINISH FLOOR	ENGR	ENGINEER			PLAM	PLASTIC LAMINATE	STOR	STORAGE
AFG	ABOVE FINISH GRADE	EOS	EDGE OF SLAB	JAN	JANITOR	PLAS	PLASTIC, PLASTER	STRUCT	STRUCTURAL
AFS	ABOVE FINISH SLAB	EPB	ELECTRICAL PANEL	JST	JOIST	PLB	PLUMBING	TS	TRAPPING STEEL
AGGR	AGGREGATE	EPB	ELECTRICAL PANEL BOARD	JT	JOINT	PLF	POUNDS PER LINEAR FOOT	SUSP	SUSPENDED
ALUM, AL	ALUMINUM	EPOM	ETHYLENE PROPYLENE DIENE MONOMER			PLYWD	PLYWOOD	SUSP CLG	SUSPENDED CEILING
		EQ	EQUAL	K		PNEU	PNEUMATIC	SVCE	SERVICE
ANOD	ANODIZED	EQ SP	EQUALLY SPACED			PNL	PANEL	SW	SOUTHWEST
APPROX	APPROXIMATE(LY)	EQUIV	EQUIVALENT	KG	KILOGRAM	PNL BD	PANEL BOARD	SYMM	SYMMETRICAL
ARCH	ARCHITECTURAL	ES	ESCALATOR	KITCH	KITCHEN	PNT, P	PANT	SYST	SYSTEM
ASPH	ASPHALT	ESCAL	ESTIMATED	KPL	KICK PLATE	PORT	PORTABLE		
AT	AVERAGE	EST	ELECTRIC WATER COOLER	KS	KNEE SPACE	PP	PUSH PLATE	T	TREAD
AVG		EXC	EXCAVATED			PM	PARTS PER MILLION	TM	TOP AND BOTTOM
		EXH	EXHAUST	L		PR	PAIR	TB	TONGUE AND GROOVE
		EXT	EXISTING	LAB	LABORATORY	PREP	PRECAST	T&G	TOP OF CONCRETE, TOP OF CURB
BB	BULLETIN BOARD	EXP	EXPANSION	LAM	LAMINATE, LAMINATION	PREFAB	PREFABRICATION	TC	TRENCH DRAIN
BD	BOARD	EXP JT	EXPANSION JOINT	LAM	LAMINATE, LAMINATION	PRKG	PARKING	TD	TELEPHONE
BTWN	BETWEEN	EXT	EXTERIOR	LAV	LAVATORY	PROJ	PROJECT	TEMP	TEMPORARY
BTUM	BUTYRUMOUS	EX-BR	EXISTING BRICK	LAV	LAVATORY	PROP	PROPERTY	THERM	THERMAL
BLK / BLKG	BLOCK / BLOCKING			LED	LED LIGHT EMITTING DIODE	PSF	POUNDS PER SQUARE FOOT	TH	THICK, THICKNESS
BLDG	BUILDING	FF	FACE TO FACE	LF	LINEAR FOOT	PSI	POUNDS PER SQUARE INCH	THRES	THRESHOLD
BND	BOND	FA	FIRE ALARM	LN	LINEAR	PT	POINT, PNT / PTD	THRU	THROUGH
BO	BOTTOM OF / BY OTHERS	FAS	FIRE ALARM STATION	LL	LEAD LINED	PTN	PARTITION	TMPL GL	TEMPERED GLASS
BO	BOTTOM	FLAT BR	FLAT BAR	LP	LOW POINT	PTS	PNEUMATIC TIE STATION	TO	TOP OF
BOS	BOTTOM OF STEEL	FU	FAN COIL UNIT	LT	LIGHT	PVC	POLYVINYL CHLORIDE	TOR	TOP OF RAILING
BRG	BEARING	FD	FLOOR DRAIN	LT WT	LIGHT WEIGHT	PVM	PAVEMENT	TOT	TOTAL
BSMT	BASEMENT	FDC	FIRE DEPARTMENT CONNECTION	LVR	LOUVER	PWR	POWER	TOW	TOP OF STEEL
BUR	BUILT UP ROOFING SYSTEM	FEN	FIRE EXTINGUISHER CABINET					TP	TOP OF PAINTMENT
		FE	FIRE EXTINGUISHER	M		Q		TPH	TOILET PAPER HOLDER
C		FF	FINISH FACE			Q		TRANS	TRANSPARENT
CAB	CABINET	FFH	FINISH FACE	M	METERS	QT	QUARRY TILE	TB	TELEPHONE TERMINAL BOARD
CAPT	CARPET	FHC	FIRE HOSE CABINET	MACH	MACHINE	QTR	QUARTER	TYP	TYPICAL
CE	CAST IRON	PHFEC	FIRE HOSE / FIRE EXTINGUISHER CABINET	MATL	MATERIAL	QTY	QUANTITY	U	TOP OF WALL
CB	CATCH BASIN	FLM	FLAT HEAD MACHINE SCREW	MATL	MATERIAL			UC	UNDER COUNTER
CCR	CARD CONTROLLER	FMS	FLAT HEAD WOOD SCREW	MATV	MASTER ANTENNA FEEDING SYSTEM			UNF	UNFINISHED
CSWK	CORNER	FHY	FIRE HYDRANT	MAX	MAXIMUM			UNJ	UNLESS OTHERWISE NOTED
CCTV	CUBICLE CURTAIN TRACK	FM	FINISH FINISHED	MB	MACHINE BOLT			URS	UNRELIABLE POWER SUPPLY
CCTV	CLOSED CIRCUIT TELEVISION	FLW	FLAMMABLE	MC	MEDICINE CABINET			URN	URNAL
CSP	CORNER GUARD	FLN	FLASHING	MDO	MEDIUM DENSITY OVERLAY			UTIL	UTILITY
CEM	CEMENT, CEMENTITIOUS	FLEX	FLEXIBLE	MECH	MECHANICAL				
CE	CERAMIC	FLR	FLOOR	MED	MEDIUM				
CT	CERAMIC TILE	FLU	FLUORESCENT	MET	METAL				
CL	CENTER LINE	FO	FACE OF	MFG	MANUFACTURE				
CL / CL	CENTER LINE	FRT	FIRE RETARDANT TREATMENT	MFR	MEMBRANE				
CLO	CEILING	FRZ	FREEZER	MH	MANIFOLD				
CLO	CLOSET	FSN	FOLDING SHOWER BENCH	MN	MINIMUM				
CLO	CLOSET	FSTR	FASTER	MS	MISCELLANEOUS				
CLO	CLOSET	FT	FOOT, FEET	MLDG	MOLDING				
CW	CONCRETE MASONRY UNIT	FTG	FOOTING	MM	MILLIMETERS				
CRES	COLD RAIN WATER TEST CHANNEL	FURN	FURNITURE	MO	MODULAR OPENING				
CU	COLD	FXTR	FIXTURE	MOD	MODULE, MODULAR				
CUL	CULM			MTD	MOUNTED				
CUN	COUNTER			MTG	MOUNTING				
CSK	COUNTERSINK	G		MVB	MOVABLE				
CSK	COUNTERSINK	G		MULL	MULLION				
CONF	CONFERENCE	GA	GAS GAUGE, GAGE	N					
CONN	CONNECTION	GAL	GALLON	(N)	NEW				
CONSTR	CONSTRUCTION	GALV	GALVANIZED	N	NORTH				
CONSTR	CONSTRUCTION	GB	GRAB BAR	ND	NORTH				
CONTR	CONTRACTOR	GC	GENERAL CONTRACTOR	NO	NOT APPLICABLE				
CJ	CONTRACT JOINT	GFJC	GROUND FAULT CIRCUIT INTERRUPTER	NA	NATURAL				
CG	CORNER GUARD	GFRG	GLASS FIBER REINFORCED CONCRETE	NAT	NATURAL				
CORR	CORROGATED, CORRIDOR	GFRC	GLASS FIBER REINFORCED GYPSUM	NE	NORTHEAST				
CUB	CUBIC	GL	GLASS	NC	NOT IN CONTRACT				
		GLU LAM	GLUE LAMINATED	N	NUMBER				
D		GLZ	GLAZING	NOM	NOMINAL				
DBL	DEPTH	GR	GRADE OR GRADING	NR	NOISE REDUCTION COEFFICIENT				
DBLACT	DOUBLE ACTING	GVL	GRAVEL	NTS	NOT TO SCALE				
DEG	DEGREE	GYP	GYPSUM	NW	NORTHWEST				
DEMCO	DEMOLISH	GYP BD	GYPSUM BOARD	O					
DEPT	DEPARTMENT	GYP PLAS	GYPSUM PLASTER						
DET	DETAIL			O	ON CENTER				
DI	DRAINING FOUNTAIN	H	HIGH	OA	OVERALL				
DIAM	DIAMETER	H	HIGH	OD	OUTSIDE DIAMETER				
DIAG	DIAGONAL	HOSE BIBB	DIAMETER	OD	OWNER FURNISHED CONTRACTOR INSTALLED				
DIF	DIFFUSER	HC	HOLLOW CORE	OFOI	OWNER FURNISHED-OWNER INSTALLED				
DM	DIMENSION	HD	HEAD	OPNG	OPENING				
DM	DIMENSION	HDB	HARDBOARD	OPNSH	OPENING				
DMP FT	DIMENSION POINT	HDW HDWD	HARDWARE	ORD	OVERFLOW ROOF DRAIN				
DSP	DISPENSER	HDWD	HARDWOOD	OVHD	OVERHEAD				
DST	DISTANCE	HGT, HT	HEIGHT	OZ	OUNCE				
DK	DECK	HM	HOLLOW METAL						
DN	DOWN	HNDR	HANDRAIL						
DR	DRAIN, DOOR	HORIZ	HORIZONTAL						
DS	DOWNSPOUT	HPT	HIGH POINT						
DSP	DRY STANDPIPE	HUR	HOUR						
DPT	DRAPERY TRACK	HVC	HEATING-VENTILATION-AIR CONDITIONING						
DTL	DETAIL	HW	HOT WATER						
DW	DISHWASHER								
DWDGWS	DRAINING DRAWINGS								

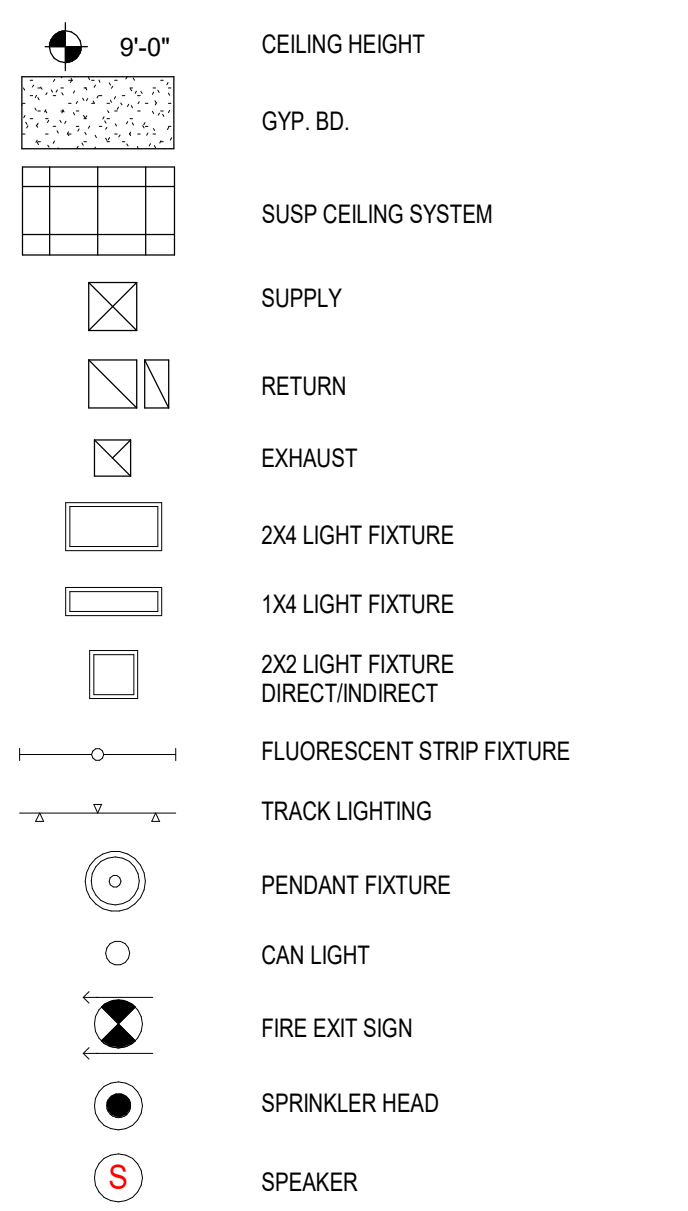
TYPICAL ARCHITECTURAL REFERENCE SYMBOLS



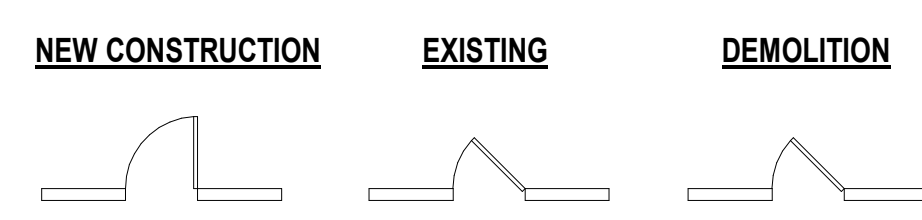
ARCHITECTURAL DIMENSIONING CONVENTIONS

- NOTE: WHERE DIRECTED TO PLACE ITEMS OF WORK ON THE "APPROXIMATE LOCATION SHOWN," DO NOT SCALE DRAWINGS FOR DIMENSIONAL INFORMATION.
- ALL ELEMENTS OF THE DRAWINGS MAY NOT BE DRAWN TO EXACT SCALE. ALL DIMENSIONS REQUIRED ARE SHOWN (OR MAY BE DERIVED FROM THOSE SHOWN OR NOTED) ON THE FLOOR PLANS, DETAIL PLANS, ELEVATIONS, SECTIONS, SCHEDULES, CONFIGURATION DETAILS, AND SPECIFICATIONS. SEE THE NOTES OR NOTES FOR DIMENSIONING CONVENTIONS USED ON THIS PROJECT.
- EXCEPT WHERE SPECIFICALLY NOTED TO THE CONTRARY, ALL DIMENSIONS SHOWN ON THE ARCHITECTURAL DRAWINGS CONFORM TO THE FOLLOWING CONVENTIONS:
- DIMENSIONS UTILIZING THE "CENTERLINE" SYMBOL ARE MEASURED TO:
 - STRUCTURAL OR DIMENSIONAL GRID LINES.
 - CENTERLINE OF CONCRETE OR CONG MASONRY UNIT WALLS [EXCLUSIVE OF FURNISH OR APPLIED FINISHES HAVING THICKNESS] REFER TO THE ARCH PLANS AND SECTIONS, THE STRUCT DRAWINGS, OR PARTITION SCHEDULE TO DETERMINE THE THICKNESS OF CONCRETE OR CONG MASONRY UNIT WALLS.
 - CENTERLINE OF PARTITION ASSEMBLY [EXCLUSIVE OF ANY APPLIED FINISHES HAVING THICKNESS WHICH MAY BE ADDED TO SUCH WALLS] AT PARTITIONS FRAMED WITH METAL STUDS. REFER TO "PARTITION SCHEDULE" TO DETERMINE THICKNESS OF EACH PARTITION TYPE.
 - CENTERLINE OF DOOR, WINDOW, OR LOUVER OPENING.
 - CENTERLINE OF EQUIPMENT OR FURNISH.
 - CENTERLINE OF OTHER FEATURES AS INDICATED.
 - REFER TO ABBREVIATIONS LEGEND FOR SYMBOL USED TO INDICATE CENTERLINE DIMENSION.
 - WHERE THE "FACE OF" SYMBOL ARE MEASURED TO:
 - FACE OF CONCRETE OR CONG MASONRY UNIT WALL [EXCLUSIVE OF APPLIED FINISHES HAVING THICKNESS] FURNISH WHICH MAY BE ADDED TO THE FACE OF SUCH WALLS].
 - FACE OF PARTITION ASSEMBLY [EXCLUSIVE OF ANY APPLIED FINISHES HAVING THICKNESS WHICH MAY BE ADDED TO SUCH WALLS AS DEFINED BY THE PARTITION SCHEDULE. UNLESS NOTED AS A "FACE OF FINISH" OR "CLEAR" DIMENSION (SEE NOTE E BELOW), DIMENSIONS ARE NOT MEASURED TO THE FACE OF APPLIED FINISH. REFER TO THE "PARTITION SCHEDULE" TO DETERMINE THE THICKNESS OF EACH PARTITION.
 - INSIDE EDGE OF FINISHED DOOR OPENING. REFER TO THE DOOR SCHEDULE FOR ADDITIONAL DIMENSIONAL INFORMATION.
 - DIMENSION OR WORK POINT AS INDICATED ON RELATED ARCH DETAIL PLAN, SECTION, ELEVATION, LAYOUT OR CONSTRUCTION DETAIL, OR CONSTRUCTION DETAIL.
 - REFER TO ABBREVIATIONS LEGEND FOR SYMBOL USED TO INDICATE "FACE OF OPENING" DIMENSION.
 - WHERE "FACE OF FINISH" OR "CLEAR" DIMENSIONS ARE SPECIFICALLY NOTED, THE DIM IS MEASURED TO:
 - FINISH FACES AT THE MOST NARROW OR CONSTRICTED PORTIONS OF SECTION WHEN DIMENSION IS SHOWN, WHEN THE DIMENSION OCCURS ACROSS AN OPEN SPACE. THIS CASE, A "FACE OF FINISH" DIMENSION IS EQUIVALENT TO A "CLEAR" DIMENSION.
 - FINISH FACES AT THE WIDEST OR MOST EXPANSIVE PORTIONS OF THE SECTION THE DIMENSION IS SHOWN WHEN THE DIMENSION OCCURS ACROSS AN OBJECT OR GROUP OF OBJECTS.
 - WHERE "EQUAL" DIMENSIONS ARE USED ON REFLECTED CEILING PLANS TO MEASURE DIMENSIONS TO:
 - EDGE OF THE INDICATED CEILING AT THE FACE OF THE ADJACENT APPLIED FINISH MEASURED AT THE PLANE OF THE CEILING.
- CAUTION: DUE TO THE POSSIBLE APPLICATION OF APPLIED FINISHES - THICKNESS OF WHICH MAY VARY - BETWEEN FLOOR AND CEILING AND IS NOT ACCOUNTED FOR (EXCEPT AS INDICATED BY "TOP" OR "CLEAN") BY THE DIMENSION SHOWN ON THE FLOOR PLANS - THE CONTRACTOR MUST ADJUST, AS NECESSARY, THE FLOOR PLAN DIMENSIONS TO REFLECT THE ACTUAL DIMENSIONS FOUND AT PLACE OF CEILING.
- WHERE DOORS OCCUR NOT ADJACENT TO A PERPENDICULAR WALL AND EITHER "DM E" OR "DM F" IN DIAGRAM BELOW IS 16" OR LESS, LOCATE DOOR UTILIZING THE FOLLOWING MINIMUM DIMENSIONS:
- DIMENSION A = 18 INCHES MIN
 - DIMENSION B = 12 INCHES MIN
 - DIMENSION C = DOOR WIDTH + 2 INCHES MINIMUM
 - DIMENSION D = 4 INCHES MIN AT METAL FRAMED QUP OR BIN PARTITIONS OR - EVEN MULTIPLE OF 12 INCHES MINIMUM
 - DIMENSION E AND F AS SHOWN ON PLANS
 - DIMENSION G = 36 INCHES MIN
 - DIMENSION H = 60 INCHES MIN
- WHERE DIMENSIONS ARE NOT PROVIDED ON FLOOR PLANS TO LOCATE DOOR OPENINGS, APPLY THE FOLLOWING RULES, IN ORDER, TO DETERMINE THE LOCATION OF DOOR OPENINGS.
- DOOR OPENINGS MAY BE DIMENSIONED ON DRAWINGS OTHER THAN THE FLOOR PLANS. REFER TO THE SECTIONS, ELEVATIONS, DETAILS, AND DOOR SCHEDULE NOTES FOR ADDITIONAL DIMENSIONAL INFORMATION.
 - WHERE THE HINGE-SIDE OF A DOOR IS SHOWN ADJACENT TO A WALL - OR WALLS - PERPENDICULAR TO THE WALL IN WHICH THE DOOR OPENING OCCURS:
 - AT DOORS OCCURRING IN METAL FRAMED OPSUM BOARD PARTITIONS. LOCATE THE HINGE-SIDE OF THE DOOR FINISHED OPENING 4 INCHES FROM THE FACE [EXCLUSIVE OF APPLIED FINISHES] OF THE CLOSEST PERPENDICULAR WALL OR PARTITION ASSEMBLY.
 - AT DOORS OCCURRING IN WALLS OF CONG MASONRY UNIT CONSTRUCTION. LOCATE THE HINGE-SIDE OF THE DOOR FINISHED OPENING 10 INCHES FROM THE FACE [EXCLUSIVE OF APPLIED FINISHES] OF THE CLOSEST PERPENDICULAR WALL OR PARTITION ASSEMBLY.
- WHERE DOOR IS SHOWN LOCATED IN A LARGE EXPANSE OF OPEN WALL "DM E" AND "DM F" IN DIAGRAM BELOW BOTH EXCEED 16" (16" PLACEMENT DOOR AT APPROXIMATE LOCATION SHOWN ON THE PLANS. WHERE DOOR OCCURS IN METAL WALL, PLACE DOOR AT APPROXIMATE LOCATION SHOWN WHILE MINIMIZING "CLT" OR PARTIAL CMU MODULES ADJACENT TO THE JAMBS.
- WHERE WALLS AND/OR PARTITIONS OF UNEQUAL THICKNESS ABUT, ALIGN EXPOSED FACES, UNLESS OTHERWISE NOTED.
- ALIGN
DIMENSION, WHEN OCCURS

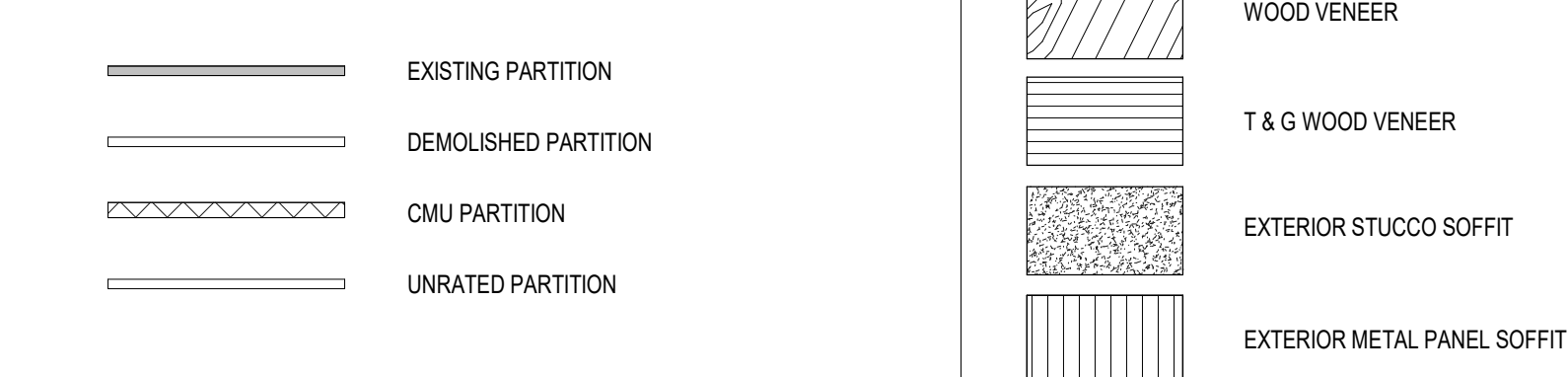
REFLECTED CEILING PLAN SYMBOLS:



TYP DOOR LEGEND



WALL TYPE LEGEND



GENERAL
INFORMATION NOTES:

- [illegible]

A11 TYPICAL MOUNTING HEIGHTS

1/4" = 1'-0"

MISCELLANEOUS ACCESSORY TYPICAL MOUNTING HEIGHTS											
NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT											
FINISH FLOOR	ACCESSORY TYPE	COMMENTS	FINISH FLOOR	ACCESSORY TYPE	COMMENTS	FINISH FLOOR	ACCESSORY TYPE	COMMENTS	FINISH FLOOR	ACCESSORY TYPE	COMMENTS
	FIRE EXTINGUISHER CABINET	SEMI RECESSED		FIRE EXTINGUISHER CABINET	SEMI RECESSED		FIRE EXTINGUISHER CABINET	SEMI RECESSED		FIRE EXTINGUISHER CABINET	SEMI RECESSED
	MANUAL FIRE PULL	SURFACE MOUNTED		MANUAL FIRE PULL	SURFACE MOUNTED		MANUAL FIRE PULL	SURFACE MOUNTED		MANUAL FIRE PULL	SURFACE MOUNTED
	FIRE STROBE/LIGHT/BUZZER ALARM	SURFACE MOUNTED		FIRE STROBE/LIGHT/BUZZER ALARM	SURFACE MOUNTED		FIRE STROBE/LIGHT/BUZZER ALARM	SURFACE MOUNTED		FIRE STROBE/LIGHT/BUZZER ALARM	SURFACE MOUNTED
	WALL MOUNTED EXIT SIGN	WALL MOUNTED		WALL MOUNTED EXIT SIGN	WALL MOUNTED		WALL MOUNTED EXIT SIGN	WALL MOUNTED		WALL MOUNTED EXIT SIGN	WALL MOUNTED
	WALL MOUNTED HANDRAIL	SURFACE MOUNTED		WALL MOUNTED HANDRAIL	SURFACE MOUNTED		WALL MOUNTED HANDRAIL	SURFACE MOUNTED		WALL MOUNTED HANDRAIL	SURFACE MOUNTED
	WALL CLOCK	SURFACE MOUNTED		WALL CLOCK	SURFACE MOUNTED		WALL CLOCK	SURFACE MOUNTED		WALL CLOCK	SURFACE MOUNTED
	FABRIC COVERED TACK BOARD	SURFACE MOUNTED		FABRIC COVERED TACK BOARD	SURFACE MOUNTED		FABRIC COVERED TACK BOARD	SURFACE MOUNTED		FABRIC COVERED TACK BOARD	SURFACE MOUNTED
	MARKER BOARD	SURFACE MOUNTED		MARKER BOARD	SURFACE MOUNTED		MARKER BOARD	SURFACE MOUNTED		MARKER BOARD	SURFACE MOUNTED
	MOP & BROOM HOLDER	SURFACE MOUNTED		MOP & BROOM HOLDER	SURFACE MOUNTED		MOP & BROOM HOLDER	SURFACE MOUNTED		MOP & BROOM HOLDER	SURFACE MOUNTED
	ROBE HOOK	SURFACE MOUNTED		ROBE HOOK	SURFACE MOUNTED		ROBE HOOK	SURFACE MOUNTED		ROBE HOOK	SURFACE MOUNTED
	ELAPSED TIME CLOCK	SURFACE MOUNTED		ELAPSED TIME CLOCK	SURFACE MOUNTED		ELAPSED TIME CLOCK	SURFACE MOUNTED		ELAPSED TIME CLOCK	SURFACE MOUNTED
	SOAP DISPENSER	SURFACE MOUNTED		SOAP DISPENSER	SURFACE MOUNTED		SOAP DISPENSER	SURFACE MOUNTED		SOAP DISPENSER	SURFACE MOUNTED
	PAPER TOWEL DISPENSER	SURFACE MOUNTED		PAPER TOWEL DISPENSER	SURFACE MOUNTED		PAPER TOWEL DISPENSER	SURFACE MOUNTED		PAPER TOWEL DISPENSER	SURFACE MOUNTED
	ALCOHOL DISPENSER	SURFACE MOUNTED		ALCOHOL DISPENSER	SURFACE MOUNTED		ALCOHOL DISPENSER	SURFACE MOUNTED		ALCOHOL DISPENSER	SURFACE MOUNTED

MISCELLANEOUS ACCESSORY TYPICAL MOUNTING HEIGHTS											
NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT											
FINISH FLOOR	ACCESSORY TYPE	COMMENTS	FINISH FLOOR	ACCESSORY TYPE	COMMENTS	FINISH FLOOR	ACCESSORY TYPE	COMMENTS	FINISH FLOOR	ACCESSORY TYPE	COMMENTS
	CLOSET HANGAR ROD & SHELF	WALL MOUNTED		CLOSET HANGAR ROD & SHELF	WALL MOUNTED		CLOSET HANGAR ROD & SHELF	WALL MOUNTED		CLOSET HANGAR ROD & SHELF	WALL MOUNTED
	WALL PHONE	SURFACE MOUNTED		WALL PHONE	SURFACE MOUNTED		WALL PHONE	SURFACE MOUNTED		WALL PHONE	SURFACE MOUNTED
	TELEPHONE HOUSING	SURFACE MOUNTED		TELEPHONE HOUSING	SURFACE MOUNTED		TELEPHONE HOUSING	SURFACE MOUNTED		TELEPHONE HOUSING	SURFACE MOUNTED
	CUP DISPENSER	SURFACE MOUNTED		CUP DISPENSER	SURFACE MOUNTED		CUP DISPENSER	SURFACE MOUNTED		CUP DISPENSER	SURFACE MOUNTED
	WALL SWITCH	SURFACE MOUNTED		WALL SWITCH	SURFACE MOUNTED		WALL SWITCH	SURFACE MOUNTED		WALL SWITCH	SURFACE MOUNTED
	TELEPHONE OUTLET	SURFACE MOUNTED		TELEPHONE OUTLET	SURFACE MOUNTED		TELEPHONE OUTLET	SURFACE MOUNTED		TELEPHONE OUTLET	SURFACE MOUNTED
	RECEPTACLE/TELEPHONE/ DATA	SURFACE MOUNTED		RECEPTACLE/TELEPHONE/ DATA	SURFACE MOUNTED		RECEPTACLE/TELEPHONE/ DATA	SURFACE MOUNTED		RECEPTACLE/TELEPHONE/ DATA	SURFACE MOUNTED
	RECEPTACLE/TELEPHONE/ DATA	SURFACE MOUNTED		RECEPTACLE/TELEPHONE/ DATA	SURFACE MOUNTED		RECEPTACLE/TELEPHONE/ DATA	SURFACE MOUNTED		RECEPTACLE/TELEPHONE/ DATA	SURFACE MOUNTED
	SPECIALTY EQUIP (IE THERMOSTAT CARD READER, INTERCOM)	SURFACE MOUNTED		SPECIALTY EQUIP (IE THERMOSTAT CARD READER, INTERCOM)	SURFACE MOUNTED		SPECIALTY EQUIP (IE THERMOSTAT CARD READER, INTERCOM)	SURFACE MOUNTED		SPECIALTY EQUIP (IE THERMOSTAT CARD READER, INTERCOM)	SURFACE MOUNTED
	ELEVATOR CALL BUTTON	SURFACE MOUNTED		ELEVATOR CALL BUTTON	SURFACE MOUNTED		ELEVATOR CALL BUTTON	SURFACE MOUNTED		ELEVATOR CALL BUTTON	SURFACE MOUNTED
	ELEVATOR VISIBLE SIGNAL INDICATOR	SURFACE MOUNTED		ELEVATOR VISIBLE SIGNAL INDICATOR	SURFACE MOUNTED		ELEVATOR VISIBLE SIGNAL INDICATOR	SURFACE MOUNTED		ELEVATOR VISIBLE SIGNAL INDICATOR	SURFACE MOUNTED
	TACTILE CHARACTER INDICATOR	SURFACE MOUNTED		TACTILE CHARACTER INDICATOR	SURFACE MOUNTED		TACTILE CHARACTER INDICATOR	SURFACE MOUNTED		TACTILE CHARACTER INDICATOR	SURFACE MOUNTED
	PANIC BAR	SURFACE MOUNTED		PANIC BAR	SURFACE MOUNTED		PANIC BAR	SURFACE MOUNTED		PANIC BAR	SURFACE MOUNTED
	DOOR PULL	SURFACE MOUNTED		DOOR PULL	SURFACE MOUNTED		DOOR PULL	SURFACE MOUNTED		DOOR PULL	SURFACE MOUNTED
	DOOR LATCH	SURFACE MOUNTED		DOOR LATCH	SURFACE MOUNTED		DOOR LATCH	SURFACE MOUNTED		DOOR LATCH	SURFACE MOUNTED
	ADA DOOR OPERATOR	VARIES		ADA DOOR OPERATOR	VARIES		ADA DOOR OPERATOR	VARIES		ADA DOOR OPERATOR	VARIES

TOILET ACCESSORY TYPICAL MOUNTING HEIGHTS

TOILET ACCESSORY TYPICAL MOUNTING HEIGHTS											
NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT											
FINISH FLOOR	ACCESSORY TYPE	COMMENTS	FINISH FLOOR	ACCESSORY TYPE	COMMENTS	FINISH FLOOR	ACCESSORY TYPE	COMMENTS	FINISH FLOOR	ACCESSORY TYPE	COMMENTS
	PAPER TOWEL DISPENSER	SURFACE MOUNTED		PAPER TOWEL DISPENSER	SURFACE MOUNTED		PAPER TOWEL DISPENSER	SURFACE MOUNTED		PAPER TOWEL DISPENSER	SURFACE MOUNTED
	POWER HAND DRYER	SURFACE MOUNTED		POWER HAND DRYER	SURFACE MOUNTED		POWER HAND DRYER	SURFACE MOUNTED		POWER HAND DRYER	SURFACE MOUNTED
	PAPER TOWEL DISPENSER & TRASH	SEMI RECESSED		PAPER TOWEL DISPENSER & TRASH	SEMI RECESSED		PAPER TOWEL DISPENSER & TRASH	SEMI RECESSED		PAPER TOWEL DISPENSER & TRASH	SEMI RECESSED
	TOILET TISSUE DISPENSER	SURFACE MOUNTED		TOILET TISSUE DISPENSER	SURFACE MOUNTED		TOILET TISSUE DISPENSER	SURFACE MOUNTED		TOILET TISSUE DISPENSER	SURFACE MOUNTED
	SANITARY NAPKIN DISPOSAL	SURFACE MOUNTED		SANITARY NAPKIN DISPOSAL	SURFACE MOUNTED		SANITARY NAPKIN DISPOSAL	SURFACE MOUNTED		SANITARY NAPKIN DISPOSAL	SURFACE MOUNTED
	SANITARY NAPKIN DISPENSER	RECESSED & SURFACE		SANITARY NAPKIN DISPENSER	RECESSED & SURFACE		SANITARY NAPKIN DISPENSER	RECESSED & SURFACE		SANITARY NAPKIN DISPENSER	RECESSED & SURFACE
	VANITY SOAP DISPENSER	SURFACE MOUNTED		VANITY SOAP DISPENSER	SURFACE MOUNTED		VANITY SOAP DISPENSER	SURFACE MOUNTED		VANITY SOAP DISPENSER	SURFACE MOUNTED
	FRAMED VANITY MIRROR	SURFACE MOUNTED		FRAMED VANITY MIRROR	SURFACE MOUNTED		FRAMED VANITY MIRROR	SURFACE MOUNTED		FRAMED VANITY MIRROR	SURFACE MOUNTED
	DIAPER CHANGING STATION	SURFACE MOUNTED		DIAPER CHANGING STATION	SURFACE MOUNTED		DIAPER CHANGING STATION	SURFACE MOUNTED		DIAPER CHANGING STATION	SURFACE MOUNTED
	SOAP DISPENSER	COUNTERTOP MOUNTED		SOAP DISPENSER	COUNTERTOP MOUNTED		SOAP DISPENSER	COUNTERTOP MOUNTED		SOAP DISPENSER	COUNTERTOP MOUNTED
	FOLDING SHOWER SEAT	SURFACE MOUNTED		FOLDING SHOWER SEAT	SURFACE MOUNTED		FOLDING SHOWER SEAT	SURFACE MOUNTED		FOLDING SHOWER SEAT	SURFACE MOUNTED
	TOILET PARTITION	WALL MOUNTED		TOILET PARTITION	WALL MOUNTED		TOILET PARTITION	WALL MOUNTED		TOILET PARTITION	WALL MOUNTED
	URNAL SCREEN	WALL MOUNTED		URNAL SCREEN	WALL MOUNTED		URNAL SCREEN	WALL MOUNTED		URNAL SCREEN	WALL MOUNTED

PLUMBING FIXTURE TYPICAL MOUNTING HEIGHTS

PLUMBING FIXTURE TYPICAL MOUNTING HEIGHTS											
NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT											
FINISH FLOOR	ACCESSORY TYPE	COMMENTS	FINISH FLOOR	ACCESSORY TYPE	COMMENTS	FINISH FLOOR	ACCESSORY TYPE	COMMENTS	FINISH FLOOR	ACCESSORY TYPE	COMMENTS
	SHOWER MIXING VALVE	WALL MOUNTED		SHOWER MIXING VALVE	WALL MOUNTED		SHOWER MIXING VALVE	WALL MOUNTED		SHOWER MIXING VALVE	WALL MOUNTED
	SHOWER HEAD	WALL MOUNTED		SHOWER HEAD	WALL MOUNTED		SHOWER HEAD	WALL MOUNTED		SHOWER HEAD	WALL MOUNTED
	HAND HELD SHOWER	WALL MOUNTED		HAND HELD SHOWER	WALL MOUNTED		HAND HELD SHOWER	WALL MOUNTED		HAND HELD SHOWER	WALL MOUNTED
	LAVATORY	WALL MOUNTED		LAVATORY	WALL MOUNTED		LAVATORY	WALL MOUNTED		LAVATORY	WALL MOUNTED
	LAVATORY	COUNTER MOUNTED		LAVATORY	COUNTER MOUNTED		LAVATORY	COUNTER MOUNTED		LAVATORY	COUNTER MOUNTED
	CHILDREN'S DRINKING FOUNTAIN	WALL MOUNTED		CHILDREN'S DRINKING FOUNTAIN	WALL MOUNTED		CHILDREN'S DRINKING FOUNTAIN	WALL MOUNTED		CHILDREN'S DRINKING FOUNTAIN	WALL MOUNTED
	SINGLE DRINKING FOUNTAIN	WALL MOUNTED		SINGLE DRINKING FOUNTAIN	WALL MOUNTED		SINGLE DRINKING FOUNTAIN	WALL MOUNTED		SINGLE DRINKING FOUNTAIN	WALL MOUNTED
	DOUBLE DRINKING FOUNTAIN	WALL MOUNTED		DOUBLE DRINKING FOUNTAIN	WALL MOUNTED		DOUBLE DRINKING FOUNTAIN	WALL MOUNTED		DOUBLE DRINKING FOUNTAIN	WALL MOUNTED
	TOILET	WALL/FLOOR MOUNTED		TOILET	WALL/FLOOR MOUNTED		TOILET	WALL/FLOOR MOUNTED		TOILET	WALL/FLOOR MOUNTED
	URNAL	WALL MOUNTED		URNAL	WALL MOUNTED		URNAL	WALL MOUNTED		URNAL	WALL MOUNTED

GRAB BAR TYPICAL MOUNTING HEIGHTS & TOILET ACCESSORY PLANS

GRAB BAR TYPICAL MOUNTING HEIGHTS & TOILET ACCESSORY PLANS											
NOTE: SOME OBJECTS INDICATED HERE ARE NOT INCLUDED IN THIS PROJECT											
FINISH FLOOR	ACCESSORY TYPE	COMMENTS	FINISH FLOOR	ACCESSORY TYPE	COMMENTS	FINISH FLOOR	ACCESSORY TYPE	COMMENTS	FINISH FLOOR	ACCESSORY TYPE	COMMENTS
	ADA TOILET GRAB BAR	SURFACE MOUNTED		ADA TOILET GRAB BAR	SURFACE MOUNTED		ADA TOILET GRAB BAR	SURFACE MOUNTED		ADA TOILET GRAB BAR	SURFACE MOUNTED
	SHOWER STALL GRAB BAR	SURFACE MOUNTED		SHOWER STALL GRAB BAR	SURFACE MOUNTED		SHOWER STALL GRAB BAR	SURFACE MOUNTED		SHOWER STALL GRAB BAR	SURFACE MOUNTED
	ROLL-IN SHOWER STALL GRAB BAR	SURFACE MOUNTED		ROLL-IN SHOWER STALL GRAB BAR	SURFACE MOUNTED		ROLL-IN SHOWER STALL GRAB BAR	SURFACE MOUNTED		ROLL-IN SHOWER STALL GRAB BAR	SURFACE MOUNTED
	TYPICAL ACCESSORIES AT ACCESSIBLE TOILET	NOTE: SANITARY NAPKIN DISPOSAL AT WOMEN'S & UNISEX ONLY		TYPICAL ACCESSORIES AT ACCESSIBLE TOILET	NOTE: SANITARY NAPKIN DISPOSAL AT WOMEN'S & UNISEX ONLY		TYPICAL ACCESSORIES AT ACCESSIBLE TOILET	NOTE: SANITARY NAPKIN DISPOSAL AT WOMEN'S & UNISEX ONLY		TYPICAL ACCESSORIES AT ACCESSIBLE TOILET	NOTE: SANITARY NAPKIN DISPOSAL AT WOMEN'S & UNISEX ONLY
	TYPICAL ADA SINK ENCLOSURE PANEL CLEARANCE			TYPICAL ADA SINK ENCLOSURE PANEL CLEARANCE			TYPICAL ADA SINK ENCLOSURE PANEL CLEARANCE			TYPICAL ADA SINK ENCLOSURE PANEL CLEARANCE	

GENERAL NOTES

ACCESSIBILITY GUIDELINES:

- NOTE: ALL DIMENSIONS ARE MEASURED FROM FLOOR, UNLESS NOTED OR SHOWN OTHERWISE.
- ADA UNOBSTRUCTED REACH RANGES: ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN.
- ELEVATORS: STANDARD CALL BUTTONS: 36" TO 48" TO C.L. & PROTRUDE 1" MAX. ADA CALL BUTTONS: 42" TO C.L. (TYP.) & 48" MAX. (3/4" SMALLEST DIM.). ADA VISIBLE SIGNALS: 72" MIN. TO C.L. (2 1/2" SMALLEST DIM.). TACTILE SIGNAL ON HOISTWAY: 60" TO BASE OF CHARACTERS W/ TACTILE STAR & 2" HIGH CHARACTERS.
- DOOR HARDWARE (TO CENTER OF HARDWARE): STANDARD MOUNTING HEIGHTS: PUSH PLATES = 42"; PULL HANDLES = 42"; KNOBS/LEVERS = 40"; PANIC EXIT = 42"; CENTERLINE OF BAR, KICKPLATES: WIDTH = DOOR WIDTH MINUS 2"; CENTER HEIGHT = 18" FROM B.O. DOOR THRESHOLDS: STANDARD = 1/2" MAX. AT EXT. SLIDING DOORS = 3/4" MAX. ADA HARDWARE = 34" MIN. TO 48" MAX. DRINKING FOUNTAINS & SPOUTS (TO SPOUT): STANDARD = 40" TYP. 42" MAX. ADA = 38" MAX. (27" MIN. CLEAR KNEE SPACE).
- COUNTERTOPS (TO SINK RIM/ COUNTERTOP): ADA = 28" MIN. TO 34" MAX.
- WATER CLOSETS (TO TOP OF SEAT): STANDARD = 14" TO 15" ADA (TO TOP OF SEAT) = 17" TO 19" ADA FLUSH CONTROLS = 44" MAX.
- URNALS (TO RIM): STANDARD = 24" MAX. ADA = 17" MAX. ADA FLUSH CONTROL S = 44" MAX.
- LAVATORIES (TO SINK RIM/ COUNTERTOP): STANDARD = 38" MAX. ADA = 34" MAX. (29" MIN. CLEAR KNEE SPACE).
- MIRRORS (TO B.O. REFLECTIVE SURFACE): STANDARD = VARIES. ADA = 40" MAX.
- GRAB BARS: ADA (TO TOP OF BAR): WATER CLOSETS = 33" MIN. TO 38" MAX. SHOWERS = 33" MIN. TO 38" MAX. FROM B.O. SHOWER, BATHTUBS: TOP BAR = 33" MIN. TO 38" MAX. BOT. BAR = 8" ABOVE T.O. TUB.
- SHOWER HEADS (FROM FLOOR TO HEAD): STANDARD = 72" TO 84" ADA = SPRAY UNIT W/ HOSE 60" LONG MIN. ADA = FIXED SHOWER HEAD = 48" AFF.
- SHOWER CONTROLS (TO CONTROL AREA): STANDARD = 48" MAX. (TO TOP), ADA = 38" MIN. TO 48" MAX. SHOWER ROD (FROM FLOOR TO C.L.): STANDARD = 78" MAX.
- TOILET ROOM PARTITIONS: TOILETS = 12" TO BOT. & 60" TO TOP. URNALS = 18" TO BOT. & 60" TO TOP.
- TOILET PAPER DISPENSERS (TO C.L. OF OUTLET): STANDARD = 24" ADA = 19" MIN. TO 24" MAX.
- WALL MOUNTED SOAP DISPENSERS (TO C.L. OF PUSH BUTTON): STANDARD = 40" ADA = VARIES. RE-OBSTRUCTED AND UNOBSTRUCTED REACH RANGES: ADA SIDE REACH = 48" MAX. ABOVE SINK IN COUNTER. PAPER TOWEL DISPENSER/ WASTE RECEPTACLE (TO TOWEL SLOT): STANDARD = 40" MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN.
- WARM AIR HAND DRYER (TO PUSH SWITCH): STANDARD = 44" MAX. ADA FORWARD REACH = 48" MAX. & 15" MIN. ADA SIDE REACH = 48" MAX. & 15" MIN.
- SHOVELS: ADA = 48" MAX.
- COAT HOOKS: STANDARD = 68" ADA = 48" MAX.
- CHALKBOARDS, TACKBOARDS & MARKERBOARDS: STANDARD = 32" TO 36" (TO B.O. BOARD OR CHALKTRAY). STANDARD = 80" (RECOMMENDED TO T.O. BOARD).
- THERMOSTATS & CONTROL DEVICES (TO TOP): ADA FORWARD REACH = 48" MAX. ADA SIDE REACH = 48" MAX. LIGHT SWITCHES & CARD READERS (TO C.L.): LOCATE 6" FROM DOOR JAMB. ADA = 48" MAX.
- CONVENIENCE RECEPTACLES - ELECTRICAL/ TELEPHONE/ DATA (TO C.L.): STANDARD = 18" ADA = 15" MIN.
- EXIT LIGHTS - WALL MOUNTED: 2" MIN. BELOW CEILING. 2" MIN. ABOVE DOOR FRAME. EQUAL SPACE FROM CEILING TO TOP OF FRAME.
- FIRE EXTINGUISHERS (TO TOP, U.N.O.): GROSS WT. 40 LBS. OR LESS = 60" MAX. GROSS WT. MORE THAN 40 LBS. = 42" MAX. ADA = 40" MAX. (B.O. CABINET).
- FIRE ALARM PULL STATIONS (TO LEVER): STANDARD = 48" MAX. ADA FORWARD REACH = 48" MAX. ADA SIDE REACH = 48" MAX.
- SMOKE AND/OR HEAT DETECTORS: STANDARD = CEILING HEIGHT.
- HORN/ SPEAKER VISUAL SIGNALS: STANDARD = 80" AFF. OR BELOW CEILING - WHICHEVER IS LOWER.
- ROOM SIGNAGE (TO C.L.): STANDARD = 60" HIGH AFF. & WITHIN 18" OF LATCH SIDE OF DOOR.

MAIN STREET BUILDING IMPROVEMENTS

230 SW MAIN ST.
LEE'S SUMMIT, MO 64063

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REVISION DATES:



PROFESSIONAL SEAL

G002

ISSUE DATE: 21 APRIL, 2022
COLLINS WEBB #: 21121

ACCESSIBILITY GUIDELINES



PERMIT DOCUMENTS

WALL PRIORITY LEGEND

NOTE: THIS LEGEND IS FOR GRAPHIC REPRESENTATION ONLY.

FOUR HOUR FIRE WALL (4FW)
 THREE HOUR FIRE WALL (3FW)
 TWO HOUR FIRE WALL (2FW)
 FOUR HOUR FIRE BARRIER (4FB)
 THREE HOUR FIRE BARRIER (3FB)
 TWO HOUR FIRE BARRIER (2FB) (INCLUDES THE FOLLOWING)
 • TWO HOUR SHUNT ENCLOSURE (SB)
 • ONE HOUR FIRE BARRIER (FB) (INCLUDES THE FOLLOWING)
 • ONE HOUR SHUNT ENCLOSURE (SB)

SMOKE TIGHT PARTITION (X) (INCLUDES THE FOLLOWING)
 • SMOKE TIGHT PARTITION TO SMOKE TIGHT CEILING (XC)
 • SMOKE TIGHT PARTITION WITHIN PLENUM ABOVE CEILING (XP)
 • SMOKE TIGHT PARTITION SEPARATION OF INTERSTITIAL SPACES (XI)

DETAIL ABUTMENT OF DISSIMILAR WALL

LOWER PRIORITY WALL

HIGHER PRIORITY WALLS SHALL PASS THROUGH A LOWER PRIORITY WALL

INTERSECTION OF RATED WALLS

TAPE & JOINT COMPOUND (TYP)
 LOWER JOINT WALL

TAPE & SEAL HIGHER PRIORITY WALL BEHIND INTERSECTING LOWER PRIORITY WALL (TYP)
 HIGHER PRIORITY WALL

TAPE & JOINT COMPOUND (TYP)
 HIGHER PRIORITY WALL

A **B**

LOWER PRIORITY WALL

TAPE & JOINT COMPOUND (TYP)

HIGHER PRIORITY WALL

LOWER PRIORITY WALL

C **D**

LOWER PRIORITY WALL

TAPE & JOINT COMPOUND (TYP)

HIGHER PRIORITY WALL

E

NOTES:

1. REFER TO WALL TYPES ON SHEET G121-TM FOR WALL COMPONENTS, NUMBER OF GYPSUM BOARD LAYERS, TYPE OF GYPSUM BOARD, AND OTHER SIMILAR INFO.
2. THE HIGHER PRIORITY WALL SHALL PASS THROUGH THE LOWER PRIORITY WALL.
3. TAPING AND SEALING OF HIGHER PRIORITY WALLS SHALL BE CONTINUOUS.
4. ALTERNATE LAYERS OF GYPSUM BOARD SHALL OVERLAP AT CORNER INTERSECTIONS OF MULTI-LAYERED RATED GYPSUM BOARD PARTITIONS.

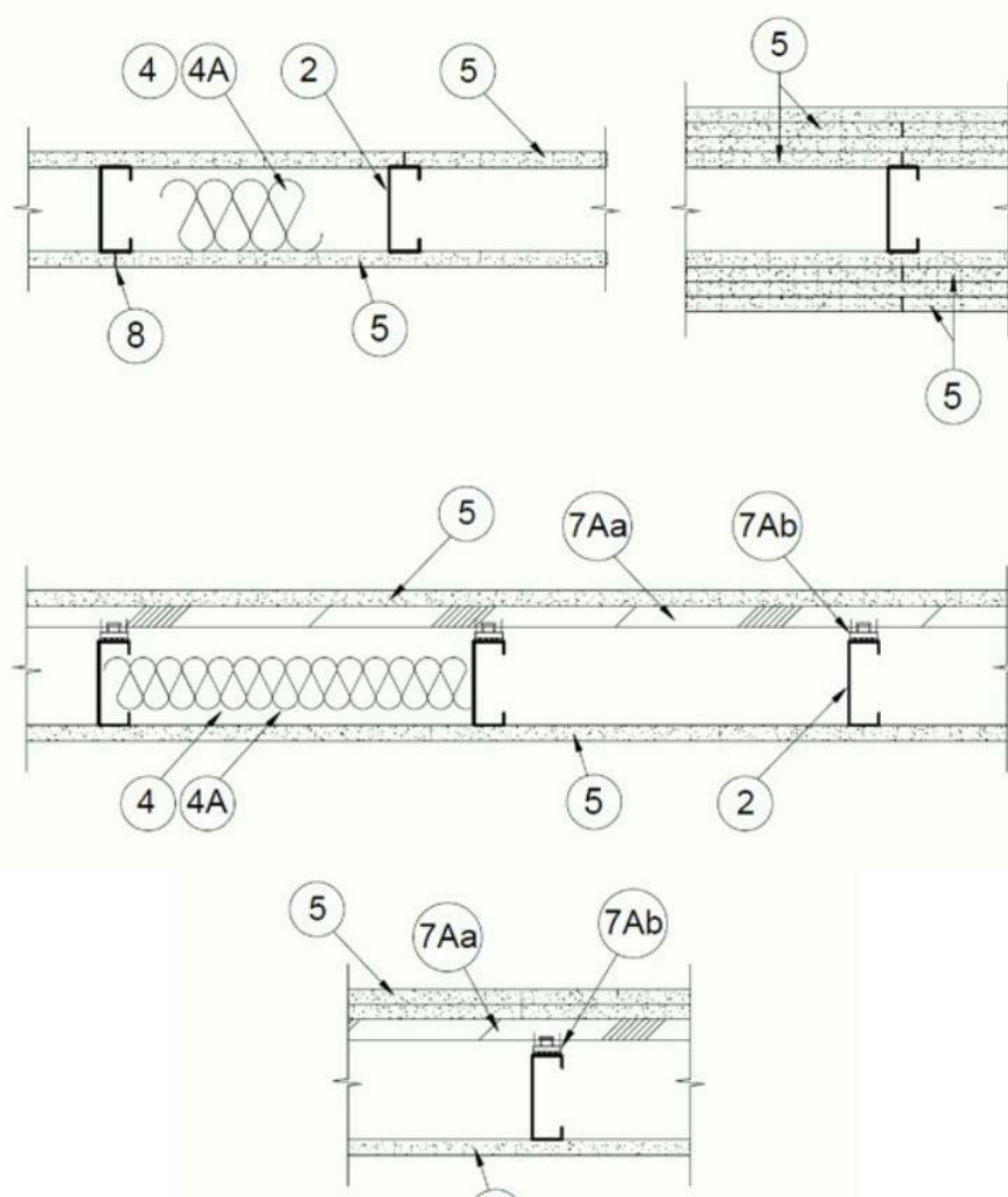
- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of Fire Resistance Assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

**BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States
BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada**[See General Information for Fire Resistance Ratings - ANSI/UL 263 Certified for United States](#)[Design Criteria and Allowable Variance](#)[See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada](#)[Design Criteria and Allowable Variance](#)**Design No. U419**

July 31, 2021

Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr (See Items 4 & 5 through 5J)

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



1. **Floor and Ceiling Runners** — (Not Shown) — For use with Item 2 — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth to accommodate stud size, with min 1-1/4 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max.

1A. **Framing Members* — Floor and Ceiling Runner** — (Not Shown) — In lieu of Item 1 — For use with Item 2B, proprietary channel shaped runners, 3-5/8 in. deep, attached to floor and ceiling with fasteners 24 in. OC max.

CRACO MFG INC — SmartTrack25™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Vipeo20™

FUSION BUILDING PRODUCTS — Vipeo25™ Track

IMPERIAL MANUFACTURING GROUP INC — Vipeo25™ Track

18. **Framing Members* — Floor and Ceiling Runner** — (Not Shown) — In lieu of Item 1 — For use with Item 2C, proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep, fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Vipeo20™ Track

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Vipeo20™ Track

FUSION BUILDING PRODUCTS — Vipeo20™ Track

IMPERIAL MANUFACTURING GROUP INC — Vipeo20™ Track

1C. **Framing Members* — Floor and Ceiling Runners** — (Not Shown) — In lieu of Item 1 — Channel shaped, attached to floor and ceiling with fasteners 24 in. OC max.

ALISTEEL & GYPSUM PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

CONSOLIDATED FABRICATORS CORP BUILDING PRODUCTS DIV — Type SUPREME D24/30EQD and Type SUPREME D20

QUAIL RUN BUILDING MATERIALS INC — Type SUPREME D24/30EQD and Type SUPREME D20

SCAFECO STEEL STUD MANUFACTURING CO — Type SUPREME D24/30EQD and Type SUPREME D20

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D24/30EQD and Type SUPREME D20

TELLING INDUSTRIES L L C — Type SUPREME D24/30EQD and Type SUPREME D20

UNITED METAL PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

1D. **Floor and Ceiling Runners** — (Not Shown) — For use with Item 2A — Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, min depth to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners spaced 24 in. OC.

1E. **Framing Members* — Floor and Ceiling Runners** — (Not Shown, As an alternate to Item 1) — For use with Items 2E, 5F or 5G or 5I only, channel shaped, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC max.

CLARKDIERICH BUILDING SYSTEMS — CD ProTrack

DMFCWB5 L L C — ProTrack

MBA METAL FRAMING — ProTrack

RAM SALES L L C — Ram ProTrack

STEEL STRUCTURAL PRODUCTS L L C — Tri-S ProTrack

1F. **Framing Members* — Floor and Ceiling Runner** — (Not Shown) — In lieu of Item 1 — For use with Item 2F, proprietary channel shaped runners, minimum width to accommodate stud size, with 1-1/8 in. long legs, fabricated from min 0.015 in. (min bare metal thickness) galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

SUPER STUD BUILDING PRODUCTS — The Edge

1G. **Framing Members* — Floor and Ceiling Runner** — For use with Item 2C, proprietary channel shaped runners, minimum width to accommodate stud size, attached to floor and ceiling with fasteners 24 in. OC max.

STUCCO BUILDING SYSTEMS — CROCS1UD Track

1H. **Floor and Ceiling Runners** — (Not Shown) — Channel shaped, fabricated from min 0.02 in. in. galv steel, min width to accommodate stud size, with min 1 in. long legs, for use with studs specified below and fabricated from min 0.018 in. galv steel or thicker, attached to floor and ceiling with fasteners spaced max 24 in. OC.

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Vipeo20™ Track V100

FUSION BUILDING PRODUCTS — Vipeo20™ Track V100

IMPERIAL MANUFACTURING GROUP INC — Vipeo20™ Track V100

1I. **Framing Members* — Floor and Ceiling Runners** — (Not Shown, As an alternate to Item 1) — For use with Item 2H, channel shaped, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC max.

TELLING INDUSTRIES L L C — TRUE-TRACK™

1J. **Framing Members* — Floor and Ceiling Runner** — (Not Shown) — In lieu of Item 1 — For use with Item 2J, proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep, fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

RESCUE METAL FRAMING, L L C — AlphaSTAK

1M. **Framing Members* — Floor and Ceiling Runners** — (Not Shown) — As an alternate to Item 1 — For use with Item 2D, proprietary channel shaped runners, min width to accommodate stud size, galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

RONDO BUILDING SERVICES PTY LTD — Rondo Wall Track

1N. **Framing Members* — Floor and Ceiling Runners** — (Not Shown) — As an alternate to Item 1 — For use with Item 2P, proprietary channel shaped runners, min width to accommodate stud size, galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

OEK BUILDING MATERIALS — OEK Track

1O. **Framing Members* — Floor and Ceiling Runner** — (Not Shown) — In lieu of Item 1 — For use with Item 2Q, proprietary channel shaped runners, min width to accommodate stud size, fabricated from min. 25 MSG 0.018 in. (min. bare metal thickness), attached to floor and ceiling with fasteners spaced 24 in. OC max.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper X Track

2. **Steel Studs** — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.

2A. **Steel Studs** — (As an alternate to Item 2, for use with Items 5B, 5E, 5I, 5J or Type ULX) — Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min depth, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height.

2B. **Framing Members* — Steel Studs** — (As an alternate to Item 2, for use with Items SC, SI or Type ULX) — Proprietary channel shaped studs, 3-5/8 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than the assembly height and installed with a 1/2 in. gap between the end of the stud and track at the bottom of the wall. For direct attachment of gypsum board only.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Vipeo25™

CRACO MFG INC — SmartTrack25™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Vipeo25™

FUSION BUILDING PRODUCTS — Vipeo25™

IMPERIAL MANUFACTURING GROUP INC — Vipeo25™

2C. **Framing Members* — Steel Studs** — (Not Shown, As an alternate to Item 2) — For use with Item 2C, proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max of 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Vipeo20™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Vipeo20™

FUSION BUILDING PRODUCTS — Vipeo20™

IMPERIAL MANUFACTURING GROUP INC — Vipeo20™

2E. **Framing Members* — Steel Studs** — (Not Shown, As an alternate to Item 2) — For use with Items 5F or 5G or 5I or Type ULX only, channel shaped studs, min depth as indicated under Item 5F, 5G or 5I, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Vipeo20™

CRACO MFG INC — SmartTrack25™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Vipeo20™

FUSION BUILDING PRODUCTS — Vipeo20™

IMPERIAL MANUFACTURING GROUP INC — Vipeo20™

2F. **Framing Members* — Steel Studs** — (Not Shown, As an alternate to Item 2) — For use with Items 5F or 5G or 5I or Type ULX only, channel shaped studs, min depth as indicated under Item 5F, 5G or 5I, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced 3/8 in. to 3/4 in. less in lengths than assembly heights.

SUPER STUD BUILDING PRODUCTS — The Edge

2G. **Framing Members* — Steel Studs** — (Not Shown) — In lieu of Item 2 — proprietary channel shaped studs, minimum width as indicated under Item 5, Studs to be cut 3/8 to 3/4 in. less than the assembly height.

STUCCO BUILDING SYSTEMS — CROCS1UD

2H. **Framing Members* — Steel Studs** — (Not Shown, As an alternate to Item 2) — Fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

TELLING INDUSTRIES L L C — TRUE-TRACK™

UNITED METAL PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

2I. **Framing Members* — Steel Studs** — (Not Shown) — In lieu of Item 2 — proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max of 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.

RESCUE METAL FRAMING, L L C — AlphaSTUD

2J. **Framing Members* — Steel Studs** — (Not Shown) — As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.

OLMAR SUPPLY INC — PREMISTUD

2K. **Framing Members* — Steel Studs** — (Not Shown) — As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Vipeo20™

2N. **Framing Members* — Steel Studs** — (As an alternate to Item 2) — proprietary channel shaped steel studs, min depth 3-1/2 in. as indicated under Item 5, spaced a max of 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.

RESCUE METAL FRAMING, L L C — AlphaSTUD

2O. **Framing Members* — Steel Studs** — (As an alternate to Item 2) — proprietary channel shaped studs, min width as indicated under Item 5, galv steel. Studs to be cut 3/8 to 3/4 in. less in lengths than assembly height. Spaced 24 in. OC max.

