TOWNEPLACE SUITES
LEE'S SUMMIT, MO

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:

1	12/22/2023	Response to City Comments
2	01/19/2024	Addendum #2
3	03/06/2024	IN RESPONSE TO GC COMMENTS

PROJECT CERTIFICATION

I, **David E. Hendrikse**, hereby specify pursuant to the governing requirements of the state, that the documents intended to be authenticated by my seal are limited to:

G-001	G-103	G-211	A-106	A-302	A-407	A-504	A-715	A-727
G-002	G-200	G-300	A-120	A-303	A-408	A-505	A-716	A-728
G-003	G-201	G-301	A-121	A-304	A-410	A-600	A-717	A-729
G-004	G-202	G-302	A-122	A-305	A-411	A-601	A-718	A-730
G-005	G-203	G-303	A-123	A-306	A-412	A-602	A-719	A-731
G-006	G-204	AS-100	A-125	A-400	A-413	A-603	A-720	A-732
G-007	G-205	AS-101	A-200	A-401	A-414	A-700	A-721	A-733
G-008	G-206	A-101	A-201	A-402	A-415	A-701	A-722	A-734
G-100	G-207	A-102	A-202	A-403	A-500	A-704	A-723	A-735
G-101	G-208	A-103	A-203	A-404	A-501	A-705	A-724	
G-102	G-209	A-104	A-300	A-405	A-502	A-706	A-725	
G-102.1	G-210	A-105	A-301	A-406	A-503	A-707	A-726	

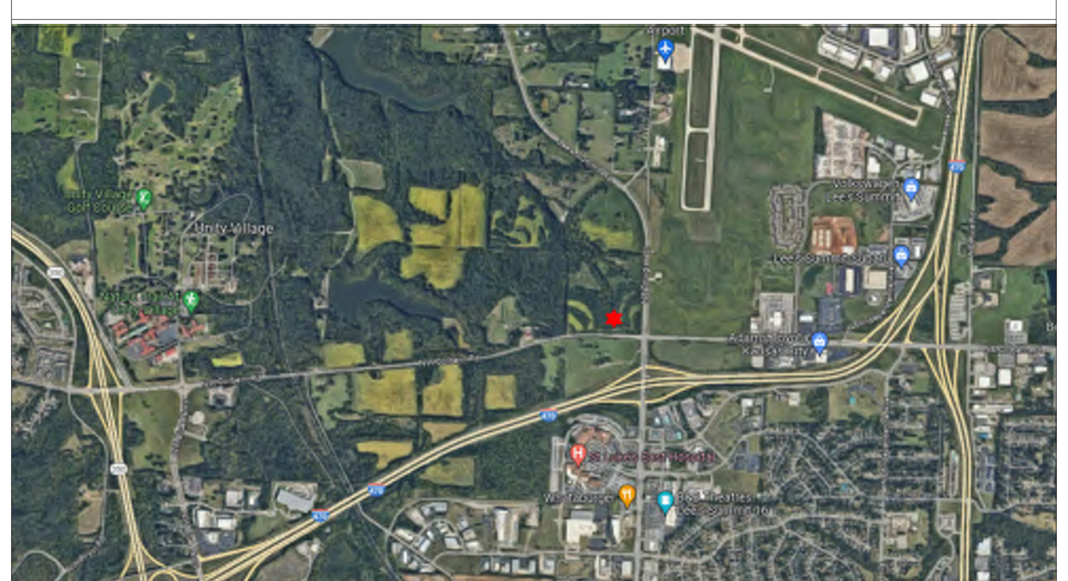
and I hereby disclaim any responsibility for all other plans, specifications, reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey.

SEAL

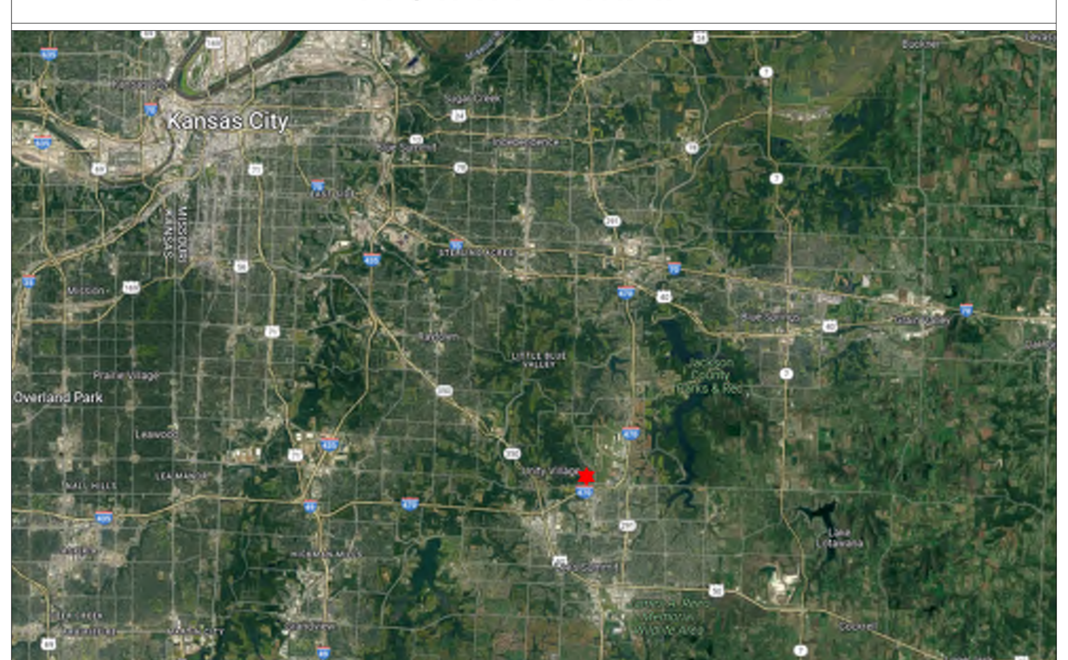
STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7305
REGISTERED ARCHITECT
03/06/2024

David E Hendrikse, AIA

REGIONAL MAP



VICINITY MAP



TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

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SHEET INDEX

GENERAL

	Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
■	11/01/2023	G-001	TITLE SHEET	3	03/06/2024
■	11/01/2023	G-002	GENERAL INFORMATION	2	01/19/2024
■	11/01/2023	G-003	PLAN GENERAL NOTES	2	01/19/2024
■	11/01/2023	G-004	GENERAL INFORMATION	2	01/19/2024
■	11/01/2023	G-005	GENERAL INFORMATION	2	01/19/2024
■	11/01/2023	G-006	GENERAL INFORMATION	2	01/19/2024
■	11/01/2023	G-007	GENERAL INFORMATION	2	01/19/2024
■	11/01/2023	G-008	TOWNEPLACE KEYNOTES	2	01/19/2024
■	11/01/2023	G-100	CODE ANALYSIS	3	03/06/2024
■	11/01/2023	G-101	CODE ANALYSIS	2	01/19/2024
■	11/01/2023	G-102	PARTITION ASSEMBLIES	3	03/06/2024
■	11/01/2023	G-102.1	PARTITION ASSEMBLIES	3	03/06/2024
■	11/01/2023	G-103	ASSEMBLIES - FLOOR/CEILING	3	03/06/2024
■	11/01/2023	G-200	UL ASSEMBLIES - D916	2	01/19/2024
■	11/01/2023	G-201	UL ASSEMBLIES - D916 / G566	2	01/19/2024
■	11/01/2023	G-202	UL ASSEMBLIES - L546	2	01/19/2024
■	11/01/2023	G-203	UL ASSEMBLIES - L546	2	01/19/2024
■	11/01/2023	G-204	UL ASSEMBLIES - P545	2	01/19/2024
■	11/01/2023	G-205	UL ASSEMBLIES - P545 / U301	2	01/19/2024
■	11/01/2023	G-206	UL ASSEMBLIES - U301 / U305	2	01/19/2024
■	11/01/2023	G-207	UL ASSEMBLIES - U305	2	01/19/2024
■	11/01/2023	G-208	UL ASSEMBLIES - U341	2	01/19/2024
■	11/01/2023	G-209	UL ASSEMBLIES - U415	2	01/19/2024
■	11/01/2023	G-210	UL ASSEMBLIES - U415 / U423	3	03/06/2024
■	11/01/2023	G-211	UL ASSEMBLIES - U905/ X790	2	01/19/2024
■	11/01/2023	G-300	ACCESSIBILITY STANDARDS	2	01/19/2024
■	11/01/2023	G-301	ACCESSIBILITY STANDARDS	2	01/19/2024
■	11/01/2023	G-302	ACCESSIBILITY STANDARDS	2	01/19/2024
■	11/01/2023	G-303	ACCESSIBILITY STANDARDS	2	01/19/2024
■	11/01/2023	AS-100	SITE PLAN	2	01/19/2024
■	11/01/2023	AS-101	ARCHITECTURAL SITE AMENITIES	2	01/19/2024

CIVIL UNDER SEPARATE REVIEW, REFERENCE FDP

STRUCTURAL

	Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
■	11/01/2023	S001	GENERAL NOTES	3	03/06/2024
■	11/01/2023	S002	GENERAL NOTES	3	03/06/2024
■	11/01/2023	S003	SPECIAL INSPECTIONS	3	03/06/2024
■	11/01/2023	S004	SCHEDULES	3	03/06/2024
■	11/01/2023	S005	SCHEDULES	3	03/06/2024
■	12/21/2023	S006	LOAD & REINFORCING PLANS	3	03/06/2024
■	11/01/2023	S010	GRID DIMENSION PLAN	2	12/21/2023
■	11/01/2023	S100	PIER PLAN	3	03/06/2024
■	11/01/2023	S101	FOUNDATION PLAN	3	03/06/2024
■	11/01/2023	S102	LEVEL 2 FRAMING PLAN	3	03/06/2024
■	11/01/2023	S103	LEVEL 3 FRAMING PLAN	3	03/06/2024
■	11/01/2023	S104	LEVEL 4 FRAMING PLAN	3	03/06/2024
■	11/01/2023	S105	ROOF FRAMING PLAN	3	03/06/2024
■	11/01/2023	S106	LEVEL 4 FRAMING PLAN		
■	11/01/2023	S107	ROOF FRAMING PLAN		
■	11/01/2023	S400	ENLARGED VIEWS	3	03/06/2024
■	12/21/2023	S401	ENLARGED VIEWS	3	03/06/2024
■	11/01/2023	S500	TYPICAL WOOD DETAILS	3	03/06/2024
■	11/01/2023	S501	TYPICAL FOUNDATION DETAILS	3	03/06/2024
■	11/01/2023	S502	TYPICAL FOUNDATION DETAILS	3	03/06/2024
■	11/01/2023	S503	FOUNDATION DETAILS	3	03/06/2024
■	11/01/2023	S504	FOUNDATION DETAILS	3	03/06/2024
■	11/01/2023	S505	STEEL DETAILS	3	03/06/2024
■	12/21/2023	S506	STEEL DETAILS	3	03/06/2024
■	12/21/2023	S507	STEEL DETAILS	3	03/06/2024
■	03/06/24	S508	STEEL DETAILS	3	03/06/2024
■	11/01/2023	S510	WOOD FRAMING DETAILS	3	03/06/2024
■	11/01/2023	S511	FRAMING DETAILS	3	03/06/2024
■	11/01/2023	S512	BALCONY DETAILS	3	03/06/2024
■	11/01/2023	S515	MASONRY DETAILS	3	03/06/2024
■	12/21/2023	S516	MASONRY DETAILS	3	03/06/2024
■	11/01/2023	S520	ROOF DETAILS	3	12/21/2023
■	12/21/2023	S521	ROOF DETAILS	2	01/19/2024
■	12/21/2023	S530	SHEAR WALL DETAILS	3	03/06/2024
■	11/01/2023	S531	SHEAR WALL DETAILS	3	03/06/2024

ARCHITECTURAL

	Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
■	11/01/2023	A-101	FIRST FLOOR PLAN	3	03/06/2024
■	11/01/2023	A-102	SECOND FLOOR PLAN	3	03/06/2024
■	11/01/2023	A-103	THIRD FLOOR PLAN	3	03/06/2024
■	11/01/2023	A-104	FOURTH FLOOR PLAN	3	03/06/2024
■	11/01/2023	A-105	ROOF PLAN	2	01/19/2024
■	11/01/2023	A-106	ROOFING & FLASHING DETAILS	2	01/19/2024
■	11/01/2023	A-120	FIRST FLOOR REFLECTED CEILING PLAN	3	03/06/2024
■	11/01/2023	A-121	SECOND FLOOR REFLECTED CEILING PLAN	3	03/06/2024
■	11/01/2023	A-122	THIRD FLOOR REFLECTED CEILING PLAN	3	03/06/2024
■	11/01/2023	A-123	FOURTH FLOOR REFLECTED CEILING PLAN	3	03/06/2024
■	11/01/2023	A-125	CEILING DETAILS	2	01/19/2024
■	11/01/2023	A-200	EXTERIOR ELEVATIONS	3	03/06/2024
■	11/01/2023	A-201	EXTERIOR ELEVATIONS	3	03/06/2024
■	12/22/2023	A-202	EXTERIOR COLOR ELEVATIONS	3	03/06/2024

■ SOLID FILL INDICATES INCLUSION IN ISSUE
SHEET ISSUE DATE
10 / 10/ 2023 A-000 SHEET NAME - 10 / 10/ 2023
SHEET NUMBER AND NAME
CURRENT REVISION NUMBER & REVISION DATE ON SHEET
SHEET INDEX LEGEND

ARCHITECTURAL

	Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
■	12/22/2023	A-203	EXTERIOR COLOR ELEVATIONS	3	03/06/2024
■	11/01/2023	A-300	BUILDING SECTIONS	3	03/06/2024
■	11/01/2023	A-301	WALL SECTIONS	3	03/06/2024
■	11/01/2023	A-302	WALL SECTIONS	3	03/06/2024
■	11/01/2023	A-303	ELEVATOR SECTION & DETAILS	3	03/06/2024
■	11/01/2023	A-304	STAIR SECTION & DETAILS	3	03/06/2024
■	11/01/2023	A-305	STAIR SECTION & DETAILS	3	03/06/2024
■	11/01/2023	A-306	FRONT CANOPY PLAN / ELEV. / SECTION / & DETAILS	2	01/19/2024
■	11/01/2023	A-400	ACC. STUDIO KING UNIT PLAN	3	03/06/2024
■	11/01/2023	A-401	ACC. STUDIO QQ UNIT PLAN	3	03/06/2024
■	11/01/2023	A-402	STUDIO KING UNIT PLAN	3	03/06/2024
■	11/01/2023	A-403	STUDIO QQ CENTER UNIT PLAN	3	03/06/2024
■	11/01/2023	A-404	STUDIO QQ END UNIT PLAN	3	03/06/2024
■	11/01/2023	A-405	ONE BED KING UNIT PLAN W/ BALCONY	3	03/06/2024
■	11/01/2023	A-406	ONE BED KING UNIT PLAN W/ BALCONY-INT ELEV	3	03/06/2024
■	11/01/2023	A-407	ONE BED KING UNIT PLAN	3	03/06/2024
■	11/01/2023	A-408	ONE BED KING UNIT INT ELEVS	3	03/06/2024
■	11/01/2023	A-410	ENLARGED 1ST FLOOR PLAN - COMMON AREAS	2	01/19/2024
■	11/01/2023	A-411	ENLARGED 1ST FLOOR PLAN - GARAGE PLAN	2	01/19/2024
■	11/01/2023	A-412	ENLARGED COMMON SPACES	3	03/06/2024
■	11/01/2023	A-413	ENLARGED MISC COMMON AREA PLANS	2	01/19/2024
■	11/01/2023	A-414	PUBLIC SPACE DETAILS	2	01/19/2024
■	11/01/2023	A-415	UNIT DETAILS	2	01/19/2024
■	11/01/2023	A-500	WATERPROOFING DETAILS	2	01/19/2024
■	11/01/2023	A-501	DETAILS	2	01/19/2024
■	11/01/2023	A-502	DETAILS	2	01/19/2024
■	11/01/2023	A-503	DETAILS	2	01/19/2024
■	11/01/2023	A-504	BALCONY AND RAILING DETAILS	2	01/19/2024
■	11/01/2023	A-505	DETAILS	2	01/19/2024
■	11/01/2023	A-600	WINDOW / DOOR / FINISH SCHEDULES	2	01/19/2024
■	11/01/2023	A-601	DOOR DETAILS	2	01/19/2024
■	11/01/2023	A-602	WINDOW DETAILS	2	01/19/2024
	01/14/2019	A-603	DOOR DETAILS	2	01/19/2024
■	11/01/2023	A-700	GUESTROOM DETAILS	2	01/19/2024
■	11/01/2023	A-701	GUESTROOM DETAILS - ACC.	2	01/19/2024
■	11/01/2023	A-704	GUESTROOM BATHROOMS SHOWERS	2	01/19/2024
■	11/01/2023	A-705	GUESTROOM BATHROOMS TUBS	2	01/19/2024
■	11/01/2023	A-706	ACC. GUESTROOM BATHROOMS TUBS	2	01/19/2024
■	11/01/2023	A-707	ACC. GUESTROOM BATHROOMS ROLL-IN	2	01/19/2024
■	11/01/2023	A-715	FINISH TRANSITION DETAILS	2	01/19/2024
■	11/01/2023	A-716	BUFFET ISLAND	2	01/19/2024
■	11/01/2023	A-717	FOOD PREP & BUSSING STATION	2	01/19/2024
■	11/01/2023	A-718	BUFFET	2	01/19/2024
■	11/01/2023	A-719	FITNESS CENTER	2	01/19/2024
■	11/01/2023	A-720	LOBBY AREAS - INTERIOR ELEVATIONS	2	01/19/2024
■	11/01/2023	A-721	WELCOME DESK	2	01/19/2024
■	11/01/2023	A-722	THE HUB	3	03/06/2024
■	11/01/2023	A-723	COMMUNITY, HUB & ON-US ENLARGED PLANS, ELEVATIONS & DETAILS	3	03/06/2024
■	11/01/2023	A-724	FITNESS CENTER & HYDRATION STATION	2	01/19/2024
■	11/01/2023	A-725	PUBLIC RESTROOMS	2	01/19/2024
■	11/01/2023	A-726	BUFFET DETAILS	2	01/19/2024
■	11/01/2023	A-727	IN A PINCH	2	01/19/2024
■	11/01/2023	A-728	CONNECTION CENTER	2	01/19/2024
■	11/01/2023	A-729	FLEX DETAILS	2	03/06/2024
■	11/01/2023	A-730	HYDRATION STATION/ ICE DISPENSER	2	01/19/2024
■	11/01/2023	A-731	CORRIDOR ELEVATIONS	2	01/19/2024
■	11/01/2023	A-732	GUESTROOM DETAILS	2	01/19/2024
■	11/01/2023	A-733	GUESTROOM BATHROOM DETAILS	2	01/19/2024
■	11/01/2023	A-734	ACC. GUESTROOM BATHROOM DETAILS	2	01/19/2024
■	12/22/2023	A-735	GUESTROOM DETAILS	2	01/19/2024

MECHANICAL

	Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
■	11/01/2023	MEP1	MECHANICAL ELECTRICAL PLUMBING COVERSHEET	1	12/22/2023
■	11/01/2023	MEP2	SITE UTILITIES PLAN	3	03/06/2024
■	11/01/2023	MEP3	SITE LIGHTING PLAN	2	01/19/2024
■	11/01/2023	MEP4	PLAN - ROOF MEP PLAN - KITCHEN EQUIPMENT PLAN	1	12/22/2023
■	11/01/2023	M101	HVAC PLAN- 1ST FLOOR- AREA A	2	01/19/2024
■	11/01/2023	M102	HVAC PLAN-2ND-4TH FLOORS - AREA A		
■	11/01/2023	M111	HVAC PLAN - 1ST FLOOR- AREA B		
■	11/01/2023	M112	HVAC PLAN - 2ND-4TH FLOORS - AREA B		
■	11/01/2023	M501	HVAC DETAILS	2	01/19/2024
■	11/01/2023	M601	HVAC SCHEDULES	2	01/19/2024
■	11/01/2023	M602	HVAC SCHEDULES		

ELECTRICAL

	Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
■	11/01/2023	EP101	POWER PLAN - 1ST FLOOR - AREA A	1	12/22/2023
■	11/01/2023	EP102	POWER PLAN - 2ND-4TH FLOORS - AREA A		
■	11/01/2023	EP111	POWER PLAN- 1ST FLOOR - AREA B	1	12/22/2023
■	11/01/2023	EP112	POWER PLAN - 2ND-4TH FLOORS - AREA B		
■	11/01/2023	EP401	POWER PLAN - GUEST ROOMS	1	12/22/2023
■	11/01/2023	EL101	LIGHTING PLAN - 1ST FLOOR - AREA A	1	12/22/2023
■	11/01/2023	EL102	LIGHTING PLAN - 2ND & 3RD FLOOR - AREA A	1	12/22/2023
■	11/01/2023	EL103	LIGHTING PLAN - 4TH FLOOR - AREA A	1	12/22/2023
■	11/01/2023	EL111	LIGHTING PLAN - 1ST FLOOR - AREA B	2	01/19/2024
■	11/01/2023	EL112	LIGHTING PLAN - 2ND & 3RD FLOOR - AREA B	1	12/22/2023
■	11/01/2023	EL113	LIGHTING PLAN - 4TH FLOOR - AREA B	1	12/22/2023
■	11/01/2023	EL401	LIGHTING PLAN - GUEST ROOMS	1	12/22/2023
■	11/01/2023	FS101	FIRE PROTECTION & SECURITY SYSTEM PLAN - 1ST FLOOR - AREA A	1	12/22/2023
■	11/01/2023	FS102	FIRE PROTECTION & SECURITY SYSTEM PLAN - 2ND-4TH FLOORS - AREA A	1	12/22/2023

ELECTRICAL

	Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
■	11/01/2023	FS111	FIRE PROTECTION & SECURITY SYSTEM PLAN - 1ST FLOOR - AREA B	1	12/22/2023
■	11/01/2023	FS112	FIRE PROTECTION & SECURITY SYSTEM PLAN - 2ND-4TH FLOORS - AREA B	1	12/22/2023
■	11/01/2023	E501	ELECTRICAL DETAILS	2	01/19/2024
■	11/01/2023	E601	ELECTRICAL SCHEDULES		
■	11/01/2023	E602	ELECTRICAL SCHEDULES		
■	11/01/2023	E603	ELECTRICAL SCHEDULES		
■	11/01/2023	E604	ELECTRICAL SCHEDULES	1	12/22/2023

PLUMBING

	Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
■	11/01/2023	PS101	SANITARY SEWER PLAN - 1ST FLOOR - AREA A	1	12/22/2023
■	11/01/2023	PS102	SANITARY SEWER PLAN - 2ND FLOOR - AREA A	1	12/22/2023
■	11/01/2023	PS111	SANITARY SEWER PLAN - 1ST FLOOR - AREA B	1	12/22/2023
■	11/01/2023	PS112	SANITARY SEWER PLAN - 2ND FLOOR - AREA B	1	12/22/2023
■	11/01/2023	PS401	SANITARY SEWER PLAN - GUEST ROOMS		
■	11/01/2023	PW101	WATER & GAS PLAN - 1ST FLOOR - AREA A	3	03/06/2024
■	11/01/2023	PW102	WATER & GAS PLAN - 2ND FLOOR - AREA A	1	12/22/2023
■	11/01/2023	PW111	WATER & GAS PLAN - 1ST FLOOR - AREA B		
■	11/01/2023	PW112	WATER & GAS PLAN - 2ND FLOOR - AREA B	1	12/22/2023
■	11/01/2023	PW401	WATER PLAN - GUEST ROOMS	1	12/22/2023
■	11/01/2023	P501	PLUMBING DETAILS & SCHEDULES	1	12/22/2023

PROJECT DATA

PROJECT DESIGN INFORMATION

NEW CONSTRUCTION:

ZONING: PLANNED COMMUNITY COMMERCIAL

CODE:
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL FIRE CODE
2017 NATIONAL ELECTRIC CODE
2009 ACCESSIBILITY CODE ICC/ANSI 117-1
LEE'S SUMMIT AMENDMENTS TO ENERGY CODE

OCCUPANCY GROUP:
R-1, HOTEL TRANSIENT
A-2, UNCONCENTRATED ASSEMBLY
A-4, SWIMMING POOL
S-2, OPEN PARKING GARAGE

TYPE OF CONSTRUCTION:
R-1, A-2, A-4: TYPE VA
S-2: TYPE IIA

ENERGY CONSERVATION:
WALLS AS PART OF BLDG ENVELOPE R-11
FLOORS AS PART OF BLDG ENVELOPE R-19
ROOFS AS PART OF BLDG ENVELOPE R-19
CEILINGS AS PART OF BLDG ENVELOPE R-30

BUILDING SUMMARY:
NUMBER: 1 TOTAL BUILDING
HEIGHT: 4 STORIES, 50'-0"

SQUARE FOOTAGES: GROSS
FIRST FLOOR 22, 735 S.F.
SECOND FLOOR 20,161 S.F.
THIRD FLOOR 20,161 S.F.
FOURTH FLOOR 20,161 S.F.

UNIT SUMMARY: 126 TOTAL UNITS

ACCESSIBLE UNITS
(6) UNITS - ACC. KING STUDIO
(3) UNITS - ACC. Q/Q STUDIO

HI/VI UNITS
(6) UNITS - STUDIO KING
(3) UNITS - 1 BED QUEEN
(3) UNITS - STUDIO Q/Q CTR A

TYPE 'B' UNITS
(66) UNITS - STUDIO KING
(3) UNITS - 1 BED QUEEN
(3) UNITS - 1 BED KING
(27) UNITS - STUDIO Q/Q CTR A
(6) UNITS - STUDIO Q/Q END C

TOTAL UNITS (126) UNITS

SQUARE FOOTAGE:	GROSS	NET
STUDIO KING	341 S.F.	305 S.F.
ACC. KING STUDIO	469 S.F.	424 S.F.
1 BED QUEEN	527 S.F.	442 S.F.
STUDIO Q/Q CTR A	435 S.F.	389 S.F.
STUDIO Q/Q END C	518 S.F.	427 S.F.
ACC. STUDIO Q/Q	459 S.F.	424 S.F.
1 BED KING	597 S.F.	515 S.F.

SITE SUMMARY:
SEE CIVIL FOR PARKING

NOTE: SQUARE FOOTAGE

-GROSS - COMMON SPACE CALCULATION: OUTSIDE PERIMETER OF STUD (ENTIRE BUILDING) LESS THE TOTAL OF THE GROSS UNIT SQUARE FOOTAGE PER FLOOR.
-GROSS - UNIT CALCULATION: CENTERLINE OF PARTY WALL TO OUTSIDE OF EXTERIOR STUD WALL AND/OR OUTSIDE OF CORRIDOR STUD WALL.
-NET - PAINT-TO-PAINT AT PERIMETER,TAKEN FROM INSIDE OF DEMISING, EXTERIOR, AND CORRIDOR WALLS.

PROJECT TEAM

OWNER

INTRINSIC DEVELOPMENT
ADDRESS: 3622 ENDEAVOR AVE., STE. 101, COLUMBIA, MO 65201
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TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
TITLE SHEET

PROJECT NUMBER: 23098

SHEET NUMBER:

G-001

ABBREVIATIONS

A

ABV	ABOVE
ACC	ACCESSIBLE
ACT	ACOUSTICAL CEILING TILE
AD	AREA DRAIN
ADA	AMERICANS WITH DISABILITIES ACT
ADAAG	ADA ACCESSIBILITY GUIDELINES
ADF	ACCESSIBLE DRINKING FOUNTAIN
ADH	ADHESIVE
ADJ	ADJUSTABLE/ADJACENT
AEWC	ACCESSIBLE ELECTRIC WATER COOLER
AFF	ABOVE FINISH FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AL	ASSISTED LIVING
ALAV	ACCESSIBLE LAVATORY
ALT	ALTERNATE
ALUM	ALUMINUM
AMI	ACCESSIBLE MIRROR
ANN	FIRE ANNUNCIATOR PANEL
ANO	ANNODIZED
APPD	APPROVED
APPROX	APPROXIMATE(LY)
ASD	ACCESSIBLE SOAP DISPENSER
ASH	ACCESSIBLE SHOWER HEAD
ATTEN	ATTENUATION
ATTN	ATTENTION
AU	ACCESSIBLE URINAL

B

B.O.	BOTTOM OF
BD	BOARD
BLDG	BUILDING
BLK	BLOCK / BLACK
BLKG	BLOCKING
BM	BENCH MARK
BO	BY OTHERS
BOD	BOTTOM OF DECK(ING)
BOH	BACK OF HOUSE
BOT	BOTTOM (OF)
BRG	BEARING
BRKT	BRACKET
BRZ	BRONZE
BSMT	BASEMENT
BTWN / BTW	BETWEEN
BUR	BUILT UP ROOFING
BUS	BUSINESS

C

C TO C	CENTER TO CENTER
CAB	CABINET
CB	CERAMIC BASE/CORNER BEAD/CHALKBOARD
CEM / CEMT	CEMENT / CEMENTITIOUS
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CLRM	CLASSROOM
CMP	CORRUGATE METAL PIPE
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTERTOP
CO	CLEANOUT
COL	COLUMN
COMB	COMBINATION
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE / COORDINATOR
CORR	CORRIDOR
CPT	CARPET
CSK	COUNTERSINK / COUNTER SUNK
CT	CERAMIC TILE
CTG	COATING
CTR	CENTER
CY	CUBIC YARD(S)

D

DBL	DOUBLE
DEMO	DEMOLITION / DEMOLISH
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIMS	DIMENSIONS
DN	DOWN
DP	DEEP
DR	DOOR
DS	DOWNSPOUT
DTL	DETAIL
DWG	DRAWING

E

E	EAST
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC(AL)
ELEV	ELEVATOR
ENLG	ENLARGED
EPDM	ETHYLENE PROPYLENE DIENE TERPOLYMER
EQ	EQUAL
ES	EACH SIDE
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR

F

FA	FIRE ALARM
FACP	FIRE ACCESS CONTROL PANEL
FAWCM	FULLY ADHERED WATER CONTROL MEMBRANE
FBG	FIBERGLASS
FD	FLOOR DRAIN / FIRE DEPARTMENT
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FGL	FIBERGLASS
FH	FIRE HOSE
FHA	FAIR HOUSING ACT
FHC	FIRE HOSE CABINET
FIN	FINISH
FIXT	FIXTURE
FLASH	FLASHING
FLEX	FLEXIBLE
FLR	FLOOR
FND	FOUNDATION
FO	FACE OF
FRP	FIBER-REINFORCED PLASTIC
FT	FOOT
FTG	FOOTING

G

GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GEN	GENERAL
GFRC	GLASS FIBER REINFORCED CONCRETE
GL	GLASS
GLZ	GLAZED TILE
GPM	GALLONS/MINUTE
GR	GRADE
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
GYP BD	GYPSUM BOARD

H

HB	HOSE BIBB
HC	HOLLOW CORE
HCWD	HOLLOW CORE WOOD
HD	HEAVY DUTY OR HAND DRYER
HDBD	HARD BOARD
HDNR	HARDENER
HDW	HARDWARE
HDWD	HARDWOOD
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HYD	HYDRANT

I

IBC	INTERNATIONAL BUILDING CODE
ID	INTERIOR DESIGNER
ID	INSIDE DIAMETER
IDF	INDIVIDUAL DISTRIBUTION FRAME
IL	INDEPENDENT LIVING
IN	INCHES
INDIV	INDIVIDUAL
INSUL	INSULATION / INSULATED
INT	INTERIOR
INV	INVERT

J

JAN	JANITOR
JST	JOIST
JT	JOINT

K

KD	KNOCKED DOWN
KIT	KITCHEN
KN	KNOX BOX

L

LA	LANDSCAPE / LANDSCAPE ARCHITECT
LAM	LAMINATE
LAV	LAVATORY
LF	LINEAR FOOT/FEET
LG	LONG
LGTH	LENGTH
LKR	LOCKER
LSC	LIFE SAFETY CODE
LT	LIGHT

M

MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MARKER BOARD / MAIL BOX
MC	MEMORY CARE
MDF	MAIN DISTRIBUTION FRAME
MECH	MECHANICAL
MFR	MANUFACTURE(ER)
MH	MANHOLE
MI	MIRROR
MIN	MINIMUM
MO	MASONRY OPENING
MTD	MOUNTED
MTG HT	MOUNTING HEIGHT
MTL	METAL

N

N	NORTH
N/A	NOT APPLICABLE
NIC	NOT IN COUNT / NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE

O

OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFD	OVERFLOW ROOF DRAIN
OFF	OFFICE
OH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD

P

PA	PUBLIC ADDRESS
PAR	PARALLEL
PCP	PORTLAND CEMENT PLASTER
PERP	PERPENDICULAR
PH	PRE-HUNG
PL	PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLBG	PLUMBING
PLBG	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
PNLG	PANELING
PR	PAIR
PRE-FIN	PRE-FINISHED
PREFAB	PREFABRICATED
PREFIN	PREFINISHED
PT	PAINT
PTD	PAINTED
PTN	PARTITION
PTR	PAPER TOWEL RECEPTACLE

R

R	RADIUS
RA	RETURN AIR
RC	RESILIENT CHANNEL
RCP	REFLECTED CEILING PLAN / REINFORCED CONCRETE PIPE(ING)
RD	ROOF DRAIN
RE / REF	REFER TO
RECPT	RECEPTACLE
RECS	RECOMMENDATION(S)
REF	REFRIGERATOR / REFER TO
REINF	REINFORCING
REQD	REQUIRED
REV	REVISION
RFG	ROOFING
RO	ROUGH OPENING
RR	RESTROOM
RTU	ROOF TOP UNIT

S

S	SOUTH
SAF	SELF ADHERED FLASHING
SAFP	SPRAYED APPLIED FIRE-PROOFING
SC	SOLID CORE
SCHED	SCHEDULE
SCR	SHOWER CURTAIN ROD
SCWD	SOLID CORE WOOD
SD	SOAP DISPENSER
SECT	SECTION
SF	SQUARE FEET
SH	SINGLE HUNG
SHR	SHOWER
SHT	SHEET
SIM	SIMILAR
SND	SANITARY NAPKIN DISPENSER
SOG	SLAB ON GRADE
SP CTG	SPECIAL COATING
SPEC	SPECIFICATION
SPKR	SPEAKER
SQ	SQUARE
SQIN	SQUARE INCHES
SST	STAINLESS STEEL
STC	SOUND TRANSMISSION COEFFICIENT
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUBFLR	SUBFLOOR
SUSP	SUSPEND(ED)
SY	SQUARE YARD
SYM	SYMMETRICAL

T

T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
T.O.	TOP OF
TB	TOWEL BAR
TBD	TO BE DETERMINED
TEL / TELE	TELEPHONE
TER / TRZ	TERRAZZO (TERRACE)
TERM	TERMINATE / TERMINAL
TOC	TOP OF CURB / TOP OF CONC
TOM	TOP OF MASONRY
TOW	TOP OF WALL
TP / TPD	TOILET PAPER DISPENSER
TPO	THERMOPLASTIC POLYOLEFIN
TRANS	TRANSFORMER / TRANSPARENT / TRANSOM
TS	TUBE STEEL
TYP	TYPICAL

U

UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
UR	URINAL
US	UTILITY SHELF

V

VCT	VINYL COMPOSITE TILE
VENT	VENTILATE / VENTILATION
VER	VERIFY
VIF	VERIFY IN FIELD
VP	VISION PANEL
VTR	VENT THRU ROOF

W

W	WEST
W/	WITH
W/IN	WITHIN
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WF	WIDE FLANGE / WATER FOUNTAIN
WH	WALL HUNG / HYDRANT / WATER HEATER / WEEP HOLE
WLD	WELD(ED)
WRB	WEATHER-RESISTANT BARRIER
WT	T SECTION
WWF	WELDED WIRE FABRIC

X

X	BY (EX: 2X4)

Y

YD	YARD / YARD DRAIN

MATERIAL LEGEND AND SYMBOLS

MASONRY BLOCK - PLAN
1/2" = 1'-0" AND BELOW

BRICK - SECTION

CONCRETE
ABOVE 1-1/2" = 1'-0"

STUD WALL

GYPSUM BOARD

PLYWOOD

RIGID INSULATION

BATT INSULATION

STANDING SEAM METAL ROOF

EARTH

CRUSHED ROCK

SAND

CONTINUOUS LUMBER

NON-CONTINUOUS LUMBER (SHIM)

FINISH LUMBER

STEEL OR METAL

9999A.2
Room Name
Type A or ACC (BLDG #) | 1/A-400
Type B (E...) | 1/A-401
Type B - HIV... G #) | 1/A-401

ROOM NUMBER

ACCESSIBLE UNIT OR TYPE-A UNIT

HEARING IMPAIRED UNIT

VISUALLY IMPAIRED UNIT

101 — DOOR NUMBER

A1 — WINDOW TYPE

P7 — WALL TYPE

01.00 — ELEVATION KEYNOTE

01.00 — PLAN KEYNOTE

ELEVATION NUMBER — 1 / A101 — SHEET NUMBER — SIM
SIMILAR TO WALL SECTION INDICATED
WALL SECTION CUT LINE

ELEVATION NUMBER — 1 / A101 — SHEET NUMBER — SIM
SIMILAR TO BUILDING SECTION INDICATED
BUILDING SECTION CUT LINE

ELEVATION NUMBER — A-101 3 — SHEET NUMBER
EXTERIOR ELEVATION

ELEVATION NUMBER — A-101 3 — SHEET NUMBER
INTERIOR ELEVATION

ELEVATION NUMBER — 1 / A101 — SHEET NUMBER — SIM
SIMILAR TO BUILDING SECTION INDICATED
ENLARGED PLAN OR DETAIL CALLOUT

Name
Elevation
ELEVATION MARK

ARCHITECT TO VERIFY

GENERAL NOTES

STANDARDS AND REGULATIONS

1. CONTRACTOR SHALL PERFORM ALL WORK IN CONFORMANCE WITH APPLICABLE BUILDING CODES, REGULATIONS, ORDINANCES, UTILITY PROVIDER REQUIREMENTS, AND SIMILAR STANDARDS.
2. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND SIMILAR RELEASES REQUIRED FOR CONSTRUCTION AND OCCUPANCY. CONTRACTOR SHALL FURNISH ALL COPIES OF SUCH ITEMS TO OWNER AND ARCHITECT WITHIN 10 DAYS OF RECEIPT. IF PERMITS ARE ISSUED SUBJECT TO CERTAIN CONDITIONS OR REVISIONS TO THE WORK OR PERMITS ARE DELAYED FOR ANY REASON, CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER IMMEDIATELY.
3. CONTRACTOR SHALL OBTAIN ALL REQUIRED INSPECTIONS OF THE WORK. CONTRACTOR SHALL REGULARLY UPDATE OWNER AND ARCHITECT REGARDING THE STATUS OF THE INSPECTIONS.
4. CONTRACTOR SHALL COORDINATE WORK WITH APPLICABLE UTILITY PROVIDERS.
5. CONTRACTOR SHALL BE FAMILIAR WITH AND WORK SHALL BE IN COMPLIANCE WITH REFERENCED FIRE-RATED ASSEMBLY TESTS AND STANDARDS.

ADMINISTRATION OF THE WORK

1. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS AND SEQUENCES OF CONSTRUCTION.
2. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SAFETY OF ALL CONSTRUCTION PERSONNEL AND AUTHORIZED VISITORS.
3. CONTRACTOR SHALL BECOME FULLY ACQUAINTED WITH THE CONDITIONS RELATED TO THE WORK. ANY KNOWN DISCREPANCIES BETWEEN THE DOCUMENTS AND ACTUAL CONDITIONS SHALL BE REPORTED TO THE OWNER FOR RESOLUTION PRIOR TO PROCEEDING WITH WORK RELATED TO THE DISCREPANCY.
4. CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL CONSTRUCTION AND DEMOLITION DEBRIS. CONTRACTOR SHALL OBTAIN APPROVAL OF OWNER (AND GOVERNING AUTHORITIES, IF APPLICABLE) FOR DETAILS RELATED TO REMOVAL OF TRASH, INCLUDING SUCH ISSUES AS PATH OF TRAVEL.
5. CONTRACTOR SHALL BECOME FAMILIAR WITH AND COMPLY WITH GOVERNMENT'S PROCEDURES FOR MAINTAINING A SECURE SITE AND BUILDING.
6. EACH INSTALLER SHALL EXAMINE SUBSTRATE CONDITION AND/OR SITE CONDITIONS WHICH AFFECT THE QUALITY OF EACH PRODUCT TO BE INSTALLED. IF ANY CONDITIONS EXIST WHICH WILL HAVE A DETRIMENTAL EFFECT ON THE QUALITY OF THE INSTALLATION, THE INSTALLER SHALL IMMEDIATELY NOTIFY THE CONTRACTOR. INSTALLATION SHALL NOT PROCEED UNTIL THE UNSATISFACTORY CONDITIONS ARE CORRECTED. PROCEEDING WITH THE INSTALLATION SHALL SIGNIFY ACCEPTANCE OF THE CONDITIONS.
7. CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS ON SITE AT ALL TIMES.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING COORDINATION EFFORTS OF ALL SUBCONTRACTORS.
9. CONTRACTOR SHALL NOT CLOSE UP CEILING UNTIL ARCHITECT HAS AN OPPORTUNITY TO INSPECT ALL WORK WHICH WILL BE CONCEALED BY CEILING. CONTRACTOR SHALL NOTIFY ARCHITECT AT LEAST TWENTY-FOUR HOURS PRIOR TO CLOSE-UP.
10. CONTRACTOR SHALL LAY OUT WORK AS SOON AS POSSIBLE. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK IN QUESTION.

USE OF CONSTRUCTION DOCUMENTS

1. CONTRACTOR SHALL NOT SCALE DRAWINGS. ONLY WRITTEN DIMENSIONS OR KEYED NOTES SHALL BE USED. CONTACT ARCHITECT IF CLARIFICATION OR ADDITIONAL INFORMATION IS REQUIRED.
2. DRAWINGS SHALL NOT BE REPRODUCED FOR SUBMITTALS. DRAWINGS OR PORTIONS OF DRAWINGS USED FOR SUBMITTALS WILL BE REJECTED AND RETURNED TO CONTRACTOR.
3. DIMENSIONS ARE AS FOLLOWS UNLESS NOTED OTHERWISE:
   A. FACE OF STUD
   B. TO CENTERLINE OF COLUMNS, PARTY WALL, WINDOWS AND DOORS
   C. TO TOP OF STRUCTURAL DECK
   D. TO BOTTOM OF FINISHED CEILING

DEFINITIONS

1. "ALIGN" AS USED IN THESE DOCUMENTS SHALL MEAN TO ACCURATELY LOCATE AND FINISH FACES IN THE SAME PLANE AND/OR TO INSTALL NEW CONSTRUCTION ADJACENT TO EXISTING CONSTRUCTION WITHOUT ANY VISIBLE JOINTS OR SURFACE IRREGULARITIES.
2. "CLEAR" AS USED IN THESE DOCUMENTS SHALL MEAN THAT THE CONDITION IS NOT ADJUSTABLE WITHOUT THE APPROVAL OF THE ARCHITECT, CLEAR DIMENSIONS ARE TYPICALLY TO FINISH FACE.
3. "MAXIMUM" OR "MAX" AS USED IN THESE DOCUMENTS SHALL MEAN THAT THE CONDITION IS SLIGHTLY ADJUSTABLE BUT MAY NOT VARY TO A DIMENSION OR QUANTITY GREATER THAN THAT SHOWN WITHOUT APPROVAL OF THE ARCHITECT.
4. "MINIMUM" OR "MIN." AS USED IN THESE DOCUMENTS SHALL MEAN THAT THE CONDITION IS SLIGHTLY ADJUSTABLE BUT MAY NOT VARY TO A DIMENSION OR QUANTITY LESS THAN THAT SHOWN WITHOUT APPROVAL OF THE ARCHITECT.
5. "TYPICAL" OR "TYP" AS USED IN THESE DOCUMENTS SHALL MEAN THAT THE CONDITION OR DIMENSION IS THE SAME OR REPRESENTATIVE FOR SIMILAR CONDITIONS THROUGHOUT.
6. "+/-" AS USED IN THESE DOCUMENTS SHALL MEAN THE DIMENSION OR QUANTITY IS SLIGHTLY ADJUSTABLE TO ACCOMMODATE ACTUAL CONDITIONS.

GENERAL CONSTRUCTION ISSUES

1. HATCHED AREAS INDICATE AREA TO BE FURRED DOWN ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
2. ALL PLUMBING SUPPLY LINES IN EXTERIOR WALLS TO RECEIVE FULL INSULATION.
3. DO NOT ALLOW EXTERIOR SHEATHING TO BE IN CONTACT WITH CONCRETE SURFACE.
4. HOLD ALL WOOD TRIM A MINIMUM OF 1/4-INCH ABOVE CONTACT WITH HORIZONTAL CONCRETE SURFACES.

PASSIVE SUB SLAB DEPRESSURIZATION RADON CONTROL SYSTEM

1. PROVIDE UNDERSLAB RADON MITIGATION SYSTEM WITH REQUIRED VENTING.
2. DESIGN OF SUB SLAB DEPRESSURIZATION RADON CONTROL SYSTEM WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. PROVIDE ELECTRICAL JUNCTION BOX IN ATTIC FOR POSSIBLE FUTURE INSTALLATION OF WARNING DEVICE FOR EACH VERTICAL STACK.
4. PROVIDE 15 AMP, 115 VOLT ELECTRIC CIRCUIT AND JUNCTION BOX FOR FUTURE INSTALLATION OF VENT FAN.
5. ALL CONCRETE SLABS THAT COME IN CONTACT WITH THE GROUND SHALL BE LAID OVER A GAS PERMEABLE MATERIAL MADE UP OF EITHER A MINIMUM 4" THICK UNIFORM OF CLEAN AGGREGATE OR A MINIMUM 4" THICK UNIFORM LAYER OF SAND, OVERLAIN BY A LAYER OR STRIPS OF MANUFACTURED MATTING DESIGNED TO ALLOW THE LATERAL FLOW OF SOIL GASES.
6. ALL CONCRETE FLOOR SLABS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL BUILDING CODES.
7. ALL OPENINGS, GAPS, AND JOISTS IN FLOOR AND WALL ASSEMBLIES IN CONTACT WITH SOIL OR GAPS AROUND PIPES, TOILETS, BATHTUBS OR DRAINS PENETRATING THESE ASSEMBLIES SHALL BE FILLED OR CLOSED WITH MATERIALS THAT PROVIDE A PERMANENT AIR-TIGHT SEAL. SEAL LARGE OPENINGS WITH NON-SHRINK MORTAR, GROUTS OR EXPANDING FOAM MATERIALS AND SMALLER GAPS WITH ELASTOMERIC JOINTS SEALANT, AS DEFINED ASTM C920-A7.
8. VENT PIPES SHALL BE INSTALLED SO THAT ANY RAINWATER OR CONDENSATION DRAINS DOWNWARD INTO THE GROUND BENEATH THE SLAB OR SOIL - GAS - RETARDER MEMBRANE.
9. EXHAUST CLEARANCES MUST CONFORM TO THE CURRENT NATIONAL STANDARD PLUMBING CODE, FOR EXHAUST TERMINATION LIMITATION AND REQUIREMENTS.

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
2 01/19/2024 Addendum #2

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
GENERAL INFORMATION

PROJECT NUMBER: 23098

SHEET NUMBER:
G-002

1/25/2024 8:46:54 AM
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ENVIRONMENTAL GENERAL NOTES

1. NOTE REMOVED.
2. CONTRACTOR IS RESPONSIBLE FOR PROPER NOTIFICATION AS MAY BE REQUIRED FOR LOCAL, STATE, OR FEDERAL ABATEMENT PROCEDURES AND PAYMENT OF ALL FEES TO THE REQUIRED JURISDICTION.
3. CONTRACTOR SHALL PROPERLY NOTIFY AND INFORM ALL SUB-CONTRACTORS AND ALL WORKERS/EMPLOYEES EITHER ENTERING OR WORKING ON SITE OF THE PRESENCE OF ANY AND ALL HAZARDOUS MATERIALS IDENTIFIED.
4. CONTRACTOR SHALL COORDINATE ALL ABATEMENT PROCEDURES, NOTIFICATION AND WORK WITH OWNER RETAINED THIRD PARTY ENVIRONMENTAL ENGINEER/CONSULTANTS IN IDENTIFICATION, ABATEMENT AND REMEDIATION OF ANY HAZARDOUS MATERIAL.
5. NOTE REMOVED.
6. NOTE REMOVED.
7. NOTE REMOVED.
8. ALL HAZARDOUS MATERIALS SHALL BE SAMPLED BY A LICENSED ABATEMENT ENVIRONMENTAL ENGINEER/CONSULTANT AND REMOVED BY A LICENSED CONTRACTOR IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS. CONTRACTOR SHALL NOTIFY OWNER AND ENVIRONMENTAL ENGINEER/CONSULTANT IMMEDIATELY UPON DISCOVERY OF ANY HAZARDOUS MATERIAL WHICH MAY BE CONCEALED AT TIME OF THE ORIGINAL PHASE I ENVIRONMENTAL REPORT AND MAY NOT HAVE BEEN PREVIOUSLY IDENTIFIED OR LOCATED.
9. NOTE REMOVED.
10. PLEASE REFERENCE THE PROJECT SPECIFICATIONS FOR THE PHASE I ENVIRONMENTAL SUMMARY REPORT. A COMPLETE COPY OF THE PHASE I REPORT AND FINDINGS IS AVAILABLE UPON REQUEST FROM THE OWNER, CONTRACTOR AND/OR ARCHITECT

ELEVATION GENERAL NOTES

1. ALL EXTERIOR SURFACES TO BE FINISHED UNO, INCLUDING BUT NOT LIMITED TO, TRIM, SIDING, GRILLS, VENTS, STACKS, ETC.
2. CAULK ALL JOINTS AND SEAMS BETWEEN DISSIMILAR MATERIALS FOR WEATHERTIGHT, WATERTIGHT, AIRTIGHT PERFORMANCE.
3. ALL FACADE MATERIAL TO WRAP BACK TO INSIDE BUILDING CORNER, UNO.
4. ALL SURFACE RUNS GREATER THAN 25'-0" & INTERIOR CORNERS TO RECEIVE CONTROL JOINT, COORDINATE LOCATION WITH ARCH.

REFLECTED CEILING PLAN GENERAL NOTES

1. SEE ID & MEP SETS FOR LOCATIONS OF ALL LIGHT FIXTURES AND MECHANICAL DIFFUSERS.
2. COORDINATE ANY DISCREPANCIES WITH MEP AND ARCHITECT PRIOR TO INSTALLATION.
3. REFERENCE ALL INTERIORS DRAWINGS FOR COORDINATION
4. ALL CEILINGS TO CONFORM TO 2018 IBC TABLE 803.9
5. ALL ACT TILES TO BE WHOLE DIMENSIONS AND ARE NOT TO BE FIELD CUT, ALL ACT TO BE FIELD CENTERED IN SPACE, U.N.O. OR DIMENSIONED
6. SEE ENLARGED UNIT PLANS (A-400 SERIES) FOR ALL UNIT RCP PLANS EXCEPT WHERE HEIGHTS ARE LISTED ON RCP PLANS IN A-100 SERIES.
7. DROPPED CEILINGS AT BATHROOMS ARE TO BE LOCATED AT 8'-0" ABOVE FINISHED FLOOR UNLESS OTHERWISE INDICATED ON THE PLAN.
8. ALL EXPOSED EQUIPMENT (IE SPRINKLER HEADS) TO BE ALIGNED AND CENTERED IN GEOMETRY AND PLACED INCONSPICUOUSLY. SPRINKLERS IN COMMON AREAS TO BE RECESSED.
9. NOTE REMOVED.
10. NOTE REMOVED.
11. NOTE REMOVED.
12. WHERE CEILING HEIGHT IS B.O. FLOOR ASSEMBLY, FINISH TO BE LEVEL FOUR FINISH. ALL UNITS TO HAVE A LEVEL FOUR FINISH AT CEILINGS.
13. ALL MECH DUCTS WHICH FEED TO PLENUM SPACE VIA MECH SHAFTS SHALL BE ENCLOSED ON THE BOTTOM ACCORDING TO PROGRESSIVE ENGINEERING REPORT AER-09-038.
14. ACCESS TO EQUIPMENT SHALL BE THROUGH ACT WHERE AVAILABLE. WHERE NECESSARY, ACCESS THROUGH GWB CEILING TO USE ACCESS HATCHES. GC TO PROVIDE HATCHES AND HATCH LOCATION DIAGRAM PRIOR TO INSTALL.
15. ALL DIMENSIONS FOR CEILING TYPE C5 AND C1 ARE TO FINISHED FACE. ALL DIMENSIONS TO WALLS ARE TO F.O. STUD.
16. ALL DROPPED SOFFIT FRAMING IN COMMON AREAS SHALL BE OUT OF METAL STUDS. ONE (1) HOUR RATED CEILING THROUGHOUT BUILDING AT UNDERSIDE OF ROOF TRUSSES AND ARE PART OF THE FIRE RATED FLOOR-CEILING ASSEMBLY
17. ALL GYPSUM BOARD CEILINGS TO BE PAINTED PA-1 (U.O.N.).
18. MISCELLANEOUS SYMBOLS INDICATED ON REFLECTED CEILING PLAN ARE MECHANICAL IN NATURE. REFER TO MEP DRAWING SHEETS FOR FURTHER CLARIFICATION FOR ITEM IDENTIFICATION AND LOCATIONS.

PLAN GENERAL NOTES

01 - GENERAL

A. ALL NEW WORK TO MEET ALL APPLICABLE BUILDING, PLUMBING, MECHANICAL, ELECTRICAL, HANDICAP, AND LIFE SAFETY CODES AND REQUIREMENTS.
B. ALL WALL DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE.
C. DO NOT SCALE DRAWINGS.
D. NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN PROJECT DOCUMENTS AND EXISTING CONDITIONS. ANY MODIFICATIONS DUE TO DIMENSIONAL CHANGES SHOULD BE PART OF THE PROJECT COST.
E. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL THOROUGHLY FAMILIARIZE THEMSELVES TO ALL SITE SPECIFIC REQUIREMENTS AND EXTENTS OF THE NEW WORK PRIOR TO BIDDING. NO CHANGES IN THE CONTRACT WILL BE CONSIDERED FOR INFORMATION DISCERNABLE FROM THE EXISTING CONDITIONS OR THE PROJECT DOCUMENTS.
F. CONTRACTORS SHALL BE FAMILIAR AND INCORPORATE ALL PROVISIONS AND REQUIREMENTS ESTABLISHED BY CODES APPLICABLE TO THE PROJECT INCLUDING FAIR HOUSING, UFAS, ANSI, & ADAAG
G. REPORT ALL EXISTING CONDITIONS THAT ARE DAMAGED OR MARRED TO THE ARCHITECT PRIOR TO COMMENCEMENT OF THE NEW WORK.
H. TYPICAL TOP OF FIRST FLOOR SUBFLOOR ELEVATION IS REFERENCED AS 100'-0". CONTRACTOR SHALL VERIFY BUILDING FINISH FLOOR ELEVATION WITH ACTUAL CONDITIONS. COORDINATE ACTUAL GRADE WITH CIVIL DRAWINGS.
I. FULLY ACCESSIBLE UNITS SHALL MEET THE REQUIREMENTS OF 2009 ICC/ANSI A117.1 - TYPE 'A' DWELLING UNITS AND 2010 ADAAG (DOJ). ALL OTHER DWELLING UNITS TO BE TYPE 'B'.
J. MAIN LEVEL ELEVATION IS T.O. GYPCRETE, OR T.O. CONCRETE SLAB, RESPECTIVELY.
K. LEVELS ABOVE MAIN LEVEL ARE MEASURED TO T.O. SUBFLOOR.
L. WHOLE BUILDING TO MEET FAIR HOUSING ACT.
M. ALL PENETRATIONS INTO FIRE-RATED ASSEMBLIES ARE TO BE FIRESTOPPED WITH UL APPROVED FIRESTOPPING ASSEMBLIES. UL INFORMATION SHALL BE PROVIDED BY TRADE RESPONSIBLE FOR PENETRATION. REFERENCE THE G200 SERIES.
N. THROUGH PENETRATIONS NOT LOCATED WITHIN WALL CAVITY OR FLOOR/CEILING/ROOF ASSEMBLY SHALL BE REQUIRED TO HAVE FIRE RESISTIVE PENETRATION WITH A T-RATING EQUAL TO OR EXCEEDING THE ASSEMBLY THAT IS PENETRATED.
O. CONTROL JOINTS IN GWB AT ALL UNIT CORRIDORS SHALL BE LOCATED AT INSIDE CORNER OF PILASTERS AND ACROSS TOP OF DROP SOFFIT AT PILASTERS. AT LOCATIONS WHICH THERE IS A 30' SPAN BETWEEN PILASTERS, A CONTROL JOINT SHALL OCCUR AT THE CENTRAL LOCATION BETWEEN THE TWO PILASTERS ADJACENT TO THE NEAREST DOOR, RUNNING FROM HEAD TO T.O. PARTITION AT CORNER. AT LOCATIONS WHICH THERE IS A 30' SPAN BETWEEN SOFFIT WHERE PILASTER OCCURS, A CONTROL JOINT SHALL OCCUR AT THE INSIDE CORNER OF PILASTER AND SOFFITS. CONTROL JOINTS SHALL OCCUR AT THE CORNERS OF ALL STOREFRONT, RUNNING TO THE T.O. THE PARTITION. GC TO VERIFY WITH ARCHITECT DURING CONSTRUCTION ALL CONTROL JOINT LOCATIONS PRIOR TO INSTALL.
P. PROVIDE FIREBLOCKING AND DRAFTSTOPPING AS REQUIRED AND IN ACCORDANCE WITH 2018 IBC, SECTION 717.0.
Q. CONTRACTOR TO PROVIDE FIRE BLOCKING AT FIRE SEPARATION PARTITION AT 10' ON CENTER VERTICALLY, TYPICAL. CONTRACTOR TO PROVIDE FIRE BLOCKING AT FIRE SEPARATION PARTITION AT ALL BACK-TO-BACK ELECTRICAL OUTLETS.
R. ALL INTERIOR WALLS ARE TYPE P1, UNLESS NOTED OTHERWISE. ALL EXTERIOR WALLS ARE TYPE P30, UNLESS NOTED OTHERWISE. SEE SHEET G-101 FOR PARTITION SCHEDULE.
S. ALL EXTERIOR MATERIALS TO BE APPLIED PER MANUFACTURER RECOMMENDATIONS AND WITH ASSOCIATED PRODUCTS (SUCH AS STAPLES, NAILS, TAPER, SEALANT).

03 - CONCRETE

A. CONCRETE SEALANT TO BE USED ON FIRST FLOOR WHERE RECEIVING RESILIENT VINYL FLOORING.
B. AT SLAB ON GRADE UNITS, LEVEL CONCRETE SURFACE AT AREAS WHERE VCT FLOORING TO BE INSTALLED.

04 - MASONRY

A. ALL EXTERIOR BRICK TO HAVE WEEP HOLES AT MAX 2' ABOVE GRADE
B. ALL EXTERIOR BRICK TO EXTEND BELOW GRADE BY 3 COURSES (8") MIN. AND HAVE A BRICK LEDGE.
C. ALL LOCATIONS WITH EXTERIOR BRICK TO BE GROUTED SOLID FROM BELOW GRADE CONDITION TO LOWEST WEEP HOLE.

05 - METALS

A. STAIR HANDRAILS, TREADS, STRINGERS TO BE PRE-FINISHED OR PAINTED STEEL.
B. ALL DOWNSPOUTS TO BE CONNECTED TO UNDERDRAINS, SLOPED AWAY FROM BUILDING.
C. ALL EXTERIOR METAL TO BE PRE-FINISHED OR PRIMED/PAINTED. COLOR PER ARCH.

06 - WOOD, PLASTICS AND COMPOSITES

A. ALL COMMON SPACE, UNIT TOILET ROOMS, AND BATHROOMS TO HAVE BLOCKING FOR GRAB BARS. SEE G301 FOR HEIGHTS AND LOCATIONS. GRAB BARS TO BE INSTALLED IN ALL COMMON SPACE, UNIT TOILET ROOMS, AND BATHROOMS. BLOCKING TO BE PROVIDED FOR ALL SHOWER GRAB BARS AND SEATING AS REQUIRED BY MANUFACTURER.
B. CONTRACTOR TO COORDINATE BLOCKING AT ALL ADJACENT POCKET DOORS, MEDICINE CABINETS, AND OTHER ELEMENTS.
C. AT ALL IDF, MDF & ELEC ROOMS; INTERIOR FINISH TO BE FIRE-TREATED PLYWOOD PAINTED WHITE ON ALL WALLS
D. ALL SHEAR WALL LOCATIONS & EXTENT OF SHEATHING TO BE COORDINATE WITH STRUCTURAL DRAWINGS.
E. ALL EXPOSED CABINET ENDS TO HAVE FINISHED PANELS, INCLUDING BUT NOT LIMITED TO END OF CABINET RUN, ADJACENT TO REFRIGERATOR, LOCATIONS OF VERTICAL OFFSETS.

07 - THERMAL AND MOISTURE PROTECTION

A. CAULK ALL JOINTS BETWEEN DISSIMILAR MATERIALS FOR WEATHER TIGHT, WATERTIGHT, AIRTIGHT, ETC. PERFORMANCE.
B. ALL EXTERIOR WRB TO BE APPLIED, TAPERED AND SEALED PER INSTRUCTIONS
C. PROVIDE SOUND ATTENUATION INSULATION OVER ALL BATHROOM CEILINGS AND IN BATHROOM WALLS, TYPICAL ALL BATHROOMS
D. AT EXTERIOR WALLS, CAULK CONTROL JOINTS IN FLOOR SLAB 12" INTO BUILDING TO PREVENT AGAINST WATER INFILTRATION.

08 - OPENINGS

A. DOORS- ELECTRICIAN IS REQUIRED TO COORDINATE WITH DOOR HARDWARE SCHEDULE FOR ALL ELECTRICAL ROUGH IN REQUIREMENTS FOR DOORS, INCLUDING AUTO OPERATORS, MAG HOLD OPENS, ELECTRONIC STRIKES, KEYPADS AND MAG LOCKS.
B. ALL DOOR HARDWARE SHALL BE COORDINATED W/ OWNER BY DESIGN BUILD CONTRACTOR.

09 - FINISHES

A. NOTE REMOVED.
B. PROVIDE 1/2" RESILIENT CHANNEL ON (1) SIDE OF EACH UNIT DEMISING WALL. EACH UNIT TO RECIEVE MIN. 1 CHANNEL ON INTERIOR FACE OF DEMISING WALL.
C. PROVIDE 1/2" RESILIENT CHANNEL ON CORRIDOR SIDE OF CORRIDOR WALL.
D. PRIME, PAINT AND SEAL ALL WALLS, COLUMNS AND CEILINGS AS REQUIRED PRIOR TO INSTALLATION OF M/E/P/F/TELEPHONE/SECURITY INSTALLATION.
E. CONTRACTOR TO COORDINATE ALL WET WALLS WITH ADJACENT RATINGS AND TO ACCOMMODATE PLUMBING FIXTURES. WALLS TO BE ALIGNED.
F. ALL WALLS TO BE ALIGNED AS INDICATED ON DRAWINGS - IF WALL IS MISALIGNED MID-WALL AND WILL AFFECT VISUAL APPEARANCE IN ROOM (I.E. 'JOG' WILL APPEAR) GC TO BRING TO ARCH ATTENTION PRIOR TO FINISHING
G. FLOOR TRANSITION SHALL OCCUR AT MIDDLE OF WALL WHERE OCCURS IN DOORWAY. PROVIDE VINYL REDUCER STRIP.

PLAN GENERAL NOTES - (CONT.)

10 - SPECIALTIES

A. NOTE REMOVED.
B. NOTE REMVOED.
C. NOTE REMOVED.
D. NOTE REMOVED.
E. CORNER GUARDS AT COMMON SPACES, PER INTERIORS
F. NOTE REMOVED.
G. TOILET PAPER DISPENSER TO BE INSTALLED PER A4/G-301 AND 2009 ICC ANSI 117.1
H. SEE G300 FOR SIGNAGE REQUIREMENTS. NUMBERING OF UNITS AND ROOMS SHALL BE UPDATED TO MEET AHJ AND OWNER REQUIREMENTS PRIOR TO SIGNAGE PRODUCTION.

21 - FIRE SUPPRESSION

A. ALL UNITS TO HAVE APPROPRIATE NUMBER OF SMOKE DETECTORS INSTALLED.
B. FIRE EXTINGUISHERS SHALL BE LOCATED SO THAT THE MAXIMUM TRAVEL DISTANCE SHALL NOT EXCEED 75 FEET. GENERAL CONTRACTOR TO PROVIDE SEMI-RECESSED TYPE THROUGHOUT WITH RATED CABINET. PROVIDE (1) TYPE "CLASS K" WITHIN 30 FEET OF COMMERCIAL COOKING EQUIPMENT. PROVIDE RESIDENTIAL TYPE ANSUL SYSTEM AT ALL RESIDENTIAL RANGES AS REQUIRED BY FIRE DEPARTMENT HEIGHT TO MEET ANSI.
C. CONCEALED SPRINKLER HEADS TO BE USED U.N.O.
D. NOTE REMOVED.
E. DRY SPRINKLERS TO BE COORDINATED WITH DESIGN-BUILD CONTRACTOR. ALL SPRINKLERS IN BUILDING CAN BE WET. SPRINKLER LOCATIONS AND SPRINKLER EQUIP TO BE COORDINATED W/ ARCH PRIOR TO INSTALL - GC TO PROVIDE LOCATIONS OF HEADS ON RCPS FOR ARCH REVIEW PRIOR TO INSTALL. GC TO COORD FIRE SPRINKLER LINER W/ ALL MEP IN CORRIDOR SPACE TO MAINTAIN CEILING TYPE & HT. PER ARCH DWGS

22 - PLUMBING

A. PLUMBING VENT STACKS, FLUES, FRESH AIR INTAKES, ETC. NOT SHOWN FOR CLARITY. SEE MEP DRAWINGS FOR HVAC/ELECTRICAL/PLUMBING REQUIREMENTS/EQUIPMENT/LOCATIONS. GC TO VERIFY LOCATIONS OF ALL SIDEWALL VENTS PRIOR TO INSTALL.
B. PROVIDE FLOOR DRAINS AS INDICATED ON PLUMBING DRAWINGS AND PER APPLICABLE PLUMBING CODE.
C. DRAINAGE SHALL BE PER 2018 IBC 3201.4 - DRAINAGE WATER COLLECTED FROM A ROOF, AWNING, CANOPY OR MARQUEE AND CONDENSATE FROM MECHANICAL EQUIPMENT SHALL NOT FLOW OVER A PUBLIC WALKING SURFACE
D. CONTRACTOR TO COORDINATE MECHANICAL DUCT, SPRINKLER, PLUMBING, AND ELECTRICAL SUCH THAT CEILING HEIGHTS AND LOCATIONS ARE MAINTAINED PER REFLECTED CEILING PLANS.
E. ALL DOWNSPOUTS INTO COURTYARDS AND AT HARDSCAPE TO BE HARDPIPED TO STORM SEWER. GUTTERS/DOWNSPOUTS SHALL NOT FLOW OVER SIDEWALKS OR OTHER HARDSCAPE.

23 - HVAC

A. GC TO COORDINATE MECHANICAL PADS FOR ROOFTOP AND GROUND MOUNTED UNITS.

26 - ELECTRICAL

A. SEE ELECTRICAL PLANS FOR ELECTRIC DEVICE LAYOUTS.
B. SEE C1/G300 FOR ELECTRICAL MOUNTING HEIGHT REQUIREMENTS.
C. PROVIDE EXIT SIGNS AT LOCATIONS AND PER **1011.3, IBC. -** A TACTILE SIGN STATING 'EXIT' AND COMPLYING WITH ICC A117.1 SHALL BE PROVIDED ADJACENT TO EACH DOOR TO AN AREA OF REFUGE, AN EXTERIOR AREA FOR ASSISTED RESCUE, AN EXIT STAIRWAY, AN EXIT RAMP, AN EXIT PASSAGEWAY AND THE EXIT DISCHARGE
D. PROVIDE DIMMER CAPABILITY FOR ALL COMMON AREA DECORATIVE AND DOWNLIGHTS/SPOTS (CAN LIGHTS).
E. TIMECLOCK AND PHOTOCELL FOR EXTERIOR LIGHTS. MULTIPLE ZONES MAY BE NECESSARY. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
F. ALL ELECTRICAL AND IDF/MDF ROOMS TO HAVE SOLID BLOCKING TO ACCOMMODATE PANEL ATTACHMENT. BLOCKING TO BE PAINTED TO MATCH WALLS. WALLS TO REMAIN RATED AS INDICATED PER PLAN.
G. FIRE PULL STATIONS TO BE PROVIDED PER 2009 IFC AND A.H.J.
H. ALL LIGHTING, T-STATS AND OTHER SWITCHES TO BE INSTALLED PER ANSI 117.1, 2010 ADAAG, AND THE FAIR HOUSING ACT. LOCATIONS AND GROUPINGS OF SWITCHES TO BE ACCEPTED BY ARCH PRIOR TO INSTALL.

ROOF PLAN GENERAL NOTES

1. ALL NEW WORK TO MEET ALL APPLICABLE BUILDING, PLUMBING, MECHANICAL, HANDICAP, AND LIFE SAFETY CODES AND REQUIREMENTS.
2. THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE SPACE VENTILATED. THE OPENINGS SHALL BE COVERED WITH CORROSION-RESISTANT MESH OR OTHER APPROVED MATERIALS WITH OPENINGS NOT MORE THAN 1/2" IN ANY DIRECTION.
3. WHERE RIDGE OR GABLE VENTS ARE UTILIZED, ADDITIONAL PROTECTION AGAINST SNOW INFILTRATION SHALL BE PROVIDED BY BALANCING THE AREA OF THE VENTS IN THE RIDGES AND THE EAVES SUCH THAT AT LEAST 1/2 OF THE VENTILATION AREA SHALL BE PROVIDED BY SOFFIT OR EAVE VENTS, WITH THE BALANCE OF THE VENTILATION OPENINGS PROVIDED BY THE GABLE OR RIDGE VENTS. REFERENCE IBC 2018 SECTION 1203.
4. ALL FLOOR JOIST BEARING HEIGHTS ARE 9'-1 1/8". ALL ROOF TRUSS BEARING HEIGHTS ARE 9'-1 1/8". REFERENCE WALL SECTIONS ON A300 SHEETS.
5. 1'-0" ROOF SOFFIT, UNLESS NOTED OTHERWISE, REF: ROOF PLAN.
6. CONTRACTOR TO INSTALL GUTTERS, DOWNSPOUTS AND ALL FLASHING PER APPLICABLE SMACNA GUIDELINES. IF ADDITIONAL DOWNSPOUTS ARE REQUIRED, CONTRACTOR SHALL CONFIRM LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.
7. MEMBRANE ROOFING SYSTEM ON RIGID INSULATION, ALL ROOF LOCATIONS TYP. U.O.N.
8. COLORS T.B.D., COORDINATE WITH ARCHITECT.
9. FLAT ROOFS TO BE TPO MEMBRANE; INSTALL PER MANUFACTURERS INSTRUCTIONS; PROVIDE 1/4" SLOPE FOR FLAT ROOFS. PROVIDE 1/2" SLOPE FOR ALL CRICKETS.
10. RE: PLUMBING FOR PRIMARY AND OVERFLOW ROOF DRAIN LOCATIONS.
11. ALL DOWNSPOUTS ARE TO BE PIPED TO THE UNDERGROUND, RE: CIVIL.
12. PROVIDE EXTRA LAYER OF MEMBRANE WALKWAY PATH FOR ALL MECHANICAL EQUIPMENT AT FLAT ROOF LOCATIONS FROM ROOF ACCESS.
13. PROVIDE 4'X4' ROOF ACCESS HATCH TO FLAT ROOF.

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7305
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
PLAN GENERAL NOTES

PROJECT NUMBER: 23098

SHEET NUMBER:
G-003

WEATHER-RESISTIVE BARRIER INSTALLATION GUIDELINES

WEATHER-RESISTIVE BARRIER INSTALLATION ON VERTICAL WALLS

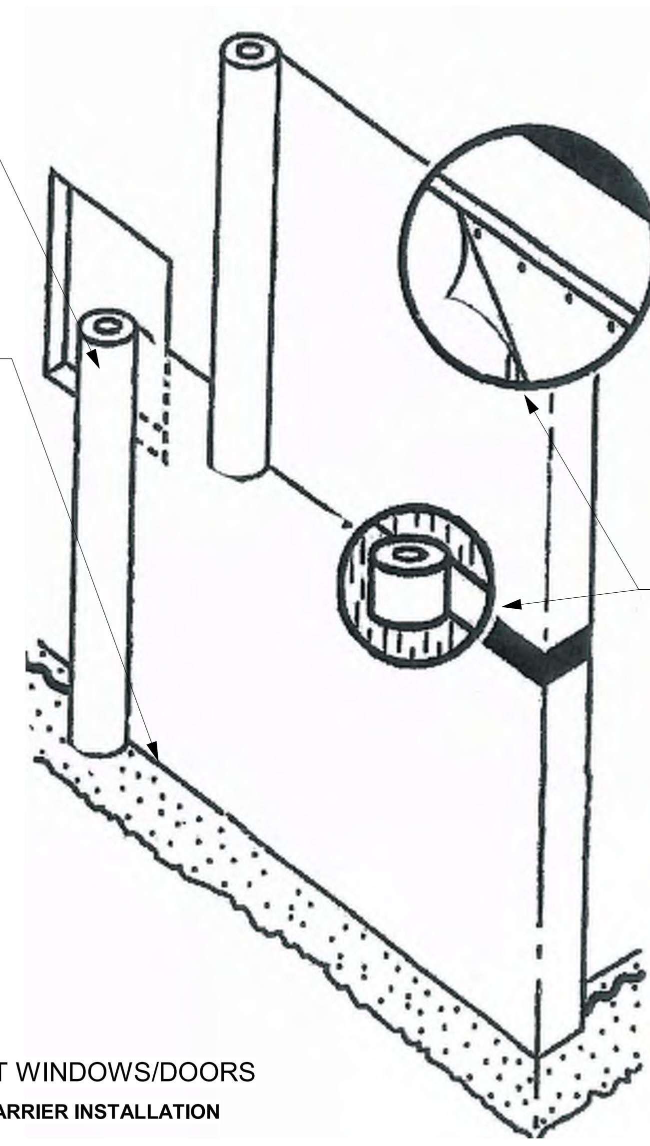
PRIOR TO INSTALLATION OF WINDOWS OR DOORS

STEP 1
UNWRAP ROLL AT CORNER, LEAVE 6" TO 12" OVERLAP - PRINTED STUD MARKS TO LINE UP WITH FIRST STUD.

STEP 2
ROLL SHOULD BE PLUMB - EXTEND BOTTOM ROLL EDGE OVER SILL PLATE INTERFACE AT LEAST 2" TO 3".

STEP 3A
WEATHER-RESISTIVE BARRIER TO BE SECURED ON VERTICAL STUD LINE EVERY 12" TO 18". WHEN USING WOOD, INSULATED SHEATHING BOARD, OR EXTERIOR GYPSUM BOARD; LARGE HEAD OR PLASTIC WEATHER HEAD NAIL USE IS BEST PRACTICE. ALSO, 1" MIN. CROWN WIDE STAPLES MAY BE USED.

STEP 3B
WHEN USING MASONRY, TEMPORARILY ATTACH BARRIER WITH ADHESIVES CONTAINING POLYURETHANE, ELASTOMERIC, OR LATEX BASE IN VERTICAL STRIPS - SPACE APPROXIMATELY 24" APART (CONSULT BUILDING WRAP MANUFACTURER FOR LIST OF SUGGESTED ADHESIVES). AS A PERMANENT ATTACHMENT, USE CLADDING FASTENERS.



STEP 4
DIRECTLY UNROLL BARRIER OVER WINDOWS AND DOORS - UPPER ROLL TO OVERLAP BOTTOM ROLL 6" HORIZONTALLY.

STEP 5
UPPER OF UPPER AND LOWER PLATES TO BE COVERED BY BARRIER - TAPE ALL HORIZONTAL SEAMS AT BAND JOISTS, HEADERS AND ROLL OVERLAPS USING 2" OR 3" MANUFACTURER APPROVED TAPE. ALL ACCIDENTAL TEARS, DAMAGE OR PENETRATIONS TO BE TAPED.

FLASHING SYSTEM INSTALLATION AT WINDOWS/DOORS

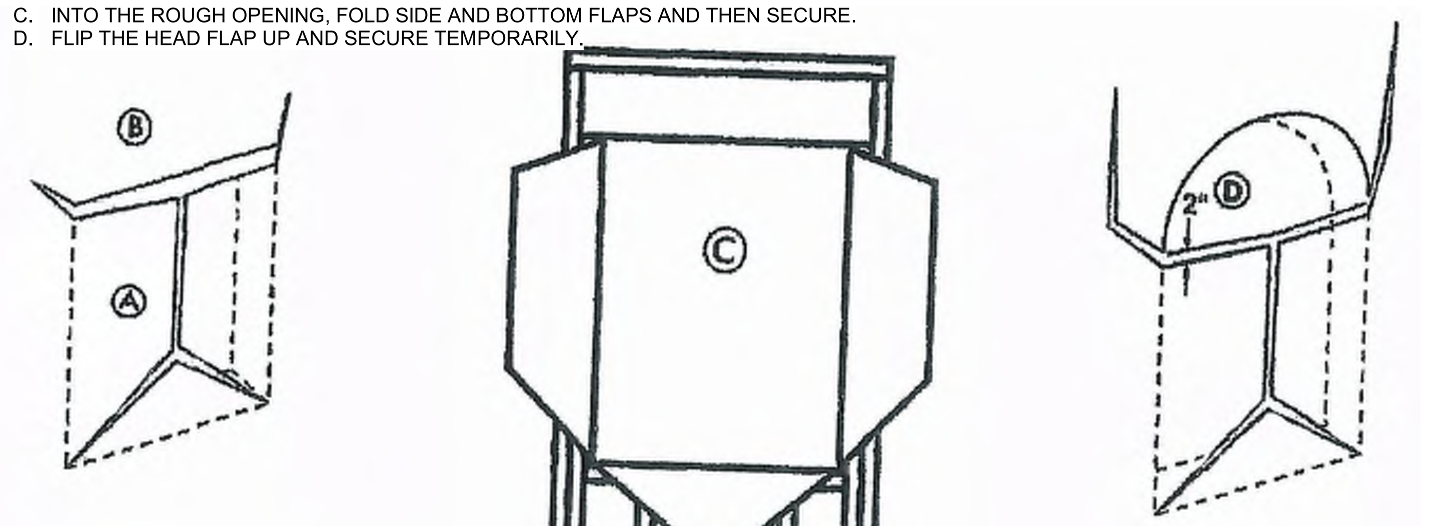
UPON COMPLETION OF WEATHER-RESISTIVE BARRIER INSTALLATION

GENERAL INSTRUCTIONS

- USE AND INSTALL APPROVED FLASHING PER WEATHER-RESISTIVE BARRIER MANUFACTURER'S RECOMMENDATIONS.
- INSTALL FLASHING ON CLEAN, DRY SURFACES. SURFACES TO BE WIPED TO REMOVE MOISTURE, DIRT, GREASE AND OTHER DEBRIS WHICH MAY INTERFERE WITH ADHESION.
- PRESSURE TO BE APPLIED ALONG ENTIRE SURFACE TO ACHIEVE A GOOD BOND.
- SMOOTH/REPOSITION SURFACE AS NECESSARY TO ELIMINATE ALL WRINKLES AND BUBBLES.

STEP 6
PREPARE WEATHER-RESISTIVE BARRIER FOR WINDOW OR DOOR INSTALLATION:

A. MAKE A MODIFIED 'I-CUT' IN THE BARRIER, BEGINNING WITH A HORIZONTAL CUT ACROSS THE TOP OF THE WINDOW FRAME. (FOR ROUNDTOP WINDOWS, BEGIN THE CUT 2" ABOVE THE MULL JOINT; SEE D). CUT STRAIGHT DOWN FROM THE CENTER APPROXIMATELY 2/3 OF THE WAY, THEN ANGLE THE CUT TO THE CORNERS (SEE A).
B. TO EXPOSE SHEATHING, OR FRAMING MEMBERS, AND TO ALLOW FOR HEAD FLASHING INSTALLATION, CUT A FLAP ABOVE THE ROUGH OPENING.
C. INTO THE ROUGH OPENING, FOLD SIDE AND BOTTOM FLAPS AND THEN SECURE.
D. FLIP THE HEAD FLAP UP AND SECURE TEMPORARILY.

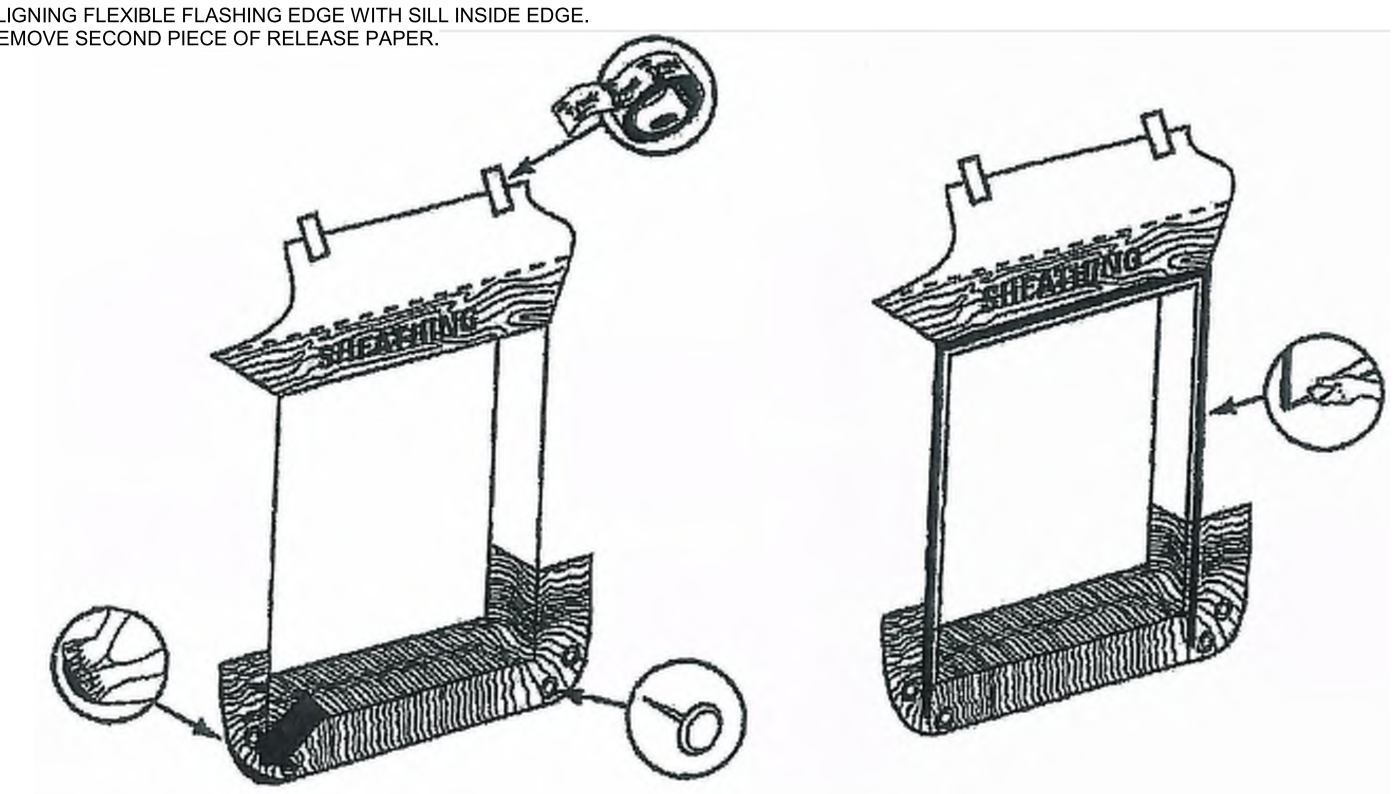


FOR RECTANGULAR WINDOWS

FOR ROUNDTOP WINDOWS

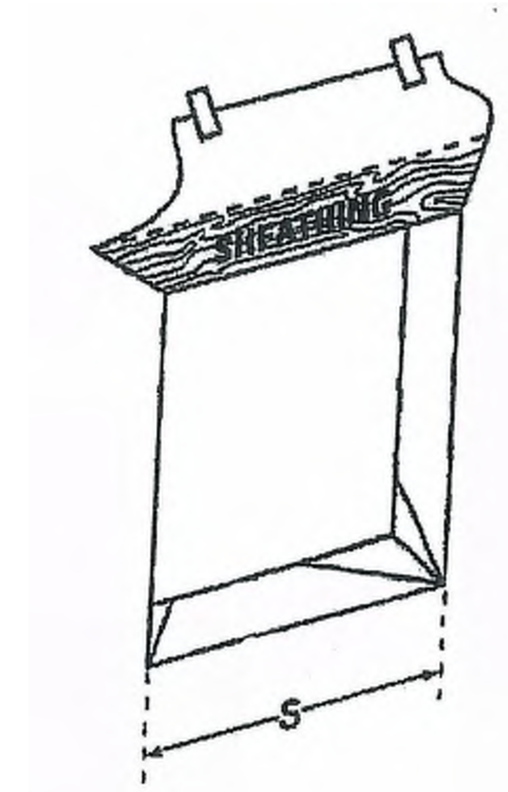
STEP 7

A. CUT FLEXIBLE FLASHING AT LEAST 12" LONGER THAN SILL ROUGH OPENING WIDTH.
B. REMOVE FIRST PIECE OF RELEASE PAPER, COVER HORIZONTAL SILL BY ALIGNING INSIDE EDGE OF SILL, AND SECURE IN ROUGH OPENING ACROSS SILL AND TURN UP JAMBS - MINIMUM 6". COVER HORIZONTAL SILL BY ALIGNING FLEXIBLE FLASHING EDGE WITH SILL INSIDE EDGE.
C. REMOVE SECOND PIECE OF RELEASE PAPER.



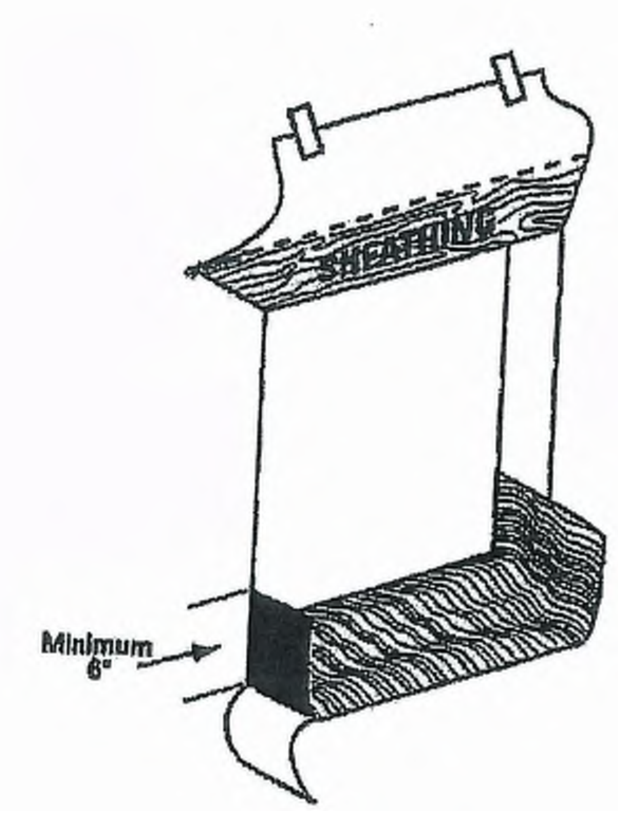
STEP 8

A. FAN FLEXIBLE FLASHING ONTO WALL FACE AT BOTTOM CORNERS.
B. PRESS SILL FLASHING FIRMLY TO ENSURE FULL ADHESION.
C. **FANNED EDGES TO BE SECURED WITH MECHANICAL FASTENERS.**



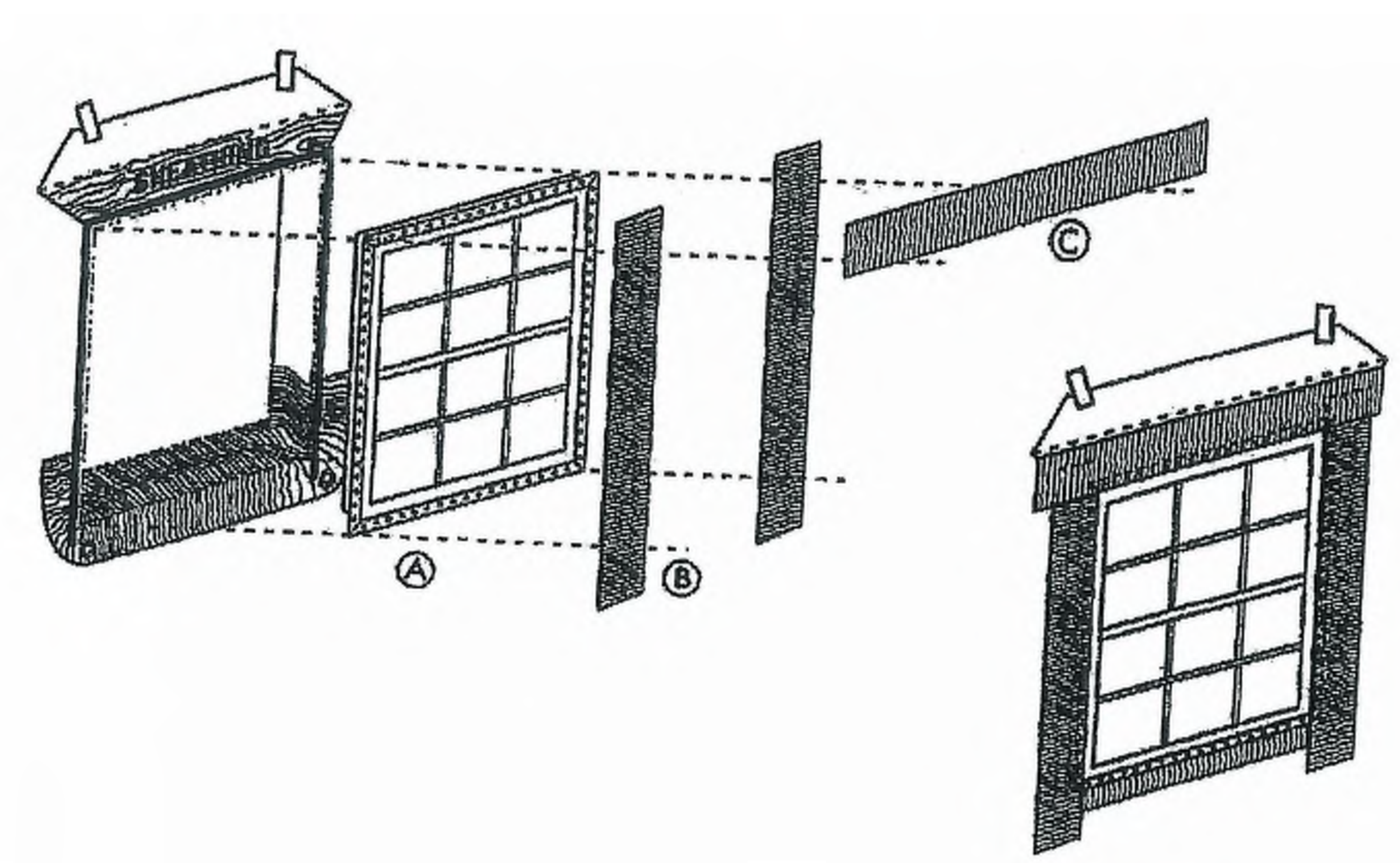
STEP 9

A. AT WALL OR BACK SIDE OF WINDOW MOUNTING FLANGE, APPLY A CONTINUOUS BEAD OF CAULK ACROSS JAMBS AND HEAD - BOTTOM SILL FLANGE TO REMAIN UNCAULKED.
B. **CAULK NOT TO BE APPLIED TO BOTTOM SILL FLANGE.**



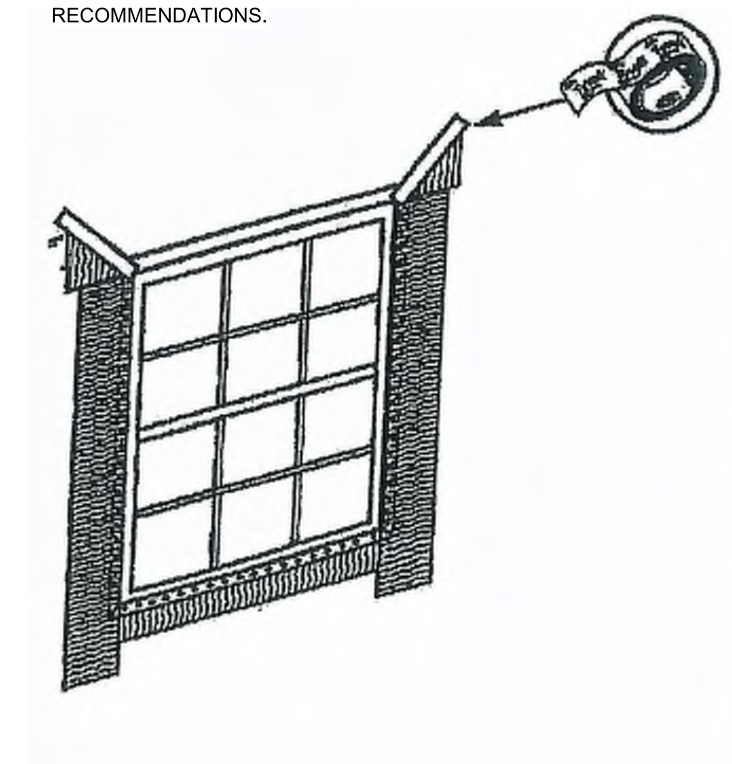
STEP 10

A. INSTALL WINDOW/DOOR PER MANUFACTURER'S INSTRUCTIONS. (IMAGE A)
B. CUT TWO PIECES OF FLASHING OR FLEXIBLE FLASHING FOR JAMB FLASHING TO EXTEND 1" ABOVE WINDOW HEAD FLANGE AND BELOW BOTTOM EDGE OF SILL FLASHING. REMOVE RELEASE PAPER AND TIGHTLY PRESS ALONG SIDES OF WINDOW FRAME. (IMAGE B)
C. CUT A PIECE OF FLASHING OR FLEXIBLE FLASHING FOR HEAD FLASHING, TO EXTEND BEYOND OUTER EDGES OF JAMB FLASHING. REMOVE RELEASE PAPER AND INSTALL COMPLETELY COVERING MOUNTING FLANGE AND ADHERING TO EXPOSED SHEATHING OR FRAMING MEMBERS. (IMAGE C)



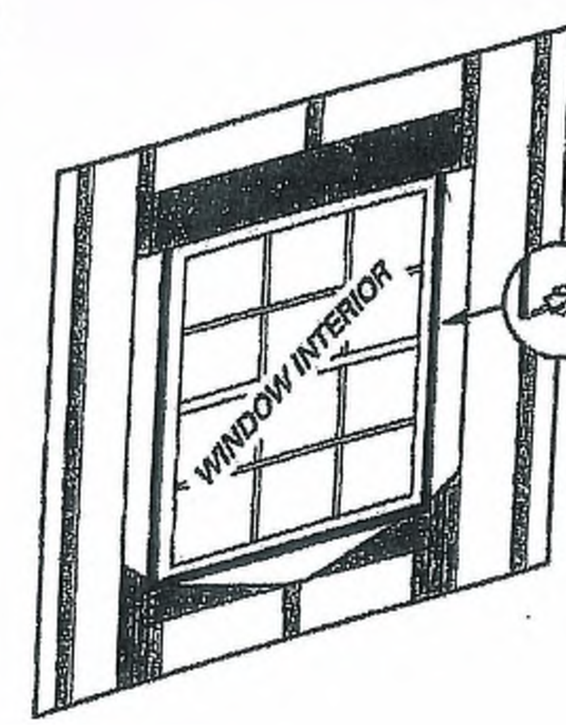
STEP 11

A. FLIP DOWN WEATHER-RESISTIVE BARRIER UPPER FLAP SO THAT IT LAYS FLAT ACROSS HEAD FLASHING.
B. TAPE ALONG ALL CUTS IN WEATHER-RESISTIVE BARRIER AND ACROSS WINDOW HEAD WITH APPROVED TAPE PER MANUFACTURER'S RECOMMENDATIONS.



STEP 12

CAULK (BACKER ROD, AS NECESSARY) AT REAR OF WINDOW/DOOR FRAME TO SEAL INSIDE OF ROUGH OPENING ACROSS BOTTOM AND A MINIMUM 12" TURN UP AT SIDES TO FORM A BACK DAM. IN ORDER TO AIR SEAL AROUND WINDOW OPENING, COMPLETELY CAULK AROUND BACK EDGE OF WINDOW PERIMETER.



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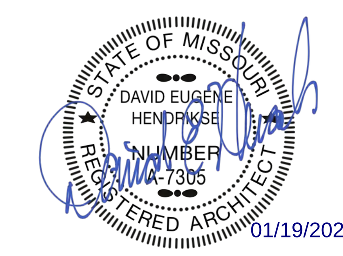

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LEE'S SUMMIT 64064 USA

SHEET TITLE
GENERAL INFORMATION

PROJECT NUMBER: 23098

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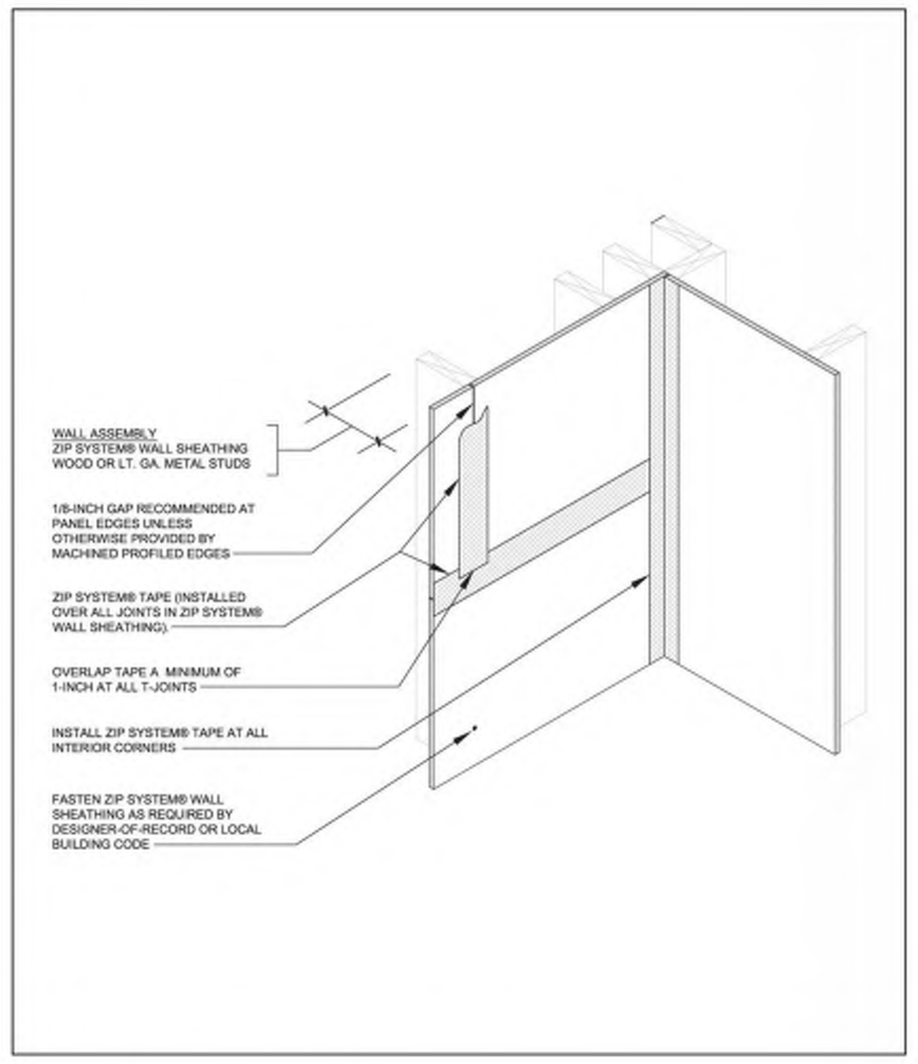
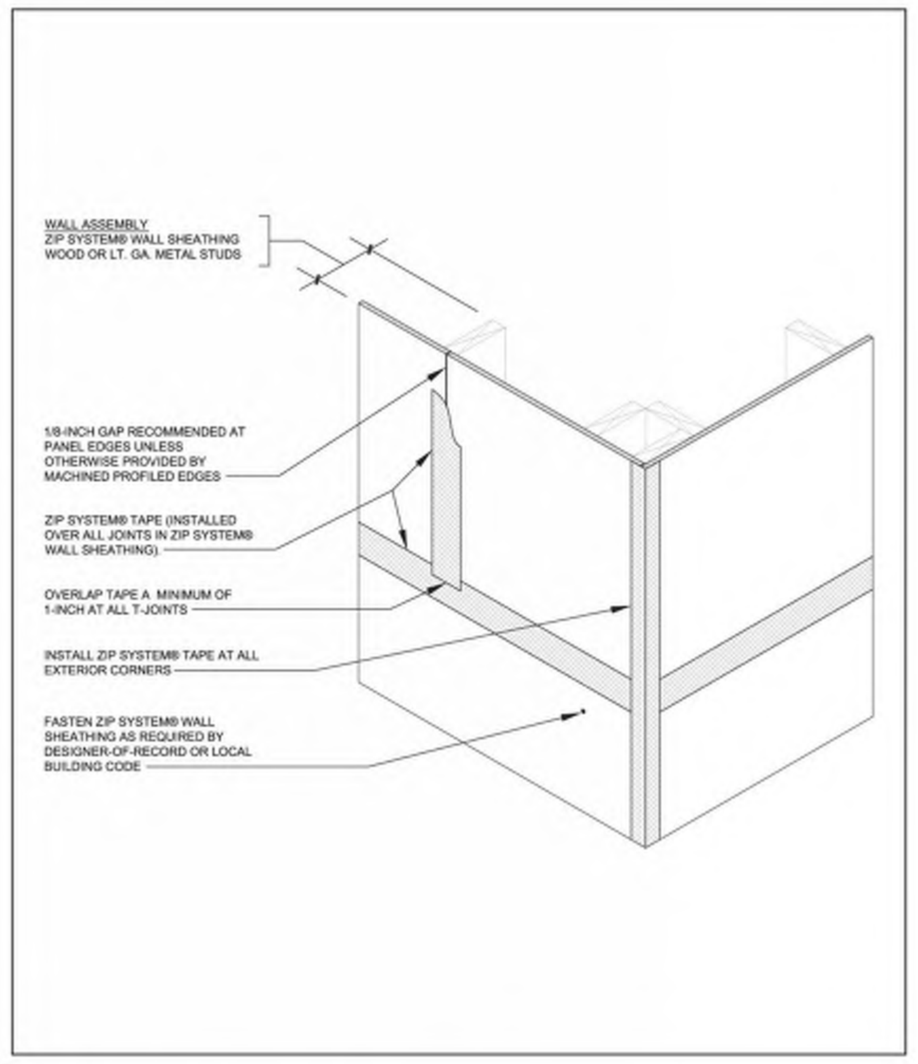
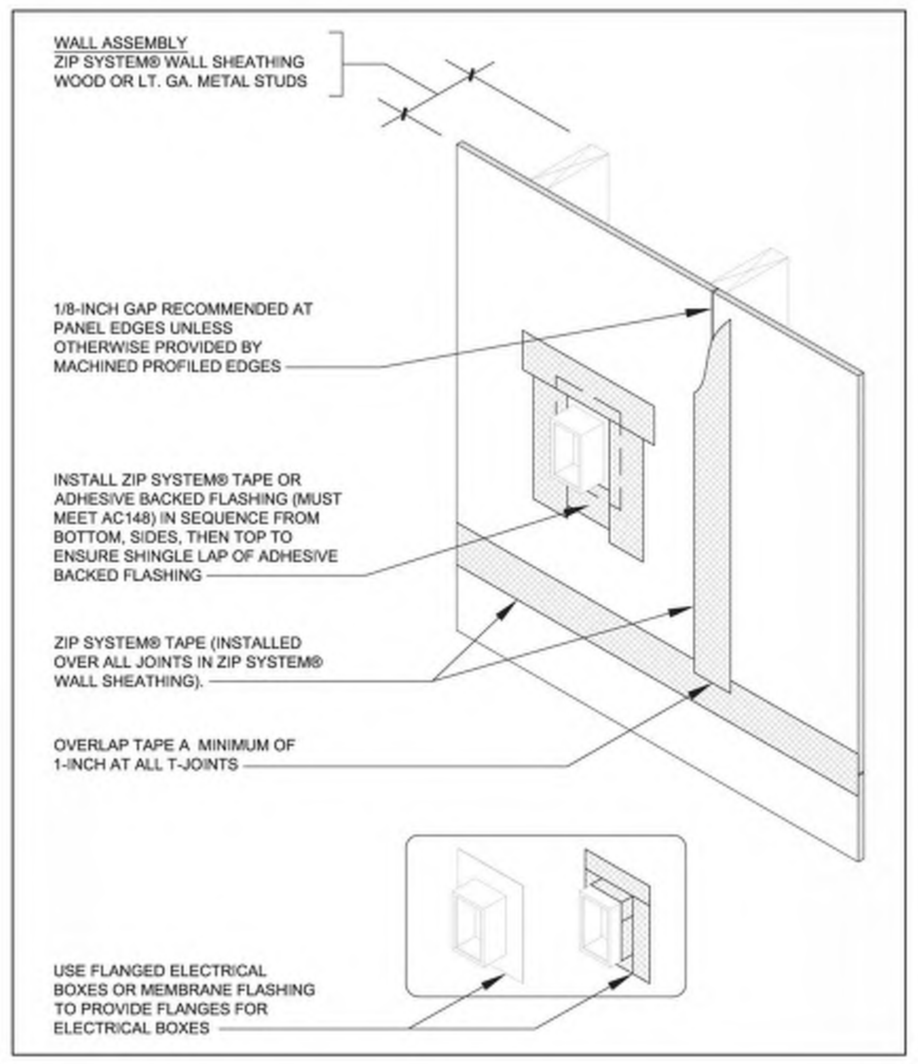
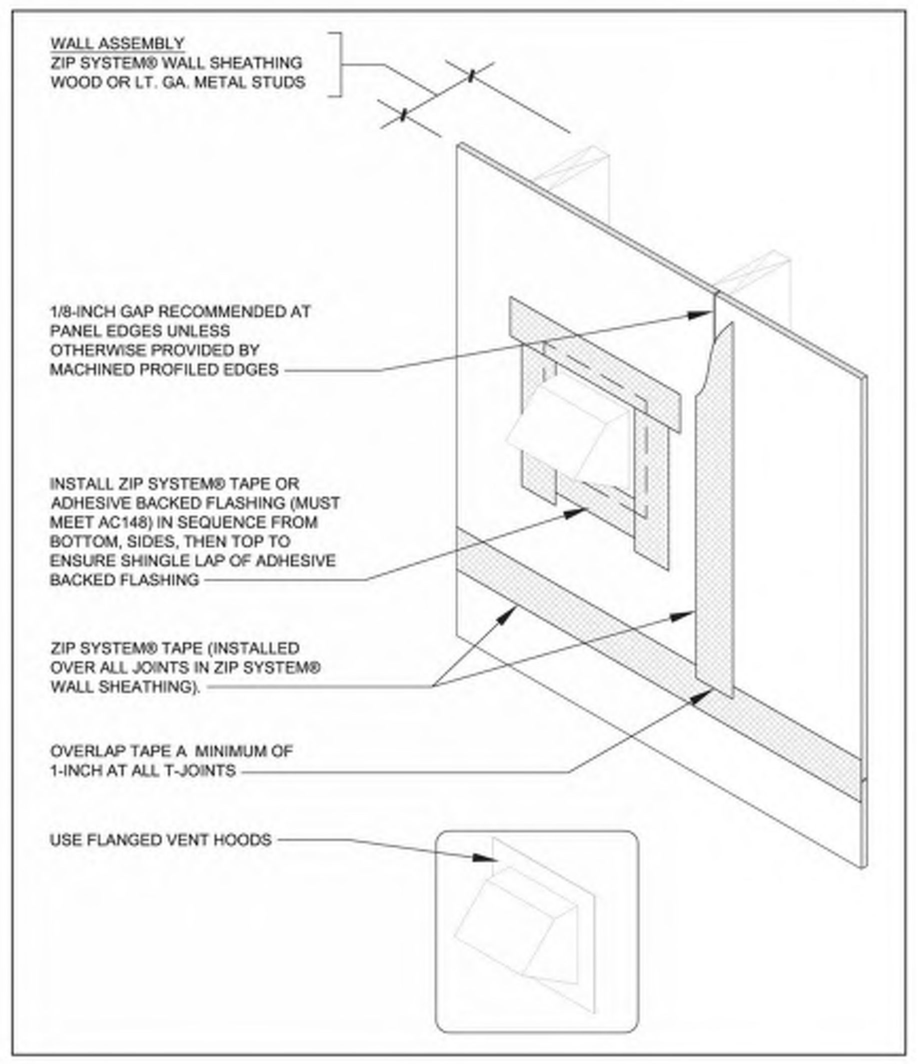
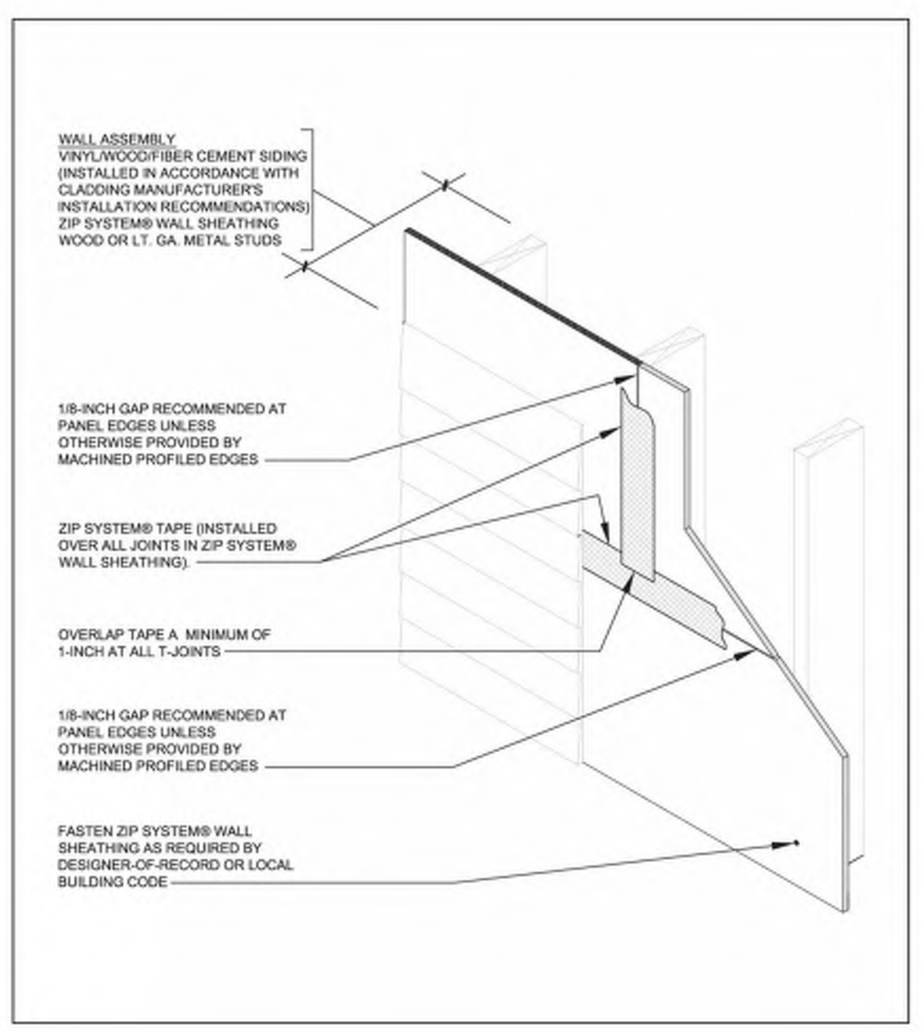
G-004

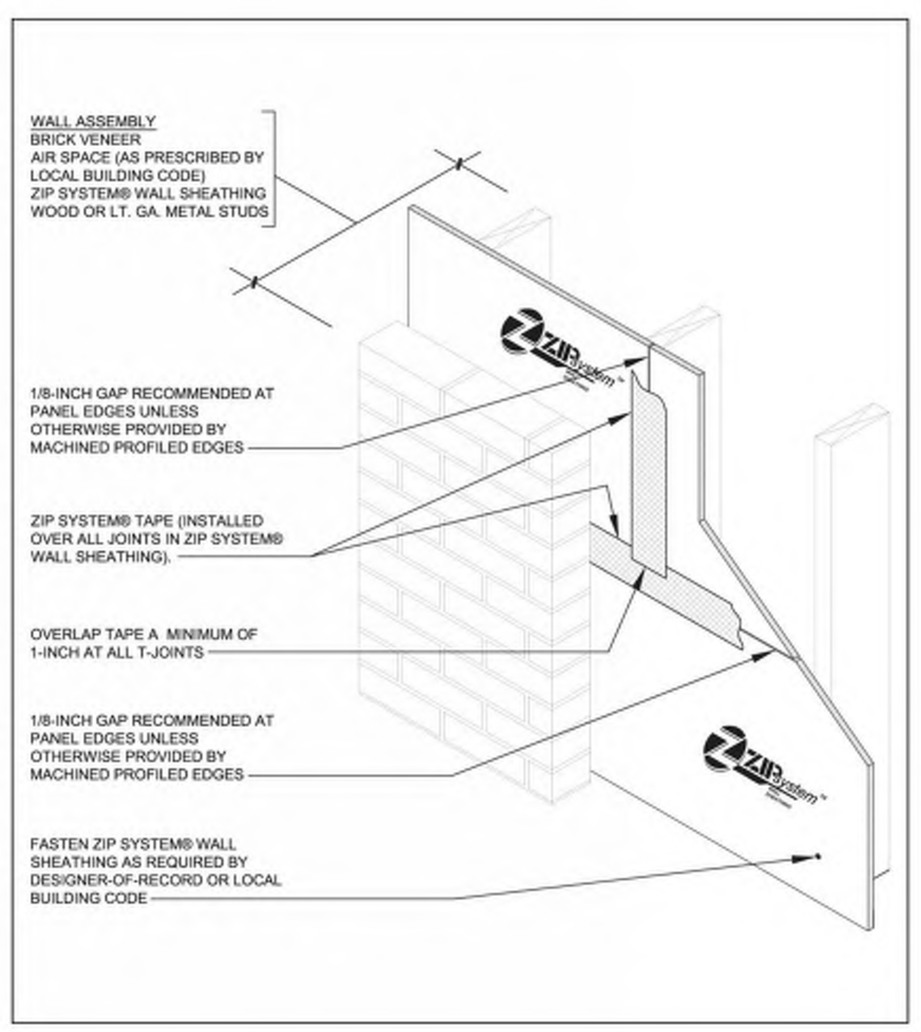












Brick Mould Windows (continued)

3. ZIP System tape may be used as pan flashing if installed in accordance with brick mould window installation details posted on zipsystem.com. Other adhesive-based flashing tapes (must meet ICC-ES Acceptance Criteria for Flashing Materials (AC148)) may be used as pan flashing if installed per ASTM 2112-07. Apply the flashing to cover the bottom of the opening, overhanging onto the sheathing by at least 2" and extending a minimum of 6" up each jamb.

4. For vertical jambs, cut ZIP System tape or another adhesive-backed flashing tape (must meet ICC-ES Acceptance Criteria for Flashing Materials (AC148)) and apply to each of the window jambs. Ensure that they cover the entire inside of the rough opening as well as overlap onto the sheathing by at least 2". Flashing shall also extend above the rough opening, such that it will project 1" beyond the exterior trim of the window.

   Once the tape is in place, use the tape gun or roller to seal the flashing to the sheathing.

5. Apply sealant to jambs and header allowing for drainage at the sill in accordance with window manufacturer's installation instructions. When using ZIP System tape, use a butyl, polyurethane or silicone sealant. Do not use latex sealants with ZIP System tape. When using another flashing tape, follow the flashing manufac-turer's recommendations in selecting a sealant compatible with that flashing.

6. Install and level window per manufacturer's installation instructions.

7. Cut a piece of rigid head flashing so that when installed, it is flush with the edges of the exterior moulding of the window. Apply a bead of sealant to the back and bottom surface of the rigid head flashing. Use sealant recommended by the flashing manufacturer.

8. Secure the rigid head flashing to ZIP System wall sheathing.

9. Cut a length of ZIP System tape or another adhesive-backed flashing tape (must meet ICC-ES Acceptance Criteria for Flashing Materials (AC148)) and apply to the rigid head flashing, ensuring that the adhesive-backed flashing overlaps the jamb flashings.

   Once the tape is in place, use the tape gun or roller to seal the flashing to the sheathing.

10. From the interior, apply low-pressure polyurethane foam (for windows) between the rough opening and the window frame. (Caulk sealant compatible with the sill flashing may be used at the sill if the opening between the sill flashing and window is too narrow to allow the use of low-pressure polyurethane foam.)

    When using ZIP System tape, butyl, silicone or polyurethane sealants are acceptable. Do not use latex sealants with ZIP System tape. If using another flashing tape, follow the flashing manufacturer's recommendation in selecting a sealant compatible with that flashing.

Apply ZIP System tape after all ZIP System wall sheathing panels are fully fastened to wall-framing members. Only ZIP System tape should be used to seal the seams of ZIP System panels. Ensure that the panel surface is dry and free of sawdust and dirt prior to taping. **ZIP System tape is a contact tape that requires pressure for an adequate seal.**

Step 1. Tape all seams using ZIP System tape. Ensure that the tape is centered over the seam within +/- 1/2" to provide adequate coverage and that wrinkles in tape are minimal.

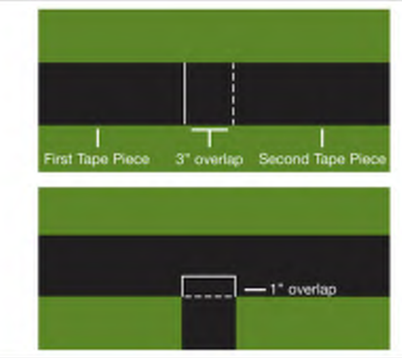
Use the ZIP System tape gun or roller to apply pressure to the tape and smooth out any wrinkles.

Step 2. Wherever tape splices occur at a horizontal or vertical seam, create an overlapping splice of at least 3".

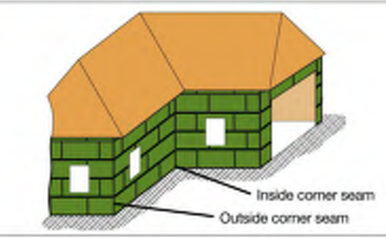
At T-joints, the tape pieces should overlap by at least 1". Apply moderate pressure onto the surface of the tape to ensure a secure bond between the panel and the tape.

Use the ZIP System tape gun or roller to apply pressure to the tape and smooth out any wrinkles.

Take special care to remove any voids and/or trapped air at splice areas and T-joints.

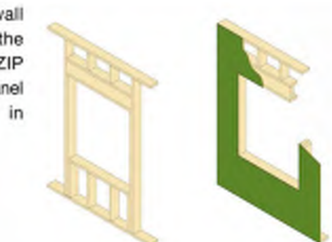


Step 3. Tape inside and outside corner seams.

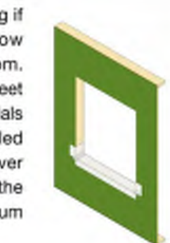


Flanged Windows

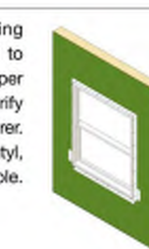
1. Fasten the ZIP System wall sheathing sheathing to the wood frame and install ZIP System tape to all wall panel seams, as de-tailed in sections 02 and 03.



2. ZIP System tape may be used as pan flashing if installed in accordance with flanged window installation details posted on zipsystem.com. Other adhesive-based flashing tapes (must meet ICC-ES Acceptance Criteria for Flashing Materials (AC148)) may be used as pan flashing if installed per ASTM 2112-07. Apply the flashing to cover the bottom of the opening, overhanging onto the sheathing by at least 2" and extending a minimum of 6" up each jamb.



3. Apply sealant around inside face of mounting flange. Sealant must be gapped at the sill to permit drainage. Install and level window per manufacturer's installation instructions. Verify sealant compatibility with window manufacturer. When using ZIP System tape as pan flashing, butyl, silicone or polyurethane sealants are acceptable. Do not use latex sealants.



4. Cut two pieces of ZIP System tape or another adhesive-backed flashing tape (must meet ICC-ES Acceptance Criteria for Flashing Materials (AC148)) and apply to each of the window jamb flanges, ensuring the jamb flashings overlap the sill flashing.

   Once the tape is in place, use the tape gun or roller to seal the flashing to the sheathing.

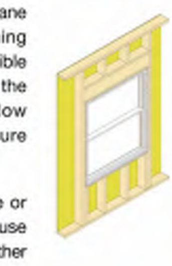
5. Cut a length of ZIP System tape or another adhesive-backed flashing tape (must meet ICC-ES Acceptance Criteria for Flashing Materials (AC148)) and apply to the header, ensuring that the flashing overlaps the jamb flashings.*

   Once the tape is in place, use the tape gun or roller to seal the flashing to the sheathing.

   *DO NOT tape bottom flange.

6. From the interior, apply low-pressure polyurethane foam (for windows) between the rough opening and the window frame. (Caulk sealant compatible with the sill flashing may be used at the sill if the opening between the sill flashing and window is too narrow to allow the use of low-pressure polyurethane foam.)

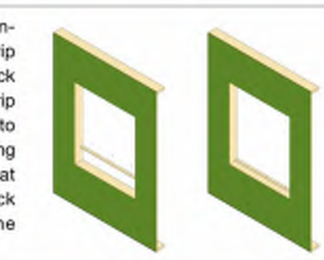
   When using ZIP System tape, butyl, silicone or polyurethane sealants are acceptable. Do not use latex sealants with ZIP System tape. If using another flashing tape, follow the flashing manufacturer's recommendation in selecting a sealant compatible with that flashing.



Brick Mould Windows

1. Fasten the ZIP System wall sheathing sheathing to the wood frame and install ZIP System tape to all wall panel seams, as de-tailed in sections 02 and 03.

2. If recommended by the win-dow manufacturer, cut a strip of wood to function as a back dam at the sill. The wood strip should have a length equal to the width of the rough opening and a height and width of at least 1/2". Position the block at the inside edge of the window frame.



THIS SHEET IS PROVIDED FOR REFERENCE ONLY. ALL INSTALLATION TO BE PER MANUFACTURER RECOMMENDATION

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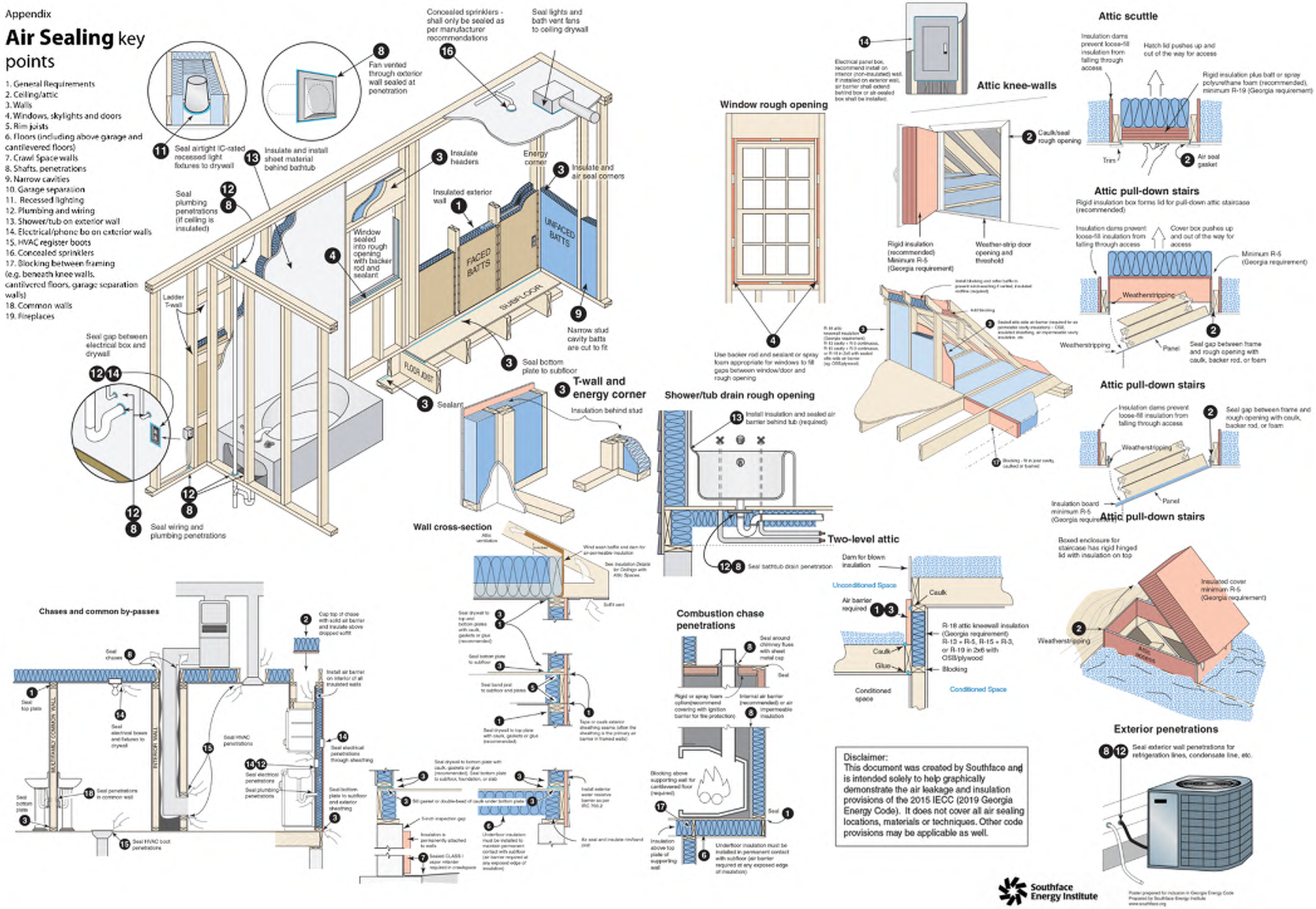
STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
GENERAL INFORMATION

PROJECT NUMBER: 23098

SHEET NUMBER:
G-005



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LEE'S SUMMIT 64064 USA

SHEET TITLE
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PROJECT NUMBER: 23098

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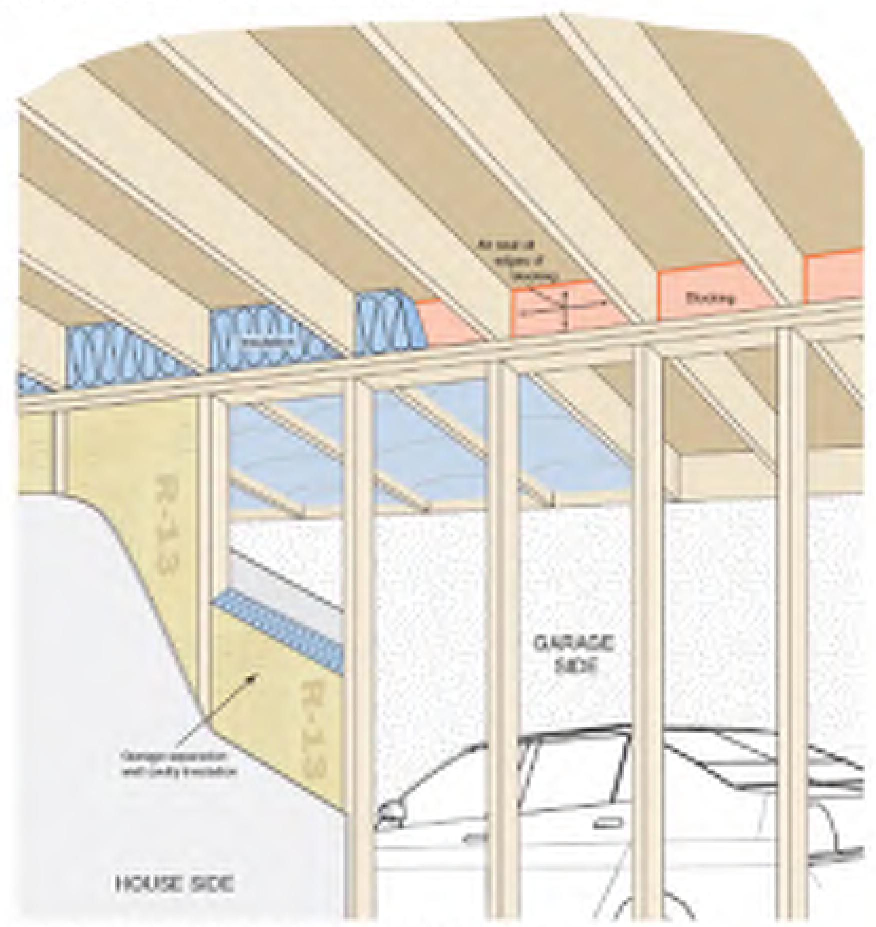
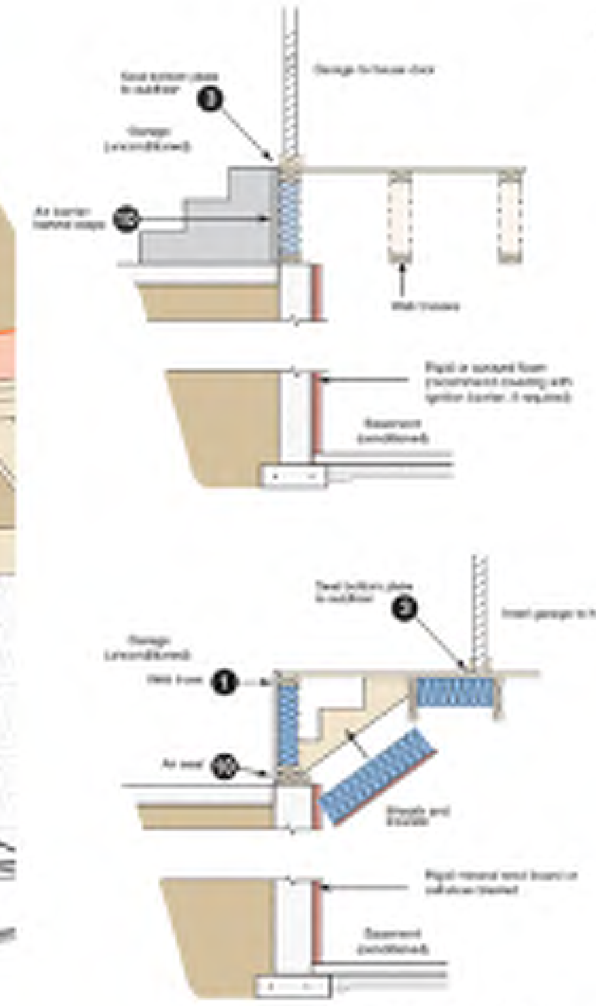
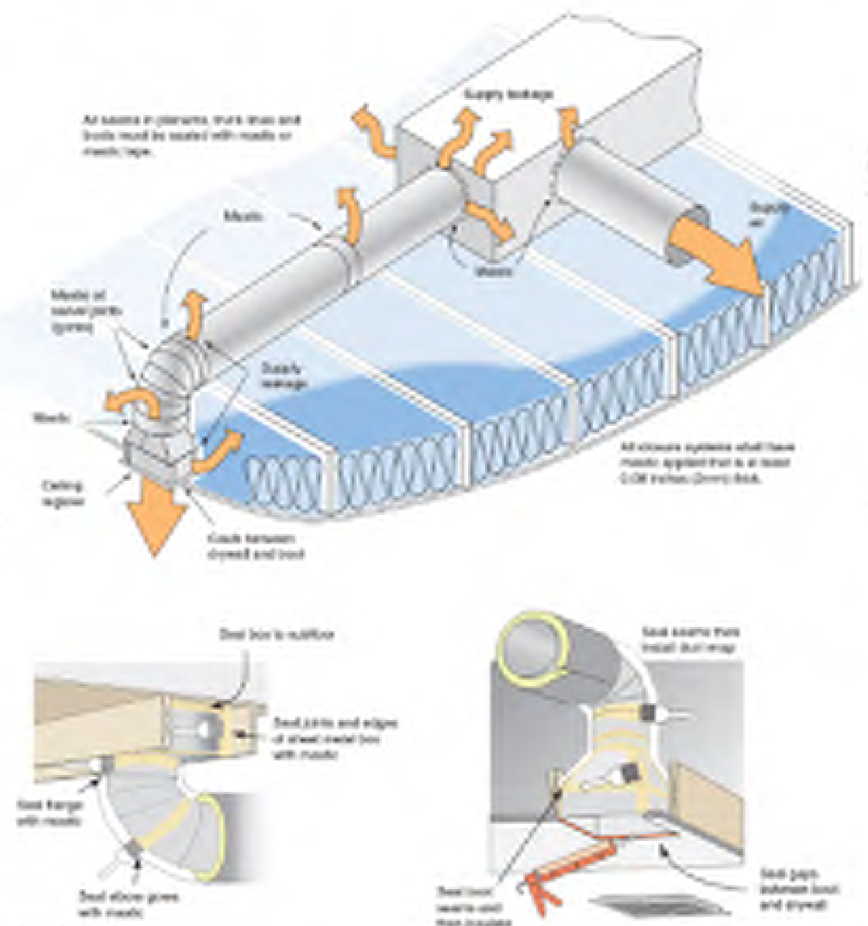
Garage blocking and sealing key points

Blocking, air sealing and insulation required above garage separation wall

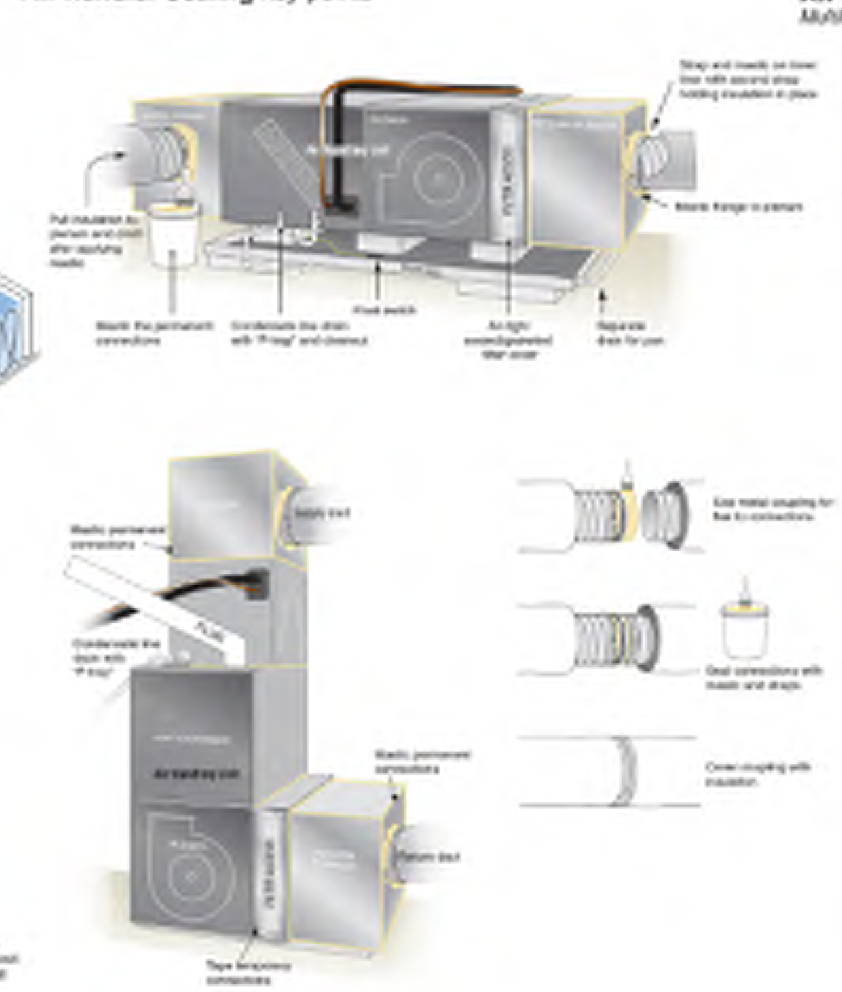




Duct Sealing key points

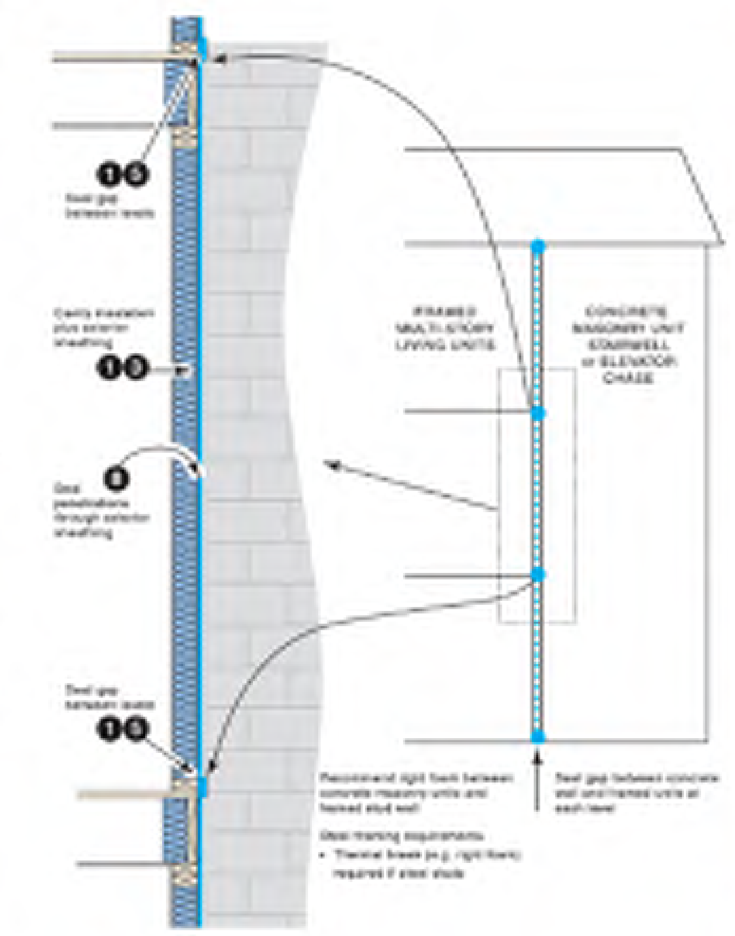


Air Handler Sealing key points



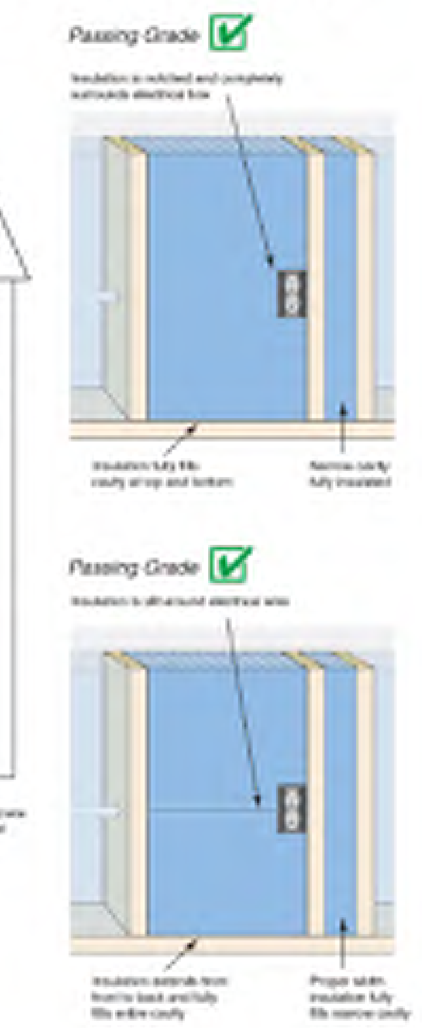
Air sealing key points *continued*

Multifamily

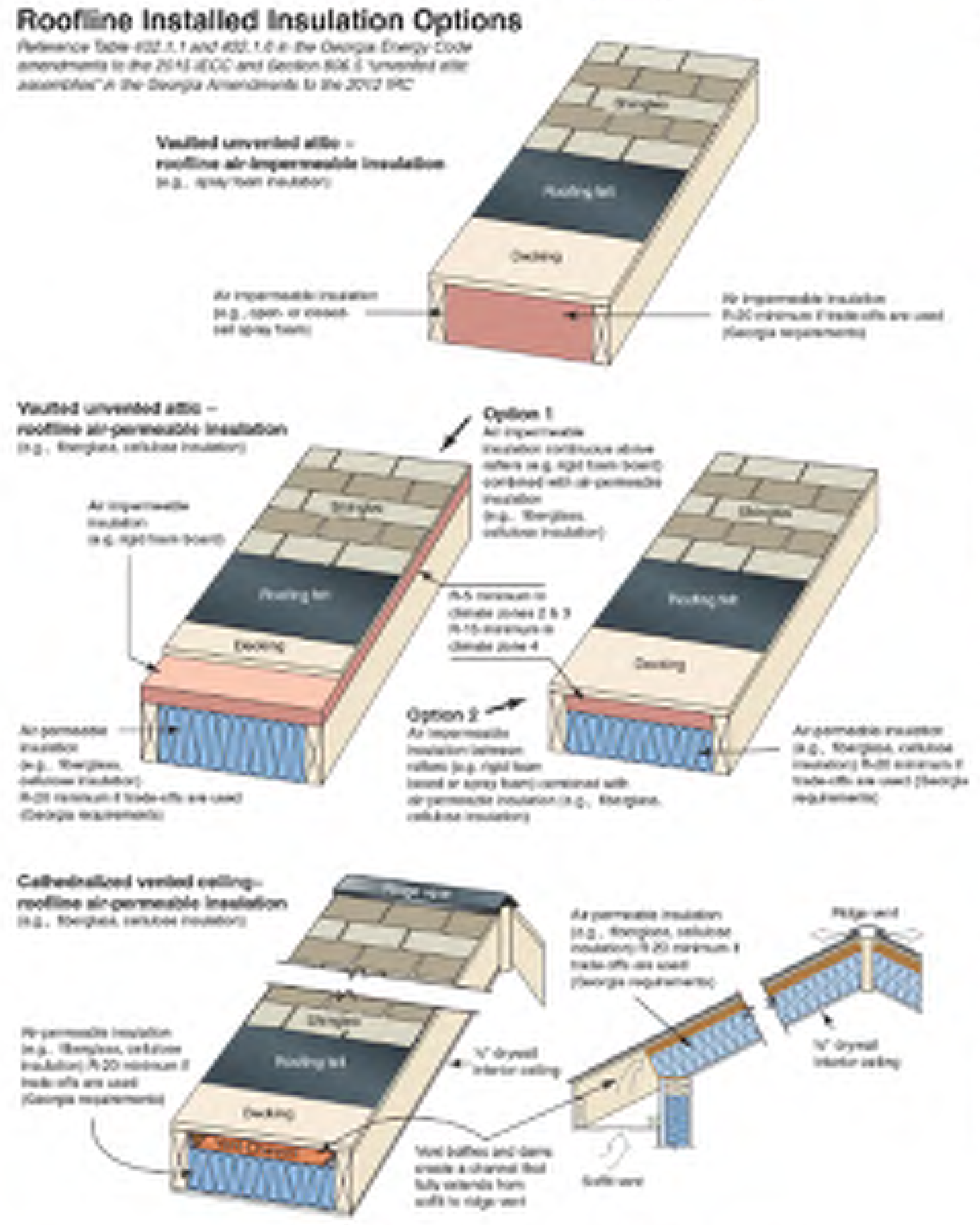


Wall Insulation key points

Passing Grade

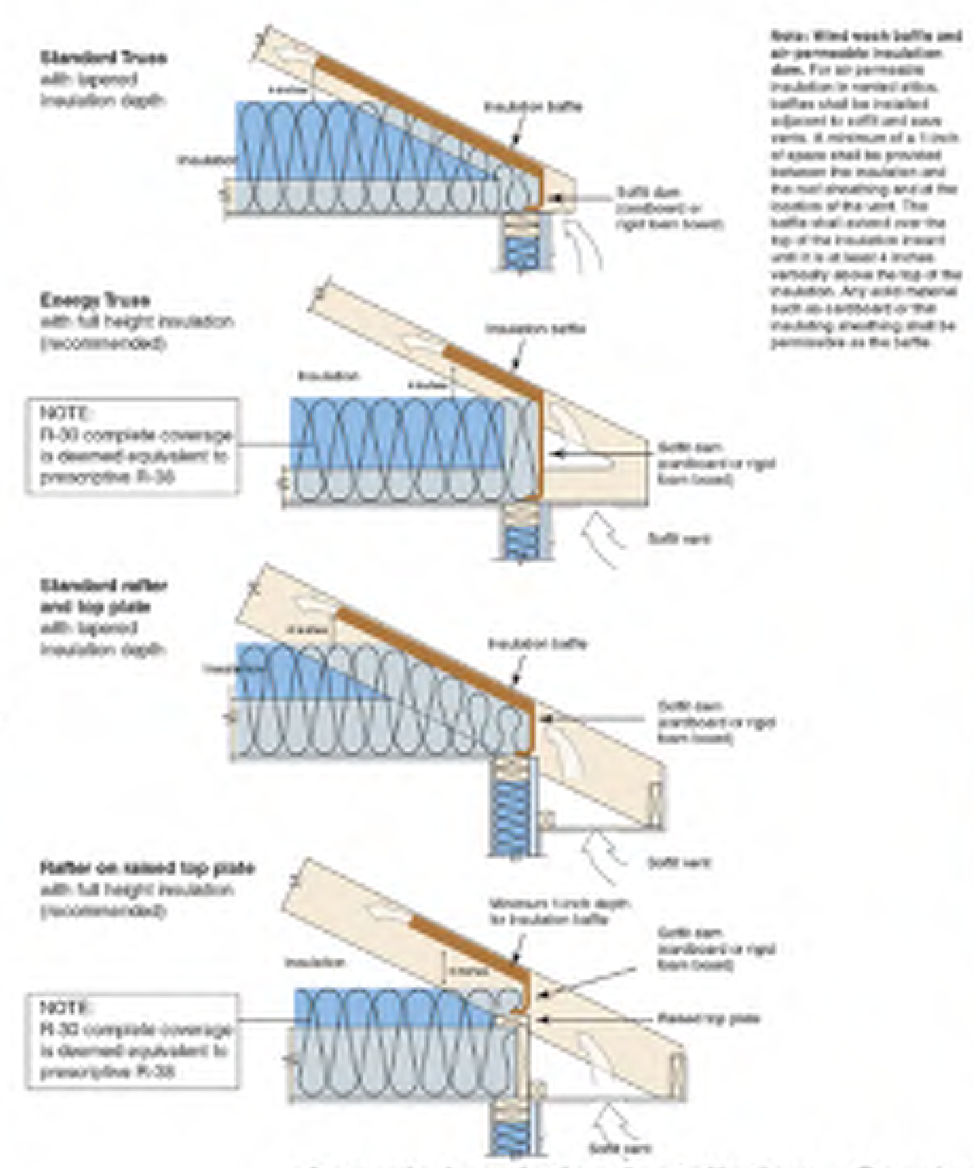


Roofline Installed Insulation Options



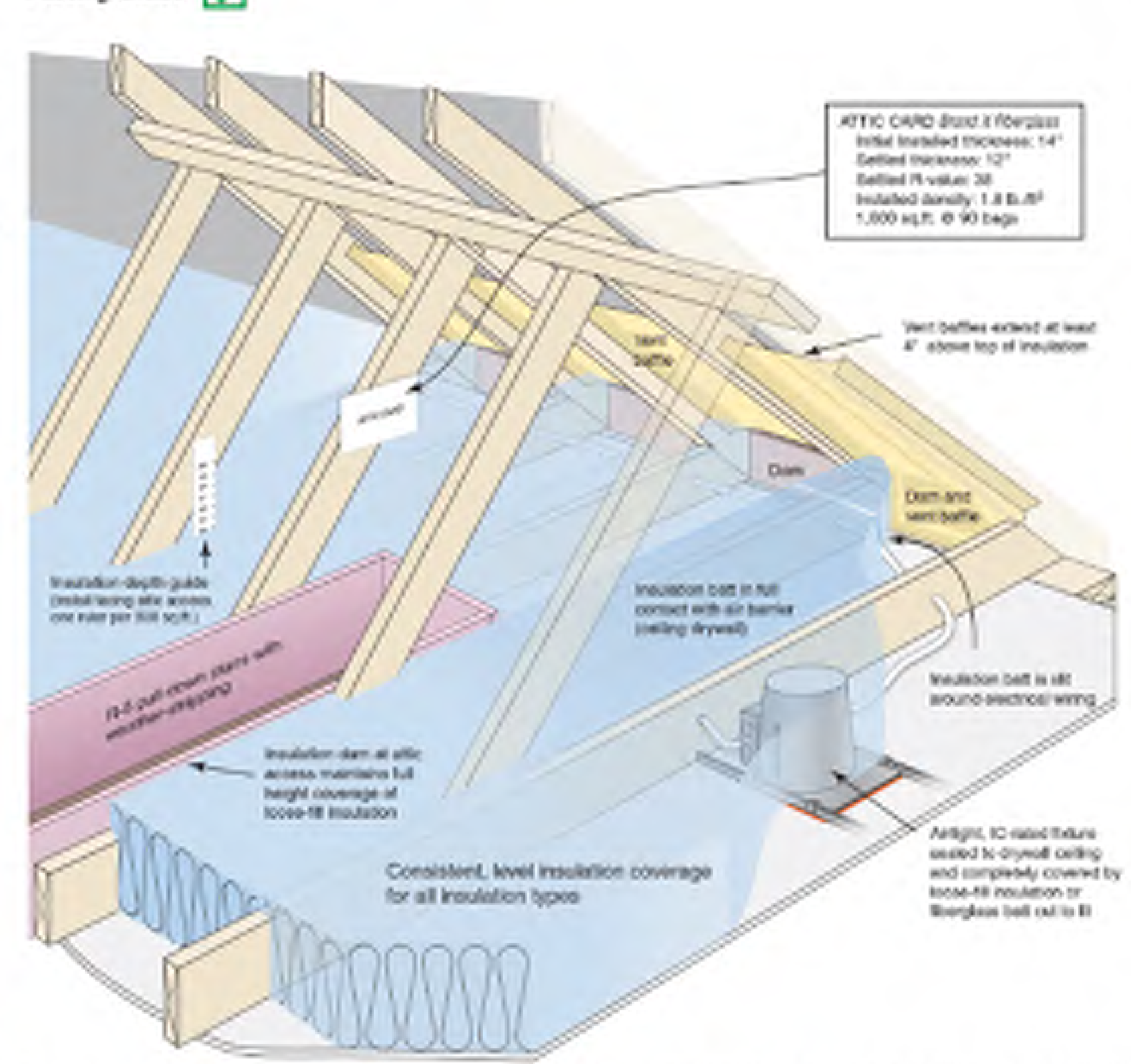
Insulation Details for Ceilings with Attic spaces

Rafter and Truss



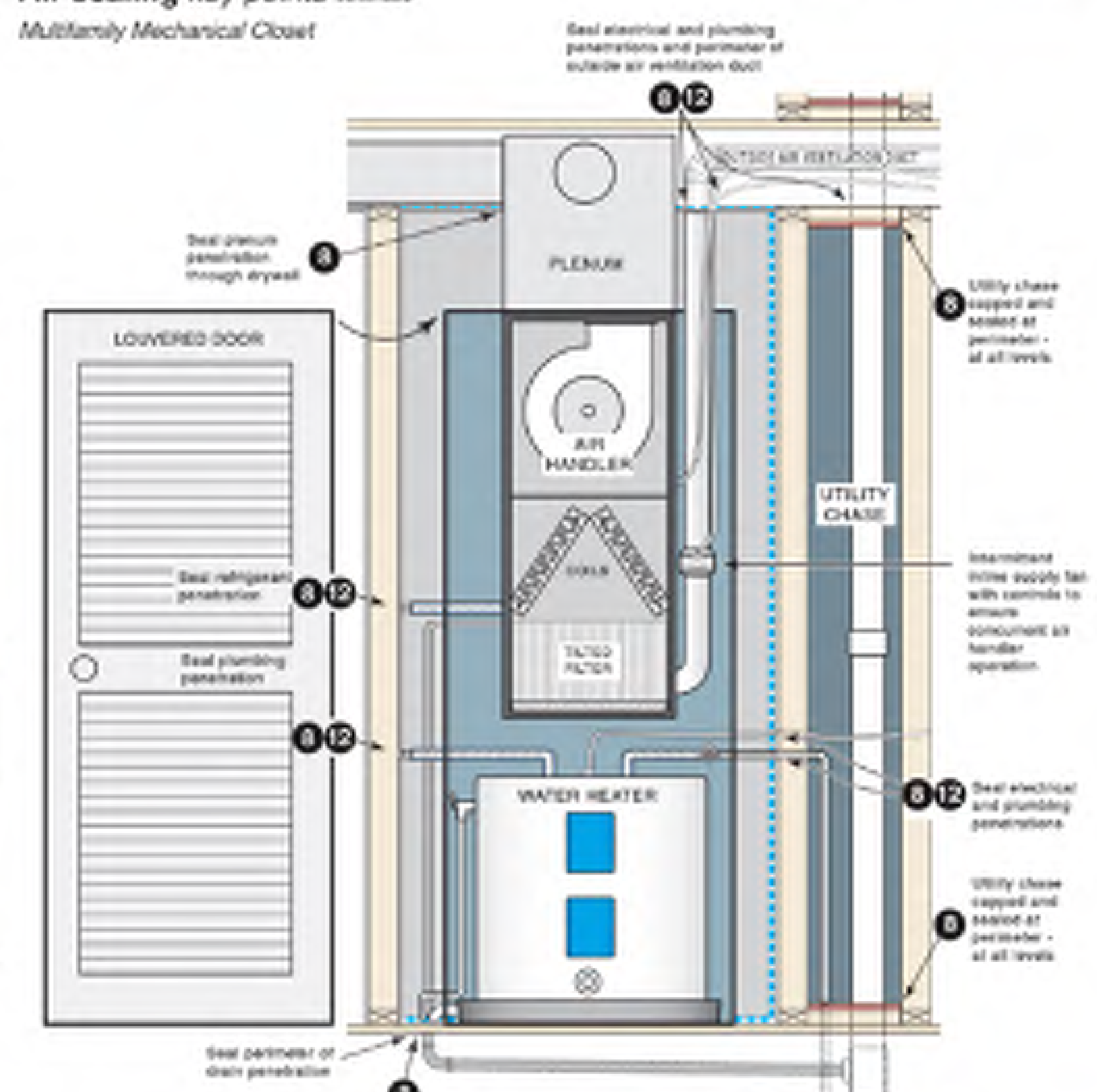
Ceiling Insulation key points

Passing Grade



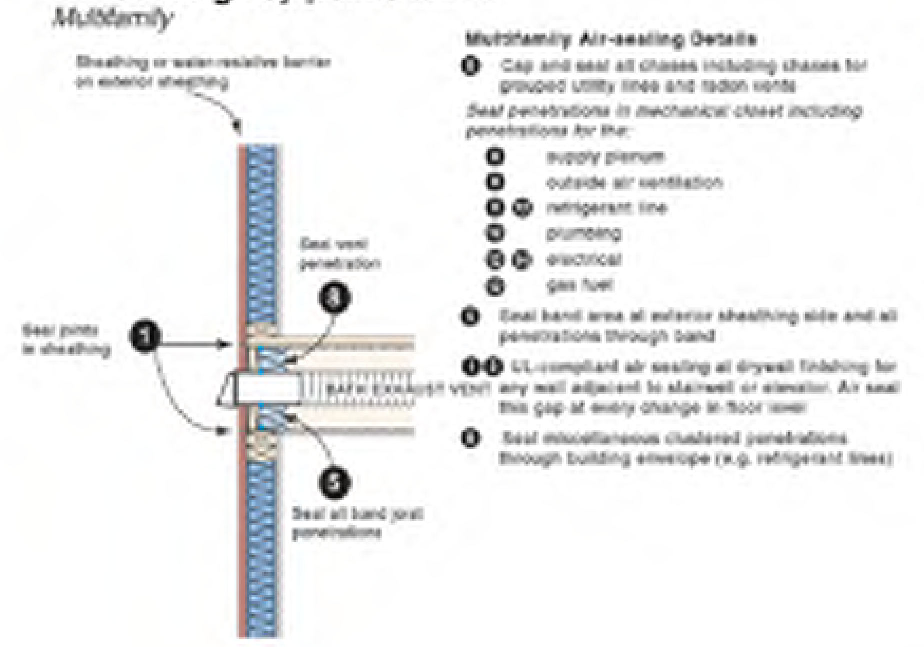
Air sealing key points *continued*

Multifamily Mechanical Closet



Air sealing key points *continued*

Multifamily



Georgia Insulation Installation – *Passing Grade Details*

Wall and ceiling insulation that makes up portions of the building thermal envelope shall be installed to Passing Grade quality.

Two criteria affect installed insulation grading: **voids/gaps** (in which no insulation is present in a portion of the overall insulated surface) and **compression/incomplete fill** (in which the insulation does not fully fill out or extend to the desired depth).

Voids/Gaps

- Voids or gaps in the insulation are < 1% of overall component surface area (only occasional and very small gaps allowed for Passing Grade).

Compression/Incomplete Fill

- Compression/Incomplete Fill for both *air permeable insulation* (e.g., fiberglass, cellulose) and *air impermeable insulation* (e.g., spray polyurethane foam) must be less than 1 inch in depth or less than 30% of the intended depth, whichever is more stringent. The allowable area of compression/incomplete fill must be less than 2% of the overall insulated surface to achieve a Passing Grade.
- Any compression/incomplete fill with a **depth** greater than the above specifications (up to 1" or 30% of the intended depth, whichever is more stringent) shall not achieve a Passing Grade.

Additional Wall Insulation Requirements

- All vertical air permeable insulation shall be installed in substantial contact with an air barrier on all six (6) sides.
  Exception: Unfinished basements, rim/band joist cavity insulation and fireplaces (insulation shall be restrained to stay in place).
  For unfinished basements, air permeable insulation and associated framing in a framed cavity wall shall be installed less than ¼" from the basement wall surface.
- Attic knee wall details – Attic knee walls shall be insulated to a total R-value of at least R-18 through any combination of cavity and continuous insulation. Air permeable insulation shall be installed with a fully sealed attic-side air barrier (e.g., OSB with seams caulked, rigid insulation with joints taped, etc.). Attic knee walls with air impermeable insulation shall not require an additional attic-side air barrier.

Underfloor insulation that makes up portions of the building thermal envelope shall be installed to Passing Grade quality.

Two criteria affect installed insulation grading: **voids/ gaps** (in which no insulation is present in a portion of the overall insulated surface) and **compression/incomplete fill** (in which the insulation does not fully fill out or extend to the desired depth).

Voids/Gaps

- Voids or gaps in the insulation are minimal for Passing Grade (< 2% of overall component surface area).

Compression/Incomplete Fill

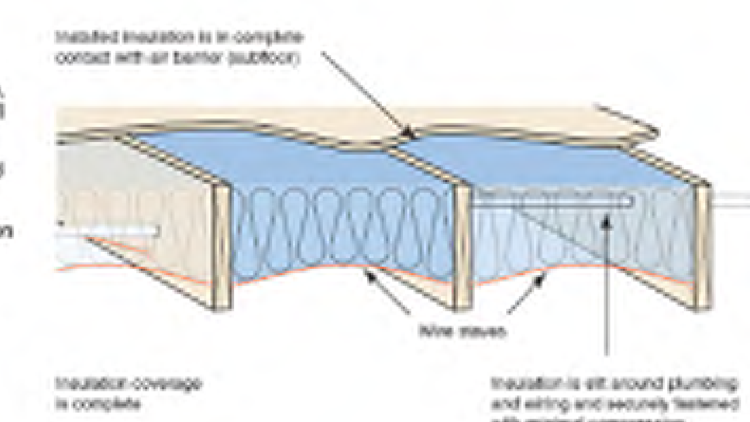
- Compression/Incomplete Fill for both air permeable insulation (e.g., fiberglass, cellulose) and air impermeable insulation (e.g., spray polyurethane foam) must be less than 1 inch in depth or less than 30% of the intended depth, whichever is more stringent. The allowable area of compression/incomplete fill must be less than 10% of the overall insulated surface to achieve a Passing Grade.
- Any compression/incomplete fill with a **depth** greater than the above specifications (up to 1" or 30% of the intended depth, whichever is more stringent) shall not achieve a Passing Grade.
- Air-permeable underfloor insulation shall be permanently installed against the subfloor decking. Adequate insulation supports (e.g., wire staves) for air permeable insulation shall be installed at least every 18-24".
  Exception: The floor framing-cavity insulation shall be permitted to be in contact with the topside of sheathing or continuous insulation installed on the bottom side of floor framing where combined with insulation that meets or exceeds the minimum wood frame wall R-value and that extends from the bottom to the top of all perimeter floor framing members.

Disclaimer:
This document was created by Southface and is intended solely to help graphically demonstrate the air leakage and insulation provisions of the 2015 IECC (2019 Georgia Energy Code). It does not cover all air sealing locations, materials or techniques. Other code provisions may be applicable as well.

Southface Energy Institute

Floor Insulation key points

Passing Grade



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TOWNEPLACE SUITES

1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
GENERAL INFORMATION

PROJECT NUMBER: 23098

SHEET NUMBER:

G-007

KEYNOTE LEGEND

Key	Description
A1	IRON AND IRONING BOARD STORAGE ACCESSORY TO BE LOCATED INSIDE CLOSET; REFER TO ENLARGED DETAIL FOR MORE INFO.
A2	LOCATE SHADE PULLS OPPOSITE SIDE OF PTAC UNIT
A3	FALSE PANEL WITH ACCESS TO ELECTRICAL BEHIND
A4	HOLD 4" SPACE BETWEEN SIDE OF REFRIGERATOR AND WALL TO ALLOW DOOR TO OPEN GREATER THAN 90 DEGREES FOR THE REMOVAL OF VEGETABLE DRAWER
A5	PROVIDE HINGE STOP AT TOP HINGE AT BATHROOM DOORS; REFER TO SPEC FOR GUESTROOM DOOR HARDWARE.
A6	OVERALL KITCHEN CABINET LENGTH TO BE ORDERED TO FIT WALL INCLUDING FILLERS ON BOTH ENDS. ALLOW FOR APPROXIMATELY 1" TO 1-1/2" OF SPACE ON BOTH ENDS FOR RECESSED FILLERS. REFER TO DETAILS 7 & 8/550.
A7	TEXTURED FINISH AND PAINT REQUIRED ON GUESTROOM EXTERIOR WALL.
A8	BLOCKING IN WALL FOR ALL CASEWORK, KITCHEN CABINETS, HEADBOARD, TV AND TV TRIM, SHOE CUBBY, MIRROR, CLOSET SYSTEM, FIXTURES, TOWEL BAR LADDER, GRAB BARS AND ACCESSORIES. COORDINATE LOCATION WITH MANUFACTURERS INSTALLATION REQUIREMENTS.
A9	INDICATE OUTLET LOCATION WITHIN WALL CONSTRUCTION TO AVOID OUTLETS OCCURING IN SAME CAVITY WITHIN PARTITION. SEE DETAIL ON STC DIAGRAM ON G-102.
A10	PROVIDE BLOCKING IN CEILING/WALL FOR SHADE MOUNT, TOP OF SHADE MOUNT ABUTTS CEILING WHERE CEILING IS 8'-0" & 9'-0". COORDINATE LOCATION WITH MANUFACTURER'S INSTALLATION REQUIREMENTS.
A12	PROVIDE BLOCKING IN WALL FOR ALL FIXTURES, GRAB BARS AND ACCESSORIES. COORDINATE LOCATION WITH MANUFACTURER'S INSTALLATION REQUIREMENTS.
A13	PROVIDE MTL WALL TRANSITION STRIP PER THE GUESTROOM BPM, AT BOTH ENDS OF THE SHOWER SURROUND. SEE DWGS FOR FINISH TAG.
A14	EDGE OF FIXED GLASS SHOWER PANEL.
A15	PROVIDE BLOCKING IN CEILING AT GLASS PANEL.
A18	FUR GUESTROOM BATHROOM CEILINGS DOWN TO 8'-0" A.F.F. (TYP).
A19	GUESTROOM SURFACE MOUNTED SIGNAGE. REFER TO INTERIOR SIGNAGE SPECIFICATIONS FOR INFORMATION.
A20	PROVIDE WALL STOPS WHERE REQUIRED, PROVIDE WALL STOP BEHIND GUESTROOM ENTRY DOOR. REFER TO GUESTROOM OR PUBLIC SPACE BPM FOR DOOR HARDWARE.
A22	REFER TO GUESTROOM PLANS FOR HOLD-TO DIMENSIONS BETWEEN PTAC UNIT AND INTERIOR WALL NOTED.
A23	TV NICHE DETAIL DOES NOT APPLY TO EXTERIOR WALLS; TVs LOCATED ON EXTERIOR WALLS SHOULD BE SURFACE MOUNTED WITH FF&E TRIM X-226, REFER TO INTERIOR DESIGN SPECIFICATIONS MANUAL. TVs LOCATED IN THE DEMISING WALLS HAVE THE OPTION BETWEEN PROVIDING A NICHE WITH A SOUND BARRIER (REFER TO DETAIL 3/552) OR THE FF&E TRIM X-226, COORDINATE WITH THE INTERIOR DESIGN SPECIFICATION MANUAL WHEN PROVIDING X-226
A24	ASSIGN A DESIGNATED SMOKING AREA FOR PUBLIC AND EMPLOYEES. LOCATION AND DISTANCE FROM ENTRANCE AT THE REAR OF THE BUILDING MUST FOLLOW LOCAL CODE.
A25	EDGE OF PORTE COCHERE CANOPY ABOVE, REFER TO DRAWING 110 FOR DETAILS.
A26	DUMPSTER ENCLOSURE, DO NOT BLOCK OVERHEAD FUNCTIONING OF TRUCK.
A27	MONUMENT SIGN, REFER TO CIVIL & EXTERIOR SIGNAGE SPECIFICATIONS
A28	DOWNSPOUTS TO BE TIGHT-LINED INTO UNDERGROUND STORM SEWER WHEREVER POSSIBLE. WHERE NOT POSSIBLE, THEY SHALL DISCHARGE ONTO CONCRETE SPLASH BLOCKS. STORM WATER SHALL NOT DRAIN ACROSS WALKWAYS, RE: CIVIL.
A29	SIDE ENTRY CANOPY ABOVE, REFER TO DRAWING 221 FOR DETAILS.
A30	ENTRANCE PATIO TRELLIS, REFER TO DRAWING 112 FOR DETAILS.
A31	POOL PATIO FENCE. SEE SHEET 430 FOR DETAILS.
A34	REFER TO THE BUILDING SITE + EXTERIOR BPM FOR ASSISTANCE WITH ORDERING THE WEBER GRILL.
A36	TYPICAL GUESTROOM WINDOW.
A37	CHANNEL LETTER SIGNAGE AT FACE OF BUILDING, SEE EXTERIOR SIGNAGE SPECIFICATIONS FOR REQUIREMENTS. PROVIDE ADEQUATE BLOCKING BEHIND WALL FOR SIGNAGE.
A40	ELEVATOR. RE: SPEC.
A41	SELF-CLOSING RATED LINEN CHUTE DISCHARGE HATCH W/FUSIBLE LINK TIED TO FIRE ALARM SYSTEM. PROVIDE CLEAR FLOOR SPACE BELOW DISCHARGE AREA.
A42	HYDRATION STATION. SEE SHEET 502 FOR DETAIL.
A52	GUTTER AND DOWNSPOUT - USE SPLASH BLOCK ON ROOF.
A54	PROVIDE ACCESS PANELS/DOORS TO ALL ROOF AREAS - LOCATE NEAR FRONT TO BACK CENTER OF THE BUILDING.
A56	PARAPET WALLS - SEE EXTERIOR ELEVATIONS FOR HEIGHTS AND FINISHES.
A58	PROVIDE JBOX AT MIRROR FOR LIGHTING, RE: ELEC.
A63	LINEN CHUTE VENT CAP, RE: MECH.
A65	5" PVC RAINLEADERS TO RUN DOWN INSIDE PORTE-COCHERE COLUMNS TO UNDERGROUND STORMWATER, RE: CIVIL.
A70	EMERGENCY & EXIT LIGHTS SHOWN SCHEMATICLY ONLY FOR IDENTIFICATION OF REQUIRED FIXTURE TYPE AS SHOWN IN THE PUBLIC SPACE BPM. LOCATION TO BE CONFIRMED WITH LOCAL A.H.J. AND IN ACCORDANCE IBC.
A71	CENTER CEILING TILE IN CORRIDOR. TYPICAL CEILING HEIGHT IN CORRIDORS IS 8'-0" A.F.F.
A72	COORDINATE MECHANICAL GRILLE LOCATIONS WITH LOCATION OF ALL ELECTRICAL ITEMS.
A73	SEE GUESTROOM BATHROOM DRAWINGS FOR LIGHT FIXTURE AND EXHAUST CONFIGURATION.
A75	24"x 24" ACOUSTICAL CEILING TILE (TYP), RE: SPEC.
A80	WALL COVERING TO BE INSTALLED AT EXPOSED AREA, AND PAINT FINISH BEHIND THE SLATS. SEE DWGS FOR FINISH TAFS.
A81	REFER TO IN-A-PINCH EQUIPMENT SHEETS.

KEYNOTE LEGEND

Key	Description
A82	REFER TO INTERIOR SIGNAGE SPECIFICATIONS FOR SIGN INFO.
A84	PROVIDE METAL EDGE TRIM TO PROVIDE REVEAL BETWEEN DIFFERENT WALL FINISHES, SEE GYPSUM BOARD ASSEMBLIES IN THE PUBLIC SPACE BPM.
A85	DOOR TO BE PAINTED TO MATCH WALL AT THIS LOCATION.
A86	ELEVATOR CALL BUTTONS, RE: SPEC.
A87	PROVIDE BLOCKING AS REQUIRED FOR TOWNEMAP, COORDINATE TOWNEMAP SIZE AND STANDOFF LOCATIONS.
A88	REFER TO SPEC. & PRODUCT MANUAL FOR GLAZING AT FLEX WINDOW BETWEEN BARN DOOR SLIDERS.
A91	LAUNDRY STORAGE WALL ENCLOSURE OPTIONAL; RELOCATE EYEWASH ACCORDINGLY
A92	EMPLOYEE LOCKERS (4), TWO TIERED - PROVIDE AT LEAST ONE ACCESSIBLE LOCKER (5%) WITH A SHELF BETWEEN 15" & 48" A.F.F.
A93	FOLDING COUNTER WITH BACKSPLASH, SEE DETAIL 3 ON SHEET 502.
A94	HANGING BAR, RE: SPEC.
A95	CLEAR FLOOR AREA FOR LAUNDRY CARTS
A96	12" THICKENED SLAB WITH TROUGH - TRENCH DRAIN W/ GRATE TO BE COORDINATED WITH EXTRACTOR REQUIREMENTS.
A98	REFER TO FOOD SERVICE AND LAUNDRY EQUIPMENT SPEC.
A101	FIXED ACCESSIBLE LIFT AS REQUIRED BY ADA.
A102	CONTROLLED ACCESS TO POOL DECK OR PATIO. DOOR TO REMAIN OPEN IN EGRESS DIRECTION AT ALL TIMES. SEE DOOR SCHEDULE & SPEC. FOR ADDITIONAL INFO.
A104	COORDINATE SIZE OF POOL EQUIPMENT ROOM, ROOM WITH CLEARANCES REQUIRED FOR EQUIPMENT AND STORAGE MATERIALS. SEE SHEET 433 FOR SCHEMATIC EQUIPMENT LAYOUT.
A105	SEE POOL SHEETS & SPEC FOR DETAIL INFORMATION ON POOL LAYOUT AND EQUIPMENT.
A106	MEMBRANE ROOFING SYSTEM, RE: SPEC.
A120	PROVIDE CUTOUT IN CARPET FOR SOFA CONNECTIVITY FLOOR BOX; REFER TO CRITERIA SHEET 720 FOR OUTLETS.
A121	COORDINATE OUTLET LOCATIONS WITH BANQUETTE LENGTHS; RE: ELEC.
A123	KITCHEN MILLWORK PULLS AND CUP HOOKS FINISH SHALL BE SATIN STAINLESS STEEL, OAE.
A124	OPEN CUBBY BACK PANELS TO BE PAINTED TO MATCH WALL FINISH WHERE INSTALLED. MILLWORK MFR TO SAND SMOOTH, PRIME BACK PANEL. PAINT TO BE APPLIED IN THE FIELD.
A125	X-222-8 @ 8'-0" CEILINGS, X-222-9 @ 9'-0" CEILINGS. GC TO VERIFY IN FIELD, IF CEILING CONDITION IS DIFFERENT, COORDINATE CUSTOM SIZE PRIOR TO ORDER.
A126	PROVIDE PEEL AWAY CORNER AT ALL EDGES OF KNEE WALL.
A127	REFER TO PUBLIC SPACE OR GUESTROOM BUILDING PRODUCT MANUAL FOR PLASTIC LAMINATE CASEWORK.
A128	GUESTROOM VANITIES CAN BE MILLWORK OR FF&E. MILLWORK DETAILS ARE PROVIDED WITHIN THE CONSTRUCTION DRAWINGS, FF&E MARK NUMBER IS ALSO PROVIDED WITHIN THE DRAWINGS; REFER TO INTERIOR DESIGN SPECIFICATION MANUAL FOR FF&E.
A129	ACCESSIBLE GUESTROOM VANITIES ARE MILLWORK ONLY.
A130	COORDINATE DEPTH OF UPPER CABINETS AND SHELVING IN GUESTROOMS WITH DEPTH OF MICROWAVE MANUFACTURER'S INSTALL DIMENSIONS FOR UPPER & SIDE CABINETS. PROVIDE BLOCKING IN WALL FOR MOUNTING MICROWAVE.
A131	THE BUFFET ISLAND, HUB CREDENZA AND ON US CAN BE MILLWORK OR FF&E. MILLWORK DETAILS ARE PROVIDED WITHIN THE CONSTRUCTION DRAWINGS. FF&E MARK NUMBER IS ALSO PROVIDED WITHIN THE DRAWINGS; REFER TO INTERIOR DESIGN SPECIFICATION MANUAL FOR FF&E.
A132	GUESTROOM SLAT WALLS CAN BE MILLWORK OR FF&E. MILLWORK DETAILS ARE PROVIDED WITHIN THE CONSTRUCTION DRAWINGS. FF&E MARK NUMBER IS ALSO PROVIDED WITHIN THE DRAWINGS; REFER TO INTERIOR DESIGN SPECIFICATION MANUAL FOR FF&E.
A133	TV RECESS SHALL COVER THE DEPTH OF THE TV WALL MOUNT BRACKET (MIN. 4"). WALLS SHALL BE A MINIMUM OF 6" THICK WHERE TVs ARE LOCATED IN PUBLIC SPACE. COORDINATE WITH TV MOUNT, REFER TO INTERIOR DESIGN SPECIFICATION MANUAL, A CHASE WALL MAY BE PROVIDED AS AN ALTERNATE SOLUTION.
A135	REFER TO THE INTERIOR DESIGN SPECIFICATION MANUAL FOR X-706-42ACC ACCESSIBLE GUESTROOM CLOSET SYSTEM LOCATED ON ACC QUEEN GR SHEETS.
A136	TV MOUNT COVER TO BE MOUNTED AT OPPOSITE OF ENTRY DOOR.
A137	FRAMELESS DOOR JAMB DOOR SYSTEM, RE: SPEC.
A138	PROVIDE WD BLOCKING AT HUB CREDENZA TUBE CEILING ANCHORS.
A139	CONCEALED EPOXY COATED STEEL BRACKET COUNTERTOP SUPPORT; REQ'D SIZE AND SPACING TO SUPPORT COUNTERTOP WEIGHT & EQUIPMENT TO BE PROVIDED BY MILLWORK CONTRACTOR.
A140	PROVIDE CONCEALED FASTENER SYSTEM TO ANCHOR SHELF INTO WALL. PROVIDE BLOCKING IN WALL FOR SHELF FASTENING. SHELF TO SIT FLUSH AGAINST WALL. FASTENING SYSTEM TO BE RATED TO SUPPORT 50 LB. PER SHELF. FASTENING SYSTEM TO PREVENT BOWING OF SHELF.

FOR REFERENCE ONLY, SEE CIVIL SHEETS

KEYNOTE LEGEND

Key	Description
C1	QUANTITY OF PARKING SPACES TO BE IN ACCORDANCE WITH DESIGN STANDARDS AND LOCAL CODES.
C3	6" THICK CONCRETE APRON WITH 10-10 W.W.F.
C4	TRUNCATED DOME TACTILE WARNING TRANSITION AT FLUSH CURB CONDITION.
C5	SLOPED SIDEWALK FOR ACCESSIBLE PARKING. PROVIDE MAXIMUM SLOPE OF 1:12 AND ENSURE CURB IS 6" HIGH OR LESS.
C8	UTILITY EQUIPMENT, POSITION TO BE OUT OF VIEW OF GUEST AND TO SCREEN WHERE NECESSARY.
C9	PROVIDE EDGE/CURB RESTRAINT AT EDGE OF PAVERS
C10	DECORATIVE METAL SLAT FENCE AT FIRE PIT OPTIONAL;
C11	DEPRESS SLAB AT PATIO FOR TILE PAVER, SEE PLAN FOR FINISH TAG; COORDINATE WITH TILE MANUFACTURER.

FOR REFERENCE ONLY, SEE LANDSCAPE SHEETS

KEYNOTE LEGEND

Key	Description
L1	LOW PLANTING FOR MAXIMUM TRAFFIC VISIBILITY AND SAFETY, RE: LA.
L2	SCREEN DUMPSTER ENCLOSURE WITH LARGE EVERGREEN SHRUBS OR TREES. DO NOT BLOCK OVERHEAD FUNCTIONING OF TRUCKS, RE: LA.
L3	ACCENT PLANTING AT ENTRIES AND CORNERS MAY INCLUDE PERENNIALS FOR SEASONAL INTEREST, RE: LA.
L4	LARGE TREES BREAK UP PARKING LOT MASS. TREE TRUNKS TO BE CENTERED ON PARKING STRIPES TO PROTECT FROM VEHICLE OVERHANG DAMAGE, RE: LA.
L5	DECORATIVE PAVERS/STAMPED CONCRETE, REFER TO BUILDING SITE + EXTERIOR SPEC.
L7	SEASONAL COLOR ACCENTING ENTRANCE, RE: LA.
L8	PLANT MATERIAL ACCENTING MONUMENT SIGNAGE, RE: LA.
L9	PROVIDE EVERGREEN SHRUBS OR SEASONAL PLANTS AT TALL PLANTERS FOR PRIVACY, RE: LA.
L10	BRAND REQUIRED EXTERIOR TILE AT PATIO AND GRILLE AREA. THIS MAY NOT BE VALUE-ENGINEERED. REFER TO SHEET 112 FOR TILE LAYOUT DETAIL AND TO THE BUILDING SITE + EXTERIOR BPM FOR SPECIFICATION.

FOR REFERENCE ONLY, SEE MEP SHEETS

KEYNOTE LEGEND

Key	Description
E1	GANG OUTLETS & SWITCHES AT THE LOCATION @ HEIGHT SHOWN. SEE TYPICAL GUESTROOM OUTLET HEIGHT IN G-300s.
E2	WALL OUTLETS SHALL NOT OCCUR IN SAME WALL CAVITY OF ADJACENT GUESTROOMS, TYPICAL.
E3	6X6 CEILING EXHAUST GRILLE. RE: MECH.
E4	MASTER DEVICE OR LIGHT SWITCH WITH SIGNAGE TO CONTROL ALL HARDWIRED LIGHTS IN GUESTROOM, WITH EXCEPTION OF BATHROOM. PROVIDE SEPARATE SWITCHES FOR UPPER CABINET, UNDER SHELF, UNDER CABINET AND DECORATIVE WALL SCONCES. INTERFACE THE MASTER DEVICE WITH THE GUESTROOM MANAGEMENT SYSTEM (GRMS). SEE ELEC. & SPEC.
E5	OUTLETS FOR TV, CABLE AND POWER FOR TV TO BE MOUNTED IN OPENING OF WALL MOUNTED TV PANEL. SEE DETAILS SHEET 552 OR B552 FOR TV OPENING DETAIL.
E6	PTAC FOR TYPICAL GUEST ROOM HVAC. SEE DETAILS ON 222 OR B222 FOR PTAC AND WALL SLEEVE INFORMATION.
E7	ELECTRIC PANEL, TO BE PAINTED SAME COLOR AS SURROUNDING WALL, INSTALL AS CLOSE AS POSSIBLE TO THE ENTRY DOOR WALL.
E8	UNDERCABINET LIGHT FIXTURES ARE INTO THE CASEWORK AND PROVIDED BY MILLWORK MANUFACTURER. PROVIDE JBOX OR OUTLET WHERE SHOWN, CONCEAL WIRING TO LIGHT FIXTURE, RE: ELEC.
E9	THERMOSTAT, LOCATE THERMOSTAT WITH INTEGRAL OCCUPANCY SENSOR FACING SLEEPING AREA. COORDINATE WITH THE GUESTROOM MANAGEMENT SYSTEM (GRMS). SEE TYPICAL GUESTROOM OUTLET HEIGHT DETAILS ON G-300s AND ROOM ELEVATION FOR ADDITIONAL INFORMATION.
E10	DOORBELL SWITCH, LIGHT, AND DISCONNECT SWITCH TO BE PROVIDED AT HEARING IMPAIRED AND ACCESSIBLE GUESTROOMS. SEE DETAIL SHEET 553 OR B553.
E11	DUPLEX OUTLET FOR MICROWAVE. SEE KITCHEN ELEVATION SHEETS FOR LOCATION.
E12	DUPLEX OUTLET FOR DISHWASHER. SEE KITCHEN ELEVATION SHEETS FOR LOCATION.
E13	REFRIGERATOR OUTLET
E15	MIRROR & OVERHEAD LIGHT TO BE SWITCHED TOGETHER. PROVIDE JBOX FOR MIRROR, TO BE CENTERED BEHIND MIRROR. SHOWER LIGHT TO BE SWITCHED SEPARATELY, RE: ELEC. REFER TO SHEET G-300s FOR TYPICAL MOUNTING HEIGHTS UNLESS OTHERWISE NOTED.
E17	LOCATE CLOSET LIGHT ON FACE OF DOOR HEAD FRAME INSIDE CLOSET AND CONNECT TO SURFACE MOUNTED RELAY SWITCH ON DOOR FRAME JAMB. PROVIDE OUTLET ABOVE DOOR FOR POWER TO TRANSFORMER ALSO LOCATED ABOVE DOOR. ALL WIRING TO BE CONCEALED WITHIN WALLS.
E18	TWO-TOGGLE SWITCH FOR GARBAGE DISPOSAL, AND UNDERCABINET LIGHT. PROVIDE JBOX(S) FOR MILLWORK LIGHTING, RE: ELEC.
E19	PROVIDE OUTLET FOR WALL SCONCE AT HEADBOARD WHERE SHOWN IN ELEVATION. SWITCH LOCATED ON LIGHT FIXTURE.
E20	SWITCH PLATE w/ INCORPORATED NITE LITE BY DECORA SEE BPM.
E21	PROVIDE JBOX FOR HARD-WIRED COOKTOP, RE: ELEC.
E22	RANGE/OVEN OUTLET, RE: ELEC.
E23	P-TRAP AT VANITY IS TO BE POLISHED CHROME.
E24	PROVIDE JBOX IN CEILING FOR TRACK LIGHT, LOCATE SWITCH WHERE SHOWN, RE: ELEC. & MOUNTING HEIGHTS ON G-300s.
E26	LOCATE OUTLET NEAR THE CORNER WALL, 48" AFF TO TOP OF BOX.
E27	HIGH OUTLET BEHIND FASCIA FOR SOLAR SHADE, RE: ELEC.
E28	CENTER OUTLET WITHIN AVAILABLE WALL SPACE.
E29	DESK OUTLET, DATA, & TELEPHONE JACK TO BE CENTERED WITHIN THE DESK OPEN SPACE. COORDINATE POWER AND DATA WITH DESK SPECIFICATION IN THE INTERIOR DESIGN SPECIFICATION MANUAL.
E30	WIRELESS ACCESS POINT (WAP) LOCATED UNDER DESK WITH DEDICATED DUPLEX OUTLET, RE ELEC.
E31	LIGHT BOLLARDS. LOCATE IN GROUND 8" FROM SIDEWALK (CENTER TO EDGE) PROVIDE CONCRETE FOUNDATION W/ J-BOX PER MANUF. REQUIREMENTS.
E33	PARKING LIGHT FIXTURE ALONG PERIMETER OF PARKING LOT TO BE CENTERED ON PARKING STRIPES TO PROTECT FROM VEHICLE OVERHANG DAMAGE.
E34	PTAC LOUVER INTEGRAL WITH WINDOW FRAME. FINISH TO MATCH WINDOW FRAME.
E35	AT EXTERIOR SIGNAGE PROVIDE ACCESS FOR MOUNTING ELECTRICAL COMPONENTS AND MAKING FINAL ELECTRICAL CONNECTIONS. PROVIDE ADEQUATE DEDICATED CIRCUITRY BROUGHT TO SIGN LOCATION FROM ELECTRICAL PANEL, RE: ELEC.
E37	PROVIDE DUPLEX POWER/USB OUTLET ABOVE GR CUBBY AT 3'-6" AFF TO BOTTOM OF OUTLET. SEE ALSO ELEVATIONS AS THEY APPLY.
E38	PROVIDE DEDICATED EXHAUST FOR POOL CHEMICALS IF STORED IN POOL EQUIP ROOM OR POOL STOR ROOM, RE: MECH.
E40	LOCATE KEY SWITCH FOR ELECTRO MAG LOCK INSIDE OF LOCKOUT ROOM AT WALL BEHIND DOOR. MOUNT IN AN ACCESSIBLE LOCATION ADJACENT TO DOOR IN THE HOLD OPEN POSITION AT 4'-0" A.F.F.
E41	LOCKOUT DOOR IS PROVIDED TO ALLOW TWO GUESTROOMS TO BE OCCUPIED BY THE SAME GUEST, OR EACH GUESTROOM TO BE OCCUPIED BY SEPARATE GUESTS. SEE HARDWARE SET FOR SPECIAL HARDWARE. CARD READER FOR MAGNETIC DOOR LOCK TO BE LOCATED ON INTERIOR WALL OF VESTIBULE, NEXT TO DOOR FRAME.
E42	EYEWASH STATION.
E44	COORDINATE SIZE OF ELECTRICAL ROOM WITH EQUIPMENT AND REQUIRED CLEARANCES, RE: ELEC.
E45	FLOOR DRAINS TO BE LOCATED IN WET AREAS, RE: PLUMB
E47	LOCATE HOUSE PHONES 12" FROM DOOR UNO; 44"AFF.
E49	UTILITY SINK.
E50	MOP SINK.
E51	RE: SPEC. & EXTERIOR BPM FOR ACCEPTABLE NATATORIUM RATED LIGHT FIXTURE.
E53	PROVIDE POWER/DATA OUTLET FOR PRINTER, RE: ELEC. WIRES TO RUN BETWEEN THE MILLWORK BACK PANELS.

FOR REFERENCE ONLY, SEE MEP SHEETS

KEYNOTE LEGEND

Key	Description
E54	DOUBLE SWITCH TO CONTROL RANGE HOOD/LIGHT AND FAN, RE: ELEC.
E55	DOUBLE SWITCH TO CONTROL UNDERCABINET LIGHTS AND DISPOSAL, RE: ELEC.
E56	PROVIDE POWER/DATA OUTLET, RE: ELEC.
E57	PROVIDE POWER/USB OUTLET, RE: ELEC.
E59	POWER AND DATA RECEPTACLES LOCATED BELOW WITHIN CABINET, RE: ELEC. PROVIDE GROMMET IN COUNTERTOP FOR ACCESS.
E60	PROVIDE TELEPHONE JACK AT NIGHTSTAND CLOSEST TO ENTRY DOOR IN THE BEDROOM OF 1-BEDROOM SUITES, RE: ELEC.
E61	FOR STANDARD LINEAR LIGHT FIXTURE, SEE DWGS FOR MARK NUMBER. PROVIDE CONTINUOUS BAND OF LIGHT TO ILLUMINATE BOTTOM OF SOFFIT.
E62	QUANTITY AND EXACT LOCATION OF SPEAKERS TO BE RECOMMENDED BY THE BGM COMPANY.
E63	EXHAUST FAN FLUSH MOUNTED IN CEILING, TYPICAL ALL PUBLIC RESTROOMS.
E64	COORDINATE MECHANICAL GRILLE LOCATIONS WITH LOCATION OF ALL ELECTRICAL ITEMS.
E65	AIR DEVICES PER MECHANICAL DRAWINGS. PROVIDE 2X2 LAY IN DEVICES IN GRID CEILING AND LINEAR DEVICES IN DRYWALL.
E67	LOCATE SPRINKLER HEADS OUTSIDE OF THE CEILING SLAT AREA.
E68	ALT1 - CONDITION WHEN LIGHTS REQUIRE EMERGENCY BACKUP IN FIXTURE. ALT1 FIXTURE MARK NO. IS ALR-030-A1.
E69	ALT2 - BLOCK AND PLANK CONSTRUCTION WHERE LIGHT CANNOT BE RECESSED. ALT2 FIXTURE MARK NO. IS ALR-030-A2.
E70	ALT3 - COMPLIANCE WITH ASHRAE 90.1 REQUIRING BI-LEVEL LIGHTING CONTROL. REFER TO LIGHT MATRIX FOR MOUNTING HEIGHT. ALT3 FIXTURE MARK NO. IS ALR-030-A3.
E71	AVOID LOCATING LIGHT FIXTURES DIRECTLY ABOVE WASHERS & DRYERS.
E72	CENTER DECORATIVE LIGHT FIXTURE LM-403 OVER BUFFET ISLAND (MILLWORK OR FF&E LM-239) HIGH COUNTER AS SHOWN.
E73	CENTER DECORATIVE LIGHT FIXTURE LM-402 OVER COMMUNITY TABLE LM-237 AS SHOWN.
E74	CENTER DECORATIVE LIGHT FIXTURE LM-401 OVER TABLE CLUSTER LM-231, LM-232, LM-233 AS SHOWN.
E76	DUCT SHAFT FOR OUTSIDE AIR. PROVIDE DAMPERS IN ACCORDANCE WITH THE CODE OF THE LOCAL AUTHORITY JURISDICTION, RE: MECH.
E80	PROVIDE DEDICATED OUTLET FOR ALL EQUIPMENT, RE: ELEC.; COORDINATE REQUIREMENTS PER EQUIPMENT SPECIFICATIONS
E81	LOCATE HOUSE PHONES 12" FROM DOOR UNO, 44" AFF.
E82	MAIN DISTRIBUTION PANELS, RE: ELEC.
E84	PROVIDE FLOOR OUTLET AT SOFA ARM BASE FOR CONNECTIVITY. COORDINATE CONNECTIVITY REQUIREMENTS WITH SPECIFIED FF&E INDICATED IN THE DRAWING WITH THE INTERIOR DESIGN SPECIFICATION MANUAL.
E85	UNDERCABINET LIGHTING AT BUFFET SHALL BE ON IT'S OWN DIMMING CONTROL. CONTROL STATION SHALL BE LOCATED NEXT TO THE FOOD PREP DOOR.
E87	ICE MACHINES TO BE EXHAUSTED OF EXCESS HEAT. LOCATE EXHAUST DIRECTLY OVER ICE MACHINE, RE: MECH.
E89	SUPPLEMENTAL HEATERS MOUNT HEATERS HIGH TO PREVENT DAMAGE, RE: MECH.
E90	PROVIDE EXHAUST AT FOOD PREP/KITCHEN AREA FOR HEATING PRE-COOKED BREAKFAST ITEMS, RE: MECH.
E91	EXHAUST TOILET ROOMS, TYPICAL, RE: MECH.
E92	ELECTRICAL WALL HEATERS WILL BE REQUIRED TO ENSURE VESTIBULE COMFORT NEAR EXTERIOR ENTRIES, RE: ELEC.
E93	REFRIGERATION EQUIPMENT SHOULD BE SELF-CONTAINED WITH REMOTE CONDENSERS, ER: MECH.
E94	MAIN LAUNDRY AIR SHOULD NOT BE RETURNED TO SYSTEMS WHICH SERVE ANY OTHER SPACES TO PREVENT LAUNDRY ODORS FROM SPREADING, RE: MECH.
E97	ALL AREAS WITH CHEMICALS TO RECEIVE FULLY PLUMBED EYE WASH STATION, CONNECTED TO COLD WATER SUPPLY LINE, RE: PLUMB.
E98	PROVIDE WALL HYDRANTS AT PAVING/ PATIO AREAS, SERVICE AREAS AS NECESSARY AROUND BUILDING, RE: PLUMB.
E99	PROVIDE APPROPRIATE CONNECTIONS FOR GUEST LAUNDRY EQUIPMENT, RE: MEP & SPEC.
E100	TRENCH DRAIN WITH GRATE, TYPICAL
E101	PROVIDE FLOOR DRAIN IN CHUTE TERMINATION ROOM
E102	PROVIDE PLUMBING CONNECTIONS FOR KITCHEN EQUIPMENT
E103	COORDINATE PLUMBING AND POWER FOR ALL EQUIPMENT, RE: FS.
E104	PROVIDE APPROPRIATE CONNECTIONS FOR REFRIGERATOR ICEMAKER, RE: FS.
E105	LOCATE FLOOR SINKS WHERE EQUIPMENT REQUIRES INDIRECT DRAINS, RE: FS.
E106	PROVIDE WATER LINE AND DRAINAGE PER HYDRATION STATION MFR RECOMMENDATIONS, RE: PLUMB.
E107	LOCATE FLOOR DRAINS IN WET AREAS
E108	ALL DECORATIVE LIGHTS SHALL BE DIMMED SEPARATELY, RE: ELEC.
E109	PROPOSED LOCATION FOR C01 LIGHTING SUB PANEL AND DIMMING.
E110	PROPOSED LOCATION FOR C01 - TOUCH SCREEN MASTER CONTROL STATION, RE: ELEC.
E111	PROPOSED LOCATION FOR C01 - REMOTE PRE-SET SCENE CONTROL, RE: ELEC.
E112	FLEX ROOM LIGHTS ARE REQUIRED TO BE ON INDIVIDUAL DIMMING CONTROL SYSTEM FOR C03 (NOT CENTRALIZED SYSTEM) RE: ELEC.
E113	WIRELESS ACCESS POINT LOCATION ABOVE GUESTROOM CEILING IN ACCESSIBLE LOCATION, TYPICAL ALL GUESTROOMS, RE: ELEC.
E117	SECURITY CAMERAS ON MANAGED PROPERTIES ARE REQUIRED. SECURITY CAMERAS ARE PREFERRED ON FRANCHISE PROPERTIES AND SHOULD BE LOCATED AS FOLLOWS: 1. CAMERA #1 SHOULD HAVE CLEAR VIEW OF VESTIBULE AND BE VISIBLE FROM VESTIBULE. 2. CAMERA #2 SHOULD HAVE CLEAR VEIW OF FOSSE SERVER WHICH CAN BE IN VARIOUS LOCATIONS. 3. CAMERA #3 SHOULD HAVE CLEAR VIEW OF SAFE IN WORK ROOM. ALL CAMERA FEEDS SHOULD EXTEND TO OCV ROOM (OR OTHER SUITABLE LOCATION) FOR RECORDING.
E118	TIME CLOCK LOCATION. POWER IS REQUIRED AT THIS LOCATION. RE: ELEC.

FOR REFERENCE ONLY, SEE MEP SHEETS

KEYNOTE LEGEND

Key	Description
E120	MUSIC SYSTEMS IN HUB/LOBBY, VESTIBULE AND PORTE COCHERE. LOCATE EQUIPMENT IN LOCKED AREA. RE: ELEC.
E121	ELECTRICAL OUTLETS FOR CARDIO EQUIPMENT INDICATE TO BE MOUNTED HORIZONTALLY IN SILL OF STOREFRONT. COORDINATE FACEPLATES FINISH WITH ADJACENT FINISH. ALTERNATELY, INDICATE FLOOR OUTLETS AS REQD AND PROVIDE IN-SLAB MULTI-COMPARTMENT RACEWAY (WALKER DUCT) TO ALLOW FOR MAXIMUM FLEXIBILITY, RE: ELEC.
E122	PROVIDE DEDICATED OUTLET FOR ALL EQUIPMENT, RE: ELEC.
E127	DOOR SECURED WITH CARD READER, RE: SPEC.
E128	CALL BUTTON AND CARD READER IN VIEW OF DESK.
E131	LOCATE INTERCOM AT WELCOME DESK RECEPTION AREA.
E132	LOCATE DURESS ALARM AT EACH WELCOME DESK.
E133	PROVIDE ISOLATED GROUND RECEPTACLES FOR ALL PRINTER, COMPUTERS AND MONITORS, RE: ELEC.
E134	PROVIDE CONDUIT BACK TO COMPUTER/COMMUNICATIONS FOR ALL SYSTEMS.
E135	COORDINATE PLACEMENT OF ELECTRICAL DEVICES, DIFFUSERS, ACCESS PANELS, SYSTEDS INTERFACE AND INTERIOR GRAPHICS SO AS NOT TO ENCROACH ON KEY FOCAL ELEMENTS, COORDINATE PLUG HEIGHT WITH EQUIPMENT.
E137	PROVIDE POWER FOR FOOD PREP EQUIPMENT, RE: ELEC. & FS.
E139	COORDINATE LOCATION OF POWER FOR HYDRATION STATION TO BE CONCEALED BY MILLWORK.
E140	LOW VOLTAGE CEILING SENSOR WITH WALL MOUNTED MOMENTARY SWITCH.
E141	COORDINATE CONNECTIVITY REQUIREMENTS WITH SPECIFIED FF&E INDICATED IN THE DRAWING WITH THE INTERIOR DESIGN SPECIFICATION MANUAL.
E145	COORDINATE ELECTRICAL OUTLETS WITH FOOD SERVICE EQUIPMENT TO ENSURE PROPER ALIGNMENT BETWEEN APPLIANCES AND OUTLETS; OUTLETS TO BE PLACED HORIZONTALLY CENTERED ON GROUT LINE AS INDICATED ON ELEVATIONS.
E146	TRANSFORMERS FOR PUCK AND UNDERCABINET LIGHTS TO BE LOCATED IN UPPER CABINETS, BEHIND REMOVABLE CABINET PANEL. PROVIDE OUTLET IN THIS SPACE TO PLUG-IN TRANSFORMERS.

FOR REFERENCE ONLY, SEE SPEC. & PROTO

KEYNOTE LEGEND

Key	Description
ID1	TEXTURED WALL COATING IS THE REQUIRED FINISH FOR EXTERIOR GUESTROOM WALLS.
ID2	ALL EXTERIOR CORNERS SHALL HAVE FULL HEIGHT CORNER GUARDS.
ID3	REFER TO INTERIOR DESIGN SPECIFICATION MANUAL WINDOW TREATMENT SPECIFICATIONS AND ELEVATIONS FOR ROLLER SHADE INFORMATION
ID5	CENTER ARTWORK ON WALL OR AS SHOWN
ID6	WHERE REQUIRED FOR ACCESIBILITY, PROVIDE MOTORIZED SHADES. REFER TO DRAPERY MANUAL AND ID SPEC MANUAL FOR ADDITIONAL INFORMATION AND POWER REQUIREMENTS.
ID8	CLOSET CEILING PAINT TO MATCH THE WALL PAINT WITHIN THE CLOSET; REFER TO THE ENLARGED DETAILS FOR INFORMATION.
ID10	CENTER WALL MOUNTED LIGHTED FIXTURES ON THE ELEVATOR DOORS.
ID11	SEE SPECIFIC AREA ENLARGED PLANS AND ELEVATIONS FOR INFORMATION ON FINISHES AND FF&E ITEMS.
ID12	REFER TO A-700s FOR FLOOR TRANSITION DETAILS
ID13	REFER TO INTERIOR SIGNAGE SPEECIFICATIONS FOR RESTROOM SIGN DETAILS.
ID14	METAL TRIM ALONG TOP EDGE OF TILE WAINSCOT. MARK NUMBER INDICATED ON ELEVATION.
ID18	ALIGN TOP MIRROR X-502 AND COAT HOOK WITH OPTIONAL PANEL X-503 WITH TOP OF DOOR FRAME. IF X-503 IS NOT USED, PROVIDE X-711 HOOKS.
ID19	CARPET PAD TO BE INSTALLED ONLY WITH BROADLOOM CARPET OPTIONS.
ID20	LVT UNDERLAYMENT MAY BE NEEDED; COORDINATE WITH LVT OPTIONS IN THE INTERIOR DESIGN SPECIFICATION MANUAL.
ID21	SLAB TILE AT VANITY WING WALLS TO BE MOUNTED VERTICALLY TO AVOID SEAMS.
ID22	TILE PATTERN TO RUN HORIZONTALLY. TILE SEAM TO START @ 40" (SAME AS MIRROR). TOP OF MIRROR TO ALIGN WITH TILE SEAM, HEIGHT MIN 7' AFF.
ID25	4" COUNTERTOP BACKSPLASH TO BE INSTALLED ONLY IF WALL PAINT OR WALL COVERING IS INSTALLED, IF OPTIONAL TILE BACKSPLASH IS INSTALLED, TILE IS TO RUN FROM COUNTERTOP TO UNDER CUBBIES AND STOP AT EDGE OF COUNTERTOP (DOES NOT RUN BEHIND THE REFRIGERATOR). USE METAL EDGE TRIM AT TILE VERTICAL EDGES. TILE BACKSPLASH MUST BE INSTALLED ON SIDEWALL WHEN COOKTOP OR RANGE IS DIRECTLY ADJACENT, AND IN THAT INSTANCE SHOULD BE ON BACKWALL TOO. TILE TO BE TW-001 AND GROUT TO BE GR-005, SEE GUESTROOM BPM.
ID29	WALLCOVERING TO WRAP AROUND ALL WALL CORNERS TRANSITIONING TO SLAT WALL.
ID30	PORCELAIN FLOOR TILE, TF-004-A1 AND GROUT GR-004 ARE OPTIONAL FINISHES FOR THE LVT FLOORING, IDSM #X-010, AT GUESTROOM ENTRIES, KITCHENS, AND BATHROOMS.

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11/01/2023 - CITY SUBMITTAL

REVISIONS:
2 01/19/2024 Addendum #2

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-1305
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
TOWNEPLACE KEYNOTES

PROJECT NUMBER: 23098

SHEET NUMBER:

G-008

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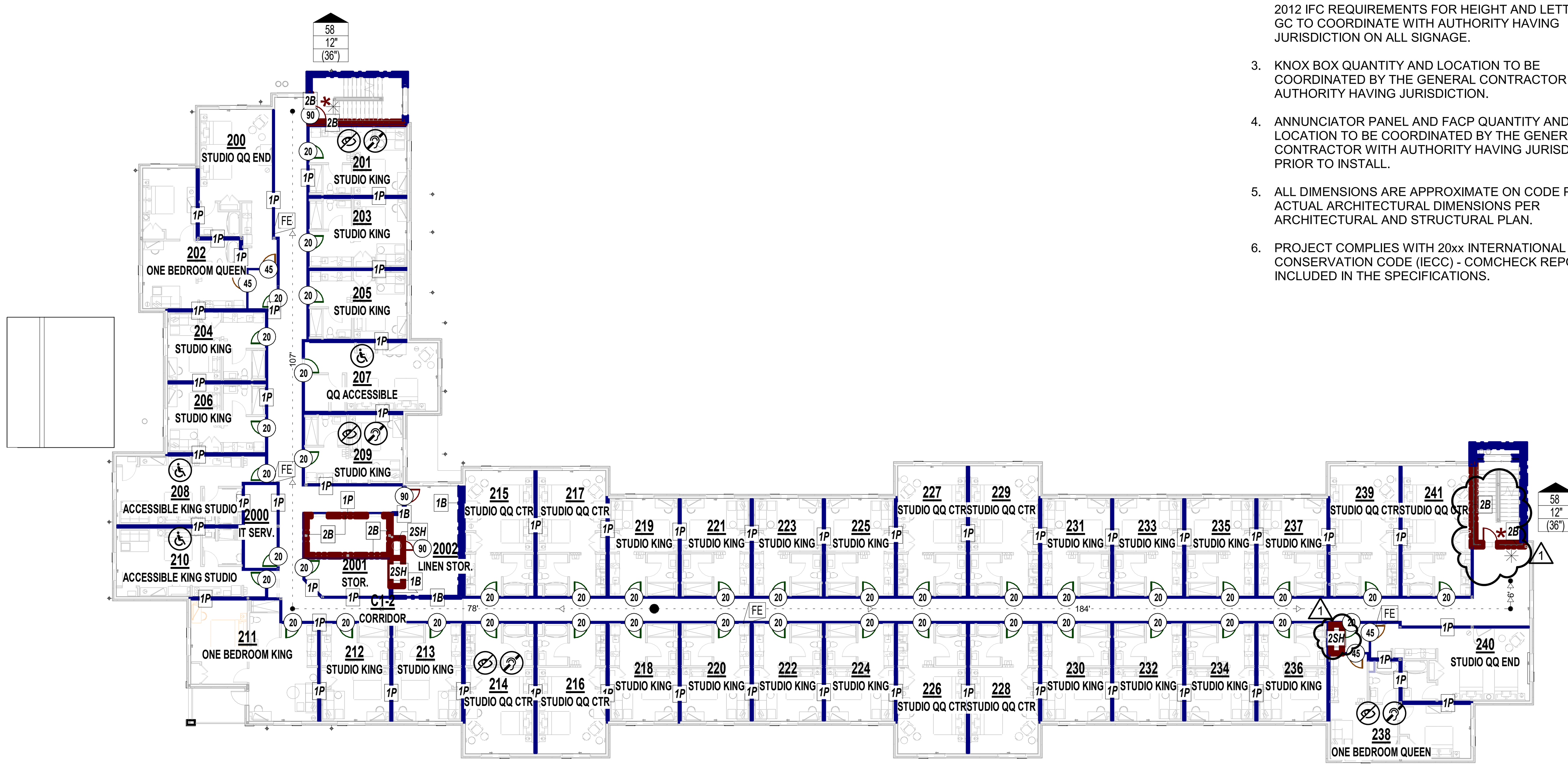
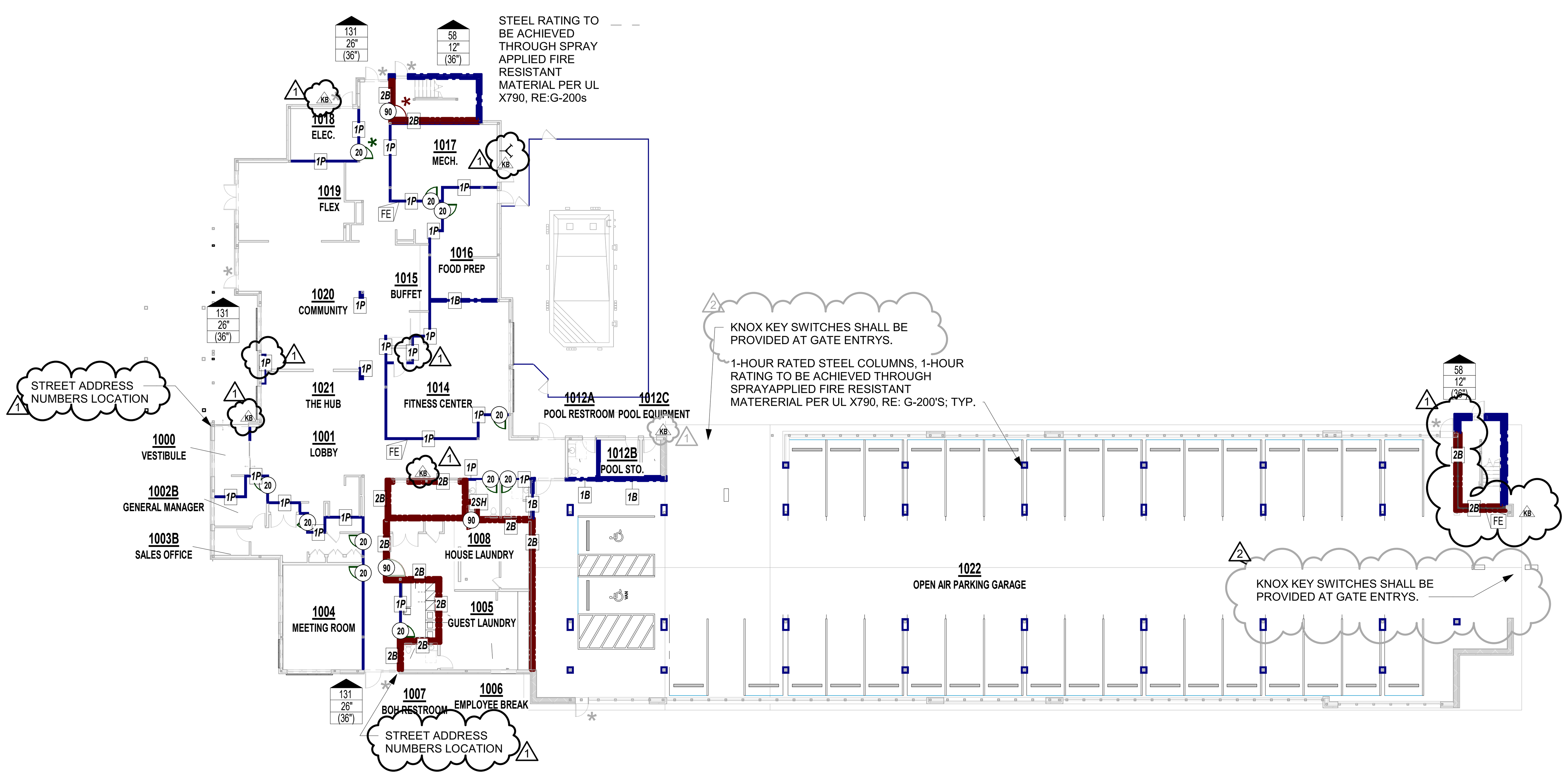
CODE PLAN GENERAL NOTES:

1. FIRE EXTINGUISHERS SHALL BE LOCATED SO THAT THE MAXIMUM TRAVEL DISTANCE SHALL NOT EXCEED 75 FEET. GENERAL CONTRACTOR TO PROVIDE SEMI-RECESSED FIRE EXTINGUISHER CABINETS WITH FIRE EXTINGUISHERS THROUGHOUT AT ACCESSIBLE HEIGHT.
2. SIGNS IDENTIFYING FIRE PROTECTION EQUIPMENT, CONTROLS FOR AIR CONDITIONING SYSTEMS, SPRINKLER RISERS AND VALVES, OR OTHER FIRE DETECTION, SUPPRESSION OR CONTROL ELEMENTS SHALL BE IDENTIFIED FOR THE USE OF THE FIRE DEPARTMENT PER 2012 IBC. SIGNAGE SHALL ALSO MEET 2012 IFC REQUIREMENTS FOR HEIGHT AND LETTERING. GC TO COORDINATE WITH AUTHORITY HAVING JURISDICTION ON ALL SIGNAGE.
3. KNOX BOX QUANTITY AND LOCATION TO BE COORDINATED BY THE GENERAL CONTRACTOR WITH AUTHORITY HAVING JURISDICTION.
4. ANNUNCIATOR PANEL AND FACP QUANTITY AND LOCATION TO BE COORDINATED BY THE GENERAL CONTRACTOR WITH AUTHORITY HAVING JURISDICTION PRIOR TO INSTALL.
5. ALL DIMENSIONS ARE APPROXIMATE ON CODE PLAN. ACTUAL ARCHITECTURAL DIMENSIONS PER ARCHITECTURAL AND STRUCTURAL PLAN.
6. PROJECT COMPLIES WITH 20xx INTERNATIONAL ENERGY CONSERVATION CODE (IECC) - COMCHECK REPORT INCLUDED IN THE SPECIFICATIONS.



2 2ND FLOOR CODE PLAN
1" = 20'-0"



1 1ST FLOOR CODE PLAN
1" = 20'-0"

REFERENCE G-003 FOR GENERAL NOTES
REFERENCE G-100 FOR CODE LEGEND

CODE REVIEW

PROJECT NAME:	TOWNPLACE SUITES BY MARRIOTT
PROJECT LOCATION:	1901 DISCOVERY AVE. LEE'S SUMMIT, MO
CODE:	2018 IBC
CODE REVIEW COMPLETED BY:	A.J. DOLPH

CHAPTER THREE

SECTION 302 OCCUPANCY:	R-1, HOTEL TRANSIENT A-2, UNCONCENTRATED A-4, SWIMMING POOL S-2, OPEN PARKING GARAGE

CHAPTER FOUR

402 COVERED MALL BUILDINGS:	N/A	416 FLAMMABLE FINISHES:	N/A
403 HIGH RISE BUILDINGS:	N/A	417 DRYING ROOMS:	N/A
404 ATRIUMS:	N/A	418 ORGANIC COATINGS:	N/A
405 UNDERGROUND BUILDINGS:	N/A	419 LIV/WORK UNITS:	N/A
407 GROUP I-2:	N/A	421 HYDROGEN FUEL GAS ROOMS:	N/A
408 GROUP I-3:	N/A	422 AMBULATORY CARE FACILITY:	N/A
409 MOTION PICTURE PROJECTION:	N/A	423 STORM SHELTERS:	N/A
410 STAGES AND PLATFORMS:	N/A	424 CHILDREN'S PLAY STRUCTURE:	N/A
411 SPECIAL AMUSEMENT BUILDINGS:	N/A	425 HYPERBARIC FACILITY:	N/A
412 AIRCRAFT RELATED OCCUP:	N/A	426 COMBUSTIBLE DUSTS & GRAINS:	N/A
413 COMBUSTIBLE STORAGE:	N/A	427 MEDICAL GAS SYSTEMS:	N/A
414 HAZARDOUS MATERIALS:	N/A	428 HIGHER EDUCATION LAB:	N/A
415 GROUPS H-1, H-2, H-3, H-4, H-5:	N/A		

406.5 OPEN PARKING GARAGES:	MUST BE TYPE I, II, OR IV CONSTRUCTION 40% MIN. OPENING FOR NATURAL VENTILATION
420 GROUPS I-1, R-1, R-2, R-3, & R-4: 420.2 SEPARATION WALLS:	WALLS SEPARATING SLEEPING UNITS TO BE FIRE PARTITIONS PER SECTION 708
420.3 HORIZONTAL SEPARATION:	FLOORS SEPARATING SLEEPING UNITS TO BE HORIZONTAL ASSEMBLY PER SECTION 711
420.4 AUTOMATIC SPRINKLER:	13R PER 903.3.1.2 FOR R

CHAPTER FIVE

TABLE 504.3 ALLOWABLE HEIGHT IN FEET ABOVE GRADE PLANE:	CONSTRUCTION TYPE VA R: ACTUAL: 50'-0" ALLOWABLE: 60'-0" A: ACTUAL: 12'-0" ALLOWABLE: 50'-0"
TABLE 504.3 ALLOWABLE HEIGHT IN FEET ABOVE GRADE PLANE:	CONSTRUCTION TYPE IIA S: ACTUAL: 12'-0" ALLOWABLE: 85'-0"
TABLE 504.4 ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE:	CONSTRUCTION TYPE VA R-1: ACTUAL: 4 ALLOWABLE: 4 STORIES A-2: ACTUAL: 1 ALLOWABLE: 2 STORIES
TABLE 504.4 ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE:	CONSTRUCTION TYPE IIA S-2: ACTUAL: 1 ALLOWABLE: 6 STORIES
TABLE 506.2 ALLOWABLE AREA FACTOR:	CONSTRUCTION TYPE VA R-1: ACTUAL:19,765 ALLOWABLE: 12,000 SQFT A-2: ACTUAL:8,720 ALLOWABLE: 11,500 SQFT
TABLE 506.2 ALLOWABLE AREA FACTOR:	CONSTRUCTION TYPE IIB S-2: ACTUAL: 13,680 ALLOWABLE: 117,000SQFT
506.2.4 MIXED-OCCUPANCY, MULTISTORY BUILDING:	Aa = [At + (NS x If)] Aa = [12,000 + (12,000 x 0.75)] Aa = 21,000
506.3 FRONTAGE INCREASE:	W = (Ln x Wn) / F W = (100 x 30) / 100 W = 30
506.33. AMOUNT OF INCREASE:	If = [F/P - 0.25]W/30 If = [100/100 - 0.25]30/30 If = 0.75
TABLE 508.4 REQUIRED SEPARATION OF OCCUPANCIES:	R - R: 1 HOUR R - A: 1 HOUR R - S: 1 HOUR A - A: 0 HOUR A - S: 0 HOUR S - S: 0 HOUR
TABLE 509 INCIDENTAL USES:	LAUNDRY > 100 SF, 1HR STORAGE > 100 SF, 1HR

CHAPTER SIX

TABLE 601 FIRE RESISTANCE REQS. FOR BUILDING ELEMENTS (HOURS):	CONSTRUCTION TYPE VA PRIMARY STRUCUTRAL FRAME: 1 HOUR INTERIOR BEARING WALL: 1 HOUR EXTERIOR BEARING WALL: 1 HOUR NON-BEARING WALL: 0 HOUR FLOOR CONSTRUCTION: 1 HOUR ROOF CONSTRUCTION: 1 HOUR CONSTRUCTION TYPE IIA PRIMARY STRUCUTRAL FRAME: 1 HOUR INTERIOR BEARING WALL: 1 HOUR EXTERIOR BEARING WALL: 1 HOUR NON-BEARING WALL: 0 HOUR FLOOR CONSTRUCTION: 1 HOUR ROOF CONSTRUCTION: 1 HOUR
TABLE 602 FIRE RESISTANCE REQS. FOR EXTERIOR WALLS BASED ON FIRE SEP. DISTANCE:	~~0 HOUR <30 FEET, 0 >30 FEET~~

CHAPTER SEVEN

704 FIRE-RESISTANCE RATING OF STRUCTURAL MEMBERS:	1 HOUR RATED SPRAY APPLIED FIRE RESISTANT MATERIAL
705.5 EXTERIOR WALLS FIRE-RESISTANCE RATING:	FIRE SEPARATION DISTANCE > 10'-0" RATED EXPOSURE FROM INSIDE ONLY
TABLE 705.8 MAX AREA OF EXTERIOR WALL OPENINGS:	FIRE SEPARATION DISTANCE > 25'-0" UNPROTECTED, NO LIMIT

CHAPTER SEVEN CONT. 1

706 FIRE WALLS:	N/A
707 FIRE BARRIERS:	2 HOUR RATED
708 FIRE PARTITIONS:	1 HOUR RATED
709 SMOKE BARRIERS:	1 HOUR-ELEVATOR LOBBY
710 SMOKE PARTITIONS:	N/A, NO RATING REQ.D
711 FLOOR & ROOF ASSEMBLIES:	1 HOUR RATED
712 VERTICAL OPENINGS:	N/A
713 SHAFT ENCLOSURES:	2 HOUR RATED
714 PENETRATIONS:	MATCH ASSEMBLY RATING
715 FIRE-RESISTANT JOINT SYSTEM:	MATCH ASSEMBLY RATING
TABLE 716.1(2) OPENING FIRE PROTECTION & RATING:	2 HOUR SHAFT: 90 MINUTE DOOR 1 HOUR FIRE BARRIER: 45 MINUTE DOOR 1 HOUR CORRIDOR: 20 MINUTE DOOR
717 DUCTS AND AIR TRANSFER OPENINGS:	REQUIRED AT RATED PENETRATIONS, 1.5 HOUR DAMPER RATING
SECTION 718 CONCEALED SPACES:	FIREBLOCK & DRAFTSTOP

CHAPTER NINE

903 AUTOMATIC SPRINKLER SYSTEM:	R-1, REQUIRED: NFPA 13R A-2, REQUIRED: NFPA 13 (13 REQ'D. ABOVE 5,000 SQFT) S-2, REQUIRED: NFPA 13, DRY SYSTEM
905 STANDPIPE SYSTEM:	CALSS I REQUIRED
906 PORTABLE FIRE EXTINGUISHERS:	REQUIRED PER NFPA 10, 75'-0" MAX TRAVEL
907 FIRE ALARM & DETECTION SYSTEM:	REQUIRED PER NFPA 72
909 SMOKE CONTROL SYSTEM:	COMPLY WITH IMC

CHAPTER TEN

TABLE 1004.5 MAX FLOOR AREA ALLOWANCES PER OCCUPANT:	R-1, 200 GROSS A-2, 15 NET A-4, 50 GROSS-SWIMMING POOL A-4, 15 GROSS-POOL DECK S-2, 200 GROSS
SECTION 1005 MEANS OF EGRESS SIZING:	STAIRS 0.2/OCC., W/ SPRINKLER EXCEPTION OTHER EGRESS 0.15/OCC., W/ SPRINKLER EXCP.
TABLE 1006.2.1 SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY:	R-1: 10 OCC., 75' MAX. PATH OF EGRESS A: 49 OCC., 75' MAX. PATH OF EGRESS S: 29 OCC., 100' MAX. PATH OF EGRESS
TABLE 1006.3.2 MINIMUM NUMBER OF EXITS PER STORY:	2 EXITS REQ.D W/ OCCUPANT LOAD/STORY 1-500
1009.3.3 AREA OF REFUGE:	NOT REQUIRED W/ SPRINKLER EXCEPTION
1009.8 TWO-WAY COMMUNICATION:	REQ'D. AT EACH ELEV. LANDING ABOVE GRADE
1011.2 STAIRWAY WIDTH CAPACITY:	44" MIN.
1011.12 STAIRWAY TO ROOF:	UNOCCUPIED ROOF, ACCESS VIA ROOF HATCH
1013.2 LOW LEVEL EXIT SIGNS IN GROUP R-1:	WHERE EXIT SIGNS ARE REQUIRED IN GROUP R-1 OCCUPANCIES BY SECTION 1013.1, ADDITIONAL LOW-LEVEL EXIT SIGNS SHALL BE PROVIDED IN AREAS SERVING GUEST ROOMS IN GROUP R-1 OCCUPANCIES AND SHALL COMPLY WITH SECTION 1013.5
1014.2 HANDRAIL HEIGHT:	34" MIN. - 38" MAX.
1014.6 HANDRAIL EXTENSIONS:	EXTEND HORIZONTALLY 12" BEYOND TOP RISER CONTINUE SLOPE 1 DEPTH TREAD AT BOTTOM
1015 GUARDS:	42" MIN. HEIGHT, 4" MAX. OPENING
TABLE 1017.2 EXIT ACCESS TRAVEL DISTANCE:	R: 250' W/ 13R SPRINKLER A: 250' W/ 13 SPRINKLER S: 400' W/ 13 SPRINKLER
1019 EXIT ACCESS STAIRWAYS:	2 HOUR RATED PER 713
TABLE 1020.1 CORRIDOR RATING:	R: 1/2 HOUR RATED W/ 13R SPRINKLER A: NO RATING REQ.D W/ 13 R SPRINKLER
1020.1.1 HOISTWAY OPENING PROTECTION:	REQUIRED PER 3006.2
TABLE 1020.2 MIN. CORRIDOR WIDTH:	44" MIN.
1020.4 DEAD ENDS:	20'-0" MAX.

CHAPTER ELEVEN

ACCESSIBILITY TO COMPLY WITH THIS CH. OF IBC, ICC A117.1, ADA, & FAIR HOUSING	
TABLE 1107.6.1.1 ACCESSIBLE DWELLING & SLEEPING UNITS:	126 TOTAL UNITS, 7 REQ.D ACC. UNITS 9 ACCESSIBLE UNITS PROVIDED

CHAPTER TWELVE

1206 SOUND TRANSMISSION:	50STC RATING BETWEEN SLEEPING UNITS

CHAPTER THIRTY

3006 ELEVATOR LOBBIES AND HOISTWAY OPENING PROTECTION:	HOISTWAY OPENING PROTECTION REQUIRED
3006.3 HOISTWAY OPENING PROTECTION:	SMOKE & DRAFT CONTROL DOOR PER UL 1784 PROVIDED AT EACH ELEVATOR HOISTWAY DOOR

R-VALUES

CLIMATE ZONE: 3A CONST. TYPE: II-A

PROJECT COMPLYING WITH LEE'S SUMMIT'S BUILDING CODE, ADOPTED ENERGY CONSERVATION CODE AND MARRIOTT'S SUSTAINABILITY BRAND STANDARDS

<u>LEE'S SUMMIT CODE ARTICLE VIII, SECTION 7-803</u>
- WALL ASSEMBLIES AS PART OF BLDG ENV.:
  - R-11
- FLOOR ASSEMBLIES AS PART OF BLDG ENV:
  - R-19
  - *EXCEPTION*: CONCRETE FLOORS IN CONCTACT WITH THE EARTH NEED NOT BE INSULATED
- ROOF ASSEMBLIES AS PART OF BLDG ENV:
  - R-19
- CEILINGS AS PART OF BLDG ENVELOPE:
  - R-30

CODE PLAN LEGEND

Symbol	Description	Symbol	Description
100 / 20" / (72")	NUMBER OF OCCUPANTS EXITING REQUIRED EXIT WIDTH EXIT WIDTH PROVIDED BY DESIGN	1001	ROOM NUMBER
	NON - RATED PARTITION	FE	FIRE EXTINGUISHER CABINET OR SURFACE MTD. AT CONC.
1P	1 HR RATED PARTITION (IBC 708)	KB	FIRE DEPARTMENT KNOX BOX INSTALLED AT 6'-0" AFF. (DEFER SUBMITTAL FOR LOC.)
1B	1 HR RATED BARRIER (IBC 707)		FIRE DEPARTMENT CONENCTION
1SH	1 HR RATED SHAFT ENCLOSURE (IBC 713)	60/S	DOOR RATING
2P	2 HR RATED PARTITION (IBC 708)		DOOR WITH PANIC HARDWARE (SEE DOOR SCHEDULE)
2B	2 HR RATED FIRE OR SMOKE BARRIER (IBC 709)		EXIT SIGNAGE; SEE ELECTRICAL
2SH	2 HR RATED SHAFT ENCLOSURE (IBC 713)		EGRESS STARTING POINT
2W	2 HR RATED FIRE WALL (IBC 706)	20'	EGRESS DISTANCE OF TRAVEL
			EGRESS DIRECTION OF TRAVEL

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:

1	12/22/2023	Response to City Comments
2	01/19/2024	Addendum #2
3	03/06/2024	IN RESPONSE TO GC COMMENTS

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DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA

STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7305
REGISTERED ARCHITECT
03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
CODE ANALYSIS

PROJECT NUMBER: 23098

SHEET NUMBER:

G-100

PRINTS ISSUED

11/01/2023 - CITY SUBMITTAL

REVISIONS:

1 12/22/2023 Response to City Comments

2 01/19/2024 Addendum #2

rosemann & ASSOCIATES P.C.

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STATE OF MISSOURI
DAVID EUGENE HENDRICKSE
NUMBER A-7305
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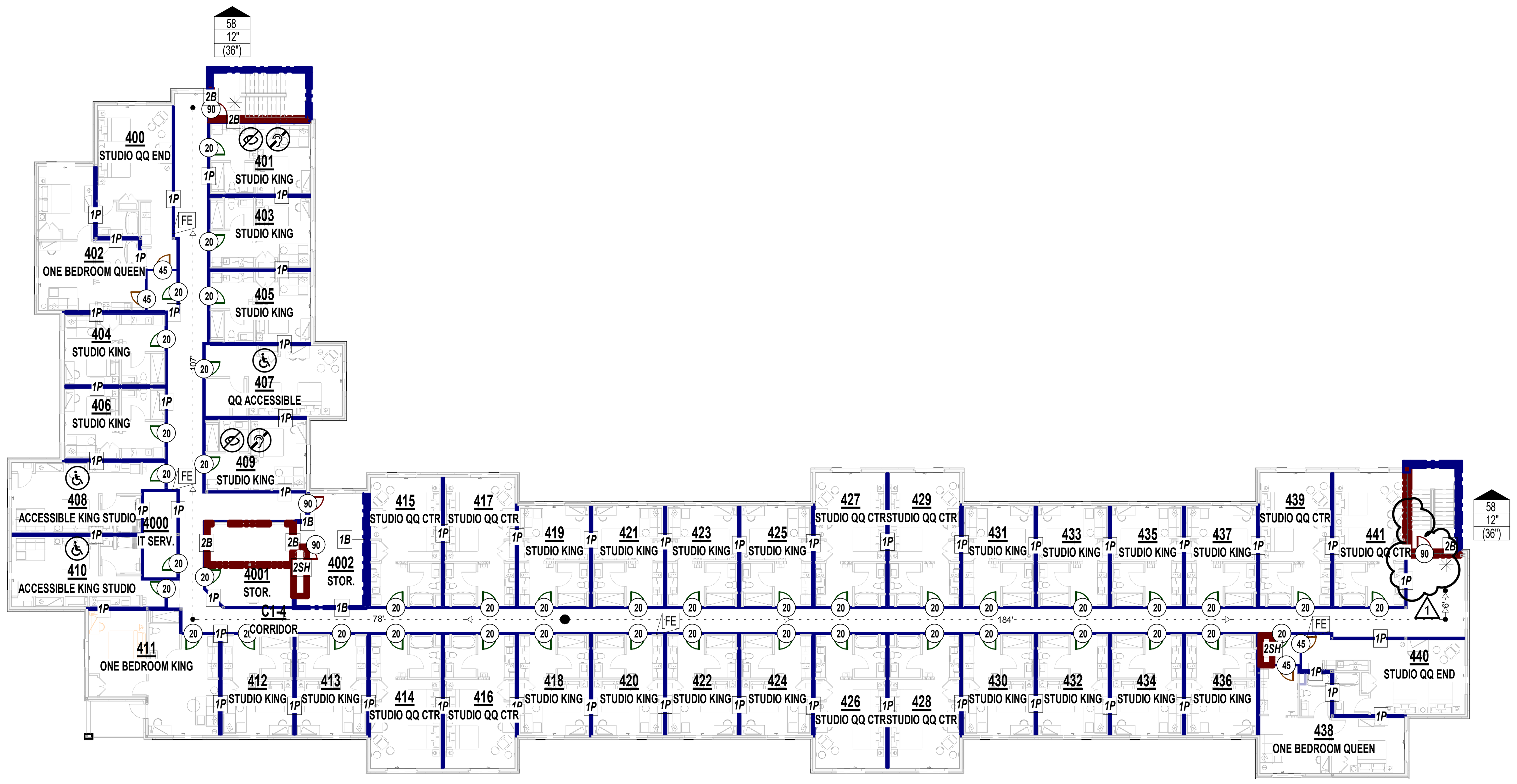
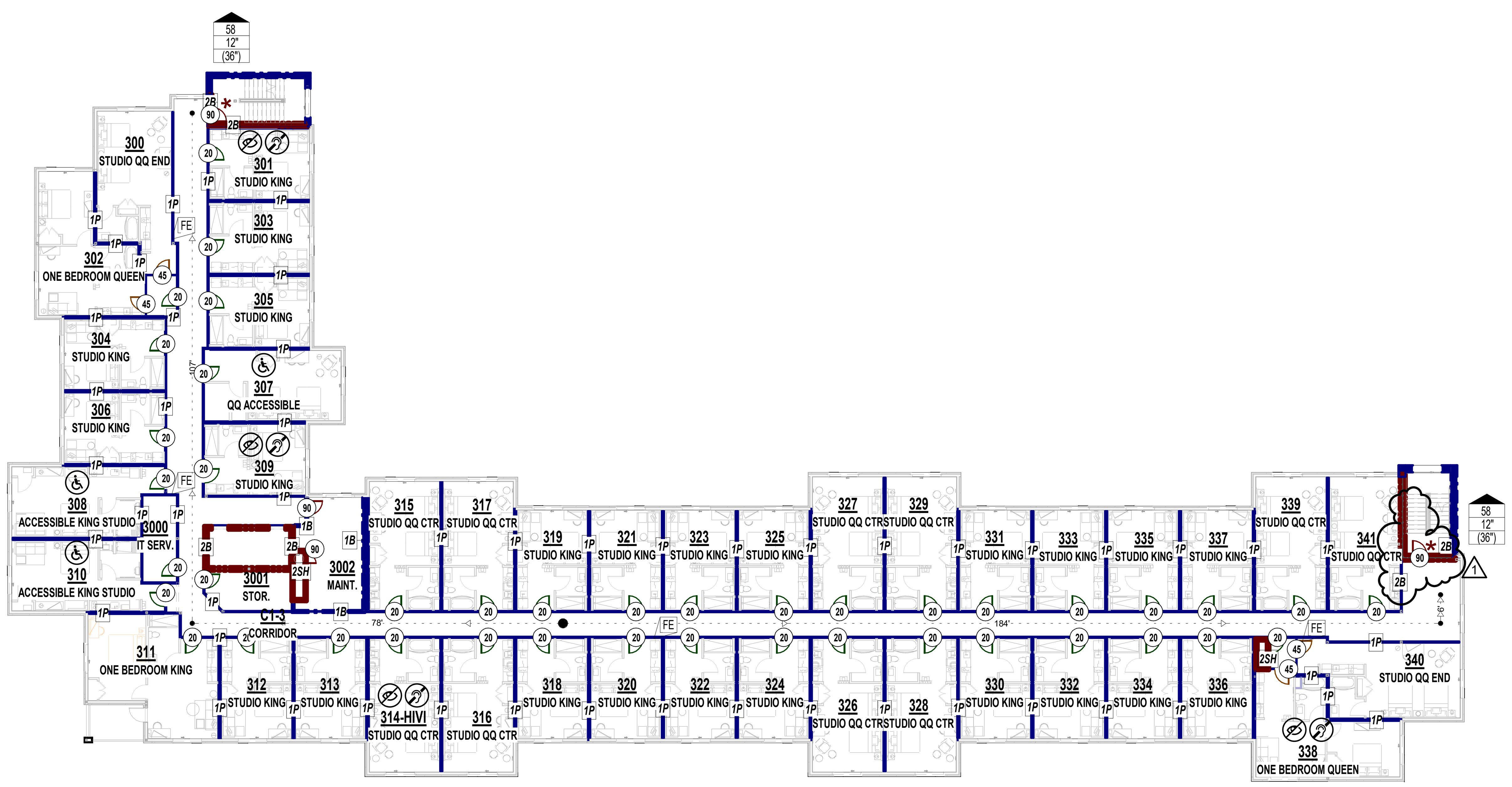
01/19/2024



2 FOURTH FLOOR PLAN
1" = 20'-0"



1 THIRD FLOOR PLAN
1" = 20'-0"

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

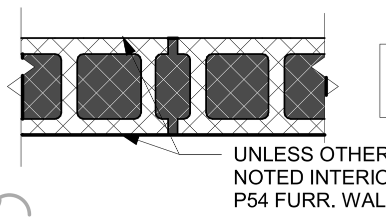
SHEET TITLE
CODE ANALYSIS

PROJECT NUMBER: 23098

SHEET NUMBER:

G-101

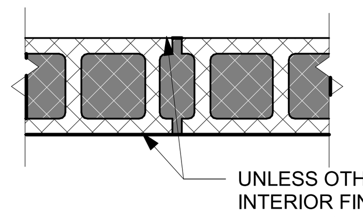
INTERIOR ASSEMBLIES - CMU



P41

CMU 8" BLOCK - 2HR FIRE BARRIER - INTERIOR
- 8" CMU (REINFORCING PER STRUCT)

NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U905 (JUNE 10, 2019)
b. APPLY WATERPROOFING AT ALL SUBGRADE PORTION OF WALLS
c. CMU TO RECIEVE FURR WALLS DIRECTLY ATTACHED BOTH SIDES. REFERENCE PLANS AND SECTIONS FOR FURR WALL TYPE.

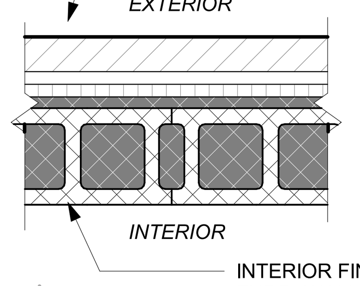


P43

CMU 8" BLOCK - 1HR FIRE BARRIER - INTERIOR
- 8" CMU (SIZING AND REINFORCING PER STRUCT)

NOTES:
a. RATING SHALL MEET IBC 2018 SECTION 721 - PRESCRIPTIVE FIRE RESISTANCE FOR 1HR RATING. SHALL MEET TABLE 721.1(2).3. - CONCRETE MASONRY UNITS. ALL TIES. MORTAR TO MEET IBC SECTION 721.
b. APPLY WATERPROOFING AT ALL SUBGRADE PORTION OF WALLS
c. CMU TO RECIEVE FURR WALLS DIRECTLY ATTACHED BOTH SIDES. REFERENCE PLANS AND SECTIONS FOR FURR WALL TYPE.

EXTERIOR ASSEMBLIES - CMU

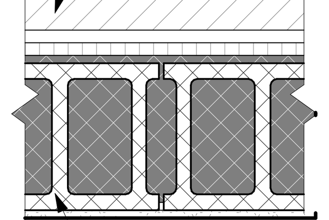


P45

CMU 8" BLOCK - 1HR - EXTERIOR
EXTERIOR
- EXTERIOR FINISH SYSTEM PER ELEVATIONS - BRICK SHOWN
- WEATHER RESISTANT BARRIER PER SPECIFICATIONS
- R VALUE PER IECC AS INDICATED ON DRAWINGS / SPECIFICATIONS.
- 8" CMU (SIZING AND REINFORCING PER STRUCT)
- P54 WALL ASSEMBLY ATTACHED DIRECTLY TO CMU
  1. 7/8" FURRING / HAT CHANNEL, SPACED 16" O.C. (GAUGE DETERMINED BY WALL HEIGHT)
  2. (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD

INTERIOR

NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U905 (JUNE 10, 2019)
b. INTERIOR EXPOSED AREAS TO BE PAINTED PER FINISH SCHEDULE
c. APPLY WATERPROOFING AT ALL SUBGRADE PORTION OF WALLS

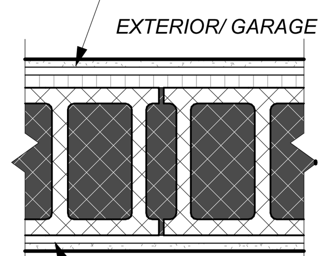


P48

CMU 12" BLOCK - 1HR - EXTERIOR
EXTERIOR
- EXTERIOR FINISH SYSTEM PER ELEVATIONS - BRICK SHOWN
- WEATHER RESISTANT BARRIER PER SPECIFICATIONS
- R VALUE PER IECC AS INDICATED ON DRAWINGS / SPECIFICATIONS.
- 12" CMU (SIZING AND REINFORCING PER STRUCT)
- P54 WALL ASSEMBLY ATTACHED DIRECTLY TO CMU
  1. 7/8" FURRING / HAT CHANNEL, SPACED 16" O.C. (GAUGE DETERMINED BY WALL HEIGHT)
  2. (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD

INTERIOR

NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U905 (JUNE 10, 2019)
b. INTERIOR EXPOSED AREAS TO BE PAINTED PER FINISH SCHEDULE
c. APPLY WATERPROOFING AT ALL SUBGRADE PORTION OF WALLS



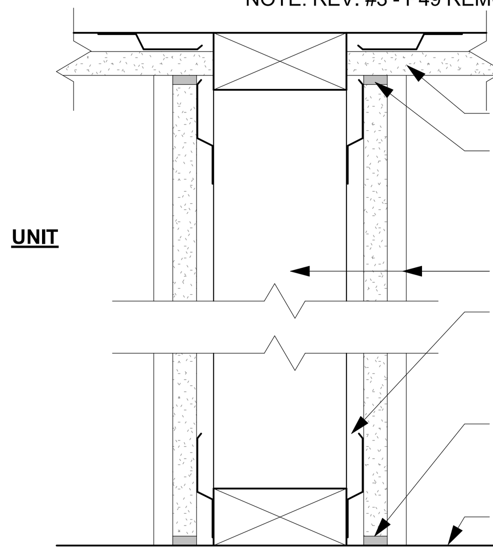
P48.1

CMU 12" BLOCK - 2HR - EXTERIOR
EXTERIOR/ GARAGE
- P54 WALL ASSEMBLY ATTACHED DIRECTLY TO CMU
  1. (1) LAYER OF 5/8" DENSGLASS FIREGUARD SHEATHING PER UL
  2. 7/8" FURRING / HAT CHANNEL, SPACED 16" O.C. (GAUGE DETERMINED BY WALL HEIGHT)
- (1) LAYER OF 5/8" DENSGLASS FIREGUARD SHEATHING PER UL
- CONTINUOUS RIGID INSULATION; R VALUE PER IECC AS INDICATED ON DRAWINGS / SPECIFICATIONS.
- 12" CMU (SIZING AND REINFORCING PER STRUCT)

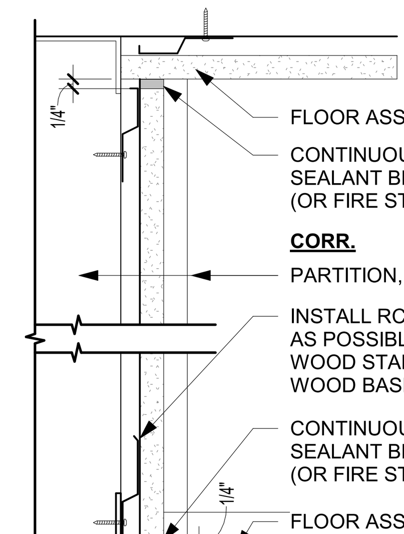
INTERIOR
- P54 WALL ASSEMBLY ATTACHED DIRECTLY TO CMU
  1. 7/8" FURRING / HAT CHANNEL, SPACED 16" O.C. (GAUGE DETERMINED BY WALL HEIGHT)
  2. (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD

NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U905 (JUNE 10, 2019)
b. INTERIOR EXPOSED AREAS TO BE PAINTED PER FINISH SCHEDULE
c. APPLY WATERPROOFING AT ALL SUBGRADE PORTION OF WALLS

NOTE: REV. #3 - P49 REMOVED

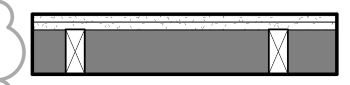


2 UNIT/UNIT ACOUSTICAL SEALANT @ FLOOR/CEILING
3" = 1'-0"



1 ACOUSTIC SEALANT @ FLOOR/CEILING
3" = 1'-0"

INTERIOR BARRIER ASSEMBLIES - WOOD - 1 HR RATED



P15

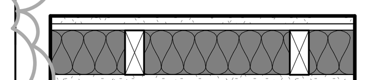
WOOD 2X4 STUD - 1HR PARTITION - INTERIOR
- (2) LAYERS 5/8" TYPE "X" GYPSUM BOARD
- 2x4 WOOD STUDS SPACED 16" O.C. MAX, OR PER STRUCT. DWGS.

NOTES:
a. ASSEMBLY TO COMPLY WITH 2018 IBC 722.2.1.4.2, INCLUDING TABLE 722.2.1.4 (2)
b. REFER TO IBC REFERENCE LISTED ABOVE FOR SCREW PATTERN AND OTHER REQUIREMENTS

P16

WOOD 2X6 STUD - 1HR PARTITION - INTERIOR
- (2) LAYERS 5/8" TYPE "X" GYPSUM BOARD
- 2x6 WOOD STUDS SPACED 16" O.C. MAX, OR PER STRUCT. DWGS.

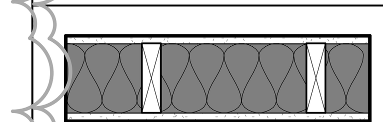
NOTES:
a. ASSEMBLY TO COMPLY WITH 2018 IBC 722.2.1.4.2, INCLUDING TABLE 722.2.1.4 (2)
b. REFER TO IBC REFERENCE LISTED ABOVE FOR SCREW PATTERN AND OTHER REQUIREMENTS



P19

WOOD 2X4 STUD - 1HR BARRIER - INTERIOR SOUND DAMPENING
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
- 25 MSG GALVANIZED RESILIENT CHANNEL, SPACED 24" O.C.
- 2x4 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS.
- 3-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

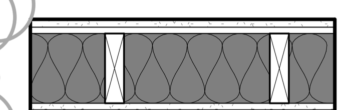
NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U305 (SEPT 19, 2023)
b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
c. SHALL COMPLY WITH IBC SECTION 7 FOR FIRE BARRIERS
d. STC SHALL BE 50 OR OVER AT UNIT ASSEMBLIES, MEETING ASTM E90 (STC 51 BASED UPON TESTING NGC 2011071)
e. WHERE BARRIER DIVIDES A CORRIDOR AND A UNIT, CORRIDOR SIDE SHALL RECEIVE THE RESILIENT CHANNEL



P20

WOOD 2X6 STUD - 1HR BARRIER - INTERIOR
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
- 2x6 WOOD STUDS SPACED 16" O.C. MAX, OR PER STRUCT. DWGS.
- 5-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U305 (SEPT 19, 2023)
b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
c. SHALL COMPLY WITH IBC SECTION 7 FOR FIRE BARRIERS

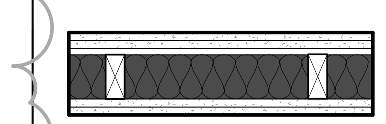


P21

WOOD 2X6 STUD - 1HR BARRIER - INTERIOR SOUND DAMPENING
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
- 25 MSG GALVANIZED RESILIENT CHANNEL, SPACED 24" O.C.
- 2x6 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS.
- 5-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U305 (SEPT 19, 2023)
b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
c. SHALL COMPLY WITH IBC SECTION 7 FOR FIRE BARRIERS
d. STC SHALL BE 50 OR OVER AT UNIT ASSEMBLIES, MEETING ASTM E90 (STC 51 BASED UPON TESTING NGC 2011071)
e. WHERE BARRIER DIVIDES A CORRIDOR AND A UNIT, CORRIDOR SIDE SHALL RECEIVE THE RESILIENT CHANNEL

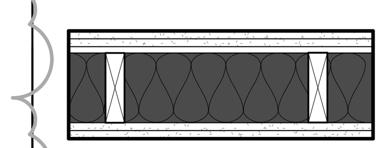
INTERIOR BARRIER ASSEMBLIES - WOOD - 2 HR RATED



P22

WOOD 2X4 STUD - 2HR BARRIER - INTERIOR
- (2) LAYERS 5/8" TYPE "X" GYPSUM BOARD
- 25 MSG GALVANIZED RESILIENT CHANNEL, 24" O.C.
- 2x4 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS.
- 3-1/2" FRICTION FIT BATT INSULATION IN STUD CAVITY
- (2) LAYERS 5/8" TYPE "X" GYPSUM BOARD

NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U301 (SEPT 19, 2023)
b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
c. SHALL COMPLY WITH IBC SECTION 7 FOR FIRE BARRIER
d. STC SHALL BE 50 OR OVER AT UNIT ASSEMBLIES, MEETING ASTM E90 (STC 58 BASED UPON TESTING NGC 2011069)

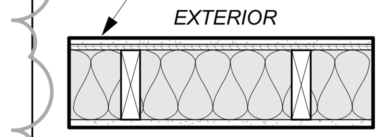


P23

WOOD 2X6 STUD - 2HR BARRIER - INTERIOR
- (2) LAYERS 5/8" TYPE "X" GYPSUM BOARD
- 25 MSG GALVANIZED RESILIENT CHANNEL, 24" O.C.
- 2x6 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS.
- 5-1/2" FRICTION FIT BATT INSULATION IN STUD CAVITY
- (2) LAYERS 5/8" TYPE "X" GYPSUM BOARD

NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U301 (SEPT 19, 2023)
b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
c. SHALL COMPLY WITH IBC SECTION 7 FOR FIRE BARRIER
d. STC SHALL BE 50 OR OVER AT UNIT ASSEMBLIES, MEETING ASTM E90 (STC 58 BASED UPON TESTING NGC 2011069)

EXTERIOR PARTITION ASSEMBLIES - WOOD - NON RATED



P36

WOOD 2x6 STUD - NON-RATED EXTERIOR
EXTERIOR
- EXTERIOR FINISH SYSTEM PER ELEVATIONS
- WEATHER RESISTANT BARRIER, PER SPECIFICATIONS
- (1) LAYER SHEATHING PER STRUCT. DWGS.
- 2x6 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS.
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

INTERIOR

NOTES:
a. INTERIOR TO BE PAINTED PER FINISH SCHEDULE
b. SCREW PATTERN PER STRUCT.

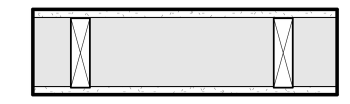
NOTE: REV. #3 - P80 MOVED TO G-102.1

INTERIOR PARTITION ASSEMBLIES - WOOD - NON RATED

P1

WOOD 2X4 STUD - NON-RATED PARTITION - INTERIOR
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD
- 2x4 WOOD STUDS SPACED 16" O.C.
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD

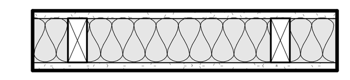
NOTES:
a. ATTACH GYPSUM WITH 1-1/4" TYPE 'W' STEEL SCREWS @ 12" O.C.



P2

WOOD 2X6 STUD - NON-RATED PARTITION - INTERIOR
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD
- 2x6 WOOD STUDS SPACED 16" O.C.
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD

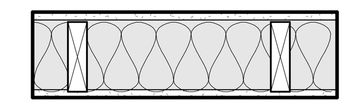
NOTES:
a. ATTACH GYPSUM WITH 1-1/4" TYPE 'W' STEEL SCREWS @ 12" O.C.



P4

WOOD 2X4 STUD - NON-RATED PARTITION - INTERIOR SOUND DAMPENING
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD
- 2x4 WOOD STUDS SPACED 16" O.C.
- 3 1/2" BATT INSULATION IN STUD CAVITY
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD

NOTES:
a. ATTACH GYPSUM WITH 1-1/4" TYPE 'W' STEEL SCREWS @ 12" O.C.



P5

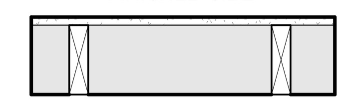
WOOD 2X6 STUD - NON-RATED PARTITION - INTERIOR SOUND DAMPENING
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD
- 2x6 WOOD STUDS SPACED 16" O.C.
- 5 1/2" BATT INSULATION IN STUD CAVITY
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD

NOTES:
a. ATTACH GYPSUM WITH 1-1/4" TYPE 'W' STEEL SCREWS @ 12" O.C.

P7

WOOD 2X4 STUD - NON-RATED FURRING - INTERIOR
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD ON OCCUPIED SIDE
- 2x4 WOOD STUDS SPACED 16" O.C.

NOTES:
a. ATTACH GYPSUM WITH 1-1/4" TYPE 'W' STEEL SCREWS @ 12" O.C.

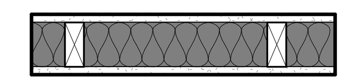


P9

WOOD 2X6 STUD - NON-RATED FURRING - INTERIOR
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD ON OCCUPIED SIDE
- 2x6 WOOD STUDS SPACED 16" O.C.

NOTES:
a. ATTACH GYPSUM WITH 1-1/4" TYPE 'W' STEEL SCREWS @ 12" O.C.

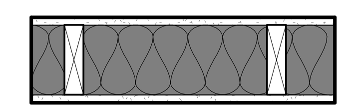
INTERIOR PARTITION ASSEMBLIES - WOOD - 1 HR RATED



P10

WOOD 2X4 STUD - 1HR PARTITION - INTERIOR
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
- 2x4 WOOD STUDS SPACED 16" O.C. MAX, OR PER STRUCT. DWGS.
- 3-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

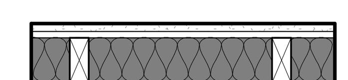
NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U305 (SEPT 19, 2023)
b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS



P11

WOOD 2X6 STUD - 1HR PARTITION - INTERIOR
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
- 2x6 WOOD STUDS SPACED 16" O.C. MAX, OR PER STRUCT. DWGS.
- 5-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

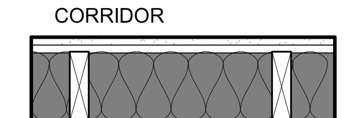
NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U305 (SEPT 19, 2023)
b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS



P12

WOOD 2X4 STUD - 1HR PARTITION - INTERIOR SOUND DAMPENING
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
- 25 MSG GALVANIZED STEEL RESILIENT CHANNEL, 24" O.C.
- 2x4 WOOD STUDS SPACED 16" O.C. MAX. OR PER STRUCT. DWGS.
- 3-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

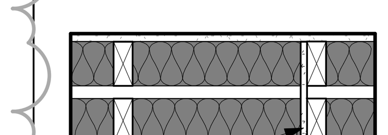
NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U305 (SEPT 19, 2023)
b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
c. STC SHALL BE 50 OR OVER AT UNIT ASSEMBLIES, MEETING ASTM E90 (STC 51 BASED UPON TESTING NGC 2011071)
d. WHERE PARTITION DIVIDES A CORRIDOR AND UNIT, RESILIENT CHANNEL SHALL BE ON CORRIDOR SIDE OF WALL, GC TO COORDINATE
e. WHERE PARTITION IS USED AS A DEMISING WALL AND/OR FOR STRUCTURAL SHEAR, GC TO COORDINATE ADDITIONAL LAYERS OF STRUCTURAL MATERIAL PER STRUCTURAL DRAWINGS. THESE LAYERS TO BE ADDITIVE TO THE ASSEMBLY LISTED ABOVE AND SHALL BE INCORPORATED PER UL 263. WHERE ONLY ONE LAYER IS ADDED FOR STRUCTURAL SHEAR, THIS SHALL BE PLACED ON SIDE OF WALL WHERE ONLY GYPSUM BOARD RESIDES, NOT ON RESILIENT CHANNEL SIDE.



P13

WOOD 2X6 STUD - 1HR PARTITION - INTERIOR SOUND DAMPENING
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
- 25 MSG GALVANIZED STEEL RESILIENT CHANNEL, 24" O.C.
- 2x6 WOOD STUDS SPACED 16" O.C. MAX. OR PER STRUCT. DWGS.
- 5-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U305 (SEPT 19, 2023)
b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
c. STC SHALL BE 50 OR OVER AT UNIT ASSEMBLIES, MEETING ASTM E90 (STC 51 BASED UPON TESTING NGC 2011071)
d. WHERE PARTITION DIVIDES A CORRIDOR AND UNIT, RESILIENT CHANNEL SHALL BE ON CORRIDOR SIDE OF WALL, GC TO COORDINATE
e. WHERE PARTITION IS USED AS A DEMISING WALL AND/OR FOR STRUCTURAL SHEAR, GC TO COORDINATE ADDITIONAL LAYERS OF STRUCTURAL MATERIAL PER STRUCTURAL DRAWINGS. THESE LAYERS TO BE ADDITIVE TO THE ASSEMBLY LISTED ABOVE AND SHALL BE INCORPORATED PER UL 263. WHERE ONLY ONE LAYER IS ADDED FOR STRUCTURAL SHEAR, THIS SHALL BE PLACED ON SIDE OF WALL WHERE ONLY GYPSUM BOARD RESIDES, NOT ON RESILIENT CHANNEL SIDE.



P14

WOOD DOUBLE 2X4 STUD - 1HR PARTITION - INTERIOR
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
- 2x4 WOOD STUDS SPACED 16" O.C. MAX, OR PER STRUCT. DWGS.
- 3 1/2" FRICTION FIT BATT INSULATION IN STUD CAVITY
- 2" AIR GAP
- 2x4 WOOD STUDS SPACED 16" O.C. MAX, OR PER STRUCT. DWGS.
- 3 1/2" FRICTION FIT BATT INSULATION IN STUD CAVITY
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

NOTES:
a. ASSEMBLY TO COMPLY WITH UL U341 (AUG 4, 2023)
b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
c. PROVIDE 1/2" GYP BOARD DRAFT STOP AT MAX 10'-0" O.C.
d. STC SHALL BE 50 OR OVER AT UNIT ASSEMBLIES, MEETING ASTM E90 (STC 61 BASED UPON TESTING TL11-120)

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2
3 03/06/2024 IN RESPONSE TO GC COMMENTS

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DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA

STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

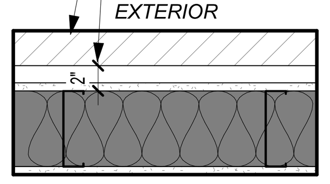
SHEET TITLE
PARTITION ASSEMBLIES

PROJECT NUMBER: 23098

SHEET NUMBER:

G-102

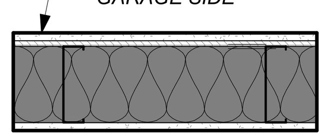
EXTERIOR PARTITION ASSEMBLIES (METAL-RATED)



P80

METAL 6" STUD - 1HR PARTITION - EXTERIOR
- EXTERIOR FINISH SYSTEM PER ELEVATIONS - BRICK SHOWN
- WEATHER RESISTANT BARRIER PER SPECIFICATIONS
- (1) LAYER OF 5/8" DENSGLASS FIREGUARD SHEATHING PER UL
- 6" METAL STUDS SPACED PER UL AND STRUCTURAL ENGINEER (MIN 20 MSG)
- BATT INSULATION PER UL AND IECC
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL

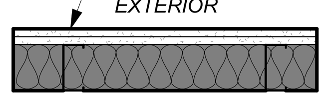
NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN W456 (JUNE 10, 2020)
b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
c. ALT. MNFR FOR 5/8" DENSGLASS FIREGUARD SHEATHING, MEETING UL, SHALL BE AS APPROVED BY ARCH ONLY



P81

METAL 6" STUD - 1HR BARRIER - EXTERIOR
- (1) LAYER 5/8" TYPE 'X' EXTERIOR RATED GYPSUM BOARD PER UL
- (1) LAYER OF 5/8" DENSGLASS FIREGUARD SHEATHING PER UL
- 6" METAL STUDS SPACED PER UL AND STRUCTURAL ENGINEER (MIN 20 MSG)
- BATT INSULATION PER UL AND IECC
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL

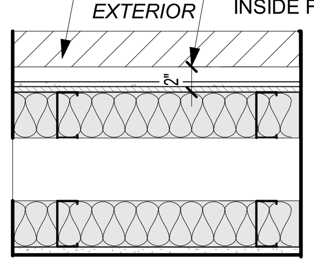
NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN W456 (JUNE 10, 2020)
b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
c. ALT. MNFR FOR 5/8" DENSGLASS FIREGUARD SHEATHING, MEETING UL, SHALL BE AS APPROVED BY ARCH ONLY



P82

METAL 3-5/8" STUD - NON-RATED - EXTERIOR
- (2) LAYERS 5/8" EXTERIOR RATED GYPSUM BOARD
- BATT INSULATION PER UL AND IECC
- 3-5/8" STUDS SPACED 16" O.C. MAX, OR PER STRUCT. DWGS.

NOTES:
a. ASSEMBLY TO COMPLY WITH 2012 IBC 722.2.1.4.2, INCLUDING TABLE 722.2.1.4 (2)
b. REFER TO IBC REFERENCE LISTED ABOVE FOR SCREW PATTERN AND OTHER REQUIREMENTS

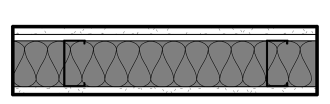


P83

METAL 6" STUD - NON-RATED - EXTERIOR
- EXTERIOR FINISH SYSTEM PER ELEVATIONS - BRICK SHOWN
- WEATHER RESISTANT BARRIER PER SPECIFICATIONS
- (1) LAYER OF 5/8" DENSGLASS FIREGUARD SHEATHING PER UL
- 3 5/8" METAL STUDS SPACED PER UL AND STRUCTURAL ENGINEER (MIN 20 MSG)
- BATT INSULATION PER UL AND IECC
- AIR GAP - WIDTH VARIES
- BATT INSULATION PER UL AND IECC
- 3 5/8" METAL STUDS SPACED PER UL AND STRUCTURAL ENGINEER (MIN 20 MSG)
- (1) LAYER OF 5/8" DENSGLASS FIREGUARD SHEATHING PER UL

NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN W456 (JUNE 10, 2020)
b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
c. ALT. MNFR FOR 5/8" DENSGLASS FIREGUARD SHEATHING, MEETING UL, SHALL BE AS APPROVED BY ARCH ONLY
d. EXTERIOR FACE OF STUDS TO ALIGN WITH CMU WALL BELOW.

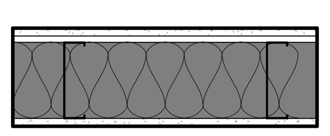
INTERIOR BARRIER ASSEMBLIES (METAL-RATED)



P69

METAL 3 5/8" STUD - 1HR BARRIER - INTERIOR
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL
- (1) LAYER 1/2" RESILIENT CHANNEL, 25 MSG, SPACED 24" O.C.
- 3-5/8" METAL STUDS SPACED PER UL AND STRUCTURAL ENGINEER (MIN 20 MSG)
- 3-1/2" BATT INSULATION PER UL
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL

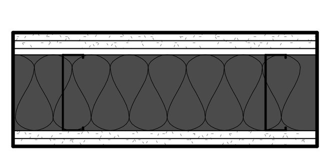
NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U423 (SEPT 27, 2018)
b. STC SHALL BE 50 OR OVER AT UNITS, MEETING ASTM E90 (STC 50 BASED UPON TESTING NGC 2013019 WITH STUDS SPACED 24" O.C.)
c. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
d. WHERE BARRIER IS USED FOR STRUCTURAL SHEAR, GC TO COORDINATE ADDITIONAL LAYERS OF STRUCTURAL MATERIAL PER STRUCTURAL DRAWINGS. THESE LAYERS TO BE ADDITIVE TO THE ASSEMBLY LISTED ABOVE AND SHALL BE INCORPORATED PER UL 263.



P70

METAL 6" STUD - 1HR BARRIER - INTERIOR
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL
- (1) LAYER 1/2" RESILIENT CHANNEL, 25 MSG, SPACED 24" O.C.
- 6" METAL STUDS SPACED PER UL AND STRUCTURAL ENGINEER (MIN 20 MSG)
- 6" BATT INSULATION PER UL
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL

NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U423 (SEPT 27, 2018)
b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
c. STC SHALL BE 50 OR OVER AT UNITS, MEETING ASTM E90 (STC 50 BASED UPON TESTING NGC 2013019 WITH STUDS SPACED 24" O.C.)
d. WHERE BARRIER IS USED FOR STRUCTURAL SHEAR, GC TO COORDINATE ADDITIONAL LAYERS OF STRUCTURAL MATERIAL PER STRUCTURAL DRAWINGS. THESE LAYERS TO BE ADDITIVE TO THE ASSEMBLY LISTED ABOVE AND SHALL BE INCORPORATED PER UL 263.

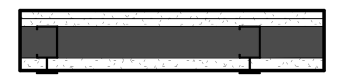


P72

METAL 6" STUD - 2HR BARRIER - INTERIOR SOUND DAMPENING
- (2) LAYERS 5/8" TYPE 'X' GYPSUM BOARD PER UL
- (1) LAYER 1/2" RESILIENT CHANNEL, 25 MSG, SPACED 24" O.C.
- 6" METAL STUDS SPACED PER UL AND STRUCTURAL ENGINEER (MIN 20 MSG)
- 6" BATT INSULATION PER UL
- (2) LAYERS 5/8" TYPE 'X' GYPSUM BOARD PER UL

NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U423 (SEPT 27, 2018)
b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
c. STC SHALL BE 50 OR OVER AT UNITS, MEETING ASTM E90 (STC 57 BASED UPON TESTING TL-92-369 WITH STUDS SPACED 24" O.C.)
d. WHERE BARRIER DIVIDES A CORRIDOR AND UNIT, RESILIENT CHANNEL SHALL BE ON CORRIDOR SIDE OF WALL, GC TO COORDINATE
e. WHERE BARRIER IS USED AS A DEMISING WALL AND/OR FOR STRUCTURAL SHEAR, GC TO COORDINATE ADDITIONAL LAYERS OF STRUCTURAL MATERIAL PER STRUCTURAL DRAWINGS. THESE LAYERS TO BE ADDITIVE TO THE ASSEMBLY LISTED ABOVE AND SHALL BE INCORPORATED PER UL 263. WHERE ONLY ONE LAYER IS ADDED FOR STRUCTURAL SHEAR, THIS SHALL BE PLACED ON SIDE OF WALL WHERE ONLY GYPSUM BOARD RESIDES, NOT ON RESILIENT CHANNEL SIDE.

INTERIOR SHAFT ASSEMBLIES (METAL-RATED)

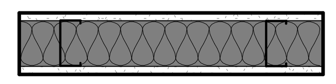


P75

METAL 2 1/2" C-H STUD - 2HR RATED SHAFT - INTERIOR
- (2) LAYERS 5/8" TYPE 'X' GYPSUM BOARD PER UL
- 2-1/2" C-H STUDS SPACED 24" O.C.
- (1) LAYER 1" SHAFT WALL LINER

NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U415, SYSTEM A (FEB 14, 2023)
b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS

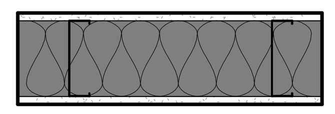
INTERIOR PARTITION ASSEMBLIES (METAL-RATED)



P60

METAL 3 5/8" STUD - 1HR PARTITION - INTERIOR
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL
- 3-5/8" METAL STUDS SPACED PER UL AND STRUCTURAL ENGINEER (MIN 20 MSG)
- 3-1/2" BATT INSULATION PER UL
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL

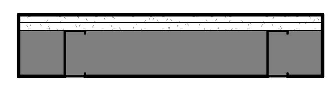
NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U423 (SEPT 27, 2018)
b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
c. WHERE PARTITION IS USED FOR STRUCTURAL SHEAR, GC TO COORDINATE ADDITIONAL LAYERS OF STRUCTURAL MATERIAL PER STRUCTURAL DRAWINGS. THESE LAYERS TO BE ADDITIVE TO THE ASSEMBLY LISTED ABOVE AND SHALL BE INCORPORATED PER UL 263.



P61

METAL 6" STUD - 1HR PARTITION - INTERIOR
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL
- 6" METAL STUDS, SPACING PER UL AND STRUCTURAL ENGINEER (MIN 20 MSG)
- 6" BATT INSULATION PER UL
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL

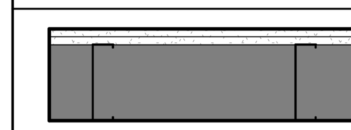
NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U423 (SEPT 27, 2018)
b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
c. WHERE PARTITION IS USED FOR STRUCTURAL SHEAR, GC TO COORDINATE ADDITIONAL LAYERS OF STRUCTURAL MATERIAL PER STRUCTURAL DRAWINGS. THESE LAYERS TO BE ADDITIVE TO THE ASSEMBLY LISTED ABOVE AND SHALL BE INCORPORATED PER UL 263.



P64

METAL 3-5/8" STUD - 1HR PARTITION - INTERIOR
- (2) LAYERS 5/8" TYPE "X" GYPSUM BOARD
- 3-5/8" STUDS SPACED 16" O.C. MAX, OR PER STRUCT. DWGS.

NOTES:
a. ASSEMBLY TO COMPLY WITH 2012 IBC 722.2.1.4.2, INCLUDING TABLE 722.2.1.4 (2)
b. REFER TO IBC REFERENCE LISTED ABOVE FOR SCREW PATTERN AND OTHER REQUIREMENTS



P65

METAL 6" STUD - 1HR PARTITION - INTERIOR
- (2) LAYERS 5/8" TYPE "X" GYPSUM BOARD
- 6" METAL STUDS SPACED 16" O.C. MAX, OR PER STRUCT. DWGS.

NOTES:
a. ASSEMBLY TO COMPLY WITH 2012 IBC 722.2.1.4.2, INCLUDING TABLE 722.2.1.4 (2)
b. REFER TO IBC REFERENCE LISTED ABOVE FOR SCREW PATTERN AND OTHER REQUIREMENTS

INTERIOR PARTITION ASSEMBLIES (METAL-NON-RATED)

P50

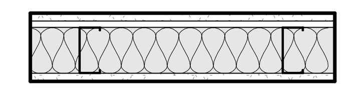
METAL 3-5/8" STUD - NON-RATED PARTITION - INTERIOR
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD
- 3-5/8" METAL STUDS SPACED 16" O.C. (GAUGE DETERMINED BY WALL HEIGHT)
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD

NOTES:
a. ATTACH GYPSUM WITH 1-1/4" TYPE 'W' STEEL SCREWS SPACED 12" O.C.

P51

METAL 6" STUD - NON-RATED PARTITION
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD
- 3-5/8" METAL STUDS SPACED 16" O.C. (GAUGE DETERMINED BY WALL HEIGHT)
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD

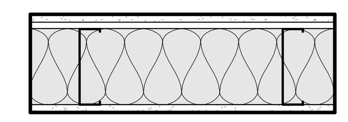
NOTES:
a. ATTACH GYPSUM WITH 1-1/4" TYPE 'W' STEEL SCREWS SPACED 12" O.C.



P52

METAL 3 5/8" STUD - NON-RATED PARTITION - INTERIOR SOUND DAMPENING
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD
- (1) LAYER 1/2" RESILIENT CHANNEL, 25 MSG, SPACED 24" O.C.
- 3-5/8" METAL STUDS SPACED 16" O.C. (GAUGE DETERMINED BY WALL HEIGHT)
- 3-1/2" BATT INSULATION, NON FACED
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD

NOTES:
a. ATTACH GYPSUM WITH 1-1/4" TYPE 'W' STEEL SCREWS SPACED 12" O.C.



P53

METAL 6" STUD - NON-RATED PARTITION - INTERIOR SOUND DAMPENING
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD
- (1) LAYER 1/2" RESILIENT CHANNEL, 25 MSG, SPACED 24" O.C.
- 6" METAL STUDS SPACED 16" O.C. (GAUGE DETERMINED BY WALL HEIGHT)
- 6" BATT INSULATION, NON-FACED
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD

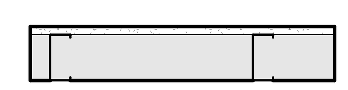
NOTES:
a. ATTACH GYPSUM WITH 1-1/4" TYPE 'W' STEEL SCREWS SPACED 12" O.C.

INTERIOR FURRING ASSEMBLIES (METAL-NON-RATED)

P54

METAL 7/8" FURRING / HAT CHANNEL - NON-RATED FURRING - INTERIOR
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD
- 7/8" FURRING / HAT CHANNEL, SPACED 16" O.C. (GAUGE DETERMINED BY WALL HEIGHT)

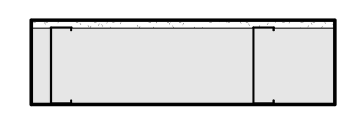
NOTES:
a. ATTACH GYPSUM WITH 1-1/4" TYPE 'W' STEEL SCREWS SPACED 12" O.C.
b. ALL EXTERIOR GARAGE WALL LOCATIONS TO RECEIVE (1) LAYER OF 5/8" DENSGLASS FIREGUARD SHEATHING PER UL



P57

METAL 3 5/8" STUD - NON-RATED FURRING - INTERIOR
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD
- 3-5/8" METAL STUDS, SPACED 16" O.C. (GAUGE DETERMINED BY WALL HEIGHT)

NOTES:
a. ATTACH GYPSUM WITH 1-1/4" TYPE 'W' STEEL SCREWS SPACED 12" O.C.



P59

METAL 6" - NON-RATED FURRING - INTERIOR
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD
- 6" METAL STUDS, SPACED 16" O.C. (GAUGE DETERMINED BY WALL HEIGHT)

NOTES:
a. ATTACH GYPSUM WITH 1-1/4" TYPE 'W' STEEL SCREWS SPACED 12" O.C.

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
3 03/06/2024 IN RESPONSE TO GC COMMENTS

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DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA

STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
PARTITION ASSEMBLIES

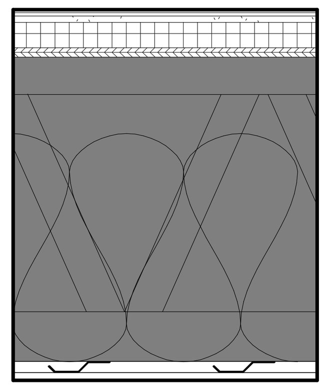
PROJECT NUMBER: 23098

SHEET NUMBER:

G-102.1

ROOF/CEILING ASSEMBLY-WOOD

EXTERIOR



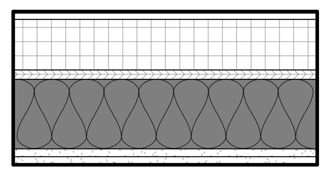
INTERIOR

R8

WOOD PARALLEL CHORD TRUSS - 1HR - TPO
- TPO ROOFING, PER SPECIFICATION TO MEET IECC
- 1/2" COVERBOARD, NON-COMBUSTIBLE, WATER-RESISTANT
- TAPERED INSULATION, SLOPE PER PLAN
- 15/32" MIN. ROOF SHEATHING, SEE NOTE b.
- WOOD TRUSS FRAMING PER STRUCT. DWGS, MAX SPACING 24" OC - REFERENCE UL FOR CONSTRUCTION
- R-30 INSULATION PER LEE'S SUMMIT CODE, INSTALLED PER UL
- 25 MSG GALVANIZED STEEL RESILIENT CHANNELS, SPACED PER UL
- (1) LAYER OF 5/8" TYPE 'AG-C' GWB, BY AMERICAN GYPSUM CO, PER UL

NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN P545 (SEPT 8, 2023)
b. STRUCTURAL SHALL SUPERCEDE IF STRUCT SHEATHING IS THICKER OR DIFFERENT TYPE THAN LISTED ABOVE. PROVIDE REQ MIN ABOVE.
c. REFER TO UL FOR SCREW PATTERN
d. CRICKETS AS INDICATED ON ROOF PLAN TO BE FORMED OUT OF PRE-SLOPED POLYISO RIGID INSULATION. SLOPE TO DRAIN
e. ROOF VENTS PER ROOF PLAN TO MEET REQUIRED VENTING

EXTERIOR



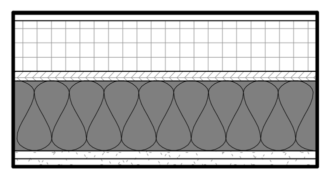
INTERIOR

R12

WOOD FLAT 2X6 LUMBER - 1HR - TPO
- TPO ROOFING MEMBRANE PER SPECIFICATIONS TO MEET IECC
- 1/2" COVERBOARD, NON-COMBUSTIBLE, WATER-RESISTANT
- PRE-SLOPED POLYISO RIGID INSULATION FOR SLOPE PER ROOF PLAN
- R-20 RIGID INSULATION MIN. (OR NECESSARY TO MEET MIN. IECC REQUIREMENT)
- VAPOR BARRIER CLASS 1, SELF ADHERED TO SHEATHING, AS REQUIRED
- SHEATHING PER STRUCTURAL DWGS.
- WOOD 2X6 FRAMING SPACED PER STRUCTURAL
- R-19 BATT INSULATION
- (2) LAYERS OF 5/8" TYPE 'X' GWB. PER GA ASSEMBLY

NOTES:
a. ASSEMBLY TO COMPLY WITH DESIGN NO. 721.1(3) (SEE G-200'S)
b. REFER TO G-200'S FOR SCREW PATTERN

EXTERIOR



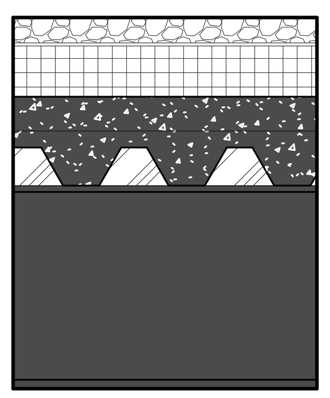
INTERIOR

R13

WOOD FLAT 2X8 LUMBER - 1HR - TPO
- TPO ROOFING MEMBRANE PER SPECIFICATIONS TO MEET IECC
- 1/2" COVERBOARD, NON-COMBUSTIBLE, WATER-RESISTANT
- PRE-SLOPED POLYISO RIGID INSULATION FOR SLOPE PER ROOF PLAN
- R-20 RIGID INSULATION MIN. (OR NECESSARY TO MEET MIN. IECC REQUIREMENT)
- VAPOR BARRIER CLASS 1, SELF ADHERED TO SHEATHING, AS REQUIRED
- SHEATHING PER STRUCTURAL DWGS.
- WOOD 2X6 FRAMING SPACED PER STRUCTURAL
- R-19 BATT INSULATION
- (2) LAYERS OF 5/8" TYPE 'X' GWB. PER GA ASSEMBLY

NOTES:
a. ASSEMBLY TO COMPLY WITH GA FILE NO. RC 2601
b. REFER TO GA FOR SCREW PATTERN

EXTERIOR



INTERIOR

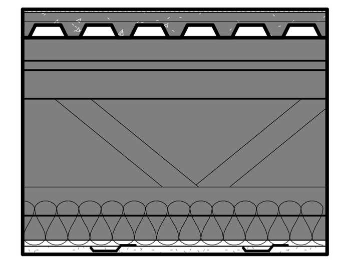
R45

METAL DECK - 1HR - TPO
- TPO ROOFING MEMBRANE PER SPECIFICATIONS TO MEET IECC
- 1/2" COVERBOARD, NON-COMBUSTIBLE, WATER-RESISTANT
- PRE-SLOPE POLYISO RIGID INSULATION FOR CRICKETS
- RIGID INSULATION ONLY IF BEING USED OVER CONDITIONED / OCCUPIED AREA, THICKNESS TO MEET IECC ROOFING REQUIREMENTS
- CONCRETE TOPPING SLAB PER STRUCTURAL DWGS., MIN. DEPTH PER UL TO MEET RATING REQUIRED
- WELDED WIRE FABRIC PER STRUCTURAL DWGS.
- METAL DECKING PER STRUCTURAL DWGS.
- STEEL BEAMS PER STRUCTURAL DWGS. W/ SPRAY APPLIED FIREPROOFING PER DWGS. / DETAILS

NOTES:
a. RATING TO COMPLY WITH UL DESIGN D916 (JAN 18, 2019)
b. CRICKETS AS INDICATED ON ROOF PLAN TO BE FORMED OUT OF PRE-SLOPE POLYISO RIGID INSULATION

FLOOR/CEILING ASSEMBLY-METAL

TOP OF FLOOR



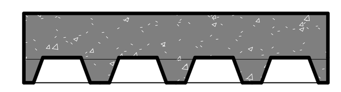
BOTTOM OF FLOOR

F31

METAL 16" OPEN WEB TRUSS - 1HR
- FLOOR FINISH PER INTERIOR DESIGN DRAWINGS
- 1/4" ACOUSTICAL FLOOR MAT, THICKNESS TO MEET STC/IIC REQUIREMENTS IN NOTES
- CONCRETE TOPPING SLAB PER STRUCT. DWGS, DEPTH MEASURED FROM T.O. DECKING, THICKNESS TO MEET STC/IIC REQUIREMENTS IN NOTES
- WELDED WIRE FABRIC PER STRUCT. DWGS.
- 9/16" MIN. 28 MSG GALVANIZED CORRUGATED METAL DECKING PER STRUCT. DWGS.
- 16" OPEN WEB METAL TRUSS PER STRUCT. DWGS.
- 3-1/2" BATT INSULATION PER UL
- 25 MSG GALVANIZED STEEL RESILIENT CHANNEL SPACED PER UL
- (1) LAYER OF 5/8" TYPE 'C' GWB PER UL

NOTES:
a. RATING SHALL COMPLY WITH UL DESIGN G566, (APRIL 24, 2020).
b. REFER TO UL FOR SCREW PATTERN
c. STC TO BE MIN. 50 PER IBC CHAPTER 12, IIC TO BE EQUAL OR GREATER THAN 50 WHEN TESTED UNDER ASTM E 492. (STC 57 BASED UPON TESTING NGC 7008010 ASSUMING CERAMIC TILE FLOOR FINISH. IIC 51 BASED UPON TESTING 7008019 ASSUMING CERAMIC TILE FLOOR FINISH.)
d. PROPRIETARY TO EISEN METAL TRUSS SYSTEM

TOP OF FLOOR



BOTTOM OF FLOOR

F32

METAL DECK AND CONCRETE - 1HR
- CONCRETE TOPPING SLAB PER STRUCT.
- WELDED WIRE FABRIC PER STRUCT. DWGS.
- METAL DECKING PER STRUCT. DWGS.

NOTES:
a. SHALL COMPLY WITH UL DESIGN D916 (MAY 16, 2023)

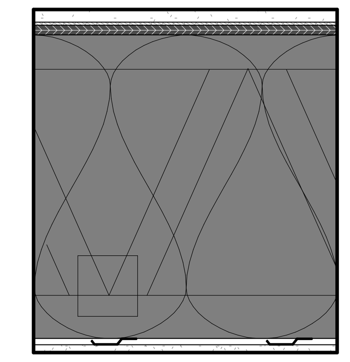
FLOOR/CEILING ASSEMBLY-WOOD

F1

CONCRETE - NON-RATED - SLAB ON GRADE
- CONCRETE SLAB ON GRADE PER STRUCT. DWGS.

NOTES
a. SEE STRUCTURAL FOR REINFORCING AND THICKNESS
b. VERIFY SLAB ELEVATIONS WITH CIVIL AND LANDSCAPE

TOP OF FLOOR



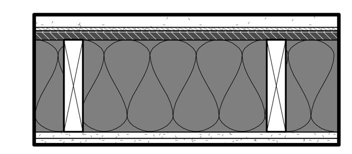
BOTTOM OF FLOOR

F3

WOOD OPEN WEB TRUSS - 1HR
- 1" GYPCRETE TOPPING
- 1/4" ACOUSTICAL MAT
- 19/32" MIN. PLYWOOD SHEATHING, TYPE 'C/D' , SEE ALSO NOTE b.
- WOOD TRUSSES PER STRUCTURAL, REFER TO UL FOR MIN. REQS
- UNFACED FIBERGLASS INSULATION COMPLETELY FILLED IN CONCEALED CAVITY TO COMPLY WITH NFPA 13 CONCEALED SPACES.
- 25 MSG GALVANIZED RESILIENT CHANNELS, SPACED PER U.L.
- (1) LAYER OF 5/8" TYPE 'C' GWB PER UL

NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN L546 (OCT 3, 2023)
b. STRUCTURAL SHALL SUPERCEDE IF STRUCT SHEATHING IS THICKER OR DIFFERENT TYPE THAN LISTED ABOVE. PROVIDE REQ MIN ABOVE.
c. REFER TO UL FOR SCREW PATTERN
d. STC TO BE MIN. 50 PER IBC CHAPTER 12, IIC TO BE EQUAL OR GREATER THAN 50 WHEN TESTED UNDER ASTM E 492. (STC 60 BASED UPON TESTING 30160-08-90744-11. IIC 52 BASED UPON TESTING 30160-08-90744-7 ASSUMING VCT FLOOR FINISH.)
e. VERIFY GWB AND RESILIENT CHANNEL WITH UL SPECIFIED, TAKE NOTE OF REQUIRED RESILIENT CHANNEL SPACING WITH INSULATION-FILLED CAVITY
f. MIN. DEPTH OF TRUSS SHALL BE 18" WHEN DUCT PRESENT.

TOP OF FLOOR



BOTTOM OF FLOOR

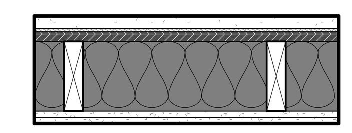
F7

WOOD 2X8 LUMBER - 1HR - CORRIDOR
- 1" GYPCRETE TOPPING
- 1/4" ACOUSTICAL MAT
- 1/2" SHEATHING MIN, SEE NOTE b.
- 2X8 WOOD JOISTS SPACED PER STRUCTURAL
- UNFACED FIBERGLASS INSULATION COMPLETELY FILLED IN CONCEALED CAVITY TO COMPLY WITH NFPA 13 CONCEALED SPACES.
- (2) LAYERS OF 5/8" TYPE 'X' GWB PER IBC

NOTES:
a. RATING FOR 2X8 DIMENSIONAL LUMBER ASSEMBLY: 2018 IBC TABLE 721.1(3) #21-1.1 & AMERICAN WOOD COUNCIL'S DCA 4 (COMPONENT ADDITIVE METHOD FOR CALCULCULATING AND DEMONSTRATING ASSEMBLY FIRE RESISTANCE)
b. STRUCTURAL SHALL SUPERCEDE IF STRUCT SHEATHING IS THICKER OR DIFFERENT TYPE THAN LISTED ABOVE. PROVIDE REQ MIN ABOVE.
c. REFER TO IBC TABLE FOR SCREW PATTERN

2

TOP OF FLOOR



BOTTOM OF FLOOR

F8

WOOD 2X6 LUMBER - 1HR - CORRIDOR
- 1" GYPCRETE TOPPING
- 1/4" ACOUSTICAL MAT
- 1/2" SHEATHING MIN, SEE NOTE b.
- 2X8 WOOD JOISTS SPACED PER STRUCTURAL
- UNFACED FIBERGLASS INSULATION COMPLETELY FILLED IN CONCEALED CAVITY TO COMPLY WITH NFPA 13 CONCEALED SPACES.
- (2) LAYERS OF 5/8" TYPE 'X' GWB PER IBC

NOTES:
a. RATING FOR 2X6 DIMENSIONAL LUMBER ASSEMBLY: 2018 IBC TABLE 721.1(3) #21-1.1 & AMERICAN WOOD COUNCIL'S DCA 4 (COMPONENT ADDITIVE METHOD FOR CALCULCULATING AND DEMONSTRATING ASSEMBLY FIRE RESISTANCE)
b. STRUCTURAL SHALL SUPERCEDE IF STRUCT SHEATHING IS THICKER OR DIFFERENT TYPE THAN LISTED ABOVE. PROVIDE REQ MIN ABOVE.
c. REFER TO IBC TABLE FOR SCREW PATTERN

F2 ASSEMBLY REMOVED 1

PRINTS ISSUED

11/01/2023 - CITY SUBMITTAL

REVISIONS:

1	12/22/2023	Response to City Comments
2	01/19/2024	Addendum #2
3	03/06/2024	IN RESPONSE TO GC COMMENTS

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Kansas City, MO 64108-1404
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DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA

STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7305
REGISTERED ARCHITECT
03/06/2024

TOWNEPLACE SUITES

2

1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

3

SHEET TITLE
ASSEMBLIES - FLOOR/CEILING

PROJECT NUMBER: 23098

SHEET NUMBER:

G-103

3/6/2024 5:34:15 PM
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UL Solutions

Design/System/Construction/Assembly Usage Disclaimer

- 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 Variances

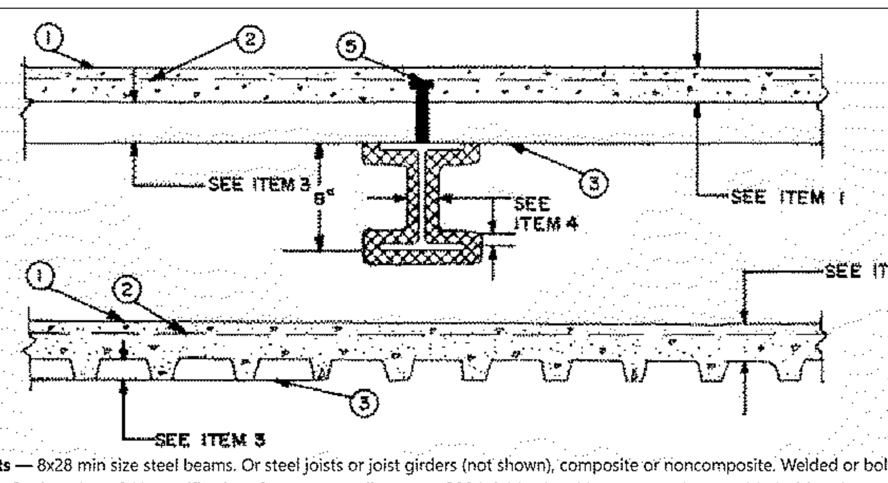
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. D916

May 16, 2023

Restrained Assembly Ratings — 3/4, 1, 1-1/2, 2 or 3 Hr.
(See Items 1, 6, 7, 8 and 11)
Unrestrained Assembly Rating — 0 Hr. (See Items 3, 4 and 4A)
Unrestrained Beam Ratings — 1, 1-1/2, 2 and 3 Hr.
(See Items 4, 4A, 7 and 11)
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

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



Supports — 8x28 min size steel beams. Or steel joists or joist girders (not shown), composite or noncomposite. Welded or bolted to end supports. Designed per S.J.I. specifications for a max tensile stress of 30 ksi. May be either uncoated or provided with a shop coat of paint. For the 2 h or less Restrained or Unrestrained Beam Ratings, top and bottom chords shall each consist of two angles with a min total area of 0.96 and 0.77 sq in., respectively. Web members shall be either round bars or angles. Min area of the end diagonal web shall be 0.444 sq in. Min area of each of the first six interior diagonal webs shall be 0.406 sq in. All other interior webs shall have a min area of 0.196 sq in. For the 3 h Restrained or Unrestrained Beam Ratings, each of the top and bottom chords shall each consist of two angles with a min total area of 1.74 sq in. Web members shall be either round bars or angles. Min area of each of the first five end diagonal webs shall be 0.886 sq in. All other interior webs shall have a min area of 0.441 sq in. Bridging per S.J.I. specifications is required when noncomposite joists are used. For noncomposite joists, steel filler pieces of proper size, 1 to 2 in. long shall be welded to and between the top chord angles at midway between all top chord panel points.

1. **Normal Weight or Lightweight Concrete —** Normal weight concrete carbonate or siliceous aggregate, 3500 psi compressive strength, vibrated. Lightweight concrete, expanded shale, or slate aggregate by rotary-kiln method, or expanded clay aggregate by rotary-kiln or sintered-grate method, or pelletized expanded blast furnace slag aggregate, 3000 psi compressive strength, vibrated, 4 to 7 percent entrained air.

Restrained Assembly Rating Hr	Concrete (Type)	Concrete Unit Weight pcf	Concrete Thkns In.
1	Normal Weight	147-153	3-1/2
1-1/2	Normal Weight	147-153	4
2	Normal Weight	147-153	4-1/2
3	Normal Weight	147-153	5-1/4
3/4 or 1 (See Item 6)	Lightweight	107-113	2-1/2
1	Lightweight	107-120	2-5/8
1-1/2	Lightweight	107-113	3
2	Lightweight	107-113	3-1/4
2	Lightweight	107-116	3-1/4*
2	Lightweight	114-120	3-1/2
3	Lightweight	107-113	4-3/16
3	Lightweight	114-120	4-7/16

*For use with 2 or 3 in. steel floor and form units only.

2. **Welded Wire Fabric —** 6x6 - W1.4xW1.4.

3. **Steel Floor and Form Units* —** Composite or non-composite, 1-1/2, 1-5/8, 1-13/16, 2 or 3 in. deep galv units or 4-1/2 in. deep noncomposite galvanized units. Fluted units may be uncoated or phosphatized/painted. Min gauges are 22 MSG for fluted and 20/20 MSG for cellular units. The following combinations of units may be used:
(1) all 18, 24, 26, 28 or 36 in. wide cellular.

(2) all fluted.

(3) one or two 3 in. deep, 12 in. wide, 18/18 MSG min cellular units, alternating with 3 in. deep fluted or other cellular.

(4) any blend of fluted and 18, 24, 26, 28, or 36 in. wide cellular.

(5) 3 in. deep, 30 in. wide cellular with 8-1/8 in. wide valley along side joints may be used when 3/8 in. diam reinforcing bars are placed 1-1/2 in. to each side of side joints and 1 in. above bottom of unit.

(6) Corrugated, 1-5/16 in. deep, 30 in. wide, 24 MSG min galv units with shear wires factory welded to deck corrugations. Welded to supports 12 in. OC. through welding washers. For shear wire spacing of 8 in. or less the steel deck stress shall not exceed 20 KSI. For shear wire spacing greater than 8 in. OC. but less than or equal to 12 in. OC., steel deck stress shall not exceed 12 KSI.

ASC STEEL DECK, DIV OF ASC PROFILES L L C — 32 in. wide Types NH-32, NHN-32, NHF-32; 36 in. wide Types BH-36, BHN-36, BHN-35-1/4, BHF-36, BHF-36A, 2WH-36, 2WHS-36, 2WHF-36, 2WHF-36A, 3WxH-36, 3WxHF-36, 3WxHF-36A, 3WH-36, 3WHF-36, 3WHF-36A, 3W-36, 3WF-36, DG3W-36, DG3WF-36. All units may be galvanized or Prime Shield. Non-cellular decks may be vented designated with a "V" suffix to the product name. Cellular deck top and bottom sections may be riveted together (designated with "Fr") vs. arc spot welded, "F".

CANAM GROUP INC — 36 in. wide Type P-3623, P-3606, P-3615 and 24 in wide Type P-2432 composite; 24 or 36 in. wide Type 3 in. LOK-Floor; 36 in. wide Types 1.5B, 1.5BI, 1.5BL and 1.5BL.

CANAM STEEL CORP — 24 in. wide, Types 1-1/2 , 2 or 3 in. LOK-Floor and LOK-Floor Cell; 36 in. wide, Types 2 or 3 in. LOK-Floor and LOK-Floor Cell; 24 in. wide, Types N-LOK and N-LOK Cell; 24, 30 or 36 in. wide, Type 1-1/2 in. B-LOK and B-LOK Cell.

KAM INDUSTRIES LTD, DBA CORDECK — QL Types, 24 in. wide 3 or 3 inverted, UKX, UKX-3, 2 in. 99, AKX, 21 or 21 inverted, 121, NKX, TKX; 24 or 30 in. wide GKX, GKXH, GKX-A; 36 in. wide 99, AKX, WKX; 24, 26, or 36 in. wide NKX; 1.5NKC, NKC, AKX, 2 or 3 in. TKC; 12 in. wide noncomposite Sec. 12; 17 in. wide 21; 26 or 28 in. wide UKX, 87.5 cm wide. Side joints of QL, 99, 121, WKX, TKX, TKC, and Metric units - QL-77-900; QLC-78-900 may be welded together 60 in. OC. Side joints of 99, AKX, WKX, GKX, GKX-A, TKX and Metric units - QL-77-900 and QLC-78-900 may be fastened together with min 1 in. long No. 12x14 self-drilling, self-tapping steel screws 36 in. OC.

CHIA TEH CONSTRUCTION MATERIAL CO LTD — 24 or 36 in. wide Mac-Lok 3; 24 in. wide CFD-3.

DECK WEST INC — 36 in. wide Type B-DW, Inverted B-DW, BA-DW, Inverted BA-DW, 2-DW or 3-DW. Side joints of Type 2-DW and 3-DW may be fastened together with min 1 in. long No. 12 x 14 self-drilling, self-tapping steel screws 36 in. OC.

DECKCO LLC – 36 in. wide, Types DC 1.5B, DC 1.5 Form, DC 1.5 Inverted Composite, DC 1.5 Inverted Form, DC 1.5 Composite, DC 2 Form, DC 2 Composite, DC 3 Form, DC 3 Composite.

DESIGN ASSISTANCE CONSTRUCTION SYSTEMS INC — 36 in. wide Type DACS1.5CD, or 24 in. wide Type DACS2.0CD, or DACS3.0CD.

EPIC METALS CORP — 24 in. wide Types EC150, ECP150, EC300, ECP300, EC366, ECP366, EC150, EC300 inverted, ECA, 30 in. wide Types ECB150, ECBR150; 36 in. wide Type EC266.

HAMBRO STRUCTURAL SYSTEMS, DIV OF CANAM STEEL CORP — 36 in. wide, 1-1/2 in. Type P3615HB. The max superimposed loadings for Type P3615HB units shall not exceed 250 PSF. For single spans, the use of the units shall be limited to 5 ft 6 in., 6 ft 0 in. and 6 ft 6 in. max spans for the 22, 20 and 18 gauge units, respectively. For multiple spans, 18 gauge units may be used on a max 7 ft 6 in. spans with a max total superimposed loading of 240 PSF.

INTSEL STEEL EAST LLC — 36 in. wide Types 1.5" COMPOSITE/FLOOR, 2" COMPOSITE/FLOOR, 3" COMPOSITE/FLOOR.

KAM INDUSTRIES LTD, DBA CORDECK — 24 in. wide, Types 2 or 3 in. WDR.

MARLYN STEEL DECKS INC — Type 1.5 CF, 2.0 CF or 3.0 CF.

NEW MILLENNIUM BUILDING SYSTEMS L L C — 24 in. wide Type Versa-Dek.

NEW MILLENNIUM BUILDING SYSTEMS L L C — 24 or 36 in. wide Types 2.0CD, 3.0CD, 2.0CFD, 3.0CFD, 3.0CFDES; 24, 30 or 36 in. wide Types 1.5CD, 1.5CDI, 1.5CDR, 1.5CFD. Fluted units may be phos/painted or galvanized.

ROOF DECK INC — 36 in. wide Types LOK 1 1/2, LOK 1 1/2 R; 24 in. wide Types LOK-2, LOK-3.

STEEL MASTERS INTERNATIONAL DEPENDABLE STEEL — 36 in. wide Types 2WH-36, 3WH-36. Units may be phos/painted or galvanized.

TATA STEEL INTERNATIONAL MIDDLE EAST FZE — 36 in. wide, Type ComFlor 46.

VALLEY JOIST+DECK — 24 or 36 in. wide Types WVC 1-1/2 or WVC 2.

VERCO DECKING INC - A NUCOR CO — FORMLOK™ deck types PLB, B, BR, PLN3, N3, PLN, N, PLW2, W2, PLW3, W3. Units may be galvanized, phos./ptd., or mill finish. Units may be cellular or acoustical cellular, with the suffix "CD" or "CD-AC" added to the product name, respectively. All non-cellular deck may be vented or non-vented. 12 in. wide PLW2, W2, PLW3 or W3 units may be blended with 24 or in. wide PLW2, W2, PLW3 or W3 units, respectively; or Types N3, PLN3.

VICWEST INC. — Types HB938, HB938CL, HB938-INV, HB308-INV, HB306, HB30V; Types HBS938, HBS938CL and HBS938CL-IN Composite Steel Decks; Types RDS938, RDS938CL and RDS938CL-IN Non-Composite Steel Decks.

VULCRAFT, DIV OF NUCOR CORP — 24, 30 or 36 in. wide Types 1.5VL, 1.5VLI, 1.5PLVLI, 1.5VLP, 1.5PLVLP, 1.5VLR; 24 or 36 in. wide Types 1.5VLPA, 1.5PLVLPA, 2VLI, 2.0PLVLI, 2VLJ, 2VLP, 2.0PLVLP, 2VLPA, 2.0PLVLPA, 3VLI, 3.0PLVLI, 3VLJ, 3VLP, 3.0PLVLP, 3VLPA, 3.0PLVLPA. Types 1.5VL, 1.5VLI, 1.5PLVLI, 1.5VLR, 2VLI, 2.0PLVLI, 2VLJ, 3VLI, 3.0PLVLI, 3VLJ units may be phos/ptd. 24 or 36 in. wide Types 2VLJ, 3VLJ units ++ may be used for max 2 hr Restrained Assembly Rating. Side joints of Type 1.5VL may be fastened together with min 1 in. long No. 12x14 self-drilling, self-tapping steel screws 36 in. OC max. 36 in. wide Types 1.5 SB, 1.5 SBR; 24 or 36 in wide Types 2.0 SB, 3.0 SB, 36 in. wide Type High Strength 1.5 SBI, 36 in. wide Type High Strength 1.5 SBN.

Spacing of welds attaching units to supports shall be 12 in. OC for 12, 24, and 36 in. wide units, four welds per sheet for 30 in. wide units, 6 in. OC for 18 in. wide and Sec. 12 units. Unless noted otherwise, adjacent units button-punched or welded together 36 in. OC along side joints. Adjacent 18 in. wide units welded together 30 in. OC along side joints. For **3 Hr. Rating,** units with overlapping type side joints welded together 24 in. OC max.

When a superimposed load of 250 PSF is desired the spacing of welds or button-punches shall not exceed 24 in. OC along side joints.

++ Side joints of Types 2VLJ or 3VLJ units may be fastened together with No. 8, 3/4 in. long self-drilling Tek screws driven diagonally from the top side through the joint of the units at 36 in. O. C. max.

The Unrestrained Assembly Rating is equal to the Unrestrained Beam Rating for a max of 3 Hr. and is limited to the following units and limitations:

(a) 1-1/2 in. deep, 24 or 36 in. wide, 22 MSG or thicker fluted with clear spans not more than 7 ft 8 in.

(b) 1-1/2 in. deep, 24 or 36 in. wide, 20 MSG or thicker fluted with clear spans not more than 8 ft 8 in.

(c) 1-1/2 in. deep, 24 or 36 in. wide, 16 MSG or thicker fluted and 18/18 MSG or thicker cellular with clear spans not more than 9 ft 11 in.

(d) 3 in. deep, 36 in. wide, 18 MSG or thicker fluted and 24 in. wide, 20/18 MSG or thicker cellular with clear spans not more than 13 ft 2 in.

4. **Spray-Applied Fire Resistive Materials* —** Applied by mixing with water and spraying in one or more coats to a final thickness as shown in the tables below, in the tables below to steel beam surfaces which must be clean and free of dirt, loose scale and oil. Min avg and min ind density of 15/14 pcf respectively. Min avg and min ind density of 19/18 pcf respectively for Type 7GP and 7HD. For method of density determination, refer to Design Information Section.

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl Thkns on Beam In.
1	1	1	1/2
1-1/2	1	1	1/2
1-1/2	1-1/2	1-1/2	13/16
2	1	1	1/2
2	2	2	1-1/16
3	1-1/2	1-1/2	13/16
3	3	3	1-9/16

The thicknesses of Spray-Applied Fire Resistive Materials shown in the table below are applicable when the thickness applied to the beams' lower flange edges is reduced by 1/2 that shown in the table:

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl Thkns on Beam In.
1	1	1	9/16
1-1/2	1	1	9/16
1-1/2	1-1/2	1-1/2	7/8
2	1	1	9/16
2	2	2	1-3/16
3	1-1/2	1-1/2	7/8
3	3	3	1-3/4

The thicknesses of Spray-Applied Fire Resistive Materials shown in the table below are applicable when the thickness applied to the beams' lower flange edges is reduced by 1/2 that shown in the table and the beams are supporting all fluted floor or form units w/lightweight concrete only:

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl Thkns on Beam In.
1	1	1	7/16+
1-1/2	1	1	7/16+
1-1/2	1-1/2	1-1/2	3/4
2	1	1	7/16+
2	2	2	1
3	1-1/2	1-1/2	3/4
3	3	3	1-9/16

+Thickness applied to beams' lower flange edge to be 1/4 in. min.

The thickness of material required on the steel joist for the various ratings are shown in the following table:

Restrained or Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl Thkns on Joist & Bridging In.
1	1	1-1/8
1-1/2	1-1/2	1-3/4
2	2	2-1/4
3	3	2-7/8

GCP KOREA INC — Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-6s, Monokote Acoustic 1.

PYROK INC — Type LD.

SOUTHWEST FIREPROOFING PRODUCTS CO — Types 4, 5, 5EF, 5GP, 5MD, 7GP, 7HD, 8EF, 8GP, 8MD, 9EF, 9GP, 9MD.

GCP APPLIED TECHNOLOGIES INC — Types MK-6/HY, MK-6s, RG, Monokote Acoustic 1.

4A. **Alternate Spray-Applied Fire Resistive Materials* —** Applied by mixing with water and spraying in one or more coats to a final thickness as shown in the tables below to steel beam surfaces which must be clean and free of dirt, loose scale and oil. When fluted steel deck is used the area between the steel deck and the beams top flange shall be sprayed min avg and min ind density of 19/18 pcf, respectively for Types 7GP, 7HD, 105. Min avg and min ind density of 22/19 pcf, respectively for Types Z-106, Z-106/G, Z-106/HY. For method of density determination, refer to Design Information Section.

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl Thkns on Beam In.
1	1	1	1/2
1-1/2	1	1	1/2
1-1/2	1-1/2	1-1/2	13/16
2	1	1	1/2
2	2	2	1-1/16
3	1-1/2	1-1/2	13/16
3	3	3	1-9/16

The thicknesses of Spray-Applied Fire Resistive Materials shown in the table below are applicable when the beams are supporting all fluted floor or form units w/lightweight concrete only:

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl Thkns on Beam In.
1	1	1	7/16
1-1/2	1	1	7/16
1-1/2	1-1/2	1-1/2	3/4
2	1	1	7/16
2	2	2	1
3	1-1/2	1-1/2	3/4
3	3	3	1-5/16

+Thickness applied to beams lower flange edge to be 1/4 in. min.

The thickness of material required on the steel joist for the various Ratings are shown in the following table:

Restrained or Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Type of Concrete Slab	Spray Applied Fire Resistive Mtl Thkns In. Joist & Bridging
1	1	NW or LW	1-1/8
1-1/2	1-1/2	NW or LW	1-3/4
2	2	NW or LW	2-1/4
3	3	NW or LW	2-7/8

GCP KOREA INC — Types Z-106, Z-106/G, Z-106/HY, Monokote Acoustic 5.

SOUTHWEST FIREPROOFING PRODUCTS CO — Types 7GP, 7HD.

GCP APPLIED TECHNOLOGIES INC — Types Z- 105, Z-106, Z-106/G, Z-106/HY, Monokote Acoustic 5.

4B. **Alternate Spray-Applied Fire Resistive Materials —** Applied by mixing with water and spraying in one or more coats to a final thickness as shown in the tables below to steel beam surfaces which must be clean and free of dirt, loose scale and oil. The thicknesses shown in the table below are applicable to beams supporting all fluted floor or form units. Min avg and min ind density of 40/36 pcf, respectively. Min avg and min ind density of 40/36 pcf respectively for Types Z-146, Z-146PC and Z-146T cementitious mixture. Min avg and min ind density of 50/45 pcf respectively for Types Z-156, Z-156T and Z-156PC.
For density determination refer to Design Information Section.

Unrestrained Beam Rating Hr	Restrained Assembly Rating Hr	Concrete Type	Spray Applied Fire Resistive Mtl Thkns on Beam In.
1	1, 1-1/2, 2	LW	9/16
1-1/2	1, 1-1/2, 2, 3	LW	7/8
1	1, 1-1/2, 2	LW	3/4
1-1/2	1, 1-1/2, 2, 3	LW	1

GCP KOREA INC — Type Z-146 investigated for exterior use

GCP APPLIED TECHNOLOGIES INC — Types Z-146, Z-146T, Z146PC, Z-156, Z-156T and Z-156PC investigated for exterior use

5. **Shear-Connector Studs — Optional —** Studs 3/4 in. diam by 3 in. long, for 1-1/2 in. deep form units to 5-1/4 in. long for 3 in. deep form units, headed type or equivalent per AISC specifications. Welded to the top flange of the beam through the steel form units.

6. **Electrical Inserts —** (Not shown) Classified as **"Outlet Boxes and Fittings Classified for Fire Resistance."**
KAM INDUSTRIES LTD, DBA CORDECK — Preset Inserts

For use with 2-1/2 in. lightweight concrete topping over QL-WKX steel floor units. Installed over factory-punched holes in floor units per accompanying

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11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7305
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
UL ASSEMBLIES - D916

PROJECT NUMBER: 23098

SHEET NUMBER:
G-200

installation instructions.

Spacing shall not be more than one insert in each 14 sq ft. of floor area with spacing along floor units not less than 48 in. OC. The holes cut in insert cover for passage of wires shall be no more than 1/8 in. larger diam. than wire. Restrained Assembly Rating is 3/4 hr with Tapmate II-FS-1 and 1 hr with Tapmate II-FS-2 inserts.

KAM INDUSTRIES LTD, DBA CORDECK — Tapmate II-FS-1, II-FS-2; Series KEB.

(2) **Wiremold Co.** — After set Inserts.

Single-service after set inserts installed per accompanying installation instructions in 2-1/2 in. diam hole core-drilled through min 3-1/4 in. thick concrete topping to top of cell of any min 3 in. deep cellular steel floor unit specified under Item 3. Spacing shall be no more than one insert in each 10 sq ft of floor area in each span with a min center to center spacing of 16 in. If the high potential and low potential raceways of the cellular steel floor unit are separated by a valley filled with concrete, the center to center spacing of the high potential and low potential single-service after set inserts may be reduced to a min of 7-1/2 in. Restrained Assembly Rating is 2 hr or less with internally protected type 436 after set insert with Type M4-, M6- or M8- Series single-service activation fitting.

WIREMOLD CO — Internally protected Type 436 after set insert with Type M4-, M6- or M8- Series single-service activation fitting.

7. **Mineral and Fiber Boards*** — (Optional, not shown). Applied over concrete floor with no restriction on board thickness. When mineral and fiber boards are used, the unrestrained beam rating shall be increased by a minimum of 1/2 hr.
See Mineral and Fiber Board (CERZ) category for names of manufacturers.

8. **Roof Covering Materials*** — (Optional, not shown)Consisting of materials compatible with insulations described herein which provide Class A, B or C coverings. See Built-Up Roof Covering Materials in Building Materials Directory.

9. **Insulating Concrete** — (not shown) Optional. Various types of insulating concrete prepared and applied in the thickness indicated:
A. **Vermiculite Concrete** — (not shown) Optional.
1. Blend 6 to 8 cu. ft. of Vermiculite Aggregate* to 94 lb. Portland Cement and air entraining agent. Min thickness of 2 in. as measured to the top surface of the structural concrete or foamed plastic (Item 10) when it is used.
ELASTIZELL CORP OF AMERICA

SIPLAST INC

VERMICULITE PRODUCTS INC

2. Blend 3.5 cu. ft. of Type NVC Concrete Aggregate* or Type NVS Vermiculite Aggregate* coat, 1/8 in. thickness beneath foamed plastic (Item 10) when used, 1 in. min topping thickness.
SIPLAST INC

VERMICULITE PRODUCTS INC

Vermiculite concrete may be covered with Roof Covering Materials (Item 8).

B. **Cellular Concrete — Roof Topping Mixture*** — concentrate mixed with water and Portland cement per manufacturers specifications. Min. thickness of 2-in. as measured to the top surface of the structural concrete or foamed plastic (Item 10A) when used. Cast dry density and 28—day min. compressive strength of 190 psi as determined with ASTM C495— 66.
AERIX INDUSTRIES — Cast dry density of 37 (+ or -) 3.0 pcf.

CELCORE INC — Type Celcore with cast dry density of 31 (+ or - 3.0) pcf or Type Celcore MF with cast dry density of 29 (+ or - 3.0) pcf.

ELASTIZELL CORP OF AMERICA — Type II. Mix #1 of cast dry density 39 (+ or -) 3.0 pcf, Mix #2 of cast dry density 40 (+ or -) 3.0 pcf, Mix #3 of cast dry density 47 (+ or -) 3.0 pcf.

C. **Cellular Concrete-Roof Topping Mixture*** — Concentrate mixed with water and Portland cement per manufacturers specifications. 28-day min. compressive strength of 190 psi as determined with ASTM C495-66.
SIPLAST INC — Mix No. 1 or 2. Cast dry density of 32+3 (Mix No. 1) or 36+3 (Mix No. 2) pcf.

D. **Perlite Concrete** — 6 cu ft. of Perlite Aggregate* to 94 lb of Portland Cement and 1-1/2 pt air entraining agent. Min. thickness 2 in. as measured to the top surface of structural concrete or foamed plastic (Item 10A) when it is used.
See Perlite Aggregate (CFFX) in Fire Resistance Directory for names of manufacturers.

E. **Cellular Concrete — Roof Topping Mixture*** — Foam Concentrate mixed with water, Portland Cement and UL Classified Vermiculite Aggregate per manufacturer's application instructions. Cast dry density of 33 (+ or -) 3.0 pcf and 28-day compressive strength of min 250 psi as determined in accordance with ASTM C495-86.
AERIX INDUSTRIES — Mix No. 3.

SIPLAST INC — Mix No. 3.

F. **Floor Topping Mixture*** — (Optional, not shown) — Approx 4.5 gal of water to 41 lbs of NVS Premix floor topping mixture. Slurry coat 1/8 in. thickness beneath foamed plastic (Item 10) when used , 1 in. min topping thickness.
SIPLAST INC

Floor Topping Mixture may be covered with Built-Up or Single Membrane Roof Covering.

10. **Foamed Plastic*** — (optional — Not Shown) For use only with vermiculite (Item 9A) or cellular (Item 9C) concretes — Rigid polystyrene foamed plastic insulation having slots and/or holes sandwiched between vermiculite concrete slurry which is applied to the normal or lightweight concrete surface and vermiculite concrete topping (Item 9A).
SIPLAST INC

VERMICULITE PRODUCTS INC

10A. **Foamed Plastic*** — For use only with cellular concrete. Nominal 24 by 48 in. polystyrene foamed plastic insulation boards having a density of 1.0 + 0.1 pcf encapsulated within cellular concrete topping (Item 9B). Each insulation board shall contain six nominal 3 in. diameter holes oriented in two rows of three holes each with the holes spaced 12 in. OC, transversely and 16 in. OC longitudinally.
See Foamed Plastic* (BRYX) category in Building Materials Directory or Foamed Plastic* (CCVW) category in Fire Resistance Directory for list of manufacturers.

11. **Foamed Plastic*** — (Optional, not shown). Polyisocyanurate roof insulation, applied over concrete floor with no restriction on insulation thickness. When polyisocyanurate insulation is used, the unrestrained beam rating shall be increased by a minimum of 1/2 hr.

12. **Metal Lath** — (Not Shown) — (Required with Z-146, Z-146T, Z146PC, Z-156, Z-156T and Z-156PC, otherwise optional) - Metal lath may be used to facilitate the spray application of Spray-Applied Fire Resistive Materials on steel bar joist and trusses. The diamond mesh, 3/8 in. expanded steel lath, 1.7 to 3.4 lb per sq yd is secured to both sides of each steel joist with No. 18 SWG galv steel wire at joist web and bottom chord members spaced 15 in. OC max. When used, the metal lath is to be fully covered with Spray-Applied Fire Resistive.
See **Foamed Plastic** (CCVW) category for list of manufacturers.

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

Last Updated on 2023-05-16

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- 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 Variances

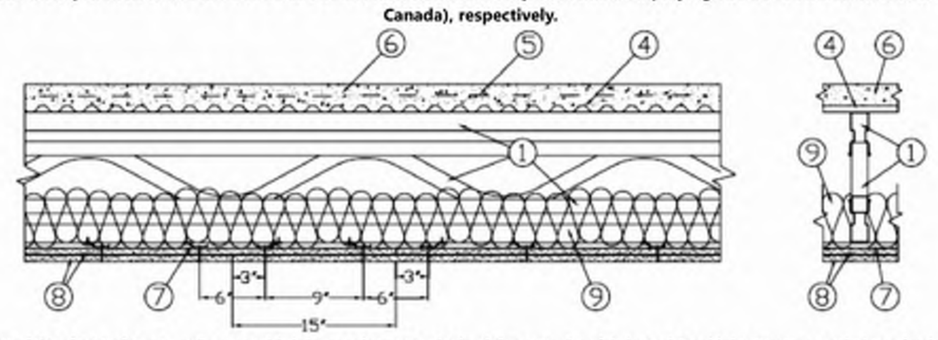
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. G566

February 3, 2022

Restrained Assembly Rating — 1 and 2 Hr (See item 8)
Unrestrained Assembly Rating — 1 and 2 Hr (See item 8)
Load Restriction — 98% (See Item 1)
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

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



1. **Structural Steel Members*** — (For use with joist spacing up to 24 in. OC max.) - Pre-fabricated steel joist system consisting of cold-formed, galvanized steel chord and web sections. Joist top and bottom chords min. 4 in. high by 1-11/16 in. wide by 18 ga. Joist webs min. 1-1/2 in. by 1-1/2 in. by 20 ga. square tube bent and triangulated as shown. Chords and web connected by fillet welds. Overall joist depth min. 12 in. Non-composite joists spaced a max of 24 in. OC with max. tensile strength of 30 ksi. Joist ends placed over and secured to Bearing Seats (Item 2) with two min. #10 by 3/4 in. long screws on each side of Bearing Seats. Allowable loading must be calculated so as to stress the steel trusses to a maximum of 98% of the stress calculated in accordance with the allowable stress design approach outlined in the manufacturer's load tables.
EISEN GROUP LLC — Type Gateway Panel pre-fabricated steel joist system

1A. **Structural Steel Members*** — (For use when joist spacing is greater than 24 in. OC up to max. 48 in. OC) - Pre-fabricated steel joist system consisting of cold-formed, galvanized steel chord and web sections. Joist top and bottom chords min. 4 in. high by 1-11/16 in. wide by 18 ga. Joist webs min. 1-1/2 in. by 1-1/2 in. by 20 ga. square tube bent and triangulated as shown. Chords and web connected by fillet welds. Overall joist depth min. 12 in. Non-composite joists spaced a max of 48 in. OC to be designed per SJI specification with max. tensile strength of 30 ksi. Joist ends placed over and secured to Bearing Seats (Item 2) with two min. #10 by 3/4 in. long screws on each side of Bearing Seats. Allowable loading must be calculated so as to stress the steel trusses to a maximum of 98% of the stress calculated in accordance with the allowable stress design approach outlined in the manufacturer's load tables.
EISEN GROUP LLC — Type Gateway Panel pre-fabricated steel joist system

2. **Bearing Seats*** — (Not Shown) — Galvanized steel tube, min. 1 in. by 2-1/2 in. by 13 ga., oriented vertically and welded to a galvanized steel plate. Bearing seats spaced to match joist spacing and attached to bearing supports by welding or screw attaching the steel plate to the bearing supports.
EISEN GROUP LLC — Type Gateway Panel bearing seat

3. **Bracing** — (Not Shown - for joist spacing up to 24 in. OC max.) — Galvanized channel-shaped steel sections, min. 1-1/2 in. wide with 1/4 in. flanges, min. 16 ga. Bracing attached to underside of trusses with min. #10 by 3/4 in. long screws through truss bottom chord. Bracing installed in truss cavities by scoring, bending and flattening the ends to form a tab for attachment to truss top and bottom chords. Two pieces of bracing crossed and tabs secured to truss chords with min. #10 by 3/4 in. long screws. Location and spacing of underside and crossed bracing to be specified on truss engineering.

3A. **Bracing** — (Not Shown - In lieu of Item 3 when the joists are spaced more than 24 in. OC up to max. 48 in. OC) Galvanized channel-shaped steel sections, min. 1-1/2 in. wide with 1/2 in. long flanges, min 16 ga. Bracing attached to underside of joists with min. #10 by 3/4 in. long screws through joist bottom chord. Bracing installed in joist cavities by scoring, bending and flattening the ends to form a tab for attachment to joist top and bottom chords. Two pieces of bracing crossed, and tabs secured to joist chords with min. #10 by 3/4 in. long screws. Location and spacing of underside and crossed bracing to be specified on joist engineering.

4. **Steel Deck** — (For joist spacing up to 24 in. OC max.) - Min 9/16 in. deep, 28 MSG galv corrugated fluted steel deck, mechanically fastened to joists 12 in. OC. The concrete topping thickness shall be measured to the top plane of the steel deck.

4A. **Steel Deck** — (Used when joist spacing is greater than 24 in. OC up to 48 in. OC max.) - Min. 1 in deep, 26 gauge uncoated or galv. fluted or cellular steel floor units with no span exceeding 48 in. Mechanically fastened to joists 12 in. OC. The concrete topping thickness shall be measured to the top plane of the steel deck.

5. **Welded Wire Fabric** — (For joist spacing up to 24 in. OC max.) - Min. 6 by 6 in., W1.4 x W1.4.

5A. **Welded Wire Fabric** — (Used in lieu of Item 5 when joist spacing exceeds 24 in. OC up to 48 in. OC max) - Min. 6 by 6 in., W2.9 x W2.9.

6. **Normal or Lightweight Concrete** — Normal weight concrete, carbonate or siliceous aggregate, 150 + 3 pcf unit weight, 3000 psi compressive strength. Lightweight concrete, expanded shale, clay or slate aggregate by rotary kiln method, 117 + 3 pcf unit weight, 3000 psi compressive strength. Min. thickness is 2 in. as measured to the top plane of the steel deck.

6A. **Floor Topping Mixture*** — (For use as an alternate to Item 6) — Compressive strength to be 3000 psi min. Minimum thickness to be 1 in. as measured from the top plane of the deck. Refer to manufacturer's instructions accompanying the material for specific mix design.
MAXXON CORP — Types Maxxon Standard and Maxxon High Strength

6B. **Floor Mat Materials*** — (Optional) — Not Shown — Floor mat material loose laid over the crests of the steel deck. Flutes of the steel deck to be filled with Floor Topping Mixture* prior to the application of the Floor Mat Materials*. Refer to manufacturer's instructions regarding minimum thickness of floor topping over each floor mat material.
MAXXON CORP — Type Encapsulated Sound Mat

Floor Mat Reinforcement — (Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor topping for use with floor mat reinforcement.

Metal Lath — (Optional) — 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material.

Fiber Glass Reinforcement — (Optional, Not Shown) - 0.015 in. thick PVC coated non-woven fiberglass mesh, 0.368 lbs/sq yd loose laid over the floor mat material.

6C. **Floor Topping Mixture*** — (For use as an alternate to Item 6 or 6A) — Compressive strength to be 2500 psi min. Minimum thickness to be 1 in. as measured from the top plane of the deck or floor mat material. Refer to manufacturer's instructions accompanying the material for specific mix design. An ethylene vinyl acetate adhesive may be applied to the steel deck prior to the installation of the floor topping mixture at a maximum application rate of 0.025 lbs./ft^2.
UNITED STATES GYPSUM CO — Types LRK, HSLRK, CSD

USG MEXICO S A DE C V — Types LRK, HSLRK, CSD

Floor Mat Materials* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.
UNITED STATES GYPSUM CO — Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25

6D. **Alternate Floor Topping Mixture*** — Compressive strength to be 3500 psi min. Minimum thickness to be 1 in. as measured from the top plane of the deck or the top plane of the **Floor Mat Material***. Refer to manufacturer's instructions accompanying the material for specific mix design. An ethylene vinyl acetate adhesive may be applied to the steel deck prior to the installation of the floor topping mixture at a maximum application rate of 0.025 lbs./ft^2.
HACKER INDUSTRIES INC — Firm-Fill CMD

Floor Mat Materials* — (Optional) — Floor mat material nom 5/64 in. (2 mm) thick adhered to steel deck with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of floor-topping mixture. Floor topping thickness a min 1 in. (25 mm) over the floor mat.
HACKER INDUSTRIES INC — Hacker Sound-Mat I

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick adhered to steel deck with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/4 in. (32 mm) of floor-topping mixture.
HACKER INDUSTRIES INC — Hacker Sound-Mat II

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/8 in. (3 mm) thick loose laid over the steel deck. Floor topping thickness shall be a min of 1 in. (25 mm).
HACKER INDUSTRIES INC — FIRM-FILL SCM 125

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick loose laid over the steel deck. Floor topping thickness shall be a min of 1 in. (25 mm).
HACKER INDUSTRIES INC — Type FIRM-FILL SCM 250

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 3/8 in. (10 mm) thick loose laid over the steel deck. Floor topping thickness shall be a min of 1-1/4 in. (32 mm).
HACKER INDUSTRIES INC — FIRM-FILL SCM 400

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 3/4 in. (19 mm) thick loose laid over the steel deck. Floor topping thickness shall be a min of 1-1/2 in. (38 mm).
HACKER INDUSTRIES INC — FIRM-FILL SCM 750

6E. As an alternate to Items 6-6D:
Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier — (Optional) - Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mat(s).

Floor Mat Materials* — (Optional, Not Shown) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

LOW & BONAR INC — EnkaSonic® by Colbond a member of the Low & Bonar group Types 125, 250, 250 Plus, 400, 400 Plus, 750, and 750 Plus.

Floor Mat Reinforcement — (Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor topping for use with floor mat reinforcement.

Metal Lath — (Optional) — Expanded steel diamond mesh, 2.5 lb / sq yd loose laid over floor mat material.

Fiberglass Mesh Reinforcement — (Optional) — Coated non-woven glass fiber mesh grid loose laid over floor mat material.

7. **Resilient Channels** — (When joist spacing exceeds 24 in. OC, additional Supplemental Supports are required, see item 7D) - Resilient channels formed of 25 MSG galv steel, installed perpendicular to the steel joists, (Item 1), spaced 12 in. OC. Channels oriented opposite at base layer and face layer gypsum board butt joints (spaced 6 in. OC) as shown in the above illustration. Channel splices overlapped 4 in. beneath steel joists. Channels secured to each joist with min. #10 by 3/4 in. long screws.

7A. **Furring Channels** — (Not Shown - When joist spacing exceeds 24 in. OC additional Supplemental Supports are required, see item 7D) — As an alternate to Item 7, hat channels min 25 MSG galv steel, min 2-5/8 in. wide by min 7/8 in. deep, installed perpendicular to the joists (Item 1), spaced a max of 12 in. OC. Two courses of channel positioned 6 in. OC, 3 in. from each end of wallboard of base layer and face layer. Channel splices overlapped 4 in. beneath steel joists. Channels secured to each joist with No. 18 SWG steel wire double strand saddle ties. Channels tied together with double strand of No. 18 SWG steel wire at each end overlap.

7B. **Steel Framing Members* — For the 1 Hr Rating** — (When joist spacing exceeds 24 in. OC additional Supplemental Supports are required, see item 7E) - As an alternate to Item 7, Main runners nom 12 ft long, spaced 48 in. OC. Hanger wires on main runners spaced max 48 in. Ends of main runners at walls to rest on wall angle or channel. Cross tees, nom 4 ft long, installed perpendicular to main runners and spaced 16 in. OC. Additional cross tee required at each gypsum board end joint with butted gypsum board end joint centered between cross tees spaced 8 in. OC. The main runners and cross tees may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation. The steel framing members shall be suspended min 2 in. below bottom of structural steel members.
For the 2 Hr Rating — (When joist spacing exceeds 24 in. OC, additional Supplemental Supports are required, see item 7E) - As an alternate to Item 7, Main runners nom 12 ft long, spaced 48 in. OC. Hanger wires on main runners spaced max 32 in. Ends of main runners at walls to rest on wall angle or channel. Cross tees, nom 4 ft long, installed perpendicular to main runners and spaced 16 in. OC. Additional cross tee required at each gypsum board end joint with butted end joint centered between cross tees spaced 8 in. OC. The main runners and cross tees may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation. The steel framing members shall be suspended min 5 in. below bottom of structural steel members.

ARMSTRONG WORLD INDUSTRIES INC — Type DFR-8000

7C. **Alternate Steel Framing Members* — For the 1 Hr Rating** — (Not Shown - when joist spacing exceeds 24 in. OC additional Supplemental Supports are required, see item 7E) — As an alternate to Item 7. For use in corridors or rooms having a maximum width dimension of 14 ft. Steel framing members consist of grid runners, locking angle wall molding and hanger bars. Locking angle wall molding secured to walls with steel nails or screws spaced max 24 in. OC. Slots of locking angle wall molding parallel with hanger bars to be aligned with tabbed cutouts in bottom edge of hanger bars. Hanger bars spaced max 50 in. OC and suspended with No. 12 AWG steel hanger wires spaced max 48 in. OC. Adjoining lengths of hanger bar to overlap 12 in. and to be secured together and suspended by a shared hanger wire. A min clearance of 1/4 in. shall be maintained between the ends of the hanger bars and the walls. Grid runners cut-to-length and installed perpendicular to hanger bars and spaced max 16 in. OC with additional grid runners installed 8 in. OC at gypsum board end joints. Grid runners parallel with walls to be spaced max 16 in. from wall. Ends of grid runners to rest on and engage slots of locking angle wall molding with a clearance of 3/8 in. to 1/2 in. maintained between each end of the grid runner and the wall. Bulb of grid runner to be captured by tabbed cutouts in bottom edge of hanger bars.
ARMSTRONG WORLD INDUSTRIES INC — Type DFR-8000-SS

7D. **Supplemental Supports** — (Must be used with Items 7, and Item 7A when joist spacing is greater than 24 in. OC up to 48 in. OC max.) - Used to provide support for the resilient channels (Item 7) and furring channels (Item 7A). Supports are 3-5/8 in., 16 gauge or larger cold-rolled track sections with 2 in. legs, spaced at 12 in. OC. Each track with its legs oriented vertically is placed on top of and perpendicular to the joist's bottom chord and tied to the joist with a double strand of 18 SWG galvanized steel wire. Additional cross furred 4 in., 16 gauge C studs spaced at the mid span of the track to provide connection to Items 7, Item 7A and Item 7C. C-stud running perpendicular to the track screw attached to the 3-5/8 in. cold rolled track as per Structural steel Member manufacturer's instructions. Resilient Channel (Item 7) and the Furring Channel (Item 7A) attached to the C-stud as specified in Item 7 and Item 7A.

7E. **Supplemental Supports** — (Must be used with items 7B and 7C when joist spacing is greater than 24 in. OC up to 48 in. OC max.) - Used to provide support for the main runners. Supports are 3-5/8 in., 16 gauge or larger cold-rolled track sections with 2 in. legs spaced at 48 in OC when used with Item 7B for 1 hour rating, at 32 in OC when used with Item 7B for 2 hour rating, and at 48 in OC when used with Item 7C. Each track with its legs oriented vertically is placed on top of and perpendicular to the joist's bottom chord and tied to the joist with a double strand of 18 SWG galvanized steel wire. Steel Framing Member (Item 7B) and (Item 7C) hanger wire main runner connected to the Steel Framing Member (Item 1A) and the track section.

8. **Gypsum Board*** — For the 1 hr. rating; One layer of nom 5/8 in thick by 48 in wide boards installed with long dimension parallel to the joists. Attached to the resilient or furring channels (Items 7 and 7A) using 1 in. long type S bugled-head screws. Screws spaced a max of 8 in. OC along butted end-joints and in the field, and 3 in. from side edges of board. For the 2 hour rating; Two layers of nom 5/8 in. thick by 48 in. wide boards, installed with long dimension parallel to joists. Base layer attached to the resilient or furring channels using 1 in. long Type S bugle-head screws. Screws spaced a max of 12 in. OC along butted end-joints and in the field, and 1-1/2 in. from side edges of board. Face layer attached to the resilient or furring channels using 1-5/8 in. long Type S bugle-head screws spaced 12 in. OC along butted end-joints and 12 in. OC in the field, and 1-1/2 in. and 5-1/2 in. from side edges of board. Screws staggered from base layer screws. Face layer and base layer side joints min. 2-1/2 in. from joist centerline. Face layer side joints offset a minimum 24 in. from base layer side joints. Face layer end joints offset a minimum 15 in. from base layer end joints.
CERTAINTEED GYPSUM INC — Type C

UNITED STATES GYPSUM CO — Type C

USG BORAL DRYWALL SFZ LLC — Type C

8A. **Gypsum Board* — For the 1 Hr Rating** — Nom 5/8 in. thick, 48 in. wide gypsum panels. When **Steel Framing Members** (Item 7B) are used, gypsum panels installed with long dimension perpendicular to cross tees with side joints centered along main runners and with end joints centered between cross tees spaced 8 in. OC. Prior to installation of the gypsum board sheets, backer strips consisting of nom 7-3/4 in. wide pieces of gypsum board are to be laid atop the cross tee flanges and centered over each butted end joint location. The backer strips are to be secured to the flanges of the cross tees at opposite corners of the backer strip to prevent the backer strips from being uplifted during screw-attachment of the gypsum board sheets. Gypsum board fastened to cross tees with drywall screws spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board. The butted end joints are to be secured to the backer strip with No. 10 by 1-1/2 in. long Type G laminating screws located 1 in. from each side of the butted end joint and spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board.
For the 1 Hr Rating — Nom 5/8 in. thick, 48 in. wide gypsum panels. When alternate **Steel Framing Members*** (Item 7C) are used, gypsum board sheets installed with long dimension (side joints) perpendicular to the grid runners with the end joints staggered min 4 ft and centered between grid runners which are spaced 8 in. OC. Prior to installation of the gypsum board sheets, backer strips consisting of nom 7-3/4 in. wide by 48 in. long pieces of gypsum board are to be laid atop the grid runner flanges and centered over each butted end joint location. The backer strips are to be secured to the flanges of the grid runners at opposite corners of the backer strip to prevent the backer strips from being uplifted during screw-attachment of the gypsum board sheets. Gypsum board fastened to grid runners with drywall screws spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board. The butted end joints are to be secured to the backer strip with No. 10 by 1-1/2 in. long Type G laminating screws located 1 in. from each side of the butted end joint and spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board.

For the 2 Hr Rating — Nom 5/8 in. thick, 48 in. wide gypsum panels. When **Steel Framing Members** (Item 7B) are used, base layer installed with long dimension perpendicular to resilient or furring channels (Items 7 and 7A). Gypsum panels secured with 1-1/4 in. long Type S bugle-head screws spaced 12 in. OC in both the field and the perimeter, and 1-1/2 in. from side edges of the board. Face layer installed with long dimension perpendicular to resilient or furring channels with joints offset 24 in. from base layer. Gypsum panels secured with 1-5/8 in. long Type S bugle-head screws spaced 8 in. OC in both the field and the perimeter, and 1-1/2 in. from side edges of the board. At the butt joint 1-1/2 in. long Type G screws to be installed to attach face layer to base layer. Type G screws spaced 8 in. OC and 1-1/2 in. from side edges of the board.

CERTAINTEED GYPSUM INC — Type C

CGC INC — Type ULIX

UNITED STATES GYPSUM CO — Type C, ULIX

USG BORAL DRYWALL SFZ LLC — Type C

8B. **Gypsum Board*** — For the 1 hr. rating; One layer of nom 5/8 in thick by 48 in wide boards installed with long dimension parallel to the joists. Attached to the resilient or furring channels (Items 7 and 7A) using 1 in. long type S bugled-head screws. Screws spaced a max of 8 in. OC along butted end-joints and in the field, and 3 in. from side edges of board. For the 2 hour rating; Two layers of nom 5/8 in. thick by 48 in. wide boards, installed with long dimension parallel to joists. Base layer attached to the resilient or furring channels (Items 7 and 7A) using 1 in. long Type S bugle-head screws. Screws spaced a max of 12 in. OC along butted end-joints and in the field, and 1-1/2 in. from side edges of board. Face layer attached to the resilient or furring channels using 1-5/8 in. long Type S bugle-head screws spaced 8 in. OC along butted end-joints and 8 in. OC in the field, and 1-1/2 in. and 5-1/2 in. from side edges of board. Screws staggered from base layer screws. Face layer and base layer side joints min. 2-1/2 in. from joist centerline. Face layer side joints offset a minimum 24 in. from base layer side joints. Face layer end joints offset a minimum 15 in. from base layer end joints.
UNITED STATES GYPSUM CO — ULIX

CGC INC — Type ULIX

9. **Batts and Blankets*** — Glass fiber insulation, nominal 3-1/2 in. thick, bearing the UL Classification Marking for Surface Burning Characteristics and/or Fire Resistance. Insulation fitted in the concealed space, draped over the resilient channel/gypsum panel ceiling membrane. See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

10. **Finishing System** — (Not Shown) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum wallboard.

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

Last Updated on 2022-02-03

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2

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STATE OF MISSOURI
DAVID EUGENE HENDRIX
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
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LEE'S SUMMIT 64064 USA

SHEET TITLE
UL ASSEMBLIES - D916 / G566

PROJECT NUMBER: 23098

SHEET NUMBER:
G-201

UL Product iQ®

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Design/System/Construction/Assembly Usage Disclaimer

- 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 Variances

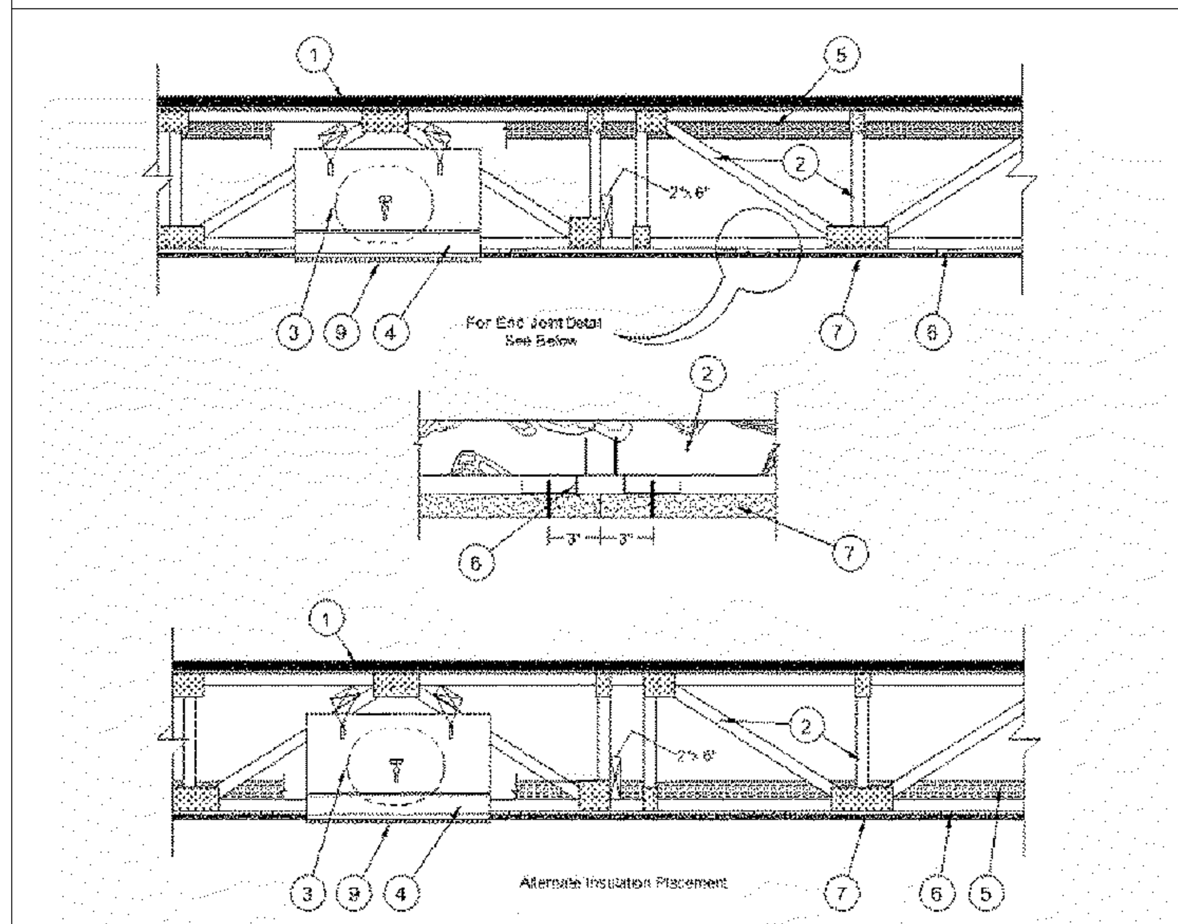
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. **L546**

October 03, 2023

Unrestrained Assembly Rating — 1 Hr
Finish Rating — 24 or 25 Min (See Item 5)
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

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



1. **Flooring System —** The flooring system shall consist of one of the following:

System No. 1

Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.

Finish Flooring - Floor Topping Mixture* — Min 3/4 thickness of floor topping mixture having a minimum compressive strength of 1500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

MAXXON CORP — Types Maxxon Standard and Maxxon High Strength

Floor Mat Materials* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

MAXXON CORP — Type Encapsulated Sound Mat

Floor Mat Reinforcement — (Optional) Refer to manufacturer's instructions regarding minimum thickness of floor topping for use with floor mat reinforcement.

Metal Lath — (Optional) — 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material.

Fiber Glass Reinforcement - (Optional, Not Shown) - 0.015 in. thick PVC coated non-woven fiberglass mesh, 0.368 lbs/sq yd loose laid over the floor mat material.

System No. 2

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.

Finish Floor — Mineral and Fiber Board* — Min 1/2 in. thick, supplied in sizes ranging from 3 ft by 4 ft to 8 ft by 12 ft. All joints to be staggered a min of 12 in. with adjacent sub-floor joints.

HOMASOTE CO — Type 440-32 Mineral and Fiber Board

System No. 3

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.

Vapor Barrier — (Optional) — Nom 0.030 in thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* — Min 1-1/2 in. thickness of floor topping mixture having a min compressive strength of 1000 psi and a cast density of 100 plus or minus 5 pcf. Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mixture shall consist of 1.4 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 300 lbs of sand with 5-1/2 gal of water.

ELASTIZELL CORP OF AMERICA — Type FF

System No. 4

Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade C-D or Sheathing. Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.

Vapor Barrier — (Optional) Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* —Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

FORMULATED MATERIALS LLC — Types FR-25, FR-30, and SiteMix

Alternate Floor Mat Material* — (Optional) Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

FORMULATED MATERIALS LLC — Types M1, M2, M3, Elite, Duo, R1, and R2

System No. 5

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.

Floor Mat Materials* — (Optional) — Floor mat material nom 5/64 in. (2 mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1 in. of floor-topping mixture.

HACKER INDUSTRIES INC — Type Hacker Sound-Mat.

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/4 in. (32 mm) of floor-topping mixture.

HACKER INDUSTRIES INC — Type Hacker Sound-Mat II.

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/8 in. (3mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 3/4 in. (19 mm)

HACKER INDUSTRIES INC — FIRM-FILL SCM 125

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1 in. (25 mm)

HACKER INDUSTRIES INC — Type FIRM-FILL SCM 250, Quiet Qurl 55/025

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 3/8 in. (10 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/4 in. (32mm)

HACKER INDUSTRIES INC — FIRM-FILL SCM 400, Quiet Qurl 60/040

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 3/4 in. (19 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/2 in. (38mm)

HACKER INDUSTRIES INC — Type FIRM-FILL SCM 750, Quiet Qurl 65/075

Metal Lath — (Optional) — For use with 3/8 in. (10 mm) floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1-1/4 in. over the floor mat.

Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand.

HACKER INDUSTRIES INC — Firm-Fill Gypsum Concrete, Firm-Fill 2010, Firm-Fill 3310, Firm-Fill 4010, Firm-Fill High Strength, Gyp-Span Radiant

System No. 6

Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* — Min 3/4 or 1 in. thickness of floor topping mixture for 19/32 or 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

ARCOSA SPECIALTY MATERIALS — AccuCrete® Types NexGen, Green, Prime and PrePour, AccuRadiant®, AccuLevel® Types G40, G50 and SD30

Alternate Floor Mat Material* — (Optional) — Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in. or 1 in. thickness of floor topping for 19/32 or 15/32 in. thick wood structural panels respectively.

ARCOSA SPECIALTY MATERIALS — AccuQuiet® Types D13, D-18, D25, DX38, EM.125, EM.125S, EM.250, EM.250S, EM.375, EM.375S, EM.750, and EM.750S.

System No. 7

Subflooring — 15/32 or 19/32 in. thick wood structural panels, min. grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to joists with joints staggered.

Vapor Barrier — (Optional) — Commercial asphalt saturated felt 0.030 in. thick.

Finish Flooring — Floor Topping Mixture* — Compressive strength to be 2100 psi min. Thickness to be 3/4 in. min for 19/32 in thick wood structural panels or 1 in. min. for 15/32 in thick wood structural panels. Refer to manufacturer's instructions accompanying the material for specific mix design. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mat(s).

System No. 8

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.

Vapor Barrier — (Optional) — Nom 0.010 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1800 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

UNITED STATES GYPSUM CO — Types LRK, HSLRK, CSD

USG MEXICO S A DE C V — Types LRK, HSLRK, CSD

Floor Mat Materials* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

UNITED STATES GYPSUM CO — Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25

Alternate Floor Mat Materials* — (Optional) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding minimum thickness of floor topping over floor mat.

GRASSWORX L L C — SC Types

System No. 9

Subflooring — Min 23/32 in. thick T&G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered 4 ft. Panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Gypsum Board* — One layer of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 1 in. long No. 6 Type W bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches from the joints of the subfloor.

GEORGIA-PACIFIC GYPSUM L L C — Type DS

Floor Mat Materials* — (As an alternate to the single layer gypsum board) — Floor mat material loose laid over the subfloor.

MAXXON CORP — Type Encapsulated Sound Mat

Gypsum Board* — (For use when floor mat is used) Two layers of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists on top of the floor mat material. Gypsum board secured to each other with 1 in. long No. 6 Type G bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches in between layers and from the joints of the subfloor.

GEORGIA-PACIFIC GYPSUM L L C — Type DS

System No. 10

Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* — Min 3/4 or 1 in. thickness of floor topping mixture for 19/32 or 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

DEPENDABLE LLC — GSL M3.4, GSL K2.6, GSL-CSD, GSL RH, and SKIMFLOW.

Floor Mat Materials* — (Optional) — Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

System No. 11

Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.

Finish Flooring - Floor Topping Mixture* — Min 1 in. thickness of floor topping mixture having a min compressive strength of 4500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.
SIKA DEUTSCHLAND GMBH — Type SCHONOX AP Rapid Plus

System No. 12

Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.

Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mat(s).

Floor Mat Materials* — (Optional, Not Shown) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.
LOW & BONAR INC — EnkaSonic® by Colbond a member of the Low & Bonar group Types 125, 250, 250 Plus, 400, 400 Plus, 750, and 750 Plus.

Floor Mat Reinforcement — (Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor topping for use with floor mat reinforcement.

Metal Lath — (Optional) — Expanded steel diamond mesh, 2.5 lb / sq yd loose laid over floor mat material.

Fiberglass Mesh Reinforcement — (Optional) — Coated non-woven glass fiber mesh grid loose laid over floor mat material.

System No. 13

Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Floor Mat Materials* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

GRASSWORX L L C — SC Types

Finish Flooring* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mat(s).

Floor Mat Reinforcement — (Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor topping for use with floor mat reinforcement.

Metal Lath — (Optional) — Expanded steel diamond mesh, 2.5 lb / sq yd loose laid over floor mat material.

Fiberglass Mesh Reinforcement — (Optional) — Coated non-woven glass fiber mesh grid loose laid over floor mat material.

System No. 14

Subflooring — Subflooring — Min 23/32 in. thick T&G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered.

Finish Floor - Building Units* — Min 1/2 in. thick magnesium oxide panels installed parallel, perpendicular, or diagonally to trusses with panel edges offset a min of 4 in. between subfloor and magnesium oxide panels. Panels secured to subfloor with construction adhesive and corrosion-resistant fasteners spaced 6 in. OC around panel edges and 12 in. OC in the field of the panel. Fasteners must be placed no closer than 1/2 in. from all panel edges and no closer than 2 in. from panel corners.

HUBER ENGINEERED WOODS LLC — Type 1/2 in. and 5/8 in. Square Edge Exacor® Board, Type ¾ in. T&G Exacor® Board.

2. **Trusses —** Parallel chord trusses spaced a max of 24 in. OC fabricated from nom 2 by 4 lumber, with lumber oriented vertically or horizontally. Min truss depth is 12 in. when dampers are not used and 18 in. when dampers are used. Truss members secured together with min 0.036 in. thick galv steel plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split tooth type plate. Each tooth has a chisel point on its outside edge with these points being diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approximately 7/8 in. centers with four rows of teeth per inch of plate width.

3. **Air Duct* —** (Optional) — Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturer

4. **Ceiling Damper* —** (Optional. To be used with Air Duct Item 3) — For use with min 18 in. deep trusses. Max nom area shall be 324 sq in. Max square size shall be 18 in. by 18 in. Rectangular sizes not to exceed 324 sq in. with a max width of 18 in. Max height of damper shall be 14 in. Aggregate damper openings shall not exceed 162 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Model RD-521

POTTORFF — Model CFD-521

4A. **Alternate Ceiling Damper* —** For use with min 18 in. deep trusses. Max nom area shall be 196 sq in. Max square size shall be 14 in. by 14 in. Rectangular sizes not to exceed 196 sq in. with a max width of 26 in. Max height of damper shall be 7 in. Aggregate damper openings shall not exceed 98 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) not to exceed 144 in.^{2} shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Model RD-521-BT

POTTORFF — Model CFD-521-BT.

4B. **Alternate Ceiling Damper* —** (Optional. To be used with Air Duct Item 3) — For use with min 18 in. deep trusses. Max nom area shall be 256 sq in. with the length not to exceed 24 in. and the width not to exceed 20 in. Max height of damper shall be 17 in. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Model RD-521-IP, RD-521-NP

POTTORFF — Models CFD-521-IP, CFD-521-NP

4C. **Alternate Ceiling Damper* —** For use with min 18 in. deep trusses. Max nom area shall be 144 sq in. with the length not to exceed 14 in. and the width not to exceed 12 in. Max height of damper shall be 17-7/8 in. Aggregate damper openings shall not exceed 74 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Model RD-521-90, RD-521-NP90

POTTORFF — Models CFD-521-90, CFD-521-90NP

4D. **Alternate Ceiling Damper* —** For use with min. 18 in. deep trusses. Max. nom area shall be 349 sq in. Max. overall length and width shall not exceed 18-11/16 in. by 18-11/16 in. with max. 16 in. by 16 in. register opening. Aggregate damper openings shall not exceed 175 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. An aluminum or steel grille (Item 9) shall be installed in accordance with installation instructions.
MIAMI TECH INC — Model Series RxCRD, RxCRDS or RxCRPD

4E. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 75 sq in. with the length not to exceed 8-9/16 in. and the width not to exceed 8-3/4 in. Max height of damper shall be 9-7/8 in. Aggregate damper openings shall not exceed 38 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturers installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions.
DELTA ELECTRONICS INC — Models CRD2, GBR-CRD, ITG-CRD

4F. **Alternate Ceiling Damper* —** For use with min 18 in. deep trusses. Max nom area shall be 324 sq in. Max square size shall be 18 in. by 18 in. Rectangular sizes not to exceed 324 sq in. with a max length of 20 in. and a max width of 22 in. Max height of damper shall be 14 in. Aggregate damper openings shall not exceed 154 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturer's installation instructions provided with the damper. An aluminum or steel grille (Item 9) shall be installed in accordance with installation instructions.
UNITED ENERTECH CORP — Type C-S/R-WT or C-S/R-WTP (Max nom area 324 sq. in.) or C-S/R-WTS or C-S/R-WTPS (Max nom area 162 sq. in.)

4G. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 75 sq in. with the length not to exceed 9-1/4 in. and the width not to exceed 9-3/4 in. Max height of damper shall be 9-7/8 in. Aggregate damper openings shall not exceed 45 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions.
DELTA ELECTRONICS INC — Model SIG-CRD

4H. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 131 sq in. with the length not to exceed 11-1/16 in. and the width not to exceed 11-7/8 in. Aggregate damper openings shall not exceed 66 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions.
DELTA ELECTRONICS INC — Model SMT-CRD

4I. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 103 sq in. with the length not to exceed 10-1/8 in. and the width not to exceed 10-1/8 in. Aggregate damper openings shall not exceed 52 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions.
PANASONIC CORPORATION, PANASONIC CORPORATION OF NORTH AMERICA — Model PC-RD05C5

4J. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 113 sq in. with the length not to exceed 10-1/8 in. and the width not to exceed 11-1/8 in. Aggregate damper openings shall not exceed 57 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Model RDFUWT

4K. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 79 sq in. with the length not to exceed 10 in. and the width not to exceed 7-15/16 in. Aggregate damper openings shall not exceed 40 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A metallic grille (Item 9) shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Models RDJ1 and RDH

4L. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 87 sq in. with the length not to exceed 9 in. and the width not to exceed 9-11/16 in. Aggregate damper openings shall not exceed 44 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Model RDMWT

4M. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 87 sq in. with the length not to exceed 9 in. and the width not to exceed 9-11/16 in. Aggregate damper openings shall not exceed 44 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Model RDMWT2

4N. **Alternate Ceiling Damper* —** (Optional. To be used with Air Duct Item 3) — For use with min 18 in. deep trusses. Max nom 21 in. long by 18 in. wide, fabricated from galvanized steel. Plenum box max size nom 21 in. long by 18 in. wide by 14 in. high (inner dimension) fabricated from either galvanized steel or min 1 in. thick Listed Duct Board bearing the UL Listing Marking having a min R-Value of 4.3. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 180 sq in. per 100 sq ft of ceiling area.
GREENHECK FAN CORP — Model CRD-1WT

4O. **Alternate Ceiling Damper* —** (Optional, To be used with Air Duct Item 3) — For use with min 18 in. deep trusses. Max nom 12 in. long by 12 in. wide with an 8 in. diameter damper, fabricated from galvanized steel. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 72 sq in. per 100 sq ft of ceiling area. .
GREENHECK FAN CORP — Model CRD-2WT

4P. **Alternate Ceiling Damper* —** (Optional. To be used with Air Duct, Item 3) — For use with min 18 in. deep trusses. Max nom 18 in. long by 18 in. wide, fabricated from galvanized steel. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 162 sq in. per 100 sq ft of ceiling area.
RUSKIN COMPANY — Model CFD7T, CFD7T-END-BT, CFD7T-90-BT, CFD7T-ST-BT, CFD7T-SB, CFD7T-R6-DB, or CFD7T-IB6

4Q. **Alternate Ceiling Damper* —** (Optional. To be used with Air Duct, Item 3) — For use with min 18 in. deep trusses. Max 8 in. diameter damper, fabricated from galvanized steel. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 25 sq in. per 100 sq ft of ceiling area.
RUSKIN COMPANY — Model CFDR7T

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:

1	12/22/2023	Response to City Comments
2	01/19/2024	Addendum #2

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7305
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES

1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
UL ASSEMBLIES - L546

PROJECT NUMBER: 23098

SHEET NUMBER:
G-202

4R. **Alternate Ceiling Damper* —** (Optional, to be used with Air Duct Item 3) For use with min 18 in. deep trusses. Max nom 11-1/8 in. long by 13-5/8 in. wide, fabricated from galvanized steel. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 76 sq in. per 100 sq ft of ceiling area.
GREENHECK FAN CORP — Model CRD-310WT

4S. **Damper* —** (Optional, to be used with Air Duct Item 3) For use with min 18 in. deep trusses. Max nom 12-3/8 in. long by 14-1/2 in. wide, fabricated from galvanized steel. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 90 sq in. per 100 sq ft of ceiling area.
GREENHECK FAN CORP — Model CRD-320WT

4T. **Alternate Ceiling Damper* —** (Optional, to be used with Air Duct Item 3) For use with min 18 in. deep trusses. Max 12 in. diameter damper within max 15 in. by 15 in. register box with max 12 in. by 12 in. register opening fabricated from galvanized steel. Aggregate area of the register opening(s) through the ceiling membrane shall not exceed 72 sq. in. per 100 sq. ft. of ceiling area. Damper assembly installed in accordance with the manufacturer's installation instructions.
RUSKIN COMPANY — Model CFD7T-SR

4U. **Alternate Ceiling Damper*** - (Optional, to be used with Air Duct Item 3) For use with min 18 in. deep trusses. Maximum 20 in. long by 18 in. wide by 2-1/8 in. high, fabricated from galvanized steel. Plenum box maximum size nom. 21 in. long by 18 in. wide by 16 in. high fabricated from either galvanized steel or Classified Air Duct Materials bearing the UL Class 0 or Class 1 rigid air duct material. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 180 sq in. per 100 sq ft of ceiling area.

NAILOR INDUSTRIES INC — Types 0755, 0755A, 0756, 0756D, 0757, 0757D, 0757FP, 0757DFP, 0763

SAFE AIR DOWCO — 0455, 0455A, 0456, 0456D, 0457, 0457D, 0457-DB, 0457-CB, 0463-FB, 0457-EB, 0463-GB, 0463

4V. **Alternate Ceiling Damper* —** (Optional, to be used with Air Duct Item 3) For use with min 18 in. deep trusses. Max nom 10-3/8 in. long by 10-3/8 in. wide, fabricated from galvanized steel. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 54 sq in. per 100 sq ft of ceiling area.

GREENHECK FAN CORP — Model CRD-300WT

5. **Batts and Blankets* —** (Optional with Items 7 and 7B; Required with Item 7A) — Glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. When the resilient channels (Item 6) or furring channels (Item 6A, 6O) are spaced 16 in. OC, the insulation shall be a max of 3-1/2 in. thick, and shall be secured against the subflooring with staples at 12 in. OC or held suspended in the concealed space with 0.090 in. diam galv steel wires attached to the wood trusses at 12 in. OC. When the resilient channels (Item 6) or furring channels (Item 6A, 6O) are spaced a max of 12 in. OC or when the Steel Framing Members (Item 6B) are used, there is no limit in the overall thickness of insulation, and the insulation can be secured against the subflooring, held suspended in the concealed space or draped over the resilient or furring channels (or Steel Framing Members) and gypsum panel membrane. When **Steel Framing Members** (Item 6C) are used, max 3-1/2 in. thick insulation shall be draped over the furring channels (Item 6Ca) and gypsum board ceiling membrane, and friction-fitted between trusses and Steel Framing Members (Item 6Cd). The finished rating has only been determined when the insulation is secured to the subflooring.

5A. **Fiber, Sprayed* —** (Dry Dense Packed 100% Borate Formulation) — As an alternate to Item 5 — When used, the resilient channel and gypsum board attachment is modified as specified in Items 6 and 7 and wire mesh (Item 10) shall be attached to the furring channels to facilitate installation of the material. The finished rating when Fiber, Sprayed is used has not been determined. The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft^3, in accordance with the application instructions supplied with the product. When Item 5A (Fiber, Sprayed) is used, two layers of gypsum board required as described in Item 7. Not evaluated for use with Items 6B, 6C or 6D.
APPLEGATE GREENFIBER ACQUISITION LLC — Insulmax & SANCTUARY to be used with dry application only.

5B. **Fiber, Sprayed* —** (Loose Fill 100% Borate Formulation) — As an alternate to Items 5 and 5A — The finished rating when Fiber, Sprayed is used has not been determined. The fiber is applied without water or adhesive at a minimum dry density of 0.5 lb/ft^3 and at a max thickness of 3-1/2 in., in accordance with the application instructions supplied with the product. Wire mesh (Item 10) shall be attached to the furring channels to facilitate installation of the material. When Item 5B (Fiber, Sprayed) is used, two layers of gypsum board required as described in Item 7. Not evaluated for use with Items 6B, 6C or 6D.
APPLEGATE GREENFIBER ACQUISITION LLC — Insulmax & SANCTUARY to be used with dry application only.

5C. **Cavity Insulation - Batts and Blankets* or Fiber, Sprayed* —** (Required for Item 7C, As described above in Items 5 through 5B) — Min. 3-1/2 in thick with no limit on maximum thickness fitted in the concealed space, draped over the resilient channel (Item 6I)/gypsum board (Item 7C) ceiling membrane.

6. **Resilient Channels —** Resilient channels, formed of 25 MSG thick galv steel, spaced 16 in. OC perpendicular to trusses. When insulation (Items 5, 5A, 5B) is draped over the resilient channel/gypsum board ceiling membrane, the spacing shall be reduced to 12 in. OC. Channels secured to each truss with 1-1/4 in. long Type S bugle head steel screws. Channels overlapped 4 in. at splices. Two channels, spaced 6 in OC, oriented opposite each gypsum board end joint as shown in the above illustration. Additional channels shall extend 6 in beyond each side edge of board.

6A. **Steel Framing Members* —** (Not Shown) — As an alternate to Item 6, 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 16 in. OC perpendicular to trusses. When batt insulation (Items 5) is draped over the resilient channel/gypsum board ceiling membrane, the resilient channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to alternating trusses with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-Si-X secured with No. 10 x 3-1/2 in. screws. RSIC-V and RSIC-V (2.75) clips secured to alternating trusses with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1, RSIC-Si-X, and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-Si-X, RSIC-1 (2.75), RSIC-V (2.75)

6B. **Alternate Steel Framing Members —** (Not Shown) — As an alternate to Items 6 and 6A, main runners, cross tees, cross channels and wall angle as listed below.
a. **Main Runners —** Nom 10 or 12 ft long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft. OC. Main runners suspended by min 12 SWG galv steel hanger wires spaced 48 in. OC. Hanger wires to be located adjacent to main runner/cross tee intersections. Hanger wires wrapped and twist-tied on 16d nails driven in to side of trusses at least 5 in. above the bottom face.

b. **Cross Tees or Channels —** Nom 4 ft long cross tees, with 15/16 in. or 1-1/2 in. wide face, or nom 4 ft long cross channels, with 1-1/2 in. wide face, either spaced 16 in. OC, installed perpendicular to the main runners. Additional cross tees or channels used 8 in. from each side of butted gypsum board end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.

c. **Wall Angle or Channel —** Painted or galv steel angle with 1 in. legs or channel with 1 in. legs, 1-9/16 in. deep attached to walls at perimeter of ceiling with fasteners 16 in. OC. To support steel framing member ends and for screw-attachment of the gypsum panel.
CGC INC — Type DGL or RX.

USG INTERIORS LLC — Type DGL or RX.

6C. **Steel Framing Members* —** (Not Shown) — As an alternate to Items 6, 6A and 6B.
a. **Furring Channels —** Hat-shaped furring channels, 7/8 in. deep by 2-5/8 in. wide at the base and 1-1/4 in. wide at the face, formed from No. 25 ga. galv steel, spaced max. 16 in. OC perpendicular to trusses and Cold Rolled Channels (Item 6Cb). Furring channels secured to Cold Rolled Channels at every intersection with a 1/2 in. pan head self-drilling screw through each furring channel leg. Ends of adjoining channels overlapped 4 in. and tied together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap. Supplemental furring channels at base layer and outer layer gypsum board butt joints are not required. Batts and Blankets draped over furring channels as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 7.

b. **Cold Rolled Channels —** 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to trusses, friction-fitted into the channel caddy on the Steel Framing Members (Item 6Cd). Adjoining lengths of cold rolled channels lapped min. 6 in. and wire-tied together with two double strand 18 SWG galv steel wire ties, one at each end of overlap.

c. **Blocking —** Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 6 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the truss (Item 2) at the top and bottom of the blocking at each Steel Framing Member (Item 6Cd) location.

d. **Steel Framing Members* —** Hangers spaced 48 in. OC. max along truss, and secured to the Blocking (Item 6Cc) on alternating trusses with a single 5/16 in. by 2 in. hex head lag bolt or four #6 1-1/4 in. drywall screws through mounting hole(s) on the hanger bracket. The two 1/4 in. long steel teeth on the hanger are embedded in the side of the blocking. Hanger positioned on blocking and leveling bolt height adjusted such that furring channels are flush with bottom of trusses before gypsum board installation. Spring gauge of hanger chosen per manufacturer\'s instructions.
KINETICS NOISE CONTROL INC — Type ICW.

6D. **Steel Framing Members* —** (Not Shown) — As an alternate to Items 6, 6A, 6B and 6C.
a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 16 in. OC perpendicular to wood structural members. When insulation, Items 5 or 5A is applied over the furring channel/gypsum panel ceiling membrane, the furring channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galv steel wire near each end of overlap.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC, and secured to the bottom chord of alternating trusses with two No. 8 x 2-1/2 in. course drywall screws, one through the hole at each end of the clip. When insulation, Items 5 or 5A is applied over the furring channel/gypsum panel ceiling membrane, the clip spacing shall be reduced to 24 in. OC and secured to consecutive trusses. Furring channels are friction fitted into clips. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7. Two layers of gypsum board required as described in Item 7. Not evaluated for use with Item 5B.
KINETICS NOISE CONTROL INC — Type Isomax.

6E. **Steel Framing Members* —** (Optional, Not Shown) — Used as an alternate method to attach min. 1/2 in. deep resilient channels (Item 6) to wood trusses (Item 2). Resilient channels are friction fitted into clips, and then clips are secured to the bottom chord of each wood truss with a min. 1-3/4 in. long Type S bugle head steel screw through the center hole of the clip and the resilient channel flange. Adjoining resilient channels are overlapped 4 in. under trusses. The clip flange is opened slightly to accommodate the two overlapped channels. Additional clips required to hold resilient channel that supports the gypsum board butt joints, as described in Item 7.
KEENE BUILDING PRODUCTS CO INC — Type RC Assurance.