RONDO BUILDING SERVICES PTY LTD — Rondo Lipged Wall Stud

2P. **Framing Members* — Steel Studs** — (As an alternate to Item 2) — proprietary channel shaped steel studs, min width as indicated under Item 5, min 25 MSG galv steel. Studs to be cut 3/8 to 3/4 in. less in lengths than assembly height. Spaced 24 in. OC max.

OEK BUILDING MATERIALS — OEK Stud

2Q. **Framing Members* — Steel Studs** — (Not Shown) — In lieu of Item 2 — For use with Item 1O, proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max of 24 in. OC, fabricated from min 25 MSG 0.018 in. (min. bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC max.

thickness. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper X

3. **Wood Structural Panel Sheathing** — (Optional, For use with Item 5 Only) — (Not Shown) — 4 ft wide, 7/16 in. thick oriented strand board (OSB) or 15/32 in. thick structural 1 sheathing (plywood complying with DOC P51 or P52, or APA Standard PDP-108, manufactured with exterior grade, applied horizontally or vertically to the steel studs. Vertical joints centered on studs, and staggered one stud space from wallboard joints. Attached to studs with flat-head self-drilling tapping screws with a min. head diam. of 0.239 in. at maximum 6 in. OC in the perimeter and 12 in. OC in the field. When used, gypsum panels attached over OSB or plywood panels and fastener lengths for gypsum panels increased by min. 1/2 in.

4. **Batts and Blankets** — (Required as indicated under Item 5) — Mineral wool batts, friction fitted between studs and runners. Min thickness as indicated under Item 5.

See Batts and Blankets (BIBV or B2D) Categories for names of Classified companies.

4A. **Batts and Blankets** — (Optional) — Placed in stud cavities, any glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance.

See Batts and Blankets (BIBV or B2D) Categories for names of Classified companies.

4B. **Fiber, Sprayd** — (Optional, for use with Type ULXO Where Information is required) — Spray applied granulated mineral fiber material. The fiber is applied with adhesive at a minimum density of 4.0 pcf to completely fill the stud cavity in accordance with the application instructions supplied with the product. See Fiber, Sprayd (CCA2).

AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus

4C. **Foamed Plastic** — (Where Batts and Blankets) — (As an optional, for use with Item 5D) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity, for 1-hour rated assemblies only. When foamed plastic is used, minimum stud depth shall be 3-1/2 in.

5. **Gypsum Board** — Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) with Type ULX need not be staggered. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall			
Rating, Hr	Min Stud Depth, In. Item 2E	No. of Layers & Thickness of Panel	Min Thkms of Insulation (Item 4)
1	3-1/2	1 layer, 5/8 in. thick	Optional
1	2-1/2	1 layer, 1/2 in. thick	1-1/2 in.
1	1-5/8	1 layer, 3/4 in. thick	Optional
2	1-5/8	2 layers, 1/2 in. thick	Optional
2	1-5/8	2 layers, 5/8 in. thick	Optional
2	1-5/8	1 layer, 3/4 in. thick	3 in.
3	1-5/8	3 layers, 1/2 in. thick	Optional
3	1-5/8	3 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 1/2 in. thick	Optional
4	2-1/2	2 layers, 3/4 in. thick	2 in.

CGC INC — 1/2 in. thick Type C, IP-X2 or IP-CAR, WRC, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IP-CAR, SCX, SHK, ULX, WRC or 3/4 in. thick Types IP-X3 or ULTRACODE

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — 1/2 in. thick Type C and 5/8 in. thick Type SCX

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IP-CAR or WRC, 5/8 in. thick Type SCX, SCX, SHK, ULX, WRC, IP-X1, AR, C, FRX-G, IP-AR, IP-X2, IP-AR, 3/4 in. thick Type IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — 1/2 in. thick Type C, 5/8 in. thick Type C, SCX, SCX, ULTRACODE

USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IP-CAR or WRC, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IP-CAR, SCX, SHK, WRC, IP-X1, AR, C, FRX-G, IP-AR, IP-X2, IP-AR, 3/4 in. thick Type IP-X3 or ULTRACODE

When Item 7B, Steel Framing Members* is used, Nonbearing Wall Rating is limited to 1 Hr. Min. stud depth is 3-1/2 in., min. thickness of insulation (Item 4) is 3 in., and two layers of gypsum board panels (1/2 in. or 5/8 in. thick) shall be attached to furring channels as described in Item 6. One layer of gypsum board panels (1/2 in. or 5/8 in. thick) attached to opposite side of stud without furring channels as described in Item 6.

5A. **Gypsum Board** — (As an alternate to Item 5) — 5/8 in. thick, 24 to 54 in. wide, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 6.

CGC INC — Type SHK

UNITED STATES GYPSUM CO — Type FRX-G, SHK

USG MEXICO S A DE C V — Type SHK

5B. **Gypsum Board** — (Not Shown) — As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 in. or 3/4 in. thick products are specified. For direct attachment only to steel studs Item 2A, not to be used with Item 3). Nom 5/8 in. or 3/4 in. may be used as alternate to all 5/8 in. or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead latter strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead latter strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type 1-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.05 in. thick. Compression fitted or adhered over the screw heads. Lead latter strips and discs to have a purity of 99.9% meeting the Federal Specification QQ-A-1001 Grade C¹. Lead tabs may be tied in place with standard adhesive tape if necessary.

RAYBAR ENGINEERING CORP — Type RB-185

5C. **Gypsum Board** — (For Use With Item 2B) — Rating Limited to 1 Hour. 5/8 in. thick, 48 in. wide, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. (Vertical Application) The gypsum board is to be installed on each side of the studs with 1 in. long Type C coated steel screws spaced 8 in. OC, starting 4 in. from the edge of the board at the vertical edges and 12 in. OC, starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screw spaced 8 in. OC, starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. Vertical joints are to be centered over studs and staggered one stud cavity on opposite sides of studs. (Horizontal Application) The gypsum board is to be installed on each side of the studs with 1 in. long Type C coated steel screws spaced 8 in. OC, starting 4 in. from the edge of the board at the vertical edges and 12 in. OC, starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC, starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. All horizontal joints are to be backed as outlined under section W of Volume 1 of the Fire Resistive Directory.

CGC INC — Type SCX, ULX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type SCX

UNITED STATES GYPSUM CO — Type SCX, SCX, ULX

USG BORAL DRYWALL SFZ LLC — Type SCX

USG MEXICO S A DE C V — Type SCX

5D. **Gypsum Board** — (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below.

a. **Furring Channels** — Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC, perpendicular to studs. Channels secured to studs as described in Item 6. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. **Steel Framing Members** — Used to attach furring channels (Item 7Aa) to studs (Item 2). Clips spaced max. 48 in. OC. RSC-1 and RSC-1 (2/75) clips secured to studs with No. 8 x 1/2 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips.

PUTEC INC — Type GENCLIP

7D. **Steel Framing Members** — (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below.

a. **Furring Channels** — Formed of No. 25 MSG galv steel, spaced 24 in. OC, perpendicular to studs. Channels secured to studs as described in Item 6. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. **Steel Framing Members** — Used to attach furring channels (Item 7Da) to studs (Item 2). Clips spaced 48 in. OC, and secured to studs with No. 8 x 1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

REGUPOL AMERICA — Type SorelClip

7E. **Steel Framing Members** — (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below.

a. **Furring Channels** — Formed of No. 25 MSG galv steel, spaced 24 in. OC, perpendicular to studs. Channels secured to studs as described in Item 6. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A and 5E.

b. **Steel Framing Members** — Used to attach furring channels (Item 7Ea) to studs (Item 2). Clips spaced 48 in. OC, and secured to studs with No. 8 x 1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.

7F. **Framing Members** — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below.

a. **Furring Channels** — Formed of No. 25 MSG galv steel, spaced 24 in. OC, perpendicular to studs. Channels secured to studs as described in Item 6. Not for use with Item 5A.

b. **Steel Framing Members** — Used to attach furring channels (Item 7Fa) to studs (Item 2). Clips spaced max. 48 in. OC. Clips secured to studs with No. 8 x 1/2 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips.

CLARKDIERICH BUILDING SYSTEMS — Type ClarkDierich Sound Clip

Gypsum Board Protection on Each Side of Wall			
Rating, Hr	Min Stud Depth, In. Item 21	No. of Layers & Thickness of Panel	Min Thickness of Insulation (Item 4)
2	1-5/8"	2 layers, 1/2 in. thick	Optional
2	1-5/8"	2 layers, 5/8 in. thick	Optional
3	1-5/8"	3 layers, 1/2 in. thick	Optional
3	1-5/8"	3 layers, 5/8 in. thick	Optional
4	1-5/8"	4 layers, 5/8 in. thick	Optional
4	1-5/8"	4 layers, 1/2 in. thick	Optional

12 11 10 9 8 7 6 5 4 3 2 1

SPECIFICATIONS - PRODUCT & INSTALLATION GENERAL REQUIREMENTS

GENERAL REQUIREMENTS APPLICABLE TO ALL MATERIALS FOR THE PROJECT.

1. NO SUBSTITUTIONS OF MATERIALS WITHOUT COMPLETION OF A SUBSTITUTION REQUEST FORM & APPROVAL OF SUBSTITUTION BY PROJECT MANAGER. FORM CAN BE REQUESTED FROM ARCHITECT.
2. A CONDENSED SET OF SPECIFICATIONS ARE PROVIDED FOR THE PROJECT. STRICT ADHERANCE TO MANUFACTURER REQUIREMENTS AND INSTALLATION ARE REQUIRED TO BE FOLLOWED WITH SECTIONS PROVIDED WITHIN. IF REQUIRED THE ARCHITECT WILL ISSUE ADDITIONAL SECTIONS TO PROVIDE CLARITY TO PRODUCTS OR INSTALLATION REQUIREMENTS.

DIVISION 1 - GENERAL REQUIREMENTS

1. SEE ADMINISTRATIVE SPECIFICATION FOR GENERAL REQUIREMENTS RELATED TO ADMINISTRATION OF THIS CONTRACT.

A. CONTRACTOR LICENSES

1. THE CONTRACTOR AND ALL SUBCONTRACTORS INVOLVED IN THE PROJECT SHALL BE REQUIRED TO OBTAIN AND PAY FOR ALL NECESSARY LICENSES AS REQUIRED BY ANY LAW OR AGENCIES HAVING JURISDICTION (AHJ) OVER THE PROJECT.

B. BUILDING PERMITS

1. THE GENERAL CONTRACTOR WILL PAY FOR ALL PERMITS REQUIRED BY ANY AGENCY HAVING JURISDICTION (AHJ) OVER THE PROJECT FOR ALL WORK TO BE PERFORMED BY THE GENERAL CONTRACTOR.

C. UTILITY FEES

1. THE CONTRACTOR SHALL PAY THE NECESSARY FEES TO CONNECT TO EXISTING UTILITIES AT THE PROPERTY LINE OR IN ADJACENT STREETS AND RIGHT OF WAY AS SPECIFIED, NECESSARY AND/OR INCLUDED IN THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL PAY ALL UTILITY COSTS (BILLS) DURING CONSTRUCTION UNTIL OWNER TAKES POSSESSION OF THE FACILITY OR THE FACILITY IS CERTIFIED AS SUBSTANTIALLY COMPLETE.

D. PROTECTION OF FINISHED WORK

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT FINISHED SURFACES. PROTECTION FOR FINISHES SUCH AS DOORS, WALLS AND FLOORS SHOULD BE PROVIDED AS REQUIRED. ANY DAMAGES TO THESE AREAS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR OR REPLACE.

E. GENERAL CONDITIONS

1. ANY DISCREPANCY OR CONFLICT WITHIN OR BETWEEN DRAWINGS AND ANY DISCREPANCY OR CONFLICT BETWEEN ANY DRAWING AND ANY SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. NOTWITHSTANDING, DISCREPANCIES OR CONFLICTS NOT BROUGHT TO THE ARCHITECTS' AND OWNERS ATTENTION AND CLARIFIED DURING THE BIDDING OF THE PROJECT WILL BE DEEMED TO HAVE BEEN OK'ED PROPOSED IN THE MORE COSTLY OR DIFFICULT MANNER, AND THE BETTER QUALITY OR GREATER QUANTITY OF THE WORK SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH ARCHITECT'S INTERPRETATION.
2. THE GENERAL CONTRACTOR SHALL KEEP A COMPLETE PROTOTYPE SET OF DOCUMENTS ON THE PROJECT SITE AT ALL TIMES FOR REFERENCE DURING CONSTRUCTION.
3. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, USING THE CONTRACTOR'S BEST SKILLS AND ATTENTION. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR HAVE AND CONTROL OVER CONSTRUCTION MEANS AND METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
4. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR HAVE AND HAVE CONTROL OVER ALL JOB SITE SAFETY PROCEDURES AND POLICES. THE GENERAL CONTRACTOR SHALL HAVE A SAFETY COORDINATOR AND BE RESPONSIBLE TO HOLD REGULARLY SCHEDULED SAFETY TRAINING WITH ALL JOB SITE PERSONNEL, INCLUDING ALL SUB CONTRACTOR PERSONNEL.
5. NEITHER THE ARCHITECTS OR THE OWNERS INSPECTION NOR FAILURE TO INSPECT SHALL RELIEVE THE CONTRACTOR OF ANY OBLIGATION HEREUNDER. IF ANY WORK FAILS TO CONFORM TO THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROMPTLY REMEDY AND REPLACE THE SAME AT THE CONTRACTOR'S EXPENSE. NO ACCEPTANCE OR PAYMENT BY THE OWNER OR ARCHITECT SHALL CONSTITUTE A WAIVER OF THE FOREGOING AND NOTHING HEREIN SHALL EXCLUDE OR LIMIT ANY WARRANTIES IMPLIED BY LAW.
6. THE GENERAL CONTRACTOR SHALL NOT SO CONDUCT ITS OPERATIONS AS NOT TO UNREASONABLY INTERFERE WITH TRAFFIC ON PUBLIC THOROUGHFARES ADJACENT OR NEAR TO THE PROJECT SITE.
7. DO NOT SCALE DRAWINGS.

F. PROJECT REQUIREMENTS

1. THE GENERAL CONTRACTOR REPRESENTS THAT IT POSSESSES THE SKILLS REQUIRED FOR THE WORK, ASSUMES THE RESPONSIBILITIES OF AN EMPLOYER FOR PERFORMANCE OF THE WORK, AND ACTS AS AN EMPLOYER OF ONE OR MORE EMPLOYEES BY PAYING WAGES, DIRECTING ACTIVITIES AND PERFORMING OTHER SIMILAR FUNCTIONS. THE GENERAL CONTRACTOR IS AN INDEPENDENT CONTRACTOR, FREE TO DETERMINE THE MANNER IN WHICH THE WORK IS PERFORMED.
2. THE GENERAL CONTRACTOR SHALL PROVIDE, AND MAINTAIN IN GOOD WORKING ORDER, THE FOLLOWING ITEMS FOR USE BY THE PROJECT SUPERINTENDENT DAILY DURING THE ENTIRE DURATION OF THE PROJECT:
- A. LAPTOP WITH INTERNET ACCESS
 - B. DIGITAL CAMERA WITH DATE STAMP CAPABILITY AND WITH PROPER CABLES TO ATTACH TO LAPTOP
 - C. EMAIL ACCESS THROUGH THE LAPTOP
 - D. A PRINTER/SCANNER/MF MACHINE WITH PROPER CABLES TO ATTACH TO LAPTOP
 - E. CELL PHONE
3. THE GENERAL CONTRACTOR SHALL HAVE A CONSTRUCTION SUPERINTENDENT ASSIGNED TO THIS PROJECT, AND THIS SUPERINTENDENT SHALL HAVE THE NECESSARY CONSTRUCTION KNOWLEDGE AND SKILLS TO SUPERVISE THE WORK. THE SUPERINTENDENT SHALL BE REACHABLE BY PHONE DURING NORMAL BUSINESS HOURS, ONCE ASSIGNED, THE SUPERINTENDENT SHALL NOT BE REMOVED OR REPLACED WITHOUT WRITTEN APPROVAL FROM OWNER & ARCHITECT, UNLESS SPECIFICALLY REQUESTED TO DO SO BY ARCHITECT.
4. THE SUPERINTENDENT WILL BE REQUIRED TO PROVIDE PHOTOGRAPHS (VIA EMAIL USING A DIGITAL CAMERA) TO THE OWNER & ARCHITECT EACH FRIDAY BY NOON CST, SHOWING THE PROGRESS OF CONSTRUCTION. THE GENERAL CONTRACTOR IS ENCOURAGED TO TAKE PHOTOS DURING CONSTRUCTION TO ASSIST IN THE PROGRESS OF CONSTRUCTION PROGRESS. RECORD UNCOVERED CONDITIONS, RECORD CONDITION AND AMOUNTS OF VENDOR GOODS UPON RECEIPT, AND RECORD CONSTRUCTION THAT VARIES FROM THE CDS (AS PART OF THE AS-BUILTS). ALL PHOTOS WILL HAVE A DATE STAMP.

G. INSPECTIONS/OBSERVATIONS

1. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OVERSEE CONSTRUCTION OF THE PROJECT, CONTINUALLY INSPECTING THE WORK, MATERIALS, AND WORKMANSHIP PROVIDED BY ALL OF HIS TRADESMEN, SUBCONTRACTORS, AND SUPPLIERS. EXCELLENCE IN QUALITY OF CONSTRUCTION CAN ONLY BE ACHIEVED IF THE CONTRACTOR EMPHOSIS HIGH STANDARDS OF ACCEPTABILITY. THE GENERAL CONTRACTOR CANNOT DELEGATE HIS RESPONSIBILITY TO THE SUBCONTRACTORS, BUT MUST CONTINUALLY MONITOR THE WORK OF EACH TRADE OR THE PROJECT.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REQUEST AND SCHEDULE ALL AGENCIES HAVING JURISDICTION (AHJ) INSPECTIONS NECESSARY TO OBTAIN THE CERTIFICATE OF OCCUPANCY (CERTIFICATE OF COMPLIANCE). PRIOR TO THE DATE OF THE AGENCY INSPECTION, THE GENERAL CONTRACTOR SHOULD INSPECT THE PROJECT TO INSURE THAT CONSTRUCTION COMES WITHIN THE REQUIREMENTS. SCHEDULING FINAL INSPECTIONS WITH AGENCY REPRESENTATIVES WHEN THE PROJECT IS NOT COMPLETE MUST BE AVOIDED. COPIES OF FINAL INSPECTIONS MUST BE PROVIDED TO OWNER & ARCHITECT AS THEY ARE AVAILABLE.
3. PRIOR TO REQUESTING THE AGENCY INSPECTION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT HIS OWN PRE-SUBSTANTIAL COMPLETION INSPECTION OF THE CONSTRUCTION FOR QUALITY OF CONSTRUCTION AND COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS.
4. THE FOLLOWING PEOPLE SHOULD BE IN ATTENDANCE FOR THE SUBSTANTIAL COMPLETION INSPECTION:
- A. GENERAL CONTRACTOR
 - B. GENERAL CONTRACTOR SUPERINTENDENT
 - C. MECHANICAL CONTRACTOR
 - D. ELECTRICAL CONTRACTOR
 - E. PLUMBING CONTRACTOR
 - F. PAINTING CONTRACTOR
 - G. FLOORING CONTRACTOR
5. ITEMS TO BE SUBMITTED AS A PRE-REQUISITE TO THE REQUEST FOR THE CERTIFICATE OF SUBSTANTIAL COMPLETION AND OWNER ARCHITECTS MUST BE COMPLETED AND CORRECTED.
- A. GENERAL CONTRACTOR'S PUNCH LISTS
 - B. HVAC TEST AND BALANCE REPORT
 - C. SPRINKLER SYSTEM TEST AND BALANCE INSPECTION REPORT
 - D. COPY OF VIDEO OF COMPLETED SEWER SYSTEM
6. THE REVIEW TEAM SHOULD PROCEED IN AN ORGANIZED MANNER THROUGHOUT THE BUILDING INSPECTING EACH SPACE OR ROOM. THE PUNCH LIST GENERATED BY THE SUBSTANTIAL COMPLETION INSPECTION TOUR IS TO BE PREPARED BY THE CONTRACTOR, ALONG WITH THE PUNCH LIST, THE ARCHITECT SHALL PREPARE THE CERTIFICATE OF SUBSTANTIAL COMPLETION.
7. IMMEDIATELY AFTER RECEIPT OF THE PUNCH LIST, THE GENERAL CONTRACTOR AND SUBCONTRACTORS ARE EXPECTED TO BEGIN CORRECTION OF THE OUTSTANDING ITEMS AFTER COMPLETION OF PUNCHLIST. THE CONTRACTOR SHALL NOTIFY OWNER & ARCHITECT IN WRITING THAT FULL LIST OF ITEMS TO BE COMPLETED AND OR CORRECT IS FINALIZED.

H. RECORD CLOSE-OUT DOCUMENTS

1. THE OWNER REQUESTS THE GENERAL CONTRACTOR AND SUBCONTRACTORS TO MAINTAIN AN ACCURATE, CURRENT SET OF RECORD DOCUMENTS (AS-BUILTS) AS CONSTRUCTION PROGRESSES, ALL PERTINENT INFORMATION RELATING TO THE PROJECT MUST BE TIMELY MAINTAINED ON THE AS-BUILTS. THE AS-BUILTS MUST BE MAINTAINED ONSITE IN THE GENERAL CONTRACTOR'S OFFICE AND WILL NOT BE USED FOR ANY OTHER PURPOSE, SINCE THE OWNER WILL OWN AND OPERATE THE FACILITY, IT IS IMPERATIVE THAT ALL PARTIES MAINTAIN ACCURATE INFORMATION REGARDING THE ACTUAL CONSTRUCTION OF THE PROJECT.
2. ALL DEVIATIONS FROM THE CONTRACT SET OF DRAWINGS MUST BE NOTED ON THE AS-BUILTS IN RED WITH CLOUDS FOR CLEAR IDENTIFICATION. THE OWNER WILL REVIEW THE AS-BUILTS FOR ACCURACY AND COMPLETENESS MONTHLY DURING THE PAYMENT APPLICATION REVIEW PROCESS. FAILURE TO POST CHANGES TO THE PROJECT ON THE AS-BUILTS AS IDENTIFIED DURING THE ON-SITE MONTHLY REVIEW WILL BE CAUSE TO SUSPEND PAYMENT UNTIL RECTIFIED. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO ENFORCE THE TIMELY POSTING OF AS-BUILT CHANGES WITH THE SUBCONTRACTORS.

I. FINAL CLOSE-OUT OF THE PROJECT

1. WITHIN THIRTY (30) CALENDAR DAYS AFTER THE FINAL PROJECT SUBSTANTIAL COMPLETION, THE GENERAL CONTRACTOR SHALL COMPLY WITH ALL CLOSE-OUT DOCUMENTS AND SUBMIT TO THE OWNER FOR REVIEW. IF THE CONTRACTOR FAILS TO COMPLETE ITS REQUIREMENTS WITHIN THIS TIMELINE ABOVE, THE CONTRACTOR MAY BE SUBJECT TO ADDITIONAL ADMINISTRATION FEES.

J. CLOSE-OUT DOCUMENTS

1. THE CATEGORIES LISTED BELOW SHOULD BE SUBMITTED AT THE SAME TIME.
- A. A DISK WITH ALL PHOTOS TAKEN DURING CONSTRUCTION
 - B. CHANGE ORDERS AND ALL ADDENDA ATTACHED AND POSTED TO THE AS-BUILT DRAWINGS
 - C. AS-BUILT DRAWINGS: ONE HARD COPY TO REMAIN ON SITE AND IN PLANT TUBE; ONE ELECTRONIC COPY TO BE SENT WITH CLOSE-OUT PAPERWORK
2. MATERIALS SELECTION DATA - PROVIDE ALL APPROVED SUBMITTALS
3. OPERATION AND MAINTENANCE MANUALS (OMM) - PROVIDE OMM MANUALS BOXED AND BOUND. THIS ITEM IS OF SIGNIFICANT IMPORTANCE TO MAINTURE MAINTENANCE ACTIVITIES.
- A. ALL HVAC TEST AND BALANCE REPORTS
 - B. RELEASE OF LIEN (AIA FORM 706), PAYMENT OF DEBT (AIA FORM 706)
 - C. WARRANTIES, CERTIFICATES, AFFIDAVITS
4. ALL INFORMATION INCLUDED IN THIS CATEGORY WILL BE FURNISHED IN ONE (1) COPY AND BOUND IN A STURDY THREE-RING BINDER WITH A LABEL ON THE OUTSIDE READING "GENERAL CLOSE-OUT DOCUMENTS" TO INCLUDE AN INDEX OF THE CONTENTS. ALL AS-BUILT DOCUMENTS WILL BE ORIGINAL (WITH RED LETTERING ON THE BOTTOM OF THE FORM) AND NOTARIZED. IF THE ELECTRONIC VERSION IS USED A COPY WITH ORIGINAL SIGNATURES WILL BE SUBMITTED. THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR WILL HAVE SEPARATE TABS IDENTIFYING EACH BY NAME. THE GENERAL CONTRACTOR WILL LIST EACH SUBCONTRACTOR ALPHABETICALLY AND WILL CHECK TO INSURE THAT A "RELEASE OF LIEN" - AIA FORM 706A AND A "PAYMENT OF DEBT-AIA FORM 706B IS INCLUDED FOR EACH AND EVERY SUBCONTRACTOR. THE GENERAL CONTRACTOR WILL INCLUDE A "CONSENT OF SURETY" - AIA FORM 707, IN ADDITION. THE GENERAL CONTRACTOR WILL INCLUDE THE FOLLOWING INFORMATION:
- A. A LIST OF NAMES, BUSINESS ADDRESSES, PHONE NUMBERS AND EMAIL ADDRESSES FOR THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR
 - B. AN ANNOTATED COPY OF THE SUBSTANTIAL COMPLETION PUNCH LIST INDICATING ACTION TAKEN ON EACH ITEM
 - C. WARRANTIES, CERTIFICATES AND AFFIDAVITS SHALL BE INCLUDED FOR ANY EQUIPMENT, MATERIALS OR SYSTEMS COMBINED WITH ALL OF THE ABOVE INFORMATION AND PLACED BEHIND THE TAB OF THE CONTRACTOR THAT ISSUED IT.

DIVISION 4 - MASONRY

04 0500 - MASONRY RESTORATION & TUCKPOINTING

A. REFERENCES

- 1. AMERICAN CONCRETE INSTITUTE (ACI).
- A. ACI 503.1-02 - SPECIFICATION FOR MASONRY FOR MASONRY STRUCTURES.
- 2. ASTM INTERNATIONAL (ASTM):
 - A. ASTM C 144 - STANDARD SPECIFICATION FOR AGGREGATE FOR MASONRY MORTAR.
 - J. ASTM C 150 - STANDARD SPECIFICATION FOR PORTLAND CEMENT.
 - D. ASTM C 207 - STANDARD SPECIFICATION FOR HYDRATED LIME FOR MASONRY PURPOSES.
 - D. ASTM C 286 - STANDARD SPECIFICATION FOR AIR-ENTRANING ADMIXTURES FOR CONCRETE.
 - A. ASTM C 270 - STANDARD SPECIFICATION FOR PRE-BLENDED DRY MORTAR FOR MASONRY.
 - F. ASTM C 595 - STANDARD SPECIFICATION FOR BLENDED HYDRAULIC CEMENTS.
 - G. ASTM C 780 - STANDARD TEST METHOD FOR PRECONSTRUCTION AND CONSTRUCTION EVALUATION OF MORTARS FOR PLAIN AND REINFORCED CONCRETE.
 - H. ASTM C 979 - STANDARD SPECIFICATION FOR PIGMENTS FOR INTEGRALLY COLORED CONCRETE.
 - I. ASTM C 1093 - STANDARD PRACTICE FOR ACCREDITATION OF TESTING AGENCIES FOR UNIT MASONRY.
 - J. ASTM C 1157 - STANDARD PERFORMANCE SPECIFICATION FOR HYDRAULIC CEMENT.
 - K. ASTM C 1314 - STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF MASONRY PRISMS.
 - L. ASTM C 1598 - STANDARD GUIDE FOR QUALITY ASSURANCE OF MORTARS.
 - M. ASTM C 1714 - STANDARD SPECIFICATION FOR PRE-BLENDED DRY MORTAR MIX FOR UNIT MASONRY.
 - N. ASTM C 329 - STANDARD SPECIFICATION FOR MINIMUM REQUIREMENTS FOR AGGREGATES ENGAGED IN THE TESTING AND INSPECTION OF MATERIALS USED IN CONSTRUCTION.
 - O. ATTACHMENT TO BUILDING CONSTRUCTION CODE FOR PORTLAND CEMENT.
 - 3. INTERNATIONAL MASONRY INDUSTRY ALL-WEATHER COUNCIL (IMAC):
 - A. IMAC - INTERNATIONAL MASONRY INDUSTRY ALL-WEATHER COUNCIL (IMAC); RECOMMENDED PRACTICES AND GUIDE SPECIFICATIONS FOR COLD WEATHER MASONRY CONSTRUCTION.
 - B. IMAC - INTERNATIONAL MASONRY INDUSTRY ALL-WEATHER COUNCIL (IMAC); RECOMMENDED PRACTICES AND GUIDE SPECIFICATIONS FOR HOT WEATHER MASONRY CONSTRUCTION.
 - D. THE BRICK INDUSTRY ASSOCIATION (BIA).
 - E. ASTM C 1157 - STANDARD SPECIFICATION FOR PORTLAND CEMENT.
 - F. BIA TECHNICAL NOTE 20 - CLEANING BRICK.

B. SUBMITTALS

- 1. PRODUCT DATA: SUBMIT MANUFACTURER'S PRODUCT DATA.
- 2. QUALITY ASSURANCE/CONTROL: SUBMITTALS
 - A. SUBMIT MANUFACTURER'S CERTIFICATE THAT PRODUCTS MEET OR EXCEED SPECIFIED REQUIREMENTS
 - B. SUBMIT TEST RESULTS PREPARED BY A QUALIFIED INDEPENDENT TESTING LABORATORY.
- 3. QUALITY ASSURANCE
 - A. MANUFACTURER QUALIFICATIONS: FIRM SPECIALIZING IN MANUFACTURE OF MASONRY INSTALLATION MATERIALS, INCLUDING MATERIALS, WITH MINIMUM 10 YEARS EXPERIENCE.
 - B. SUPPORTING TEST RESULTS: TESTING TEST REPORTS PREPARED BY A QUALIFIED INDEPENDENT LABORATORY INDICATING COMPLIANCE WITH THE FOLLOWING PERFORMANCE REQUIREMENTS.
 - C. PRE-INSTALLATION MEETING: AT LEAST ONE WEEKS PRIOR TO COMMENCING MASONRY WORK, CONDUCT A MEETING AT THE PROJECT SITE TO DISCUSS CONTRACT REQUIREMENTS AND JOB CONDITIONS, REQUIRE THE ATTENDANCE OF MASONRY CONTRACTOR, AND INSTALLERS OF RELATED MATERIALS, NOTIFY ARCHITECT IN ADVANCE OF MEETING REVIEW DETAILING AND SEQUENCE OF WORK TO BE PERFORMED.
 - D. THE BRICK INDUSTRY ASSOCIATION (BIA) TECHNICAL NOTE 20 - CLEANING BRICK.

D. PROJECT CONDITIONS

- 1. MAINTAIN ENVIRONMENTAL CONDITIONS AND PROTECT WORK DURING AND AFTER INSTALLATION TO COMPLY WITH REQUIREMENTS STANDARDS AND MANUFACTURER'S PRINTED RECOMMENDATIONS.
- 2. DO NOT BUILD OR APPLY MORTAR PRODUCTS ON FROZEN SUBSTRATES.
- 3. REMOVE AND REPLACE MORTAR DAMAGED BY FROST OR BY FREEZING CONDITIONS.
- 4. VENT TEMPORARY HEATERS TO EXTERIOR TO PREVENT DAMAGE TO MASONRY WORK FROM CARBON DIOXIDE BUILD-UP.

E. PRODUCTS

- 1. BASIC OF DESIGN: SPEC MIX# 008, INC. WEB: WWW.SPECMIX.COM/WWW.SPECMIX.COM
- 2. REQUESTS FOR SUBSTITUTIONS WILL BE CONSIDERED IN ACCORDANCE WITH PROVISIONS OF SUBSTITUTION PROCEDURES.
- 3. OBTAIN PRODUCTS FROM A SINGLE MANUFACTURER.
- 4. DESIGN AND PERFORMANCE REQUIREMENTS: PROVIDE MORTAR MIXES THAT HAVE BEEN SELECTED, MANUFACTURED, MIXED AND INSTALLED TO COMPLY WITH THE FOLLOWING:
 - A. ASTM C 270
 - B. ASTM C 1714
 - C. MORTAR
 - D. ASTM C 270 FOR TUCKPOINT MORTAR, SPEC MIX TUCKPOINT MORTAR, APPLICABLE STANDARDS: ASTM C 144, ASTM C 150, ASTM C 207, ASTM C 270 FOR TUCKPOINT MORTAR, ASTM C 595, ASTM C 780, ASTM C 1093, ASTM C 1157, ASTM C 1314, ASTM C 1598, ASTM C 1714, ACI 503.1, IMAC.

F. EXECUTION

- EXAMINE SURFACES TO RECEIVE MASONRY WORK AND CONDITIONS UNDER WHICH MASONRY WILL BE INSTALLED. DO NOT PROCEED WITH MASONRY WORK UNTIL SURFACES AND CONDITIONS COMPLY WITH REQUIREMENTS INDICATED IN REFERENCED MASONRY INSTALLATION STANDARD AND MANUFACTURER'S PRINTED INSTRUCTIONS.

- 1. REMOVAL OF EXISTING MORTAR
 - A. REMOVAL OF EXISTING MORTAR: CUT OUT EXISTING MORTAR JOINTS (BOTH BED AND HEAD JOINTS) AND REMOVE BY MEANS OF A TOOTHING CHISEL OR A SPECIAL POINTERS GRINDER, TO A REMAIN DEPTH OF TO 3/4-INCH (19 MM), OR 1/2-INCH (13 MM) DEEPER FOR MORTAR JOINTS.
 - B. TAKE CARE TO NOT DAMAGE EDGES OF EXISTING MASONRY UNITS TO UNIFORM.
 - C. REMOVE DUST AND DEBRIS FROM THE JOINTS BY BRUSHING, BLOWING WITH AIR OR RINSING WITH WATER. DO NOT RINSE WHEN TEMPERATURE IS BELOW FREEZING.
- 2. REPLACEMENT OF MASONRY UNITS
 - A. REMOVE DAMAGED, SPALLED, LOOSE OR DETERIORATED MASONRY UNITS. CAREFULLY REMOVE ENTIRE UNITS FROM JOINT TO JOINT, WITHOUT DAMAGING SURROUNDING MASONRY, IN A MANNER THAT PERMITS REPLACEMENT WITH FULL SIZE UNITS.
 - B. SUPPORT AND PROTECT REMAINING MASONRY THAT SURROUNDS REMOVAL AREA. MAINTAIN FLASHING, REINFORCEMENT, LINTELS, AND ADJOINING CONSTRUCTION IN AN UNDAUNTED CONDITION.
 - C. CLEAN MASONRY UNITS SURROUNDING REMOVAL AREAS BY REMOVING MORTAR, DUST, AND LOOSE PARTICLES IN PREPARATION FOR REPLACEMENT.
 - D. REPLACE REMOVED UNITS WITH SALVAGED OR NEW UNITS THAT MATCH EXISTING SIZE AND TEXTURE. DO NOT USE BROKEN UNITS UNLESS THEY CAN BE CUT TO USABLE SIZE.
 - E. INSTALL REPLACEMENT UNITS INTO BONDING AND COURSEING PATTERN OF EXISTING UNITS. IF CUTTING IS REQUIRED, USE A MOTOR-DRIVEN SAW DESIGNED TO CUT MASONRY WITH CLEAN, SHARP, UNCHIPPED EDGES. UNITS MUST BE TOOTHED IN OR COURSEING SHALL MATCH SURROUNDING IN PLACE WORK.
 - F. MAINTAIN JOINT WIDTH FOR REPLACEMENT UNITS TO MATCH EXISTING JOINTS.
 - G. LAY REPLACEMENT UNITS WITH COMPLETELY FILLED BED, HEAD, AND COLLAR JOINTS. BUTTER ENDS WITH SUFFICIENT MORTAR TO FILL HEAD JOINTS AND SHOVE INTO PLACE.
 - H. AS RECOMMENDED BY MANUFACTURER.
 - I. RETEMPERING.
 - J. RETEMPER MORTAR AS RECOMMENDED BY MANUFACTURER

G. INSTALLATION OF TUCK POINTING MORTAR

- 1. INSTALL MORTAR IN ACCORDANCE WITH ADHESIVE 530-1.
- 2. IMMEDIATELY PRIOR TO APPLICATION OF MORTAR, DAMPEN JOINTS TO BE TUCK POINTED. PRIOR TO APPLICATION OF POINTING MORTAR, ALLOW MORTAR UNITS TO ABSORB SURFACE WATER.
- 3. THENTLY PACK MORTAR INTO JOINTS IN THIN LAYERS, APPROXIMATELY 1/4-INCH (6 MM) THICK MAXIMUM.
- 4. ALLOW LAYER TO BECOME "THUMBPRINT HARD" BEFORE APPLYING NEXT LAYER.
- 5. PACK FINAL LAYER FLUSH WITH SURFACES OF MASONRY UNITS. WHEN MORTAR BECOMES "THUMBPRINT HARD", TOOL JOINTS.
- 6. MARLINE GRADING WITH THE MORTAR OR MORTAR SEPARATION AT EDGE OF A JOINT IS UNACCEPTABLE. COMPLETELY REMOVE SUCH MORTAR AND REPOINT.
- 7. TOOL JOINTS IN PATCH WORK WITH A JOINTING TOOL, TO MATCH THE EXISTING SURROUNDING JOINTS.
- 8. CLEANING
 - A. COMPLY WITH CLEANING PROCEDURES AND RECOMMENDATIONS OF THE MANUFACTURERS OF BOTH THE CLEANING SOLUTIONS AND THE UNIT MASONRY.
 - B. REMOVE EFFLORESCENCE FROM MASONRY WALL EXPOSED IN THE FINISHED WORK IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION, NCM TA BULLETIN #8-3A AND/OR BIA TECHNICAL NOTE 20 - CLEANING BRICK.
 - C. REMOVE DIRT OR STAINS FROM MASONRY WALLS EXPOSED IN THE FINISHED WORK IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, NCM TA BULLETIN #8-2A AND/OR BIA TECHNICAL NOTE 20 - CLEANING BRICK.
 - D. COMPLY WITH APPLICABLE ENVIRONMENTAL LAWS AND RESTRACTIONS.
 - E. AFTER MORTAR HAS FULLY HARDENED, THOROUGHLY CLEAN EXPOSED MASONRY SURFACES OF EXCESS MORTAR AND FOREIGN MATTER. USE WOOD SCRAPERS, STIFF-NOON OR -FIBER BRUSHES, AND CLEAN WATER. SPRAY APPLIED AT LOW PRESSURE.
 - F. DO NOT USE METAL SCRAPERS OR BRUSHES.
 - G. DO NOT USE ACIDIC OR ALKALINE CLEANERS.

H. PROTECTION

- 1. PROTECTION: PROTECT NEWLY POINTED JOINTS FROM WEATHER AND ELEMENTS AS RECOMMENDED BY MANUFACTURER AND INDUSTRY STANDARDS, UNTIL POINTED JOINTS ARE SUFFICIENTLY HARD ENOUGH TO PREVENT DAMAGE.
- 2. PROTECT INSTALLED WORK FROM DAMAGE DUE TO SUBSEQUENT CONSTRUCTION ACTIVITY ON THE SITE.

DIVISION 5 - METALS

05 0215 - PIPE AND TUBE RAILINGS

- A. SUBMITTALS: PRODUCT DATA AND SHOP DRAWINGS WITH PLANS ELEVATIONS AND SECTIONS INDICATING MEMBER SIZES AND LAYOUT, VERTICAL AND HORIZONTAL DIMENSIONS, EDGE CONDITIONS, AND CONNECTION DETAILS. INCLUDE DETAILS OF EQUIPMENT ASSEMBLY, ADJACENT DIMENSIONS, WEIGHTS, LOADS, REQUIRED CLEARANCES, METHOD OF FIELD CONNECTIONS, COMPONENTS, AND LOCATION AND SIZE OF EACH FIELD CONNECTION. SAMPLES FOR INITIAL SELECTION FOR EACH TYPE OF EXPOSED FINISH.
- 1. DEDICATED DESIGN SUBMITTAL: FOR HANDRAIL AND GUARDRAIL SYSTEMS, INCLUDING ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION.

- B. DESIGN: METAL TUBE RAILINGS SHALL BE DESIGNED BY FABRICATOR TO SUPPORT CODE-REQUIRED LOADS AND TO MATCH THE CONFIGURATIONS INDICATED IN THE CONSTRUCTION DOCUMENTS. SEE DRAWINGS FOR REQUIRED RAILING ELEVATIONS.

C. FIELD CONDITIONS

- 1. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS BEFORE FABRICATION.

D. PERFORMANCE REQUIREMENTS

- 1. A. DELEGATED DESIGN: ENGAGE A QUALIFIED PROFESSIONAL ENGINEER TO DESIGN RAILINGS, INCLUDING ATTACHMENT TO BUILDING CONSTRUCTION.
- B. STRUCTURAL PERFORMANCE: RAILINGS, INCLUDING ATTACHMENT TO BUILDING CONSTRUCTION, SHALL WITHSTAND THE EFFECTS OF GRAVITY LOADS AND THE FOLLOWING LOADS AND STRESSES WITHIN LIMITS AND UNDER CONDITIONS INDICATED:
 - A. UNIFORM LOAD OF 50 LBF/FT (7.35 KN/M) APPLIED IN ANY DIRECTION.
 - B. CONCENTRATED LOAD OF 200 LBF (8.9 KN) APPLIED IN ANY DIRECTION.
 - C. UNIFORM AND CONCENTRATED LOADS NEED NOT BE ASSUMED TO ACT CONCURRENTLY.

E. FASTENERS

- 1. FASTENERS FOR ANCHORING RAILINGS TO OTHER CONSTRUCTION: SELECT FASTENERS OF TYPE, GRADE, AND CLASS REQUIRED TO PRODUCE CONNECTIONS SUITABLE FOR ANCHORING RAILINGS TO OTHER TYPES OF CONSTRUCTION. VERIFY FASTENERS ARE AVAILABLE AND CAPABLE OF WITHSTANDING DESIGN LOADS.

F. MISCELLANEOUS MATERIALS

- A. METAL SURFACES: GENERAL: PROVIDE MATERIALS WITH SMOOTH SURFACES, WITHOUT SEAM MARKS, ROLLER MARKS, ROLLED TRADE NAMES, STAINS, DISCOLORATIONS, OR BLEMISHES.
- B. BRACKETS, FLANGES, AND ANCHORS: CAST OR FORMED METAL OF SAME TYPE AND FINISH AS SUPPORTING METAL, UNLESS OTHERWISE INDICATED.
- C. PIPE: ASTM A 53A 3.5M, TYPE F OR TYPE S, GRADE A, STANDARD WEIGHT (SCHEDULE 40), UNLESS ANOTHER GRADE AND WEIGHT ARE REQUIRED BY STRUCTURAL LOADS.

G. FABRICATION

- 1. GENERAL: FABRICATE RAILINGS TO COMPLY WITH REQUIREMENTS INDICATED FOR DESIGN, DIMENSIONS, MEMBER SIZES AND SPACING, METAL TYPES, FINISH, AND ANCHORS, BUT NOT LESS THAN THAT REQUIRED TO SUPPORT STRUCTURAL LOADS.
- 2. CUT, DRILL, AND PUNCH ALUMINUM CLEANLY AND ACCURATELY. REMOVE BURRS AND EASE EDGES TO A RADIUS OF APPROXIMATELY 1/16 INCH (1.6 MM), UNLESS OTHERWISE INDICATED. REMOVE SHARP OR ROUGH AREAS ON EXPOSED SURFACES.
- 3. FABRICATE CONNECTIONS THAT ARE EXPOSED TO WEATHER IN A MANNER THAT EXCLUDES WATER. PROVIDE WEEP HOLES WHERE WATER MAY ACCUMULATE.
- 4. WELDED CONNECTIONS: USE FULLY WELDED JOINTS FOR PERMANENTLY CONNECTING RAILING COMPONENTS. COMPLY WITH REQUIREMENTS FOR WELDED CONNECTIONS IN "FABRICATION" ARTICLE WHETHER WELDING IS PERFORMED IN THE SHOP OR IN THE FIELD.

H. FINISH

- 1. FOR NONGALVANIZED STEEL RAILINGS: PROVIDE NONGALVANIZED FERROUS METAL FITTINGS, BRACKETS, FASTENERS, AND SLEEVES; HOWEVER, GALVANIZE ANCHORS TO BE EMBEDDED IN OTHER CONCRETE OR MASONRY.
- 2. PREPARATION FOR SHOP PRIMING: PREPARE UNPAINTED FERROUS METAL SURFACES TO COMPLY WITH SSPC-SP 3 "POWER TOOL CLEANING."
- 3. PRIMER APPLICATION: APPLY SHOP PRIMER TO PREPARED SURFACES OF RAILINGS UNLESS OTHERWISE INDICATED. COMPLY WITH REQUIREMENTS IN SSPC-PA 1 "SHOP FIELD AND MAINTENANCE PAINTING OF STEEL" FOR SHOP PAINTING. PRIMER NEED NOT BE APPLIED TO SURFACES TO BE EMBEDDED IN CONCRETE OR MASONRY.

I. INSTALLATION

- 1. SUPPLY COMPONENTS REQUIRED FOR ANCHORAGE FABRICATED FROM SAME MATERIAL AND FINISH AS FABRICATION UNLESS NOTED OTHERWISE. SHIM AND LEVEL FABRICATIONS AS NECESSARY. COAT CONCEALED SURFACES OF FABRICATIONS IN CONTACT WITH CONCRETE, GROUT, MASONRY, WOOD, OR DISSIMILAR METALS WITH BITUMINOUS PAINT.
- 2. FIT EXPOSED CONNECTIONS TOGETHER TO FORM TIGHT, HAIRLINE JOINTS.
- 3. PERFORM CUTTING, DRILLING, AND FITTING REQUIRED FOR INSTALLING RAILINGS. SET RAILINGS ACCURATELY IN LOCATION, ALIGNMENT, AND ELEVATION, MEASURED FROM ESTABLISHED LINES AND LEVELS AND FREE OF RACK. DO NOT WELD, CUT, OR GRABE SURFACES OF RAILING COMPONENTS THAT ARE COATED OR FINISHED AFTER FABRICATION AND THAT ARE INTENDED FOR FIELD CONNECTION BY MECHANICAL OR OTHER MEANS WITHOUT FURTHER CUTTING OR FITTING.
- 4. SET POSTS FLUSH WITH A TOLERANCE OF 1/16 INCH IN 3 FEET.
- 5. CONTROL OF CORROSION: PREVENT GALVANIC ACTION AND OTHER FORMS OF CORROSION BY INSULATING METALS AND OTHER MATERIALS FROM DIRECT CONTACT WITH INCOMPATIBLE MATERIALS.
- 6. ADJUST RAILINGS BEFORE ANCHORING TO ENSURE MATCHING ALIGNMENT AT ABUTTING JOINTS.
- 7. FASTENING TO IN-PLACE CONSTRUCTION: USE ANCHORAGE DEVICES AND FASTENERS WHERE NECESSARY FOR SECURING RAILINGS AND FOR PROPERLY TRANSFERRING LOADS TO IN-PLACE CONSTRUCTION.
- 8. PROTECT FINISHES OF RAILINGS FROM DAMAGE DURING CONSTRUCTION PERIOD WITH TEMPORARY PROTECTIVE COVERINGS APPROVED BY RAILING MANUFACTURER. REMOVE PROTECTIVE COVERINGS AT TIME OF SUBSTANTIAL COMPLETION.

05 0600 - STRUCTURAL METAL STUDS AND TRACK

THIS SECTION IS A DEDICATED DESIGN SUBMITTAL. CONTRACTOR SHALL ENGAGE A STRUCTURAL ENGINEER LICENSED IN THE JURISDICTION WHERE THIS PROJECT IS LOCATED. ALL FEES SUBMITTED FOR THIS SERVICE WILL BE PART OF BASE CONTRACT.

A. SUBMITTALS: PRODUCT DATA: MANUFACTURER'S DATA SHEETS ON EACH PRODUCT TO BE USED, INCLUDING:

- 1. SHOWING PLANS, SECTIONS, ELEVATIONS, LAYOUTS, PROFILES AND PRODUCT COMPONENT LOCATIONS, INCLUDING ANCHORAGE, BRACING, FASTENERS, ACCESSORIES AND FINISHES.
- 2. INDICATE COMPONENT DETAILS, FRAMED OPENINGS, BEARING, ANCHORAGE, LOADING, WELDS, TYPE AND LOCATION OF FASTENERS, AND ACCESSORIES.
- 3. INDICATE METHOD FOR SECURING STUDS AND OTHER COMPONENTS TO TRACKS AND FOR FRAMING CONNECTIONS.
- 4. SUBMIT CALCULATIONS FOR LOADINGS AND STRESSES UNDER PROFESSIONAL ENGINEER'S SEAL, REGISTERED IN THE STATE OF THE PROJECT.

B. QUALITY STANDARD:

- 1. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING PRODUCTS SPECIFIED IN THIS SECTION WITH MINIMUM FIVE YEARS DOCUMENTED EXPERIENCE.
- 2. INSTALLER QUALIFICATIONS: COMPANY SPECIALIZING IN PERFORMING WORK OF THIS SECTION WITH MINIMUM 3 YEARS DOCUMENTED EXPERIENCE.
- 3. DESIGN STRUCTURAL ELEMENTS UNDER DIRECT SUPERVISION OF PROFESSIONAL ENGINEER EXPERIENCED IN DESIGN OF THIS WORK AND REGISTERED IN THE STATE OF THE PROJECT.

F. INSTALLATION

- 1. FOLLOW MANUFACTURER INSTALLATION GUIDELINES. INSTALLATION SHALL BE COMPLIANT WITH APPLICABLE BUILDING CODES.

DIVISION 6 - WOOD AND PLASTICS

06 1000 - ROUGH CARPENTRY

- 1. PROVIDE SUFFICIENT FIRE RETARDANT TREATED WOOD BLOCKING AT ALL STUDS FOR SECURING OF WALL & CEILING ITEMS, WHETHER FURNISHED BY OWNER OR CONTRACTOR.
- 2. CONCEALED WOOD IS TO BE FIRE RETARDANT TREATED UNLESS NOTED OTHERWISE.
- 3. PRESERVATIVE TREATED LUMBER IS REQUIRED FOR ALL ITEMS TO REMAIN IN CONTACT WITH CONCRETE OR MASONRY TO CONFORM TO AWPA STANDARD 5.
- 4. EXTERIOR WOOD SHALL BE CD GRADE SPRUCE OR YELLOW PINE. ALL PLY-WOOD TO BE FIRE RATED WHERE WALLS ARE INDICATED AS RATED CONSTRUCTION.
- 5. BLOCKING SHALL BE CLOSELY FITTED, ACCURATELY SET TO REQUIRED LEVELS & LEVELS, SECURELY CONNECTED & FIRMLY FIXED IN PLACE. USING NAILS, SCREWS, &/OR BOLTS AS INDICATED OR REQUIRED BY GOOD PRACTICE AND MANUFACTURER'S RECOMMENDATIONS.

06 2000 - FINISH CARPENTRY

- A. SUBMITTALS: SAMPLES OF FINISH MATERIALS, CATALOG CUTS OF HARDWARE, AND SHOP DRAWINGS INCLUDING DIMENSIONED PLANS, ELEVATIONS, AND SECTIONS.

- B. QUALITY STANDARD: ARCHITECTURAL WOODWORK INSTITUTES' "ARCHITECTURAL WOODWORK QUALITY STANDARDS"

C. MATERIALS

- 1. SOFTWOOD LUMBER: MAXIMUM MOISTURE CONTENT OF 6 PERCENT; WITH VERTICAL GRAIN, OF QUALITY SUITABLE FOR SCHEDULED FINISH.
- 2. HARDWOOD LUMBER: MAXIMUM MOISTURE CONTENT OF 6 PERCENT; WITH VERTICAL GRAIN, OF QUALITY SUITABLE FOR SCHEDULED FINISH.
- 3. SHEET MATERIALS: SOFTWOOD PLYWOOD, EXPOSED TO VIEW: FACE SPECIES AS NOTICED, PLAN SAWN, MEDIUM DENSITY FIBERBOARD, CORE 1/2 GRADE A3, GLUE TYPE AS RECOMMENDED FOR APPLICATION.

D. INTERIOR WOODWORK

- 1. COMPLETE FABRICATION BEFORE SHIPPING TO PROJECT SITE TO MAXIMUM EXTENT FEASIBLE. DISASSEMBLE ONLY AS NEEDED FOR SHIPPING AND INSTALLING, WHERE NECESSARY FOR FITTING AT PROJECT SITE, PROVIDE FOR SCABBING AND TRIMMING.
- 2. BACKSOT AND GROOVE BACKS OF FLAT MEMBERS, KERN BACKS OF OTHER WIDE, FLAT MEMBERS, EXCEPT WHERE ENDS WILL BE EXPOSED IN FINISHED WORK.

F. INSTALLATION

- 1. DO NOT INSTALL INTERIOR STALLWOOD WORK UNTIL BUILDING IS ENCLOSED, NET WORK IS COMPLETED, HVAC IS OPERATING, AND WOODWORK IS CONDITIONED TO PREVAILING CONDITIONS OF SPACE WHERE INSTALLED. MAINTAIN TEMPERATURE BETWEEN 55 F. AND 75 F. FOR 72 HOURS BEFORE BEGINNING INSTALLATION AND FOR 12 HOURS AFTER.
- 2. INSTALL WOODWORK LEVEL AND PLUMB AND SHIM AS REQUIRED WITH CONCEALED SHIMS TO 8 TOLERANCE.
- 3. INSTALL TRIM WITH MINIMUM NUMBER OF JOINTS POSSIBLE USING FULL-LENGTH PIECES TO GREATEST EXTENT POSSIBLE. STAGGER JOINTS.
- 4. INSTALL FOR TRANSPARENT FINISH (STAINED OR CLEAR), USE PIECES MADE OF SOLID LUMBER STOCK.
- 5. INSTEAD OF PAINTED FINISH: AT CONTRACTOR'S OPTION, USE PIECES WHICH ARE EITHER GLUED-UP OR MADE OF SOLID LUMBER STOCK.
- 6. DISCARD UNITS OF MATERIAL WHICH ARE UNSOUND, WARPED, BOWED, TWISTED, IMPROPERLY TREATED, NOT ADEQUATELY EXPOSED OR TOO SMALL TO FABRICATE WORK WITHHIN SPECIFIED TRANSMISSION, JOINTS OR JOINTUM, JOINING ARRANGEMENTS, OR WHICH ARE DEFECTIVELY MANUFACTURED WITH RESPECT TO SURFACES, SIZES OR PATTERNS.
- 8. INSTALL THE WORK PLUMB, LEVEL, TRUE AND STRAIGHT WITH NO DISTORTIONS. SHIM AS REQUIRED WITH FINISH CUTS.
- 9. SCRIBE AND CUT WORK TO FIT ADJOINING WORK, AND REFINISH CUT SURFACES OR REPAIR DAMAGED FINISH AT CUTS.
- 10. SAND WORK SMOOTH AND SET EXPOSED NAILS AND SCREWS.
- 11. APPLY WOOD FILLER IN EXPOSED NAIL AND SCREW INDENTATIONS.
- 12. FINISH WORK SHALL BE SMOOTH, FREE FROM SAND, TOOL MARKS, RAISED GRAIN MARKINGS, OR SIMILAR DEFECTS ON EXPOSED SURFACES.

06 4000 - ARCHITECTURAL WOOD CASEWORK

- A. SUBMITTALS: SAMPLES OF FINISH MATERIALS, CATALOG CUTS OF HARDWARE, AND SHOP DRAWINGS INCLUDING DIMENSIONED PLANS, ELEVATIONS, AND SECTIONS. INDICATE COMPONENT PROFILES, FASTENING METHODS, JOINTS, METALS, AND ACCESSORIES.
- 1. SCALE OF DRAWINGS: 1/4"=1'-0" TO 1'-0", MINIMUM.
- 2. PROVIDE THE INFORMATION REQUIRED BY AN/AMMAGCWI (AWS) OR AN/AMAGCWI (NAWS).
- 3. SURFACE FINISHES: INDIC

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SPECIFICATIONS - PRODUCT & INSTALLATION GENERAL REQUIREMENTS

07 5423 - EPDM MEMBRANE ROOFING & ACCESSORIES

- A. SUBMITTALS: PRODUCT DATA AND SHOP DRAWINGS. INDICATE JOINT OR TERMINATION DETAIL CONDITIONS, CONDITIONS OF INTERFACE WITH OTHER MATERIALS, AND PAVEMENT OR WALKWAY PAD LAYOUT.
1. MANUFACTURER'S FIELD REPORTS: INDICATE PROCEDURES FOLLOWED, AMBIENT TEMPERATURES, HUMIDITY, WIND VELOCITY DURING APPLICATION, AND SUPPLEMENTARY INSTRUCTIONS GIVEN SUBMIT FINAL MANUFACTURER'S PUNCH LIST FIELD REPORT WHEN COMPLETE SYSTEM IS INSTALLED.
2. MANUFACTURER'S INSTALLATION INSTRUCTIONS: INDICATE MEMBRANE SEAMING PRECAUTIONS AND PERMITTER CONDITIONS REQUIRING SPECIAL ATTENTION.

B. WARRANTY:

1. MATERIAL WARRANTY: PROVIDE MEMBRANE MANUFACTURER'S WARRANTY AGREEING TO REPLACE MATERIAL THAT SHOWS MANUFACTURE DEFECTS WITHIN 10 YEARS AFTER INSTALLATION.
2. SYSTEM WARRANTY: PROVIDE MANUFACTURER'S SYSTEM WARRANTY AGREEING TO REPAIR OR REPLACE ROOFING THAT LEAKS OR IS DAMAGED DUE TO WIND OR OTHER NATURAL CAUSES. WARRANTY TERM: 20 YEARS.
- A. FOR REPAIR AND REPLACEMENT INCLUDE COSTS OF BOTH MATERIAL AND LABOR IN WARRANTY.
- B. INCLUDE ADJACENT PUNCTURES ACCORDING TO THE MANUFACTURER'S STANDARD WARRANTY TERMS.
- C. INCLUDE HAIL DAMAGE ACCORDING TO THE MANUFACTURER'S STANDARD WARRANTY TERMS.
- D. EXCEPTIONS NOT PERMITTED: DAMAGE DUE TO ROOF TRAFFIC, DAMAGE DUE TO WIND OF SPEED GREATER THAN 56 MPH BUT LESS THAN 90 MPH.

C. BASIS OF DESIGN: FIRESTONE RUBBERGARD® EPDM MEMBRANE - WWW.FIRESTONEBPO.COM

1. WIND UPLIFT: DESIGNED TO WITHSTAND WIND UPLIFT FORCES CALCULATED WITH ASCE 7.

2. INSULATION THERMAL RESISTANCE (R-VALUE): 3 PER INCH, MINIMUM, PROVIDE INSULATION OF THICKNESS REQUIRED, MINIMUM R-20.

D. ROOFING MEMBRANE MATERIALS:

1. MATERIAL: RUBBERGARD EPDM
- A. B. THICKNESS: 60 MILS (0.060 INCH), MINIMUM.
- B. C. SHEET WIDTH: FACTORY FABRICATED INTO LARGEST SHEETS POSSIBLE.
- C. D. PRODUCT: FULLY ADHERED.
2. SEAMING MATERIALS: AS RECOMMENDED BY MEMBRANE MANUFACTURER.
3. VAPOR RETARDER: MATERIAL APPROVED BY ROOF MANUFACTURER COMPLYING WITH REQUIREMENTS OF FIRE RATING CLASSIFICATION COMPATIBLE WITH ROOFING AND INSULATION MATERIALS. INSTALL WITH FIRE-RETARDANT ADHESIVE.
4. FLEXIBLE FLASHING MATERIAL: SAME MATERIAL AS MEMBRANE.
5. BASE FLASHING: PROVIDE WATERPROOF, FULLY ADHERED BASE FLASHING SYSTEM AT ALL PENETRATIONS, PLANE TRANSITIONS, AND TERMINATIONS.

E. DECK SHEATHING AND COVER BOARDS:

- IF SHEATHING OR COVER BOARD IS REFERENCED IN THE DRAWINGS, PROVIDE PRODUCTS COMPLYING WITH BELOW REQUIREMENTS.
1. DECK SHEATHING: 1/2" PSJM SHEATHING, ASTM C1395C1399M, TYPE I SPECIAL FIRE RESISTANT TYPE.
2. COVERBOARD: CEMENT ROOF BOARD, COMPLYING WITH ASTM C1325.

F. INSULATION:

1. INSULATION COMPLYING WITH MANUFACTURER'S RECOMMENDATIONS.
2. CELLULOSE FIBER BOARD INSULATION: ASTM C208, TYPE II, NATURAL FINISH.
3. EXPANDED POLYSTYRENE (EPS) BOARD INSULATION: COMPLES WITH ASTM C578 WITH DRAINAGE CHANNELS ON ONE FACE.
4. TAPERED BOARD: POLYISOCYANATE ISOLATED: MINIMUM THICKNESS 1/2 INCH; FABRICATE OF FEWEST LAYERS POSSIBLE.
5. EXTRUDED POLYSTYRENE (XPS) BOARD INSULATION: COMPLES WITH ASTM C578 WITH NATURAL SKIN SURFACE, DRAINAGE CHANNELS ON ONE FACE.

G. ACCESSORIES:

1. PROVIDE AND INSTALL ONLY ACCESSORIES WHICH COMPLY WITH MANUFACTURER'S RECOMMENDATIONS.
2. PROVIDE FIRESTONE PREFINISHED FLASHINGS AND CORNERS FOR ITEMS NOTED IN DRAWING DETAILS.