6F. **Steel Framing Members —** (Not Shown) — As an alternate to Item 6, furring channels and Steel Framing Members* as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 16 in. OC perpendicular to trusses. When batt insulation (Items 5) is draped over the resilient channel/gypsum board ceiling membrane, the resilient channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC. GenieClips secured to alternating joists with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. When insulation, Items 5 is applied over the furring channel/gypsum panel ceiling membrane, the clip spacing shall be reduced to 24 in. OC and secured to consecutive trusses. Furring channels are friction fitted into clips. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7. Not evaluated for use with Item 5A or 5B.
PLITEQ INC — Type GENIECLIP

6G. **Alternate Steel Framing Members* —** (Not Shown) — As an alternate to items 6-6F, furring channels and Steel Framing Members as described below.
a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in deep, spaced 16 in OC, perpendicular to trusses. When batt insulation (Items 5) is draped over the resilient channel/gypsum board ceiling membrane, the resilient channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced at 48" OC and secured to the bottom of the joists with one 2 in. Coarse Drywall Screw with 1 in. diam washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and tied together with double strand of No. 18 AWG galvanized steel wire Additional clips are required to hold the Gypsum Butt joints as described in item 7B.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

6H. **Alternate Steel Framing Members* —** (Not Shown) — As an alternate to items 6-6G, furring channels and Steel Framing Members as described below.
a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-1/2 in. wide by 7/8 in deep, spaced 16 in OC, perpendicular to trusses. When batt insulation (Items 5) is draped over the resilient channel/gypsum board ceiling membrane, the resilient channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced at 48" OC and secured to the bottom of the trusses with one 2-1/2 in. Coarse Drywall Screw with 1 in. diam washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and tied together with double strand of No. 18 AWG galvanized steel wire Additional clips are required to hold the Gypsum Butt joints as described in item 7B.

REGUPOL AMERICA — Type SonusClip

6I. **Resilient Channels —** For Use With Item 7C - Formed from min 25 MSG galv. steel installed perpendicular to trusses and spaced 16 in. OC. Channels secured to each truss with 1-5/8 in. long Type S bugle head steel screws. Channels overlapped 4 in. at splices. Two channels, spaced 6 in. OC, oriented opposite each gypsum panel end joint. Additional channels shall extend min 6 in. beyond each side edge of panel. Insulation, Item 5C is applied over the resilient channel/gypsum panel ceiling membrane.

6J. **Steel Framing Members* —** (Optional, Not Shown) — As an alternate to Item 6.
a. **Furring Channels —** Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced as indicated in Item 6, perpendicular to the trusses. Channels secured to Cold Rolled Channels at every intersection with a 3/4 in. TEK screw through each furring channel leg. Ends of adjoining channels overlapped 12 in. and fastened together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap, or with two 3/4 in. TEK screws in each leg of the overlap section. Two furring channels used at end joints of gypsum board (Item 7), each extending a min of 6 in. beyond both side edges of the board.

b. **Cold Rolled Channels —** 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to trusses, friction-fitted into the channel caddy on the Steel Framing Members (Item 6Jd) and secured with two 3/4 in. TEK screws. Adjoining lengths of cold rolled channels lapped min. 12 in. and secured along bottom legs with four 3/4 in. TEK screws and wire-tied together with two double strand 18 SWG galv steel wire ties, one at each end of overlap.

c. **Blocking —** Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 12 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the trusses at the top and bottom of the blocking at each Steel Framing Member (Item 6Jd) location with 16d nails or minimum 2-1/2 in. screws.

d. Steel Framing Members* — Spaced 48 in. OC. max along truss, and secured to the truss on alternating trusses with two, #10 x 2 in. screws through mounting holes on the hanger bracket.
PAC INTERNATIONAL L L C — Type RSIC-SI-CRC EZ Clip

6K. **Steel Framing Members* —** (Not Shown) — As an alternate to Item 6.
a. **Furring Channels —** Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced as indicated in Item 6, perpendicular to trusses and friction fit into Steel Framing Members (Item 6Kc). Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap or with two TEK screws along each leg of the 6 in. overlap. Two furring channels used at end joints of gypsum board (Item 7). Butt joint channels held in place by strong back channels placed upside down, on top of, and running perpendicular to primary furring channels, extending 6 in. longer than length of gypsum side joint. Strong back channels spaced maximum 48 in. OC. Strong back channels secured to every intersection of primary furring channels with four 7/16 in. pan head screws, two along each of the legs at intersections. Butt joint channels run perpendicular to strong back channels and shall be minimum 6 in. longer than length of joint, secured to strong back channels with 7/16 in. pan head screws, two along each of the legs at intersection with strong back channels.

b. **Blocking —** Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 12 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the trusses at the top and bottom of the blocking at each Steel Framing Member (Item 6Kc) location with 16d nails or minimum 2-1/2 in. screws.

c. **Steel Framing Members* —** Used to attach furring channels (Item 6Ka) to trusses. Clips spaced 48 in. OC and secured along truss webs at each furring channel intersection with min. 3/4 in. long self-drilling #10 x 1-1/2 in. screws through each of the provided hole locations. Furring channels are friction fitted into clips.
PAC INTERNATIONAL L L C — Type RSIC-S1-1 Ultra

6L. **Steel Framing Members* —** (Optional - Not Shown) — Used to attach resilient channels (Item 6) to trusses (Item 2). Clips spaced 48 in. OC and secured to trusses with one No. 8 x 2-1/2 in. coarse drywall screw through center grommet hole. Channels secured to clips with one #10 x 1/2 in. pan-head self-drilling screw. Ends of adjoining channels overlapped 6 in. and secured together with two #8 15 x 1/2 in. Philips Modified screws spaced 2-1/2 in. from the center of the overlap. Gypsum board butt joints require additional resilient channels spaced 1-1/2 in. from the butt joint on either side. One edge of the extra channels will extend to an adjacent truss where it is secured with a clip.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

6M. **Steel Framing Members* —** (Optional, Not Shown) — Used as an alternate method to attach resilient channels to structural members. A resilient sound isolation accessory shall be used at each attachment point of the resilient channels and spaced max 24 in. O.C. Channel ends butted and centered under the structural members and attached with one accessory at each end. Additional accessories used to hold resilient channels that support the gypsum board end joints. The accessory envelops the mounting edge of the resilient channel. The accessory and resilient channel are fastened to the structural members with the screws supplied with the accessory and per the accessory manufacturer's installation instructions. Gypsum Board butt joints staggered minimum 24 in. OC and Gypsum Board screws spaced 8 in. OC when used.

PAC INTERNATIONAL L L C — Type RC-1 Boost

6N. **Resilient Channels —** For use with **American Gypsum Co. Type AG-C gypsum board only**. Resilient channels, formed of 25 MSG thick galv steel, spaced 16 in. OC perpendicular to trusses. When insulation (Items 5, 5A, 5B) is applied over the resilient channel/gypsum board ceiling membrane, the spacing may remain at 16 in. OC. Channels secured to each truss with 1-1/4 in. long Type S bugle head steel screws. Channels overlapped 4 in. at splices. Two channels, spaced 6 in OC, oriented opposite each gypsum board end joint as shown in the above illustration. Additional channels shall extend 6 in beyond each side edge of board.

6O. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 6) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-23/32 in. wide by 7/8 in. When there is no insulation installed in the concealed space the furring channels are spaced 24 in. OC max perpendicular to trusses. When insulation (Item 5) is secured to the underside of the subfloor the furring channels are spaced 16 in. OC max. When insulation (Item 5) is applied over the furring channel/gypsum panel ceiling membrane, the furring channels are spaced 12 in. OC max. Channels secured to trusses as described in Item 6Ob. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the wallboard butt joints, as described in Item 7.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6Oa) to trusses (Item 2). Clips spaced 48 in. OC max with No. 8 x 2-1/2 in. course drywall screw through the center grommet. Furring channels are friction fitted into clips.

CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clips

6P. **Steel Framing Members* —** (Optional, Not Shown) — Used as an alternate method to attach resilient channels (items 6 and 6I) to structural members. A resilient sound isolation accessory shall be used at each attachment point of the resilient channels and spaced 16 in. O.C. Channel ends butted and centered under the structural members and attached with one accessory at each end. Additional accessories used to hold resilient channels that support the gypsum board end joints. The accessory envelops the mounting edge of the resilient channel. The accessory and resilient channel are fastened to the structural members with the 2in. screws supplied with the accessory and per the accessory manufacturer's installation instructions. Gypsum Board butt joints staggered minimum 24 in. OC and Gypsum Board screws spaced 8 in. OC when used.

PAC INTERNATIONAL L L C — Type RC-1 Boost

6Q. **Steel Framing Members* —** (Not Shown) — As an alternate to item 6I, 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 16 in. OC perpendicular to trusses. When batt insulation (Items 5) is draped over the resilient channel/gypsum board ceiling membrane, the resilient channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to alternating trusses with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-Si-X secured with No. 10 x 3-1/2 in. screws. RSIC-1, and RSIC-Si-X, clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one 2in. screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7.

PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-Si-X, RSIC-1 (2.75), RSIC-SI-X.

6R. **Steel Framing Members* —** (Optional, Not Shown) — As an alternate to Item 6I.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced as indicated in Item 6, perpendicular to the trusses. Channels secured to Cold Rolled Channels at every intersection with a 3/4 in. TEK screw through each furring channel leg. Ends of adjoining channels overlapped 12 in. and fastened together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap, or with two 3/4 in. TEK screws in each leg of the overlap section. Two furring channels used at end joints of gypsum board (Item 7), each extending a min of 6 in. beyond both side edges of the board.

b. **Cold Rolled Channels —** 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to trusses, friction-fitted into the channel caddy on the Steel Framing Members (Item 6Jd) and secured with two 3/4 in. TEK screws. Adjoining lengths of cold rolled channels lapped min. 12 in. and secured along bottom legs with four 3/4 in. TEK screws and wire-tied together with two double strand 18 SWG galv steel wire ties, one at each end of overlap.

c. **Blocking —** Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 12 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the trusses at the top and bottom of the blocking at each Steel Framing Member (Item 6Jd) location with 16d nails or minimum 2-1/2 in. screws.

d. **Steel Framing Members* —** Spaced 48 in. OC. max along truss, and secured to the truss on alternating trusses with two, #10 x 2in. screws through mounting holes on the hanger bracket.

PAC INTERNATIONAL L L C — Type RSIC-SI-CRC EZ Clip

6S. **Steel Framing Members* —** (Not Shown) — As an alternate to Item 6I.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced as indicated in Item 6, perpendicular to trusses and friction fit into Steel Framing Members (Item 6Kc). Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap or with two TEK screws along each leg of the 6 in. overlap. Two furring channels used at end joints of gypsum board (Item 7). Butt joint channels held in place by strong back channels placed upside down, on top of, and running perpendicular to primary furring channels, extending 6 in. longer than length of gypsum side joint. Strong back channels spaced maximum 48 in. OC. Strong back channels secured to every intersection of primary furring channels with four 7/16 in. pan head screws, two along each of the legs at intersections. Butt joint channels run perpendicular to strong back channels and shall be minimum 6 in. longer than length of joint, secured to strong back channels with 7/16 in. pan head screws, two along each of the legs at intersection with strong back channels.

b. **Blocking —** Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 12 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the trusses at the top and bottom of the blocking at each Steel Framing Member (Item 6Kc) location with 16d nails or minimum 2-1/2 in. screws.

c. **Steel Framing Members* —** Used to attach furring channels (Item 6Ka) to trusses. Clips spaced 48 in. OC and secured along truss webs at each furring channel intersection with min. 3/4 in. long self-drilling #10 x 2 in. screws through each of the provided hole locations. Furring channels are friction fitted into clips.

PAC INTERNATIONAL L L C — Type RSIC-S1-1 Ultra

7. **Gypsum Board* —** Nom 5/8 in. thick, 48 in. wide gypsum board. When resilient channels (Item 6) are used, gypsum board installed with long dimension perpendicular to resilient channels. Gypsum board secured with 1 in. long Type S bugle head screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from end joints. End joints secured to both resilient channels as shown in end joint detail. When batt insulation (Item 5) is draped over the resilient channel/gypsum board ceiling membrane, screws spacing shall be 8 in. OC. When **Steel Framing Members*** (Item 6A, 6F, 6O) are used, gypsum board installed with long dimension perpendicular to furring channels and side joints of sheet located beneath joists. Gypsum board secured to furring channels with 1 in. long Type S bugle head screws spaced 12 in. OC in the field. Butted end joints shall be staggered min 2 ft within the assembly, and occur between the continuous furring channels. At butted end joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. The two furring channels shall be spaced approximately 3-1/2 in. OC and be attached to underside of the joist with one clip at each end of the channel. Screw spacing along the end joint shall be 8 in. OC.
When **Steel Framing Members** (Item 6J) are used, nom 5/8 in. thick, 4 ft wide gypsum board, installed as described in Item 7. Adjacent butt joints staggered minimum 48 in. OC.

When **Steel Framing Members** (Item 6K) are used, nom 5/8 in. thick, 4 ft wide gypsum board, installed as described in Item 7. Butt joints staggered minimum 24 in. OC.

AMERICAN GYPSUM CO — Type AG-C

CGC INC — Types C, IP-X2, IPC-AR

CERTAINTEED GYPSUM INC — Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

7A. **Gypsum Board* —** Nom 5/8 in. thick, 48 in. wide gypsum board, installed with long dimension perpendicular to resilient channels. Gypsum board secured with 1-1/8 in. long Type S bugle head screws spaced 8 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. End joints secured to both resilient channels as shown in end joint detail. When Item 7A is used, the insulation must be used and must be draped over the resilient channel/gypsum board.
NATIONAL GYPSUM CO — Types eXP-C, FSW-G, FSW-C, FSK-G, FSK-C

7B. **Gypsum Board* —** Nom 5/8 in. thick, 48 in. wide gypsum panels. When resilient channels (Item 6) are used, gypsum panels installed with long dimension perpendicular to resilient channels. Gypsum panels secured with 1 in. long Type S bugle head steel screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. When insulation (Items 5 or 5A) is applied over the resilient channel/gypsum panel ceiling membrane screw spacing shall be reduced to 8 in. OC. End joints secured to both resilient channels as shown in end joint detail. When **Steel Framing Members** (Item 6A, 6O) are used, gypsum panels installed with long dimensions perpendicular to furring channels. Panels attached to the furring channels using 1 in. long Type S bugle-head steel screws spaced 8 in. OC along butted end joints and in the field of the panel. Butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. Each end of each gypsum panel shall be supported by a single length of furring channel equal to the width of the gypsum panel plus 6 in. on each end. The two support furring channels shall be spaced approximately 3-1/2 in. OC, and be attached to underside of the truss with one clip at each end of the channel. When **Steel Framing Members*** (Item 6B) are used, gypsum panels installed with long dimension perpendicular to cross tees with side joints centered along main runners and end joints centered along cross tees. Panels fastened to cross tees with 1 in. long . Type S bugle-head screws spaced in the field and 8 in. OC along end joints. Panels fastened to main runners with 1 in. long . Type S bugle-head screws spaced midway between cross tees. Screws along sides and ends of panels spaced 3/8 to 1/2 in. from panel edge. End joints of panels shall be staggered with spacing between joints on adjacent panels not less than 4 2 ft OC. When **Fiber, Sprayed** (Items 5A or 5B) is used, two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimensions perpendicular to furring channels. Base layer gypsum board secured with 1 in. long Type S bugle head steel screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. End joints secured to both resilient channels as shown in end joint detail. Outer layer gypsum board secured with 1-5/8 in. long Type S bugle head steel screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. Outer layer shall be finished as described in Item 8. When both **Steel Framing Members** (Item 6A) and **Fiber, Sprayed** (Items 5A or 5B) are used, furring channels spaced 12 in. OC and two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimension perpendicular to furring channels. Base layer secured to furring channels with nom 1 in. long Type S bugle head screws spaced 8 in. OC along butted end joints and in the field of the board. Butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. Each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. The two support furring channels shall be spaced approximately 3-1/2 in. OC, and be attached to the underside of the truss with one clip at each end of the channel. Outer layer secured to furring channels using 1-5/8 in. long Type S screws spaced 8 in. OC and 1-1/2 in. from the end joint. Butted end joints to be offset a min. of 8 in. from base layer end joints. Butted side joints of outer layer to be offset min. 18 in. from butted side joints of base layer. When **Steel Framing Members** (Item 6C) are used, two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimensions perpendicular to furring channels (Item 6Ca). Base layer attached to the furring channels using 1 in. long Type S bugle head steel screws spaced 8 in. OC along butted end joints and 12 in. OC in the field of the board. Butted end joints centered on the continuous furring channels. Butted base layer end joints to be offset a min of 16 in. in adjacent courses. Outer layer attached to the furring channels using 1-5/8 in. long Type S bugle head steel screws spaced 8 in. OC at butted end joints and 12 in. OC in the field. Butted end joints centered on the continuous furring channels and offset a min of 16 in. from butted end joints of base layer. Butted side joints of outer layer to be offset min 16 in. from butted side joints of base layer. When **Steel Framing Members** (Item 6D) are used, two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimensions perpendicular to furring channels. Base layer attached to the furring channels using 1 in. long Type S bugle-head steel screws spaced 12 in. OC in the field of the board. Butted end joints shall be staggered min 2 ft. within the assembly, and occur midway between the continuous furring channels. Each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. The two furring channels shall be spaced approximately 4 in. OC, and be attached to underside of the truss with one Isomax clip at each end of the channel. Screw spacing along the gypsum board butt joint shall be 8 in. OC. Outer layer attached to the furring channels using 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC in the field. The end of the outer layer boards at the butt joint shall be attached to the base layer boards with 1-5/8 in. long Type G screws spaced 8 in. OC and 1-1/2 in. from the end joint. Butted end joints to be offset a min of 8 in. from base layer end joints. Butted side joints of outer layer to be offset min 18 in. from butted side joints of base layer. Outer layer shall be finished as described in Item 8. When **Steel Framing Members** (Item 6F) are used, two layers of nom 5/8 in. thick, 4 ft wide are installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels using 1 in. long No. 6 Type S bugle-head steel screws spaced 12 in. OC in the field of the board. Butted end joints shall be staggered minimum 2 ft. within the assembly. Additional furring channels constructed as per Item 6F shall be used to support each end of each gypsum board. These additional furring channels shall be attached to underside of the truss with Genie clips as described in Item 6F. Screw spacing along the gypsum board butt joint shall be 8 in. OC. Outer layer attached to the furring channels using 1-5/8 in. long No. 6 Type S bugle-head steel screws spaced 12 in. OC in the field. The outer layer boards at the butt joint shall be attached to the base layer boards with No. 10, 1-1/2 in. long drywall screws spaced 8 in. OC and 1-1/2 in. from the end joint. Butted end joints to be offset a min of 24 in. from base layer end joints. Butted side joints of outer layer to be offset min 16 in. from butted side joints of base layer. When **Steel Framing Members** (Item 6G) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 3 in. on each end. The two support furring channels shall be spaced approximately 3 in. in from joint. Screw spacing along the gypsum board butt joint and along both additional channels shall be 8 in. OC. Additional screws shall be placed in the adjacent section of gypsum board into the aforementioned 3 in. extension of the extra butt joint channels as well as into the main channel that runs between. Butt joint furring channels shall be attached with one RESILMOUNT Sound Isolation Clip at each end of the channel.
When **Steel Framing Members** (Item 6H) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, an additional single length of furring channel shall be installed and be spaced approximately 3 in. from the butt joint (6 in. from the continuous furring channels) to support the floating end of the gypsum board. Each of these shorter sections of furring channel shall extend one truss beyond the width of the gypsum panel and be attached to the adjacent trusses with one SonusClip at every truss involved with the butt joint.

CERTAINTEED GYPSUM INC — Type C

CGC INC — Types C, IP-X2, IPC-AR

CERTAINTEED GYPSUM INC — Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

7C. **Gypsum Board* —** (As an alternative to Items 7 and 7B, For use with Items 5C and 6I) — Nom 5/8 in. thick, 48 in. wide gypsum board, installed and secured as described in Items 7 and 7B but with max screw spacing 8 in. OC. When used with insulation (Batts and Blankets* or Fiber Sprayed*) that is installed over the resilient channel/Gypsum Board* ceiling membrane, the resilient channels may remain at 16 in. OC and not need to be reduced to 12 in. OC.
CGC INC — Type ULIX

UNITED STATES GYPSUM CO — ULIX

7D. **Gypsum Board* —** (As an alternative to Items 7, 7A, 7B and 7C) — For use when no insulation is used. Nom 5/8 in. thick, 48 in. wide gypsum board, installed as described in item 7 with resilient channels (Item 6) spaced 24 in OC.

AMERICAN GYPSUM CO — Type AG-C

8. **Finishing System —** (Not Shown) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum board.

9. **Grille —** Grille, installed in accordance with the installation instructions provided with the ceiling damper.

10. **Wire Mesh —** (Not Shown) — For use with Item 5A and 5B — 1 in. 20 gauge galvanized poultry netting installed between the furring channels and gypsum board. The poultry netting is attached with washers and 1/2 in. wafer head screws, spaced 24 in. OC., to the furring channels. The **Fiber, Sprayed** (Item 5A or 5B) is installed through cut-openings in the poultry netting, in-between trusses. The cut-openings in the poultry netting shall be staggered at a maximum of 6 ft.

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

Last Updated on 2023-10-03

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2

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STATE OF MISSOURI
DAVID EUGENE HENDRIXSE
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
UL ASSEMBLIES - L546

PROJECT NUMBER: 23098

SHEET NUMBER:
G-203

UL Product iQ®

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Design/System/Construction/Assembly Usage Disclaimer

- 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 Variances

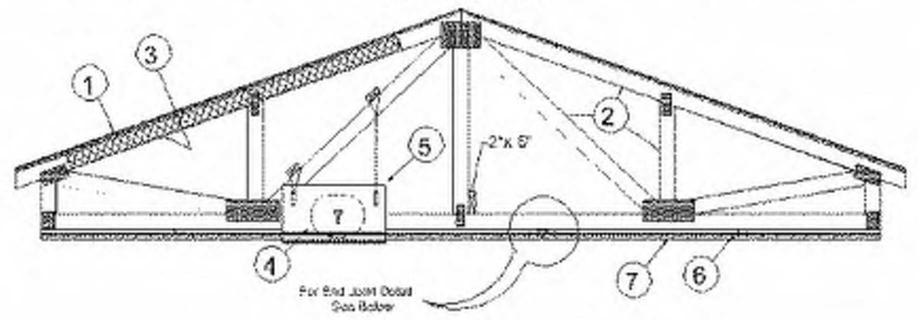
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

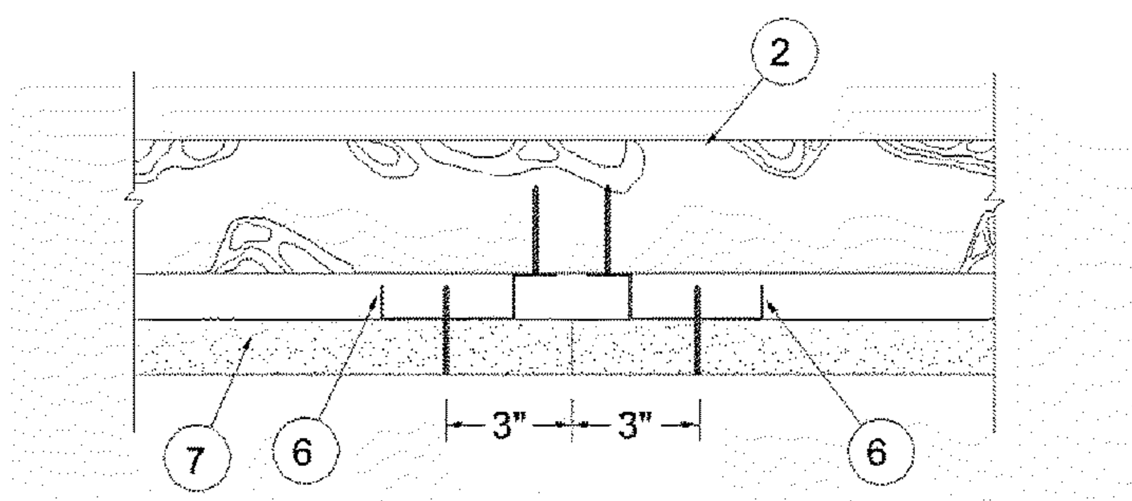
Design No. **P545**

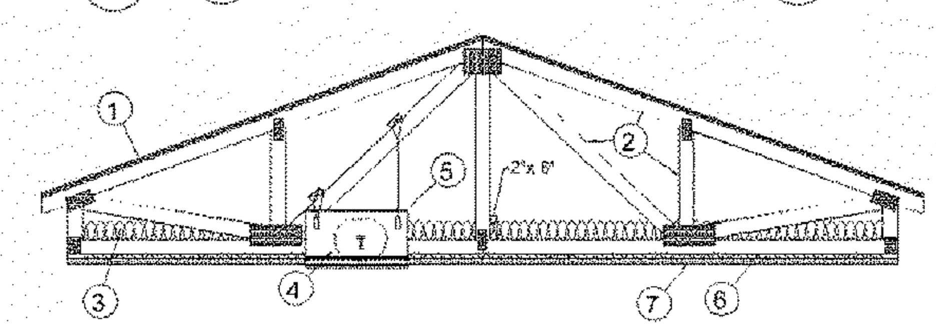
September 8, 2023

Unrestrained Assembly Rating — 1 Hr.
Finish Rating — 24 or 25 Min (See Items 3 and 3A)
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

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







Alternate Insulation Placement

1. **Roofing System* —** Any UL Class A, B or C Roofing System **(TGFU)** or Prepared Roof Covering **(TFWZ)** acceptable for use over nom 15/32 in. thick wood structural panels, min. grade "C-D" or "Sheathing". Nom 15/32 in. thick wood structural panels secured to trusses with No. 6d ringed shank nails. Nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Construction adhesive is optional.

2. **Trusses —** Pitch chord trusses, spaced a max of 24 in. OC, fabricated from nom 2 by 4 lumber, with lumber oriented vertically or horizontally. Truss members secured together min.0.0356 in. thick galv steel plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split tooth type plate. Each tooth has a chisel point on its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approximately 7/8 in. centers with four rows of teeth per inch of plate width. Where the truss intersects with the interior face of the exterior walls, the min truss depth shall be 5-1/4 in. and a min. average depth of 18 in.. Where the truss intersects with the interior face of the exterior walls, the min truss depth may be reduced to 3 in. if the batts and blankets (Item 3) are used as shown in the above illustration (Alternate Insulation Placement) and are firmly packed against the intersection of the bottom chords and the plywood sheathing. Min roof slope of 3/12 unless American Gypsum boards are used, in which case there is no minimum slope.

3. **Batts and Blankets* —** (Optional) — Glass fiber insulation, secured to the wood structural panels with staples spaced 12 in. OC or to the trusses with 0.090 in. diam galv steel wires spaced 12 in. OC. Any glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance, having a min density of 0.5 pcf. As an option, the insulation may be fitted in the concealed space, draped over the resilient channel/gypsum wallboard ceiling membrane when resilient channels and gypsum wallboard attachment is modified as specified in Items 6 and 7. The Finish Rating is 24 min. when the insulation is draped over the resilient channels and gypsum board ceiling membrane and 25 min. when it is installed on underside of the plywood deck or when it is omitted.
When Type AG-C panels are installed there is no limit on maximum thickness.

When Type TG-C panels are installed the maximum thickness is 3-1/2 in.

3A. **Loose Fill Material* —** As an alternate to Item 3 — Loose fill material bearing the UL Classification Marking for Surface Burning Characteristics, having a min density of 0.5 pcf, fitted in the concealed space, draped over the resilient channel/gypsum wallboard ceiling membrane when resilient channels and gypsum wallboard attachment is modified as specified in Items 6 and 7. The finished rating when this insulation is used has not been determined.
When Type AG-C panels are installed there is no limit on maximum thickness.

When Type TG-C panels are installed the maximum thickness is 3-1/2 in.

3B. **Fiber, Sprayed* —** For Use With American Gypsum Type AG-C only. As an alternate to Item 3 (not evaluated for use with Item 6B and 6C) — spray-applied cellulose insulation material, having a min density of 0.5 lb/ft^3, applied with water, over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. Fiber, Sprayed is applied with moisture in accordance with the application instructions supplied with the product. The finish rating when Fiber Sprayed is used has not been determined. Alternate application method: The fiber is applied without water or adhesive in accordance with the application instructions supplied with a minimum density of 0.5 lb/ft^3 over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. Alternate application method: The fiber is applied without water or adhesive to a nominal density of 3.5 lb/ft^3 behind netting (Item 11) stapled to the rafters. The netting is stapled at both lower edges of the rafters creating a cavity to accept the cellulose fiber The finished rating when this insulation is used has not been determined.
When Type AG-C panels are installed there is no limit on maximum thickness.

When Type TG-C panels are installed the maximum thickness is 3-1/2 in.

APPLEGATE GREENFIBER ACQUISITION LLC — Insulmax and SANCTUARY for use with wet or dry application. INS510LD, INS515LD, and INS541LD are to be used for dry application only.

3C. **Foamed Plastic* —** For Use With American Gypsum Type AG-C only. (As an alternate to Item 3, Not Shown) — Spray foam insulation applied directly to the underside of the underside of the roofing system (Item 1). Spray foam insulation installed to a maximum thickness of 10 in. at a nominal 0.5 lb/ft^3 density, while maintaining a minimum 8-1/2 in. clearance between the spray foam insulation and the gypsum board. When spray foam insulation is used, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board (Item 7) installed at 6 in. OC to allow for maximum 3 in. spacing off ends of the gypsum board joints. Gypsum board to be installed using 1-1/4 in. long Type S screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a ceiling damper (Items 5 through 5AC) in the concealed space, minimum 1 in. clearance to be maintained between damper housing and spray foam insulation. Limited to resilient channels, Item 6 only, no Item 6 alternates. The finished rating when this insulation is used has not been determined.
SES FOAM INC — Sucraseal

3D. **Foamed Plastic* —** For Use With American Gypsum Type AG-C only. (As alternate to Item 3 Not Shown) — Spray foam insulation applied directly to the underside of the roofing system. Spray foam insulation installed to a maximum thickness of 10 in. at a nominal 0.5 lb/ft^3 or 2.0 lb/ft^3 density, depending on the product installed. When spray foam insulation is installed, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board spaced maximum 3 in. away from gypsum butt joints. Gypsum board to be installed using minimum 1-1/4 in. long Type S screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a ceiling damper (Items 5 through 5AC) in the concealed space, minimum 1 in. clearance to be maintained between damper housing and spray foam insulation. Limited to resilient channels, Item 6 only, no Item 6 alternates.. The finished rating when this insulation is used has not been determined.
BASF CORP — Enertite® NM, Enertite® G, FE178®, Spraytite® 178, Spraytite® 81206, Walltite® 200, Walltite® US, Walltite® US-N, and Walltite® HP+

3E. **Foamed Plastic* —** For Use With American Gypsum Type AG-C only. (As an alternate to Item 3, Not Shown) — Spray foam insulation applied directly to the underside of the underside of the roofing system. Spray foam insulation installed to a maximum thickness of 17 in. at a nominal 0.5 lb/ft^3 density, while maintaining a minimum 1-1/2 in. clearance between the spray foam insulation and the gypsum board. When spray foam insulation is used, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board installed at 6 in. OC to allow for maximum 3 in. spacing off ends of the gypsum board joints. Gypsum board to be installed using 1-1/4 in. long Type S screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a ceiling damper (Items 5 through 5AC) in the concealed space, no clearance is necessary between damper housing and spray foam insulation. Limited to resilient channels, Item 6 only, no Item 6 alternates. The finished rating when this insulation is used has not been determined.
SES FOAM INC — EasySeal.5, EasySeal ULD

3F. **Foamed Plastic* —** (As alternate to Item 3) — Spray foam insulation applied directly to the underside of the underside of the roofing system. Spray foam insulation installed to a maximum thickness of 11 in. at a nominal 1.0 lb/ft^3 - 2.5 lb/ft^3 density, while maintaining a minimum 7 in. clearance between the spray foam insulation and the gypsum board (Item 7). Spray foam insulation is limited for use with minimum 18 in. deep trusses (Item 2). When spray foam insulation is installed, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board spaced maximum 3 in. away from gypsum butt joints. Gypsum board to be installed using minimum 1-1/4 in. long Type S screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels, as illustrated above. If used with a ceiling damper (Items 5 through 5AC) in the concealed space, no clearance is necessary between damper housing and spray foam insulation. Only for use with item 5 not evaluated for use with alternates to item 5. Only for use with item 6 not evaluated for use with alternates to item 6.
CARLISLE SPRAY FOAM INSULATION — Types SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCX, SealTite Pro No Trim 21, SealTite Pro One Zero, SealTite PRO HFO, Foamsulate Closed Cell, Foamsulate OCX, Foamsulate 70, Foamsulate HFO, and Foamsulate HFO 2.0.

4. **Air Duct* —** For use with **Ceiling Damper*** - Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturer.

5. **Ceiling Damper* —** Nom 20 in. long by 18 in. wide by 2-1/8 in. high, fabricated from galvanized steel. Plenum box maximum size nom. 21 in. long by 18 in. wide by 16 in. high fabricated from either galavanized steel or Classified Air Duct Materials bearing the UL Class 0 or Class 1 rigid air duct material. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 180 sq in. per 100 sq ft of ceiling area.
NAILOR INDUSTRIES INC — Types 0755, 0755A, 0756, 0756D, 0757, 0757D, 0757FP, 0757DFP, 0758, 0759, 0760, 0761, 0762, 0763, CRD5, CRD5D, CRD6, CRD6D, CRD6FP, CRD6DFP.

SAFE AIR DOWCO — 0455, 0455A, 0456, 0456D, 0457, 0457D, 0457-DB, 0457-CB, 0463-FB, 0457-EB, 0463-GB, 0463

5A. **Alternate Ceiling Damper* —** Max plenum box size nom 19 in. long by 19 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.
AIRE TECHNOLOGIES INC — Models: CRD model 50 w/Boot, CRD model 50EA w/Boot, CRD model 55 w/Boot, CRD model 55 EA w/Boot

LLOYD INDUSTRIES INC — Model CRD 50-BT, CRD 50-EA-BT, CRD 55-BT, CRD 55 EA-BT

5B. **Alternate Ceiling Damper* —** Max plenum box size nom 13 in. long by 13 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 50 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.
LLOYD INDUSTRIES INC — Model CRD 50-BT-6, CRD 50-EA-BT-6, CRD 55-BT-6, CRD 55 EA-BT-6, CRD50-ᵂ X-BT-6

5C. **Alternate Ceiling Damper* —** Max size ceiling outlet in plenum box nom 12 in. long by 12 in. wide. Plenum box fabricated from galv steel. Aggregate damper openings shall not exceed 72 sq in. per 100 sq ft of ceiling area. Installed in accordance with the manufacturers installation instructions provided with the damper.
AIRE TECHNOLOGIES INC — Models: CRD model 50 w/Boot, CRD model 50EA w/Boot, CRD model 55 w/Boot, CRD model 55 EA w/Boot

LLOYD INDUSTRIES INC — Model CRD 50-95BT, CRD 50-EA-95BT, CRD 55-95BT, CRD 55 EA-95BT

5D. **Alternate Ceiling Damper* —** Max size ceiling outlet in plenum box nom 16 in. long by 16 in. wide. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.
LLOYD INDUSTRIES INC — Models CRD 50- FGPB-4.2, - 4.2 NI, -6.0, -6.0 NI; CRD50-EA-FGPB-4.2, -4.2 NI, -6.0, -6.0 NI

5E. **Alternate Ceiling Damper* —** Max plenum box size nom 15 in. long by 15 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 72 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.
LLOYD INDUSTRIES INC — Models 45-CRD-LT-BT and 45-CRD-LTD-BT

5F. **Alternate Ceiling Damper* —** Max size ceiling outlet in plenum box nom 10 in. long by 10 in. wide. Plenum box fabricated from galv steel. Aggregate damper openings shall not exceed 50 sq in. per 100 sq ft of ceiling area. Installed in accordance with the manufacturers installation instructions provided with the damper.
LLOYD INDUSTRIES INC — Model 45-LTD-95-BT-4

5G. **Alternate Ceiling Damper* —** Max plenum box size nom 19 in. long by 15 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 96 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.
LLOYD INDUSTRIES INC — Model CRD50-ᵂ X-BT

5H. **Alternate Ceiling Damper* —** Max nom area shall be 324 sq in. Max square size shall be 18 in. by 18 in. Rectangular sizes not to exceed 324 sq in. with a max width of 18 in. Max height of damper shall be 14 in. Aggregate damper openings shall not exceed 162 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Model RD-521

POTTORFF — Model CFD-521

5I. **Alternate Ceiling Damper* —** Max nom area shall be 196 sq in. Max square size shall be 14 in. by 14 in. Rectangular sizes not to exceed 196 sq in. with a max width of 26 in. Max height of damper shall be 7 in. Aggregate damper openings shall not exceed 98 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) not to exceed 144 in.2 shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Model RD-521-BT

POTTORFF — Model CFD-521-BT

5J. **Alternate Ceiling Damper* —** Max nom area shall be 256 sq in. with the length not to exceed 24 in. and the width not to exceed 20 in. Max height of damper shall be 17 in. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Model RD-521-IP, RD-521-NP

POTTORFF — Models CFD-521-IP, CFD-521-NP

5K. **Alternate Ceiling Damper* —** Max nom area shall be 144 sq in. with the length not to exceed 14 in. and the width not to exceed 12 in. Max height of damper shall be 17-7/8 in. Aggregate damper openings shall not exceed 74 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Model RD-521-90, RD-521-NP90

POTTORFF — Models CFD-521-90, CFD-521-90NP

5L. **Alternate Ceiling Damper* —** (Optional) Max nom area shall be 324 sq in. Max square size shall be 18 in. by 18 in. Rectangular sizes not to exceed 324 sq in. with a max width and max length of 18 in. Max round size shall be 18 in. dia. Aggregate damper openings shall not exceed 162 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.
RUSKIN COMPANY — Models CFD7T, CFD7T-END-BT, CFD7T-90-BT, CFD7T-ST-BT, CFD7T-SB, CFD7T-R6-DB, CFD7T-IB6, or CFDR7T

5M. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly. Max nom area shall be 75 sq in. with the length not to exceed 8-9/16 in. and the width not to exceed 8-3/4 in. Max height of damper shall be 9-7/8 in. Aggregate damper openings shall not exceed 38 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturers installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
DELTA ELECTRONICS INC — Models CRD2, GBR-CRD, ITG-CRD

5N. **Alternate Ceiling Damper* —** Max nom area shall be 324 sq in. Max square size shall be 18 in. by 18 in. Rectangular sizes not to exceed 324 sq in. with a max length of 20 in. and a max width of 22 in. Max height of damper shall be 14 in. Aggregate damper openings shall not exceed 154 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturer's installation instructions provided with the damper. An aluminum or steel grille shall be installed in accordance with installation instructions.
UNITED ENERTECH CORP — Type C-S/R-WT or C-S/R-WTP (Max nom area 324 sq. in.) or C-S/R-WTS or C-S/R-WTPS (Max nom area 162 sq. in.)

5O. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly. Max nom area shall be 75 sq in. with the length not to exceed 9-1/4 in. and the width not to exceed 9-3/4 in. Max height of damper shall be 9-7/8 in. Aggregate damper openings shall not exceed 45 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
DELTA ELECTRONICS INC — Model SIG-CRD

5P. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly. Max nom area shall be 131 sq in. with the length not to exceed 11-1/16 in. and the width not to exceed 11-7/8 in. Aggregate damper openings shall not exceed 66 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions.
DELTA ELECTRONICS INC — Model SMT-CRD

5Q. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly. Max nom area shall be 103 sq in. with the length not to exceed 10-1/8 in. and the width not to exceed 10-1/8 in. Aggregate damper openings shall not exceed 52 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
PANASONIC CORPORATION, PANASONIC CORPORATION OF NORTH AMERICA — Model PC-RD05C5

5R. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly. Max nom area shall be 113 sq in. with the length not to exceed 10-1/8 in. and the width not to exceed 11-1/8 in. Aggregate damper openings shall not exceed 57 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Model RDFUWT

5S. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly. Max nom area shall be 79 sq in. with the length not to exceed 10 in. and the width not to exceed 7-15/16 in. Aggregate damper openings shall not exceed 40 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A metallic grille shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Models RDJ1 and RDH

5T. **Alternate Ceiling Damper* —** Max plenum box size nom 19 in. long by 19 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.
METAL-FAB INC — Models MSCD-HC and MRCD-HC

5U. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly. Max nom area shall be 87 sq in. with the length not to exceed 9 in. and the width not to exceed 9-11/16 in. Aggregate damper openings shall not exceed 44 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Model RDMWT

5V. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly. Max nom area shall be 87 sq in. with the length not to exceed 9 in. and the width not to exceed 9-11/16 in. Aggregate damper openings shall not exceed 44 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Model RDMWT2

5W. **Alternate Ceiling Damper* —** Max nom 21 in. long by 18 in. wide, fabricated from galvanized steel. Plenum box max size nom 21 in. long by 18 in. wide by 14 in. high (inner dimension) fabricated from either galvanized steel or min 1 in. thick Listed Duct Board bearing the UL Listing Marking having a min R-Value of 4.3. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 180 sq in. per 100 sq ft of ceiling area.
GREENHECK FAN CORP — Model CRD-1WT

5X. **Alternate Ceiling Damper* —** Max nom 12 in. long by 12 in. wide with an 8 in. diameter damper, fabricated from galvanized steel. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 72 sq in. per 100 sq ft of ceiling area.
GREENHECK FAN CORP — Model CRD-2WT

5Y. **Alternate Ceiling Damper* —** Max 12 in. diameter damper and insulated register box assembly. The maximum size of the register box assembly is nom. 20 in. long by 20 in. wide and 4 in. high fabricated from galv steel. The aggregate area of the register opening(s) through the ceiling membrane shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper assembly installed in accordance with the manufacturers installation instructions.
AIRE TECHNOLOGIES INC — Model 57IB.

5Z. **Alternate Ceiling Damper* —** Max 20 in. long by 16 in. wide by 4 in. high rectangular damper with plenum box assembly. The maximum outer dimensions of the plenum box assembly is 23-1/2 in. long by 19-1/2 in. wide and 17 in. high fabricated from 6pcf, 1-1/2 to 2 in. thick Knauf Air Duct Board M*. The aggregate area of the register opening(s) through the ceiling membrane shall not exceed 160 sq in. per 100 sq ft ceiling area. Damper assembly installed in accordance with the manufacturers installation instructions.
AIRE TECHNOLOGIES INC — Series 58.

5AA. **Alternate Ceiling Damper* —** Max 14 in. long by 14 in. wide and 18 in. high ceiling damper with boot or box assembly, fabricated from galv steel. The aggregate area of the register opening(s) through the ceiling membrane shall not exceed 98 sq in. per 100 sq ft of ceiling area. Damper assembly installed in accordance with the manufacturers installation instructions.
AIRE TECHNOLOGIES INC — Model 51 w/Boot.

5AB. **Alternate Ceiling Damper* —** Max nom 11-1/8 in. long by 13-5/8 in. wide, fabricated from galvanized steel. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 76 sq in. per 100 sq ft of ceiling area.
GREENHECK FAN CORP — Model CRD-310WT

5AC. **Alternate Ceiling Damper* —** Max nom 12-3/8 in. long by 14-1/2 in. wide, fabricated from galvanized steel. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 90 sq in. per 100 sq ft of ceiling area.
GREENHECK FAN CORP — Model CRD-320WT

5AD. **Alternate Ceiling Damper* —** Max 12 in. diameter damper within max 15 in. by 15 in. register box with max 12 in. by 12 in. register opening fabricated from galvanized steel. Aggregate area of the register opening(s) through the ceiling membrane shall not exceed 72 sq. in. per 100 sq. ft. of ceiling area. Damper assembly installed in accordance with the manufacturer's installation instructions.
RUSKIN COMPANY — Model CFD7T-SR

5AE. **Alternate Ceiling Damper* —** Max 12 in. diameter damper and insulated register box assembly. The maximum size of the register box assembly is nom. 20 in. long by 20 in. wide and 4 in. high fabricated from galv steel. The aggregate area of the register opening(s) through the ceiling membrane shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper assembly installed in accordance with the manufacturers installation instructions.
SOUTHWARK METAL MFG CO — Model 800 w/Box

5AF. **Alternate Ceiling Damper* —** Max 20 in. long by 16 in. wide by 4 in. high rectangular damper with plenum box assembly. The maximum outer dimensions of the plenum box assembly are 23-1/2 in. long by 19-1/2 in. wide and 17 in. high fabricated from 6pcf, 1-1/2 to 2 in. thick Knauf Air Duct Board M*. The aggregate area of the register opening(s) through the ceiling membrane shall not exceed 160 sq in. per 100 sq ft ceiling area. Damper assembly installed in accordance with the manufacturers installation instructions.
SOUTHWARK METAL MFG CO — CRD w/DB Box

5AG. **Alternate Ceiling Damper* —** Max 14 in. long by 14 in. wide and 18 in. high ceiling damper with boot or box assembly, fabricated from galv steel. The aggregate area of the register opening(s) through the ceiling membrane shall not exceed 98 sq in. per 100 sq ft of ceiling area. Damper assembly installed in accordance with the manufacturers installation instructions.
SOUTHWARK METAL MFG CO — Model 500 w/Boot, 510 w/Boot, 500 w/Box or 510 w/Box

5AH. **Alternate Ceiling Damper* —** Max nom 10-3/8 in. long by 10-3/8 in. wide, fabricated from galvanized steel. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 54 sq in. per 100 sq ft of ceiling area.

GREENHECK FAN CORP — Model CRD-300WT

6. **Furring Channels —** Resilient channels formed of 25 MSG galv steel, spaced 16 in. OC, installed perpendicular to trusses. When insulations are installed or draped over the resilient channel/gypsum wallboard ceiling membrane, the spacing shall be as described below. Channels secured to each truss with 1-1/4 in. long Type S steel screws. Channels overlapped 4 in. at splices. Channels oriented opposite at wallboard butt joints (spaced 6 in. OC) as shown in the above illustration.
When Type AG-C panels are attached to the resilient channels, the channels may remain at 16 in. OC.

When Type TG-C panels are attached to the resilient channels, the channels are installed at 12 in. OC.

6A. **Steel Framing Members* —** (Not Shown) — As an alternate to Item 6, 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 16 in. OC perpendicular to trusses. When batt insulation (Item 3) is draped over the resilient channel/gypsum board ceiling membrane, the resilient channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to alternating trusses with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to alternating trusses with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75)

6B. **Alternate Steel Framing Members* —** (Not Shown) — Not evaluated with Item 3 (Batts and Blankets). As an alternate to Items 6 or 6A, furring channels and Steel Framing Members as described below.
a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in deep, spaced 16 in OC, perpendicular to trusses. Channels secured to trusses as described in Item b.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the wood trusses (Item 2). Clips spaced at 48" OC and secured to the bottom of the trusses with one 2 in. Coarse Drywall Screw with 1 in. diam washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and tied together with double strand of No. 18 AWG galvanized steel wire. Additional clips are required to hold the Gypsum Butt joints as described in Item 7.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

6C. **Alternate Steel Framing Members* —** (Not Shown) — Not evaluated with Item 3 (Batts and Blankets). As an alternate to Items 6 through 6B, furring channels and Steel Framing Members as described below.
a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-1/2 in. wide by 7/8 in deep, spaced 16 in OC, perpendicular to trusses. Channels secured to trusses as described in Item b.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the wood trusses (Item 2). Clips spaced at 48" OC and secured to the bottom of the trusses with one 2-1/2 in. Coarse Drywall Screw with 1 in. diam washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and tied together with double strand of No. 18 AWG galvanized steel wire. Additional clips are required to hold the Gypsum Butt joints as described in Item 7.
REGUPOL AMERICA — Type SonusClip

7. **Gypsum Board* —** Nom 5/8 in. thick, 48 in. wide, installed with long dimension perpendicular to resilient channels with 1 in. long Type S screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. At end joints, two resilient channels are used, extending a min of 6 in. beyond both ends of the joint. When batt and blanket insulation, Item 3, is draped over the resilient channel/gypsum wallboard ceiling membrane, screws shall be installed at 8 in. OC. When **Steel Framing Members** (Item 6B) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 3 in. on each end. The two support furring channels shall be spaced approximately 3 in. in from end joint. Screw spacing along the gypsum board butt joint and along both additional channels shall be 8 in. OC. Additional screws shall be placed in the adjacent section of gypsum board into the aforementioned 3 in. extension of the extra butt joint channels as well as into the main channel that runs between. Butt joint furring channels shall be attached with one RESILMOUNT Sound Isolation Clip at each end of the channel.
When **Steel Framing Members** (Item 6C) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, an additional single length of furring channel shall be installed and be spaced approximately 3 in. from the butt joint (6 in. from the continuous furring channels) to support the floating end of the gypsum board. Each of these shorter sections of furring channel shall extend one truss beyond the width of the gypsum panel and be attached to the adjacent trusses with one SonusClip at every truss involved with the butt joint.

AMERICAN GYPSUM CO — Types AG-C

GEORGIA-PACIFIC GYPSUM L L C — Type TG-C

7A. **Gypsum Board* —** (As an alternative to Item 7) — For use when no insulation is used. Nom 5/8 in. thick, 48 in. wide gypsum board, installed as described in item 7 with resilient channels (Item 6) spaced 24 in OC.

AMERICAN GYPSUM CO — Type AG-C

8. **Finishing System —** (Not Shown) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum wallboard.

9. **Grille —** Installed in accordance with the installation instructions provided with the ceiling damper

10. **Discrete Products Installed in Air-handling Spaces* —** Automatic Balancing Valve/Damper — (Not Shown - Optional) — For use with item 5L, Ruskin Company's Model CFD7T damper (CABS). Ceiling damper to be provided with plenum box per damper manufacturer's instructions with side outlet only. Entire assembly to be installed into any UL Class 0 or Class 1 flexible air duct in accordance with the instructions provided by the automatic balancing valve/damper manufacturer.
METAL INDUSTRIES INC — Model ABV-4, ABV-5, ABV-6

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2

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DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA

STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
UL ASSEMBLIES - P545

PROJECT NUMBER: 23098

SHEET NUMBER:

G-204

11. **Netting —** (Not shown) Fibrous, woven netting material fastened to underside of each joist with staples, with side joints overlapped.

12. **Netting —** (Not shown) - Non-woven polypropylene fabric fastened to underside of each joist with staples, with side joints overlapped. For use with Type AG-C gypsum boards only.

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

Last Updated on 2023-09-08

UL Product **iQ**®

UL Solutions

Design/System/Construction/Assembly Usage Disclaimer

- 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 Variances

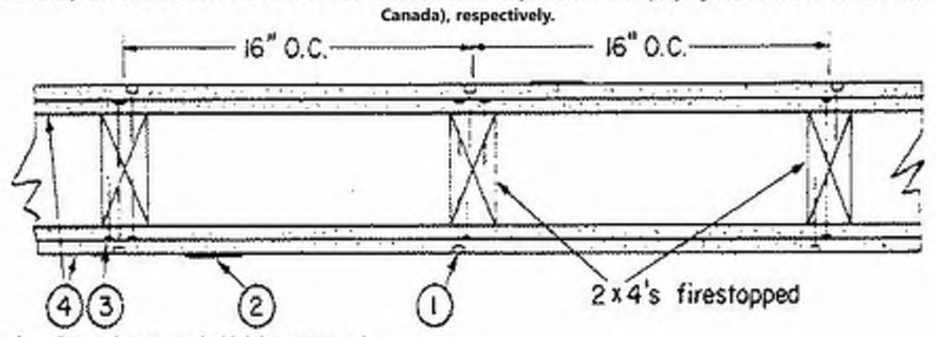
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. **U301**

September 19, 2023

Bearing Wall Rating — 2 Hr.
Finish Rating — 66 Min.
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

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



1. **Nailheads —** Exposed or covered with joint compound.

2. **Joints —** Exposed joints covered with joint compound and paper tape. Joint compound and paper tape may be omitted when square edge boards are used. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with the joints reinforced with paper tape.

3. **Nails —** 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam, 1/4 in. diam heads, and 8d cement coated nails 2-3/8 in. long, 0.113 in. shank diam, 9/32 in. diam heads.

4. **Gypsum Board* —** 5/8 in. thick, two layers applied either horizontally or vertically. Inner layer attached to studs with the 1-7/8 in. nails spaced 6 in. OC. Outer layer attached to studs over inner layer with the 2-3/8 in. long nails spaced 8 in. OC. Vertical joints located over studs. All joints in face layers staggered with joints in base layers. Joints of each base layer offset with joints of base layer on opposite side.
When used in widths other than 48 in., gypsum board to be installed horizontally.

When **Steel Framing Members*** (Item 6 or any alternate clips) are used, base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced max 24 in. OC; face layer attached with 1-5/8 in. long Type S bugle-head steel screws spaced max 12 in. OC.

AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C, AGX-11, LightRoc

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1

CABOT MANUFACTURING ULC — Type X, 5/8 Type X, Moisture Resistant Type X, Gypsum Sheathing Type X, Mold & Mildew Resistant Type X and Mold & Mildew Resistant AR Type X, Type Blueglass Exterior Sheathing

CERTAINTEED GYPSUM INC — Types EGRG, GlasRoc, GlasRoc-2, Type C, Type X-1, Type LWTX

CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, ULX, USGX, WRC, WRX

CERTAINTEED GYPSUM INC — Types LGFC2A, LGFC6A, LGFC-C/A, LGFC-WD, LGLLX, CLLX

GEORGIA-PACIFIC GYPSUM L L C — Types 5, 6, 9, C, DAP, DD, DA, DAPC, DGG, DS, GPFS6, LS, TG-C, Type X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X, GreenGlass Type X, Type LWX, Veneer Plaster Base-Type LWX, Water Rated-Type LWX, Sheathing Type-LWX, Soffit-Type LWX, Type DGLW, Water Rated-Type DGLW, Sheathing Type- DGLW, Soffit-Type DGLW, Type LW2X, Veneer Plaster Base - Type LW2X, Water Rated - Type LW2X, Sheathing - Type LW2X, Soffit - Type LW2X, Type DGL2W, Water Rated - Type DGL2W, Sheathing - Type DGL2W

NATIONAL GYPSUM CO — Types eXP-C, FSK, FSK-C, FSK-G, FSW, FSW-3, FSW-5, FSW-6, FSW-8, FSW-C, FSW-G, FSMR-C, FSL, RSX

NATIONAL GYPSUM CO — Riyadh, Saudi Arabia — Type FR, or WR.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-2, PG-3, PG-3W, PG-4, PG-5, PG-5W, PG-5WS, PG-9, PG-11, PG-C, PGS-WRS, PGI

PANEL REY S A — Types PRC, PRC2, PRX, RHX, MDX, ETX, GREX, GRIX

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1

THAI GYPSUM PRODUCTS PCL — Type C or Type X

UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, ULX, USGX, WRC, WRX

USG BORAL DRYWALL SFZ LLC — Types C, SCX, USGX

USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

4A. **Gypsum Board* —** (As an alternate to Item 4) — Nom 3/4 in. thick, installed as described in Item 4.
CGC INC — Types AR, IP-AR

UNITED STATES GYPSUM CO — Types AR, IP-AR

USG MEXICO S A DE C V — Types AR, IP-AR

4B. **Gypsum Board* —** (As an alternate to Items 4 and 4A) — 5/8 in. thick, 2 ft wide, tongue and groove edge, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 4. Joint covering (Item 2) not required.
CGC INC — Type SHX

UNITED STATES GYPSUM CO — Type SHX

USG MEXICO S A DE C V — Type SHX

4C. **Gypsum Board* —** (As an alternate to Items 4, 4A or 4B — Not Shown) — For Direct Application to Studs Only- For use on one or both sides of the wall as the base layer or one or both sides of the wall as the face layer. Nom 5/8 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 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-12 pan head steel screws, F4j.one at the top of the strip and one at the bottom of the strip. Lead discs or tabs may be used in lieu of or in addition to the lead batten strips or optional at other locations. Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards underneath screw locations prior to the installation of the screws. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Fasteners for face layer gypsum panels (Items 4, 4A or 4B) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 4.
RAY-BAR ENGINEERING CORP — Type RB-LBG.

4D. **Gypsum Board* —** As an Alternate to Item 4 — 5/8 in. thick applied either horizontally or vertically. Inner layers fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. Outer layers fastened to framing with 1-7/8 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths other than 48 in., gypsum board to be installed horizontally. All joints in face layers staggered with joints in base layers. Joints of each base layer offset with joints of base layer on opposite side.
AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C, LightRoc

4E. **Gypsum Board* —** (As an alternate to Items 4 through 4D) — 5/8 in. thick, 4 ft. wide, paper surfaced applied vertically and secured as described in Item 4.
GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board

4F. **Gypsum Board* —** (As an alternate to Item 4) — Not to be used with item 6, 6A, 6B or 6C. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically and secured as described in Item 4.
NATIONAL GYPSUM CO — Type SBWB

4G. **Gypsum Board * —** (As an alternate to Items 4 through 4F) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 4.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types QuietRock ES

4H. **Gypsum Board* —** (As an alternate to Item 4) — Not to be used with item 6, 6A, 6B, or 6C. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically or horizontally and secured as described in Item 4.
CERTAINTEED GYPSUM INC — Type SilentFX

4I. **Gypsum Board* —** (As an alternate to item 4) — 5/8 in. thick, two layers applied either horizontally or vertically. Inner layer attached to studs with 1-1/4 in. long Type W steel screws spaced 8 in. OC. Outer layer attached to studs over inner layer with 2 in. long Type W steel screws spaced 8 in. OC offset 6 in. from base layer. Vertical joints located over studs. Vertical and horizontal joints between inner and outer layers staggered. Outer layer joints covered with joint tape and compound, screwheads covered with joint compound. As an alternate to the joint compound nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced. Wallboard other than 48 in. wide must be applied horizontally. The SoundBreak XP Type X Gypsum Board is not to be used with Item 6, 6A, 6B, or 6C.
NATIONAL GYPSUM CO — Types eXP-C, FSK, FSK-C, FSK-G, FSW, FSW-3, FSW-5, FSW-6, FSW-C, FSW-G, FSMR-C, SBWB

4J. **Gypsum Board* —** (As an alternate to Items 4) — For Direct Application to Studs Only- For use as the base layer or as the face layer. Nom 5/8 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 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, max 5/16 in. diam by max 0.140 in. thick. compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Fasteners for face layer gypsum panels (Items 4, 4A or 4B) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 4.
MAYCO INDUSTRIES INC — "X-Ray Shielded Gypsum"

4K. **Gypsum Board* —** For use with Item 7 — 5/8 in. thick, two layers applied vertically. Inner layer attached to resilient channels with 1 in. long steel screws spaced 8 in. OC. Outer layer attached to resilient channels over inner layer with 1-5/8 in. long steel screws spaced 8 in. OC. All joints in face layers staggered with joints in base layers. Joints of each base layer offset with joints of base layer on opposite side. Insulation, Items 8 or 9 is required.
AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C, AGX-11

NATIONAL GYPSUM CO — Types eXP-C, FSK, FSK-C, FSK-G, FSW, FSW-3, FSW-5, FSW-6, FSW-C, FSW-G, FSMR-C, SBWB.

4L. **Gypsum Board* —** (As an alternate to Items 4) — For Direct Application to Studs Only- For use as the base layer or as the face layer. Nom 5/8 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 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten 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 S-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 0.085 in. thick. compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Fasteners for face layer gypsum panels (Items 4, 4A or 4B) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 4.
RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

4M. **Gypsum Board* —** (As an alternate to Item 4) — 5/8 in. thick, 4 ft. wide, two layers applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Secured as described in Item 4.
CERTAINTEED GYPSUM INC — 5/8" Easi-Lite Type X

4N. **Gypsum Board* —** (As an alternate to 5/8 in. Type FSW in Items 4 or 4I) — Nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Two layers of 5/16 in. for every single layer of 5/8 in. gypsum board described in Item 4 or 4I. Horizontal joints on the same side need not be staggered. Inner layer of each double 5/16 in. layer attached with fasteners, as described in item 4 or 4I, spaced 24 in. OC. Outer layer of each double 5/16 in. layer attached per Item 4 or 4I.
NATIONAL GYPSUM CO — Type FSW

4O. **Wall and Partition Facings and Accessories* —** (As an alternate to Items 4 through 4N) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 4.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527

4P. **Gypsum Board* —** (As an alternate to Item 4) — 5/8 in. thick, two layers applied either horizontally or vertically. Inner layer attached to studs with 1-1/4 in. long Type W steel screws spaced 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. Outer layer attached to studs over inner layer with 1-7/8 in. long Type W steel screws spaced 10 in. OC offset 5 in. from base layer with the last two screws 4 and 1 in. from the edges of the board. Vertical joints located over studs. Vertical and horizontal joints between inner and outer layers staggered. Outer layer joints covered with joint tape and compound, screwheads covered with joint compound. When used in widths other than 48 in., gypsum panels are to be installed horizontally.
CERTAINTEED GYPSUM INC — Type LGFC6A, Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX

4Q. **Gypsum Board* —** (As an alternate to Item 4. For use with Item 13) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board UL Classified for Fire Resistance (CKNX) eligible for use in Design Nos. U305 and L501 or G512. Two layers, applied either horizontally or vertically, and screwed to studs with 1-5/8 in. long Type W coarse thread steel screws at 8 in. OC at perimeter and in the field with the last two screws 4 and 3/4 in. from the edges of the board when applied as the base layer. For the face layer, screw length to be increased to 2-1/2 in. All joints in face layers staggered with joints in base layers. When used in widths other than 48 in., gypsum panels are to be installed horizontally.

4R. **Gypsum Board* —** As an Alternate to Item 4 — 5/8 in. thick applied either horizontally or vertically. Inner layers fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. Outer layers fastened to framing with 1-7/8 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths other than 48 in., gypsum board to be installed horizontally. All joints in face layers staggered with joints in base layers. Joints of each base layer offset with joints of base layer on opposite side.

CERTAINTEED GYPSUM INC — Types EGRG, GlasRoc, GlasRoc-2, Type C, Type X-1, Easi-Lite Type X, SilentFX

4S. **Gypsum Board* —** (As an alternate to Item 4. For use with Item 13A) — 5/8 in. thick, two layers applied vertically. Inner layer attached to studs with the 1-7/8 in. nails spaced 6 in. OC. Outer layer attached to studs over inner layer with the 2-3/8 in. long nails spaced 8 in. OC. Vertical joints located over studs. All joints in face layers staggered with joints in base layers. Joints of each base layer offset with joints of base layer on opposite side.
AMERICAN GYPSUM CO — Types AGX-1

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1

CABOT MANUFACTURING ULC — "5/8 Type X"

CGC INC — Type SCX

PANEL REY S A — Type PRX

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1

THAI GYPSUM PRODUCTS PCL — Type X

UNITED STATES GYPSUM CO — Type SCX

USG BORAL DRYWALL SFZ LLC — Types SCX

USG MEXICO S A DE C V — Type SCX

4T. **Gypsum Board* —** (As an alternate to Item 4. For use with Item 13B) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 4 above. Two layers applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. All joints in outer layers staggered with joints in inner layers. Inner layer attached to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Outer layer attached to studs over inner layer with the 2-1/2 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC.

4U. **Gypsum Board* —** (As an alternate to Item 4. For use with Item 13C) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 4 above. Two layers applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. All joints in outer layers staggered with joints in inner layers. Inner layer attached to studs with 1-1/4 in. long Type W screws spaced 8 in. OC at perimeter and in the field. Outer layer attached to studs over inner layer with 1-7/8 in. long Type W screws spaced 8 in. OC.

5. **Molded Plastic* —** Not Shown, Optional — Solid vinyl siding mechanically secured over the outer layer to framing members in accordance with manufacturer's recommended installation details.
ALSIDE, DIV OF ASSOCIATED MATERIALS INC

GENTEK BUILDING PRODUCTS LTD

VYTEC CORP

6. **Steel Framing Members* —** (Optional, Not Shown) — 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 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Wallboard attached to furring channels as described in Item 4.

B. **Steel Framing Members* —** Used to attach furring channels (Item 6a) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75)

6A. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 6) — 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 b. 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 4.

B. **Steel Framing Members* —** Used to attach furring channels (Item 6Aa) to studs. Clips spaced 48 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

6B. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 6) — 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 6Bb. 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 4.

B. **Steel Framing Members* —** Used to attach furring channels (Item 6Ba) to studs. Clips spaced 48 in. OC., and secured to studs with 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

6C. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 6) —Resilient channels and Steel Framing Members as described below:
a. **Resilient Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 4.

b. **Steel Framing Members* —** Used to attach resilient channels (Item 6Ca) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 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.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

6D. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 6) — Used as an alternate method to attach resilient channels to wall studs. A resilient sound isolation accessory shall be used at each attachment point of the resilient channels and spaced max 24 in. O.C. Channel ends butted and centered under the structural members and attached with one accessory at each end. Additional accessories used to hold resilient channels that support the gypsum board end joints. The accessory envelops the mounting edge of the resilient channel. The accessory and resilient channel are fastened to the structural members with the screws supplied with the accessory and per the accessory manufacturer's installation instructions.
PAC INTERNATIONAL L L C — Type RC-1 Boost

6E **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 6) — Furring channels and Steel Framing Members as described below:
a **Furring Channels —** Formed of No. 25 MSG galv steel. 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 4.

b **Steel Framing Members* —** Used to attach furring channels (Item 6Ea) to studs. Clips spaced maximum 48 in. OC. Clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips.

CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

7. **Furring Channel —** Optional — Not Shown — For use on one side of the wall with Item 4K — Resilient channels, 25 MSG galv steel, spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws. When resilient channels are used, insulation, Item 8 or 9 is required.

8. **Batts and Blankets* —** Required for use with resilient channels, Item 7, min. 3 in. thick mineral wool batts, placed to fill interior of wall, attached to the nom 4 in. face of the studs with staples placed 24 in. OC.
ROCKWOOL — Type SAFEnSOUND, min. 1.8 pcf.

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2

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DAVID EUGENE HENDRIKSE
NUMBER A-7305
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
UL ASSEMBLIES - P545 / U301

PROJECT NUMBER: 23098

SHEET NUMBER:
G-205

THERMAFIBER INC — Type SAFB, SAFB FF

9. **Batts and Blankets* —** (As an alternate to Item 8) — Min. 3 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, friction-fitted to fill the stud cavities. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

9A. **Fiber, Sprayed* —** (Optional) — As an alternate to Batts and Blankets (Item 8), Required for use with resilient channels, Item 7. Not for use with Item 6, 6A, 6B, or 6C. — Spray applied mineral wool insulation. The fiber is applied with adhesive, at a minimum density of 4.0 pcf, to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See Fiber, Sprayed (CCAZ).
AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus

10. **Wall and Partition Facings and Accessories* —** (Optional, Not Shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-500 or QR-510

11. **Cementitious Backer Units* —** (Optional Item Not Shown — For Use On Face Of 2 Hr Systems With All Standard Items Required) — 7/16 in., 1/2 in., 5/8 in., 3/4 in. or 1 in. thick, min. 32 in. wide. Applied horizontally or vertically with vertical joints centered over studs. Face layer fastened over gypsum board to studs and runners with cement board screws of adequate length to penetrate stud by a minimum of 3/8 in. for steel framing members, and a minimum of 3/4 in. for wood framing members spaced a max of 8 in. OC.
NATIONAL GYPSUM CO — Type DuraBacker, PermaBase, DuraBacker Plus, or PermaBase Plus

12. **Wall and Partition Facings and Accessories* —** (Optional, Not Shown) - When the Wall Assembly is used as an External Wall, on the External side of the wall one of the following Wall and Partition and Facing Accessories may be used, refer to items (A) to (C) below.
A. **Non Insulated system with metal channels —** Install moisture barrier over the Gypsum Board Item 4 and Install Acry Metal Channels vertically at a horizontal spacing not greater than 24 inches OC., over the moisture barrier. Acry Metal Channels attached through the moisture barrier and the Gypsum Board to the Wood Studs using fasteners specified by the manufacturer and fasteners spaced max., 24 in. OC. Install Acrytec Panels on Acry Metal Channels using 1-1/4" long corrosion coated stainless steel screws spaced at a max spacing of 24 inches OC, along with manufacturer's approved adhesive (3M 540 or Tremco Vulcum 116). Adhesive to be applied in a zigzag pattern along every channel. Joint treatment in between panels shall be Tremco illmod 600 pre compressed polyurethane foam sealant.

B. **Insulated system with metal channels —** Install moisture barrier over the Gypsum Board Item 4. Install galvanized Z girt channels specified by the manufacturer over the moisture barrier and the Gypsum Board Item 4. Z girt channels to be installed horizontally at a max. spacing of 24" OC. Z girt channels attached through the Gypsum Board and the moisture barrier to the wood studs with screws provided by the manufacturer at a max spacing of 24 inches OC. Install mineral wool insulation between the Z girts. Maximum thickness of mineral wool insulation not to exceed 6 in. As per manufacturer's instructions install Acry Metal Channels vertically over the Z girts at a max horizontal spacing of 24 in. OC. Acrytec Panels installed on Acry channel with 1-1/4" long corrosion coated stainless steel screws at a max spacing of 24 in. OC, along with manufacturers approved adhesive (3M 540 or Tremco Vulcum 116). Adhesive to be applied in a zigzag pattern along every channel. Joint treatment in between panels to be Tremco illmod 600 pre compressed polyurethane foam sealant.

C. **Non insulated wood strapping system —** Install moisture barrier over the Gypsum Board Item 4 and Install 1" x 3" wood strapping vertically at a horizontal spacing not greater than 24 inches OC., over the moisture barrier. 1" x 3" wood strapping attached through the moisture barrier and the Gypsum Board to the Wood studs using fasteners specified by the manufacturer and fasteners spaced max., 24 in. OC. Acrytec Panels to be installed on the 1" x 3" wood strapping using manufacturers approved stainless steel fasteners spaced at maximum 24 inches OC along with Tremco Vulcum 116 adhesive applied in a zigzag pattern along every wood strap. Joint treatment in between panels to be Tremco illmod 600 pre compressed polyurethane foam sealant.

D. **Insulated Wood Strapping System —** Install moisture barrier over the Gypsum Board Item 4. Install Extruded Polystyrene Insulation over moisture barrier and the Gypsum Board Item 4, max thickness of insulation not to exceed 4 inches. Install 1" x 3" wood strapping vertically at a horizontal spacing not greater than 24 inches OC. Wood strapping attached through the Insulation, the Gypsum Board and moisture barrier to the Wood Studs using fasteners specified by the manufacturer and fasteners spaced max. 24 in. OC. Acrytec Panels to be installed over the wood strapping using manufacturers approved stainless steel fasteners at a max spacing of 24 in. OC and Tremco Vulcum 116 adhesive applied in a zigzag pattern along every wood strap. Joint treatment in between panels to be Tremco illmod 600 pre compressed polyurethane foam sealant.

ACRYTEC PANEL INDUSTRIES — Nominal 5/8 inch thick Acrytec Panel.

UL Product **iQ**®

UL Solutions

Design/System/Construction/Assembly Usage Disclaimer

- 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 Variances

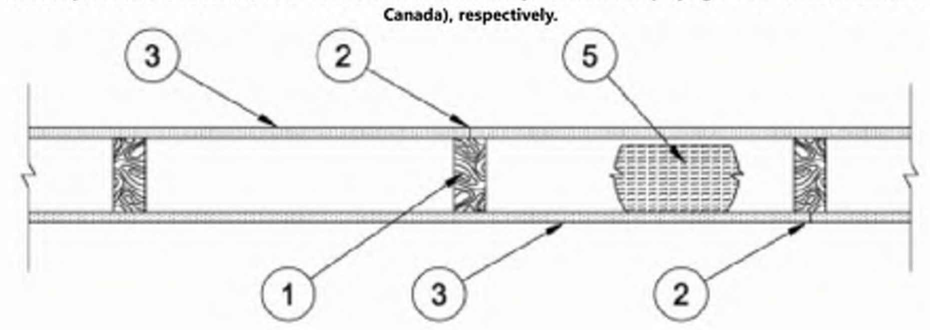
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. **U305**

September 19, 2023

Bearing Wall Rating — 1 Hr
Finish Rating — See Items 3, 3A, 3D, 3E, 3F, 3G, 3H, 3J and 3L.
STC Rating - 56 (See Item 9)
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

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



NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSW-C (finish rating 20 min), Type FSMR-C, Type FSW-6 (finish rating 20 min), Type FSL (finish rating 24 min), Type FSW-8, Type FSLX (finish rating 21 min), Type RSX (finish rating 26 min).

NATIONAL GYPSUM CO — Riyadh, Saudi Arabia — Type FR, or WR.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-2 (finish rating 20 min), PG-3 (finish rating 20 min), Types PG-3W, PG-5W (finish rating 20 min), Type PG-4 (finish rating 20 min), Type PG-6 (finish rating 23 min), Types PG-3WS, PG-5WS, PGS-WRS (finish rating 20 min), Types PG-5, PG-9 (finish rating 26 min), PG-11 PG-13 (Nails increased to 2 in.), Type PG-C or PGI (finish rating 26 min)

PANEL REY S A — Type ARX, GREX, GRIX, PRX, PRC, PRC2; Types RHX, Guard Rey, MDX, ETX (finish rating 22 min), PRX2 (finish rating 21 min)

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1 (finish rating 26 min)

THAI GYPSUM PRODUCTS PCL — Type C, Type X (finish rating 26 min)

UNITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type FRX-G (finish rating 29 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX (finish rating 24 min), Type SGX (finish rating 24 min), Type ULX (finish rating 22 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type ULIX (finish rating 20 min)

USG BORAL DRYWALL SFZ LLC — Type SGX (finish rating 24 min).

USG MEXICO S A DE C V — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), SCX (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type ULX (finish rating 22 min)

3A. **Gypsum Board* —** (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.

AMERICAN GYPSUM CO — Types AGX-1 (finish rating 25 min.), M-Glass (finish rating 25 min.), AG-C (finish rating 25 min.), LighttRoc (finish rating 25 min.)

CERTAINTEED GYPSUM INC — Type C, Type X-1 (finish rating 26 min), Type EGRG or GlasRoc, LWTX.

CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SCX (finish rating 24 min), Type SHX (finish rating 24 min), Type WRC (finish rating 24 min), Type WRX (finish rating 24 min)

NATIONAL GYPSUM CO — Type FSW (finish rating 24 min)

UNITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type SCX (finish rating 24 min), Type SGX (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type FRX-G (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min)

USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX (finish rating 24 min).

USG MEXICO S A DE C V — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX, Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min)

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES (finish rating 20 min)

3J. **Gypsum Board* —** (As an alternate to Item 3) — 5/8 in. thick paper surfaced applied vertically or horizontally. Gypsum panels secured with 1-1/4 in. Type W coarse thread gypsum panel steel screws spaced a maximum of 12 in. OC.
CERTAINTEED GYPSUM INC — Type SilentFX

3K. **Gypsum Board* —** (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 8 in. OC with the last screw 1 in. from the edge of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.
NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSW-C (finish rating 20 min), Type FSMR-C, Type FSW-6 (finish rating 20 min), Type FSL (finish rating 24 min).

3L. **Gypsum Board* —** (As an alternate to Item 3) — For Direct Application to Studs Only — Nom 5/8 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 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, max 5/16 in. diam by max 0.140 in. thick, compression fitted or adhered over the screw heads. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D".
MAYCO INDUSTRIES INC — "X-Ray Shielded Gypsum"

3M. **Gypsum Board* —** (As an alternate to Items 3) — For Direct Application to Studs Only — For use as the base layer or as the face layer. Nom 5/8 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 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten 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 S-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 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Fasteners for face layer gypsum panels (Items 4, 4A or 4B) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 4.
RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

3N. **Gypsum Board* —** (As an alternate to Item 3) — 5/8 in. thick, 4 ft. wide, applied horizontally or vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Secured as described in Item 3 or 3A.
CERTAINTEED GYPSUM INC — Easi-Lite Type X (finish rating 24 min), Easi-Lite Type X-2 (finish rating 24 min)

3O. **Wall and Partition Facings and Accessories* —** (As an alternate to Item 3, Not Shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint compound.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527 (finish rating 24 min).

3P. **Gypsum Board* —** (As an alternate to Item 3, Not Shown) — Two layers nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by wood studs. Horizontal joints on the same side between face and base layers need not be staggered. Base layer gypsum panels fastened to studs with 1-1/4 in. long drywall nails spaced 8 in. OC. Face layer gypsum panels fastened to studs with 1-7/8 in. long drywall nails spaced 8 in. OC starting with a 4" stagger.
NATIONAL GYPSUM CO — Type FSW (finish rating 25 min)

3Q. **Gypsum Board* —** (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.
CERTAINTEED GYPSUM INC — Type LGFC6A (finish rating 21 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX

3R. **Gypsum Board* —** (As an alternate to Item 3. For use with Item 5H) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 3 above. Applied either horizontally or vertically, and screwed to panels with 1-5/8 in. long Type W coarse thread steel screws at 8 in. OC at perimeter and in the field with the last two screws 4 and 3/4 in. from the edges of the board when applied as the base layer. When used in widths other than 48 in., gypsum panels are to be installed horizontally.

13. **Foamed Plastic* —** (Optional, Not Shown - For use with Item 4Q) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.
SES FOAM INC — Nexseal™ 2.0 or Nexseal™ 2.0 LE Spray Foam and Sucraseal Spray Foam. For use in Bearing and Non-Load Bearing Walls.

13A. **Foamed Plastic* —** (Optional, Not Shown - For use with Item 4S) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.
HOLCIM SOLUTIONS AND PRODUCTS US, LLC — Types GacoEZSpray F4500, GacoProFill FR6500R, Gaco 052N, GacoOnePass F1850, GacoOnePass Low GWP F1880, and Gaco WallFoam 183M.

13B. **Foamed Plastic* —** (Optional, Not Shown - For use with Item 4T) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.
CARLISLE SPRAY FOAM INSULATION — Types SealTite ONE, SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCX, SealTite Pro No Trim 21, SealTite Pro One Zero, Foamsulate Closed Cell, Foamsulate OCX, Foamsulate 70, and Foamsulate HFO.

13C. **Foamed Plastic*** - (Optional, Not Shown – For use with Item 4U) - Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.

BASF CORP – Types Enertite® NM, Enertite® G, FE178®, Spraytite® 178, Spraytite® 81206, Walltite® 200, Walltite® US , Walltite® US-N, Walltite® HP+, Spraytite® Comfort XL, and Walltite® XL

14. **Foamed Plastic* —** (Optional, Not Shown - For use over Gypsum Board, Item 4) - Polyisocyanurate foamed plastic boards, any thickness applied vertically with vertical joints located over studs. May be used with Molded Plastic, Item 5 or any exterior facing, as authorized by the Authority Having Jurisdiction and installed in accordance with the manufacturer's installation instructions.
HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — "Xci Class A", "Xci 286", "Xci Foil (Class A)", "Xci CG", "Xci Foil", "Xci CG NH", "Xci Foil NH"

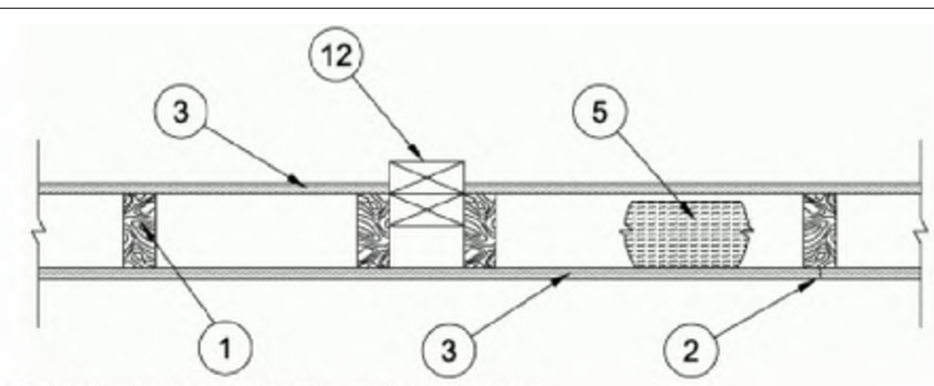
15. **Building Units* —** (Optional, Not Shown - For use over Gypsum Board, Item 4) Polyisocyanurate composite foamed plastic boards, any thickness, applied vertically with vertical joints located over studs. May be used with Molded Plastic, Item 5 or any exterior facing, as authorized by the Authority Having Jurisdiction and installed in accordance with the manufacturer's installation instructions.
HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — "Xci NB", "Xci Ply"

16. **Building Units –** (Optional Item Not Shown – For use over Gypsum Board, Item 4) 1 in., 2 in. or 3 in. thick, 4 ft. wide – Applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with wafer head screws of adequate length to penetrate framing by a minimum of of ¾ in., spaced a max 8 in. o.c.

NATIONAL GYPSUM CO – Type PBCI

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

Last Updated on 2023-09-19



1. **Wood Studs —** Nom 2 by 4 in. spaced 16 in. OC max, effectively firestopped.

2. **Joints and Nail-Heads —** Joints covered with joint compound and paper tape. Joint compound and paper tape may be omitted when square edge boards are used. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with the joints reinforced with paper tape. Nailheads exposed or covered with joint compound.

3. **Gypsum Board* —** 5/8 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths other than 48 in., gypsum panels are to be installed horizontally. For an alternate method of attachment of gypsum panels, refer to Items 6 through 6F, **Steel Framing Members***.
When Items 6, 6B, 6C, 6D, 6E, or 6F, **Steel Framing Members***, are used, gypsum panels attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC.

When Item 6A, **Steel Framing Members***, is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC. All joints in face layers staggered with joints in base layers. One layer of gypsum board attached to opposite side of wood stud without furring channels as described in Item 3.

When Item 7, resilient channels are used, 5/8 in. thick, 4 ft wide gypsum panels applied vertically. Screw attached furring channels with 1 in. long, self-drilling, self-tapping Type S or S-12 steel screws spaced 8 in. OC, vertical joints located midway between studs.

AMERICAN GYPSUM CO — Types AGX-1(finish rating 23 min.), M-Glass (finish rating 23 min.), Type AGX-11 (finish rating 26 min), Type AGX-12 (finish rating 22 min), Type LightRoc (finish rating 23 min.) or Type AG-C

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1 (finish rating 24 min)

CABOT MANUFACTURING ULC — Type X (finish rating 22 min), 5/8 Type X, Moisture Resistant Type X, Gypsum Sheathing Type X, Mold & Mildew Resistant Type X and Mold & Mildew Resistant AR Type X, Type Blueglass Exterior Sheathing

CERTAINTEED GYPSUM INC — Type C, Type X-1 (finish rating 26 min); Type EGRG or GlasRoc (finish rating 23 min), GlasRoc-2, Type Habito (finish rating 26 min), Type LWTX (finish rating 18 min), Type LGFC6A (finish rating 34 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX (finish rating 21 min), Type CLLX (finish rating 24 min)

CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SCX (finish rating 24 min), Type SHX (finish rating 24 min), Type ULX (finish rating 22 min), Type WRC (finish rating 24 min), Type WRX (finish rating 24 min), Type ULIX (finish rating 20 min)

GEORGIA-PACIFIC GYPSUM L L C — Type 5 (finish rating 26 min), Type 6 (finish rating 23 min), Type 9 (finish rating 26 min), Type C (finish rating 26 min), Type DGG (finish rating 20 min), Type GPFS1 (finish rating 20 min), Type GPFS2 (finish rating 20 min), Type GPFS6 (finish rating 26 min), Type DS, Type DAP, Type DD (finish rating 20 min), Type DA, Type DAPC, Type LS (finish rating 23 min), Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, Type LWX (finish rating 22 min), Veneer Plaster Base-Type LWX (finish rating 22 min), Water Rated-Type LWX (finish rating 22 min), Sheathing Type-LWX (finish rating 22 min), Soffit-Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Water Rated-Type DGLW (finish rating 22 min), Sheathing Type- DGLW (finish rating 22 min), Soffit-Type DGLW (finish rating 22 min), Type LWX (finish rating 22 min), Type LW2X (finish rating 22 min), Veneer Plaster Base - Type LW2X (finish rating 22 min), Water Rated - Type LW2X (finish rating 22 min), Sheathing - Type LW2X (finish rating 22 min), Soffit - Type LW2X (finish rating 22 min), Type DGL2W (finish rating 22 min), Water Rated - Type DGL2W (finish rating 22 min), Sheathing - Type DGL2W (finish rating 22 min)

3B. **Gypsum Board* —** (As an alternate to Item 3) — Nom 3/4 in. thick, installed with 1-7/8 in. long cement coated nails as described in Item 3 or 1-3/8 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A.
CGC INC — Types AR, IP-AR

UNITED STATES GYPSUM CO — Types AR, IP-AR

USG MEXICO S A DE C V — Types AR, IP-AR

3C. **Gypsum Board* —** (As an alternate to Items 3, 3A and 3B) — 5/8 in. thick, 2 ft wide, tongue and groove edge, applied horizontally to one side of the assembly. Installed with 1-7/8 in. long cement coated nails as described in Item 3 or 1-1/4 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A. Joint covering (Item 2) not required.
CGC INC — Type SHX

UNITED STATES GYPSUM CO — Type SHX

USG MEXICO S A DE C V — Type SHX

3D. **Gypsum Board* —** (As an alternate to Items 3, 3A, 3B, or 3C — Not Shown) — For Direct Application to Studs Only- Nom 5/8 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 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs or tabs may be used in lieu of or in addition to the lead batten strips or optional at other locations. Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards underneath screw locations prior to the installation of the screws. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
RAY-BAR ENGINEERING CORP — Type RB-LBG (finish rating 24 min)

3E. **Gypsum Board* —** (As an alternate to Items 3, 3A, 3B, 3C, and 3D) — 5/8 in. thick gypsum panels, with square edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last 2 screws 1 and 4 in. from edge of board or nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.
GEORGIA-PACIFIC GYPSUM L L C — Type DGG (finish rating 20 min), GreenGlass Type X (finish rating 23 min)

3F. **Gypsum Board* —** (As an alternate to Items 3, 3A, 3B, 3C, 3D, and 3E) — 5/8 in. glass-mat faced with square edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC around the perimeter and in the field with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Nails shall be placed 1 inch and 3 inch from horizontal joints and 7 inch OC thereafter.
CGC INC — Type USGX (finish rating 22 min)

UNITED STATES GYPSUM CO — Type USGX (finish rating 22 min.)

USG BORAL DRYWALL SFZ LLC — , Type USGX (finish rating 22 min.)

USG MEXICO S A DE C V — Type USGX (finish rating 22 min.)

3G. **Gypsum Board* —** (As an alternate to Items 3 through 3F) — 5/8 in. thick paper surfaced applied vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.
GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board (finish rating 27 min)

3H. **Gypsum Board* —** (As an alternate to Items 3) — Not to be used with items 6 or 7. 5/8 in. thick paper surfaced applied vertically only. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.
NATIONAL GYPSUM CO — Type SBWB

3I. **Gypsum Board* —** (As an alternate to Items 3 through 3H, Not Shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint compound.

3S. **Gypsum Board* —** 3/4 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels secured as described in Item 3 with nail length increased to 2 in.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-13

3T. **Wall and Partition Facings and Accessories* —** (As an alternate to 5/8 in. thick board as outlined in Item 3) — Nominal 1-3/8 in. thick, 4 ft wide panels, applied vertically or horizontally. Fastened with #6 x 2 in. long drywall screws spaced 8 in. OC along the perimeter and 12 in. OC in the field.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 545

3U. **Gypsum Board* —** (As an alternate to Item 3 - For use with Foamed Plastic products, Item 5J) — 5/8 in. thick, 4 ft. wide, applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.
AMERICAN GYPSUM CO — Types AGX-1

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1

CABOT MANUFACTURING ULC — Type X

CERTAINTEED GYPSUM INC — Type X

CGC INC — Type SCX

PANEL REY S A — Type ARX, PRX

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1

THAI GYPSUM PRODUCTS PCL — Type X

UNITED STATES GYPSUM CO — Types SCX and SGX

USG BORAL DRYWALL SFZ LLC — Types SCX and SGX

USG MEXICO S A DE C V — Type SCX

3V. **Gypsum Board* —** (As an alternate to Item 3. For use with Item 5K) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 3 above. Applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field.

3W. **Gypsum Board* —** (As an alternate to Item 3. For use with Item 5L) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 3 above. Applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1-1/4 in. long Type W screws spaced 8 in. OC at perimeter and in the field.

4. **Steel Corner Fasteners —** (Optional) — For use at wall corners. Channel shaped, 2 in. long by 1 in. high on the back side with two 1/8 in. wide cleats protruding into the 5/8 in. wide channel, fabricated from 24 gauge galv steel. Fasteners applied only to the end or cut edge (not along tapered edges) of the gypsum board, no greater than 2 in. from corner of gypsum board, max spacing 16 in. OC. Nailed to adjacent stud through tab using one No. 6d cement coated nail per fastener. Corners of wall board shall be nailed to top and bottom plate using No. 6d cement coated nails.

5. **Batts and Blankets* —** (Optional — Required when Item 6A is used (RC-1)) — Glass fiber or mineral wool insulation. Placed to completely or partially fill the stud cavities. When Item 6A is used, glass fiber or mineral wool insulation shall be friction-fitted to completely fill the stud cavities.
CERTAINTEED CORP

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:

1	12/22/2023	Response to City Comments
2	01/19/2024	Addendum #2

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DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA

STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7365
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
UL ASSEMBLIES - U301 / U305

PROJECT NUMBER: 23098

SHEET NUMBER:
G-206

JOHNS MANVILLE

KNAUF INSULATION LLC

MANSON INSULATION INC

ROCKWOOL — Types Acoustical Fire Batts and Type AFB, min. density 1.69 pcf / 27.0 kg/m³

ROCKWOOL MALAYSIA SDN BHD — Type Acoustical Fire Batts

ROCK WOOL MANUFACTURING CO — Delta Board

THERMAFIBER INC — Type SAFB, SAFB FF

5A. **Fiber, Sprayed*** — (Not Shown — Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft³. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft³, in accordance with the application instructions supplied with the product. When Item 6B is used, Fiber, Sprayed shall be INS735, INS745, INS750LD, INS765LD, INS773LD or SANCTUARY.

Applegate Greenfiber Acquisition LLC — Insulmax and SANCTUARY for use with wet or dry application. INS515LD and INS541LD are to be used for dry application only

5B. **Fiber, Sprayed*** — (Not Shown - Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.
NU-WOOL CO INC — Cellulose Insulation

5C. **Batts and Blankets*** — Required for use with resilient channels, Item 7, 3 in. thick mineral wool batts, friction-fitted to fill interior of wall.
THERMAFIBER INC — Type SAFB, SAFB FF

5D. **Glass Fiber Insulation** — (As an alternate to Item 5C) — 3 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, friction-fitted to fill the interior of the wall. See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

5E. **Batts and Blankets*** — (Required for use with Wall and Partition Facings and Accessories, Item 3D) — Glass fiber insulation, nom 3-1/2 in. thick, min. density of 0.80 pcf, with a flame spread of 25 or less and a smoke developed of 50 or less, friction-fitted to completely fill the stud cavities. See Batts and Blankets Category (BKNV) for names of manufacturers.

5F. **Fiber, Sprayed*** — (Optional, Not Shown — Not for use with Items 6, 6A, 6B, 6C, or 6D) — As an alternate to Batts and Blankets (Item 5) and Item 5A - Spray applied granulated mineral fiber material. The fiber is applied with adhesive, at a minimum density of 4.0 pcf, to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See **Fiber, Sprayed** (CCAZ).
AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus

5G. **Fiber, Sprayed*** — (Optional, Not Shown — Not for use with Items 6, 6A, 6B, 6C, or 6D). — As an alternate to Batts and Blankets (Item 5) and Item 5A - Brown Colored Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed stud cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft³.
INTERNATIONAL CELLULOSE CORP — Celbar-RL

5H. **Foamed Plastic*** — (Optional -For use with Item 3R) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.
SES FOAM INC — Nexseal™ 2.0 or Nexseal™ 2.0 LE Spray Foam and Sucraseal Spray Foam.

5I. Deleted.

5J. **Foamed Plastic*** — (Optional, Not Shown - For use with Item 3U) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.
HOLCIM SOLUTIONS AND PRODUCTS US, LLC — Types GacoEZSpray F4500, GacoProFill FR6500R, Gaco 052N, GacoOnePass F1850, GacoOnePass Low GWP F1880, and Gaco WallFoam 183M

5K. **Foamed Plastic*** — (Optional, Not Shown - For use with Item 3V) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.
CARLISLE SPRAY FOAM INSULATION — Types SealTite ONE, SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCX, SealTite Pro No Trim 21, SealTite Pro One Zero, Foamsulate Closed Cell, Foamsulate OCX, Foamsulate 70, and Foamsulate HFO.

5L. **Foamed Plastic*** - (Optional, Not Shown – For use with Item 3W) - Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.

BASF CORP – Types Enertite® NM, Enertite® G, FE178®, Spraytite® 178, Spraytite® 81206, Walltite® 200, Walltite® US, Walltite® US-N, Walltite® HP+, Spraytite® Comfort XL, and Walltite® XL.

6. **Steel Framing Members*** — (Optional, Not Shown) — 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 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members*** — Used to attach furring channels (Item 6a) to studs. Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75)

6A. **Steel Framing Members*** — (Optional, Not Shown) — Furring channels and Steel Framing Members on one side of studs 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 b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members*** — Used to attach furring channels (Item 6Aa) to one side of studs only. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.
KINETICS NOISE CONTROL INC — Type Isomax

6B. **Steel Framing Members*** — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels** — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members*** — Used to attach furring channels (Item 6Ba) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
PLITEQ INC — Type Genie Clip

6C. **Steel Framing Members*** — (Optional, Not Shown) — 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 b. 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 3.

b. **Steel Framing Members*** — Used to attach furring channels (Item 6Ca) to studs. Clips spaced 48 in. OC., and secured to studs with No. 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

6D. **Steel Framing Members*** — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels** — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with a double strand of No. 18 AWG twisted steel wire. Gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members*** — Used to attach furring channels (Item 6Da) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

6E. **Steel Framing Members*** — (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below:
a. **Resilient Channels** — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 3.

b. **Steel Framing Members*** — Used to attach resilient channels (Item 6Ea) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 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.
KEENE BUILDING PRODUCTS CO INC - Type RC+ Assurance Clip

6F. **Steel Framing Members*** — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels** — Formed of No. 25 MSG galv steel. 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members*** — Used to attach furring channels (Item 6Fa) to studs. Clips spaced 48 in. OC. Clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips.
CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

6G. **Steel Framing Members*** — (Optional, Not Shown) — Used as an alternate method to attach resilient channels to wall studs. A resilient sound isolation accessory shall be used at each attachment point of the resilient channels and spaced max 16 in. O.C. Channel ends butted and centered under the structural members and attached with one accessory at each end. Additional accessories used to hold resilient channels that support the gypsum board end joints. The accessory envelops the mounting edge of the resilient channel. The accessory and resilient channel are fastened to the structural members with the screws supplied with the accessory and per the accessory manufacturer's installation instructions.
PAC INTERNATIONAL L L C — Type RC-1 Boost

7. **Furring Channel** — Optional — Not Shown — For use on one side of the wall - Resilient channels, 25 MSG galv steel, spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws. When resilient channels are used, insulation, Items 5C or 5D is required.

8. **Caulking and Sealants** — (Not Shown, Optional) — A bead of acoustical sealant applied around the partition perimeter for sound control.

9. **STC Rating** — The STC Rating of the wall assembly is 56 when it is constructed as described by Items 1 through 6, except:

A. Item 2, above — Nailheads Shall be covered with joint compound.

B. Item 2, above — Joints As described, shall be covered with fiber tape and joint compound.

C. Item 5, above — Batts and Blankets* The cavities formed by the studs shall be friction fit with R-19 unfaced fiberglass insulation batts measuring 6-1/4 in. thick and 15-1/4 in. wide.

D. Item 6, above — Steel Framing Members* Type RSIC-1 clips shall be used to attach gypsum board to studs on either side of the wall assembly.

E. Item 8, above — Caulking and Sealants (Not Shown) A bead of acoustical sealant shall be applied around the partition perimeter for sound control.

F. Steel Corner Fasteners (Item 4), Fiber, Sprayed (Items 5A and 5B) and Steel Framing Members (Item 6A), not evaluated as alternatives for obtaining STC rating.

10. **Wall and Partition Facings and Accessories*** — (Optional, Not Shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-500 and QR-510

11. **Cementitious Backer Units*** — (Optional Item Not Shown — For Use On Face Of 1 Hr Systems With All Standard Items Required) - 7/16 in., 1/2 in., 5/8 in., 3/4 in. or 1 in. thick, min. 32 in. wide. Applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with cement board screws of adequate length to penetrate stud by a minimum of 3/8 in. for steel framing members, and a minimum of 3/4 in. for wood framing members spaced a max of 8 in. OC. When 4 ft. wide boards are used, horizontal joints need not be backed by framing.
NATIONAL GYPSUM CO — Type DuraBacker, PermaBase, DuraBacker Plus, or PermaBase Plus

12. **Non-Bearing Wall Partition Intersection** — (Optional) —Two nominal 2 by 4 in. studs or nominal 2 by 6 in. studs nailed together with two 3 in. long 10d nails spaced a max. 16 in. OC. vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

13. **Mesh Netting** — (Not Shown) — Any thin, woven or non-woven fibrous netting material attached with staples to the outer face of one row of studs to facilitate the installation of the sprayed fiber from the opposite row.

14. **Mineral and Fiber Board*** — (Optional, Not Shown) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with 2 in. long Type W steel screws, spaced 12 in. OC. The required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
HOMASOTE CO — Homasote Type 440-32

14A. **Mineral and Fiber Board*** — (Optional, Not Shown) — For use with Items 14B-14E) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with minimum 1-3/8 in. long ring shanked nails or 1-1/4 in. long Type W steel screws, spaced 12 in. OC along board edges and 24 in. OC in field of board along intermediate framing. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
HOMASOTE CO — Homasote Type 440-32

14B. **Glass Fiber Insulation** — (For use with Item 14A) — 3-1/2 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, placed to fill the interior of the wall. See Batts and Blankets (BKNV or BZJZ) categories for names of Classified companies.

14C. **Batts and Blankets*** — (As an alternate to Item 14B, For use with Item 14A), 3 in. thick mineral wool batts, placed to fill interior of wall, attached to the 3-1/2 in. face of the studs with staples placed 24 in. OC.
THERMAFIBER INC — Type SAFB, SAFB FF

14D. **Adhesive** — (For use with Item 14A) — Construction grade adhesive applied in vertical, serpentine, nominal 3/8 in. wide beads down the length of both vertical edges of Mineral and Fiber Board (Item 14A).

14E. **Gypsum Board*** — (For use with Item 14A) — 5/8 in. thick, 4 ft wide, applied vertically over Mineral and Fiber Board (Item 14A) with vertical joints located anywhere over stud cavities. Secured to mineral and fiber boards with 1-1/2 in. Type G Screws spaced 8 in. OC along edges of each vertical joint and 12 in. OC in intermediate field of the Mineral and Fiber Board (Item 14A). Secured to outermost studs and bearing plates with 2 in. long Type S screws spaced 8 in. OC. Gypsum Board joints covered with paper tape and joint compound. Screw heads covered with joint compound. Finish Rating 30 Min.
AMERICAN GYPSUM CO — Type AG-C

CGC INC — Types C, IP-X2, IPC-AR

CERTAINTEED GYPSUM INC — Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C

NATIONAL GYPSUM CO — Types FSK-C, FSW-C

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-C

PANEL REY S A — Type PRC

THAI GYPSUM PRODUCTS PCL — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

14F. **Mineral and Fiber Board** — (Optional, Not Shown) — For optional use as an additional layer on one side of wall - Nom 1/2 in. thick, 4 ft wide, square edge fiber boards applied vertically to studs on one side of the wall in between the wood studs and the UL Classified Gypsum Board (Item 3). Fiber boards installed with 1-1/4 in. long, Type W, bugle head, coarse thread gypsum board screws spaced 12 in. OC max, with the last screws spaced 2 in. and 6 in. from edge of board. Gypsum board (Item 3) installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
BLUE RIDGE FIBERBOARD INC — SoundStop

14G. **Building Units** – (Optional Item Not Shown – For use over Gypsum Board, Item 3) 1 in., 2 in. or 3 in. thick, 4 ft. wide – Applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with wafer head screws of adequate length to penetrate framing by a minimum of of ¾ in., spaced a max 8 in. o.c.

NATIONAL GYPSUM CO – Type PBCI

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

Last Updated on 2023-09-19

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2

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DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA

STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7305
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
UL ASSEMBLIES - U305

PROJECT NUMBER: 23098

SHEET NUMBER:
G-207

UL Product iQ®

Design/System/Construction/Assembly Usage Disclaimer

- 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 Variances

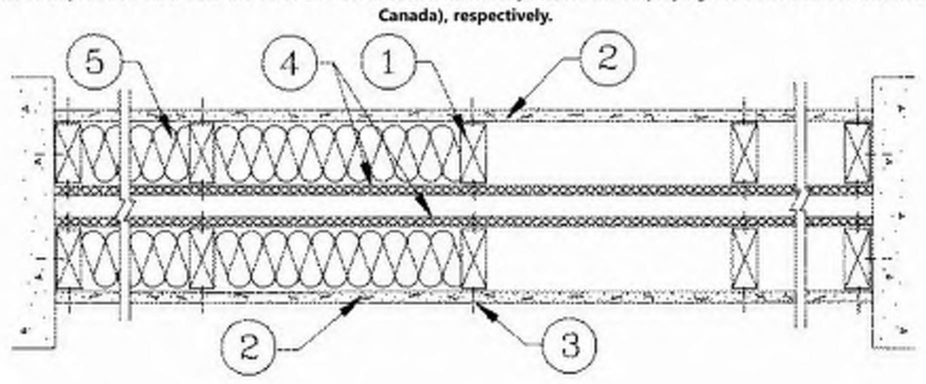
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

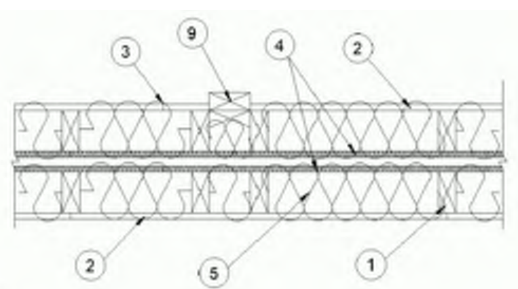
Design No. **U341**

August 4, 2023

Bearing Wall Rating — 1 Hr.
Finish Rating — Min 20 min.
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

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





HORIZONTAL SECTION

1. **Wood Studs —** Nom 2 by 4 in., spaced 24 in. OC max. Cross braced at mid-height and effectively firestopped at top and bottom of wall. No min. air space between stud rows except to accommodate attachment of sheathing, where required. See items 4 and 5.

2. **Gypsum Board* — Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or U305.** Nom 5/8 in. thick 4 ft wide. Gypsum board applied horizontally or vertically, unless specified below, and nailed to studs and bearing plates 7 in. OC with 6d cement coated nails, 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam head. As an alternate, No. 6 bugle head drywall screws, 1-7/8 in. long, may be substituted for the 6d cement coated nails.
When **Steel Framing Members*** (Item 6 or any alternate clips) are used, wallboard attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC.

When used in widths other than 48 in., gypsum board to be installed horizontally.

AMERICAN GYPSUM CO (View Classification) — CKNX.R14196

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO (View Classification) — CKNX.R19374

CABOT MANUFACTURING ULC (View Classification) — CKNX.R25370

CERTAINTEED GYPSUM INC (View Classification) — CKNX.R3660

CGC INC (View Classification) — CKNX.R19751

CERTAINTEED GYPSUM INC (View Classification) — CKNX.R18482

GEORGIA-PACIFIC GYPSUM L L C (View Classification) — CKNX.R2717

NATIONAL GYPSUM CO (View Classification) — CKNX.R3501

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM (View Classification) — CKNX.R7094

PANEL REY S A (View Classification) — CKNX.R21796

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD (View Classification) — CKNX.R19262

THAI GYPSUM PRODUCTS PCL (View Classification) — CKNX.R27517

UNITED STATES GYPSUM CO (View Classification) — CKNX.R1319

USG BORAL DRYWALL SFZ LLC (View Classification) — CKNX.R38438

USG BORAL DRYWALL SFZ LLC (View Classification) — CKNX.R38438

USG MEXICO S A DE C V (View Classification) — CKNX.R16089

2A. **Gypsum Board* —** (As an alternate to Item 2, not shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically to studs and bearing plates on one side of the assembly with 1-5/8 in. long Type S screws spaced 12 in. OC at perimeter of panels and 8 in. OC in the field. Horizontal joints of vertically applied panels need not be backed by studs. Panel joints covered with paper tape and two layers of joint compound. Screwheads covered with two layers of joint compound. Batts and Blankets placed in stud cavity as described in Item 5C. Not evaluated for use with Steel Framing Members, Furring Channels or Fiber, Sprayed.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-530 (finish rating 23 min).

2B. **Gypsum Board* —** (As an alternate to Item 2, not shown) — Any 5/8 in. thick gypsum panels that are eligible for use in Design Nos. L501, G512 or U305, supplied by the Classified companies listed below shown in the **Gypsum Board*** (CKNX) category. Applied horizontally or vertically and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths other than 48 in., gypsum board to be installed horizontally.
UNITED STATES GYPSUM CO

USG BORAL DRYWALL SFZ LLC

USG MEXICO S A DE C V

2C. **Gypsum Board* —** (As an alternate to Item 2, Not Shown) — 5/8 in. thick gypsum panels applied horizontally or vertically and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths other than 48 in., gypsum board to be installed horizontally.
AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C, LightRoc

CERTAINTEED GYPSUM INC — Type C or Type X-1

NATIONAL GYPSUM CO — Type FSK, Type FSK-G, Type FSW, Type FSW-3, Type FSW-5, Type FSW-G, Type FSK-C, Type FSW-C, Type FSMR-C, Type FSW-6, Type FSL

THAI GYPSUM PRODUCTS PCL — Type C or Type X

2D. **Gypsum Board* —** (As an alternate to Items 2, 2A, 2B and 2C) — 5/8 in. thick gypsum panels, with square edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last 2 screws 1 and 4 in. from edge of board or nailed as described in Item 2. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.
GEORGIA-PACIFIC GYPSUM L L C — GreenGlass Type X, Type DGG.

2E. **Gypsum Board* —** (As an alternate to Items 2 through 2D) — 5/8 in. thick, 4 ft. wide, paper surfaced applied vertically only and secured as described in Item 2.
GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board.

2F. **Gypsum Board* —** (As an alternate to Items 2 through 2E) - Installed as described in Item 2. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically only and fastened to the studs and plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads, 7 in. OC. Not for use with item #6.
NATIONAL GYPSUM CO — Type SBWB

2G. **Gypsum Board* —** (As an alternate to Items 2 through 2F) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 2.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types QuietRock ES.

2H. **Gypsum Board* —** (As an alternate to Items 2 through 2G) — Installed as described in Item 2. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically or horizontally fastened to the studs and plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 12 in. OC.
CERTAINTEED GYPSUM INC — Type SilentFX

2I. **Wall and Partition Facings and Accessories* —** (As an alternate to Items 2 through 2H) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 2.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527.

2J. **Gypsum Board* —** (As an alternate to 5/8 in. Type FSW in Item 2) — 2 layers nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Horizontal joints on the same side need not be staggered. Inner layer attached with fasteners, as described in item 2, spaced 24 in. OC. Outer layer attached per Item 2.
NATIONAL GYPSUM CO — Type FSW.

2K. **Gypsum Board* —** (As an alternate to Item 2) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.
CERTAINTEED GYPSUM INC — Type LGFC6A (finish rating 21 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX

3. **Joints and Nailheads —** Gypsum board joints of outer layer covered with tape and joint compound. Nail heads of outer layer covered with joint compound. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with joints reinforced with paper tape.

4. **Sheathing —** (Optional) — Septum may be sheathed with min 7/16 in. thick wood structural panels min grade "C-D" or "Sheathing" or min 1/2 in. thick **Mineral and Fiber Boards***.
See **Mineral and Fiber Boards** (CERZ) category for names of Classified companies.

5. **Batts and Blankets* —** 3-1/2 in. max thickness glass or mineral fiber batt insulation. **Optional** when sheathing (Item 4) is used on both halves of wall.
See **Batts and Blankets** (BZJZ) category for list of Classified companies.

5A. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 5) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft^3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft^3, in accordance with the application instructions supplied with the product.

Applegate Greenfiber Acquisition LLC — Insulmax and SANCTUARY for use with wet or dry application. INS515LD and INS541LD are to be used for dry application only.

5B. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 5) when Sheathing (Item 4) is used on both halves of wall - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.
NU-WOOL CO INC — Cellulose Insulation

5C. **Batts and Blankets* —** (Required for use with Wall and Partition Facings and Accessories, Item 2A. Use of Sheathing, Item 4, does not nullify requirement of Item 5C for use with Item 2A) — Glass fiber insulation, nom 3-1/2 in. thick, min. density of 0.80 pcf, with a flame spread of 25 or less and a smoke developed of 50 or less, friction-fitted to completely fill the stud cavities. See Batts and Blankets Category (BKNV) for names of manufacturers.

5D. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 5) and Item 5A when Sheathing (Item 4) is used on both halves of wall - Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft^3.
INTERNATIONAL CELLULOSE CORP — Celbar-RL

5E. Deleted.

6. **Steel Framing Members* —** (Optional, Not Shown) — 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 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Wallboard attached to furring channels as described in Item 2.

B. **Steel Framing Members* —** Used to attach furring channels (Item a) to studs (Item 1) . Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75).

6A. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 6) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
PLITEQ INC — Type Genie Clip

6B. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 6) — 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 b. 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 2.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6Ba) to studs. Clips spaced 48 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

6C. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 6) — 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 6Cb. 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 2.

B. **Steel Framing Members* —** Used to attach furring channels (Item 6CA) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

6D. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 6) — Resilient channels and Steel Framing Members as described below:
a. **Resilient Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 2.

b. **Steel Framing Members* —** Used to attach resilient channels (Item 6Da) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 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.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

6E. **Steel Framing Members* —** (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below:
a. **Resilient Channels** —Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to resilient channels as described in Item 2.

b. **Steel Framing Members*** - Used to attach resilient channels to wall studs. A resilient sound isolation accessory shall be used at each attachment point of the resilient channels to the studs. Channel ends butted and centered under the structural members and attached with one accessory at each end. Additional accessories used to hold resilient channels that support the gypsum board end joints. The accessory envelops the mounting edge of the resilient channel. The accessory and resilient channel are fastened to the studs with the screws supplied with the accessory and per the accessory manufacturer's installation instructions.

PAC INTERNATIONAL L L C — Type RC-1 Boost

6F **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 6) — Furring channels and Steel Framing Members as described below:
a **Furring Channels —** Formed of No. 25 MSG galv steel. 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.

b **Steel Framing Members* —** Used to attach furring channels (Item 6Fa) to studs. Clips spaced maximum 48 in. OC. Clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips.

CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

7. **Wall and Partition Facings and Accessories* —** (Optional, Not shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-500 and QR-510

8. **Mineral and Fiber Board* —** ((Optional, Not Shown) — For optional use as an additional layer on one or both sides of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing as described in Item 2. The required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
HOMASOTE CO — Homasote Type 440-32

9. **Non-Bearing Wall Partition Intersection —** (Optional) — Two nominal 2 by 4 in. stud or nominal 2 by 6 in. stud nailed together with two 3in. long 10d nails spaced a max. 16 in. OC. vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max 16 in. OC. vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

(Optional, Not Shown) Alternate Construction For Use On One Side Of The Wall.

10. **Mineral and Fiber Board* —** For use with Items 10A-10D) —Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with minimum 1-3/8 in. long ring shanked nails or 1-1/4 in. long Type W steel screws, spaced 12 in. OC along board edges and 24 in. OC in field of board along intermediate framing. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
HOMASOTE CO — Homasote Type 440-32

10A. **Glass Fiber Insulation —** (For use with Item 10) — 3-1/2 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, placed to fill the interior of the wall. See Batts and Blankets (BKNV or BZJZ) categories for names of Classified companies.

10B. **Batts and Blankets* —** (As an alternate to Item 10B, For use with Item 10), 3 in. thick mineral wool batts, placed to fill interior of wall, attached to the 3-1/2 in. face of the studs with staples placed 24 in. OC.
THERMAFIBER INC — Type SAFB, SAFB FF

10C. **Adhesive —** (For use with Item 10) — Construction grade adhesive applied in vertical, serpentine, nominal 3/8 in. wide beads down the length of both vertical edges of Mineral and Fiber Board (Item 14A).

10D. **Gypsum Board* —** (For use with Item 10) — 5/8 in. thick, 4 ft wide, applied vertically over Mineral and Fiber Board (Item 14A) with vertical joints located anywhere over stud cavities. Secured to mineral and fiber boards with 1-1/2 in. Type G Screws spaced 8 in. OC along edges of each vertical joint and 12 in. OC in intermediate field of the Mineral and Fiber Board (Item 10). Secured to outermost studs and bearing plates with 2 in. long Type S screws spaced 8 in. OC. Gypsum Board joints covered with paper tape and joint compound. Screw heads covered with joint compound. Finish Rating 30 Min.
AMERICAN GYPSUM CO — Type AG-C

CERTAINTEED GYPSUM INC — Type C

CERTAINTEED GYPSUM INC — Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C

NATIONAL GYPSUM CO — Types FSK-C, FSW-C

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-C

PANEL REY S A — Type PRC

THAI GYPSUM PRODUCTS PCL — Type C

UNITED STATES GYPSUM CO — Type CTypes C, IP-X2, IPC-AR

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

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

Last Updated on 2023-08-04

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2

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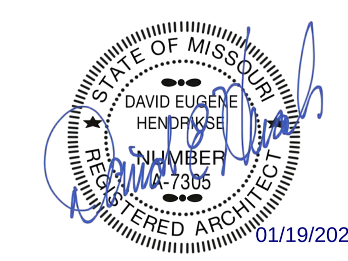


TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
UL ASSEMBLIES - U341

PROJECT NUMBER: 23098

SHEET NUMBER:
G-208

UL Product iQ®

Design/System/Construction/Assembly Usage Disclaimer

- 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 Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

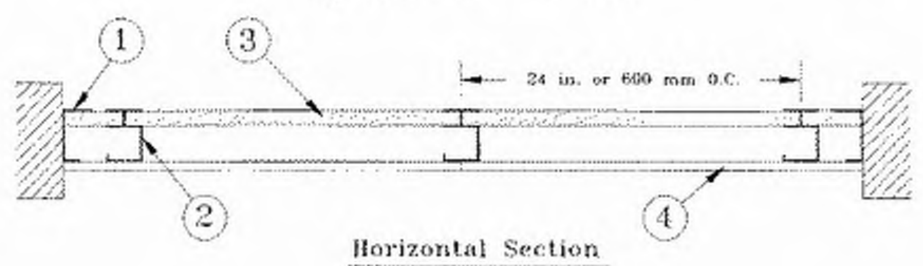
Design No. U415

February 14, 2022

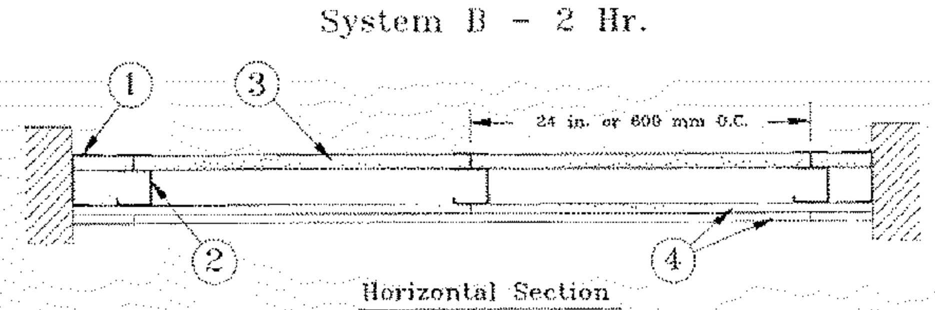
Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr

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

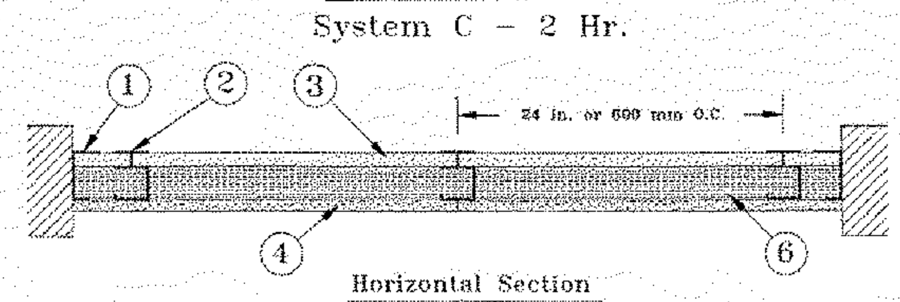
System A — 1 Hr.



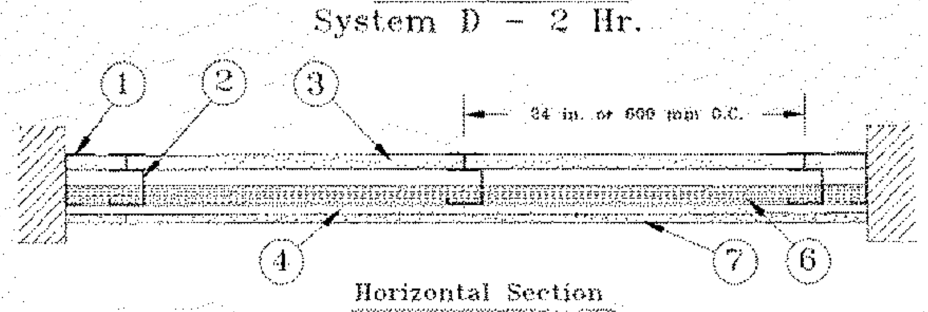
System B — 2 Hr.



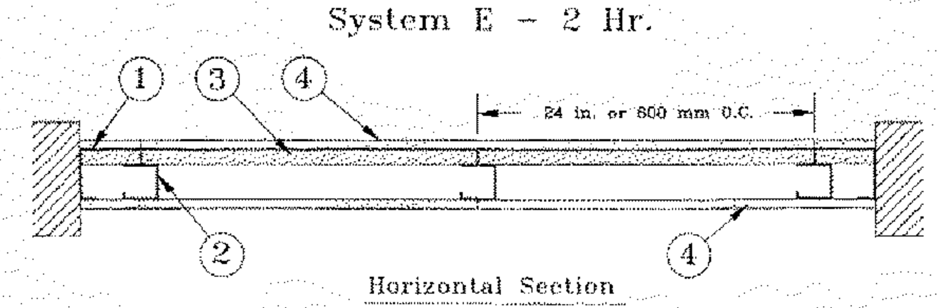
System C — 2 Hr.



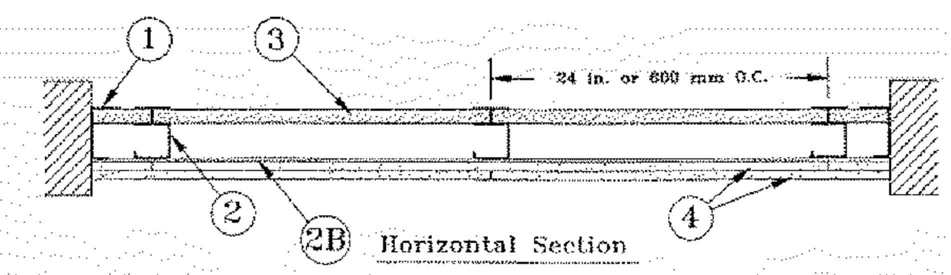
System D — 2 Hr.



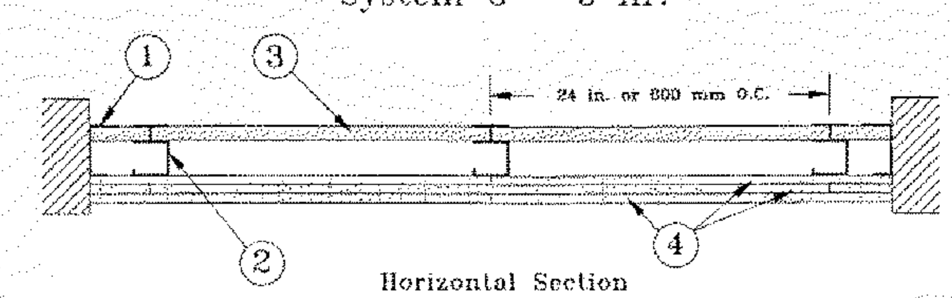
System E — 2 Hr.



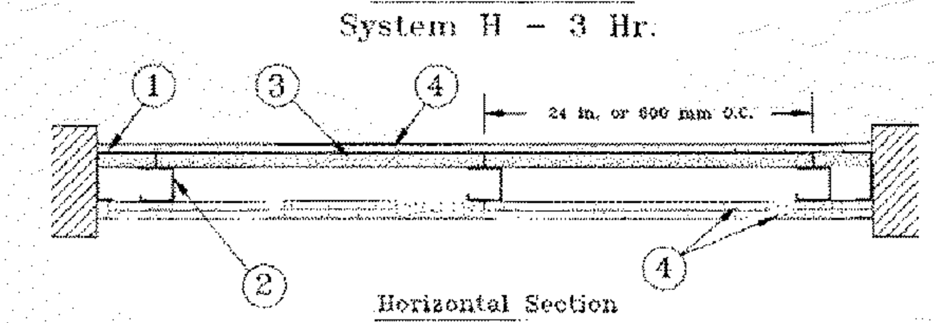
System F — 2 Hr.



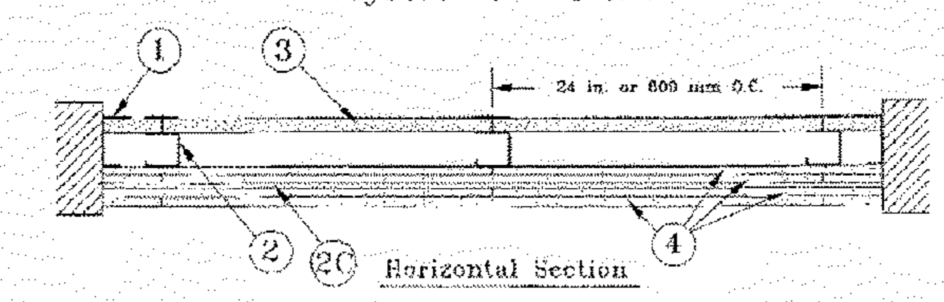
System G — 3 Hr.



System H — 3 Hr.



System I — 4 Hr.



1. **Floor, Side and Ceiling Runners** — "J" - shaped runner, min 2-1/2 in. deep (min 4 in. deep when System C is used), with unequal legs of 1 in. and 2 in., fabricated from min 24 MSG (min 20 MSG when Item 4A, 4B, 4C, 4D or 7 are used) galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC. "E" - shaped studs (Item 2A) may be used as side runners in place of "J" - shaped runners.

2. **Steel Studs** — "C-H" - shaped studs, min 2-1/2 in. deep (min 4 in. deep when System C is used), fabricated from min 25 MSG (min 20 MSG when Items 2D, 4A, 4B, 4C, 4D or 7 is used) galv steel. Cut to lengths 3/8 to 1/2 in. less than floor-to-ceiling height and spaced 24 in. or 600 mm OC (max 16 in. OC when Items 4A, 4B, 4C, or 4D are used).

2A. **Steel Studs** — (Not Shown) — "E" - shaped studs installed back to back in place of "C-H" - shaped studs (Item 2) "E" - shaped studs secured together with steel screws spaced a maximum 12 in. OC. Fabricated from min 25 MSG (min 20 MSG when Item 2D, 4A, 4B or 7 is used) galv steel, min 2-1/2 in. deep (min 4 in. deep when System C is used), with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 to 1/2 in. less than floor to ceiling heights.

2B. **Furring Channels** — (Optional, Not Shown) — For use with single or double layer systems. Resilient furring channels fabricated from min 25MSG corrosion protected steel, installed horizontally, and spaced vertically a max 24 in. OC. Flange portion of channel attached to each intersecting "C-H" or "E" stud on side of stud opposite the 1 in. liner panels with 1/2 in. long Type S or S-12 pan-head steel screws. When furring channels are used, wallboard to be installed vertically only. . Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).

2C. **Furring Channels** — For use with System I - "Hat" - shaped, 25 MSG galv steel furring channels attached directly over the inner layers of wallboard to each stud with 2 in. long Type S pan head steel screws. Screws alternate from top flange to bottom flange at each stud intersection. Furring channels spaced vertically max 24 in. OC.

2D. **Steel Framing Members*** — (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
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 b. Gypsum board installed vertically only and attached to furring channels as described in Item 4.

b. **Steel Framing Members*** — Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75)

2E. **Steel Framing Members*** — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. . Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
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 b. 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 4.

b. **Steel Framing Members*** — Used to attach furring channels (Item 2Ea) to studs. Clips spaced 24 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

2F. **Steel Framing Members*** — (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. **Furring Channels** — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 3.

b. **Steel Framing Members*** — Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.
PLITEQ INC — Type GENIECLIP

2G. **Steel Framing Members*** — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
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 2Gb. 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 4.

b. **Steel Framing Members*** — Used to attach furring channels (Item 2Ga) to studs. Clips spaced 24 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

2H. **Steel Framing Members*** — (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. **Resilient Channels** — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 4.

b. **Steel Framing Members*** — Used to attach resilient channels (Item 2Ha) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 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.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

2I. **Steel Framing Members*** — (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. **Furring Channels** — Formed of No. 25 MSG galv steel. 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 b. Gypsum board installed vertically only and attached to furring channels as described in Item 4.

b. **Steel Framing Members*** — Used to attach furring channels (Item 2Ia) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.
CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

3. **Gypsum Board*** — Gypsum liner panels, nom 1 in. thick, 24 in. or 600 mm (for metric spacing) wide. Panels cut 1 in. less in length than floor to ceiling height. Vertical edges inserted in "H" portion of "C-H" studs or the gap between the two 3/4 in. legs of the "E" studs. Free edge of end panels attached to long leg of vertical "J" - runners with 1-5/8 in. long Type S steel screws spaced not greater than 12 in. OC. When wall height exceeds liner panel length, liner panel may be butted to extend to the full height of the wall. Horizontal joints need not be backed by steel framing. In System I, butt joints in liner panels are staggered min 36 in. Butt joints backed with 6 in. by 22 in. strips of 3/4 in. thick gypsum wallboard (Item 4). Wallboard strips centered over butt joints and secured to liner panels with six 1-1/2 in. long Type G steel screws, three screws along the 22 in. dimension at the top and bottom of the strips.
CGC INC — Type SLX

UNITED STATES GYPSUM CO — Type SLX

USG BORAL DRYWALL SFZ LLC — Type SLX

USG MEXICO S A DE C V — Type SLX

4. **Gypsum Board*** —

System A — 1 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. when installed vertically or 8 in OC when installed horizontally. Horizontal joints need not be backed by steel framing.

CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, ULX, USGX, WRC, WRX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX

UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, WRC, WRX, USGX.

USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System B — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in two layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 1-5/8 in. long Type S steel screws spaced 12 in. OC when installed vertically and staggered 12 in. from base layer screws or 8 in. OC when installed horizontally and staggered 8 in. from base layer screws. Horizontal joints between inner and outer layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in.

CGC INC — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX

UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC-AR, or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System C — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 3/4 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, secured with 1-1/4 in. long Type S steel screws spaced 8 in. OC along vertical edges and 12 in. OC in the field when installed vertically or 8 in. OC along the vertical edges and in the field when installed horizontally. Horizontal joints need not be backed by steel framing. Screws along side joints offset 4 in. Requires min 4 in. deep framing per Items 1, 2 and 3. Requires min 3 in. thick mineral wool batts per Item 6.

CGC INC — Types IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — Type ULTRACODE

USG MEXICO S A DE C V — Types IP-X3 or ULTRACODE

System D — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached directly to studs with 1 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. OC when installed horizontally. Horizontal joints need not be backed by steel framing. Requires face layer of 1/2 or 5/8 in. thick cementitious backer units per Item 7 and min 1-1/2 in. thick mineral wool batts per Item 6.

CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX

UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System E — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. OC when installed vertically or 8 in. when installed horizontally. Horizontal joints need not be backed by steel framing.

CGC INC — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX

UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System F — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically in two layers. Inner or base layer attached to resilient furring channels (Item 2B) with 1 in. long Type S steel screws spaced 24 in. Outer or face layer attached to resilient furring channels (Item 2B) with 1-5/8 in. long Type S steel screws spaced 12 in. OC and staggered 12 in. from base layer screws. Joints between inner and outer layers staggered 24 in.

CGC INC — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX

UNITED STATES GYPSUM CO — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

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

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System G — 3 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in three layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in OC when installed horizontally. Middle layer attached to studs with 1-5/8 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 2-1/4 in. long Type S steel screws spaced 16 in. when installed vertically or 12 in. OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered a min of 12 in. . Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers.

CGC INC — Types C, IP-X2, IPC-AR, ULIX, WRC

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, ULIX, WRC

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR, WRC

System H — 3 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, two layers over the flange of the "C" section of the studs, one layer over the flange of the "H" section of the studs. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Face layer attached to studs with 1-5/8 in. long Type S steel screws spaced 16 in. when installed vertically or 12 in. OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers.

CGC INC — Types C, IP-X2, IPC-AR, ULIX, WRC

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, ULIX, WRC

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR, WRC

System I — 4 Hr

Gypsum panels, with beveled, square or tapered edges, nom 3/4 in. thick, 4 ft wide (or 1200 mm for metric spacing) wallboard with square or tapered edges. Total of four layers to be used. First and second (inner) layers applied vertically or horizontally over the steel studs. Horizontal joints need not be backed by steel framing. When applied vertically, joints centered over studs and staggered min 24 in., otherwise all joints staggered min 12 in. First layer secured to studs with 1-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 24 in. OC. Second layer secured to studs with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. Third layer applied vertically over the furring channels (Item 2C) with a 1-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. Fourth layer applied vertically or horizontally with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. When applied vertically, joints to be staggered min 24 in. from third layer, otherwise all joints staggered min 12 in.

CGC INC — Types IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — Type ULTRACODE

USG MEXICO S A DE C V — Types IP-X3 or ULTRACODE

4A. **Gypsum Board*** — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — 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 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1, 2, 2A, 2B and 2D. 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. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9) or Lead Discs or Tabs (see Item 10).
RAY-BAR ENGINEERING CORP — Type RB-LBG

4B. **Gypsum Board*** — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nominal 5/8 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 (or #6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.
NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Type Nelco

4C. **Gypsum Board*** — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1, 2, 2A, 2B and 2D. 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. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9A) or Lead Discs (see Item 10A). Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip.
MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

4D. **Gypsum Board*** — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 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 gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten 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 S-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 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

5. **Joint Tape and Compound** — (Not Shown)

Systems A, B, C, E, F, G, H, I

Joints on outer layers of gypsum boards (Item 4 and 4A) covered with paper tape and joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges. Exposed screw heads covered with joint compound.

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
UL ASSEMBLIES - U415

PROJECT NUMBER: 23098

SHEET NUMBER:
G-209

6. **Batts and Blankets*** —

Systems A, B, E, F, G, H, I

(Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt mineral bearing the UL Classification Marking as to Fire Resistance.

Systems C & D

Min 3 in. (System C) and min 1-1/2 in. (System D) thick mineral wool batts, friction fitted between the studs and floor and ceiling runners.

ROCKWOOL — Type AFB, min. density 1.8 pcf / 28.8 kg/m³

THERMAFIBER INC — Type SAFB, SAFB FF

7. **Cementitious Backer Units*** — (System D) — Nom 1/2 or 5/8 in. thick panels, square edge, attached to studs over gypsum wallboard with 1-5/8 in. long, Type S-12, corrosion resistant steel screws spaced 8 in. OC and staggered 8 in. from gypsum wall board screws. Joints covered with glass fiber mesh tape. Vertical joints staggered one stud cavity from gypsum wallboard joints. Horizontal joints staggered a min of 12 in. from the gypsum wallboard joints.
UNITED STATES GYPSUM CO — Type DCB

8. **Laminating Adhesive*** — (Optional, Not Shown) — Used to bond outer layer of Cementitious Backer Units (Item 7) to inner layers of Gypsum Board (Item 4) in System D. ANSI A136.1 Type 1 organic adhesive applied with 1/4 in. square notched trowel. See Adhesives (BYWR) in the Fire Resistance Directory or Adhesives (BJLZ) in the Building Materials Directory for names of Classified companies.

9. **Lead Batten Strips** — (Not Shown, For Use With Item 4A) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4A) and optional at remaining stud locations. Required behind vertical joints.

9A. **Lead Batten Strips** — (Not Shown, for use with Item 4C) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4C) and optional at remaining stud locations.

10. **Lead Discs or Tabs** — (Not Shown, For Use With Item 4A) — Used in lieu of or in addition to the lead batten strips (Item 9) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 4A) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

10A. **Lead Discs** — (Not Shown, for use with Item 4C) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

11. **Lead Batten Strips** — (Not Shown, For Use With Item 4B) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4B) and optional at remaining stud locations.

12. **Lead Tabs** — (Not Shown, For Use With Item 4B) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 4B) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

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

Last Updated on 2022-02-14

UL Product iQ™

BXUV.U423

Design/System/Construction/Assembly Usage Disclaimer

- 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 Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

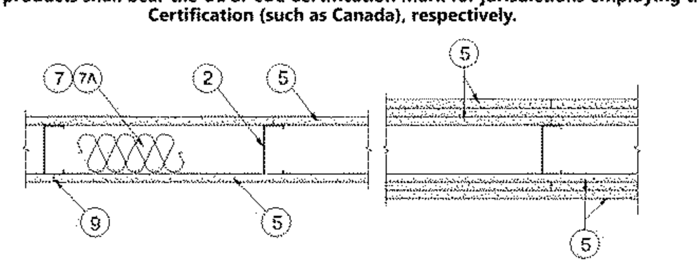
Design No. U423

September 27, 2018

Bearing Wall Ratings — 3/4 Hr, 1, 1-1/2 or 2 Hr (See Items 5 & 7)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** 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) — Channel shaped, fabricated from min 0.0329 in., bare metal thickness (No. 20 MSG) corrosion-protected steel, that provide a sound structural connection between steel studs and adjacent assemblies such as floors, ceilings and/or other walls. Attached to floor and ceiling assemblies with steel fasteners spaced not greater than 24 in. OC.

1A. **Floor and Ceiling Runners** — (Not Shown, As an alternate to Item 1, For Use With Item 5A and 5C) — Channel shaped runners min 3-1/2 in. deep with 1-1/4 in. flanges fabricated from min No. 20 MSG corrosion-protected steel. Attached to floor and ceiling assemblies with steel fasteners spaced not greater than 24 in. OC.

2. **Steel Studs** — Min 0.0329 in., bare metal thickness (No. 20 MSG) corrosion-protected steel studs, min 3-1/2 in. wide, cold formed, designed in accordance with the current edition of the Specification for the Design of Cold-Formed Steel Structural Members by the American Iron and Steel Institute (AISI). All design details enhancing the structural integrity of the wall assembly, including the axial design load of the studs, shall be as specified by the steel stud designer and/or producer, and shall meet the requirements of all applicable local code agencies. The max stud spacing shall not exceed 24 in. OC. Studs attached to floor and ceiling runners with 1/2 in. long Type S-12 steel screws on both sides of the studs or by welded or bolted connections designed in accordance with the AISI specifications.

2A. **Steel Studs** — (As an alternate to Item 2, For use with Item 5A, 5C, 5D, and 5E) — Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min width, min 1-1/2 in. flanges and 3/4 in. return, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners.

2B. **Steel Studs** — (As an alternate to Item 2 and 2A, For Use With Item 5B) — Min 0.0329 in., (No. 20 MSG) corrosion-protected cold formed steel studs, min 3-1/2 in. deep by 1-5/8 in. wide with 1/2 in. returns. Braced at mid-height and designed in accordance with the current edition of the Specification for the Design of Cold-Formed Steel Structural Members by the American Iron and Steel Institute (AISI). All design details enhancing the structural integrity of the wall assembly, including the axial design load of the studs, shall be as specified by the steel stud designer and/or producer, and shall meet the requirements of all applicable local code agencies. The max stud spacing shall not exceed 24 in. OC. Studs attached to floor and ceiling runners with 1/2 in. long Type S-12 steel screws on both sides of the studs or by welded or bolted connections designed in accordance with the AISI specifications.

2C. **Framing Members - Steel Studs** — (As an alternate to Item 2, For use with Item 5C) — Channel shaped, fabricated from min 20 MSG (0.0327 in. thick) corrosion-protected or galv steel, 3-1/2 in. min width, min 1-1/2 in. flanges and 1/4 in. return, 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.

3. **Lateral Support Members** — (Not shown) — Where required for lateral support of studs, support shall be provided by means of steel straps, channels or other similar means as specified in the design of a particular steel stud wall system.

4. **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 PS1 or PS2, or APA Standard PRP-108, manufactured with exterior glue, 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 0.292 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.
The maximum loading on the steel studs was evaluated with the steel studs braced at mid-height and not braced by the plywood sheathing

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 when load is reduced to 90 percent of max stud capacity. When load is at 100 percent, horizontal edge joints and horizontal butt joints on opposite sides of studs staggered a min of 12 in. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. When used in widths other than 48 in., gypsum panels to be installed horizontally. The thickness and number of layers and percent of design load for the 45 min, 1 hr, 1-1/2 hr, and 2 hr ratings are as follows:

Wallboard Protection on Each Side of Wall

Rating	No. of Layers & Thkns of Panel	% of Design Load
45 Min	1 layer, 1/2 in. thick	100
1 hr	1 layer, 5/8 in. thick	100
1-1/2 hr	2 layers, 1/2 in. thick	100
2 hr	2 layers, 5/8 in. thick	80
2 hr@	2 layers, 5/8 in. thick	100
2 hr	3 layers, 1/2 in. thick	100
2 hr	2 layers, 3/4 in. thick	100

@Rating applicable when Batts and Blankets (Item 7) are used

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

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR, or WRC; 5/8 in. thick Type AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULX, WRX, or WRC; 3/4 in. thick Types AR, IP-AR or IP-X3, ULTRACODE

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

USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR, WRC; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, WRX or WRC; 3/4 in. thick Types AR, IP-AR, IP-X3, ULTRACODE

5A. **Gypsum Board*** — (As an alternate to Item 5 when used as the base layer on one or both sides of wall, For direct attachment only, not to be used with Item 4) — 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 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1A, 2A 8, 8A(a). 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. To be used with Lead Batten Strips (see Item 12) or Lead Discs or Tabs (see Item 13).
RAY-BAR ENGINEERING CORP — Type RB-LBG

5B. **Gypsum Board*** — (As an alternate to Items 5 and 5A) — Nom 5/8 in. thick gypsum panels with square edges, applied horizontally or vertically. For the1 hour single layer system - when the gypsum board panels are installed horizontally the joints are to be staggered by a minimum of 12 in. on opposite sides of assembly, they are to be secured on each side of the studs with 1-1/4 in. long Type S-12 bugle head steel screws spaced 8 in. OC to the top and bottom tracks and in the field with screws 1 in. and 4 in. from the horizontal joints. When the gypsum board panels are installed vertically all vertical joints must be centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC to the top and bottom tracks and in the field with screws 1 in and 4 in. from the perimeter. For the 2 hour double layer system - when the gypsum board panels are installed horizontally the joints need not be staggered on opposite sides of assembly. Base layer secured on each side of the studs with 1-1/4 in. long Type S-12 bugle head steel screws spaced 16 in. OC to the top and bottom track and in the field with screws beginning 1 in. and 8 in. from the horizontal joints. Face layer horizontal joints staggered 8 in from base layer joints and secured with 1-5/8 in. long Type S-12 bugle head steel screws spaced 16 in. OC to the top and bottom tracks and in the field with screws beginning 1 in. and 8 in. from the horizontal joints. Face layer screws offset 8 in. from base layer screws. When the gypsum board panels are installed vertically all vertical joints must be centered over studs and staggered min 1 stud cavity on opposite sides of studs. Face layer gypsum boards secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 16 in. OC with screws 2 in. and 16 in. from the perimeter. Base layer gypsum boards secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 16 in. OC with screws 1-1/2 in and 8 in. from the perimeter. Face layer screws offset 8 in. from base layer screws.
CGC INC — Type USGX

UNITED STATES GYPSUM CO — 5/8 in. thick Type USGX (Joint tape and compound, Item 9, optional with Type USGX)

USG BORAL DRYWALL SFZ LLC — 5/8 in. thick Type USGX (Joint tape and compound, Item 9, optional with Type USGX)

USG MEXICO S A DE C V — Type USGX

5C. **Gypsum Board*** — (As an alternate to Item 5 when used as the base layer on one or both sides of wall, For direct attachment only, not to be used with Item 4) — Nominal 5/8 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 (or #6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.
NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Nelco

5D. **Gypsum Board*** — (As an alternate to Item 5 when used as the base layer on one or both sides of wall, For direct attachment only, not to be used with Item 4) — Nom 5/8 or 3/4 in. may be used as alternate to all 5/8 or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1A, 2A 8, 8A(a). 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. To be used with Lead Batten Strips (see Item 12A) or Lead Discs (see Item 13A).
MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

5E. **Gypsum Board*** — (As an alternate to Item 5 when used as the base layer on one or both sides of wall, For direct attachment only, not to be used with Item 4) — Nom 5/8 in. may be used as alternate to all 5/8. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1A, 2A 8, 8A(a). 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 batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten 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 S-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 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

5F. **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. 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 between layers need not be staggered. When used in widths other than 48 in., gypsum panels to be installed horizontally. Insulation (Item 7D) required when using Type ULIX for the 1 hour Rating. The thickness and number of layers and percent of design load are as follows:

Wallboard Protection on Each Side of Wall

Rating	No. of Layers & Thkns of Panel	% of Design Load
1 hr@	1 layer, 5/8 in. thick	100
2 hr	2 layers, 5/8 in. thick	80
2 hr@	2 layers, 5/8 in. thick	100

@Rating applicable when Batts and Blankets (Item 7) are used.

UNITED STATES GYPSUM CO — 5/8 in. thick Type ULIX

6. **Fasteners** — (Not Shown) — For use with Item 5 and 5F - Type S-12 steel screws used to attach panels to runners (Item 1 or 1A) and studs (Item 2 or 2A) or furring channels (Item 8). **Single layer systems:** 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 12 in. OC when panels are applied vertically. **Two layer systems:** First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in. and 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer. **Three-layer systems:** First layer- 1 in. long for 1/2 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.

7. **Batts and Blankets*** — (Required as indicated under Item 5 and 5F) — Nom 2 in. thick mineral wool batts, friction fitted between studs and runners. See **Batts and Blankets (BKNV or BZJZ) Categories** for names of Classified companies.

7A. **Batts and Blankets*** — (Optional, Not Shown) — 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 (BKNV or BZJZ) Categories** for names of Classified companies.

7B. **Batts and Blankets*** — (Optional, Not Shown) — Placed in stud cavities, glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance.
OWENS CORNING — Type QuietZone Acoustic Batts

7C. **Fiber, Sprayed*** — (Optional) — As an alternate to Batts and Blankets (Item 7) — Not for use with Items 8A or 8B) — Spray applied mineral wool insulation. The fiber is applied with adhesive, at a minimum density of 4.0 pcf, to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See Fiber, Sprayed (CCAZ).
AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus

7D. **Batts and Blankets*** — Placed in stud cavities, any 3-1/2 in. thick glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See **Batts and Blankets (BKNV or BZJZ) Categories** for names of Classified companies.

8. **Furring Channels** — (Optional on one or both sides, not shown, for single or double layer systems) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 panhead steel screws. Not for use with type FRX-G gypsum panels and Item 5A, 5C, 5D, or 5E.

8A. **Steel Framing Members (Not Shown)*** — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 8, 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 b. Gypsum board attached to furring channels as described in Item 6. Not for use with type FRX-G gypsum panels and Item 5A, 5C, 5D, or 5E.

b. **Steel Framing Members*** — Used to attach furring channels (Item 8a) to studs (Item 2). Clips spaced max. 48 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75)

8B. **Steel Framing Members*** — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 8, furring channels and Steel Framing Members as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with type FRX-G gypsum panels and Item 5A, 5C, 5D, or 5E.

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

8C. **Steel Framing Members*** — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 8, furring channels and Steel Framing Members as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. 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 type FRX-G gypsum panels and Item 5A, 5C, 5D, or 5E.

b. **Steel Framing Members*** — Used to attach furring channels to studs (Item 2). Clips spaced max. 48 in. OC., and secured to studs with 2 in. coarse drywall screws with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

8D. **Steel Framing Members*** — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 8, furring channels and Steel Framing Members as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 8Db. 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 type FRX-G gypsum panels and Item 5A, 5C, 5D, or 5E.

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

8E. **Steel Framing Members*** — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 8, resilient channels and Steel Framing Members as described below:

a. **Resilient Channels** — Formed of No. 25 MSG galv steel spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 1/2 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 5. Not for use with type FRX-G gypsum panels and Item 5A, 5C, 5D, or 5E.

b. **Steel Framing Members*** — Used to attach resilient channels (Item 8Ea) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 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.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

9. **Joint Tape and Compound** — Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layers. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges.

10. **Siding, Brick or Stucco** — (Optional, Not Shown) — Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick.

11. **Caulking and Sealants*** — (Optional, Not Shown) — A bead of acoustical sealant applied around the partition perimeter for sound control
UNITED STATES GYPSUM CO — Type AS

12. **Lead Batten Strips** — (Not Shown, For Use With Item 5A) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5A) and optional at remaining stud locations. Required behind vertical joints.

12A. **Lead Batten Strips** — (Not Shown, for use with Item 5D) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5D) and optional at remaining stud locations.

13. **Lead Discs or Tabs** — (Not Shown, For Use With Item 5A) — Used in lieu of or in addition to the lead batten strips (Item 12) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5A)

underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

13A. **Lead Discs** — (Not Shown, for use with Item 5D) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

14. **Lead Batten Strips** — (Not Shown, For Use With Item 5C) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5C) and optional at remaining stud locations.

15. **Lead Tabs** — (Not Shown, For Use With Item 5C) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 5C) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

16. **Wall and Partition Facings and Accessories*** — (Optional, Not Shown) — For use with Item 1, Item 2 to 2C, Item 3, Item 5, Item 6, Item 7A, Item 8 and Item 9. For a maximum fire rating of 1 hour. On one side of the wall, over the first layer of Gypsum Board (Item 5), install RefleXor membrane with the gold side facing outwards. Membrane installed with T50 staples spaced 12 inches on center in both directions as per manufacturer's instructions. seams in membrane to be overlapped by 2 inches. When RefleXor membrane is used an additional layer of Gypsum Board identical to the one used in the first layer and as specified in Item 5 shall be installed over the membrane. Additional layer of Gypsum Board to be installed through the membrane to the stud as specified in Item 5 except the fastener length shall be increased by a minimum of 5/8 inch. Install Batts and Blankets in the stud cavity as per Item 7A. On the other side of the wall prior to the installation of the Gypsum Board install Resilient Channels as per Item 8. Over the Resilient Channels install 3/4 inch thick SONOpan panel secured to the Resilient Channels with drywall screws and washers spaced at 16 in. OC on the perimeter of the panel and 8 in. OC in the field of the panel. Over the SONOpan panel install the same Gypsum Board as specified in Item 5 with the fastener length increased by minimum 3/4 inch. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
MSL — RefleXor membrane, SONOpan panel

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

Last Updated on 2018-09-27

DESIGN NO. 721.1(3) 2018 IBC

FLOOR/CEILING ASSEMBLY ASSEMBLY RATING - 75 MINUTE

RESOURCE: TABLE 721.1(3) FIRE RESISTANCE-RATED CONSTRUCTION 2018 INTERNATIONAL BUILDING CODE

TABLE 721.1(3) MINIMUM PROTECTION FOR FLOOR AND ROOF SYSTEMS[a, q]

FLOOR OR ROOF CONSTRUCTION	ITEM NUMBER	CEILING CONSTRUCTION	THICKNESS OF FLOOR OR ROOF SLAB (inches)				MINIMUM THICKNESS OF CEILING (inches)			
			4 hours	3 hours	2 hours	1 hour	4 hours	3 hours	2 hours	1 hour
21. Wood joists, wood I-joists, floor trusses and flat or pitched roof trusses spaced a maximum 24" o.c. with $^{1}/_{2}$" wood structural panels with exterior glue applied at right angles to top of joist or top chord of trusses with 8d nails. The wood structural panel thickness shall be not less than nominal $^{1}/_{2}$" nor less than required by Chapter 23.	21-1.1	Base layer $^{5}/_{8}$" Type X gypsum wallboard applied at right angles to joist or truss 24" o.c. with $1^{1}/_{4}$" Type S or Type W drywall screws 24" o.c. Face layer $^{5}/_{8}$" Type X gypsum wallboard or veneer base applied at right angles to joist or truss through base layer with $1^{7}/_{8}$" Type S or Type W drywall screws 12" o.c. at joints and intermediate joist or truss. Face layer Type G drywall screws placed 2" back on either side of face layer end joints, 12" o.c.	—	—	—	Varies	—	—	—	$1^{1}/_{4}$

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:

1	12/22/2023	Response to City Comments
2	01/19/2024	Addendum #2
3	03/06/2024	IN RESPONSE TO GC COMMENTS

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STATE OF MISSOURI
DAVID EUGENE [illegible]
NUMBER [illegible]
REGISTERED ARCHITECT
03/06/2024

TOWNEPLACE SUITES

1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

3

SHEET TITLE
UL ASSEMBLIES - U415 / U423

PROJECT NUMBER: 23098

SHEET NUMBER:

G-210

3

3/6/2024 5:34:20 PM

UL Product iQ®

BXUV.U905 - Fire-resistance Ratings - ANSI/UL 263

Design/System/Construction/Assembly Usage Disclaimer

- 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.

Fire-resistance Ratings - ANSI/UL 263

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 Variances

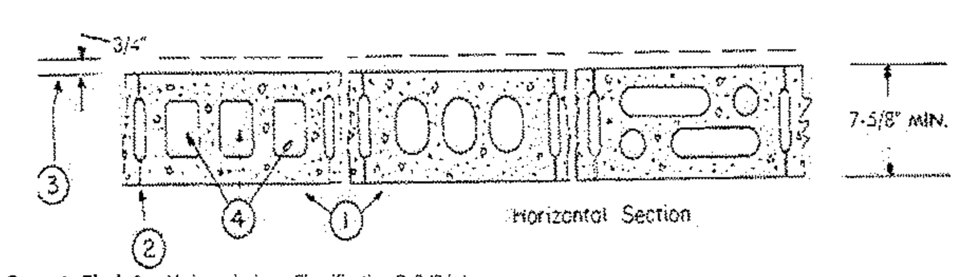
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. U905

June 6, 2022

Bearing Wall Rating — 2 HR.
Nonbearing Wall Rating — 2 HR
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

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



1. **Concrete Blocks* —** Various designs. Classification D-2 (2 hr).
See **Concrete Blocks** category for list of eligible manufacturers.

2. **Mortar —** Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.

3. **Portland Cement Stucco or Gypsum Plaster —** Add 1/2 hr to classification if used. Where combustible members are framed in wall, plaster or stucco must be applied on the face opposite framing to achieve a max. Classification of 1-1/2 hr. Attached to concrete blocks (Item 1).

4. **Loose Masonry Fill —** If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kiln Process), water repellant vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 2 hr to classification.

5. **Foamed Plastic* —** (Optional-Not Shown) — 1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).
ATLAS ROOFING CORP — "EnergyShield Pro Wall Insulation", "EnergyShield Pro 2 Wall Insulation", EnergyShield CGF Pro and EnergyShield Ply Pro

DUPONT DE NEMOURS, INC. — Types Thermax Sheathing, Thermax Light Duty Insulation, Thermax Heavy Duty Insulation, Thermax Metal Building Board, Thermax White Finish Insulation, Thermax ci Exterior Insulation, Thermax XARMOR ci Exterior Insulation, Thermax IH Insulation, Thermax Plus Liner Panel, Thermax Heavy Duty Plus (HDP), TUFF-R™ ci Insulation, Thermax Butler Stylwall Insulation Board and Thermax Morton Heavy Duty Insulation Board

FIRESTONE BUILDING PRODUCTS CO L L C — "Enverge™ CI Foil Exterior Wall Insulation" and "Enverge™ CI Glass Exterior Wall Insulation"

HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — Types "Xci-Class A", "Xci Foil (Class A)", "Xci 286"

RMAX, A BUSINESS UNIT OF SIKA CORPORATION — Types "TSX-8500", "ECOMAXci FR", "TSX-8510", "ECOMAX xi FR White", "ECOMAXci", "ECOMAXci FR Air Barrier", "Thermasheath-XP", "Thermasheath", "Durasheath", "Thermasheath-3", "Durasheath-3".

JOHNS MANVILLE — Type "AP Foil-Faced Foam Sheathing"

5A. **Building Units* —** As an alternate to Items 5, min. 1-in thick polyisocyanurate composite foamed plastic insulation boards, nom. 48 by 48 or 96 in.
HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — "Xci NB", "Xci Ply"

RMAX, A BUSINESS UNIT OF SIKA CORPORATION — "Thermasheath-SI", "ECOBASEci", "ThermaBase-CI", "ECOMAXci FR Ply", "ECOMAXci Ply".

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

Last Updated on 2022-06-06

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
2 01/19/2024 Addendum #2

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7305
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
UL ASSEMBLIES - U905

PROJECT NUMBER: 23098

SHEET NUMBER:
G-211

1/20/2024 8:50:41 AM
C:\Revit Local Cache\2023\23098_DPLS_Townplace_R23_AJDolph.rvt

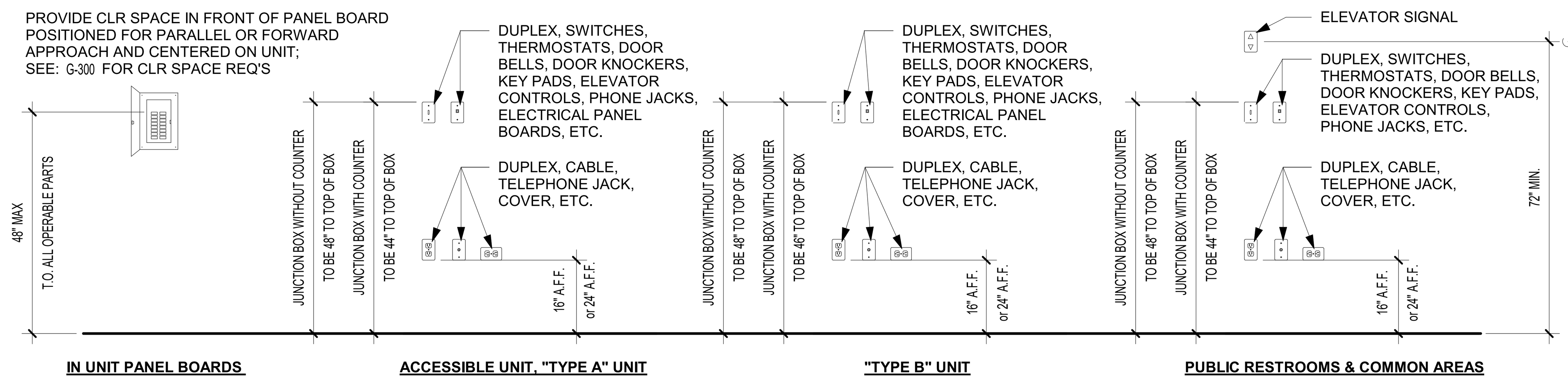
REFERENCE G-003 FOR GENERAL NOTES

DIAGRAMS BELOW ARE APPLICABLE TO PUBLIC SPACES AND ALL UNIT TYPES UNLESS NOTED OTHERWISE

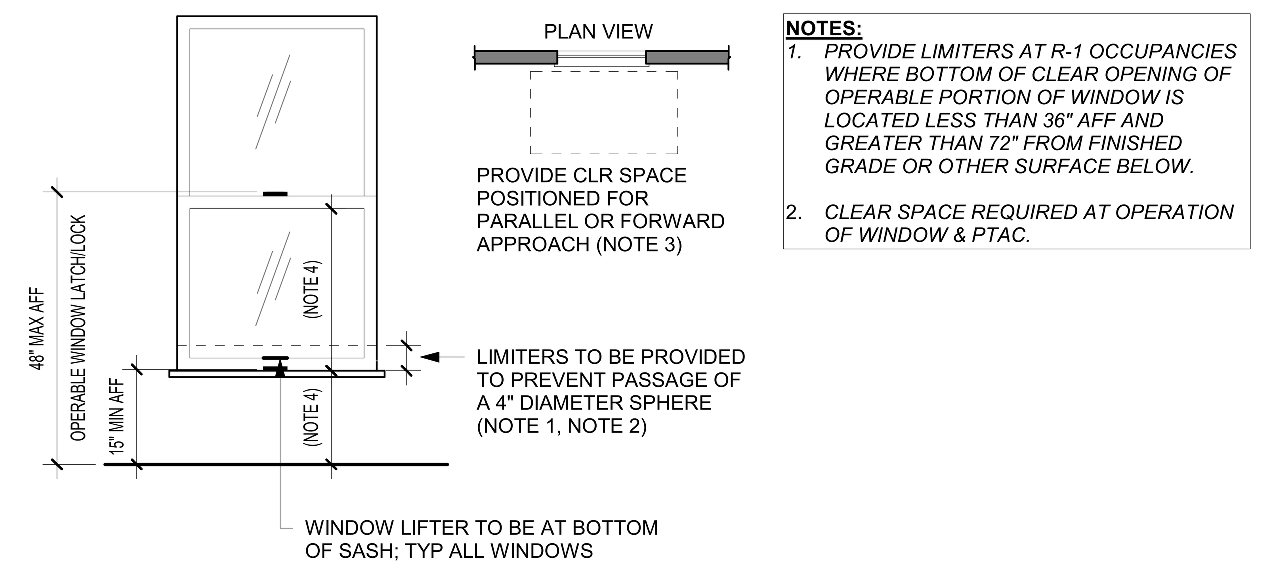
GENERAL NOTES

1. THE PROJECT SHALL MEET ALL APPLICABLE CODES SPECIFIED BY LOCAL AND FEDERAL REQUIREMENTS, INCLUDING BUT NOT LIMITED TO THE INFORMATION PRESENTED ON THE FOLLOWING G-300 SHEETS.
   A. LOCAL AND FEDERAL REQUIREMENTS SHALL SUPERCEDE ANY CONFLICTING INFORMATION
2. ALL DIMENSIONS PROVIDED ON THE FOLLOWING G-300 SHEETS REPRESENT CLEAR DIMENSIONS AND ARE TAKEN FROM FACE OF FINISH/COMPONENT

OTHER HEIGHTS

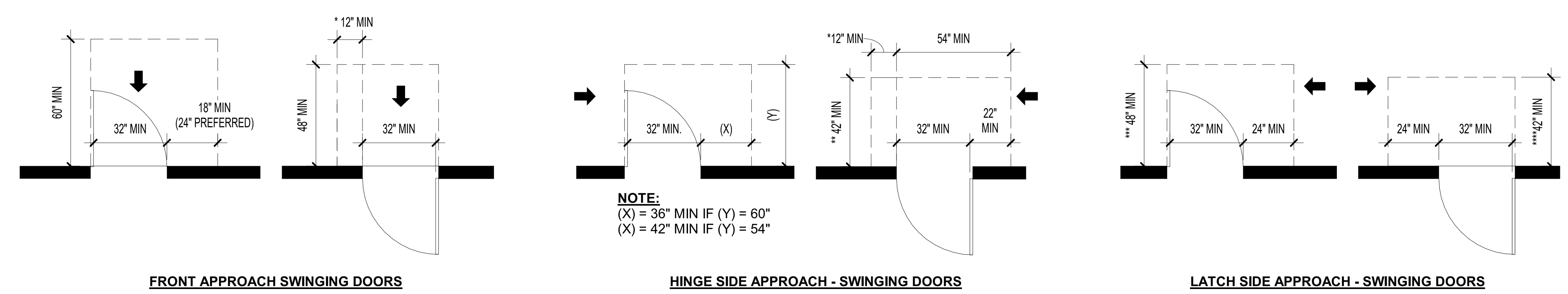


D4 MOUNTING HEIGHTS
NOT TO SCALE



A4 WINDOW LATCH/LOCK REQ'S
NOT TO SCALE

DOORS

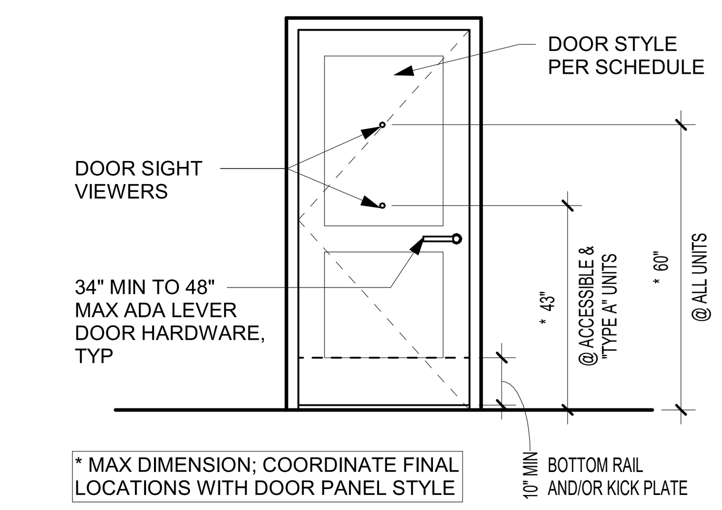


NOTE:
DOOR CLEARANCES ARE REQUIRED FOR ALL DOORS AT THE FOLLOWING LOCATIONS:
PUBLIC AREAS & ACCESSIBLE/TYPE "A" UNITS

STANDARD UNIT DOORS ARE NOT REQUIRED TO PROVIDE PUSH/PULL CLEARANCES PER ADA EXCEPTION 224.1.2; SEE UNIT PLANS FOR MORE INFORMATION

GENERAL LEGEND:
- * = IF BOTH CLOSER & LATCH ARE REQUIRED
- ** = 48" MIN IF BOTH CLOSER & LATCH PROVIDED
- *** = 54" MIN IF CLOSER IS PROVIDED
- **** = 48" MIN IF CLOSER PROVIDED

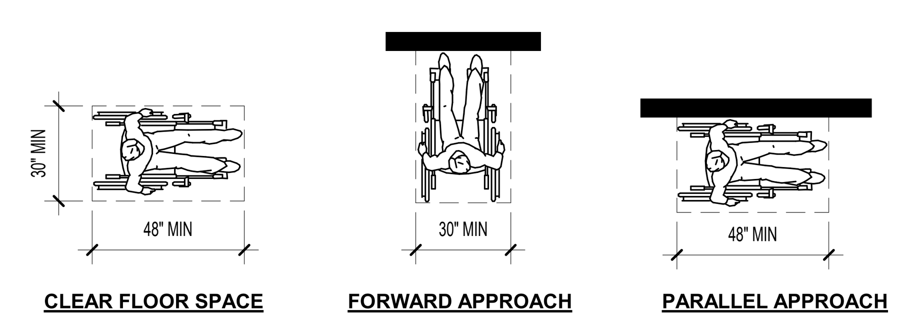
D3 DOOR CLEARANCES
NOT TO SCALE



* MAX DIMENSION; COORDINATE FINAL LOCATIONS WITH DOOR PANEL STYLE

A3 DOOR HARDWARE HEIGHTS
NOT TO SCALE

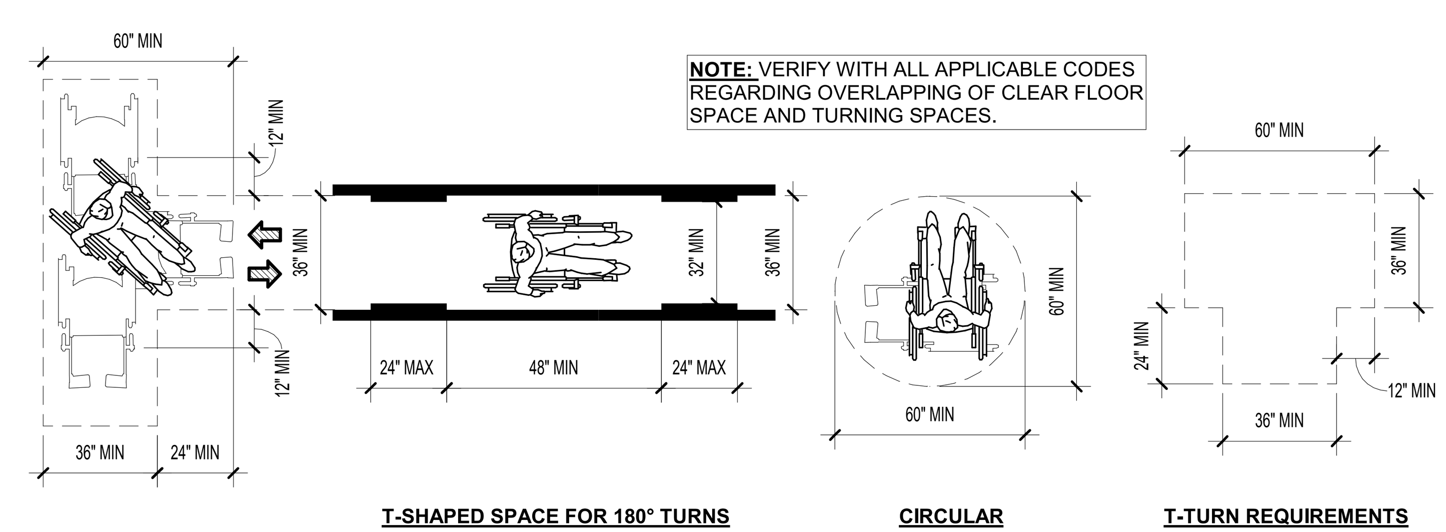
CLEAR FLOOR SPACES



NOTE: ALL CLEAR SPACES ARE 30"x48" UNLESS SPECIFIED OTHERWISE.

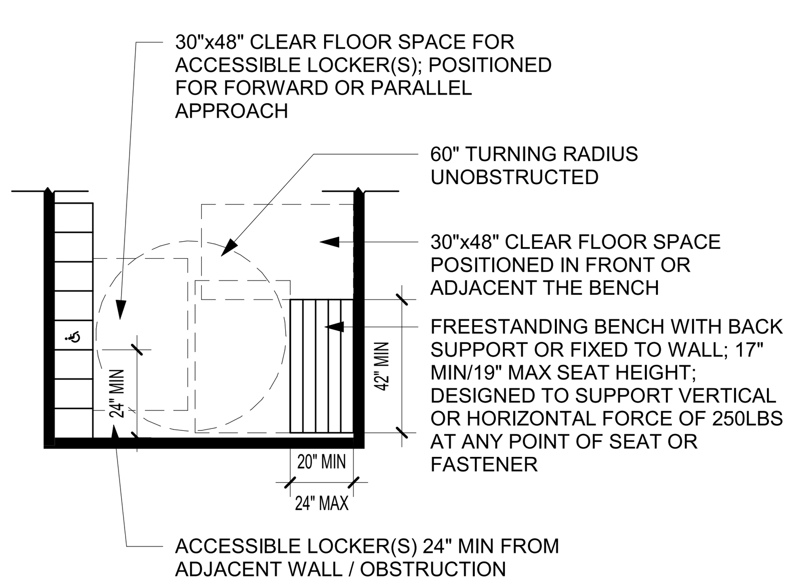
C2 CLEAR FLOOR SPACE
NOT TO SCALE

NOTE: VERIFY WITH ALL APPLICABLE CODES REGARDING OVERLAPPING OF CLEAR FLOOR SPACE AND TURNING SPACES.



A2 WHEELCHAIR TURNING SPACE
NOT TO SCALE

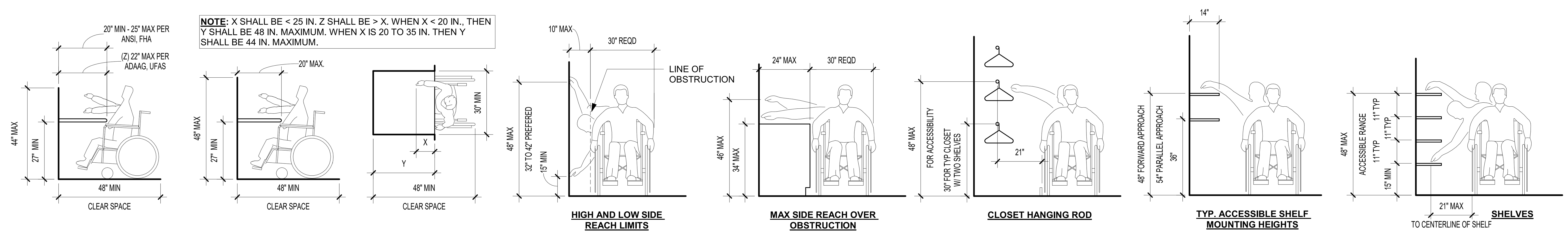
LOCKER ROOMS



E1 LOCKER ROOM BENCH
NOT TO SCALE

REACH RANGES

NOTE: X SHALL BE < 25 IN. Z SHALL BE > X. WHEN X < 20 IN., THEN Y SHALL BE 48 IN. MAXIMUM. WHEN X IS 20 TO 35 IN. THEN Y SHALL BE 44 IN. MAXIMUM.



D1 REACH REQUIREMENTS
NOT TO SCALE

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2 01/19/2024 Addendum #2

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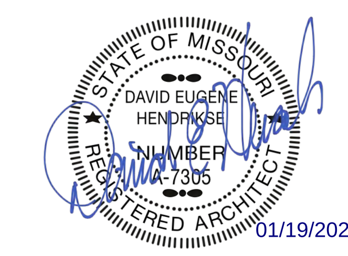


TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
ACCESSIBILITY STANDARDS

PROJECT NUMBER: 23098

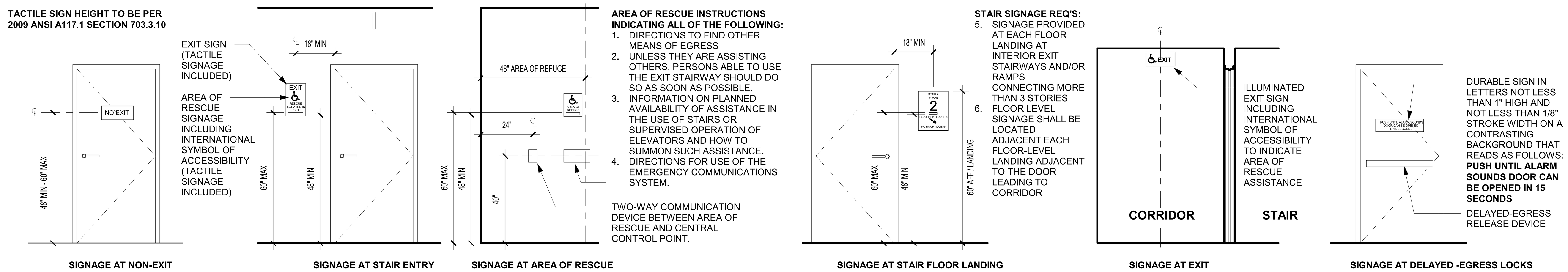
SHEET NUMBER:

G-300

REFERENCE G-003 FOR GENERAL NOTES

DIAGRAMS BELOW ARE APPLICABLE TO PUBLIC SPACES AND ALL UNIT TYPES UNLESS NOTED OTHERWISE

SIGNAGE

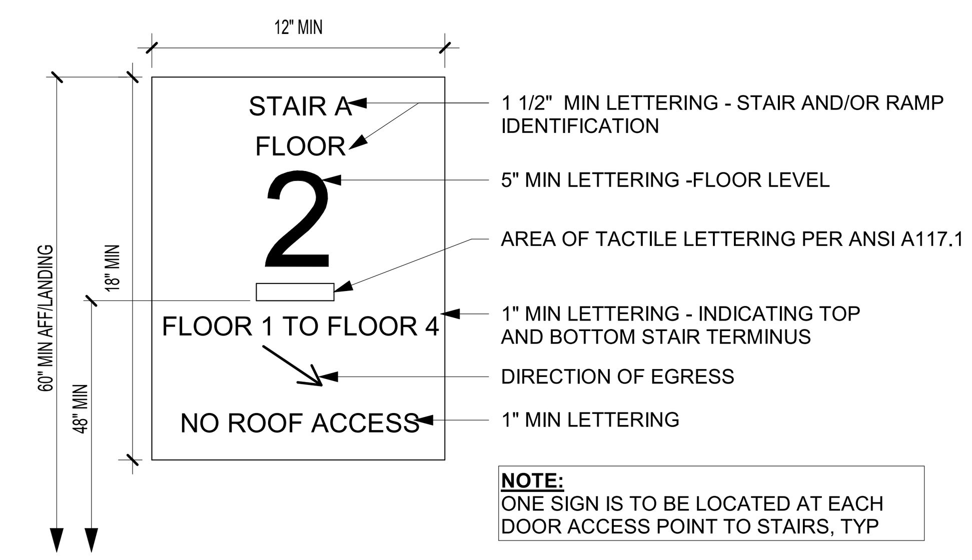


AREA OF RESCUE INSTRUCTIONS INDICATING ALL OF THE FOLLOWING:
1. DIRECTIONS TO FIND OTHER MEANS OF EGRESS
2. UNLESS THEY ARE ASSISTING OTHERS, PERSONS ABLE TO USE THE EXIT STAIRWAY SHOULD DO SO AS SOON AS POSSIBLE.
3. INFORMATION ON PLANNED AVAILABILITY OF ASSISTANCE IN THE USE OF STAIRS OR SUPERVISED OPERATION OF ELEVATORS AND HOW TO SUMMON SUCH ASSISTANCE.
4. DIRECTIONS FOR USE OF THE EMERGENCY COMMUNICATIONS SYSTEM.

STAIR SIGNAGE REQ'S:
5. SIGNAGE PROVIDED AT EACH FLOOR LANDING AT INTERIOR EXIT STAIRWAYS AND/OR RAMPS CONNECTING MORE THAN 3 STORIES
6. FLOOR LEVEL SIGNAGE SHALL BE LOCATED ADJACENT EACH FLOOR-LEVEL LANDING ADJACENT TO THE DOOR LEADING TO CORRIDOR

NOTE: SIGNS CONTAINING RAISED CHARACTERS AND BRAILLE SHALL BE LOCATED ON LATCH SIDE OF DOOR WITH A 18x18 CLEAR FLOOR SPACE OUTSIDE THE SWING OF THE DOOR

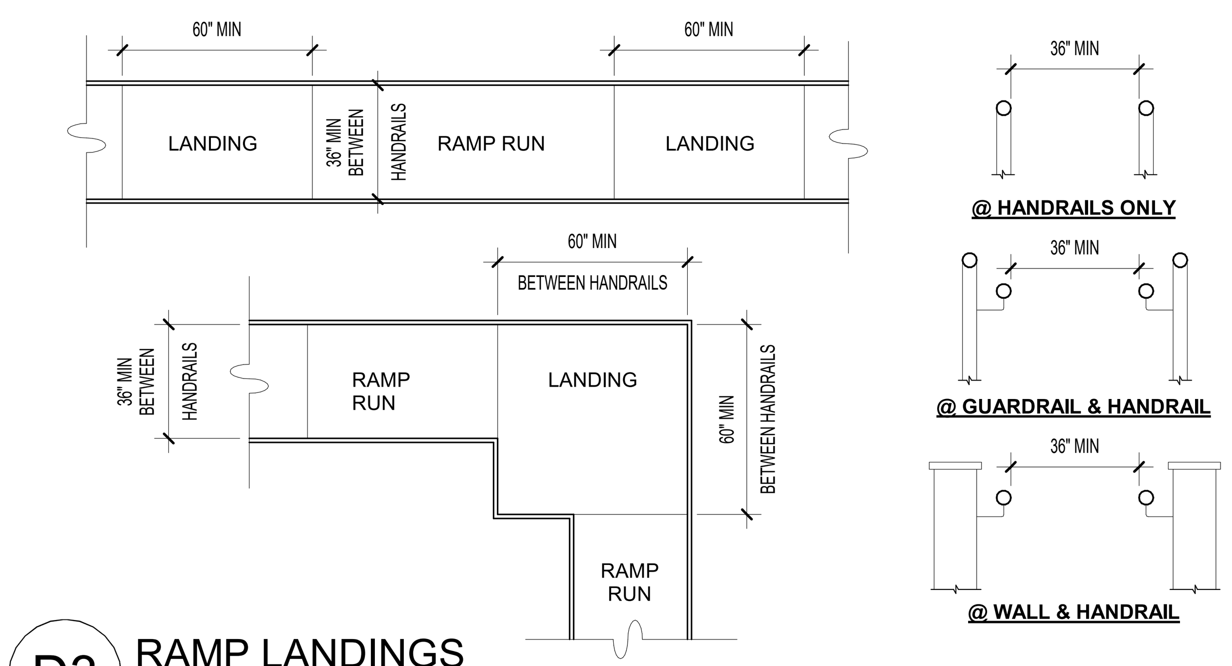
D4 CODE COMPLIANT SIGNAGE
NOT TO SCALE



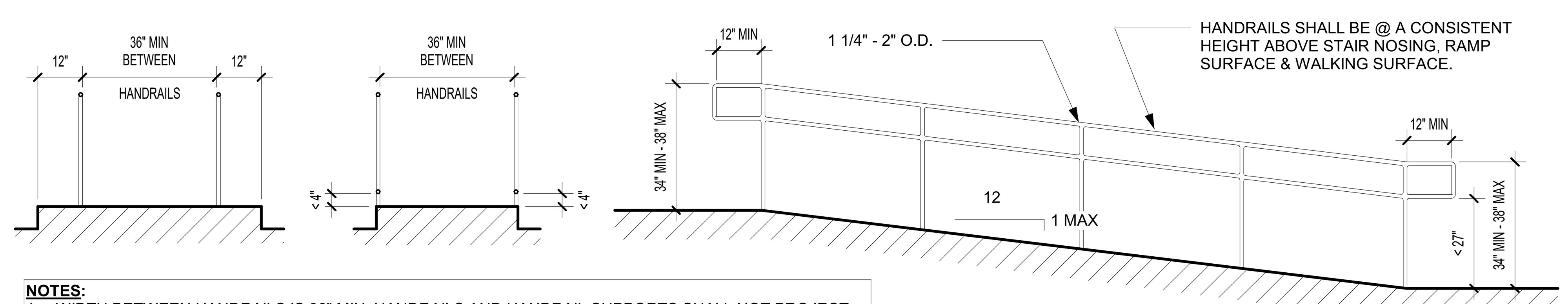
NOTE:
ONE SIGN IS TO BE LOCATED AT EACH DOOR ACCESS POINT TO STAIRS, TYP

A4 EGRESS STAIR SIGNAGE
NOT TO SCALE

RAMPS



D3 RAMP LANDINGS
NOT TO SCALE



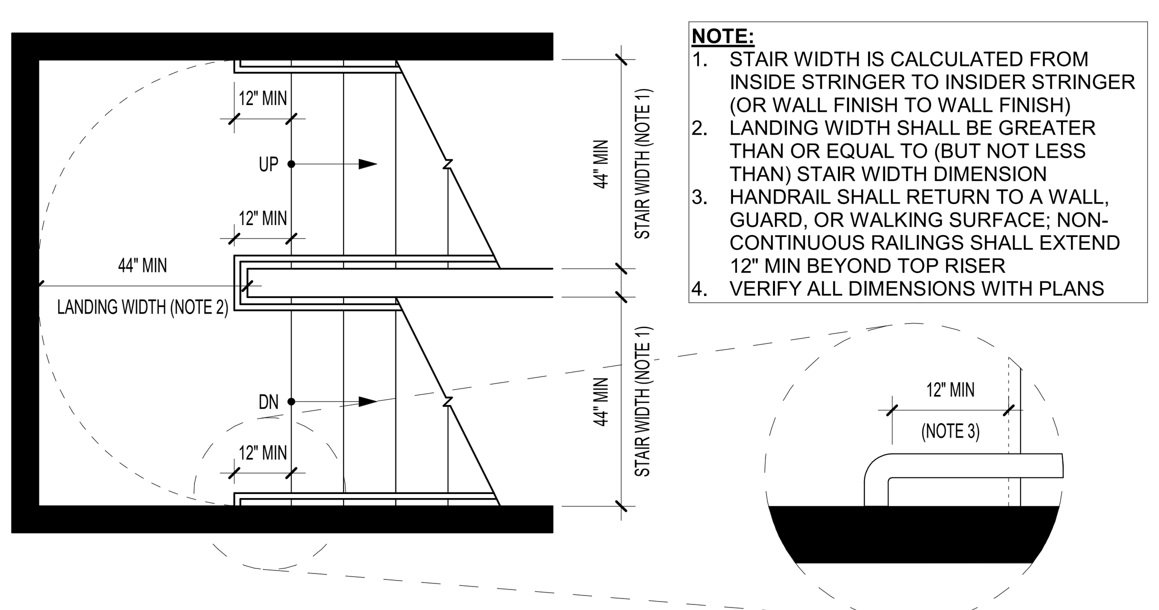
NOTES:
1. WIDTH BETWEEN HANDRAILS IS 36" MIN; HANDRAILS AND HANDRAIL SUPPORTS SHALL NOT PROJECT INTO THE REQUIRED CLEAR WIDTH OF THE RAMP RUN.
2. CROSS SLOPE OF RAMP SURFACES SHALL BE NO GREATER THAN 1:48 AND SHALL BE STABLE, FIRM, AND SLIP-RESISTANT. IF THE SLOPE IS EQ. OR GREATER THAN 1:20 YOU ARE REQ. TO HAVE HANDRAILS ON BOTH SIDES OF RAMP.
3. RAMP RUNS WITH A RISE GREATER THAN 6 INCHES SHALL HAVE HANDRAILS.

C3 RAMP & HANDRAIL SPECS
NOT TO SCALE

ADDITIONAL REQUIREMENTS

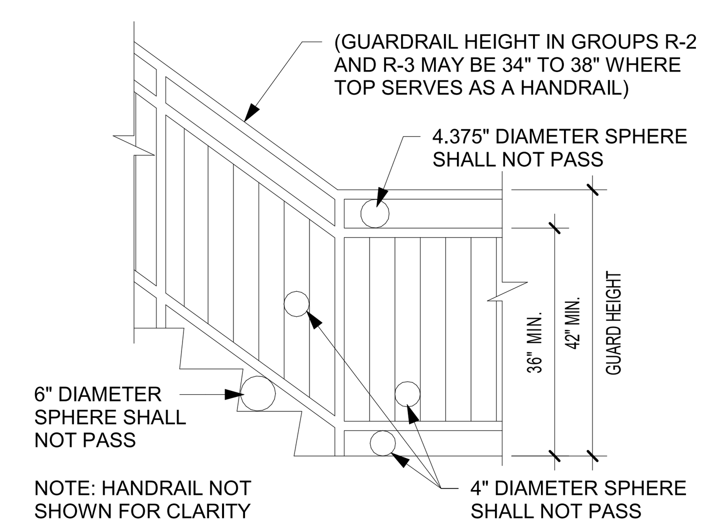
CARPET	MAX PILE HEIGHT SHALL BE 1/2 IN. EXPOSED EDGES OF CARPET SHALL BE FASTENED TO FLOOR SURFACES AND HAVE TRIM ALONG THE ENTIRE LENGTH OF THE EXPOSED EDGE. IF CARPET TILE IS USED ON AN ACCESSIBLE GROUND OF FLOOR SURFACE, IT SHALL HAVE A MAXIMUM COMBINED THICKNESS OF PILE, CUSHION, AND BACKING HEIGHT OF 1/2 IN.		
RAMPS	SLOPE	MAX RISE	MAX HORIZONTAL PROJECTION
	1:12 TO <1:16 1:16 TO <1:20	30 IN. 30 IN.	30 FT. 40 FT.
	1:12 TO 1:20 - REQUIRES A HANDRAIL		
INTERIOR SIGNAGE	**CHARACTER PROPORTION AND COLOR CONTRAST** LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH-TO-HEIGHT RATIO BETWEEN 3:5 AND 1:1 AND A STROKE WIDTH-TO-HEIGHT RATIO BETWEEN 1:5 AND 1:10. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND AND BE NON-GLARE. CHARACTERS SHALL BE UPPER CASE. CHARACTER HEIGHT, MEASURED VERTICALLY FROM THE BASELINE OF THE CHARACTER, SHALL BE 5/8 IN. MINIMUM, AND 2 IN. MAXIMUM, BASED ON THE UPPERCASE LETTER "I".		
	RAISED OR INDENTED CHARACTERS OR SYMBOLS LETTERS AND NUMBERS ON SIGNS SHALL BE RAISED OR INCISED 1/32 IN. MIN AND SHALL BE SANS SERIF CHARACTERS. RAISED CHARACTERS OR SYMBOLS SHALL BE AT LEAST 5/8 IN HIGH, BUT NO HIGHER THAN 2 IN. INDENTED CHARACTERS OR SYMBOLS SHALL HAVE A STROKE WIDTH OF AT LEAST 1/4 IN. SYMBOLS OR PICTOGRAPHS ON SIGNS SHALL BE RAISED OR INDENTED 1/32 IN MIN		
	MOUNTING LOCATION AND HEIGHT INTERIOR SIGNAGE SHALL BE LOCATED ALONGSIDE THE DOOR ON THE LATCH SIDE AND SHALL BE MOUNTED AT A HEIGHT OF BETWEEN 54 IN. AND 66 IN. ABOVE THE FINISHED FLOOR PER UFAS AND BETWEEN 48 IN. AND 60 IN. PER ANSI. REFER TO **ICC/ANSI A117.1-2009, 703.2.8** FOR MORE REQUIREMENTS ON MOUNTING LOCATION.		

STAIRS AND RAILINGS

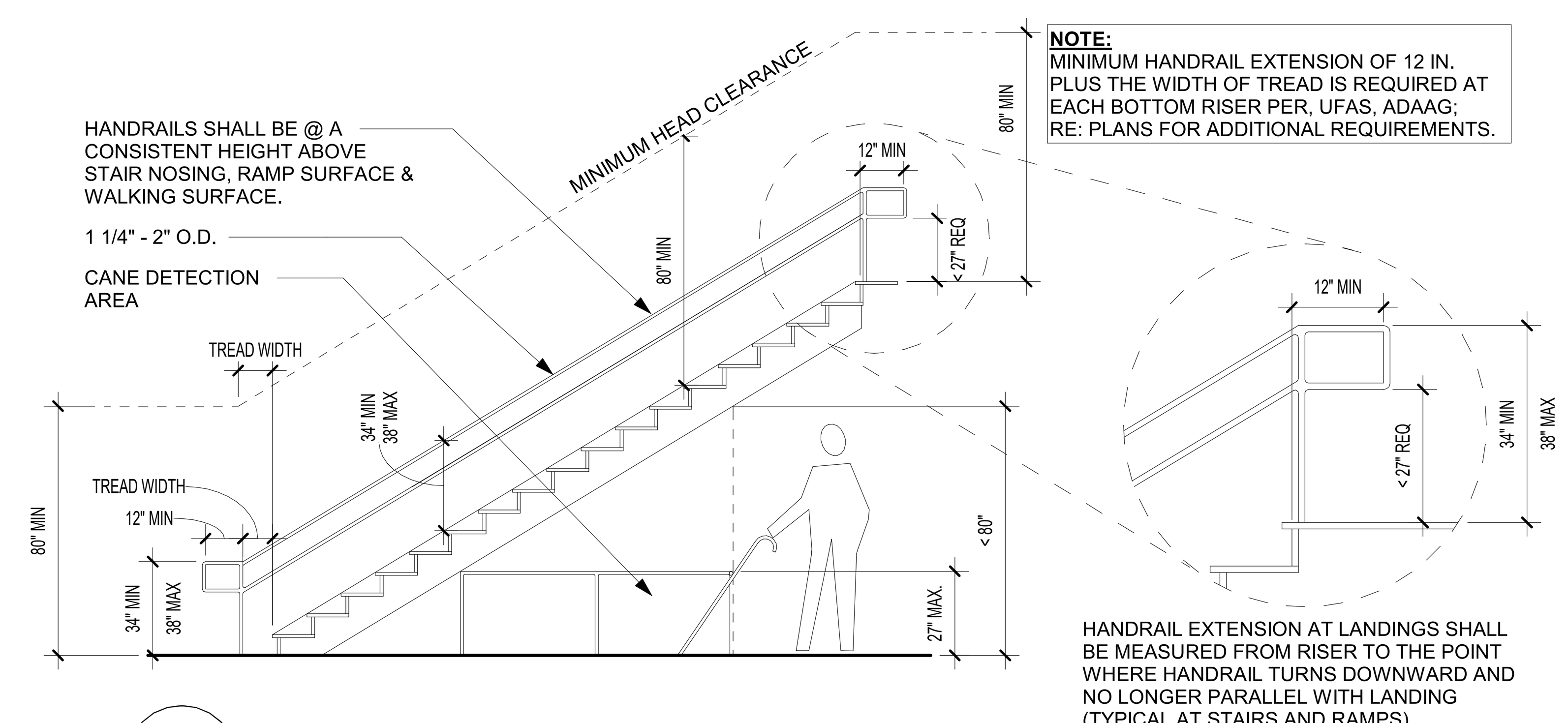


NOTE:
1. STAIR WIDTH IS CALCULATED FROM INSIDE STRINGER TO INSIDER STRINGER (OR WALL FINISH TO WALL FINISH)
2. LANDING WIDTH SHALL BE GREATER THAN OR EQUAL TO (BUT NOT LESS THAN) STAIR WIDTH DIMENSION
3. HANDRAIL SHALL RETURN TO A WALL, GUARD, OR WALKING SURFACE; NON-CONTINUOUS RAILINGS SHALL EXTEND 12" MIN BEYOND TOP RISER
4. VERIFY ALL DIMENSIONS WITH PLANS

D2 EGRESS STAIR REQ'S
NOT TO SCALE

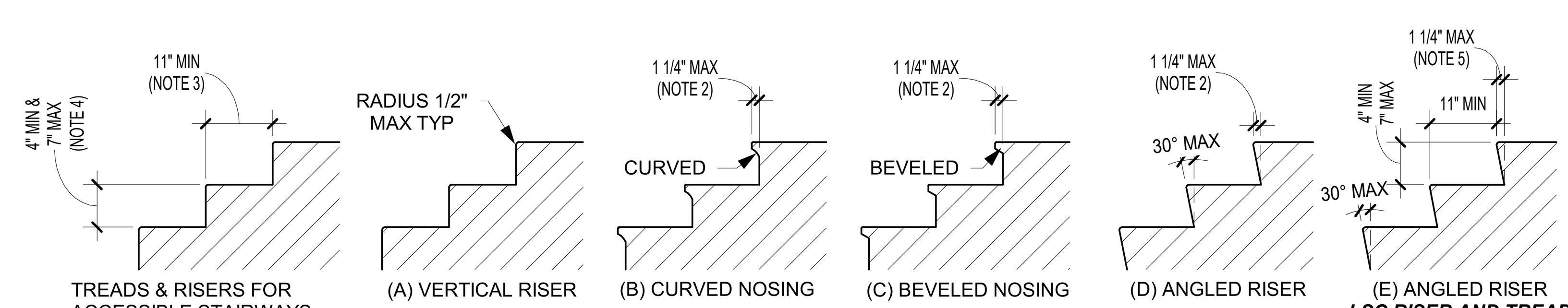


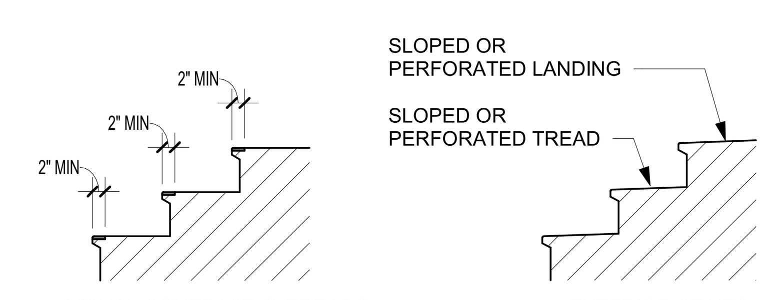
C2 STAIR OPENING GUARD LIMITATIONS
NOT TO SCALE



NOTE:
MINIMUM HANDRAIL EXTENSION OF 12 IN. PLUS THE WIDTH OF TREAD IS REQUIRED AT EACH BOTTOM RISER PER, UFAS, ADAAG; RE: PLANS FOR ADDITIONAL REQUIREMENTS.

B2 STAIR PROTECTION & HANDRAIL DETAIL
NOT TO SCALE



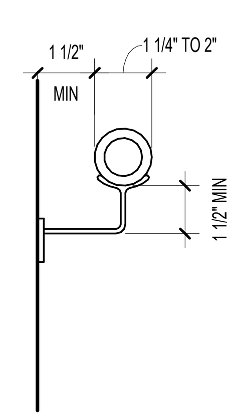


THE LEADING 2" OF TREADS SHALL HAVE VISUAL CONTRAST OF DARK-ON-LIGHT OR LIGHT-ON-DARK FROM THE REMAINDER OF THE TREAD

MATERIAL CHANGES SHALL PROVIDE A FLUSH SURFACE

TREADS AND LANDINGS SUBJECT TO WET CONDITIONS SHALL BE DESIGNED TO PREVENT ACCUMULATION OF WATER

D1 STAIR RISER AND TREAD REQ
NOT TO SCALE



B1 IBC HANDRAIL DETAIL
NOT TO SCALE

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
2 01/19/2024 Addendum #2

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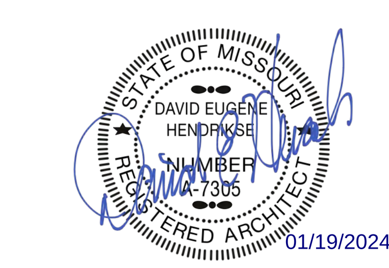


TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
ACCESSIBILITY STANDARDS

PROJECT NUMBER: 23098

SHEET NUMBER:

G-301

REFERENCE G-003 FOR GENERAL NOTES

DIAGRAMS BELOW ARE APPLICABLE TO PUBLIC SPACES AND ALL UNIT TYPES UNLESS NOTED OTHERWISE

TOILET, BATH, LAUNDRY ACCESSORY SCHEDULE

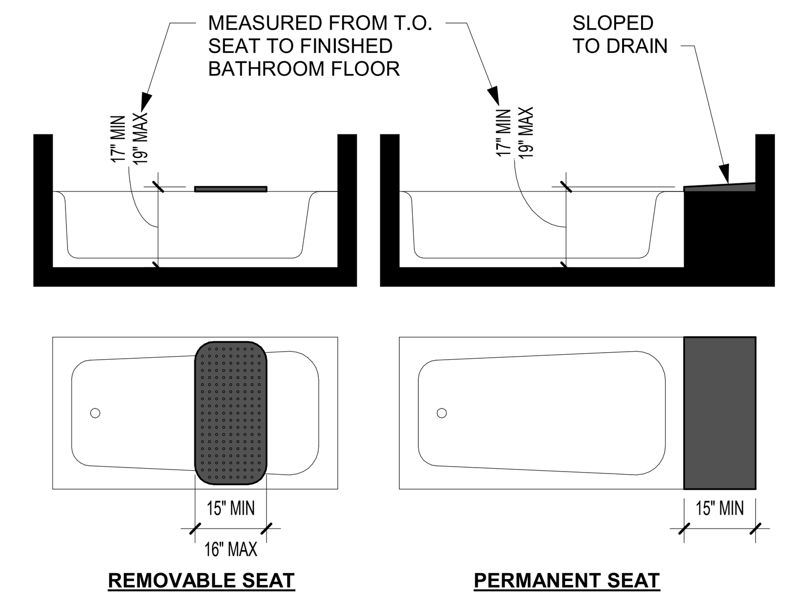
ACCESSORY	MOUNTING HEIGHT	LOCATION
MIRROR	SEE A1/G-303	PUBLIC & UNIT
PAPER TOWEL DISP/RECP	40" AFF MIN TO CONTROLS	PUBLIC
TOILET PAPER DISPENSER (TPD)	SEE D1/G-302	PUBLIC
TOILET PAPER HOLDER (TP)	SEE D1/G-302	UNIT
DIAPER CHANGING STATIONS	34" MAX TO CHANGING SURFACE	PUBLIC
GRAB BARS	SEE G-302	PUBLIC & UNIT
SANITARY NAPKIN RECEPTOR	18" MIN AFF & 24" MIN / 42" MAX FROM REAR WALL	PUBLIC
DRINKING FOUNTAIN	SEE C1/G303	PUBLIC
DRINKING FOUNTAIN - ACCESSIBLE	SEE C1/G-303	PUBLIC
WATER CLOSET (FLOOR-MOUNTED)	1'-4" AFF MIN TO RIM	PUBLIC & UNIT
WATER CLOSET - ACCESSIBLE (FLOOR-MOUNTED)	SEE D1/G-302	PUBLIC & UNIT
LAVATORY	SEE INTERIOR ELEVATIONS	PUBLIC & UNIT
LAVATORY - ACCESSIBLE	SEE A1/G-303	PUBLIC & UNIT
SOAP DISPENSER	40" AFF MIN TO CONTROLS	PUBLIC
MEDICINE CABINET	42" AFF MIN TO TOP OF BOTTOM SHELF	UNIT
MEDICINE CABINET - ACCESSIBLE	40" AFF MIN TO TOP OF BOTTOM SHELF	UNIT

REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION

GENERAL NOTES

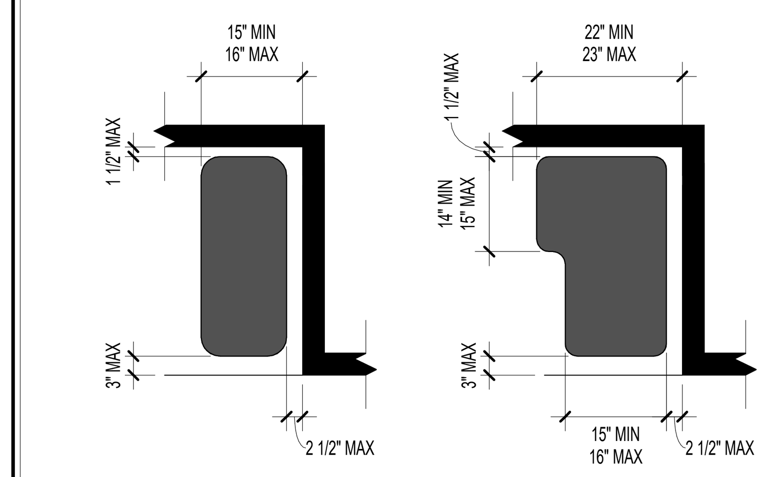
1. GRAB BAR BLOCKING IS REQUIRED AT ALL TOILET, SHOWER AND BATHTUB GRAB BAR LOCATIONS; APPLICABLE AT ALL PUBLIC SPACES, ACCESSIBLE UNITS, "TYPE A" UNITS, AND "TYPE B" UNITS.
2. CONTRACTOR SHALL BE FAMILIAR AND INCORPORATE ALL PROVISIONS AND REQUIREMENTS ESTABLISHED BY CODES APPLICABLE TO THE PROJECT INCLUDING FAIR HOUSING, UFAS, ANSI, & ADAAG

TUB SEAT



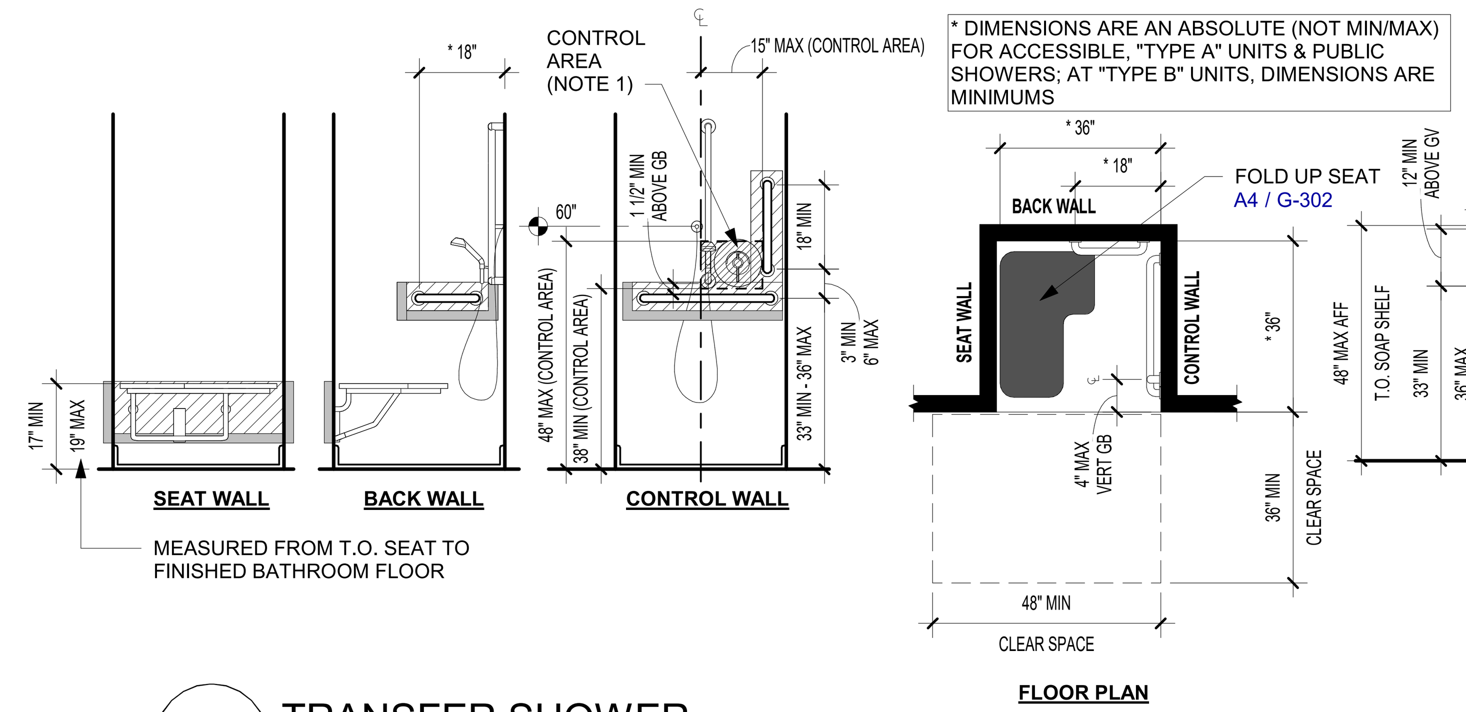
B4 BATHTUB SEAT
NOT TO SCALE

SHOWER SEAT

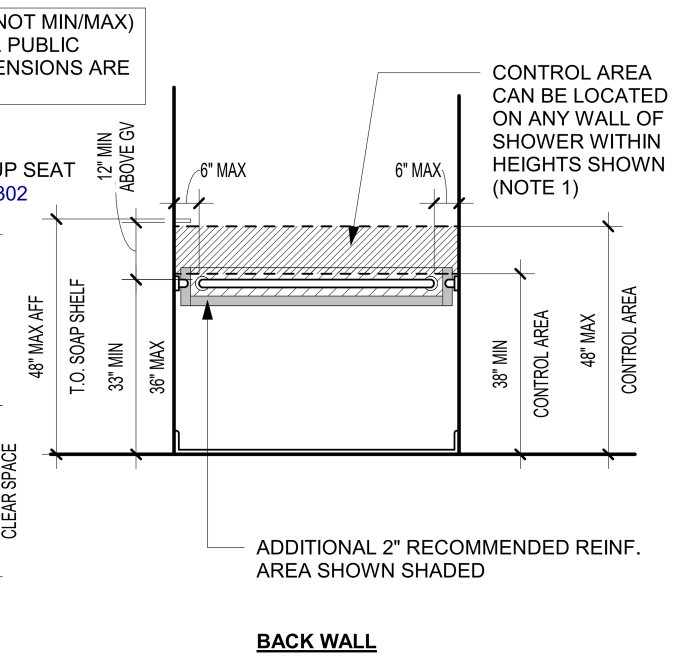


A4 SHOWER SEAT
NOT TO SCALE

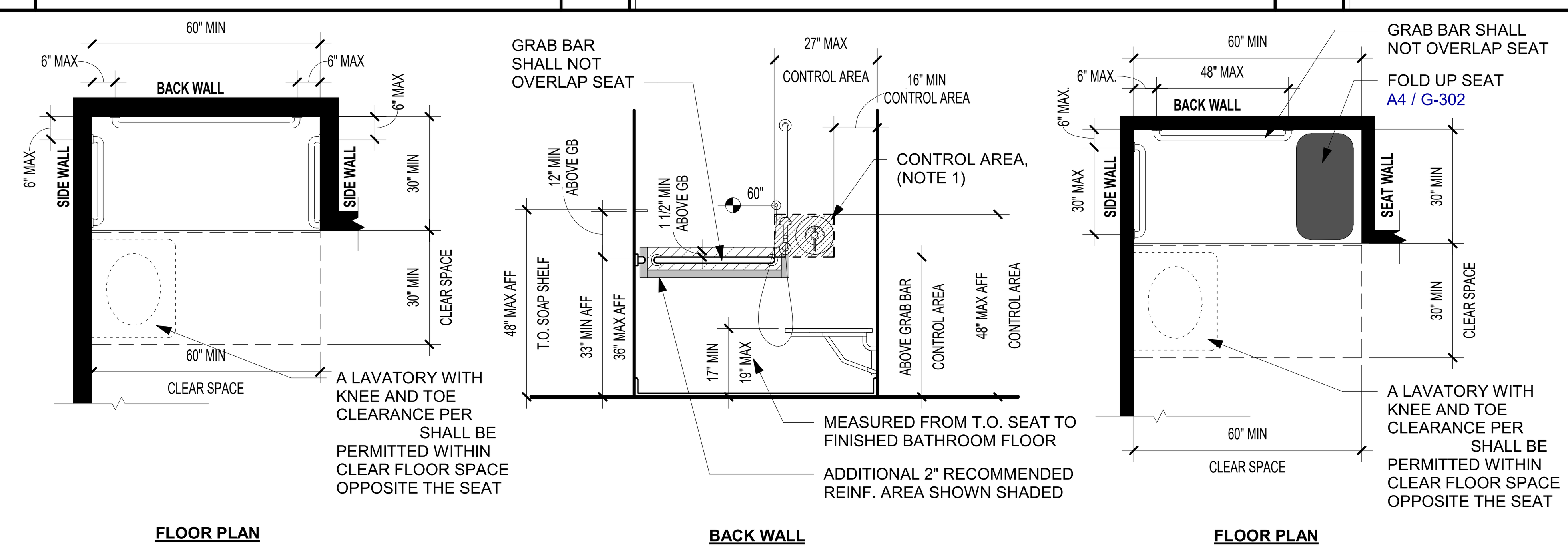
SHOWERS



D3 TRANSFER SHOWER
NOT TO SCALE



C3 ROLL-IN SHOWER W/O SEAT
NOT TO SCALE



B3 ROLL-IN SHOWER W/ SEAT
NOT TO SCALE

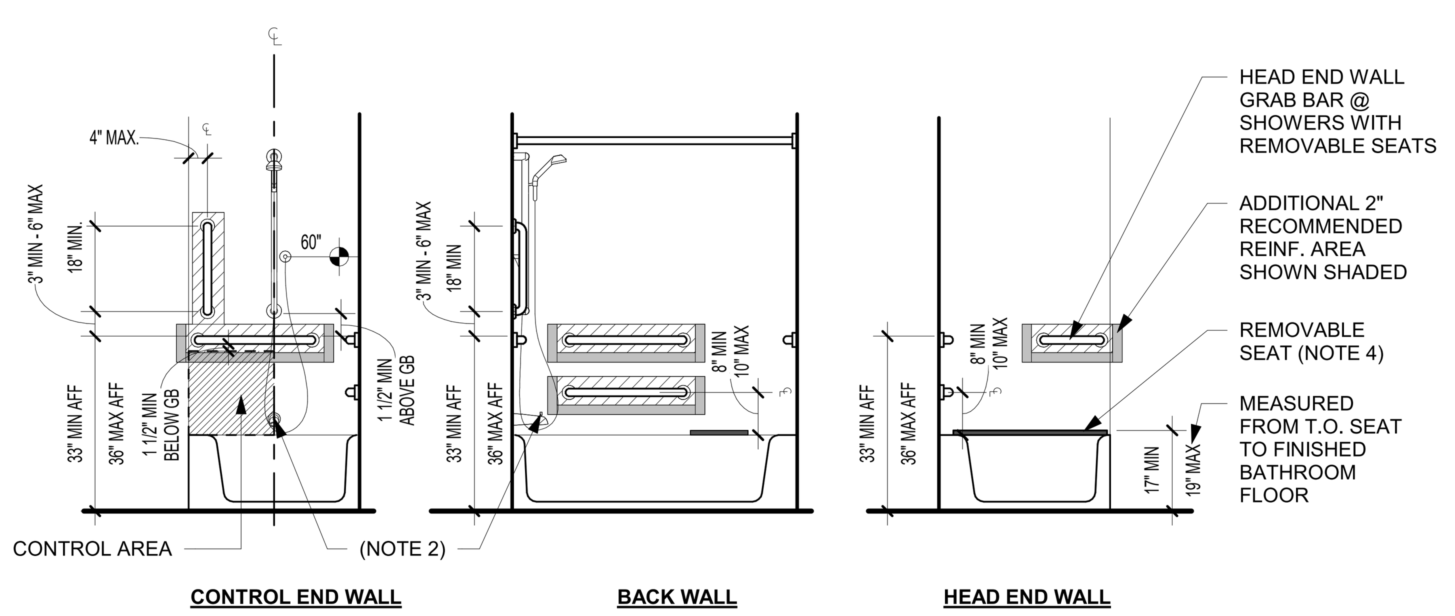
SHOWER NOTES

SHOWER DIAGRAMS & NOTES BELOW ARE APPLICABLE TO PUBLIC, ACCESSIBLE, AND "TYPE A" COMPLIANT BATHROOMS.

SEE UNIT PLANS AND/OR PLUMBING SCHEDULE FOR "TYPE B" OR EXEMPT SHOWER REQUIREMENTS

1. AN ADJUSTABLE-HEIGHT HAND SHOWER, MOUNTED ON A VERTICAL BAR, SHALL BE INSTALLED SUCH THAT THE HANDLE OF THE HAND SHOWER (POSITIONED AT ITS LOWEST POSITION) SHALL BE LOCATED WITHIN THE CONTROL AREA SHOWN
   A. FIXED SHOWER HEAD MOUNTED AT 48" MAX ABOVE SHOWER FLOOR PERMITTED AT PUBLIC SHOWERS.
2. A HAND SHOWER WITH A HOSE OF 60" MINIMUM IN LENGTH TO BE PROVIDED.
   A. HAND SHOWER SHALL HAVE A CONTROL WITH A NONPOSITIVE SHUT OFF FEATURE.
3. ADDITIONAL 2" RECOMMENDED REINFORCED AREA AROUND GRAB BARS (SHOWN SHADED)
4. SEE UNIT PLANS AND/OR INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION
5. THRESHOLDS SHALL BE 1/2" MAX

TUB

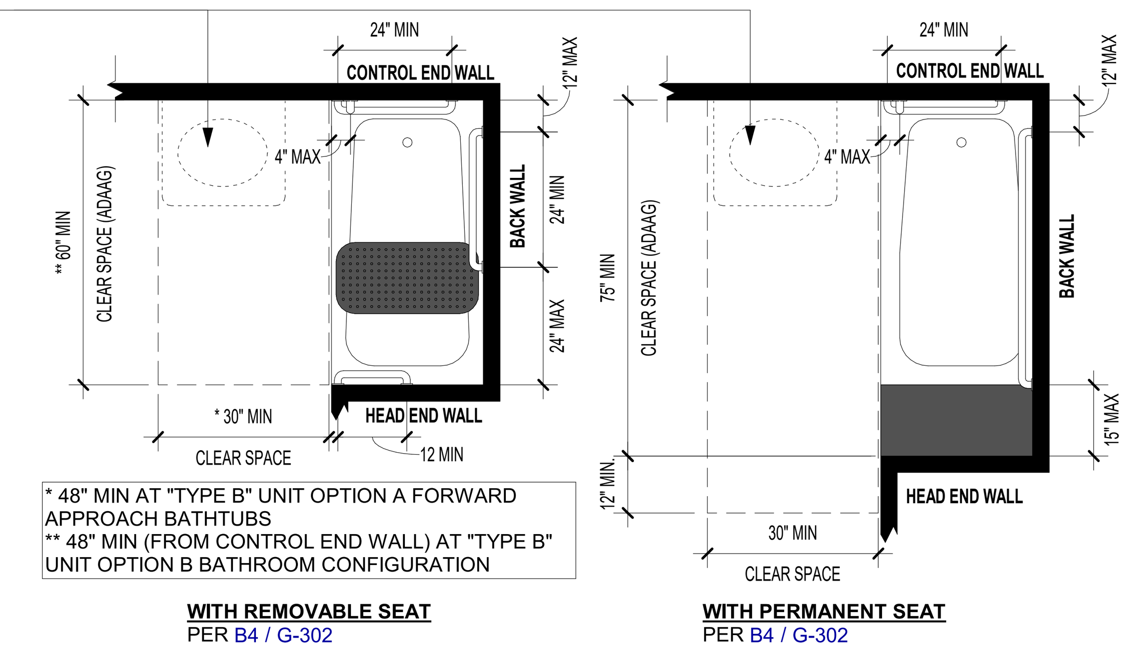


D2 BATHTUB HEIGHT REQ'S
NOT TO SCALE

ACCESSIBLE UNITS:
SINK OR CABINETRY NOT ALLOWED WITHIN CLEAR FLOOR SPACE

"TYPE A" UNITS:
COUNTER TOPS AND CABINETRY PERMITTED WITHIN CLEAR FLOOR SPACE PROVIDED ALL OF THE FOLLOWING:
A. REMOVABLE COUNTER TOP & CABINETRY
B. FLOOR AND WALL FINISHES EXTEND UNDER AND BEHIND THE REMOVABLE CABINETRY & COUNTER TOP.

"TYPE B" UNITS:
OPTION A - PARALLEL APPROACH TUB:
LAVATORY PERMITTED WITHIN CLEAR FLOOR SPACE PROVIDED A 48"X30" CLEAR SPACE IS PROVIDED IN FRONT OF THE TUB
OPTION A - FORWARD APPROACH TUB:
WATER CLOSET AND LAVATORY PERMITTED WITHIN CLEAR FLOOR SPACE
OPTION B:
SINK OR CABINETRY NOT ALLOWED WITHIN 30"X48" CLEAR FLOOR SPACE



* 48" MIN AT "TYPE B" UNIT OPTION A FORWARD APPROACH BATHTUBS
** 48" MIN (FROM CONTROL END WALL) AT "TYPE B" UNIT OPTION B BATHROOM CONFIGURATION

WITH REMOVABLE SEAT
PER B4 / G-302

WITH PERMANENT SEAT
PER B4 / G-302

C2 BATHTUB CLEARANCES
NOT TO SCALE

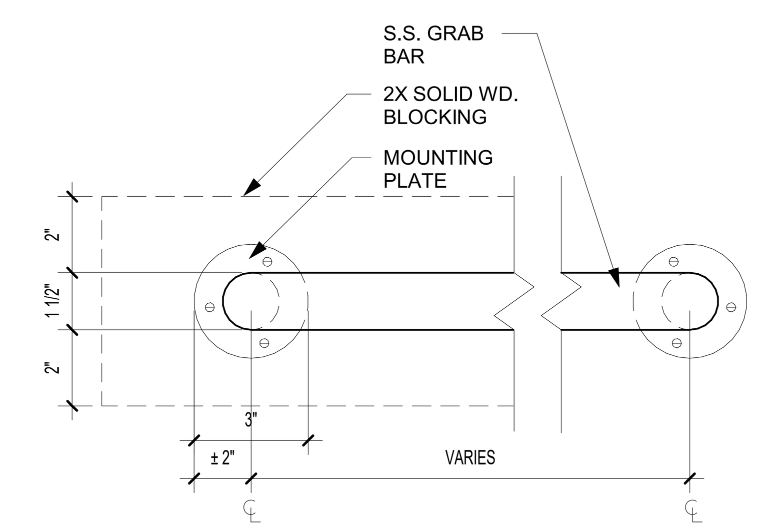
TUB NOTES

TUB DIAGRAMS & NOTES BELOW ARE APPLICABLE TO ACCESSIBLE, AND "TYPE A" COMPLIANT BATHROOMS.

SEE UNIT PLANS AND/OR PLUMBING SCHEDULE FOR "TYPE B" OR EXEMPT TUB REQUIREMENTS.

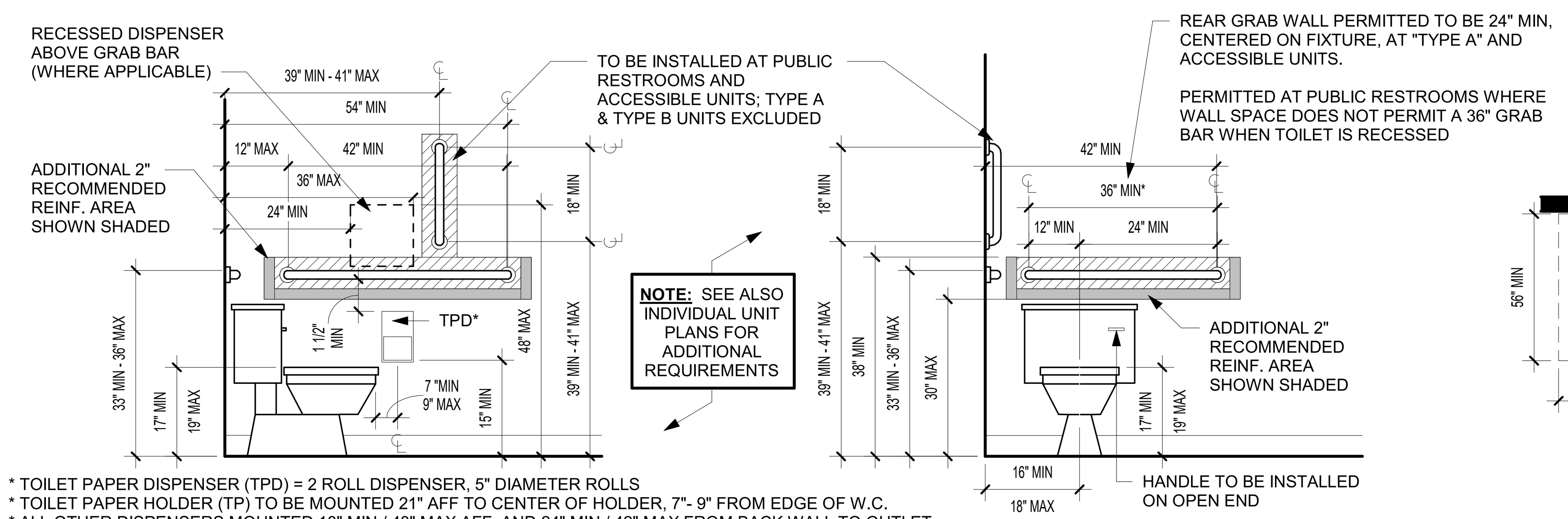
1. A HAND SHOWER WITH A HOSE OF 60" MINIMUM IN LENGTH TO BE PROVIDED.
   A. HAND SHOWER SHALL HAVE A CONTROL WITH A NONPOSITIVE SHUT OFF FEATURE.
2. NO PIN KNOB DIVERTERS IN ACCESSIBLE OR "TYPE A" UNITS AT TUB FAUCETS.
3. ADDITIONAL 2" RECOMMENDED REINFORCED AREA AROUND GRAB BARS (SHOWN SHADED).
4. REMOVABLE SEAT NOT REQUIRED AT "TYPE A" UNITS.
5. SEE UNIT PLANS AND/OR INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.

GRAB BAR



A2 GRAB BAR DETAIL
NOT TO SCALE

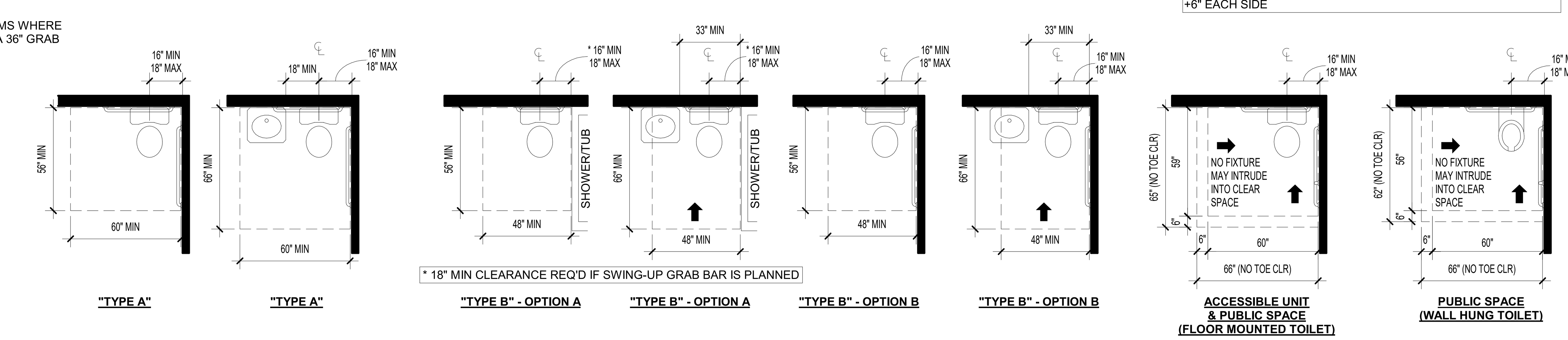
TOILET



* TOILET PAPER DISPENSER (TPD) = 2 ROLL DISPENSER, 5" DIAMETER ROLLS
* TOILET PAPER HOLDER (TP) TO BE MOUNTED 21" AFF TO CENTER OF HOLDER, 7"- 9" FROM EDGE OF W.C.
* ALL OTHER DISPENSERS MOUNTED 18" MIN / 48" MAX AFF, AND 24" MIN / 42" MAX FROM BACK WALL TO OUTLET

D1 TOILET STANDARDS
NOT TO SCALE

WHERE TOILET PARTITIONS EXTEND TO FINISHED FLOOR (NO TOE CLEARANCE PROVIDED); CLEARANCE REQ'S INCREASE BY +6" EACH SIDE



* 18" MIN CLEARANCE REQ'D IF SWING-UP GRAB BAR IS PLANNED

"TYPE A" | "TYPE A" | "TYPE B" - OPTION A | "TYPE B" - OPTION A | "TYPE B" - OPTION B | "TYPE B" - OPTION B | ACCESSIBLE UNIT & PUBLIC SPACE (FLOOR MOUNTED TOILET) | PUBLIC SPACE (WALL HUNG TOILET)

C1 TOILET APPROACHES
NOT TO SCALE

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
2 01/19/2024 Addendum #2

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-...
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
ACCESSIBILITY STANDARDS

PROJECT NUMBER: 23098

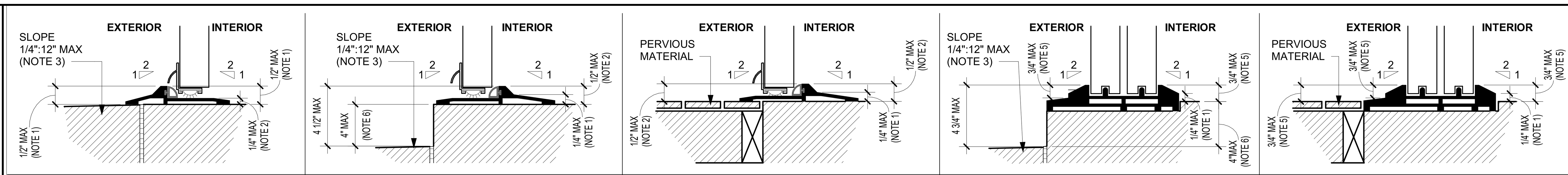
SHEET NUMBER:

G-302

REFERENCE G-003 FOR GENERAL NOTES

DIAGRAMS BELOW ARE APPLICABLE TO PUBLIC SPACES AND ALL UNIT TYPES UNLESS NOTED OTHERWISE

THRESHOLD



SWINGING @ IMPERVIOUS MATERIAL	SWINGING SECONDARY DOOR @ IMPERVIOUS MATERIAL	SWINGING SECONDARY DOOR @ PERVIOUS MATERIAL	SLIDING SECONDARY DOOR @ IMPERVIOUS MATERIAL	SLIDING SECONDARY DOOR @ PERVIOUS MATERIAL
ALL DOORS INTENDED FOR PASSAGE	BALCONY OR OTHER EXTERIOR DOORS	BALCONY OR OTHER EXTERIOR DOORS	BALCONY OR OTHER EXTERIOR DOORS	BALCONY OR OTHER EXTERIOR DOORS
✓ PUBLIC DOORS		✓ PUBLIC DOORS		
✓ ACCESSIBLE UNITS (ALL DOORS)		✓ ACCESSIBLE UNITS		
✓ "TYPE A" UNITS (ALL DOORS)		✓ "TYPE A" UNITS		
✓ "TYPE B" UNITS (UNIT ENTRY DOORS ONLY)	✓ "TYPE B" UNITS	✓ "TYPE B" UNITS	✓ "TYPE B" UNITS	✓ "TYPE B" UNITS

SEE ARCHITECTURAL DRAWINGS FOR PROJECT SPECIFIC THRESHOLD DETAILS AND WEATHER PROOFING

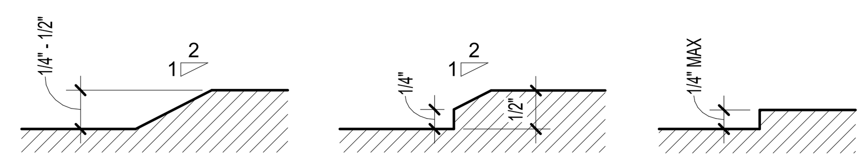
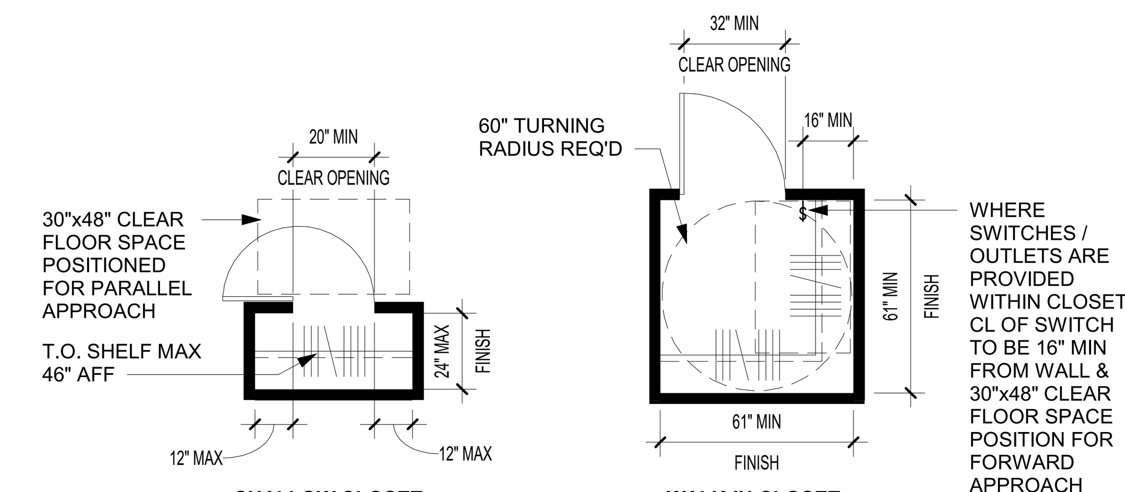


IMAGE 3 IMAGE 2 IMAGE 1

NOTES:
1. CHANGES IN LEVEL OF 1/4" MAXIMUM IN HEIGHT SHALL BE PERMITTED TO BE VERTICAL WITH NO BEVEL PROVIDED **(IMAGE 1)**
2. CHANGES IN LEVEL GREATER THAN 1/4" SHALL BE BEVELED WITH A 1:2 SLOPE FOR UP TO 1/2" MAX **(IMAGE 2,3)**
3. FINISHED SURFACE OUTSIDE OF PRIMARY ENTRY DOOR MAY BE SLOPED AT A MAXIMUM OF 1/4" PER 12"
4. **EXISTING BUILDINGS ONLY:** EXISTING OR ALTERED THRESHOLDS SHALL BE PERMITTED TO BE 3/4" MAX WITH A 1:2 BEVELED EDGE ON EA SIDE OF HEIGHT EXCEEDING 1/4"
5. **SLIDING DOORS ONLY:** THRESHOLD SHALL BE PERMITTED TO BE 3/4" MAX WITH A 1:2 BEVELED EDGE ON EACH SIDE FOR HEIGHT EXCEEDING 1/4"
6. ALLOWABLE AT SECONDARY EXTERIOR RESIDENTIAL DOORS ONLY **(ANSI A117.1 1004.4.2 & FHA 4.11)**

C4 CHANGES IN LEVEL & THRESHOLDS
NOT TO SCALE

CLOSETS



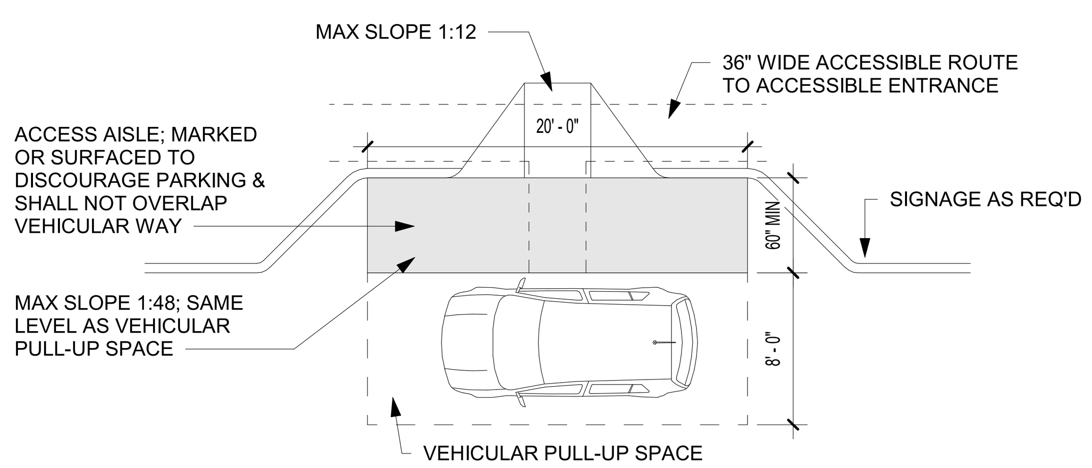
SHALLOW CLOSET
24" MAX DEPTH
20" MIN CLR OPENING REQUIRED

WALK-IN CLOSET
48"+ DEPTH
32" MIN CLR OPENING REQ'D
48"+ CLOSET DEPTH

LOCATIONS: PUBLIC, ACCESSIBLE, AND "TYPE A" UNITS

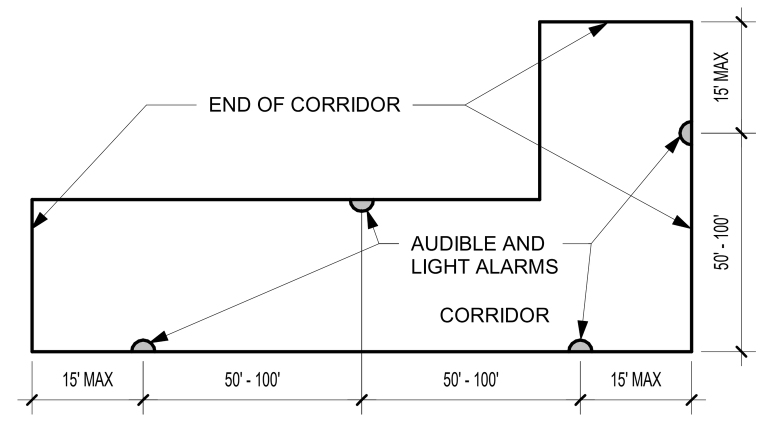
A4 CLOSET DIMENSIONS - UFAS/ADAAG COMPLIANT
NOT TO SCALE

PASSENGER LOADING ZONE

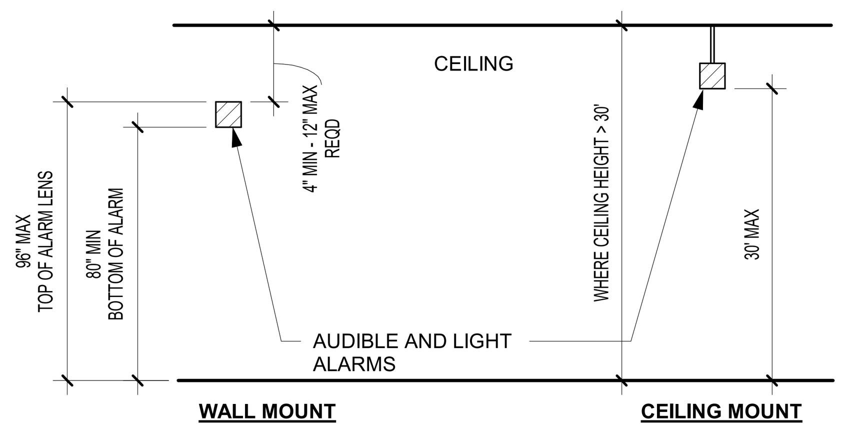


D3 PASSENGER LOADING ZONE
NOT TO SCALE

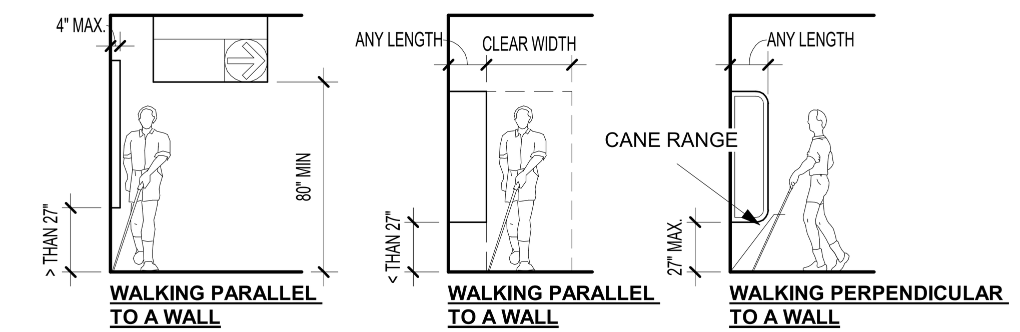
HEARING & VISION IMPAIRED



C3 ALARM SPACING IN CORRIDOR
NOT TO SCALE

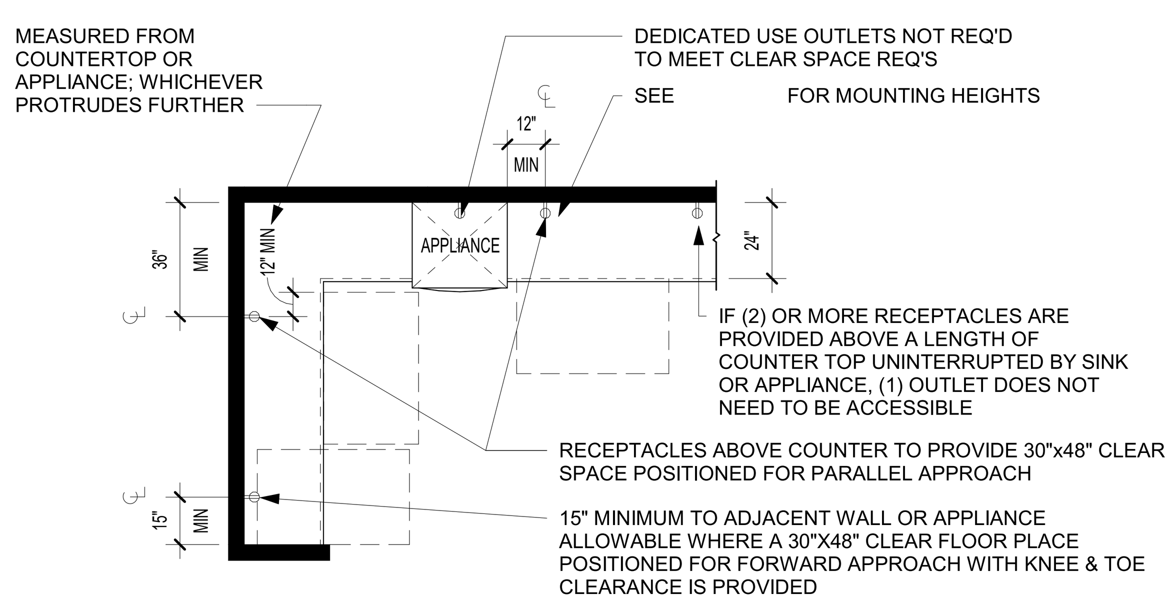


B3 CEILING/ WALL MOUNTED ALARM LOCATIONS
NOT TO SCALE



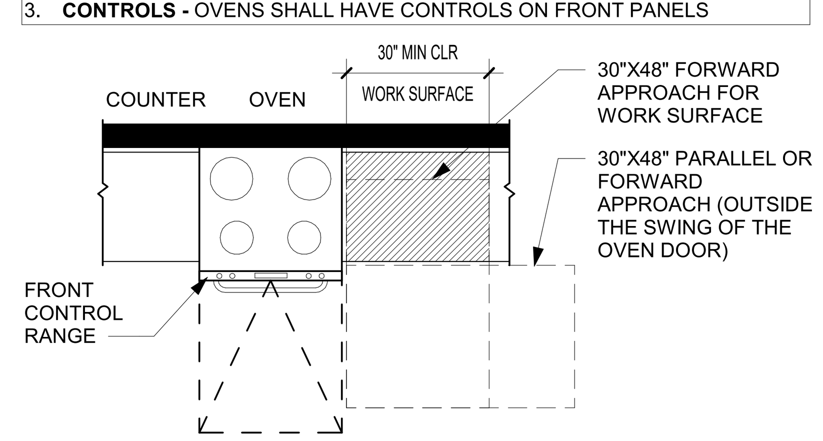
A3 PROTRUDING OBJECTS
NOT TO SCALE

KITCHENS



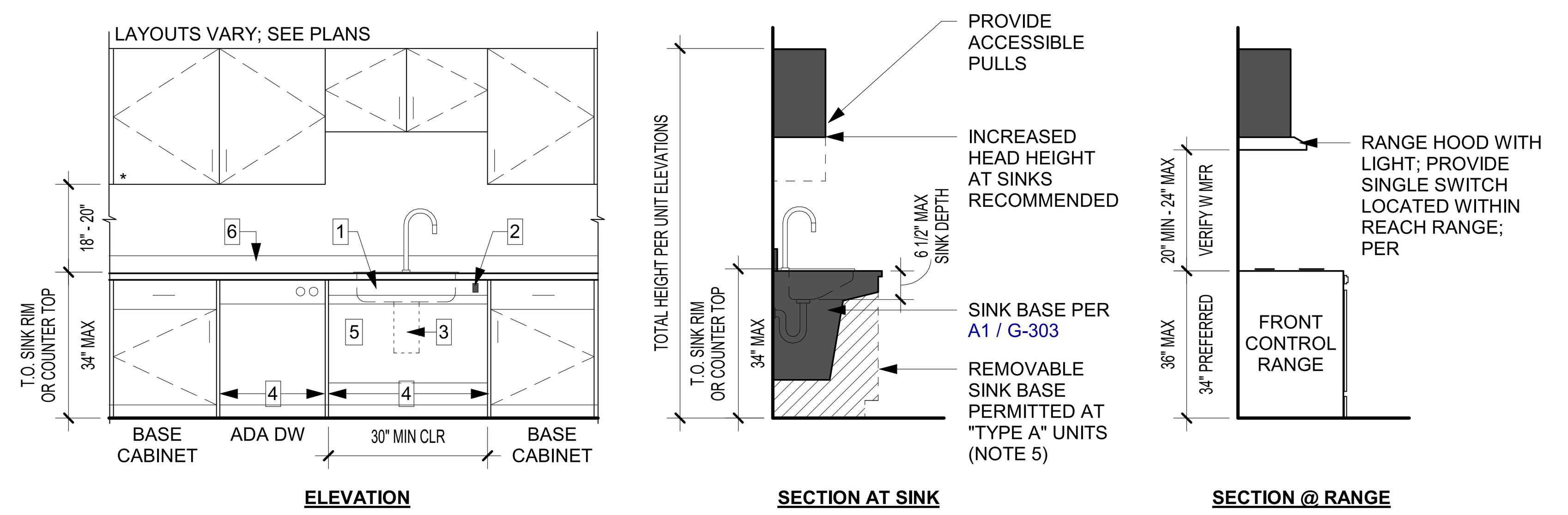
D2 ABOVE COUNTER RECEPTACLES
NOT TO SCALE

NOTE:
FOR PUBLIC SPACES, ACCESSIBLE UNITS, AND "TYPE A" UNITS:
1. **SIDE-HINGED DOOR OVENS** - WORK SURFACE IS TO BE POSITIONED ADJACENT TO THE LATCH SIDE OF THE OVEN DOOR.
2. **BOTTOM-HINGED DOOR OVENS** - WORK SURFACE IS TO BE POSITIONED ADJACENT TO ONE SIDE OF THE OVEN DOOR.
3. **CONTROLS** - OVENS SHALL HAVE CONTROLS ON FRONT PANELS



C2 OVEN WITH WORK SPACE
NOT TO SCALE

* AT PUBLIC SPACES, 50% OF SHELF SPACE SHALL BE WITHIN REACH RANGE (2010 ADA 804.5); COORDINATE WITH DRAWINGS



B2 KITCHEN REQUIREMENTS
NOT TO SCALE

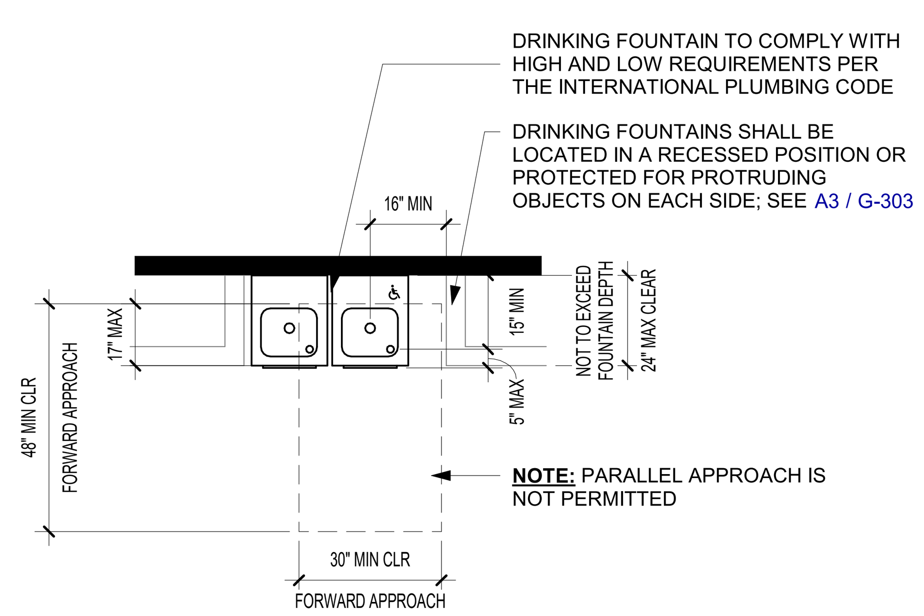
KITCHEN NOTES

KITCHEN DIAGRAMS AND NOTES APPLICABLE TO PUBLIC SPACES, ACCESSIBLE, AND "TYPE A" COMPLIANT KITCHENS

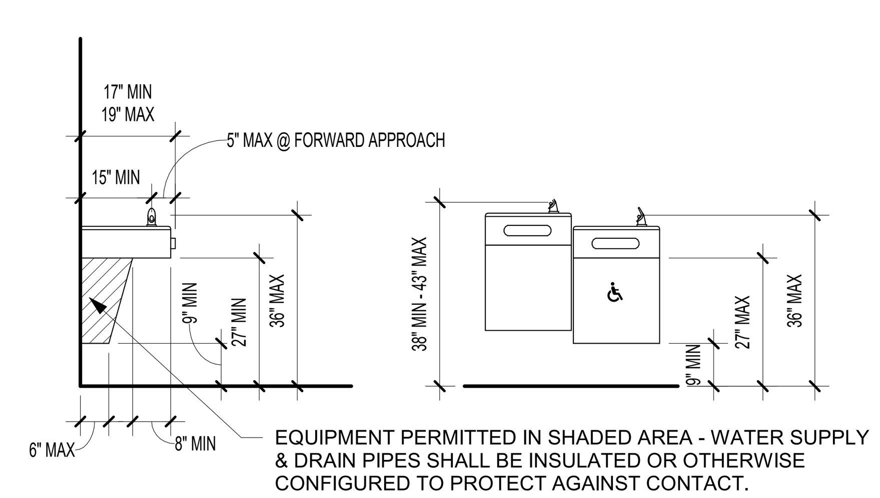
SEE UNIT PLANS AND/OR INTERIOR ELEVATIONS FOR "TYPE B" OR EXEMPT KITCHENS

NOTES:
1. SINK DEPTH MAX 6 1/2" AND HAVE REAR LOCATED DRAINS
2. GARBAGE DISPOSAL SWITCH TO BE LOCATED WITHIN REACH RANGE; COORDINATE FINAL LOCATION WITH ARCHITECT
3. INSULATE ALL PIPES AND DRAIN EXPOSED BELOW SINK
4. PROVIDE FINISHED END PANELS EACH SIDE OF SINK PANEL AND DISHWASHER
   A. WALL BASE, WALL FINISH & FLOOR FINISH TO CONTINUE TO UNDERSIDE OF SINK
5. CABINETRY PERMITTED UNDER SINK AT "TYPE A" UNITS PROVIDED ALL THE FOLLOWING:
   A. REMOVABLE CABINETRY WITHOUT REPLACING SINK
   B. FLOORING, WALL FINISH, AND WALL BASE TO CONTINUE TO UNDERSIDE OF SINK
6. BACKSPLASH VARIES; COORDINATE WITH DRAWINGS
7. SEE INDIVIDUAL UNIT PLANS AND INTERIOR ELEVATIONS FOR SPECIFIC LAYOUTS

DRINKING FOUNTAINS

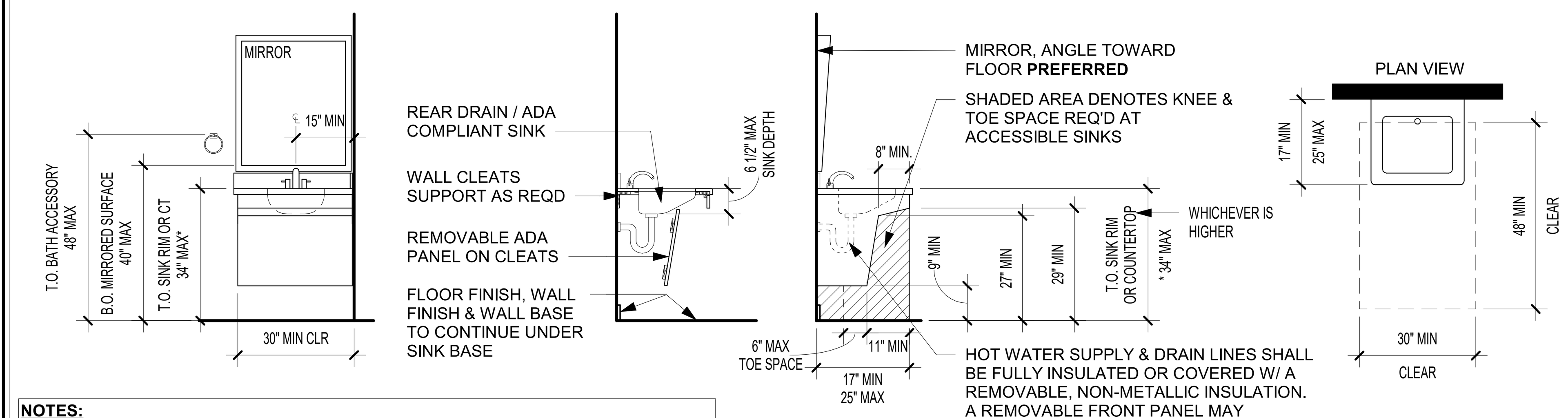


D1 DRINKING FOUNTAINS CLEAR SPACE REQUIREMENTS
NOT TO SCALE



C1 DRINKING FOUNTAIN HEIGHT REQUIREMENTS
NOT TO SCALE

SINKS



* 36" MAX T.O. SINK OR COUNTERTOP AT "TYPE B" UNITS

NOTES:
1. 34" MAX AFF TO TOP OF WALL MOUNTED SINKS
2. SEE PLANS & ELEV. FOR PROJ. SPECIFIC DETAILS
3. SINKS SHALL BE 6 1/2" DEEP MAX

FOR "TYPE B" UNITS:
1. PARALLEL APPROACH CENTERED ON SINK PERMITTED WHEN CENTERLINE OF SINK IS 24" MIN FROM ADJACENT WALL
2. IF FORWARD APPROACH IS PROVIDED, CABINETRY ALLOWED UNDER THE LAVATORY PROVIDED:
   A. CABINETRY CAN BE REMOVED WITHOUT REPLACEMENT OF THE LAVATORY
   B. FLOOR FINISH EXTENDS UNDER THE CABINETRY
   C. WALLS BEHIND AND SURROUNDING THE CABINETRY ARE FINISHED

A1 SINK KNEE & TOE CLEARANCES & HEIGHT REQUIREMENTS
NOT TO SCALE
LOCATIONS: PUBLIC AREAS, ACCESSIBLE UNITS, "TYPE A" UNITS

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
2 01/19/2024 Addendum #2

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STATE OF MISSOURI
DAVID EUGENE HENDRIXSE
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
ACCESSIBILITY STANDARDS

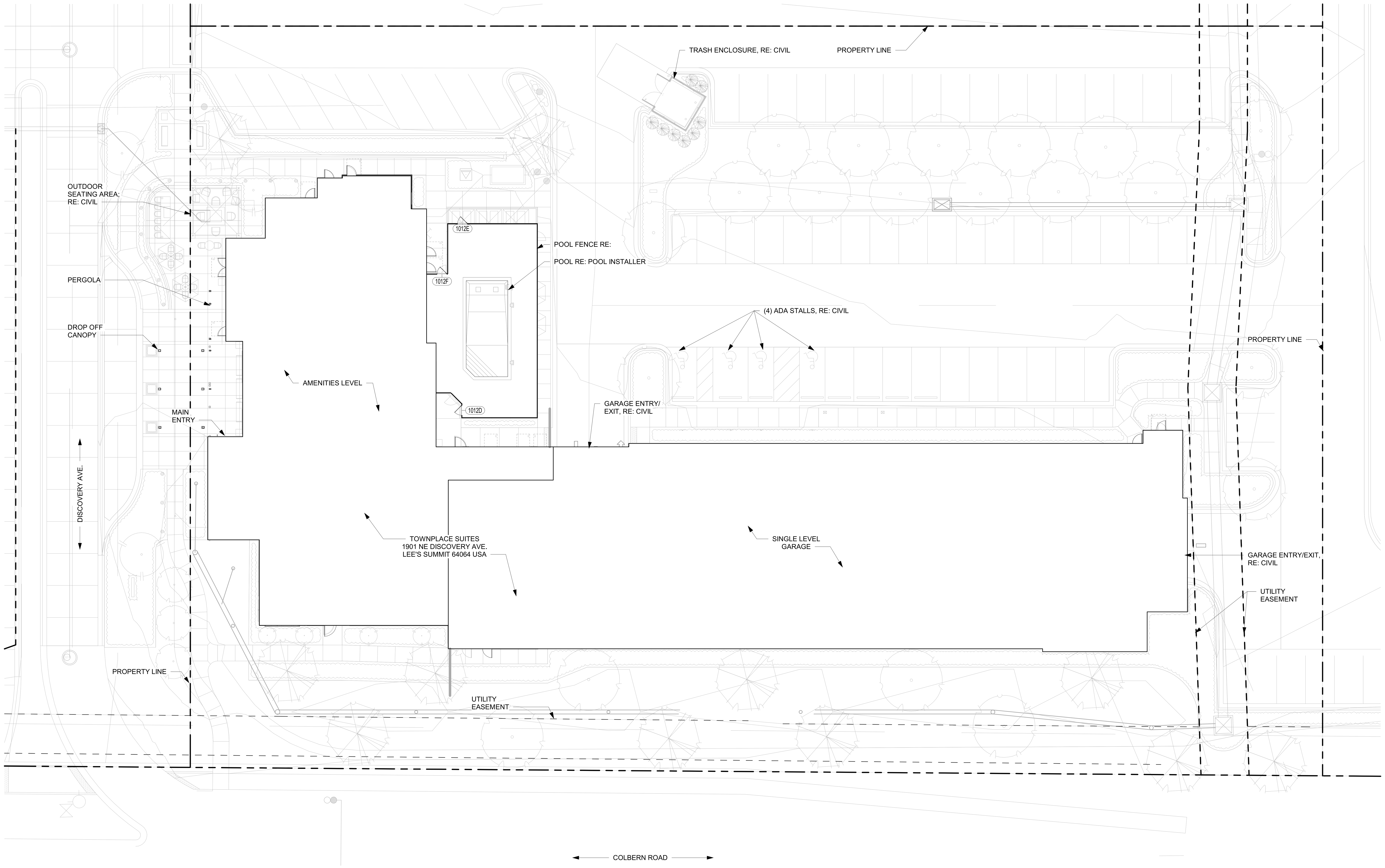
PROJECT NUMBER: 23098

SHEET NUMBER:

G-303

ARCHITECTURAL SITE AMENITIES PLAN GENERAL NOTES

1. ARCHITECTURAL SITE PLAN IS FOR GENERAL INFORMATION AND LAYOUT ONLY. REFERENCE THE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION, BUILDING PLACEMENT, GRADES, UTILITIES AND ACTUAL FLOOR ELEVATION FOR EACH BUILDING.
2. DO NOT SCALE DRAWINGS.
3. NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN PROJECT DOCUMENTS AND EXISTING CONDITIONS. ANY MODIFICATIONS DUE TO DIMENSIONAL CHANGES SHOULD BE PART OF THE PROJECT COST.
4. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL THOROUGHLY FAMILIARIZE THEMSELVES TO ALL SITE SPECIFIC REQUIREMENTS AND EXTENTS OF THE NEW WORK PRIOR TO BIDDING. NO CHANGES IN THE CONTRACT WILL BE CONSIDERED FOR INFORMATION DISCERNABLE FROM THE EXISTING CONDITIONS OR THE PROJECT DOCUMENTS.
5. FULLY ACCESSIBLE UNITS SHALL MEET THE REQUIREMENTS OF 2009 ICC/ANSI A117.1.
6. COORDINATE DUMPSTER TO BE USED TO ENSURE APPROPRIATE CLEARANCES ARE PROVIDED FOR ACCESS.
7. ALL UNIT ENTRIES ARE DESIGNED TO ACCOMODATE ACCESSIBLE ROUTES TO ALL OTHER BUILDINGS ON THE PROJECT SITE. ACCESSIBLE ROUTES SHALL BE COORDINATED AND MAINTAINED AT TRANSITIONS FROM SIDEWALKS TO UNIT FRONT PORCHES, AND FROM UNIT PORCHES TO UNIT ENRTY.



1 ARCHITECTURAL SITE PLAN
1/16" = 1'-0"

4' 16' 8' 32' N

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11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2

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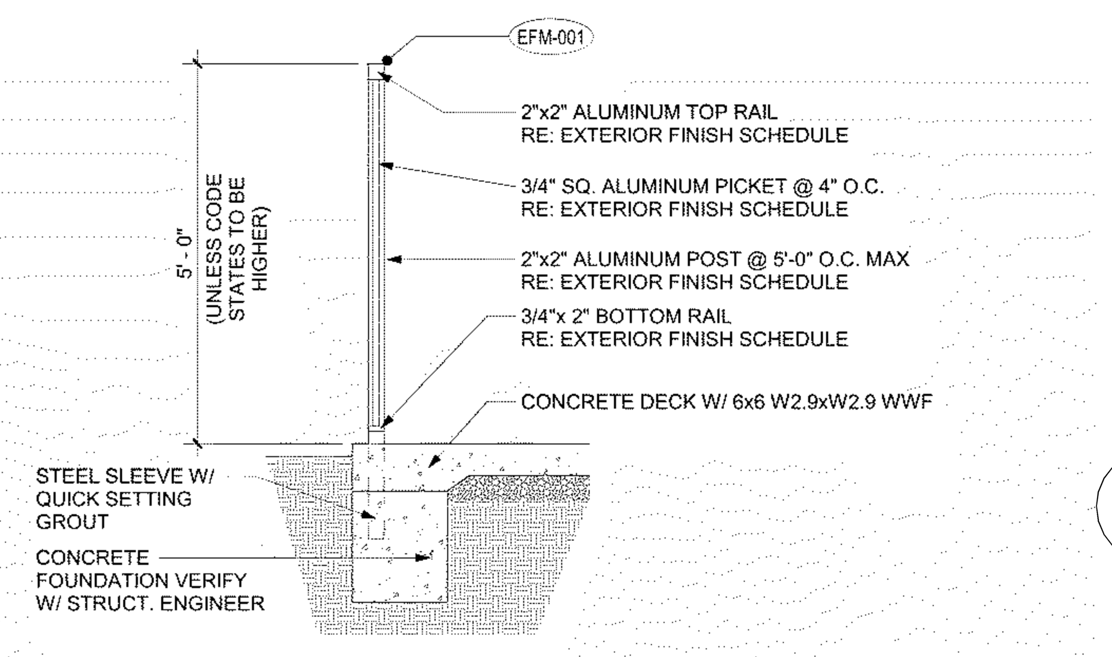
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

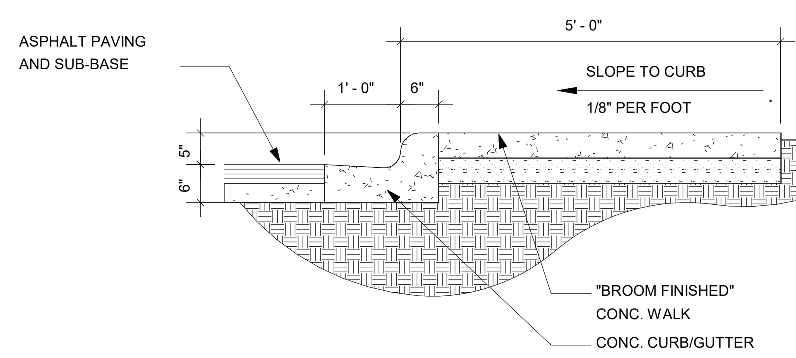
SHEET TITLE
SITE PLAN

PROJECT NUMBER: 23098

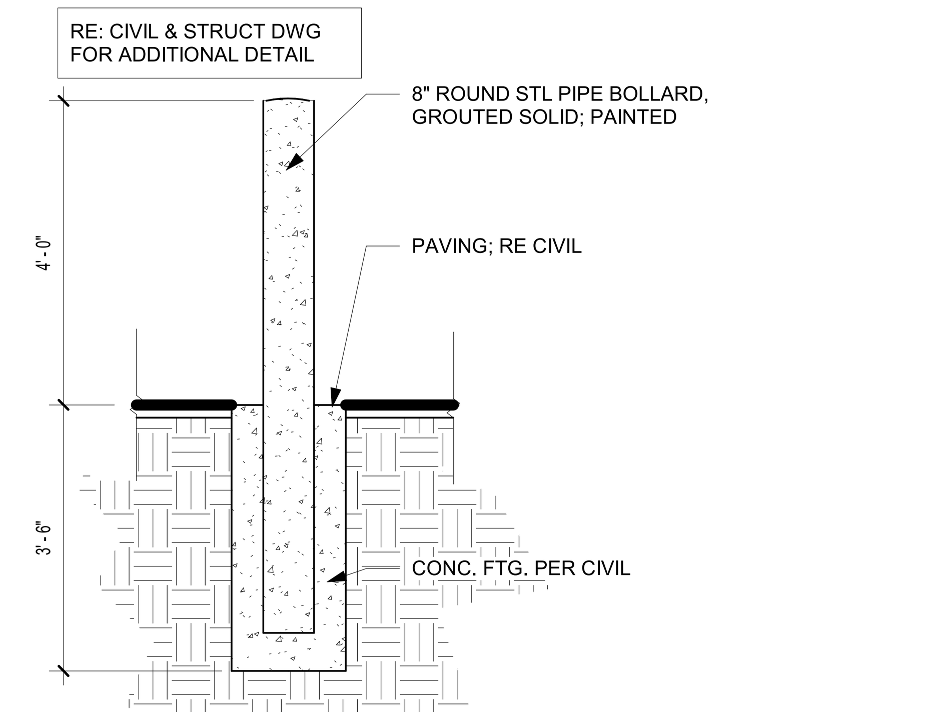
SHEET NUMBER:
AS-100



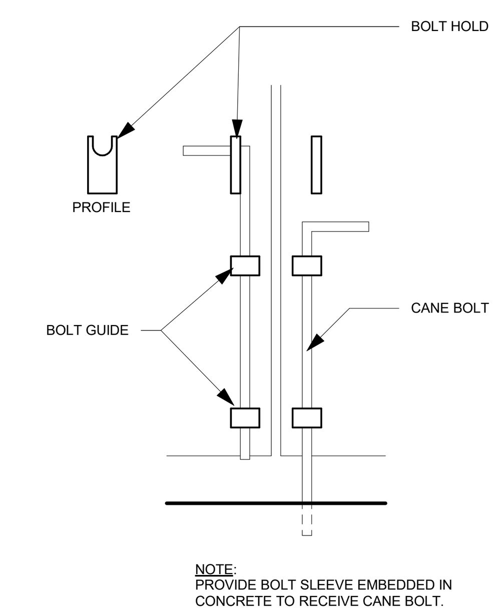
D3 POOL FENCE SECTION
1/2" = 1'-0"



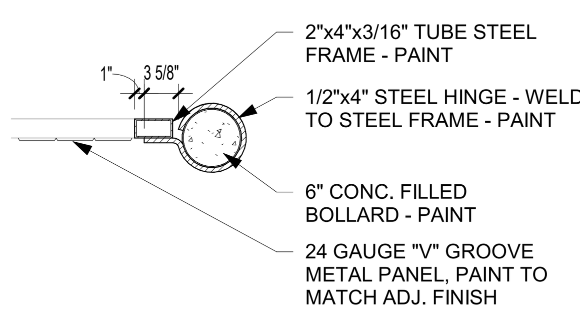
C4 SIDEWALK CURB DETAIL
1/2" = 1'-0"



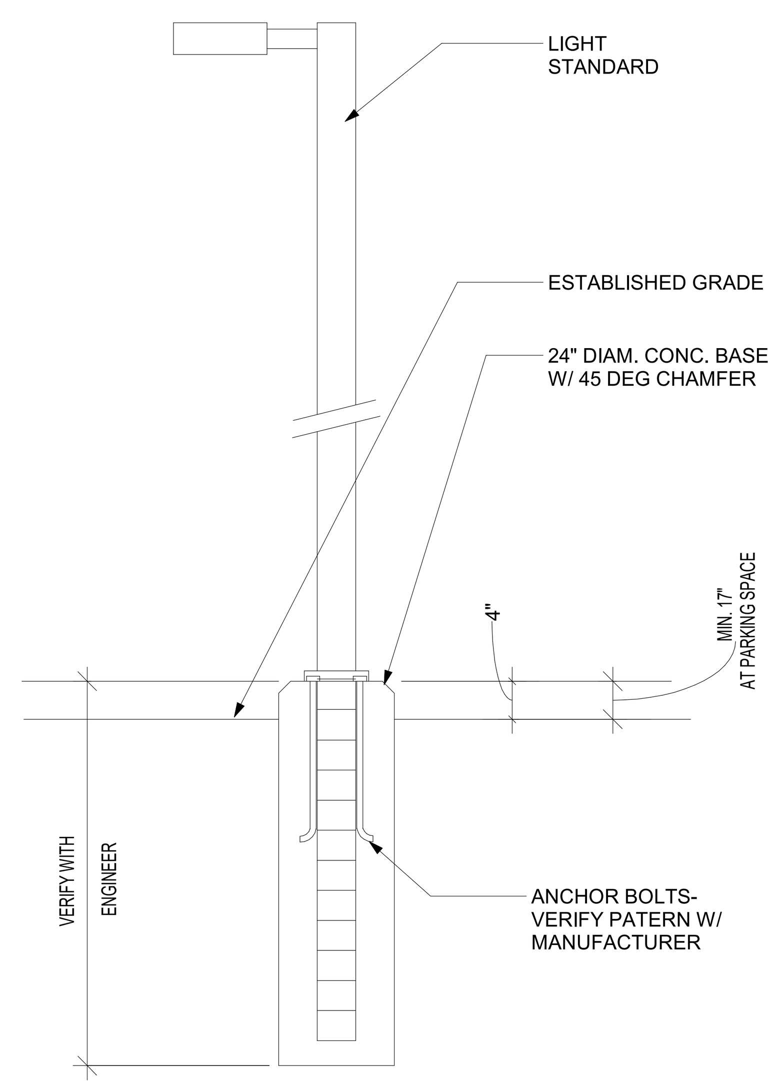
B3 SITE - BOLLARD - STEEL
1/2" = 1'-0"



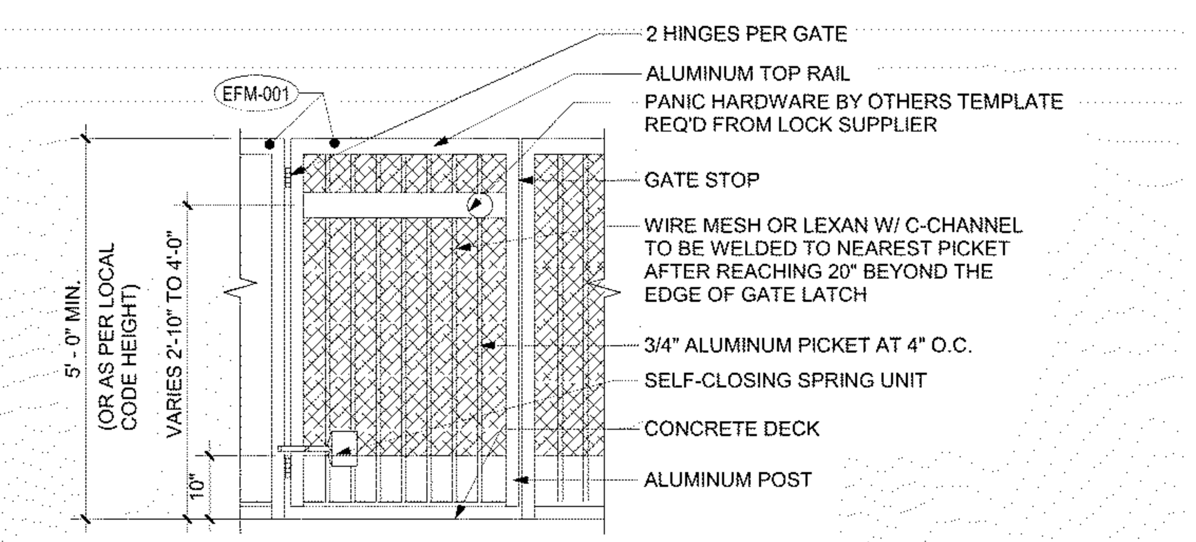
A4 SITE - CANE BOLT DETAIL
3" = 1'-0"



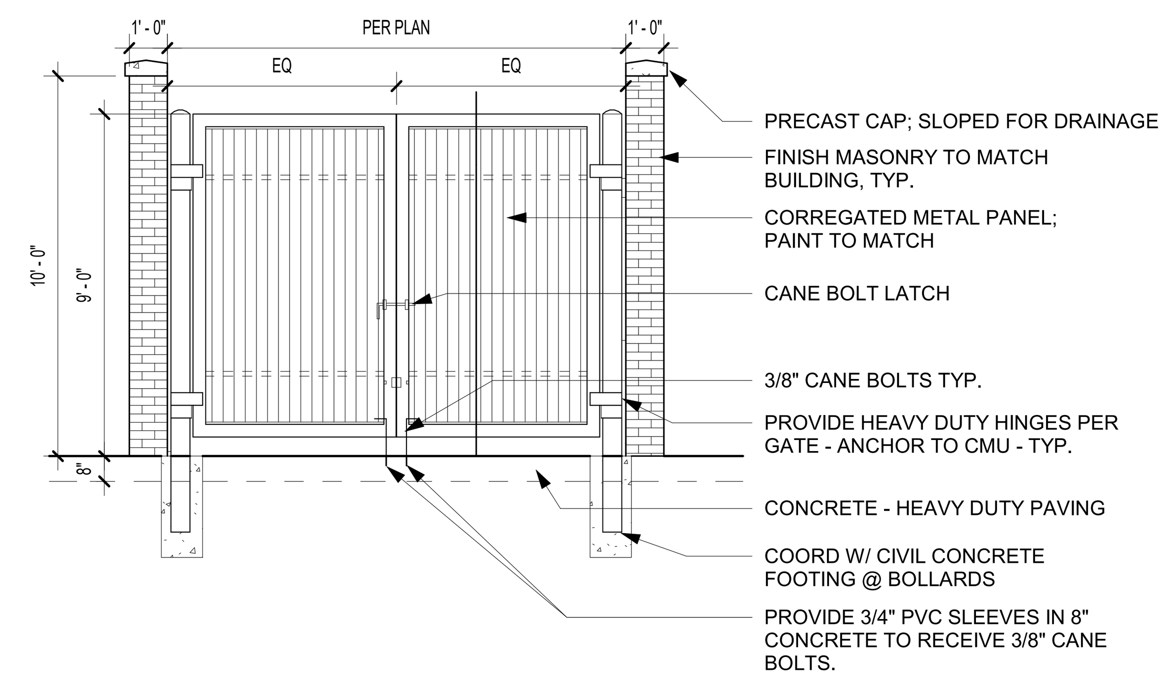
A3 TRASH GATE CROSS SECTION
3/4" = 1'-0"



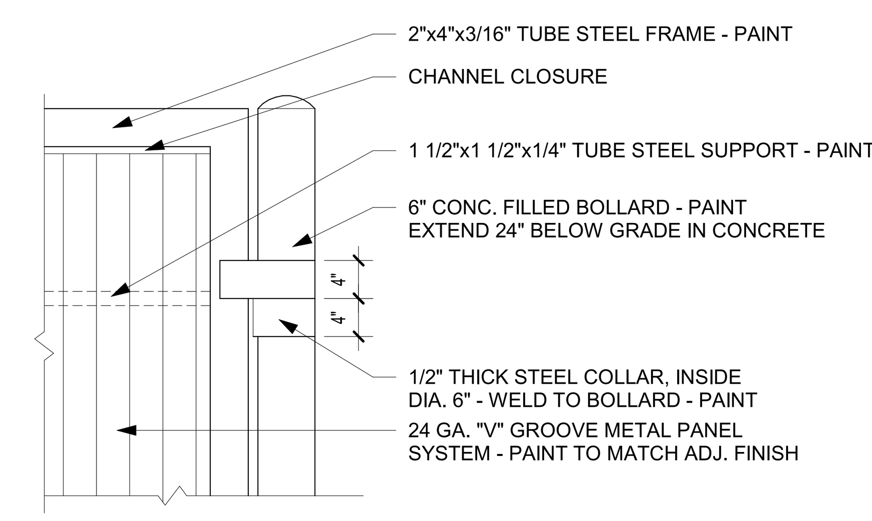
C2 SITE LIGHT POLE
3/4" = 1'-0"



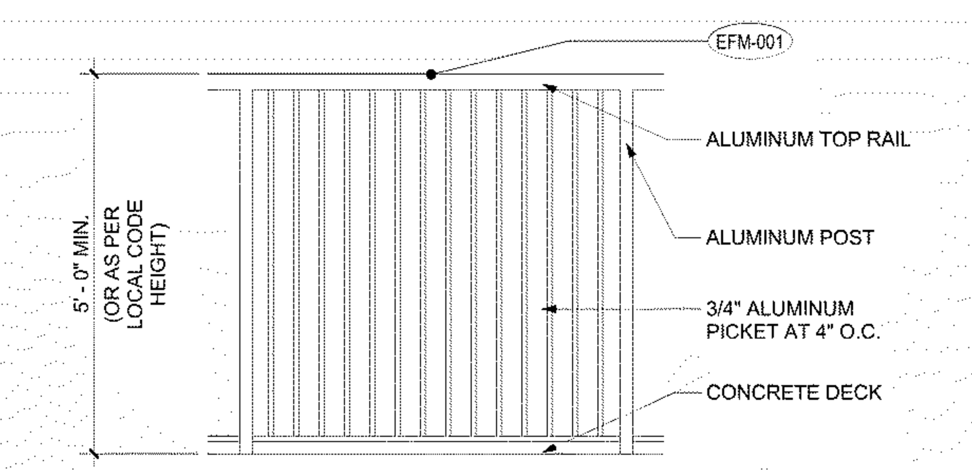
D2 POOL GATE ELEVATION
1/2" = 1'-0"



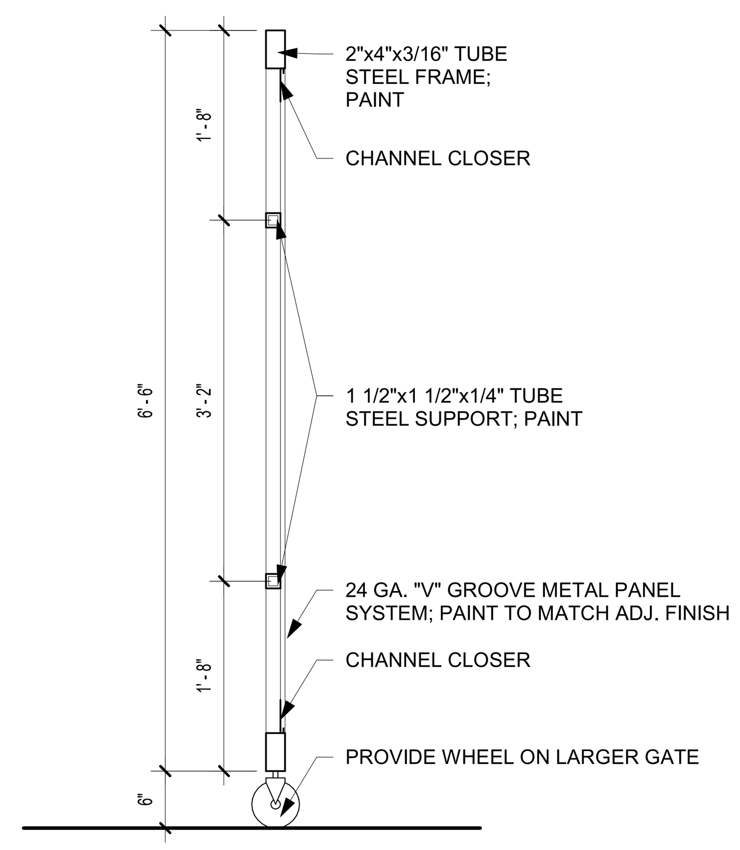
B2 ENCLOSURE FRONT ELEVATION
1/4" = 1'-0"



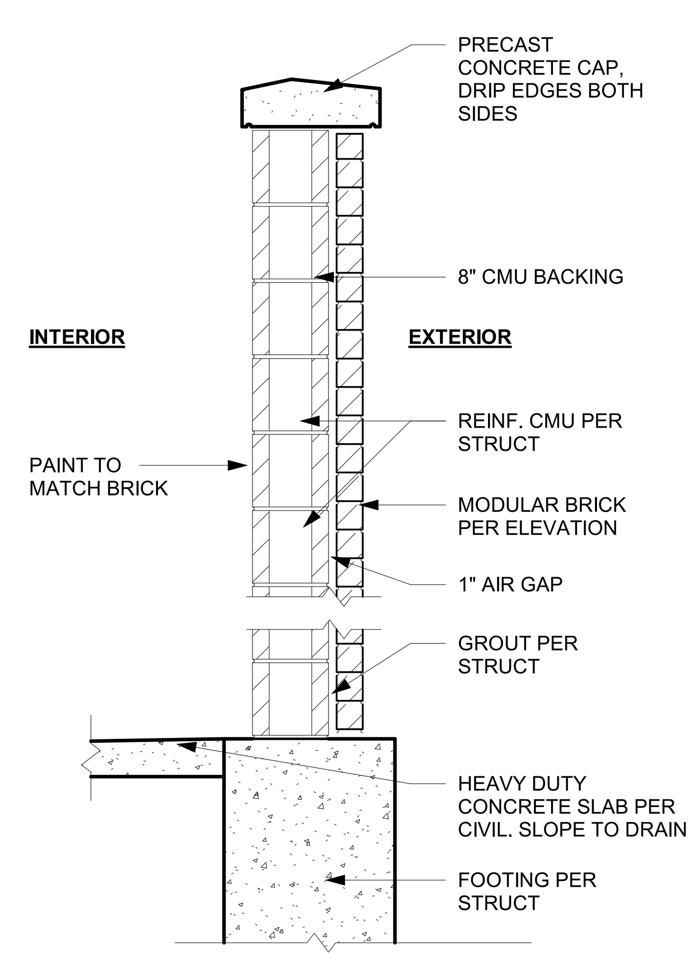
A2 TRASH GATE DETAIL
3/4" = 1'-0"



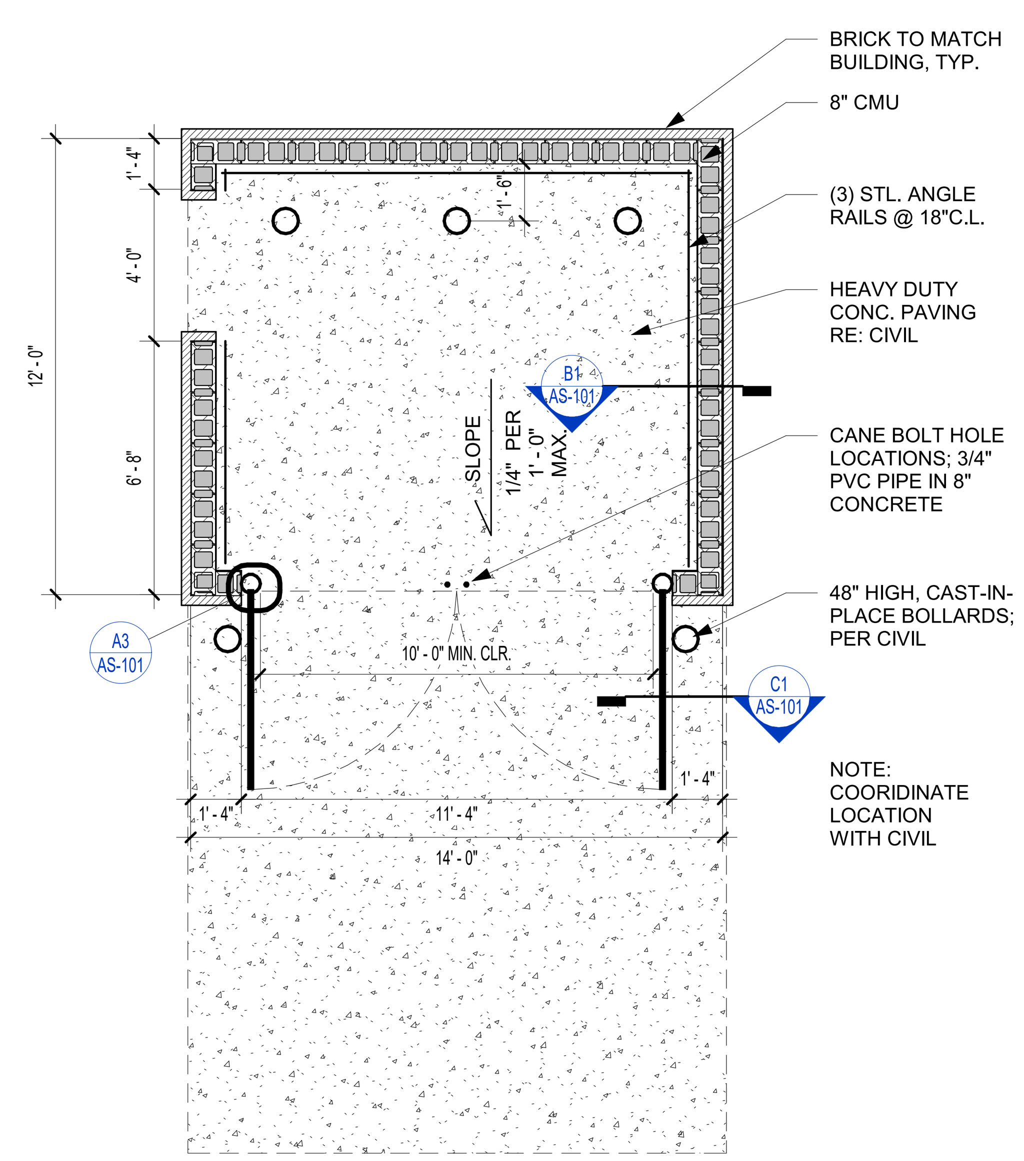
D1 POOL FENCE ELEVATION
1/2" = 1'-0"



C1 TRASH GATE SECTION
3/4" = 1'-0"



B1 SITE - ENCLOSURE - CMU - WALL SECTION
3/4" = 1'-0"



A1 SINGLE DUMPSTER TRASH ENCLOSURE PLAN
1/4" = 1'-0"

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
2 01/19/2024 Addendum #2

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STATE OF MISSOURI
DAVID EUGENE HENDRICKS
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
ARCHITECTURAL SITE AMENITIES

PROJECT NUMBER: 23098

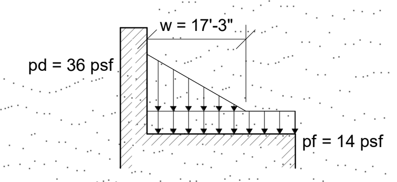
SHEET NUMBER:
AS-101

A. DESIGN CRITERIA

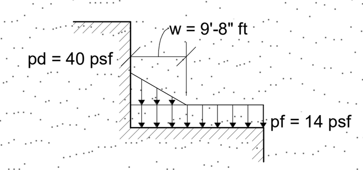
1. Design Codes:
   a. International Building Code: IBC 2018
   b. Minimum Design Loads for Buildings and Other Structures: ASCE 7-16
2. Design Loads:
   a. Dead Loads
      - Wood Floors = 27 psf
      - Composite Deck w/ LW concrete = 51 psf
      - Partitions in Residential Units = 15 psf (additive to floor load)
      - Roof = 20 psf plus mechanical equipment shown on roof plan

   b. Live Loads (reducible per code UNO)
      - Slab on Grade = 100 psf
      - Parking Garage Slab on Grade = 100 psf + 3000lb point load
      - Residential Units = 40 psf
      - Corridors (Public) = 100 psf
      - Mechanical/Storage = 125 psf (non-reducible)
      - Balconies = 60 psf (1.5 x Occupancy Served)
      - Typical Roof = 20 psf
      - Handrails = 200 lb point load at any point on handrail or on top rail; = 50 plf linear load on top rail

   c. Roof Snow Load
      - Ground Snow Load (p_g) = 20 psf
      - Flat Roof Snow Load (p_f) = 14 psf
      - Snow Exposure Factor (Ce) = 1.0
      - Snow Load Importance (I_s) = 1.0
      - Thermal Factor (C_t) = 1.0
      - Slope Factor (C_s) = 1.0
      - Snow Drift Load (Parapet) (p_d) = 36 psf
      - Snow Drift Width (Parapet) (w) = 17'-3"
      - Snow Drift Load (Low Roof) (p_d) = 40 psf
      - Snow Drift Width (Low Roof) (w) = 9'-8"
      - Rain on Snow Surcharge = 5 psf



MAIN ROOF SNOW DRIFT LOAD DIAGRAM



LOW ROOF SNOW DRIFT LOAD DIAGRAM

   d. Wind Load
      - Basic Design Wind Speed, V = 109 mph (3 sec. Gust)
      - ASD Wind Speed, V_{asd} = 85 mph
      - Risk Category = II
      - Wind Exposure = C
      - Internal pressure Coefficient (GC_{pi}) = ±0.18
      - Components and Cladding (psf):

Zone	A=10ft²	A=50 ft²	A=100 ft²
1	+16/-52	+16/-44	+16/-41
2	+16/-69	+16/-59	+16/-54
3	+16/-69	+16/-59	+16/-54
4	+30/-33	+27/-30	+26/-28
5	+30/-40	+27/-34	+26/-31

Notes:
1. A is the Effective Wind Area as defined in ASCE 7 Ch. 26.
2. Linear interpolation between tabulated values is permitted.
3. Elements with Tributary Area (A_t) > 700 ft² shall be permitted to be designed using provisions for MWFRS.

   e. Earthquake Load
      - Risk Category = II
      - Seismic Importance Factor (I_e) = 1.0
      - Mapped Spectral Response Acceleration Parameters: S_S = 0.099g, S_1 = 0.068g
      - Soil Site Class: C
      - Design Spectral Response Acceleration Parameters: S_{DS} = 0.086, S_{D1} = 0.068
      - Seismic Design Category B
      - Basic Seismic Force Resisting System(s)
        - Wood Walls with Wood Structural Panels (ASCE 7 Table 12.2-1 Line A.15)
          R = 6.5 Ω_0 = 3.0 C_s = 0.013 C_D = 4.0
          (Ω_0 reduced to 2.5 per ASCE7-16 Table 12.2-1 footnote *b*)
        - Wood Walls with Panels of other Materials (Gypsum) (ASCE 7 Table 12.2-1 Line A.17)
          R = 2.0 Ω_0 = 2.5 C_s = 0.043 C_D = 2.0
          (Ω_0 reduced to 2.0 per ASCE7-16 Table 12.2-1 footnote *b*)
        - Ordinary Reinforced Masonry Shear Walls (ASCE 7 Table 12.2-1 Line A.9)
          R = 2.0 Ω_0 = 2.5 C_s = 0.043 C_D = 1.75
      - Design Base Shear, V= C_s x W = 250 kips
      - Analysis Procedure = Equivalent Lateral Force Procedure (ASCE 7-16 Chapter 12.8)

   f. Rain Load
      - 100 Year 15 min. Rain Intensity (i) = 7.5 in/hr
3. Allowable Deflections:

	Total Load	Live/Snow/Wind Load	Absolute Maximum
Floor Joists/Trusses	L/360	L/480	1"
Roof Joists/Trusses	L/240	L/360	1.5"
Wall Framing (flexible finish)		L/360	0.75"
Wall Framing (brittle/brick finish)		L/600	0.5"

   Cantilever deflection limits are the more restrictive of 2 x the appropriate L/--- limit (e.g. 2L/360 = L/180) or absolute maximum value listed above, measured at the tip of the cantilever U.N.O.
4. Soil Properties:
   a. Soil properties are based on the project geotechnical report entitled Geotechnical Engineering Report Discovery Park Lot 3, prepared by Olsson on August 10, 2023 (herein known as "Geotechnical Report").
   b. Lateral Earth Pressure:
      - Cohesive Material, at Rest (Drained): = 70 pcf
      - Cohesive Material, at Rest (Undrained): = 95 pcf
      - Granular Material, at Rest (Drained): = 55 pcf
   c. Allowable Bearing Pressure at End of Drilled Piers = 40,000 psf

B. STRUCTURAL ENGINEERING DESIGN NARRATIVE

1. McClure Engineering Company (McClure, MEC) is the Structural Engineer of Record (EOR) responsible for the documentation of structural design criteria, strength and stability of the primary vertical and lateral load-carrying systems in their completed form, and conformance of the structural design to the applicable building codes. These drawings produced by McClure convey the structural engineering design for the project, which includes the following components and systems:
   a. Foundations consisting of drilled concrete piers and cast-in-place grade beams.
   b. Slabs-On-Grade.
   c. Residential Building Framing:
      i. Load-bearing wood wall and opening framing – Level 2 and above.
      ii. Plywood sheathing on dimensional lumber wood floor and roof joists – Level 3 and roof.
      iii. Elevated concrete floor slab with composite steel deck on composite steel framing – Level 2
      iv. Steel framed balconies with non-composite deck.
   d. Structural steel framing identified on the drawings.
   e. The lateral force resisting system of the structure consisting of sheathed wood structural walls, gypsum sheathed wood walls, masonry shear walls, composite deck diaphragms and wood sheathing diaphragms.
2. The following items are Deferred Submittals. Framing intent and additional requirements for these structural components are provided within these drawings*:
   a. Structural steel connections – see general notes section "Structural Steel".
   b. Wood roof/floor trusses – see general notes section "Wood Framing and Fastening" / see S001 and S002 for applicable design criteria.
   c. All premanufactured canopy and awning framing including connections to the structure.
   d. Handrails at balconies – see S001 "Design Criteria" for applicable loading.
   e. Cold-formed steel wall framing and miscellaneous Cold-formed steel framing.

   * Reference section "D. Submittal Requirements." Coordinate requirements of these drawings with those of other design consultant drawings and the Project Specifications.
3. The following items are specifically excluded from McClure's design scope as represented on these drawings:
   a. Requirements for fire rating of assemblies or fire protection of structural members.
   b. Global stability of soil mass.
   c. Any exterior slabs, bollards, curbs, and any enclosures not shown on these drawings.
   d. Interior non-load-bearing wood framed walls or furring.
   e. Shoring design, formwork design, temporary bracing, and other means and methods items.
   f. Cold-formed steel framing below the Level 2 structural steel framing.

C. GENERAL NOTES

1. All construction shall conform to the Design Codes in Section "A. Design Criteria," including all applicable standards and documents referenced within those codes.
2. Plan and detail notes provided on specific sheets within these drawings supplement information in these General Notes. Always coordinate the requirements of these notes with what is shown within the drawings.
3. Unless noted specifically on a plan, all floor plans show framing for the floor indicated and vertical framing (walls, openings, posts, columns) supporting that floor.
   a. Structural steel floor plan shows the floor framing for that level and the supporting columns.
4. Contract Document Coordination:
   a. The drawings contained herein are intended to be utilized in conjunction with other design consultant's drawings (architectural, civil, mechanical, etc.). It is the responsibility of the Contractor to coordinate the requirements of the drawings into their shop drawings and construction.
      i. Refer to the Project Specifications issued as part of the contract documents for information supplemental to these drawings. Should conflicts between these drawings and the Specifications exist, the Contractor shall bring them to the attention of the structural engineer for clarification.
   b. Refer to the architectural, mechanical, electrical, and civil drawings for location and size of block outs, inserts, openings, curbs, bases & pads, and dimensions not shown on these drawings.
   c. Refer to the architectural drawings for size and location of doors and window openings, exterior wall assemblies, and floor, wall, and roof finishes. Refer to the mechanical and electrical drawings for additional information including locations of mechanical units, generators, etc.
   d. Omissions or conflicts between various elements of the drawings, notes and details shall be brought to the attention of the structural engineer and resolved before proceeding with the work.
5. Use of Drawings in Construction:
   a. The Contractor shall verify all dimensions and conditions at the job site before commencing work and shall report any discrepancies to the engineer responsible for the design of that work.
   b. Do not use scaled dimensions; use written dimensions or, where no dimension is provided, consult the structural engineer for clarification before proceeding with the work.
      i. Where member locations are not specifically dimensioned, members are either located on columns lines or are equally spaced between located members.
   c. Details and keynotes shown shall be incorporated into the project at all appropriate locations, whether specifically called out or not.
   d. McClure may provide the contractor with electronic files for their convenience and use in the preparation of shop drawings. These electronic files are not construction documents; the contractor is not relieved of his/her duty to fully comply with the contract documents, including the need to confirm and coordinate all dimensions and details, take field measurements, verify field conditions, and coordinate the contractor's work with that of other contractors for the project.
6. Changes During Construction:
   a. Openings shall not be cut or otherwise made in any structural member unless that opening is specifically shown on these drawings. The Contractor shall seek approval in writing from the structural engineer for any design incorporating additional openings.
   b. Support details shown for Architectural, Mechanical, Electrical, and Plumbing equipment as well as elevators is based upon available information from the manufacturer (if any). The Contractor shall coordinate requirements of actual equipment supplied with details and shall provide any additional framing required.
   c. The Contractor has the responsibility to notify the structural engineer of any architectural, mechanical, electrical, or plumbing load imposed on the structure that is not documented on the Contract Documents or differs from what is originally shown. Provide documentation of location, load, size, and anchorage of all undocumented loads in excess of 250 lbs.
7. Construction Sequence and Methods:
   a. These drawings and the related Specifications represent the finished structure and, except where specifically shown, do not indicate the method or means of construction. Loads on the structure during construction shall not exceed the design loads indicated in Section "A. Design Criteria" as a maximum. The Contractor shall supervise and direct the work and shall be solely responsible for all construction means, methods, procedures, techniques, and sequence.
   a. The Contractor is responsible for compliance with all applicable job-related safety standards proceeding from governing organizations (e.g. OSHA).
   b. It is the responsibility of the Contractor to ensure the stability of the structural elements during construction as a result of means and sequence by providing shoring, bracing, etc. as required.
      i. Stability considerations should include all applicable temporary construction and environmental loads per ASCE 37 which may include wind and seismic forces.
      ii. Temporary bracing shall remain in place until positive connection is made between the floor/roof diaphragm and the lateral force resisting elements. This is a means and methods item.
   c. The Contractor shall consider the effects of thermal movements due to hot or cold weather construction and the potential for extreme temperature variations before the structure is complete.
   d. The Contractor is responsible for the protection and repair of any adjacent existing structures, surfaces, and areas which may be damaged as a result of the work.

D. SUBMITTAL REQUIREMENTS

1. Submittal Procedures:
   a. The Contractor shall provide all submittals in PDF format unless otherwise requested or indicated otherwise in the Project Specifications.
   b. All submittals must be reviewed by the Contractor prior to McClure's review. The Contractor is responsible for reviewing each submittal for basic coordination with these drawings and to verify that all the required components of the submittal are incorporated. The submittal must bear the electronic review stamp of the Contractor before McClure will proceed with the review.
   c. Incomplete submittals or submittals not meeting the requirements of this section will not be reviewed. McClure will notify the contractor that the submittal is incomplete or unacceptable and that resubmission is required.
      i. Submittals requiring engineering calculations for all or a portion of the work are considered incomplete without the sealed calculations and will not be reviewed.
      ii. Shop Drawings shall be original drawings. Submissions incorporating any portion or reproduction of the contract documents will not be reviewed.
      iii. Deferred Submittals not meeting the seal requirements of section D.2.b are considered incomplete and will not be reviewed.
      iv. Resubmittals with comments from a previous review left unaddressed or without any response will not be reviewed.
   d. Allow two weeks for review of all submittals unless an agreement for expedited review is made in writing by McClure.
   e. McClure's submittal review scope of work includes a single submittal review and one review of the revised submittal if required (two reviews total of the same submittal). Time required for more than two reviews of a submittal is considered an additional service and will be billed hourly. McClure reserves the right to withhold review of a submittal surpassing this allowance until proper billing to the responsible party can be established.
   f. Submittals must be returned to the Contractor by McCure bearing a stamp marked "Reviewed No Exception Taken" or "Reviewed With Comments/Exceptions" prior to proceeding with the work. Submittals marked "Reject/Resubmit" must be revised according to the comments provided prior to commencing with the respective scope of work.
2. Deferred Submittals:
   a. See Section "B. Structural Engineering Design Narrative" for the list of items considered Deferred Submittals.
   b. Deferred Submittals shall bear the seal of a professional engineer licensed in the state where the project is located. If the project requires a licensed Structural Engineer (S.E.) as the Engineer of Record according to state laws, the same qualification level applies to the engineer sealing the Deferred Submittals.
   c. Deferred Submittal items shall not be installed until the Deferred Submittal documents have been approved by the Building Official.
3. Submittal List:
   a. Submittals (product data, test records, shop drawings, and/or calculations) are required for the following:

Submittal Name	Items Required: Product Data	Shop Drawings	Test Records	Engineering Drawings	Engineering Calculations
1. Concrete Mix Designs	X		X		
2. Concrete Break Reports			X		
3. Concrete Reinforcing Layout		X			
4. Concrete Anchor Bolts & Embedded Plates	X	X			
5. Concrete & CMU Anchors (Post-Installed)	X				
6. Post-Installed Anchor Substitutions	X				X
7. Post-Installed Connection Geometry Alteration	X			X	X
8. Structural Steel Framing		X			
9. Structural Steel Framing Connections		X			X
10. Steel Floor Deck	X	X			
11. Exterior Non-load-Bearing Cold-Formed Steel Framing	X			X	X
12. Metal Railings & Connections	X	X			X
13. Metal Ladders & Connections	X	X			X
14. Fall Arrest Systems	X	X			X
15. Wood Framing Materials	X				
16. Wood Floor & Roof Trusses incl. Reactions				X	X
17. Wood Truss Connections to Supporting Structure				X	X
18. Specialty Wood Fasteners	X				
19. Manufactured Wood Shear Panels	X				

   b. "Product Data" may indicate mill certifications, material data sheets, Evaluation Service Reports (ESRs), etc. See requirements of each material section of the general notes for further information.
   c. Where "Engineering Drawings" and/or "Engineering Calculations" are indicated, the submittal must comply with the requirements of item "2. Deferred Submittals" above.
4. Submittals For Record:
   a. The following items impact the structural design and therefore must be submitted to the engineer; however, they do not require review. They will be returned stamped as "Received for Record".
      i. Elevator Shop Drawings with Loads to Structure
      ii. Mechanical Equipment Shop Drawings with Weight

E. CONCRETE

1. Reinforced concrete shall have the following minimum 28 day compressive strengths:
   a. Slab on grade, unless noted otherwise 4000 psi normal weight
   b. Foundations and Grade Beams 5000 psi normal weight
   c. Drilled piers and pile caps 5000 psi normal weight
   d. Slabs on non-composite metal deck 4000 psi normal weight
   e. Slabs on composite metal deck 4000 psi lightweight
2. All concrete exposed to weather shall have 6% (+- 1%) air entrainment.
3. Submit mix designs for all concrete mixes prior to placement. All submittals shall include the following:
   a. Batch quantities including admixture dosage rates.
   b. Strength test results for trial mixes.
   c. Cured unit weight results (for lightweight concrete mixes only).
   d. Aggregate source(s) and gradation(s).
   e. Product data for cement, fly ash and other cementitious materials.
   f. Product data for all admixtures.
4. Provide protection for reinforcing bars as follows:
   a. Cast-in-place concrete
      i. Concrete cast against and permanently exposed to earth: 3"
      ii. Concrete exposed to earth and weather (formed)
         1. #5 and smaller 1-1/2"
         2. #6 and larger 2"
      iii. Concrete not exposed to weather and not in contact with ground:
         1. Slabs and walls 3/4"
         2. Beams and columns 1-1/2"
5. Provide construction or control joints in slab on grade as shown on plans. If joint pattern is not shown, provide joints at 10'-0" x 10'-0" and at locations to conform to bay spacing wherever possible (at column centerlines, half bays, third bays, etc.).
6. Interface of all slab and beam construction joints shall be roughened with 1/4" amplitude. Surface of construction joints shall be clean and free of laitance. Immediately before new concrete is placed, construction joints shall be wetted and standing water removed.
7. Construction joints in walls shall be keyed and placed at locations approved by the Architect and Structural Engineer.
8. Provide control joints in all retaining walls at 15 ft to 20 ft intervals.
9. **Elevator pit walls shall not have control joints as they are part of the lateral system.**
10. Provide PVC waterstops in all below grade construction joints and at other locations as shown.
11. Provide compressible filler and sealant in all slab-on-grade and wall and column interfaces that are not doweled together.
12. All column pockets shall be filled with concrete after column is erected.
13. Sleeves and openings in slabs not shown on structural drawings or outside the parameters of typical sleeve details are not permitted, unless approved by the Structural Engineer.
14. Conduit and pipes embedded in slabs, walls, or grade beams shall be no larger in outside dimension than 1/3 the overall member thickness and shall be placed no closer than 3 diameters or widths on center.
15. Conduits and pipes shall not be permitted in concrete pilasters or columns.
16. See "G. Foundations" section 5 for requirements at slab on grade.
17. Bond break material for slip joints shall be 1/8" thick tempered wood particleboard, 1/8" thick high-density plastic elastomeric strips, two layers of 10mil polyethylene sheeting or equivalent.
18. Provide concrete housekeeping pads under all mechanical, plumbing, fire protection, and electrical equipment per plans. Pads shall extend beyond equipment a nominal 6" on all sides. Provide reinforcing per details.
19. At floor drains, locally slope floor towards drain. See architectural and plumbing drawings for drain locations.
20. Foundation walls shall be temporarily braced until positive attachment is made to floor framing per details. This is a means and methods item.

F. REINFORCING FOR CONCRETE

1. General
   a. All reinforcing steel to be ASTM A615, Grade 60, deformed bars, unless noted otherwise.
      i. Any reinforcing to be welded shall be ASTM A706 and welded with E80 electrodes.
      ii. Alternatively, ASTM A615 reinforcing may be welded with E90 electrodes and proper preheat according to AWS D1.4.
      iii. E70 electrodes are not permitted for welding rebar.
   b. Welded wire fabric shall be ASTM A185. Welded wire fabric shall be in flat sheets.
   c. All reinforcing bars to be detailed and placed in accordance with the ACI "Manual of Standard Practice for Detailing Reinforced Concrete Structures" specifications.
   d. All reinforcing, including dowels, shall be securely tied and cast with the lower member. Placing reinforcing after concrete has been placed will not be permitted.
   e. Field bending of reinforcing partially embedded in concrete will not be allowed unless specifically noted on the drawings or approved by the Structural Engineer.
   f. All reinforcing bars shall be contact lap spliced or doweled as follows, unless noted otherwise:

Tension Development and Splice Lengths for f'_c = 5,000psi							
	Development		*Class "B" Splice*		*Standard 90 deg. Hook*		
Bar Size	Top Bar	Other Bar	Top Bar	Other Bar	Embed	Leg Length	Bend Dia.
#3	17	13	22	17	6	6	2-1/4
#4	22	17	29	22	6	8	3
#5	28	22	36	28	8	10	3-3/4
#6	33	26	43	33	9	12	4-1/2
#7	49	37	63	49	11	14	5-1/4
#8	55	43	72	55	12	16	6
#9	63	48	81	63	14	19	9-1/2
#10	70	54	91	70	15	22	10-3/4
#11	78	60	101	78	17	24	12
#14	94	72	---	---	29	31	18-1/4
#18	125	96	---	---	39	41	24

Tension Development and Splice Lengths for f'_c = 4,000psi							
	Development		*Class "B" Splice*		*Standard 90 deg. Hook*		
Bar Size	Top Bar	Other Bar	Top Bar	Other Bar	Embed	Leg Length	Bend Dia.
#3	19	15	24	19	6	6	2-1/4
#4	25	19	32	25	7	8	3
#5	31	24	40	31	9	10	3-3/4
#6	37	29	48	37	10	12	4-1/2
#7	54	42	70	54	12	14	5-1/4
#8	62	48	80	62	14	16	6
#9	70	54	91	70	15	19	9-1/2
#10	79	61	102	79	17	22	10-3/4
#11	87	67	113	87	19	24	12
#14	105	81	---	---	32	31	18-1/4
#18	139	107	---	---	43	41	24

1. Straight development and Class "B" splice lengths shown in above tables are based on uncoated bars assuming center-to-center bar spacing ≥ 3*d_b, without ties or stirrups or ≥ 2*d_b with ties or stirrups, and bar clear cover ≥ 1.0*d_b Normal weight concrete as well as no transverse reinforcing are both assumed.
2. Standard 90 deg. hook embedment lengths are based on bar side cover ≥ 2.5" and bar end cover ≥ 2" without ties around hook.
3. For special seismic considerations, refer to ACI 318 Code Chapter 21.
4. All tension splices shall be Class "B" splices unless noted otherwise on plans.

   g. All welded wire fabric shall be lapped 12" or 48 wire diameters, whichever is greater.
   h. Provide (2) #5 x 6'-0" diagonals at all corners of openings and re-entrant corners, unless noted otherwise.
   i. Dowels between foundation and walls shall be installed and shall be the same grade, size, and spacing as the vertical wall reinforcing, unless noted otherwise.
   j. Provide corner bars to match longitudinal reinforcing in all footings. Provide (2) corner bars at tee intersections.
   k. Provide 500 pounds of miscellaneous straight bar reinforcing (#4 & #5) to be used in field for special conditions. Labor for placing same to be included.
2. Slabs and Slabs-on-Grade
   a. All slabs on grade to be reinforced with 6x6 – W2.9xW2.9 welded wire fabric, unless noted otherwise.

G. FOUNDATIONS

1. Foundation design is based on Geotechnical Report prepared by Olsson, dated Aug. 10, 2023. See documents for additional information. The geotechnical report shall be considered part of the construction documents.
2. A geotechnical representative shall be retained on site for all construction activity to verify that all proper requirements have been met to meet the design requirements outlined in the geotechnical report. Representative shall be Olsson Engineers or someone familiar with all documents of the geotechnical investigation provided for the project.
3. The Contractor shall provide dewatering of excavations from surface water and ground water. Do not place concrete if water is present at base of excavation.
4. Piers
   a. Piers shall be drilled piers with adequate capacity and shall have a depth into soil strata as indicated on the "Drilled Pier Schedule" on sheet S100. Depth of pier into indicated soil strata shall be verified by the Geotechnical Engineer's representative or other qualified geotechnical personnel.
   b. Excavations for drilled piers shall be approved by the geotechnical engineer prior to placing reinforcing and concrete. The inspector shall be present to continuously monitor the drilling operations. The geotechnical engineer shall submit boring logs and a letter of compliance to the owner.
   c. Concrete should be placed in pier holes immediately after holes are drilled, cleaned, and observed. Concrete for piers shall be as specified in Specification Section 033000 Cast-In-Place Concrete. Concrete shall not be placed if there is more than 3" of free water at the bottom of the hole. Pumping the bottom of the pier holes to displace the water shall be done if required.
5. Slab on Grade
   a. Slabs shall be constructed as shown on the plans.
   b. Parking slab-on-grade shall be placed on subgrade prepared in accordance with the requirements of the geotechnical report and the details in these construction documents.
   c. A 10mil minimum vapor retarder shall be installed under all slabs on grade in occupied or conditioned spaces per the drawings. See the geotechnical report for additional information regarding the installation of the vapor retarder.
   d. Slab-on-grade shall be founded on 6" deep ¾" clean aggregate base.
   e. The upper 24" of subgrade extending 5' beyond the footprint of the building shall consist of low volume change material such as rollstone or wastelime. Granular fill shall be compacted to a minimum of 95% of the ASTM D698 maximum dry Standard Proctor density. The 6" aggregate base shall be included in the 24" depth required for the low volume change layer.
   f. Provide joints at 30 x slab thickness (+/-) in both directions and located to conform to bay spacing wherever possible (at column centerlines, half bays, third bays, etc.). Submit control joint layout for approval by the Structural Engineer.
   g. Saw cut control joints shall be done late enough to prevent raveling of the cut edges and early enough to prevent racking of the slab ahead of the saw blade.
   h. Plumbing and utilities passing through the slab on grade shall be constructed with flexible fittings to allow for slab movement. The expected slab movement for the parking slab shall be considered up to 2" minimum for fittings.
   i. Concrete slab to be cured according to ACI Standards. Concrete slab cure to be compatible with any sealer, grout, or adhesive that may be used in the floor later.
   j. Locally slope floor towards any floor drains. See architectural and plumbing drawings for drain locations.
6. Geotechnical Testing Agency Requirements
   a. If the geotechnical representative on site takes exception to anything in the Geotechnical Report and requires additional field investigation to clarify those exceptions, the cost of such investigation shall be included in the additional fee for field quality control and testing and identified as such. All other exceptions shall be documented and approved by the geotechnical engineer.
   b. The geotechnical representative must have read all documents pertaining to the geotechnical report for the project and have understood and accepted the criteria contained in the report.
   c. The geotechnical representative must understand and be able to make decisions affecting the work for field observations and conditions described in the report during construction. The representative must be capable of advising the owner or contractor for procedures regarding, but not limited to, adjustments of pier depth, adjustments of bearing strata, adjustments of pier lengths, sub-grade preparation, dewatering activities, and other construction considerations.
   d. The geotechnical representative must be able to recognize conditions where design bearing or skin friction parameters for the drilled piers cannot be achieved and provide additional recommendations for revisions and recommended design criteria for rework.
7. See notes on sheets and details for additional information.

IN RESPONSE TO GC COMMENTS
3

H. POST-INSTALLED ANCHORS TO CONCRETE AND MASONRY

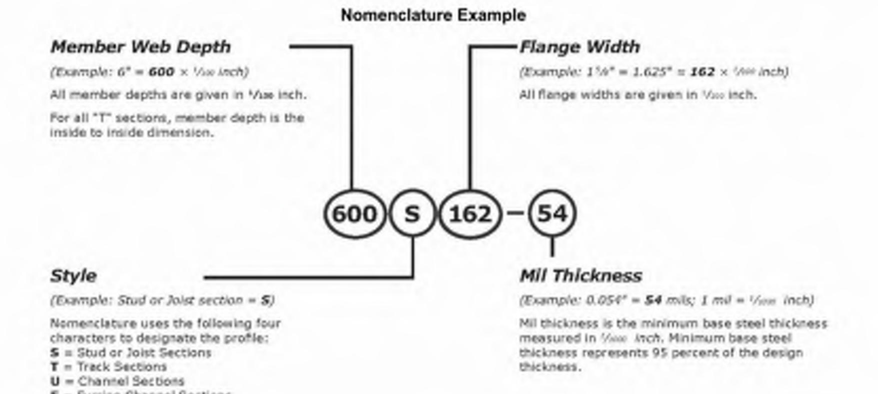
1. Post installed anchors shall be expansion, adhesive, or screw anchors as indicated in the details, unless noted otherwise. Only use the anchor type indicated. All anchors on the project of each type must be by the same manufacturer, see below for substitution requirements.
   a. Expansion anchors:
      i. Concrete:
         - Hilti Kwik Bolt TZ (ICC-ES ESR1917).
         - Simpson Strong-Bolt 2 (ICC-ES ESR3037).
         - DeWalt Power-Stud+ SD2 (ICC-ES ESR2502).
      ii. Grout-filled Concrete Masonry:
         - Hilti Kwik Bolt 3 (ICC-ES ESR1385).
         - Simpson Strong-Bolt 2 (UES ER0240)
         - DeWalt Power-Stud+ SD1 (ICC-ES ESR2966).
   b. Adhesive anchors (threaded rods shall be ASTM A193 B7 for all anchors):
      i. Concrete:
         - Hilti HIT RE 500-SD (ICC-ES ESR2322) or Hilti HIT-HY 200 (ICC-ES ESR3187).
         - Simpson AT-XP (UES ER263), SET-XP (ICC-ES ESR2508) or ET-HP (ICC-ES ESR3372)
         - DeWalt Pure 110+ (ICC-ES ESR3298), PE1000+ (ICC-ES ESR2583), Pure 50+ (ICC-ES ESR3576), AC 200+ (ICC-ES ESR4027), or AC100+ Gold (ICC-ES ESR2582)
      ii. Solid grouted concrete masonry:
         - Hilti HIT-HY 70 anchor adhesive (ICC-ES ESR3342).
         - Simpson AT-XP (UES ER0281), SET-XP (UES ER0265) or ET-HP (UES ER0241)
         - DeWalt AC100+ Gold (ICC-ES ESR3200)
      iii. Hollow concrete or multi-wythe clay masonry:
         - Hilti HIT-HY 70 with screen tubes (ICC-ES ESR3342).
         - Simpson SET-XP (UES ER0265)
         - DeWalt AC100+ Gold with screen tubes (ICC-ES ESR3200)
   c. Screw anchors:
      i. Concrete:
         - Hilti Kwik HUS EZ (ICC-ES ESR3027)
         - Simpson Titen HD (ICC-ES ESR2713)
         - DeWalt Screw-Bolt+ (ICC-ES ESR2526)
      ii. Grout-filled concrete masonry:
         - Hilti Kwik HUS EZ (ICC-ES ESR3056)
         - Simpson Titen HD (ICC-ES ESR1056)
         - DeWalt Screw-Bolt+ (ICC-ES ESR1678)
2. Post-installed anchors shall only be used where specified in the drawings. The Contractor shall obtain approval from the engineer prior to using post-installed anchors for missing or misplaced cast-in-place anchors.
3. All personnel installing anchors shall be trained and certified by the anchoring system manufacturer or by ACI. Contractor shall submit current certifications for all personnel. ACI certification required for all personnel installing adhesive anchors in horizontal or overhead conditions. If a failure occurs at any time during testing or construction, personnel shall be retrained and recertified.
4. Installation:
   a. Do not cut existing reinforcing.
   b. The hole through the supported steel member shall be 1/16" larger in diameter (1/8" for screw anchors) than the anchor unless noted otherwise. Use plate washers with a standard size hole welded to steel members where oversized holes must be used.
   c. Holes shall be drilled per the manufacturer's written instructions as outlined in the ESR.
   d. Where applicable, installation shall follow cleaning procedure indicated in the ESR. Holes shall be made with a hammer drill. Use of a core drill is not allowed.
5. Special inspection shall be provided for all post installed anchors as required by the building code and/or ICC-ES report. Written special inspection reports shall be submitted to the registered design professional in responsible charge by the special inspector. The reports shall record and report the following as a minimum:
   a. One of every ten anchors installed by each technician in locations listed below shall be randomly tested in direct tension. At least one anchor shall be tested on each day that anchors are installed.
      i. Test anchors in the following locations:
         - Shear wall hold down anchors.
         - Shear wall sill plate anchors.
         - Anchors supporting dead or live loads in tension.
      ii. Test anchor to twice the allowable tension load as provided in the ESR. Test load shall not exceed 80 percent of the yield strength of the anchor (0.8 x A_{se} x f_{ya}).
      iii. Post-installed anchors shall not be tested using a torque wrench.
      iv. If any anchor fails quality control testing, all anchors of the same type shall be randomly tested until (10) consecutive anchors pass. Resume normal frequency after this with approval of the engineer. The failed anchor(s) shall be removed and the affected area patched per engineer's direction. Consult the engineer for anchor replacement instructions. The cost for additional work and testing required due to anchor failure is the responsibility of the installing contractor.
   b. Prior to and during installation of anchors, inspection and report shall include:
      i. Installer shall have reviewed manufacturer's ESR report and written installation procedures and has been certified by the manufacturer or ACI.
      ii. General concrete or CMU block conditions (cracked or un-cracked, wet or dry, grouted or hollow, etc).
      iii. Whether manufacturer's written procedures for preparation of hole were followed. Indicate if hole is wet or dry.
      iv. Whether hole was made with a hammer drill
      v. Whether manufacturer's written procedures for anchor installation were followed.
      vi. Embedment depth and concrete or block thickness.
      vii. Anchor diameter, length and type.
   c. After installing anchors, inspection and report shall include:
      i. All test locations.
      ii. Anchor size and/or type.
      iii. Applied load, loading procedure, load increments and rate of loading.
      iv. Mode of failure.
      v. Photographs of test equipment and typical failures.
6. Substitution requests for products other than those listed above shall be submitted to the engineer with calculations that are prepared and sealed by a registered structural engineer at least two weeks prior to scheduled installations. Calculations shall demonstrate that the substituted product will achieve an equivalent capacity using the appropriate design procedure required by the building code. Product ICC-ES code reports shall be included with the submittal package.

O. COLD FORMED STRUCTURAL STUD FRAMING

1. Any dimensional information shown is included for engineering purposes only. It is the responsibility of the contractor to verify building dimensions with the A/E and MEP drawings and to comply with all other requirements of the Contract Documents.
2. All materials shall have 33 ksi minimum yield strength, except studs and track of 16 gauge or heavier shall have a minimum yield strength of 50 ksi.
3. All material properties, fabrication, and erection shall be in accordance the latest edition of the AISI "Specifications for the Design of Cold-Formed Structural Members."
4. Any proprietary connectors shown have been selected based on specifications and capacities published by the manufacturer. Weld design values have been based on the latest edition of the AISI "Specifications for the Design of Cold-Formed Structural Members." Any deviance from the brand, type, size or quantity of connectors indicated on these drawings must be approved by the engineer prior to construction.
5. All framing components shall be cut squarely or at an angle to fit squarely against abutting members. Splicing of axially loaded members shall not be permitted. Members shall be held firmly in place until properly fastened. Attachments of similar components shall be by welding, screw attachment, or bolting. Wire tying of components is not permitted.
6. All field cutting of members shall be done by sawing, drilling, or shearing. Torching is not permitted.
7. Special anchorage requirements required for wind and seismic bracing shall be as shown on the plans.
8. Members shall not be spliced other than at the locations indicated on the drawings. All splices shall conform to the details in the drawings.
9. The Contractor shall verify sizes and locations of structural components where members attach.
10. All load bearing joists shall have blocking with a maximum spacing of 8'-0" on center, attached per details.
11. CFS wall studs have been designed to support floor/roof load tributary to them. Masonry veneer is assumed to be self-supported and transferred to the foundation/podium. CFS framing has been designed to laterally support veneer where applicable.
12. No notching or coping of any framing member is allowed, unless stated within this drawing package.
13. Per AISI standard for cold-formed framing- wall design, the maximum allowable gap (measured between the web of the stud and of the track) for a stud seated in a track is 1/4" for non-axial load bearing conditions and 1/8" for axial load bearing conditions (U.N.O.) Pressure should be applied to nest the studs into the tracks until the tolerances listed above are achieved. Failure to do so could result in serviceability problems in the future.
14. CFS wall studs have been designed to support floor/roof load tributary to them. Masonry veneer is assumed to be self-supported and transferred to the foundation/podium. CFS framing has been designed to laterally support veneer where applicable.
15. Product Identification:
   a. The designations of the Steel Stud Manufacturer Association are used in this package. Any Manufacturer whose product geometry meets or exceeds SSMA standards is acceptable. See below for SSMA nomenclature.
   b. The Last Two Numbers Indicate the Steel Thickness:

Gage	Design	Minimum	SSMA
20	0.0346"	0.0329"	33 mils
18	0.0451"	0.0428"	43 mils
16	0.0566"	0.0538"	54 mils
14	0.0713"	0.0677"	68 mils
13	0.0840"	0.0798"	84 mils
12	0.1017"	0.0966"	97 mils

Nomenclature Example



O.1. COLD FORMED CONNECTIONS

1. All fasteners are to be installed per the manufacturer's recommendations. Do not substitute fasteners without written permission from Engineer.
2. PAF point must penetrate through full base steel thickness. Notify PAF manufacturer for instructions where full penetration is not achieved.
3. If required, all welded connections are to be performed in accordance with the latest version of AWS D1.3 Structural Welding Code – Sheet Steel. Consult AWS D19.0 Welding Zinc Coated Steel & ANSI Standard Z49.1 for information regarding safe welding procedures.
4. Minimum weld throat thickness (t) must match or exceed the base steel thickness of the thinnest connected part unless noted otherwise.
5. In welding, the zinc coating on steel framing will be burned away; therefore, a zinc rich paint must be applied to the weld area to provide corrosion resistance.
6. All screw connections are based on AISI S100 Section J4, which outlines the AISI Specification provisions for screw connections. Screw penetration through joined materials shall not be less than three exposed threads.
7. For screws, a minimum of 1.5 x screw diameter clearance must be maintained from all edges of the steel members. A minimum of 3.0 x screw diameter on-center spacing must be maintained between adjacent screws.
8. Power driven fastener systems, expansion anchor systems, masonry screw systems, & adhesive anchor systems connections are based on literature for fastener requirements (e.g. spacing, edge distance, base material thickness, etc.) Alternate manufacturer's fasteners of equivalent specifications & load capacities are acceptable.
9. All Tracks shall be fastened to each stud with #8 screws at each flange (min.).

PRINTS ISSUED
11/01/23 - CITY SUBMITTAL

REVISIONS:

1	12/21/2023	RESPONSE TO CITY COMMENTS
2	1/19/2024	ADDENDUM #2
3	3/06/2024	IN RESPONSE TO GC COMMENTS

McCLURE
2001 W Broadway
Columbia, MO 65203
P 573-814-1568

MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
GENERAL NOTES

PROJECT NUMBER: 2023000333

SHEET NUMBER:
S001

J. STRUCTURAL STEEL

1. Materials:
   a. Materials shall conform to the following, unless noted otherwise.

i.	Rolled WF shapes	ASTM A992, Fy = 50ksi
ii.	Plates and angles	ASTM A572-50
iii.	Channels	ASTM A36
iv.	HSS: Rectangular	ASTM A500, Grade C
v.	HSS: Round	ASTM A500, Grade C
vi.	Bolts	ASTM F3125
	1. All bolts shall be Grade A325 or F1852, UNO	
	2. Bolts designed as "A490" shall be Grade A490 or F2280	
vii.	Nuts	ASTM A563 DH or A194
viii.	Washers	ASTM F436
ix.	Anchor Bolts	ASTM F1554 Grade 36, UNO
x.	Threaded Rod	ASTM A36
xi.	Studs	ASTM A108, Type B Nelson headed shear stud connectors or equal.
xii.	Electrodes	Matching weld metal, 70 ksi minimum strength.

   b. Finishes
      i. Prepare all surfaces that will be exposed in accordance with SSPC SP3.
      ii. All exterior steel components exposed to view or weather shall be galvanized in accordance with ASTM A123 for framing members and ASTM A153 for fasteners.
      iii. All exterior welded connections shall be cold galvanized in accordance with ASTM A780.
2. Fabricator:
   a. Steel fabricator shall be AISC Certified.
   b. Structural members shall be detailed, fabricated, and erected in accordance with the latest edition AISC Code of Standard Practice.
   c. Structural steel fabrication and erection drawings must be submitted to the engineer for review and approval prior to fabrication.
   d. Fabricator shall engage a professional engineer registered in the state of the project for the design and detailing of:
      i. Steel connections.
      ii. Temporary bracing.
      iii. Steel deck (for continuity and load transfer).
3. Connections:
   a. The contractor has the option to use bolted or welded connections. Any connections not specifically detailed on the drawings shall be designed by a professional structural engineer licensed in the project state and retained by the fabricator. In general, any connections shown on the drawings are schematic and are intended to show only the relative relationship of the connected members.
   b. Structural design calculations for all beam and bracing connections shall be submitted to the engineer prior to fabrication and should include the following (as a minimum):
      i. All plate dimensions and grades (minimum plate thickness shall be 3/8").
      ii. All weld sizes, lengths, pitches and returns.
      iii. Number and type of bolts.
   c. Connection design forces:
      i. Beam shear connections shall be designed for the actual reactions indicated on the drawings. Connection forces shown on drawings are envelope reactions based on ASD load combinations.
      ii. Connections indicated on the drawings as moment-resisting shall be designed for the moment shown. If moment is not indicated on the drawings, connection shall be designed to develop the full capacity of the member.
      iii. Columns have not been checked for local effects at connections. Fabricator shall verify if stiffener or web doubler plates are required and provide as necessary. Column size may also be increased with approval of the Structural Engineer.
      iv. Connection loads indicated on the drawings include compensation for Code permitted stress increases and load reductions for connection design.
   d. Bolted Connections:
      i. Minimum bolt diameter shall be 3/4".
      ii. Slip critical connections shall be used for bracing members, moment-resisting connections, cantilevers, and as indicated on the drawings. Standard oversized and long-slotted holes are permitted for friction-type connections.
      iii. All non-slip-critical connections shall be typical bearing type. Oversized or slotted holes are not permitted unless indicated on the drawings.
      iv. The fabricator is responsible for verifying the tensile capacity of axially loaded members with the presence of bolt holes. Increase member size; add plates (etc) as required.
   e. Welded Connections:
      i. All fillet welds shall be sized according to AISC minimums, but never less than 3/16" (UNO).
      ii. All welds shall be performed in accordance with the latest edition of the AWS Structural Welding Code.
4. Erection:
   a. All structural steel to be fabricated and erected in accordance with latest AISC specifications.
      i. It is the responsibility of the contractor to ensure that structure is maintained in a safe, stable configuration at all times.
      ii. Any shoring required shall be submitted with engineering calculations for approval.
   b. Splicing of steel members not specifically shown on the drawings is prohibited without prior approval from the engineer.
   c. All beams shall be installed with the mill camber up.
5. Steel Lintels:
   a. Loose lintels for King Brick Masonry at all openings shall be the following:
      i. L 3-1/2 x 2-1/2 x 1/2 for spans less than 6'-4"
      ii. L 5 x 3 x 3/8 for spans between 6'-5" and 8'-3"
      iii. L 6 x 3-1/2 x 3/8 for spans between 8'-4" and 10'-0"
      iv. L 7 x 4 x 7/16 for spans between 10'-1" and 12'-1"
         1. Lintel sizes are based on 27 psf brick weight with 6'-0" max height of brick above the lintel.
   b. Loose lintels for Large Format Masonry at all openings shall be the following:
      v. L 5 x 3-1/2 x 5/16 for spans less than 6'-3"
      vi. L 7 x 4 x 3/8 for spans between 6'-4" and 9'-3"
      vii. L 8 x 4 x 7/16 for spans between 9'-4" and 11'-0"
      viii. L 8 x 4 x 5/8 for spans between 11'-1" and 12'-1"
      ix. L 8 x 4 x 1 for spans between 12'-2" and 13'-11"
         1. Lintel sizes are based on 56 psf masonry weight with 6'-0" max height of brick above the lintel.
   c. Lintels shall bear 8" minimum each end.
   d. Lintels carrying masonry shall be galvanized.
   e. All double angle lintels back-to-back shall be bolted at 32" o.c. maximum spacing, with 5/8" diameter A307 bolts, a minimum of two bolts per span.
   f. See architectural and mechanical drawings for opening sizes and locations.

K. WOOD FRAMING AND CONNECTIONS

1. Install rough carpentry according to the American Institute of Timber Construction Manual. It is the responsibility of the contractor to verify all dimensions prior to erection.
2. Material:
   a. Sawn lumber
      i. Sawn lumber shall be grade stamped and visually graded with maximum 19% moisture content.
      ii. All members shall meet strength requirements in NDS "National Design Specification for Wood Construction".
      iii. Joists, rafters, and nailers with nominal depth 8" or less shall be Southern Pine (SP) or Douglas Fir-Larch (DFL), No. 2 or better, UNO.
      iv. Joists, rafters, and nailers with nominal depth greater than 8" shall be Southern Pine (SP) or Douglas Fir-Larch (DFL), No. 1 or better, UNO.
      v. All members used as columns or beams (including headers) shall be void of any significant defects (ie. Checking, warping, etc.) at the time of erection.
      vi. All exterior posts shall be Western Red Cedar No. 2 or better.
      vii. Bearing and shear wall studs, and wall plates, shall be Douglas Fir-Larch (DFL), No. 2 or better.
   b. Structural Composite Lumber
      i. SCL shall meet material specifications in ASTM D5456
      ii. SCL shall include laminated veneer lumber (LVL), laminated strand lumber (LSL), oriented strand lumber (OSL) and parallel strand lumber (PSL)
      iii. All SCL materials shall be graded as indicated on the plans.
   c. Glued-laminated timber (GluLam) shall be manufactured and identified as required in ANSI/AITC A-190.1 and ASTM D3737.
      i. GluLam shall be graded as indicated on the plans.
   d. Structural Panels
      i. All plywood or oriented strand board (OSB) panels shall meet the strength requirements in Department of Commerce (DOC) PS 1 and PS 2 or ANSI/APA PRP 210.
      ii. All structural panels (walls, floor and roof) shall meet the Structural 1 grading standard.
   e. Connectors and Fasteners
      i. Metal connectors and associated fasteners used for the applications indicated shall meet the following minimum standards:
         1. Untreated Lumber
            a. Connectors ....ASTM A653 G90
            b. Bolts and Anchor Rods ....ASTM F1554 Gr36
            c. Nails and Staples ....ASTM F1667
         2. Sodium Borate (SBX) Pressure Treated Lumber
            a. Connectors ....ASTM A653 G90
            b. Bolts ....ASTM A307
            c. Anchor Rods ....ASTM F1554 Gr 55
            d. Nails and Staples ....ASTM F1667 with A153 Hot Dipped Galvanized
         3. All Other Pressure Treated Lumber (e.g. ACQ-C, ACQ-D, CA-B, CBA-A, ACZA)
            a. Connectors ....AISI SS Type 304 or 316
            b. Bolts ....ASTM A193, GrB7
            c. Anchor Rods ....ASTM A193, GrB7
            d. Nails and Staples ....ASTM F1667 using AISI Type 304 or 316 Stainless Steel
      ii. Fasteners utilizing dissimilar materials are prohibited.
      iii. Power driven fasteners shall comply with NES NER-272.
      iv. Fastener installation whether power driven or otherwise shall be in accordance with the Building Code and the manufacturer's recommendations. In general fastener heads shall be installed nominally flush with the outer ply of the connection. Sheathing and support framing damaged by overdriven fasteners shall be removed and replaced.
      v. Aluminum fasteners and flashing shall not be in contact with pressure treated lumber.
3. General:
   a. All light framed wood construction shall be fastened as indicated on the plans. Connections not detailed shall be fastened in accordance with the table below.
   b. Sill plates shall be anchored to the foundation as shown on the drawings.
   c. Plywood/OSBS wall, floor or roof sheathing shall be fastened per the requirements shown on the drawings.
   d. Splicing of structural members is not permitted under any circumstances.
   e. All framing in direct contact with water, soil, concrete, masonry, or permanently exposed to weather shall be preservative treated lumber in accordance with the AWPA Standard U1 and M4
   f. All framing indicated to be fire-retardant treated or fire resistive on the drawings (Architectural or Structural) shall comply with AWPA U1 UCFA, Type A or ICC-ES ESR 2645 and shall have UL FR-S surface burning characteristics.
   g. All wood shall be stored on site and protected from the elements to prevent warping, cupping, bowing, crooking and twisting. Use only material that is straight. All stored wood shall be held off the ground with sacrificial dunnage blocks.
   h. Wood connectors shall be installed to prevent wood from splitting or otherwise damaging either member.
   i. All wood denoted as requiring fire-resistive treatment shall be pressure treated according to AWPA Standard requirements.
   j. Use 4x4, 4x6 and 6x6 columns as shown on plans. Built-up sections of 2x studs shall not be substituted for timber posts.
   k. All multi-ply beams, joists and headers shall be fastened together.
      i. Fasten sawn lumber members per schedule below.
      ii. Fasten structural composite lumber per manufacturer's literature.
   l. Standard cut washers shall be used under bolt heads and nuts bearing against wood, unless noted otherwise per shear wall anchorage details.
   m. Wall studs are designed based on being fully braced by sheathing. Design of temporary or permanent blocking or bridging for support of construction loads by unsheathed walls is the responsibility of the contractor.
   n. Wood joists shall bear on the full width of supporting members (stud walls, beams, nailers, etc.) unless noted otherwise.
   o. Subject to compliance with the project requirements, wood connectors, joist hangers, post caps and bases, hold downs, and related hardware shall be manufactured by Simpson Strong-Tie Company, Inc. or approved equal.
      i. Contractor shall follow the manufacturer's latest recommendations for installation of connectors.
      ii. Other manufacturers may be acceptable. Submit substitution request demonstrating that the proposed hardware has the same or greater capacity for each connection. Allow two weeks for review.
   p. All beams and joists not bearing on supporting members shall be framed with Simpson joist hangers. Use joist hangers per schedule and details. The joist hangers shall be installed using nails or screws supplied by the hanger manufacturer as required for the hanger type.
   q. Sill plates of all bearing walls on concrete shall be anchored with anchors as shown on the drawings. Sill plate anchors shall be located a maximum of 1'-0" from corners, ends of walls and sill plate splices. Provide (2) anchors minimum in each sill plate segment Refer to plans and details for shear wall anchorage requirements.
   r. Nailers shall be anchored to steel beams and columns with 1/2" diameter A307 bolts with required washers at a maximum spacing of 24" on center (alternate sides), unless noted otherwise.
   s. Wall studs, jamb studs, and beam support studs shall have adequate vertical blocking installed to transfer all vertical loads to the foundation.
4. Wood Floor and Roof Trusses:
   a. Provide wood trusses capable of withstanding the design loads within the limits and under the conditions indicated. Truss design shall be in accordance with the Building Code and TPI-1 Nation Design Standard for Metal Plate Connected Wood Truss Construction.
   b. Metal gusset plates shall be designed, manufactured, and approved according to IBCO requirements.
   c. Wood trusses shall be of sawn lumber with 2x nominal thickness. Minimum grade for any truss member shall be #2.
   d. In addition to the loads indicated in section "A. Design Criteria", wood trusses shall be designed for all applicable wind, seismic, and snow (including drift) loads required by Building Code and noted on plans.
   e. Truss design and shop drawing preparation shall be supervised by a registered professional engineer licensed in the state where the project is located. Submittals shall be signed and sealed and include comprehensive truss layout plans and design calculations that indicate species and grades of lumber, design stresses, size and type of connector plates used.
   f. Fabricator shall determine truss diagonal locations. Truss configurations shown on drawings are diagrammatic only. Bearing points shall coincide with intersections of diagonals and chords. All dimensions shall be determined by the truss manufacturer. The manufacturer and contractor shall coordinate all architectural and MEP components with the truss layout and profile.
   g. The manufacturer shall provide all open web trusses and accessories as shown on the structural and architectural drawings and as required for a complete project. This includes all blocking, bridging, bracing, and drag components required for construction.
   h. All truss-to-truss connections and truss to supporting member connections shall be designed and detailed by the truss supplier and the size and type of connectors included in the sealed shop drawing submittal. Coordinate size, species, and grade of supporting chord and web members with the truss hanger selected.
   i. All temporary and permanent bracing shall be in accordance with the TPI standards for bracing. The bracing shall be furnished and installed by the Contractor. Do not use ceilings as uplift bracing at truss bottom chord.
   j. Girder trusses shown on drawings shall be designed to carry concentrated reactions from supported members. Girder trusses shall not be located directly above openings unless coordinated with the Structural Engineer.
   k. Wood trusses shall be handled and erected in accordance with TPI HIB-91. Trusses shall be unloaded and stored in bundles in an upright position out of contact with the ground until ready for installation.
   l. Any damage to the trusses shall be brought to the immediate attention of the Structural Engineer and truss supplier. Field repair and modification of trusses shall not be made without prior written approval from the supplier, except for nominal trimming to correct length where such trimming will not impair the load carrying capacity of the truss
5. Roof trusses shall be designed for the following:
   TC DL = 10 psf   TC LL = 20 psf   TC SL = 20 psf   C&C TC WL = +24/-48 psf   MWFRS TC WL = ±17 psf
   BC DL = 10 psf   BC LL = N/A   C&C BC WL = ±5 psf   MWCRS BC WL = ±5 psf
   End/Parapet C&C WL = +89/-60 psf
   Snow Drift Snow Load:
   Balanced TC SL = 14psf   Drift Surcharge TC SL = 36 psf   Drift Width = 17'-3"
6. Floor trusses shall be designed for the following loads:
   TC DL = 17 psf + 15psf partition dead load   TC LL* = 40/100/125 psf
   BC DL = 10 psf   BC LL = ±5 psf
   *(Coordinate LL with Architectural plans and general note section "A. Design Criteria"
7. The allowable deflection is:
   a. Roof Trusses
      i. Total Load: L/240
      ii. Roof Live or Snow Load: L/360
      iii. Absolute Maximum: 1.5"
   b. Floor Trusses
      i. Total Load: L/360
      ii. Live Load: L/480
      iii. Absolute Maximum: 1"

L. WOOD SHRINKAGE

1. IBC 2304.3.3 requires that architectural, mechanical, electrical, and plumbing systems be designed to accommodate movement due to shrinkage. McClure Engineering Co. takes no responsibility for the naturally occurring shrinking that will occur.
2. Estimated values are based upon the following moisture content:
   a. At installation (MC) = 19%
   b. At equilibrium (EMC) = 8%
3. The following recommendations are intended to minimize the potential issues associated with wood shrinkage. Implementation and liability are ultimately up to the contractor or design professional responsible for the impacted trade.
   a. Mechanical, Electrical, Plumbing
      i. Allow construction gaps in the wood framing to close by delaying installation of MEP as long as possible to allow for additional dead load to be installed.
      ii. Provide oversized or long slotted holes at pipe penetrations. Holes must be within conformance of typical penetration details.
      iii. Rigid connections shall be adjusted before closing of wall and ceiling assemblies.
      iv. All vertical sheet metal down spouts shall have intermediate slip joints.
      v. Roof Drains shall utilize adjustable fittings. Fittings must be adjusted at the completion of construction and then as required to maintain proper drainage.
   b. Architectural Considerations
      i. Stucco, EIFS and brittle finishes shall have horizontal expansion joints, slip joints with appropriate waterproofing.
      ii. Brick and stone finishes shall have ties that accommodate differential movement.
      iii. Provide adjustable thresholds or transitions at rigid transitions such as CMU or concrete stair and elevator shafts.
   c. Construction tolerance
      i. Limit shortening due to nesting by cutting all studs level square and tight against plates.
      ii. Structural wood panels shall have ½" relief gaps at each floor to limit bulging.
      iii. Floor sheathing shall have 1/8" gaps on all sides during installation to accommodate movement.
      iv. Shear wall hold downs shall be check and retightened immediately prior to sheathing walls.
      v. Delay gyp topping around concrete and CMU stair or elevator shafts until competition of construction.
   d. Material storage
      i. Stored materials shall be covered and elevated to provide protection from the elements.
      ii. Do not allow water to pond on floor sheathing. Provide drain holes if required to allow water to quickly drain if water does temporarily pond.
   e. Post occupancy
      i. McClure recommends a review of roof drains every 3 months for the first 24 months of occupancy and then annually. Adjust drains as required to maintain watertight integrity.
      ii. McClure recommends review of joints at exterior doors, windows and finish transitions. Waterproof as needed where original joints fail per the architect's recommendations.
      iii. Remedial self-leveling work may be required around concrete or CMU stair and elevator towers to accommodate shrinkage.

M. STEEL FLOOR AND ROOF DECK

1. General:
   a. Install steel deck according to procedures outlined in the latest edition of the "SDI Manual of Construction with Steel Deck" published by the Steel Deck Institute. One copy shall be maintained on site.
   b. All steel roof deck shall be welded to supporting beams and joists and erected in accordance with manufacturer's latest recommendations.
   c. Deck shall be continuous over 3 spans, unless noted otherwise.
   d. Provide welds or screws at parallel edges equal to specified fastening as supports. Fasten to all parallel supports – both at edges and in the field of the deck. Raise steel supports or provide shims at weld points if the deck valley does not engage the support.
   e. Provide welding washers as required by manufacturer's recommendations.
   f. All miscellaneous accessories – pour stops, column closures, etc. -- will be installed in accordance with manufacturer recommendations and the Steel Deck Institute.
   g. Pour stops shall be A36 steel angles (1/4") to finish floor height unless otherwise noted.
   h. Composite deck has been designed for a uniform construction live load of 20 psf and concentrated construction live load of 150 lbs. These loads are considered adequate for typical construction that consists of concrete transport and placement by hose and concrete finishing using hand tools. Bulk dumping of concrete using buckets, chutes, or handcarts, and the use of motorized finishing equipment (such as power screeds) may require design for larger construction live loads and the addition of deck shoring during concrete placement. Requests for approval to use concrete placement or finishing methods requiring analysis using increased loading must be made by the contractor to the engineer prior to submittal of deck and supporting structure shop drawings to be considered.
   i. Concrete placed on steel deck shall have a constant thickness. Thickness shall be maintained by probing the deck at supports and at mid-span between supports. It is not permissible to finish the deck to be flat unless a design is submitted demonstrating that the deck and supporting structure can support the additional concrete weight.
2. Roof Deck @ Canopy:
   a. Roof deck properties shall be as follows based on deck type indicated on plans:
      i. 1 1/2" wide rib 22 Ga. t_{min} = .0295", I=0.155 in^4/ft, S_p=0.186 in^3/ft, S_n=0.192 in^3/ft, and F_y=33 ksi
   b. Roof deck shall be G90 Galvanized unless noted otherwise.
   c. Roof deck shall be fastened to supports with X-HSN24 PAF and fastened at sidelaps with #10 screws as follows:
      i. 1.5B: 36/4 fastener pattern w/ (1) sidelap fastener per span
      ii. Refer to general notes section "P. Power-Actuated Fasteners" for spacing and edge distance requirements of PAFs.
   b. Floor Deck: Floor deck properties shall be as follows based on deck type indicated on plans:
      i. Main Floor Slab: 5 1/2" Total Depth Lightweight Concrete with 3" Composite Deck
         a. Reinforcing: 6x6-W1.4xW1.4 Welded Wire Mesh
         b. Deck: 3" Composite 20 Ga:
            t_{min} = 0.0358", I_p = 0.919 in^4/ft I_n = 0.6921 in^4/ft, S_p = 0.512 in^3/ft, S_n = 0.539 in^3/ft, F_y = 50ksi,
         c. Maximum Unshored Spans: Single Span = 12'-2", Double Span = 13'-1", Triple Span = 13'-7"
      ii. Balcony Structural Slab: 2 1/2" Total Depth Light Weight Concrete With 9/16" form deck
         a. Reinforcing: 6x6-W1.4xW.14 Welded Wire Mes
         b. Deck: 9/16" non-composite 28 Ga.:
            t_{min} = .0149", I_p=0.012 in^4/ft I_n=0.012 in^4/ft, S_p=0.035 in^3/ft, S_n=0.036 in^3/ft, F_y=60 ksi,
   c. Floor deck shall be fastened to supports with X- ENP-19 L15 w/ (5) fasteners per rib & (1) @ 2" o.c. along edge of panel, with sidelap fasteners at 36" o.c. within 30ft of CMU. When not within 30ft of CMU, fasten to supports w/ X-ENP-19 L15 PAFs w/ (1) fastener per rib & (1) @ 36" o.c. along edge of panel with sidelap fasteners at 36" o.c.
      1. Refer to general notes section "P. Power-Actuated Fasteners" for spacing and edge distance requirements of PAFs.
      2. (5) X-ENP-19 L15 PAFs may be replaced with (1) ¾"Ø HAS welded to the support through the deck, along the edge of a panel the PAFs may be replaced by (1) ¾"Ø HAS welded to the support through the deck @ 12" o.c.
      3. Alternatively, floor deck may be fastened to supports (At embed plate at CMU) with 5/8"Ø puddle welds (2) per rib + (1) every other rib & (1) weld @ 4" o.c. along edge of panel, with sidelap fasteners at 36" o.c. within 30ft of CMU. When not within 30ft of CMU, fasten to supports w/ (1) 5/8"Ø puddle weld per rib & (1) weld @ 36" o.c. along edge of panel with sidelap fasteners at 36" o.c.
      4. Sidelap fasteners may be #10 screws or button punch interchangeably.
   d. Non-composite floor deck at Balconies shall be fastened to supports with X-ENP-19 L15 PAFs w/ 30/4 pattern, with 0 sidelap fasteners.
      1. Refer to general notes section "P. Power-Actuated Fasteners" for spacing and edge distance requirements of PAFs.
   e. Metal floor deck shall be galvanized in accordance with the requirements of ASTM A653-94 G60.
   f. Metal floor deck exposed to weather (at balconies) shall be galvanized in accordance with the requirements of ASTM A653-94 G90.

Schedule of minimum nailing for standard connections[1]

Connection[2, 3]	Number, or spacing, of fasteners required per connection. Nail lengths are minimum, nominal lengths, in inches. Nail shank diameters are minimum, nominal diameters, in inches.										
	3 ½ x 0.162	3 x 0.148	3 ¼ x 0.131	3 x 0.131	2 ½ x 0.131	3 ¼ x 0.120	3 x 0.120	2 ⅜ x 0.113	2 x 0.113	2 ¼ x 0.105	2 ¼ x 0.099
Equiv. Common Nail	16d	10d			8d				6d		
Floor Framing											
Joist to band joist	3	5	5	5	N/A	6	6	N/A	N/A	N/A	N/A
Ledger strip	3	4	4	4	6	4	4	N/A	N/A	N/A	N/A
Joist to sill or girder	3	3	3	3	3	4	4	N/A	N/A	N/A	N/A
Blocking between joist or rafter to top plate	3	3	3	4	3	4	4	N/A	N/A	N/A	N/A
Bridging to joist	N/A	N/A	N/A	N/A	2	3	3	3	4	3	4
Rim joist to top plate	8" o.c.	6" o.c.	6" o.c.	6" o.c.	6" o.c.	6" o.c.	4" o.c.	6" o.c.	3" o.c.	3" o.c.	3" o.c.
Built-up Girders & Beams - Spacing along edges,	24" o.c.	24" o.c.	24" o.c.	24" o.c.	16" o.c.	16" o.c.	16" o.c.	N/A	N/A	N/A	N/A
- # at ends & splices	3	3	3	3	4	3	3				
Ceiling and Roof Framing											
Ceiling joists to plate	3	4	5	5	5	5	5	6	N/A	N/A	N/A
Ceiling joists, laps over partitions	3	4	4	4	6	4	4	N/A	N/A	N/A	N/A
Ceiling joist to parallel rafter	3	4	4	4	6	4	4	N/A	N/A	N/A	N/A
Collar tie to rafter	3	3	4	4	5	4	4	N/A	N/A	N/A	N/A
Jack rafter to hip, toe-nailed	3	3	4	4	5	4	4	N/A	N/A	N/A	N/A
Jack rafter to hip, face nailed	2	3	3	3	3	4	4	N/A	N/A	N/A	N/A
Roof rafter to plate	3	3	3	3	3	4	4	5	5	5	6
Roof rafter to 2-by ridge beam (driven through beam into end of ridge)	2	3	3	3		4	4	N/A	N/A	N/A	N/A
Roof rafter to 2-by ridge beam (toe-nail rafter to beam)	2	3	3	3	3	4	4	N/A	N/A	N/A	N/A
Wall Framing											
Top or sole plate to stud (End nailed)	2	3	3	3	5	4	4	N/A	N/A	N/A	N/A
Stud to top or sole plate (toe-nailed)	2	3	3	3	5	4	4	5	5	5	5
Cap/top plate laps and intersections (each side of lap)	2	3	3	3	4	3	3	N/A	N/A	N/A	N/A
Diagonal bracing	2	2	2	2	2	3	3	3	4	4	4
Sole plate to joist or blocking @ braced panels (number per 16" joist space)	2	3	3	4		4	4	N/A	N/A	N/A	N/A
Sole plate to joist or blocking	16" o.c.	8" o.c.	8" o.c.	8" o.c.	6" o.c.	8" o.c.	8" o.c.	N/A	N/A	N/A	N/A
Double top plate	16" o.c.	16" o.c.	12" o.c.	12" o.c.	8" o.c.	12" o.c.	12" o.c.	N/A	N/A	N/A	N/A
Double studs	12" o.c.	12" o.c.	8" o.c.	8" o.c.	6" o.c.	8" o.c.	8" o.c.	N/A	N/A	N/A	N/A
Corner studs	24" o.c.	16" o.c.	16" o.c.	16" o.c.	8" o.c.	12" o.c.	12" o.c.	N/A	N/A	N/A	N/A

N/A – Fastener not applicable to connection
[1]This fastening schedule applies to framing members having an actual thickness of 1 ½"(Nominal "2-by" lumber)
[2]Fastenings listed above may also be used for other connections that are not listed but that have the same configuration and the same code requirement for fastener quantity/spacing and fastener size (pennyweight and style, e.g., 8d common, "8-penny common nail").
[3]Fastening schedule only applies to buildings of conventional wood frame construction. Connections of shear walls and floor and roof diaphragms shall be as shown on the drawings.

N. CONCRETE MASONRY

IN RESPONSE TO GC COMMENTS 3

1. All construction shall comply with applicable provisions of the following latest ACI standards:
   a. ACI 530/ASCE 52/TMS 402 – Building Code Requirements for Masonry Structures.
   b. ACI 530.1/ASCE 6/TMS 602– Specifications for Masonry Structures.
   c. IBC Chapter 21 Masonry
2. Concrete block units shall conform to the requirements for Grade N Type 1, load-bearing normal-weight units per ASTM C-90. Use Grade S blocks below grade. All below grade block shall be solid grouted.
3. Net area compressive strength of masonry. f'_m = 2,000 psi.
4. Standard units shall have nominal face dimensions of 16 long x 8 inches high & waterproofed x 8 inches wide. The minimum compressive strength of the masonry units shall be as follows:

Net Area Compressive Strength Of Masonry (f'_m psi)	Net Area Compressive Strength Of Concrete Masonry Units (psi): Type M or S mortar	Type N mortar
2,000	2000	2650

5. Mortar for unit masonry shall be proportioned per ASTM C270. The minimum mortar compressive strength is as follows:
   a. Type S: 1,800 psi
   b. Type M: 2,500 psi
6. Grout for unit masonry shall be proportioned per ASTM C476. The minimum grout compressive strength is the larger of 2,000 psi or f'_m.
7. Maximum coarse aggregate size is 3/8".
8. Reinforce all CMU walls with vertical rebar full height, centered in cell as shown on the drawings. Grout reinforced cells solid.
   a. When reinforcing is not specified, provide #5 @ 48" o.c., minimum.
9. All vertical cells to be filled shall have vertical alignment to maintain an unobstructed cell area not less than 2 in. x 3 in.
10. All bond beams shall be grouted solid and reinforced.
    a. Provide bent dowels at all wall intersections – one per bond beam at corners, and two at tee intersections.
11. Provide bond beams at all walls supporting roof and floors.
12. Grout jambs solid under all beams and lintels for full height of wall.
13. All masonry walls shall have ladder type horizontal joint reinforcement with two 9 gage wires spaced at 16" o.c. vertically, unless noted otherwise.
    a. All wall intersections shall be reinforced with prefabricated tee or corner units.
14. Use low lift method of grouting. Maximum grout lift = 5'-0". Alternative methods of grouting may be acceptable. Submit method for approval two weeks in advance.
15. Masonry reinforcing lap lengths shall be as follows:

Bar Size	Masonry Strength, f'_m (psi) 2,000
#3	12"
#4	17"
#5	27"
#6	51"
#7	69"
#8	105"
#9	132"

Notes:
1. Development length is based on 2½" masonry cover for all bars. Use bar spacers to maintain cover.

16. Brace all masonry walls until floor and roof framing and metal deck are installed.
    a. Design and installation of bracing is the responsibility of the masonry contractor.
    b. Submit bracing plan for review.
17. When grouting is stopped for more than one hour, horizontal construction joints shall be formed by stopping the pour of grout 1-1/2" below the top of the uppermost course.
18. Provide control vertical joints in wall every 40 ft. Provide vertical reinforcing in first cell each side of control joint. Do not locate control joint within 2'-0" of end or opening.
19. Conduit pipes and sleeves in masonry shall not displace more than 2 percent of the net cross-sectional area and shall be placed no closer than 3 diameters or widths on center.
20. The Contractor shall include in his bid an allowance of 300 lbs of reinforcing steel "in place" to be used in the field as the architect or structural engineer may direct.

P. POWER-ACTUATED FASTENERS (PAFS)

1. This section applies to all driven pin installation methods (e.g. powder, pneumatic, electric), regardless of terminology employed.
2. All PAFs shall be of the brand, size, and quantity indicated in the sections or details.
3. All PAFs shall be Hilti 0.157"Ø X-U, U.N.O
4. PAF length is dependent on installation penetration requirement in base material:
   a. For concrete: PAFs shall have an embedment of 1-1/2".
   b. For steel, the required penetration is dependent on the thickness of the steel substrate. The contractor shall select a PAF that satisfies the following requirements:
      i. For steel 1/2"thickness or less, PAFs must penetrate through the full base steel thickness.
      ii. For steel thickness greater than 1/2", PAFs must penetrate the steel to a depth of at least 1/2" and the head of the PAF shall be flush with the surface.
   c. For concrete masonry units (CMU): The PAF must penetrate 1" into the substrate.
   d. The contractor must consider the thickness of the component attached to the substrate material to ensure adequate penetration or embedment. A PAF that is equal in length to the specified penetration or embedment is inadequate to comply with this requirement.
5. Refer to PAF spacing and edge distance general details for minimum spacing and edge distance requirements in all base materials.
6. Notify the manufacturer for instructions if PAFs are not driven flush to surface.
7. Do not re-drive PAFs if they do not drive completely on the first charge. Remove and replace the PAF in question or contact the manufacturer for specific alternative instructions.
8. PAFs shall not be installed into concrete until the concrete has achieved the minimum compressive strength listed in the concrete requirements of the structural general notes.
9. PAFs shall not be driven into steel that is 3/16" thick or less. Notify McClure for alternate connection options.
10. PAFs driven into existing concrete may cause damage. The contractor is responsible for ensuring anchors do not damage existing structure. Notify McClure if alternate anchorage requirements are needed to protect existing concrete.
11. PAFs have limited use in seismic applications. Additional anchorage may be required as indicated in the details. Deferred submittals shall fully consider the most restrictive implications of ASCE 7 Section 13.1.4. and the manufacturer's product ESR for use of PAFs to resist seismic loads.
12. PAF installers must be certified by the manufacturer of the PAFs being installed.
13. PAFs shall not be substituted without the written approval of McClure prior to fabrication. Requests after installation may incur additional charges for evaluation.

PRINTS ISSUED
11/01/23 - CITY SUBMITTAL

REVISIONS:
1 12/21/2023 RESPONSE TO CITY COMMENTS
2 1/19/2024 ADDENDUM #2
3 3/06/2024 IN RESPONSE TO GC COMMENTS

McCLURE™
2001 W Broadway
Columbia, MO 65203
P 573-814-1568

MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

STATE OF MISSOURI
CELESTE KAY SPICKERT
NUMBER PE-2008022213
PROFESSIONAL ENGINEER
03/06/2024

TOWNEPLACE SUITES

1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
GENERAL NOTES

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S002

STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS

Project Name: Discovery Park Lee's Summit Lot 3   Address: 1901 NE Discovery Ave, Lee's Summit, MO 64064

1. This Statement of Special Inspections is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Building Code. It includes a schedule of Special Inspection services applicable to this project as well as the name of the Special Inspector to be retained for conducting these inspections and tests.

2. The Special Inspector shall keep records of all inspections and shall furnish inspection reports to the Building Official and the Registered Design Professional in Responsible Charge. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

3. Interim reports shall be submitted to the Building Official and the Registered Design Professional in Responsible Charge.

4. A Final Report of Special Inspections documenting completion of all required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy.

5. Job site safety and means and methods of construction are solely the responsibility of the Contractor. This Statement of Special Inspections includes the following building systems:

x Fabricators	x Soils
x Cast-In-Place Foundations Elements	o Driven Deep Foundation Elements
o Helical Pile Foundations	x Cast-In-Place Deep Foundation Elements
x Concrete Construction	x Masonry Construction - Level 1
o Masonry Construction - Level 2	x Structural Steel Construction
o Steel Construction Other than Structural Steel	x Wood Construction
x Seismic Resistance	x Wind Resistance

6. The following components are wind-resisting components or part of the main wind-force resisting system and are subject to special inspections in accordance with the Special Inspection Schedule - Wind Resistance:

Wood Shear Walls with Structural Plywood or Gypsum Board Sheathing
Masonry Walls

7. The following components are designated seismic systems or part of the seismic-force resisting system that are subject to special inspections in accordance with the Special Inspection Schedule - Seismic Resistance:

Wood Shear Walls with Structural Plywood or Gypsum Board Sheathing
Masonry Walls

Special Inspection Schedule: Fabricators

Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Verify fabrication and implementation procedures:			
a. Steel Construction	X	-	X
b. Concrete Construction (including rebar fabrication)	X	-	X
c. Masonry Construction	-	-	X
d. Wood Construction	X	-	X
e. Cold Formed Metal Construction	-	-	X
f. Other Construction	-	-	X

Special Inspection Schedule: Soils

Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	X	-	X
2. Verify excavations are extended to proper depth and have reached proper material.	X	-	X
3. Perform classification and testing of compacted fill materials.	X	-	X
4. Verify use of proper materials, densities and lift thickness during placement and compaction of compacted fill.	X	X	-
5. Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.	X	-	X

Special Inspection Schedule: Cast-In-Place Foundation Elements

Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Special Inspections and verifications for concrete foundation construction in accordance with the Special Inspection Schedule: Cast-In-Place Concrete for the following foundation elements:			
a. Isolated spread concrete footings.	-	-	X
b. Continuous concrete Grade Beams.	X	-	X
c. Concrete foundation walls.	X	X	-

Special Inspection Schedule: Cast-In-Place Deep Foundation Elements

Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Observe drilling operations and maintain complete and accurate records for each element.	X	X	-
2. Verify placement locations and plumbness, confirm pier diameters, bell diameters (if applicable), lengths, embedment into bedrock (if applicable), and adequate end bearing strata capacity. Record concrete or grout...	X	X	-
3. For concrete elements, perform additional inspections in accordance with the concrete Special Inspections.	X		
4. Determine capacities of test elements and conduct additional load tests as required.	X	X	-

Special Inspection Schedule: Concrete Construction

Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Inspect reinforcing steel, including prestressing tendons and placement.	X	-	X
2. Inspect reinforcing steel welding in accordance with the Special Inspection Schedule: Steel Construction (other than Item 3).	X	-	-
3. Inspect anchors cast in concrete where allowable loads have been increased or where strength design is used.	X	-	X
4. Inspect anchors post-installed in hardened concrete members.	X	-	X
5. Verify use of required design mix.	X	-	X
6. At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests and record the temperature of the concrete.	X	X	-
7. Inspect concrete and shotcrete placement for proper application techniques.	X	X	-
8. Inspect for maintenance of specified curing temperature and techniques.	X	-	X
9. Inspection of Prestressed Concrete:			
a. Observe application of prestressing forces.	-	X	-
b. Observe grouting of bonded prestressing tendons in the seismic force resisting system.	-	X	-
10. Inspect erection of precast concrete members.	-	-	X
11. Verify in-situ concrete strength prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	-	-	X
12. Inspect formwork for shape, location, and dimensions of the concrete member being formed.	X	-	X

Special Inspection Schedule: Structural Steel Construction

Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Material verification of high-strength bolts, nuts and washers:			
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	X	-	X
b. Manufacturer's certificate of compliance required.	X	-	X
2. Inspection of high-strength bolting:			
a. Snug-tight joints.	X	-	X
b. Pretensioned and slip-critical joints using turn-of-nut with match marking, twist-off bolt, or direct tension indicator methods of installation.	-	-	X
c. Pretensioned and slip-critical joints using turn-of-nut without match marking or calibrated wrench methods of installation.	-	X	-
3. Material verification of structural steel:			
a. Identification markings to conform to ASTM standards specified in the approved Construction Documents and AISC 360.	X	-	X
b. Manufacturer's certified test reports.	X	-	X
4. Material verification of weld filler materials:			
a. Identification markings to conform to AWS specification in the approved Construction Documents.	X	-	X
b. Manufacturer's certificate of compliance required.	X	-	X
5. Inspection of welding, structural steel:			
a. Complete and partial penetration groove welds.	X	X	-
b. Multi-pass fillet welds.	X	X	-
c. Single-pass fillet welds > 5/16".	X	X	-
d. Single-pass fillet welds < 5/16".	X	-	X
6. Inspection of steel frame joint details for compliance with approved Construction Documents:			
a. Details such as bracing and stiffening.	X	-	X
b. Member locations.	X	-	X
c. Application of joint details at each connection.	X	-	X

Special Inspection Schedule: Wood Construction

Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Inspection of high-load diaphragms:			
a. Verify wood structural panel sheathing is of the grade and thickness shown on the Construction Documents.	X	-	X
b. Verify nominal size of framing members at adjoining panel edges agrees with the Construction Documents.	X	-	X
c. Verify fastener diameter and length, number of fastener lines, the spacing of the fasteners, and the edge margins agree with the Construction Documents.	X	-	X
2. Inspection of metal-plate-connected wood trusses spanning 60 feet or greater:			
a. Verify temporary installation restraint/bracing are installed in accordance with approved truss submittal package.	-	-	X
b. Verify permanent individual truss member restraint/bracing are installed in accordance with approved truss submittal package.	-	-	X

Special Inspection Schedule: Masonry Construction - Level 1

Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Compliance with required inspection provisions of the Construction Documents and the approved submittals shall be verified.	X	-	X
2. Verify f'm and f'aac prior to construction except where specifically exempted by the building code.	X	-	X
3. Verify slump flow and Visual Stability Index as delivered to the site for self-consolidating grout.	X	X	-
4. As masonry construction begins, the following shall be verified to ensure compliance:			
a. Proportions of site-prepared mortar.	X	-	X
b. Construction of mortar joints.	X	-	X
c. Location of reinforcement, connectors, prestressing tendons, and anchorages.	X	-	X
d. Prestressing technique.	-	-	X
e. Grade and size of prestressing tendons and anchorages.	-	-	X
5. During construction, the inspection program shall verify:			
a. Size and location of structural elements.	X	-	X
b. Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction.	X	-	X
c. Specified size, grade, and type of reinforcement, anchor bolts, prestressing tendons, and anchorages.	X	-	X
d. Welding of reinforcing bars.	-	X	-
e. Preparation, construction, and protection of masonry during cold weather (temperature < 40°f) or hot weather (temperature > 90°f).	X	-	X
f. Application and measurement of prestressing force.	-	X	-
6. Prior to grouting, the following shall be verified to ensure compliance:			
a. Grout space is clean.	X	-	X
b. Placement of reinforcement, connectors, prestressing tendons, and anchorages.	X	-	X
c. Proportions of site-prepared grout and prestressing grout for bonded tendons.	X	-	X
d. Construction of mortar joints.	X	-	X
7. Grout placement shall be verified to ensure compliance with Building Code and Construction Document provisions.			
a. Grouting of prestressing bonded tendons.	-	X	-
8. Preparation of any required grout specimens, mortar specimens, and/or prisms shall be observed.	X	-	X

Special Inspection Schedule: Wind Resistance

Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Roof cladding and roof framing connections.	X	-	-
2. Wall connections to roof and floor diaphragms and framing.	X	-	X
3. Roof and floor diaphragm systems including collectors, drag struts, and boundary elements.	X	-	X
4. Vertical wind force resisting systems including braced frames, moment frames, and shear walls.	X	-	X
5. Wind force resisting system connections to the foundation.	X	-	X
6. Fabrication and installation of systems or components required to meet impact-resistant requirements.	-	-	X
7. Inspection of structural wood:			
a. Inspect field gluing operations of elements of the main wind force resisting system.	X	X	-
b. Inspect nailing, bolting, anchoring, and other fastening of components within the main wind force resisting system including wood shear walls, wood diaphragms, drag struts, braces, and hold downs.	X	-	X
8. Inspection of cold-formed steel light frame construction:			
a. Inspection of welding operations of elements of the main wind force resisting system.	-	-	-
b. Inspection of screw attachment, bolting, anchoring, and other fastening of other components within the main wind force resisting system including shear walls, braces, diaphragms, collectors (drag struts), and hold downs.	-	-	-
9. Wind resistant systems and components:			
a. Roof cladding	X	-	-
b. Wall cladding	X	-	-

Special Inspection Schedule: Seismic Resistance

Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Inspection of pier foundations:			
a. Inspect placement of reinforcement.	X	-	X
b. Inspect placement of concrete.	X	-	X
2. Inspection of concrete reinforcement:			
a. Verify certified mill test reports comply with ACI 318 Chapter 21 requirements.	X	-	X
b. Where reinforcing complying with ASTM A615 is to be welded, chemical tests shall be performed to determine weldability.	X	-	X
3. Inspection of structural steel.			
a. Inspections shall be in accordance with the quality assurance plan requirements of AISC 341.	X	-	X
4. Inspection of cold-formed steel framing:			
a. Inspect welding operations of elements of the seismic force resisting system.	X	-	X
b. Inspect screw attachment, bolting, anchoring, and other fastening of components within the seismic force resisting system including shear walls, braces, diaphragms, collectors (drag struts), and hold downs.	X	-	X
5. Inspection of structural wood:			
a. Inspect field gluing operations of elements of the seismic force resisting system.	X	X	
b. Inspect nailing, bolting, anchoring, and other fastening of components within the seismic force resisting system including shear walls, wood diaphragms, drag struts, braces, shear panels, and hold downs.	X	-	X
6. Inspection of storage racks:			
a. Inspect anchorage of storage racks 8 feet or greater in height.	-	-	X
7. Inspection of architectural components:			
a. Inspect erection and fastening of exterior cladding.	X	-	X
b. Inspect erection and fastening of interior and exterior nonbearing...	X	-	X
c. Inspect erection and fastening of interior and exterior veneer.	X	-	X
d. Inspect anchorage of access floors.	-	-	X
8. Inspection of designated seismic systems:			
a. Verify label, anchorage, or mounting conforms to the certificate of compliance.	-	-	X
9. Inspection of seismic isolation systems:			
a. Inspect the fabrication and installation of isolator units and energy dissipation devices that are part of the seismic isolation system.	-	-	X

IN RESPONSE TO GC COMMENTS 3

PRINTS ISSUED

11/01/23 - CITY SUBMITTAL

REVISIONS:

1	12/21/2023	RESPONSE TO CITY COMMENTS
2	1/19/2024	ADDENDUM #2
3	3/06/2024	IN RESPONSE TO GC COMMENTS

McCLURE™

2001 W Broadway
Columbia, MO 65203
P 573-814-1568

MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

03/06/2024

TOWNEPLACE SUITES

1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
SPECIAL INSPECTIONS

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S003

WOOD WALL SCHEDULE			
Mark	Level 2	Level 3	Level 4
WA	(2) 2x4	(1) 2x4	(1) 2x4
WB	(1) 2x6	(1) 2x6	(1) 2x6
WC	(1) 2x6	(1) 2x6	(1) 2x6
WD	(2) 2x4*	(1) 2x4	(1) 2x4

Notes:
1. All wall studs are 16" o.c. U.N.O. on plans or followed by an * (see note 8).
2. Bottom sill plates at Level 2 Podium to be fastened w/ 3/8"Ø x 3-1/2" Hilti Kwik HUS EZ Bolts @ 48" o.c. U.N.O.
3. Bottom sill plate connections shall have a 3"x3"x1/4" steel plate washer at each anchor bolt on shear walls only.
4. Bottom and top plates at all other levels to be fastened w/ (2) 16d nails @ 16" o.c. U.N.O.
5. Shear walls shall be sheathed per shear wall schedule
6. Non-load bearing walls not shown, refer to architectural drawings.
7. All top plates are to be continuous. Splice per 3/S500.
8. * Indicates studs or stud pack at 12" o.c.