H. INSTALLATION:

1. VERIFY THAT SURFACES AND SITE CONDITIONS ARE READY TO RECEIVE WORK.
2. INCHES DECK IS SUPPORTED AND SECURE.
3. VERIFY DECK IS CLEAN AND SMOOTH. FLAT, FREE OF DEBRIS, WAVES, OR PROJECTIONS, PROPERLY SLOPED AND SUITABLE FOR INSTALLATION OF ROOF SYSTEM.
4. VERIFY DECK SURFACES ARE DRY AND FREE OF RAIN, SNOW OR ICE.
5. VERIFY THAT ROOF OPENINGS, CURBS, AND PENETRATIONS THROUGH ROOF ARE SOLIDLY SET, AND CANT STRIPS ARE IN PLACE.
6. CLEAN SUBSTRATE THOROUGHLY PRIOR TO ROOF APPLICATION.
7. DO NOT BEGIN WORK UNTIL OTHER WORK THAT REQUIRES FOOT OR EQUIPMENT TRAFFIC ON ROOF IS COMPLETE.
8. APPLY MANUFACTURER'S RECOMMENDED VAPOR RETARDER OR TEMPORARY ROOF BEFORE ROOF INSTALLATION.
9. PERFORM WORK IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND NRCA (RM) APPLICABLE REQUIREMENTS.
10. REMOVE WRAPPINGS, EMPTY CONTAINERS, PAPER, AND OTHER DEBRIS FROM THE ROOF DAILY. DISPOSE OF DEBRIS IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
11. REMOVE ITUMINOUS MARKINGS FROM FINISHED SURFACES.
12. IN AREAS WHERE FINISHED SURFACES ARE SOLED BY WORK OF THIS SECTION, CONSULT MANUFACTURER OF SURFACES FOR CLEANING ADVICE AND CONFORM TO THEIR DOCUMENTED INSTRUCTIONS.
13. REPAIR OR REPLACE DEFACED OR DAMAGED FINISHES CAUSED BY WORK OF THIS SECTION.

I. PROTECTION:

1. PROTECT INSTALLED ROOFING AND FLASHINGS FROM CONSTRUCTION OPERATIONS.
2. WHERE TRAFFIC MUST CONTINUE OVER FINISHED ROOF MEMBRANE, PROTECT SURFACES USING DURABLE MATERIALS.

07 6200 - SHEET METAL FLASHING AND TRIM

A. STANDARDS:

FABRICATED SHEET METAL ITEMS, INCLUDING FLASHINGS, COUNTERFLASHINGS, AND OTHER ITEMS INDICATED IN SCHEDULE.

- AAMA 811 - VOLUNTARY SPECIFICATION FOR ANODIZED ARCHITECTURAL ALUMINUM 2014 (2015 ERRATA).
- ASTM C602 - STANDARD SPECIFICATION FOR ELASTOMERIC JOINT SEALANTS 2016.
- CDA A4050 - COPPER IN ARCHITECTURE - HANDBOOK CURRENT EDITION.
- SMCMAA (ASMA) - ARCHITECTURAL SHEET METAL MANUAL 2012.

B. SUBMITTALS:

1. SHOP DRAWINGS: INDICATE MATERIAL PROFILE, JOINTING PATTERN, JOINTING DETAILS, FASTENING METHODS, FLASHINGS, TERMINATIONS, AND INSTALLATION DETAILS.

C. QUALITY ASSURANCE:

1. PERFORM WORK IN ACCORDANCE WITH SMCMAA (ASMA) AND CDA A4050 REQUIREMENTS AND STANDARD DETAILS, EXCEPT AS OTHERWISE INDICATED.

D. DELIVERY, STORAGE, AND HANDLING:

1. STACK MATERIAL TO PREVENT TWISTING, BENDING, AND ABRASION, AND TO PREVENT VENTILATION. LOOSE METAL SHEETS TO ENSURE DRAINAGE.
2. PREVENT CONTACT WITH MATERIALS THAT COULD CAUSE DISCOLORATION OR STAINING.

E. PRODUCTS:

- PREFINISHED ALUMINUM: ASTM B209 (ASTM B209M); 20 GAUGE, (0.032 INCH) THICK, PLAIN FINISH. SHOP PRE-COATED WITH MODIFIED SILICONE COATINGS.
1. FLUOROPOLYMER COATING: HIGH PERFORMANCE ORGANIC FINISH; AAMA 2604; MULTIPLE COAT.
2. THERMALLY CURED FLUOROPOLYMER FINISH SYSTEM.
3. COLOR: AS SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS.

F. FABRICATION:

1. FORM SECTIONS TRUE TO SHAPE, ACCURATE IN SIZE, SQUARE, AND FREE FROM DISTORTION OR DEFECTS.
2. FORM PIECES IN LONGEST POSSIBLE LENGTHS.
3. HEN EXPOSED EDGES ON UNDERSIDE: 10 INCH MATERIAL AND SEAM CORNERS.
4. FORM MATERIAL WITH FLAT LOCK SEAMS, EXCEPT WHERE OTHERWISE INDICATED; AT MOVING JOINTS, USE SEALED LAPPED, BAYONET-TYPE OR INTERLOCKING HOOKED SEAMS.
5. FABRICATE FLASHINGS TO ALLOW TCE TO EXTEND 2 INCHES OVER ROOFING GRAVEL, RETURN AND BRAKE EDGES.

G. ACCESSORIES:

1. FASTENERS: GALVANIZED STEEL, WITH SOFT NEOPRENE WASHERS.
2. PRIMER: ZINC CHROMATE TYPE.
3. CONCEALED SEALANTS: NON-CURING BUTYL SEALANT.
4. EXPOSED SEALANTS: ASTM C602; ELASTOMERIC SEALANT, WITH MINIMUM MOVEMENT CAPABILITY AS RECOMMENDED BY MANUFACTURER FOR SUBSTRATES TO BE SEALED; COLOR TO MATCH ADJACENT MATERIAL.

H. INSTALLATION:

1. SECURE FLASHINGS IN PLACE USING CONCEALED FASTENERS, AND USE EXPOSED FASTENERS ONLY WHERE PERMITTED.
2. APPLY PLASTIC CEMENT COMPOUND BETWEEN METAL FLASHINGS AND FELT FLASHINGS.
3. FIT FLASHINGS TIGHT IN PLACE, MAKE CORNERS SQUARE, FLASHINGS TRUE AND STRAIGHT IN PLANES, AND LINES ACCURATE TO PROFILES.
4. SEAL METAL JOINTS WATER-TIGHT.

07 8100 - APPLIED FIREPROOFING

- A. SUBMITTALS: PRODUCT DATA; PROVIDE DATA INDICATING PRODUCT CHARACTERISTICS.
1. TEST REPORTS: REPORTS FROM REPUTABLE, INDEPENDENT TESTING AGENCIES FOR PROPOSED PRODUCTS, INDICATING COMPLIANCE WITH SPECIFIED CRITERIA, CONDUCTED UNDER CONDITIONS SIMILAR TO THOSE ON PROJECT, AS FOLLOWS:
- A. BOND STRENGTH.
- B. BOND IMPACT.
- C. COMPRESSIVE STRENGTH.
- D. FIRE TESTS USING SUBSTRATE MATERIALS SIMILAR THOSE ON PROJECT.

2. MANUFACTURER'S INSTALLATION INSTRUCTIONS: INDICATE SPECIAL PROCEDURES.
3. MANUFACTURER'S QUALIFICATION STATEMENT.

I. FIELD CONDITIONS:

1. DO NOT APPLY FIREPROOFING WHEN TEMPERATURE OF SUBSTRATE MATERIAL AND SURROUNDING AIR IS BELOW -40 DEGREES F OR WHEN TEMPERATURE IS PRECIPITATED TO BE BELOW 34 TEMPERATURE FOR 24 HOURS AFTER APPLICATION.
2. PROVIDE VENTILATION IN AREAS TO RECEIVE FIREPROOFING DURING APPLICATION AND 24 HOURS AFTERWARD, TO DRY APPLIED MATERIAL.
3. PROVIDE TEMPORARY ENCLOSURE TO PREVENT SPRAY FROM CONTAMINATING AIR.

K. WARRANTY:

1. CORRECT DEFECTIVE WORK WITHIN A TWO YEAR PERIOD AFTER DATE OF SUBSTANTIAL COMPLETION.
- A. INCLUDE COVERAGE FOR FIREPROOFING TO REMAIN FREE FROM CRACKING, CHECKING, DUSTING, FLAKING, SPALLING, SEPARATION, AND BULSTERING.
- B. REINSTATE OR REPAIR FAILURES THAT OCCUR WITHIN WARRANTY PERIOD.

L. MANUFACTURERS:

1. GCP APPLIED TECHNOLOGIES: WWW.GCPAT.COM/FIREPROOFING
2. ISOLATEK INTERNATIONAL CORP.: WWW.ISOLATEK.COM
3. SOUTHWEST FIREPROOFING PRODUCTS COMPANY: WWW.SW.FP

M. MATERIALS:

1. PROVIDE ASSEMBLIES AS INDICATED ON DRAWING.
2. PROVIDE FIRE RESISTANCE RATINGS FOR FOLLOWING:
- A. PRIMARY STRUCTURAL FRAME, INCLUDING WALLS, AND TRUSSES: [1 HOUR]
- B. BEARING WALLS, INTERIOR: [1 HOUR]
- C. NON-BEARING WALLS, INTERIOR: [1 HOUR]
- D. ROOF CONSTRUCTION, INCLUDING DECK, JOISTS, AND TRUSSES: [1 HOUR]

N. ACCESSORIES:

1. PRIMER ADHESIVE: OF TYPE RECOMMENDED BY APPLIED FIREPROOFING MANUFACTURER.
2. OVERCOAT: AS RECOMMENDED BY MANUFACTURER OF APPLIED FIREPROOFING MATERIAL.
3. METAL LATH: EXPANDED METAL LATH, MINIMUM WEIGHT OF 17 PSF, GALVANIZED FINISH.
4. WATER: CLEAN, POTABLE.
1. VERIFY THAT SURFACES ARE READY TO RECEIVE FIREPROOFING.
2. VERIFY THAT DUCTS, PIPING, EQUIPMENT, OR OTHER ITEMS THAT WOULD INTERFERE WITH APPLICATION OF FIREPROOFING HAVE NOT BEEN INSTALLED.
3. VERIFY THAT VOIDS AND CRACKS IN SUBSTRATE HAVE BEEN FILLED.
4. VERIFY THAT PROJECTIONS HAVE BEEN REMOVED WHERE FIREPROOFING WILL BE EXPOSED TO VIEW AS A FINISH MATERIAL.
5. PERFORM TESTS AS RECOMMENDED BY FIREPROOFING MANUFACTURER IN APPLICATIONS WHERE ADHESION OF FIREPROOFING TO SUBSTRATE IS IN QUESTION.
6. REMOVE INCOMPATIBLE MATERIALS THAT COULD EFFECT BOND BY SCRAPING, BRUSHING, SCRUBBING, OR SANDBLASTING.
7. PREPARE SUBSTRATES TO RECEIVE FIREPROOFING IN STRICT ACCORDANCE WITH INSTRUCTIONS OF FIREPROOFING MANUFACTURER.
8. APPLY FIREPROOFING MANUFACTURER'S RECOMMENDED BONDING AGENT ON PRIMED STEEL.
9. INSTALL METAL LATH OVER STRUCTURAL MEMBERS AS INDICATED OR AS REQUIRED BY UL ASSEMBLY DESIGN NUMBERS.
10. APPLY FIREPROOFING IN UNIFORM THICKNESS AND DENSITY AS NECESSARY TO ACHIEVE REQUIRED RATINGS.
11. INSPECT INSTALLED FIREPROOFING AFTER APPLICATION AND CURING FOR INTEGRITY, PRIOR TO ITS CONCEALMENT.
12. ENSURE THAT ACTUAL THICKNESSES, DENSITIES, AND BOND STRENGTHS MEET REQUIREMENTS FOR SPECIFIED RATINGS AND REQUIREMENTS OF AUTOMATICALLY RATED AND LISTED PRODUCTS.
13. REMOVE EXCESS MATERIAL, OVERSPRAY, DROPPINGS, AND DEBRIS.
14. REMOVE FIREPROOFING FROM MATERIALS AND SURFACES NOT REQUIRED TO BE FIREPROOFED.

O. ACCESSORIES:

1. PRIMER ADHESIVE: OF TYPE RECOMMENDED BY APPLIED FIREPROOFING MANUFACTURER.
2. OVERCOAT: AS RECOMMENDED BY MANUFACTURER OF APPLIED FIREPROOFING MATERIAL.
3. METAL LATH: EXPANDED METAL LATH, MINIMUM WEIGHT OF 17 PSF, GALVANIZED FINISH.
4. WATER: CLEAN, POTABLE.

H. INSTALLATION:

1. VERIFY THAT SURFACES ARE READY TO RECEIVE FIREPROOFING.
2. VERIFY THAT DUCTS, PIPING, EQUIPMENT, OR OTHER ITEMS THAT WOULD INTERFERE WITH APPLICATION OF FIREPROOFING HAVE NOT BEEN INSTALLED.
3. VERIFY THAT VOIDS AND CRACKS IN SUBSTRATE HAVE BEEN FILLED.
4. VERIFY THAT PROJECTIONS HAVE BEEN REMOVED WHERE FIREPROOFING WILL BE EXPOSED TO VIEW AS A FINISH MATERIAL.
5. PERFORM TESTS AS RECOMMENDED BY FIREPROOFING MANUFACTURER IN APPLICATIONS WHERE ADHESION OF FIREPROOFING TO SUBSTRATE IS IN QUESTION.
6. REMOVE INCOMPATIBLE MATERIALS THAT COULD EFFECT BOND BY SCRAPING, BRUSHING, SCRUBBING, OR SANDBLASTING.
7. PREPARE SUBSTRATES TO RECEIVE FIREPROOFING IN STRICT ACCORDANCE WITH INSTRUCTIONS OF FIREPROOFING MANUFACTURER.
8. APPLY FIREPROOFING MANUFACTURER'S RECOMMENDED BONDING AGENT ON PRIMED STEEL.
9. INSTALL METAL LATH OVER STRUCTURAL MEMBERS AS INDICATED OR AS REQUIRED BY UL ASSEMBLY DESIGN NUMBERS.
10. APPLY FIREPROOFING IN UNIFORM THICKNESS AND DENSITY AS NECESSARY TO ACHIEVE REQUIRED RATINGS.
11. INSPECT INSTALLED FIREPROOFING AFTER APPLICATION AND CURING FOR INTEGRITY, PRIOR TO ITS CONCEALMENT.
12. ENSURE THAT ACTUAL THICKNESSES, DENSITIES, AND BOND STRENGTHS MEET REQUIREMENTS FOR SPECIFIED RATINGS AND REQUIREMENTS OF AUTOMATICALLY RATED AND LISTED PRODUCTS.
13. REMOVE EXCESS MATERIAL, OVERSPRAY, DROPPINGS, AND DEBRIS.
14. REMOVE FIREPROOFING FROM MATERIALS AND SURFACES NOT REQUIRED TO BE FIREPROOFED.

07 8400 - FIRESTOPPING

- A. SUBMITTALS: PRODUCT DATA; PROVIDE DATA ON PRODUCT CHARACTERISTICS, PERFORMANCE RATINGS, AND LIMITATIONS.

B. MANUFACTURERS:

1. 3M FIRE PROTECTION PRODUCTS: WWW.3M.COM/FIRESTOP.COM
2. HILTl, INC.: WWW.US.HILTl.COM

C. MATERIALS:

1. FIRESTOPPING MATERIALS: ANY MATERIALS MEETING REQUIREMENTS.
2. PRIMERS, SLEEVES, FORMS, INSULATION, PACKING, STUFFING, AND ACCESSORIES: PROVIDE TYPE OF MATERIALS AS REQUIRED FOR TESTED FIRESTOPPING APPLICATIONS.
3. FIRE RATINGS: REFER TO DRAWINGS FOR REQUIRED SYSTEMS AND RATINGS.

D. ASSEMBLY REQUIREMENTS:

1. HEAD-OF-WALL, JOINT SYSTEM FIRESTOPPING AT JOINTS BETWEEN FIRE-RATED WALL ASSEMBLIES AND NON-RATED HORIZONTAL ASSEMBLIES: USE SYSTEM THAT HAS BEEN TESTED ACCORDING TO ASTM E837 TO HAVE FIRE RESISTANCE F RATING EQUAL TO REQUIRED FIRE RATING OF FLOOR OR WALL, WHICHEVER IS GREATER.
2. FLOOR-TO-FLOOR, WALL-TO-WALL, AND WALL-TO-FLOOR JOINTS, EXCEPT PERIMETER, WHERE BOTH ARE FIRE-RATED: USE SYSTEM THAT HAS BEEN TESTED ACCORDING TO ASTM E1966 OR UL 2079 TO HAVE FIRE RESISTANCE.
3. FIRE RATING EQUAL TO REQUIRED FIRE RATING OF THE ASSEMBLY IN WHICH THE JOINT OCCURS.
4. THROUGH PENETRATION FIRESTOPPING: USE SYSTEM THAT HAS BEEN TESTED ACCORDING TO ASTM E814 TO HAVE FIRE RESISTANCE F-RATING EQUAL TO REQUIRED FIRE RATING OF PENETRATED ASSEMBLY.

E. INSTALLATION:

1. INSTALLATIONS SHALL CONFORM TO UL REQUIREMENTS OF THE ASSEMBLY WHICH FIRESTOPPING IS TO BECOME PART OF THE BUILT ASSEMBLY.

07 9200 - JOINT SEALANTS

- A. SUBMITTALS: PRODUCT DATA, AND SCHEDULE OF LOCATIONS FOR EACH TYPE OF JOINT SEALANT SUBMITTED.

1. JOINT SEALANT SCHEDULE: INCLUDE THE FOLLOWING INFORMATION:
1. JOINT SEALANT APPLICATION, JOINT LOCATION, AND DESIGNATION.
2. JOINT SEALANT MANUFACTURER AND PRODUCT NAME.
3. JOINT SEALANT FORMULATION.
4. JOINT SEALANT COLOR.

- C. ENVIRONMENTAL LIMITATIONS: DO NOT PROCEED WITH INSTALLATION OF JOINT SEALANTS WHEN AMBIENT AND SUBSTRATE TEMPERATURE CONDITIONS ARE OUTSIDE LIMITS PERMITTED BY JOINT SEALANT MANUFACTURER OR ARE BELOW 40 deg F (4 deg C).

- D. COMPATIBILITY: PROVIDE JOINT SEALANTS, JOINT FILLERS, AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH JOINT SUBSTRATES UNDER SERVICE AND APPLICATION CONDITIONS.

E. JOINT SEALANTS:

1. COLORS OF EXPOSED JOINT SEALANTS: AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.
2. INTERIOR JOINTS IN CERAMIC TILE AND OTHER HARD SURFACES IN KITCHENS, TOILET ROOMS, AND AROUND PLUMBING FIXTURES: SINGLE COMPONENT, MILDEW-RESISTANT SILICONE SEALANT, ASTM C 620, TYPE S; GRADE NS, CLASS 25; USES AT, A, AND C, FORMULATED WITH FUNGICIDE.
3. INTERIOR JOINTS AROUND PERIMETERS OF DOORS AND FRAMES: LATEX SEALANT, SINGLE COMPONENT, NONSAG, MILDEW-RESISTANT, PAINTABLE, ACRYLIC EMULSION SEALANT COMPLYING WITH ASTM C 834.
4. ACUSTICAL SEALANT FOR EXPOSED INTERIOR JOINTS: NONSAG, PAINTABLE, NONSTAINING, LATEX SEALANT COMPLYING WITH ASTM C 834.
5. ACUSTICAL SEALANT FOR CONCEALED JOINTS: NONDRYING, NONHARDENING, NONSKINNING, NONSTAINING, QUINNABLE, SYNTHETIC RUBBER SEALANT RECOMMENDED FOR SEALING INTERIOR CONCEALED JOINTS TO REDUCE TRANSMISSION OF AERIOBIC SOUND.
6. EXTERIOR CONCRETE PANELS, NATURAL STONES, MASONRY, ALUMINUM CURTAIN WALLS, METAL PANELS AND WINDOW PERIMETERS.
- BASIS OF DESIGN PRODUCTS:
- A. TREMCO INCORPORATED: SPECTREM 1.
- B. DOW CORNING CORPORATION: 790.
- C. PECORA CORPORATION: BRONST.
7. EXTERIOR JOINTS IN HORIZONTAL TRAFFIC SURFACES.
8. ISOLATION AND CONTRACTION JOINTS IN CAST-IN-PLACE CONCRETE SLABS.
- URETHANE JOINT SEALANT: MULTICOMPONENT, NONSAG, GRADE 25, CLASS 25.

F. JOINT SEALANT BACKING:

1. GENERAL: PROVIDE SEALANT BACKINGS OF MATERIAL THAT ARE NONSTAINING, ARE COMPATIBLE WITH JOINT SUBSTRATES, SEALANTS, PRIMERS, AND OTHER JOINT FILLERS, AND ARE APPROVED FOR APPLICATIONS INDICATED BY SEALANT MANUFACTURER BASED ON FIELD EXPERIENCE AND LABORATORY TESTING.
2. CYLINDRICAL SEALANT BACKINGS: ASTM C 1330, TYPE C (CLOSED-CELL MATERIAL WITH A SURFACE SKIN), AND OF SIZE AND DENSITY TO CONTROL SEALANT DEPTH AND OTHERWISE CONTRIBUTE TO PRODUCING OPTIMUM SEALANT PERFORMANCE.
3. BOND-BREAKER TAPE: POLYETHYLENE TAPE OR OTHER PLASTIC TAPE RECOMMENDED BY SEALANT MANUFACTURER FOR PREVENTING SEALANT FROM ADHERING TO RIGID, INFLEXIBLE JOINT-FILLER MATERIALS OR JOINT SURFACES AT BACK OF JOINT. PROVIDE SELF-ADHESIVE TAPE WHERE APPLICABLE.

F. MISCELLANEOUS MATERIALS:

1. PRIMER: MATERIAL RECOMMENDED BY JOINT SEALANT MANUFACTURER WHERE REQUIRED FOR ADHESION OF SEALANT TO JOINT SUBSTRATES INDICATED, AS DETERMINED FROM PRECONSTRUCTION JOINT SEALANT-SUBSTRATE TESTS AND FIELD TESTS.
2. CLEANERS FOR NONPOROUS SURFACES: CHEMICAL CLEANERS ACCEPTABLE TO MANUFACTURERS OF SEALANTS AND SEALANT BACKING MATERIALS, FREE OF OILY RESIDUES OR OTHER SUBSTANCES CAPABLE OF STAINING OR HARMING JOINT SUBSTRATES AND ADJACENT NONPOROUS SURFACES IN ANY WAY, AND FORMULATED TO PROMOTE OPTIMUM ADHESION OF SEALANTS TO JOINT SUBSTRATES.
3. BOND-BREAKER TAPE: POLYETHYLENE TAPE OR OTHER PLASTIC TAPE RECOMMENDED BY SEALANT MFR FOR PREVENTING SEALANT FROM ADHERING TO RIGID, INFLEXIBLE JOINT-FILLER MATERIALS OR JOINT SURFACES AT BACK OF JOINT.
4. MASKING TAPE: NONSTAINING, NONABSORBENT MATERIAL COMPATIBLE WITH JOINT SEALANTS AND SURFACES ADJACENT TO JOINTS.
6. INSTALLATION: COMPLY WITH ASTM C 1193; ASTM C 919 FOR ACUSTICAL JOINTS; AND AS FOLLOWS:
1. REMOVE ALL LOOSE MATERIAL, CLEAN AND PRIME JOINTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, AND PROTECT ADJACENT SURFACES.
2. INSTALL BOND-BREAKER TAPE WHERE JOINT BACKINGS ARE NOT USED.
3. INSTALL SEALANT TOOLED CONCAVE, FREE OF AIR POCKETS, FOREIGN EMBEDDED MATTER, RIDGES, AND SAGS, AND PROTECT UNTIL FULLY CURED. SEALANT WITH DUST AND DEBRIS EMBEDDED IN SURFACE SHALL BE CAUSE FOR REJECTION.

DIVISION 8 - OPENINGS

08 0671 - DOOR HARDWARE

- A. SUBMITTALS: PRODUCT DATA AND HARDWARE SCHEDULE INDICATING HARDWARE ITEM, FINISH, AND QUANTITY LOCATED ON EACH DOOR WITH DOOR AND HARDWARE SET NUMBERING CORRESPONDING TO THOSE USED IN CONSTRUCTION DOCUMENTS. REFER TO ARCHITECTURAL PLANS AND HARDWARE SCHEDULES PROVIDED.
1. HARDWARE SUPPLIER SHALL SUBMIT FOUR COPIES OF FINAL HARDWARE SCHEDULE AT EARLIEST POSSIBLE DATE PARTICULARLY WHERE ACCEPTANCE OF HARDWARE SCHEDULE MUST PRECEDE FABRICATION OF OTHER WORK WHICH IS CRITICAL IN THE PROJECT CONSTRUCTION SCHEDULE. INCLUDE WITH SCHEDULE SHOP DRAWINGS OF OTHER WORK SUBMITTED BY BUILDERS HARDWARE, AND OTHER INFORMATION ESSENTIAL TO THE COORDINATE REVIEW OF HARDWARE SCHEDULE.
2. KEYING SCHEDULE: SUBMIT SEPARATE DETAILED SCHEDULE INDICATING CLEARLY HOW THE OWNER'S FINAL INSTRUCTIONS ON KEYING OF LOCKS HAS BEEN FULFILLED. ALL KEYING SHALL BE COORDINATED WITH THE OWNER.

- B. PRODUCTS: REFER TO HARDWARE SCHEDULE AND ARCHITECTURAL DRAWINGS.

1. STRIKES: PROVIDE MANUFACTURER'S STANDARD WROUGHT BOX STRIKE FOR EACH LATCH OR LOCK BOLT, WITH CURVED UP EXTENSION TO PROTECT FRAME. FINISH TO MATCH HARDWARE SET. PROVIDE STANDARD (OPEN) STRIKE PLATES FOR INTERIOR DOORS WHERE WOOD DOOR FRAMES ARE USED.
2. IN GENERAL, HARDWARE FINISH SHALL BE U155 (SATIN NICKEL) UNLESS SPECIFIED DIFFERENTLY ON HARDWARE SCHEDULE.
3. SUPPLY CAL ROAL HOFS3 FLEXIBLE DOOR STOPS IN THE APARTMENT DWELLING UNITS. USE 2 1/8"X23 HINGE STOPS WHERE FLEXIBLE STOPS CANNOT BE USED.
4. SUPPLY OUT SWINGING EXTERIOR DOORS WITH NON REMOVABLE PINS.

C. INSTALLATION:

1. MOUNT HARDWARE UNITS AT HEIGHTS INDICATED IN 'RECOMMENDED LOCATIONS FOR BUILDERS HARDWARE FOR STANDARD STEEL DOORS AND FRAMES' BY THE DOOR AND HARDWARE INSTITUTE, EXCEPT AS SPECIFICALLY INDICATED OR REQUIRED TO COMPLY WITH GOVERNING REGULATIONS, AND EXCEPT AS MAY BE OTHERWISE DIRECTED BY ARCHITECT. MOUNT HARDWARE IN UNITS DESIGNATED FOR USE BY THE HANDICAPPED AT HEIGHTS RECOMMENDED FOR USE BY THE HANDICAPPED.
2. INSTALL EACH HARDWARE ITEM IN COMPLIANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS, WHEREVER CUTTING AND FITTING IS REQUIRED TO INSTALL HARDWARE ONTO OR INTO SURFACES WHICH ARE LATER TO BE PAINTED OR FINISHED IN ANOTHER WAY, COORDINATE REMOVAL, STORAGE AND REINSTALLATION OR APPLICATION OF SURFACE PROTECTIONS WITH FINISHING WORK SPECIFIED IN THE DIVISION 9 SECTIONS. DO NOT INSTALL SURFACE MOUNTED UNITS UNTIL FINISHES HAVE BEEN COMPLETED ON THE SUBSTRATE.
3. SET UNITS LEVEL, PLUMB AND TRUE TO LINE AND LOCATION. ADJUST AND REINFORCE THE ATTACHMENT SUBSTRATE AS NECESSARY FOR PROPER INSTALLATION AND OPERATION.
4. DRILL AND COUNTERBANK UNITS WHICH ARE NOT FACTORY PREPARED FOR ANCHORAGE FASTENERS. SPACE FASTENERS AND ANCHORS IN ACCORDANCE WITH INDUSTRY STANDARDS.
5. METAL THRESHOLDS SHALL BE SET IN A SOLID BED OF NON STAINING THICK, BASE CAULKING.
6. ADJUST CHIEF AND CHECK OPERATING ITEM OF HARDWARE AND EACH DOOR, TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS WHICH CANNOT BE ADJUSTED TO OPERATE FREELY AND SMOOTHLY AS INTENDED FOR THE APPLICATION MADE.
7. FINAL ADJUSTMENT, WHEREVER HARDWARE INSTALLATION IS MADE MORE THAN ONE MONTH PRIOR TO ACCEPTANCE OR OCCUPANCY OF A SPACE OR AREA, RETURN TO THE WORK DURING THE WEEK PRIOR TO ACCEPTANCE OR OCCUPANCY, AND MAKE FINAL CHECK AND ADJUSTMENT OF ALL HARDWARE ITEMS IN SUCH SPACE OR AREA. CLEAN OPERATING ITEMS AS NECESSARY TO RESTORE PROPER FUNCTION OF EACH ITEM.
- HARDWARE AND DOORS: ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT.

HARDWARE SET: 1.0

FOR USE ON DOOR (S):

N-101, N-102

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3 EA	HINGE	5881 4.5 X 4.5	BRUSHED NICKEL	IVE
1 EA	PRIVACY WDR B AND	L3496R 6GA L583-303	BRUSHED NICKEL	SCH
1 EA	SURFACE CLOSER	4040P REG	BRUSHED NICKEL	LCN
1 EA	KICK PLATE	8400 10" X 2" LDW 8-CS	BRUSHED NICKEL	IVE
1 EA	WALL STOP	WS4640G7CVX	BRUSHED NICKEL	IVE
3 EA	SLENCER	S864	GRY	NE

HARDWARE SET: 2.0

FOR USE ON DOOR (S):

N-103

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3 EA	HINGE	5881 4.5 X 4.5	BRUSHED NICKEL	IVE
1 EA	STOREROOM LOCK	L908R 6GA	BRUSHED NICKEL	SCH
1 EA	HO STOP	905	BRUSHED NICKEL	GLY
3 EA	SLENCER	S864	GRY	IVE

HARDWARE SET: 3.0

FOR USE ON DOOR (S):

S-100C

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3 EA	HINGE	5881HW 4.5 X 4.5 NRP	BRUSHED NICKEL	IVE
1 EA	STOREROOM LOCK	N08LD RHO	BRUSHED NICKEL	SCH
1 EA	FISC CORE	PERMANENT CORE	BRUSHED NICKEL	SCH
1 EA	KEYED CONST CORE	KEYED CONST CORE	BRUSHED NICKEL	SCH
1 EA	SURFACE CLOSER	4040P SHUSHS MC	BRUSHED NICKEL	LCN
1 EA	RAN DRIP	142	BRUSHED NICKEL	ZER
1 EA	GASKETING	328-S	BRUSHED NICKEL	ZER
1 EA	DOOR SWEEP	39	BRUSHED NICKEL	ZER
1 EA	THRESHOLD	555-223	BRUSHED NICKEL	ZER
1 EA	DOOR CONTACT	679-05HM OR WD AS REQD	BRUSHED NICKEL	SCB

08 1113 - HOLLOW METAL DOORS AND FRAMES

- A. SUBMITTALS: PRODUCT DATA AND SHOP DRAWINGS WITH DETAILS OF EACH OPENING, SHOWING ELEVATIONS, GLAZING, FRAME PROFILES, AND ANY INDICATED FINISH REQUIREMENTS.

B. HOLLOW METAL DOOR AND FRAME MANUFACTURERS:

1. CEOO DOOR, AN ASSA ABLOY GROUP COMPANY: WWW.ASSAABLOYDOSS.COM
2. DE LA FONTAINE INC.: WWW.DELAFONTAINE.COM
3. REPUBLIC DOORS, AN ALLEGION BRAND: WWW.REPUBLICDOOR.COM
4. STEELCRAFT, AN ALLEGION BRAND: WWW.ALLEGION.COM

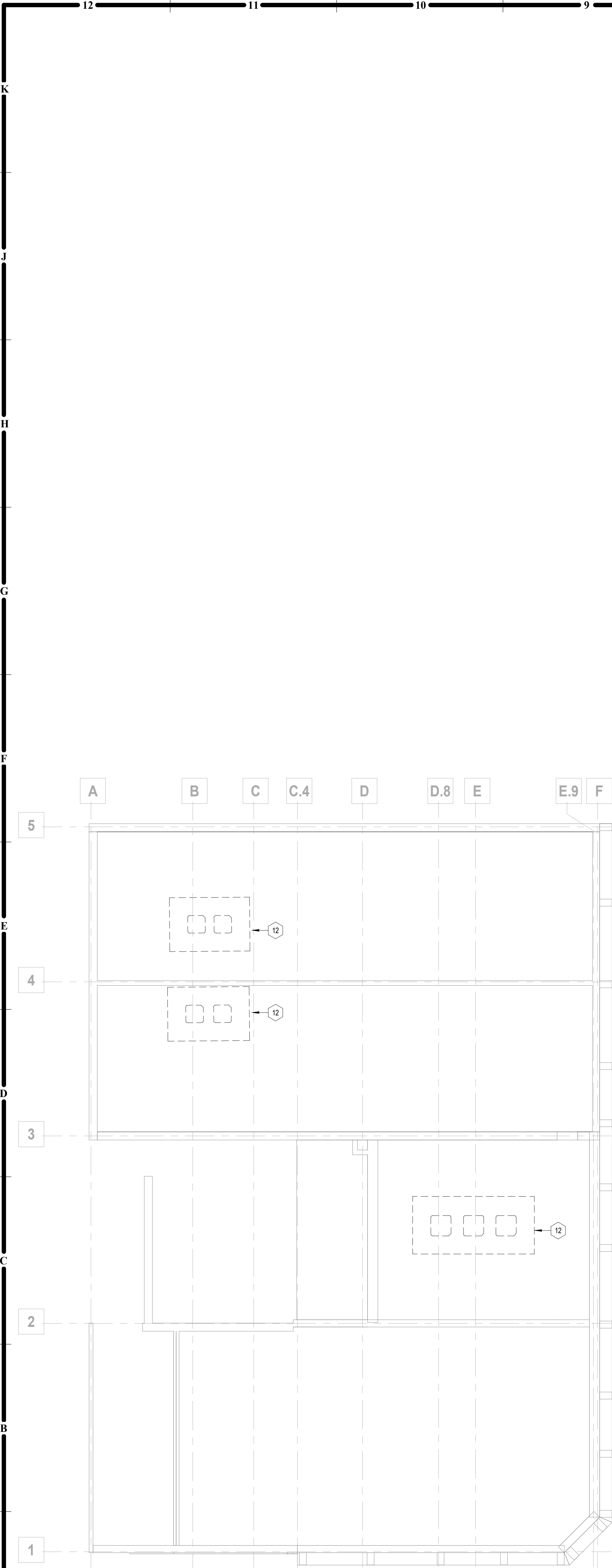
C. SOUND-RATED HOLLOW METAL DOORS AND FRAMES:

1. OVERLY DOOR COMPANY: WWW.OVERLY.COM

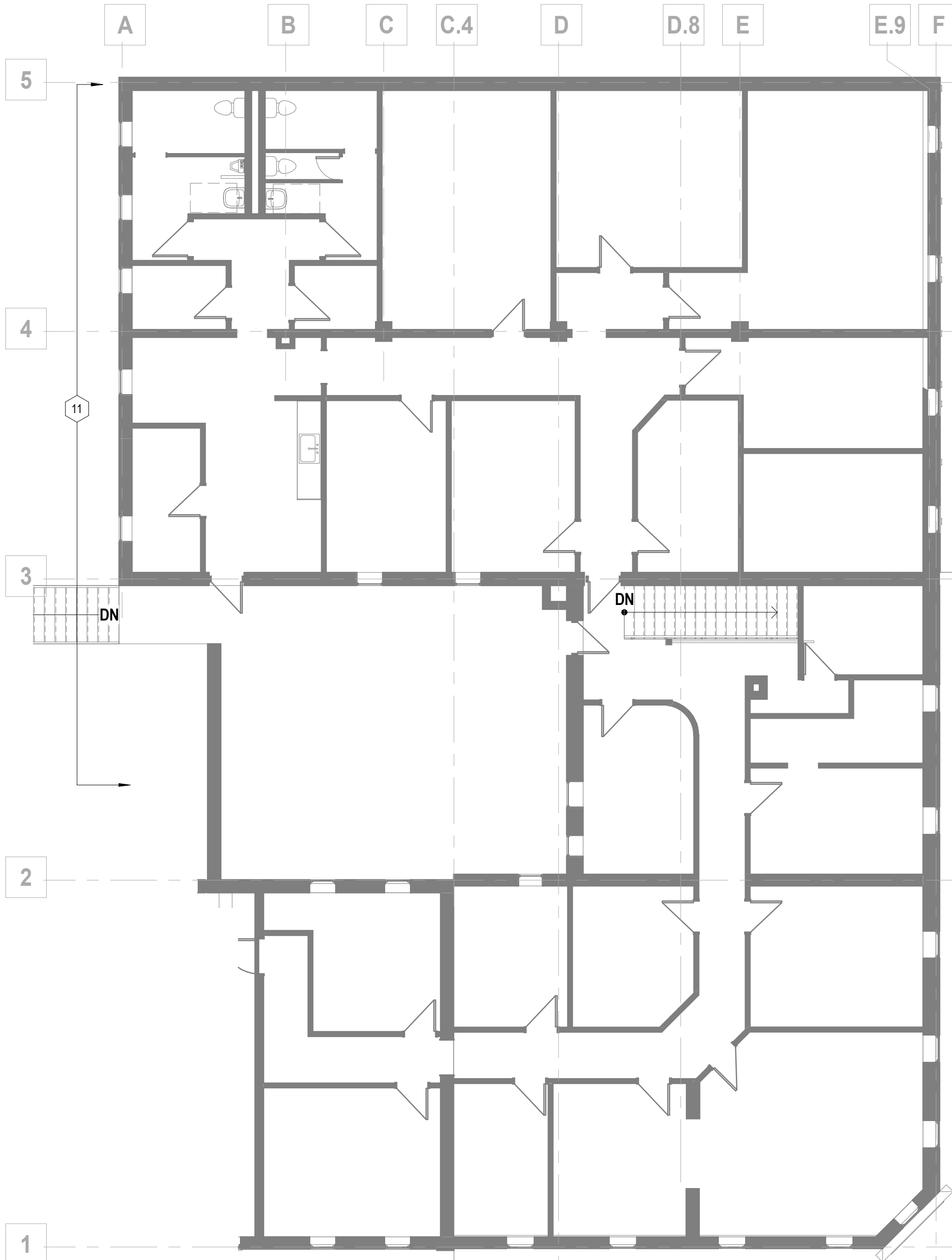
D. DESIGN CRITERIA:

1. STEEL USED FOR FABRICATION OF DOORS AND FRAMES SHALL COMPLY WITH ONE OR MORE OF THE FOLLOWING RECOMMENDATIONS:
- A. STEEL SHALL BE COMPLETE WITH ALL HARDY, OPERATOR OR APPROVED EQUAL, OPERATOR.
- B. TWO HAND-HELD ROLLING CODE.
- C. WINDOW DESIGN: STOCKTON, GLASS-FULL.
- D. CONFORMING TO ASTM A1008/A1009M, OR HOT-ROLLED PICKLED AND OILED (HPO) STEEL CONFORMING TO ASTM A1011/A1011M, COMMERCIAL STEEL (CS) TYPE B FOR EACH.
2. 2" DOOR FACE SHEETS: FLUSH.
3. GLAZED LIGHTS: NON-REMOVABLE STOPS ON NON-SECURE SIDE; SIZES AND CONFIGURATIONS AS INDICATED ON DRAWINGS. STYLE: MANUFACTURER'S STANDARD.
4. HOLLOW METAL PANELS: SAME CONSTRUCTION, PERFORMANCE, AND FINISH AS DOORS.
5. COMBINED REQUIREMENTS: IF A PARTICULAR DOOR AND FRAME UNIT IS INDICATED TO COMPLY WITH MORE THAN ONE TYPE OF REQUIREMENT, COMPLY WITH THE SPECIFIED REQUIREMENTS FOR EACH TYPE, FOR EACH DOOR THAT IS SO INDICATED AS BEING SOUND-RATED MUST COMPLY WITH THE REQUIREMENTS SPECIFIED FOR EXTERIOR DOORS AND FOR SOUND-RATED DOORS, WHERE TWO REQUIREMENTS COMPLY, COMPLY WITH THE MOST STRINGENT.

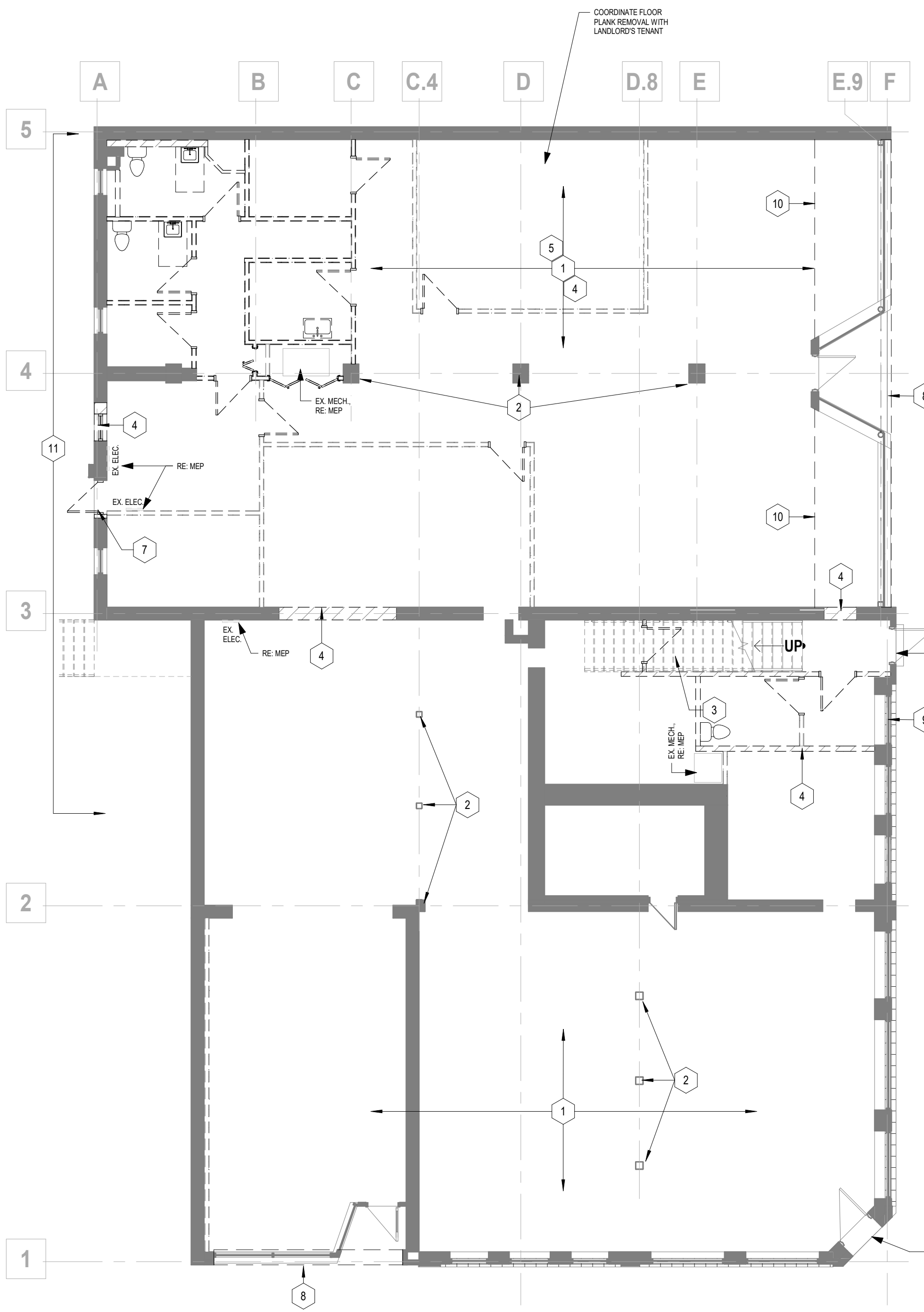
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A12 ROOF DEMO PLAN
1/8" = 1'-0"



A8 2ND FLOOR DEMO PLAN
1/8" = 1'-0"



A4 1ST FLOOR DEMO PLAN
1/8" = 1'-0"

GEN. DEMO NOTES

1. CONTRACTOR TO VISIT PROJECT SITE AND BUILDING, PRIOR TO BID.
2. BUILDING AND SITE TO REMAIN SECURE DURING DEMOLITION AND CONSTRUCTION.
3. PROTECT ALL ITEMS TO REMAIN (WALLS, PLUMBING FIXTURES, PIPING, HVAC UNITS, COLUMNS, ETC.).
4. CARE IS TO BE EXERCISED IN THE DEMOLITION OPERATIONS. EXISTING SURFACES TO REMAIN SHALL BE PROTECTED. ANY DAMAGE INCURRED AS A RESULT OF DEMOLITION SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL BEAR THE COST OF REPAIRING SUCH DAMAGE.
5. ALL OPENINGS IN WALLS AND ROOFS RESULTING FROM EQUIPMENT AND/OR PIPE REMOVAL SHALL BE SEALED WEATHERTIGHT. ALL CONDITIONS SHALL BE LEFT SAFE AND HAZARD FREE.
6. CONTRACTOR TO REPAIR ANY AREAS DAMAGED DURING DEMOLITION.
7. CONTRACTOR TO COORDINATE DEMOLITION OPENINGS WITH NEW PLANS AND ELEVATIONS.
8. ALL MEP SYSTEMS TO BE REMOVED TO BE FULLY COORDINATED WITH EXISTING CONDITIONS. ALL SYSTEMS TO BE REMOVED COMPLETELY THAT ARE NOT BEING RE-UTILIZED.
9. PROTECT EXISTING CONDITIONS AND MAINTAIN WEATHER TIGHTNESS FOR ALL OCCUPIED/UNOCCUPIED SPACES, BOTH VERTICALLY AND HORIZONTALLY FOR THE ENTIRE DURATION THAT THE BUILDING IS EXPOSED TO THE ELEMENTS. PATCH/REPAIR/REPLACE AS REQUIRED.

DEMO FLOOR PLAN KEYED NOTES

MARK	DESCRIPTION
1	REMOVE EXISTING FLOOR AND ALL ASSOCIATED CONSTRUCTION. PREPARE ENTIRE SUB-FLOOR FOR NEW DRAIN TILE AND CLEAN GRAVEL. EXTERIOR WALLS AND FOUNDATIONS TO BE PREPARED FOR NEW WATERPROOFING BELOW GRADE.
2	PROTECT COLUMNS AND BRACE AS NECESSARY TO PROVIDE FULL STABILITY DURING REWORK OF SUB-FLOOR AREA.
3	EXISTING MAIN STAIR TO 2ND LEVEL TO REMAIN. PROTECT STAIR AND BRACE AS REQUIRED TO MAINTAIN STRUCTURAL INTEGRITY WHILE SUB-FLOOR IS REMOVED. REFER TO STRUCTURAL FOR ADDITIONAL INFORMATION.
4	REMOVE EXISTING DOORS/FRAMES/WALLS AND ROUGH-INS FOR MEP SYSTEMS. REFER TO MEP FOR ADDITIONAL NOTES.
5	REMOVE EXISTING RESTROOM CORE AND ALL ASSOCIATED MEP SYSTEMS. REFER TO MEP FOR ADDITIONAL INFORMATION.
6	REMOVE WINDOW AND PREPARE OPENING FOR NEW EGRESS DOOR. REFER TO STRUCTURAL FOR ADDITIONAL INFORMATION.
7	REMOVE EXISTING WEATHERHOOD AND LOUVER ABOVE EXTERIOR DOOR. REMOVE DOOR AND ENLARGE OPENING FOR NEW EGRESS DOOR. REFER TO STRUCTURAL FOR ADDITIONAL INFORMATION.
8	REMOVE WINDOW SYSTEM AND ALL FAILED COMPONENTS. PREPARE OPENING FOR NEW WINDOW SYSTEM, FRAMING AND FLASHINGS.
9	REMOVE BROKEN GLASS. PREPARE FOR NEW GLASS INSTALL.
10	REMOVE PLATFORM AND ALL NON-STRUCTURAL FRAMING.
11	REMOVE ALL COMPONENTS THAT NO LONGER ARE ACTIVE, IN GOOD WORKING ORDER, OR ABANDONED. COORDINATE WITH MEP FOR ADDITIONAL ITEMS TO BE REMOVED.
12	PREPARE ROOF FOR NEW RTU CURBS AND OPENINGS. COORDINATE EXACT LOCATIONS WITH MEP/STRUCTURAL DOCUMENTS.



3075 SW Market Street, Lee's Summit, Mo. 64063 P: 816.249.2270
(www.collinswebb.com)

MAIN STREET BUILDING IMPROVEMENTS

230 SW MAIN ST.
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REVISION DATES:



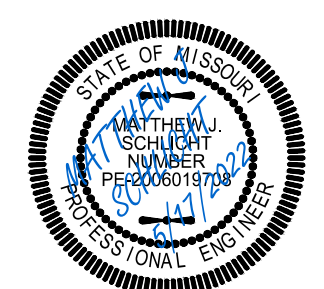
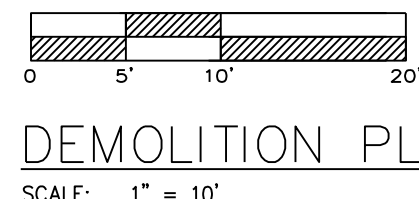
PROFESSIONAL SEAL

D101

ISSUE DATE: 21 APRIL, 2022
COLLINS WEBB #: 21121

DEMO PLANS

PERMIT DOCUMENTS



Matthew J. Schlicht
MO PE 2006015708
KS PE 19071
OK PE 23225
NE PE E-14335
REVISIONS

City Comments 5/17/2022

C.010

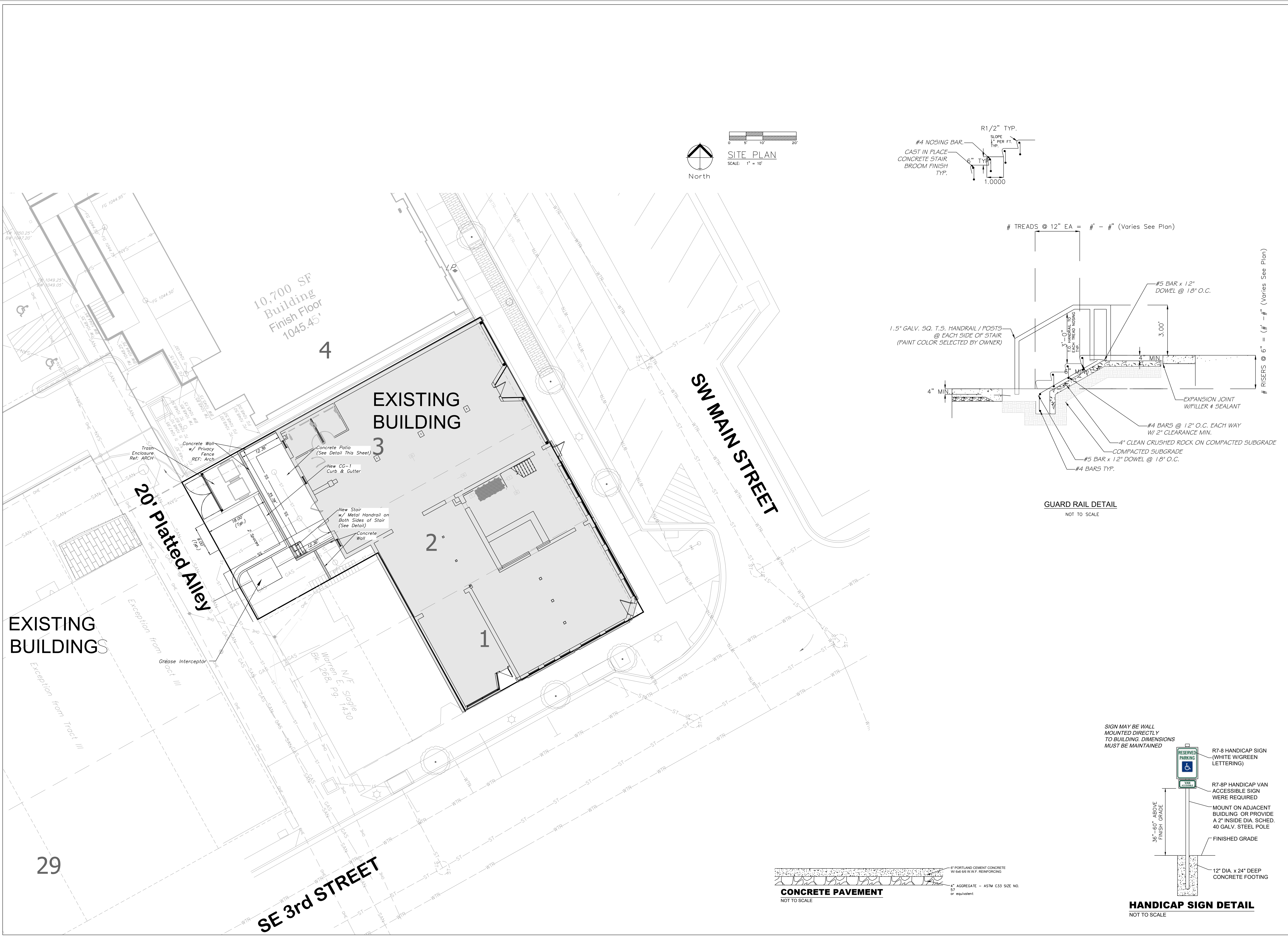
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Preliminary Development Plans
230 SW Main Street
Lee's Summit, Jackson County, Missouri

Project: 228 SW MAIN, L&NO
Issue Date: April 21, 2022

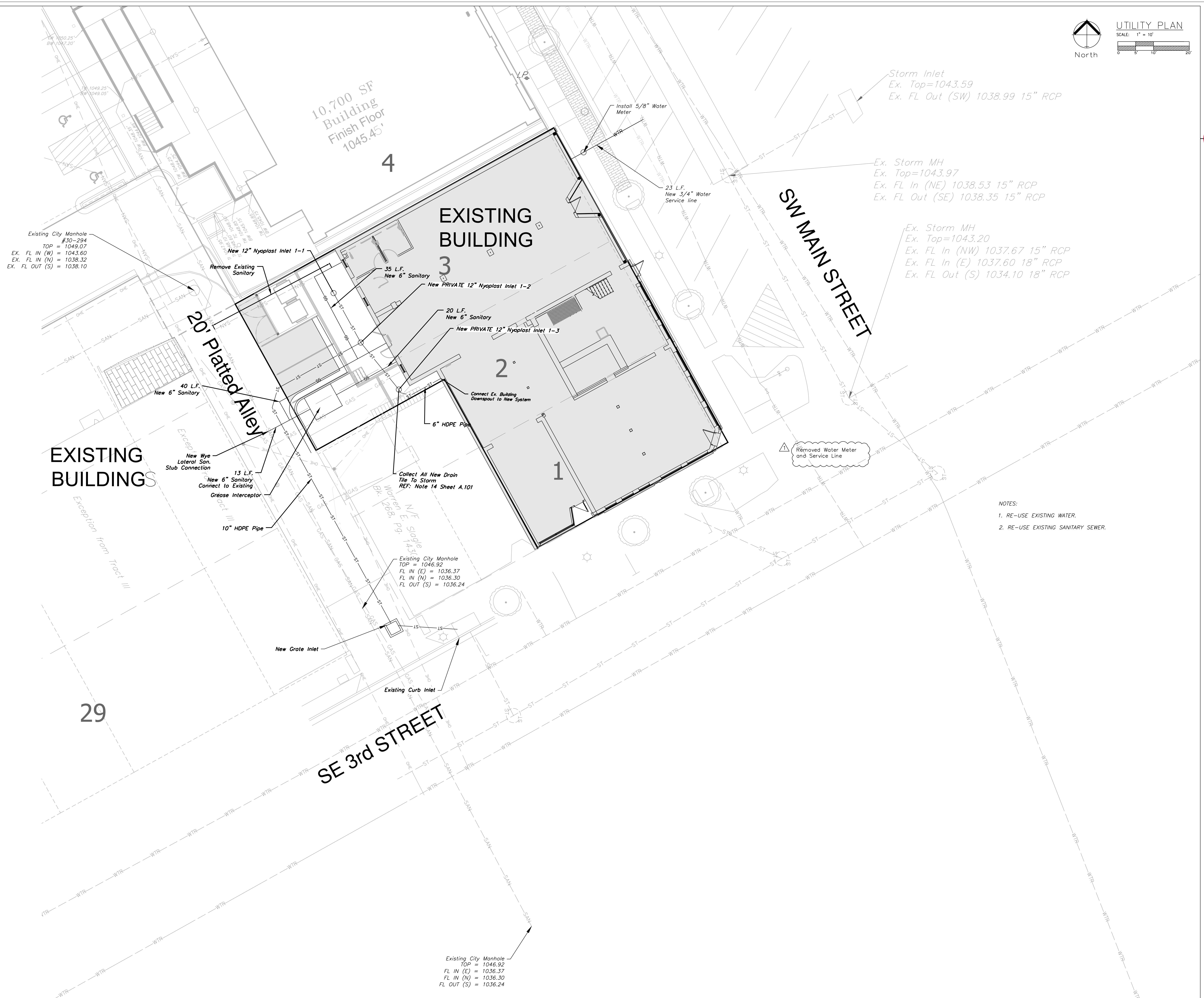
Preliminary Development Plans
230 SW Main Street
Lee's Summit, Jackson County, Missouri

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005000319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering E254
Nebraska
Engineering CA2821

ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
5010 S. 10TH STREET
LEE'S SUMMIT, MO 64082
P: 816.623.9888 F: 816.623.9849







ENGINEERING SOLUTIONS

ENGINEERING & SURVEYING

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 200500319-D
Kansas
Engineering E-1685
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

Project: 228 SW MAIN, L&NO
Issue Date: April 21, 2022

Preliminary Development Plans
230 SW Main Street
Lee's Summit, Jackson County, Missouri

Utility Plan
Preliminary Development Plans
230 SW Main Street
Lee's Summit, Jackson County, Missouri

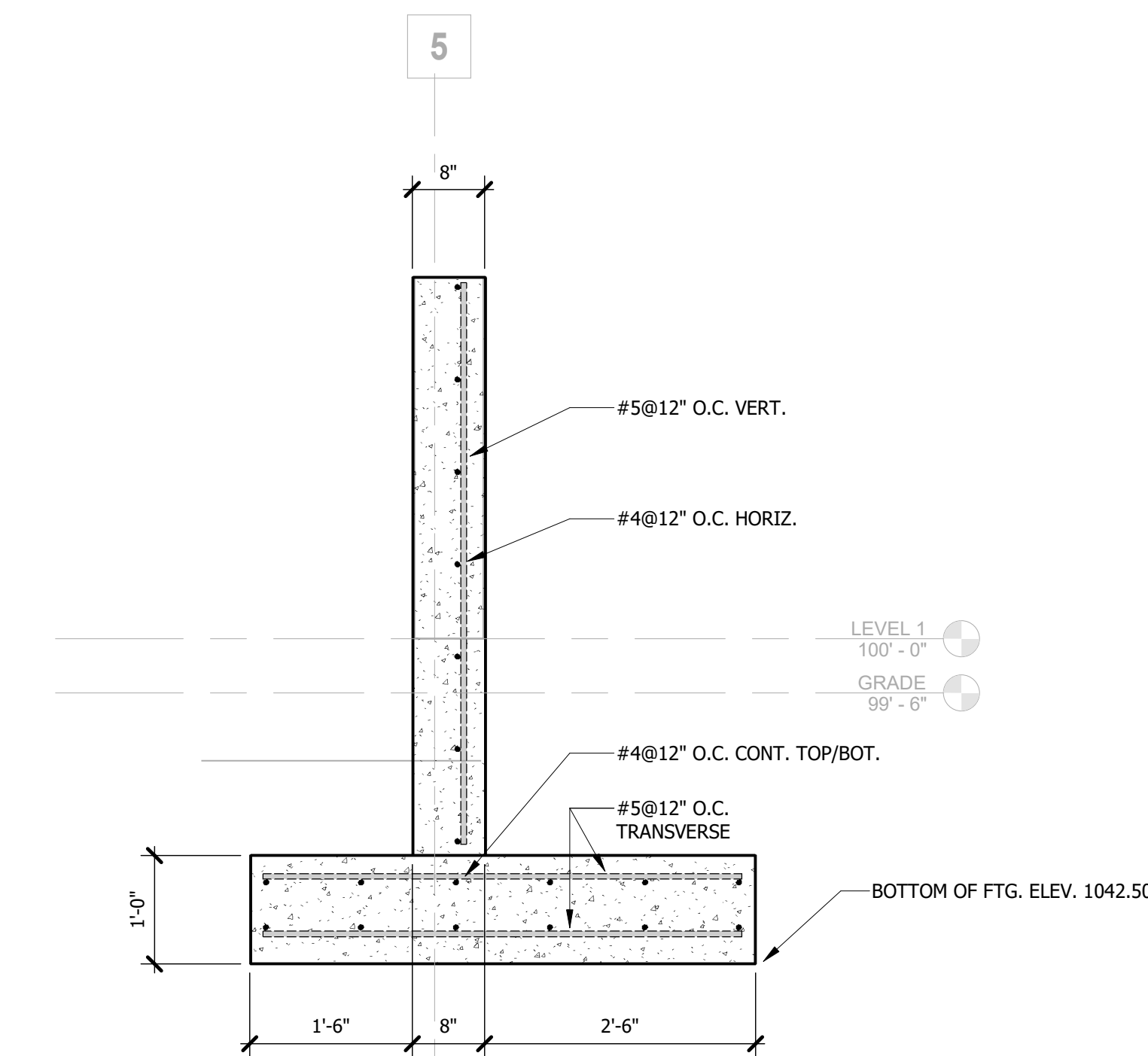
Matthew J. Schlicht
MO PE 2006015708
KS PE 19071
OK PE 23225
NE PE E-14335

REVISIONS

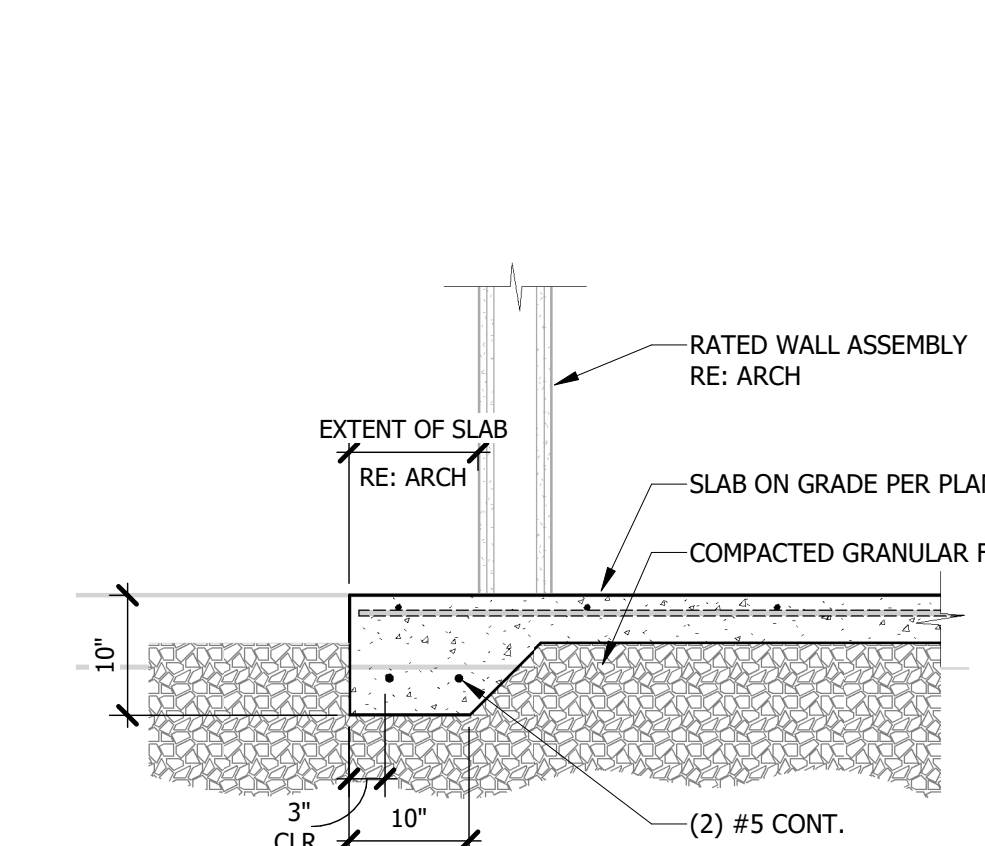
City Comments 5/17/2022

C. 300

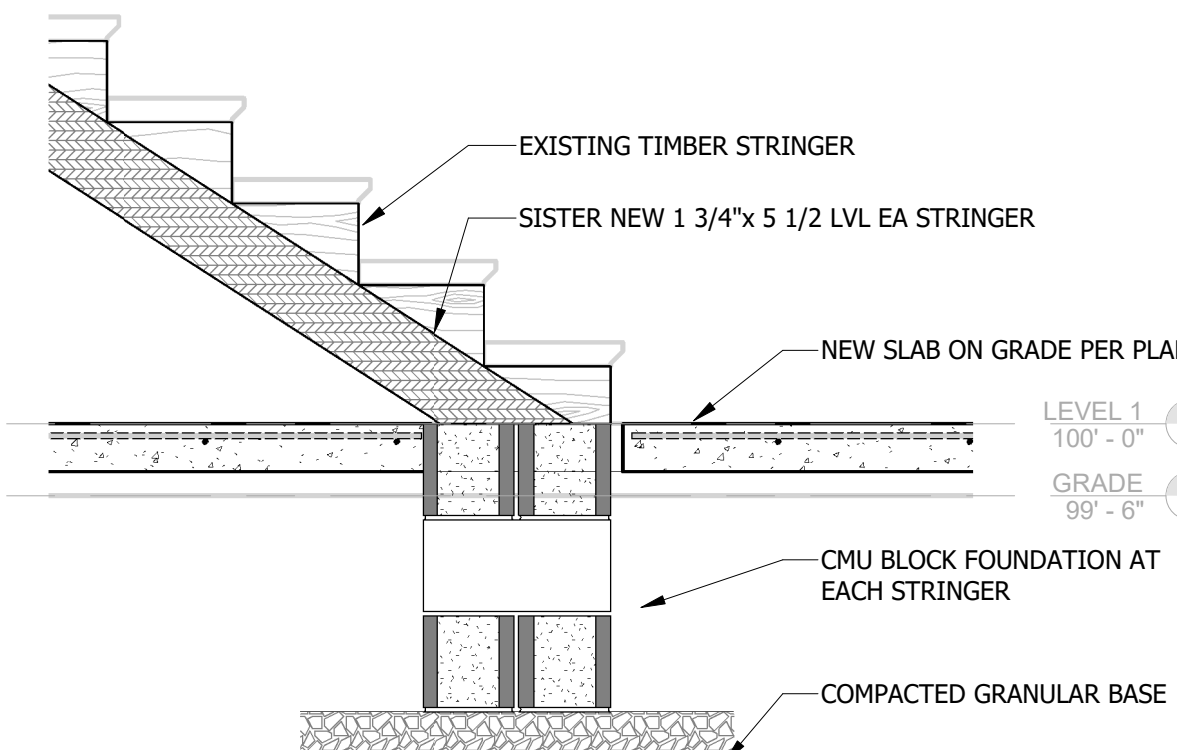
14. **STRUCTURAL STEEL**
- A. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, LATEST USABLE EDITION AND AISC CODE OF STANDARD PRACTICE.
- B. STRUCTURAL STEEL FOR WIDE FLANGE SHALL BE A992 GRADE 50 UNLESS NOTED OTHERWISE. ALL ANGLES, PLATES, AND BOLTS SHALL BE A36 UNLESS NOTED OTHERWISE.
- C. ALL RECTANGULAR AND ROUND HSS SHAPES SHALL BE ASTM A500, GRADE B.
- D. ALL BOLTS SHALL BE 3/4" Ø A-325 BOLTS WITH HEAVY HEX HEADS UNLESS NOTED OTHERWISE. CONNECTIONS SHALL BE 3/4" Ø A-325 BOLTS WITH 3/4" Ø WASHERS AND NUTS, TYPE CONNECTION ONLY.
- E. STRUCTURAL STEEL WELDS IN THE SHOP OR IN THE FIELD SHALL BE PERFORMED BY A QUALIFIED WELDER AND SHALL CONFORM TO THE CURRENT REQUIREMENTS OF A.W.S.
- F. SHOP WELDED AND FIELD BOLTED CONNECTIONS ARE PREFERRED UNLESS NOTED OTHERWISE.
- G. THE CONTRACTOR SHALL PROVIDE SHEET PILES, GLASS SPANGLES, LINTELS, AND OTHER MISC. STEEL AS SHOWN ON THESE DRAWINGS AS REQUIRED TO PROVIDE SUPPORT (STABILIZATION) AGAINST THE BUILDING. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL MISC. STEEL DETAILS.



8 RETAINING WALL
3/4" = 1'-0"



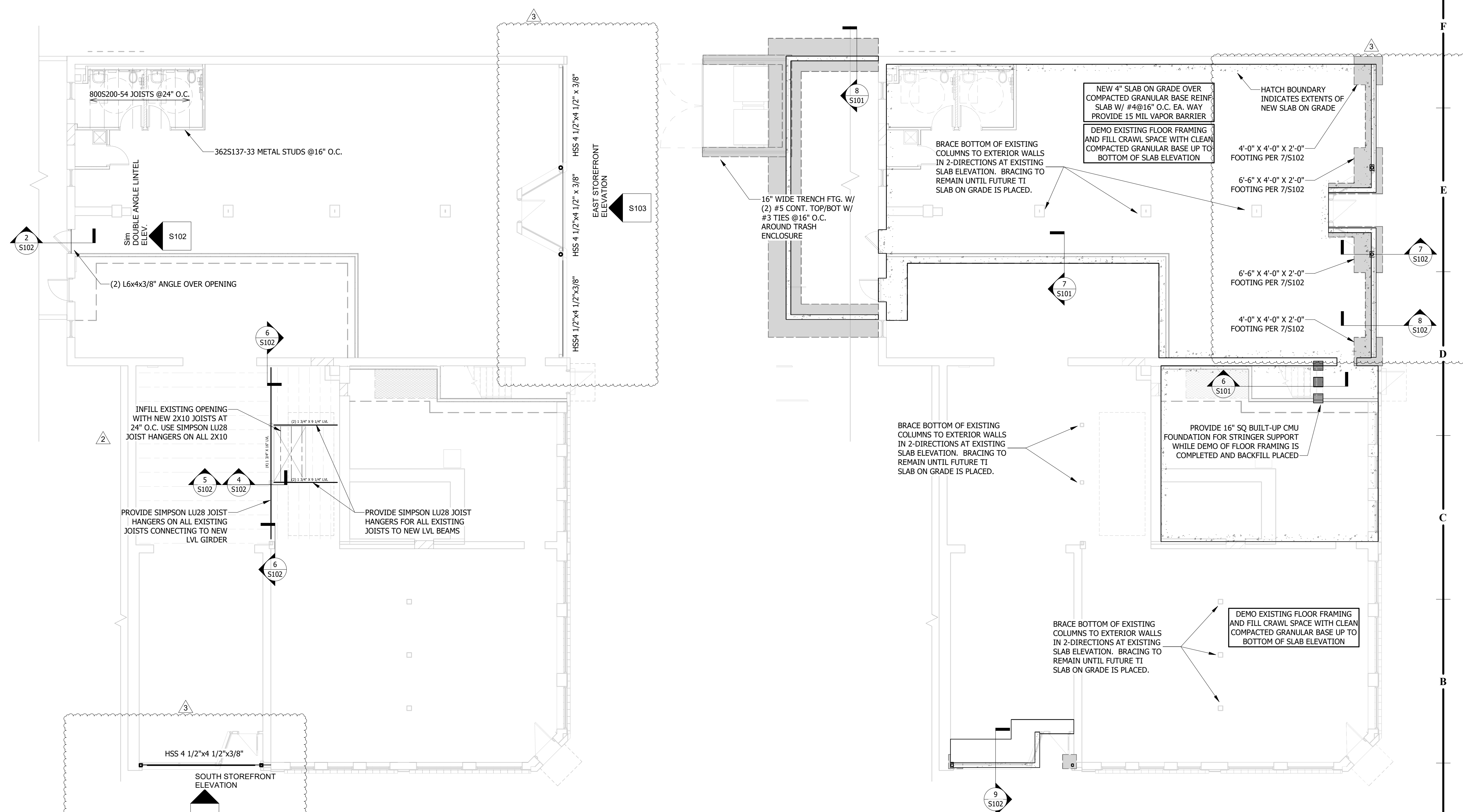
7 SLAB EDGE
3/4" = 1'-0"



6 EGRESS STAIR FRAMING

FOUNDATION PLAN NOTES:

1. TOP OF CONCRETE SLAB ELEVATION = 90'-0".
2. 4" SLAB ON GRADE REINFORCED WITH 6x6 W2x9x2.9 OVER 4" GRANULAR FILL AND 10 MIL VAPOR BARRIER, UNLESS NOTED OTHERWISE.
3. SLAB CONTROL AND CONSTRUCTION JOINTS PER DETAIL A5/S301. CONSTRUCTION JOINTS MAY BE SUBSTITUTED FOR CONTROL JOINTS AT THE CONTRACTOR'S DISCRETION.
4. ISOLATION JOINTS PER DETAIL A12/S301.
5. FOOTING STEPS PER DETAIL E1/S301.
6. #4x5' 0" LONG AT ALL RE-ENTRANT CORNERS.
7. CONTRACTOR TO COORDINATE ALL FLOOR AND SLAB PENETRATIONS WITH ALL OTHER DISCIPLINES.
8. DURING INSTALLATION OF ALL POST CONSTRUCTION ANCHORS, CARE MUST BE TAKEN TO AVOID ALL REINFORCING.
9. REFER TO ARCHITECTURAL FOR NON-LOAD BEARING WALL LOCATIONS.
10. REFER TO ARCHITECTURAL FOR ALL DIMENSIONS NOT SHOWN ON THESE DRAWINGS.
11. ALL JACK STEPS TO BE CARRIED DOWN TO FOUNDATION LEVEL.
12. SHEAR WALL W/UDOWN PER DETAIL K16/S201.
13. REFER TO SHEET S201 FOR SHEAR WALL INFORMATION.
14. ALL SILL ANCHORS TO BE 1/2" DIA. SIMPSON TITEN HD @32" WITH 3 1/2" EMBEDMENT.

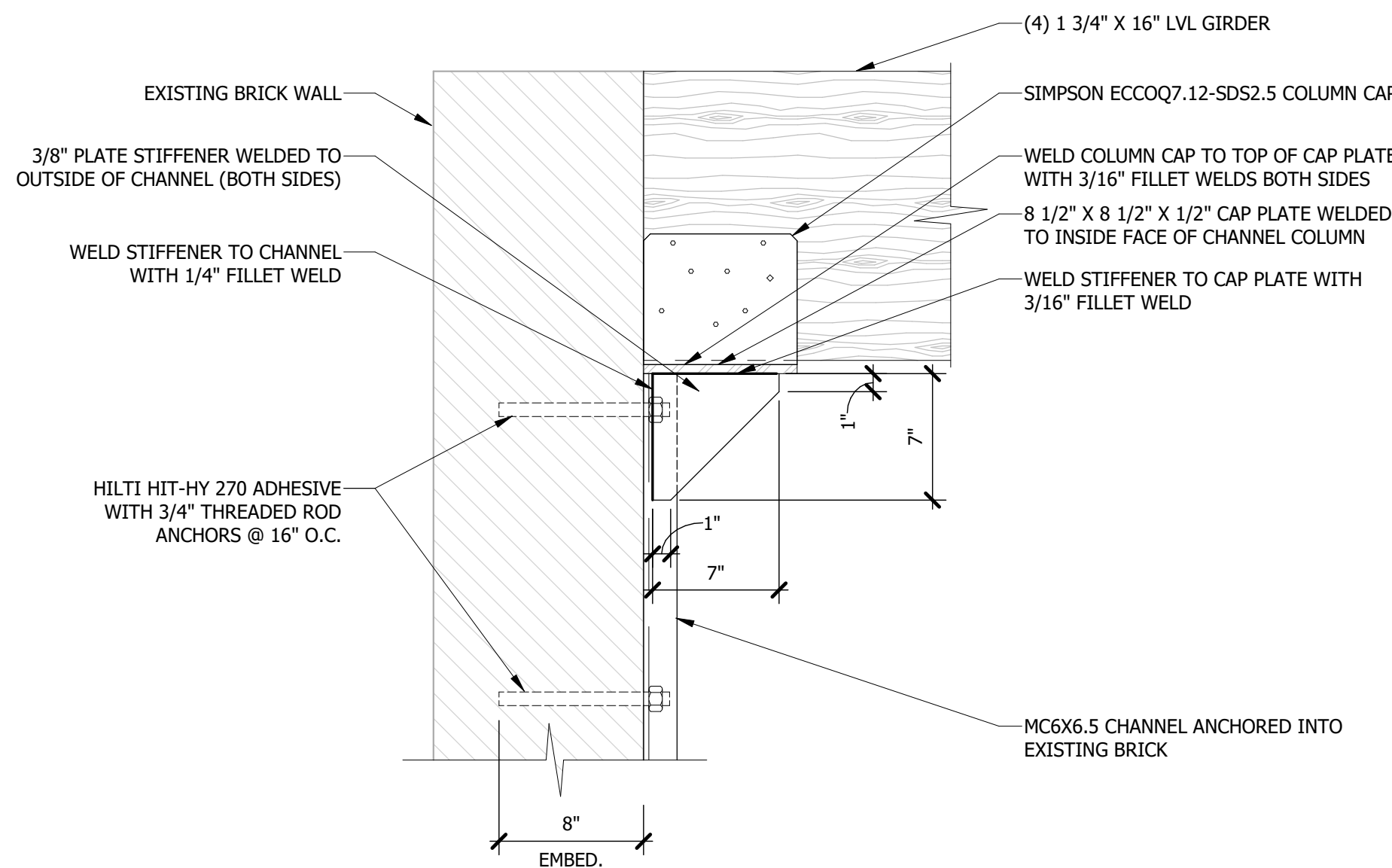


9 2ND FLOOR PLAN
1/8" = 1'-0"

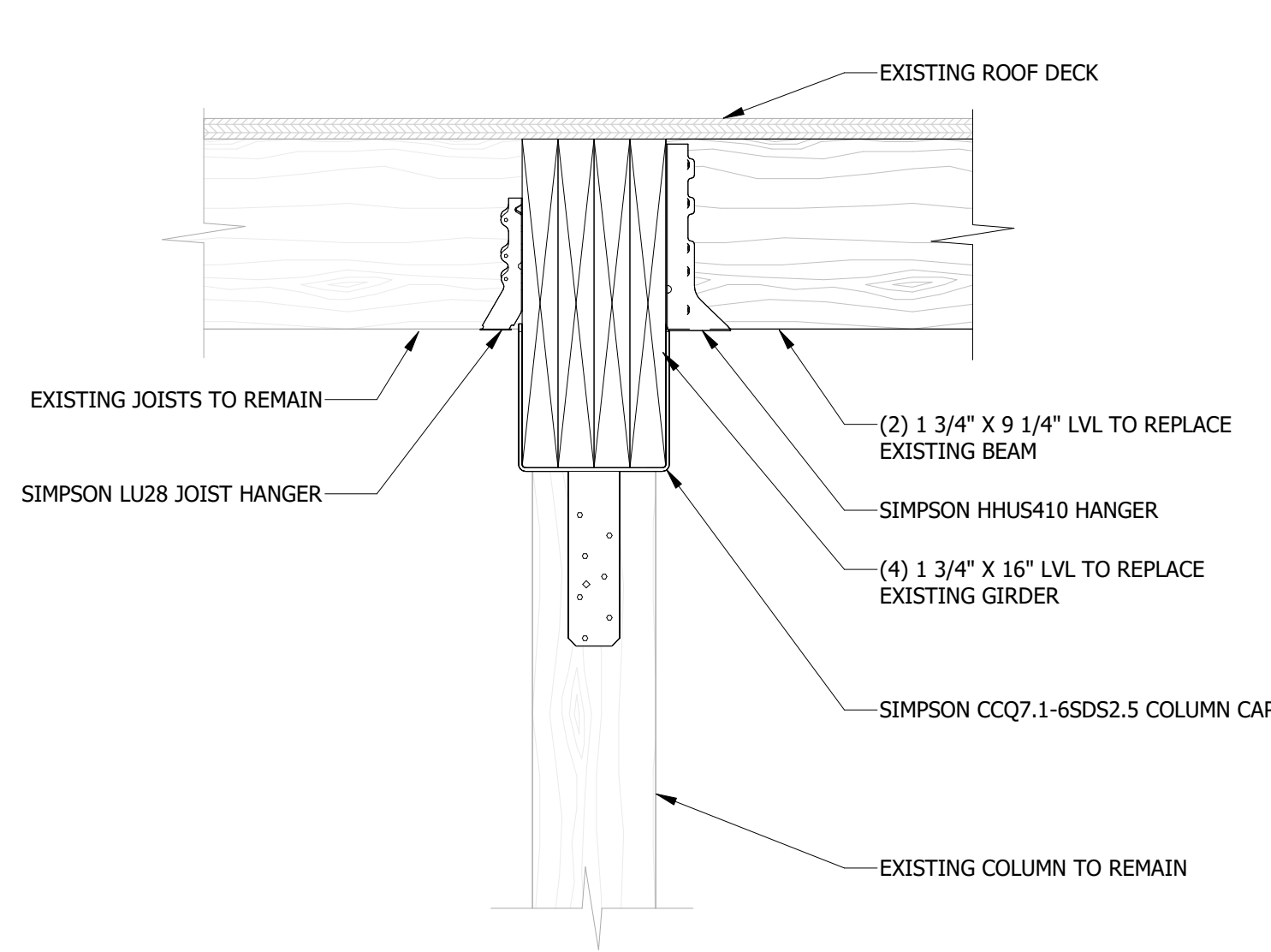
1 LEVEL 1 FLOOR PLAN
1/8" = 1'-0"

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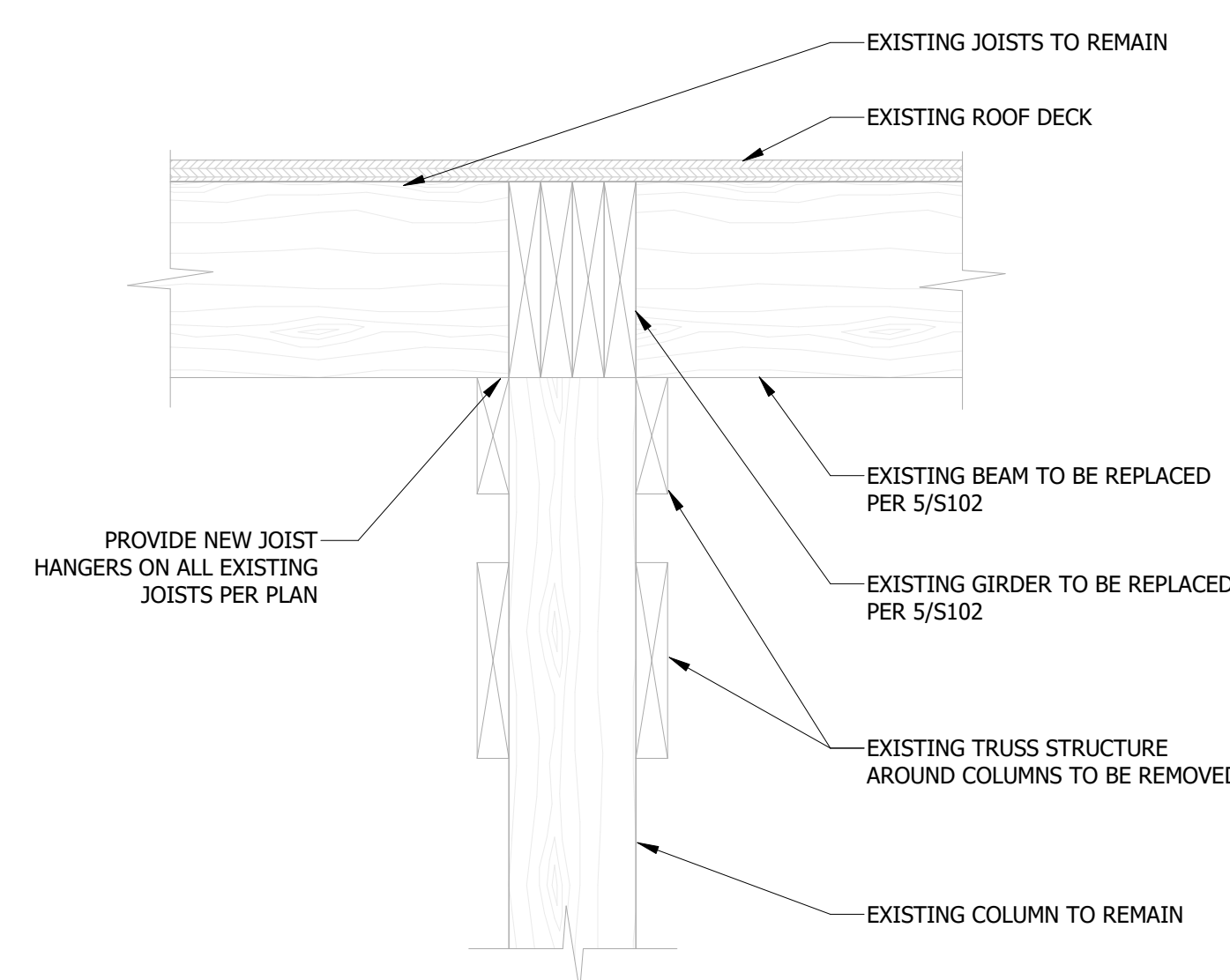
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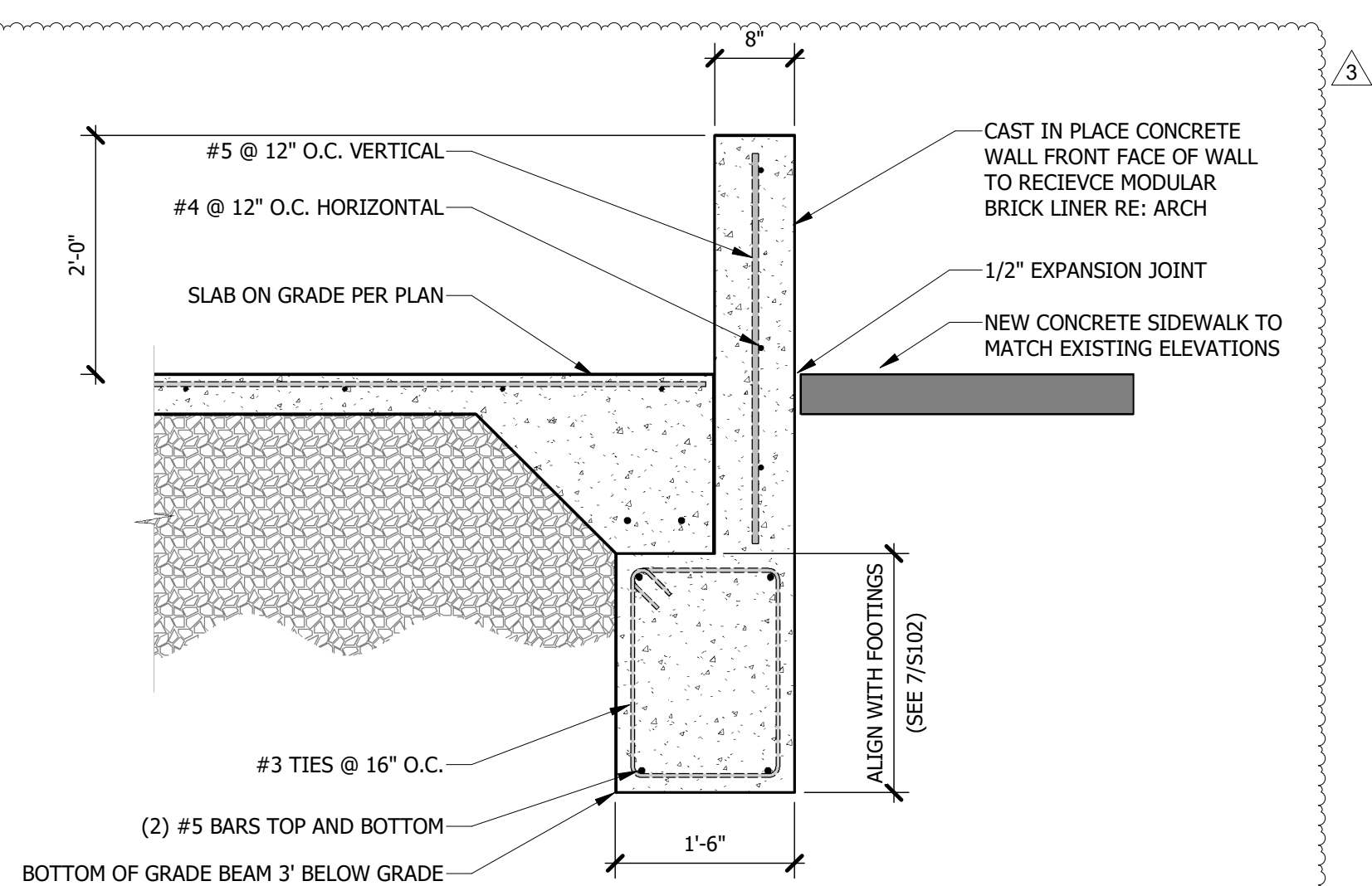
6 LVL GIRDER TO EXISTING BRICK
1 1/2" = 1'-0"



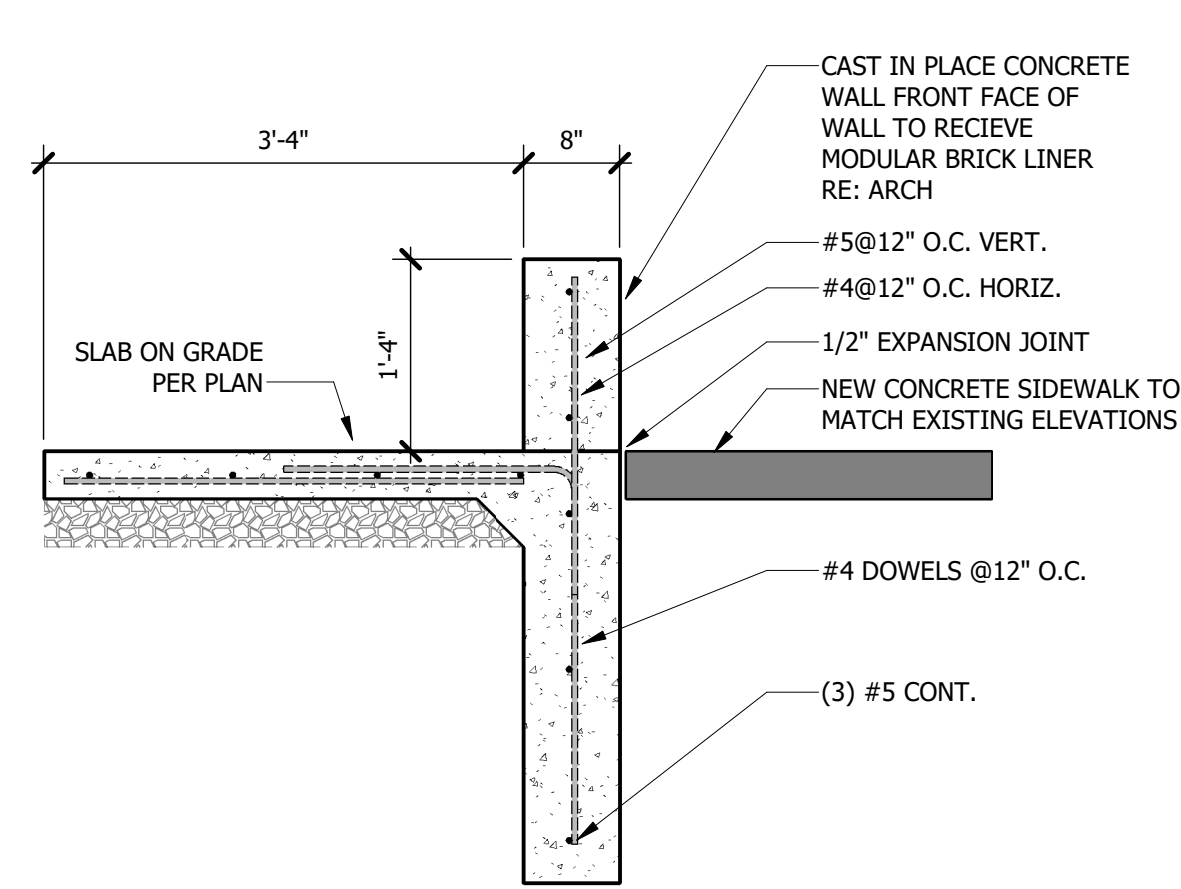
5 REPLACEMENT ROOF SUPPORT
1 1/2" = 1'-0"



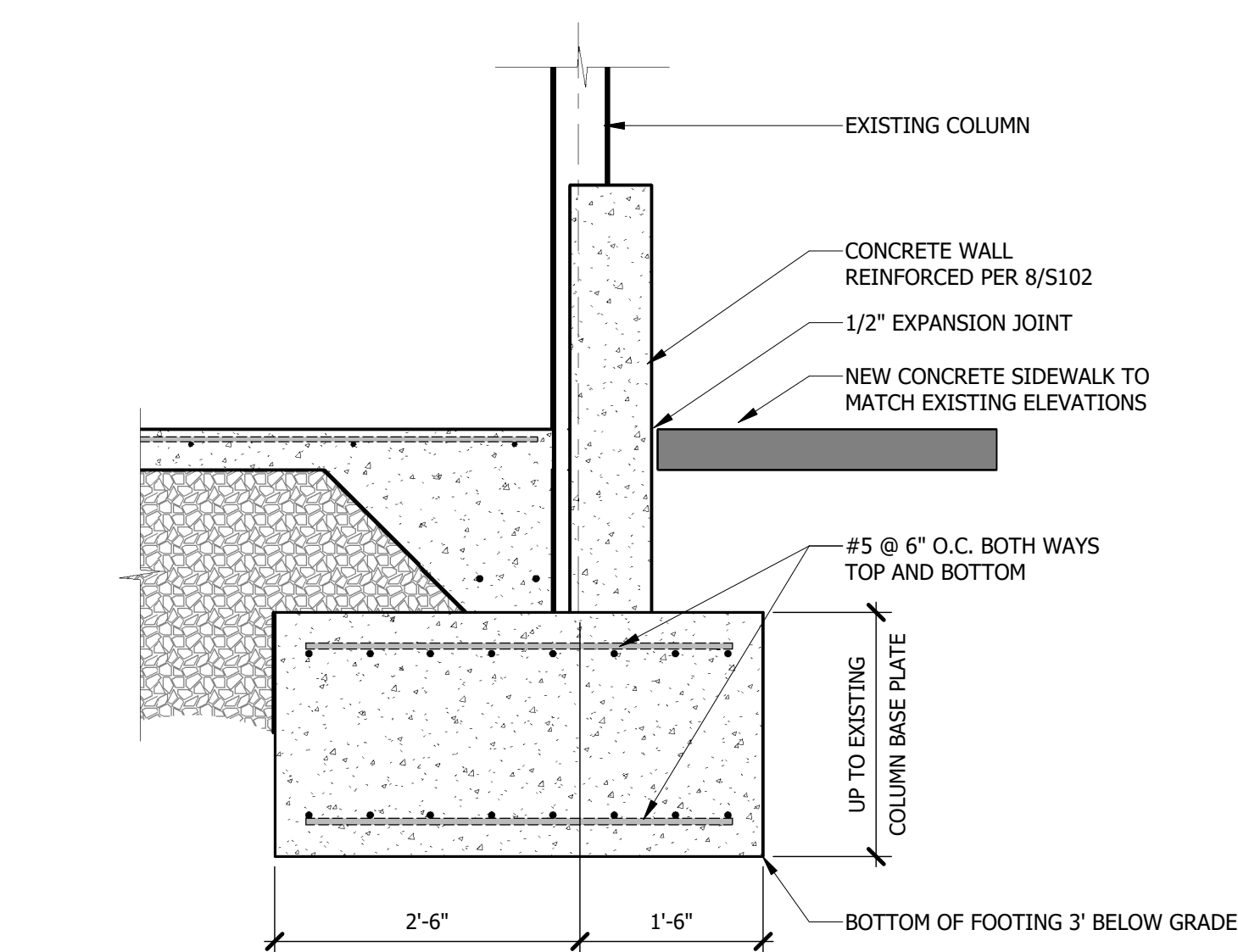
4 EXISTING ROOF SUPPORT
1 1/2" = 1'-0"



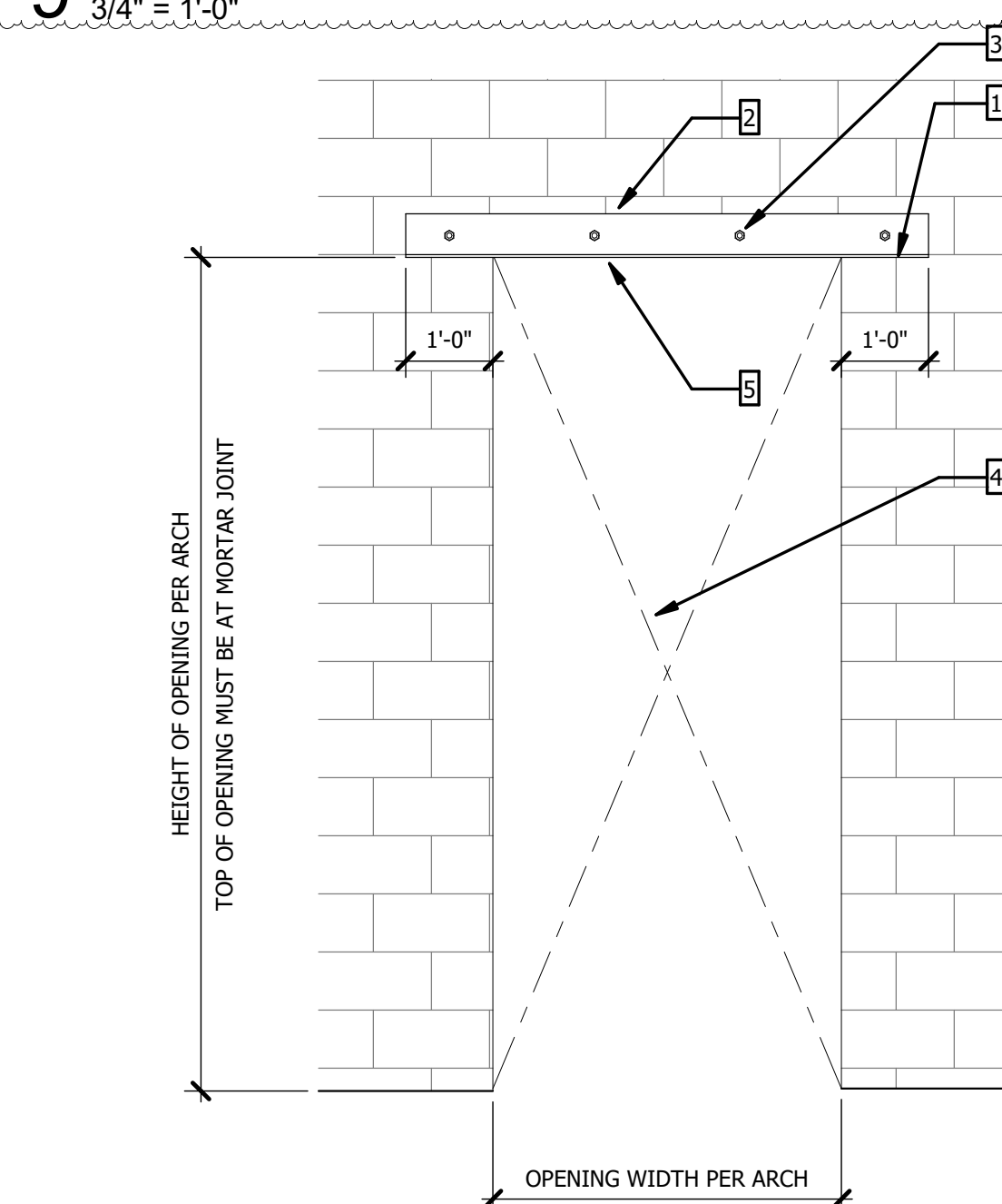
8 EAST STOREFRONT GRADE BEAM (TYP.)
3/4" = 1'-0"



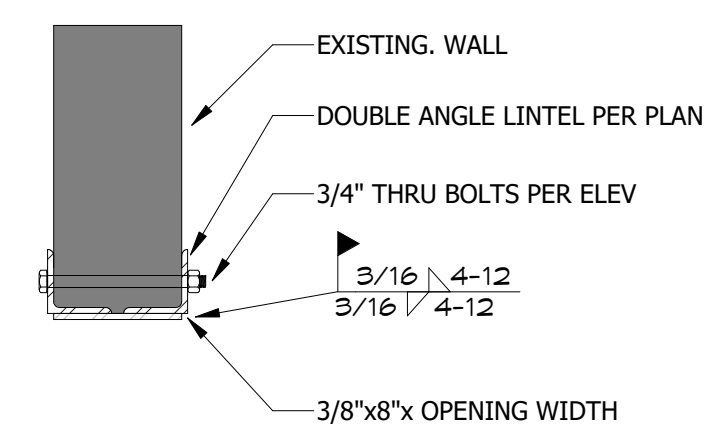
9 SOUTH STOREFRONT FOUNDATION
3/4" = 1'-0"



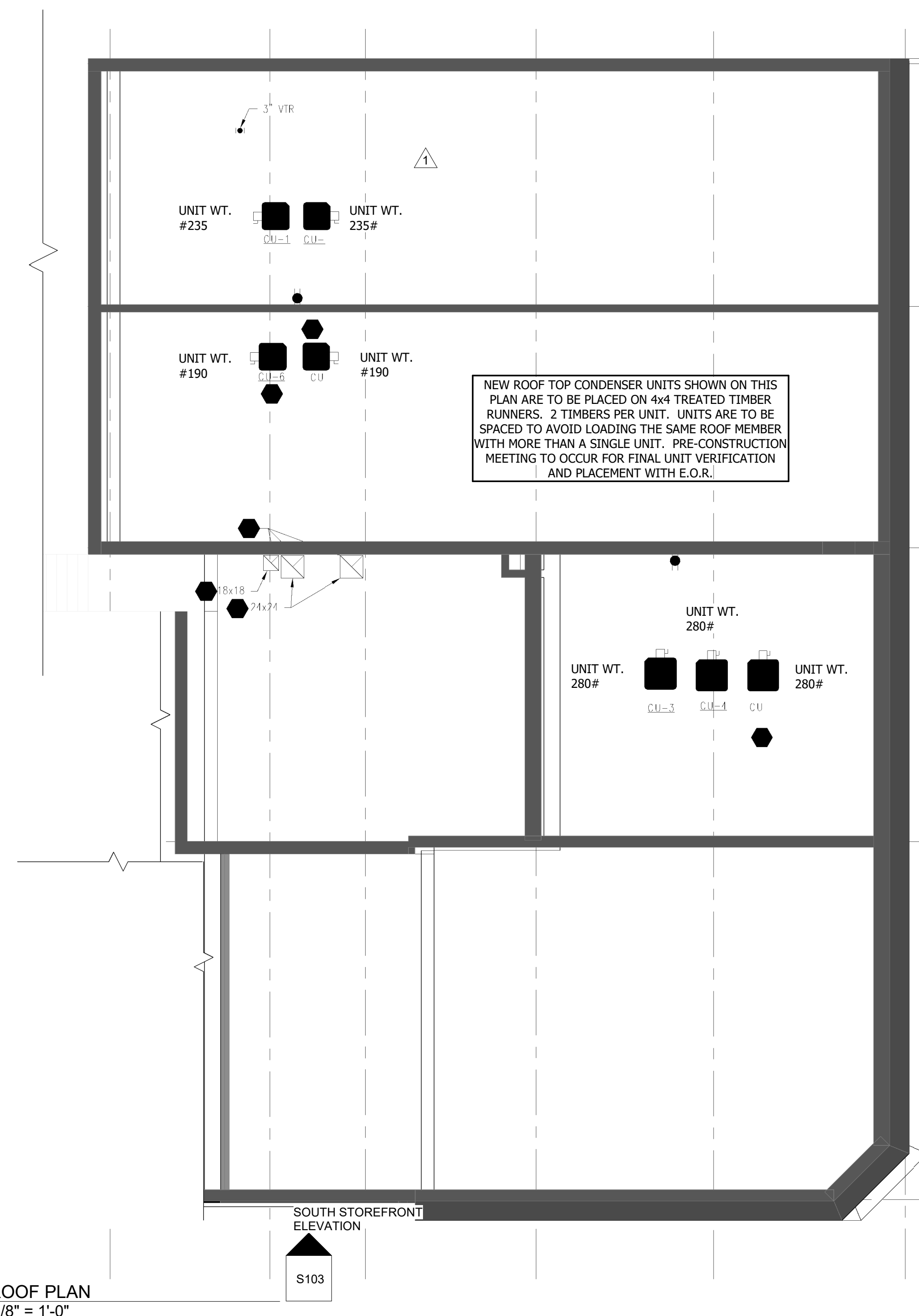
7 EAST STOREFRONT FOOTINGS FOR EXISTING COLUMNS (TYP.)
3/4" = 1'-0"



- 3** DOUBLE ANGLE LINTEL ELEV.
1/2" = 1'-0"
- INSTALL SEQUENCE
1. SAW-CUT EXISTING MORTAR JOINT AT OPENING HEIGHT FULL WIDTH OF OPENING PLUS 1'-0" EITHER SIDE
 2. INSTALL ANGLES BOTH SIDES OF OPENING
 3. INSTALL THRU-BOLTS FOR LENGTH OF LINTEL. TIGHTEN ALL NUTS AND WASHERS
 4. INTERIOR MASONRY REMOVED FROM OPENING
 5. WELD PLATE TO UNDERSIDE OF LINTEL



2 DOUBLE ANGLE LINTEL
1" = 1'-0"



1 ROOF PLAN
1/8" = 1'-0"

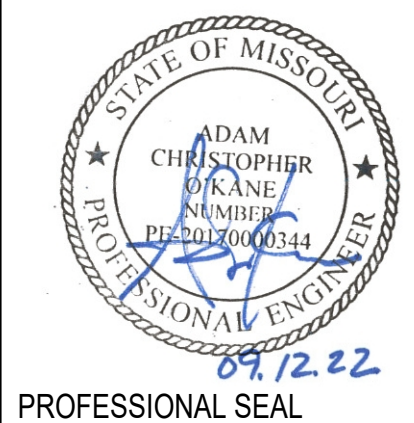
MAIN STREET LANDLORD IMPROVEMENTS

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REVISION DATES:

- | | | |
|---|-----------------|---------|
| 1 | City Comments | 5/17/22 |
| 2 | Revision 2 | 6/12/22 |
| 3 | Owner Revisions | 9/12/22 |

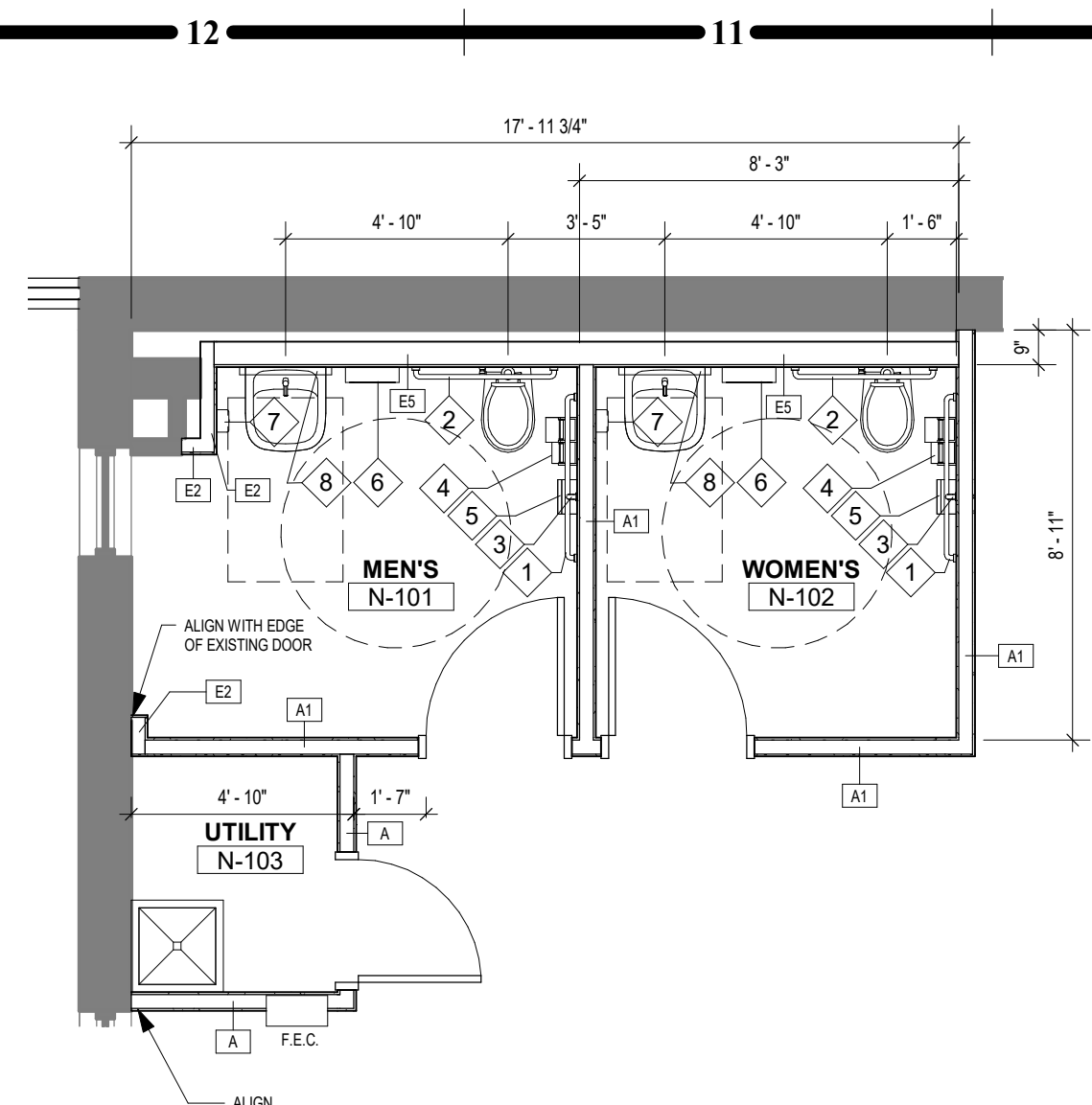


S102
ISSUE DATE: APRIL 21, 2022
COLLINS WEBB #: 21121

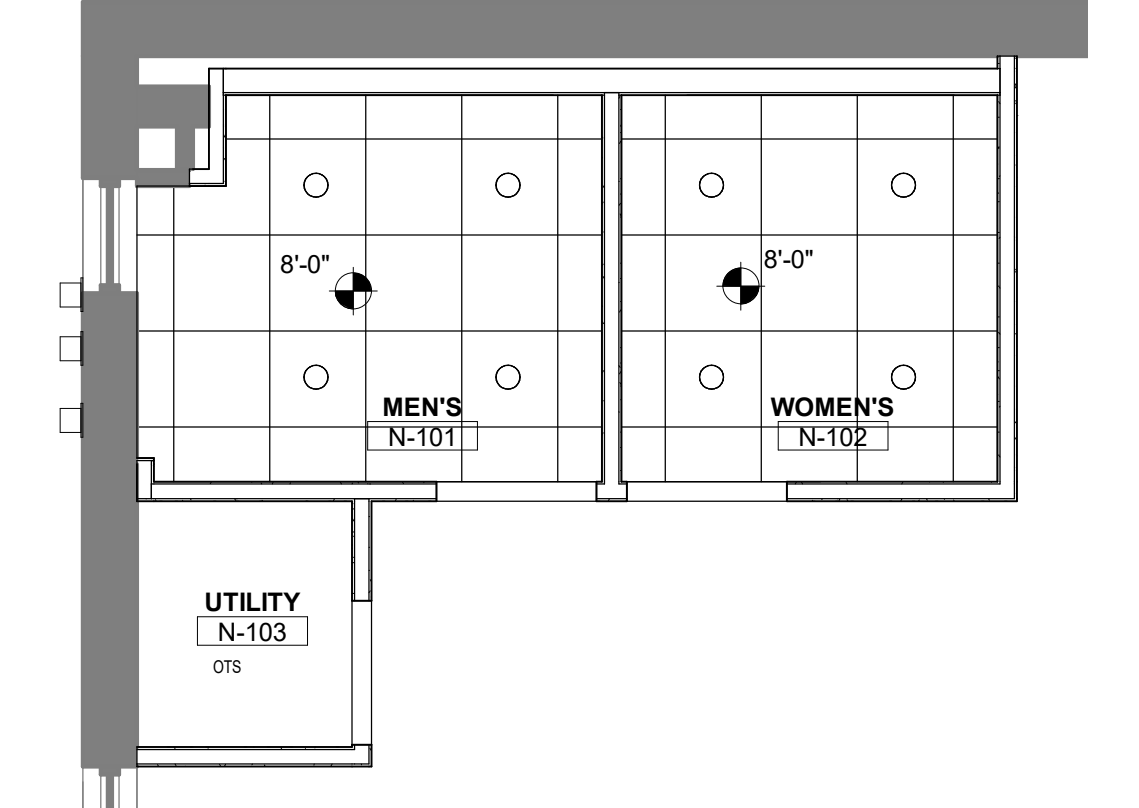
STRUCTURAL PLANS AND SECTIONS

PERMIT SET

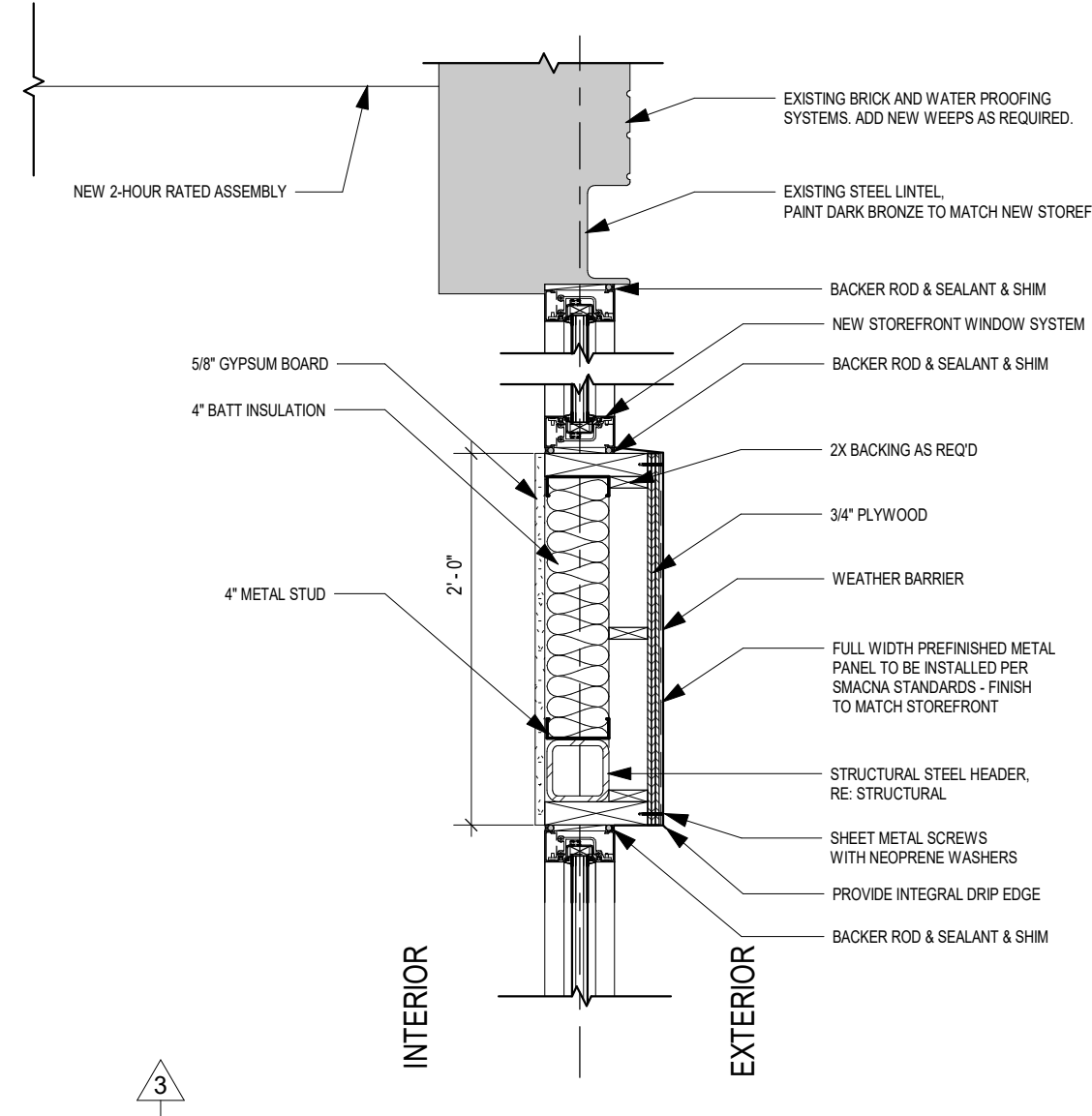
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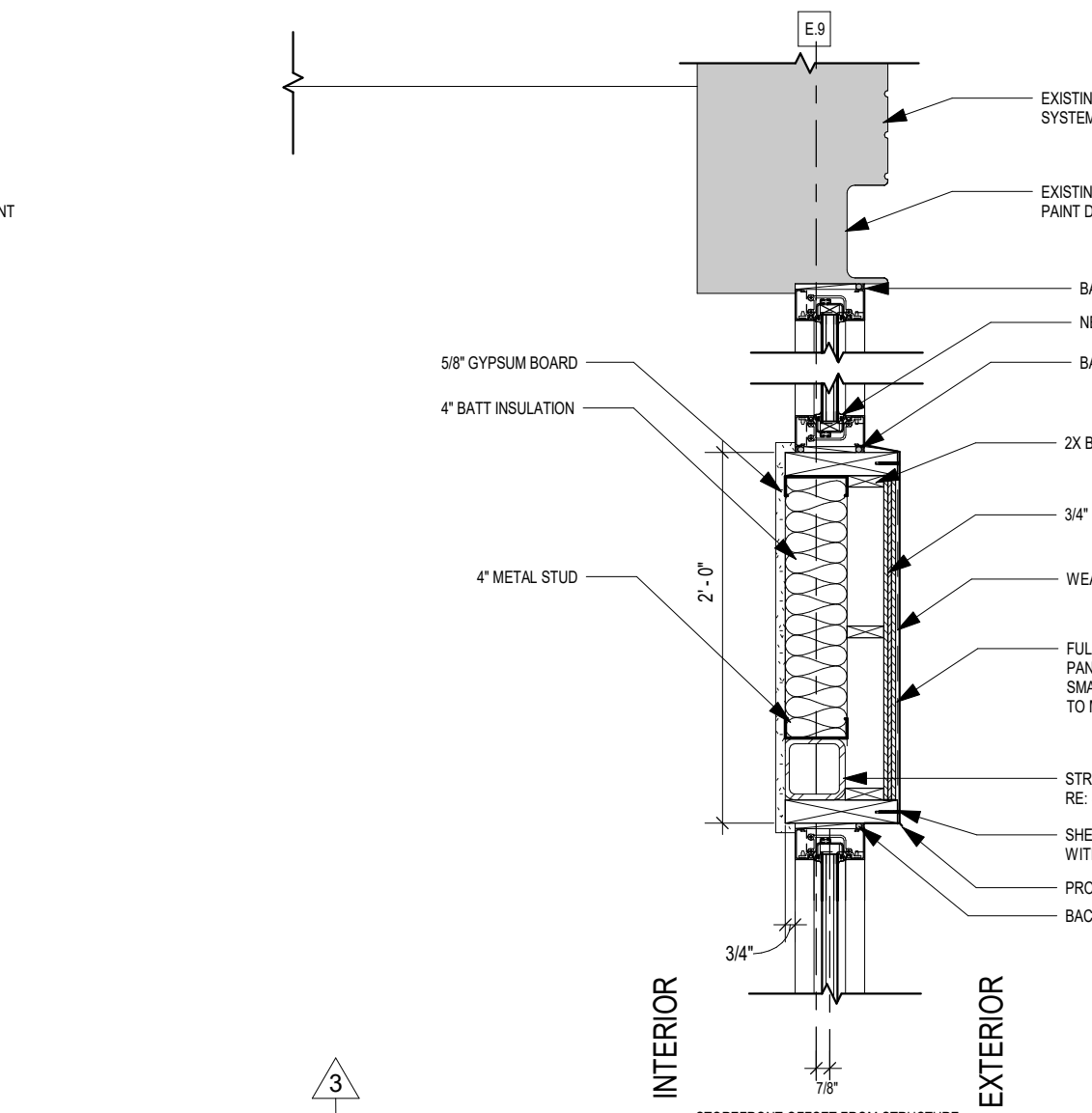
H12 ENLARGED PLAN - 1ST FLOOR
1/4" = 1'-0"



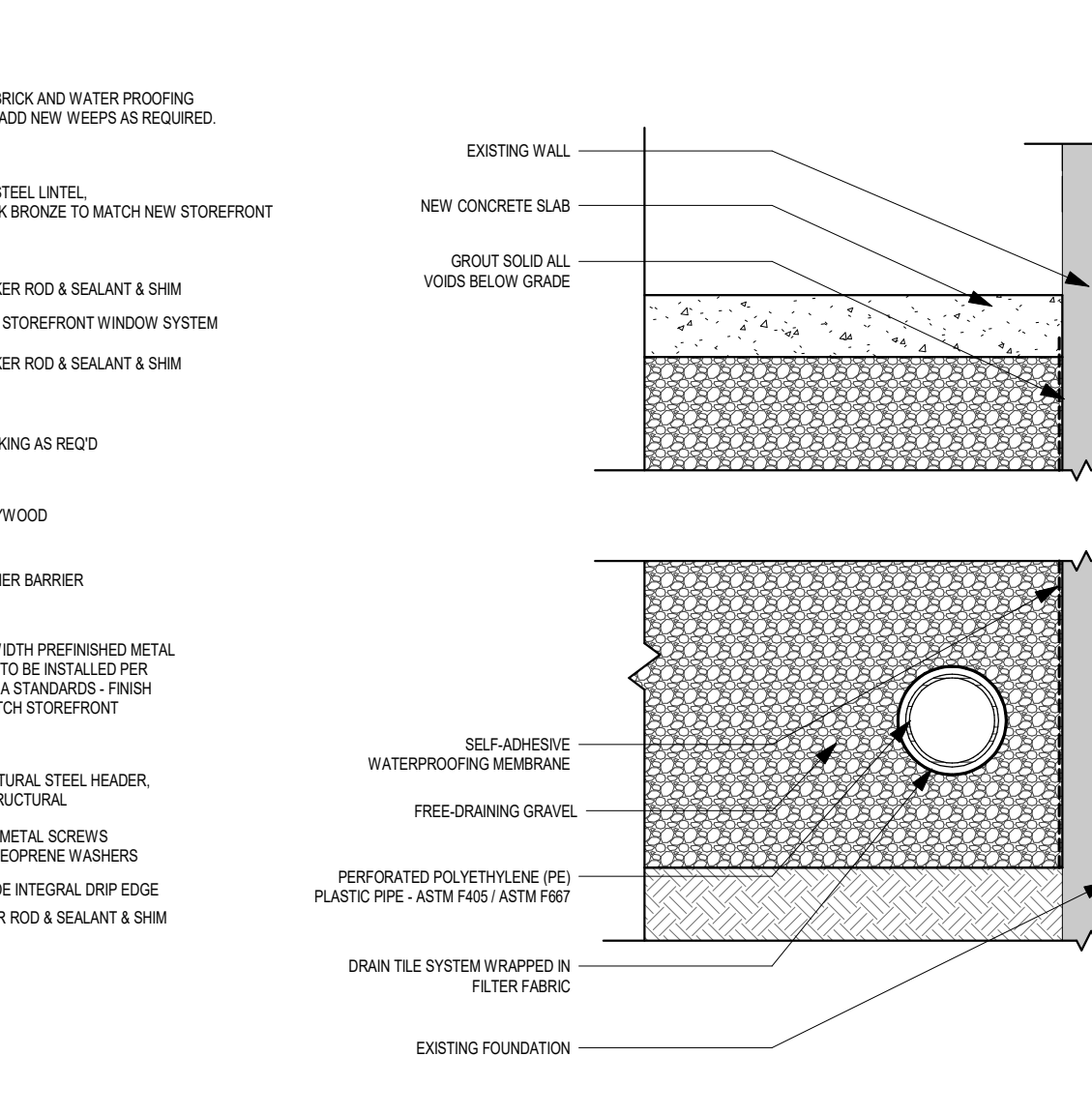
F12 RCP - 1ST FLOOR
1/4" = 1'-0"