JOIST HANGER SCHEDULE	
Joist Size	Hanger
2x4	LUS24
2x6	LUS26
2x8	LUS26
2x10	LUS28

Notes:
1. Hangers to be installed with typical fasteners per manufacturer product data
2. All exterior members are to be pressure treated

TYPICAL WALL HEADER SCHEDULE (STACKED OPENINGS)												
Header Mark	Max. Span (ft-in)	Header			Kings & Jacks							Sills*
		Level 2	Level 3	Level 4	Header Top Plates*	Level 2		Level 3		Level 4		All Levels
					All Levels	Kings	Jacks	Kings	Jacks	Kings	Jacks	(if applicable)
H1	3'-3"	(3) 2x8	(3) 2x8	(3) 2x8	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6
H2	6'-3"	(3) 2x10	(3) 2x10	(3) 2x8	(1) 2x6	(2) 2x6	(1) 2x6	(2) 2x6	(1) 2x6	(2) 2x6	(1) 2x6	(1) 2x6
H3	6'-3"	(3) 2x8	(3) 2x8	(3) 2x8	(1) 2x6	(2) 2x6	(1) 2x6	(2) 2x6	(1) 2x6	(2) 2x6	(1) 2x6	(1) 2x6
H4	6'-4"	(3) 2x8	(3) 2x8	(3) 2x8	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6
H5	3'-3"	(2) 2x8	(2) 2x8	(2) 2x8	(1) 2x4	(3) 2x4	(1) 2x4	(2) 2x4	(1) 2x4	(1) 2x4	(1) 2x4	(1) 2x4

H = An opening which requires a header

Notes:
1. See S500 for typical opening framing.
2. All openings shall stack.
3. Coordinate all dimensions and elevations with architectural drawings.
4. Cripple studs should match the adjacent wall framing.
5. * Header top plates and sills shall match the adjacent wall studs.

WOOD BEAM SCHEDULE			
Mark	Max. Span (ft-in)	Beam Size	Simpson Strong-Tie Hanger
B1	7'-3"	(3) 2x10	HHUS210-3
B2	9'-0"	(3) 2x8	HGUS26-3
B3	7'-3"	(3) 2x12	HHUS210-3
B4	15'-3"	(2) 1 3/4"x11 7/8" LVL	HUCQ210-2-SDS*
B5	5'-3"	(2) 2x10	DGHT3.62/9.25**
B6	11'-9"	(3) 1 3/4"x11 7/8" LVL	---

Notes:
1. All exterior beams are to be pressure treated.
2. All LVL shall be stress class 2.0E-2500F
3. * Indicates that weld to steel plate is required for beam support (See 10/S511)
4. ** Indicates that beam hanger switches to LGUM210-2-SDS at Masonry.

WOOD POST SCHEDULE				
Mark	Level 1	Level 2	Level 3	Level 4
WP1	(3) 2x6	(3) 2x6	(3) 2x6	(3) 2x6
WP2	6X6	---	---	---
WP3	---	(2) 2x4	(2) 2x4	(2) 2x4

Notes:
1. All exterior columns are to be pressure treated UNO
2. Exterior columns supporting canopy to be Western Cedar or Redwood Grade 1 or better

FLOOR AND ROOF SCHEDULE				
Type	Membrane/Sheathing	Fastening	Concrete/Topping	Reinforcing
Slab on Grade	10mil Vapor Retarder	Taped Edges	4" NW Concrete U.N.O.	See General Notes
Interior Floors - Level 2	Per Plans/Gen. Notes	Per Gen. Notes	Per Gen. Notes	Per Gen. Notes
Interior Floors Above Level 2	3/4" Plywood	10d @ 6/12	1" Gypcrete Topping	---
Canopy	3/4" Plywood	10d @ 6/12	---	---
Balcony	Per Plans/Gen. Notes	Per Gen. Notes	Per Gen. Notes	Per Gen. Notes
Roof	15/32" Plywood	10d @ 6/12 UNO	---	---

Notes:
1. Vapor barrier to be placed over compacted fill per general notes.
2. Plywood sheathing to be fastened per detail 2/S500
3.* Concrete on balconies shall slope away from building per Arch.
4. Plywood to be Structural Grade 1 Material.
5. See architectural drawings for full floor and roof assemblies including nonstructural elements.
6. Floor diaphragm assumed unblocked unless noted otherwise on plan.

STRUCTURAL COLUMN SCHEDULE	
Type Mark	Type
C1	HSS4X4X1/4
C2	HSS5X5X3/16
C3	HSS5X5X1/4
C4	HSS5X5X5/16
C5	HSS5X5X3/8
C6	HSS5X5X1/2
C7	HSS6X6X1/2
C8	HSS8X8X3/8

IN RESPONSE TO GC COMMENTS

3

WOOD SHEAR WALL SCHEDULE						
Mark	Level	Sheathing/ Fastener Layout	Post	Hold-Down	Min. Sill/Top Plate	Base Connection
SWA	Level 4	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MST37 w/ (22) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 12" o.c.
	Level 3	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2X6	MST37 w/ (22) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 8" o.c.
	Level 2	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2X6	HTT4 w/ (18) 0.162Øx2-1/2" & 5/8"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 8" o.c.
SWB	Level 4	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x6	(2) 10d Nails @ 16" o.c.
	Level 3	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x6	(2) 10d Nails @ 12" o.c.
	Level 2	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2x6	DTT2Z w/ (8) 1/4"Øx1-1/2" SDS screws & 1/2"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 16" o.c.
SWC	Level 4	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x6	(2) 10d Nail @ 12" o.c.
	Level 3	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x6	(2) 10d Nail @ 8" o.c.
	Level 2	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	DTT1Z w/ (6) 0.148"Øx1-1/2" & 3/8"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 8" o.c.
SWD	Level 4	(1) Sided, Gypsum Wallboard - 1/2" Thick, 5d Nail, 7" Edge Fastening, 16" O.C. Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x6	(2) 10d Nail @ 16" o.c.
	Level 3	(1) Sided, Gypsum Wallboard - 1/2" Thick, 5d Nail, 7" Edge Fastening, 16" O.C. Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x6	(2) 10d Nail @ 12" o.c.
	Level 2	(1) Sided, Gypsum Wallboard - 1/2" Thick, 5d Nail, 7" Edge Fastening, 16" O.C. Blocked	(2) 2x6	DTT1Z w/ (6) SD #9x1-1/2" & 3/8"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 16" o.c.
SWE	Level 4	(1) Sided, Gypsum Wallboard - 1/2" Thick, 5d Nail, 7" Edge Fastening, 16" O.C. Unblocked	(2) 2x4	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x4	(1) 10d Nail @ 16" o.c.
	Level 3	(1) Sided, Gypsum Wallboard - 1/2" Thick, 5d Nail, 7" Edge Fastening, 16" O.C. Unblocked	(2) 2x4	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x4	(1) 10d Nail @ 16" o.c.
	Level 2	(1) Sided, Gypsum Wallboard - 1/2" Thick, 5d Nail, 4" Edge Fastening, 16" O.C. Blocked	(2) 2x4	DTT2Z w/ (8) 1/4"Øx1-1/2" SDS screws & 1/2"Ø Anchor Rod	(1) 2x4	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 24 o.c.
SWF	Level 4	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2x6	MST48 w/ (34) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 8" o.c.
	Level 3	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 4" Edge fastening	(2) 2x6	MST60 w/ (46) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 6" o.c.
	Level 2	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 3" Edge fastening	(2) 2x6	HDQ8-SDS3 w/ (20) 1/4"Øx3" SDS screws & 7/8"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 4" o.c.
SWG	Level 4	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x6	(2) 10d Nails @ 4" o.c.
	Level 3	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2x6	MST48 w/ (34) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 3" o.c.
	Level 2	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 4" Edge fastening	(2) 2x6	HTT4 w/ (18) 0.162Øx2-1/2" & 5/8"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 4" o.c.

Notes:
1. See S530 for typical shear wall framing
2. All hold down embedded anchors in concrete shall use Hilti HIT-HY 500 V3 Adhesive or Equivalent
3. All threaded rods shall be F1554 GR105
4. Floor to floor strap ties at top of wall shall match that of the floor above.
5. All hold downs and strap ties are Simpson Strong-Tie brand, U.N.O.
6. Bottom sill plate connections shall have a 3"x3"x1/4" steel plate washer at each anchor bolt on shear walls only.
7. All drag trusses shall be connected to shear walls per detail 4/S530.
8. Provide floor to floor strapping on the same side as the OSB sheathing.
9. See S530 for shear wall to steel beam hold-down details.
10. See 6/S530 for shear wall to CMU hold-down detail.
11. All shear walls to be blocked at all panel joints unless noted "Unblocked".

PRINTS ISSUED

11/01/23 - CITY SUBMITTAL

REVISIONS:

1	12/21/2023	RESPONSE TO CITY COMMENTS
2	1/19/2024	ADDENDUM #2
3	3/06/2024	IN RESPONSE TO GC COMMENTS

McCLURE™

2001 W Broadway
Columbia, MO 65203
P 573-814-1568

MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

03/06/2024

TOWNEPLACE SUITES

1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
SCHEDULES

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S004

WOOD SHEAR WALL SCHEDULE

Mark	Level	Sheathing/ Fastener Layout	Post	Hold-Down	Min. Sill/Top Plate	Base Connection
SW1	Level 4	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MST37 w/ (22) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 12" o.c.
	Level 3	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2X6	MST37 w/ (22) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 8" o.c.
	Level 2	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2X6	HTT4 w/ (18) 0.162Øx2-1/2" & 5/8"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 8" o.c.
SW2	Level 4	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 8d Nail, 6" Edge fastening Unblocked	(2) 2x6	MST37 w/ (22) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 12" o.c.
	Level 3	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 8d Nail, 6" Edge fastening	(2) 2X6	MST37 w/ (22) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 8" o.c.
	Level 2	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2X6	HTT4 w/ (18) 0.162Øx2-1/2" & 5/8"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 8" o.c.
SW3	Level 4	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 4" Edge fastening	(2) 2X6	MST48 w/ (34) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 4" o.c.
	Level 3	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 2" Edge fastening	(3) 2X6	MST60 w/ (46) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 3" o.c.
	Level 2	(2) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 2" Edge fastening	(3) 2X6	(2) HD12 w/ (4) 1"Ø Bolts & 1"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 3" o.c.
SW7	Level 4	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2x6	MST48 w/ (34) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 8" o.c.
	Level 3	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 4" Edge fastening	(2) 2x6	MST60 w/ (46) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 6" o.c.
	Level 2	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 3" Edge fastening	(2) 2x6	HDQ8-SDS3 w/ (20) 1/4"Øx3" SDS screws & 7/8"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 8" o.c.
SW8	Level 4	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x6	(2) 10d Nails @ 4" o.c.
	Level 3	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2x6	MST48 w/ (34) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 3" o.c.
	Level 2	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 4" Edge fastening	(2) 2x6	HTT4 w/ (18) 0.162Øx2-1/2" & 5/8"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 8" o.c.
SW10	Level 4	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x6	(2) 10d Nails @ 16" o.c.
	Level 3	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x6	(2) 10d Nails @ 12" o.c.
	Level 2	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2x6	DTT2Z w/ (8) 1/4"Øx1-1/2" SDS screws & 1/2"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 16" o.c.
SW11	Level 4	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x6	(2) 10d Nails @ 12" o.c.
	Level 3	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2x6	MST37 w/ (22) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 8" o.c.
	Level 2	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2x6	HTT4 w/ (18) 0.162Øx2-1/2" & 5/8"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 8" o.c.
SW12	Level 4	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x6	(2) 10d Nails @ 16" o.c.
	Level 3	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x6	(2) 10d Nails @ 12" o.c.
	Level 2	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2x6	DTT2Z w/ (8) 1/4"Øx1-1/2" SDS screws & 1/2"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @16" o.c.
SW13	Level 4	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2x6	MST48 w/ (34) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 8" o.c.
	Level 3	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 4" Edge fastening	(2) 2x6	MST60 w/ (46) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 6" o.c.
	Level 2	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 3" Edge fastening	(2) 2x6	HDQ8-SDS3 w/ (20) 1/4"Øx3" SDS screws & 7/8"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 4" o.c.
SW14	Level 4	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2x6	MST48 w/ (34) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 8" o.c.
	Level 3	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 4" Edge fastening	(2) 2x6	MST60 w/ (46) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 6" o.c.
	Level 2	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 4" Edge fastening	(2) 2x6	HDQ8-SDS3 w/ (20) 1/4"Øx3" SDS screws & 7/8"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 4" o.c.
SW15	Level 4	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MST37 w/ (22) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 12" o.c.
	Level 3	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2x6	MST48 w/ (34) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 8" o.c.
	Level 2	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 4" Edge fastening	(2) 2x6	HDQ8-SDS3 w/ (20) 1/4"Øx3" SDS screws & 7/8"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 8" o.c.
SW16	Level 4	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x4	(2) 10d Nails @ 16" o.c.
	Level 3	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x4	(2) 10d Nails @ 16" o.c.
	Level 2	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	HTT4 w/ (18) 0.162Øx2-1/2" & 5/8"Ø Anchor Rod	(1) 2x4	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 16" o.c.
SW17	Level 4	(1) Sided, Gypsum Wallboard - 1/2" Thick, 5d Nail, 7" Edge Fastening, 16" O.C. Unblocked	(2) 2x4	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x4	(1) 10d Nail @ 16" o.c.
	Level 3	(1) Sided, Gypsum Wallboard - 1/2" Thick, 5d Nail, 7" Edge Fastening, 16" O.C. Unblocked	(2) 2x4	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x4	(1) 10d Nail @ 16" o.c.
	Level 2	(1) Sided, Gypsum Wallboard - 1/2" Thick, 5d Nail, 4" Edge Fastening, 16" O.C. Blocked	(2) 2x4	DTT2Z w/ (8) 1/4"Øx1-1/2" SDS screws & 1/2"Ø Anchor Rod	(1) 2x4	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 24 o.c.
SW18	Level 4	(1) Sided, Gypsum Wallboard - 1/2" Thick, 5d Nail, 7" Edge Fastening, 16" O.C. Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x6	(2) 10d Nail @ 16" o.c.
	Level 3	(1) Sided, Gypsum Wallboard - 1/2" Thick, 5d Nail, 7" Edge Fastening, 16" O.C. Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x6	(2) 10d Nail @ 12" o.c.
	Level 2	(1) Sided, Gypsum Wallboard - 1/2" Thick, 5d Nail, 7" Edge Fastening, 16" O.C. Blocked	(2) 2x6	DTT1Z w/ (6) SD #9x1-1/2" & 3/8"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 16" o.c.
SW19	Level 4	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x6	(2) 10d Nail @ 12" o.c.
	Level 3	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x6	(2) 10d Nail @ 8" o.c.
	Level 2	(1) Sided, Wood Structural Panels - S1 - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	DTT1Z w/ (6) 0.148"Øx1-1/2" & 3/8"Ø Anchor Rod	(1) 2x6	3/8"Ø Hilti KH-EZ Screws Anchors w/ 1 5/8" Embedment @ 8" o.c.

Notes:
1. See S530 for typical shear wall framing
2. All hold down embedded anchors in concrete shall use Hilti HIT-HY 500 V3 Adhesive or Equivalent
3. All threaded rods shall be F1554 GR105
4. Floor to floor strap ties at top of wall shall match that of the floor above.
5. All hold downs and strap ties are Simpson Strong-Tie brand, U.N.O.
6. Bottom sill plate connections shall have a 3"x3"x1/4" steel plate washer at each anchor bolt on shear walls only.
7. All drag trusses shall be connected to shear walls per detail 4/S530.
8. Provide floor to floor strapping on the same side as the OSB sheathing.
9. See S530 for shear wall to steel beam hold-down details.
10. See 6/S530 for shear wall to CMU hold-down detail.

PRINTS ISSUED

11/01/23 - CITY SUBMITTAL

REVISIONS:

1	12/21/2023	RESPONSE TO CITY COMMENTS
2	1/19/2024	ADDENDUM #2

01/19/2024

McCLURE™

1901 Pennsylvania Drive
Columbia, MO 65202
P 573-814-1568

MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

TOWNEPLACE SUITES

1810 NORTHEAST DOUGLAS ST
LEE'S SUMMIT, MO 64064

SHEET TITLE
SCHEDULES

PROJECT NUMBER: 2023000333

SHEET NUMBER:

2

S005

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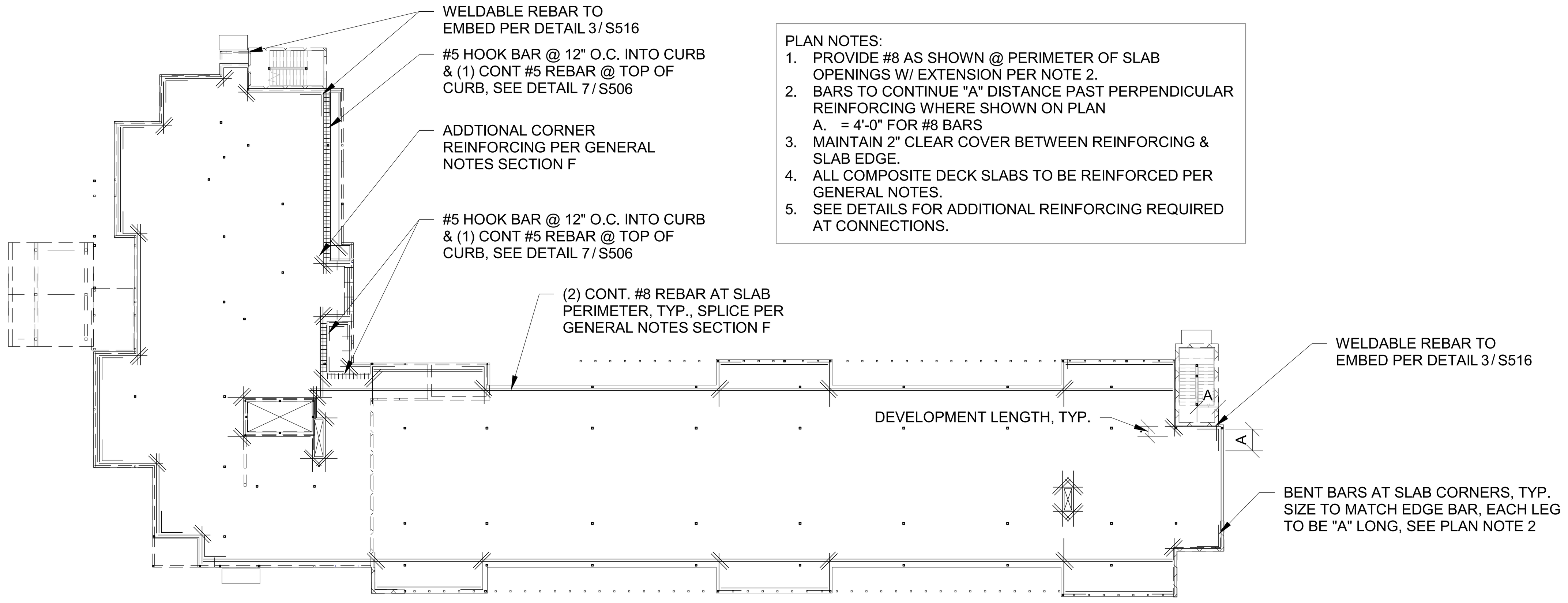
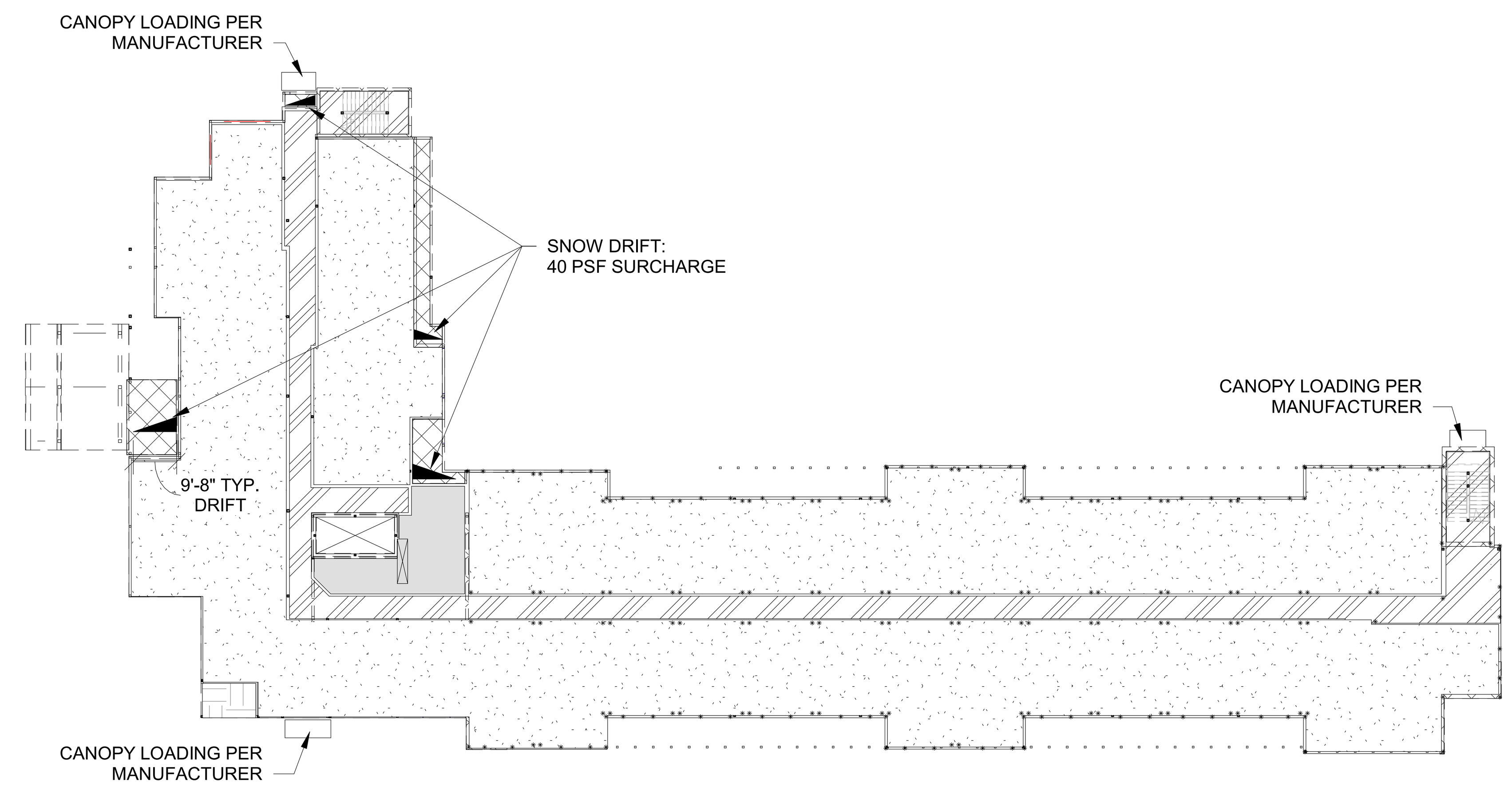


PLAN NOTES:
1. PROVIDE #8 AS SHOWN @ PERIMETER OF SLAB OPENINGS W/ EXTENSION PER NOTE 2.
2. BARS TO CONTINUE "A" DISTANCE PAST PERPENDICULAR REINFORCING WHERE SHOWN ON PLAN
   A. = 4'-0" FOR #8 BARS
3. MAINTAIN 2" CLEAR COVER BETWEEN REINFORCING & SLAB EDGE.
4. ALL COMPOSITE DECK SLABS TO BE REINFORCED PER GENERAL NOTES.
5. SEE DETAILS FOR ADDITIONAL REINFORCING REQUIRED AT CONNECTIONS.

1 S006 LEVEL 2 REINFORCING PLAN
1" = 30'-0"

IN RESPONSE TO GC COMMENTS 3

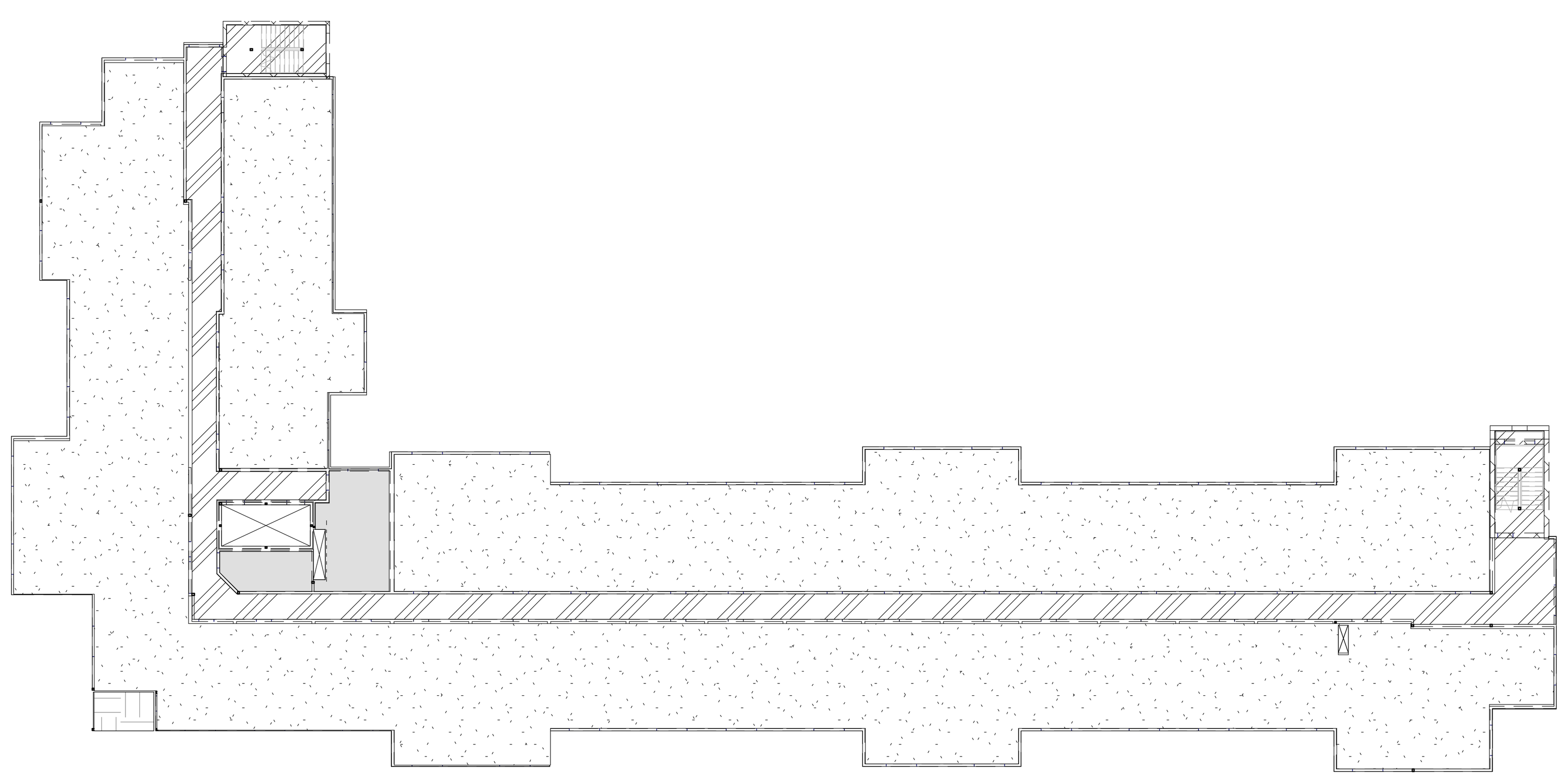


2 S006 LEVEL 2 LOAD PLAN
1" = 30'-0"

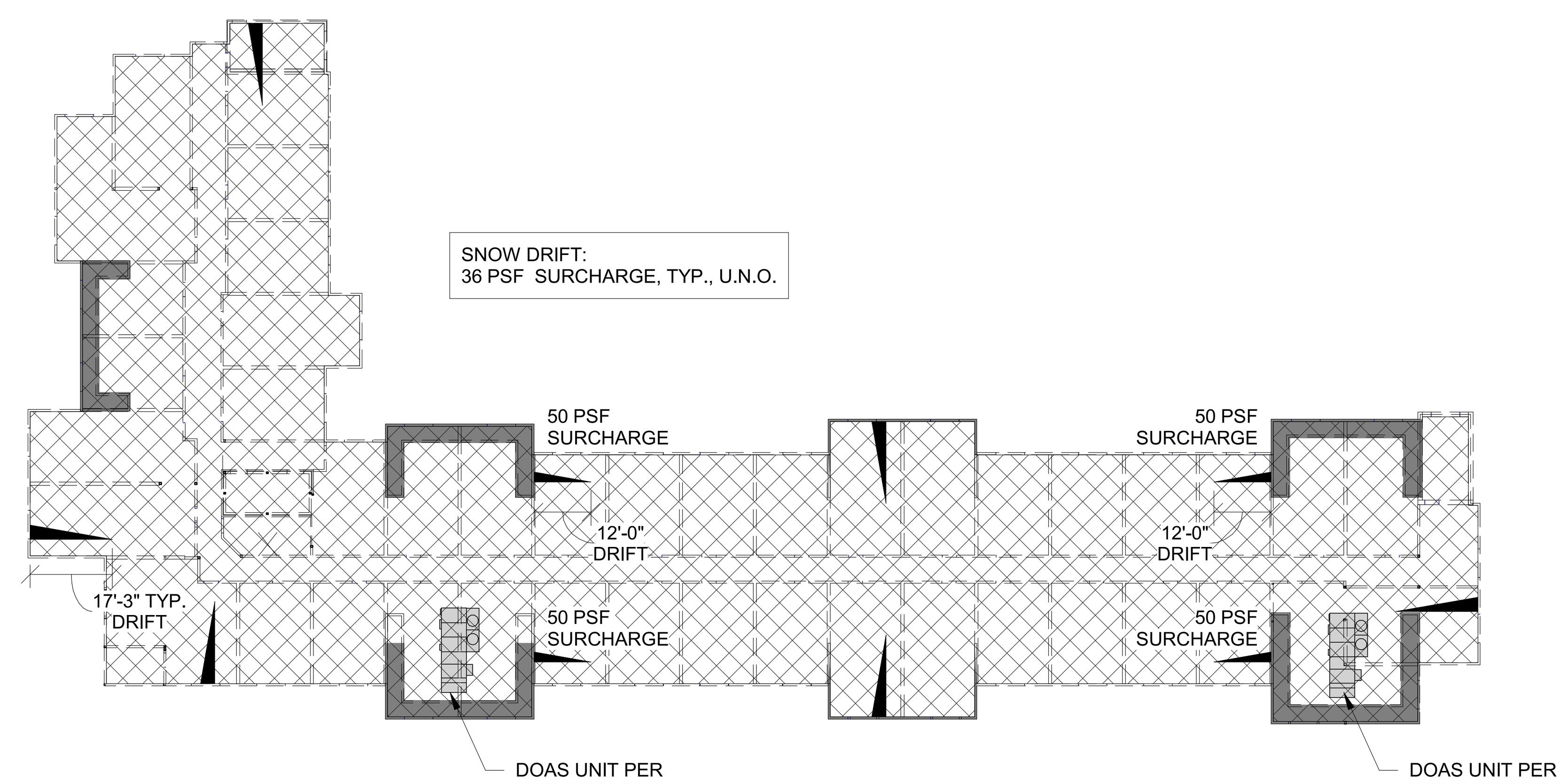
LOADING PLAN NOTES:

1.	RESIDENTIAL	
	A. SUPERIMPOSED DEAD LOAD	15 PSF
	B. LIVE LOAD	40 PSF
2.	PUBLIC	
	A. SUPERIMPOSED DEAD LOAD	5 PSF
	B. LIVE LOAD	100 PSF
3.	MECHANICAL/STORAGE	
	A. SUPERIMPOSED DEAD LOAD	5 PSF
	B. LIVE LOAD	125 PSF
	a. LIVE LOAD INCLUDED IN SEISMIC WEIGHT OF BUILDING	
4.	TERRACE	
	A. SUPERIMPOSED DEAD LOAD	60 PSF
	B. LIVE LOAD	60 PSF
5.	TYP. ROOF LOAD	
	A. SUPERIMPOSED DEAD LOAD	7 PSF
	B. MECHANICAL UNITS AS INDICATED ON PLAN (DEAD)	
	C. ROOF LIVE LOAD	20 PSF
	D. SNOW LOAD (UNIFORM/BALANCED)	14 PSF
	a. APPLIED SIMULTANEOUSLY WITH DRIFT PER PLAN	
	E. RAIN SURCHARGE ON SNOW	5 PSF

NOTE: SUPERIMPOSED DEAD LOADS ARE IN ADDITION TO TYPICAL FLOOR DEAD LOAD OF 27 PSF AND TYPICAL ROOF DEAD LOAD OF 20 PSF



3 S006 LEVELS 3 & 4 LOAD PLAN
1" = 30'-0"



4 S006 ROOF LOAD PLAN
1" = 30'-0"

PRINTS ISSUED
11/01/23 - CITY SUBMITTAL

REVISIONS:

1	12/21/2023	RESPONSE TO CITY COMMENTS
2	1/19/2024	ADDENDUM #2
3	3/06/2024	IN RESPONSE TO GC COMMENTS

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Columbia, MO 65203
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MISSOURI CERTIFICATE OF AUTHORITY
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EXPIRES: DECEMBER 31, 2024

03/06/2024

TOWNEPLACE SUITES

1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
LOAD & REINFORCING PLANS

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S006

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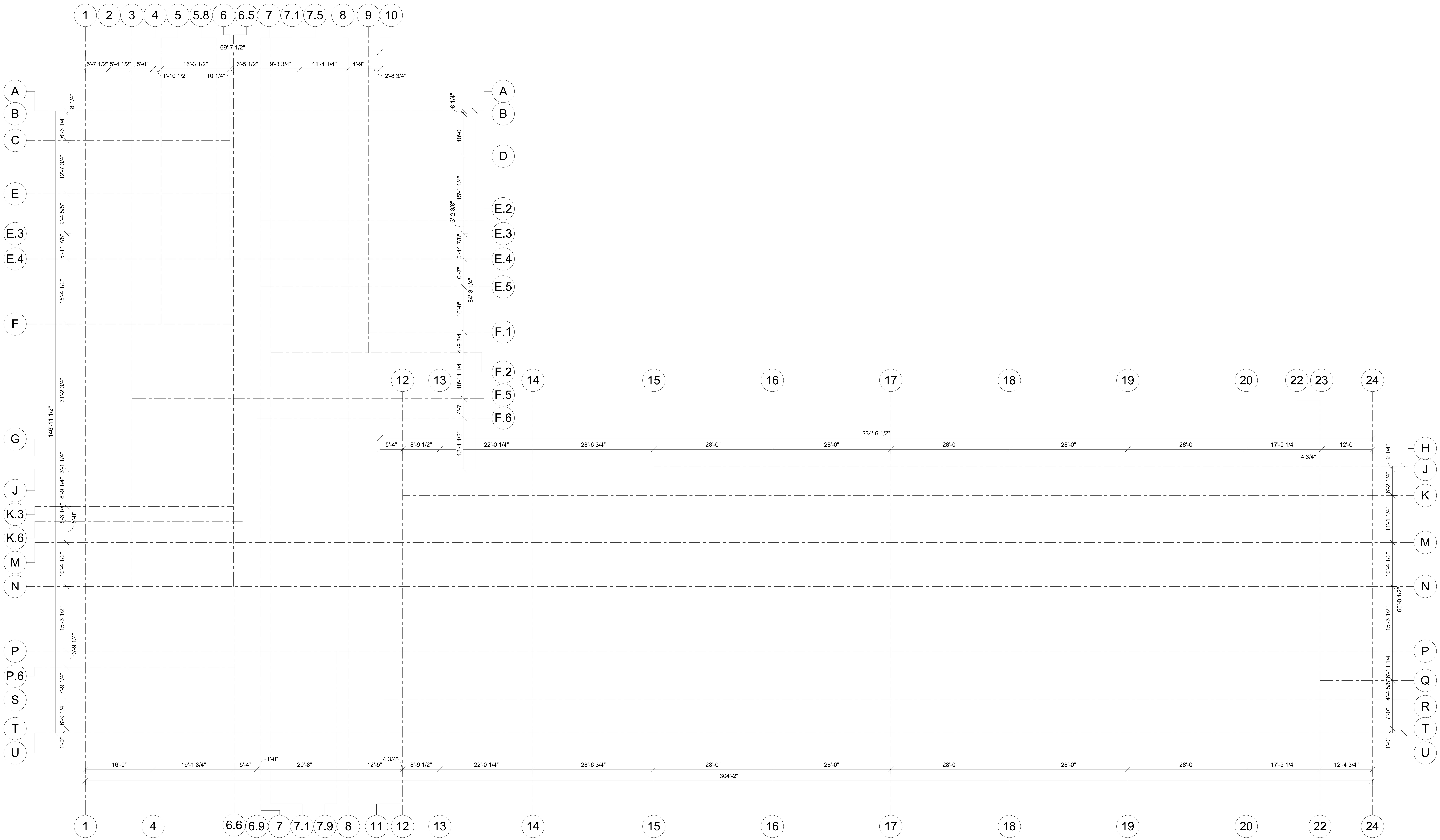

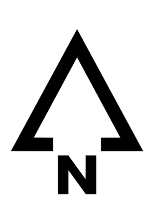

1 GRID DIMENSION PLAN
S010 3/32" = 1'-0"

PRINTS ISSUED
11/01/23 - CITY SUBMITTAL

REVISIONS:

1	12/21/2023	RESPONSE TO CITY COMMENTS
2	1/19/2024	ADDENDUM #2

STATE OF MISSOURI
CELESTE KAY SPICKERT
NUMBER PE-2008002213
PROFESSIONAL ENGINEER
01/19/2024

McCLURE™

1901 Pennsylvania Drive
Columbia, MO 65202
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MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

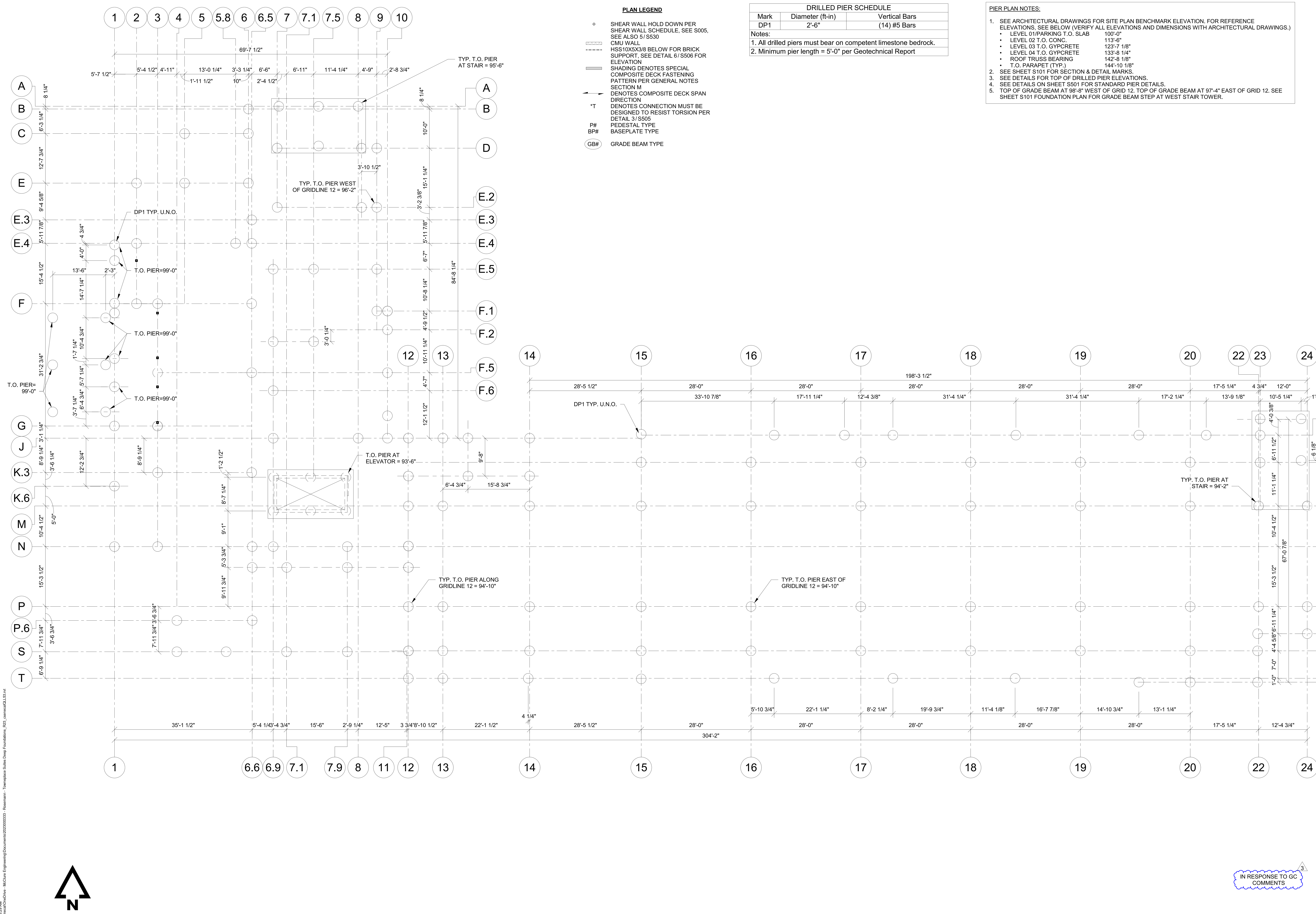
TOWNEPLACE SUITES

1810 NORTHEAST DOUGLAS ST
LEE'S SUMMIT, MO 64064

SHEET TITLE
GRID DIMENSION PLAN

PROJECT NUMBER: 2023000333

SHEET NUMBER:
2
S010



1 S100 PIER PLAN
3/32" = 1'-0"

PLAN LEGEND

- SHEAR WALL HOLD DOWN PER SHEAR WALL SCHEDULE, SEE S005, SEE ALSO 5 / S530
- CMU WALL
- HSS10X5X3/8 BELOW FOR BRICK SUPPORT, SEE DETAIL 6 / S506 FOR ELEVATION
- SHADING DENOTES SPECIAL COMPOSITE DECK FASTENING PATTERN PER GENERAL NOTES SECTION M
- DENOTES COMPOSITE DECK SPAN DIRECTION
- *T DENOTES CONNECTION MUST BE DESIGNED TO RESIST TORSION PER DETAIL 3 / S505
- P# PEDESTAL TYPE
- BP# BASEPLATE TYPE
- GB# GRADE BEAM TYPE

DRILLED PIER SCHEDULE		
Mark	Diameter (ft-in)	Vertical Bars
DP1	2'-6"	(14) #5 Bars
Notes:		
1. All drilled piers must bear on competent limestone bedrock.		
2. Minimum pier length = 5'-0" per Geotechnical Report		

PIER PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR SITE PLAN BENCHMARK ELEVATION. FOR REFERENCE ELEVATIONS, SEE BELOW (VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS.)
   - LEVEL 01/PARKING T.O. SLAB 100'-0"
   - LEVEL 02 T.O. CONC. 113'-6"
   - LEVEL 03 T.O. GYPCRETE 123'-7 1/8"
   - LEVEL 04 T.O. GYPCRETE 133'-8 1/4"
   - ROOF TRUSS BEARING 142'-8 1/8"
   - T.O. PARAPET (TYP.) 144'-10 1/8"
2. SEE SHEET S101 FOR SECTION & DETAIL MARKS.
3. SEE DETAILS FOR TOP OF DRILLED PIER ELEVATIONS.
4. SEE DETAILS ON SHEET S501 FOR STANDARD PIER DETAILS.
5. TOP OF GRADE BEAM AT 98'-8" WEST OF GRID 12. TOP OF GRADE BEAM AT 97'-4" EAST OF GRID 12. SEE SHEET S101 FOUNDATION PLAN FOR GRADE BEAM STEP AT WEST STAIR TOWER.

IN RESPONSE TO GC COMMENTS
3

PRINTS ISSUED
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REVISIONS:

1	12/21/2023	RESPONSE TO CITY COMMENTS
2	1/19/2024	ADDENDUM #2
3	3/06/2024	IN RESPONSE TO GC COMMENTS

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MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

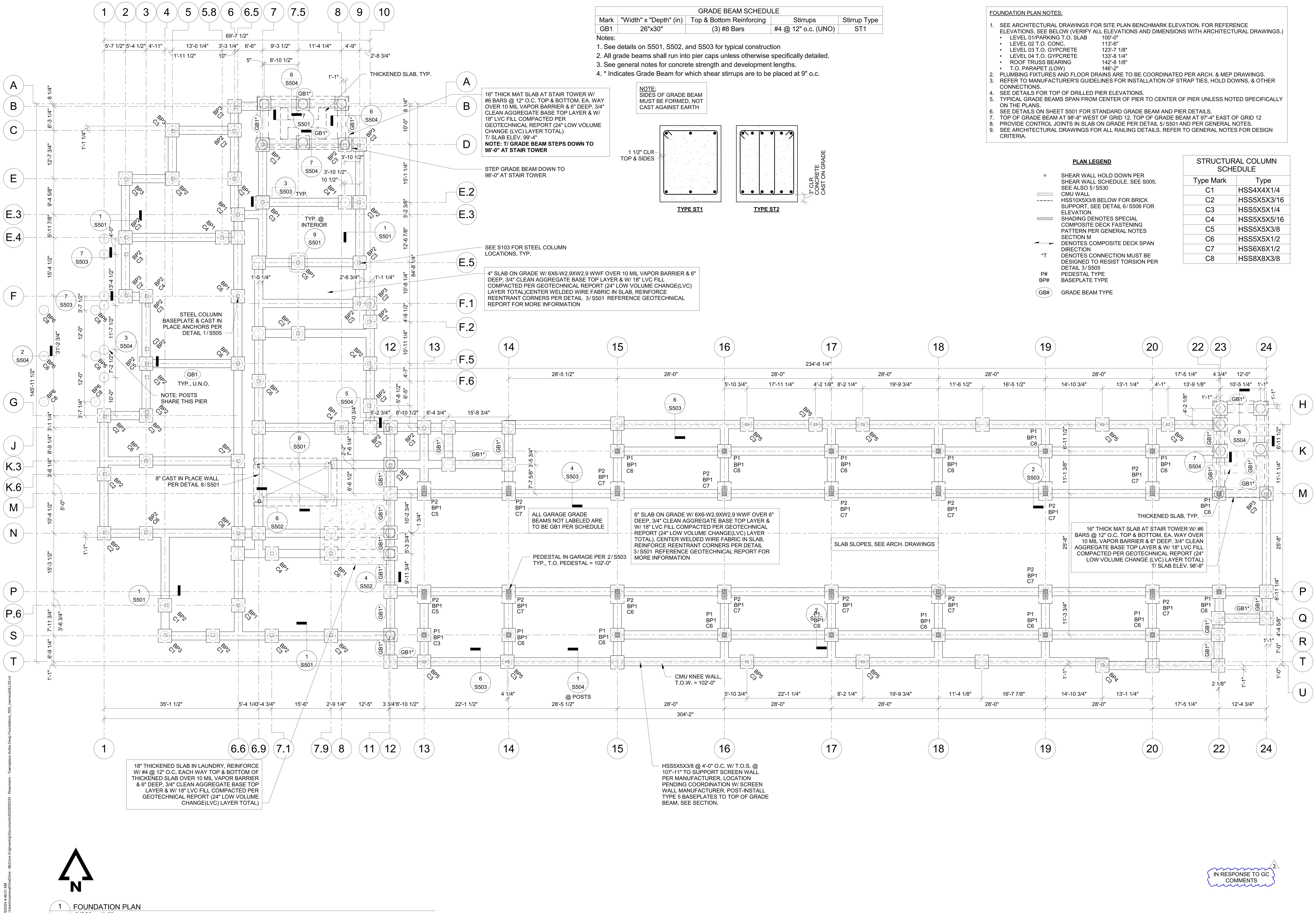
STATE OF MISSOURI
CELESTE KAY SPICKERT
NUMBER PE-2008022213
PROFESSIONAL ENGINEER
03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
PIER PLAN

PROJECT NUMBER: 2023000333

SHEET NUMBER:
S100



1 FOUNDATION PLAN
S101 3/32" = 1'-0"

GRADE BEAM SCHEDULE				
Mark	"Width" x "Depth" (in)	Top & Bottom Reinforcing	Stirrups	Stirrup Type
GB1	26"x30"	(3) #8 Bars	#4 @ 12" o.c. (UNO)	ST1

Notes:

1. See details on S501, S502, and S503 for typical construction
2. All grade beams shall run into pier caps unless otherwise specifically detailed.
3. See general notes for concrete strength and development lengths.
4. * Indicates Grade Beam for which shear stirrups are to be placed at 9" o.c.

FOUNDATION PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR SITE PLAN BENCHMARK ELEVATION. FOR REFERENCE ELEVATIONS, SEE BELOW (VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS.)
   - LEVEL 01/PARKING T.O. SLAB 100'-0"
   - LEVEL 02 T.O. CONC. 113'-6"
   - LEVEL 03 T.O. GYPCRETE 123'-7 1/8"
   - LEVEL 04 T.O. GYPCRETE 133'-8 1/4"
   - ROOF TRUSS BEARING 142'-8 1/8"
   - T.O. PARAPET (LOW) 146'-2"
2. PLUMBING FIXTURES AND FLOOR DRAINS ARE TO BE COORDINATED PER ARCH. & MEP DRAWINGS.
3. REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION OF STRAP TIES, HOLD DOWNS, & OTHER CONNECTIONS.
4. SEE DETAILS FOR TOP OF DRILLED PIER ELEVATIONS.
5. TYPICAL GRADE BEAMS SPAN FROM CENTER OF PIER TO CENTER OF PIER UNLESS NOTED SPECIFICALLY ON THE PLANS.
6. SEE DETAILS ON SHEET S501 FOR STANDARD GRADE BEAM AND PIER DETAILS.
7. TOP OF GRADE BEAM AT 98'-8" WEST OF GRID 12. TOP OF GRADE BEAM AT 97'-4" EAST OF GRID 12
8. PROVIDE CONTROL JOINTS IN SLAB ON GRADE PER DETAIL 5/S501 AND PER GENERAL NOTES.
9. SEE ARCHITECTURAL DRAWINGS FOR ALL RAILING DETAILS. REFER TO GENERAL NOTES FOR DESIGN CRITERIA.

PLAN LEGEND

	SHEAR WALL HOLD DOWN PER SHEAR WALL SCHEDULE, SEE S005, SEE ALSO 5/S530
	CMU WALL
	HSS10X5X3/8 BELOW FOR BRICK SUPPORT, SEE DETAIL 6/S506 FOR ELEVATION
	SHADING DENOTES SPECIAL COMPOSITE DECK FASTENING PATTERN PER GENERAL NOTES SECTION M
	DENOTES COMPOSITE DECK SPAN DIRECTION
*T	DENOTES CONNECTION MUST BE DESIGNED TO RESIST TORSION PER DETAIL 3/S505
P#	PEDESTAL TYPE
BP#	BASEPLATE TYPE
GB#	GRADE BEAM TYPE

STRUCTURAL COLUMN SCHEDULE	
Type Mark	Type
C1	HSS4X4X1/4
C2	HSS5X5X3/16
C3	HSS5X5X1/4
C4	HSS5X5X5/16
C5	HSS5X5X3/8
C6	HSS5X5X1/2
C7	HSS6X6X1/2
C8	HSS8X8X3/8

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STATE OF MISSOURI
CELESTE KAY SPICKERT
NUMBER PE-2008002213
PROFESSIONAL ENGINEER

03/06/2024

TOWNEPLACE SUITES

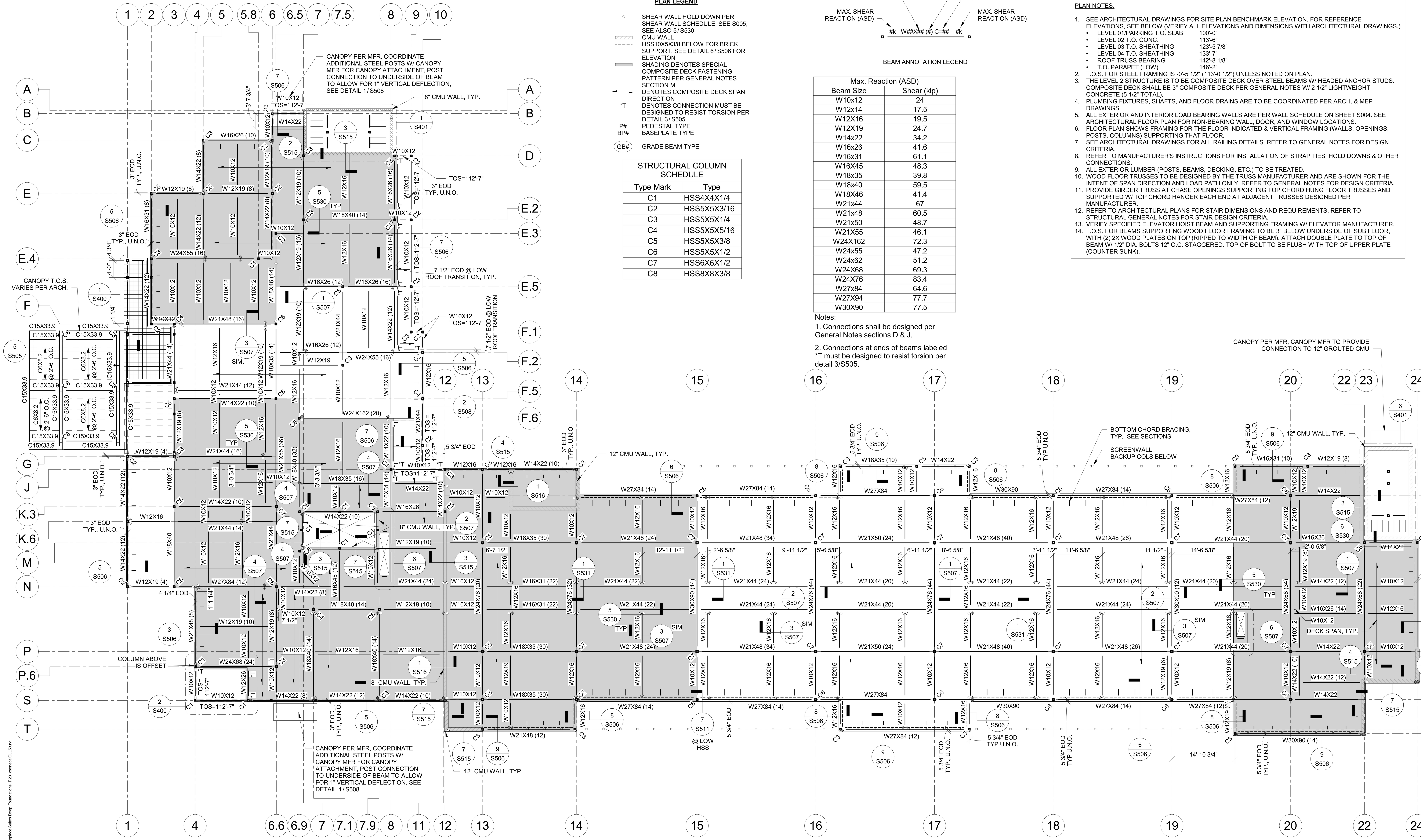
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
FOUNDATION PLAN

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S101



PLAN LEGEND

- SHEAR WALL HOLD DOWN PER SHEAR WALL SCHEDULE, SEE S005, SEE ALSO 5 / S530
- CMU WALL
- HSS10X5X3/8 BELOW FOR BRICK SUPPORT, SEE DETAIL 6 / S506 FOR ELEVATION
- SHADING DENOTES SPECIAL COMPOSITE DECK FASTENING PATTERN PER GENERAL NOTES SECTION M
- DENOTES COMPOSITE DECK SPAN DIRECTION
- *T DENOTES CONNECTION MUST BE DESIGNED TO RESIST TORSION PER DETAIL 3 / S505
- P# PEDESTAL TYPE
- BP# BASEPLATE TYPE
- GB# GRADE BEAM TYPE

STRUCTURAL COLUMN SCHEDULE	
Type Mark	Type
C1	HSS4X4X1/4
C2	HSS5X5X3/16
C3	HSS5X5X1/4
C4	HSS5X5X5/16
C5	HSS5X5X3/8
C6	HSS5X5X1/2
C7	HSS6X6X1/2
C8	HSS8X8X3/8

BEAM SHAPE — NUMBER OF STUDS — CAMBER — MAX. SHEAR REACTION (ASD) — MAX. SHEAR REACTION (ASD)

#k W##X## (#) C=## #k

BEAM ANNOTATION LEGEND

Max. Reaction (ASD)	
Beam Size	Shear (kip)
W10x12	24
W12x14	17.5
W12X16	19.5
W12X19	24.7
W14x22	34.2
W16x26	41.6
W16x31	61.1
W16X45	48.3
W18x35	39.8
W18x40	59.5
W18X46	41.4
W21x44	67
W21x48	60.5
W21x50	48.7
W21X55	46.1
W24X162	72.3
W24x55	47.2
W24x62	51.2
W24X68	69.3
W24X76	83.4
W27x84	64.6
W27X94	77.7
W30X90	77.5

Notes:

1. Connections shall be designed per General Notes sections D & J.

2. Connections at ends of beams labeled *T must be designed to resist torsion per detail 3/S505.

PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR SITE PLAN BENCHMARK ELEVATION. FOR REFERENCE ELEVATIONS, SEE BELOW (VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS.)
   - LEVEL 01/PARKING T.O. SLAB 100'-0"
   - LEVEL 02 T.O. CONC. 113'-6"
   - LEVEL 03 T.O. SHEATHING 123'-5 7/8"
   - LEVEL 04 T.O. SHEATHING 133'-7"
   - ROOF TRUSS BEARING 142'-8 1/8"
   - T.O. PARAPET (LOW) 146'-2"
2. T.O.S. FOR STEEL FRAMING IS -0'-5 1/2" (113'-0 1/2") UNLESS NOTED ON PLAN.
3. THE LEVEL 2 STRUCTURE IS TO BE COMPOSITE DECK OVER STEEL BEAMS W/ HEADED ANCHOR STUDS. COMPOSITE DECK SHALL BE 3" COMPOSITE DECK PER GENERAL NOTES W/ 2 1/2" LIGHTWEIGHT CONCRETE (5 1/2" TOTAL).
4. PLUMBING FIXTURES, SHAFTS, AND FLOOR DRAINS ARE TO BE COORDINATED PER ARCH. & MEP DRAWINGS.
5. ALL EXTERIOR AND INTERIOR LOAD BEARING WALLS ARE PER WALL SCHEDULE ON SHEET S004. SEE ARCHITECTURAL FLOOR PLAN FOR NON-BEARING WALL, DOOR, AND WINDOW LOCATIONS.
6. FLOOR PLAN SHOWS FRAMING FOR THE FLOOR INDICATED & VERTICAL FRAMING (WALLS, OPENINGS, POSTS, COLUMNS) SUPPORTING THAT FLOOR.
7. SEE ARCHITECTURAL DRAWINGS FOR ALL RAILING DETAILS. REFER TO GENERAL NOTES FOR DESIGN CRITERIA.
8. REFER TO MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION OF STRAP TIES, HOLD DOWNS & OTHER CONNECTIONS.
9. ALL EXTERIOR LUMBER (POSTS, BEAMS, DECKING, ETC.) TO BE TREATED.
10. WOOD FLOOR TRUSSES TO BE DESIGNED BY THE TRUSS MANUFACTURER AND ARE SHOWN FOR THE INTENT OF SPAN DIRECTION AND LOAD PATH ONLY. REFER TO GENERAL NOTES FOR DESIGN CRITERIA.
11. PROVIDE GIRDER TRUSS AT CHASE OPENINGS SUPPORTING TOP CHORD HUNG FLOOR TRUSSES AND SUPPORTED W/ TOP CHORD HANGER EACH END AT ADJACENT TRUSSES DESIGNED PER MANUFACTURER.
12. REFER TO ARCHITECTURAL PLANS FOR STAIR DIMENSIONS AND REQUIREMENTS. REFER TO STRUCTURAL GENERAL NOTES FOR STAIR DESIGN CRITERIA.
13. VERIFY SPECIFIED ELEVATOR HOIST BEAM AND SUPPORTING FRAMING W/ ELEVATOR MANUFACTURER.
14. T.O.S. FOR BEAMS SUPPORTING WOOD FLOOR FRAMING TO BE 3" BELOW UNDERSIDE OF SUB FLOOR, WITH (2) 2X WOOD PLATES ON TOP (RIPPED TO WIDTH OF BEAM). ATTACH DOUBLE PLATE TO TOP OF BEAM W/ 1/2" DIA. BOLTS 12" O.C. STAGGERED. TOP OF BOLT TO BE FLUSH WITH TOP OF UPPER PLATE (COUNTER SUNK).

1 LEVEL 2 STEEL & PODIUM PLAN
S102 3/32" = 1'-0"

IN RESPONSE TO GC COMMENTS 3

PRINTS ISSUED

11/01/23 - CITY SUBMITTAL

REVISIONS:

1	12/21/2023	RESPONSE TO CITY COMMENTS
2	1/19/2024	ADDENDUM #2
3	3/06/2024	IN RESPONSE TO GC COMMENTS

McCLURE™
2001 W Broadway
Columbia, MO 65203
P 573-814-1568

MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

STATE OF MISSOURI — CELESTE KAY SPICKERT — NUMBER PE-2008022213 — PROFESSIONAL ENGINEER

03/06/2024

TOWNEPLACE SUITES

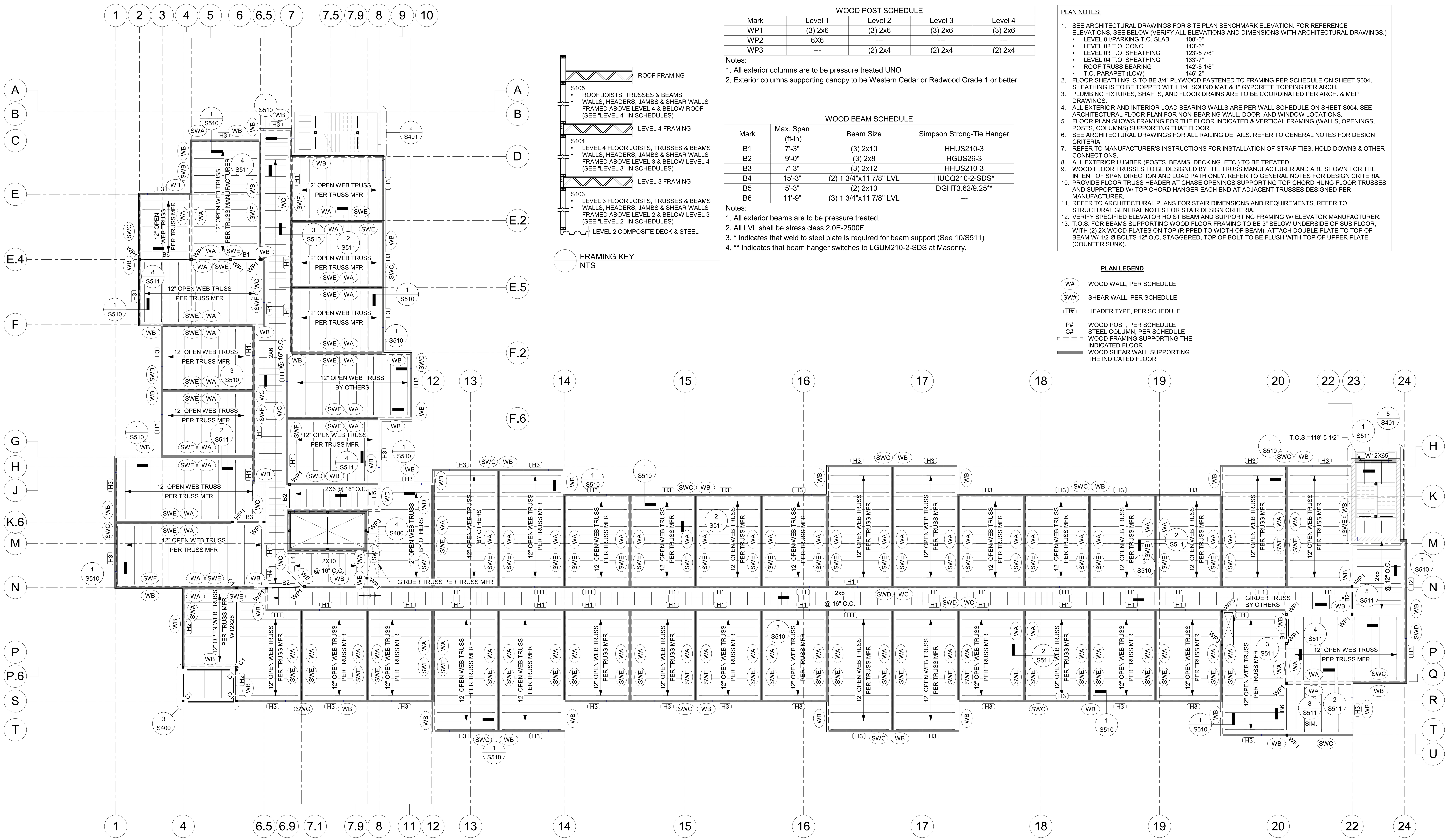
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
LEVEL 2 FRAMING PLAN

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S102



IN RESPONSE TO GC COMMENTS

WOOD POST SCHEDULE				
Mark	Level 1	Level 2	Level 3	Level 4
WP1	(3) 2x6	(3) 2x6	(3) 2x6	(3) 2x6
WP2	6X6	---	---	---
WP3	---	(2) 2x4	(2) 2x4	(2) 2x4

Notes:
1. All exterior columns are to be pressure treated UNO
2. Exterior columns supporting canopy to be Western Cedar or Redwood Grade 1 or better

WOOD BEAM SCHEDULE			
Mark	Max. Span (ft-in)	Beam Size	Simpson Strong-Tie Hanger
B1	7'-3"	(3) 2x10	HHUS210-3
B2	9'-0"	(3) 2x8	HGUS26-3
B3	7'-3"	(3) 2x12	HHUS210-3
B4	15'-3"	(2) 1 3/4"x11 7/8" LVL	HUCQ210-2-SDS*
B5	5'-3"	(2) 2x10	DGHT3.62/9.25**
B6	11'-9"	(3) 1 3/4"x11 7/8" LVL	---

Notes:
1. All exterior beams are to be pressure treated.
2. All LVL shall be stress class 2.0E-2500F
3. * Indicates that weld to steel plate is required for beam support (See 10/S511)
4. ** Indicates that beam hanger switches to LGUM210-2-SDS at Masonry.

PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR SITE PLAN BENCHMARK ELEVATION. FOR REFERENCE ELEVATIONS, SEE BELOW (VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS.)
   - LEVEL 01/PARKING T.O. SLAB 100'-0"
   - LEVEL 02 T.O. CONC. 113'-6"
   - LEVEL 03 T.O. SHEATHING 123'-5 7/8"
   - LEVEL 04 T.O. SHEATHING 133'-7"
   - ROOF TRUSS BEARING 142'-8 1/8"
   - T.O. PARAPET (LOW) 146'-2"
2. FLOOR SHEATHING IS TO BE 3/4" PLYWOOD FASTENED TO FRAMING PER SCHEDULE ON SHEET S004. SHEATHING IS TO BE TOPPED WITH 1/4" SOUND MAT & 1" GYPCRETE TOPPING PER ARCH.
3. PLUMBING FIXTURES, SHAFTS, AND FLOOR DRAINS ARE TO BE COORDINATED PER ARCH. & MEP DRAWINGS.
4. ALL EXTERIOR AND INTERIOR LOAD BEARING WALLS ARE PER WALL SCHEDULE ON SHEET S004. SEE ARCHITECTURAL FLOOR PLAN FOR NON-BEARING WALL, DOOR, AND WINDOW LOCATIONS.
5. FLOOR PLAN SHOWS FRAMING FOR THE FLOOR INDICATED & VERTICAL FRAMING (WALLS, OPENINGS, POSTS, COLUMNS) SUPPORTING THAT FLOOR.
6. SEE ARCHITECTURAL DRAWINGS FOR ALL RAILING DETAILS. REFER TO GENERAL NOTES FOR DESIGN CRITERIA.
7. REFER TO MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION OF STRAP TIES, HOLD DOWNS & OTHER CONNECTIONS.
8. ALL EXTERIOR LUMBER (POSTS, BEAMS, DECKING, ETC.) TO BE TREATED.
9. WOOD FLOOR TRUSSES TO BE DESIGNED BY THE TRUSS MANUFACTURER AND ARE SHOWN FOR THE INTENT OF SPAN DIRECTION AND LOAD PATH ONLY. REFER TO GENERAL NOTES FOR DESIGN CRITERIA.
10. PROVIDE FLOOR TRUSS HEADER AT CHASE OPENINGS SUPPORTING TOP CHORD HUNG FLOOR TRUSSES AND SUPPORTED W/ TOP CHORD HANGER EACH END AT ADJACENT TRUSSES DESIGNED PER MANUFACTURER.
11. REFER TO ARCHITECTURAL PLANS FOR STAIR DIMENSIONS AND REQUIREMENTS. REFER TO STRUCTURAL GENERAL NOTES FOR STAIR DESIGN CRITERIA.
12. VERIFY SPECIFIED ELEVATOR HOIST BEAM AND SUPPORTING FRAMING W/ ELEVATOR MANUFACTURER.
13. T.O.S. FOR BEAMS SUPPORTING WOOD FLOOR FRAMING TO BE 3" BELOW UNDERSIDE OF SUB FLOOR, WITH (2) 2X WOOD PLATES ON TOP (RIPPED TO WIDTH OF BEAM). ATTACH DOUBLE PLATE TO TOP OF BEAM W/ 1/2"Ø BOLTS 12" O.C. STAGGERED. TOP OF BOLT TO BE FLUSH WITH TOP OF UPPER PLATE (COUNTER SUNK).

PLAN LEGEND

W# WOOD WALL, PER SCHEDULE
SW# SHEAR WALL, PER SCHEDULE
H# HEADER TYPE, PER SCHEDULE
P# WOOD POST, PER SCHEDULE
C# STEEL COLUMN, PER SCHEDULE
WOOD FRAMING SUPPORTING THE INDICATED FLOOR
WOOD SHEAR WALL SUPPORTING THE INDICATED FLOOR

WOOD WALL SCHEDULE			
Mark	Level 2	Level 3	Level 4
WA	(2) 2x4	(1) 2x4	(1) 2x4
WB	(1) 2x6	(1) 2x6	(1) 2x6
WC	(1) 2x6	(1) 2x6	(1) 2x6
WD	(2) 2x4*	(1) 2x4	(1) 2x4

Notes:
1. All wall studs are 16" o.c. U.N.O. on plans or followed by an * (see note 8).
2. Bottom sill plates at Level 2 Podium to be fastened w/ 3/8"Ø x 3-1/2" Hilti Kwik HUS EZ Bolts @ 48" o.c. U.N.O.
3. Bottom sill plate connections shall have a 3"x3"x1/4" steel plate washer at each anchor bolt on shear walls only.
4. Bottom and top plates at all other levels to be fastened w/ (2) 16d nails @ 16" o.c. U.N.O.
5. Shear walls shall be sheathed per shear wall schedule
6. Non-load bearing walls not shown, refer to architectural drawings.
7. All top plates are to be continuous. Splice per 3/S500.
8. * Indicates studs or stud pack at 12" o.c.

TYPICAL WALL HEADER SCHEDULE (STACKED OPENINGS)												
Header Mark	Max. Span (ft-in)	Header				Kings & Jacks						Sills*
		Level 2	Level 3	Level 4	Header Top Plates*	Level 2		Level 3		Level 4		All Levels
					All Levels	Kings	Jacks	Kings	Jacks	Kings	Jacks	(if applicable)
H1	3'-3"	(3) 2x8	(3) 2x8	(3) 2x8	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6
H2	6'-3"	(3) 2x10	(3) 2x10	(3) 2x8	(1) 2x6	(2) 2x6	(1) 2x6	(2) 2x6	(1) 2x6	(2) 2x6	(1) 2x6	(1) 2x6
H3	6'-3"	(3) 2x8	(3) 2x8	(3) 2x8	(1) 2x6	(2) 2x6	(1) 2x6	(2) 2x6	(1) 2x6	(2) 2x6	(1) 2x6	(1) 2x6
H4	6'-4"	(3) 2x8	(3) 2x8	(3) 2x8	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6
H5	3'-3"	(2) 2x8	(2) 2x8	(2) 2x8	(1) 2x4	(3) 2x4	(1) 2x4	(2) 2x4	(1) 2x4	(1) 2x4	(1) 2x4	(1) 2x4

H = An opening which requires a header

Notes:
1. See S500 for typical opening framing.
2. All openings shall stack.
3. Coordinate all dimensions and elevations with architectural drawings.
4. Cripple studs should match the adjacent wall framing.
5. * Header top plates and sills shall match the adjacent wall studs.

N

1 LEVEL 3 FRAMING PLAN
S103 3/32" = 1'-0"

PRINTS ISSUED

11/01/23 - CITY SUBMITTAL

REVISIONS:

1	12/21/2023	RESPONSE TO CITY COMMENTS
2	1/19/2024	ADDENDUM #2
3	3/06/2024	IN RESPONSE TO GC COMMENTS

McCLURE™

2001 W Broadway
Columbia, MO 65203
P 573-814-1568

MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

03/06/2024

TOWNEPLACE SUITES

1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
LEVEL 3 FRAMING PLAN

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S103

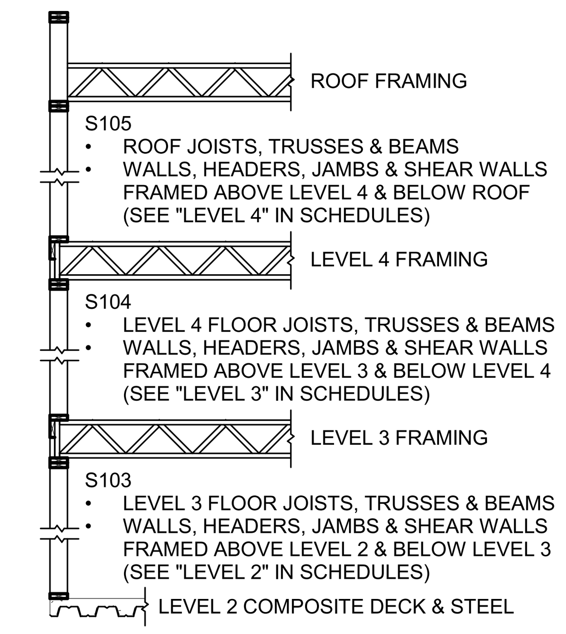
IN RESPONSE TO GC COMMENTS

WOOD POST SCHEDULE				
Mark	Level 1	Level 2	Level 3	Level 4
WP1	(3) 2x6	(3) 2x6	(3) 2x6	(3) 2x6
WP2	6X6	---	---	---
WP3	---	(2) 2x4	(2) 2x4	(2) 2x4

Notes:
1. All exterior columns are to be pressure treated UNO
2. Exterior columns supporting canopy to be Western Cedar or Redwood Grade 1 or better

WOOD BEAM SCHEDULE			
Mark	Max. Span (ft-in)	Beam Size	Simpson Strong-Tie Hanger
B1	7'-3"	(3) 2x10	HHUS210-3
B2	9'-0"	(3) 2x8	HGUS26-3
B3	7'-3"	(3) 2x12	HHUS210-3
B4	15'-3"	(2) 1 3/4"x11 7/8" LVL	HUCQ210-2-SDS*
B5	5'-3"	(2) 2x10	DGHT3.62/9.25**
B6	11'-9"	(3) 1 3/4"x11 7/8" LVL	---

Notes:
1. All exterior beams are to be pressure treated.
2. All LVL shall be stress class 2.0E-2500F
3. * Indicates that weld to steel plate is required for beam support (See 10/S511)
4. ** Indicates that beam hanger switches to LGUM210-2-SDS at Masonry.



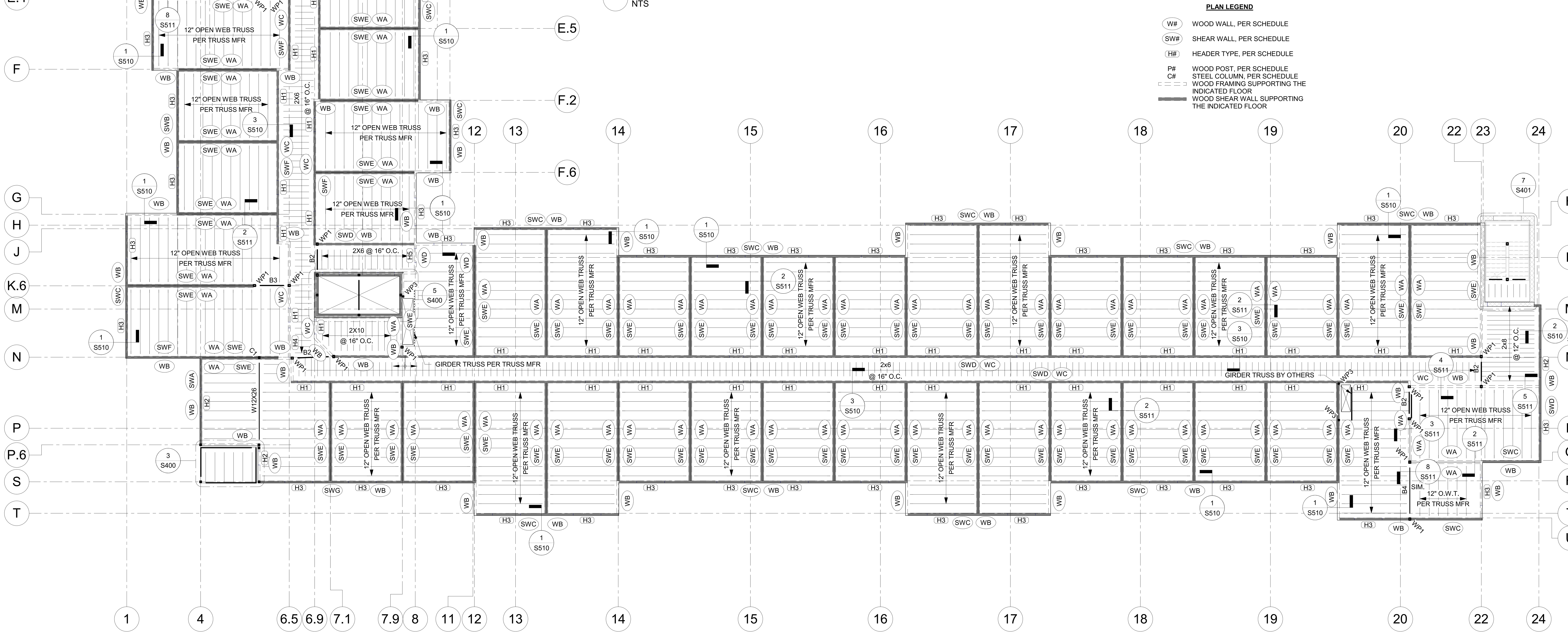
FRAMING KEY
NTS

PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR SITE PLAN BENCHMARK ELEVATION. FOR REFERENCE ELEVATIONS, SEE BELOW (VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS.)
   - LEVEL 01/PARKING T.O. SLAB 100'-0"
   - LEVEL 02 T.O. CONC. 113'-6"
   - LEVEL 03 T.O. SHEATHING 123'-5 7/8"
   - LEVEL 04 T.O. SHEATHING 133'-7"
   - ROOF TRUSS BEARING 142'-8 1/8"
   - T.O. PARAPET (LOW) 146'-2"
2. FLOOR SHEATHING IS TO BE 3/4" PLYWOOD FASTENED TO FRAMING PER SCHEDULE ON SHEET S004. SHEATHING IS TO BE TOPPED WITH 1/4" SOUND MAT & 1" GYPCRETE TOPPING PER ARCH.
3. PLUMBING FIXTURES, SHAFTS, AND FLOOR DRAINS ARE TO BE COORDINATED PER ARCH. & MEP DRAWINGS.
4. ALL EXTERIOR AND INTERIOR LOAD BEARING WALLS ARE PER WALL SCHEDULE ON SHEET S004. SEE ARCHITECTURAL FLOOR PLAN FOR NON-BEARING WALL, DOOR, AND WINDOW LOCATIONS.
5. FLOOR PLAN SHOWS FRAMING FOR THE FLOOR INDICATED & VERTICAL FRAMING (WALLS, OPENINGS, POSTS, COLUMNS) SUPPORTING THAT FLOOR.
6. SEE ARCHITECTURAL DRAWINGS FOR ALL RAILING DETAILS. REFER TO GENERAL NOTES FOR DESIGN CRITERIA.
7. REFER TO MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION OF STRAP TIES, HOLD DOWNS & OTHER CONNECTIONS.
8. ALL EXTERIOR LUMBER (POSTS, BEAMS, DECKING, ETC.) TO BE TREATED.
9. WOOD FLOOR TRUSSES TO BE DESIGNED BY THE TRUSS MANUFACTURER AND ARE SHOWN FOR THE INTENT OF SPAN DIRECTION AND LOAD PATH ONLY. REFER TO GENERAL NOTES FOR DESIGN CRITERIA.
10. PROVIDE FLOOR TRUSS HEADER AT CHASE OPENINGS SUPPORTING TOP CHORD HUNG FLOOR TRUSSES AND SUPPORTED W/ TOP CHORD HANGER EACH END AT ADJACENT TRUSSES DESIGNED PER MANUFACTURER.
11. REFER TO ARCHITECTURAL PLANS FOR STAIR DIMENSIONS AND REQUIREMENTS. REFER TO STRUCTURAL GENERAL NOTES FOR STAIR DESIGN CRITERIA.
12. VERIFY SPECIFIED ELEVATOR HOIST BEAM AND SUPPORTING FRAMING W/ ELEVATOR MANUFACTURER.
13. T.O.S. FOR BEAMS SUPPORTING WOOD FLOOR FRAMING TO BE 3" BELOW UNDERSIDE OF SUB FLOOR, WITH (2) 2X WOOD PLATES ON TOP (RIPPED TO WIDTH OF BEAM). ATTACH DOUBLE PLATE TO TOP OF BEAM W/ 1/2"Ø BOLTS 12" O.C. STAGGERED. TOP OF BOLT TO BE FLUSH WITH TOP OF UPPER PLATE (COUNTER SUNK).

PLAN LEGEND

- W# — WOOD WALL, PER SCHEDULE
- SW# — SHEAR WALL, PER SCHEDULE
- H# — HEADER TYPE, PER SCHEDULE
- P# — WOOD POST, PER SCHEDULE
- C# — STEEL COLUMN, PER SCHEDULE
- WOOD FRAMING SUPPORTING THE INDICATED FLOOR
- WOOD SHEAR WALL SUPPORTING THE INDICATED FLOOR



WOOD WALL SCHEDULE			
Mark	Level 2	Level 3	Level 4
WA	(2) 2x4	(1) 2x4	(1) 2x4
WB	(1) 2x6	(1) 2x6	(1) 2x6
WC	(1) 2x6	(1) 2x6	(1) 2x6
WD	(2) 2x4*	(1) 2x4	(1) 2x4

Notes:
1. All wall studs are 16" o.c. U.N.O. on plans or followed by an * (see note 8).
2. Bottom sill plates at Level 2 Podium to be fastened w/ 3/8"Ø x 3-1/2" Hilti Kwik HUS EZ Bolts @ 48" o.c. U.N.O.
3. Bottom sill plate connections shall have a 3"x3"x1/4" steel plate washer at each anchor bolt on shear walls only.
4. Bottom and top plates at all other levels to be fastened w/ (2) 16d nails @ 16" o.c. U.N.O.
5. Shear walls shall be sheathed per shear wall schedule
6. Non-load bearing walls not shown, refer to architectural drawings.
7. All top plates are to be continuous. Splice per 3/S500.
8. * Indicates studs or stud pack at 12" o.c.

TYPICAL WALL HEADER SCHEDULE (STACKED OPENINGS)

Header Mark	Max. Span (ft-in)	Header				Kings & Jacks						Sills*
		Level 2	Level 3	Level 4	Header Top Plates*	Level 2		Level 3		Level 4		All Levels
					All Levels	Kings	Jacks	Kings	Jacks	Kings	Jacks	(if applicable)
H1	3'-3"	(3) 2x8	(3) 2x8	(3) 2x8	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6
H2	6'-3"	(3) 2x10	(3) 2x10	(3) 2x8	(1) 2x6	(2) 2x6	(1) 2x6	(2) 2x6	(1) 2x6	(2) 2x6	(1) 2x6	(1) 2x6
H3	6'-3"	(3) 2x8	(3) 2x8	(3) 2x8	(1) 2x6	(2) 2x6	(1) 2x6	(2) 2x6	(1) 2x6	(2) 2x6	(1) 2x6	(1) 2x6
H4	6'-4"	(3) 2x8	(3) 2x8	(3) 2x8	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6
H5	3'-3"	(2) 2x8	(2) 2x8	(2) 2x8	(1) 2x4	(3) 2x4	(1) 2x4	(2) 2x4	(1) 2x4	(1) 2x4	(1) 2x4	(1) 2x4

H = An opening which requires a header

Notes:
1. See S500 for typical opening framing.
2. All openings shall stack.
3. Coordinate all dimensions and elevations with architectural drawings.
4. Cripple studs should match the adjacent wall framing.
5. * Header top plates and sills shall match the adjacent wall studs.

1 LEVEL 4 FRAMING PLAN
S104 3/32" = 1'-0"

PRINTS ISSUED
11/01/23 - CITY SUBMITTAL

REVISIONS:

1	12/21/2023	RESPONSE TO CITY COMMENTS
2	1/19/2024	ADDENDUM #2
3	3/06/2024	IN RESPONSE TO GC COMMENTS

McCLURE™
2001 W Broadway
Columbia, MO 65203
P 573-814-1568

MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

STATE OF MISSOURI
CELESTE KAY SPICKERT
NUMBER PE-2008022213
PROFESSIONAL ENGINEER
03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

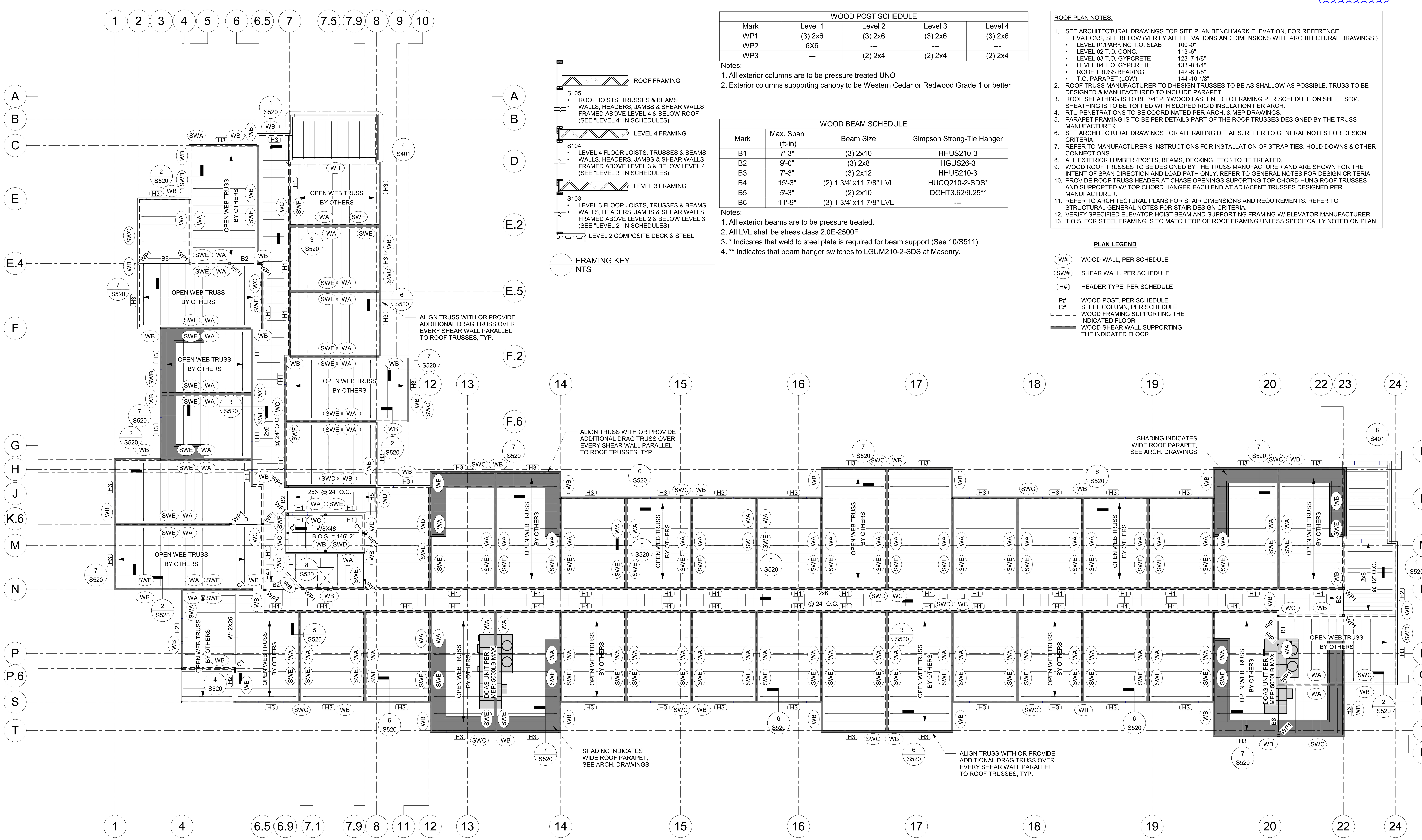
SHEET TITLE
LEVEL 4 FRAMING PLAN

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S104

IN RESPONSE TO GC COMMENTS



WOOD POST SCHEDULE				
Mark	Level 1	Level 2	Level 3	Level 4
WP1	(3) 2x6	(3) 2x6	(3) 2x6	(3) 2x6
WP2	6X6	---	---	---
WP3	---	(2) 2x4	(2) 2x4	(2) 2x4

Notes:
1. All exterior columns are to be pressure treated UNO
2. Exterior columns supporting canopy to be Western Cedar or Redwood Grade 1 or better

WOOD BEAM SCHEDULE			
Mark	Max. Span (ft-in)	Beam Size	Simpson Strong-Tie Hanger
B1	7'-3"	(3) 2x10	HHUS210-3
B2	9'-0"	(3) 2x8	HGUS26-3
B3	7'-3"	(3) 2x12	HHUS210-3
B4	15'-3"	(2) 1 3/4"x11 7/8" LVL	HUCQ210-2-SDS*
B5	5'-3"	(2) 2x10	DGHT3.62/9.25**
B6	11'-9"	(3) 1 3/4"x11 7/8" LVL	---

Notes:
1. All exterior beams are to be pressure treated.
2. All LVL shall be stress class 2.0E-2500F
3. * Indicates that weld to steel plate is required for beam support (See 10/S511)
4. ** Indicates that beam hanger switches to LGUM210-2-SDS at Masonry.

ROOF PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR SITE PLAN BENCHMARK ELEVATION. FOR REFERENCE ELEVATIONS, SEE BELOW (VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS.)
   - LEVEL 01/PARKING T.O. SLAB 100'-0"
   - LEVEL 02 T.O. CONC. 113'-6"
   - LEVEL 03 T.O. GYPCRETE 123'-7 1/8"
   - LEVEL 04 T.O. GYPCRETE 133'-8 1/4"
   - ROOF TRUSS BEARING 142'-8 1/8"
   - T.O. PARAPET (LOW) 144'-10 1/8"
2. ROOF TRUSS MANUFACTURER TO DHESIGN TRUSSES TO BE AS SHALLOW AS POSSIBLE. TRUSS TO BE DESIGNED & MANUFACTURED TO INCLUDE PARAPET.
3. ROOF SHEATHING IS TO BE 3/4" PLYWOOD FASTENED TO FRAMING PER SCHEDULE ON SHEET S004. SHEATHING IS TO BE TOPPED WITH SLOPED RIGID INSULATION PER ARCH.
4. RTU PENETRATIONS TO BE COORDINATED PER ARCH. & MEP DRAWINGS.
5. PARAPET FRAMING IS TO BE PER DETAILS PART OF THE ROOF TRUSSES DESIGNED BY THE TRUSS MANUFACTURER.
6. SEE ARCHITECTURAL DRAWINGS FOR ALL RAILING DETAILS. REFER TO GENERAL NOTES FOR DESIGN CRITERIA.
7. REFER TO MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION OF STRAP TIES, HOLD DOWNS & OTHER CONNECTIONS.
8. ALL EXTERIOR LUMBER (POSTS, BEAMS, DECKING, ETC.) TO BE TREATED.
9. WOOD ROOF TRUSSES TO BE DESIGNED BY THE TRUSS MANUFACTURER AND ARE SHOWN FOR THE INTENT OF SPAN DIRECTION AND LOAD PATH ONLY. REFER TO GENERAL NOTES FOR DESIGN CRITERIA.
10. PROVIDE ROOF TRUSS HEADER AT CHASE OPENINGS SUPORTING TOP CHORD HUNG ROOF TRUSSES AND SUPPORTED W/ TOP CHORD HANGER EACH END AT ADJACENT TRUSSES DESIGNED PER MANUFACTURER.
11. REFER TO ARCHITECTURAL PLANS FOR STAIR DIMENSIONS AND REQUIREMENTS. REFER TO STRUCTURAL GENERAL NOTES FOR STAIR DESIGN CRITERIA.
12. VERIFY SPECIFIED ELEVATOR HOIST BEAM AND SUPPORTING FRAMING W/ ELEVATOR MANUFACTURER.
13. T.O.S. FOR STEEL FRAMING IS TO MATCH TOP OF ROOF FRAMING UNLESS SPECIFCALLY NOTED ON PLAN.

PLAN LEGEND

W# WOOD WALL, PER SCHEDULE
SW# SHEAR WALL, PER SCHEDULE
H# HEADER TYPE, PER SCHEDULE
P# WOOD POST, PER SCHEDULE
C# STEEL COLUMN, PER SCHEDULE
WOOD FRAMING SUPPORTING THE INDICATED FLOOR
WOOD SHEAR WALL SUPPORTING THE INDICATED FLOOR

1 ROOF FRAMING PLAN
S105 3/32" = 1'-0"

WOOD WALL SCHEDULE			
Mark	Level 2	Level 3	Level 4
WA	(2) 2x4	(1) 2x4	(1) 2x4
WB	(1) 2x6	(1) 2x6	(1) 2x6
WC	(1) 2x6	(1) 2x6	(1) 2x6
WD	(2) 2x4*	(1) 2x4	(1) 2x4

Notes:
1. All wall studs are 16" o.c. U.N.O. on plans or followed by an * (see note 8).
2. Bottom sill plates at Level 2 Podium to be fastened w/ 3/8"Ø x 3-1/2" Hilti Kwik HUS EZ Bolts @ 48" o.c. U.N.O.
3. Bottom sill plate connections shall have a 3"x3"x1/4" steel plate washer at each anchor bolt on shear walls only.
4. Bottom and top plates at all other levels to be fastened w/ (2) 16d nails @ 16" o.c. U.N.O.
5. Shear walls shall be sheathed per shear wall schedule
6. Non-load bearing walls not shown, refer to architectural drawings.
7. All top plates are to be continuous. Splice per 3/S500.
8. * Indicates studs or stud pack at 12" o.c.

TYPICAL WALL HEADER SCHEDULE (STACKED OPENINGS)												
Header Mark	Max. Span (ft-in)	Header				Kings & Jacks						Sills*
		Level 2	Level 3	Level 4	Header Top Plates*	Level 2		Level 3		Level 4		All Levels
					All Levels	Kings	Jacks	Kings	Jacks	Kings	Jacks	(if applicable)
H1	3'-3"	(3) 2x8	(3) 2x8	(3) 2x8	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6
H2	6'-3"	(3) 2x10	(3) 2x10	(3) 2x8	(1) 2x6	(2) 2x6	(1) 2x6	(2) 2x6	(1) 2x6	(2) 2x6	(1) 2x6	(1) 2x6
H3	6'-3"	(3) 2x8	(3) 2x8	(3) 2x8	(1) 2x6	(2) 2x6	(1) 2x6	(2) 2x6	(1) 2x6	(2) 2x6	(1) 2x6	(1) 2x6
H4	6'-4"	(3) 2x8	(3) 2x8	(3) 2x8	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6
H5	3'-3"	(2) 2x8	(2) 2x8	(2) 2x8	(1) 2x4	(3) 2x4	(1) 2x4	(2) 2x4	(1) 2x4	(1) 2x4	(1) 2x4	(1) 2x4

H = An opening which requires a header

Notes:
1. See S500 for typical opening framing.
2. All openings shall stack.
3. Coordinate all dimensions and elevations with architectural drawings.
4. Cripple studs should match the adjacent wall framing.
5. * Header top plates and sills shall match the adjacent wall studs.

PRINTS ISSUED
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3	3/06/2024	IN RESPONSE TO GC COMMENTS

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MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

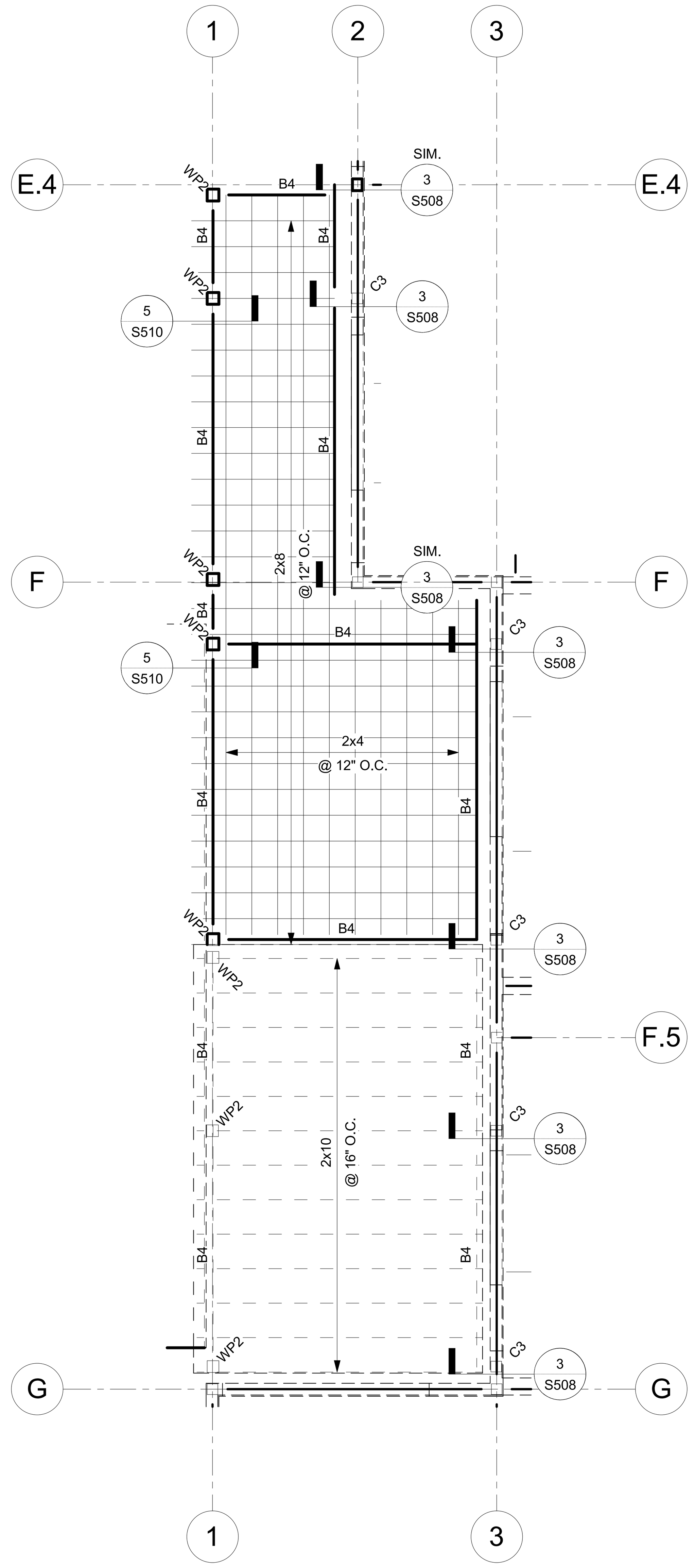
STATE OF MISSOURI
CELESTE KAY SPICKERT
NUMBER PE-2008022213
PROFESSIONAL ENGINEER
03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

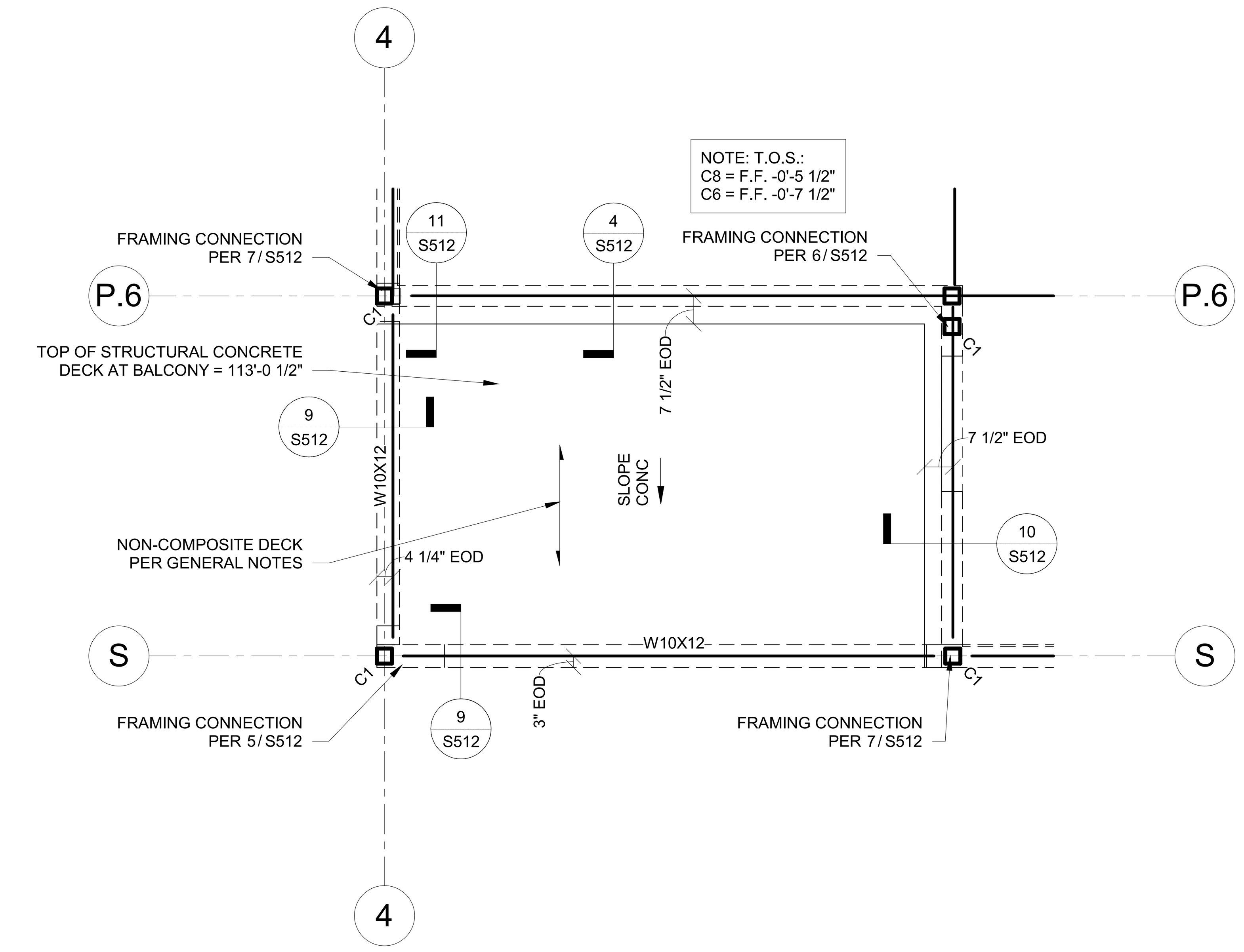
SHEET TITLE
ROOF FRAMING PLAN

PROJECT NUMBER: 2023000333

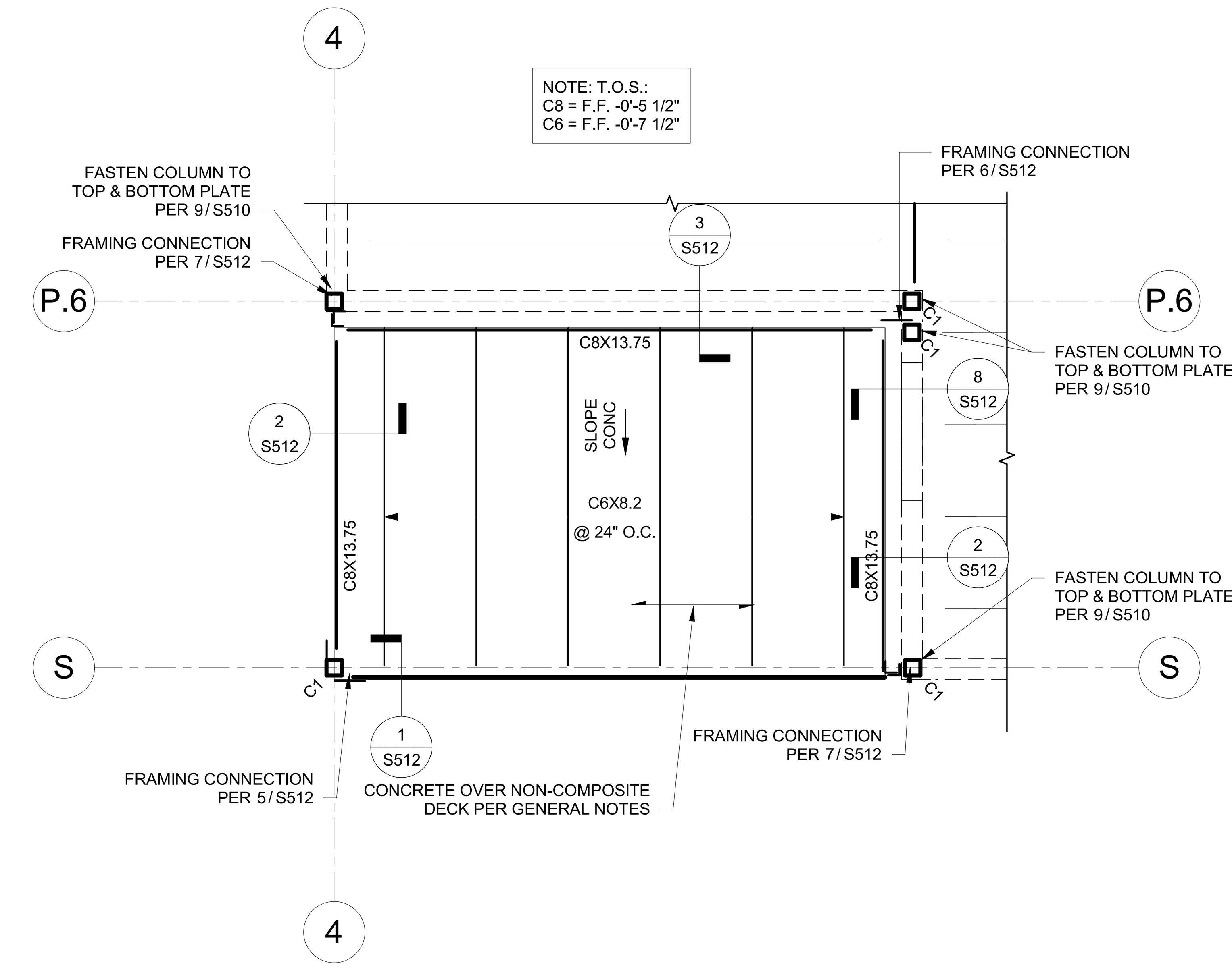
SHEET NUMBER:
S105



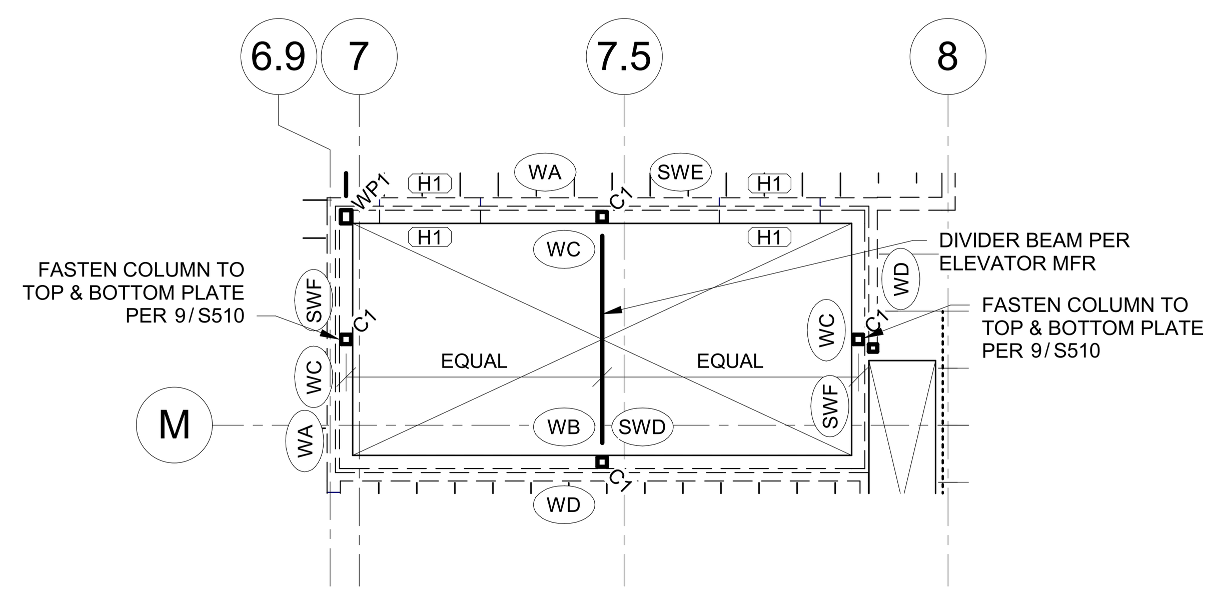
1 ENLARGED PERGOLA PLAN
S400 1/4" = 1'-0"



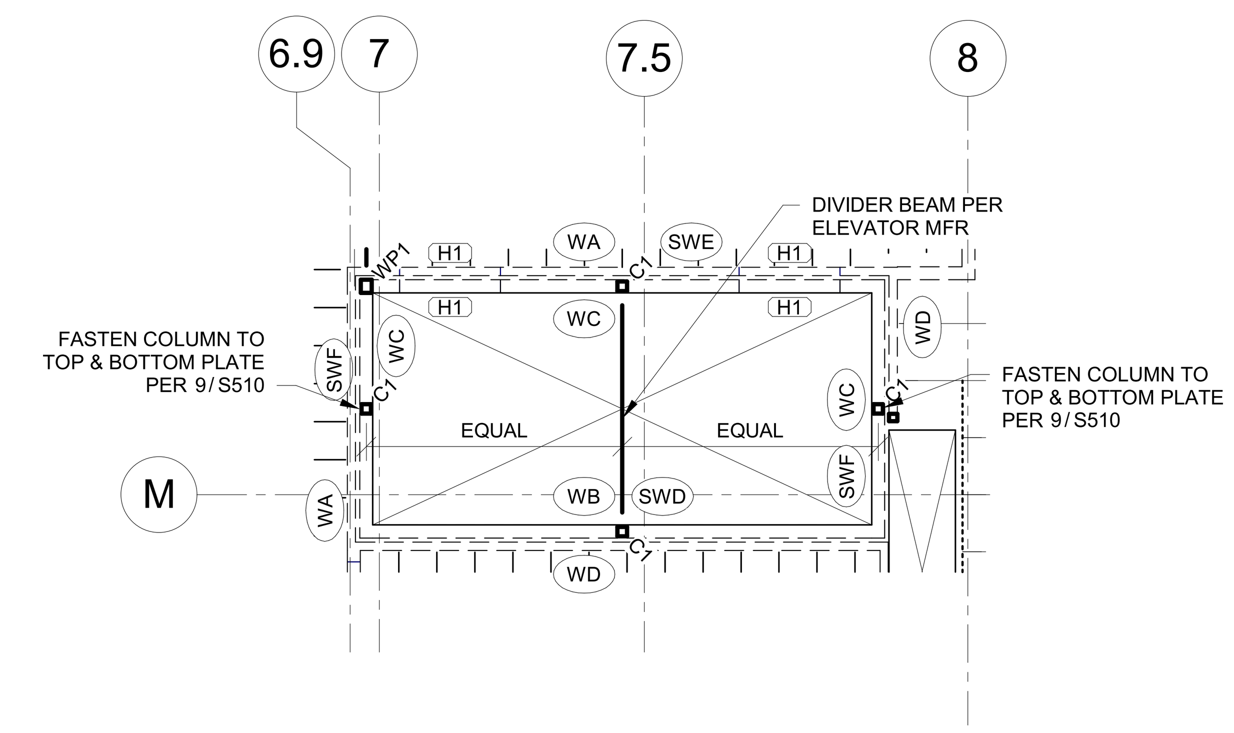
2 LEVEL 2 BALCONY FRAMING PLAN
S400 3/8" = 1'-0"



3 LEVELS 3 & 4 BALCONY FRAMING PLAN
S400 3/8" = 1'-0"



4 ENLARGED ELEVATOR PLAN - L3
S400 3/16" = 1'-0"



5 ENLARGED ELEVATOR PLAN - L4
S400 3/16" = 1'-0"

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TOWNEPLACE SUITES

1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

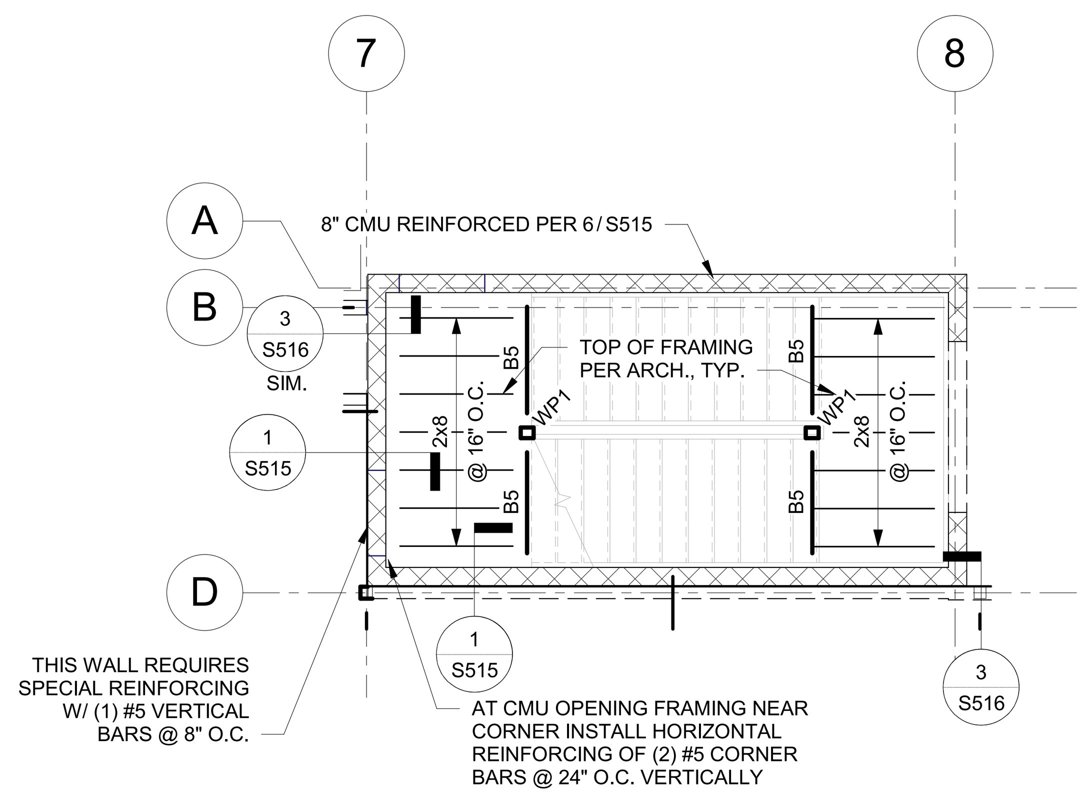
SHEET TITLE
ENLARGED VIEWS

PROJECT NUMBER: 2023000333

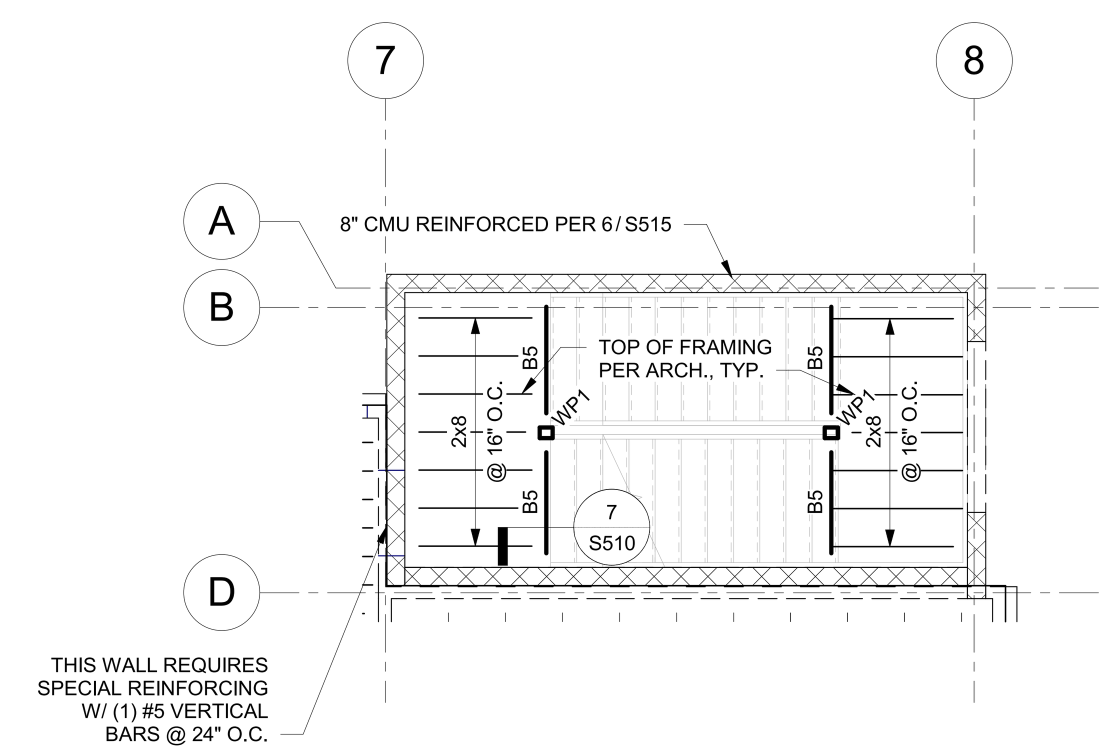
SHEET NUMBER:

S400

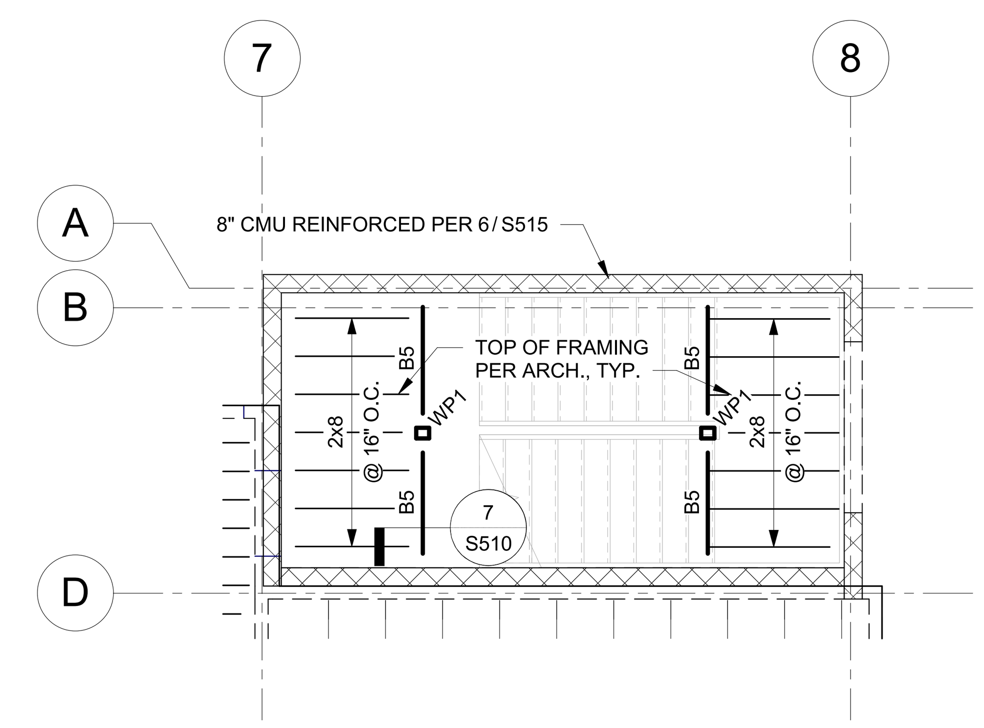
IN RESPONSE TO GC COMMENTS 3



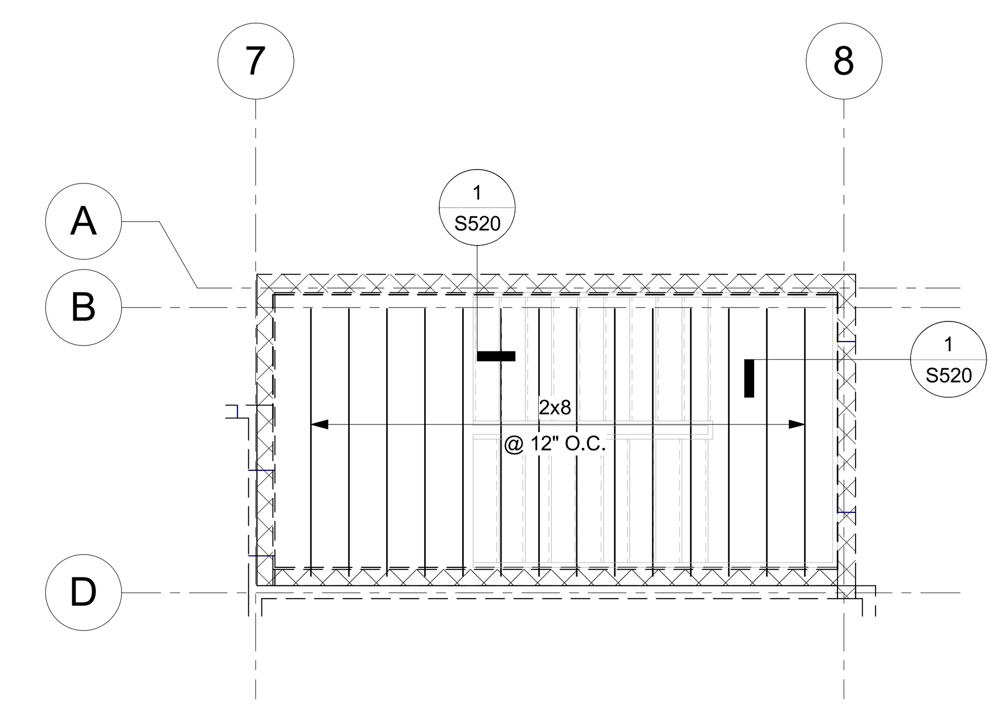
1 S401 NORTH STAIR TOWER AT LEVEL 2
3/16" = 1'-0"



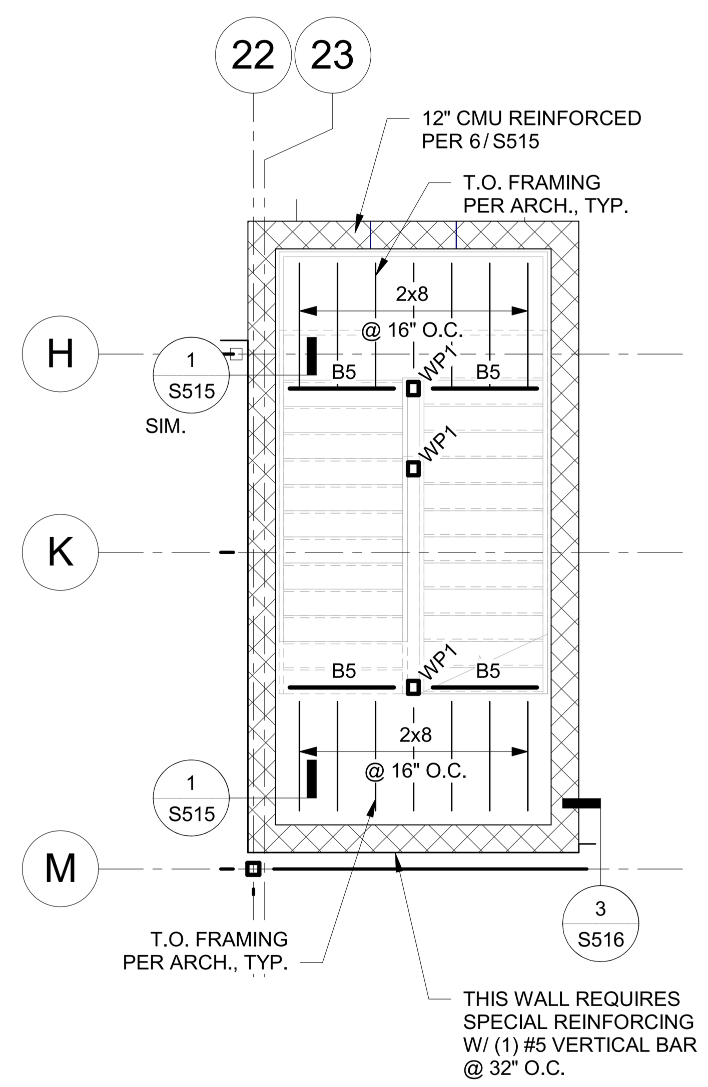
2 S401 NORTH STAIR TOWER AT LEVEL 3
3/16" = 1'-0"



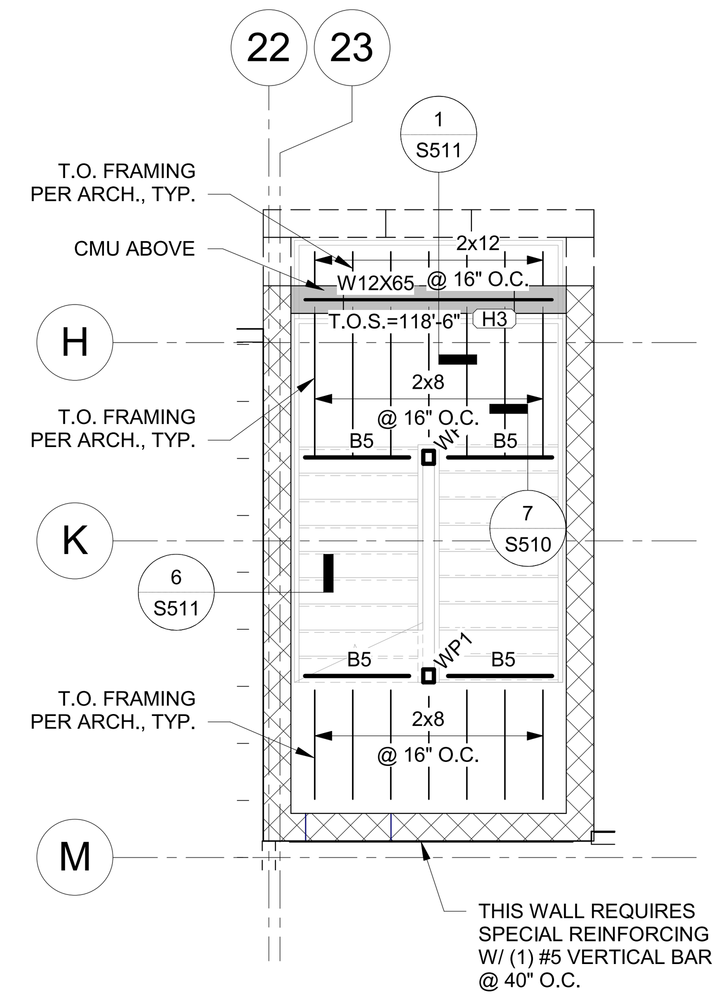
3 S401 NORTH STAIR TOWER AT LEVEL 4
3/16" = 1'-0"



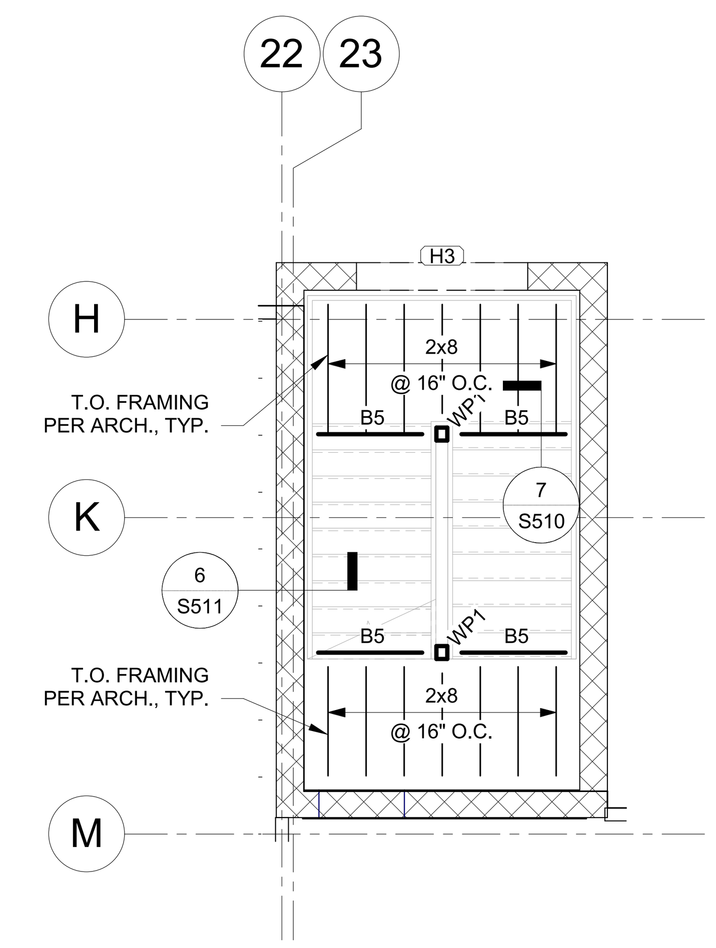
4 S401 NORTH STAIR TOWER AT ROOF
3/16" = 1'-0"



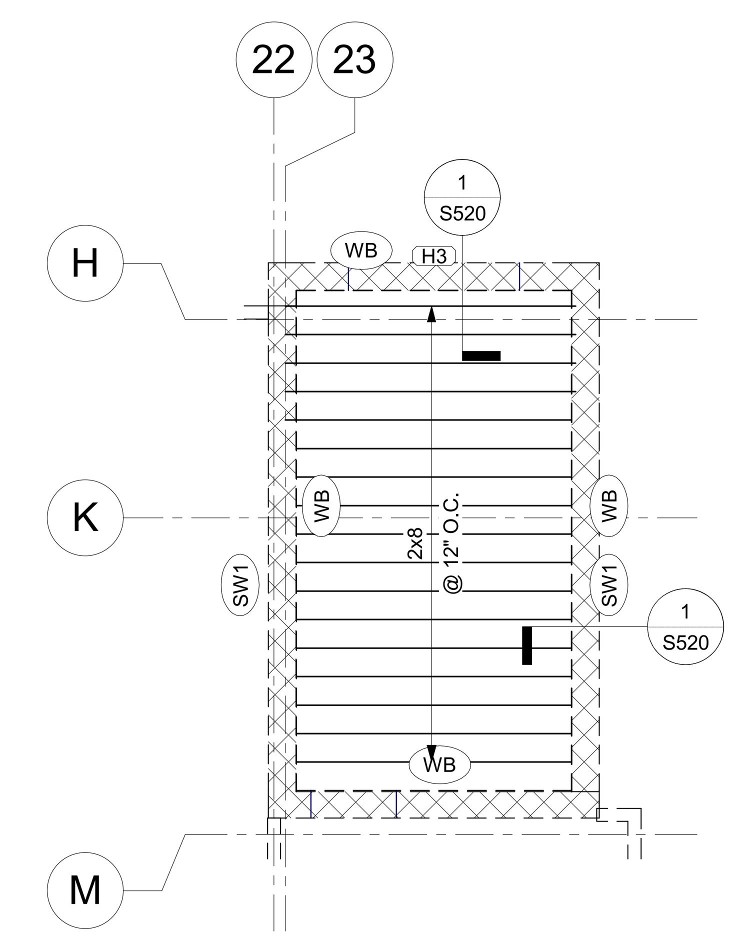
6 S401 EAST STAIR TOWER AT LEVEL 2
3/16" = 1'-0"



5 S401 EAST STAIR TOWER AT LEVEL 3
3/16" = 1'-0"



7 S401 EAST STAIR TOWER AT LEVEL 4
3/16" = 1'-0"



8 S401 EAST STAIR TOWER AT ROOF
3/16" = 1'-0"

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CELESTE KAY SPICKERT
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03/06/2024

TOWNEPLACE SUITES

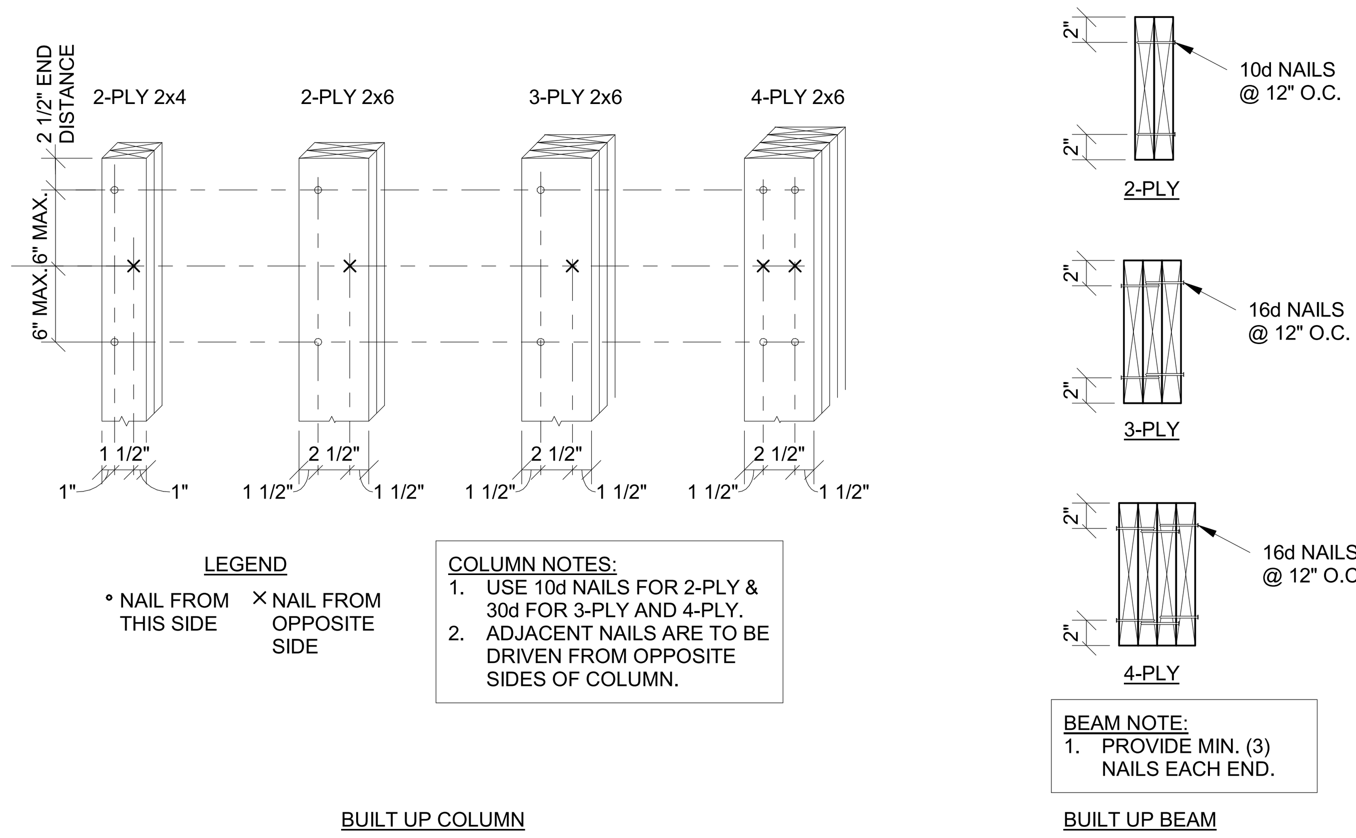
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
ENLARGED VIEWS

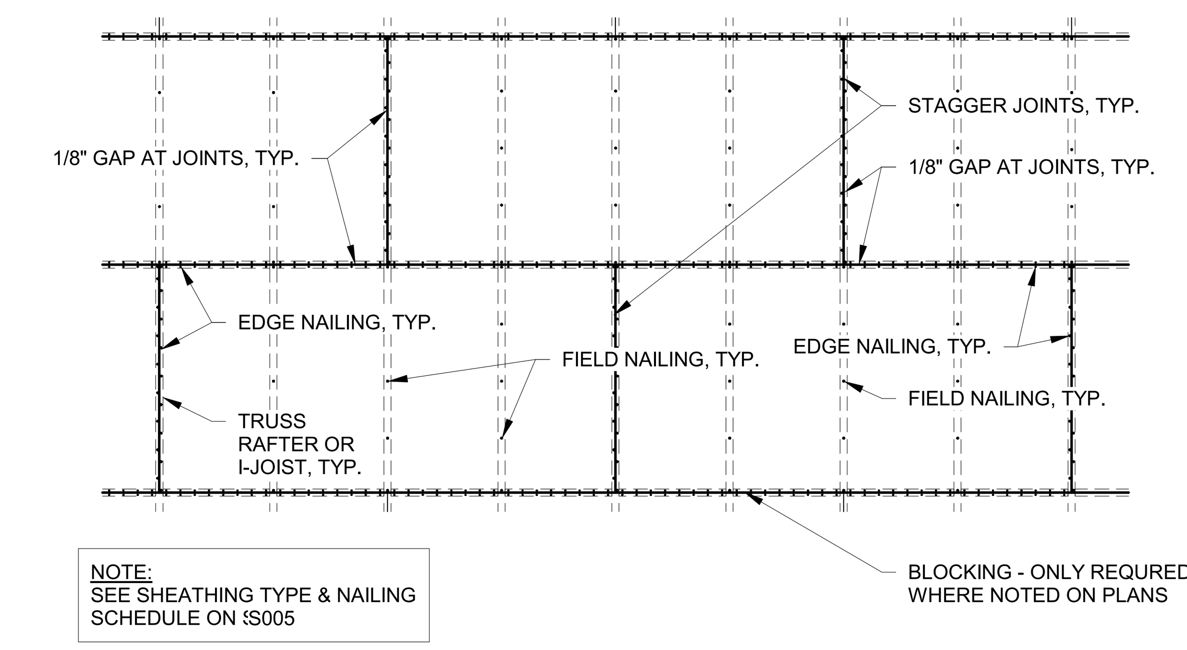
PROJECT NUMBER: 2023000333

SHEET NUMBER:

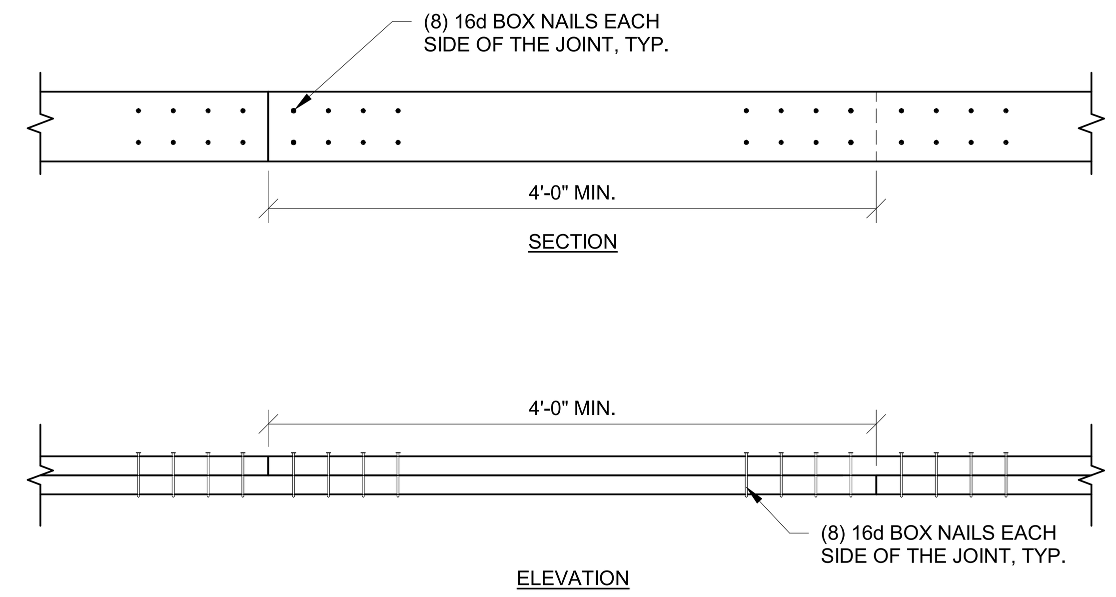
S401



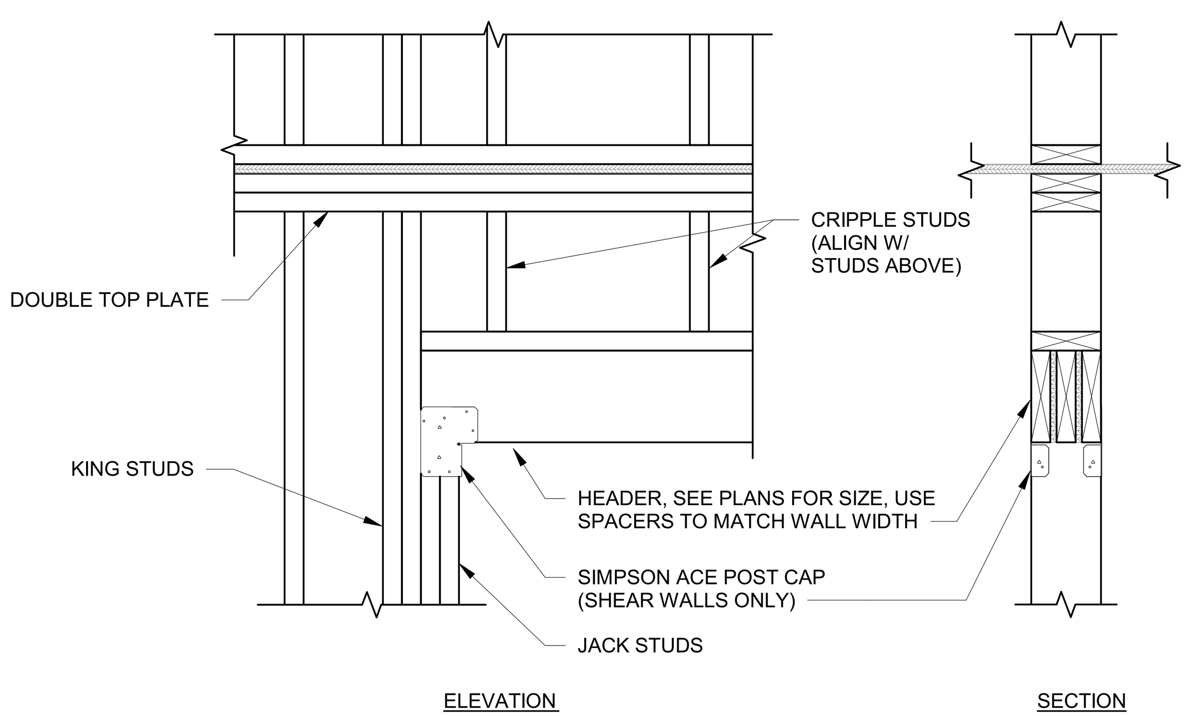
1 S500 TYPICAL BUILT-UP MEMBERS
NTS



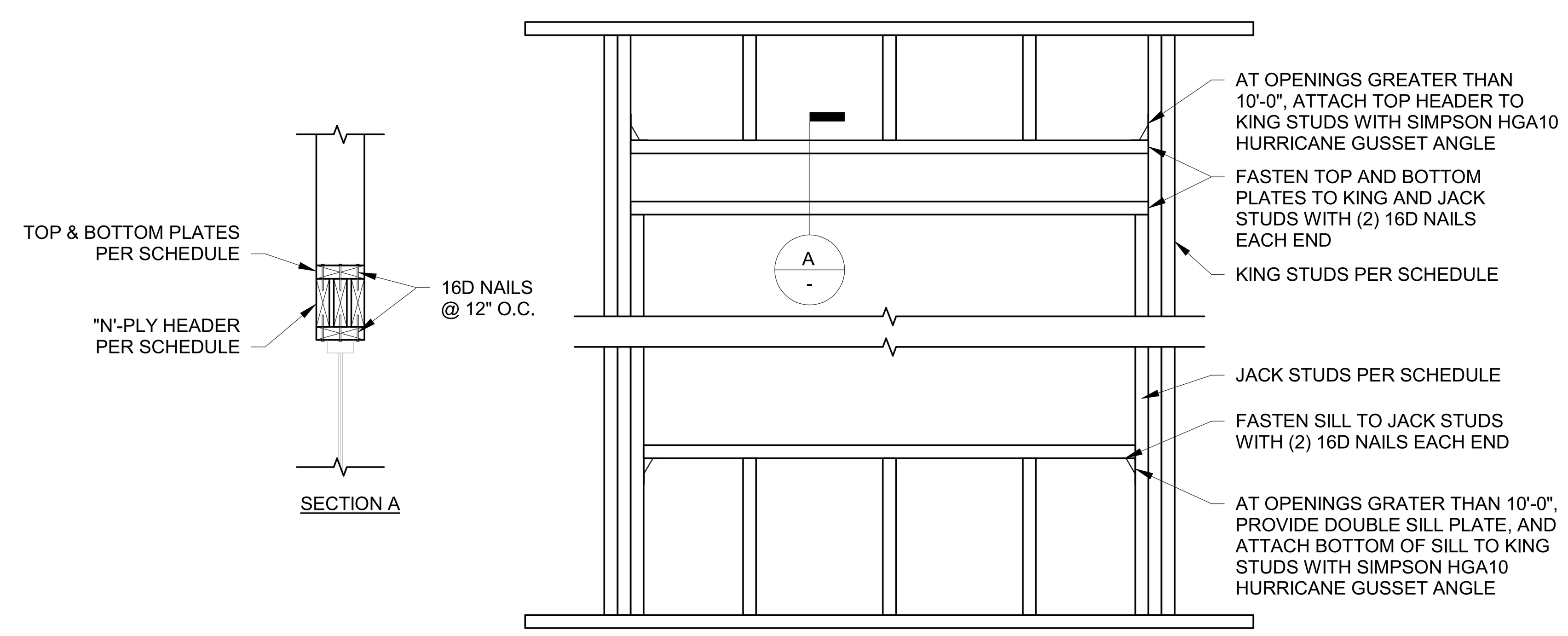
2 S500 TYPICAL DIAPHRAGM NAILING
NTS



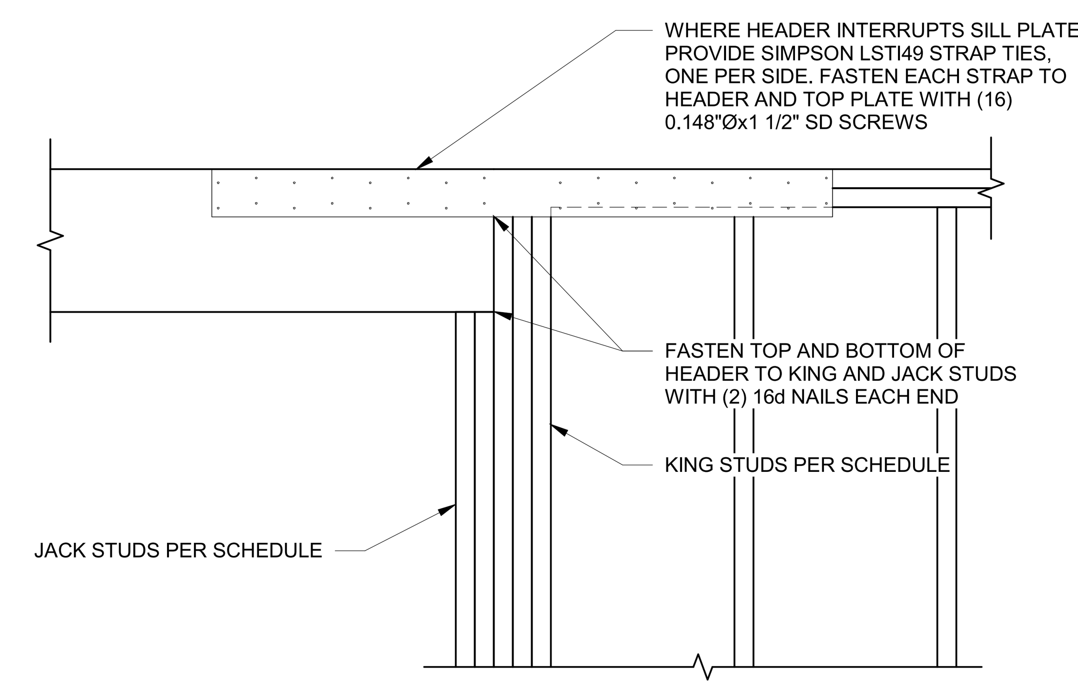
3 S500 TYPICAL TOP PLATE SPLICE
NTS



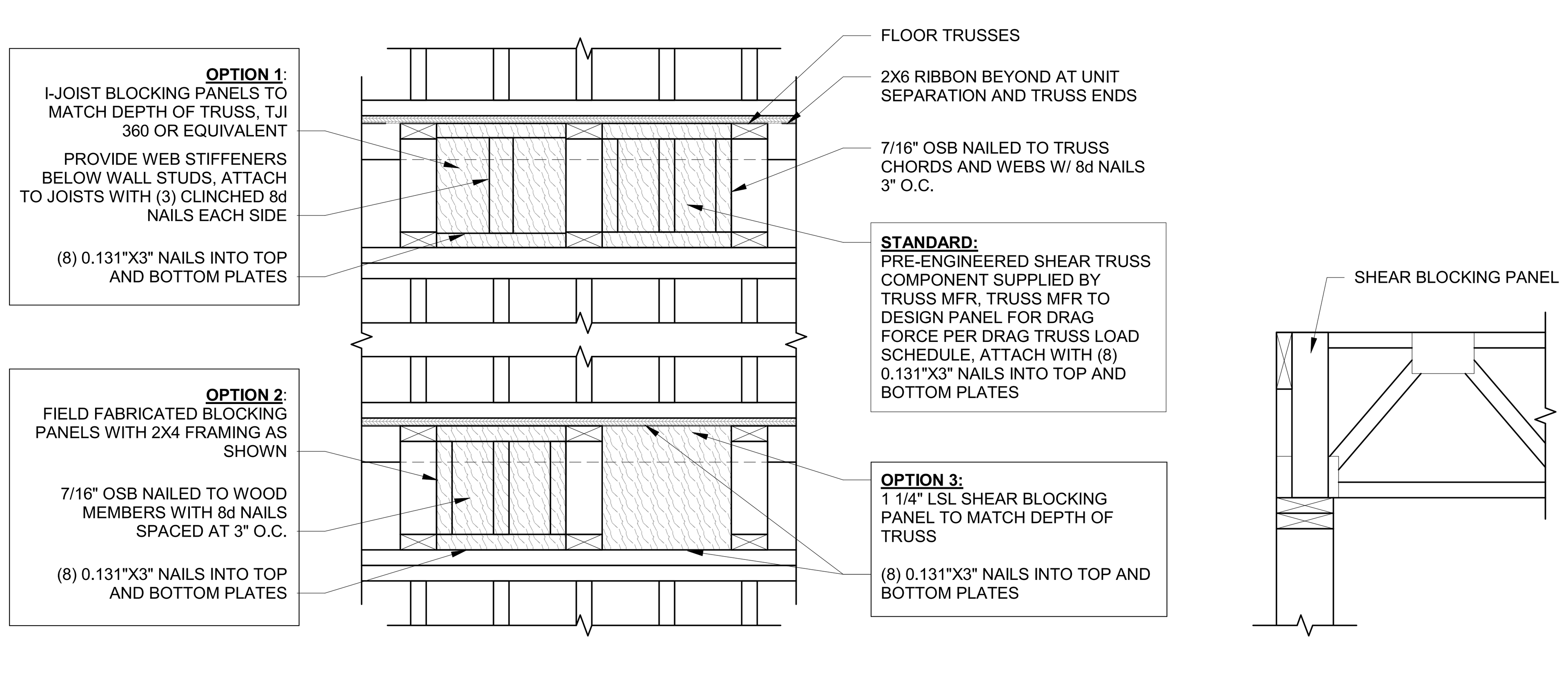
4 S500 TYPICAL HEADER CONNECTION AT SHEAR WALLS
NTS



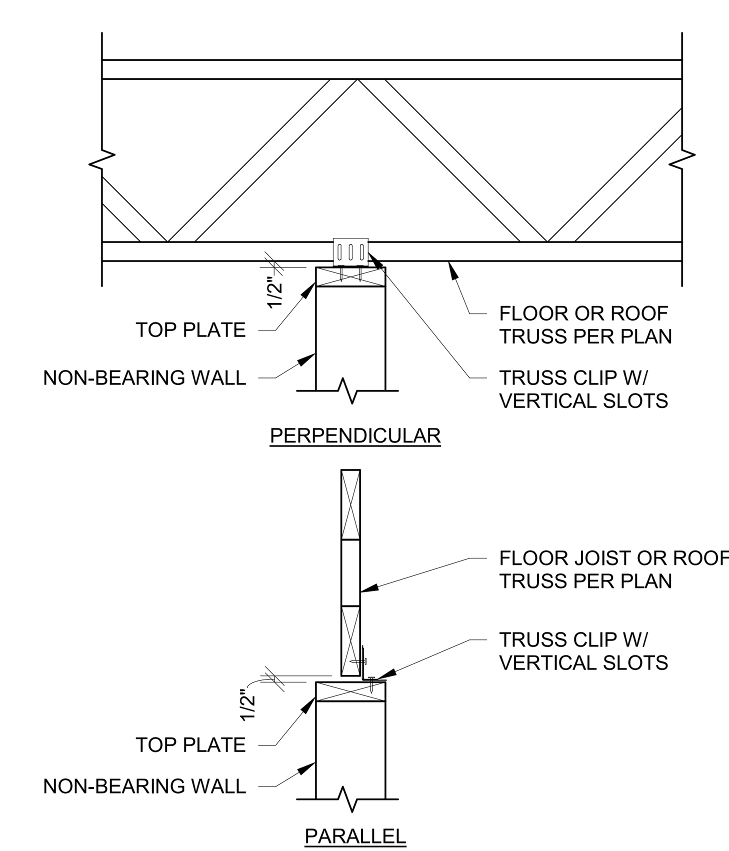
5 S500 TYPICAL FRAMING AT OPENING
NTS



6 S500 TYPICAL FRAMING AT OPENING - RAISED HEADER
NTS



7 S500 SHEAR BLOCKING PANEL OPTIONS
1" = 1'-0"



9 S500 NON-BEARING WALL TO FLOOR OR ROOF TRUSS
1" = 1'-0"

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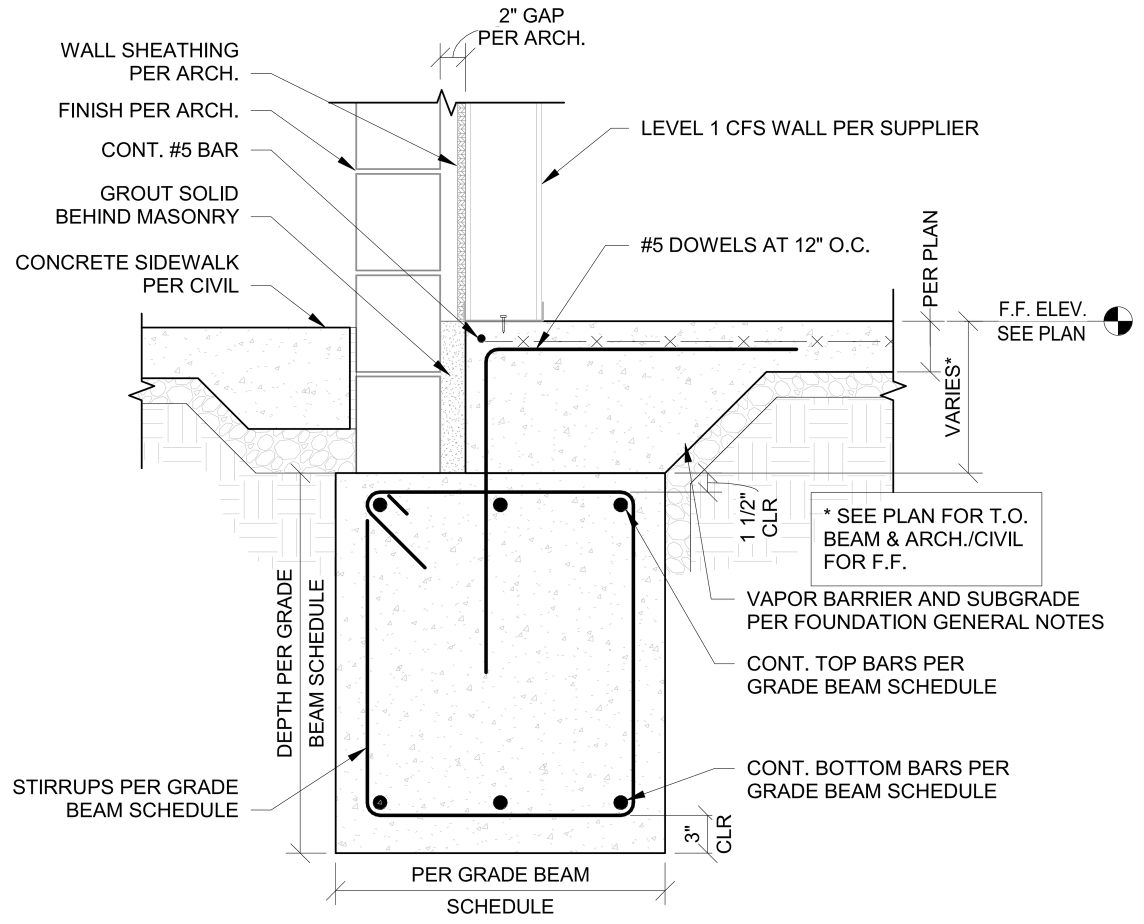
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
TYPICAL WOOD DETAILS

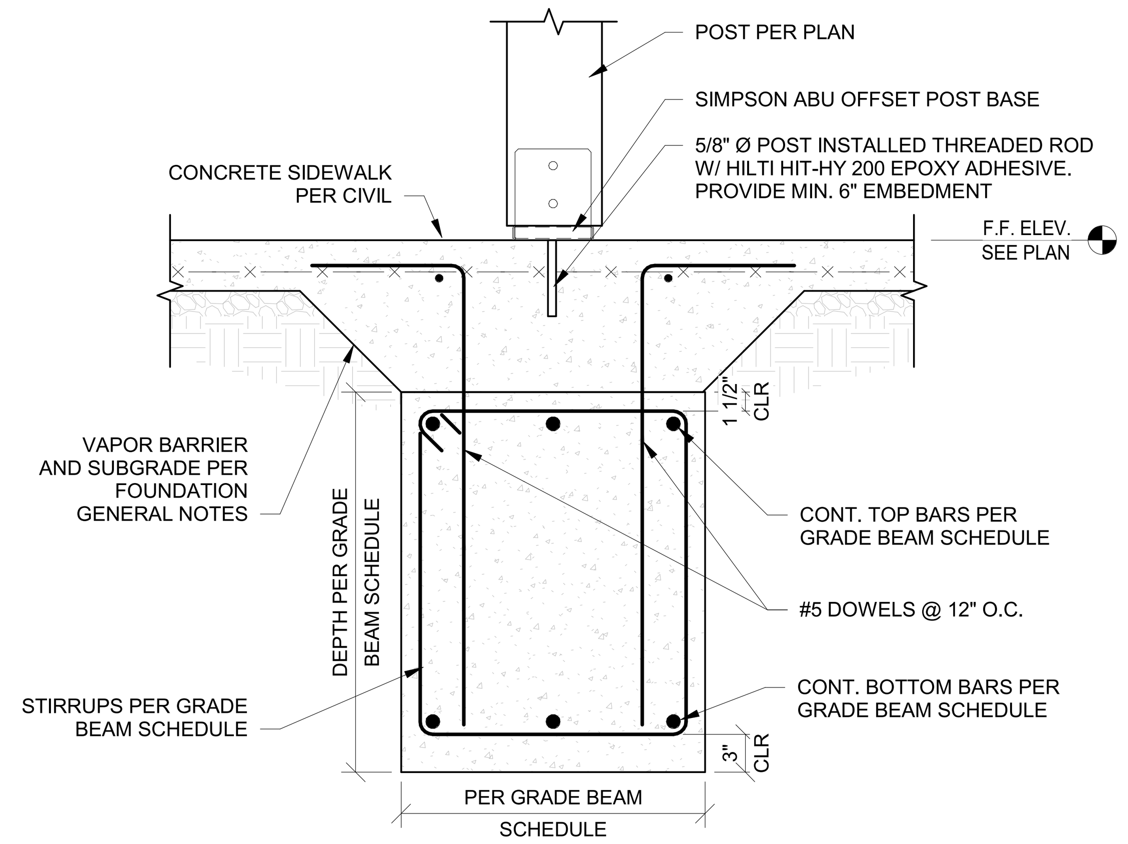
PROJECT NUMBER: 2023000333

SHEET NUMBER:

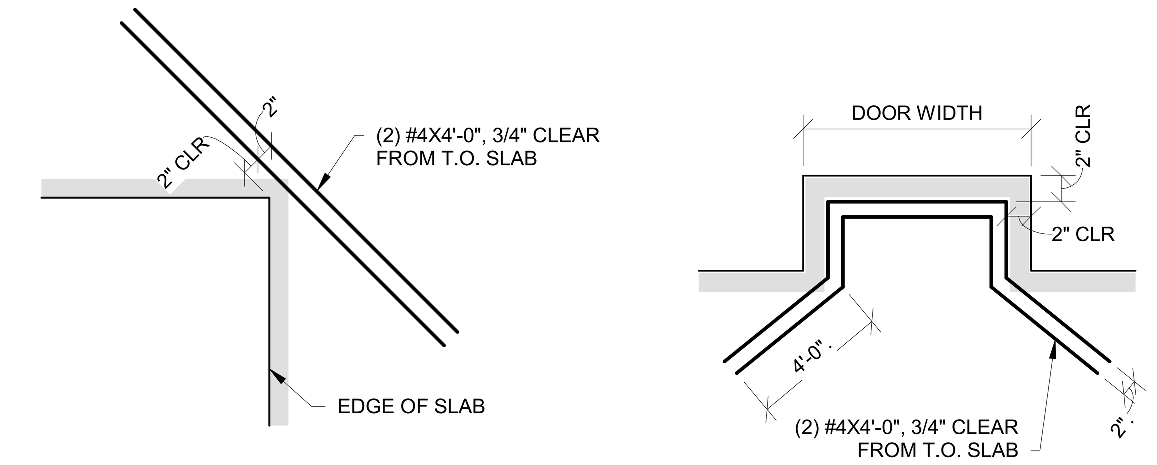
S500



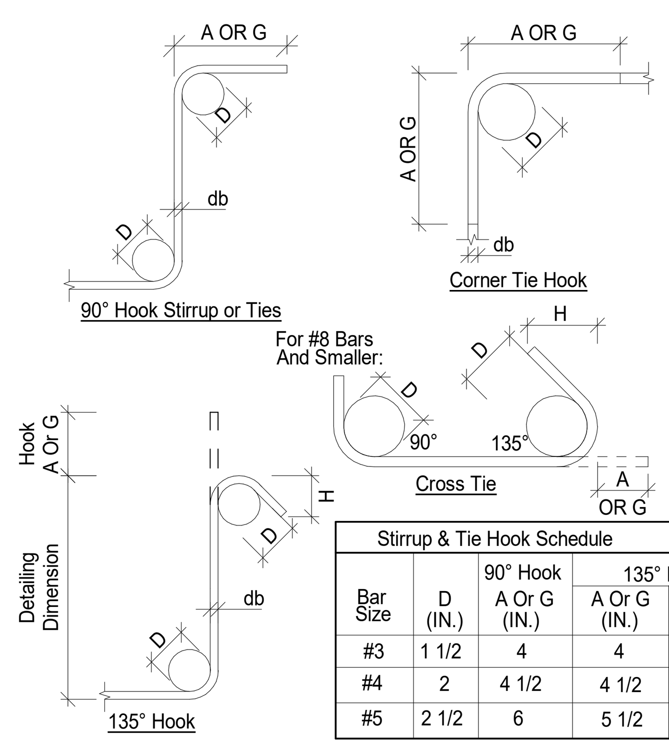
1 SECTION AT GRADE BEAM
S501 1" = 1'-0"



2 SECTION AT POST BASE
S501 1" = 1'-0"



3 ADDITIONAL REINFORCING IN SLABS
S501 3/4" = 1'-0"

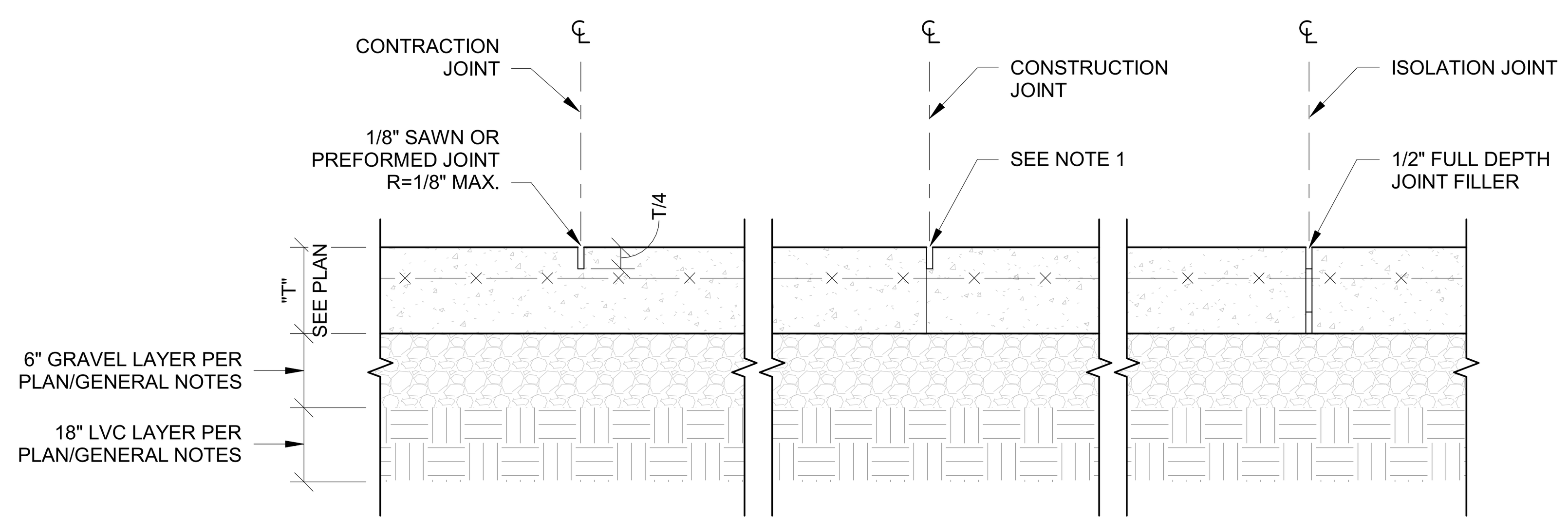


Stirrup & Tie Hook Schedule

Bar Size	90° Hook D (IN.)	90° Hook A Or G (IN.)	135° Hook A Or G (IN.)	135° Hook H (IN.)
#3	1 1/2	4	4	2 1/2
#4	2	4 1/2	4 1/2	3
#5	2 1/2	6	5 1/2	3 3/4

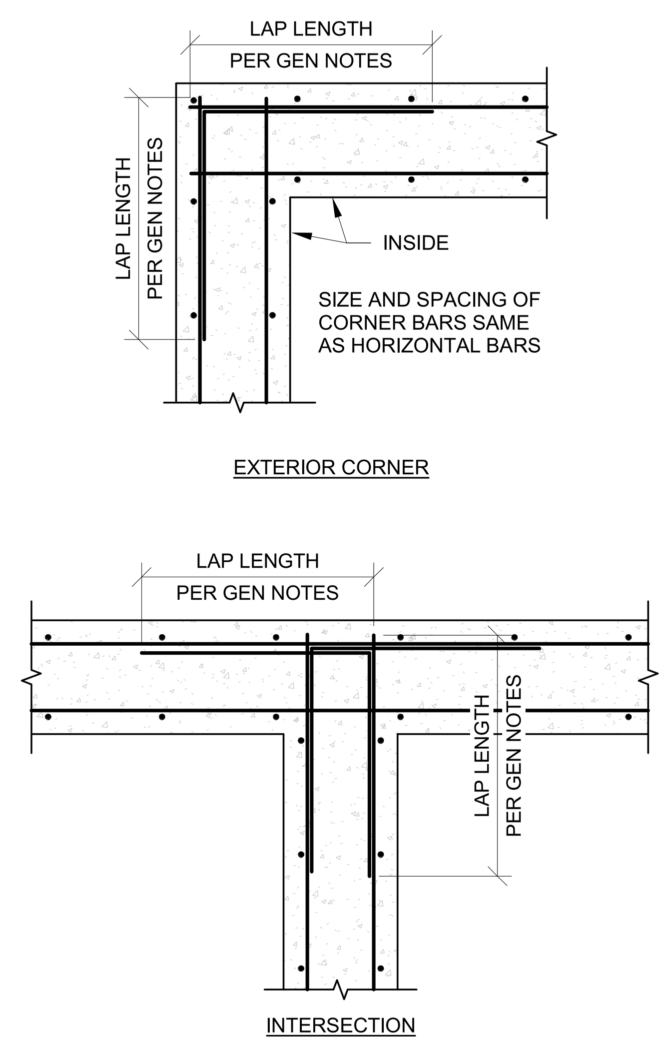
D=Inside Diameter Of Bend
#3 THRU #8 D = 4db
#9 THRU #11 D = 5db
#14 THRU #18 D = 6db

4 STIRRUP AND TIE BAR BENDING DETAIL
S501 NTS



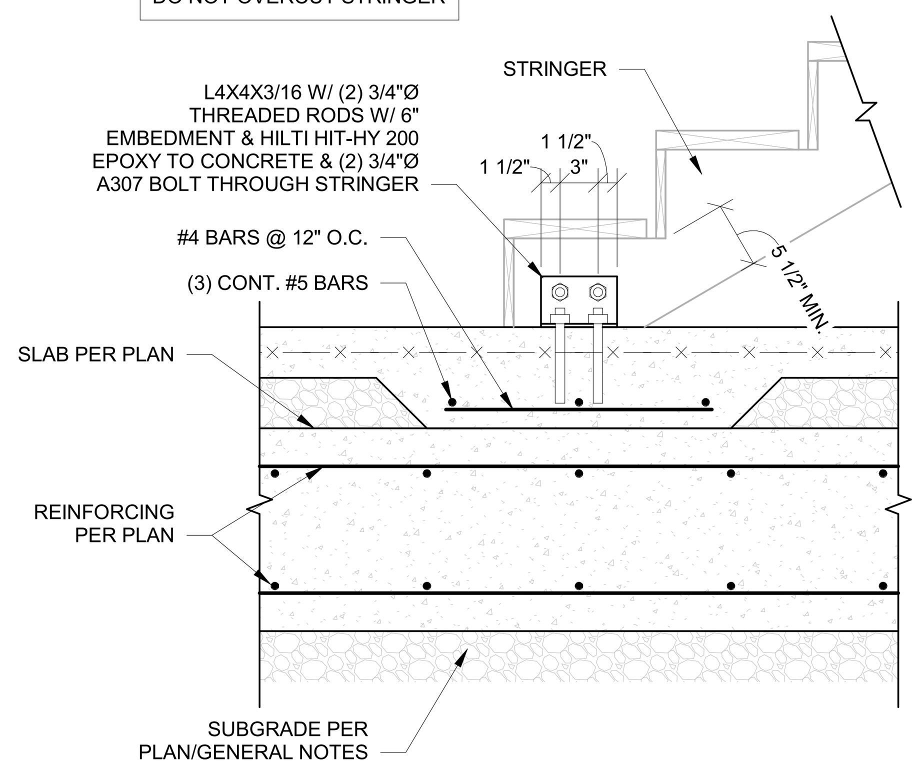
NOTES:
1. LOCATE CONSTRUCTION JOINTS AT SAW JOINT LOCATIONS. MATCH SAW JOINT PROFILE. ALL CONSTRUCTION JOINT LOCATIONS TO BE REVIEWED AND APPROVED BY EOR PRIOR TO CONSTRUCTION.
2. MAXIMUM SPACING BETWEEN SAW JOINTS = 15'-0" FOR 6" SLABS & 10'-0" FOR 4" SLABS. SEE PLAN FOR LOCATIONS.
3. CONTINUE SLAB ON GRADE REINFORCING, UNO. PROVIDE TENSION LAP SPLICE AS REQUIRED.
4. DO NOT PLACE DOWELS WITHIN 12" OF A SLAB CORNER.

5 TYPICAL SLAB ON GRADE JOINTS
S501 1" = 1'-0"



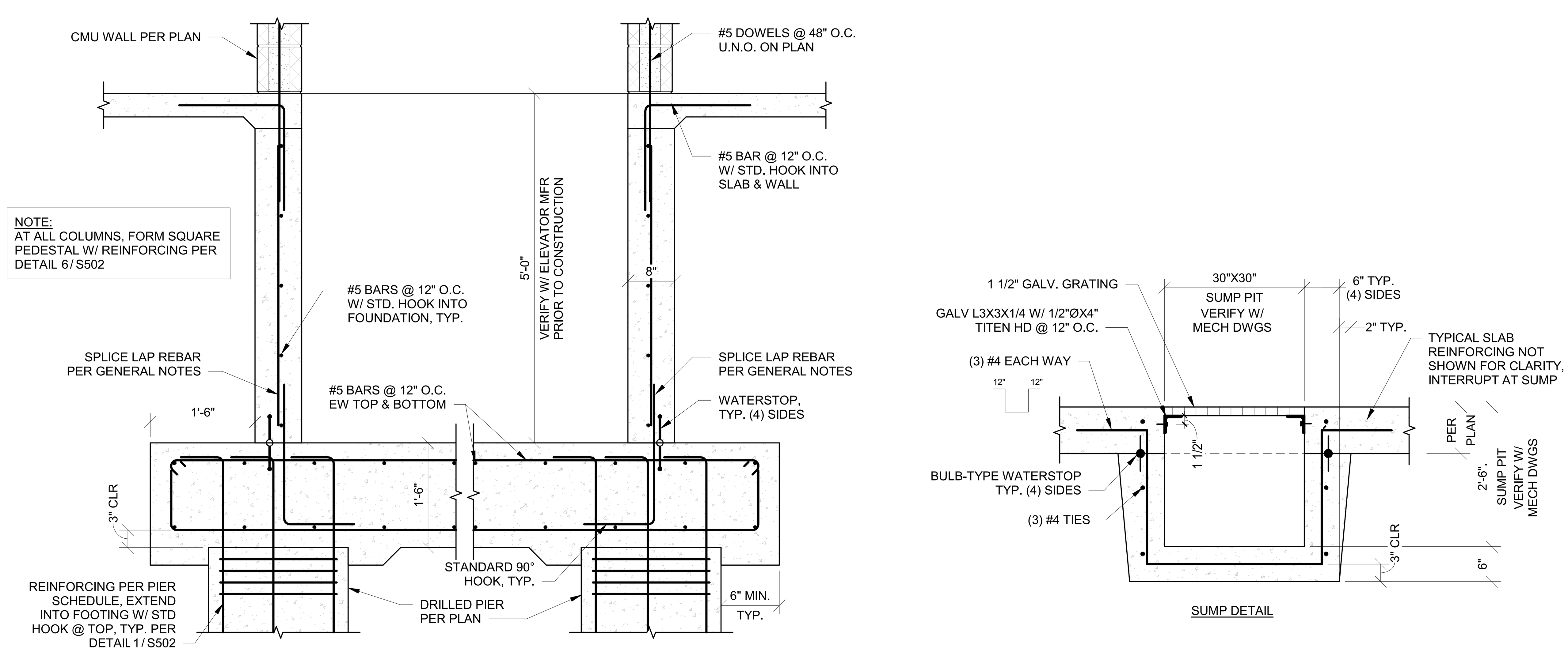
6 CORNER BAR DETAIL
S501 3/4" = 1'-0"

NOTE:
DO NOT OVERCUT STRINGER

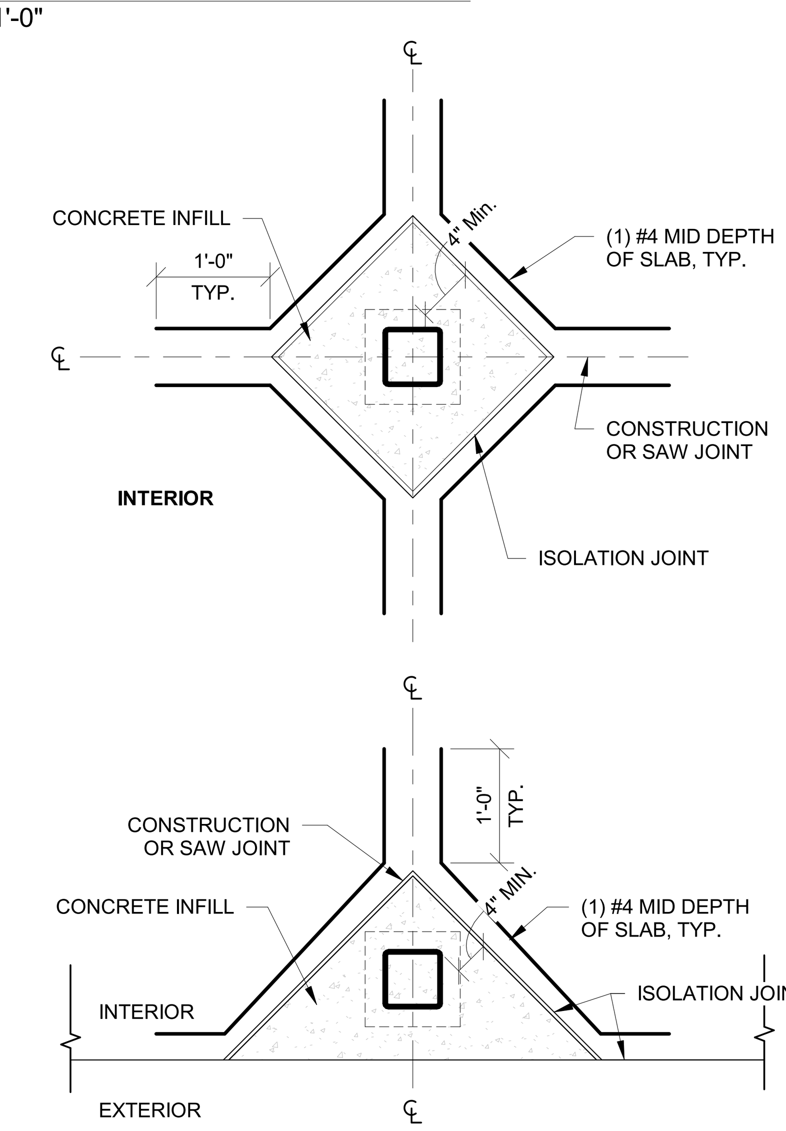


7 STAIR TO THICKENED SLAB
S501 1" = 1'-0"

NOTE:
AT ALL COLUMNS, FORM SQUARE PEDESTAL W/ REINFORCING PER DETAIL 6 / S502



8 ELEVATOR PIT DETAIL
S501 3/4" = 1'-0"



9 SLAB ON GRADE ISOLATION JOINT AT COLUMNS
S501 3/4" = 1'-0"

IN RESPONSE TO GC COMMENTS 3

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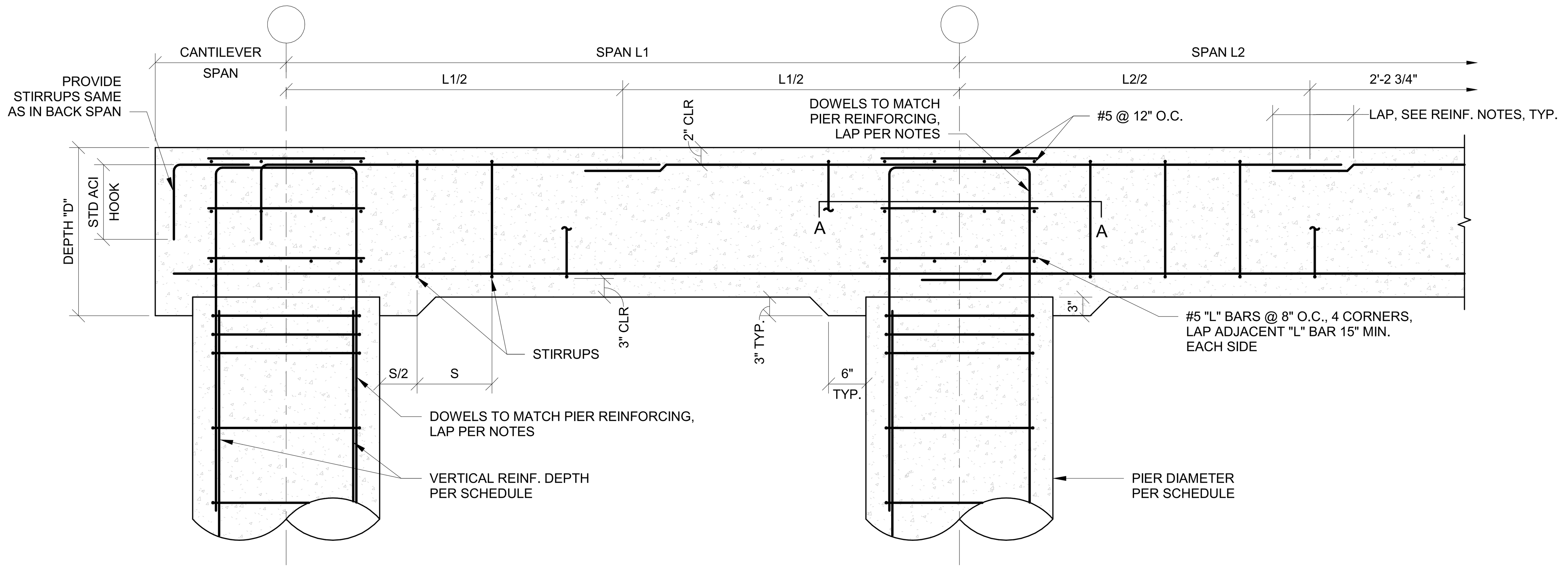
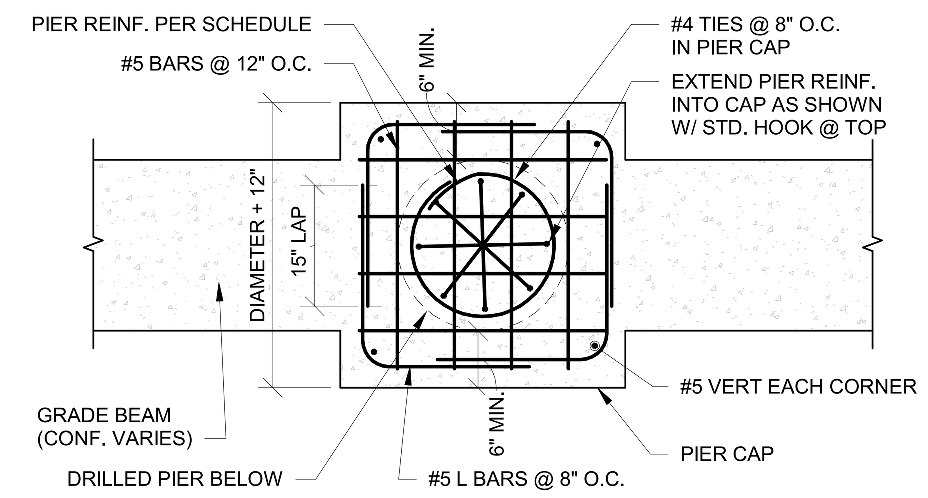
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
TYPICAL FOUNDATION DETAILS

PROJECT NUMBER: 2023000333

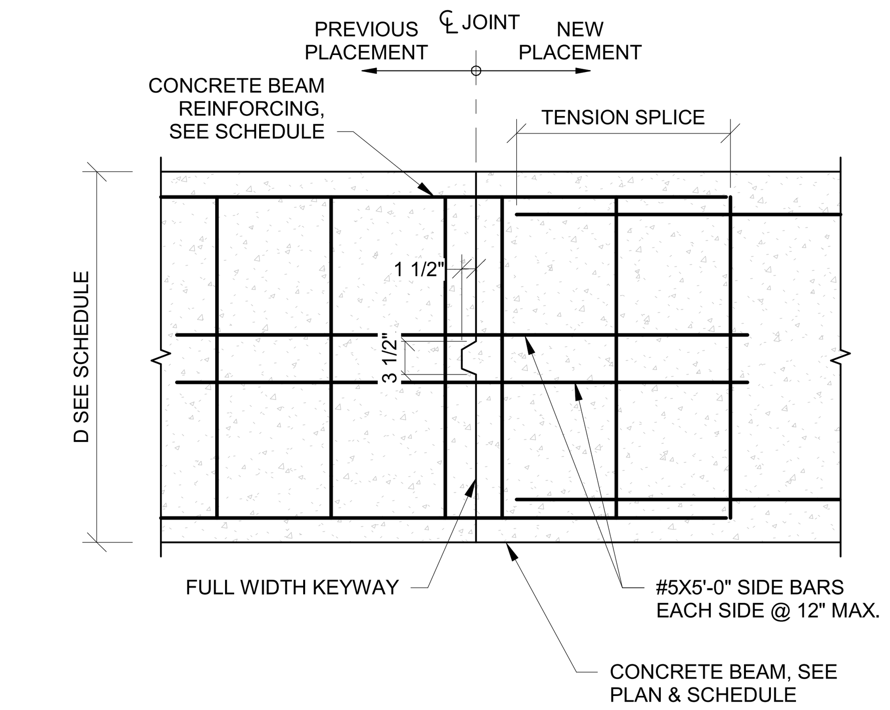
SHEET NUMBER:
S501



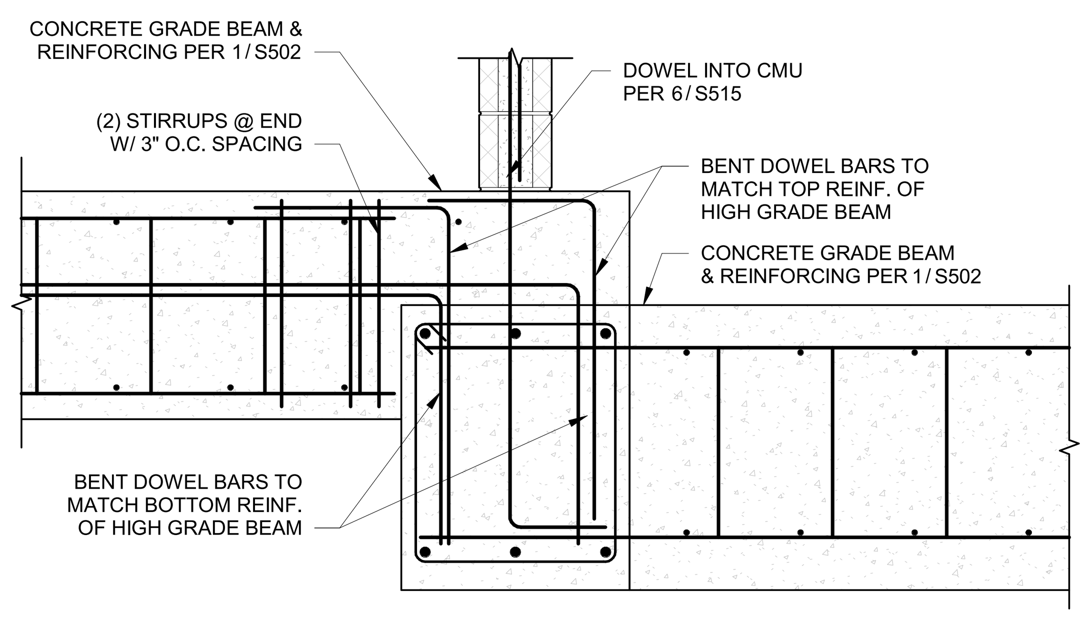


SECTION A-A

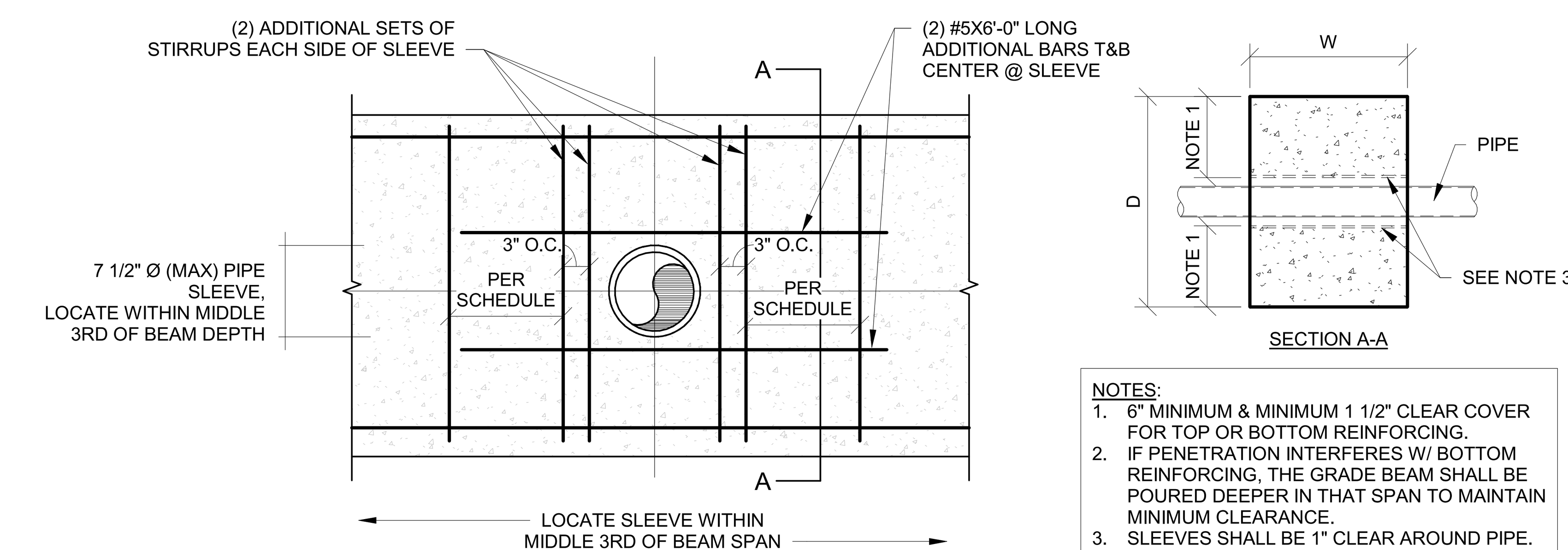
1 GRADE BEAM & PIER CAP REINFORCING
S502 3/4" = 1'-0"



2 GRADE BEAM CONSTRUCTION JOINT
S502 3/4" = 1'-0"

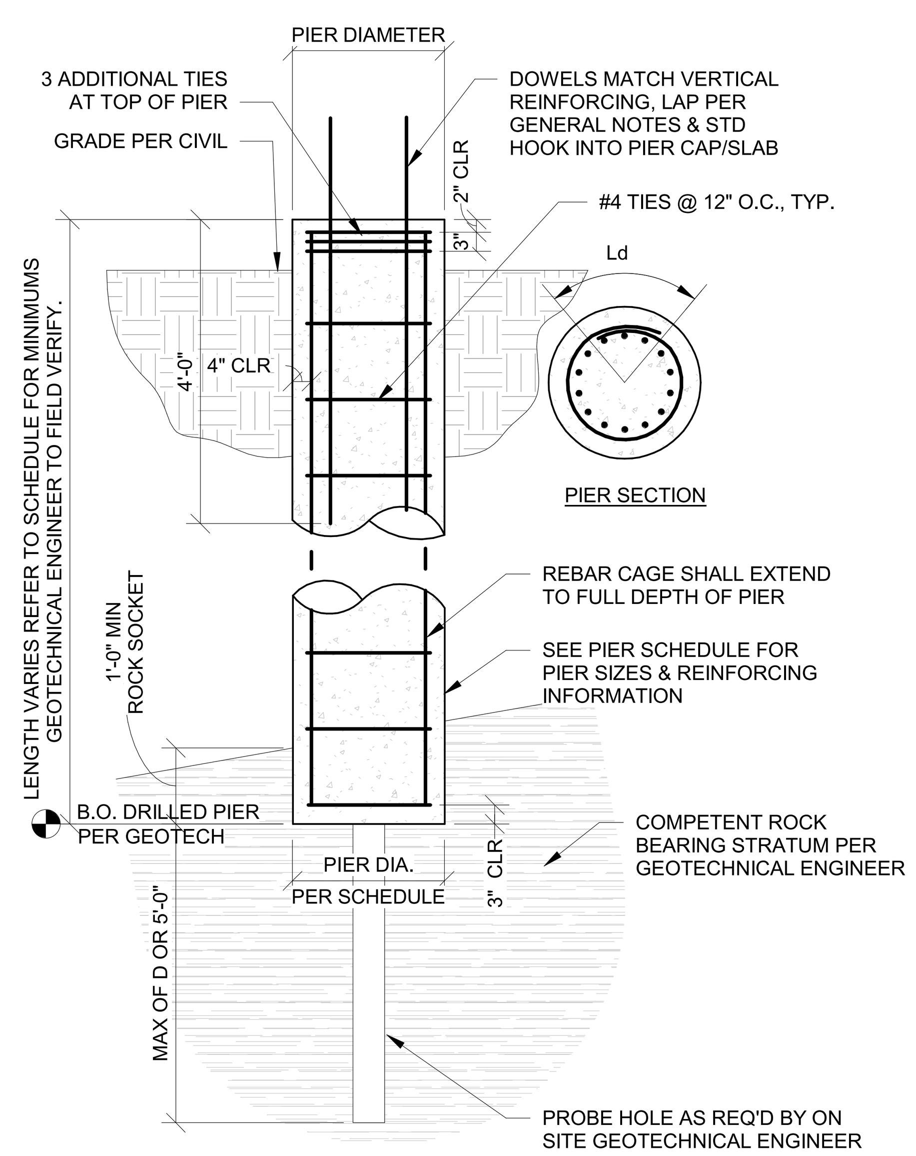


4 TYPICAL GRADE BEAM STEP SECTION
S502 3/4" = 1'-0"

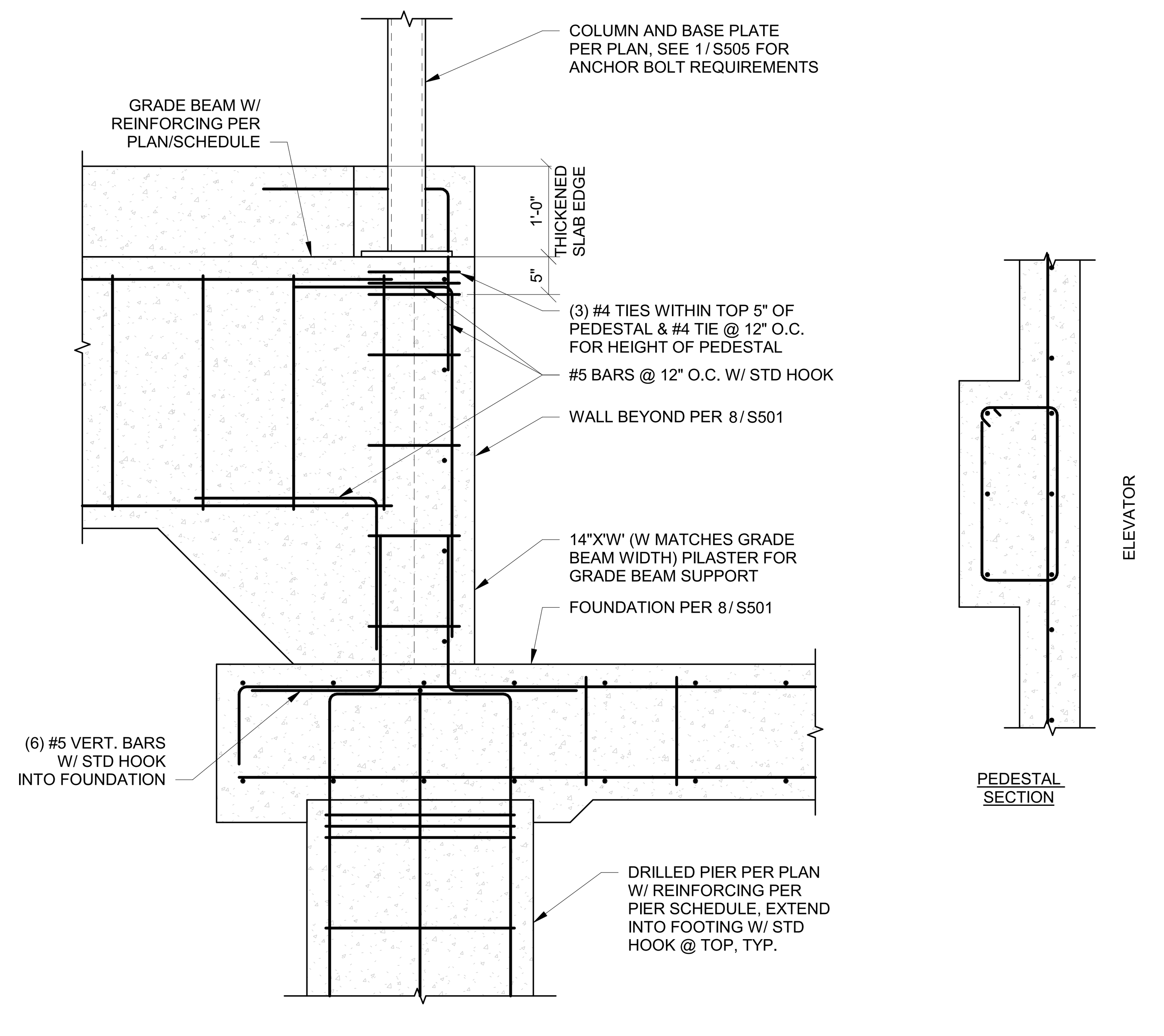


NOTES:
1. 6" MINIMUM & MINIMUM 1 1/2" CLEAR COVER FOR TOP OR BOTTOM REINFORCING.
2. IF PENETRATION INTERFERES W/ BOTTOM REINFORCING, THE GRADE BEAM SHALL BE POURED DEEPER IN THAT SPAN TO MAINTAIN MINIMUM CLEARANCE.
3. SLEEVES SHALL BE 1" CLEAR AROUND PIPE. WRAP PIPE W/ COMPRESSIBLE MATERIAL.
4. MAX. PENETRATION DIAMETER IS D/4.

5 OPENING THRU GRADE BEAM
S502 3/4" = 1'-0"



3 TYPICAL DRILLED PIER REINFORCEMENT DETAIL
S502 1/2" = 1'-0"



6 SECTION AT PEDESTAL AT ELEVATOR
S502 3/4" = 1'-0"

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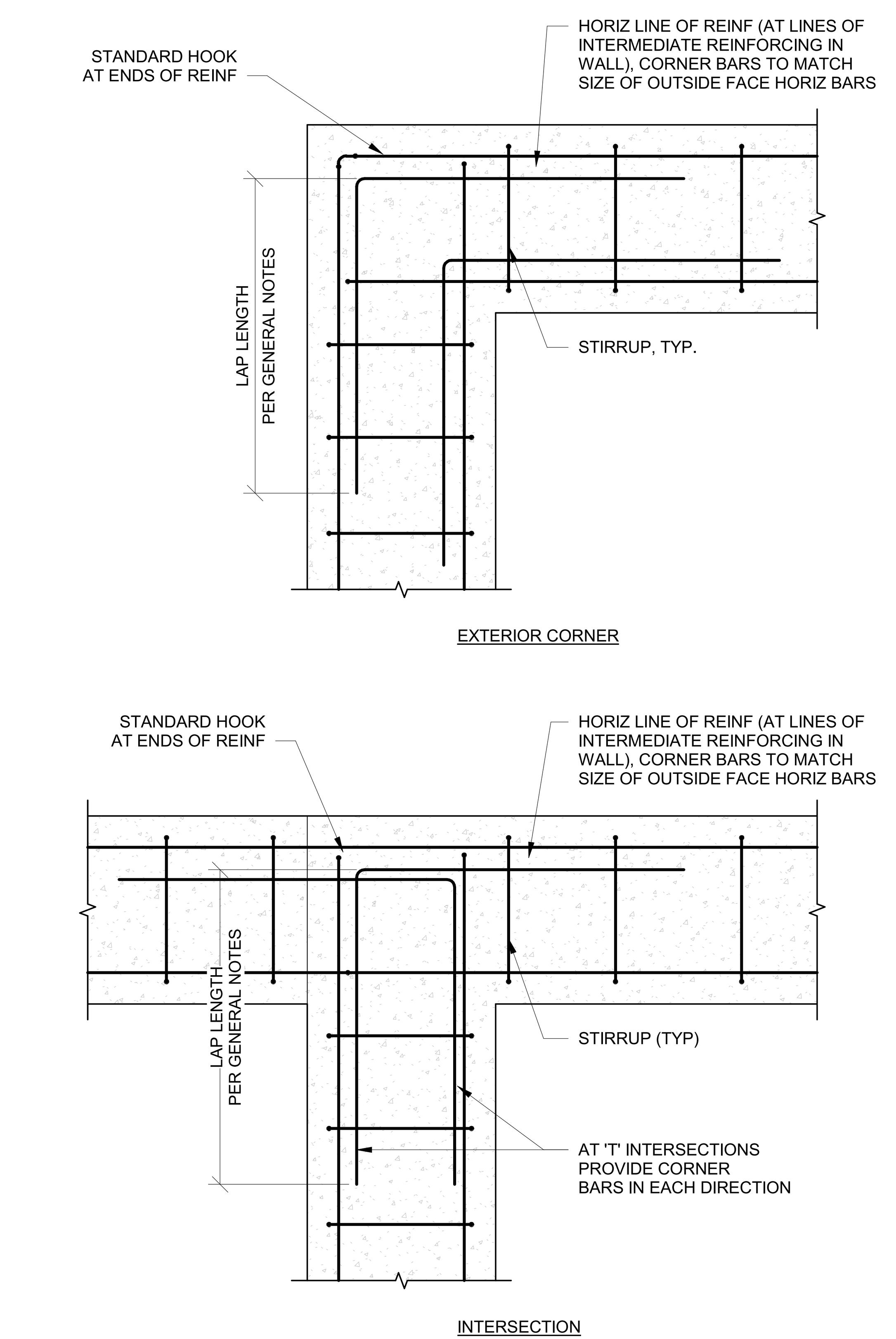
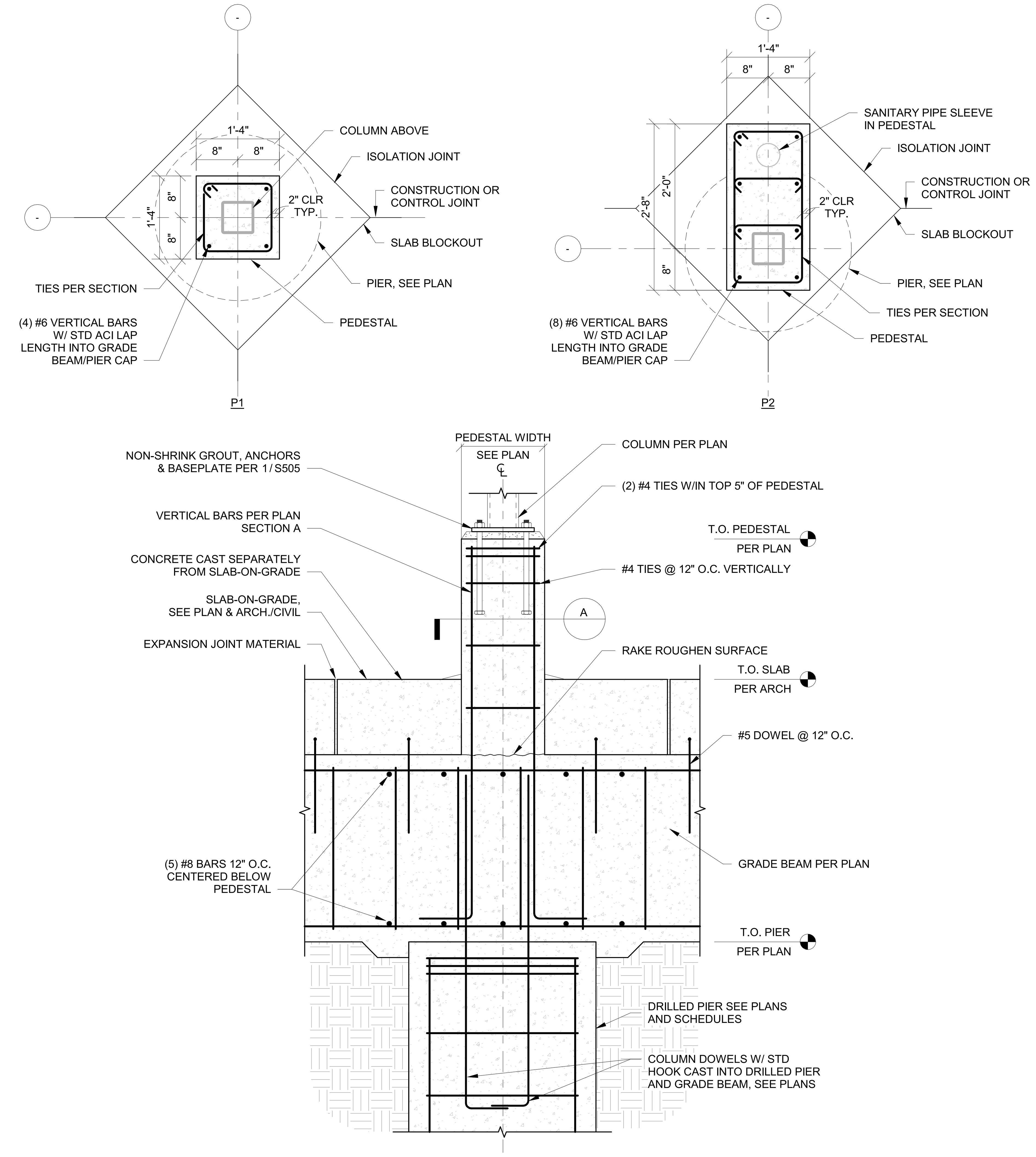
SHEET TITLE
TYPICAL FOUNDATION DETAILS

PROJECT NUMBER: 2023000333

SHEET NUMBER:
S502

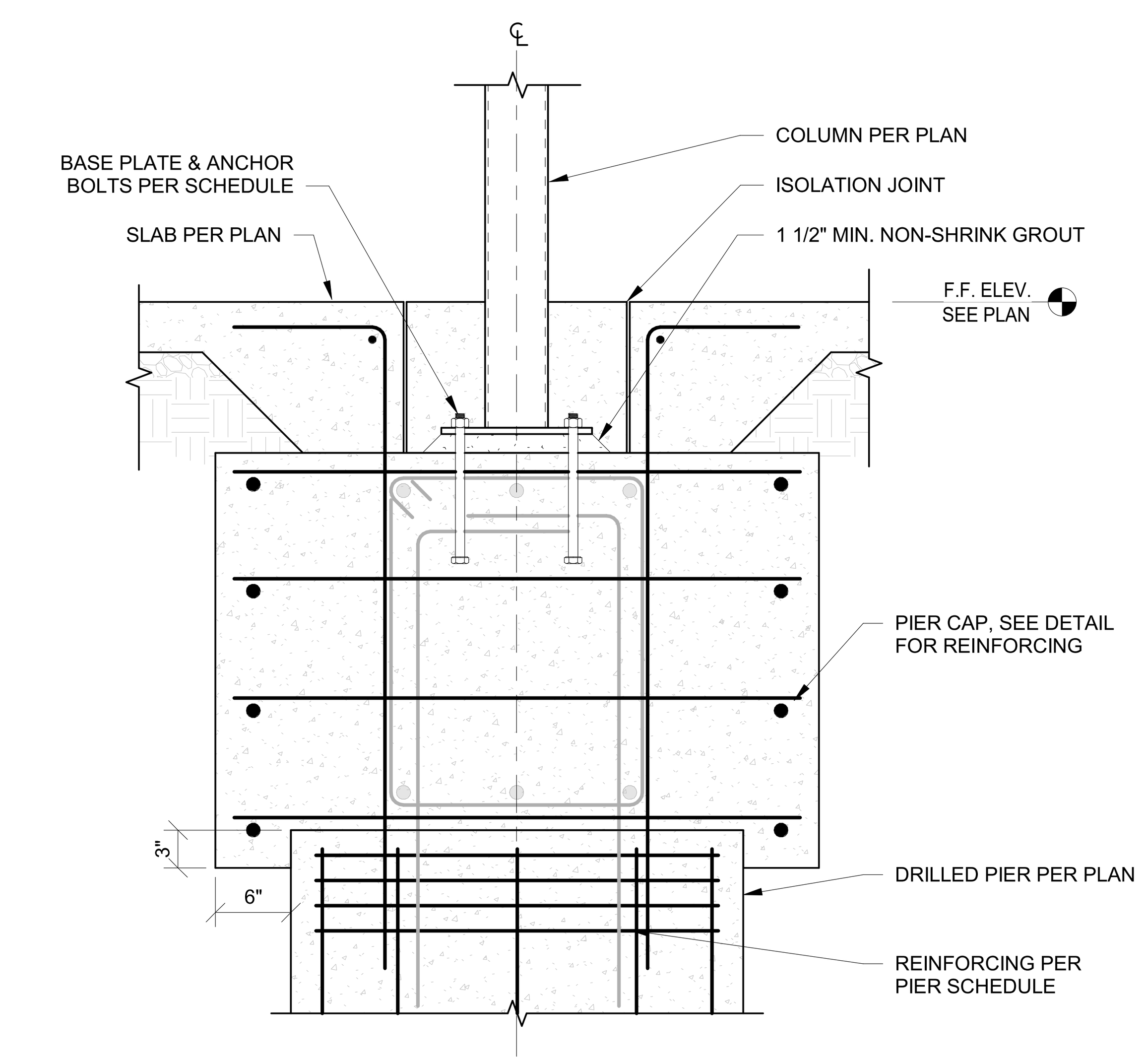


1 GRADE BEAM CORNER & INTERSECTION REINFORCING
S503 3/4" = 1'-0"

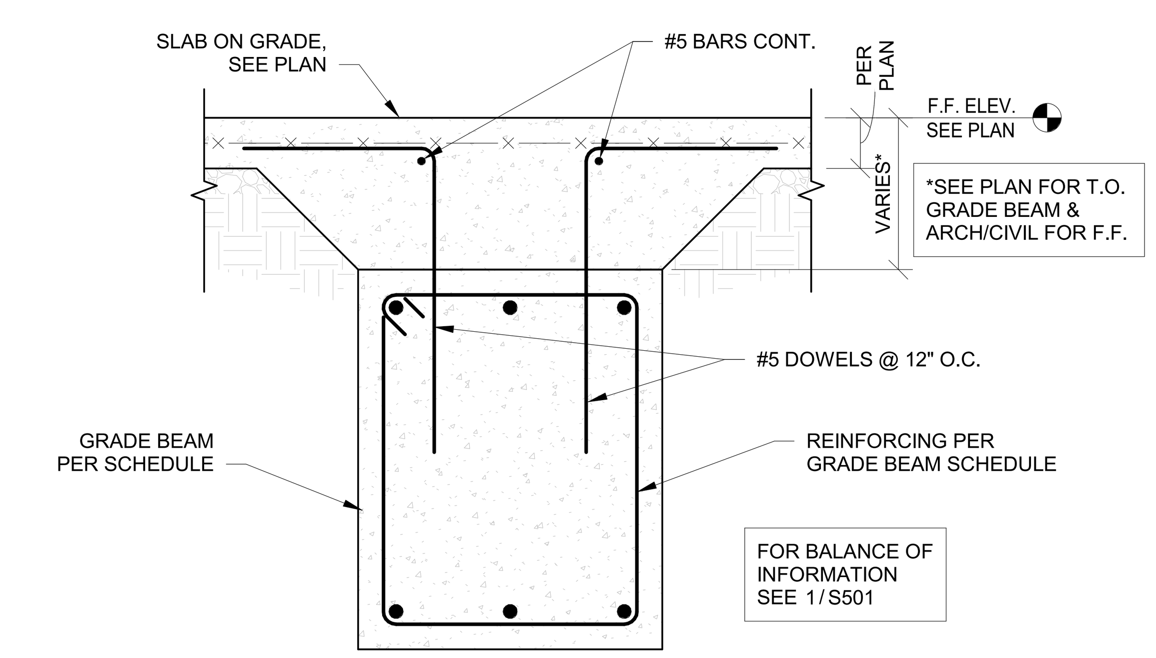


2 GARAGE COLUMN PIER SECTION
S503 3/4" = 1'-0"

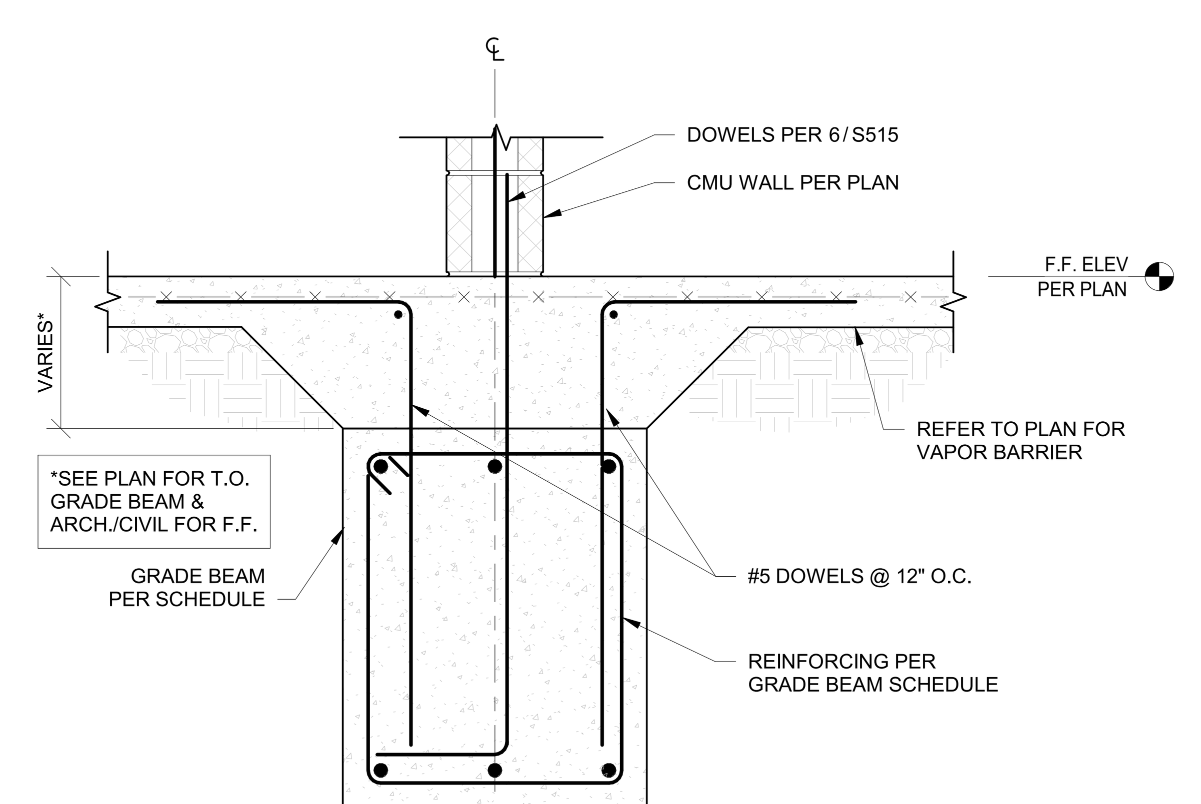
IN RESPONSE TO GC COMMENTS 3



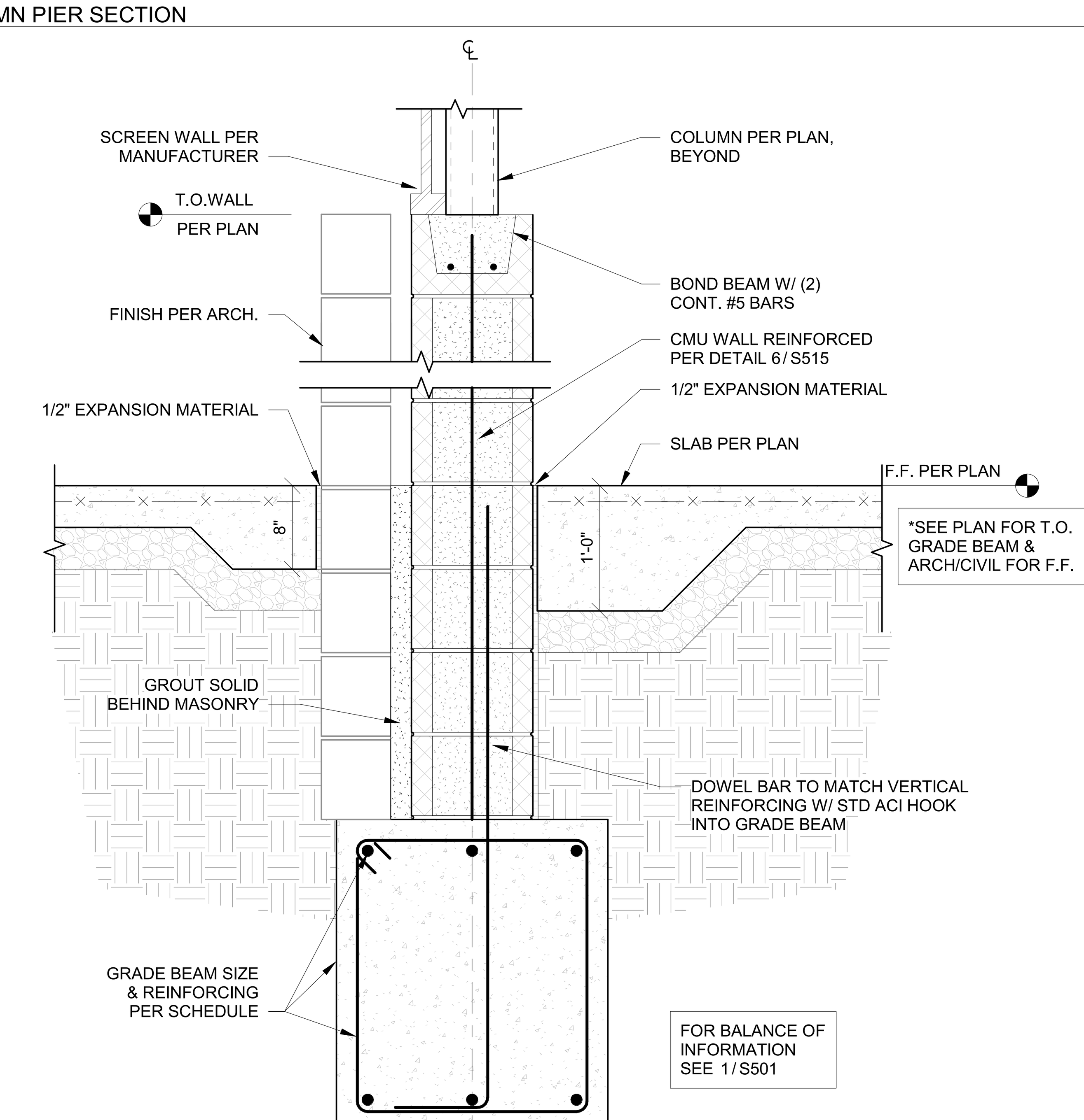
3 TYPICAL INTERIOR COLUMN FOOTING
S503 1" = 1'-0"



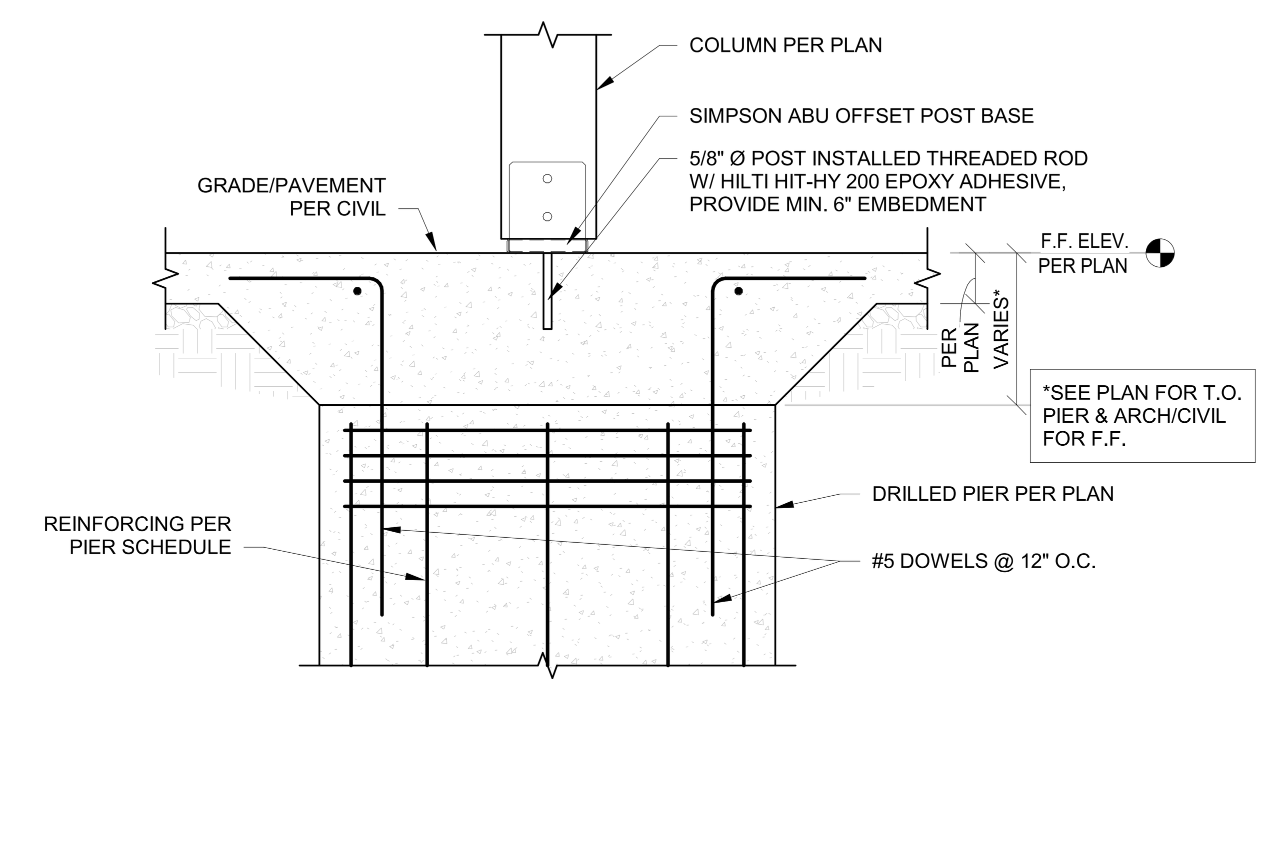
4 SECTION AT GRADE BEAM
S503 1" = 1'-0"



5 FOUNDATION SECTION AT CMU
S503 1" = 1'-0"



6 FOUNDATION SECTION AT CMU WALL
S503 1" = 1'-0"



7 WOOD CANOPY COLUMN BASE CONNECTION
S503 1" = 1'-0"

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MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

03/06/2024

TOWNEPLACE SUITES

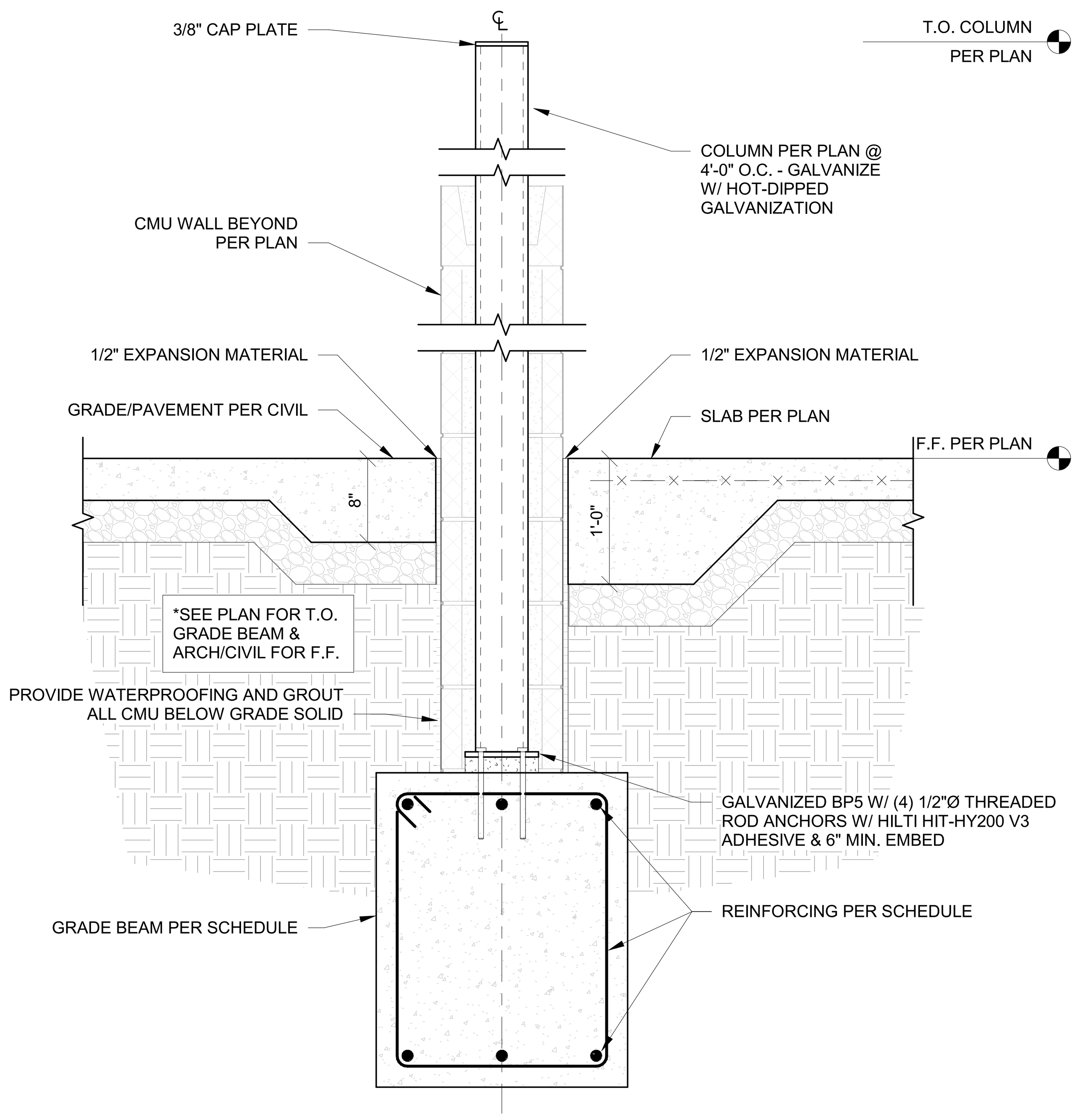
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
FOUNDATION DETAILS

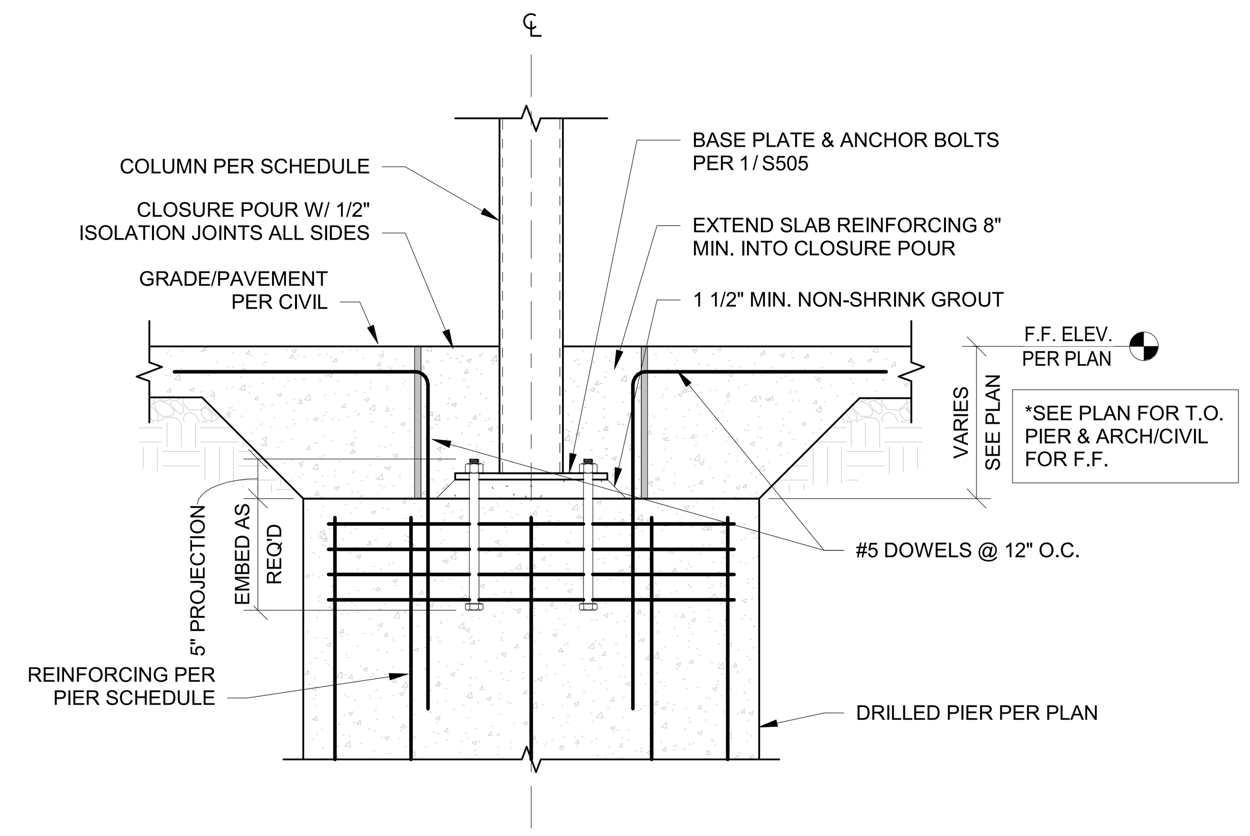
PROJECT NUMBER: 2023000333

SHEET NUMBER:

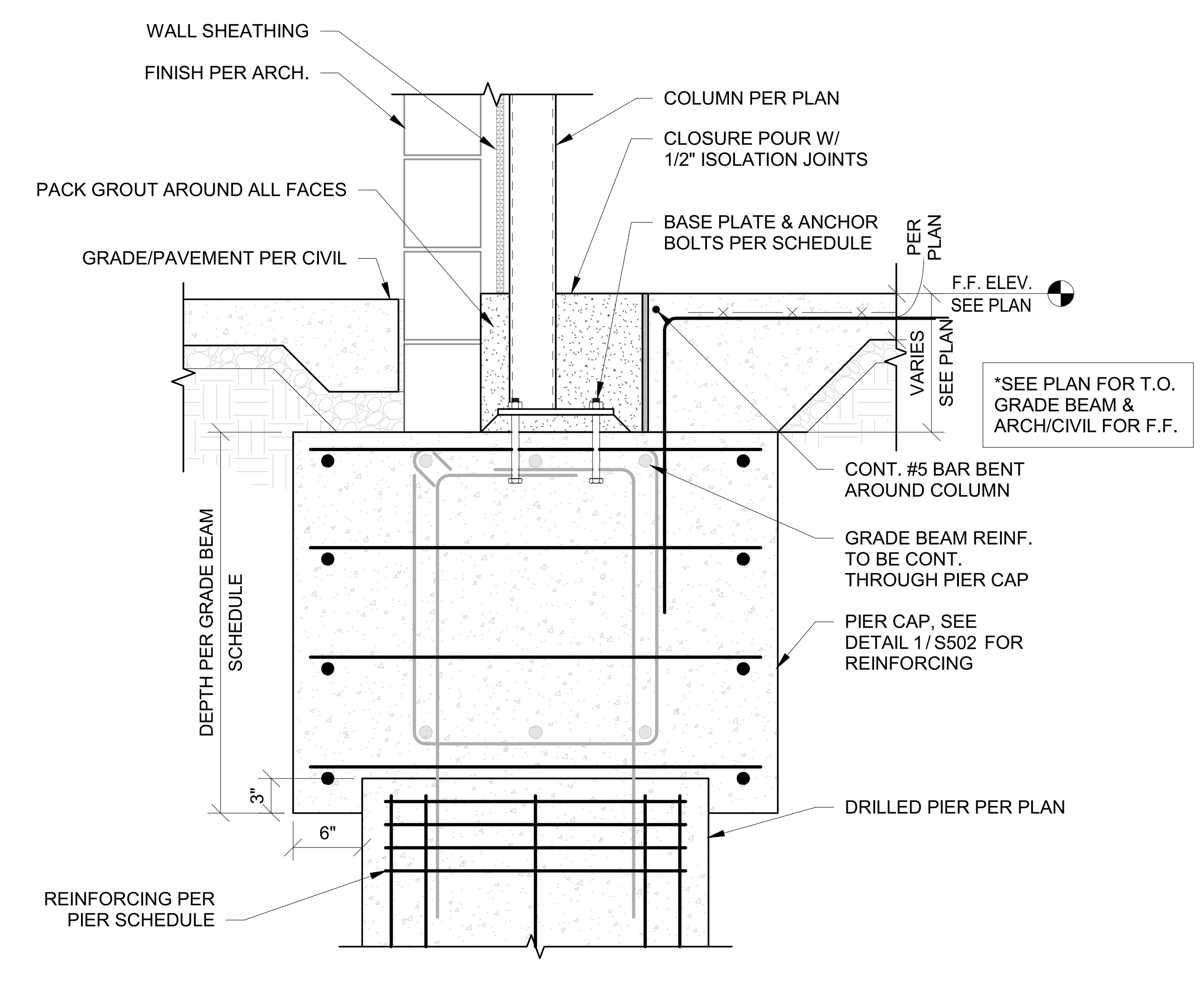
S503



1 FOUNDATION SECTION AT CANTILEVERED COLUMN IN SCREEN WALL
S504 1" = 1'-0"

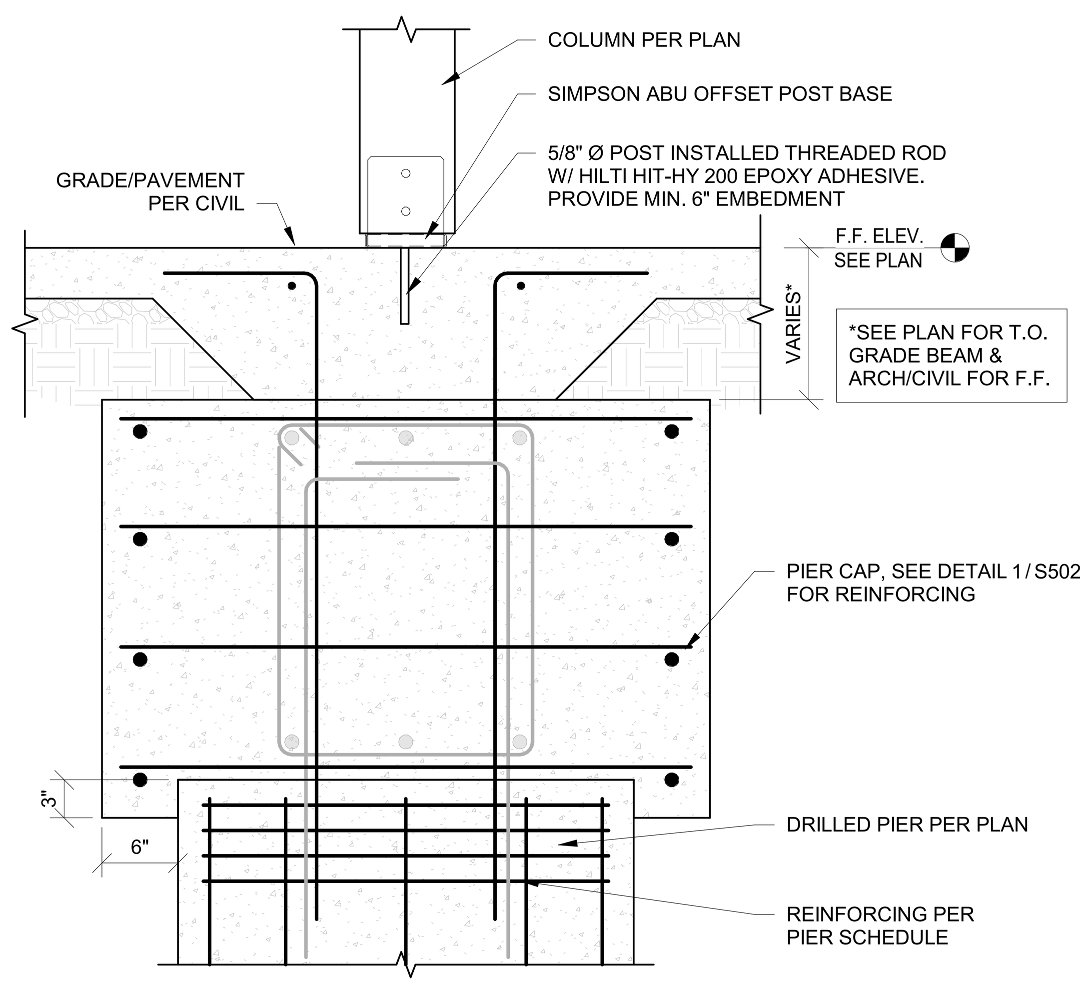


2 SECTION AT CANOPY COLUMN FOUNDATION
S504 1" = 1'-0"

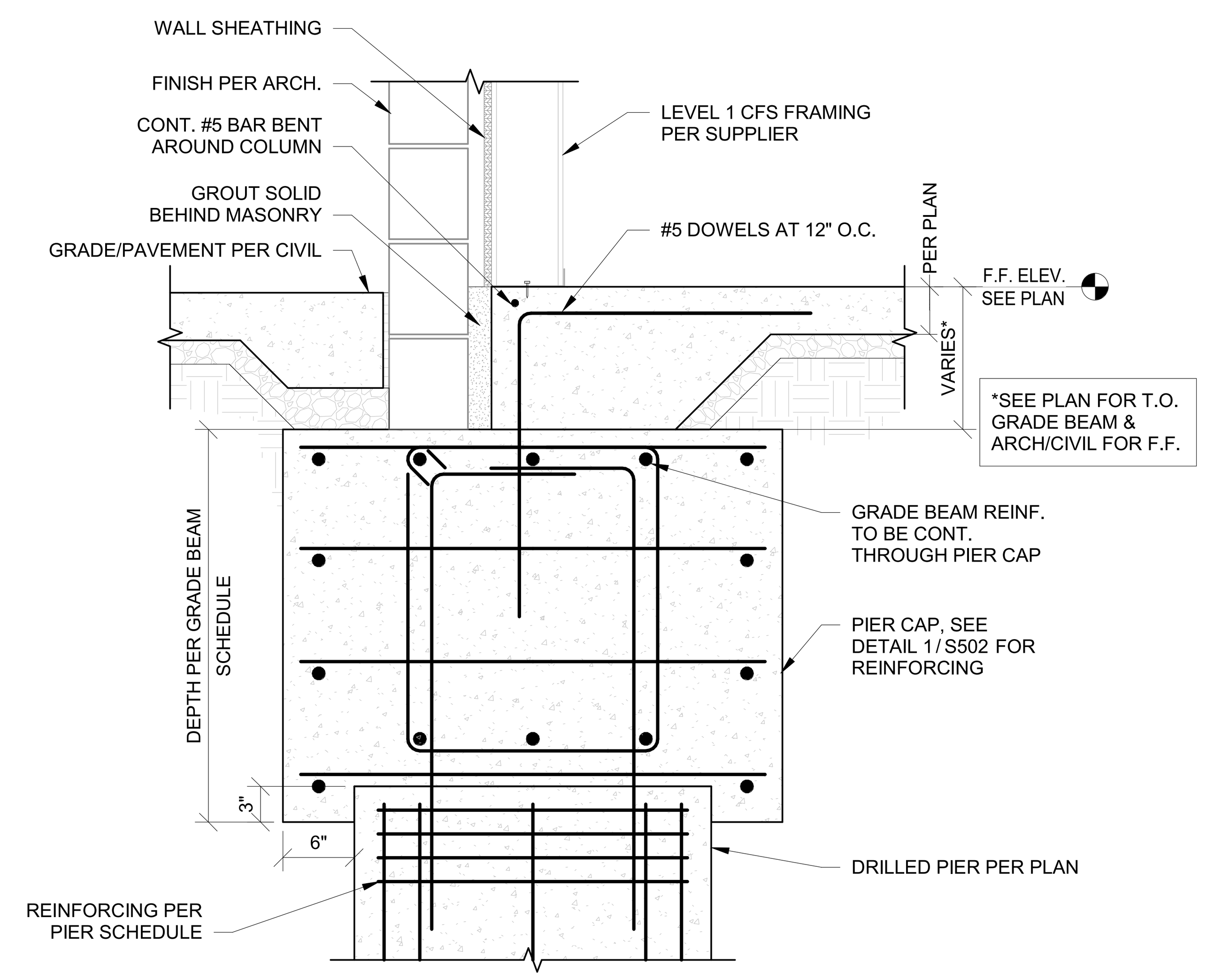


3 SECTION AT EXTERIOR STEEL COLUMN AT DRILLED PIER
S504 1" = 1'-0"

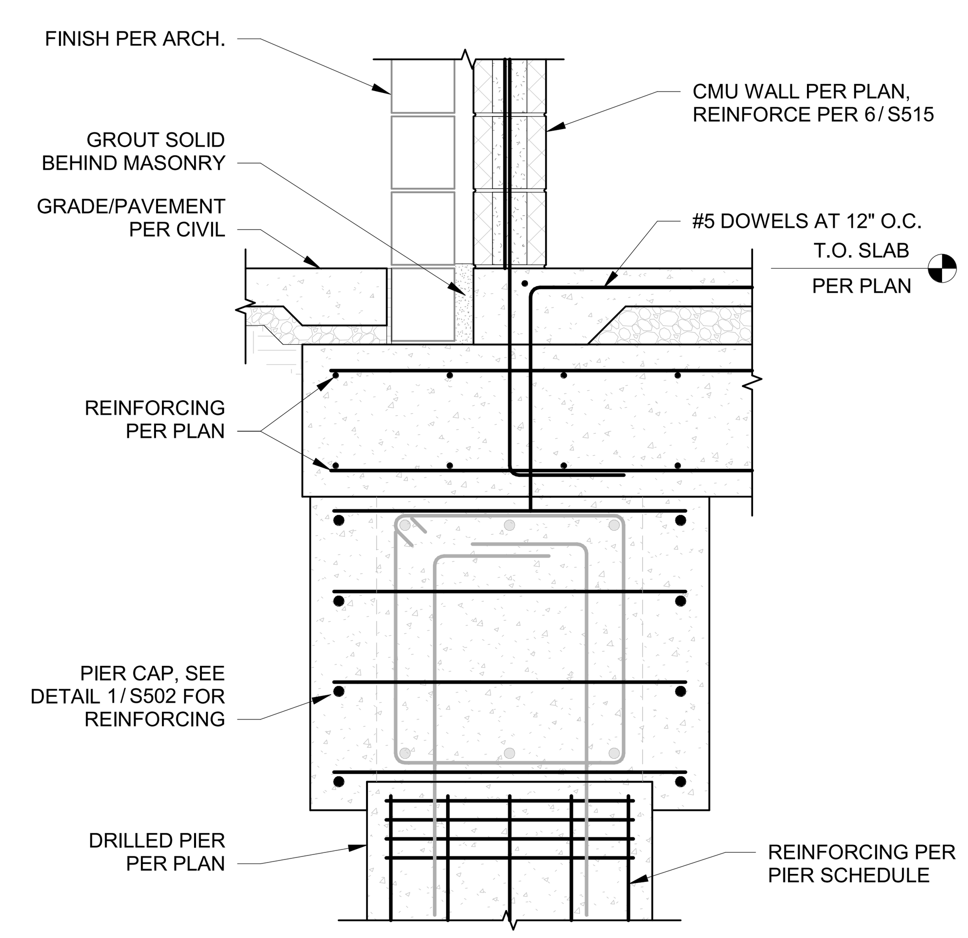
IN RESPONSE TO GC COMMENTS 3



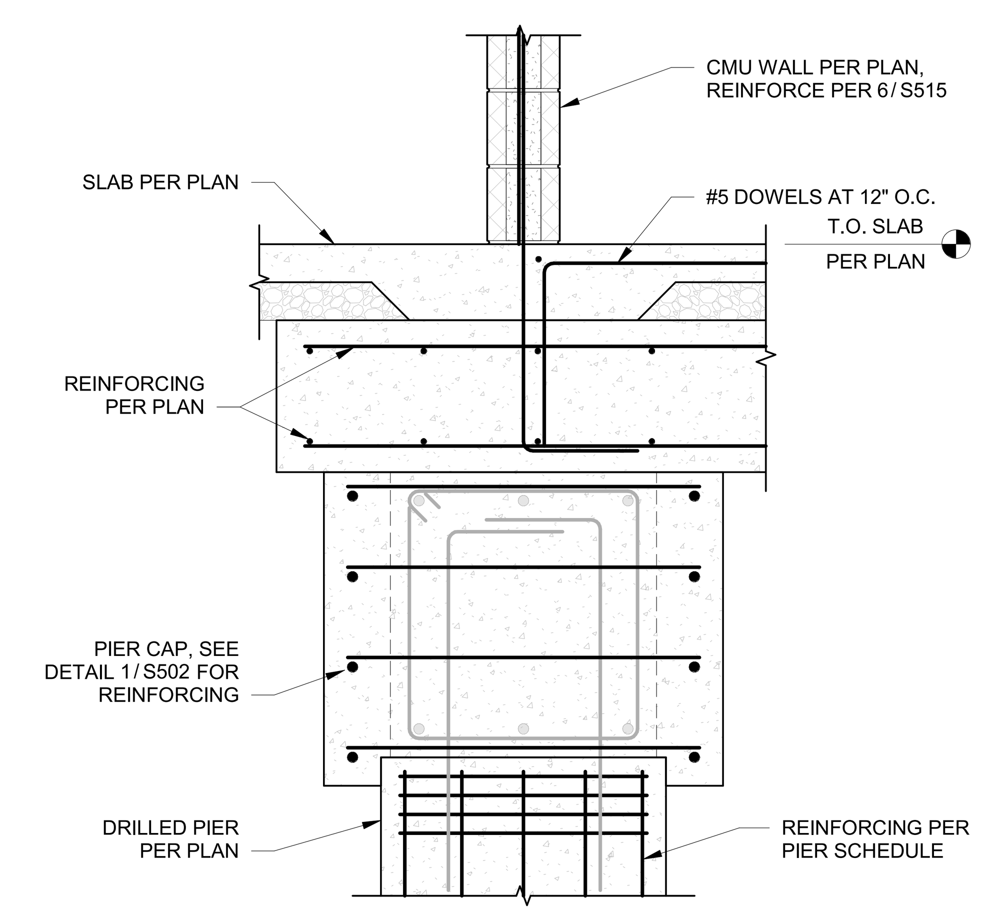
4 SECTION AT WOOD COLUMN BASE
S504 1" = 1'-0"



5 WALL SECTION AT PIER CAP
S504 1" = 1'-0"



6 SECTION AT STAIR TOWER FOUNDATION
S504 3/4" = 1'-0"



7 INTERIOR SECTION AT STAIR TOWER FOUNDATION
S504 3/4" = 1'-0"

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1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
FOUNDATION DETAILS

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S504

9/9/2024 8:49:26 AM
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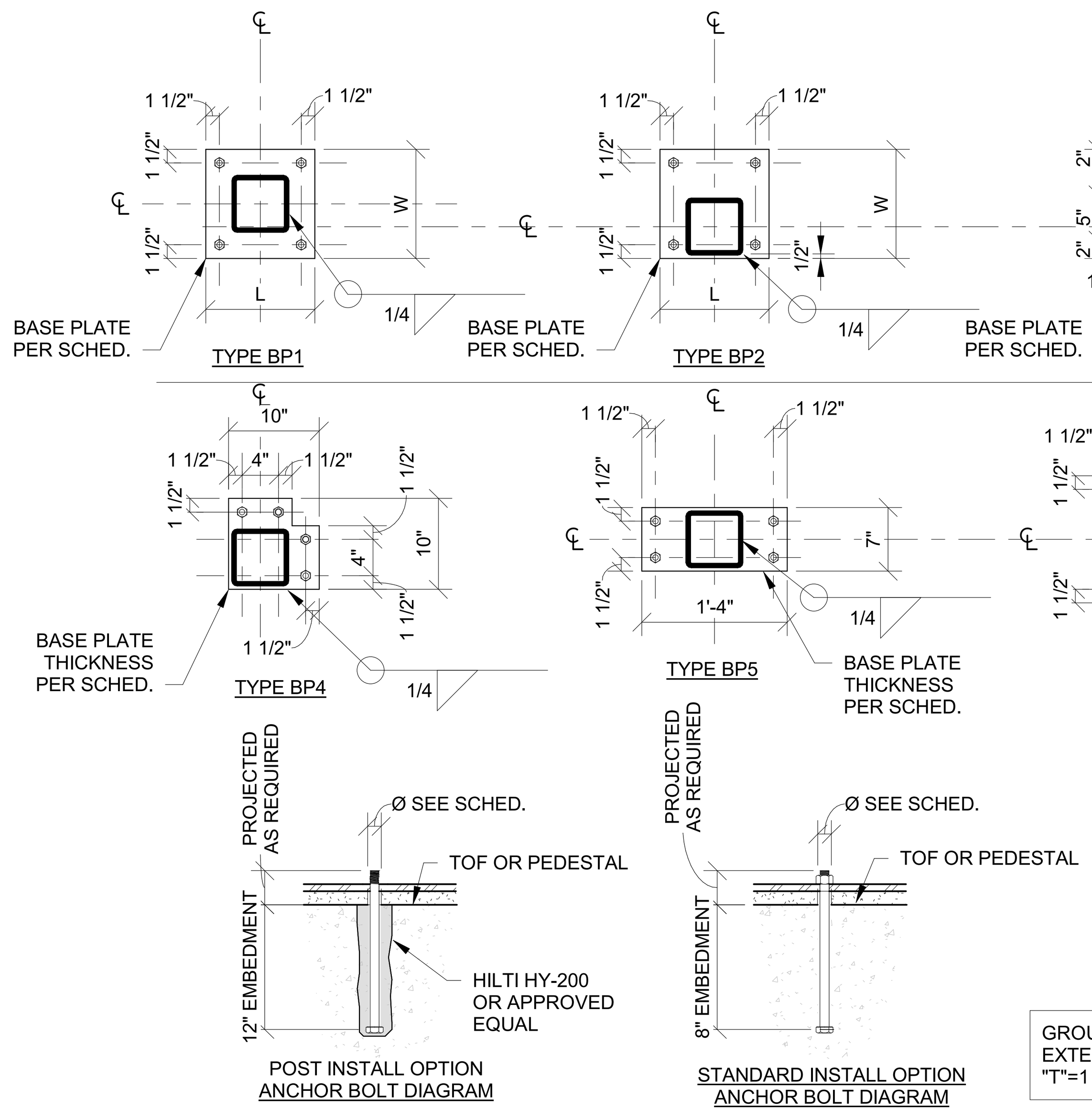
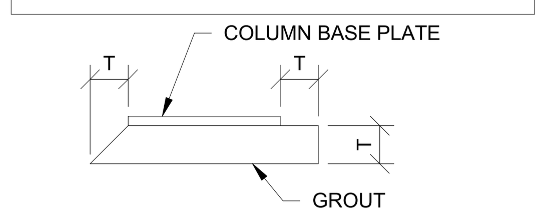


BASEPLATE SCHEDULE

Mark	Column Size	Baseplate	Anchor Diameter
BP#	HSS4X4	PL 1/2"x10"x0'-10"	(4) 5/8"Ø
BP#	HSS5X5	PL 1/2"x11"x0'-11"	(4) 5/8"Ø
BP#	HSS6X6	PL 3/4"x12"x1'-0"	(4) 5/8"Ø
BP#	HSS8X8	PL 3/4"x14"x1'-2"	(4) 5/8"Ø

NOTES:
1. W, L, & Thickness vary per HSS column size per schedule
2. Anchor & column layout vary based on callout per plan (i.e.: BP1, BP2, etc.)

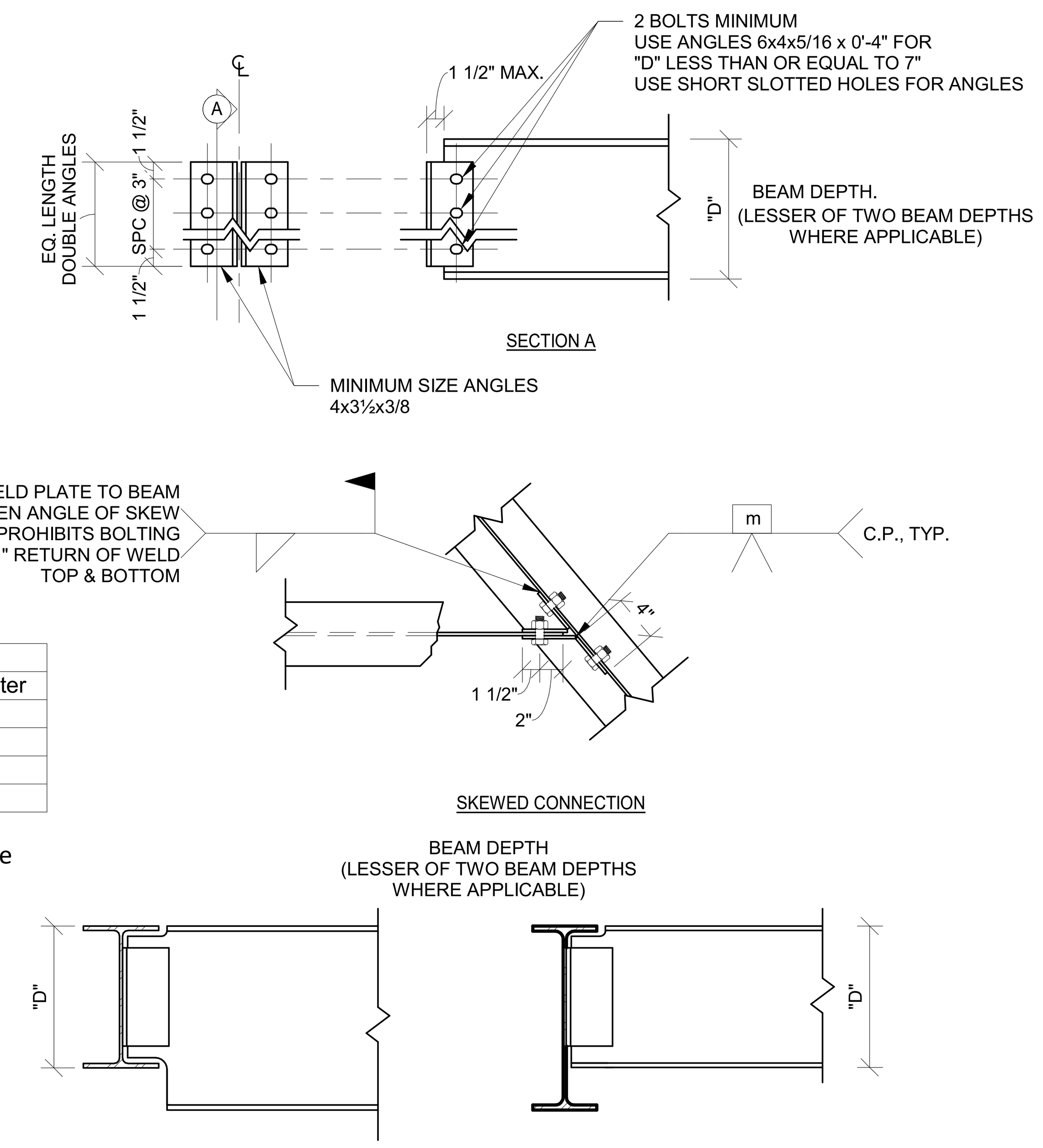
GROUT MAY BE BEVELED OR FORMED BUT SHALL EXTEND A MIN "T" BEYOND FACE OF BASE PLATE. "T"=1 1/2" FOR ANCHOR BOLT Ø UP TO 1"



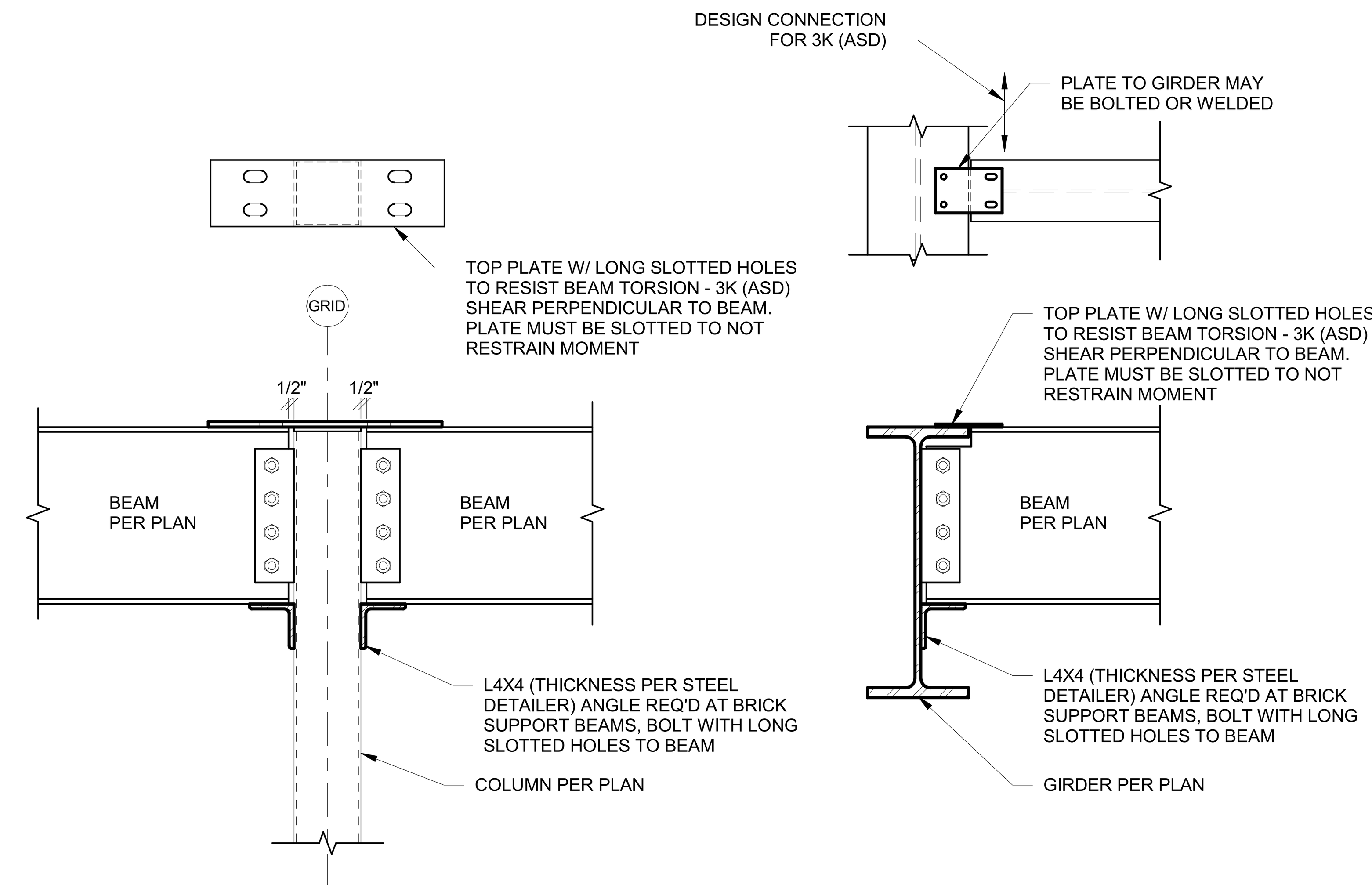
GROUT PLACEMENT

NOTES:
1. SEE SCHEDULE FOR BASE PLATE WxLxTHICKNESS
2. SIZE WELDS PER AISC MIN FILLET REQUIREMENTS
3. ANCHOR BOLTS WITH FORGED HEADS MEETING THE REQUIREMENTS OF ASTM A307 MAY BE SUBMITTED FOR 3/4"Ø ANCHOR BOLTS
4. BP1 TO BE USED TYPICALLY U.N.O. ON PLAN
5. SEE STEEL COLUMN SCHEDULES FOR BALANCE OF INFORMATION

1 COLUMN BASE PLATE
S505 3/4" = 1'-0"

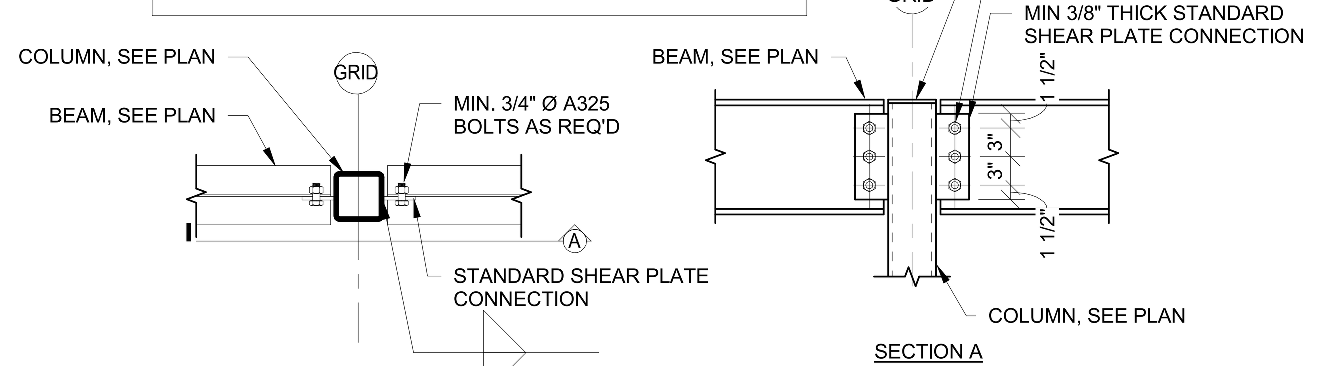


2 BEAM TO BEAM CONNECTION
S505 1" = 1'-0"

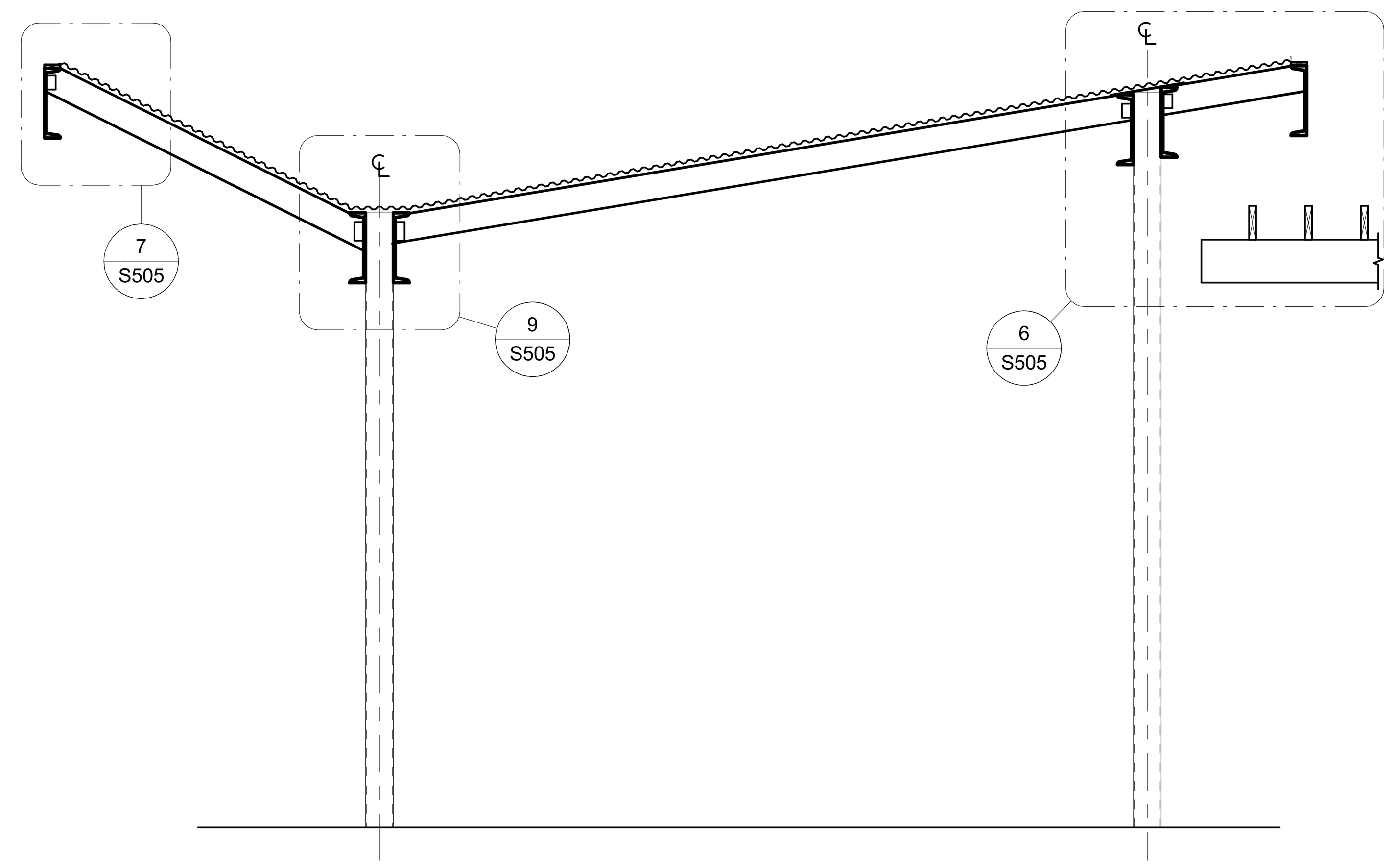


3 BRICK SUPPORT BEAM CONNECTIONS (SHEAR & TORSION)
S505 1" = 1'-0"

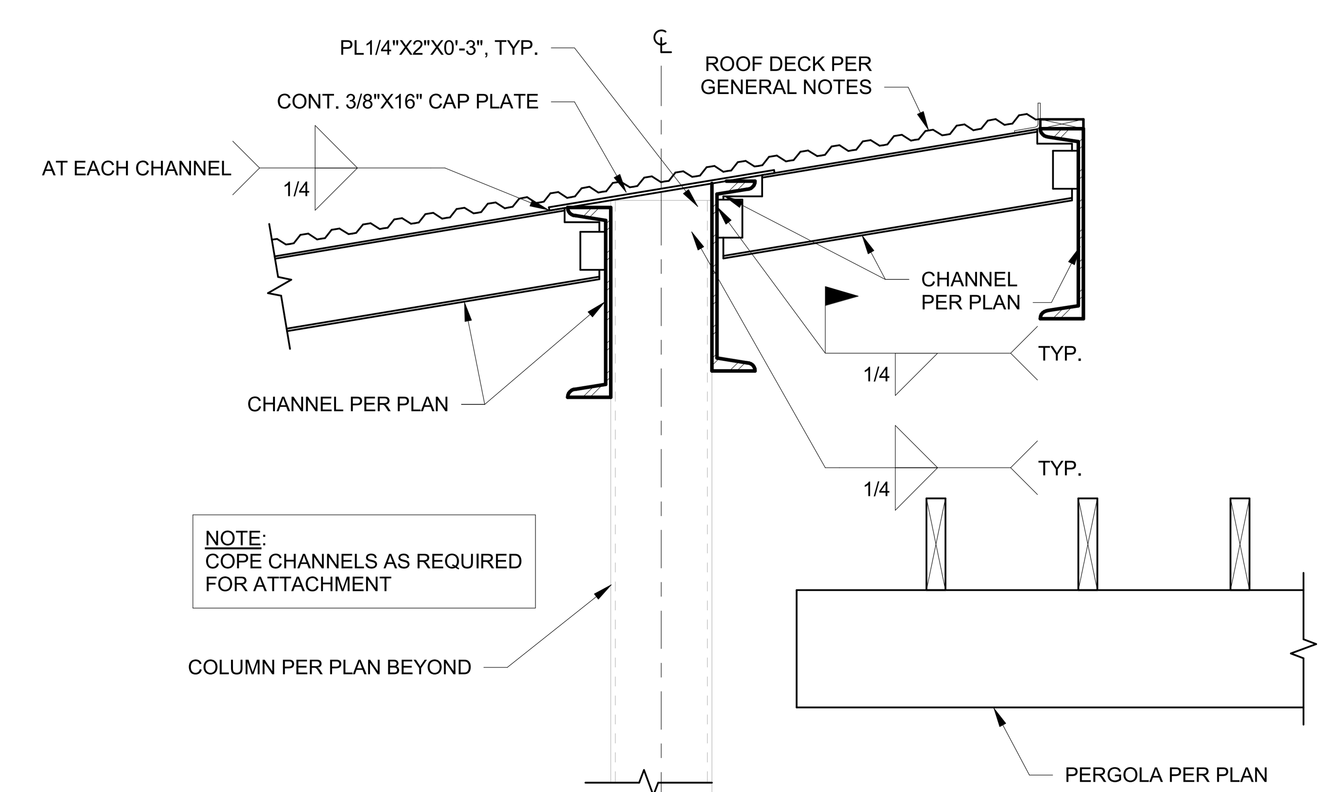
NOTES:
1. SEE PLAN OR GENERAL NOTES FOR CONNECTION FORCES
2. ALL CONNECTIONS TO BE DESIGNED BY STEEL FABRICATOR'S ENGINEER AS "CONVENTIONAL" TO PREVENT ADDITIONAL ECCENTRICITY IN CONNECTION.
3. THE NUMBER OF BOLTS SHOWN IS SCHEMATIC AND WILL VARY WITH DEPTH OF BEAM AND REACTION.



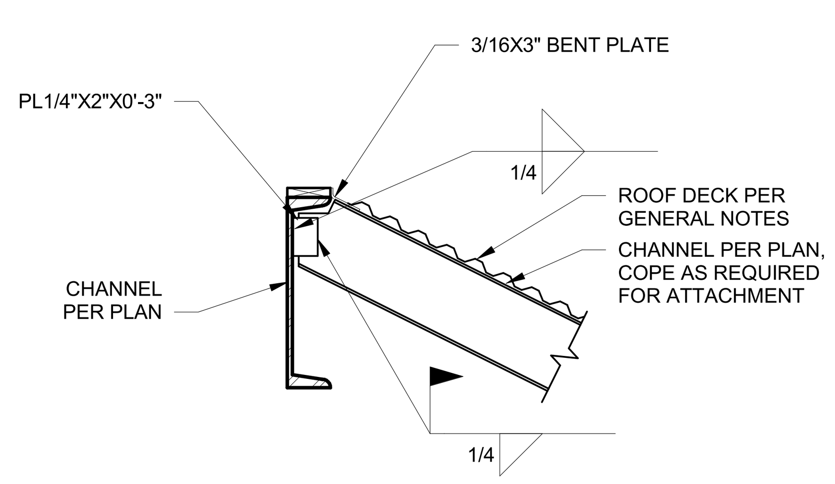
4 TYPICAL BEAM TO COLUMN SHEAR CONNECTION
S505 3/4" = 1'-0"



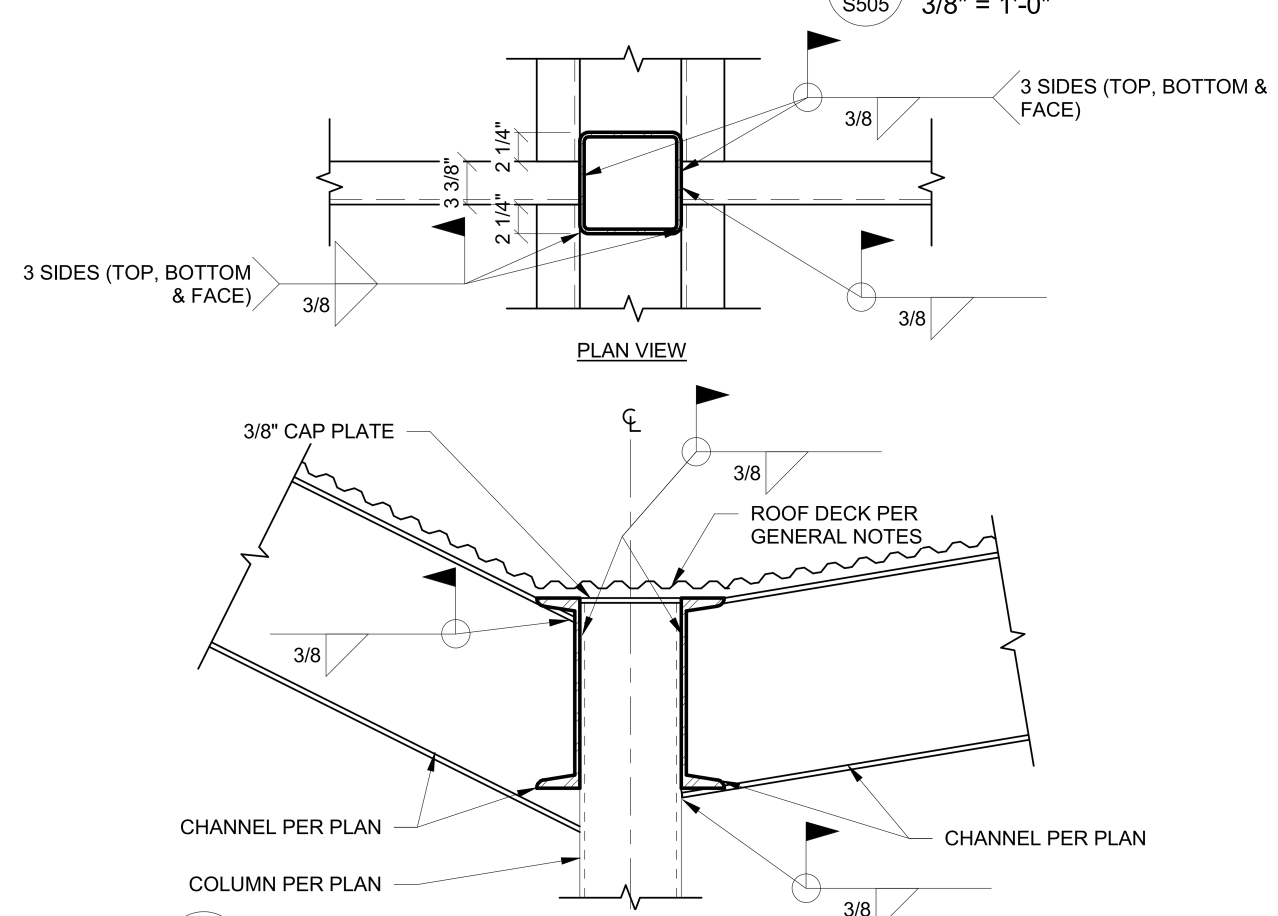
5 CANOPY SECTION
S505 3/8" = 1'-0"



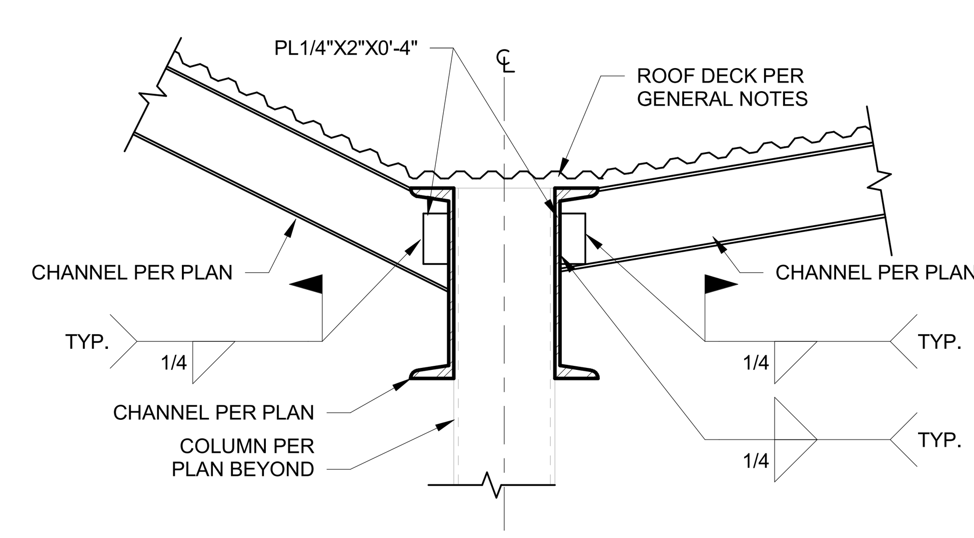
6 FRAMING AT CANOPY EDGE W/ PERGOLA
S505 1" = 1'-0"



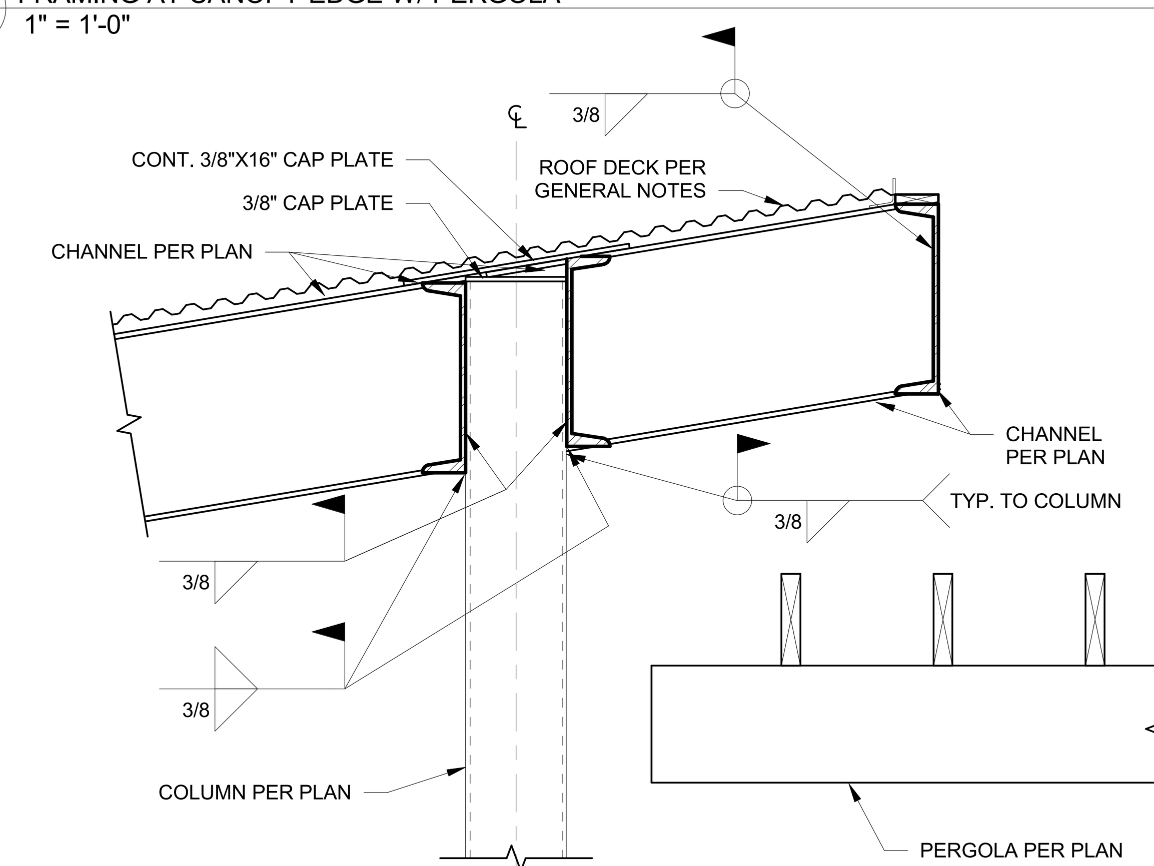
7 FRAMING AT CANOPY EDGE
S505 1" = 1'-0"



8 FRAMING AT CANOPY VALLEY AT COLUMN
S505 1" = 1'-0"



9 FRAMING AT CANOPY VALLEY
S505 1" = 1'-0"



10 FRAMING AT CANOPY EDGE AT COLUMN
S505 1" = 1'-0"

IN RESPONSE TO GC COMMENTS 3

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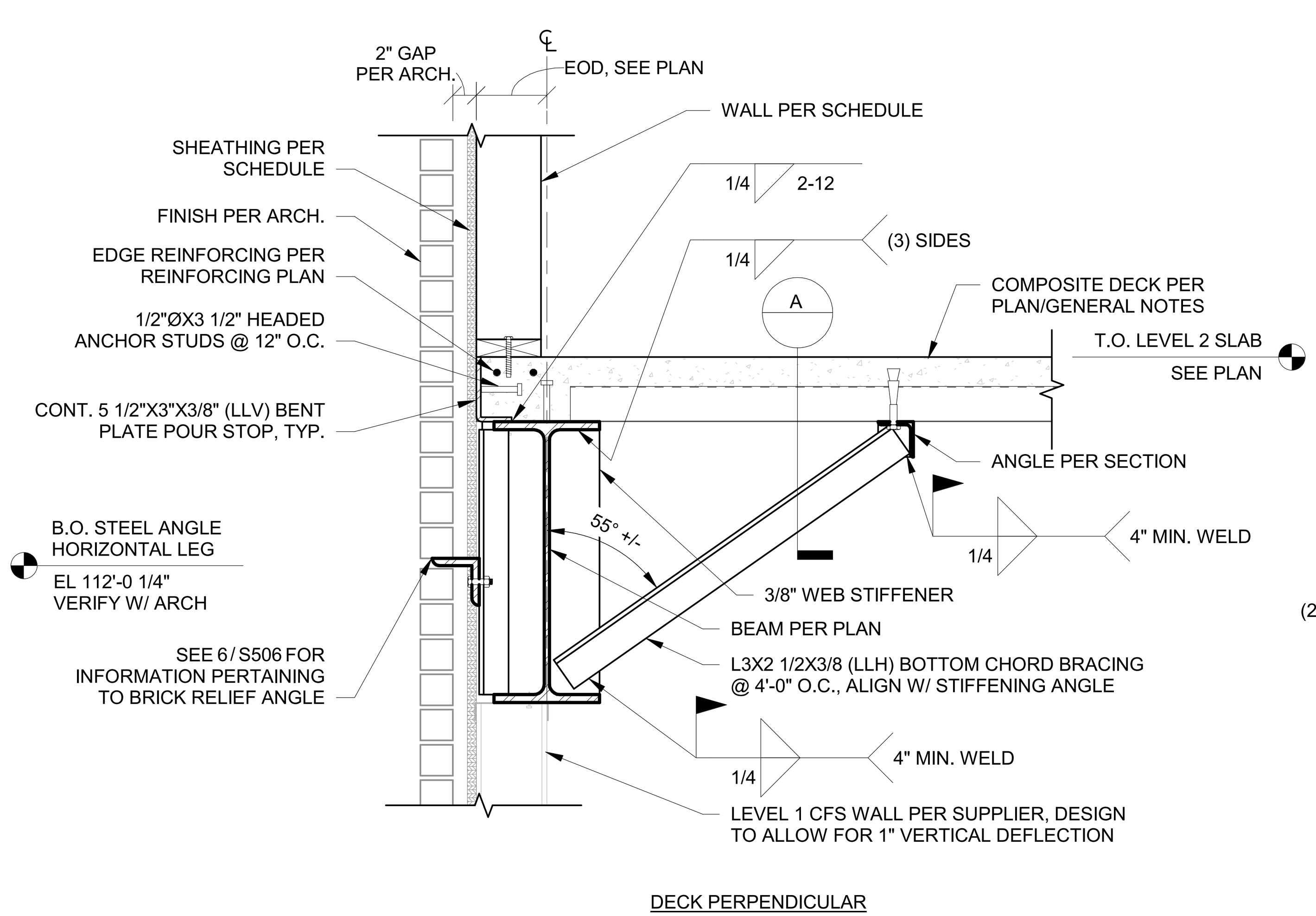
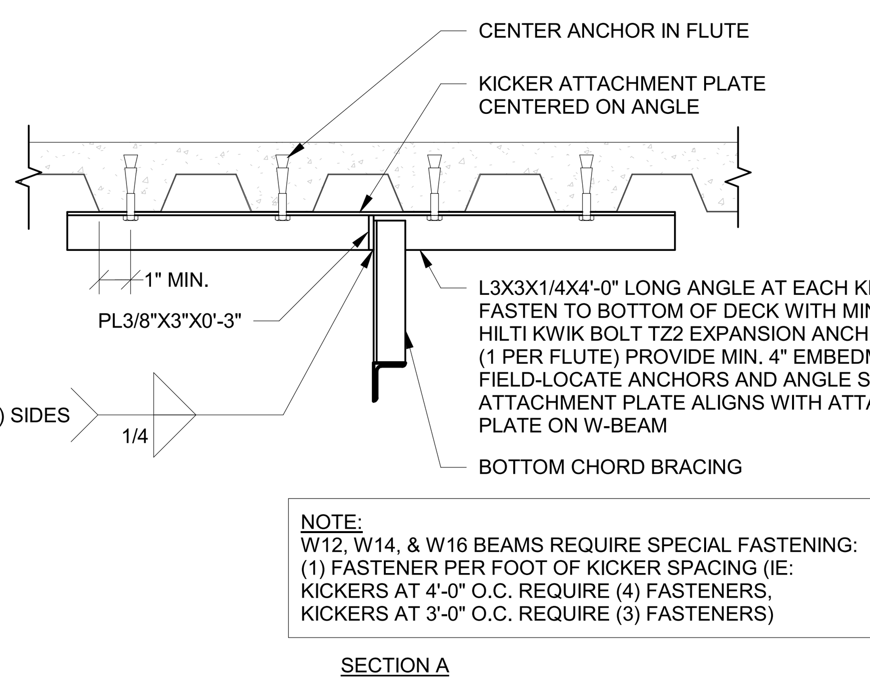
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

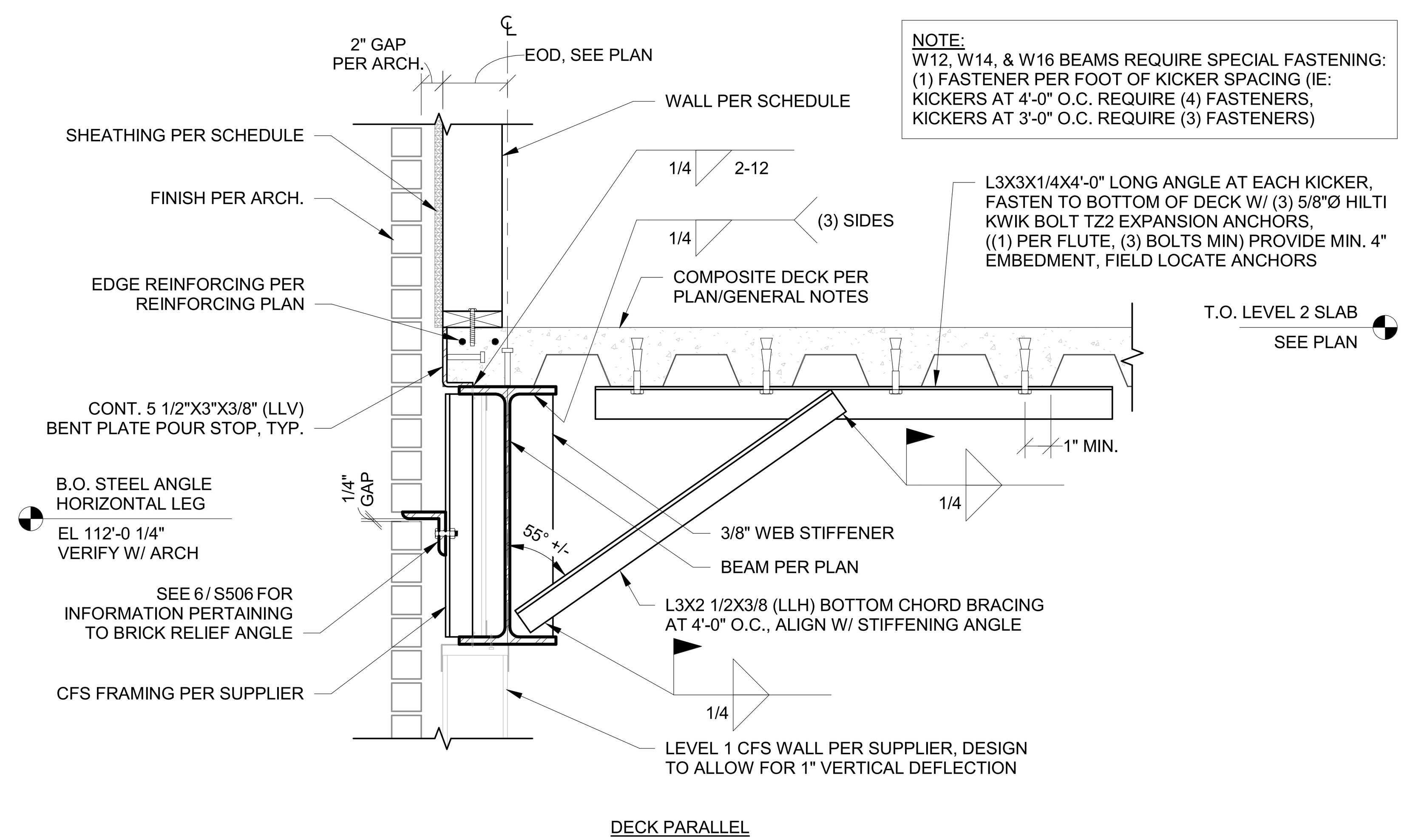
SHEET TITLE
STEEL DETAILS

PROJECT NUMBER: 2023000333

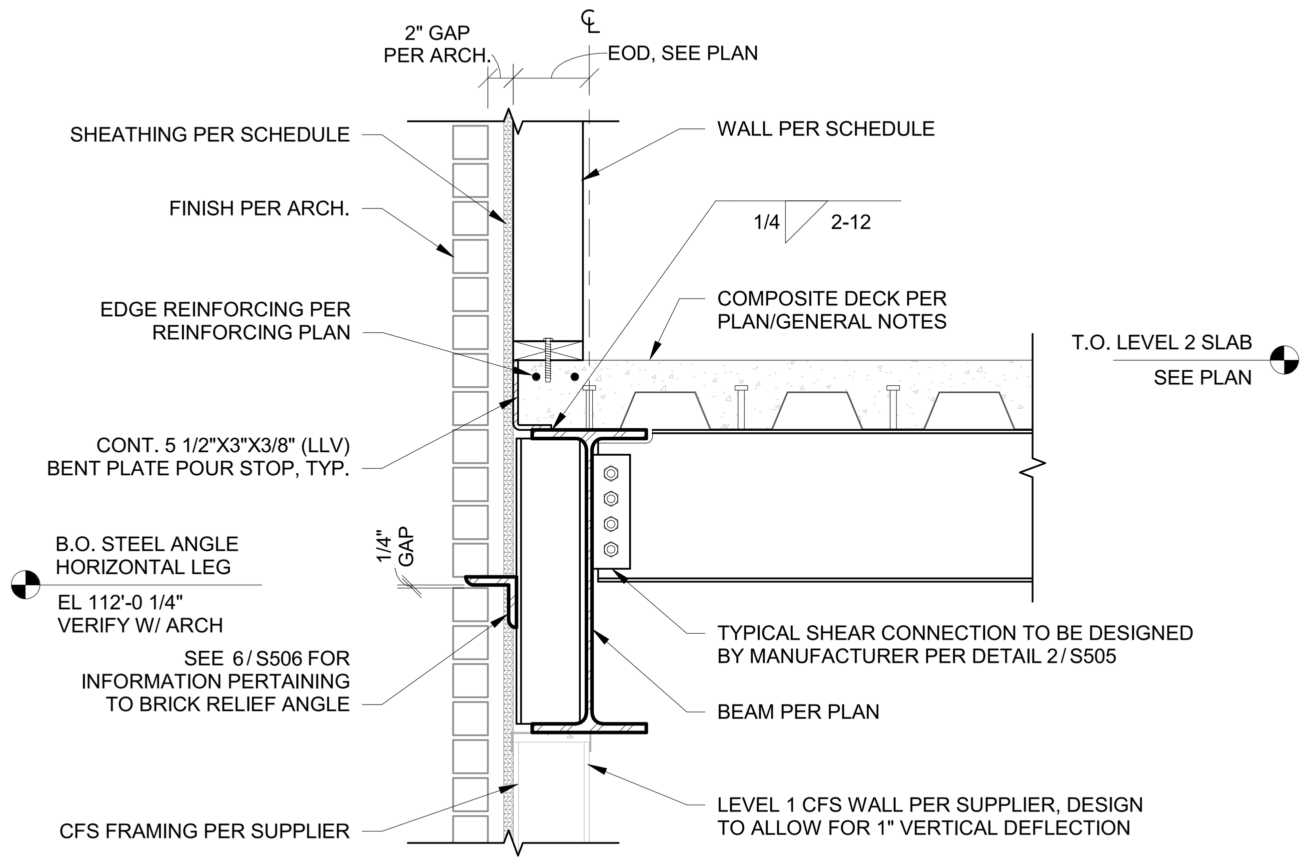
SHEET NUMBER:
S505



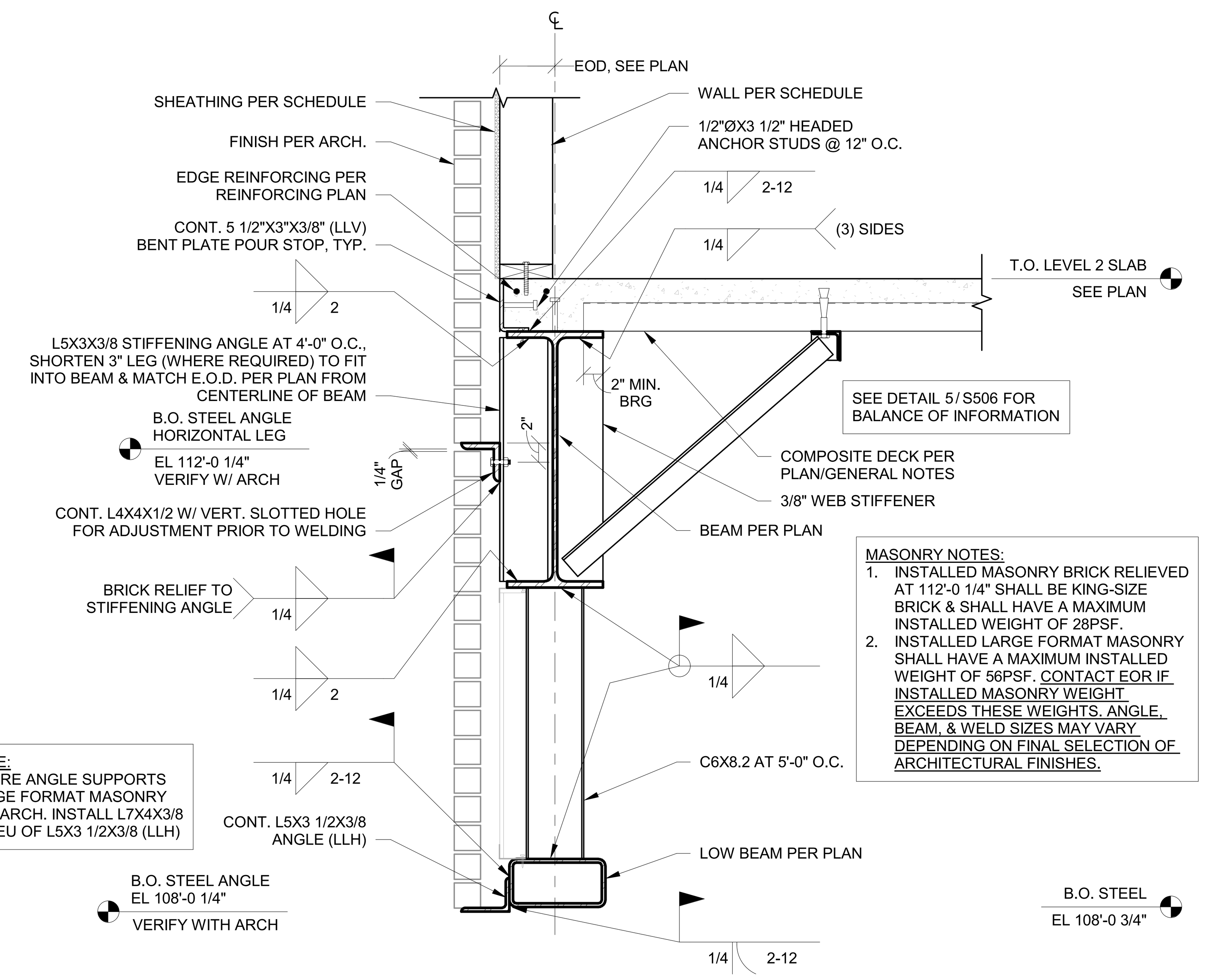




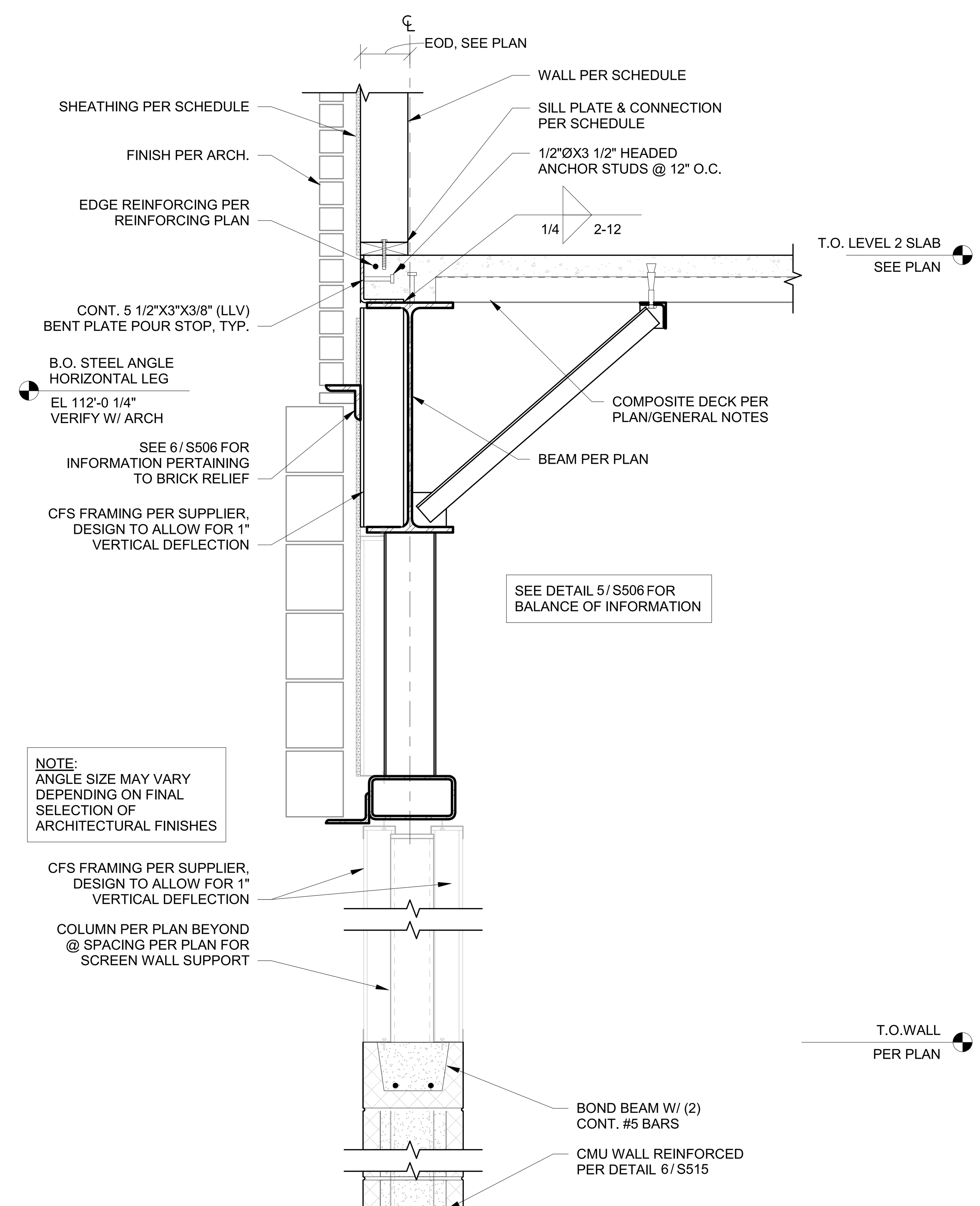
5 EXTERIOR WALL SECTION AT KICKER
S506 1" = 1'-0"

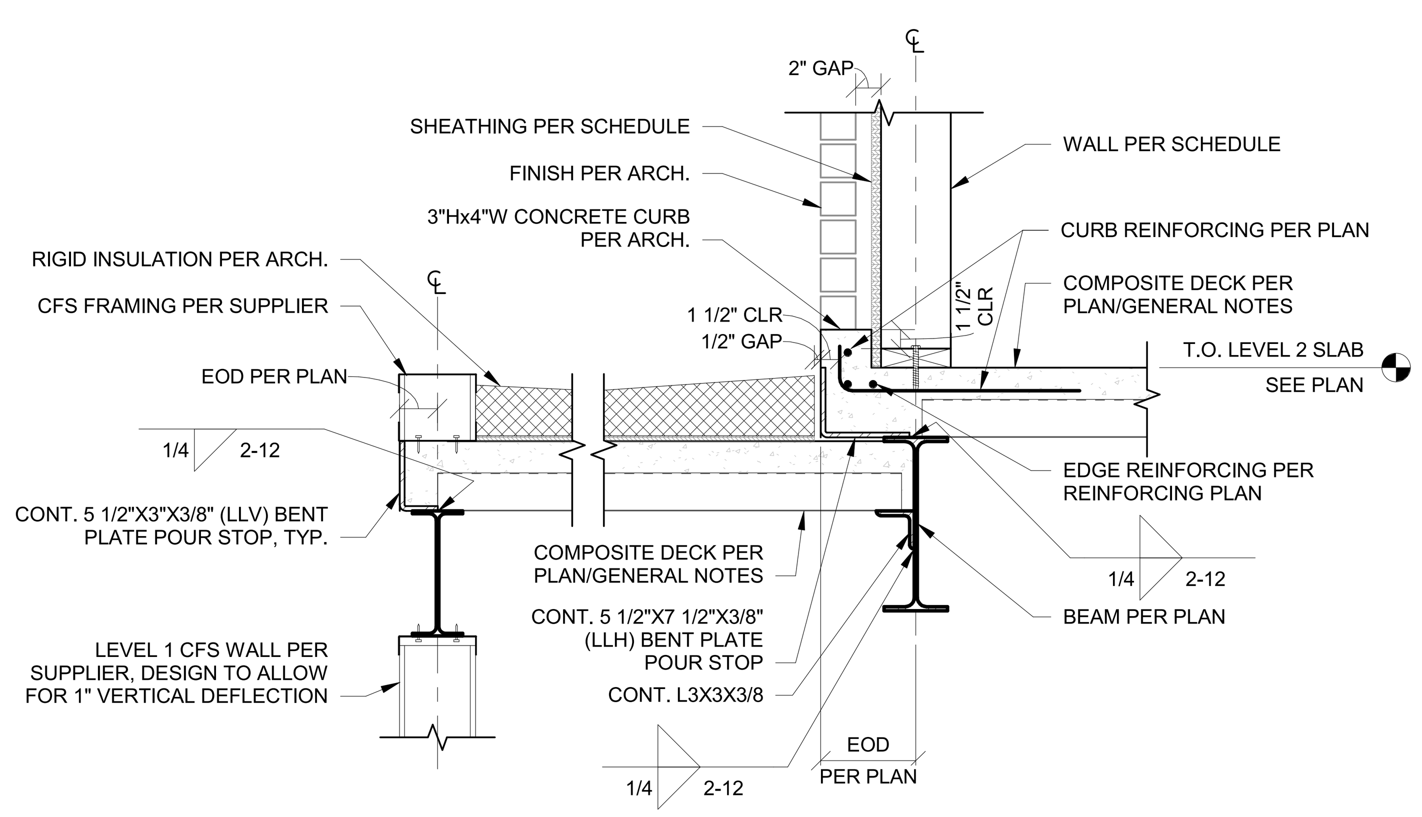


3 EXTERIOR WALL SECTION AT BEAM
S506 1" = 1'-0"

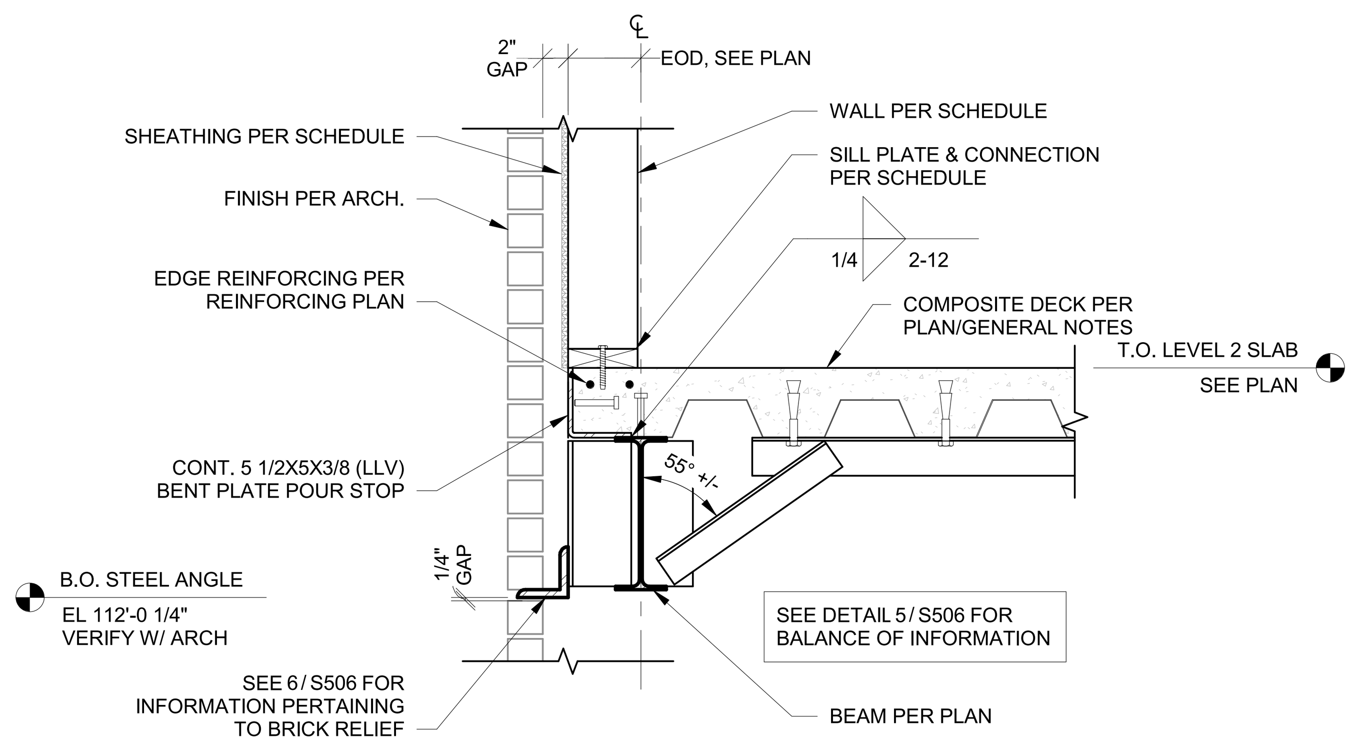


6 SECTION AT BRICK RELIEF IN GARAGE
S506 1" = 1'-0"





7 SECTION AT LOW ROOF
S506 1" = 1'-0"



8 SECTION AT POUR STOP AT GARAGE
S506 1" = 1'-0"

9 SECTION AT BRICK RELIEF IN GARAGE AT FULL HEIGHT CFS
S506 1" = 1'-0"

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STATE OF MISSOURI
CELESTE KAY SPICKERT
NUMBER PE-2008002213
PROFESSIONAL ENGINEER
03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

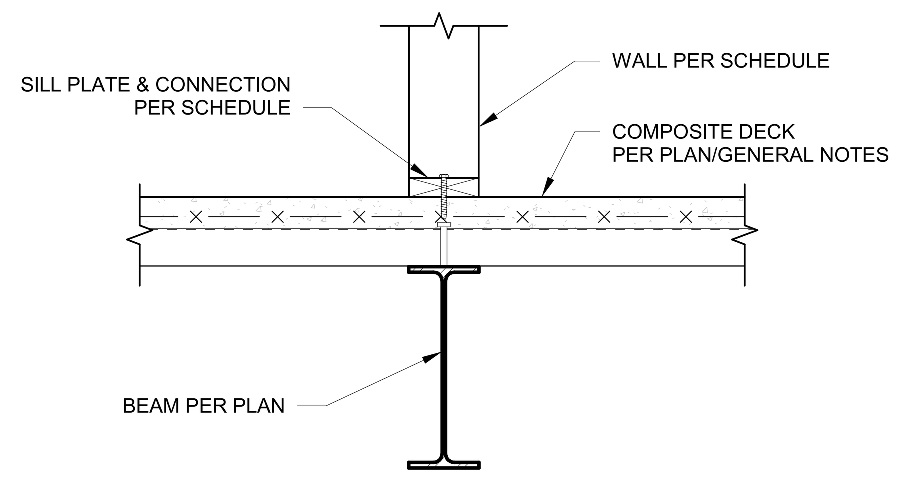
SHEET TITLE
STEEL DETAILS

PROJECT NUMBER: 2023000333

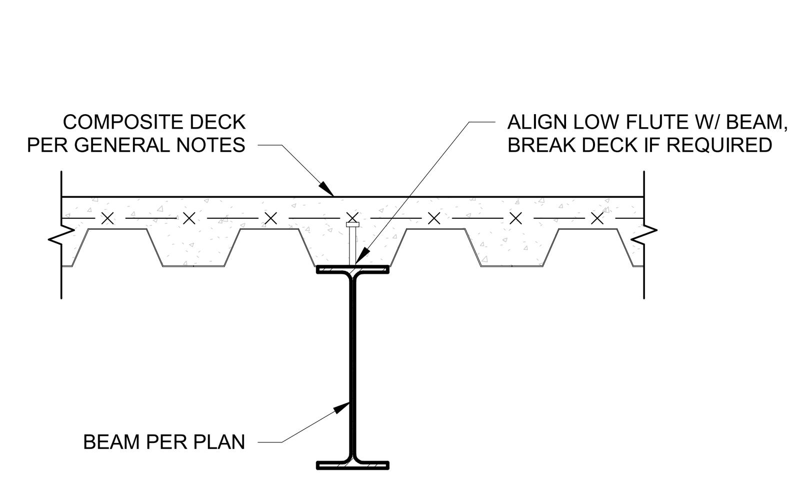
SHEET NUMBER:

S506

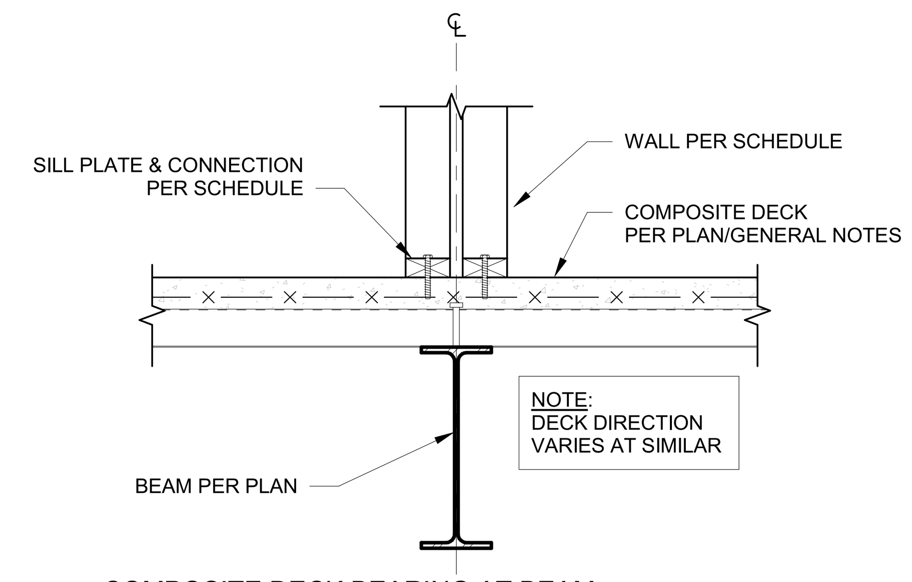
IN RESPONSE TO GC COMMENTS 3



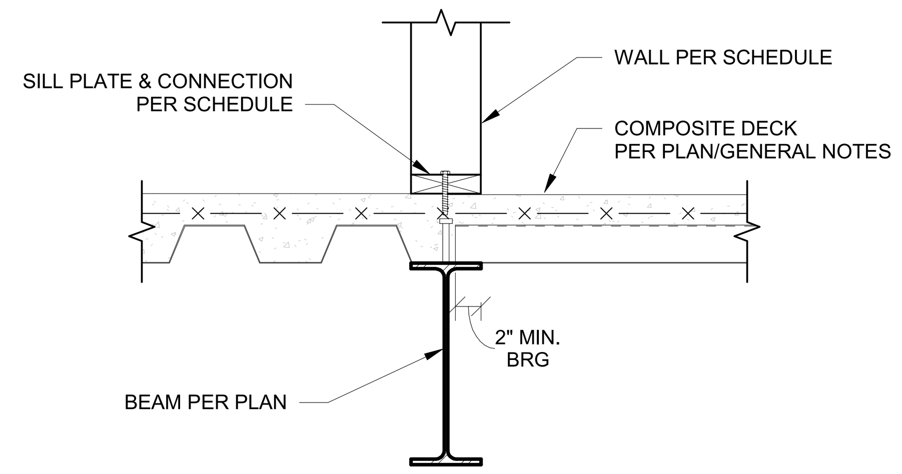
1 S507 COMPOSITE DECK BEARING AT BEAM
1" = 1'-0"



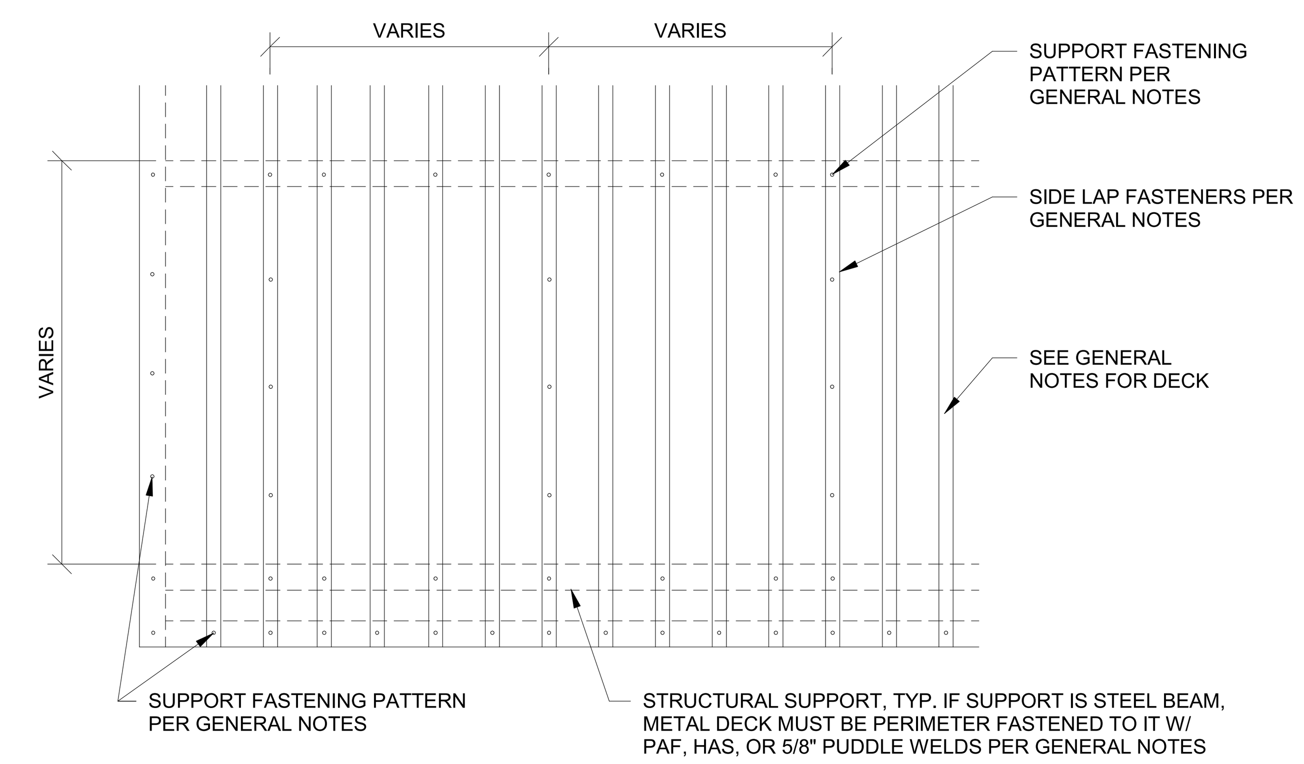
2 S507 COMPOSITE DECK PARALLEL TO BEAM
1" = 1'-0"



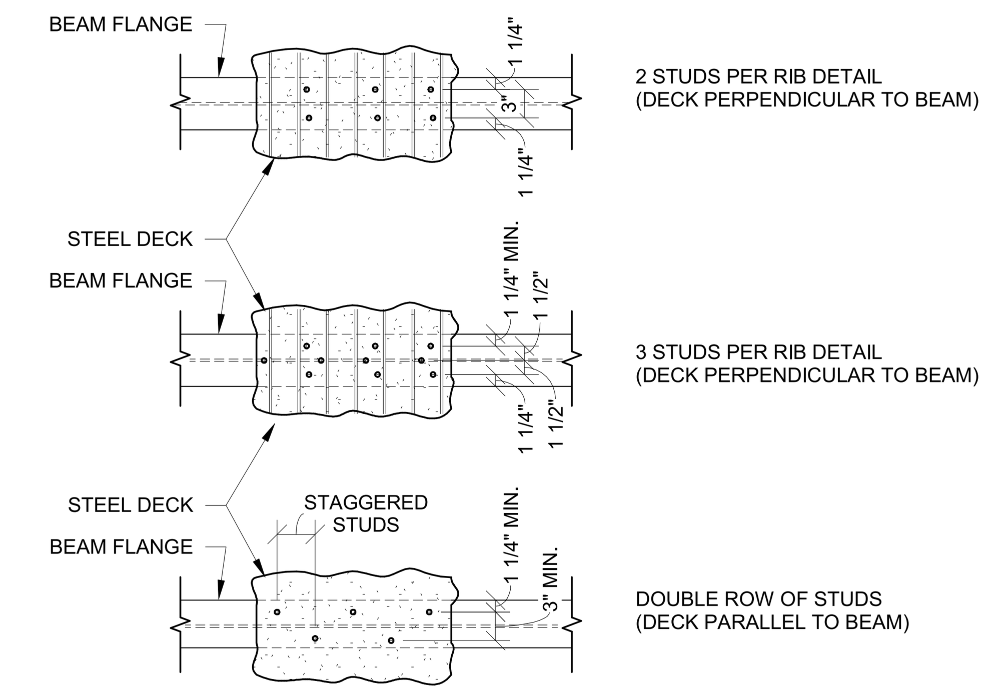
3 S507 COMPOSITE DECK BEARING AT BEAM BELOW DEMISING WALL
1" = 1'-0"

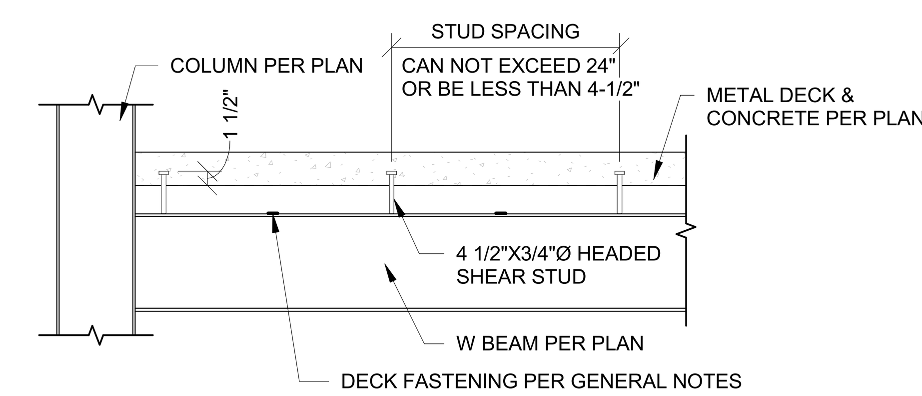


4 S507 COMPOSITE DECK TRANSITION AT BEAM
1" = 1'-0"



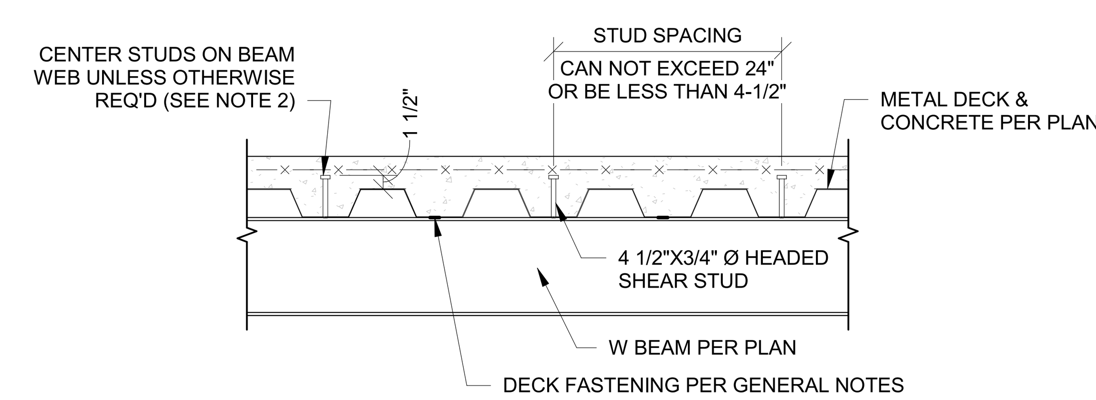
5 S507 DECK FASTENING DETAIL
1" = 1'-0"





DECK IS PARALLEL TO BEAM

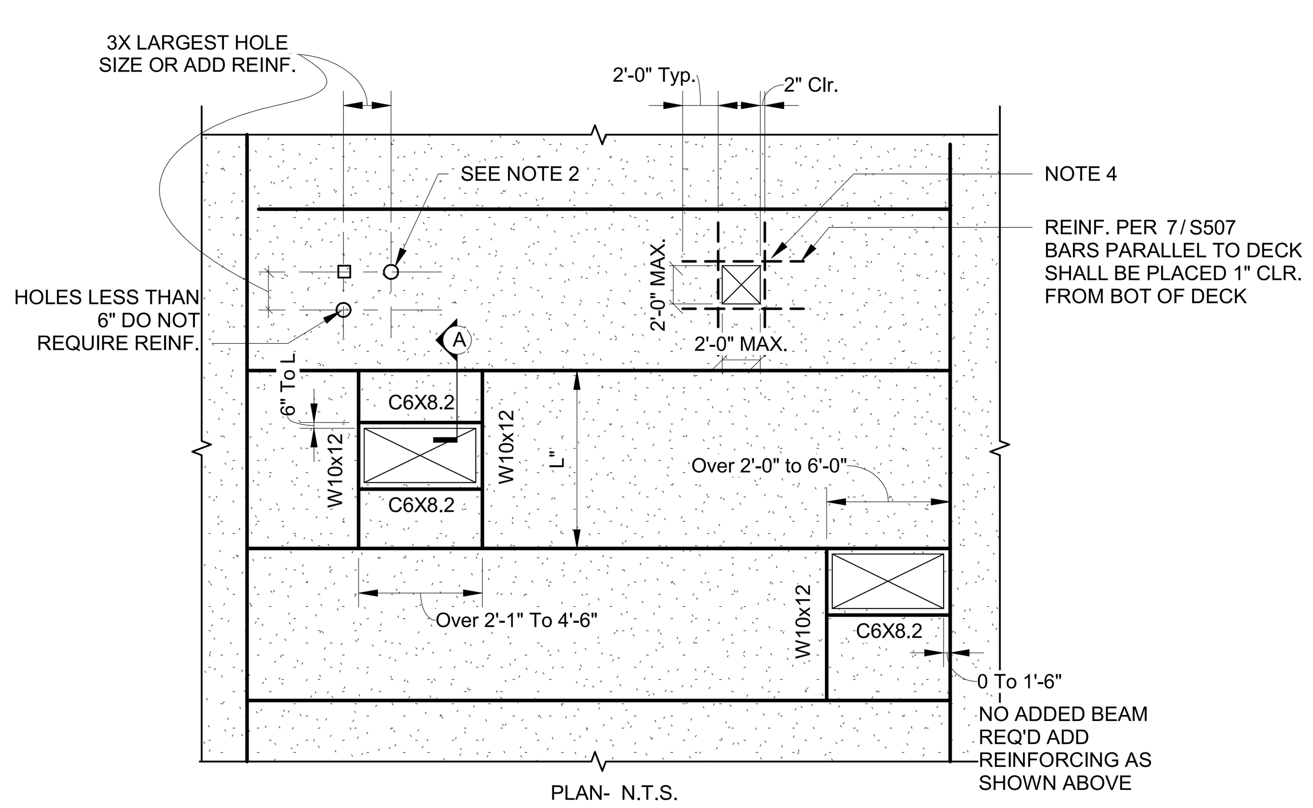
NOTES:
1. SPACE STUDS EQUALLY WITHIN BEAM SEGMENT. WHERE STUD SPACING EXCEEDS 24", PROVIDE ADDITIONAL STUDS AS NECESSARY TO MAINTAIN A 24" MAX STUD SPACING.
2. PLACE STUDS IN SINGLE ROW UNLESS NUMBER OF STUDS RESULTS IN SPACING LESS THAN 4-1/2". WHERE SPACING WOULD BE LESS THAN 4-1/2", PROVIDE A DOUBLE ROW OF STUDS IN A STAGGERED PATTERN RATHER THAN SIDE BY SIDE.
3. MAINTAIN TRANSVERSE SPACING BETWEEN STUDS & EDGE DIMENSIONS AS SHOWN ON PLAN DETAIL ABOVE.

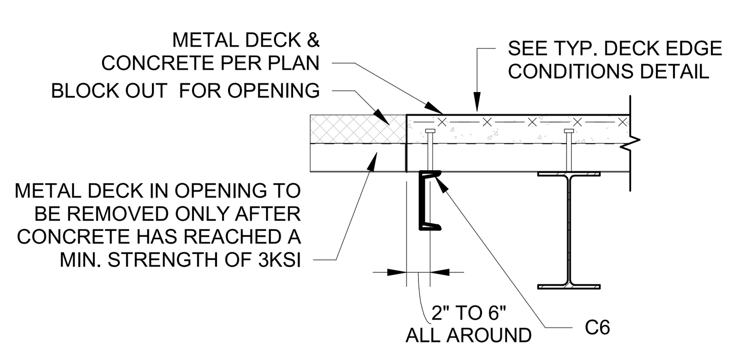


DECK IS PERPENDICULAR TO BEAM

NOTES:
1. SEE PLAN FOR REQUIRED NUMBER OF STUDS. STUDS SHALL BE PLACED AT A MAXIMUM SPACING OF 2'-0" ALONG THE BEAM AXIS UNLESS NOTED OTHERWISE ON PLAN OR NUMBER OF STUDS INDICATED REQUIRES CLOSER SPACING. SEE "GENERAL NOTES" FOR MINIMUM NUMBER OF STUDS AND MINIMUM STEEL COMPOSITE DECK TO STEEL BEAM FASTENING REQUIREMENTS.
2. SPACE STUDS AS EVENLY AS POSSIBLE IN AVAILABLE DECK FLUTES. WHERE STUD SPACING EXCEEDS 24", PROVIDE ADDITIONAL STUDS AS NECESSARY TO MAINTAIN A 24" MAX STUD SPACING.
3. WHERE THE NUMBER OF STUDS EXCEEDS THE NUMBER OF FLUTES, INSTALL REMAINING STUDS IN DOUBLE OR TRIPLE ROW, STARTING FROM THE BEAM ENDS & WORKING TOWARDS THE CENTER. UNLESS NOTED OTHERWISE, STUDS ARE TO BE EQUALLY SPACED ALONG THE BEAM LENGTH AND PLACED SYMMETRICALLY ABOUT THE BEAM CENTERLINE AXIS. IF EQUAL SPACING IS NOT POSSIBLE DUE TO DECK CONFIGURATION, THE STRUCTURAL ENGINEER SHALL BE NOTIFIED.
4. THE REQUIRED NUMBER OF STUD ROWS SHALL BE DETERMINED AS FOLLOWS (BEAM LENGTH IN FEET):
   A. FOR DECK FLUTES PERPENDICULAR TO THE BEAM:
      a. # ROWS = # STUDS / BEAM LENGTH
   B. FOR DECK FLUTES PARALLEL TO THE BEAM:
      a. # ROWS = (0.375 x # STUDS) / BEAM LENGTH
5. FOR DECK FLUTES PARALLEL TO THE BEAM, THE FIRST STUD (OR STUDS) SHALL BE PLACED 6" FROM THE BEAM ENDS. FOR DECK FLUTES PERPENDICULAR TO THE BEAM, THE FIRST STUD (OR STUDS) SHALL BE PLACED IN THE FLUTE CLOSEST TO THE BEAM ENDS.
6. FOR CANTILEVER SPANS, STUDS SHALL BE PLACED IN ONE ROW ALONG THE BEAM CENTERLINE AXIS AT A MAXIMUM SPACING OF 2'-0". STUDS PLACED ON THE CANTILEVER SPAN ARE NOT INCLUDED IN THE NUMBER OF STUDS SHOWN ON THE DRAWINGS.
7. WHERE BEAM FLANGE THICKNESS IS LESS THAN 0.30", STUDS MUST BE PLACED AT CENTERLINE OF THE BEAM
8. MAINTAIN TRANSVERSE SPACING BETWEEN STUDS & EDGES DIMENSIONS AS SHOWN ON PLAN DETAILS ABOVE.

8 S507 SHEAR PLACEMENT DIAGRAM
3/4" = 1'-0"



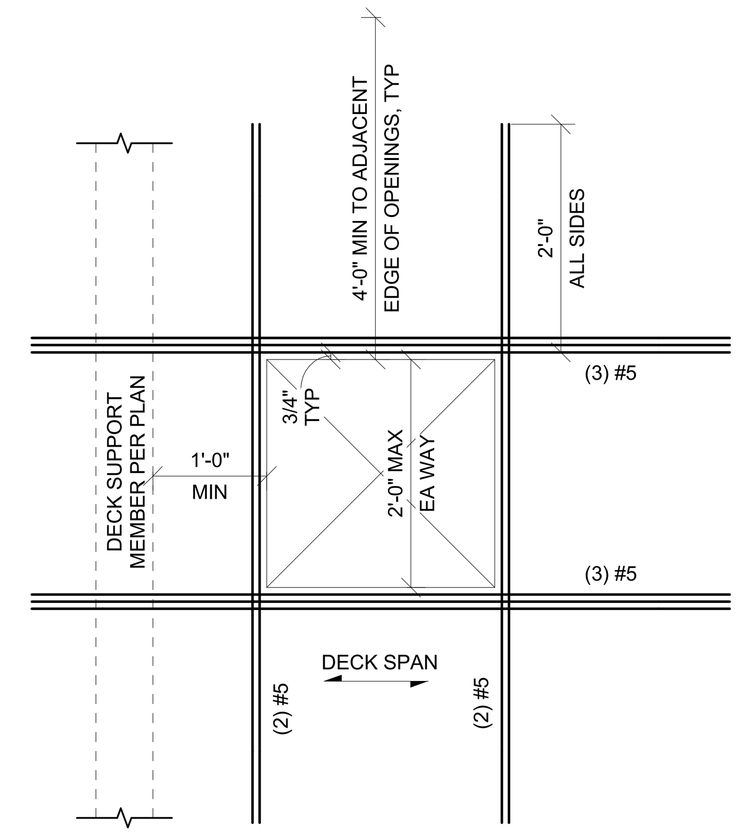


SECTION A

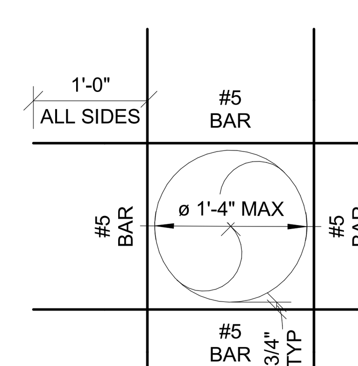
NOTES:
1. BLOCK OUT OPENING BEFORE PLACING CONCRETE.
2. REMOVE BLOCKOUT & CUT DECK AFTER CONCRETE HAS CURED
3. CONTRACTOR SHALL COORDINATE OPENING SIZE & LOCATION W/ MECH. & ELEC. CONTRACTORS & ARCH DRAWINGS
4. THE OPENING NOTED REQUIRES A CLEAR SPACING FROM ADJACENT OPENING OF THREE TIMES THE MAX OPENING DIMENSION. IF REQUIRED LAYOUT CANNOT CONFORM TO THESE REQUIREMENTS, REINFORCE GROUP AS IF ONE COMBINED PENETRATION.

6 S507 TYPICAL FLOOR DECK OPENING LESS THAN 6'-0"
3/4" = 1'-0"

NOTES:
1. METAL DECK TO REMAIN UNCUT AND IN PLACE UNTIL CONCRETE HAS OBTAINED F'C OF 3 KSI.
2. OPENING PLACEMENT MUST BE COORDINATED TO AVOID INTERUPTING DIAPHRAGM REINFORCING.