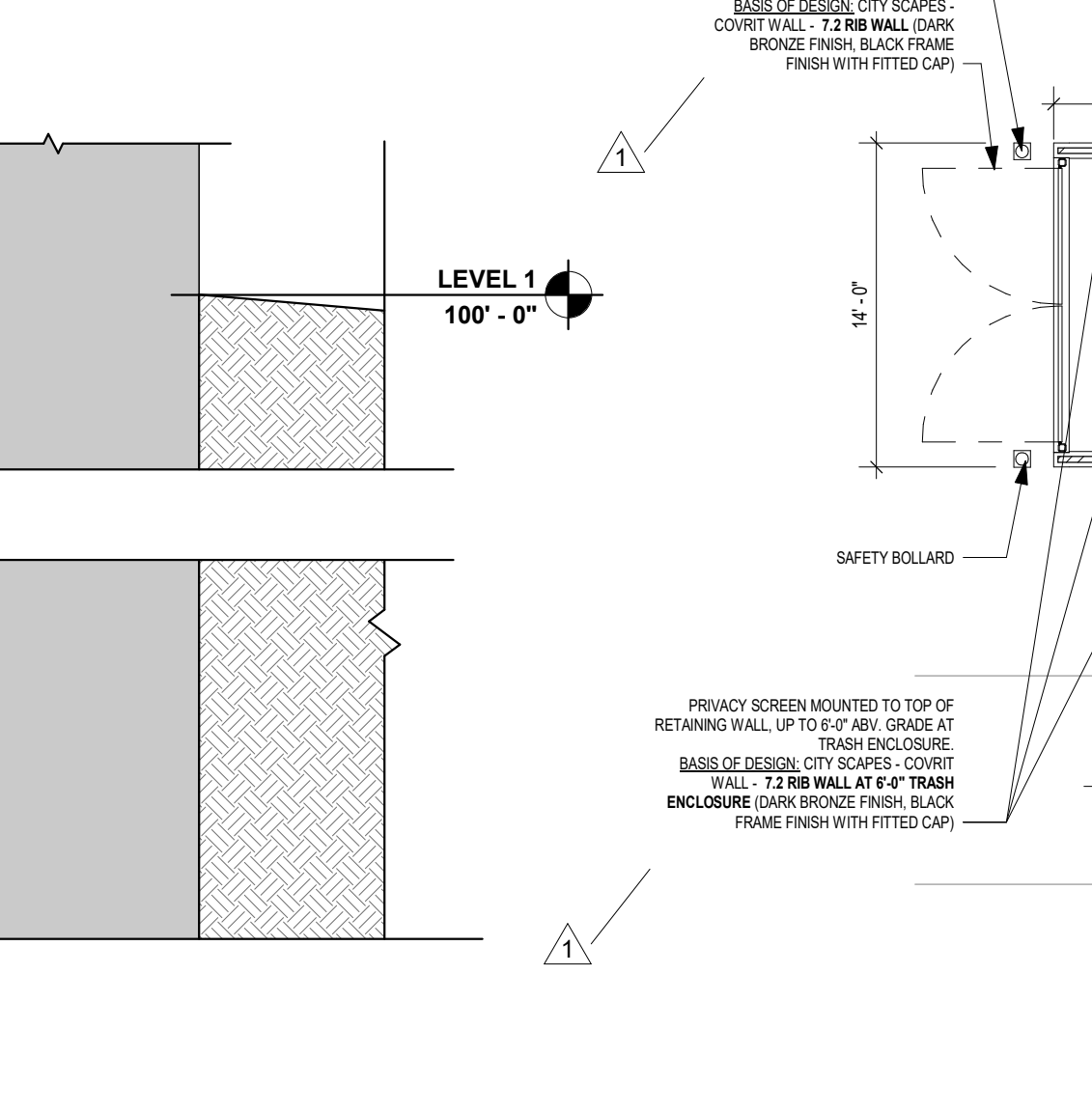
F10 SECTION DETAIL - NEW STOREFRONT - SOUTH
1" = 1'-0"



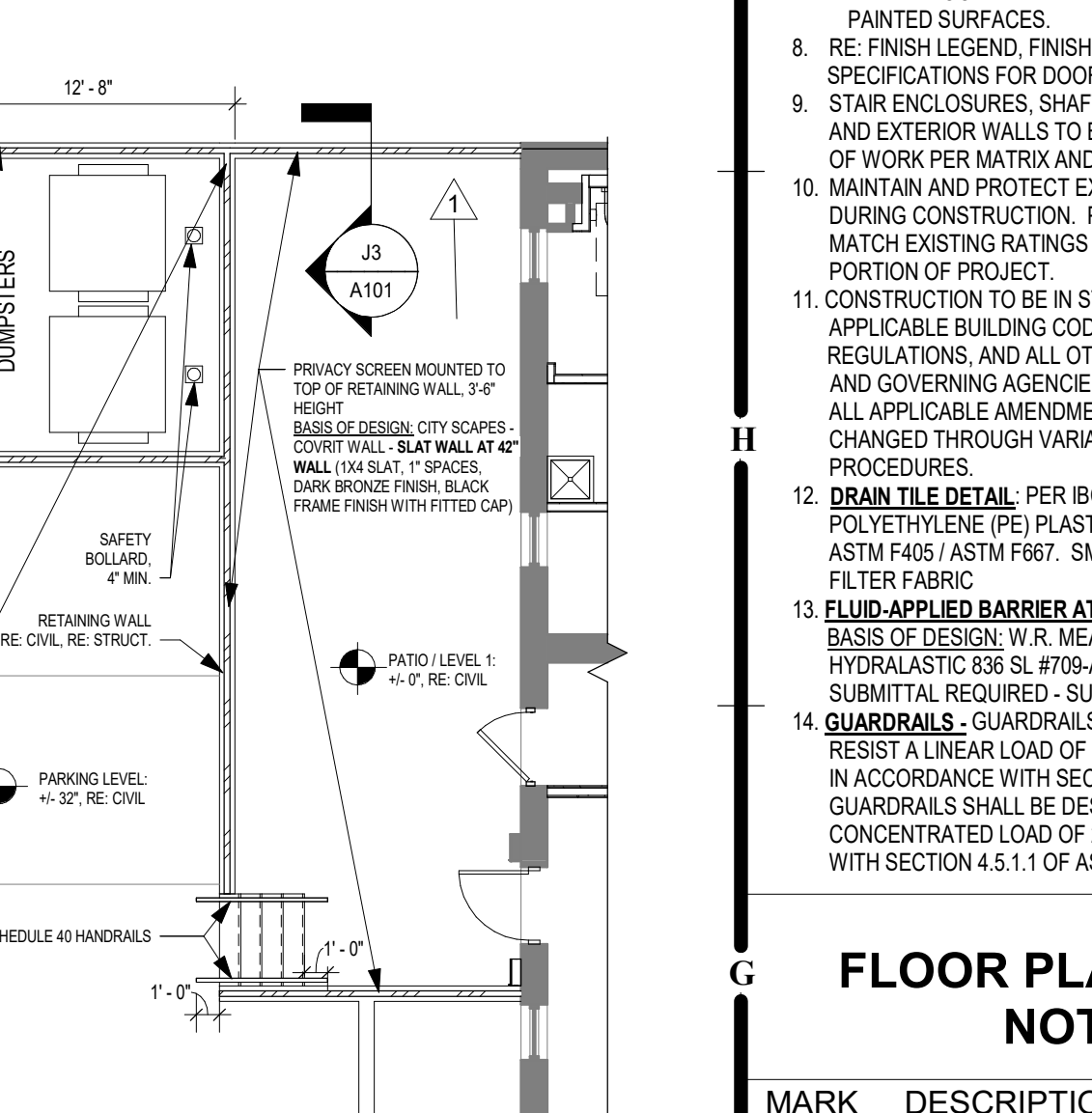
F8 SECTION DETAIL - NEW STOREFRONT - EAST
1" = 1'-0"



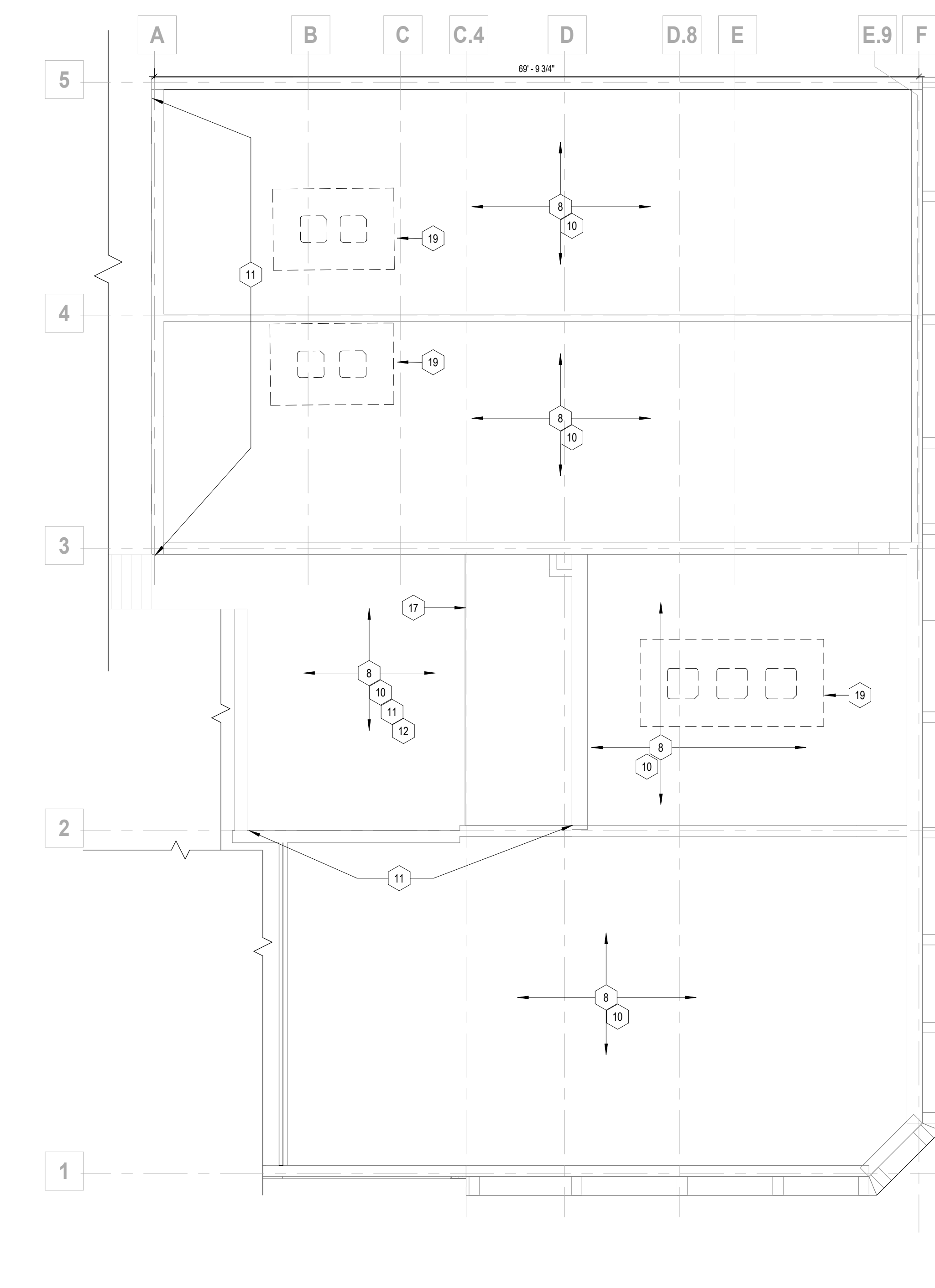
F5 SECTION DETAIL - DRAIN TILE SYSTEM
1" = 1'-0"



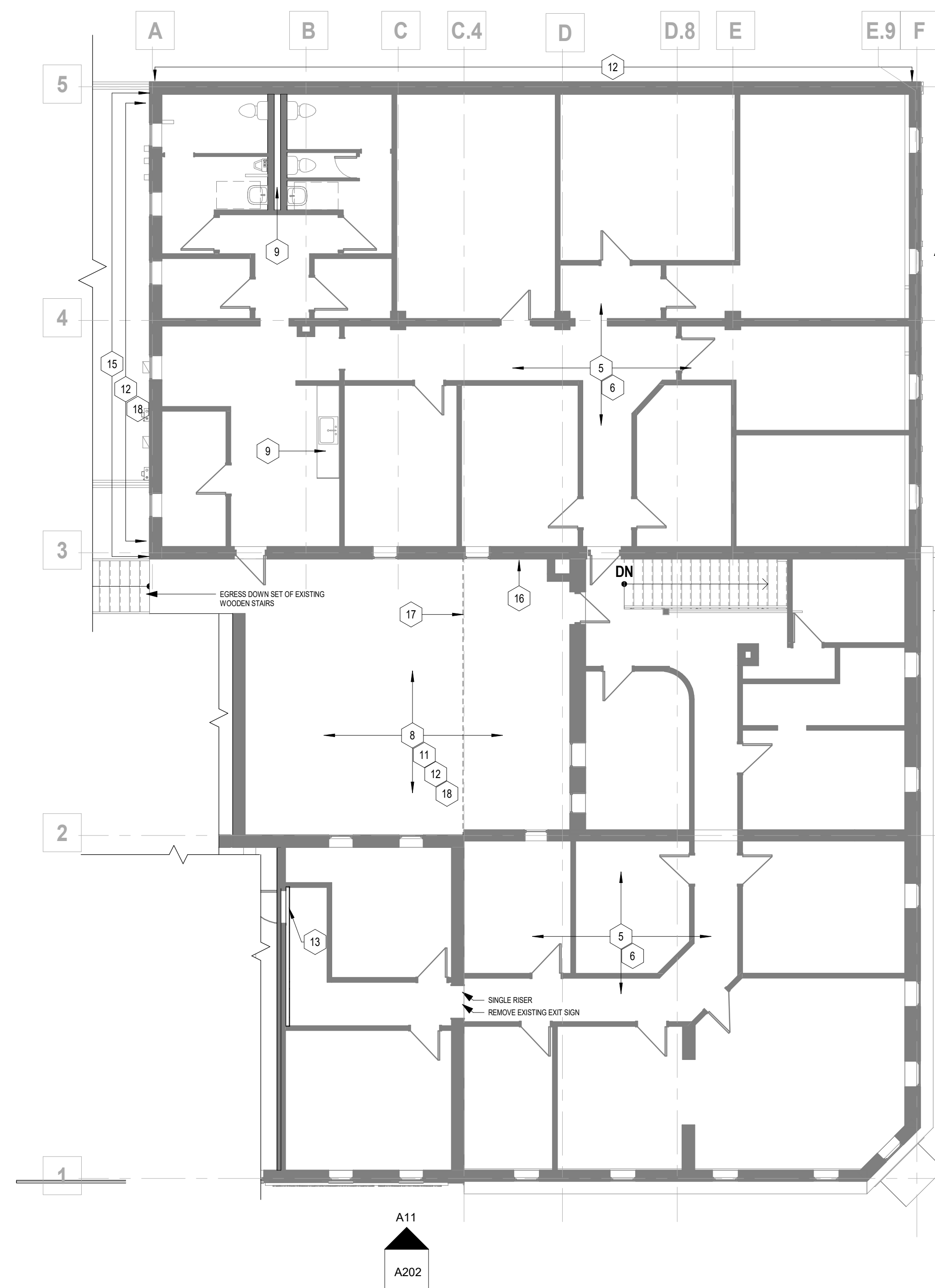
F3 ENLARGED PLAN - TRASH ENCLOSURE
1/8" = 1'-0"



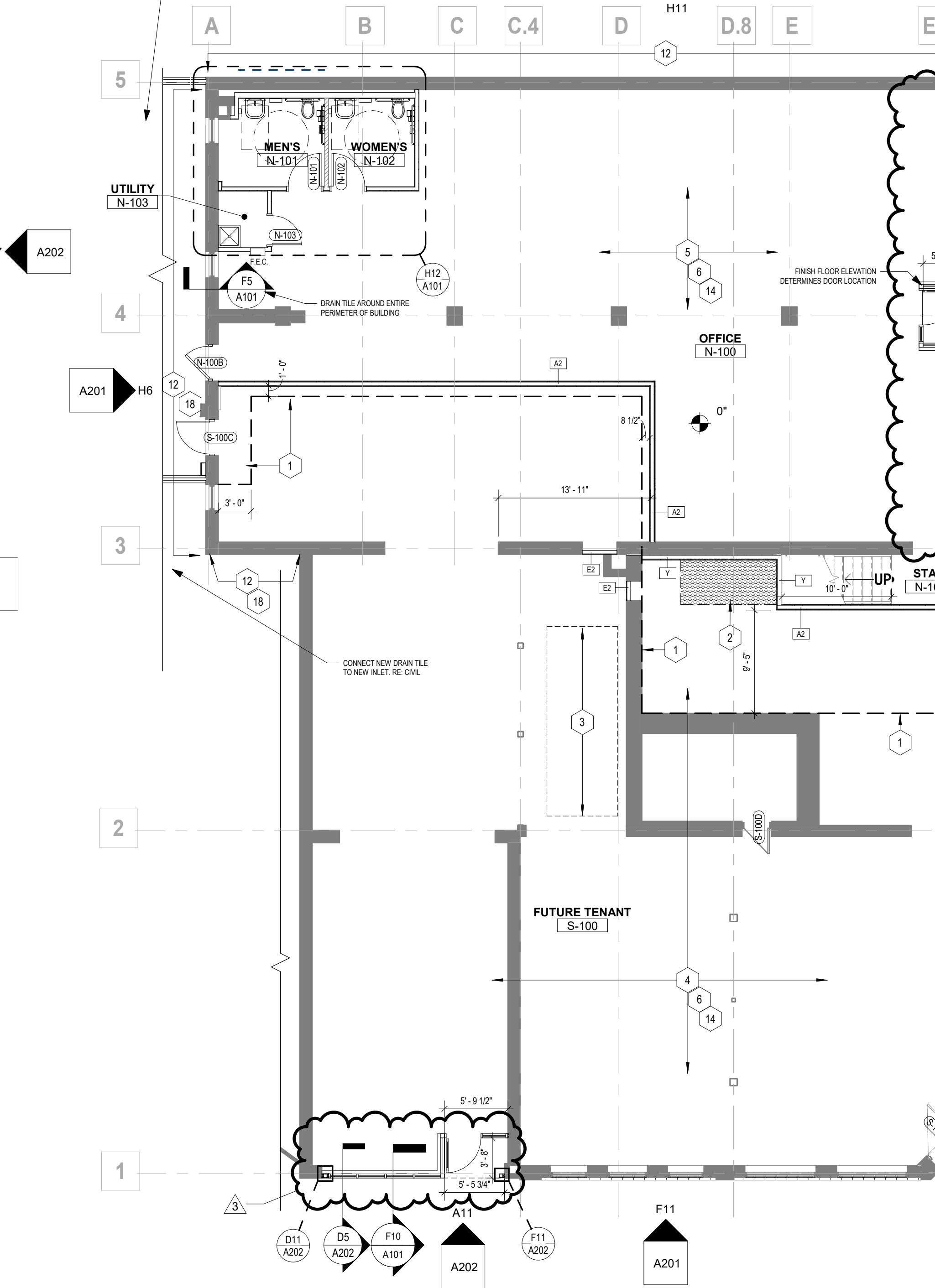
J3 PRIVACY SCREEN ATTACHMENT
1" = 1'-0"



A12 ROOF PLAN
1/8" = 1'-0"



A8 2ND FLOOR PLAN
1/8" = 1'-0"



A4 1ST FLOOR PLAN
1/8" = 1'-0"

GENERAL NOTES: FLOOR PLANS

1. RE: GENERAL ARCHITECTURAL SHEETS FOR ADDITIONAL NOTES AND DETAILS THAT ARE APPLICABLE.
2. ARCHITECTURAL ELEVATION 100'-0".
3. DIMENSIONS SHOWN ON THE FLOOR PLAN ARE TO THE FACE OF GYP. BOARD WALL (F00), FACE OF MASONRY (F0M), FACE OF CONCRETE WALLS (F0C), AND COLUMN GRD LINES, UNLESS NOTED OR SHOWN OTHERWISE.
4. NOTE: WALL THICKNESSES ARE ACTUAL DIMENSIONS AND PER WALL TYPES SEE GENERAL SHEETS.
5. DOOR OPENINGS NOT LOCATED BY DIMENSION SHALL BE CENTERED IN WALL SHOWN OR LOCATED 4 INCHES FROM FINISH WALL TO HINGE SIDE OF THE DOOR, ALWAYS ALLOWING A MINIMUM OF 1" FROM THE WALL SIDE (STRIKE SIDE) OF THE DOOR TO THE INTERSECTING WALL OR OTHER PROTRUDING OBJECTS.
6. ALL ALCOVES WITHOUT A SPACE IDENTIFICATION NUMBER SHALL HAVE THE SAME FINISHES AS THE ADJOINING SPACES.
7. PROVIDE FINISH LEVELS AS DESCRIBED:
LEVEL 4:
- ALL WALLS TO BE BROUGHT UP TO LEVEL 4 FINISH.
- AREAS FOR BACK OF HOUSE EMPLOYEE OPERATIONS WHERE ROOM SIDE WALLS AND/OR CEILING HAVE PAINTED SURFACES.
CONCESSION AND CIRCULATION CORRIDORS WHERE ROOM SIDE WALLS AND/OR CEILING HAVE PAINTED SURFACES.
8. RE: FINISH LEGEND, FINISH SCHEDULE AND SPECIFICATIONS FOR DOOR AND DOOR FRAME FINISHES.
9. STAIR ENCLOSURES, SHAFT WALLS, EXIT PASSAGEWAYS AND EXTERIOR WALLS TO BE COORDINATED FOR PHASE OF WORK PER MATRIX AND PROJECT SCOPING.
10. MAINTAIN AND PROTECT EXISTING EXPANSION JOINTS DURING CONSTRUCTION. PATCH/REPAIR TO MATCH EXISTING RATINGS AS REQUIRED ON THE SHELL PORTION OF PROJECT.
11. CONSTRUCTION TO BE IN STRICT ACCORDANCE WITH ALL APPLICABLE BUILDING CODES, LOCAL RULES, AND REGULATIONS, AND ALL OTHER CODES, REGULATIONS AND GOVERNING AGENCIES HAVING JURISDICTION WITH ALL APPLICABLE AMENDMENTS UNLESS ALTERED OR CHANGED THROUGH VARIANCES OF OTHER LEGAL PROCEDURES.
12. DRAIN TILE DETAIL: PER IRC 2018, PERFORATED POLYETHYLENE (PE) PLASTIC PIPE, SMOOTH WALL, WRAPPED IN FILTER FABRIC.
13. FLUID APPLIED BARRIER AT FOUNDATION:
BASIS OF DESIGN: W.R. MENDOTA, SEALTIGHT - HYDRASTIC 935 SL #709-A.
SUBMITTAL REQUIRED - SUBMIT TO ARCHITECT.
14. GUARDRAILS - GUARDRAILS SHALL BE DESIGNED TO RESIST A LINEAR LOAD OF 50 POUNDS PER LINEAR FOOT IN ACCORDANCE WITH SECTION 4.5.1.1 OF ASCE 7. GUARDRAILS SHALL BE DESIGNED TO RESIST A CONCENTRATED LOAD OF 200 POUNDS IN ACCORDANCE WITH SECTION 4.5.1.1 OF ASCE 7.

FLOOR PLAN KEYED NOTES

- | MARK | DESCRIPTION |
|------|--|
| 1 | EXTENTS OF NEW CONCRETE SLAB. REFER TO STRUCTURAL FOR ADDITIONAL INFORMATION. |
| 2 | UNDERSIDE OF STAIR TO RECEIVE 2-HR RATING ON UNDERSIDE OF STRINGER TO MAINTAIN CONTINUOUS RATING OF FLOOR/CEILING/WALL ASSEMBLY. MUST MAINTAIN THE 2-HOUR HORIZONTAL RATING OF THE CEILING PLANE. |
| 3 | FUTURE LOCATION OF RESTROOM CORE. REFER TO MEP DOCUMENTS FOR ADDITIONAL INFORMATION. |
| 4 | ENTIRE CEILING TO RECEIVE A 2-HOUR RATING TO SEPARATE FROM FLOOR ABOVE. REFER TO UL ASSEMBLY #L511 (G5006). |
| 5 | CEILING TO REMAIN. PATCH REPAIR AS REQUIRED. |
| 6 | ALL PLASTER OR GYPSUM BOARD WALLS TO BE PREPARED TO A LEVEL 4 FINISH. |
| 7 | REMOVE WINDOW AND PREPARE OPENING FOR NEW EGRESS DOOR. REFER TO STRUCTURAL FOR ADDITIONAL INFORMATION. |
| 8 | ANY ROOF MODIFICATIONS TO BE COMPLETED BY JR & CO. COORDINATE WITH BUILDING OWNER. ALL DEBRIS TO BE REMOVED AND ROOFING SYSTEM TO HAVE POSITIVE SLOPE AWAY FROM BUILDING TO GUTTER SYSTEM. ENTIRE ROOF TO BE REVIEWED FOR REPAIRS. PROVIDE COMPLETE ANALYSIS TO OWNER FOR REVIEW. |
| 9 | RECONNECT SANITARY AND WATER AS REQUIRED FOR FUNCTIONAL PLUMBING. REFER TO MEP DOCUMENTS FOR ADDITIONAL INFORMATION. |
| 10 | REMOVE ALL DEBRIS FROM EXISTING ROOF. REPAIR ROOF TO ELIMINATE ANY PONDING AND PROVIDE POSITIVE DRAINAGE. |
| 11 | REPAIR ALL GUTTER SYSTEMS AND CONFIRM TO BE IN GOOD WORKING ORDER AND FREE OF DEBRIS. CONFIRM ALL SEAMS ARE WATERTIGHT AND ALL FLASHINGS TO AND AROUND GUTTER SYSTEM ARE IN GOOD WORKING ORDER. ALL GUTTERS AND DOWNSPOUTS TO BE SECURE TO THE BUILDING AND HAVE POSITIVE SLOPE FOR PROPER DRAINAGE. |
| 12 | PATCH/REPAIR STUCCO SYSTEM AND MAKE READY FOR NEW EXTERIOR PAINT. |
| 13 | INFILL EXISTING OPENING. PATCH/REPAIR AS REQUIRED. PAINT TO MATCH ADJACENT FINISH. |
| 14 | DRAIN TILE - PROVIDE 6" PERFORATED, SLEEVED DRAIN TILE AROUND ENTIRE PERIMETER AND ALONG ALL FOUNDATION WALLS. COLLECT AND CONNECT INTO STORM SEWER. REFER TO CIVIL FOR ADDITIONAL INFORMATION. |
| 15 | INFILL OPEN STUD CAVITY WITH SIMILAR MATERIALS. PROVIDE SCRATCH AND FINISH COATS TO MATCH EXISTING. PREPARE FOR NEW PAINT FINISH. |
| 16 | INFILL OPENING IN MASONRY. MATCH EXISTING. |
| 17 | EXISTING OVERHANG TO REMAIN. PAINT SOFFIT SW 7007 CEILING BRIGHT WHITE. |
| 18 | STUCCO TO MATCH PRIMARY PAINT COLOR. |
| 19 | NEW RTU CURBS AND OPENINGS. COORDINATE EXACT LOCATIONS WITH MEP/STRUCTURAL DOCUMENTS. |

FLOOR PLANS, ENLARGED PLANS, AND DETAILS

MAIN STREET BUILDING IMPROVEMENTS

230 SW MAIN ST.
LEE'S SUMMIT, MO 64063

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REVISION DATES:

- | | | |
|---|-----------------|---------|
| 1 | City Comments | 5/17/22 |
| 3 | Owner Revisions | 9/12/22 |



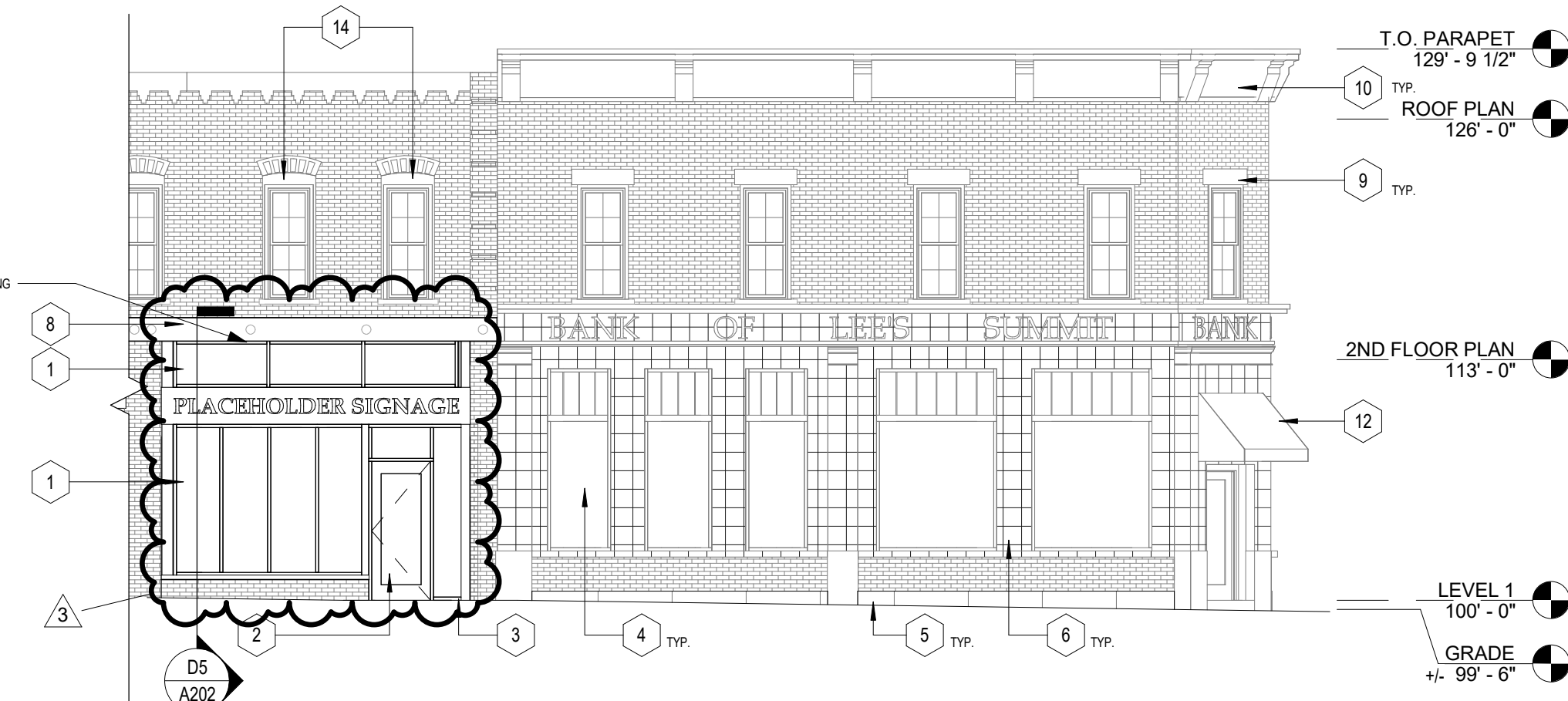
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A101
ISSUE DATE: 21 APRIL, 2022
COLLINS WEBB #: 21121

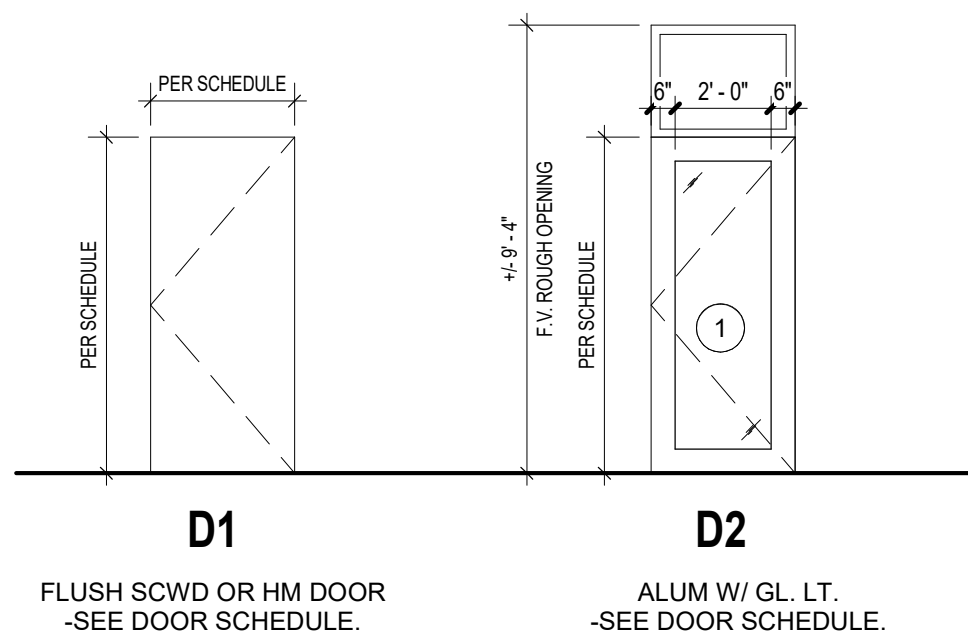
PERMIT DOCUMENTS



H11 NORTH ELEVATION
1/8" = 1'-0"



F11 SOUTH ELEVATION
1/8" = 1'-0"



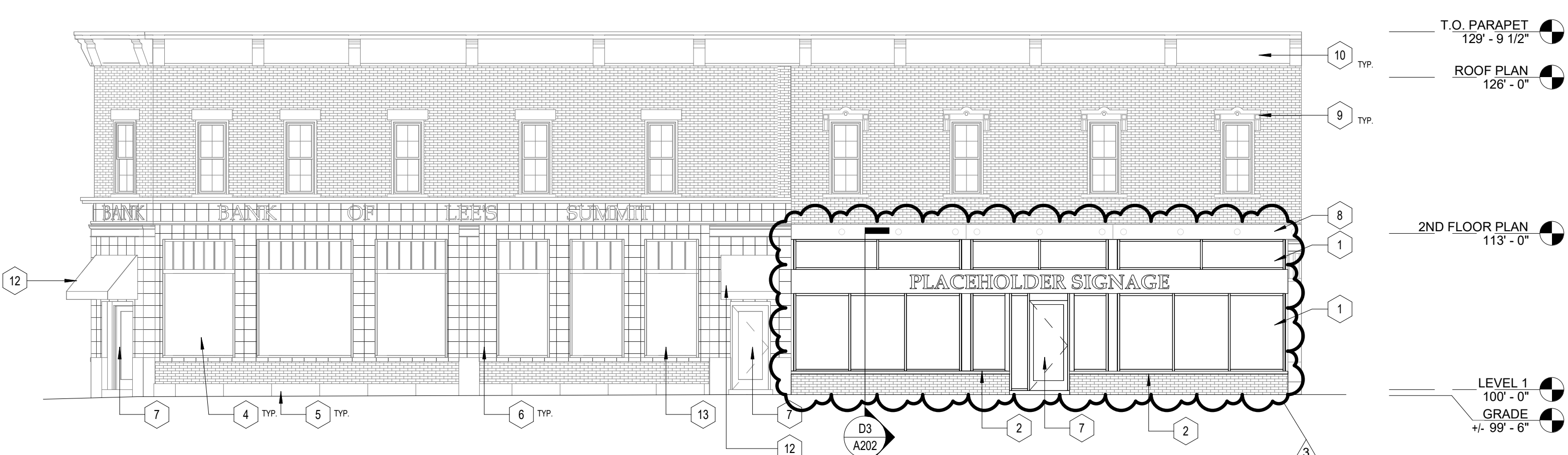
GLASS TYPE LEGEND	
DESIGNATION NUMBER	DESCRIPTION
1	TEMPERED GLASS COLOR: CLEAR

NOTE:
1. DOORS TO BE 1 3/4" THICK, UNLESS NOTED OTHERWISE ON DOOR SCHEDULE.

DOOR SCHEDULE									
DOOR #	WIDTH	HEIGHT	ROOM NAME	DOOR		FRAME		RTG	REMARKS
				TYPE	MATERIAL	FINISH	MATERIAL	FINISH	
N-100B	3'-0"	7'-0"	OFFICE	D2	ALUM/GLASS	ANODIZED	ALUM	ANODIZED	N/A 1, 3, 4, 5, 6, 7
N-101	3'-0"	7'-0"	MEN'S	D1	SCWD	PAINT	HM	PAINT	N/A 1, 3, 4, 6
N-102	3'-0"	7'-0"	WOMEN'S	D1	SCWD	PAINT	HM	PAINT	N/A 1, 3, 4, 6
N-103	2'-8"	7'-0"	UTILITY	D1	SCWD	PAINT	HM	PAINT	N/A 3, 4
N-104	EXIST	EXIST	STAIR	EXIST	EXIST	PAINT	EXIST	PAINT	N/A 1, 2, 3
S-100B	EXIST	EXIST	FUTURE TENANT	EXIST	EXIST	PAINT	EXIST	PAINT	N/A 1, 2, 3
S-100C	3'-0"	7'-0"	FUTURE TENANT	D1	HM	PAINT	HM	PAINT	N/A 1, 3, 4, 6
S-100D	EXIST	EXIST	FUTURE TENANT	EXIST	EXIST	EXIST	EXIST	EXIST	N/A 2, 3

DOOR SCHEDULE REMARKS:
1. MATCH EXISTING MASTER KEYING SYSTEM. COORDINATE WITH BUILDING OWNER.
2. MAINTAIN EXISTING HARDWARE.
3. PROTECT DOOR AND FRAME FROM DAMAGE THROUGHOUT CONSTRUCTION. ANY DAMAGE TO BE REPAIRED/REPLACED PER OWNER DISCRETION.
4. DOOR FRAME 2" OFF FINISHED FACE ON HINGE SIDE, U.N.O.
5. PROVIDE PANIC HARDWARE.
6. MANUALLY LOCKABLE FROM INSIDE OF ROOM. MASTER KEY LOCK ON OUTSIDE OF ROOM.
7. COORDINATE HARDWARE WITH MANUFACTURER.

H6 WEST ELEVATION
1/8" = 1'-0"



F6 EAST ELEVATION
1/8" = 1'-0"



C6 SOUTH ELEVATION - COLOR
3/16" = 1'-0"



A8 EAST ELEVATION - COLOR
3/16" = 1'-0"

GENERAL NOTES
EXTERIOR ELEVATIONS:

- RE: SHEET G0.01 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
- DIMENSIONS SHOWN ON THE EXTERIOR ELEVATIONS ARE TO THE FACE OF MTL. STUD WALL, FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FCO), AND COLUMN GRID LINES, UNLESS OTHERWISE NOTED OR INDICATED.
- RE: THE WINDOW TYPES SHEET FOR ALL EXTERIOR WINDOW TYPES AND GLASS TYPES.
- BRICK REPAIR: REFER TO SPECIFICATIONS FOR BRICK REPAIR. ALL MASONRY CONTRACTOR TO REVIEW ALL ELEVATIONS FOR REPAIR/REPLACEMENT AS REQUIRED.
- JOINT SEALANTS: REFER TO SPECIFICATIONS FOR JOINT SEALANT REPAIR. REMOVE/REPLACE REPAIR ALL JOINT SEALANTS ON THE BUILDING. PROVIDE 1/2" BACK ROD BEHIND SEALANTS BETWEEN ALL DISSIMILAR MATERIALS. COLOR TO MATCH ADJACENT MATERIALS.
- CONTRACTOR SHALL FOLLOW STUCCO REPAIR AS OUTLINED WITHIN STO RESTORATION DETAIL SERIES. DETAIL MANUAL, IF CONTRACTOR USES ALTERNATE OR SUBSTITUTED MANUFACTURER, A SUBMITTAL SHALL BE PROVIDED CONTAINING SIMILAR DETAIL INFORMATION FOR ARCHITECT'S APPROVAL.
- EXTERIOR BRICK, STEEL, AND WOOD PAINT: BASIS OF DESIGN: SHERWIN WILLIAMS - PRO INDUSTRIAL - PRE-CATALYZED WATERBASED URETHANE B65-1100 SERIES.
- ALL OPENINGS TO BE FIELD VERIFIED PRIOR TO SHOP DRAWINGS BEING SUBMITTED FOR REVIEW AND APPROVAL.
NOTE FOR CONTRACTOR TO FOLLOW MANUFACTURER RECOMMENDATIONS AND PDS: PRODUCT DATA SHEET. PRIOR TO THE EXTERIOR URETHANE COATING APPLICATION ON BRICK, APPLY CONCRETE AND MASONRY PRIMER-SEALER (BASIS OF DESIGN: LOXON) PRODUCT AND COATS AS RECOMMENDED BY MANUFACTURER.

EXTERIOR ELEVATION
KEYED NOTES

MARK	DESCRIPTION
1	STOREFRONT SYSTEM: BASIS OF DESIGN IS KAWNEER 450T FRAMING SYSTEM. GLAZING TO BE FRONT GLAZED.
2	SILL FLASHINGS: COLOR TO BE DARK ALUMINUM TO MATCH STOREFRONT.
3	BRICK: REPLACE ALL MISSING BRICK AND DAMAGED BRICK. COLOR TO MATCH EXISTING. TUCK POINT AS REQUIRED. PROVIDE BACKER ROD & SEALANT BETWEEN DISSIMILAR MATERIALS, TYP. RE: SPECIFICATIONS.
4	WOOD WINDOWS: REMOVE ALL LOOSE PAINT. PATCH/REPAIR/CAULK AS REQUIRED. PREPARE FOR NEW PAINT.
5	CAST STONE: TO BE RE-SET AND LEVELED. RE-GROUT AS REQUIRED.
6	GLAZED TILE: CLEAN AND TUCK-POINT.
7	WOOD DOOR: SAND AND REPAINT ENTRY DOOR AND FRAME. COLOR DARK BRONZE TO MATCH NEW WINDOW SYSTEM.
8	STEEL LINTEL: REMOVE ALL LOOSE MATERIAL AND REPAINT.
9	ALUMINUM WINDOWS / WINDOW HEAD DETAIL: ALUMINUM WINDOWS AT SECOND LEVEL EXISTING TO REMAIN. REMOVE ALL LOOSE MATERIAL. REPAIR CAST STONE HEADER AS REQUIRED AND REPAINT.
10	TOP OF WALL DETAIL: REMOVE ALL LOOSE MATERIAL AND REPAINT. REPAIR AS REQUIRED AND REFLASH TOP OF WALL AS NEEDED TO MAKE A WATER TIGHT SYSTEM. PREPARE FOR NEW FINISH.
11	REMOVE EXISTING WEATHERHOOD ABOVE EXTERIOR DOOR. 14"x14" OF EXISTING OPENING ABOVE DOOR TO REMAIN FOR NEW INTAKE LOUVER. INFILL REMAINDER OF EXISTING OPENING WITH SUB-FRAMING, SHEATHING, AND FINISH MATERIAL TO MATCH EXISTING. RE: MEP. REPLACE EXISTING DOOR WITH NEW HOLLOW METAL DOOR.
12	EXISTING AWNINGS: RE-ATTACH EXISTING AWNINGS TO BUILDING. NEW FABRIC ON AWNINGS TO MATCH SW #7625 MOUNT ETNA.
13	INSTALL NEW TEMPERED GLAZING AS REQUIRED.
14	REPLACE WOOD TRIM AT PERIMETER OF WINDOW WITH EXTERIOR/PAINT-GRADE LUMBER. MATCH EXISTING LUMBER SIZES. PAINT.
15	EXHAUST WALL CAPS, RE: MECH. PAINT TO MATCH WALL.
16	LOUVERS, RE: MECH. PAINT TO MATCH WALL.
17	ELEC. METER, RE: ELEC.
18	WALL PACK, RE: ELEC.

EXTERIOR ELEVATION
COLOR LEGEND

	PRIMARY COLOR: SW #7594 CARRIAGE DOOR
	ACCENT COLOR 1: SW #7625 MOUNT ETNA
	ACCENT COLOR 2: SW #7675 SEALSKIN
	ACCENT COLOR 3: SW #0009 EASTLAKE GOLD
	EXISTING GLAZED TILE TO REMAIN. RE: KEYNOTE #6

MAIN STREET BUILDING IMPROVEMENTS

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REVISION DATES:
3 Owner Revisions 9/12/22



PROFESSIONAL SEAL

A201
ISSUE DATE: 21 APRIL, 2022
COLLINS WEBB #: 21121

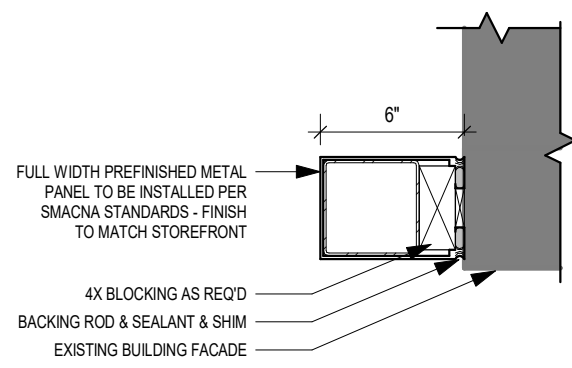
EXTERIOR ELEVATIONS AND
DOOR SCHEDULE



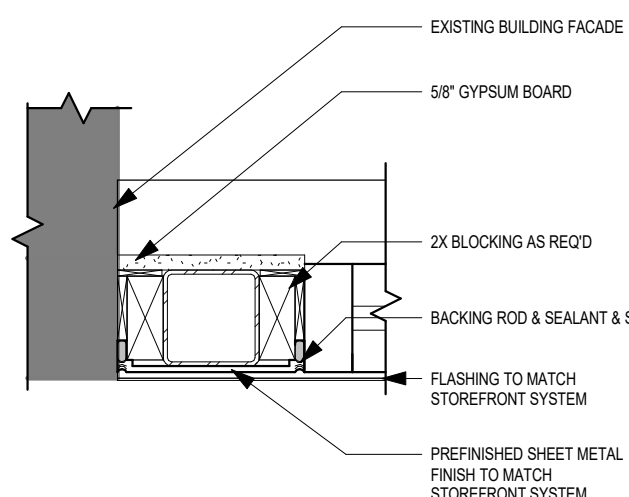
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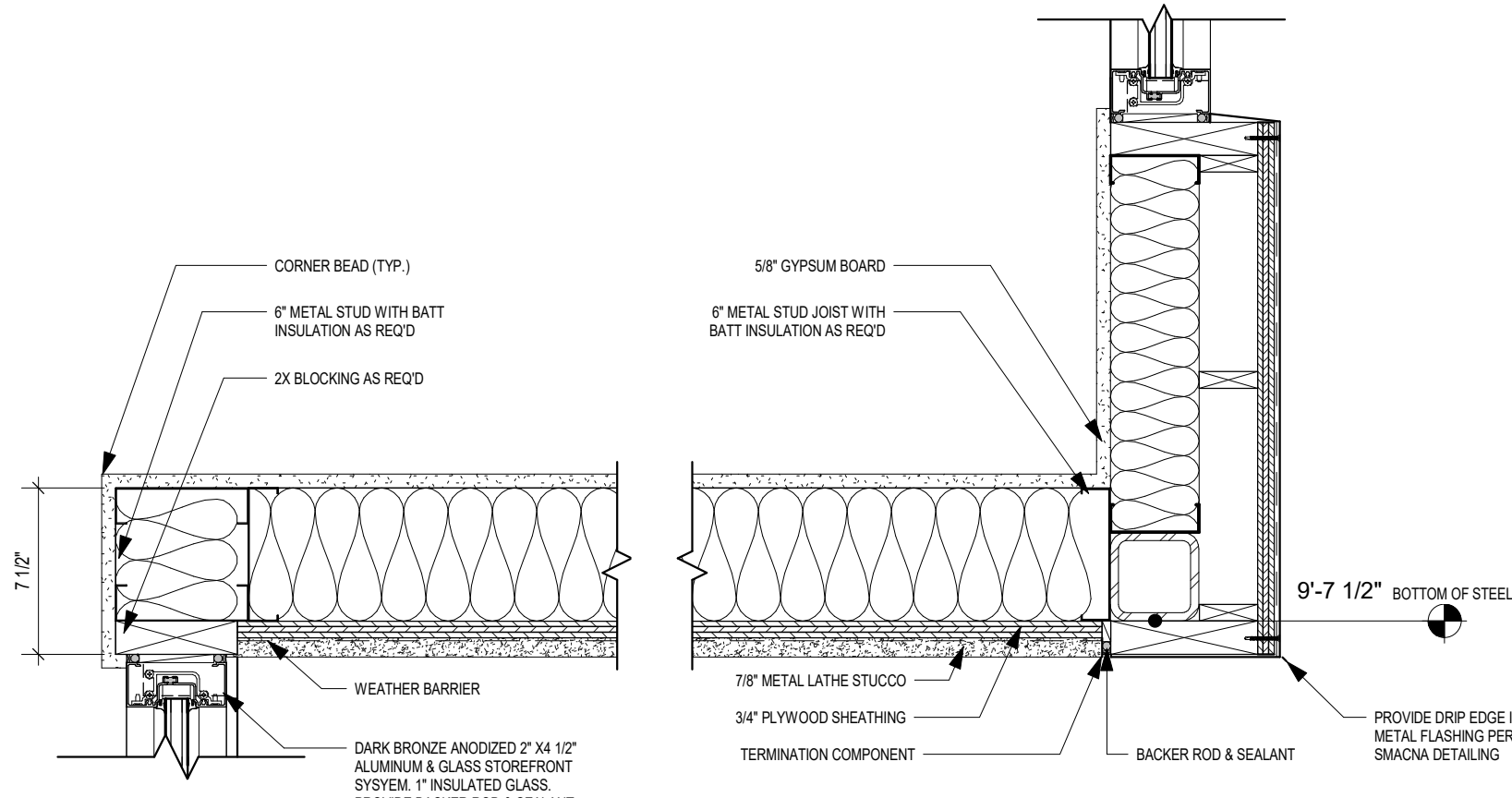
F11 PLAN DETAIL - NEW STOREFRONT - COLUMN - SOUTH 2
1 1/2" = 1'-0"



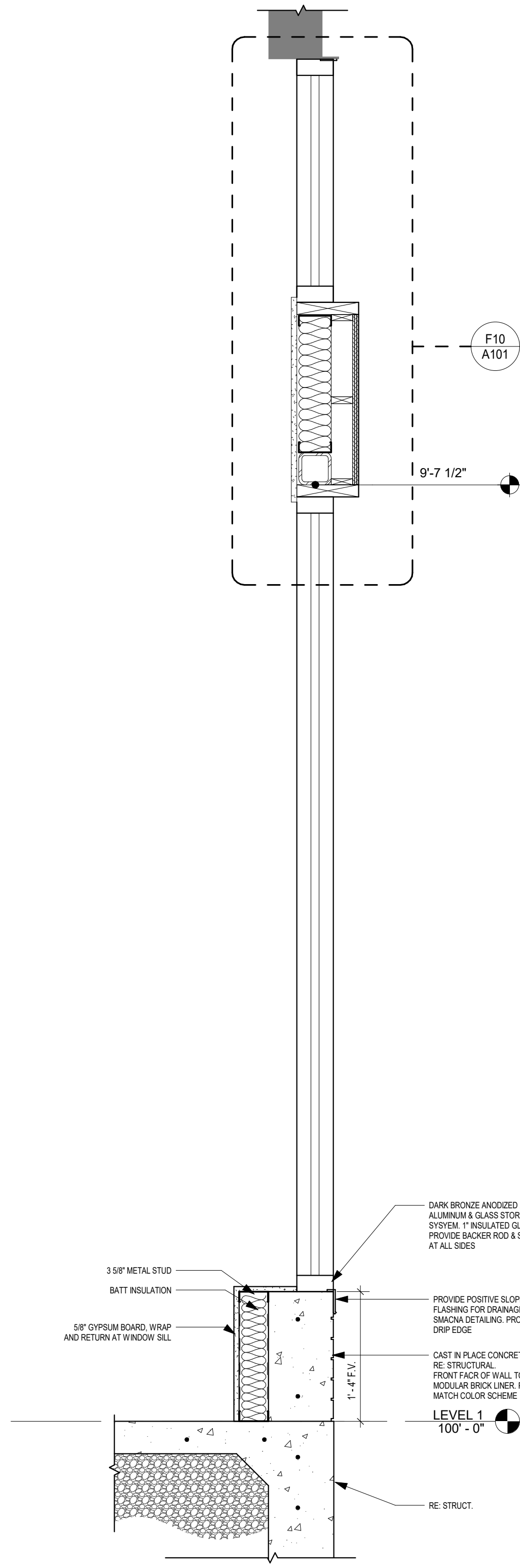
D11 PLAN DETAIL - NEW STOREFRONT - COLUMN - SOUTH 1
1 1/2" = 1'-0"



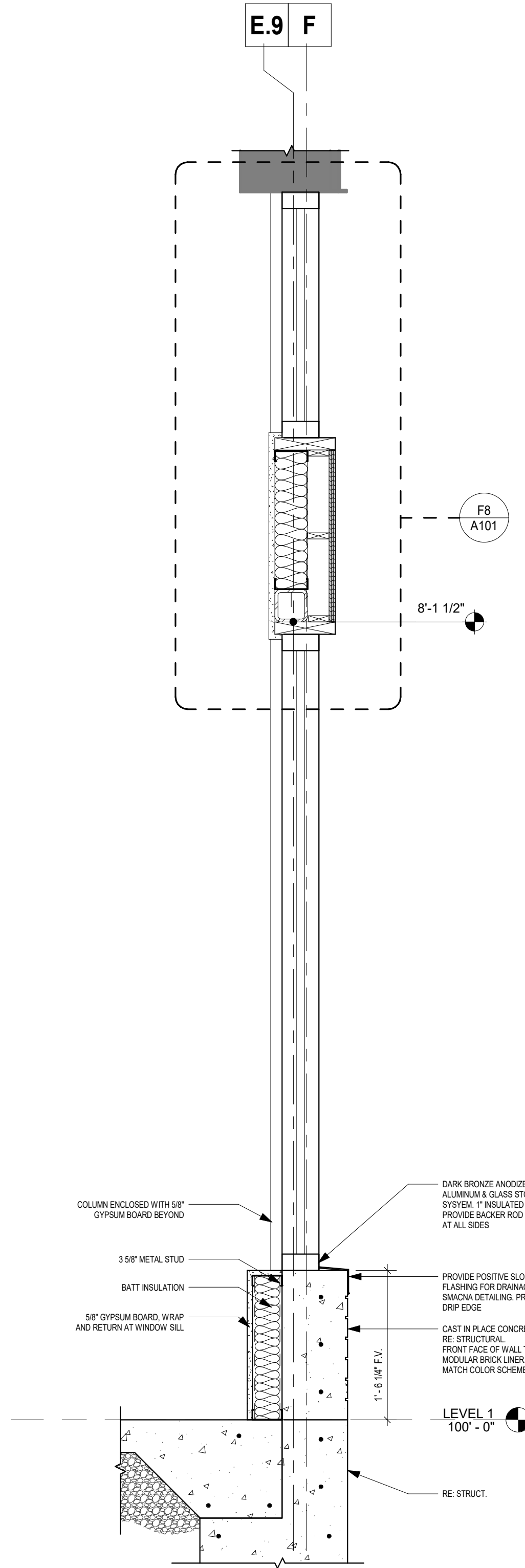
D9 DETAIL - NEW STOREFRONT - SOFFIT
1 1/2" = 1'-0"



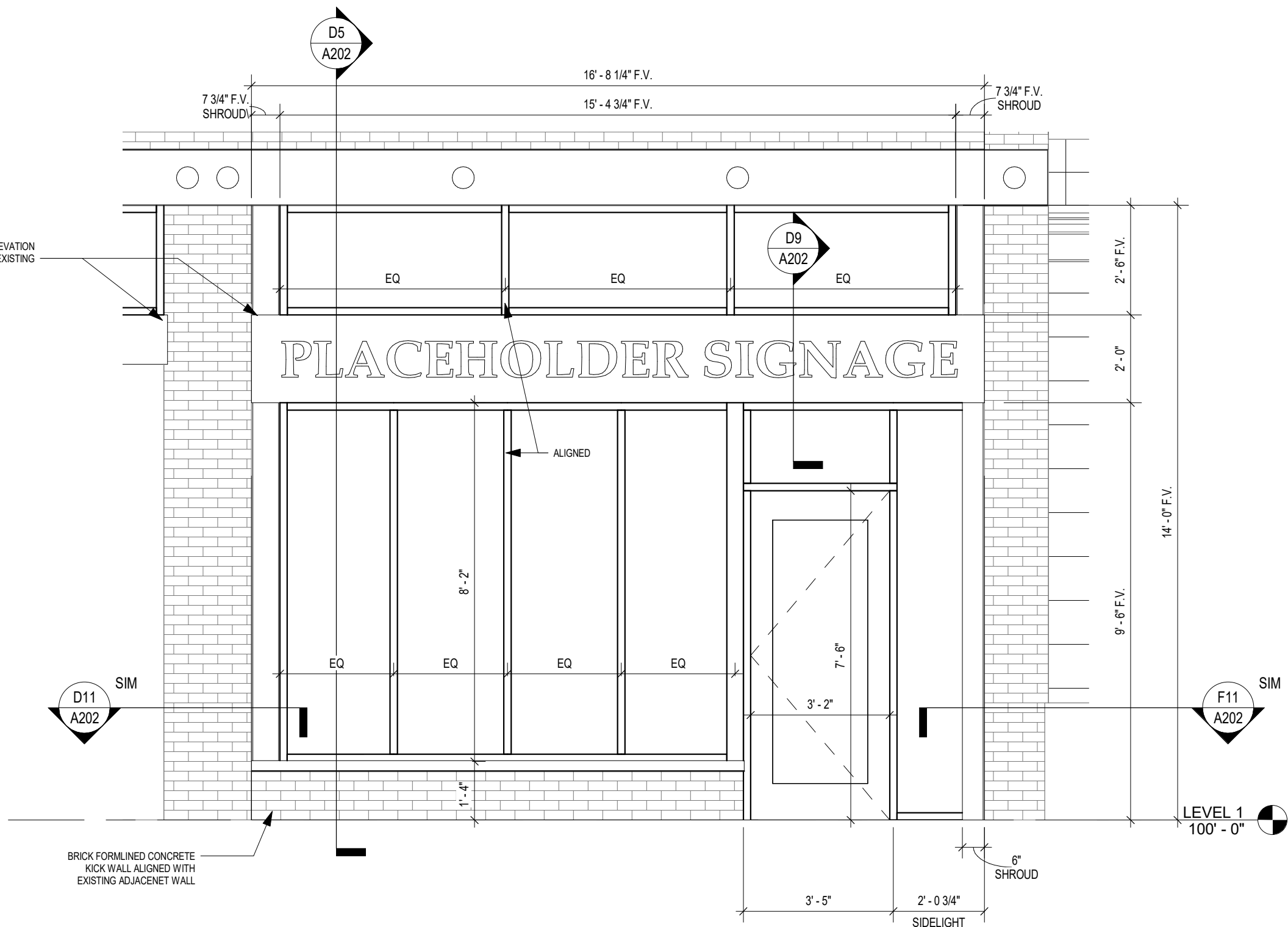
D5 SECTION - STOREFRONT SOUTH
1" = 1'-0"



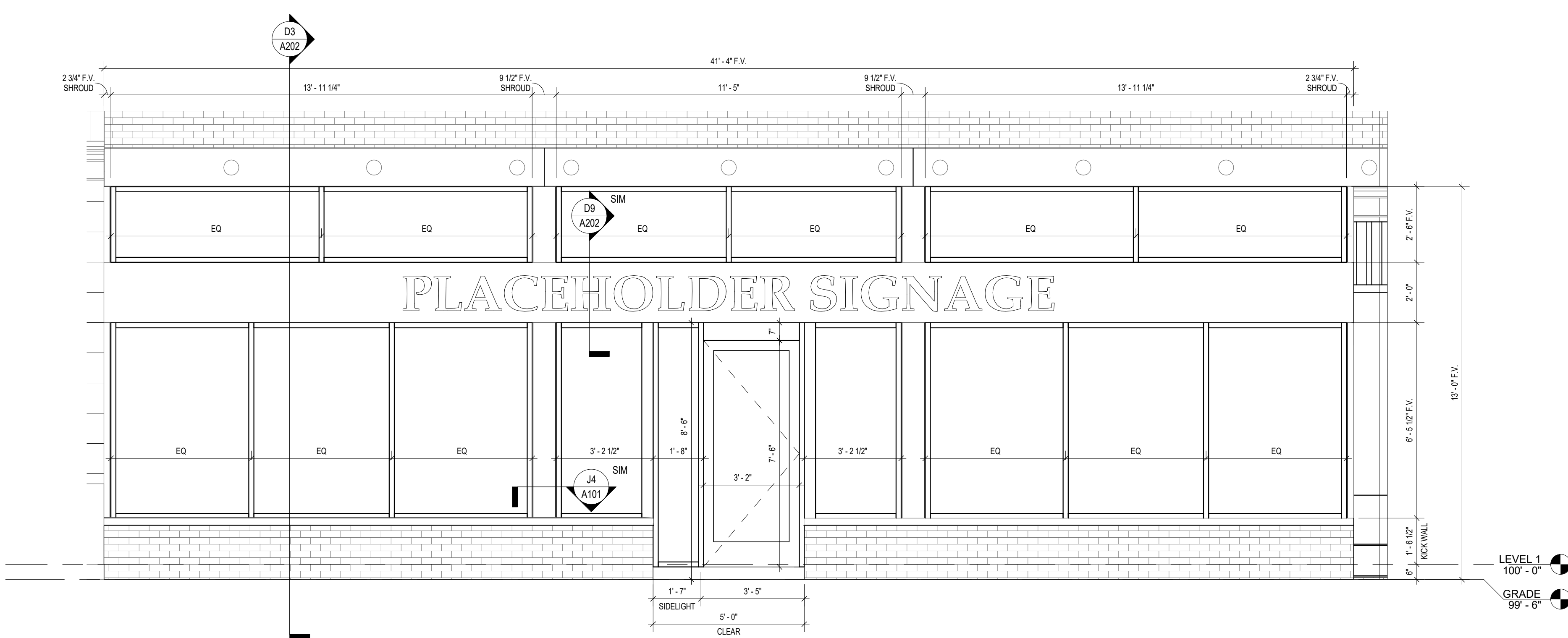
D3 SECTION - STOREFRONT EAST
1" = 1'-0"