RECTANGULAR FLOOR PENETRATION



CIRCULAR FLOOR PENETRATION

7 S507 REINFORCED OPENING IN SLAB ON METAL DECK
3/4" = 1'-0"

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SHEET TITLE
STEEL DETAILS

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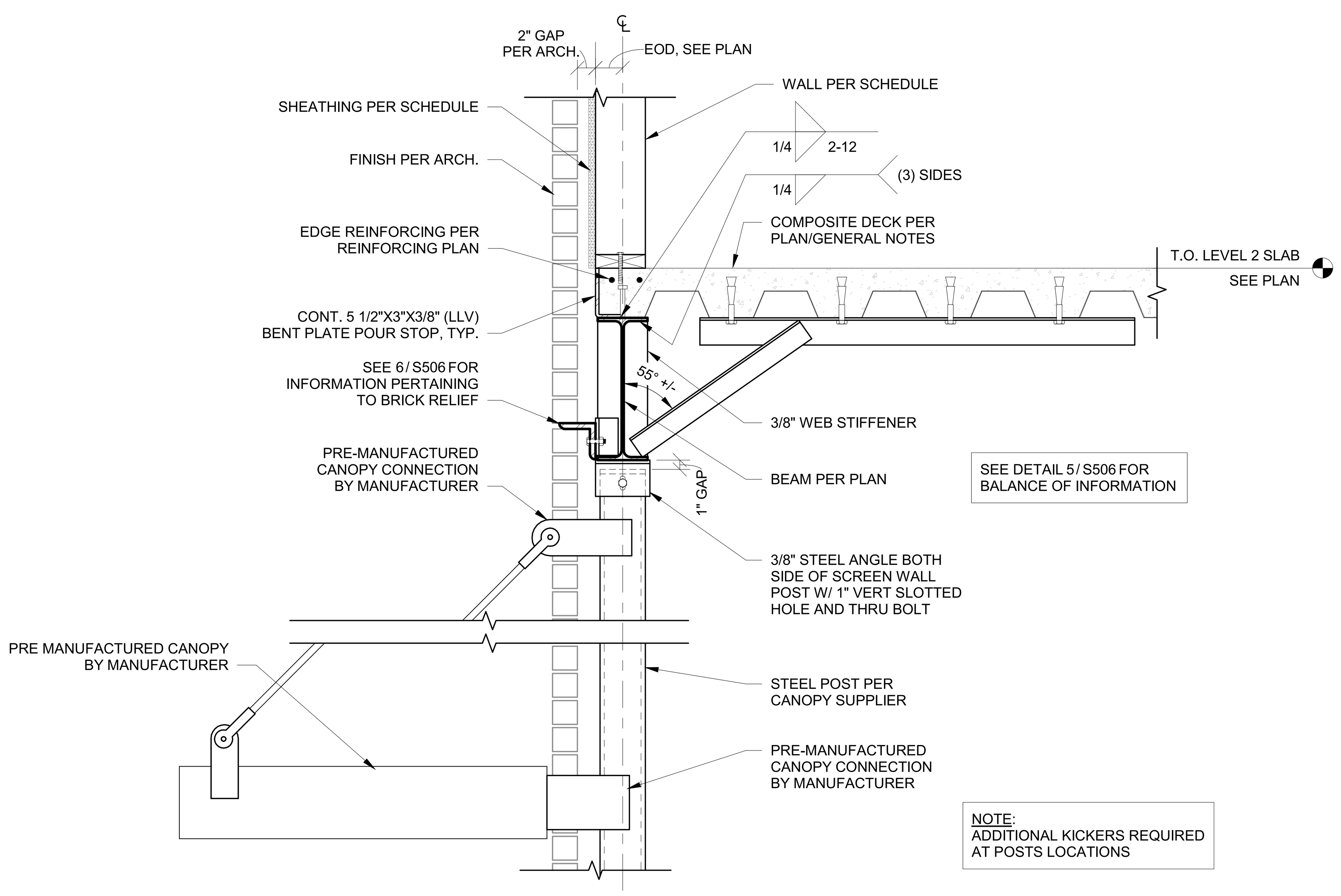
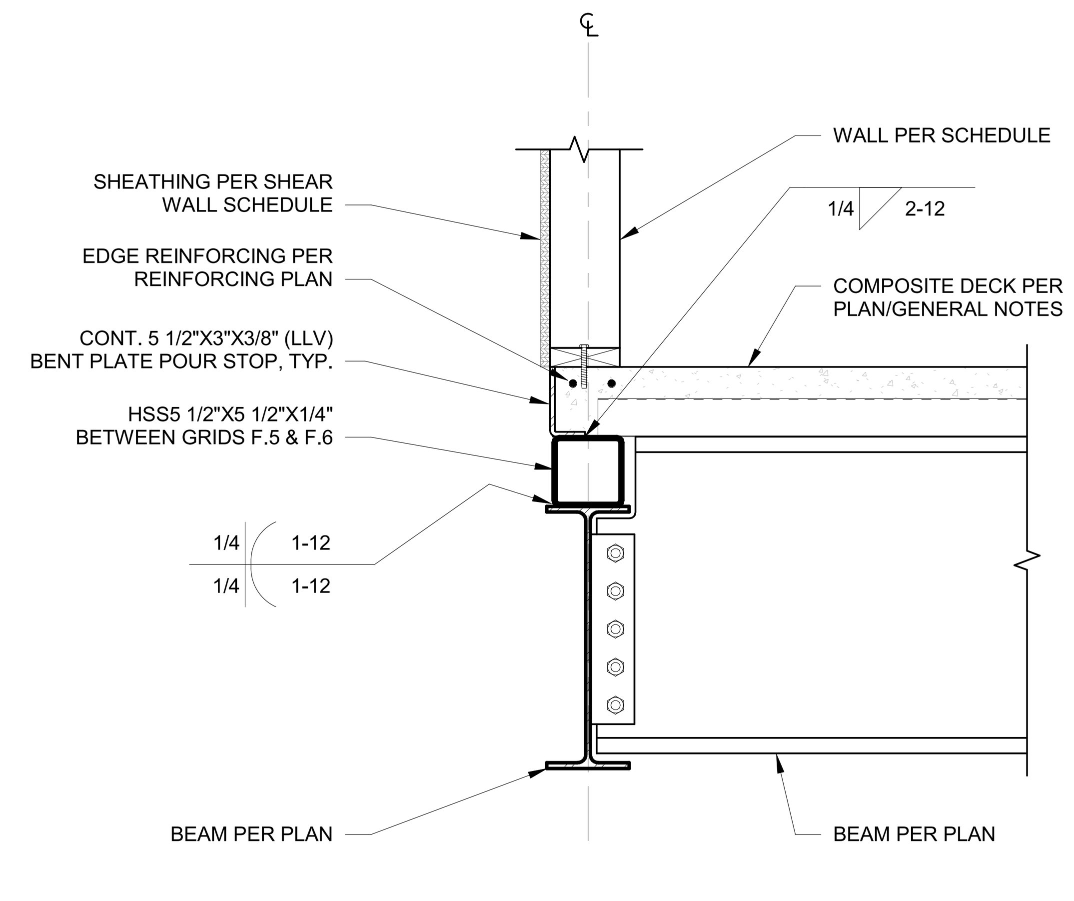
SHEET NUMBER:
S507

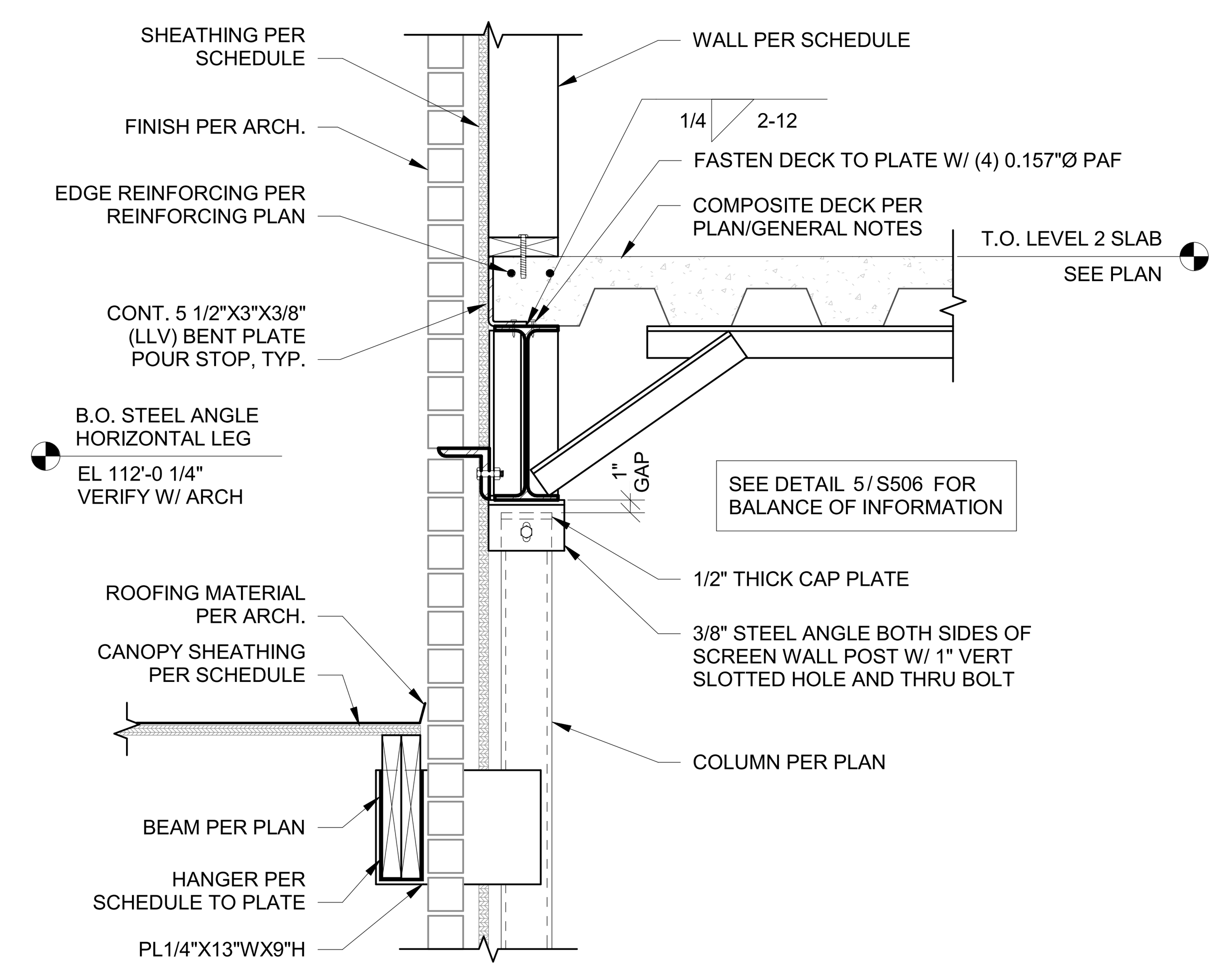


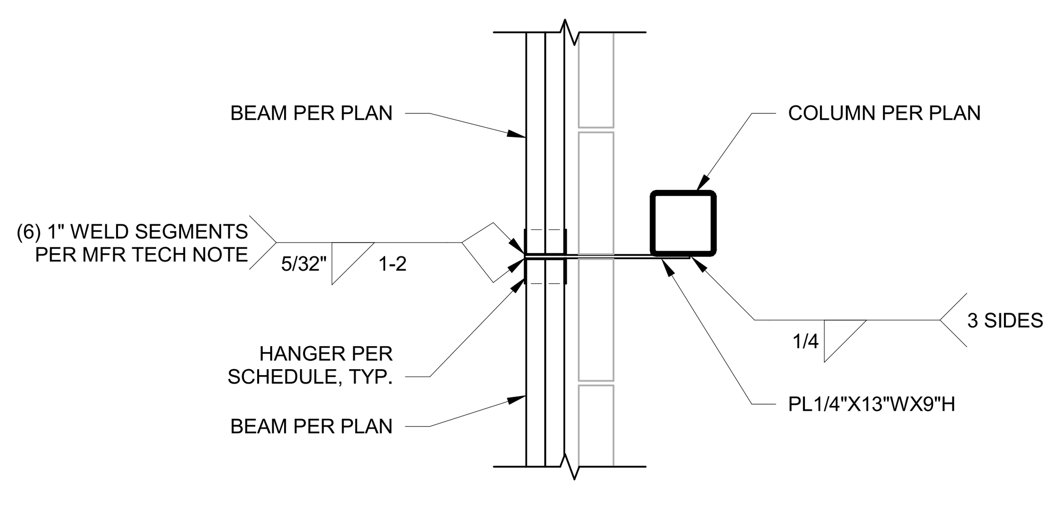
1 S508 FRAMING AT CANOPY POST
1" = 1'-0"

IN RESPONSE TO GC COMMENTS 3



2 S508 SECTION AT BUILT-UP BEAM
1" = 1'-0"





PLAN VIEW

3 S508 FRAMING AT PERGOLA
1" = 1'-0"

PRINTS ISSUED
11/01/23 - CITY SUBMITTAL

REVISIONS:

1	12/21/2023	RESPONSE TO CITY COMMENTS
2	1/19/2024	ADDENDUM #2
3	3/06/2024	IN RESPONSE TO GC COMMENTS

McCLURE™
2001 W Broadway
Columbia, MO 65203
P 573-814-1568

MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

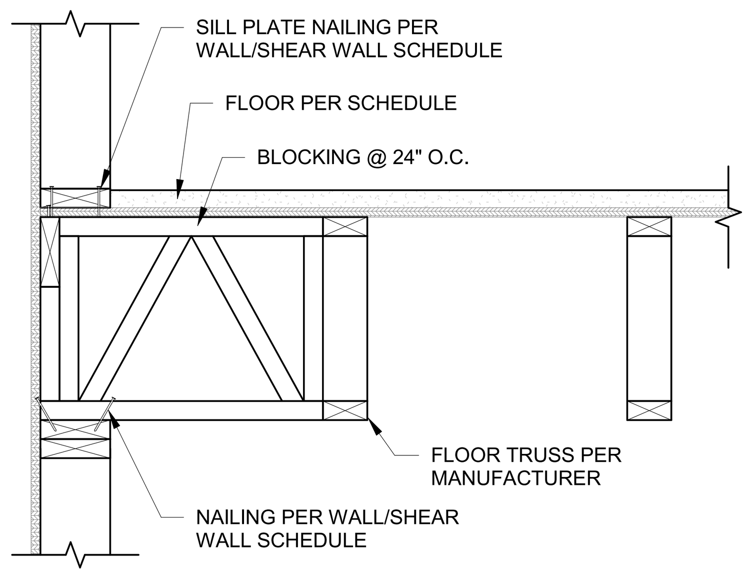
STATE OF MISSOURI
CELESTE KAY SPICKERT
NUMBER PE-2008002213
PROFESSIONAL ENGINEER
03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

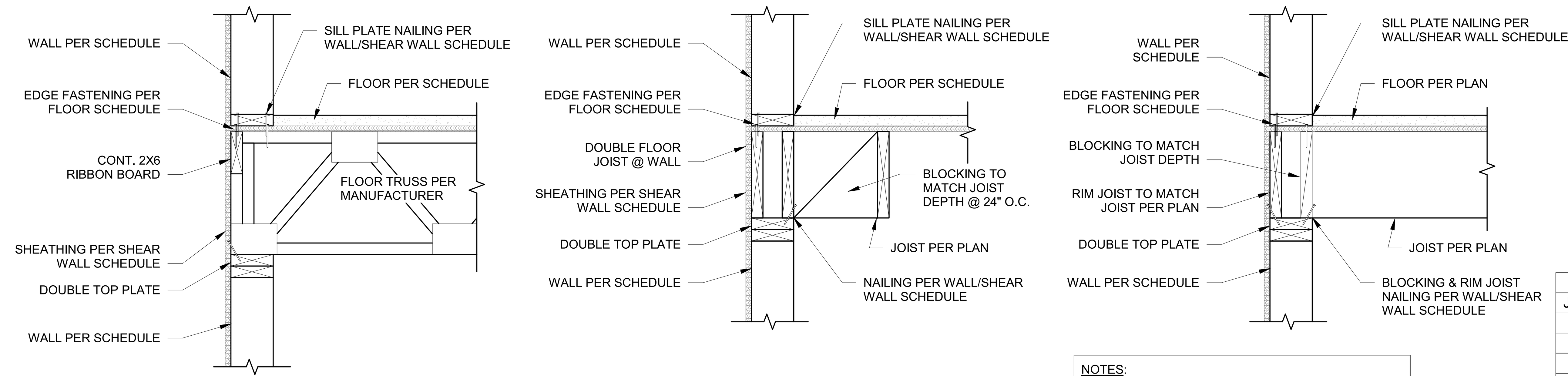
SHEET TITLE
STEEL DETAILS

PROJECT NUMBER: 2023000333

SHEET NUMBER:
S508



1 S510 FRAMING AT EXTERIOR WALL
1" = 1'-0"



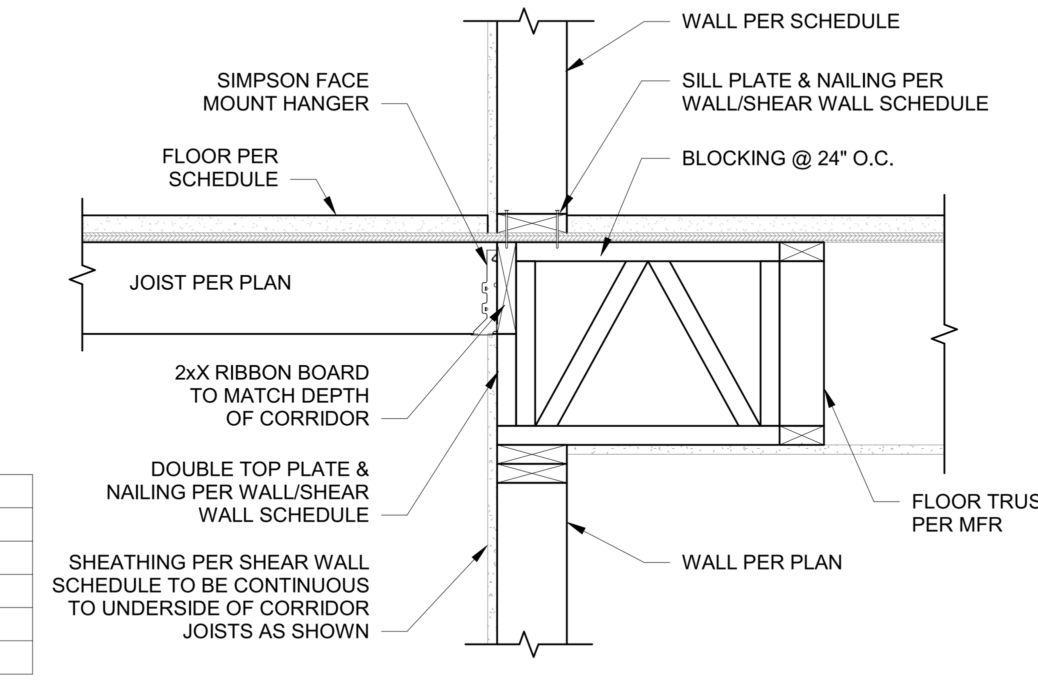
NOTES:
1. CONTRACTOR MAY ALTERNATIVELY FASTEN FLOOR JOIST TO DOUBLE RIM JOIST @ END OF WALL W/ HANGER PER SCHEDULE @ EACH JOIST
2. CONTRACTOR MUST USE SIMPSON HANGER @ STAIR LOCATIONS WHERE (2) LAYERS OF GYP ARE TO BYPASS LANDING FRAMING

JOIST HANGER SCHEDULE

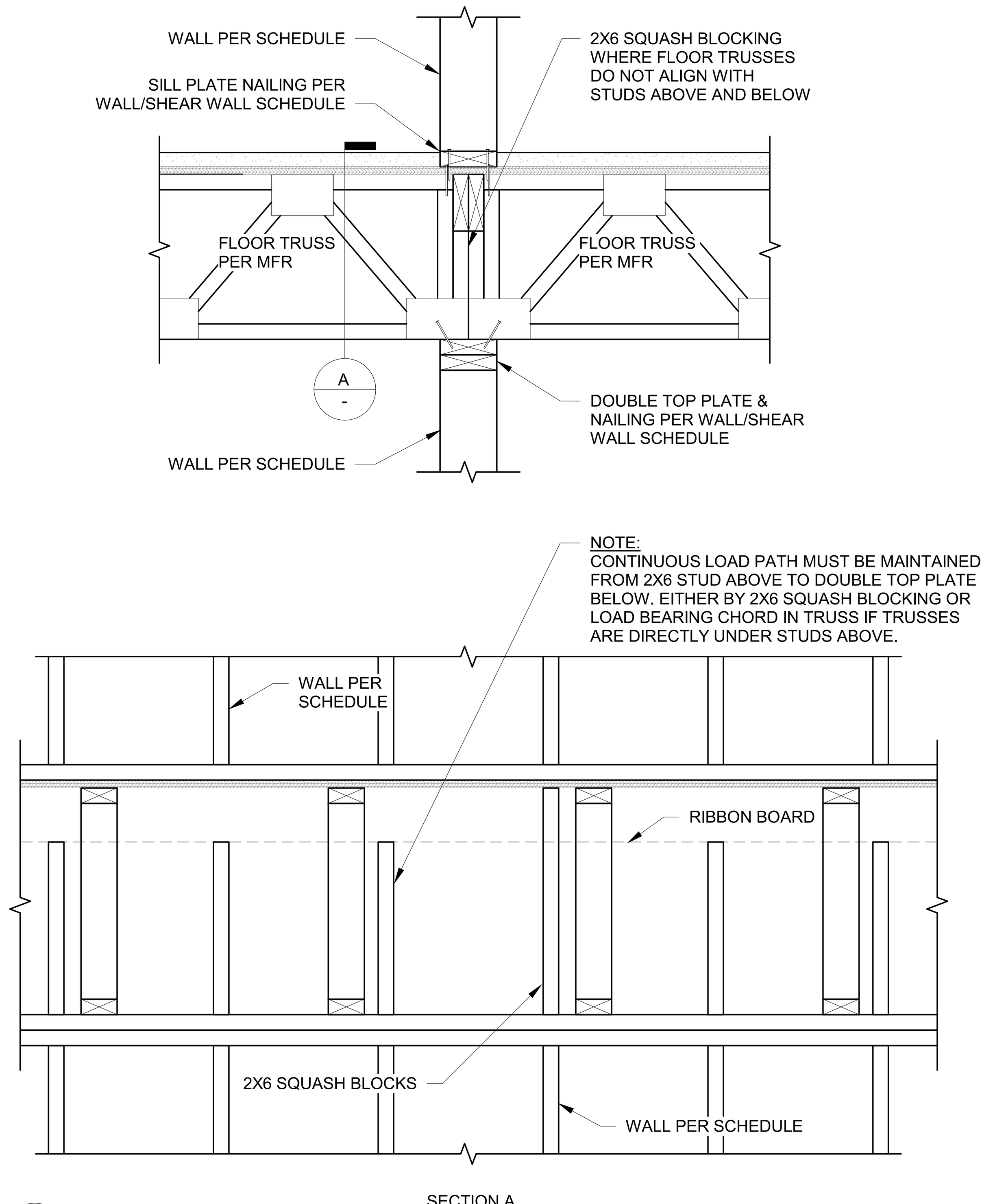
Joist Size	Hanger
2x4	LUS24
2x6	LUS26
2x8	LUS26
2x10	LUS28

Notes:
1. Hangers to be installed with typical fasteners per manufacturer product data
2. All exterior members are to be pressure treated

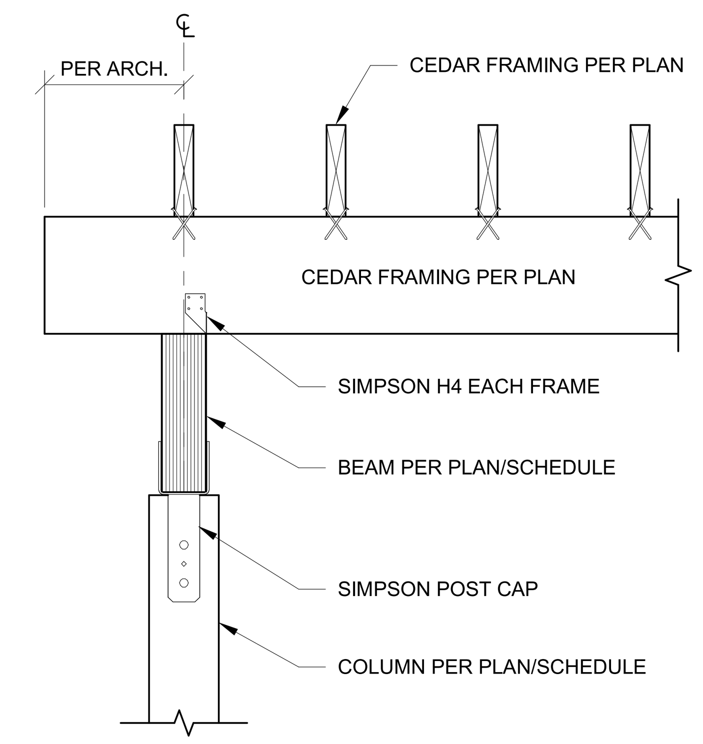
2 S510 FRAMING AT EXTERIOR WALL AT 2X JOISTS
1" = 1'-0"



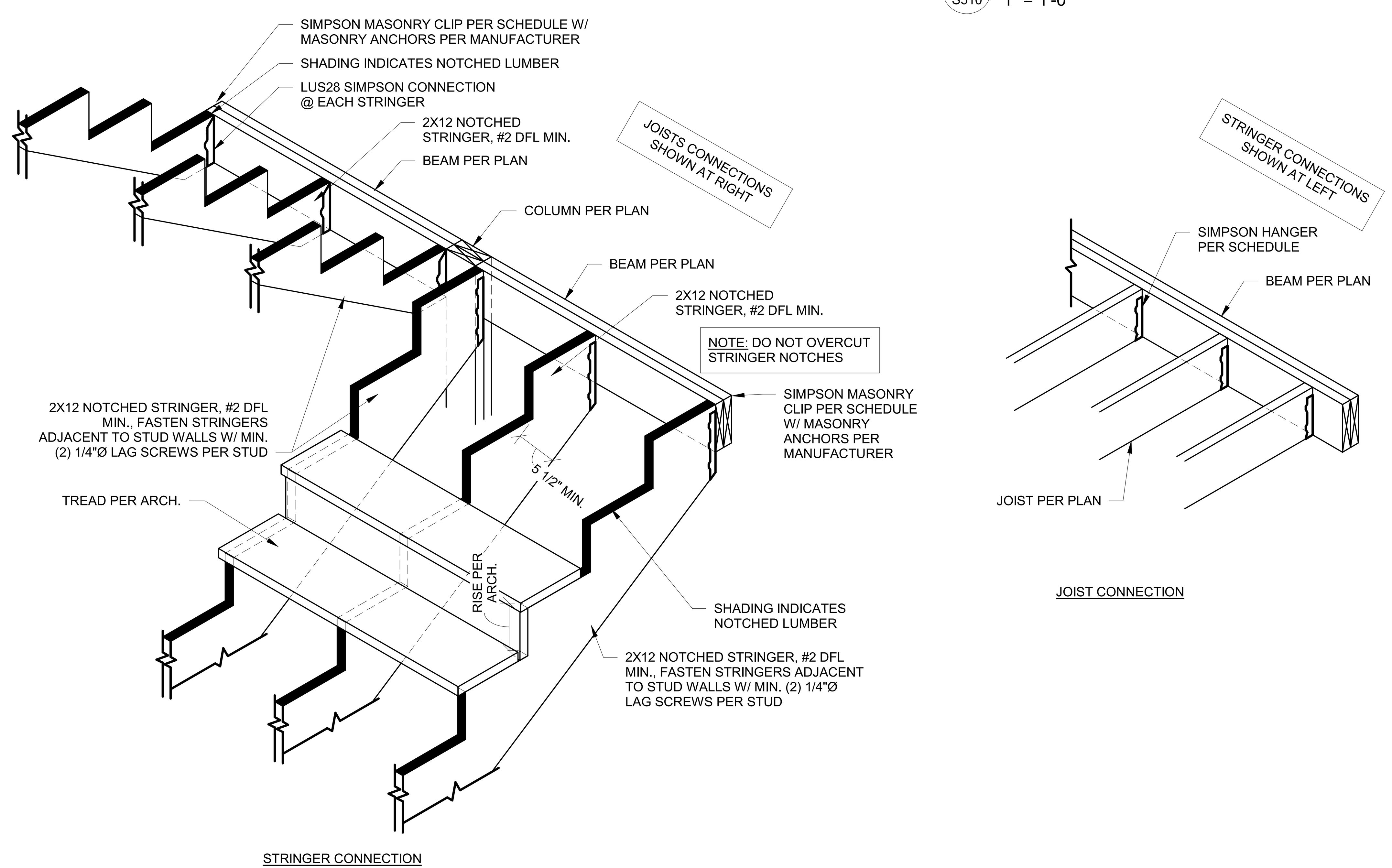
3 S510 FRAMING AT CORRIDOR
1" = 1'-0"



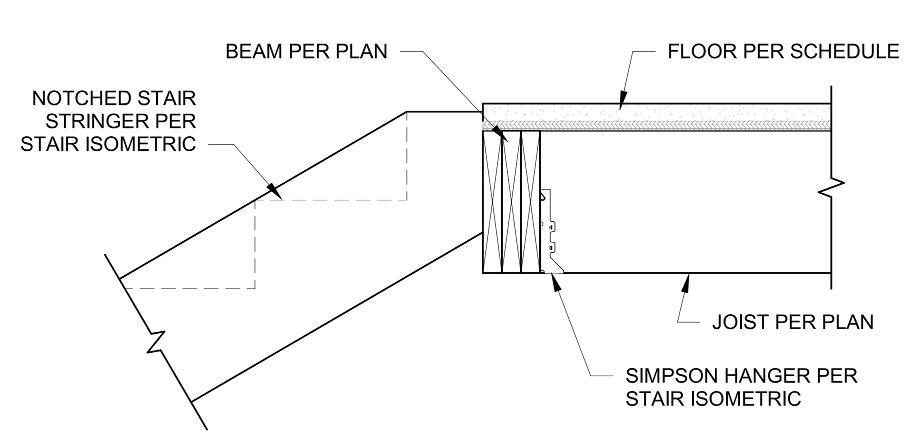
4 S510 FRAMING AT INTERIOR WALL
1" = 1'-0"



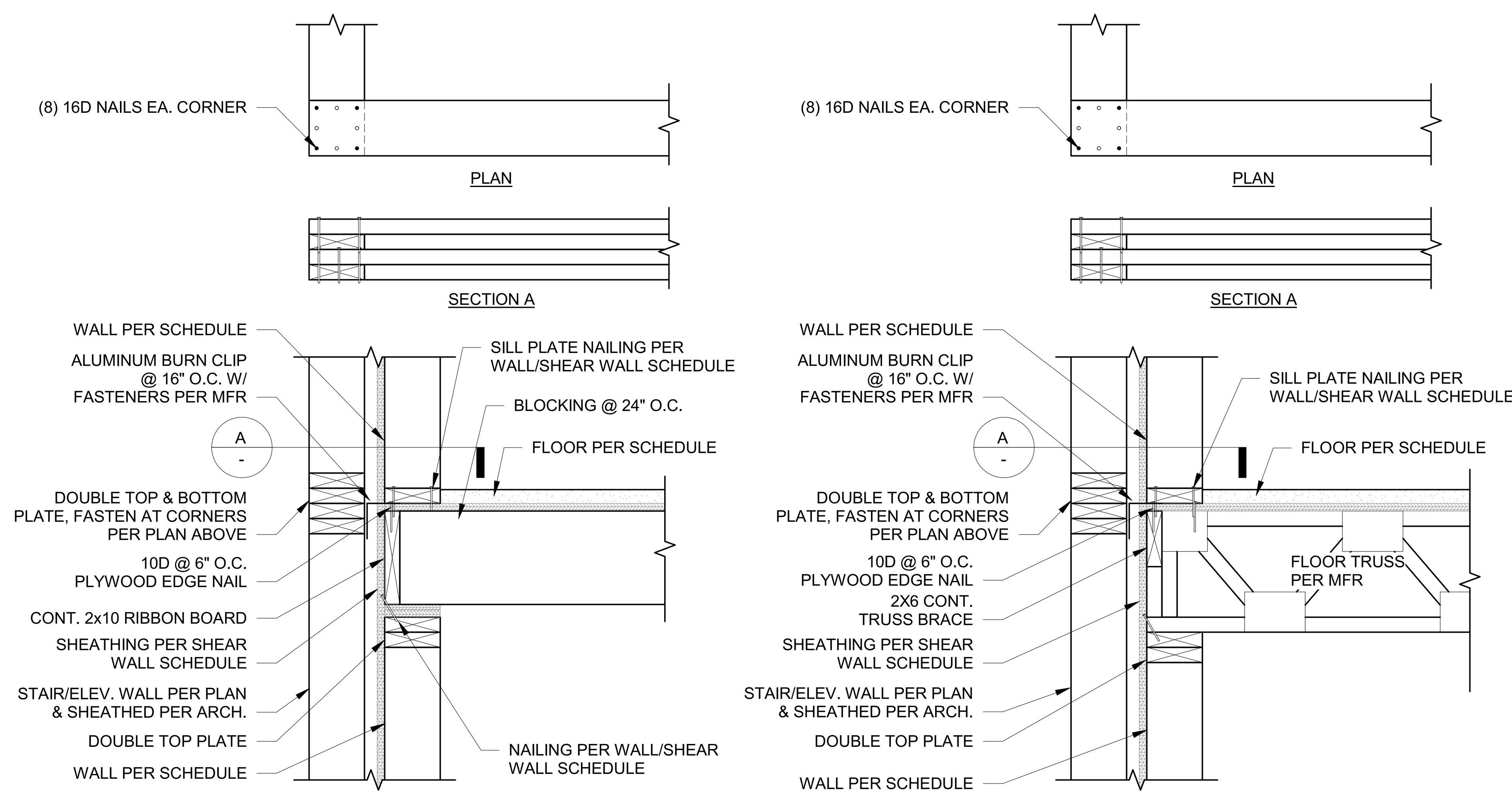
5 S510 FRAMING AT PERGOLA BEARING
1" = 1'-0"



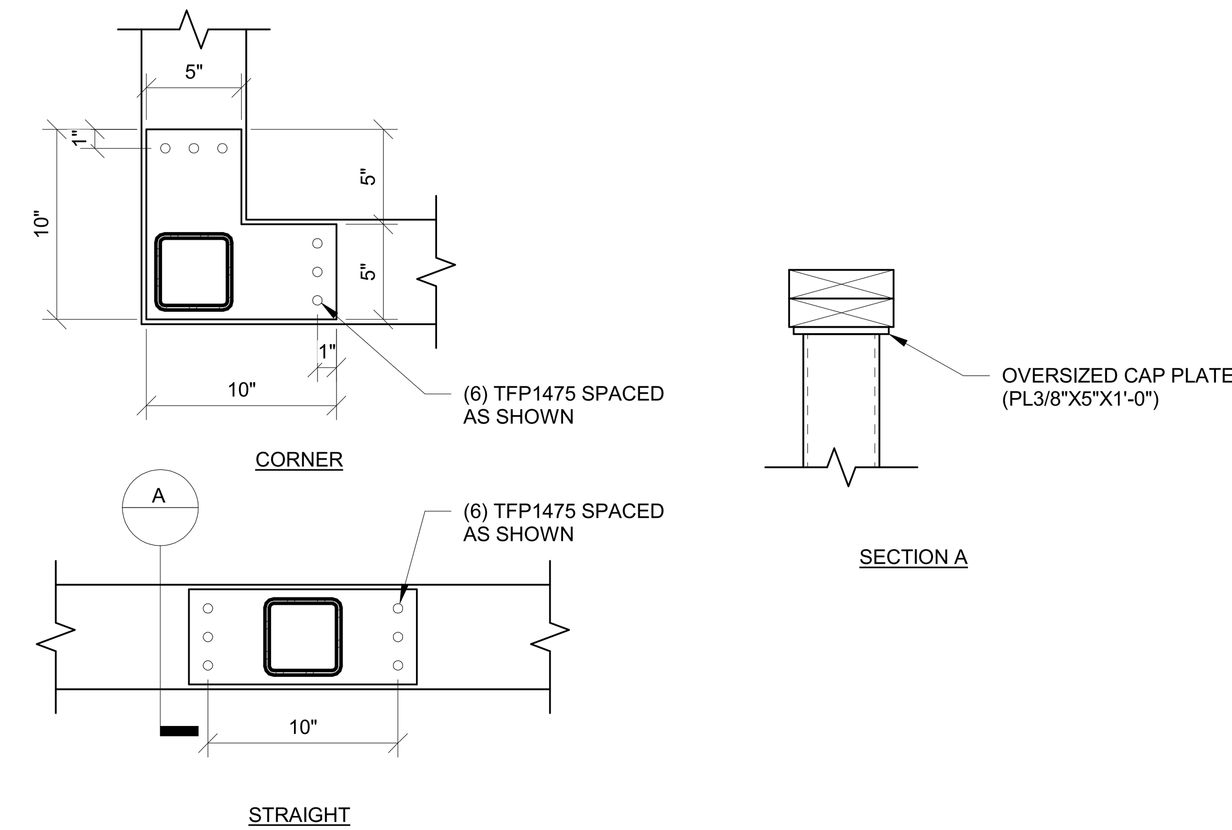
6 S510 WOOD STAIR ISOMETRIC
3/4" = 1'-0"



7 S510 LANDING AT FLOOR JOIST
1" = 1'-0"



8 S510 DOUBLE WALL FRAMING AT ELEVATOR
1" = 1'-0"



9 S510 STEEL PLATE TO WALL TOP/BOTTOM PLATE
1 1/2" = 1'-0"

IN RESPONSE TO GC COMMENTS 3

PRINTS ISSUED
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CELESTE KAY SPICKERT
NUMBER PE-2008002213
PROFESSIONAL ENGINEER

03/06/2024

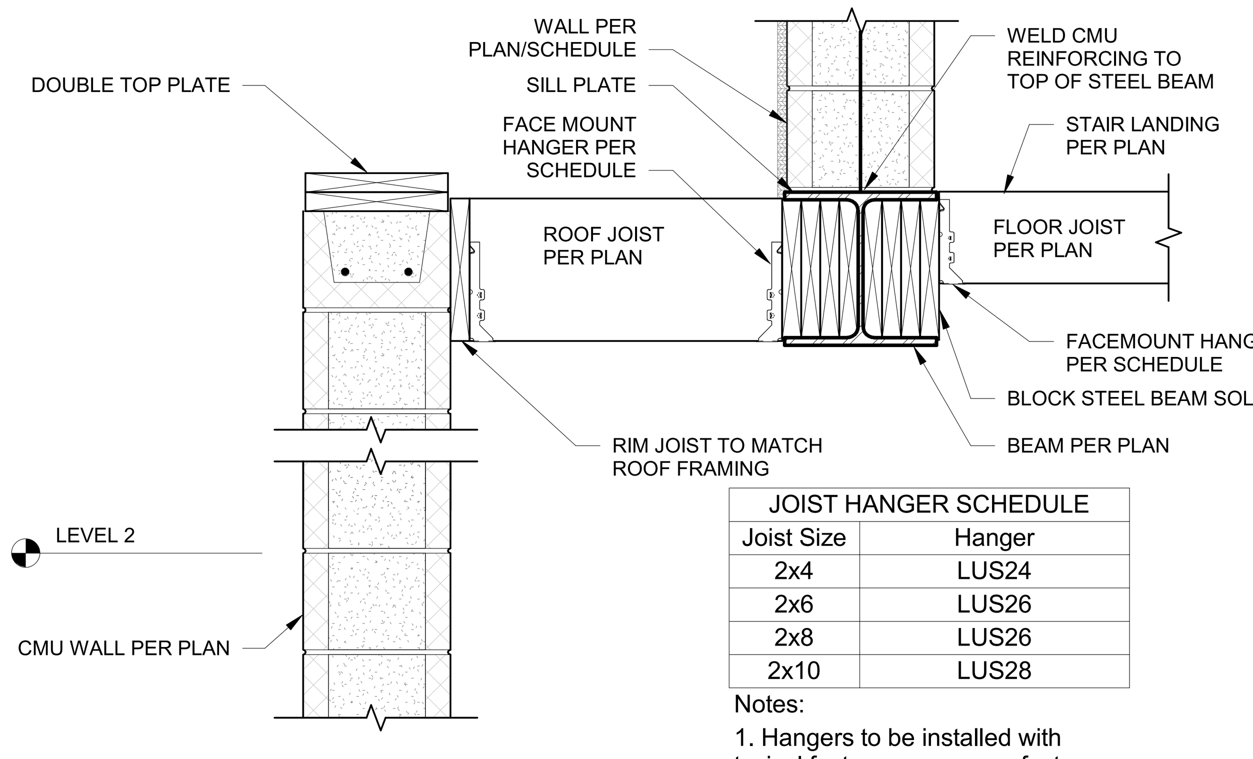
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
WOOD FRAMING DETAILS

PROJECT NUMBER: 2023000333

SHEET NUMBER:
S510

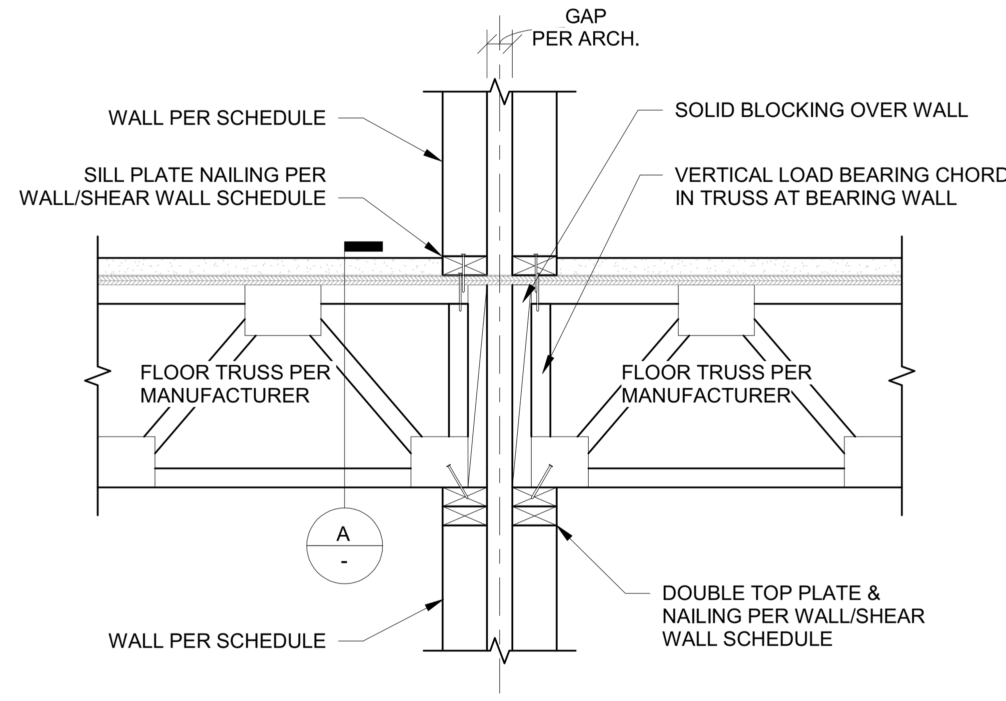
9/9/2024 8:50:00 AM
C:\Users\csenecal\OneDrive - McClure Engineering\Documents\2023000333 - Rosemann - Towneplace Suites Deep Foundations_R23_csenecalQLL53.rvt



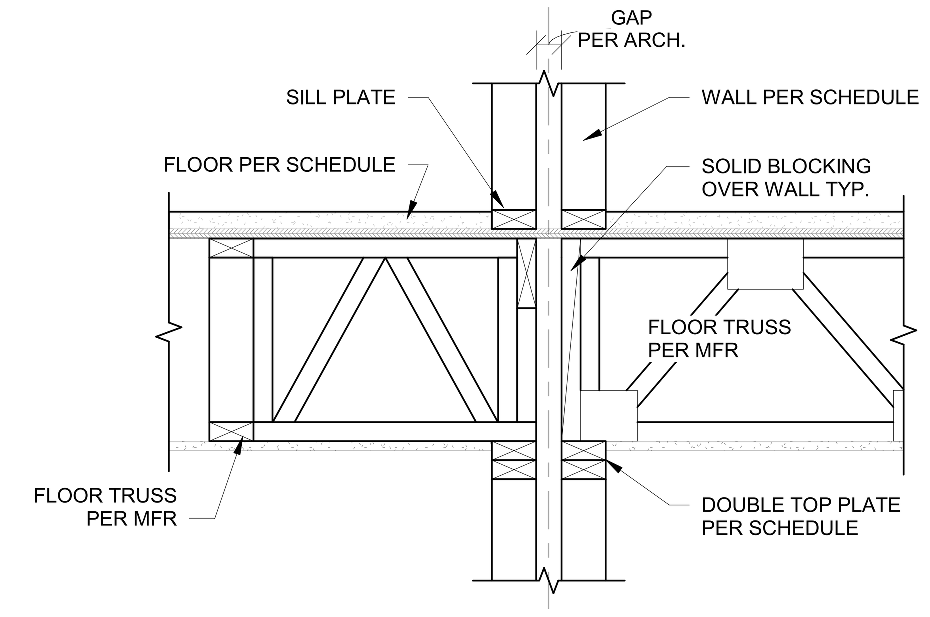
JOIST HANGER SCHEDULE	
Joist Size	Hanger
2x4	LUS24
2x6	LUS26
2x8	LUS26
2x10	LUS28

Notes:
1. Hangers to be installed with typical fasteners per manufacturer product data
2. All exterior members are to be pressure treated

1 S511 SECTION AT LOW ROOF AT STAIR
1" = 1'-0"

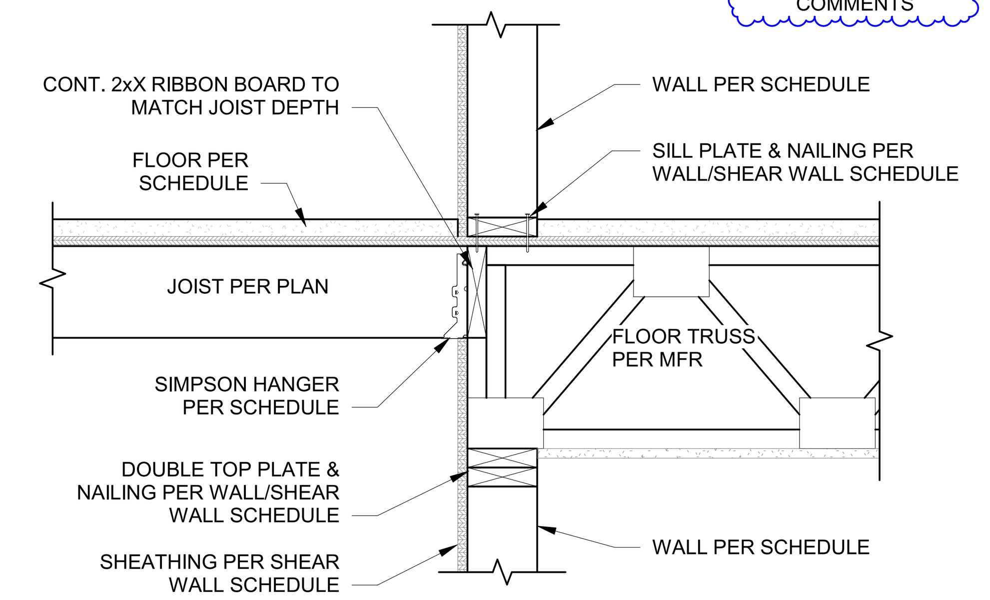


2 S511 FRAMING AT INTERIOR WALL
1" = 1'-0"

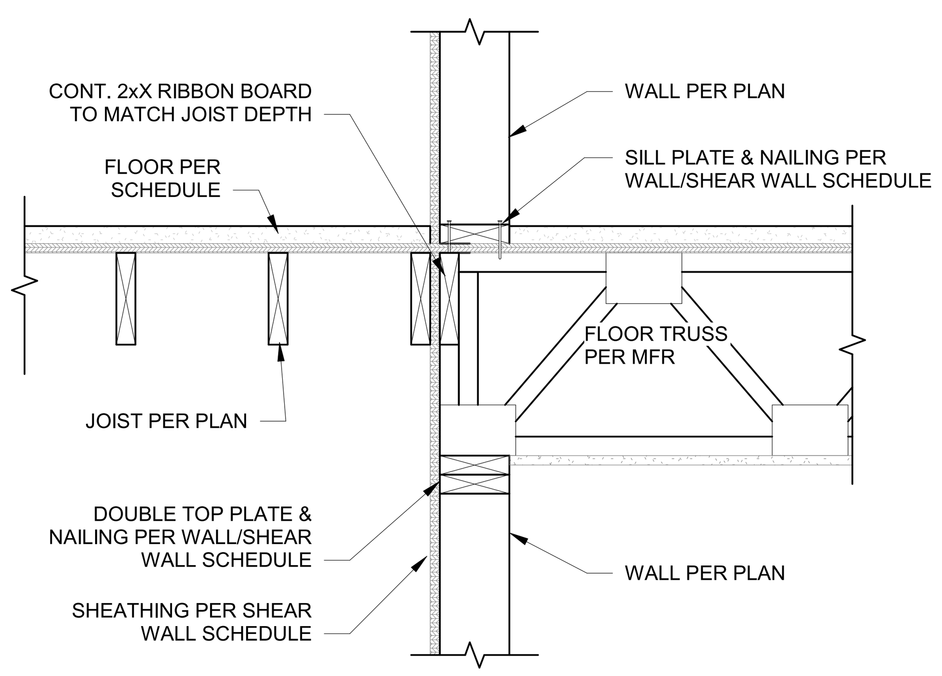


3 S511 FLOOR TRUSS BEARING TRANSITION AT DEMISING WALL
1" = 1'-0"

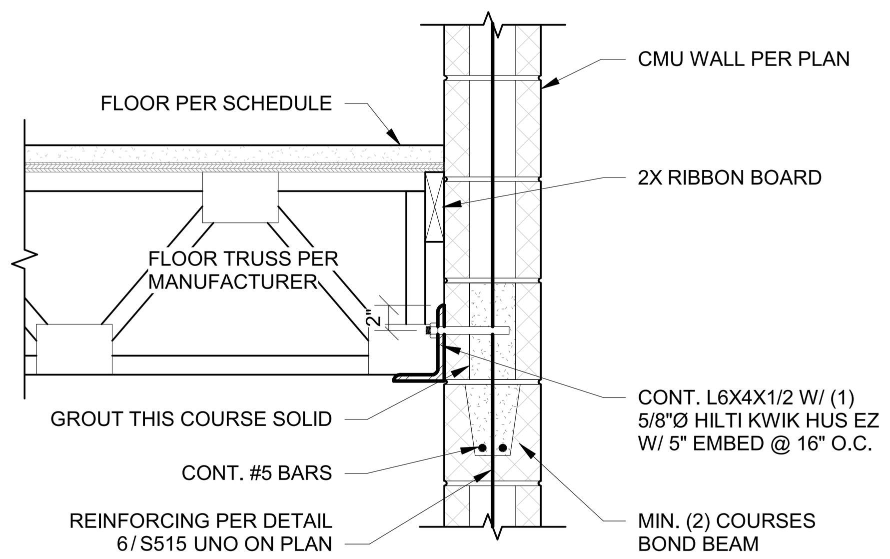
IN RESPONSE TO GC COMMENTS 3



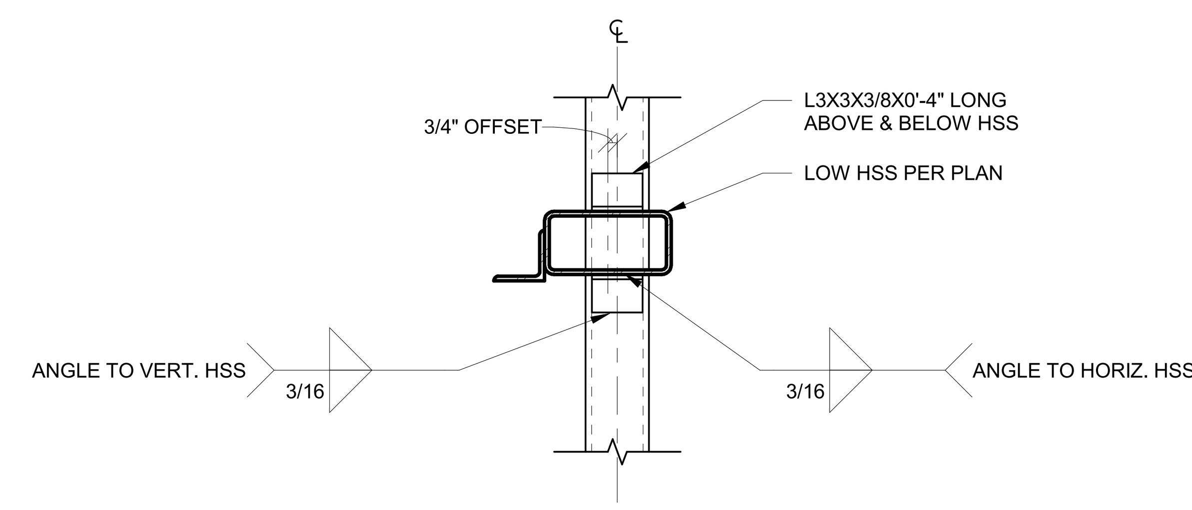
4 S511 FRAMING AT CORRIDOR
1" = 1'-0"



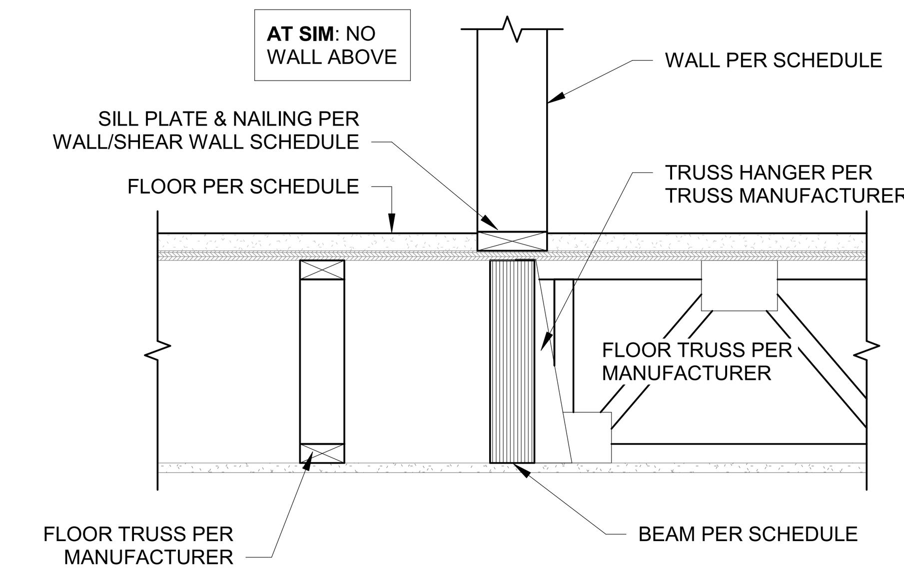
5 S511 FRAMING TRANSITION AT CORRIDOR
1" = 1'-0"



6 S511 FLOOR TRUSS BEARING AT CMU
1" = 1'-0"



7 S511 LOW BEAM CONNECTION TO COLUMN
1" = 1'-0"



8 S511 FLOOR TRUSS BEARING TRANSITION AT WOOD BEAM
1" = 1'-0"

PRINTS ISSUED
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MISSOURI CERTIFICATE OF AUTHORITY
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STATE OF MISSOURI
CELESTE KAY SPICKERT
NUMBER PE-2008002213
PROFESSIONAL ENGINEER
03/06/2024

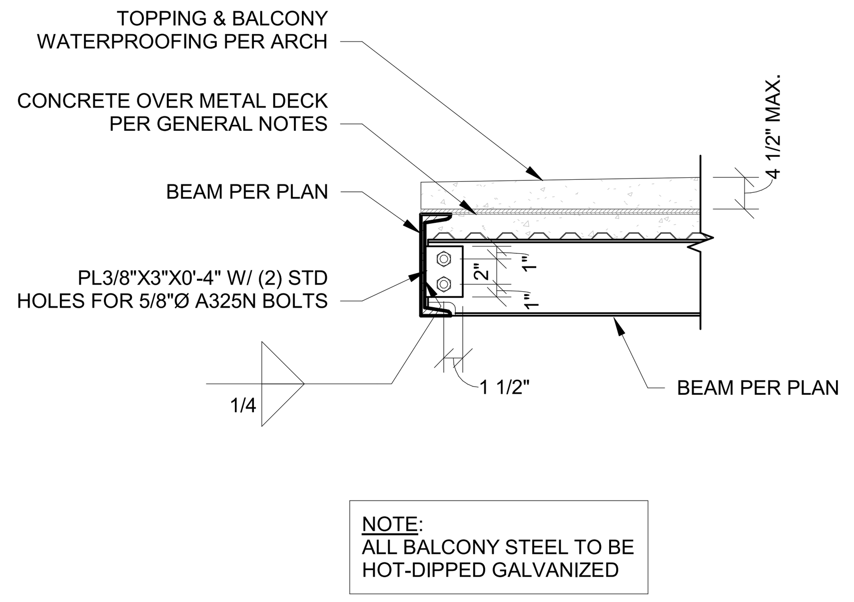
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
FRAMING DETAILS

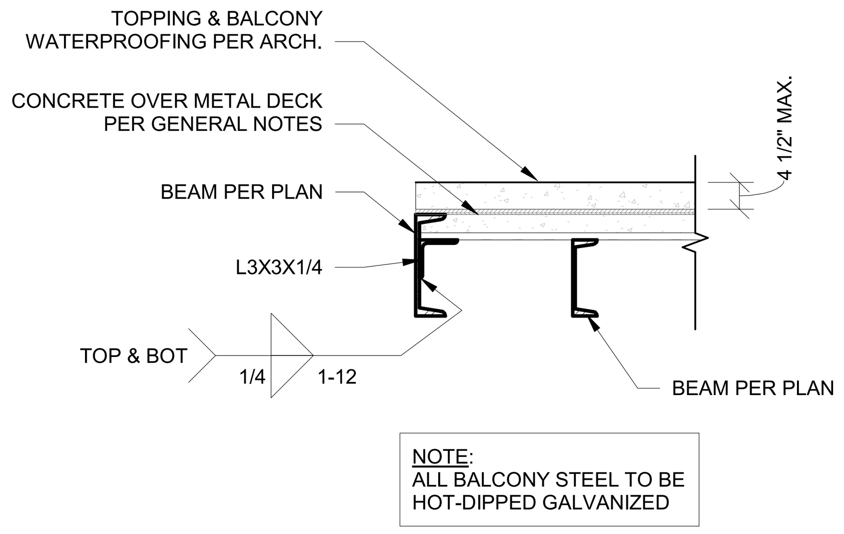
PROJECT NUMBER: 2023000333

SHEET NUMBER:

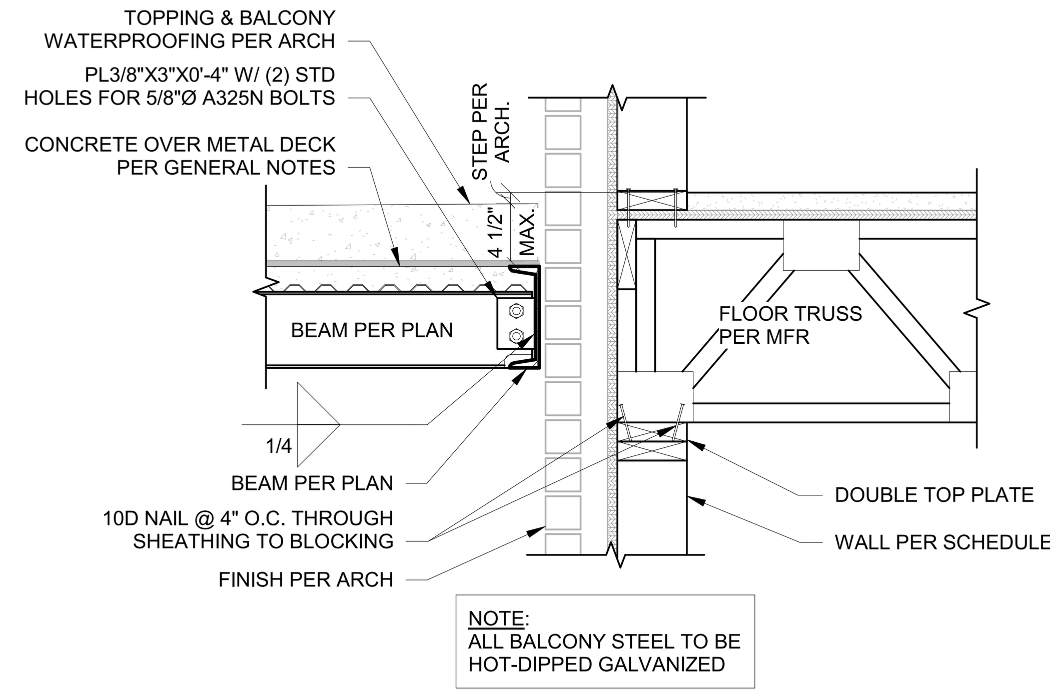
S511



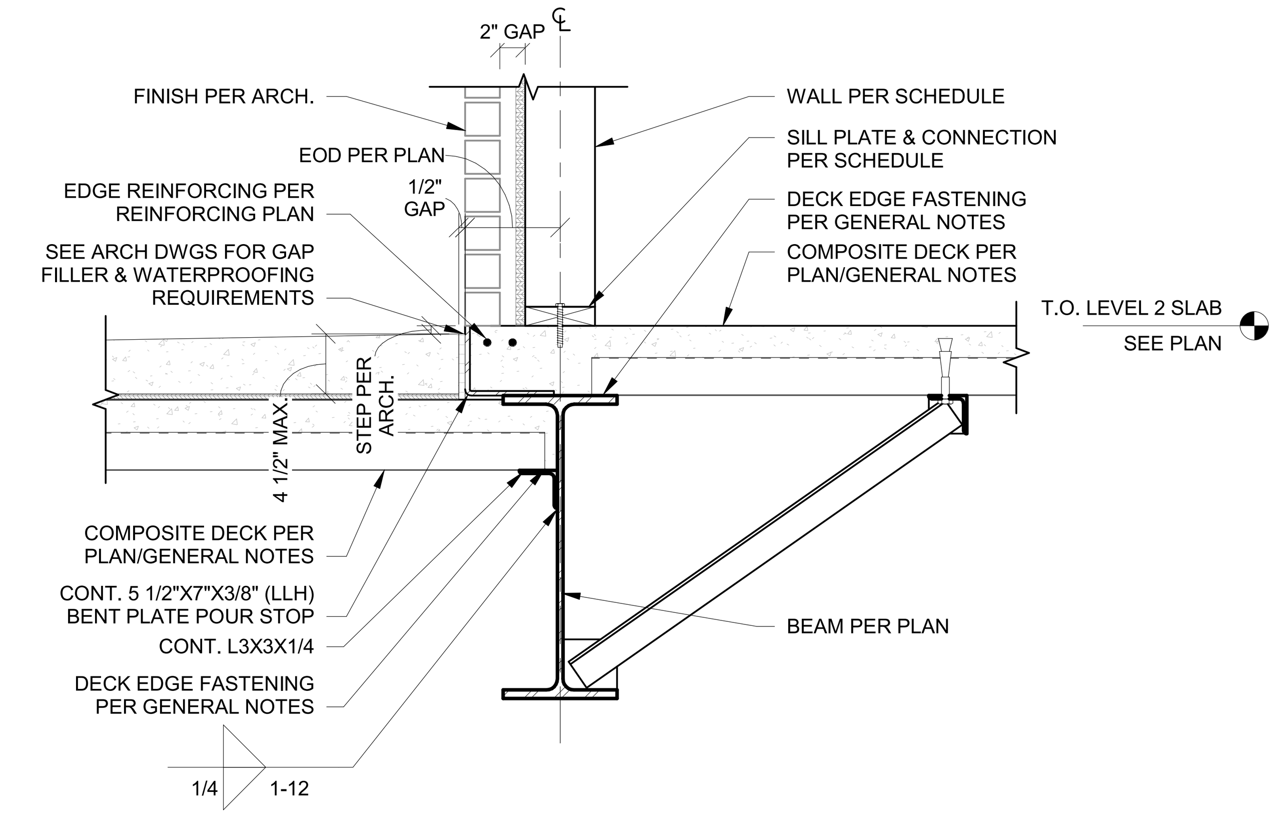
1 BALCONY EDGE FRAMING - PERPENDICULAR
S512 1" = 1'-0"



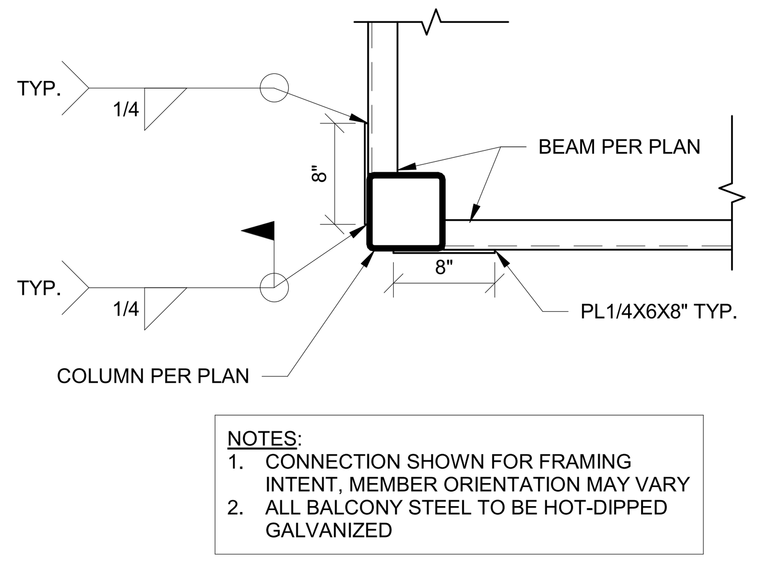
2 BALCONY EDGE FRAMING - PARALLEL
S512 1" = 1'-0"



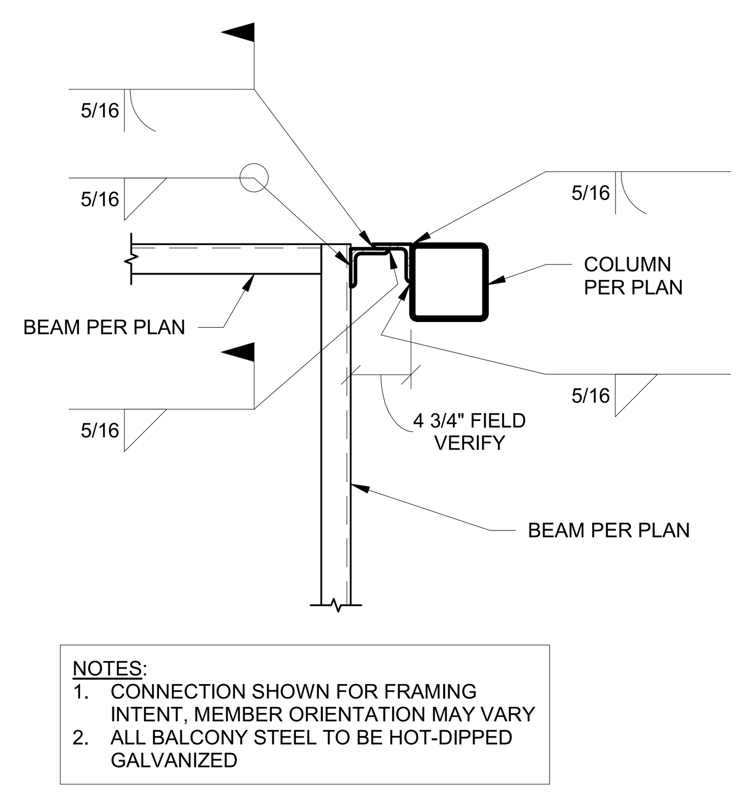
3 BALCONY FRAMING - PERPENDICULAR TO WALL
S512 1" = 1'-0"



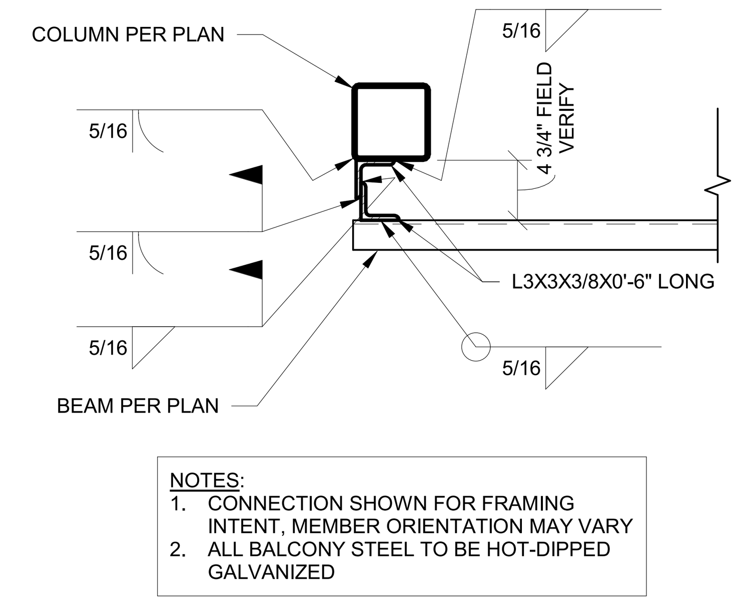
4 BALCONY FRAMING - PERPENDICULAR TO BEAM
S512 1" = 1'-0"



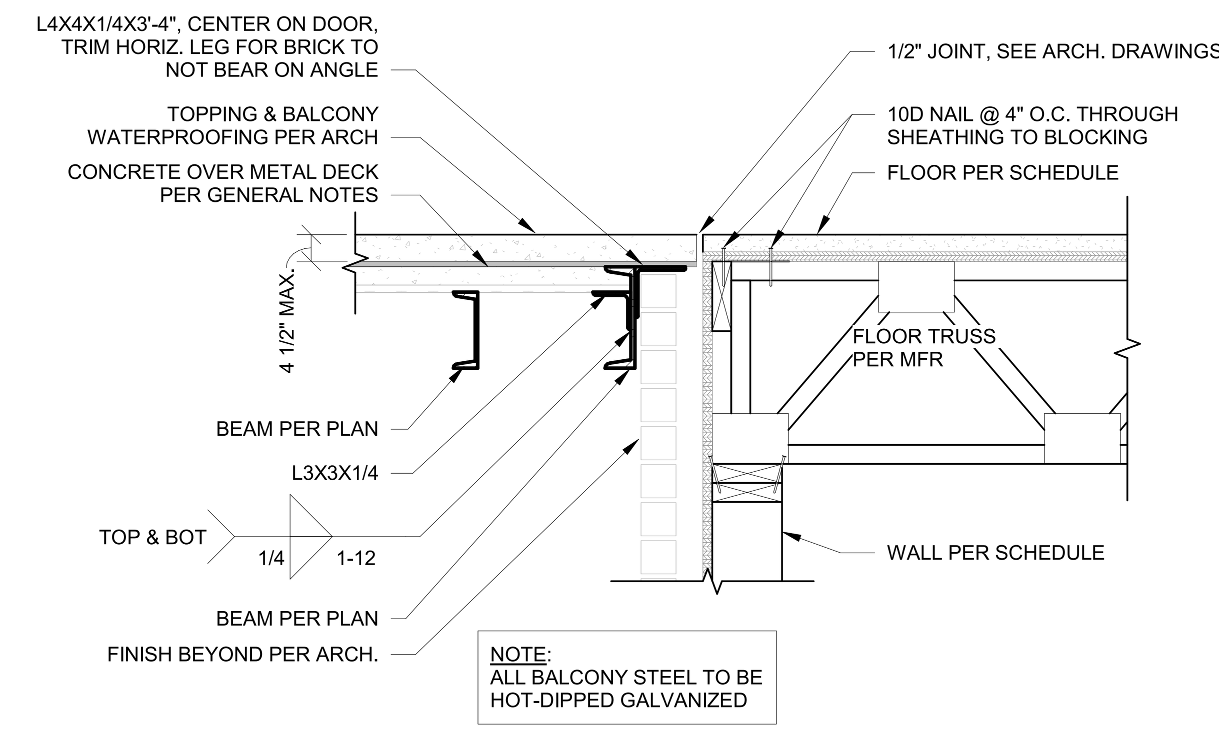
5 BALCONY BEAM TO COLUMN
S512 1" = 1'-0"



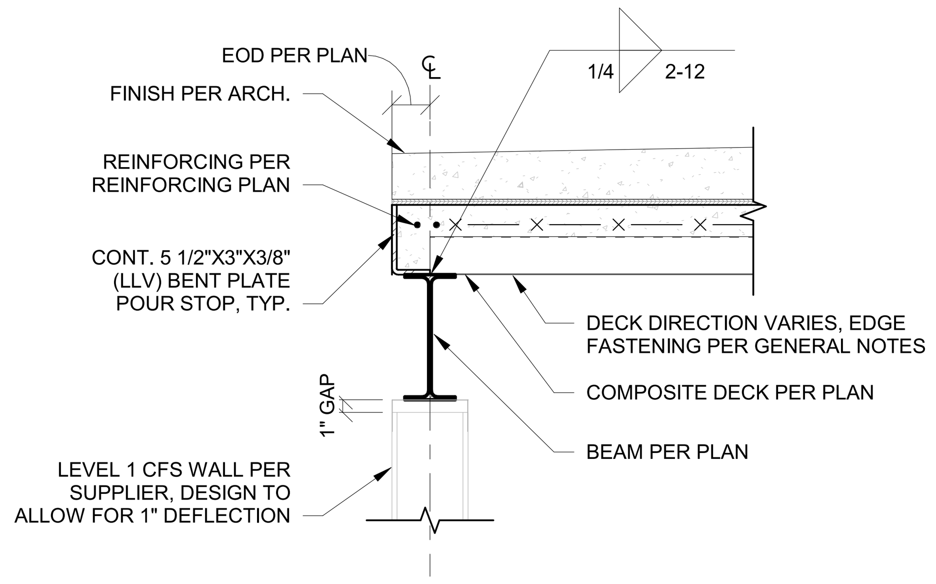
6 BALCONY BEAM TO COLUMN WITH PLATE
S512 1" = 1'-0"



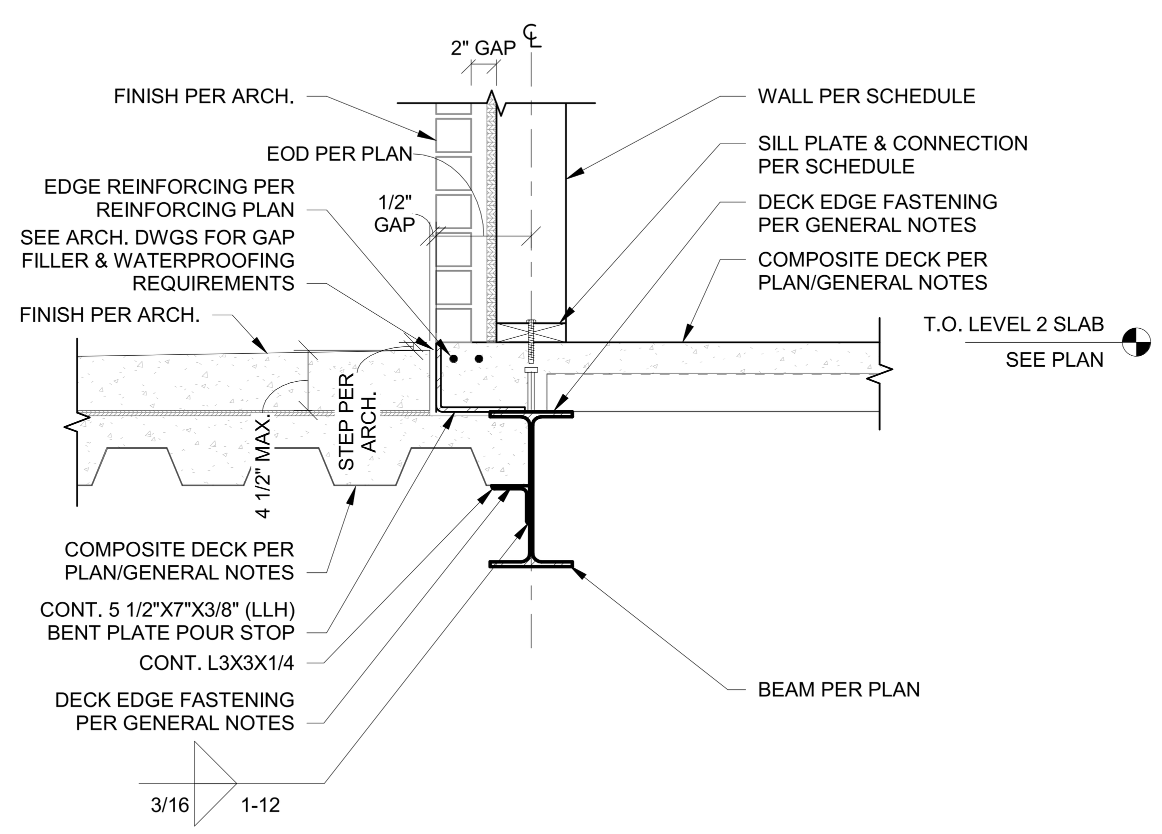
7 BALCONY BEAM TO COLUMN WITH ANGLES
S512 1" = 1'-0"



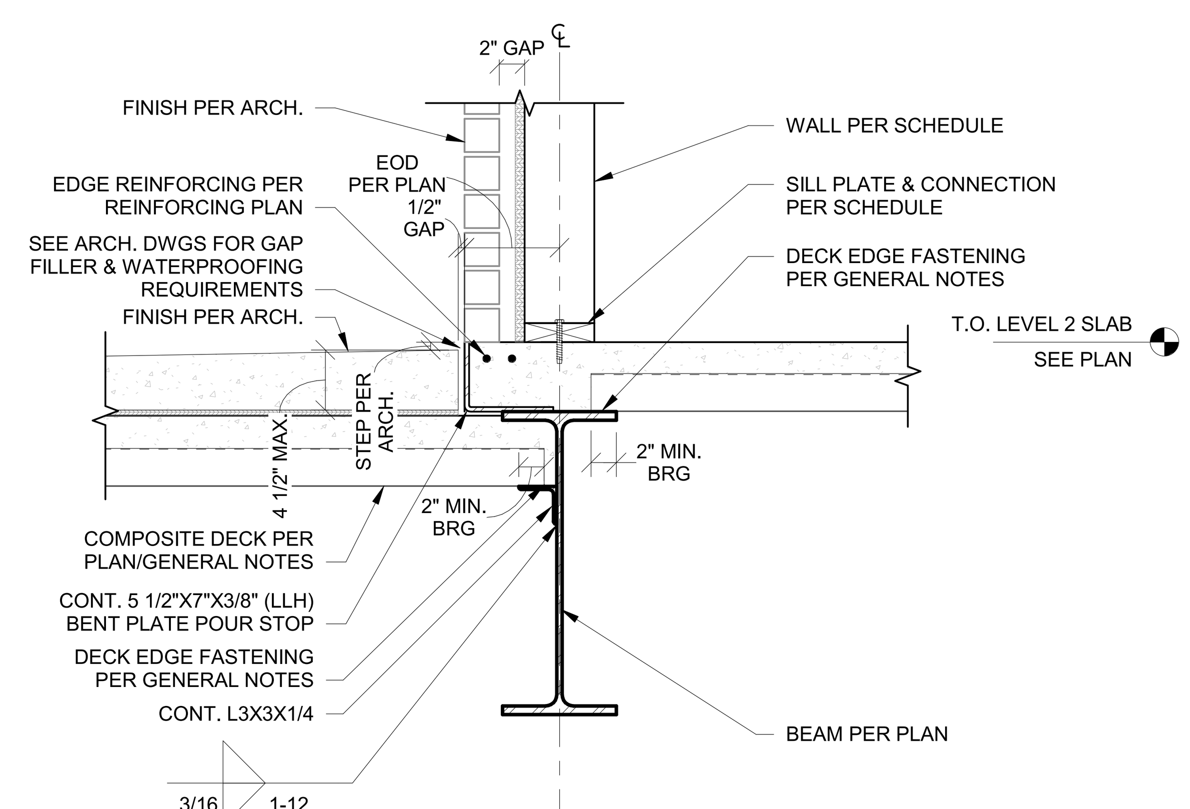
8 BALCONY EDGE FRAMING AT OPENING
S512 1" = 1'-0"



9 BALCONY EDGE FRAMING ON LEVEL 2
S512 1" = 1'-0"



10 BALCONY FRAMING - PARALLEL TO BEAM
S512 1" = 1'-0"



11 BALCONY FRAMING AT COLUMN - PERPENDICULAR TO BEAM
S512 1" = 1'-0"

IN RESPONSE TO GC COMMENTS 3

PRINTS ISSUED
11/01/23 - CITY SUBMITTAL

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CELESTE KAY SPICKERT
NUMBER PE-2008002213
PROFESSIONAL ENGINEER
03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
BALCONY DETAILS

PROJECT NUMBER: 2023000333

SHEET NUMBER:

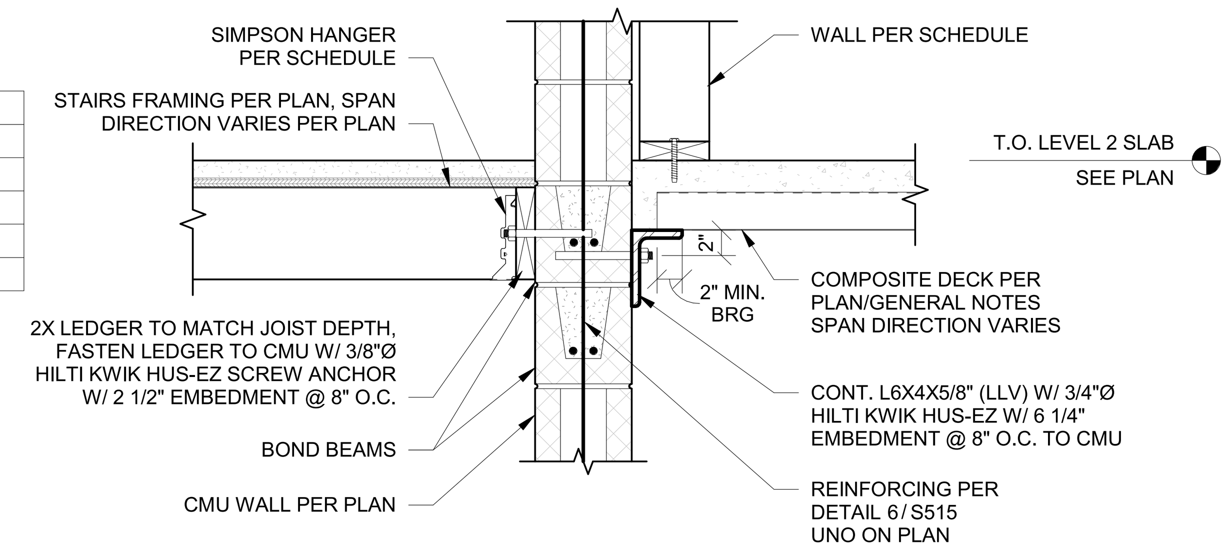
S512

IN RESPONSE TO GC COMMENTS 3

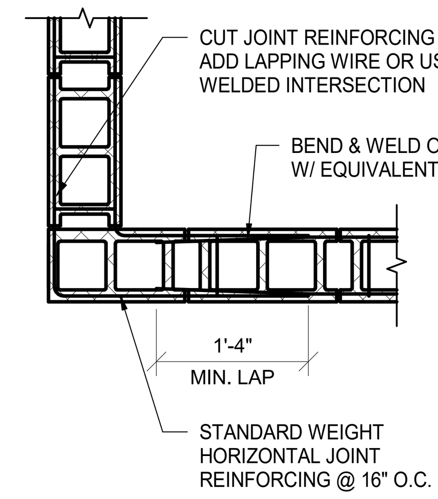
JOIST HANGER SCHEDULE	
Joist Size	Hanger
2x4	LUS24
2x6	LUS26
2x8	LUS26
2x10	LUS28

Notes:

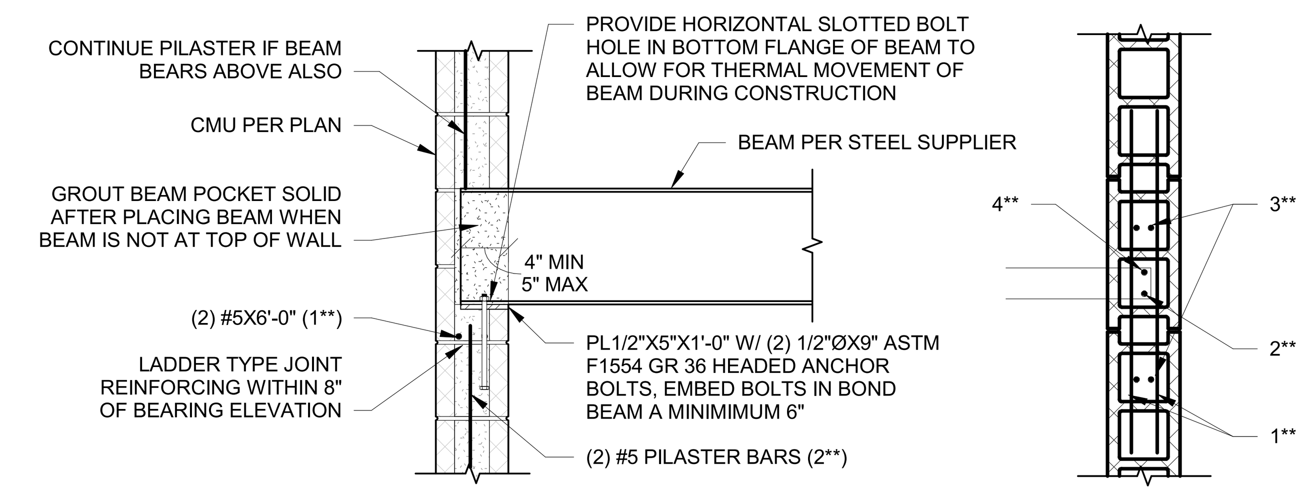
1. Hangers to be installed with typical fasteners per manufacturer product data
2. All exterior members are to be pressure treated



1 S515 SECTION AT STAIRS AT LEVEL 2
1" = 1'-0"

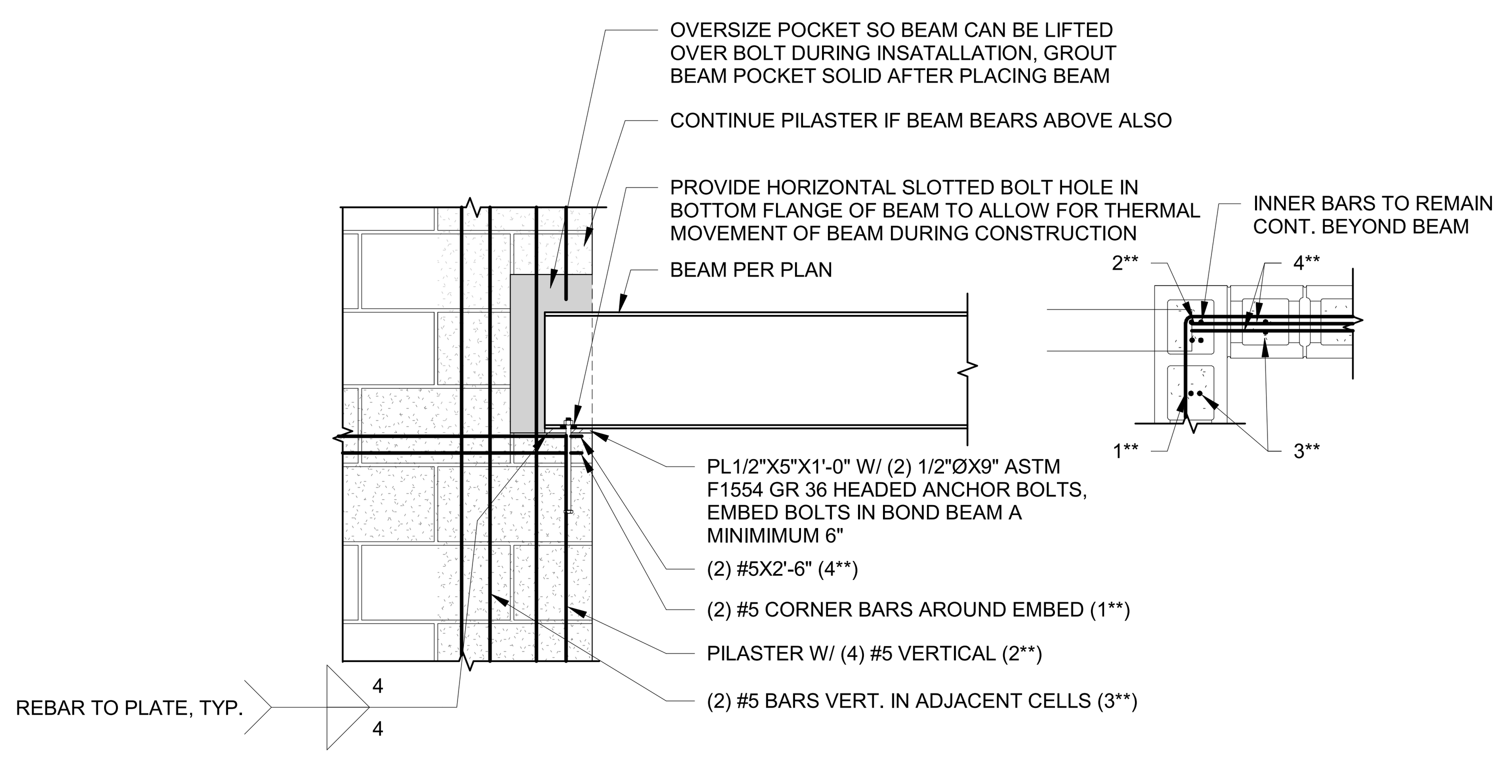


2 S515 JOINT REINFORCING AT INTERSECTING CMU WALLS
3/4" = 1'-0"



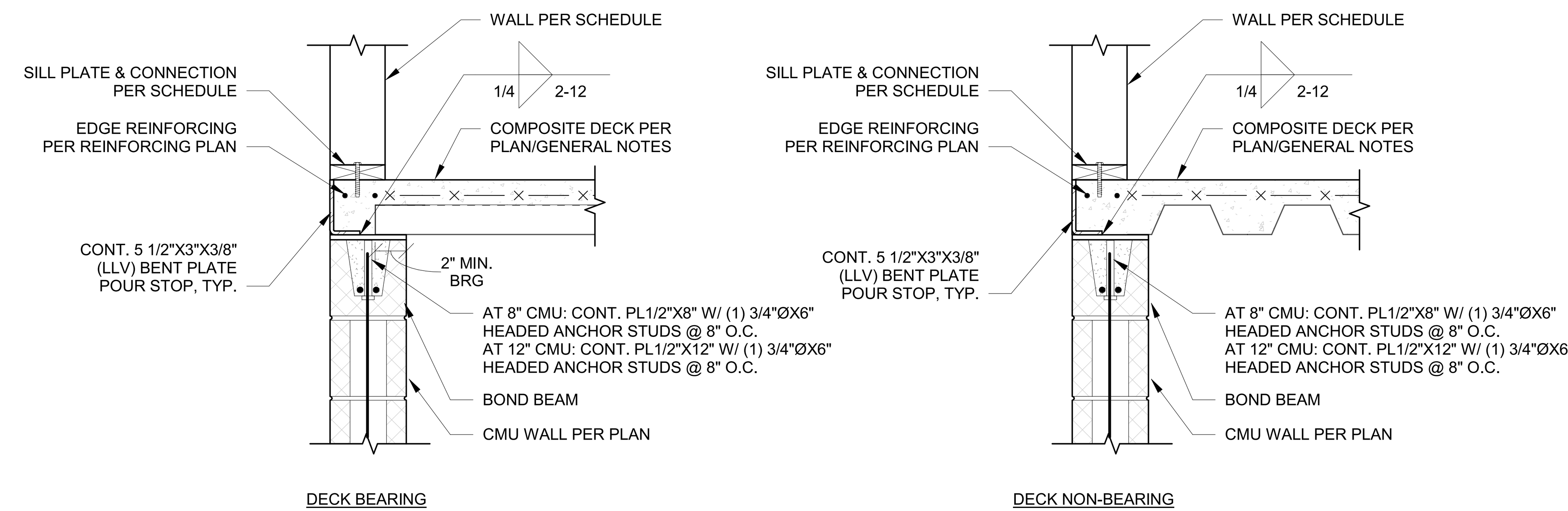
NOTES:
CONNECTION SHOULD USE SLOTTED HOLES TO ALLOW FOR BEAM MOVEMENT IN THE AXIAL DIMENSION

3 S515 BEAM CONNECTION TO MASONRY - MID WALL
3/4" = 1'-0"



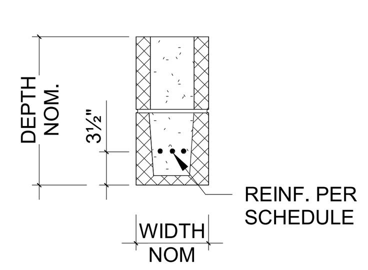
NOTES:
CONNECTION SHOULD USE SLOTTED HOLES TO ALLOW FOR BEAM MOVEMENT IN THE AXIAL DIMENSION

4 S515 BEAM CONNECTION TO MASONRY AT CORNER
3/4" = 1'-0"

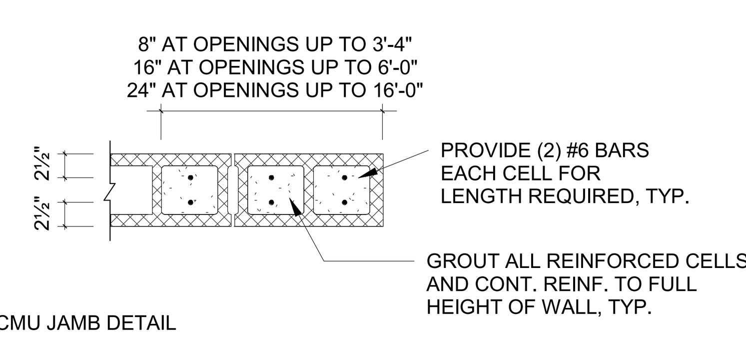


7 S515 COMPOSITE DECK BEARING ON MASONRY WALL
1" = 1'-0"

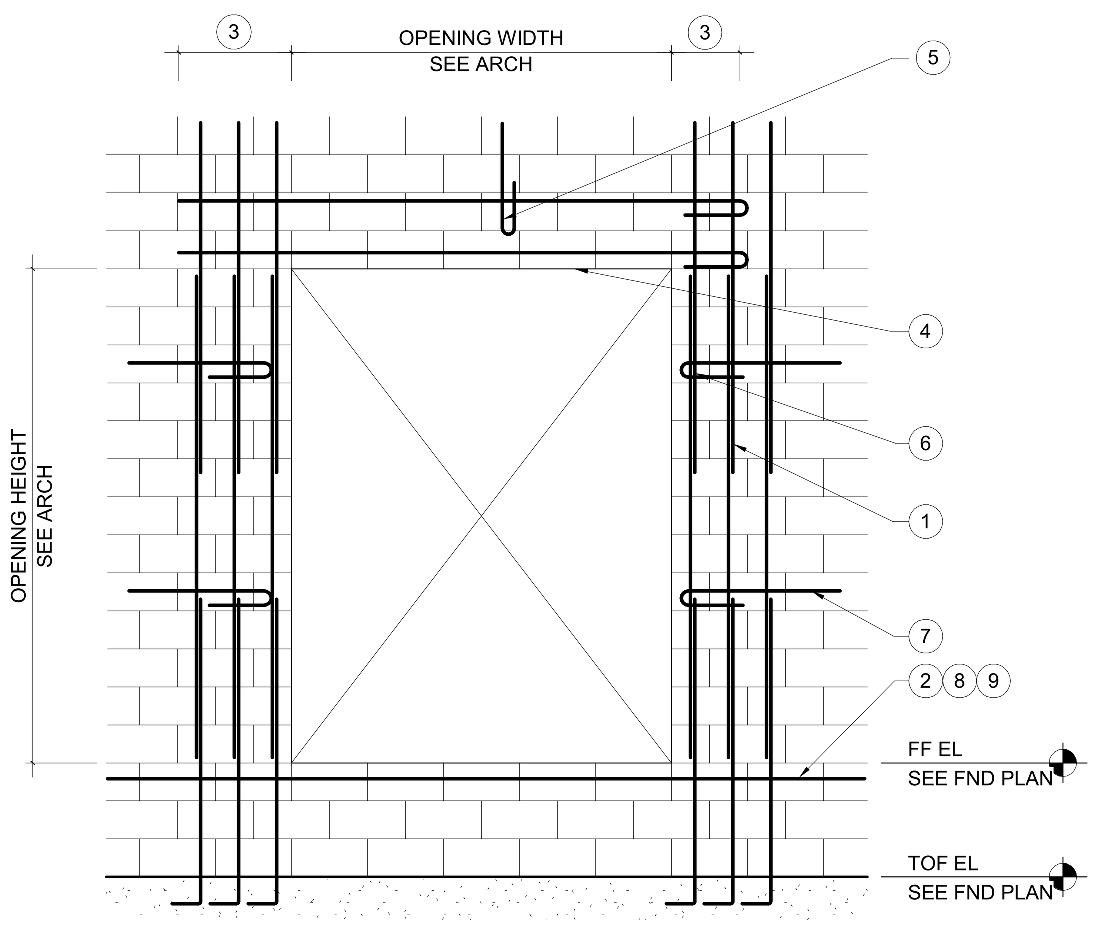
CMU LINTEL SCHEDULE				
MARK	WIDTH	DEPTH	REINFORCING	STIRRUPS
ALL	8"	16"	(2) #5	-
ALL	12"	16"	(2) #5	-



CMU LINTEL DETAIL



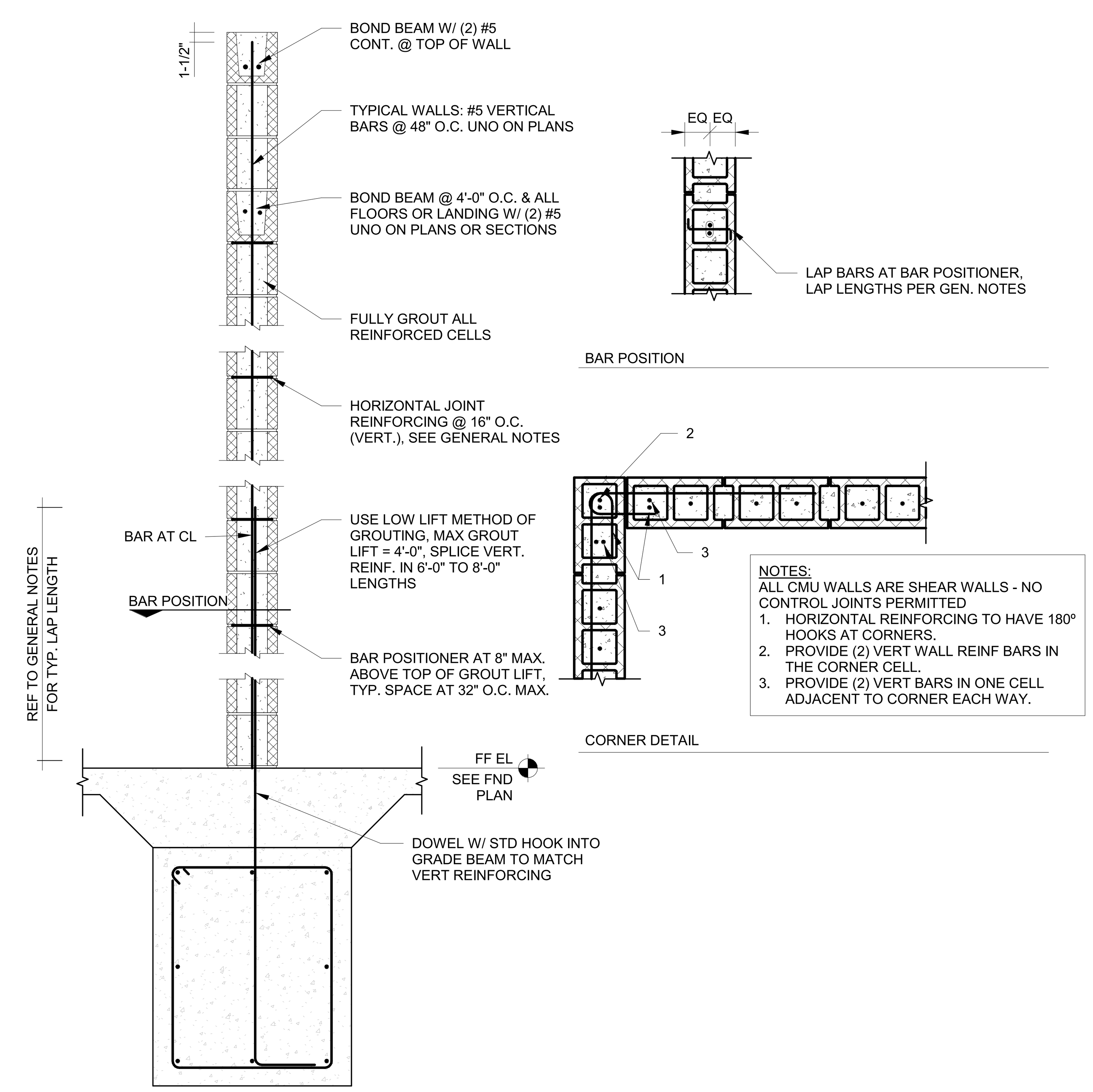
CMU JAMB DETAIL



NOTES:

1. SPLICES IN VERT REINF, SEE GENERAL NOTES
2. BOND BEAM, SEE 6 / S515
3. EXTEND GROUTED LINTEL A MINIMUM OF 2'-0" BEYOND FACE OF OPENING EACH SIDE FOR STRAIGHT LINTEL REINF AND 1'-4" FOR LINTEL REINF WITH STANDARD 180° ACI HOOK.
4. USE LINTEL BLOCKS ONLY FOR BOTTOM COURSE OF LINTEL BEAMS OVER OPENING.
5. CONTINUE VERT WALL REINF OVER OPENING. ANCHOR VERT REINF INTO LINTEL BEAM WITH STANDARD 180° ACI HOOK.
6. ALL VERT BARS AT CMU JAMB TO EXTEND 24" ABOVE OPENING.
7. WHERE HORIZONTAL REINFORCING IS TERMINATED BY OPENING OR CONTROL JOINT, PROVIDE STANDARD 180° ACI HOOK WITH VERTICAL WALL REINFORCING IN THE END CELL.
8. PROVIDE 2-#5 AT BOTTOM OF ALL OPENINGS ABOVE FINISH FLOOR. EXTEND MINIMUM OF 2'-0" BEYOND FACE OF OPENING EACH SIDE FOR STRAIGHT REINFORCING AND 1'-4" FOR HOOKED REINFORCING WITH STANDARD 180° ACI HOOK.
9. PROVIDE (2) #5 BAR IN BOND BEAM AT SILL LOCATIONS.
10. DO NOT OVERSIZE OPENINGS AT ELEVATORS DURING CONSTRUCTION WITHOUT EXPLICIT PERMISSION FROM MEC

5 S515 TYPICAL MASONRY OPENING DIAGRAM & SCHEDULE
3/4" = 1'-0"



NOTES:
ALL CMU WALLS ARE SHEAR WALLS - NO CONTROL JOINTS PERMITTED

1. HORIZONTAL REINFORCING TO HAVE 180° HOOKS AT CORNERS.
2. PROVIDE (2) VERT WALL REINF BARS IN THE CORNER CELL.
3. PROVIDE (2) VERT BARS IN ONE CELL ADJACENT TO CORNER EACH WAY.

6 S515 CMU WALL REINFORCING DIAGRAM
3/4" = 1'-0"

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McCLURE™
2001 W Broadway
Columbia, MO 65203
P 573-814-1568

MISSOURI CERTIFICATE OF AUTHORITY NO. E-2006023253 EXPIRES: DECEMBER 31, 2024

STATE OF MISSOURI CELESTE KAY SPICKERT NUMBER PE-2008002213 PROFESSIONAL ENGINEER
03/06/2024

TOWNEPLACE SUITES

1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
MASONRY DETAILS

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S515

IN RESPONSE TO GC COMMENTS 3

PRINTS ISSUED
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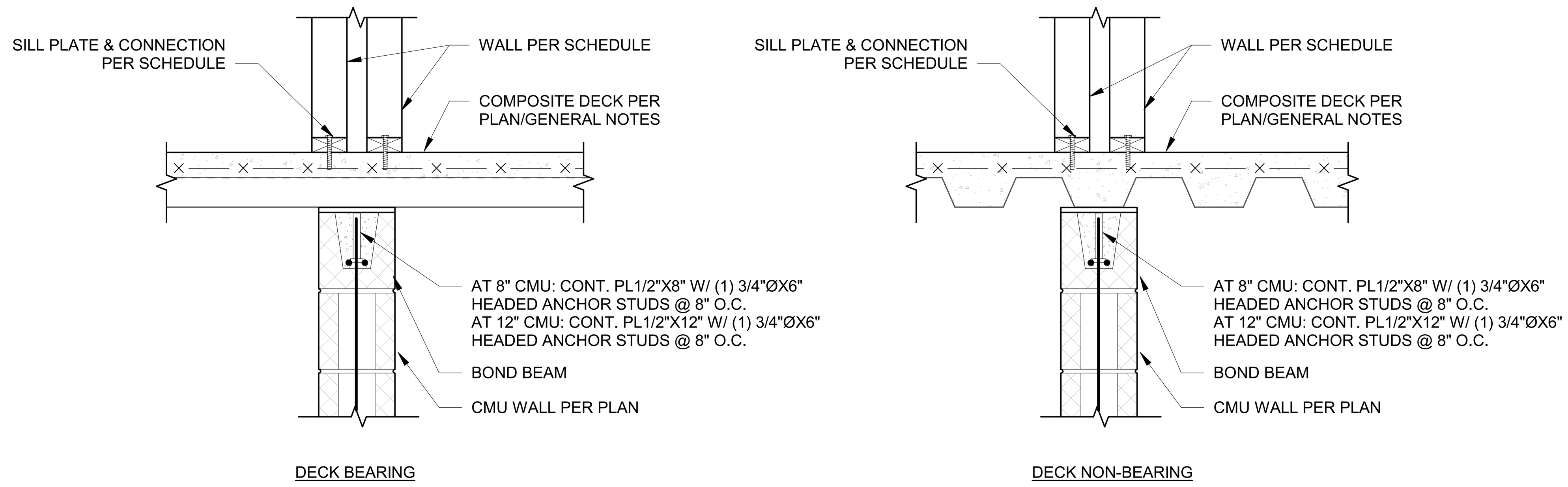
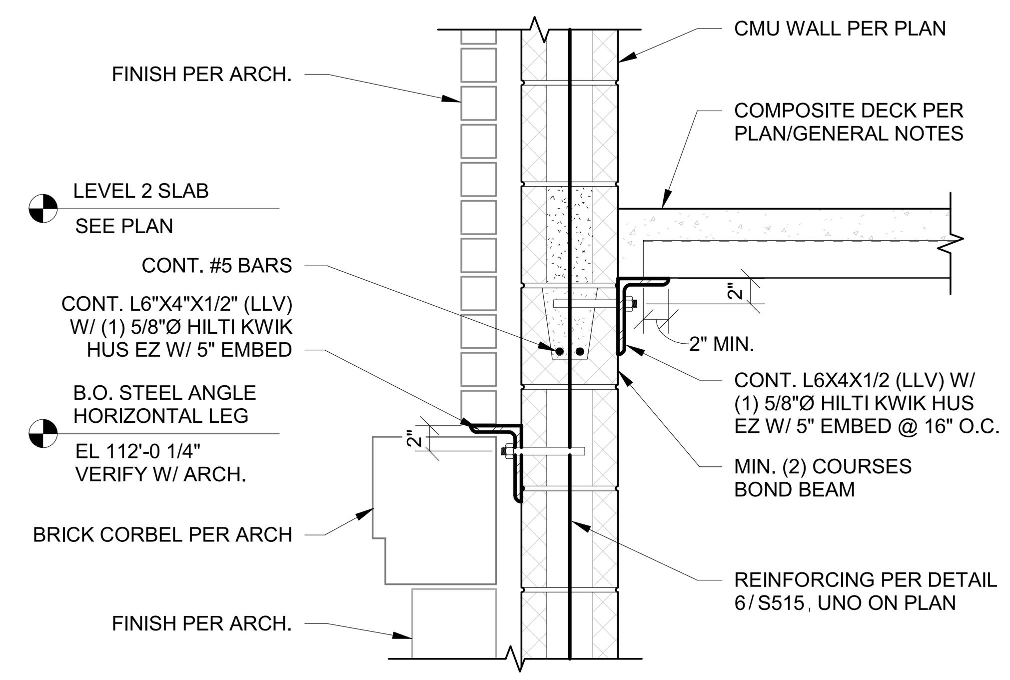
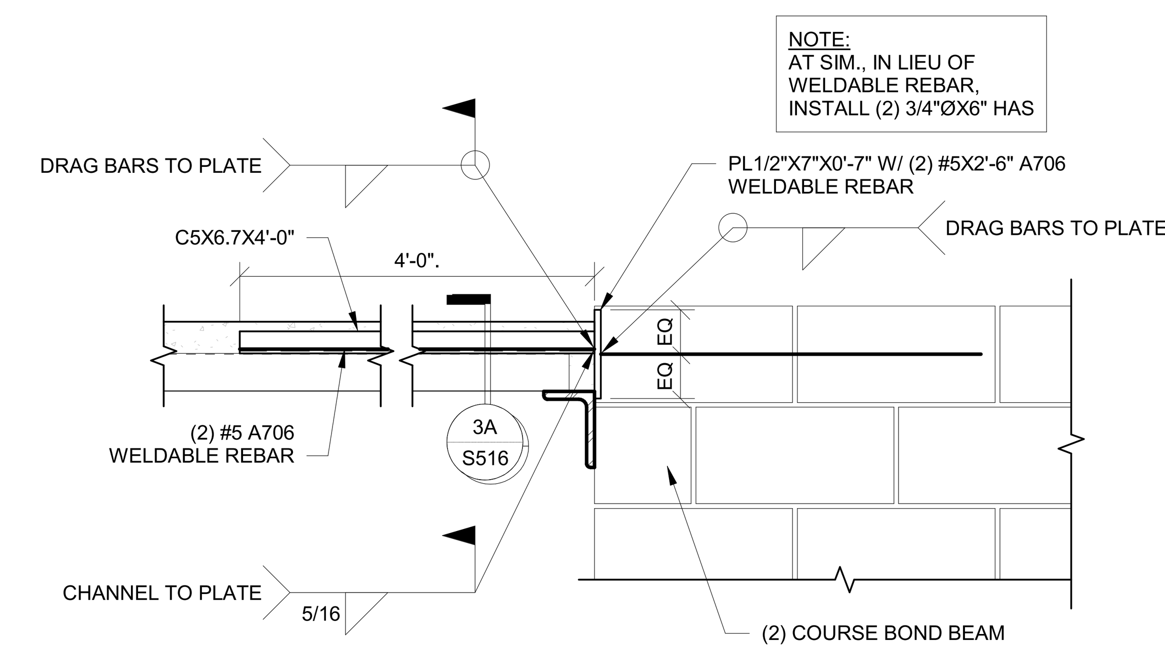


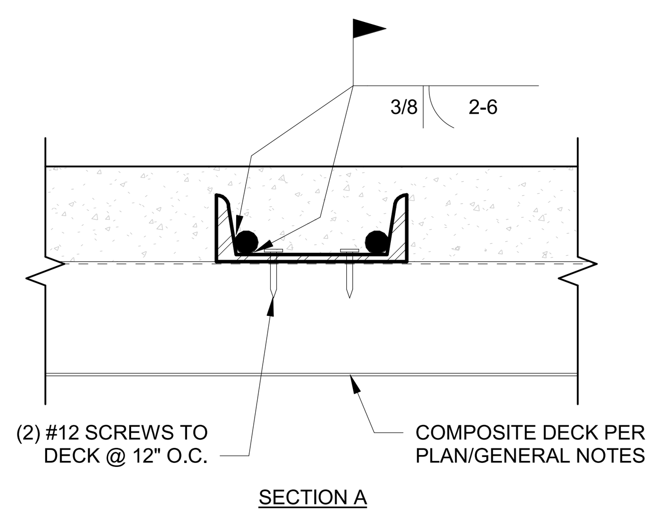
1 S516 COMPOSITE DECK BEARING ON BOTH SIDES OF MASONRY WALL
1" = 1'-0"



2 S516 BRICK RELIEF AT CMU STAIR TOWER
1" = 1'-0"



3 S516 DRAG STRUT CONNECTION TO MASONRY
1" = 1'-0"



3A S516 DRAG STRUT CONNECTION ENLARGED VIEW
3" = 1'-0"

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03/06/2024

TOWNEPLACE SUITES

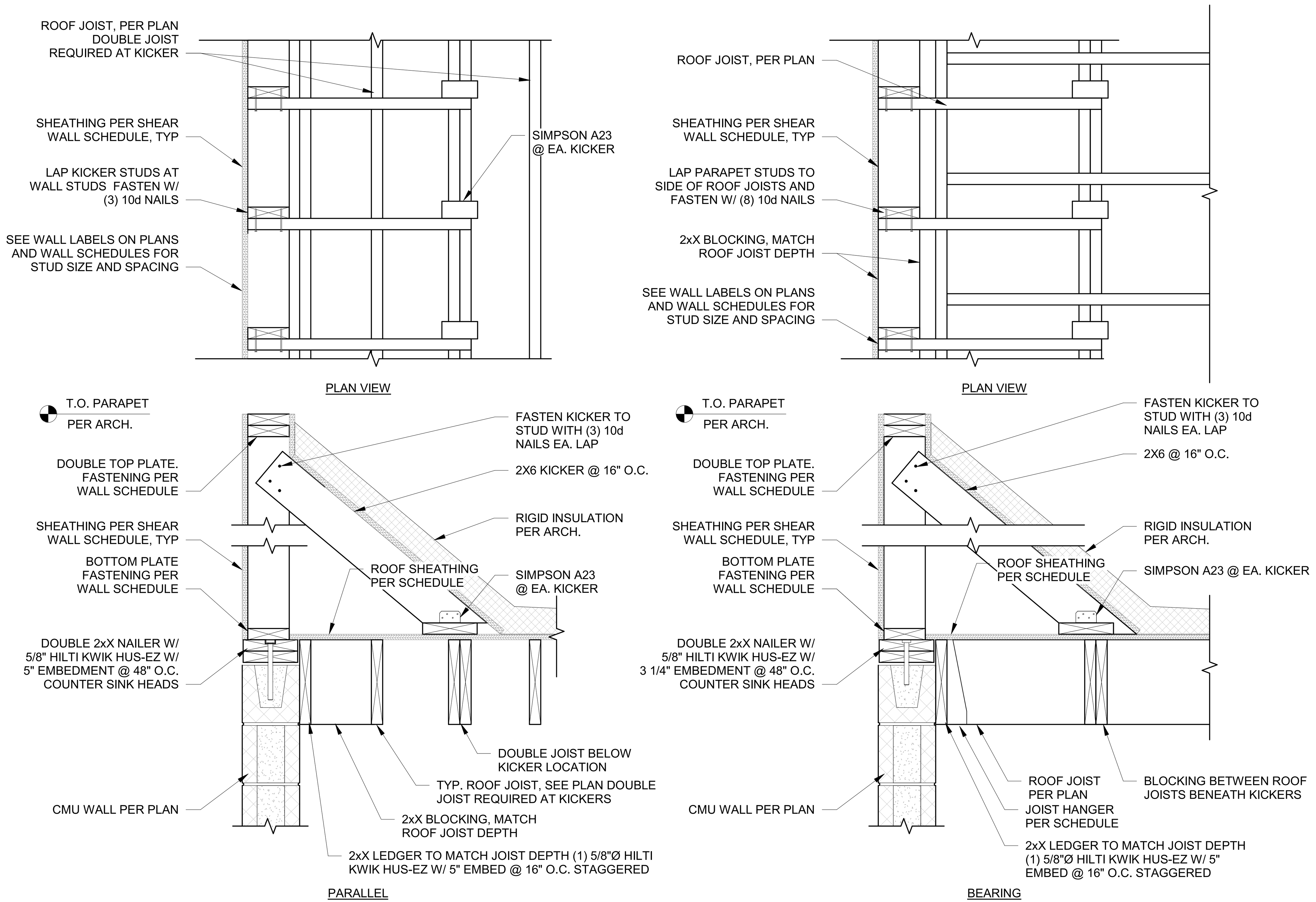
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
MASONRY DETAILS

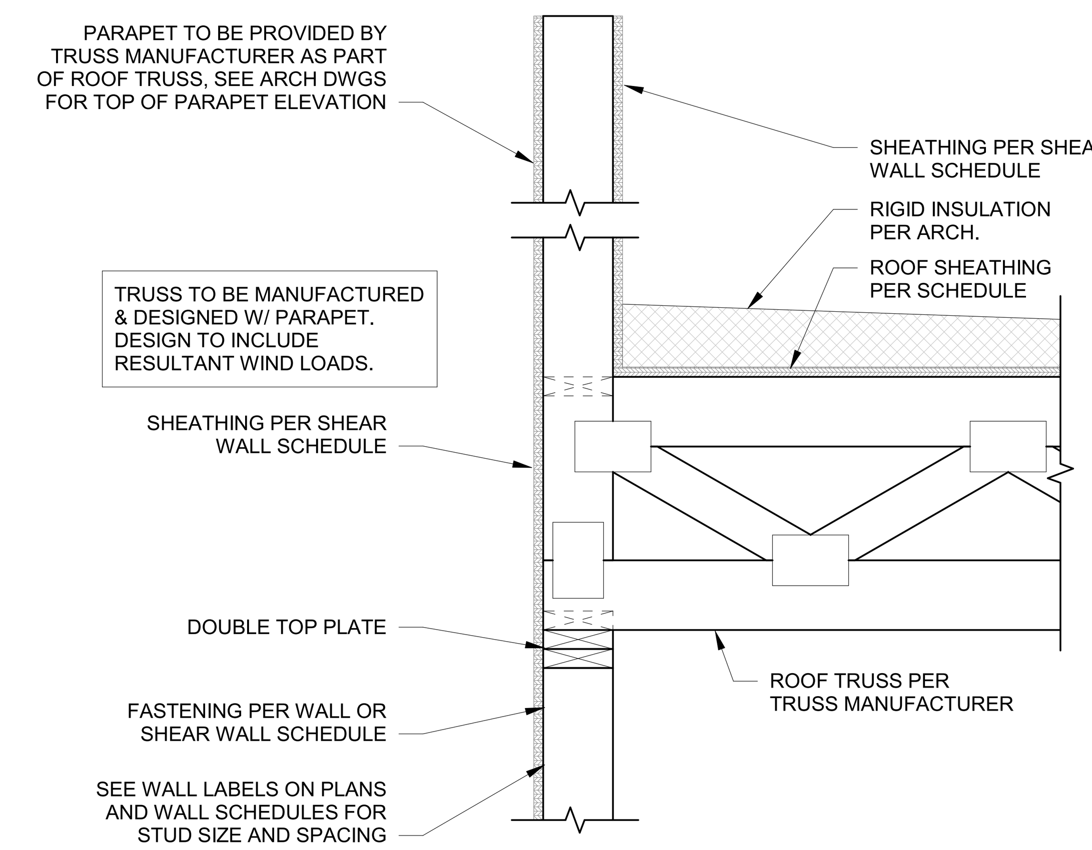
PROJECT NUMBER: 2023000333

SHEET NUMBER:

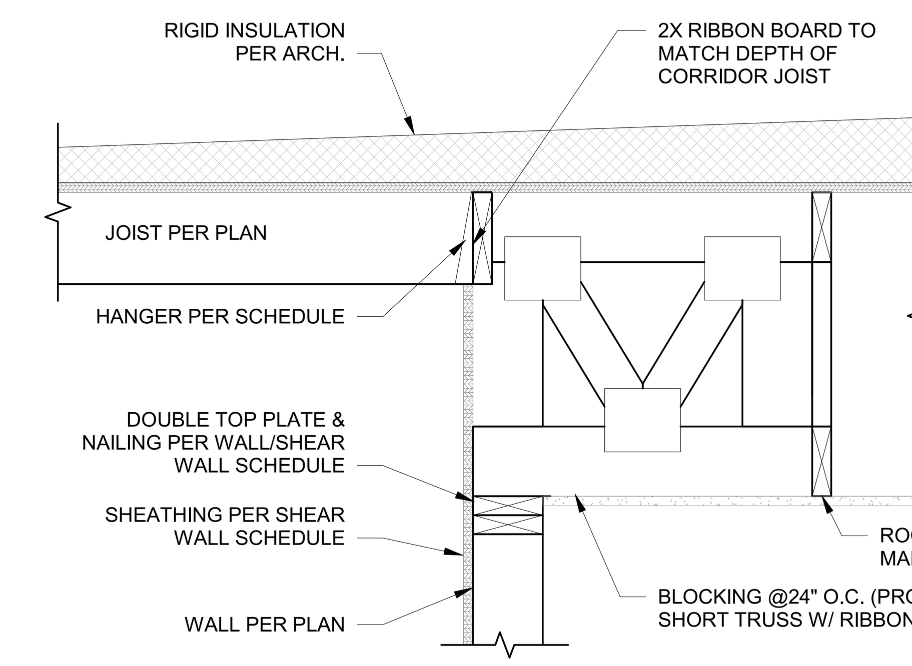
S516



1 S520 SHORT PARAPET SECTION AT 2x ROOF FRAMING
1" = 1'-0"



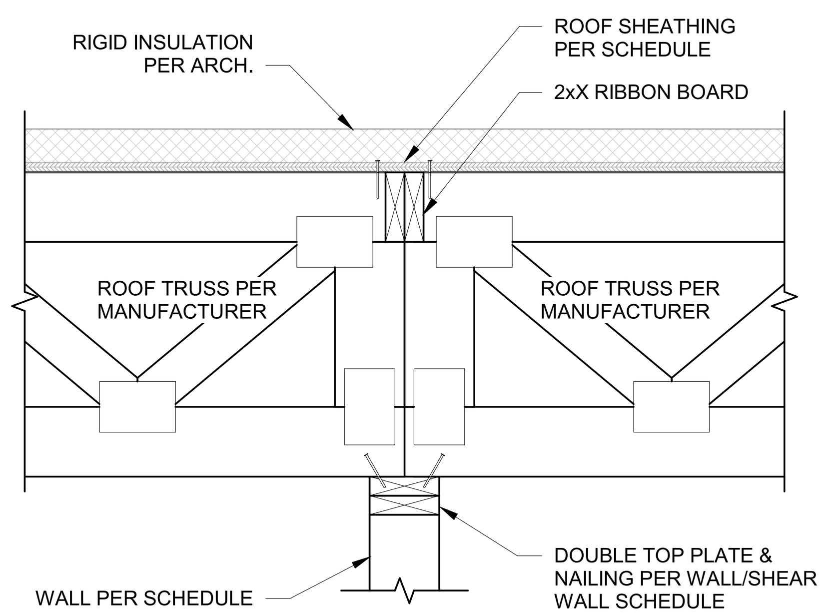
2 S520 SHORT PARAPET SECTION AT ROOF TRUSS
1" = 1'-0"



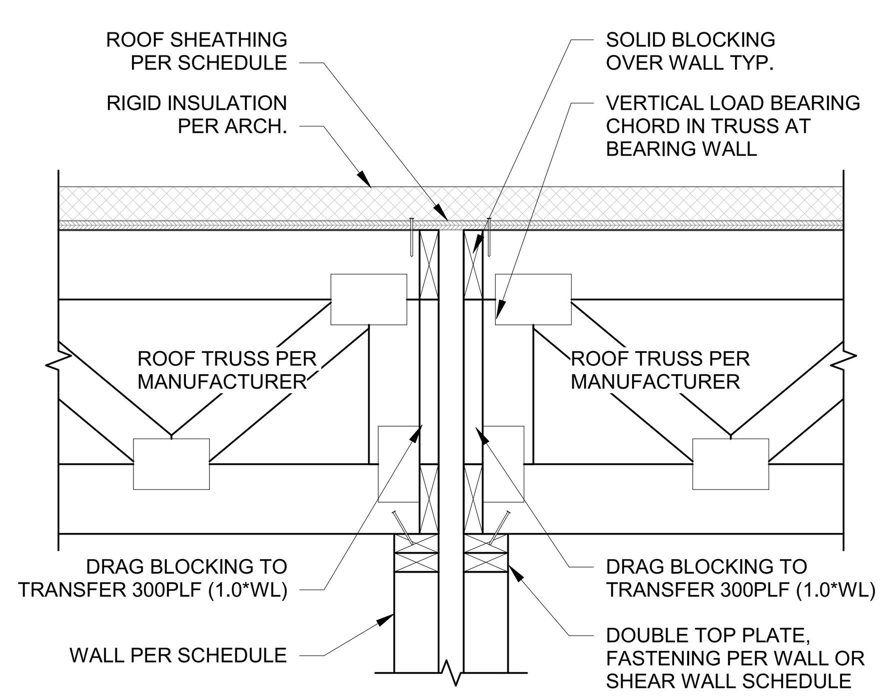
3 S520 FRAMING AT CORRIDOR AT ROOF
1" = 1'-0"

JOIST HANGER SCHEDULE	
Joist Size	Hanger
2x4	LUS24
2x6	LUS26
2x8	LUS26
2x10	LUS28

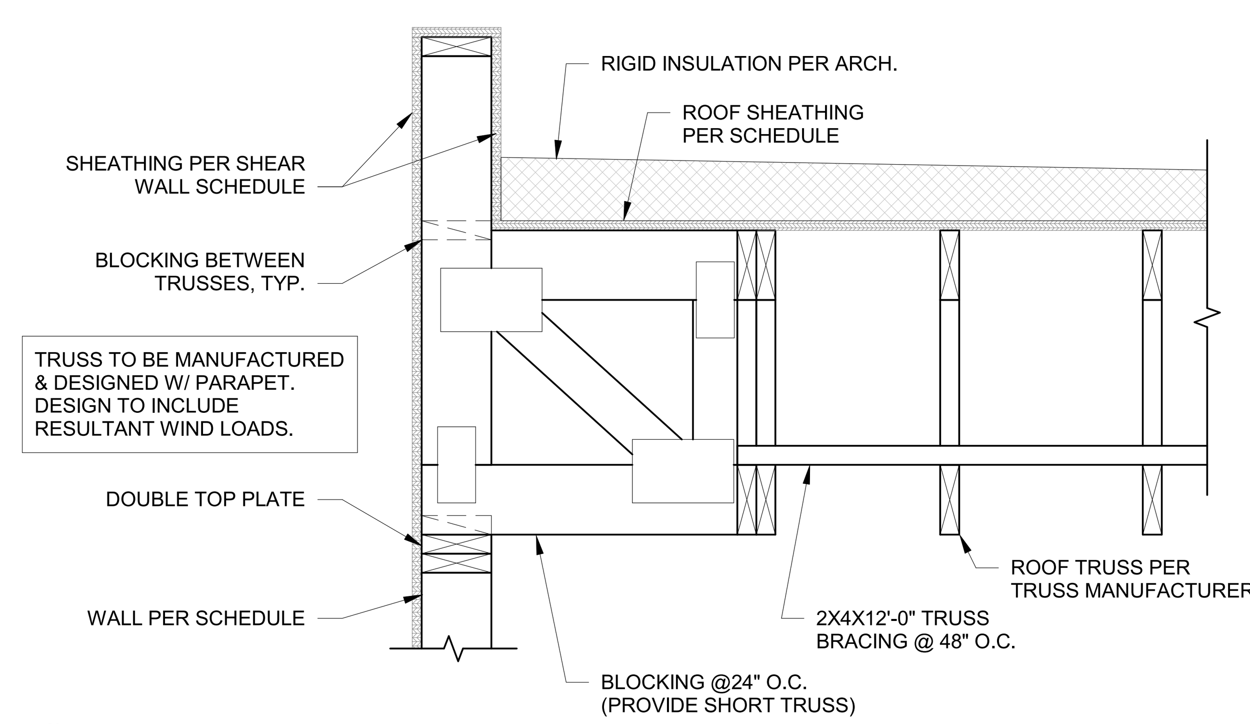
Notes:
1. Hangers to be installed with typical fasteners per manufacturer product data
2. All exterior members are to be pressure treated



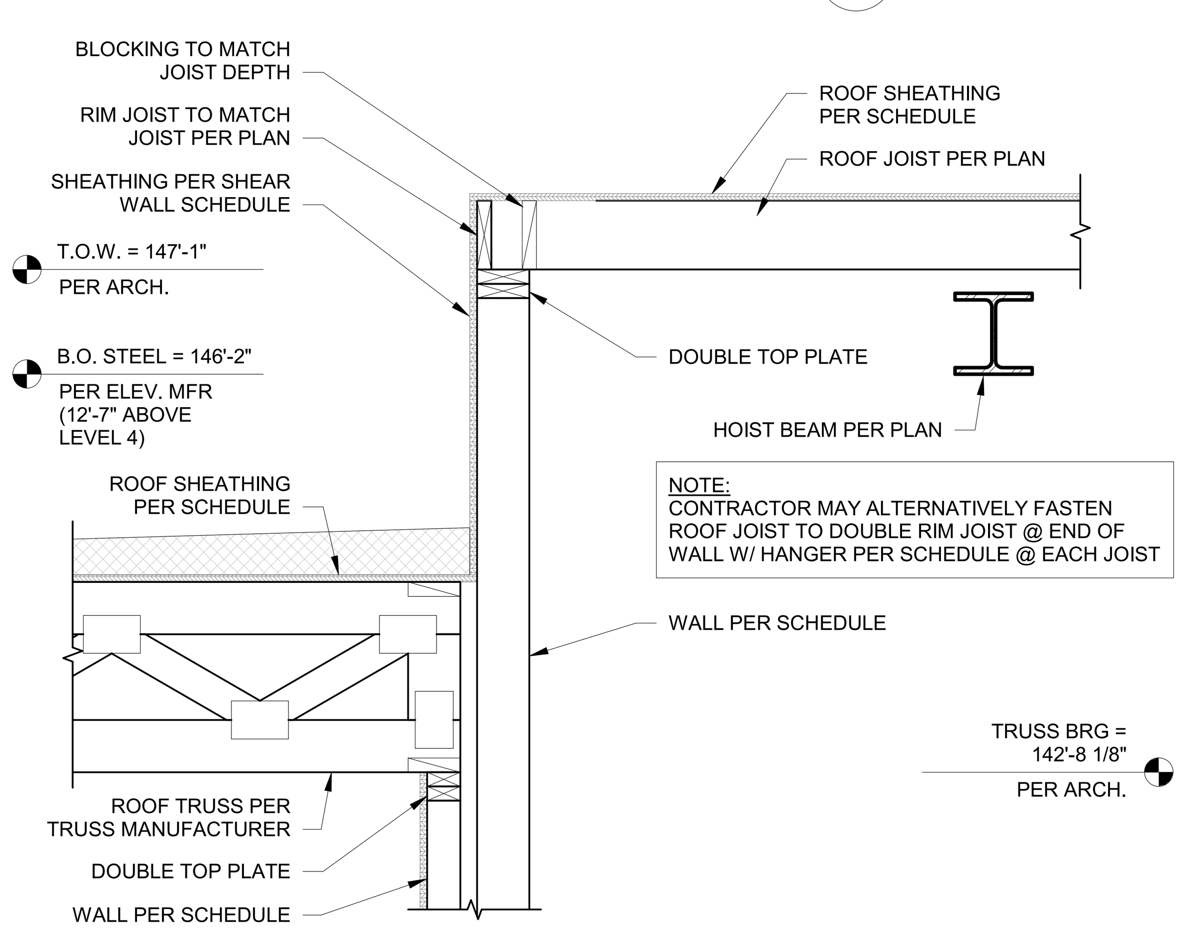
4 S520 ROOF FRAMING AT INTERIOR WALL
1" = 1'-0"



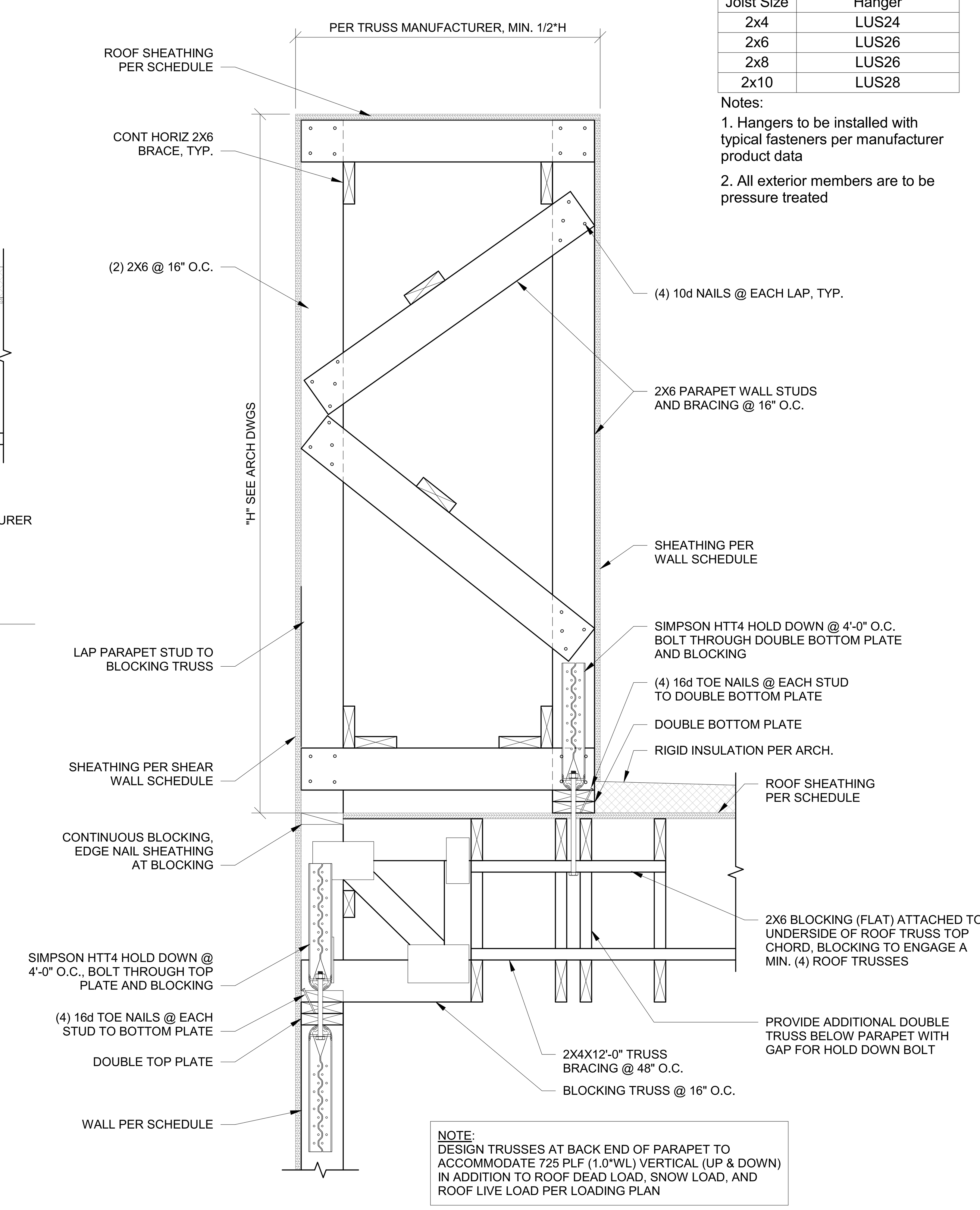
5 S520 ROOF TRUSS BEARING AT INTERIOR DEMISING WALL
1" = 1'-0"



6 S520 ROOF TRUSS PARALLEL AT EXTERIOR WALL
1" = 1'-0"



8 S520 ROOF SECTION AT ELEVATOR
3/4" = 1'-0"



7 S520 TALL PARAPET SECTION
1" = 1'-0"

IN RESPONSE TO GC COMMENTS 3

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REVISIONS:

1	12/21/2023	RESPONSE TO CITY COMMENTS
2	1/19/2024	ADDENDUM #2
3	3/06/2024	IN RESPONSE TO GC COMMENTS

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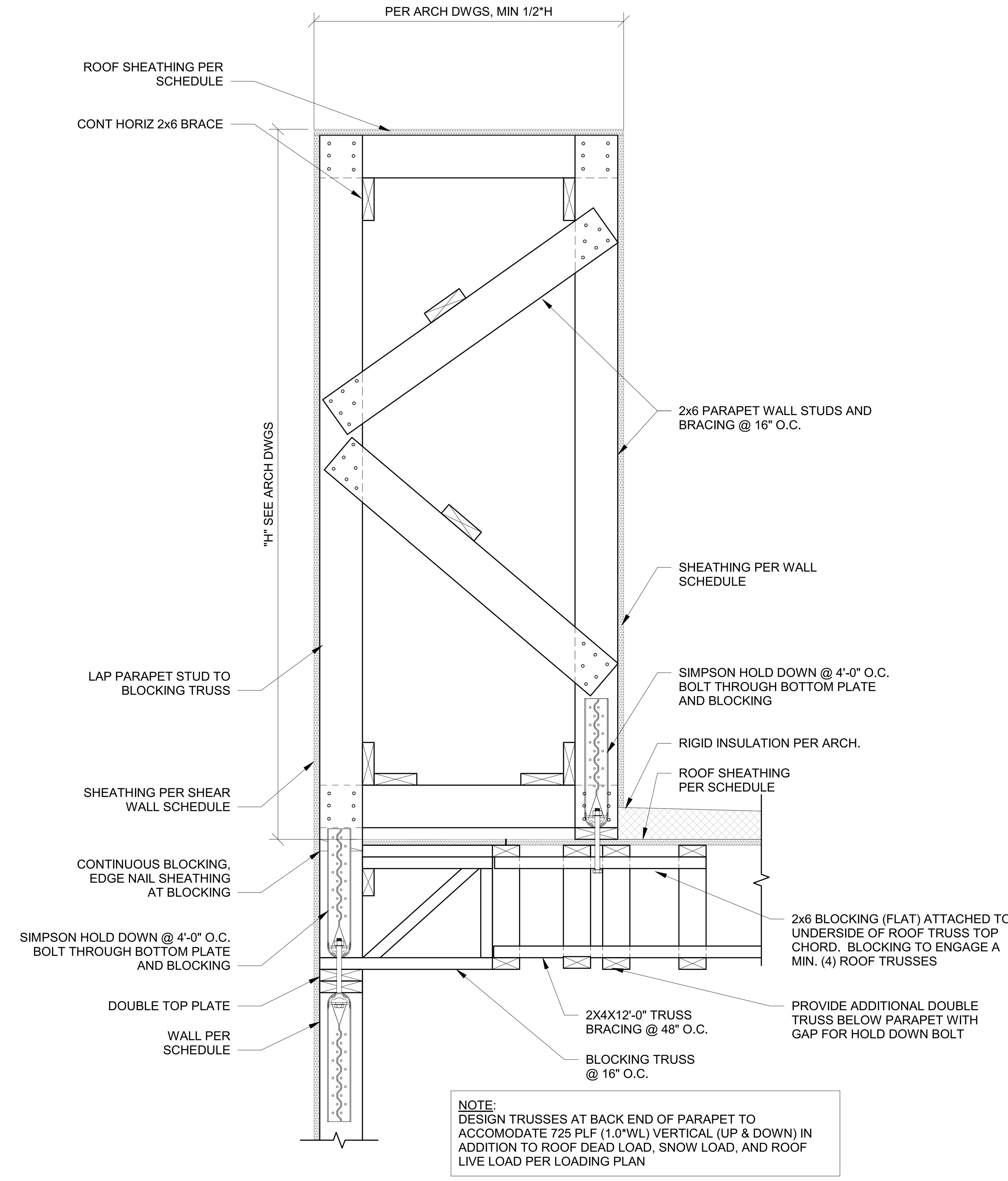
STATE OF MISSOURI
CELESTE KAY SPICKERT
NUMBER PE-2008002213
PROFESSIONAL ENGINEER
03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
ROOF DETAILS

PROJECT NUMBER: 2023000333

SHEET NUMBER:
S520



1 S521 TALL PARAPET SECTION
1" = 1'-0"

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REVISIONS:

1	12/21/2023	RESPONSE TO CITY COMMENTS
2	1/19/2024	ADDENDUM #2

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PROFESSIONAL ENGINEER
01/19/2024

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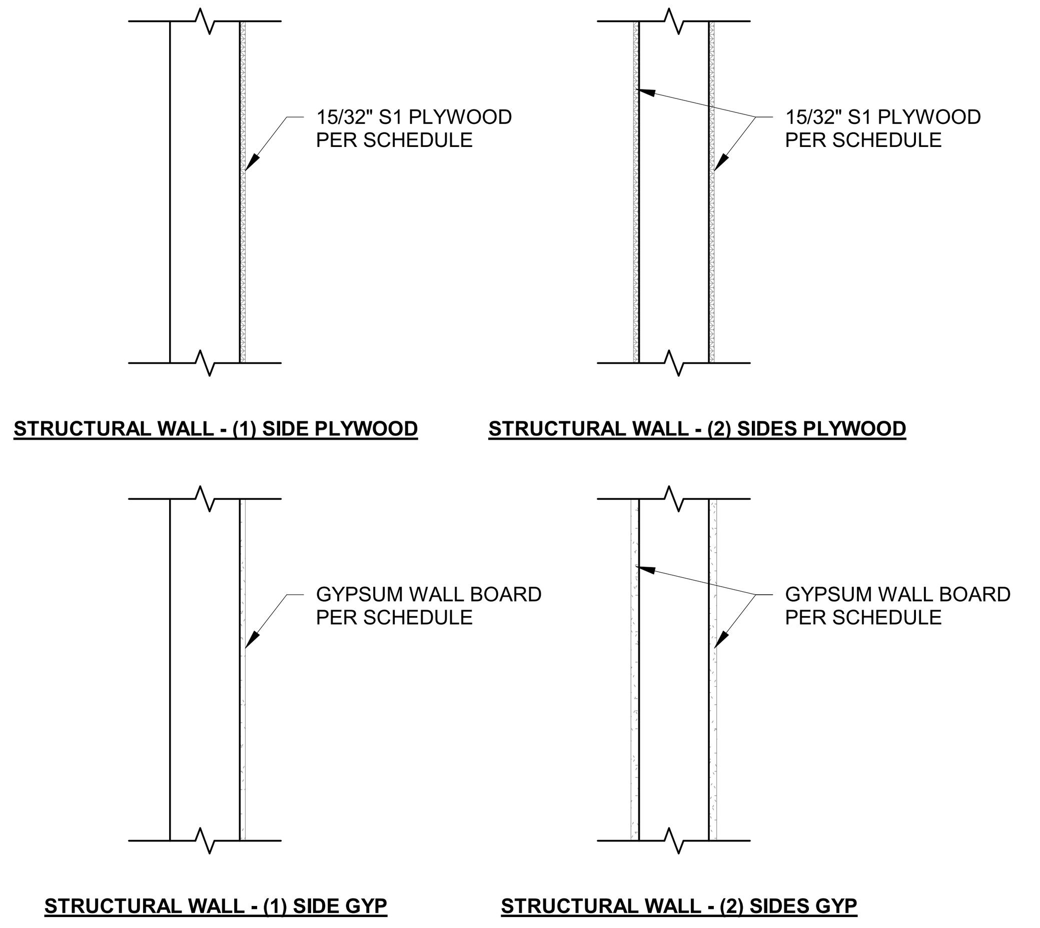
EXPIRES: DECEMBER 31, 2024

TOWNEPLACE SUITES
1810 NORTHEAST DOUGLAS ST
LEE'S SUMMIT, MO 64064

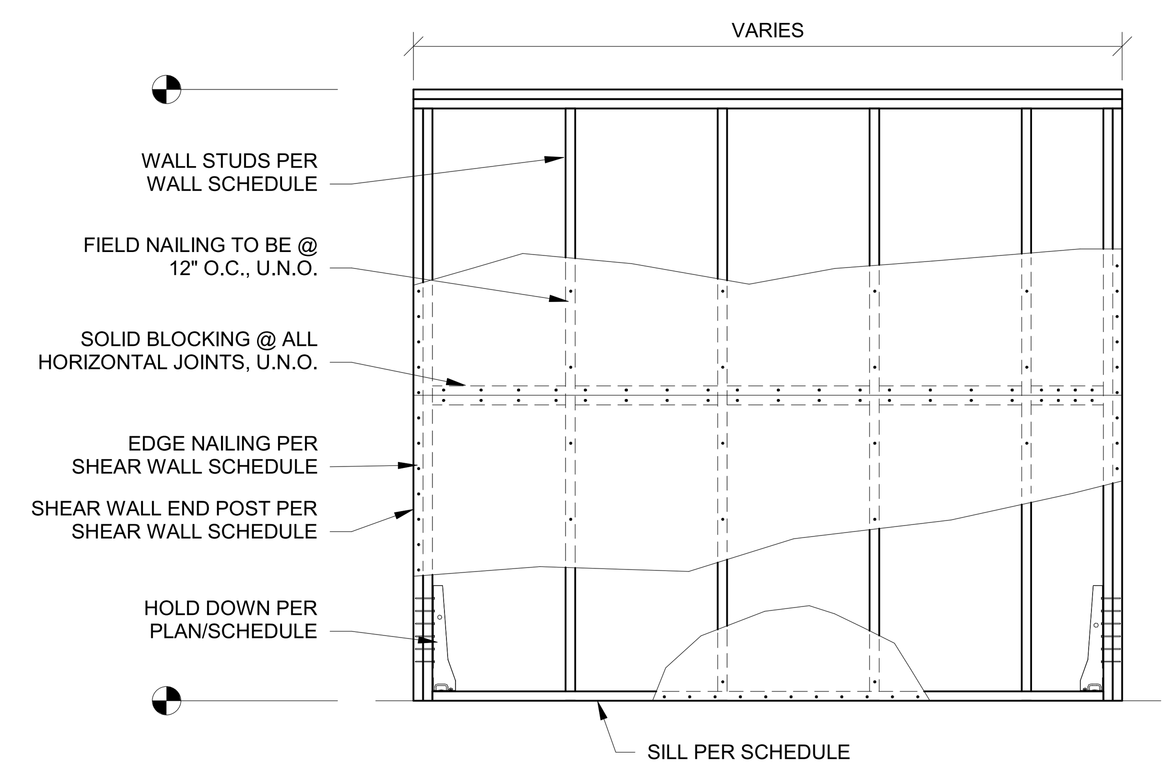
SHEET TITLE
ROOF DETAILS

PROJECT NUMBER: 2023000333

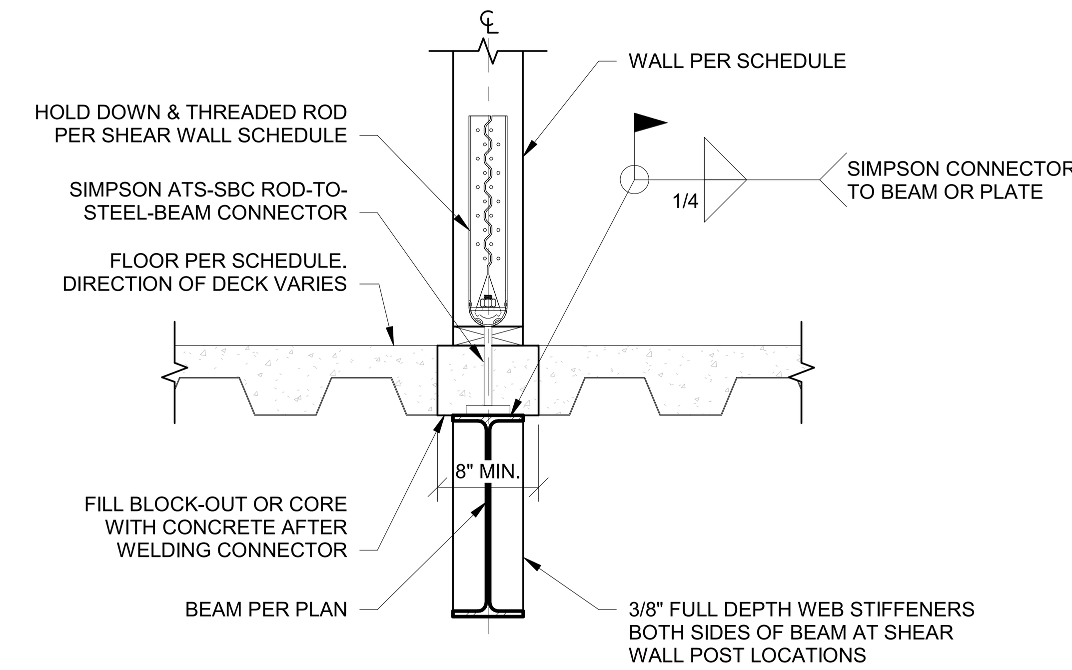
SHEET NUMBER:
2 S521



1 S530 TYPICAL SHEARWALL SECTIONS
1" = 1'-0"



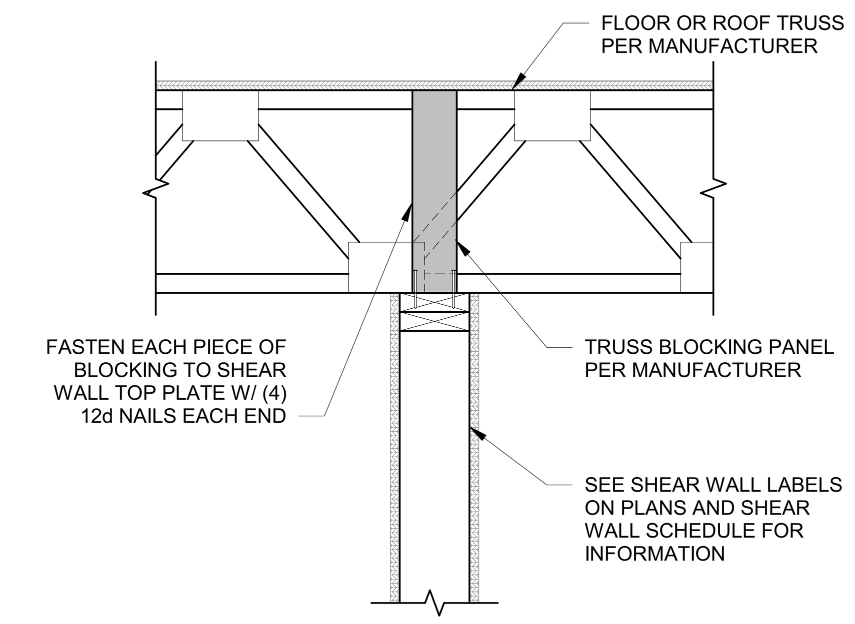
2 S530 SHEARWALL NAILING
1/2" = 1'-0"



NOTE:
SEE LEVEL 2 FRAMING FOR HOLD DOWN LOCATIONS. WELD SIMPSON ATS-SBC ROD-TO-STEEL-BEAM CONNECTORS TO BEAM AND INSTALL ROD BEFORE PLACING CONCRETE, OR BLOCK OUT SLAB FOR LATER INSTALLATION.

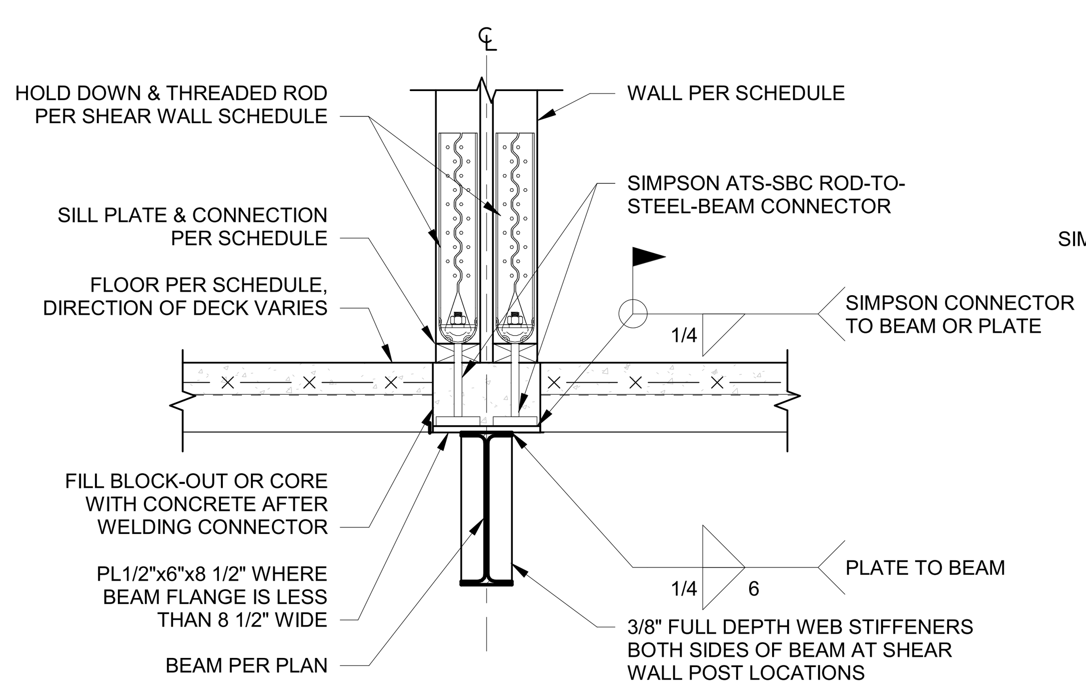
3 S530 SHEAR WALL HOLD DOWN AT STEEL BEAM
1" = 1'-0"

IN RESPONSE TO GC COMMENTS 3



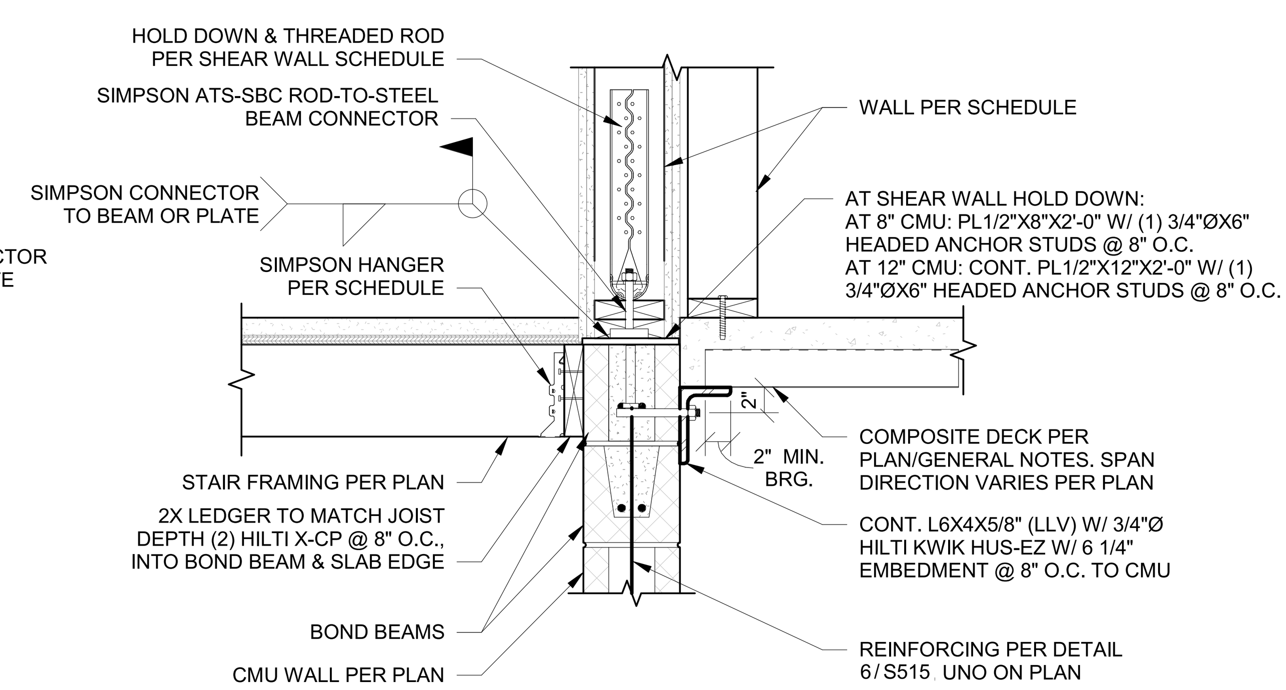
NOTE:
ALL TRUSSES AND TRUSS BLOCKING PANELS ABOVE SHEAR WALLS TO TRANSFER LOAD PER DRAG TRUSS DESIGN LOAD SCHEDULE

4 S530 ROOF TRUSS AT SHEAR WALL
1" = 1'-0"



NOTE:
SEE LEVEL 2 FRAMING PLAN FOR HOLD DOWN LOCATIONS. WELD SIMPSON ATS-SBC ROD-TO-STEEL-BEAM CONNECTORS TO BEAM AND INSTALL ROD BEFORE PLACING CONCRETE, OR BLOCK OUT SLAB FOR LATER INSTALLATION.

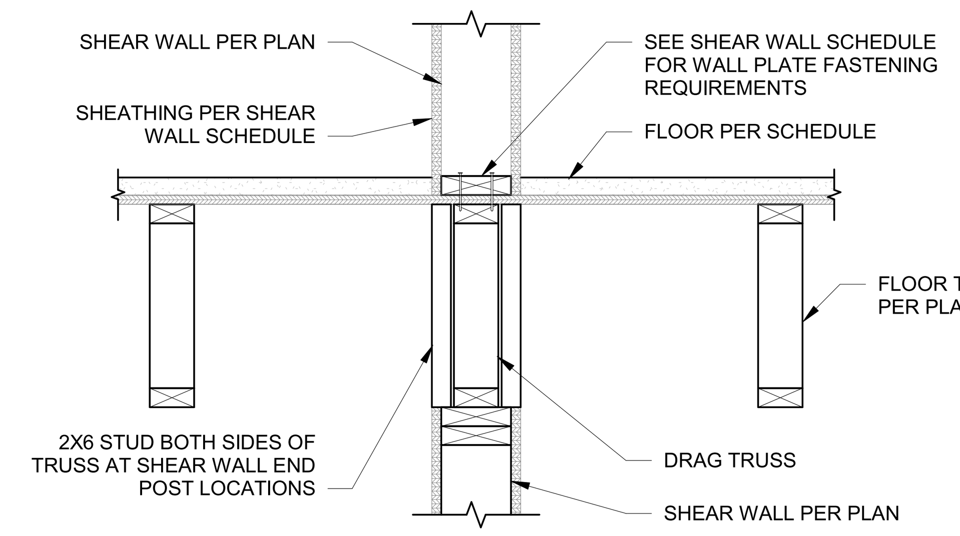
5 S530 SHEAR WALL HOLD DOWN AT STEEL BEAM WITH DEMISING WALL
1" = 1'-0"



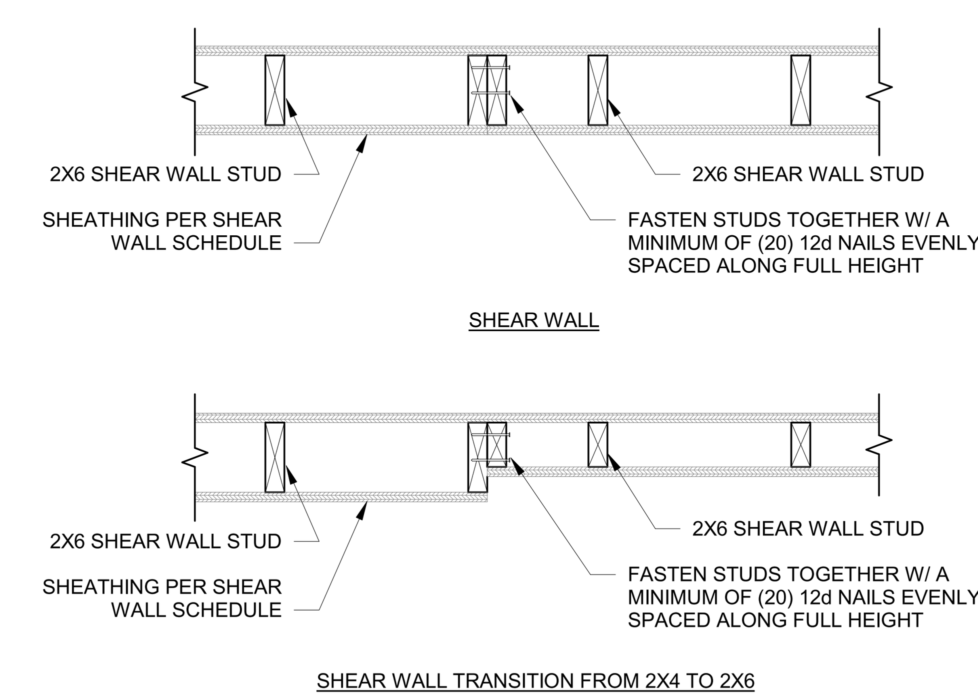
JOIST HANGER SCHEDULE	
Joist Size	Hanger
2x4	LUS24
2x6	LUS26
2x8	LUS26
2x10	LUS28

Notes:
1. Hangers to be installed with typical fasteners per manufacturer product data
2. All exterior members are to be pressure treated

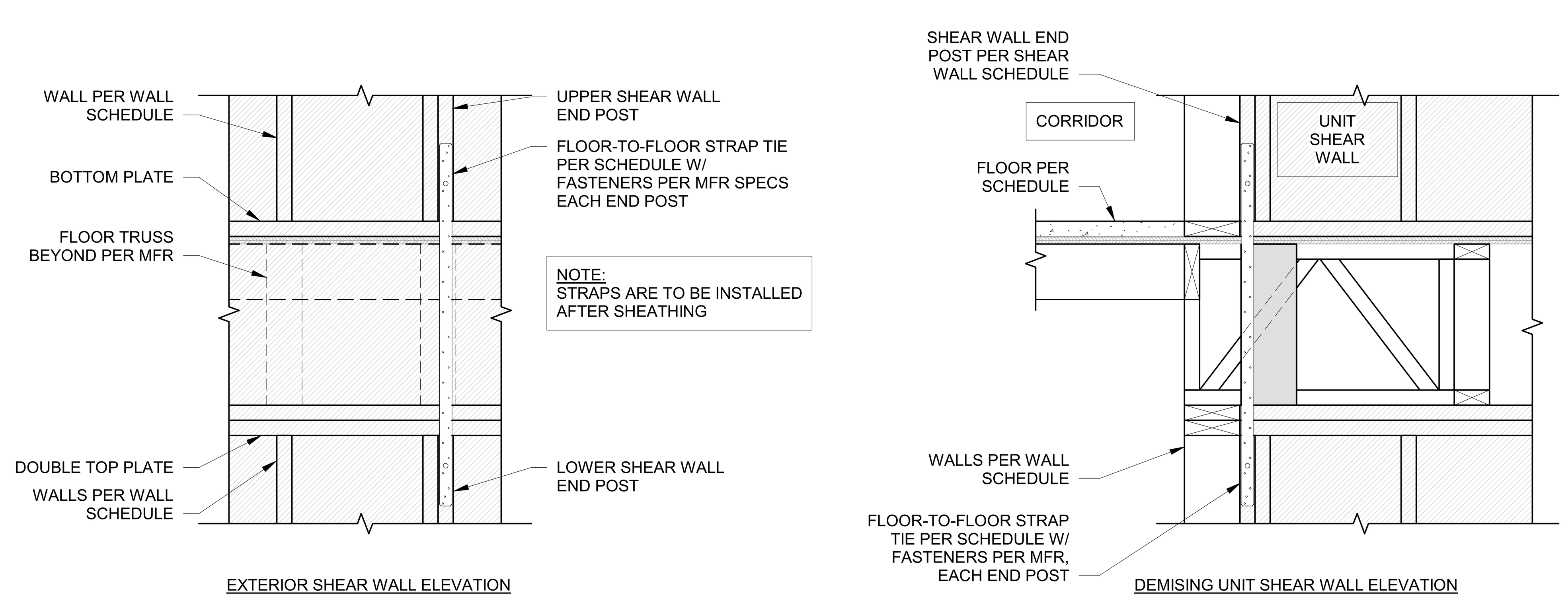
6 S530 SHEAR WALL HOLD DOWN AT CMU
1" = 1'-0"



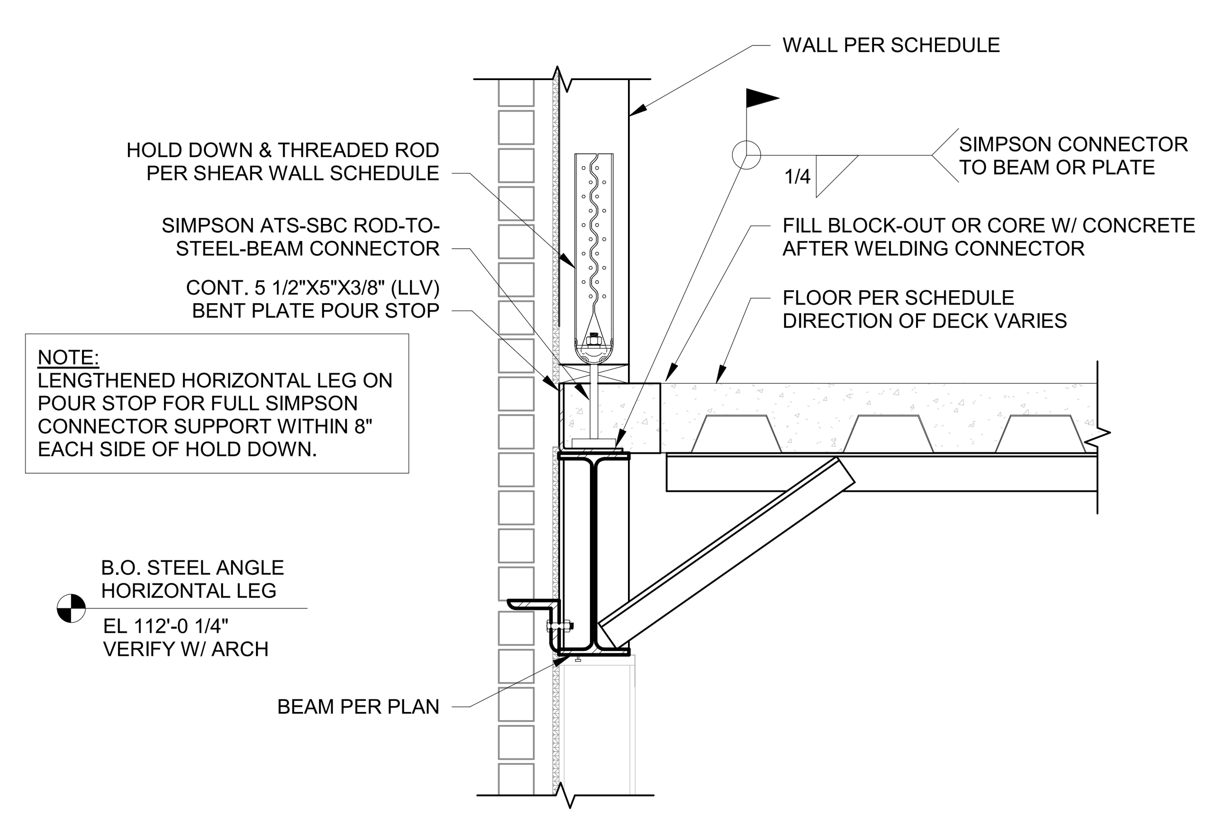
7 S530 SHEAR WALL PARALLEL TO FLOOR TRUSSES
1" = 1'-0"



8 S530 SHEAR WALL STUD DEPTH TRANSITION
1" = 1'-0"

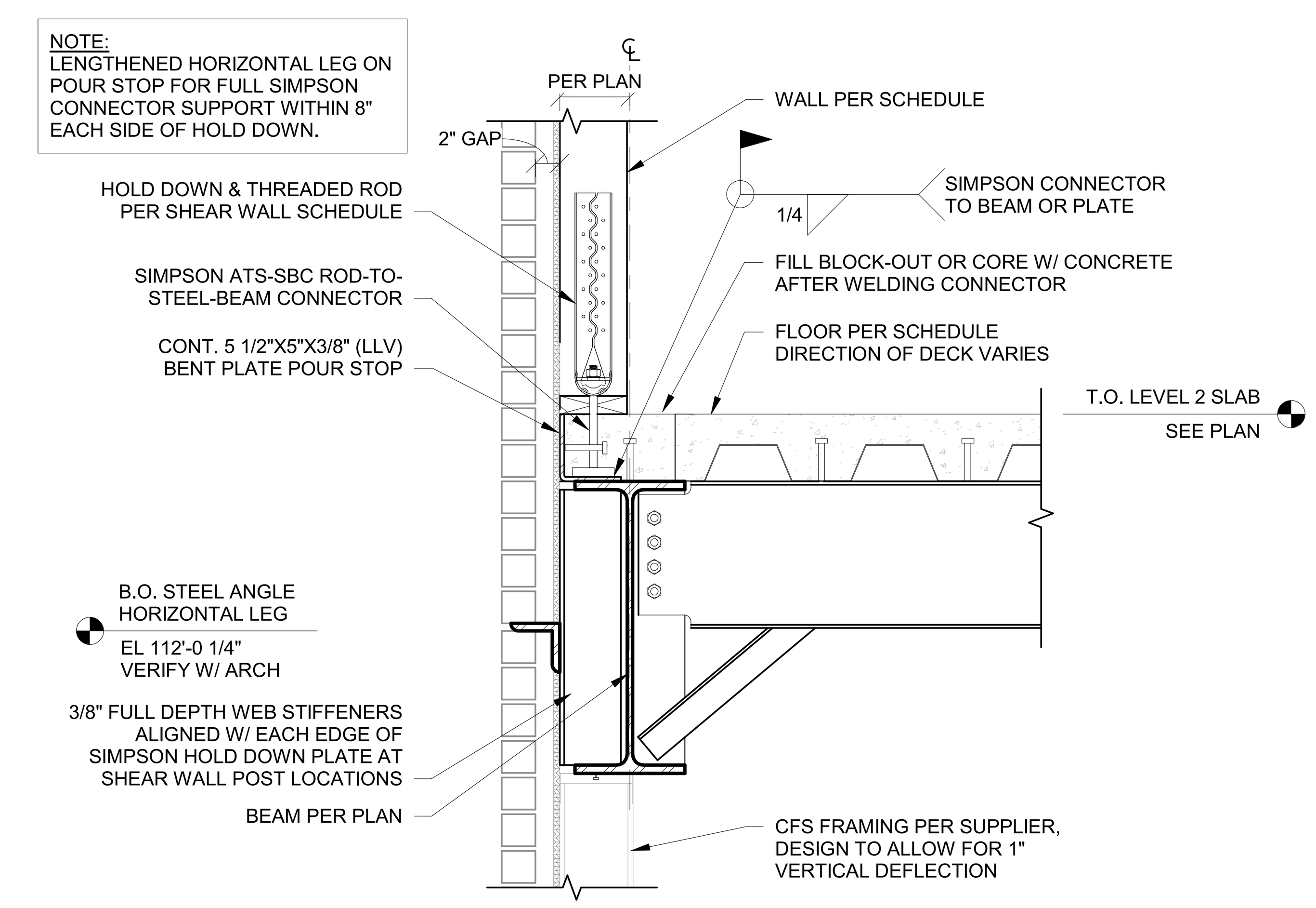


9 S530 FLOOR-TO-FLOOR STRAP TIE
1" = 1'-0"



NOTE:
SEE LEVEL 2 FRAMING PLAN FOR HOLD DOWN LOCATIONS. WELD SIMPSON ATS-SBC ROD-TO-STEEL-BEAM CONNECTORS TO BEAM AND INSTALL ROD BEFORE PLACING CONCRETE, OR BLOCK OUT SLAB FOR LATER INSTALLATION.

10 S530 SHEAR WALL HOLD DOWN AT TYPICAL EXTERIOR WALL
1" = 1'-0"



NOTE:
SEE LEVEL 2 FRAMING PLAN FOR HOLD DOWN LOCATIONS. WELD SIMPSON ATS-SBC ROD-TO-STEEL-BEAM CONNECTORS TO BEAM AND INSTALL ROD BEFORE PLACING CONCRETE, OR BLOCK OUT SLAB FOR LATER INSTALLATION.

11 S530 SHEAR WALL HOLD DOWN AT GARAGE EXTERIOR WALL
1" = 1'-0"

PRINTS ISSUED
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REVISIONS:

1	12/21/2023	RESPONSE TO CITY COMMENTS
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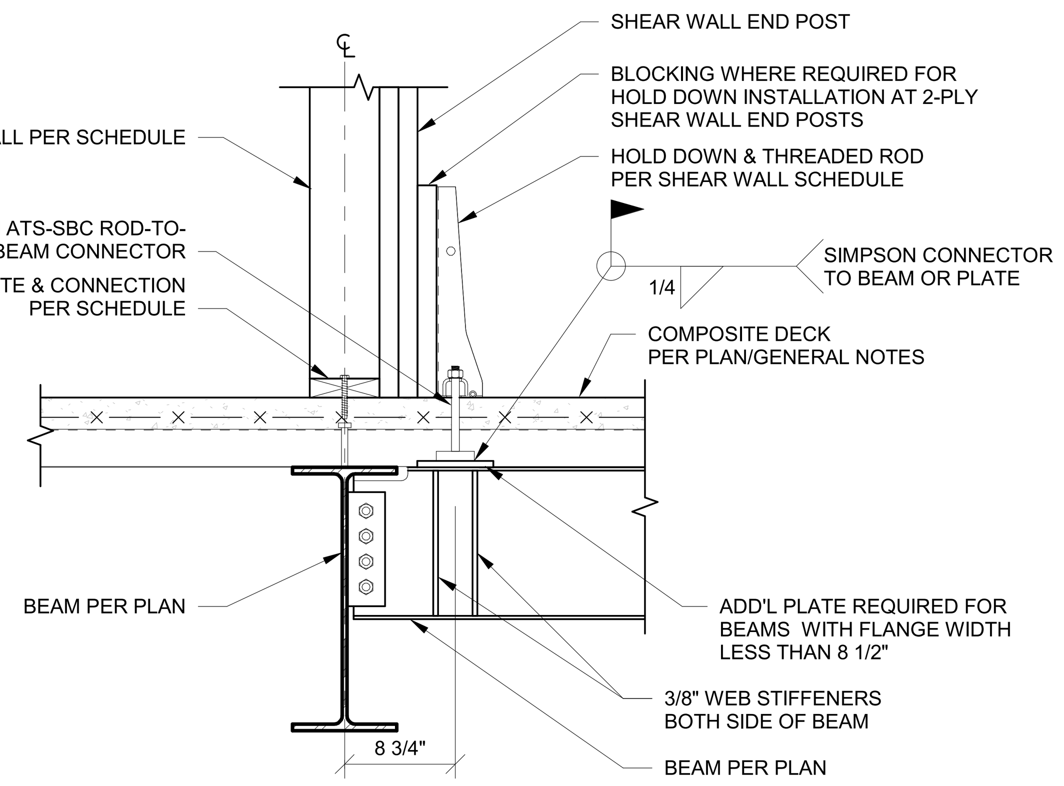
STATE OF MISSOURI
CELESTE KAY SPICKERT
NUMBER PE-2008022213
PROFESSIONAL ENGINEER
03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
SHEAR WALL DETAILS

PROJECT NUMBER: 2023000333

SHEET NUMBER:
S530



1 SHEAR WALL HOLD DOWN AT TYPICAL INTERIOR WALL
S531 1" = 1'-0"

IN RESPONSE TO GC COMMENTS 3

PRINTS ISSUED
11/01/23 - CITY SUBMITTAL

REVISIONS:

1	12/21/2023	RESPONSE TO CITY COMMENTS
2	1/19/2024	ADDENDUM #2
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CELESTE KAY SPICKERT
NUMBER PE-2008002213
PROFESSIONAL ENGINEER
03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE
LEE'S SUMMIT, MO 64064

SHEET TITLE
SHEAR WALL DETAILS

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S531

REFERENCE G-003 FOR GENERAL NOTES

PLAN LEGEND

- PARTIAL HEIGHT PARTITION
- NON-RATED PARTITION; SEE ASSEMBLIES ON SHEET G-102
- 1 HR RATED PARTITION; SEE ASSEMBLIES ON SHEET G-102
- 2 HR RATED PARTITION; SEE ASSEMBLIES ON SHEET G-102
- A1 — WINDOW TYPE; SEE WINDOW SCHEDULE ON SHEET A-600
- 101 — DOOR TYPE; SEE DOOR SCHEDULE ON SHEET A-600
- P7 — PARTITION TYPE; SEE ASSEMBLIES ON SHEET G-102
- 6' - 0" — FRAMING DIMENSIONS
- 6' - 0" LAYOUT — LAYOUT LINE DIMENSIONS
- HEARING/VISIBILITY
- ADA/ACCESSIBLE UNITS

KEYNOTE LEGEND

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:

1	12/22/2023	Response to City Comments
2	01/19/2024	Addendum #2
3	03/06/2024	IN RESPONSE TO GC COMMENTS

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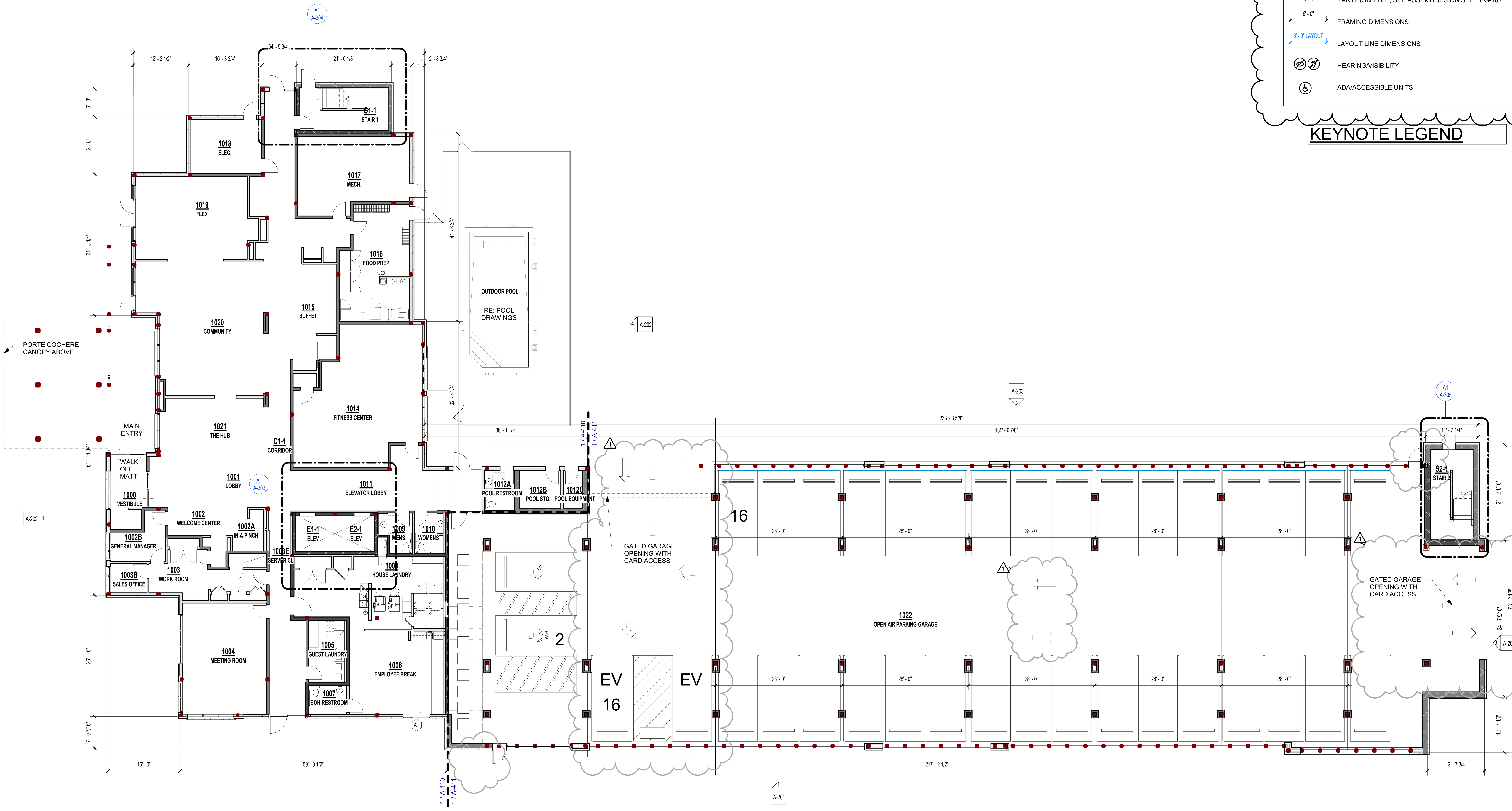
STATE OF MISSOURI
DAVID EUGENE HENDRIXSE
NUMBER A-7305
REGISTERED ARCHITECT
03/06/2024



1 1ST FLOOR PLAN
3/32" = 1'-0"

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
FIRST FLOOR PLAN

PROJECT NUMBER: 23098

SHEET NUMBER:

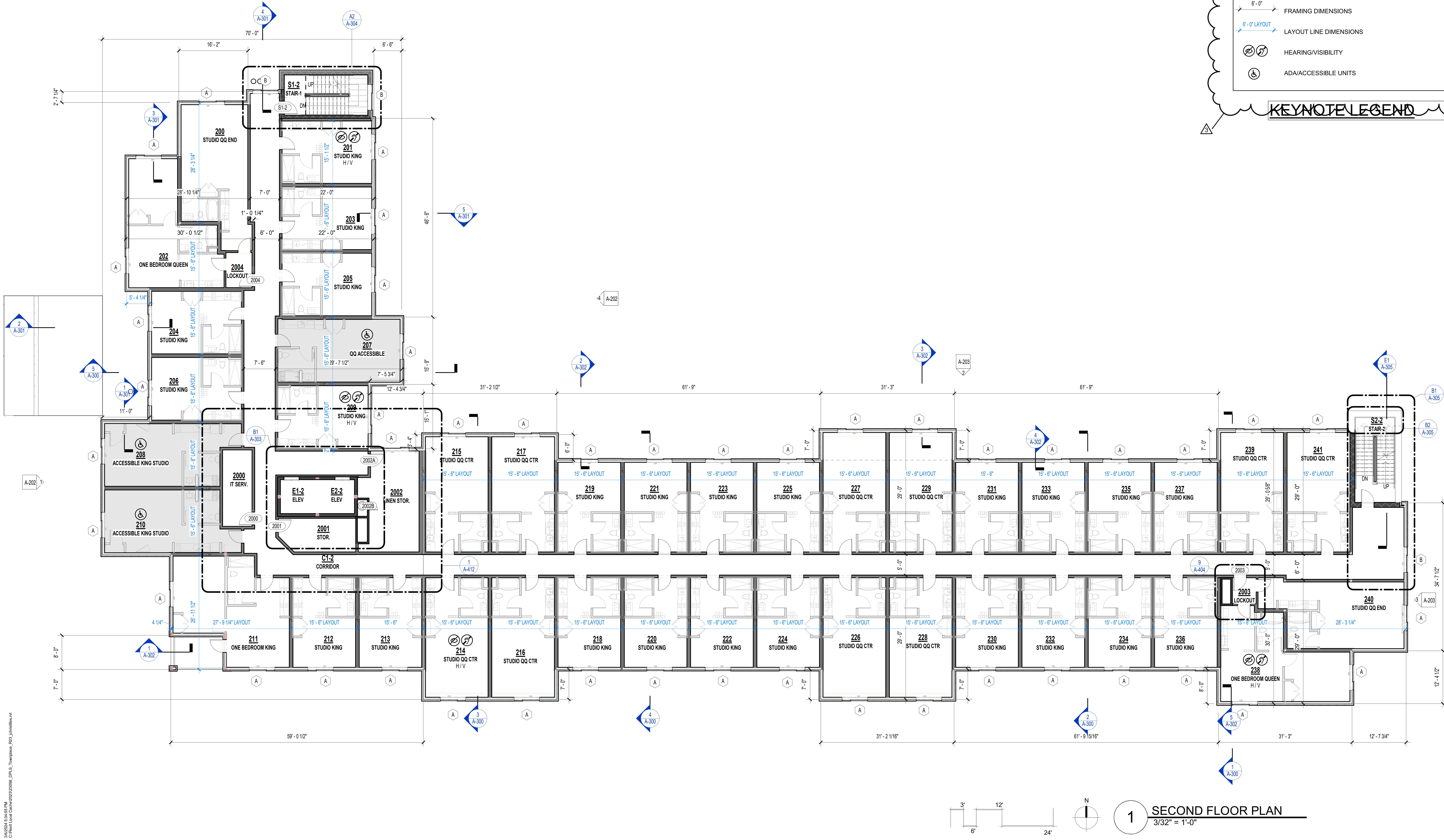
A-101

REFERENCE G-003 FOR GENERAL NOTES

PLAN LEGEND

- PARTIAL HEIGHT PARTITION
- NON-RATED PARTITION; SEE ASSEMBLIES ON SHEET G-102
- 1 HR RATED PARTITION; SEE ASSEMBLIES ON SHEET G-102
- 2 HR RATED PARTITION; SEE ASSEMBLIES ON SHEET G-102
- A1 WINDOW TYPE; SEE WINDOW SCHEDULE ON SHEET A-600
- 101 DOOR TYPE; SEE DOOR SCHEDULE ON SHEET A-600
- P7 PARTITION TYPE; SEE ASSEMBLIES ON SHEET G-102
- 6' - 0" FRAMING DIMENSIONS
- 6' - 0" LAYOUT LAYOUT LINE DIMENSIONS
- HEARING/VISIBILITY
- ADA/ACCESSIBLE UNITS

KEYNOTE LEGEND



1 SECOND FLOOR PLAN
3/32" = 1'-0"

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
2 01/19/2024 Addendum #2
3 03/06/2024 IN RESPONSE TO GC COMMENTS

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NUMBER
REGISTERED ARCHITECT
03/06/2024

TOWNEPLACE SUITES

1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
SECOND FLOOR PLAN

PROJECT NUMBER: 23098

SHEET NUMBER:

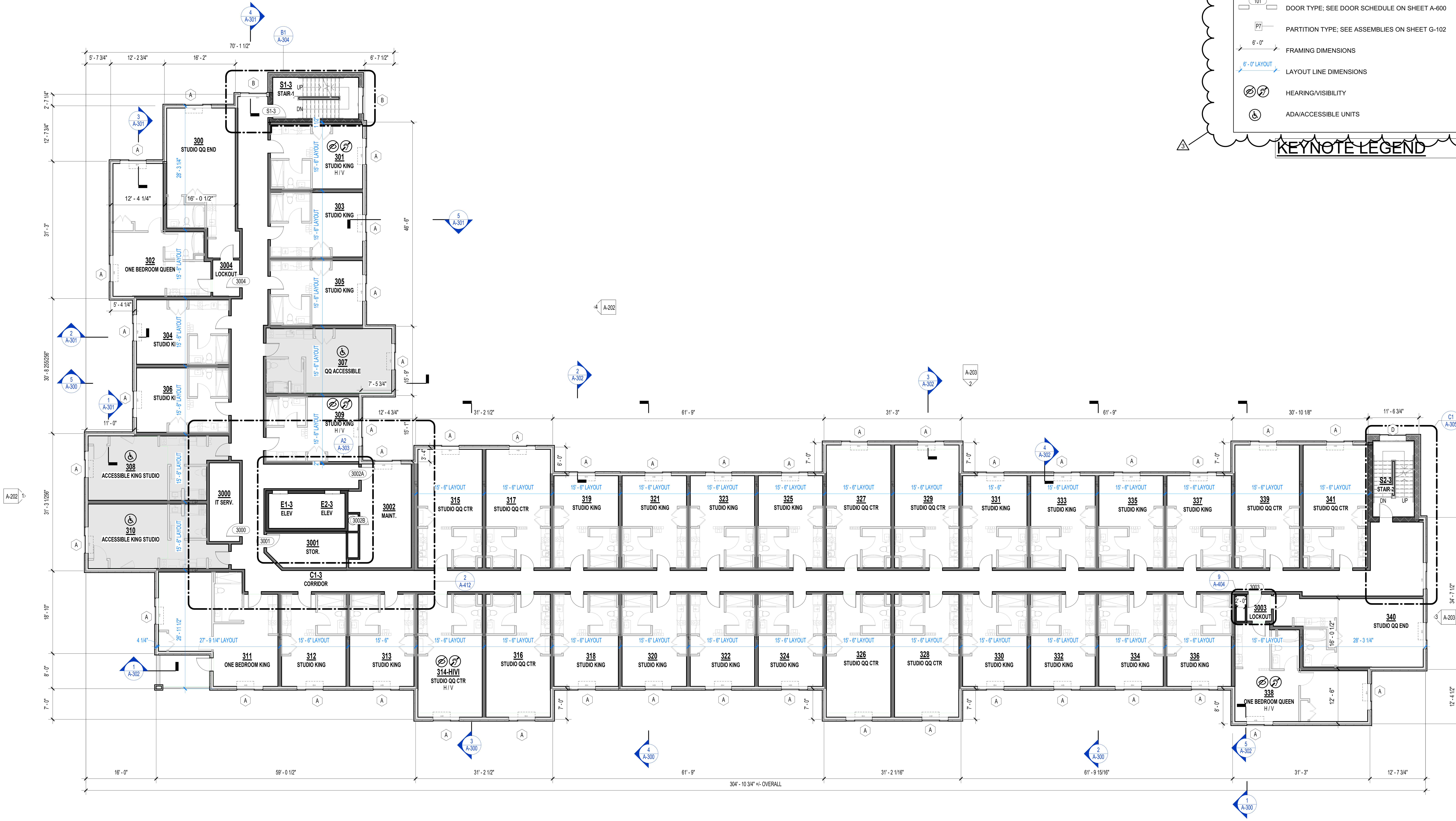
A-102

REFERENCE G-003 FOR GENERAL NOTES

PLAN LEGEND

	PARTIAL HEIGHT PARTITION
	NON-RATED PARTITION; SEE ASSEMBLIES ON SHEET G-102
	1 HR RATED PARTITION; SEE ASSEMBLIES ON SHEET G-102
	2 HR RATED PARTITION; SEE ASSEMBLIES ON SHEET G-102
A1	WINDOW TYPE; SEE WINDOW SCHEDULE ON SHEET A-600
101	DOOR TYPE; SEE DOOR SCHEDULE ON SHEET A-600
P7	PARTITION TYPE; SEE ASSEMBLIES ON SHEET G-102
6' - 0"	FRAMING DIMENSIONS
6' - 0" LAYOUT	LAYOUT LINE DIMENSIONS
	HEARING/VISIBILITY
	ADA/ACCESSIBLE UNITS

KEYNOTE LEGEND



1 THIRD FLOOR PLAN
3/32" = 1'-0"

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REVISIONS:

2	01/19/2024	Addendum #2
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03/06/2024

TOWNEPLACE SUITES

1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
THIRD FLOOR PLAN

PROJECT NUMBER: 23098

SHEET NUMBER:

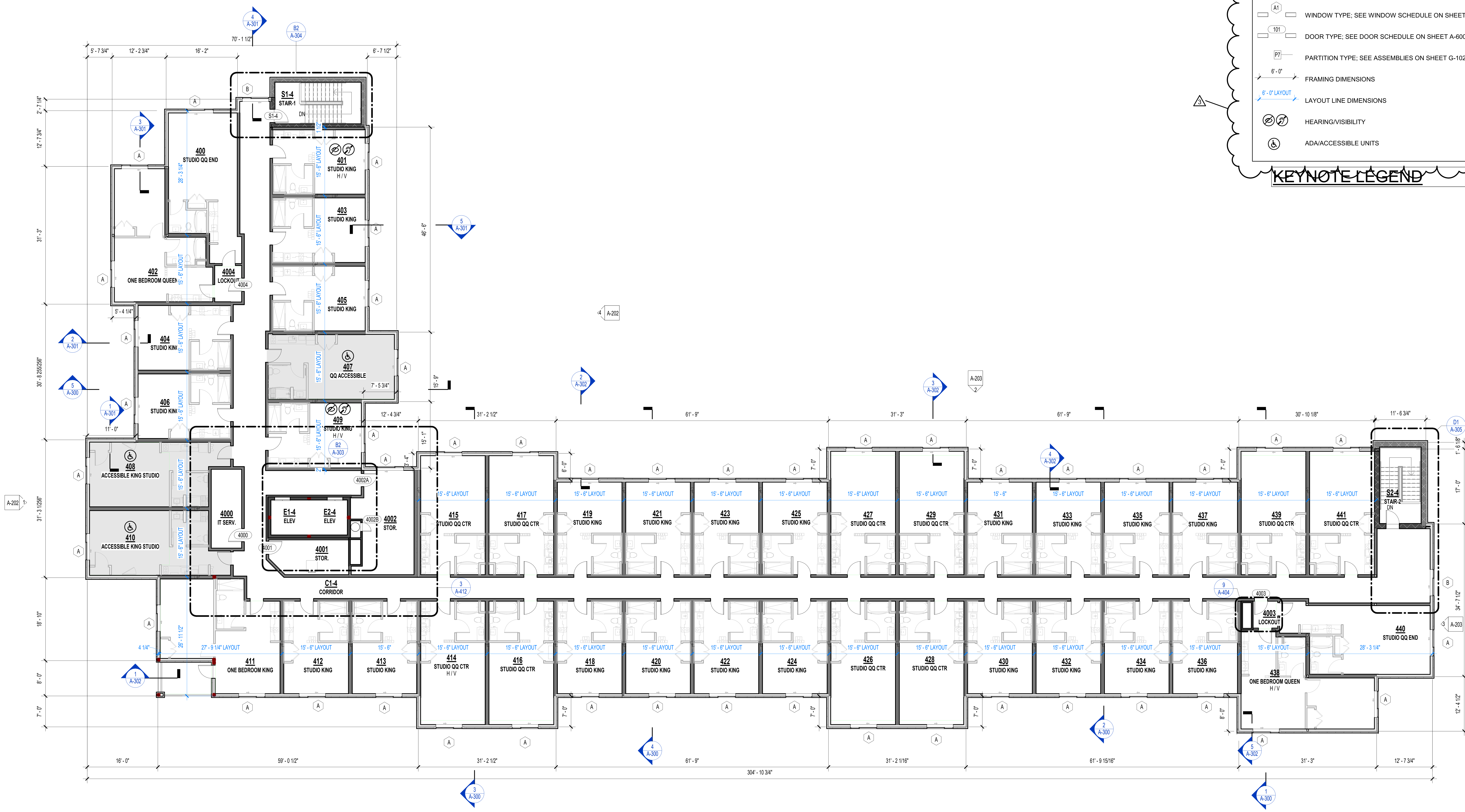
A-103

REFERENCE G-003 FOR GENERAL NOTES

PLAN LEGEND

- PARTIAL HEIGHT PARTITION
- NON-RATED PARTITION; SEE ASSEMBLIES ON SHEET G-102
- 1 HR RATED PARTITION; SEE ASSEMBLIES ON SHEET G-102
- 2 HR RATED PARTITION; SEE ASSEMBLIES ON SHEET G-102
- A1 WINDOW TYPE; SEE WINDOW SCHEDULE ON SHEET A-600
- 101 DOOR TYPE; SEE DOOR SCHEDULE ON SHEET A-600
- P7 PARTITION TYPE; SEE ASSEMBLIES ON SHEET G-102
- 6' - 0" FRAMING DIMENSIONS
- 6' - 0" LAYOUT LAYOUT LINE DIMENSIONS
- HEARING/VISIBILITY
- ADA/ACCESSIBLE UNITS

KEYNOTE LEGEND



1 FOURTH FLOOR PLAN
3/32" = 1'-0"

PRINTS ISSUED
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REVISIONS:

2	01/19/2024	Addendum #2
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DAVID EUGENE HENDRICKSE
NUMBER A-7305
REGISTERED ARCHITECT
03/06/2024

TOWNEPLACE SUITES

1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
FOURTH FLOOR PLAN

PROJECT NUMBER: 23098

SHEET NUMBER:

A-104

Zone A			
AREA TO BE VENTED		**866 S.F.**	
VENTING CALCULATION FACTOR PER	IBC	300	
TOTAL REQUIRED VENTING	= (866 S.F. x 144) / 300 =	**416 SQ.IN.**	
HIGH ROOF VENTING	= 416 SQ.IN. x **1** =	416 SQ.IN.	
LOW ROOF VENTING	= 416 SQ.IN. x **0** =	0 SQ.IN.	
HIGH ROOF VENTING		**416 SQ.IN.**	**REQUIRED**
PROVIDED HIGH ROOF VENTING		**508 SQ.IN.**	**PROVIDED**
(1) Intake Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED		**508 SQ.IN.**	**PROVIDED**

Zone B			
AREA TO BE VENTED		**1360 S.F.**	
VENTING CALCULATION FACTOR PER	IBC	300	
TOTAL REQUIRED VENTING	= (1360 S.F. x 144) / 300 =	**653 SQ.IN.**	
HIGH ROOF VENTING	= 653 SQ.IN. x **1** =	653 SQ.IN.	
LOW ROOF VENTING	= 653 SQ.IN. x **0** =	0 SQ.IN.	
HIGH ROOF VENTING		**653 SQ.IN.**	**REQUIRED**
PROVIDED HIGH ROOF VENTING		**762 SQ.IN.**	**PROVIDED**
(1) Intake Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
(2) Exhaust Vent	@ 254 NFA =	508 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED		**762 SQ.IN.**	**PROVIDED**

Zone C			
AREA TO BE VENTED		**763 S.F.**	
VENTING CALCULATION FACTOR PER	IBC	300	
TOTAL REQUIRED VENTING	= (763 S.F. x 144) / 300 =	**366 SQ.IN.**	
HIGH ROOF VENTING	= 366 SQ.IN. x **1** =	366 SQ.IN.	
LOW ROOF VENTING	= 366 SQ.IN. x **0** =	0 SQ.IN.	
HIGH ROOF VENTING		**366 SQ.IN.**	**REQUIRED**
PROVIDED HIGH ROOF VENTING		**508 SQ.IN.**	**PROVIDED**
(1) Intake Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED		**508 SQ.IN.**	**PROVIDED**

Zone D			
AREA TO BE VENTED		**915 S.F.**	
VENTING CALCULATION FACTOR PER	IBC	300	
TOTAL REQUIRED VENTING	= (915 S.F. x 144) / 300 =	**439 SQ.IN.**	
HIGH ROOF VENTING	= 439 SQ.IN. x **1** =	439 SQ.IN.	
LOW ROOF VENTING	= 439 SQ.IN. x **0** =	0 SQ.IN.	
HIGH ROOF VENTING		**439 SQ.IN.**	**REQUIRED**
PROVIDED HIGH ROOF VENTING		**508 SQ.IN.**	**PROVIDED**
(1) Intake Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED		**508 SQ.IN.**	**PROVIDED**

Zone E			
AREA TO BE VENTED		**1228 S.F.**	
VENTING CALCULATION FACTOR PER	IBC	300	
TOTAL REQUIRED VENTING	= (1228 S.F. x 144) / 300 =	**589 SQ.IN.**	
HIGH ROOF VENTING	= 589 SQ.IN. x **1** =	589 SQ.IN.	
LOW ROOF VENTING	= 589 SQ.IN. x **0** =	0 SQ.IN.	
HIGH ROOF VENTING		**589 SQ.IN.**	**REQUIRED**
PROVIDED HIGH ROOF VENTING		**762 SQ.IN.**	**PROVIDED**
(1) Intake Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
(2) Exhaust Vent	@ 254 NFA =	508 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED		**762 SQ.IN.**	**PROVIDED**

Zone F			
AREA TO BE VENTED		**975 S.F.**	
VENTING CALCULATION FACTOR PER	IBC	300	
TOTAL REQUIRED VENTING	= (975 S.F. x 144) / 300 =	**468 SQ.IN.**	
HIGH ROOF VENTING	= 468 SQ.IN. x **1** =	468 SQ.IN.	
LOW ROOF VENTING	= 468 SQ.IN. x **0** =	0 SQ.IN.	
HIGH ROOF VENTING		**468 SQ.IN.**	**REQUIRED**
PROVIDED HIGH ROOF VENTING		**508 SQ.IN.**	**PROVIDED**
(1) Intake Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED		**508 SQ.IN.**	**PROVIDED**

Zone G			
AREA TO BE VENTED		**743 S.F.**	
VENTING CALCULATION FACTOR PER	IBC	300	
TOTAL REQUIRED VENTING	= (743 S.F. x 144) / 300 =	**357 SQ.IN.**	
HIGH ROOF VENTING	= 357 SQ.IN. x **1** =	357 SQ.IN.	
LOW ROOF VENTING	= 357 SQ.IN. x **0** =	0 SQ.IN.	
HIGH ROOF VENTING		**357 SQ.IN.**	**REQUIRED**
PROVIDED HIGH ROOF VENTING		**508 SQ.IN.**	**PROVIDED**
(1) Intake Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED		**508 SQ.IN.**	**PROVIDED**

Zone H			
AREA TO BE VENTED		**815 S.F.**	
VENTING CALCULATION FACTOR PER	IBC	300	
TOTAL REQUIRED VENTING	= (815 S.F. x 144) / 300 =	**391 SQ.IN.**	
HIGH ROOF VENTING	= 391 SQ.IN. x **1** =	391 SQ.IN.	
LOW ROOF VENTING	= 391 SQ.IN. x **0** =	0 SQ.IN.	
HIGH ROOF VENTING		**391 SQ.IN.**	**REQUIRED**
PROVIDED HIGH ROOF VENTING		**508 SQ.IN.**	**PROVIDED**
(1) Intake Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED		**508 SQ.IN.**	**PROVIDED**

Zone I			
AREA TO BE VENTED		**849 S.F.**	
VENTING CALCULATION FACTOR PER	IBC	300	
TOTAL REQUIRED VENTING	= (849 S.F. x 144) / 300 =	**408 SQ.IN.**	
HIGH ROOF VENTING	= 408 SQ.IN. x **1** =	408 SQ.IN.	
LOW ROOF VENTING	= 408 SQ.IN. x **0** =	0 SQ.IN.	
HIGH ROOF VENTING		**408 SQ.IN.**	**REQUIRED**
PROVIDED HIGH ROOF VENTING		**508 SQ.IN.**	**PROVIDED**
(1) Intake Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED		**508 SQ.IN.**	**PROVIDED**

Zone J			
AREA TO BE VENTED		**1025 S.F.**	
VENTING CALCULATION FACTOR PER	IBC	300	
TOTAL REQUIRED VENTING	= (1025 S.F. x 144) / 300 =	**492 SQ.IN.**	
HIGH ROOF VENTING	= 492 SQ.IN. x **1** =	492 SQ.IN.	
LOW ROOF VENTING	= 492 SQ.IN. x **0** =	0 SQ.IN.	
HIGH ROOF VENTING		**492 SQ.IN.**	**REQUIRED**
PROVIDED HIGH ROOF VENTING		**508 SQ.IN.**	**PROVIDED**
(1) Intake Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED		**508 SQ.IN.**	**PROVIDED**

Zone K			
AREA TO BE VENTED		**665 S.F.**	
VENTING CALCULATION FACTOR PER	IBC	300	
TOTAL REQUIRED VENTING	= (665 S.F. x 144) / 300 =	**319 SQ.IN.**	
HIGH ROOF VENTING	= 319 SQ.IN. x **1** =	319 SQ.IN.	
LOW ROOF VENTING	= 319 SQ.IN. x **0** =	0 SQ.IN.	
HIGH ROOF VENTING		**319 SQ.IN.**	**REQUIRED**
PROVIDED HIGH ROOF VENTING		**508 SQ.IN.**	**PROVIDED**
(1) Intake Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED		**508 SQ.IN.**	**PROVIDED**

Zone L			
AREA TO BE VENTED		**828 S.F.**	
VENTING CALCULATION FACTOR PER	IBC	300	
TOTAL REQUIRED VENTING	= (828 S.F. x 144) / 300 =	**397 SQ.IN.**	
HIGH ROOF VENTING	= 397 SQ.IN. x **1** =	397 SQ.IN.	
LOW ROOF VENTING	= 397 SQ.IN. x **0** =	0 SQ.IN.	
HIGH ROOF VENTING		**397 SQ.IN.**	**REQUIRED**
PROVIDED HIGH ROOF VENTING		**508 SQ.IN.**	**PROVIDED**
(1) Intake Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED		**508 SQ.IN.**	**PROVIDED**

Zone M			
AREA TO BE VENTED		**660 S.F.**	
VENTING CALCULATION FACTOR PER	IBC	300	
TOTAL REQUIRED VENTING	= (660 S.F. x 144) / 300 =	**317 SQ.IN.**	
HIGH ROOF VENTING	= 317 SQ.IN. x **1** =	317 SQ.IN.	
LOW ROOF VENTING	= 317 SQ.IN. x **0** =	0 SQ.IN.	
HIGH ROOF VENTING		**317 SQ.IN.**	**REQUIRED**
PROVIDED HIGH ROOF VENTING		**508 SQ.IN.**	**PROVIDED**
(1) Intake Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED		**508 SQ.IN.**	**PROVIDED**

Zone N			
AREA TO BE VENTED		**871 S.F.**	
VENTING CALCULATION FACTOR PER	IBC	300	
TOTAL REQUIRED VENTING	= (871 S.F. x 144) / 300 =	**418 SQ.IN.**	
HIGH ROOF VENTING	= 418 SQ.IN. x **1** =	418 SQ.IN.	
LOW ROOF VENTING	= 418 SQ.IN. x **0** =	0 SQ.IN.	
HIGH ROOF VENTING		**418 SQ.IN.**	**REQUIRED**
PROVIDED HIGH ROOF VENTING		**508 SQ.IN.**	**PROVIDED**
(1) Intake Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
(1) Exhaust Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED		**508 SQ.IN.**	**PROVIDED**

Zone O			
AREA TO BE VENTED		**1042 S.F.**	
VENTING CALCULATION FACTOR PER	IBC	300	
TOTAL REQUIRED VENTING	= (1042 S.F. x 144) / 300 =	**500 SQ.IN.**	
HIGH ROOF VENTING	= 500 SQ.IN. x **1** =	500 SQ.IN.	
LOW ROOF VENTING	= 500 SQ.IN. x **0** =	0 SQ.IN.	
HIGH ROOF VENTING		**500 SQ.IN.**	**REQUIRED**
PROVIDED HIGH ROOF VENTING		**762 SQ.IN.**	**PROVIDED**
(1) Intake Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
(2) Exhaust Vent	@ 254 NFA =	508 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED		**762 SQ.IN.**	**PROVIDED**

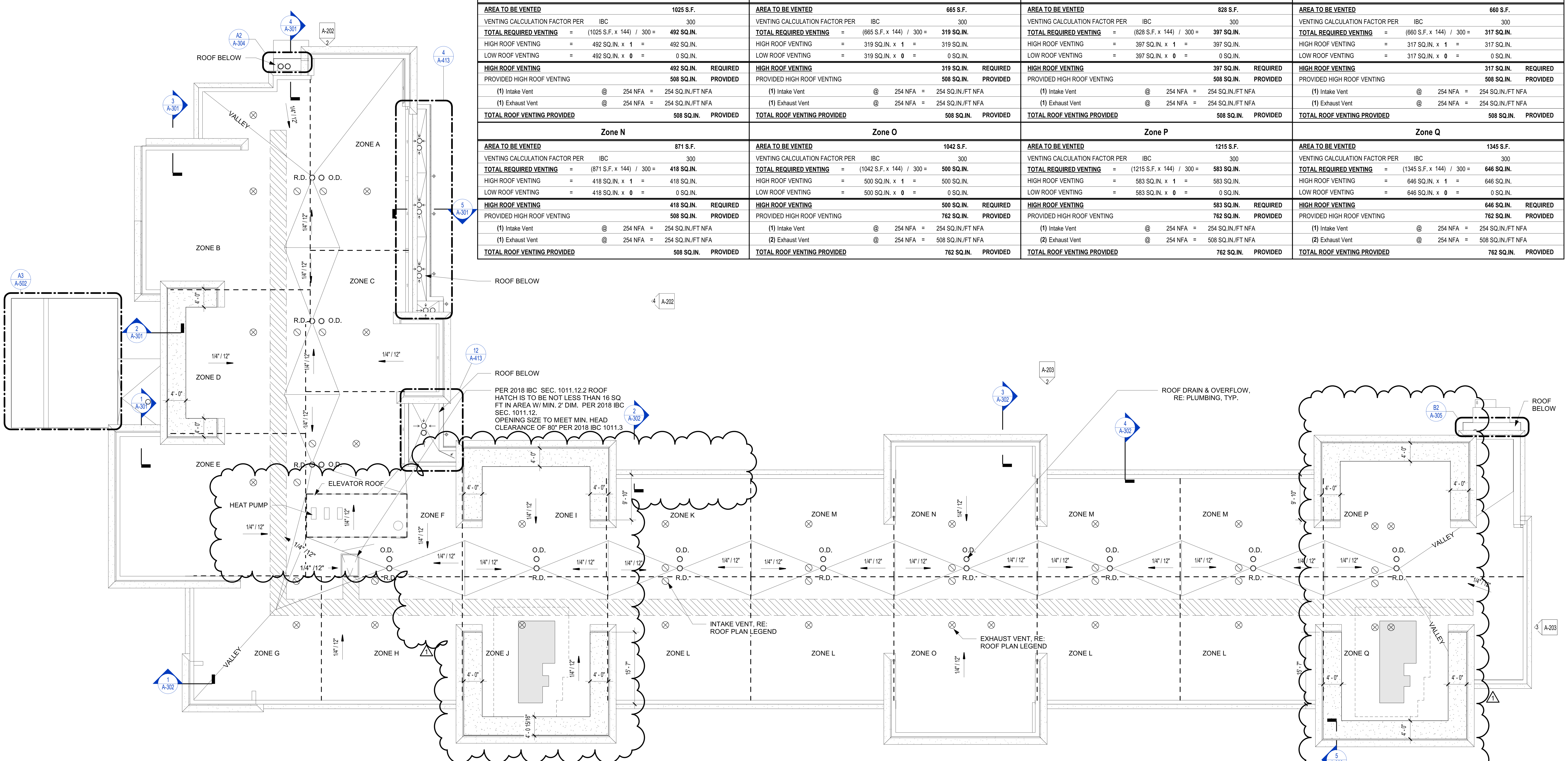
Zone P			
AREA TO BE VENTED		**1215 S.F.**	
VENTING CALCULATION FACTOR PER	IBC	300	
TOTAL REQUIRED VENTING	= (1215 S.F. x 144) / 300 =	**583 SQ.IN.**	
HIGH ROOF VENTING	= 583 SQ.IN. x **1** =	583 SQ.IN.	
LOW ROOF VENTING	= 583 SQ.IN. x **0** =	0 SQ.IN.	
HIGH ROOF VENTING		**583 SQ.IN.**	**REQUIRED**
PROVIDED HIGH ROOF VENTING		**762 SQ.IN.**	**PROVIDED**
(1) Intake Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
(2) Exhaust Vent	@ 254 NFA =	508 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED		**762 SQ.IN.**	**PROVIDED**

Zone Q			
AREA TO BE VENTED		**1345 S.F.**	
VENTING CALCULATION FACTOR PER	IBC	300	
TOTAL REQUIRED VENTING	= (1345 S.F. x 144) / 300 =	**646 SQ.IN.**	
HIGH ROOF VENTING	= 646 SQ.IN. x **1** =	646 SQ.IN.	
LOW ROOF VENTING	= 646 SQ.IN. x **0** =	0 SQ.IN.	
HIGH ROOF VENTING		**646 SQ.IN.**	**REQUIRED**
PROVIDED HIGH ROOF VENTING		**762 SQ.IN.**	**PROVIDED**
(1) Intake Vent	@ 254 NFA =	254 SQ.IN./FT NFA	
(2) Exhaust Vent	@ 254 NFA =	508 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED		**762 SQ.IN.**	**PROVIDED**

REFERENCE G-003 FOR GENERAL NOTES

ROOF PLAN LEGEND

- INTAKE VENTS
- EXHAUST VENTS



3' 6' 12' 24'
N

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

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2

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w: www.rosemann.com

DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA

STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7205
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

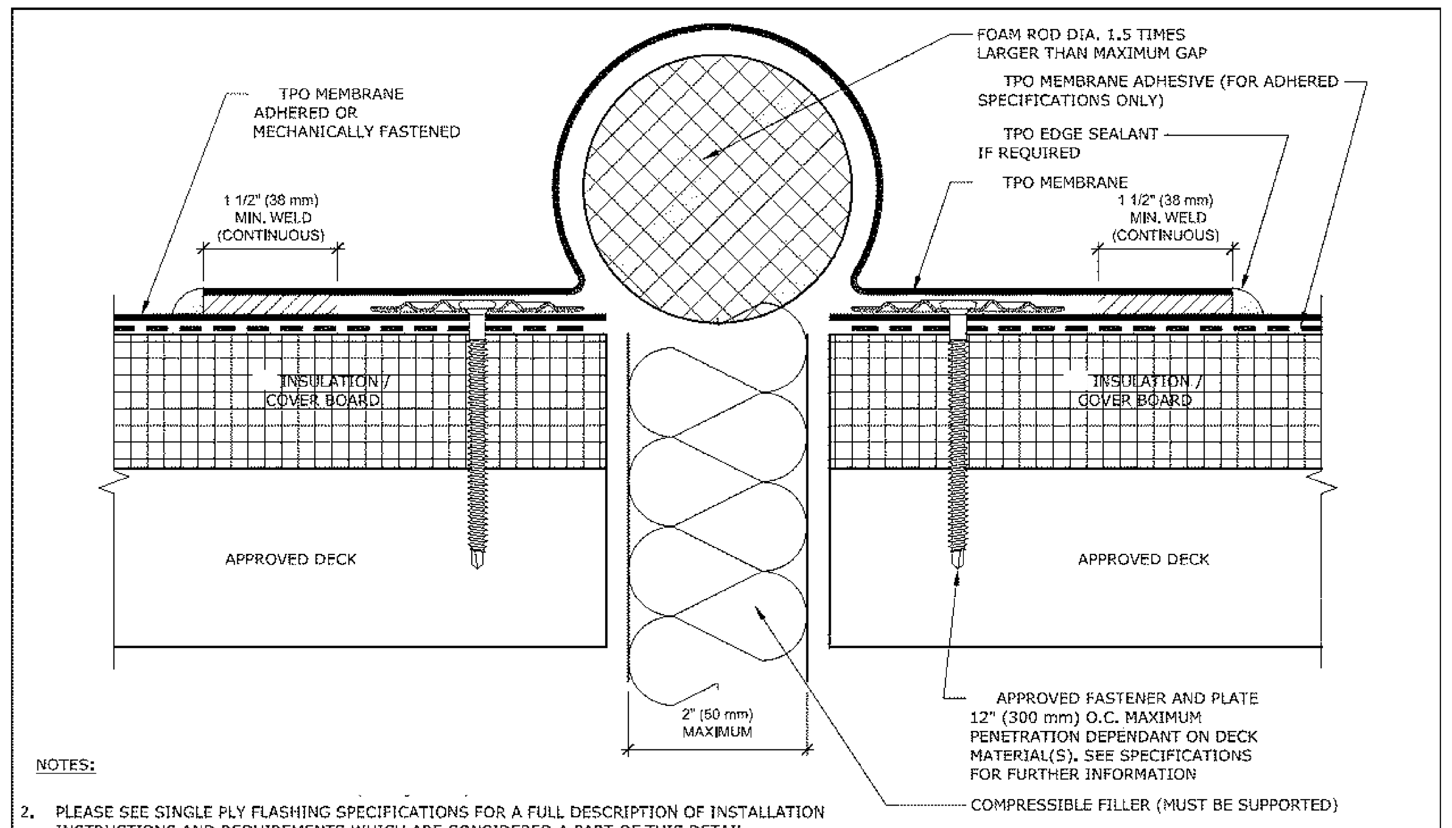
SHEET TITLE
ROOF PLAN

PROJECT NUMBER: 23098

SHEET NUMBER:

A-105

NOTE: DETAILS PROVIDED FOR REFERENCE ONLY. FOLLOW MANUF. RECOMMENDED DETAILS FOR FLASHING/PENETRATION/SEALING DETAILS, TYP.

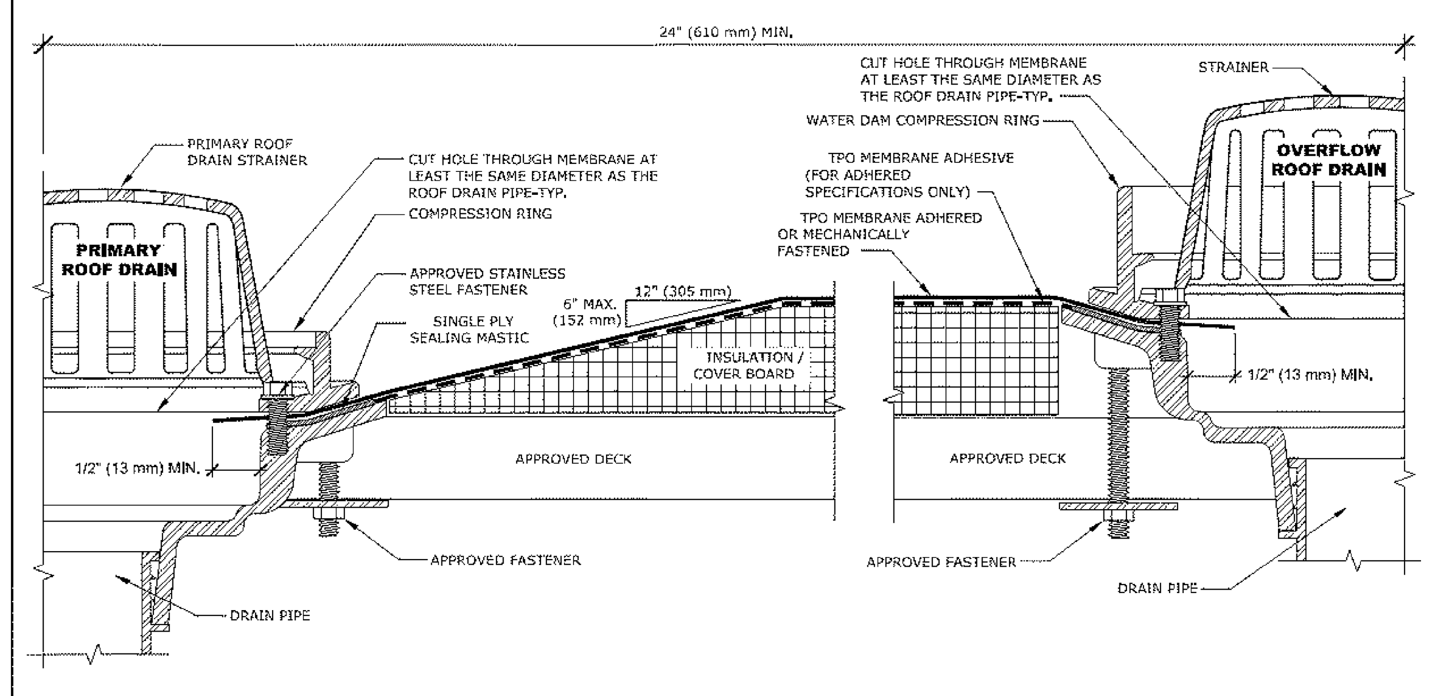


NOTES:

2. PLEASE SEE SINGLE PLY FLASHING SPECIFICATIONS FOR A FULL DESCRIPTION OF INSTALLATION INSTRUCTIONS AND REQUIREMENTS WHICH ARE CONSIDERED A PART OF THIS DETAIL.
3. ANY CARPENTRY OR METAL WORK SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS AND/OR PROJECT SPECIFICATIONS. THESE COMPONENTS SHOULD BE REVIEWED AND APPROVED BY A LICENSED DESIGN PROFESSIONAL.
4. JM TPO EDGE SEALANT IS REQUIRED ON ALL CUT OR NON-ENCAPSULATED EDGES OF REINFORCED MEMBRANE. THIS INCLUDES FACTORY CUT MEMBRANE (SEE DETAIL T-MS-01).

EXPANSION JOINT (ROOF TO ROOF)

DRAWING NO. **T-EJ-02** REPLACES TT-71 | MEMBRANE TYPE: TPO | SCALE N.T.S



NOTES:

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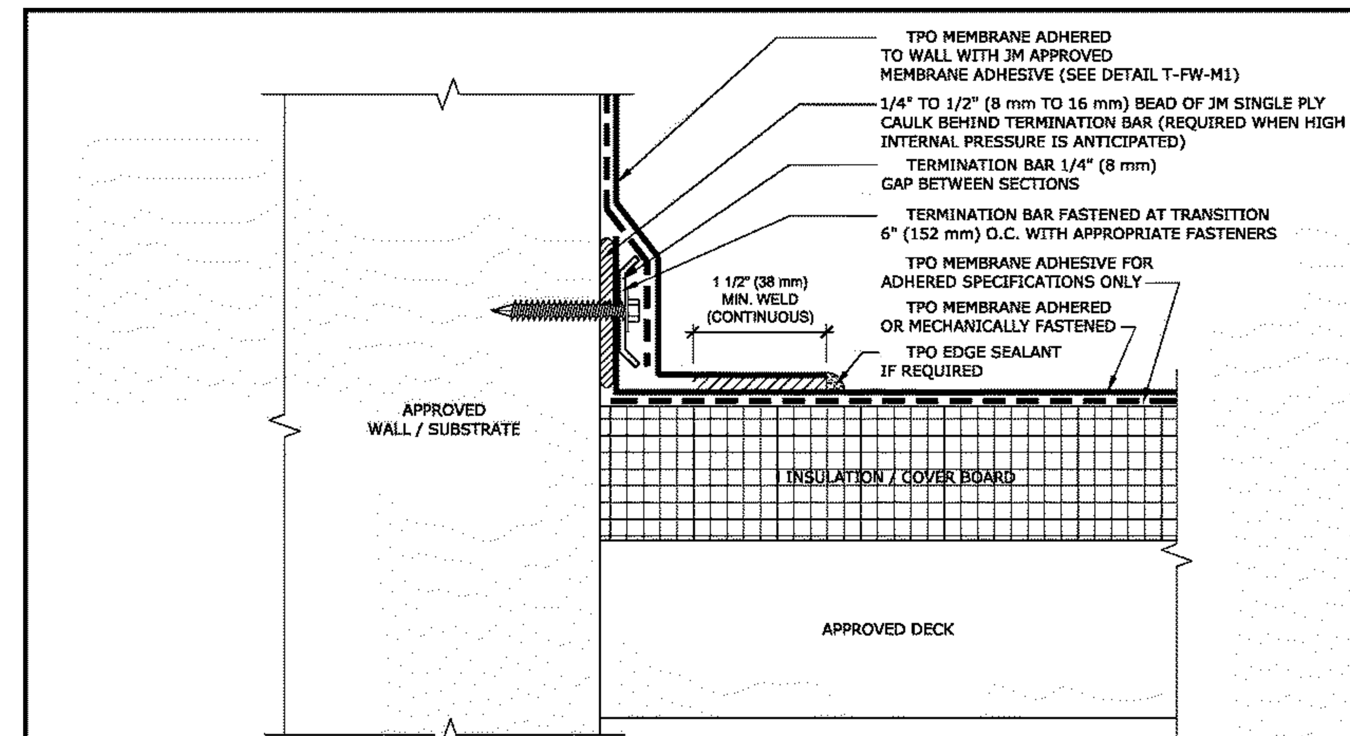
3. ANY CARPENTRY OR METAL WORK SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS AND/OR PROJECT SPECIFICATIONS. THESE COMPONENTS SHOULD BE REVIEWED AND APPROVED BY A LICENSED DESIGN PROFESSIONAL.
4. DRAIN AREA MUST BE PROPERLY TAPERED SO THAT THE DRAIN FLASHING IS NOT INSTALLED UNDER TENSION.
5. NO SEAMS OR FOLDS UNDER THE COMPRESSION RING.

PRIMARY AND OVERFLOW ROOF DRAIN

DRAWING NO. **T-DV-17** DRAINS-VENTS | MEMBRANE TYPE: TPO | SCALE N.T.S



NOTES:

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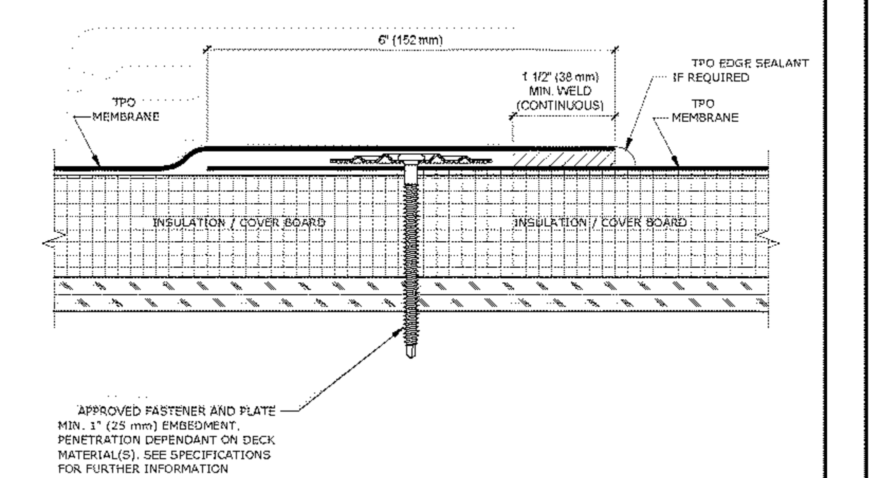
3. ANY CARPENTRY OR METAL WORK SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS AND/OR PROJECT SPECIFICATIONS. THESE COMPONENTS SHOULD BE REVIEWED AND APPROVED BY A LICENSED DESIGN PROFESSIONAL.
4. TPO EDGE SEALANT IS REQUIRED ON ALL CUT OR NON-ENCAPSULATED EDGES OF REINFORCED MEMBRANE. THIS INCLUDES FACTORY CUT MEMBRANE (SEE DETAIL T-MS-01).
5. THIS DETAIL IS ALSO SUITABLE FOR TERMINATION OF FLEECE BACKED MEMBRANES. NON FLEECE BACK MEMBRANE IS REQUIRED FOR WALL FLASHINGS.

MEMBRANE FLASHING BASE TIE-IN (HIGH INTERNAL PRESSURE)

DRAWING NO. **T-FW-B5** REPLACES TB-26A | MEMBRANE TYPE: TPO | SCALE N.T.S

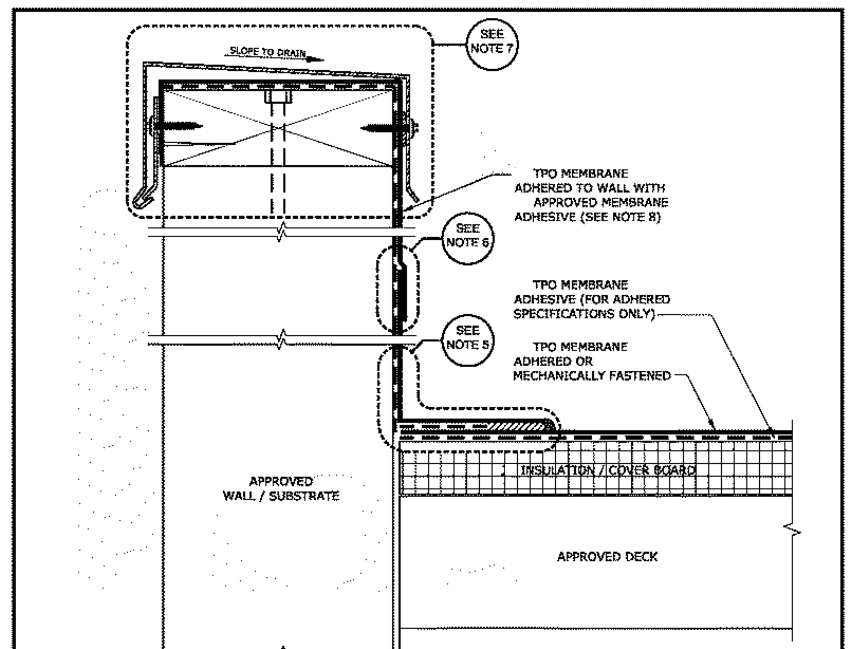


NOTES:

2. PLEASE SEE SINGLE PLY FLASHING SPECIFICATIONS FOR A FULL DESCRIPTION OF INSTALLATION INSTRUCTIONS AND REQUIREMENTS WHICH ARE CONSIDERED A PART OF THIS DETAIL.
3. ANY CARPENTRY OR METAL WORK SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS AND/OR PROJECT SPECIFICATIONS. THESE COMPONENTS SHOULD BE REVIEWED AND APPROVED BY A LICENSED DESIGN PROFESSIONAL.
4. TPO EDGE SEALANT IS REQUIRED ON ALL CUT OR NON-ENCAPSULATED EDGES OF REINFORCED MEMBRANE. THIS INCLUDES FACTORY CUT MEMBRANE (SEE DETAIL T-MS-01).

IN LAP FASTENING METHOD-PLYWOOD DECK

DRAWING NO. **T-MS-03** REPLACES TA-1A | MEMBRANE TYPE: TPO | SCALE N.T.S

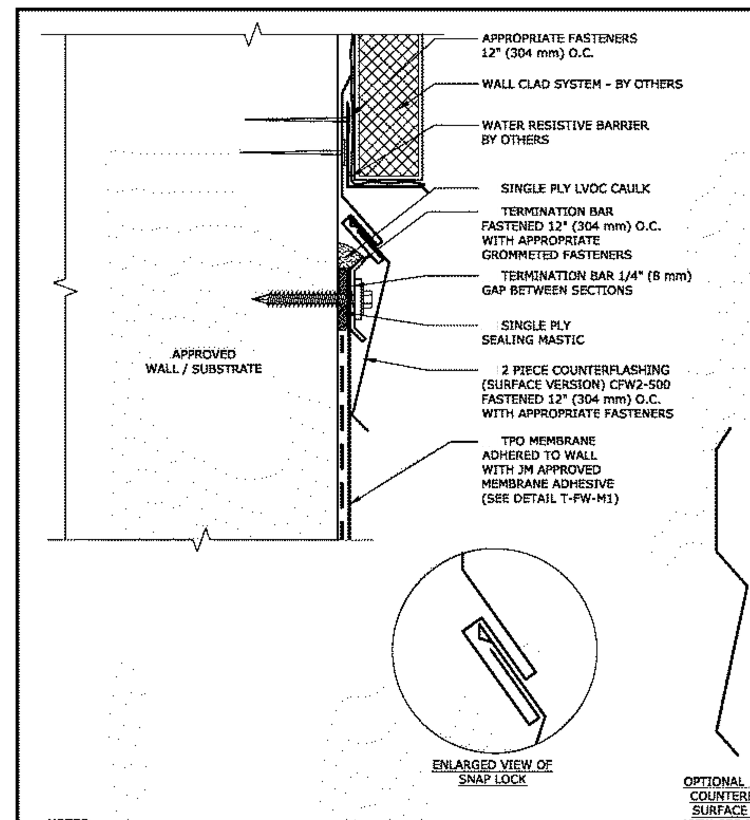


NOTES:

2. PLEASE SEE SINGLE PLY FLASHING SPECIFICATIONS FOR A FULL DESCRIPTION OF INSTALLATION INSTRUCTIONS AND REQUIREMENTS WHICH ARE CONSIDERED A PART OF THIS DETAIL.
3. ANY CARPENTRY OR METAL WORK SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS AND/OR PROJECT SPECS. THESE COMPONENTS SHOULD BE REVIEWED AND APPROVED BY A LICENSED DESIGN PROFESSIONAL.
4. TPO EDGE SEALANT IS REQUIRED ON ALL CUT OR NON-ENCAPSULATED EDGES OF REINFORCED MEMBRANE. THIS INCLUDES FACTORY CUT MEMBRANE (SEE DETAIL T-MS-01).
5. FOR APPROVED BASE FLASHING FASTENING METHODS SEE T-FW-B DETAILS. A SUFFICIENT BACKER FASTENING STRIP MUST BE INSTALLED BEHIND SUBSTRATES DIRECTLY TO STUDS FOR INSTALLATION OF TERMINATION BARS AND FLASHINGS WHEN SUBSTRATES WILL NOT SUPPORT A PROPER, SECURE INSTALLATION. SEE DETAIL T-FW-M2I FOR BACKER DETAIL.
6. FOR APPROVED INTERMEDIATE FLASHING FASTENING METHODS SEE T-FW-I DETAILS. MINIMUM FLASHING TERMINATION HEIGHT IS 8" (203 mm) ABOVE ROOF SURFACE. INTERMEDIATE ADHERED MEMBRANE FASTENING REQUIRED AT 5'-0" (1.52 m) INTERVALS MAXIMUM, AND 18" (457 mm) HIGH MAXIMUM FOR NON ADHERED MEMBRANE ON CMU, BRICK, SMOOTH CONCRETE WALLS, OR ANY APPROVED SUBSTRATE, IE. PLYWOOD, SECUROCK® GYPSUM-FIBER AND DENSDECK®. SEE DETAIL T-FW-M2I FOR APPROVED FASTENING METHODS.
7. FOR APPROVED TOP OF WALL FLASHING METHODS SEE T-FW-T DETAILS.
8. APPROVED ADHESIVES FOR USE ON VERTICAL FLASHING APPLICATIONS INCLUDES JM LVOC MEMBRANE ADHESIVE (TPO & EPDM), MEMBRANE BONDING ADHESIVE (TPO & EPDM), AND JM TPO WATER BASED MEMBRANE ADHESIVE.

TPO BASE & WALL FLASHING WITH COPING

DRAWING NO. **T-FW-M1** NEW DETAIL | MEMBRANE TYPE: TPO | SCALE N.T.S

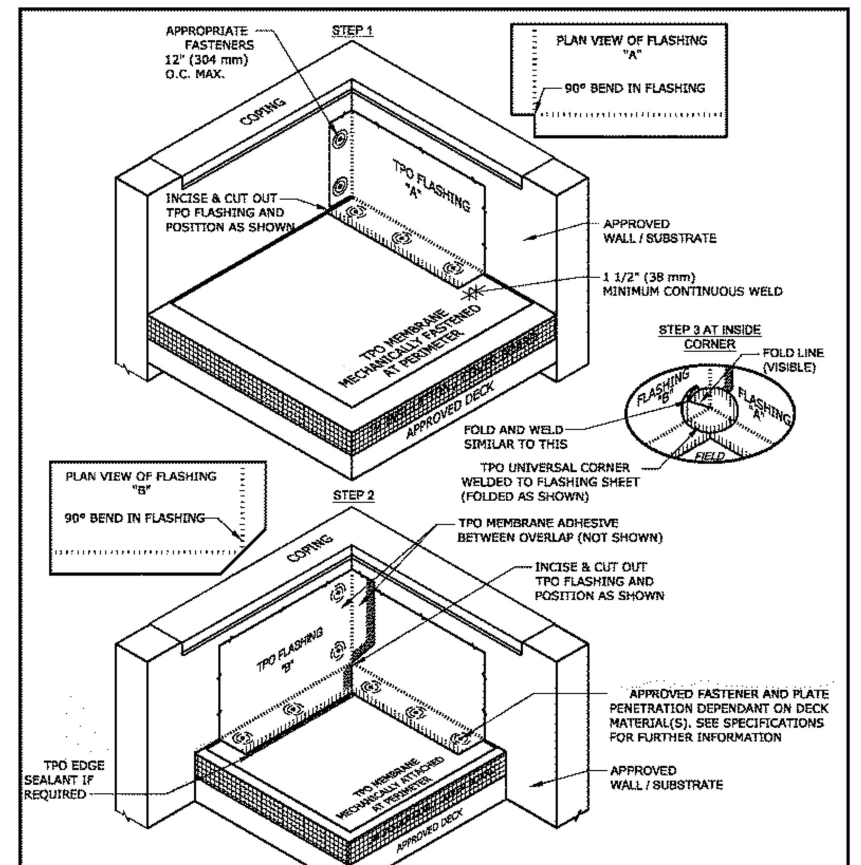


NOTES:

2. PLEASE SEE SINGLE PLY FLASHING SPECIFICATIONS FOR A FULL DESCRIPTION OF INSTALLATION INSTRUCTIONS AND REQUIREMENTS WHICH ARE CONSIDERED A PART OF THIS DETAIL.
3. ANY CARPENTRY OR METAL WORK SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS AND/OR PROJECT SPECIFICATIONS. THESE COMPONENTS SHOULD BE REVIEWED AND APPROVED BY A LICENSED DESIGN PROFESSIONAL.
4. ALL SEALANTS / CAULKING SHALL BE PERIODICALLY INSPECTED AND MAINTAINED BY THE BUILDING OWNER THROUGHOUT THE LIFE OF THE ROOF.
5. MINIMUM FLASHING HEIGHT IS 8" (203 mm) ABOVE ROOF SURFACE.

TPO INTERMEDIATE TERMINATION BELOW WALL CLADDING

DRAWING NO. **T-FW-I11** NEW DETAIL | MEMBRANE TYPE: TPO | SCALE N.T.S

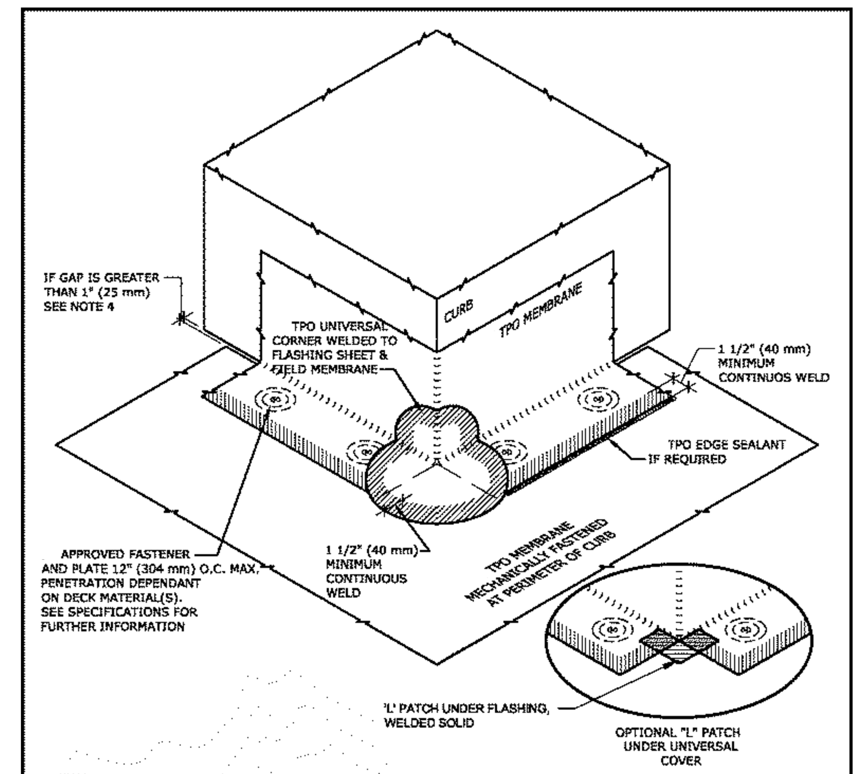


NOTES:

2. PLEASE SEE SINGLE PLY FLASHING SPECIFICATIONS FOR A FULL DESCRIPTION OF INSTALLATION INSTRUCTIONS AND REQUIREMENTS WHICH ARE CONSIDERED A PART OF THIS DETAIL.
3. ANY CARPENTRY OR METAL WORK SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS AND/OR PROJECT SPECS. THESE COMPONENTS SHOULD BE REVIEWED AND APPROVED BY A LICENSED DESIGN PROFESSIONAL.
4. TPO EDGE SEALANT IS REQUIRED ON ALL CUT OR NON ENCAPSULATED EDGES OF REINFORCED MEMBRANE. THIS INCLUDES FACTORY CUT EDGES (SEE DETAIL T-MS-01).

INSIDE CORNER

DRAWING NO. **T-FC-04** REPLACES TF-63 | MEMBRANE TYPE: TPO | SCALE N.T.S



NOTES:

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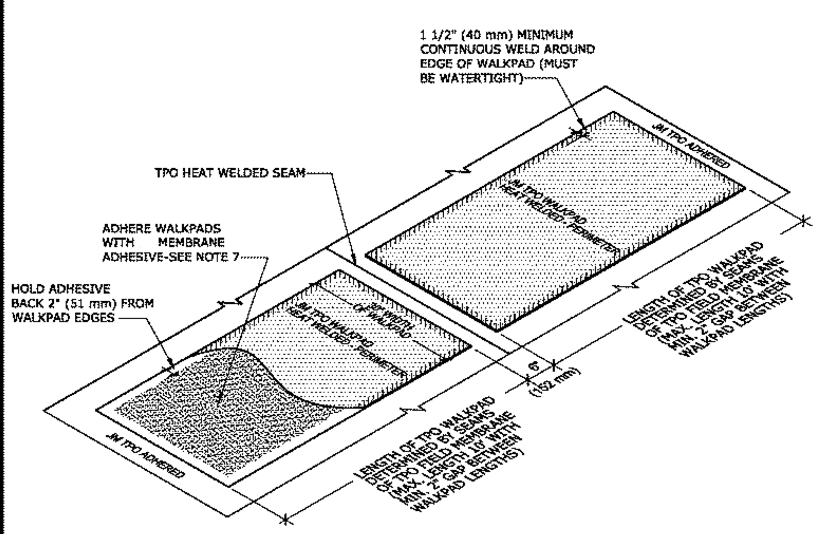
3. ANY CARPENTRY OR METAL WORK SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS AND/OR PROJECT SPECIFICATIONS. THESE COMPONENTS SHOULD BE REVIEWED AND APPROVED BY A LICENSED DESIGN PROFESSIONAL.
4. IF GAP OR CUT IN MEMBRANE IS GREATER THAN 1" UNDER TPO UNIVERSAL CORNER, AN "L" PATCH THAT EXTENDS OUT ONTO THE MEMBRANE A MINIMUM OF 2" MUST BE INSTALLED AT OUTSIDE CORNER. ("L" PATCH SHOWN AT RIGHT WITHOUT TPO UNIVERSAL CORNER)
5. TPO EDGE SEALANT IS REQUIRED ON ALL CUT OR NON ENCAPSULATED EDGES OF REINFORCED MEMBRANE. THIS INCULDES FACTORY CUT MEMBRANE (SEE DETAIL T-MS-01).

OUTSIDE CORNER

DRAWING NO. **T-FC-03** REPLACES TF-62A | MEMBRANE TYPE: TPO | SCALE N.T.S



NOTES:

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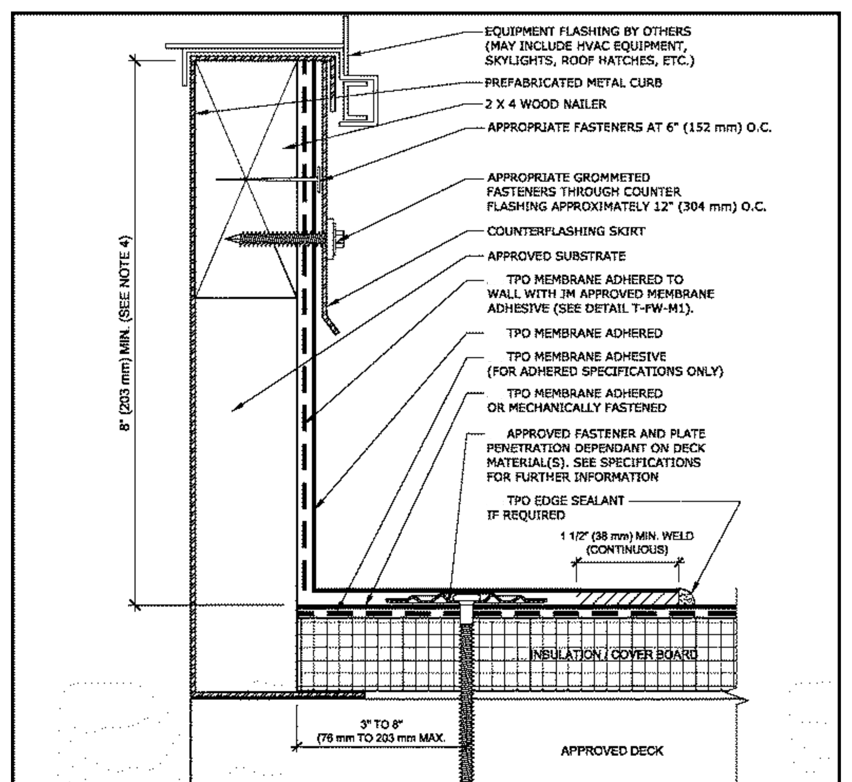
3. ANY CARPENTRY OR METAL WORK SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS AND/OR PROJECT SPECIFICATIONS. THESE COMPONENTS SHOULD BE REVIEWED AND APPROVED BY A LICENSED DESIGN PROFESSIONAL.
4. TPO EDGE SEALANT IS REQUIRED ON ALL CUT OR NON-ENCAPSULATED EDGES OF REINFORCED MEMBRANE. THIS INCLUDES FACTORY CUT MEMBRANE (SEE DETAIL T-MS-01).
5. CLEAN MEMBRANE SURFACE PRIOR TO WALKPAD INSTALLATION WITH TPO MEMBRANE CLEANER.
6. DO NOT INSTALL WALKPADS OVER MEMBRANE SEAMS.
7. APPROVED ADHESIVES FOR ADHERING TPO WALKPADS ARE JM LVOC MEMBRANE ADHESIVE (TPO & EPDM), MEMBRANE BONDING ADHESIVE (TPO & EPDM) AND JM TPO WATER BASED MEMBRANE ADHESIVE.

TPO WALKPADS OVER ADHERED TPO MEMBRANE

DRAWING NO. **T-PT-05** REPLACES TM-93A | MEMBRANE TYPE: TPO | SCALE N.T.S



NOTES:

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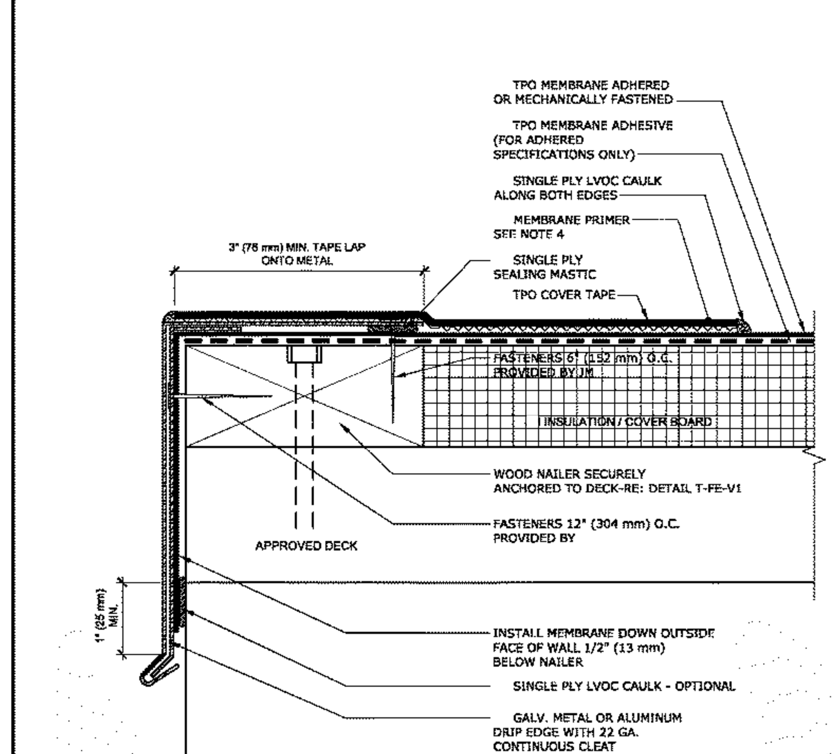
3. ANY CARPENTRY OR METAL WORK SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS AND/OR PROJECT SPECIFICATIONS. THESE COMPONENTS SHOULD BE REVIEWED AND APPROVED BY A LICENSED DESIGN PROFESSIONAL.
4. HEIGHT OF CURB TO BE ADJUSTED WITH NAILERS. IT IS PREFERRED TO RAISE CURB ONTO NAILERS TO EXTEND FLASHING HEIGHT.
5. TPO EDGE SEALANT IS REQUIRED ON ALL CUT AND NON ENCAPSULATED EDGES OF REINFORCED MEMBRANE. THIS INCLUDES FACTORY CUT MEMBRANE (SEE DETAIL T-MS-01).
6. SEE T-FW-B DETAILS FOR APPROVED BASE FLASHING TIE IN TERMINATION METHODS.

PREFABRICATED METAL CURB BASE FLASHING

DRAWING NO. **T-FC-01** REPLACES TF-64-ADH | MEMBRANE TYPE: TPO | SCALE N.T.S

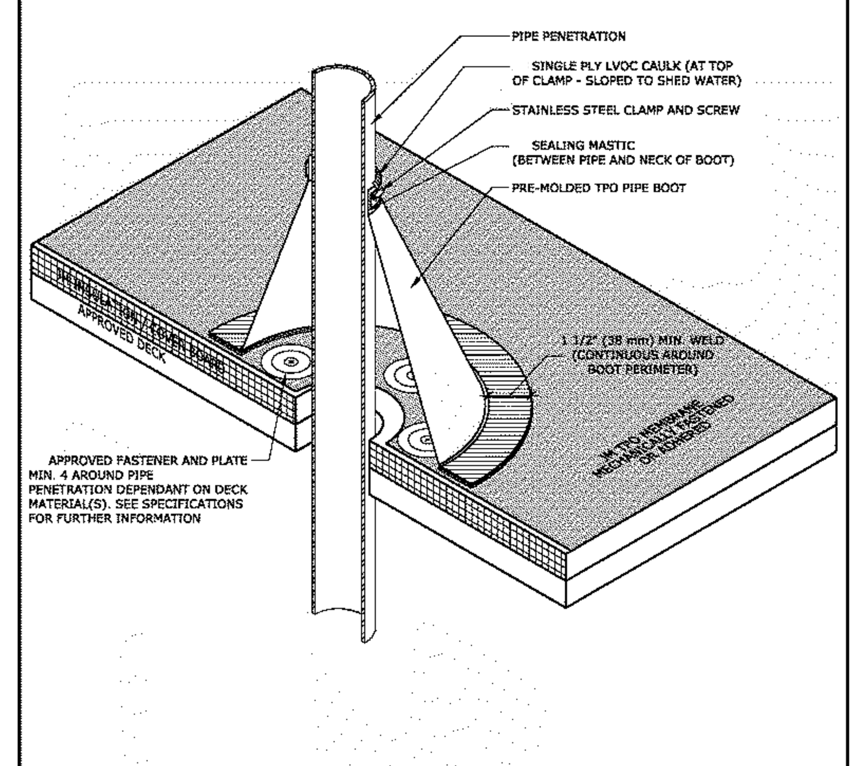


NOTES:

2. PLEASE SEE SINGLE PLY FLASHING SPECIFICATIONS FOR A FULL DESCRIPTION OF INSTALLATION INSTRUCTIONS AND REQUIREMENTS WHICH ARE CONSIDERED A PART OF THIS DETAIL.
3. ANY CARPENTRY OR METAL WORK SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS AND/OR PROJECT SPECIFICATIONS. THESE COMPONENTS SHOULD BE REVIEWED AND APPROVED BY A LICENSED DESIGN PROFESSIONAL.
4. TPO MEMBRANE PRIMER OR JM SINGLE PLY MEMBRANE PRIMER (LOW VOC) MUST BE APPLIED ON ALL SURFACES COMING INTO CONTACT WITH TPO PEEL & STICK PRODUCTS. ROLL MEMBRANE WITH HAND ROLLER UNDER PRESSURE AT SEAM.

JM METAL DRIP EDGE WITH JM TPO COVER TAPE

DRAWING NO. **T-FE-P5** NEW DETAIL | MEMBRANE TYPE: TPO | SCALE N.T.S

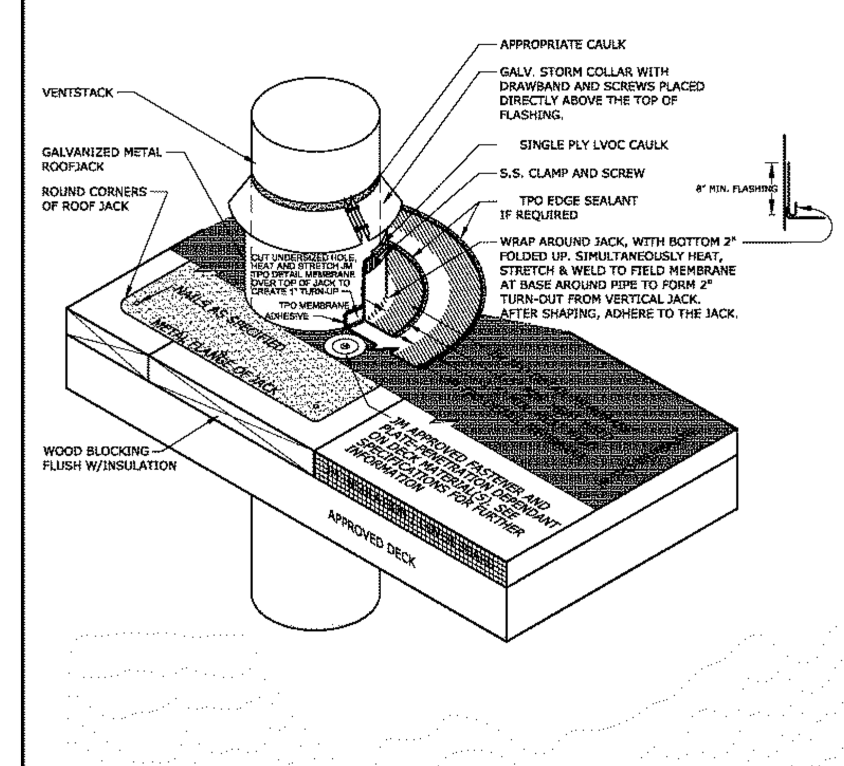


NOTES:

2. PLEASE SEE SINGLE PLY FLASHING SPECIFICATIONS FOR A FULL DESCRIPTION OF INSTALLATION INSTRUCTIONS AND REQUIREMENTS WHICH ARE CONSIDERED A PART OF THIS DETAIL.
3. ANY CARPENTRY OR METAL WORK SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS AND/OR PROJECT SPECIFICATIONS. THESE COMPONENTS SHOULD BE REVIEWED AND APPROVED BY A LICENSED DESIGN PROFESSIONAL.

TPO PIPE BOOT

DRAWING NO. **T-FP-01** REPLACES TF-60S | MEMBRANE TYPE: TPO | SCALE N.T.S



NOTES:

2. PLEASE SEE SINGLE PLY FLASHING SPECIFICATIONS FOR A FULL DESCRIPTION OF INSTALLATION INSTRUCTIONS AND REQUIREMENTS WHICH ARE CONSIDERED A PART OF THIS DETAIL.
3. ANY CARPENTRY OR METAL WORK SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS AND/OR PROJECT SPECIFICATIONS. THESE COMPONENTS SHOULD BE REVIEWED AND APPROVED BY A LICENSED DESIGN PROFESSIONAL.
4. TPO EDGE SEALANT IS REQUIRED ON ALL CUT OR NON-ENCAPSULATED EDGES OF REINFORCED MEMBRANE. THIS INCLUDES FACTORY CUT MEMBRANE (SEE DETAIL T-MS-01)

VENT PIPE

DRAWING NO. **T-DV-01** REPLACES TF-62 | MEMBRANE TYPE: TPO | SCALE N.T.S

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
ROOFING & FLASHING DETAILS

PROJECT NUMBER: 23098

SHEET NUMBER:

A-106

REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-120 FOR RCP LEGEND

RCP LEGEND

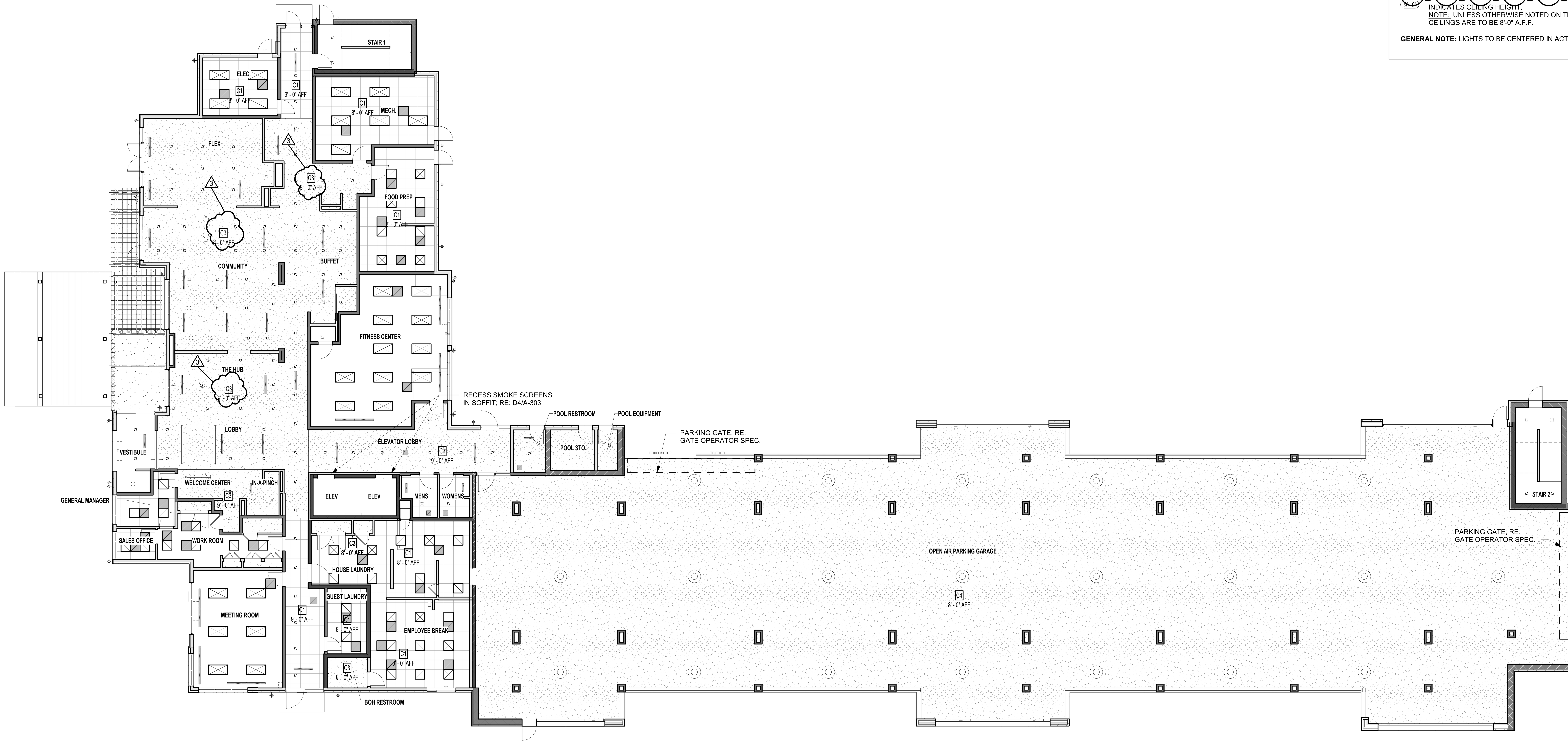
C1 - 2' X 2' ACT SYSTEM

C3 - GWB ON UNDERSIDE OF TRUSS ASSEMBLY FOR FIRE RATING

C4 - EXTERIOR RATED SHEATHING WITH BLOWN INSULATION ABOVE

INDICATES CEILING HEIGHT.
NOTE: UNLESS OTHERWISE NOTED ON THE PLANS ALL CEILINGS ARE TO BE 8'-0" A.F.F.

GENERAL NOTE: LIGHTS TO BE CENTERED IN ACT TILES



1 FIRST FLOOR REFLECTED CEILING PLAN
3/32" = 1'-0"

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SHEET TITLE
FIRST FLOOR REFLECTED CEILING PLAN

PROJECT NUMBER: 23098

SHEET NUMBER:

A-120

REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-120 FOR RCP LEGEND

RCP LEGEND

C1 - 2' X 2' ACT SYSTEM

C3 - GWB ON UNDERSIDE OF TRUSS ASSEMBLY FOR FIRE RATING

C4 - EXTERIOR RATED SHEATHING WITH BLOWN INSULATION ABOVE

9' - 0" INDICATES CEILING HEIGHT.
NOTE: UNLESS OTHERWISE NOTED ON THE PLANS ALL CEILINGS ARE TO BE 8'-0" A.F.F.

GENERAL NOTE: LIGHTS TO BE CENTERED IN ACT TILES

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TOWNEPLACE SUITES

1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
SECOND FLOOR REFLECTED CEILING PLAN

PROJECT NUMBER: 23098

SHEET NUMBER:

A-121

0 4' 8' 16' 32'

1 SECOND FLOOR REFLECTED CEILING PLAN
3/32" = 1'-0"

N

VERIFY SHEET #'S

REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-120 FOR RCP LEGEND

KEYNOTE LEGEND

RCP LEGEND

C1 - 2' X 2' ACT SYSTEM

C3 - GWB ON UNDERSIDE OF TRUSS ASSEMBLY FOR FIRE RATING

C4 - EXTERIOR RATED SHEATHING WITH BLOWN INSULATION ABOVE

9' - 0" INDICATES CEILING HEIGHT.
NOTE: UNLESS OTHERWISE NOTED ON THE PLANS ALL CEILINGS ARE TO BE 8'-0" A.F.F.

GENERAL NOTE: LIGHTS TO BE CENTERED IN ACT TILES

4' 8' 16' 32'

1 THIRD FLOOR REFLECTED CEILING PLAN
3/32" = 1'-0"

N

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STATE OF MISSOURI DAVID EUGENE HENDRIX NUMBER A-7305 REGISTERED ARCHITECT
03/06/2024

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1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
THIRD FLOOR REFLECTED CEILING PLAN

PROJECT NUMBER: 23098

SHEET NUMBER:

A-122

REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-120 FOR RCP LEGEND

KEYNOTE LEGEND

3

RCP LEGEND

C1 - 2' X 2' ACT SYSTEM

C3 - GWB ON UNDERSIDE OF TRUSS ASSEMBLY FOR FIRE RATING

C4 - EXTERIOR RATED SHEATHING WITH BLOWN INSULATION ABOVE

9'-0" INDICATES CEILING HEIGHT.
NOTE: UNLESS OTHERWISE NOTED ON THE PLANS ALL CEILINGS ARE TO BE 8'-0" A.F.F.

GENERAL NOTE: LIGHTS TO BE CENTERED IN ACT TILES

4' 8' 16' 32'

1 FOURTH FLOOR REFLECTED CEILING PLAN
3/32" = 1'-0"

N

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NUMBER A-7305
REGISTERED ARCHITECT
03/06/2024

TOWNEPLACE SUITES

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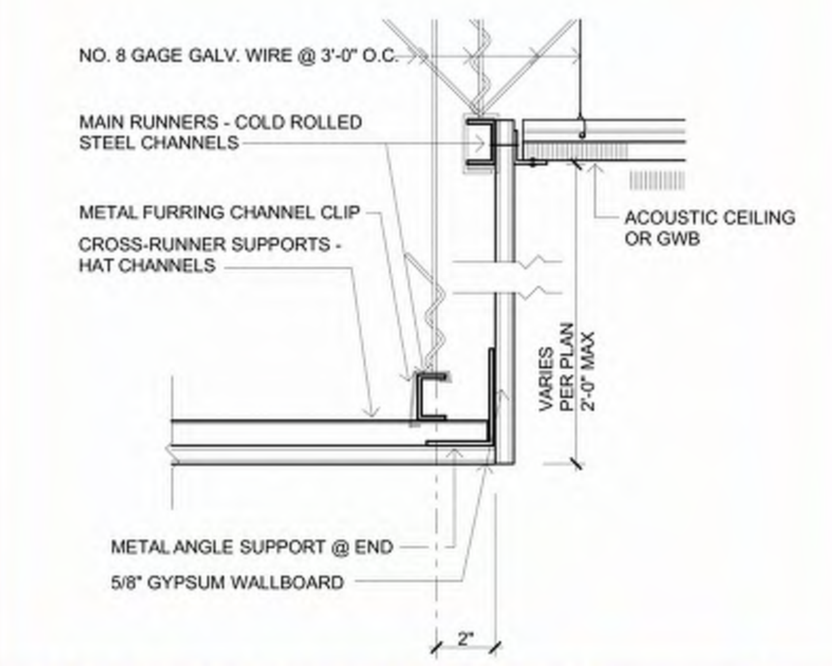
LEE'S SUMMIT 64064 USA

SHEET TITLE
FOURTH FLOOR REFLECTED CEILING PLAN

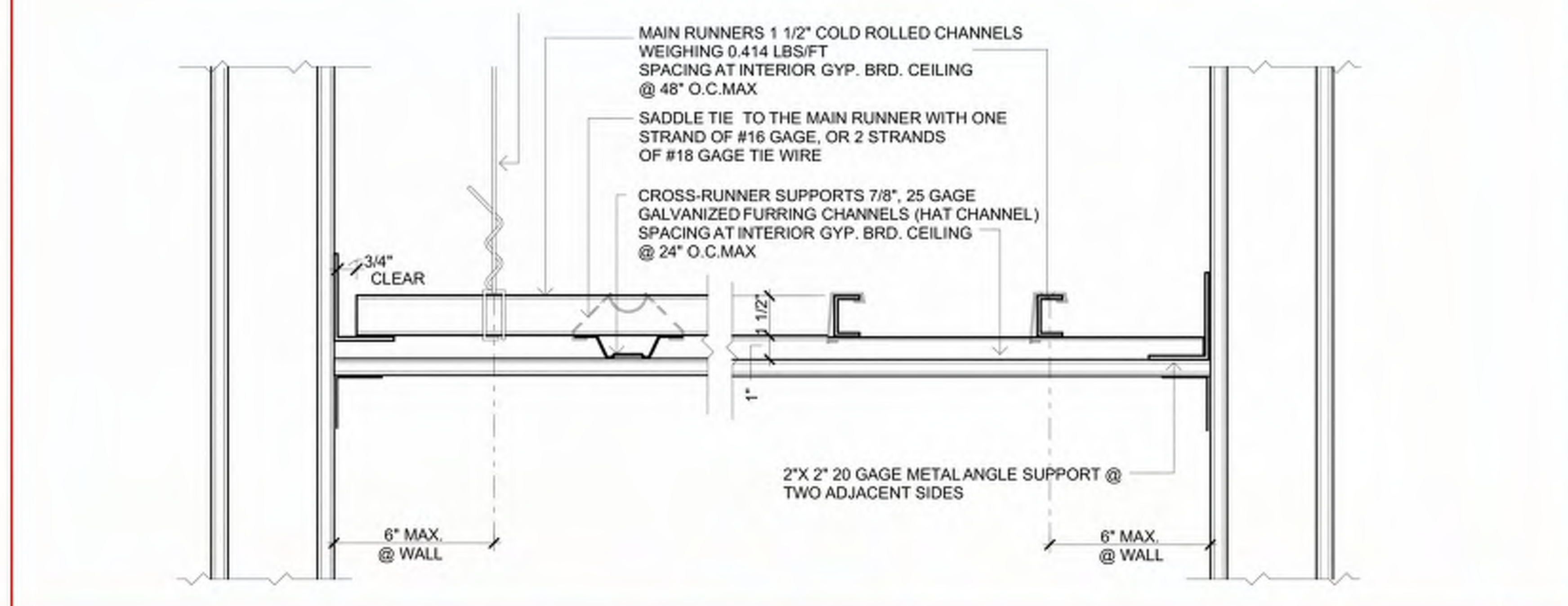
PROJECT NUMBER: 23098

SHEET NUMBER:

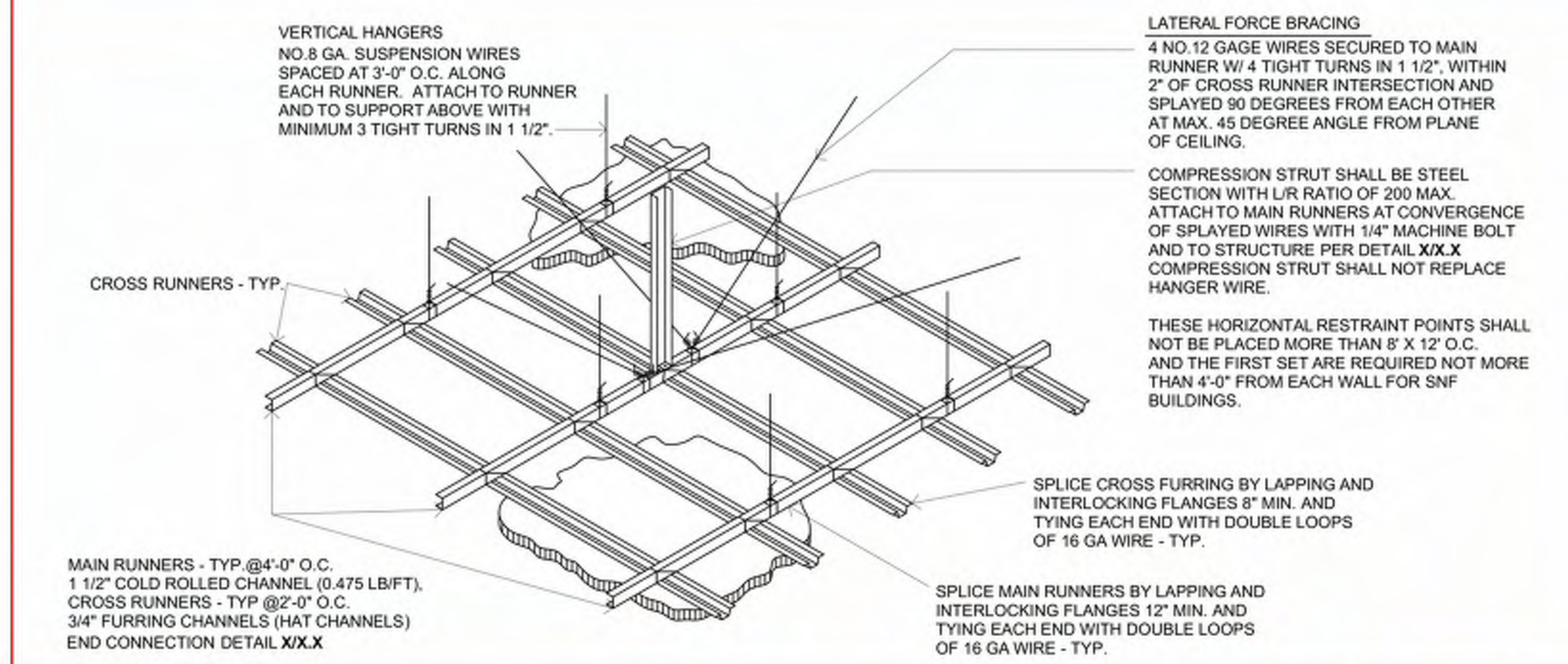
A-123



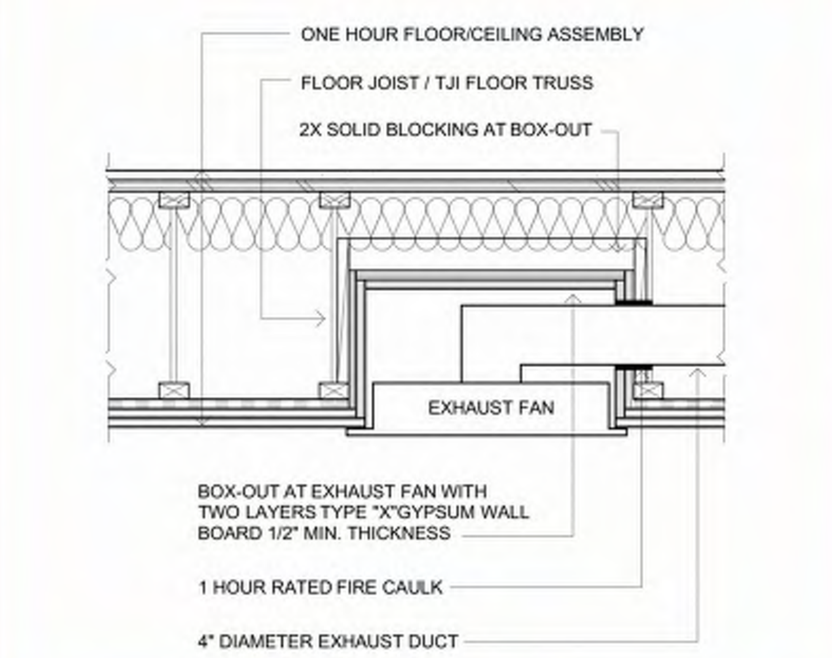
SUSPENDED CEILING/SOFFIT TRANSITION | 3" = 1'-0" | 20 A13.1



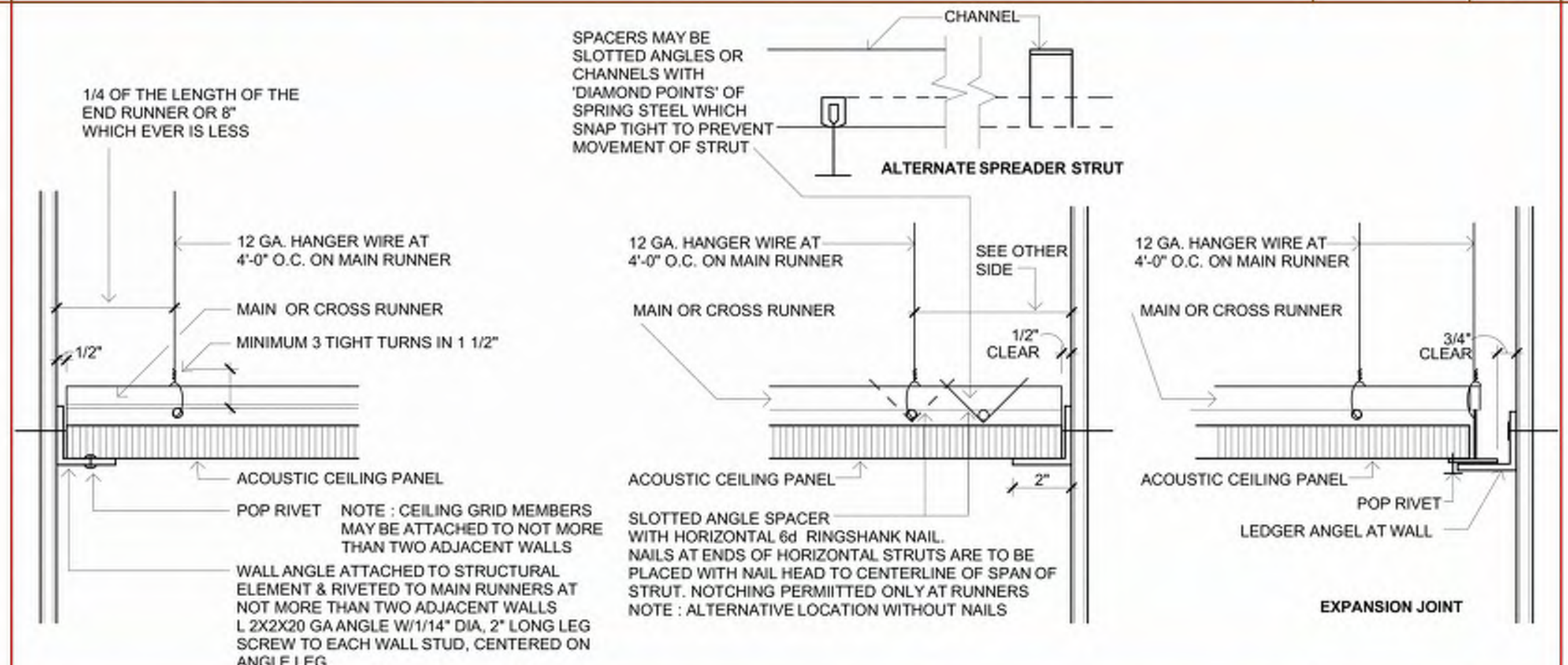
SUSPENDED GYPSUM WALL BOARD CEILING - CONNECTION DETAIL | 3" = 1'-0" | 12 A13.1



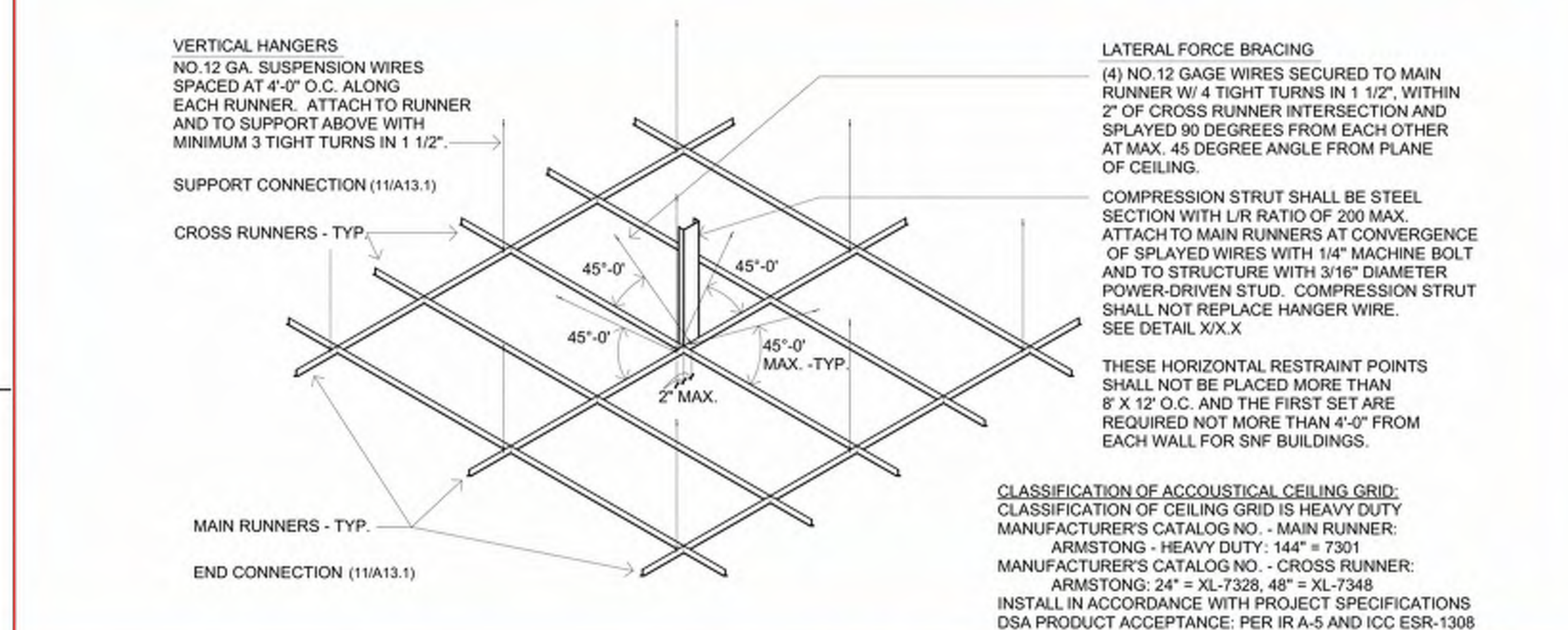
SUSPENDED GYPSUM BOARD CEILING GRID | 1 1/2"= 1'-0" | 4 A13.1



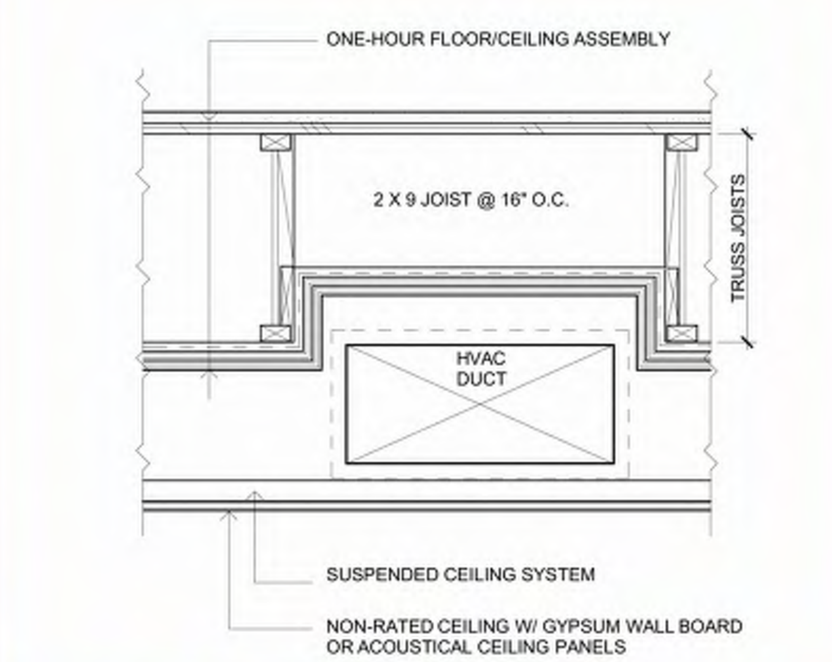
FAN EXHAUST AT FLOOR/CEILING | 1 1/2"= 1'-0" | 19 A13.1



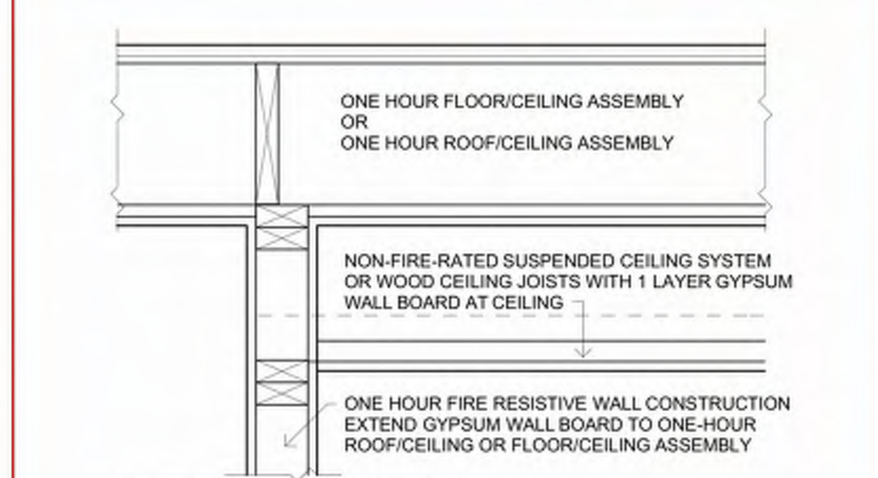
SUSPENDED LAY-IN CEILING - CONNECTION DETAIL | 3" = 1'-0" | 11 A13.1



SUSPENDED LAY-IN CEILING GRID | 1 1/2"= 1'-0" | 3 A13.1



DUCT AT FLOOR/CEILING AND DROPPED CEILING | 1 1/2"= 1'-0" | 18 A13.1

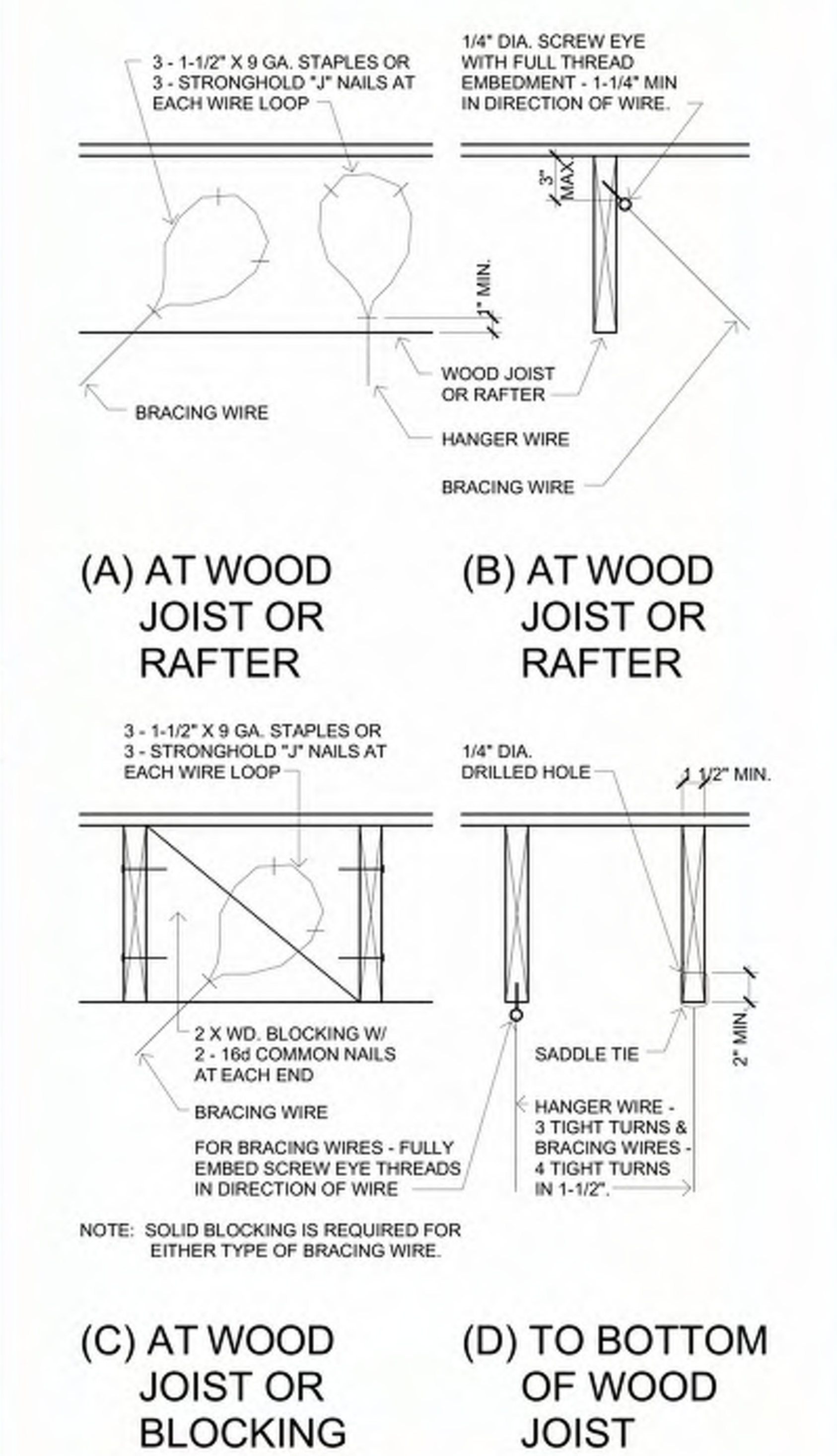


ONE HOUR ENVELOPE CONSTRUCTION (CORRIDORS, LOBBIES, ETC.)
DOOR OPENINGS SHALL BE PROTECTED BY A TIGHT-FITTING SMOKE AND DRAFT CONTROL ASSEMBLY HAVING A FIRE-PROTECTION RATING OF NOT LESS THAN 20 MINUTES. DOORS SHALL BE MAINTAINED SELF-CLOSING OR SHALL BE AUTOMATIC CLOSING BY ACTUATION OF A SMOKE DETECTOR.

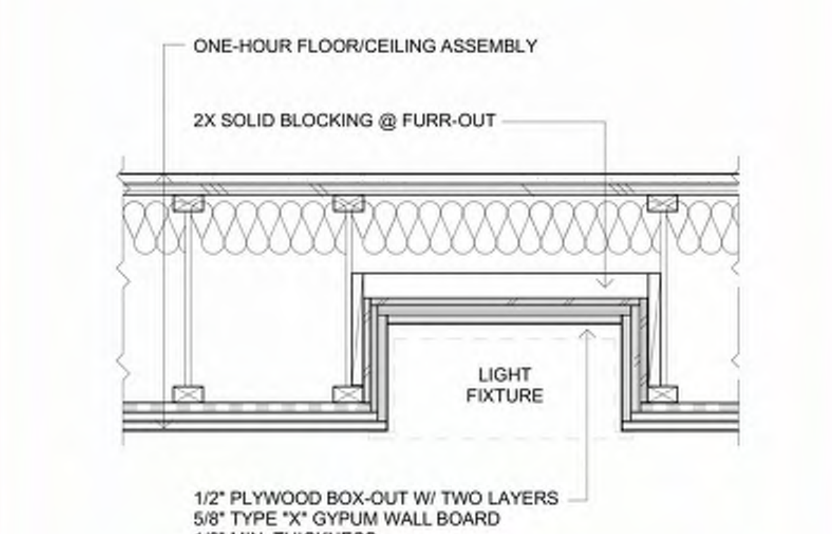
ACCESS DOORS IN ROOF/CEILING ASSEMBLY SHALL BE APPROVED FIRE-RATED HORIZONTAL ACCESS DOOR ASSEMBLIES.

FOR LOCATION OF SMOKE DAMPERS, FIRE DAMPERS OR COMBINATION SEE MECHANICAL DRAWINGS

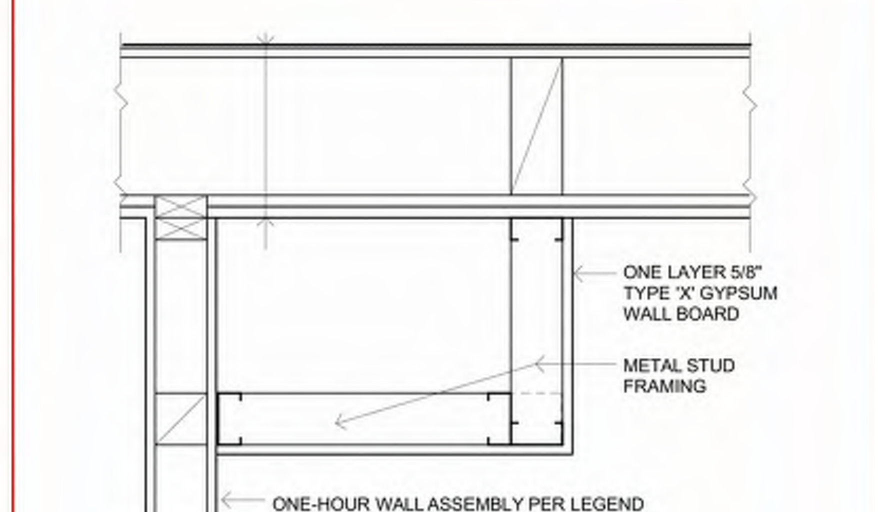
CORRIDOR CONSTRUCTION | 1 1/2"= 1'-0" | 14 A13.1



SUSPENDED CEILING AT WOOD FRAMING | 1 1/2"= 1'-0" | 9 A13.1



LIGHT FIXTURE AT FLOOR/CEILING | 1 1/2"= 1'-0" | 17 A13.1



RECESSED LIGHT FIXTURES AND DUCT OPENINGS IN THE NON-RATED SOFFIT ARE NOT REQUIRED TO BE PROTECTED

SOFFIT FRAMING SHALL BE NON-COMBUSTABLE CONSTRUCTION - CBC SECTION 803.11.2

METAL STUD SOFFIT FRAMING | 1 1/2"= 1'-0" | 13 A13.1

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DAVID EUGENE HENDRIKSE
NUMBER A-7305
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01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
CEILING DETAILS

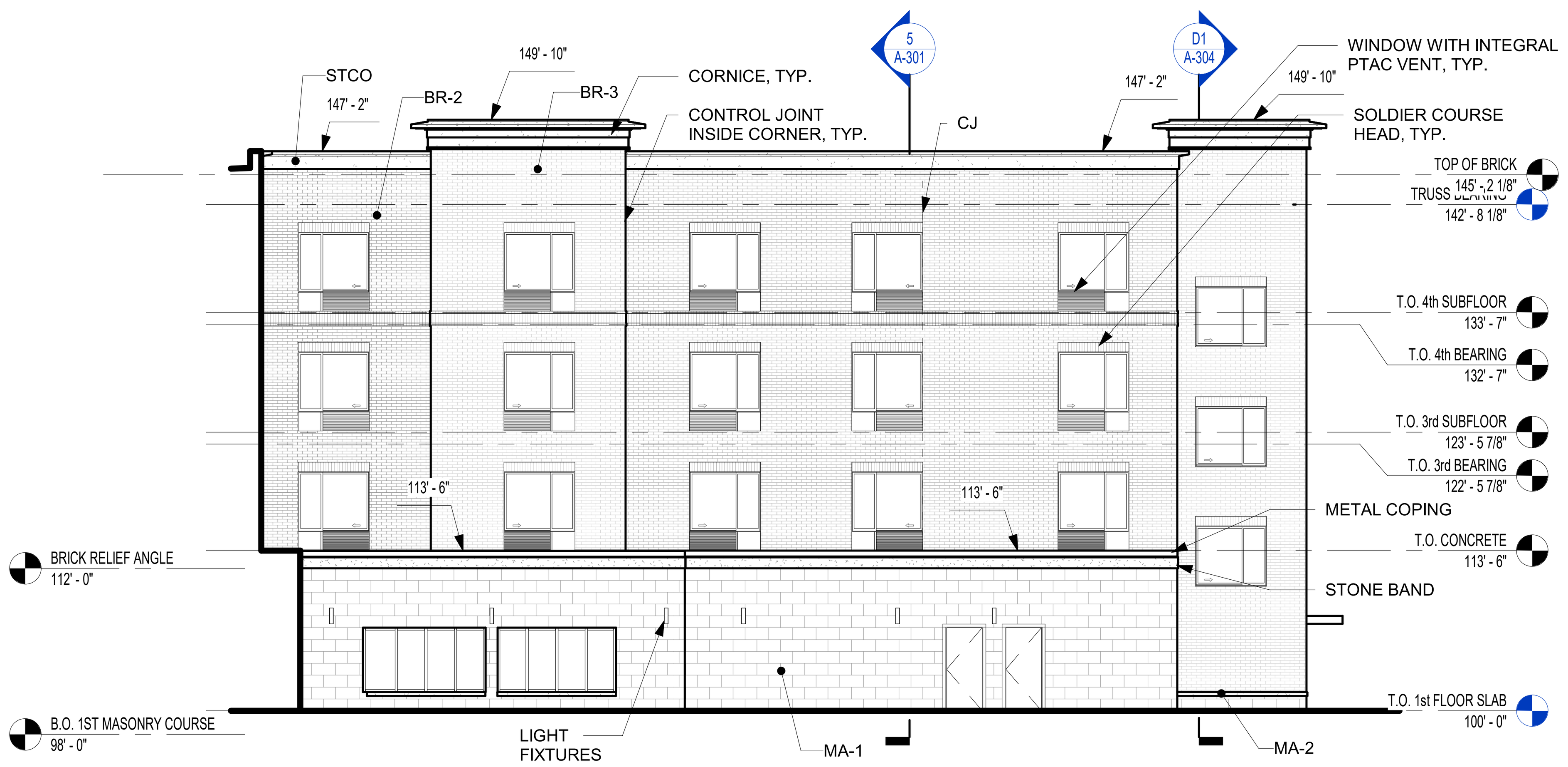
PROJECT NUMBER: 23098

SHEET NUMBER:
A-125

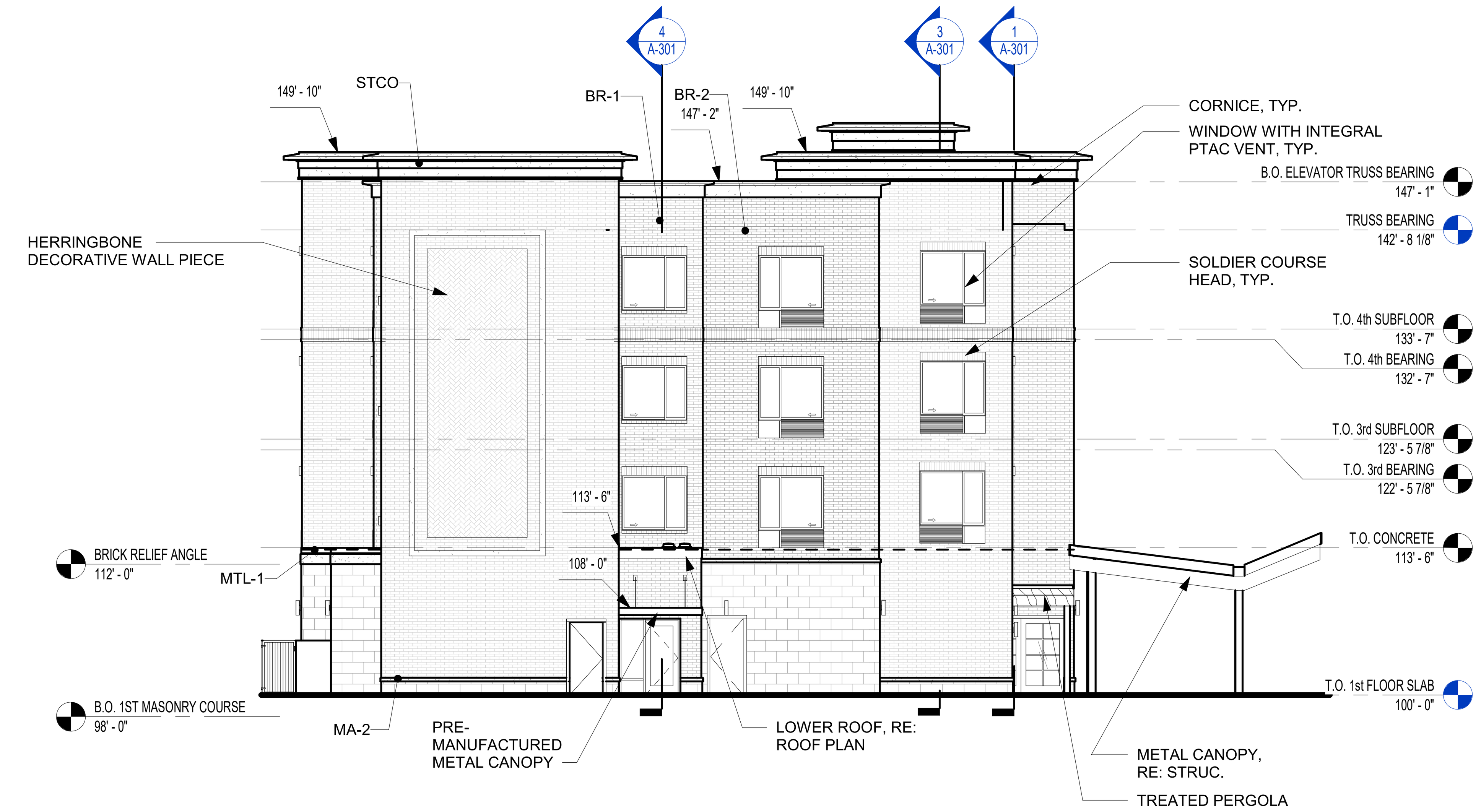
REFERENCE G-003 FOR GENERAL NOTES

MATERIAL LEGEND

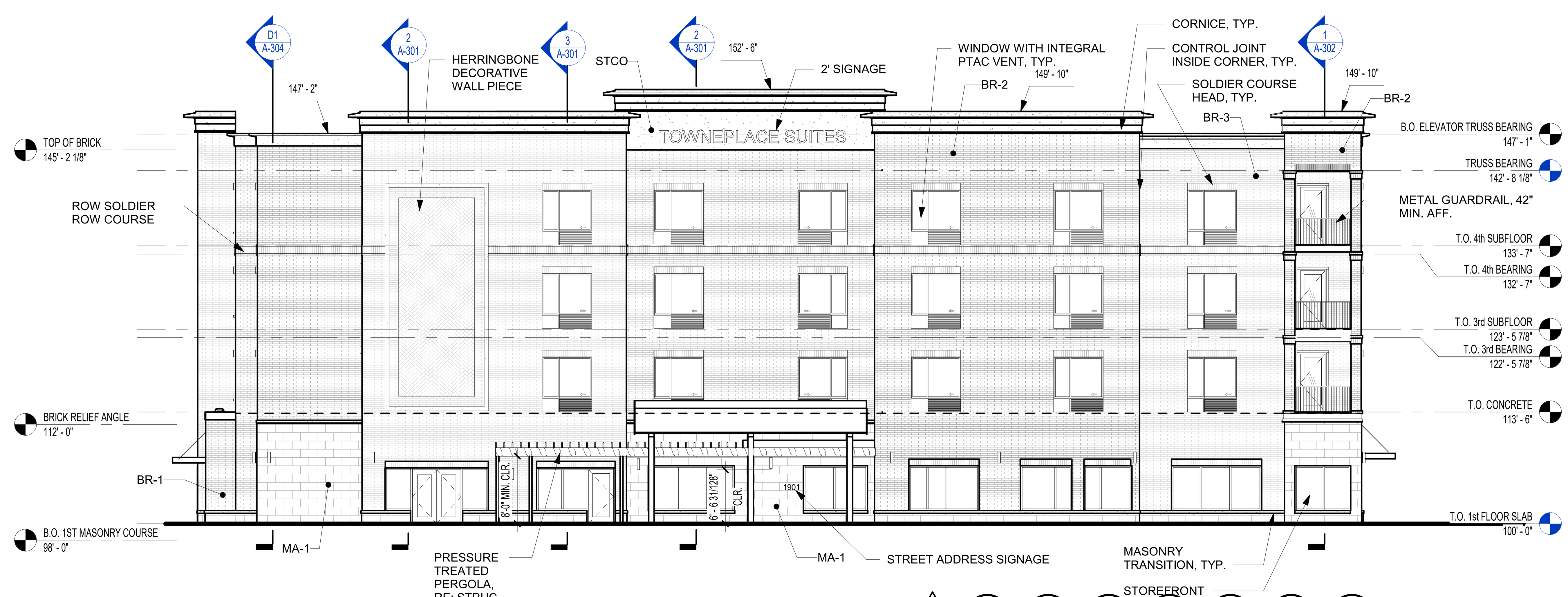
	MA-1 - STONE - ROCK FACE
	MA-2 - STONE SILL - SMOOTH FACE
	BR-1 - BRICK - RED
	BR-2 - BRICK - DARK RED
	BR-3 - BRICK - GREY
	MTL-1 - METAL - DARK BRONZE
	STCO - STUCCO - COLOR TO MATCH STONE
- - -	BRICK RELIEF ANGLE LOCATION



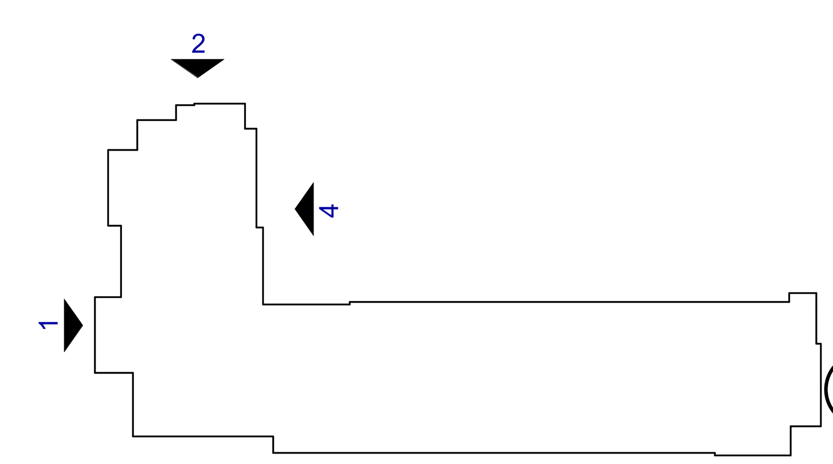
4 EAST ELEVATION (NORTH WING)
3/32" = 1'-0"



2 NORTH ELEVATION (NORTH WING)
3/32" = 1'-0"



1 WEST ELEVATION - FRONT
3/32" = 1'-0"



KEY PLAN

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1	12/22/2023	Response to City Comments
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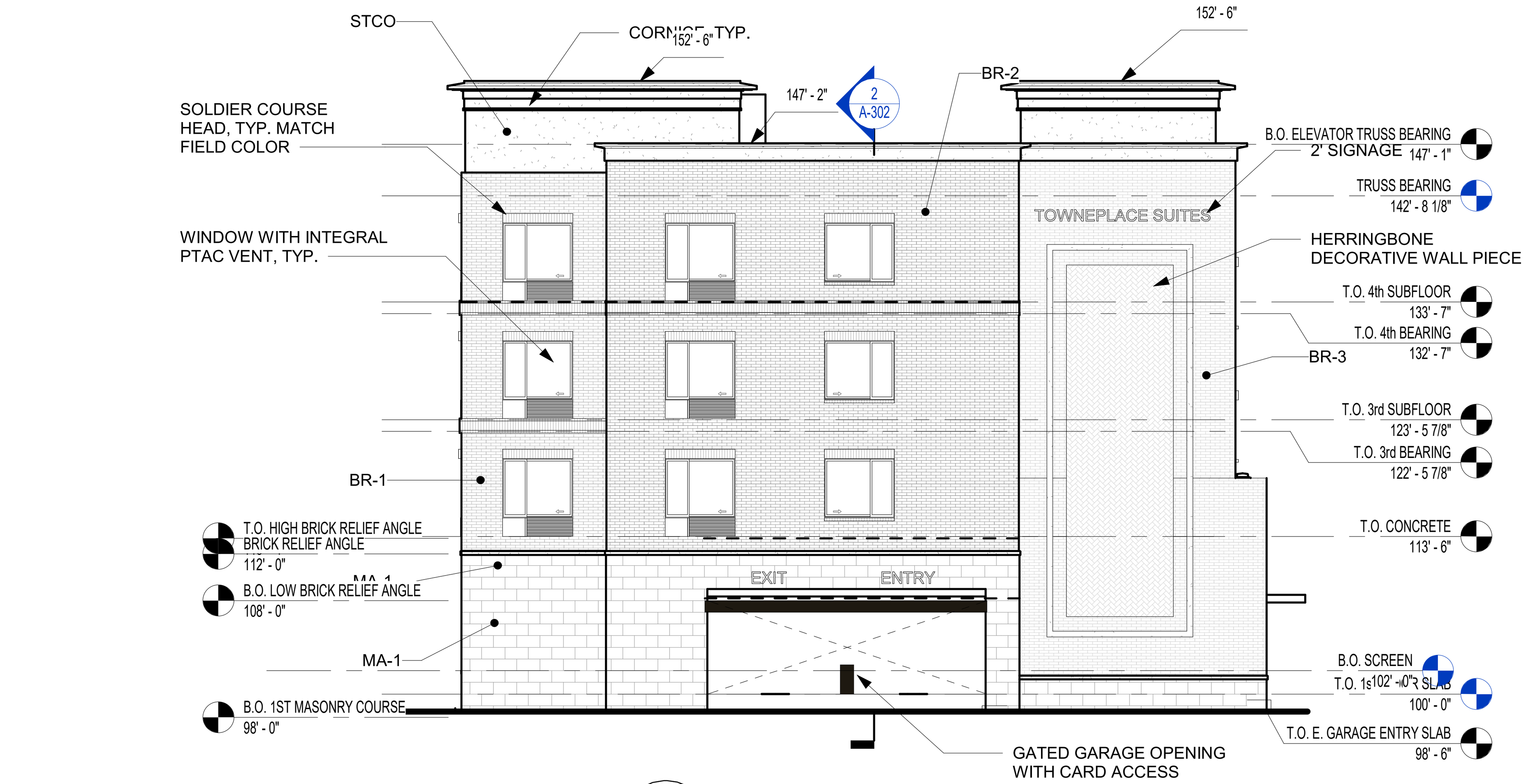
TOWNEPLACE SUITES

1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

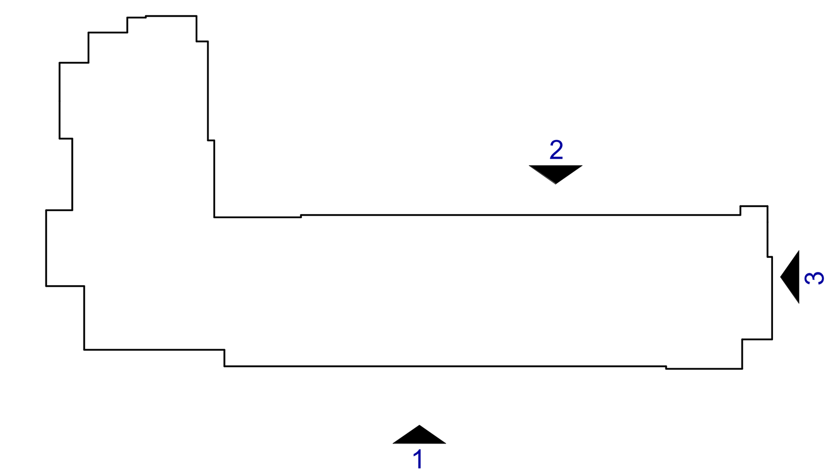
SHEET TITLE
EXTERIOR ELEVATIONS

PROJECT NUMBER: 23098

SHEET NUMBER:
A-200



3 EAST ELEVATION (EAST WING)
3/32" = 1'-0"

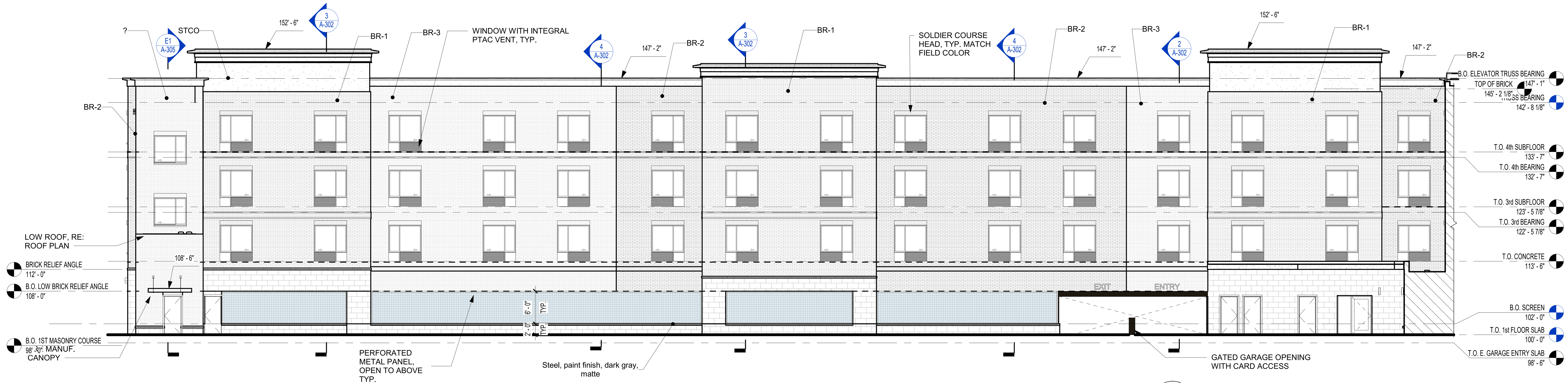


KEY PLAN

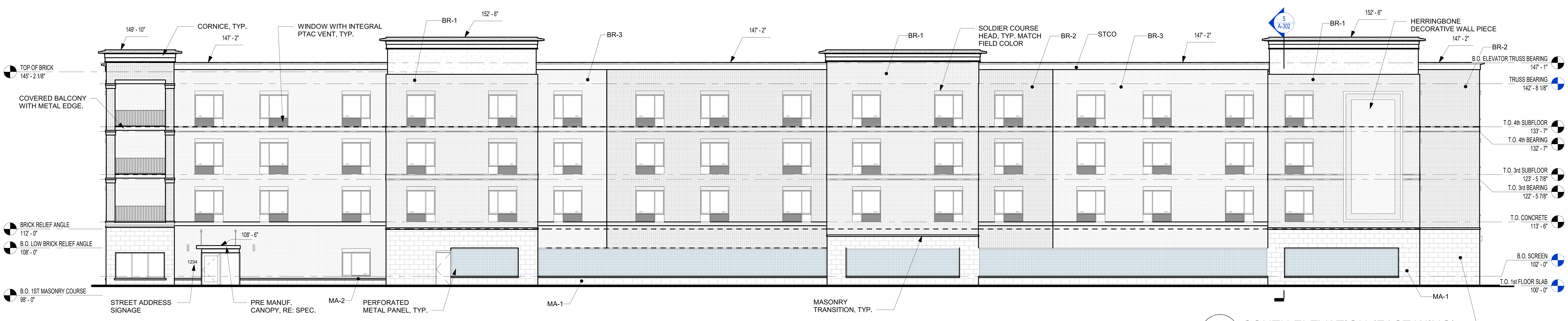
REFERENCE G-003 FOR GENERAL NOTES

MATERIAL LEGEND

MA-1	STONE - ROCK FACE
MA-2	STONE SILL - SMOOTH FACE
BR-1	BRICK - RED
BR-2	BRICK - DARK RED
BR-3	BRICK - GREY
MTL-1	METAL - DARK BRONZE
STCO	STUCCO - COLOR TO MATCH STONE
	BRICK RELIEF ANGLE LOCATION



2 NORTH ELEVATION (EAST WING)
3/32" = 1'-0"



1 SOUTH ELEVATION (EAST WING)
3/32" = 1'-0"

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2	01/19/2024	Addendum #2
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03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

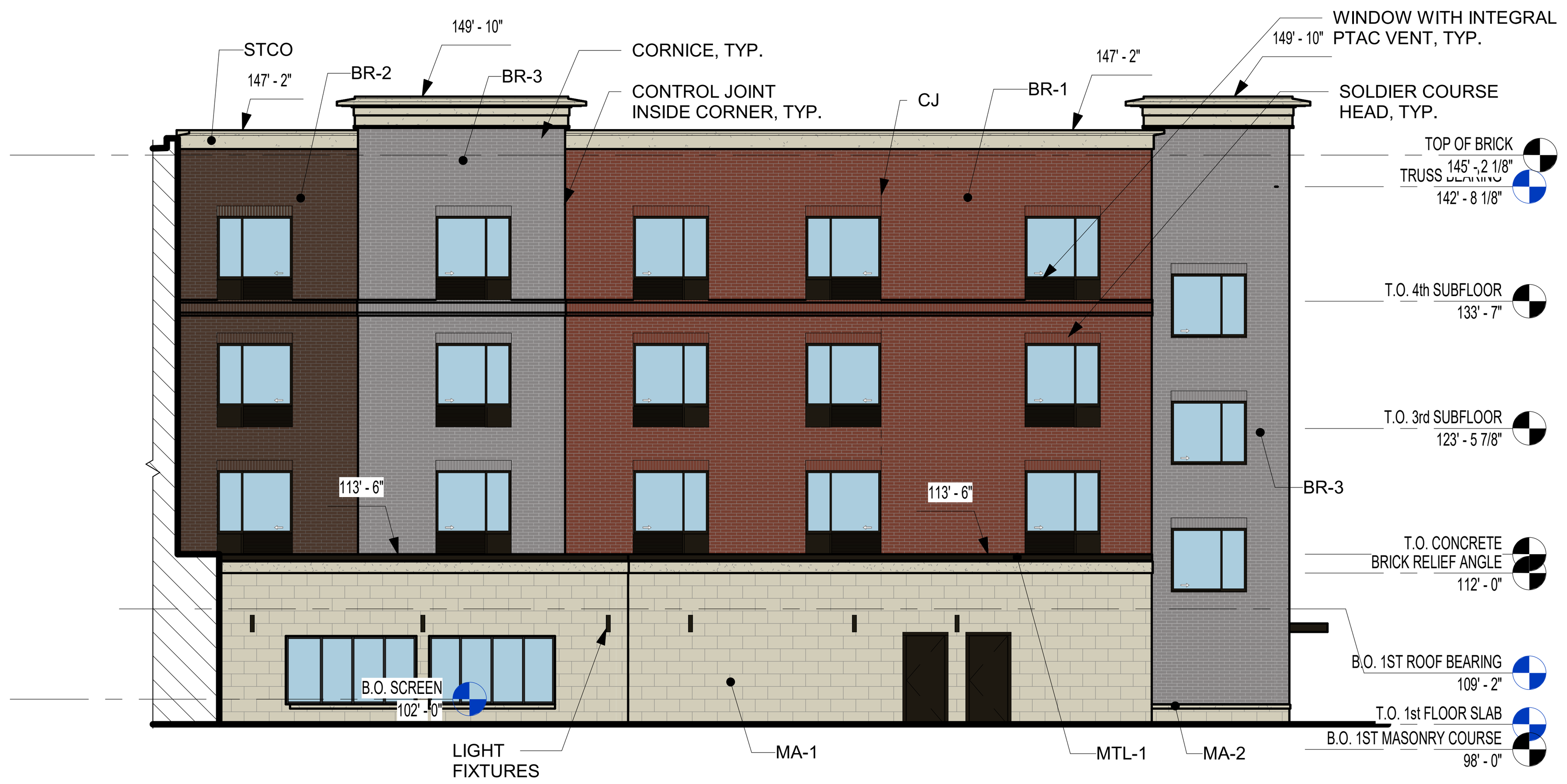
SHEET TITLE
EXTERIOR ELEVATIONS

PROJECT NUMBER: 23098

SHEET NUMBER:
A-201

MATERIAL LEGEND

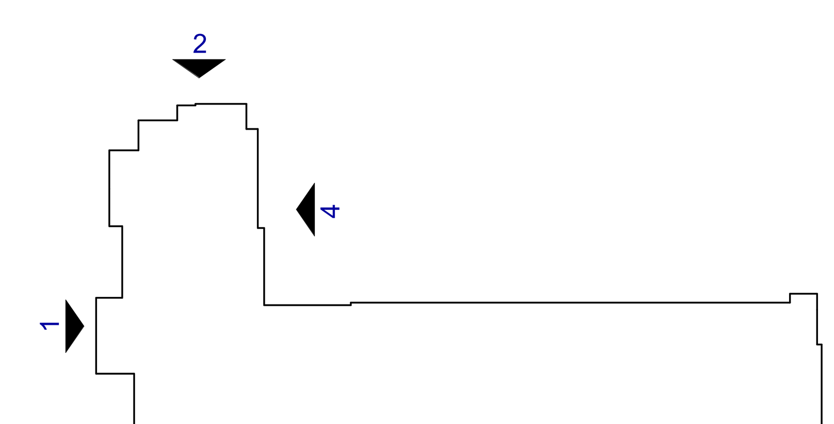
	MA-1 - STONE - ROCK FACE
	MA-2 - STONE SILL - SMOOTH FACE
	BR-1 - BRICK - RED
	BR-2 - BRICK - DARK RED
	BR-3 - BRICK - GREY
	MTL-1 - METAL - DARK BRONZE
	STCO - STUCCO - COLOR TO MATCH STONE
- - -	BRICK RELIEF ANGLE LOCATION



4 EAST ELEVATION (NORTH WING)
3/32" = 1'-0"

2 NORTH ELEVATION (NORTH WING)
3/32" = 1'-0"

1 WEST ELEVATION - FRONT
3/32" = 1'-0"



KEY PLAN

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1 12/22/2023 Response to City Comments
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DAVID EUGENE HENDRIXSE
ARCHITECT
03/06/2024

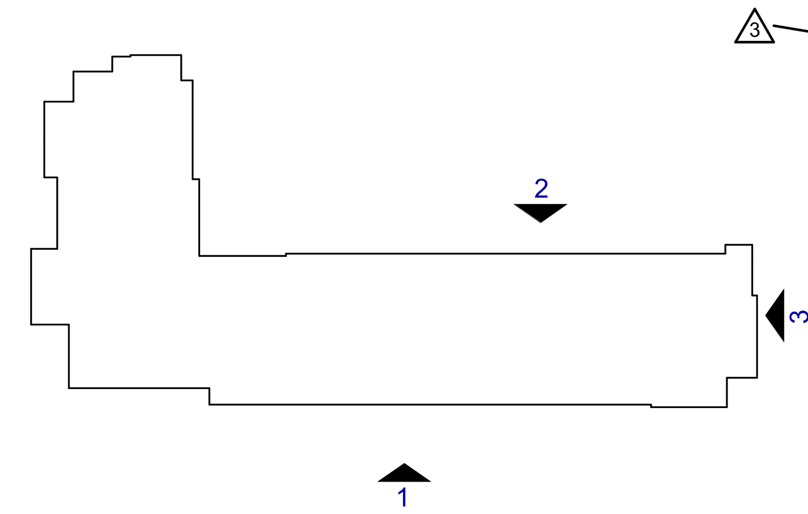
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
EXTERIOR COLOR ELEVATIONS

PROJECT NUMBER: 23098

SHEET NUMBER:
A-202

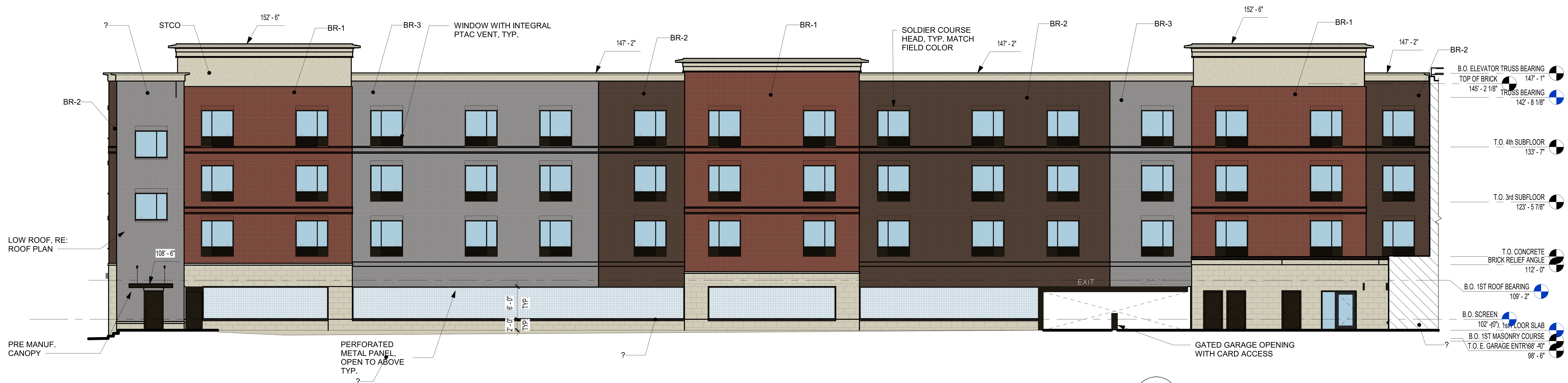
3 EAST ELEVATION (EAST WING)
3/32" = 1'-0"



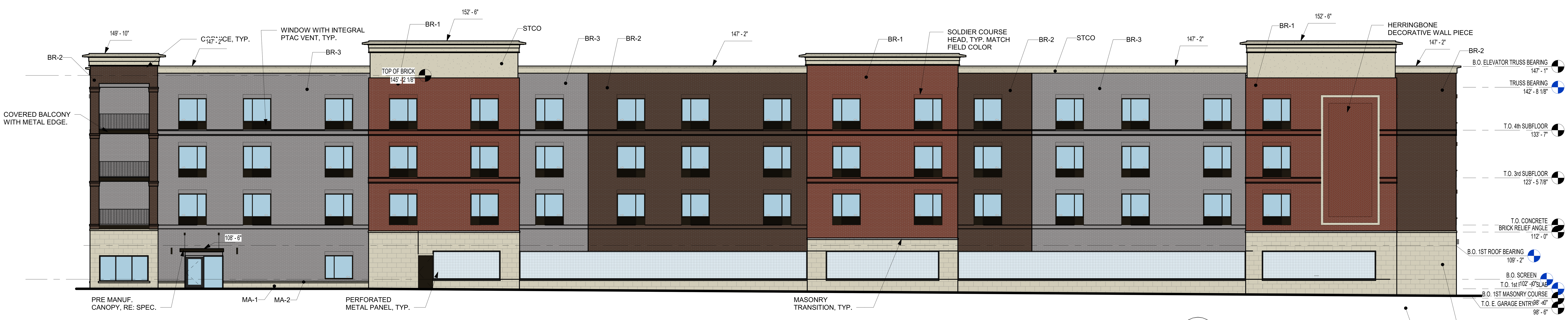
KEY PLAN

MATERIAL LEGEND

MA-1 - STONE - ROCK FACE
MA-2 - STONE SILL - SMOOTH FACE
BR-1 - BRICK - RED
BR-2 - BRICK - DARK RED
BR-3 - BRICK - GREY
MTL-1 - METAL - DARK BRONZE
STCO - STUCCO - COLOR TO MATCH STONE
BRICK RELIEF ANGLE LOCATION



2 NORTH ELEVATION (EAST WING)
3/32" = 1'-0"



1 SOUTH ELEVATION (EAST WING)
3/32" = 1'-0"

PRINTS ISSUED
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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
EXTERIOR COLOR ELEVATIONS

PROJECT NUMBER: 23098

SHEET NUMBER:
A-203

ROOF/CEILING ASSEMBLY-WOOD

R8	**WOOD PARALLEL CHORD TRUSS - 1HR - TPO** • TPO ROOFING, PER SPECIFICATION TO MEET IECC • 1/2" COVERBOARD, NON-COMBUSTIBLE, WATER-RESISTANT • TAPERED INSULATION, SLOPE PER PLAN • 15/32" MIN. ROOF SHEATHING, SEE NOTE b. • WOOD TRUSS FRAMING PER STRUCT. DWGS, MAX SPACING 24" OC - REFERENCE UL FOR CONSTRUCTION • R-30 INSULATION PER LEE'S SUMMIT CODE, INSTALLED PER UL • 25 MSG GALVANIZED STEEL RESILIENT CHANNELS, SPACED PER UL • (1) LAYER OF 5/8" TYPE 'AG-C' GWB, BY AMERICAN GYPSUM CO, PER UL

FLOOR/CEILING ASSEMBLY-METAL

F32	**METAL DECK AND CONCRETE - 1HR** • CONCRETE TOPPING SLAB PER STRUCT. • WELDED WIRE FABRIC PER STRUCT. DWGS. • METAL DECKING PER STRUCT. DWGS.

FLOOR/CEILING ASSEMBLY-WOOD

F1	**CONCRETE - NON-RATED - SLAB ON GRADE** • CONCRETE SLAB ON GRADE PER STRUCT. DWGS.
F3	**WOOD OPEN WEB TRUSS - 1HR** • 1" GYPCRETE TOPPING • 1/4" ACOUSTICAL MAT • 19/32" MIN. PLYWOOD SHEATHING, TYPE 'C/D' , SEE ALSO NOTE b. • WOOD TRUSSES PER STRUCTURAL, REFER TO UL FOR MIN. REQS • UNFACED FIBERGLASS INSULATION COMPLETELY FILLED IN CONCEALED CAVITY TO COMPLY WITH NFPA 13 CONCEALED SPACES. • 25 MSG GALVANIZED RESILIENT CHANNELS, SPACED PER U.L. • (1) LAYER OF 5/8" TYPE 'C' GWB PER UL
F8	**WOOD 2X6 LUMBER - 1HR - CORRIDOR** • 1" GYPCRETE TOPPING • 1/4" ACOUSTICAL MAT • 1/2" SHEATHING MIN, SEE NOTE b. • 2X8 WOOD JOISTS SPACED PER STRUCTURAL • UNFACED FIBERGLASS INSULATION COMPLETELY FILLED IN CONCEALED CAVITY TO COMPLY WITH NFPA 13 CONCEALED SPACES. • (2) LAYERS OF 5/8" TYPE 'X' GWB PER IBC

EXTERIOR PARTITION ASSEMBLIES (METAL-RATED)

P81	**METAL 6" STUD - 1HR BARRIER - EXTERIOR** • (1) LAYER 5/8" TYPE 'X' EXTERIOR RATED GYPSUM BOARD PER UL • (1) LAYER OF 5/8" DENSGLASS FIREGUARD SHEATHING PER UL • 6" METAL STUDS SPACED PER UL AND STRUCTURAL ENGINEER (MIN 20 MSG) • BATT INSULATION PER UL AND IECC • (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL

INTERIOR PARTITION ASSEMBLIES (METAL-RATED)

P61	**METAL 6" STUD - 1HR PARTITION - INTERIOR** • (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL • 6" METAL STUDS, SPACING PER UL AND STRUCTURAL ENGINEER (MIN 20 MSG) • 6" BATT INSULATION PER UL • (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL

3

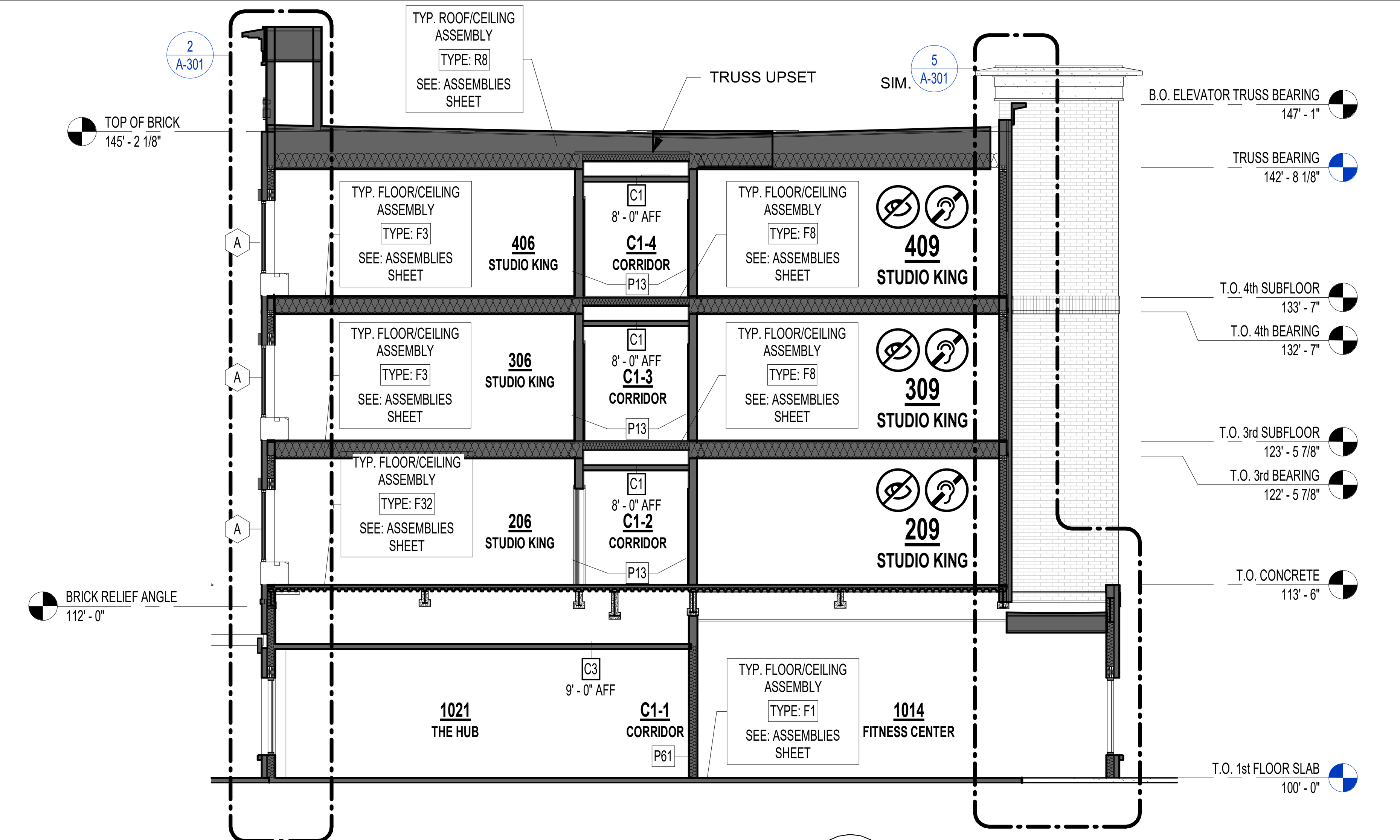
EXTERIOR PARTITION ASSEMBLIES - WOOD - 1HR RATED

P36	**WOOD 2x6 STUD - NON-RATED EXTERIOR** *EXTERIOR* • EXTERIOR FINISH SYSTEM PER ELEVATIONS • WEATHER RESISTANT BARRIER, PER SPECIFICATIONS • (1) LAYER SHEATHING PER STRUCT. DWGS. • 2x6 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS. • (1) LAYER 5/8" TYPE "X" GYPSUM BOARD *INTERIOR*

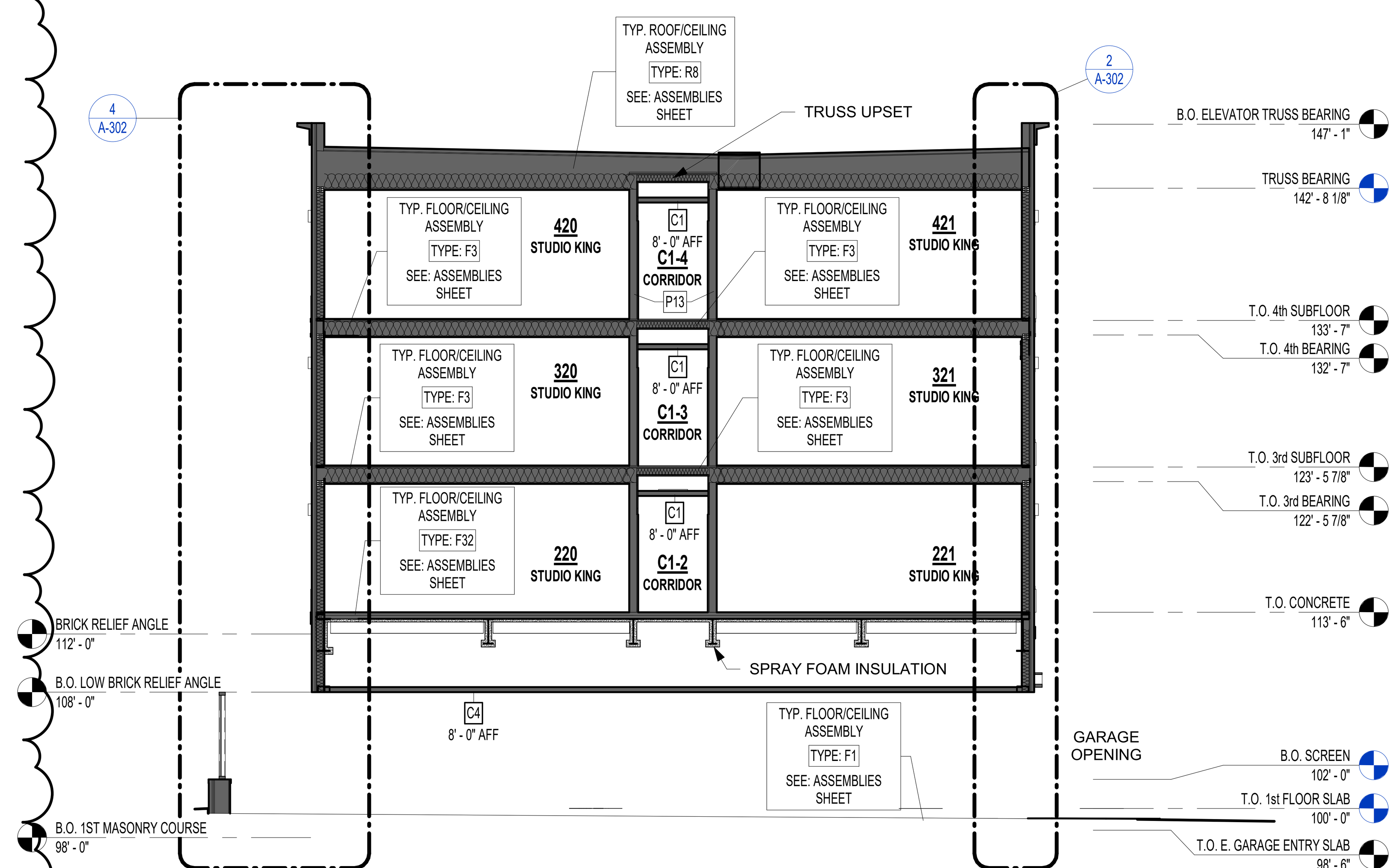
INTERIOR PARTITION ASSEMBLIES - WOOD - 1 HR RATED

P12	**WOOD 2X4 STUD - 1HR PARTITION - INTERIOR SOUND DAMPENING** • (1) LAYER 5/8" TYPE "X" GYPSUM BOARD • 25 MSG GALVANIZED STEEL RESILIENT CHANNEL, 24" O.C. • 2x4 WOOD STUDS SPACED 16" O.C. MAX. OR PER STRUCT. DWGS. • 3-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY • (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
P13	**WOOD 2X6 STUD - 1HR PARTITION - INTERIOR SOUND DAMPENING** • (1) LAYER 5/8" TYPE "X" GYPSUM BOARD • 25 MSG GALVANIZED STEEL RESILIENT CHANNEL, 24" O.C. • 2x6 WOOD STUDS SPACED 16" O.C. MAX. OR PER STRUCT. DWGS. • 5-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY • (1) LAYER 5/8" TYPE "X" GYPSUM BOARD.

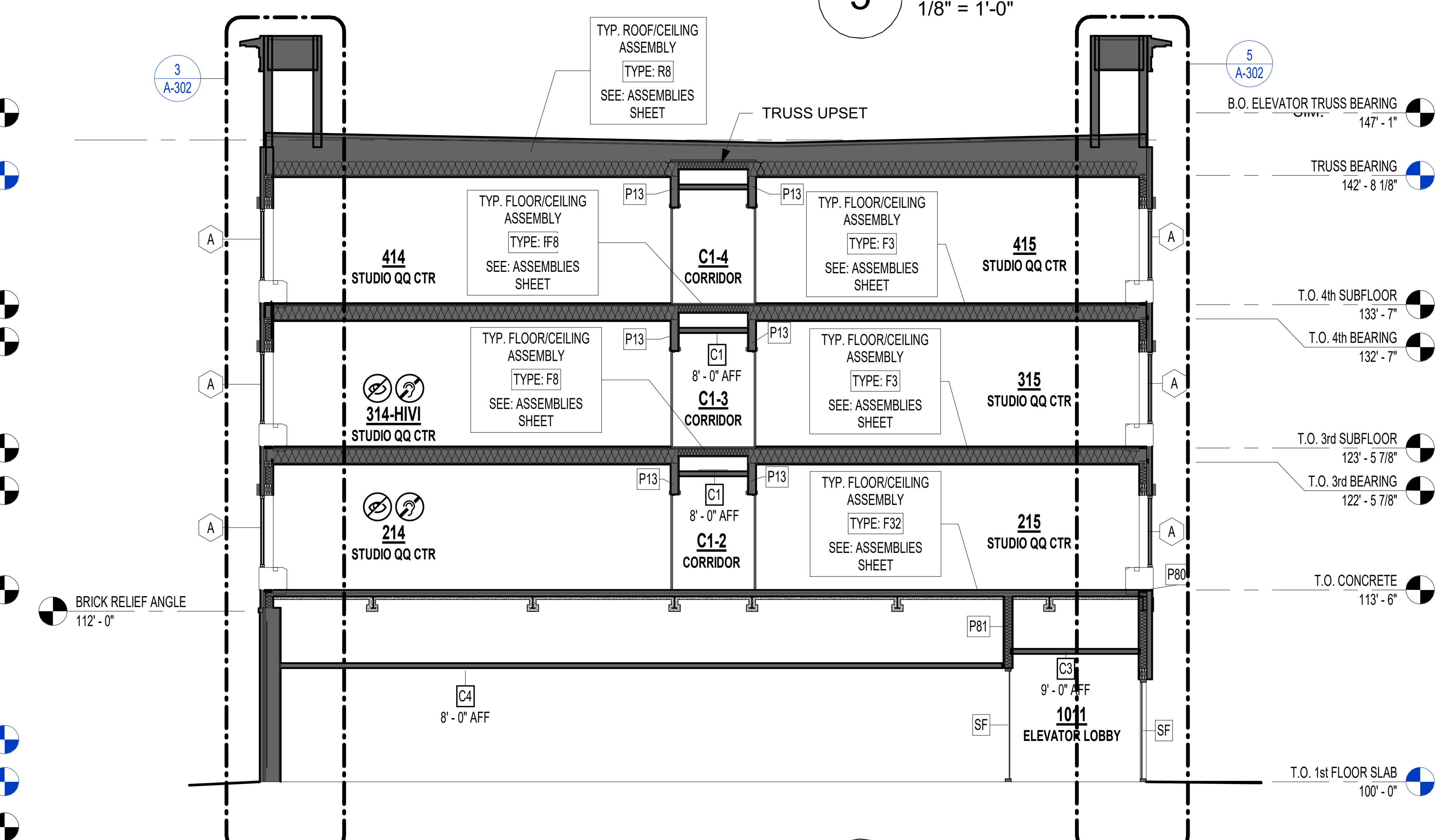
NOTE: ROOF TRUSSES NOT TO SCALE, REFERENCE CITY APPROVED SHOP DRAWINGS. PARAPET HEIGHTS RAISED AS PART OF THIS REVISION.



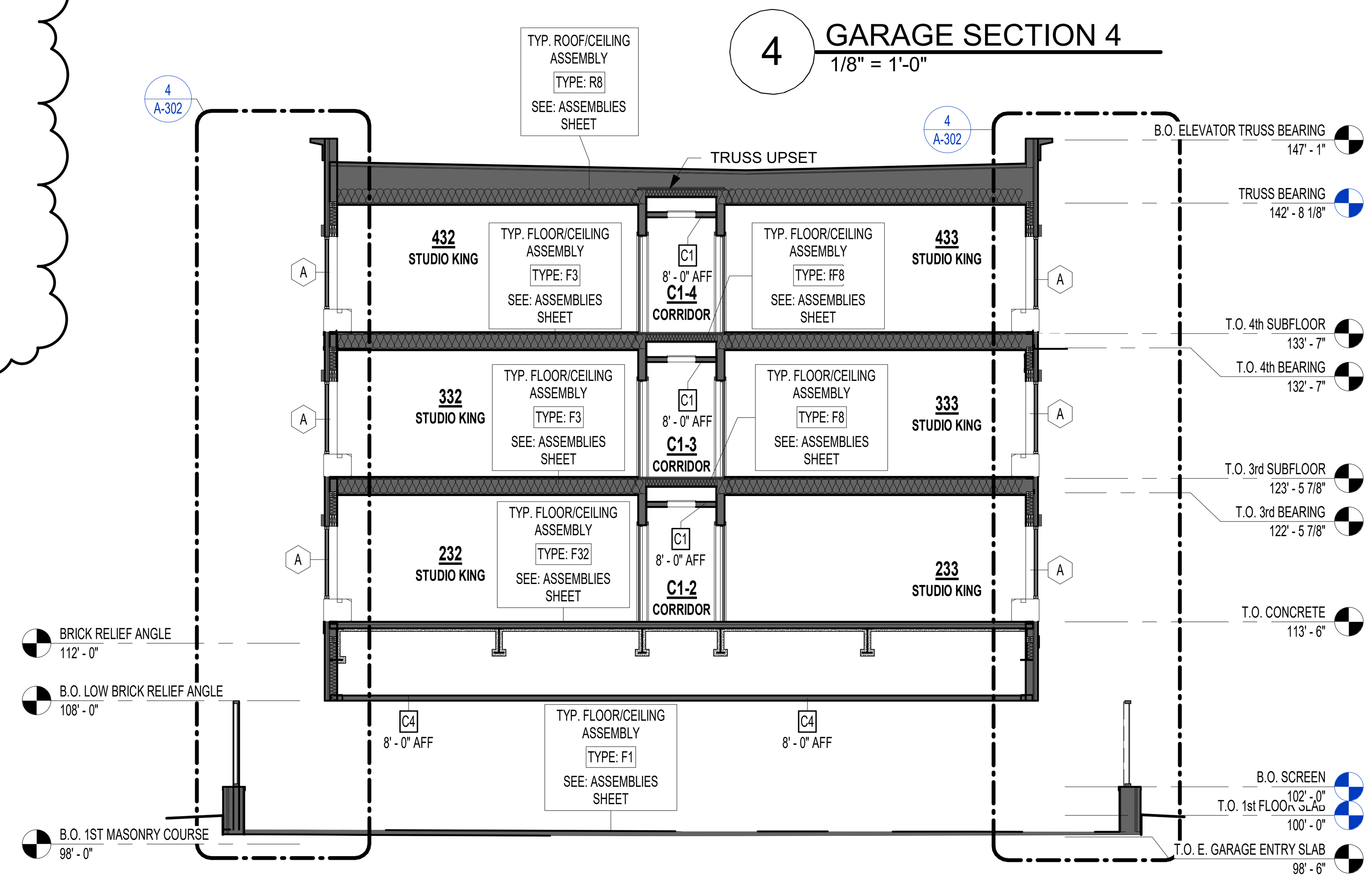
5 BUILDING SECTION 3
1/8" = 1'-0"



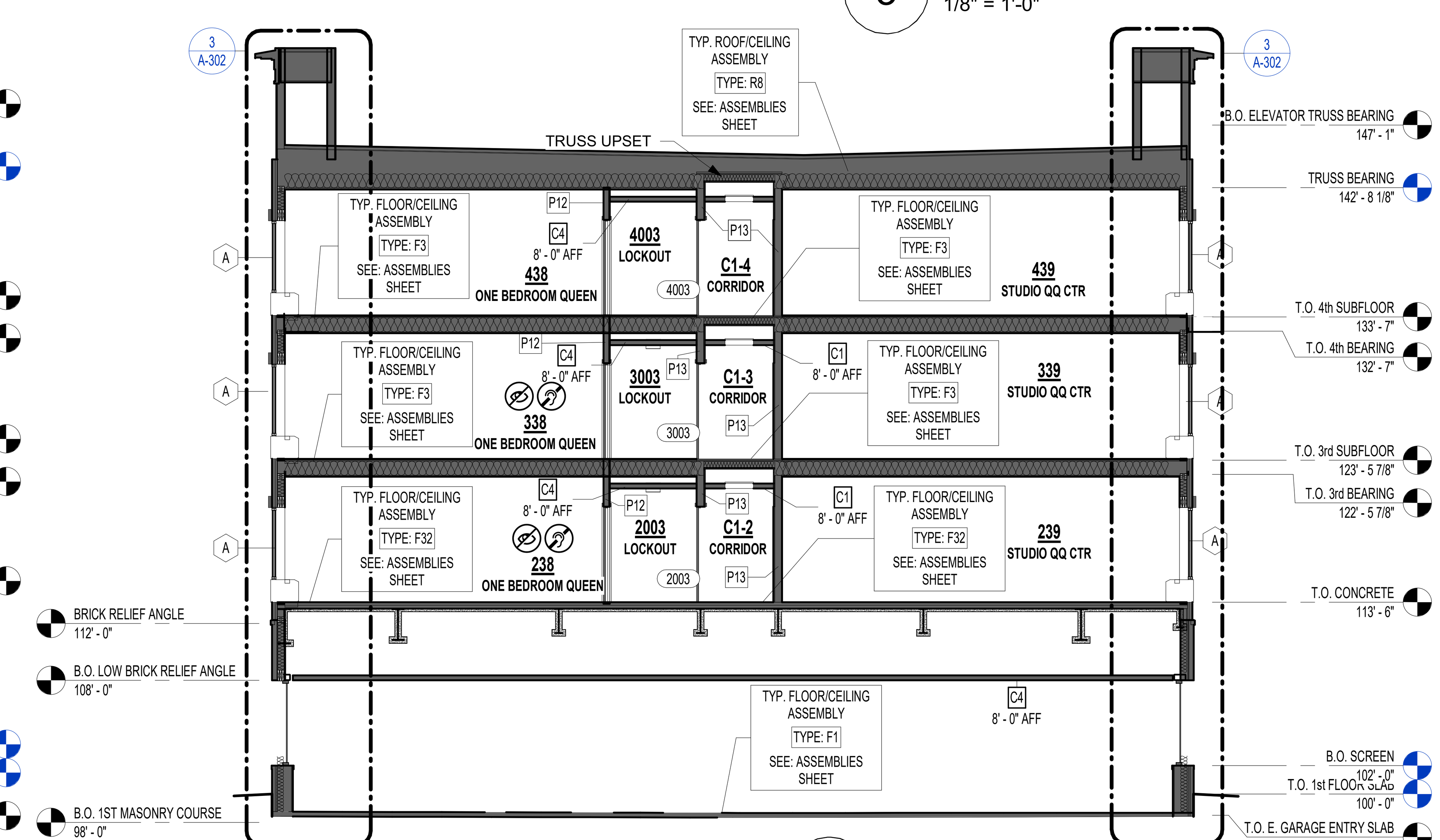
4 GARAGE SECTION 4
1/8" = 1'-0"



3 GARAGE SECTION 5
1/8" = 1'-0"



2 GARAGE SECTION 3
1/8" = 1'-0"



1 GARAGE SECTION 2
1/8" = 1'-0"

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STATE OF MISSOURI
DAVID EUGENE HENDRIX
NUMBER
REGISTERED ARCHITECT
03/06/2024

TOWNEPLACE SUITES

1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
BUILDING SECTIONS

PROJECT NUMBER: 23098

SHEET NUMBER:

A-300

REFERENCE G-003 FOR GENERAL NOTES

ROOF/CEILING ASSEMBLY-WOOD

R8

WOOD PARALLEL CHORD TRUSS - 1HR - TPO
- TPO ROOFING, PER SPECIFICATION TO MEET IECC
- 1/2" COVERBOARD, NON-COMBUSTIBLE, WATER-RESISTANT
- TAPERED INSULATION, SLOPE PER PLAN
- 15/32" MIN. ROOF SHEATHING, SEE NOTE b.
- WOOD TRUSS FRAMING PER STRUCT. DWGS, MAX SPACING 24" OC - REFERENCE UL FOR CONSTRUCTION
- R-30 INSULATION PER LEE'S SUMMIT CODE, INSTALLED PER UL
- 25 MSG GALVANIZED STEEL RESILIENT CHANNELS, SPACED PER UL
- (1) LAYER OF 5/8" TYPE 'AG-C' GWB, BY AMERICAN GYPSUM CO, PER UL

FLOOR/CEILING ASSEMBLY-METAL

F32

METAL DECK AND CONCRETE - 1HR
- CONCRETE TOPPING SLAB PER STRUCT.
- WELDED WIRE FABRIC PER STRUCT. DWGS.
- METAL DECKING PER STRUCT. DWGS.

NOTE: ROOF TRUSSES NOT TO SCALE, REFERENCE CITY APPROVED SHOP DRAWINGS. PARAPET HEIGHTS RAISED AS PART OF THIS REVISION.

FLOOR/CEILING ASSEMBLY-WOOD

F1

CONCRETE - NON-RATED - SLAB ON GRADE
- CONCRETE SLAB ON GRADE PER STRUCT. DWGS.

F3

WOOD OPEN WEB TRUSS - 1HR
- 1" GYPCRETE TOPPING
- 1/4" ACOUSTICAL MAT
- 19/32" MIN. PLYWOOD SHEATHING, TYPE 'C/D' , SEE ALSO NOTE b.
- WOOD TRUSSES PER STRUCTURAL, REFER TO UL FOR MIN. REQS
- UNFACED FIBERGLASS INSULATION COMPLETELY FILLED IN CONCEALED CAVITY TO COMPLY WITH NFPA 13 CONCEALED SPACES.
- 25 MSG GALVANIZED RESILIENT CHANNELS, SPACED PER U.L.
- (1) LAYER OF 5/8" TYPE 'C' GWB PER UL

EXTERIOR PARTITION ASSEMBLIES - WOOD - NON RATED

P36

WOOD 2x6 STUD - NON-RATED EXTERIOR

EXTERIOR
- EXTERIOR FINISH SYSTEM PER ELEVATIONS
- WEATHER RESISTANT BARRIER, PER SPECIFICATIONS
- (1) LAYER SHEATHING PER STRUCT. DWGS.
- 2x6 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS.
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

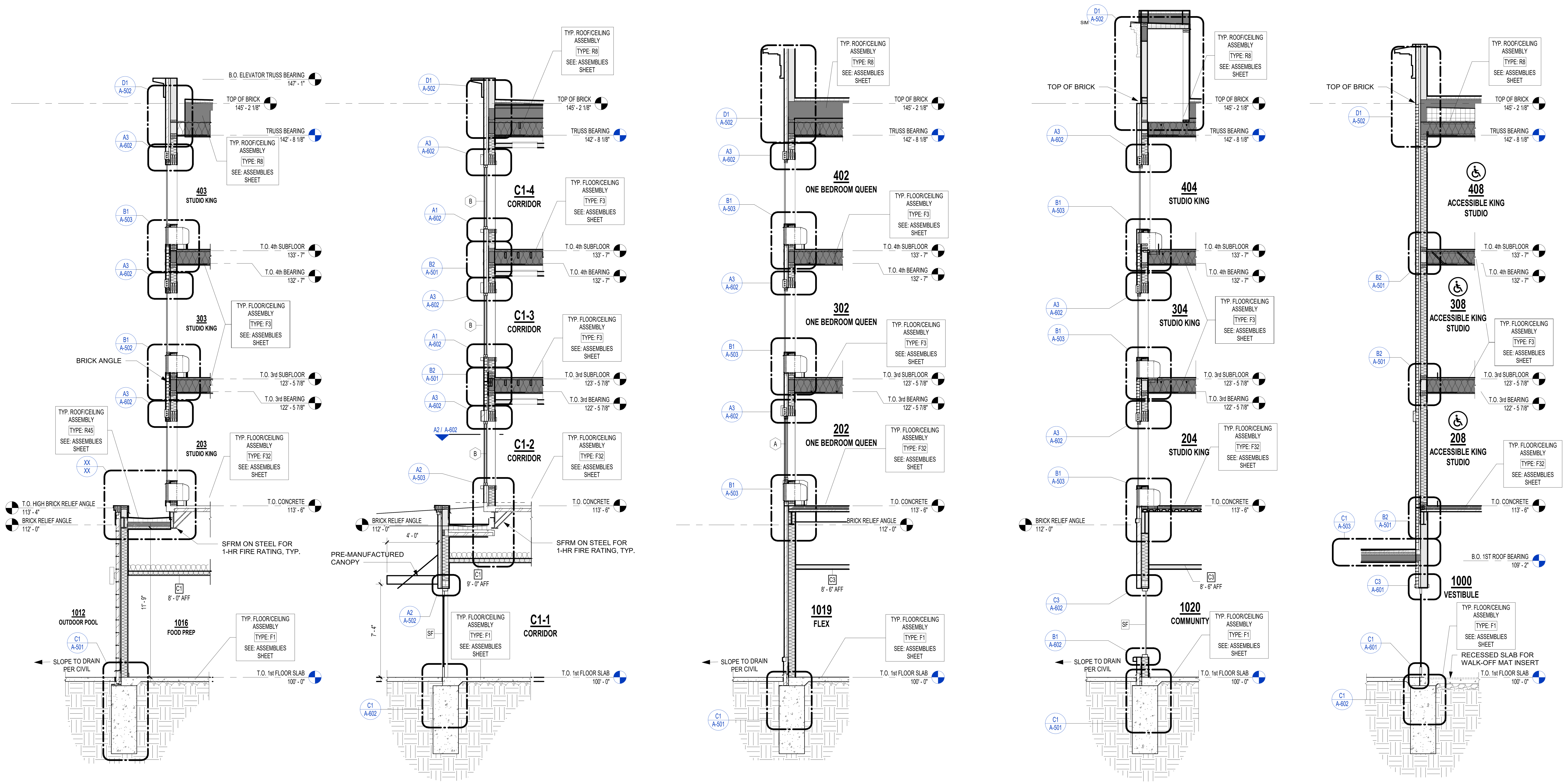
INTERIOR

EXTERIOR PARTITION ASSEMBLIES - (METAL-RATED)

P80

METAL 6" STUD - 1HR PARTITION - EXTERIOR
- EXTERIOR FINISH SYSTEM PER ELEVATIONS - BRICK SHOWN
- WEATHER RESISTANT BARRIER PER SPECIFICATIONS
- (1) LAYER OF 5/8" DENSGLASS FIREGUARD SHEATHING PER UL
- 6" METAL STUDS SPACED PER UL AND STRUCTURAL ENGINEER (MIN 20 MSG)
- BATT INSULATION PER UL AND IECC
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL

3



5 WALL SECTION AT FITNESS 1
1/4" = 1'-0"

4 WALL SECTION AT CORRIDOR
1/4" = 1'-0"

3 WALL SECTION AT GUEST ROOMS
1/4" = 1'-0"

2 WALL SECTION AT COMMUNITY
1/4" = 1'-0"

1 WALL SECTION AT VESTIBULE
1/4" = 1'-0"

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
03/06/2024

TOWNEPLACE SUITES

1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
WALL SECTIONS

PROJECT NUMBER: 23098

SHEET NUMBER:

A-301

REFERENCE G-003 FOR GENERAL NOTES

ROOF/CEILING ASSEMBLY-WOOD

R8

WOOD PARALLEL CHORD TRUSS - 1HR - TPO
- TPO ROOFING, PER SPECIFICATION TO MEET IECC
- 1/2" COVERBOARD, NON-COMBUSTIBLE, WATER-RESISTANT
- TAPERED INSULATION, SLOPE PER PLAN
- 15/32" MIN. ROOF SHEATHING, SEE NOTE b.
- WOOD TRUSS FRAMING PER STRUCT. DWGS, MAX SPACING 24" OC - REFERENCE UL FOR CONSTRUCTION
- R-30 INSULATION PER LEE'S SUMMIT CODE, INSTALLED PER UL
- 25 MSG GALVANIZED STEEL RESILIENT CHANNELS, SPACED PER UL
- (1) LAYER OF 5/8" TYPE 'AG-C' GWB, BY AMERICAN GYPSUM CO, PER UL

FLOOR/CEILING ASSEMBLY-METAL

F32

METAL DECK AND CONCRETE - 1HR
- CONCRETE TOPPING SLAB PER STRUCT.
- WELDED WIRE FABRIC PER STRUCT. DWGS.
- METAL DECKING PER STRUCT. DWGS.

NOTE: ROOF TRUSSES NOT TO SCALE, REFERENCE CITY APPROVED SHOP DRAWINGS. PARAPET HEIGHTS RAISED AS PART OF THIS REVISION.

FLOOR/CEILING ASSEMBLY-WOOD

F1

CONCRETE - NON-RATED - SLAB ON GRADE
- CONCRETE SLAB ON GRADE PER STRUCT. DWGS.

F3

WOOD OPEN WEB TRUSS - 1HR
- 1" GYPCRETE TOPPING
- 1/4" ACOUSTICAL MAT
- 19/32" MIN. PLYWOOD SHEATHING, TYPE 'C/D' , SEE ALSO NOTE b.
- WOOD TRUSSES PER STRUCTURAL, REFER TO UL FOR MIN. REQS
- UNFACED FIBERGLASS INSULATION COMPLETELY FILLED IN CONCEALED CAVITY TO COMPLY WITH NFPA 13 CONCEALED SPACES.
- 25 MSG GALVANIZED RESILIENT CHANNELS, SPACED PER U.L.
- (1) LAYER OF 5/8" TYPE 'C' GWB PER UL

EXTERIOR PARTITION ASSEMBLIES - WOOD - NON RATED

P36

WOOD 2x6 STUD - NON-RATED EXTERIOR

EXTERIOR
- EXTERIOR FINISH SYSTEM PER ELEVATIONS
- WEATHER RESISTANT BARRIER, PER SPECIFICATIONS
- (1) LAYER SHEATHING PER STRUCT. DWGS.
- 2x6 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS.
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

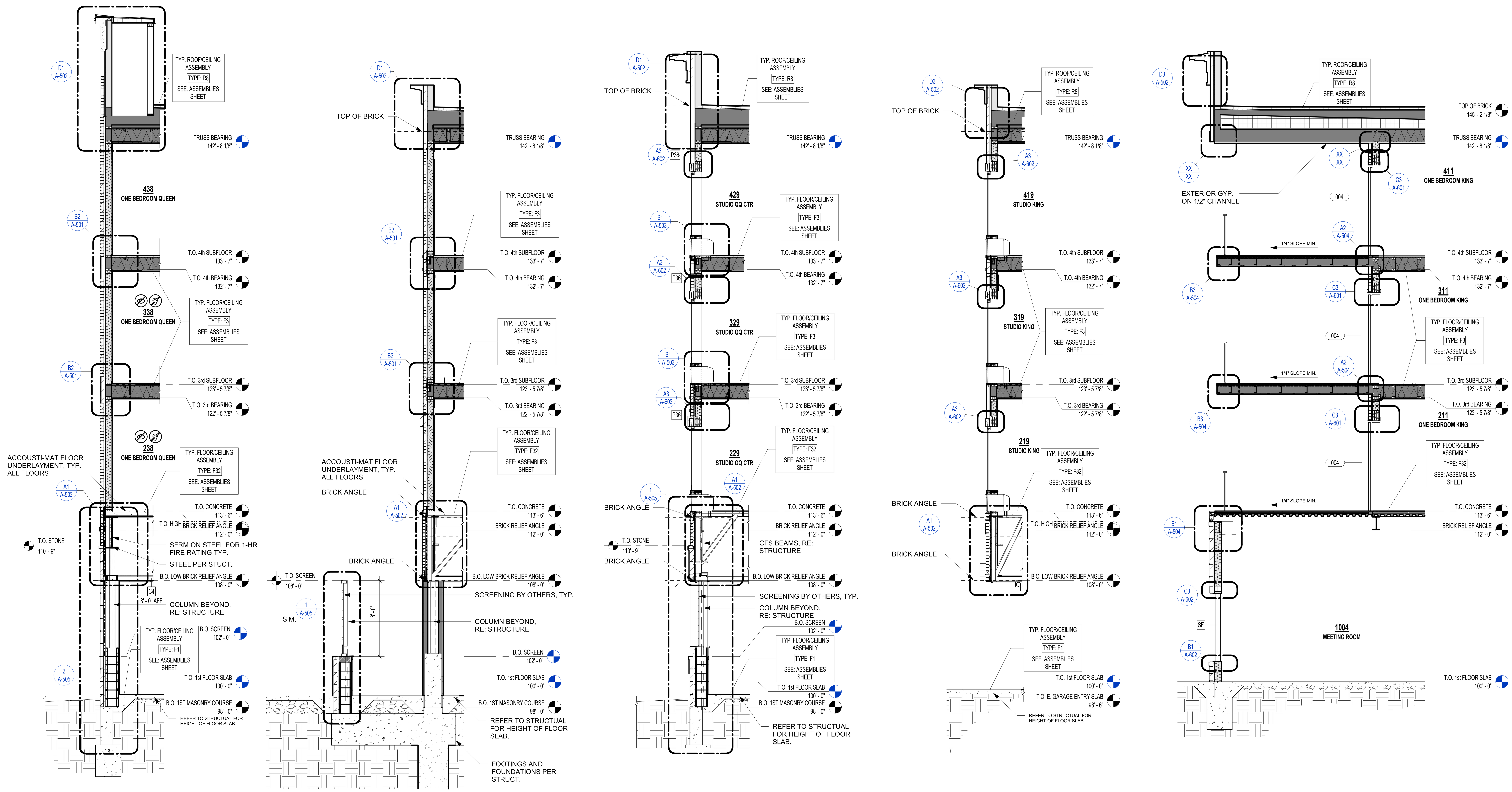
INTERIOR

EXTERIOR PARTITION ASSEMBLIES - (METAL-RATED)

P80

METAL 6" STUD - 1HR PARTITION - EXTERIOR
- EXTERIOR FINISH SYSTEM PER ELEVATIONS - BRICK SHOWN
- WEATHER RESISTANT BARRIER PER SPECIFICATIONS
- (1) LAYER OF 5/8" DENSGLASS FIREGUARD SHEATHING PER UL
- 6" METAL STUDS SPACED PER UL AND STRUCTURAL ENGINEER (MIN 20 MSG)
- BATT INSULATION PER UL AND IECC
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL

3



5 WALL SECTION AT GARAGE 6
1/4" = 1'-0"

4 WALL SECTION AT GARAGE 3
1/4" = 1'-0"

3 WALL SECTION AT GARAGE 2
1/4" = 1'-0"

2 WALL SECTION AT GARAGE 1
1/4" = 1'-0"

1 WALL SECTION AT BALCONY
1/4" = 1'-0"

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

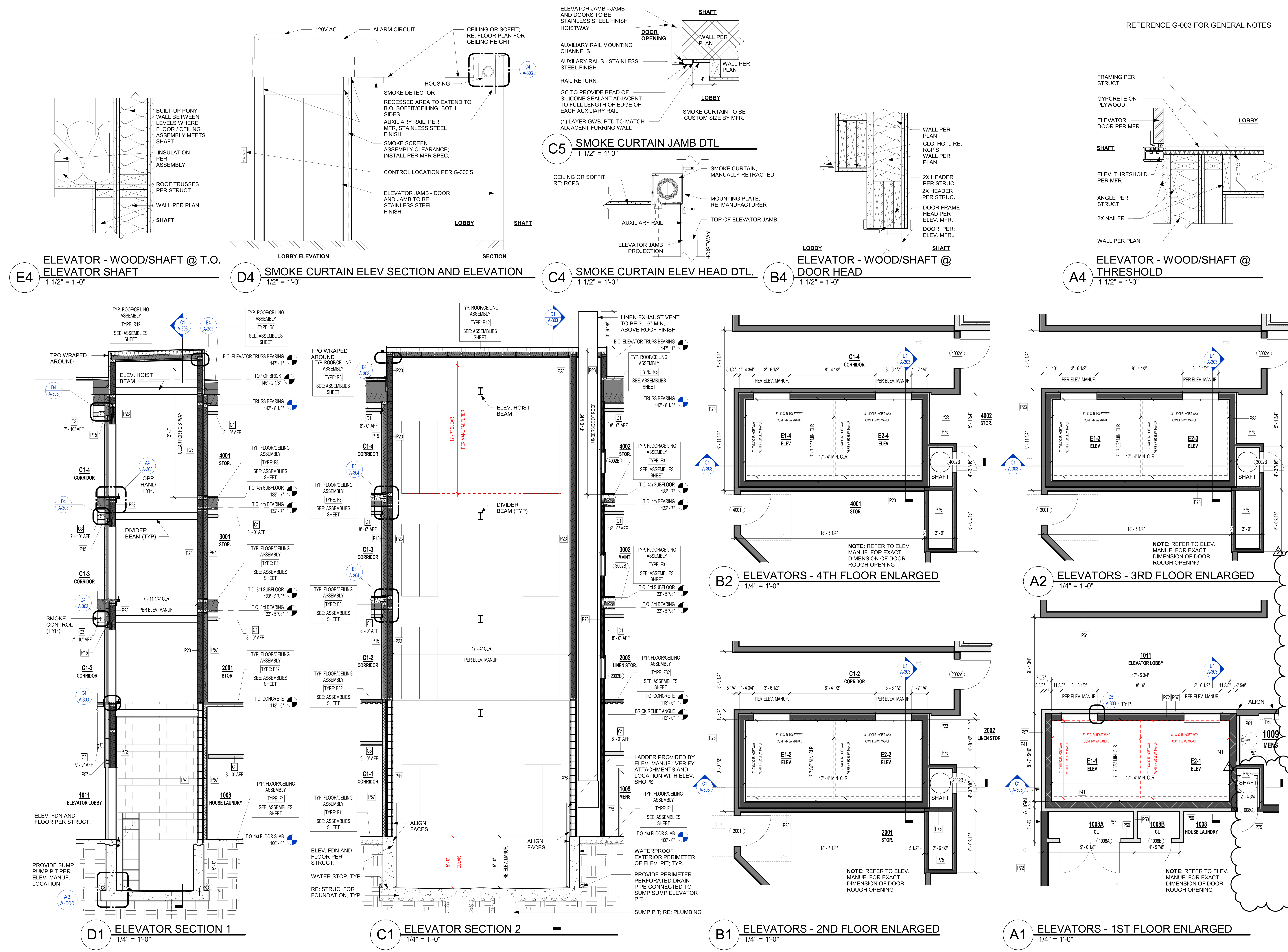
SHEET TITLE
WALL SECTIONS

PROJECT NUMBER: 23098

SHEET NUMBER:

A-302

REFERENCE G-003 FOR GENERAL NOTES



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1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

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STATE OF MISSOURI
DAVID EUGENE HENDRIXSEN
NUMBER
REGISTERED ARCHITECT
03/06/2024

SHEET TITLE
ELEVATOR SECTION & DETAILS

PROJECT NUMBER: 23098

SHEET NUMBER:

A-303

INTERIOR ASSEMBLIES - CMU

P43

CMU 8" BLOCK - 1HR FIRE BARRIER - INTERIOR
- 8" CMU (SIZING AND REINFORCING PER STRUCT)

EXTERIOR ASSEMBLIES - CMU

P45

CMU 8" BLOCK - 1HR - EXTERIOR
EXTERIOR
- EXTERIOR FINISH SYSTEM PER ELEVATIONS - BRICK SHOWN
- WEATHER RESISTANT BARRIER PER SPECIFICATIONS
- R VALUE PER IECC AS INDICATED ON DRAWINGS / SPECIFICATIONS.
- 8" CMU (SIZING AND REINFORCING PER STRUCT)
- P54 WALL ASSEMBLY ATTACHED DIRECTLY TO CMU
  1. 7/8" FURRING / HAT CHANNEL, SPACED 16" O.C. (GAUGE DETERMINED BY WALL HEIGHT)
  2. (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD

INTERIOR

EXTERIOR PARTITION ASSEMBLIES - WOOD - NON RATED

P36

WOOD 2x6 STUD - NON-RATED EXTERIOR
EXTERIOR
- EXTERIOR FINISH SYSTEM PER ELEVATIONS
- WEATHER RESISTANT BARRIER, PER SPECIFICATIONS
- (1) LAYER SHEATHING PER STRUCT. DWGS.
- 2x6 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS.
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

INTERIOR

EXTERIOR PARTITION ASSEMBLIES (METAL)

P80

METAL 6" STUD - 1HR PARTITION - EXTERIOR
- EXTERIOR FINISH SYSTEM PER ELEVATIONS - BRICK SHOWN
- WEATHER RESISTANT BARRIER PER SPECIFICATIONS
- (1) LAYER OF 5/8" DENSGLASS FIREGUARD SHEATHING PER UL
- 6" METAL STUDS SPACED PER UL AND STRUCTURAL ENGINEER (MIN 20 MSG)
- BATT INSULATION PER UL AND IECC
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL

INTERIOR PARTITION ASSEMBLIES - WOOD - NON RATED

P1

WOOD 2X4 STUD - NON-RATED PARTITION - INTERIOR
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD
- 2x4 WOOD STUDS SPACED 16" O.C.
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD

NOTE: ROOF TRUSSES NOT TO SCALE, REFERENCE CITY APPROVED SHOP DRAWINGS. PARAPET HEIGHTS RAISED AS PART OF THIS REVISION.

INTERIOR PARTITION ASSEMBLIES - WOOD - 1 HR RATED

P13

WOOD 2X6 STUD - 1HR PARTITION - INTERIOR SOUND DAMPENING
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
- 25 MSG GALVANIZED STEEL RESILIENT CHANNEL, 24" O.C.
- 2x6 WOOD STUDS SPACED 16" O.C. MAX. OR PER STRUCT. DWGS.
- 5-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD.

INTERIOR BARRIER ASSEMBLIES - WOOD - 1 HR RATED

P15

WOOD 2X4 STUD - 1HR PARTITION - INTERIOR
- (2) LAYERS 5/8" TYPE "X" GYPSUM BOARD
- 2x4 WOOD STUDS SPACED 16" O.C. MAX, OR PER STRUCT. DWGS.

INTERIOR PARTITION ASSEMBLIES (METAL-RATED)

P64

METAL 3-5/8" STUD - 1HR PARTITION - INTERIOR
- (2) LAYERS 5/8" TYPE "X" GYPSUM BOARD
- 3-5/8" STUDS SPACED 16" O.C. MAX, OR PER STRUCT. DWGS.

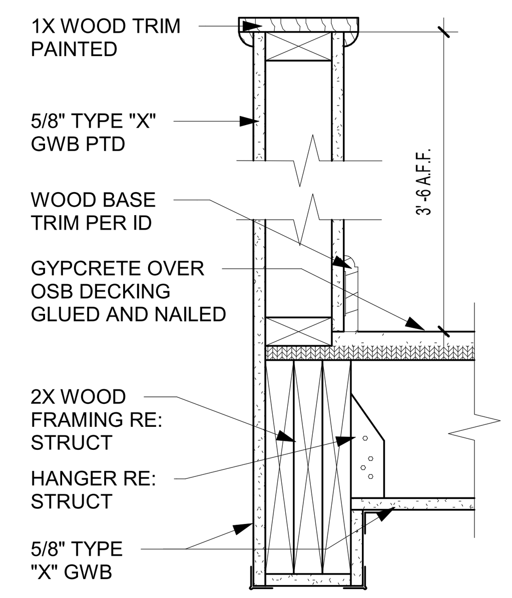
P65

METAL 6" STUD - 1HR PARTITION - INTERIOR
- (2) LAYERS 5/8" TYPE "X" GYPSUM BOARD
- 6" METAL STUDS SPACED 16" O.C. MAX, OR PER STRUCT. DWGS.

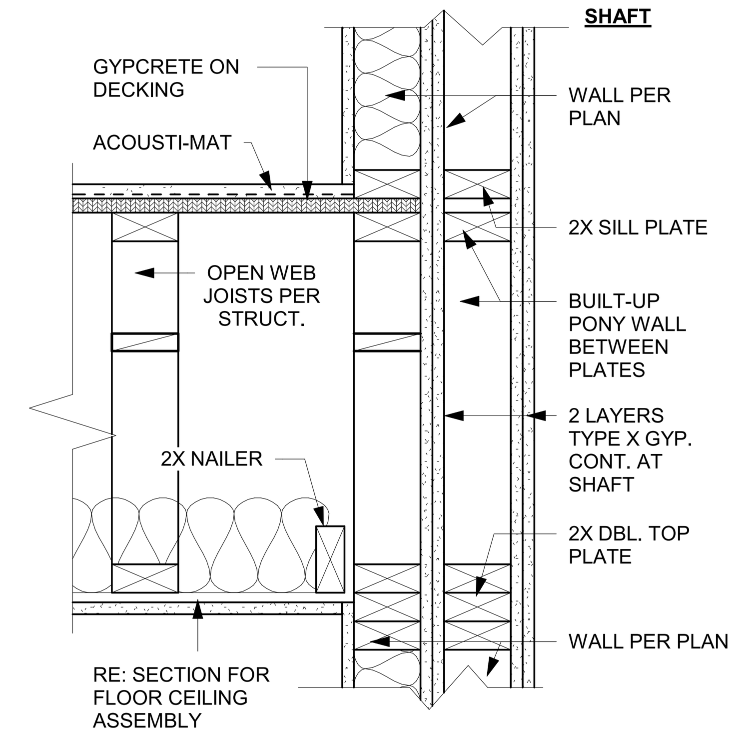
INTERIOR PARTITION ASSEMBLIES (METAL-NON-RATED)

P50

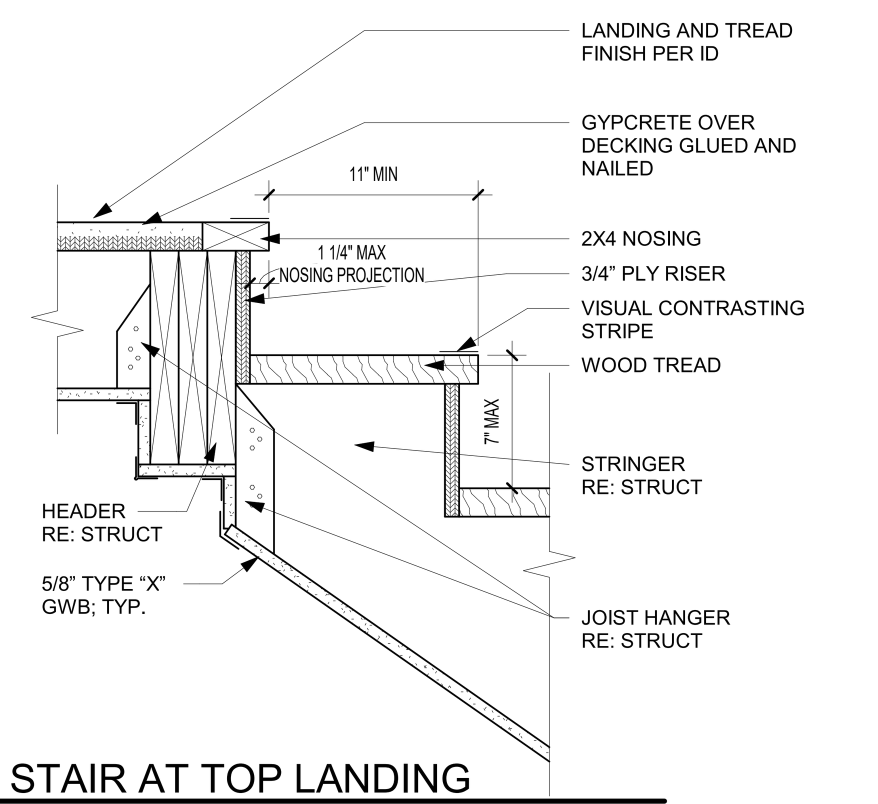
METAL 3-5/8" STUD - NON-RATED PARTITION - INTERIOR
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD
- 3-5/8" METAL STUDS SPACED 16" O.C. (GAUGE DETERMINED BY WALL HEIGHT)
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD



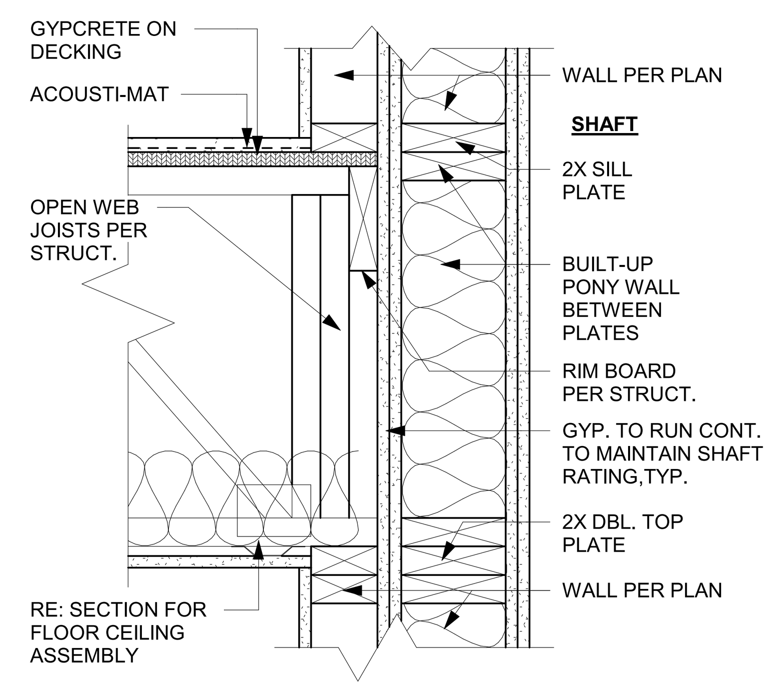
E3 WOOD STAIR KNEE WALL
1 1/2" = 1'-0"



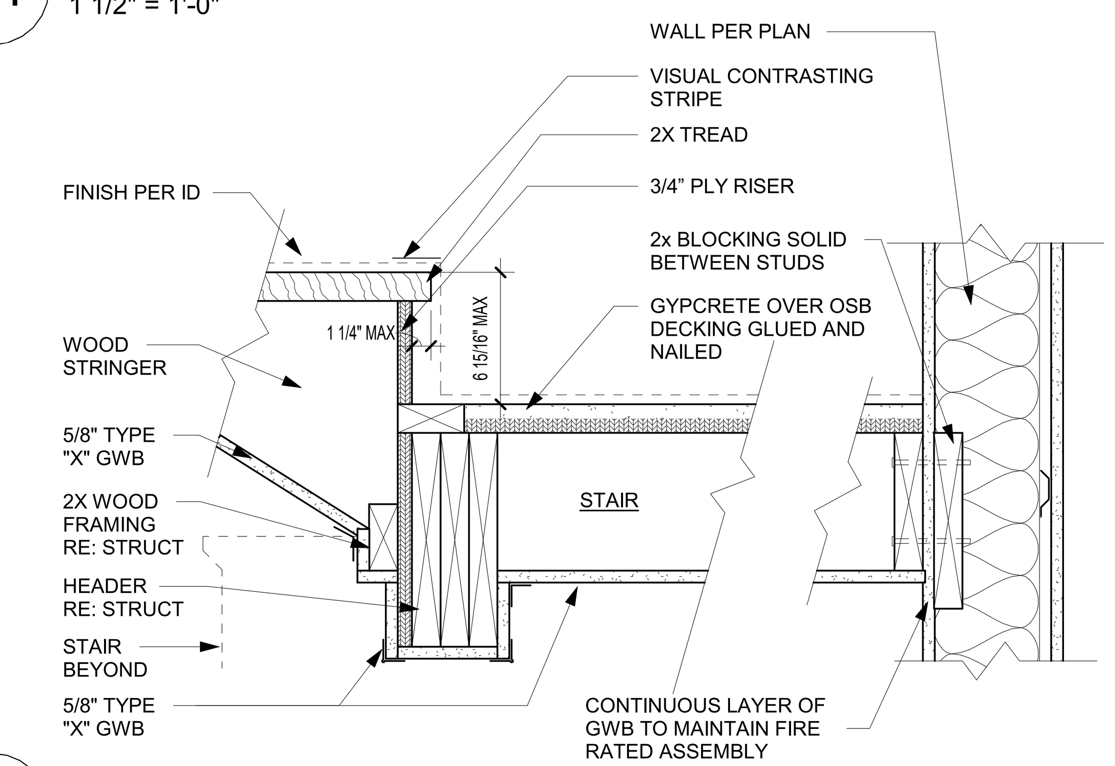
D3 WOOD FRAMING/ CMU SHAFT 2
1 1/2" = 1'-0"



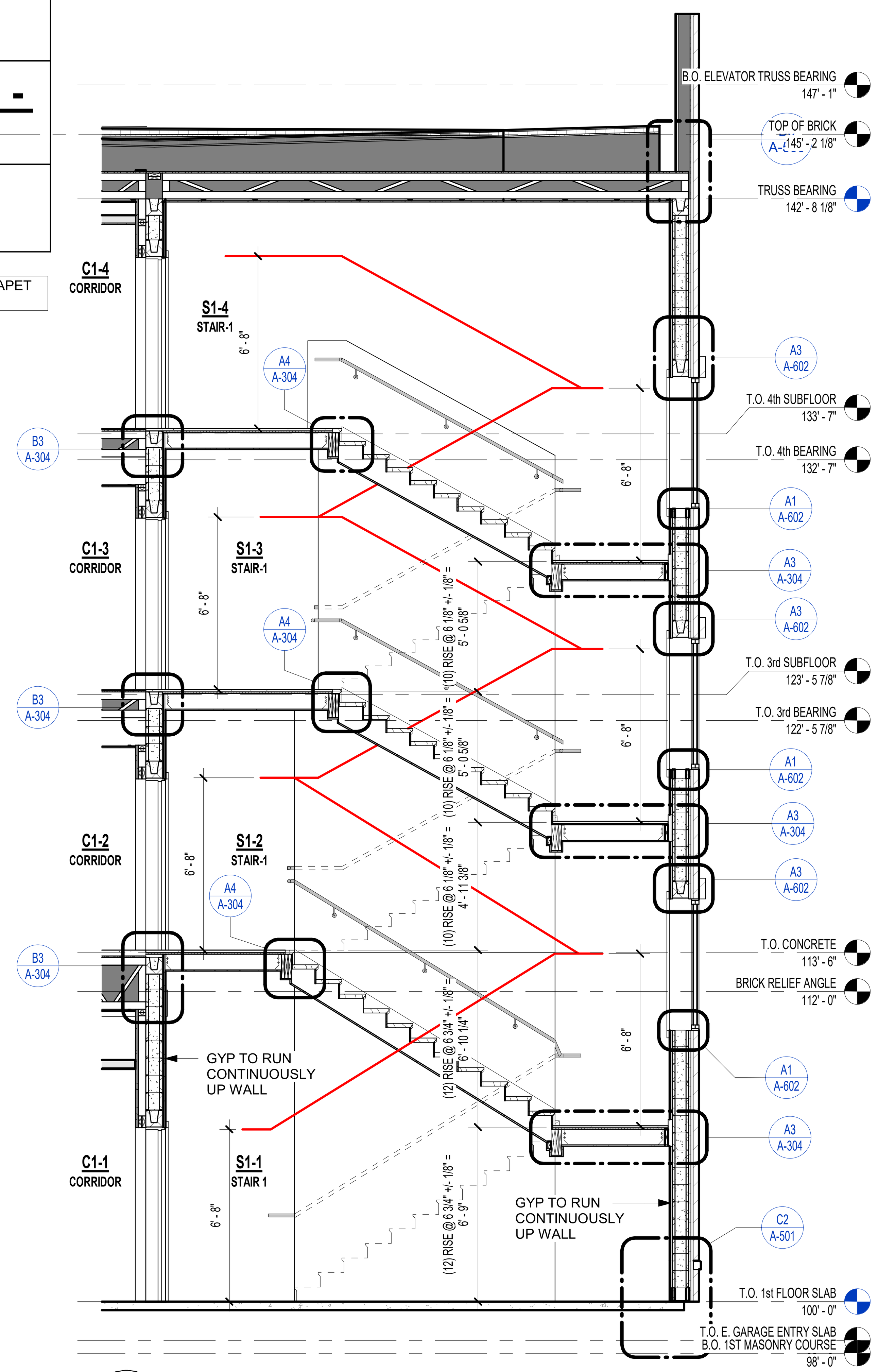
A4 WOOD STAIR AT TOP LANDING
1 1/2" = 1'-0"



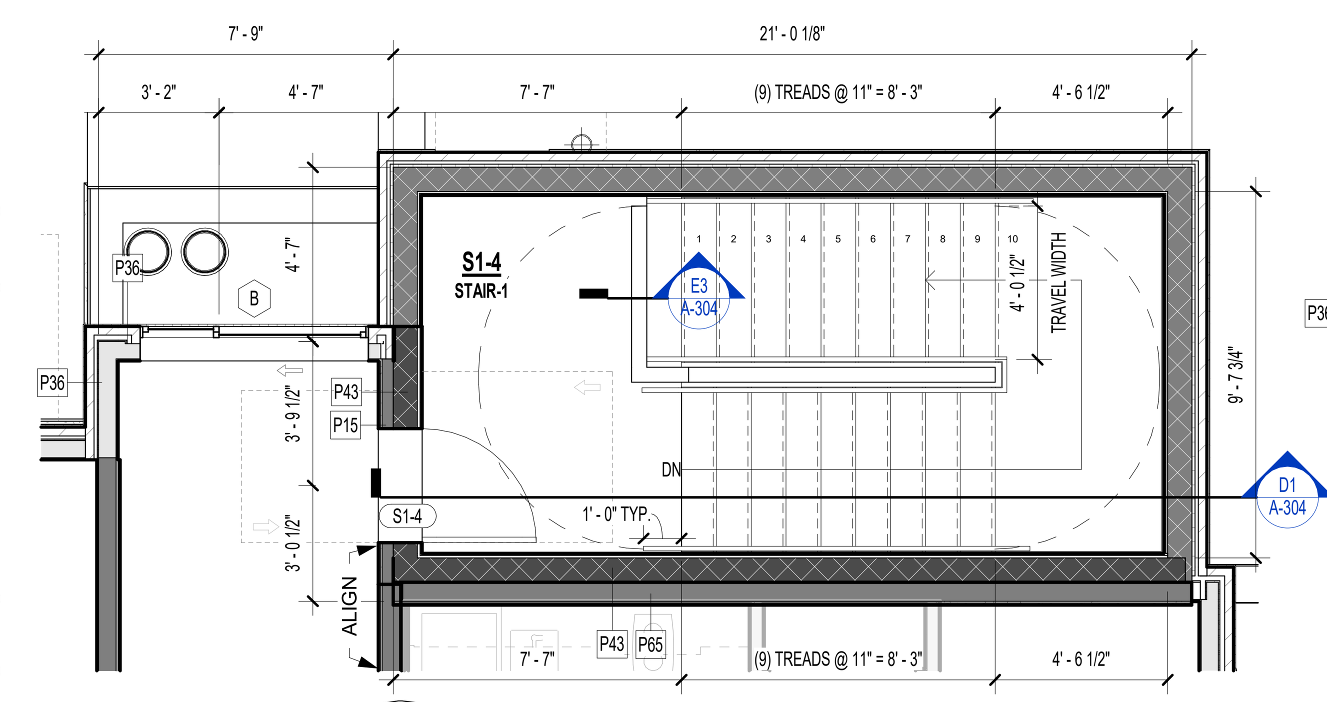
B3 WOOD FRAMING/ CMU SHAFT 1
1 1/2" = 1'-0"



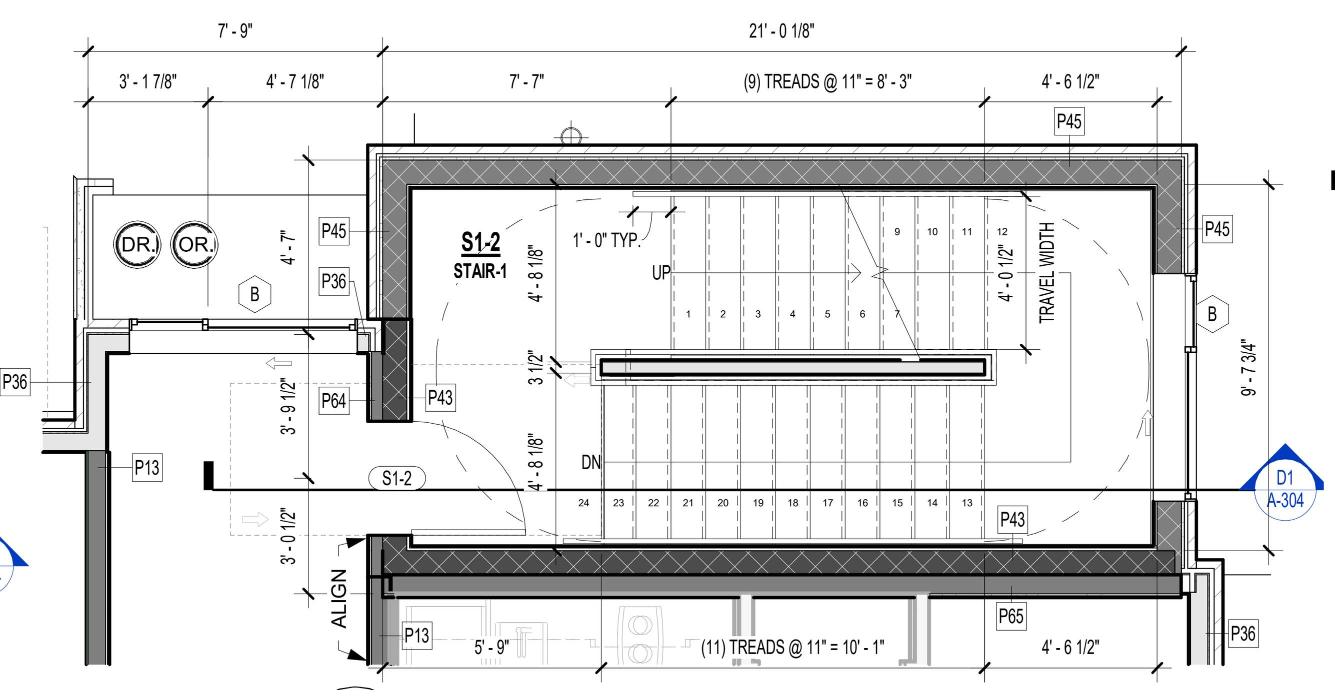
A3 WOOD STAIR AT BOTTOM LANDING
1 1/2" = 1'-0"



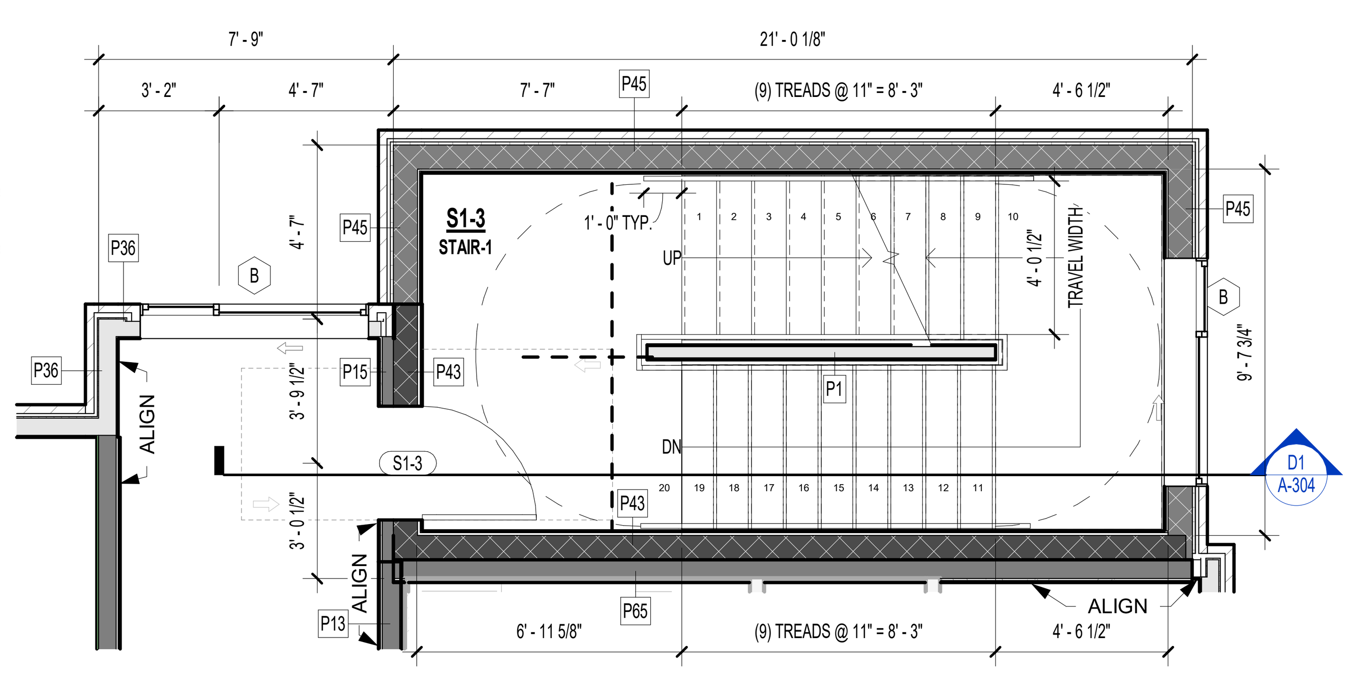
D1 NORTH STAIR SECTION
1/4" = 1'-0"



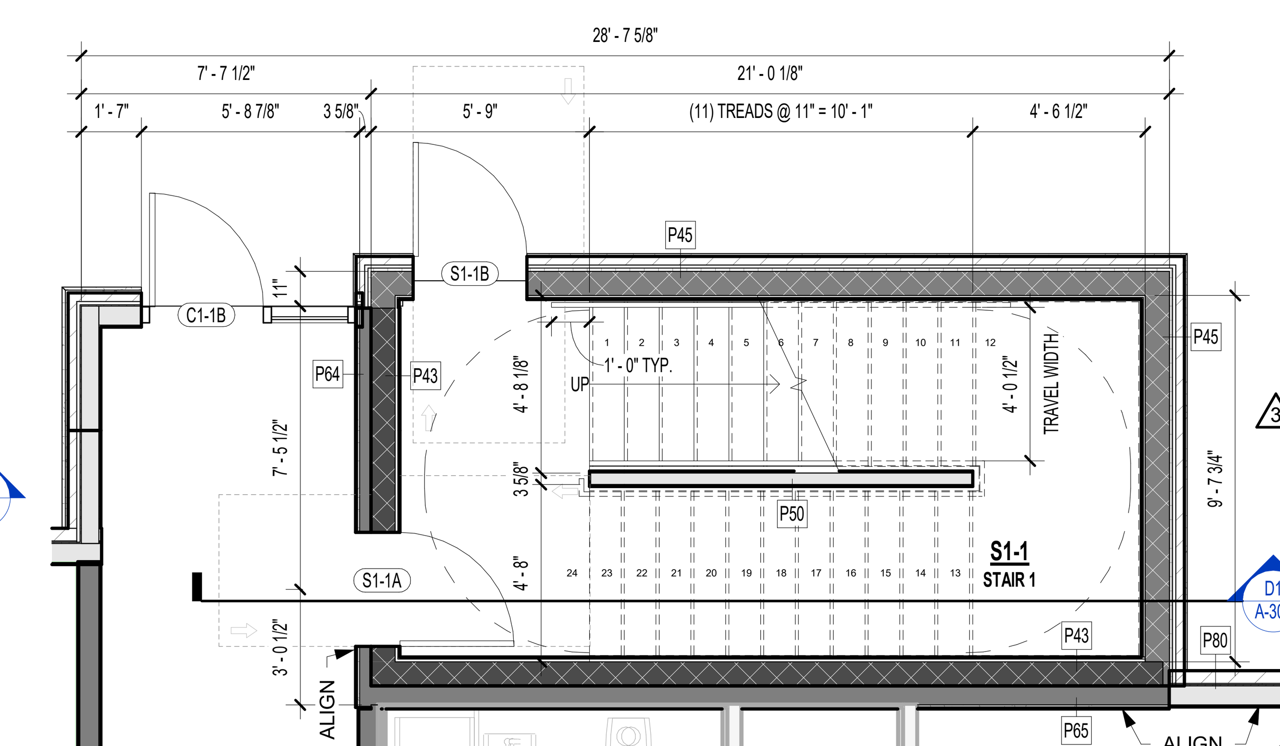
B2 NORTH STAIR - 4TH FLOOR ENLARGED
1/4" = 1'-0"



A2 NORTH STAIR - 2ND FLOOR ENLARGED
1/4" = 1'-0"



B1 NORTH STAIR - 3RD FLOOR ENLARGED
1/4" = 1'-0"



NOTE: P54 FURR WALLS DIRECTLY ABUT ALL INTERIOR CMU WALLS UNLESS OTHERWISE NOTED

A1 NORTH STAIR - 1ST FLOOR ENLARGED PLAN
1/4" = 1'-0"

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STATE OF MISSOURI
DAVID EUGENE HENDRICKSE
NUMBER
REGISTERED ARCHITECT
03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
STAIR SECTION & DETAILS

PROJECT NUMBER: 23098

SHEET NUMBER:

A-304

INTERIOR ASSEMBLIES - CMU

P43

CMU 8" BLOCK - 1HR FIRE BARRIER - INTERIOR
- 8" CMU (SIZING AND REINFORCING PER STRUCT)

EXTERIOR ASSEMBLIES - CMU

P48

CMU 12" BLOCK - 1HR - EXTERIOR

EXTERIOR
- EXTERIOR FINISH SYSTEM PER ELEVATIONS - BRICK SHOWN
- WEATHER RESISTANT BARRIER PER SPECIFICATIONS
- R VALUE PER IECC AS INDICATED ON DRAWINGS / SPECIFICATIONS.
- 12" CMU (SIZING AND REINFORCING PER STRUCT)
- P54 WALL ASSEMBLY ATTACHED DIRECTLY TO CMU
  1. 7/8" FURRING / HAT CHANNEL, SPACED 16" O.C. (GAUGE DETERMINED BY WALL HEIGHT)
  2. (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD

INTERIOR

P48.1

CMU 12" BLOCK - 2HR - EXTERIOR

EXTERIOR/ GARAGE
- P54 WALL ASSEMBLY ATTACHED DIRECTLY TO CMU
  1. (1) LAYER OF 5/8" DENSGLASS FIREGUARD SHEATHING PER UL
  2. 7/8" FURRING / HAT CHANNEL, SPACED 16" O.C. (GAUGE DETERMINED BY WALL HEIGHT)
- (1) LAYER OF 5/8" DENSGLASS FIREGUARD SHEATHING PER UL
- CONTINUOUS RIGID INSULATION; R VALUE PER IECC AS INDICATED ON DRAWINGS / SPECIFICATIONS.
- 12" CMU (SIZING AND REINFORCING PER STRUCT)

INTERIOR
- P54 WALL ASSEMBLY ATTACHED DIRECTLY TO CMU
  1. 7/8" FURRING / HAT CHANNEL, SPACED 16" O.C. (GAUGE DETERMINED BY WALL HEIGHT)
  2. (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD

NOTE: ROOF TRUSSES NOT TO SCALE, REFERENCE CITY APPROVED SHOP DRAWINGS. PARAPET HEIGHTS RAISED AS PART OF THIS REVISION.

INTERIOR PARTITION ASSEMBLIES (METAL-NON-RATED)

P50

METAL 3-5/8" STUD - NON-RATED PARTITION - INTERIOR
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD
- 3-5/8" METAL STUDS SPACED 16" O.C. (GAUGE DETERMINED BY WALL HEIGHT)
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD

INTERIOR PARTITION ASSEMBLIES - WOOD - 1 HR RATED

P13

WOOD 2X6 STUD - 1HR PARTITION - INTERIOR SOUND DAMPENING
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
- 25 MSG GALVANIZED STEEL RESILIENT CHANNEL, 24" O.C.
- 2x6 WOOD STUDS SPACED 16" O.C. MAX. OR PER STRUCT. DWGS.
- 5-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD.

EXTERIOR PARTITION ASSEMBLIES - WOOD - NON RATED

P36

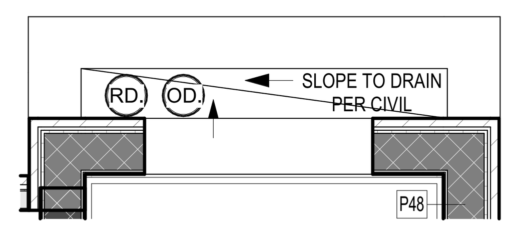
WOOD 2x6 STUD - NON-RATED EXTERIOR

EXTERIOR
- EXTERIOR FINISH SYSTEM PER ELEVATIONS
- WEATHER RESISTANT BARRIER, PER SPECIFICATIONS
- (1) LAYER SHEATHING PER STRUCT. DWGS.
- 2x6 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS.
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

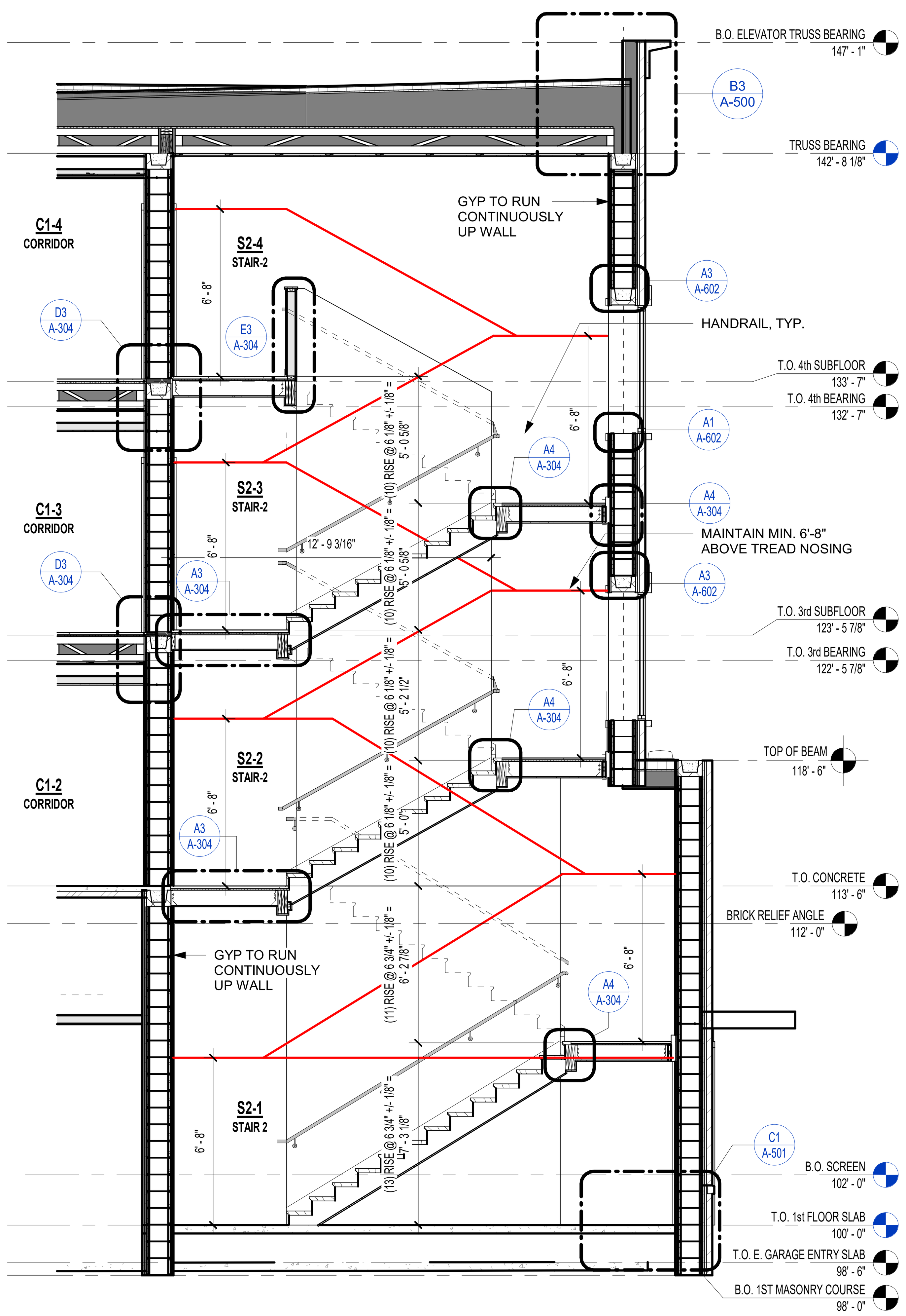
INTERIOR

REFERENCE G-003 FOR GENERAL NOTES

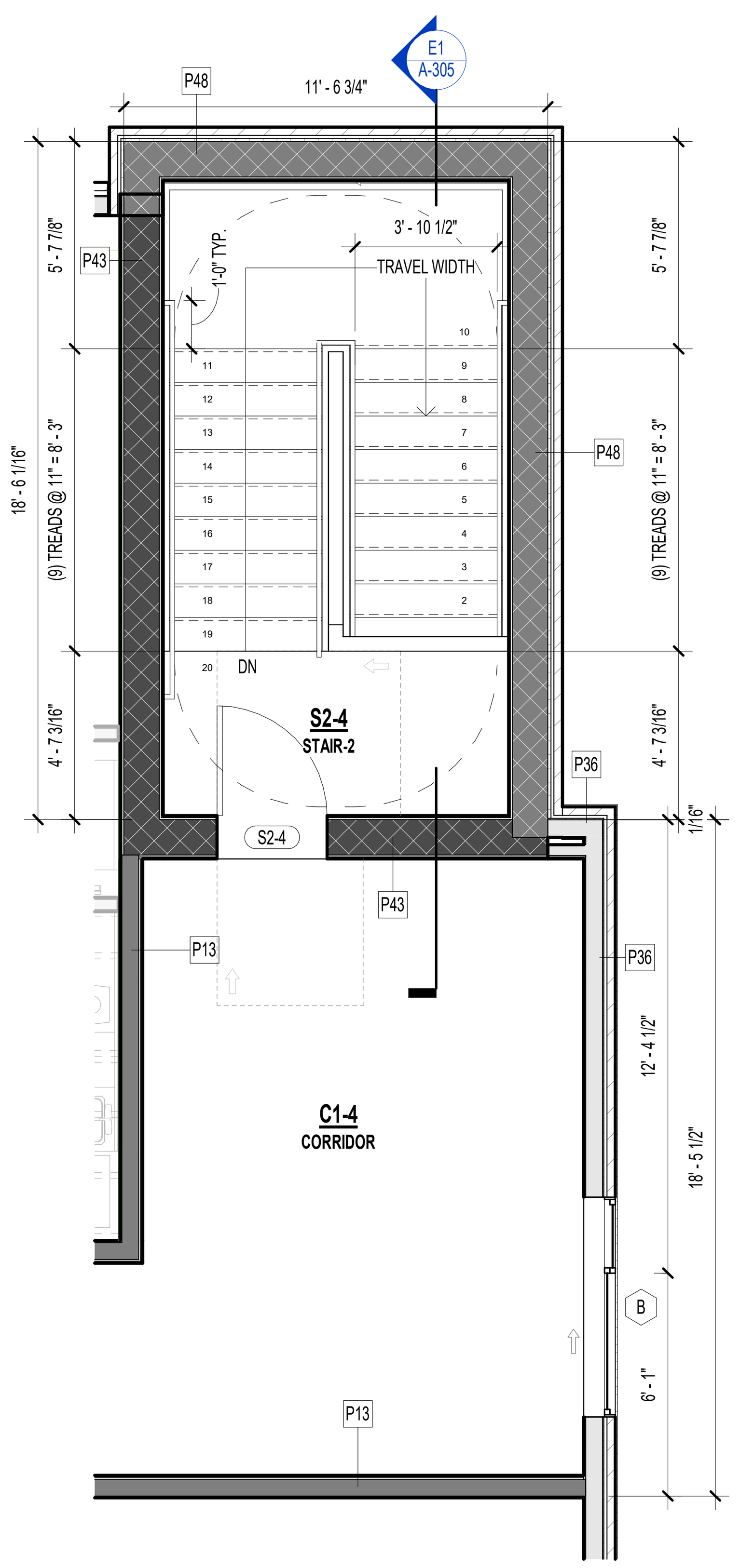
KEYNOTE LEGEND



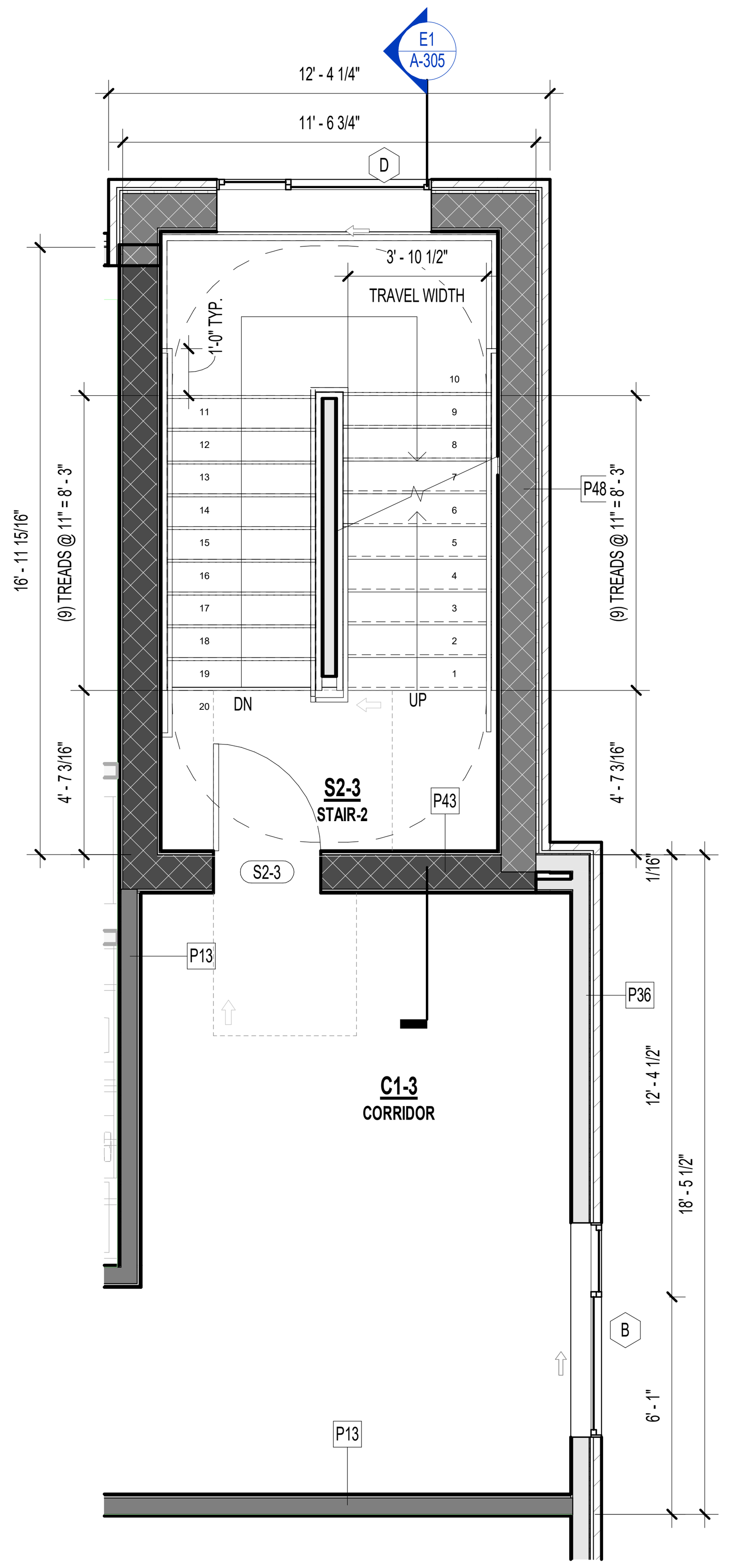
B2 EAST STAIR ROOF
1/4" = 1'-0"



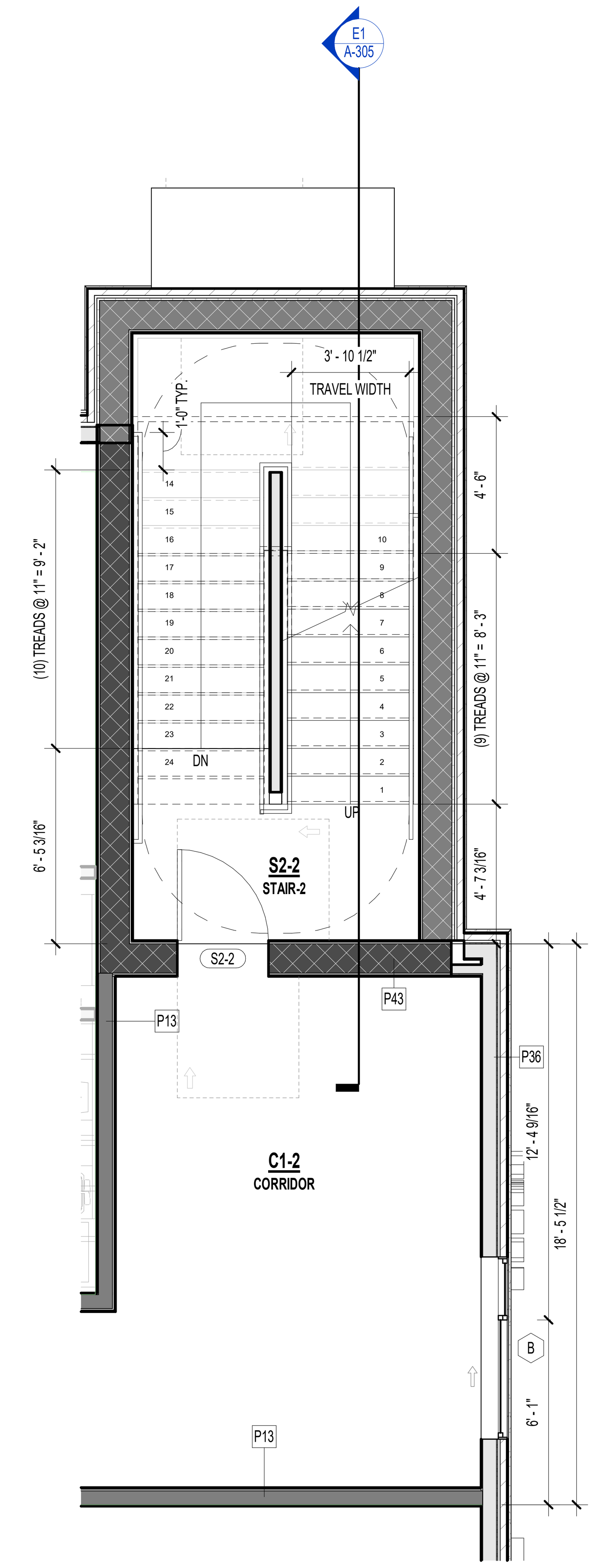
E1 EAST STAIR SECTION
1/4" = 1'-0"



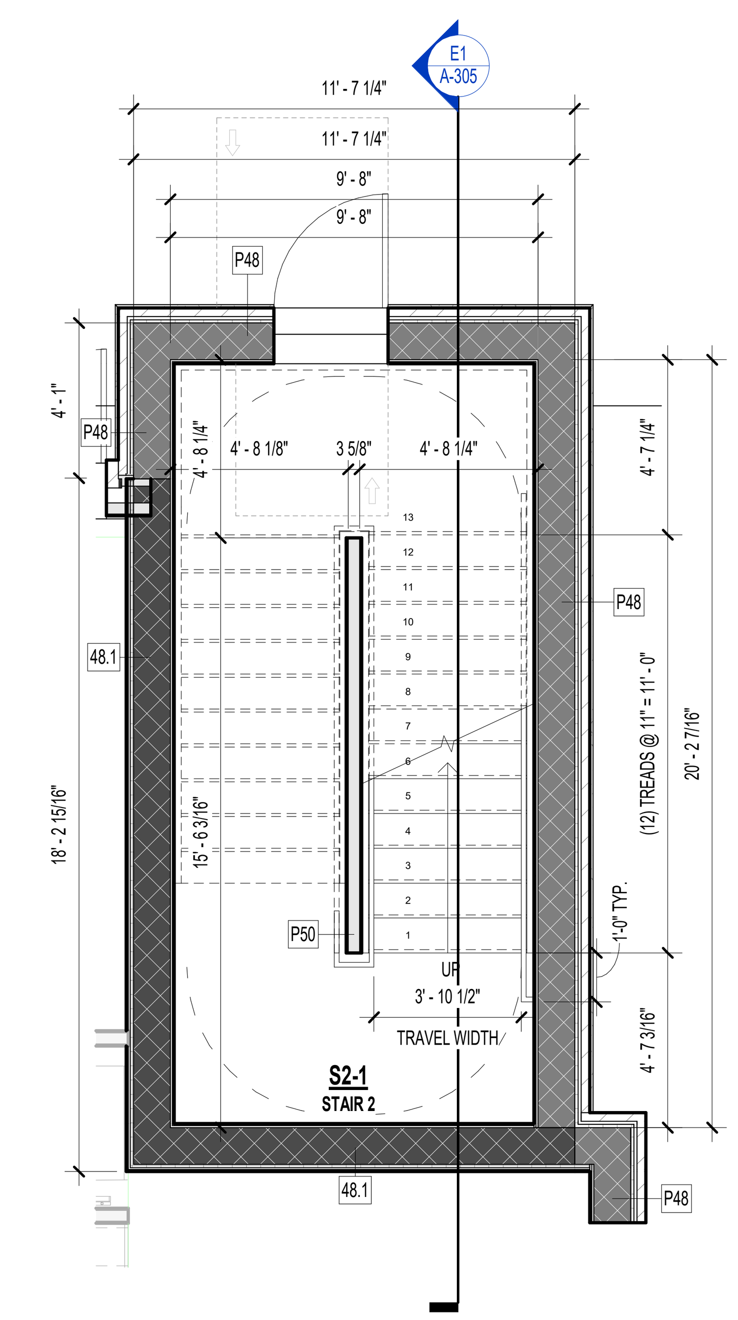
D1 EAST STAIR - 4TH FLOOR ENLARGED
1/4" = 1'-0"



C1 EAST STAIR - 3RD FLOOR ENLARGED
1/4" = 1'-0"



B1 EAST STAIR - 2ND FLOOR ENLARGED
1/4" = 1'-0"



A1 EAST STAIR - 1ST FLOOR ENLARGED
1/4" = 1'-0"

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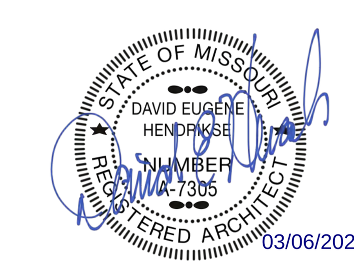


TOWNEPLACE SUITES

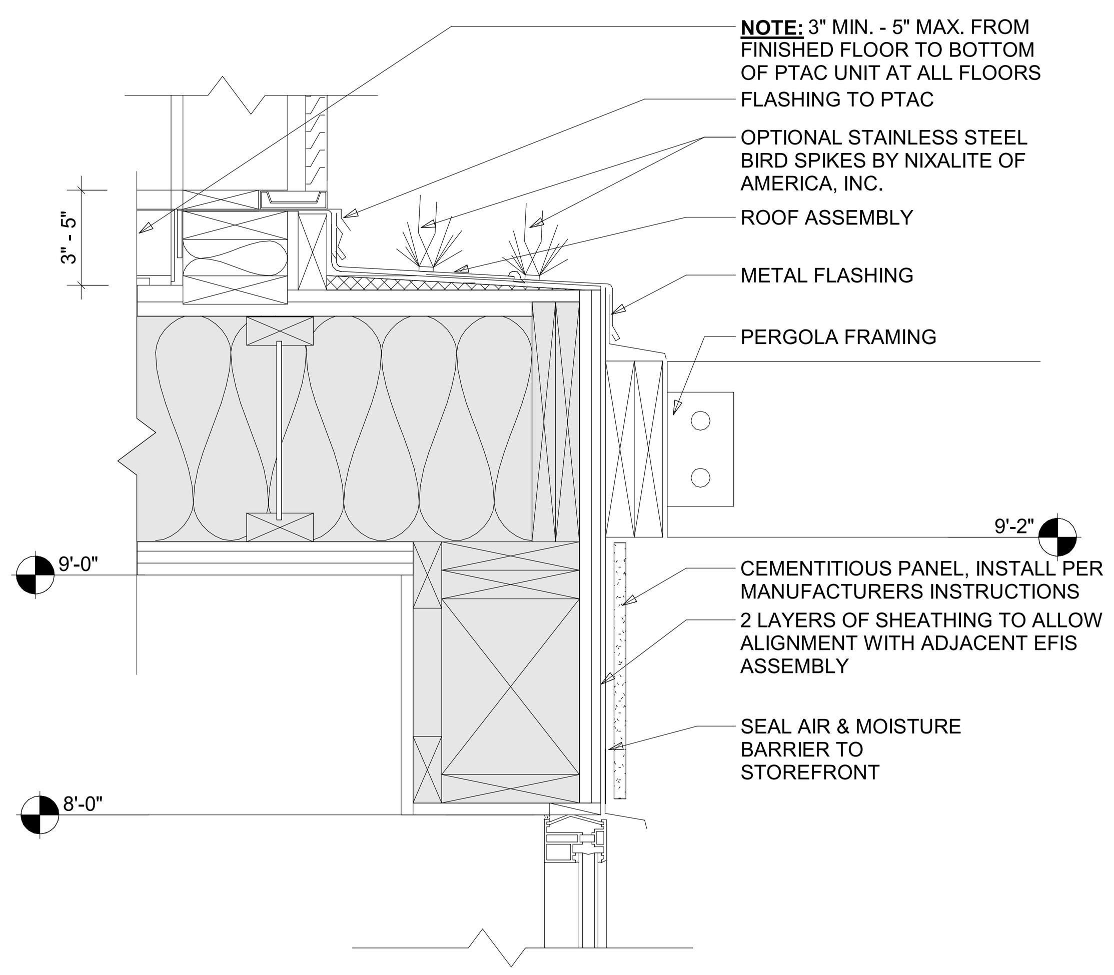
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
STAIR SECTION & DETAILS

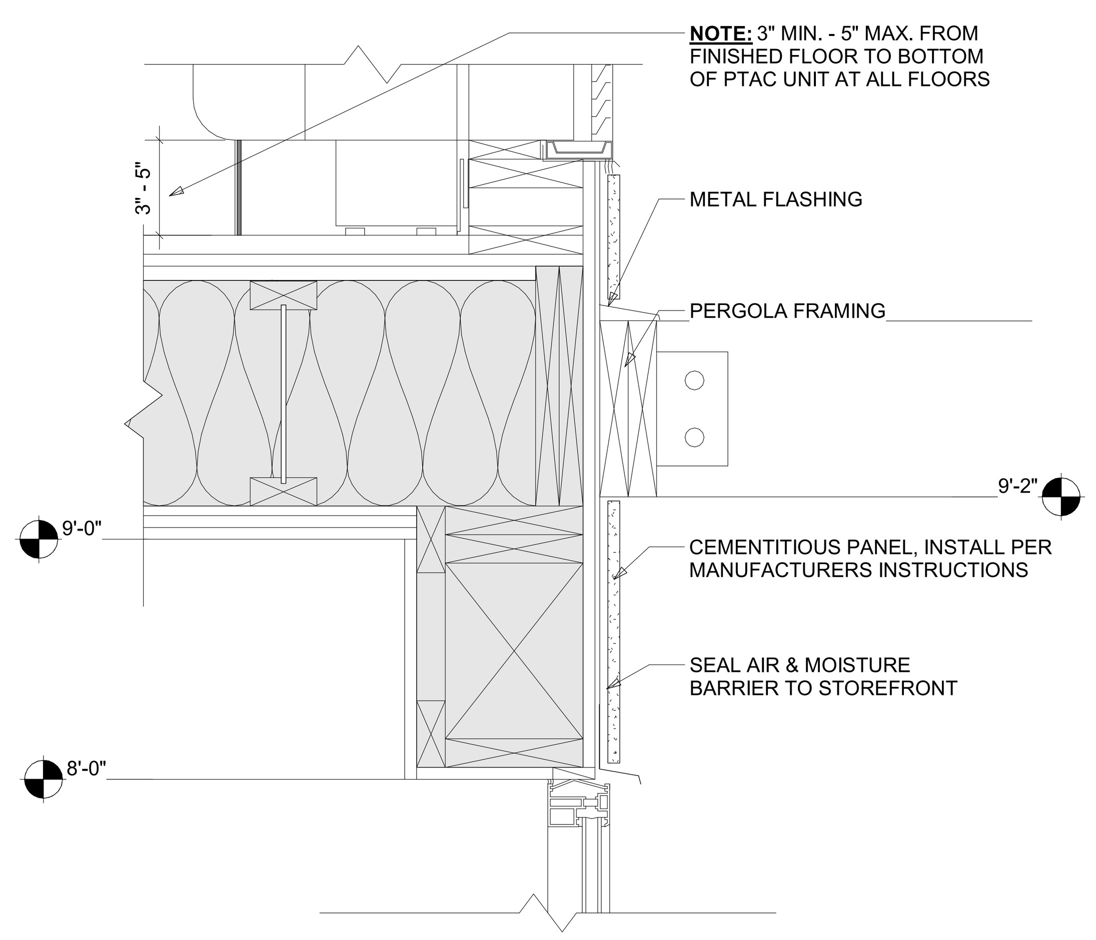
PROJECT NUMBER: 23098

SHEET NUMBER:

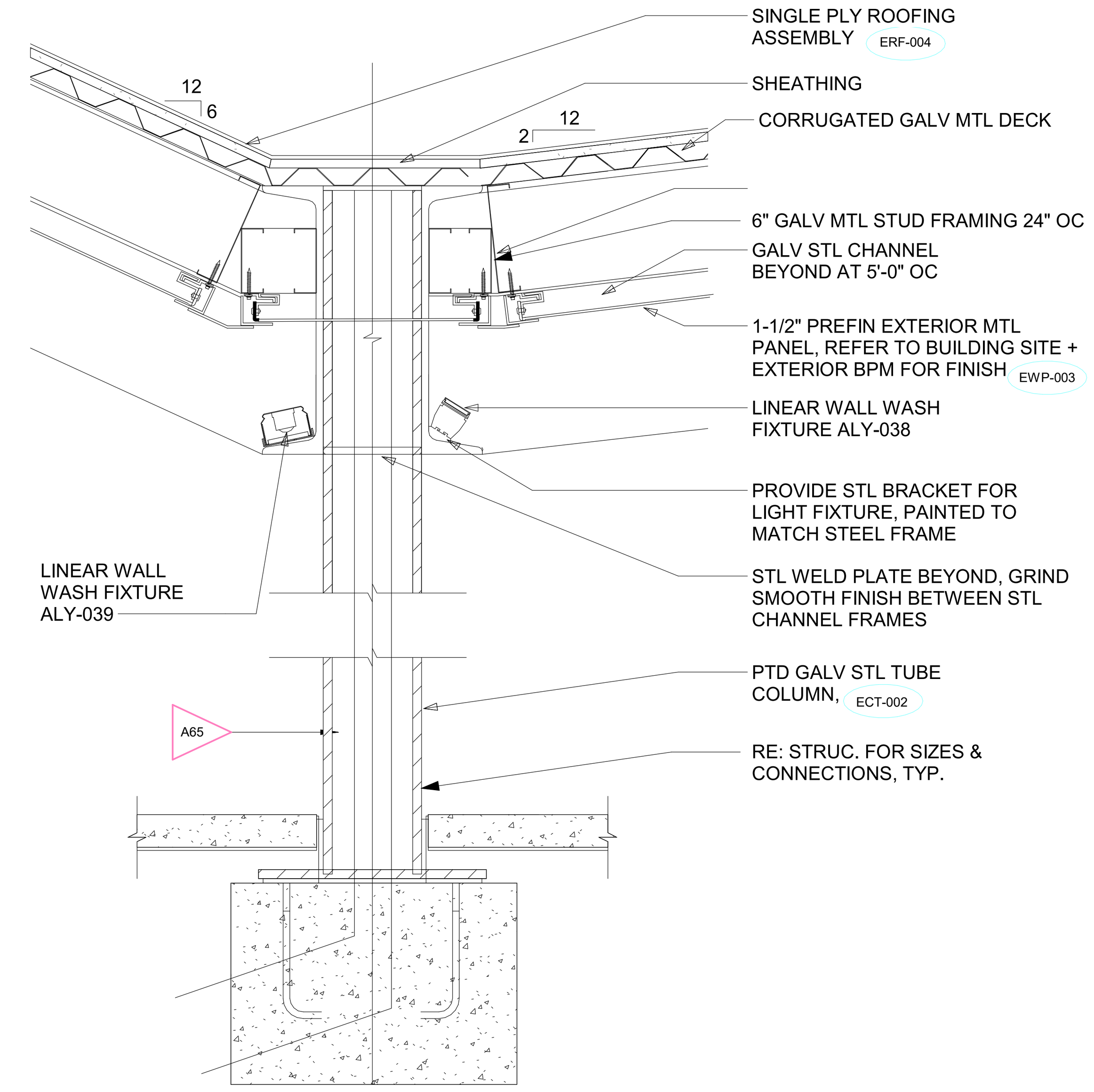
A-305



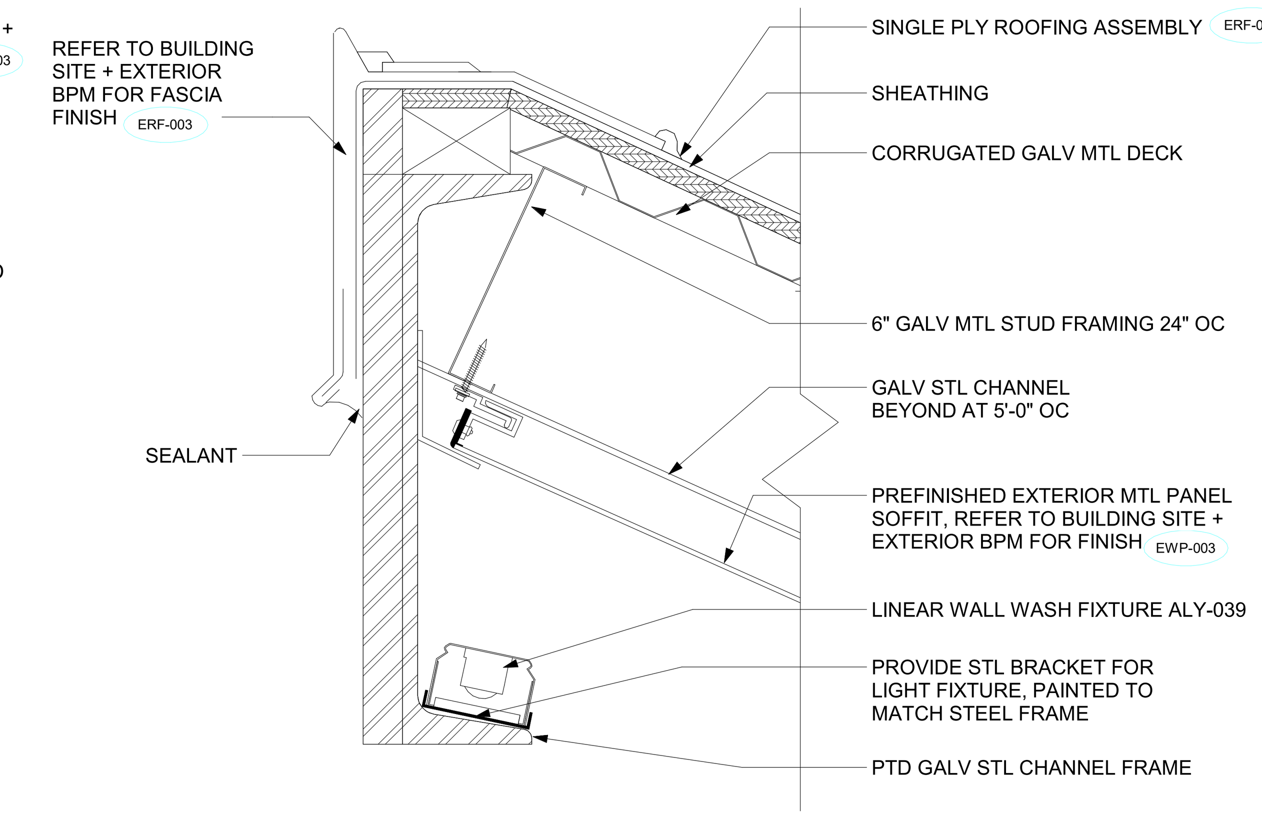
6 HEAD AT STOREFRONT PANEL & PERGOLA
1 1/2" = 1'-0"



5 HEAD AT ENTRY STOREFRONT PERGOLA
1 1/2" = 1'-0"



7 PORTE COCHERE COLUMN SECTION
1 1/2" = 1'-0"

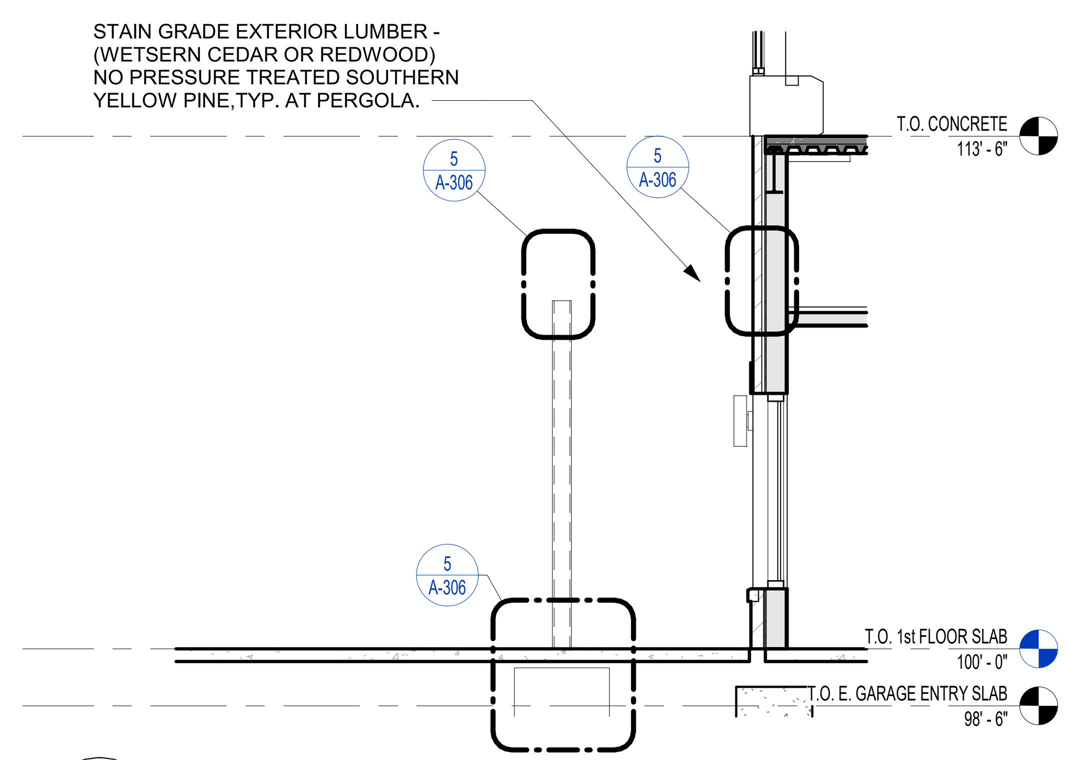


8 PORTE COCHERE ROOF EDGE
3" = 1'-0"

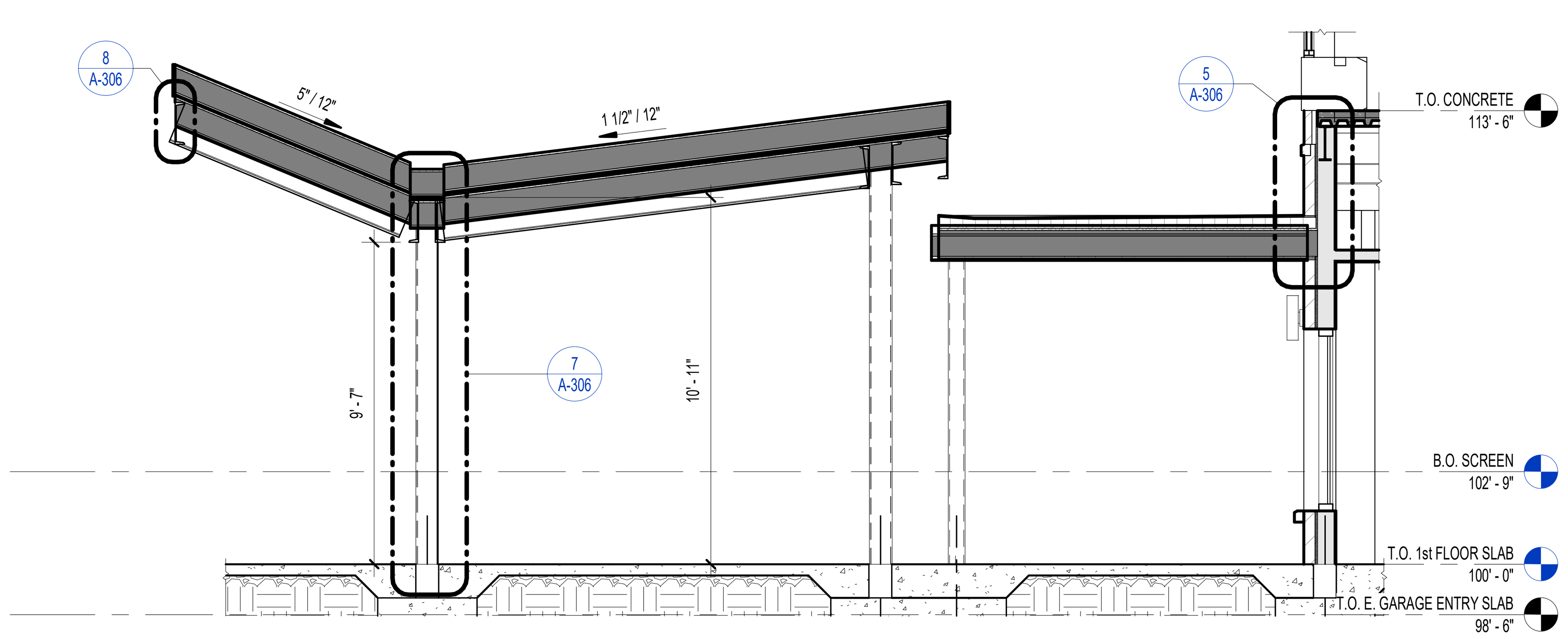
REFERENCE G-003 FOR GENERAL NOTES

KEYNOTE LEGEND

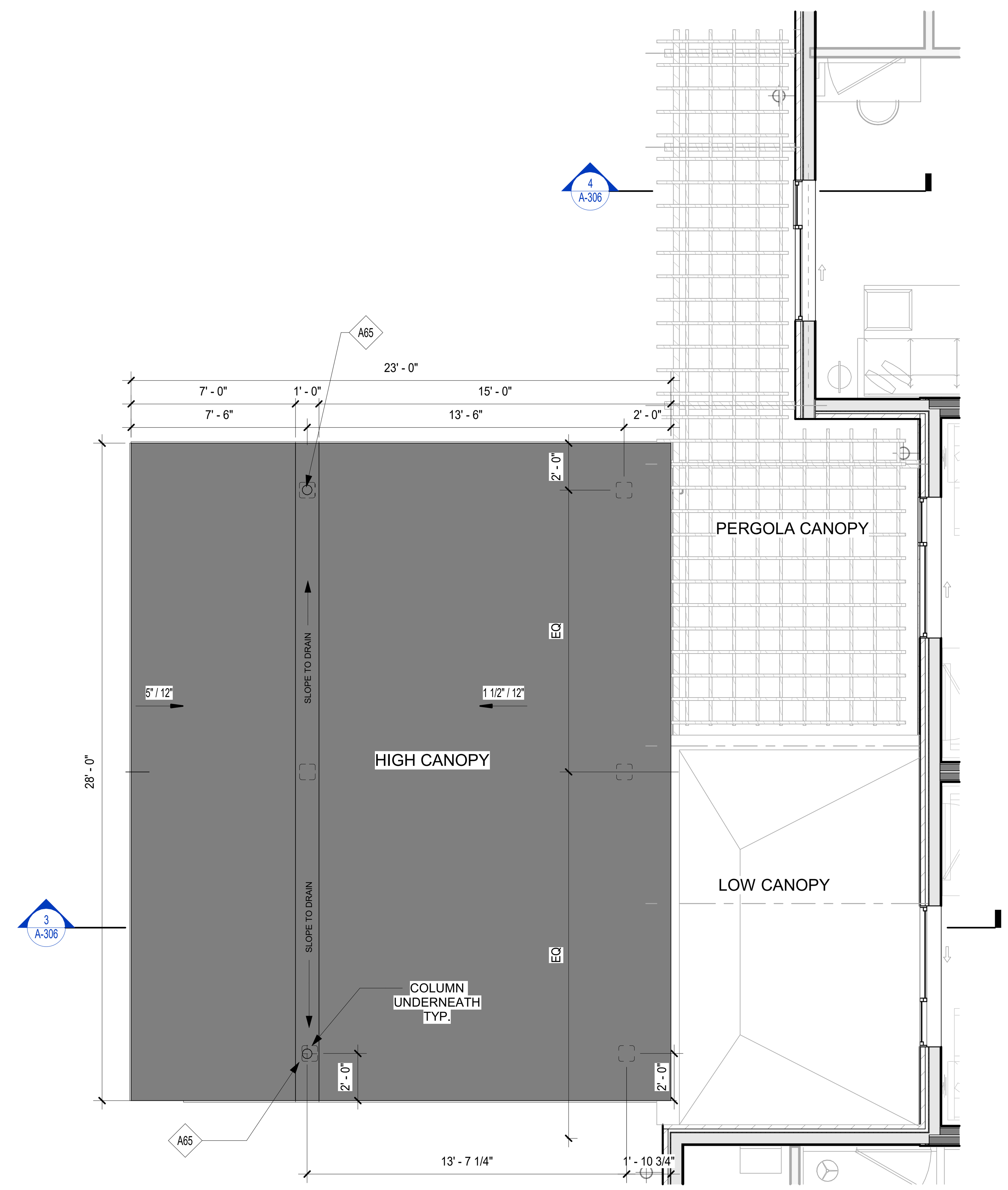
A65	5" PVC RAINLEADERS TO RUN DOWN INSIDE PORTE-COCHERE COLUMNS TO UNDERGROUND STORMWATER, RE: CIVIL.



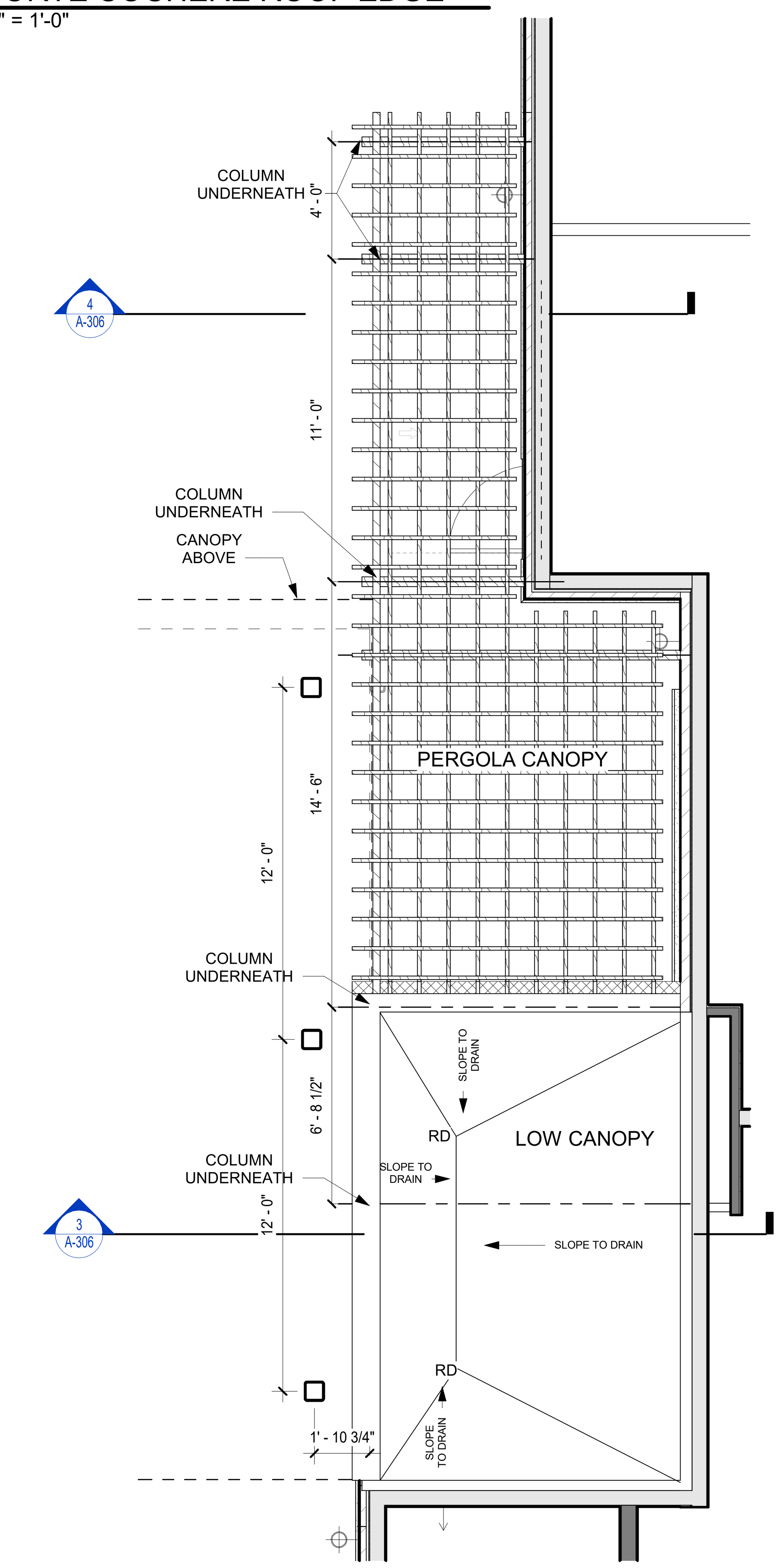
4 CANOPY SECTION1
1/4" = 1'-0"



3 CANOPY SECTION
1/4" = 1'-0"



2 ENLARGED DRIVE CANOPY
1/4" = 1'-0"



1 ENLARGED PERGOLA CANOPY
1/4" = 1'-0"

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7385
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES

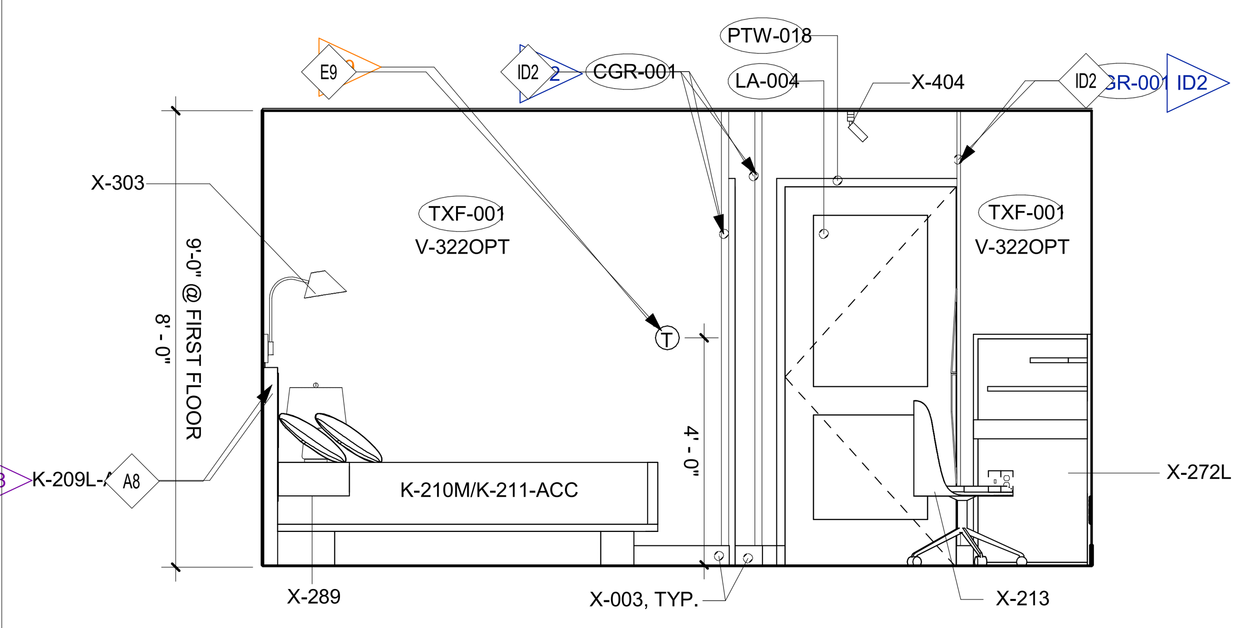
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
FRONT CANOPY PLAN / ELEV. / SECTION / & DETAILS

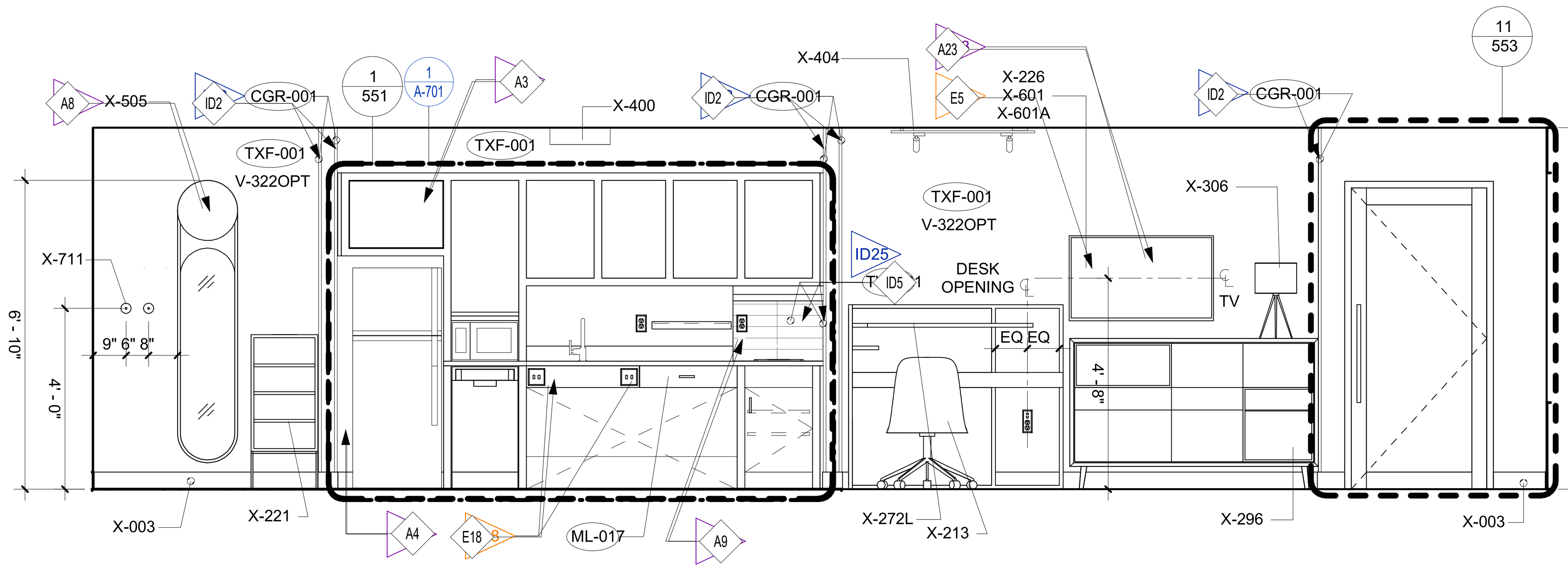
PROJECT NUMBER: 23098

SHEET NUMBER:

A-306

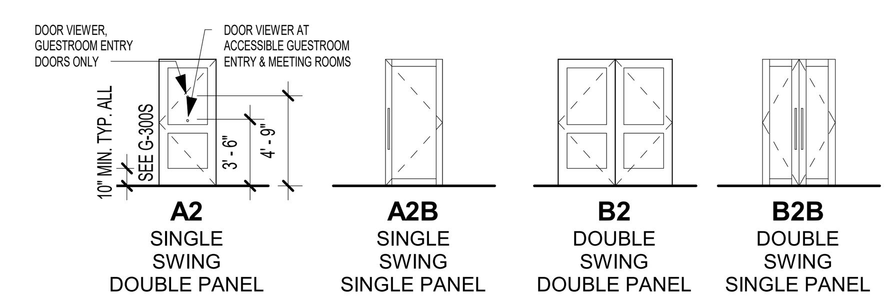


8 ACC STUDIO KING-ELEV4
3/8" = 1'-0"

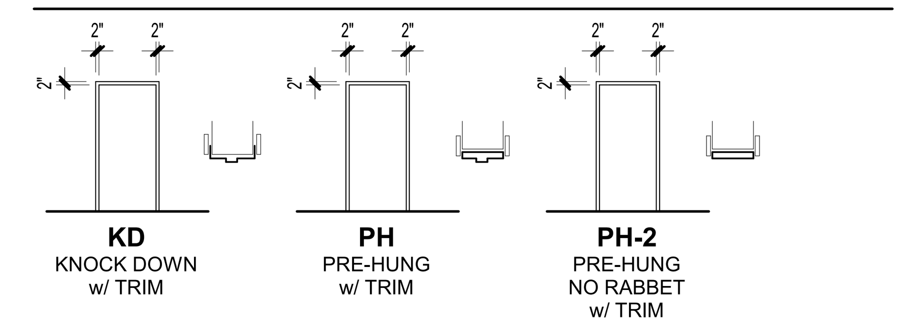


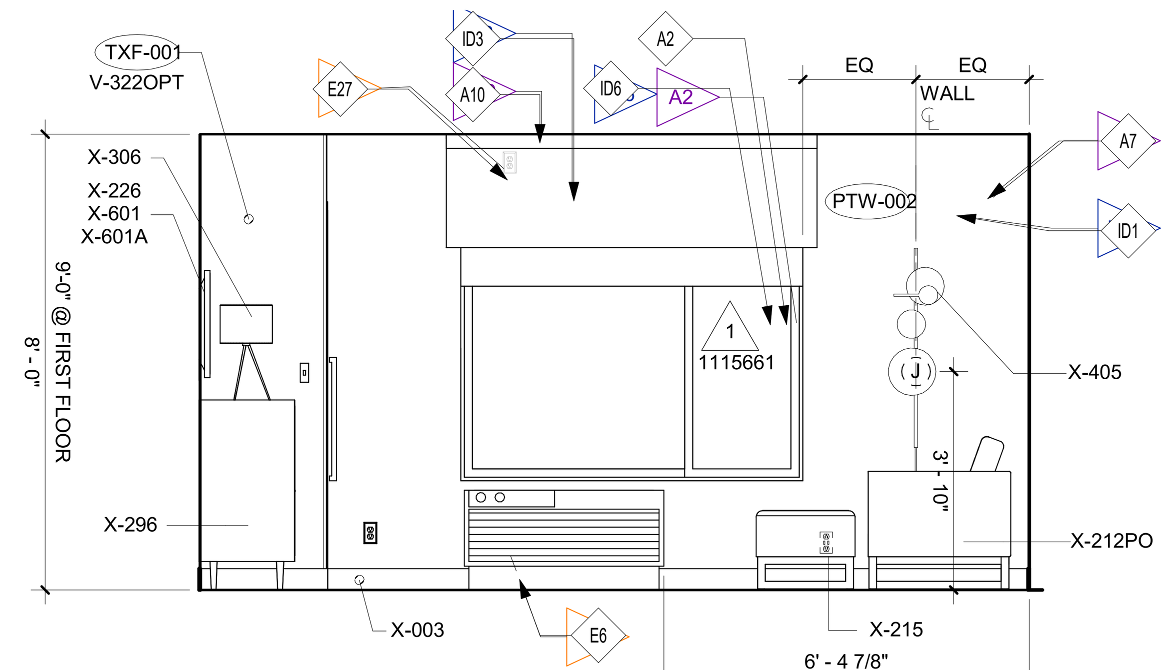
7 ACC STUDIO KING-ELEV3
3/8" = 1'-0"

DOOR TYPES

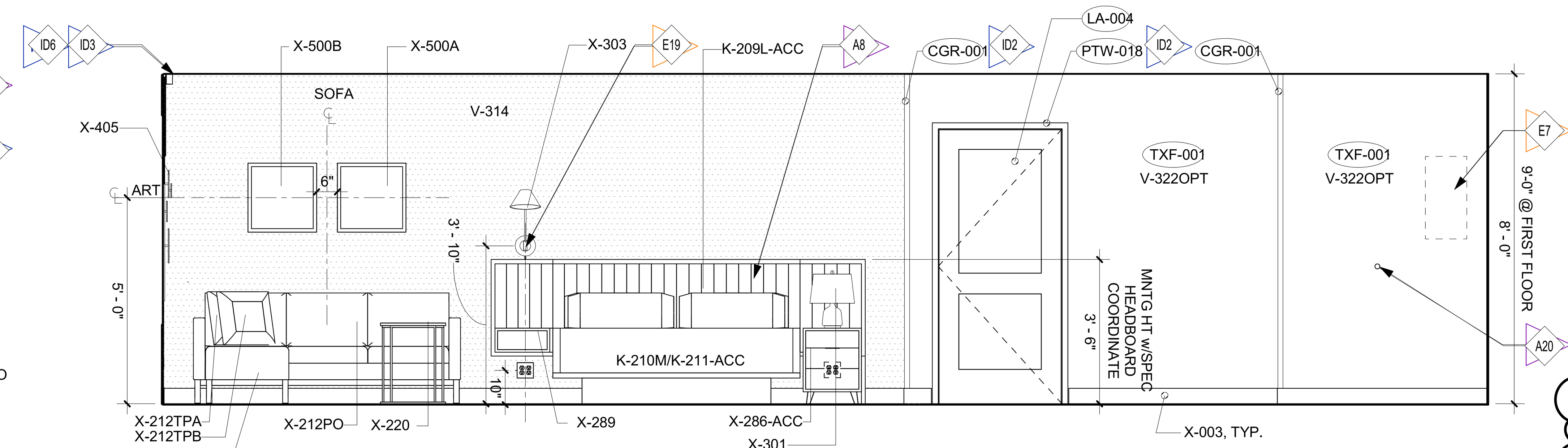


FRAME TYPES





6 ACC STUDIO KING-ELEV2
3/8" = 1'-0"



5 ACC STUDIO KING-ELEV1
3/8" = 1'-0"

REFERENCE A-101 FOR PLAN LEGEND

REFERENCE G-003 FOR GENERAL NOTES

KEYNOTE LEGEND

A2	LOCATE SHADE PULLS OPPOSITE SIDE OF PTAC UNIT
A3	FALSE PANEL WITH ACCESS TO ELECTRICAL BEHIND
A4	HOLD 4" SPACE BETWEEN SIDE OF REFRIGERATOR AND WALL TO ALLOW DOOR TO OPEN GREATER THAN 90 DEGREES FOR THE REMOVAL OF VEGETABLE DRAWER
A7	TEXTURED FINISH AND PAINT REQUIRED ON GUESTROOM EXTERIOR WALL.
A8	BLOCKING IN WALL FOR ALL CASEWORK, KITCHEN CABINETS, HEADBOARD, TV AND TV TRIM, SHOE CUBBY, MIRROR, CLOSET SYSTEM, FIXTURES, TOWEL BAR LADDER, GRAB BARS AND ACCESSORIES. COORDINATE LOCATION WITH MANUFACTURERS INSTALLATION REQUIREMENTS.
A9	INDICATE OUTLET LOCATION WITHIN WALL CONSTRUCTION TO AVOID OUTLETS OCCURING IN SAME CAVITY WITHIN PARTITION. SEE DETAIL ON STC DIAGRAM ON G-102.
A10	PROVIDE BLOCKING IN CEILING/WALL FOR SHADE MOUNT, TOP OF SHADE MOUNT ABUTTS CEILING WHERE CEILING IS 8'-0" & 9'-0". COORDINATE LOCATION WITH MANUFACTURER'S INSTALLATION REQUIREMENTS.
A20	PROVIDE WALL STOPS WHERE REQUIRED. PROVIDE WALL STOP BEHIND GUESTROOM ENTRY DOOR. REFER TO GUESTROOM OR PUBLIC SPACE BPM FOR DOOR HARDWARE.
A23	TV NICHE DETAIL DOES NOT APPLY TO EXTERIOR WALLS; TVs LOCATED ON EXTERIOR WALLS SHOULD BE SURFACE MOUNTED WITH FF&E TRIM X-226, REFER TO INTERIOR DESIGN SPECIFICATIONS MANUAL. TVs LOCATED IN THE DEMISING WALLS HAVE THE OPTION BETWEEN PROVIDING A NICHE WITH A SOUND BARRIER (REFER TO DETAIL 3/552) OR THE FF&E TRIM X-226. COORDINATE WITH THE INTERIOR DESIGN SPECIFICATION MANUAL WHEN PROVIDING X-226
E5	OUTLETS FOR TV, CABLE AND POWER FOR TV TO BE MOUNTED IN OPENING OF WALL MOUNTED TV PANEL. SEE DETAILS SHEET 552 OR B552 FOR TV OPENING DETAIL.
E6	PTAC FOR TYPICAL GUEST ROOM HVAC. SEE DETAILS ON 222 OR B222 FOR PTAC AND WALL SLEEVE INFORMATION.
E7	ELECTRIC PANEL, TO BE PAINTED SAME COLOR AS SURROUNDING WALL. INSTALL AS CLOSE AS POSSIBLE TO THE ENTRY DOOR WALL.
E9	THERMOSTAT. LOCATE THERMOSTAT WITH INTEGRAL OCCUPANCY SENSOR FACING SLEEPING AREA. COORDINATE WITH THE GUESTROOM MANAGEMENT SYSTEM (GRMS). SEE TYPICAL GUESTROOM OUTLET HEIGHT DETAILS ON G-300s AND ROOM ELEVATION FOR ADDITIONAL INFORMATION.
E18	TWO-TOGGLE SWITCH FOR GARBAGE DISPOSAL, AND UNDERCABINET LIGHT. PROVIDE JBOX(S) FOR MILLWORK LIGHTING, RE: ELEC.
E19	PROVIDE OUTLET FOR WALL SCONCE AT HEADBOARD WHERE SHOWN IN ELEVATION. SWITCH LOCATED ON LIGHT FIXTURE.
E27	HIGH OUTLET BEHIND FASCIA FOR SOLAR SHADE, RE: ELEC.
ID1	TEXTURED WALL COATING IS THE REQUIRED FINISH FOR EXTERIOR GUESTROOM WALLS.
ID2	ALL EXTERIOR CORNERS SHALL HAVE FULL HEIGHT CORNER GUARDS.
ID3	REFER TO INTERIOR DESIGN SPECIFICATION MANUAL WINDOW TREATMENT SPECIFICATIONS AND ELEVATIONS FOR ROLLER SHADE INFORMATION
ID5	CENTER ARTWORK ON WALL OR AS SHOWN
ID6	WHERE REQUIRED FOR ACCESIBILITY, PROVIDE MOTORIZED SHADES. REFER TO DRAPERY MANUAL AND ID SPEC MANUAL FOR ADDITIONAL INFORMATION AND POWER REQUIREMENTS.

DOOR SCHEDULE - UNIT DOORS (BY UNIT TYPE)

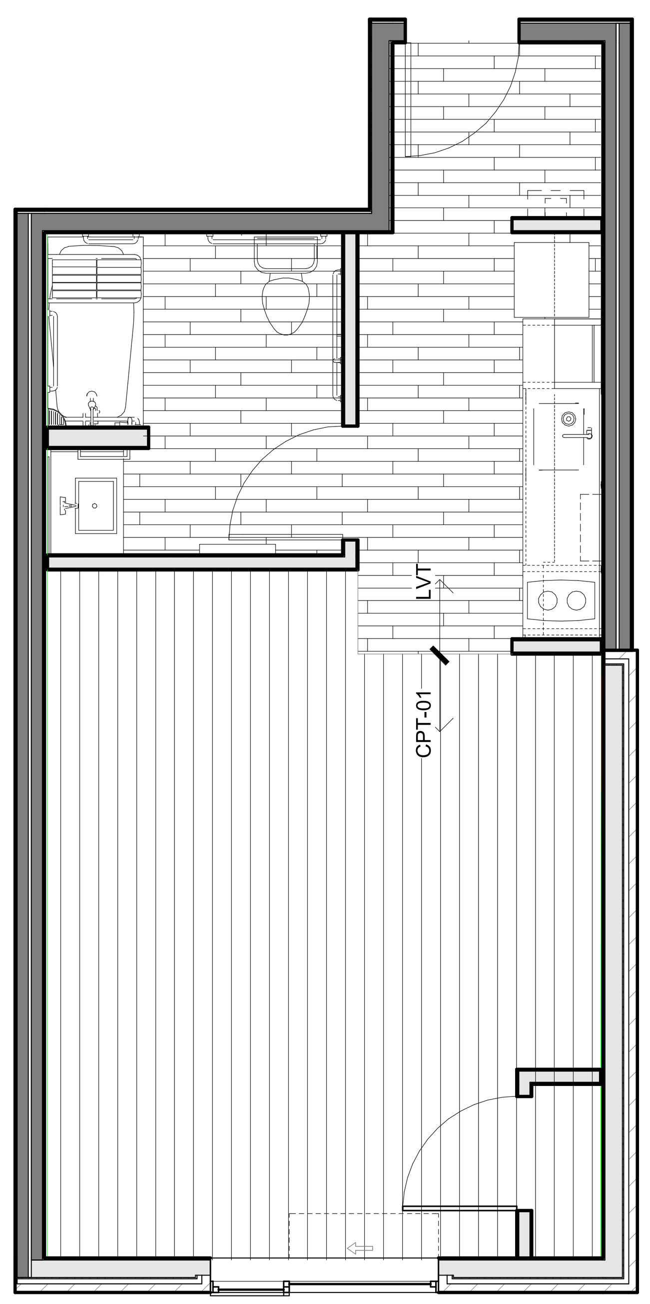
Mark	Width	Height	Thickness	Fire Rating (Minutes)	Door Type	Frame Type	Hardware Group	Comments
000	3' - 0"	6' - 8"	1 3/4"	20	A2	HM		
001	3' - 0"	6' - 8"	1 3/4"		A2			
002	3' - 0"	6' - 8"	1 3/8"		A2B			

ROOM FINISH SCHEDULE - UNITS

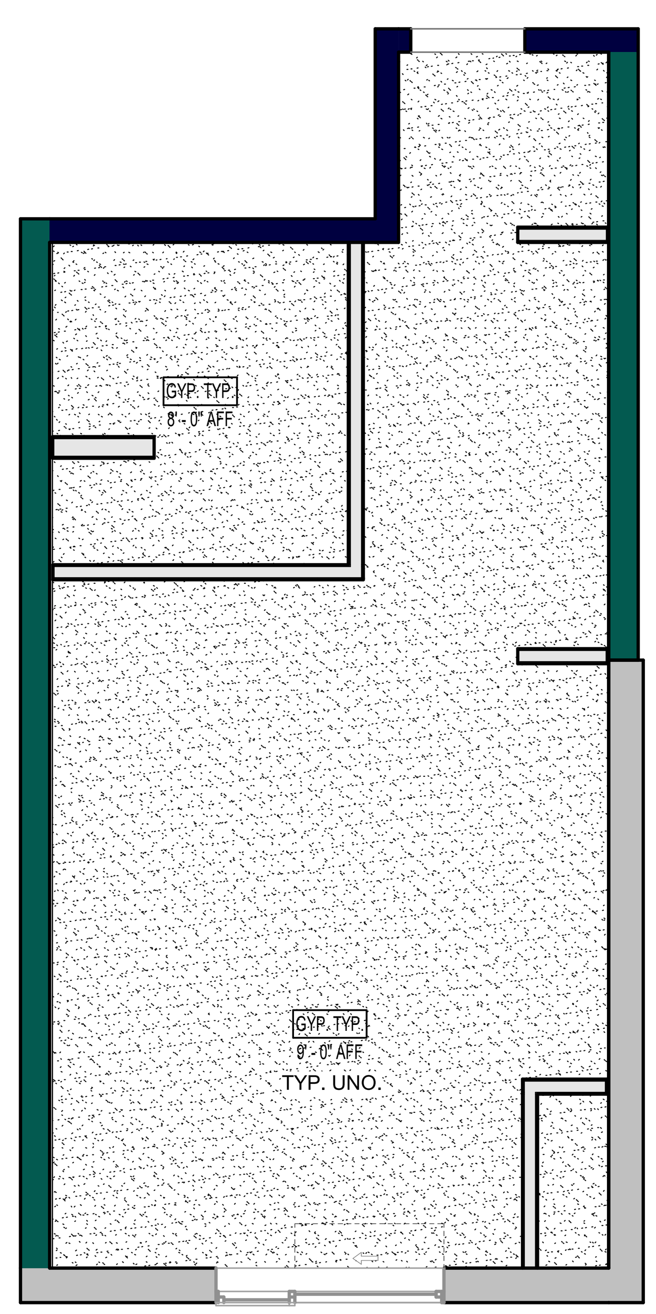
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
001	LIVING ROOM	PER PLAN	BASE, PER ELEV.	WALL COVERING, PER ELEV.	PAINT ON GYP	
002	BATH	PER PLAN	BASE, PER ELEV.	WALL COVERING, PER ELEV.	PAINT ON GYP	

NOTE: UNIT FINISH SCHEDULES ARE PER THE BRAND PROTOTYPE. FINISHES ARE TO BE COORDINATED WITH THE INTERIOR DESIGNER.

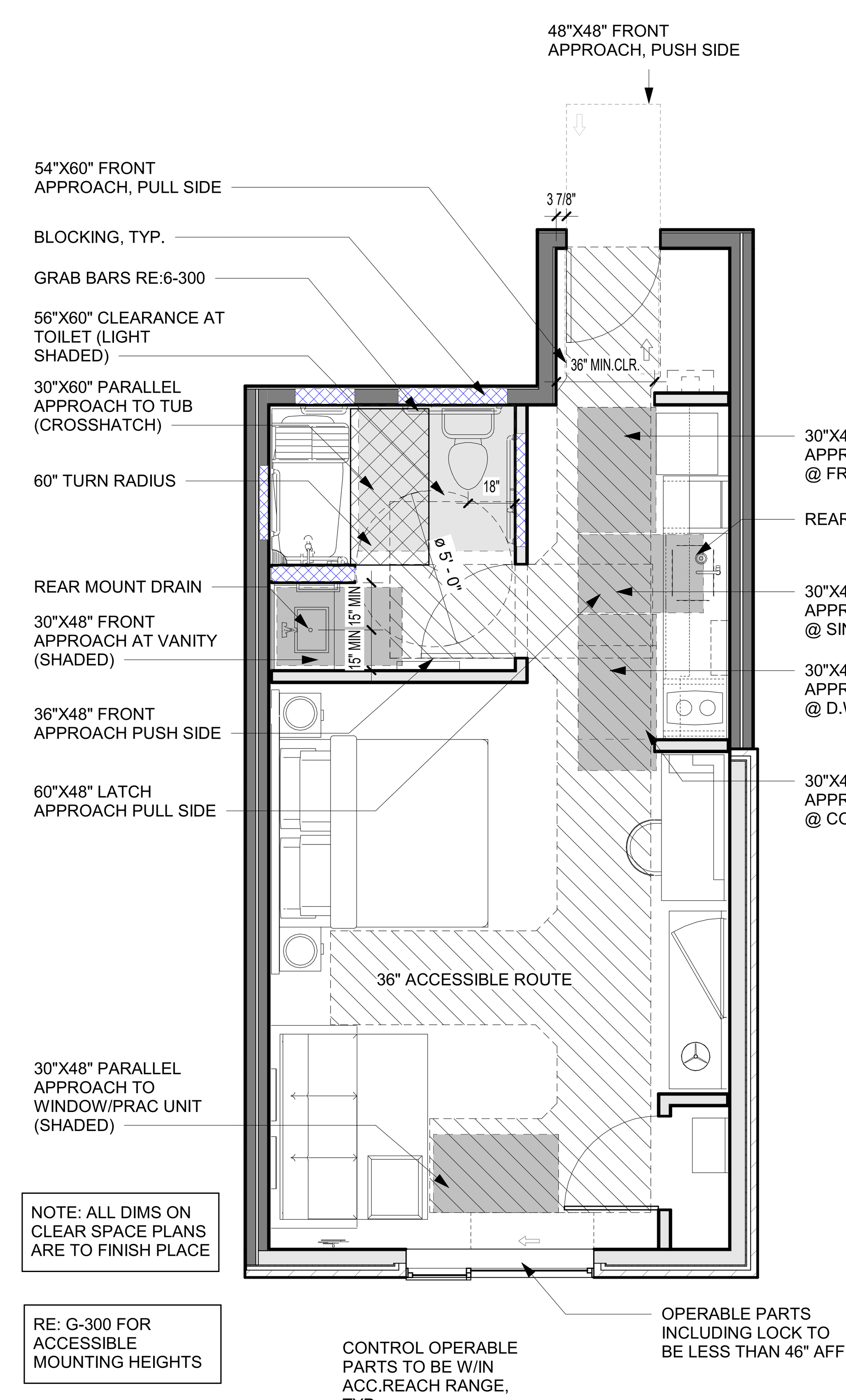
3



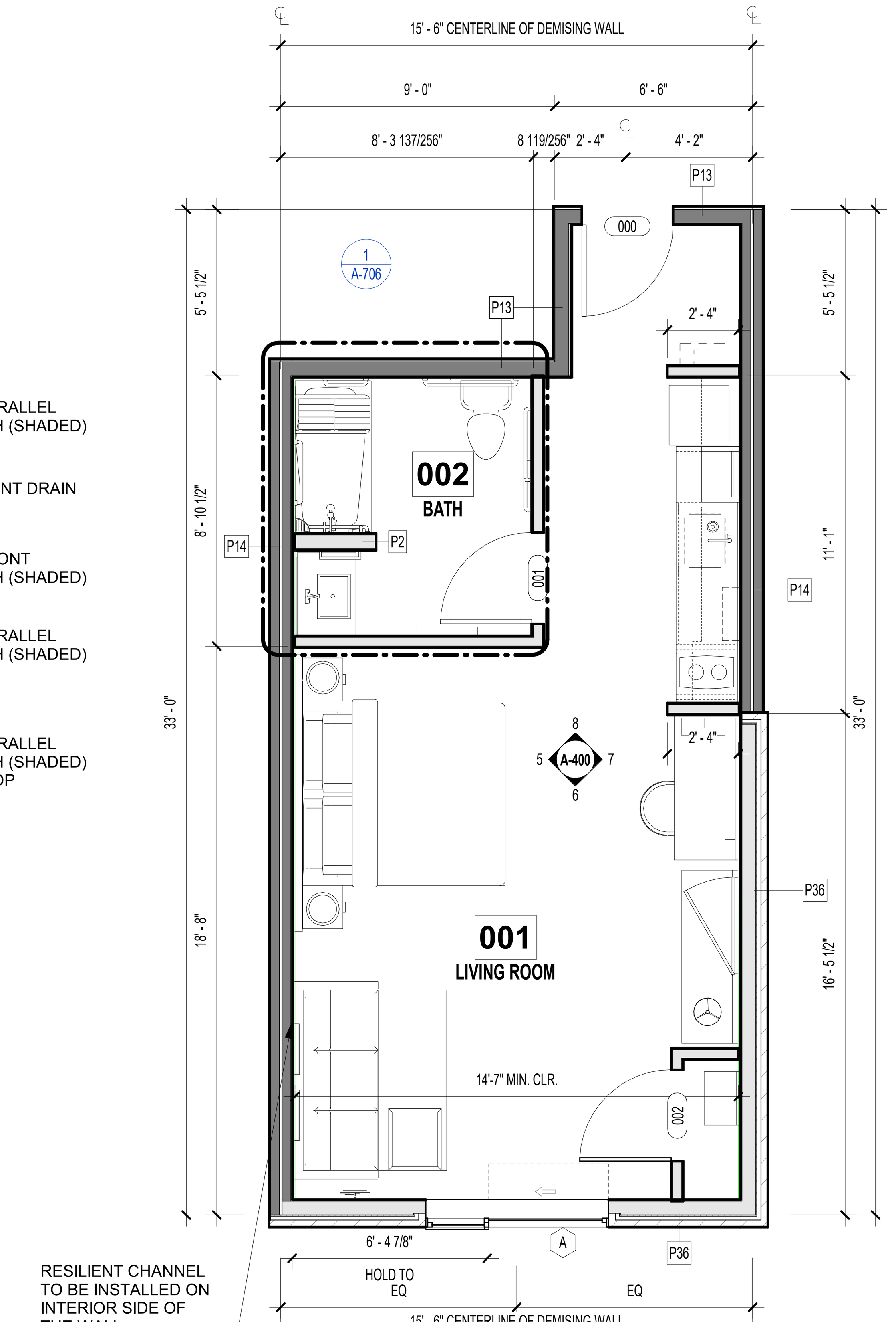
4 ACC STUDIO KING- FINISH
1/4" = 1'-0"



3 ACC STUDIO KING - RCP
1/4" = 1'-0"



2 ACC STUDIO KING - CS
1/4" = 1'-0"



1 ACC STUDIO KING- FP
1/4" = 1'-0"

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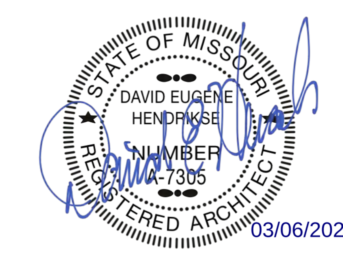


TOWNEPLACE SUITES

1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
ACC. STUDIO KING UNIT PLAN

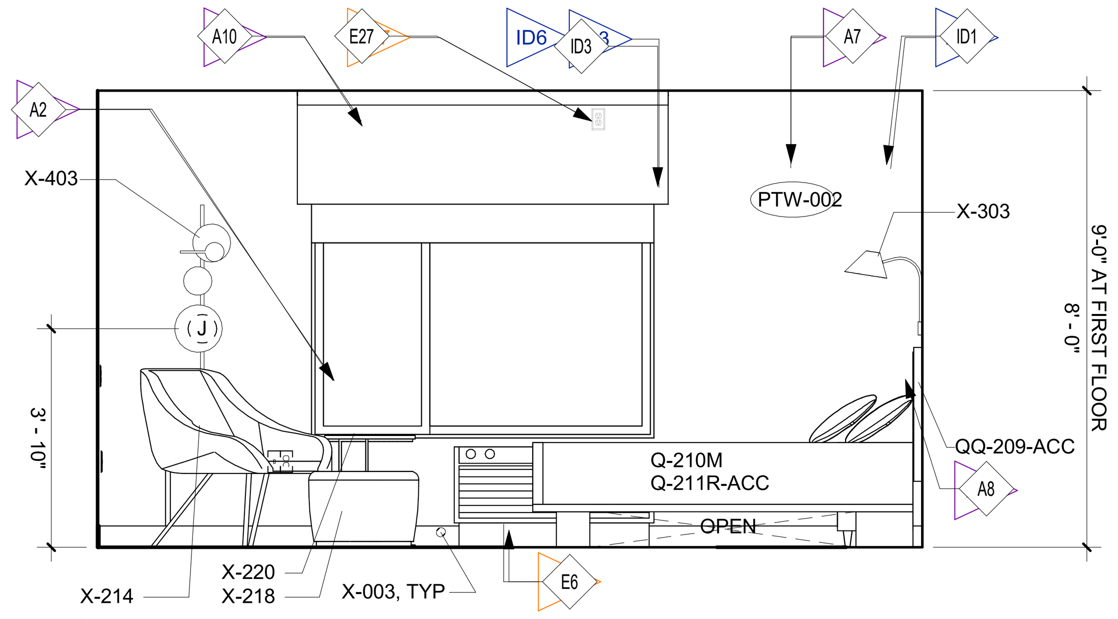
PROJECT NUMBER: 23098

SHEET NUMBER:

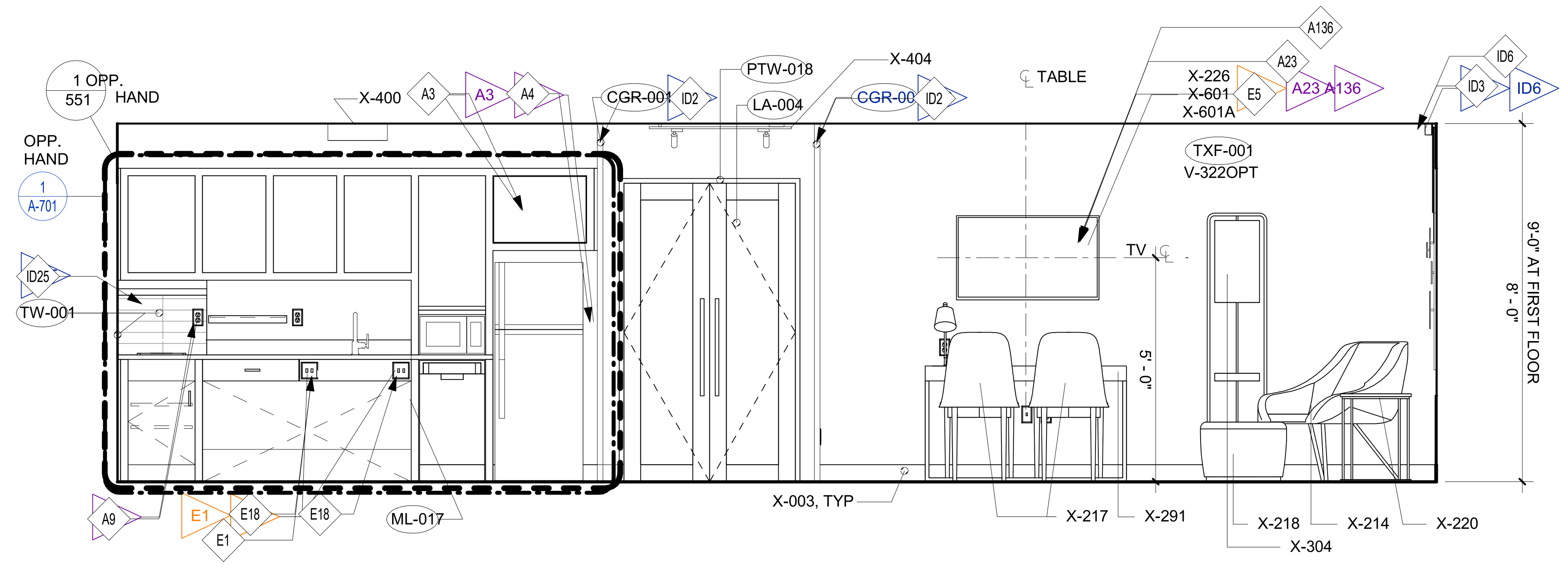
A-400

REFERENCE A-101 FOR PLAN LEGEND

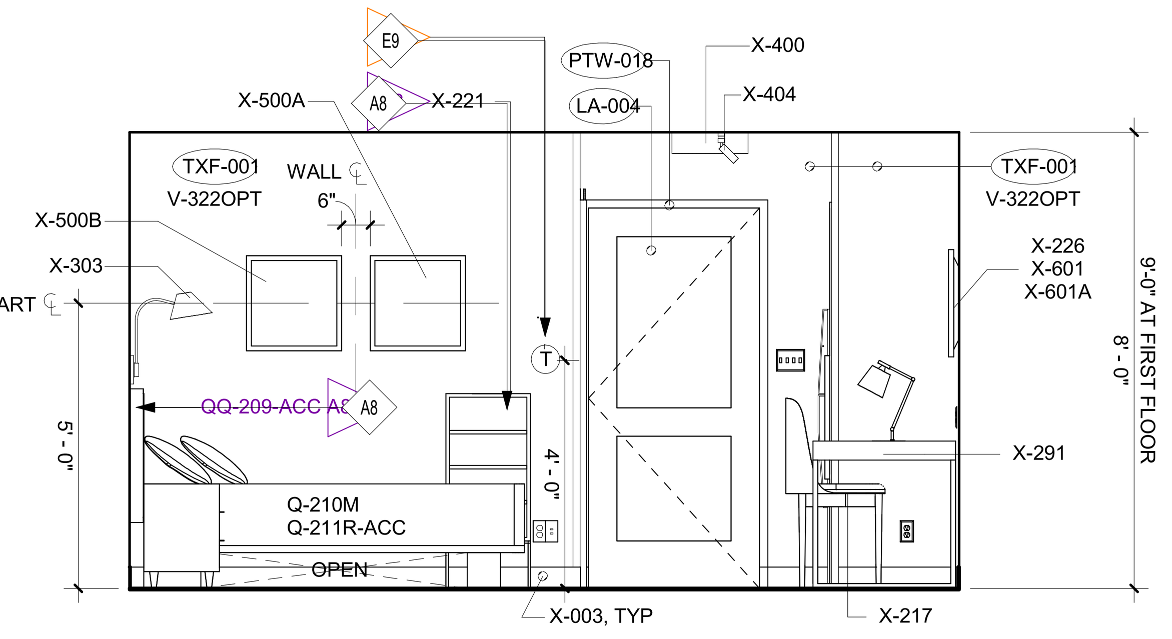
REFERENCE G-003 FOR GENERAL NOTES



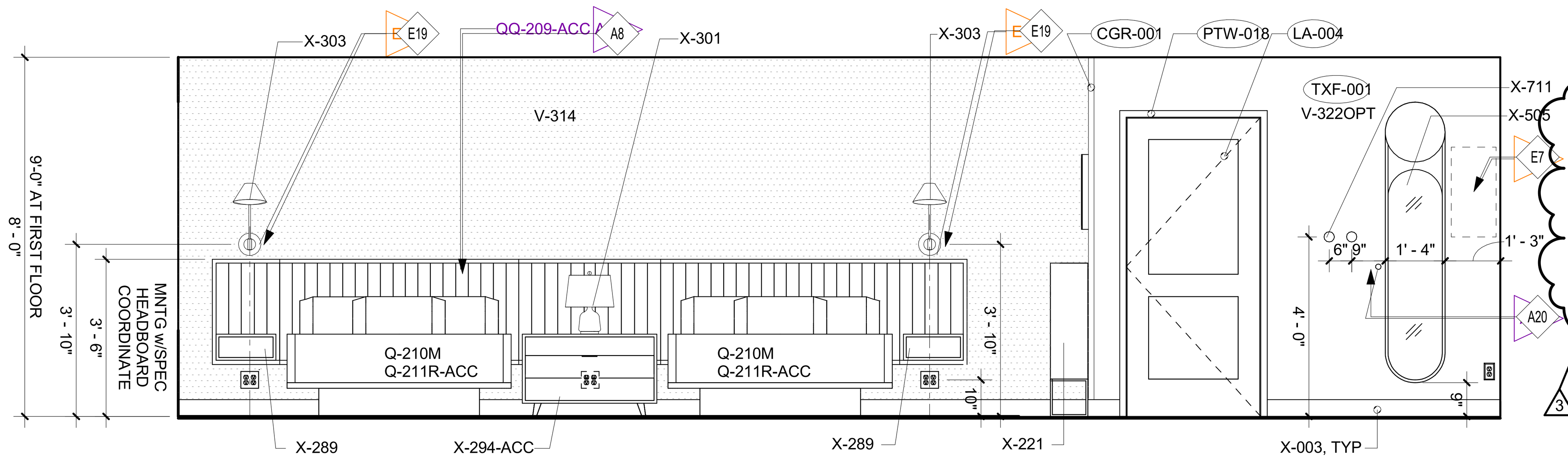
8 ACC STUDIO QQ-ELEV4
3/8" = 1'-0"



7 ACC STUDIO QQ-ELEV3
3/8" = 1'-0"

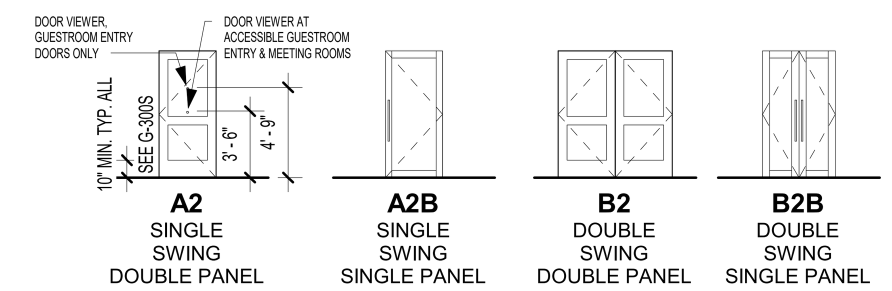


6 ACC STUDIO QQ-ELEV2
3/8" = 1'-0"



5 ACC STUDIO QQ-ELEV1
3/8" = 1'-0"

DOOR TYPES



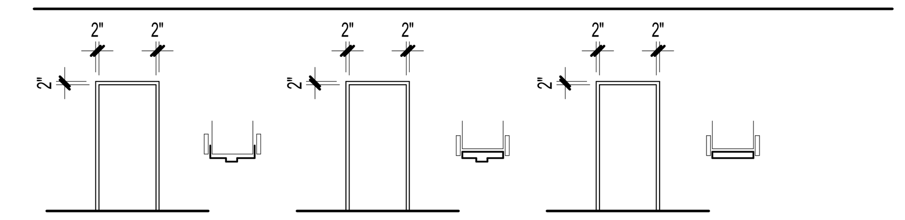
A2
SINGLE SWING
DOUBLE PANEL

A2B
SINGLE SWING
SINGLE PANEL

B2
DOUBLE SWING
DOUBLE PANEL

B2B
DOUBLE SWING
SINGLE PANEL

FRAME TYPES



KD
KNOCK DOWN
w/ TRIM

PH
PRE-HUNG
w/ TRIM

PH-2
PRE-HUNG
NO RABBET
w/ TRIM

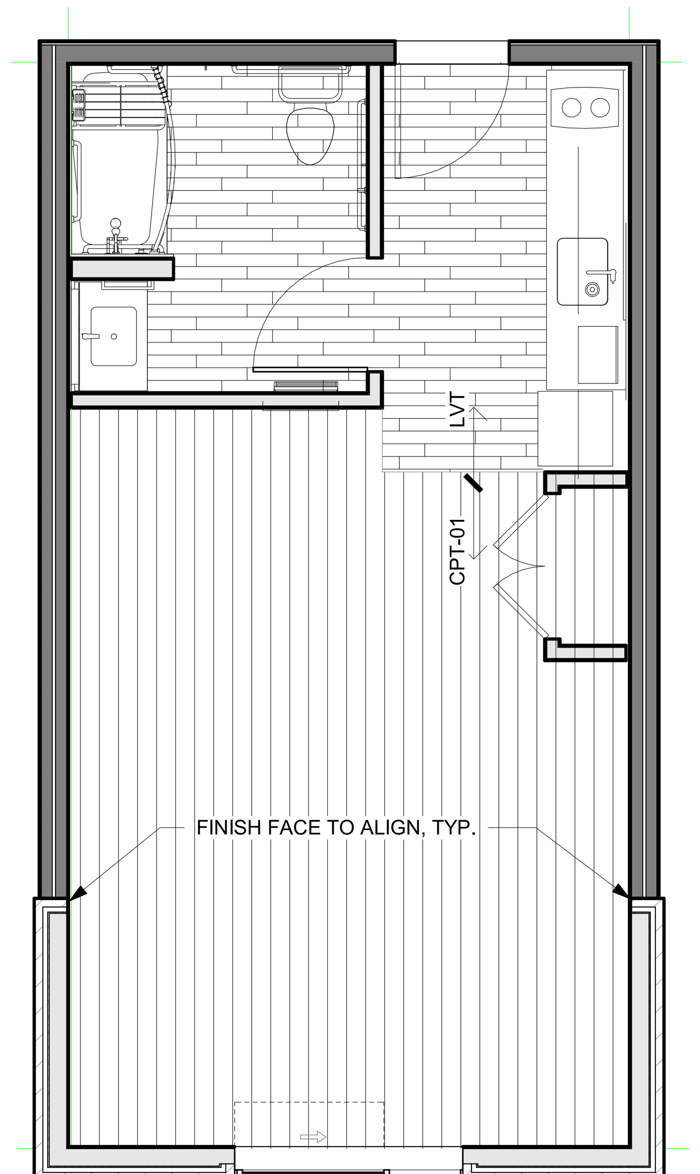
DOOR SCHEDULE - UNIT DOORS (BY UNIT TYPE)								
Mark	Width	Height	Thickness	Fire Rating (Minutes)	Door Type	Frame Type	Hardware Group	Comments
000	3' - 0"	6' - 8"	1 3/4"	20	A2	HM		
001	3' - 0"	6' - 8"	1 3/8"		A2			
002	3' - 10"	6' - 8"	1 3/4"		B2B			

ROOM FINISH SCHEDULE - UNITS						
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
001	LIVING ROOM	PER PLAN	BASE, PER ELEV.	WALL COVERING, PER ELEV.	PAIN ON GYP	
002	BATH	PER PLAN	BASE, PER ELEV.	WALL COVERING, PER ELEV.	PAIN ON GYP	

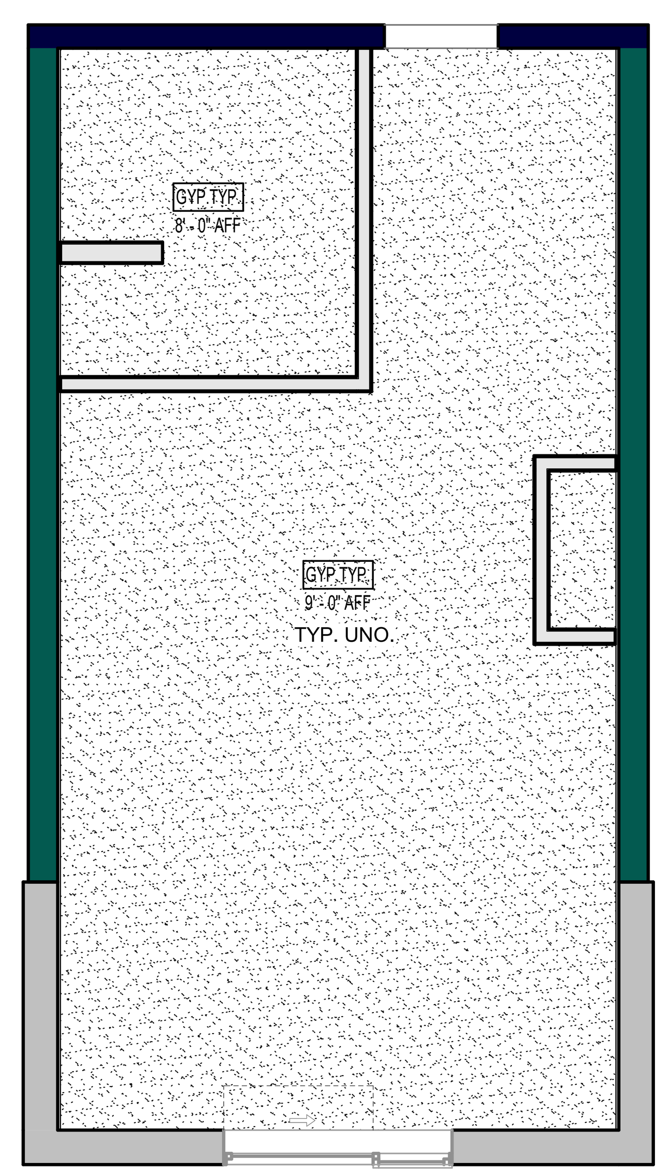
NOTE: UNIT FINISH SCHEDULES ARE PER THE BRAND PROTOTYPE. FINISHES ARE TO BE COORDINATED WITH THE INTERIOR DESIGNER.

KEYNOTE LEGEND

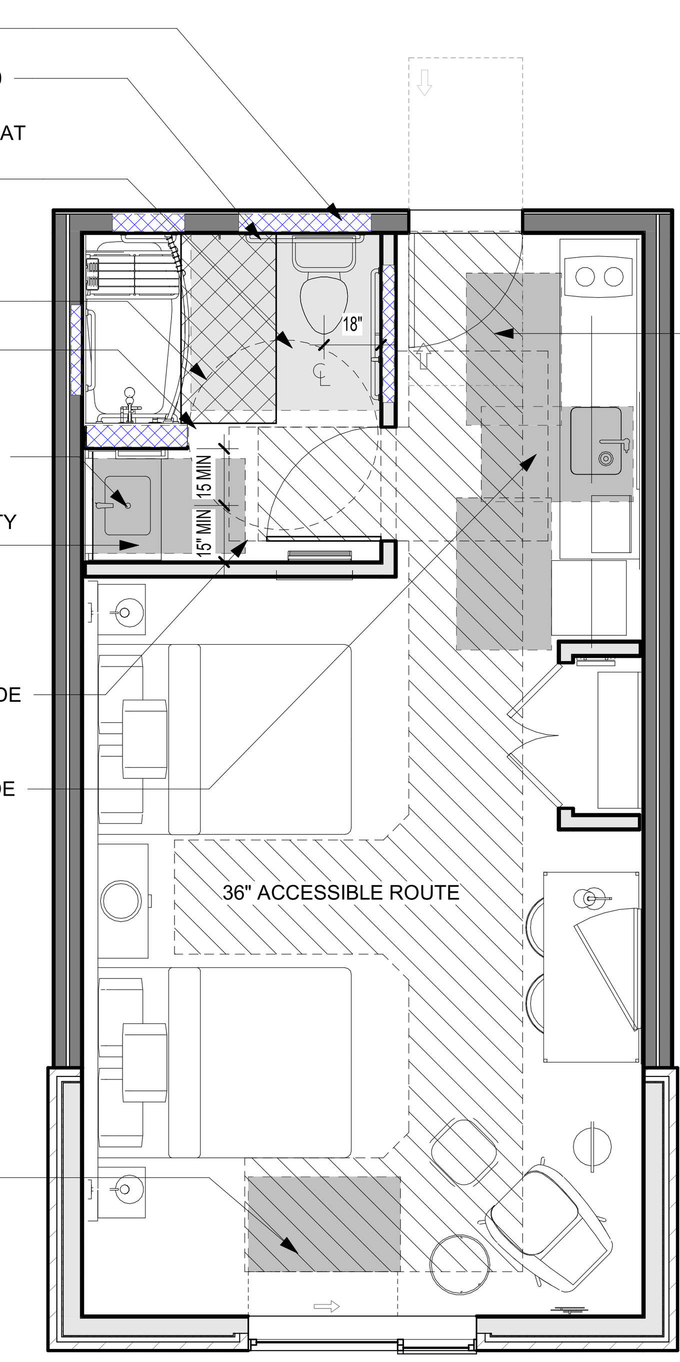
A2	LOCATE SHADE PULLS OPPOSITE SIDE OF PTAC UNIT
A3	FALSE PANEL WITH ACCESS TO ELECTRICAL BEHIND
A4	HOLD 4" SPACE BETWEEN SIDE OF REFRIGERATOR AND WALL TO ALLOW DOOR TO OPEN GREATER THAN 90 DEGREES FOR THE REMOVAL OF VEGETABLE DRAWER
A7	TEXTURED FINISH AND PAINT REQUIRED ON GUESTROOM EXTERIOR WALL.
A8	BLOCKING IN WALL FOR ALL CASEWORK, KITCHEN CABINETS, HEADBOARD, TV AND TV TRIM, SHOE CUBBY, MIRROR, CLOSET SYSTEM, FIXTURES, TOWEL BAR LADDER, GRAB BARS AND ACCESSORIES. COORDINATE LOCATION WITH MANUFACTURERS INSTALLATION REQUIREMENTS.
A9	INDICATE OUTLET LOCATION WITHIN WALL CONSTRUCTION TO AVOID OUTLETS OCCURING IN SAME CAVITY WITHIN PARTITION. SEE DETAIL ON STC DIAGRAM ON G-102.
A10	PROVIDE BLOCKING IN CEILING/WALL FOR SHADE MOUNT, TOP OF SHADE MOUNT ABUTTS CEILING WHERE CEILING IS 8'-0" & 9'-0". COORDINATE LOCATION WITH MANUFACTURER'S INSTALLATION REQUIREMENTS.
A20	PROVIDE WALL STOPS WHERE REQUIRED. PROVIDE WALL STOP BEHIND GUESTROOM ENTRY DOOR. REFER TO GUESTROOM OR PUBLIC SPACE BPM FOR DOOR HARDWARE.
A23	TV NICHE DETAIL DOES NOT APPLY TO EXTERIOR WALLS; TVs LOCATED ON EXTERIOR WALLS SHOULD BE SURFACE MOUNTED WITH FF&E TRIM X-226, REFER TO INTERIOR DESIGN SPECIFICATIONS MANUAL. TVs LOCATED IN THE DEMISING WALLS HAVE THE OPTION BETWEEN PROVIDING A NICHE WITH A SOUND BARRIER (REFER TO DETAIL 3/552) OR THE FF&E TRIM X-226. COORDINATE WITH THE INTERIOR DESIGN SPECIFICATION MANUAL WHEN PROVIDING X-226
A136	TV MOUNT COVER TO BE MOUNTED AT OPPOSITE OF ENTRY DOOR.
E1	GANG OUTLETS & SWITCHES AT THE LOCATION @ HEIGHT SHOWN. SEE TYPICAL GUESTROOM OUTLET HEIGHT IN G-300s.
E5	OUTLETS FOR TV, CABLE AND POWER FOR TV TO BE MOUNTED IN OPENING OF WALL MOUNTED TV PANEL. SEE DETAILS SHEET 552 OR B552 FOR TV OPENING DETAIL.
E6	PTAC FOR TYPICAL GUEST ROOM HVAC. SEE DETAILS ON 222 OR B222 FOR PTAC AND WALL SLEEVE INFORMATION.
E7	ELECTRIC PANEL, TO BE PAINTED SAME COLOR AS SURROUNDING WALL. INSTALL AS CLOSE AS POSSIBLE TO THE ENTRY DOOR WALL.
E9	THERMOSTAT. LOCATE THERMOSTAT WITH INTEGRAL OCCUPANCY SENSOR FACING SLEEPING AREA. COORDINATE WITH THE GUESTROOM MANAGEMENT SYSTEM (GRMS). SEE TYPICAL GUESTROOM OUTLET HEIGHT DETAILS ON G-300s AND ROOM ELEVATION FOR ADDITIONAL INFORMATION.
E18	TWO-TOGGLE SWITCH FOR GARBAGE DISPOSAL, AND UNDERCABINET LIGHT. PROVIDE JBOX(S) FOR MILLWORK LIGHTING, RE: ELEC.
E19	PROVIDE OUTLET FOR WALL SCONCE AT HEADBOARD WHERE SHOWN IN ELEVATION. SWITCH LOCATED ON LIGHT FIXTURE.
E27	HIGH OUTLET BEHIND FASCIA FOR SOLAR SHADE, RE: ELEC.
ID1	TEXTURED WALL COATING IS THE REQUIRED FINISH FOR EXTERIOR GUESTROOM WALLS.
ID2	ALL EXTERIOR CORNERS SHALL HAVE FULL HEIGHT CORNER GUARDS.
ID3	REFER TO INTERIOR DESIGN SPECIFICATION MANUAL WINDOW TREATMENT SPECIFICATIONS AND ELEVATIONS FOR ROLLER SHADE INFORMATION
ID6	WHERE REQUIRED FOR ACCESIBILITY, PROVIDE MOTORIZED SHADES. REFER TO DRAPERY MANUAL AND ID SPEC MANUAL FOR ADDITIONAL INFORMATION AND POWER REQUIREMENTS.
ID25	4" COUNTERTOP BACKSPLASH TO BE INSTALLED ONLY IF WALL PAINT OR WALL COVERING IS INSTALLED. IF OPTIONAL TILE BACKSPLASH IS INSTALLED, TILE IS TO RUN FROM COUNTERTOP TO UNDER CUBBIES AND STOP AT EDGE OF COUNTERTOP (DOES NOT RUN BEHIND THE REFRIGERATOR). USE METAL EDGE TIRM AT TILE VERTICAL EDGES. TILE BACKSPLASH MUST BE INSTALLED ON SIDEWALL WHEN COOKTOP OR RANGE IS DIRECTLY ADJACENT, AND IN THAT INSTANCE SHOULD BE ON BACKWALL TOO. TILE TO BE TW-001 AND GROUT TO BE GR-005, SEE GUESTROOM BPM.



4 ACC STUDIO QQ - FINISH
1/4" = 1'-0"



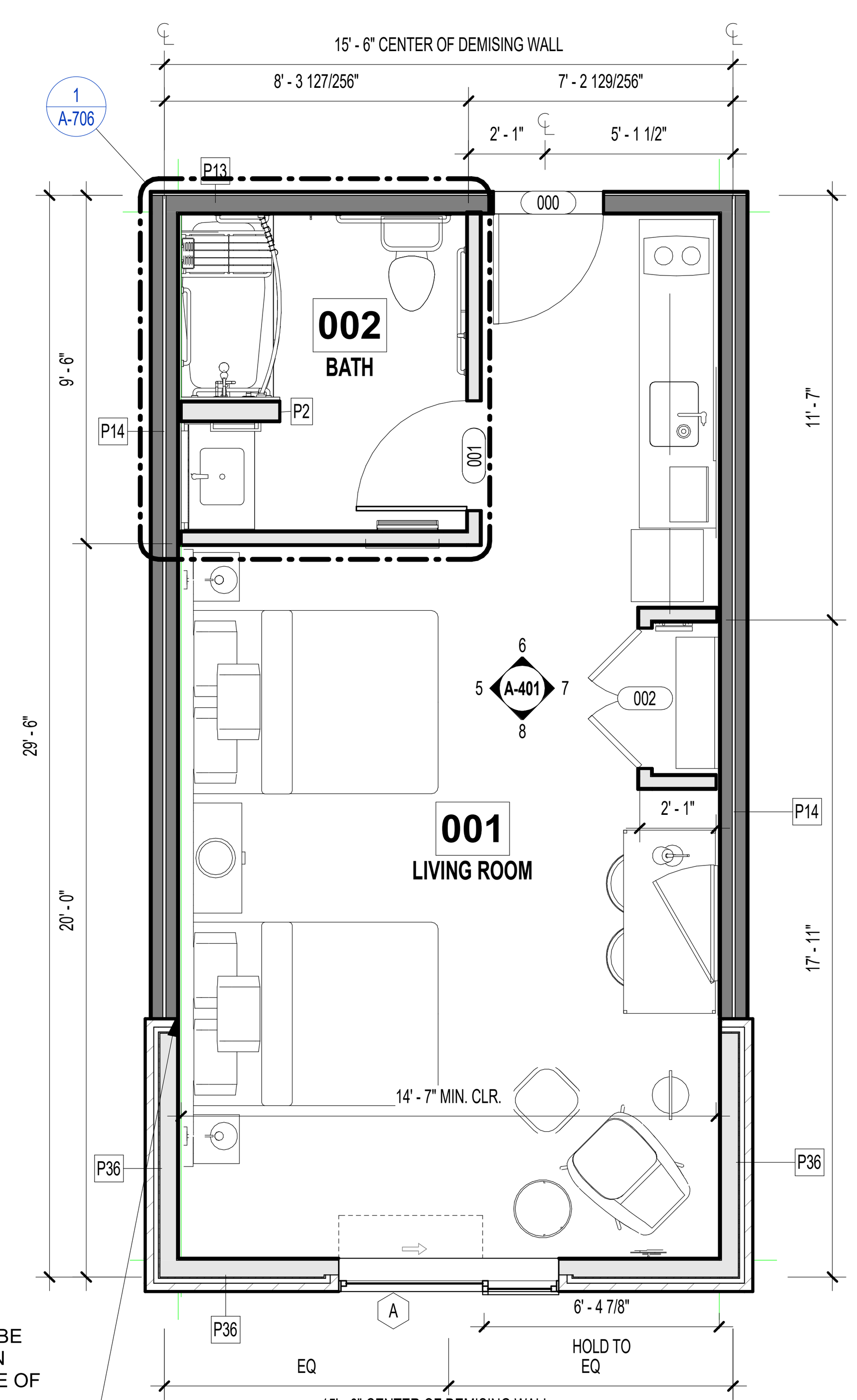
3 ACC STUDIO QQ - RCP
1/4" = 1'-0"



RE: G-300 FOR ACCESSIBLE MOUNTING HEIGHTS, TYP

NOTE: ALL DIMS ON CLEAR SPACE PLANS ARE TO FINISH FACE

2 ACC STUDIO QQ - CS
1/4" = 1'-0"



RESILIENT CHANNEL TO BE INSTALLED ON INTERIOR SIDE OF THIS WALL

1 ACC STUDIO QQ - FP
1/4" = 1'-0"

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
2 01/19/2024 Addendum #2
3 03/06/2024 IN RESPONSE TO GC COMMENTS

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DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA

STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
03/06/2024

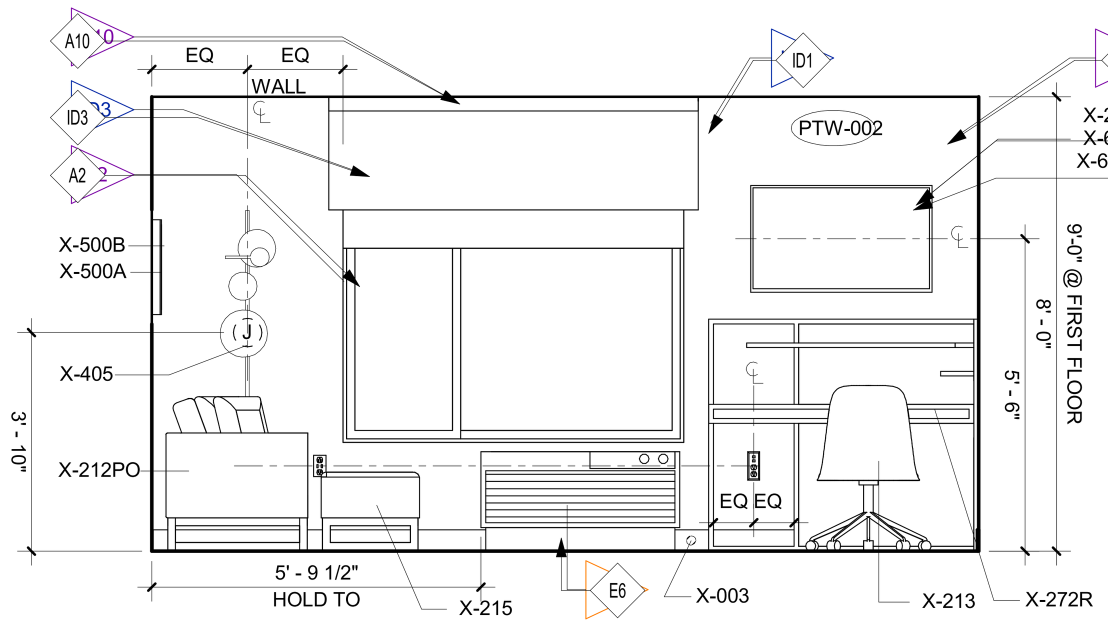
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
ACC. STUDIO QQ UNIT PLAN

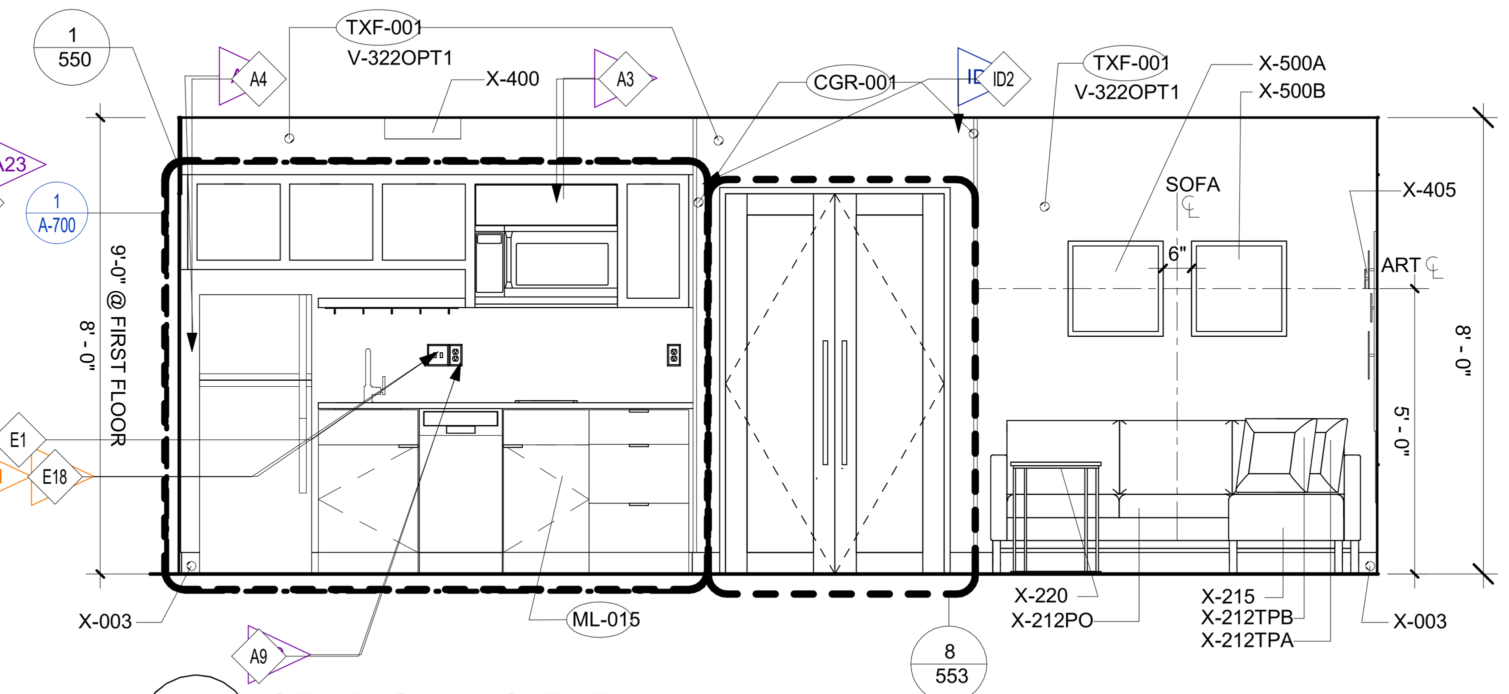
PROJECT NUMBER: 23098

SHEET NUMBER:

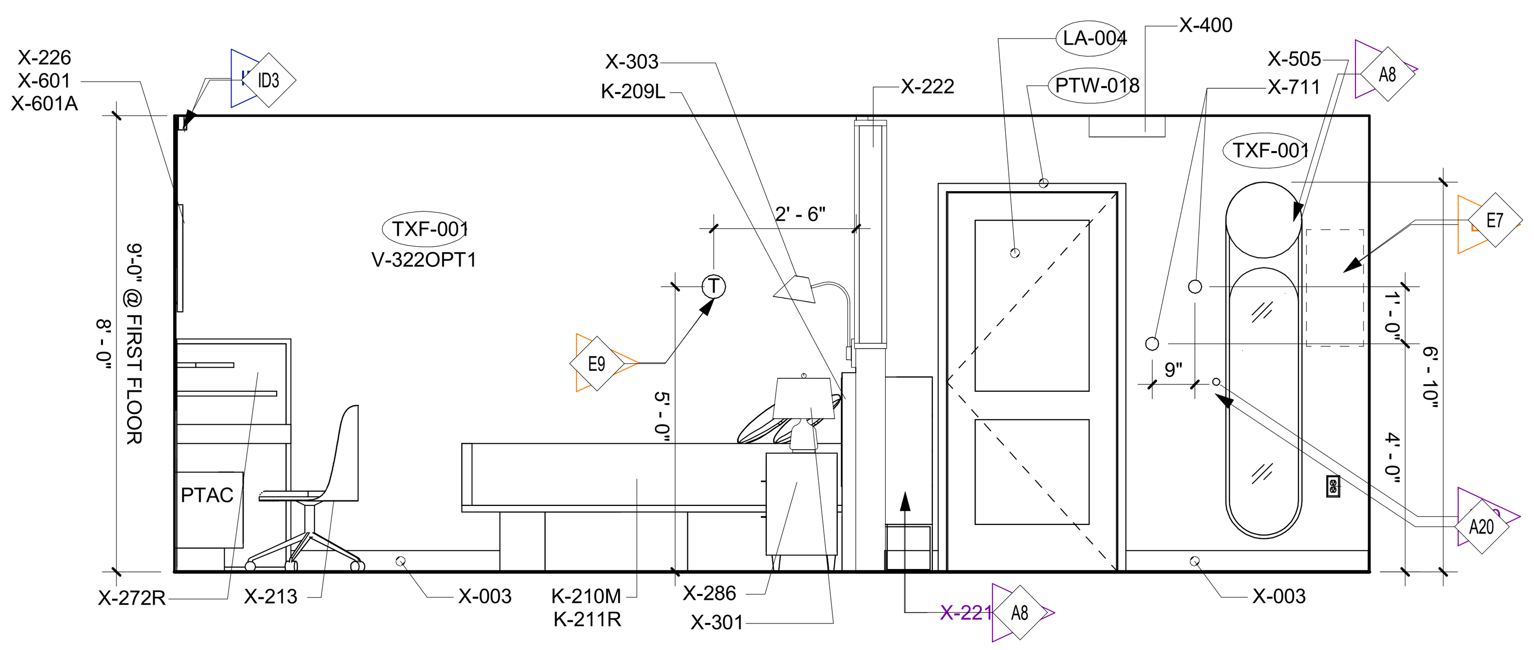
A-401



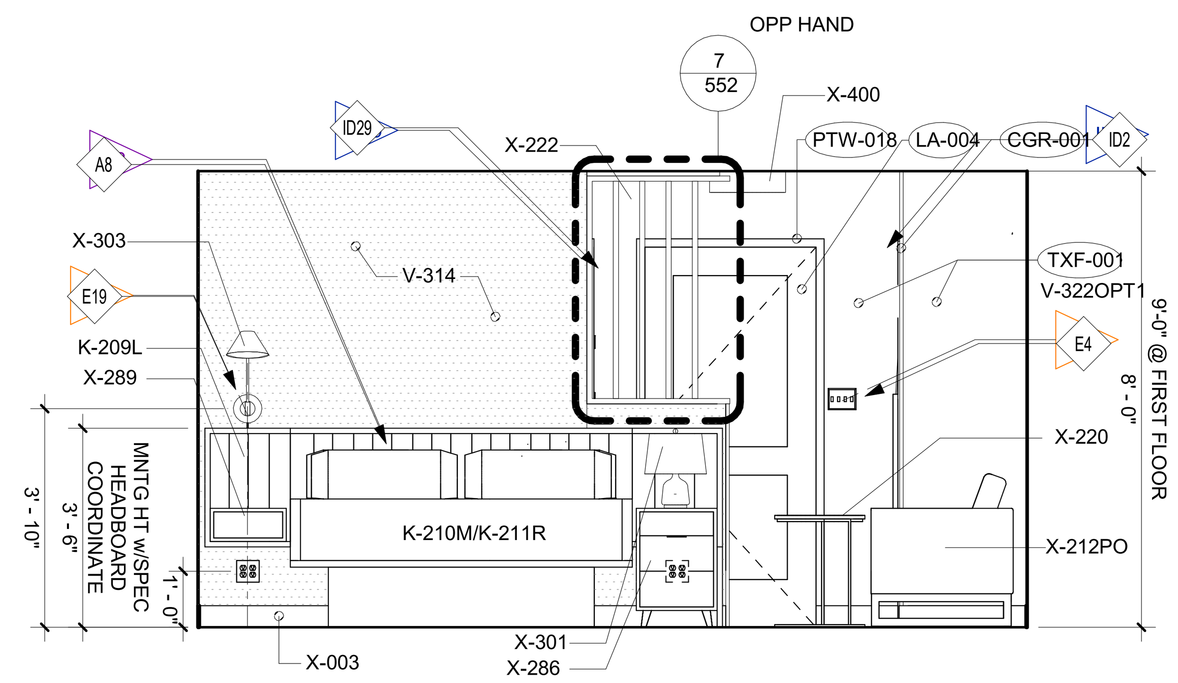
8 STUDIO KING-ELEV4
3/8" = 1'-0"



7 STUDIO KING-ELEV2
3/8" = 1'-0"

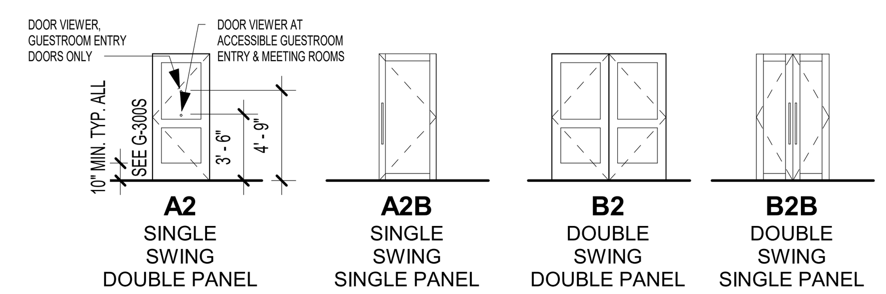


6 STUDIO KING-ELEV1
3/8" = 1'-0"

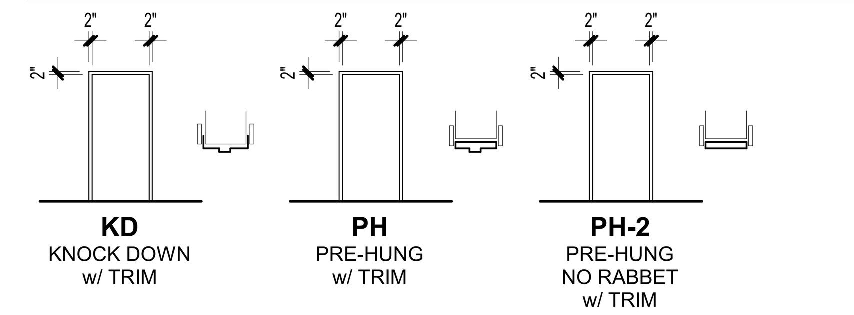


5 STUDIO KING-ELEV3
3/8" = 1'-0"

DOOR TYPES



FRAME TYPES



DOOR SCHEDULE - UNIT DOORS (BY UNIT TYPE)

Mark	Width	Height	Thickness	Fire Rating (Minutes)	Door Type	Frame Type	Hardware Group	Comments
000	3' - 0"	6' - 8"	1 3/4"	20	A2	HM		
001	3' - 0"	6' - 8"	1 3/8"		A2			
002	3' - 10"	6' - 8"	1 3/4"		B2B			

ROOM FINISH SCHEDULE - UNITS

Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
001	LIVING ROOM	PER PLAN	BASE, PER ELEV.	WALL COVERING, PER ELEV.	PAINT ON GYP	
002	BATH	PER PLAN	BASE, PER ELEV.	WALL COVERING, PER ELEV.	PAINT ON GYP	

NOTE: UNIT FINISH SCHEDULES ARE PER THE BRAND PROTOTYPE. FINISHES ARE TO BE COORDINATED WITH THE INTERIOR DESIGNER.

3

REFERENCE A-101 FOR PLAN LEGEND

REFERENCE G-003 FOR GENERAL NOTES

KEYNOTE LEGEND

A2	LOCATE SHADE PULLS OPPOSITE SIDE OF PTAC UNIT
A3	FALSE PANEL WITH ACCESS TO ELECTRICAL BEHIND
A4	HOLD 4" SPACE BETWEEN SIDE OF REFRIGERATOR AND WALL TO ALLOW DOOR TO OPEN GREATER THAN 90 DEGREES FOR THE REMOVAL OF VEGETABLE DRAWER
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A10	PROVIDE BLOCKING IN CEILING/WALL FOR SHADE MOUNT. TOP OF SHADE MOUNT ABUTTS CEILING WHERE CEILING IS 8'-0" & 9'-0". COORDINATE LOCATION WITH MANUFACTURER'S INSTALLATION REQUIREMENTS.
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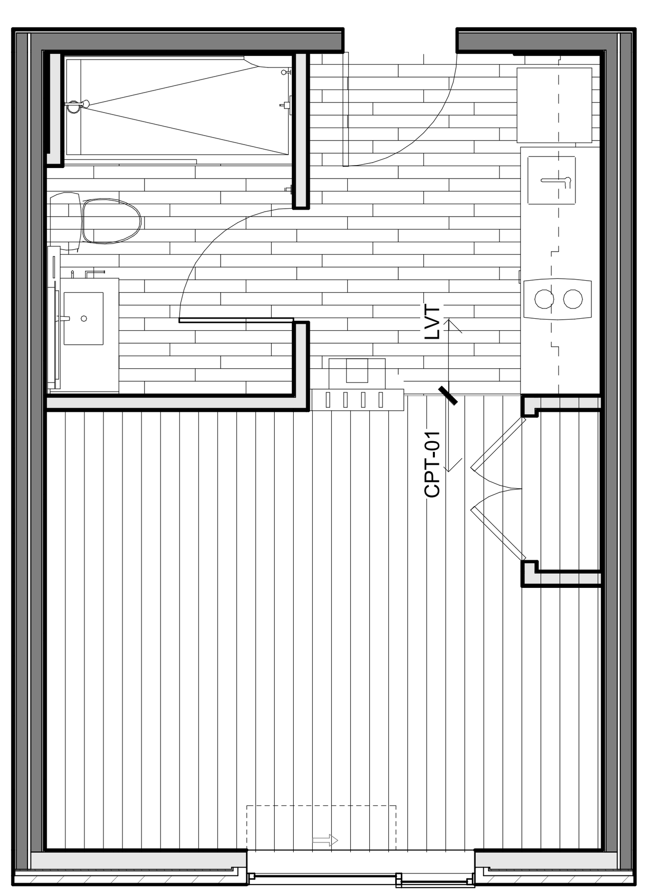
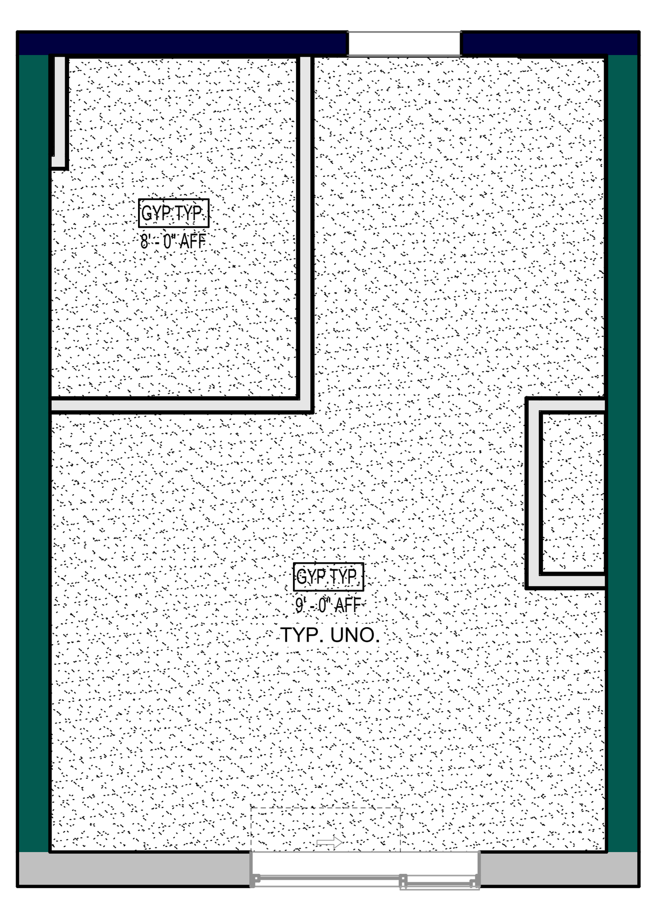
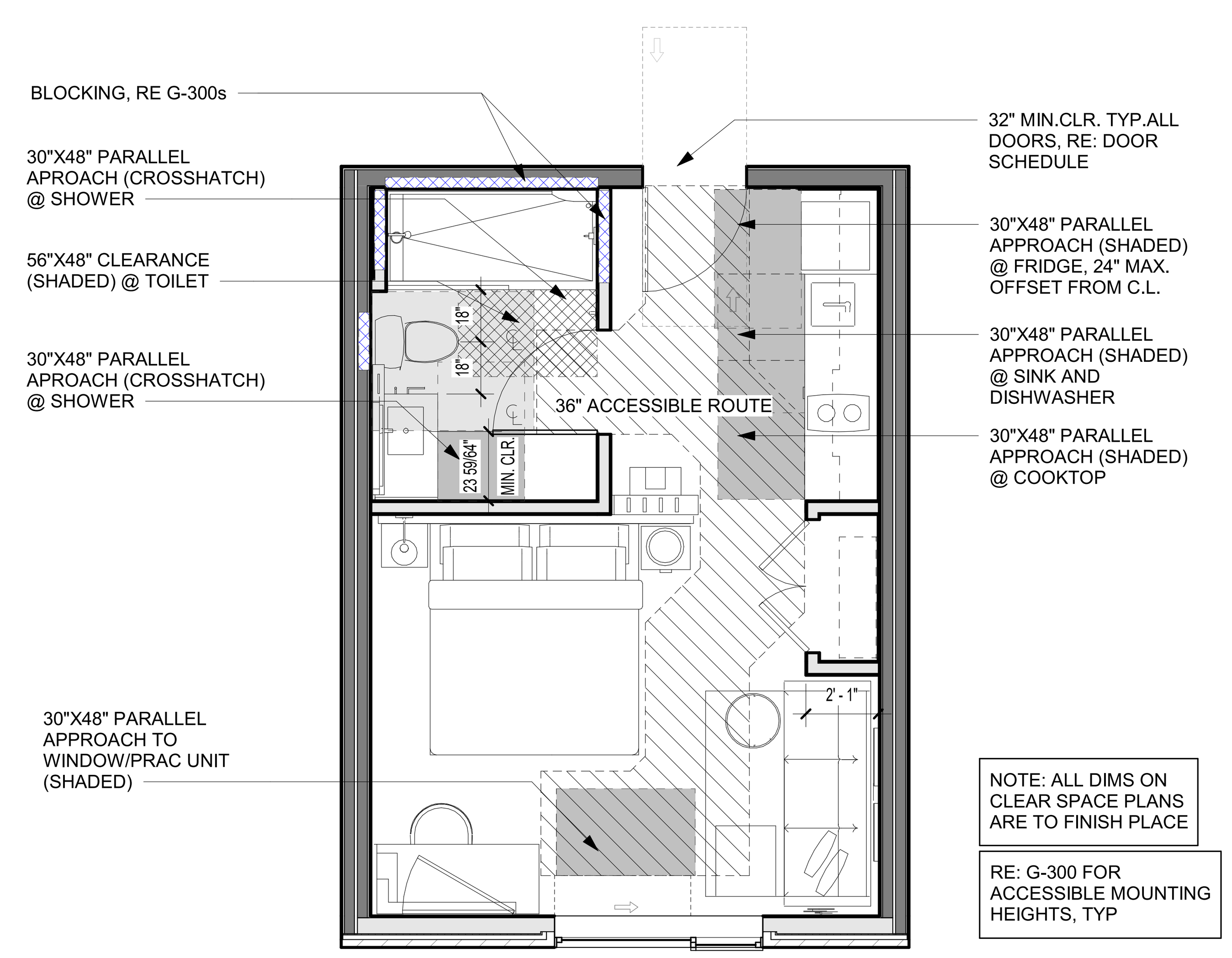
A23	TV NICHE DETAIL DOES NOT APPLY TO EXTERIOR WALLS; TVs LOCATED ON EXTERIOR WALLS SHOULD BE SURFACE MOUNTED WITH FF&E TRIM X-226, REFER TO INTERIOR DESIGN SPECIFICATIONS MANUAL. TVs LOCATED IN THE DEMISING WALLS HAVE THE OPTION BETWEEN PROVIDING A NICHE WITH A SOUND BARRIER (REFER TO DETAIL 3/552) OR THE FF&E TRIM X-226. COORDINATE WITH THE INTERIOR DESIGN SPECIFICATION MANUAL WHEN PROVIDING X-226
E1	GANG OUTLETS & SWITCHES AT THE LOCATION @ HEIGHT SHOWN. SEE TYPICAL GUESTROOM OUTLET HEIGHT IN G-300s.
E4	MASTER DEVICE OR LIGHT SWITCH WITH SIGNAGE TO CONTROL ALL HARDWIRED LIGHTS IN GUESTROOM, WITH EXCEPTION OF BATHROOM. PROVIDE SEPARATE SWITCHES FOR UPPER CABINET, UNDER SHELF, UNDER CABINET AND DECORATIVE WALL SCONCES. INTERFACE THE MASTER DEVICE WITH THE GUESTROOM MANAGEMENT SYSTEM (GRMS). SEE ELEC. & SPEC.
E5	OUTLETS FOR TV, CABLE AND POWER FOR TV TO BE MOUNTED IN OPENING OF WALL MOUNTED TV PANEL. SEE DETAILS SHEET 552 OR B552 FOR TV OPENING DETAIL.
E6	PTAC FOR TYPICAL GUEST ROOM HVAC. SEE DETAILS ON 222 OR B222 FOR PTAC AND WALL SLEEVE INFORMATION.
E7	ELECTRIC PANEL, TO BE PAINTED SAME COLOR AS SURROUNDING WALL. INSTALL AS CLOSE AS POSSIBLE TO THE ENTRY DOOR WALL.
E9	THERMOSTAT. LOCATE THERMOSTAT WITH INTEGRAL OCCUPANCY SENSOR FACING SLEEPING AREA. COORDINATE WITH THE GUESTROOM MANAGEMENT SYSTEM (GRMS). SEE TYPICAL GUESTROOM OUTLET HEIGHT DETAILS ON G-300s AND ROOM ELEVATION FOR ADDITIONAL INFORMATION.
E18	TWO-TOGGLE SWITCH FOR GARBAGE DISPOSAL, AND UNDERCABINET LIGHT. PROVIDE JBOX(S) FOR MILLWORK LIGHTING, RE: ELEC.
E19	PROVIDE OUTLET FOR WALL SCONCE AT HEADBOARD WHERE SHOWN IN ELEVATION. SWITCH LOCATED ON LIGHT FIXTURE.
ID1	TEXTURED WALL COATING IS THE REQUIRED FINISH FOR EXTERIOR GUESTROOM WALLS.
ID2	ALL EXTERIOR CORNERS SHALL HAVE FULL HEIGHT CORNER GUARDS.
ID3	REFER TO INTERIOR DESIGN SPECIFICATION MANUAL WINDOW TREATMENT SPECIFICATIONS AND ELEVATIONS FOR ROLLER SHADE INFORMATION
ID29	WALLCOVERING TO WRAP AROUND ALL WALL CORNERS TRANSITIONING TO SLAT WALL.



4 STUDIO KING - FINISH
1/4" = 1'-0"



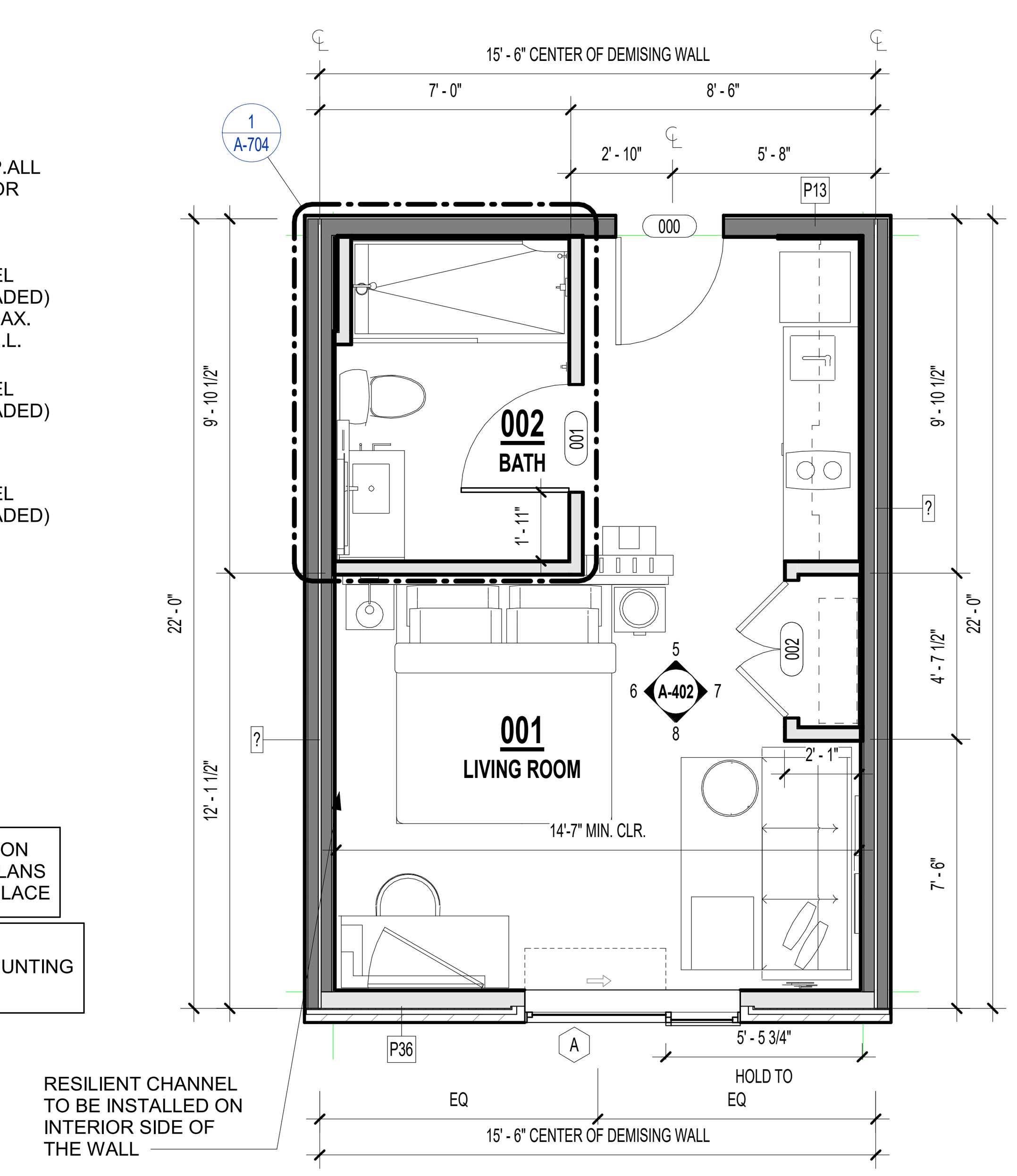
3 STUDIO KING - RCP
1/4" = 1'-0"



NOTE: ALL DIMS ON CLEAR SPACE PLANS ARE TO FINISH PLACE

RE: G-300 FOR ACCESSIBLE MOUNTING HEIGHTS, TYP

2 STUDIO KING - CS
1/4" = 1'-0"



1 STUDIO KING - FP
1/4" = 1'-0"

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:

2	01/19/2024	Addendum #2
3	03/06/2024	IN RESPONSE TO GC COMMENTS

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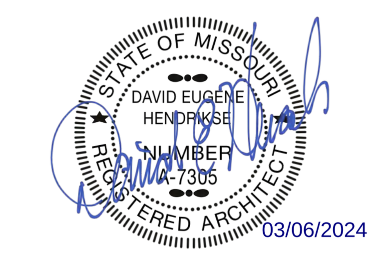


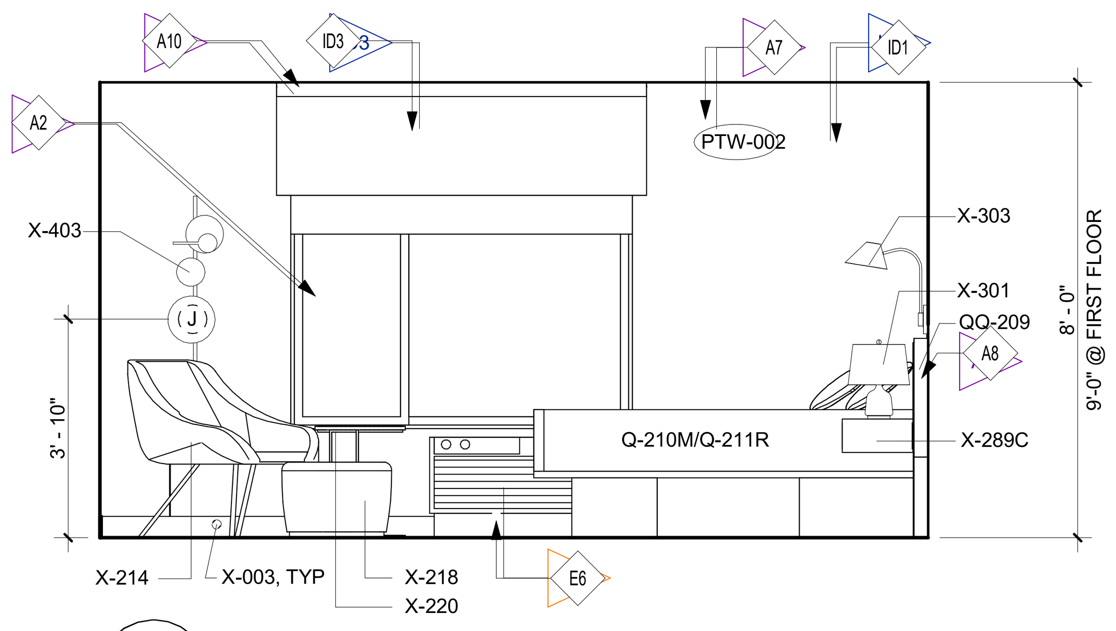
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
STUDIO KING UNIT PLAN

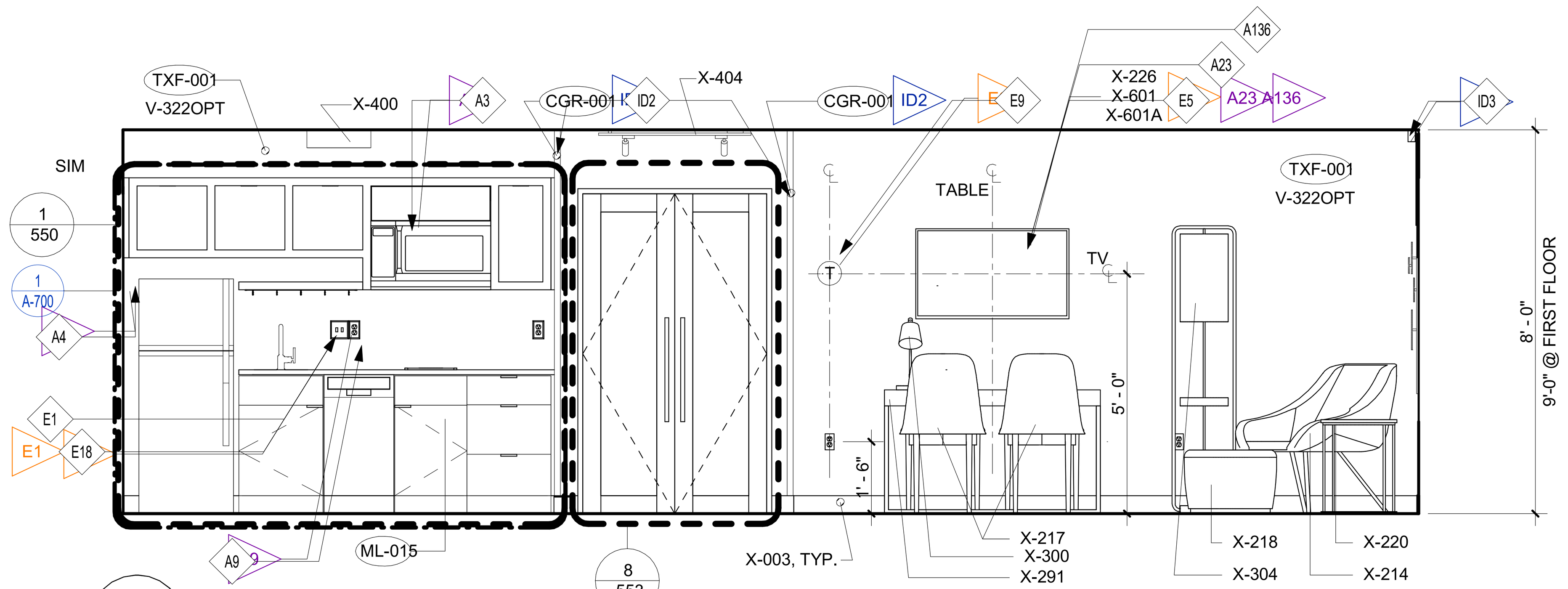
PROJECT NUMBER: 23098

SHEET NUMBER:

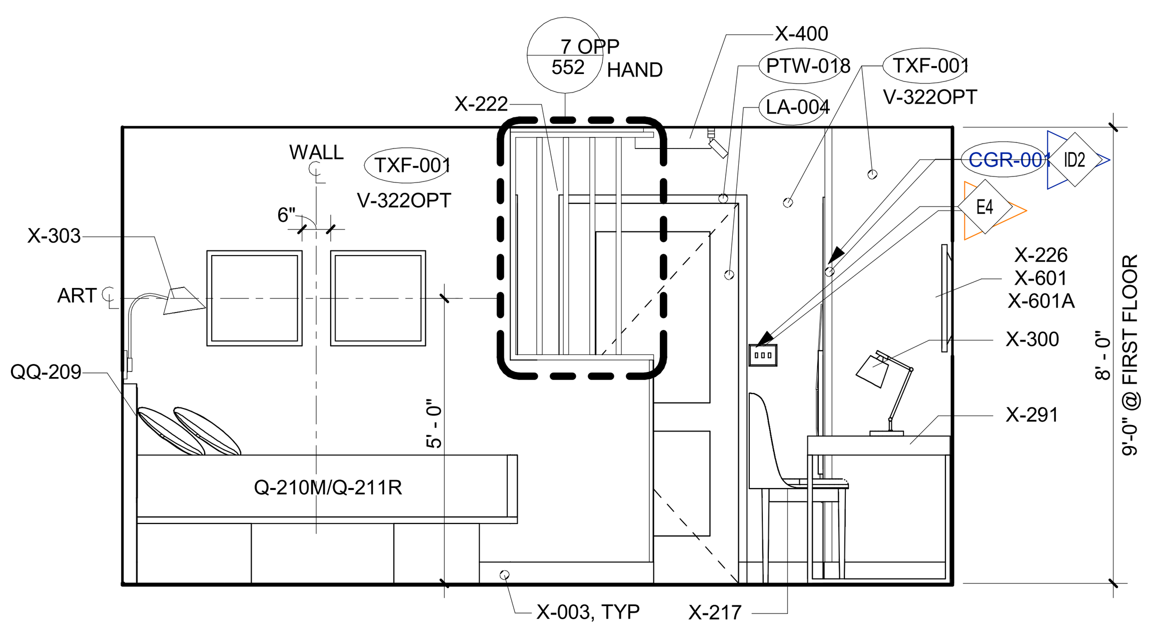
A-402



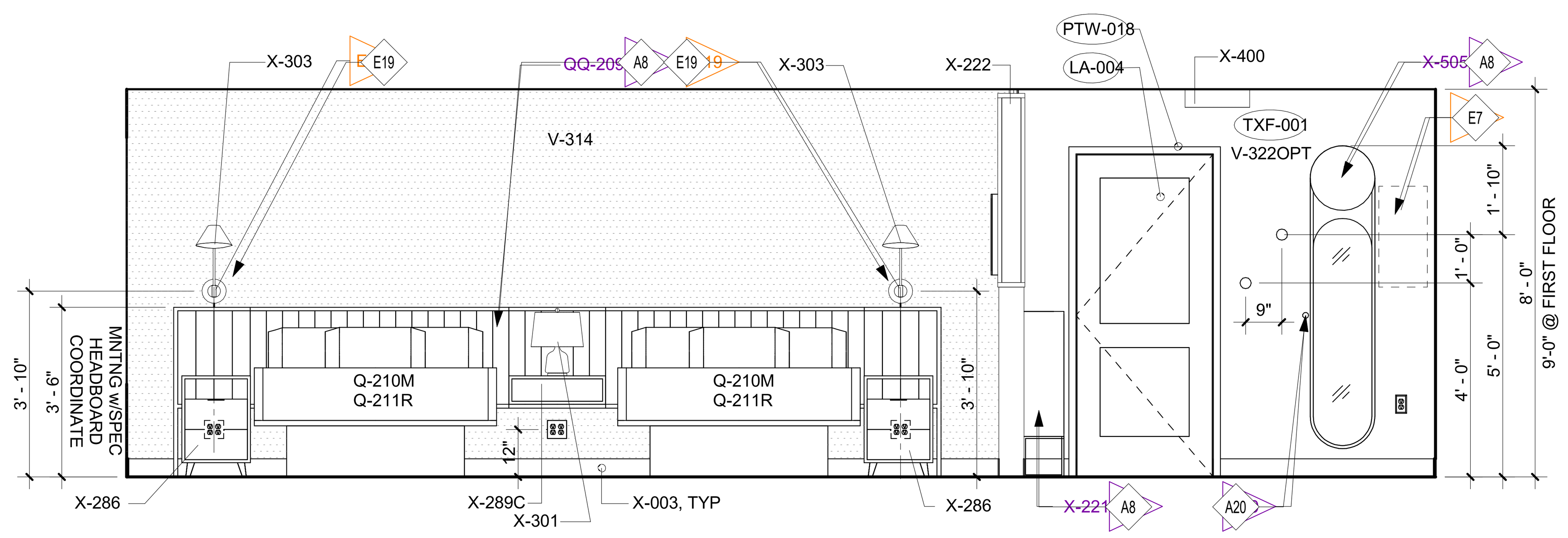
8 STUDIO QQ CENTER-ELEV4
3/8" = 1'-0"



7 STUDIO QQ CENTER-ELEV3
3/8" = 1'-0"



6 STUDIO QQ CENTER-ELEV2
3/8" = 1'-0"

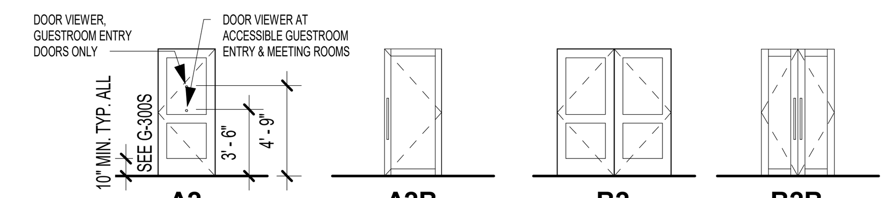


5 STUDIO QQ CENTER-ELEV1
3/8" = 1'-0"

REFERENCE G-003 FOR GENERAL NOTES

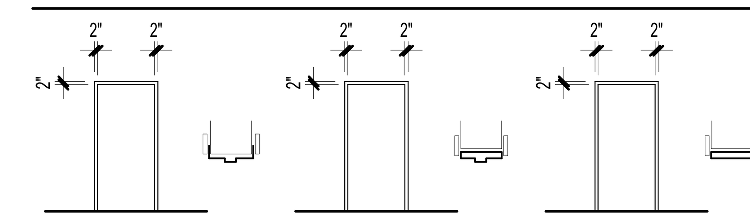
REFERENCE A-101 FOR PLAN LEGEND

DOOR TYPES



A2	A2B	B2	B2B
SINGLE SWING DOUBLE PANEL	SINGLE SWING SINGLE PANEL	DOUBLE SWING DOUBLE PANEL	DOUBLE SWING SINGLE PANEL

FRAME TYPES



KD	PH	PH-2
KNOCK DOWN w/ TRIM	PRE-HUNG w/ TRIM	PRE-HUNG NO RABBET w/ TRIM

DOOR SCHEDULE - UNIT DOORS (BY UNIT TYPE)

Mark	Width	Height	Thickness	Fire Rating (Minutes)	Door Type	Frame Type	Hardware Group	Comments
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NOTE: UNIT FINISH SCHEDULES ARE PER THE BRAND PROTOTYPE. FINISHES ARE TO BE COORDINATED WITH THE INTERIOR DESIGNER.

3

KEYNOTE LEGEND

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A3	FALSE PANEL WITH ACCESS TO ELECTRICAL BEHIND
A4	HOLD 4" SPACE BETWEEN SIDE OF REFRIGERATOR AND WALL TO ALLOW DOOR TO OPEN GREATER THAN 90 DEGREES FOR THE REMOVAL OF VEGETABLE DRAWER
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A23	TV NICHE DETAIL DOES NOT APPLY TO EXTERIOR WALLS; TVs LOCATED ON EXTERIOR WALLS SHOULD BE SURFACE MOUNTED WITH FF&E TRIM X-226, REFER TO INTERIOR DESIGN SPECIFICATIONS MANUAL. TVs LOCATED IN THE DEMISING WALLS HAVE THE OPTION BETWEEN PROVIDING A NICHE WITH A SOUND BARRIER (REFER TO DETAIL 3/552) OR THE FF&E TRIM X-226. COORDINATE WITH THE INTERIOR DESIGN SPECIFICATION MANUAL WHEN PROVIDING X-226
A136	TV MOUNT COVER TO BE MOUNTED AT OPPOSITE OF ENTRY DOOR.
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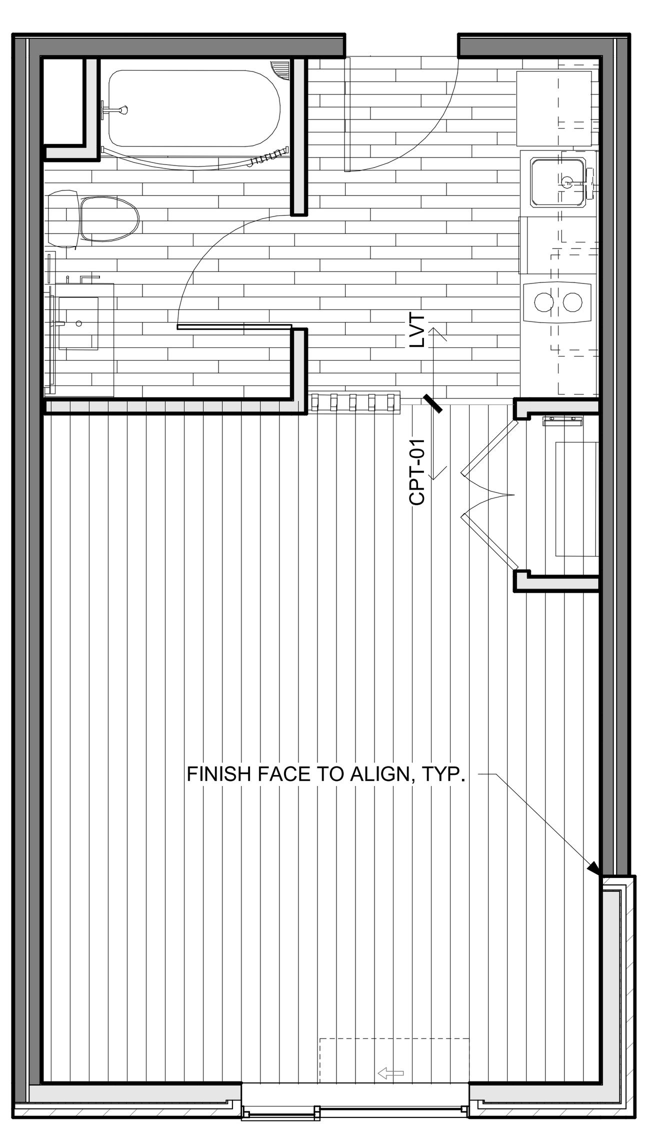
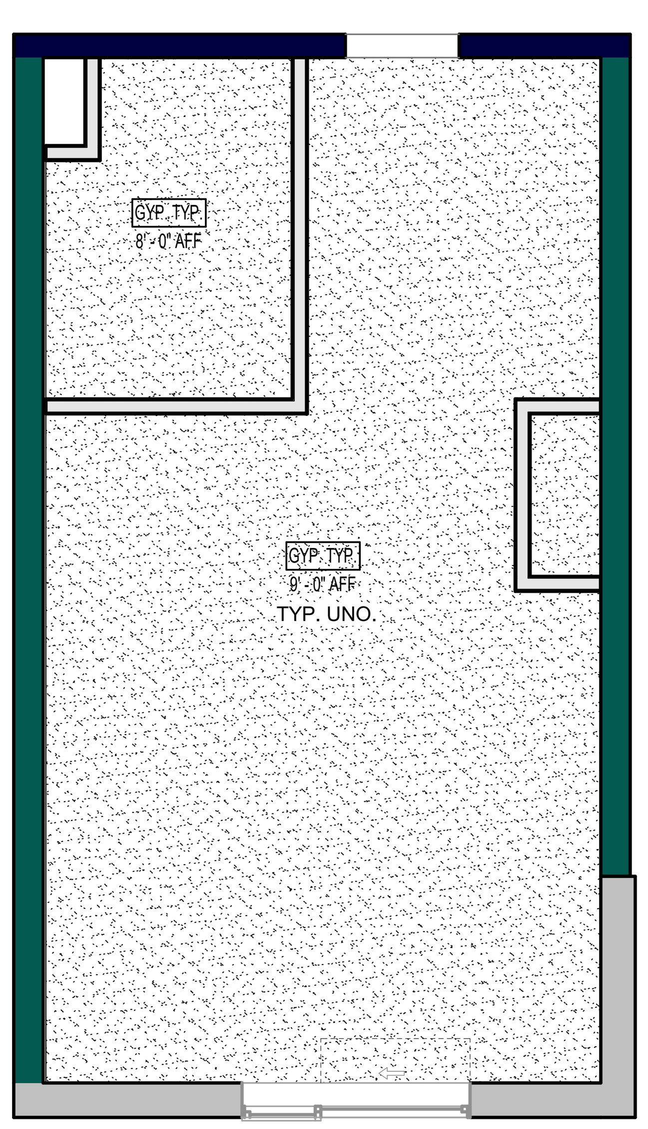
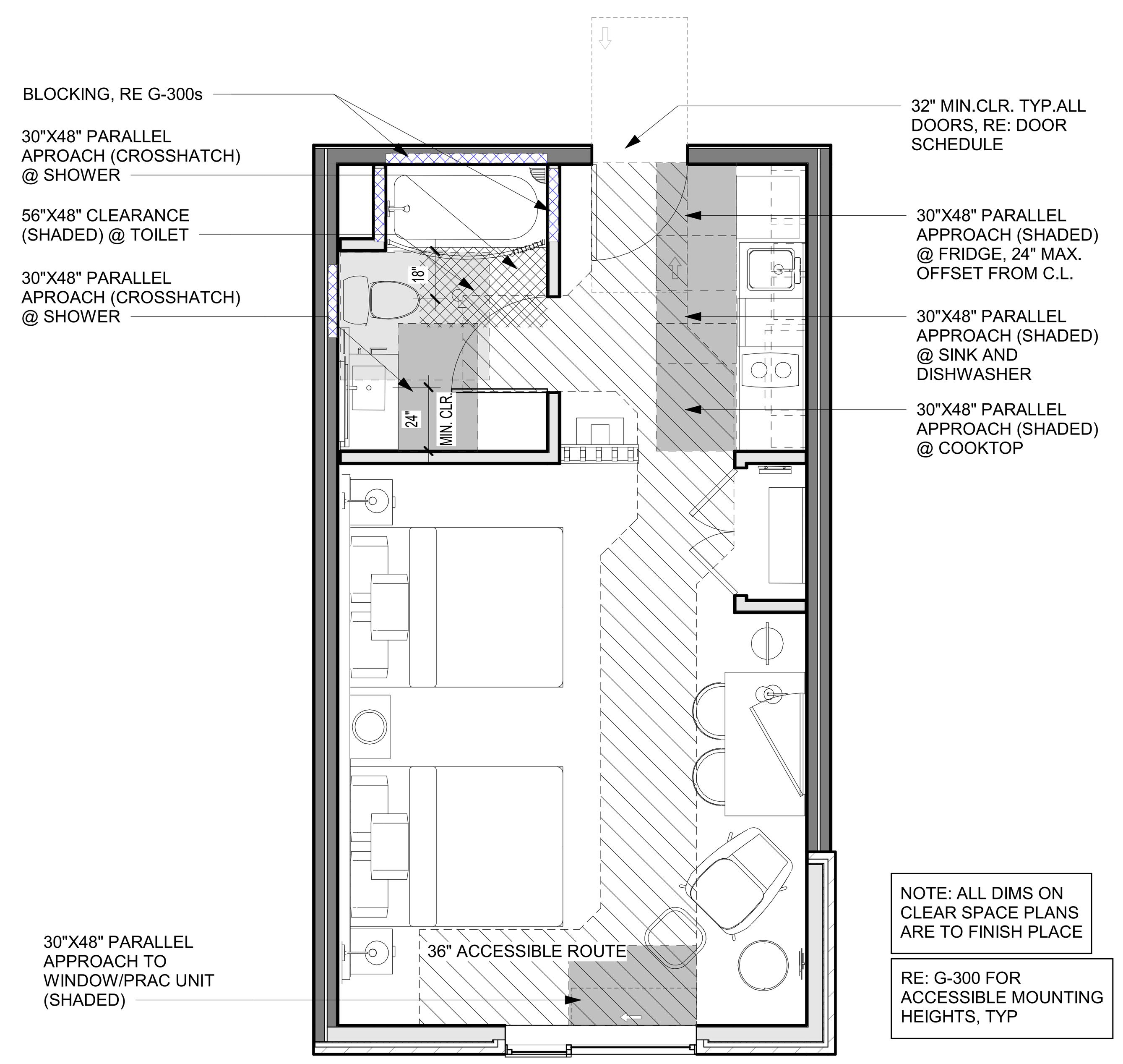
E5	OUTLETS FOR TV, CABLE AND POWER FOR TV TO BE MOUNTED IN OPENING OF WALL MOUNTED TV PANEL. SEE DETAILS SHEET 552 OR B552 FOR TV OPENING DETAIL.
E6	PTAC FOR TYPICAL GUEST ROOM HVAC. SEE DETAILS ON 222 OR B222 FOR PTAC AND WALL SLEEVE INFORMATION.
E7	ELECTRIC PANEL, TO BE PAINTED SAME COLOR AS SURROUNDING WALL. INSTALL AS CLOSE AS POSSIBLE TO THE ENTRY DOOR WALL.
E9	THERMOSTAT. LOCATE THERMOSTAT WITH INTEGRAL OCCUPANCY SENSOR FACING SLEEPING AREA. COORDINATE WITH THE GUESTROOM MANAGEMENT SYSTEM (GRMS). SEE TYPICAL GUESTROOM OUTLET HEIGHT DETAILS ON G-300s AND ROOM ELEVATION FOR ADDITIONAL INFORMATION.
E18	TWO-TOGGLE SWITCH FOR GARBAGE DISPOSAL, AND UNDERCABINET LIGHT. PROVIDE JBOX(S) FOR MILLWORK LIGHTING, RE: ELEC.
E19	PROVIDE OUTLET FOR WALL SCONCE AT HEADBOARD WHERE SHOWN IN ELEVATION. SWITCH LOCATED ON LIGHT FIXTURE.
ID1	TEXTURED WALL COATING IS THE REQUIRED FINISH FOR EXTERIOR GUESTROOM WALLS.
ID2	ALL EXTERIOR CORNERS SHALL HAVE FULL HEIGHT CORNER GUARDS.
ID3	REFER TO INTERIOR DESIGN SPECIFICATION MANUAL WINDOW TREATMENT SPECIFICATIONS AND ELEVATIONS FOR ROLLER SHADE INFORMATION



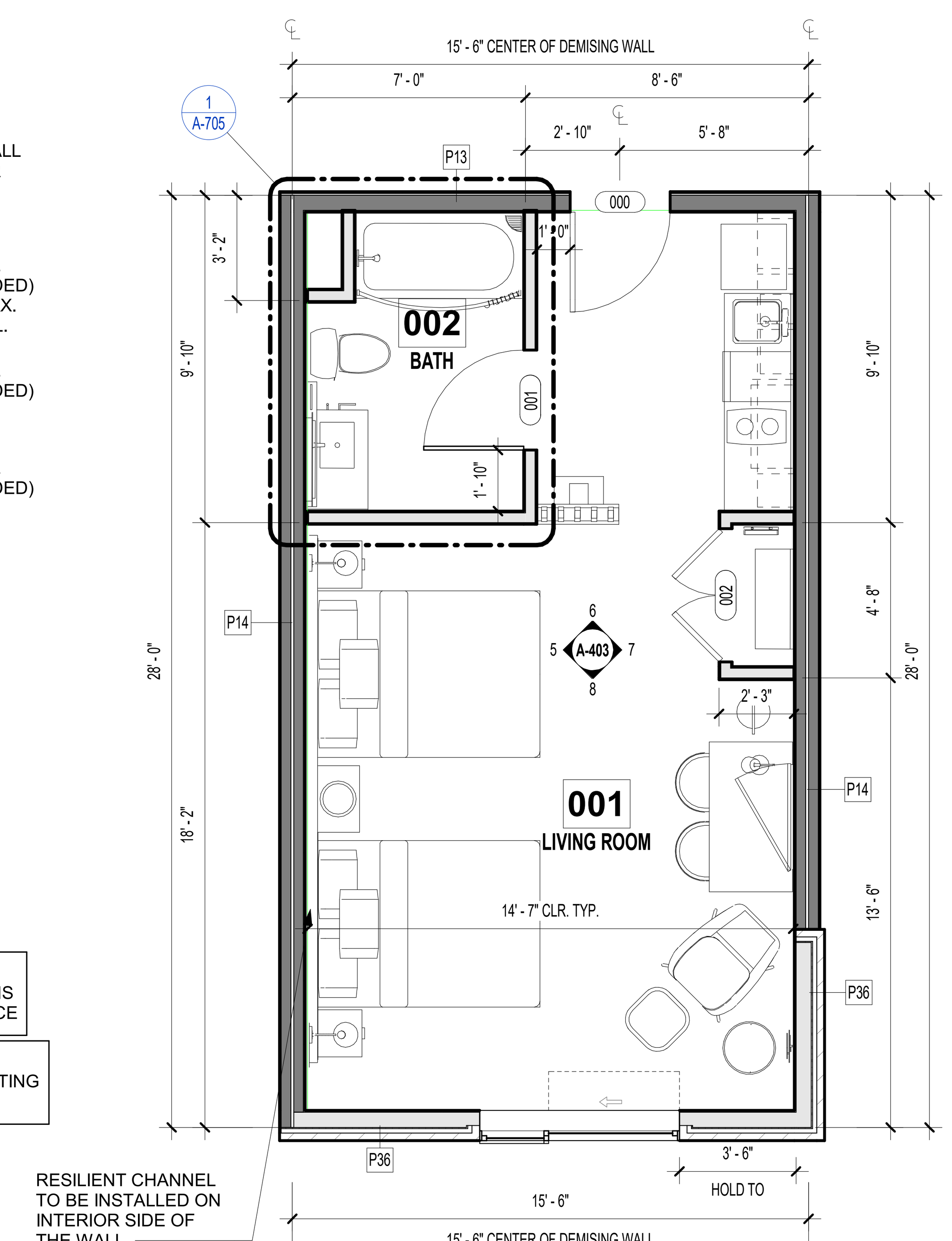
4 STUDIO QQ CENTER - FINISH
1/4" = 1'-0"



3 STUDIO QQ CENTER - RCP
1/4" = 1'-0"



2 STUDIO QQ CENTER - CS
1/4" = 1'-0"



1 STUDIO QQ CENTER - FP
1/4" = 1'-0"

PRINTS ISSUED

11/01/2023 - CITY SUBMITTAL

REVISIONS:

2	01/19/2024	Addendum #2
3	03/06/2024	IN RESPONSE TO GC COMMENTS

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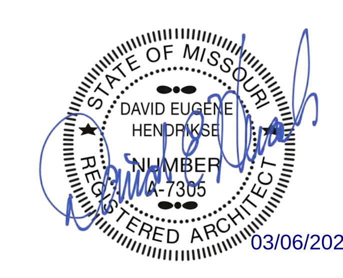


TOWNEPLACE SUITES

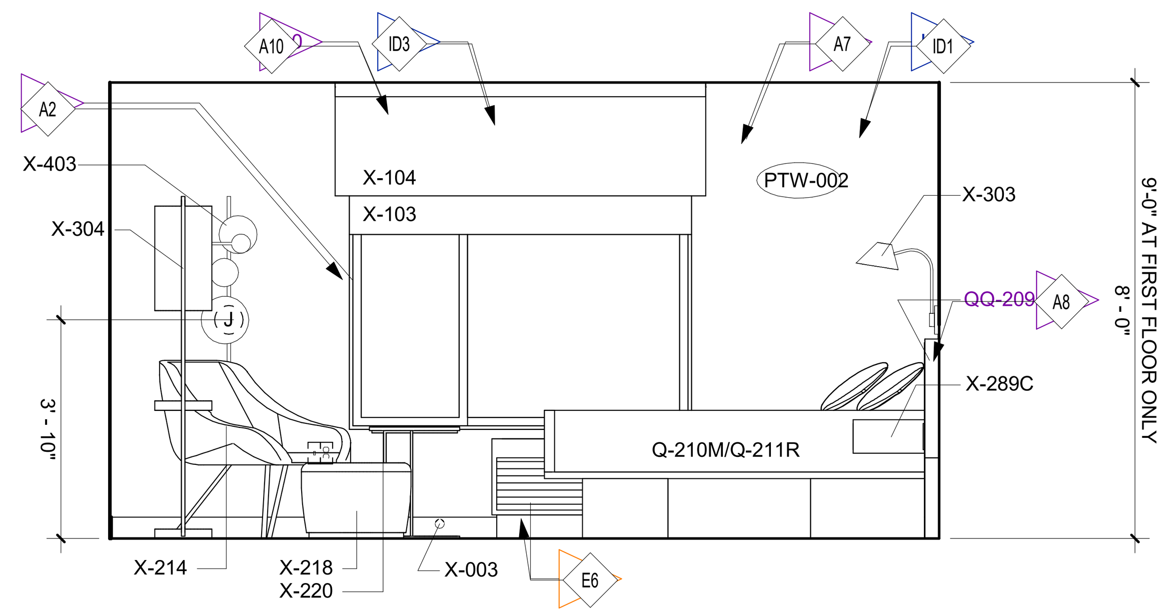
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
STUDIO QQ CENTER UNIT PLAN

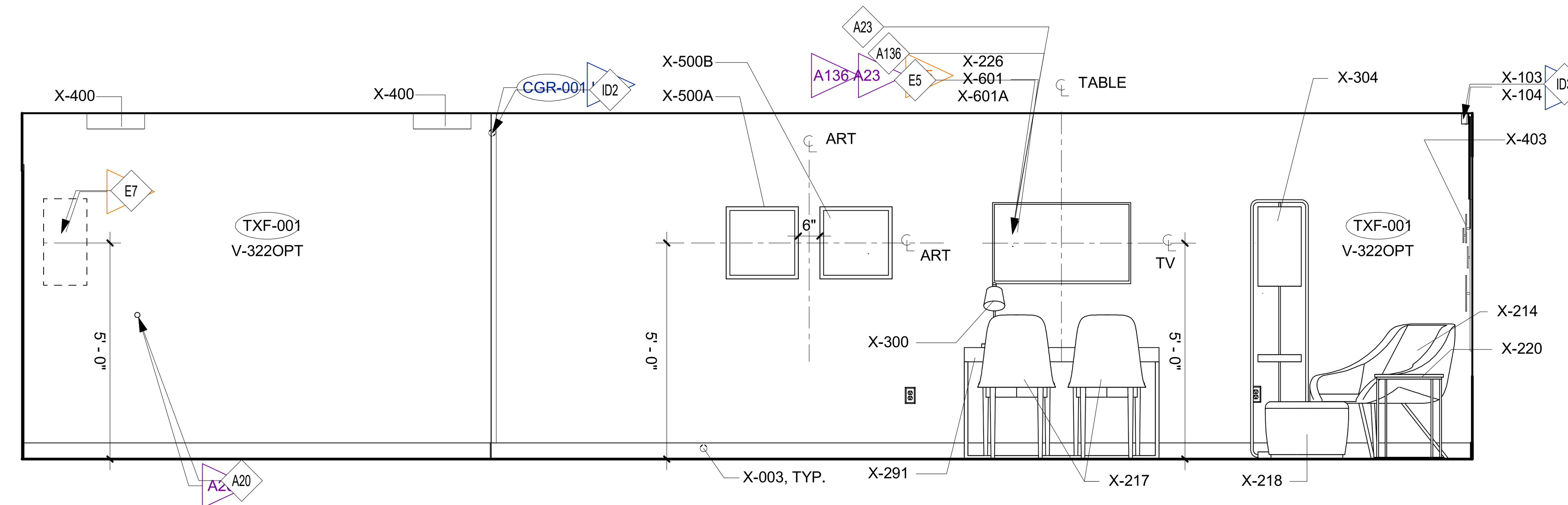
PROJECT NUMBER: 23098

SHEET NUMBER:

A-403

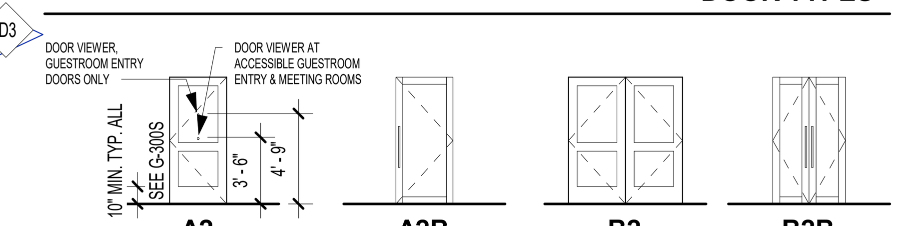


8 STUDIO QQ END-ELEV4
3/8" = 1'-0"



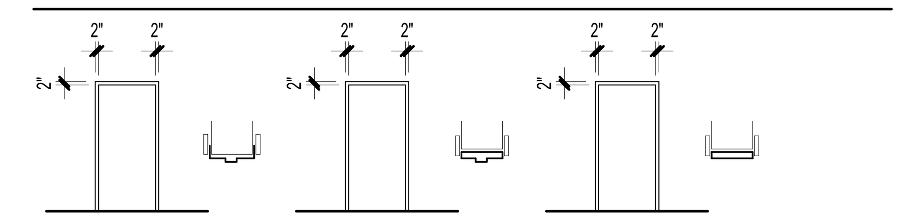
7 STUDIO QQ END-ELEV3
3/8" = 1'-0"

DOOR TYPES

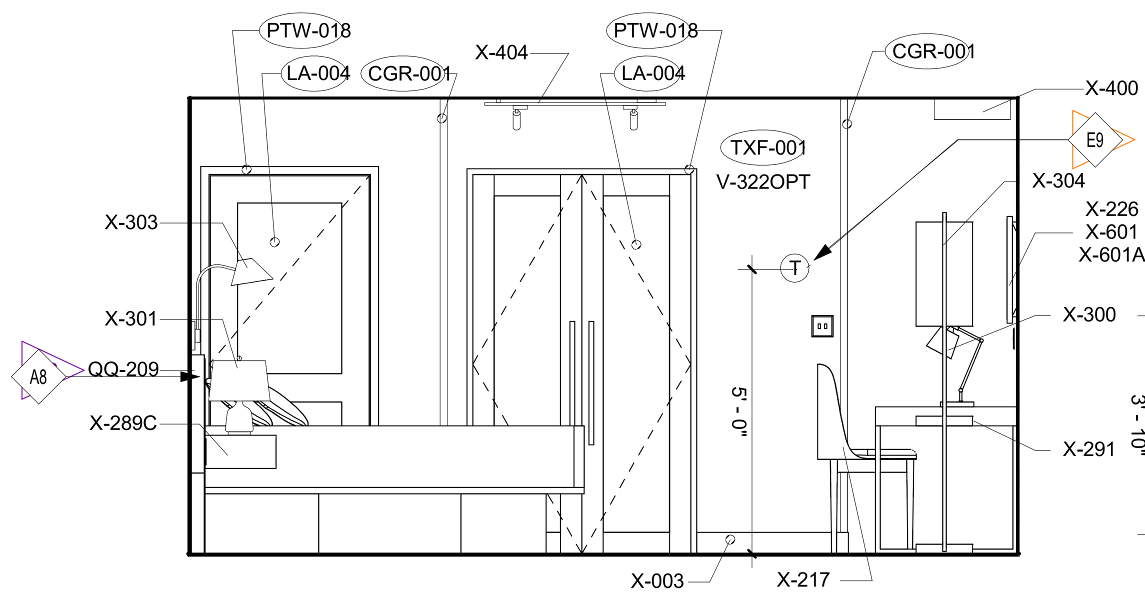


A2 SINGLE SWING DOUBLE PANEL
A2B SINGLE SWING SINGLE PANEL
B2 DOUBLE SWING DOUBLE PANEL
B2B DOUBLE SWING SINGLE PANEL

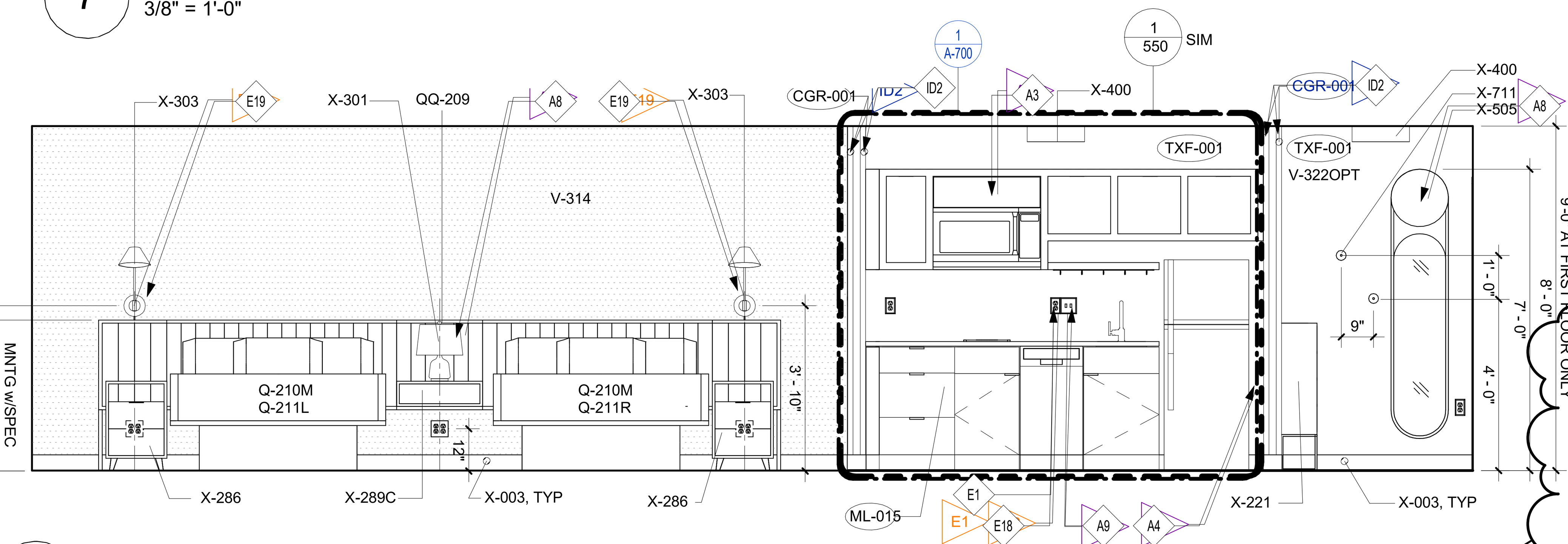
FRAME TYPES



KD KNOCK DOWN w/ TRIM
PH PRE-HUNG w/ TRIM
PH-2 PRE-HUNG NO RABBET w/ TRIM



6 STUDIO QQ END-ELEV2
3/8" = 1'-0"



5 STUDIO QQ END-ELEV1
3/8" = 1'-0"

DOOR SCHEDULE - UNIT DOORS (STUDIO QQ END ONLY)								
Mark	Width	Height	Thickness	Fire Rating (Minutes)	Door Type	Frame Type	Comments	Hardware Group
000	3' - 0"	6' - 8"	1 3/4"	20	A2	HM		
000	3' - 0"	6' - 8"	1 3/4"	20	A2	HM		
000	3' - 0"	6' - 8"	1 3/4"	20	A2	HM		
000A	3' - 0"	6' - 8"	1 3/4"	45	A2			
000A	3' - 0"	6' - 8"	1 3/4"	45	A2			
001	3' - 0"	6' - 8"	1 3/4"		A2			
001	3' - 0"	6' - 8"	1 3/4"		A2			
002	3' - 10"	6' - 8"	1 3/4"		B2			
Lockout	3' - 0"	6' - 8"	1 3/4"		A2			

ROOM FINISH SCHEDULE - UNITS						
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
001	LIVING ROOM	PER PLAN	BASE, PER ELEV.	WALL COVERING, PER ELEV.	PAINT ON GYP	
002	BATH	PER PLAN	BASE, PER ELEV.	WALL COVERING, PER ELEV.	PAINT ON GYP	
003	BEDROOM	PER PLAN	BASE, PER ELEV.	WALL COVERING, PER ELEV.	PAINT ON GYP	

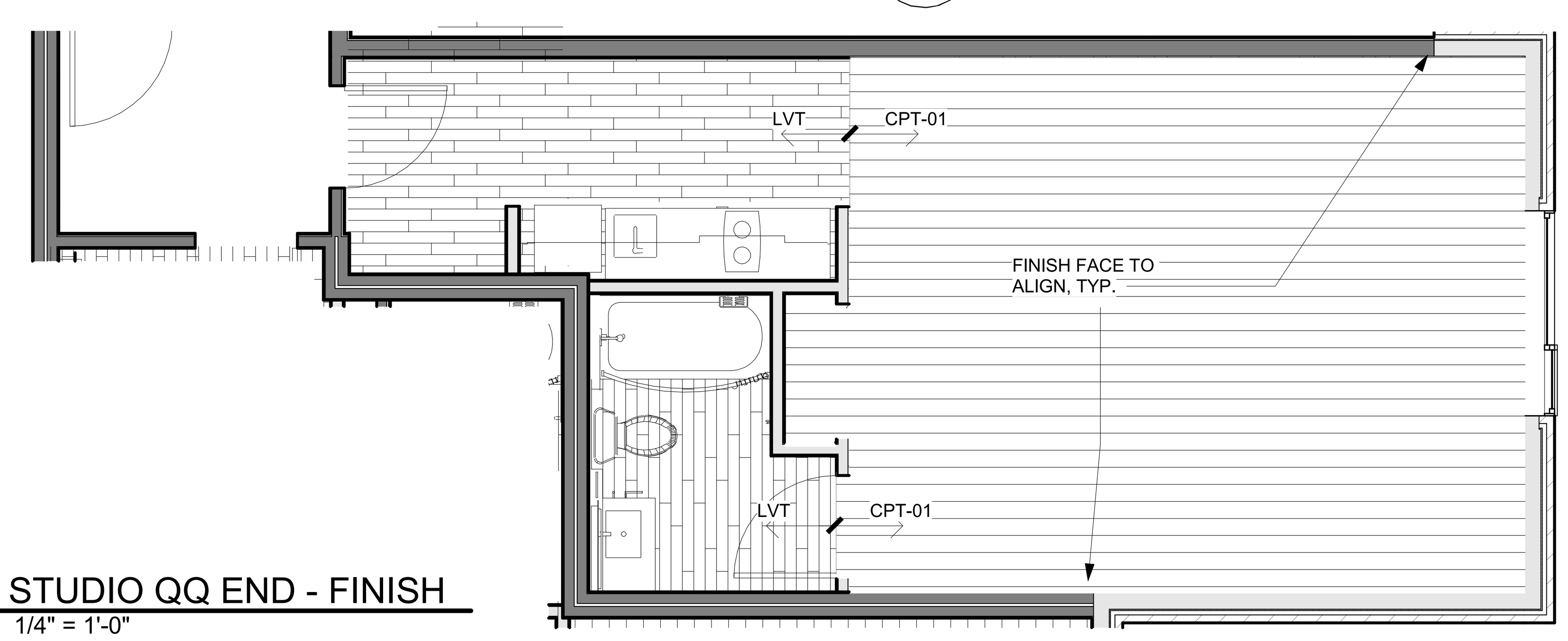
NOTE: UNIT FINISH SCHEDULES ARE PER THE BRAND PROTOTYPE. FINISHES ARE TO BE COORDINATED WITH THE INTERIOR DESIGNER.

3

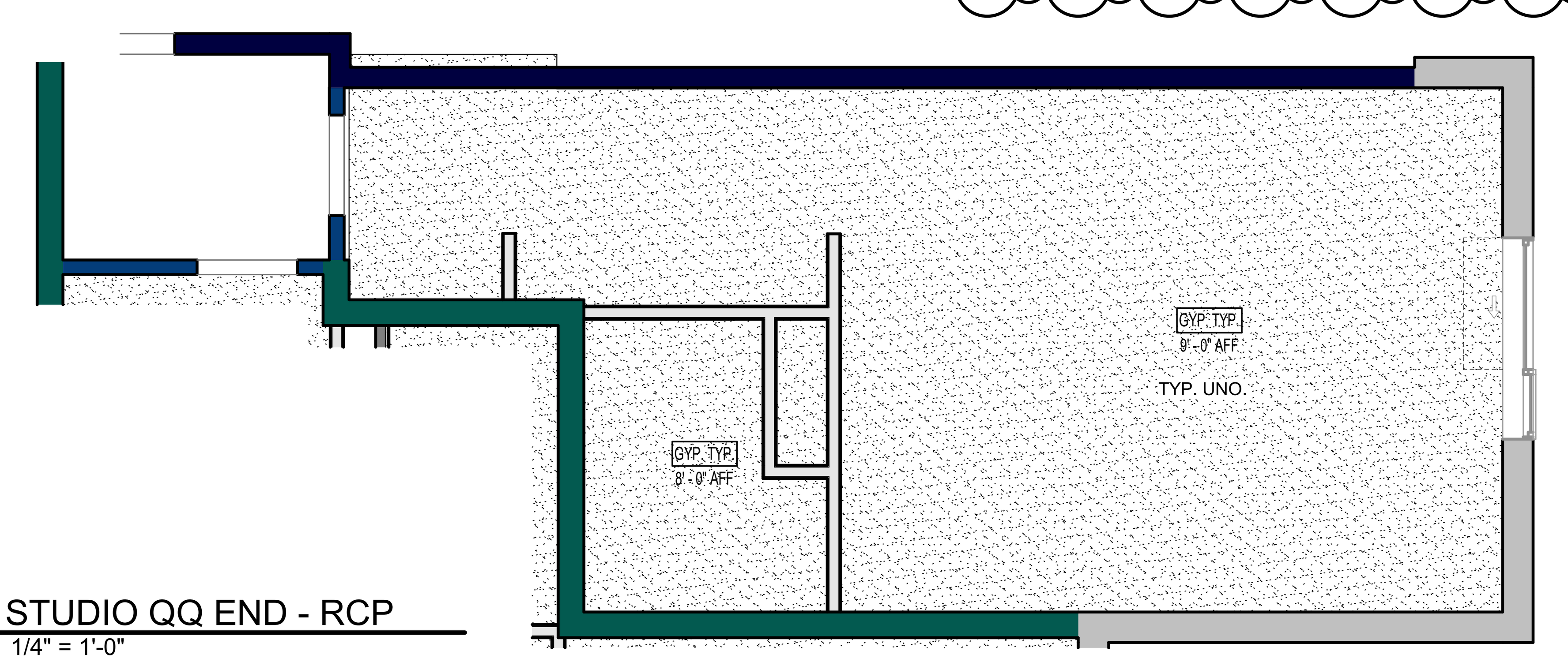
REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-101 FOR PLAN LEGEND

KEYNOTE LEGEND

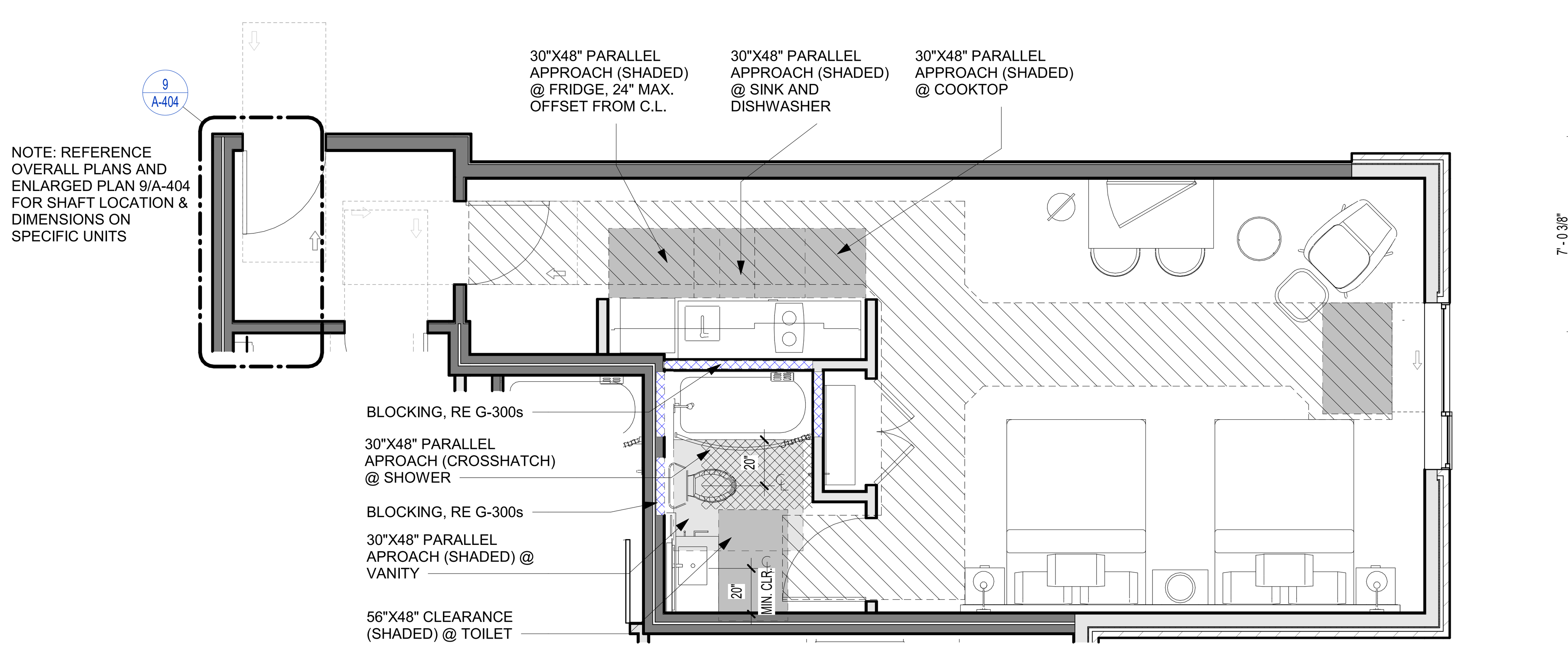
A2	LOCATE SHADE PULLS OPPOSITE SIDE OF PTAC UNIT
A3	FALSE PANEL WITH ACCESS TO ELECTRICAL BEHIND
A4	HOLD 4" SPACE BETWEEN SIDE OF REFRIGERATOR AND WALL TO ALLOW DOOR TO OPEN GREATER THAN 90 DEGREES FOR THE REMOVAL OF VEGETABLE DRAWER
A7	TEXTURED FINISH AND PAINT REQUIRED ON GUESTROOM EXTERIOR WALL.
A8	BLOCKING IN WALL FOR ALL CASEWORK, KITCHEN CABINETS, HEADBOARD, TV AND TV TRIM, SHOE CUBBY, MIRROR, CLOSET SYSTEM, FIXTURES, TOWEL BAR LADDER, GRAB BARS AND ACCESSORIES. COORDINATE LOCATION WITH MANUFACTURERS INSTALLATION REQUIREMENTS.
A9	INDICATE OUTLET LOCATION WITHIN WALL CONSTRUCTION TO AVOID OUTLETS OCCURING IN SAME CAVITY WITHIN PARTITION. SEE DETAIL ON STC DIAGRAM ON G-102.
A10	PROVIDE BLOCKING IN CEILING/WALL FOR SHADE MOUNT, TOP OF SHADE MOUNT ABUTTS CEILING WHERE CEILING IS 8'-0" & 9'-0". COORDINATE LOCATION WITH MANUFACTURER'S INSTALLATION REQUIREMENTS.
A20	PROVIDE WALL STOPS WHERE REQUIRED. PROVIDE WALL STOP BEHIND GUESTROOM ENTRY DOOR. REFER TO GUESTROOM OR PUBLIC SPACE BPM FOR DOOR HARDWARE.
A23	TV NICHE DETAIL DOES NOT APPLY TO EXTERIOR WALLS; TVs LOCATED ON EXTERIOR WALLS SHOULD BE SURFACE MOUNTED WITH FF&E TRIM X-226, REFER TO INTERIOR DESIGN SPECIFICATIONS MANUAL. TVs LOCATED IN THE DEMISING WALLS HAVE THE OPTION BETWEEN PROVIDING A NICHE WITH A SOUND BARRIER (REFER TO DETAIL 3/552) OR THE FF&E TRIM X-226. COORDINATE WITH THE INTERIOR DESIGN SPECIFICATION MANUAL WHEN PROVIDING X-226
A136	TV MOUNT COVER TO BE MOUNTED AT OPPOSITE OF ENTRY DOOR.
E1	GANG OUTLETS & SWITCHES AT THE LOCATION @ HEIGHT SHOWN. SEE TYPICAL GUESTROOM OUTLET HEIGHT IN G-300s.
E5	OUTLETS FOR TV, CABLE AND POWER FOR TV TO BE MOUNTED IN OPENING OF WALL MOUNTED TV PANEL. SEE DETAILS SHEET 552 OR B552 FOR TV OPENING DETAIL.
E6	PTAC FOR TYPICAL GUEST ROOM HVAC. SEE DETAILS ON 222 OR B222 FOR PTAC AND WALL SLEEVE INFORMATION.
E7	ELECTRIC PANEL, TO BE PAINTED SAME COLOR AS SURROUNDING WALL. INSTALL AS CLOSE AS POSSIBLE TO THE ENTRY DOOR WALL.
E9	THERMOSTAT. LOCATE THERMOSTAT WITH INTEGRAL OCCUPANCY SENSOR FACING SLEEPING AREA. COORDINATE WITH THE GUESTROOM MANAGEMENT SYSTEM (GRMS). SEE TYPICAL GUESTROOM OUTLET HEIGHT DETAILS ON G-300s AND ROOM ELEVATION FOR ADDITIONAL INFORMATION.
E18	TWO-TOGGLE SWITCH FOR GARBAGE DISPOSAL, AND UNDERCABINET LIGHT. PROVIDE JBOX(S) FOR MILLWORK LIGHTING, RE: ELEC.
E19	PROVIDE OUTLET FOR WALL SCONCE AT HEADBOARD WHERE SHOWN IN ELEVATION. SWITCH LOCATED ON LIGHT FIXTURE.
ID1	TEXTURED WALL COATING IS THE REQUIRED FINISH FOR EXTERIOR GUESTROOM WALLS.
ID2	ALL EXTERIOR CORNERS SHALL HAVE FULL HEIGHT CORNER GUARDS.
ID3	REFER TO INTERIOR DESIGN SPECIFICATION MANUAL WINDOW TREATMENT SPECIFICATIONS AND ELEVATIONS FOR ROLLER SHADE INFORMATION



4 STUDIO QQ END - FINISH
1/4" = 1'-0"



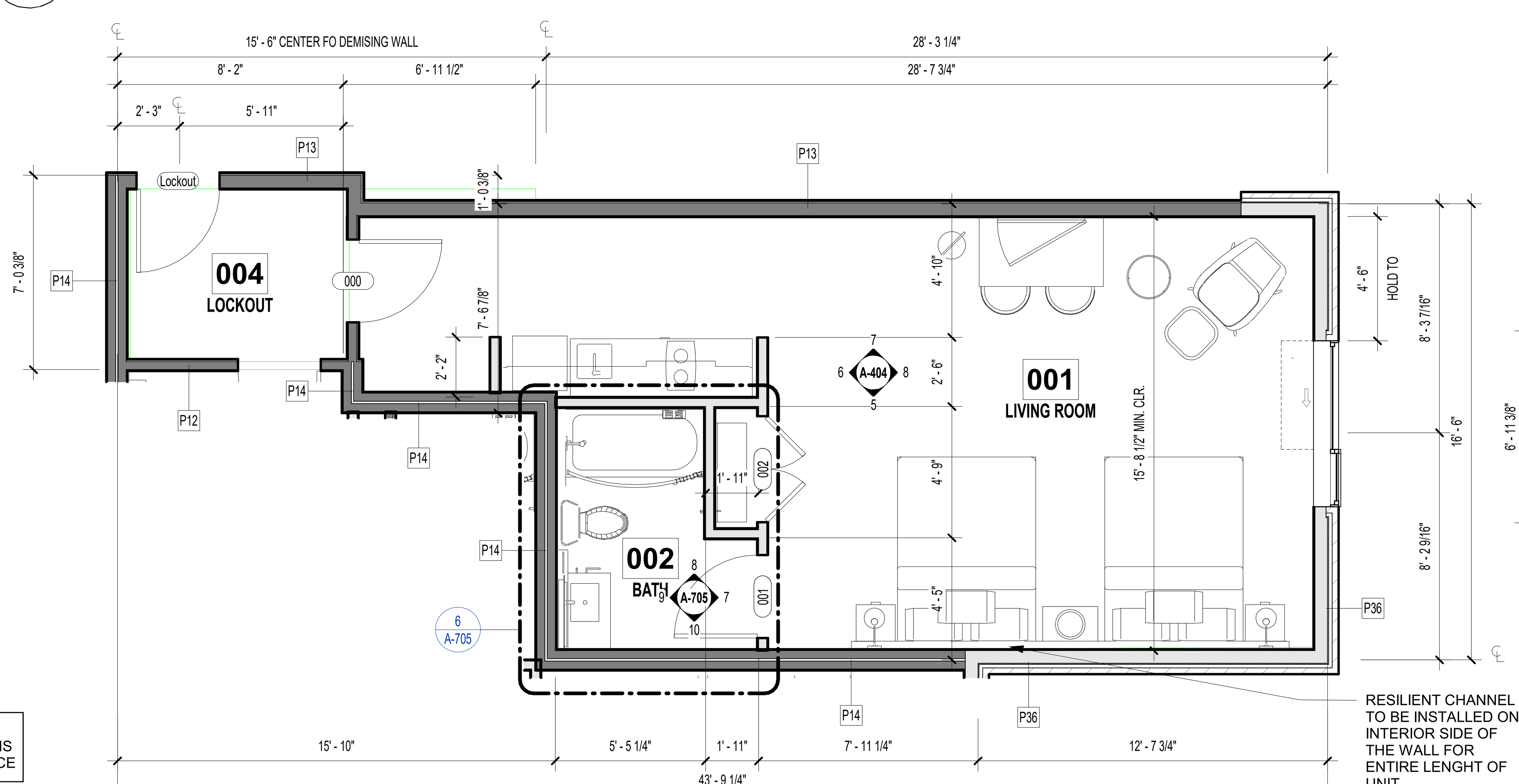
3 STUDIO QQ END - RCP
1/4" = 1'-0"



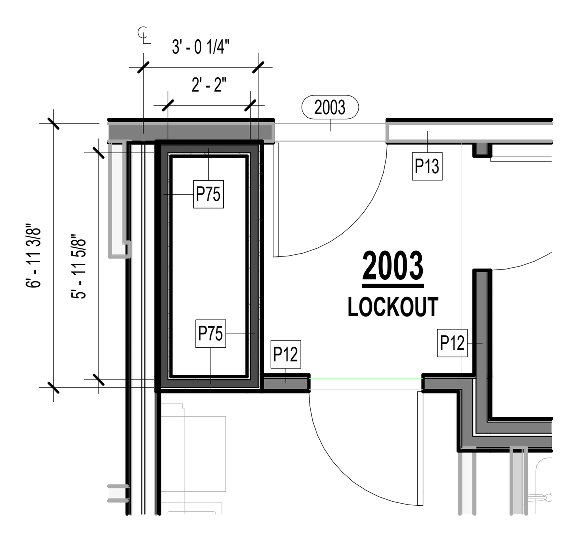
RE: G-300 FOR ACCESSIBLE MOUNTING HEIGHTS, TYP

NOTE: ALL DIMS ON CLEAR SPACE PLANS ARE TO FINISH PLACE

2 STUDIO QQ END - CS
1/4" = 1'-0"



1 STUDIO QQ END - FP
1/4" = 1'-0"



NOTE: REFERENCE OVERALL PLANS FOR SHAFT LOCATION ON SPECIFIC UNITS

9 SHAFT ENLARGED PLAN
1/4" = 1'-0"

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

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3	03/06/2024	IN RESPONSE TO GC COMMENTS

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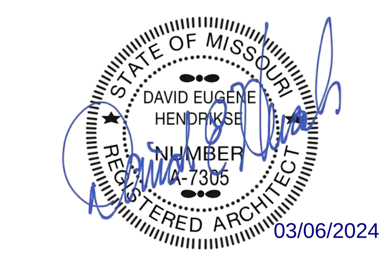

TOWNEPLACE SUITES

1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
STUDIO QQ END UNIT PLAN

PROJECT NUMBER: 23098

SHEET NUMBER:

A-404

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REFERENCE A-101 FOR PLAN LEGEND

REFERENCE G-003 FOR GENERAL NOTES

PRINTS ISSUED

11/01/2023 - CITY SUBMITTAL

REVISIONS:

2 01/19/2024 Addendum #2

3 03/06/2024 IN RESPONSE TO GC COMMENTS

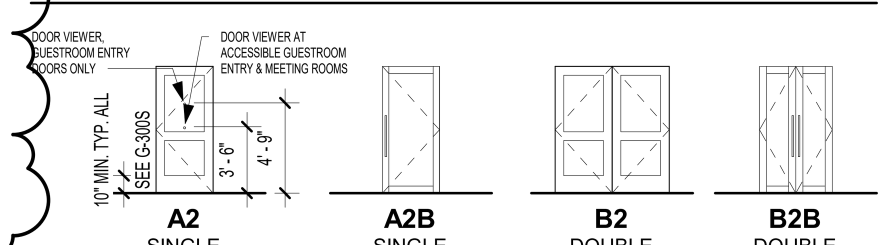
ROOM FINISH SCHEDULE - UNITS						
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
001	LIVING ROOM	PER PLAN	BASE, PER ELEV.	WALL COVERING, PER ELEV.	PAINT ON GYP	
002	BATH	PER PLAN	BASE, PER ELEV.	WALL COVERING, PER ELEV.	PAINT ON GYP	
003	BEDROOM	PER PLAN	BASE, PER ELEV.	WALL COVERING, PER ELEV.	PAINT ON GYP	

NOTE: UNIT FINISH SCHEDULES ARE PER THE BRAND PROTOTYPE. FINISHES ARE TO BE COORDINATED WITH THE INTERIOR DESIGNER.

3

DOOR SCHEDULE - UNIT DOORS (BY UNIT TYPE)								
Mark	Width	Height	Thickness	Fire Rating (Minutes)	Door Type	Frame Type	Hardware Group	Comments
000	3' - 0"	6' - 8"	1 3/4"	20	A2	HM		
001	3' - 0"	6' - 8"	1 3/8"		B			
002	3' - 0"	6' - 8"	1 3/4"		A2			
003	3' - 10"	6' - 8"	1 3/4"		B2			
004	3' - 0"	7' - 0"	1 3/4"		A3	HM		

DOOR TYPES



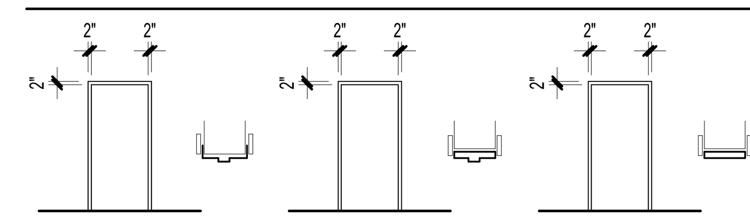
A2 SINGLE SWING DOUBLE PANEL

A2B SINGLE SWING SINGLE PANEL

B2 DOUBLE SWING DOUBLE PANEL

B2B DOUBLE SWING SINGLE PANEL

FRAME TYPES

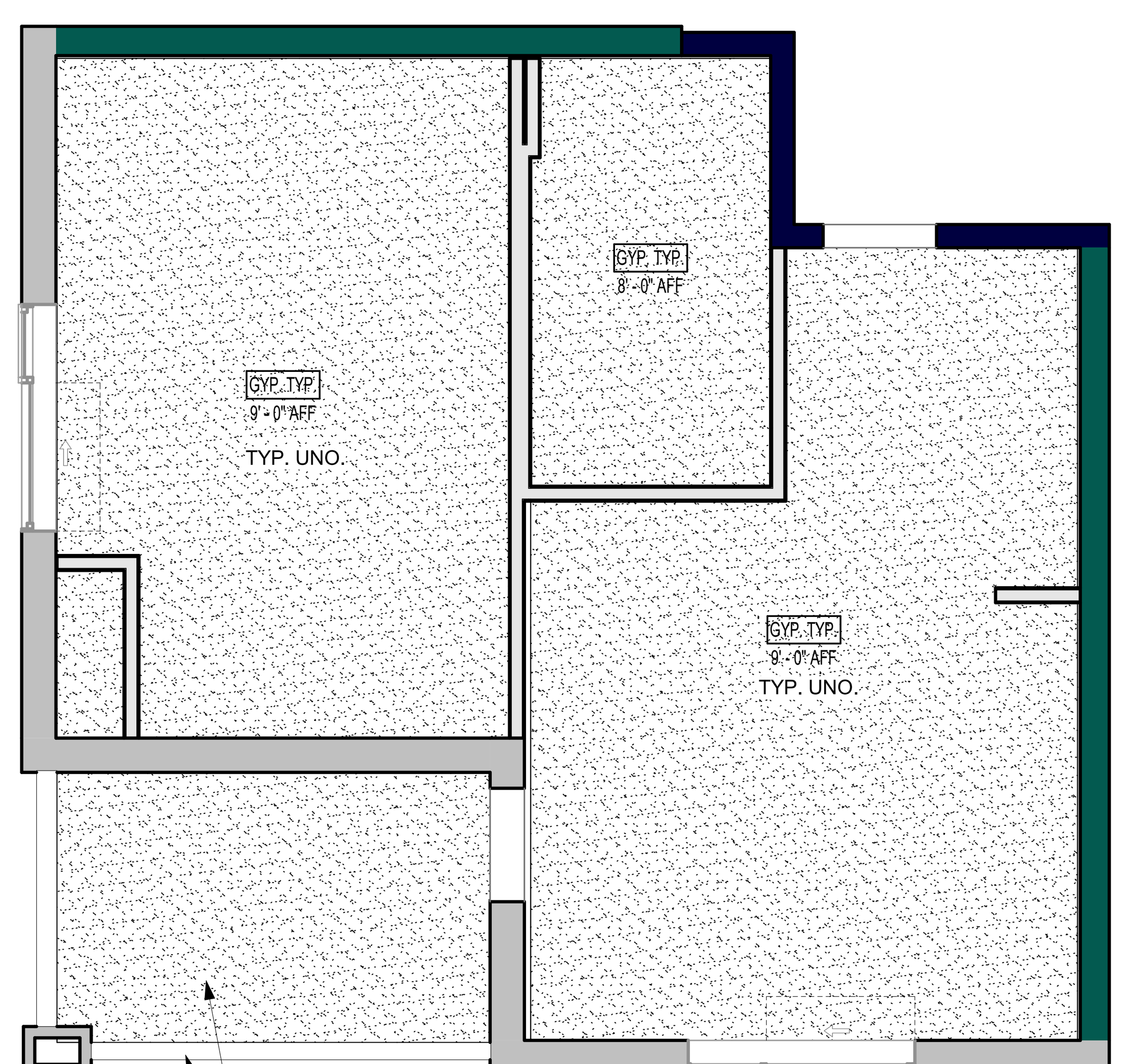


KD KNOCK DOWN w/ TRIM

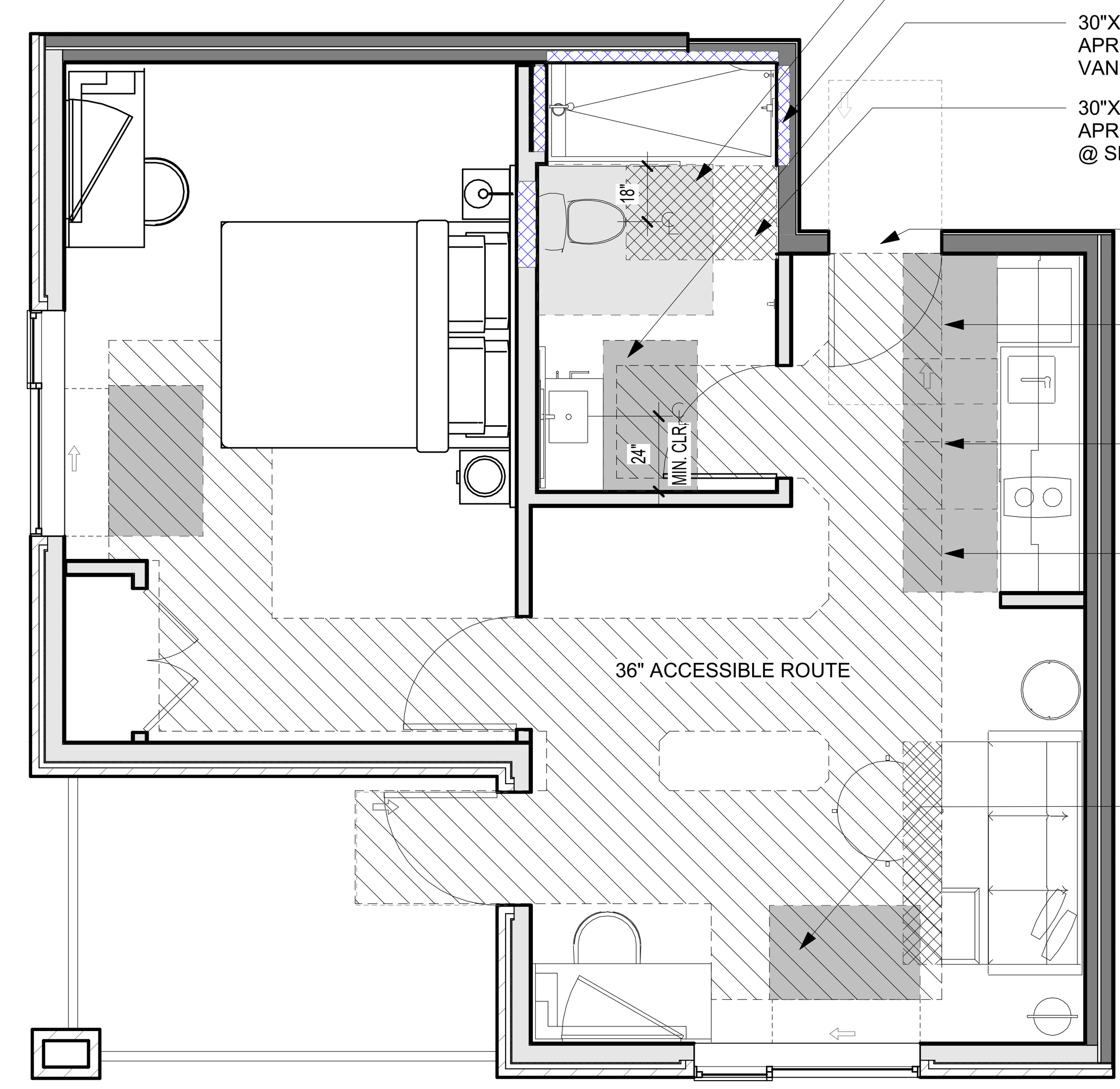
PH PRE-HUNG w/ TRIM

PH-2 PRE-HUNG NO RABBET w/ TRIM

4 ONE BED KING W/BALC. - FINISH
1/4" = 1'-0"



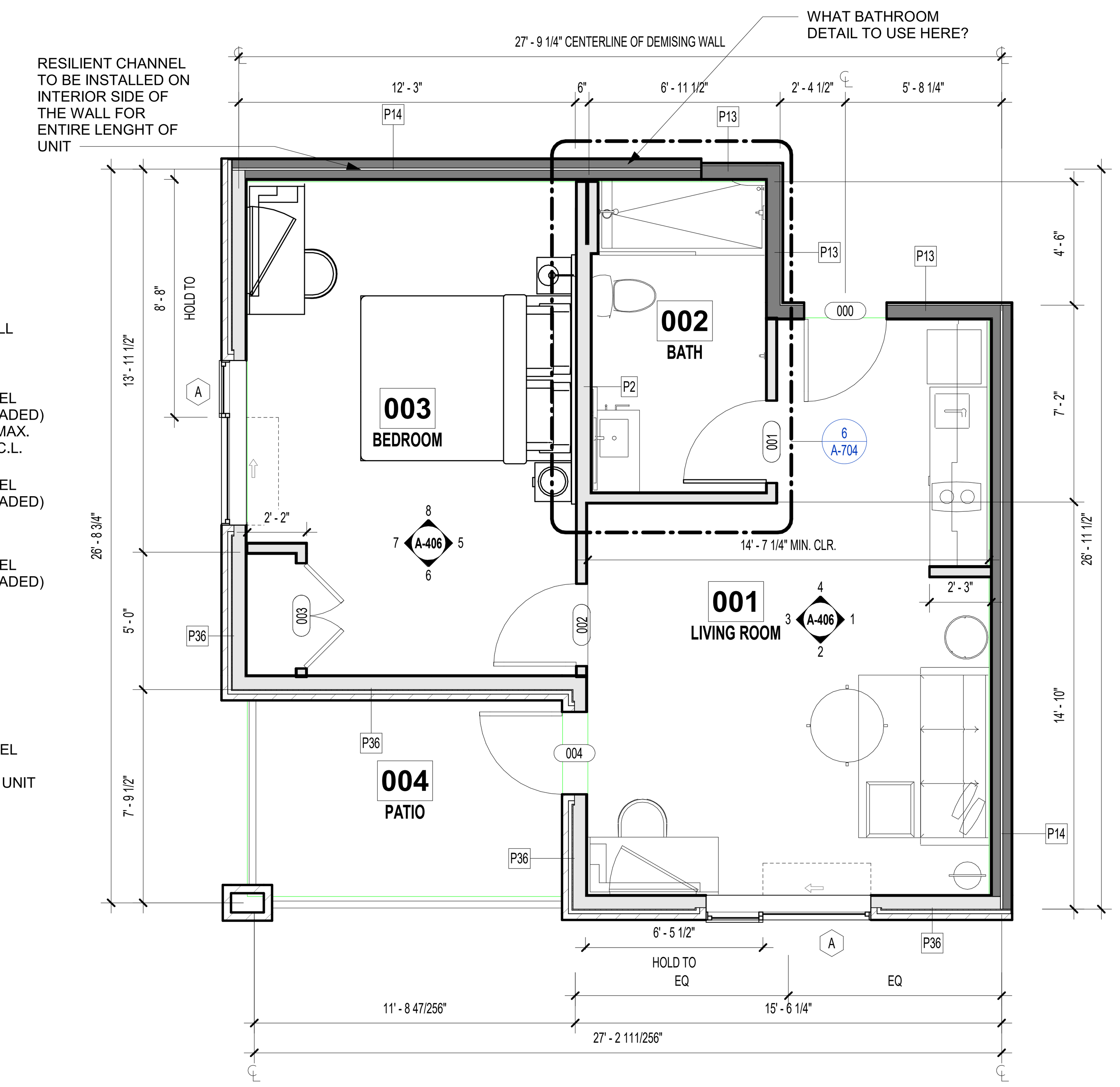
3 ONE BED KING W/BALC.- RCP
1/4" = 1'-0"



NOTE: ALL DIMS ON CLEAR SPACE PLANS ARE TO FINISH PLACE

RE: G-300 FOR ACCESSIBLE MOUNTING HEIGHTS, TYP

2 ONE BED KING W/BALC. - CS
1/4" = 1'-0"



1 ONE BED KING W/BALC. - FP
1/4" = 1'-0"

rosemann & ASSOCIATES P.C.

ARCHITECTURE
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Kansas City, MO 64108-1404
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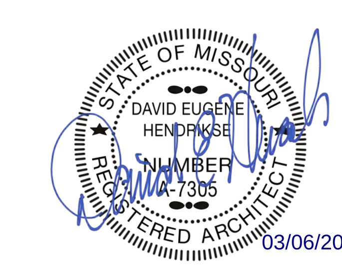


TOWNEPLACE SUITES

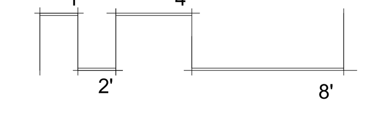
1901 NE DISCOVERY AVE. LEE'S SUMMIT 64064 USA

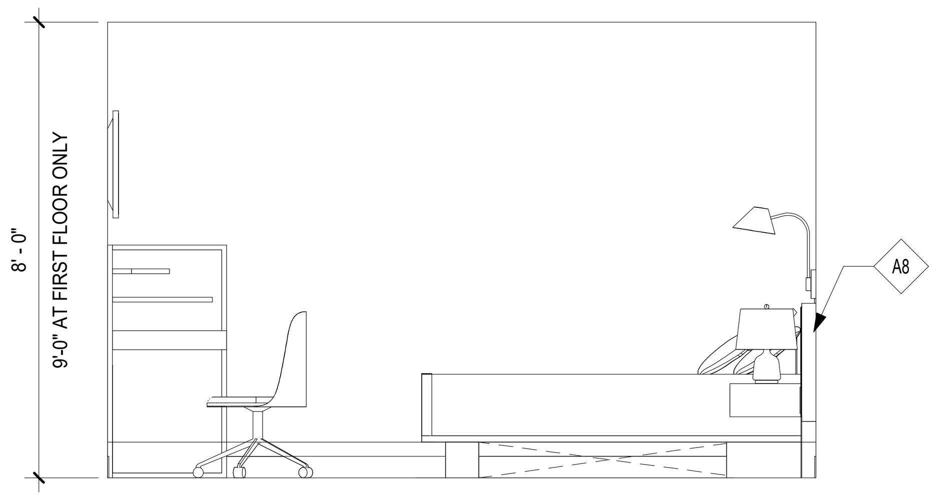
SHEET TITLE
ONE BED KING UNIT PLAN W/ BALCONY

PROJECT NUMBER: 23098

SHEET NUMBER:

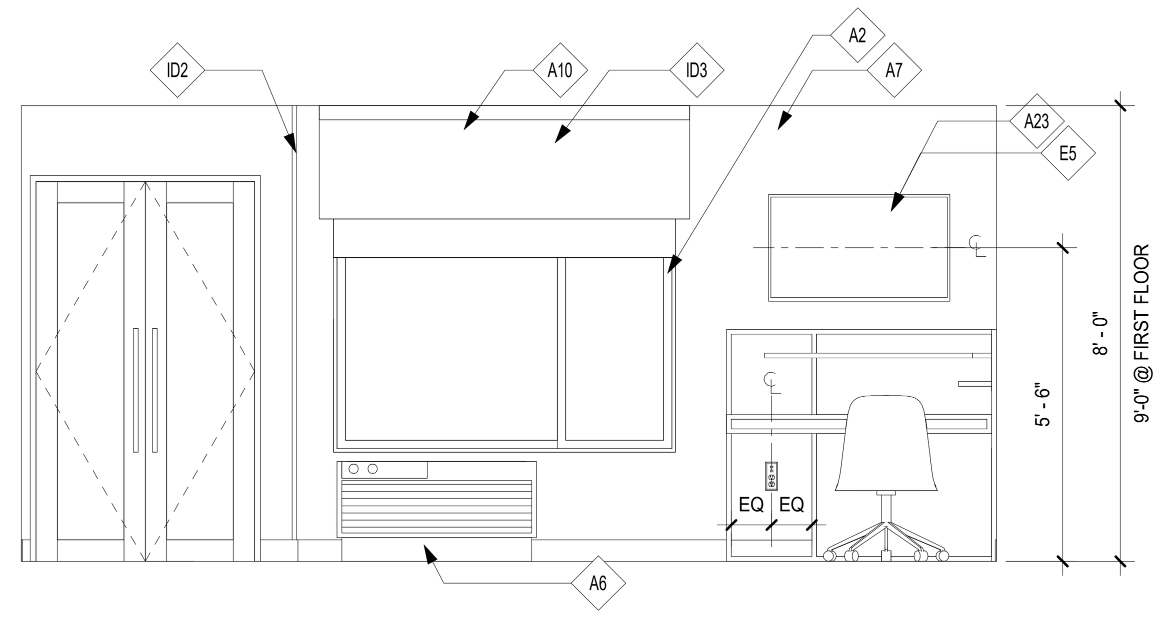
A-405





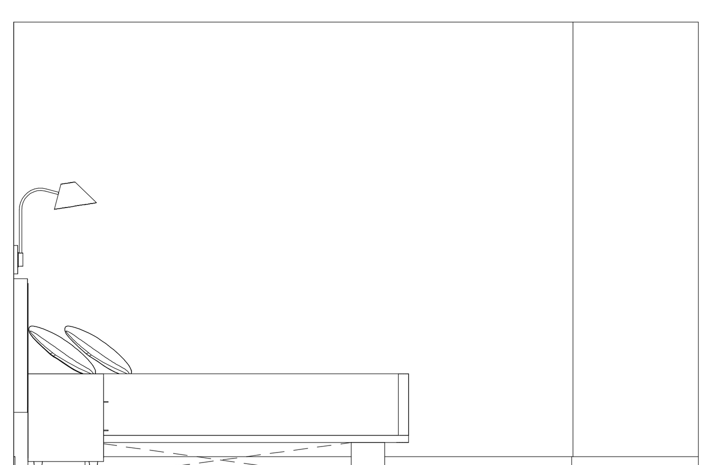
8 ONE BED KING w/ BALCONY ELEV
3/8" = 1'-0"

3



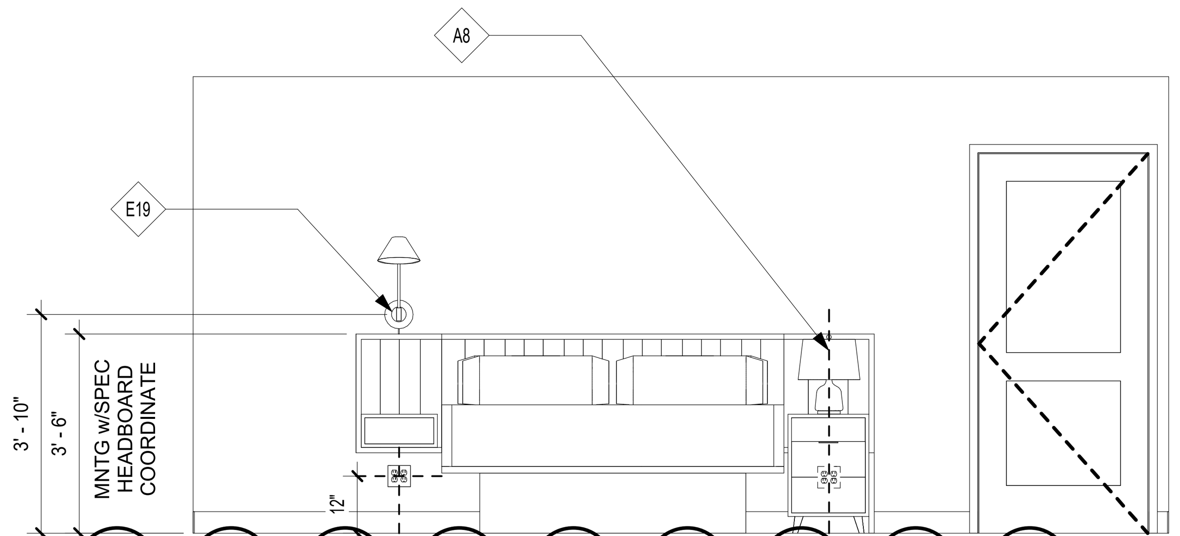
7 ONE BED KING w/ BALCONY ELEV
3/8" = 1'-0"

3



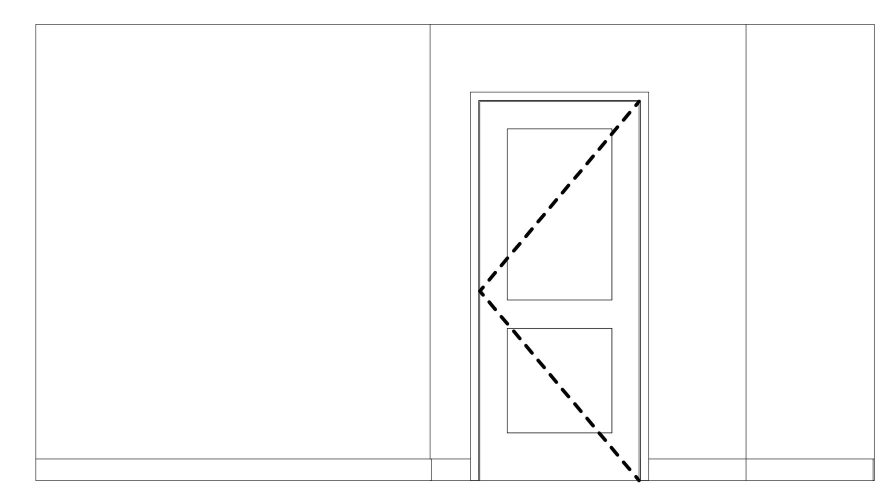
6 ONE BED KING w/ BALCONY ELEV
3/8" = 1'-0"

3



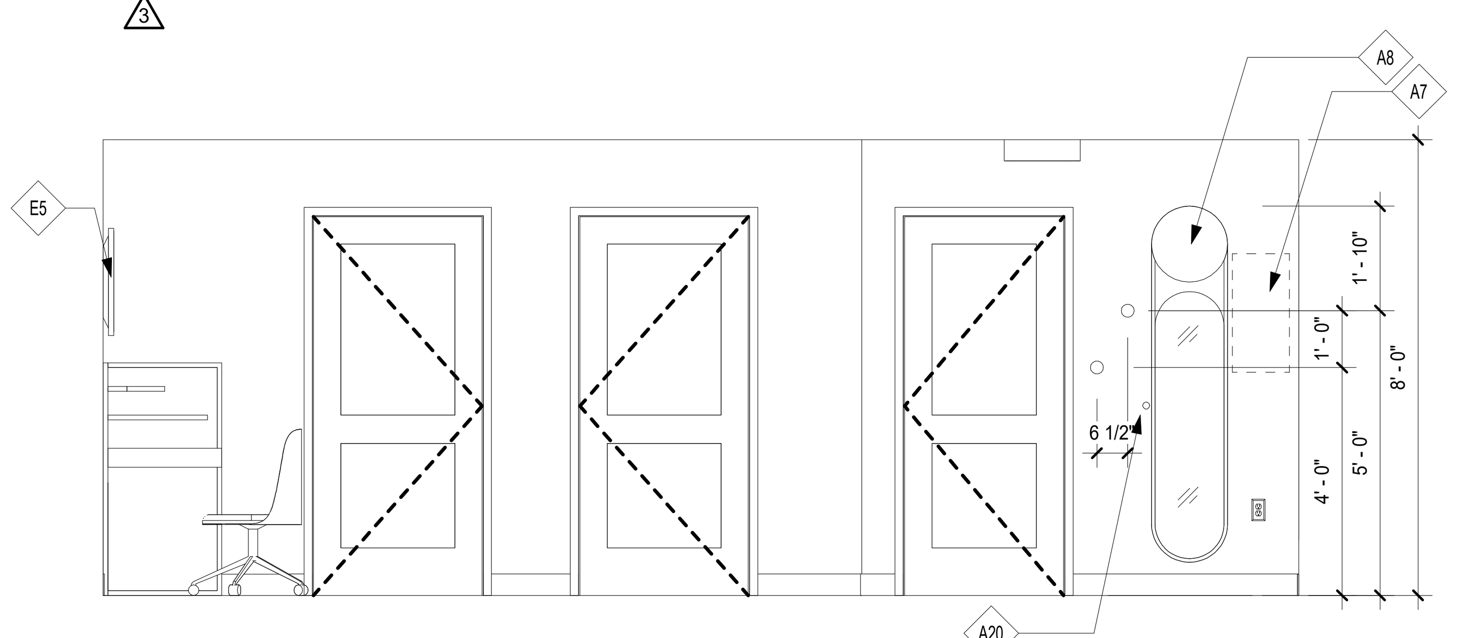
5 ONE BED KING w/ BALCONY ELEV
3/8" = 1'-0"

3



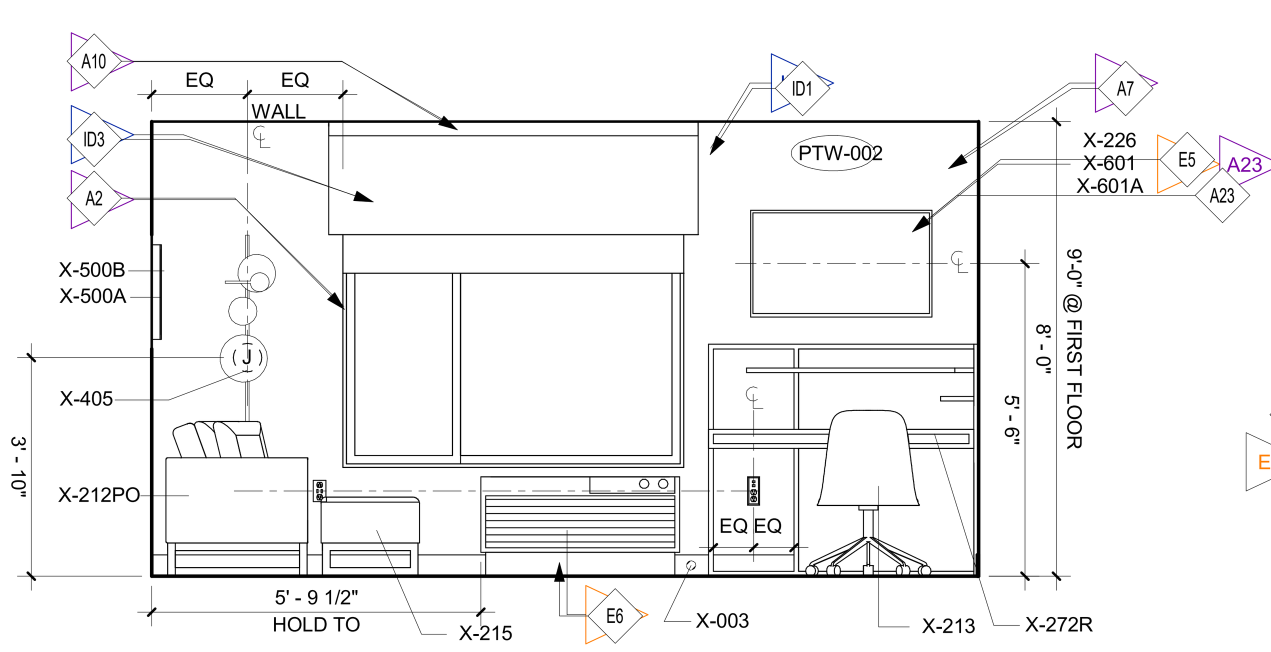
4 ONE BED KING w/ BALCONY ELEV
3/8" = 1'-0"

3



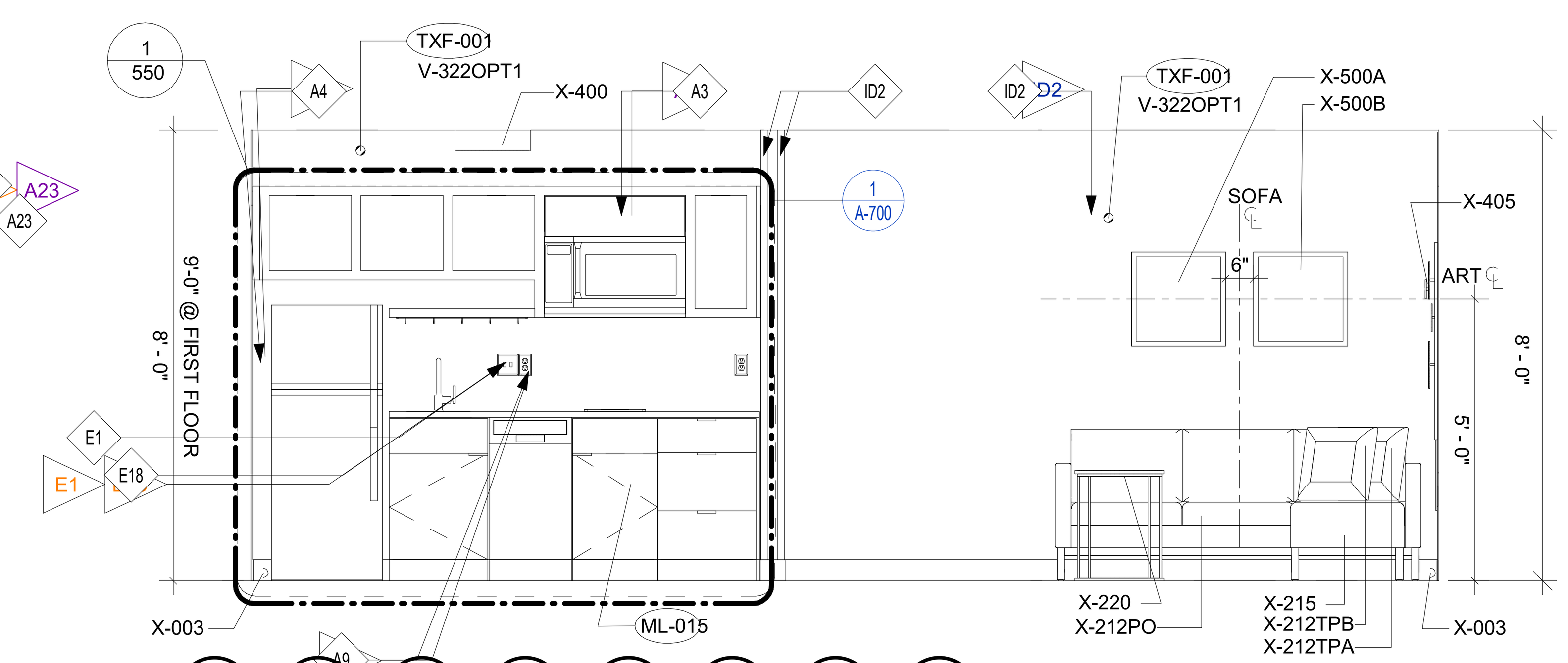
3 ONE BED KING w/ BALCONY ELEV
3/8" = 1'-0"

3



2 ONE BED KING w/ BALCONY ELEV
3/8" = 1'-0"

3



1 ONE BED KING w/ BALCONY ELEV
3/8" = 1'-0"

3

KEYNOTE LEGEND

A2	LOCATE SHADE PULLS OPPOSITE SIDE OF PTAC UNIT
A3	FALSE PANEL WITH ACCESS TO ELECTRICAL BEHIND
A4	HOLD 4" SPACE BETWEEN SIDE OF REFRIGERATOR AND WALL TO ALLOW DOOR TO OPEN GREATER THAN 90 DEGREES FOR THE REMOVAL OF VEGETABLE DRAWER
A6	OVERALL KITCHEN CABINET LENGTH TO BE ORDERED TO FIT WALL INCLUDING FILLERS ON BOTH ENDS. ALLOW FOR APPROXIMATELY 1" TO 1-1/2" OF SPACE ON BOTH ENDS FOR RECESSED FILLERS. REFER TO DETAILS 7 & 8/550.
A7	TEXTURED FINISH AND PAINT REQUIRED ON GUESTROOM EXTERIOR WALL.
A8	BLOCKING IN WALL FOR ALL CASEWORK, KITCHEN CABINETS, HEADBOARD, TV AND TV TRIM, SHOE CUBBY, MIRROR, CLOSET SYSTEM, FIXTURES, TOWEL BAR LADDER, GRAB BARS AND ACCESSORIES. COORDINATE LOCATION WITH MANUFACTURERS INSTALLATION REQUIREMENTS.
A9	INDICATE OUTLET LOCATION WITHIN WALL CONSTRUCTION TO AVOID OUTLETS OCCURING IN SAME CAVITY WITHIN PARTITION. SEE DETAIL ON STC DIAGRAM ON G-102.
A10	PROVIDE BLOCKING IN CEILING/WALL FOR SHADE MOUNT, TOP OF SHADE MOUNT ABUTTS CEILING WHERE CEILING IS 8'-0" & 9'-0". COORDINATE LOCATION WITH MANUFACTURER'S INSTALLATION REQUIREMENTS.
A20	PROVIDE WALL STOPS WHERE REQUIRED. PROVIDE WALL STOP BEHIND GUESTROOM ENTRY DOOR. REFER TO GUESTROOM OR PUBLIC SPACE BPM FOR DOOR HARDWARE.
A23	TV NICHE DETAIL DOES NOT APPLY TO EXTERIOR WALLS; TVs LOCATED ON EXTERIOR WALLS SHOULD BE SURFACE MOUNTED WITH FF&E TRIM X-226, REFER TO INTERIOR DESIGN SPECIFICATIONS MANUAL. TVs LOCATED IN THE DEMISING WALLS HAVE THE OPTION BETWEEN PROVIDING A NICHE WITH A SOUND BARRIER (REFER TO DETAIL 3/552) OR THE FF&E TRIM X-226. COORDINATE WITH THE INTERIOR DESIGN SPECIFICATION MANUAL WHEN PROVIDING X-226
E1	GANG OUTLETS & SWITCHES AT THE LOCATION @ HEIGHT SHOWN. SEE TYPICAL GUESTROOM OUTLET HEIGHT IN G-300s.
E5	OUTLETS FOR TV, CABLE AND POWER FOR TV TO BE MOUNTED IN OPENING OF WALL MOUNTED TV PANEL. SEE DETAILS SHEET 552 OR B552 FOR TV OPENING DETAIL.
E6	PTAC FOR TYPICAL GUEST ROOM HVAC. SEE DETAILS ON 222 OR B222 FOR PTAC AND WALL SLEEVE INFORMATION.
E18	TWO-TOGGLE SWITCH FOR GARBAGE DISPOSAL, AND UNDERCABINET LIGHT. PROVIDE JBOX(S) FOR MILLWORK LIGHTING, RE: ELEC.
E19	PROVIDE OUTLET FOR WALL SCONCE AT HEADBOARD WHERE SHOWN IN ELEVATION. SWITCH LOCATED ON LIGHT FIXTURE.
ID1	TEXTURED WALL COATING IS THE REQUIRED FINISH FOR EXTERIOR GUESTROOM WALLS.
ID2	ALL EXTERIOR CORNERS SHALL HAVE FULL HEIGHT CORNER GUARDS.
ID3	REFER TO INTERIOR DESIGN SPECIFICATION MANUAL WINDOW TREATMENT SPECIFICATIONS AND ELEVATIONS FOR ROLLER SHADE INFORMATION

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:

2	01/19/2024	Addendum #2
3	03/06/2024	IN RESPONSE TO GC COMMENTS

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STATE OF MISSOURI
DAVID EUGENE HENDRIXSE
NUMBER
REGISTERED ARCHITECT
03/06/2024

TOWNEPLACE SUITES

1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
ONE BED KING UNIT PLAN W/ BALCONY-INT ELEV

PROJECT NUMBER: 23098

SHEET NUMBER:

A-406

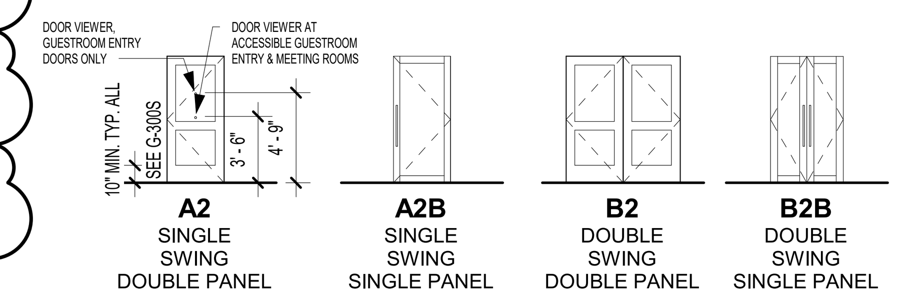
REFERENCE G-003 FOR GENERAL NOTES

ROOM FINISH SCHEDULE - UNITS						
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
001	LIVING ROOM	PER PLAN	BASE, PER ELEV.	WALL COVERING, PER ELEV.	PAINT ON GYP	
002	BATH	PER PLAN	BASE, PER ELEV.	WALL COVERING, PER ELEV.	PAINT ON GYP	
003	BEDROOM	PER PLAN	BASE, PER ELEV.	WALL COVERING, PER ELEV.	PAINT ON GYP	

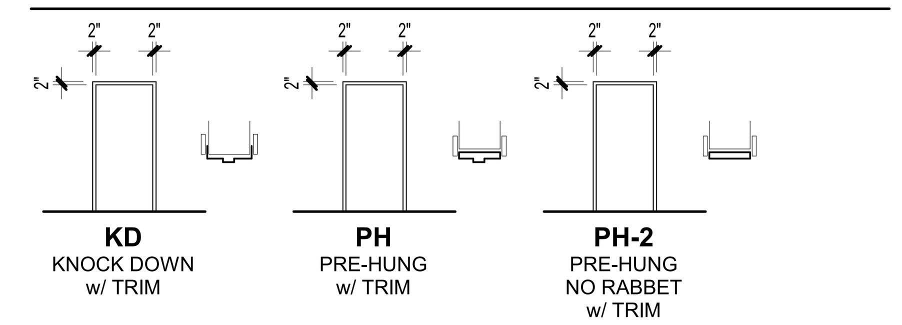
NOTE: UNIT FINISH SCHEDULES ARE PER THE BRAND PROTOTYPE. FINISHES ARE TO BE COORDINATED WITH THE INTERIOR DESIGNER.

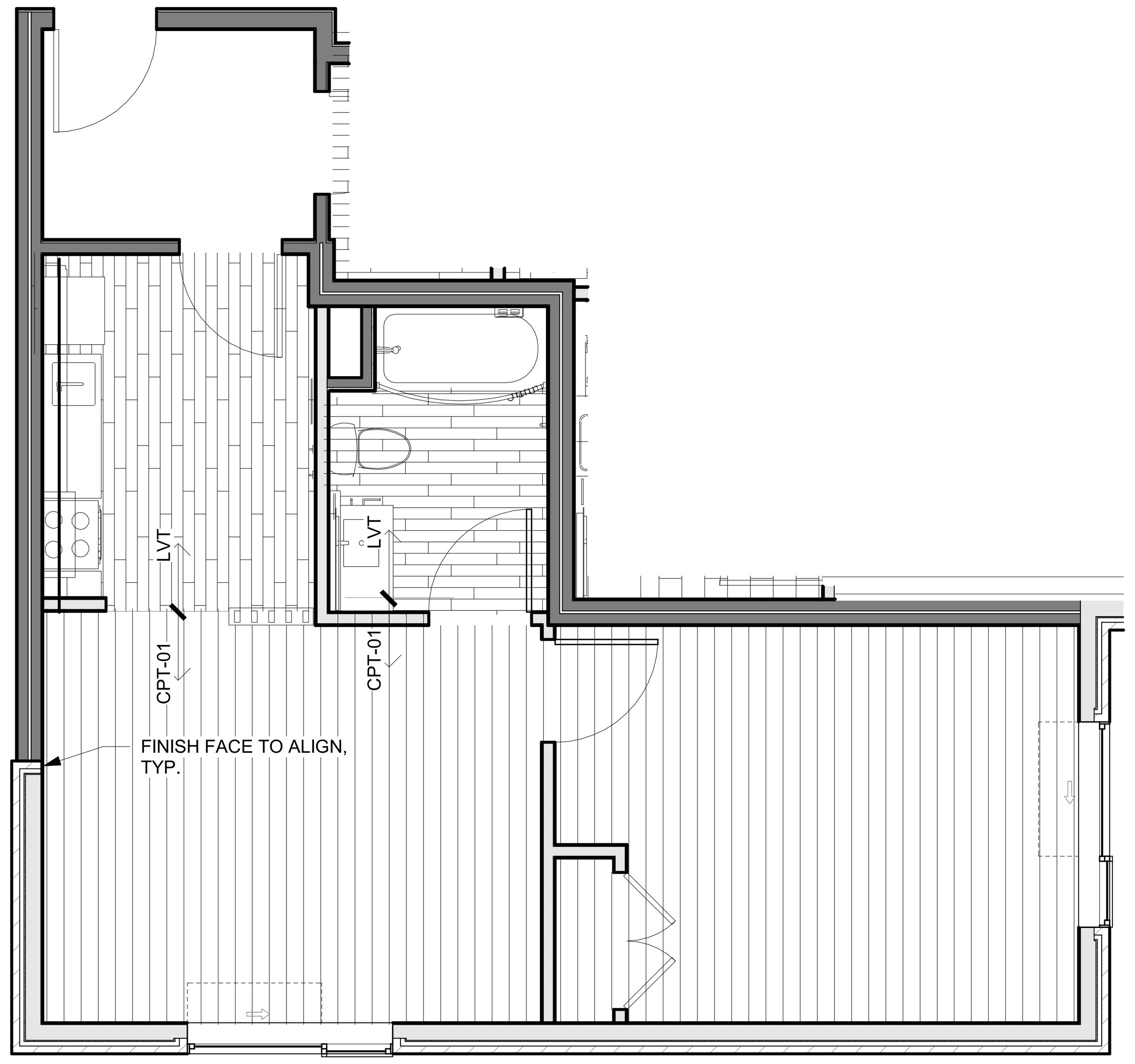
DOOR SCHEDULE - UNIT DOORS (BY UNIT TYPE)								
Mark	Width	Height	Thickness	Fire Rating (Minutes)	Door Type	Frame Type	Hardware Group	Comments
000	3' - 0"	6' - 8"	1 3/4"	20	A2	HM		
000	3' - 0"	6' - 8"	1 3/4"	20	A2	HM		
001	3' - 0"	6' - 8"	1 3/4"		A2			
001	3' - 0"	6' - 8"	1 3/4"		A2			
002	4' - 0"	6' - 8"	1 3/4"		B2			
003	3' - 0"	6' - 8"	1 3/4"		A2			
Lockout	3' - 0"	6' - 8"	1 3/4"		A2			

DOOR TYPES

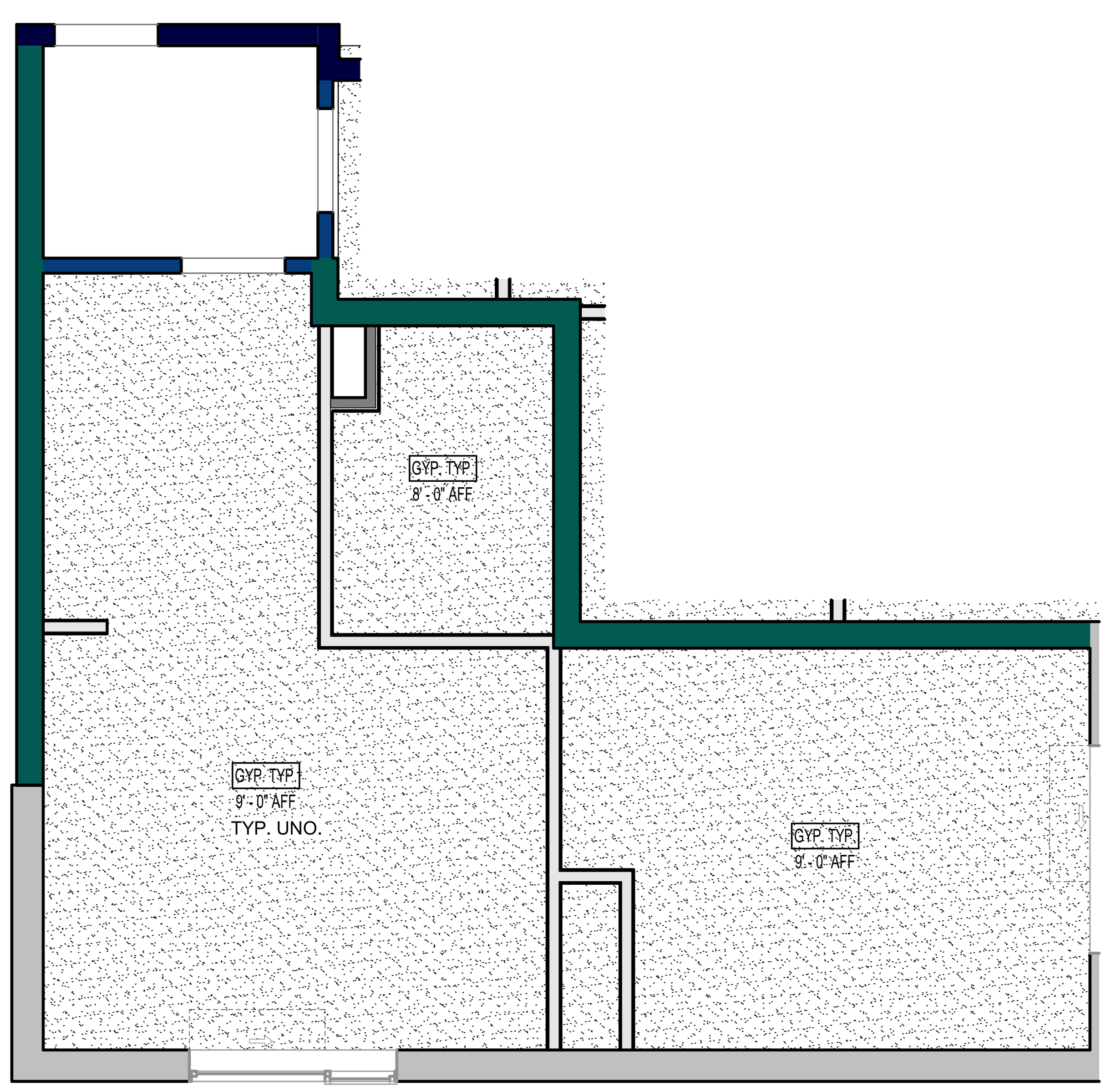


FRAME TYPES

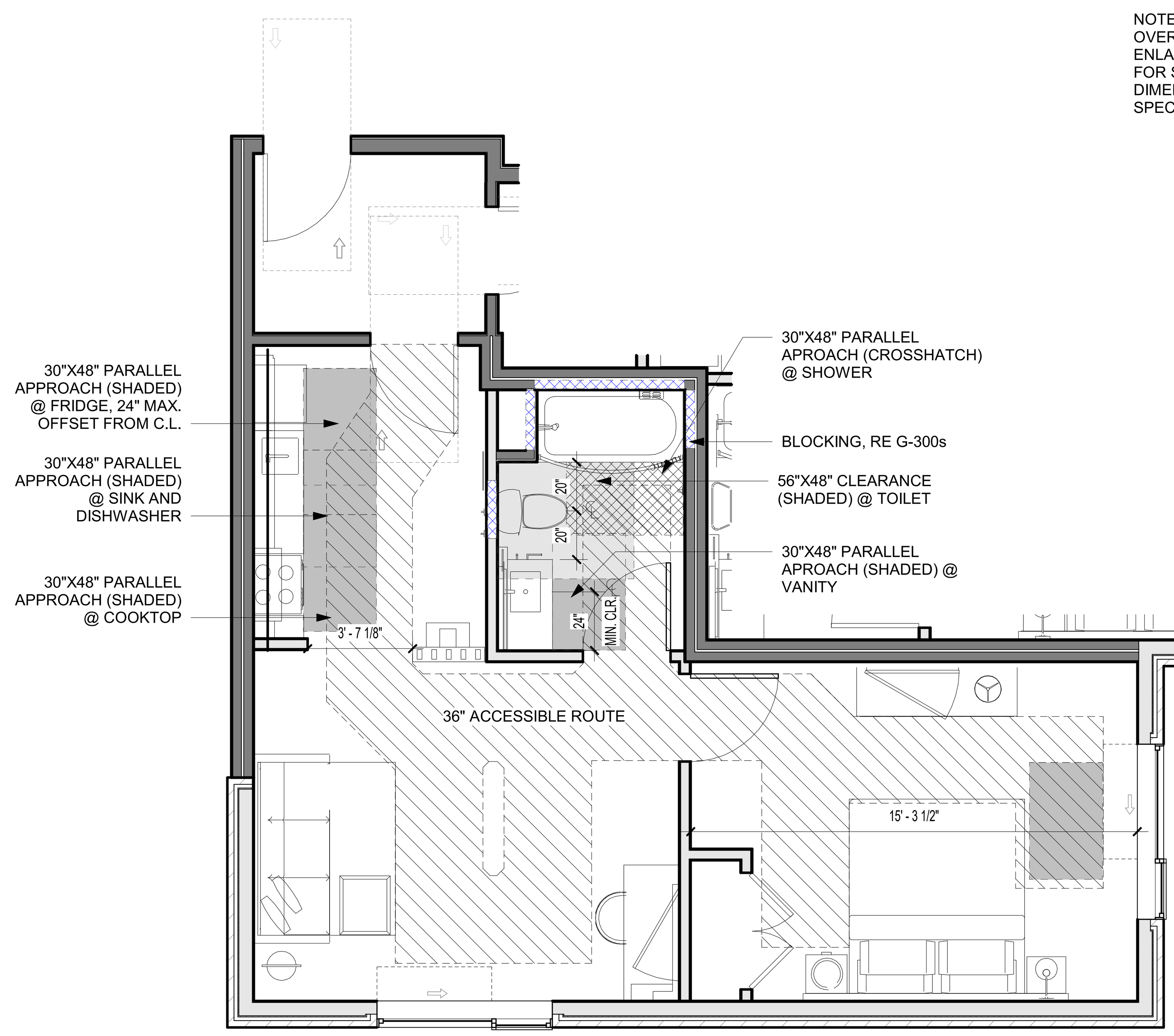




4 ONE BED KING - FINISH
1/4" = 1'-0"



3 ONE BED KING - RCP
1/4" = 1'-0"

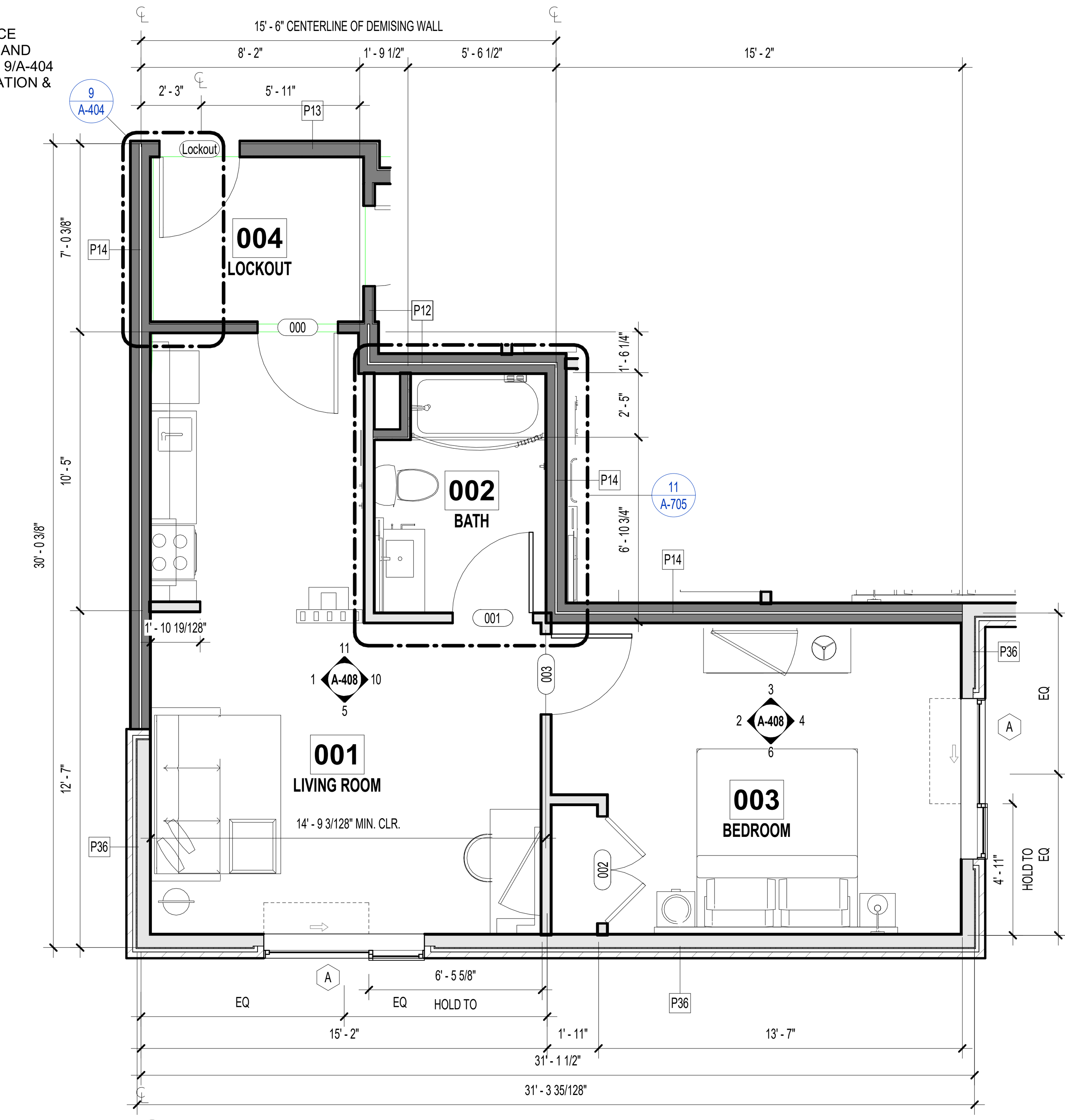


NOTE: ALL DIMS ON CLEAR SPACE PLANS ARE TO FINISH PLACE

RE: G-300 FOR ACCESSIBLE MOUNTING HEIGHTS, TYP

2 ONE BED KING - CS
1/4" = 1'-0"

NOTE: REFERENCE OVERALL PLANS AND ENLARGED PLAN 9/A-404 FOR SHAFT LOCATION & DIMENSIONS ON SPECIFIC UNITS



1 ONE BED KING - FP
1/4" = 1'-0"

1' 4' 2' 8'

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11/01/2023 - CITY SUBMITTAL

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7305
REGISTERED ARCHITECT
03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
ONE BED KING UNIT PLAN

PROJECT NUMBER: 23098

SHEET NUMBER:
A-407

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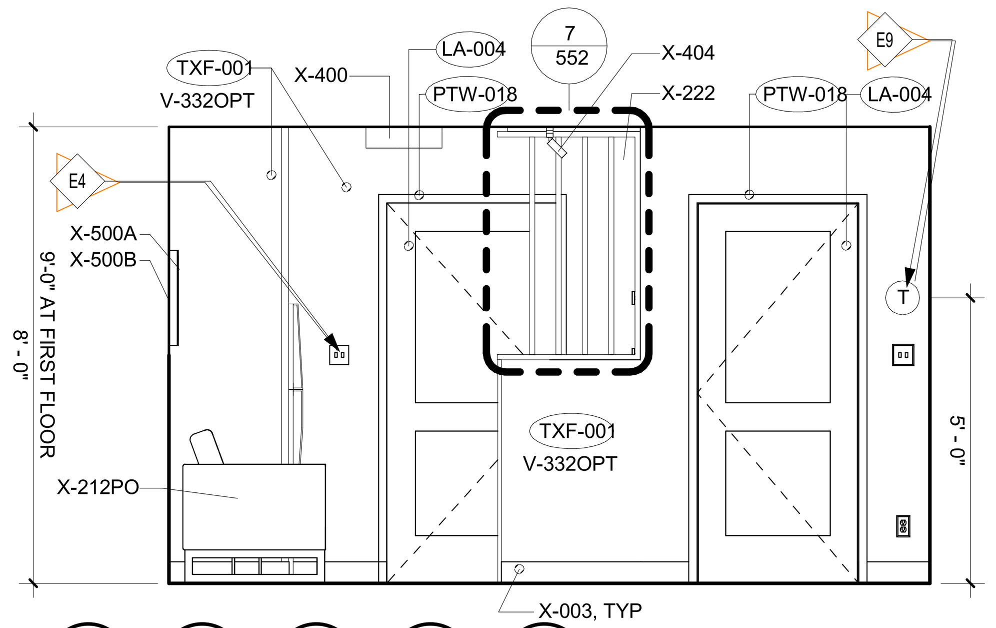
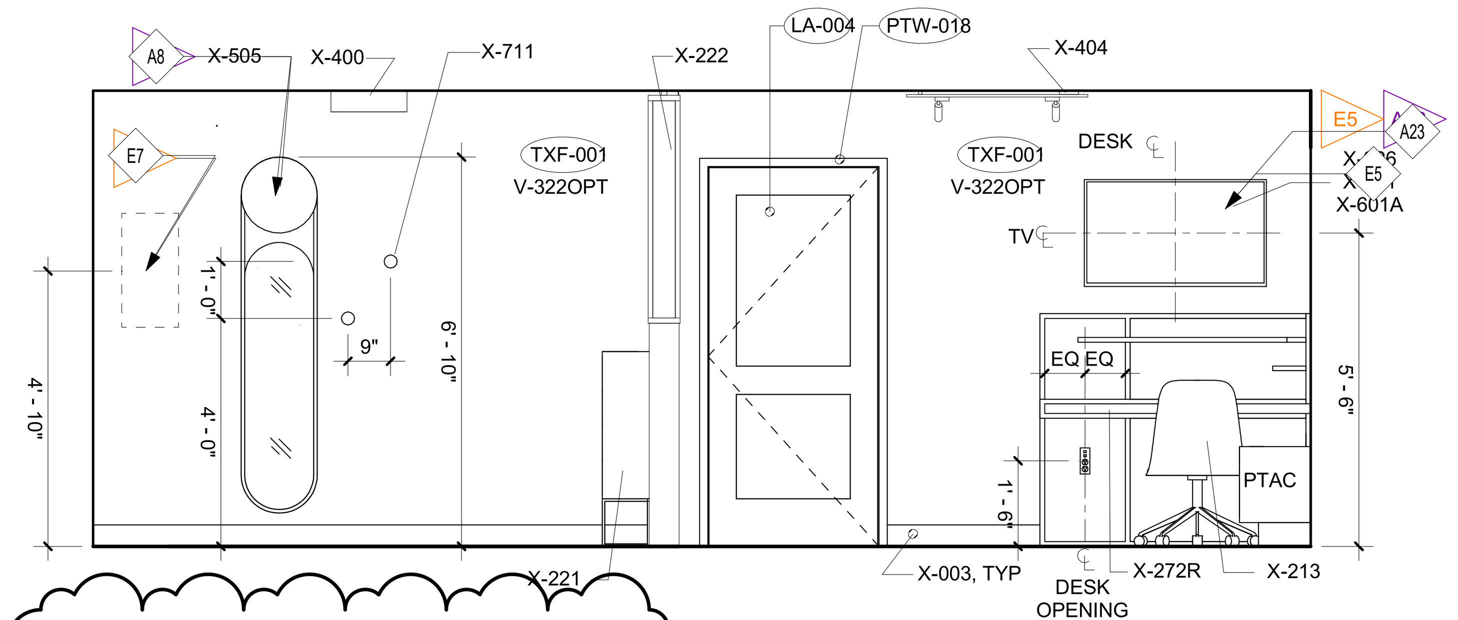
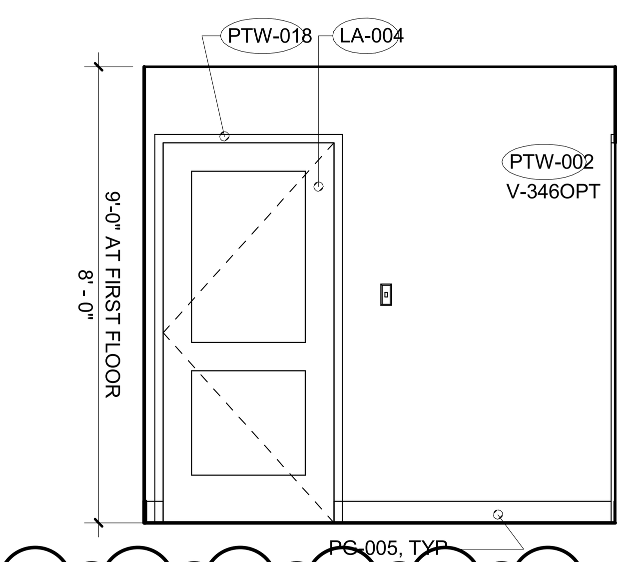


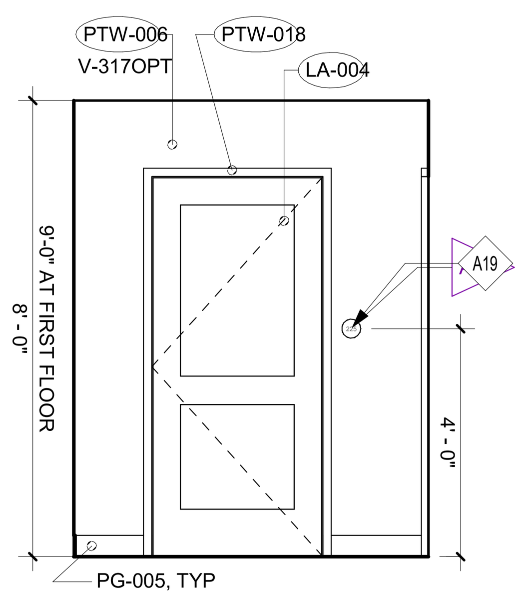
11 ONE BED KING-ELEV
3/8" = 1'-0"



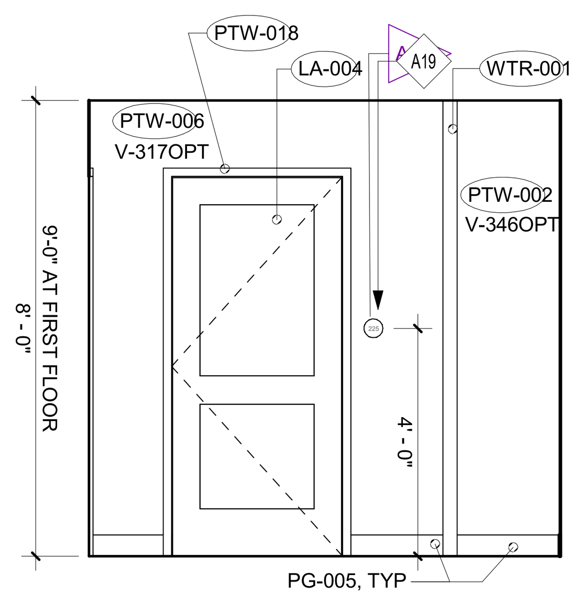
10 ONE BED KING-ELEV
3/8" = 1'-0"



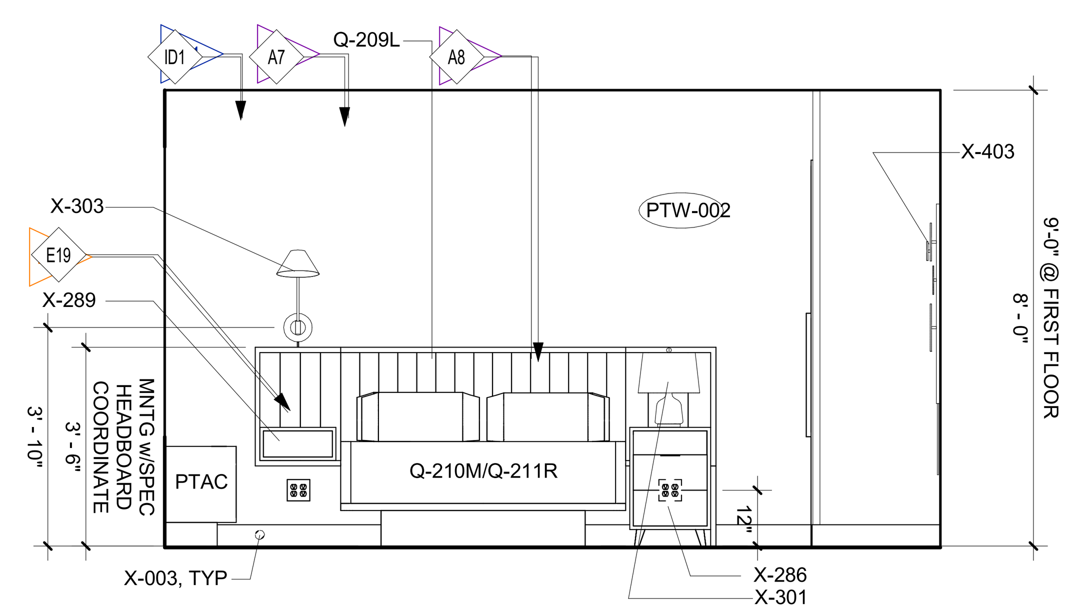
9 ONE BED KING-ELEV
3/8" = 1'-0"



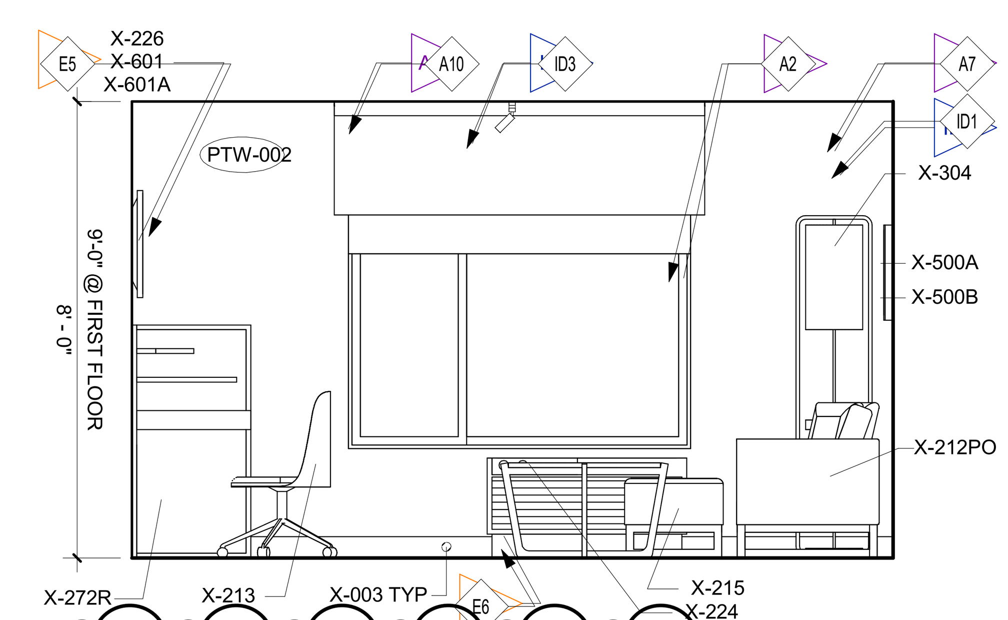
8 ONE BED KING-ELEV
3/8" = 1'-0"



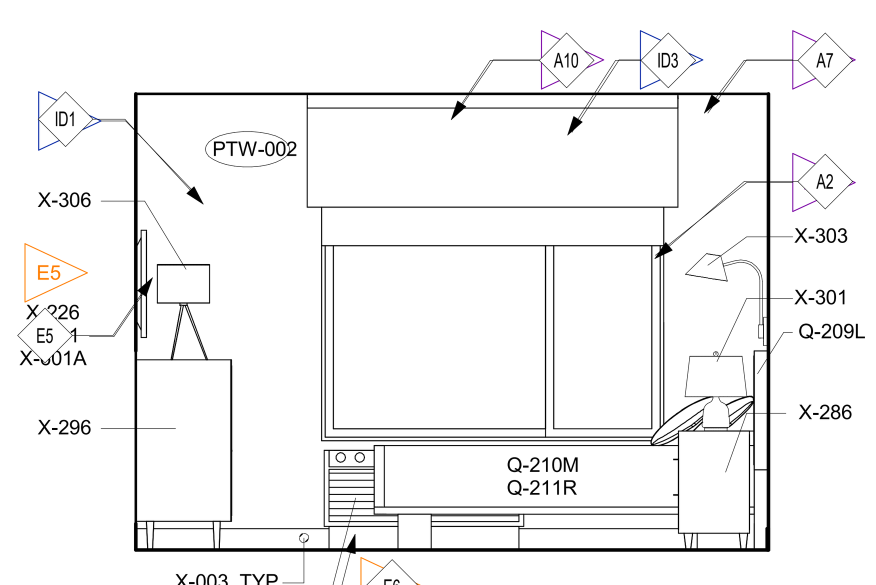
7 ONE BED KING-ELEV
3/8" = 1'-0"



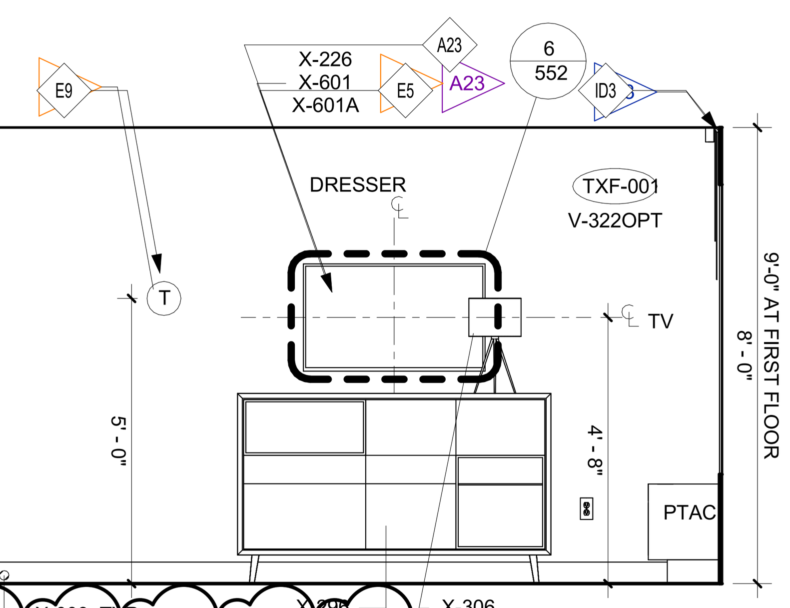
6 ONE BED KING-ELEV
3/8" = 1'-0"



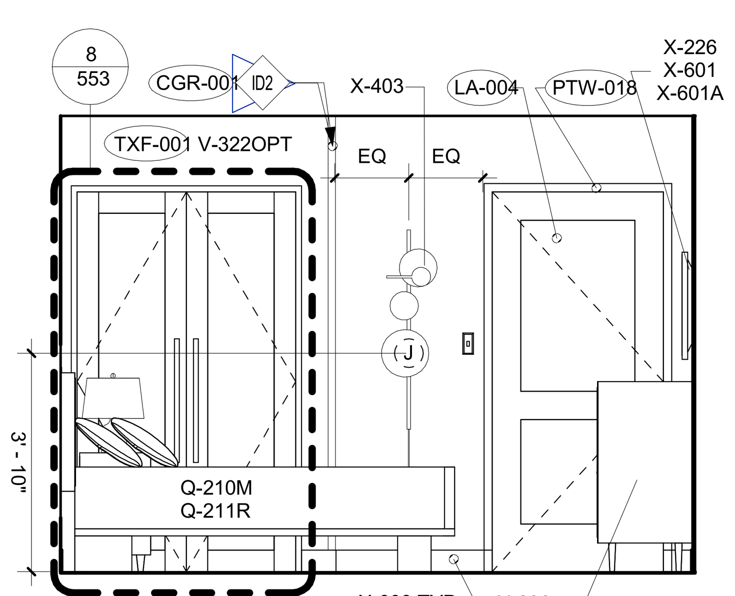
5 ONE BED KING-ELEV
3/8" = 1'-0"



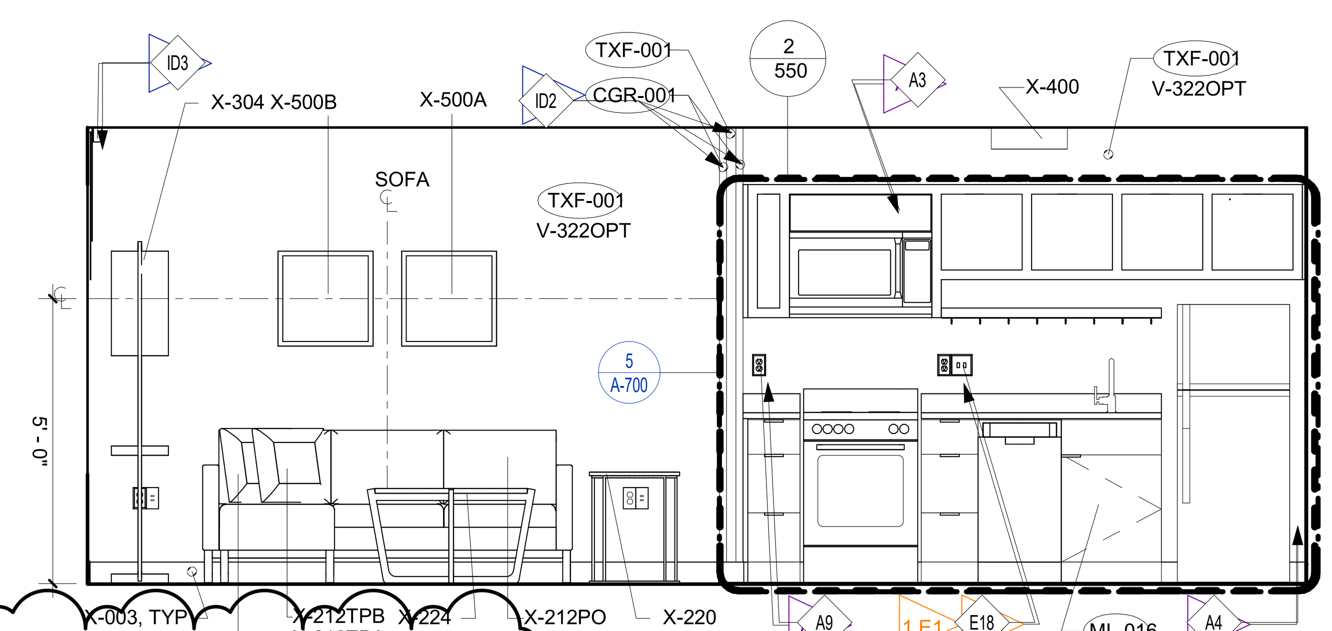
4 ONE BED KING-ELEV
3/8" = 1'-0"



3 ONE BED KING-ELEV
3/8" = 1'-0"



2 ONE BED KING-ELEV
3/8" = 1'-0"



1 ONE BED KING-ELEV
3/8" = 1'-0"

KEYNOTE LEGEND

A2	LOCATE SHADE PULLS OPPOSITE SIDE OF PTAC UNIT
A3	FALSE PANEL WITH ACCESS TO ELECTRICAL BEHIND
A4	HOLD 4" SPACE BETWEEN SIDE OF REFRIGERATOR AND WALL TO ALLOW DOOR TO OPEN GREATER THAN 90 DEGREES FOR THE REMOVAL OF VEGETABLE DRAWER
A7	TEXTURED FINISH AND PAINT REQUIRED ON GUESTROOM EXTERIOR WALL.
A8	BLOCKING IN WALL FOR ALL CASEWORK, KITCHEN CABINETS, HEADBOARD, TV AND TV TRIM, SHOE CUBBY, MIRROR, CLOSET SYSTEM, FIXTURES, TOWEL BAR LADDER, GRAB BARS AND ACCESSORIES. COORDINATE LOCATION WITH MANUFACTURERS INSTALLATION REQUIREMENTS.
A9	INDICATE OUTLET LOCATION WITHIN WALL CONSTRUCTION TO AVOID OUTLETS OCCURING IN SAME CAVITY WITHIN PARTITION. SEE DETAIL ON STC DIAGRAM ON G-102.
A10	PROVIDE BLOCKING IN CEILING/WALL FOR SHADE MOUNT, TOP OF SHADE MOUNT ABUTTS CEILING WHERE CEILING IS 8'-0" & 9'-0". COORDINATE LOCATION WITH MANUFACTURER'S INSTALLATION REQUIREMENTS.
A19	GUESTROOM SURFACE MOUNTED SIGNAGE. REFER TO INTERIOR SIGNAGE SPECIFICATIONS FOR INFORMATION.
A23	TV NICHE DETAIL DOES NOT APPLY TO EXTERIOR WALLS; TVs LOCATED ON EXTERIOR WALLS SHOULD BE SURFACE MOUNTED WITH FF&E TRIM X-226, REFER TO INTERIOR DESIGN SPECIFICATIONS MANUAL. TVs LOCATED IN THE DEMISING WALLS HAVE THE OPTION BETWEEN PROVIDING A NICHE WITH A SOUND BARRIER (REFER TO DETAIL 3/552) OR THE FF&E TRIM X-226. COORDINATE WITH THE INTERIOR DESIGN SPECIFICATION MANUAL WHEN PROVIDING X-226
E4	MASTER DEVICE OR LIGHT SWITCH WITH SIGNAGE TO CONTROL ALL HARDWIRED LIGHTS IN GUESTROOM, WITH EXCEPTION OF BATHROOM. PROVIDE SEPARATE SWITCHES FOR UPPER CABINET, UNDER SHELF, UNDER CABINET AND DECORATIVE WALL SCONCES. INTERFACE THE MASTER DEVICE WITH THE GUESTROOM MANAGEMENT SYSTEM (GRMS). SEE ELEC. & SPEC.
E5	OUTLETS FOR TV, CABLE AND POWER FOR TV TO BE MOUNTED IN OPENING OF WALL MOUNTED TV PANEL. SEE DETAILS SHEET 552 OR B552 FOR TV OPENING DETAIL.
E6	PTAC FOR TYPICAL GUEST ROOM HVAC. SEE DETAILS ON 222 OR B222 FOR PTAC AND WALL SLEEVE INFORMATION.
E7	ELECTRIC PANEL, TO BE PAINTED SAME COLOR AS SURROUNDING WALL. INSTALL AS CLOSE AS POSSIBLE TO THE ENTRY DOOR WALL.
E9	THERMOSTAT. LOCATE THERMOSTAT WITH INTEGRAL OCCUPANCY SENSOR FACING SLEEPING AREA. COORDINATE WITH THE GUESTROOM MANAGEMENT SYSTEM (GRMS). SEE TYPICAL GUESTROOM OUTLET HEIGHT DETAILS ON G-300s AND ROOM ELEVATION FOR ADDITIONAL INFORMATION.
E18	TWO-TOGGLE SWITCH FOR GARBAGE DISPOSAL, AND UNDERCABINET LIGHT. PROVIDE JBOX(S) FOR MILLWORK LIGHTING, RE: ELEC.
E19	PROVIDE OUTLET FOR WALL SCONCE AT HEADBOARD WHERE SHOWN IN ELEVATION. SWITCH LOCATED ON LIGHT FIXTURE.
ID1	TEXTURED WALL COATING IS THE REQUIRED FINISH FOR EXTERIOR GUESTROOM WALLS.
ID2	ALL EXTERIOR CORNERS SHALL HAVE FULL HEIGHT CORNER GUARDS.
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2 01/19/2024 Addendum #2
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STATE OF MISSOURI
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03/06/2024

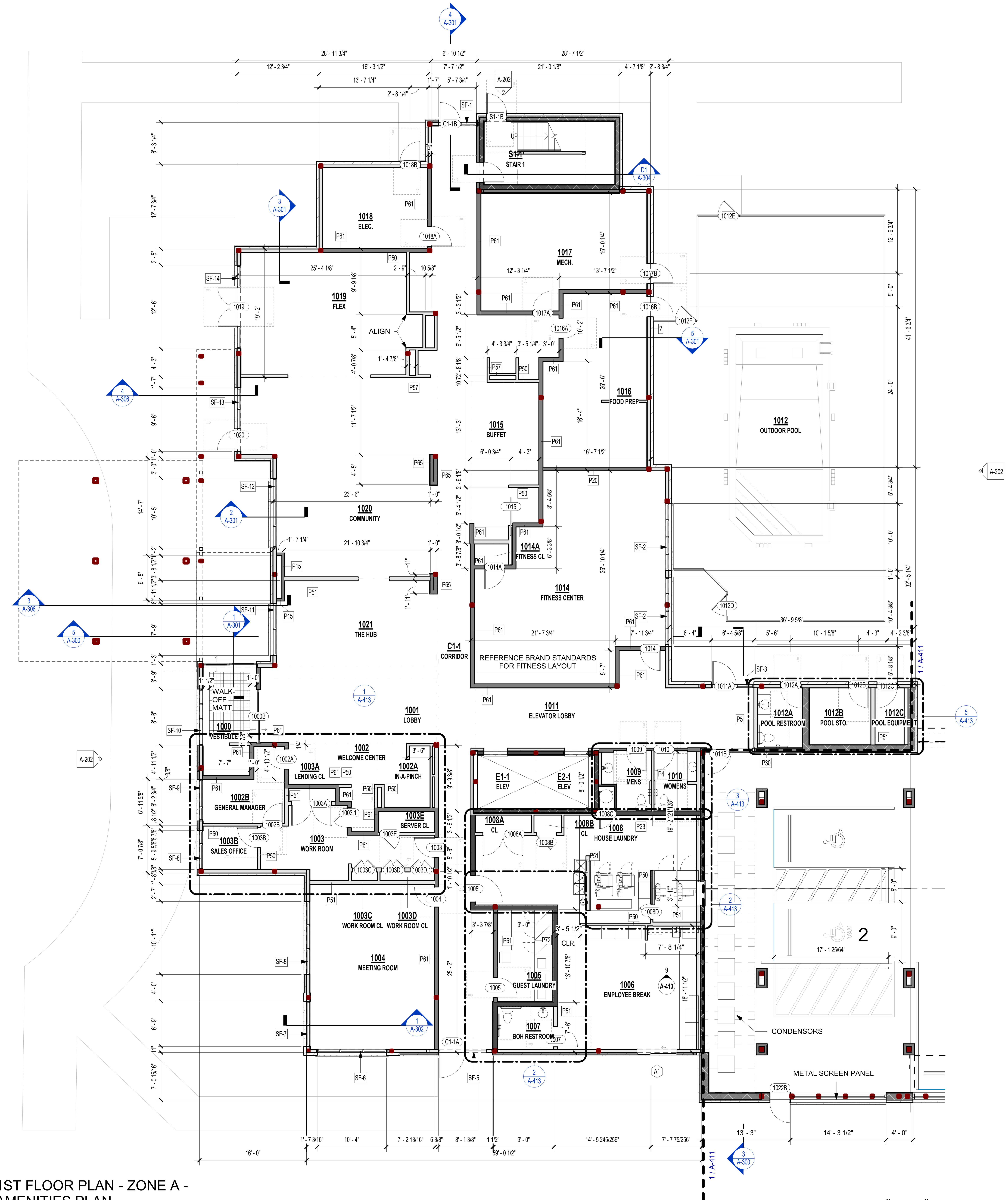
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
ONE BED KING UNIT INT ELEVS

PROJECT NUMBER: 23098

SHEET NUMBER:

A-408



1 1ST FLOOR PLAN - ZONE A - AMENITIES PLAN
1/8" = 1'-0"

KEYPLAN

REFERENCE G-003 FOR GENERAL NOTES

PLAN LEGEND

- PARTIAL HEIGHT PARTITION
- NON-RATED PARTITION; SEE ASSEMBLIES
- 1 HR RATED PARTITION; SEE ASSEMBLIES
- 2 HR RATED PARTITION; SEE ASSEMBLIES
- A1 WINDOW TYPE; SEE WINDOW SCHEDULE
- 101 DOOR TYPE; SEE DOOR SCHEDULE
- P7 PARTITION TYPE; SEE ASSEMBLIES
- 6' - 0" FRAMING DIMENSIONS
- 6' - 0" LAYOUT LAYOUT LINE DIMENSIONS
- HEARING/VISIBILITY
- ADA/ACCESSIBLE UNITS

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
2 01/19/2024 Addendum #2

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01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
ENLARGED 1ST FLOOR PLAN - COMMON AREAS

PROJECT NUMBER: 23098

SHEET NUMBER:

A-410

REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-410 FOR PLAN LEGEND

KEYNOTE LEGEND

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7305
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
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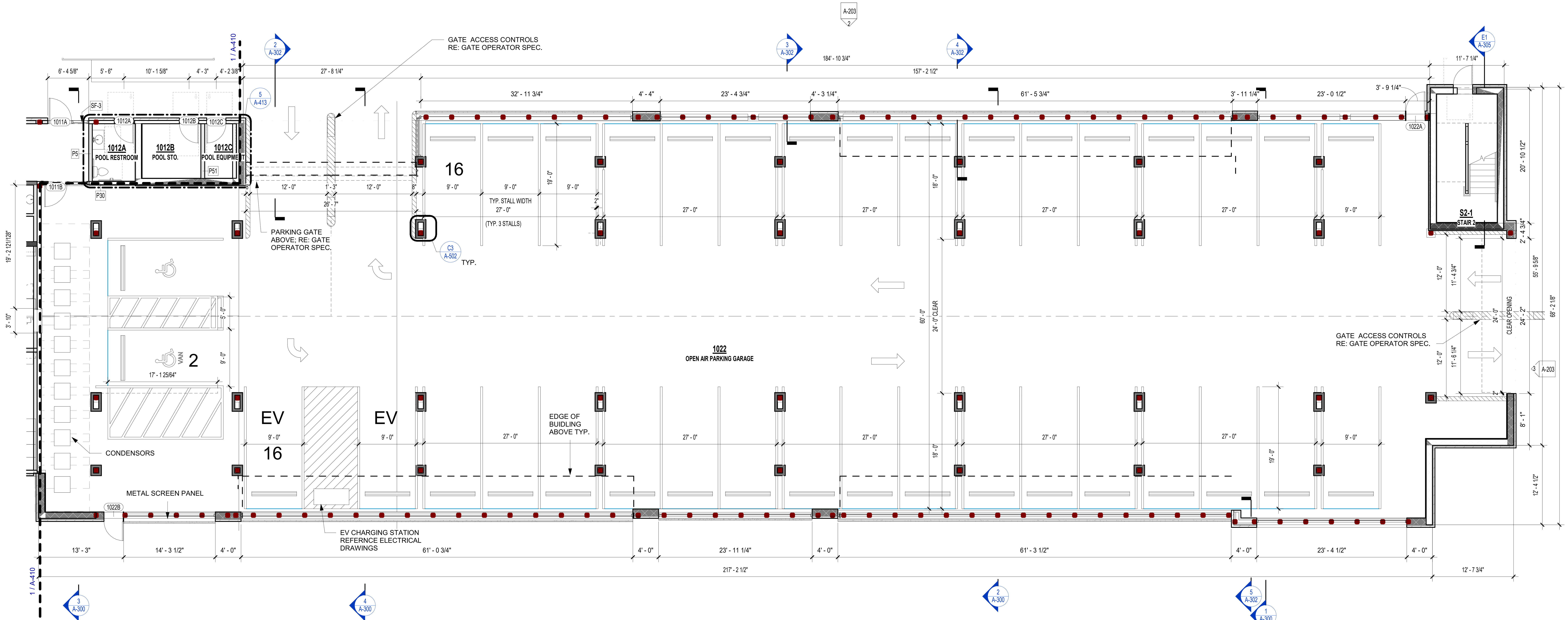
LEE'S SUMMIT 64064 USA



1 1ST FLOOR PLAN - ZONE B - GARAGE PLAN
1/8" = 1'-0"

SHEET TITLE
ENLARGED 1ST FLOOR PLAN - GARAGE PLAN

PROJECT NUMBER: 23098

SHEET NUMBER:
A-411

REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-410 FOR PLAN LEGEND

KEYNOTE LEGEND

PRINTS ISSUED
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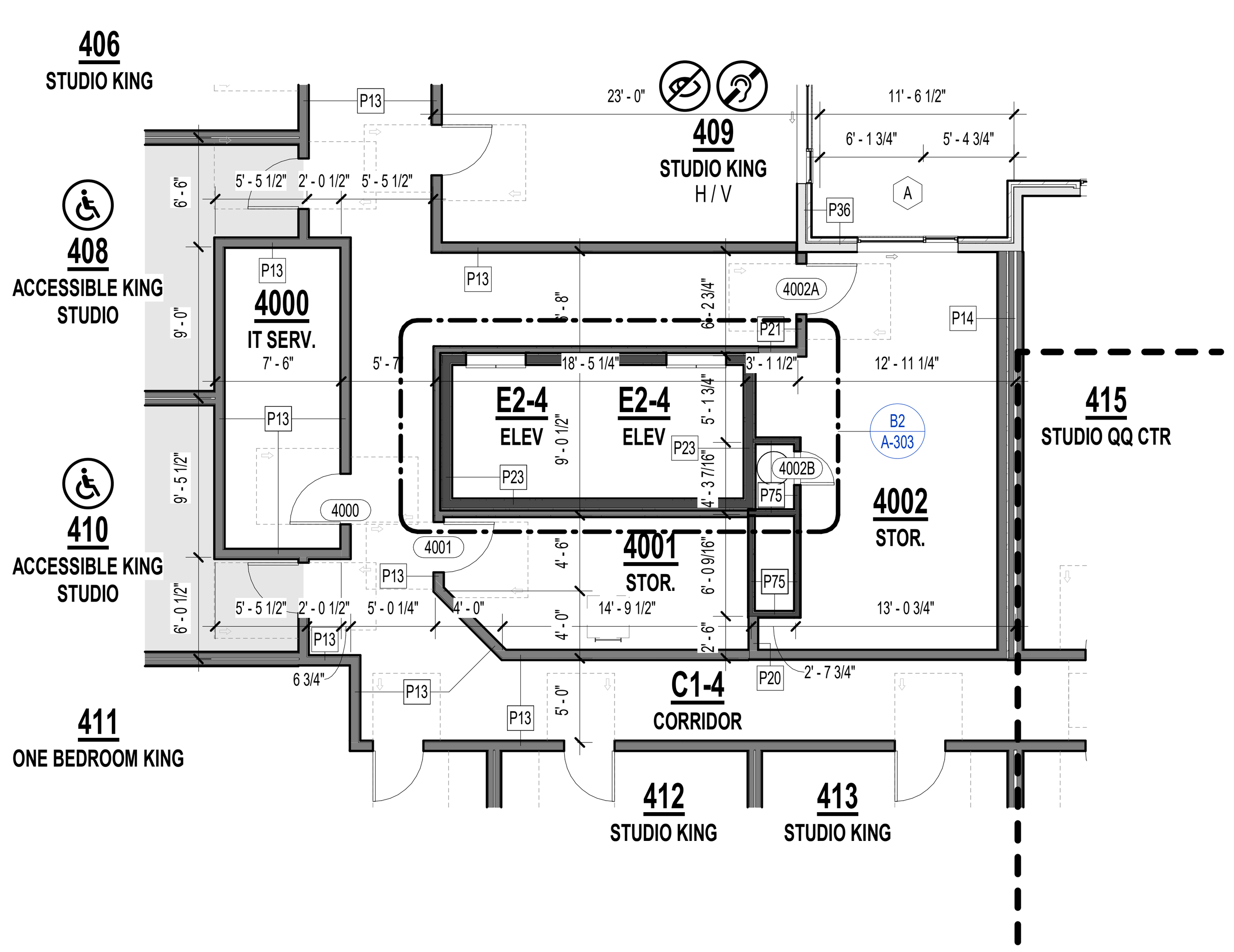
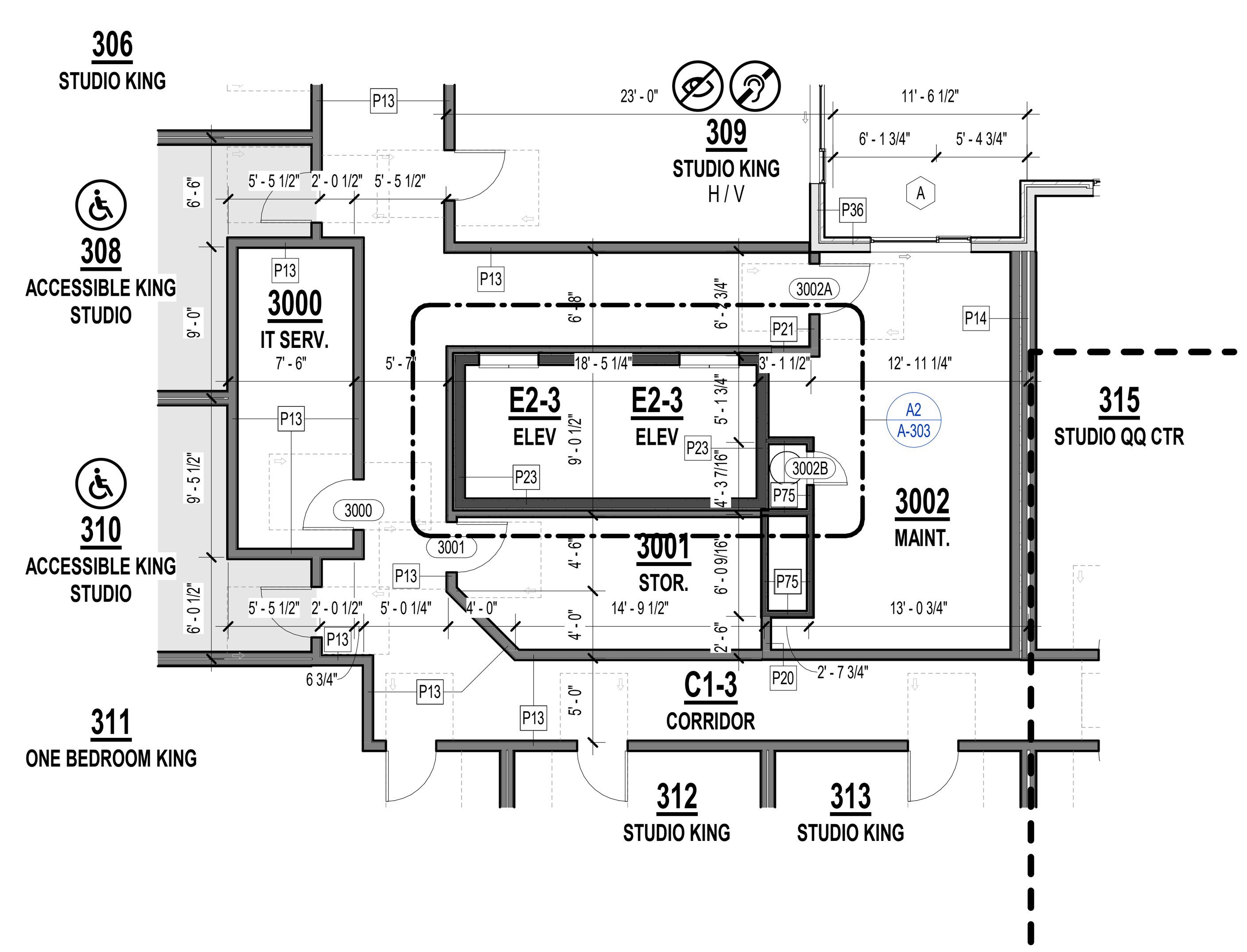
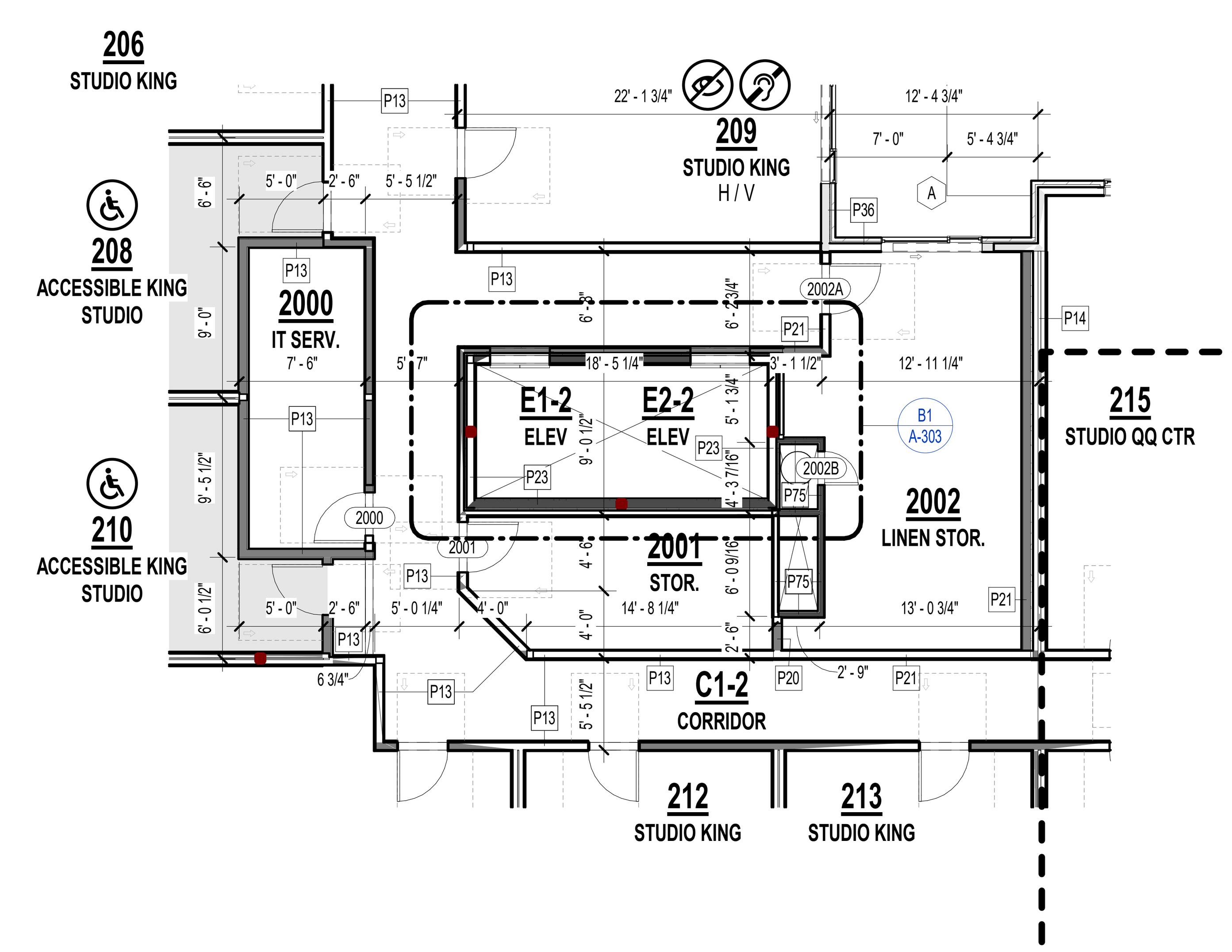


3 4TH FLOOR PLAN - COMMON SPACES
1/8" = 1'-0"



2 3RD FLOOR PLAN - COMMON SPACES
1/8" = 1'-0"



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

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STATE OF MISSOURI
DAVID EUGENE HENDRICKS
NUMBER A-7395
REGISTERED ARCHITECT
03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
ENLARGED COMMON SPACES

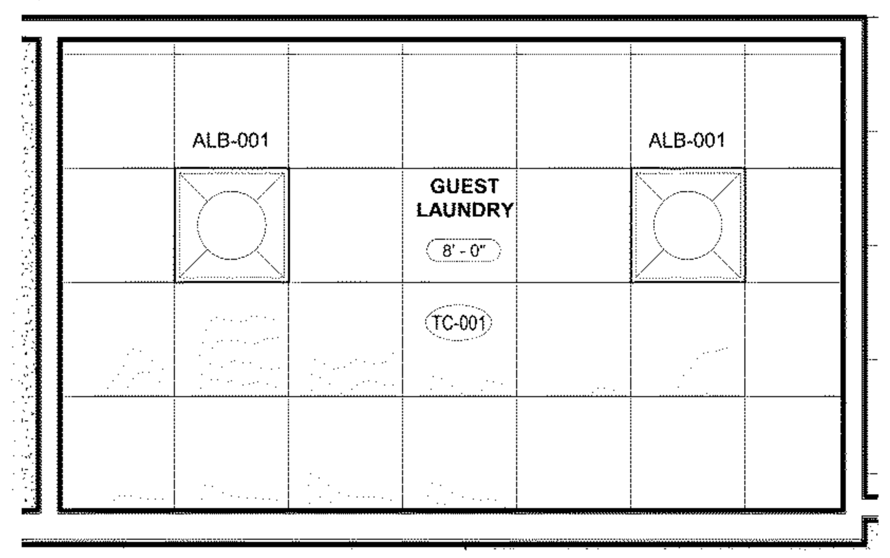
PROJECT NUMBER: 23098

SHEET NUMBER:

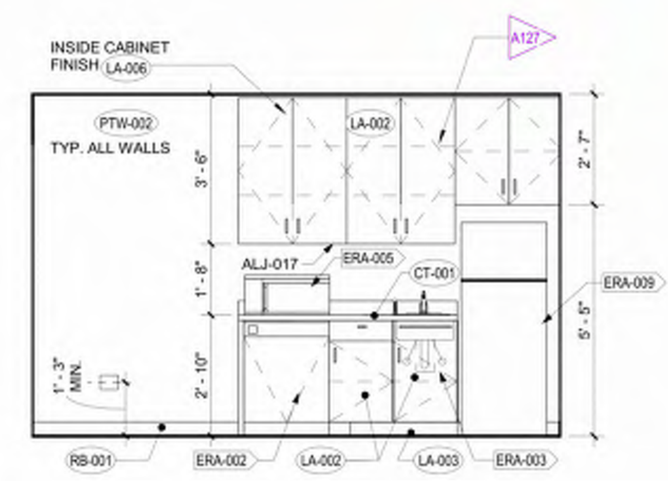
A-412

REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-410 FOR PLAN LEGEND

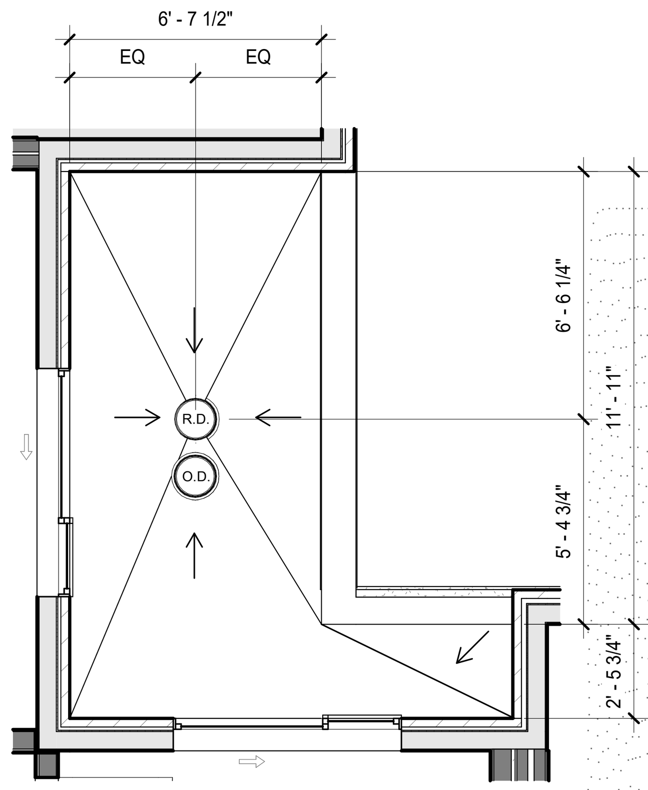
KEYNOTE LEGEND



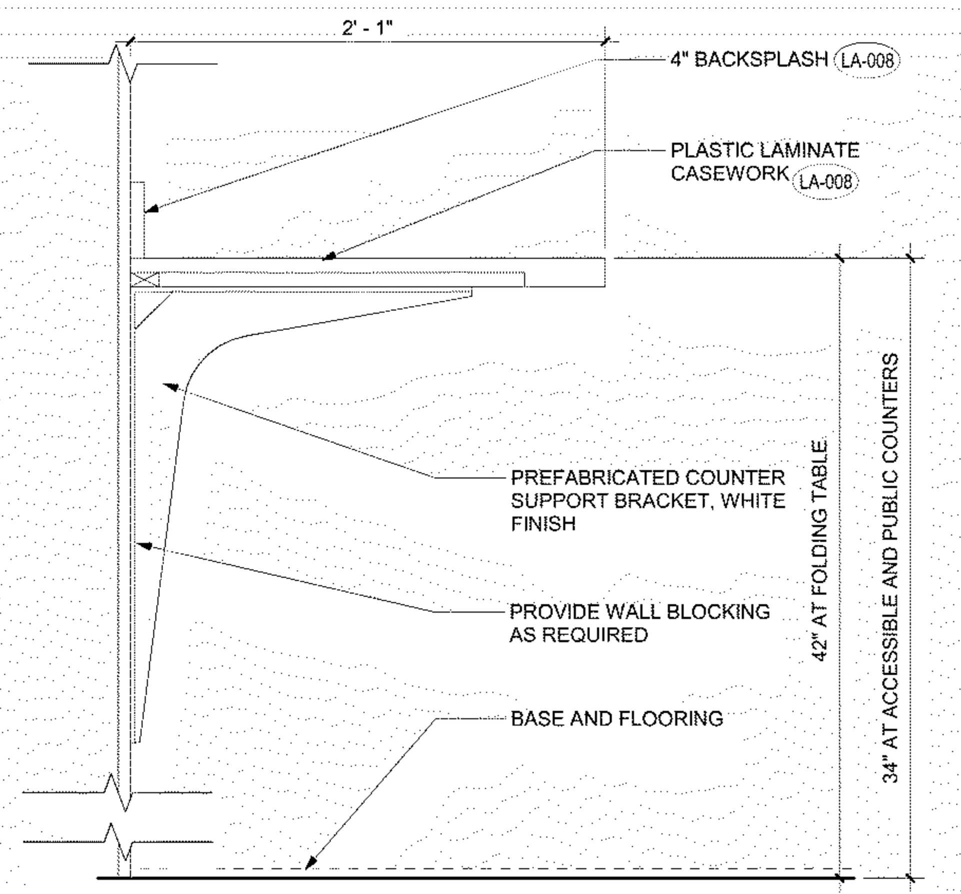
11 GUEST LAUNDRY RCP
3/8" = 1'-0"



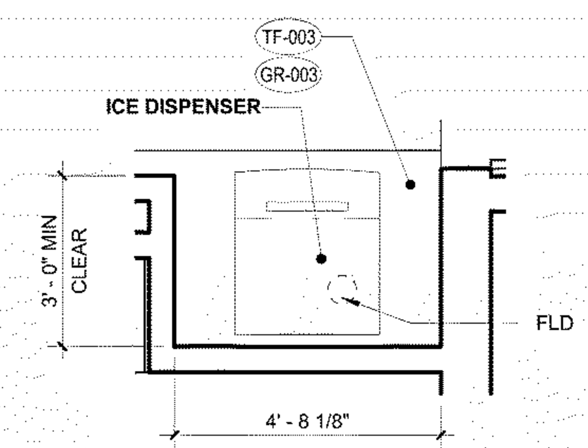
9 BREAK ROOM ELEVATION
3/8" = 1'-0"



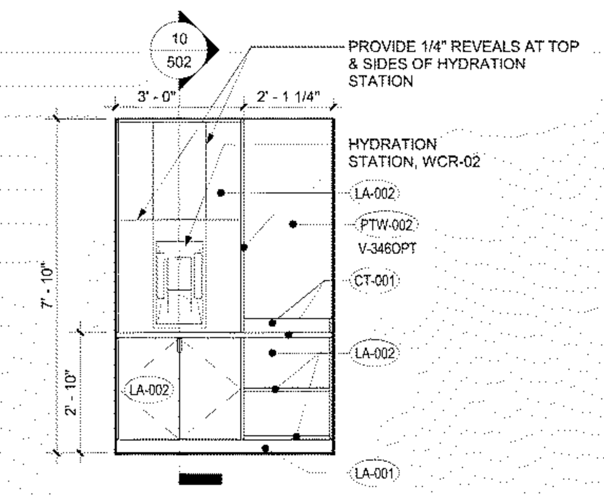
12 ROOF ENLARGED 2
1/4" = 1'-0"



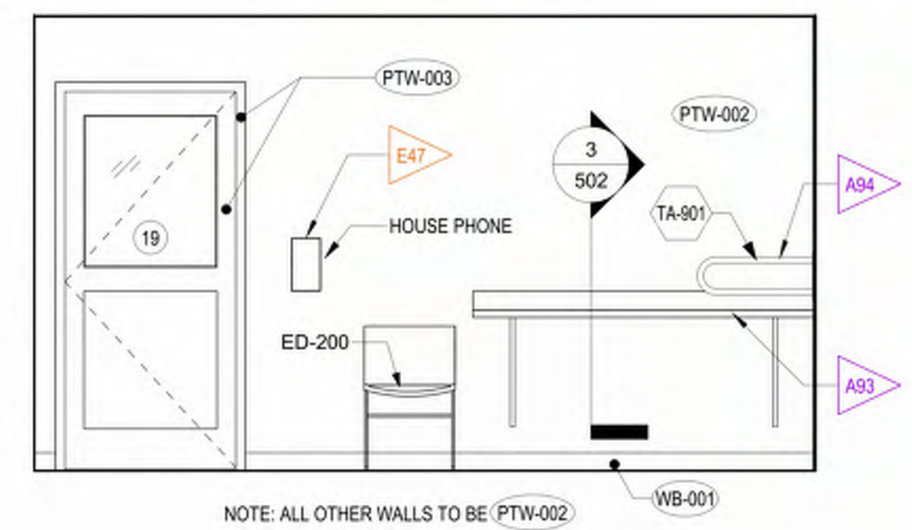
10 GUEST LAUNDRY FOLDING TABLE
1 1/2" = 1'-0"



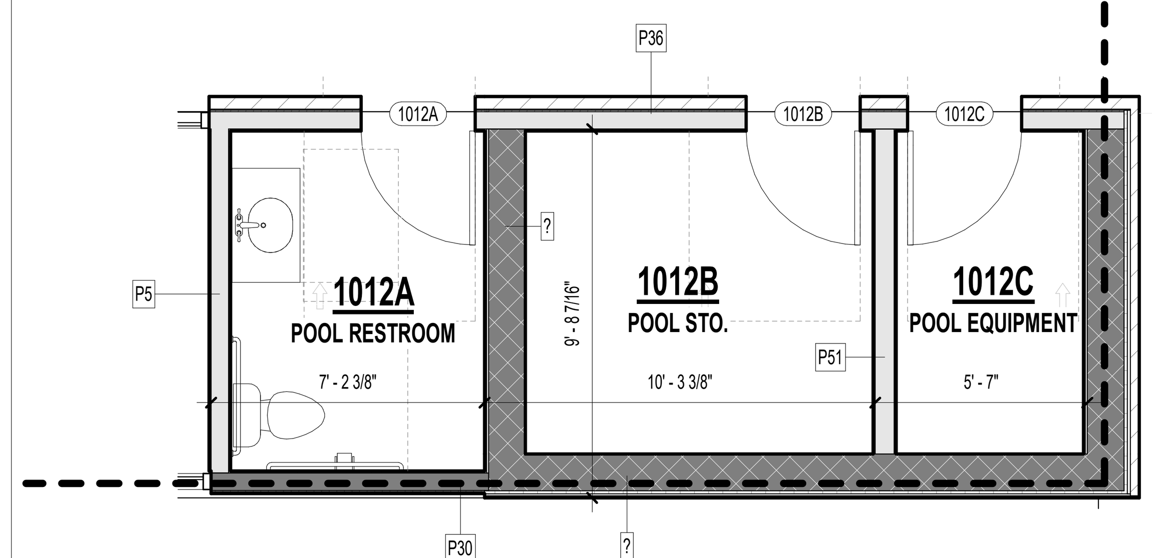
8 ICE DISPENSER AREA - FIRST FLOOR
3/8" = 1'-0"



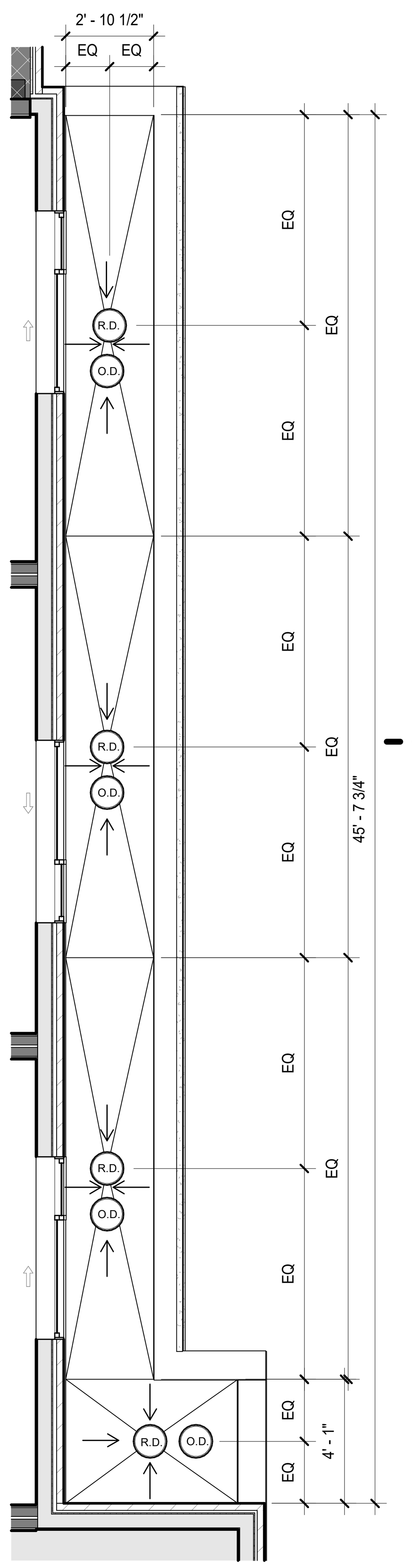
7 HYDRATION STATION ELEVATION - CORRIDOR
3/8" = 1'-0"



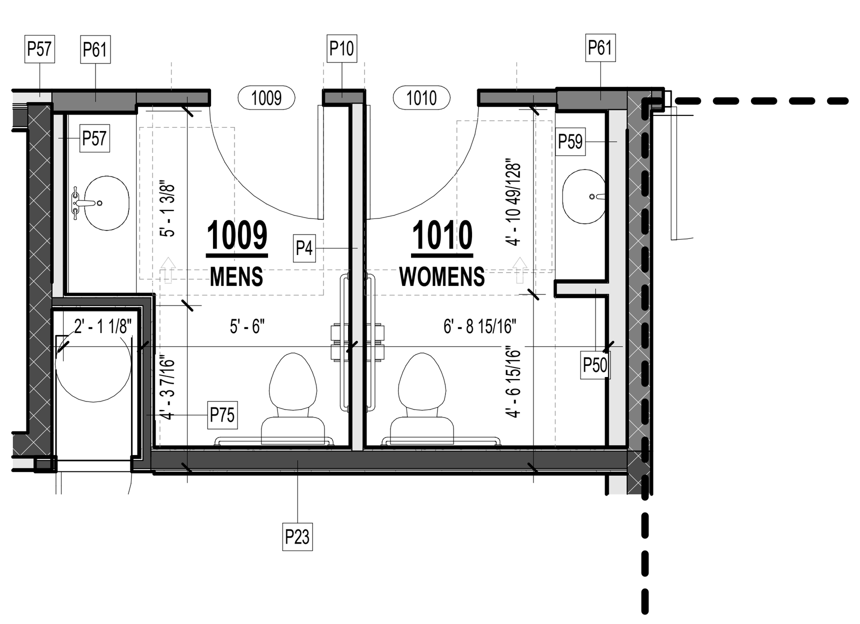
6 GUEST LAUNDRY ELEVATION
3/8" = 1'-0"



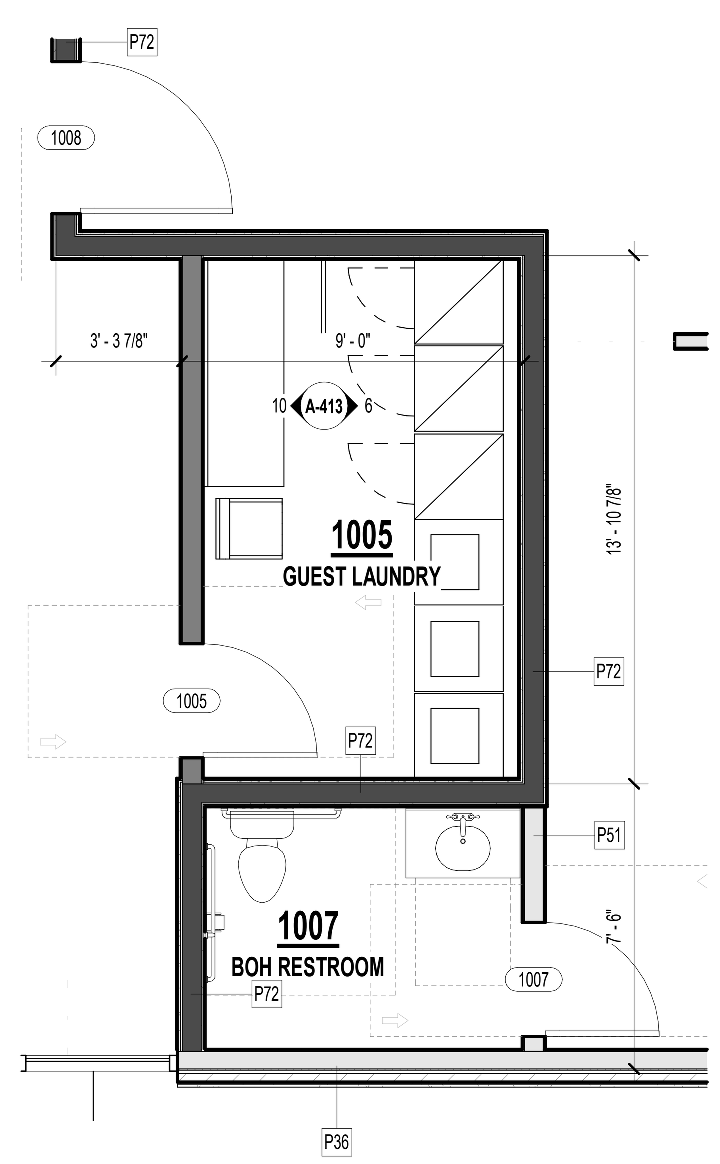
5 1ST FLOOR PLAN - POOL AMENITIES
1/4" = 1'-0"



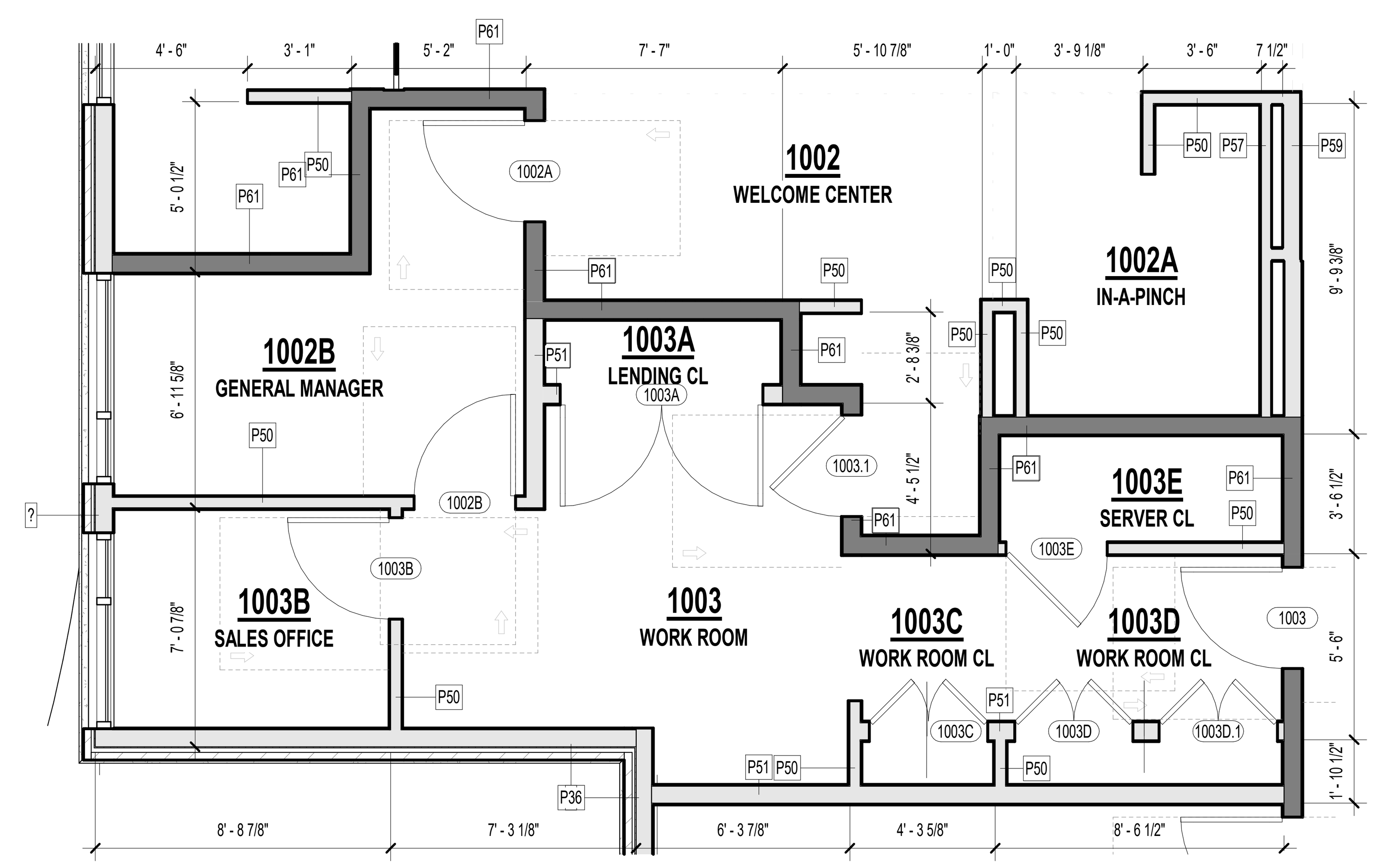
4 ROOF ENLARGED 1
1/4" = 1'-0"



3 1ST FLOOR PLAN - RESTROOMS
1/4" = 1'-0"



2 1ST FLOOR PLAN - LAUNDRY AREA
1/4" = 1'-0"



1 1ST FLOOR PLAN - ADMINISTRATION AREA
1/4" = 1'-0"

PRINTS ISSUED
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REVISIONS:
2 01/19/2024 Addendum #2

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ARCHITECTURE
INTERIOR DESIGN
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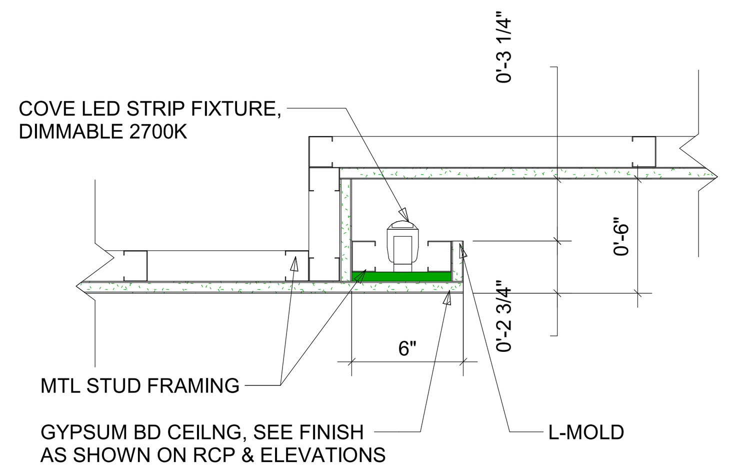
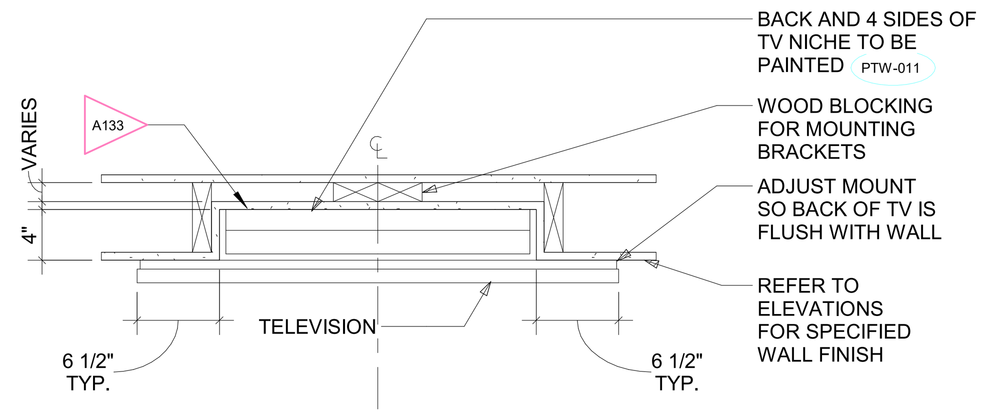
STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7305
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

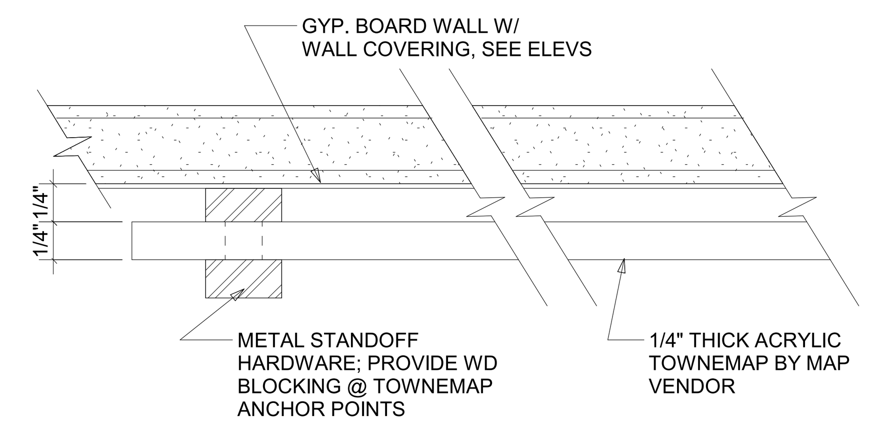
SHEET TITLE
ENLARGED MISC COMMON AREA PLANS
PROJECT NUMBER: 23098
SHEET NUMBER:
A-413



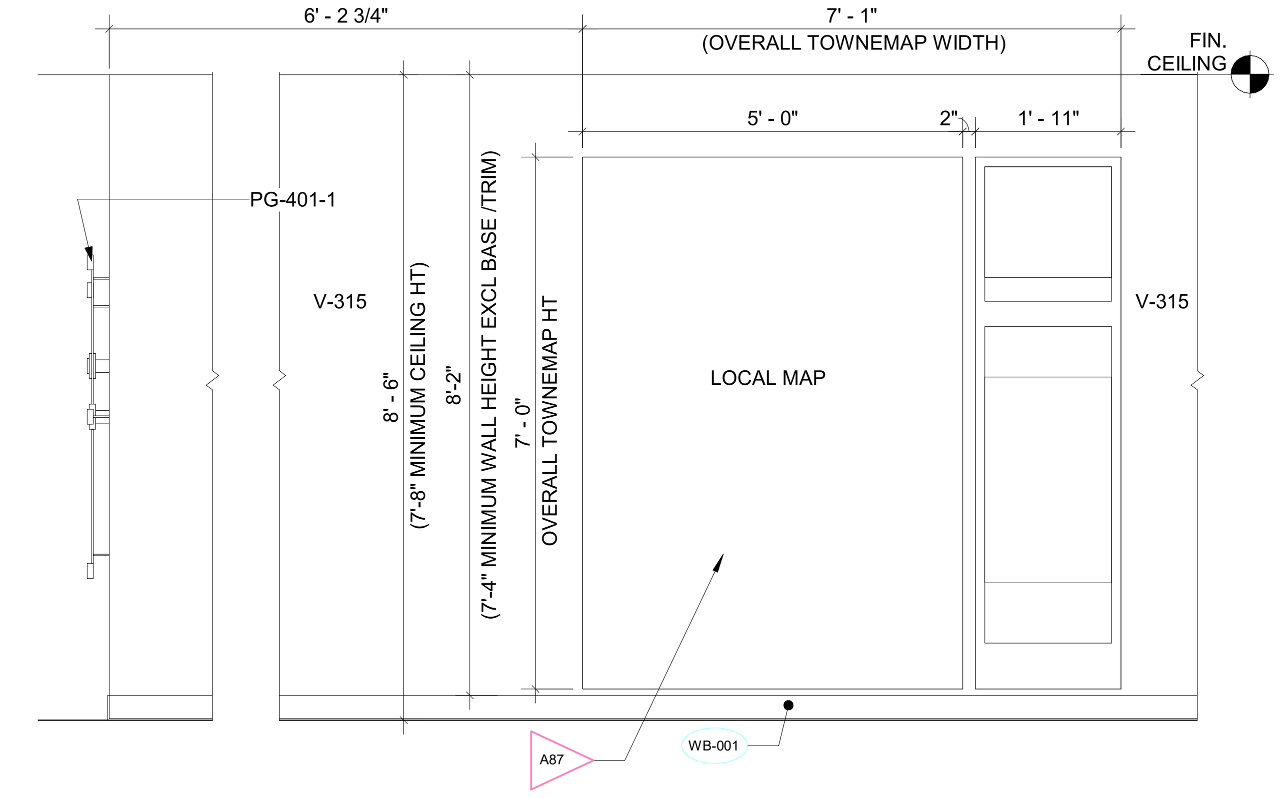
12 LIGHT COVE DETAIL AT HUB
1 1/2" = 1'-0"



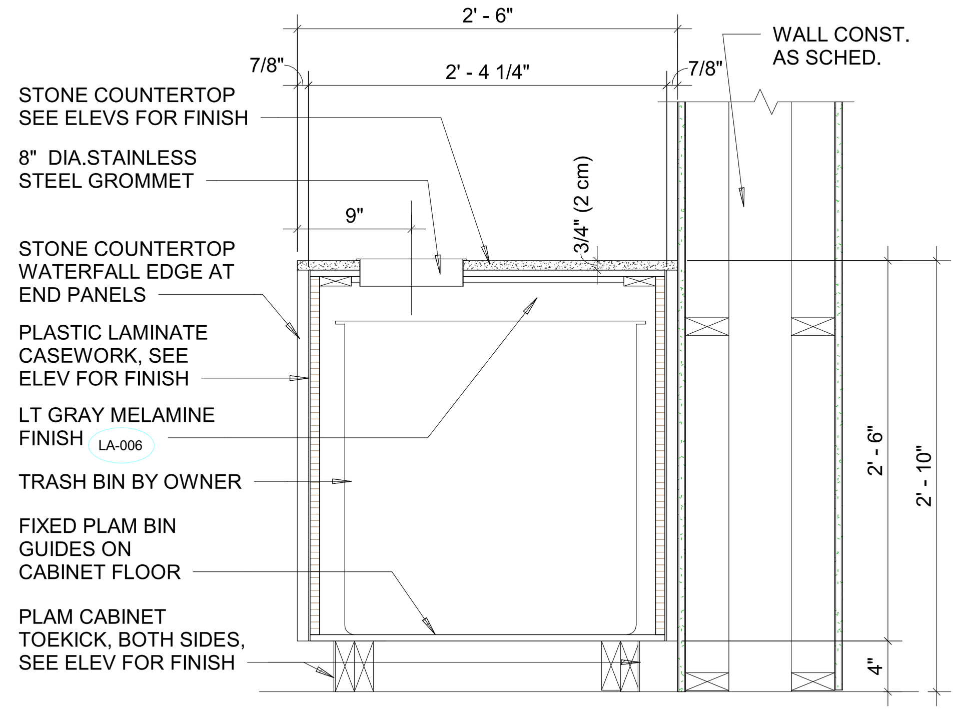
11 PUBLIC SPACE TELEVISION MOUNTING DETAIL
1" = 1'-0"



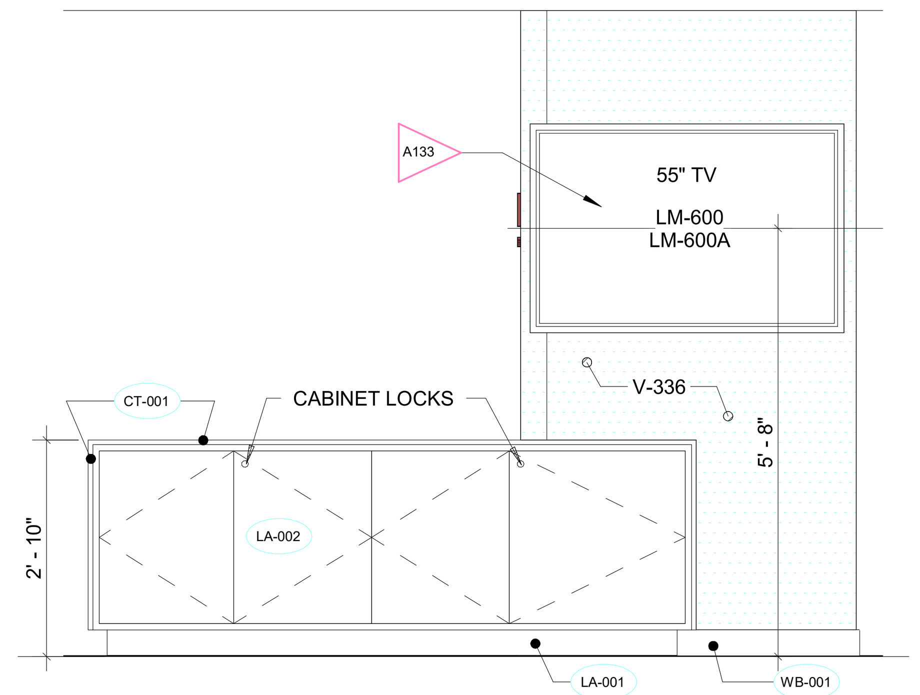
10 TOWNEMAP WALL ASSEMBLY
12" = 1'-0"



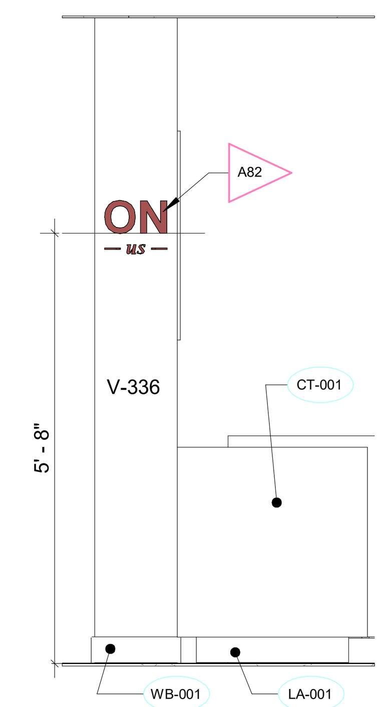
9 TOWNEMAP WALL ELEVATION
1/2" = 1'-0"



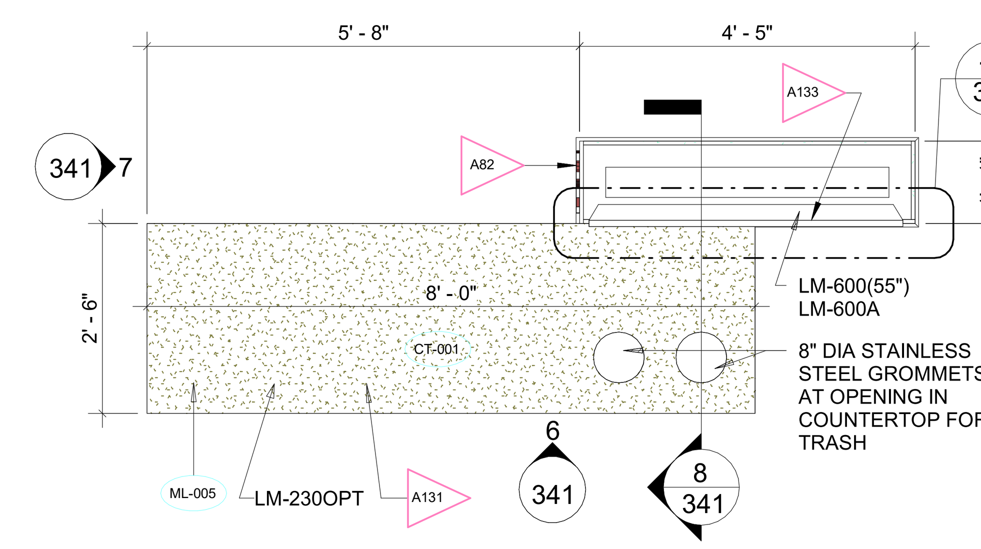
8 "ON US" SECTION
1" = 1'-0"



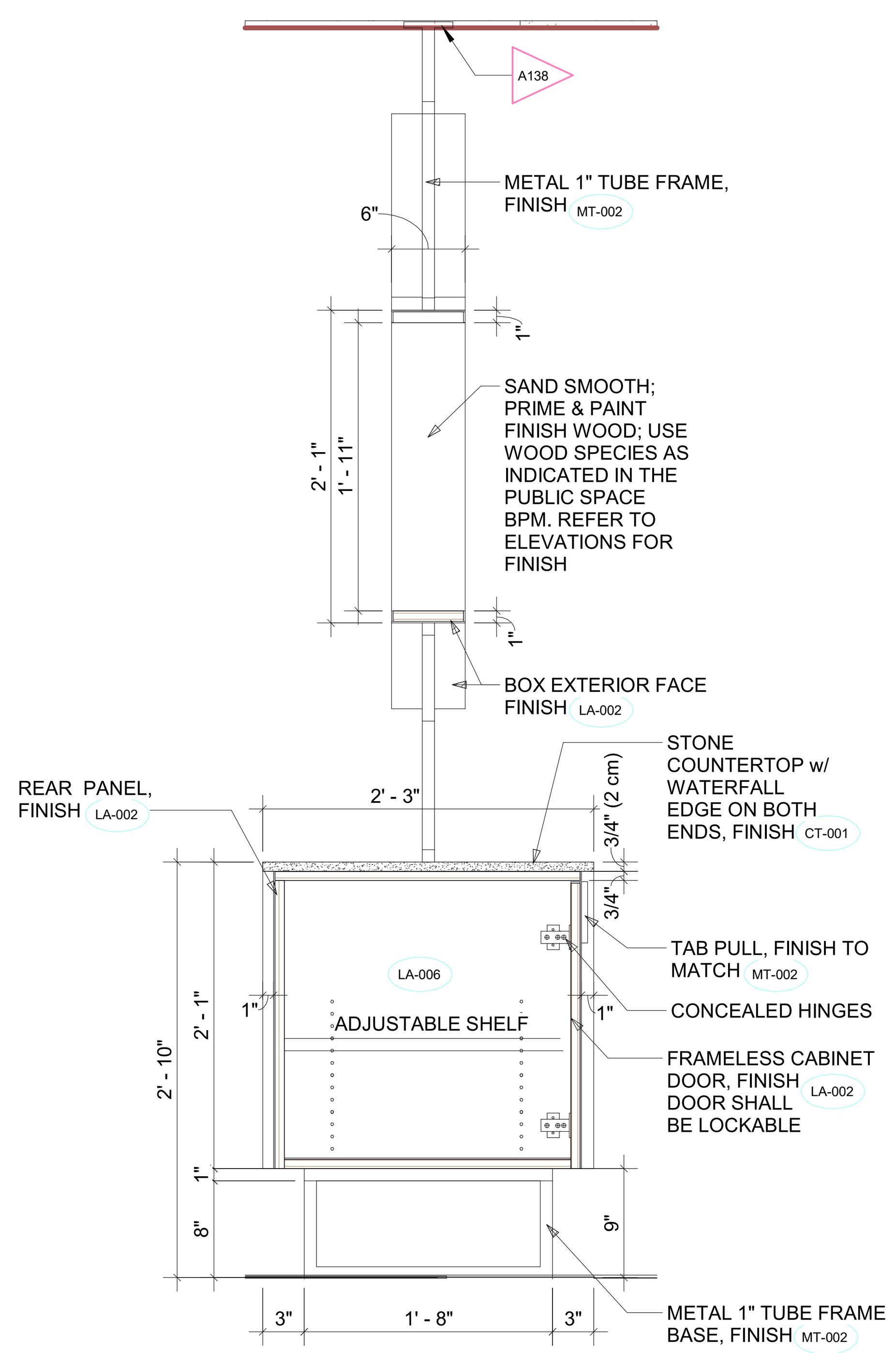
7 "ON US" ELEVATION 2
1/2" = 1'-0"



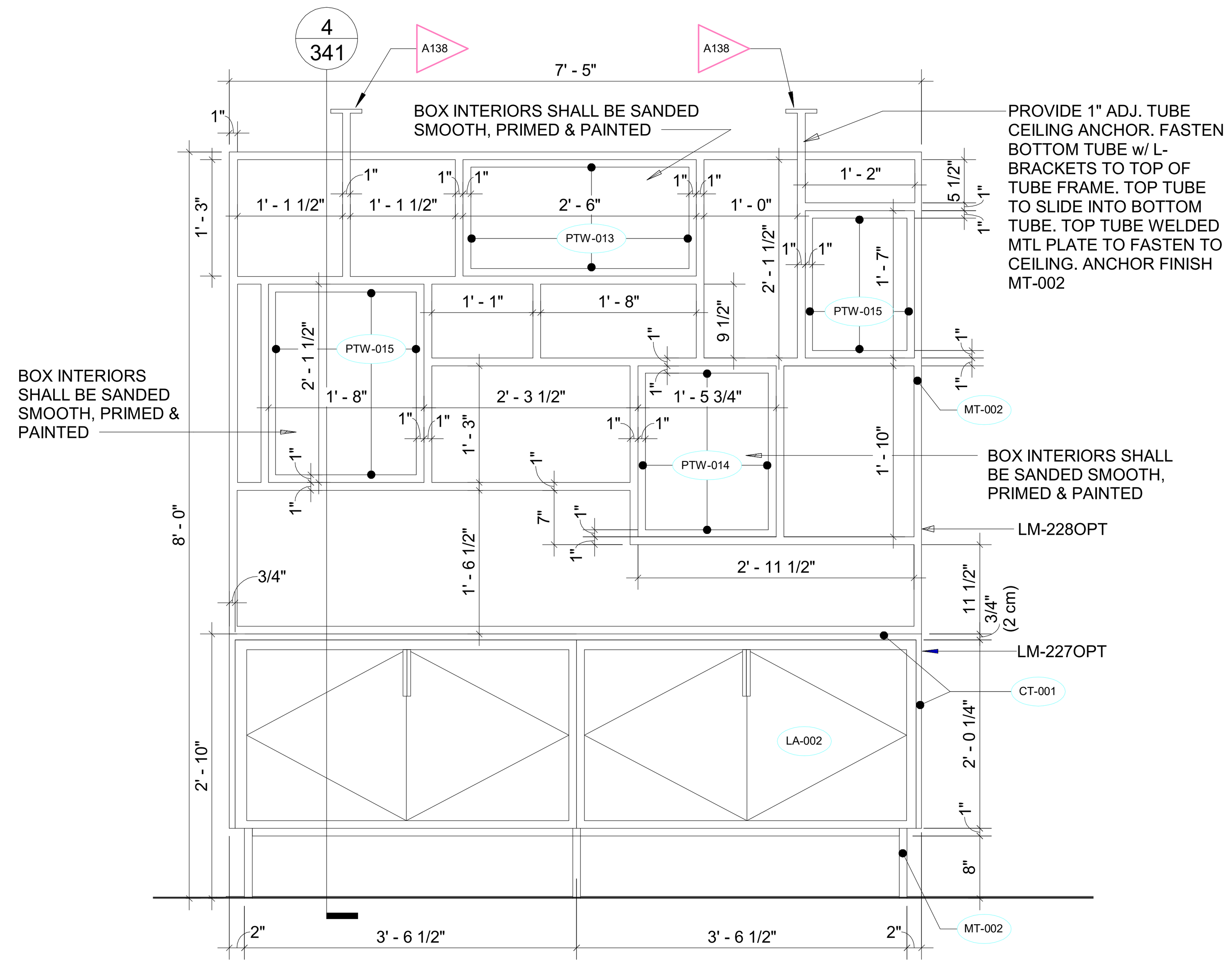
6 "ON US" ELEVATION 1
1/2" = 1'-0"



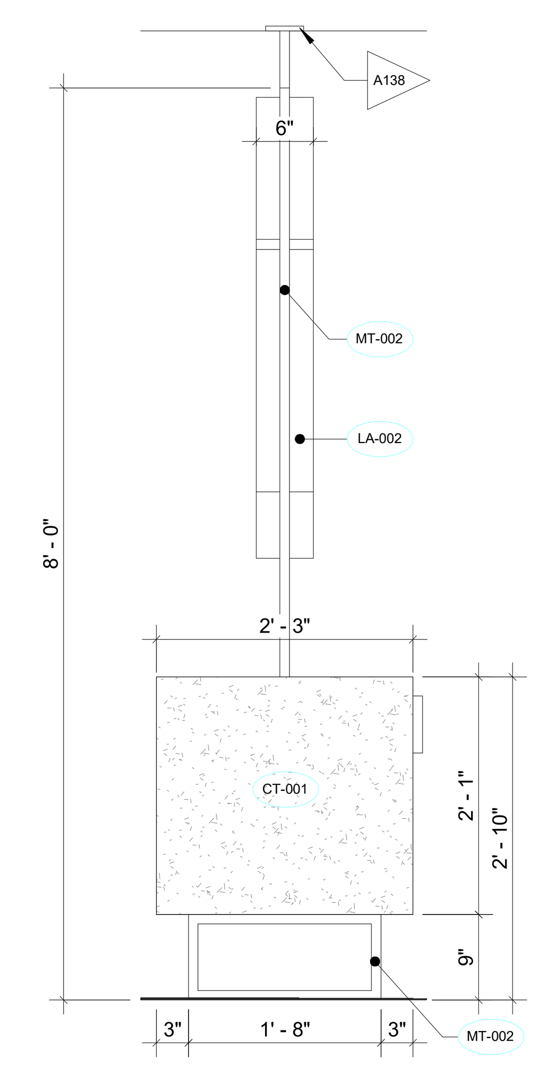
5 ENLARGED "ON US" PLAN
1/2" = 1'-0"



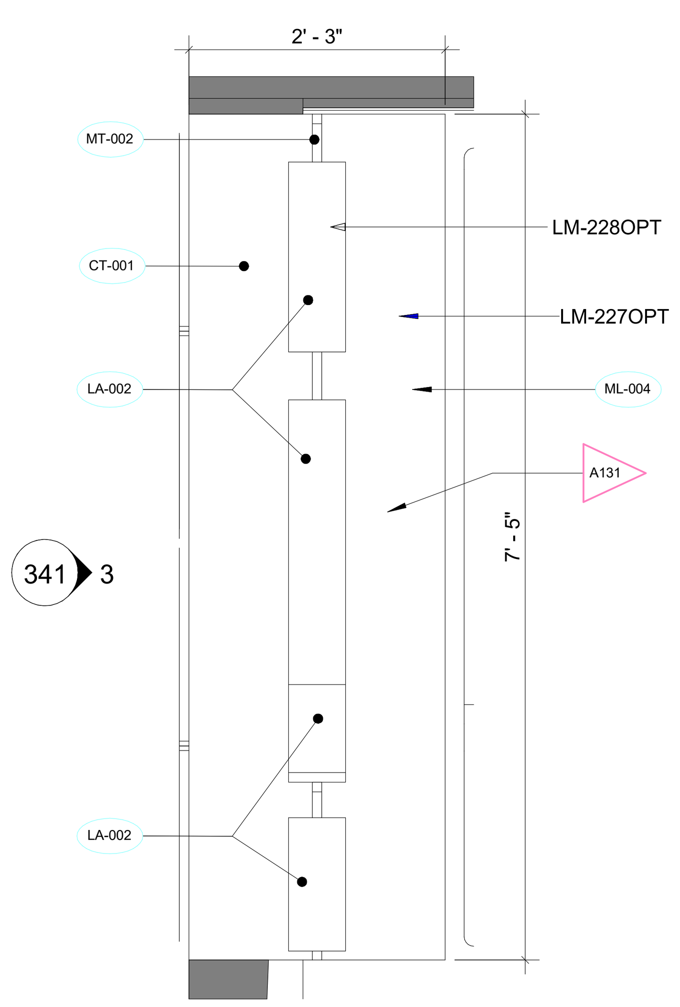
4 HUB CREDENZA SECTION DETAIL
1" = 1'-0"



1 HUB CREDENZA ELEVATION
3/4" = 1'-0"



3 HUB CREDENZA SIDE ELEVATION
3/4" = 1'-0"



2 HUB CREDENZA PLAN
3/4" = 1'-0"

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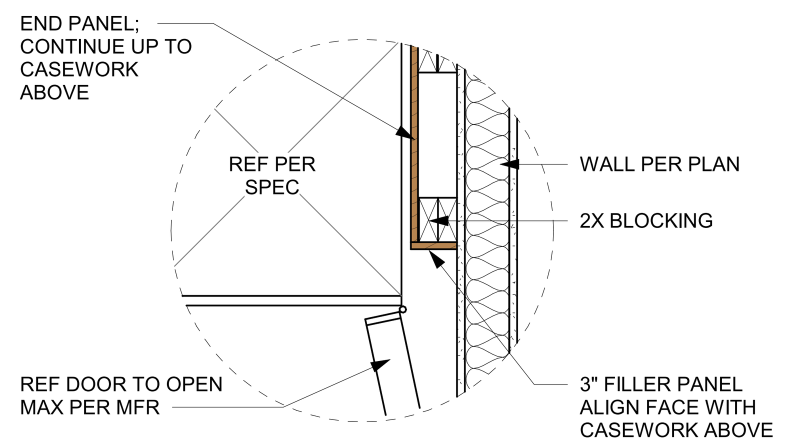
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
PUBLIC SPACE DETAILS

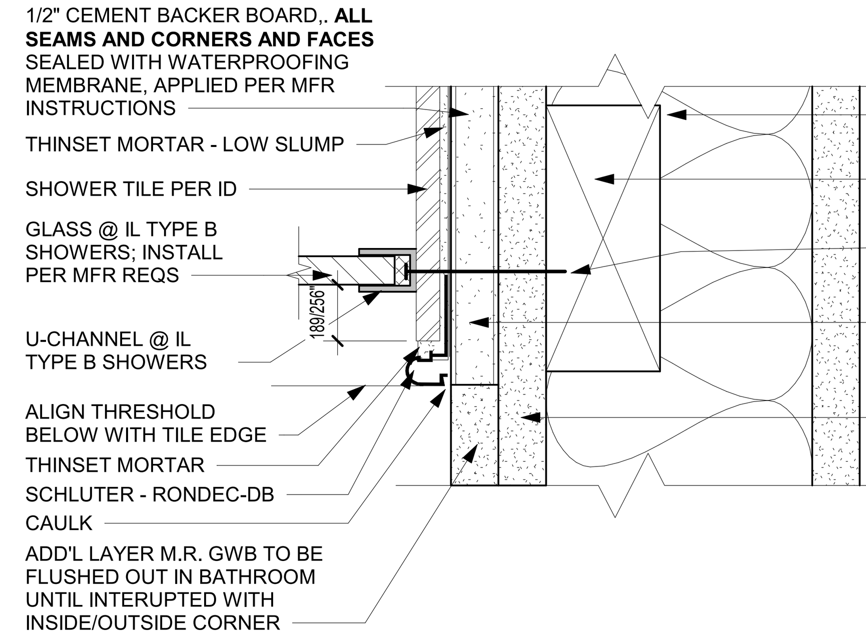
PROJECT NUMBER: 23098

SHEET NUMBER:

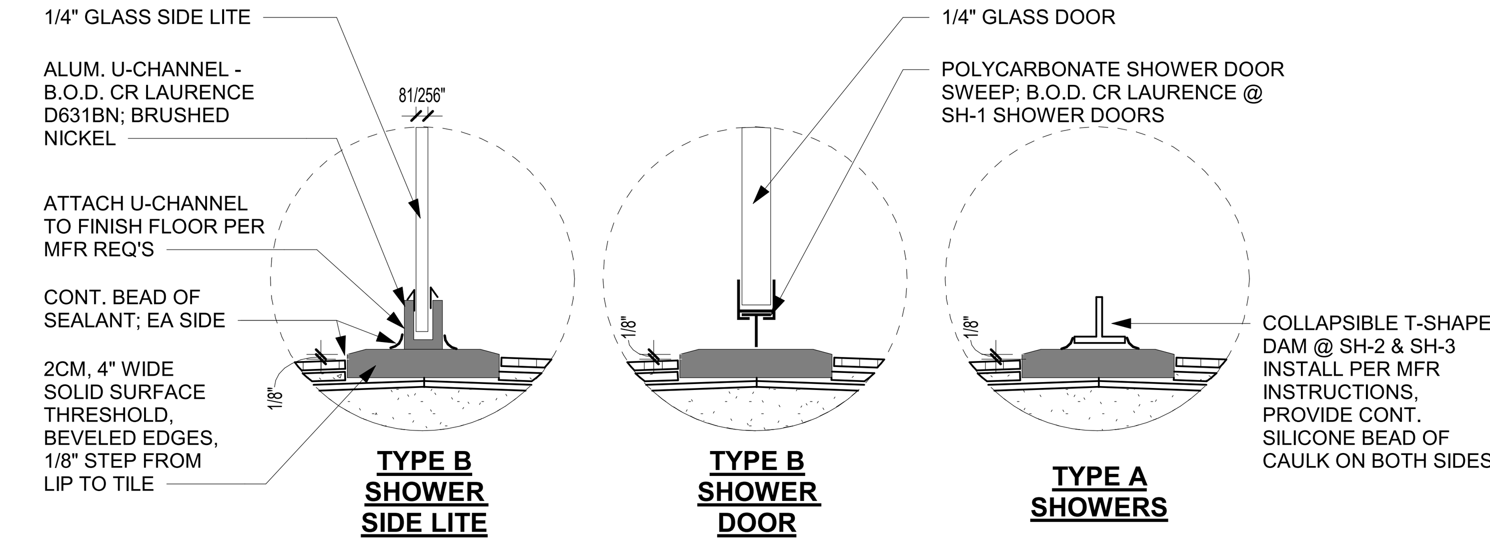
A-414



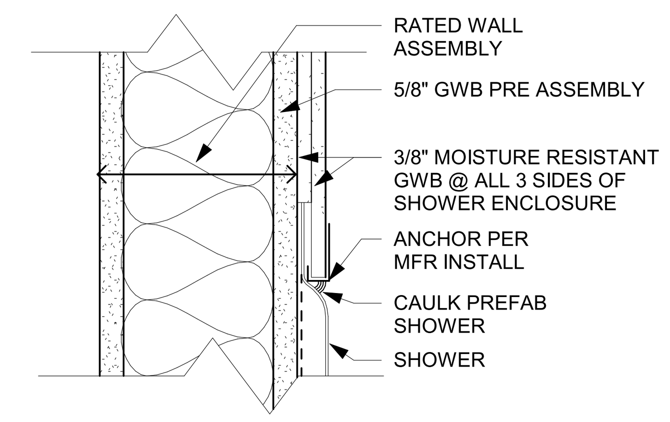
D4 UNIT DETAIL - REF FILLER
1" = 1'-0"



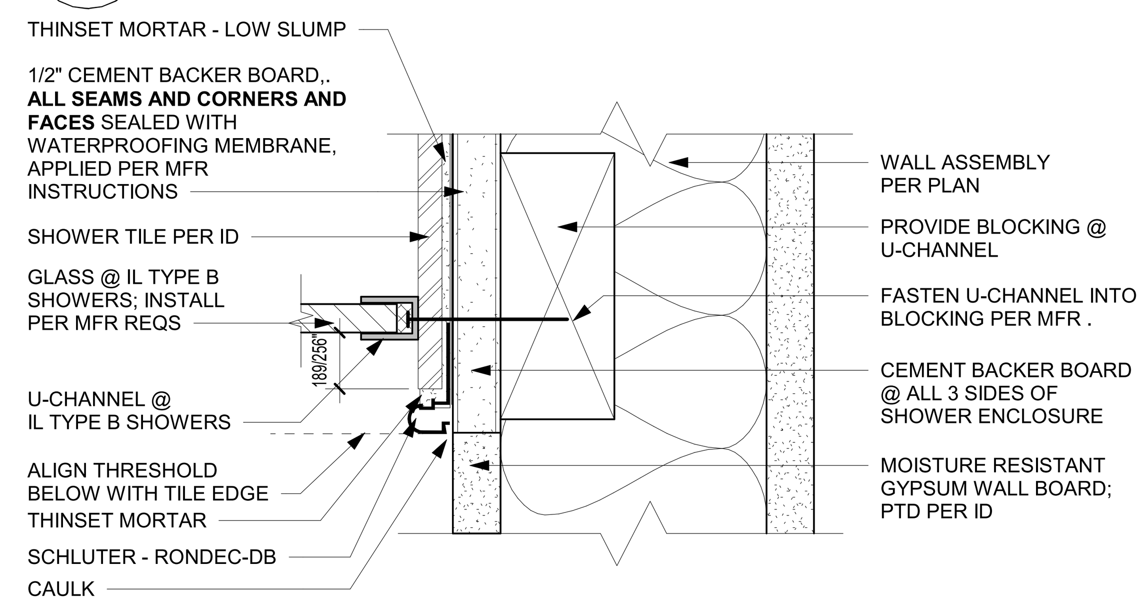
B4 UNIT DETAIL - TYPE B SHOWER - JAMB DETAIL (RATED WALL)
6" = 1'-0"



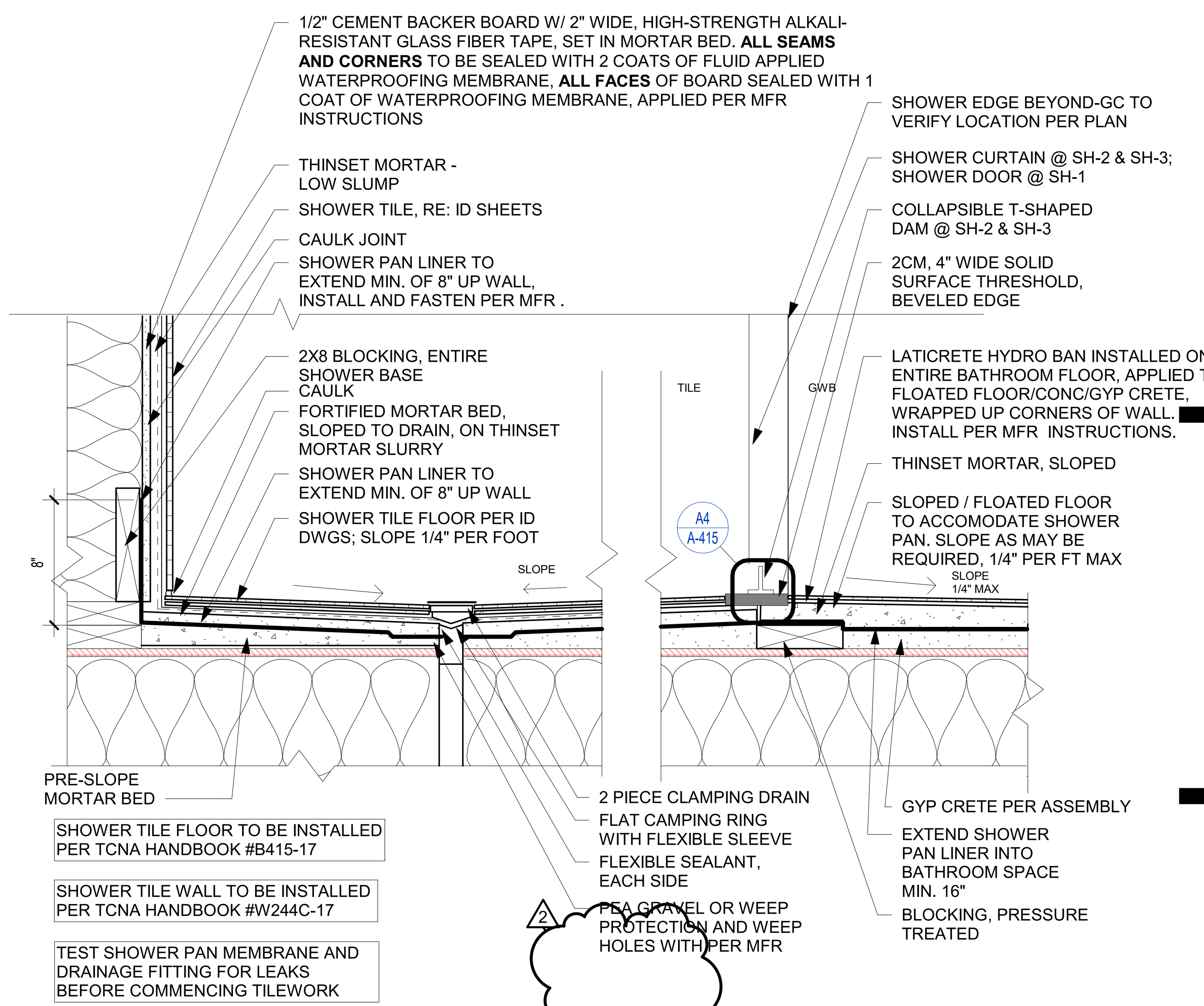
A4 UNIT DETAIL - SHOWER THRESHOLDS
3" = 1'-0"



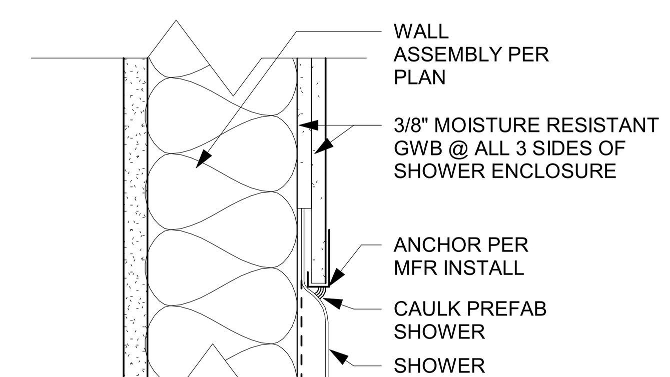
C3 UNIT DETAIL - SHOWER @ RATED WALL @ HEAD/JAMB
3" = 1'-0"



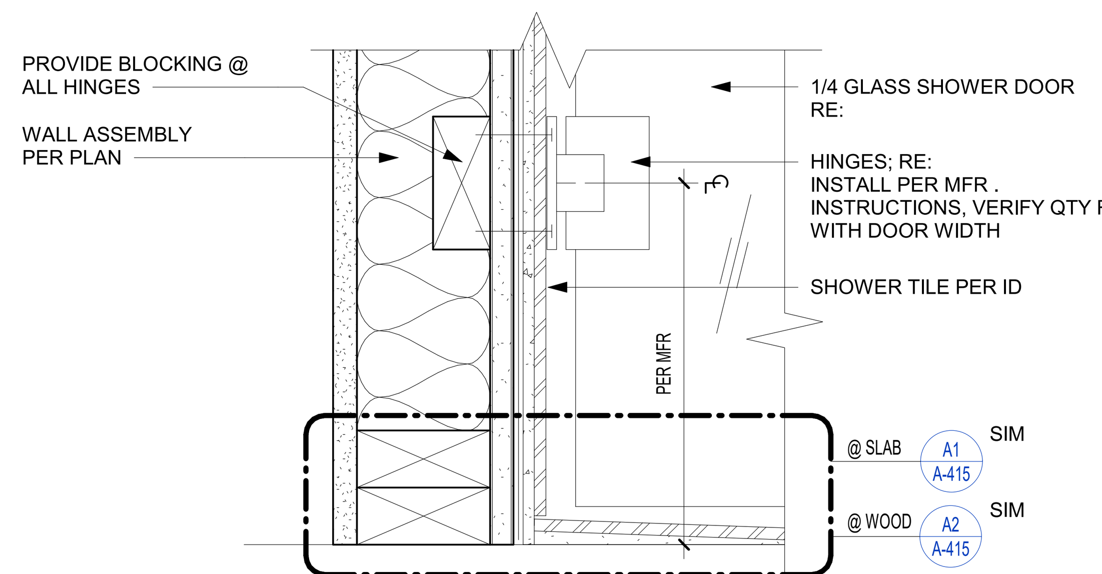
B3 UNIT DETAIL - TYPE B SHOWER - JAMB DETAIL (NON RATED WALL)
6" = 1'-0"



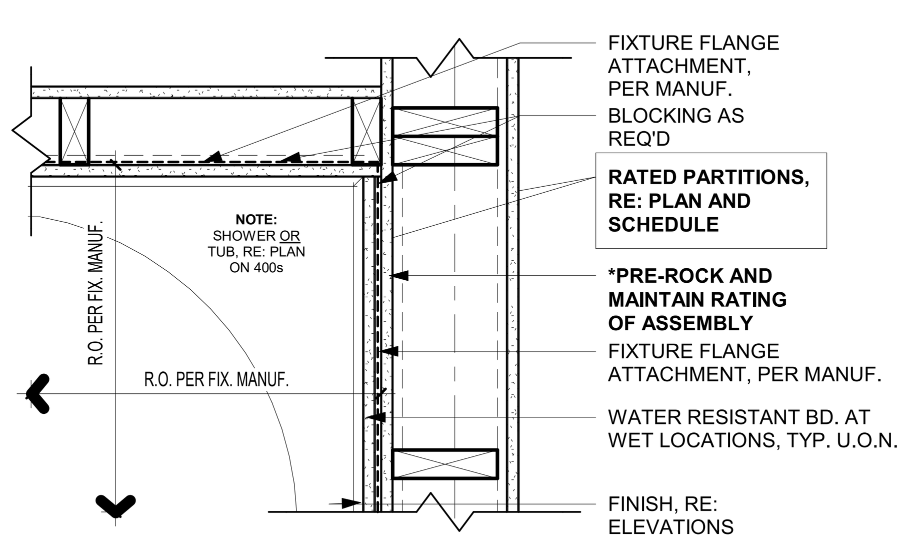
A2 UNIT DETAIL - TILE SHOWER @ WOOD ASSEMBLY
1 1/2" = 1'-0"



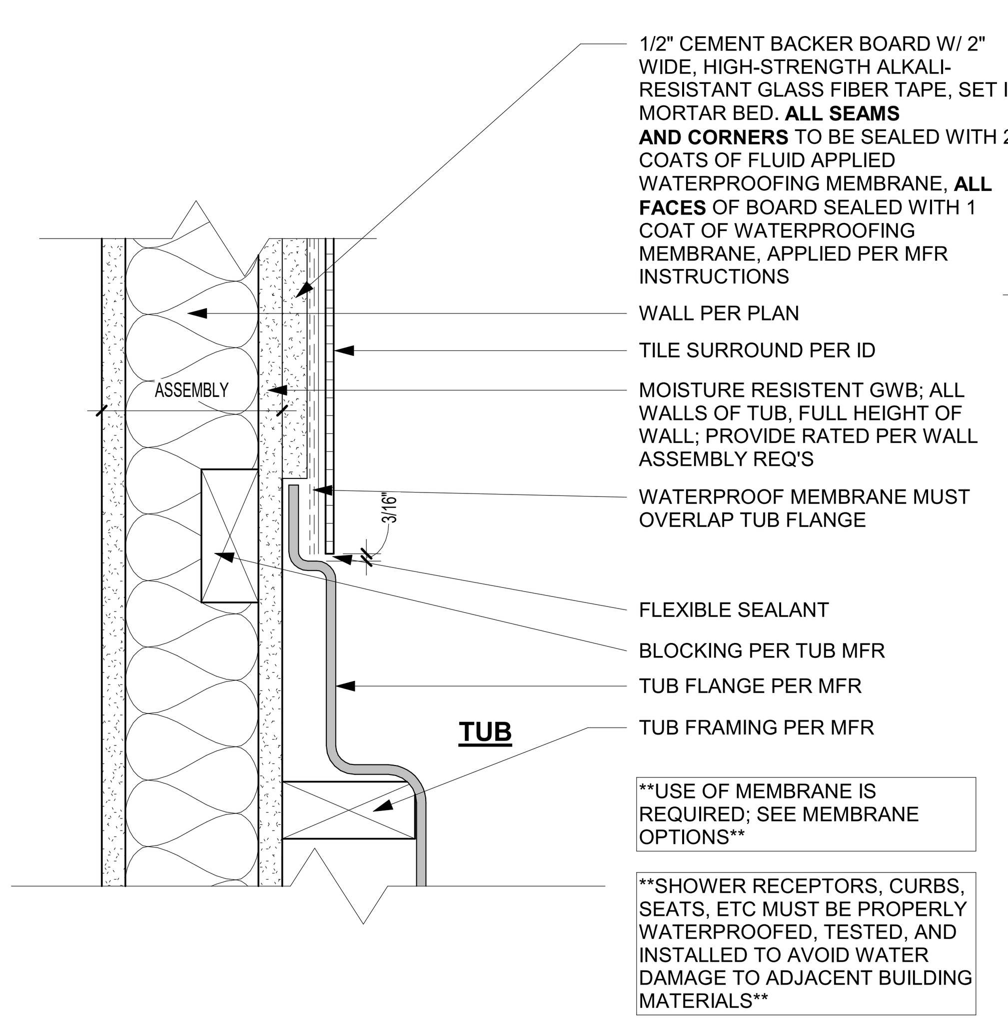
C2 UNIT DETAIL - SHOWER @ NON RATED WALL @ HEAD/JAMB
3" = 1'-0"



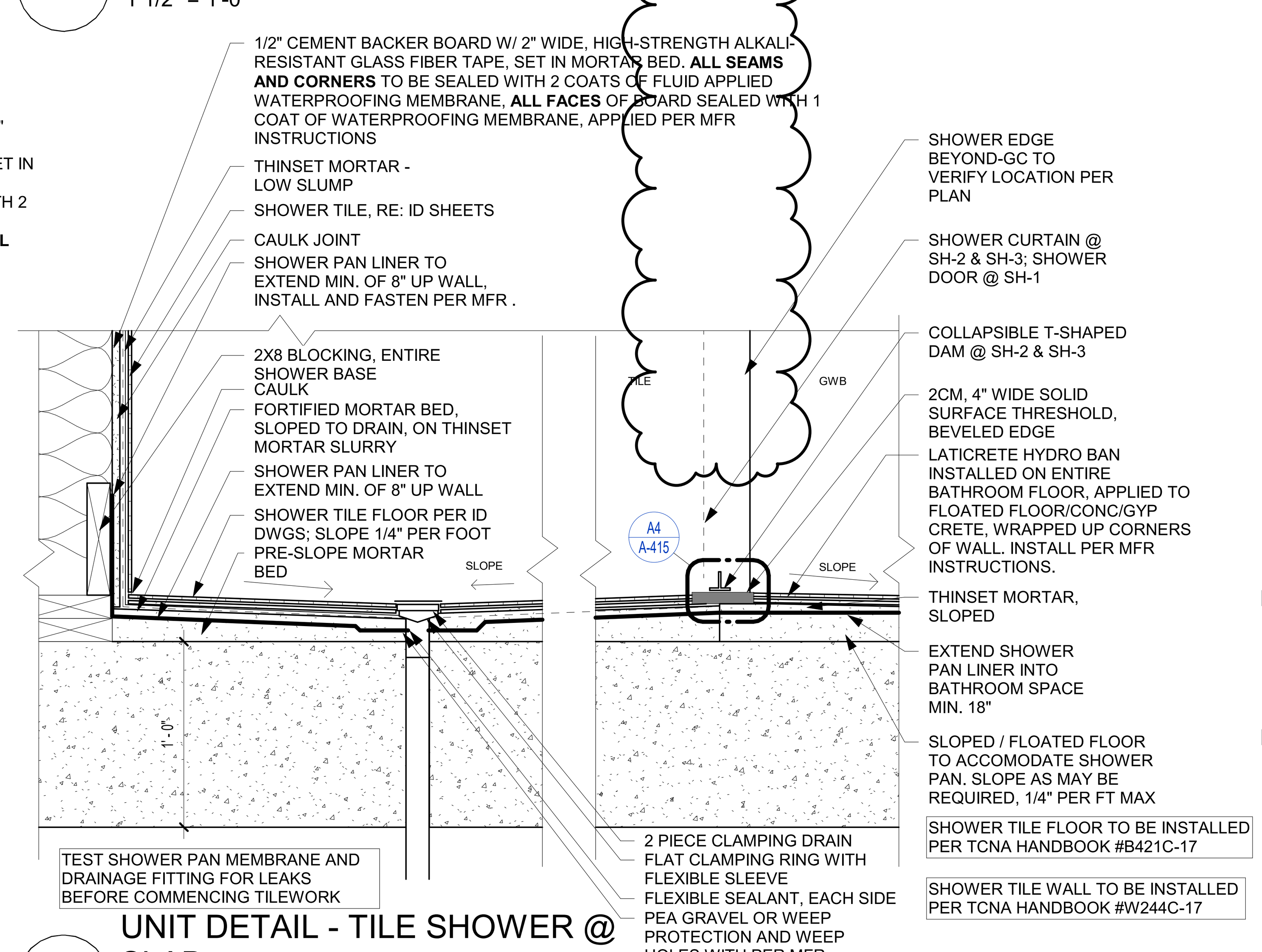
B2 UNIT DETAIL - TYPE B SHOWER DOOR HINGE
3" = 1'-0"



C1 FRAMING - RATED WALL TUB/ SHOWER
1 1/2" = 1'-0"



B1 UNIT DETAIL - TUB SURROUND DETAIL
3" = 1'-0"



A1 UNIT DETAIL - TILE SHOWER @ SLAB
1 1/2" = 1'-0"

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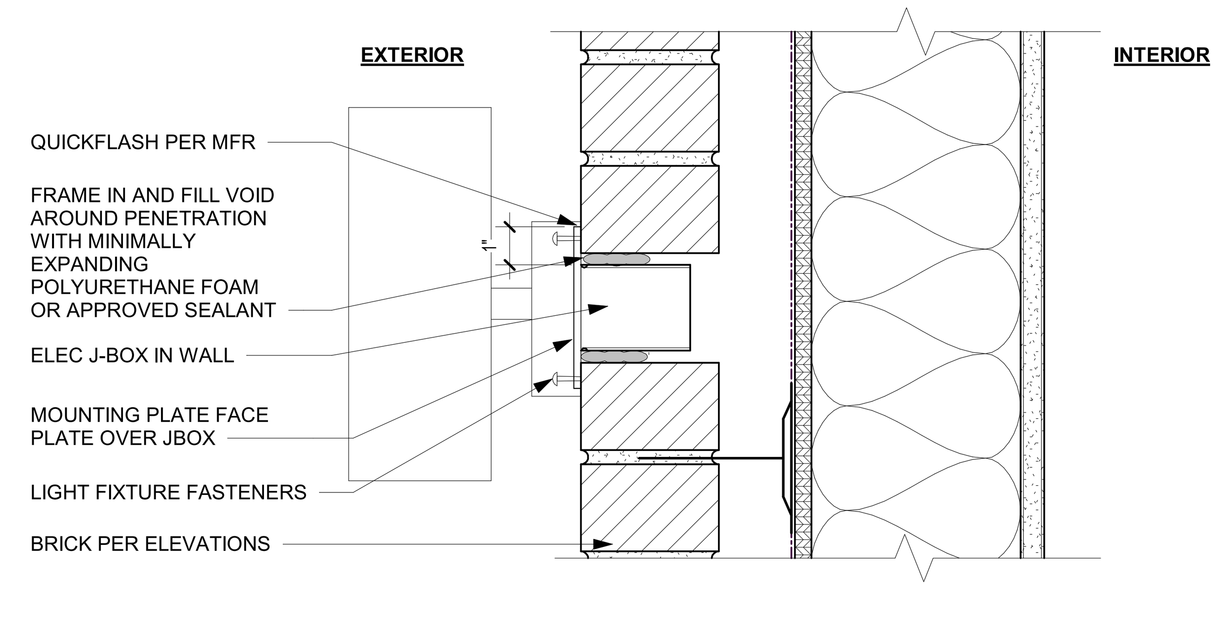
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
UNIT DETAILS

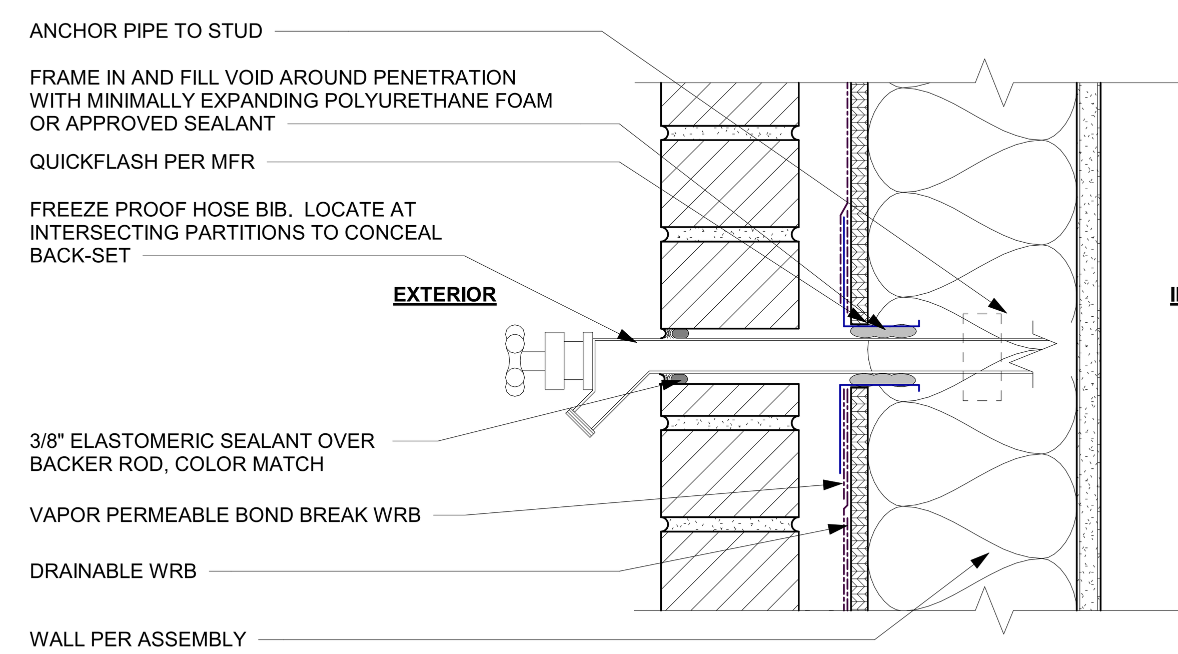
PROJECT NUMBER: 23098

SHEET NUMBER:

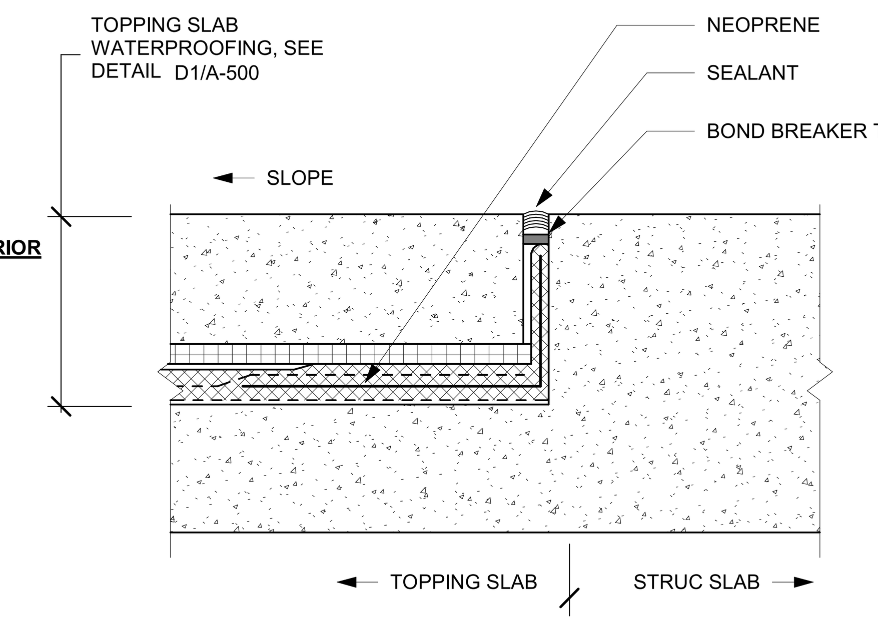
A-415



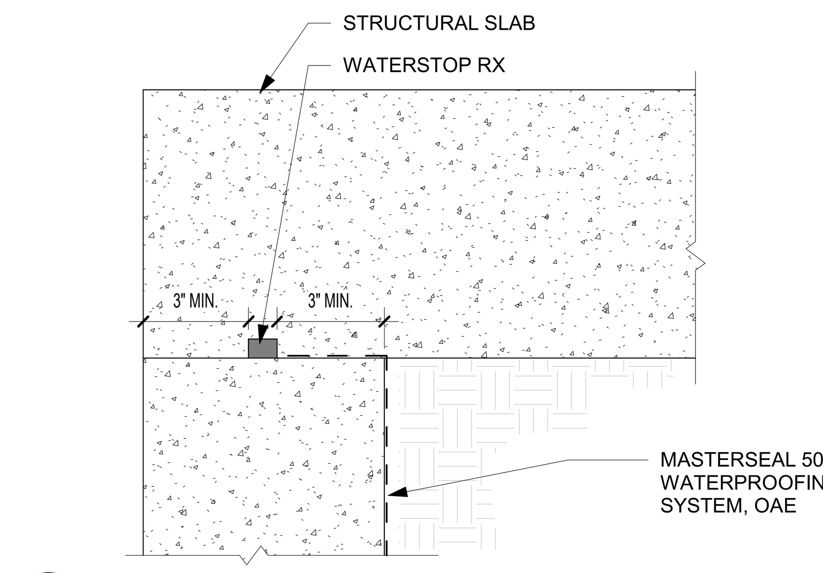
E4 FIXTURE PENETRATION
3" = 1'-0"



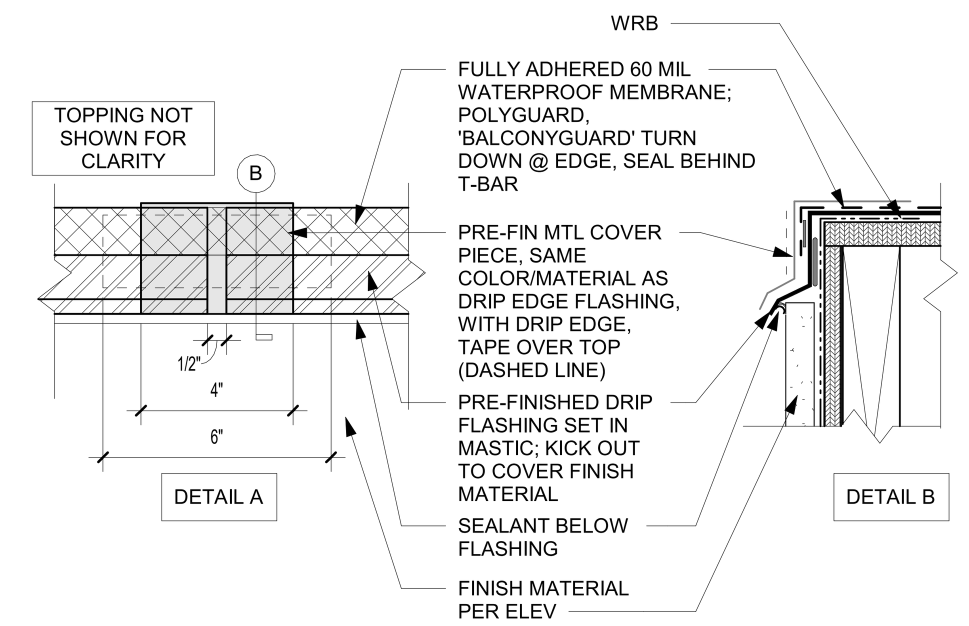
C4 HOSEBIB PENETRATION
3" = 1'-0"



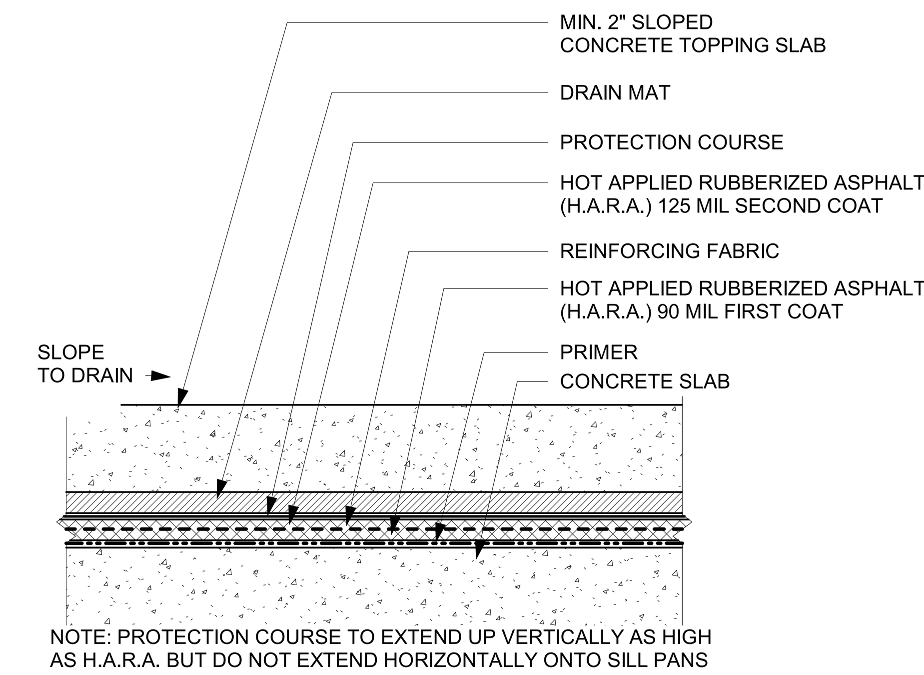
B4 TOPPING SLAB TRANSITION
N.T.S.