A11 SOUTH ELEVATION - NEW STOREFRONT
3/8" = 1'-0"



A7 EAST ELEVATION - NEW STOREFRONT
3/8" = 1'-0"



GENERAL NOTES EXTERIOR ELEVATIONS:

1. RE: SHEET 00.01 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
 2. DIMENSIONS SHOWN ON THE EXTERIOR ELEVATIONS ARE TO THE FACE OF MTL. STUD WALL, FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FCC), AND COLUMN GRID LINES, UNLESS OTHERWISE NOTED OR INDICATED.
 3. RE: THE WINDOW TYPES SHEET FOR ALL EXTERIOR WINDOW TYPES AND GLASS TYPES.
 4. **BRICK REPAIR** - REFER TO SPECIFICATIONS FOR BRICK REPAIR. ALL MASONRY CONTRACTOR TO REVIEW ALL ELEVATIONS FOR REPAIR/REPLACEMENT AS REQUIRED.
 5. **JOINT SEALANTS** - REFER TO SPECIFICATIONS FOR JOINT SEALANT REPAIR. REMOVE/REPLACE/REPAIR ALL JOINT SEALANTS ON THE BUILDING. PROVIDE 1/2" BACK ROD BEHIND SEALANTS BETWEEN ALL DISSIMILAR MATERIALS. COLOR TO MATCH ADJACENT MATERIALS.
 6. CONTRACTOR SHALL FOLLOW STUCCO REPAIR AS OUTLINED WITHIN STUCCO RESTORATION DETAIL SERIES: DETAIL MANUAL. IF CONTRACTOR USES ALTERNATE OR SUBSTITUTED MANUFACTURER, A SUBMITTAL SHALL BE PROVIDED CONTAINING SIMILAR DETAIL INFORMATION FOR ARCHITECT'S APPROVAL.
 7. **EXTERIOR BRICK, STEEL, AND WOOD PAINT** - BASIS OF DESIGN: SHERWIN WILLIAMS - PRO INDUSTRIAL - PRE-CATALYZED WATERBASED URETHANE B05-1100 SERIES.
 8. ALL OPENINGS TO BE FIELD VERIFIED PRIOR TO SHOP DRAWINGS BEING SUBMITTED FOR REVIEW AND APPROVAL.
- NOTE FOR CONTRACTOR TO FOLLOW MANUFACTURER RECOMMENDATIONS AND PDS: PRODUCT DATA SHEET. PRIOR TO THE EXTERIOR URETHANE COATING APPLICATION ON BRICK, APPLY CONCRETE AND MASONRY PRIMER-SEALER (BASIS OF DESIGN: LONOX) PRODUCT AND COATS AS RECOMMENDED BY MANUFACTURER.**

MAIN STREET BUILDING IMPROVEMENTS

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REVISION DATES:
3 Owner Revisions 9/12/22



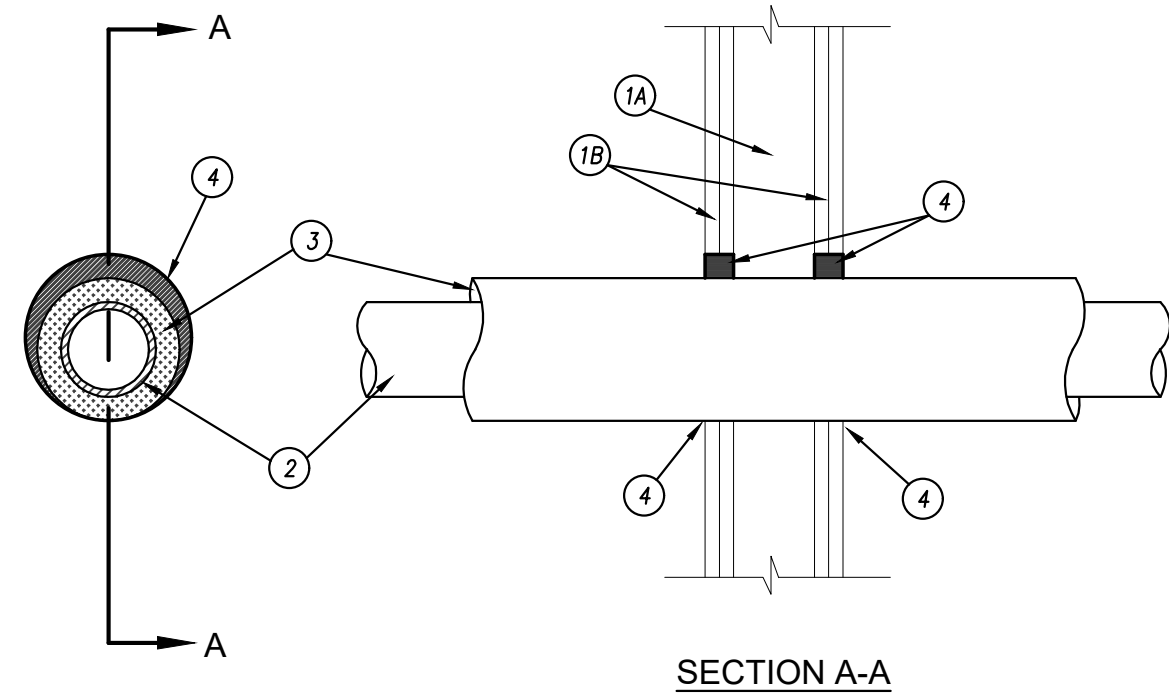
PROFESSIONAL SEAL
A202
ISSUE DATE: 21 APRIL, 2022
COLLINS WEBB #: 21121

ENLARGED ELEVATIONS AND
DETAILS



PERMIT DOCUMENTS

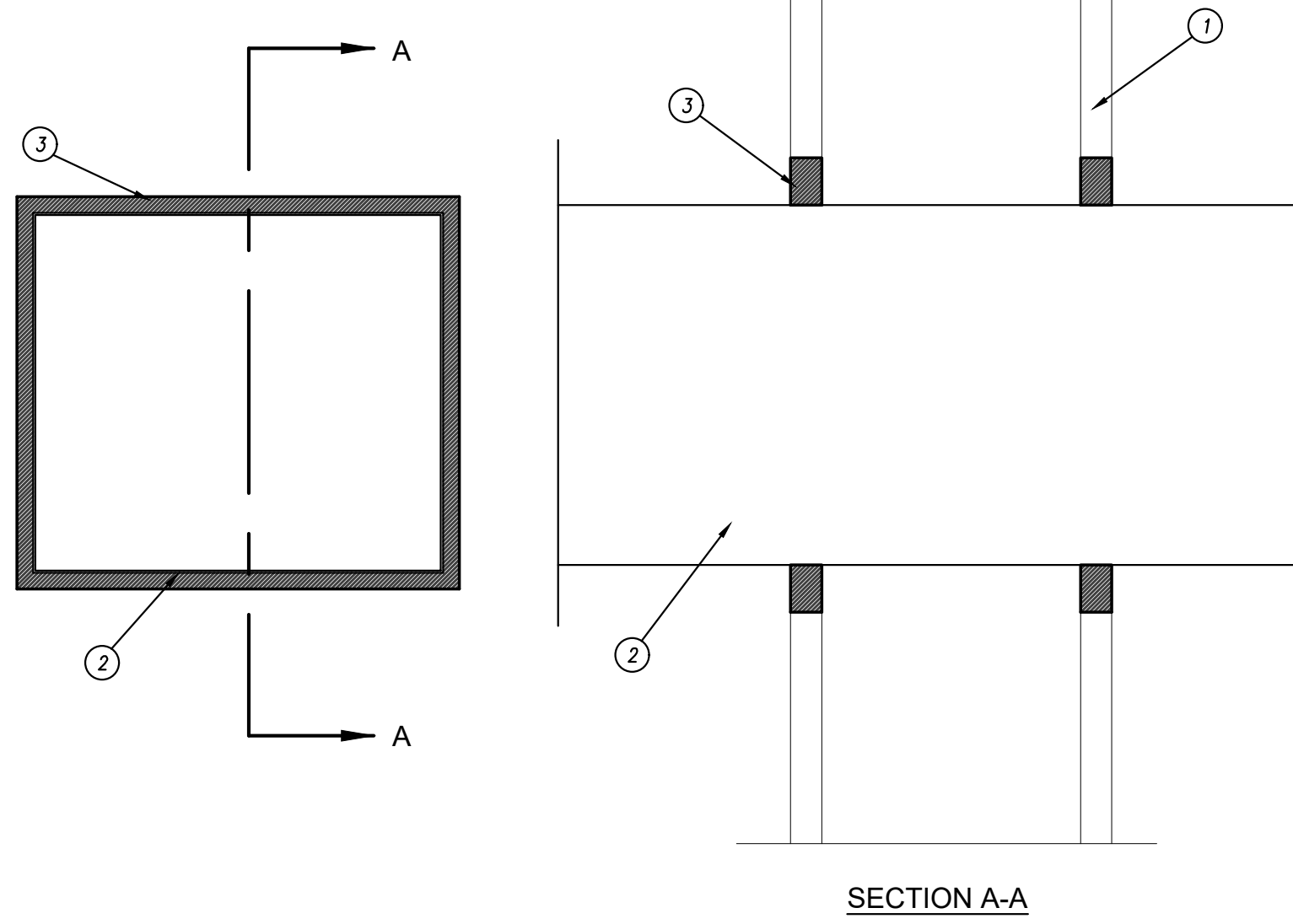
System No. W-L-5040
September 7, 2004
F Ratings - 1 and 2 HR (See Item 1)
T Ratings - 1/4, 1/2 and 3/4 HR (See Item 2)



1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300, U400 OR U400 SERIES WALL OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. OC. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE AND SPACED MAX 24 IN. OC.
B. GYPSUM BOARD* - NOM 5/8 IN. THICK, 4 FT WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX DIM OF OPENING IN WALLBOARD LAYERS IS 7 IN. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS 1 HR WHEN INSTALLED IN A 1 HR FIRE RATED WALL AND 2 HR WHEN INSTALLED IN A 2 HR FIRE RATED WALL.
2. THROUGH PENETRANTS - ONE METALLIC PIPE OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. PIPE OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR TUBING MAY BE USED:
A. STEEL PIPE - NOM 4 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE. WHEN STEEL PIPE IS USED, T RATING IS 3/4 HR.
B. COPPER TUBING - NOM 4 IN. DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING. T RATING IS 3/4 HR FOR COPPER TUBING OF NOM 2 IN. DIAM AND SMALLER. FOR COPPER TUBING GREATER THAN NOM 2 IN. DIAM, T RATING IS 1/4 AND 1/2 HR WHEN INSTALLED IN 1 AND 2 HR RATED WALLS, RESPECTIVELY.
C. COPPER PIPE - NOM 4 IN. DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE. T RATING IS 3/4 HR FOR COPPER PIPE OF NOM 2 IN. DIAM AND SMALLER. FOR COPPER PIPE GREATER THAN NOM 2 IN. DIAM, T RATING IS 1/4 AND 1/2 HR WHEN INSTALLED IN 1 AND 2 HR RATED WALLS, RESPECTIVELY.
3. PIPE INSULATION - PLASTICS* - NOM 3/4 IN. THICK ACRYLONITRILE BUTADIENE/POLYVINYL CHLORIDE (AB/PVC) FLEXIBLE FOAM FURNISHED IN THE FORM OF TUBING. THE ANNULAR SPACE BETWEEN THE INSULATED PIPE AND THE EDGE OF THE THROUGH OPENING SHALL BE MIN ZERO IN. (POINT CONTACT) TO MAX 1-1/4 IN. SEE PLASTICS (PM22) CATEGORY IN THE RECOGNIZED COMPONENT DIRECTORY FOR NAMES OF MANUFACTURERS. ANY RECOGNIZED COMPONENT TUBE INSULATION MATERIAL MEETING THE ABOVE SPECIFICATIONS AND HAVING A UL94 FLAMMABILITY CLASSIFICATION OF 94-SHA MAY BE USED.
4. FILL, VOID OR CAVITY MATERIALS* - CAULK OR SEALANT - MIN 5/8 IN. THICKNESS OF CAULK APPLIED WITHIN THE ANNULAR SPACE, FLUSH WITH EACH SURFACE OF WALL. A MIN 1/2 IN. DIAM BEAD OF CAULK SHALL BE APPLIED TO THE PIPE INSULATION/ WALLBOARD INTERFACE AT THE POINT CONTACT LOCATION ON BOTH SIDES OF WALL.
SM COMPANY - CP 25WB+ CAULK OR FB-3000 WT SEALANT

*BEARING THE UL CLASSIFICATION MARKING

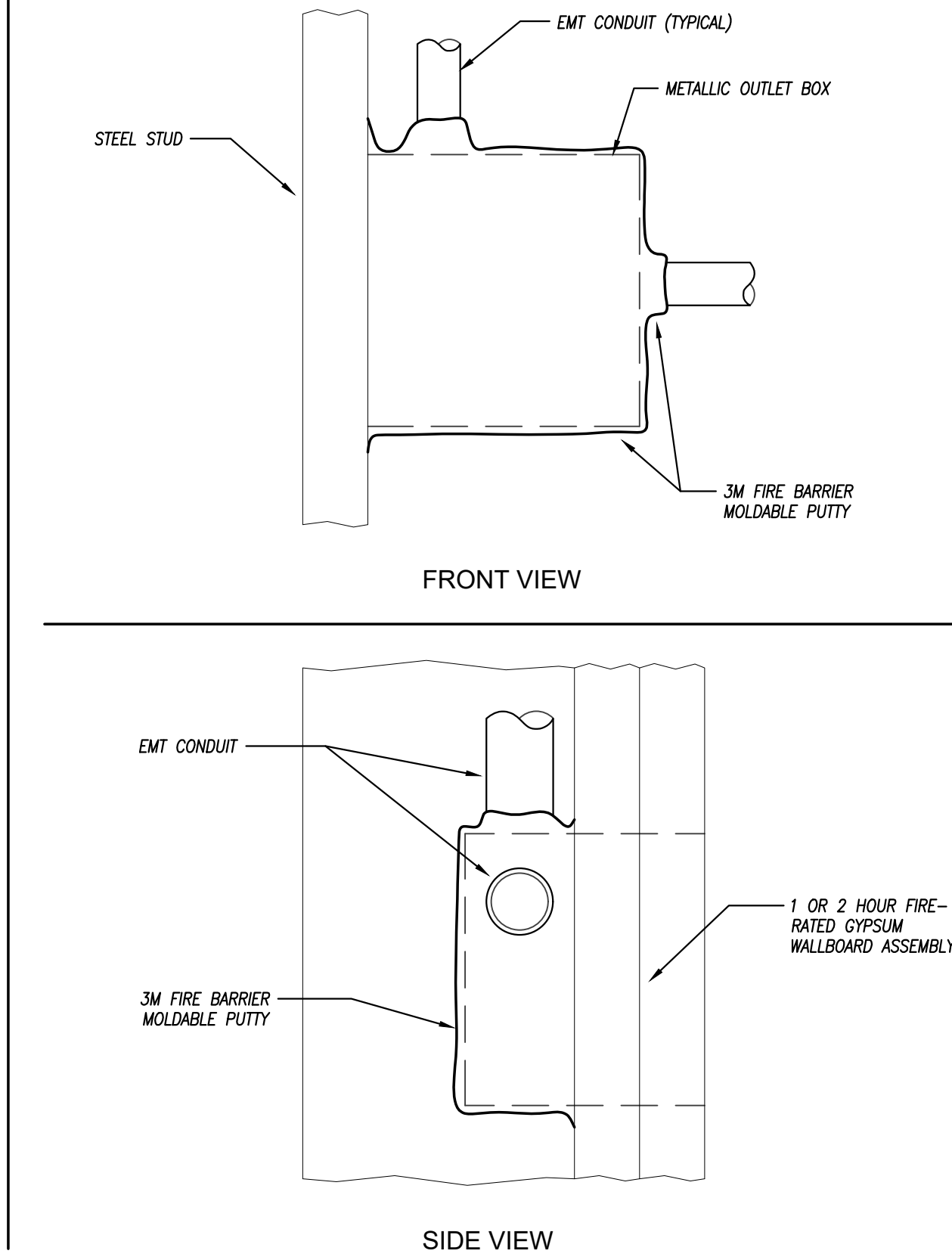
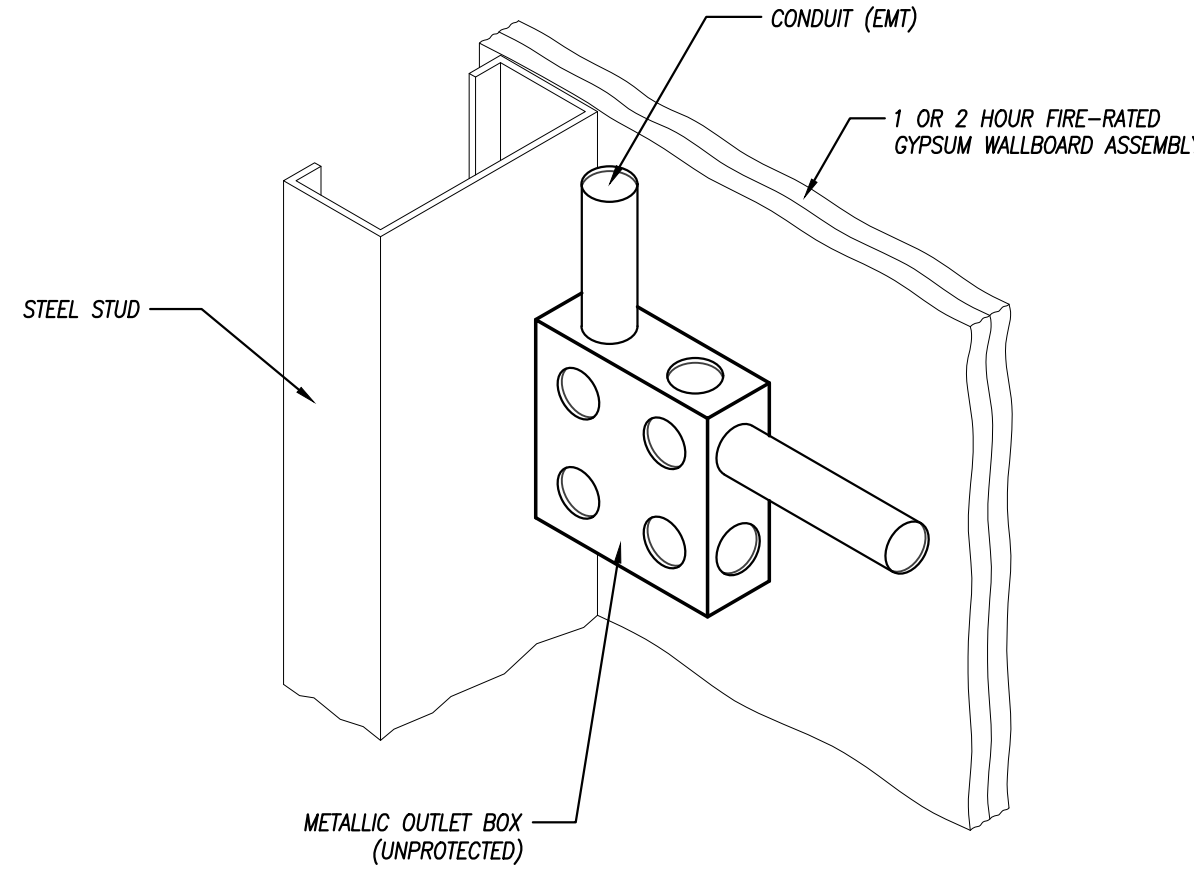
System No. W-L-7052
May 19, 2005
F Rating - 1 HR
T Rating - 0 HR



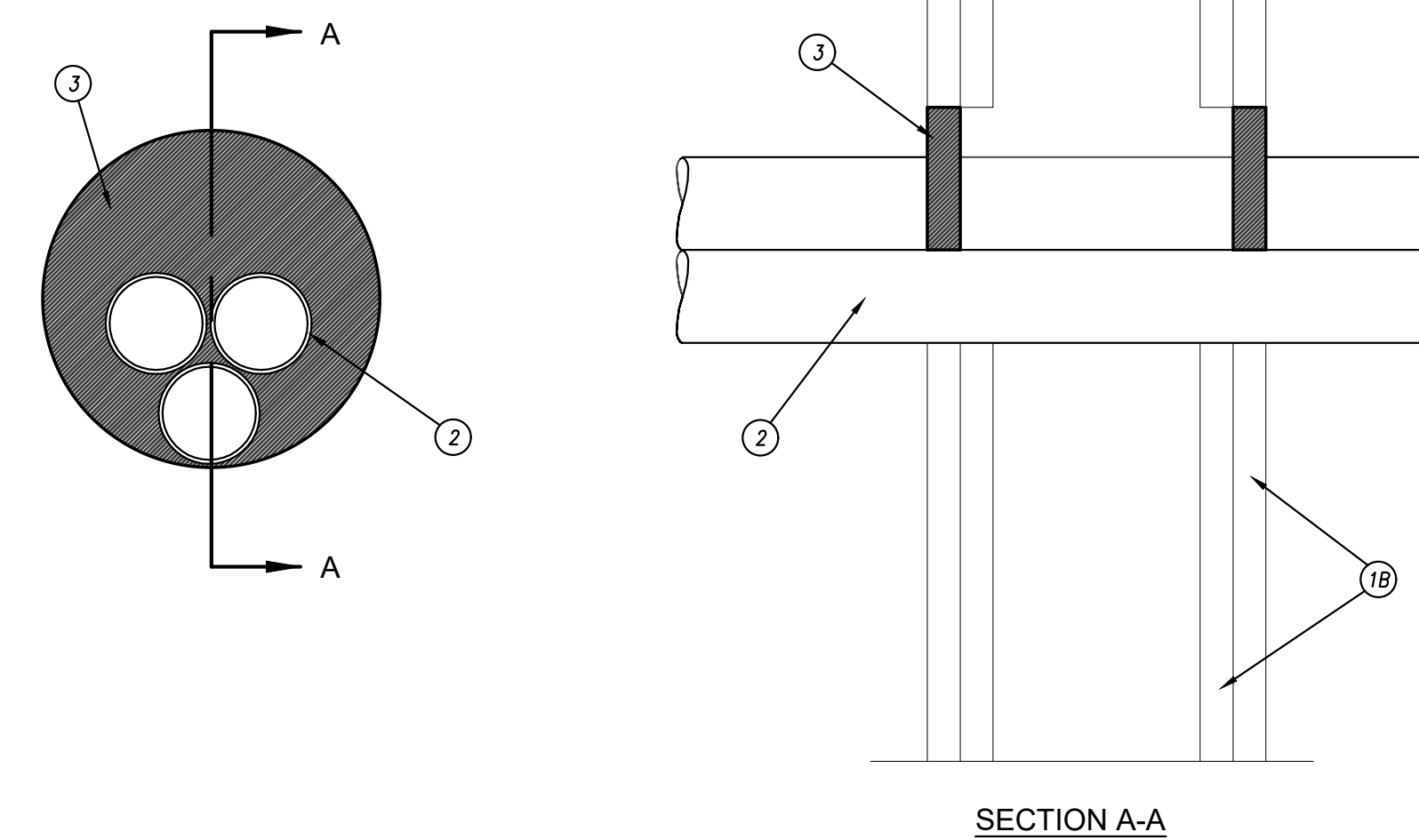
1. WALL ASSEMBLY - THE 1 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300, U400 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. (51 MM BY 102 MM) LUMBER SPACED 16 IN. (406 MM) OC. STEEL STUDS TO BE MIN 3-1/2 IN. (89 MM) WIDE AND SPACED MAX 24 IN. (610 MM) OC.
B. GYPSUM BOARD* - THICKNESS, TYPE, NUMBER OF LAYERS AND FASTENERS AS REQUIRED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX SIZE OF OPENING IS 14 BY 14 IN. (356 MM BY 356 MM) SQUARE.
2. STEEL DUCT - NOM 12 BY 12 IN. (305 MM BY 305 MM) (OR SMALLER) NO. 24 GAUGE (OR HEAVIER) GALV STEEL DUCT TO BE CENTERED WITHIN OPENING WITH A NOM ANNULAR SPACE OF 1 IN. (25 MM). DUCT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF OPENING.
3. FILL, VOID OR CAVITY MATERIAL* - CAULK OR SEALANT - MIN 5/8 IN. (16 MM) THICKNESS OF CAULK APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL ASSEMBLY.
SM COMPANY - CP 25WB+ IC 15WB+ CAULK OR FB-3000 WT SEALANT

*BEARING THE UL CLASSIFICATION MARK

INSTALLATION DETAIL FOR 3M FIRE BARRIER MOLDABLE PUTTY ON ELECTRICAL OUTLET BOXES



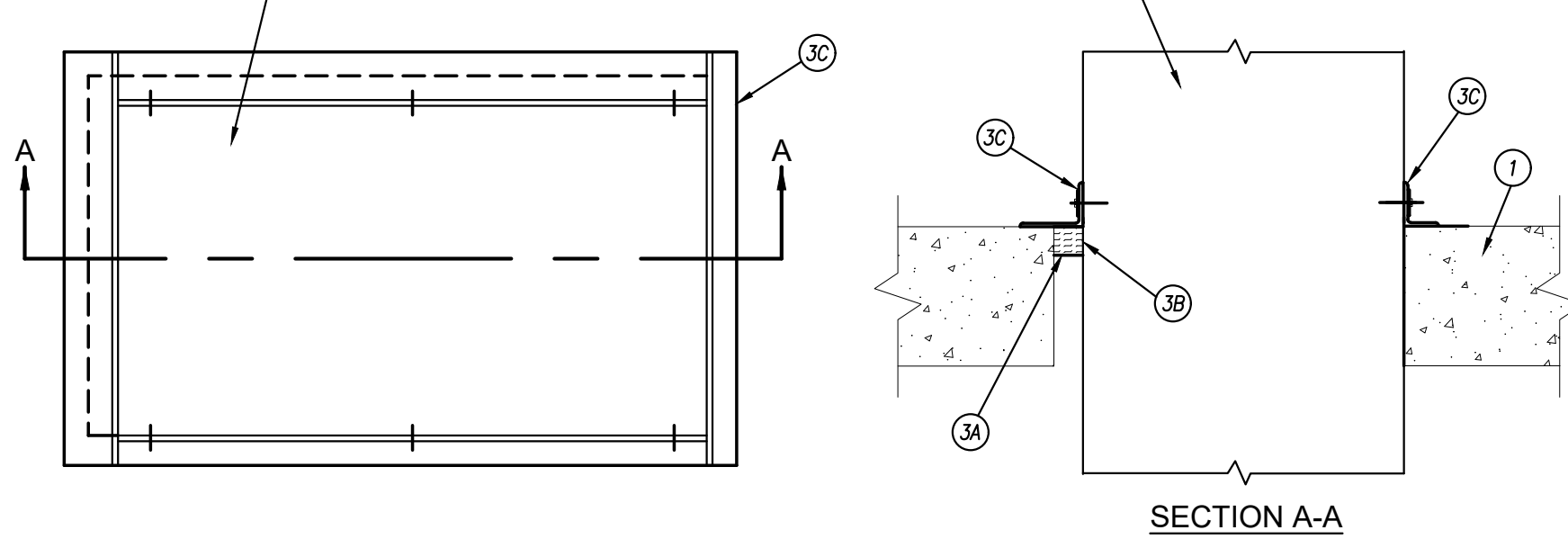
System No. W-L-2300
May 19, 2005
F Ratings - 1 & 2 Hr (See Item 1)
T Ratings - 0 & 1/2 Hr (See Item 1)



1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300, U400 OR U400 SERIES WALL OR PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 IN. BY 4 IN. (51 MM BY 102 MM) LUMBER SPACED 16 IN. (406 MM) OC. STEEL STUDS TO BE MIN 3-1/2 IN. (89 MM) WIDE SPACED MAX 24 IN. (610 MM) OC.
B. GYPSUM BOARD* - THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIM OF OPENING IS 4 IN. (102 MM). THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. THE HOURLY F RATING IS 0 AND 1/2 HR FOR 1 AND 2 HR RATED ASSEMBLIES, RESPECTIVELY.
2. THROUGH PENETRANTS - ONE OR MORE NONMETALLIC PIPES, CONDUITS OR TUBES INSTALLED CONCENTRICALLY OR ECCENTRICALLY WITHIN OPENING. ANNULAR SPACE BETWEEN PENETRANTS AND PERIPHERY OF OPENING TO BE MIN 0 IN. (POINT CONTACT) TO MAX 1 IN. (0 MM TO MAX 25 MM). SPACE BETWEEN PENETRANTS SHALL BE MIN 0 IN. (POINT CONTACT) TO MAX 1 IN. (0 MM TO MAX 25 MM). PENETRANTS TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL. THE FOLLOWING TYPES AND SIZES OF PENETRANTS MAY BE USED:
A. POLYETHYLENE GLYCOL (PEGL) PIPE - NOM 1-1/2 IN. (38 MM) DIAM (OR SMALLER) SCHEDULE 40 SOLID OR CELLULAR CORE PVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.
B. RIGID NONMETALLIC CONDUIT** - NOM 1-1/2 IN. (38 MM) DIAM (OR SMALLER) SCHEDULE 40 SOLID OR CELLULAR CORE PVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.
C. CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE - NOM 1-1/2 IN. (38 MM) DIAM (OR SMALLER) SDR13.5 CPVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.
D. CROSSLINKED POLYETHYLENE (PEX) TUBING - NOM 1 IN. (25 MM) DIAM (OR SMALLER) SDR 9 PEX TUBING FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.
3. FILL, VOID OR CAVITY MATERIAL* - CAULK OR SEALANT - MIN 5/8 IN. (16 MM) THICKNESS OF CAULK APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. MIN 1/4 IN. (6 MM) DIAM BEAD OF CAULK APPLIED TO GYPSUM BOARD/PENETRANT INTERFACE AT POINT CONTACT LOCATION ON BOTH SIDES OF WALL.
SM COMPANY - IC 15WB+ CP 25WB+ CAULK OR FB-3000 WT SEALANT
(NOTE: CP 25WB+ NOT SUITABLE FOR USE WITH CPVC PIPES.)

*BEARING THE UL CLASSIFICATION MARKING

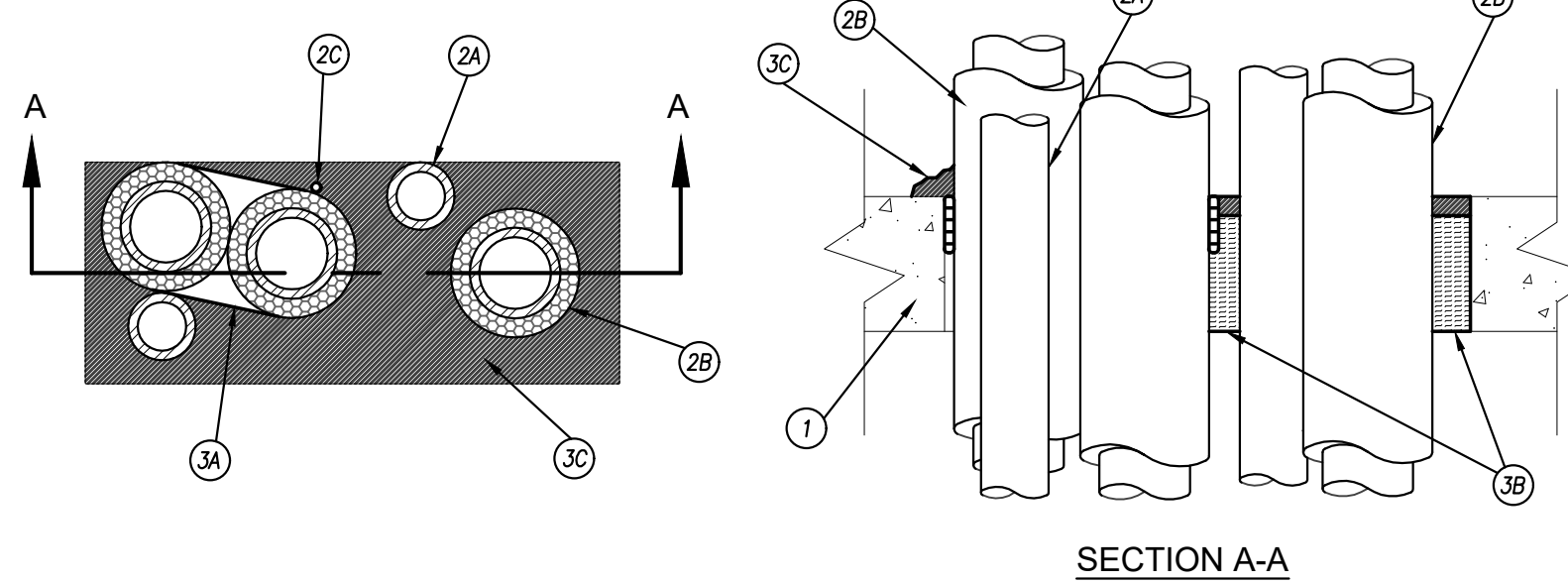
System No. C-AJ-7016
May 19, 2005
F Ratings - 2 & 3 Hr (See Item 1)
T Rating - 0 Hr (See Item 1)



1. FLOOR OR WALL ASSEMBLY - MIN 2-1/2 IN. (64 MM) THICK OR MIN 4-1/2 IN. (114 MM) THICK LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS. MAX AREA OF OPENING IS 576 SQ IN. (3716 C/M2) WITH MAX DIMENSION OF 36 IN. (914 MM) FOR 2 HR ASSEMBLIES AND 544 SQ IN. (3510 C/M2) WITH MAX DIMENSION OF 34 IN. (864 MM) FOR 3 HR ASSEMBLIES. SEE CONCRETE BLOCKS (CA27) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
2. THROUGH PENETRANTS - ONE STEEL DUCT TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. AN ANNULAR SPACE OF MIN 0 IN. (POINT CONTACT) TO MAX 4 IN. (0 MM TO MAX 102 MM) IS REQUIRED WITHIN THE FIRESTOP SYSTEM FOR 2 HR ASSEMBLIES AND MIN 0 IN. (POINT CONTACT) TO MAX 2 IN. IS REQUIRED WITHIN THE FIRESTOP SYSTEM FOR 3 HR ASSEMBLIES. STEEL DUCT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE FOLLOWING SIZES OF STEEL DUCTS MAY BE USED:
A. STEEL DUCT - NOM 32 IN. BY 14 IN. (813 MM BY 356 MM) (OR SMALLER) NO. 22 GAUGE (OR HEAVIER) GALV STEEL DUCT.
B. STEEL DUCT - NOM 30 IN. BY 12 IN. (762 MM BY 305 MM) (OR SMALLER) NO. 24 GAUGE (OR HEAVIER) GALV STEEL DUCT.
3. FIRESTOP SYSTEM - THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
A. PACKING MATERIAL - NOM 1 IN. (25 MM) THICKNESS OF TIGHTLY PACKED MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF CAULK FILL MATERIAL.
B. FILL/VOID OR CAVITY MATERIAL* - CAULK OR SEALANT - MIN 1 IN. (25 MM) THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL ASSEMBLY. AT THE POINT CONTACT LOCATION BETWEEN DUCT AND CONCRETE, A MIN 1/4 IN. (6 MM) DIAM BEAD OF SEALANT SHALL BE APPLIED TO THE CONCRETE/DUCT INTERFACE ON THE TOP SURFACE OF FLOOR AND ON BOTH SURFACES OF WALL ASSEMBLY.
SM COMPANY - CP 25WB+ IC 15WB+ CAULK OR FB-3000 WT SEALANT.
C. RETAINING ANGLES - MIN 16 GAUGE GALV STEEL ANGLES SIZED TO LAP DUCT A MIN OF 2 IN. (51 MM) IN. AND LAP TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL A MIN OF 1 IN. (25 MM). ANGLES ATTACHED TO DUCT WITH MIN 1/2 IN. (13 MM) LONG, NO. 10 (OR LARGER) SHEET METAL SCREWS SPACED A MAX OF 1 IN. (25 MM) FROM EACH END OF DUCT AND SPACED A MAX OF 6 IN. (152 MM) OC.

*BEARING THE UL CLASSIFICATION MARKING

System No. C-AJ-8088
September 07, 2004
F Ratings - 2 Hr
T Rating - 0 Hr



1. FLOOR OR WALL ASSEMBLY - MIN 4-1/2 IN. THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS. MAX AREA OF OPENING IS 144 SQ IN. WITH A MAX DIMENSION OF 18 IN. SEE CONCRETE BLOCKS (CA27) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
2. THROUGH PENETRANTS - METALLIC PIPES, TUBING OR CABLE TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. PENETRANTS TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF PENETRANTS MAY BE USED:
A. METALLIC PIPES - MAX FIVE METALLIC PIPES OR TUBING. THE ANNULAR SPACE BETWEEN UNINSULATED PENETRANT AND PERIPHERY OF OPENING SHALL BE MIN 0 IN. (POINT CONTACT) TO MAX 2-3/4 IN. IN THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR TUBING MAY BE USED:
A1. COPPER TUBING - NOM 3 IN. DIAM (OR SMALLER) TYPE M (OR HEAVIER) COPPER TUBE.
A2. COPPER PIPE - NOM 3 IN. DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
B. TUBE INSULATION - PLASTICS* - NOM 1 IN. THICK ACRYLONITRILE BUTADIENE/POLYVINYL CHLORIDE (AB/PVC) FLEXIBLE FOAM FURNISHED IN THE FORM OF TUBING. THE TUBE INSULATION SHALL BE INSTALLED ON ALL TUBING GREATER THAN NOM 2 IN. DIAM. THE ANNULAR SPACE BETWEEN THE INSULATED PENETRATING ITEM AND UNINSULATED METALLIC PIPES, CONDUIT OR TUBING SHALL BE MIN 0 IN. (POINT CONTACT) TO MAX 1-1/4 IN. THE ANNULAR SPACE BETWEEN THE INSULATED PENETRATING ITEM AND THE PERIPHERY OF THE OPENING SHALL BE MIN 0 IN. (POINT CONTACT) TO MAX 2-3/4 IN. SEE PLASTICS (PM22) CATEGORY IN THE RECOGNIZED COMPONENT DIRECTORY FOR NAMES OF MANUFACTURERS. ANY RECOGNIZED COMPONENT TUBE INSULATION MATERIAL MEETING THE ABOVE SPECIFICATIONS AND HAVING A UL 94 FLAMMABILITY CLASSIFICATION OF 94-SHA MAY BE USED.
C. CABLES - MAX ONE 2/C NO. 18 AWG (OR SMALLER) THERMOSTAT WIRE SPACED MIN 0 IN. (POINT CONTACT) FROM TUBE INSULATION OR MIN 1/2 IN. FROM OTHER PENETRANTS. THE ANNULAR SPACE BETWEEN CABLE AND PERIPHERY OF OPENING IS MIN 0 IN. (POINT CONTACT) TO MAX 2-3/4 IN. CABLE TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.
3. FIRESTOP SYSTEM - THE DETAILS OF THE FIRESTOP SYSTEM SHALL BE AS FOLLOWS:
A. FILL/VOID OR CAVITY MATERIALS* - WRAP STRIP - NOM 1/8 IN. THICK INTUMESCENT MATERIAL SUPPLIED IN 2 IN. WIDE STRIPS. MIN ONE LAYER OF WRAP STRIP WRAPPED AROUND PENETRANTS AND PIPE INSULATION AND SECURED IN PLACE WITH STEEL WIRE OR ALUMINUM FOIL TAPE AND RECESSED WITHIN THE OPENING NOT MORE THAN 2 IN. ABOVE THE BOTTOM OF THE FLOOR. WRAP STRIP REQUIRED AROUND INSULATED PENETRANTS WHICH MAY BE TIGHTLY BUNDLED TOGETHER. WRAP STRIP ALSO REQUIRED TO BE INSTALLED AROUND UNINSULATED PENETRANTS WHEN INSTALLED LESS THAN 1/2 IN. FROM UNINSULATED TUBES OR CABLES. IN SUCH CASES WHERE INSULATED PENETRANT IS AT POINT CONTACT WITH UNINSULATED TUBES OR CABLES, WRAP STRIP TO BE RECESSED BETWEEN INSULATION AND UNINSULATED TUBE OR CABLE BY COMPRESSING INSULATION. WRAP STRIP NOT REQUIRED AROUND INSULATED TUBES INSTALLED 1/2 IN. OR GREATER FROM OTHER PENETRANTS.
SM COMPANY - ULTRA GS
B. PACKING MATERIAL - MIN 3 IN. THICKNESS OF MIN 4 PCF MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
C. FILL/VOID OR CAVITY MATERIALS* - CAULK, SEALANT OR PUTTY - MIN 1/2 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR. MIN 1/2 IN. DIAM BEAD OF FILL MATERIAL APPLIED TO THE PENETRANT/CONCRETE INTERFACE AT THE POINT CONTACT LOCATION ON THE TOP SURFACE OF FLOOR.
SM COMPANY - MP+ STIX PUTTY, CP 25WB+ CAULK OR FB-3000 WT SEALANT.

*BEARING THE UL CLASSIFICATION MARKING

*BEARING THE UL RECOGNIZED COMPONENT MARKING



THROUGH PENETRATION DETAILS

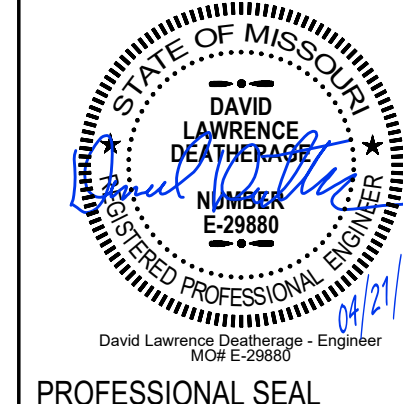
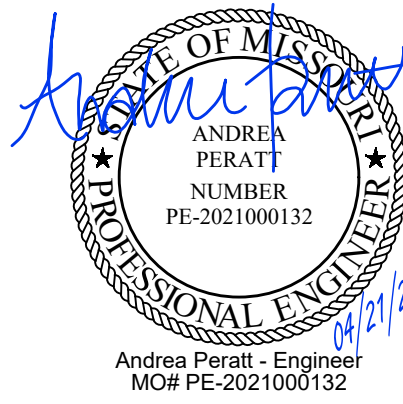


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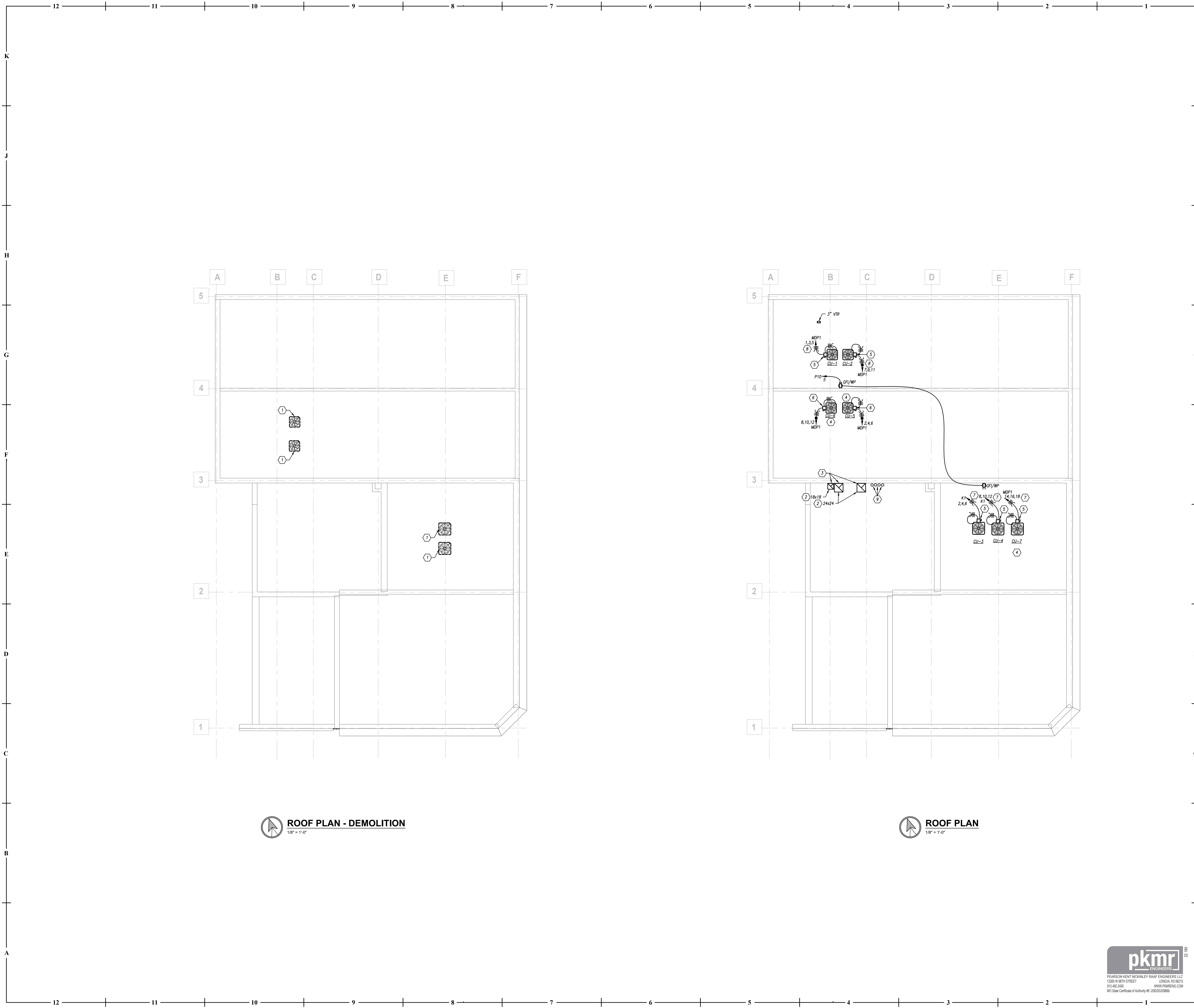


PROFESSIONAL SEAL

MEP002

ISSUE DATE: APRIL 21, 2022
COLLINS WEBB #: 21121

Permit Set



GENERAL ROOF PLAN

NOTES

1. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.
2. MAINTAIN CODE-REQUIRED DISTANCES FOR ALL VENTS, EXHAUSTS, ETC. FROM MECHANICAL EQUIPMENT OUTSIDE AIR INTAKES.
3. ALL ELECTRICAL EQUIPMENT AND DEVICES SHALL BE MOUNTED A MINIMUM OF 36" ABOVE THE ROOF ON SUITABLE STEEL SUPPORTS UNLESS OTHERWISE NOTED.

ROOF PLAN KEYED NOTES

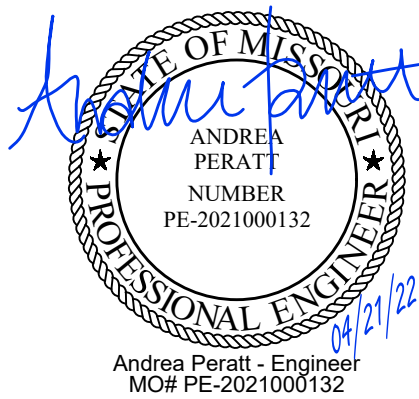
1. CONTRACTOR TO FIELD VERIFY LOCATION AND REMOVE EXISTING CONDENSING UNITS. REUSE EXISTING LOCATIONS. REFRIGERANT PIPE PENETRATIONS AND ACCESSORIES OF CONDENSING UNITS SERVING SECOND FLOOR. REFER TO NEW WORK PLAN.
2. DISHWASHER, GREASE AND MAKE-UP AIR DUCT FROM/ TO FIRST FLOOR TO/ FROM 2ND FLOOR ROOF.
3. CAP DUCTWORK ON ROOF FOR FUTURE USE.
4. CONDENSING UNIT SERVING 2ND FLOOR TO BE INSTALLED IN EXISTING LOCATION.
5. 60AMP, 3-POLE, NON-FUSED HEAVY-DUTY DISCONNECT SWITCH IN NEMA 3R ENCLOSURE.
6. 30AMP, 3-POLE, NON-FUSED HEAVY DUTY DISCONNECT SWITCH IN NEMA 3R ENCLOSURE.
7. (3) #6 WIRE AND (1) #10 GROUND IN 3/4" CONDUIT.
8. (3) #8 WIRE AND (1) #10 GROUND IN 3/4" CONDUIT.
9. CONDUIT PENETRATIONS FOR FUTURE MECHANICAL EQUIPMENT. REFER TO SHEET E111 FOR ADDITIONAL INFORMATION.

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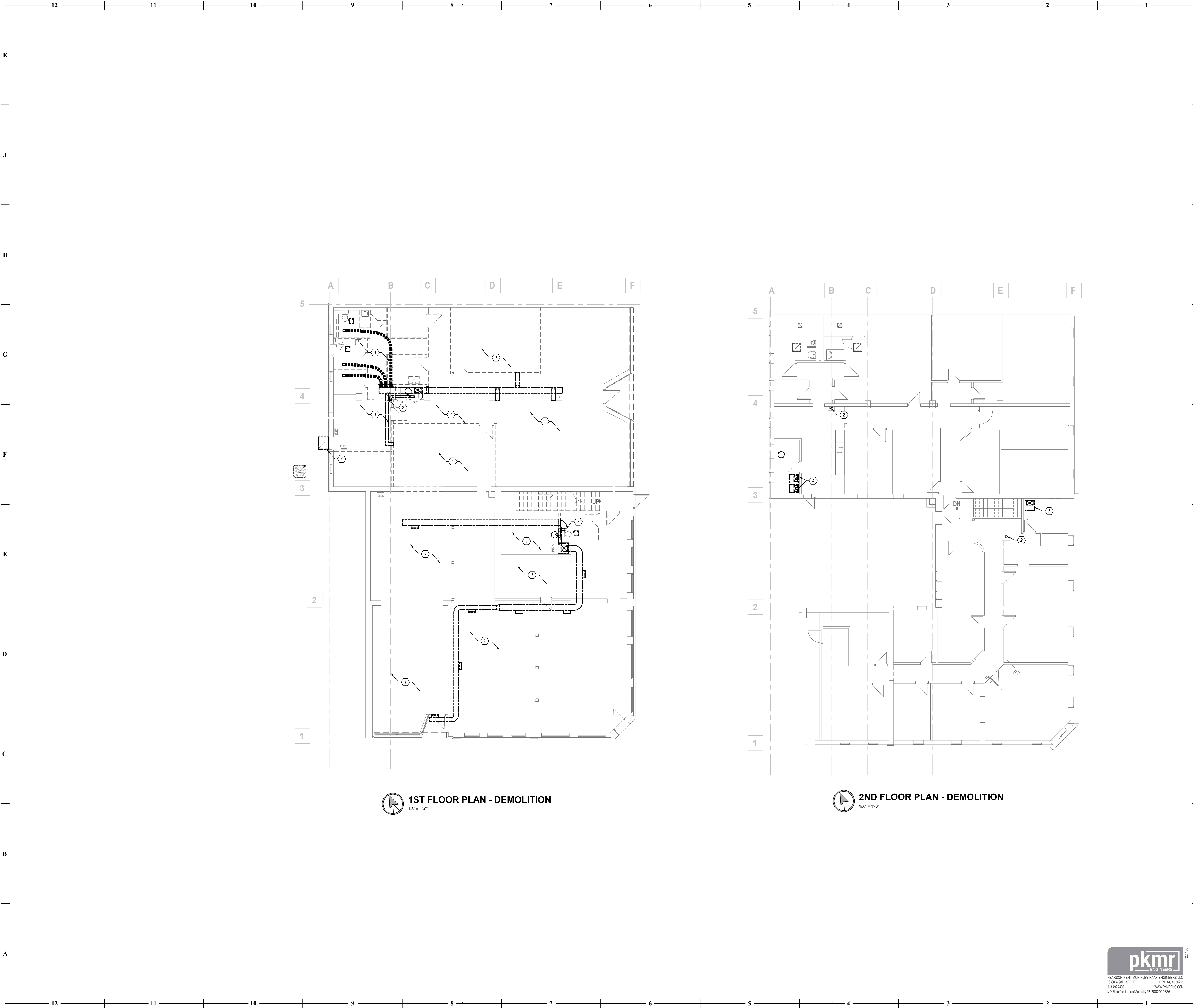
PROFESSIONAL SEAL

MEP101

ISSUE DATE: APRIL 21, 2022
COLLINS WEBB #: 21121

ROOF PLAN





GENERAL DEMOLITION NOTES

1. REFER TO GENERAL DEMOLITION NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.

DEMOLITION PLAN KEYED NOTES

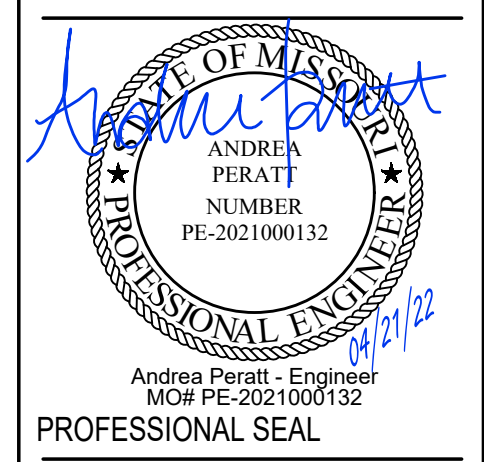
- 1. REMOVE ALL DUCTWORK, DIFFUSERS AND EQUIPMENT IN THIS AREA. PATCH/ REPAIR WALL/ CEILING IF REQUIRED. REFER TO NEW WORK PLAN.
- 2. REMOVE VERTICAL FLUE DUCT GOING THROUGH SECOND FLOOR TO ROOF. REFER TO NEW WORK PLAN.
- 3. REMOVE EXISTING FURNACE. KEEP ALL DUCTWORK, FLUE AND ACCESSORIES. CLEAN RETURN PLENUM, GRILLE AND PROVIDE NEW FILTERS. PREPARE DUCTWORK FOR NEW FURNACE INSTALLATION. REFER TO NEW WORK PLAN.
- 4. REMOVE EXISTING WEATHER HOOD AND INTAKE OPENING. PATCH AND REPAIR OPENING WITH CONSTRUCTION MATERIALS TO MATCH EXISTING CONDITIONS. REFER TO ARCHITECT.

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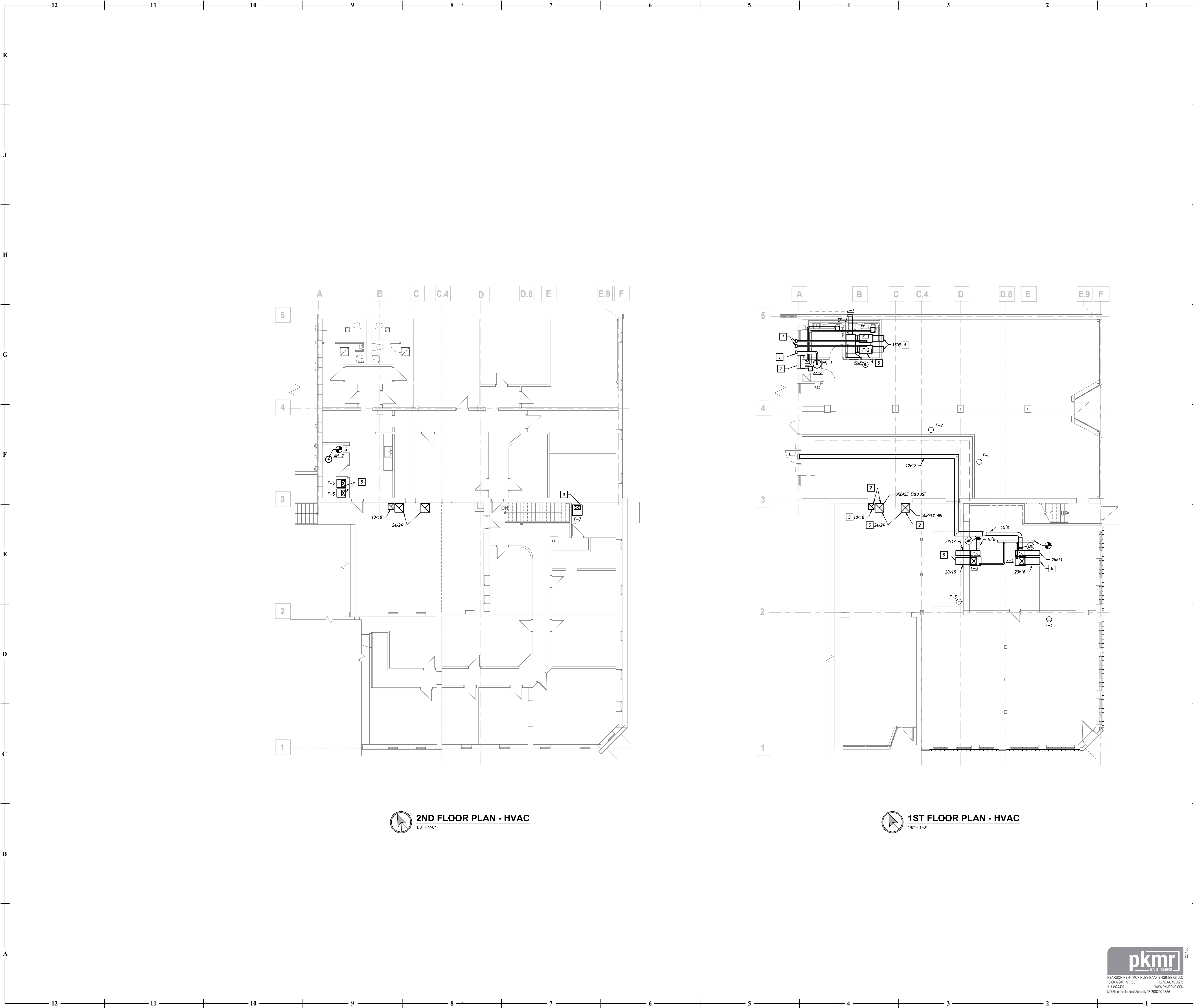
M011
ISSUE DATE: APRIL 21, 2022
COLLINS WEBB #: 21121

DEMOLITION - FLOOR PLANS



Permit Set





GENERAL HVAC NOTES

1. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.
2. ROUND BRANCH DUCT RUNOUTS AND FLEXIBLE DUCT SHALL BE THE SAME SIZE AS THE DIFFUSER NECK UNLESS NOTED OTHERWISE.
3. MAXIMUM FLEXIBLE DUCT LENGTH SHALL BE 5'-0".
4. ALL RUNOUTS TO TERMINAL BOXES SHALL BE ONE SIZE LARGER THAN BOX INLETS UNLESS NOTED OTHERWISE.
5. ALL AIR DISTRIBUTION DEVICES SHALL HAVE LOCKABLE VOLUME CONTROL DEVICES.
6. ALL 90 DEGREE TURNING ELBOWS SHALL BE SMOOTH ROUND OR SQUARE WITH TURNING VANES.
7. DUCT SIZES SHOWN ON PLANS ARE INSIDE FREE AREA.
8. PROVIDE ACCESS DOORS IN DUCTS AHEAD OF ALL AUTOMATIC FIRE AND SMOKE DAMPERS.
9. FOR BALANCING THE OUTSIDE AIRFLOW QUANTITIES, REFER TO HVAC SCHEDULES.

HVAC PLAN KEYED NOTES

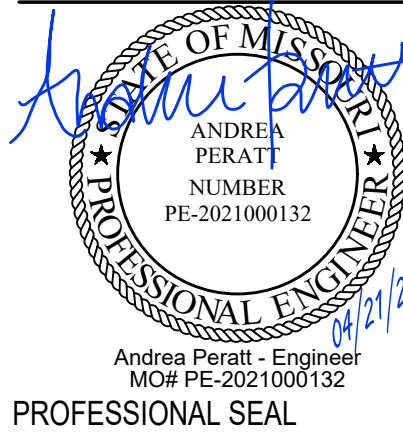
1. TERMINATE 4"Ø FLUE/VENT WITH PRINTABLE WALL CAP. REFER TO DETAIL.
2. DISHWASHER, GREASE AND MAKE-UP AIR DUCT CAPPED IN SPACE FOR FUTURE USE.
3. DISHWASHER AND GREASE DUCT FROM FIRST FLOOR TO 2ND FLOOR ROOF. DUCT TO BE ROUTED ON EXTERIOR WALL AND CAPPED OVER 2ND FLOOR ROOF. REFER TO ROOF PLAN.
4. CAP SPIRAL DUCTWORK IN SPACE. ROUTE DUCTWORK RIGHT TO STRUCTURE.
5. FURNACES TO BE INSTALLED ABOVE TOILET. REFER TO DETAIL FOR INSTALLATION.
6. SUPPLY AND RETURN AIR DUCTWORK ROUTED THROUGH STRUCTURAL WALL. BOTTOM OF DUCT TO BE ROUTED AT 10'-0" A.F.F. COORDINATE PENETRATIONS WITH STRUCTURE.
7. ROUTE GENERAL EXHAUST TO PLENUM ON BACKSIDE OF EXISTING LOUVER. PLENUM TO MATCH EXISTING SIZE OF LOUVER. REFER TO DETAIL.
8. REPLACE EXISTING FURNACES, CONNECT TO EXISTING DUCTWORK, FLUES, ELECTRICAL AND CONDENSATE.
9. REPLACE EXISTING WATER HEATER TO CONNECT INTO EXISTING FLUES.