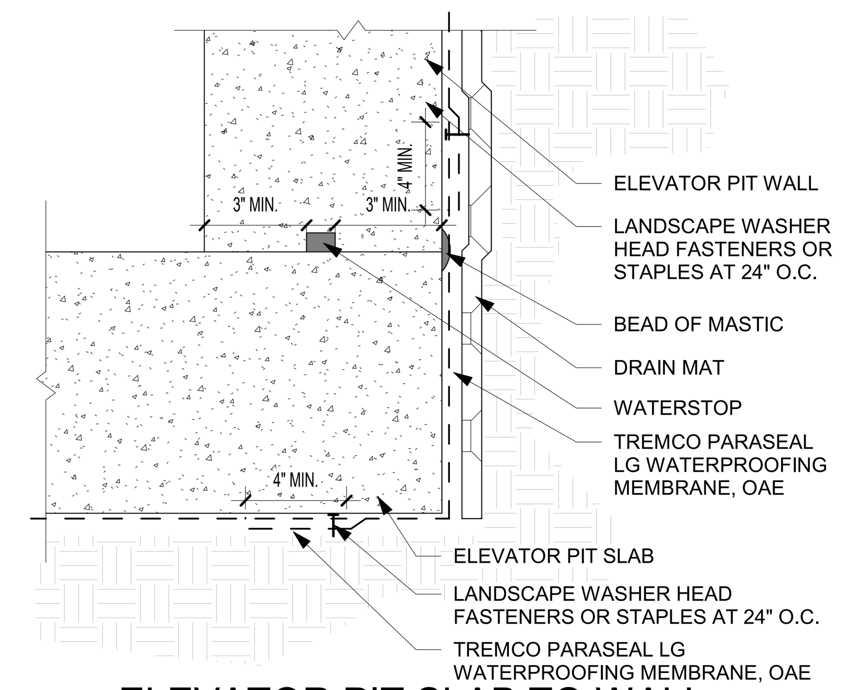
A4 WATERPROOFING TERMINATION
N.T.S.



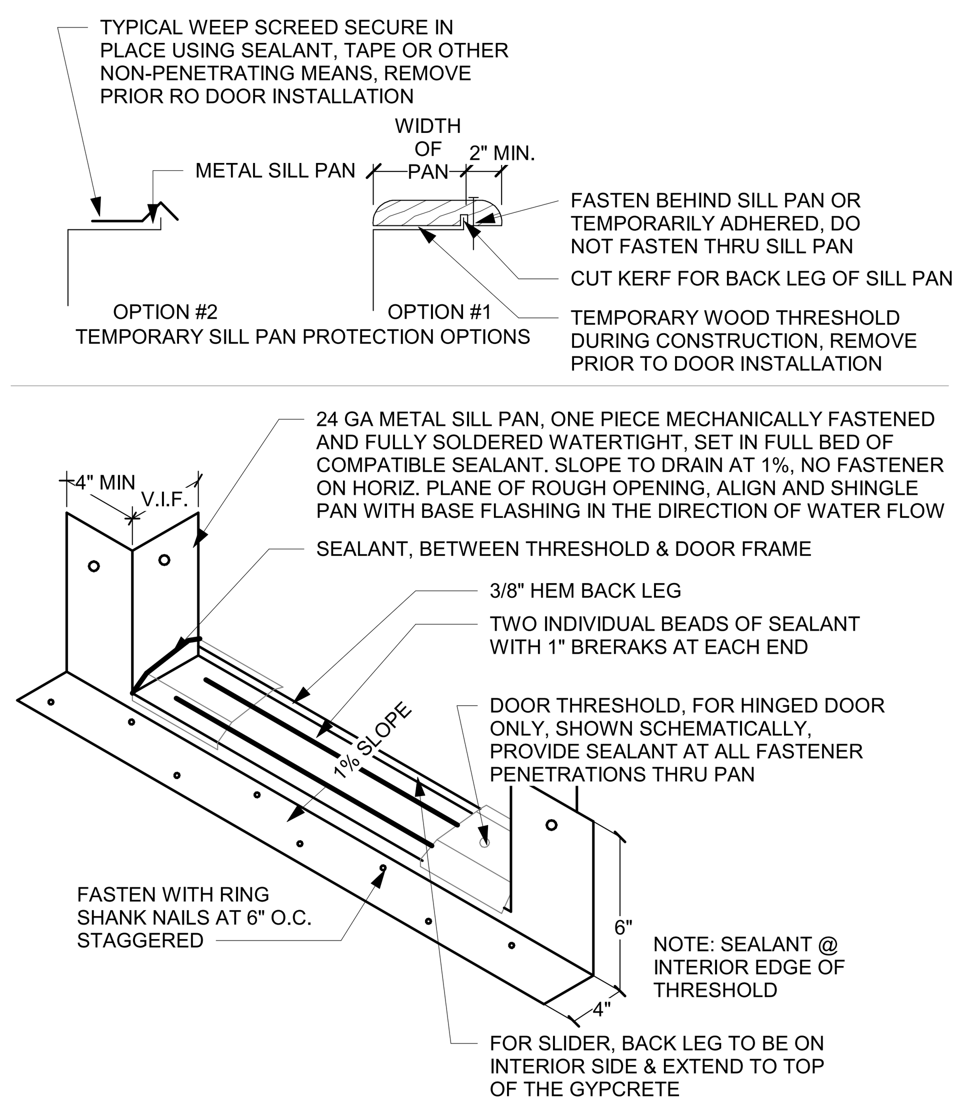
C3 OUTSIDE EDGE DETAIL @ FRAMED BALCONY
3" = 1'-0"



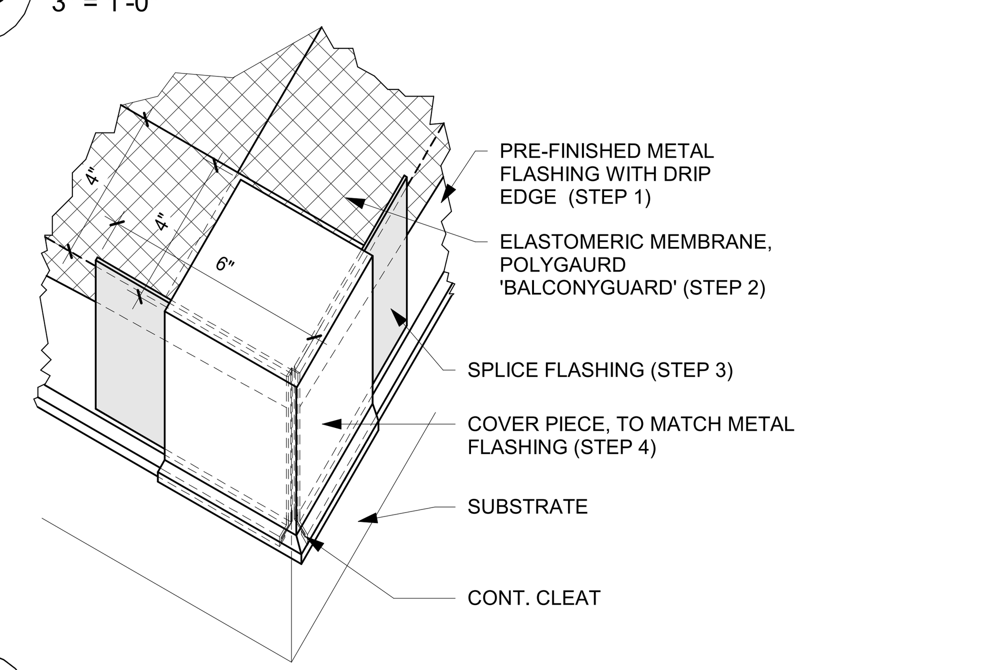
B3 TOPPING SLAB DECK WATERPROOFING
N.T.S.



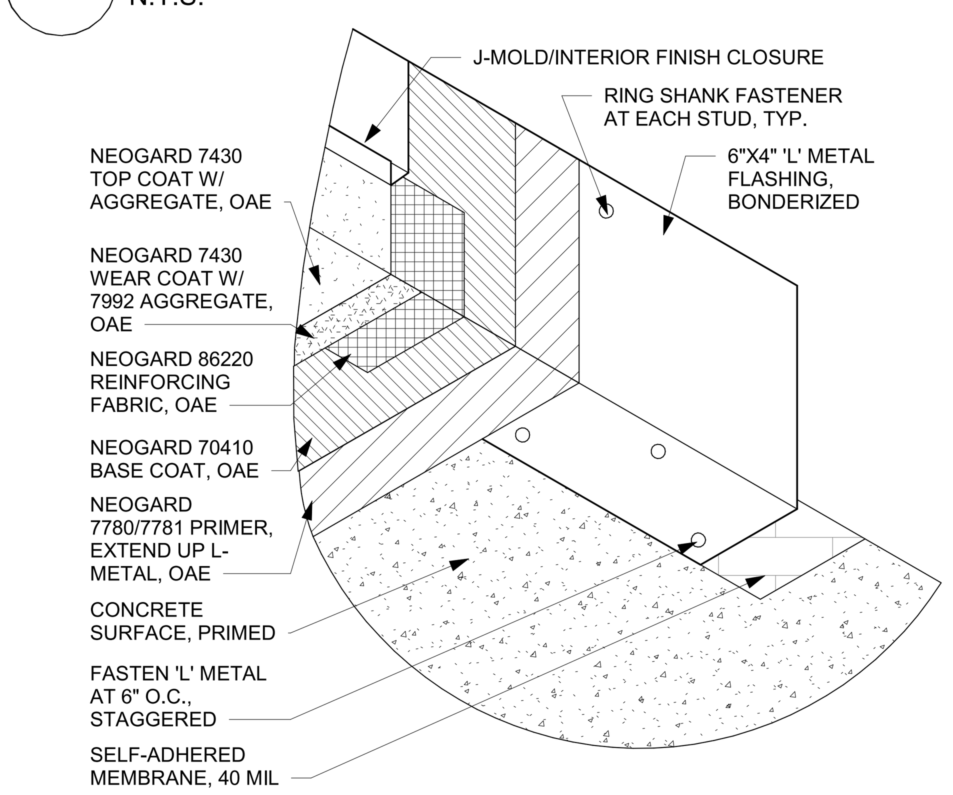
A3 ELEVATOR PIT SLAB TO WALL TRANSITION
N.T.S.



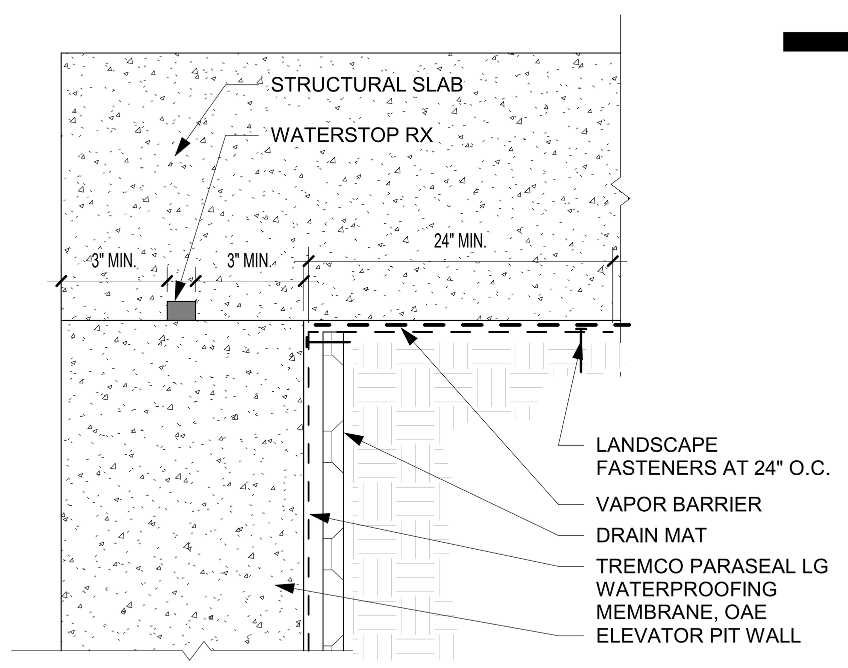
E2 PODIUM SILL PAN
3/4" = 1'-0"



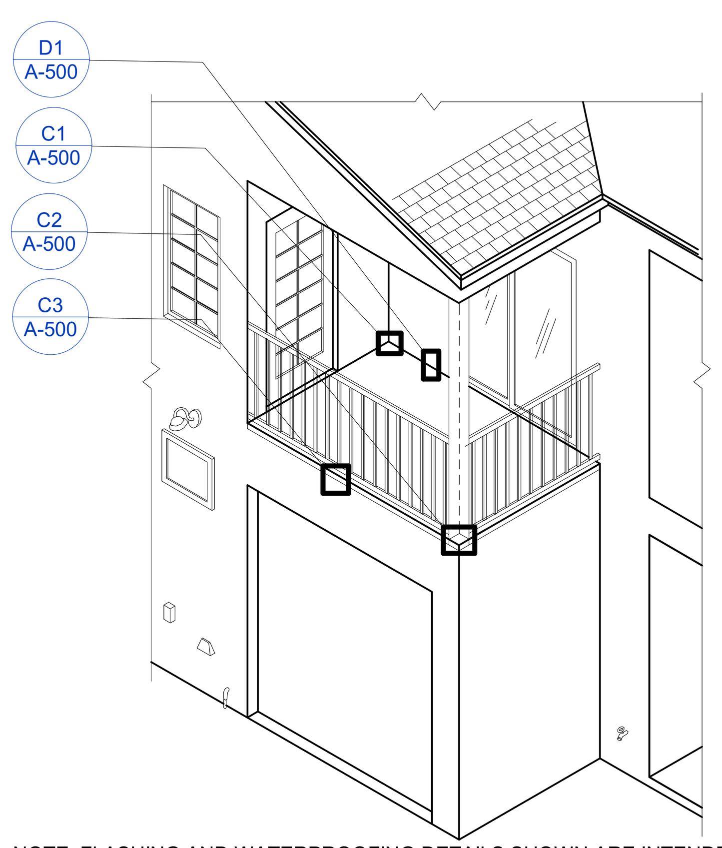
C2 OUTSIDE CORNER DETAIL @ FRAMED BALCONY
3" = 1'-0"



B2 TRAFFIC COATING WALL BASE
N.T.S.

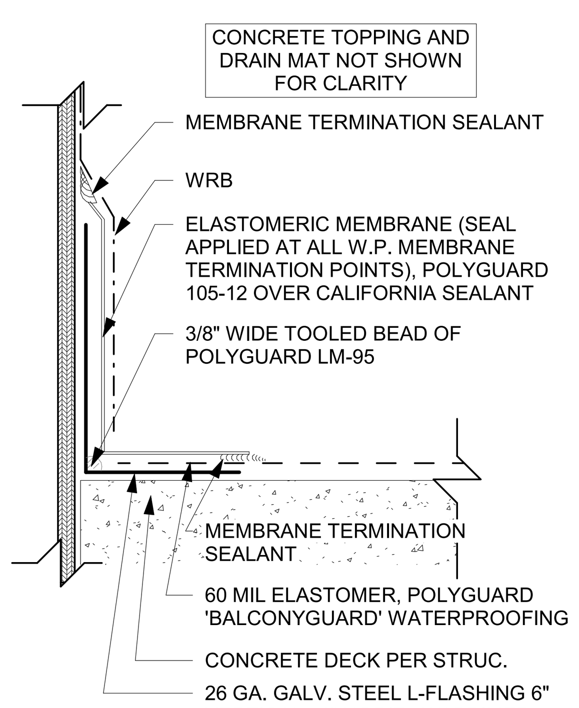


A2 ELEVATOR PIT WALL TO SLAB
N.T.S.



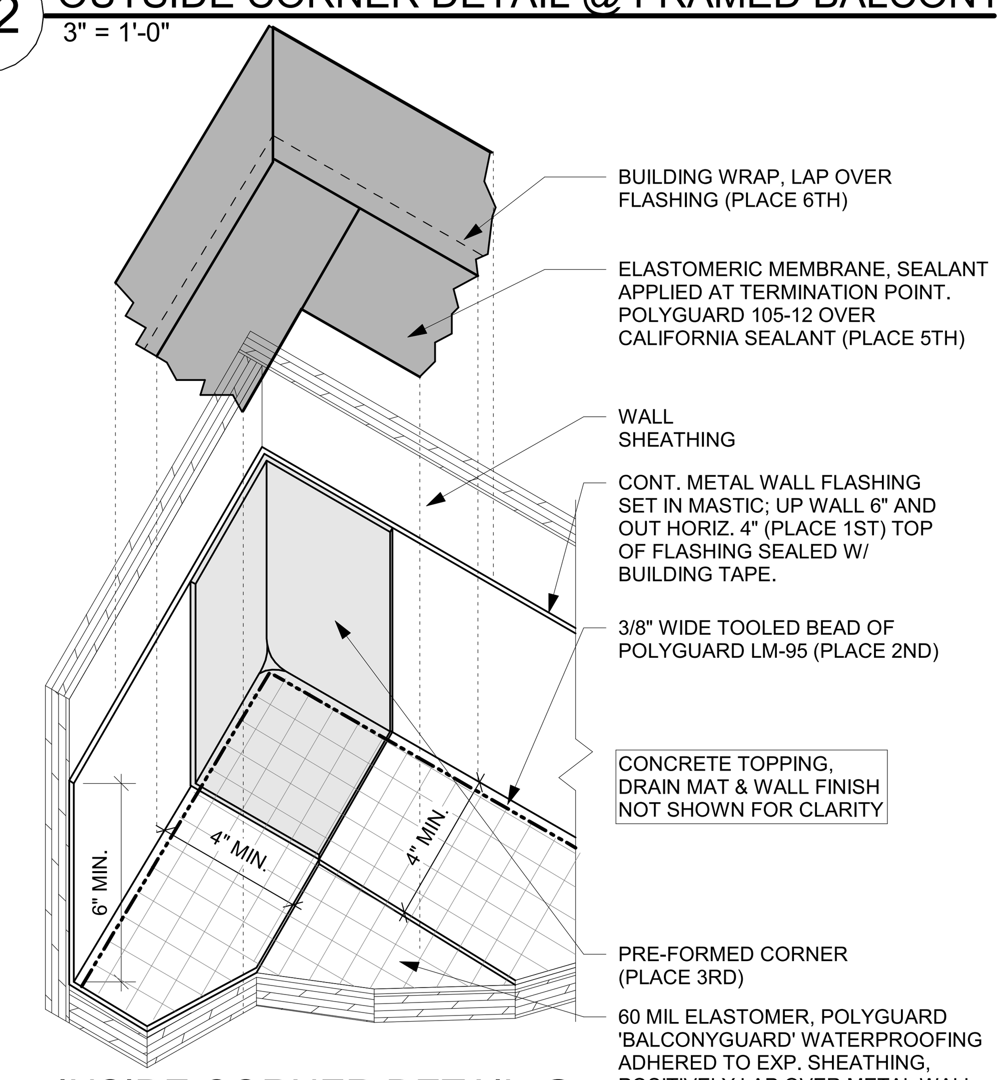
NOTE: FLASHING AND WATERPROOFING DETAILS SHOWN ARE INTENDED TO BE TYPICAL FOR ALL AREAS REQUIRING ATTENTION TO WATERPROOFING OF THE BUILDING ENVELOPE. NOT ALL THE CONDITIONS ARE COVERED BY DETAILS, REFER TO SMACNA PUBLICATIONS AND FOLLOW ALL PRODUCT MFR'S RECOMMENDATIONS AND REQUIREMENTS FOR CONDITIONS NOT SHOWN IN ARCHITECT'S DRAWINGS AND SPECIFICATIONS. THE ABOVE DWG IS FOR DETAIL REFERENCE UNDERSTANDING ONLY, NOT FOR DESIGN INTENT OF THE PROJECT.

E1 ISO REFERENCE
N.T.S.

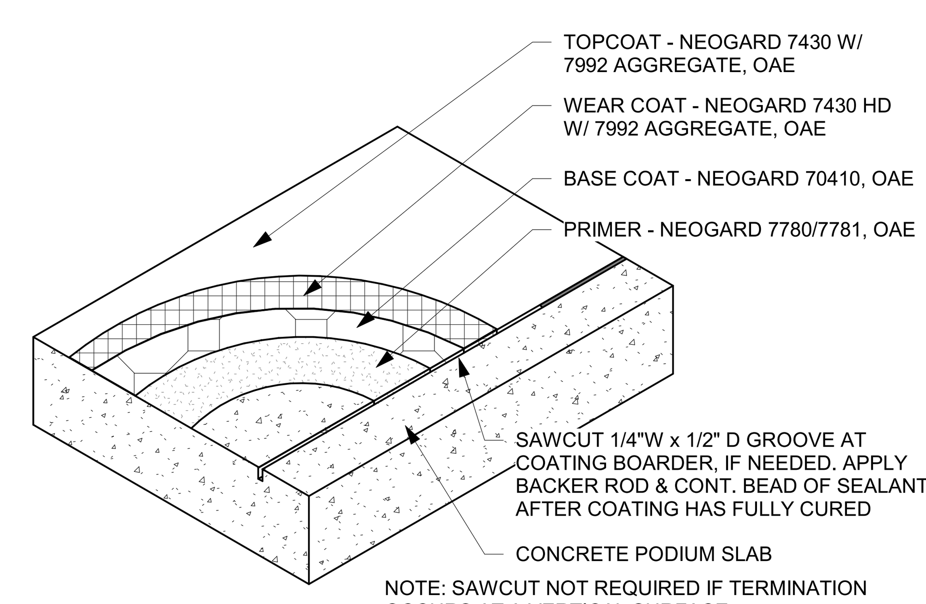


BALCONY WALL

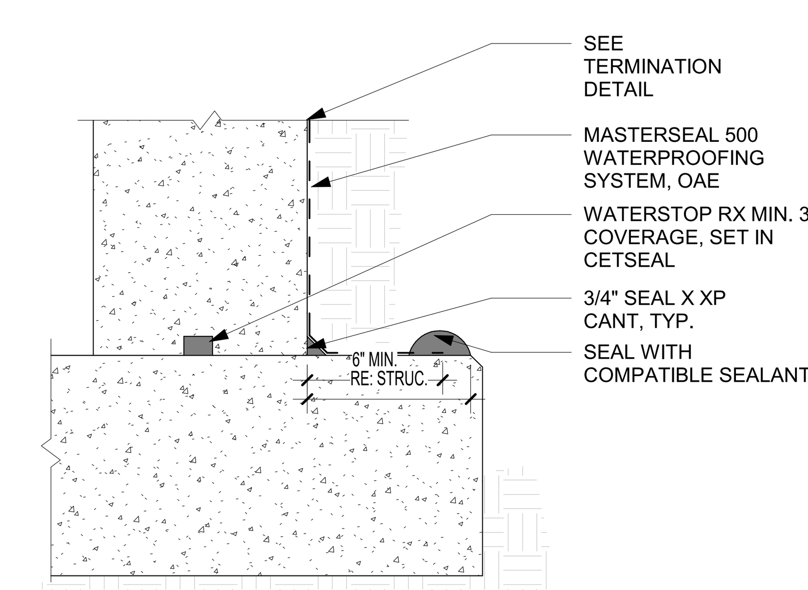
D1 FLASHING DETAIL AT BALCONY WALL
3" = 1'-0"



C1 INSIDE CORNER DETAIL @ FRAMED BALCONY
3" = 1'-0"



B1 VEHICULAR TRAFFIC COATING
N.T.S.



A1 SUBGRADE CONCRETE WALL
N.T.S.

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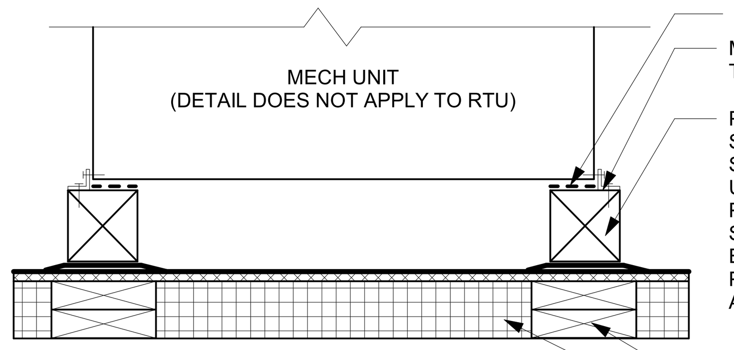
1901 NE DISCOVERY AVE, LEE'S SUMMIT 64064 USA

SHEET TITLE
WATERPROOFING DETAILS

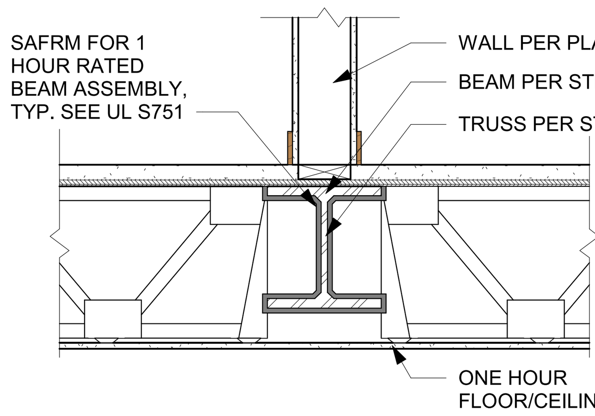
PROJECT NUMBER: 23098

SHEET NUMBER:

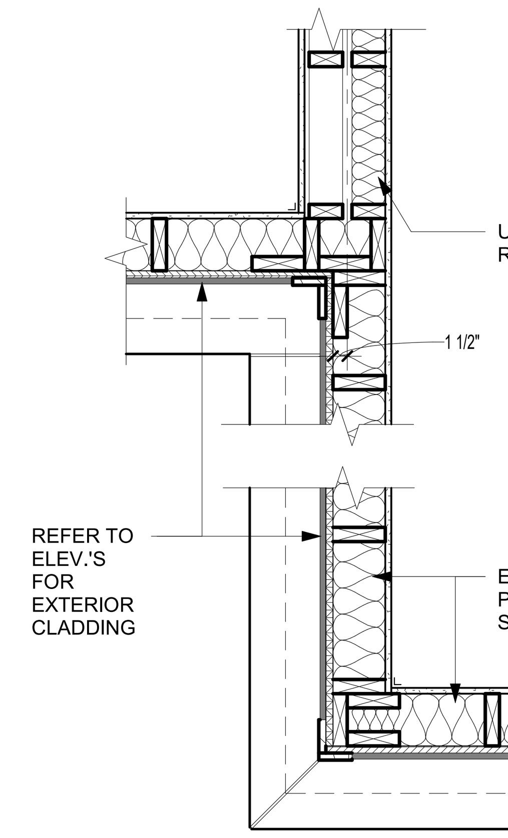
A-500



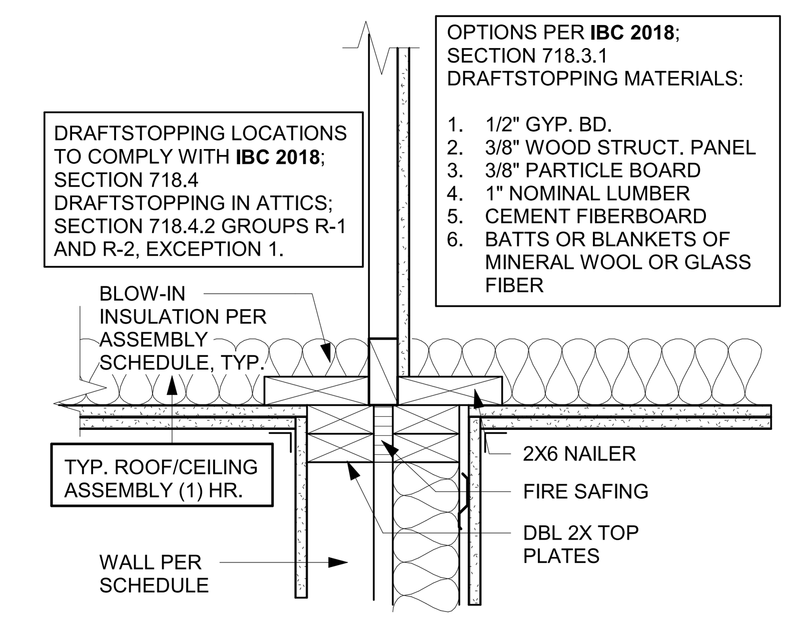
D4 ROOF - MECH UNIT ROOF SUPPORT BLOCKS
1 1/2" = 1'-0"



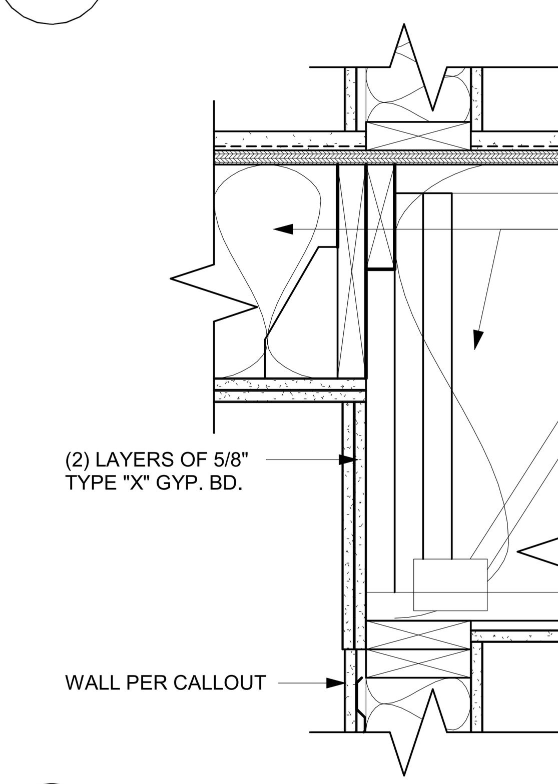
C4 SAFRM SECTION
3/4" = 1'-0"



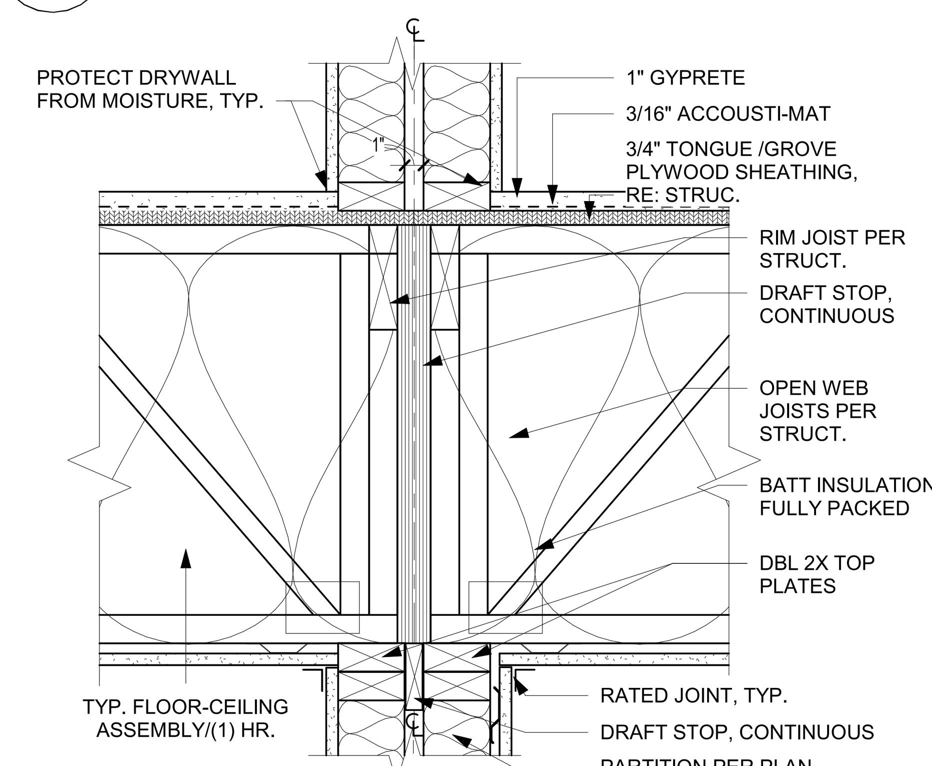
B4 CORNER FRAMING DETAIL
3/4" = 1'-0"



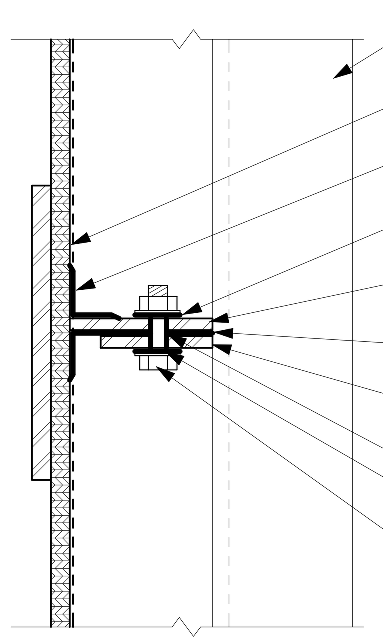
A4 PARTY WALL - DRAFTSTOP
1 1/2" = 1'-0"



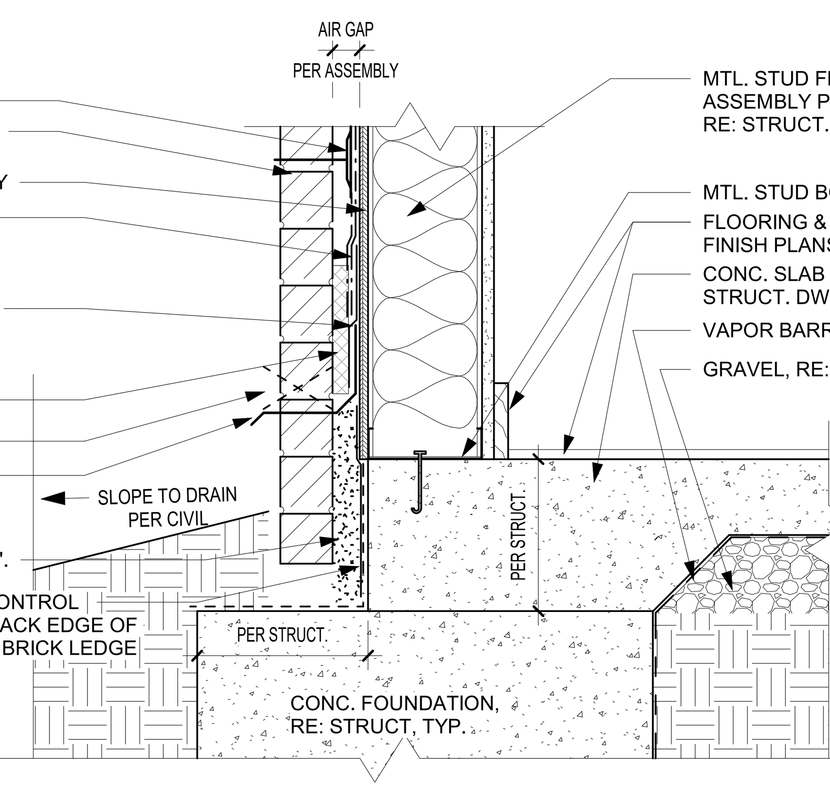
B3 FRAMING UPSET @ CORRIDORS
1 1/2" = 1'-0"



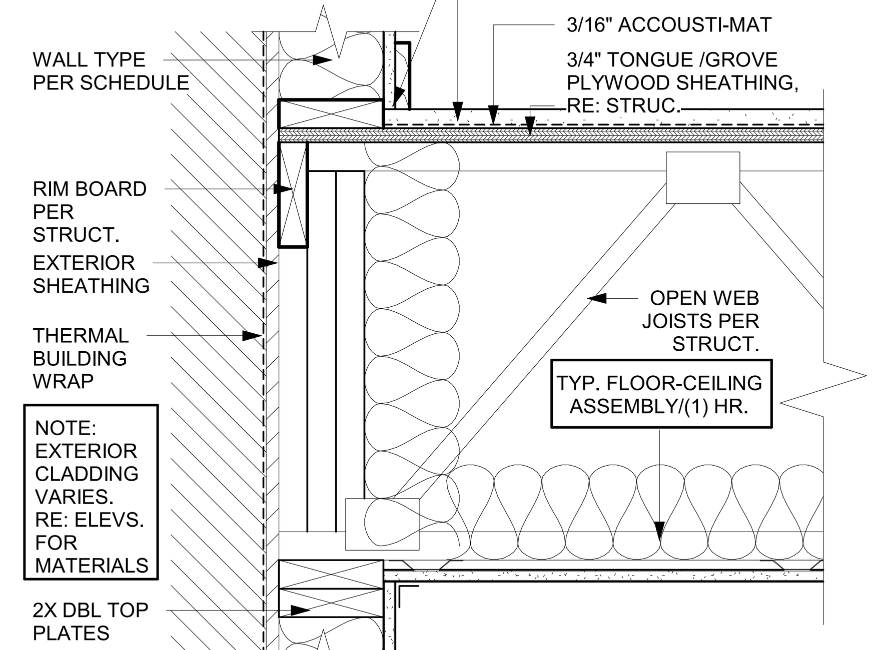
A3 PARTY WALL - SECTION 2
1 1/2" = 1'-0"



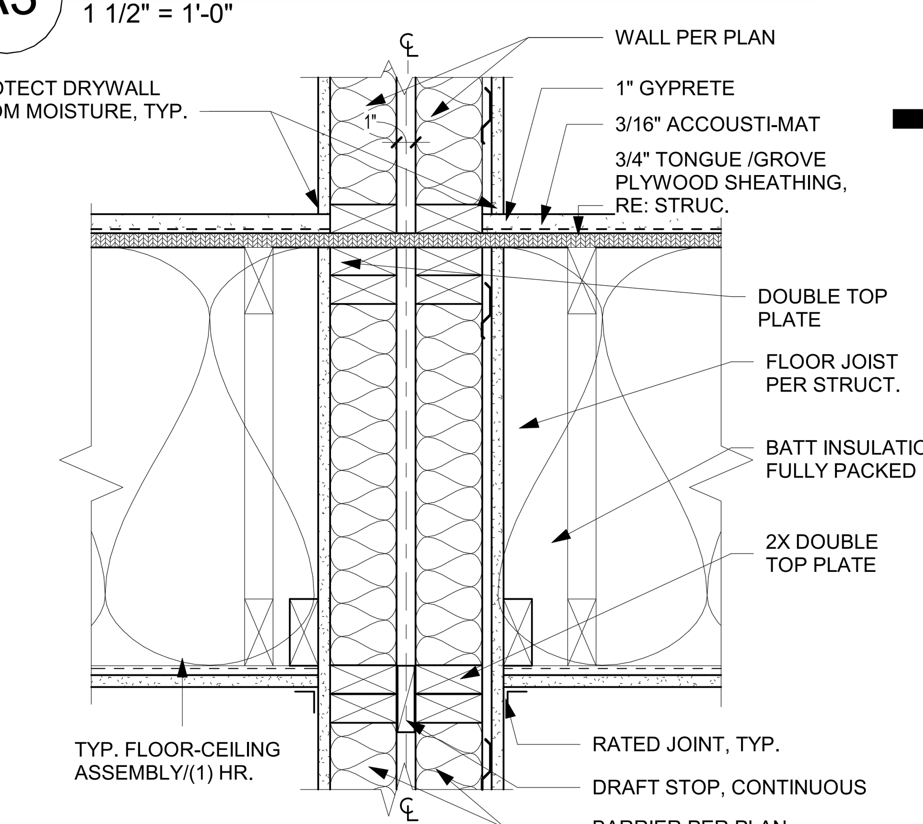
D2 KNIFE PLATE CONNECTION
N.T.S.



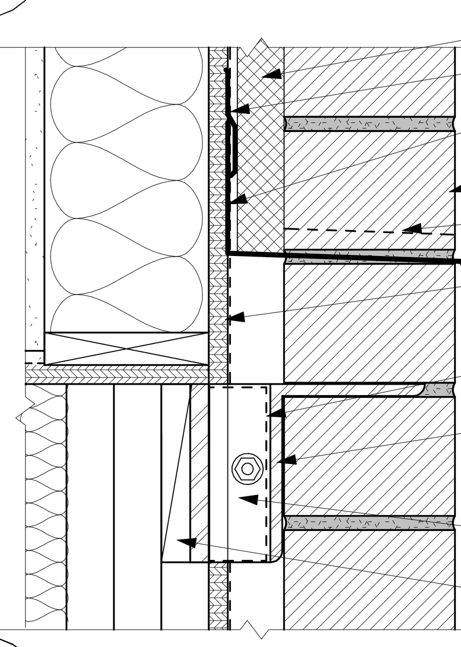
C2 FOUNDATION AT GRADE
1 1/2" = 1'-0"



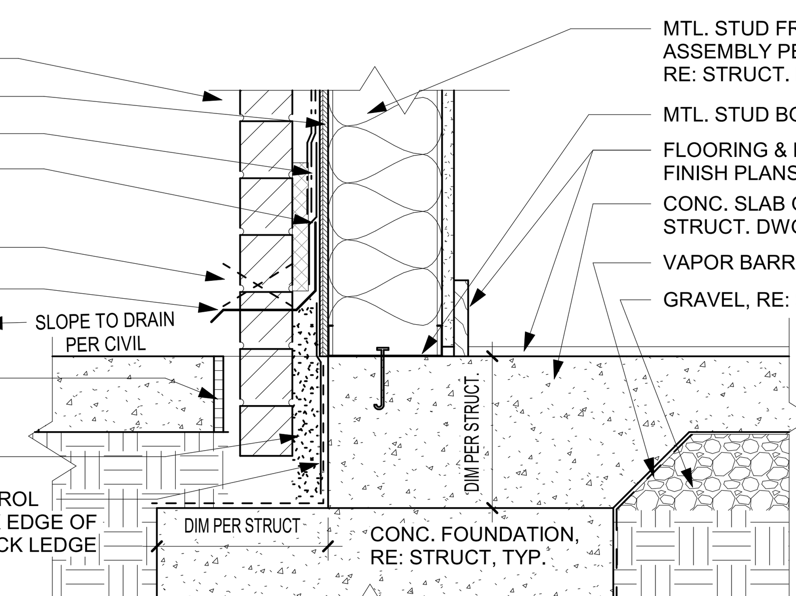
B2 FRAMING FLOOR/CLG DTL.
1 1/2" = 1'-0"



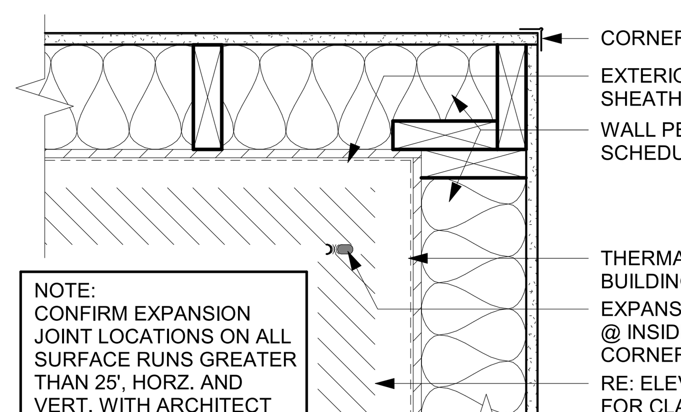
A2 PARTY WALL - SECTION
1 1/2" = 1'-0"



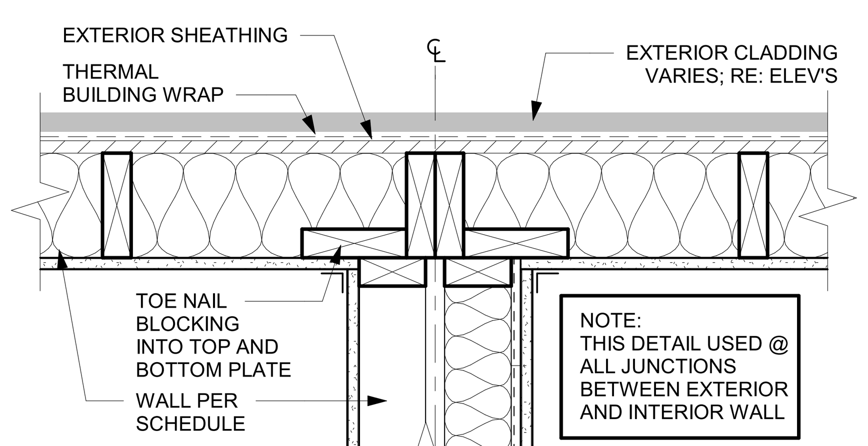
D1 BRICK SUPPORT ANGLE
N.T.S.



C1 FOUNDATION AT HARDSCAPE
1 1/2" = 1'-0"



B1 FRAMING INSIDE CORNER
1 1/2" = 1'-0"



A1 PARTITION WALL FIRE SEPERATION DETAIL
1 1/2" = 1'-0"

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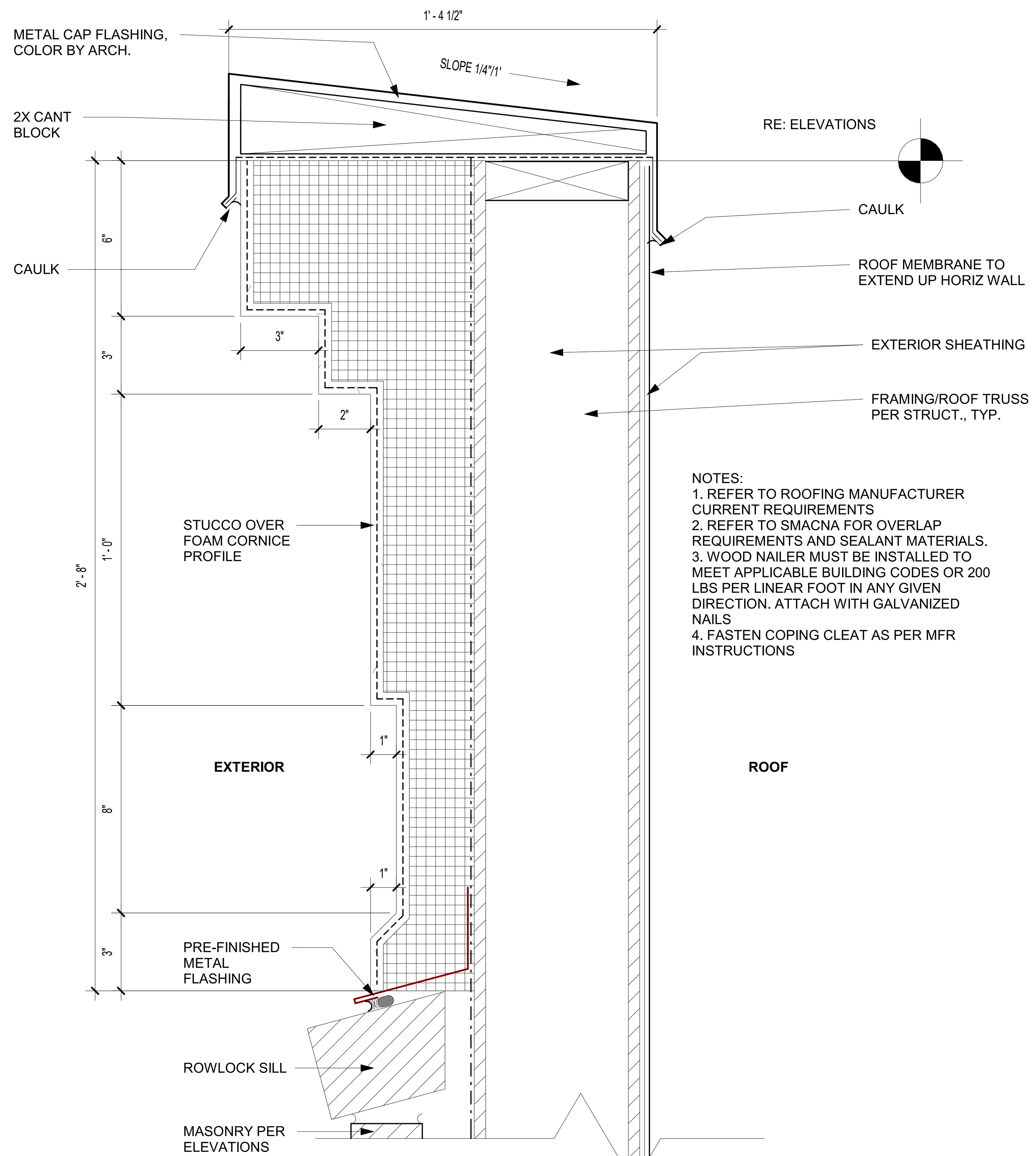
LEE'S SUMMIT 64064 USA

SHEET TITLE
DETAILS

PROJECT NUMBER: 23098

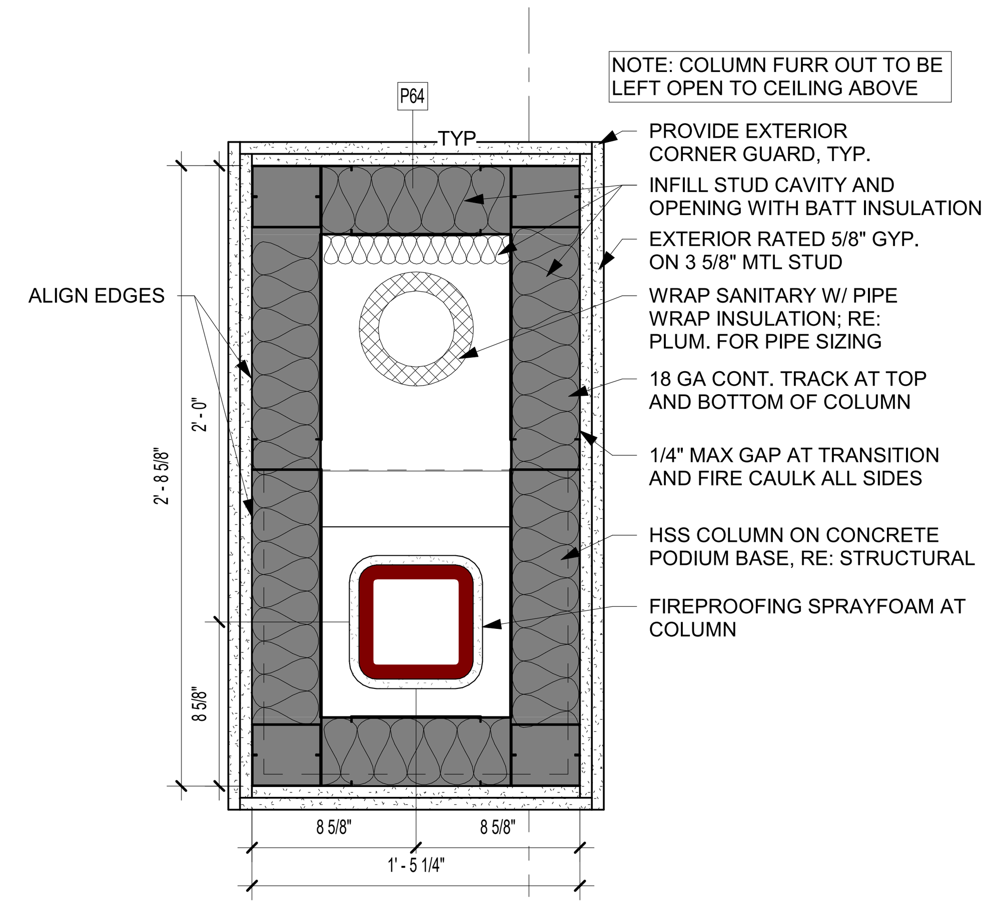
SHEET NUMBER:

A-501

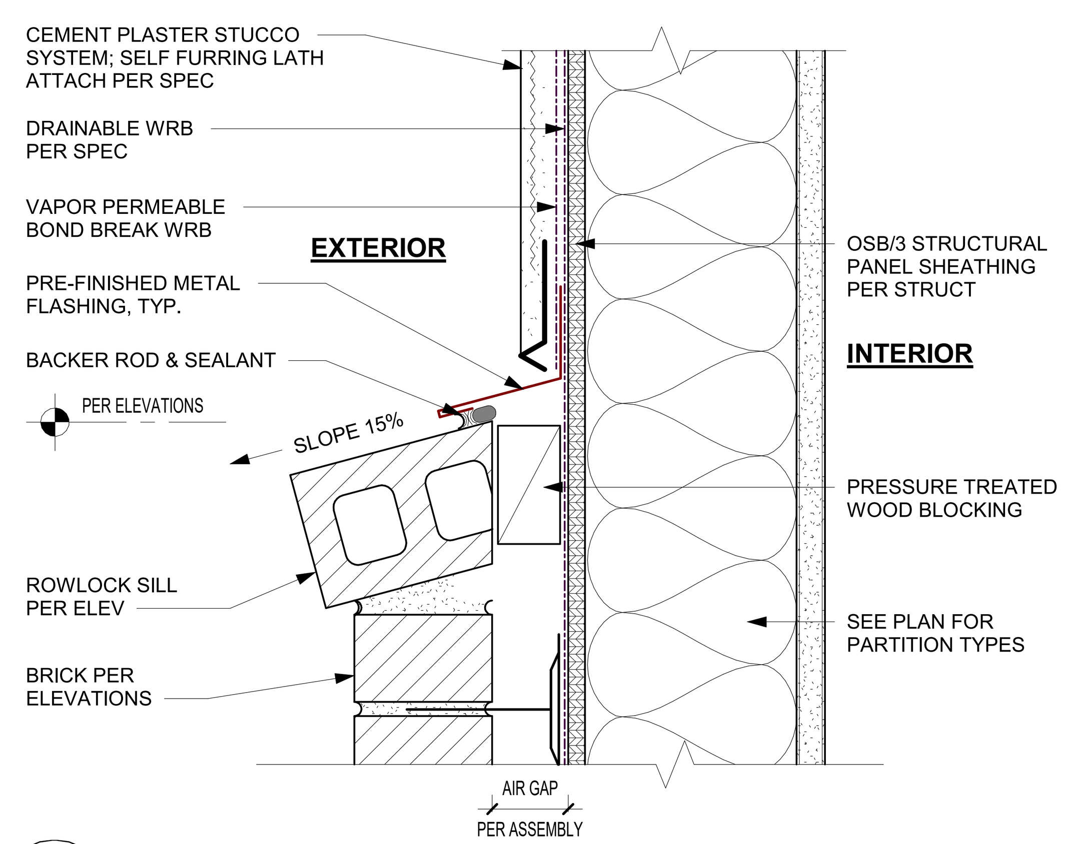


NOTES:
1. REFER TO ROOFING MANUFACTURER CURRENT REQUIREMENTS
2. REFER TO SMACNA FOR OVERLAP REQUIREMENTS AND SEALANT MATERIALS.
3. WOOD NAILER MUST BE INSTALLED TO MEET APPLICABLE BUILDING CODES OR 200 LBS PER LINEAR FOOT IN ANY GIVEN DIRECTION. ATTACH WITH GALVANIZED NAILS
4. FASTEN COPING CLEAT AS PER MFR INSTRUCTIONS

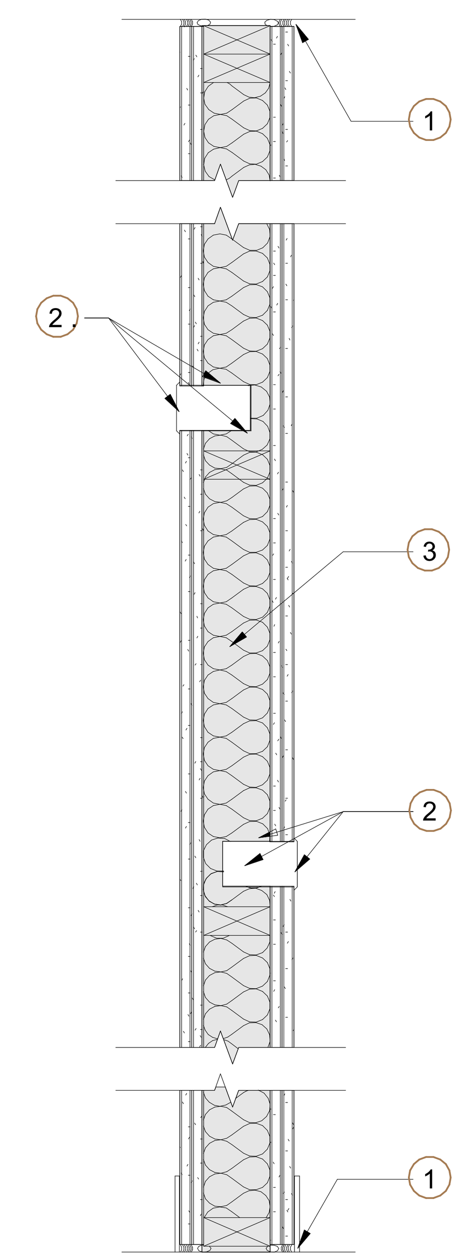
D3 ROOF - WOOD STUD - TPO/SIDING - PARAPET (SECTION)
3" = 1'-0"



C3 TYP. GARAGE COLUMN FURR OUT
1 1/2" = 1'-0"



C2 BRICK TO STUCCO TRANSITION
3" = 1'-0"

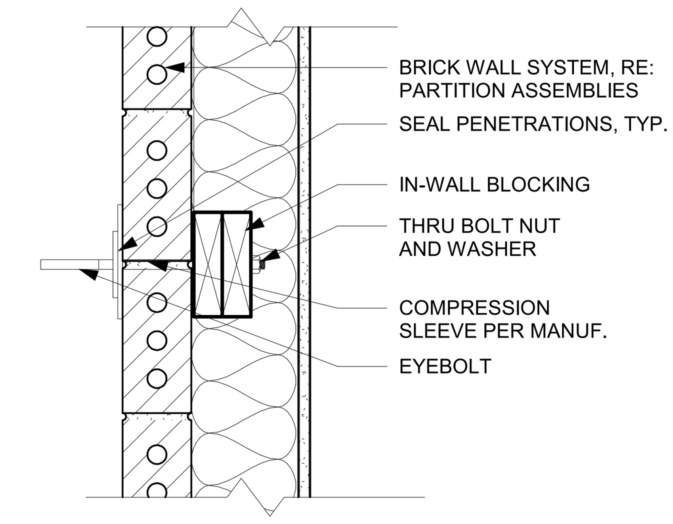


1 SEALANT: APPLY CONTINUOUS SEALANT ON BOTH SIDES OF BASE, HEAD AND WALL FRAMING MEMBERS THAT ADJOIN FLOOR, STRUCTURE ABOVE AND ADJOINING WALLS

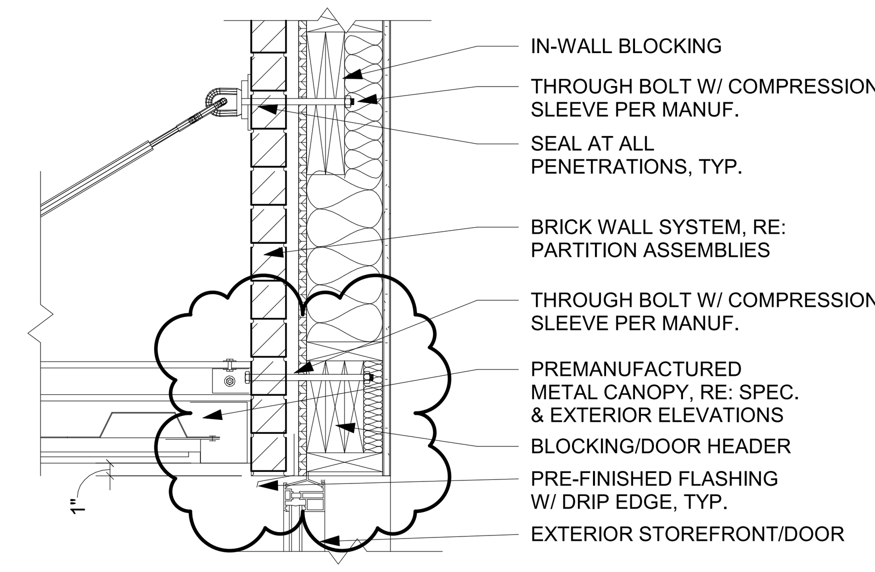
2 OUTLET BOXES: OFFSET AND STAGGER OUTLET BOXES BETWEEN STUDS (NOT BACK-TO-BACK). FULLY SEAL BOXES IN PUTTY PACKS, CLOSE OFF WIRING CONDUITS AND CABLE OPENINGS WITH PUTTY AND SEAL AROUND BOXES.

3 ACOUSTIC INSULATION: MINERAL WOOL BATTS, FIT TIGHTLY BETWEEN FRAMING MEMBERS

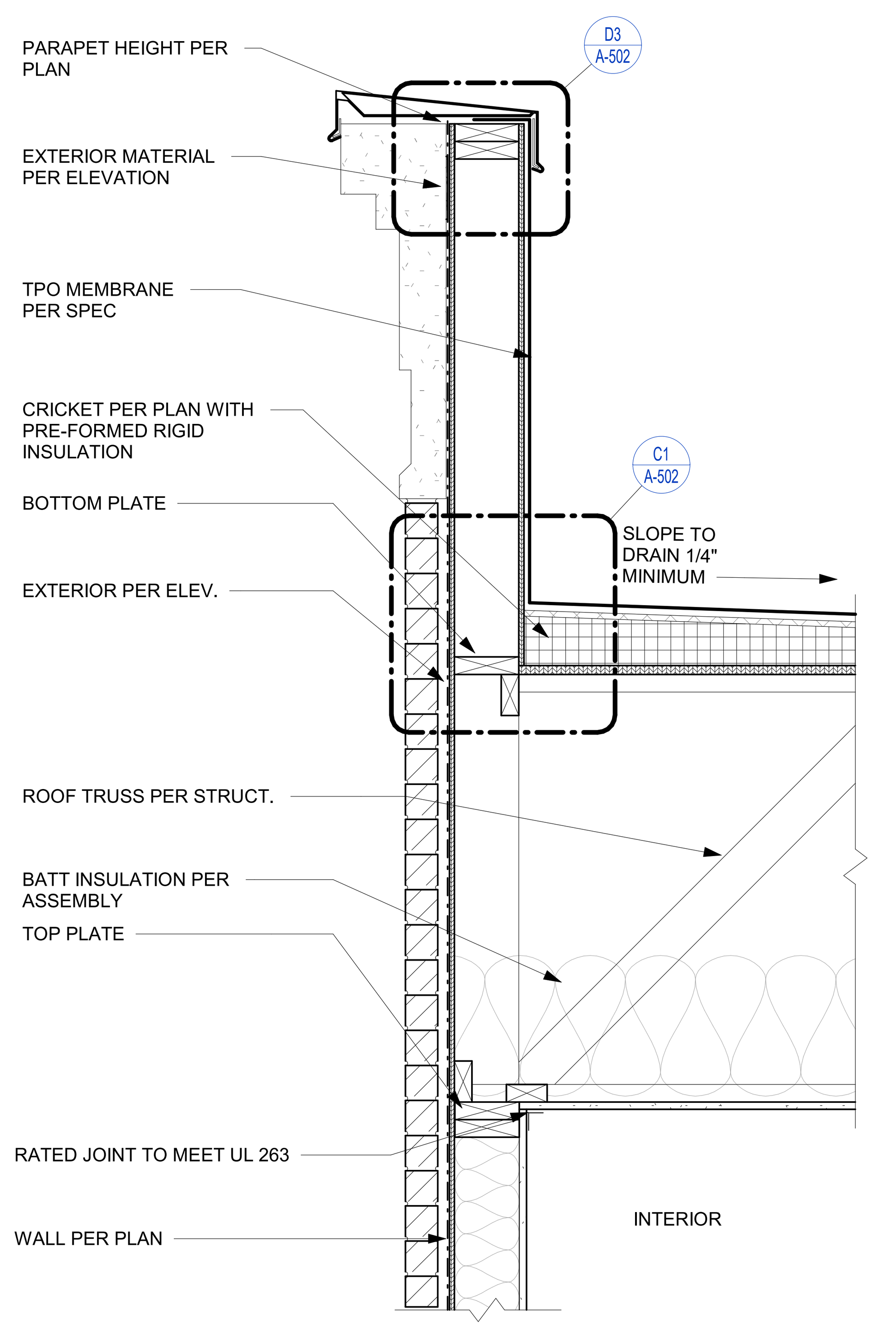
B2 ACOUSTIC WALL PLAN / SECTION
1 1/2" = 1'-0"



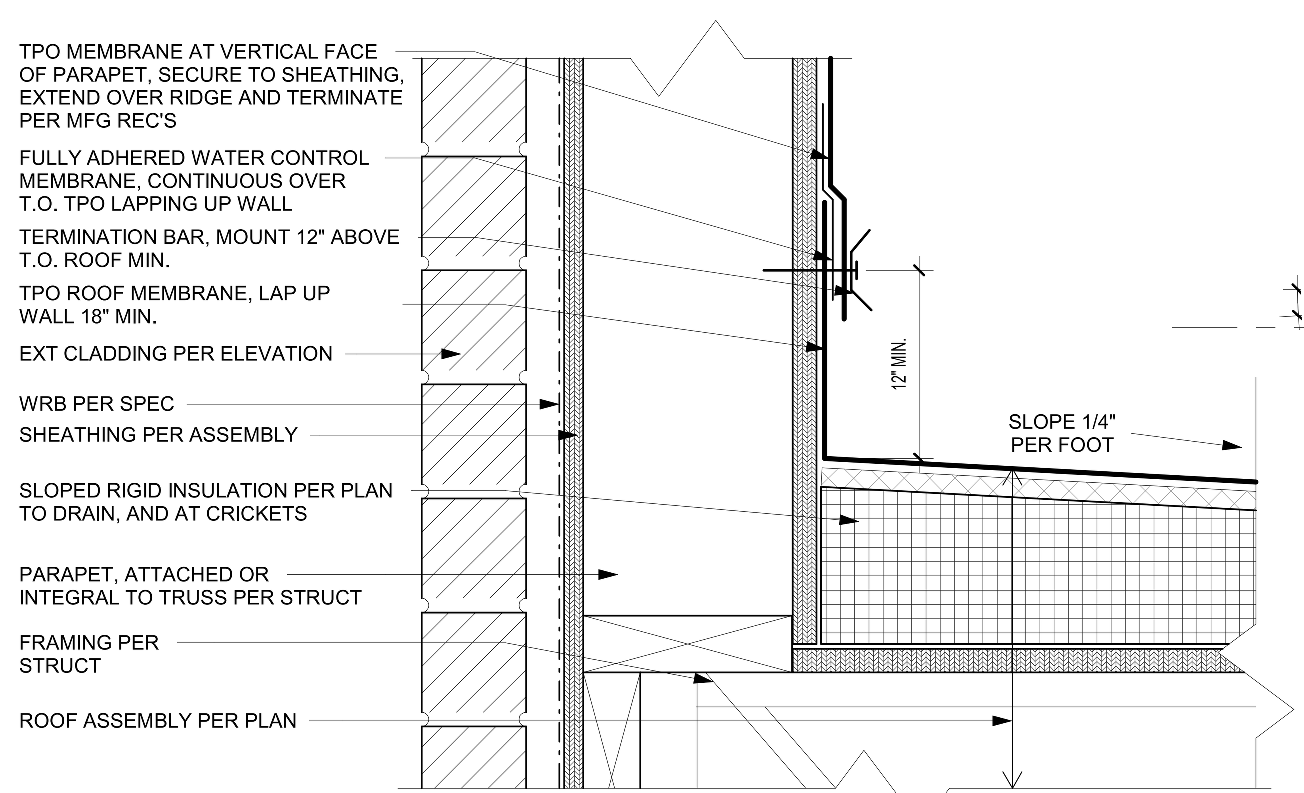
A3 CANOPY PLAN DETAIL
1 1/2" = 1'-0"



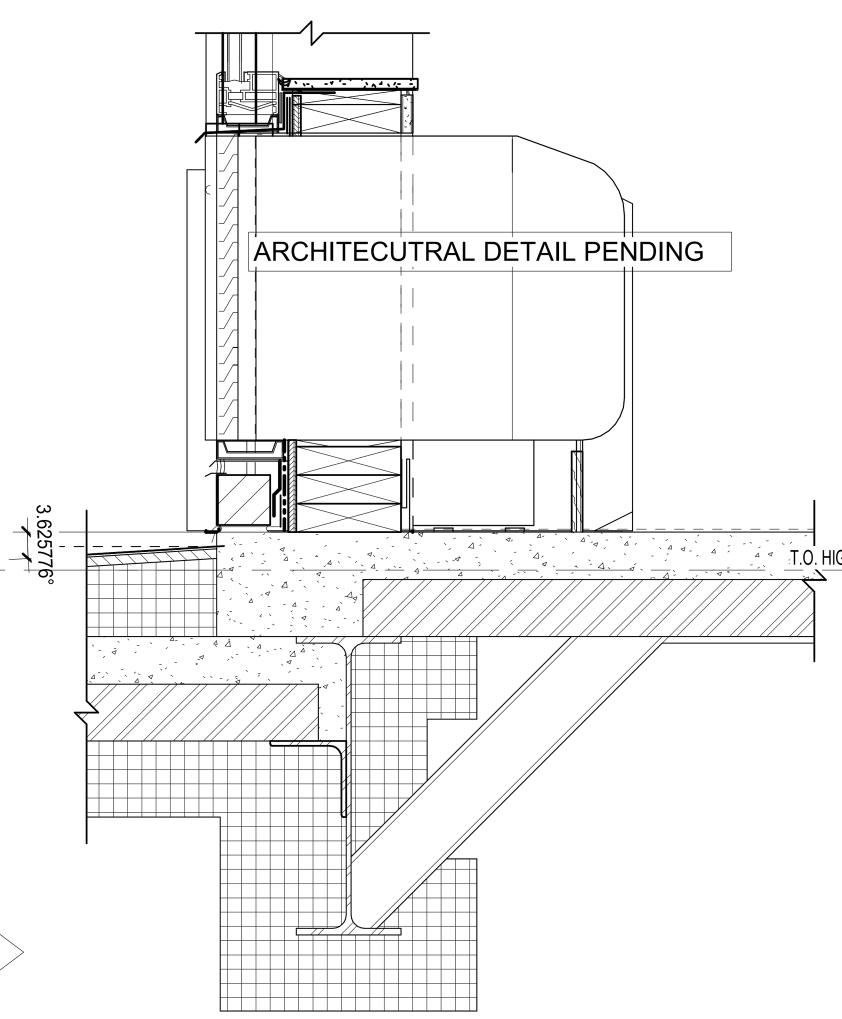
A2 WALL PROFILE AT STAIR DETAIL
1" = 1'-0"



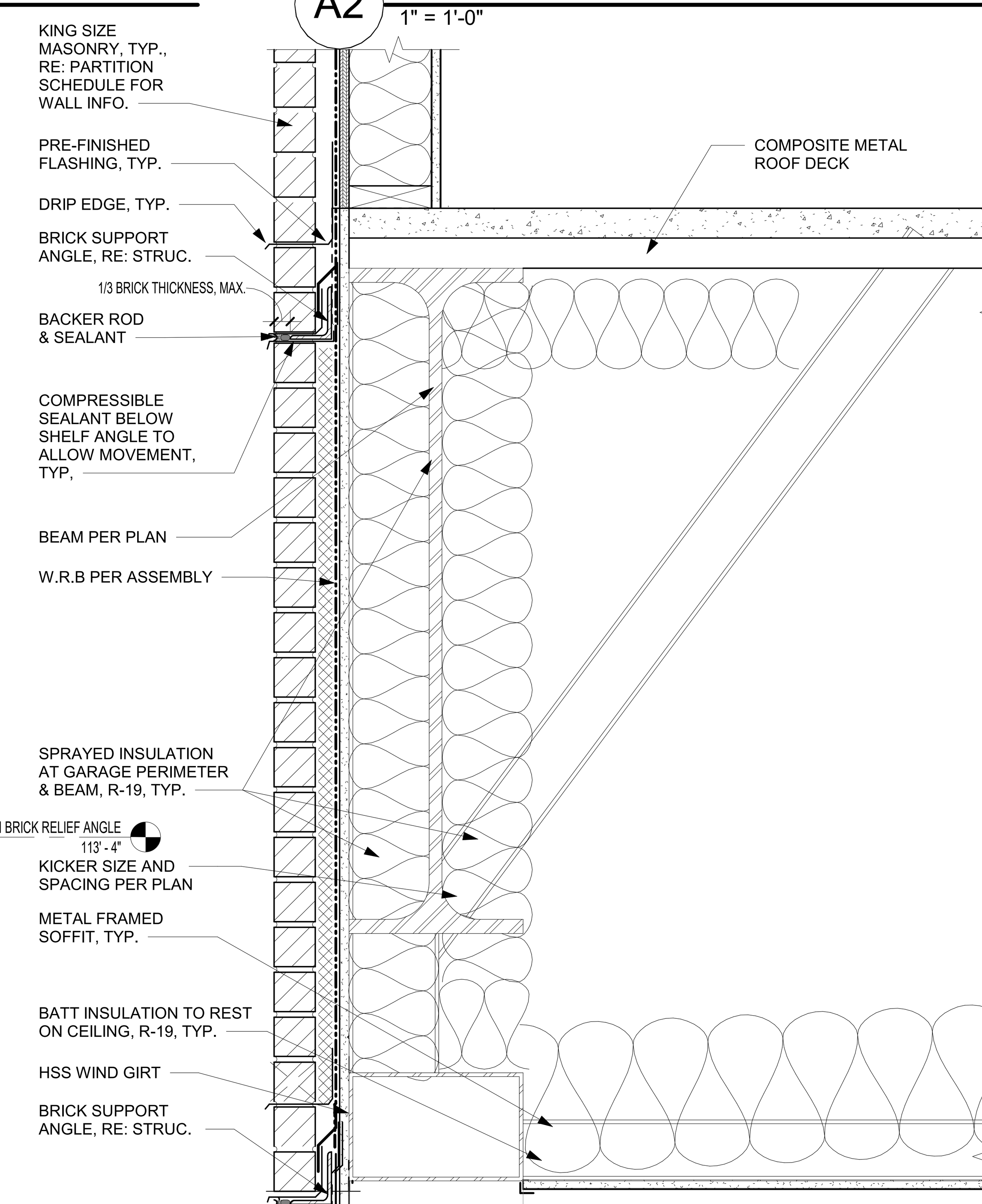
D1 ROOF - WOOD STUD - TPO - PARAPET HIGH, TYP.
1" = 1'-0"



C1 ROOF - WOOD STUD - TPO PARAPET BASE AT WALL
3" = 1'-0"



B1 LOWER ROOF WALL CONNECTION - PTAC
1 1/2" = 1'-0"



A1 PARKING GARAGE BRICK LEDGE DETAIL
1 1/2" = 1'-0"

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2

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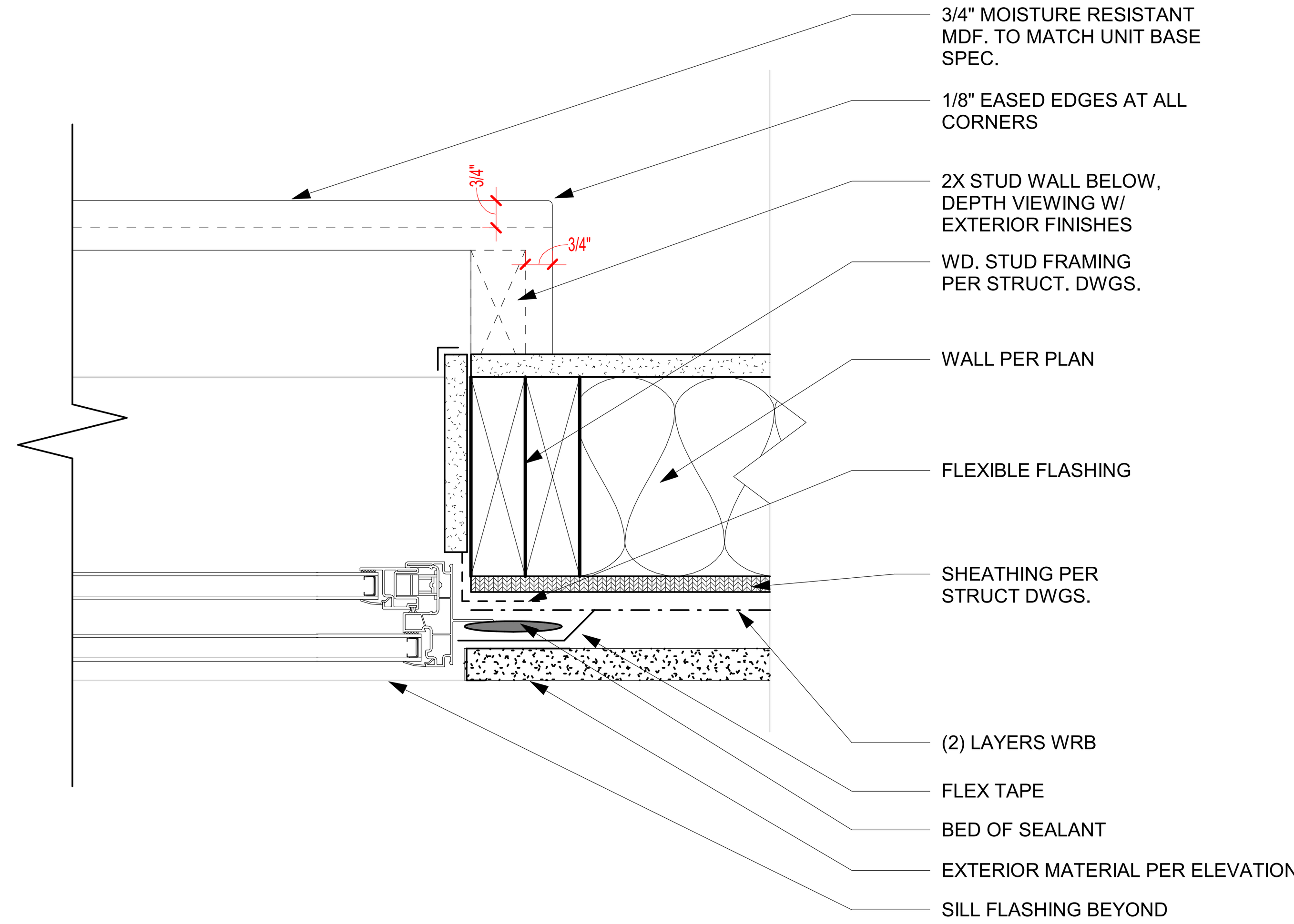
STATE OF MISSOURI
DAVID EUGENE HENDRIX
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

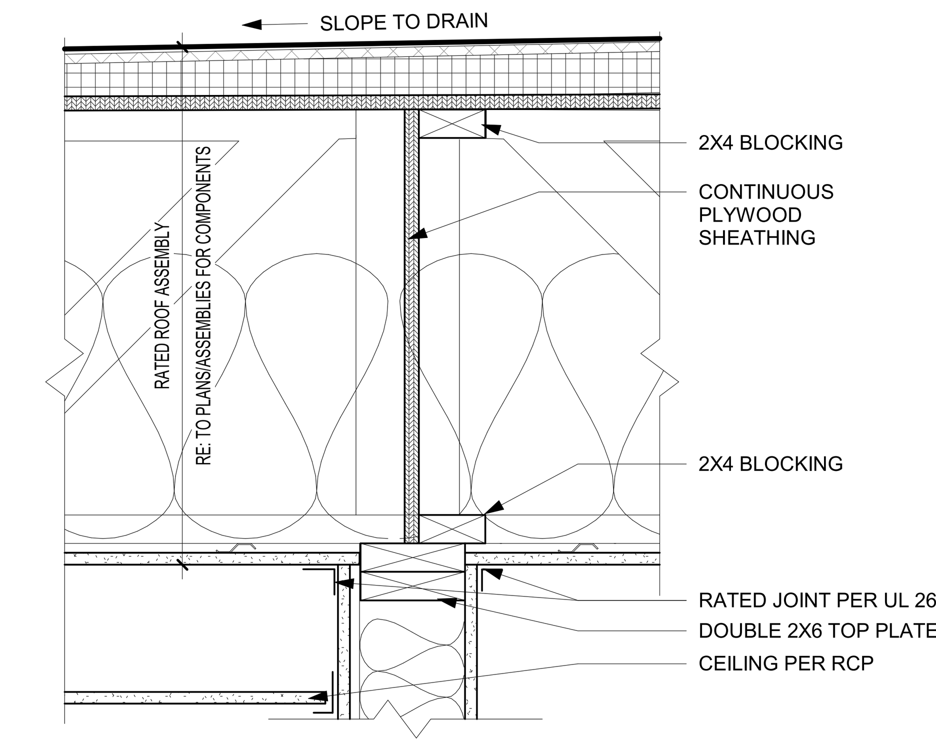
SHEET TITLE
DETAILS

PROJECT NUMBER: 23098

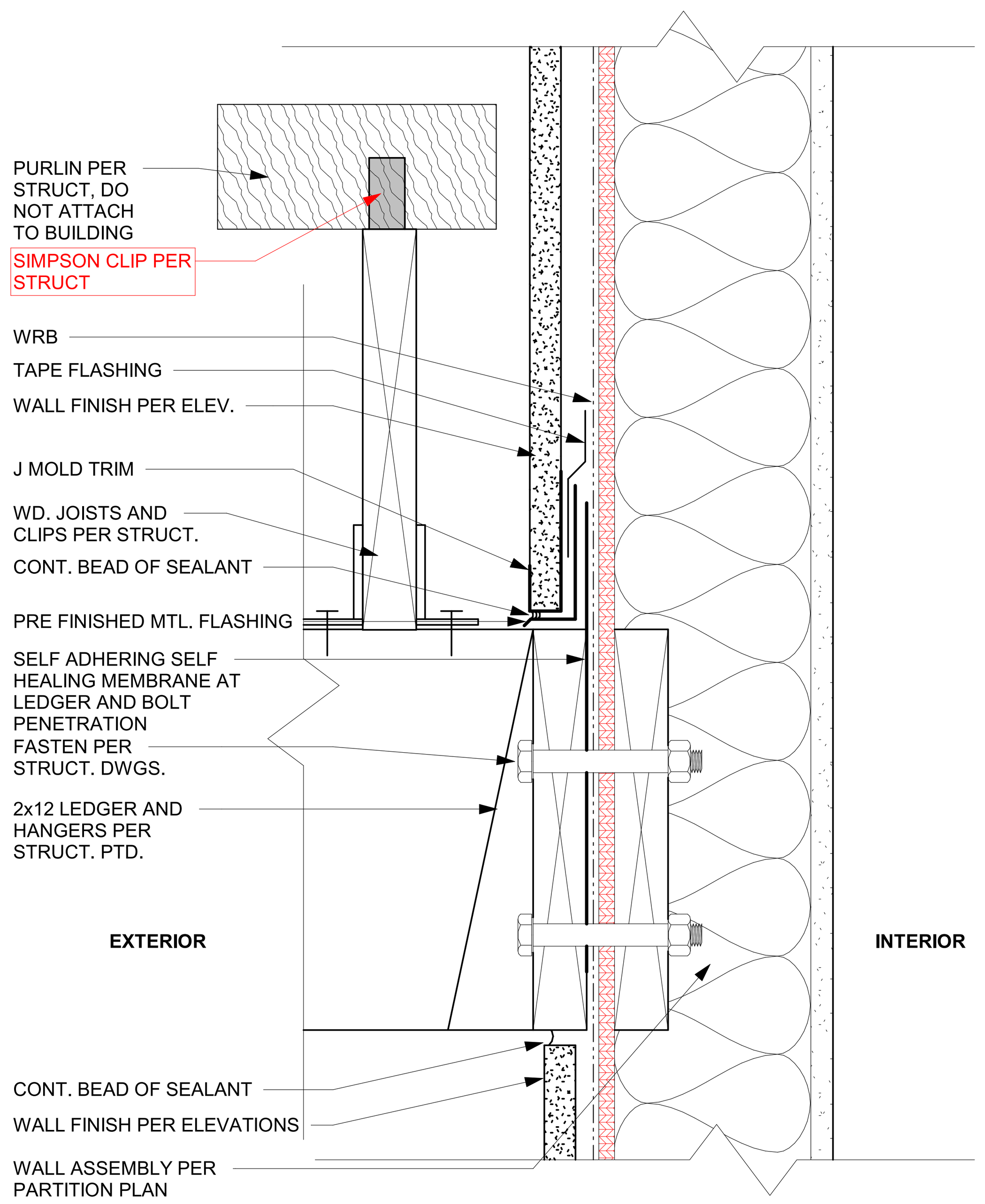
SHEET NUMBER:
A-502



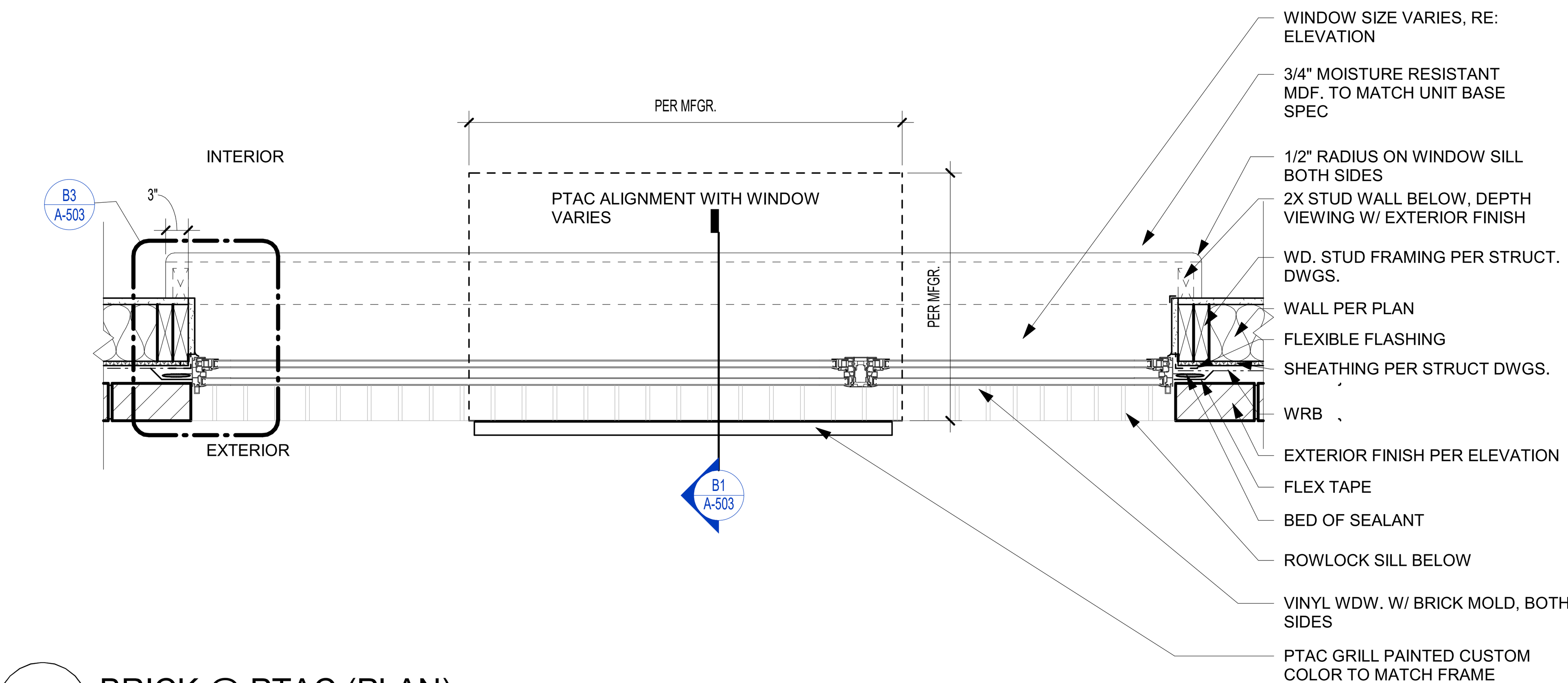
B3 WINDOW/INTERIOR - TRIM @ WINDOW JAMB
3" = 1'-0"



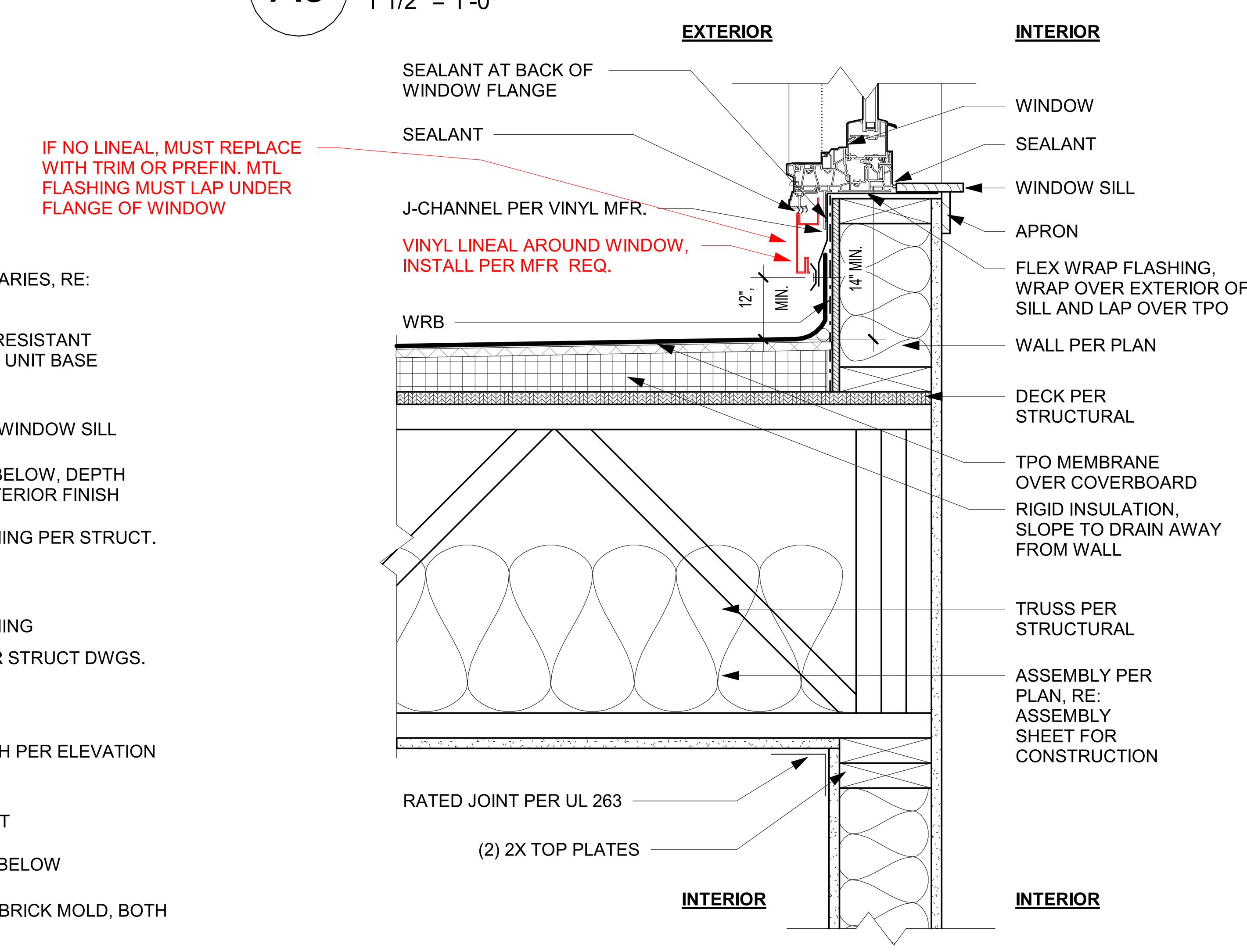
A3 ROOF DRAFT STOPPING (SECTION)
1 1/2" = 1'-0"



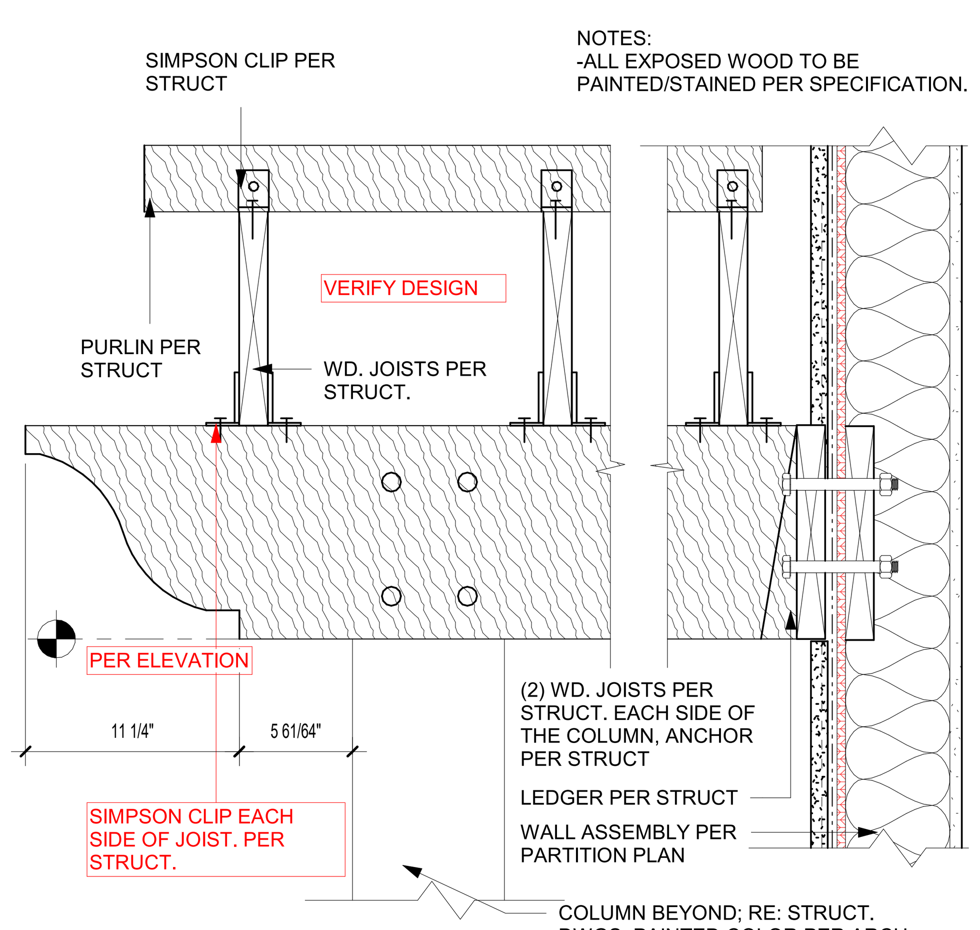
C2 PERGULA CONNECTION
3" = 1'-0"



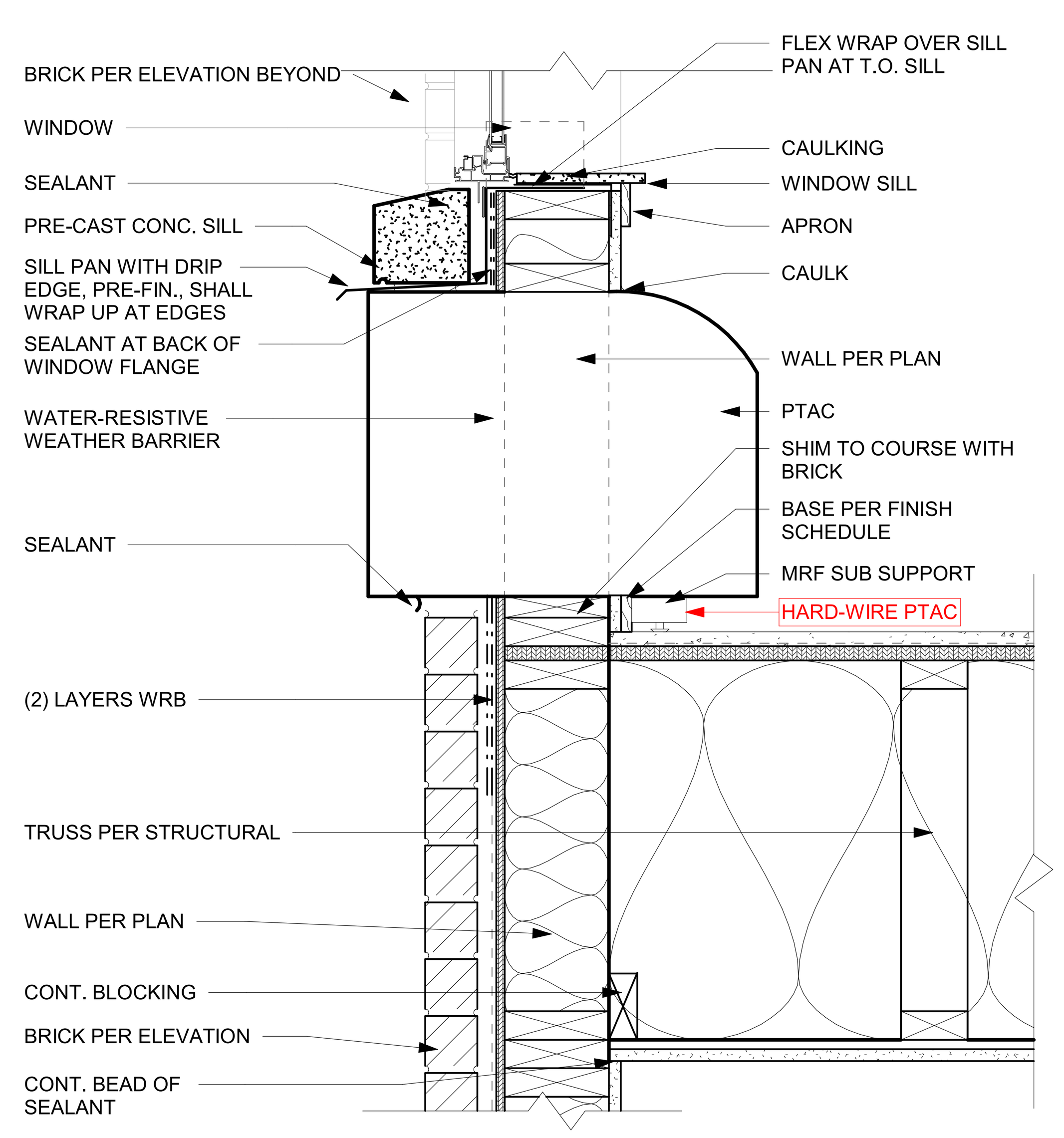
B2 BRICK @ PTAC (PLAN)
1" = 1'-0"



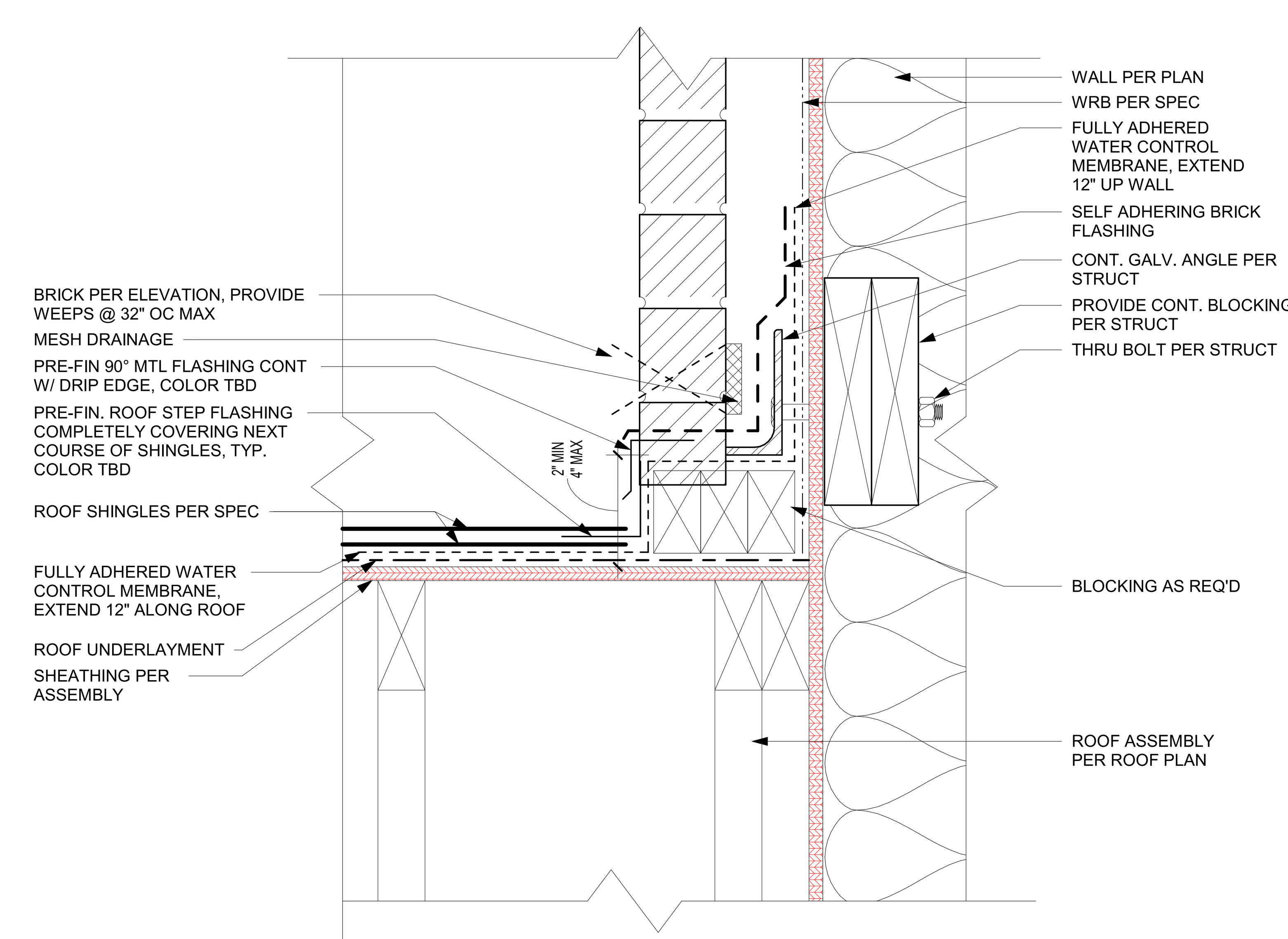
A2 WINDOW SILL @ DECK
1 1/2" = 1'-0"



C1 PERGULA SECTION
1 1/2" = 1'-0"



B1 BRICK @ PTAC (SECTION)
1 1/2" = 1'-0"



A1 THROUGH WALL FLASHING @ ROOF
3" = 1'-0"

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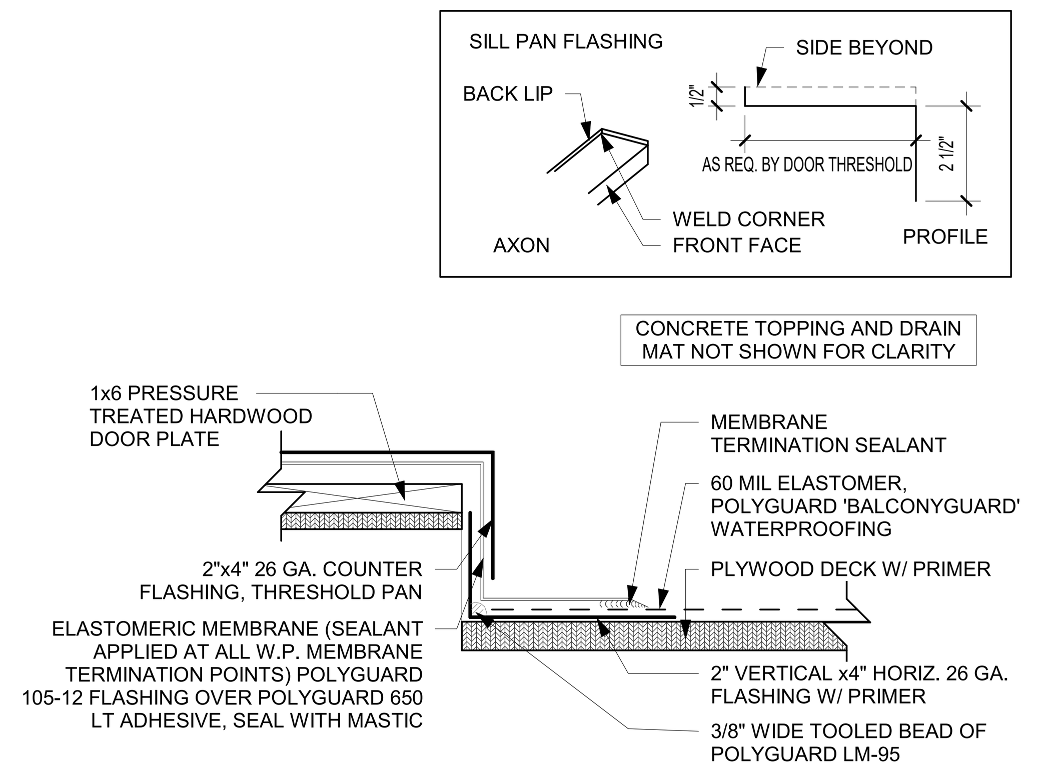
STATE OF MISSOURI
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

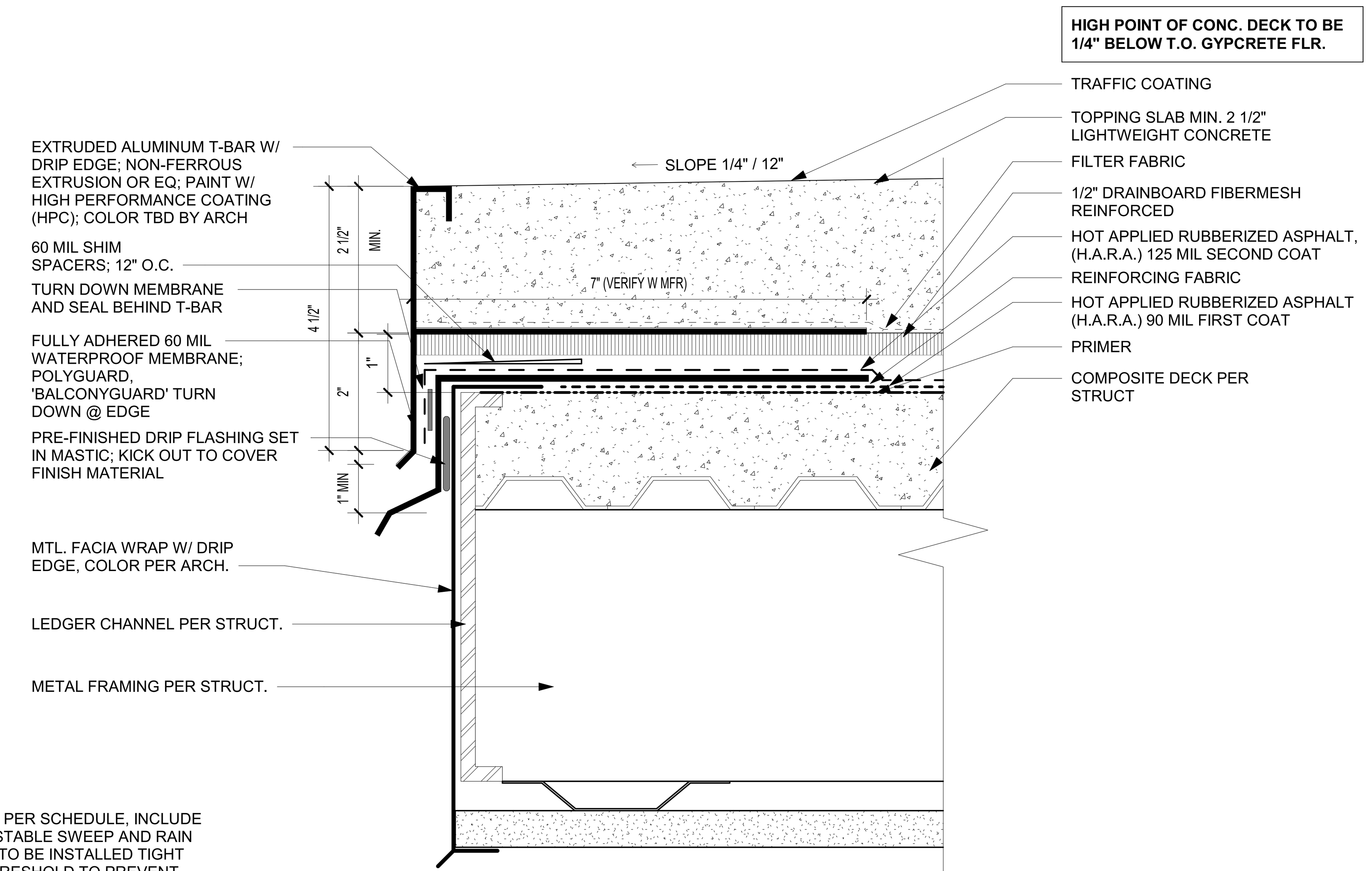
SHEET TITLE
DETAILS

PROJECT NUMBER: 23098

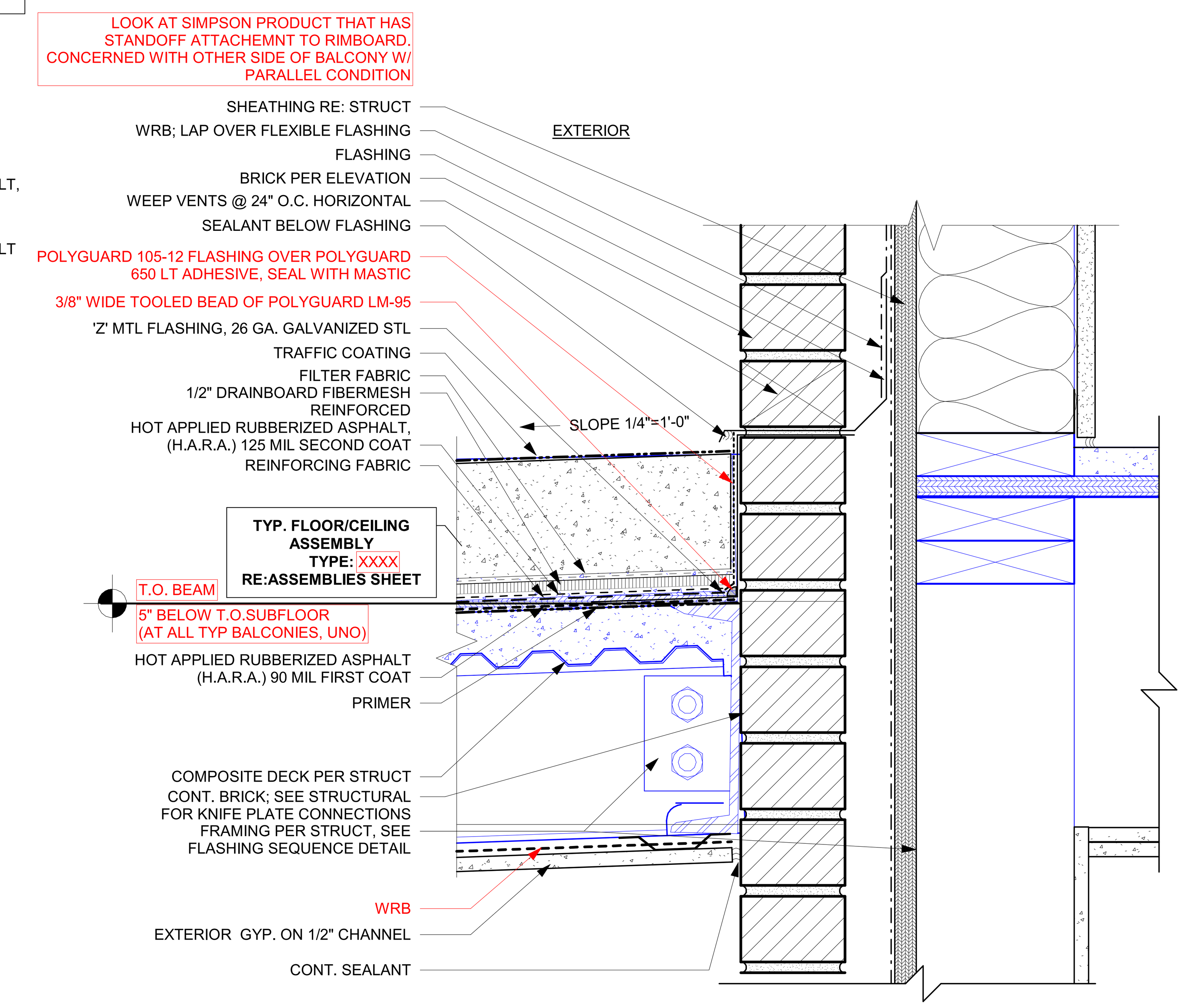
SHEET NUMBER:
A-503



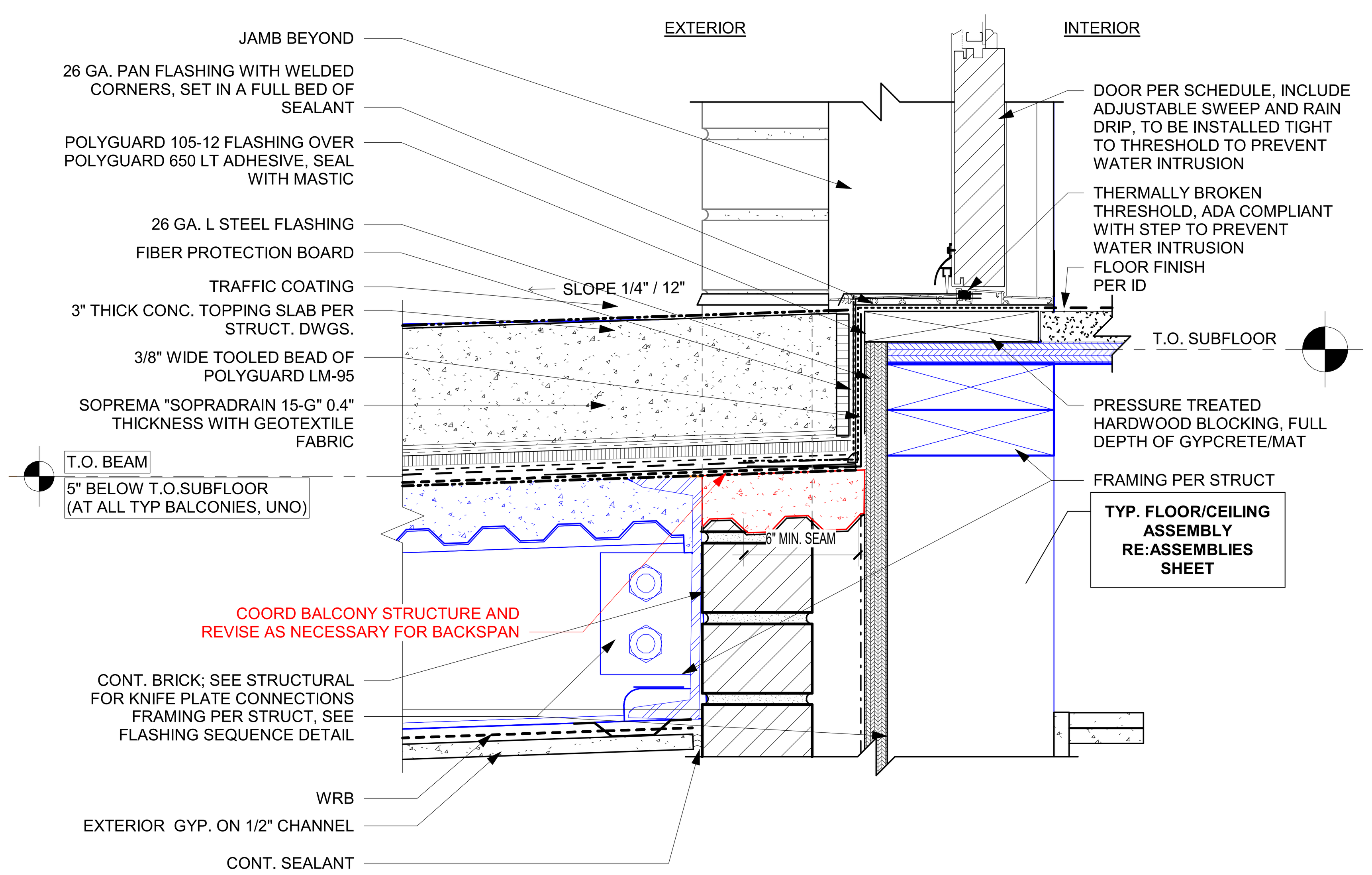
D3 FLASHING DETAIL @ BALCONY DOOR
3" = 1'-0"



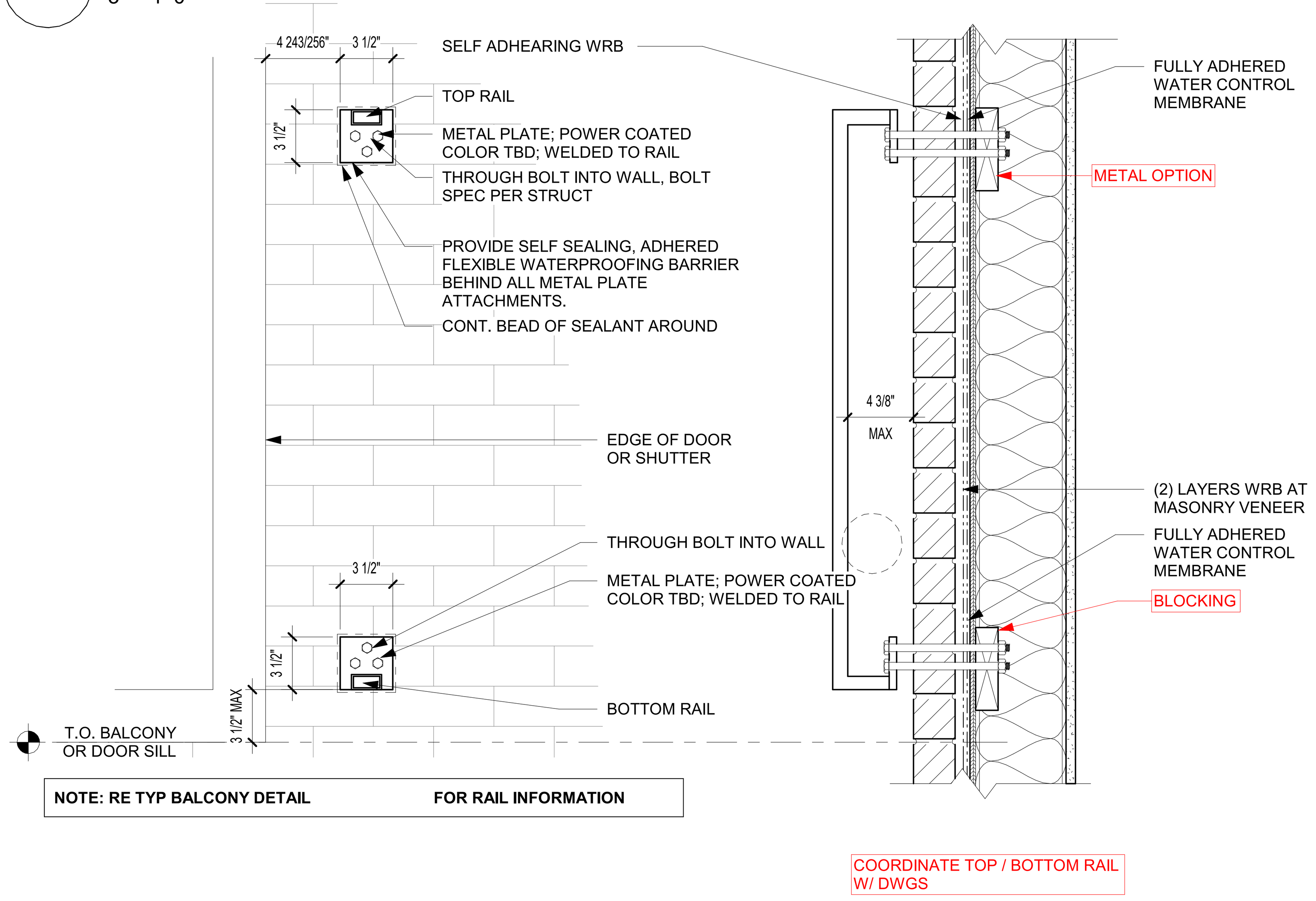
B3 BALCONY DTL - T-BAR DETAIL / FLASHING DETAIL 1
6" = 1'-0"



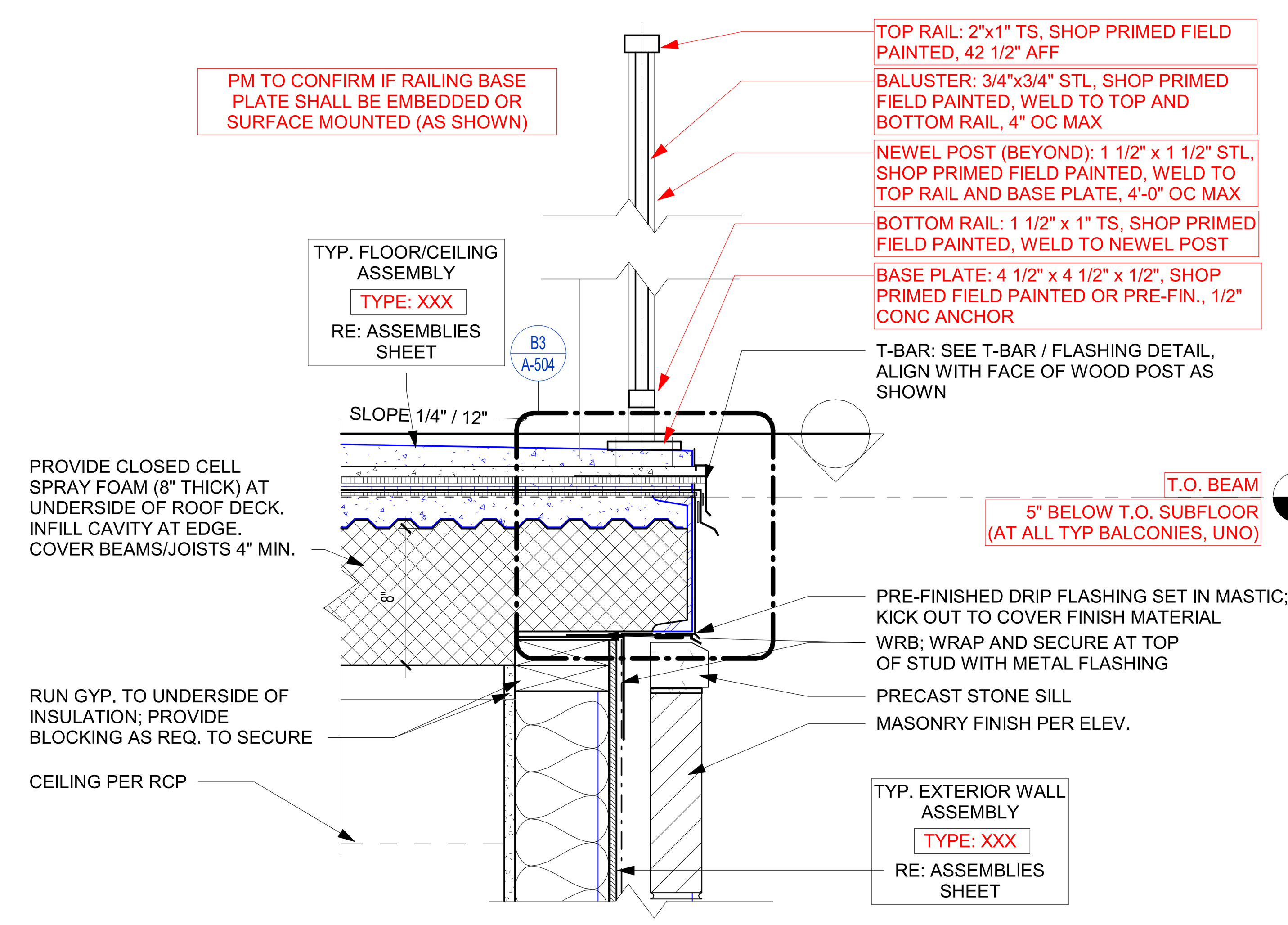
A2 BALCONY DTL - WD FRAMING/BRICK - PERPENDICULAR AT WALL
3" = 1'-0"



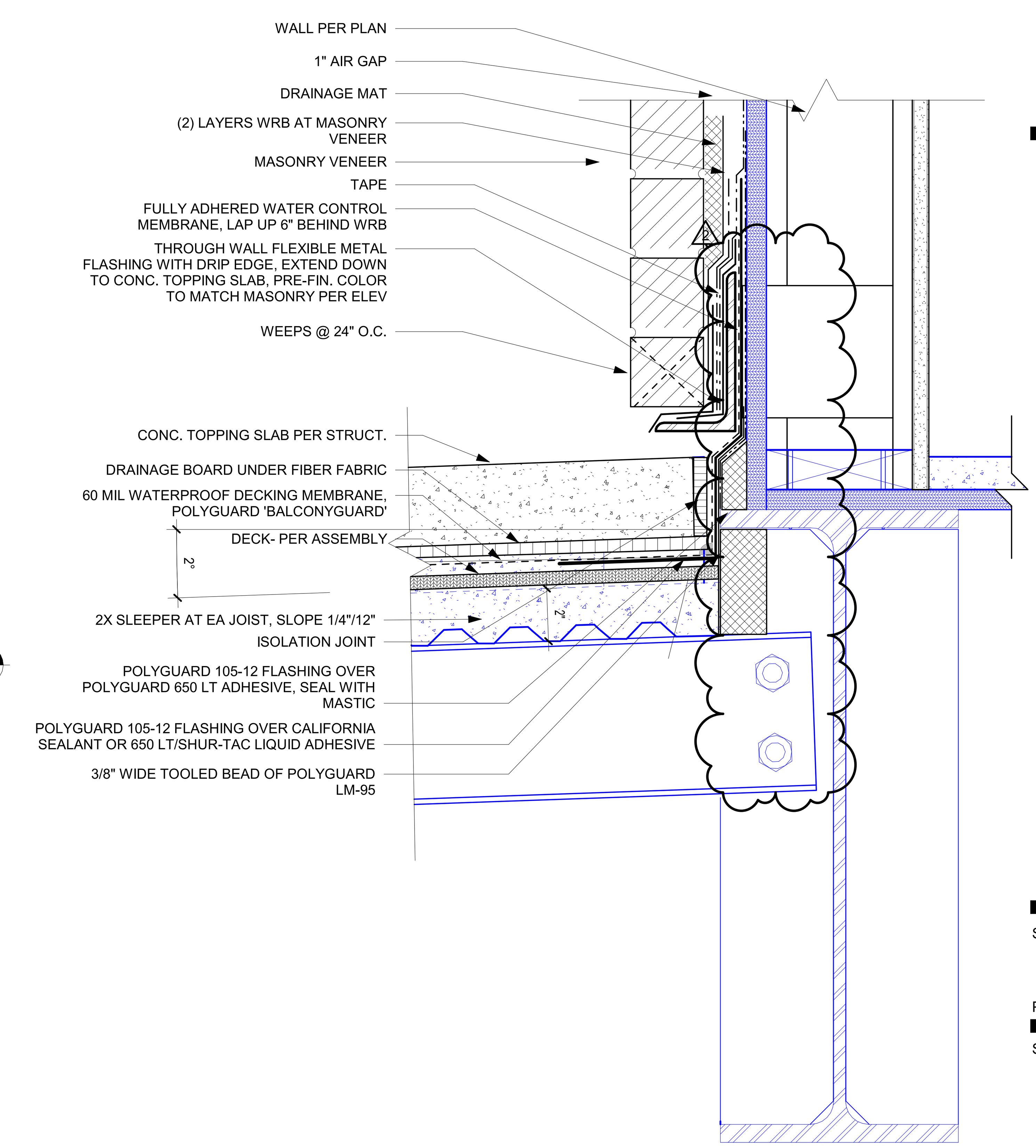
D2 BALCONY DTL - STL. FRAMING - THRESHOLD (OUTSWING SHOWN)
3" = 1'-0"



D1 RAILING - CONNECTIONS @ MASONRY VENEER
1 1/2" = 1'-0"



B1 BALCONY DTL - 2ND LEVEL BALCONY
1 1/2" = 1'-0"



A1 BALCONY DTL - WD FRAMING/BRICK - PERPENDICULAR AT BEAM
3" = 1'-0"

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7305
REGISTERED ARCHITECT
01/19/2024

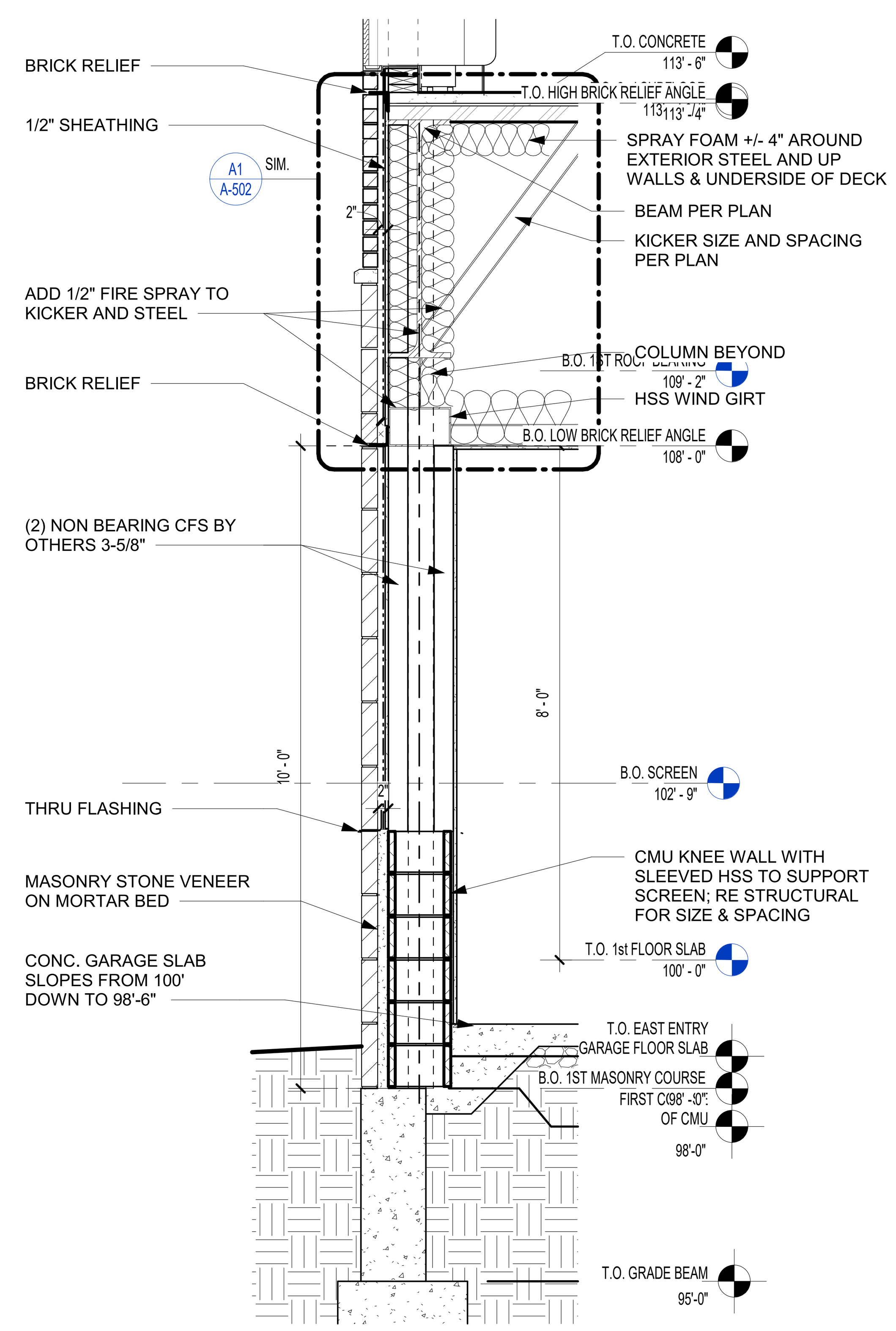
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
BALCONY AND RAILING DETAILS

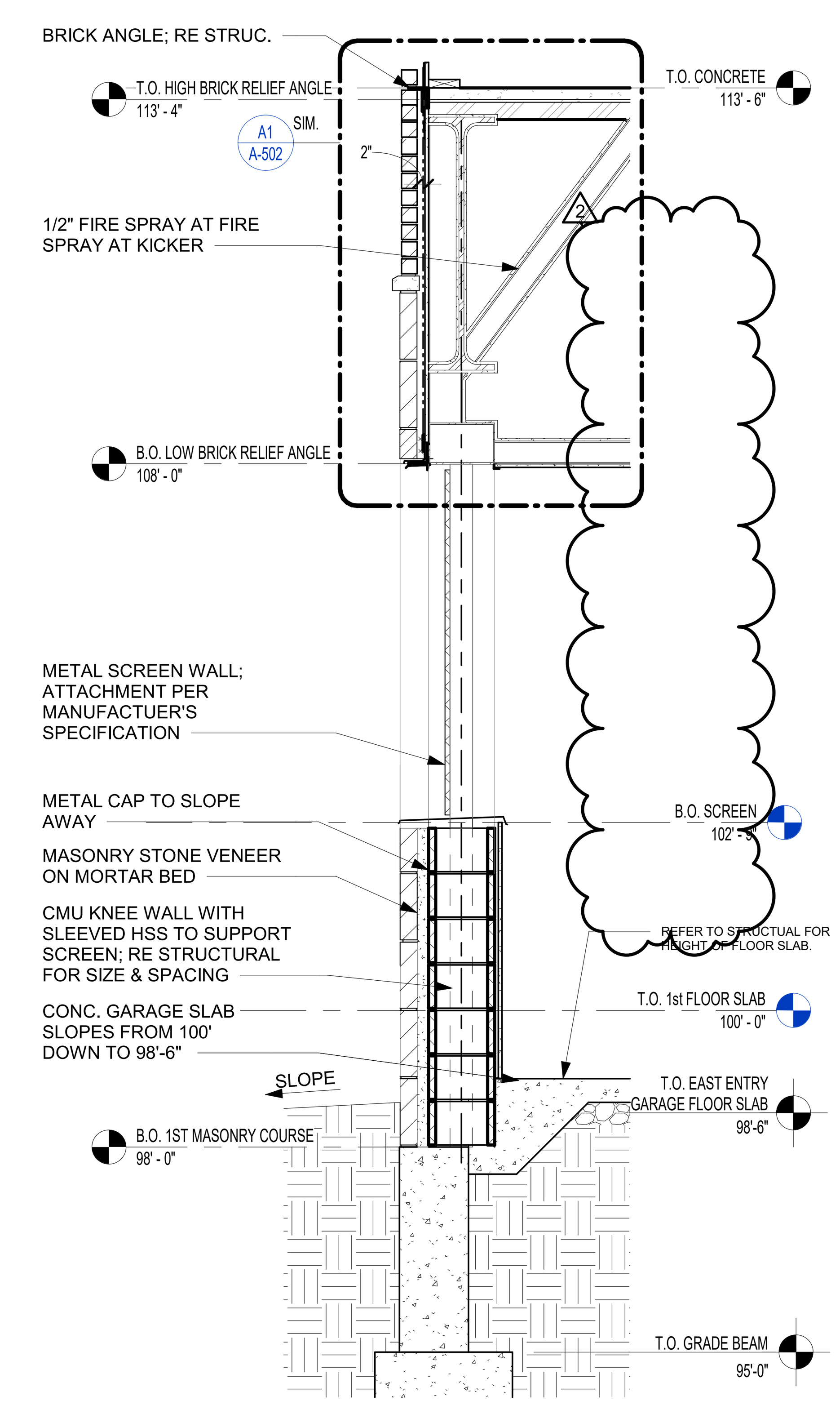
PROJECT NUMBER: 23098

SHEET NUMBER:

A-504



2 WALL SECTION DETAIL AT MASONRY
1/2" = 1'-0"



1 WALL SECTION DETAIL AT METAL SCREEN
1/2" = 1'-0"

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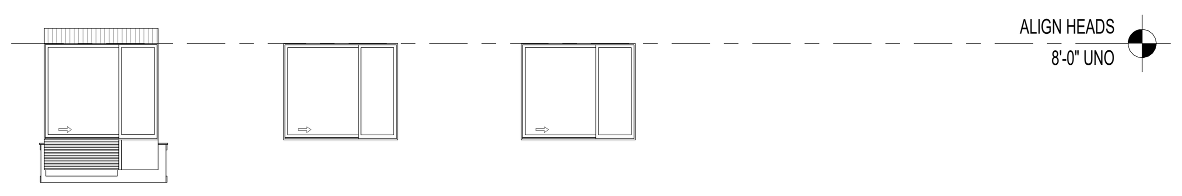
LEE'S SUMMIT 64064 USA

SHEET TITLE
DETAILS

PROJECT NUMBER: 23098

SHEET NUMBER:
A-505

WINDOW TYPES



WINDOW SCHEDULE						
TYPE	DESCRIPTION	LOCATION	HEIGHT	WIDTH	FRAME MATERIAL	COMMENTS
A	FIXED W/ HORIZONTAL SLIDER	TYP. GUESTROOM	5' - 1"	6' - 0"	ALUMINUM	SET SLIDER TO NOT OPEN MORE THAN 4"
A1	FIXED W/ HORIZONTAL SLIDER	EMPLOYEE BREAKROOM	5' - 1"	6' - 0"	ALUMINUM	SET SLIDER TO NOT OPEN MORE THAN 4"
B	FIXED	CORRIDOR	5' - 1"	6' - 0"	ALUMINUM	
B	FIXED	STAIRS	5' - 1"	6' - 0"	ALUMINUM	
D		STAIRS	5' - 1"	6' - 0"	ALUMINUM	

WINDOW COMMENTS:

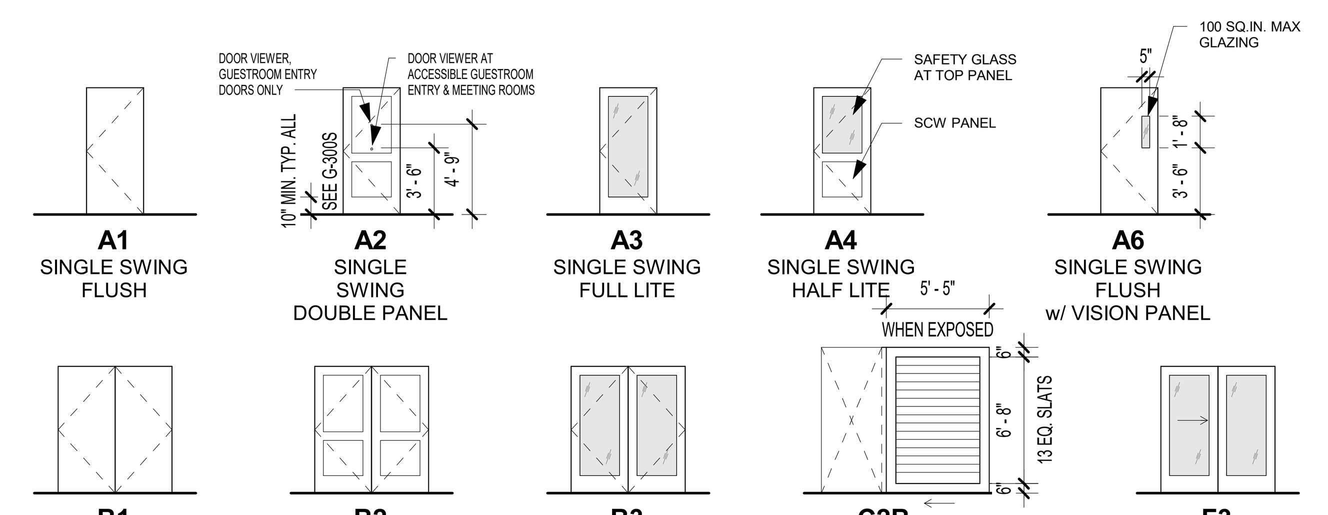
1. GLAZING DEEMED TO BE IN A HAZARDOUS LOCATION SHALL BE TEMPERED / SAFETY GLAZING.
2. EACH PANE OF SAFETY GLAZING INSTALLED IN HAZARDOUS LOCATIONS SHALL BE IDENTIFIED BY MFR'S DESIGNATION.
3. CONFIRM OPERATION OF SASH LOCKS AT "TYPE A" UNITS WILL BE WITHIN 48" REQUIRED REACH RANGE PER XX / XX
4. ALL WINDOWS IN PUBLIC SPACES SHALL RECEIVE TRIM PER XX / XX
5. SEE XX / XX FOR EXTERIOR WINDOW & DOOR TRIM
6. REFER TO CODE SHEET FOR ALL FIRE RATINGS
7. WINDOWS ON AND ABOVE SECOND FLOOR MUST HAVE WINDOW LIMITERS PER
8. WINDOW LOCATIONS PER PLANS
9. OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5.0 POUNDS (22.2 N) MAXIMUM
10. PROVIDE WINDOW OPENING CONTROL DEVICES (WOCDs) THAT COMPLY WITH ASTM F2090
11. WINDOW HEADERS TO ALIGN WITH ADJACENT DOOR HEADERS; UNO

DOOR COMMENTS:

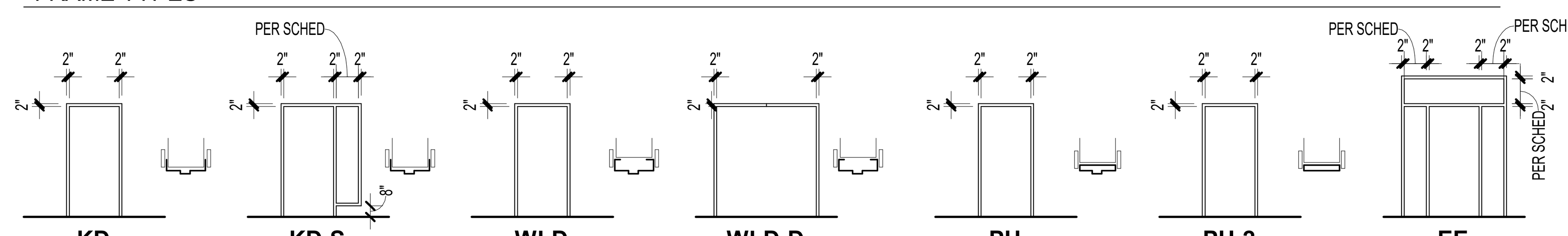
1. BOTTOM RAIL TO BE MINIMUM 10" TO ALLOW FOR A 10" KICK PLATE; TYPICALL ALL DOORS.
2. ALL DOORS TO BE 1-3/4" THICK, UNO.
3. SEE SPECIFICATIONS FOR DOOR HARDWARE SCHEDULE; FINAL HARDWARE SCHEDULE AND FINAL GROUPS TO BE DETERMINED BY DOOR SUB-CONTRACTOR. VERIFY FINAL HARDWARE INSTALLATION WITH CLIENT AND ARCHITECT.
4. DOOR HARDWARE SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST XX / XX ERATE.
5. ALL DOOR HARDWARE TO BE LEVER TYPE HARDWARE, UNO.
6. DOOR HARDWARE TO BE CENTERED ON RAIL OF PANEL DOORS.
7. DOOR FRAMES TO BE FINISHED PER SCHEDULE.
8. EXTERIOR PAINT COLOR TO MATCH ADJACENT EXTERIOR MATERIALS.
9. TOPS AND BOTTOMS OF ALL HOLLOW METAL DOORS EXPOSED TO WEATHER TO BE PATINED.
10. ALLOW FOR PLASTIC LAMINATE FACES AT DOOR FRAMES. ADJUST HINGES AS NEEDED.
11. VERIFY KEYING SCHEDULE WITH OWNER. ALL KEYS TO BE GIVEN TO OWNER AT SUBSTANTIAL COMPLETION.
12. NO HINGE-MOUNTED DOOR STOPS.
13. ALL COMMON AREA RATED DOORS TO HAVE SMOKE SEALS (GASKETS), CLOSURES, AND LATCH HARDWARE.
14. PROVIDE SPACER AT UNIT ENTRY DOOR GUARDS TO CLEAR DOOR TRIM.
15. UNIT ENTRY DOORS TO HAVE SPRING HINGES & LATCH HARDWARE, TYP UNO.
16. ALL DOORS INTENDED FOR PASSAGE TO HAVE 32" MIN. CLEAR WIDTH PER ICC ANSI A117.1

DOOR TYPES

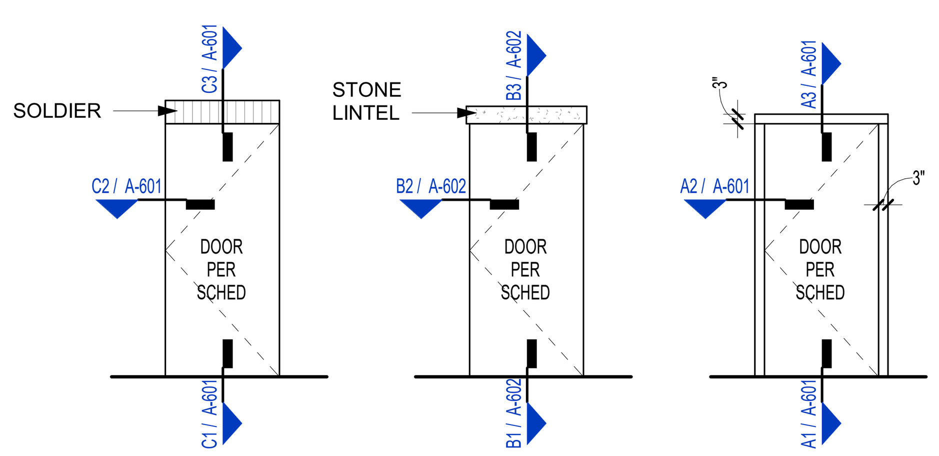
REFERENCE A-601/602 FOR DOOR AND WINDOW DETAILS



FRAME TYPES



DOOR SCHEDULE - UNIT DOORS - COORDINATION ONLY - SEE UNIT PLANS									
Mark	Width	Height	Thickness	Fire Rating (Minutes)	Door Type	Frame Type	Comments	Unit vs Public	*Typical Doors
-	3' - 0"	6' - 8"	1 3/4"		A2			U	(none)
000	3' - 0"	6' - 8"	1 3/4"	20	A2	HM		U	(none)
000A	3' - 0"	6' - 8"	1 3/4"	45	A2			U	(none)
004	3' - 0"	7' - 0"	1 3/4"		A3	HM		U	(none)
Lockout	3' - 0"	6' - 8"	1 3/4"		A2			U	(none)



TYPICAL EXTERIOR DOOR TRIM (@ BRICK)

TYPICAL EXTERIOR DOOR TRIM (@ STOREFRONT)

TYPICAL INTERIOR DOOR CASING

A1 DOOR TRIM & CASING - TYPICAL

1/4" = 1'-0"

DOOR SCHEDULE - COMMON AREA DOORS

Rev	Mark	Location	Width	Height	Thickness	Fire Rating (Minutes)	Panic Hardware	Door: Door Type	Door: Door Material	Door: Door Finish	Frame: Frame Type	Frame: Frame Finish	Hardware Group	Comments
T.O. 1st FLOOR SLAB														
	1000A	VESTIBULE	8' - 0"	7' - 0"	1 3/4"		No	F3	ALUM	PRE-FIN	ALUM	PRE-FIN	01	
	1000B	LOBBY	8' - 0"	7' - 0"	1 3/4"		No	F3	ALUM	PRE-FIN	ALUM	PRE-FIN	11	
	1002A	GENERAL MANAGER	3' - 0"	6' - 8"	1 3/4"	20	No	A2	SC WOOD	PTD	HM	PTD	15	FRAMELESS DOOR JAMB SYSTEM
	1002B	GENERAL MANAGER	3' - 0"	6' - 8"	1 3/4"		No	A2	WD	PTD	HM	PTD	17	
	1003	WORK ROOM	3' - 0"	6' - 8"	1 3/4"	20	No	A2	SC WOOD	PTD	HM	PTD	15	
	1003.1	WORK ROOM	3' - 0"	6' - 8"	1 3/4"	20	No	A2	SC WOOD	PTD	HM	PTD	29	
	1003A	WORK ROOM	6' - 0"	6' - 8"	1 3/4"		No	B2	WD	PTD	HM	PTD	16	
	1003B	SALES OFFICE	3' - 0"	6' - 8"	1 3/4"		No	A2	WD	PTD	HM	PTD	17	
	1003C	WORK ROOM	3' - 6"	6' - 8"	1 3/4"		No	B2	WD	PTD	WD	PTD	27	
	1003D	WORK ROOM	3' - 6"	6' - 8"	1 3/4"		No	B2	WD	PTD	WD	PTD	27	
	1003D.1	WORK ROOM	3' - 6"	6' - 8"	1 3/4"		No	B2	WD	PTD	WD	PTD	27	
	1003E	WORK ROOM	3' - 0"	6' - 8"	1 3/4"		No	A2	WD	PTD	HM	PTD	14	
	1004	MEETING ROOM	3' - 0"	6' - 8"	1 3/4"	20	No	A2	WD	PTD	HM	PTD	15	
	1005	GUEST LAUNDRY	3' - 0"	6' - 8"	1 3/4"	20	No	A4	SC WOOD	PTD	HM	PTD	21	
	1007	EMPLOYEE BREAK	3' - 0"	6' - 8"	1 3/4"		No	A2	SC WOOD	PTD	HM	PTD	22	
	1008	HOUSE LAUNDRY	4' - 0"	6' - 8"	1 3/4"	90	No	A2	SC WOOD	PTD	HM	PTD	15	
	1008A	HOUSE LAUNDRY	6' - 0"	6' - 8"	1 3/4"		No	B1	HM	PTD	HM	PTD	16	
	1008B	HOUSE LAUNDRY	3' - 0"	6' - 8"	1 3/4"		No	A1	HM	PTD	HM	PTD	19	
	1008C	HOUSE LAUNDRY	2' - 0"	2' - 0"	1 3/4"	90	No	A1	HM	PTD	HM	PTD	18	SELF-CLOSING RATED LINEN CHUTE DISCHARGE-HATCH W/FUSIBLE LINK TIED TO FIRE ALARM SYSTEM
	1008D	HOUSE LAUNDRY	2' - 4"	6' - 8"	1 3/4"		No	A1	HM	PTD	HM	PTD	13	
	1009	MENS	3' - 0"	6' - 8"	1 3/4"	20	No	A2	HM	PTD	HM	PTD	22	
	1010	WOMENS	3' - 0"	6' - 8"	1 3/4"	20	No	A2	HM	PTD	HM	PTD	22	
	1011A		3' - 6"	7' - 0"	1 3/4"		No	A3	ALUM	PRE-FIN	ALUM	PRE-FIN	03	
	1011B	ELEVATOR LOBBY	3' - 6"	8' - 3 1/2"	1 3/4"		No	A3	ALUM	PRE-FIN	ALUM	PRE-FIN	04	
	1012A	POOL RESTROOM	3' - 0"	7' - 0"	1 3/4"		No	A1	HM	PTD	HM	PTD	10	
	1012B	POOL STO.	3' - 0"	7' - 0"	1 3/4"		No	A1	HM	PTD	HM	PTD	09	
	1012C	POOL EQUIPMENT	3' - 0"	7' - 0"	1 3/4"		No	A1	HM	PTD	HM	PTD	09	
	1012D		3' - 0"	5' - 0"			Yes	-					25	POOL GATE
	1012E		3' - 0"	5' - 0"			Yes	-					25	POOL GATE
	1012F		3' - 0"	5' - 0"			Yes	-					25	POOL GATE
	1014	ELEVATOR LOBBY	3' - 0"	7' - 0"	1 3/4"	20	No	A3	HM	PTD	HM	PTD	31	
	1014A	FITNESS CENTER	3' - 0"	6' - 8"	1 3/4"		No	A1	WD	PTD	WD	PTD	29	
	1015	BUFFET	5' - 8"	7' - 9"	1 3/4"		No	C2B	WD	PTD	-	PTD	23	
	1016A	FOOD PREP	3' - 0"	6' - 8"	1 3/4"	20	No	A2	SC WOOD	PTD	HM	PTD	30	
	1016B		3' - 0"	7' - 0"	1 3/4"		No	A1	HM	PTD	HM	PTD	07	
	1017A	MECH.	3' - 0"	6' - 8"	1 3/4"	20	No	A2	SC WOOD	PTD	HM	PTD	15	
	1017B		3' - 0"	7' - 0"	1 3/4"		No	A1	HM	PTD	HM	PTD	05	
	1018A	CORRIDOR	3' - 0"	6' - 8"	1 3/4"	20	Yes	A2	SC WOOD	PTD	HM	PTD	15	
	1018B		3' - 0"	7' - 0"	1 3/4"		Yes	A1	HM	PTD	HM	PTD	05	
	1019	FLEX	5' - 10 1/2"	6' - 6 1/4"	1 3/4"		No	B3	ALUM	PRE-FIN	ALUM	PRE-FIN	08	
	1020	COMMUNITY	3' - 0"	6' - 6 1/4"	1 3/4"		Yes	A3	ALUM	PRE-FIN	ALUM	PRE-FIN	03	
	1022A		3' - 0"	7' - 0"	1 3/4"		Yes	145						
	1022B		3' - 0"	7' - 0"	1 3/4"		Yes	145						
	C1-1A	CORRIDOR	3' - 8 1/2"	6' - 9 1/2"	1 3/4"		Yes	A3	ALUM	PRE-FIN	ALUM	PRE-FIN	03	
	C1-1B		3' - 0"	6' - 9 1/2"	1 3/4"		Yes	A3	ALUM	PRE-FIN	ALUM	PRE-FIN	03	
	S1-1A	STAIR 1	3' - 0"	6' - 8"	1 3/4"	90	Yes	A6	HM	PTD	HM	PTD	12	
	S1-1B		3' - 0"	6' - 8"	1 3/4"		Yes	A1	HM	PTD	HM	PTD	06	
	S1-1C		3' - 0"	7' - 0"	1 3/4"		No	A1						
T.O. 2nd GYPCRETE														
	2000	IT SERV.	3' - 0"	6' - 8"	1 3/4"	20	No	A2	SC WOOD	PTD	HM	PTD	15	
	2001	STOR.	3' - 0"	6' - 8"	1 3/4"	20	No	A2	SC WOOD	PTD	HM	PTD	15	
	2002A	LINEN STOR.	3' - 0"	6' - 8"	1 3/4"	90	No	A2	SC WOOD	PTD	HM	PTD	15	
	2002B	LINEN STOR.	2' - 0"	2' - 0"	1 3/4"	90	No	A1	HM	PTD	HM	PTD	18	SELF-CLOSING RATED LINEN CHUTE DISCHARGE-HATCH W/FUSIBLE LINK TIED TO FIRE ALARM SYSTEM
	2003	LOCKOUT	3' - 0"	6' - 8"	1 3/4"	20	No	A2	SC WOOD	PTD	HM	PTD	20	LOCATE KEY SWITCH FOR ELECTRO MAG LOCK INSIDE OF LOCKOUT ROOM ST WALL BEHIND DOOR. mOUNT IN ACC. LOCATION ADJACENT TO DOOR IN THE OPEN POSITION.
	2004	LOCKOUT	3' - 0"	6' - 8"	1 3/4"	20	No	A2	SC WOOD	PTD	HM	PTD	20	LOCATE KEY SWITCH FOR ELECTRO MAG LOCK INSIDE OF LOCKOUT ROOM ST WALL BEHIND DOOR. mOUNT IN ACC. LOCATION ADJACENT TO DOOR IN THE OPEN POSITION.
	S1-2	STAIR-1	3' - 0"	6' - 8"	1 3/4"	90	Yes	A6	HM	PTD	HM	PTD	12	
	S2-2	STAIR-2	3' - 0"	6' - 8"	1 3/4"	90	Yes	A6	HM	PTD	HM	PTD	12	
T.O. 3rd GYPCRETE														
	3000	IT SERV.	3' - 0"	6' - 8"	1 3/4"	20	No	A2	SC WOOD	PTD	HM	PTD	15	
	3001	STOR.	3' - 0"	6' - 8"	1 3/4"	20	No	A2	SC WOOD	PTD	HM	PTD	15	
	3002A	MAINT.	3' - 0"	6' - 8"	1 3/4"	90	No	A2	SC WOOD	PTD	HM	PTD	15	
	3002B	MAINT.	2' - 0"	2' - 0"	1 3/4"	90	No	A1	HM	PTD	HM	PTD	18	SELF-CLOSING RATED LINEN CHUTE DISCHARGE-HATCH W/FUSIBLE LINK TIED TO FIRE ALARM SYSTEM
	3003	LOCKOUT	3' - 0"	6' - 8"	1 3/4"	20	No	A2	SC WOOD	PTD	HM	PTD	20	LOCATE KEY SWITCH FOR ELECTRO MAG LOCK INSIDE OF LOCKOUT ROOM ST WALL BEHIND DOOR. mOUNT IN ACC. LOCATION ADJACENT TO DOOR IN THE OPEN POSITION.
	3004	LOCKOUT	3' - 0"	6' - 8"	1 3/4"	20	No	A2	SC WOOD	PTD	HM	PTD	20	LOCATE KEY SWITCH FOR ELECTRO MAG LOCK INSIDE OF LOCKOUT ROOM ST WALL BEHIND DOOR. mOUNT IN ACC. LOCATION ADJACENT TO DOOR IN THE OPEN POSITION.
	S1-3	STAIR-1	3' - 0"	6' - 8"	1 3/4"	90	Yes	A6	HM				12	
	S2-3	STAIR-2	3' - 0"	6' - 8"	1 3/4"	90	Yes	A6	HM				12	
T.O. 4th GYPCRETE														
	4000	IT SERV.	3' - 0"	6' - 8"	1 3/4"	20	No	A2					15	
	4001	STOR.	3' - 0"	6' - 8"	1 3/4"	20	No	A2					15	
	4002A	STOR.	3' - 0"	6' - 8"	1 3/4"	90	No	A2					15	
	4002B	STOR.	2' - 0"	2' - 0"	1 3/4"	90	No	A1					18	SELF-CLOSING RATED LINEN CHUTE DISCHARGE-HATCH W/FUSIBLE LINK TIED TO FIRE ALARM SYSTEM
	4003	LOCKOUT	3' - 0"	6' - 8"	1 3/4"	20	No	A2					20	LOCATE KEY SWITCH FOR ELECTRO MAG LOCK INSIDE OF LOCKOUT ROOM ST WALL BEHIND DOOR. mOUNT IN ACC. LOCATION ADJACENT TO DOOR IN THE OPEN POSITION.
	4004	LOCKOUT	3' - 0"	6' - 8"	1 3/4"	20	No	A2					20	LOCATE KEY SWITCH FOR ELECTRO MAG LOCK INSIDE OF LOCKOUT ROOM ST WALL BEHIND DOOR. mOUNT IN ACC. LOCATION ADJACENT TO DOOR IN THE OPEN POSITION.
	S1-4	STAIR-1	3' - 0"	6' - 8"	1 3/4"	90	No	A6					12	
	S2-4	STAIR-2	3' - 0"	6' - 8"	1 3/4"	90	No	A6					12	

PUBLIC ROOM FINISH COMMENTS:

1. PAINT BULKHEADS
2.

GENERAL NOTES:

1. BASE FINISH
   A. RB-1 = VINYL TOED/TOELESS - STANDARD COLOR
2.

DOOR SCHEDULE ABBREVIATIONS:

ALUM	ALUMINUM	**FGL / FBG**	FIBERGLASS	**N/A**	NOT APPLICABLE	**STL**	NOT APPLICABLE
ANO	ANODIZED	**HC WOOD / HCWD**	HOLLOW CORE WOOD	**PER MFR**	PER MANUFACTURER	**WD CLAD**	WOOD CLAD
BLK	BLACK	**HM**	HOLLOW METAL	**PRE-FIN**	PRE-FINISHED		
BRZ	BRONZE	**INSUL MTL**	INSULATED METAL	**PT / PTD**	PAINTED		
CLR	CLEAR	**MTL**	METAL	**SC WOOD / SCWD**	SOLID CORE WOOD		

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
01/19/2024

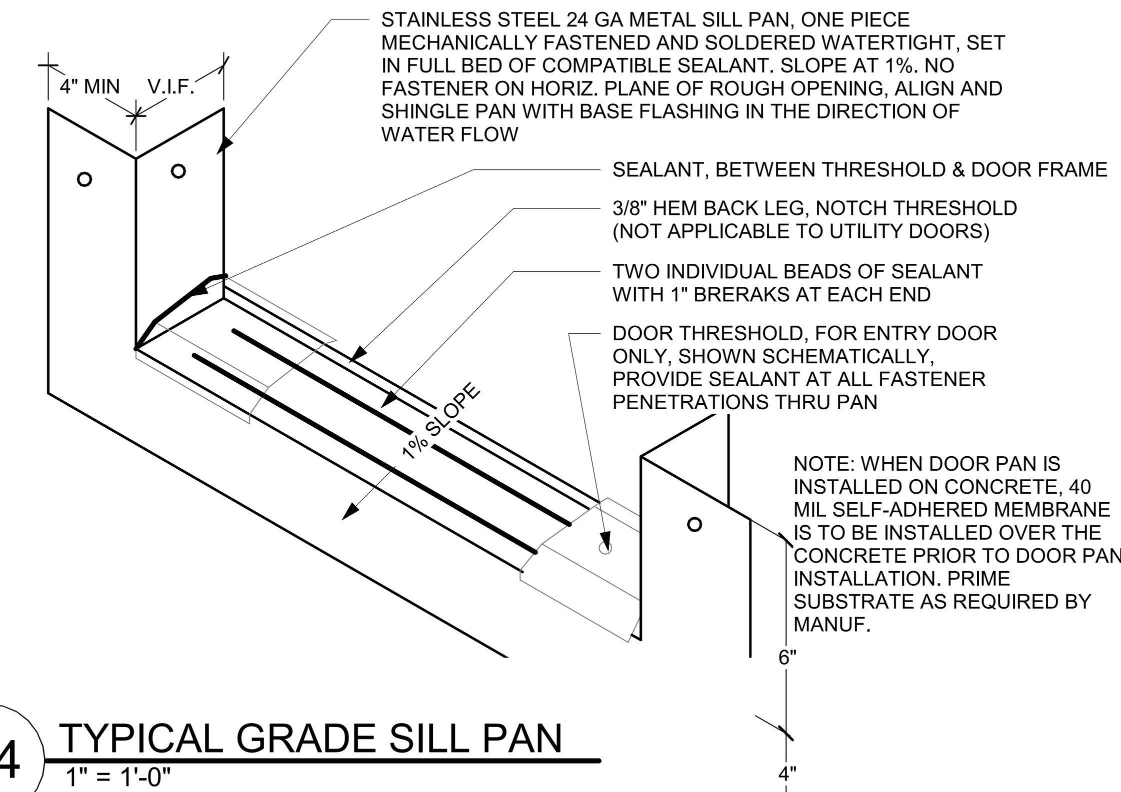
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
WINDOW / DOOR / FINISH SCHEDULES

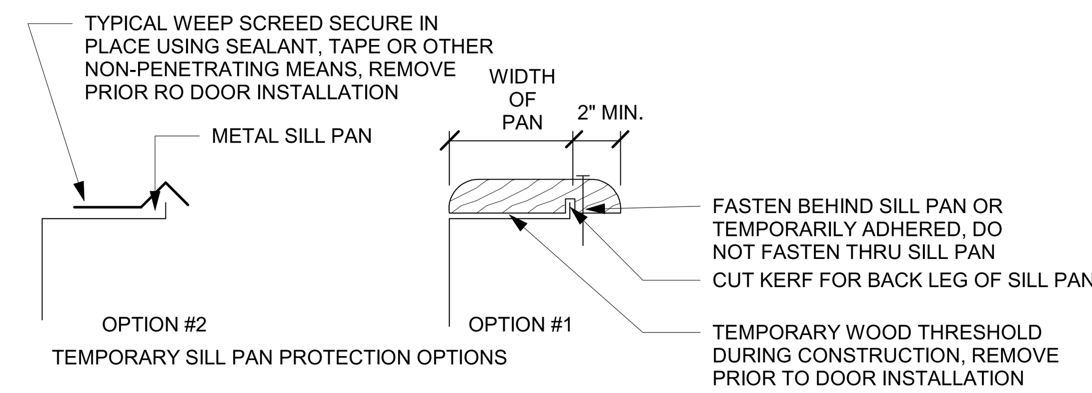
PROJECT NUMBER: 23098

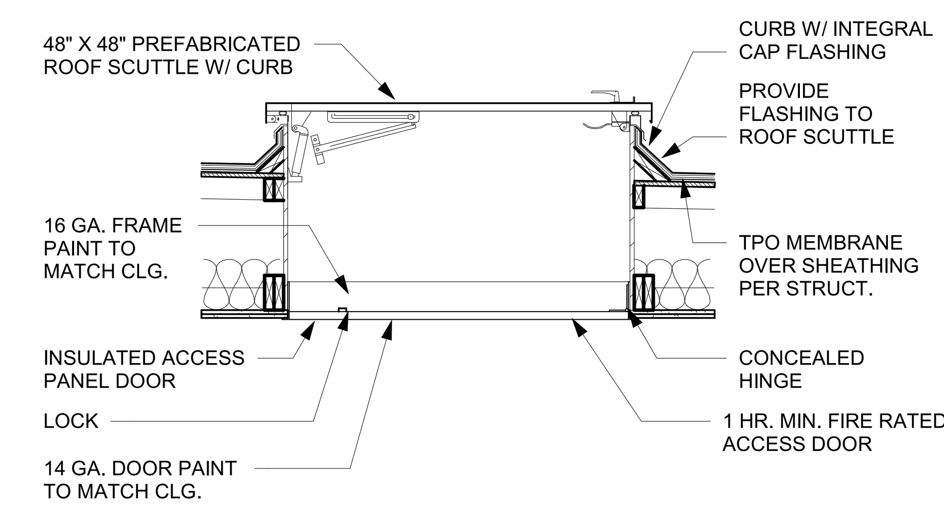
SHEET NUMBER:
A-600

REFERENCE A-601/602 FOR DOOR AND WINDOW DETAILS

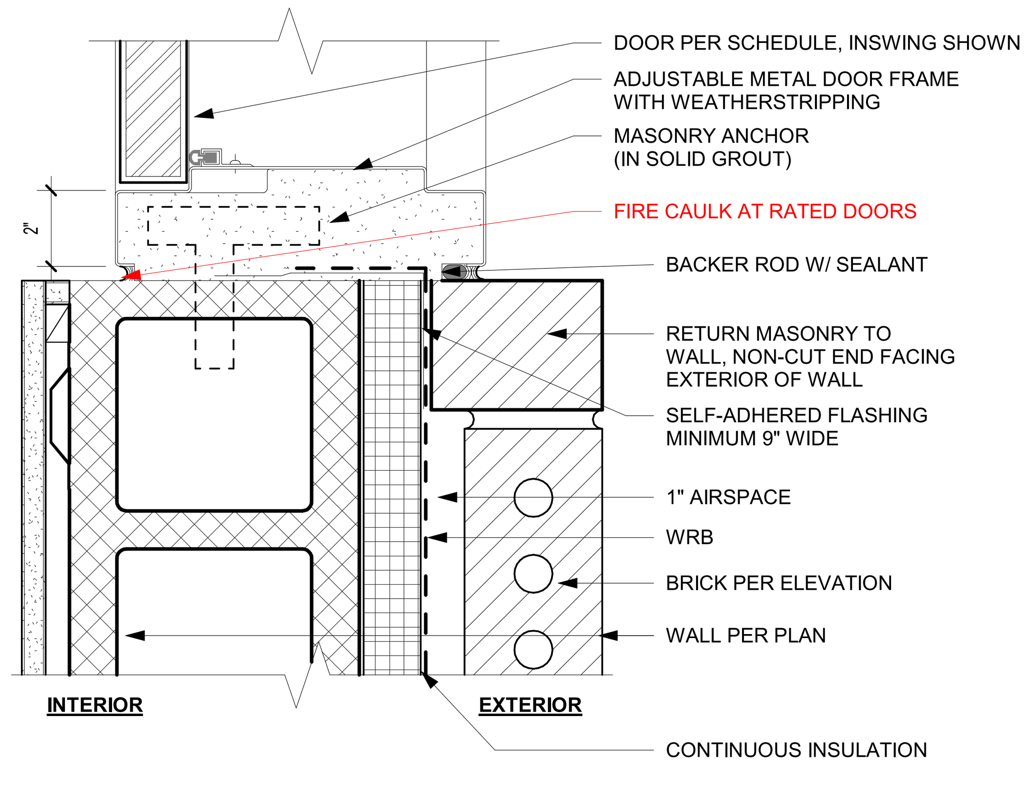


D4 TYPICAL GRADE SILL PAN
1" = 1'-0"

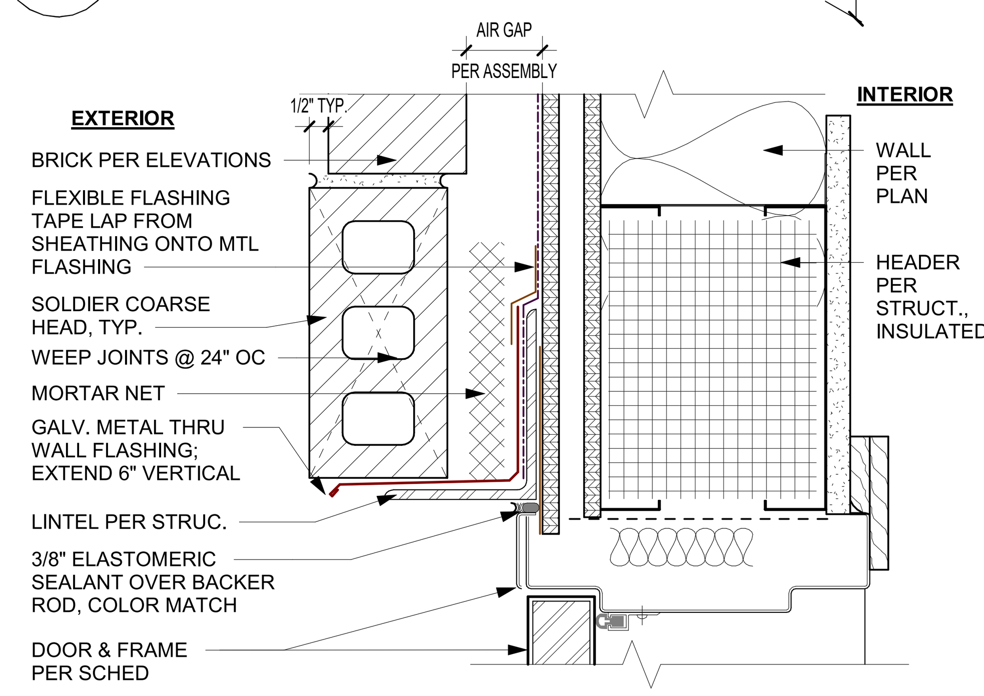




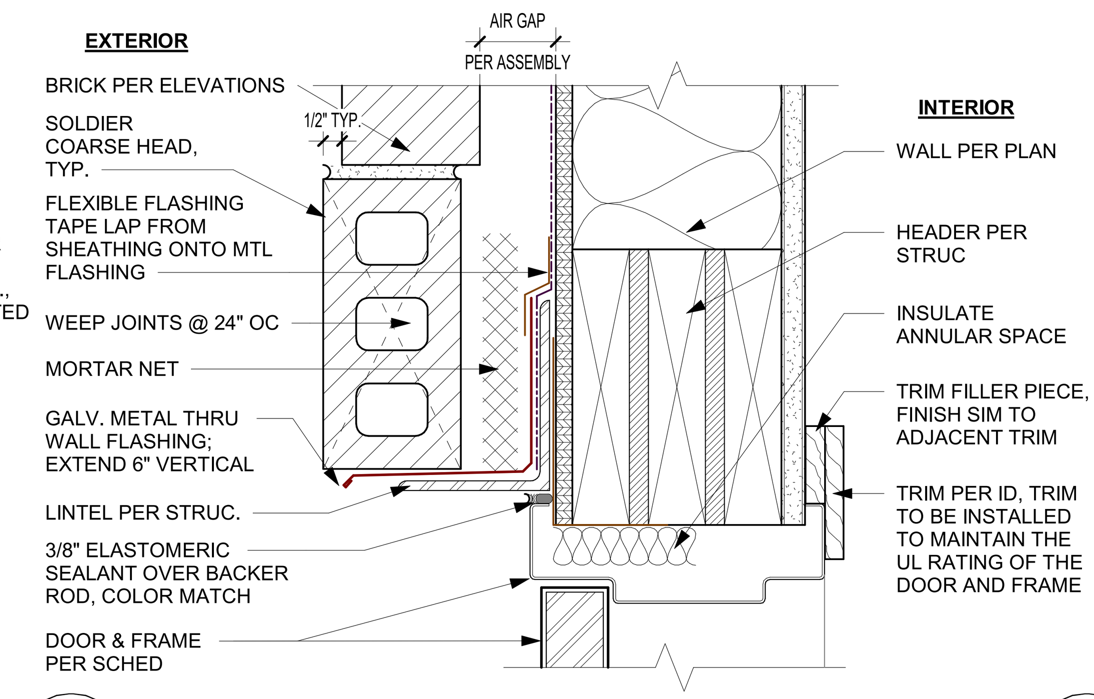
A4 ROOF SCUTTLE
1/2" = 1'-0"



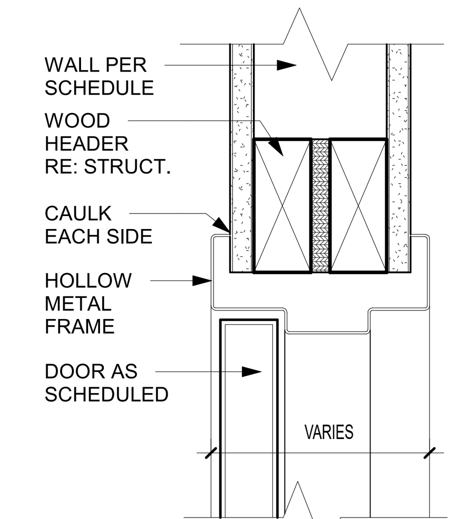
E3 DOOR/EXTERIOR - CMU/BRICK - WELDED FRAME @ JAMB
3" = 1'-0"



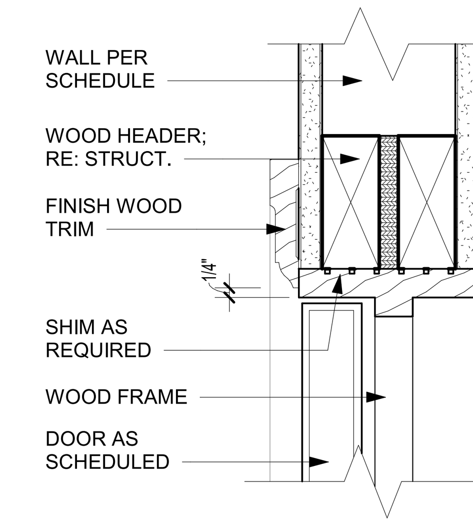
D3 EXTERIOR MTL DOOR HEAD- BRICK
3" = 1'-0"



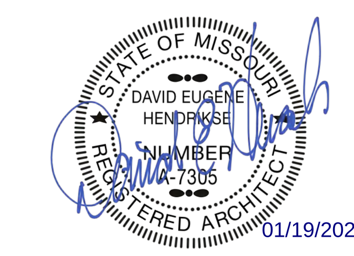
C3 EXTERIOR DOOR HEAD - BRICK
3" = 1'-0"

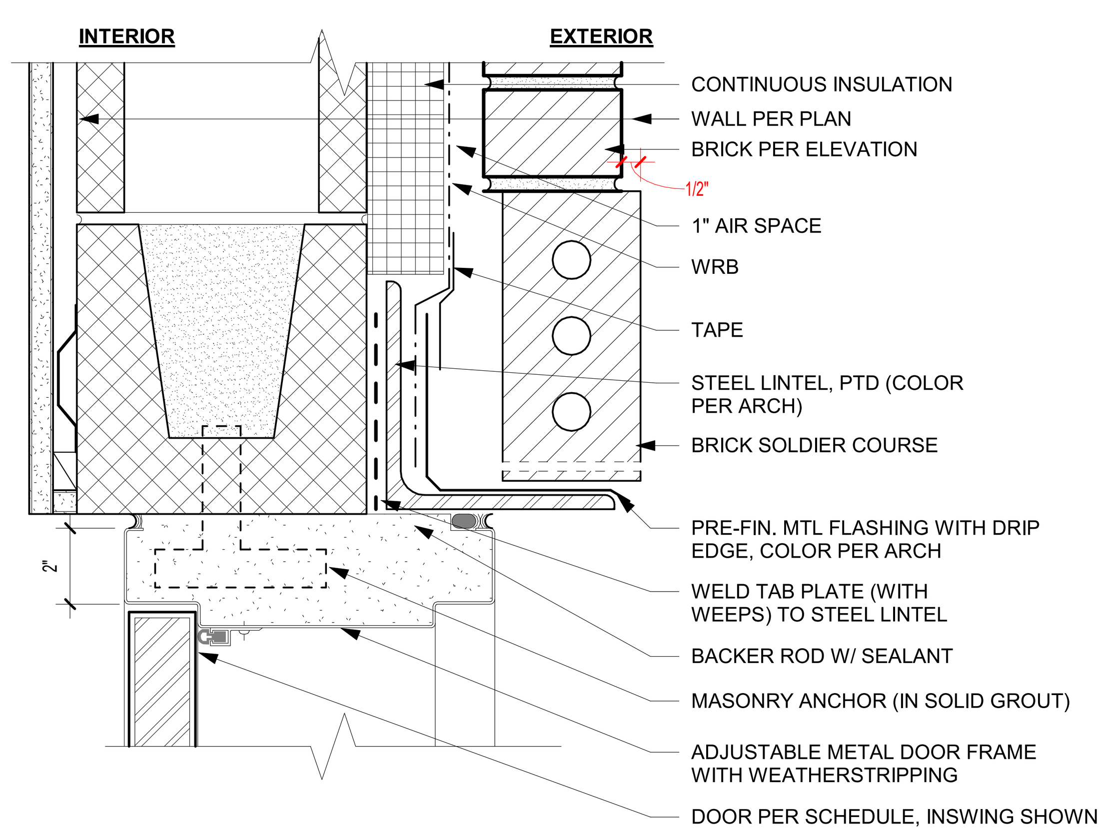


B3 INTERIOR DOOR HEAD - METAL
3" = 1'-0"

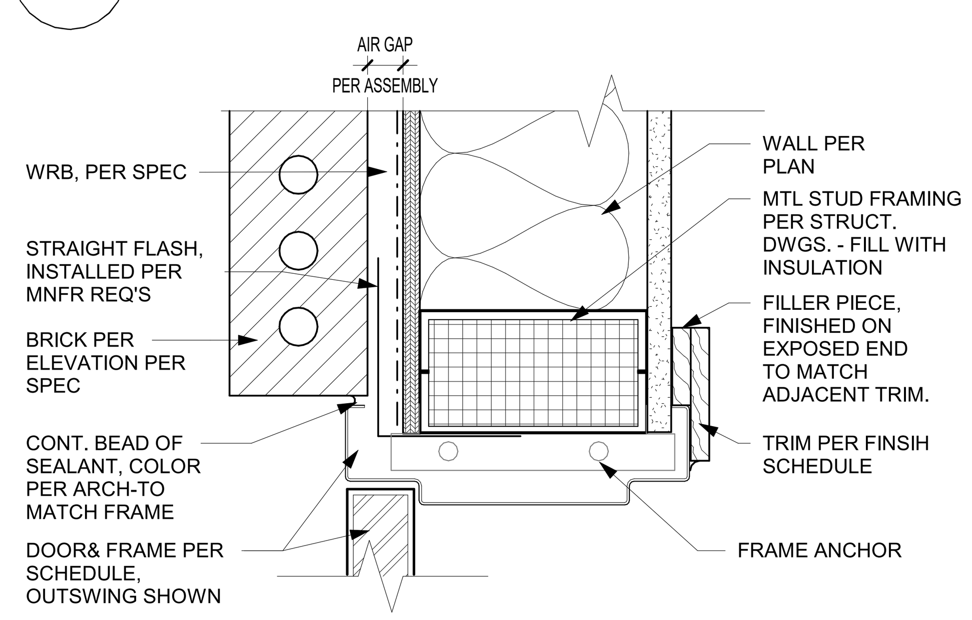


A3 INTERIOR DOOR HEAD - WOOD
3" = 1'-0"

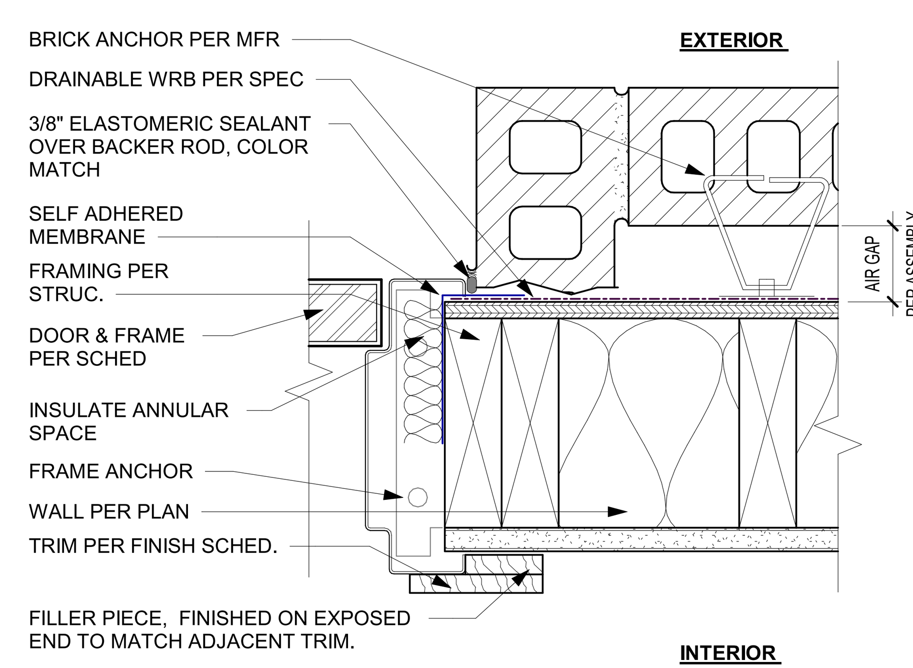




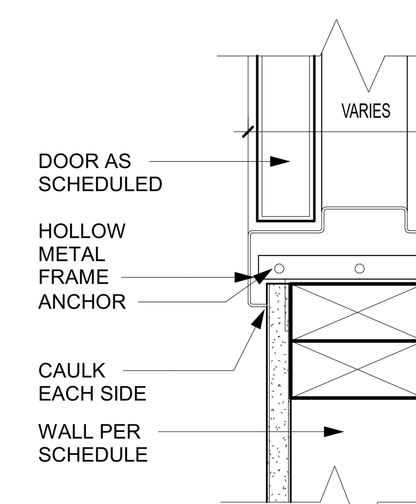
E2 DOOR/EXTERIOR - CMU/BRICK - WELDED FRAME @ HEAD
3" = 1'-0"



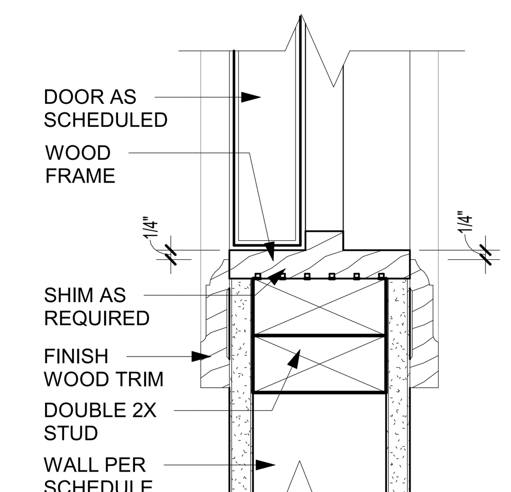
D2 EXTERIOR MTL DOOR JAMB - BRICK
3" = 1'-0"



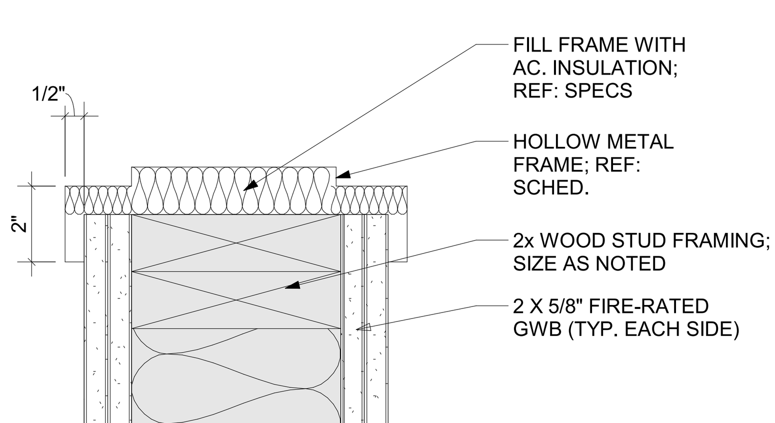
C2 EXTERIOR DOOR JAMB - BRICK
3" = 1'-0"



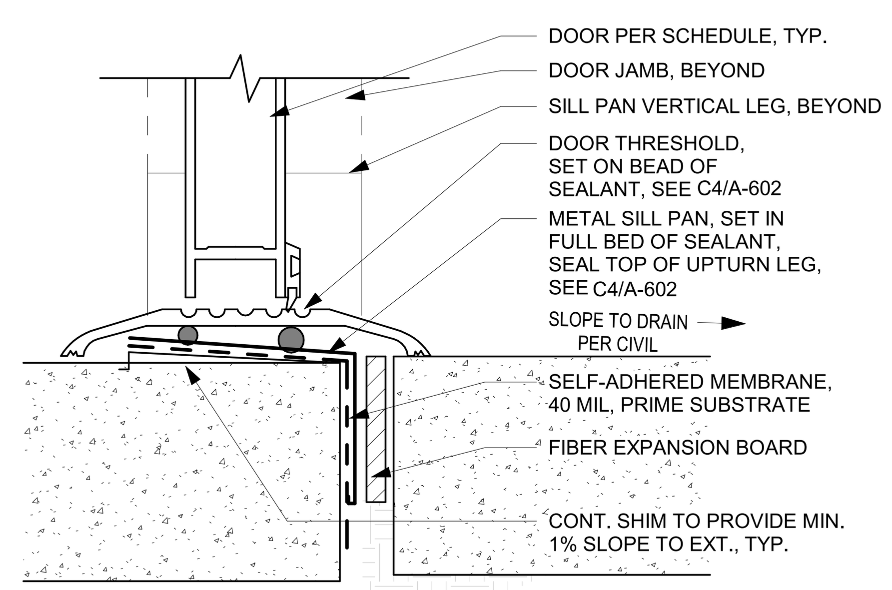
B2 INTERIOR DOOR JAMB - METAL
3" = 1'-0"



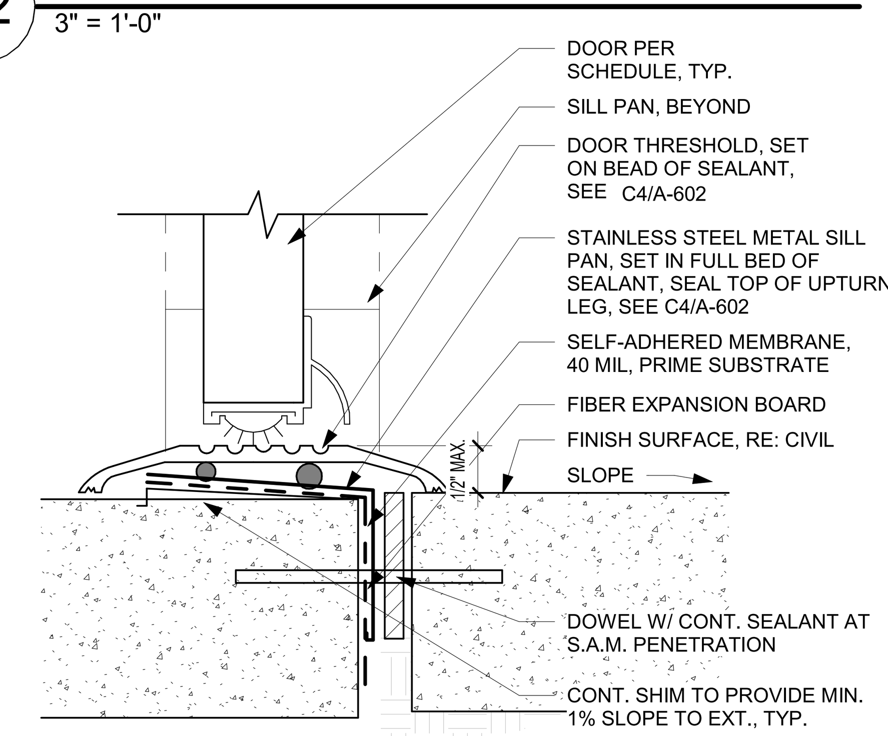
A2 INTERIOR DOOR JAMB - WOOD
3" = 1'-0"



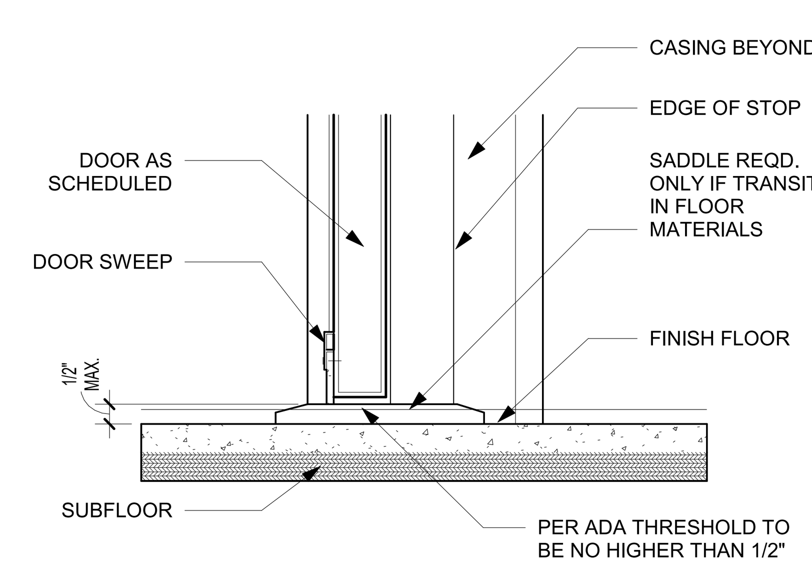
E1 GUESTROOM ENTRY & CONNECTOR DOOR
3" = 1'-0"



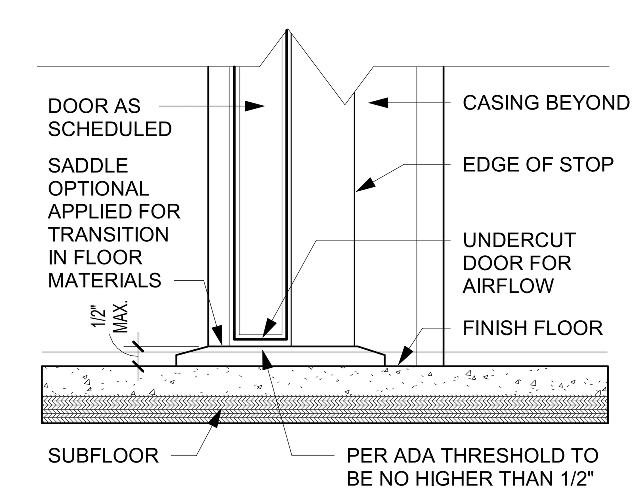
D1 EXTERIOR STOREFRONT THRESHOLD
1" = 1'-0"



C1 EXTERIOR DOOR THRESHOLD
1" = 1'-0"



B1 INTERIOR RATED DOOR SILL
3" = 1'-0"



A1 INTERIOR DOOR SILL
3" = 1'-0"

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2 01/19/2024 Addendum #2

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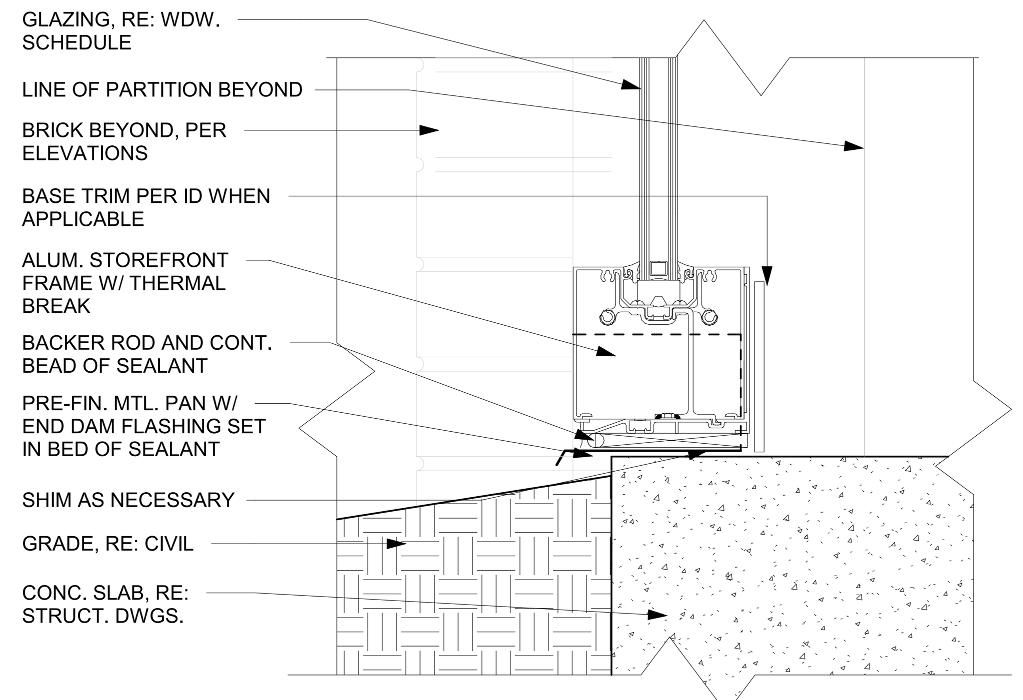
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

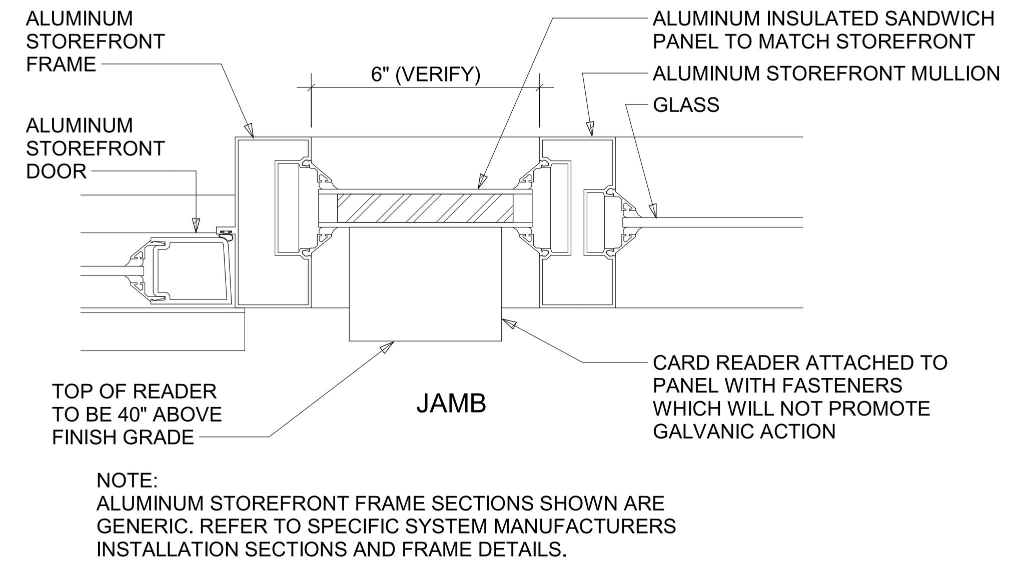
SHEET TITLE
DOOR DETAILS

PROJECT NUMBER: 23098

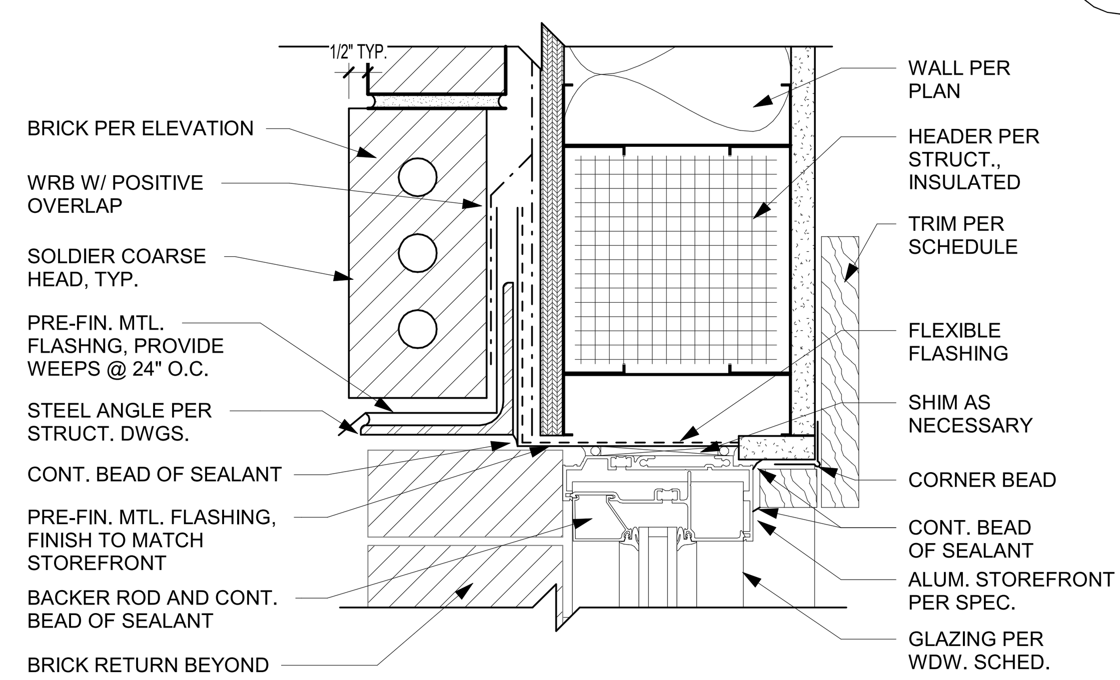
SHEET NUMBER:
A-601



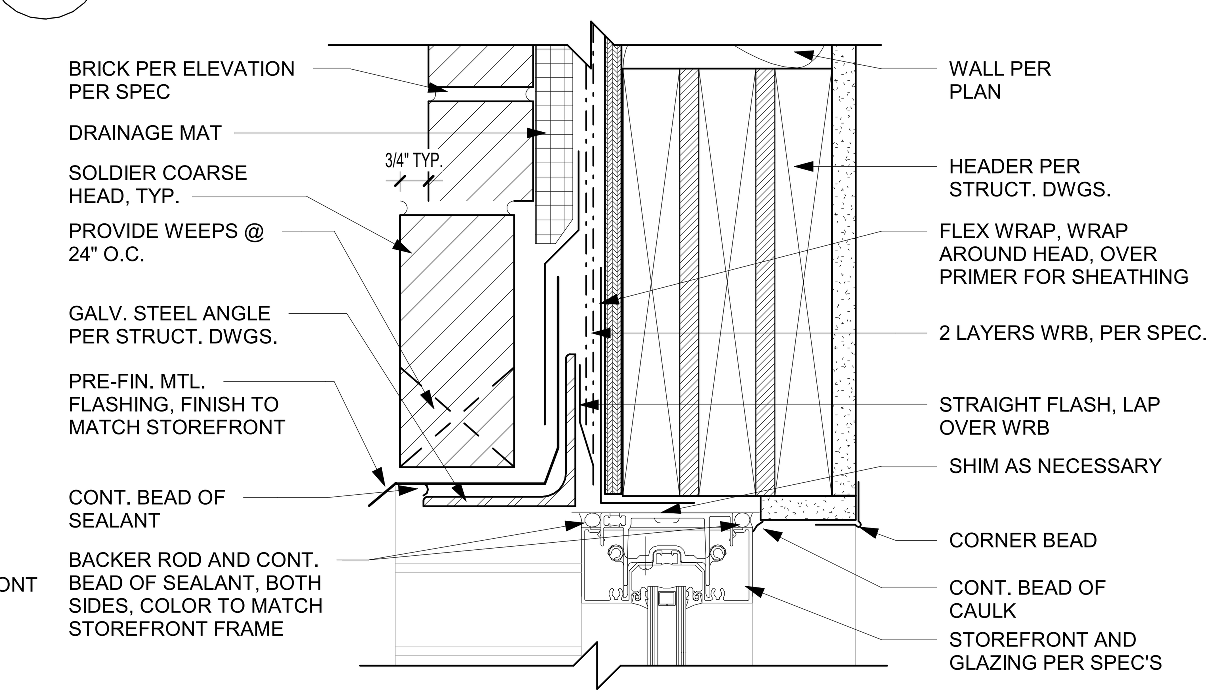
C4 STOREFRONT THRESHOLD - GRADE
3" = 1'-0"



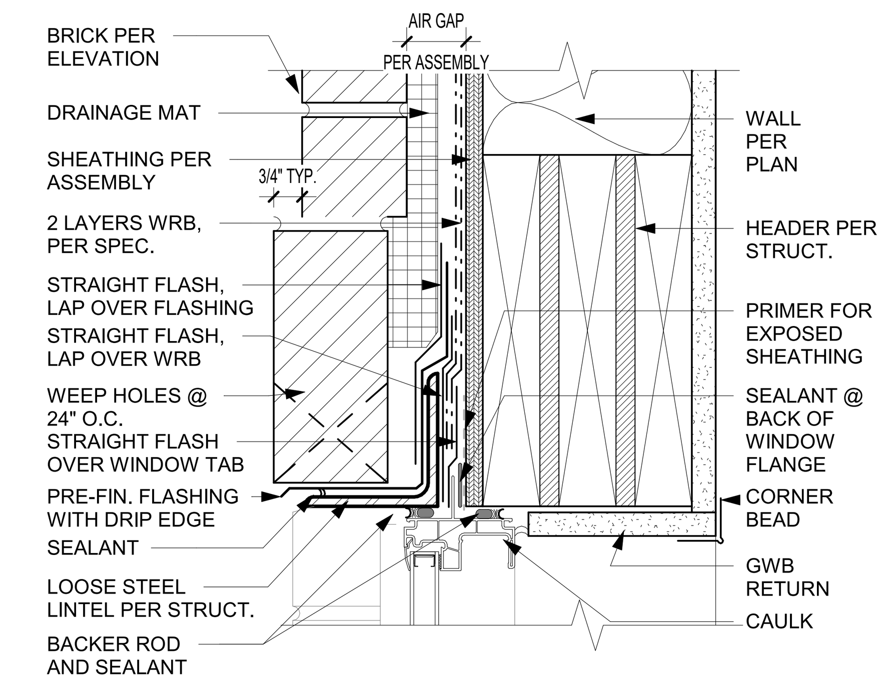
B4 CARD READER @ STOREFRONT DOORS
3" = 1'-0"



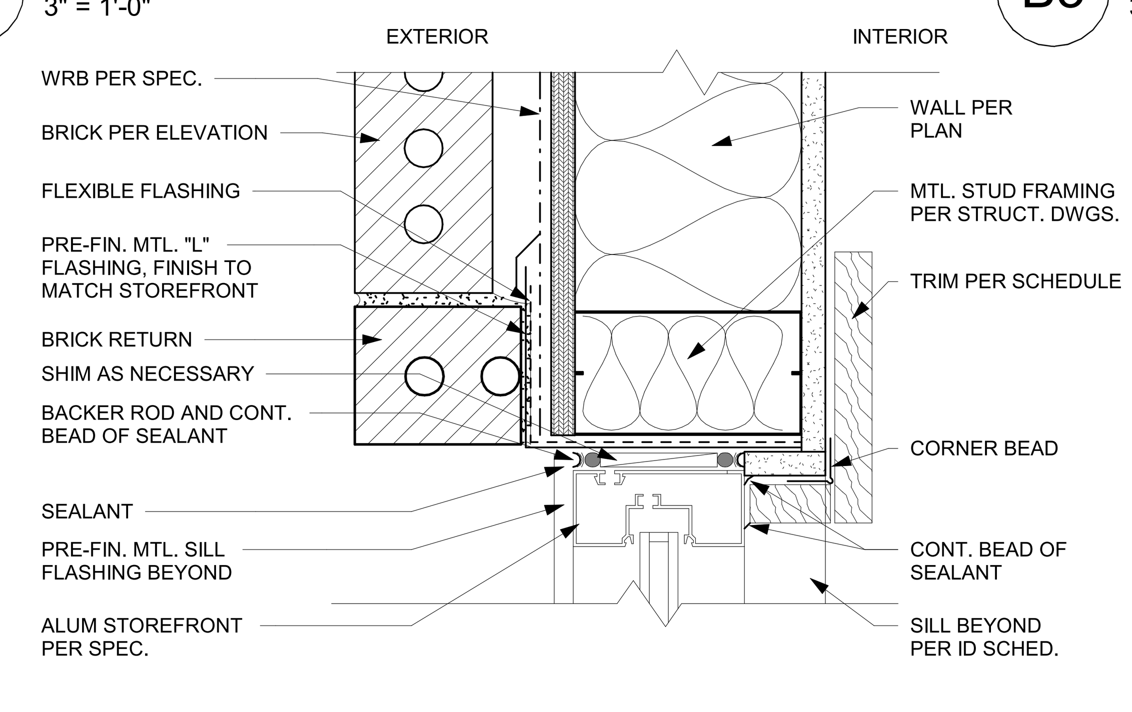
C3 STOREFRONT MTL HEAD - BRICK
3" = 1'-0"



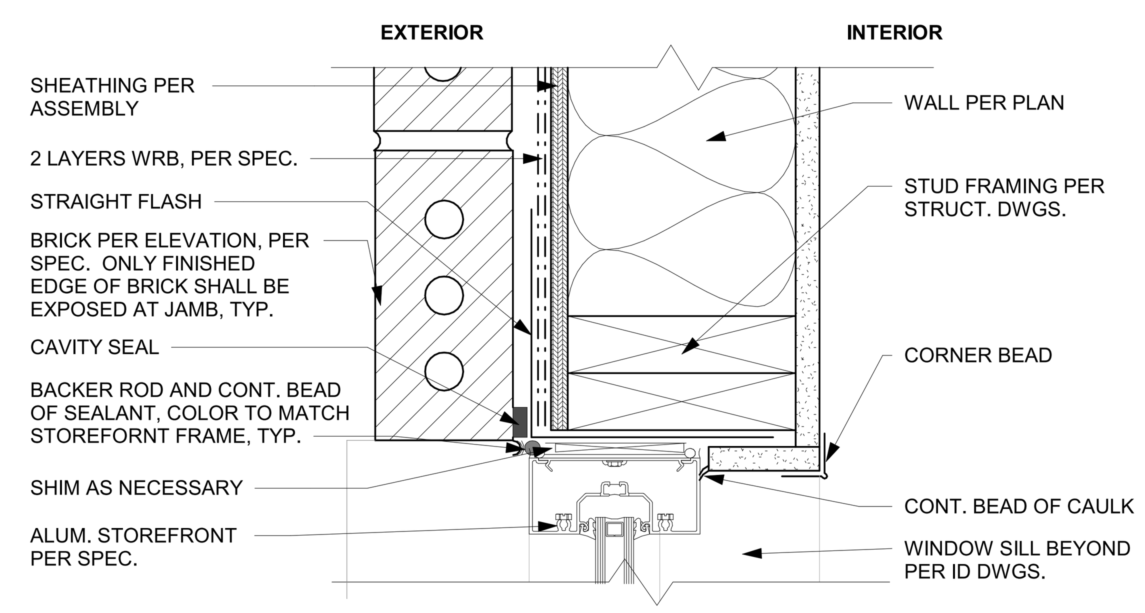
B3 STOREFRONT HEAD - BRICK
3" = 1'-0"



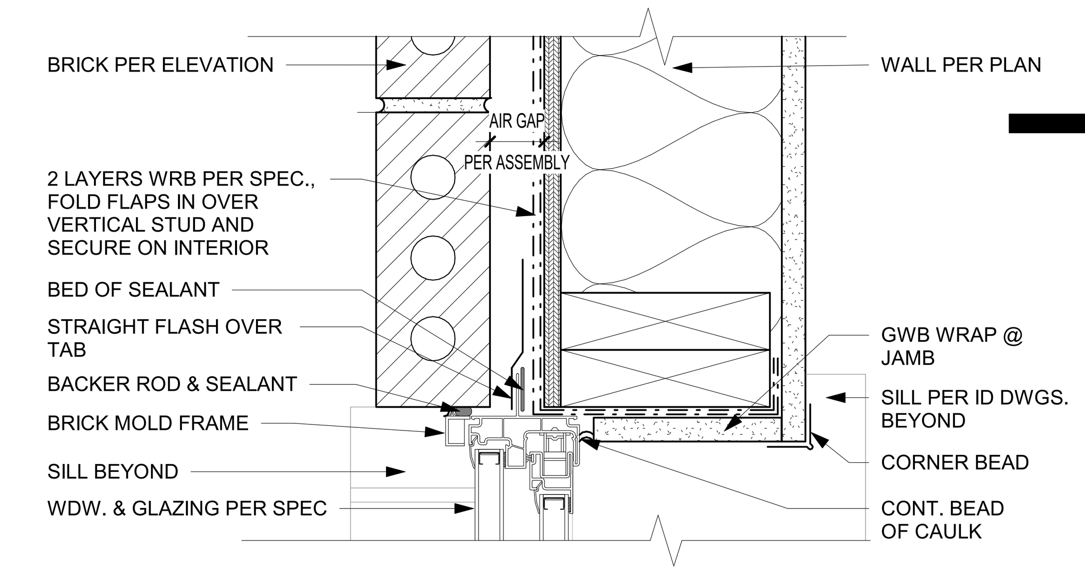
A3 WINDOW HEAD - BRICK
3" = 1'-0"



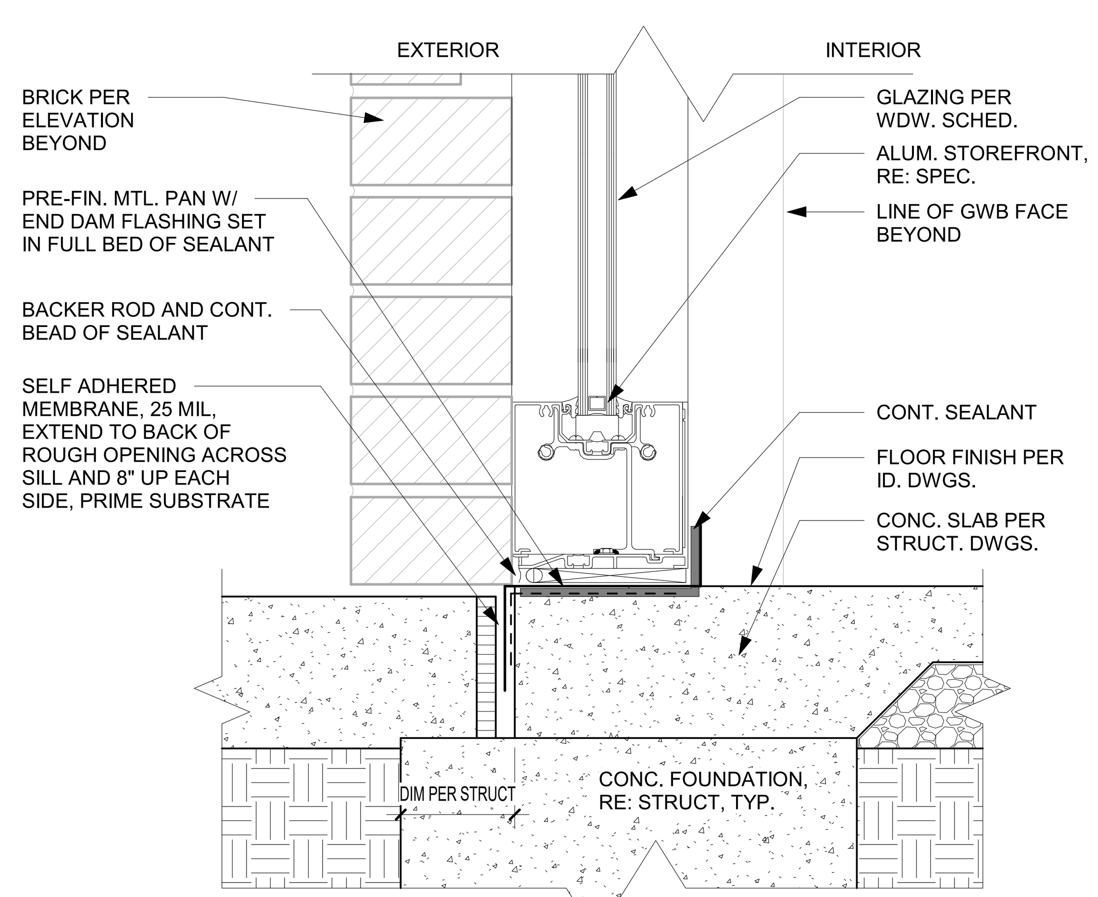
C2 STOREFRONT MTL JAMB - BRICK
3" = 1'-0"



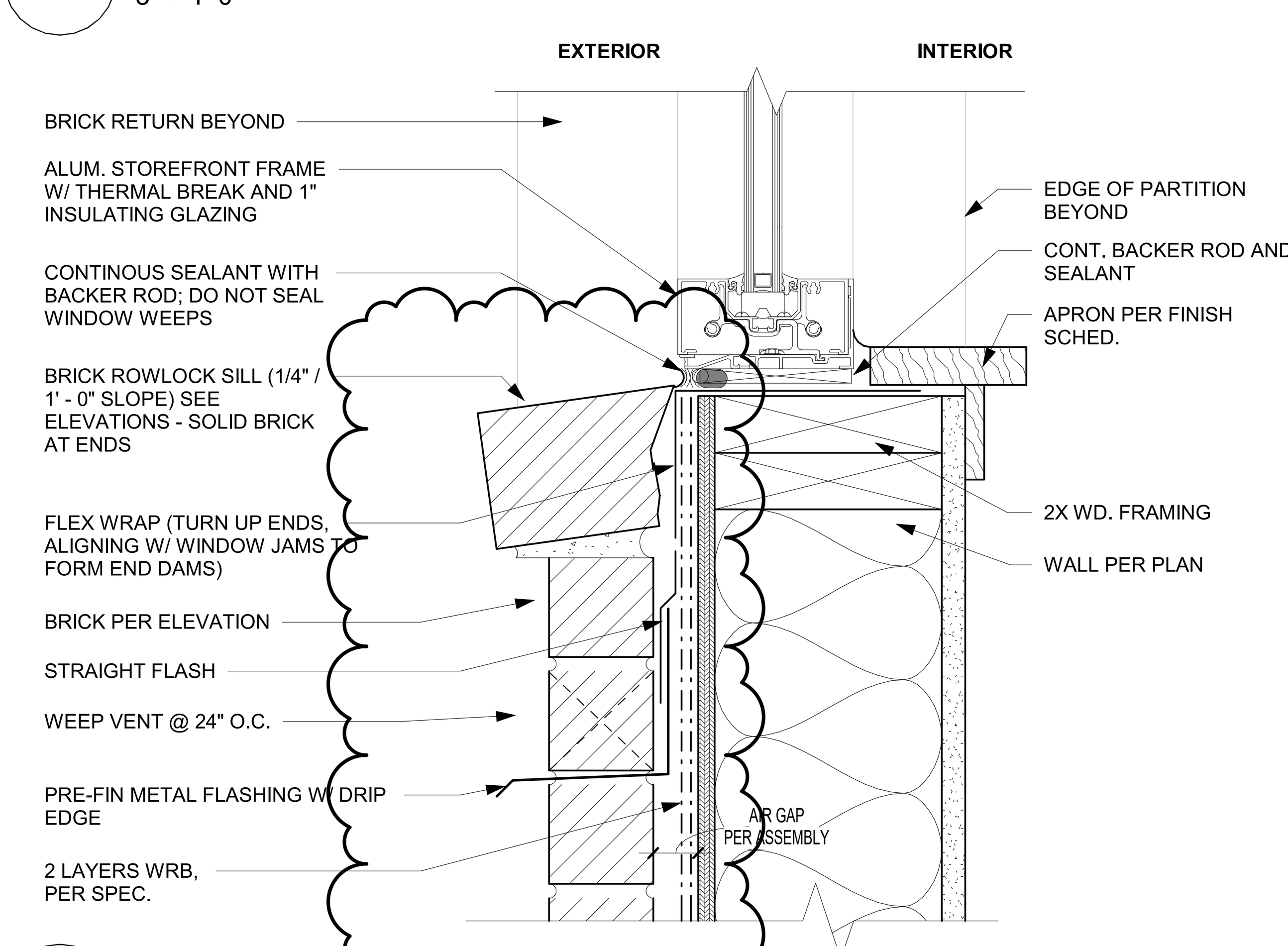
B2 STOREFRONT JAMB - BRICK
3" = 1'-0"



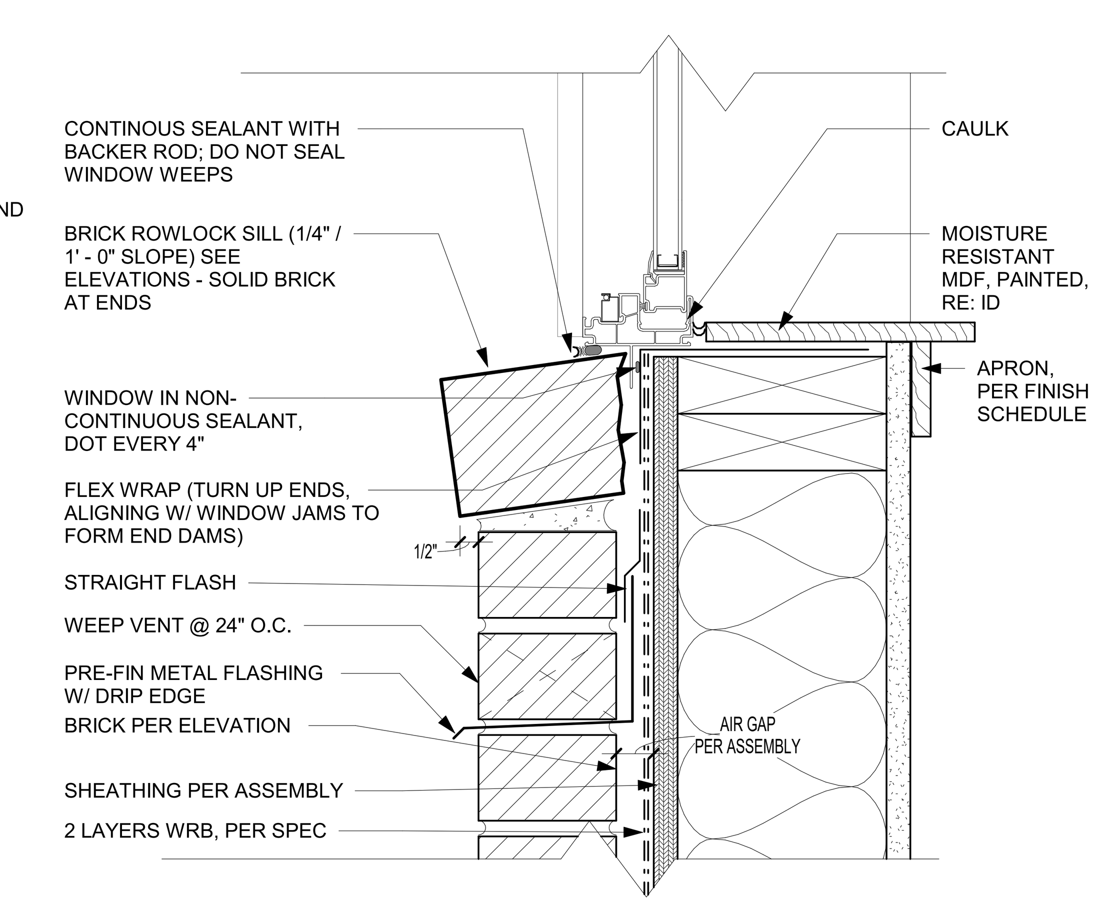
A2 WINDOW JAMB - BRICK
3" = 1'-0"



C1 STOREFRONT THRESHOLD - HARDSCAPE
3" = 1'-0"



B1 STOREFRONT SILL - BRICK
3" = 1'-0"



A1 WINDOW SILL - BRICK
3" = 1'-0"

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
7365
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
WINDOW DETAILS

PROJECT NUMBER: 23098

SHEET NUMBER:

A-602

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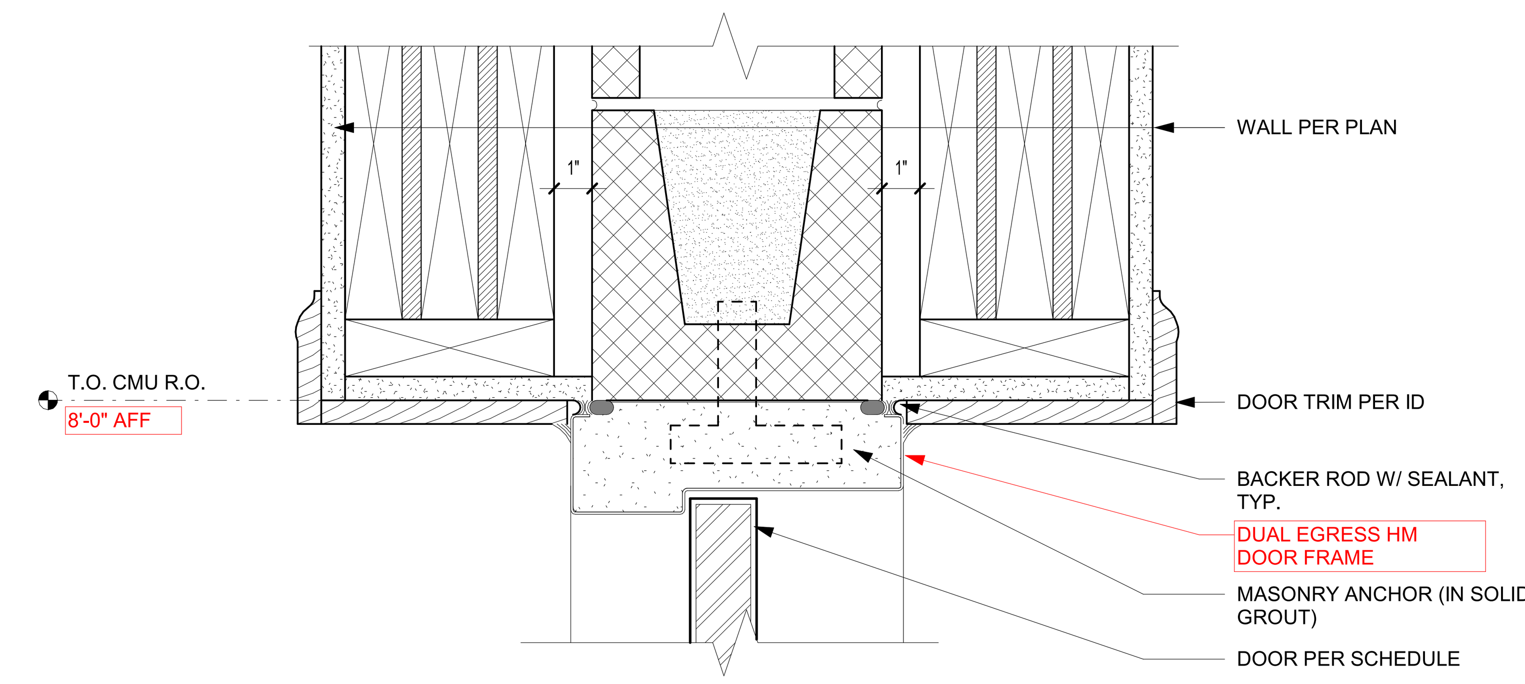
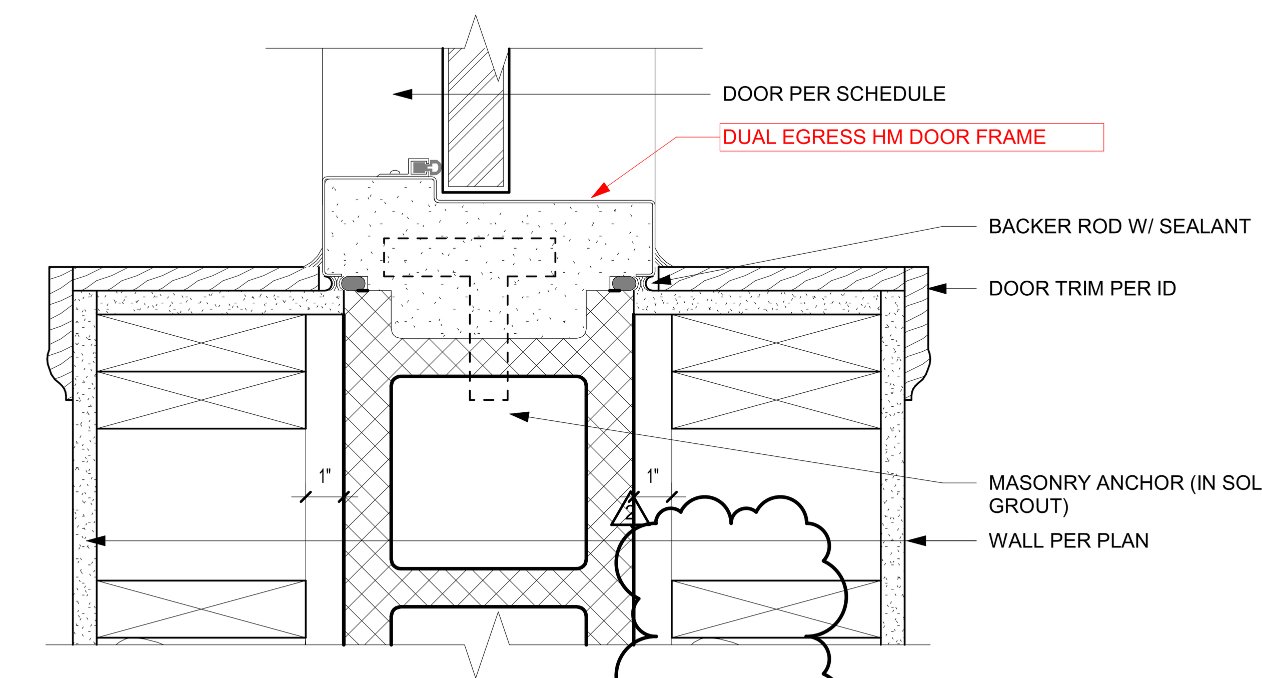
11/01/2023 - CITY SUBMITTAL

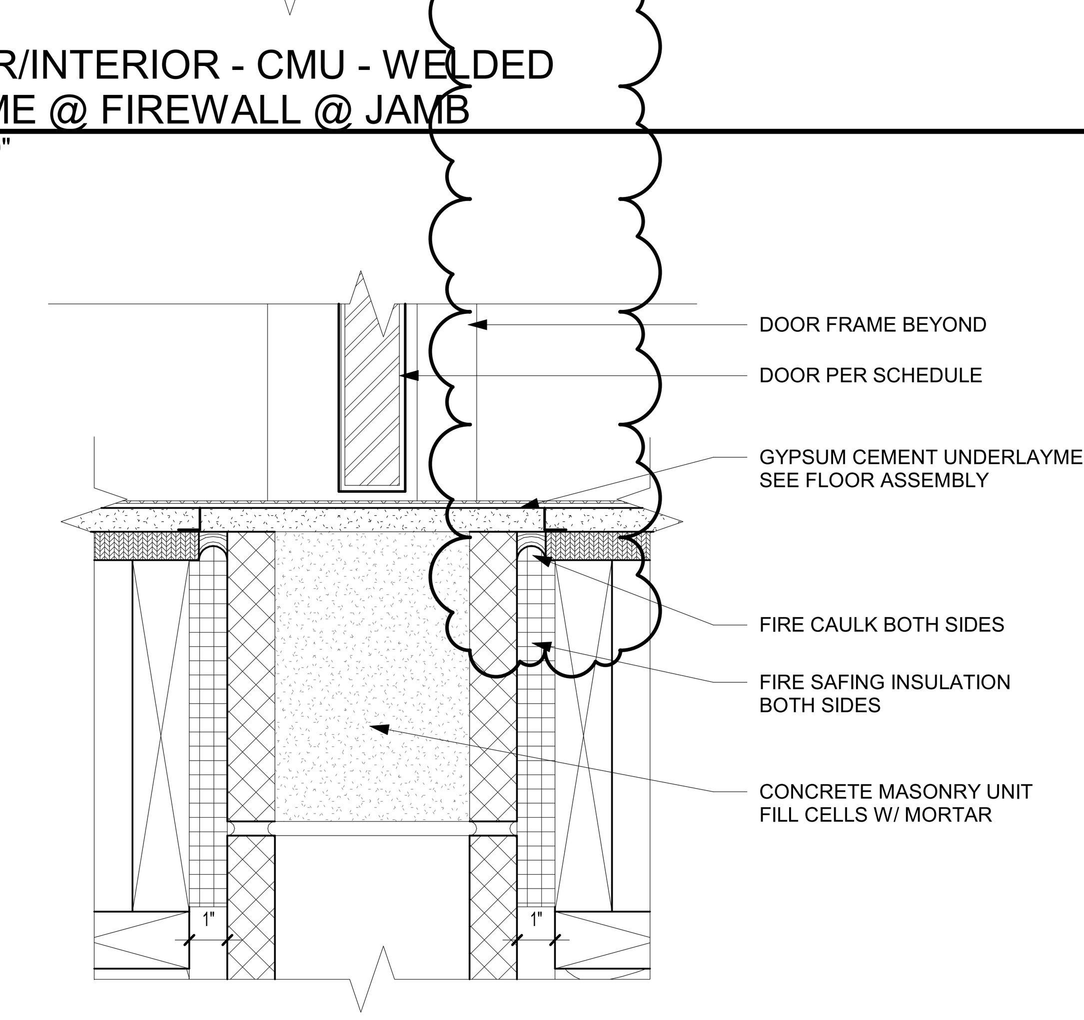
REVISIONS:
2 01/19/2024 Addendum #2



A3 DOOR/INTERIOR - CMU - WELDED FRAME @ FIREWALL @ HEAD
3" = 1'-0"



A2 DOOR/INTERIOR - CMU - WELDED FRAME @ FIREWALL @ JAMB
3" = 1'-0"



A1 DOOR/INTERIOR - CMU - WELDED FRAME @ FIREWALL @ THRESHOLD
3" = 1'-0"

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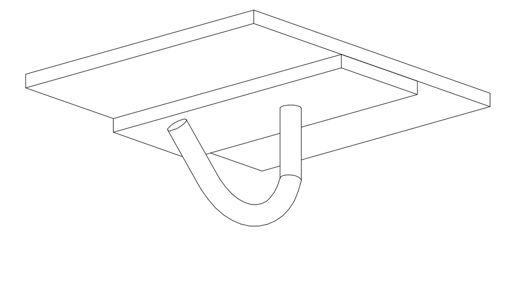
STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

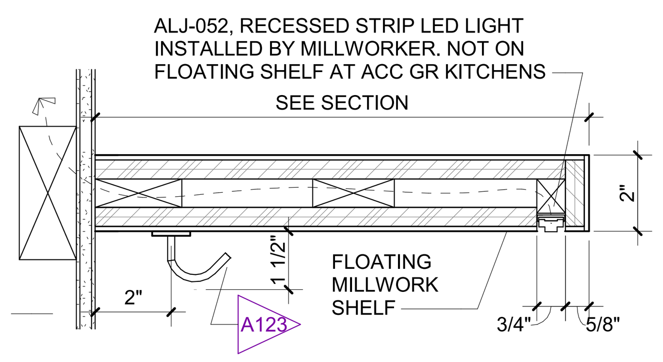
SHEET TITLE
DOOR DETAILS

PROJECT NUMBER: 23098

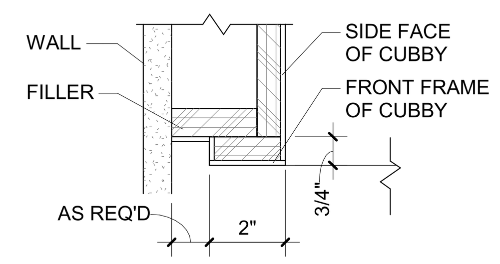
SHEET NUMBER:
A-603



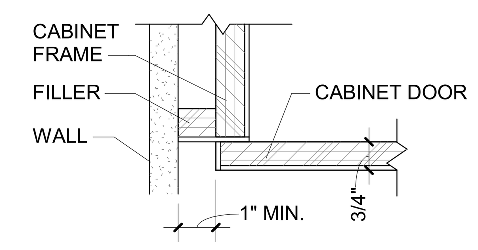
8 CUP HOOK
3" = 1'-0"



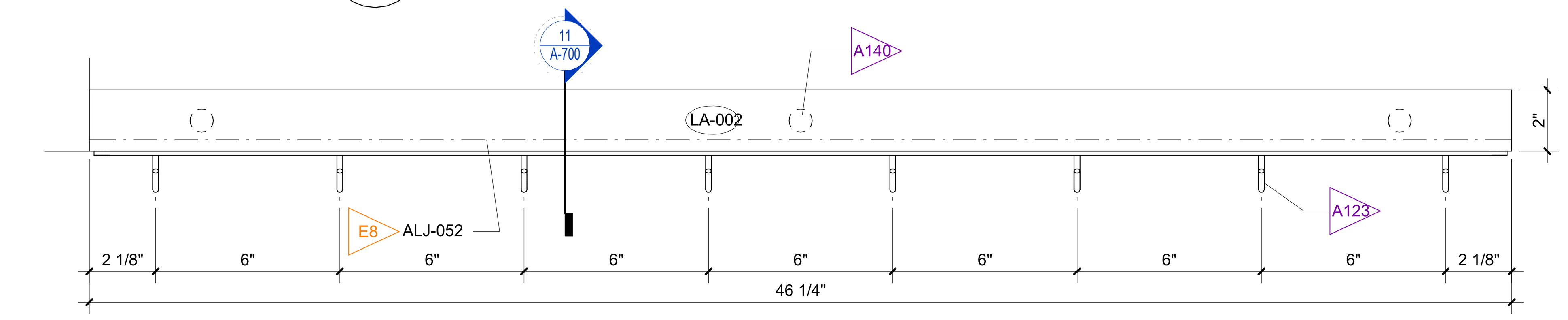
11 HOOK AND LIGHT DETAIL
3" = 1'-0"



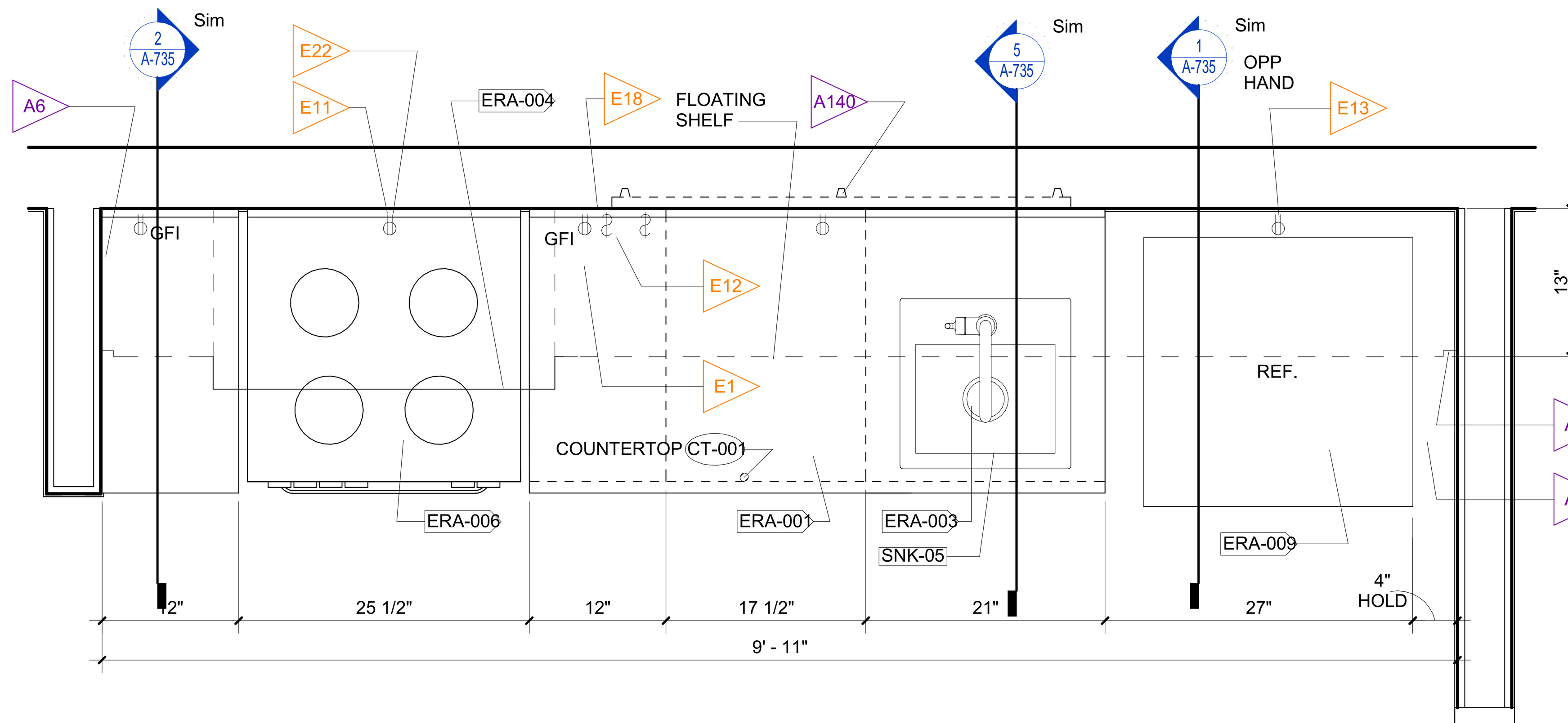
10 FILLER AT OPEN SHELF
3" = 1'-0"



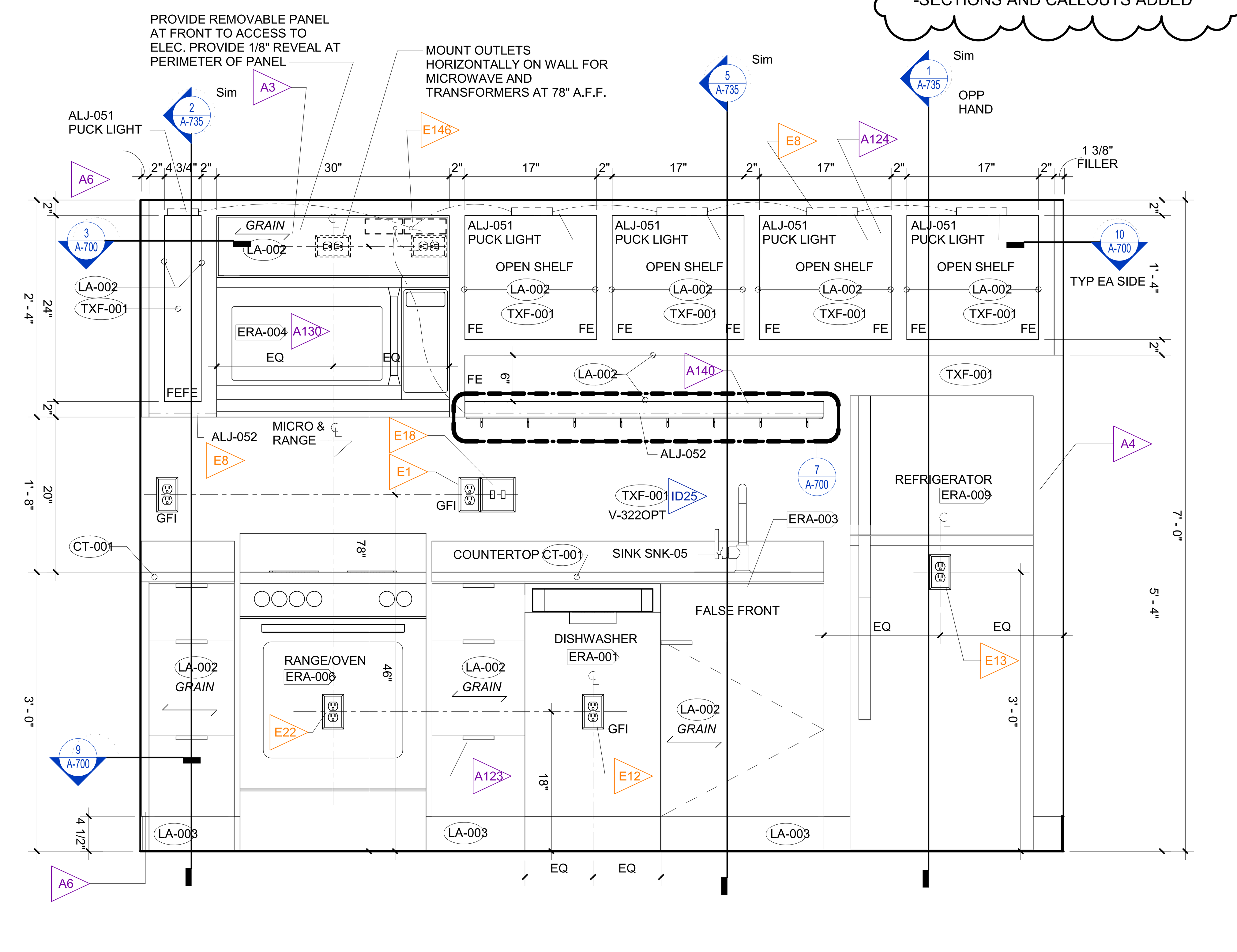
9 FILLER AT CABINET
3" = 1'-0"



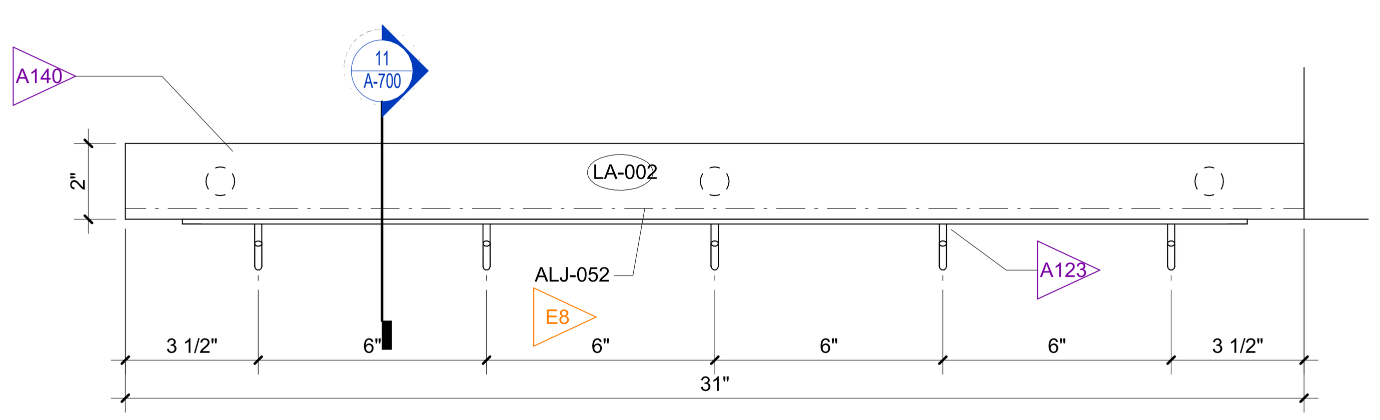
7 ONE BED QUEEN KITCHEN SHELF
3" = 1'-0"



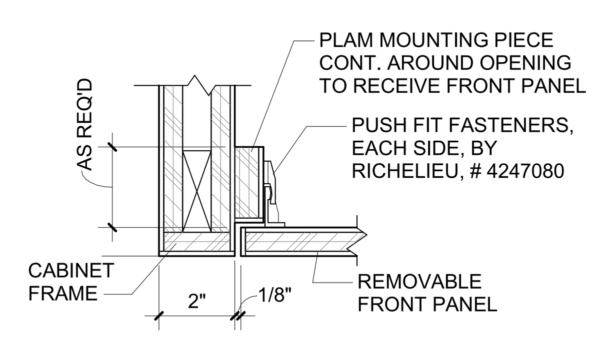
6 ONE BED QUEEN KITCHEN FP
1" = 1'-0"



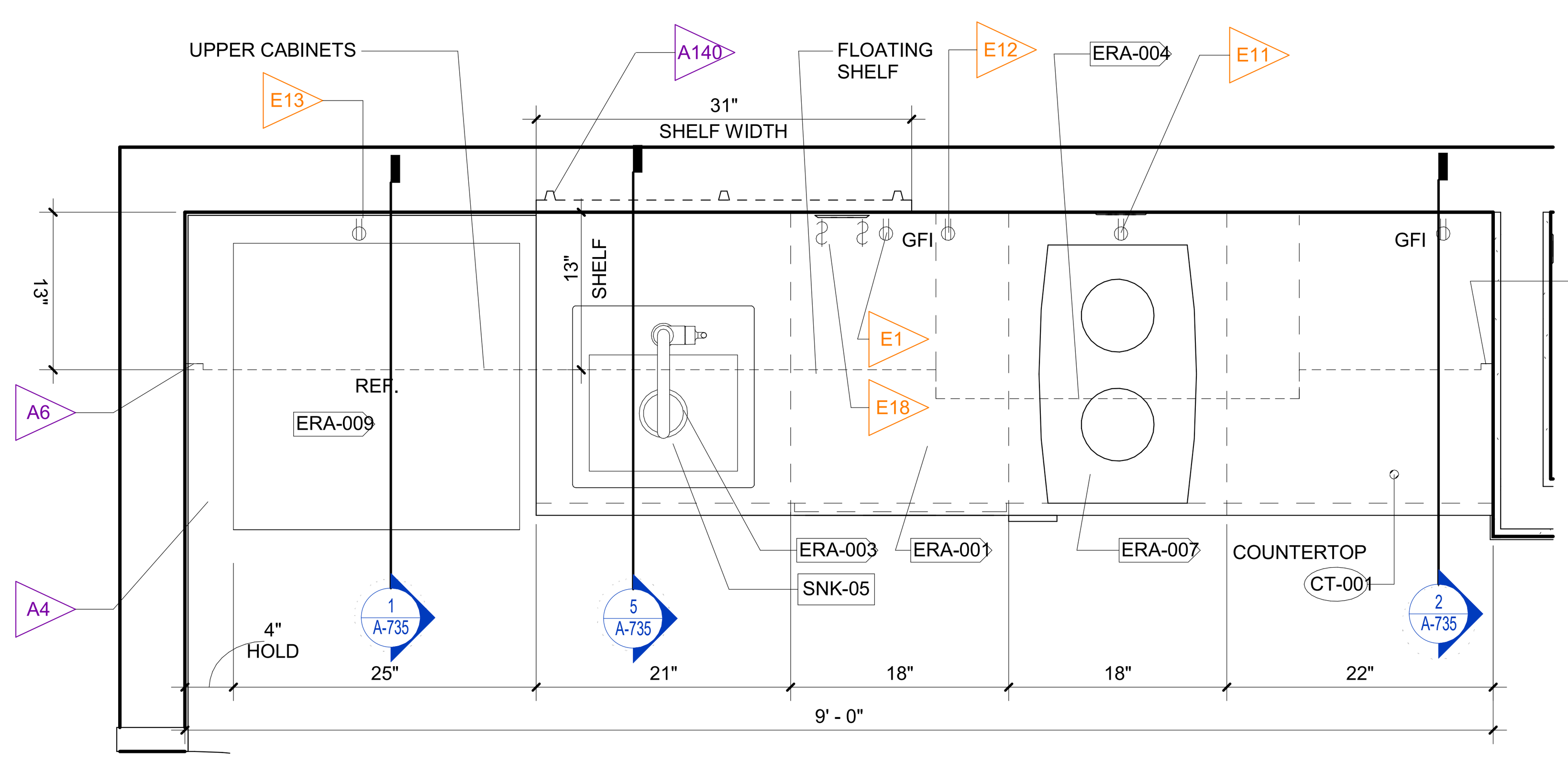
5 ONE BED QUEEN KITCHEN ELEV
1" = 1'-0"



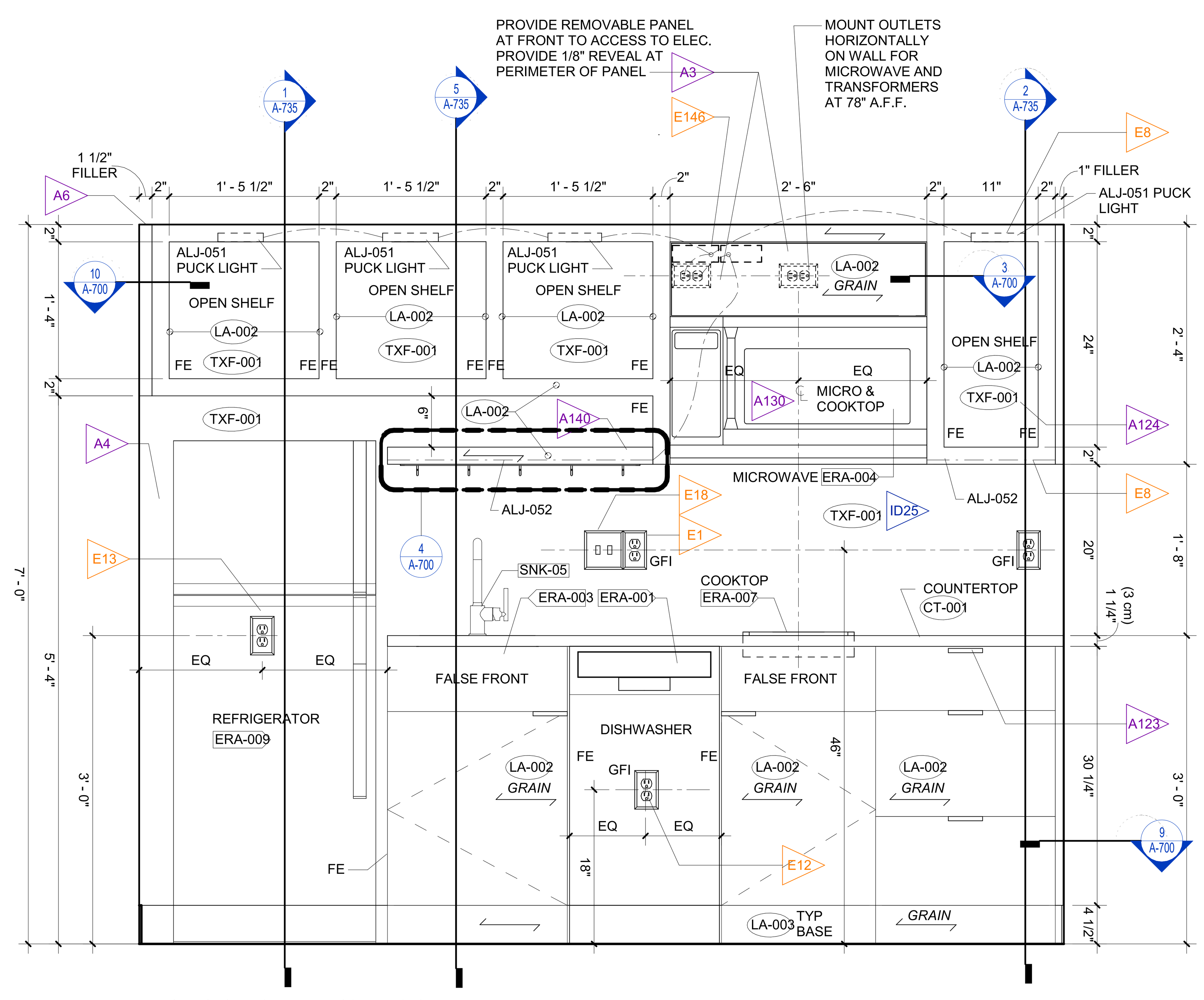
4 STUDIO KING-QQ KITCHEN SHELF
3" = 1'-0"



3 STUDIO KING-QQ KITCHEN DETAILS
3" = 1'-0"



2 STUDIO KING-QQ KITCHEN FP
1" = 1'-0"



NOTE: (FE) FINISH ALL EXPOSED FACES

1 STUDIO KING-QQ KITCHEN ELEV
1" = 1'-0"

REFERENCE G-003 FOR GENERAL NOTES
-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2

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STATE OF MISSOURI
DAVID EUGENE HENDRIXSE
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

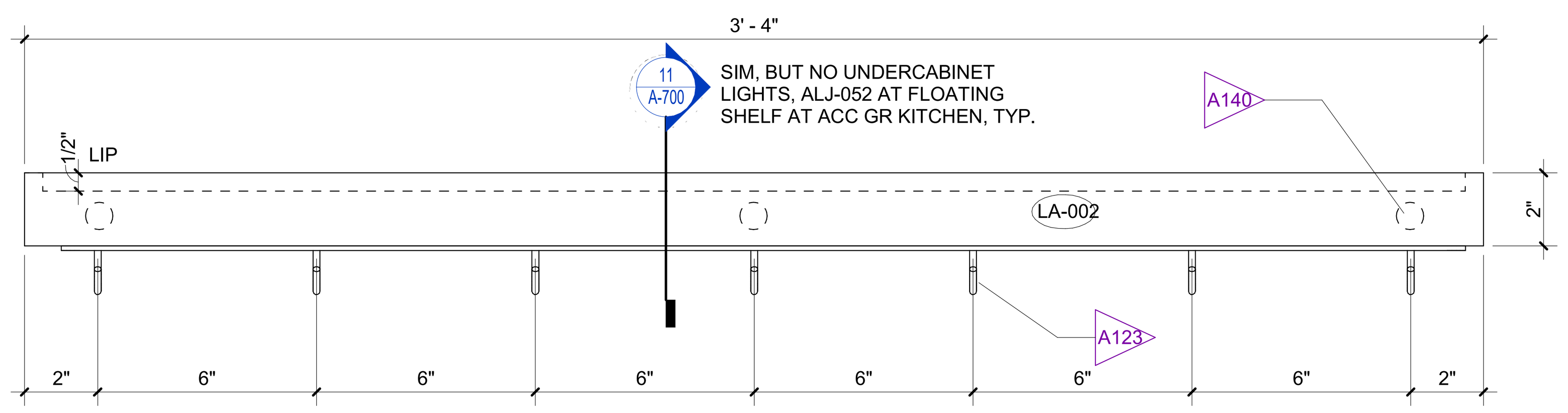
SHEET TITLE
GUESTROOM DETAILS

PROJECT NUMBER: 23098

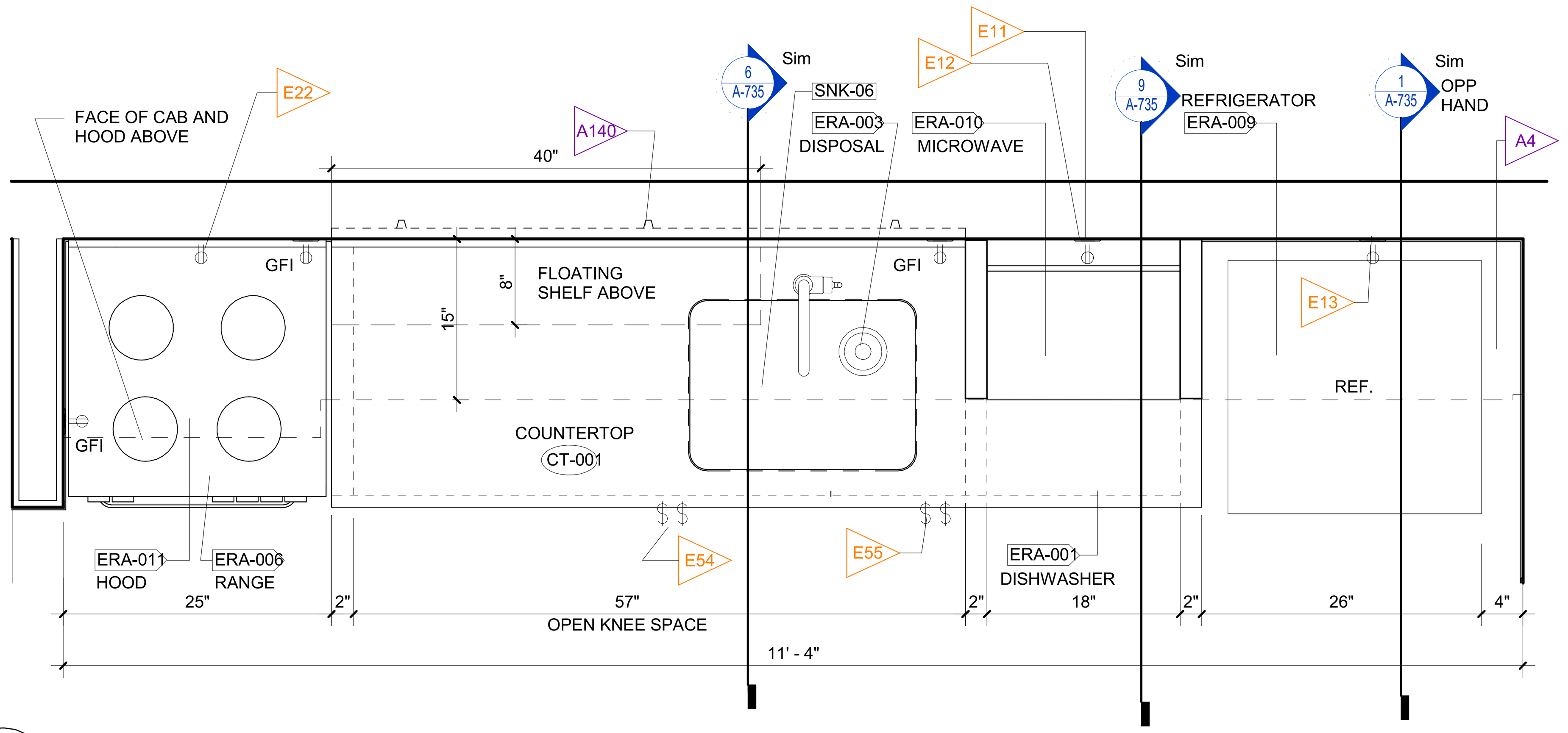
SHEET NUMBER:
A-700

REFERENCE G-003 FOR GENERAL NOTES

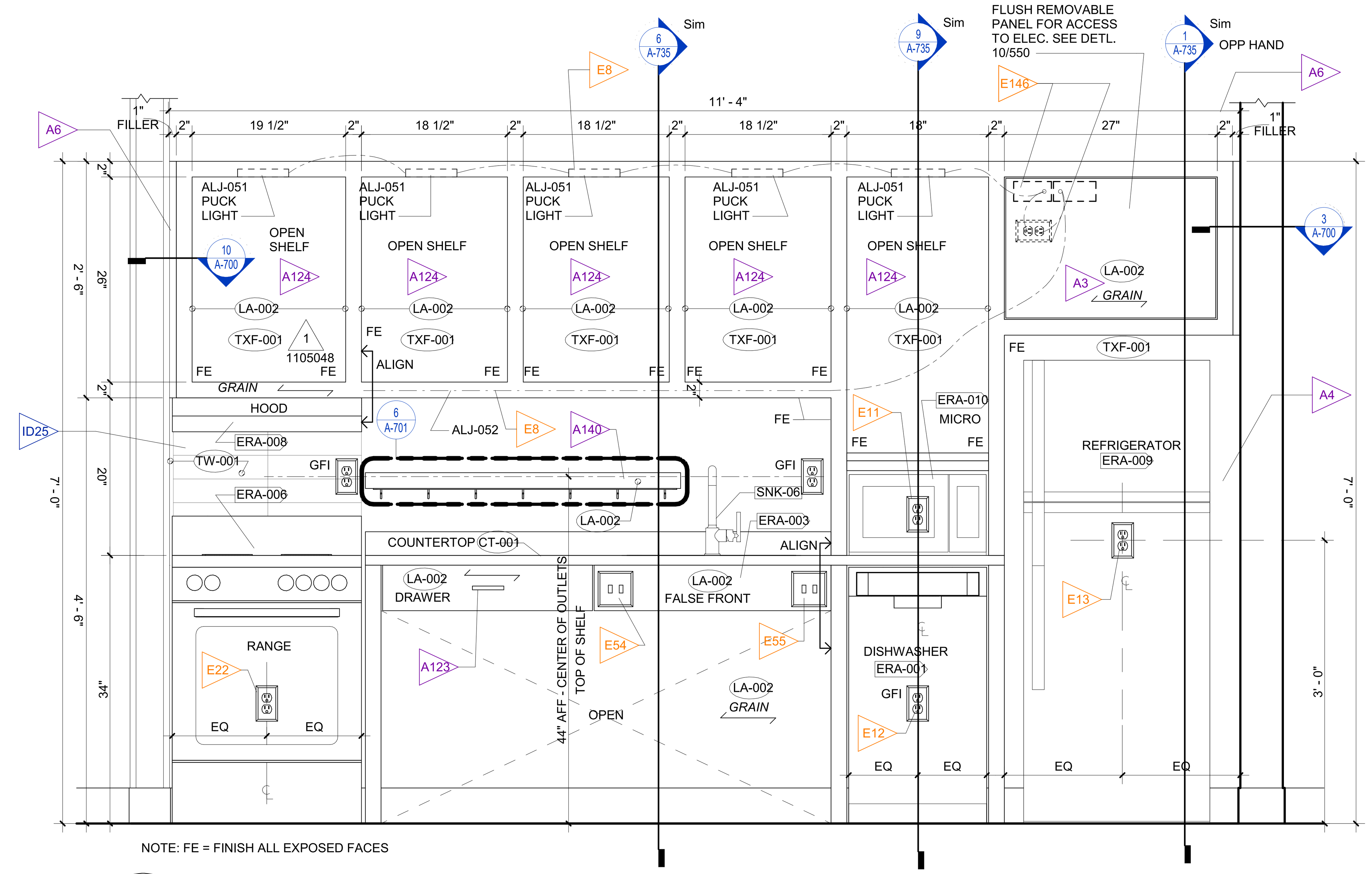
-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED



6 ACC ONE BEDROOM KITCHEN SHELF
3" = 1'-0"

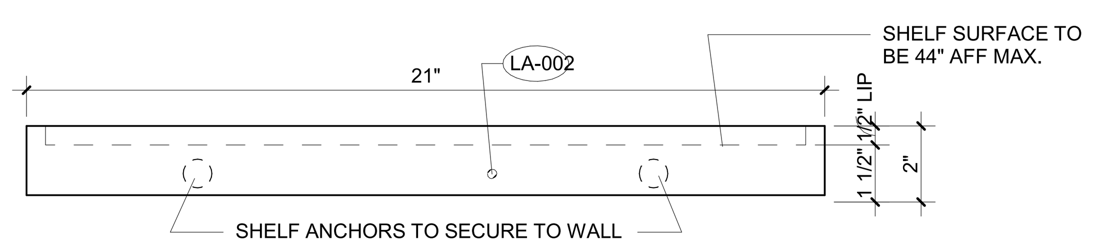


5 ACC ONE BEDROOM KITCHEN FP
1" = 1'-0"

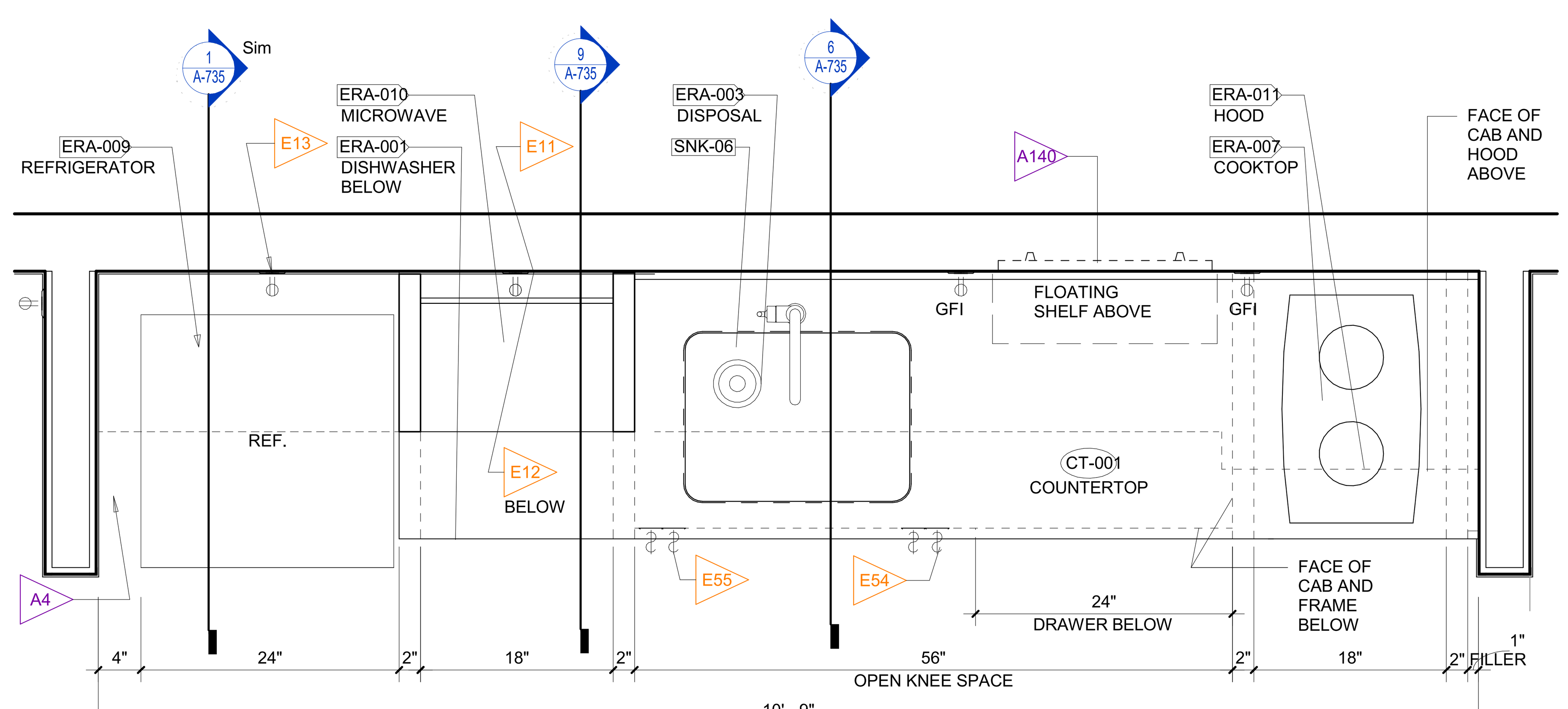


NOTE: FE = FINISH ALL EXPOSED FACES

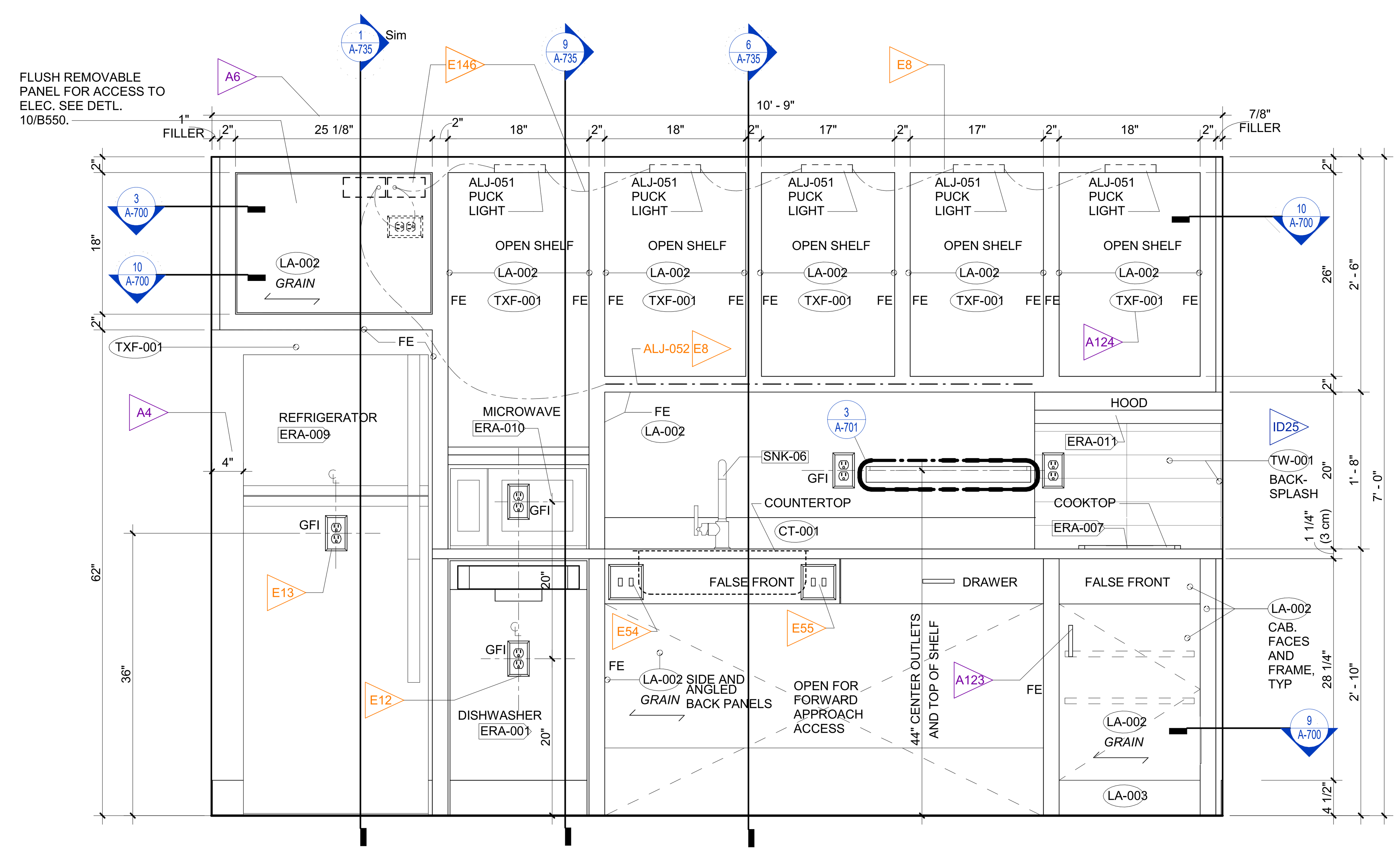
4 ACC ONE BEDROOM KITCHEN ELEV
1" = 1'-0"



3 ACC STUDIO KITCHEN SHELF
3" = 1'-0"



2 ACC STUDIO KITCHEN FP
1" = 1'-0"



NOTE: (FE) FINISH ALL EXPOSED FACES

1 ACC STUDIO KITCHEN ELEV
1" = 1'-0"

PRINTS ISSUED
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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7305
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
GUESTROOM DETAILS - ACC.

PROJECT NUMBER: 23098

SHEET NUMBER:

A-701

REFERENCE G-003 FOR GENERAL NOTES

-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED

PRINTS ISSUED
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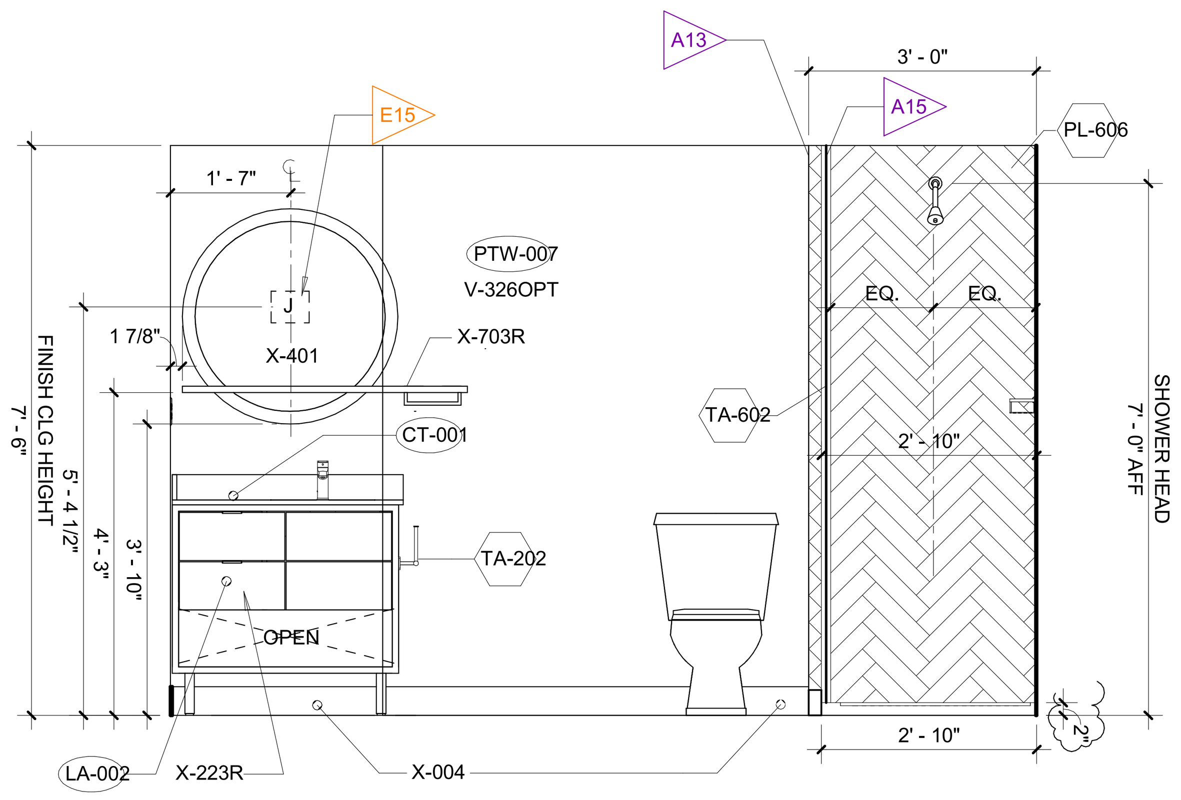
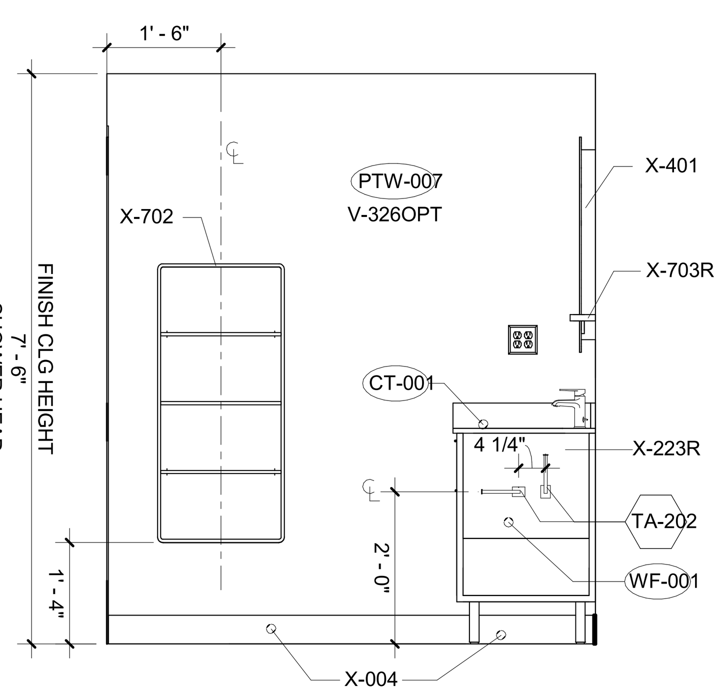
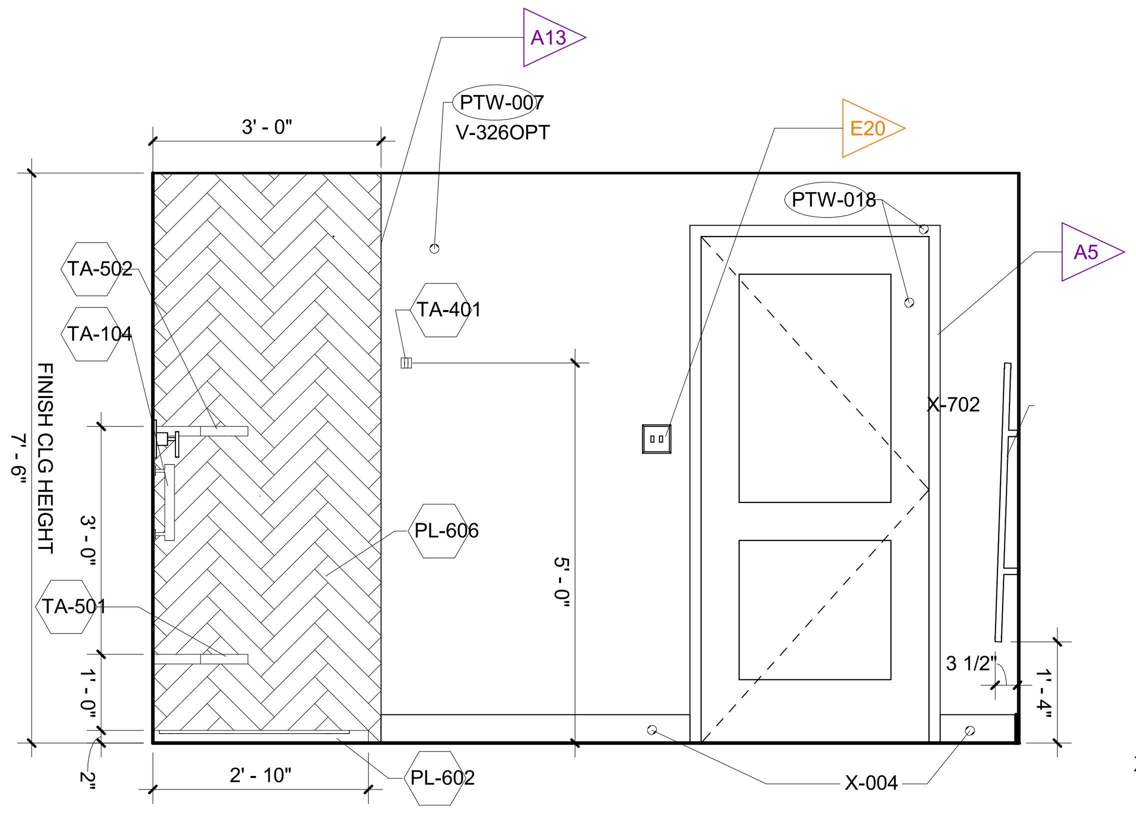


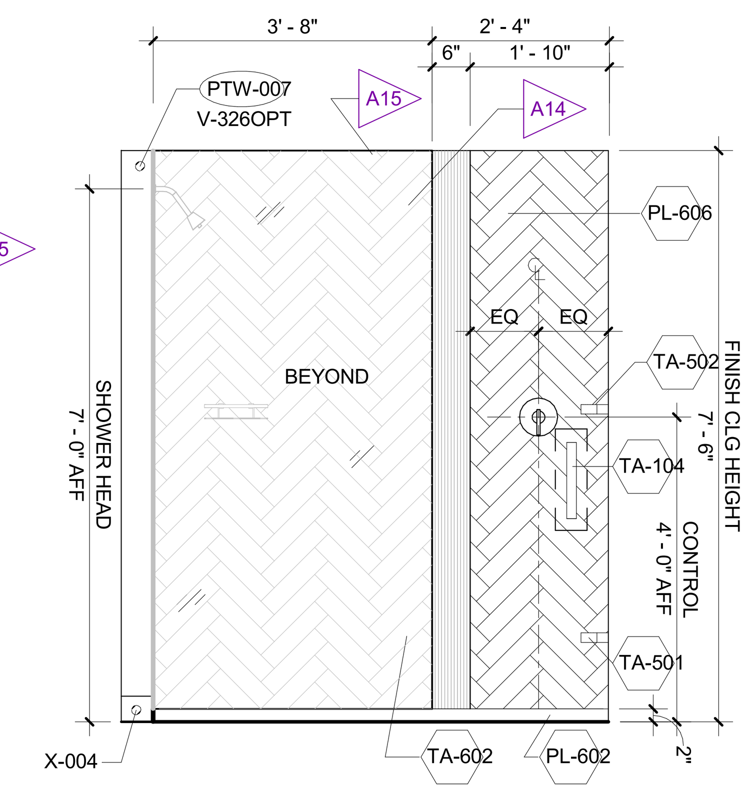
10 E-BATHROOMONE BED KING W/ BALC. ELEV 4
1/2" = 1'-0"



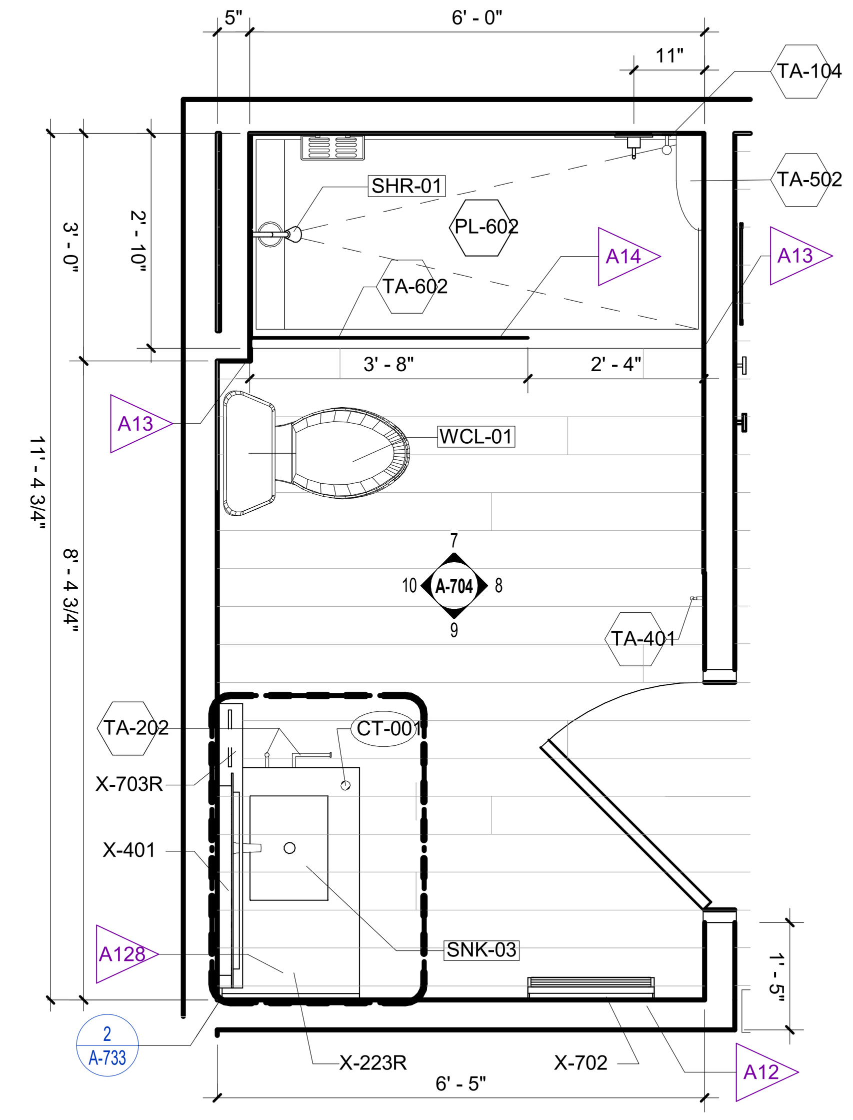
9 E-BATHROOMONE BED KING W/ BALC. ELEV 3
1/2" = 1'-0"



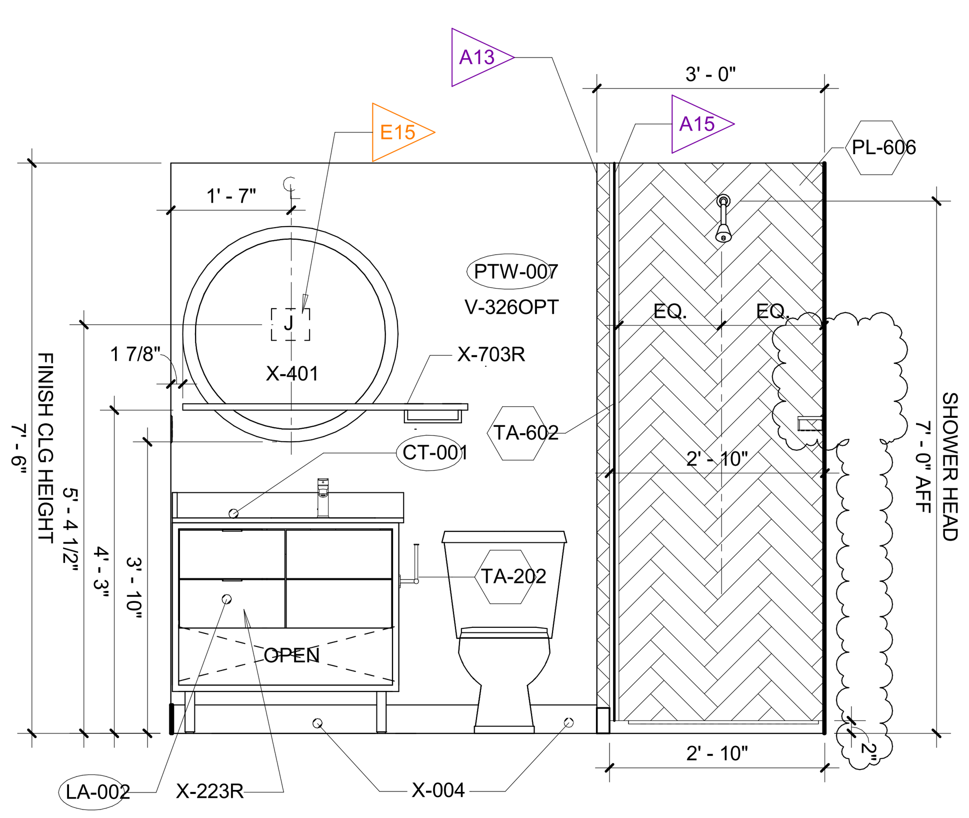
8 E-BATHROOMONE BED KING W/ BALC. ELEV 2
1/2" = 1'-0"



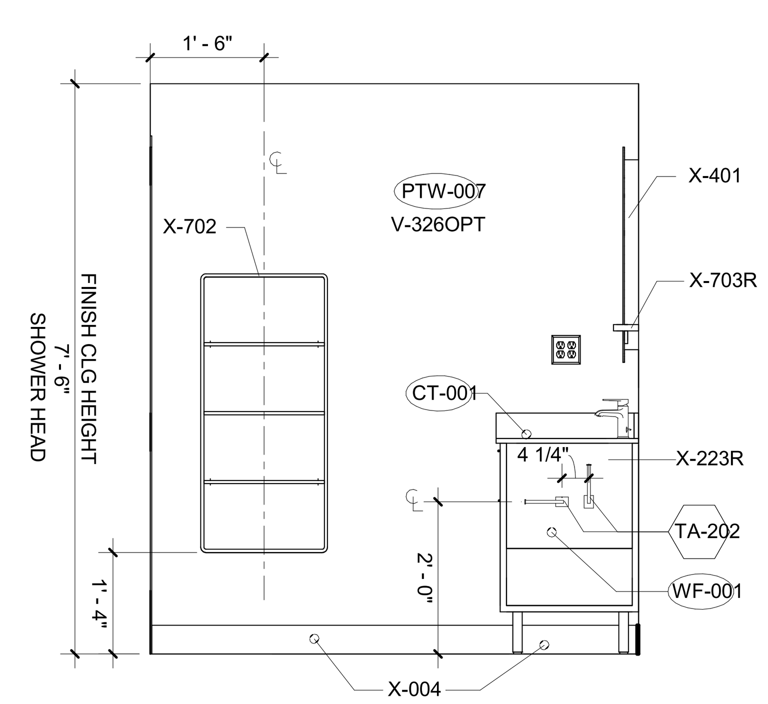
7 E-BATHROOMONE BED KING W/ BALC. ELEV 1
1/2" = 1'-0"



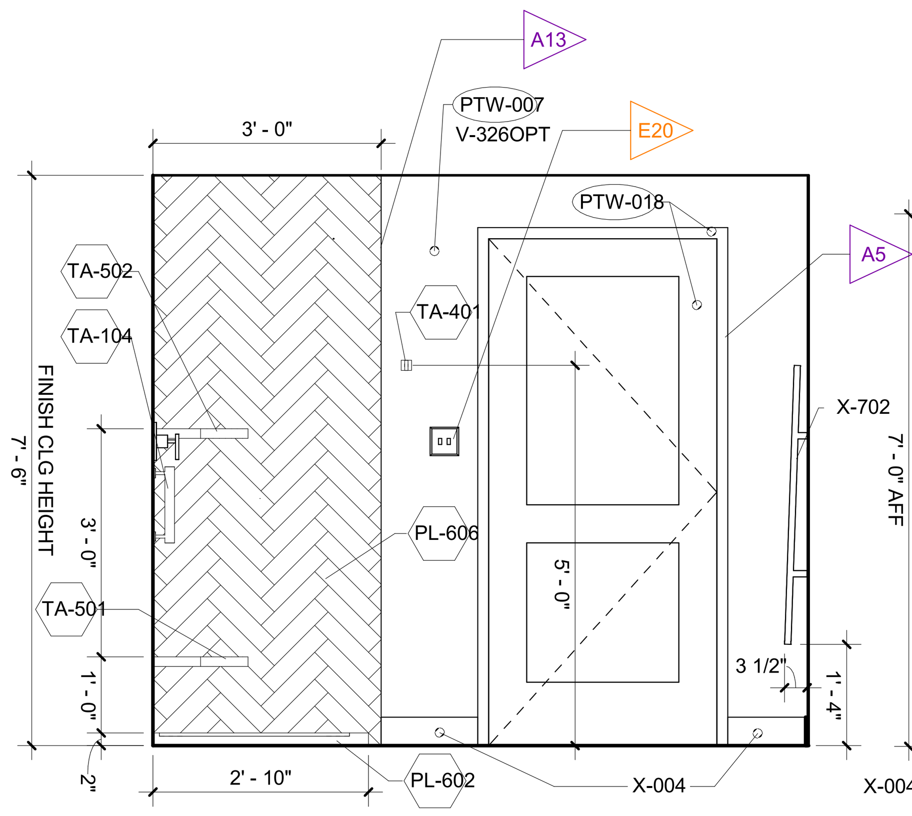
6 ONE BED KING W/BALC. - Enlarged bath
1/2" = 1'-0"



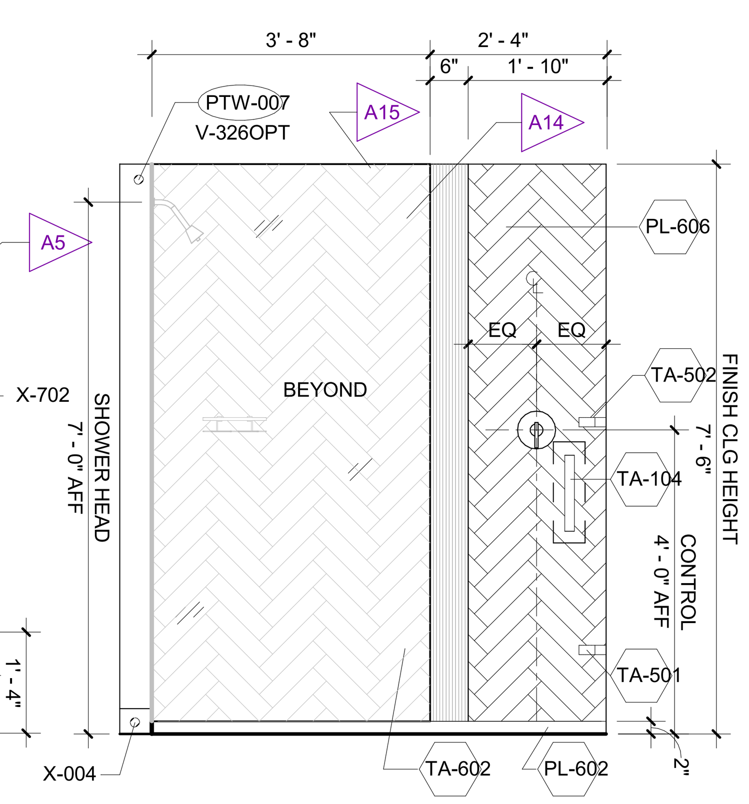
5 E-BATHROOM-STUDIO ELEV 4
1/2" = 1'-0"



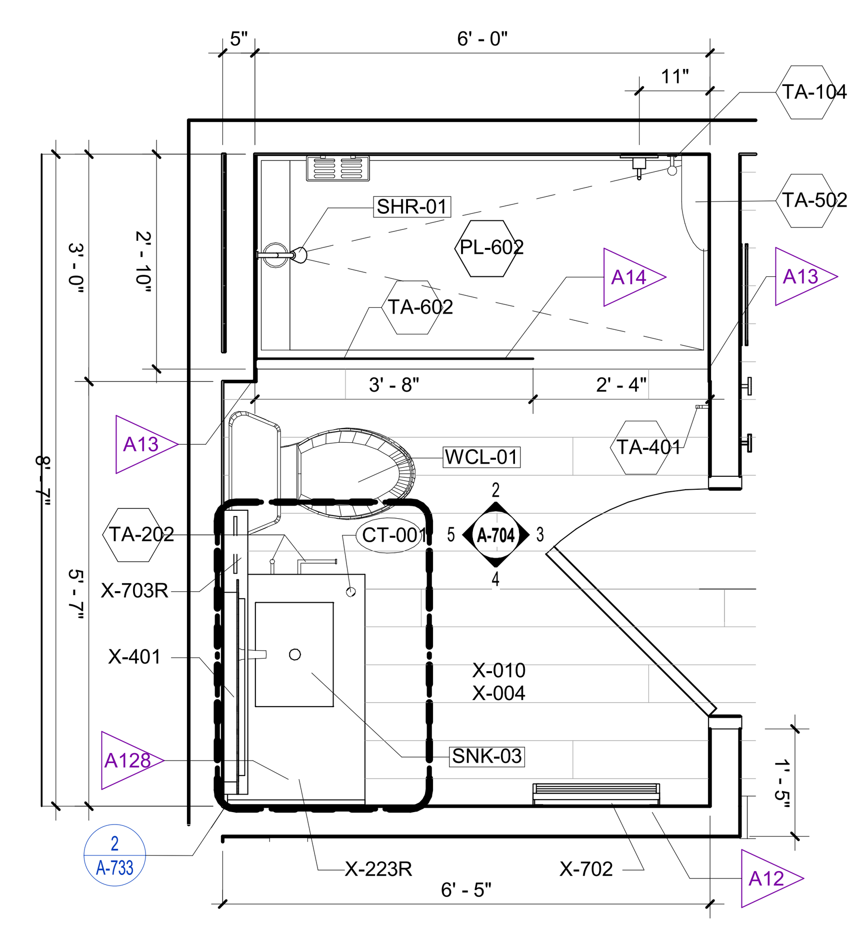
4 E-BATHROOM-STUDIO ELEV 3
1/2" = 1'-0"



3 E-BATHROOM-STUDIO ELEV 2
1/2" = 1'-0"



2 E-BATHROOM-STUDIO ELEV 1
1/2" = 1'-0"



1 STUDIO KING - FP Enlarged bath
1/2" = 1'-0"

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES

1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
GUESTROOM BATHROOMS
SHOWERS

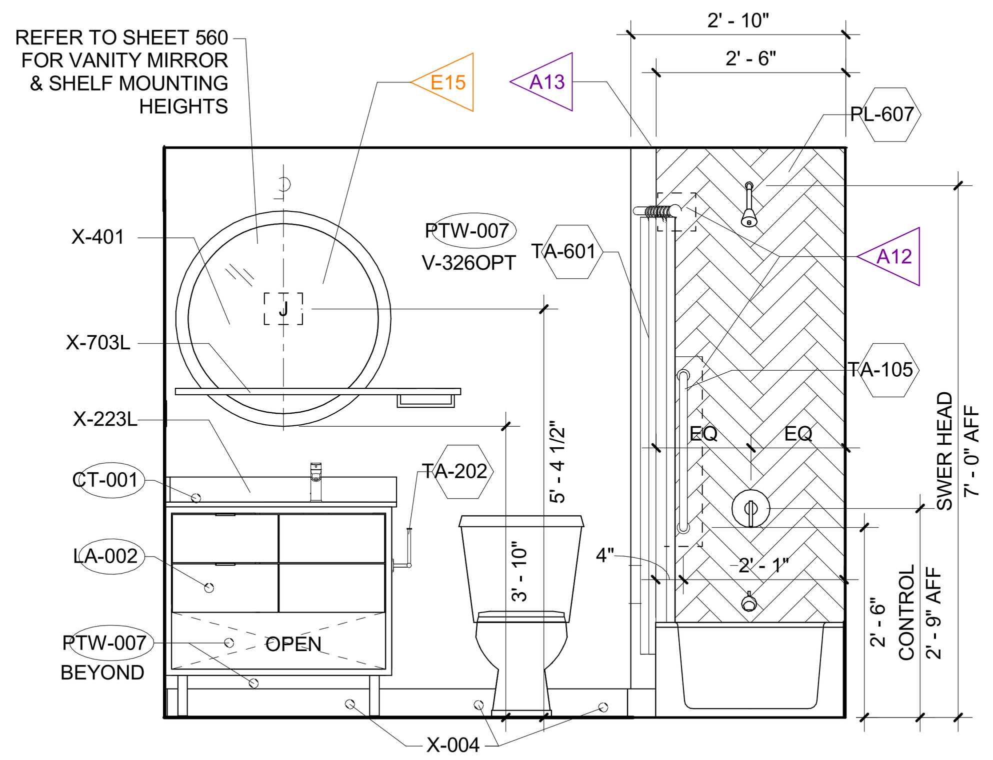
PROJECT NUMBER: 23098

SHEET NUMBER:

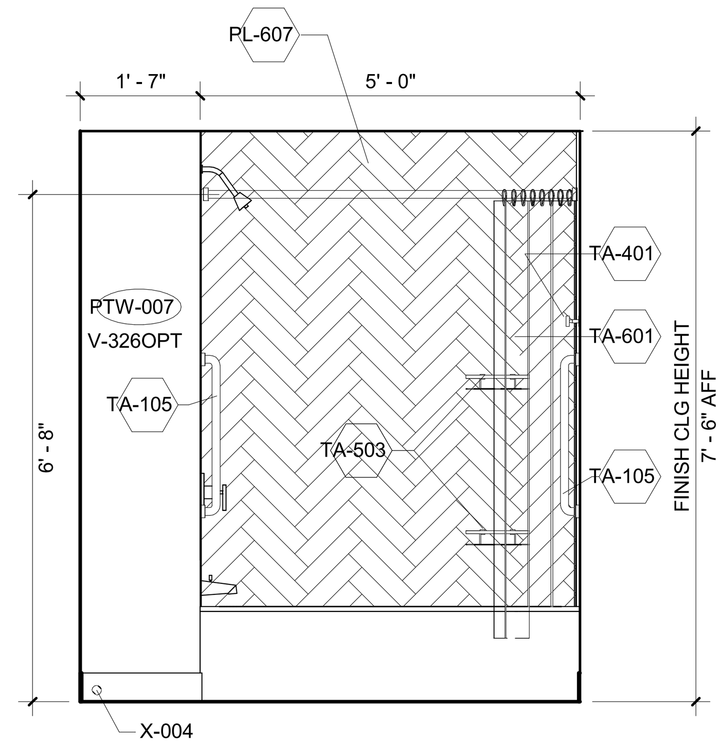
A-704

-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED

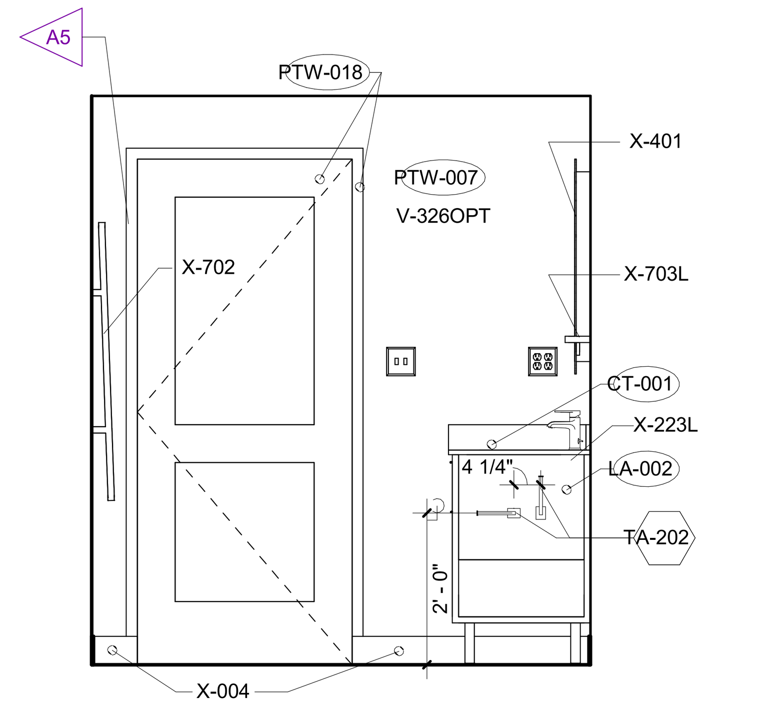
REFERENCE G-003 FOR GENERAL NOTES



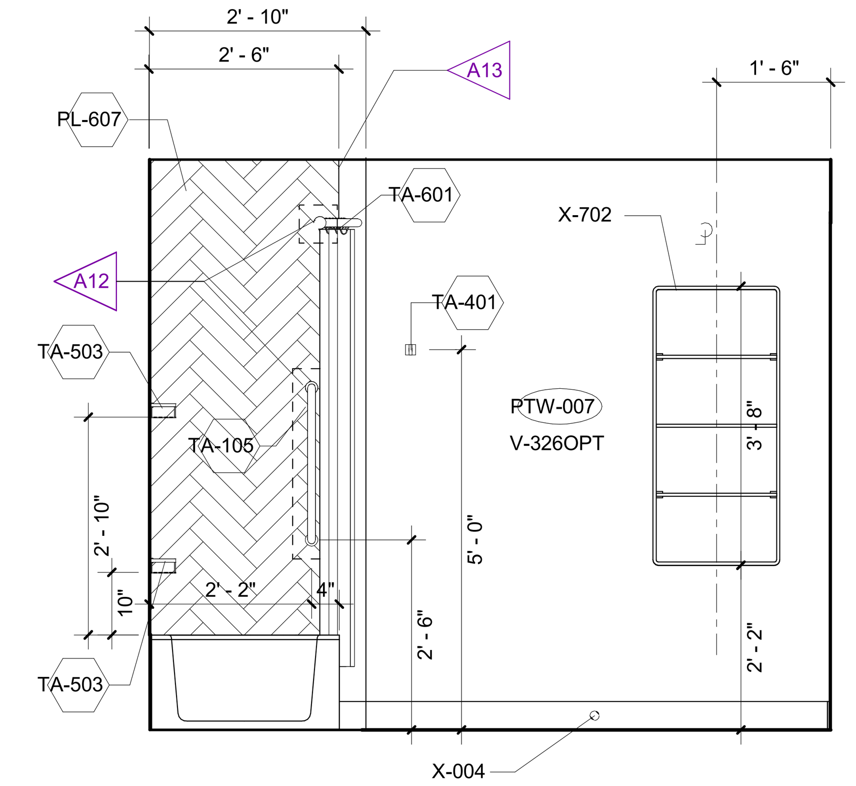
15 BATHROOM-1 BED QUEEN-ELEV 2
1/2" = 1'-0"



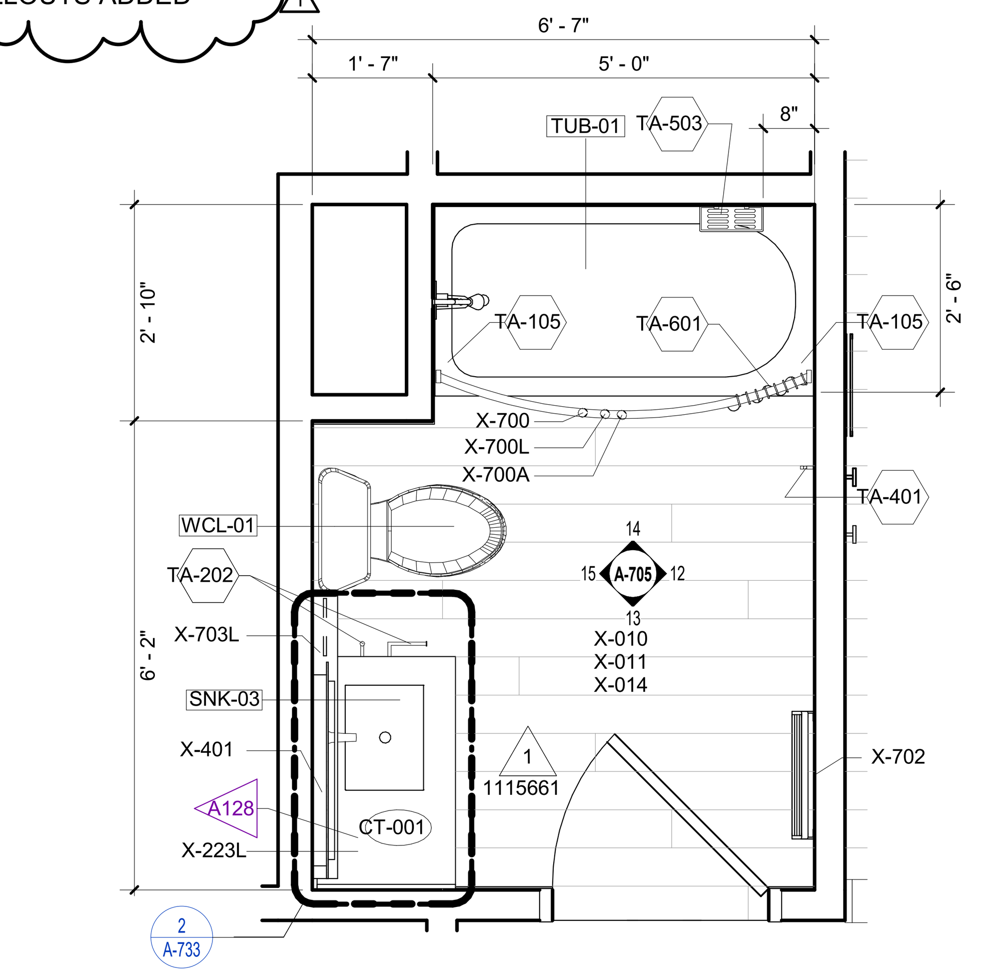
14 BATHROOM-1 BED QUEEN-ELEV 1
1/2" = 1'-0"



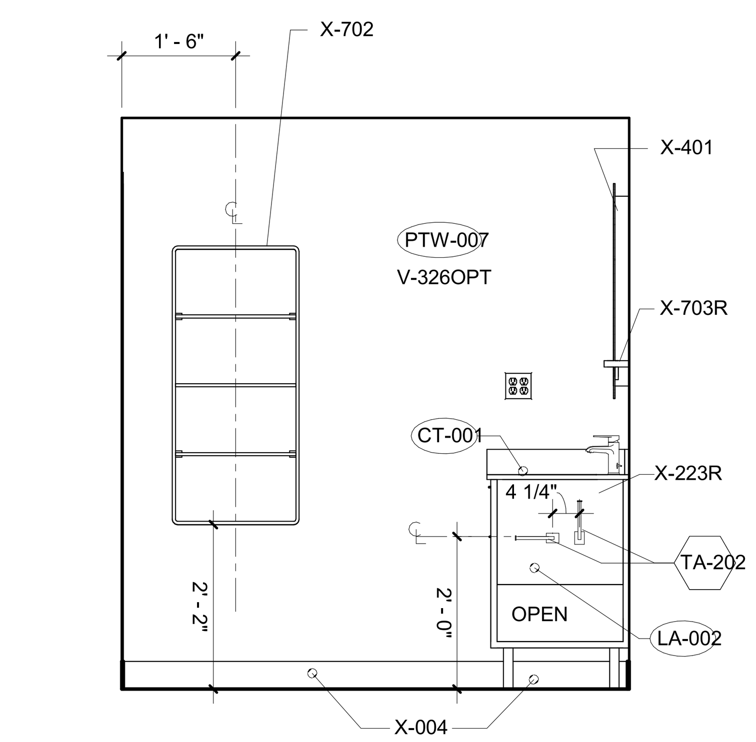
13 BATHROOM-1 BED QUEEN-ELEV 3
1/2" = 1'-0"



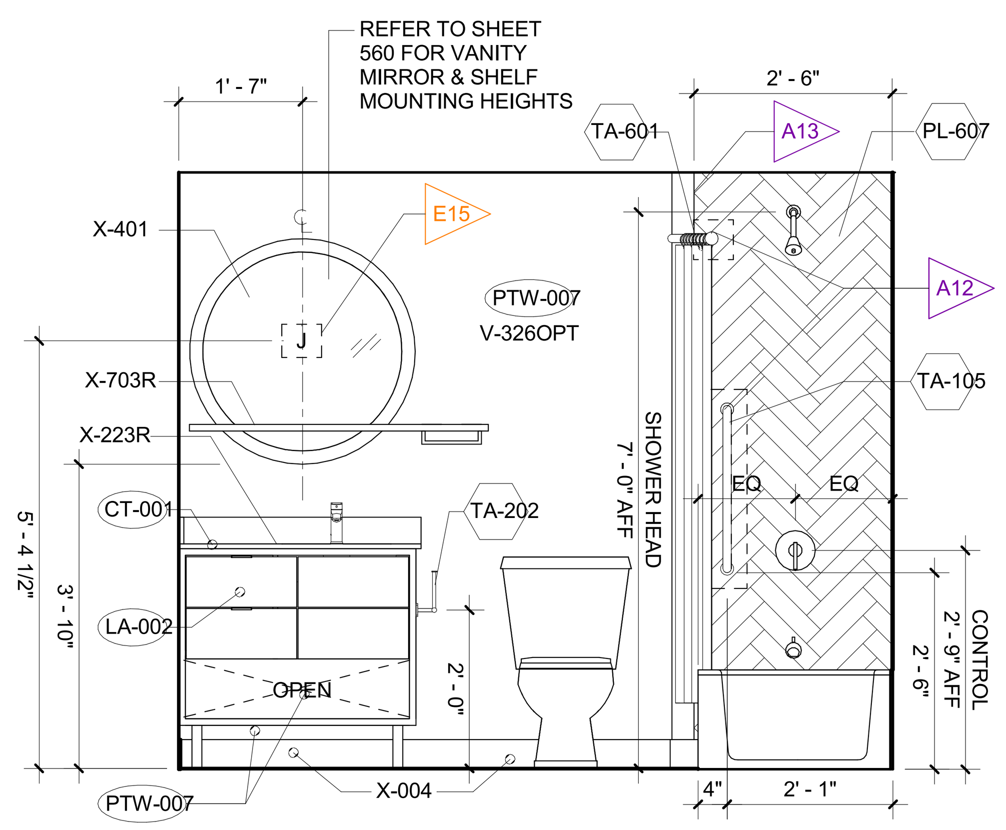
12 BATHROOM-1 BED QUEEN-ELEV 4
1/2" = 1'-0"



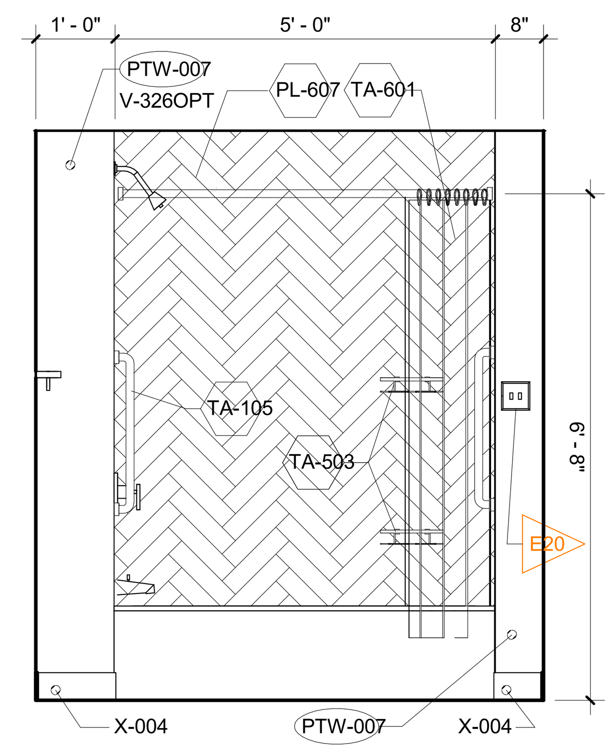
11 1-BEDROOM QUEEN BATHROOM FLR PLAN
11 ONE BED KING - FP Enlarged bath
1/2" = 1'-0"



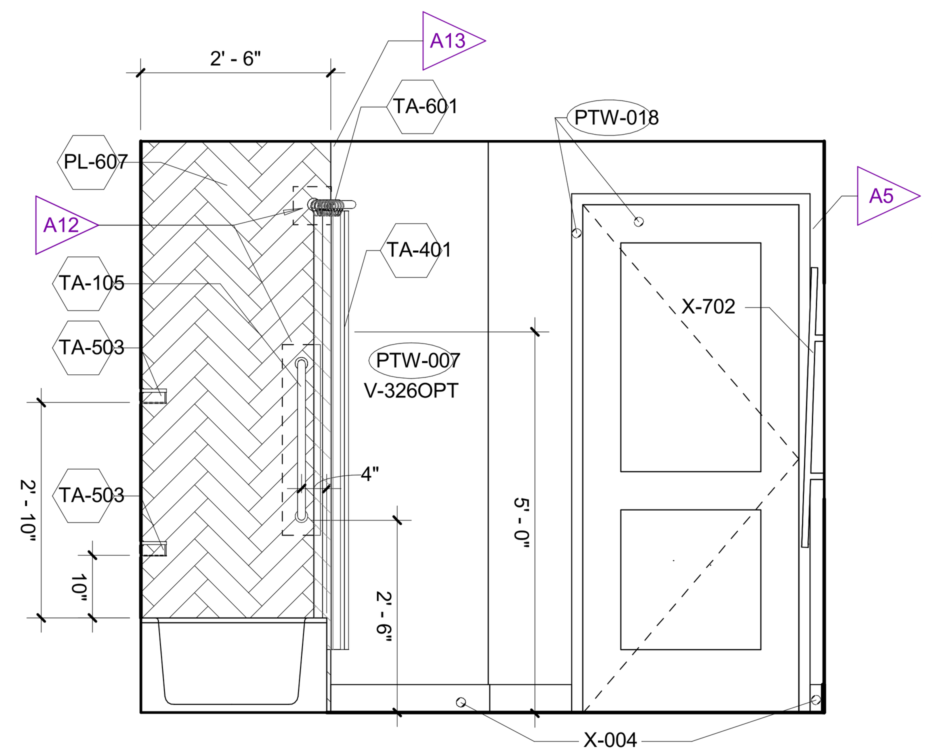
10 BATHROOM-STUDIO QQ END-ELEV 1
1/2" = 1'-0"



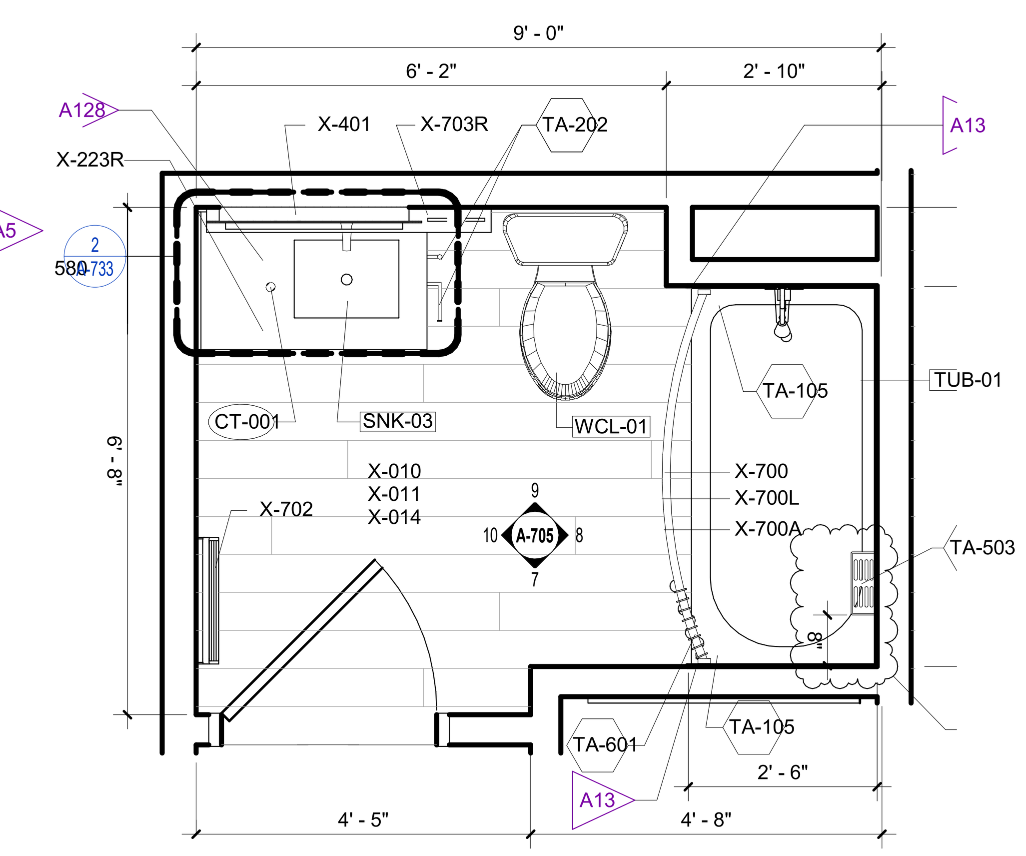
9 BATHROOM-STUDIO QQ END-ELEV 2
1/2" = 1'-0"



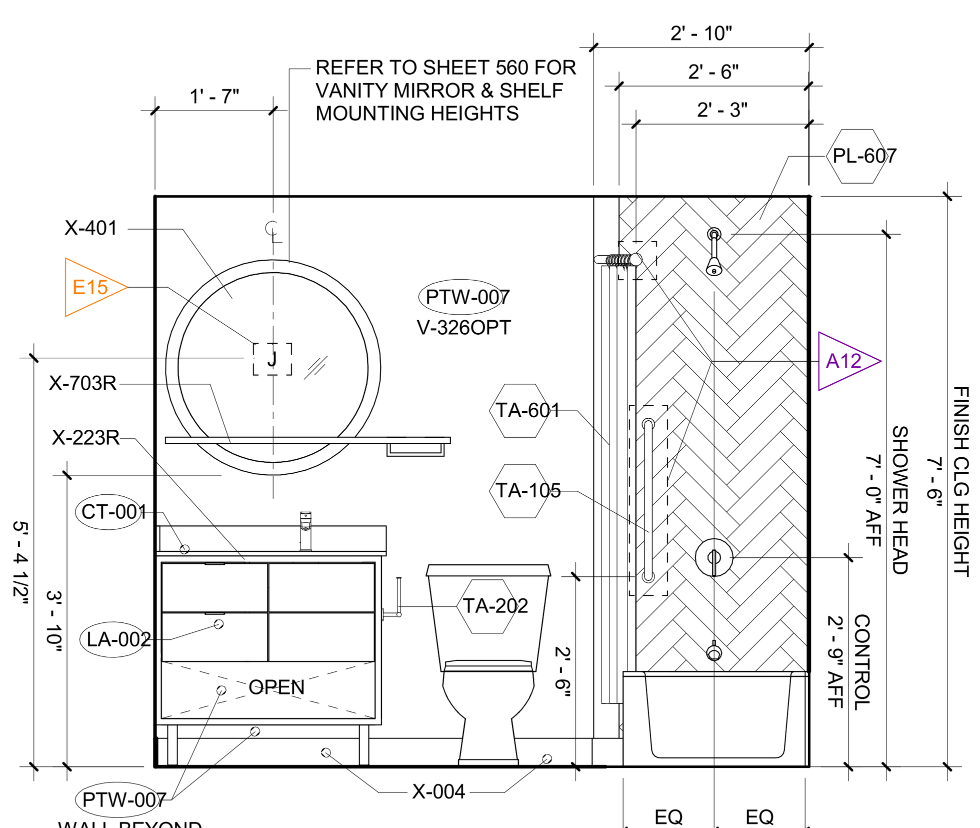
8 BATHROOM-STUDIO QQ END-ELEV 3
1/2" = 1'-0"



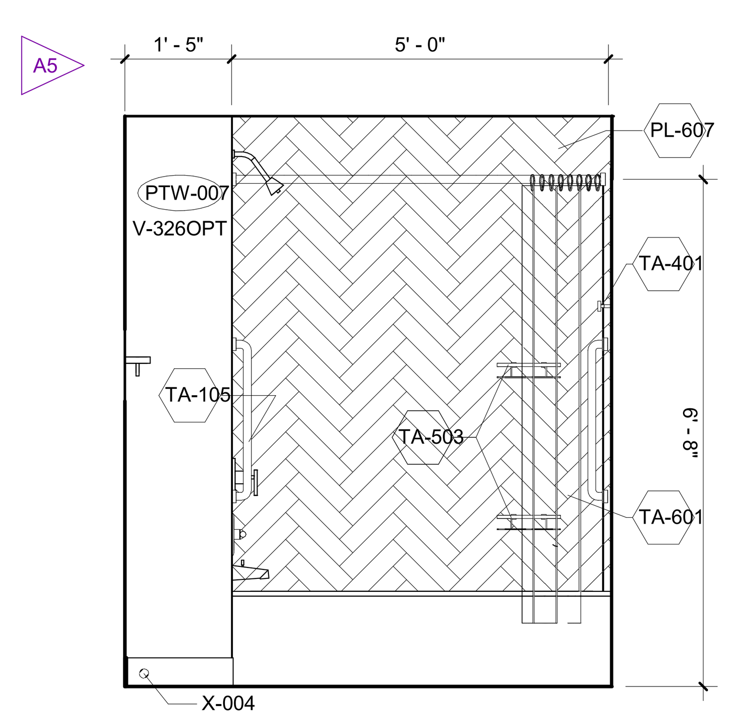
7 BATHROOM-STUDIO QQ END-ELEV 4
1/2" = 1'-0"



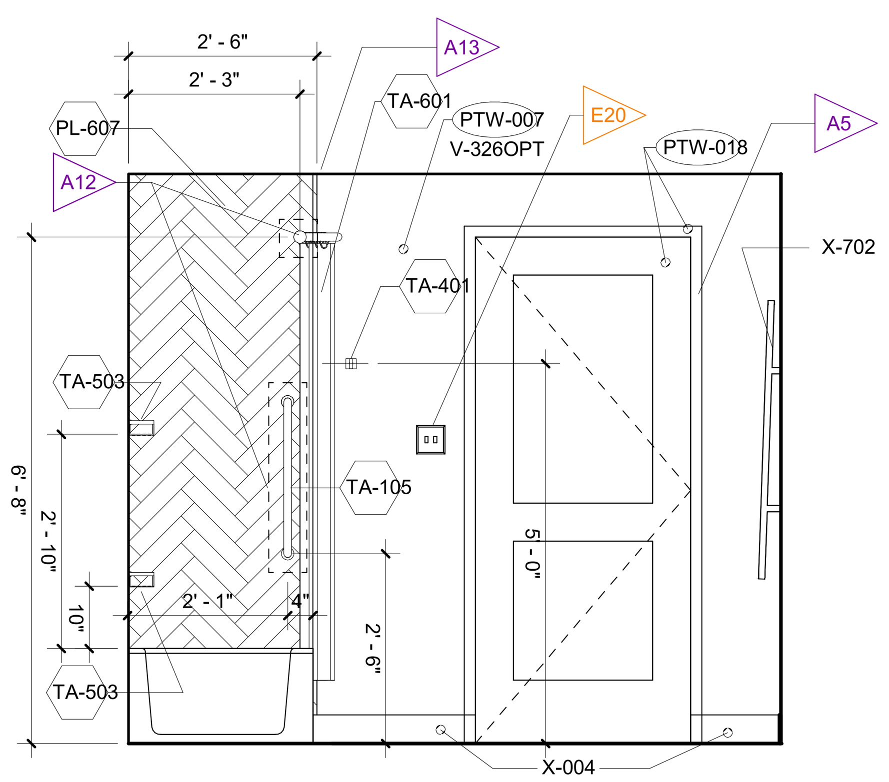
6 STUDIO QQ END - FP Enlarged Bath
1/2" = 1'-0"



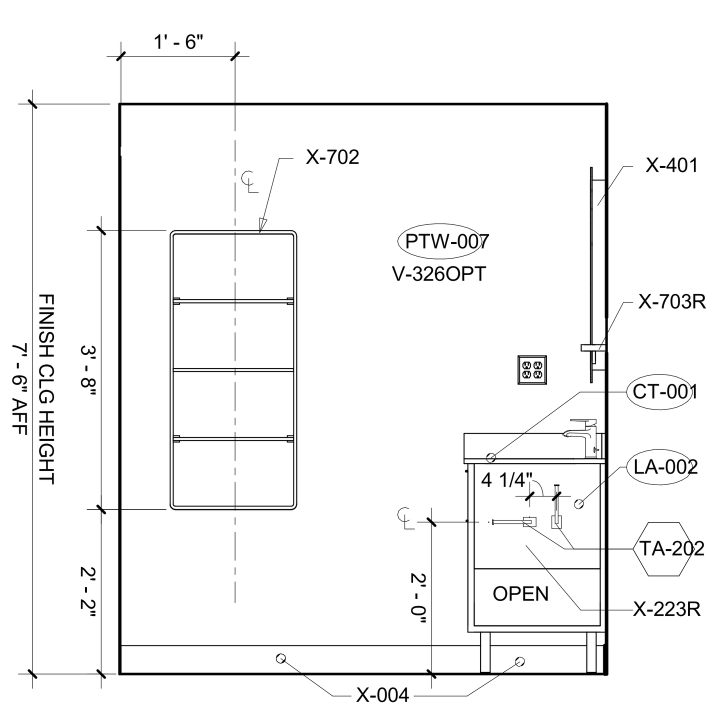
5 BATHROOM-STUDIO QQ CTR-ELEV 1
1/2" = 1'-0"



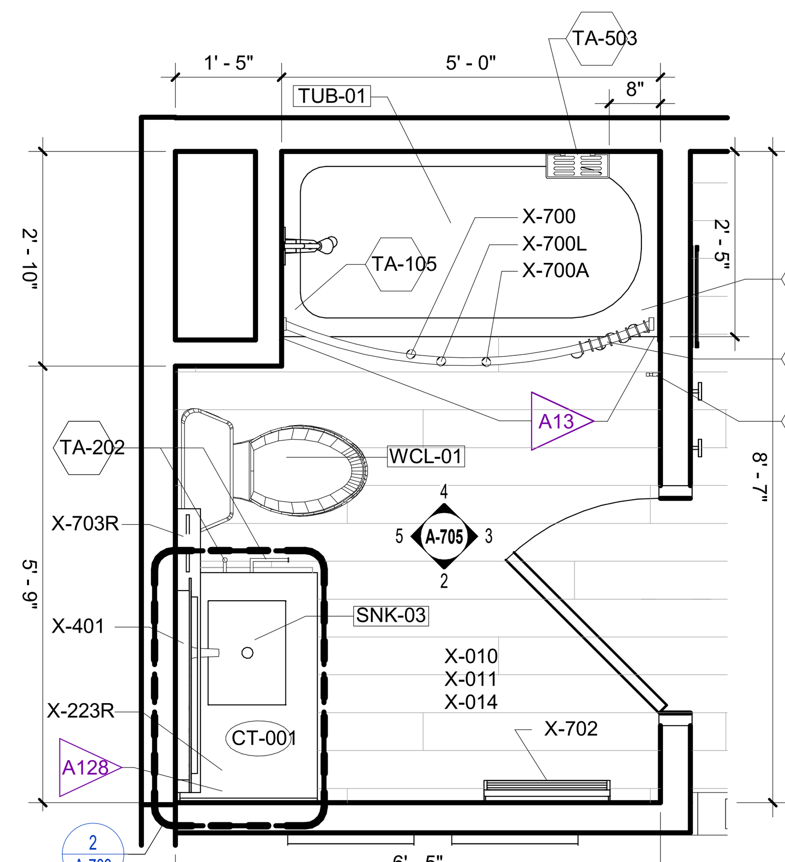
4 BATHROOM-STUDIO QQ CTR-ELEV 2
1/2" = 1'-0"



3 BATHROOM-STUDIO QQ CTR-ELEV 3
1/2" = 1'-0"



2 BATHROOM-STUDIO QQ CTR-ELEV 4
1/2" = 1'-0"



1 STUDIO QQ CENTER - FP Enlarge bath
1 STUDIO QQ CTR-A BATHROOM PLAN
1/2" = 1'-0"

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STATE OF MISSOURI
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01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