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MECHANICAL - FLOOR PLANS



Permit Set



EXHAUST FAN SCHEDULE

PLAN MARK	MANUFACTURER	MODEL NUMBER	TYPE	SERVICE	CFM	E.S.P. (IN)	BHP	HP	DRIVE	SONES	RPM	ELECTRICAL	CONTROL	REMARKS
EF-1	COOK	GC-146	CEILING CABINET	BATHROOM	90	0.250	----	36W	DIRECT	1.3	900	120V / 1PH	SWITCH	ALL
EF-2	COOK	GC-146	CEILING CABINET	BATHROOM	90	0.250	----	36W	DIRECT	1.3	900	120V / 1PH	SWITCH	ALL
EF-3	COOK	GC-146	CEILING CABINET	BATHROOM	90	0.250	----	36W	DIRECT	1.3	900	120V / 1PH	SWITCH	ALL

REMARKS:

- UNIT SHALL BE PROVIDED WITH SOLID STATE SPEED CONTROL MOUNTED AT FAN.
- PROVIDE WITH STARTER AND WIRE TO START SWITCH.

FURNACE SCHEDULE

PLAN MARK	MANUFACTURER	MODEL NUMBER	CFM	O.A. CFM	FAN DATA		HEATING			ELECTRICAL				REMARKS
					E.S.P. (IN)	HP	CAPACITY (MBH)	INPUT (MBH)	OUTPUT (MBH)	EFF.	VOLTS / PH	M.C.A.	M.O.C.P.	
F-1	LENNOX	SL297UH090V48B	1,400	210	0.5"	1/2	45.0	110.0	106.7	97.0%	120V / 1PH	12.0	20	2
F-2	LENNOX	SL297UH090V48B	1,400	210	0.5"	1/2	45.0	110.0	106.7	97.0%	120V / 1PH	12.0	20	2
F-3	LENNOX	SL280UH135V60D	1,990	299	0.5"	1	60.0	165.0	132.0	80.0%	120V / 1PH	12.0	20	1
F-4	LENNOX	SL280UH135V60D	1,990	299	0.5"	1	60.0	165.0	132.0	80.0%	120V / 1PH	12.0	20	1
F-5	LENNOX	SL280UH090V36B	1,200	180	0.5"	1/2	36.0	110.0	88.0	80.0%	120V / 1PH	12	15	1
F-6	LENNOX	SL280UH090V36B	1,200	180	0.5"	1/2	36.0	110.0	88.0	80.0%	120V / 1PH	12	15	1
F-7	LENNOX	SL280UH135V60D	1,990	299	0.5"	1	60.0	165.0	132.0	80.0%	120V / 1PH	12	20	1

REMARKS:

- STANDARD EFFICIENCY FURNACE.
- HIGH EFFICIENCY FURNACE. PROVIDE WITH MANUFACTURER'S VERTICAL DISCHARGE KIT. REFER TO DETAIL.

CONDENSING UNIT SCHEDULE

PLAN MARK	MANUFACTURER	MODEL NUMBER	CAPACITY (MBH)	MINIMUM SEER	AMBIENT TEMP. (°F)	ELECTRICAL			REMARKS
						VOLTS / PH	M.C.A.	M.O.C.P.	
CU-1	LENNOX	16ACX-048-230	45.0	15.0	105°	208V / 3PH	29.0	40	ALL
CU-2	LENNOX	16ACX-048-230	45.0	15.0	105°	208V / 3PH	29.0	40	ALL
CU-3	LENNOX	16ACX-060-230	60.0	15.5	105°	208V / 3PH	36.0	50	ALL
CU-4	LENNOX	16ACX-060-230	60.0	15.5	105°	208V / 3PH	36.0	50	ALL
CU-5	LENNOX	16ACX-036-230	36.0	16.0	105°	208V / 3PH	21.0	30	ALL
CU-6	LENNOX	16ACX-036-230	36.0	16.0	105°	208V / 3PH	21.0	30	ALL
CU-7	LENNOX	16ACX-060-230	60.0	15.5	105°	208V / 3PH	36.0	50	ALL

REMARKS:

- COOLING CAPACITY BASED ON A SUCTION TEMPERATURE OF 49°F.
- ENERGY-STAR COMPLIANT.
- PROVIDE WITH 3-1/2" CONCRETE PAD.

LOUVER SCHEDULE

PLAN MARK	QTY.	MANUFACTURER	MODEL NUMBER	STYLE	SERVICE	WIDTH (IN)	HEIGHT (IN)	APD (IN)	FREE AREA (SQ FT)	VELOCITY (FPM)	REMARKS
L-1	2	GREENECK	EDJ-401	STATIONARY	INTAKE	14	14	0.006	0.3	200	ALL

REMARKS:

- PROVIDE EXTENDED SILL AND MOUNTING FRAME TO MATCH CONSTRUCTION. COORDINATE EXACT LOUVER SIZE TO INSTALL WITHIN MASONRY DIMENSIONS.
- PROVIDE COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS.

GRILLE, REGISTER & DIFFUSER SCHEDULE

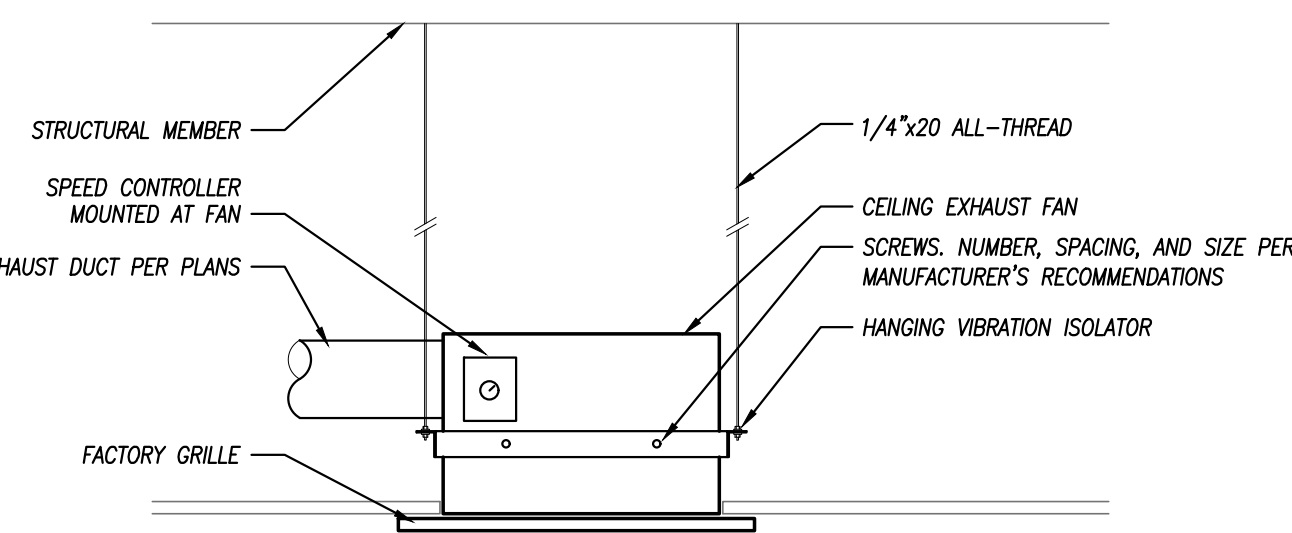
PLAN MARK	MANUFACTURER	MODEL NUMBER	MATERIAL	STYLE	DESCRIPTION	MOUNT TYPE	FACE SIZE (IN)	NECK SIZE (IN)	VOLUME DAMPER	MAX APD (IN. WG.)	MAX NC.	FINISH COLOR	REMARKS
RT	TITUS	350FLF2	STEEL	SQUARE WALL	35 DEG SINGLE DEFLECTION AEROBLADE 3/4" SPACING	WALL	AS INDICATED	AS INDICATED	NO	0.08	25	WHITE	ALL

GENERAL REMARKS:

- PROVIDE ALL GRD WITH ALL NECESSARY MOUNTING HARDWARE.
- PROVIDE GRD WITHOUT SCREWBOLTS WHEN INSTALLED IN JAY-IN CEILINGS
- VERIFY CEILING CONFIGURATION, COLOR AND SPECIFICS WITH ARCHITECTURAL CEILING PLANS.

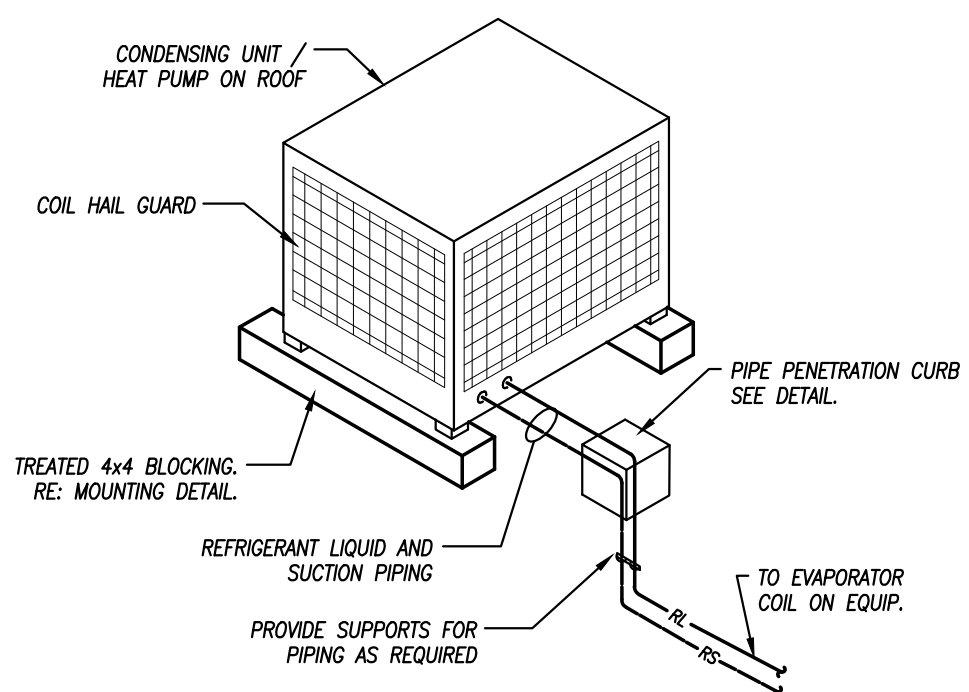
NOTES:

- PROVIDE WITH FILTERED GRILLE. PROVIDE WITH MERV 8 2" FILTER TO FIT WITHIN GRILLE ASSEMBLY



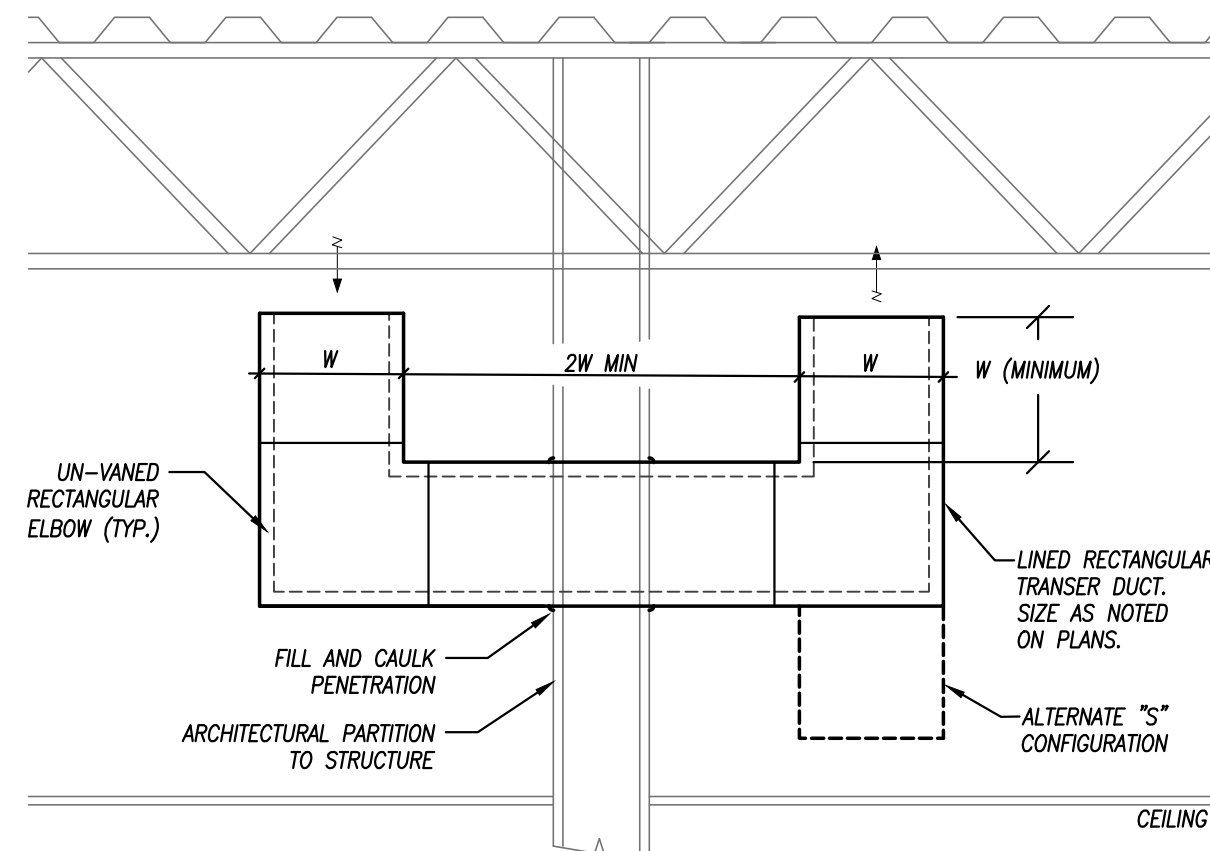
CABINET EXHAUST FAN MOUNTING DETAIL

NOT TO SCALE



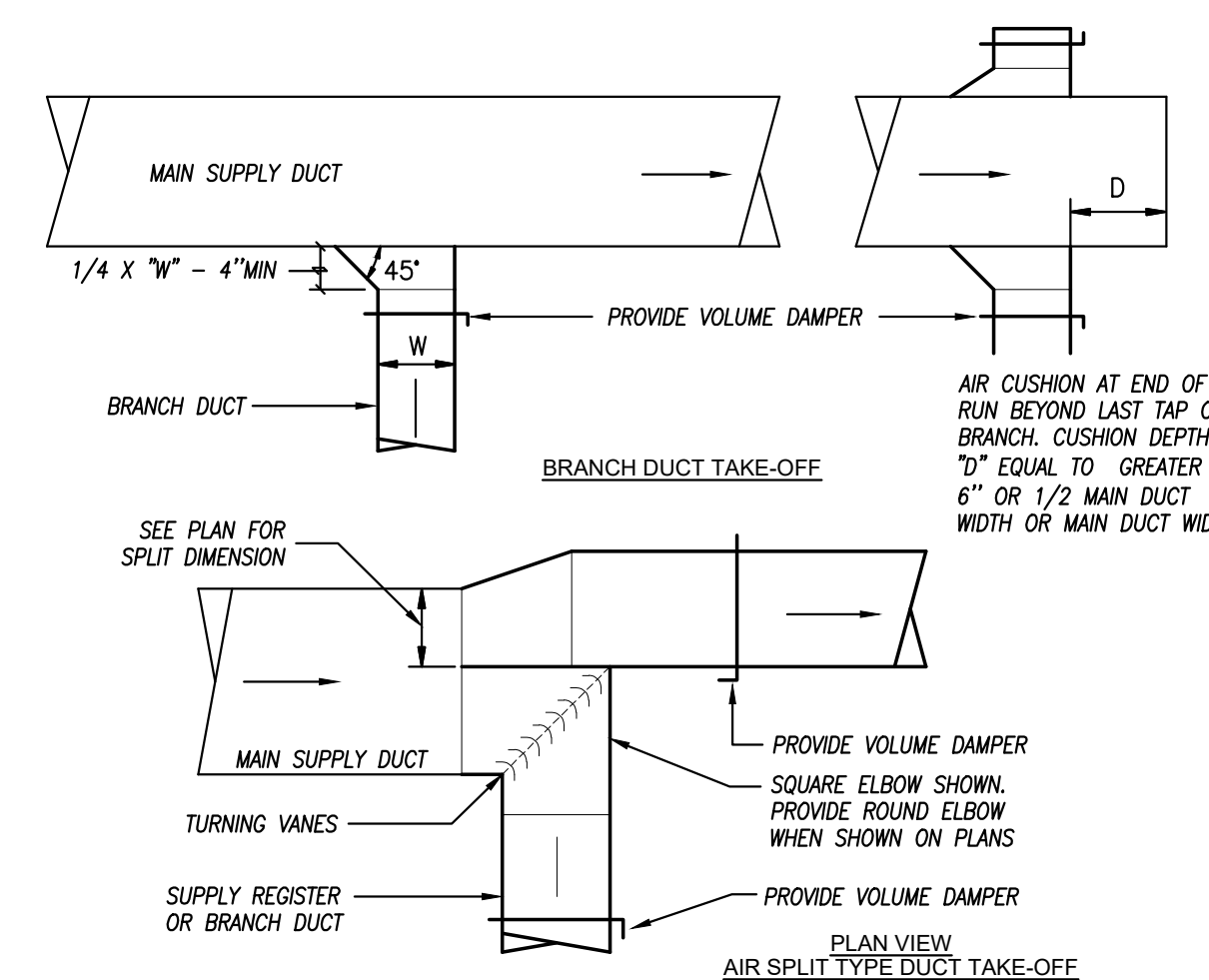
CONDENSING UNIT / HEAT PUMP DETAIL

NOT TO SCALE



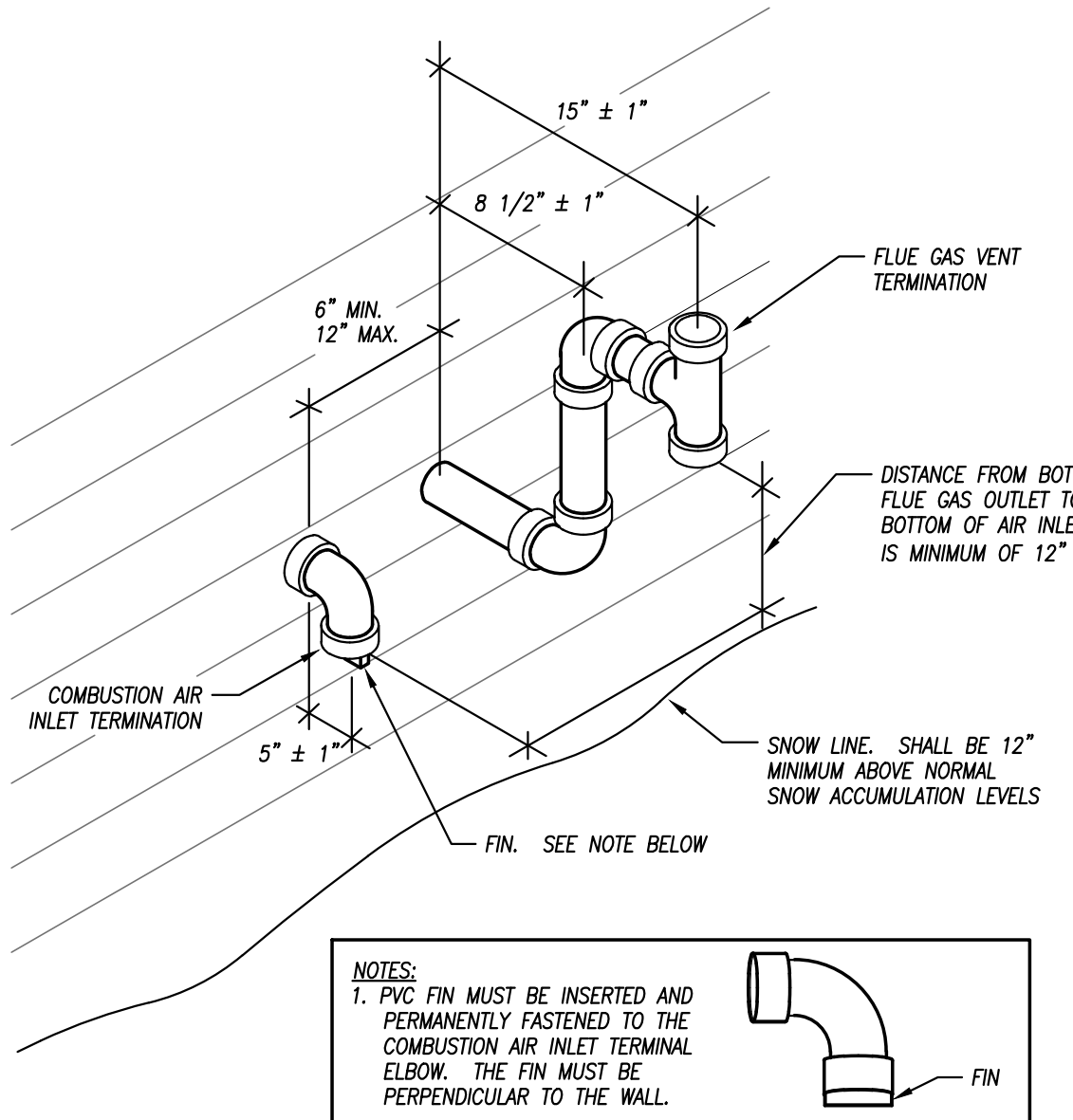
TRANSFER BOOT DETAIL

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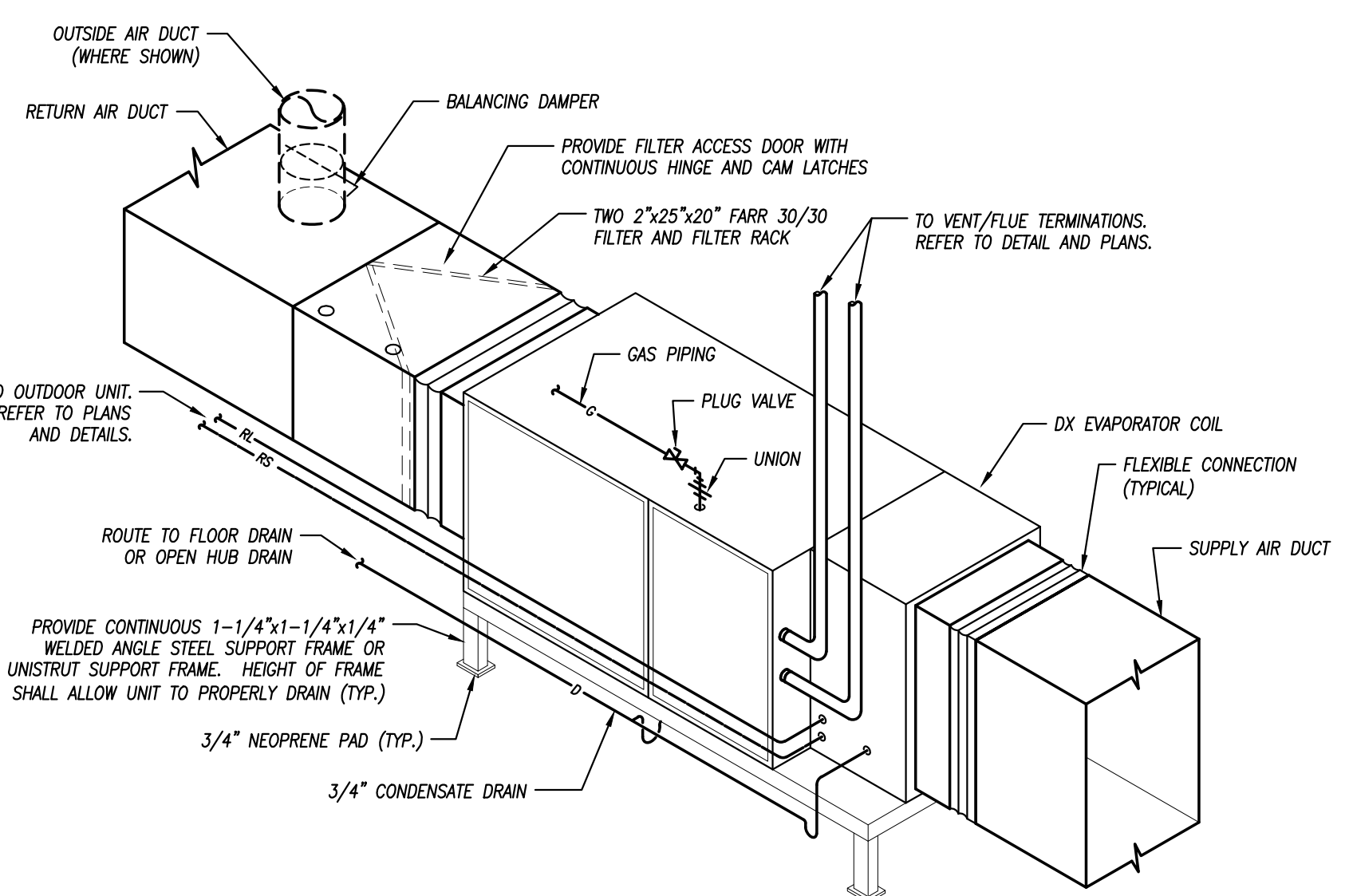
DUCTWORK TAKEOFFS

NOT TO SCALE



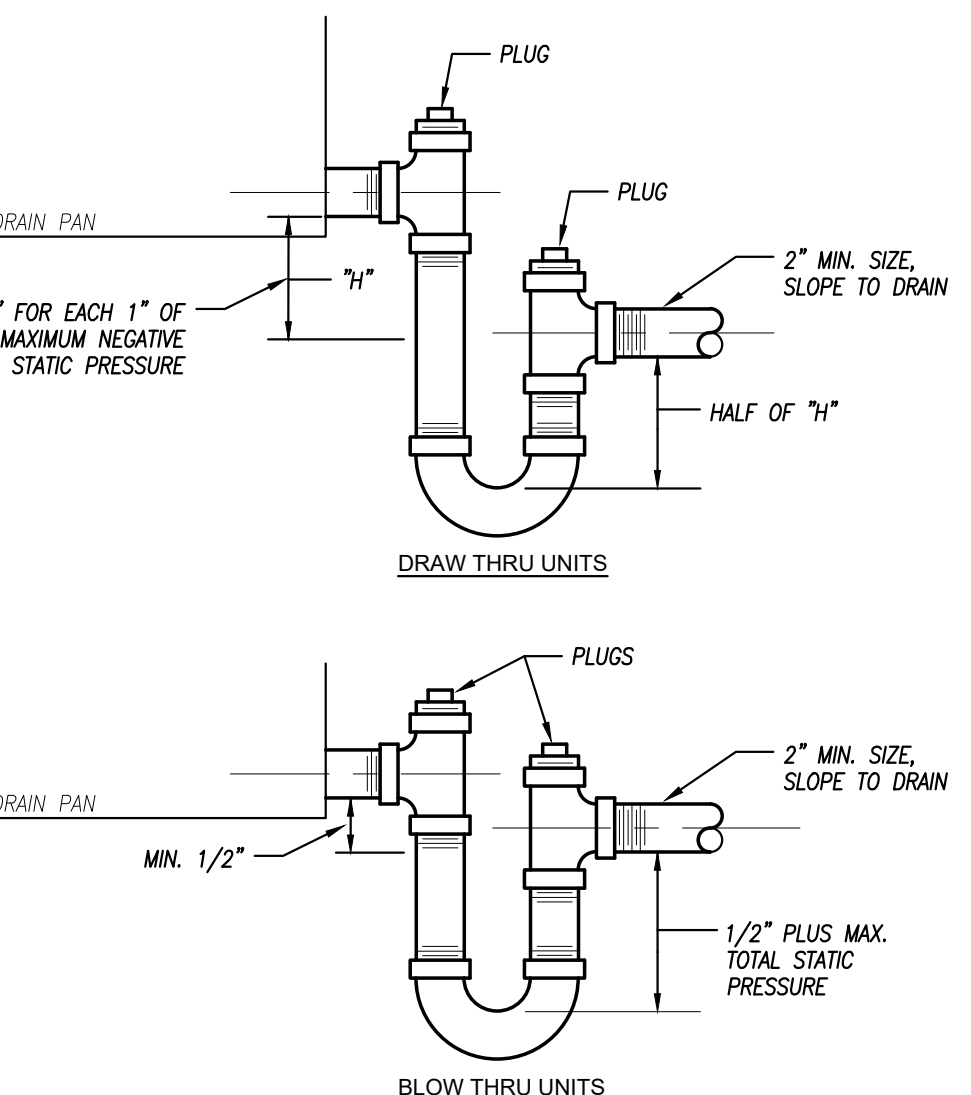
WALL VENT/COMBUSTION AIR DETAIL

NOT TO SCALE



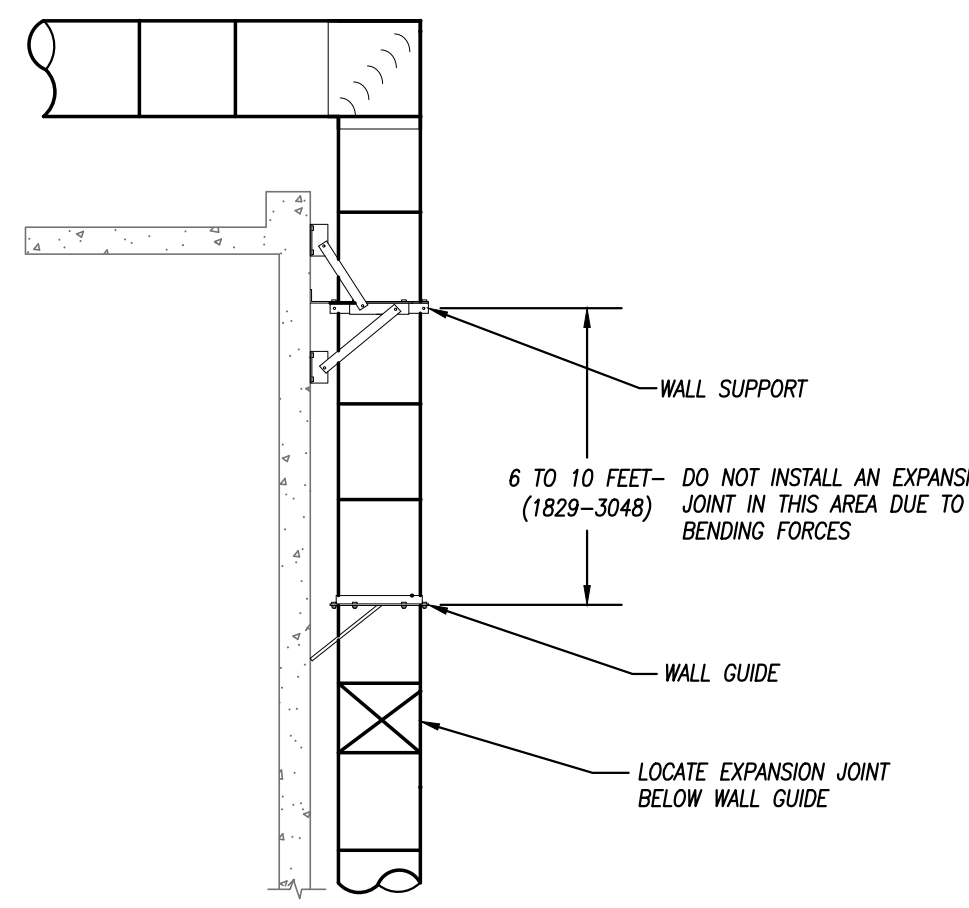
HORIZONTAL FURNACE DETAIL

NOT TO SCALE



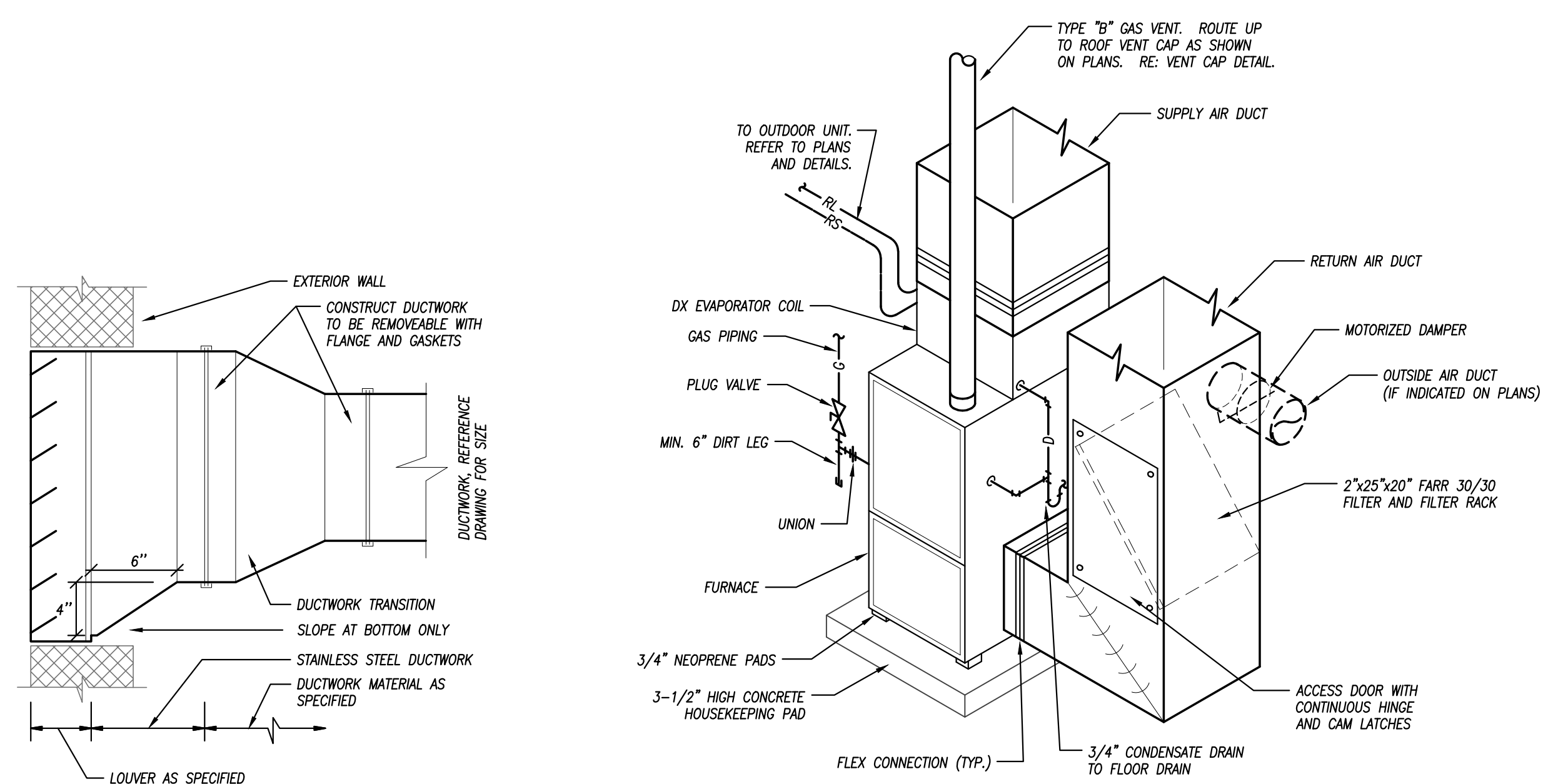
CONDENSATE TRAP DETAIL

NOT TO SCALE



GREASE DUCT ON WALL DETAIL

NOT TO SCALE



FURNACE DETAIL

NOT TO SCALE

DUCTWORK AT LOUVER

NOT TO SCALE

HVAC PIPING MATERIAL SCHEDULE

SYSTEM	SIZE	TYPE/SCHED	MATERIAL	ACCEPTABLE FITTINGS	FIELD TEST PRESSURE/TIME	ALLOWABLE IN PLENUMS	INSULATION
CONDENSATE DRAIN INTERIOR	3/4" - 2"	SCH. 40	CVC	SOLVENT JOINED	10 FT - 1/2HR	YES	FIBERGLASS W/ ASJ 1/2" (PLENUM ONLY)
CONDENSATE DRAIN INTERIOR	1/2" - 2"	L	COPPER	SOLDER, PRO-PRESS	10 FT - 1/2HR	YES	FIBERGLASS W/ ASJ 1/2" (PLENUM ONLY)
REFRIGERANT LINES	1/2" - 2"	ACR	COPPER	BRAZED		YES	ELASTOMERIC 3/4"

NOTES:

- ALL PIPING AND MATERIALS IN PLENUMS MUST MEET ASTM E84 FLAME/SMOKE RATING OF 25/50.
- ALL INSULATION THICKNESSES SHALL MEET ASHRAE 90.1 - 2007 REQUIREMENTS AT A MINIMUM.
- REFER TO SPECIFICATIONS FOR MORE DETAILED INFORMATION.

DUCTWORK INSULATION SCHEDULE

PURPOSE	DUTY	LOCATION	STYLE	MATERIAL	INSULATION	APPLICATION	THICKNESS	NOTES
SUPPLY		CONCEALED	RECTANGULAR	FIBERGLASS	LINED		1/2"	----
		CONCEALED	ROUND	MINERAL FIBER	WRAPPED		1-1/2"	----
		EXPOSED	RECTANGULAR	FIBERGLASS	LINED		1/2"	----
		EXPOSED	ROUND	PRE-FORMED FIBERGLASS W/ASJ-PT	WRAPPED		2"	----
		EXPOSED	ROUND	FIBERGLASS	NONE	LINED	1"	3
		UNCONDITIONED ATTICS (CZ 1-4)	ALL	FIBERGLASS & MINERAL FIBER	LINED & WRAPPED (R-8 MIN)		1/2" & 2.2"	6
		UNCONDITIONED ATTICS (CZ 5-8)	ALL	FIBERGLASS & MINERAL FIBER	LINED & WRAPPED (R-12 MIN)		1" & 3"	6
RETURN		CONCEALED	RECTANGULAR	FIBERGLASS	LINED		1/2"	----
		CONCEALED	ROUND	MINERAL FIBER	WRAPPED		1-1/2"	----
		EXPOSED	RECTANGULAR	FIBERGLASS	LINED		1/2"	----
		EXPOSED	ROUND	FIBERGLASS	NONE			----
		RETURN/TRANSFER BOOT	RECTANGULAR	FIBERGLASS	LINED		1/2"	----
		UNCONDITIONED ATTICS (CZ 1-4)	ALL	FIBERGLASS & MINERAL FIBER	LINED & WRAPPED (R-8 MIN)		1/2" & 2.2"	6
		UNCONDITIONED ATTICS (CZ 5-8)	ALL	FIBERGLASS & MINERAL FIBER	LINED & WRAPPED (R-12 MIN)		1" & 3"	6
EXHAUST		CONCEALED	RECTANGULAR	FIBERGLASS	LINED		1/2"	----
		CONCEALED	ROUND	FIBERGLASS	WRAPPED		1/2"	----
		EXPOSED	RECTANGULAR	FIBERGLASS	LINED		1/2"	----
		EXPOSED	ROUND	FIBERGLASS	LINED		1"	1,3
		UNCONDITIONED ATTICS	ALL	MINERAL FIBER	WRAPPED		1-1/2"	----
		GREASE HOOD EXHAUST	ALL	UL LISTED FIRE RATED WRAP SYSTEM				----
		DISHWASHER EXHAUST	ALL	UL LISTED FIRE RATED WRAP SYSTEM				----
OUTSIDE AIR		CONCEALED OR MECH. SPACE	RECTANGULAR	MINERAL FIBER	WRAPPED		1-1/2"	----
		CONCEALED OR MECH. SPACE	ROUND	MINERAL FIBER	WRAPPED		1-1/2"	----
		EXPOSED (NON MECH SPACE)	RECTANGULAR	RIGID FIBERGLASS BD. W/ASJ-PT	WRAPPED		1-1/2"	2
		EXPOSED (NON MECH SPACE)	ROUND	PRE-FORMED FIBERGLASS W/ASJ-PT	WRAPPED		2"	3

NOTES:

- PROVIDE LINER ONLY WITHIN 10' OF FAN FOR ACOUSTICS.
- THICKNESS SHALL ENCAPSULATE DUCT CONSTRUCTION.
- CONTRACTOR OPTION TO USE ROUND DUCT LINER OR PROVIDE PERFORATED LINER DOUBLE WALL DUCT (SOLID LINER FOR OUTSIDE AIR DUCTS).
- IN ADDITION TO OTHER SCHEDULED INSULATION.
- INSTALL FROM UNIT DISCHARGE TO FIRST DUCT ELBOW, THEN 10' FURTHER. NOT REQUIRED INSIDE CHASES OR MECHANICAL ROOMS. BUT SHALL BE INSTALLED ON REMAINING DUCTWORK WHEN 10' DIMENSION FALLS OUTSIDE ROOM.
- PROVIDE ALUMINUM JACKETING OVER EXTERIOR DUCTWORK INSULATION.

GENERAL REMARKS (APPLICABLE TO ALL TYPES):

- ALL DUCTWORK, INSULATION AND MATERIALS IN PLENUMS MUST MEET ASTM E84 FLAME/SMOKE RATING OF 25/50.
- ALL INSULATION THICKNESSES SHALL MEET ASHRAE 90.1 - 2016 REQUIREMENTS AT A MINIMUM.
- REFER TO SPECIFICATIONS FOR MORE DETAILED INFORMATION FOR INSULATION PRODUCTS AND SYSTEMS.



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MECHANICAL - SCHED. /DETAILS



PLANS/KENT MCKINLEY RAAF ENGINEERS LLC
1350 W 96TH STREET
LEWISIA, KS 66025
913.482.2400
WWW.PKMRENGINEERS.COM
MO State Certificate of Authority #E-000020886

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GENERAL DEMOLITION NOTES

1. REFER TO GENERAL DEMOLITION NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.


DEMOLITION PLAN KEYED NOTES

1. REMOVE ALL DOMESTIC COLD WATER, HOT WATER, SANITARY & VENT PIPE SERVING FIRST FLOOR FIXTURES AND EQUIPMENT. DO NOT DEMOLISH SANITARY PIPES FROM SECOND FLOOR. REFER TO NEW WORK PLAN.

2. GAS PIPE SERVING FIRST FLOOR TO BE REMOVED.

3. EXISTING WATER HEATER TO BE REPLACED ON SAME LOCATION. REUSE ALL EXISTING PIPES AND ACCESSORIES. REFER TO NEW WORK PLAN.

4. EXISTING FURNACE TO BE REPLACED ON SAME LOCATION. RECONNECT EXISTING GAS AND PROVIDE NEW CONDENSATE DRAIN PIPE.



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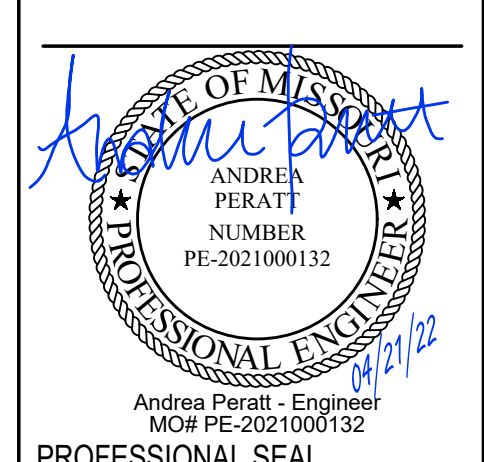
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Andreea Peratt - Engineer
MOW PE-2021000132
04/11/22

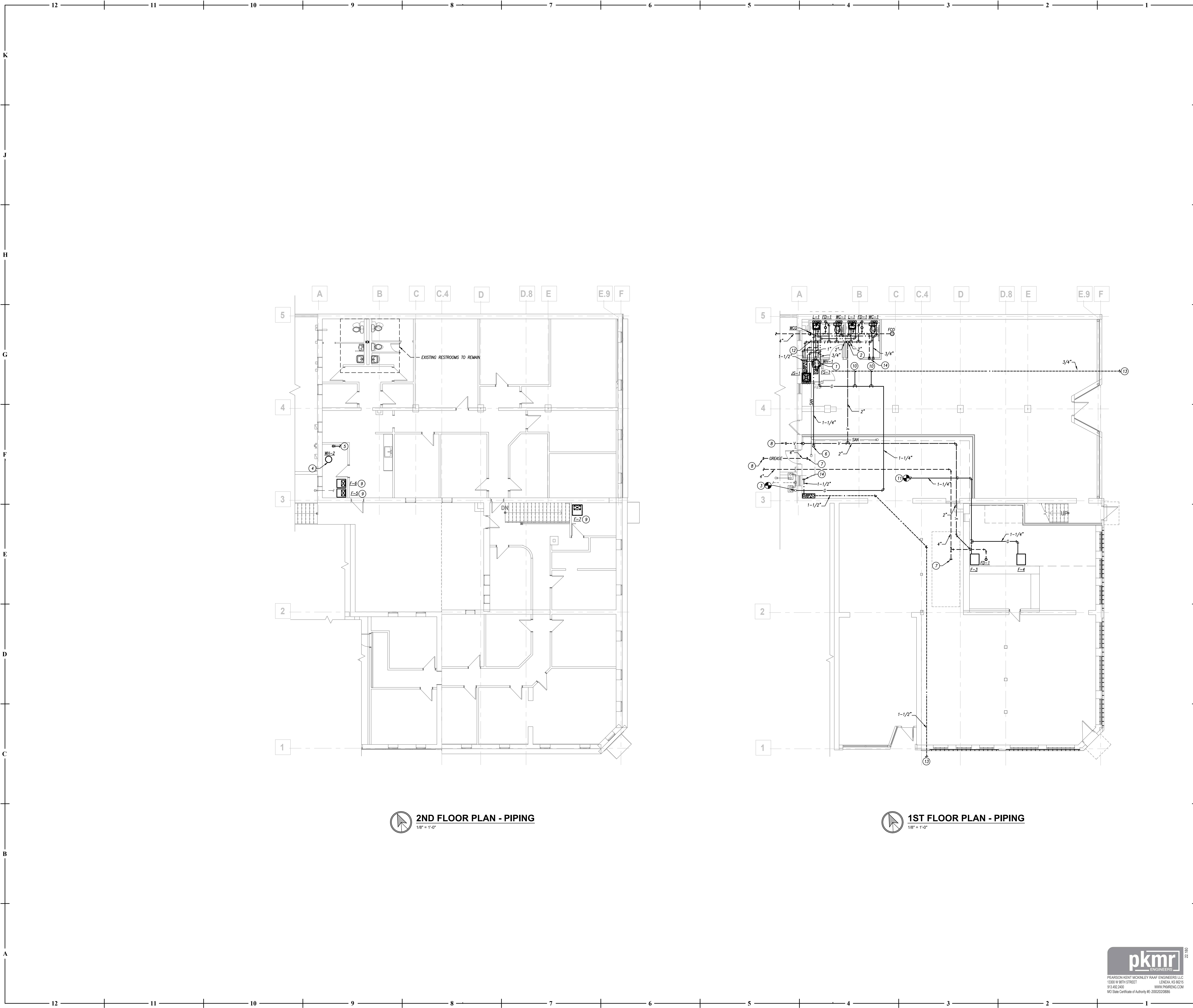
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PEARSON KENT MCKINLEY RAAP ENGINEERS, LLC
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MO State Certificate of Authority #E-0002020886

DEMOLITION - FLOOR PLANS



2ND FLOOR PLAN - PIPING
1/8" = 1'-0"

1ST FLOOR PLAN - PIPING
1/8" = 1'-0"

GENERAL PLUMBING NOTES

1. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.
2. REFER TO PLUMBING FIXTURE / DRAIN SCHEDULES FOR PIPING SIZES FOR INDIVIDUAL CONNECTIONS TO FIXTURES AND RISERS NOT SHOWN ON PLANS.
3. NO SANITARY OR VENT PIPING BELOW GRADE SHALL BE LESS THAN 2'.
4. NO DOMESTIC WATER PIPING SHALL BE SMALLER THAN 3/4" UNLESS NOTED OTHERWISE.
5. ALL VENT PIPING SHOWN IS DIAGRAMMATIC. USE APPROPRIATE FITTINGS FOR VENT PIPING BELOW FLOOD SIM OF FIXTURE.
6. NOT ALL INTERIOR CLEANOUTS ARE SHOWN FOR DRAWING CLARITY. CONTRACTOR SHALL INSTALL ALL CODE-REQUIRED CLEANOUTS (RE: GENERAL NOTES ON COVER SHEET). COORDINATE EXACT LOCATIONS OF CLEANOUTS WITH ARCHITECT.
7. ALL FLOOR DRAIN TRAPS SHALL BE PROTECTED BY ONE OF THE FOLLOWING METHODS, TO BE INSTALLED AT CONTRACTOR'S DISCRETION AND IN COMPLIANCE WITH ADOPTED VERSION OF PLUMBING CODE AND/OR ANI.
 - 7.1. PROVIDE TRAP SEALS LISTED FOR PROPOSED USE.
 - 7.2. PROVIDE TRAP PRIMERS. 1/2" TRAP PRIMER PIPING TO NEAREST TRAP PRIMER VALVE. PIPING SHALL BE TYPE "K" SOFT COPPER SEAMLESS WITH NO JOINTS FROM VALVE TO DRAIN.

PLUMBING PLAN KEYED NOTES

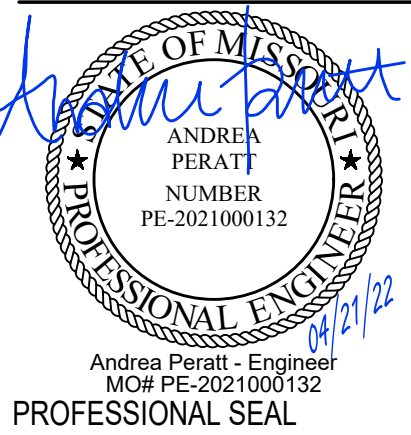
1. INSTALL WATER HEATER NEXT TO JANITOR'S SINK.
2. 3" VENT THROUGH CHASE ON 2ND FLOOR TO ROOF. TERMINATE VENT 10' CLEAR FROM ANY OUTSIDE AIR INTAKE.
3. CONNECT TO EXISTING GAS MAIN FOR NORTH/SECOND FLOOR TENANT. CONTRACTOR SHALL FIELD VERIFY GAS PIPE ROUTING AND SIZING PRIOR TO NEW SCOPE OF WORK.
4. NEW WATER HEATER. RECONNECT WATER HEATER TO EXISTING PLUMBING. PROVIDE NEW PIPE/PIPE FITTING IF REQUIRED.
5. 3/4" DOMESTIC WATER PIPE UP FROM FLOOR BELOW. CONNECT TO EXISTING COLD WATER MAIN TO SERVE ALL 2ND FLOOR PLUMBING FIXTURES AND EQUIPMENT. CONTRACTOR TO VERIFY LOCATION OF EXISTING PIPE.
6. 3/4" COLD WATER PIPE TO 2ND FLOOR.
7. PIPE TO BE CAPPED FOR FUTURE TENANT USE. PIPING TO BE 36" BELOW FINISH GRADE FOR FUTURE TENANT USE.
8. UNDERGROUND GREASE AND VENT TO BE CAPPED OUTSIDE FOR FUTURE GREASE INTERCEPTOR.
9. RECONNECT EXISTING GAS TO FURNACES. PROVIDE NEW CONDENSATE DRAIN AND TERMINATE TO NEAREST FLOOR DRAIN.
10. GAS PIPE FOR FURNACE F-1 AND F-2 RESPECTIVELY. REFER TO DETAIL FOR CONNECTION.
11. CONNECT TO EXISTING GAS MAIN FOR SOUTH TENANT. CONTRACTOR SHALL FIELD VERIFY GAS PIPE ROUTING AND SIZING PRIOR TO NEW SCOPE OF WORK.
12. CONNECT EXISTING SANITARY LINE FROM SECOND FLOOR EXISTING PIPING TO REMAIN. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK.
13. REFER TO CIVIL FOR CONTINUATION.
14. CAP PLUMBING PIPING FOR FUTURE TENANT BUILD OUT.

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PLUMBING - FLOOR PLANS



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PIPING MATERIAL & INSULATION SCHEDULE

PIPING SYSTEM	SIZE	TYPE/SCHED	MATERIAL	ACCEPTABLE FITTINGS	FIELD TEST PRESSURE/TIME	ALLOWABLE IN PLENUMS	INSULATION TYPE	THICKNESS
DOMESTIC COLD WATER	1/2"-2-1/2"	L	COPPER	SOLDER, PRO-PRESS	130 PSI - 1/2HR	YES	FIBERGLASS W/ ASJ	1/2"
DOMESTIC HOT WATER & HW RETURN	1/2"-1-1/4"	L	COPPER	SOLDER, PRO-PRESS	130 PSI - 1/2HR	YES	FIBERGLASS W/ ASJ	1"
DOMESTIC HOT WATER & HW RETURN	1/2"-2-1/2"	L	COPPER	SOLDER, PRO-PRESS	130 PSI - 1/2HR	YES	FIBERGLASS W/ ASJ	1-1/2"
NATURAL GAS - ABOVE GRADE	1/2"-2"	SCH. 40	STEEL - SEAMLESS	THREADED IRON OR WELDED	75 PSI - 1HR	YES	-----	----
SOIL & WASTE ABOVE GRADE	1-1/2"-6"	NO HUB / SERVICE WT.	CAST IRON	NO HUB	10 FT - 1/2HR	YES	-----	----
SOIL & WASTE ABOVE GRADE	2"-8"	SCH. 40	PVC	SOLVENT JOINED	10 FT - 1/2HR	NO	-----	----
SOIL & WASTE BELOW GRADE	2"-8"	SCH. 40	PVC	SOLVENT JOINED	10 FT - 1/2HR	NO	-----	----
RPTZ AND SIMILAR EXPOSED DRAIN LINES	ALL	ALL	COPPER	SOLDER, PRO-PRESS	10 FT - 1/2HR	YES	-----	----
CONDENSATE DRAIN ON ROOF	3/4"-3"	SCH. 40	PVC	SOLVENT JOINED	10 FT - 1/2HR	NO	-----	----
CONDENSATE DRAIN INTERIOR	3/4"-2"	SCH. 40	CPVC	SOLVENT JOINED	10 FT - 1/2HR	YES	FIBERGLASS W/ ASJ	1/2" (PLENUM ONLY)
CONDENSATE DRAIN INTERIOR	1/2"-2"	L	COPPER	SOLDER, PRO-PRESS	10 FT - 1/2HR	YES	FIBERGLASS W/ ASJ	1/2" (PLENUM ONLY)

- NOTES:
1. ALL PIPING AND MATERIALS IN PLENUMS MUST MEET ASTM E84 FLAME/SMOKE RATING OF 25/50.
2. ALL INSULATION THICKNESSES SHALL MEET ADOPTED EEC AND ASHRAE 90.1 - 2016 REQUIREMENTS AT A MINIMUM.
3. REFER TO SPECIFICATIONS FOR MORE DETAILED INFORMATION.
4. WELDED PIPING IS REQUIRED FOR GAS PIPING WHEN: A) PIPING IS AT OR OVER 2PSI; B) WHEN PIPING OF ANY PRESSURE IS ROUTED THROUGH CONCEALED SPACES.

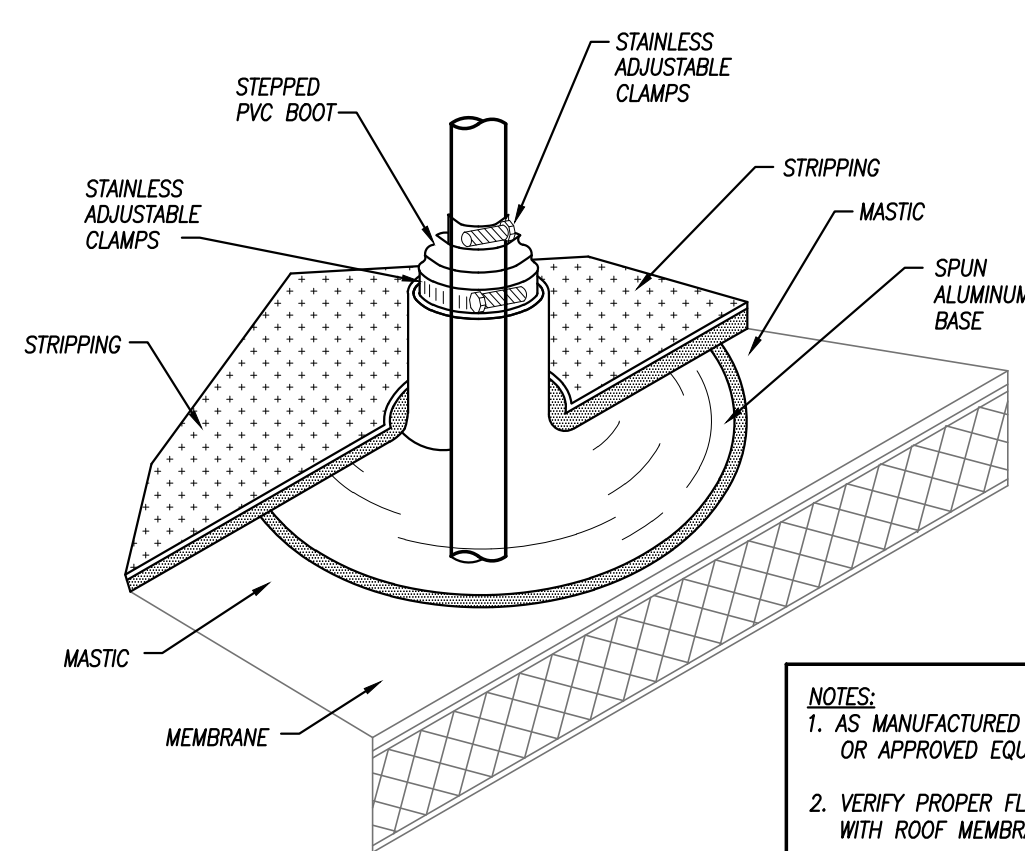
PLUMBING FIXTURE BRANCH CONNECTION SCHEDULE

FIXTURE TYPE	TRAP	WASTE	VENT	DCW	DHW
WATER CLOSET (FLUSH VALVE)	INTEGRAL	4"	2"	1"	----
URINAL (FLUSH VALVE)	INTEGRAL	2"	2"	3/4"	----
FLUSH TANK WATER CLOSET	INTEGRAL	4"	2"	1/2"	----
LAVATORY	PROVIDE TRAP	2"	1-1/2"	1/2"	1/2"
SINK	PROVIDE TRAP	2"	2"	1/2"	1/2"
MOP SINK	PROVIDE DEEP SEAL TRAP	3"	2"	1/2"	1/2"
FLOOR DRAIN	PROVIDE DEEP SEAL TRAP	AS SCHEDULED	1-1/2"	----	----
FLOOR SINK	PROVIDE TRAP	AS SCHEDULED	1-1/2"	----	----
DRINKING FOUNTAINS/ENC'S	PROVIDE TRAP	1-1/2"	1-1/2"	1/2"	----
SHOWERS/TUBS	PROVIDE TRAP	2"	1-1/2"	1/2"	1/2"
SHOWERS	PROVIDE TRAP	2"	1-1/2"	1/2"	1/2"
ICE MACHINE HOOKUP BOX	----	----	----	1/2"	----
WASHER HOOKUP BOXES	PROVIDE TRAP	2"	1-1/2"	1/2"	1/2"

FLOOR / ROOF DRAIN SCHEDULE

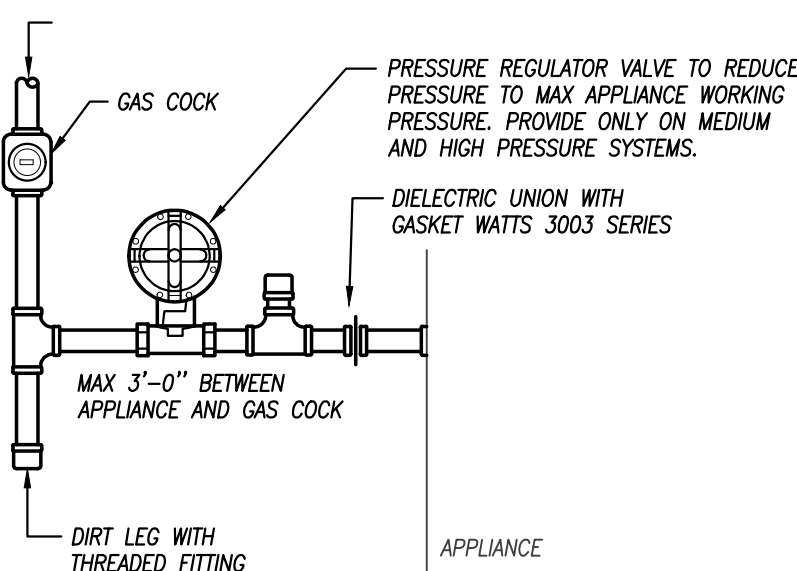
PLAN MARK	MANUFACTURER	MODEL NUMBER	SERVICE	TOP/GRADE SIZE	WASTE SIZE	REMARKS
FD-1	WADE	1100	FLOOR DRAIN	6"	2"	1
FS-1	WADE	9100	FLOOR SINK	12"x12"	4"	2

- REMARKS:
1. PROVIDE WITH NICKEL BRONZE TOP.
2. PROVIDE WITH 3/4" GRATE.