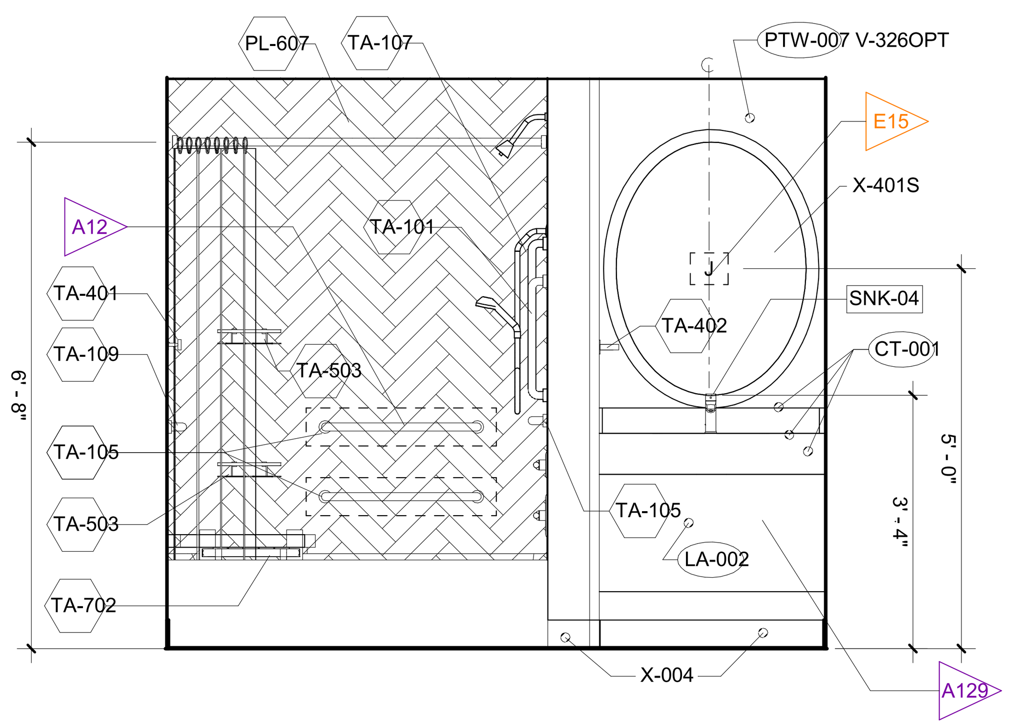
SHEET TITLE
GUESTROOM BATHROOMS TUBS

PROJECT NUMBER: 23098

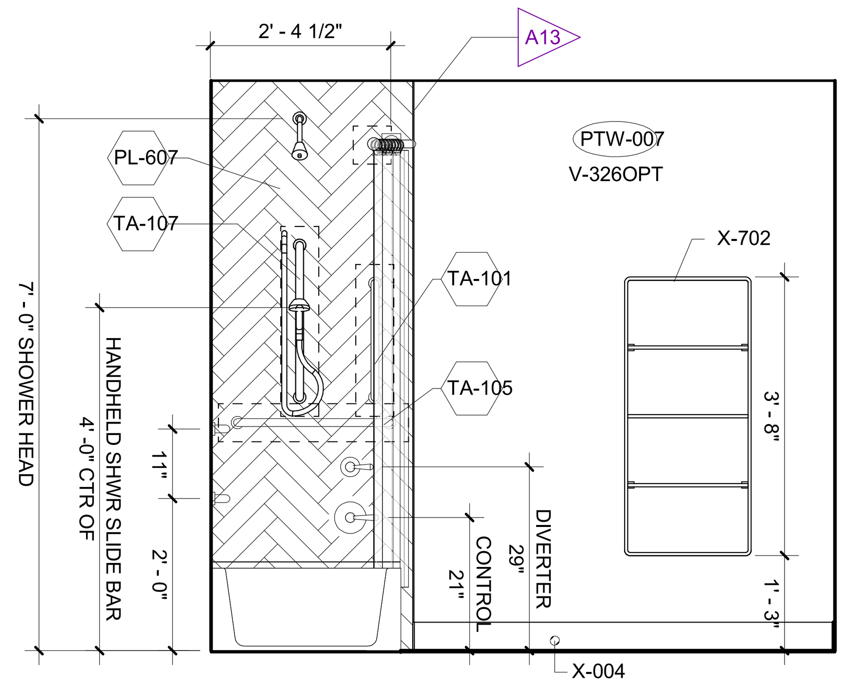
SHEET NUMBER:
A-705

REFERENCE G-003 FOR GENERAL NOTES

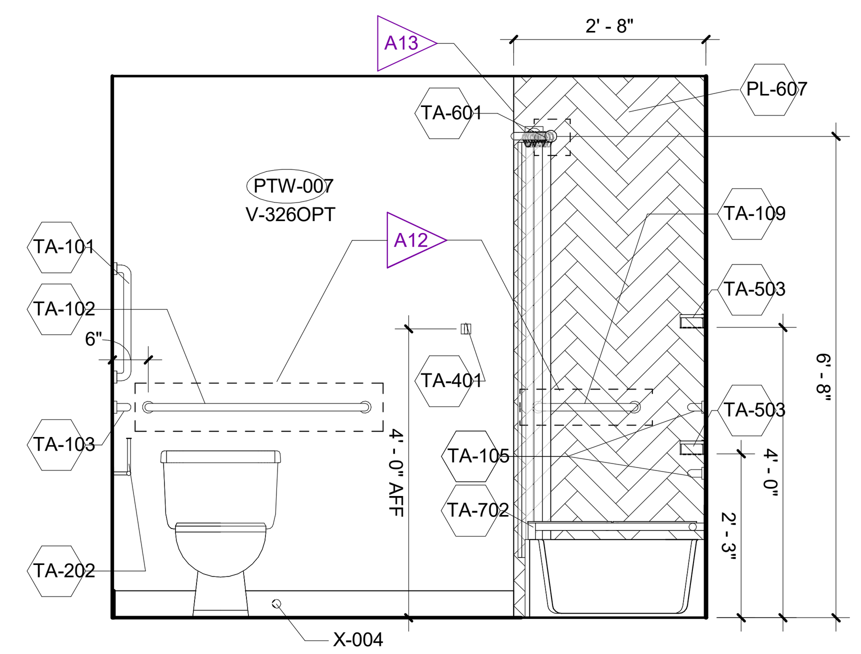
-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED



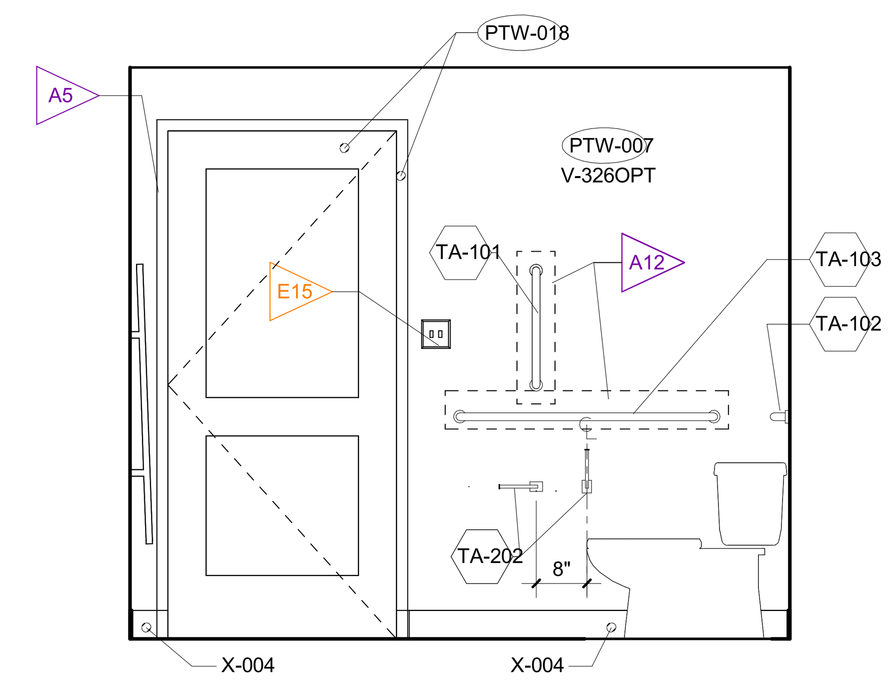
12 BATHROOM-1 BED QUEEN ACC-ELEV 3
1/2" = 1'-0"



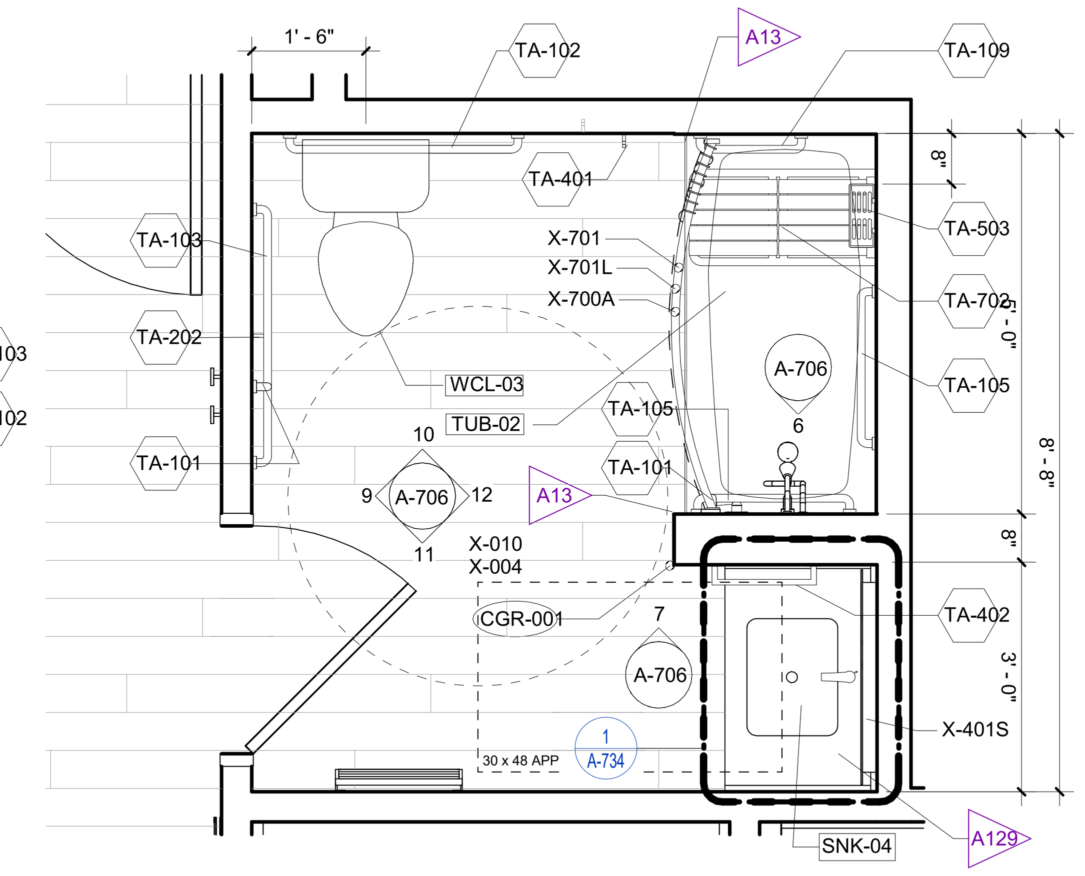
11 BATHROOM-1 BED QUEEN ACC-ELEV 4
1/2" = 1'-0"



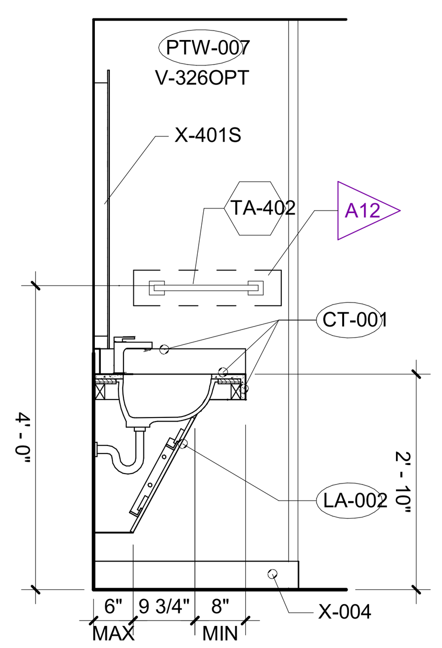
10 BATHROOM-1 BED QUEEN ACC-ELEV 2
1/2" = 1'-0"



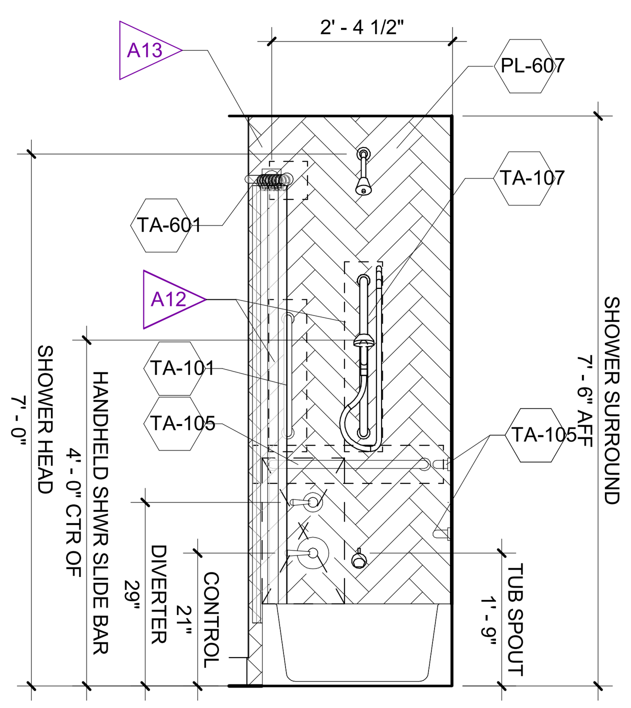
9 BATHROOM-1 BED QUEEN ACC-ELEV 1
1/2" = 1'-0"



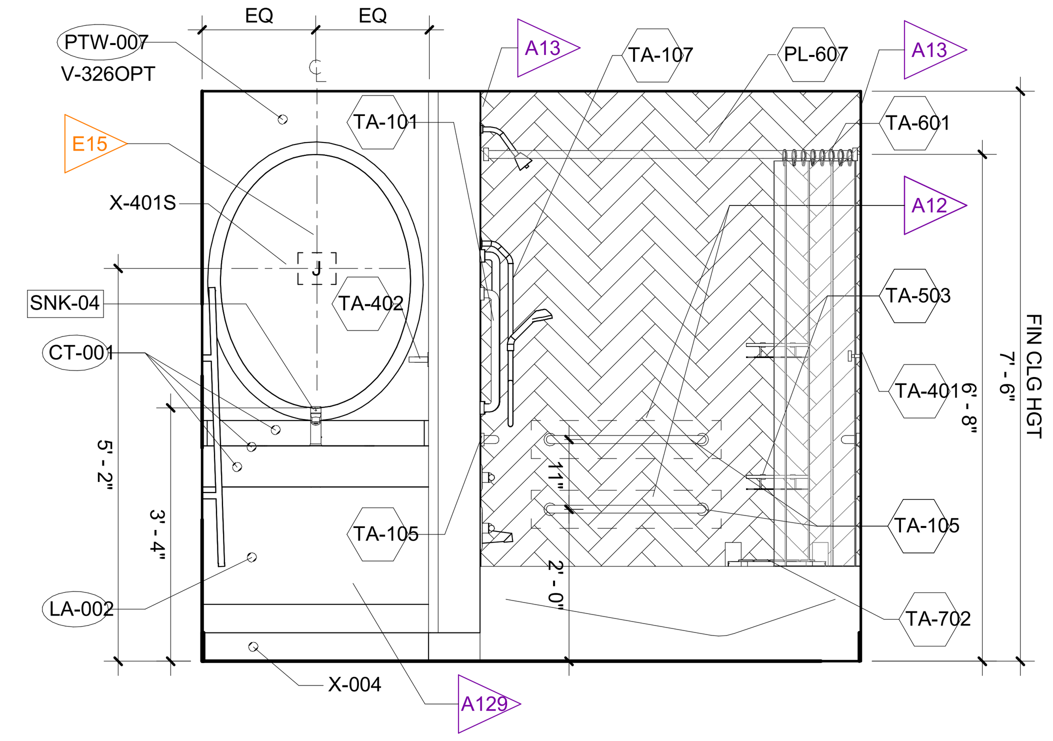
8 BATHROOM-1 BED QUEEN ACC-FP
1/2" = 1'-0"



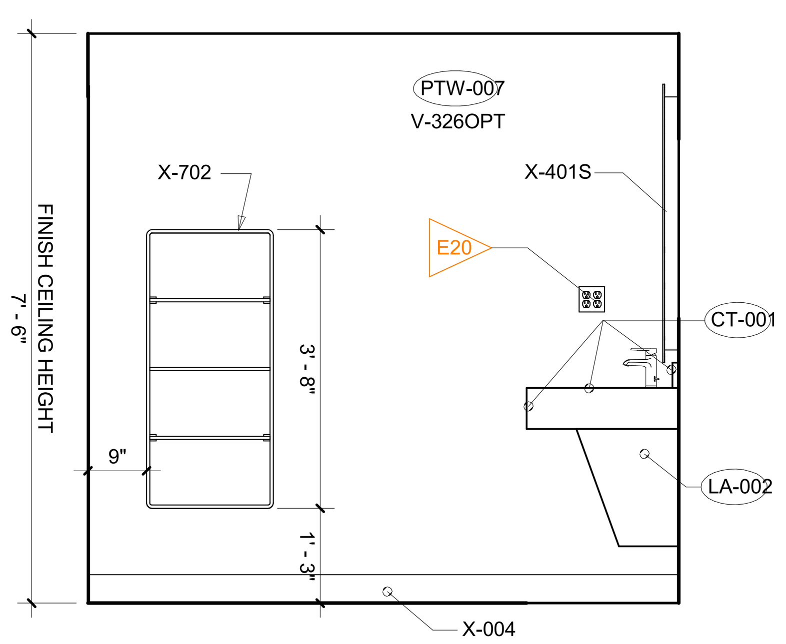
7 BATHROOM-ACC STUDIO-ELEV 6
1/2" = 1'-0"



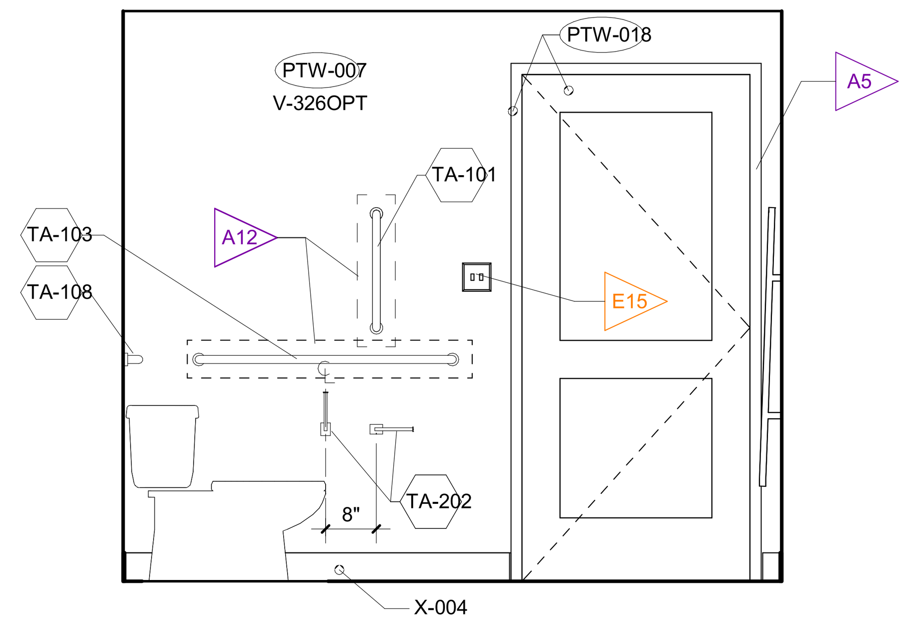
6 BATHROOM-ACC STUDIO-ELEV 5
1/2" = 1'-0"



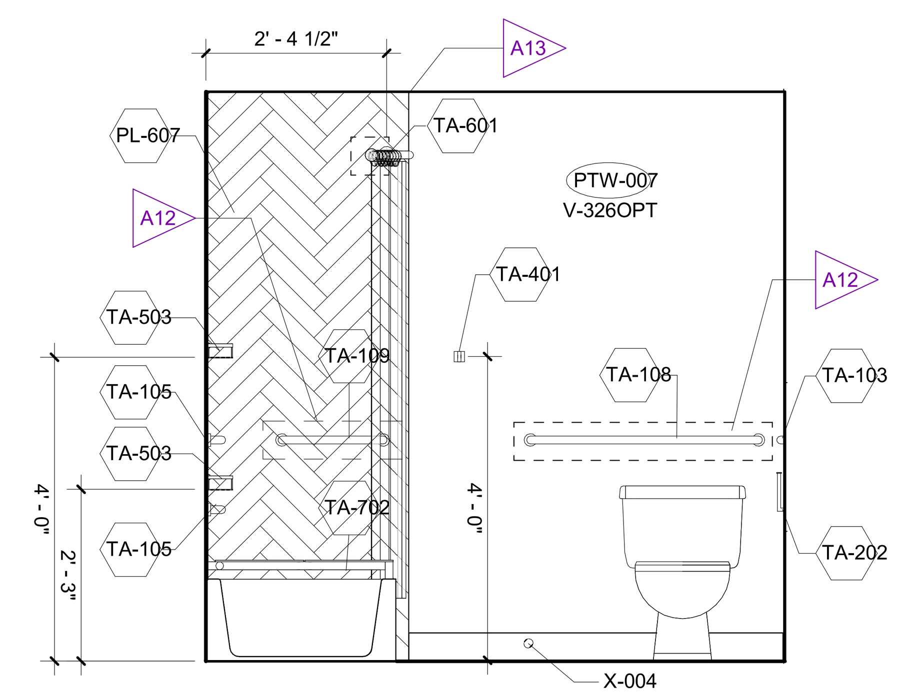
5 BATHROOM-ACC KING & QQ STUDIO-ELEV 1
1/2" = 1'-0"



4 BATHROOM-ACC KING & QQ STUDIO-ELEV 4
1/2" = 1'-0"

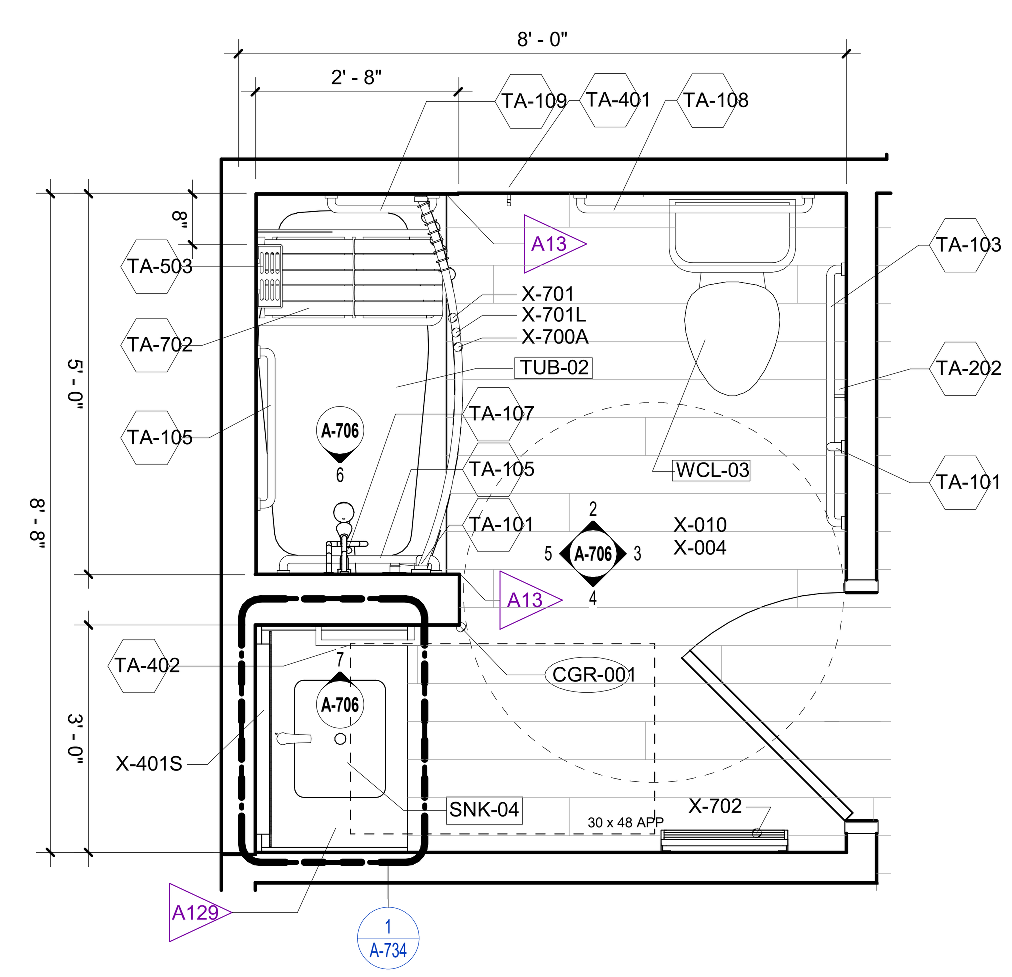


3 BATHROOM-ACC KING & QQ STUDIO-ELEV 3
1/2" = 1'-0"



(TUB ALTERNATE)

2 BATHROOM-ACC KING & QQ STUDIO-ELEV 2
1/2" = 1'-0"



1 ACC STUDIO KING / QQ- Enlarged bath
1 ACCESSIBLE KING STUDIO BATHROOM PLAN

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7305
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
ACC. GUESTROOM BATHROOMS
TUBS

PROJECT NUMBER: 23098

SHEET NUMBER:
A-706

REFERENCE G-003 FOR GENERAL NOTES

-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED

PRINTS ISSUED
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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7305
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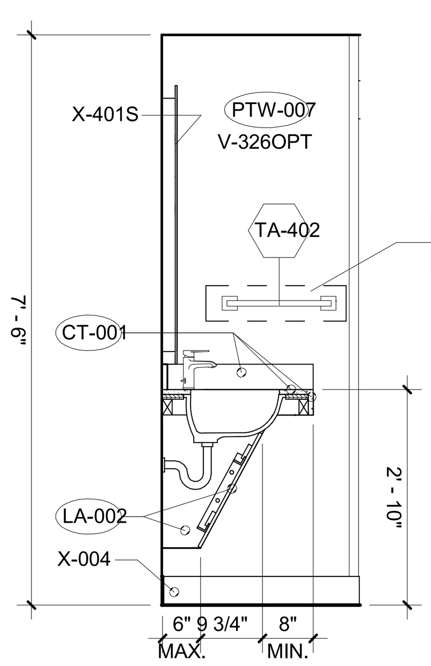
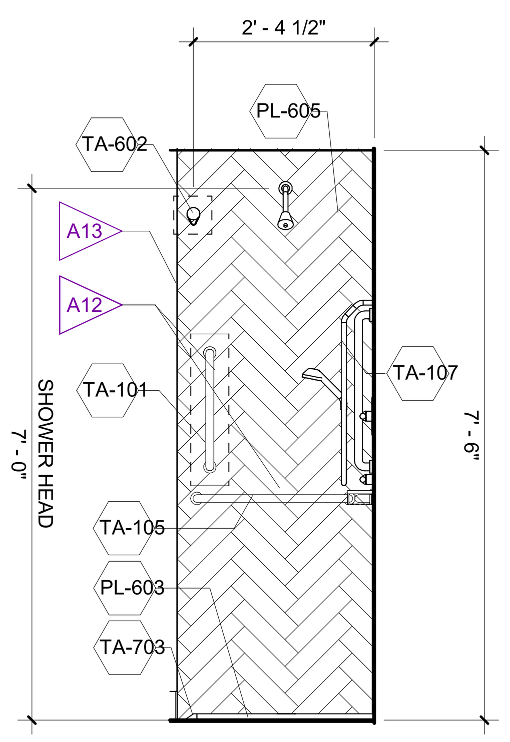
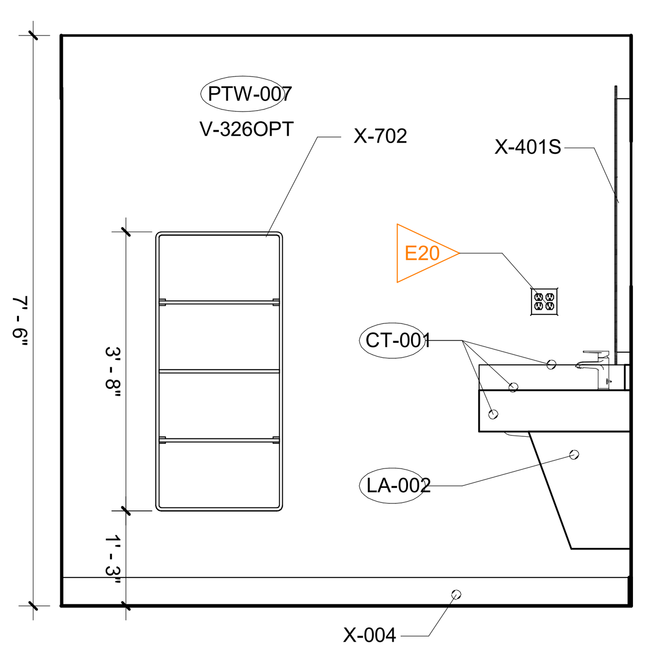
01/19/2024



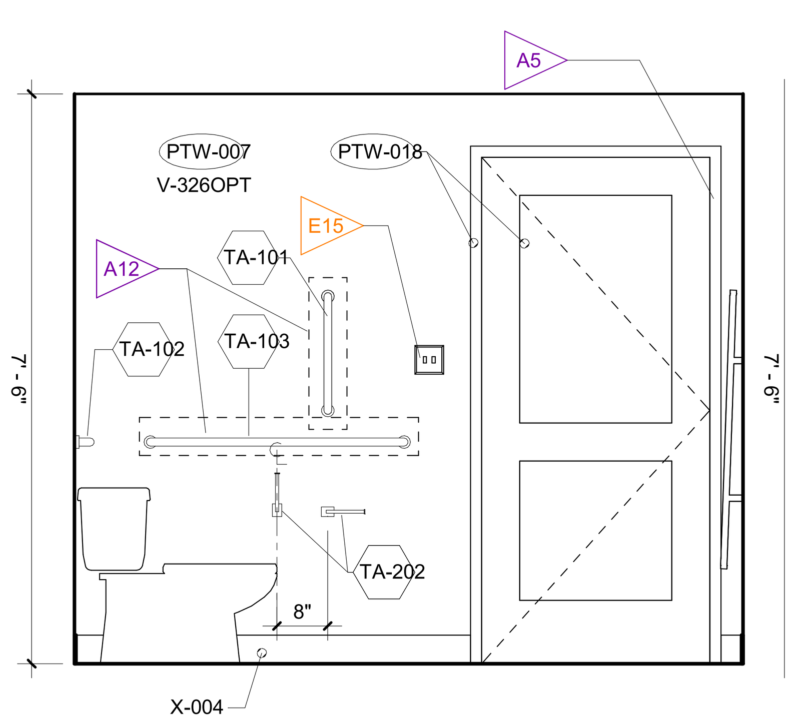
7 BATHROOM-ACC QQ-ELEV 6
1/2" = 1'-0"



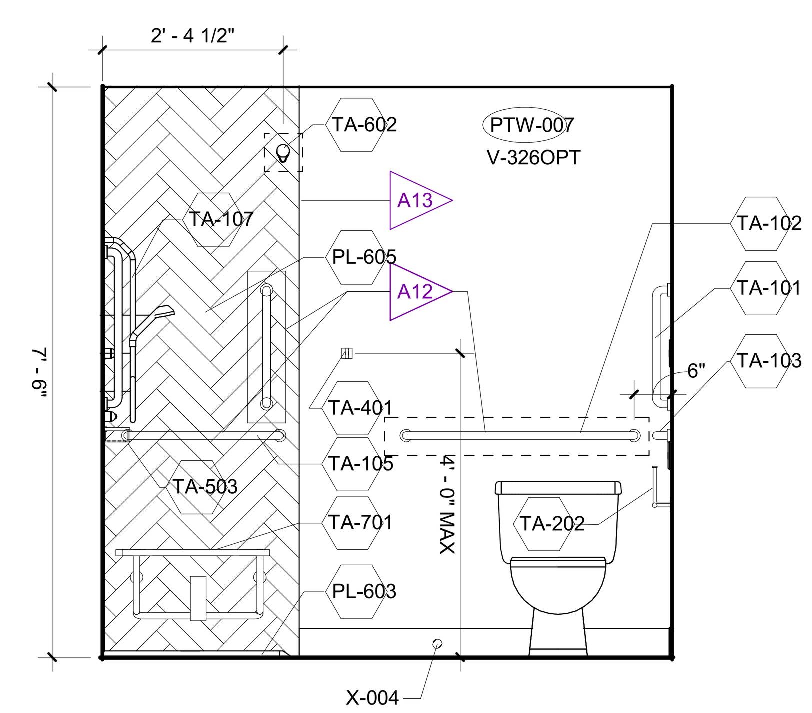
6 BATHROOM-ACC QQ-ELEV 5
1/2" = 1'-0"



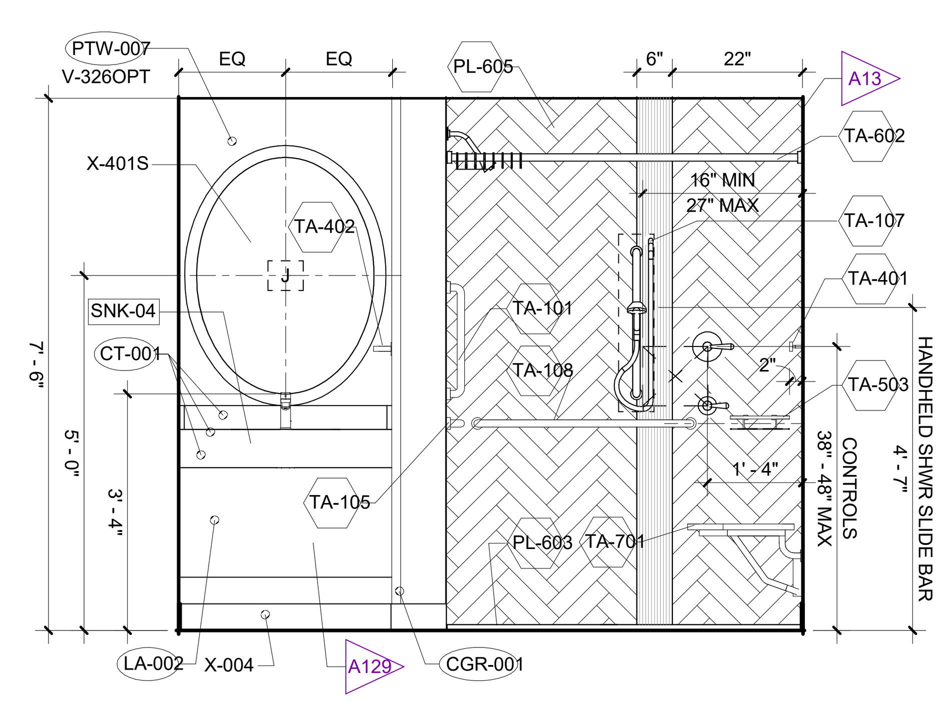
5 BATHROOM-ACC QQ-ELEV 4
1/2" = 1'-0"



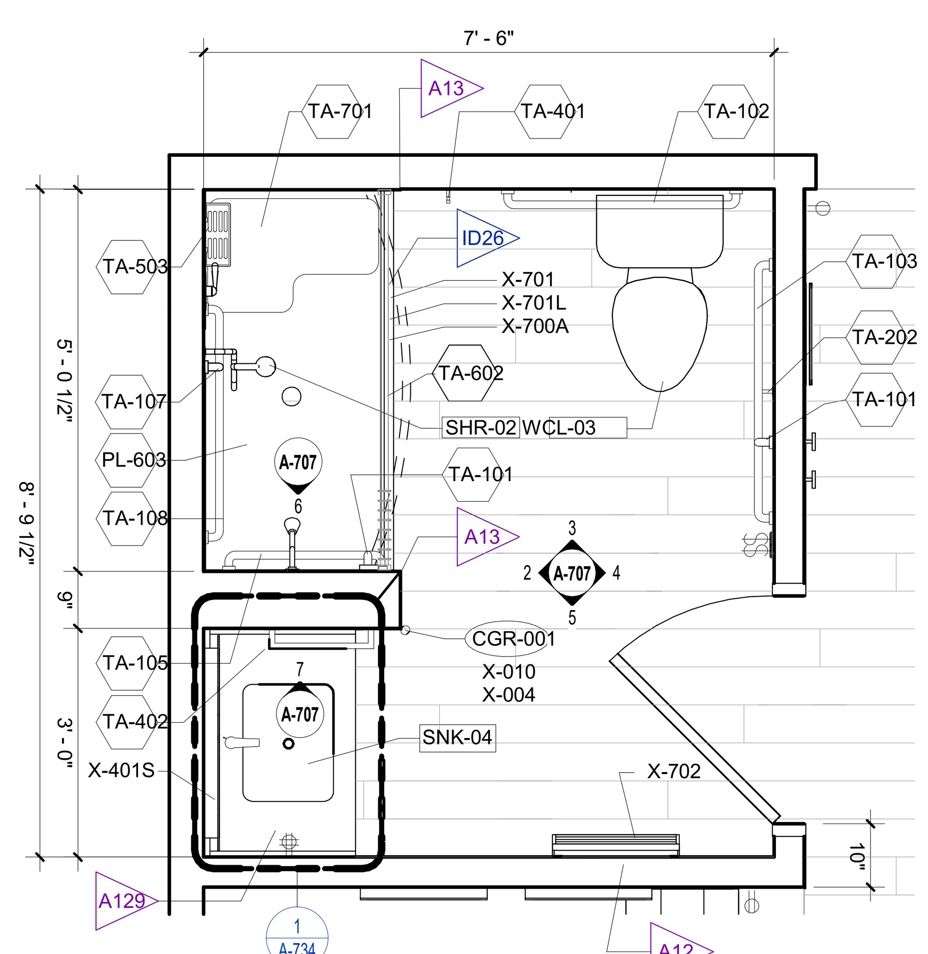
4 BATHROOM-ACC QQ-ELEV 3
1/2" = 1'-0"



3 BATHROOM-ACC QQ-ELEV 2
1/2" = 1'-0"



2 BATHROOM-ACC QQ-ELEV 1
1/2" = 1'-0"



1 BATHROOM-ACC QQ-FP
1/2" = 1'-0"

TOWNEPLACE SUITES

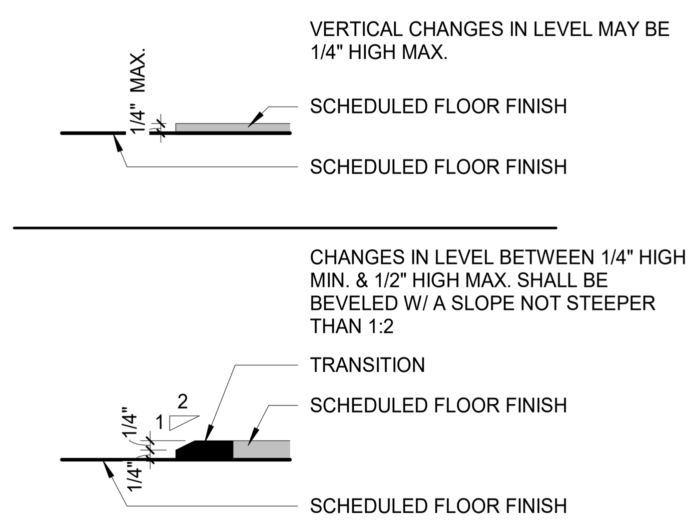
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
ACC. GUESTROOM BATHROOMS ROLL-IN

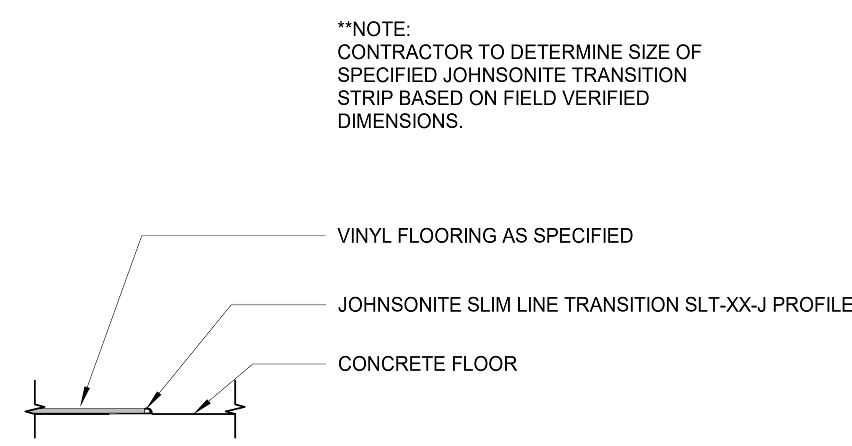
PROJECT NUMBER: 23098

SHEET NUMBER:

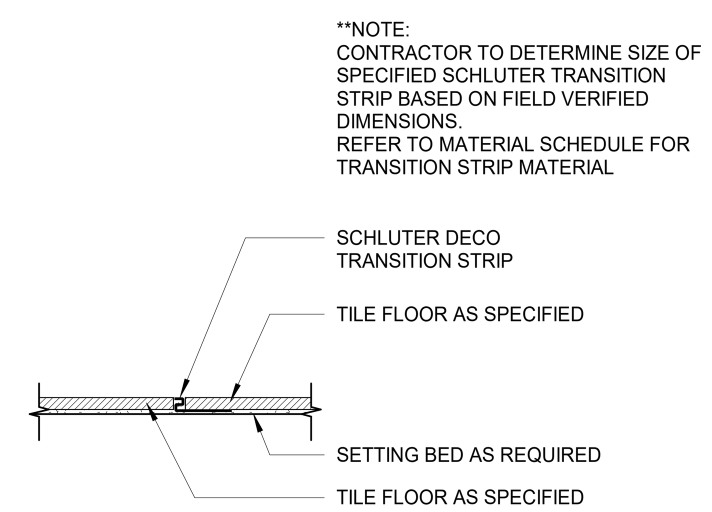
A-707



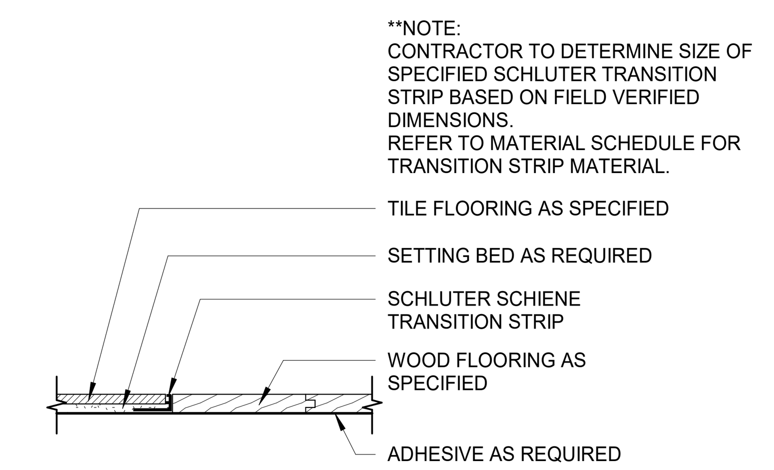
D4 FLOOR FINISH TRANSITION-CHANGE IN LEVEL
SCALE: 3" = 1'-0"



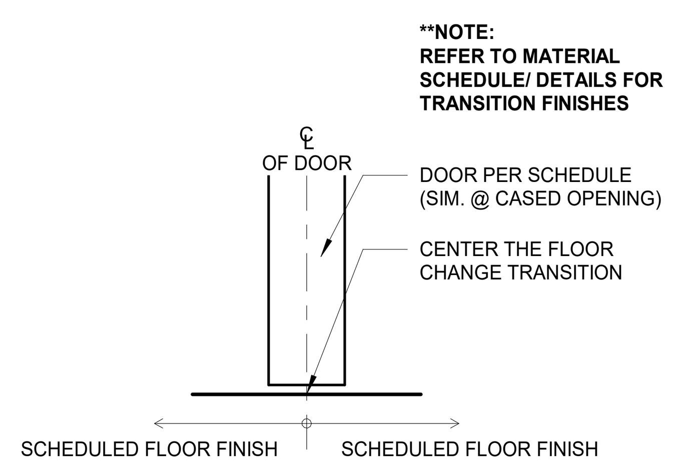
C4 VINYL / CONCRETE TRANSITION
SCALE: 3" = 1'-0"



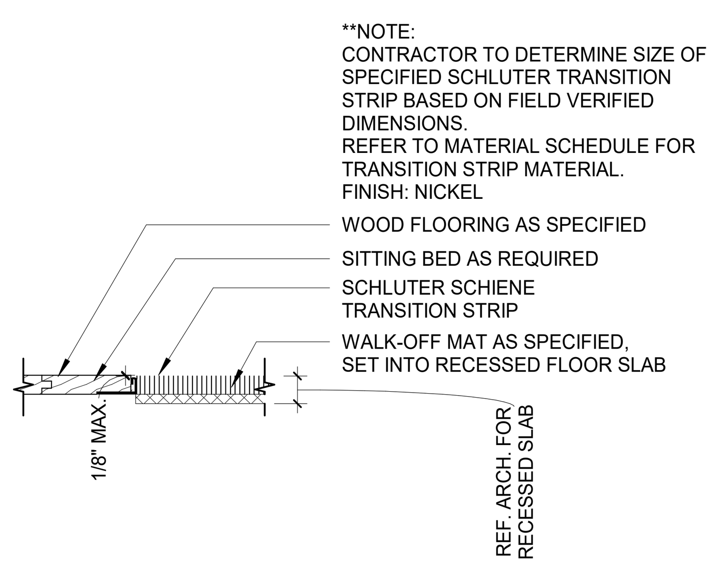
B4 TILE/ TILE TRANSITION
SCALE: 3" = 1'-0"



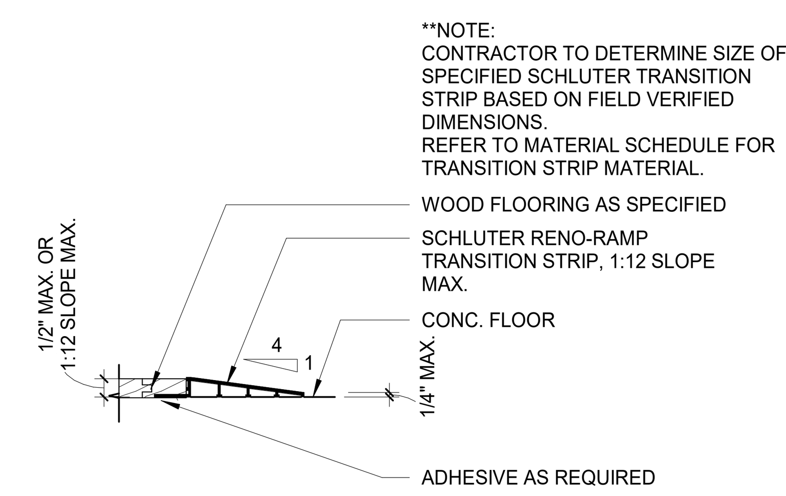
A4 TILE / WOOD TRANSITION
SCALE: 3" = 1'-0"



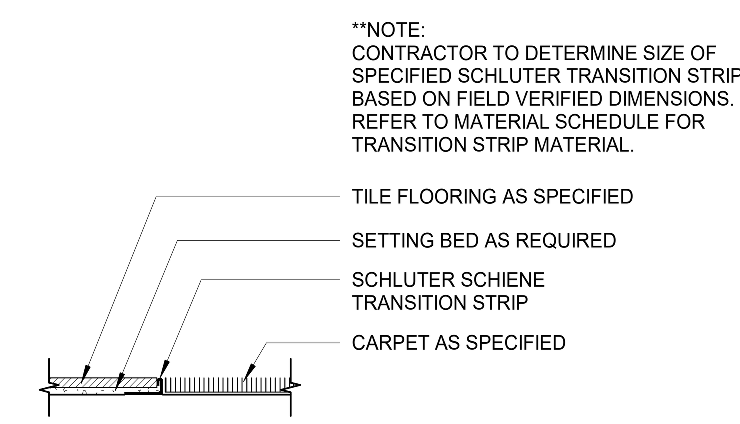
D3 FLOOR FINISH TRANSITION LOCATION
SCALE: 3" = 1'-0"



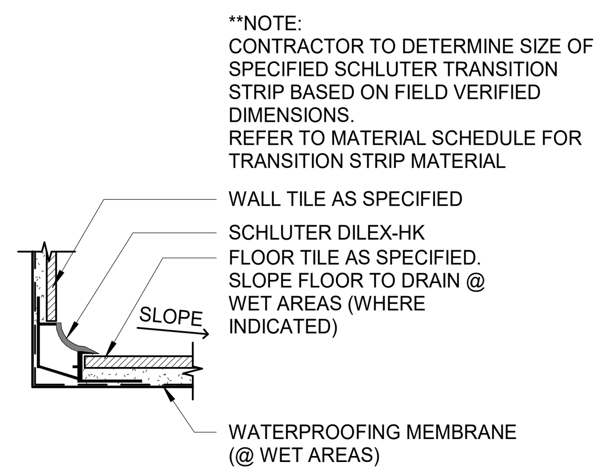
C3 WOOD / WALK-OFF MAT TRANSITION
SCALE: 3" = 1'-0"



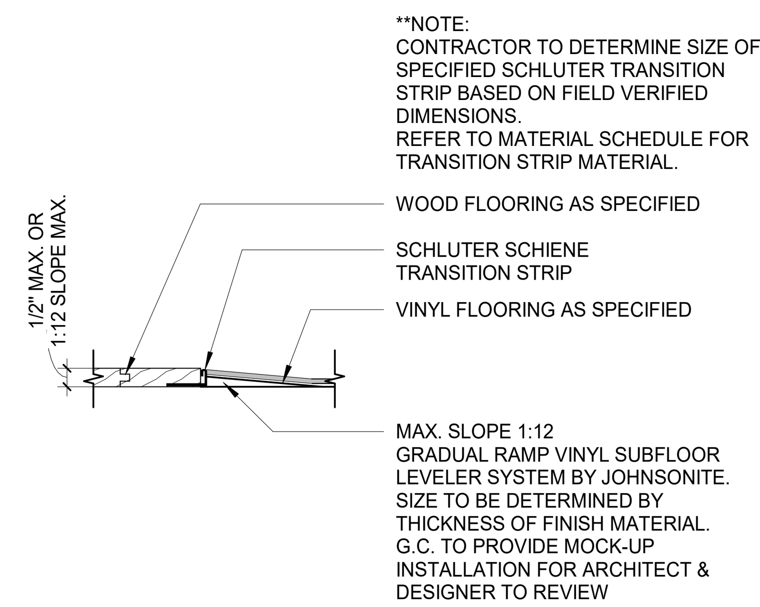
B3 WOOD / CONC. TRANSITION
SCALE: 3" = 1'-0"



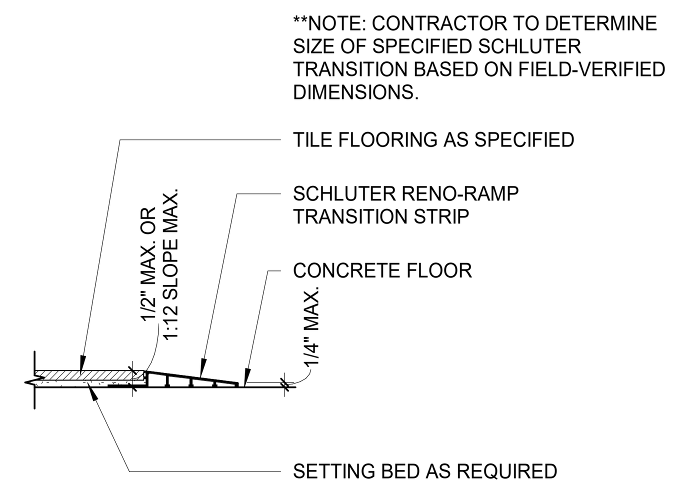
A3 TILE / CARPET TRANSITION
SCALE: 3" = 1'-0"



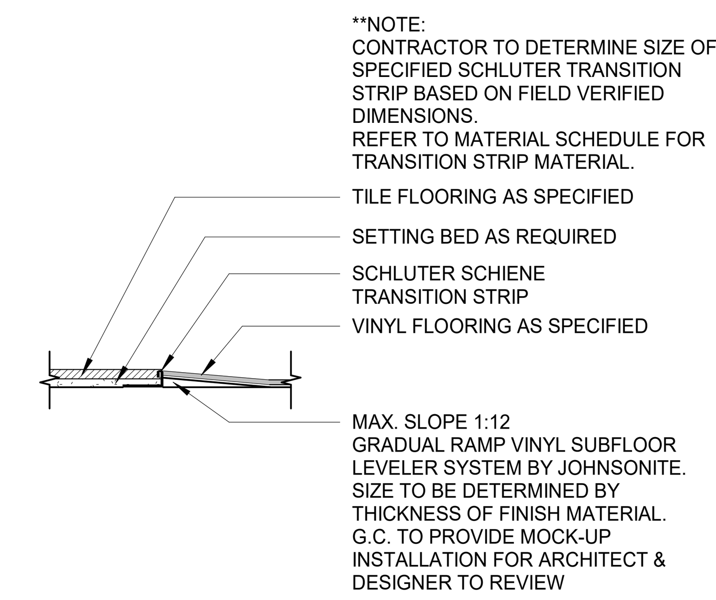
D2 FLOOR TILE TO WALL TILE TRANSITION
SCALE: 3" = 1'-0"



C2 WOOD / VINYL TRANSITION
SCALE: 3" = 1'-0"



B2 TILE / CONC. TRANSITION
SCALE: 3" = 1'-0"



A2 TILE / VINYL TRANSITION
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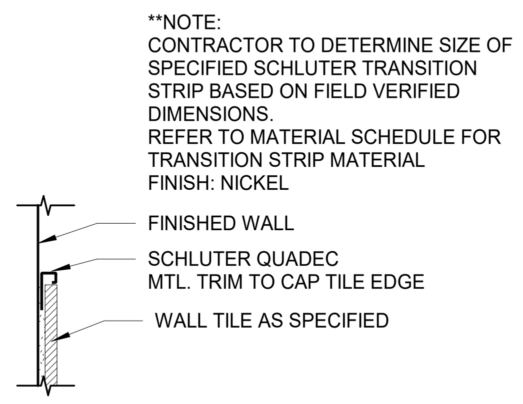
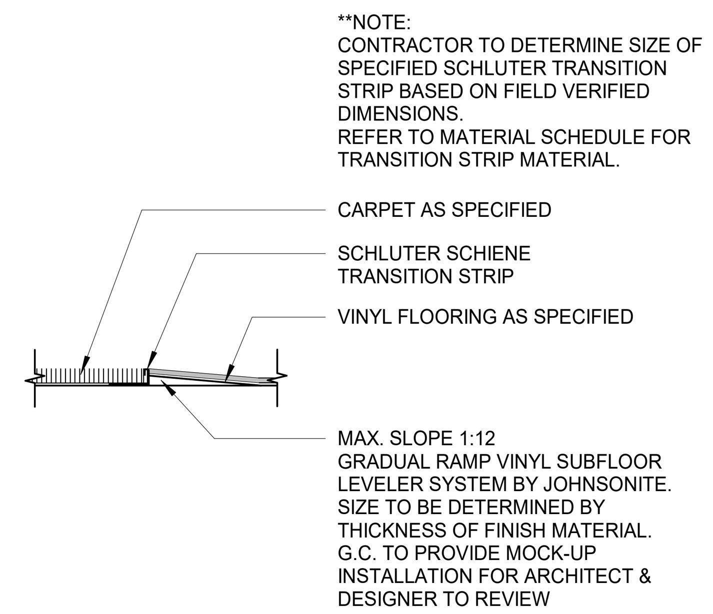


D1 WALL TILE EDGE AT BASE (VERT. & HORIZ.)
SCALE: 3" = 1'-0"



C1 CARPET / VINYL TRANSITION
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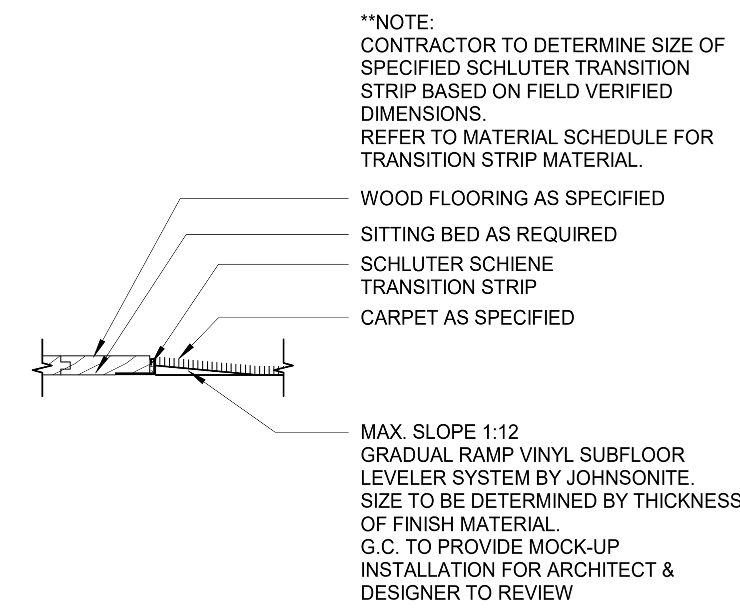

B1 WOOD / CARPET TRANSITION
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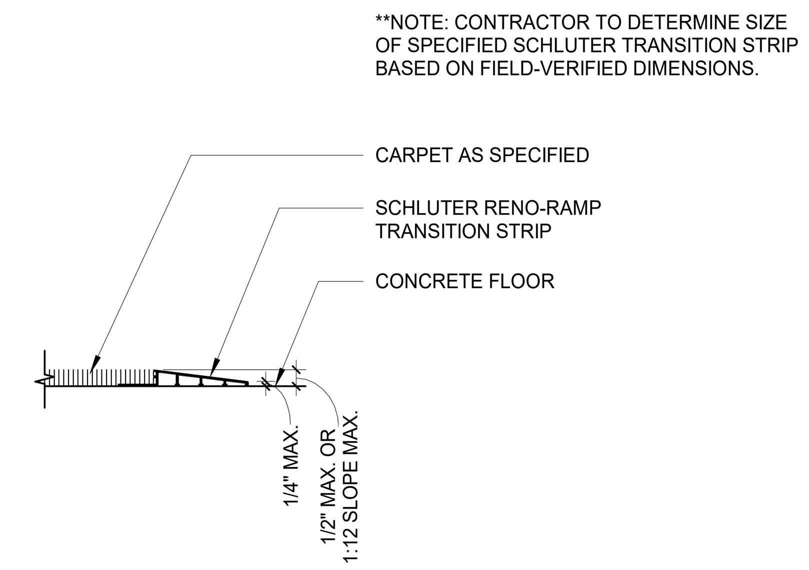

A1 CARPET / CONC. TRANSITION
SCALE: 3" = 1'-0"

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STATE OF MISSOURI
DAVID EUGENE HENDRIXSE
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

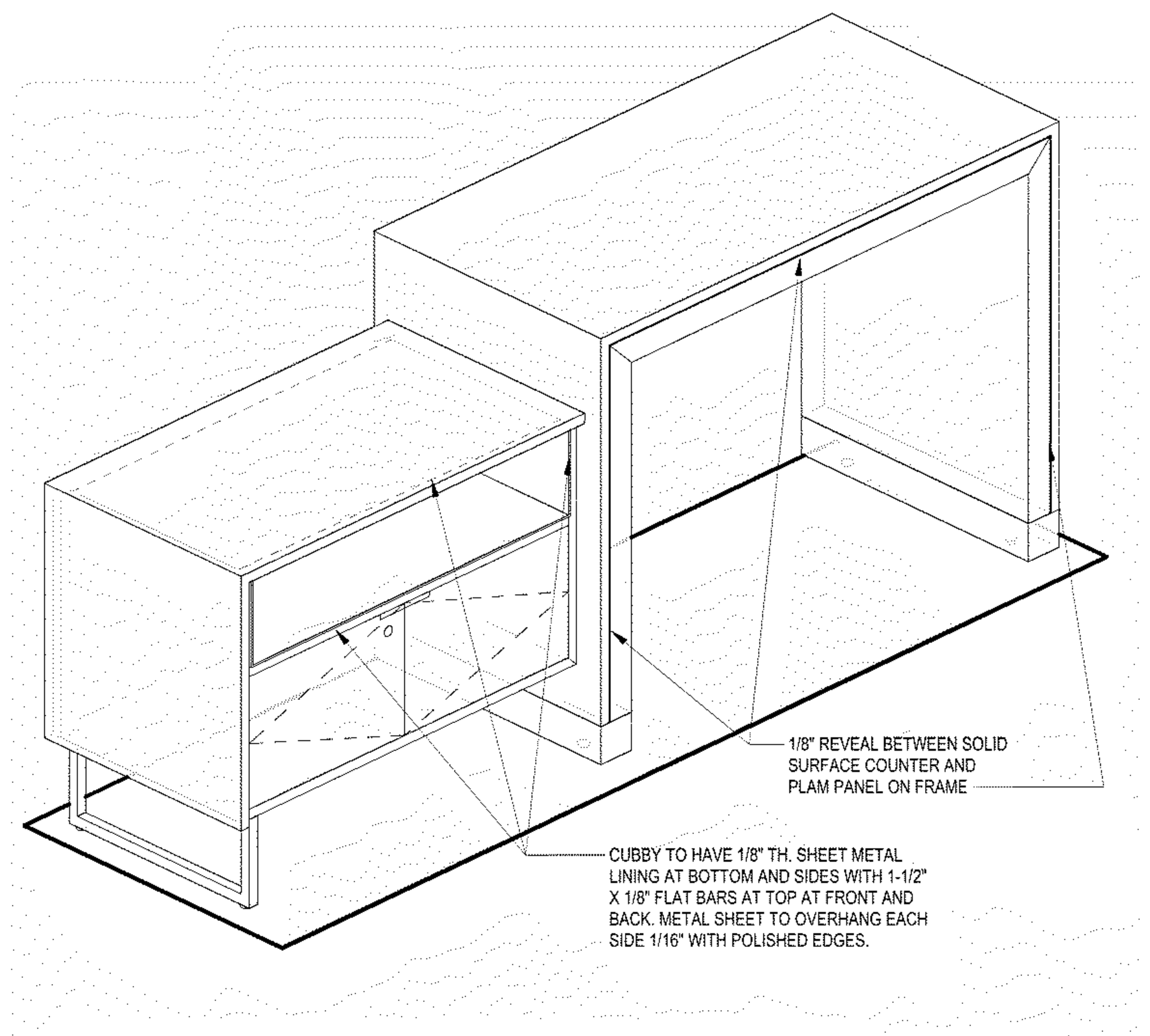
SHEET TITLE
FINISH TRANSITION DETAILS

PROJECT NUMBER: 23098

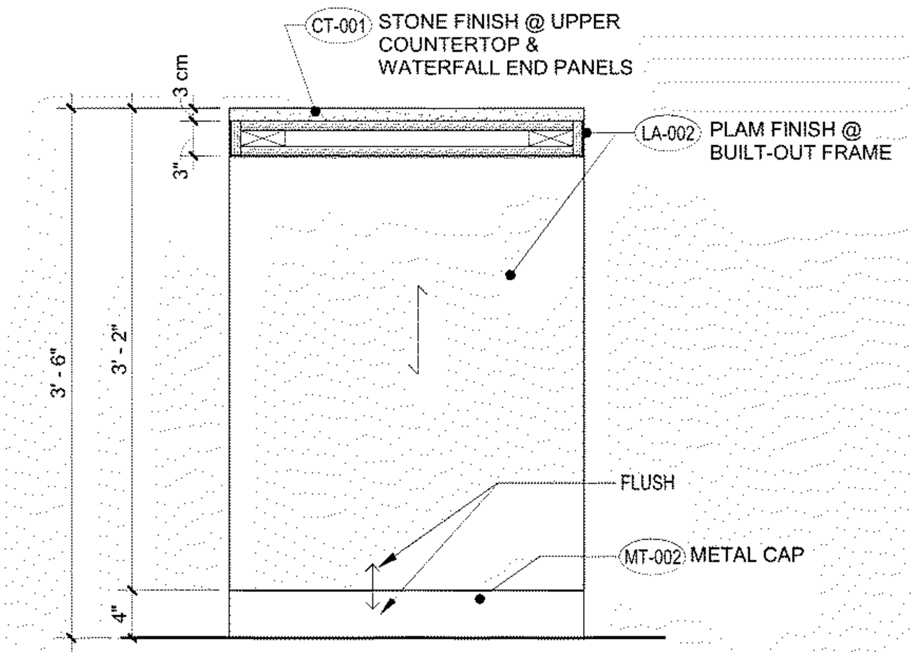
SHEET NUMBER:

A-715

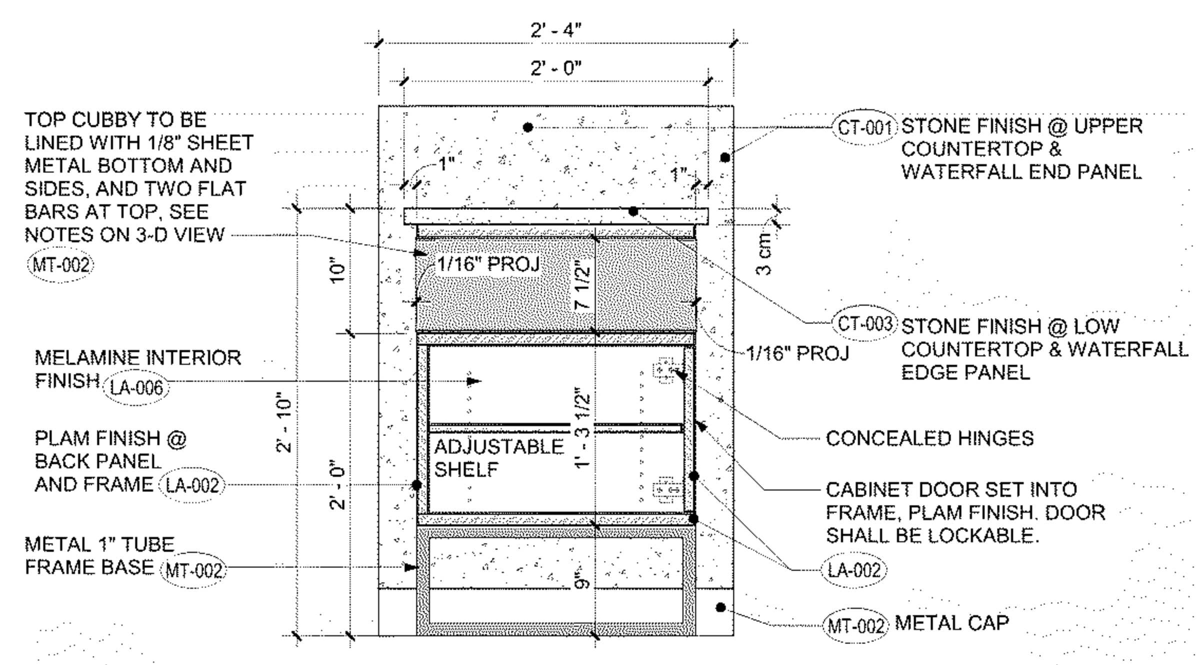
-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED



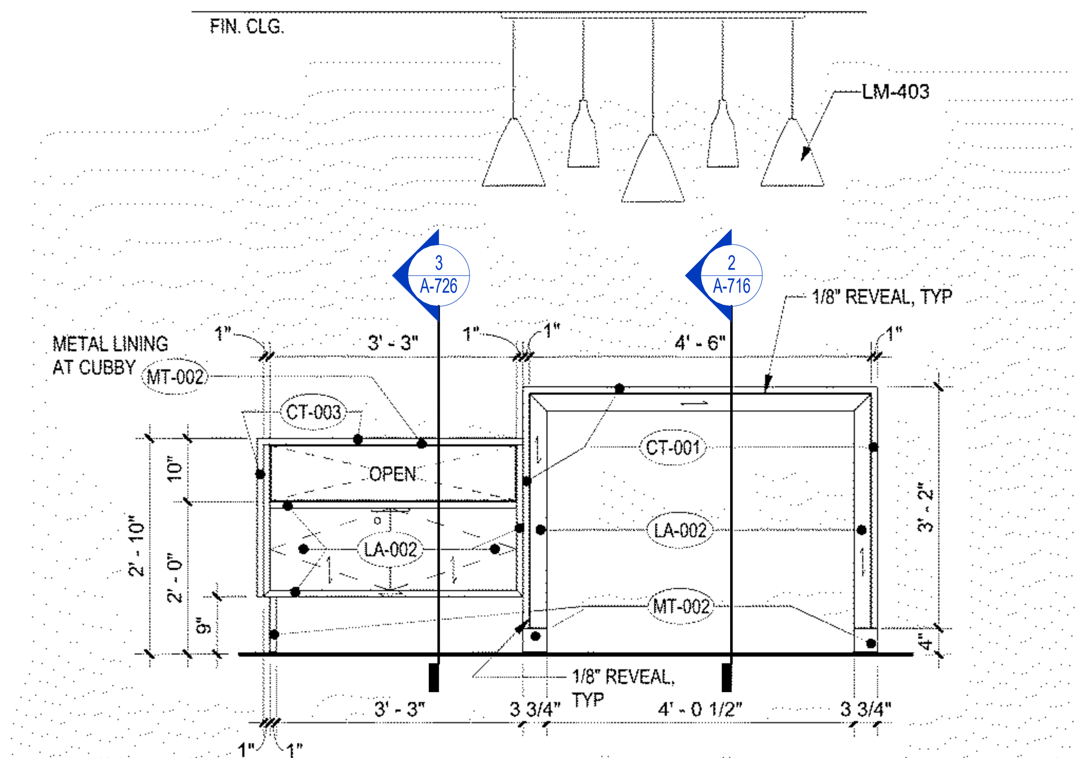
1 BUFFET ISLAND-3D-REAR
1/2" = 1'-0"



2 BUFFET ISLAND SECTION
1" = 1'-0"

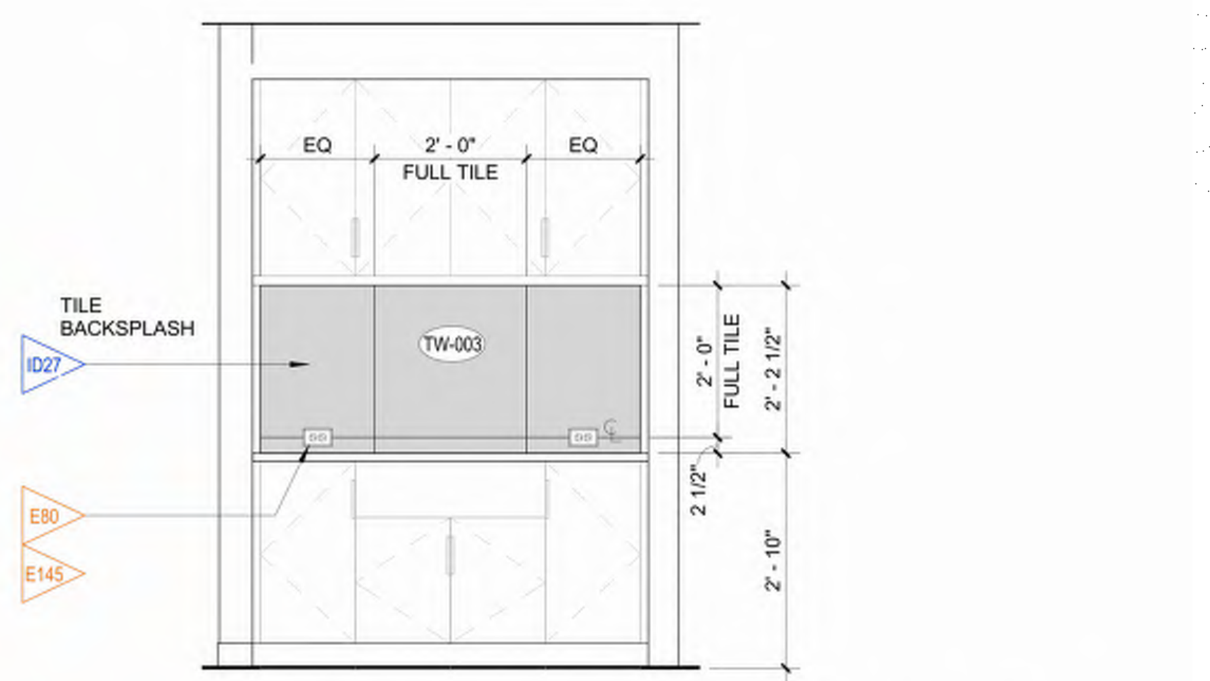


3 BUFFET ISLAND SECTION 2
1" = 1'-0"

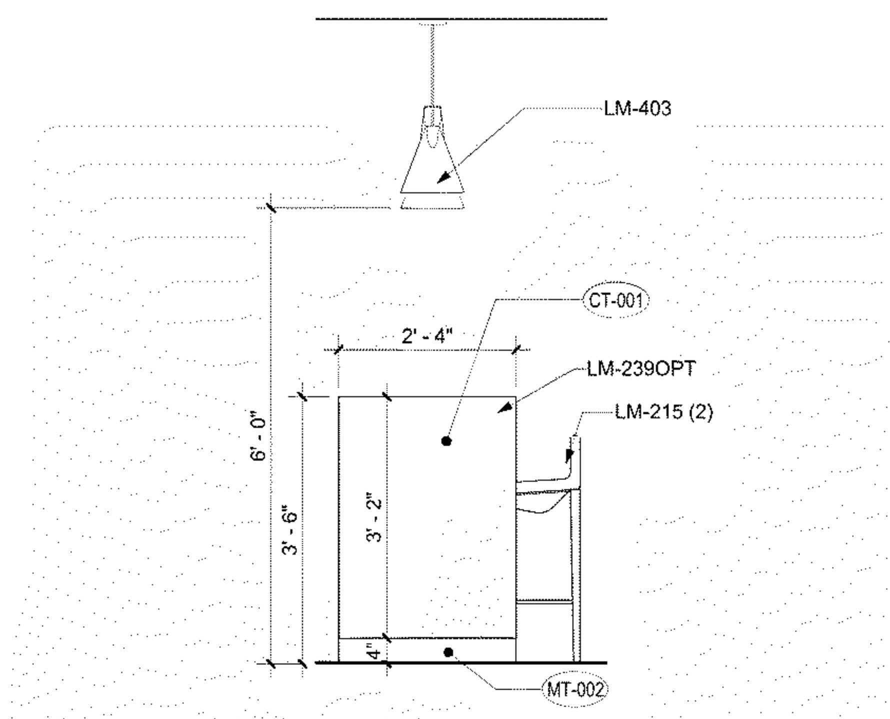


6 BUFFET ISLAND MILLWORK ELEVATION - REAR
1/2" = 1'-0"

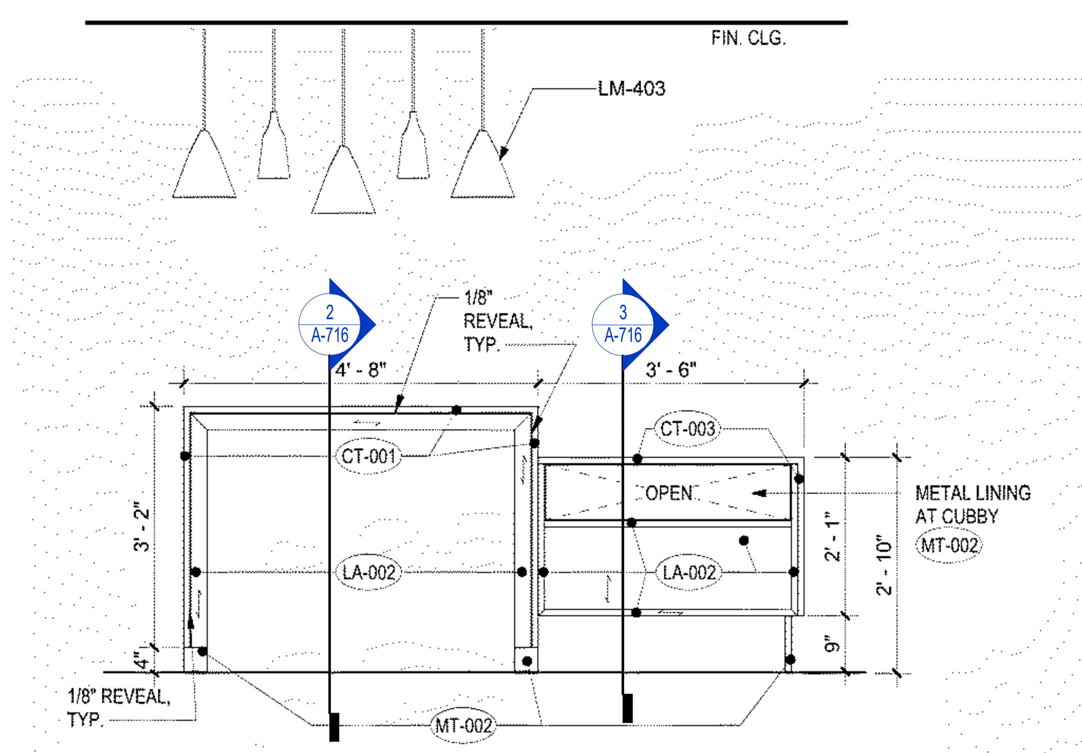
CHECK VIEW AT PAGE 402 IN PROTO



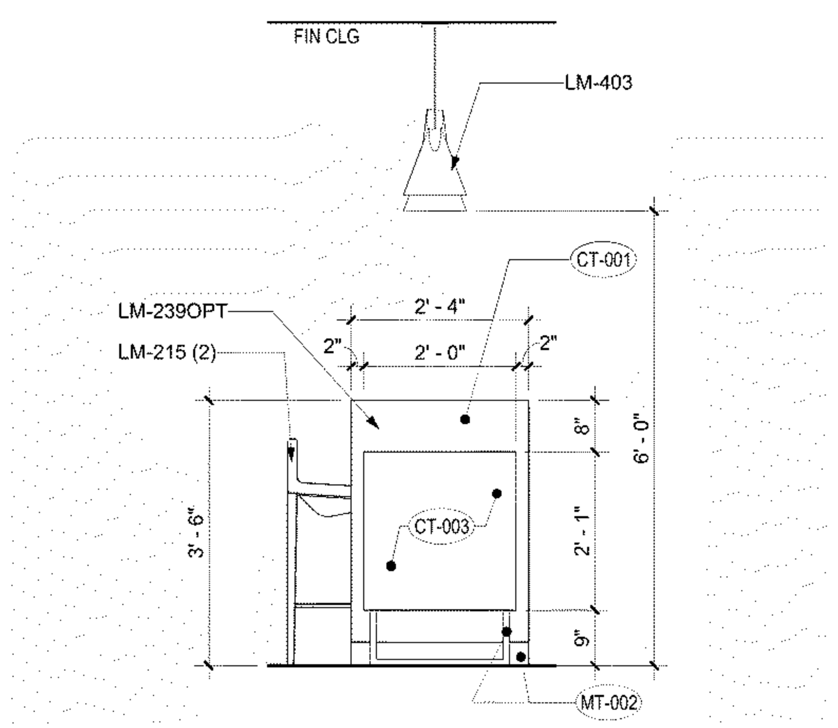
10 BUFFET ELEVATION FOR TILE LAYOUT 2
1/2" = 1'-0"



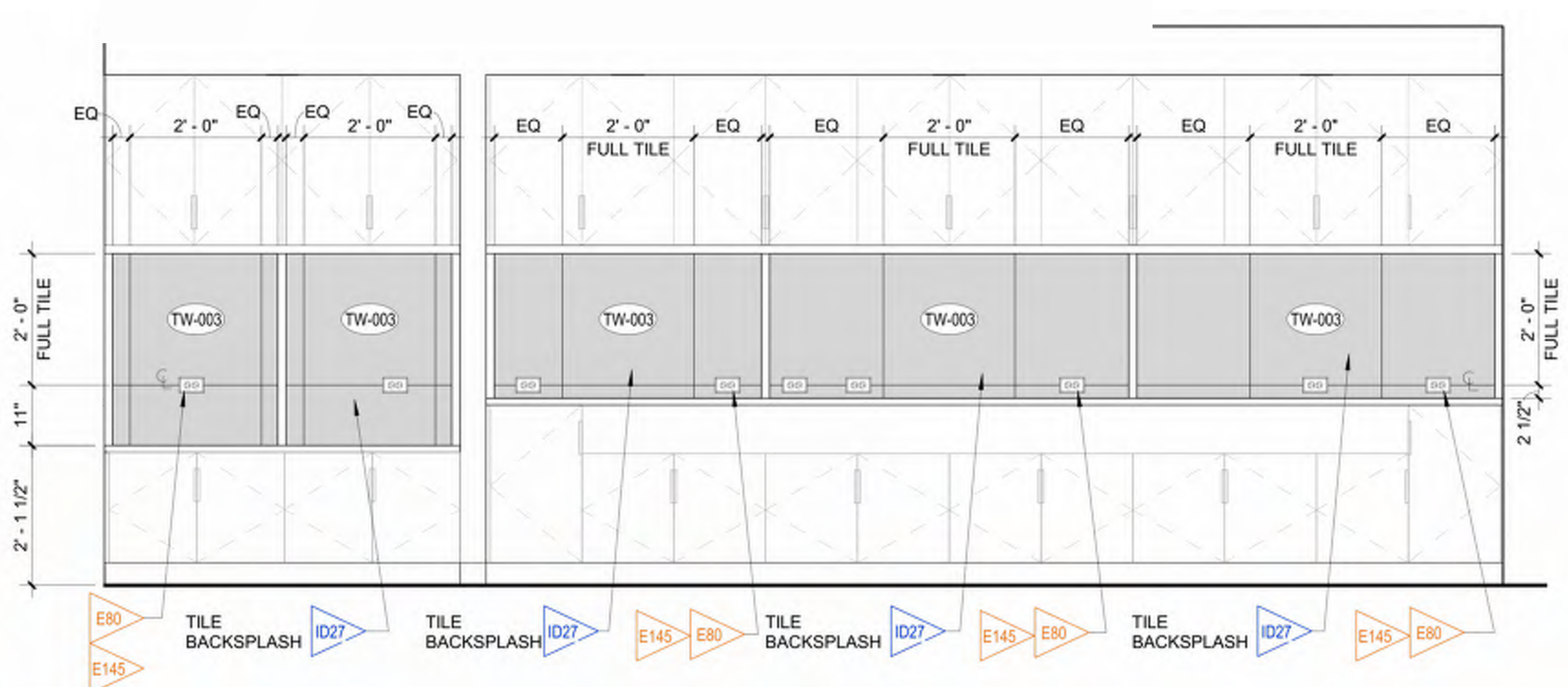
4 BUFFET ISLAND MILLWORK ELEVATION - END
1/2" = 1'-0"



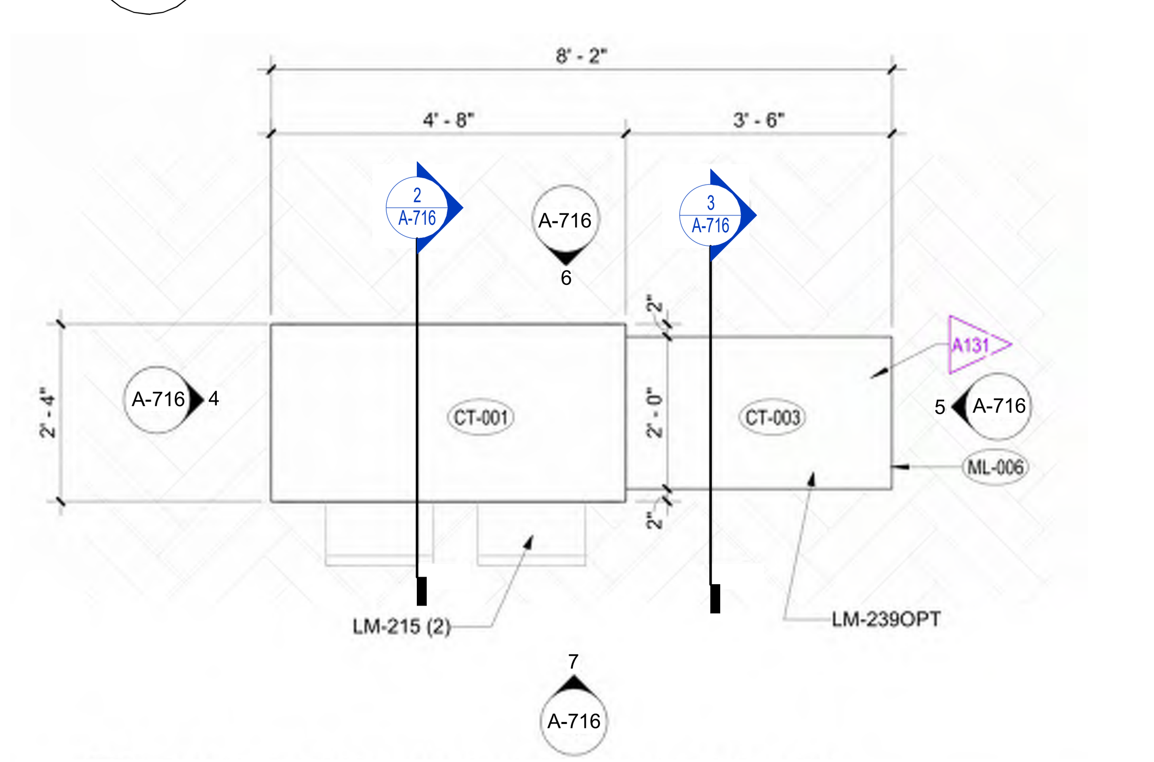
7 BUFFET ISLAND MILLWORK ELEVATION - FRONT
1/2" = 1'-0"



5 BUFFET ISLAND MILLWORK ELEVATION - END 2
1/2" = 1'-0"



9 BUFFET ELEVATION FOR TILE LAYOUT
1/2" = 1'-0"



8 BUFFET ISLAND MILLWORK PLAN
1/2" = 1'-0"

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
BUFFET ISLAND

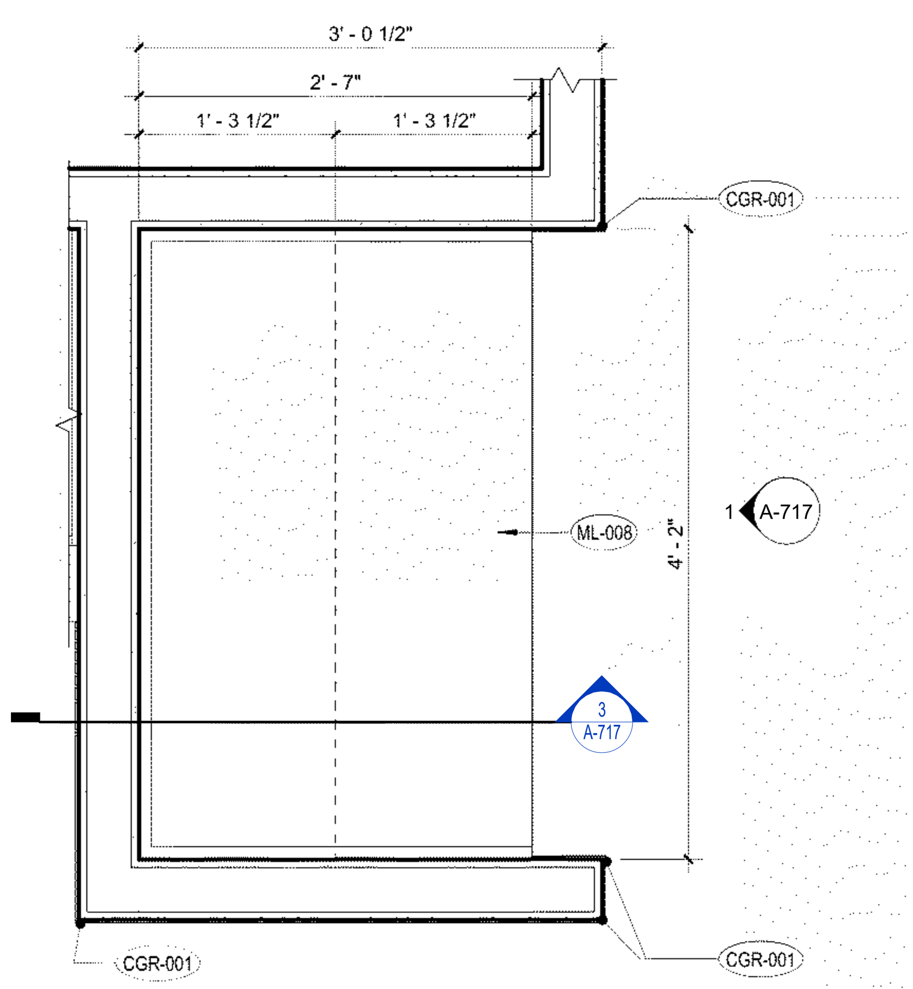
PROJECT NUMBER: 23098

SHEET NUMBER:

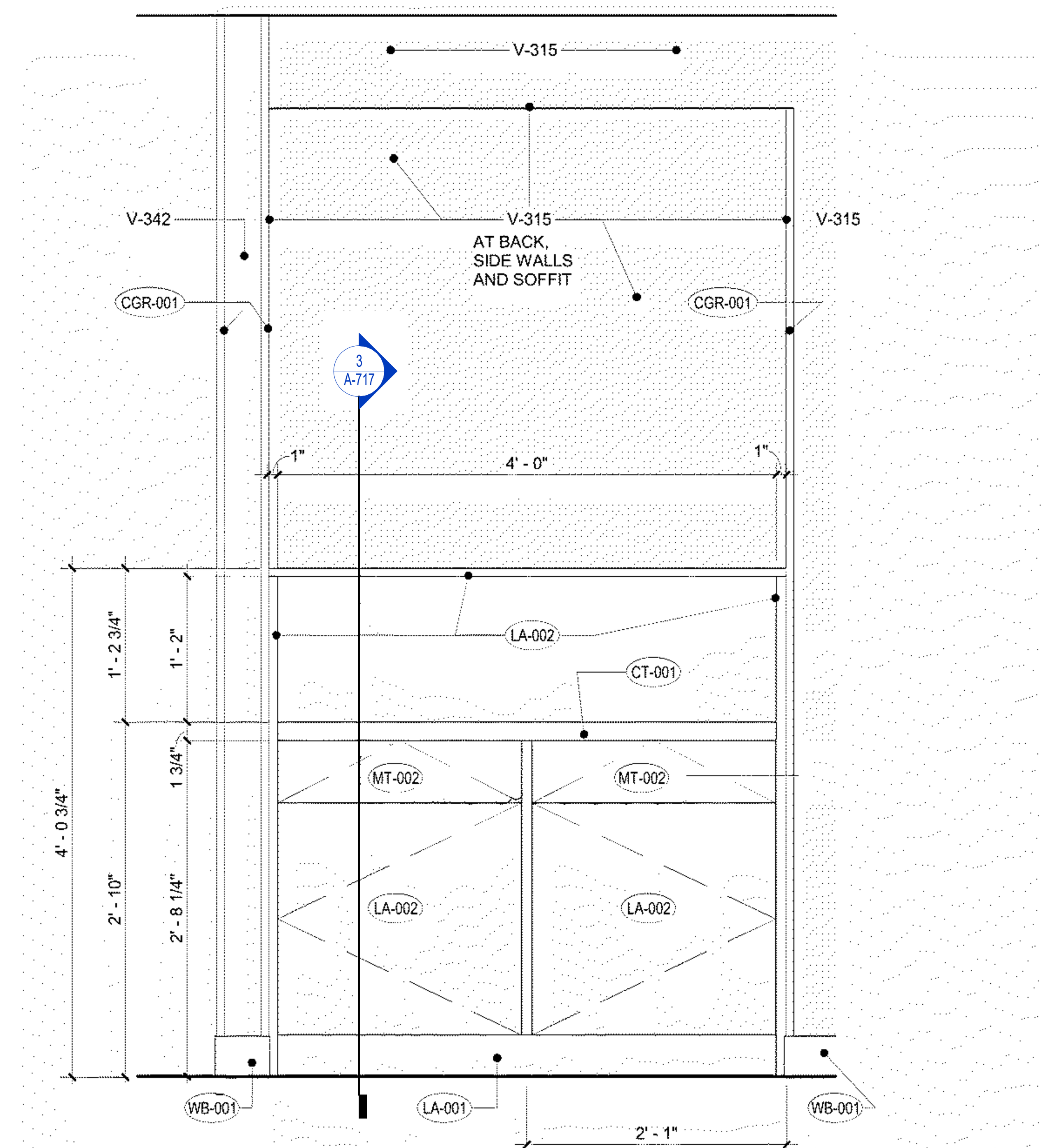
A-716

-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED

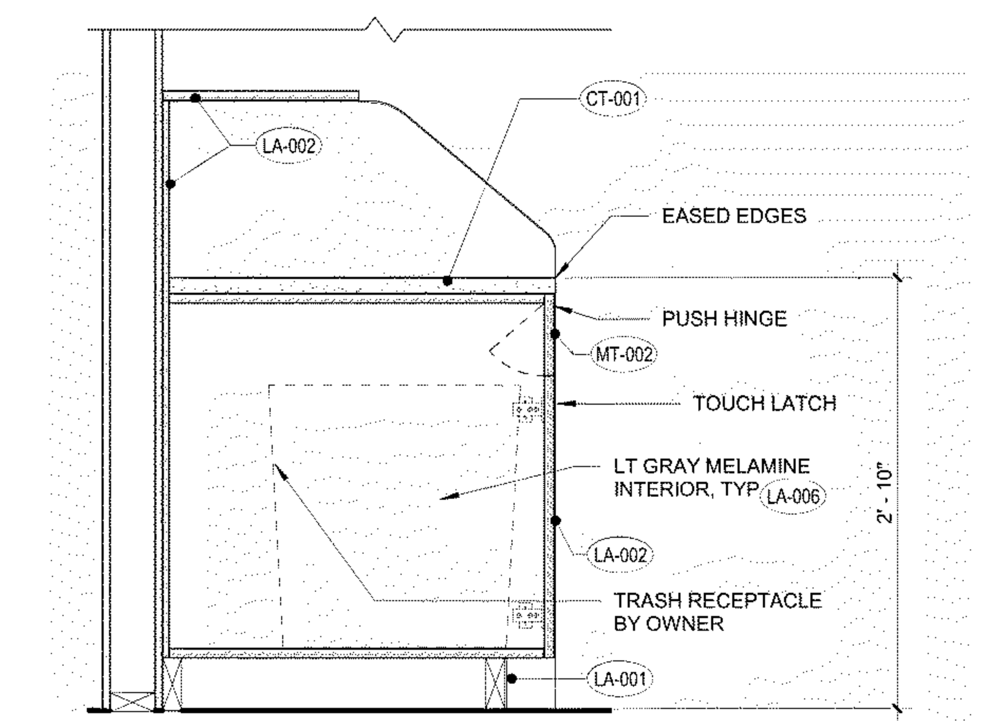
-FOR GENERAL INFORMATION AND FINISHES ONLY.
-SEE FOOD SERVICE AND MEP PLANS FOR ADDITIONAL FOOD PREP INFO.



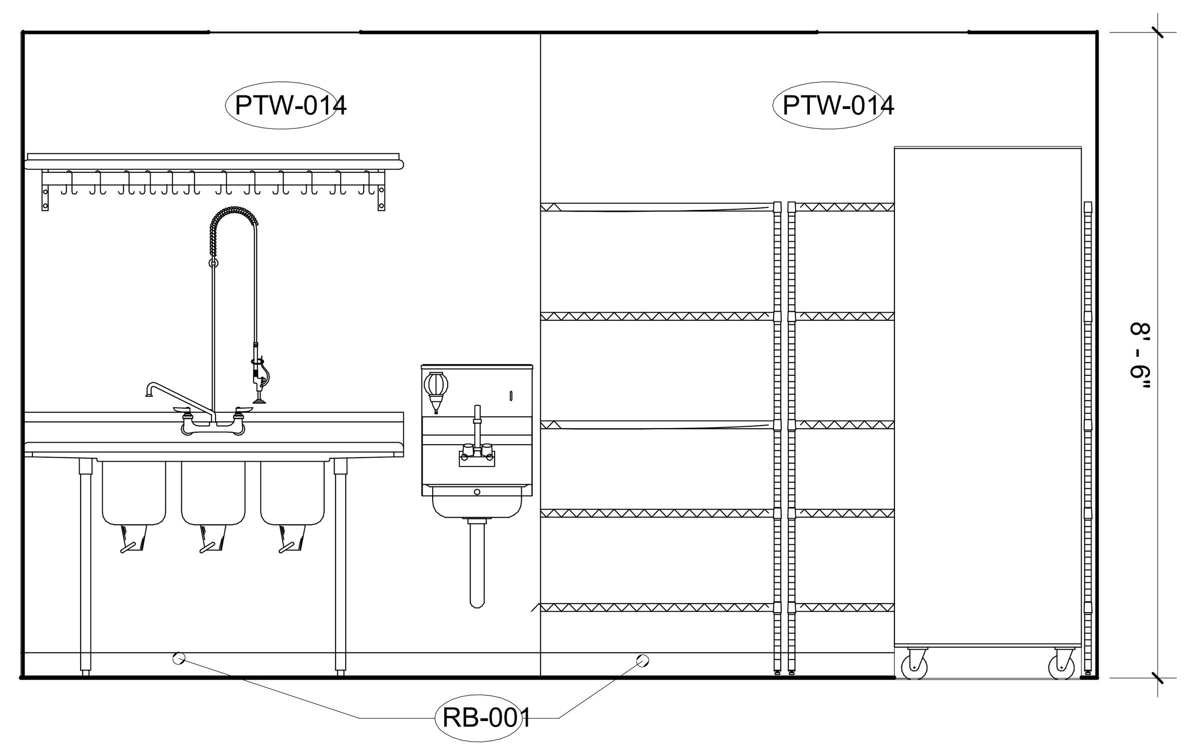
2 BUSSING STATION PLAN
1/2" = 1'-0"



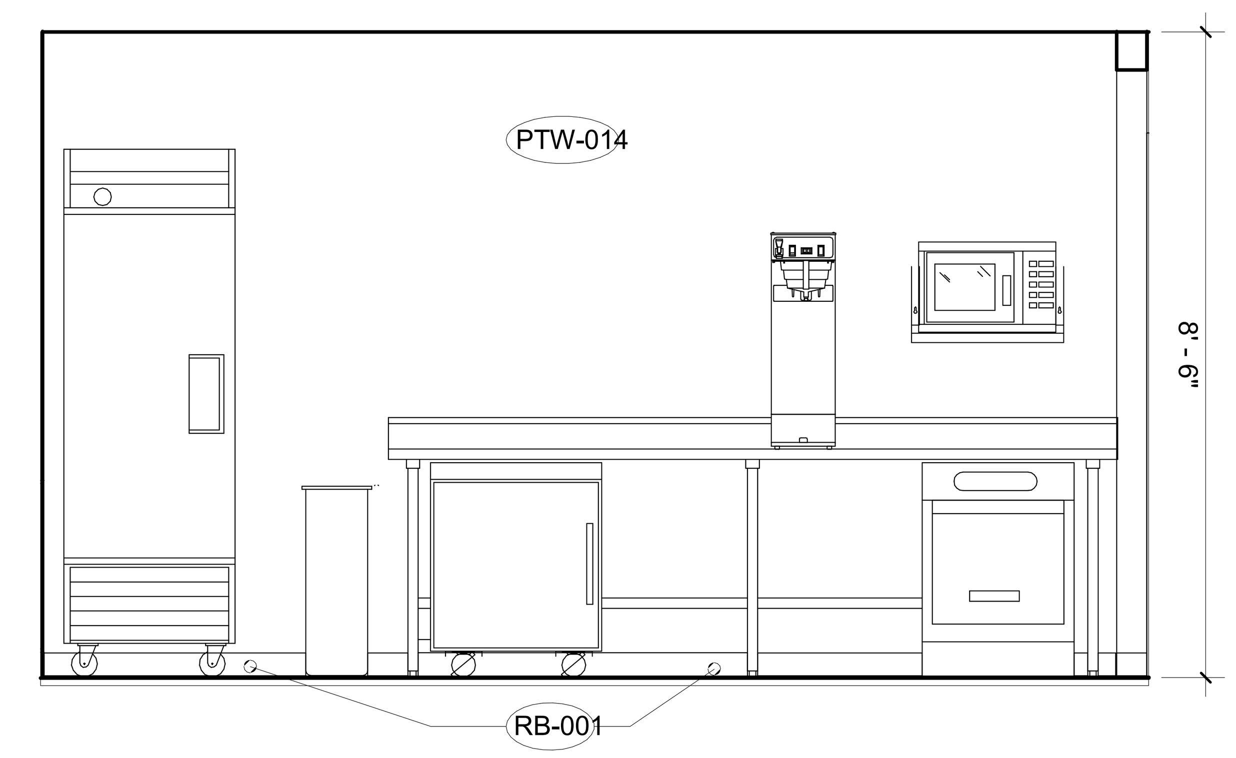
1 BUSSING STATION ELEVATION
1" = 1'-0"



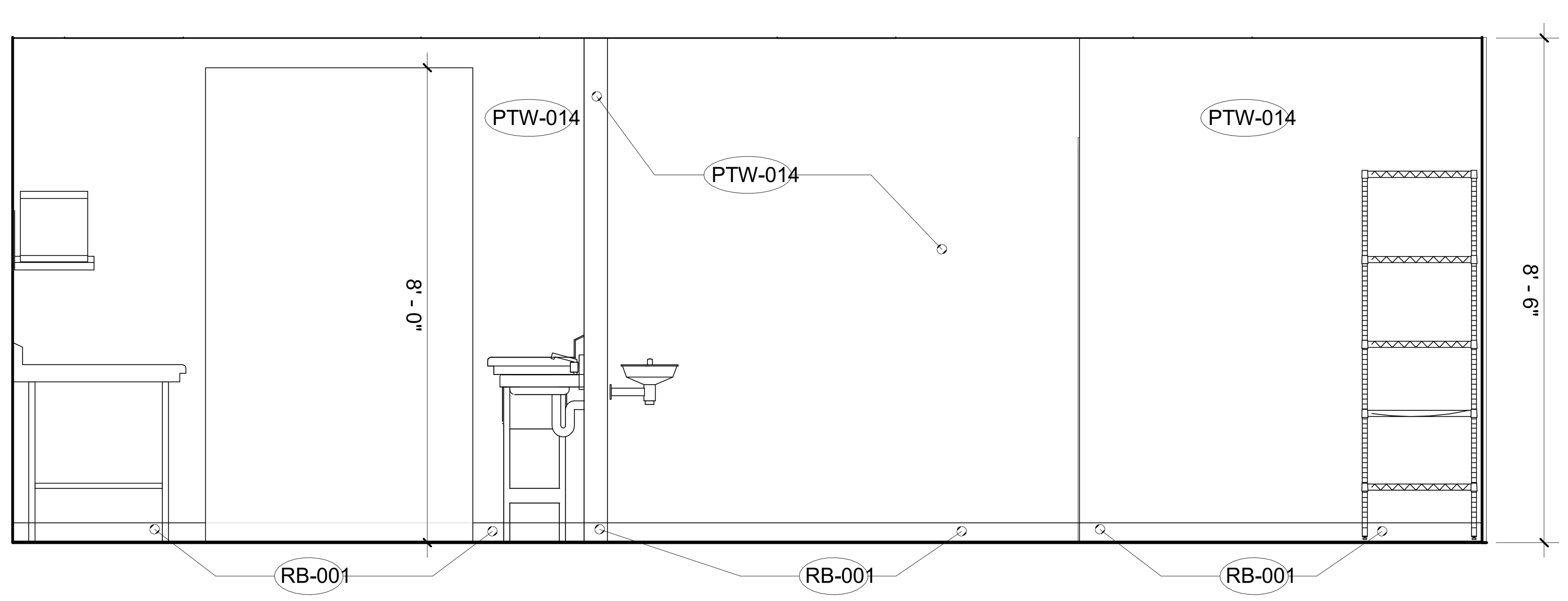
3 BUSSING STATION SECTION
1/2" = 1'-0"



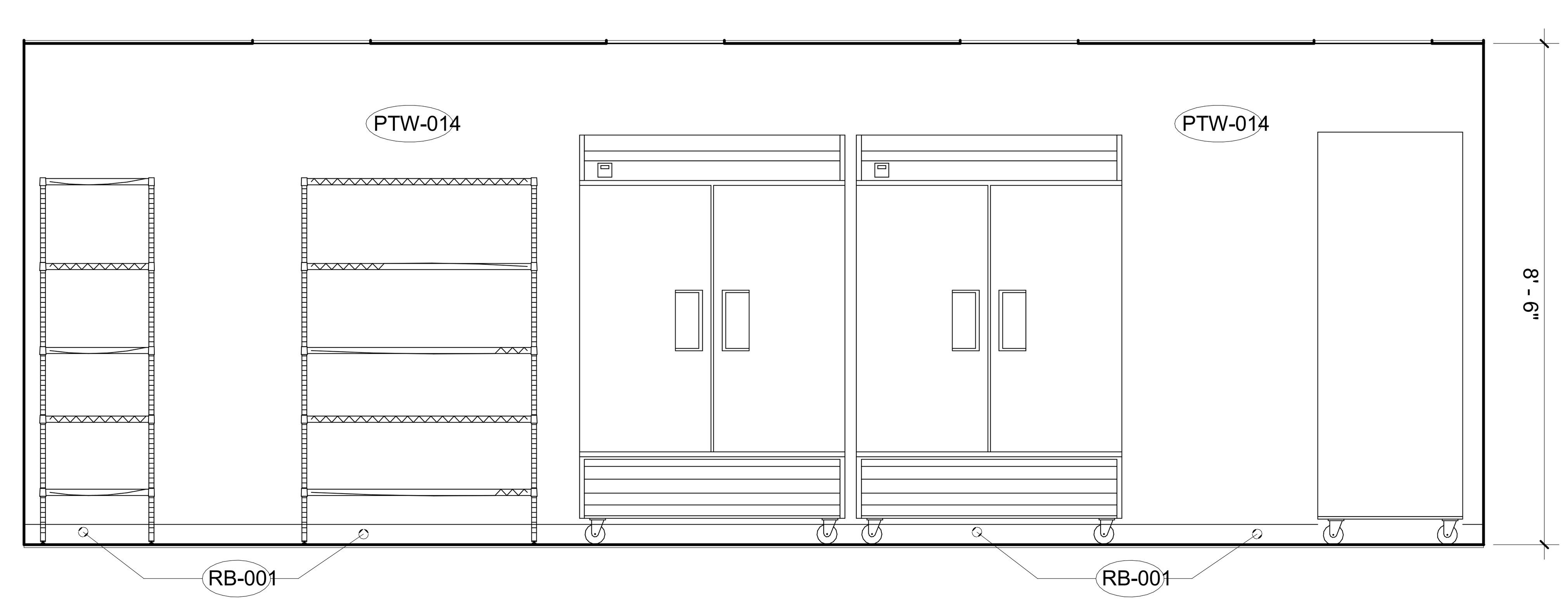
4 FOOD PREP ELEVATION
1/2" = 1'-0"



5 FOOD PREP ELEVATION 2
1/2" = 1'-0"



7 FOOD PREP ELEVATION 4
1/2" = 1'-0"



6 FOOD PREP ELEVATION 3
1/2" = 1'-0"

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01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
FOOD PREP & BUSSING STATION

PROJECT NUMBER: 23098

SHEET NUMBER:

A-717

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

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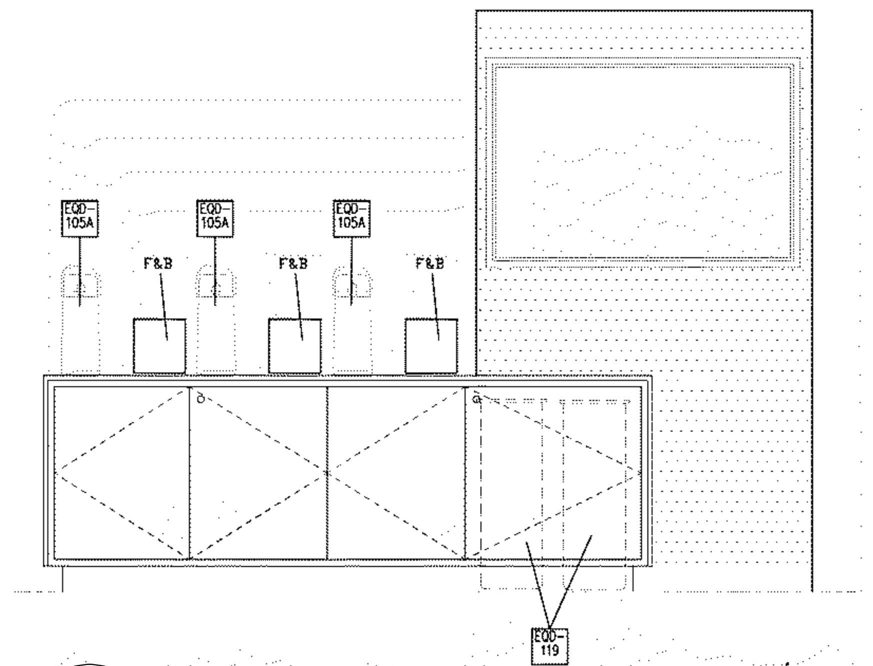
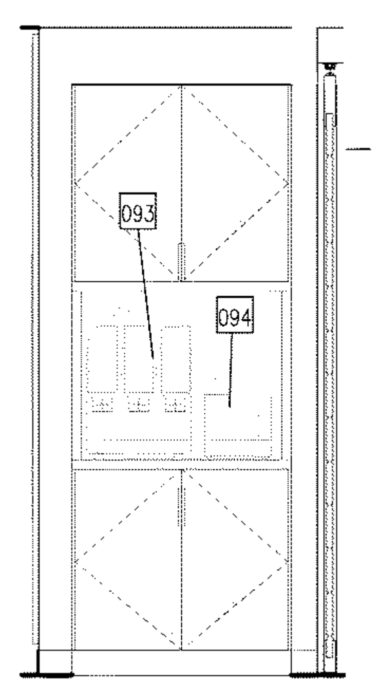
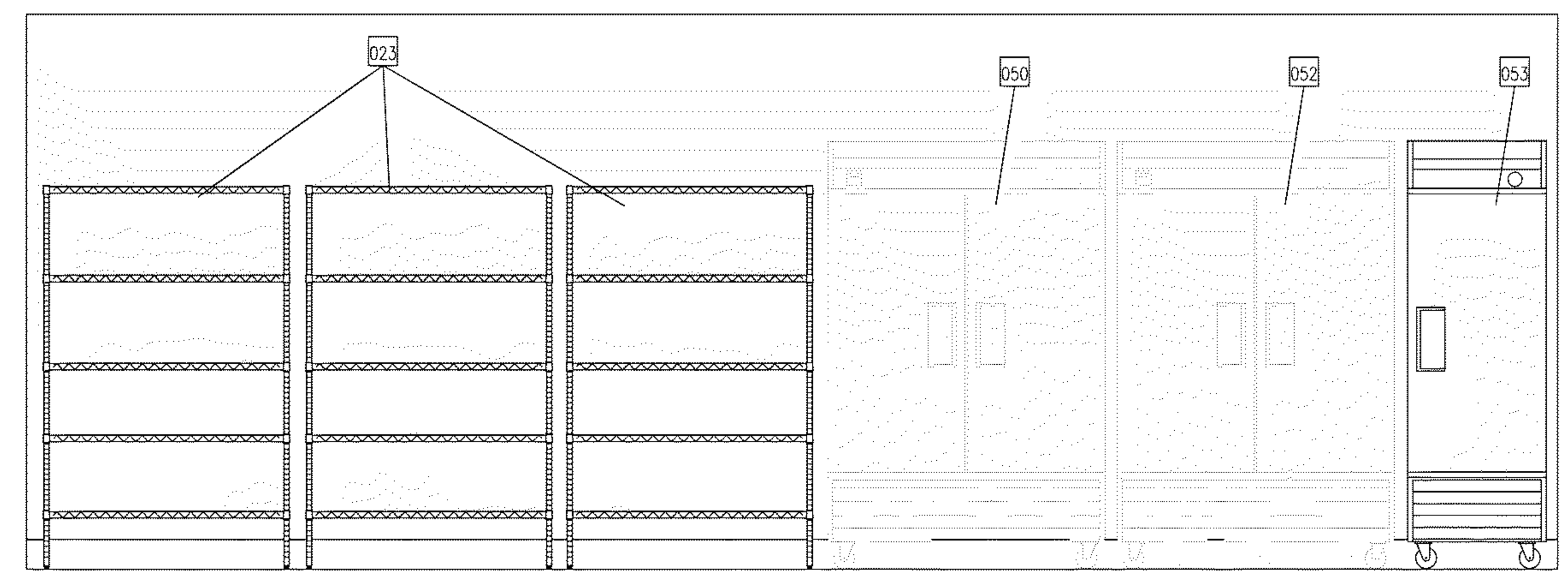


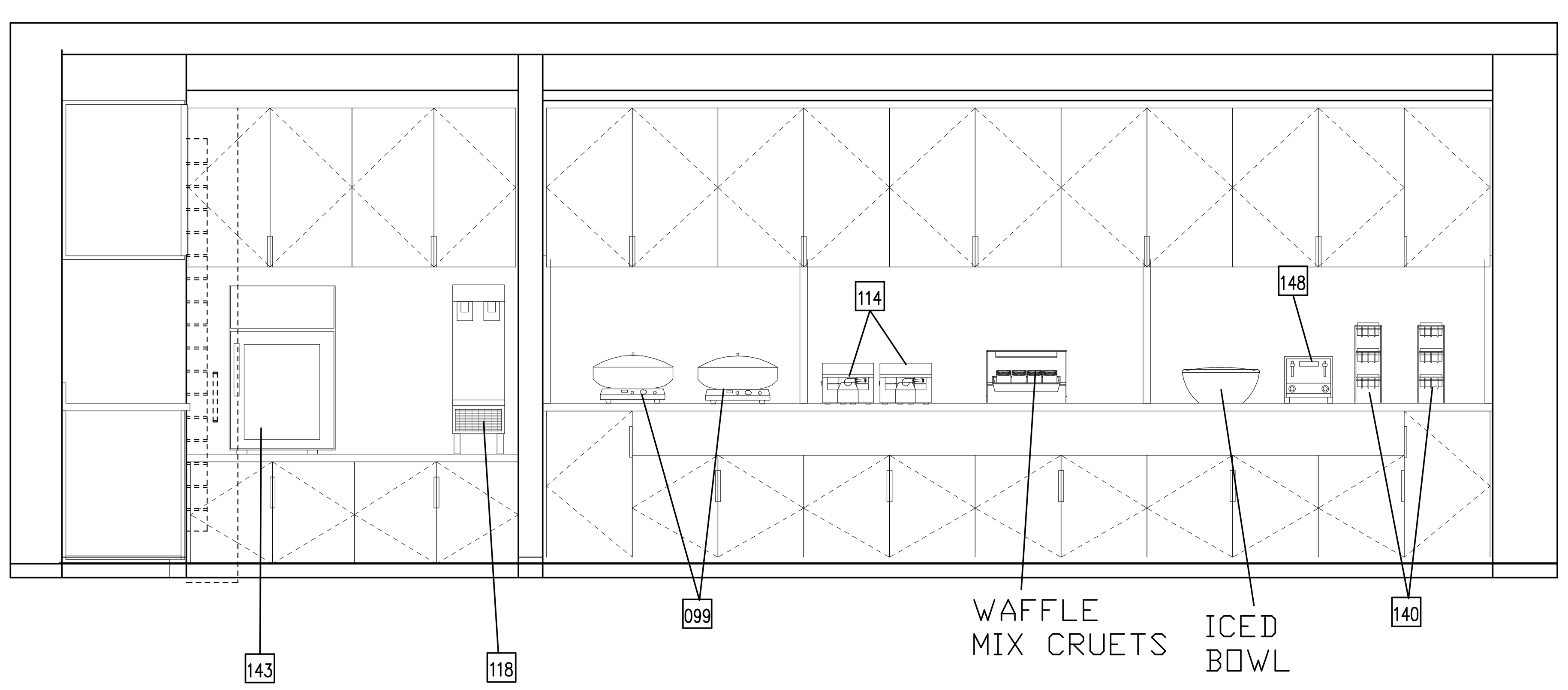
1 ON US
1/2" = 1'-0"



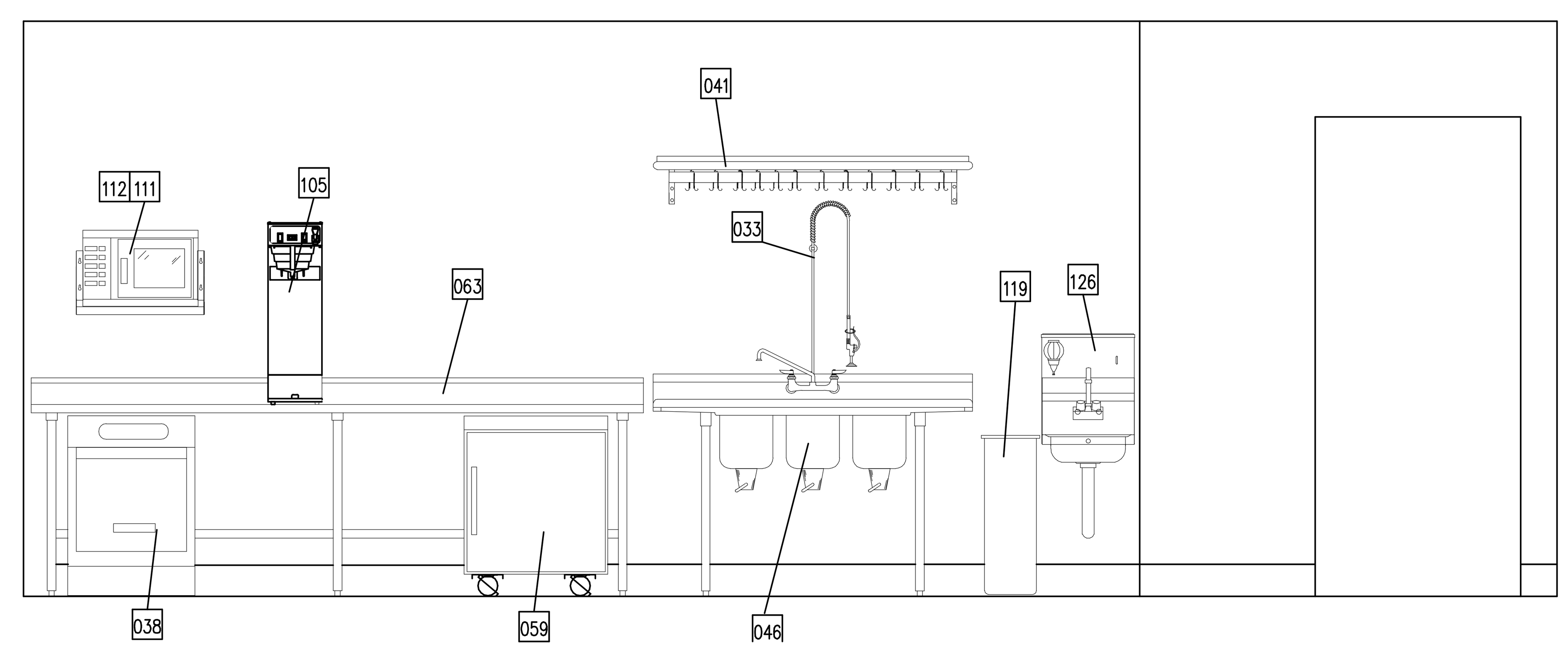
2 BUFFET
1/2" = 1'-0"



3 STORAGE
1/2" = 1'-0"



4 BUFFET 2
1/2" = 1'-0"



5 PREP AND POTWASHING
1/2" = 1'-0"

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1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

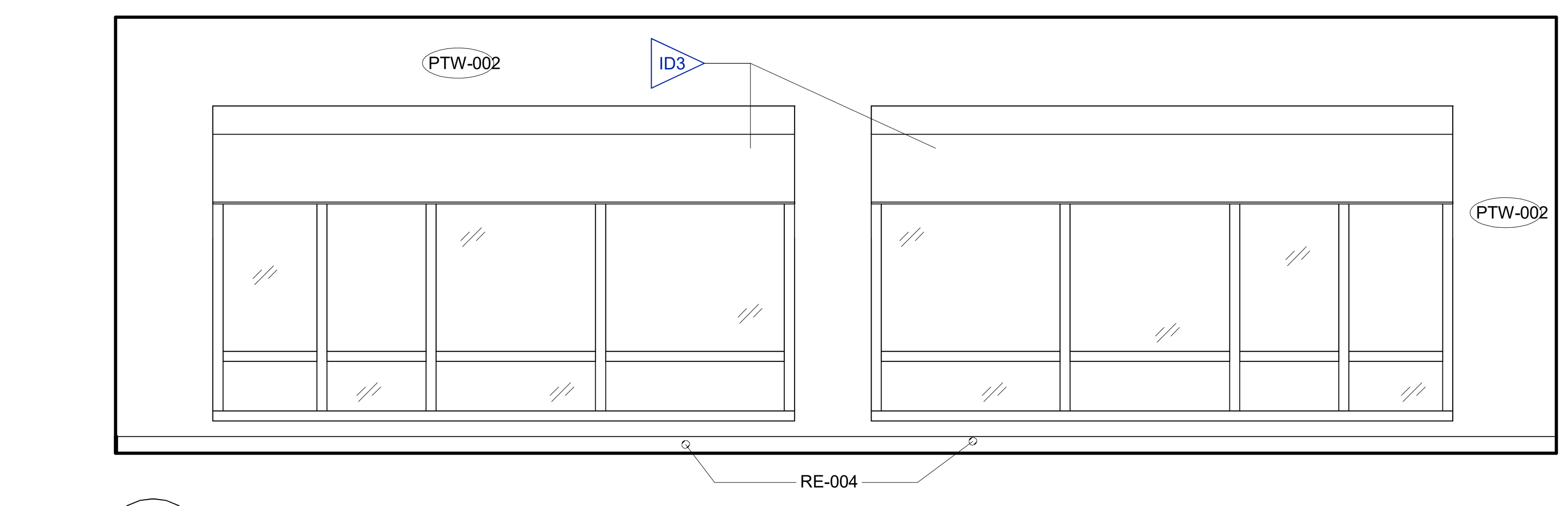
SHEET TITLE
BUFFET

PROJECT NUMBER: 23098

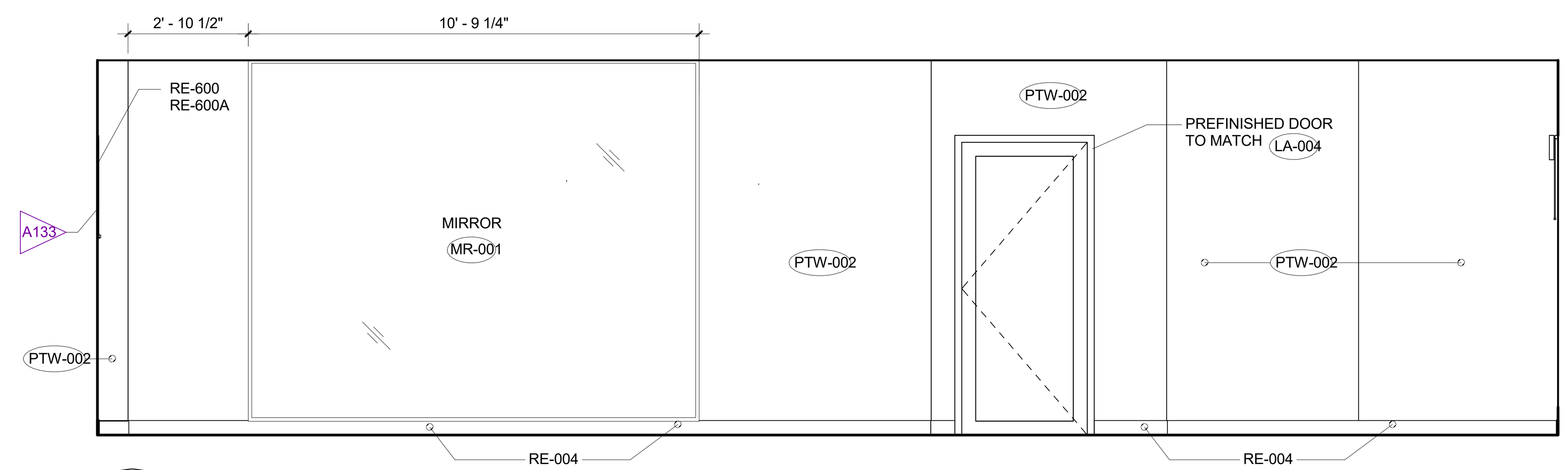
SHEET NUMBER:

A-718

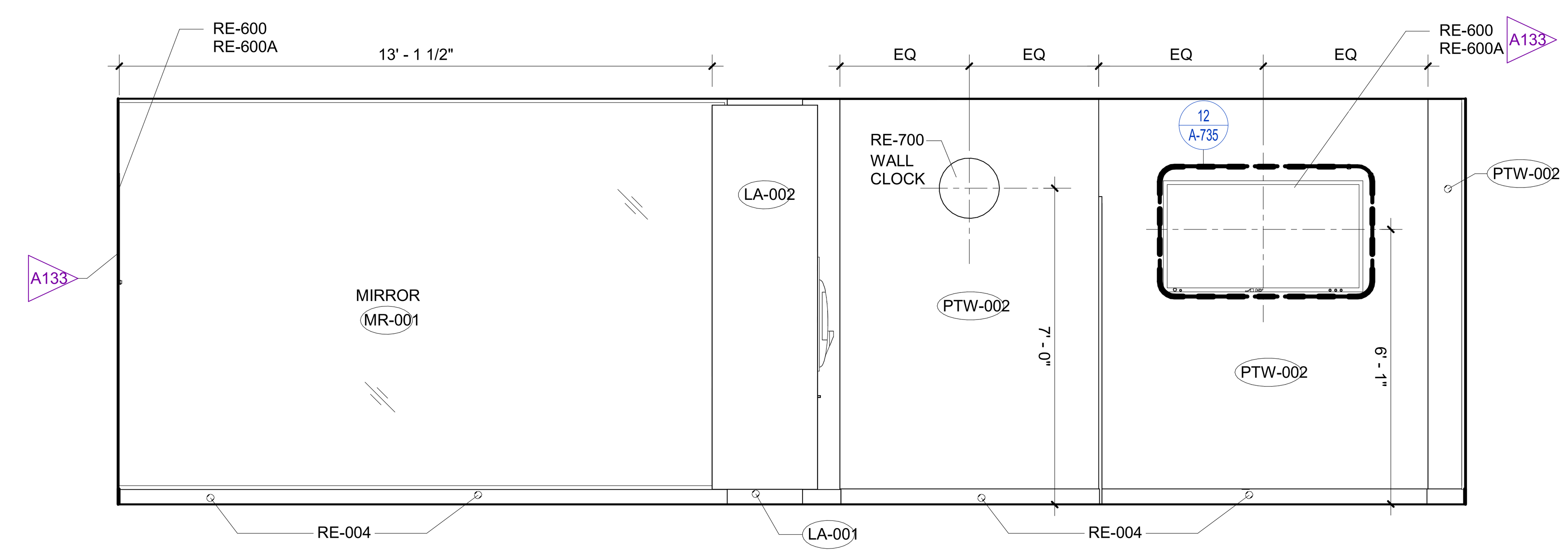
-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED



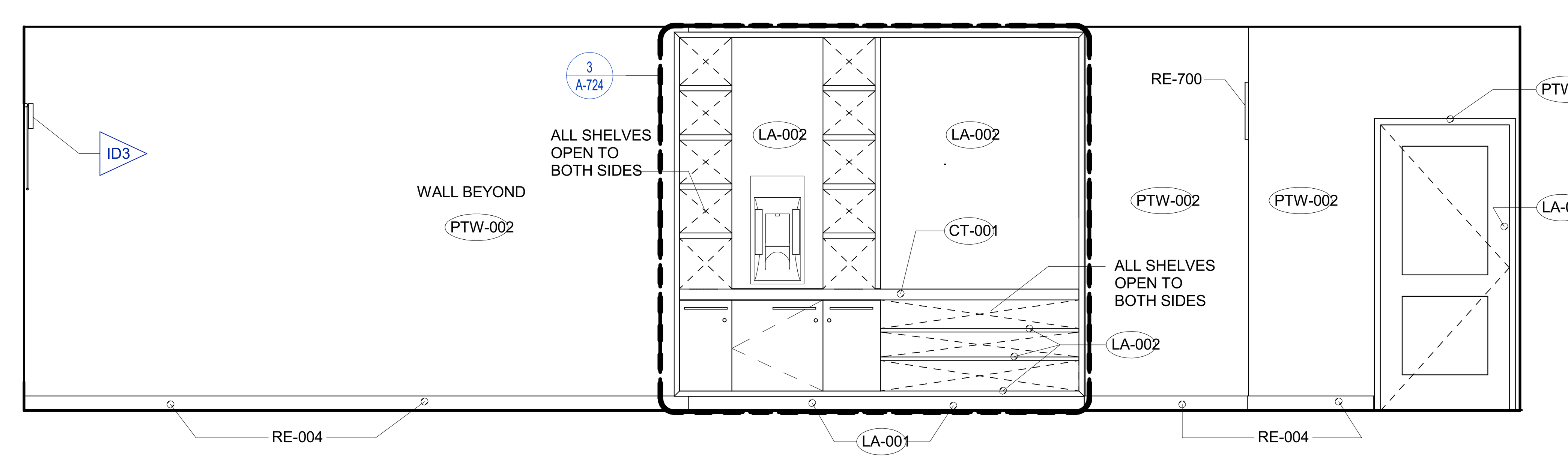
1 FITNESS CENTER ELEVATION
3/8" = 1'-0"



2 FITNESS CENTER ELEVATION 2
3/8" = 1'-0"



3 FITNESS CENTER ELEVATION 3
3/8" = 1'-0"



4 FITNESS CENTER ELEVATION 4
3/8" = 1'-0"

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
FITNESS CENTER

PROJECT NUMBER: 23098

SHEET NUMBER:

A-719

-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED

PRINTS ISSUED
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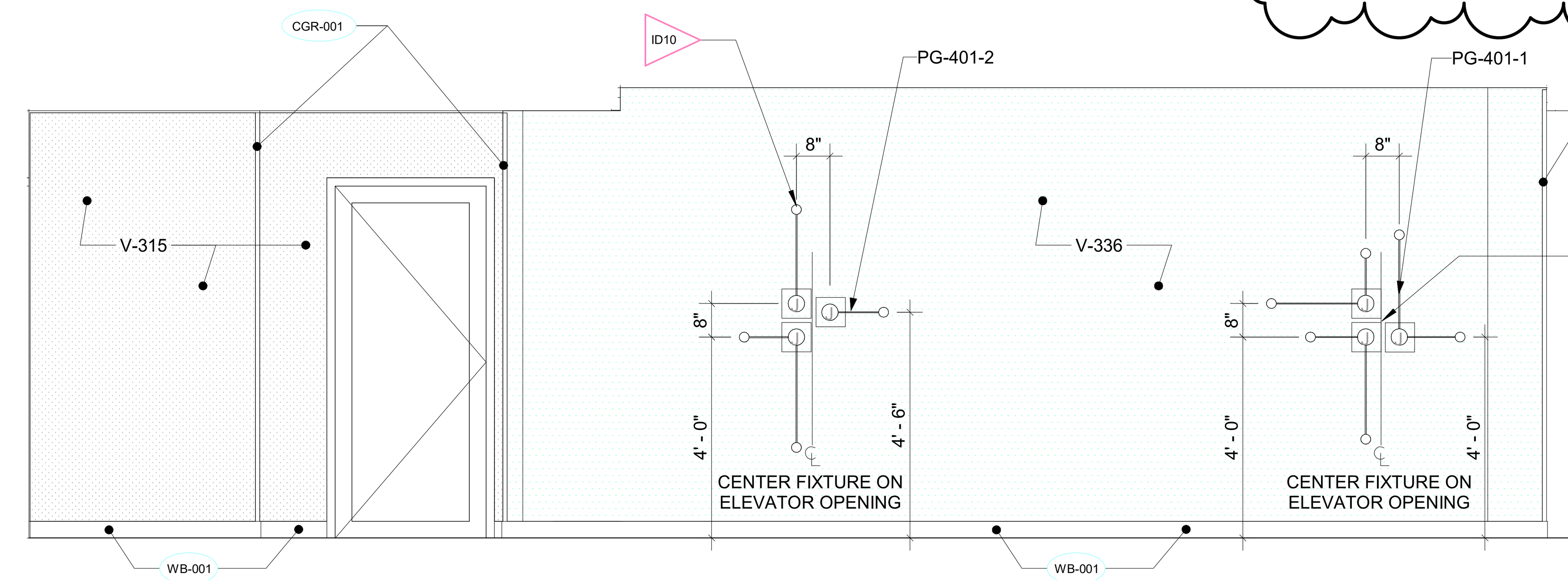
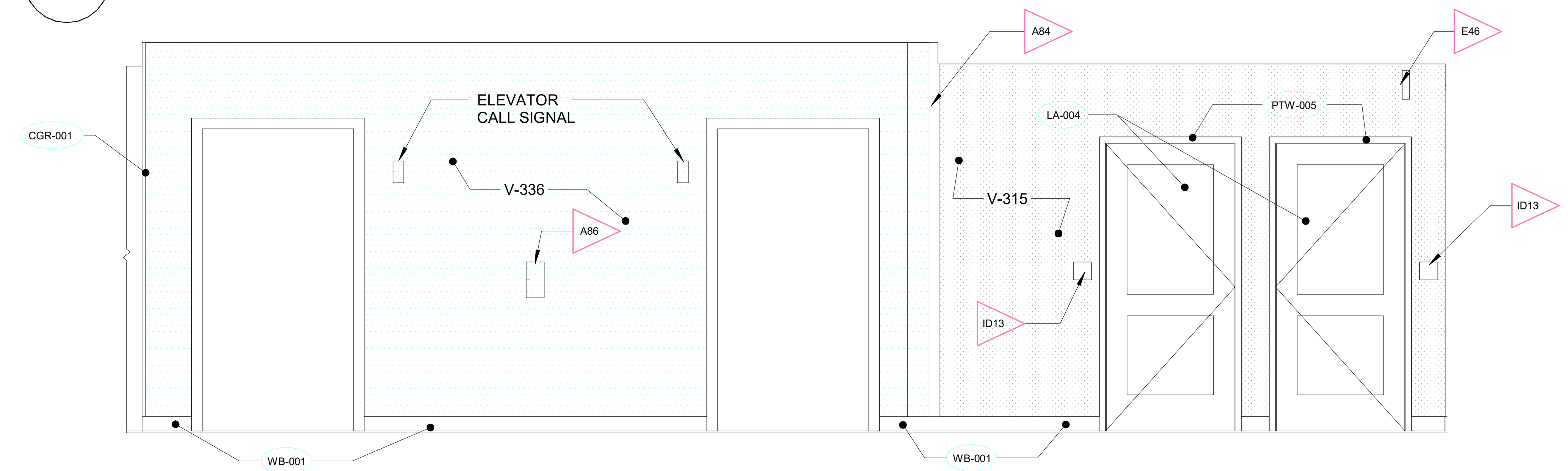
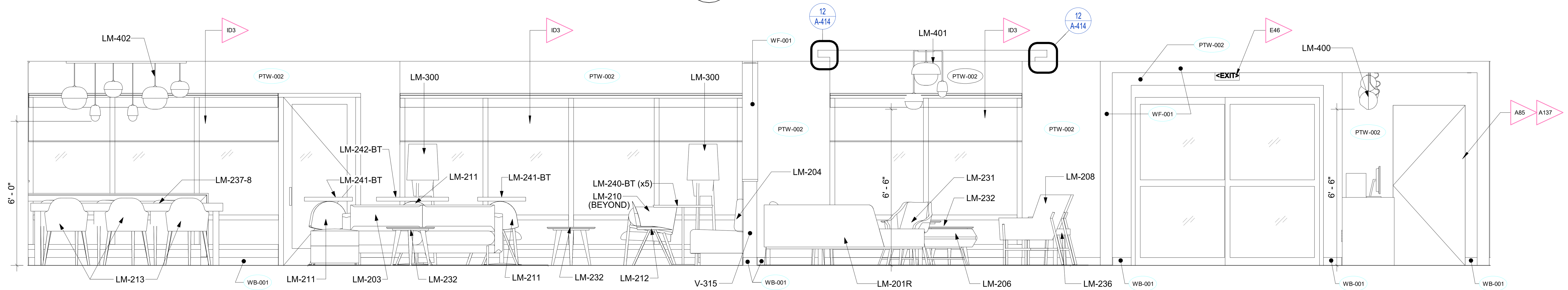
REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2



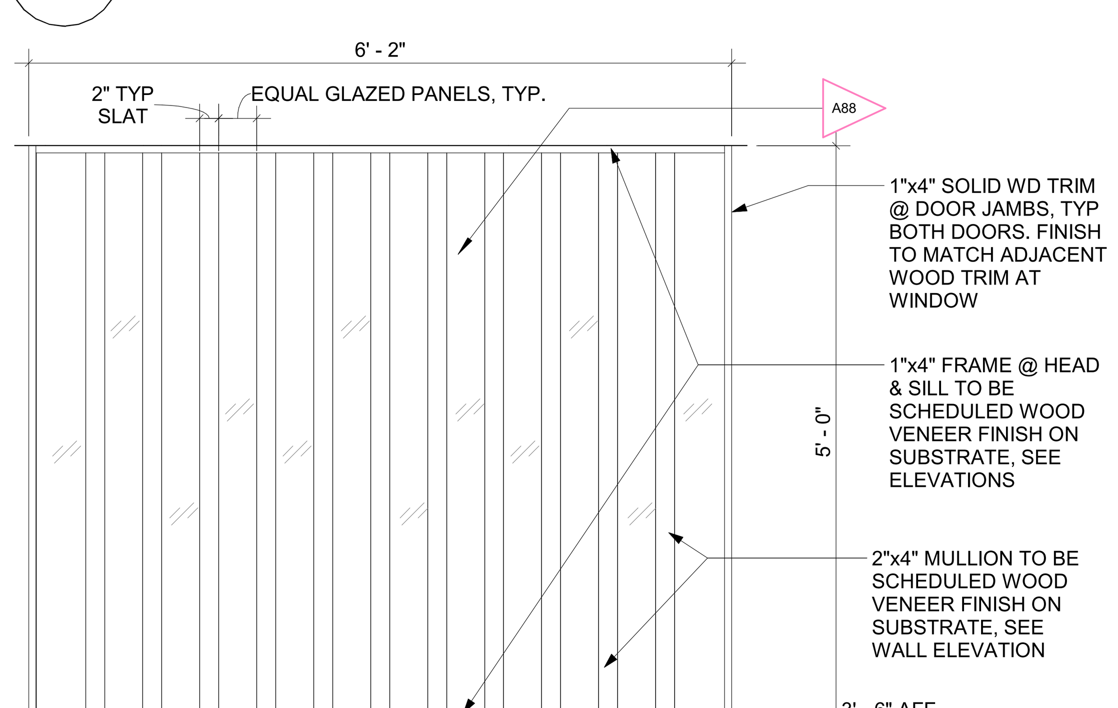
A4 ELEVATIOR LOBBY ELEVATION 2 - 1ST FLOOR
3/8" = 1'-0"



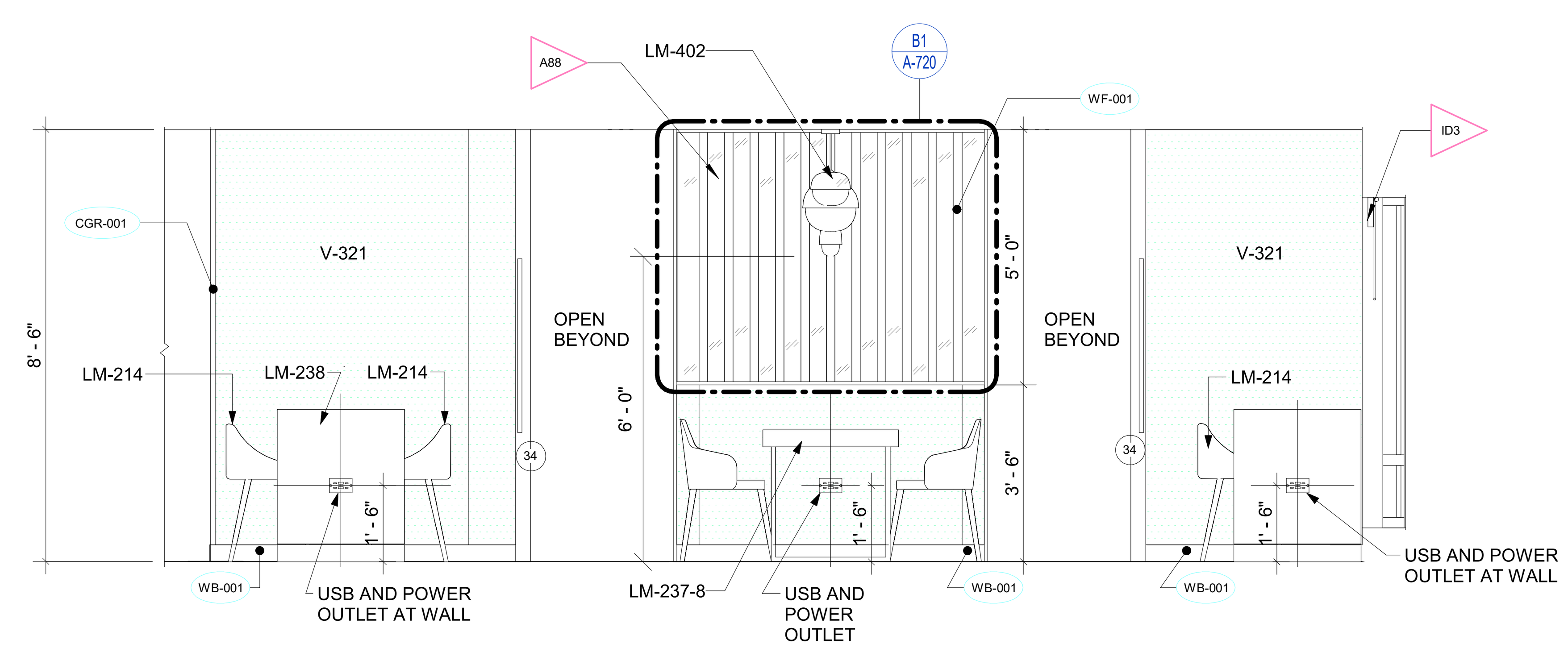
A3 ELEVATOR LOBBY ELEVATION 1 - 1ST FLOOR
3/8" = 1'-0"



B2 COMMUNITY ELEVATION 1
3/8" = 1'-0"



B1 WINDOW ELEVATION@ FLEX ROOM
3/4" = 1'-0"



A1 COMMUNITY ELEVATION 2
3/8" = 1'-0"

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7305
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

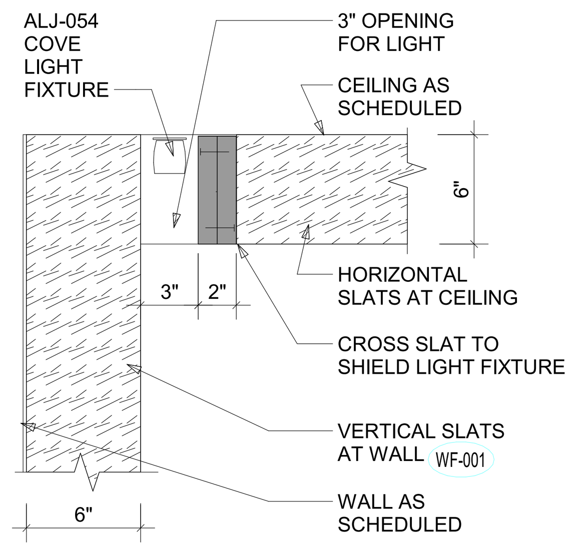
SHEET TITLE
LOBBY AREAS - INTERIOR ELEVATIONS

PROJECT NUMBER: 23098

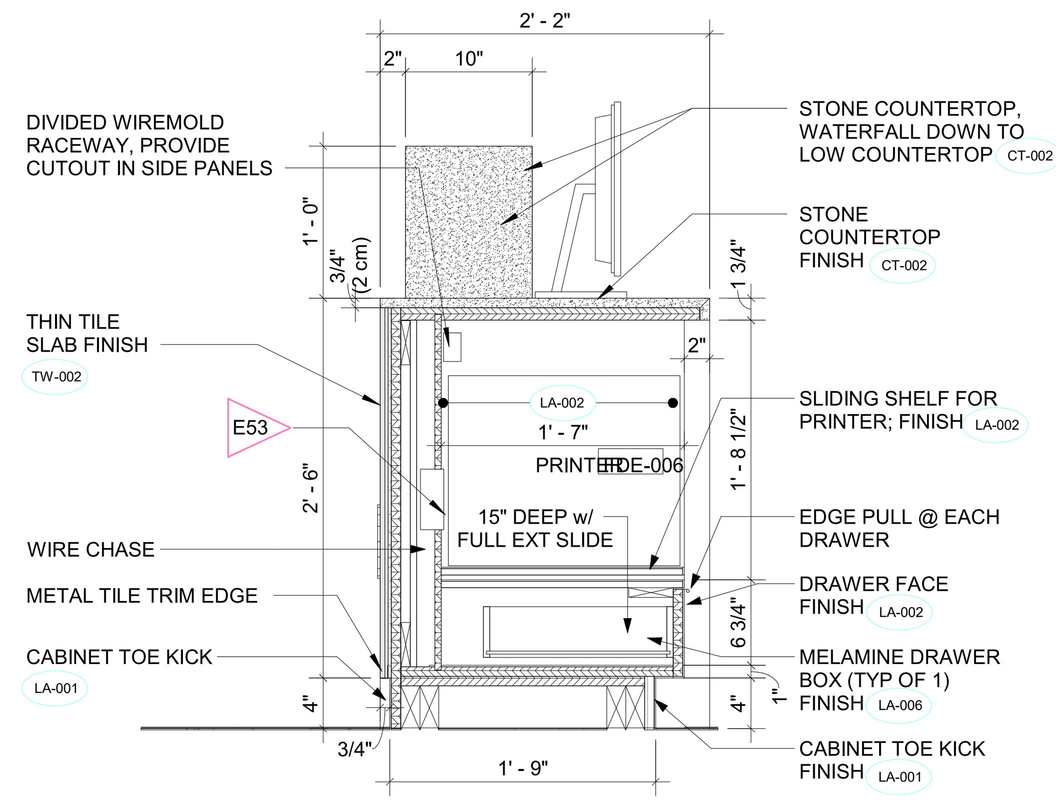
SHEET NUMBER:

A-720

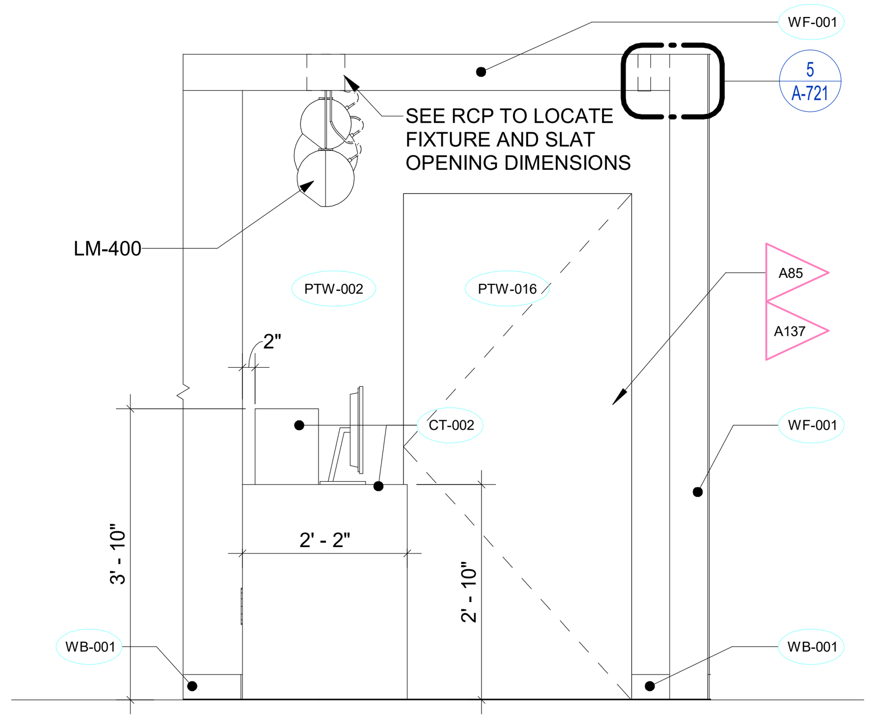
-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED



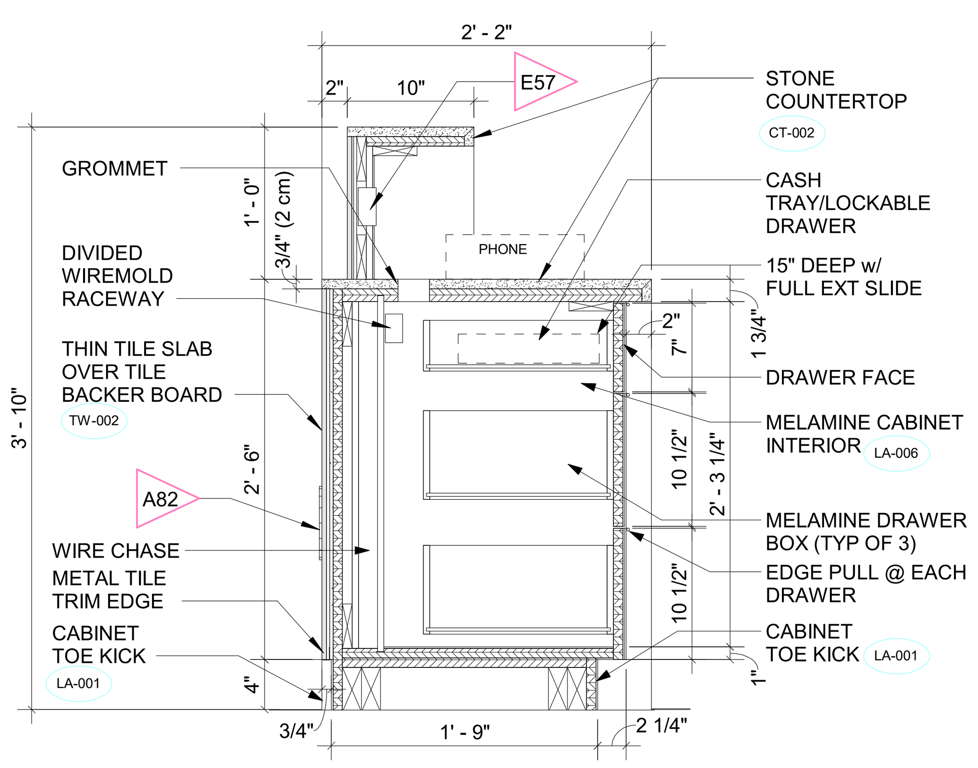
5 WELCOME DESK COVE LIGHTING
1 1/2" = 1'-0"



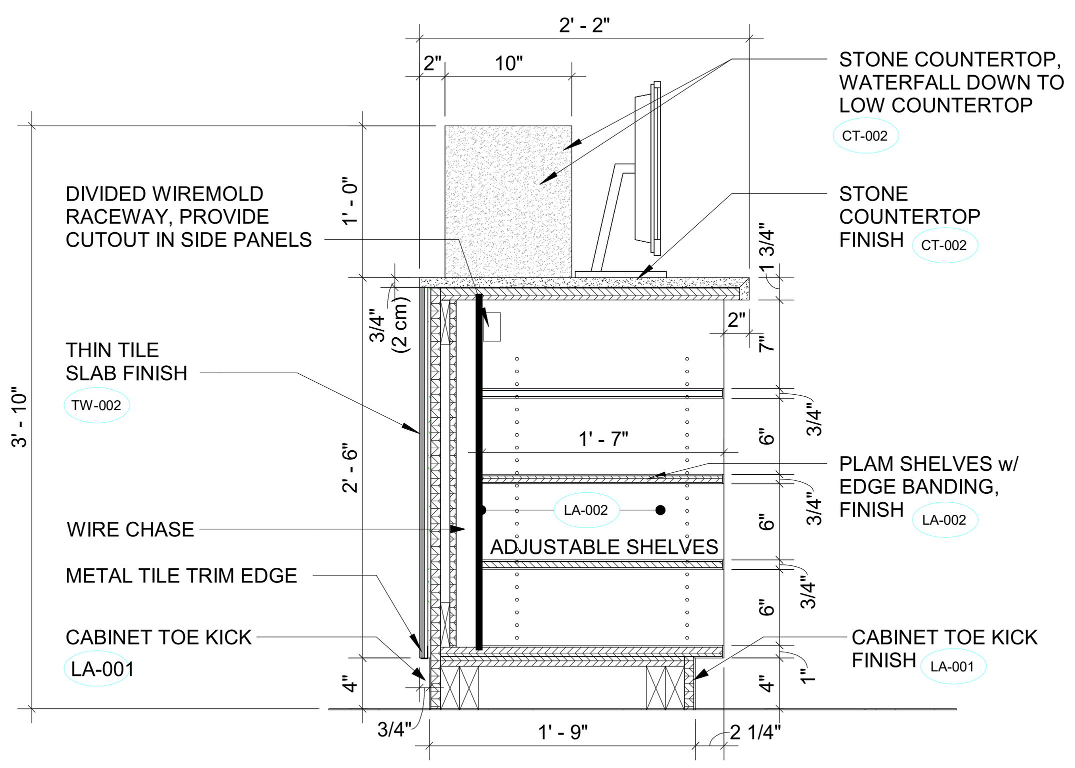
7 WELCOME DESK LOW COUNTER SECTION @ DRAWER
1" = 1'-0"



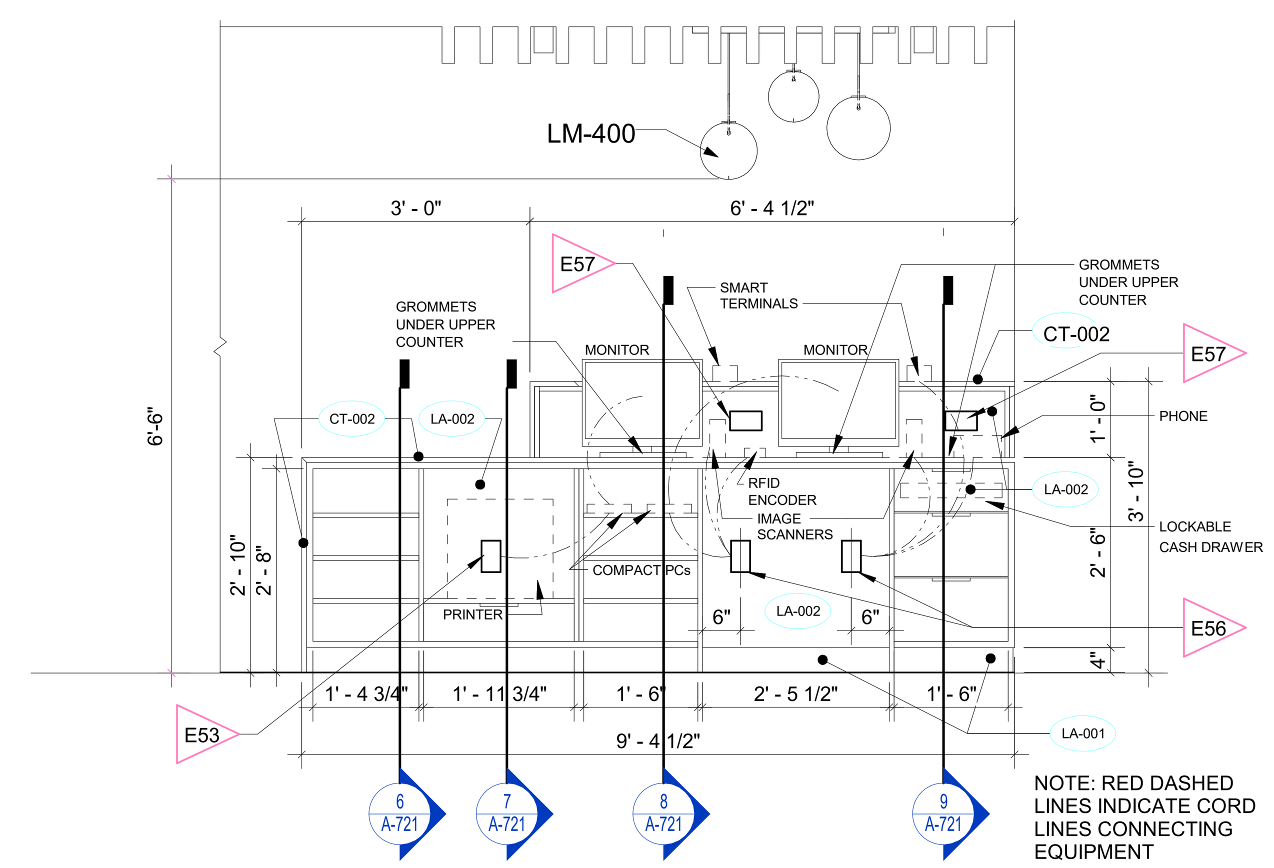
3 WELCOME DESK ELEVATION 2
1/2" = 1'-0"



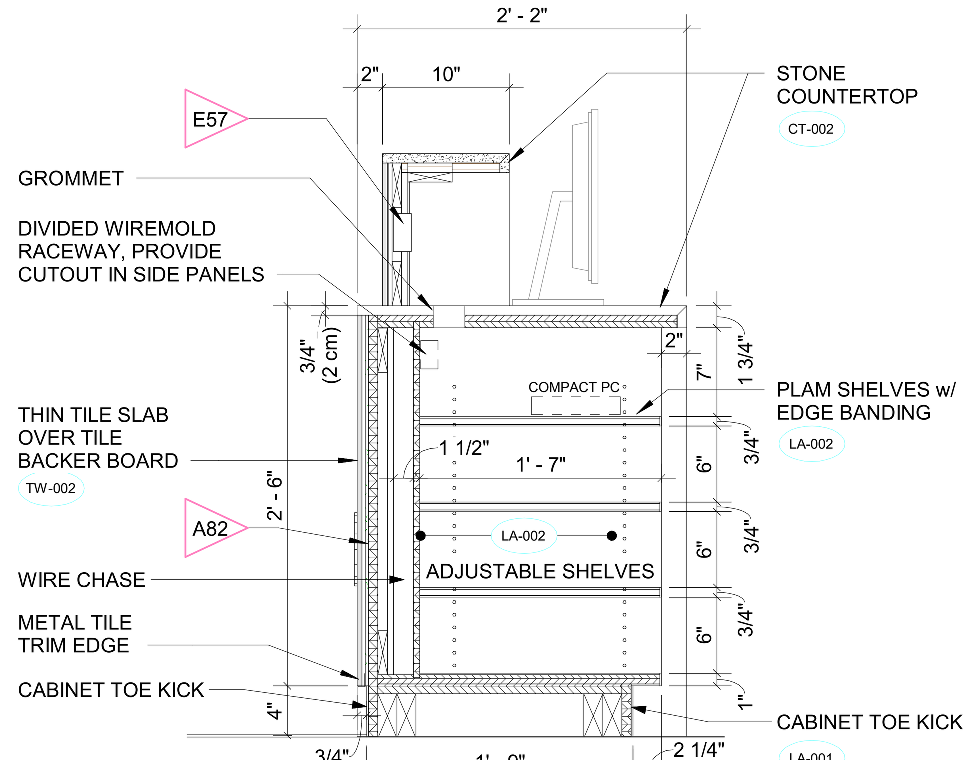
9 WELCOME DESK UPPER COUNTER SECTION @ DRAWERS
1" = 1'-0"



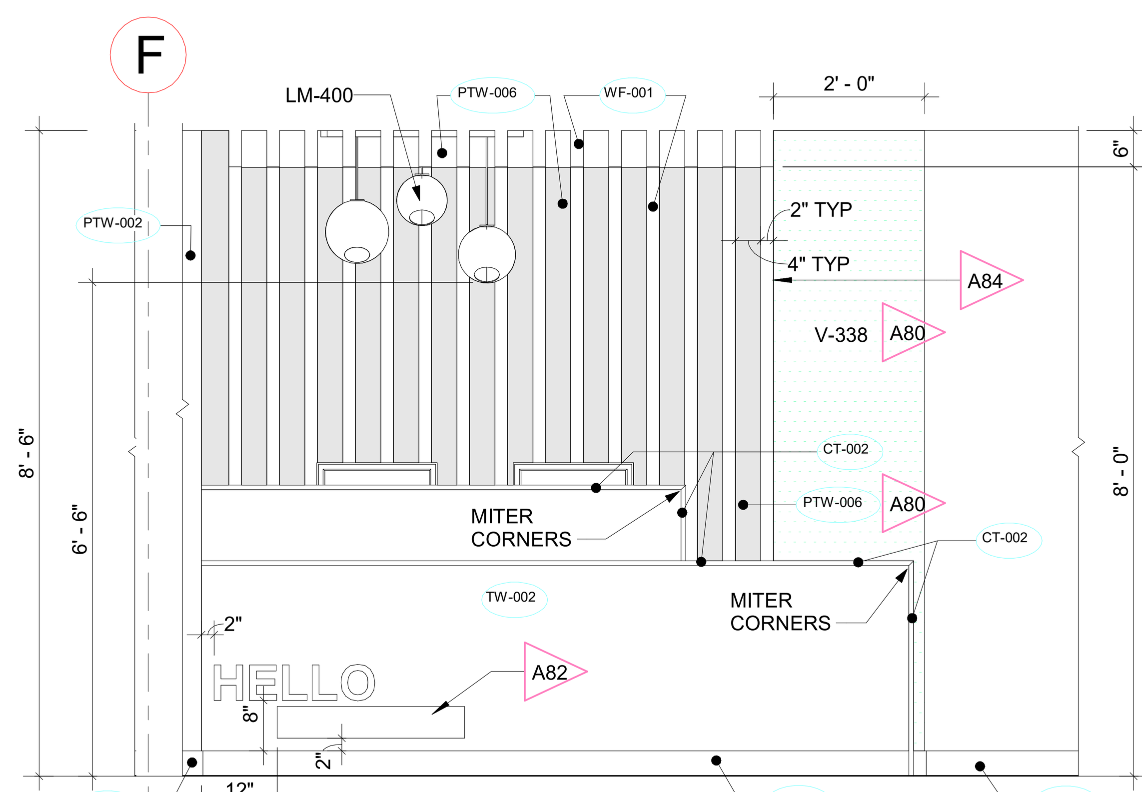
6 WELCOME DESK LOW COUNTER SECTION DETAIL
1" = 1'-0"



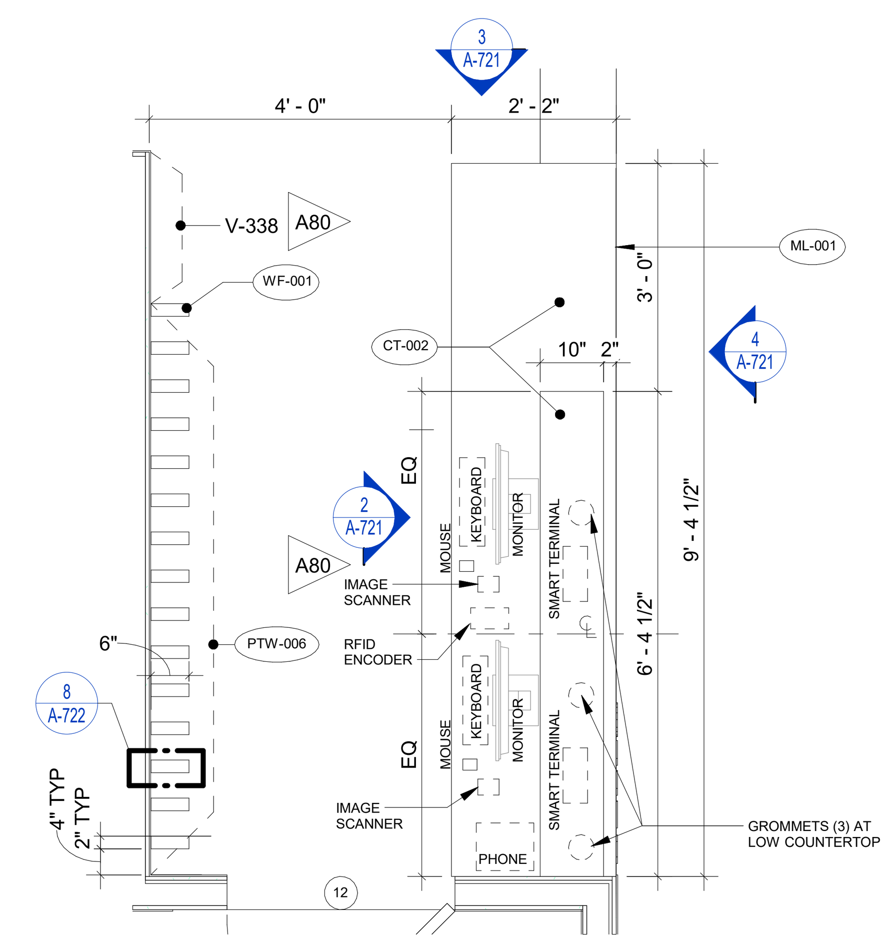
2 WELCOME DESK ELEVATION 1
1/2" = 1'-0"



8 WELCOME DESK COUNTER SECTION @ SHELVES
1" = 1'-0"



4 WELCOME DESK ELEVATION 3
1/2" = 1'-0"



1 WELCOME DESK PLAN
1/2" = 1'-0"

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
WELCOME DESK

PROJECT NUMBER: 23098

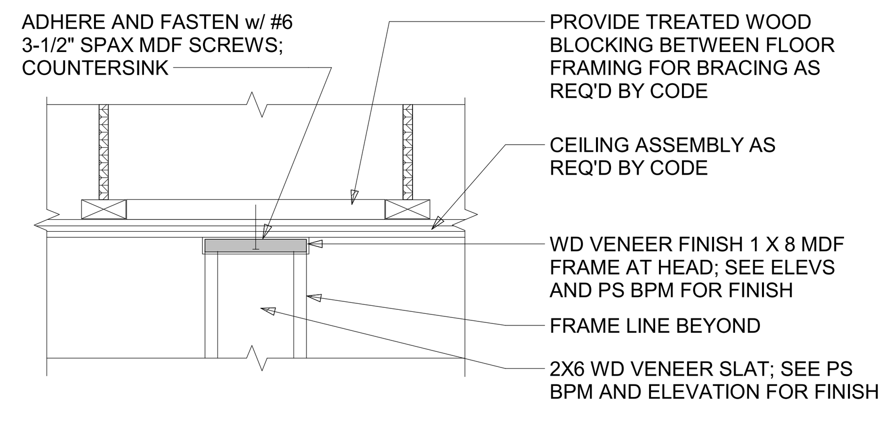
SHEET NUMBER:

A-721

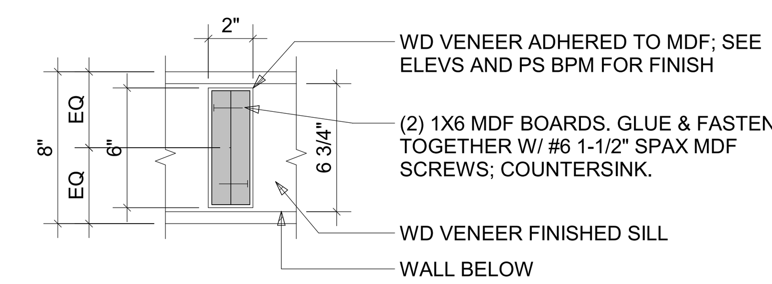
ROOM FINISH SCHEDULE					
Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
THE HUB	PER PLAN	BASE, PER ELEV.	WALL COVERING, PER ELEV.	PAINT ON GYP	

NOTE: UNIT FINISH SCHEDULES ARE PER THE BRAND PROTOTYPE. FINISHES ARE TO BE COORDINATED WITH THE INTERIOR DESIGNER.

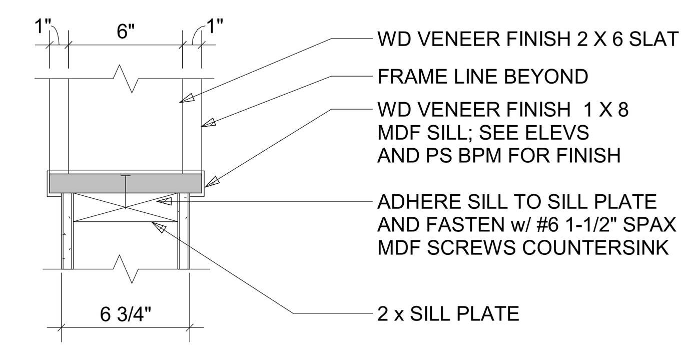
3



9 HUB SLAT HEAD DETAIL
1" = 1'-0"



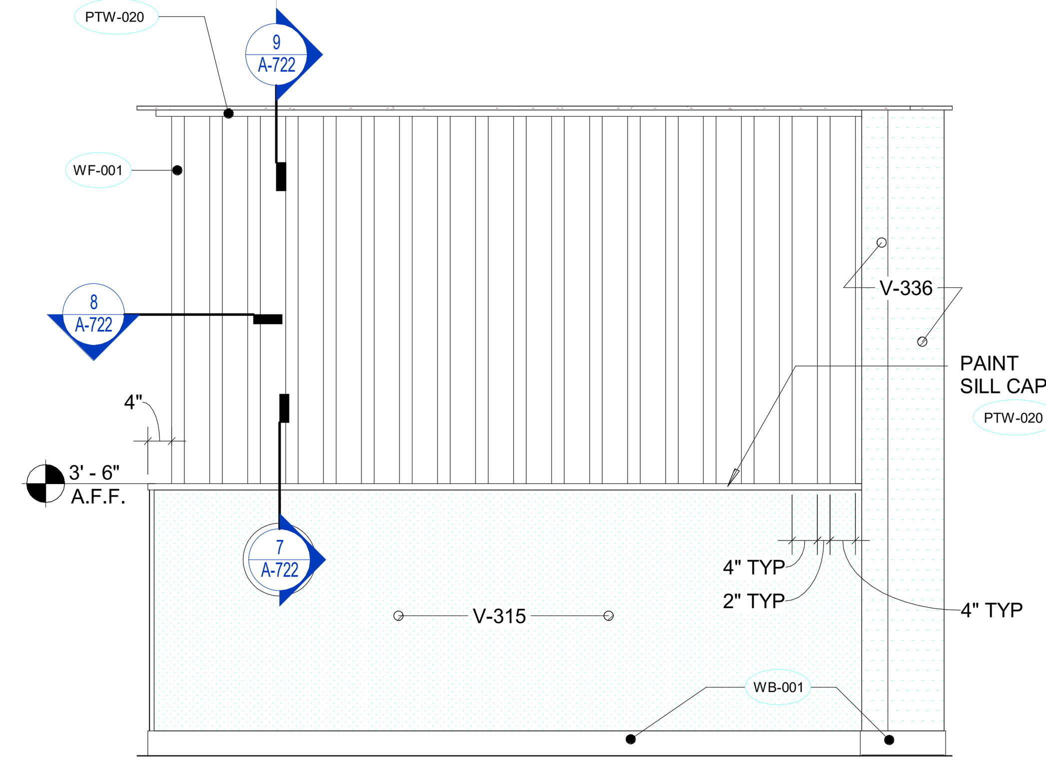
8 HUB SLAT PLAN DETAIL
1 1/2" = 1'-0"



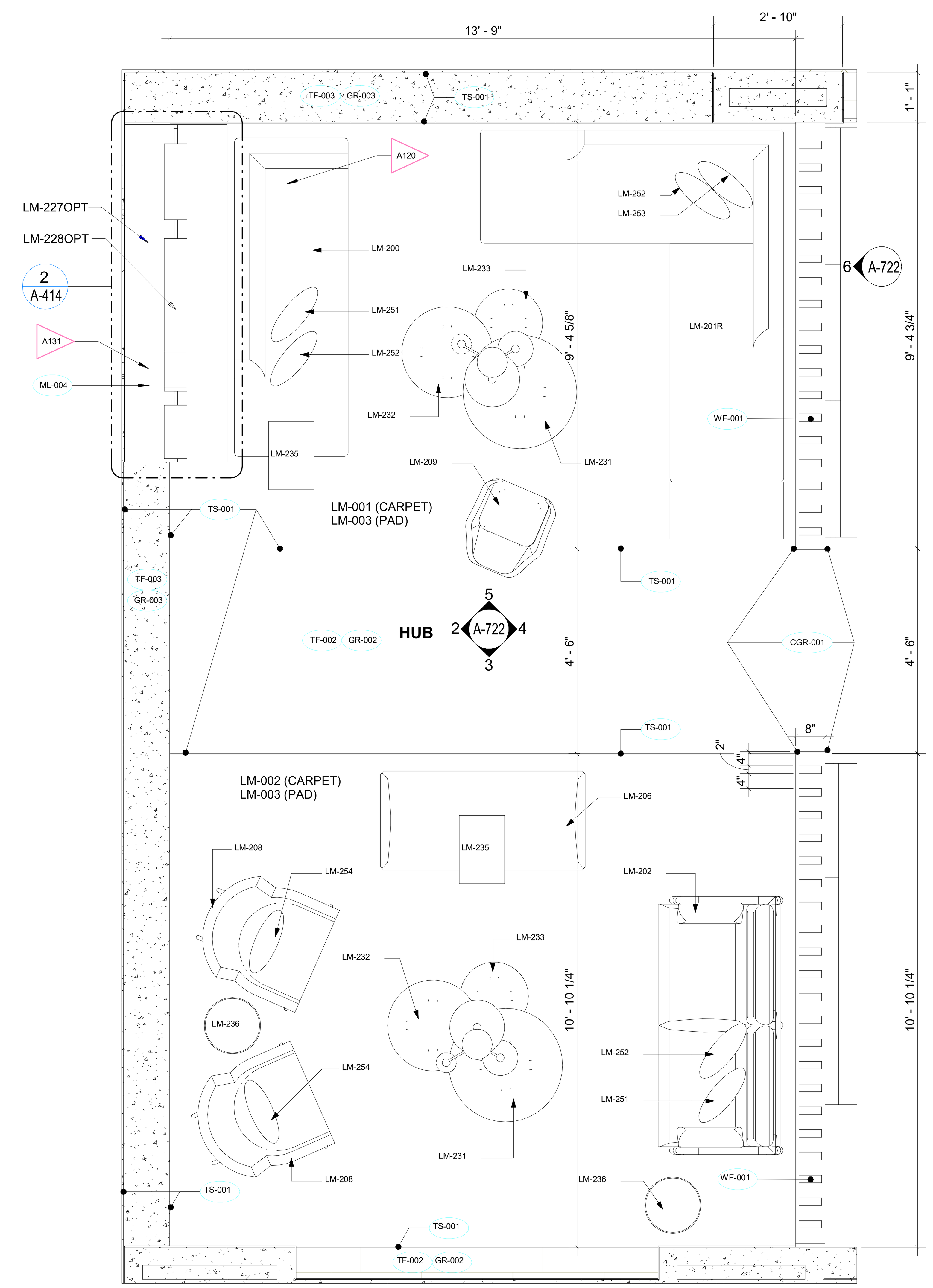
7 HUB SLAT SILL DETAIL
1 1/2" = 1'-0"

-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED

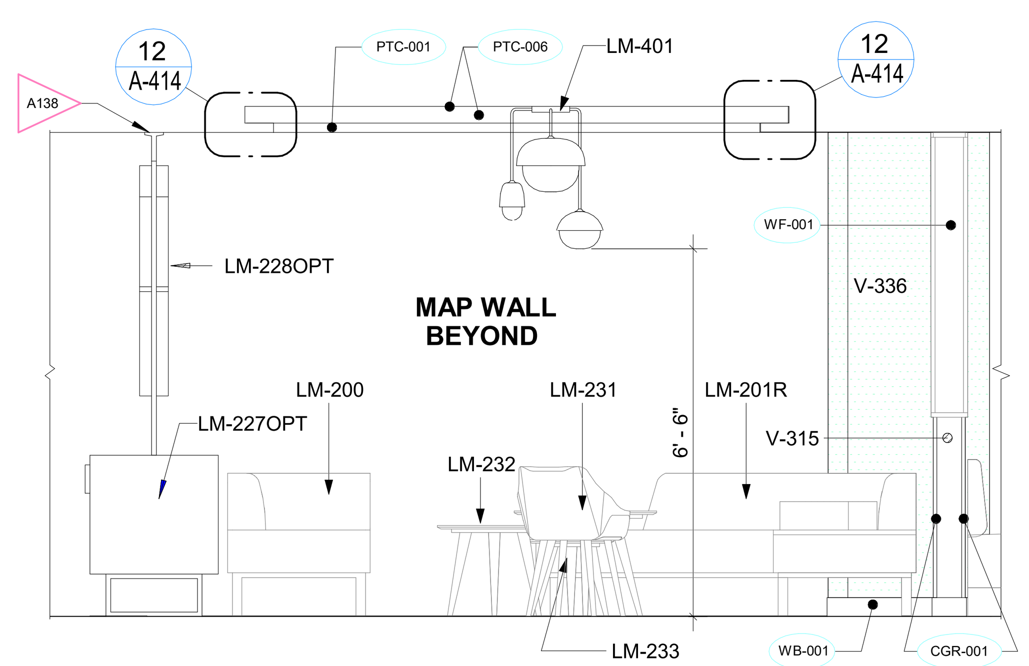
1



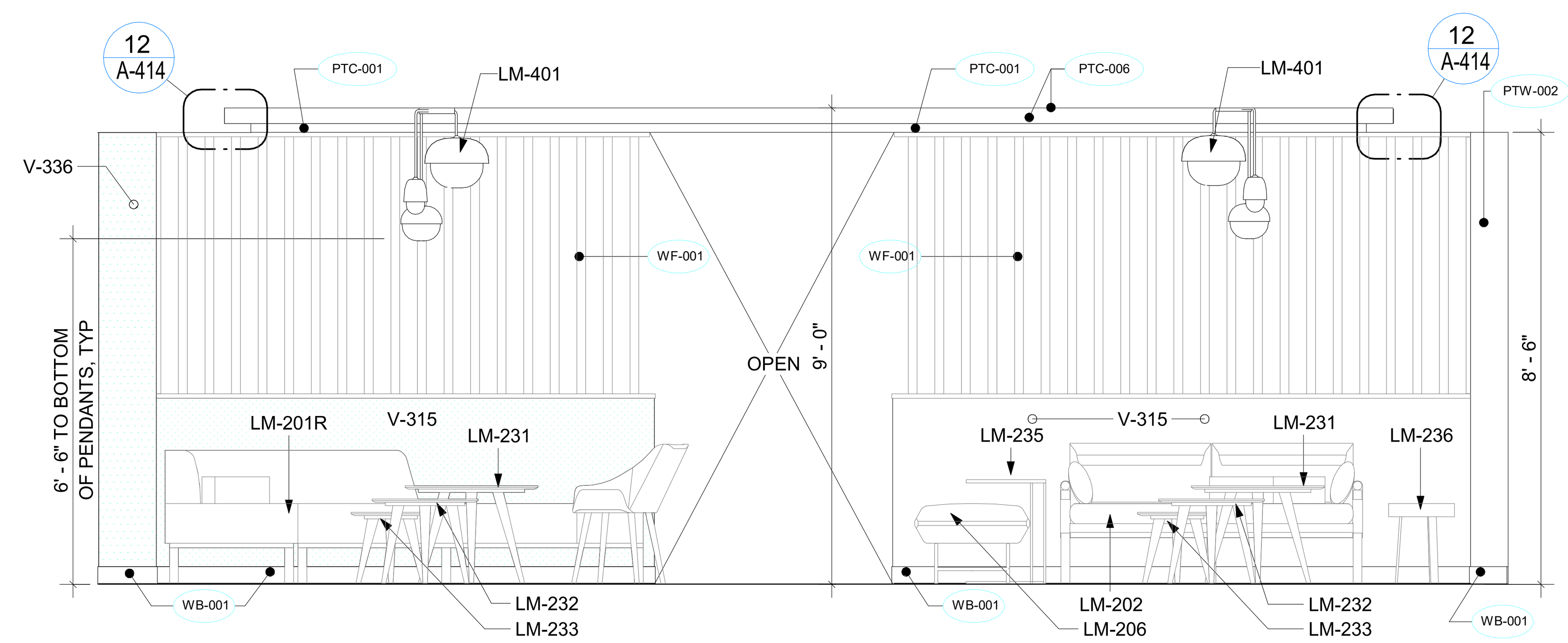
6 SLAT WALL ELEVATION FOR DETAILS
1/2" = 1'-0"



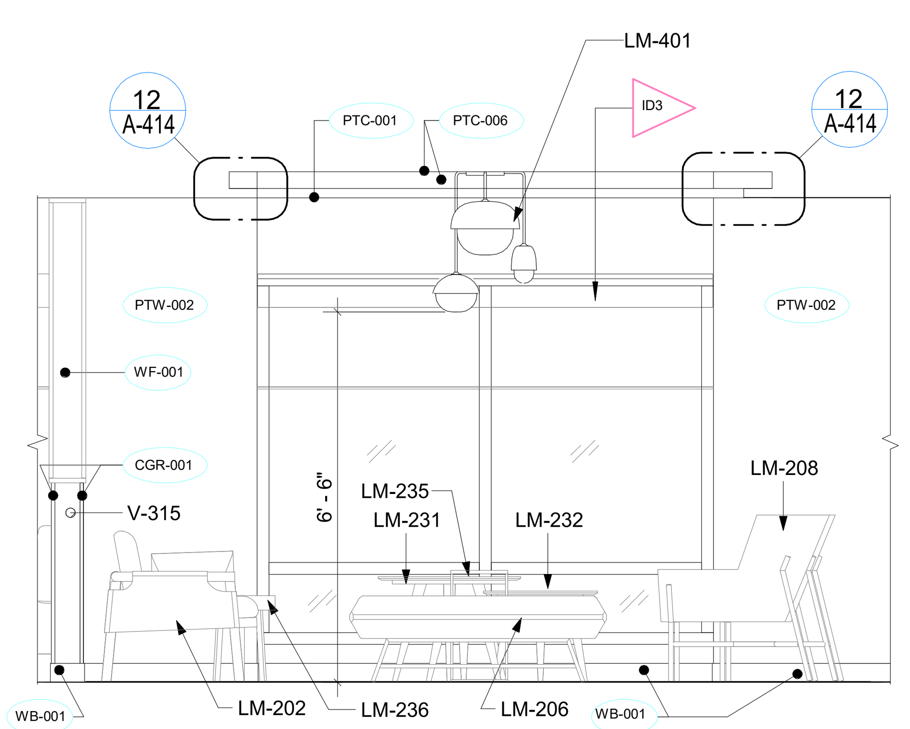
1 THE HUB PLAN
1/2" = 1'-0"



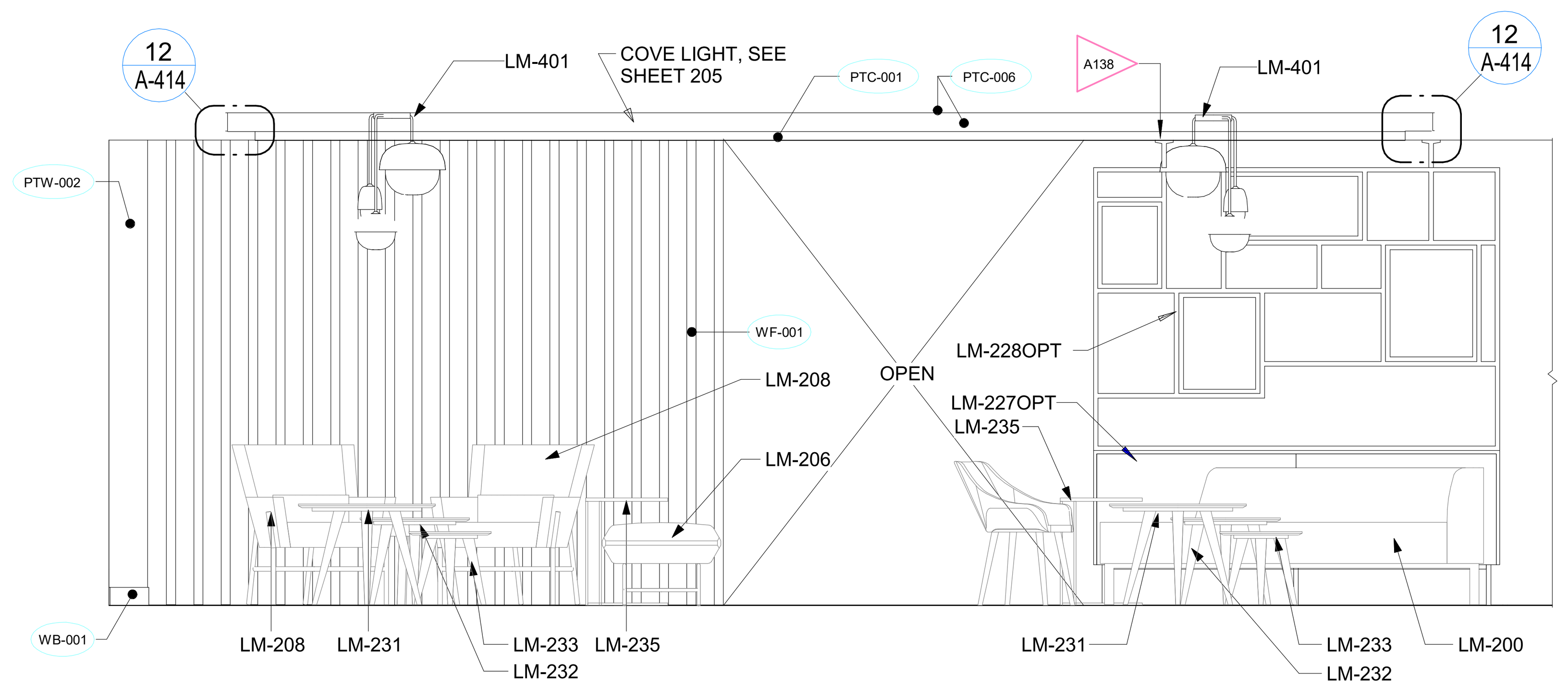
5 THE HUB ELEVATION 4
3/8" = 1'-0"



4 THE HUB ELEVATION 3
3/8" = 1'-0"



3 THE HUB ELEVATION 2
3/8" = 1'-0"



2 THE HUB ELEVATION 1
3/8" = 1'-0"

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:

1	12/22/2023	Response to City Comments
2	01/19/2024	Addendum #2
3	03/06/2024	IN RESPONSE TO GC COMMENTS

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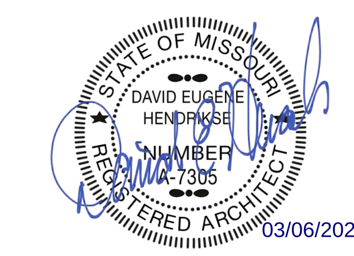


TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

3

SHEET TITLE
THE HUB

PROJECT NUMBER: 23098

SHEET NUMBER:

A-722

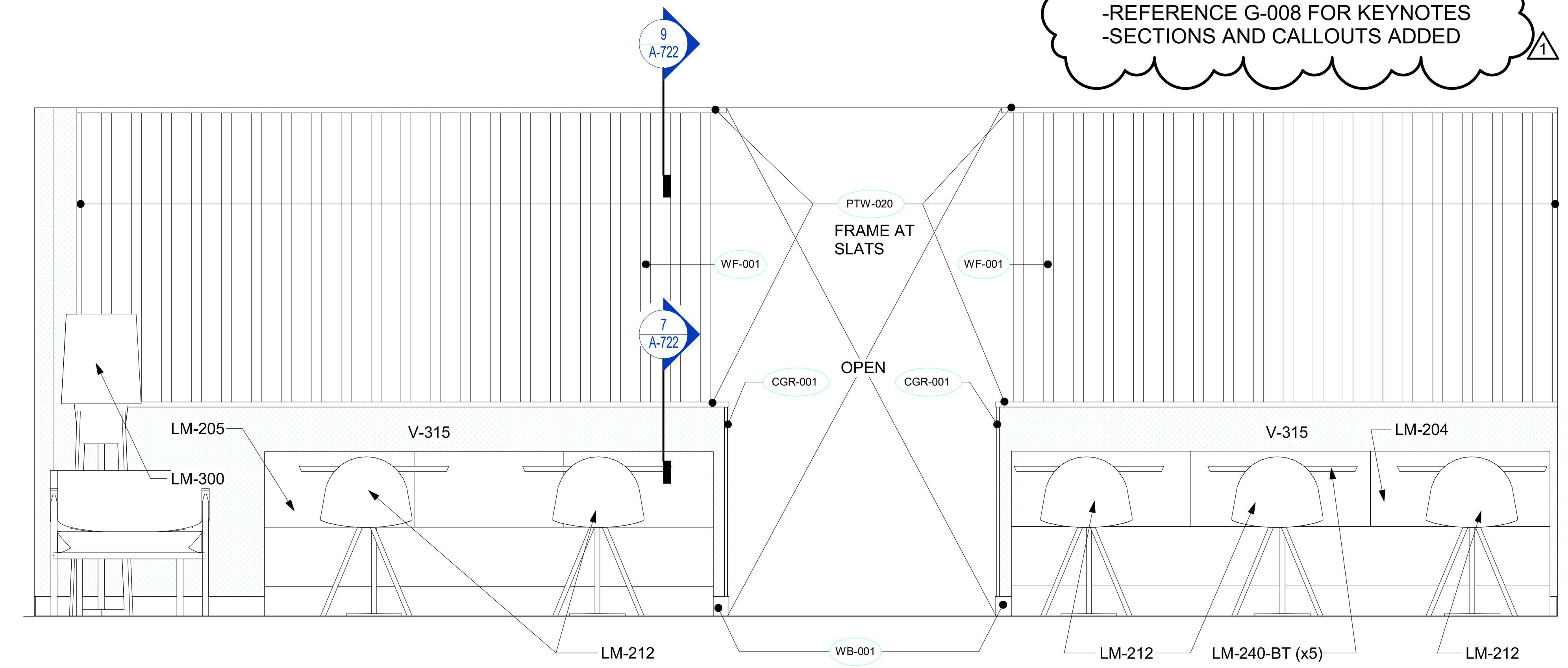
ROOM FINISH SCHEDULE					
Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
COMMUNITY	PER PLAN	BASE, PER ELEV.	WALL COVERING, PER ELEV.	PAINT ON GYP	

NOTE: UNIT FINISH SCHEDULES ARE PER THE BRAND PROTOTYPE. FINISHES ARE TO BE COORDINATED WITH THE INTERIOR DESIGNER.

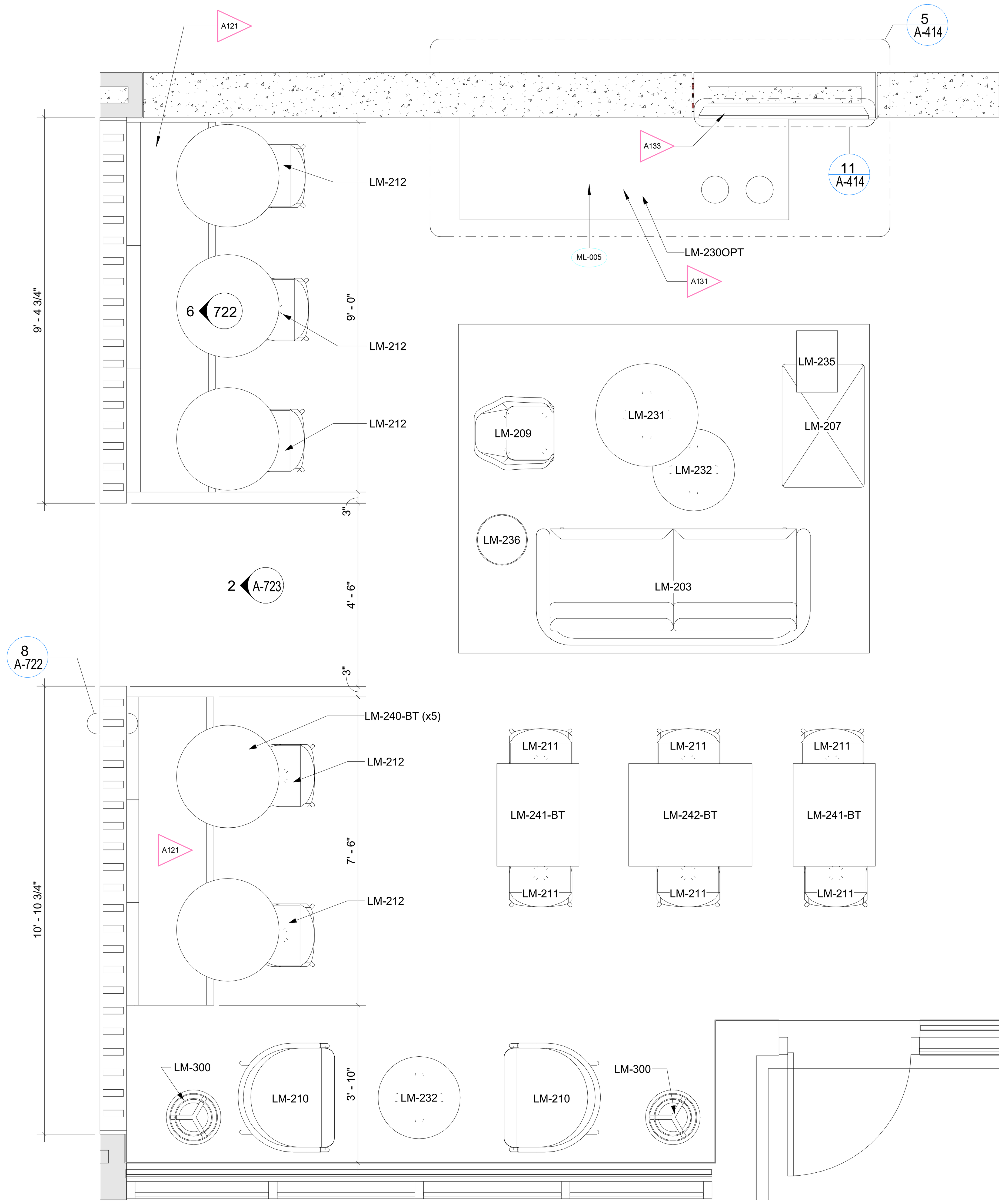
3

-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED

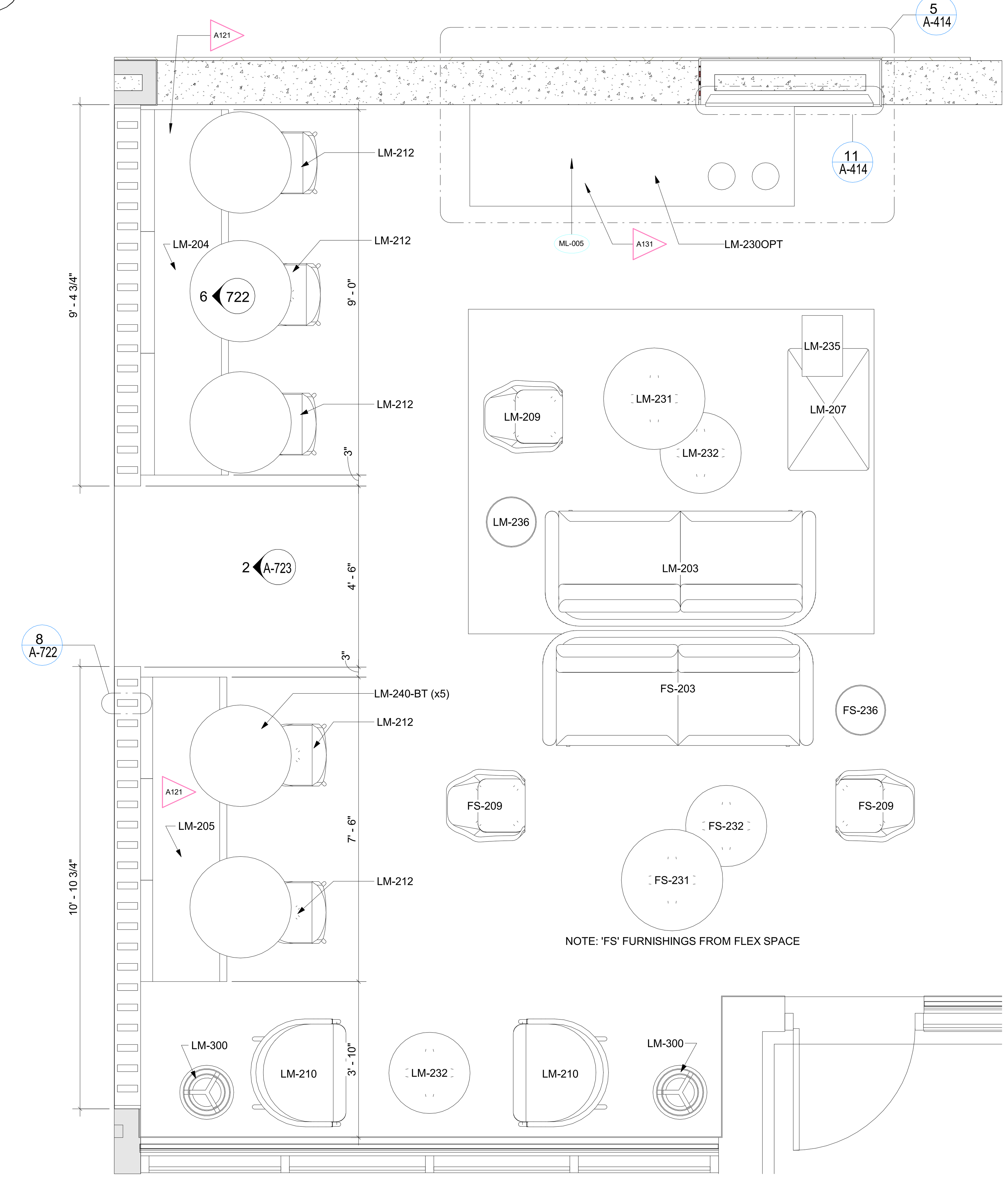
1



2 COMMUNITY ELEVATION
1/2" = 1'-0"



3 ALTERNATE COMMUNITY FURNITURE PLAN
1/2" = 1'-0"



1 COMMUNITY FURNITURE PLAN
1/2" = 1'-0"

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

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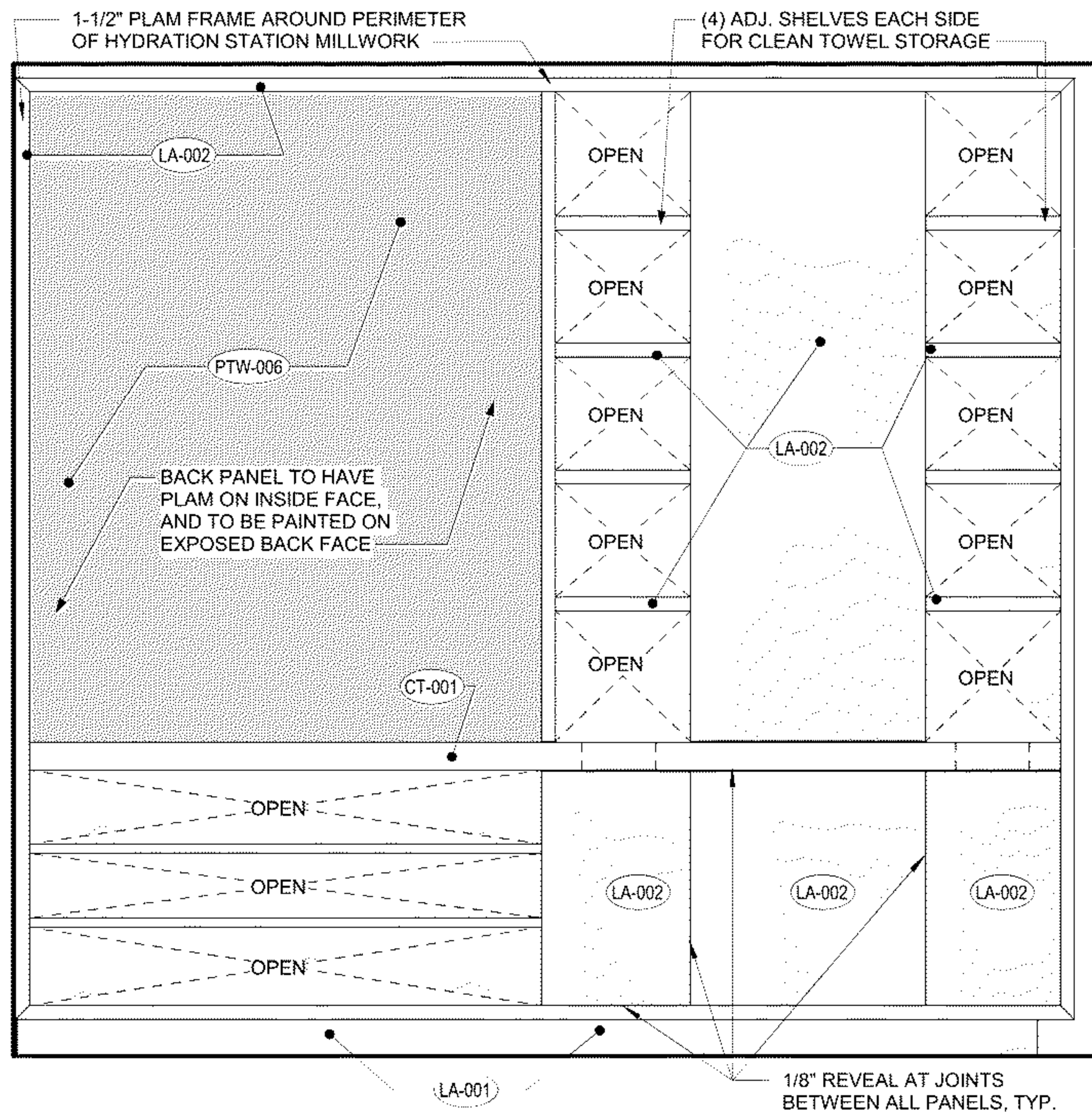
STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7365
REGISTERED ARCHITECT
03/06/2024

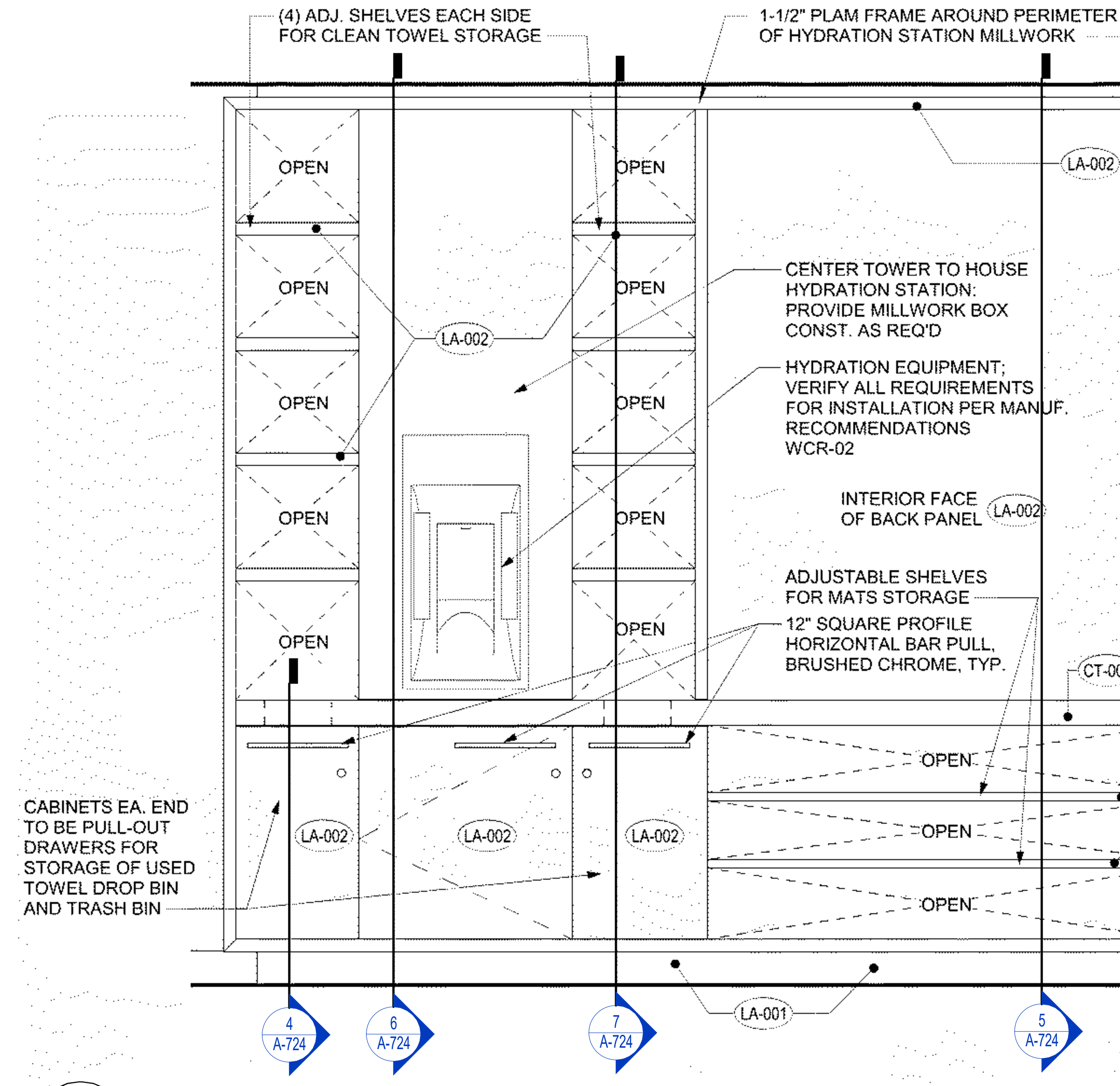
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

3

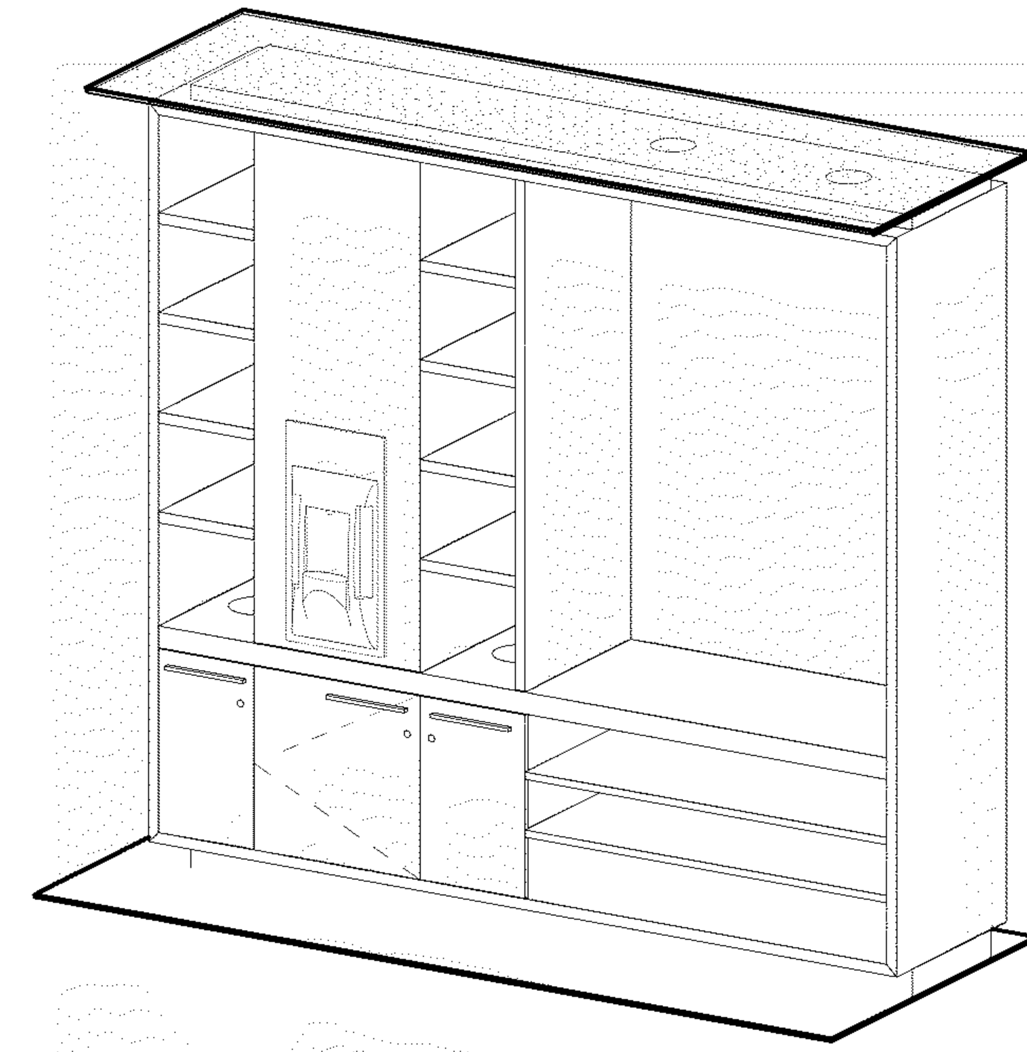
SHEET TITLE
COMMUNITY, HUB & ON-US ENLARGED PLANS, ELEVATIONS & DETAILS
PROJECT NUMBER: 23098
SHEET NUMBER:
A-723



2 HYDRATION STATION ELEVATION - REAR
1/2" = 1'-0"

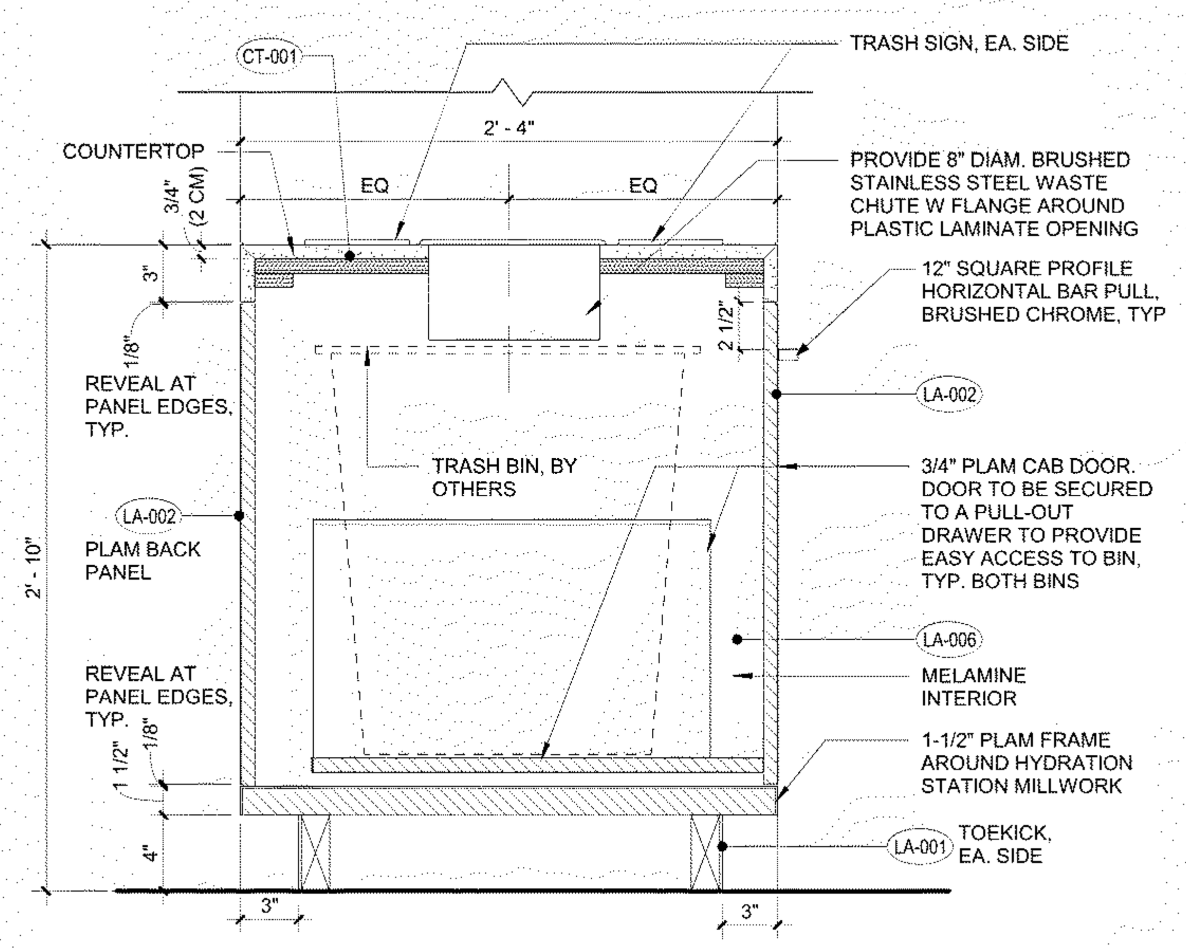


3 HYDRATION STATION ELEVATION - FRONT
1/2" = 1'-0"

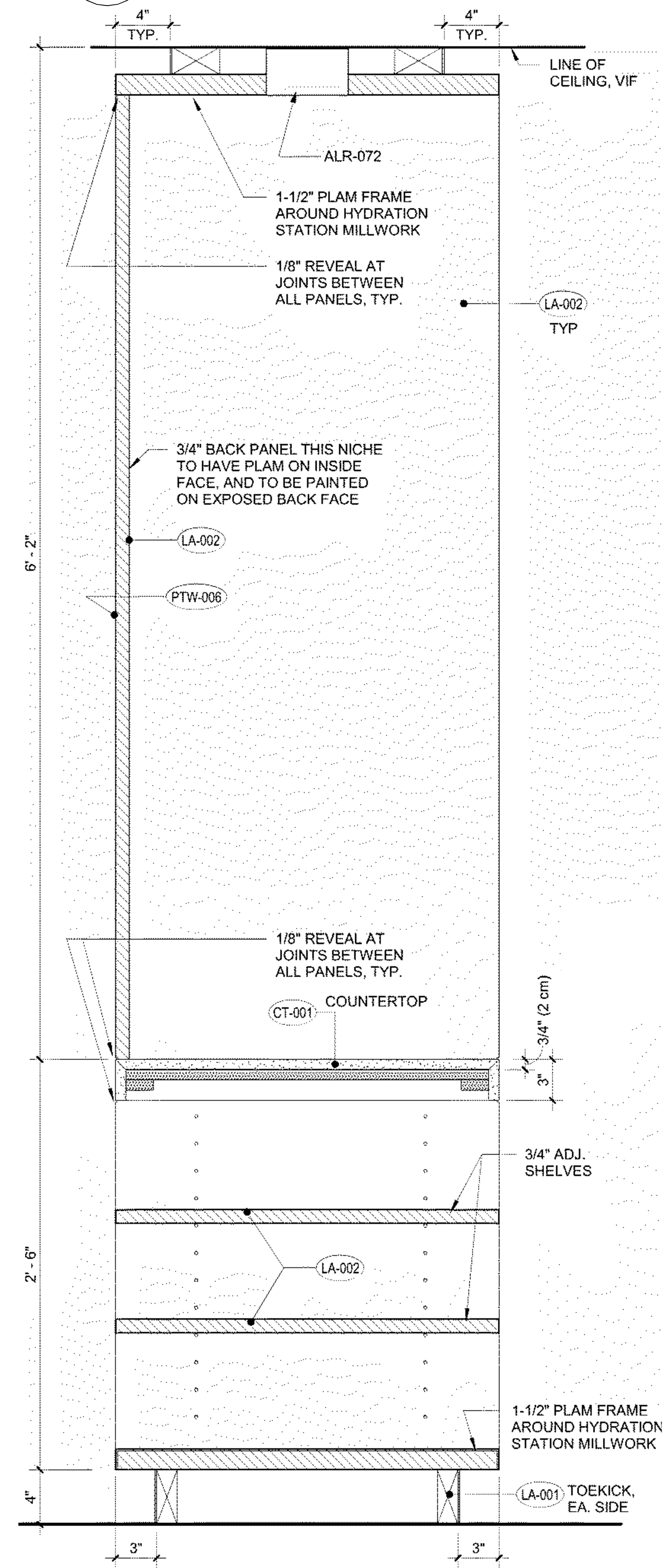


-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED

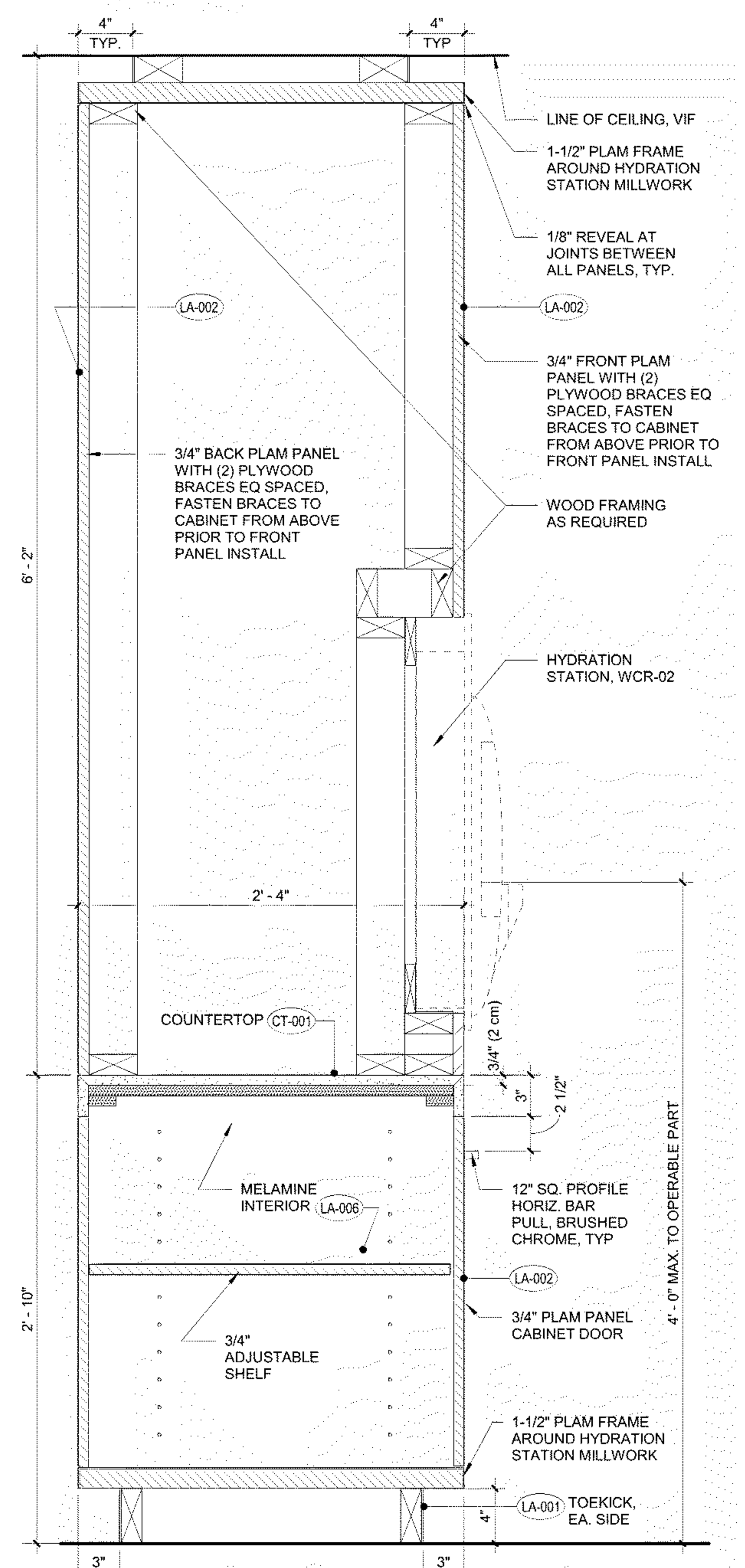
1 HYDRATION STATION
1/2" = 1'-0"



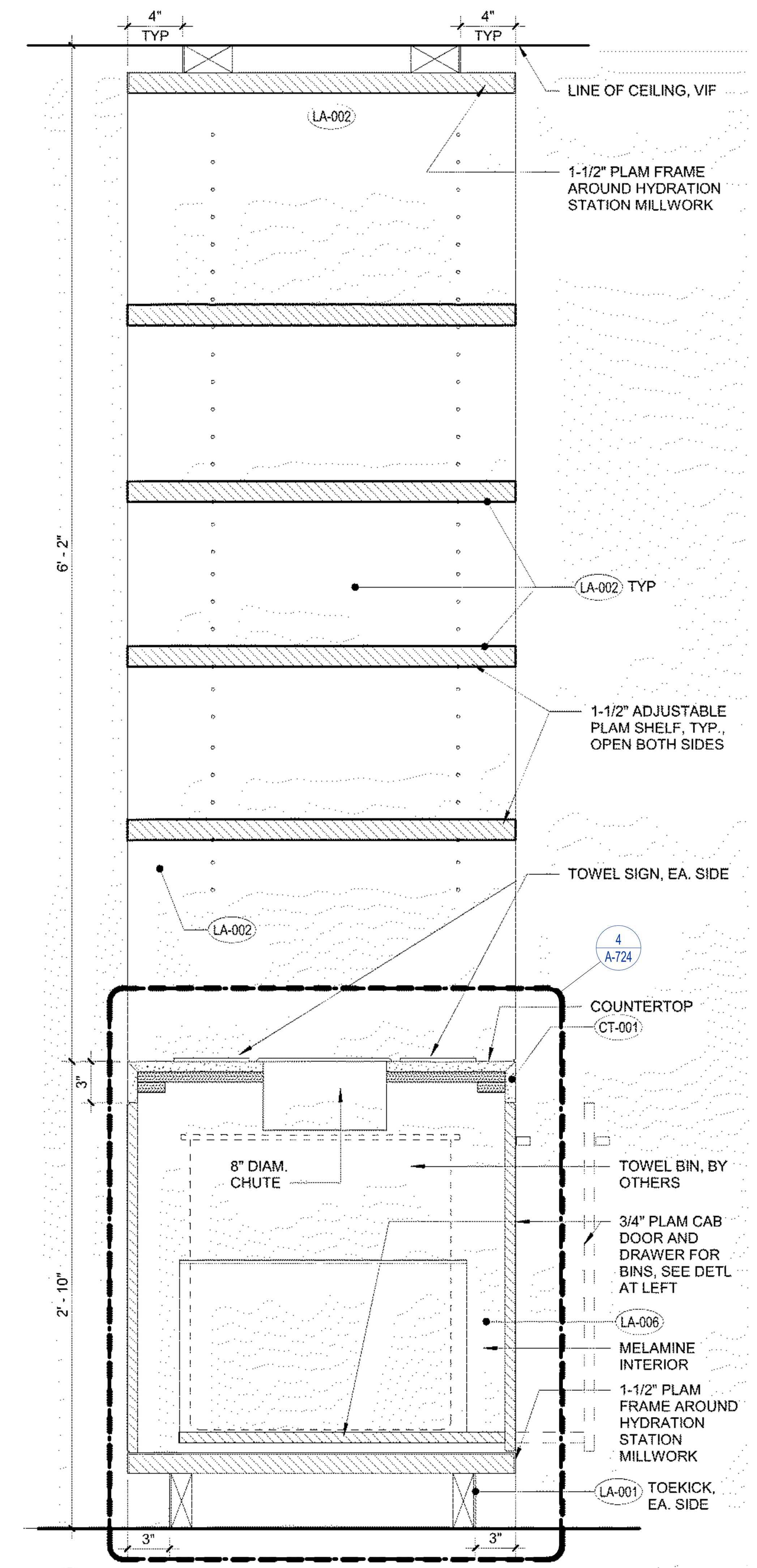
4 FITNESS MILLWORK TRASH TOWEL BIN
1 1/2" = 1'-0"



5 FITNESS MILLWORK TRASH SECTION
1 1/2" = 1'-0"



6 FITNESS MILLWORK TRASH SECTION 2
1 1/2" = 1'-0"



7 FITNESS MILLWORK TRASH SECTION 3
1 1/2" = 1'-0"

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
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STATE OF MISSOURI
DAVID EUGENE HENDRIXSE
NUMBER A-7205
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
FITNESS CENTER & HYDRATION STATION

PROJECT NUMBER: 23098

SHEET NUMBER:

A-724

1/25/2024 9:08:47 AM
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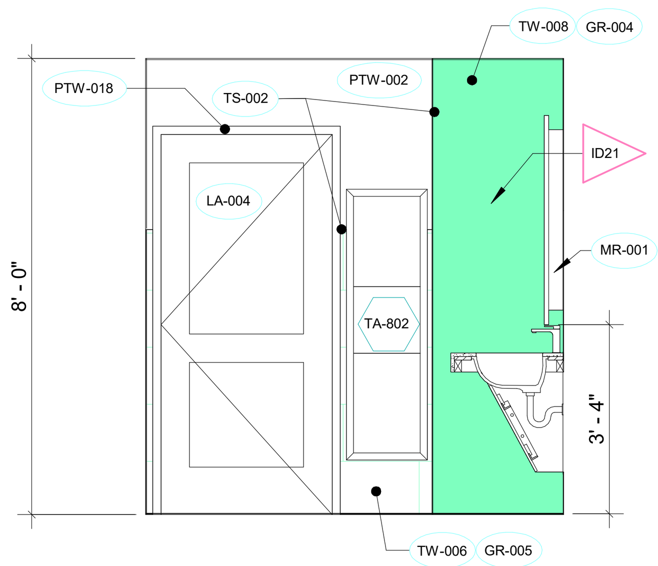
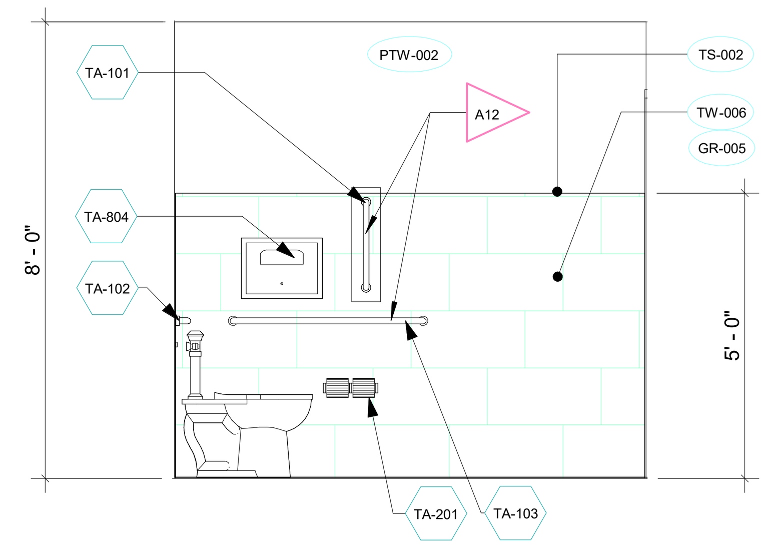
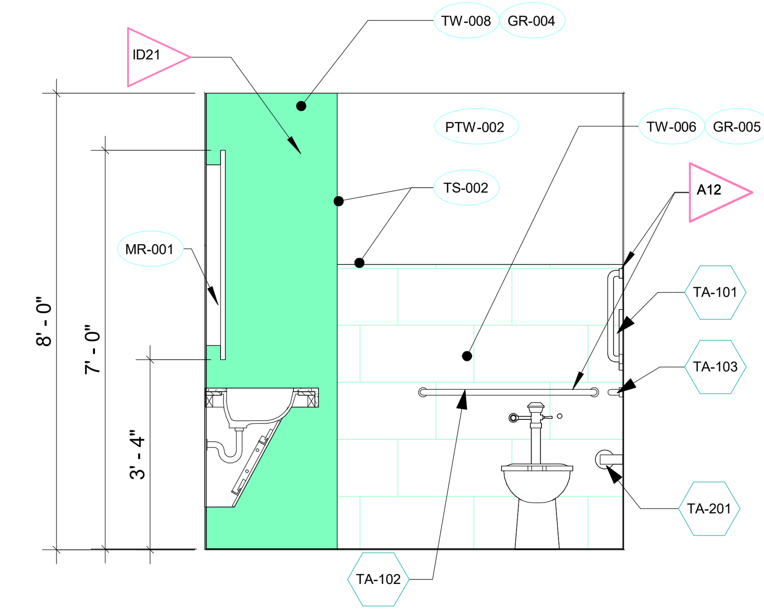
-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED



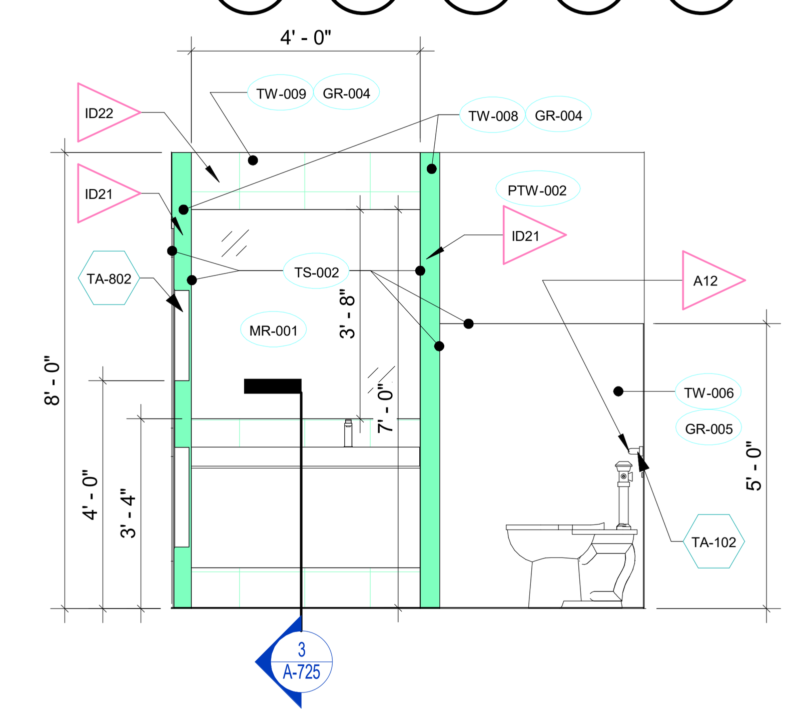
11 MEN'S ELEVATION 4
3/8" = 1'-0"



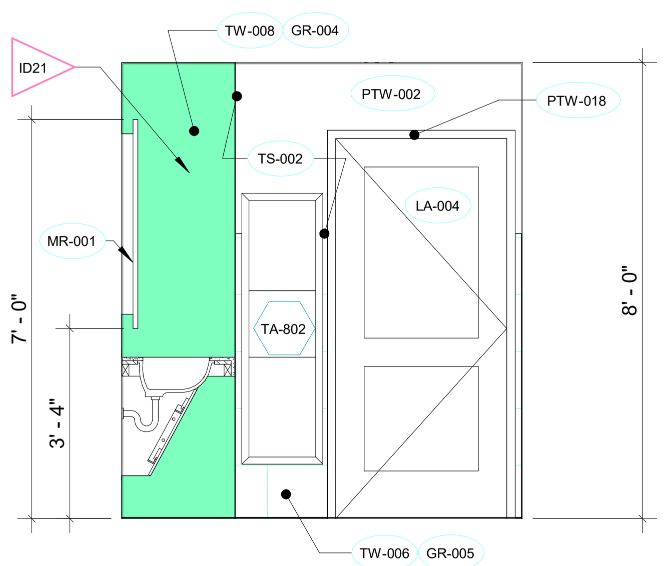
10 MEN'S ELEVATION 3
3/8" = 1'-0"



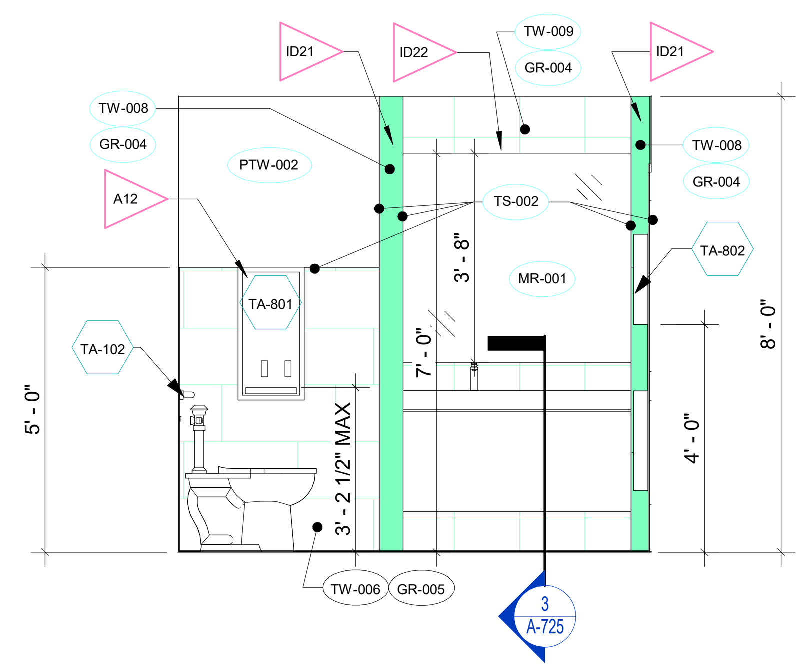
9 MEN'S ELEVATION 2
3/8" = 1'-0"



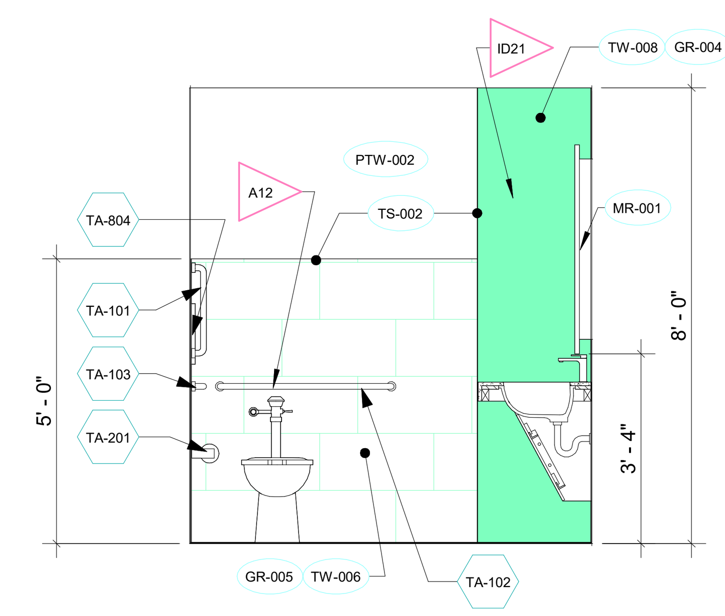
8 MEN'S ELEVATION 1
3/8" = 1'-0"



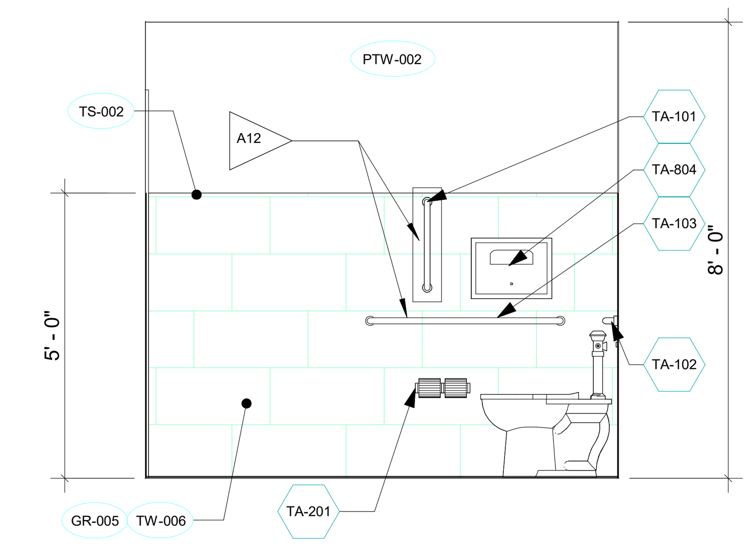
7 WOMEN'S ELEVATION 4
3/8" = 1'-0"



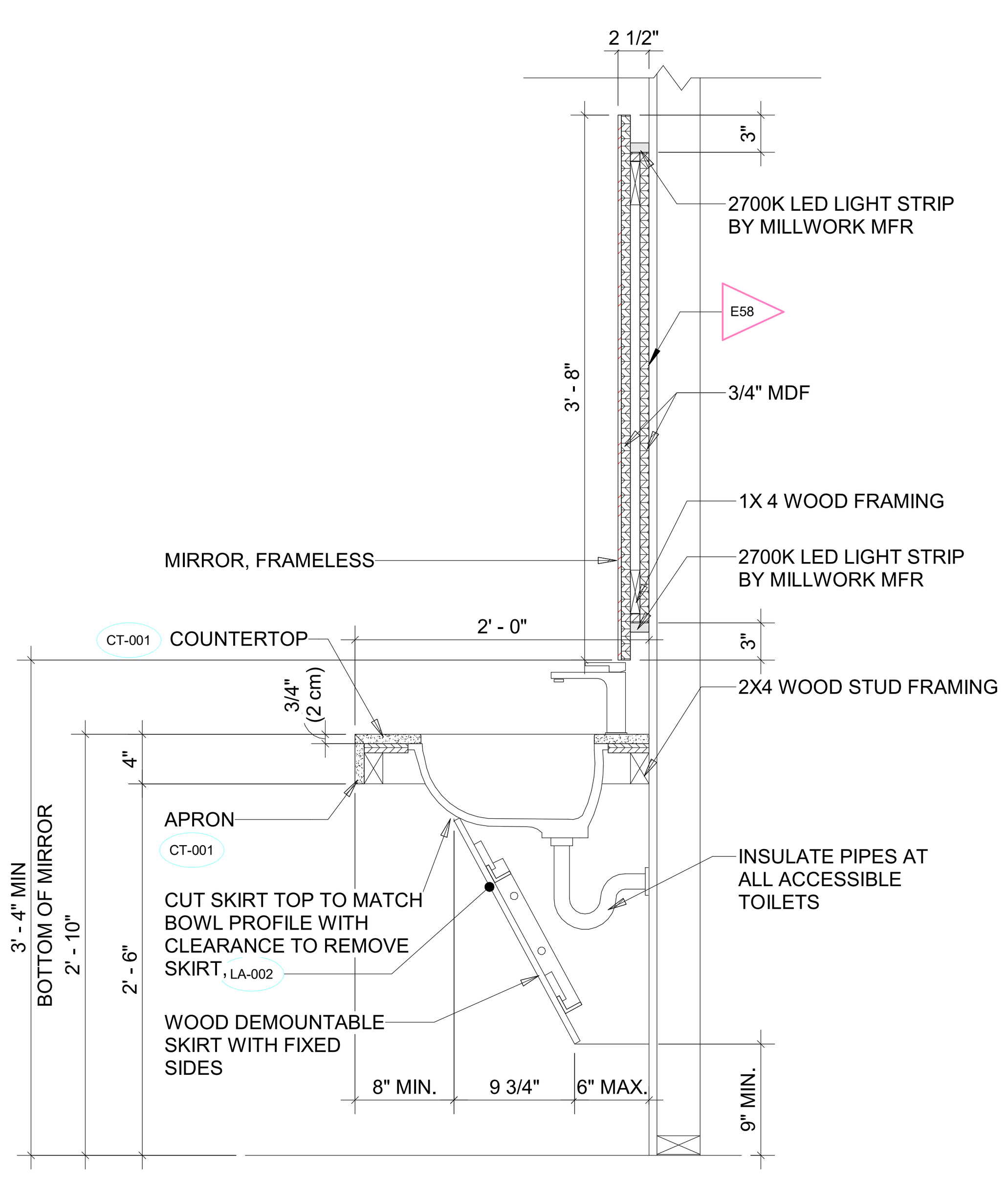
6 WOMEN'S ELEVATION 3
3/8" = 1'-0"



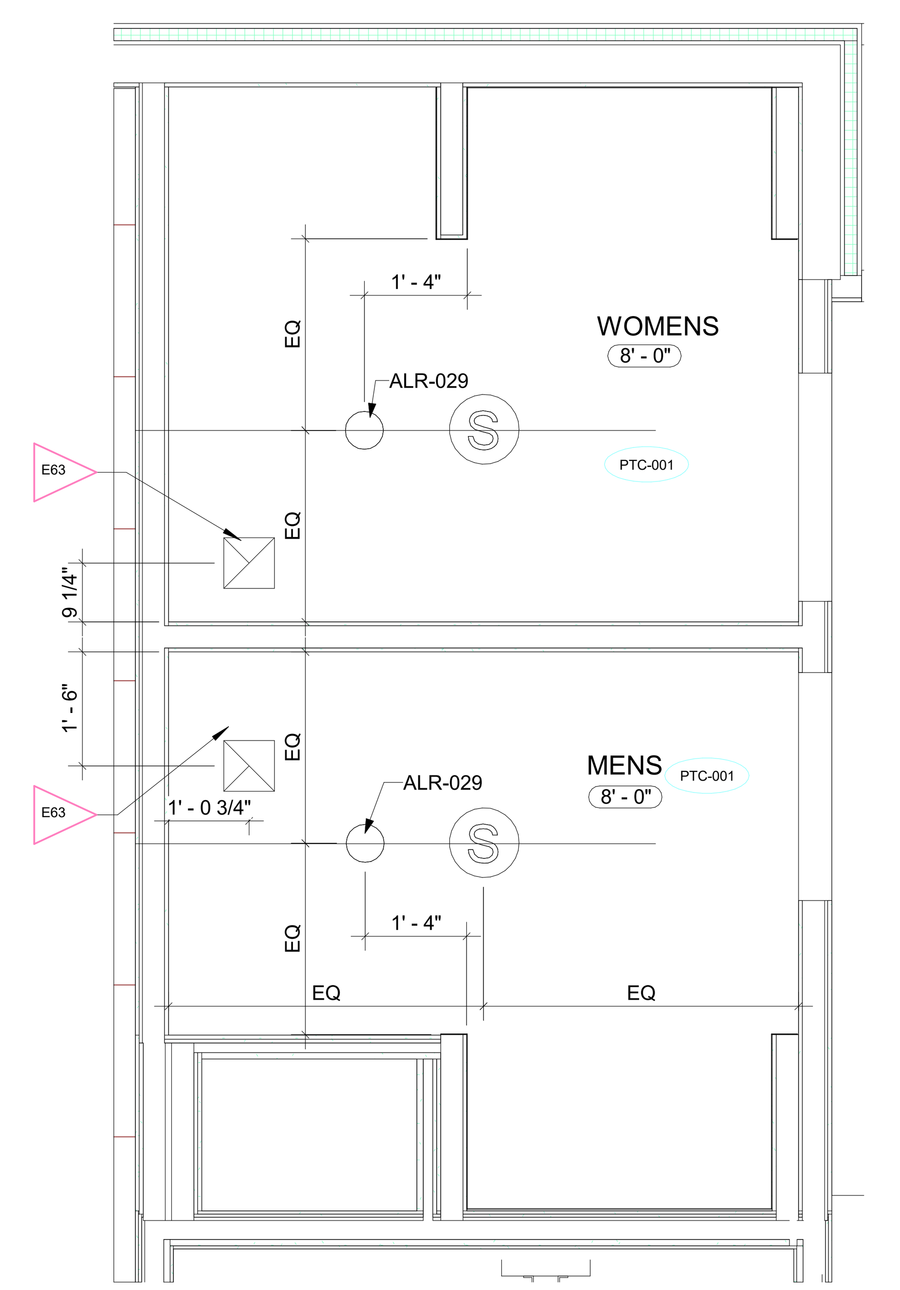
5 WOMEN'S ELEVATION 2
3/8" = 1'-0"



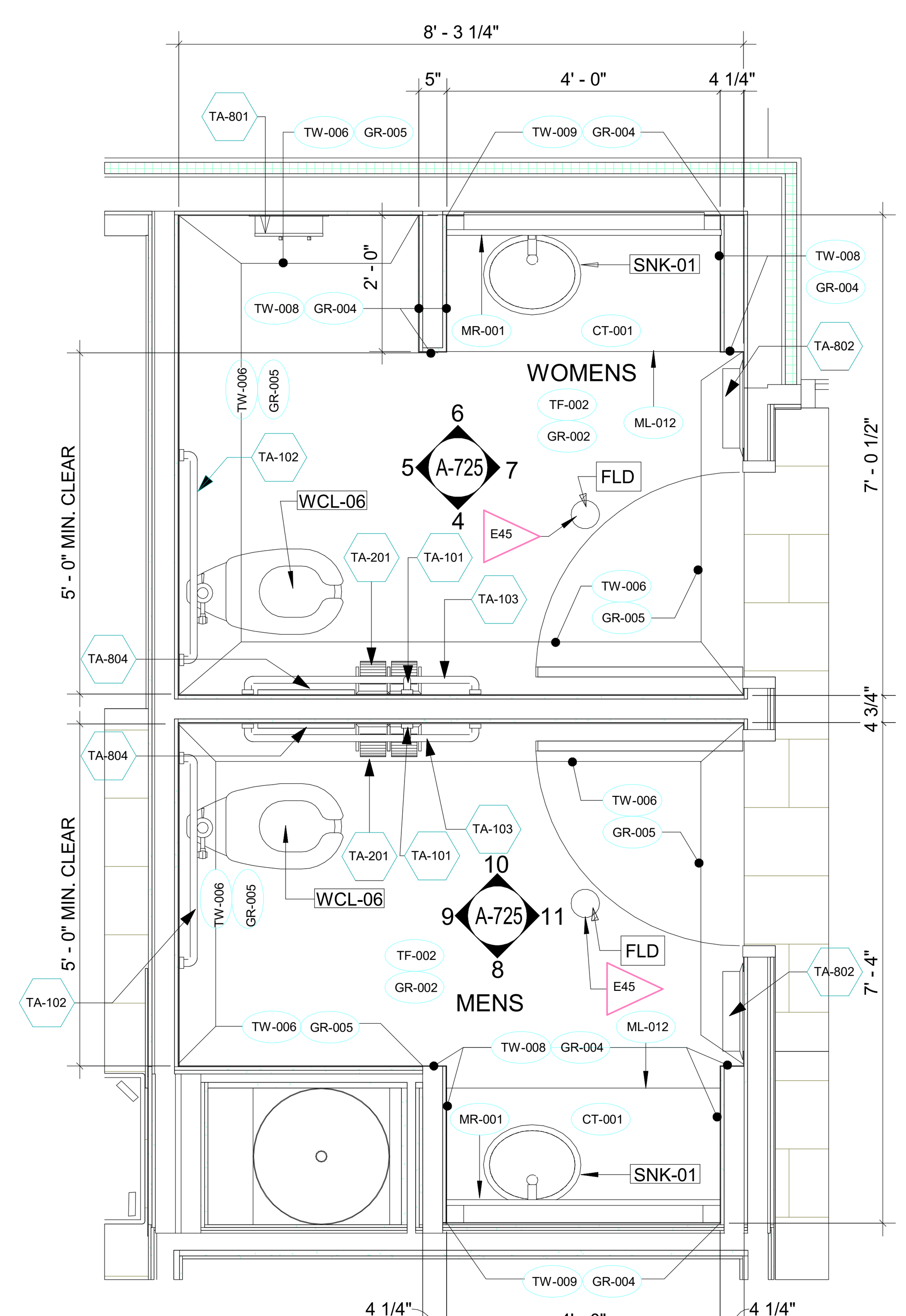
4 WOMEN'S ELEVATION 1
3/8" = 1'-0"



3 PUBLIC RESTROOM LAVATORY SECTION
1" = 1'-0"



2 PUBLIC SPACE TOILETS - RCP
1/2" = 1'-0"



1 PUBLIC SPACE TOILETS PLAN
1/2" = 1'-0"

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
01/19/2024

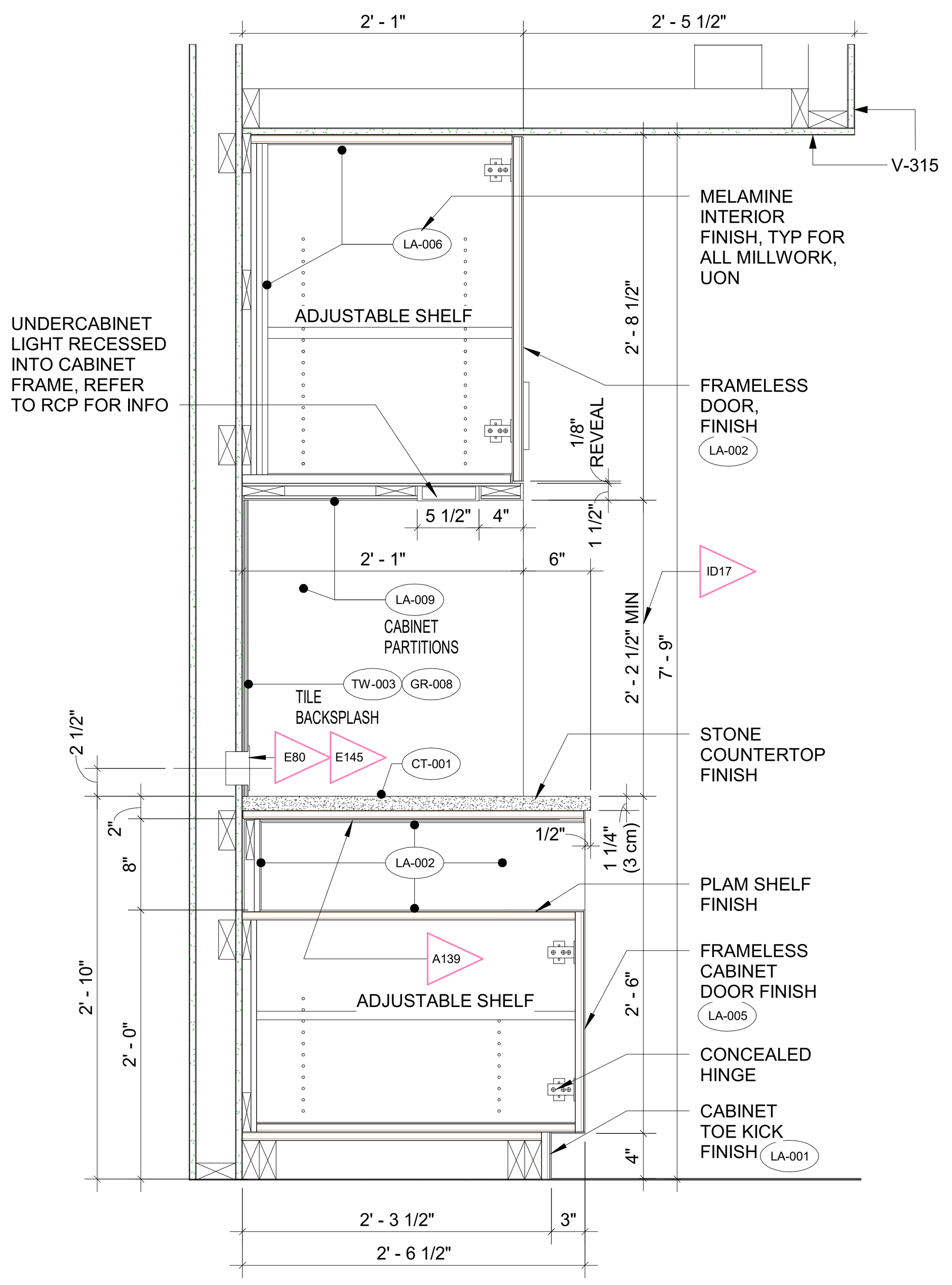
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
PUBLIC RESTROOMS

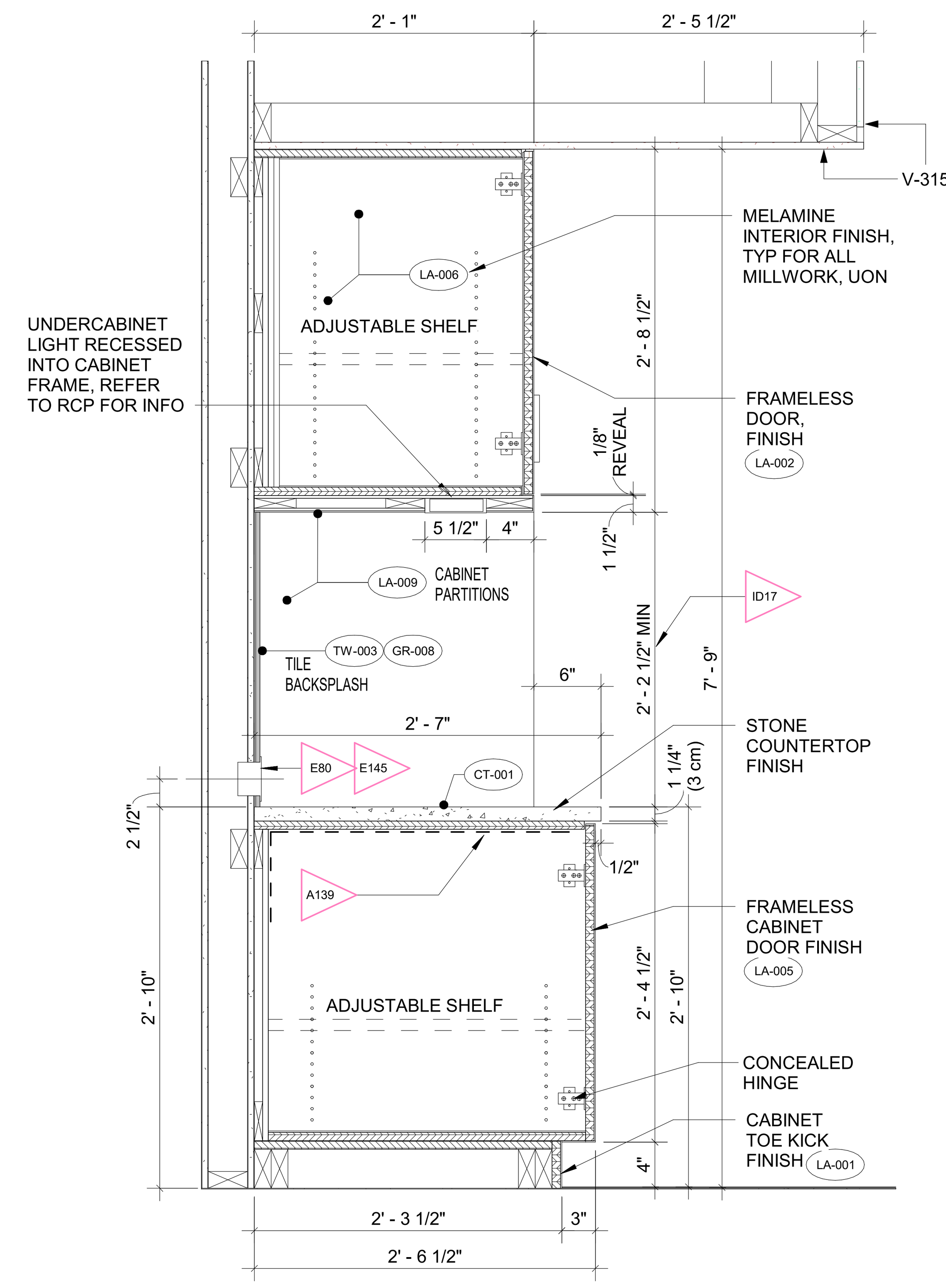
PROJECT NUMBER: 23098

SHEET NUMBER:

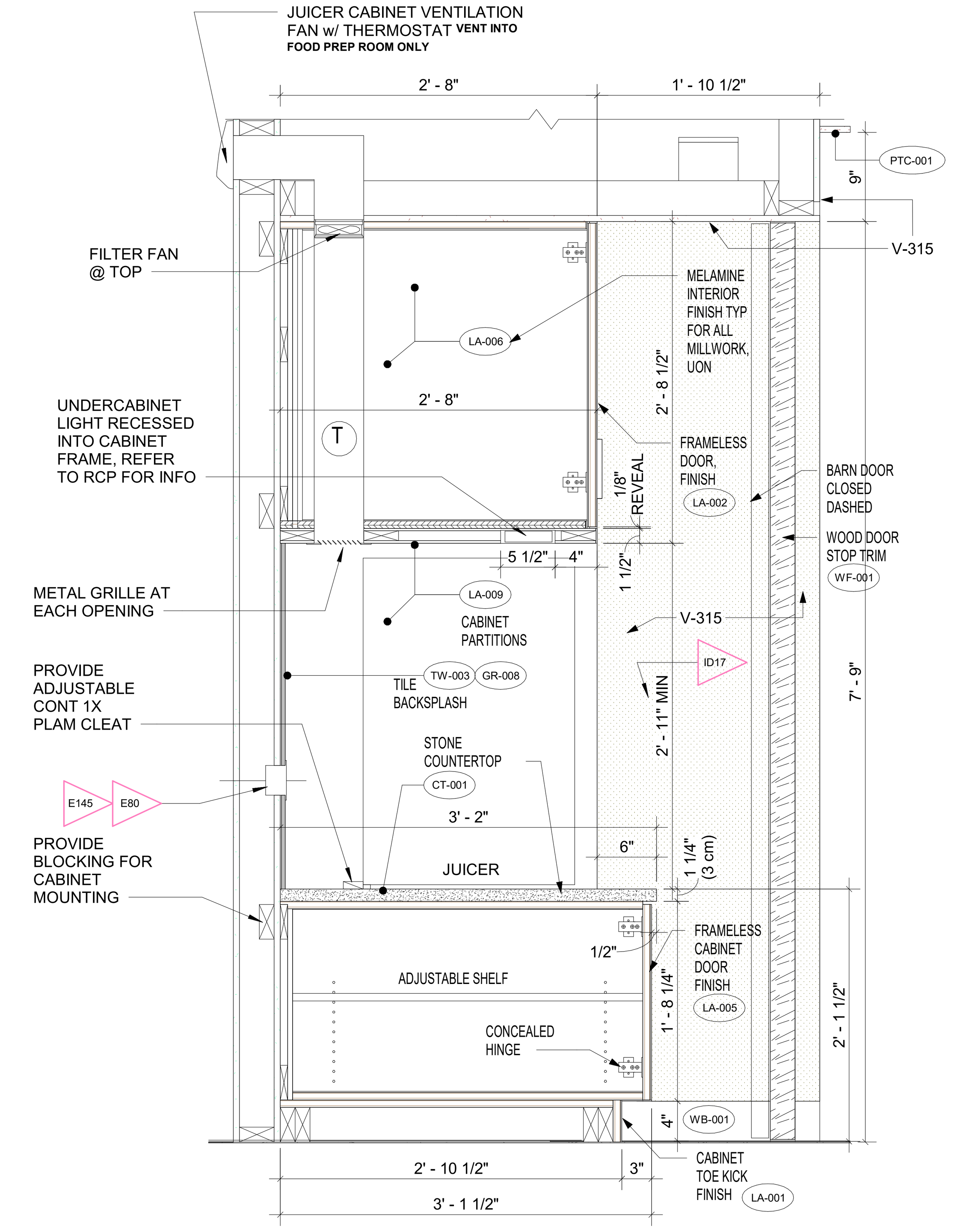
A-725



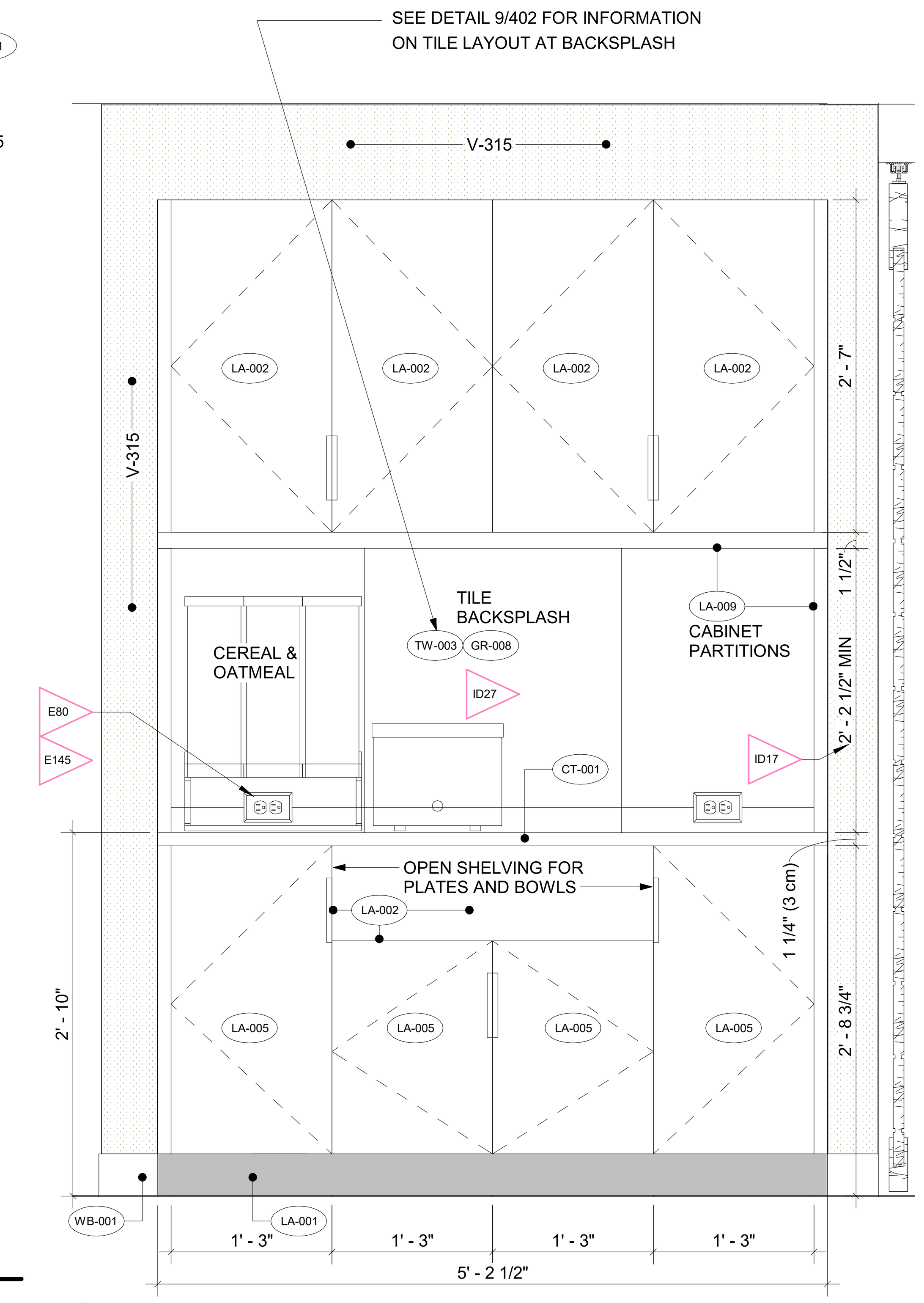
5 BUFFET MILLWORK DETAIL @ OPEN SHELF
1" = 1'-0"



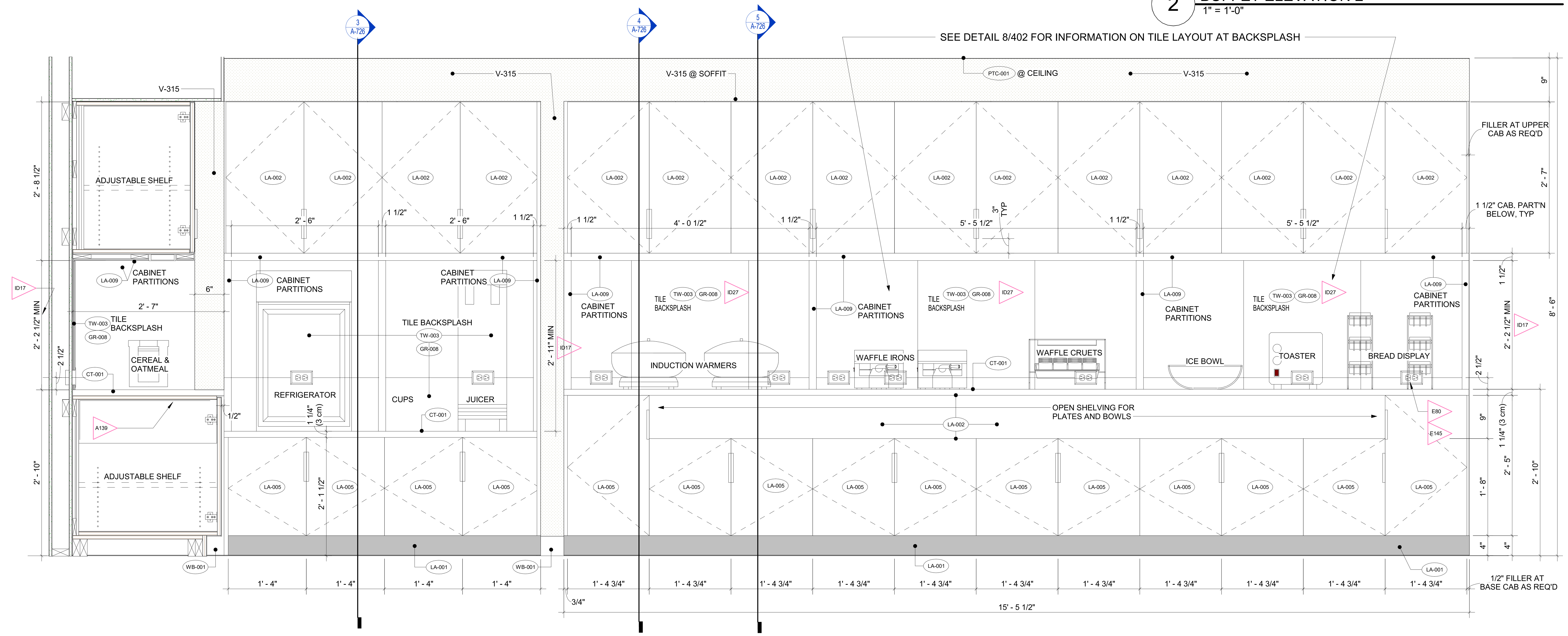
4 BUFFET MILLWORK SECTION
1" = 1'-0"



3 BUFFET MILLWORK DETAIL @ JUICER
1" = 1'-0"



2 BUFFET ELEVATION 2
1" = 1'-0"



1 BUFFET ELEVATION
1" = 1'-0"

-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
BUFFET DETAILS

PROJECT NUMBER: 23098

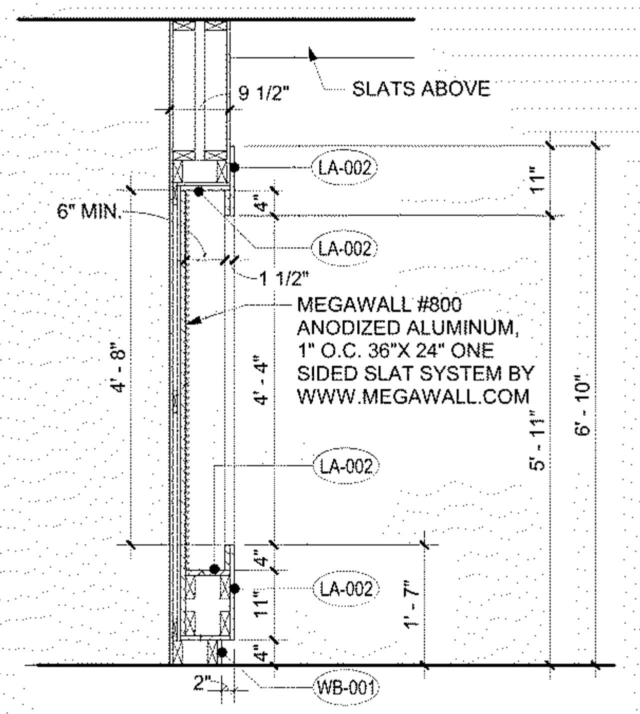
SHEET NUMBER:
A-726

1/25/2024 9:08:38 AM

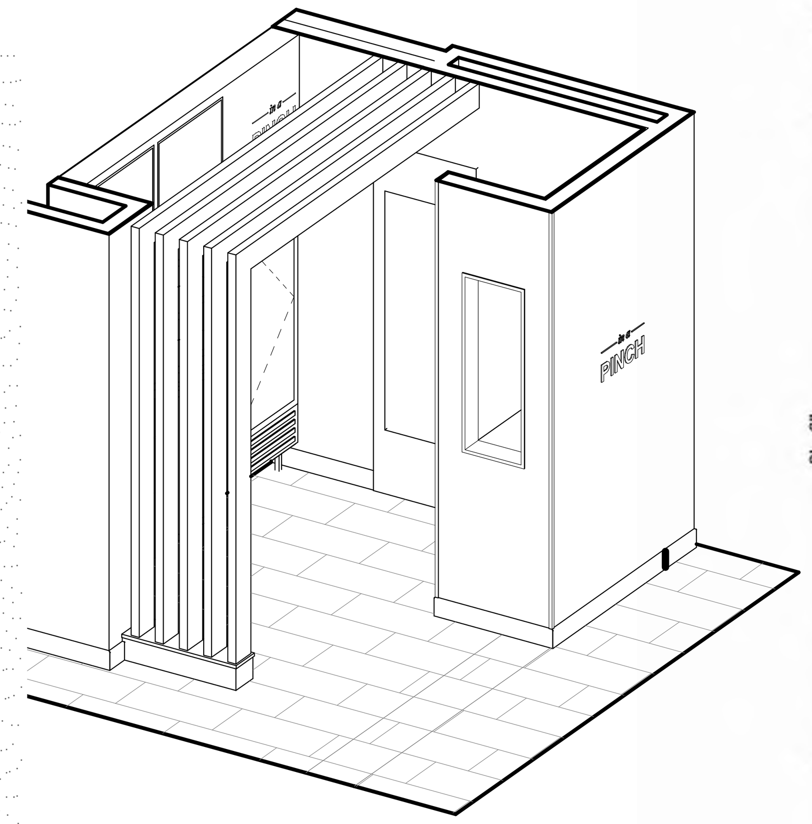
-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

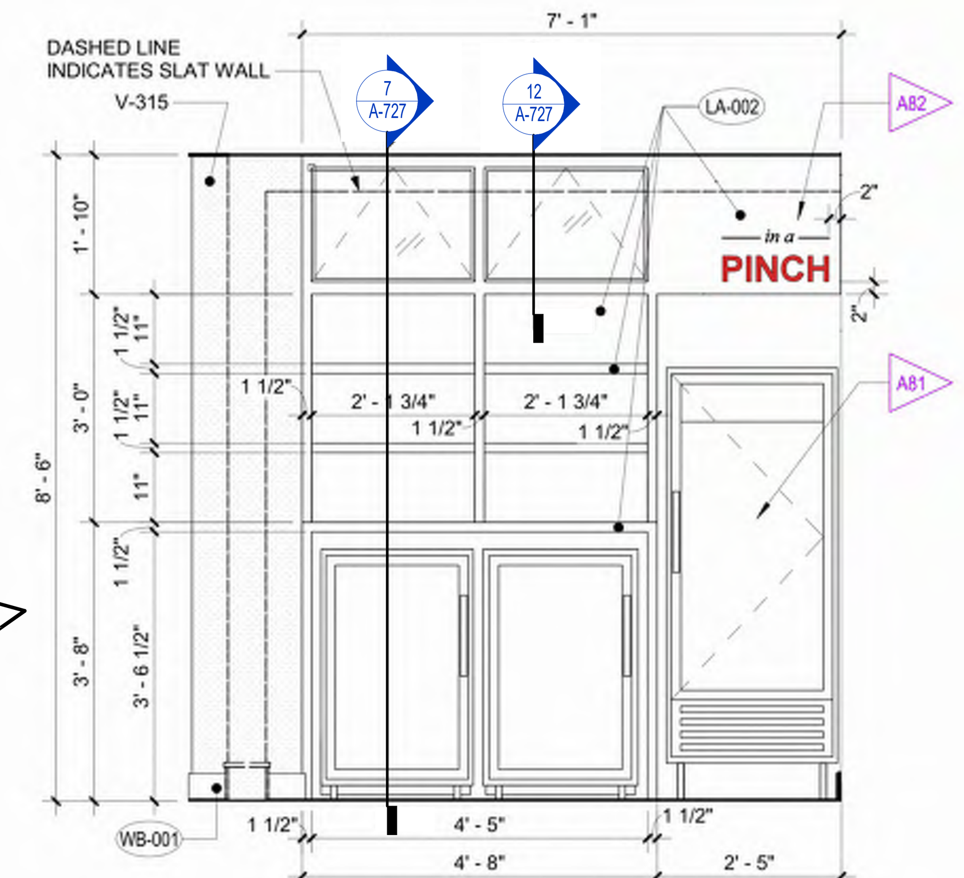
REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2



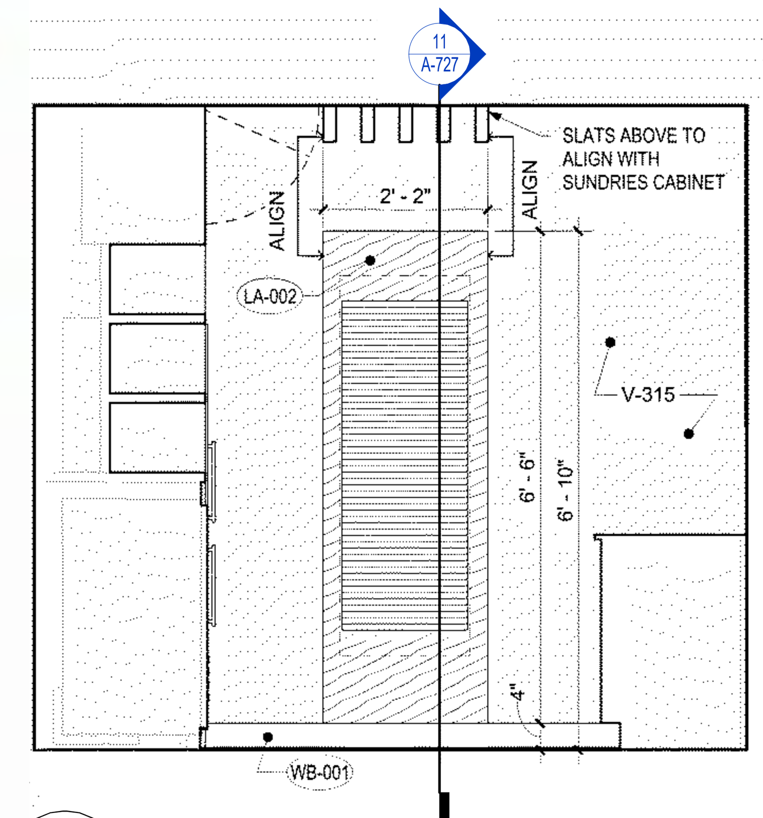
11 SUNDRIES SECTION
1/2" = 1'-0"



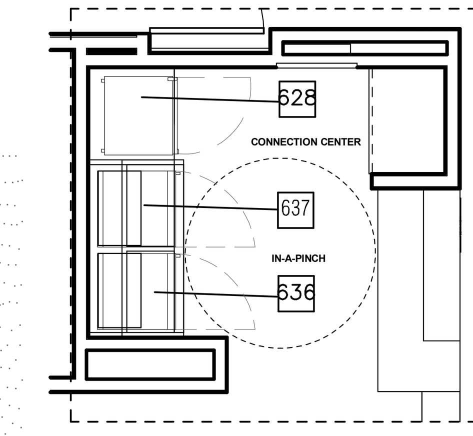
9 IN A PINCH 3D VIEW
1/2" = 1'-0"



8 IN A PINCH SUNDRIES EQUIPMENT
1/2" = 1'-0"

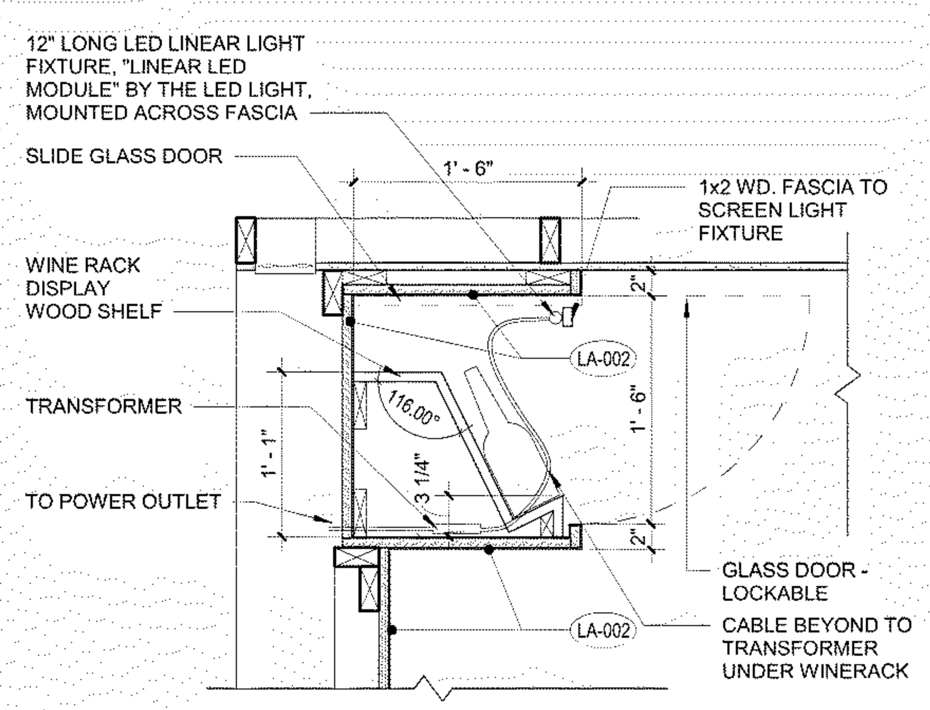


6 IN A PINCH SUNDRIES ELEVATION
1/2" = 1'-0"

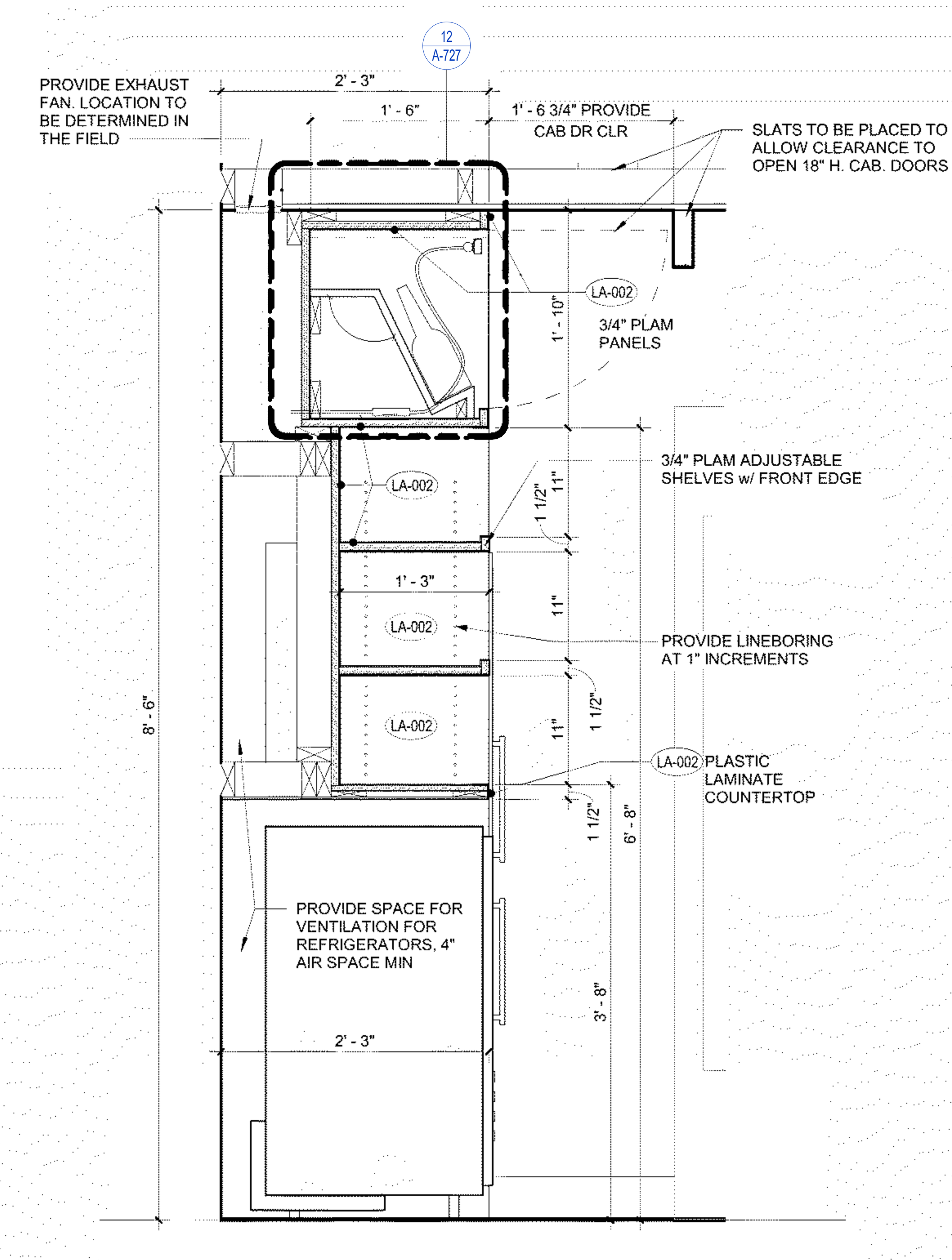


10 IN A PINCH EQUIPMENT FP
1/2" = 1'-0"

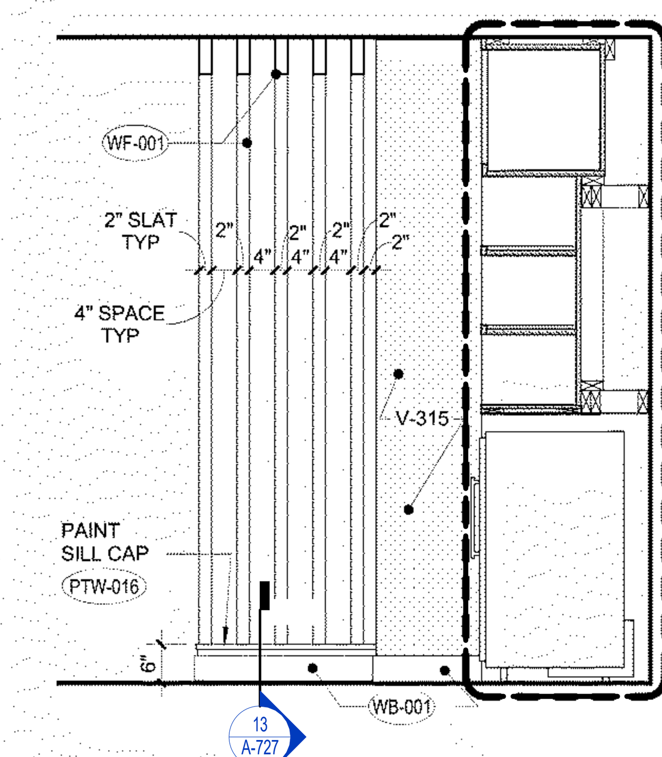
3 IN A PINCH EQUIPMENT ELEVATION WITH BEER AND WINE SERVICE
1/2" = 1'-0"



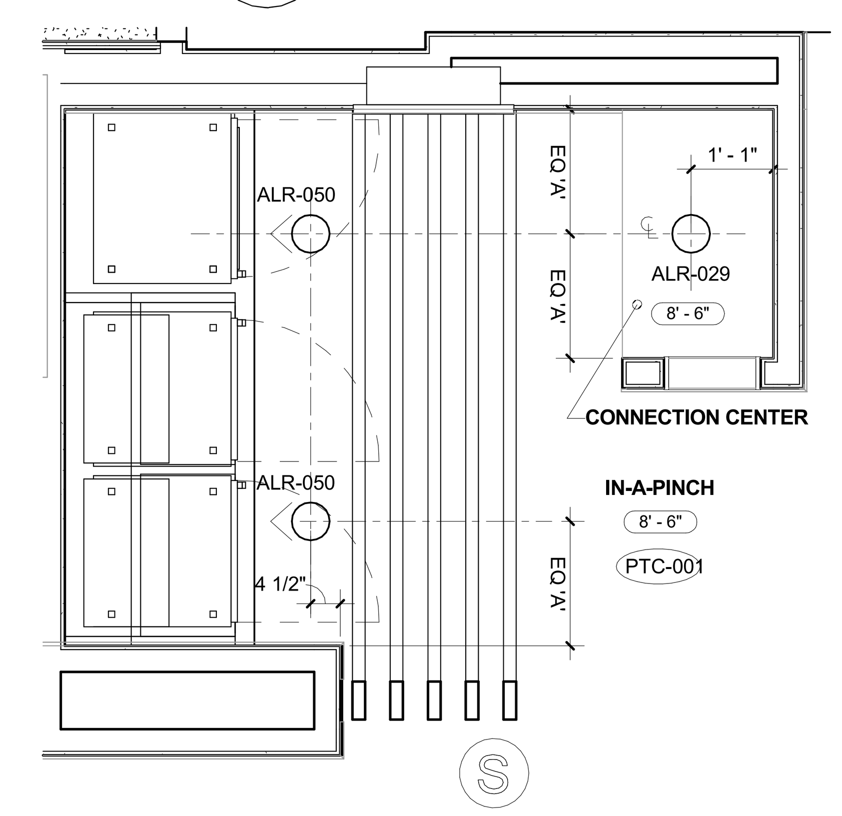
12 WINE CABINET LIGHTING DETAIL
1" = 1'-0"



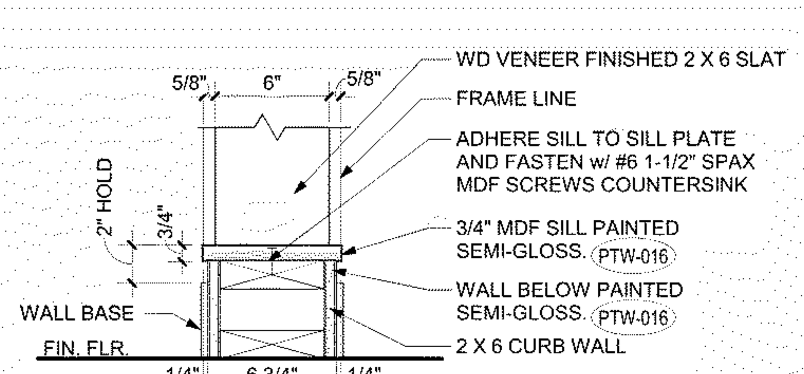
7 IN A PINCH SECTION
1" = 1'-0"



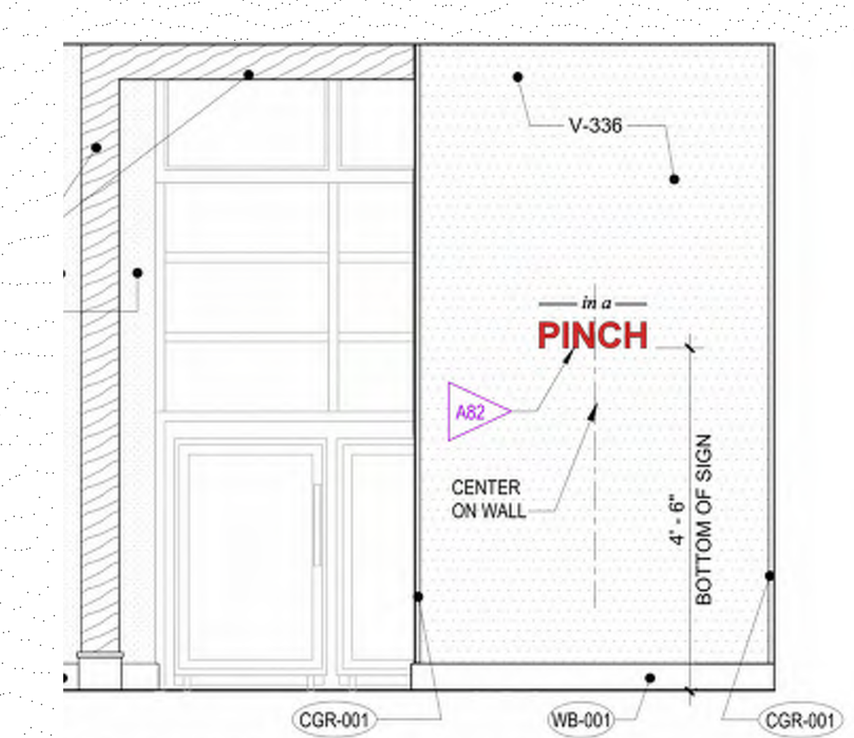
5 IN A PINCH SLAT WALL ELEVATION
1/2" = 1'-0"



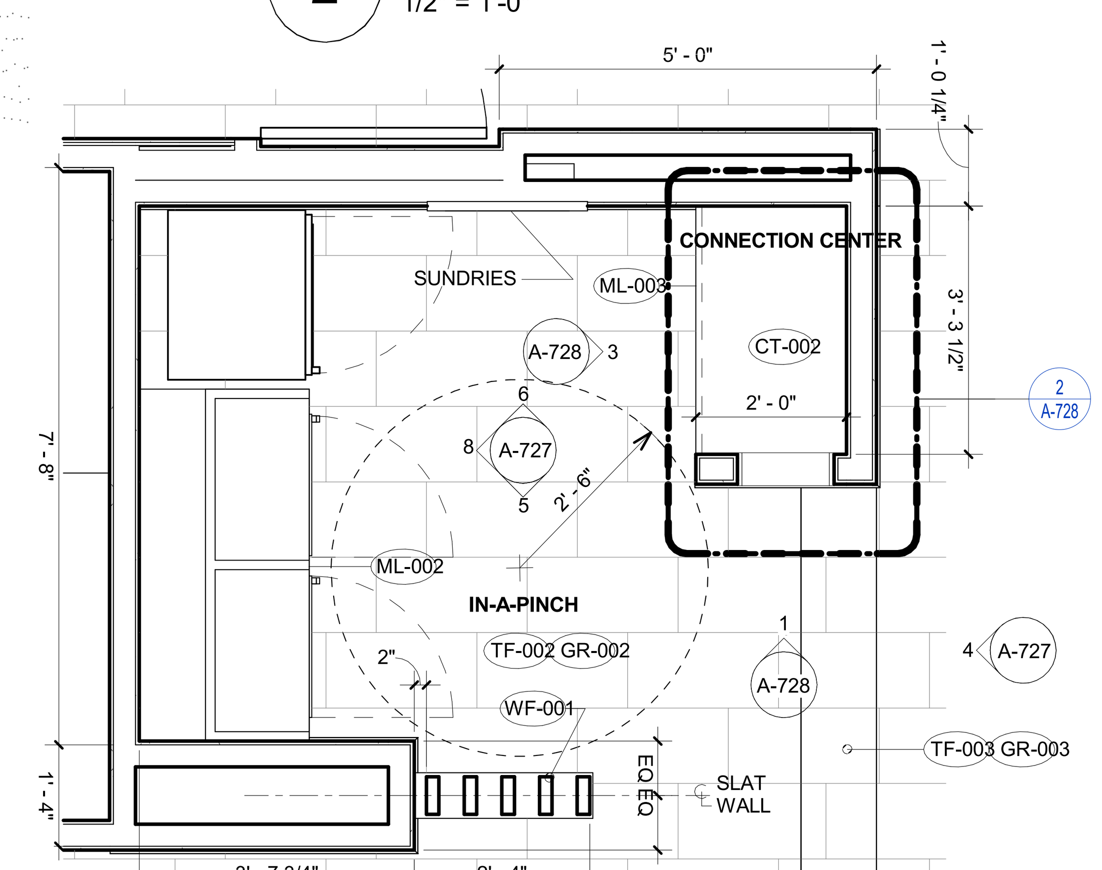
2 IN A PINCH RCP
1/2" = 1'-0"



13 SLAT WALL CURB DETAIL
1 1/2" = 1'-0"



4 IN A PINCH ELEVATION
1/2" = 1'-0"



1 IN A PINCH ENLARGED PLAN
1/2" = 1'-0"

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

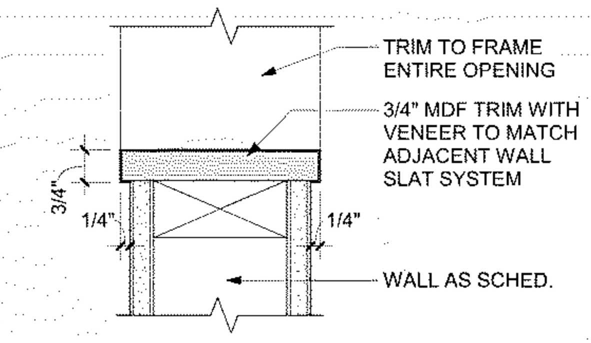
SHEET TITLE
IN A PINCH

PROJECT NUMBER: 23098

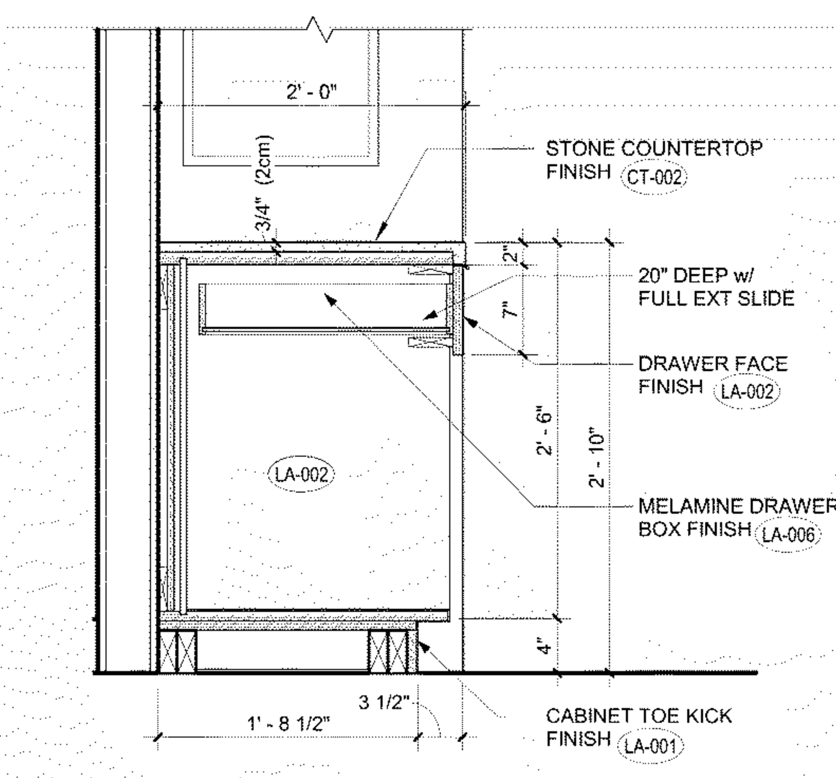
SHEET NUMBER:

A-727

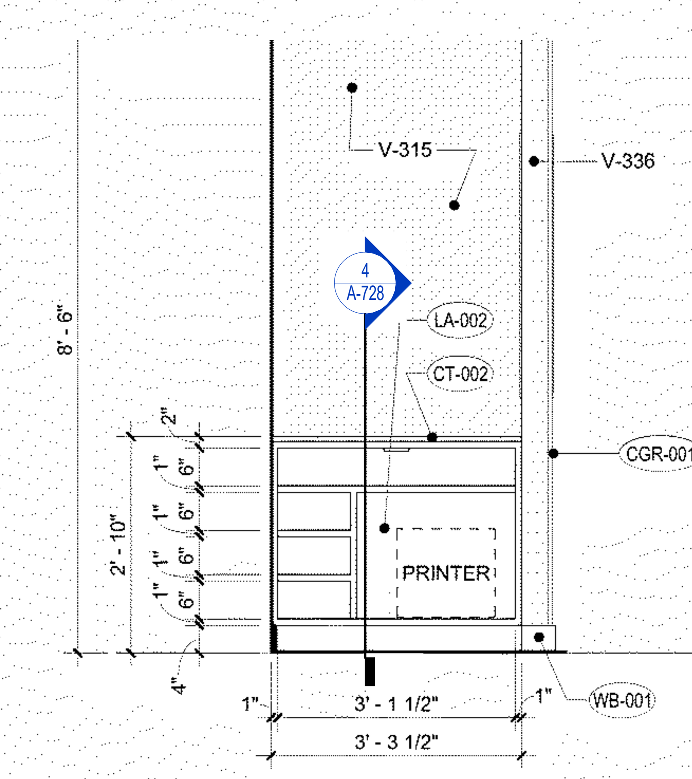
-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED



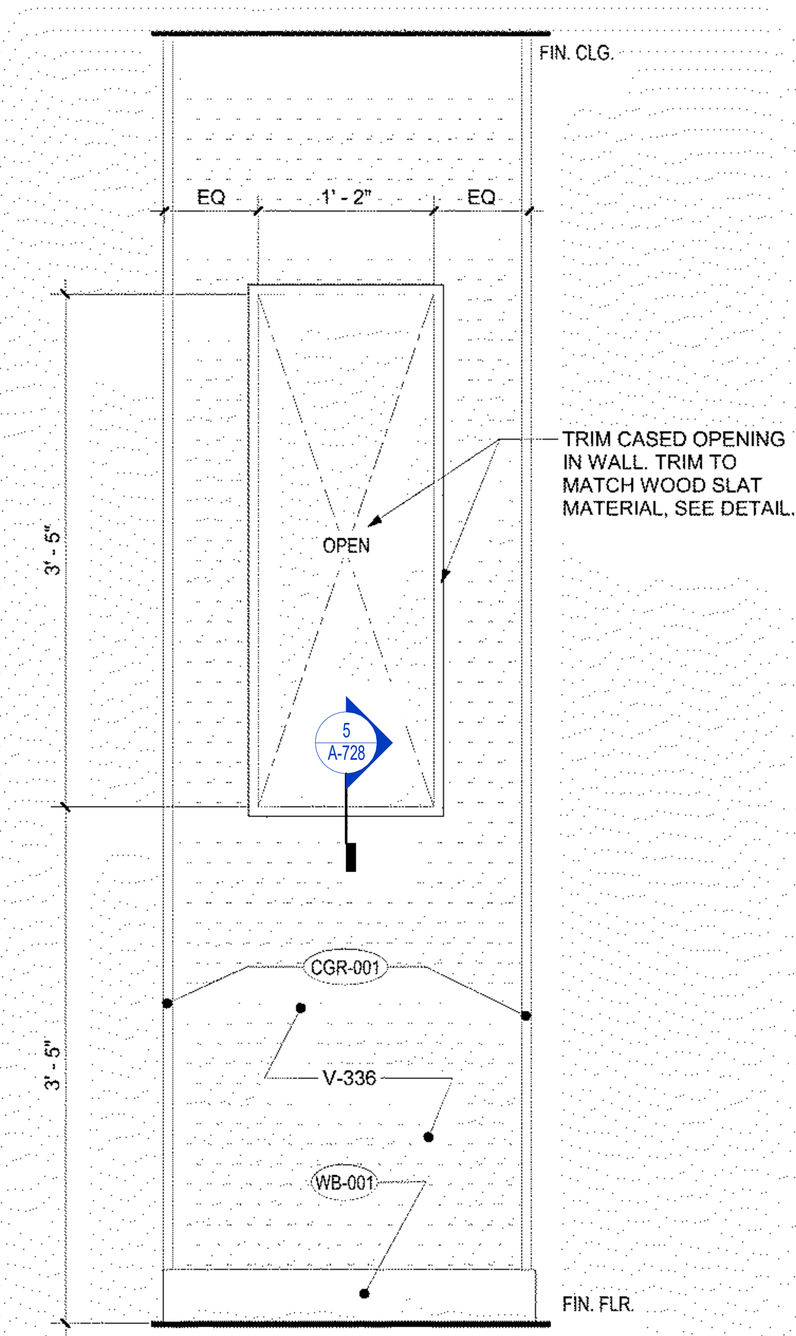
5 TRIM DETAIL
1/2" = 1'-0"



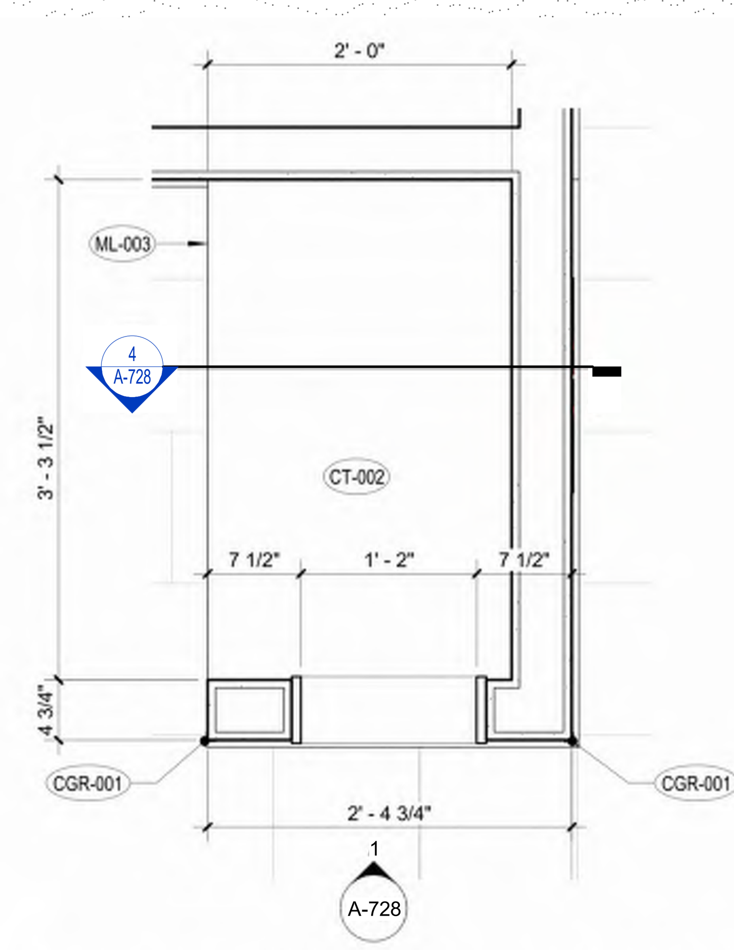
4 CONNECTION CENTER MILLWORK SECTION
1/2" = 1'-0"



3 CONNECTION CENTER ELEVATION
1/2" = 1'-0"



1 CONNECTION CENTER WALL ELEVATION
1" = 1'-0"



2 CONNECTION CENTER MILLWORK PLAN
1" = 1'-0"

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:

1	12/22/2023	Response to City Comments
2	01/19/2024	Addendum #2

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STATE OF MISSOURI
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REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
CONNECTION CENTER

PROJECT NUMBER: 23098

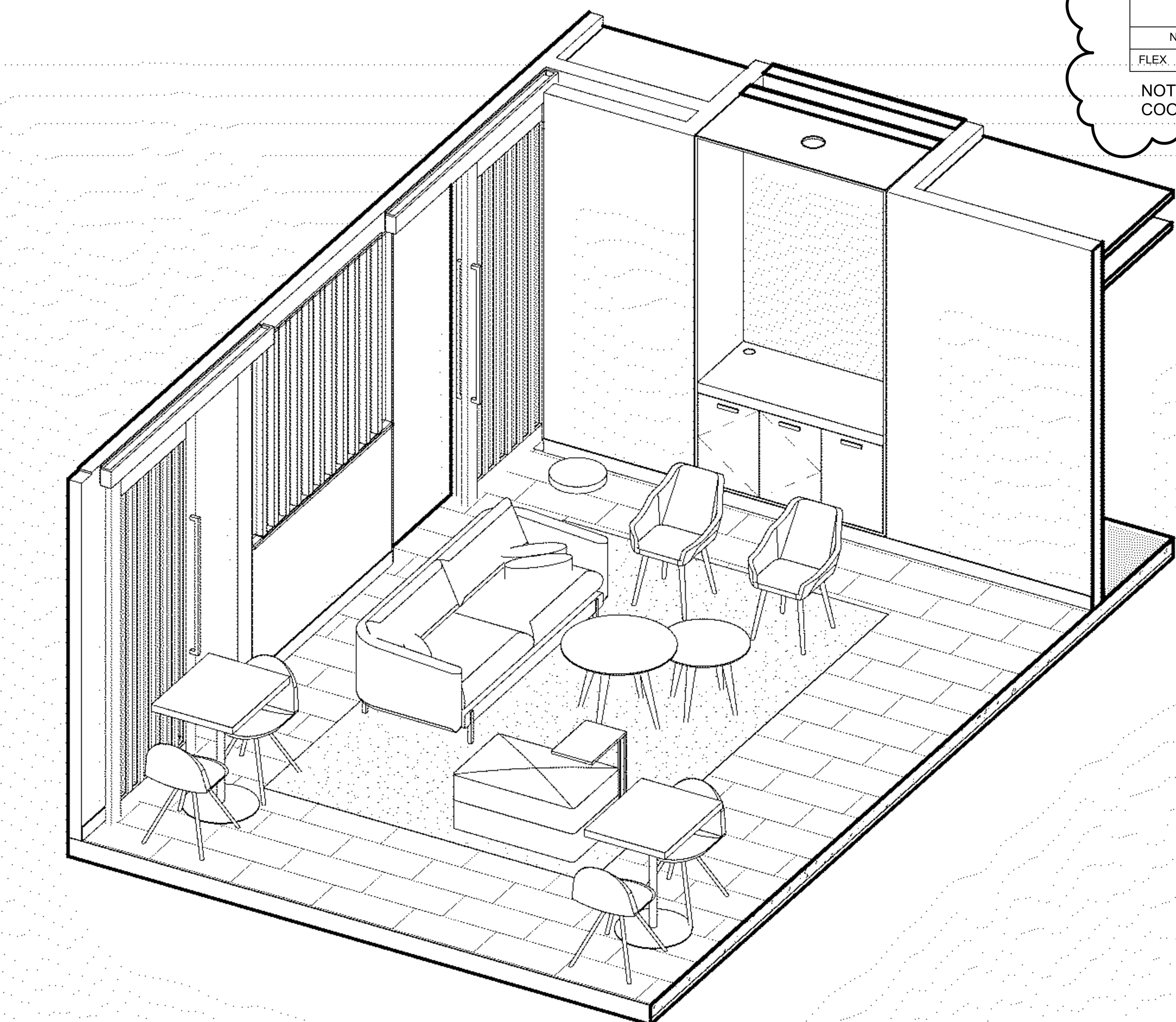
SHEET NUMBER:

A-728

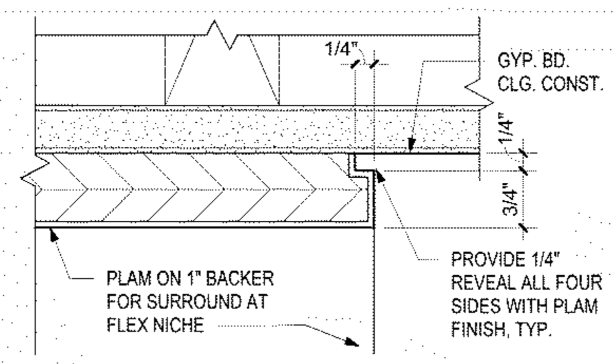
ROOM FINISH SCHEDULE					
Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
FLEX	PER PLAN	BASE, PER ELEV.	WALL COVERING, PER ELEV.	PAINT ON GYP	

NOTE: UNIT FINISH SCHEDULES ARE PER THE BRAND PROTOTYPE. FINISHES ARE TO BE COORDINATED WITH THE INTERIOR DESIGNER.

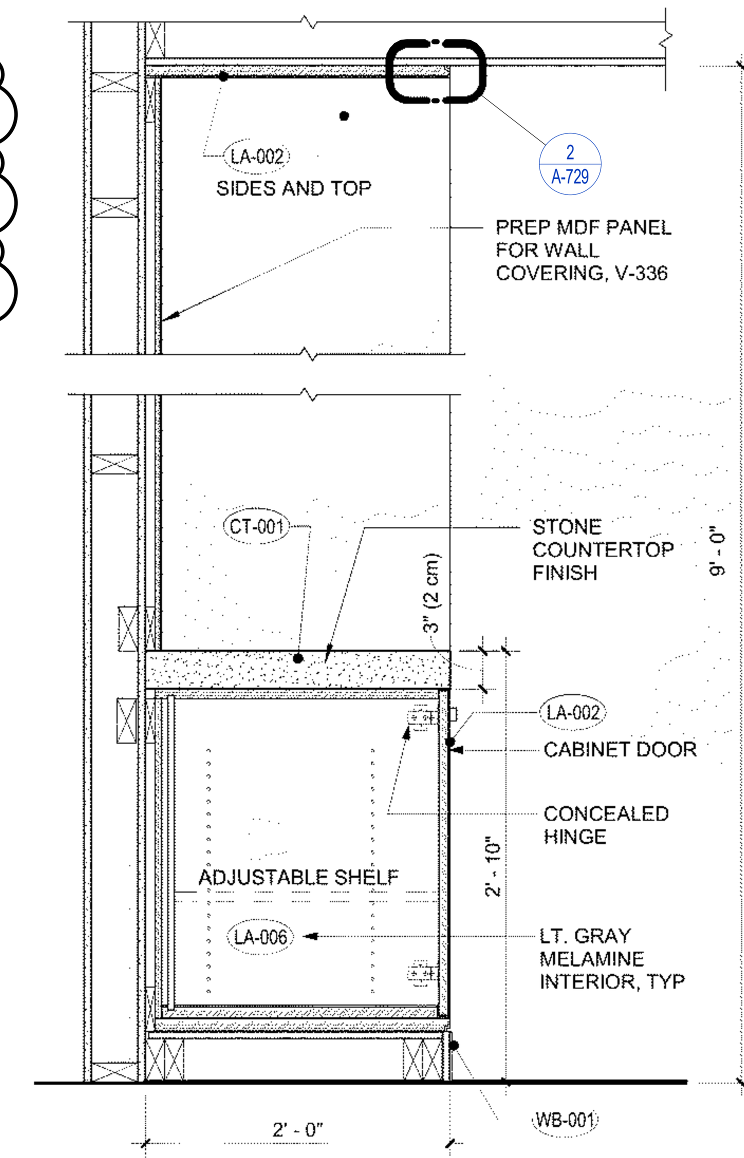
-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED



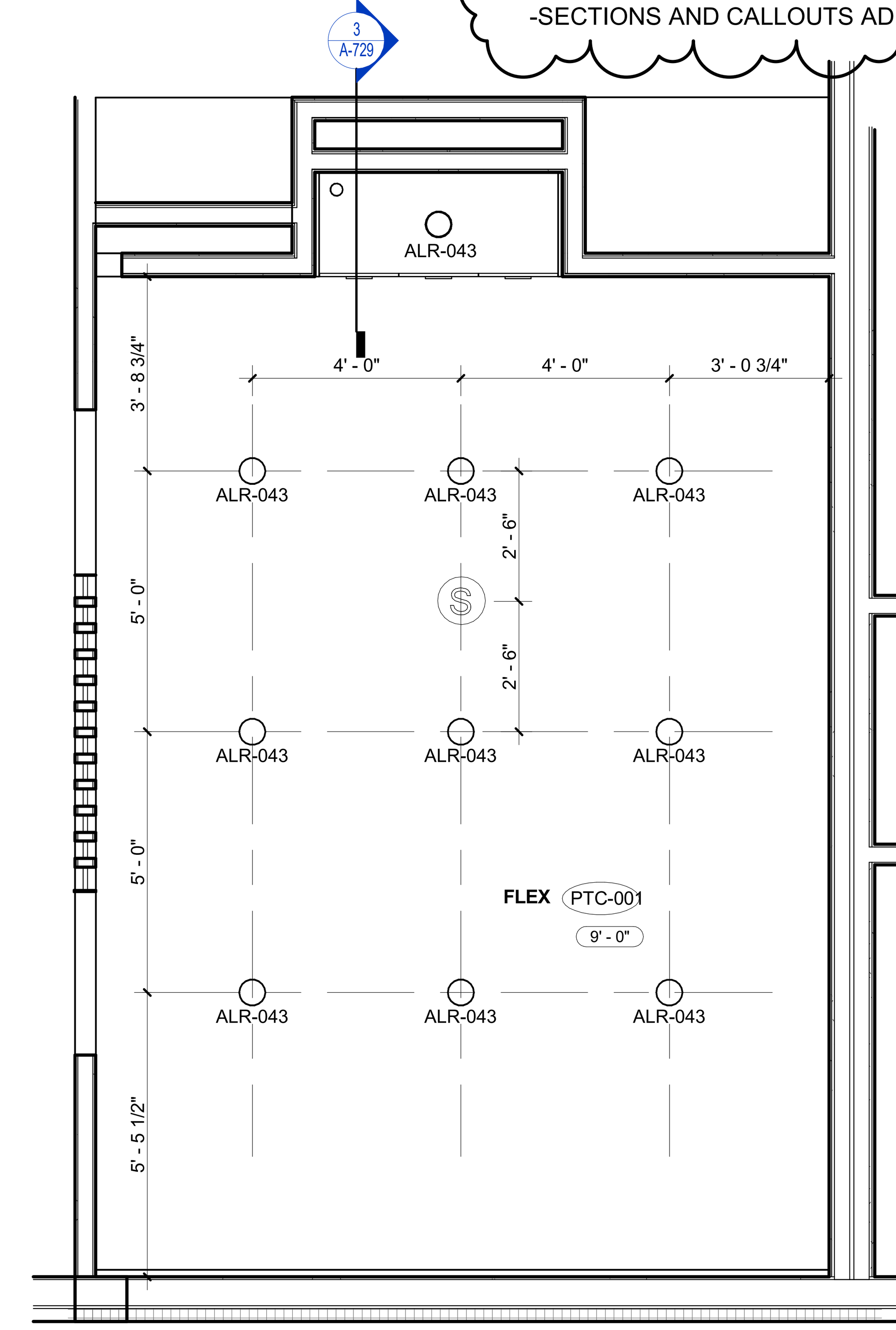
1 FLEX ROOM 3D VIEW
1/2" = 1'-0"



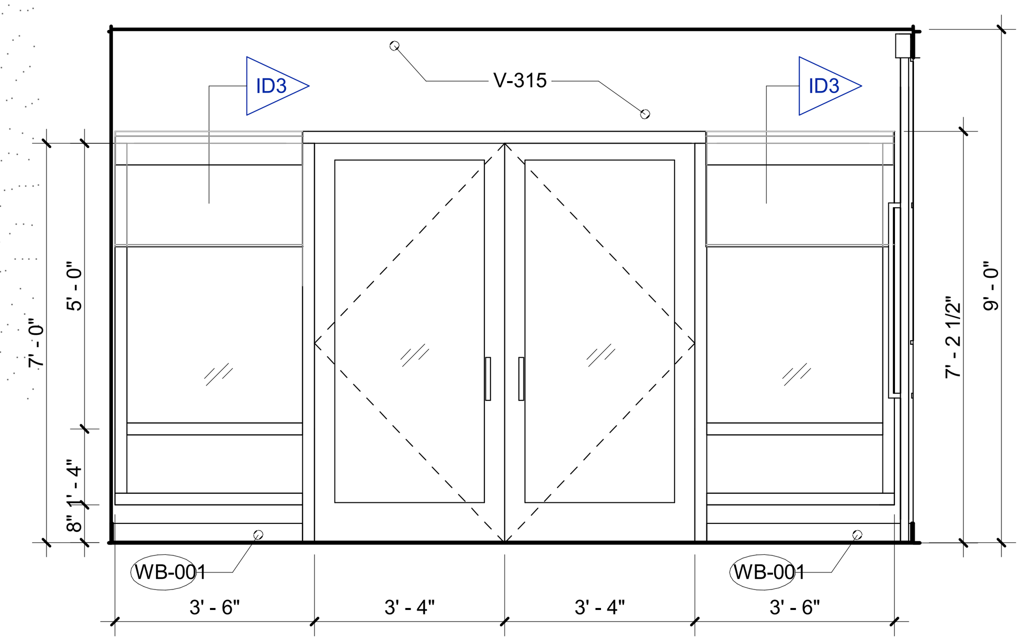
2 FLEX ROOM MILLWORK DETAIL
6" = 1'-0"



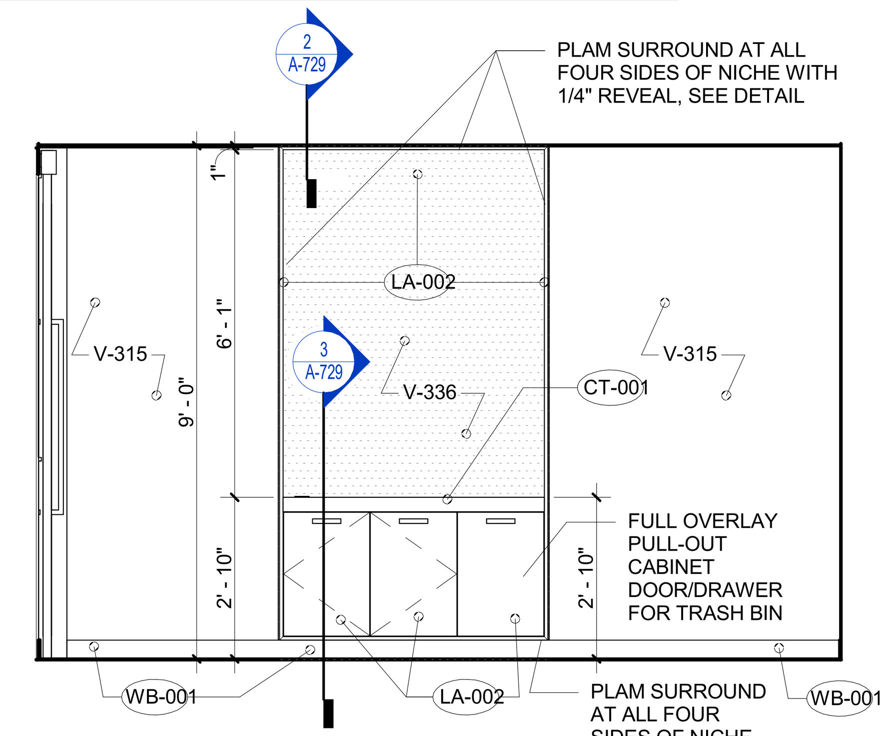
3 FLEX ROOM MILLWORK SECTION DETAIL
1" = 1'-0"



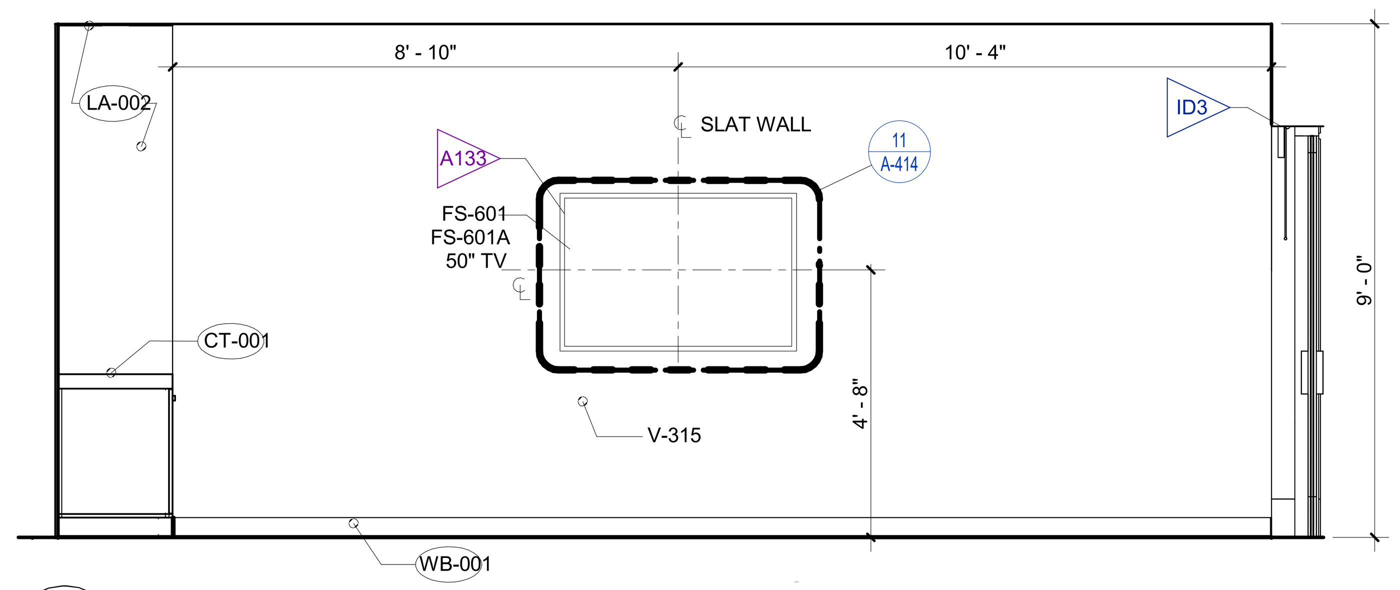
4 FLEX ROOM RCP
3/8" = 1'-0"



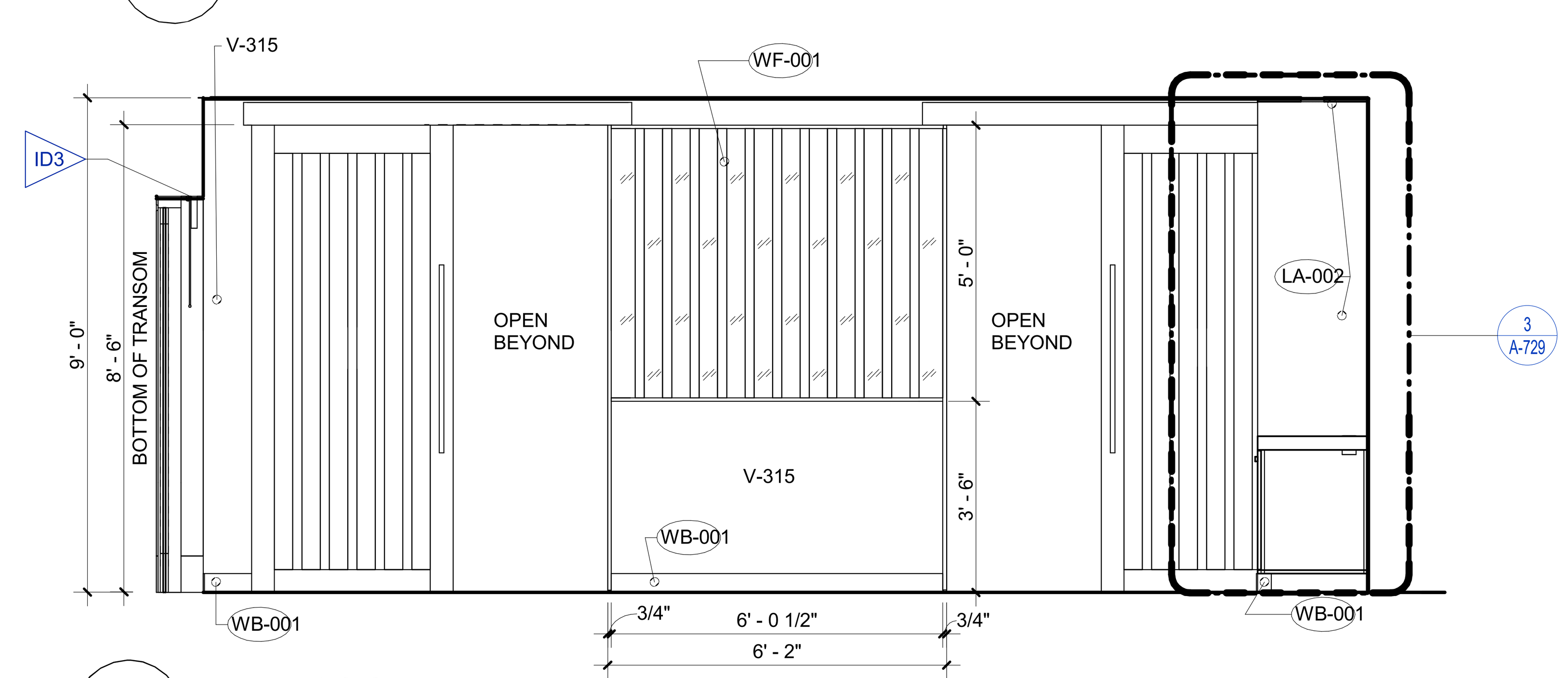
5 FLEX ROOM ELEVATION 1
3/8" = 1'-0"



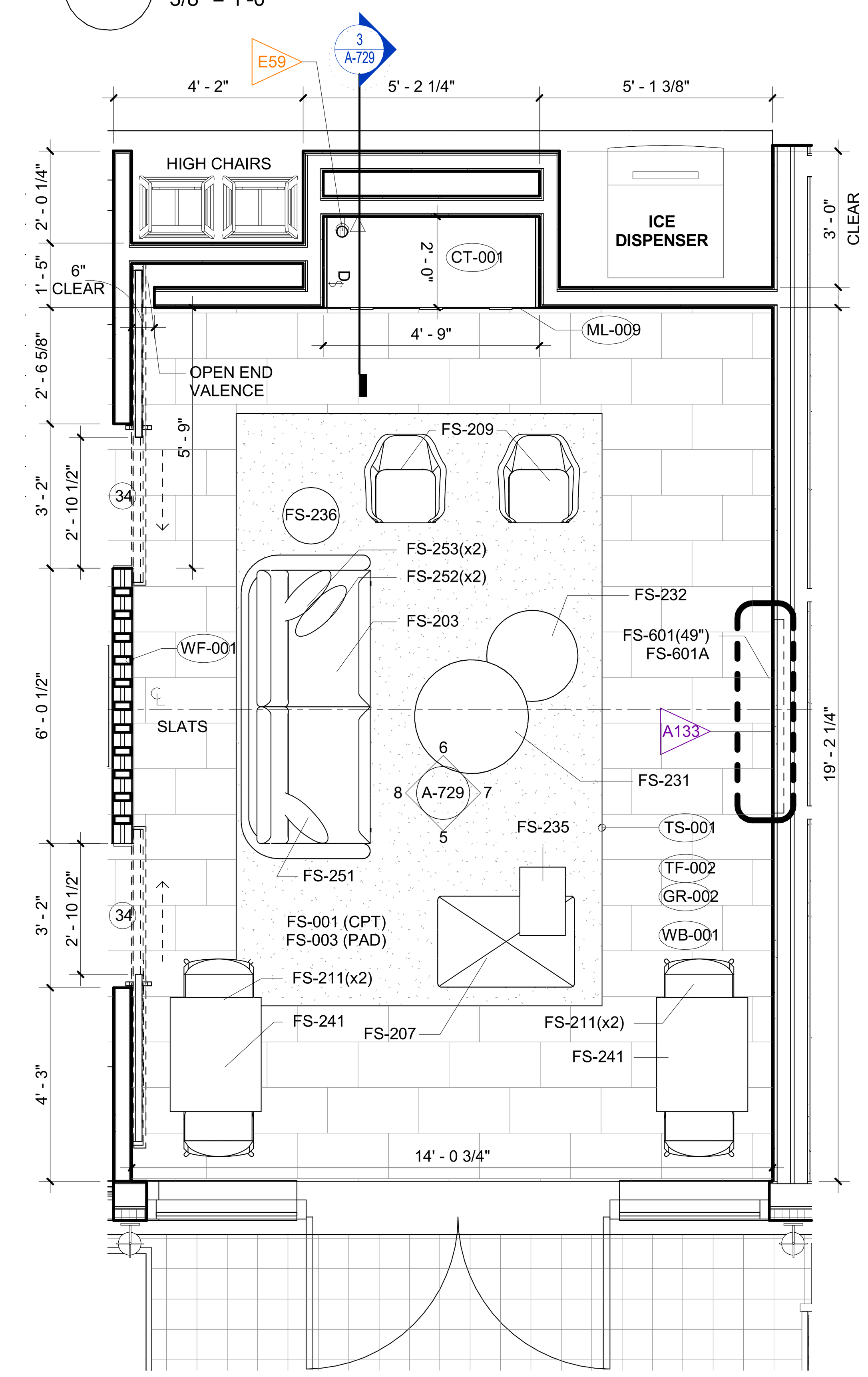
6 FLEX ROOM ELEVATION 2
3/8" = 1'-0"



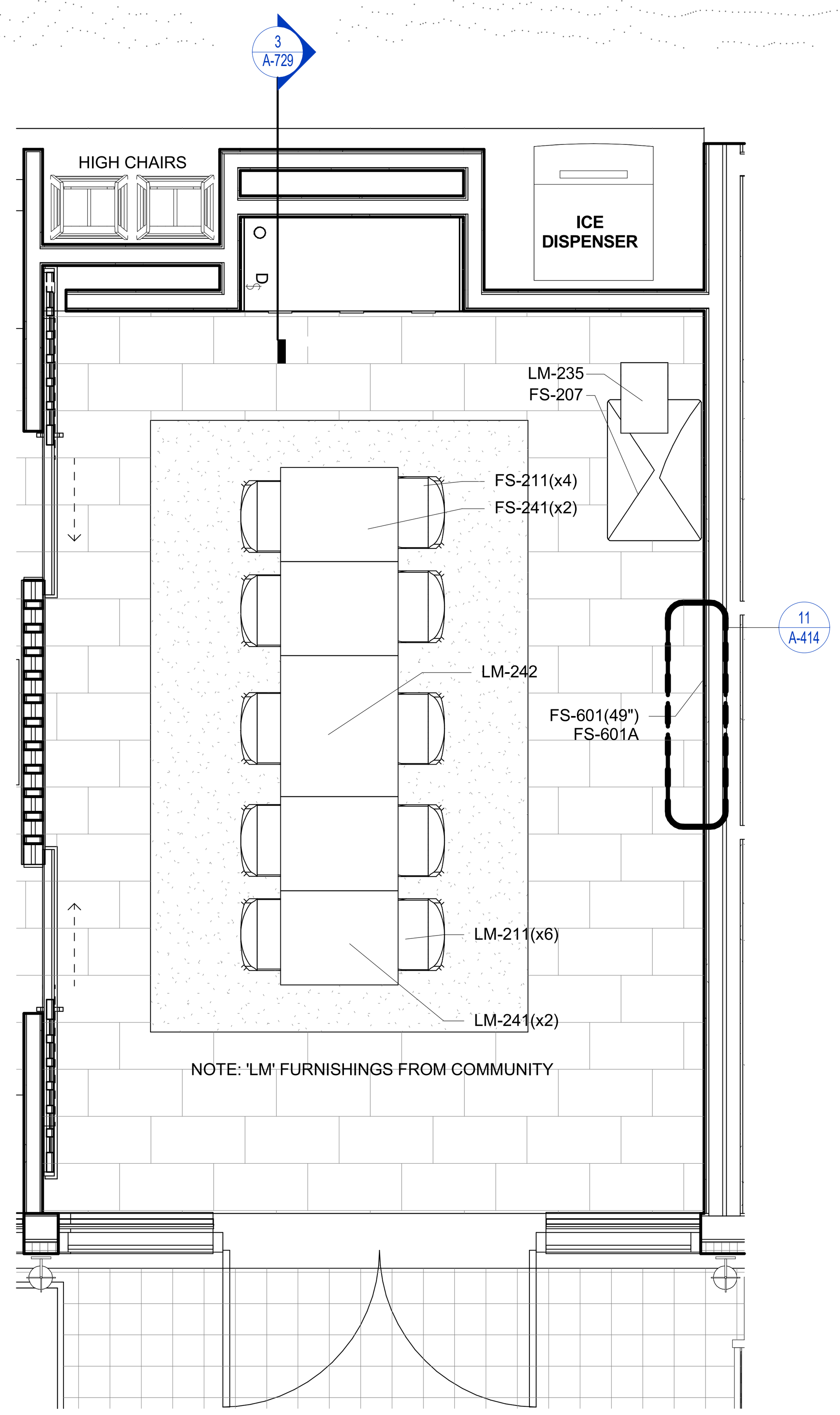
7 FLEX ROOM ELEVATION 3
3/8" = 1'-0"



8 FLEX ROOM ELEVATION 4
3/8" = 1'-0"



9 FLEX ROOM FURN PLAN
3/8" = 1'-0"



10 FLEX ROOM ALTERNATE FURN PLAN
3/8" = 1'-0"

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
2 01/19/2024 Addendum #2
3 03/06/2024 IN RESPONSE TO GC COMMENTS

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
03/06/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
FLEX DETAILS

PROJECT NUMBER: 23098

SHEET NUMBER:

A-729

3/6/2024 5:49:11 PM

-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

REVISIONS:
1 12/22/2023 Response to City Comments
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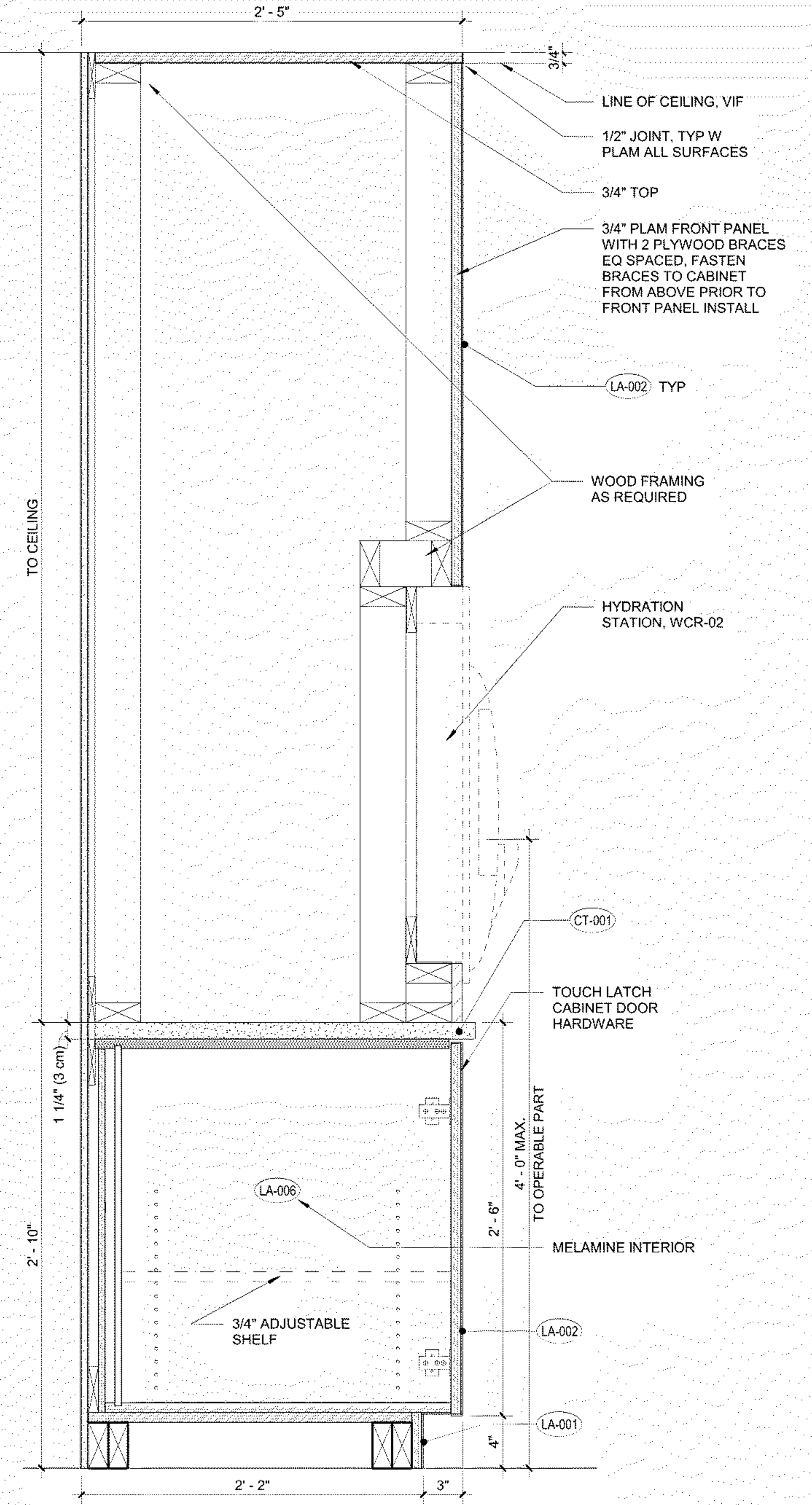
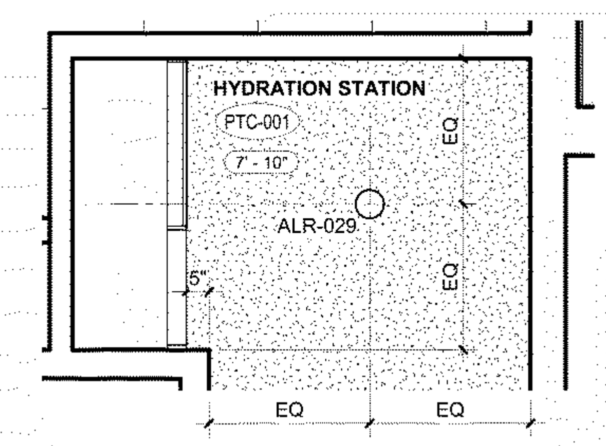
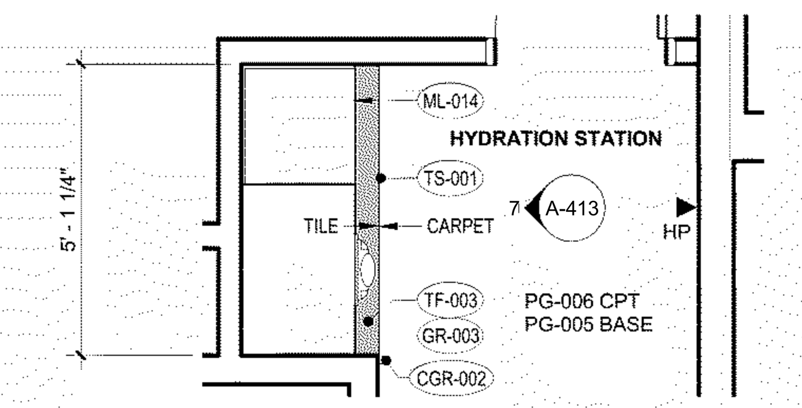


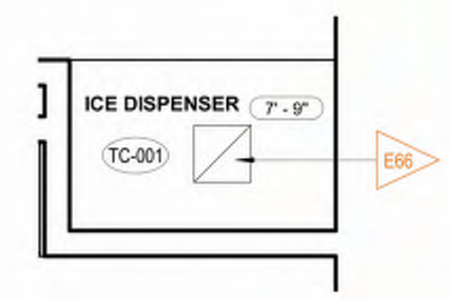
1 HYDRATION STATION SECTION
1 1/2" = 1'-0"



4 HYDRATION STATION AREA - UPPER FLOOR RCP
3/8" = 1'-0"



2 HYDRATION STATION AREA - UPPER FLOOR
3/8" = 1'-0"



3 ICE DISPENSER AREA - FIRST FLOOR RCP
3/8" = 1'-0"

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STATE OF MISSOURI
DAVID EUGENE HENDRICKS
NUMBER
REGISTERED ARCHITECT
01/19/2024

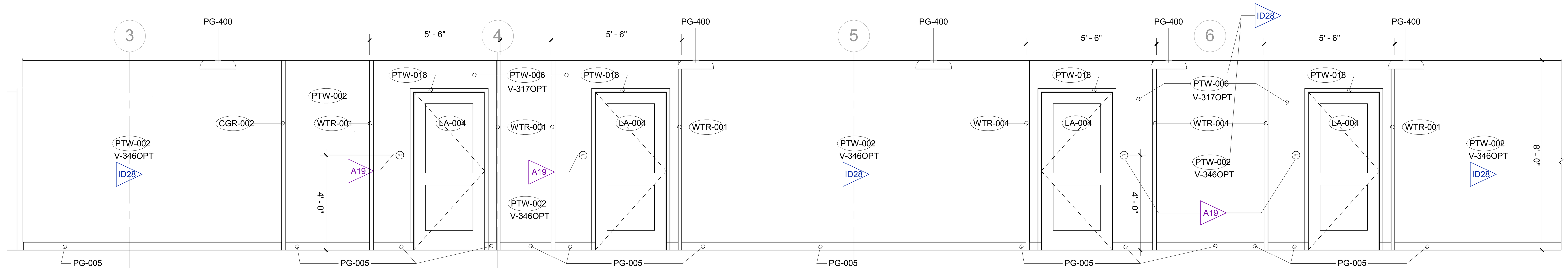
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
HYDRATION STATION/ ICE DISPENSER

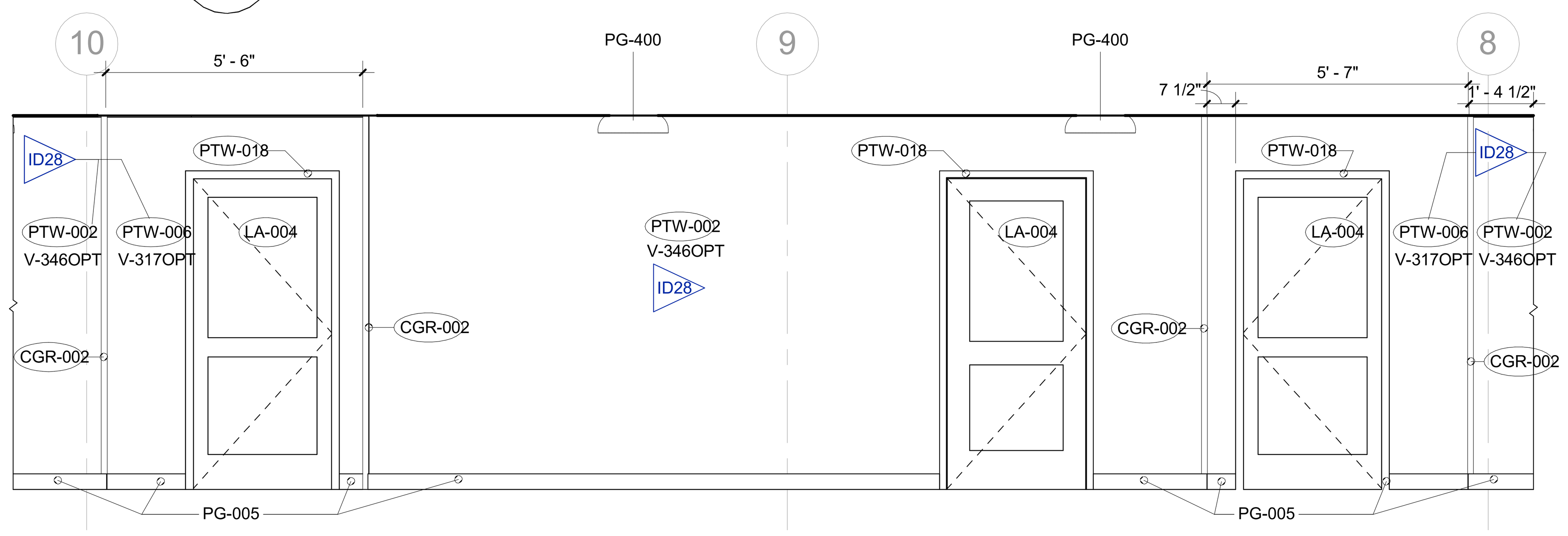
PROJECT NUMBER: 23098

SHEET NUMBER:

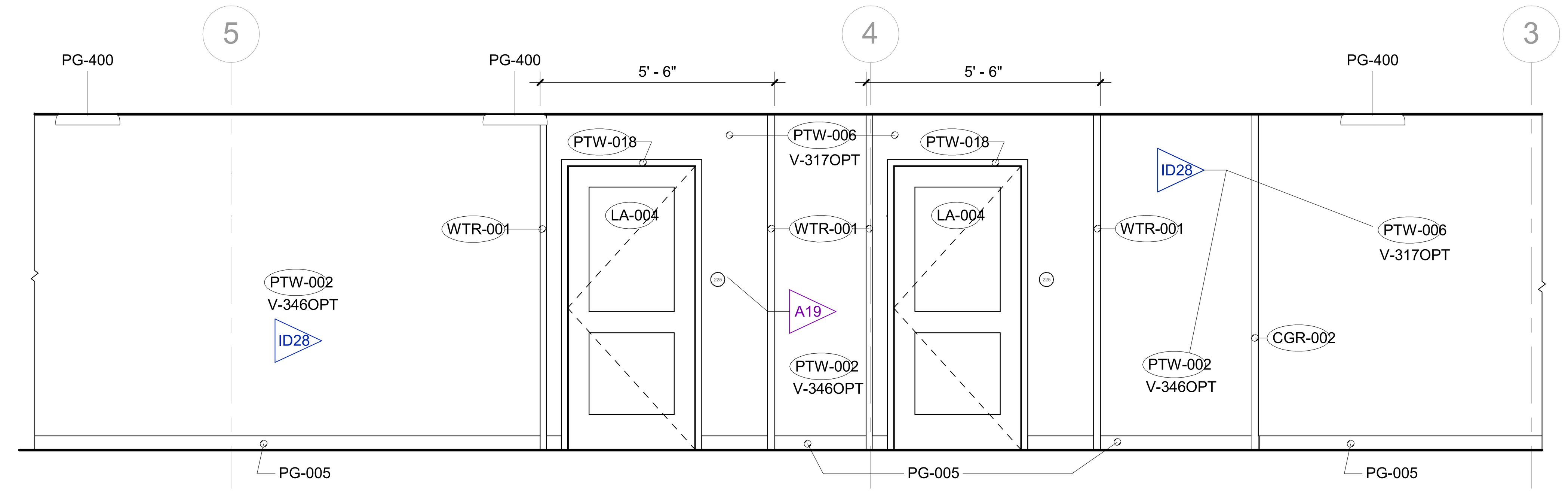
A-730



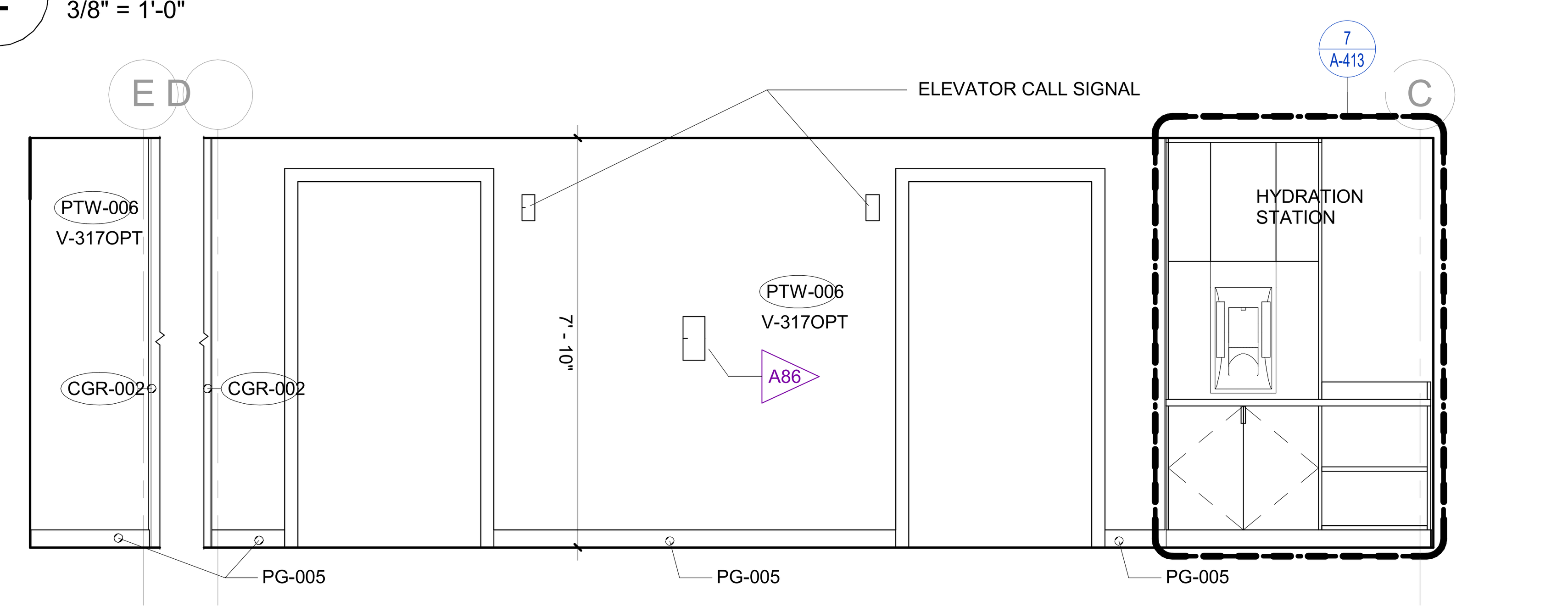
1 PARTIAL INT. ELEVATION GUESTROOM CORRIDOR
3/8" = 1'-0"



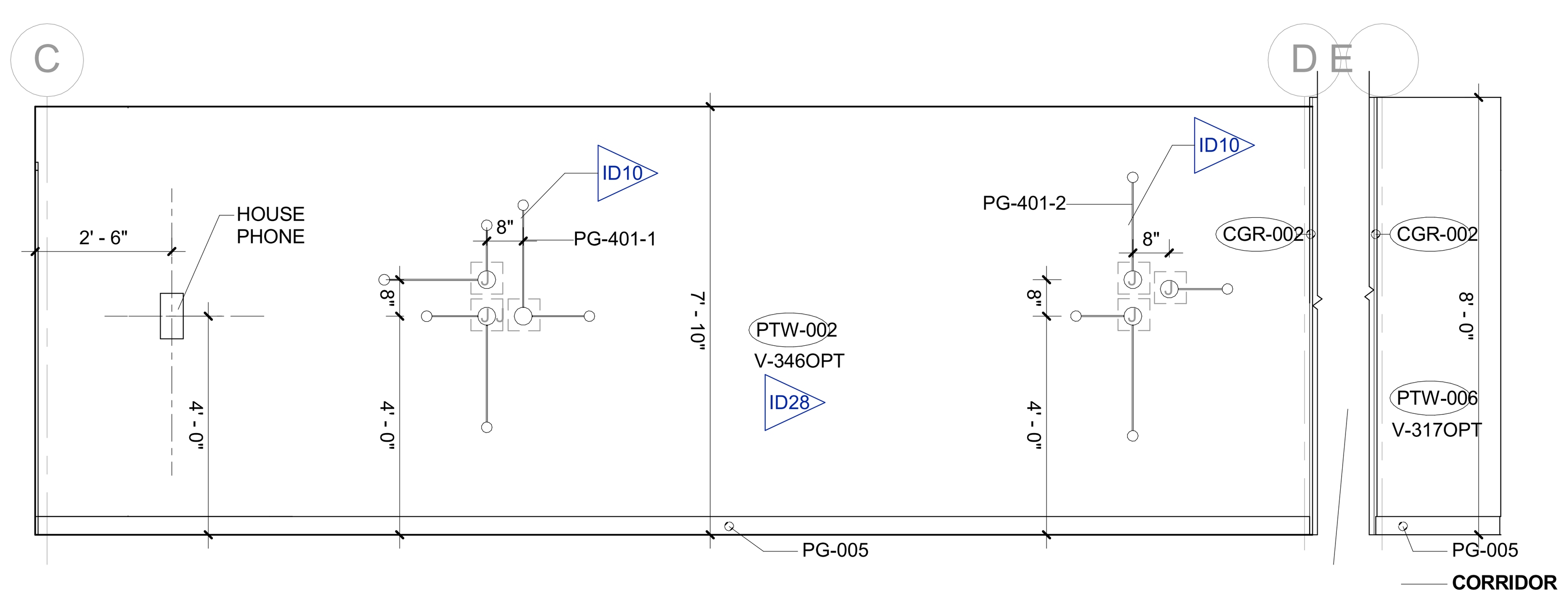
2 PARTIAL INT. ELEVATION GUESTROOM CORRIDOR 2
3/8" = 1'-0"



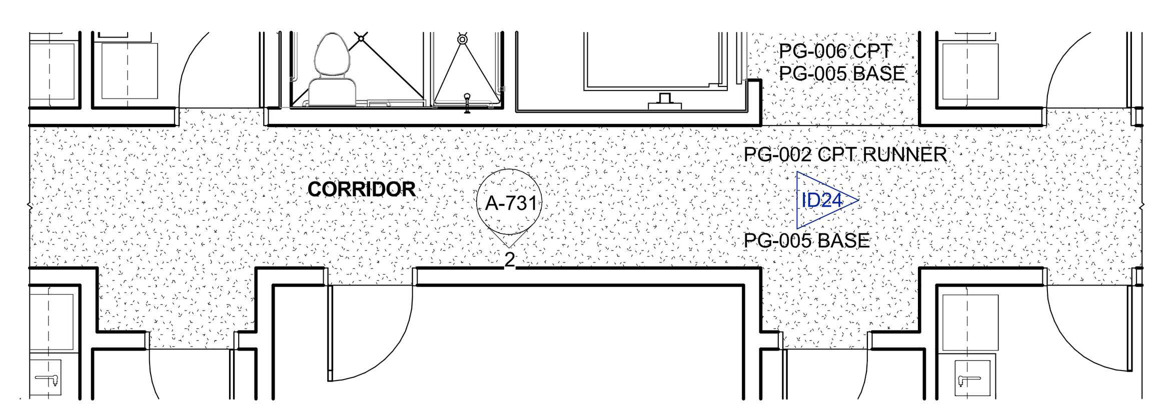
3 PARTIAL INT. ELEVATION GUESTROOM CORRIDOR 3
3/8" = 1'-0"



4 PARTIAL INT. ELEVATION UPPER ELEVATOR LOBBY
3/8" = 1'-0"



5 PARTIAL INT. ELEVATION UPPER ELEVATOR LOBBY 2
3/8" = 1'-0"



6 UPPER CORRIDOR CARPET PLAN
3/16" = 1'-0"

-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

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STATE OF MISSOURI
DAVID EUGENE HENDRIXSE
NUMBER
A-7365
REGISTERED ARCHITECT
01/19/2024

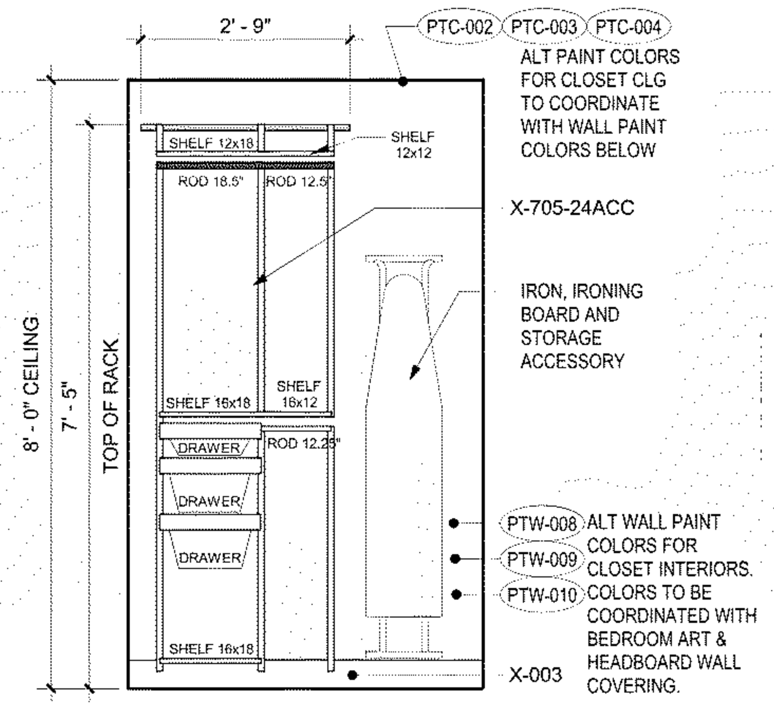
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
CORRIDOR ELEVATIONS

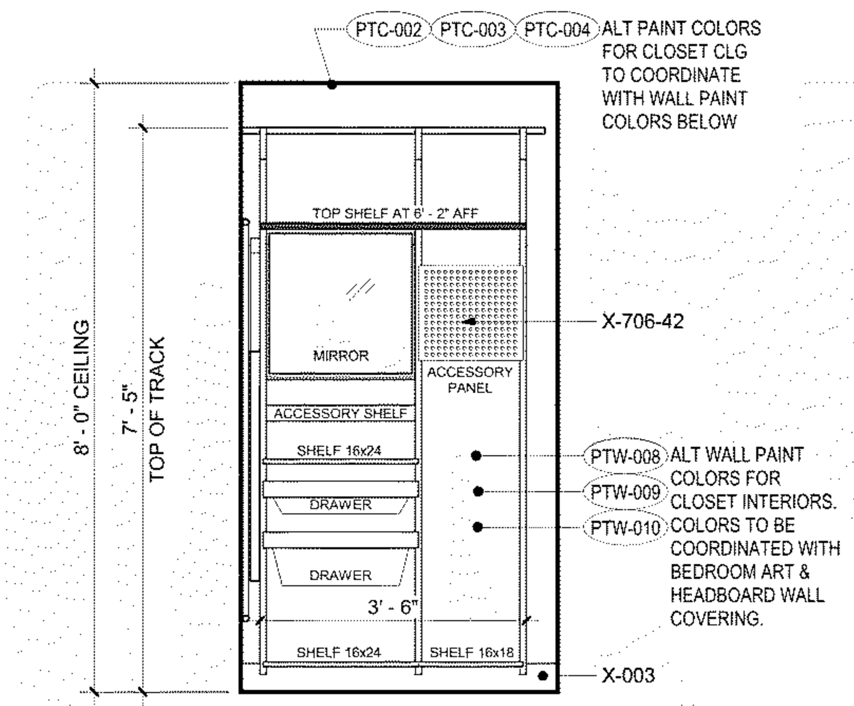
PROJECT NUMBER: 23098

SHEET NUMBER:

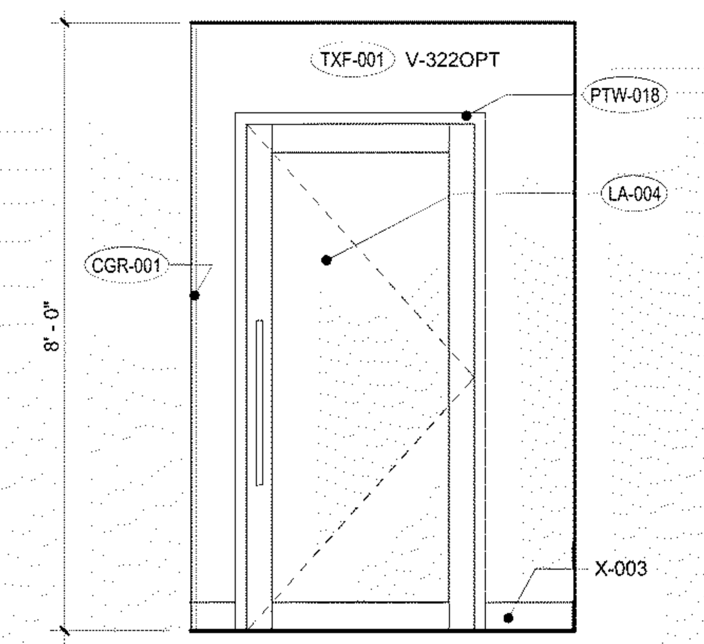
A-731



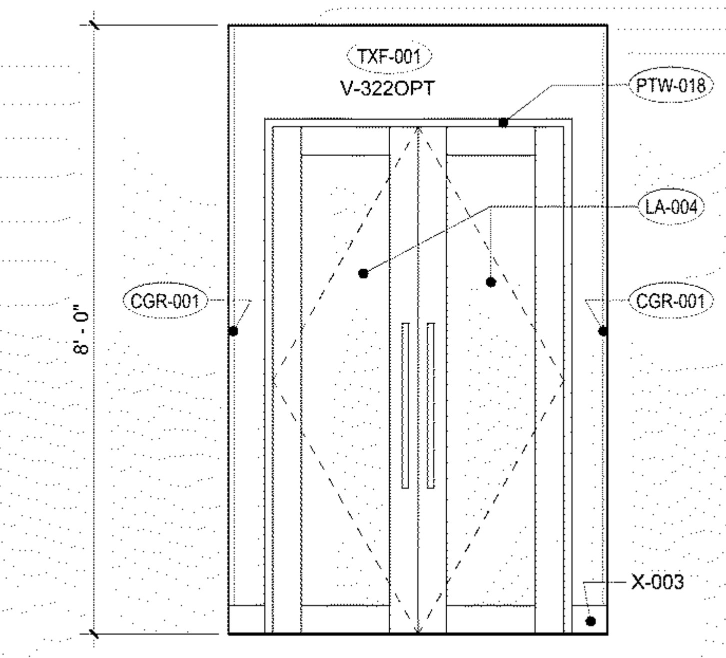
9 ACC KING STUDIO INTERIOR CLO. ELEV.
1/2" = 1'-0"



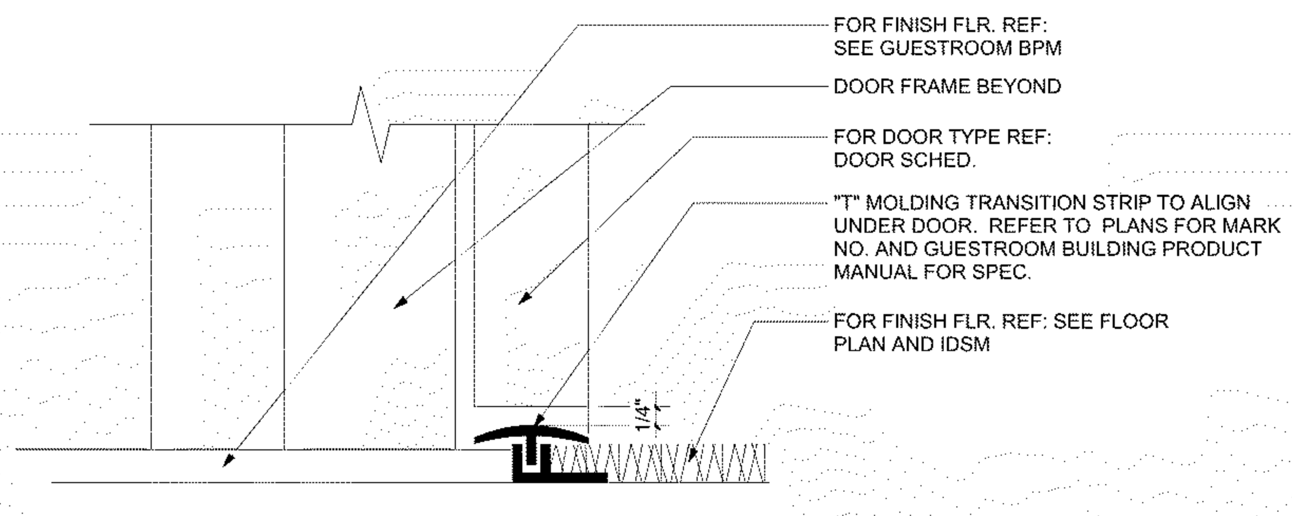
8 INTERIOR CLOSET ELEVATION
1/2" = 1'-0"



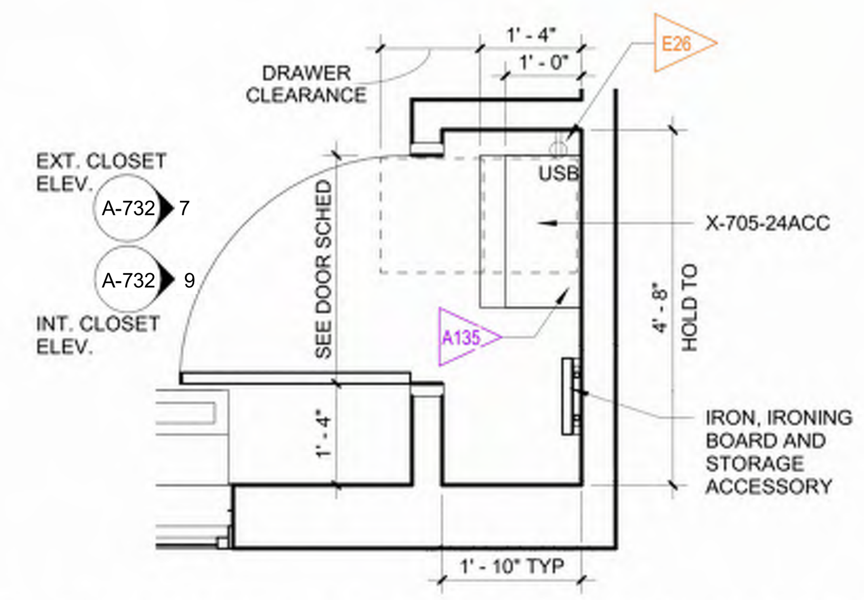
7 ACC KING STUDIO CLOSET DOOR ELEVATION
1/2" = 1'-0"



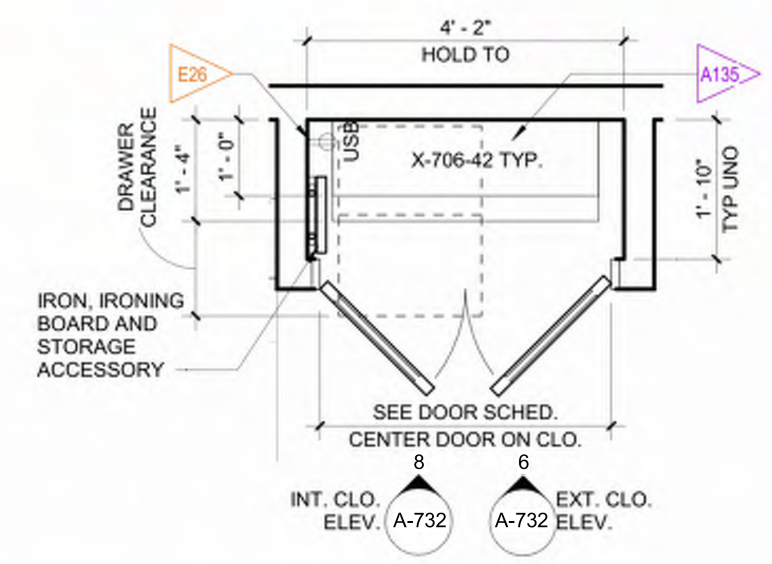
6 TYP. CLOSET DOOR ELEVATION
1/2" = 1'-0"



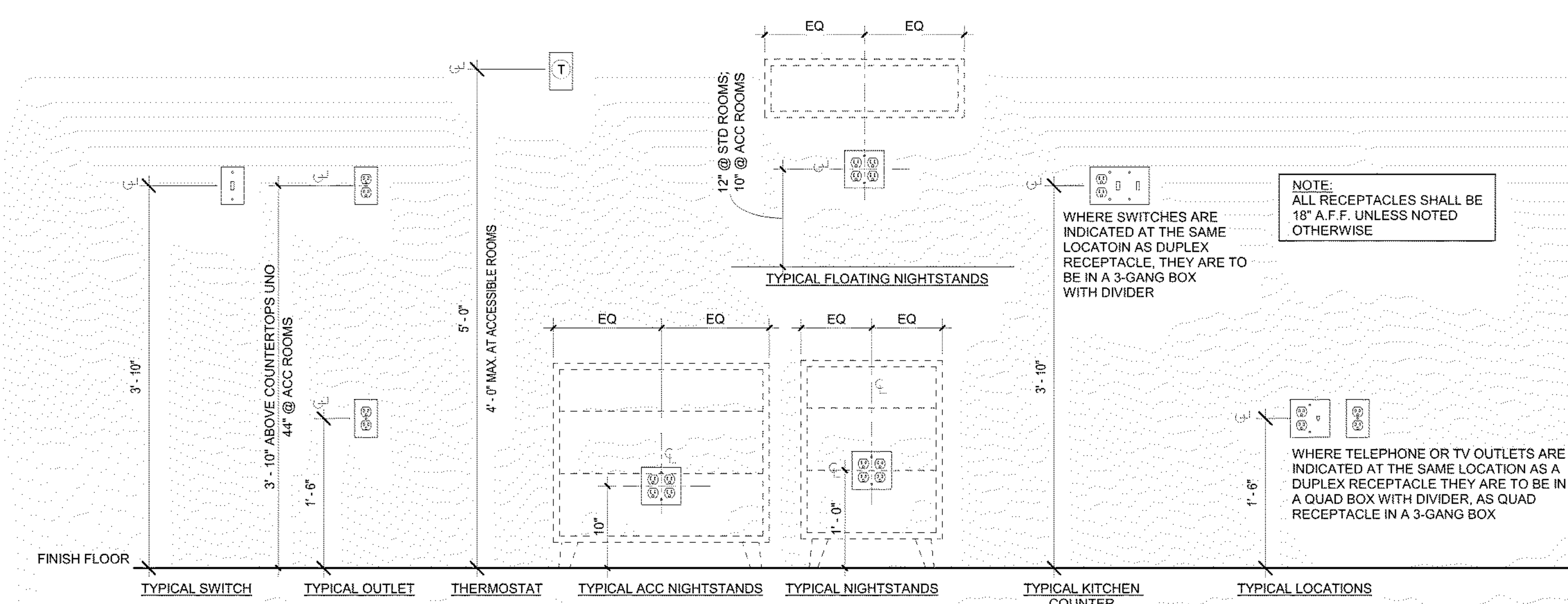
5 GUESTROOM ENTRY KITCHEN TRANSITION CARPET TO VINYL
6" = 1'-0"



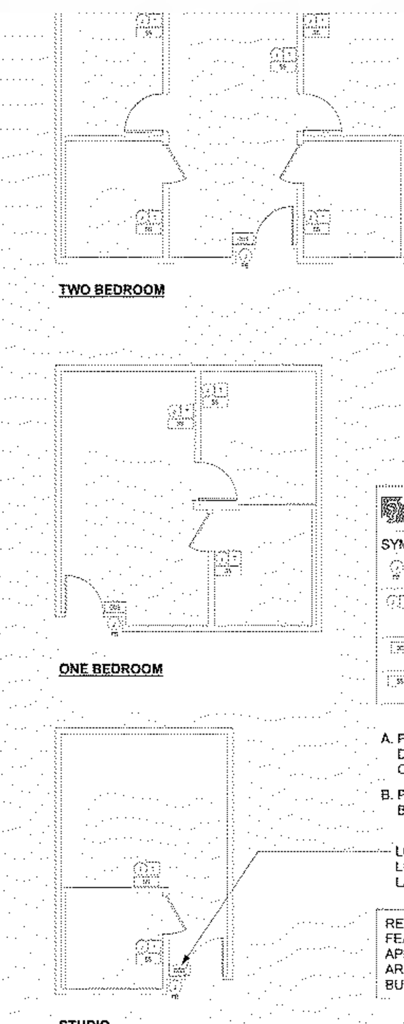
4 ENLARGED ACC KING STUDIO CLOSET PLAN
1/2" = 1'-0"



3 TYP ENLARGED CLOSET PLAN
1/2" = 1'-0"



2 TYPICAL GUESTROOM ELECTRICAL OUTLET HEIGHTS
1" = 1'-0"



DEVICES FOR THE HEARING IMPAIRED

SYMBOL	DEVICE	NOTES
	BUTTON FOR DOOR SIGNAL	OUTSIDE DOOR ON STRIKE SIDE, +46" AFF TO FACTORY LABEL ON COVER PLATE
	2-GANG BOX W/ TRANSFORMER FOR DOOR BELL	MOUNT TRANSFORMER IN SOFFIT OR CABINET AND PROVIDE ACCESS
	DOORBELL DISABLE SWITCH	WALL BEHIND ENTRY DOOR, NEAR LIGHT SWITCH "DOORBELL DISABLE SWITCH" PLAQUE
	SMOKE STROBE, REMOTE	COMPATIBLE WITH SMOKE DETECTOR, BATHROOM +80" AFF "SMOKE" LABEL INTEGRAL TO DEVICE

A. PLAN DIAGRAM SHOWS GENERAL CONFIGURATION OF DOORBELL DEVICES - DESIGNER TO MODIFY AS REQUIRED FOR ACTUAL GUESTROOM CONFIGURATION AND LOCAL REQUIREMENTS.