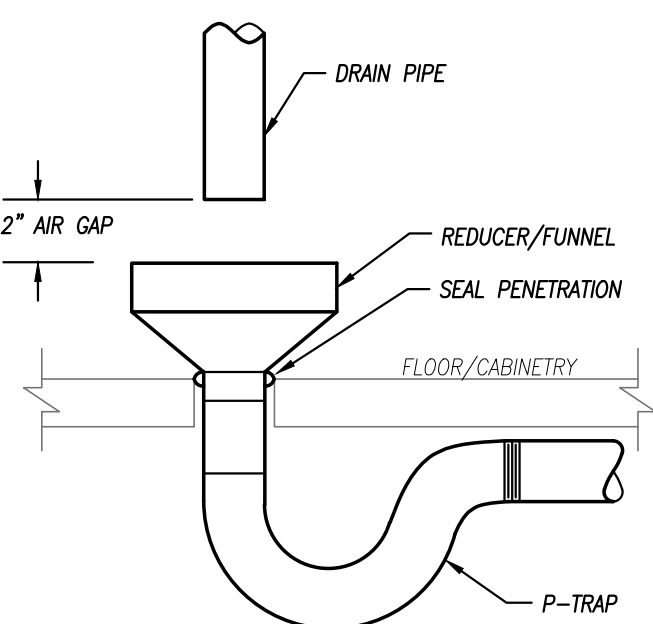
ROOF PLUMBING VENT

NOT TO SCALE



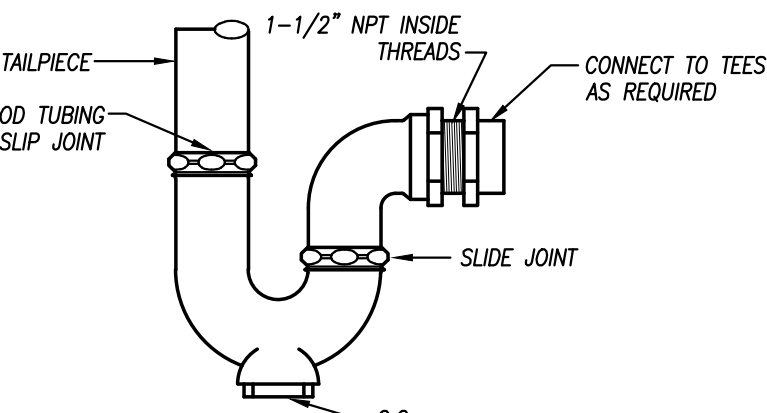
TYPICAL GAS CONNECTION

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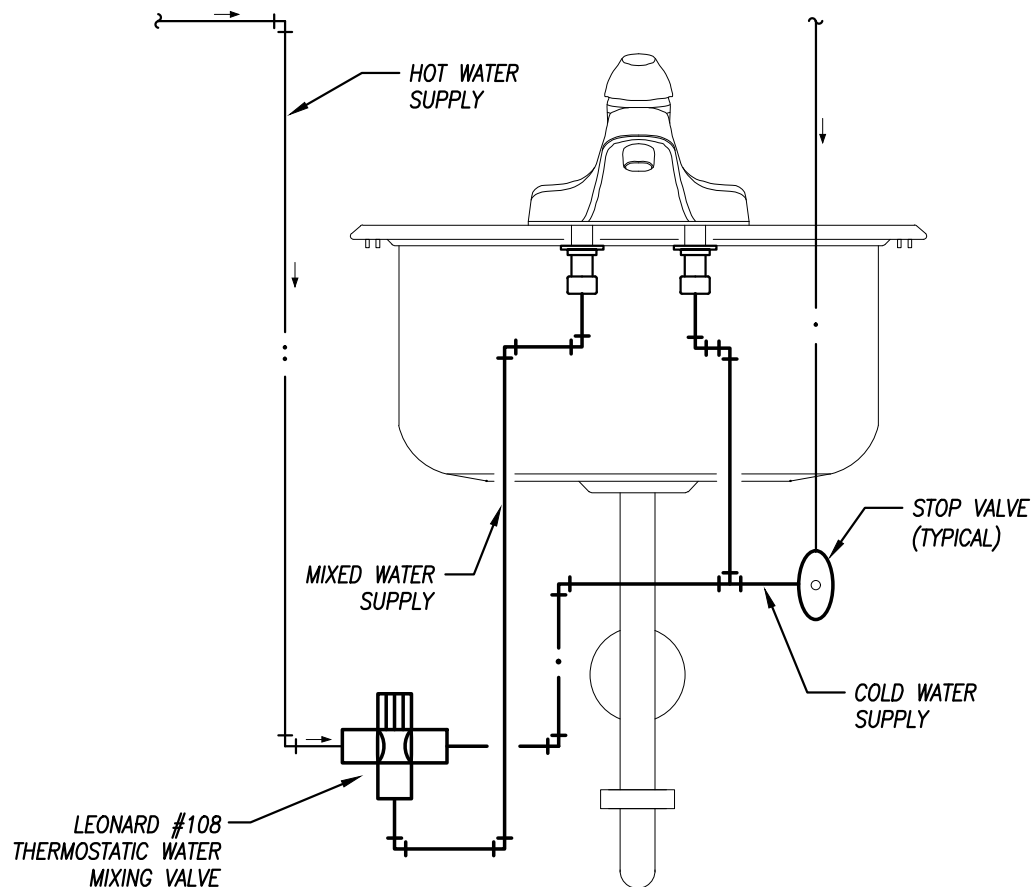
AIR GAP DETAIL

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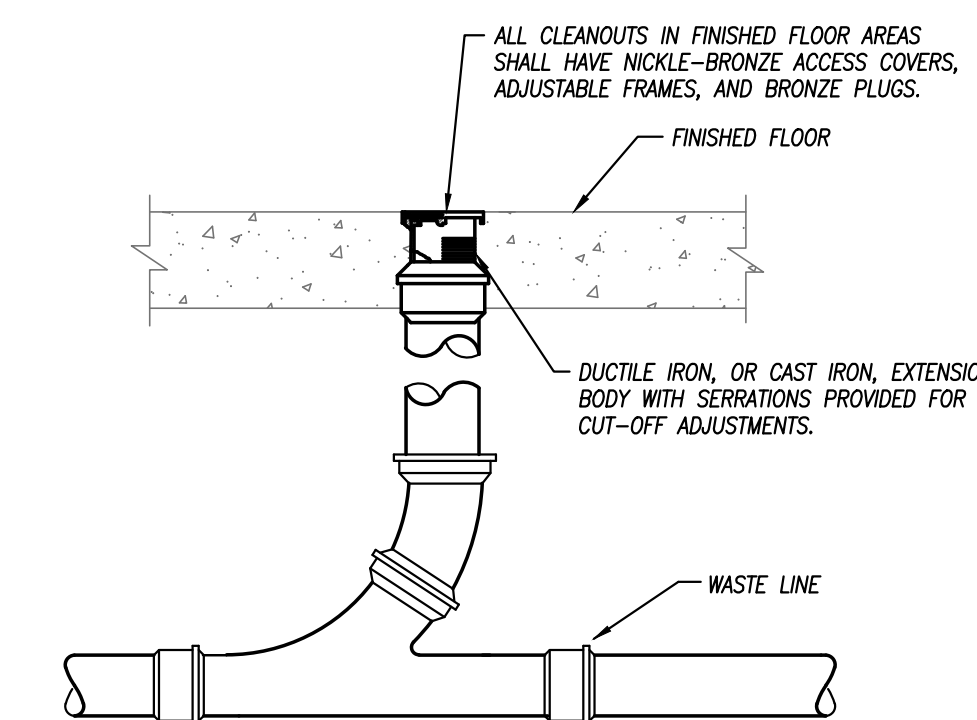
P-TRAP DETAIL

NOT TO SCALE



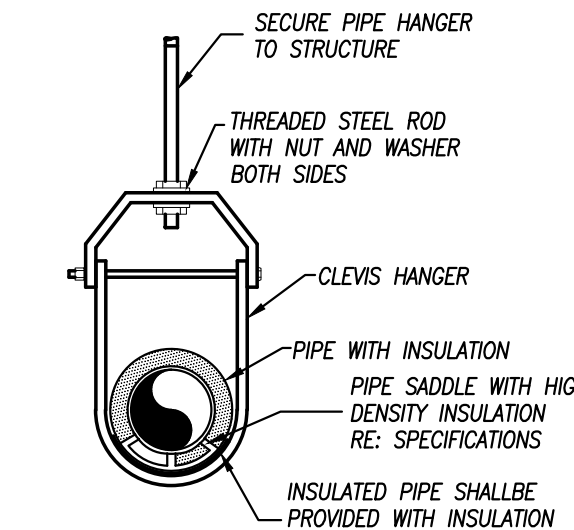
HAND WASHING SINK/LAVATORY TEMPERED WATER SCHEMATIC

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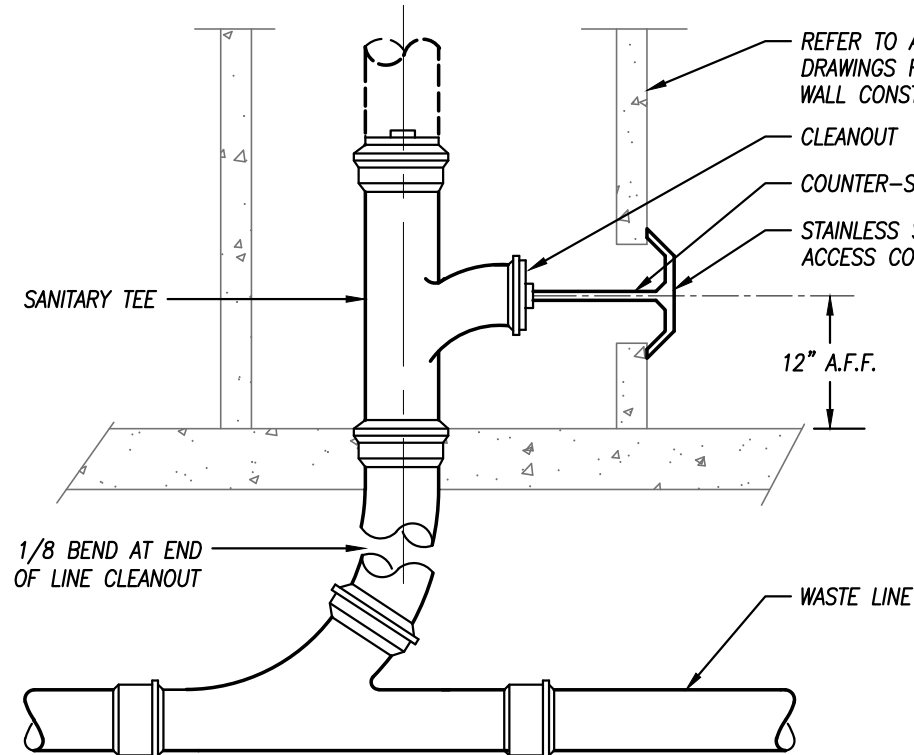
FLOOR CLEANOUT DETAIL

NOT TO SCALE



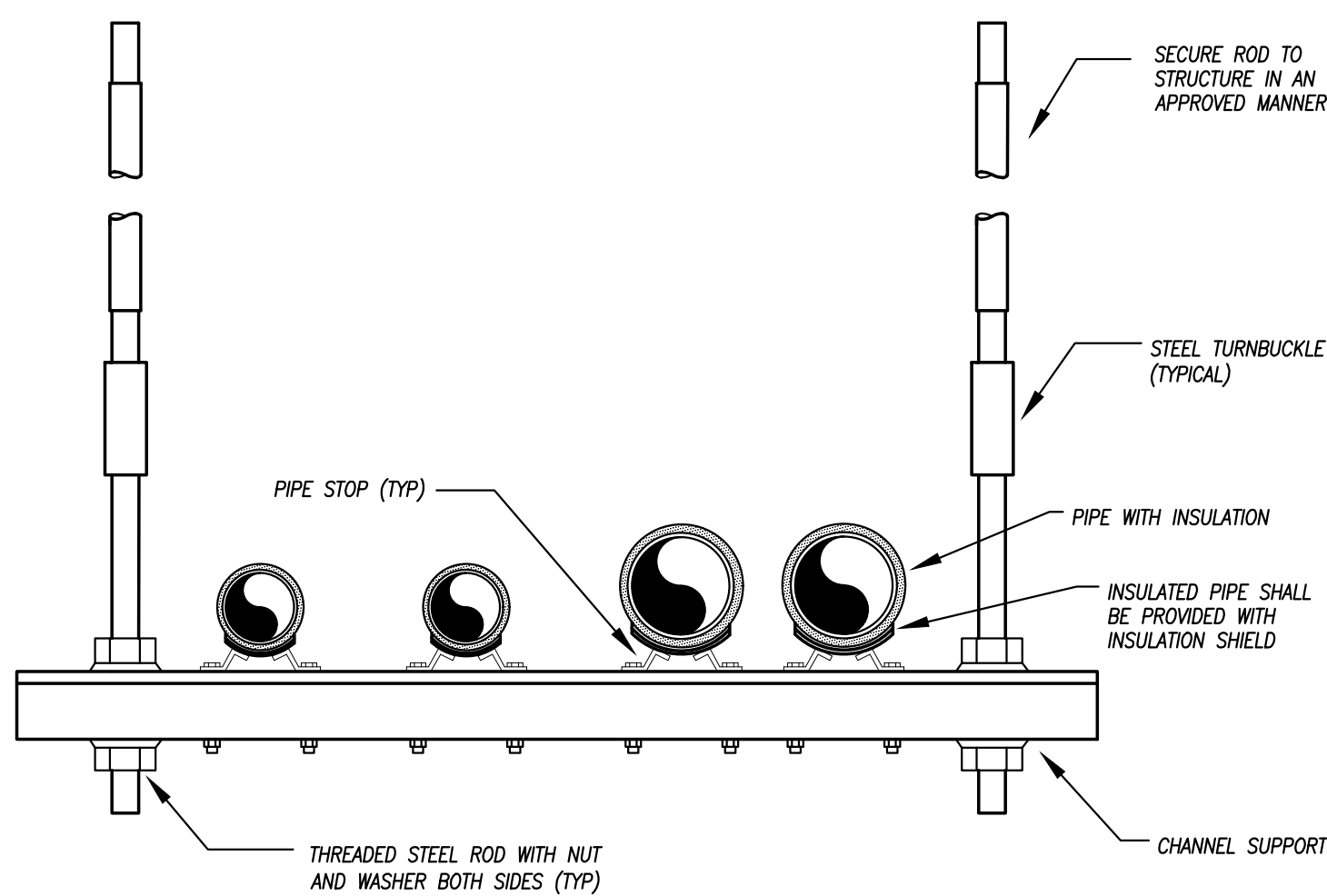
PIPE HANGER DETAIL

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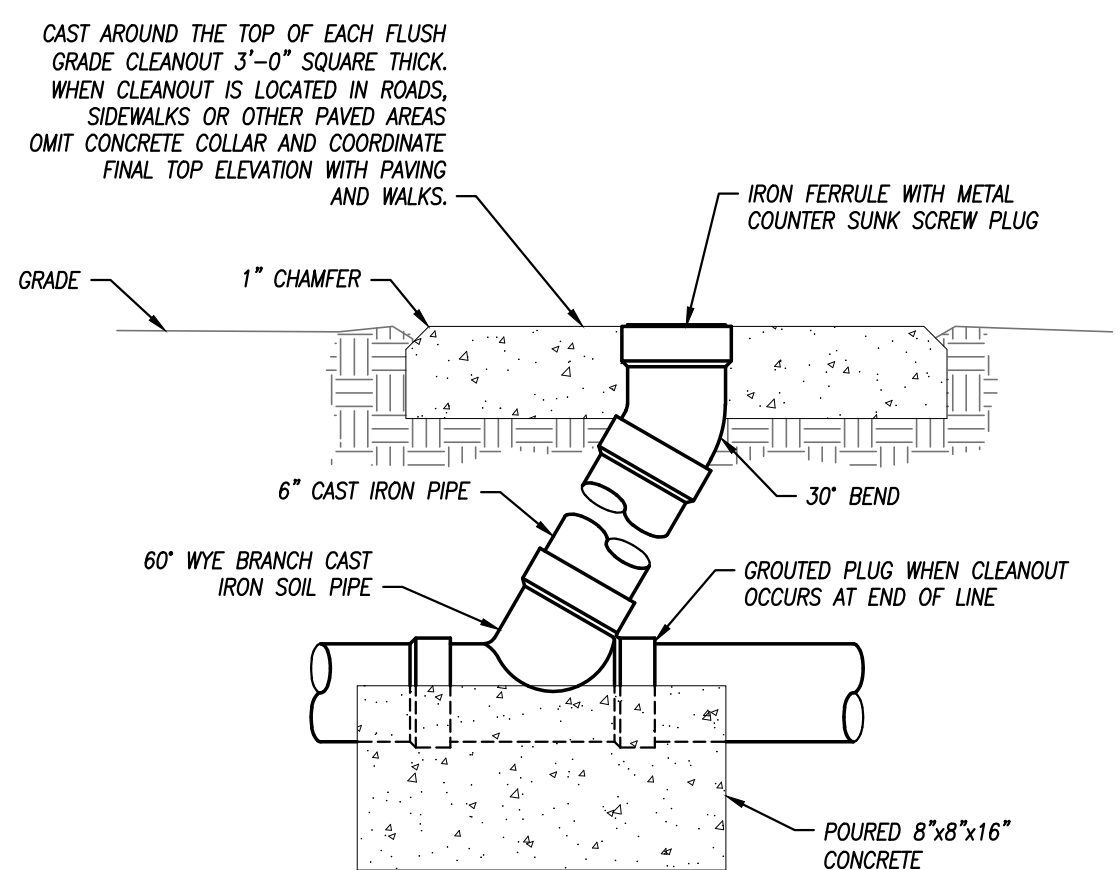
WALL CLEANOUT DETAIL

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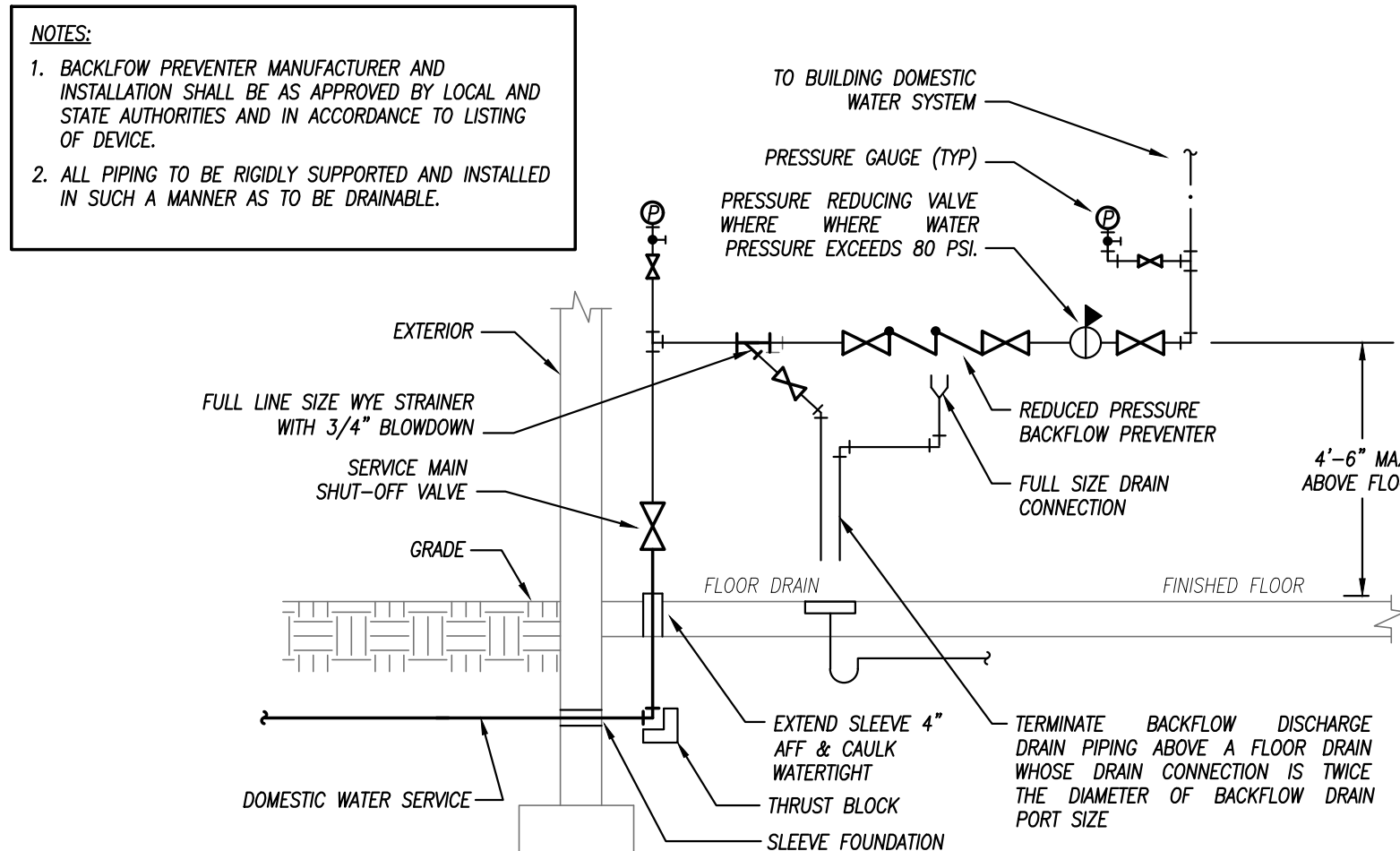
MULTIPLE PIPE TRAPEZE HANGER DETAIL

NOT TO SCALE



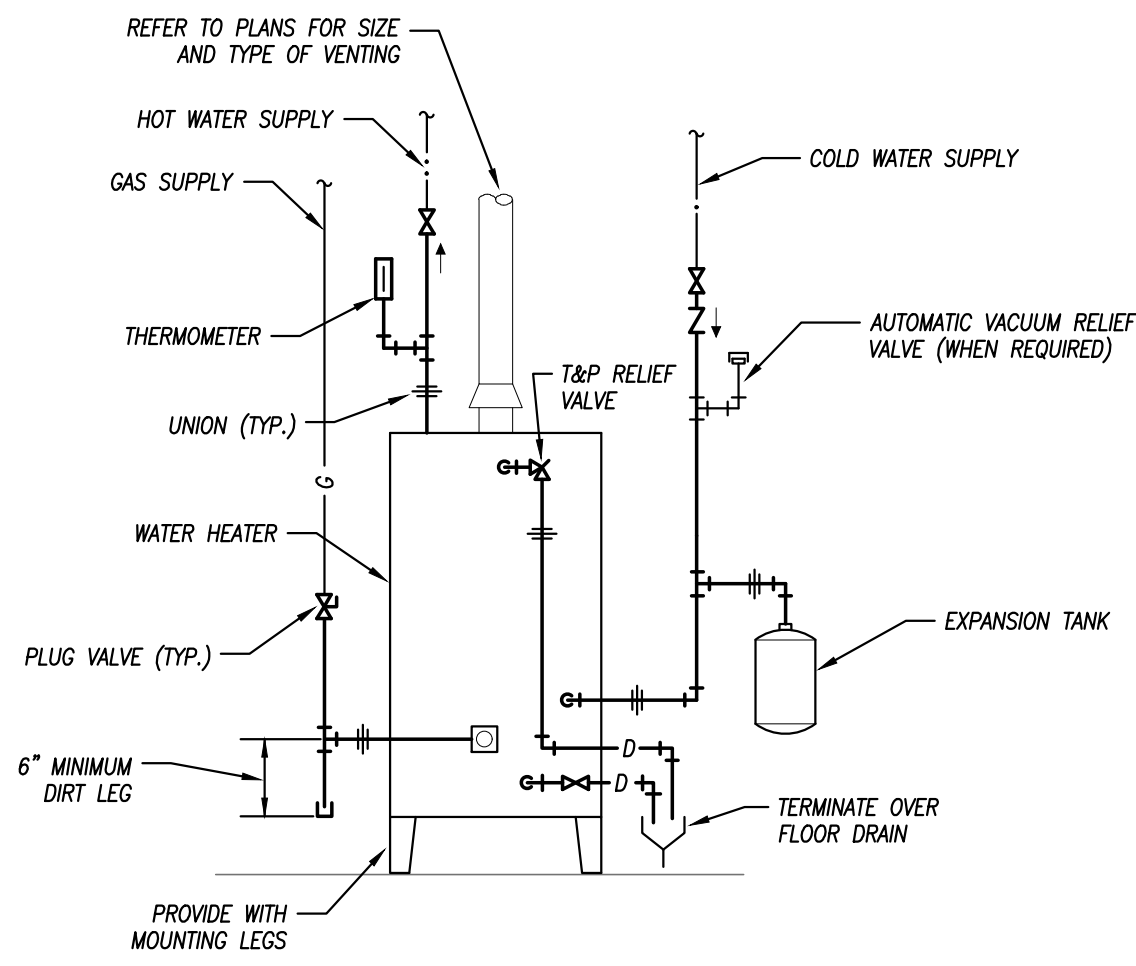
FLUSH GRADE CLEANOUT DETAIL

NOT TO SCALE



WATER SERVICE REDUCED PRESSURE BACKFLOW PREVENTER DETAIL

NOT TO SCALE



GAS WATER HEATER DETAIL

NOT TO SCALE

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE MODEL	FIXTURE DESCRIPTION	FITTINGS MODEL	FITTINGS AND TRIM	REMARKS	PLUMBING FIXTURE PIPE SIZES
L-1	TBD OWNER SELECTION	WALL-HUNG LAVATORY, 20"x18" WHITE VITREOUS CHINA BOWL WITH 4" BACK FOR USE WITH CONCEALED ARM HANGER. FAUCET HOLES COORDINATED WITH FAUCET AND TRIM. PROVIDE CONCEALED ARM CARRIER.	TBD OWNER SELECTION	CENTERSET SINGLE HOLE FAUCET WITH LOOP METAL LEVER HANDLE. 1/2" CONNECTIONS, WITH DRAIN AND POP-UP HOLE. POLISHED CHROME FINISH.	1,2,3,4,5	WASTE 2" VENT 1-1/2" DCW 1/2" DHW 1/2"
WC-1	TBD OWNER SELECTION	ADA-COMPLIANT, 128/0.9 GPF DUAL, FLUSH TANK WATER CLOSET. PRESSURE-ASSISTED SPIN-JET, WHITE VITREOUS CHINA ELONGATED BOWL AND TANK, 16-1/8" HIGH. TWO PIECE, 12" ROUGH-IN. FINISH WITH POLISHED CHROME FLUSH ACTUATOR ON WIDE SIDE OF STALL.	TBD OWNER SELECTION	WHITE, SOLID PLASTIC, CLOSED-FRONT SEAT FOR ELONGATED BOWL. INTEGRAL BUMPER, SOLID TOP LID. EXTERNAL CHECK HINGES WITH STAINLESS STEEL POSTS.	3,6	4" 2" 1/2" ----
JS-1	FIAT TSBC-6010	JANITORS SINK, 24"x24"x12" PRECAST TERRAZO FLOOR SERVICE SINK. CORNER CHAMFERED MODEL FOR INSTALLATION IN CORNER OF ROOM. STAINLESS STEEL CAP AND 2 SIDE WALL TUNG FLANGE. 3" STAINLESS STEEL CAST DRAIN AND STAINLESS STEEL STRAINER PLATE. PROVIDE STAINLESS STEEL WALL GUARDS, MOP BRACKETS, HOSE BACK.	CHICAGO FAUCET B97-CP	C.P. SERVICE SINK FITTING WITH VACUUM BREAKER, 3/4" HOSE THREAD ON SPOUT, ADJUSTABLE WALL BRACE, PAIL HOOK, AND 1/2" PLUNGED FEMALE ADJUSTABLE ARMS WITH INTERNAL STOPS. CAULK BETWEEN WALL AND FLANGE WITH GE SILICONE SEALANT. 3" C.I. "P" TRAP.	----	3" 2" 1/2" 1/2"

- REMARKS:
1. PROVIDE CHROME-PLATED BRASS TAILPIECE AND GRID DRAIN.
2. PROVIDE CHROME-PLATED BRASS P-TRAP.
3. PROVIDE LOOSE KEY STOPS AND FLEXIBLE RISERS.
4. PROVIDE CONCEALED ARM TYPE CARRIER WITH SQUARE, TUBULAR STEEL UP-RIGHTS AND BLOCK TYPE BASES.
5. INSULATE EXPOSED TAILPIECE, P-TRAP, AND WATER RISERS. REFER TO SPECIFICATIONS FOR INSULATION METHODS.
6. PROVIDE FLUSH VALVE HANDLE ON WIDE SIDE OF STALL.
7. PROVIDE HANDLE STOPS AND FLEXIBLE RISERS.
8. PROVIDE CHROME-PLATED BRASS TAILPIECE AND BASKET STRAINER.

- GENERAL NOTES (APPLICABLE TO ALL FIXTURES):
1) ALL PUBLIC LAVATORIES AND SINKS SHALL BE PROVIDED WITH ANTI-SOILD ASSE 1070 LISTED VALVE ON HOT WATER SUPPLY.
2) VERIFY PLUMBING MATERIALS AND EQUIPMENT COORDINATE BETWEEN TRADES. VERIFY CABINET SIZES, COUNTERTOP MATERIALS, WALL THICKNESSES, ETC ARE APPROPRIATE FOR SPECIFIED EQUIPMENT PRIOR TO ORDER.

GAS WATER HEATER SCHEDULE

PLAN MARK	MANUFACTURER	MODEL NUMBER	GALLONS	USE	STYLE	GAS INPUT (MBH)	ENERGY FACTOR	RECOVERY @ 90°F RISE	FLUE SIZE (IN/OUT)	VOLTAGE/ PHASE	REMARKS
WH-1	STATE	GSB 50	50	RESIDENTIAL	POWER DIRECT VENT	65	0.58	64	3" / 3"	120V / 1PH	2
WH-2	STATE	GPV 50	50	RESIDENTIAL	STANDARD EFF.	50	0.62	41	4"	120V / 1PH	1

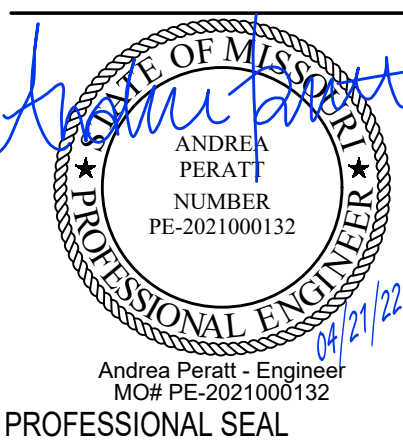
- REMARKS:
1. DIRECT-VENT STYLE WATER HEATER.
2. PROVIDE WITH MANUFACTURERS CONCENTRIC VENT KIT.

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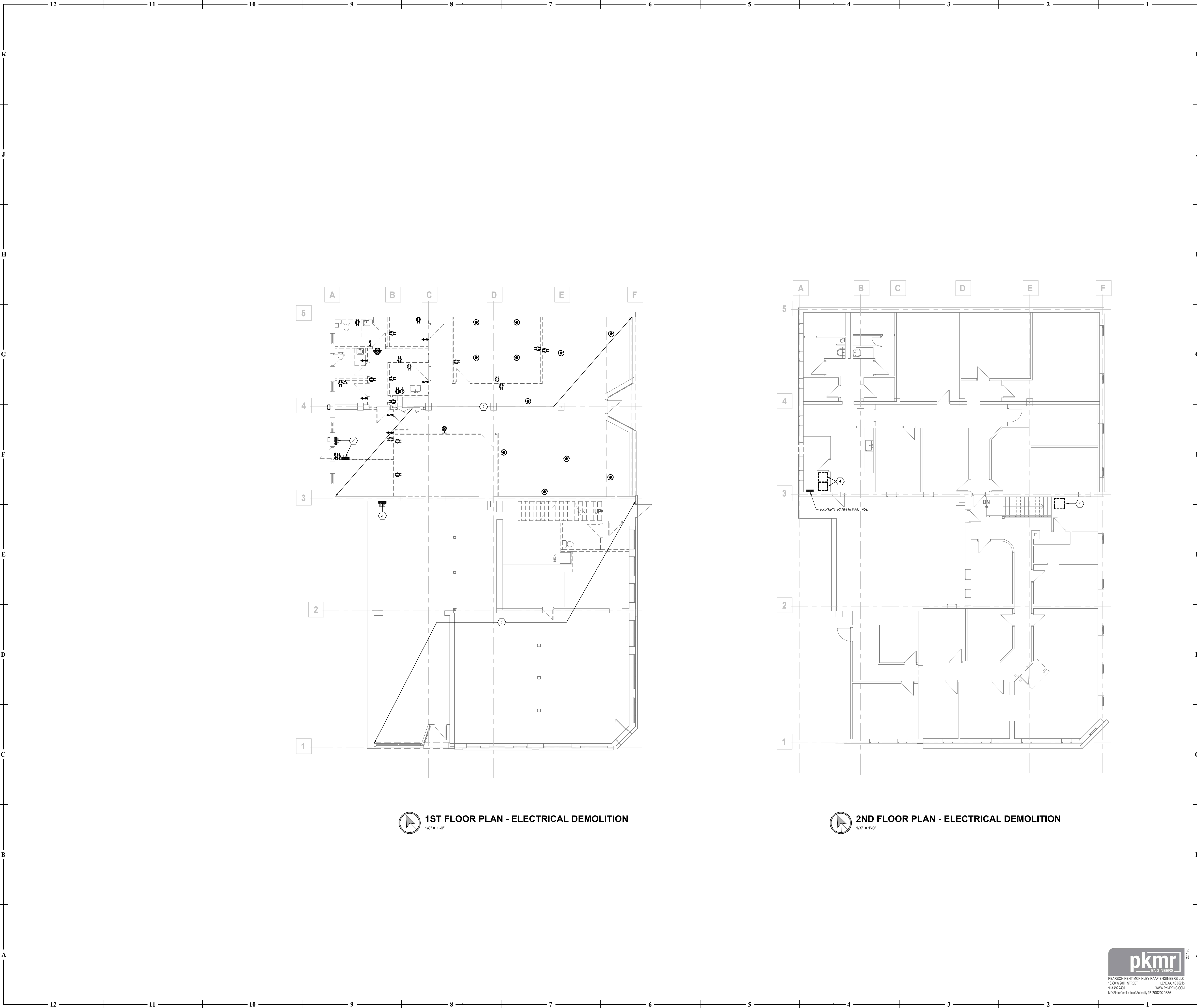
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PLUMBING - SCHED./DETAILS



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GENERAL DEMOLITION NOTES

1. REFER TO GENERAL DEMOLITION NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.

DEMOLITION PLAN KEYED NOTES

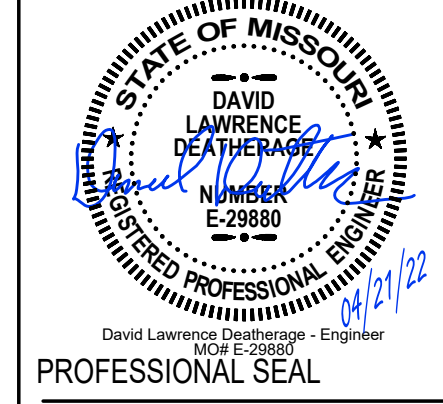
1. REMOVE ALL FIXTURES, EQUIPMENT, AND DEVICES THIS AREA. REMOVE ALL WIRING/CONDUIT AND PIPING TO SAME NOT REQUIRED TO REMAIN.
2. REMOVE PANELBOARD AND MAINTAIN EXISTING CIRCUITS TO REMAIN. INCEPT AND EXTEND EXISTING BRANCH CIRCUITS NEW PANELBOARD IN NEW LOCATION. REFER TO NEW WORK DRAWINGS FOR MORE INFORMATION.
3. REMOVE EXISTING PANELBOARD. REMOVE FEEDERS AND BRANCH CIRCUITS TO SAME.
4. EXISTING FURNACE TO BE REPLACED. MAINTAIN EXISTING WIRING/CONDUIT TO RECONNECT TO NEW FURNACE.

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COLLINS WEBB #: 21121

ELECTRICAL DEMOLITION - FLOOR PLANS

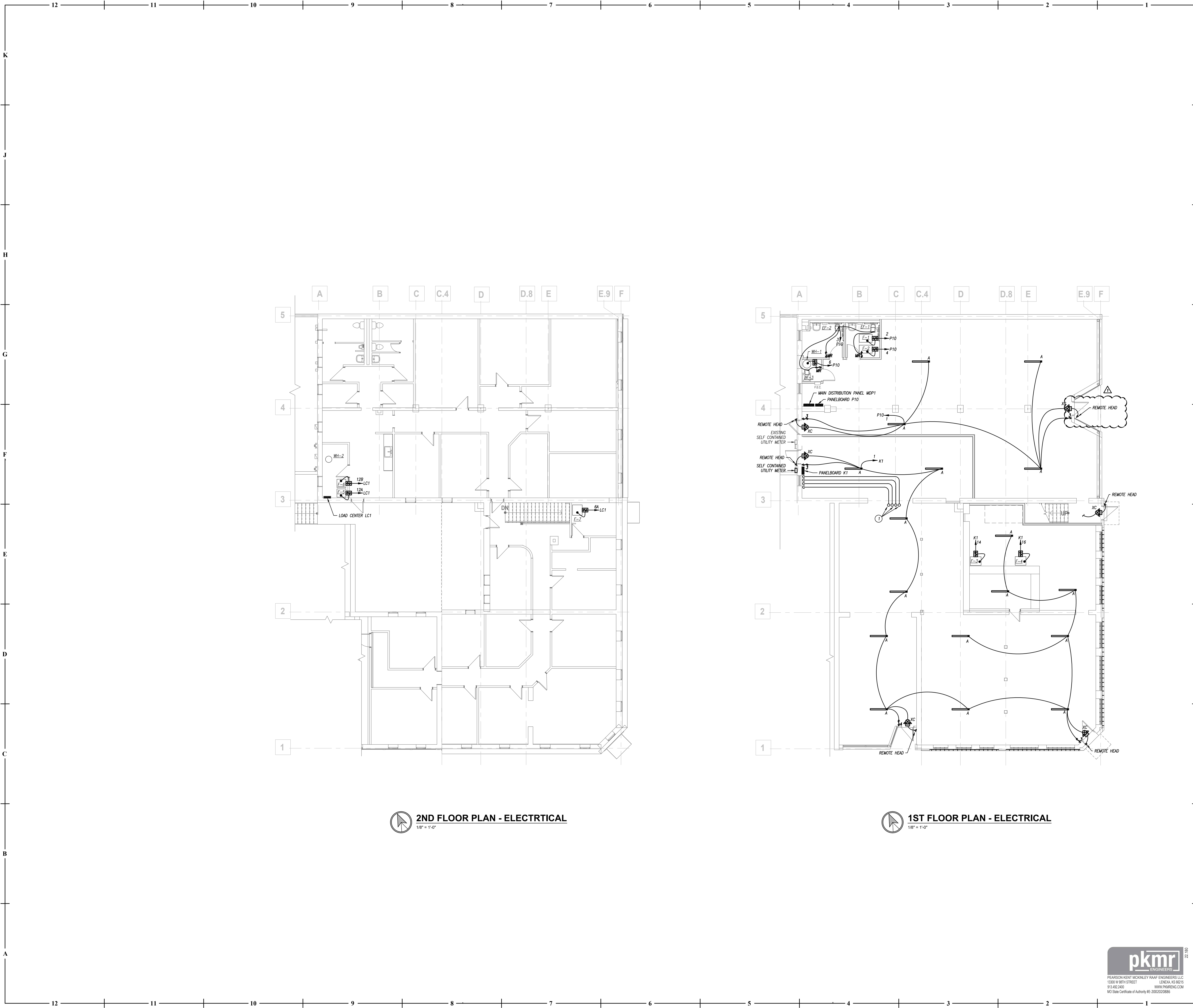


307B SW Market Street, Lee's Summit, Mo. 64063 P: 816.249.2270
(www.collinsandwebb.com)

Permit Set



PEARSON KENT MCKINLEY RAAP ENGINEERS, LLC
1300 W 96TH STREET
LENDIA, KS 66215
913.482.2400 WWW.PKMRNG.COM
MO State Certificate of Authority #E-0002020886



GENERAL LIGHTING NOTES

1. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.
2. LIGHT FIXTURES INDICATED AS EMERGENCY FIXTURES ARE TO FUNCTION AS NIGHT LIGHTS UNLESS SPECIFICALLY SHOWN SWITCHED.
3. ALL CIRCUITING SHOWN ON THIS PLAN IS DIAGRAMMATIC.
3.1. ALL FIXTURES SHALL BE FED FROM JUNCTION BOXES WITH LIGHT FIXTURE WIRING (<4'). DASHY-DRAWING OF FIXTURES IS NOT ALLOWED.
3.2. SWITCH BOX LOCATIONS SHALL BE WIRED SO THAT A NEUTRAL WIRE IS AVAILABLE AT THE SWITCH BOX LOCATION, EITHER IN THE BOX OR AVAILABLE TO BE ADDED VIA RACEWAY OR AN ACCESSIBLE WALL CAVITY.
3.3. WALL SWITCHES FOR SEPARATE LOAD TYPES (CM/NORMAL, 120/277V, ETC.) SHALL NOT BE IN A SINGLE BOX.
3.4. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

ELECTRICAL PLAN KEYED NOTES

1. PROVIDE (3) 2" CONDUIT AND (1) 1" CONDUIT WITH PULL STINGS FOR FUTURE MECHANICAL EQUIPMENT. ROUTE CONDUIT TO TOP OF CEILING AND TURN UP THROUGH CEILING PATCH ALL PENETRATIONS WATERTIGHT. CAP CONDUIT AT BOTH ENDS FOR FUTURE USE.



MAIN STREET LANDLORD IMPROVEMENTS

230 SW MAIN ST.
LEE'S SUMMIT, MO 64063

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ARCHITECTURE, LLC

REVISION DATES:

City Comments	05/17/22
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ISSUE DATE: APRIL 21, 2022
COLLINS WEBB #: 21121

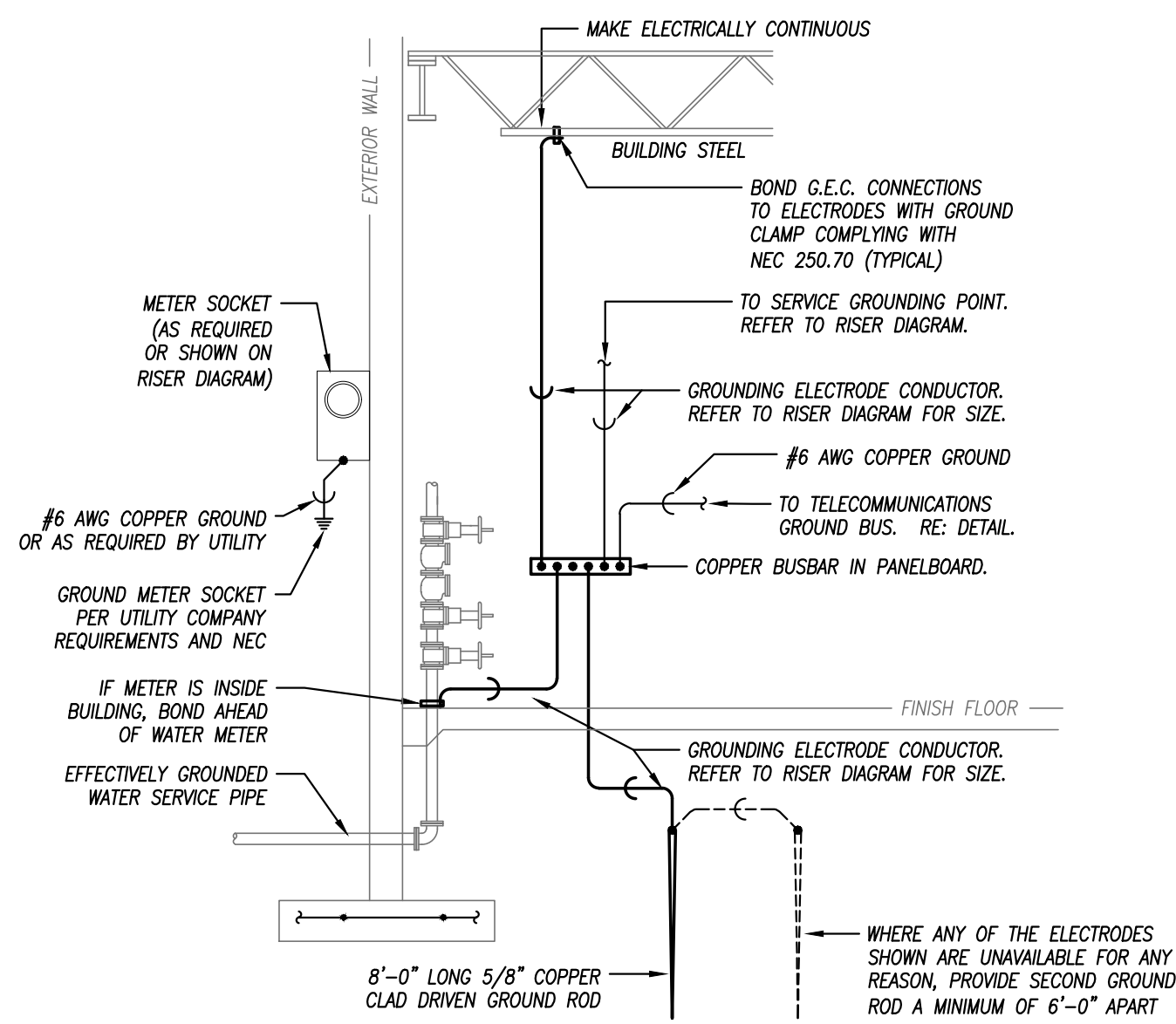
ELECTRICAL - FLOOR PLANS



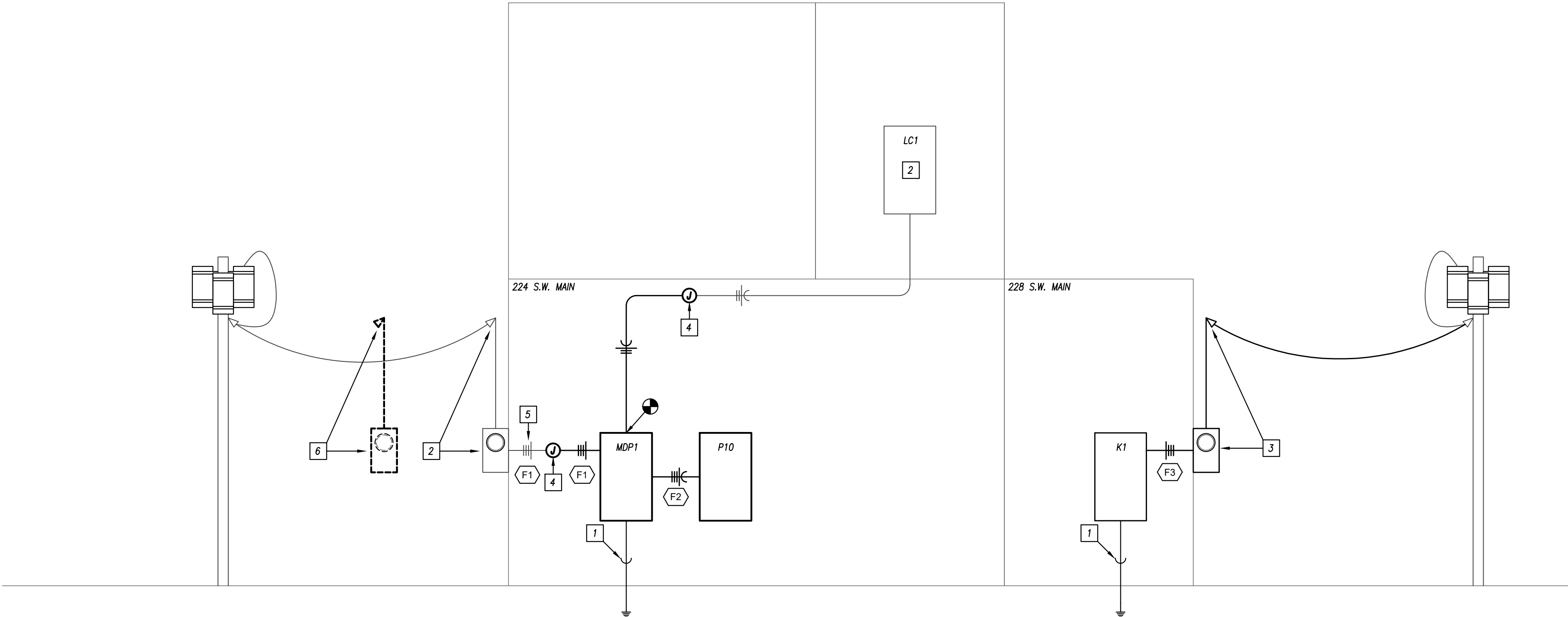
Permit Set

12 11 10 9 8 7 6 5 4 3 2 1

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ELECTRICAL SERVICE GROUNDING DETAIL
NOT TO SCALE



ELECTRICAL RISER DIAGRAM
NOT TO SCALE

RISER DIAGRAM KEYED NOTES

- 1 #1/0 GROUNDING ELECTRODE IN 1" CONDUIT.
- 2 EXISTING TO REMAIN.
- 3 PROVIDE METER AND WEATHERHEAD PER EVERY STANDARDS.
- 4 INTERCEPT AND EXTEND FEEDER TO NEW MDP LOCATION.
- 5 FIELD VERIFY FEEDER SIZE.
- 6 REMOVE EXISTING ELECTRICAL SERVICE.

SINGLE-SECTION PANELBOARD SCHEDULE														
PANEL DESIGNATION: K1					MAIN LUG AMPS: 400					SCCR RATING (AIC): 22,000				
MOUNTING: SURFACE					MAIN BREAKER: 400					VOLTAGE: 208/120				
LOCATION: FUTURE TENANT S-100					PHASE/WIRE: 3Ø, 4W					CIRCUIT #				
DESCRIPTION	PHASE			C/B	POLE	TRIP	C/B			POLE	TRIP	C/B		DESCRIPTION
	A	B	C				A	B	C			A	B	
LTS: FUTURE TENANT S-100	546	-	-	20	1	1	20	1	3	4	3	50	3459	CONDENSING UNIT CU-3
SPARE	-	-	-	20	1	5	6	-	-	-	-	-	3459	CONDENSING UNIT CU-4
SPARE	-	-	-	20	1	7	8	-	-	-	-	-	3459	CONDENSING UNIT CU-5
SPARE	-	-	-	20	1	9	10	-	-	-	-	-	3459	CONDENSING UNIT CU-6
SPARE	-	-	-	20	1	11	12	-	-	-	-	-	3459	CONDENSING UNIT CU-7
SPARE	-	-	-	20	1	13	14	-	-	-	-	-	1920	FURNACE F-3
SPARE	-	-	-	20	1	15	16	-	-	-	-	-	1920	FURNACE F-4
SPARE	-	-	-	20	1	17	18	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	19	20	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	21	22	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	23	24	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	25	26	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	27	28	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	29	30	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	31	32	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	33	34	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	35	36	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	37	38	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	39	40	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	41	42	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	43	44	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	45	46	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	47	48	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	49	50	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	51	52	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	53	54	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	55	56	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	57	58	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	59	60	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	61	62	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	63	64	-	-	-	-	-	-	SPARE
SPARE	-	-	-	20	1	65	66	-	-	-	-	-	-	SPARE
LARGE SUB-FED BREAKER					3	-	-	-	-	-	-	-	-	-
TOTALS					546	0	0	8839	8839	6918	TOTALS			

PANELBOARD SIZING LOAD			
LOAD DESCRIPTION	CONNECTED	DEMAND	CODE MIN. (VA)
LIGHTS	546	1.25	683
RECEPTACLES	0	10KVA + 50% REST	0
MOTORS	3,840	1.25 x LARGEST + SUM OF REST	4,320
AIR CONDITIONING	20,754	1.00	20,754
SPACE HEATING	0	0.00	0
HEAT PUMP	0	1.00	0
CONTINUOUS	0	1.25	0
NON-CONTINUOUS	0	1.00	0
MISC. LOADS 1	0	1.00	0
SIZING LOAD:		25,757	
SIZING LOAD (AMPS):		71	

CONNECTED PHASE LOADS			
PHASE	VA	AMPS	
A	9,384	78.1	
B	6,836	73.6	
C	6,918	57.6	
TOTALS	25,140	69.8	

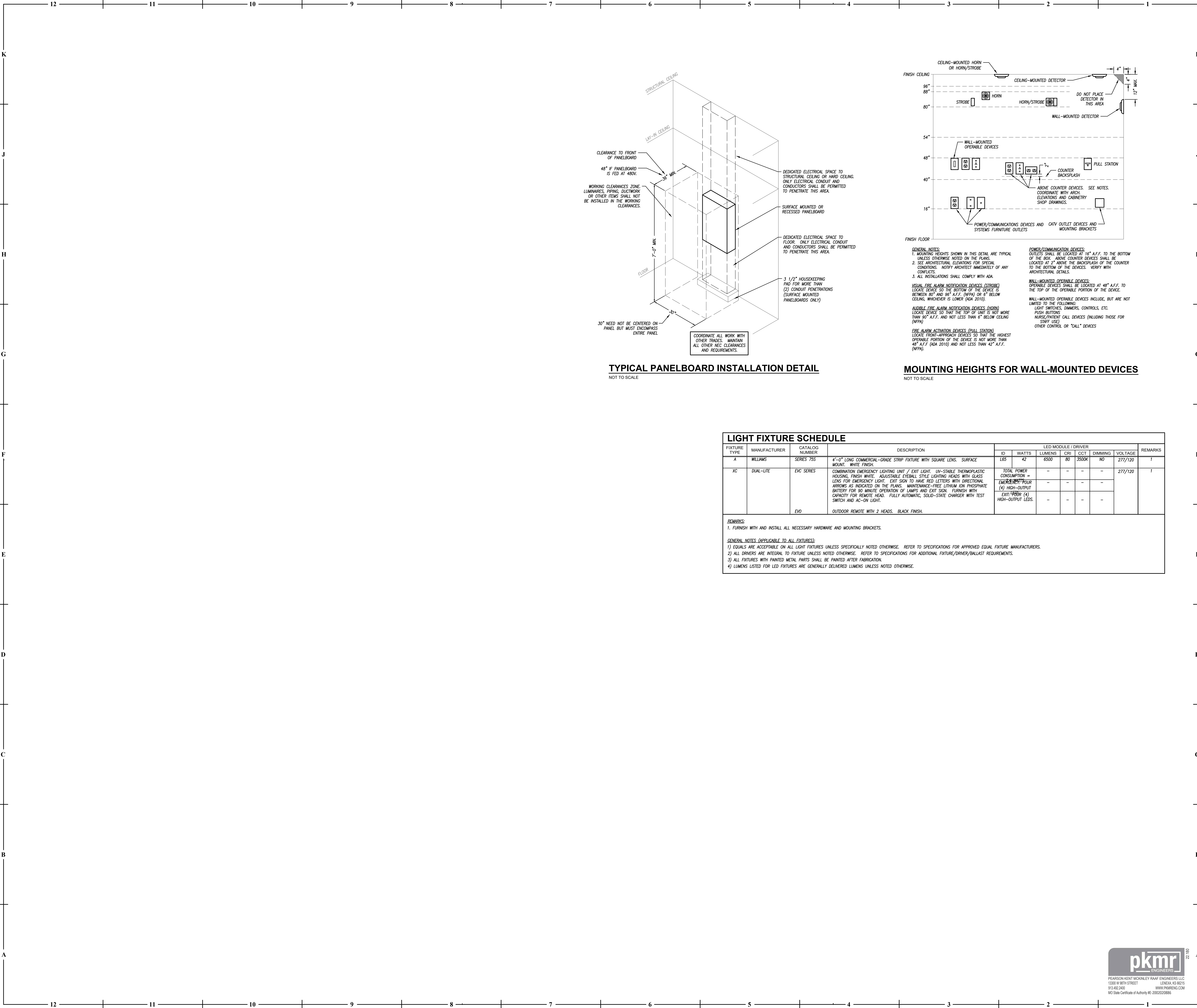
REMARKS:
1. EATON POW-R-LINE 1X OR EQUAL.
2. SERVICE ENTRANCE RATED.

EQUIPMENT FAULT CURRENT RATING SCHEDULE				
EQUIPMENT	SCA **	SCCR	NOTES	
DISTRIBUTION PANELBOARD MDP1	11,046	22,000	1,2	
PANELBOARD P10	10,664	22,000	1,2	
PANELBOARD K1	9,924	22,000	1,2	

NOTES:
1. RATING BASED ON AN ASSUMED FAULT AT UTILITY CO. TRANSFORMER OF 38,914A.
2. EQUIPMENT MAY BE SERIES RATED.
** CALCULATIONS PERFORMED USING BUSSMANN POINT-TO-POINT METHOD.

EQUIPMENT FEEDER SCHEDULE							
FEEDER NO.	EQUIPMENT	LOAD (AMPS)	SETS	# OF WIRES	FEEDER SIZE	GROUND	CONDUIT SIZE
F1	DISTRIBUTION PANELBOARD MDP1	174.3	2	4	#3/0	-	2"
F2	PANELBOARD P10	10.0	1	4	#3/0	#6	2"
F3	PANELBOARD K1	71.5	1	4	500 MCM	-	3-1/2"

DISTRIBUTION PANELBOARD SCHEDULE														
PANEL DESIGNATION: MDP1						MAIN LUG AMPS: 400					SCCR RATING (AIC): 22,000			
MOUNTING: SURFACE						MAIN BREAKER: 400					VOLTAGE: 208/120			
LOCATION: OFFICE N-100						PHASE/WIRE: 3Ø, 4W					CIRCUIT #			
DESCRIPTION	PHASE			C/B	POLE	TRIP	C/B			POLE	TRIP	PHASE		DESCRIPTION
	A	B	C				A	B	C			A	B	
CONDENSING UNIT CU-1	2786	-	-	40	3	30	2018	-	-	-	-	2018	-	CONDENSING UNIT CU-5
	2786	-	2786	-	3	30	-	-	-	-	-	2018	2018	
CONDENSING UNIT CU-2	2786	-	-	40	3	30	2018	-	-	-	-	2018	-	CONDENSING UNIT CU-6
	2786	-	2786	-	3	30	-	-	-	-	-	2018	2018	
CONDENSING UNIT CU-3	2786	-	-	40	3	30	2018	-	-	-	-	2018	-	CONDENSING UNIT CU-7
	2786	-	2786	-	3	30	-	-	-	-	-	2018	2018	
CONDENSING UNIT CU-4	2786	-	-	40	3	30	2018	-	-	-	-	2018	-	CONDENSING UNIT CU-8
	2786	-	2786	-	3	30	-	-	-	-	-	2018	2018	
CONDENSING UNIT CU-5	2786	-	-	40	3	30	2018	-	-	-	-	2018	-	CONDENSING UNIT CU-9
	2786	-	2786	-	3	30	-	-	-	-	-	2018	2018	
CONDENSING UNIT CU-6	2786	-	-	40	3	30	2018	-	-	-	-	2018	-	CONDENSING UNIT CU-10
	2786	-	2786	-	3	30	-	-	-	-	-	2018	2018	
CONDENSING UNIT CU-7	2786	-	-	40	3	30	2018	-	-	-	-	2018	-	CONDENSING UNIT CU-11
	2786	-	2786	-	3	30	-	-	-	-	-	2018	2018	
CONDENSING UNIT CU-8	2786	-	-	40	3	30	2018	-	-	-	-	2018	-	CONDENSING UNIT CU-12
	2786	-	2786	-	3	30	-	-	-	-	-	2018	2018	
CONDENSING UNIT CU-9	2786	-	-	40	3	30	2018	-	-	-	-	2018	-	CONDENSING UNIT CU-13
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TYPICAL PANELBOARD INSTALLATION DETAIL

NOT TO SCALE

MOUNTING HEIGHTS FOR WALL-MOUNTED DEVICES

NOT TO SCALE

LIGHT FIXTURE SCHEDULE

FIXTURE TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LED MODULE / DRIVER							REMARKS
				ID	WATTS	LUMENS	CRI	CCT	DIMMING	VOLTAGE	
A	WILLIAMS	SERIES 75S	4'-0" LONG COMMERCIAL-GRADE STRIP FIXTURE WITH SQUARE LENS. SURFACE MOUNT. WHITE FINISH.	L8S	42	6500	80	3500K	NO	277/120	1
XC	DUAL-LITE	EVO SERIES	COMBINATION EMERGENCY LIGHTING UNIT / EXIT LIGHT. UV-STABLE THERMOPLASTIC HOUSING, FINISH WHITE. ADJUSTABLE EYEBALL STYLE LIGHTING HEADS WITH GLASS LENS FOR EMERGENCY LIGHT. EXIT SIGN TO HAVE RED LETTERS WITH DIRECTIONAL ARROWS AS INDICATED ON THE PLANS. MAINTENANCE-FREE LITHIUM ION PHOSPHATE BATTERY FOR 90 MINUTE OPERATION OF LAMPS AND EXIT SIGN. FURNISH WITH CAPACITY FOR REMOTE HEAD. FULLY AUTOMATIC, SOLID-STATE CHARGER WITH TEST SWITCH AND AC-ON LIGHT.	TOTAL POWER CONSUMPTION =							1
				EMERGENCY: FOUR (4) HIGH-OUTPUT							
				EXIT: FOUR (4) HIGH-OUTPUT LEADS							
		EVO	OUTDOOR REMOTE WITH 2 HEADS. BLACK FINISH.								

REMARKS:

1. FURNISH WITH AND INSTALL ALL NECESSARY HARDWARE AND MOUNTING BRACKETS.

GENERAL NOTES (APPLICABLE TO ALL FIXTURES):

1) EQUALS ARE ACCEPTABLE ON ALL LIGHT FIXTURES UNLESS SPECIFICALLY NOTED OTHERWISE. REFER TO SPECIFICATIONS FOR APPROVED EQUAL FIXTURE MANUFACTURERS.

2) ALL DRIVERS ARE INTEGRAL TO FIXTURE UNLESS NOTED OTHERWISE. REFER TO SPECIFICATIONS FOR ADDITIONAL FIXTURE/DRIVER/BALLAST REQUIREMENTS.

3) ALL FIXTURES WITH PAINTED METAL PARTS SHALL BE PAINTED AFTER FABRICATION.

4) LUMENS LISTED FOR LED FIXTURES ARE GENERALLY DELIVERED LUMENS UNLESS NOTED OTHERWISE.



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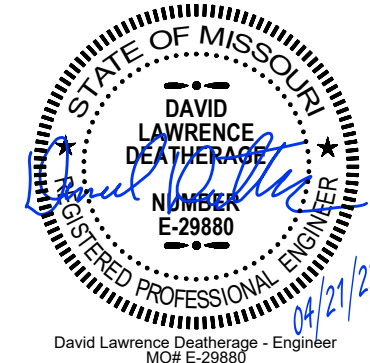
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ELECTRICAL - PANELBOARD SCHEDULES