B. PLAQUES (EXCEPT AS NOTED); PROVIDE AS REQUIRED; PLAQUES SHALL BE BLACK PHENOLIC W/ 1/4" WHITE ENGRAVED LETTERS.

LOCATE DOORBELL DISABLE SWITCH NEXT TO WELCOME LIGHT SWITCH - DO NOT GANG BOX, PROVIDE SEPARATE LABELED COVER PLATE (TYPICAL)

REQUIREMENTS ON QUANTITY AND DISPERSAL OF GUESTROOMS WITH FEATURES FOR THE HEARING IMPARIED TO BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS AND DETERMINED BY THE ARCHITECT OF RECORD. DOORBELL SPEC INCLUDED IN THE GUESTROOM BUILDING PRODUCT MANUAL.

1 HEARING IMPARIED DEVICES DIAGRAM
1/8" = 1'-0"

PRINTS ISSUED
11/01/2023 - CITY SUBMITTAL

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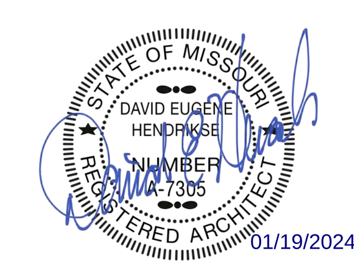


TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

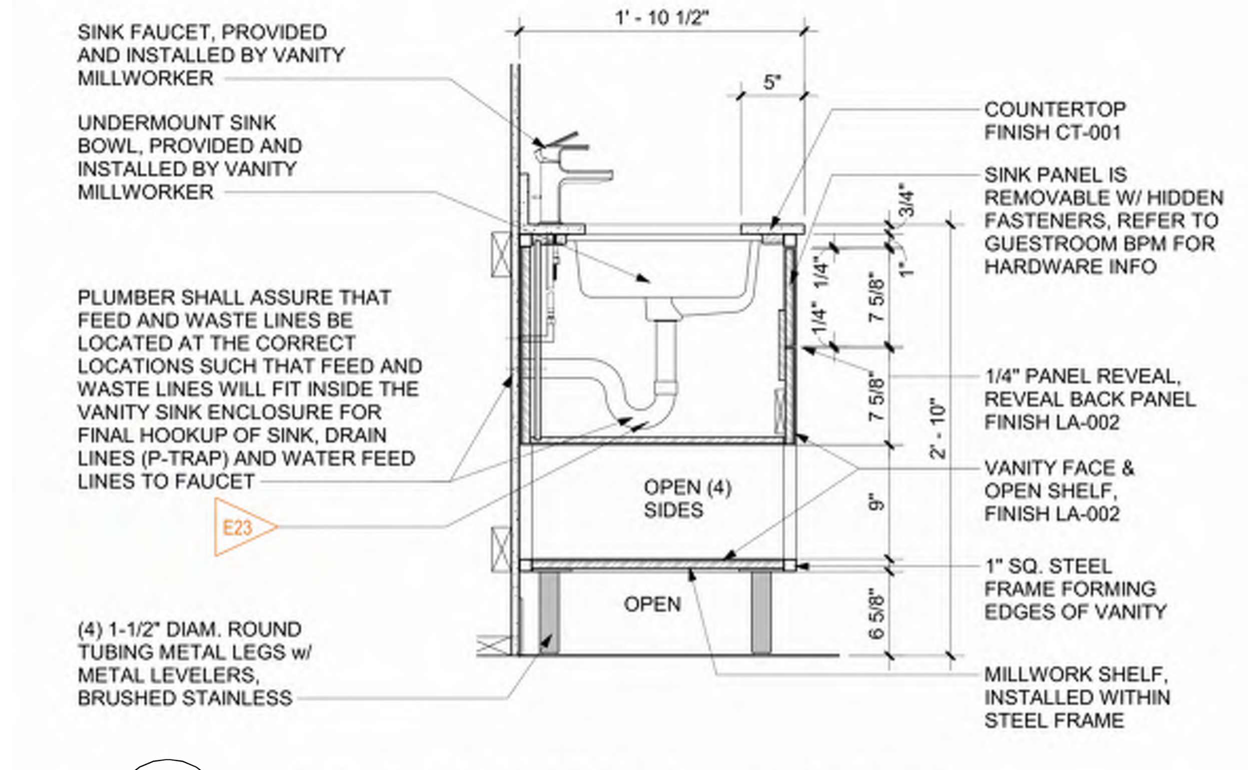
SHEET TITLE
GUESTROOM DETAILS

PROJECT NUMBER: 23098

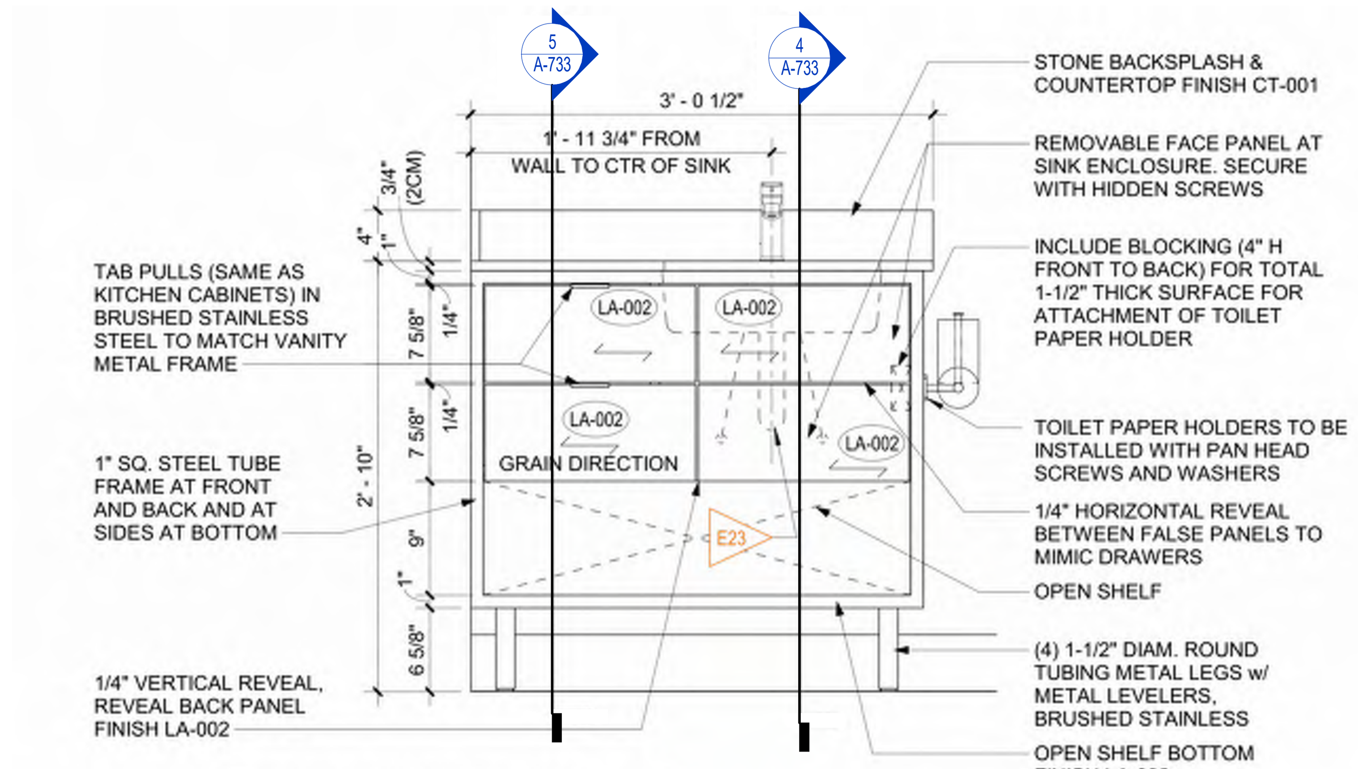
SHEET NUMBER:

A-732

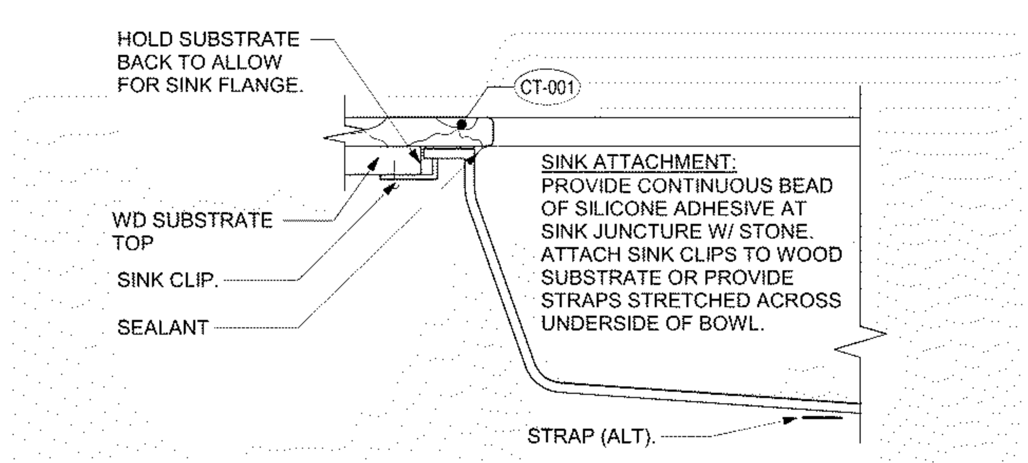
-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED



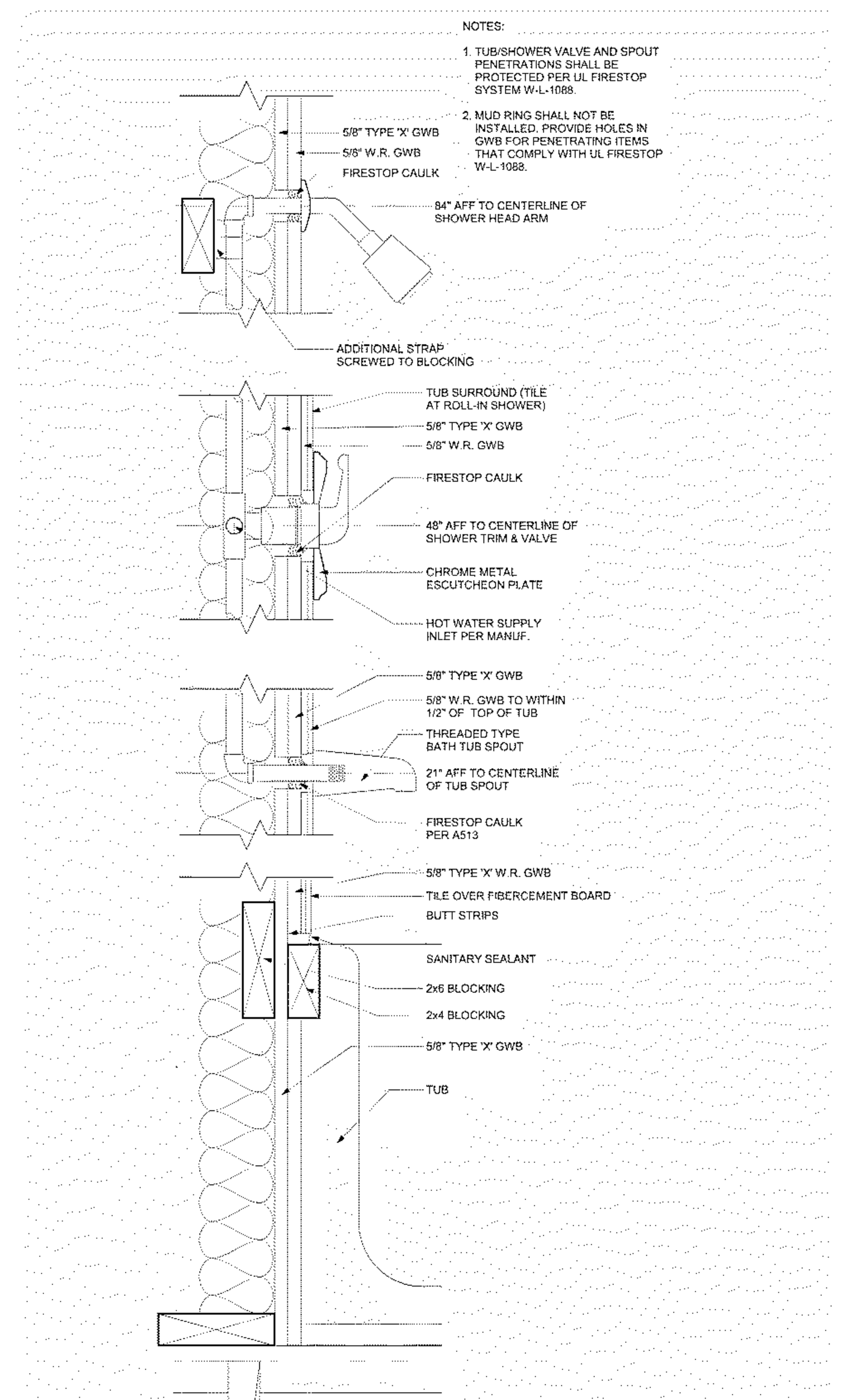
4 VANITY SECTION THRU SINK
1" = 1'-0"

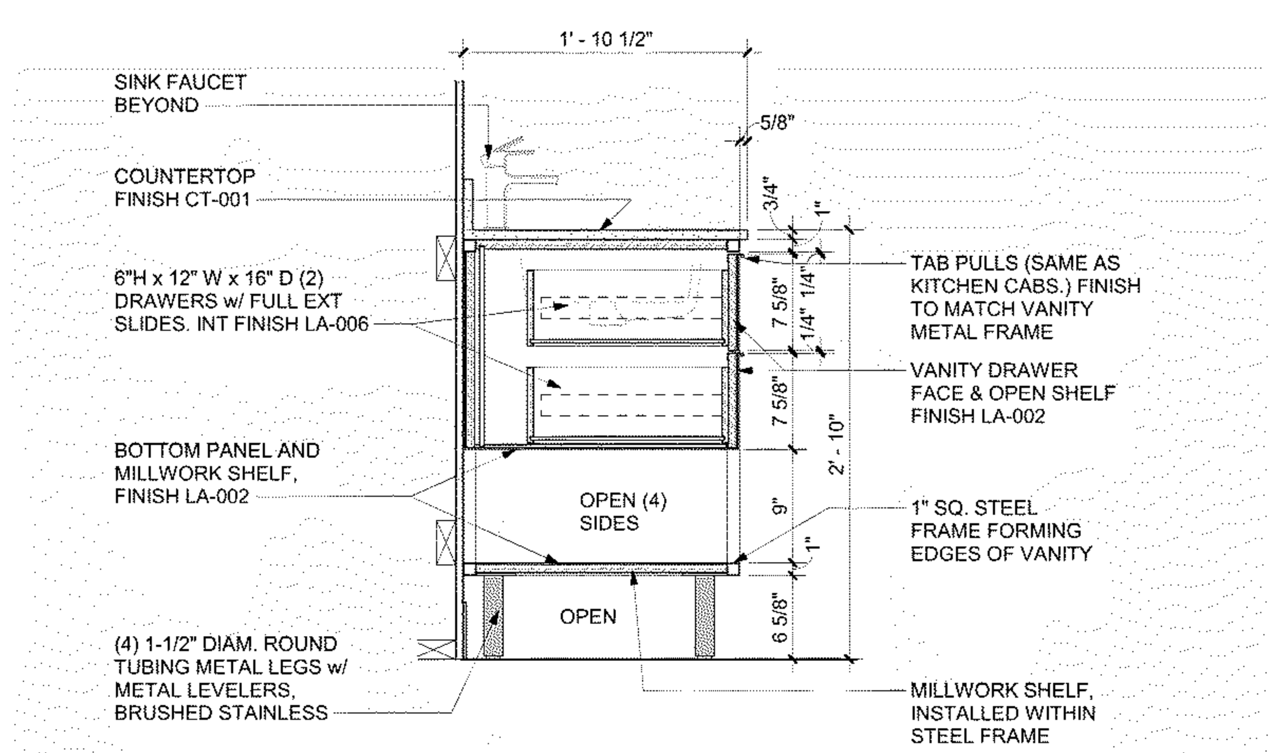


3 VANITY ELEVATION
1" = 1'-0"

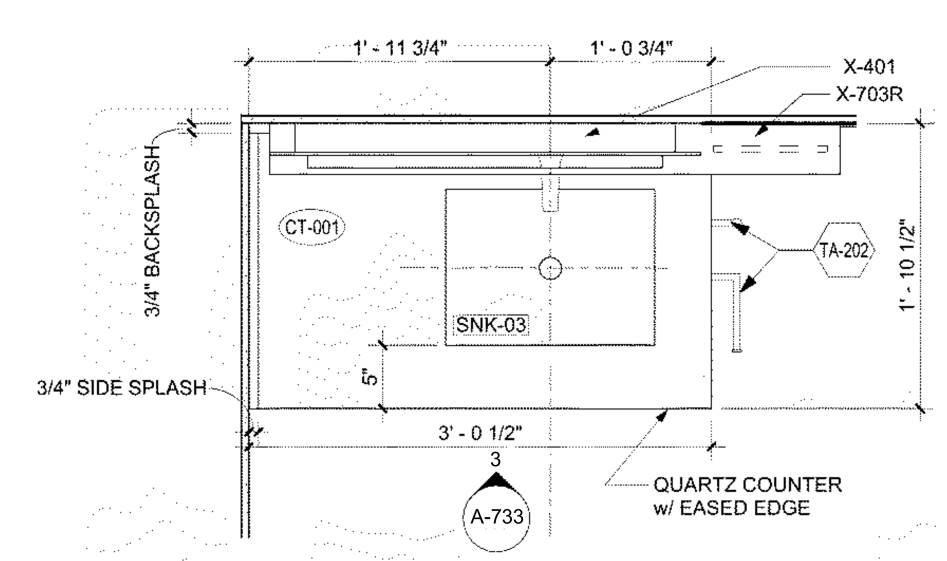


6 SINK ATTACHMENT SECTION
3" = 1'-0"





5 VANITY SECTION THRU DRAWERS
1" = 1'-0"



2 VANITY PLAN
1" = 1'-0"

1 TUB SHOWER 1 HR WALL
3" = 1'-0"

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
A-7305
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
GUESTROOM BATHROOM DETAILS

PROJECT NUMBER: 23098

SHEET NUMBER:

A-733

-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED

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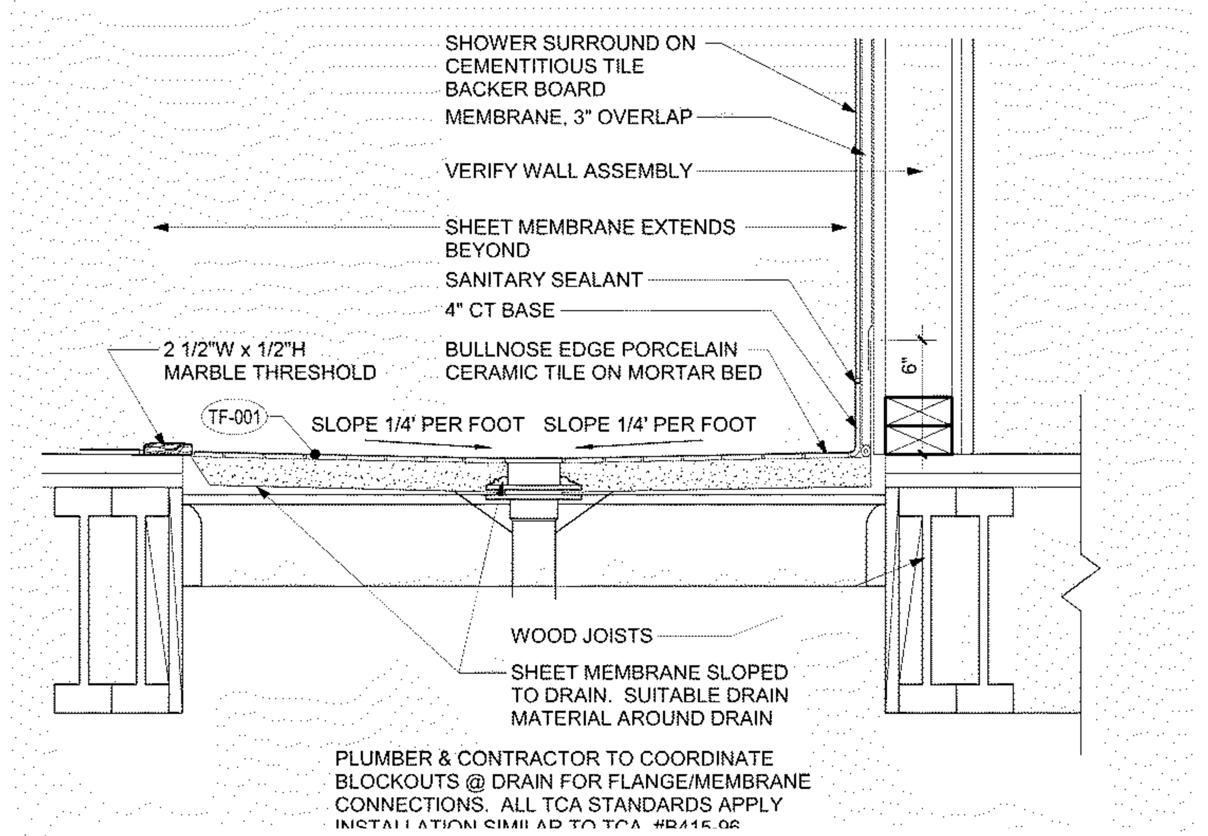
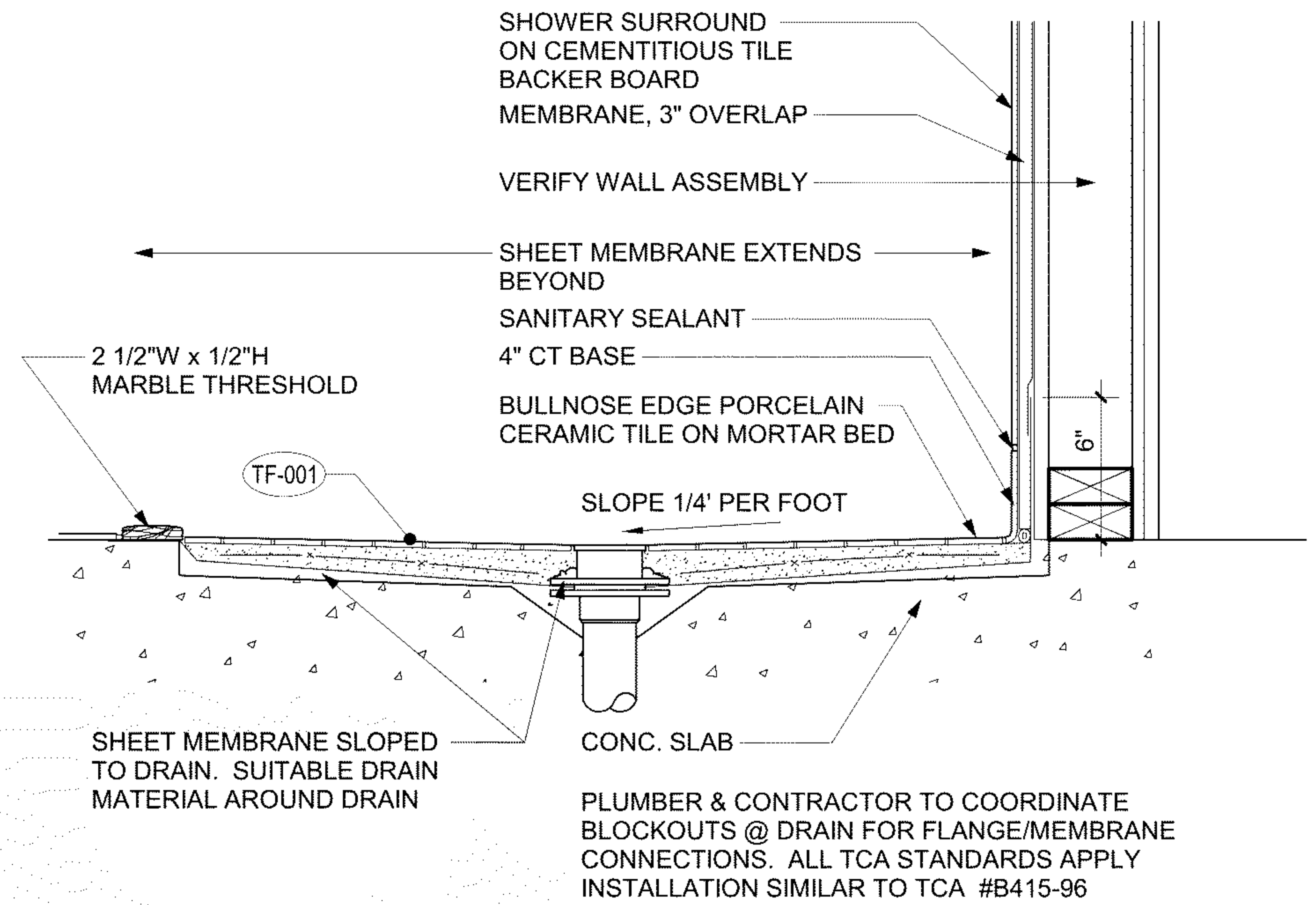
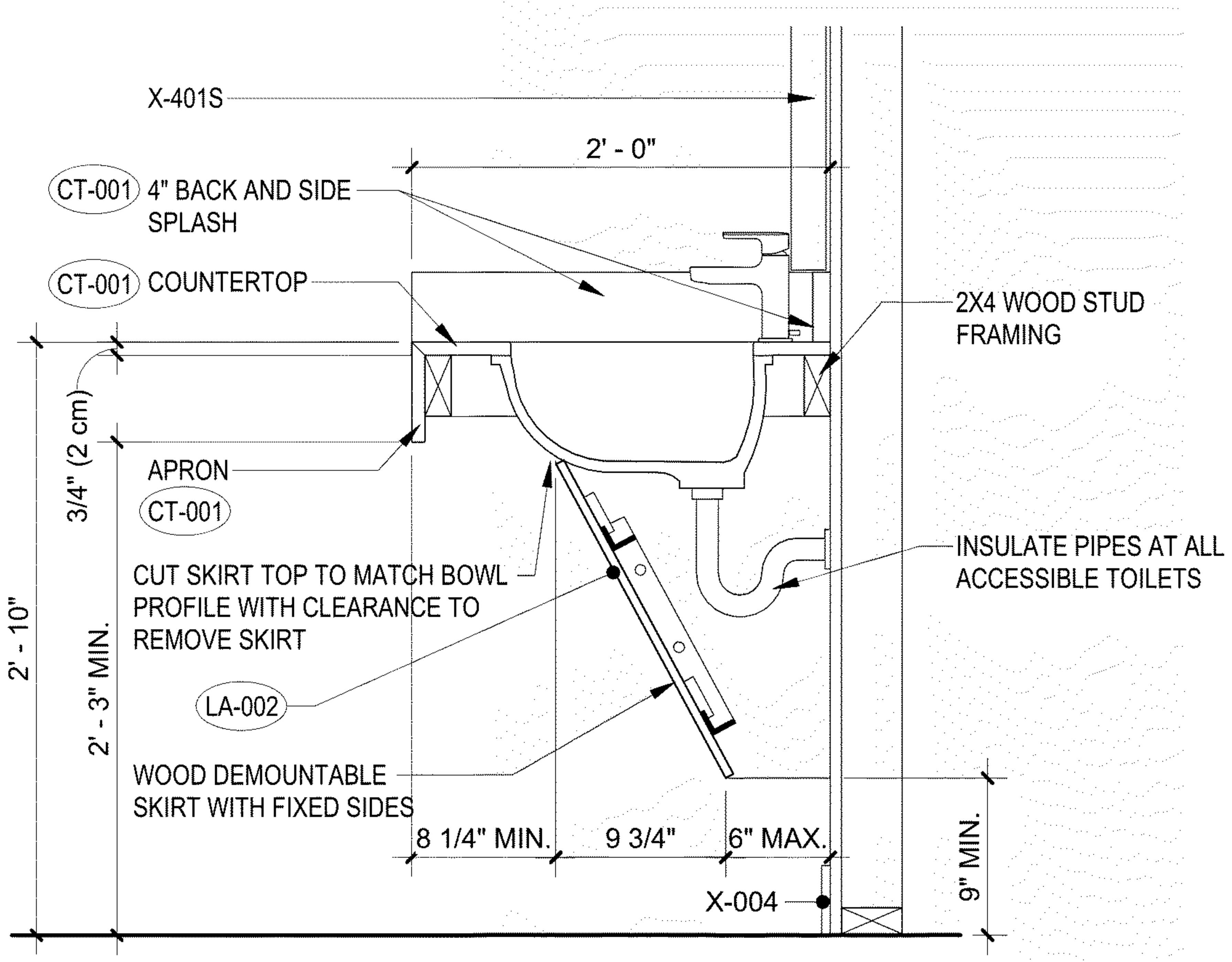


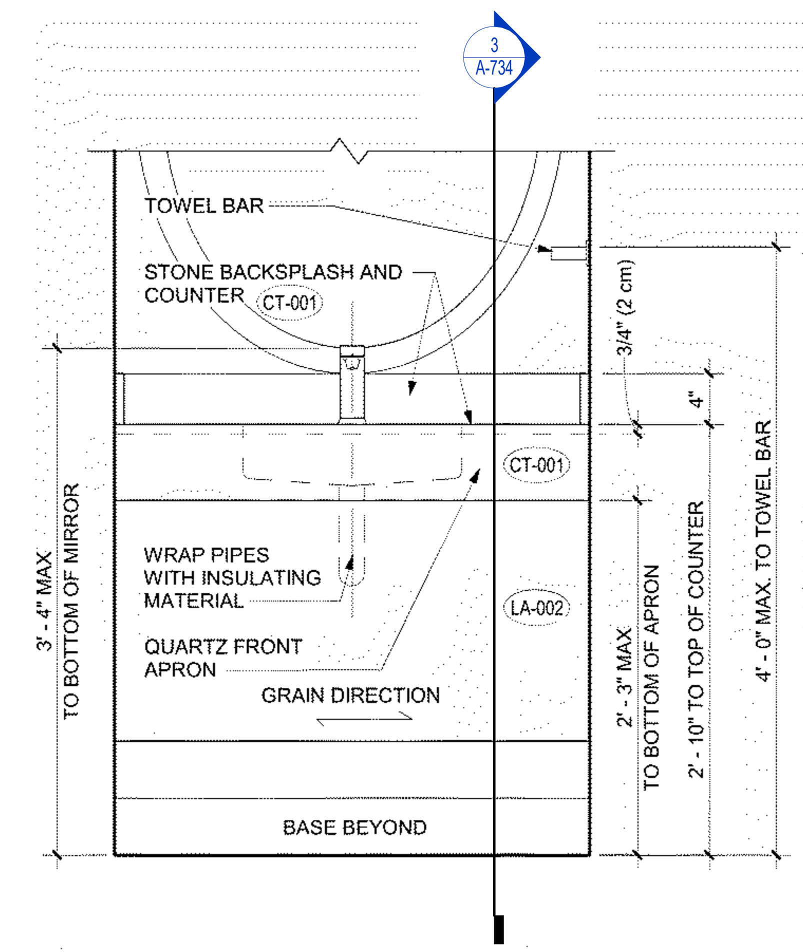
5 OPTIONAL TILE AT ROLL-IN SHOWER IN GROUND UPPER FLOORS
1 1/2" = 1'-0"



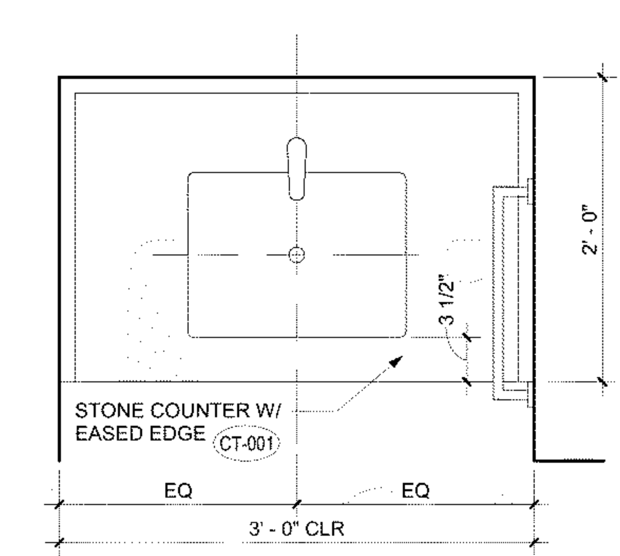
4 OPTIONAL TILE AT ROLL-IN SHOWER IN GROUND FLOOR
1 1/2" = 1'-0"



3 ACCESSIBLE VANITY SECTION
1" = 1'-0"



2 ACCESSIBLE VANITY ELEVATION
1" = 1'-0"



1 ACCESSIBLE VANITY PLAN
1" = 1'-0"

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7285
REGISTERED ARCHITECT
01/19/2024

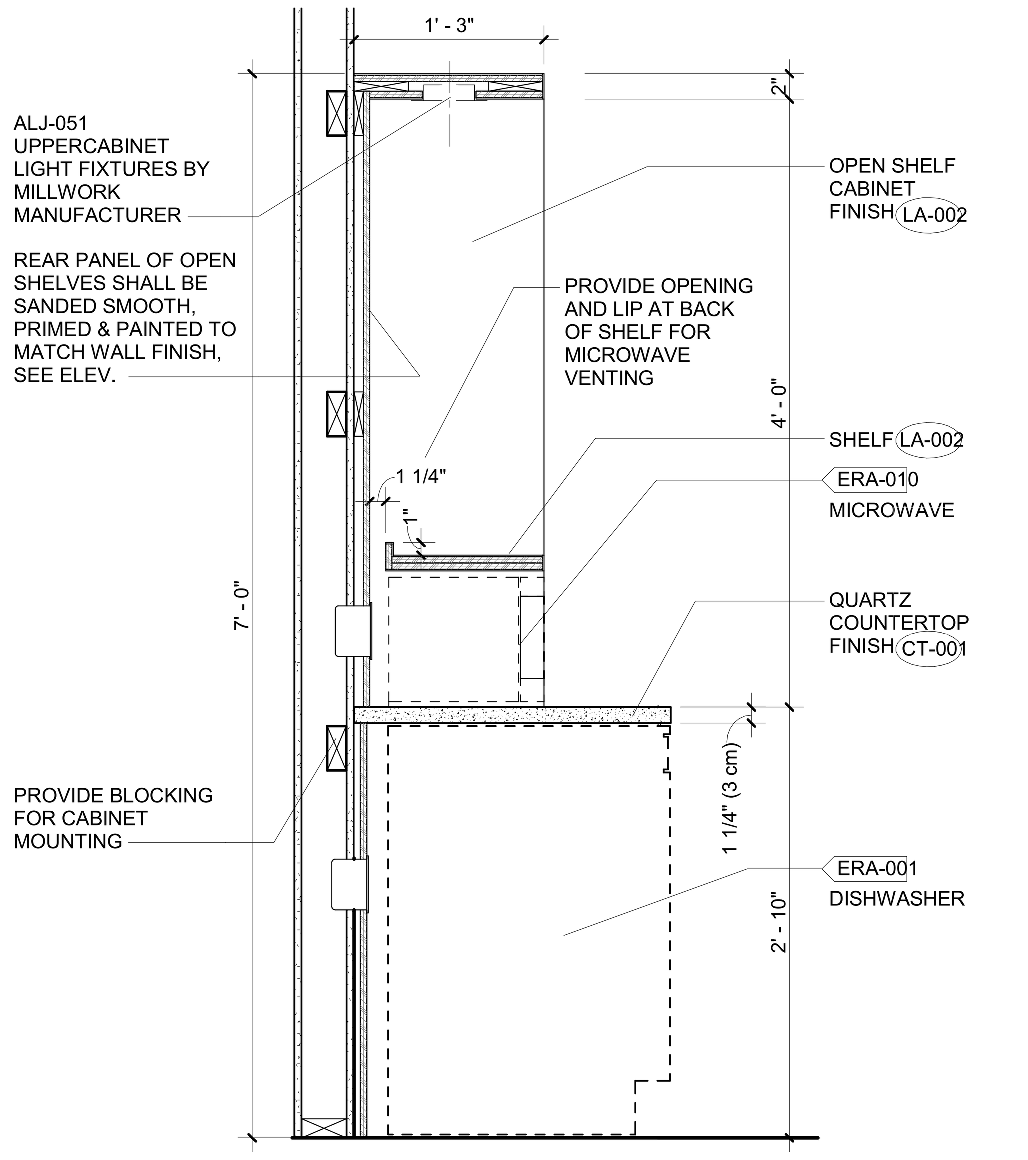
TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
ACC. GUESTROOM BATHROOM DETAILS

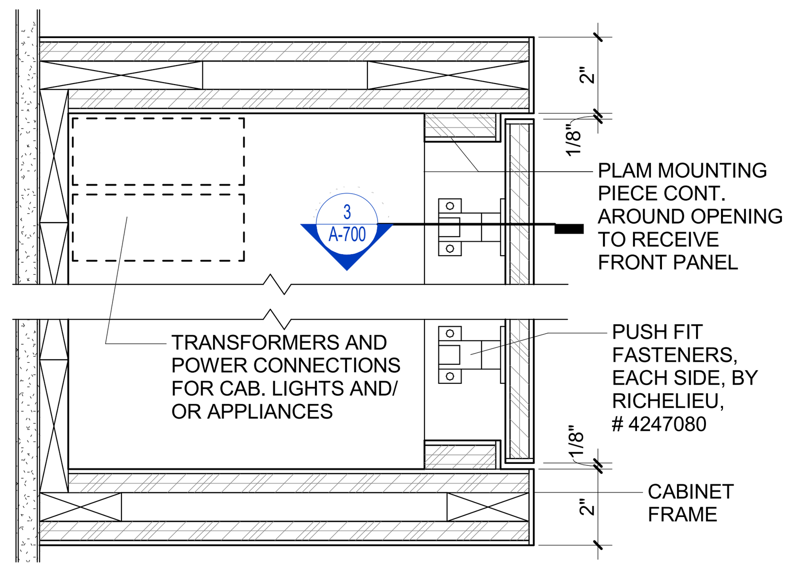
PROJECT NUMBER: 23098

SHEET NUMBER:

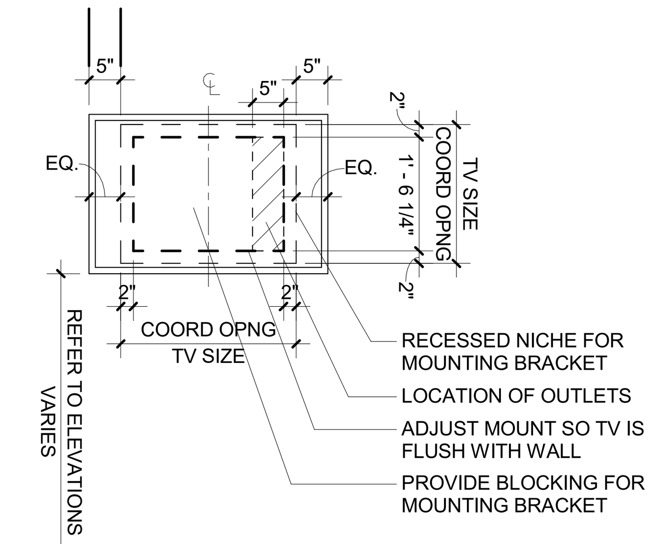
A-734



9 KITCHEN MILLWORK SECTION AT MICRO
1" = 1'-0"

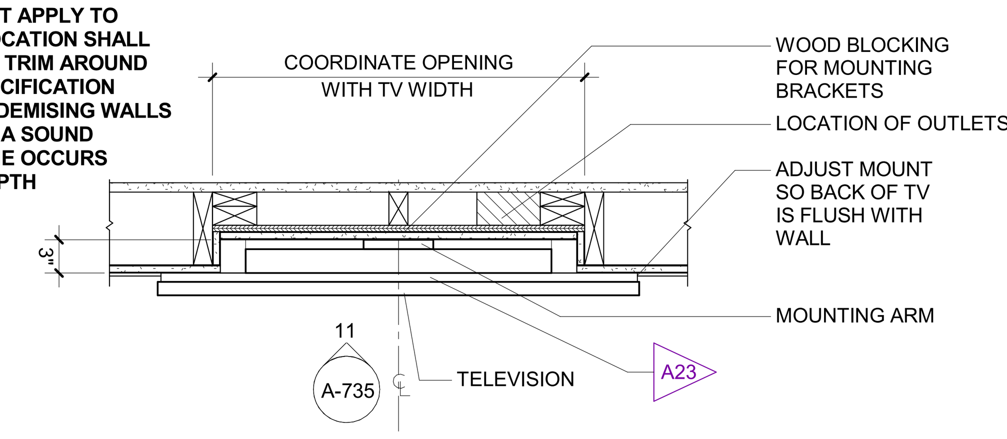


10 REMOVABLE PANEL DETAIL
1" = 1'-0"



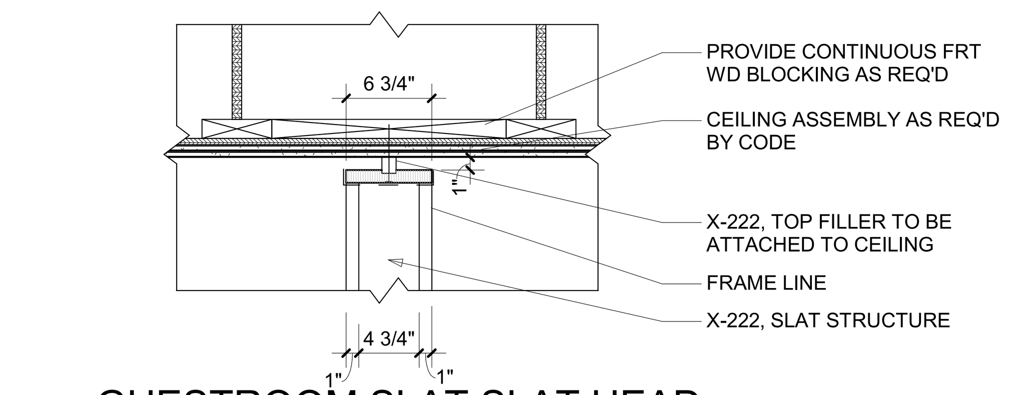
11 TYP GUESTROOM TELEVISION ELEVATION
1/2" = 1'-0"

NOTE: TV NICHE DETAIL DOES NOT APPLY TO EXTERIOR WALLS; TVs IN THIS LOCATION SHALL BE SURFACE MOUNTED w/A FF&E TRIM AROUND (REFER TO INTERIOR DESIGN SPECIFICATION MANUAL). TVs LOCATED AT UNIT DEMISING WALLS SHALL PROVIDE THE NICHE WITH A SOUND BARRIER. WALLS WHERE TV NICHE OCCURS SHALL BE A MINIMUM OF 6" IN DEPTH

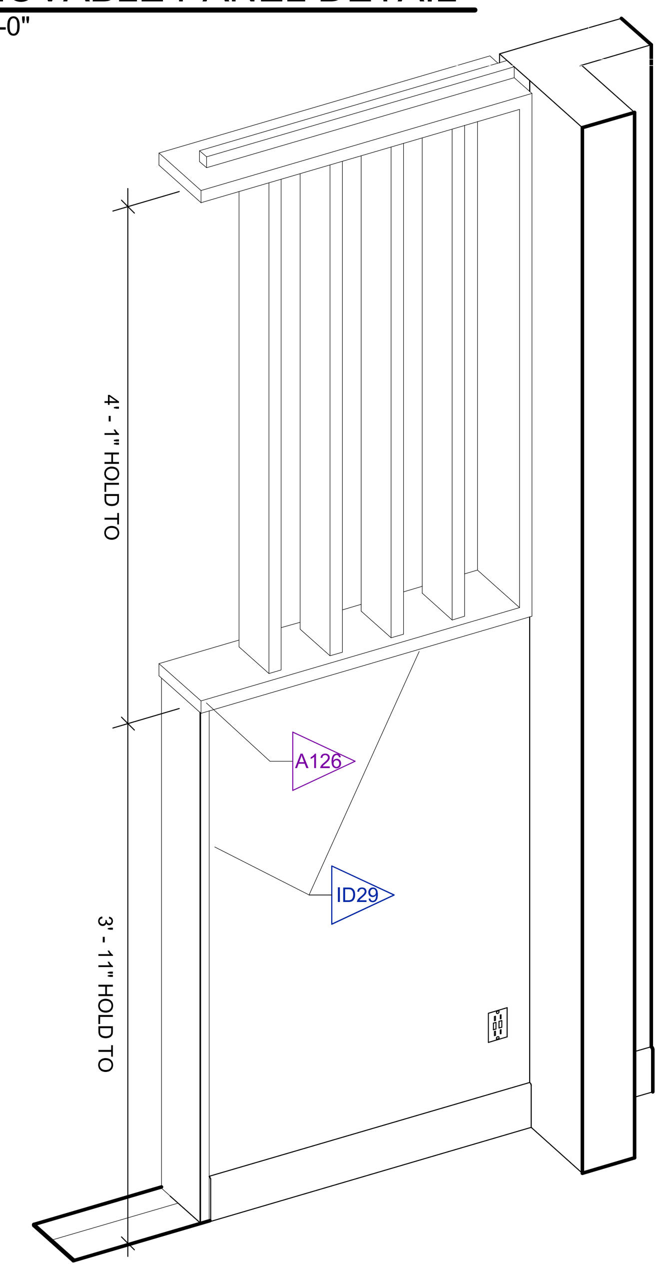


12 TYP GUESTROOM TELEVISION FP
1" = 1'-0"

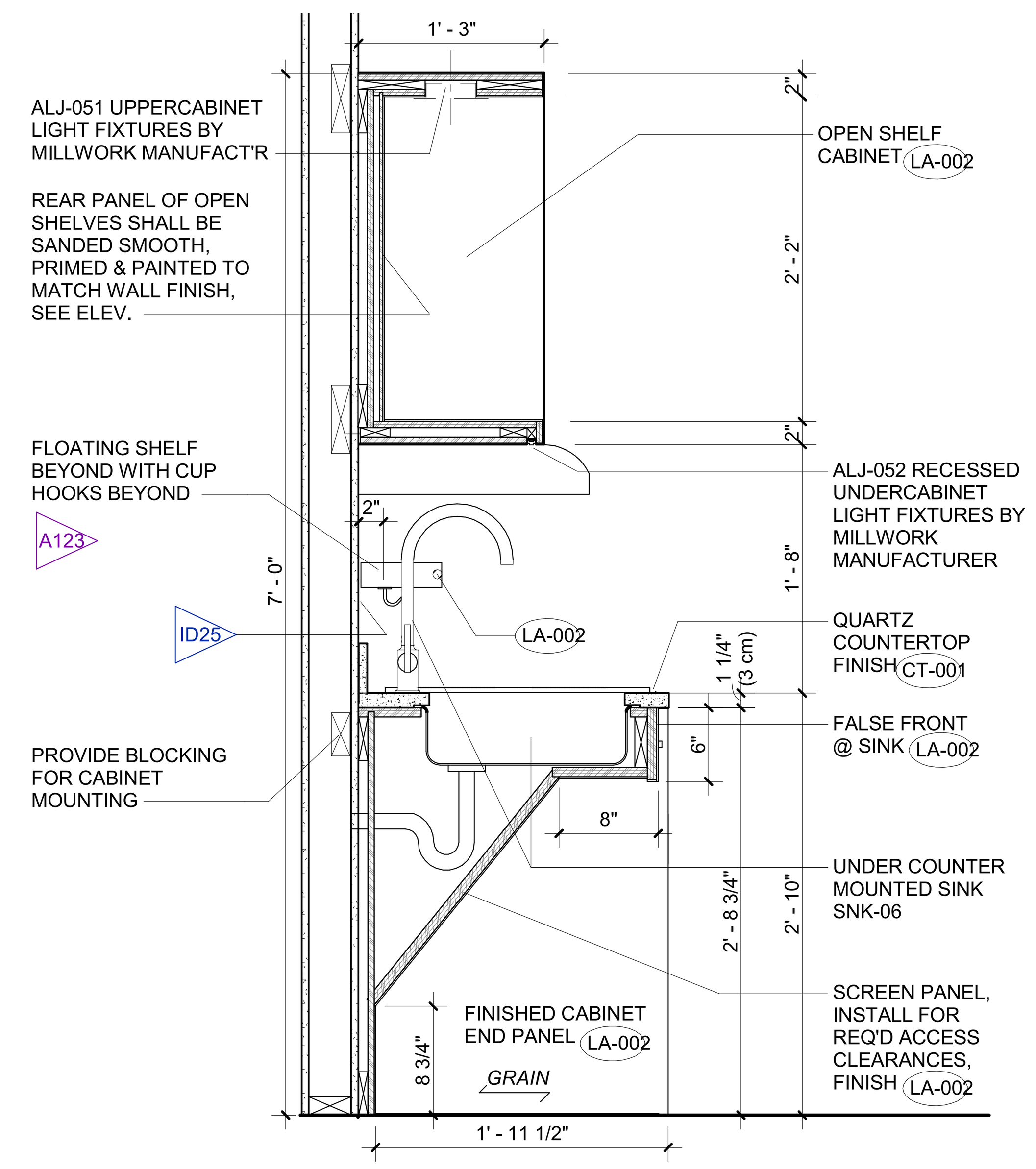
-REFERENCE G-008 FOR KEYNOTES
-SECTIONS AND CALLOUTS ADDED



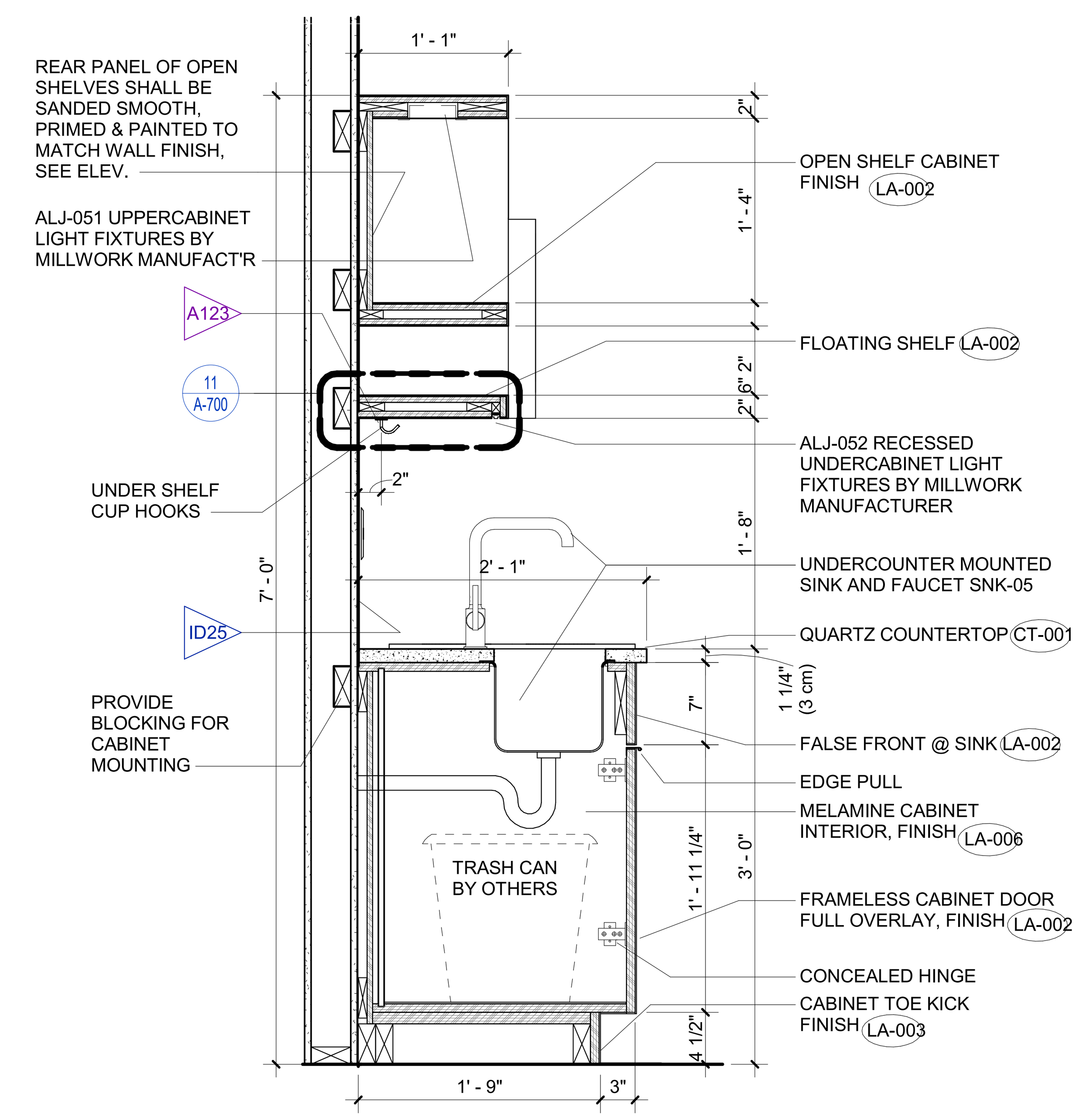
8 GUESTROOM SLAT SLAT HEAD DETAIL
1" = 1'-0"



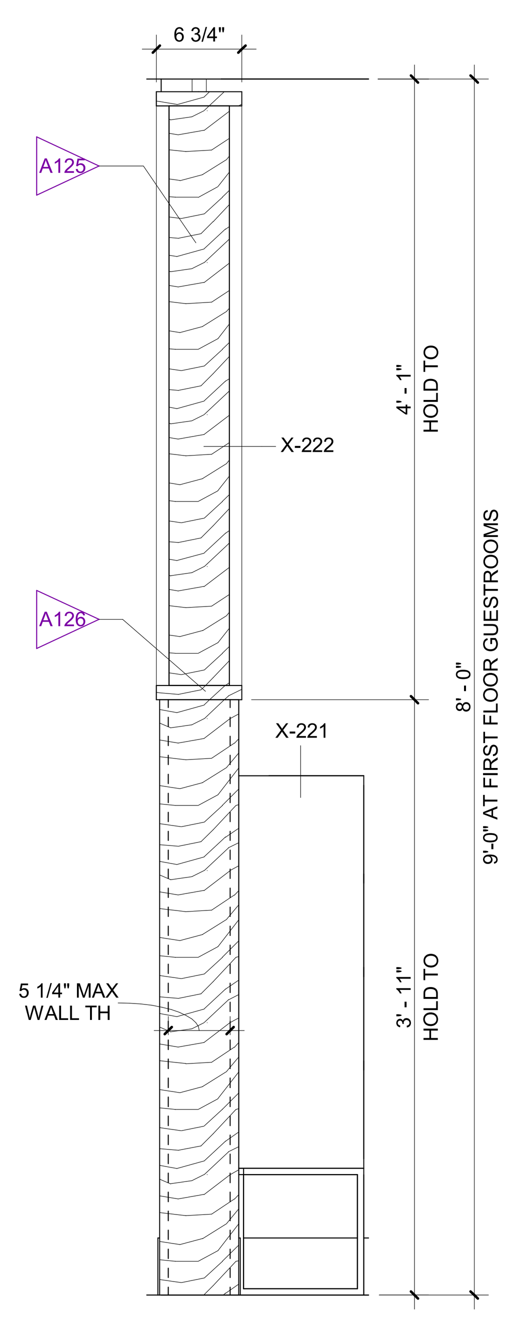
7 GUESTROOM SLAT WALL 3D VIEW
1" = 1'-0"



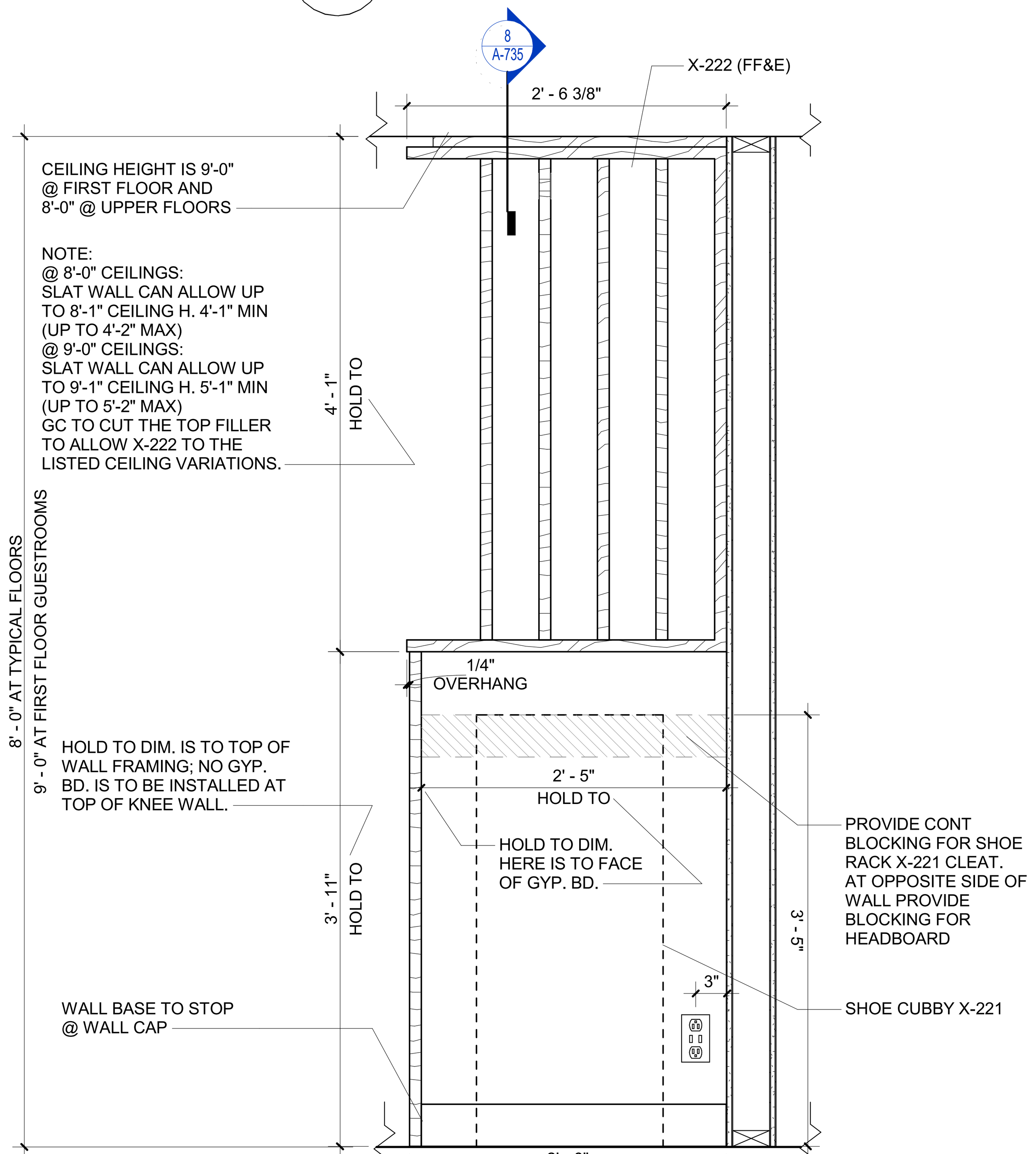
6 ACC KITCHEN MILLWORK SECTION AT SINK
1" = 1'-0"



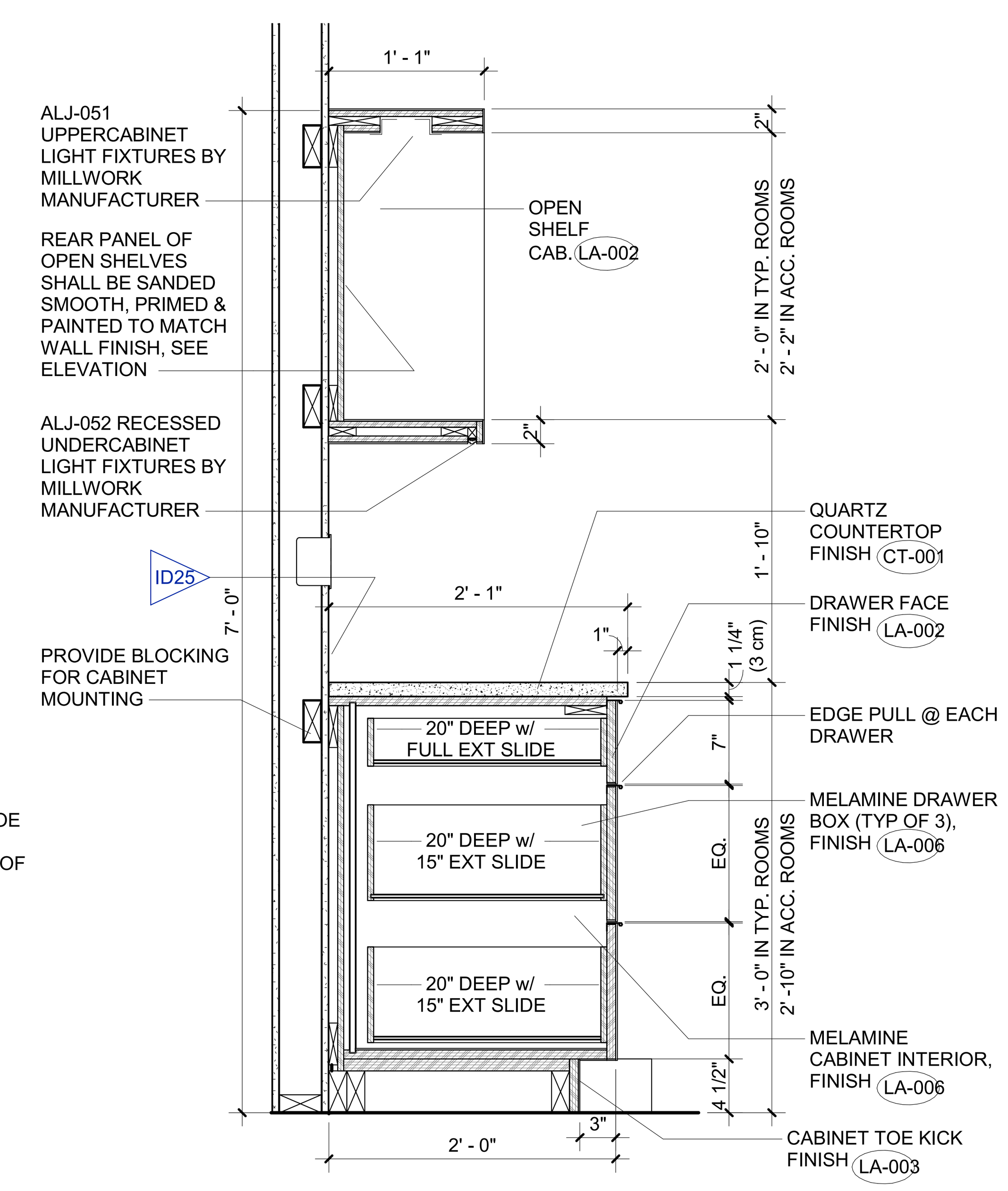
5 KITCHEN MILLWORK SECTION AT SINK
1" = 1'-0"



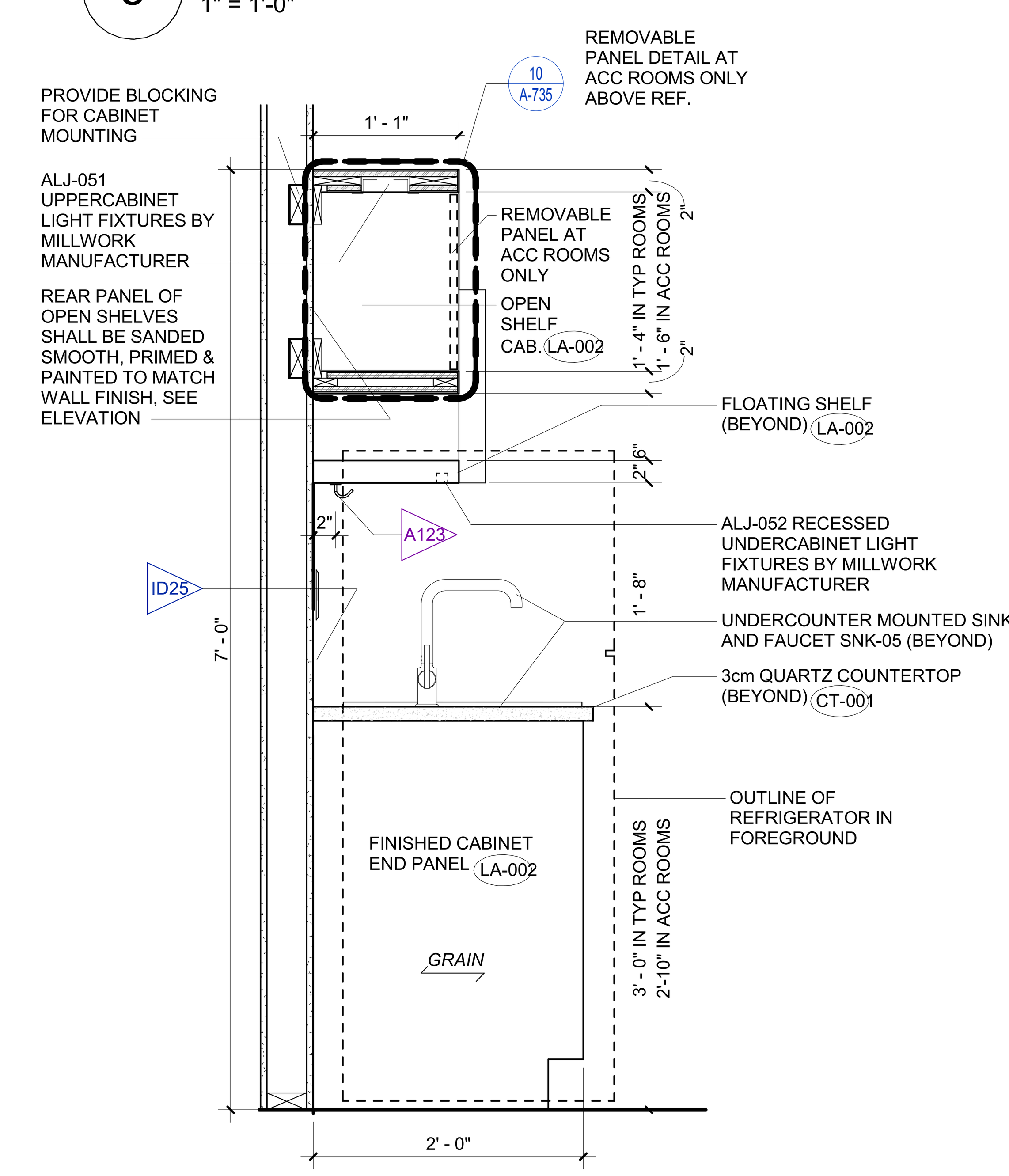
4 GUESTROOM SLATS SIDE ELEVATION
1" = 1'-0"



3 GUESTROOM SLATS ELEVATION
1" = 1'-0"



2 KITCHEN MILLWORK SECTION 2
1" = 1'-0"



1 KITCHEN MILLWORK SECTION
1" = 1'-0"

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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER
REGISTERED ARCHITECT
01/19/2024

TOWNEPLACE SUITES
1901 NE DISCOVERY AVE.
LEE'S SUMMIT 64064 USA

SHEET TITLE
GUESTROOM DETAILS

PROJECT NUMBER: 23098

SHEET NUMBER:

A-735

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

GENERAL MEP SPECIFICATIONS

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW AND UNDERSTAND ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENTS. EACH CONTRACTOR IS RESPONSIBLE FOR ALL WORK ASSOCIATED WITH HIS TRADE REGARDLESS OF WHERE THE WORK IS DEPICTED IN THE DRAWINGS OR SPECIFICATIONS.
2. THE LAYOUT OF SYSTEMS SHOWN ON PLANS ARE APPROXIMATE AND WILL NEED TO BE COORDINATED IN FIELD. THE CONTRACTOR SHALL INCLUDE THIS COORDINATION IN HIS SCOPE AND INCLUDE ALL COSTS OF MODIFYING THE LAYOUT AS REQUIRED IN HIS BID.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY PARTS AND LABOR TO PRODUCE A COMPLETE AND FULLY OPERATIONAL SYSTEM UNLESS STATED OTHERWISE ON PLANS.
4. ALL MATERIALS TO BE NEW, FIRST CLASS, AND INSTALLED PER MANUFACTURE'S PUBLISHED INSTRUCTIONS.
5. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH LOCALLY ADOPTED CODES AND ORDINANCES.
6. CONTRACTOR IS RESPONSIBLE FOR COORDINATING EQUIPMENT LOCATIONS AND SYSTEM ROUTING WITH OTHER TRADES PRIOR TO INSTALLATION.
7. CONTRACTOR TO GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE THE PROJECT IS TURN OVER TO THE OWNER, UNLESS NOTED OTHERWISE.
8. CONTRACTOR IS TO INCLUDE IN THEIR SCOPE THE COST OF ALL PERMITS, INSPECTIONS, METERING, AND TAPS ASSOCIATED WITH THEIR WORK.
9. CONTRACTOR IS RESPONSIBLE FOR ALL EXCAVATION, CUTTING, CORING, PATCHING, AND BACKFILL REQUIRED TO COMPLETE THEIR WORK, UNLESS NOTED OTHERWISE.
10. THESE PLANS ARE NOT TO BE SCALED. SEE ARCHITECTURAL PLANS FOR DIMENSIONS. WHERE THERE IS A CONFLICT BETWEEN ARCHITECTURAL DIMENSIONS AND MEP DIMENSION, ARCHITECTURAL SHALL GOVERN.
11. SEE DISCIPLINE SHEETS FOR ADDITIONAL DISCIPLINE SPECIFIC SPECIFICATIONS.

DEFERRED SUBMITTAL NOTES

1. FIRE ALARM CONTRACTOR TO PROVIDE DEFERRED SUBMITTAL FOR FIRE ALARM SYSTEM. SUBMITTAL TO INCLUDE BATTERY CALCULATION, VOLTAGE DROP CALCULATIONS, AND DEVICE CUT SHEETS FOR DEVICES AND PANELS.
2. FIRE SPRINKLER CONTRACTOR TO PROVIDE DEFERRED SUBMITTAL FOR FIRE SPRINKLER SYSTEM. SUBMITTAL TO INCLUDE HYDRAULIC CALCULATIONS AND SPRINKLER DRAWINGS SEALED BY A QUALIFIED DESIGN PROFESSIONAL LICENSED BY THE STATE.

FIRE RATED PENETRATION NOTES

- THIS BUILDING CONTAINS FIRE RATED ASSEMBLIES. SEE ARCHITECTURAL PLANS FOR LOCATIONS.
- A UL LISTED FIRESTOP SYSTEM SHALL BE INSTALLED AT EACH PENETRATION OF A HORIZONTAL OR VERTICAL RATED ASSEMBLY IN ACCORDANCE WITH ASTM E814 OR UL 1479.
- EACH CONTRACTOR IS RESPONSIBLE FOR PROVIDING PROTECTION FOR HIS PENETRATIONS THRU RATED ASSEMBLIES.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING A CATALOG OF ALL UL LISTED FIRESTOP ASSEMBLIES

MEP COMMISSIONING REQUIREMENTS

- THIS BUILDING REQUIRES COMMISSIONING PER BRAND REQUIREMENTS.
- SYSTEMS REQUIRING COMMISSIONING INCLUDE DOAS UNITS, SPLIT SYSTEMS, WATER HEATING EQUIPMENT, LIGHTING CONTROLS, AND BUILDING AUTOMATION SYSTEM. SEE PLANS FOR DETAILS.

REFERENCED CODES IN EFFECT

2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL FIRE CODE
2017 NATIONAL ELECTRIC CODE

SHEET INDEX

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. December 22, 2023
PE-2015017071
MO Certificate of Authority # 2018029680

J-SQUARED ENGINEERING
2400 Bluff Creek Drive, Suite 101
Columbia, Missouri 65201
573 - 234 - 4492 phone
www.j-squaredeng.com

J2 PROJECT No:	J21006
J2 DESIGN:	ACW

ISSUE TITLE	DATE
CITY SUBMISSION	11 / 01 / 2023
1 REVISION 1	12 / 22 / 2023

Mechanical - Electrical - Plumbing Design Drawings for
Towneplace Suites By Marriott
1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE

MECHANICAL
ELECTRICAL
PLUMBING
COVER SHEET

SHEET NUMBER

MEP1

SITE PLAN SYMBOL LEGEND

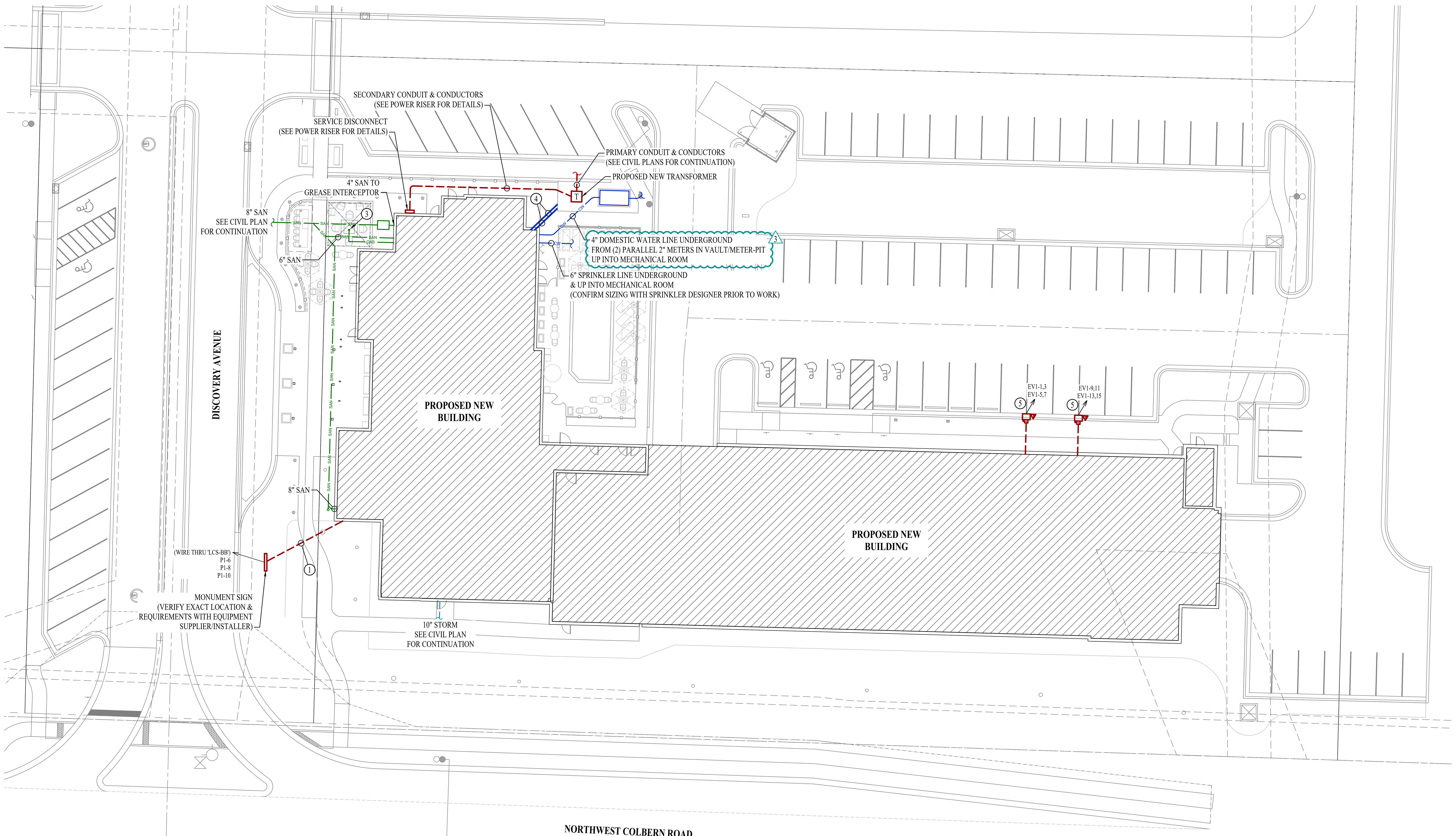
— SAN — SAN —	SANITARY SEWER PIPING
— CW — CW —	COLD WATER LINE
M	WATER METER
	VALVE
— GAS — GAS —	GAS LINE
G	GAS METER
	TIE INTO EXISTING
- - - -	ELECTRIC

SITE UTILITIES PLAN GENERAL NOTES:

1. REFER TO CIVIL PLANS FOR EXACT UTILITY LOCATIONS, CONNECTIONS, DETAILS, ETC.

SITE UTILITIES PLAN KEY NOTES:

1. (1) 2" CONDUIT WITH (6) #10 CU. & (3) #10 CU. EQ. GRD.
2. STUB UP PRIMARY CONDUIT FOR FUTURE EXTENSION TO NEW TRANSFORMER FOR EV-CHARGING. COORDINATE WITH EVERGY.
3. TOTAL ESTIMATED LOAD AT GRILL/FIREPIT = 200kBTU. PLUMBING CONTRACTOR PROVIDE & INSTALL 120V ELECTRICALLY HELD (NORMALLY CLOSED) SOLENOID ON GAS LINE FOR EMERGENCY SHUT-OFF; COORDINATE WITH ELECTRICAL CONTRACTOR.
4. (2) 2" SLEEVES BELOW GRADE FROM MECHANICAL ROOM TO IRRIGATION METER FOR CONTROLS. COORDINATE WITH IRRIGATION CONTRACTOR.
5. PROVIDE & INSTALL LEVEL-2, DUAL-STATION, EV-CHARGING SYSTEM EQUAL TO JUICEBAR GEN-3 #JB3.0-402; COORDINATE EXACT LOCATION & REQUIREMENTS WITH OWNER.



SITE UTILITIES PLAN
SCALE: 1" = 20 ft

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. March 06, 2024
PE-2015017071
MO Certificate of Authority # 2018029680

J-SQUARED ENGINEERING
2400 Bluff Creek Drive, Suite 101
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573 - 234 - 4492 phone
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J2 PROJECT No:	J21006
J2 DESIGN:	ACW

ISSUE TITLE	DATE
CITY SUBMISSION	11 / 01 / 2023
REVISION 1	12 / 22 / 2023
REVISION 3	03 / 06 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE

SITE UTILITIES PLAN

SHEET NUMBER

MEP2

SITE LIGHTING PLAN SYMBOL LEGEND

- CIRCUIT WIRING
- PX-XX — CIRCUIT TAG
- X1 — "X1" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)
- POLE LIGHT
- ARROW INDICATES FORWARD AIMING DIRECTION
- 1.1 — PHOTOMETRIC CALCULATIONS (IN FOOT-CANDLES)

LIGHTING PLAN GENERAL NOTES:

1. SITE PHOTOMETRIC VALUES SHOWN HAVE BEEN CALCULATED PER SPECIFIED LIGHT FIXTURES AT INDICATED MOUNTING HEIGHTS. ANY CHANGES OR ALTERATIONS TO LIGHTING LAYOUT SHOWN WILL REQUIRE RECALCULATING SITE PHOTOMETRICS AND WILL THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR / EQUIPMENT SUPPLIER.
2. PHOTOMETRIC CALCULATIONS SHOWN DO NOT INCLUDE EXISTING LIGHT FIXTURE(S), ONLY NEW POLE LIGHT FIXTURE(S) SHOWN.
3. SEE SHEET EL101 & EL111 FOR BUILDING MOUNTED EXTERIOR LIGHT FIXTURE CIRCUITING AND
4. ADDITIONAL DETAILS.

SITE LIGHTING PLAN KEY NOTES:

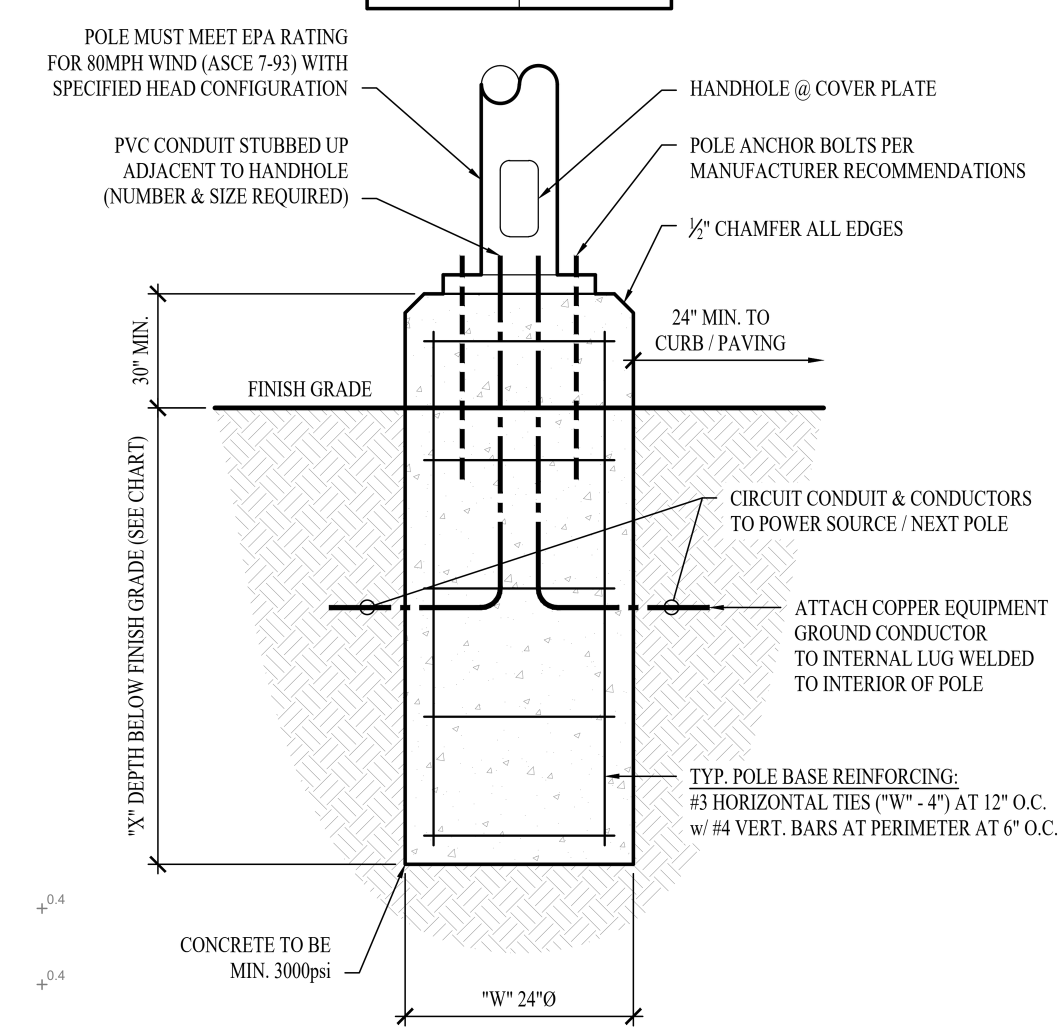
1. 1" CONDUIT WITH (2) #10 CU. & (1) #10 CU. EQ. GRD.

SITE LIGHTING FIXTURE SCHEDULE

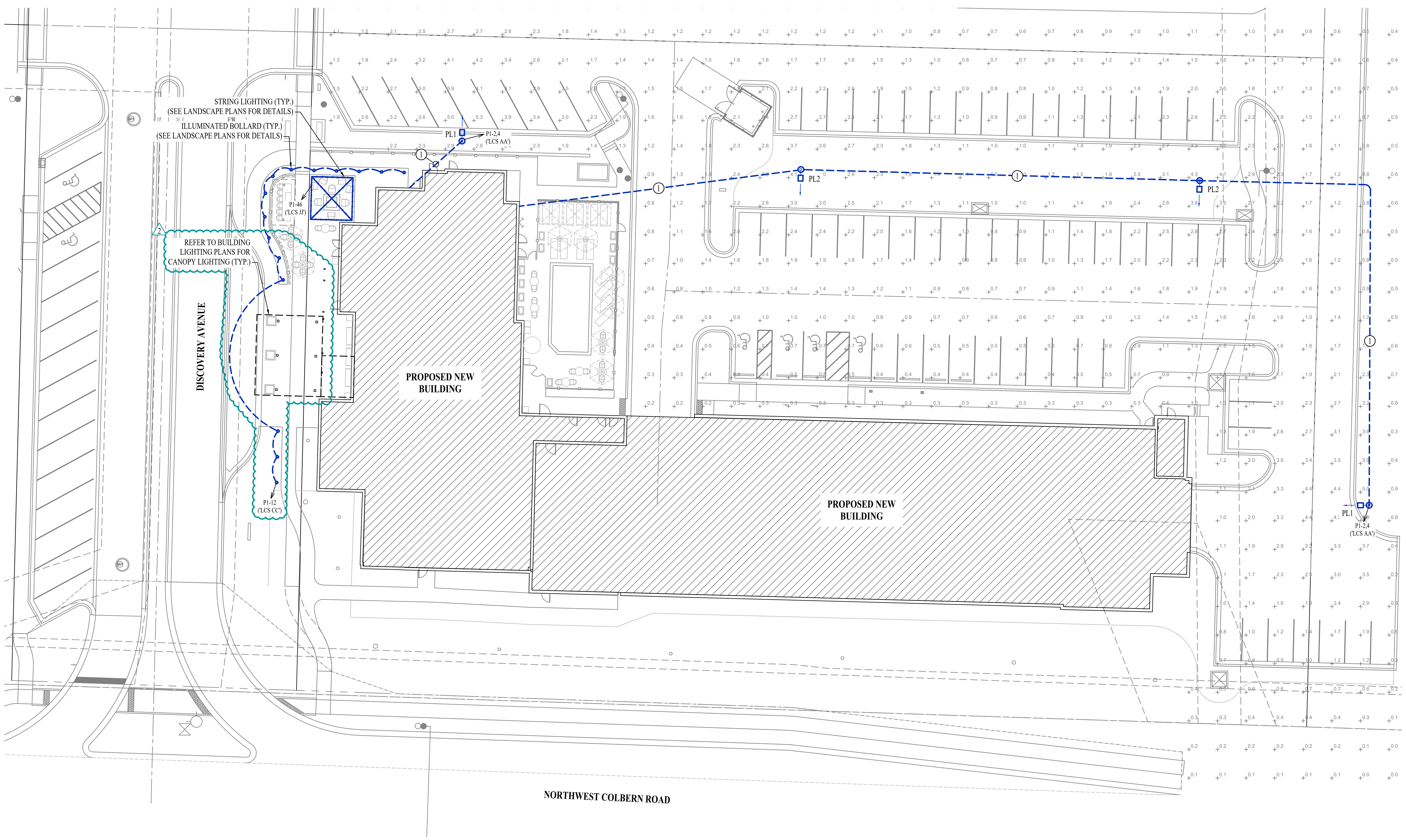
TAG	MANUFACTURER (OR EQUAL)	MODEL NUMBER (OR EQUAL)	DESCRIPTION	MOUNTING	LUMEN OUTPUT	CCT (°K)	CRI	VOLTS	WATTS	NOTES
PL1	MCGRAW EDISON	PRV-XL-PA3B-740-U-T4W-HSS	POLE LIGHT	20' #SSS POLE ON 30" BASE	24,843	4000	70	208	234	WITH #MS/DIM-L40W MOTION SENSING DIMMING
PL2	MCGRAW EDISON	PRV-XL-PA3B-740-U-5WQ	POLE LIGHT	20' #SSS POLE ON 30" BASE	31,559	4000	70	208	234	WITH #MS/DIM-L40W MOTION SENSING DIMMING

NOTES:
1. VERIFY LIGHT FIXTURE FINISHES WITH OWNER / ARCHITECT PRIOR TO INSTALLATION

POLE HEIGHT	"X" DEPTH
10ft - 14ft	4'-6"
15ft - 20ft	6'-0"
21ft - 25ft	7'-0"
26ft - 30ft	8'-0"



TYP. LIGHT POLE DETAIL - 1



SITE LIGHTING PLAN

SCALE: 1" = 20 ft

STATE OF MISSOURI — JAMES P. WATSON — NUMBER PE-2015017071 — PROFESSIONAL ENGINEER

James Watson, P.E. January 19, 2024
PE-2015017071
MO Certificate of Authority # 2018029680

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J2 PROJECT No:	J21006
J2 DESIGN:	ACW

ISSUE TITLE	DATE
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REVISION 1	12 / 22 / 2023
REVISION 2	01 / 19 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE

SITE LIGHTING PLAN

SHEET NUMBER

MEP3

ROOF MEP PLAN SYMBOL LEGEND

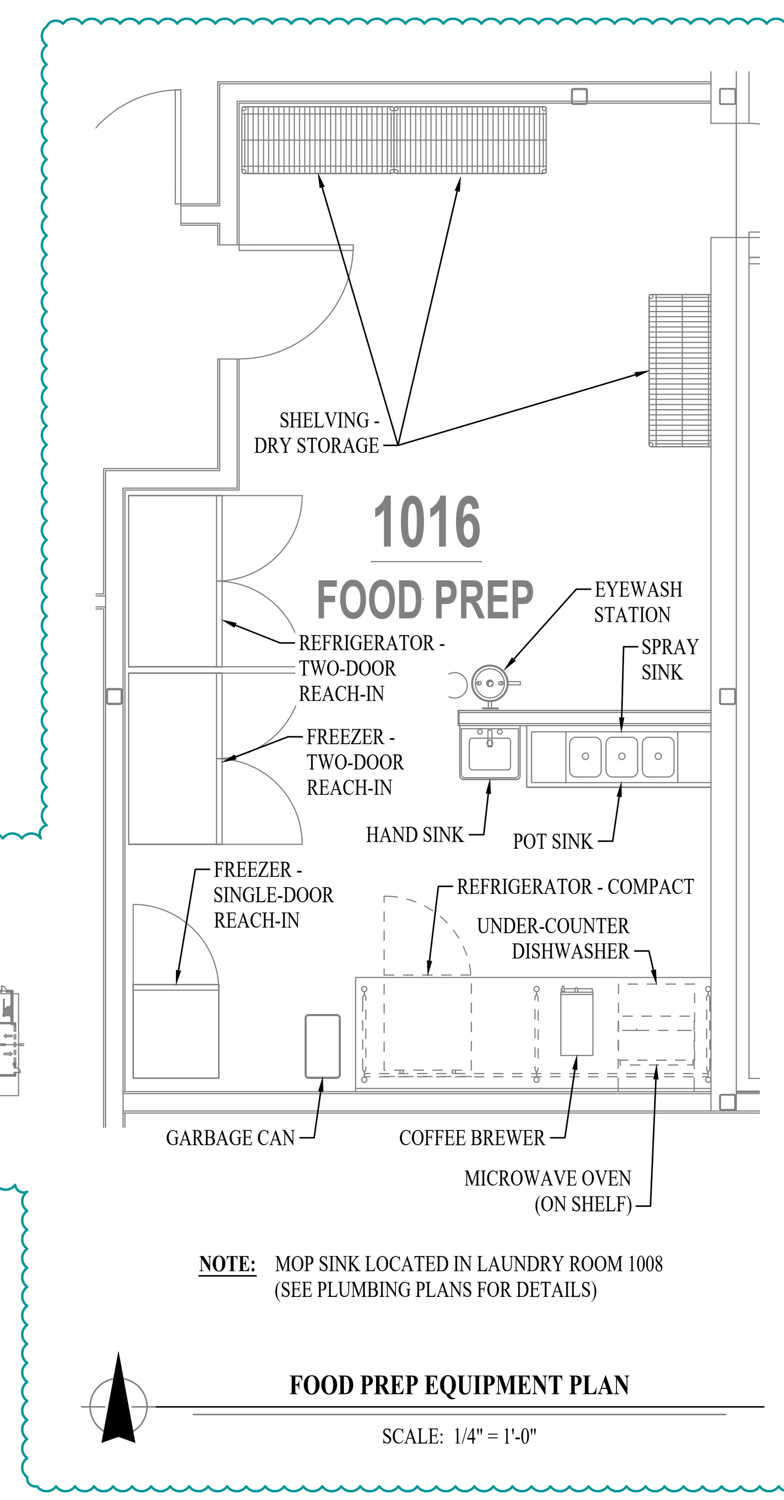
X / #	EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE) / EQUIPMENT REFERENCE NUMBER
	SUPPLY DUCTWORK
	RETURN DUCTWORK
	EXHAUST DUCTWORK
	OUTSIDE AIR DUCTWORK
	CIRCUIT WIRING
PX-XX	CIRCUIT TAG
WP	GFCI DUPLEX CONVENIENCE RECEPTACLE / INDICATES WEATHERPROOF OUTDOOR RECEPTACLE
	STORM DRAIN PIPING
GAS	GAS PIPING

ROOF MEP PLAN GENERAL NOTES

1. REFER TO TRADE SPECIFIC SHEETS FOR ADDITIONAL INFORMATION.
2. PROVIDE & INSTALL 2PSI TO 11"W.C. VENTLESS REGULATOR & SHUT-OFF VALVE AT ALL GAS EQUIPMENT.

ROOF MEP PLAN KEY NOTES

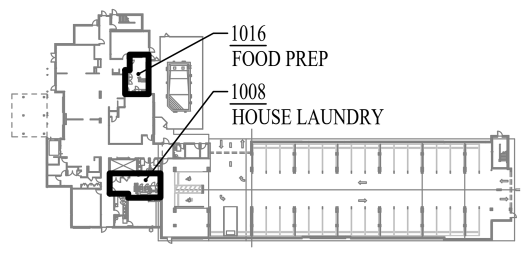
1. ¾" CW UP FROM BELOW TO ROOF HYDRANT 'RH1'
2. 2 PSI TO 11" W.C. REGULATOR & SHUT-OFF VALVE AT EQUIPMENT CONNECTION.
3. 6" STORM DRAIN PIPING DOWN TO BELOW
4. 4" STORM DRAIN PIPING DOWN TO BELOW
5. 4" Ø PRIMARY & SECONDARY STORM DRAIN PIPE DOWN IN MECHANICAL ROOM ON FIRST FLOOR. SEE SHEET PS101 FOR CONTINUATION.
6. SEE SHEET PS102 FOR CONTINUATION.



NOTE: MOP SINK LOCATED IN LAUNDRY ROOM 1008 (SEE PLUMBING PLANS FOR DETAILS)

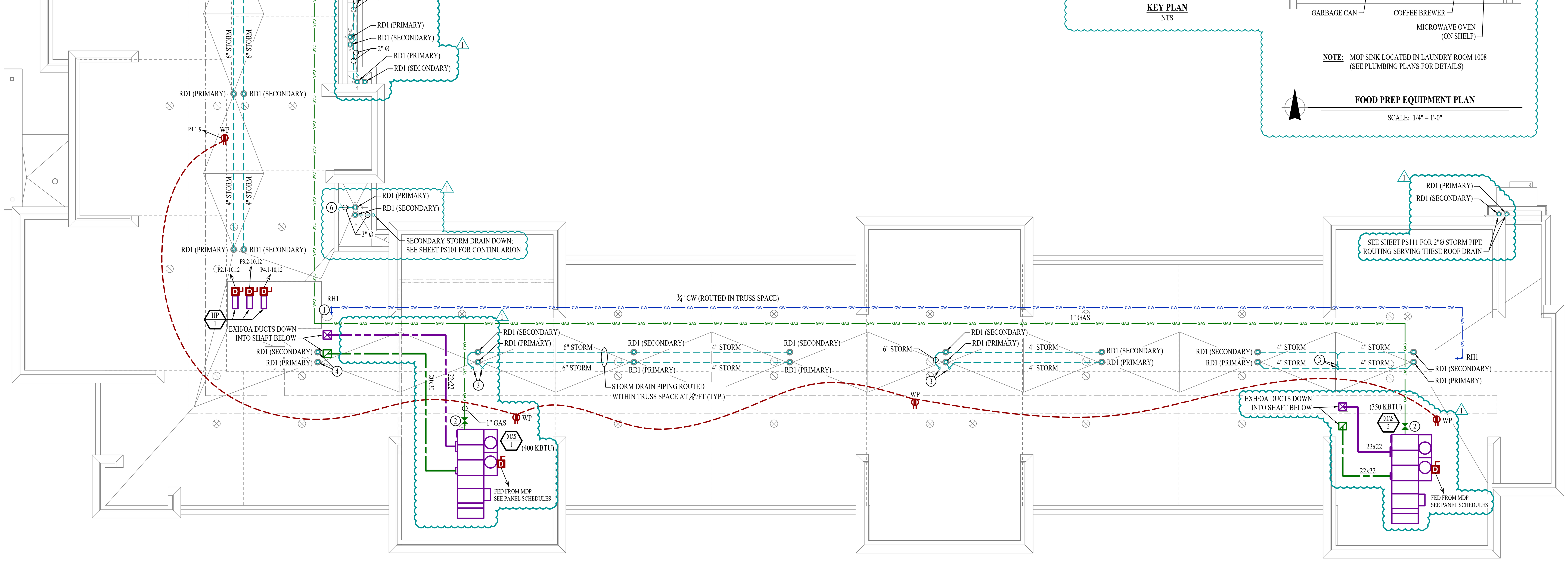
FOOD PREP EQUIPMENT PLAN

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



KEY PLAN

NTS



ROOF MEP PLAN

SCALE: 3/32" = 1'-0"

James Watson, P.E. December 22, 2023
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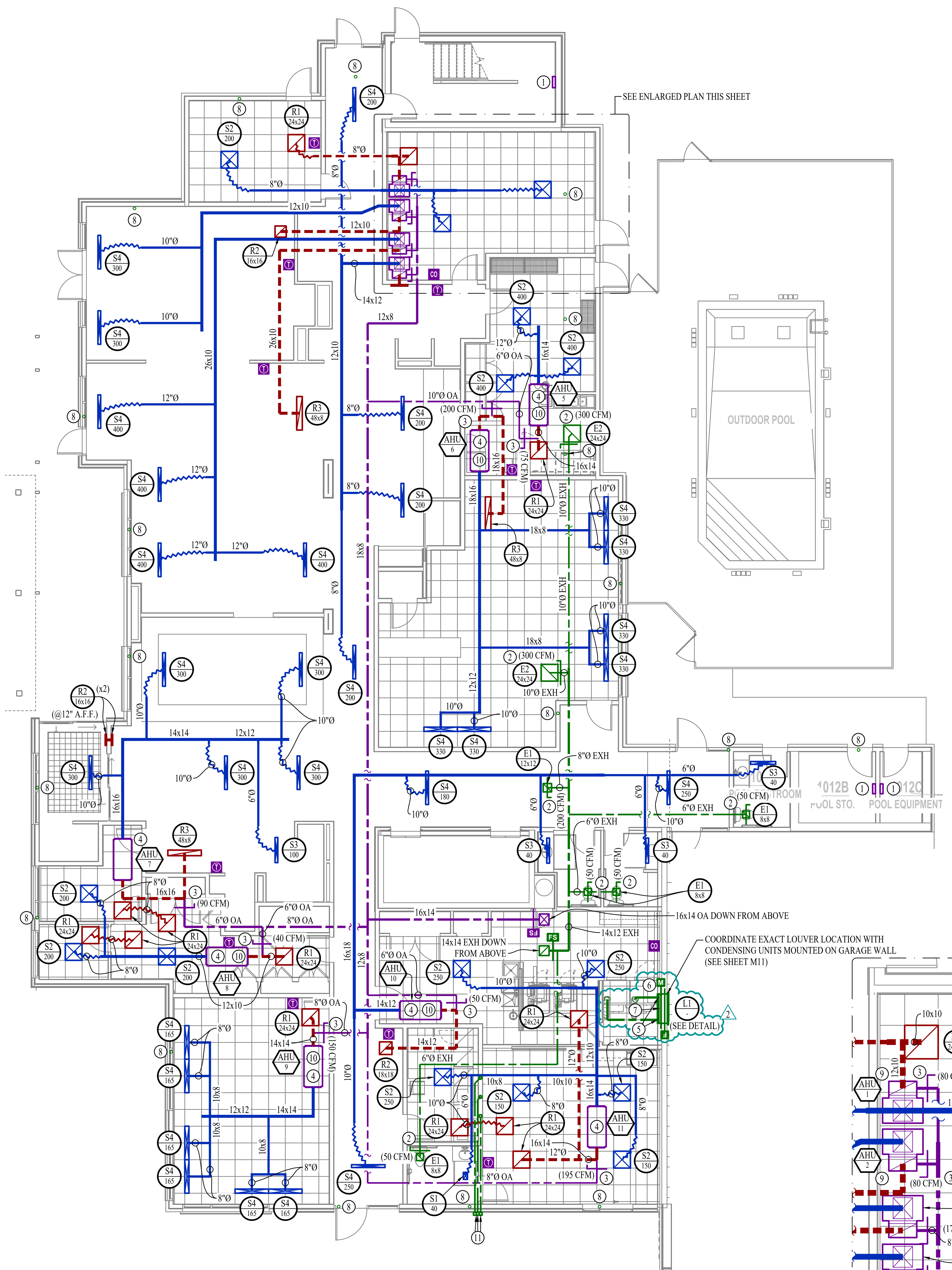
SHEET TITLE

ROOF MEP PLAN - KITCHEN EQUIPMENT PLAN

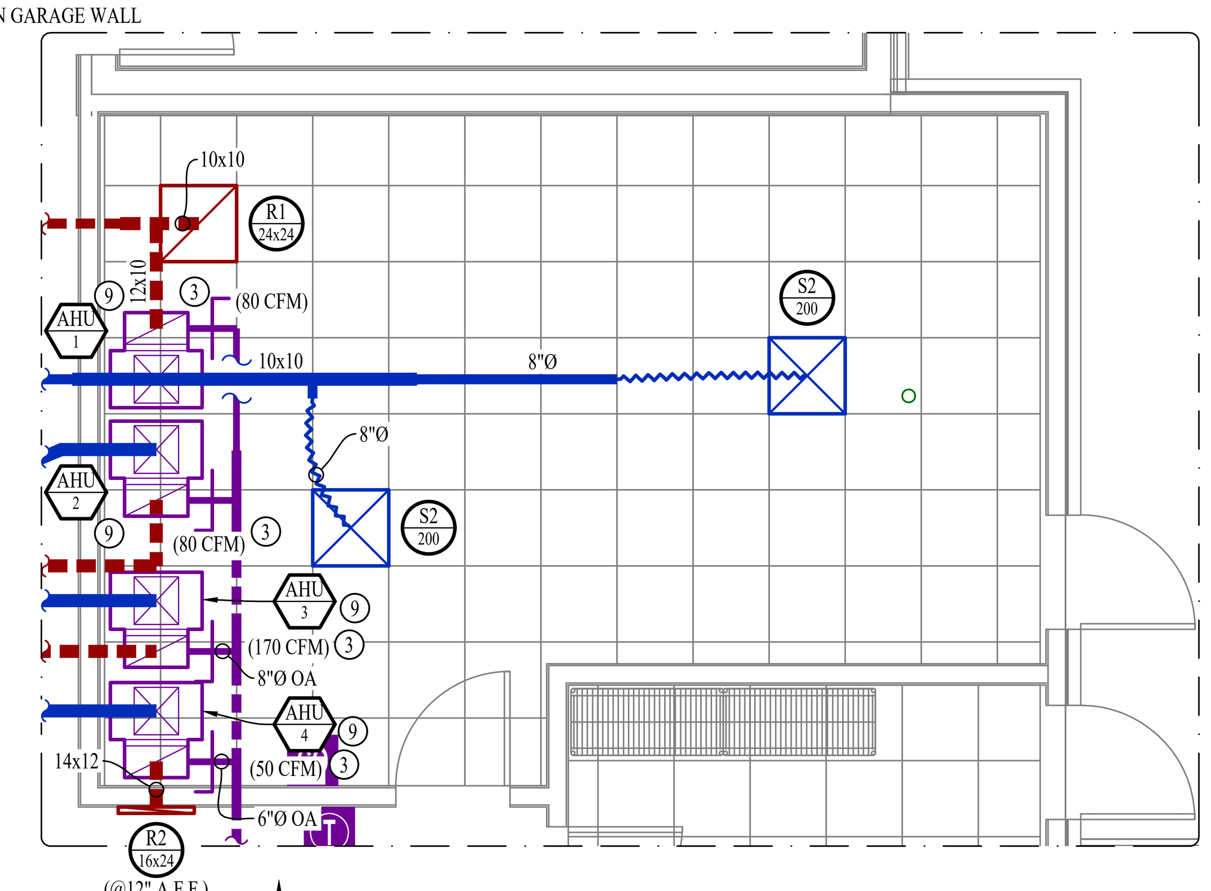
SHEET NUMBER

MEP4



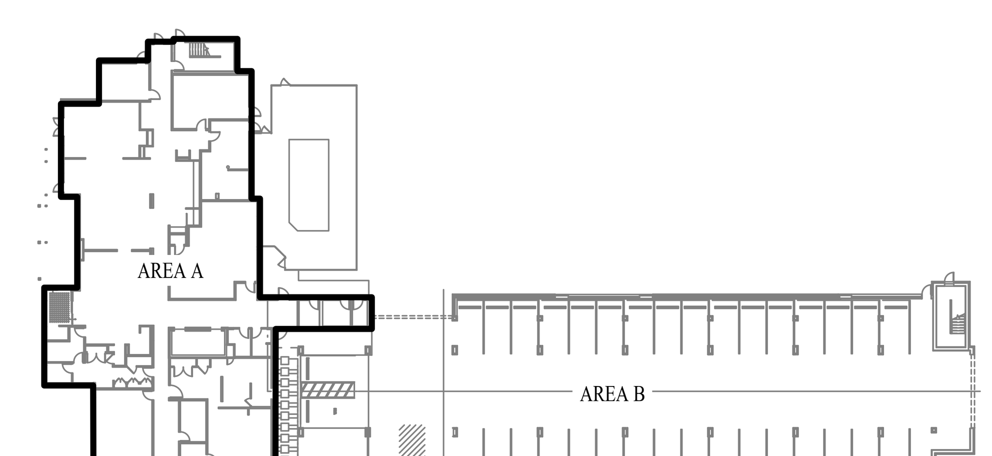
HVAC PLAN - 1ST FLOOR - AREA A

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



HVAC PLAN - MECHANICAL ROOM - ENLARGED PLAN

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



KEY PLAN

SCALE: 1" = 50 ft

HVAC PLAN SYMBOL LEGEND

- EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
- EQUIPMENT REFERENCE NUMBER
- DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE)
- CUBIC FEET PER MINUTE (CFM) / FACE SIZE
- SUPPLY DUCTWORK
- RETURN DUCTWORK
- EXHAUST DUCTWORK
- OUTSIDE AIR DUCTWORK
- FLEX DUCT
- VENT / COMBUSTION AIR
- CONDENSATION LINE
- REFRIGERANT LINE
- TIE INTO EXISTING
- SUPPLY DIFFUSER (HATCH INDICATES "NO FLOW ZONE")
- RETURN DIFFUSER
- BALANCE DAMPER
- M — MOTORIZED DAMPER
- C — CEILING RADIATION DAMPER
- F — FIRE RATED DAMPER
- S — SMOKE DAMPER
- FS — FIRE/SMOKE DAMPER
- T — THERMOSTAT
- CO2 — CARBON DIOXIDE DETECTOR
- CO — CARBON MONOXIDE DETECTOR / ALARM (MUST MEET UL LISTING 2034
- DS — RETURN DUCT SMOKE DETECTOR WIRED TO FAN STARTER TO SHUT UNIT(S) DOWN AND SEND ALARM SIGNAL TO FIRE ALARM SYSTEM (IF PRESENT) OR TO REMOTE SOUNDER LOCATED IN AN OCCUPIED SPACE (EQUAL TO SYSTEM SENSOR #D4120)
- RS — REMOTE SOUNDER WIRED TO RETURN DUCT SMOKE DETECTOR (EQUAL TO SYSTEM SENSOR #MHW)

HVAC PLAN GENERAL NOTES:

1. SEE M500 & M600 SERIES SHEETS FOR ADDITIONAL HVAC NOTES, DETAIL, AND SCHEDULES.
2. ALL HVAC EQUIPMENT SHALL BE FULLY INTEGRATED AND AUTOMATED THRU BUILDING AUTOMATION SYSTEM. SEE BUILDING AUTOMATION SYSTEM NOTES FOR DETAILS.
3. ALL REFRIGERANT PIPING SHALL ROUTE IN SPACE WITHIN WALLS OR ABOVE FINISHED CEILINGS TO REMAIN CONCEALED.
4. ALL DUCTWORK SHOWN SHALL ROUTE IN SPACE ABOVE FINISHED CEILINGS TO REMAIN CONCEALED UNLESS NOTE OTHERWISE. HVAC CONTRACTOR TO ADJUST SIZING & ROUTING AS NECESSARY TO COORDINATE WITH ALL OTHER TRADES.

HVAC PLAN KEY NOTES:

(1) WALL HEATER PROVIDED & INSTALLED BY ELECTRICIAN.

(2) BALANCE EXHAUST FLOW TO AMOUNT SHOWN (XXX CVM).

(3) BALANCE OA FLOW TO AMOUNT SHOWN (XXX CVM).

(4) AHU TO BE SUSPENDED ABOVE CEILING.

(5) EXTEND 10"Ø DRYER EXHAUST FROM EACH COMMERCIAL DRYER & TERMINATE AT TOP OF LOUVER (SEE DETAIL). DRYER VENT TO TERMINATE A MINIMUM OF 3'-0" ABOVE INTAKE LOUVER.

(6) MOTORIZED DAMPER SHALL OPEN WHEN EITHER OF THE DRYERS IS IN OPERATION.

(7) DRYER MAKE-UP DUCT OPEN TO CAVITY BEHIND DRYERS.

(8) ¾" CONDENSATE DOWN FROM PTACS ON FLOORS ABOVE. ROUTE OVER & INDIRECT DISCHARGE INTO NEAREST HUB-DRAIN ABOVE CEILING (SEE SANITARY PLANS)

(9) AHU CONDENSATE TO INDIRECT DISCHARGE IN FLOOR DRAIN WITHIN MECHANICAL ROOM.

(10) AHU CONDENSATE TO INDIRECT DISCHARGE IN NEARBY HUB-DRAIN IN WALL (SEE SANITARY PLANS).

(11) 4" DRYER EXHAUST FROM GUEST LAUNDRY DRYER TO EXTERIOR; TERMINATE WITH #DWV (COLOR DETERMINED BY ARCHITECT). WRAP DRYER EXHAUST WITH ZERO-CLEARANCE FIREWRAP EQUAL TO FIREMASTER DUCTWRAP OR EQUAL. DRYER EXHAUST SHALL NOT EXCEED 35' IN TOTAL DEVELOPED LENGTH PER IMC 504.8.4.

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. January 19, 2024
PE-2015017071
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Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

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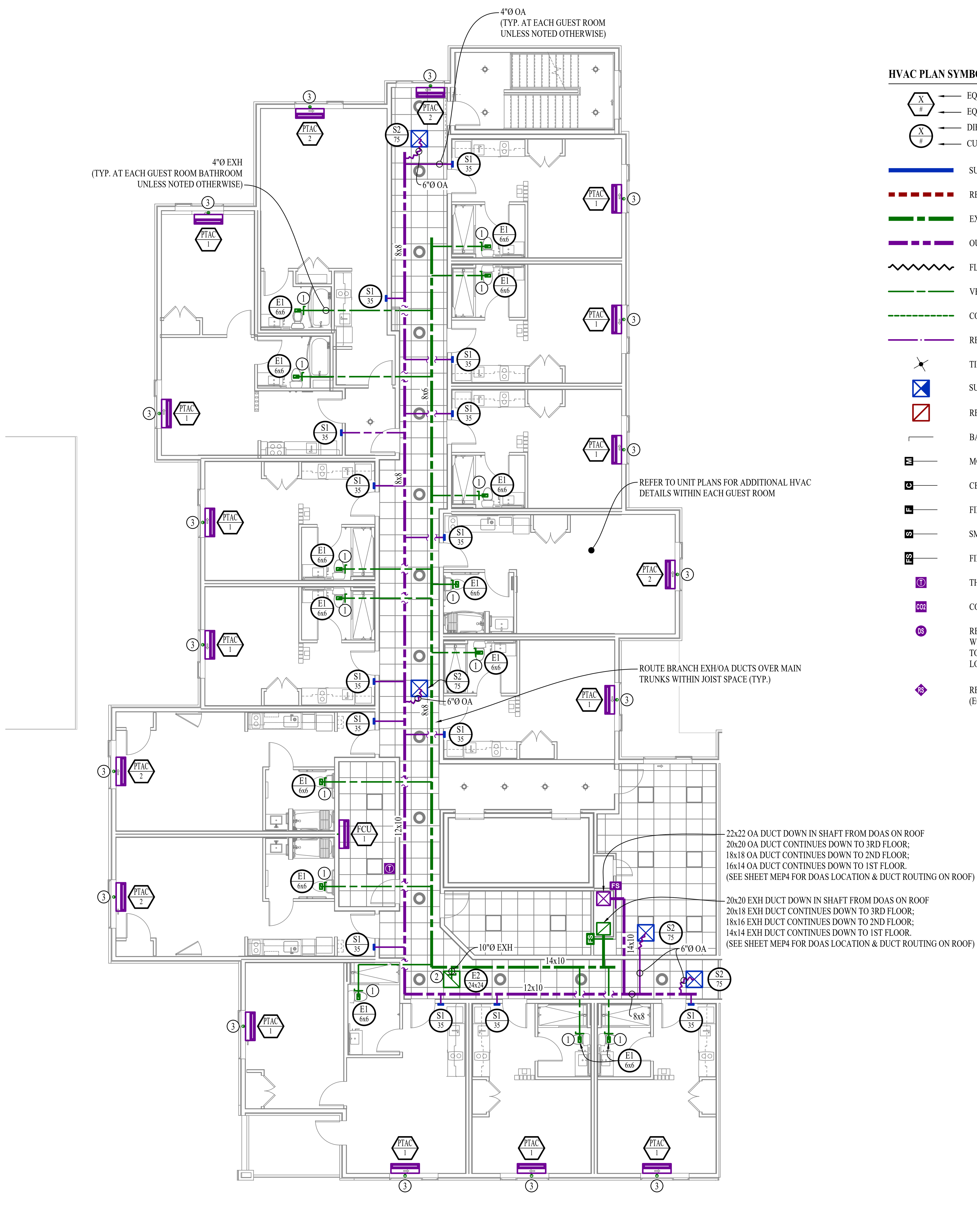
AHJ APPROVAL STAMP

SHEET TITLE

HVAC PLAN - 1ST FLOOR - AREA A

SHEET NUMBER

M101



HVAC PLAN - 2ND-4TH FLOORS - AREA A

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

HVAC PLAN SYMBOL LEGEND

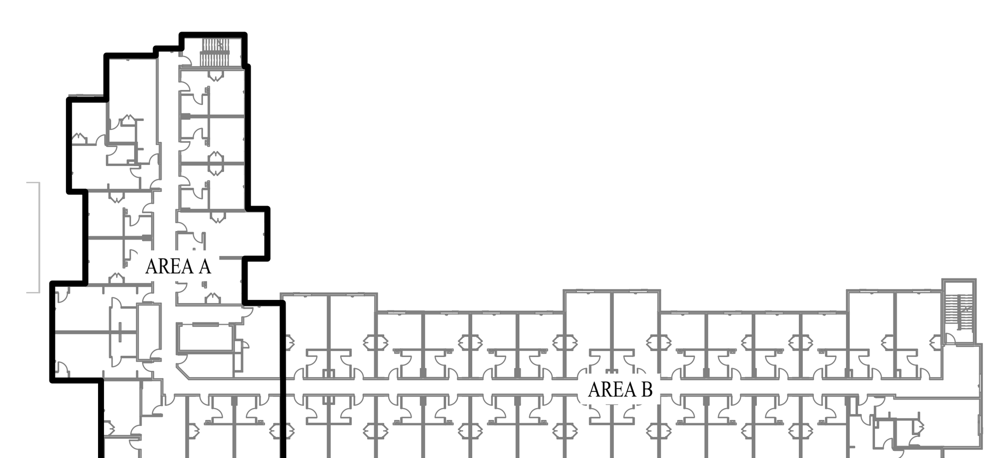
- X / # — EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE) / EQUIPMENT REFERENCE NUMBER
- X / # — DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE) / CUBIC FEET PER MINUTE (CFM) / FACE SIZE
- SUPPLY DUCTWORK
- RETURN DUCTWORK
- EXHAUST DUCTWORK
- OUTSIDE AIR DUCTWORK
- FLEX DUCT
- VENT / COMBUSTION AIR
- CONDENSATION LINE
- REFRIGERANT LINE
- TIE INTO EXISTING
- SUPPLY DIFFUSER (HATCH INDICATES "NO FLOW ZONE")
- RETURN DIFFUSER
- BALANCE DAMPER
- MOTORIZED DAMPER
- CEILING RADIATION DAMPER
- FIRE RATED DAMPER
- SMOKE DAMPER
- FIRE/SMOKE DAMPER
- THERMOSTAT
- CO2 DETECTOR
- RETURN DUCT SMOKE DETECTOR WIRED TO FAN STARTER TO SHUT UNIT(S) DOWN AND SEND ALARM SIGNAL TO FIRE ALARM SYSTEM (IF PRESENT) OR TO REMOTE SOUNDER LOCATED IN AN OCCUPIED SPACE (EQUAL TO SYSTEM SENSOR #D4120)
- REMOTE SOUNDER WIRED TO RETURN DUCT SMOKE DETECTOR (EQUAL TO SYSTEM SENSOR #MHW)

HVAC PLAN GENERAL NOTES:

1. SEE M500 & M600 SERIES SHEETS FOR ADDITIONAL HVAC NOTES, DETAIL, AND SCHEDULES.
2. ALL HVAC EQUIPMENT SHALL BE FULLY INTEGRATED AND AUTOMATED THRU BUILDING AUTOMATION SYSTEM. SEE BUILDING AUTOMATION SYSTEM NOTES FOR DETAILS.

HVAC PLAN KEY NOTES:

1. BALANCE EXHAUST FLOW TO 30 CFM.
2. BALANCE EXHAUST FLOW TO 250 CFM.
3. ¾" CONDENSATE STACK IN EXTERIOR WALL TO COLLECT PTAC CONDENSATE IN FLOORS 2, 3, &4.



KEY PLAN

SCALE: 1" = 50 ft

JAMES P. WATSON
NUMBER PE-2015017071
STATE OF MISSOURI PROFESSIONAL ENGINEER

James Watson, P.E. November 1, 2023
PE-2015017071
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Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE

HVAC PLAN - 2ND-4TH FLOORS - AREA A

SHEET NUMBER

M102

HVAC PLAN SYMBOL LEGEND

- EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
- EQUIPMENT REFERENCE NUMBER
- DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE)
- CUBIC FEET PER MINUTE (CFM) / FACE SIZE
- SUPPLY DUCTWORK
- RETURN DUCTWORK
- EXHAUST DUCTWORK
- OUTSIDE AIR DUCTWORK
- FLEX DUCT
- VENT / COMBUSTION AIR
- CONDENSATION LINE
- REFRIGERANT LINE
- TIE INTO EXISTING
- SUPPLY DIFFUSER (HATCH INDICATES "NO FLOW ZONE")
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- MOTORIZED DAMPER
- CEILING RADIATION DAMPER
- FIRE RATED DAMPER
- SMOKE DAMPER
- FIRE/SMOKE DAMPER
- THERMOSTAT
- CO2 DETECTOR
- RETURN DUCT SMOKE DETECTOR WIRED TO FAN STARTER TO SHUT UNIT(S) DOWN AND SEND ALARM SIGNAL TO FIRE ALARM SYSTEM (IF PRESENT) OR TO REMOTE SOUNDER LOCATED IN AN OCCUPIED SPACE (EQUAL TO SYSTEM SENSOR #D4120)
- REMOTE SOUNDER WIRED TO RETURN DUCT SMOKE DETECTOR (EQUAL TO SYSTEM SENSOR #MHW)

HVAC PLAN GENERAL NOTES:

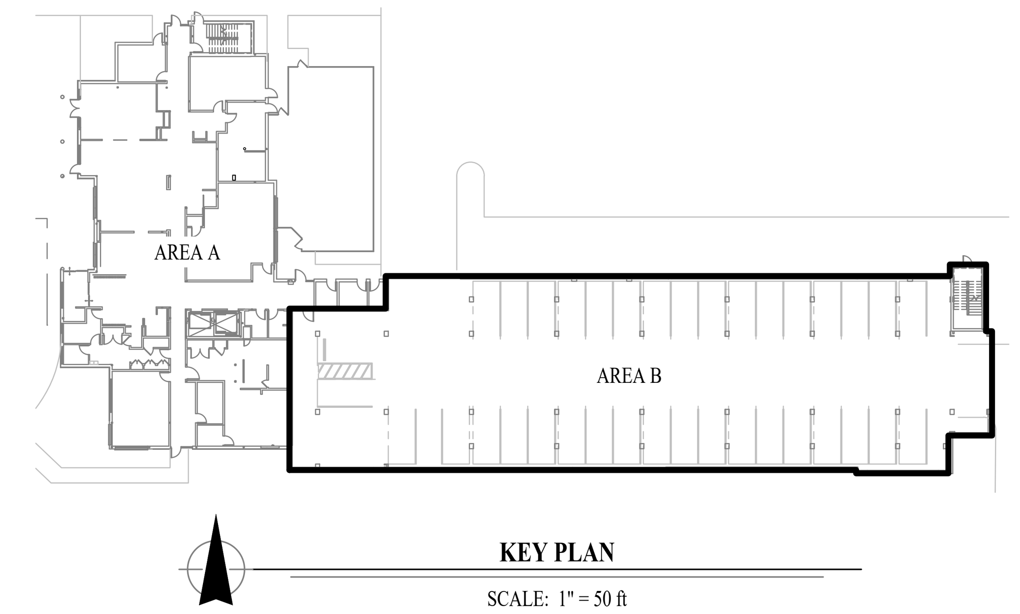
1. SEE M500 & M600 SERIES SHEETS FOR ADDITIONAL HVAC NOTES, DETAIL, AND SCHEDULES.
2. ALL HVAC EQUIPMENT SHALL BE FULLY INTEGRATED AND AUTOMATED THRU BUILDING AUTOMATION SYSTEM. SEE BUILDING AUTOMATION SYSTEM NOTES FOR DETAILS.
3. ALL REFRIGERANT PIPING SHALL ROUTE IN SPACE WITHIN WALLS OR ABOVE FINISHED CEILINGS TO REMAIN CONCEALED.

HVAC PLAN KEY NOTES:

1 WALL HEATER PROVIDED & INSTALLED BY ELECTRICIAN.

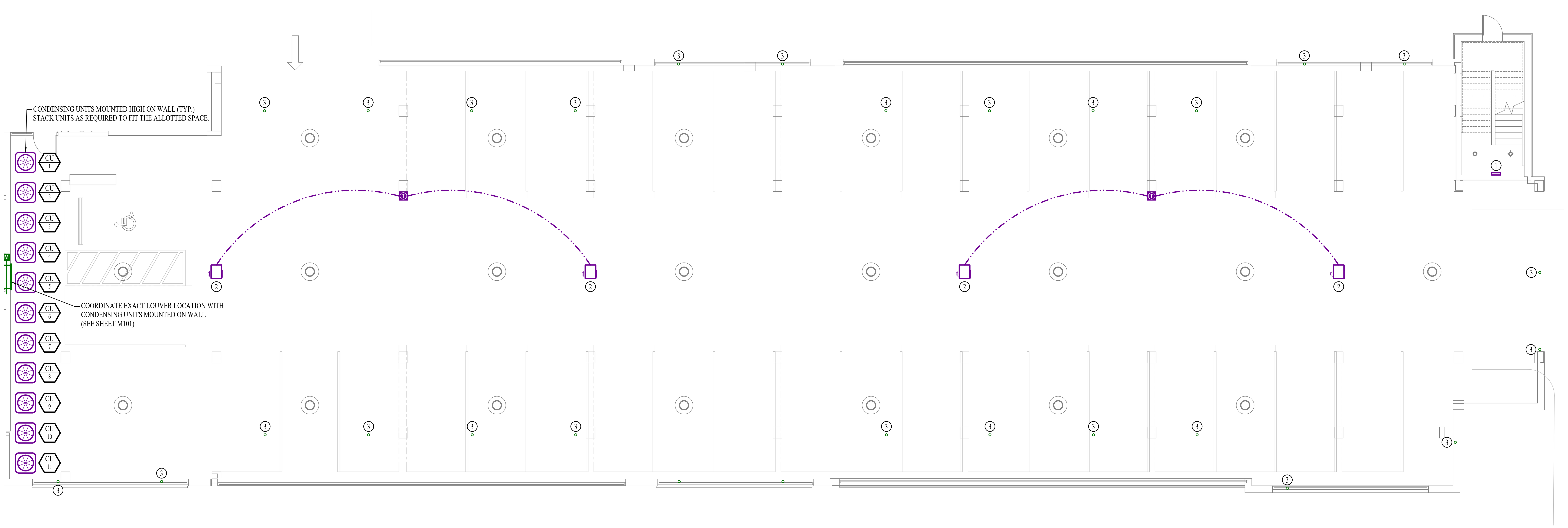
2 PROVIDE & INSTALL CONCEALED ZERO-CLEARANCE PLENUM HEATER EQUAL TO BERKO #BPH158324.

3 ¾" CONDENSATE DOWN FROM PTACS ON FLOORS ABOVE. ROUTE OVER IN HEATED SPACE & ROUTE DOWN TO INDIRECT DISCHARGE INTO NEAREST FLOOR DRAIN NEXT TO COLUMN (SEE SANITARY PLANS)



KEY PLAN

SCALE: 1" = 50 ft



HVAC PLAN - 1ST FLOOR - AREA B

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

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Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE

HVAC PLAN - 1ST FLOOR - AREA B

SHEET NUMBER

M111

HVAC PLAN SYMBOL LEGEND

- EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
- EQUIPMENT REFERENCE NUMBER
- DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE)
- CUBIC FEET PER MINUTE (CFM) / FACE SIZE
- SUPPLY DUCTWORK
- RETURN DUCTWORK
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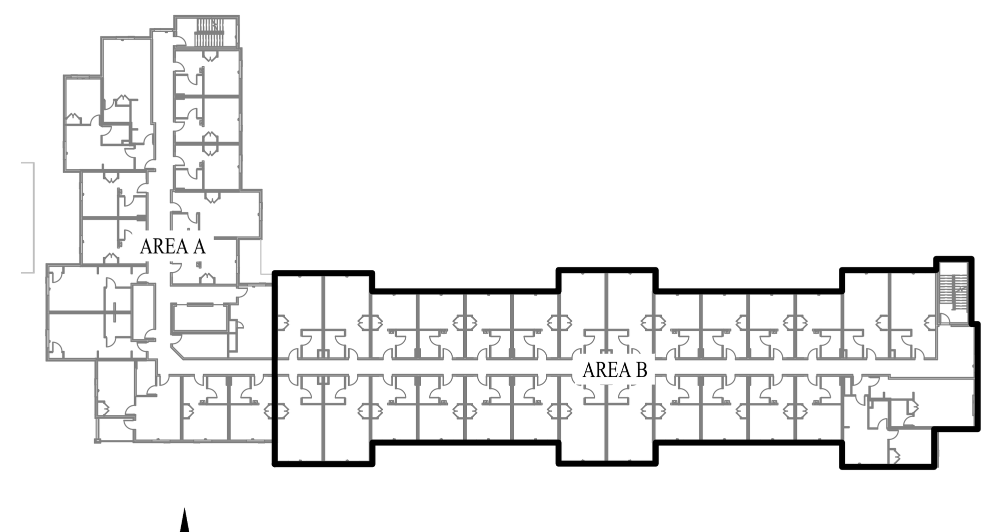
- THERMOSTAT
- CO2 DETECTOR
- RETURN DUCT SMOKE DETECTOR WIRED TO FAN STARTER TO SHUT UNIT(S) DOWN AND SEND ALARM SIGNAL TO FIRE ALARM SYSTEM (IF PRESENT) OR TO REMOTE SOUNDER LOCATED IN AN OCCUPIED SPACE (EQUAL TO SYSTEM SENSOR #D4120)
- REMOTE SOUNDER WIRED TO RETURN DUCT SMOKE DETECTOR (EQUAL TO SYSTEM SENSOR #MHW)

HVAC PLAN GENERAL NOTES:

1. SEE M500 & M600 SERIES SHEETS FOR ADDITIONAL HVAC NOTES, DETAIL, AND SCHEDULES.
2. ALL HVAC EQUIPMENT SHALL BE FULLY INTEGRATED AND AUTOMATED THRU BUILDING AUTOMATION SYSTEM. SEE BUILDING AUTOMATION SYSTEM NOTES FOR DETAILS.

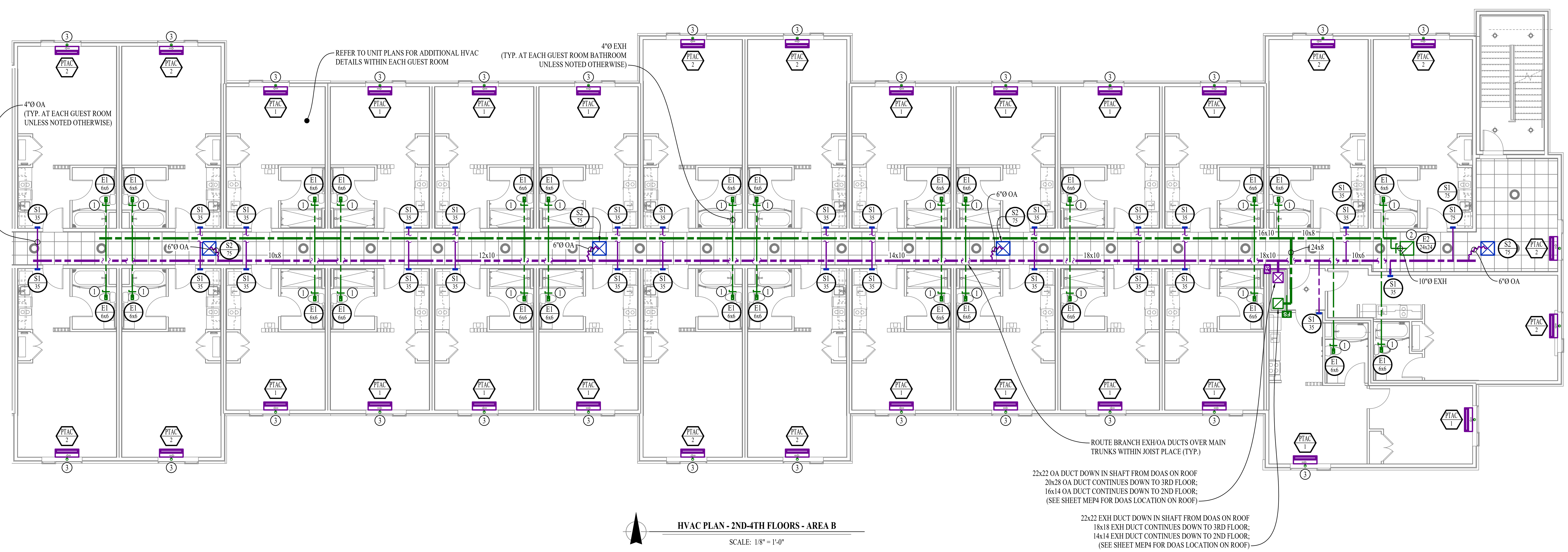
HVAC PLAN KEY NOTES:

1. BALANCE EXHAUST FLOW TO 30 CFM.
2. BALANCE EXHAUST FLOW TO 250 CFM.
3. ¾" CONDENSATE STACK IN EXTERIOR WALL TO COLLECT PTAC CONDENSATE IN FLOORS 2, 3, &4.



KEY PLAN

SCALE: 1" = 50 ft



HVAC PLAN - 2ND-4TH FLOORS - AREA B

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

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. November 1, 2023
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AHJ APPROVAL STAMP

SHEET TITLE

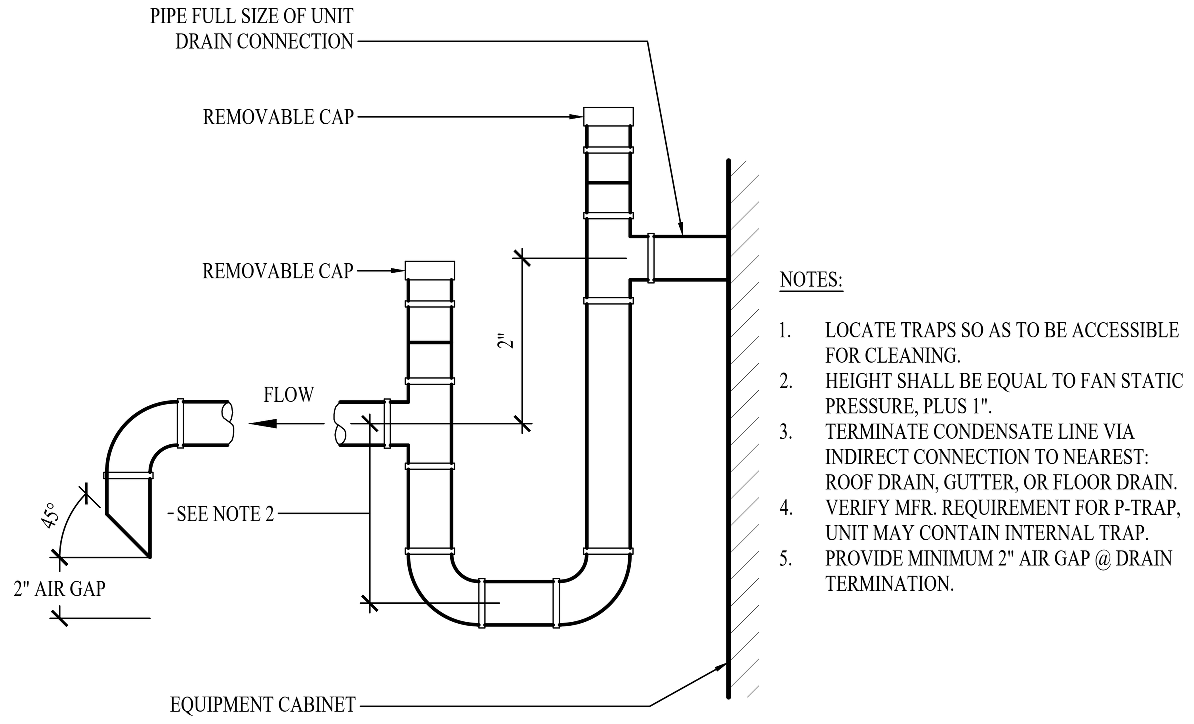
HVAC PLAN - 2ND-4TH FLOORS - AREA B

SHEET NUMBER

M112

HVAC SPECIFICATIONS

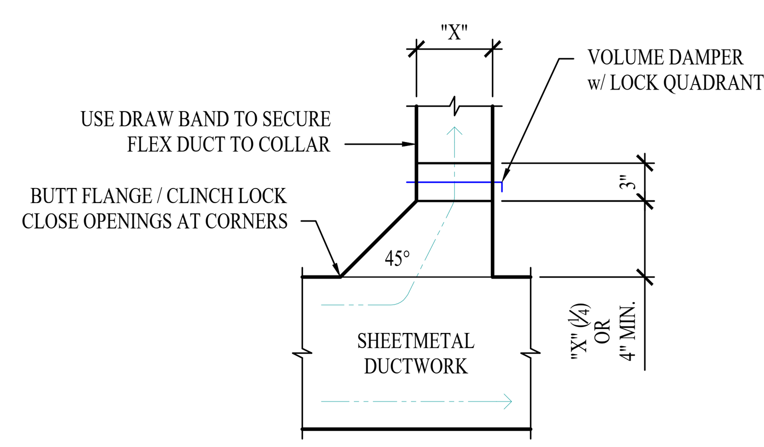
1. EQUIPMENT
   - 1.1. ALL EQUIPMENT MUST PROVIDE THE PERFORMANCE SPECIFIED ON PLANS. WHERE SPECIFIC MAKES AND MODELS ARE INDICATED ON PLAN, CONTRACTOR TO PROVIDE MODEL INDICATED OR APPROVED EQUAL.
   - 1.2. CONTRACTOR TO SUPPLY SUBMITTALS FOR ALL EQUIPMENT FOR REVIEW BY ARCHITECT AND ENGINEER PRIOR TO PURCHASE,
   - 1.3. ALL HORIZONTAL FURNACES WITH AC COILS TO BE EQUIPPED WITH CORROSION RESISTANT DRAIN PAIN. DRAIN PAN TO DISCHARGE TO SANITARY WASTE VIA INDIRECT CONNECTION WITH AIR GAP. DRAIN PAN TO PROVIDE SECONDARY OVERFLOW OR FLOAT SWITCH INTERLOCKED WITH UNIT TO SHUT DOWN UNIT ON HIGH WATER SIGNAL.
   - 1.4. ALL EXTERIOR REFRIGERANT COILS TO BE PROTECTED BY FACTORY EQUIPPED HAIL GUARDS.
   - 1.5. REFRIGERANT PIPING TO BE ACR COPPER OR TYPE L COPPER.
2. DUCTWORK
   - 2.1. DUCTWORK TO BE GALVANIZED STEEL, SEAL CLASS B, CONSTRUCTED PER SMACNA STANDARDS.
   - 2.2. 26 GA. MINIMUM UP TO 16" DUCT, 24 GA. UP TO 20", 22 GA. UP TO 24", 20 GA. UP TO 28", AND 18 GA. UP TO 36".
   - 2.3. TURNING VANES TO BE PROVIDED AND INSTALLED AT ALL 90° BENDS AND TEES.
   - 2.4. DUCT DIMENSIONS LISTED ARE TO INTERIOR OF DUCT LINER.
   - 2.5. BALANCE DAMPERS MUST BE PROVIDED TO ALLOW ADJUSTMENT AT EACH AIR TERMINAL.
     - 2.5.1. WHERE BRANCH TAKEOFF IS ACCESSIBLE (ABOVE LAY-IN CEILING OR EXPOSED DUCT), THE BALANCE DAMPER IS TO BE INSTALLED AT TAKEOFF.
     - 2.5.2. WHERE TAKEOFF IS INACCESSIBLE (IN ATTIC OR SOFFIT), THE BALANCE DAMPER IS TO BE LOCATED SO IT IS ACCESSIBLE FROM FACE OF AIR DEVICE.
   - 2.6. HVAC CONTRACTOR RESPONSIBLE FOR ALL DUCTWORK TRANSITIONS AND FITTINGS AS REQUIRED FOR FINAL CONNECTIONS TO HVAC EQUIPMENT.
3. INSULATION
   - 3.1. DUCTWORK
     - 3.1.1. SEE "TYPICAL DUCT INSULATION DIAGRAM" FOR INSTALLATION SPECIFIC REQUIREMENTS.
     - 3.1.2. INTERNAL DUCT LINER TO BE EQUAL TO CLOSED CELL ELASTOMERIC BACTERIAL RESISTANT INSULATION (NON-FIBROUS) WITH IMPERVIOUS FACE. FROM FIST 30' FROM AIR HANDLER, LINER SHALL BE 2", 1½# DENSITY.
     - 3.1.3. EXTERNAL DUCT WRAP TO INCLUDE VAPOR BARRIER. EQUAL TO 'JOHNS MANVILLE MICROLITE' WITH FSK JACKET.
   - 3.2. REFRIGERANT PIPING
     - 3.2.1. SPLIT SYSTEM (SUCTION LINE ONLY) - 1" CLOSED CELL ELASTOMERIC FOAM (EQUAL TO 'ARMAFLEX AP').
   - 3.3. VRV/VRF SYSTEMS (BOTH SUCTION AND HOT GAS LINES) 1½" EPDM (EQUAL TO 'AEROFLEX AEROCEL AC') WITHIN CONDITIONED SPACES & 2" EDPM (EQUAL TO 'AEROFLEX AEROCEL AC') IN UNCONDITIONED SPACES, AND WITH BANDED ALUMINUM SHIELDING IN EXTERIOR SPACES.
   - 3.4. CONDENSATE PIPING
     - 3.4.1. SPLIT SYSTEMS - WHERE CONDENSATE PIPING IS LOCATED IN UNCONDITIONED SPACE, INSULATE WITH ½" ELASTOMERIC. NO INSULATION REQUIRED IN CONDITIONED SPACES.
     - 3.4.2. VRV/VRF - INSULATE WITH ½" ELASTOMERIC.
4. WORKMANSHIP
   - 4.1. COORDINATE WITH OTHER TRADES SO THAT HVAC EQUIPMENT AND DUCT WORK DOES NOT BLOCK REQUIRED ACCESS OR CLEARANCE TO EQUIPMENT.
   - 4.2. ALL HVAC EQUIPMENT IS TO BE INSTALLED PER MANUFACTURER'S PUBLISHED RECOMMENDATIONS.
   - 4.3. ALL EQUIPMENT TO BE INSTALLED LEVEL AND PLUMB.
   - 4.4. ROOFTOP MOUNTED RTUS TO BE INSTALLED ON CURBS PER MANUFACTURES INSTRUCTIONS.
   - 4.5. GRADE MOUNTED RTUS, CONDENSING UNITS, AND HEAT PUMPS TO BE INSTALLED ON 4" REINFORCED CONCRETE PAD EXTENDING 4" BEYOND EACH EDGE OF THE EQUIPMENT, OR A MANUFACTURER APPROVED PRE-MANUFACTURED BASE.
5. TESTING AND BALANCING
   - 5.1. ALL SYSTEMS MUST BE BALANCED TO WITHIN 10% OF VALUES INDICATED ON PLAN.
   - 5.2. HVAC CONTRACTOR TO PROVIDE WRITTEN BALANCE REPORT INCLUDING FLOW VALUES INDICATED ON PLAN AND ACTUAL MEASURED VALUES.
   - 5.3. THIRD PARTY CERTIFIED TEST AND BALANCE NOT REQUIRED.



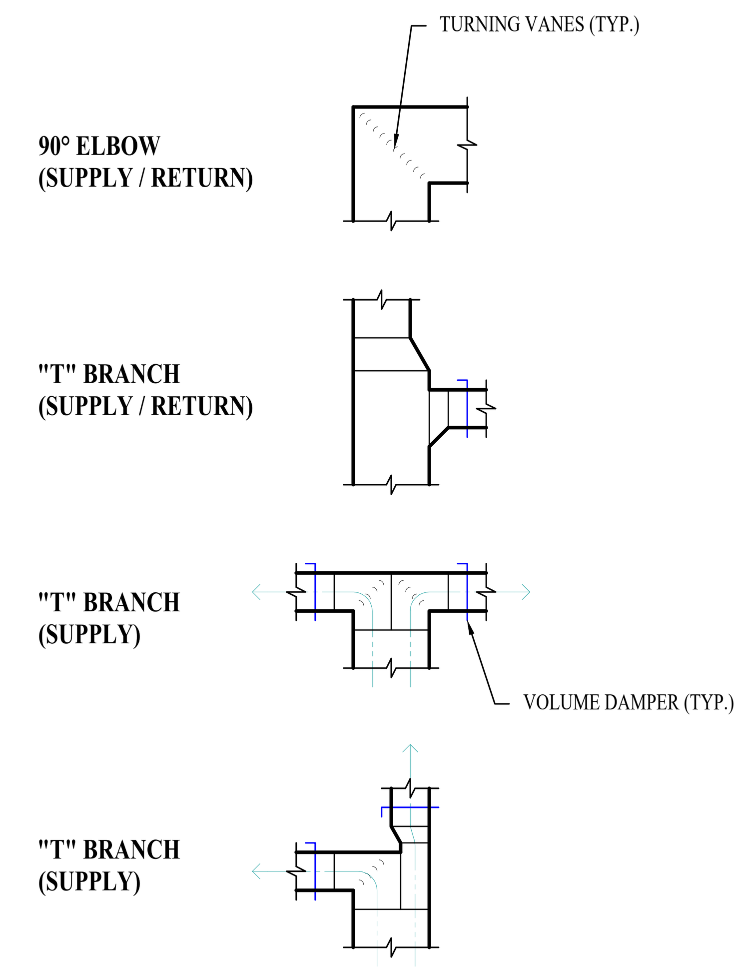
NOTES:

1. LOCATE TRAPS SO AS TO BE ACCESSIBLE FOR CLEANING.
2. HEIGHT SHALL BE EQUAL TO FAN STATIC PRESSURE, PLUS 1".
3. TERMINATE CONDENSATE LINE VIA INDIRECT CONNECTION TO NEAREST: ROOF DRAIN, GUTTER, OR FLOOR DRAIN.
4. VERIFY MFR. REQUIREMENT FOR P-TRAP, UNIT MAY CONTAIN INTERNAL TRAP.
5. PROVIDE MINIMUM 2" AIR GAP @ DRAIN TERMINATION.

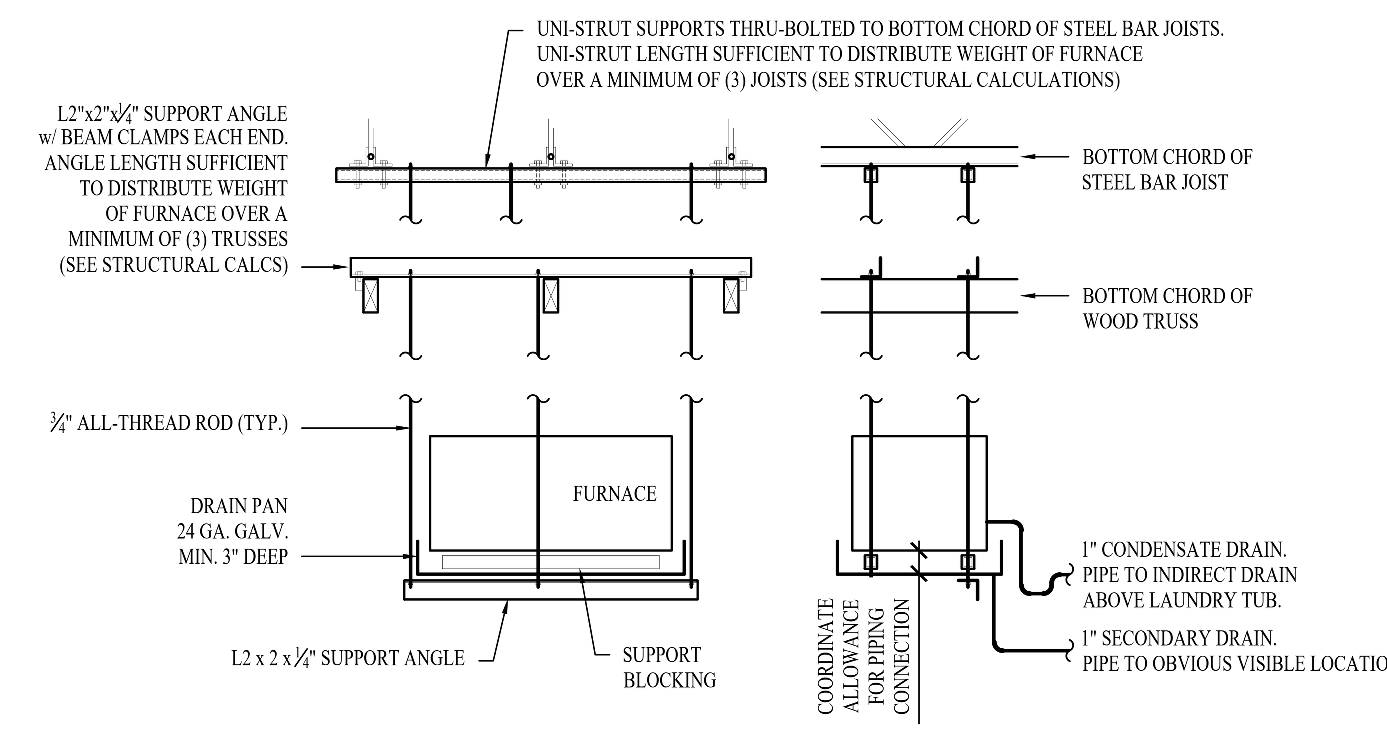
COOLING EQUIPMENT CONDENSATE DRAIN TRAP



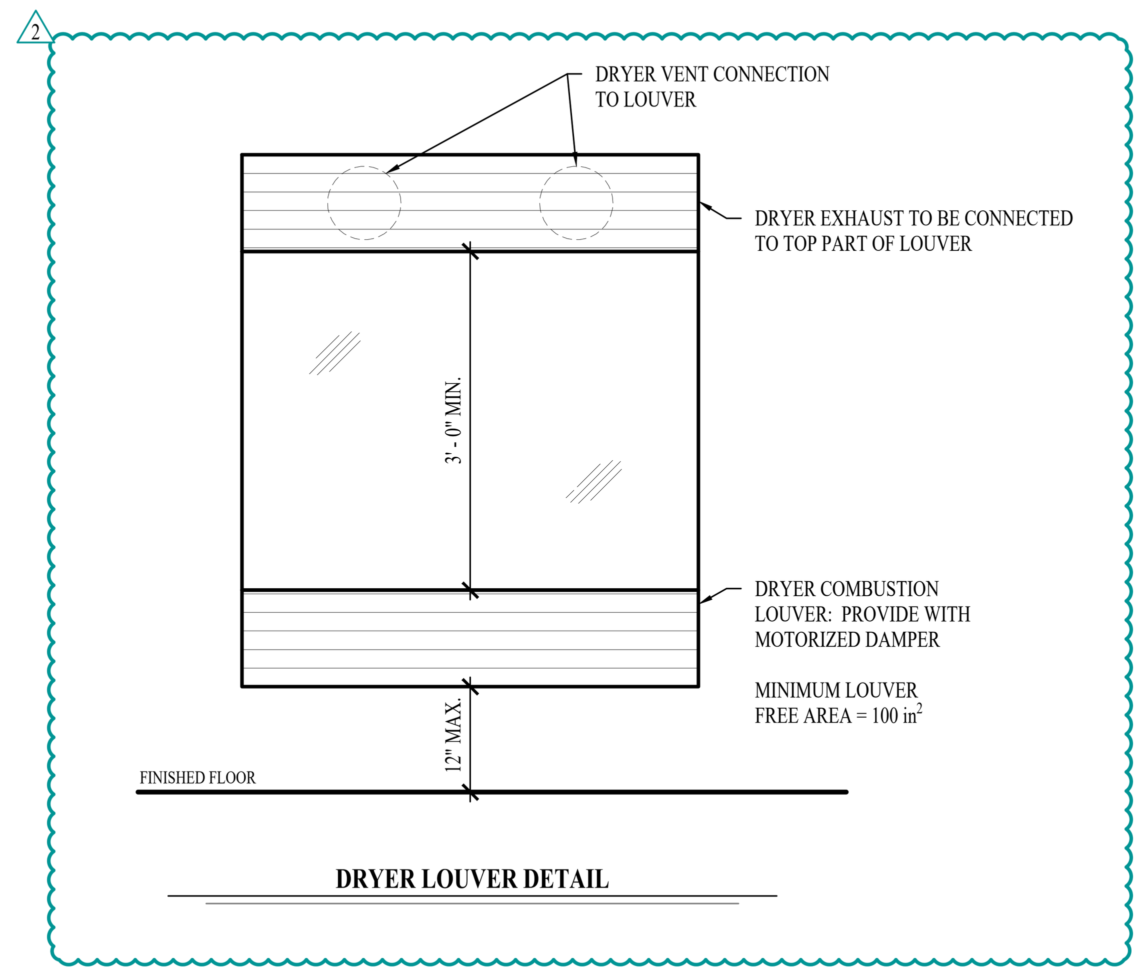
TYPICAL 45° TAKEOFF DETAIL



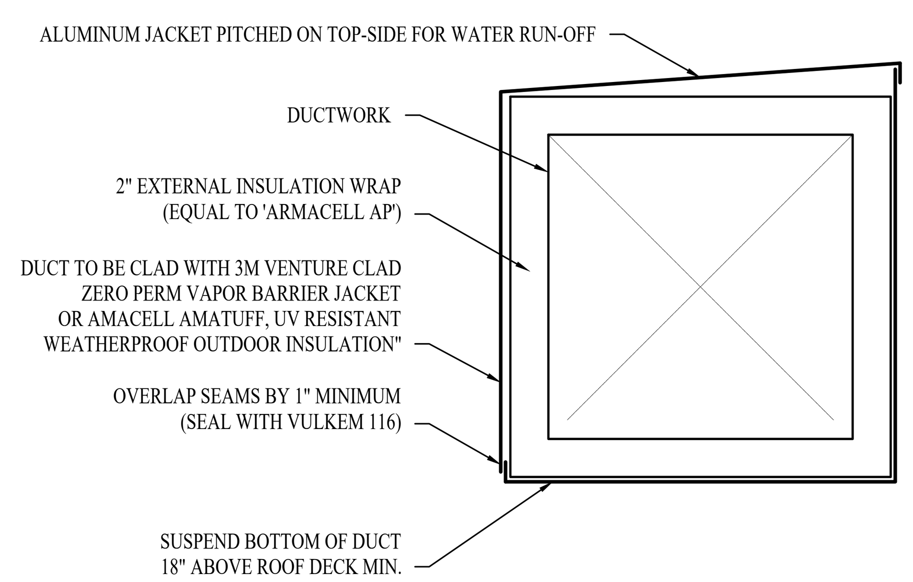
TYPICAL DUCTWORK FITTINGS DETAIL



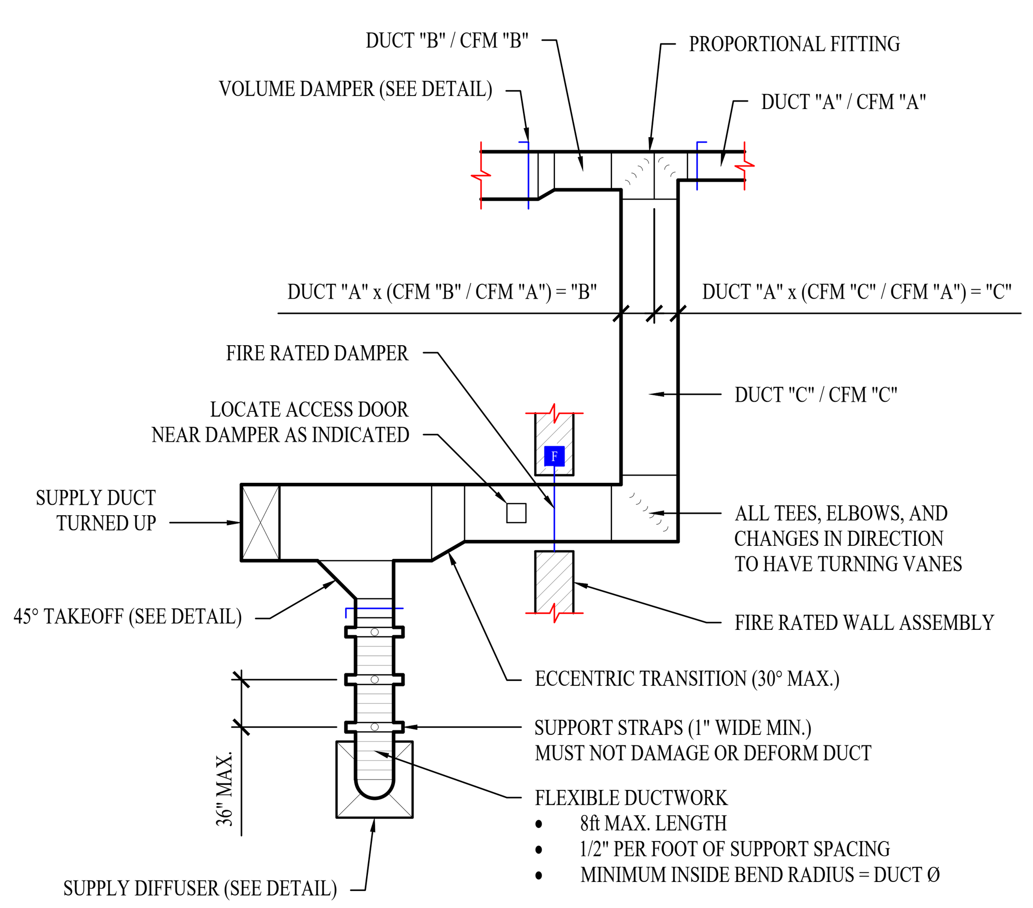
SUSPENDED FURNACE INSTALLATION DETAIL



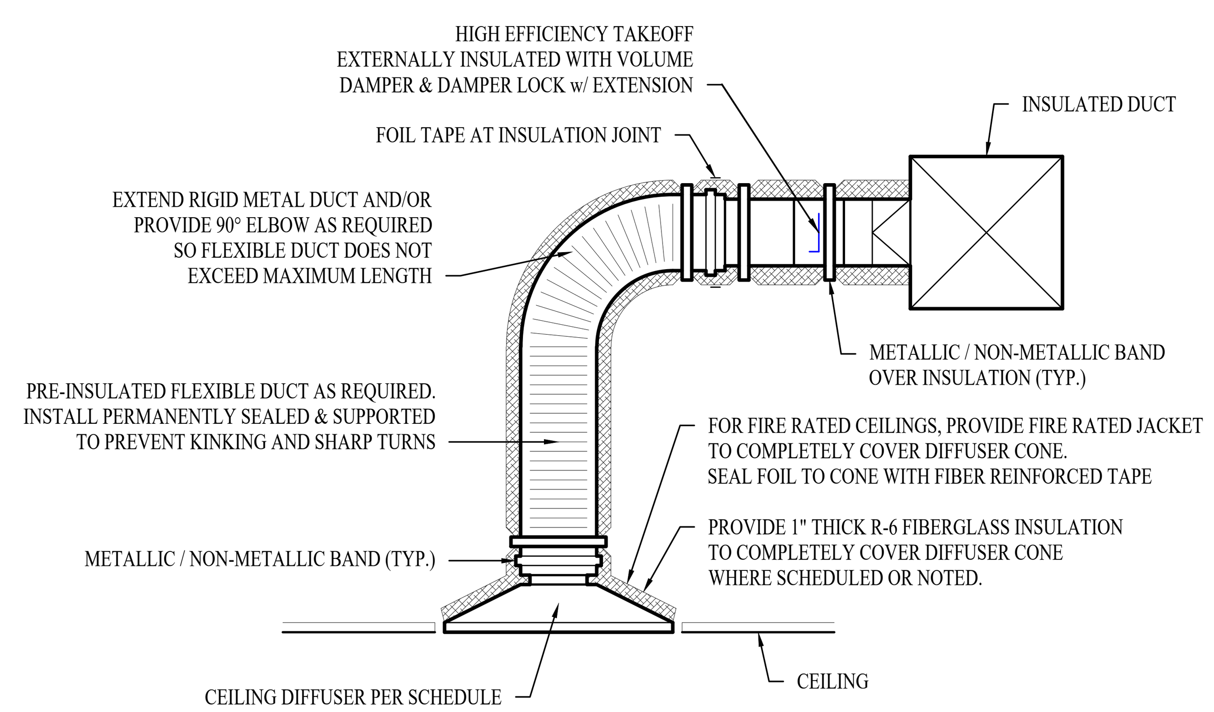
DRYER LOUVER DETAIL



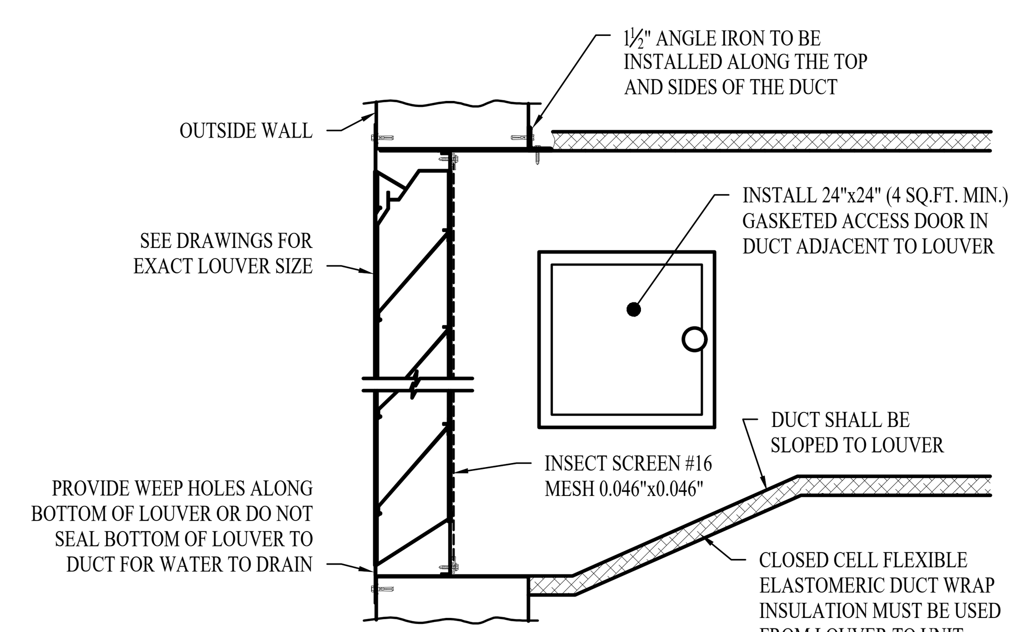
BUILDING EXTERIOR DUCT SECTION DETAIL



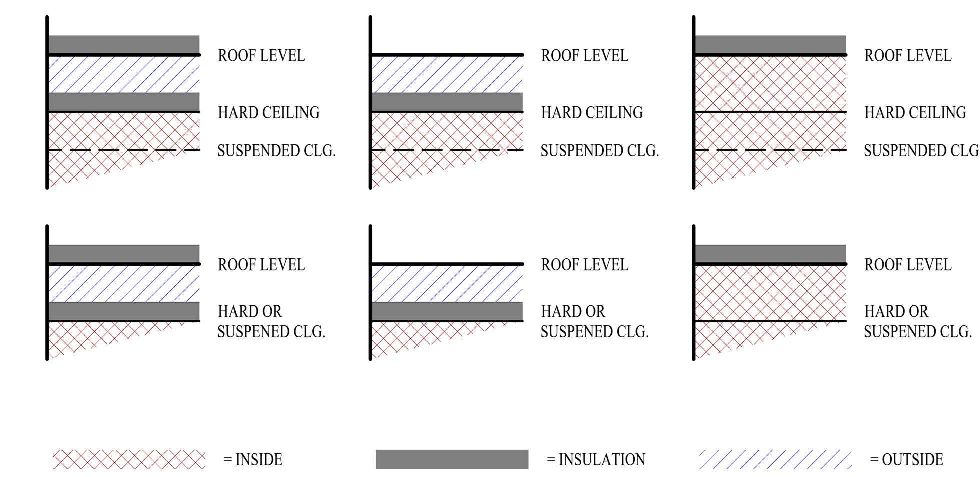
TYPICAL DUCTWORK DETAIL



TYPICAL LAY-IN DIFFUSER DETAIL



LOUVER CONNECTION DETAIL



DUCT INSIDE THERMAL ENVELOPE INSULATION REQUIREMENTS

RECTANGULAR
- SUPPLY = 1" LINER
- RETURN = 1" LINER
- EXHAUST = NONE
- OUTSIDE AIR = 2" WRAP

ROUND
- SUPPLY = 1½" WRAP
- RETURN = NONE
- EXHAUST = NONE
- OUTSIDE AIR = 2" WRAP

SPIRAL
- SUPPLY = NONE
- RETURN = NONE
- EXHAUST = NONE
- OUTSIDE AIR = 2" WRAP

DUCT OUTSIDE THERMAL ENVELOPE INSULATION REQUIREMENTS

RECTANGULAR
- SUPPLY = 1" LINER & 1½" WRAP
- RETURN = 1" LINER & 1½" WRAP
- EXHAUST = 1½" WRAP
- OUTSIDE AIR = NONE

ROUND
- SUPPLY = 2" WRAP
- RETURN = 2" WRAP
- EXHAUST = 1½" WRAP
- OUTSIDE AIR = NONE

SPIRAL
- SUPPLY = 2" WRAP
- RETURN = 2" WRAP
- EXHAUST = 1½" WRAP
- OUTSIDE AIR = NONE

* SEE HVAC SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

TYPICAL BUILDING INTERIOR DUCT INSULATION DIAGRAM

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. January 19, 2024
PE-2015017071
MO Certificate of Authority # 2018029680

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J2 PROJECT No:	J21006
J2 DESIGN:	ACW

ISSUE TITLE	DATE
CITY SUBMISSION	11 / 01 / 2023
REVISION 2	01 / 19 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE

HVAC DETAILS

SHEET NUMBER

M501

PTAC SCHEDULE

TAG	EQUIPMENT DESCRIPTION	MANUFACTURER (OR EQUAL)	MODEL NUMBER (OR EQUAL)	TOTAL AIRFLOW (CFM)	HEATING	COOLING (IA: 80 DB/67 WB, OA: 95 DB)			ELECTRICAL			NOTES
					ELECTRIC (KW)	SENSIBLE (KBTU)	TOTAL CAP. (KBTU)	MIN EFF. (EER)	VOLTS/PH	MCA	OCP	
PTAC-1	PACKAGED TERMINAL AC	FRIEDRICH	PDE07K3SG	315 - 255	3.5	6.2	7.2	13.0	208/1	16	20-2	1, 2, 3, 4
PTAC-2	PACKAGED TERMINAL AC	FRIEDRICH	PDE09K3SG	355 - 275	3.5	8.0	9.4	12.1	208/1	16	20-2	1, 2, 3, 4

NOTES:
1. PROVIDE & INSTALL ALL NECESSARY COMPONENTS/EQUIPMENT TO FULLY INTEGRATE UNIT INTO GUESTROOM MANAGEMENT SYSTEM (GRMS) & BUILDING AUTOMATION SYSTEM (BAS)
2. WITH WALL SLEEVE TO EXTEND 8" - 10" FROM FACE OF EXTERIOR WALL
3. WITH #PXSB23020 UNIT SUBBASE & #PXDS DISCONNECT SWITCH
4. WITH ARCHITECTURAL SERIES EXTERIOUR GRILLE (VERIFY STYLE WITH ARCHITECT)
5. WITH CONDENSATION PIPING KIT

MINI-SPLIT SYSTEM SCHEDULE

TAG	EQUIPMENT DESCRIPTION	SIZE (TONS)	ORIENTATION	TOTAL AIRFLOW (CFM)	HEATING (IA:70 DB, OA:17 DB)	COOLING (IA: 80 DB/67 WB, OA: 95 DB)			ELECTRICAL			NOTES
					TOTAL (KBTU)	SENSIBLE (KBTU)	TOTAL (KBTU)	EFFICIENCY (SEER)	VOLTS/PH	MCA	OCP	
FCU-1	FAN-COIL UNIT	2.0	WALL-MOUNT	700	-	-	-	-	(POWERED THRU HP-1)			1, 3, 4
HP-1	HEAT PUMP	2.0	STANDARD	-	18.3	18.5	24.0	21	208/1	14	25-2	2, 5

NOTES:
1. PROVIDE & INSTALL DIRECT DIGITAL SENSOR CONNECTED TO BAS WITH TEMPERATURE & HUMIDITY READOUTS/SETPOINTS.
2. WITH WIND BAFFLE.
3. WITH FIELD INSTALLED CONDENSATE PUMP.
4. EQUAL TO MITSUBISHI #PKA-A24KA7
5. EQUAL TO MITSUBISHI #PUZ-A24NHA7

2

DEDICATED OUTSIDE AIR UNIT SCHEDULE

UNIT															
TAG	MANUFACTURER (OR APPROVED EQUAL)	MODEL (OR APPROVED EQUAL)	ELECTRICAL			SUPPLY FAN				EXHAUST FAN				FILTERS	
			VOLT/PH	MCA	MOCP	AIRFLOW (CFM)	ESP (inH₂O)	TSP (inH₂O)	MOTOR (HP)	AIRFLOW (CFM)	ESP (inH₂O)	TSP (inH₂O)	MOTOR (HP)	SIZE	EFFICIENCY
DOAS-1	TRANE	OADG025F1-DAB10BK00-G3AEE3AE0-21A40B03C-A00C00A00-A00A00000-00AK00000	208/3	137	175-3	3840	1.00	2.62	2.40	3270	1.00	2.16	1.81	2"	MERV-8 (30%)
DOAS-2	TRANE	OADG025F1-DAB10BK00-G3AEE3AE0-21A40B03C-A00C00A00-A00A00000-00AK00000	208/3	137	175-3	3560	1.00	2.49	2.07	3010	1.00	2.49	2.07	2"	MERV-8 (30%)

TAG	ENERGY RECOVERY							COOLING							GAS HEATING		
	MIXED AIR LAT		APD (inH₂O)	EFFECTIVENESS				EAT		LAT		TOTAL CAPACITY	SENSIBLE CAPACITY	EFFICIENCY (EER)	INPUT / OUTPUT (kBTU)	ENTERING DB (°F)	LEAVING DB (°F)
	COOLING (°F)	HEATING (°F)		TOTAL COOLING	SENSIBLE COOLING	TOTAL HEATING	SENSIBLE HEATING	ENTERING DB (°F)	ENTERING WB (°F)	LEAVING DB (°F)	LEAVING WB (°F)						
DOAS-1	82.0	46.0	1.1	101.7	51.7	214.4	168.6	82.0	71.3	47.4	47.4	271.3	142.8	14.2	400 / 324	46.1	123.9
DOAS-2	81.9	46.4	1.0	98.1	48	202.3	156.2	81.9	70.9	45.4	45.4	262.9	139.7	14.2	350 / 284	46.4	119.8

NOTES:
1. TEMPERATURE / HUMIDITY SENSOR SHALL BE LOCATED WITHIN TYPICAL GUEST CORRIDOR.
2. DOUBLE-WALL RTU WITH MINIMUM 2-COMPRESSORS, HEAT RECOVERY, 2" FOAM INSULATION (R-13 MINIMUM), MERV-8 FILTRATION, SUPPLY/RETURN/EXHAUST/CONDENSER FANS WITH FACTORY-MOUNTED VFD
3. FULLY MODULATING HOT GAS REHEAT TO MAINTAN CONSTANT DISCHARGE AIR TEMPERATURE AT ROOM NEUTRAL CONDITIONS.
4. MIMINUM 10:1 TURNDOWN MODULATING GAS HEAT
5. WITH SEMCO (OR EQUAL) TOTAL ENERGY RECOVERY WHEEL WITH BYPASS DAMPERS, 1% PURGE TO MINIMIZE EXHAUST CROSS CONTAMINATION AND DEFROST CONTROL, WITH REMOVABLE SLIDE OUT RACK FOR SERVICING
6. IF EQUIPPED WITH DIGITAL SCROLL COMPRESSORS, PROVIDE 3" HIGH DENSITY SOUND BATTS AND OUTDOOR GRADE DRYWALL SHEETS (2 EACH, PERMANENTLY INSTALLED) FOR FOOTPRINT OF UNIT WITHIN ROOF CURB.

SPLIT SYSTEM EQUIPMENT SCHEDULE

TAG	EQUIPMENT DESCRIPTION	SIZE (TONS)	ORIENTATION	TOTAL AIRFLOW (CFM)	OA AIRFLOW MAX/MIN (CFM)	HEATING	COOLING (IA: 80 DB/67 WB, OA: 95 DB)			ELECTRICAL			NOTES
						ELECTRIC (KW)	SENSIBLE (KBTU)	TOTAL (KBTU)	MIN EFF. (SEER)	VOLTS/PH	MCA	OCP	
AHU-1	AIR HANDLER	1.5	UPFLOW	600	-	5	-	-	-	208/1	33	35-2	1, 3
AHU-2	AIR HANDLER	1.5	UPFLOW	600	-	5	-	-	-	208/1	33	35-2	2, 3
AHU-3	AIR HANDLER	4.0	UPFLOW	1600	-	10	-	-	-	208/1	51	60-2	2, 3
AHU-4	AIR HANDLER	2.0	UPFLOW	800	-	5	-	-	-	208/1	33	35-2	2, 3
AHU-5	AIR HANDLER	3.0	HORIZONTAL	1200	-	10	-	-	-	208/1	51	60-2	2, 3
AHU-6	AIR HANDLER	5.0	HORIZONTAL	2000	-	15	-	-	-	208/1	51, 33	35-2, 60-2	2, 3
AHU-7	AIR HANDLER	4.0	HORIZONTAL	1600	-	10	-	-	-	208/1	51	60-2	2, 3
AHU-8	AIR HANDLER	1.5	HORIZONTAL	600	-	5	-	-	-	208/1	33	35-2	1, 3
AHU-9	AIR HANDLER	2.5	HORIZONTAL	1000	-	10	-	-	-	208/1	51	60-2	1, 3
AHU-10	AIR HANDLER	2.0	UPFLOW	800	-	5	-	-	-	208/1	33	35-2	2, 3
AHU-11	AIR HANDLER	3.0	HORIZONTAL	1200	-	10	-	-	-	208/1	51	60-2	1, 3
CU-1	CONDENSING UNIT	1.5	-	-	-	-	13.2	17.8	13	208/1	12	20	4, 5
CU-2	CONDENSING UNIT	1.5	-	-	-	-	13.2	17.8	13	208/1	12	20	4, 5
CU-3	CONDENSING UNIT	4.0	-	-	-	-	35.4	46.0	13	208/1	27	45	4, 5
CU-4	CONDENSING UNIT	2.0	-	-	-	-	17.2	23.0	13	208/1	18	30	4, 5
CU-5	CONDENSING UNIT	3.0	-	-	-	-	24.5	33.6	13	208/1	19	30	4, 5
CU-6	CONDENSING UNIT	5.0	-	-	-	-	41.0	57.0	13	208/1	33	50	4, 5
CU-7	CONDENSING UNIT	4.0	-	-	-	-	35.4	46.0	13	208/1	27	45	4, 5
CU-8	CONDENSING UNIT	1.5	-	-	-	-	13.2	17.8	13	208/1	12	20	4, 5
CU-9	CONDENSING UNIT	2.5	-	-	-	-	21.5	28.4	13	208/1	17	25	4, 5
CU-10	CONDENSING UNIT	2.0	-	-	-	-	17.2	23.0	13	208/1	18	30	4, 5
CU-11	CONDENSING UNIT	3.0	-	-	-	-	24.5	33.6	13	208/1	19	30	4, 5

NOTES:
1. PROVIDE & INSTALL 7 DAY PROGRAMABLE LOCAL THERMOSTAT. COORDINATE EXACT MOUNTING LOCATION WITH OWNER.
2. PROVIDE & INSTALL DIRECT DIGITAL SENSOR CONNECTED TO BAS WITH TEMPERATURE & HUMIDITY READOUTS/SETPOINTS.
3. INCLUDE CORROSION RESISTANT DRAIN PAN WITH OVERFLOW SWITCH WIRED TO SHUT DOWN UNIT.
4. WITH FACTORY HAIL GUARD.
5. LOW AMBIENT PACKAGE FOR OPERATION TO 0° F.

AIR DEVICE SCHEDULE

TAG	SERVICE	MANUFACTURER (OR EQUAL)	MODEL (OR EQUAL)	SIZE	COLOR / FINISH	NOTES
E1	EXHAUST	PRICE	530	AS INDICATED	WHITE	
E2	EHXAUST	PRICE	80	AS INDICATED	WHITE	
L1	OA	-	-	-	-	SEE ARCHITECTURAL
R1	RETURN	PRICE	80	AS INDICATED	WHITE	
R2	RETURN	PRICE	530	AS INDICATED	WHITE	
R3	RETURN	PRICE	SDR	48"L x (8) SLOT	WHITE	WITH SDB PLENUM
S1	SUPPLY	PRICE	520	8x4	WHITE	
S2	SUPPLY	PRICE	SPD	24x24	WHITE	
S3	SUPPLY	PRICE	SDS100	36"L x (1) SLOT	WHITE	WITH SDB PLENUM
S4	SUPPLY	PRICE	SDS100	48"L x (4) SLOT	WHITE	WITH SDB PLENUM

NOTES:
1. VERIFY AIR DEVICE FINISHES WITH OWNER/ARCHITECT PRIOR TO INSTALLATION

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. January 19, 2024
PE-2015017071
MO Certificate of Authority # 2018029680

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J2 PROJECT No:	J21006
J2 DESIGN:	ACW

ISSUE TITLE	DATE
CITY SUBMISSION	11 / 01 / 2023
2 REVISION 2	01 / 19 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE

HVAC SCHEDULES

SHEET NUMBER

M601

BUILDING CONTROLS SYSTEM SCHEDULE

EQUIPMENT DETAILS			CONTROL SYSTEM			CONTROLS INTERFACE						
EQUIPMENT (SEE PLANS)	DESCRIPTION	LOCATION	BUILDING AUTOMATION SYSTEM (BAS)	GUESTROOM MANAGEMENT SYSTEM (GRMS)	GUESTROOM CONTROLLER	GUESTROOM CONTROLLER	CONTROLS INTEGRATED TO BAS	LOCAL OCCUPANT CONTROL	DISPLAY (TEMP / RH)	TEMPERATURE CONTROL	HUMIDITY CONTROL
AHU-1 / CU-1	AIR HANDLING UNIT / REMOTE CONDENSING UNIT	MECHANICAL ROOM	X	-	-	-	X	NO	NO	X	-
AHU-2 / CU-2	AIR HANDLING UNIT / REMOTE CONDENSING UNIT	FLEX SPACE	X	-	-	-	X	NO	YES	X	X
AHU-3 / CU-3	AIR HANDLING UNIT / REMOTE CONDENSING UNIT	COMMUNITY SPACE	X	-	-	-	X	NO	NO	X	X
AHU-4 / CU-4	AIR HANDLING UNIT / REMOTE CONDENSING UNIT	CORRIDORS	X	-	-	-	X	NO	YES	X	X
AHU-5 / CU-5	AIR HANDLING UNIT / REMOTE CONDENSING UNIT	KITCHEN	X	-	-	-	X	NO	YES	X	X
AHU-6 / CU-6	AIR HANDLING UNIT / REMOTE CONDENSING UNIT	FITNESS CENTER	X	-	-	-	X	NO	YES	X	X
AHU-7 / CU-7	AIR HANDLING UNIT / REMOTE CONDENSING UNIT	COMMUNITY SPACE	X	-	-	-	X	NO	YES	X	X
AHU-8 / CU-8	AIR HANDLING UNIT / REMOTE CONDENSING UNIT	WORK ROOM	X	-	-	-	X	64° - 77°	NO	X	
AHU-9 / CU-9	AIR HANDLING UNIT / REMOTE CONDENSING UNIT	MEETING ROOM	X	-	-	-	X	64° - 77°	YES	X	X
AHU-10 / CU-10	AIR HANDLING UNIT / REMOTE CONDENSING UNIT	CORRIDORS	X	-	-	-	X	NO	YES	X	X
AHU-11 / CU-11	AIR HANDLING UNIT / REMOTE CONDENSING UNIT	BREAK / LAUNDRY	X	-	-	-	X	NO	NO	X	
FCU-1	MINI-SPLIT FAN COIL UNIT	I.T. ROOM (FLOORS 2, 3, & 4)	X	-	-	-	X	NO	YES	X	-
HP-1	MINI-SPLIT HEAT PUMP	I.T. ROOM (FLOORS 2, 3, & 4)	X	-	-	-	X	NO	YES	X	-
DOAS-1	DEDICATED OUTSIDE AIR SYSTEM WITH ENERGY RECOVERY	ROOF (WEST)	X	-	-	-	X	NO	YES	X	X
DOAS-2	DEDICATED OUTSIDE AIR SYSTEM WITH ENERGY RECOVERY	ROOF (EAST)	X	-	-	-	X	NO	YES	X	X
PTAC-1	PACKAGED TERMINAL AIR CONDITIONER	GUEST ROOMS	X	X	X	X	X	64° - 77°	X	X	X
PTAC-2	PACKAGED TERMINAL AIR CONDITIONER	GUEST ROOMS	X	X	X	X	X	64° - 77°	X	X	X
WH-1	WATER HEATER (MULTIPLE)	MECHANICAL ROOM	X	-	-	-	X	YES	X	X	-
RP-1	HOT WATER RECIRCULATION PUMP	MECHANICAL ROOM	X	-	-	-	X	YES	X	X	-
HWMS-1	HOT WATER MIXING STATION	MECHANICAL ROOM	X	-	-	-	X	YES	X	X	-
INTERIOR LIGHTING	LIGHTING CONTROL SYSTEM	SEE LIGHTING CONTROL SCHEDULE	X	-	-	-	X	-	-	-	-
EXTERIOR LIGHTING	LIGHTING CONTROL SYSTEM	SEE LIGHTING CONTROL SCHEDULE	X	-	-	-	X	-	-	-	-

BUILDING AUTOMATION SYSTEM (BAS) NOTES:

1. BUILDING AUTOMATION SYSTEM TO CONSIST OF HIGH-SPEED, PEER-TO-PEER NETWORK OF DDC CONTROLLERS, A CONTROL SYSTEM SERVER, AND WEB-BASED OPERATOR INTERFACE.
2. CONTROL PANELS CONTAINING OUTSTATIONS SHALL HAVE FACILITY OF EXTERNAL CONNECTION FOR LAPTOP CONNECTION TO ENABLE SET POINT ADJUSTMENT LOCALLY.
3. ANALOG INPUTS SHALL HAVE AT LEAST ONE HIGH AND ONE LOW ALARM SETTING TO PROVIDE ALARM MONITORING. ALL COMMANDS SHALL HAVE AT LEAST ONE STATUS POINT. PROVIDE FULL COLOR INTERACTIVE GRAPHICS TO ALLOW POINTS TO BE DISPLAYED, TOGETHER WITH CONTROL SET POINTS AND REAL TIME VALUES.
4. SYSTEM SHALL HAVE ABILITY FOR ON/OFF SITE NETWORKING, AND FOR INTERFACE WITH GUESTROOM MANAGEMENT SYSTEM AND GUESTROOM CONTROLLERS.
5. SYSTEM SHALL INCLUDE UNINTERRUPTED POWER SUPPLY SYSTEM TO PROVIDE 4 HOURS OF SYSTEM RUNTIME IN THE EVENT OF POWER FAILURE.
6. SYSTEM SHALL INCLUDE A SUPERVISOR, COMPRISING CENTRAL PROCESSOR UNIT (CPU), COLOR MONITOR, KEYBOARD, AND COLOR PRINTER. SUPERVISOR SHALL BE CONFIGURED WITH LATEST WINDOWS OPERATING SYSTEM AND LATEST BAS OPERATIONAL SOFTWARE, INCLUDING FULL GRAPHICAL INTERFACE. 10% SPARE OUTSTATION CAPACITY SHALL BE PROVIDED BACKED UP BY EQUIVALENT SPARE MEMORY WITHIN CPU.

6.1. SYSTEM COMPUTER: INDUSTRY-STANDARD HARDWARE SHALL MEET OR EXCEED DDC SYSTEM MANUFACTURER'S RECOMMENDED SPECIFICATIONS. HARDWARE SHALL HAVE A HARD DISK WITH SUFFICIENT MEMORY TO STORE ALL REQUIRED OPERATOR WORKSTATION SOFTWARE, A DDC DATABASE AT LEAST TWICE THE SIZE OF THE DELIVERED SYSTEM DATABASE, AND ONE YEAR OF TREND DATA BASED ON POINTS SPECIFIED TO BE TRENDED AT THEIR SPECIFIED TREND INTERVALS.

6.2. SYSTEM CONFIGURATION: MINIMUM HARDWARE CONFIGURATION SHALL INCLUDE DUAL OR QUAD-CORE PROCESSOR, 6GB RAM, 500GB HARD DISK PROVIDING DATA AT 3.0 GB/SEC, 16x DVD-RW DRIVE, AND SERIAL, PARALLEL, AND NETWORK COMMUNICATION PORTS AND CABLES AS REQUIRED FOR PROPER DDC SYSTEM OPERATION.

7. SYSTEM SOFTWARE: SOFTWARE BASED ON SERVER/THIN CLIENT ARCHITECTURE, DESIGNED AROUND OPEN STANDARDS OF WEB TECHNOLOGY. CONTROL SYSTEM SERVER SHALL BE ACCESSED USING WEB BROWSER OVER THE CONTROL SYSTEM NETWORK, AND THE INTERNET. THE THIN-CLIENT ARHICTECTURE PROVIDES OPERATORS COMPLETE ACCESS TO CONTROL SYSTEM TO ACCESS GRAPHICS, POINT DISPLAYS, AND TRENDS, CONFIGURE TRENDS, CONFIGURE POINTS AND CONTROLLERS, OR TO DOWNLOAD PROGRAMMING INTO THE CONTROLLERS.

7.1. OPERATING SYSTEM: WEB SERVER OR WORKSTATION SHALL HAVE AN INDUSTRY-STANDARD PROFESSIONAL-GRADE OPERATING SYSTEM THAT MEETS OR EXCEEDS THE DDC SYSTEM MANUFACTURERS MINIMUM REQUIREMENTS FOR THEIR SOFTWARE.

7.2. SYSTEM GRAPHICS: OPERATOR INTERFACE SOFTWARE SHALL BE GRAPHICALLY BASED THAT CAN BE MODIFIED OR EDITED BY THE END USER WITH MINIMAL TRAINING. SOLUTIONS THAT REQUIRE VENDOR SUPPORT ARE UNNACCEPTABLE. INTERFACE SHALL INCLUDE AT LEAST ONE GRAPHIC PER PIECE OF EQUIPMENT OR OCCUPIED ZONE, GRAPHICS FOR EACH CHILLED WATER AND HOT WATER SYSTEM, AND GRAPHICS THAT SUMMARIZE CONDITIONS ON EACH FLOOR. INDICATE THERMAL ZONE COMFORT ON FLOOR PLAN SUMMARY GRAPHICS USING COLORS TO REPRESENT ZONE TERMPATURE RELATIVE TO ZONE SETPOINT.

7.3 SYSTEM PROTOCOL: SYSTEM SHALL USE BACNET OPEN NON-PROPRIETARY PROTOCOL FOR COMMUNICATION TO OPERATOR WORKSTATION OR WEB SERVER AND FOR COMMUNICATION BETWEEN CONTROL MODULES. I/O POINTS, SCHEDULES, SETPOINTS, TRENDS, AND ALARMS SPECIFIED IN 'SEQUENCE OF OPERATIONS FOR HVAC CONTROLS' SHALL BE BACNET OBJECTS.

8. SYSTEM COMMUNICATION: WEB SERVER OR WORKSTATION AND CONTROLLERS SHALL COMMUNICATE USING BACNET PROTOCOL AND BACKBONE SHALL COMMUNICATE USING ISO 8802-3 (EHTERNET) DATA LINK/PHYISCAL LAYER PROTOCOL AND BACNET/IP ADDRESSING AS SPECIFIED IN ANSI/ASHRAE 135-2016, BACNET ANNEX J.

9. MANUFACTURERS THAT CURRENTLY PROVIDE ACCEPTABLE PRODUCTS INCLUDE (BUT ARE NOT LIMITED TO): AUTOMATED LOGIC, TRANE, SIEMENS, SCHNEIDER ELECTRIC, JOHNSON, HONEYWELL.

10. ACCEPTANCE TESTING: PRIOR TO OCCUPANCY, ACCEPTANCE TESTING MUST BE PERFORMED BY A THIRD-PARTY ACCEPTANCE OR COMMISSIONING AGENT, NOT CONNECTED WITH PRIME, MECHANICAL, OR ELECTRICAL CONTRACTOR.

10.1 ACCEPTANCE TESTING MUST TEST, VERIFY, AND DOCUMENT FUNCITONAL PERFORMANCES, ADJUSTMENTS, SETTINGS, CALIBRATION, AND PROGRAMMING OF ALL SYSTEMS, EQUIPMENT AND DEVICES, FURNISHED AND INSTALLED AS PART OF BUILDING DESIGN TO ENSURE PROPER AND EFFICIENT OPERATION PER MANUFACTURERS' AND ENGINEERS' SPECIFICAITONS, RATINGS, AND CAPACITIES.

10.2 ACCEPTANCE TESTING LEVEL: AS DEFINED BY ASHRAE GUIDELINE 202-2018 (COMMISSIONING PROCESS) AND INCLUDE REQUIRED PRE-START, START-UP, AND VERIFICAITON CHECKLISTS. ADDITIONAL DOCUMENTATION WATER TEST AND BALANCE REPORTS, OPERTING AND MAINTENANCE MANUALS, HIGHLIGHTED MANUFACTURER CUTSHEETS, RECORD 'AS-BUILT' DOCUMENTS IN PDF FORMAT, AND WARRANTIES ON ALL EQUIPMENT.

11. SYSTEM SHALL MONITOR/CONTROL ALL AVAILABLE UTILIZED POINTS FOR ALL EQUIPMENT SHOWN ABOVE.

12. SYSTEM SHALL MONITOR/CONTROL THE FOLLOW CRITICAL NON-HVAC SYSTEMS: OUTDOOR AIR TEMPERATURE, OUTDOOR RELATIVE HUMIDITY, INDOOR RELATIVE HUMIDITY, BUILDING STATIC PRESSURE TO REGULATE OA, INTERIOR/EXTERIOR LIGHTING AND CONTROLS, ELECTRICAL METER AND SUBMETERS, WATER METER AND SUBMETERS, GAS METER

GUESTROOM MANAGEMENT SYSTEM (GRMS) NOTES:

1. GUESTROOM MANAGEMENT SYSTEM SHALL BE FULLY NETWORKED AND INTEGRATE WITH BAS, INCLUDE HOTEL OPERATOR CONSOLE AT RECEPTION DESK, SYSTEM MAY BE WIRED OR WIRELESS.
2. GUESTROOM MANAGEMENT SYSTEM INTEGRATOR IS REQUIRED FOR PROPER SYSTEM FUNCTION.

2.1 GRMS SYSTEM INTEGRATOR SHALL DEMONSTRATE ABILITY TO INTEGRATE ALL ASPECTS OF GUESTROOM FUNCIONALITY INCLUDING HVAC, RFID LOCK, LIGHTING CONTROLS, AND OTHER GUEST AMENITIES AS REQUIRED.

2.2 GRMS SYSTEM INTEGRATOR SHALL ENSURE THAT ALL SERVER-TO-SERVER INTERFACES ARE ESTABLISHED AND OPERATIONAL FOR COMPLETE INTER-OPERABILITY BETWEEN GUESTROOM FUNCTIONS AND BAS AND GRMS.

2.3 GRMS SYSTEM INTEGRATOR SHALL OFFER FULL MAINTENANCE AND SERVICE AGREEMENT FOR PROJECT.

3. GUESTROOM MANAGEMENT SYSTEM MANUFACTURERS SHALL CONFORM TO THE PERFORMANCE CRITERIA ABOVE. MANUFACTURERS THAT CURRENTLY PROVIDE ACCEPTABLE PRODUCTS INCLUDE (BUT ARE NOT LIMITED TO): TELKONET, INCCOM (HONEYWELL), LUTRON, SCHNEIDER ELECTRIC, INTEREL.

GUESTROOM CONTROLLER SYSTEM NOTES:

1. GUESTROOM CONTROLLER SHALL DETERMINE OCCUPANCY TO DETERMINE ROOM MANAGEMENT SEQUENCE.

1.1 GUESTROOM CONTROLLER SHALL BE LOCATED ON GUESTROOM SIDE OF BATHROOM WALL SUCH THAT OCCUPANCY SENSOR FACES INTO SLEEPING AREA.

1.2.GUESTROOM CONTROLLER SHALL ALLOW FOR OCCUPANCY BASED MASTER LIGHTING RELAY CONTROL AND INTEGRATE WITH GUESTROOM ENTRYDOOR LOCK. KEY CARD SLOTS SHALL NOT BE ALLOWED.

1.3 GUESTROOM CONTROLLER SHALL CONTROL HVAC SYSTEM, HUMIDITY AND GUESTROOM LIGHTING

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J2 PROJECT No: J21006
J2 DESIGN: ACW

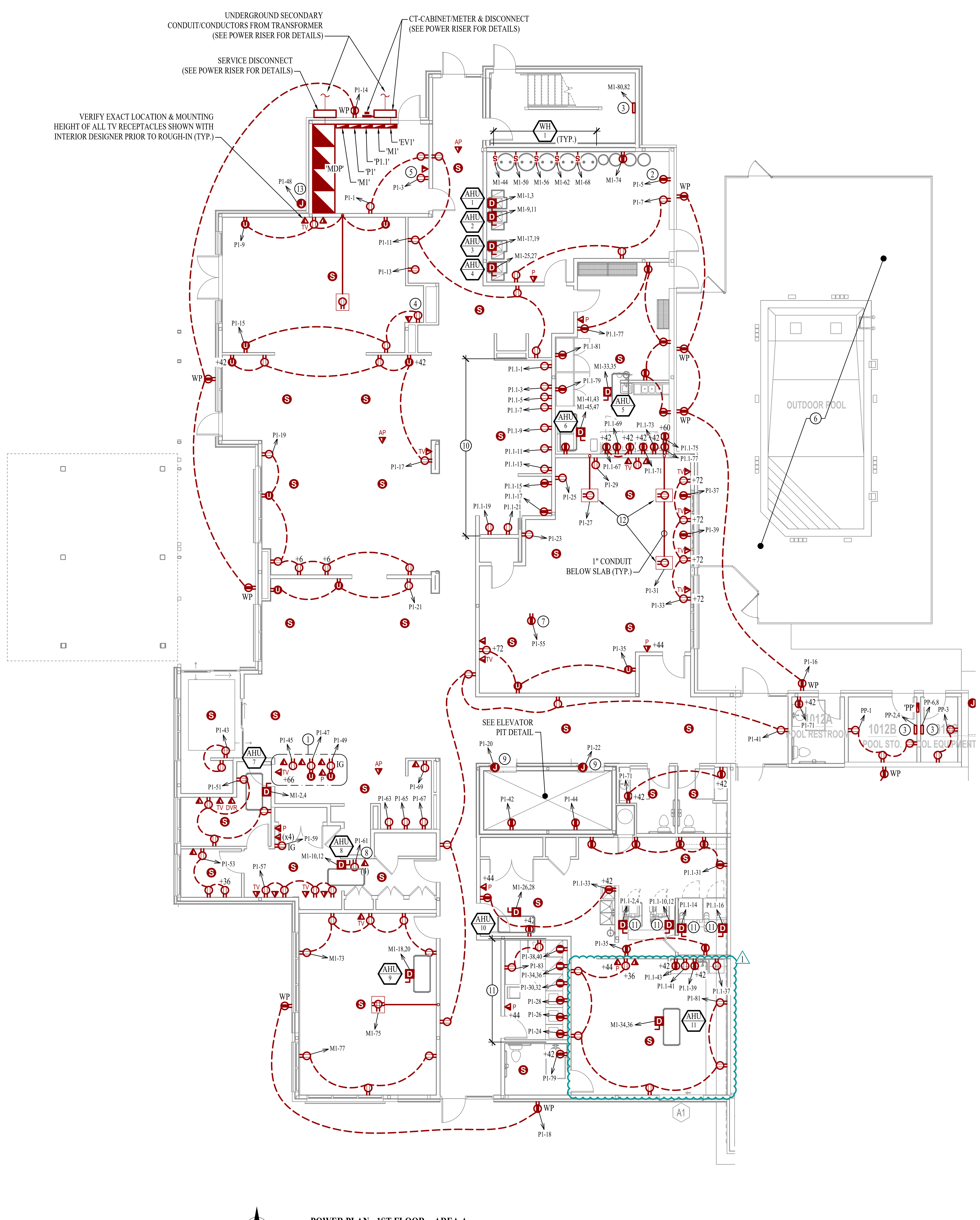
ISSUE TITLE	DATE
CITY SUBMISSION	11 / 01 / 2023

Mechanical - Electrical - Plumbing Design Drawings for
Towneplace Suites By Marriott
1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE
HVAC SCHEDULES

SHEET NUMBER
M602



POWER PLAN - 1ST FLOOR - AREA A

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

POWER PLAN SYMBOL LEGEND

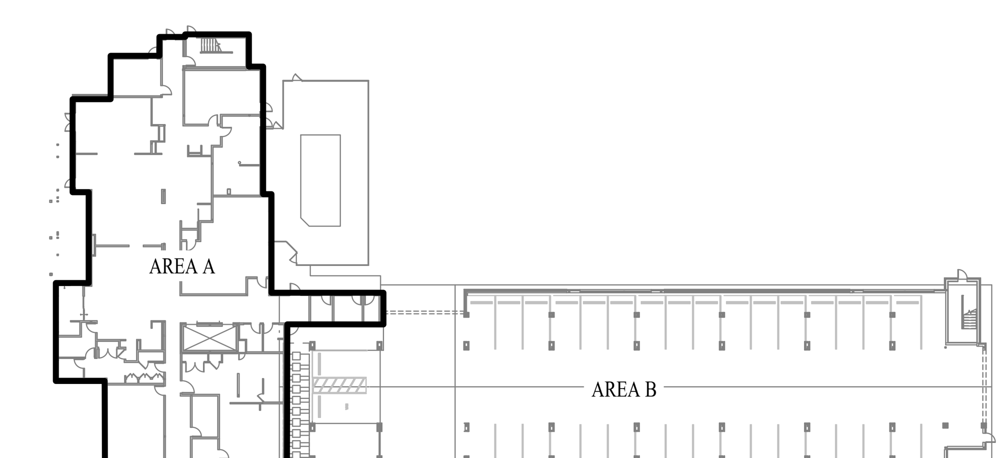
Symbol	Description
	CIRCUIT WIRING
PX-XX	CIRCUIT TAG
J	JUNCTION BOX
XX +42	RECEPTACLE INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE) "WP" = WEATHERPROOF OUTDOOR RECEPTACLE "AW" = ABOVE WINDOW RECEPTACLE "AC" = ABOVE CEILING RECEPTACLE "EX" = EXISTING RECEPTACLE TO REMAIN "IG" = ISOLATED GROUND
	GFCI DUPLEX CONVENIENCE RECEPTACLE
	208V RECEPTACLE
	QUADPLEX CONVENIENCE RECEPTACLE
U	USB OUTLET WITH USB-A & USB-C CHARGING PORT
	DATA / PHONE JACK BOX WITH 1" CONDUIT & PULL STRING UP TO CEILING SPACE (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE) TV = TELEVISION, P = PHONE
AP	WIRELESS ACCESS POINT, CEILING MOUNTED
	FLOOR RECEPTACLE
	FLOOR DATA
D	DISCONNECT
FD	FUSED DISCONNECT
FS	FUSED SWITCH
SD	STARTER / DISCONNECT
S	SPEAKER AS PART OF BACKGROUND MUSIC (BGM) SYSTEM; REFER TO BRAND STANDARDS FOR SYSTEM DETAILS & REQUIREMENTS

POWER PLAN GENERAL NOTES:

1. SEE SHEET E501 FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.

POWER PLAN KEY NOTES:

1. POWER, DATA, PHONE, ETC. LOCATED WITHIN MILLWORK OF WELCOME DESK. COORDINATE EXACT LOCATION/REQUIREMENTS WITH WELCOME DESK SUPPLIER/INSTALLER. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL DETAIL/REQUIREMENTS. PROVIDE CONDUIT BACK TO COMPUTER/COMMUNICATIONS FOR ALL SYSTEMS. COORDINATE PLACEMENT OF ELECTRICAL DEVICES, DIFFUSERS, ACCESS PANELS, SYSTEMS INTERFACE AND INTERIOR GRAPHICS SO AS NOT TO ENCROACH ON KEY FOCAL ELEMENTS, COORDINATE PLUG HEIGHT WITH EQUIPMENT.
2. POWER FOR LANDSCAPE IRRIGATION; COORDINATE EXACT LOCATION & REQUIREMENTS WITH LANDSCAPE CONTRACTOR.
3. PROVIDE & INSTALL 3kW ELECTRIC WALL HEATER EQUAL TO QMARK #AWH4404F.
4. POWER & DATA RECEPTACLE LOCATED BELOW WITHIN CABINET; PROVIDE GROMMET IN COUNTERTOP FOR ACCESS.
5. POWER FOR FIRE ALARM CONTROL PANEL (FACP); COORDINATE WITH FIRE ALARM CONTRACTOR.
6. PROVIDE EQUIPOTENTIAL BONDING OF POOL & DECK AREA PER NEC 680.26. SEE ELECTRICAL DETAILS.
7. COORDINATE LOCATION OF POWER FOR HYDRATION STATION TO BE CONCEALED BY MILLWORK.
8. POWER/DATA FOR TIMECLOCK; COORDINATE WITH EQUIPMENT PROVIDER.
9. POWER FOR SMOKE CURTAIN; SEE ARCHITECTURAL DETAILS.
10. PROVIDE DEDICATED RECEPTACLE FOR ALL EQUIPMENT; COORDINATE EXACT LOCATIONS & REQUIREMENTS WITH EQUIPMENT PROVIDER. COORDINATE ELECTRICAL OUTLETS WITH FOOD SERVICE EQUIPMENT TO ENSURE PROPER ALIGNMENT BETWEEN APPLIANCES AND OUTLETS; OUTLETS TO BE PLACED HORIZONTALLY CENTERED ON GROUT LINE AS INDICATED ON ELEVATIONS. REFER TO ARCHITECTURAL ELEVATIONS FOR ADDITIONAL DETAILS.
11. POWER FOR LAUNDRY EQUIPMENT; VERIFY EXACT LOCATION & REQUIREMENTS WITH EQUIPMENT PROVIDER.
12. COORDINATE EXACT LOCATION OF FLOOR BOXES WITH EQUIPMENT SUPPLIER (TYP.)
13. POWER FOR 120V SOLENOID/GAS VALVE, SEE DETAILS ON THIS SHEET FOR ADDITIONAL INFORMATION. WIRE THRU 'LCPC' RELAY #2. INCLUDE EMERGENCY STOP PUSH-BUTTON EQUAL TO STI-USA #SS2079ES-EN TO OPEN CIRCUIT TO ELECTRICALLY HELD GAS SOLENOID TO TURN OFF GAS SUPPLY TO FIREPIT. MOUNT IN OBVIOUS VISIBLE LOCAITON. COORDINATE WITH PLUMBING CONTRACTOR.



KEY PLAN

SCALE: 1" = 50 ft

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J2 PROJECT No:	J21006
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Mechanical - Electrical - Plumbing Design Drawings for

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Lee's Summit, Missouri 64064

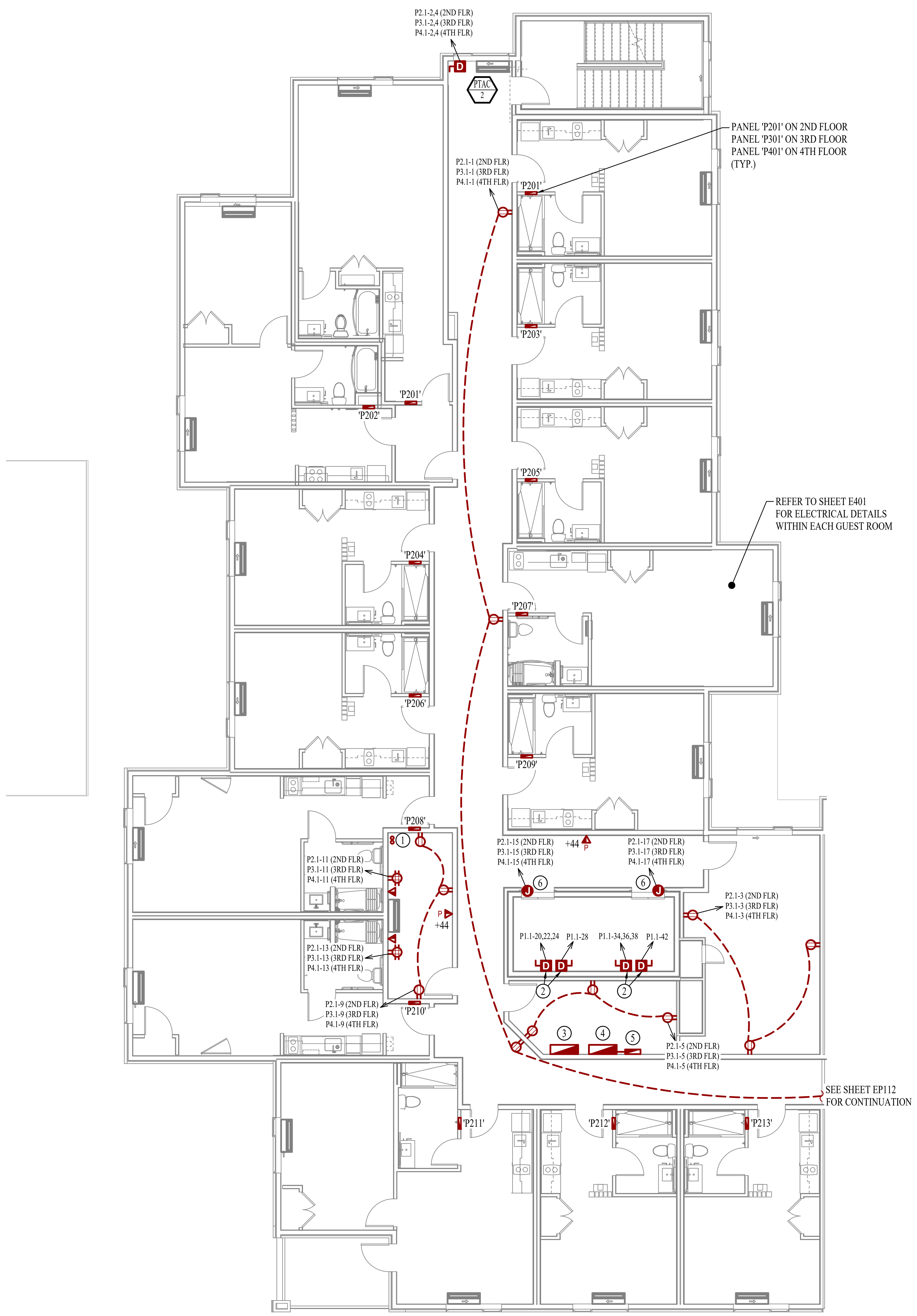
AHJ APPROVAL STAMP

SHEET TITLE

POWER PLAN - 1ST FLOOR - AREA A

SHEET NUMBER

EP101



POWER PLAN - 2ND-4TH FLOORS - AREA A

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

POWER PLAN SYMBOL LEGEND

CIRCUIT WIRING

PX-XX CIRCUIT TAG

JUNCTION BOX

XX +42 RECEPTACLE

INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX
(STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)

"WP" = WEATHERPROOF OUTDOOR RECEPTACLE
"AW" = ABOVE WINDOW RECEPTACLE
"AC" = ABOVE CEILING RECEPTACLE
"EX" = EXISTING RECEPTACLE TO REMAIN
"IG" = ISOLATED GROUND

GFCI DUPLEX CONVENIENCE RECEPTACLE

208V RECEPTACLE

QUADPLEX CONVENIENCE RECEPTACLE

USB OUTLET
WITH USB-A & USB-C CHARGING PORT

DATA / PHONE JACK
BOX WITH 1" CONDUIT & PULL STRING UP TO CEILING SPACE
(STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
TV = TELEVISION, P = PHONE

AP WIRELESS ACCESS POINT, CEILING MOUNTED

FLOOR RECEPTACLE

FLOOR DATA

DISCONNECT

FUSED DISCONNECT

FUSED SWITCH

STARTER / DISCONNECT

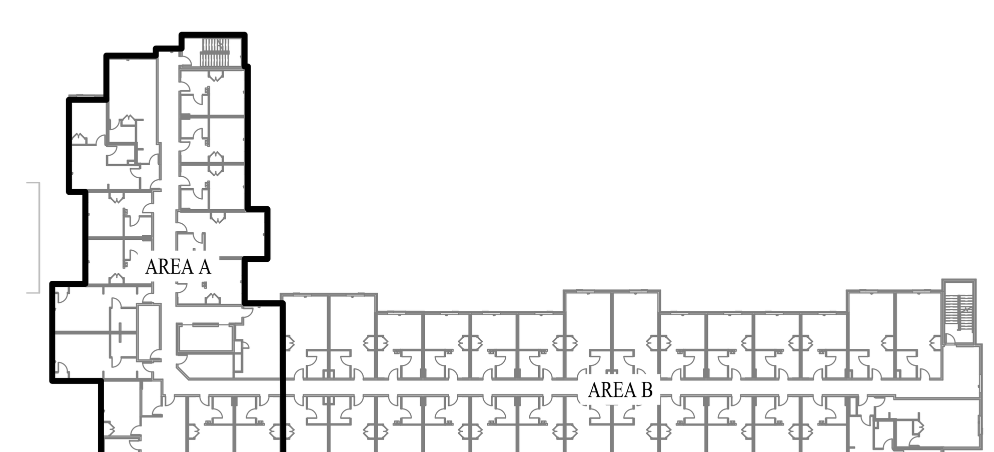
SPEAKER AS PART OF BACKGROUND MUSIC (BGM) SYSTEM;
REFER TO BRAND STANDARDS FOR SYSTEM DETAILS & REQUIREMENTS

POWER PLAN GENERAL NOTES:

1. SEE SHEET E501 FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.

POWER PLAN KEY NOTES:

1. PROVIDE & INSTALL (2) 3" CONDUITS FROM TELECOMMUNICATION DEMARCATIONS TO I.T. CLOSET, INTERCONNECT I.T. CLOSET(S) WITH (2) 3" CONDUITS BETWEEN EACH FLOOR.
2. ELEVATOR DISCONNECT(S) LOCATED WITHIN SHAFT ON FOURTH FLOOR FOR ELEVATOR EQUIPMENT; COORDINATE EXACT LOCATION & DETAILS WITH ELEVATOR CONTRACTOR.
3. PANEL 'P2A' ON 2ND FLOOR; PANEL 'P3A' ON 3RD FLOOR; PANEL 'P4A' ON 4TH FLOOR.
4. PANEL 'P2B' ON 2ND FLOOR; PANEL 'P3B' ON 3RD FLOOR; PANEL 'P4B' ON 4TH FLOOR.
5. PANEL 'P2.1' ON 2ND FLOOR; PANEL 'P3.1' ON 3RD FLOOR; PANEL 'P4.1' ON 4TH FLOOR.
6. POWER FOR SMOKE CURTAIN; SEE ARCHITECTURAL DETAILS.



KEY PLAN

SCALE: 1" = 50 ft

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AHJ APPROVAL STAMP

SHEET TITLE

POWER PLAN - 2ND-4TH FLOORS - AREA A

SHEET NUMBER

EP102

POWER PLAN SYMBOL LEGEND

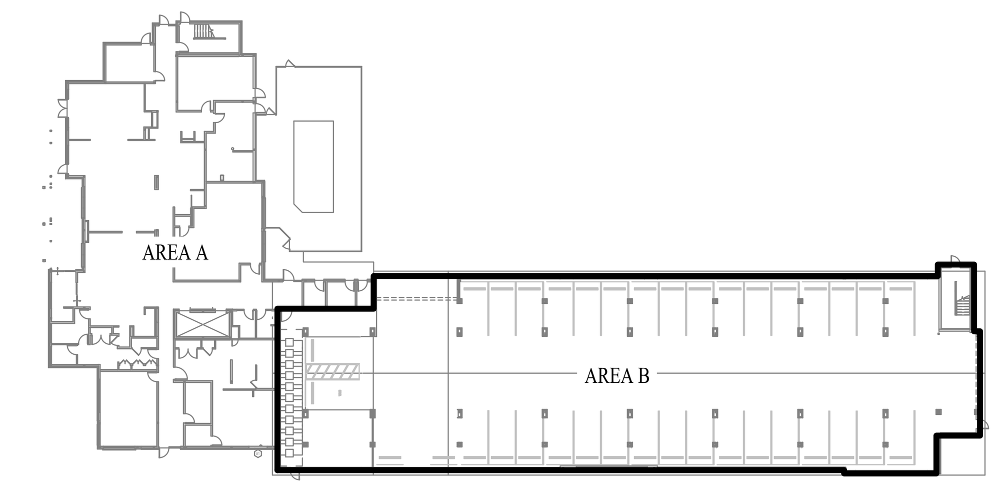
Symbol	Description
	CIRCUIT WIRING
PX-XX	CIRCUIT TAG
J	JUNCTION BOX
XX +42	RECEPTACLE INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE) "WP" = WEATHERPROOF OUTDOOR RECEPTACLE "AW" = ABOVE WINDOW RECEPTACLE "AC" = ABOVE CEILING RECEPTACLE "EX" = EXISTING RECEPTACLE TO REMAIN "IG" = ISOLATED GROUND
	GFCI DUPLEX CONVENIENCE RECEPTACLE
	208V RECEPTACLE
	QUADPLEX CONVENIENCE RECEPTACLE
U	USB OUTLET WITH USB-A & USB-C CHARGING PORT
	DATA / PHONE JACK BOX WITH 1" CONDUIT & PULL STRING UP TO CEILING SPACE (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE) TV = TELEVISION, P = PHONE
AP	WIRELESS ACCESS POINT, CEILING MOUNTED
	FLOOR RECEPTACLE
	FLOOR DATA
D	DISCONNECT
FD	FUSED DISCONNECT
FS	FUSED SWITCH
SD	STARTER / DISCONNECT
S	SPEAKER AS PART OF BACKGROUND MUSIC (BGM) SYSTEM; REFER TO BRAND STANDARDS FOR SYSTEM DETAILS & REQUIREMENTS

POWER PLAN GENERAL NOTES:

1. SEE SHEET E501 FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.

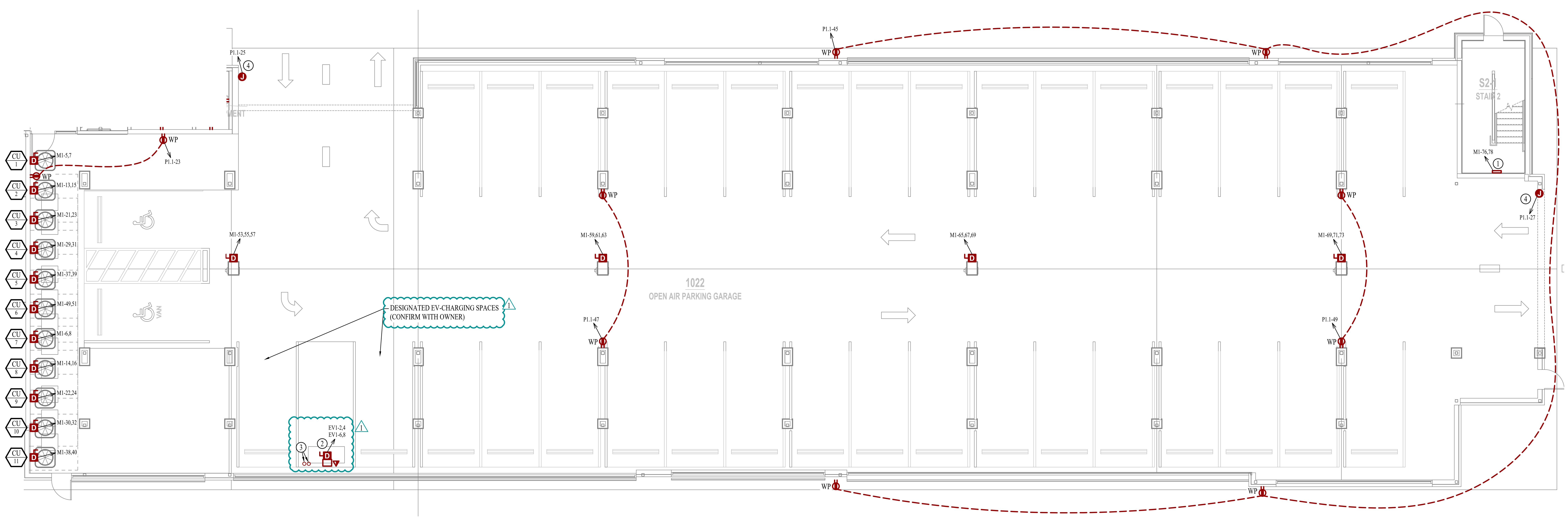
POWER PLAN KEY NOTES:

1. PROVIDE & INSTALL 3kW ELECTRIC WALL HEATER EQUAL TO QMARK #AWH4404F.
2. PROVIDE & INSTALL LEVEL-2, DUAL-STATION, EV-CHARGING SYSTEM EQUAL TO JUICEBAR GEN-3 #JB3.0-402; COORDINATE EXACT LOCATION & REQUIREMENTS WITH OWNER.
3. PROVIDE & INSTALL (2) 4" CONDUITS WITH PULL-STRINGS FROM ELECTRICAL ROOM TO GARAGE FOR FUTURE EV-CHARGING; COORDINATE EXACT LOCATION & REQUIREMENTS WITH OWNER.
4. POWER FOR ACCESS CONTROL GATE; COORDINATE EXACT LOCATION & REQUIREMENTS WITH EQUIPMENT SUPPLIER/INSTALLER.



KEY PLAN

SCALE: 1" = 50 ft



POWER PLAN - 1ST FLOOR - AREA B

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

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AHJ APPROVAL STAMP

SHEET TITLE

POWER PLAN - 1ST FLOOR - AREA B

SHEET NUMBER

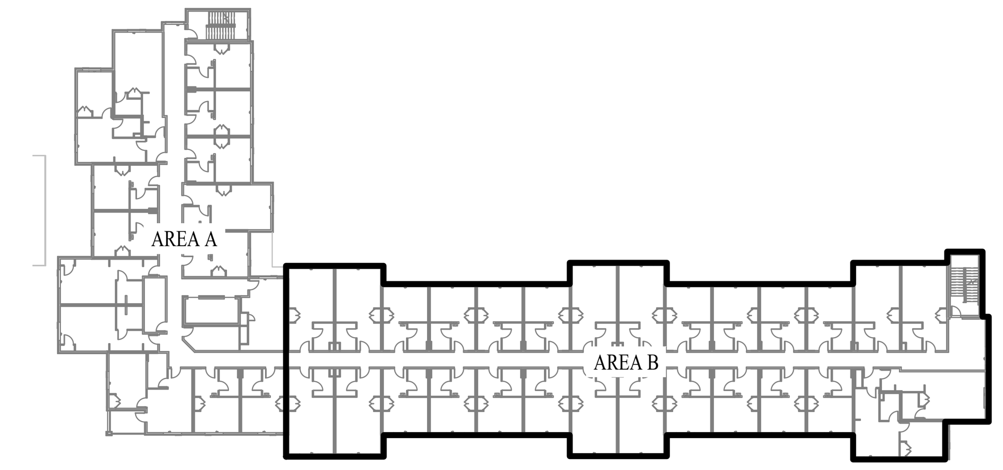
EP111

POWER PLAN SYMBOL LEGEND

Symbol	Description
	CIRCUIT WIRING
PX-XX	CIRCUIT TAG
J	JUNCTION BOX
XX +42	RECEPTACLE INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE) "WP" = WEATHERPROOF OUTDOOR RECEPTACLE "AW" = ABOVE WINDOW RECEPTACLE "AC" = ABOVE CEILING RECEPTACLE "EX" = EXISTING RECEPTACLE TO REMAIN "IG" = ISOLATED GROUND
	GFCI DUPLEX CONVENIENCE RECEPTACLE
	208V RECEPTACLE
	QUADPLEX CONVENIENCE RECEPTACLE
U	USB OUTLET WITH USB-A & USB-C CHARGING PORT
	DATA / PHONE JACK BOX WITH 1" CONDUIT & PULL STRING UP TO CEILING SPACE (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE) TV = TELEVISION, P = PHONE
AP	WIRELESS ACCESS POINT, CEILING MOUNTED
	FLOOR RECEPTACLE
	FLOOR DATA
D	DISCONNECT
FD	FUSED DISCONNECT
FS	FUSED SWITCH
SD	STARTER / DISCONNECT
S	SPEAKER AS PART OF BACKGROUND MUSIC (BGM) SYSTEM; REFER TO BRAND STANDARDS FOR SYSTEM DETAILS & REQUIREMENTS

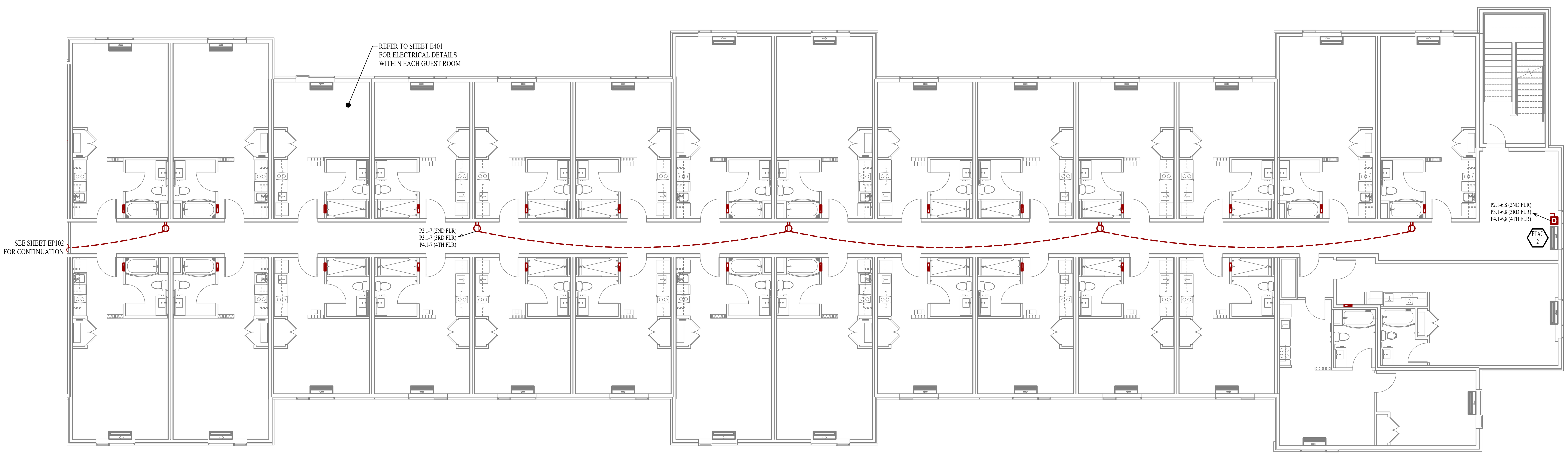
POWER PLAN GENERAL NOTES:

1. SEE SHEET E501 FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.



KEY PLAN

SCALE: 1" = 50 ft



POWER PLAN - 2ND-4TH FLOORS - AREA B

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

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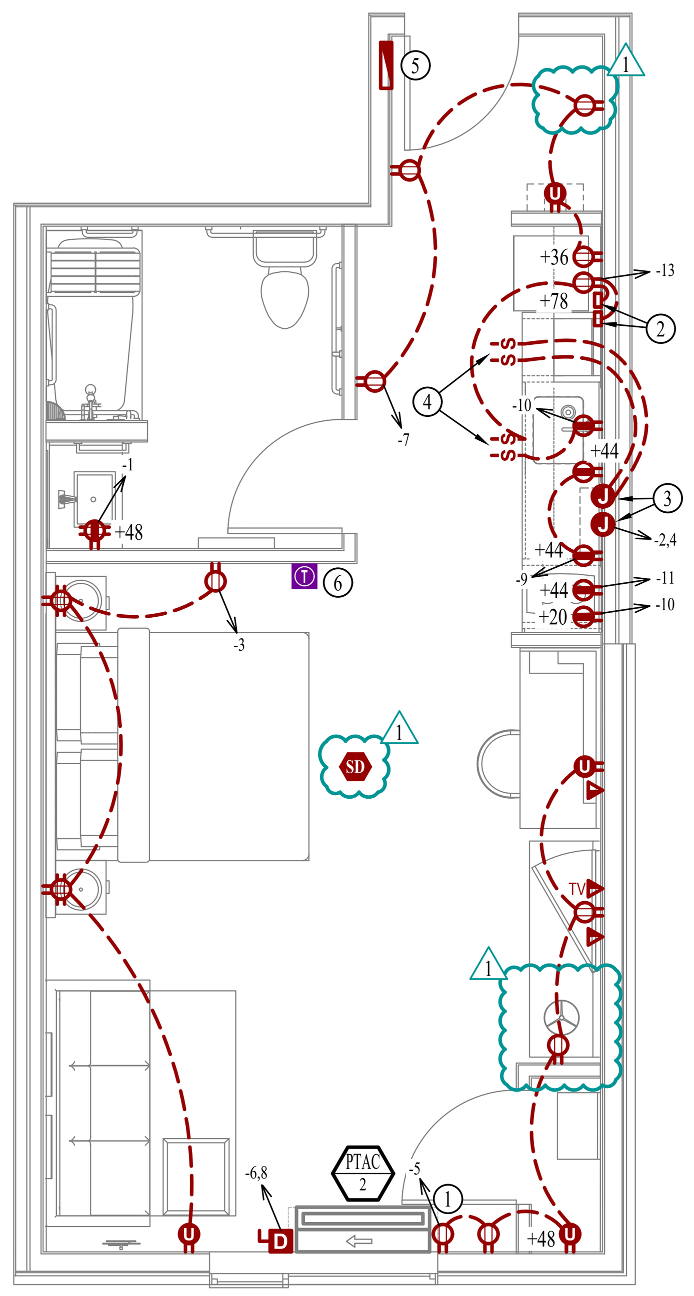
AHJ APPROVAL STAMP

SHEET TITLE

POWER PLAN - 2ND-4TH FLOORS - AREA B

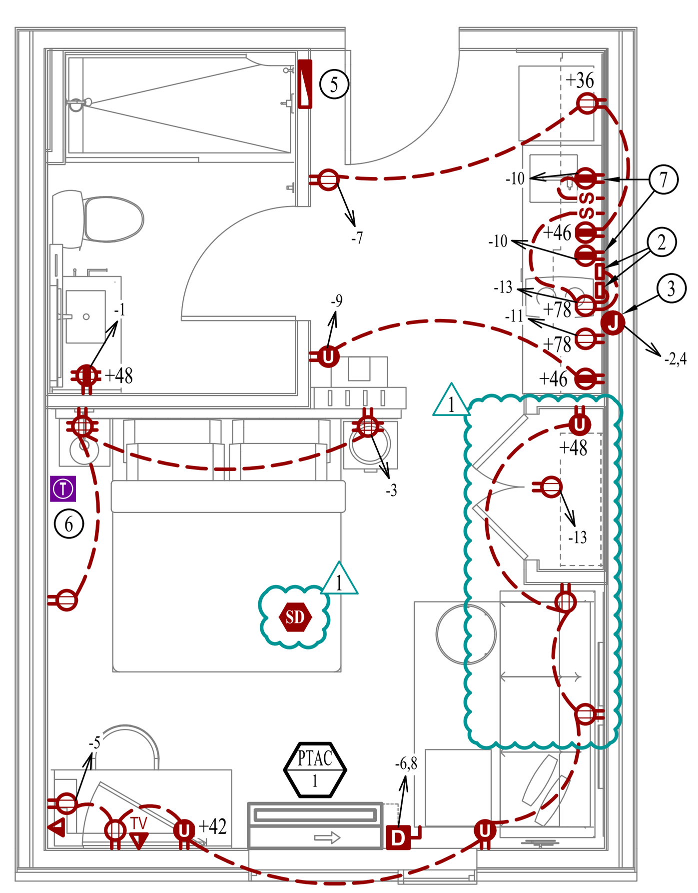
SHEET NUMBER

EP112



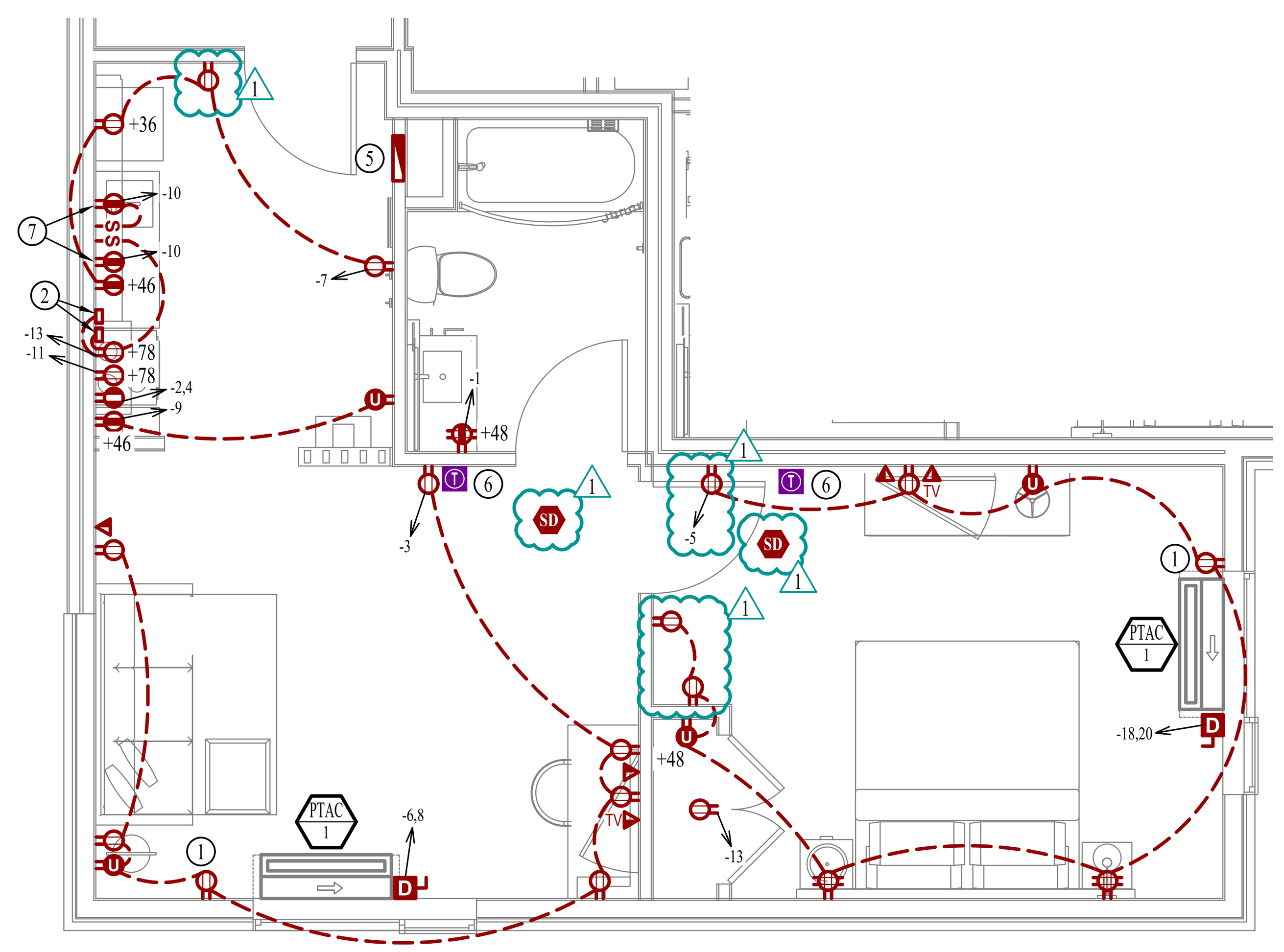
POWER PLAN - KING ACCESSIBLE

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



POWER PLAN - KING STUDIO

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



POWER PLAN - ONE BED KING

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

POWER PLAN SYMBOL LEGEND

CIRCUIT WIRING

PX-XX CIRCUIT TAG

JUNCTION BOX

XX +42 RECEPTACLE

INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)

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"AW" = ABOVE WINDOW RECEPTACLE
"AC" = ABOVE CEILING RECEPTACLE
"EX" = EXISTING RECEPTACLE TO REMAIN

GFCI DUPLEX CONVENIENCE RECEPTACLE

208V RECEPTACLE

QUADPLEX CONVENIENCE RECEPTACLE

USB OUTLET
WITH USB-A & USB-C CHARGING PORT

DATA / PHONE JACK
BOX WITH 1" CONDUIT & PULL STRING UP TO CEILING SPACE (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)

AP WIRELESS ACCESS POINT, CEILING MOUNTED

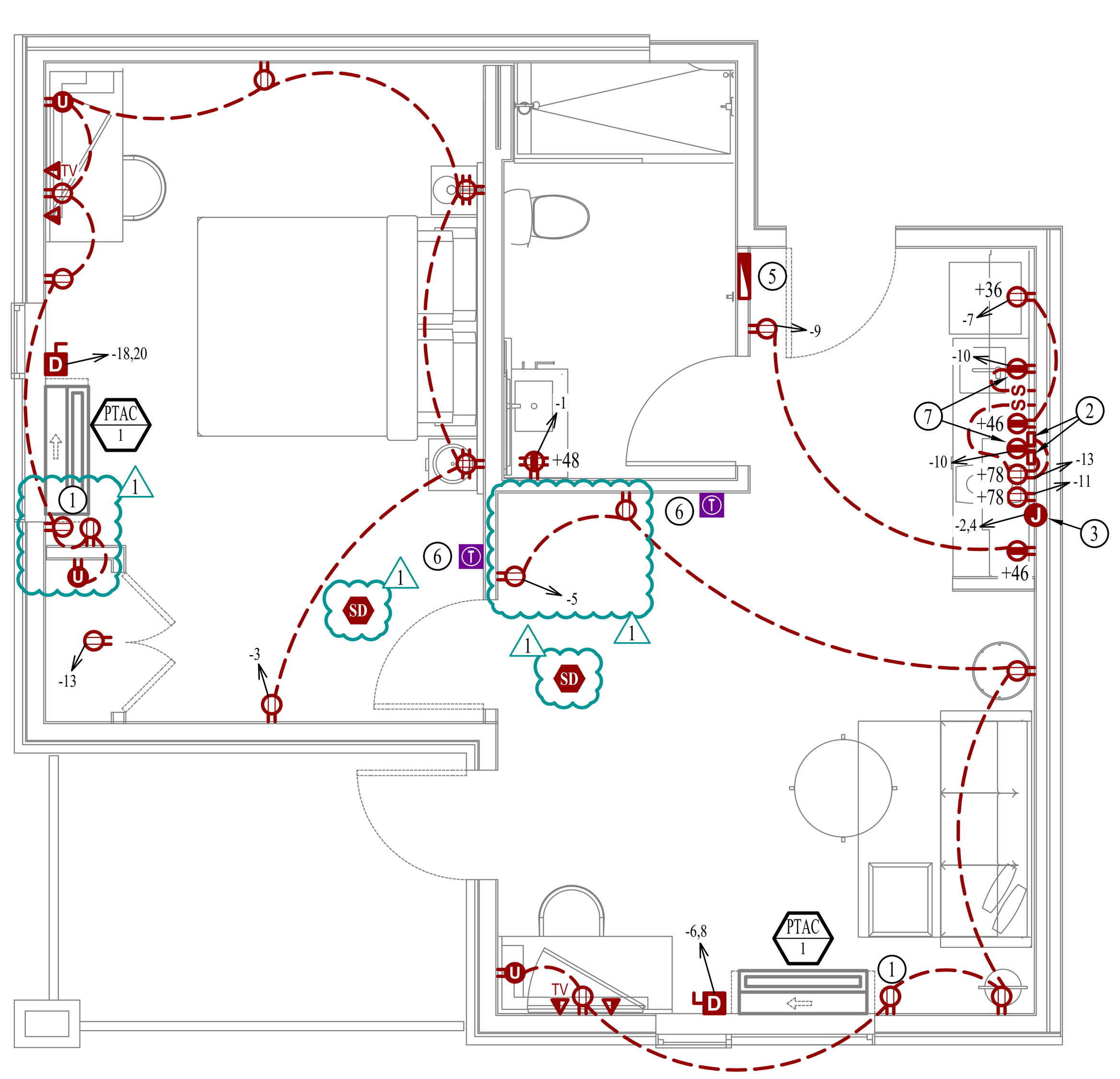
SD SMOKE DETECTOR WITH 520HZ LOW-FREQUENCY SOUNDER BASE

POWER PLAN GENERAL NOTES:

1. COORDINATE ALL DEVICE AND EQUIPMENT LOCATIONS AND TYPES WITH ARCHITECT, OWNER, AND ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION. IN SOME CASES, RECEPTACLES WILL BE IN ACCESS PANELS.
2. ALL TELECOMMUNICATION, DATA, TV, SECURITY WIRING, AND EQUIPMENT TO BE PROVIDED BY THE OWNER'S LOW VOLTAGE SYSTEM SUPPLIER.
3. COMPLETE (1) UNIT OF EACH TYPE & OBTAIN OWNER'S APPROVAL BEFORE PROCEEDING TO OTHERS.
4. DO NOT INSTALL OUTLETS BACK-TO-BACK EVEN IF ASSOCIATED WITH DIFFERENT SYSTEM. OFFSET BOXES TO PREVENT SOUND PASS-THRU AT ADJACENT UNIT WALLS.
5. COORDINATE LOCATION OF SWITCH & RECEPTACLES IN GUEST ROOM BATHROOMS WITH MIRROR, VANITY BACKSPLASH, TOWEL HOLDER, ETC.
6. COORDINATE ALL ELECTRICAL DEVICE MOUNTING HEIGHTS & LOCATIONS WITH ARCHITECTURAL PLANS.
7. DOORBELL AND FIRE ALARM STROBES ARE ONLY REQUIRED IN HEARING IMPAIRED ROOMS.
8. ALL 20 AMP, 120 VOLT, DUPLEX RECEPTACLES IN GUEST SUITS SHALL BE ARC FAULT PROTECTED AND TAMPER RESISTANT (TYP.)
9. ELECTRICAL CONTRACTOR SHALL PROVIDE A RACEWAY FOR THERMOSTATS. COORDINATE LOCATION WITH MECHANICAL CONTRACTOR.

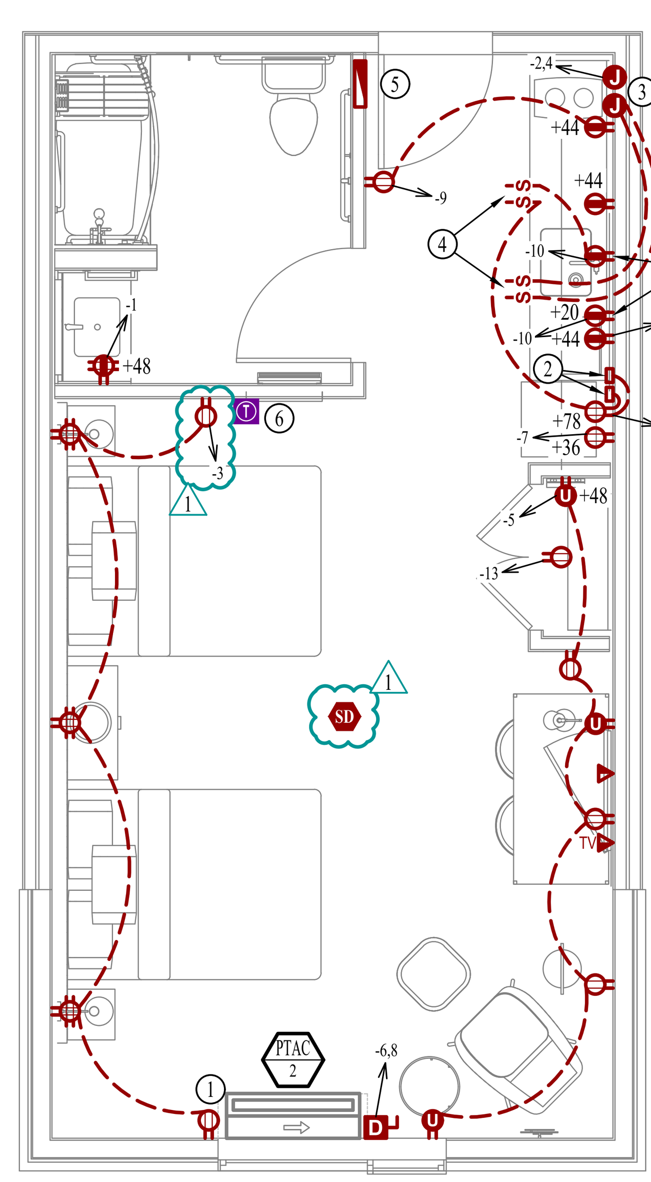
POWER PLAN KEY NOTES:

1. POWER FOR SOLAR SHADE. COORDINATE EXACT LOCATION WITH EQUIPMENTS SUPPLIER/INSTALLER PRIOR TO ROUGH-IN.
2. TRANSFORMERS FOR PUCK AND UNDERCABINET LIGHTS TO BE LOCATED IN UPPER CABINETS, BEHIND REMOVABLE CABINET PANEL. PROVIDE OUTLET IN THIS SPACE TO PLUG-IN TRANSFORMERS.
3. JUNCTION BOX(ES) FOR RANGE HOOD/LIGHT & COOKTOP.
4. SWITCH(ES) MOUNTED IN FACE OF MILLWORK. COORDINATE EXACT LOCATION & REQUIREMENTS WITH MILLWORK SUPPLIER/INSTALLER.
5. REFER TO OVERALL ELECTRICAL PLANS FOR PANEL DETAILS ('PXXX').
6. GUESTROOM CONTROLLER; SEE BUILDING CONTROL SYSTEM SCHEDULE FOR DETAILS.
7. DISPOSAL OUTLET TO BE SWITCHED; DISHWASHER OUTLET TO BE UNSWITCHED.



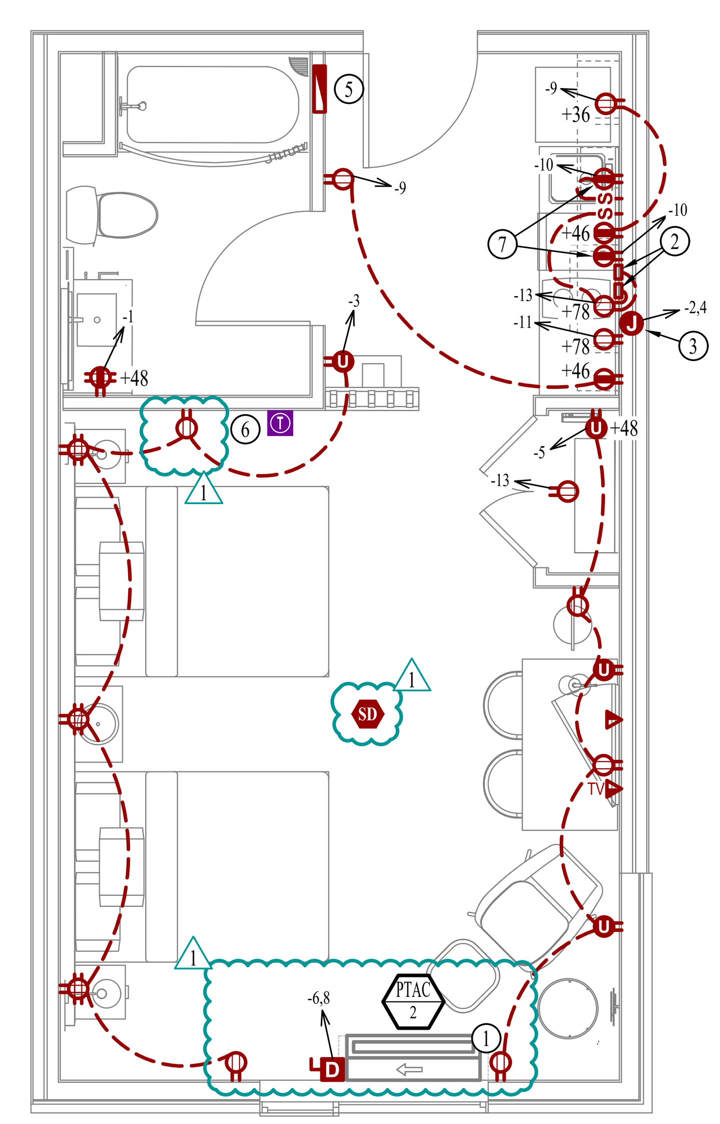
POWER PLAN - ONE BED KING W/ BALCONY

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



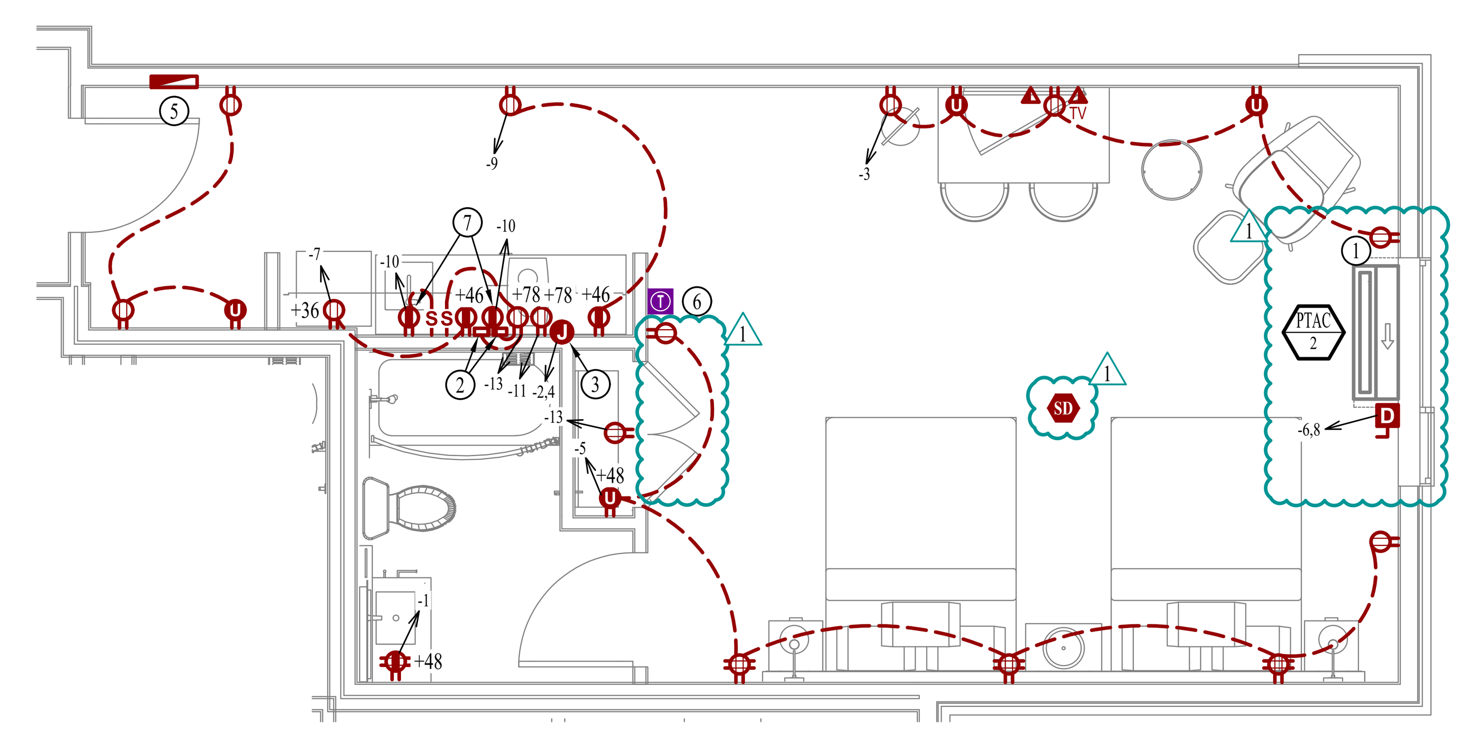
POWER PLAN - STUDIO DOUBLE QUEEN ACCESSIBLE

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



POWER PLAN - STUDIO DOUBLE QUEEN CENTER

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



POWER PLAN - STUDIO DOUBLE QUEEN END

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

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PE-2015017071
MO Certificate of Authority # 2018029680

J-SQUARED ENGINEERING
2400 Bluff Creek Drive, Suite 101
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J2 PROJECT No:	J21006
J2 DESIGN:	ACW

ISSUE TITLE	DATE
CITY SUBMISSION	11 / 01 / 2023
1 REVISION 1	12 / 22 / 2023

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

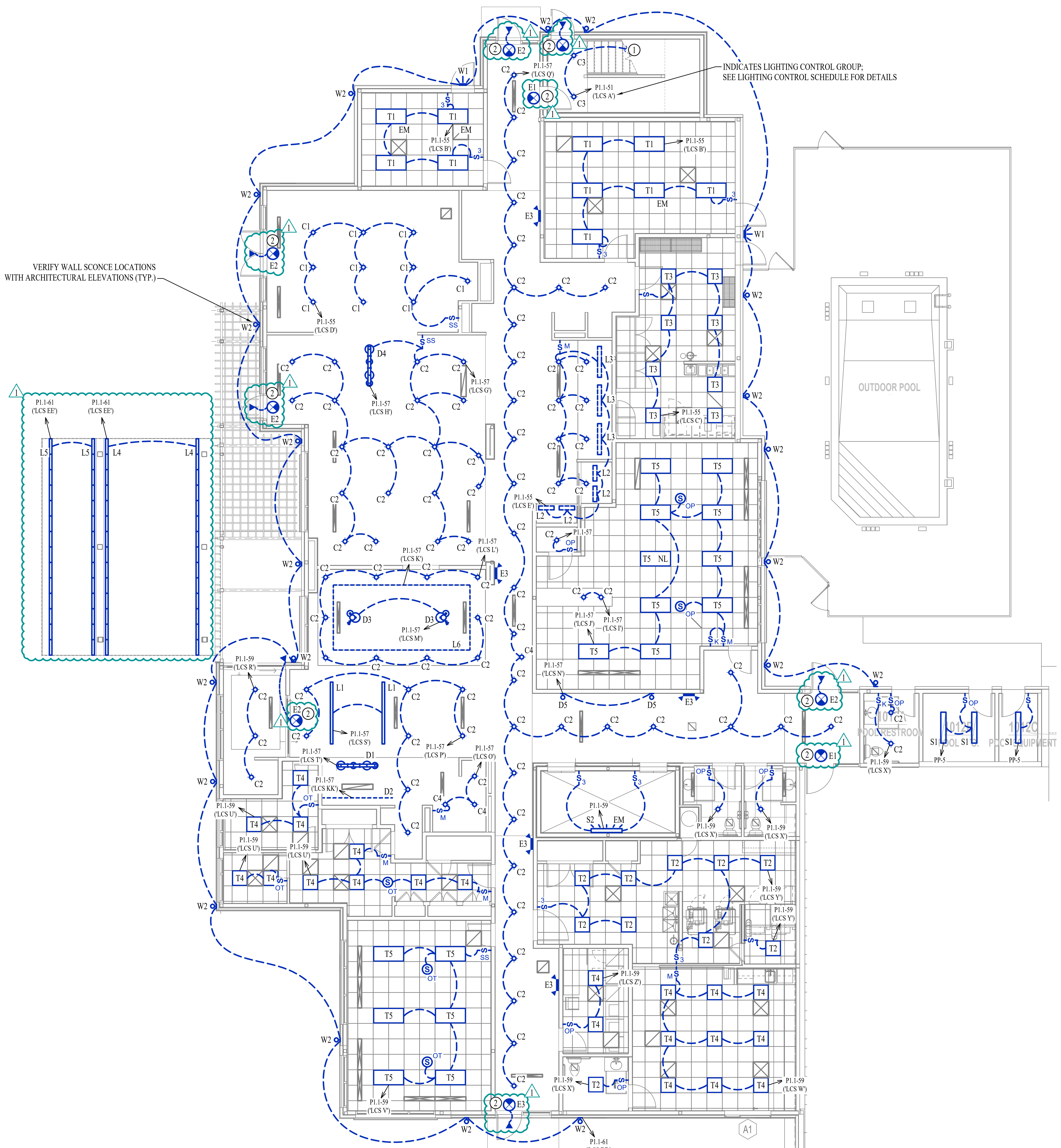
AHJ APPROVAL STAMP

SHEET TITLE

POWER PLAN - GUEST ROOMS

SHEET NUMBER

EP401



LIGHTING PLAN - 1ST FLOOR - AREA A

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

LIGHTING PLAN SYMBOL LEGEND

- "X1" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)
- LIGHTING FIXTURE
- "EM" INDICATES EMERGENCY BATTERY BACKUP
- "NL" INDICATES UN-SWITCHED NIGHT LIGHT

EXIT LIGHT

INDICATES REQUIRED REMOTE HEAD

EMERGENCY EGRESS LIGHT

SWITCH (WALL MOUNTED)

SWITCH TYPE:
- 3 = 3-WAY
- 4 = 4-WAY
- OP = PASSIVE INFRARED OCCUPANCY SENSOR
- OU = ULTRASONIC OCCUPANCY SENSOR
- OT = DUAL-TECHNOLOGY OCCUPANCY SENSOR
- VP = PASSIVE INFRARED VACANCY SENSOR
- VU = ULTRASONIC VACANCY SENSOR
- VT = DUAL-TECHNOLOGY VACANCY SENSOR
- M = MOMENTARY SWITCH
- SS = SCENE SWITCH
- K = KEYED SWITCH

DIMMER SWITCH (WALL MOUNTED)

SWITCH TYPE:
- SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS

SWITCH (CEILING MOUNTED)

SWITCH TYPE:
- SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS

PP POWER PACK

OCCUPANCY SENSOR
- AUTO FULL-ON (OR 50% IF NOTED)
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

VACANCY SENSOR
- MANUAL FULL-ON
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

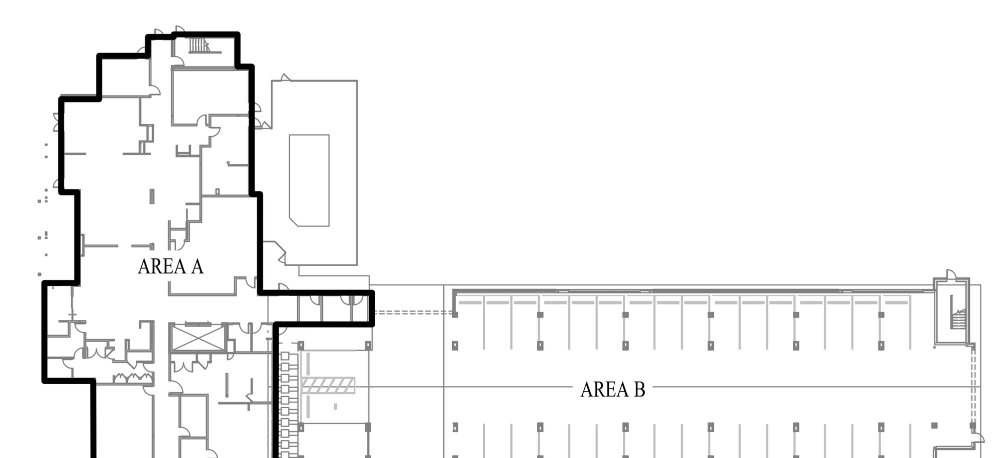
LIGHTING PLAN GENERAL NOTES:

1. SEE SHEET E501 FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
2. OCCUPANCY / VACANCY SENSOR QUANTITIES AND GENERAL LOCATIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO PROVIDE AND INSTALL SENSOR WITH SPACING PER MANUFACTURER SPECIFICATIONS AND INCLUDE ADDITIONAL SENSORS IF NECESSARY. CEILING-MOUNTED SENSORS SHALL BE INSTALLED WITHIN MANUFACTURE'S ACCEPTABLE MOUNTING HEIGHT RANGE.
3. REFER TO LIGHTING CONTROL SCHEDULE FOR ADDITIONAL CONTROL DETAILS & REQUIREMENTS.
4. REFER TO ARCHITECTURAL RCP'S FOR EXACT FIXTURE LOCATIONS & REQUIREMENTS.

LIGHTING PLAN KEY NOTES:

1 CIRCUIT CONTINUES TO LEVEL ABOVE.

1 2 (1) EXIT SIGN AT STANDARD OVERHEAD MOUNTING HEIGHT & (1) EXIT SIGN AT FLOOR LEVEL WITH BOTTOM OF SIGN BEING NO LESS THAN 10" OR GREATER THAN 18" A.F.F.



KEY PLAN

SCALE: 1" = 50 ft

JAMES P. WATSON
NUMBER PE-2015017071
STATE OF MISSOURI PROFESSIONAL ENGINEER

James Watson, P.E. December 22, 2023
PE-2015017071
MO Certificate of Authority # 2018029680

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Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

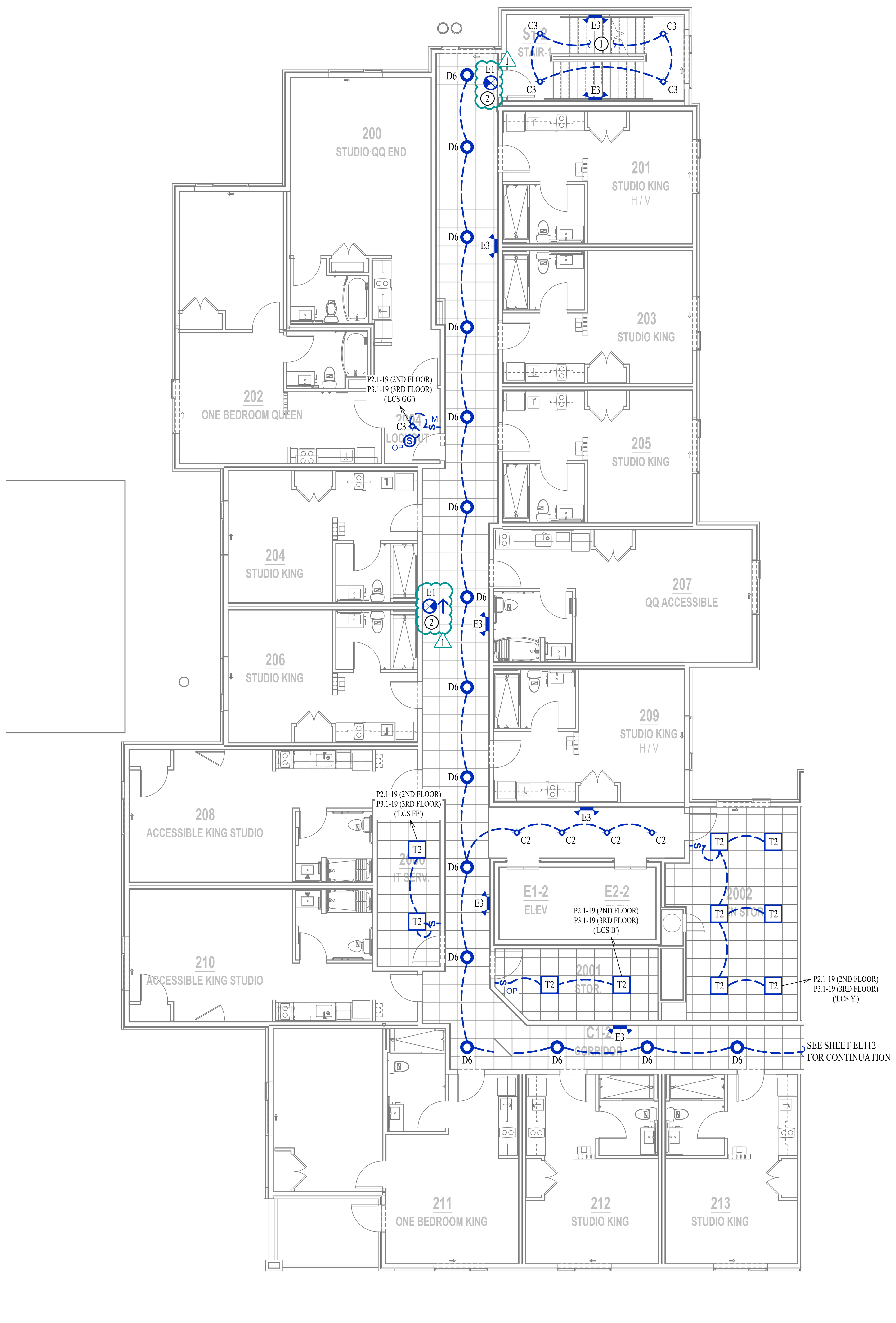
AHJ APPROVAL STAMP

SHEET TITLE

LIGHTING PLAN - 1ST FLOOR - AREA A

SHEET NUMBER

EL101



LITHTING PLAN - 2ND & 3RD FLOOR - AREA A

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

LIGHTING PLAN SYMBOL LEGEND

- "X1" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)
- LIGHTING FIXTURE
- "EM" INDICATES EMERGENCY BATTERY BACKUP
- "NL" INDICATES UN-SWITCHED NIGHT LIGHT

EXIT LIGHT

INDICATES REQUIRED REMOTE HEAD

EMERGENCY EGRESS LIGHT

SWITCH (WALL MOUNTED)

SWITCH TYPE:
- 3 = 3-WAY
- 4 = 4-WAY
- OP = PASSIVE INFRARED OCCUPANCY SENSOR
- OU = ULTRASONIC OCCUPANCY SENSOR
- OT = DUAL-TECHNOLOGY OCCUPANCY SENSOR
- VP = PASSIVE INFRARED VACANCY SENSOR
- VU = ULTRASONIC VACANCY SENSOR
- VT = DUAL-TECHNOLOGY VACANCY SENSOR
- M = MOMENTARY SWITCH
- SS = SCENE SWITCH
- K = KEYED SWITCH

DIMMER SWITCH (WALL MOUNTED)

SWITCH TYPE:
- SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS

SWITCH (CEILING MOUNTED)

SWITCH TYPE:
- SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS

PP POWER PACK

OCCUPANCY SENSOR
- AUTO FULL-ON (OR 50% IF NOTED)
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

VACANCY SENSOR
- MANUAL FULL-ON
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

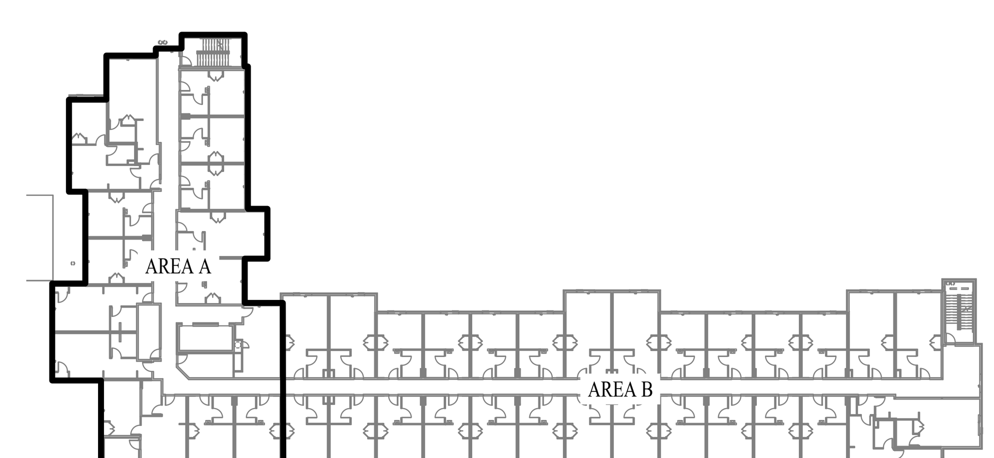
LIGHTING PLAN GENERAL NOTES:

1. SEE SHEET E501 FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
2. OCCUPANCY / VACANCY SENSOR QUANTITIES AND GENERAL LOCATIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO PROVIDE AND INSTALL SENSOR WITH SPACING PER MANUFACTURER SPECIFICATIONS AND INCLUDE ADDITIONAL SENSORS IF NECESSARY. CEILING-MOUNTED SENSORS SHALL BE INSTALLED WITHIN MANUFACTURE'S ACCEPTABLE MOUNTING HEIGHT RANGE.

LIGHTING PLAN KEY NOTES:

1 CIRCUIT CONTINUES TO LEVEL ABOVE/BELOW.

1 2 (1) EXIT SIGN AT STANDARD OVERHEAD MOUNTING HEIGHT & (1) EXIT SIGN AT FLOOR LEVEL WITH BOTTOM OF SIGN BEING NO LESS THAN 10" OR GREATER THAN 18" A.F.F.



KEY PLAN

SCALE: 1" = 50 ft

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. December 22, 2023
PE-2015017071
MO Certificate of Authority # 2018029680

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Mechanical - Electrical - Plumbing Design Drawings for

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Lee's Summit, Missouri 64064

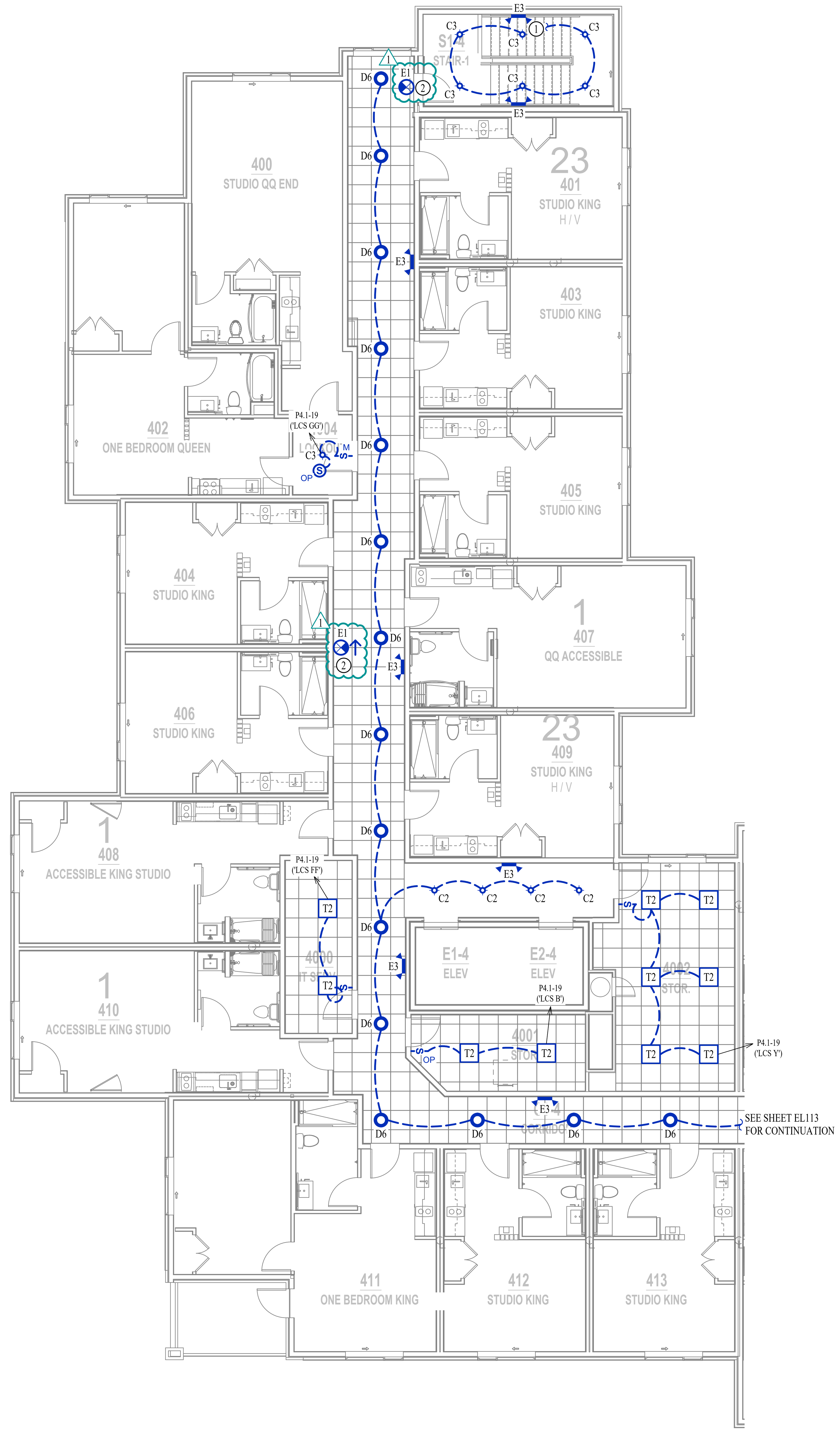
AHJ APPROVAL STAMP

SHEET TITLE

LITHTING PLAN - 2ND & 3RD FLOOR - AREA A

SHEET NUMBER

EL102



LIGHTING PLAN - 4TH FLOOR - AREA A

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

LIGHTING PLAN SYMBOL LEGEND

- X1 — "X1" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)
- LIGHTING FIXTURE
- EM — "EM" INDICATES EMERGENCY BATTERY BACKUP
- NL — "NL" INDICATES UN-SWITCHED NIGHT LIGHT
- EXIT LIGHT
- INDICATES REQUIRED REMOTE HEAD
- EMERGENCY EGRESS LIGHT
- S_X — SWITCH (WALL MOUNTED)
  - SWITCH TYPE:
    - 3 = 3-WAY
    - 4 = 4-WAY
    - OP = PASSIVE INFRARED OCCUPANCY SENSOR
    - OU = ULTRASONIC OCCUPANCY SENSOR
    - OT = DUAL-TECHNOLOGY OCCUPANCY SENSOR
    - VP = PASSIVE INFRARED VACANCY SENSOR
    - VU = ULTRASONIC VACANCY SENSOR
    - VT = DUAL-TECHNOLOGY VACANCY SENSOR
    - M = MOMENTARY SWITCH
    - SS = SCENE SWITCH
    - K = KEYED SWITCH
- D_X — DIMMER SWITCH (WALL MOUNTED)
  - SWITCH TYPE:
    - SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
- S_X (circled) — SWITCH (CEILING MOUNTED)
  - SWITCH TYPE:
    - SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
- PP — POWER PACK

OCCUPANCY SENSOR

- AUTO FULL-ON (OR 50% IF NOTED)
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

VACANCY SENSOR

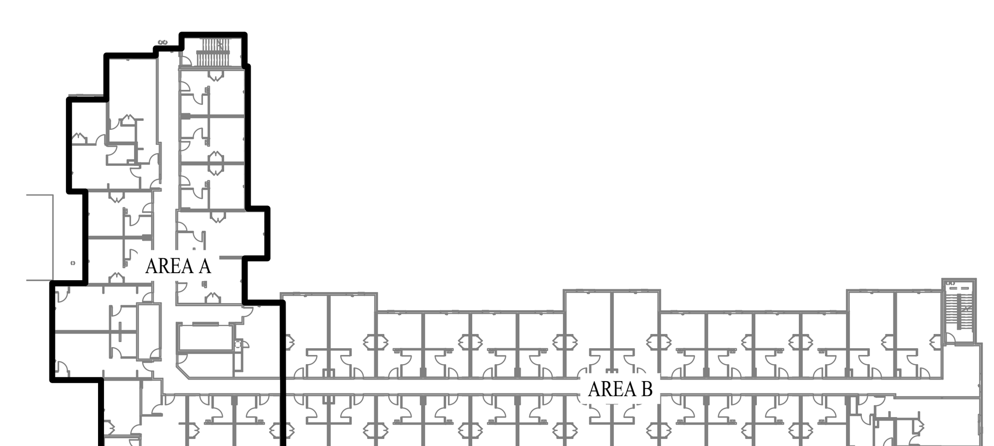
- MANUAL FULL-ON
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

LIGHTING PLAN GENERAL NOTES:

1. SEE SHEET E501 FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
2. OCCUPANCY / VACANCY SENSOR QUANTITIES AND GENERAL LOCATIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO PROVIDE AND INSTALL SENSOR WITH SPACING PER MANUFACTURER SPECIFICATIONS AND INCLUDE ADDITIONAL SENSORS IF NECESSARY. CEILING-MOUNTED SENSORS SHALL BE INSTALLED WITHIN MANUFACTURE'S ACCEPTABLE MOUNTING HEIGHT RANGE.

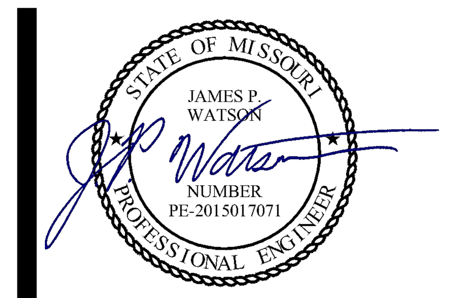
LIGHTING PLAN KEY NOTES:

1. CIRCUIT CONTINUES TO LEVEL BELOW.
2. (1) EXIT SIGN AT STANDARD OVERHEAD MOUNTING HEIGHT & (1) EXIT SIGN AT FLOOR LEVEL WITH BOTTOM OF SIGN BEING NO LESS THAN 10" OR GREATER THAN 18" A.F.F.



KEY PLAN

SCALE: 1" = 50 ft



James Watson, P.E. December 22, 2023
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REVISION 1	12 / 22 / 2023

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE

LIGHTING PLAN
- 4TH FLOOR -
AREA A

SHEET NUMBER

EL103

LIGHTING PLAN SYMBOL LEGEND

X1 — "X1" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)
LIGHTING FIXTURE
EM — "EM" INDICATES EMERGENCY BATTERY BACKUP
NL — "NL" INDICATES UN-SWITCHED NIGHT LIGHT

EXIT LIGHT
INDICATES REQUIRED REMOTE HEAD

EMERGENCY EGRESS LIGHT

S_X — SWITCH (WALL MOUNTED)
SWITCH TYPE:
- 3 = 3-WAY
- 4 = 4-WAY
- OP = PASSIVE INFRARED OCCUPANCY SENSOR
- OU = ULTRASONIC OCCUPANCY SENSOR
- OT = DUAL-TECHNOLOGY OCCUPANCY SENSOR
- VP = PASSIVE INFRARED VACANCY SENSOR
- VU = ULTRASONIC VACANCY SENSOR
- VT = DUAL-TECHNOLOGY VACANCY SENSOR
- M = MOMENTARY SWITCH
- SS = SCENE SWITCH
- K = KEYED SWITCH

D_X — DIMMER SWITCH (WALL MOUNTED)
SWITCH TYPE:
- SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS

S_X — SWITCH (CEILING MOUNTED)
SWITCH TYPE:
- SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS

PP — POWER PACK

OCCUPANCY SENSOR
- AUTO FULL-ON (OR 50% IF NOTED)
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

VACANCY SENSOR
- MANUAL FULL-ON
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

LIGHTING PLAN GENERAL NOTES:

1. SEE SHEET E501 FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
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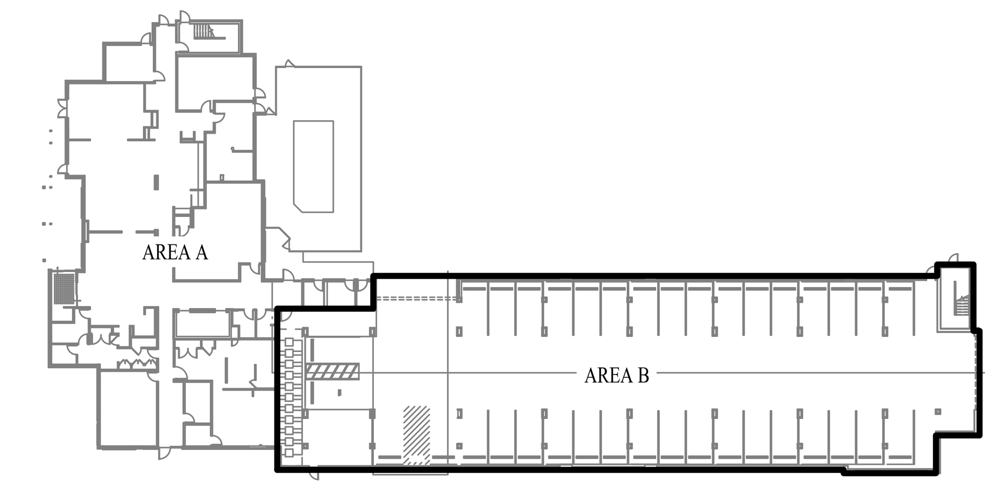
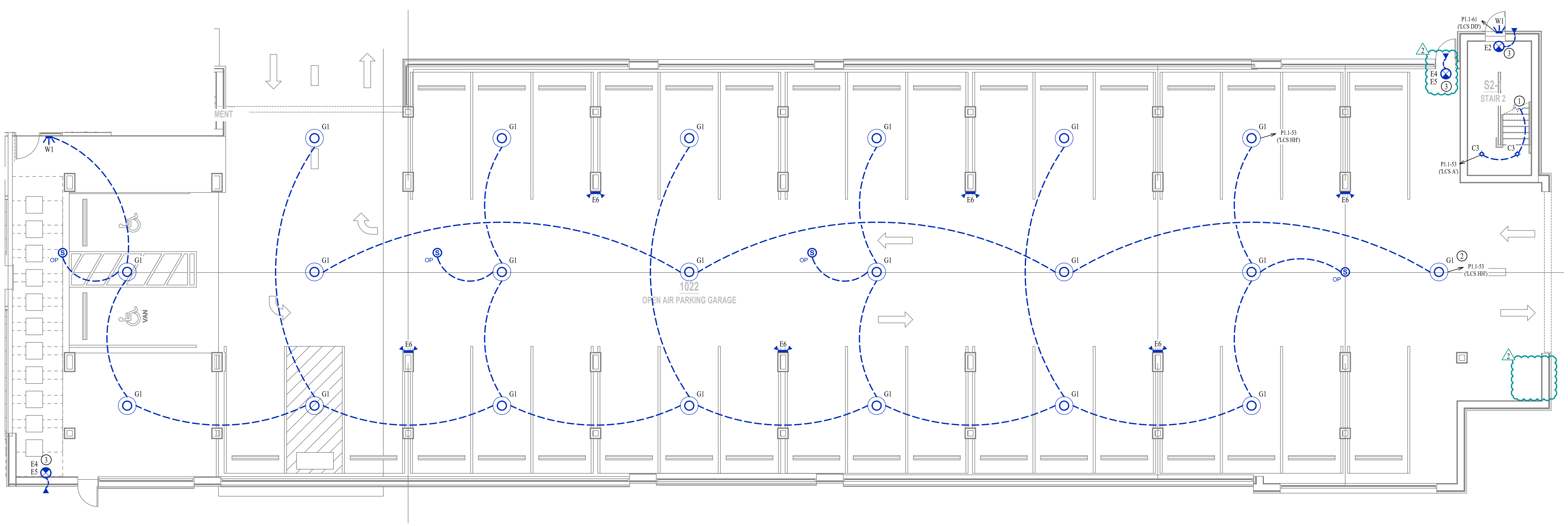
LIGHTING PLAN KEY NOTES:

1. CIRCUIT CONTINUES TO LEVEL ABOVE.
2. WIRE THRU LIGHTING INVERTER EQUAL TO MYERS ILLUMINATOR 'LV3' SERIES (550W). LOCATE INVERTER IN MAIN ELECTRICAL ROOM.
3. (1) EXIT SIGN AT STANDARD OVERHEAD MOUNTING HEIGHT & (1) EXIT SIGN AT FLOOR LEVEL WITH BOTTOM OF SIGN BEING NO LESS THAN 10" OR GREATER THAN 18" A.F.F.



KEY PLAN
SCALE: 1" = 50 ft



LIGHTING PLAN - 1ST FLOOR - AREA B
SCALE: 1/8" = 1'-0"

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. January 19, 2024
PE-2015017071
MO Certificate of Authority # 2018029680

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REVISION 2	01 / 19 / 2024

Mechanical - Electrical - Plumbing Design Drawings for
Towneplace Suites By Marriott
1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE
LIGHTING PLAN - 1ST FLOOR - AREA B

SHEET NUMBER
EL111

LIGHTING PLAN SYMBOL LEGEND

X1 — "X1" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)
LIGHTING FIXTURE
EM — "EM" INDICATES EMERGENCY BATTERY BACKUP
NL — "NL" INDICATES UN-SWITCHED NIGHT LIGHT

EXIT LIGHT
INDICATES REQUIRED REMOTE HEAD

EMERGENCY EGRESS LIGHT

S_X SWITCH (WALL MOUNTED)
SWITCH TYPE:
- 3 = 3-WAY
- 4 = 4-WAY
- OP = PASSIVE INFRARED OCCUPANCY SENSOR
- OU = ULTRASONIC OCCUPANCY SENSOR
- OT = DUAL-TECHNOLOGY OCCUPANCY SENSOR
- VP = PASSIVE INFRARED VACANCY SENSOR
- VU = ULTRASONIC VACANCY SENSOR
- VT = DUAL-TECHNOLOGY VACANCY SENSOR
- M = MOMENTARY SWITCH
- SS = SCENE SWITCH
- K = KEYED SWITCH

D_X DIMMER SWITCH (WALL MOUNTED)
SWITCH TYPE:
- SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS

S_X SWITCH (CEILING MOUNTED)
SWITCH TYPE:
- SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS

PP POWER PACK

OCCUPANCY SENSOR
- AUTO FULL-ON (OR 50% IF NOTED)
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

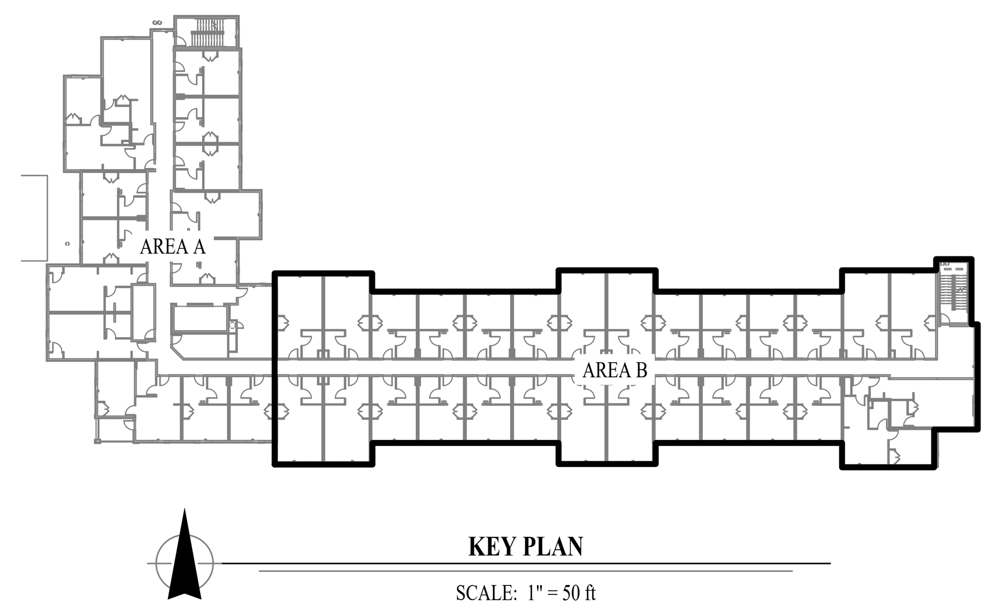
VACANCY SENSOR
- MANUAL FULL-ON
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

LIGHTING PLAN GENERAL NOTES:

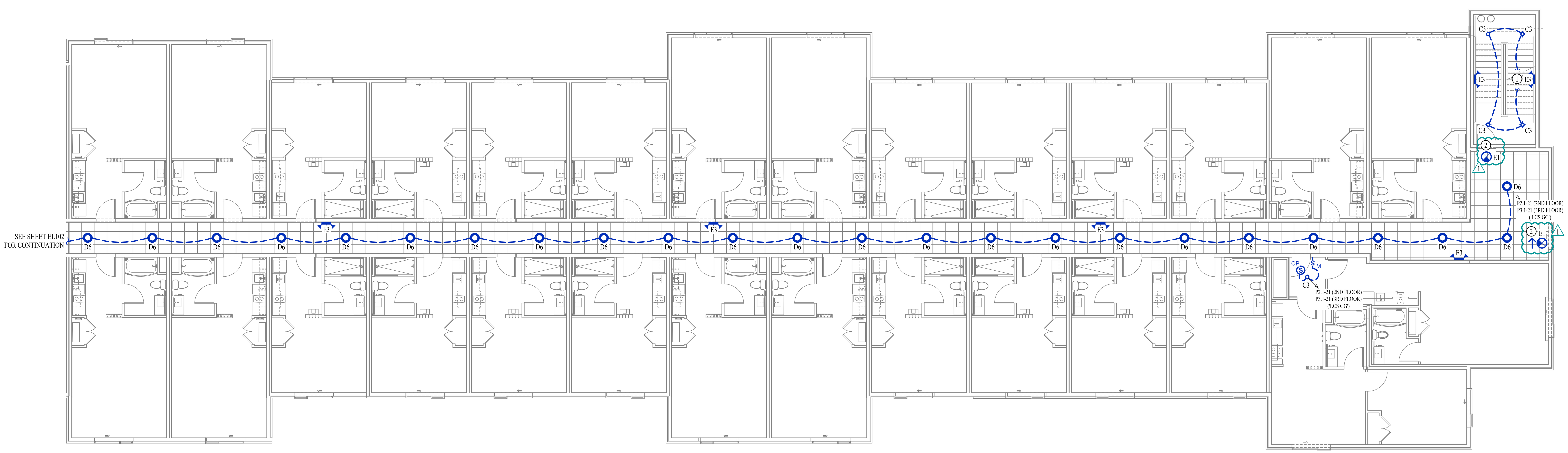
1. SEE SHEET E501 FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
2. OCCUPANCY / VACANCY SENSOR QUANTITIES AND GENERAL LOCATIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO PROVIDE AND INSTALL SENSOR WITH SPACING PER MANUFACTURER SPECIFICATIONS AND INCLUDE ADDITIONAL SENSORS IF NECESSARY. CEILING-MOUNTED SENSORS SHALL BE INSTALLED WITHIN MANUFACTURE'S ACCEPTABLE MOUNTING HEIGHT RANGE.

LIGHTING PLAN KEY NOTES:

1 CIRCUIT CONTINUES TO LEVEL ABOVE/BELOW.
2 (1) EXIT SIGN AT STANDARD OVERHEAD MOUNTING HEIGHT & (1) EXIT SIGN AT FLOOR LEVEL WITH BOTTOM OF SIGN BEING NO LESS THAN 10" OR GREATER THAN 18" A.F.F.



KEY PLAN
SCALE: 1" = 50 ft



LIGHTING PLAN - 2ND & 3RD FLOOR - AREA B
SCALE: 1/8" = 1'-0"

STATE OF MISSOURI
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NUMBER PE-2015017071
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Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE

LIGHTING PLAN - 2ND & 3RD FLOOR - AREA B

SHEET NUMBER

EL112

LIGHTING PLAN SYMBOL LEGEND

- X1 — "X1" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)
- LIGHTING FIXTURE
- EM — "EM" INDICATES EMERGENCY BATTERY BACKUP
- NL — "NL" INDICATES UN-SWITCHED NIGHT LIGHT
- EXIT LIGHT
- INDICATES REQUIRED REMOTE HEAD
- EMERGENCY EGRESS LIGHT
- S_X — SWITCH (WALL MOUNTED)
  - SWITCH TYPE:
    - 3 = 3-WAY
    - 4 = 4-WAY
    - OP = PASSIVE INFRARED OCCUPANCY SENSOR
    - OU = ULTRASONIC OCCUPANCY SENSOR
    - OT = DUAL-TECHNOLOGY OCCUPANCY SENSOR
    - VP = PASSIVE INFRARED VACANCY SENSOR
    - VU = ULTRASONIC VACANCY SENSOR
    - VT = DUAL-TECHNOLOGY VACANCY SENSOR
    - M = MOMENTARY SWITCH
    - SS = SCENE SWITCH
    - K = KEYED SWITCH
- D_X — DIMMER SWITCH (WALL MOUNTED)
  - SWITCH TYPE:
    - SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
- S_X — SWITCH (CEILING MOUNTED)
  - SWITCH TYPE:
    - SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
- PP — POWER PACK

OCCUPANCY SENSOR

- AUTO FULL-ON (OR 50% IF NOTED)
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

VACANCY SENSOR

- MANUAL FULL-ON
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

LIGHTING PLAN GENERAL NOTES:

1. SEE SHEET E501 FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
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LIGHTING PLAN KEY NOTES:

1 CIRCUIT CONTINUES TO LEVEL BELOW.

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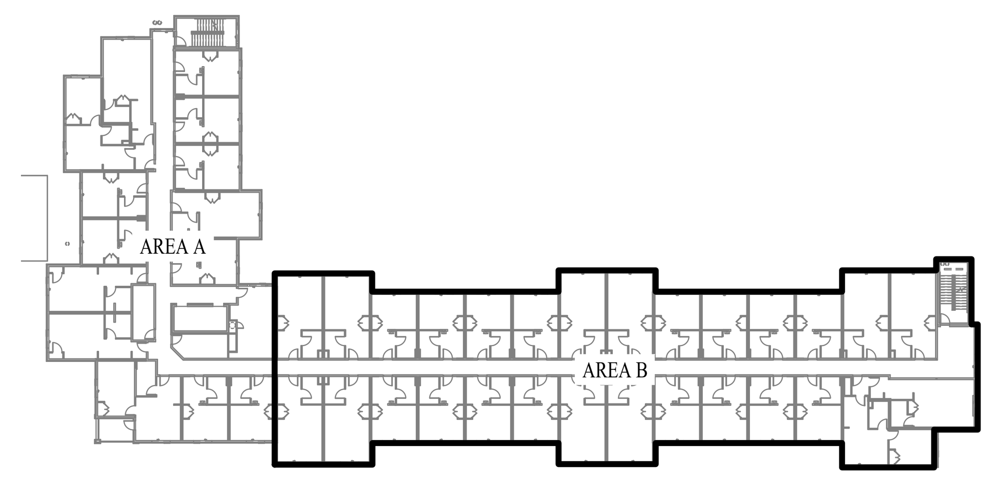
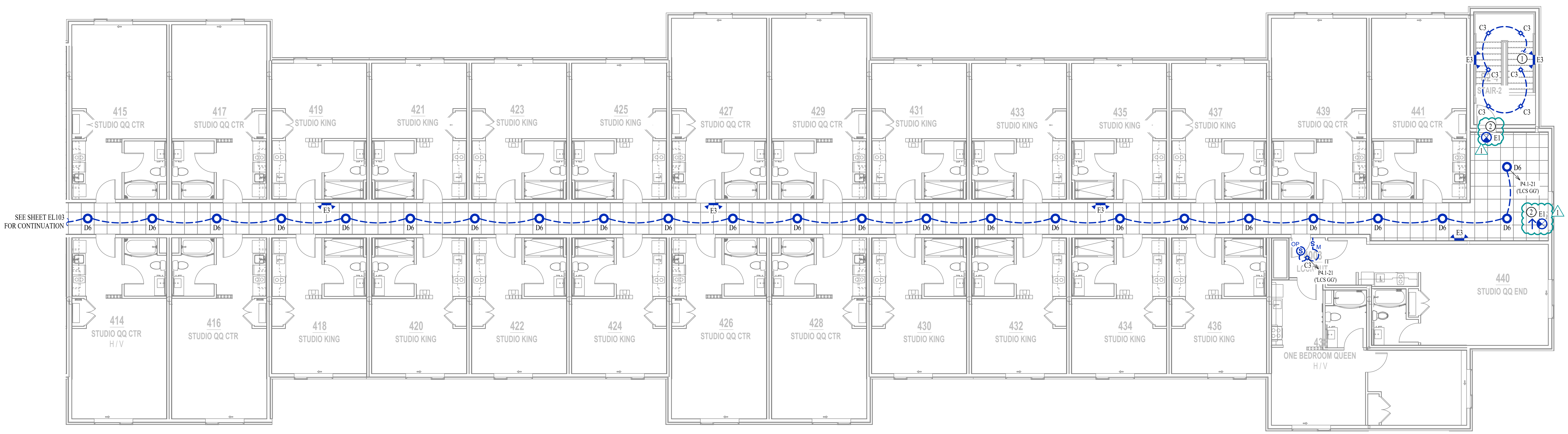


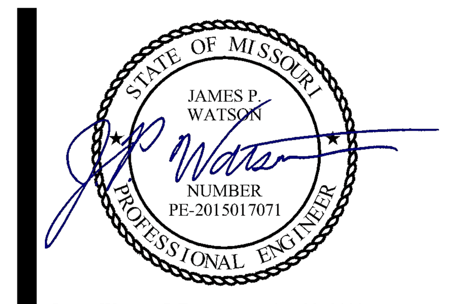
KEY PLAN

SCALE: 1" = 50 ft



LIGHTING PLAN - 4TH FLOOR - AREA B

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



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1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

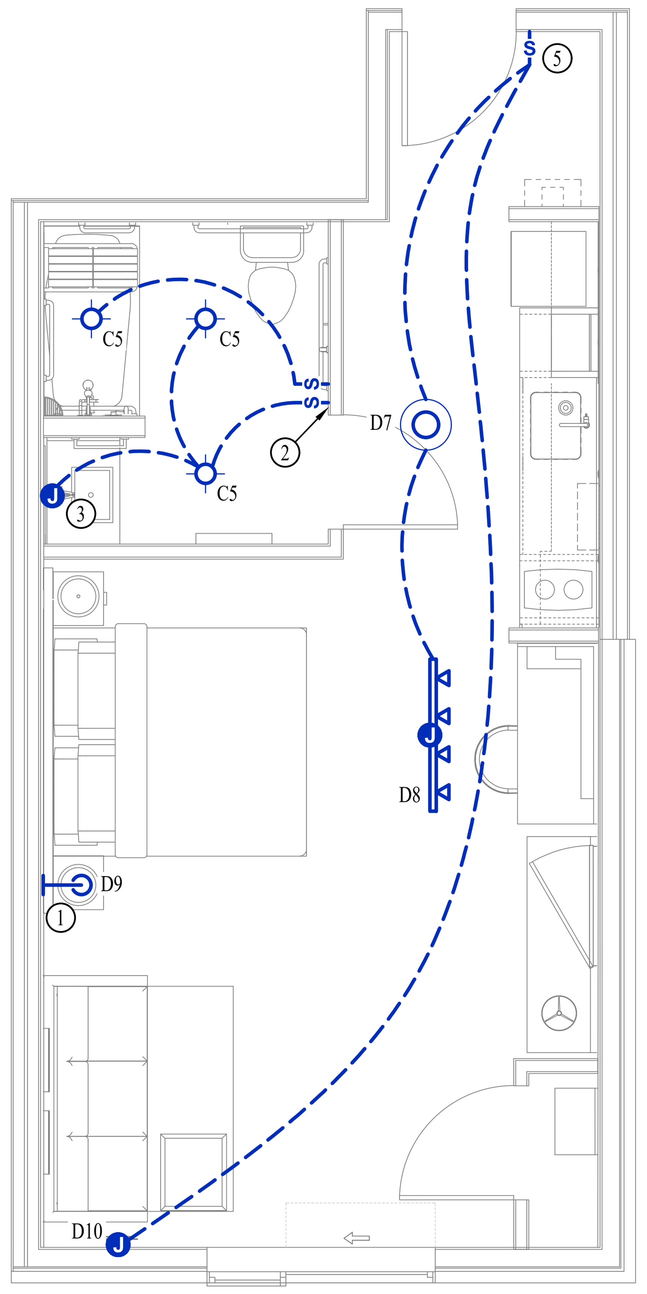
AHJ APPROVAL STAMP

SHEET TITLE

LIGHTING PLAN - 4TH FLOOR - AREA B

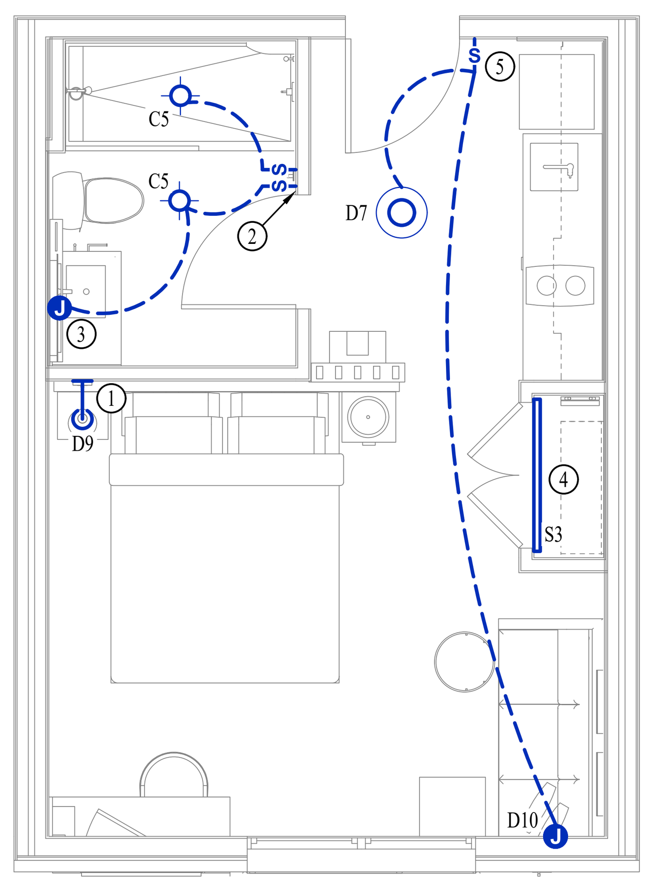
SHEET NUMBER

EL113



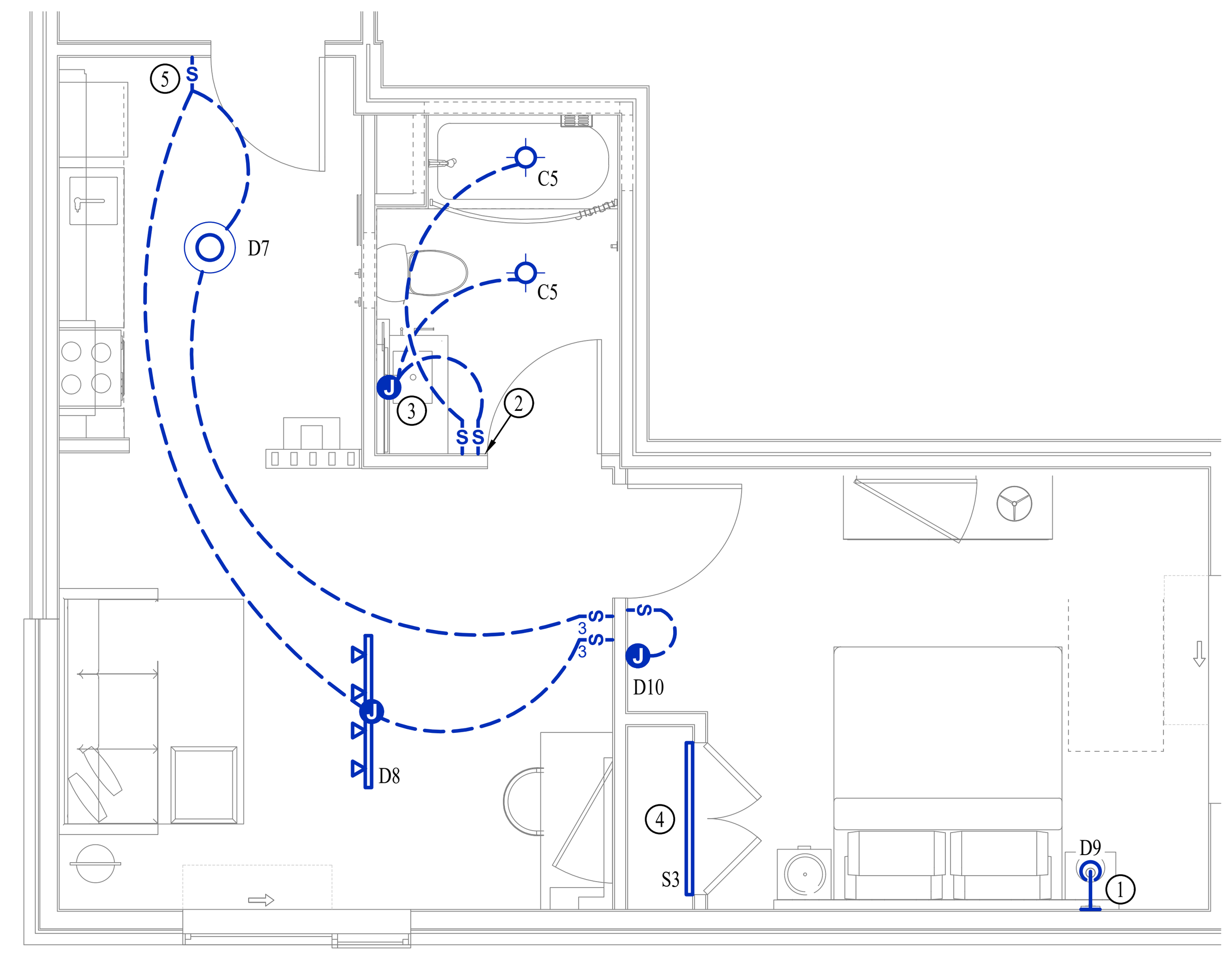
LIGHTING PLAN - KING ACCESSIBLE

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



LIGHTING PLAN - KING STUDIO

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



LIGHTING PLAN - ONE BED KING

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

LIGHTING PLAN SYMBOL LEGEND

X1	LIGHTING FIXTURE "X1" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)
SX	SWITCH (WALL MOUNTED) SWITCH TYPE: • 3 = 3-WAY • 4 = 4-WAY
DX	DIMMER SWITCH (WALL MOUNTED) SWITCH TYPE: • SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
J	JUNCTION BOX

LIGHTING PLAN GENERAL NOTES:

1. SEE SHEET E501 FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
2. REFER TO ARCHITECTURAL PLANS FOR EXACT FIXTURE LOCATIONS, DETAILS & REQUIREMENTS
3. ALL LIGHTING WITHIN EACH GUEST ROOM SHALL BE ON CIRCUIT PXXX-13 UNLESS NOTED OTHERWISE.

LIGHTING PLAN KEY NOTES:

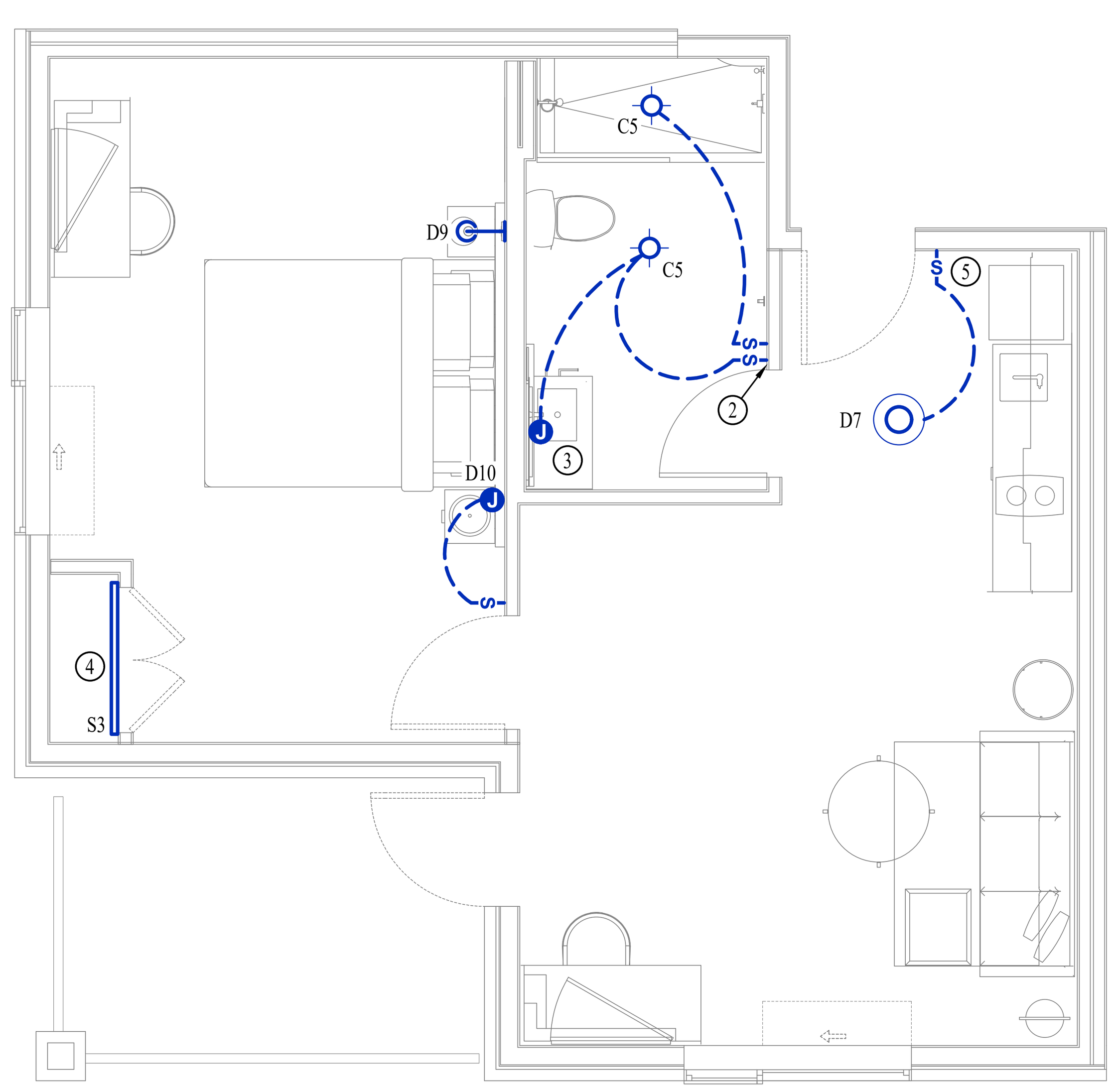
1 PLUG IN FIXTURE WITH INTEGRAL ON/OFF SWITCH.

2 SWITCH PLATE W/ INCORPORATED NIGHT LIGHT (SEE ARCHITECTURAL PLANS FOR DETAILS.)

3 MIRROR & OVERHEAD LIGHT TO BE SWITCHED TOGETHER. PROVIDE JBOX FOR MIRROR, TO BE CENTERED BEHIND MIRROR.

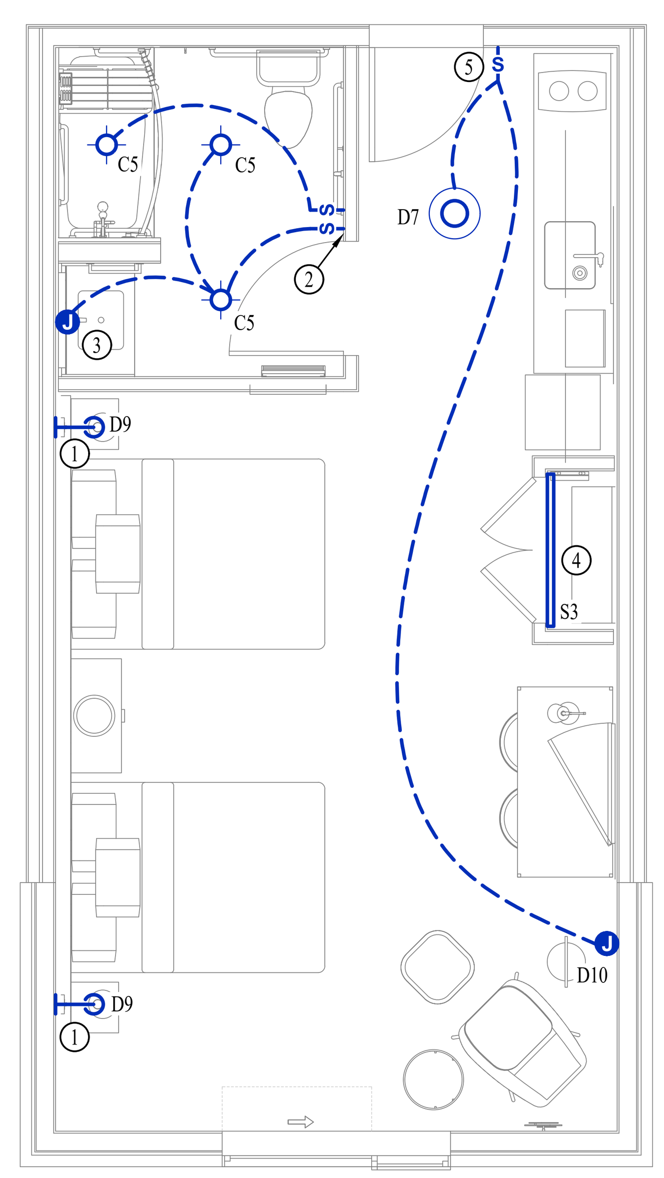
4 LOCATE CLOSET LIGHT ON FACE OF DOOR HEAD FRAME INSIDE CLOSET AND CONNECT TO SURFACE MOUNTED RELAY SWITCH ON DOOR FRAME JAMB. PROVIDE OUTLET ABOVE DOOR FOR POWER TO TRANSFORMER ALSO LOCATED ABOVE DOOR (SEE POWER PLAN). ALL WIRING TO BE CONCEALED WITHIN WALLS.

5 GUESTROOM CONTROLLER WITH LABELED MASTER LIGHTING SWITCH TO ALL HARDWIRED LIGHTING WITHIN ROOM (EXCEPT BATHROOM); CONTROLLER TO INTEGRATE INTO GUESTROOM MANAGEMENT SYSTEM & BAS. SEE BUILDING CONTROL SCHEDULE FOR DETAILS.



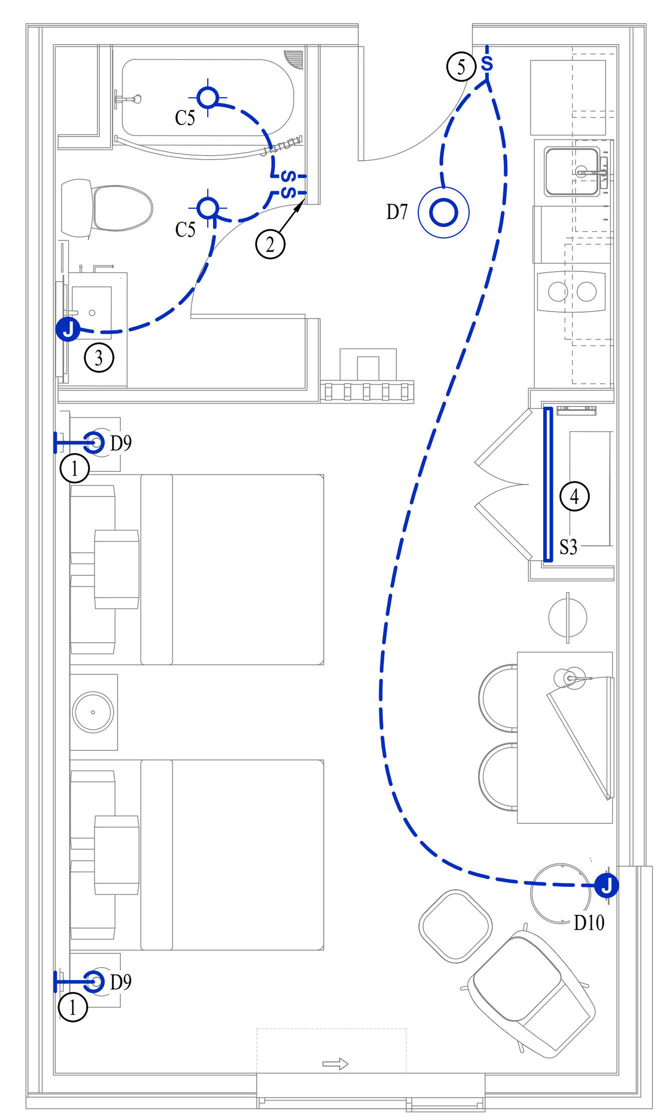
LIGHTING PLAN - ONE BED KING W/ BALCONY

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



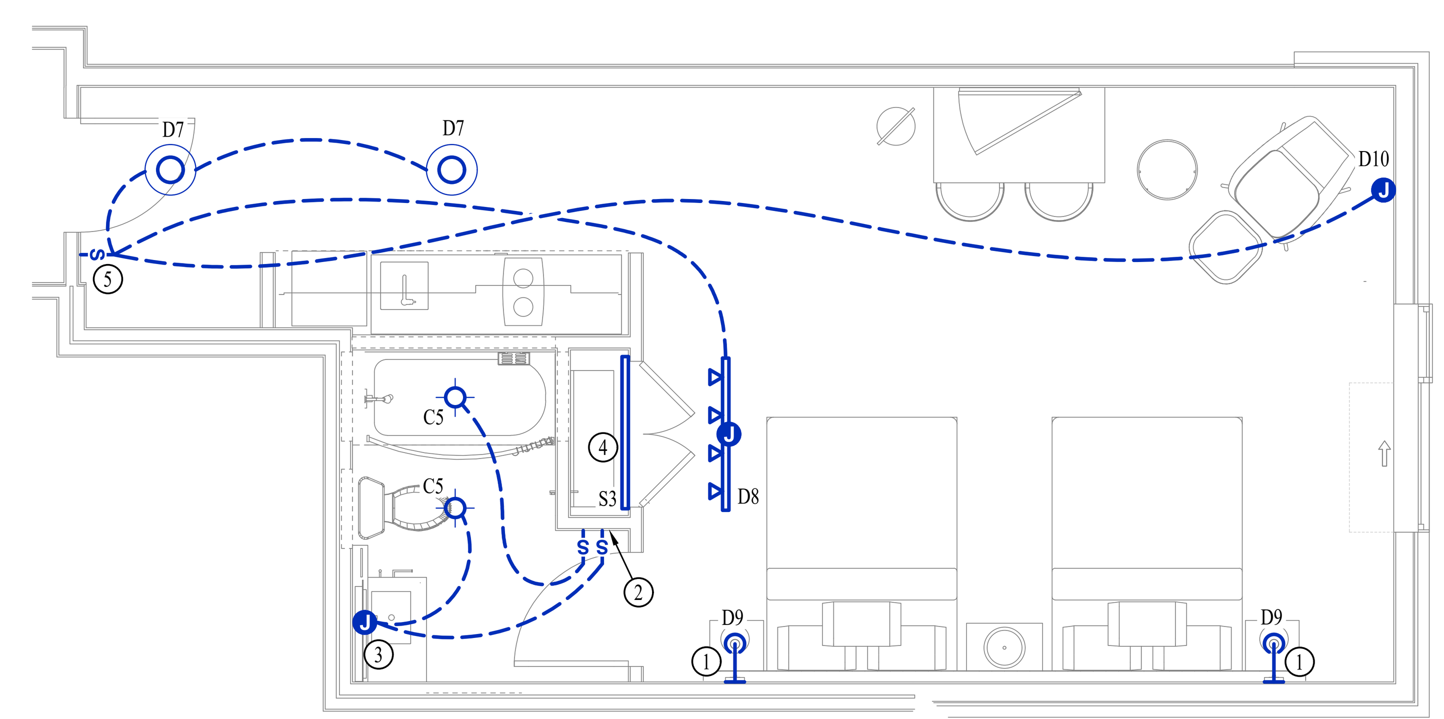
LIGHTING PLAN - STUDIO DOUBLE QUEEN ACCESSIBLE

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



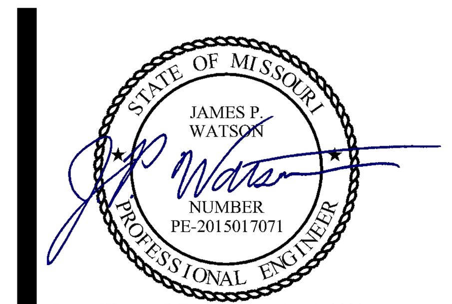
LIGHTING PLAN - STUDIO DOUBLE QUEEN CENTER

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



LIGHTING PLAN - STUDIO DOUBLE QUEEN END

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



James Watson, P.E. November 1, 2023
PE-2015017071
MO Certificate of Authority # 2018029680

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J2 PROJECT No:	J21006
J2 DESIGN:	ACW

ISSUE TITLE	DATE
CITY SUBMISSION	11 / 01 / 2023

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

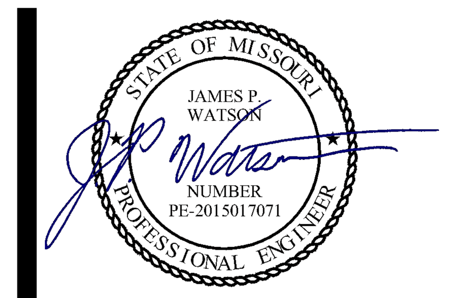
AHJ APPROVAL STAMP

SHEET TITLE

LIGHTING PLAN - GUEST ROOMS

SHEET NUMBER

EL401



James Watson, P.E. December 22, 2023
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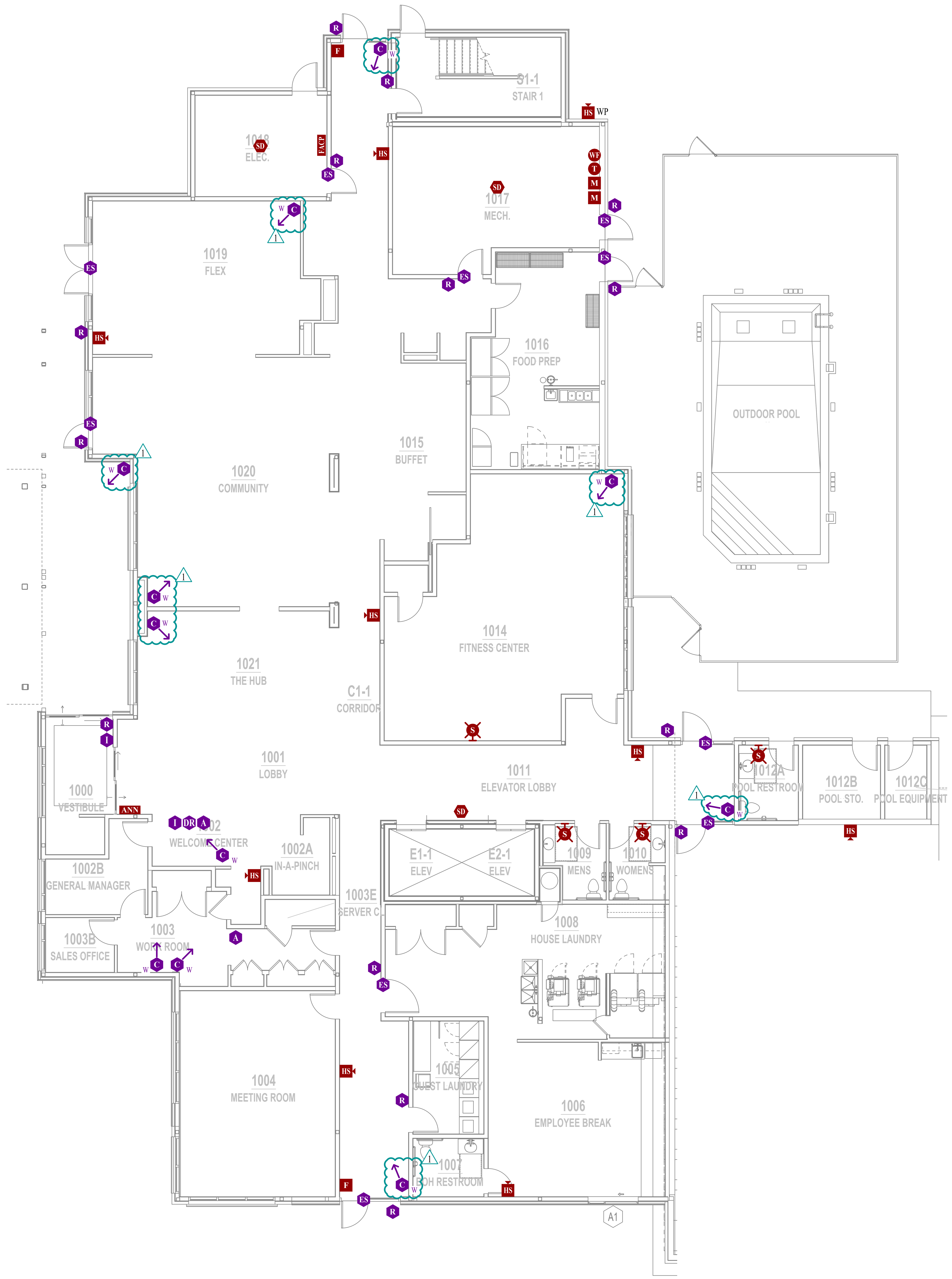
MO Certificate of Authority # 2018029680



FIRE PROTECTION & SECURTY SYSTEM PLAN - 1ST FLOOR - AREA A

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

FIRE ALARM PLAN SYMBOL LEGEND

Symbol	Description
F	MANUAL PULL STATION
M	MODULE
O	OUTPUT MODULE
SD	SMOKE DETECTOR
S	STROBE - CEILING MOUNT
S	STROBE - WALL MOUNT
HS	HORN STROBE - WALL MOUNT
HS	HORN STROBE - CEILING MOUNT
SS	SPEAKER STROBE - WALL MOUNT
SS	SPEAKER STROBE - CEILING MOUNT
T	TAMPER SWITCH
WF	WATER FLOW SWITCH
FACP	FIRE ALARM CONTROL PANEL
ANN	FIRE ALARM ANNUNCIATOR

SECURITY PLAN SYMBOL LEGEND

Symbol	Description
R	READER
M	MOTION DETECTOR
KP	ALARM KEYPAD
DC	DOOR CONTACT
P	PANIC
GB	GLASS BREAK SENSOR
ES	ELECTRIC STRIKE
I	INTERCOM
DR	DOOR RELEASE
A	DURESS ALARM BUTTON
BURG	BURGLAR PANEL
C W	WALL MOUNT CAMERA (ARROW INDICATES VIEW DIRECTION)
C C	CEILING MOUNT CAMERA (ARROW INDICATES VIEW DIRECTION)

FIRE ALARM SYSTEM SPECIFICATIONS

1. FIRE ALARM SYSTEM SHALL BE AN ADDRESSABLE SYSTEM THAT IS NONCODED, UL-LISTED, WITH MULTIPLEX SIGNAL TRANSMISSION AND HORN/STROBE EVACUATION.
2. EVERY FIRE ALARM SYSTEM COMPONENT SHALL BE UL-LISTED AND UL-CERTIFIED, TESTED BY MANUFACTURERS AS A COMPLETE SYSTEM, AND MEET ALL APPLICABLE REQUIREMENTS OF NFPA 72.
3. ALL FIRE ALARM WIRING TO BE PLENUM RATED.
4. ALL INITIATING DEVICES INSTALLED IN UNCONDITIONED SPACES SHALL BE CONVENTIONAL DEVICES SUITABLE FOR USE IN EXTREME HIGH AND LOW TEMPERATURES AND HIGH HUMIDITY. SUCH DEVICES SHALL BE SUPERVISED BY ADDRESSABLE MONITOR MODULES LOCATED IN CONDITIONED SPACES.
5. QUANTITIES, TYPES, AND LOCATIONS OF INITIATING DEVICES AND OUTPUT MODULES FOR INTERCONNECTION WITH FIRE SUPPRESSION MUST BE COORDINATED WITH CONTRACTORS THAT ARE RESPONSIBLE FOR THOSE SYSTEMS.

FIRE ALARM DEVICE TYPICAL LOCATIONS:

1. VERIFY EXACT LOCATIONS WITH LATEST NFPA REQUIREMENTS;
2. CEILING MOUNTED SMOKE / HEAT DETECTORS:
   - 2.1. MUST BE MOUNTED AT LEAST 36" FROM HVAC GRILLES / DIFFUSERS
   - 2.2. MUST BE LOCATED AT LEAST 4" FROM WALL/CEILING INTERSECTIONS (MEASURED FROM EDGE OF DEVICE)
3. WALL MOUNTED SMOKE / HEAT DETECTORS:
   - 3.1. MUST BE LOCATED AT LEAST 4" FROM WALL/CEILING INTERSECTIONS (MEASURED FROM EDGE OF DEVICE)
   - 3.2. MUST BE LOCATED WITHIN AT LEAST 12" FROM WALL/CEILING INTERSECTION (MEASURED FROM EDGE OF DEVICE)
4. MANUAL PULL STATIONS:
   - 4.1. MUST BE LOCATED WITHIN 5' OF EXTERIOR DOORWAY (MEASURED FROM CENTER OF PULL STATION TO NEAREST EDGE OF DOOR)
   - 4.2. MUST BE LOCATED BETWEEN 42" AND 54" A.F.F. (MEASURED FROM FINISH FLOOR TO CENTER OFF PULL STATION)
5. MAGNETIC DOOR HOLDER:
   - 5.1. MUST BE LOCATED 6" BELOW TOP OF DOOR (MEASURED FROM TOP OF DOOR TO TOP OF DOOR HOLDER)
   - 5.2. MUST BE LOCATED DOOR WIDTH MINUS THREE INCHES FROM DOOR (MEASURED FROM NEAREST EDGE OF HOLDER TO NEAREST EDGE OF DOOR).
6. FIRE ALARM CONTROL PANEL:
   - 6.1. MUST BE LOCATED AT MAXIMUM OF 72" A.F.F. (MEASURED FROM FINISH FLOOR TO TOP OF FIRE ALARM CONTROL PANEL)
7. FIRE ALARM ANNUNCIATOR:
   - 7.1. MUST BE LOCATED AT MAXIMUM OF 60" A.F.F. (MEASURED FROM FINISH FLOOR TO TOP OF FIRE ALARM ANNUNCIATOR PANEL)
8. WALL MOUNTED STROBE DEVICES (VISUAL ONLY):
   - 8.1. MUST BE LOCATED AT 84" A.F.F. (MEASURED FROM FINISH FLOOR TO BOTTOM OF BACK BOX)
   - 8.2. MUST BE LOCATED AT MOST 24" FROM WALL/CEILING INTERSECTION WITHIN HANDICAP BEDROOMS (MEASURED FROM WALL/CEILING INTERSECTION TO BOTTOM OF BACK BOX)
9. WALL-MOUNTED HORN / STROBE DEVICES (AUDIBLE & VISUAL):
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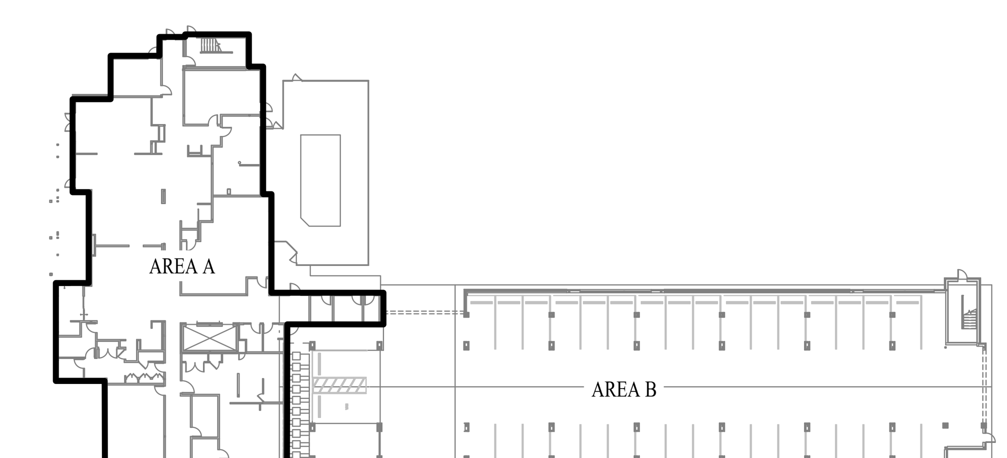

KEY PLAN

SCALE: 1" = 50 ft

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J2 DESIGN:	ACW

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REVISION 1	12 / 22 / 2023

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

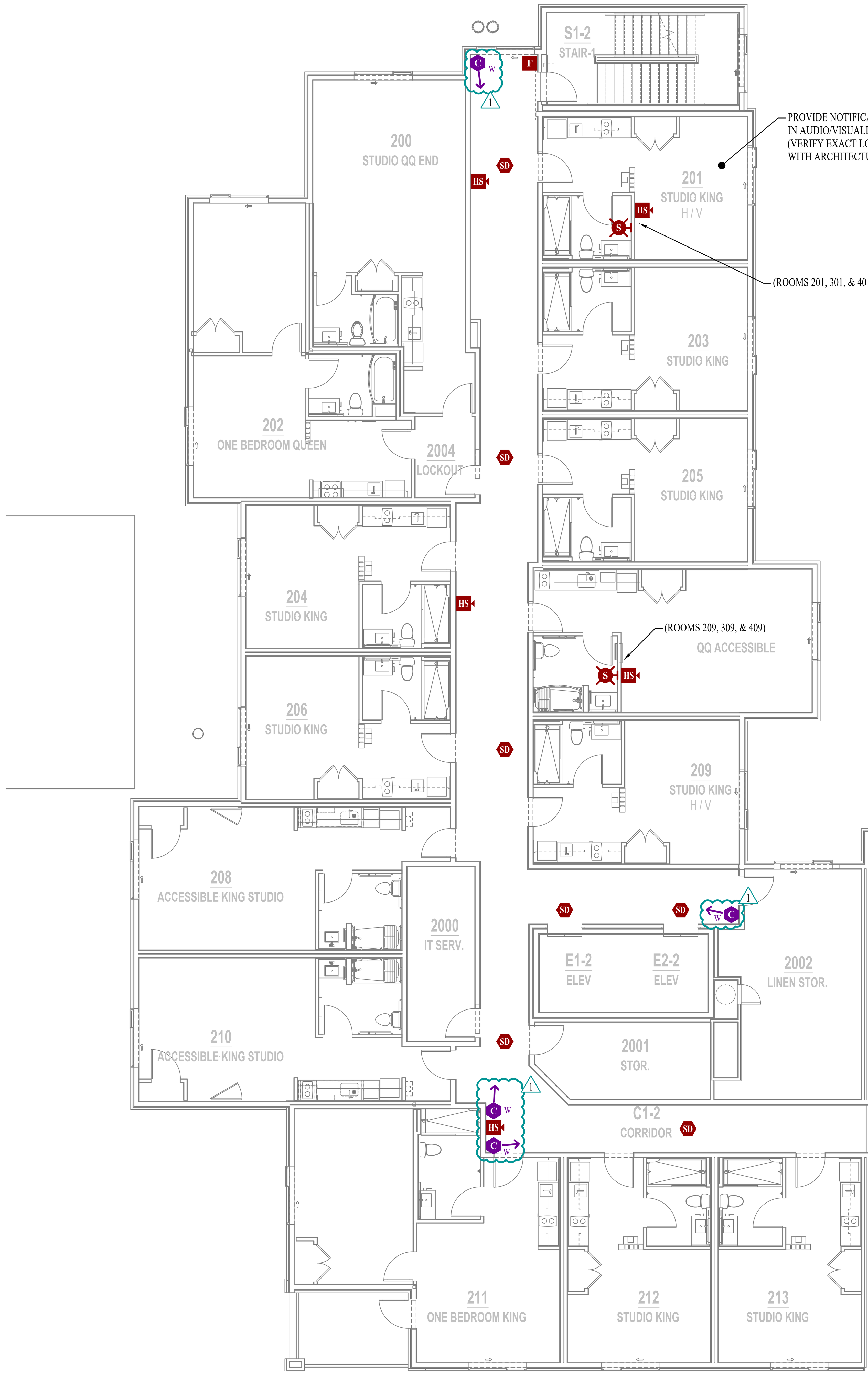
AHJ APPROVAL STAMP

SHEET TITLE

FIRE PROTECTION & SECURITY SYSTEM PLAN - 1ST FLOOR - AREA A

SHEET NUMBER

FS101



FIRE PROTECTION & SECURITY SYSTEM PLAN - 2ND-4TH FLOORS - AREA A

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

FIRE ALARM PLAN SYMBOL LEGEND

F	MANUAL PULL STATION
M	MODULE
O	OUTPUT MODULE
SD	SMOKE DETECTOR
S	STROBE - CEILING MOUNT
S	STROBE - WALL MOUNT
HS	HORN STROBE - WALL MOUNT
HS	HORN STROBE - CEILING MOUNT
SS	SPEAKER STROBE - WALL MOUNT
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T	TAMPER SWITCH
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FACP	FIRE ALARM CONTROL PANEL
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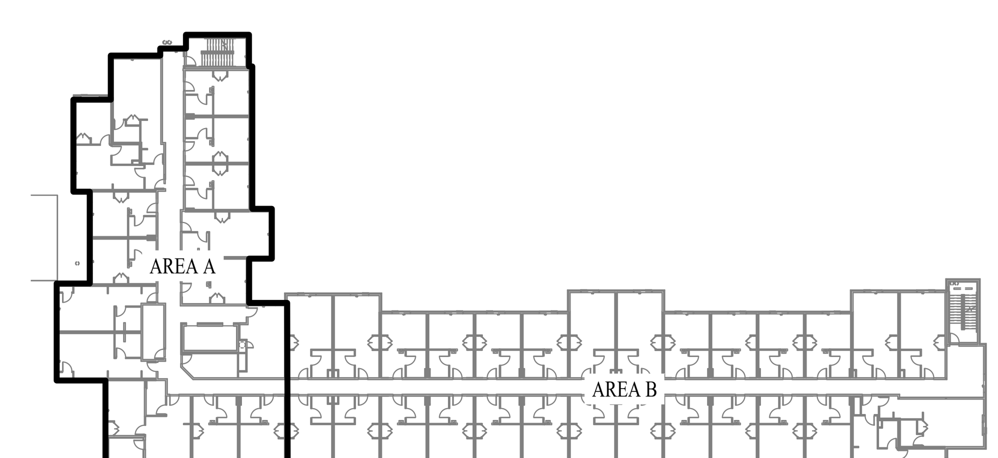

KEY PLAN

SCALE: 1" = 50 ft

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. December 22, 2023
PE-2015017071
MO Certificate of Authority # 2018029680

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AHJ APPROVAL STAMP

SHEET TITLE

FIRE PROTECTION & SECURITY SYSTEM PLAN - 2ND-4TH FLOORS - AREA A

SHEET NUMBER

FS102

FIRE ALARM PLAN SYMBOL LEGEND

F	MANUAL PULL STATION
M	MODULE
O	OUTPUT MODULE
SD	SMOKE DETECTOR
S	STROBE - CEILING MOUNT
S	STROBE - WALL MOUNT
HS	HORN STROBE - WALL MOUNT
HS	HORN STROBE - CEILING MOUNT
SS	SPEAKER STROBE - WALL MOUNT
SS	SPEAKER STROBE - CEILING MOUNT
T	TAMPER SWITCH
WF	WATER FLOW SWITCH
FACP	FIRE ALARM CONTROL PANEL
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SECURITY PLAN SYMBOL LEGEND

R	READER
M	MOTION DETECTOR
KP	ALARM KEYPAD
DC	DOOR CONTACT
P	PANIC
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ES	ELECTRIC STRIKE
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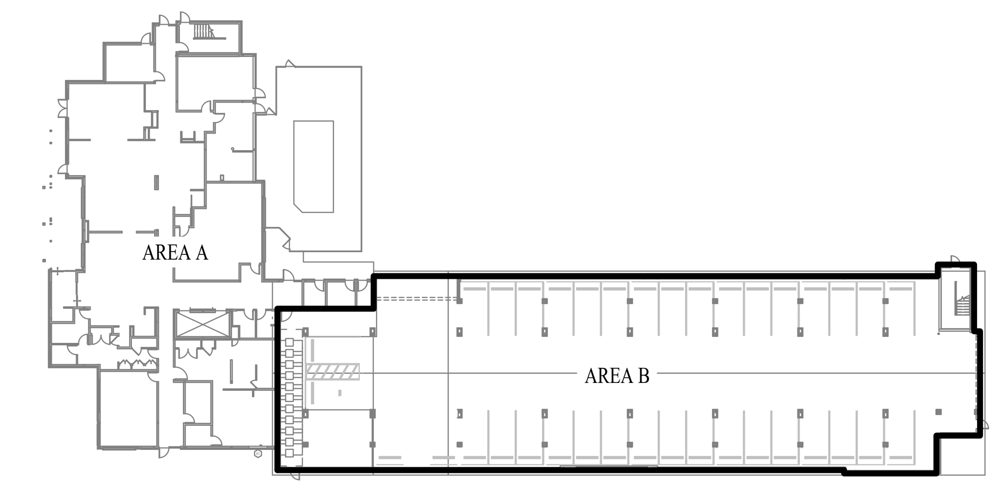
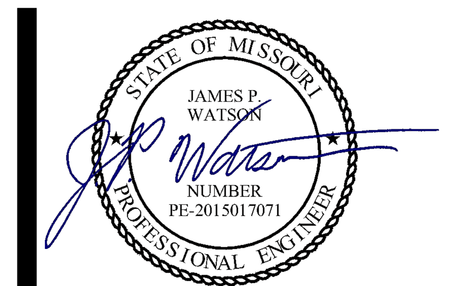


KEY PLAN

SCALE: 1" = 50 ft

FIRE PROTECTION & SECURITY SYSTEM PLAN - 1ST FLOOR - AREA B

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



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SHEET NUMBER

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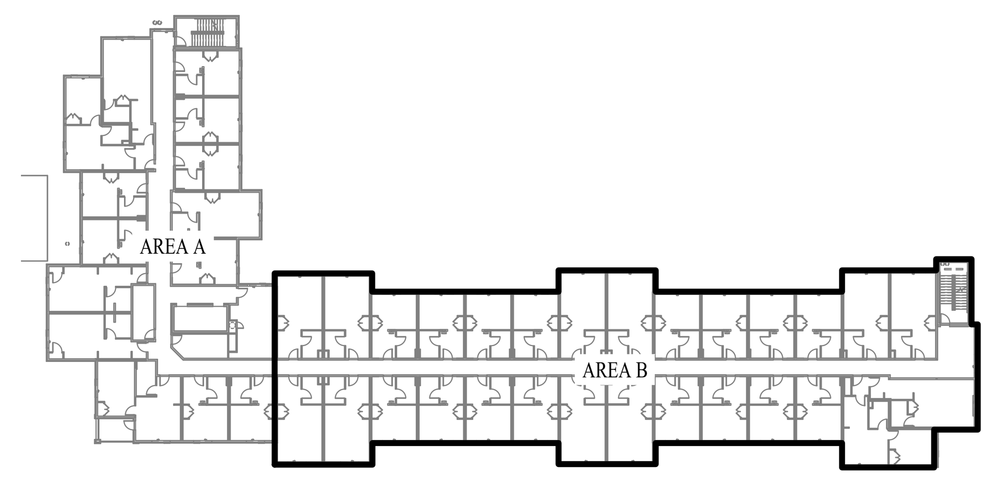
3. ALL FIRE ALARM WIRING TO BE PLENUM RATED.
4. ALL INITIATING DEVICES INSTALLED IN UNCONDITIONED SPACES SHALL BE CONVENTIONAL DEVICES SUITABLE FOR USE IN EXTREME HIGH AND LOW TEMPERATURES AND HIGH HUMIDITY. SUCH DEVICES SHALL BE SUPERVISED BY ADDRESSABLE MONITOR MODULES LOCATED IN CONDITIONED SPACES.
5. QUANTITIES, TYPES, AND LOCATIONS OF INITIATING DEVICES AND OUTPUT MODULES FOR INTERCONNECTION WITH FIRE SUPPRESSION MUST BE COORDINATED WITH CONTRACTORS THAT ARE RESPONSIBLE FOR THOSE SYSTEMS.

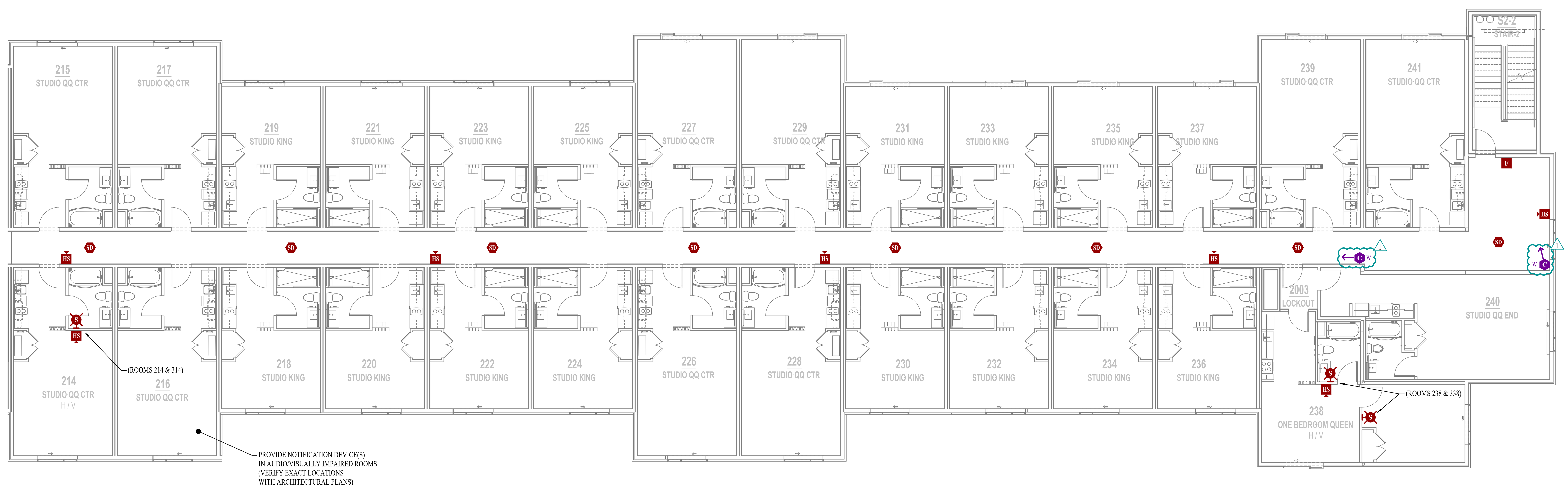
FIRE ALARM DEVICE TYPICAL LOCATIONS:

1. VERIFY EXACT LOCATIONS WITH LATEST NFPA REQUIREMENTS;
2. CEILING MOUNTED SMOKE / HEAT DETECTORS:
   - 2.1. MUST BE MOUNTED AT LEAST 36" FROM HVAC GRILLES / DIFFUSERS
   - 2.2. MUST BE LOCATED AT LEAST 4" FROM WALL/CEILING INTERSECTIONS (MEASURED FROM EDGE OF DEVICE)
3. WALL MOUNTED SMOKE / HEAT DETECTORS:
   - 3.1. MUST BE LOCATED AT LEAST 4" FROM WALL/CEILING INTERSECTIONS (MEASURED FROM EDGE OF DEVICE)
   - 3.2. MUST BE LOCATED WITHIN AT LEAST 12" FROM WALL/CEILING INTERSECTION (MEASURED FROM EDGE OF DEVICE)
4. MANUAL PULL STATIONS:
   - 4.1. MUST BE LOCATED WITHIN 5' OF EXTERIOR DOORWAY (MEASURED FROM CENTER OF PULL STATION TO NEAREST EDGE OF DOOR)
   - 4.2. MUST BE LOCATED BETWEEN 42" AND 54" A.F.F. (MEASURED FROM FINISH FLOOR TO CENTER OFF PULL STATION)
5. MAGNETIC DOOR HOLDER:
   - 5.1. MUST BE LOCATED 6" BELOW TOP OF DOOR (MEASURED FROM TOP OF DOOR TO TOP OF DOOR HOLDER)
   - 5.2. MUST BE LOCATED DOOR WIDTH MINUS THREE INCHES FROM DOOR (MEASURED FROM NEAREST EDGE OF HOLDER TO NEAREST EDGE OF DOOR).
6. FIRE ALARM CONTROL PANEL:
   - 6.1. MUST BE LOCATED AT MAXIMUM OF 72" A.F.F. (MEASURED FROM FINISH FLOOR TO TOP OF FIRE ALARM CONTROL PANEL)
7. FIRE ALARM ANNUNCIATOR:
   - 7.1. MUST BE LOCATED AT MAXIMUM OF 60" A.F.F. (MEASURED FROM FINISH FLOOR TO TOP OF FIRE ALARM ANNUNCIATOR PANEL)
8. WALL MOUNTED STROBE DEVICES (VISUAL ONLY):
   - 8.1. MUST BE LOCATED AT 84" A.F.F. (MEASURED FROM FINISH FLOOR TO BOTTOM OF BACK BOX)
   - 8.2. MUST BE LOCATED AT MOST 24" FROM WALL/CEILING INTERSECTION WITHIN HANDICAP BEDROOMS (MEASURED FROM WALL/CEILING INTERSECTION TO BOTTOM OF BACK BOX)
9. WALL-MOUNTED HORN / STROBE DEVICES (AUDIBLE & VISUAL):
   - 9.1. MUST BE LOCATED AT 84" A.F.F. (MEASURED FROM FINISH FLOOR TO BOTTOM OF BACK BOX)



KEY PLAN

SCALE: 1" = 50 ft



FIRE PROTECTION & SECURITY SYSTEM PLAN - 2ND-4TH FLOORS - AREA B

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

James Watson, P.E. December 22, 2023
PE-2015017071
MO Certificate of Authority # 2018029680

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J2 PROJECT No:	J21006
J2 DESIGN:	ACW

ISSUE TITLE	DATE
CITY SUBMISSION	11 / 01 / 2023
REVISION 1	12 / 22 / 2023

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE

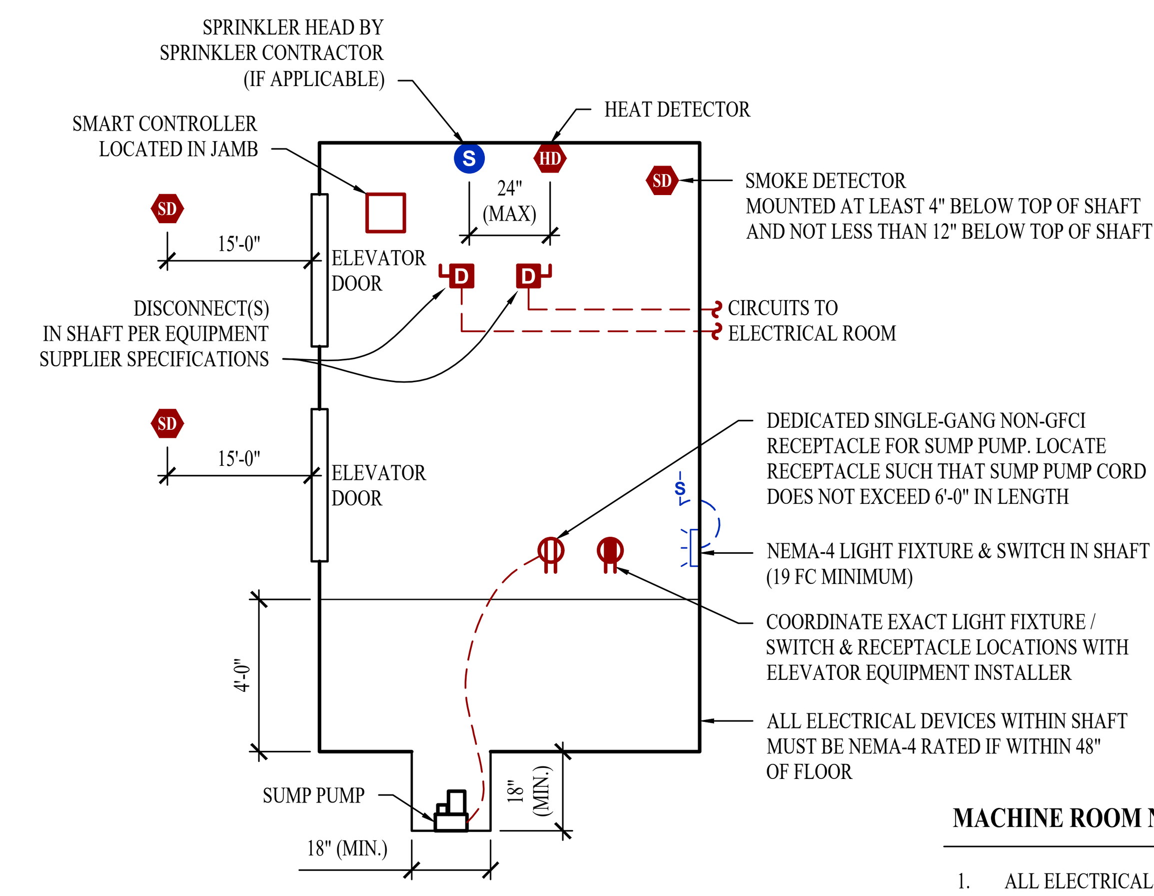
FIRE PROTECTION & SECURITY SYSTEM PLAN - 2ND-4TH FLOORS - AREA B

SHEET NUMBER

FS112

ELECTRICAL SPECIFICATIONS

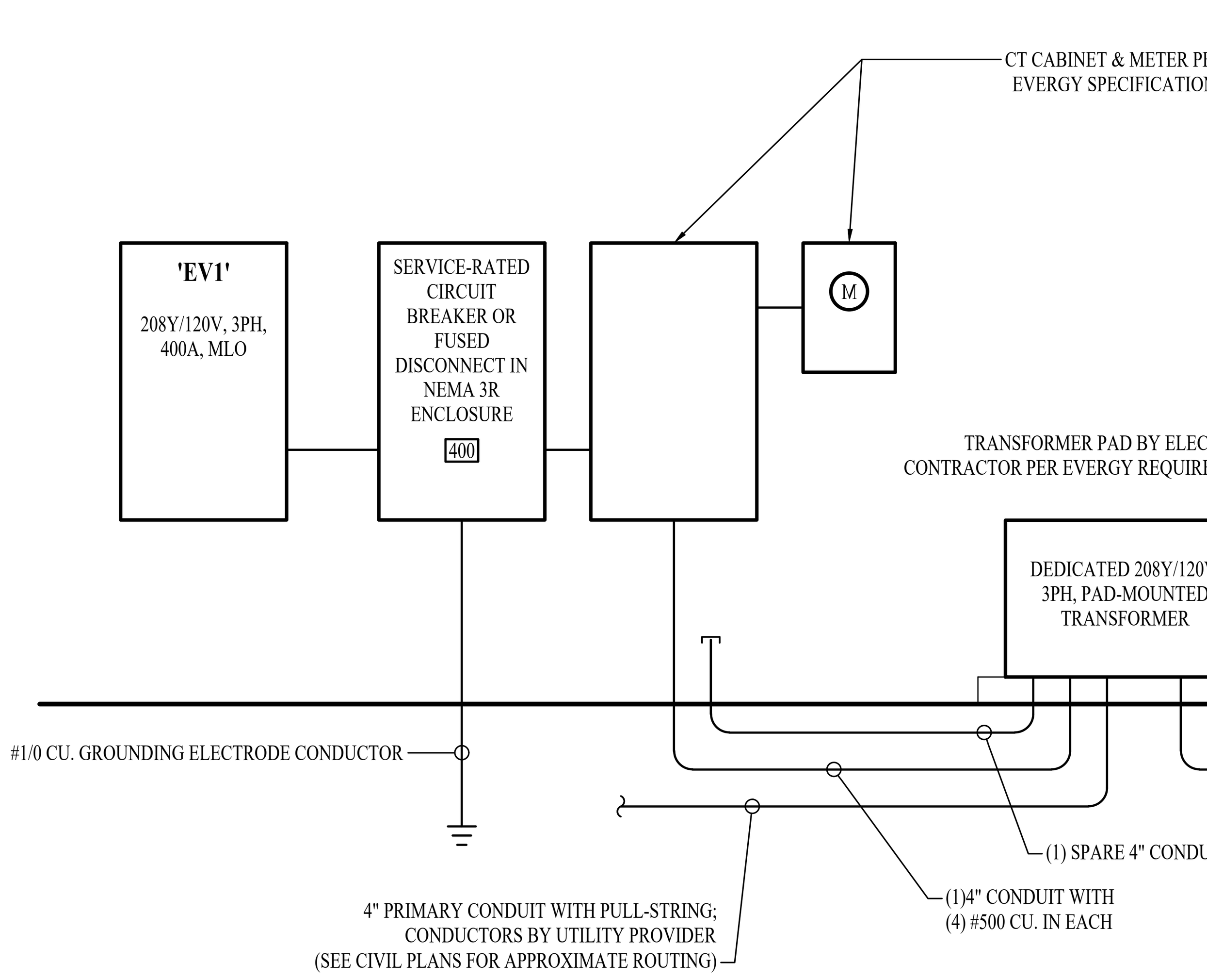
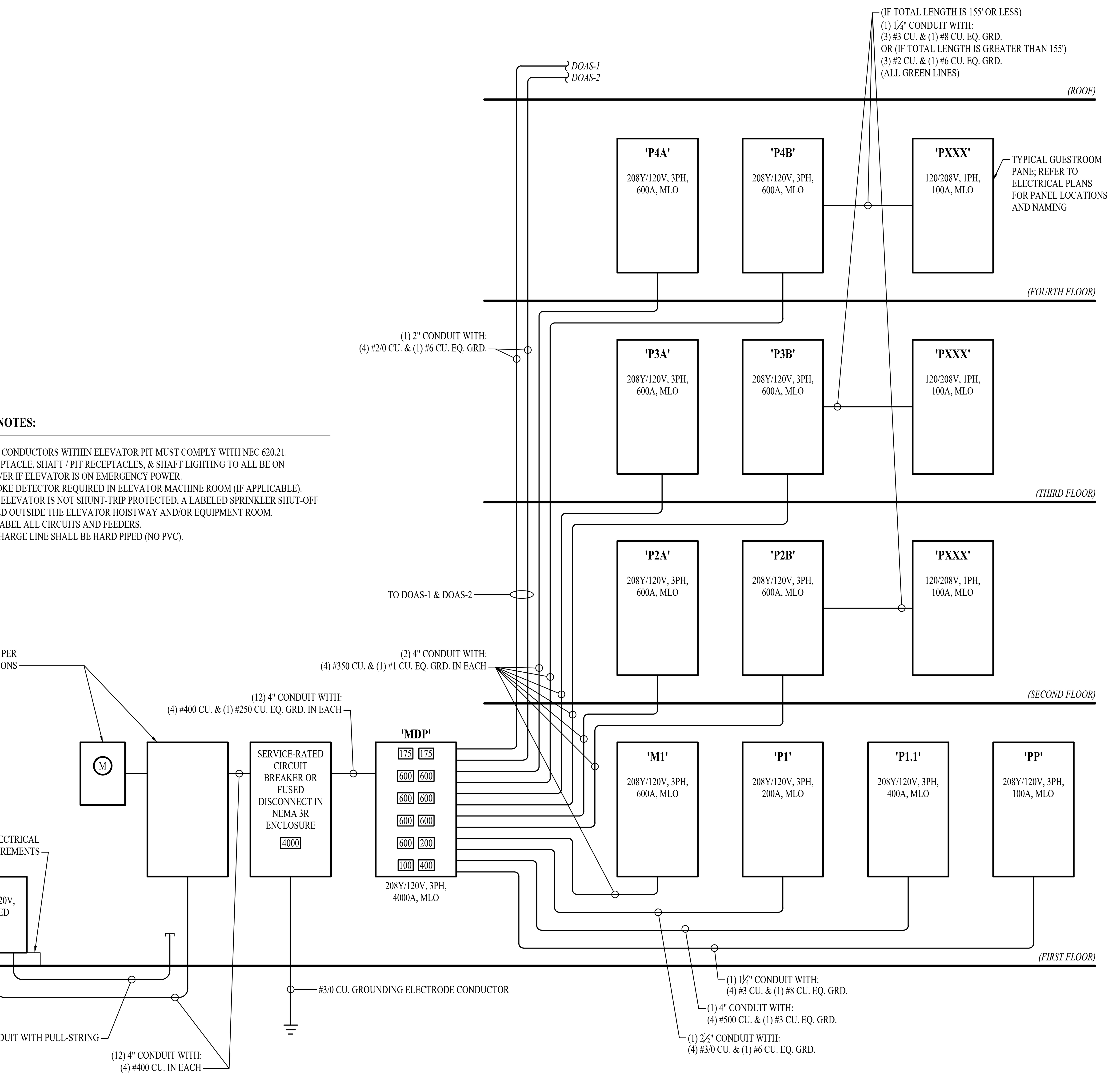
1. GENERAL
   - 1.1. THE ENTIRE ELECTRICAL SYSTEM SHALL BE CONTINUOUSLY GROUNDED. EVERY BRANCH CONDUIT SHALL INCLUDE A GREEN GROUND CONDUCTOR SIZED PER NEC.
   - 1.2. ARC-FAULT CIRCUITS SHALL BE RUN WITH A DEDICATED NEUTRAL AS REQUIRED BY MANUFACTURER.
   - 1.3. PROVIDE PERMANENT ARC-FLASH LABEL AFFIXED TO EVERY DISCONNECT AND PANEL.
   - 1.4. PROVIDE TYPE WRITTEN PANEL SCHEDULE FOR EACH PANEL.
2. MATERIALS
   - 2.1. CONDUIT & CONDUCTORS
     - 2.1.1. ALL CONDUCTORS SIZES INDICATED ON PLANS ARE COPPER UNLESS NOTED OTHERWISE.
     - 2.1.2. ABOVE GRADE CONDUCTORS SHALL BE THHN COPPER. BELOW GRADE CONDUCTORS SHALL BE XHHW-2.
     - 2.1.3. MINIMUM CONDUCTOR SIZE SHALL BE #12 UNLESS NOTED OTHERWISE. 120V, 20 AMP CIRCUITS WITH CONDUCTOR LENGTH GREATER THAN 100' SHALL BE MINIMUM #10. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR MEASURING ACTUAL CONDUCTOR LENGTH AND INCREASING CONDUCTOR SIZE TO COMPENSATE FOR VOLTAGE DROP AS REQUIRED BY NEC.
     - 2.1.4. RIGID GALVANIZED OR SCHEDULE 40 PVC CONDUIT SHALL BE USED FOR SERVICE WIRING, BELOW GRADE INSTALLATIONS, OR WHERE EXPOSED TO WEATHER.
     - 2.1.5. IN APPLICATIONS OTHER THAN THOSE LISTED IN 2.1.4, RIGID STEEL, EMT, OR IMC SHALL BE USED. PVC CONDUIT IS ACCEPTABLE EMBEDDED IN CONCRETE OR WITHIN MASONRY WALLS. BRANCH CIRCUITS SHALL BE COPPER IN CONDUIT. MC & AC MAY BE USED WHERE APPROVED BY AHJ.
   - 2.2. DEVICES
     - 2.2.1. CONTRACTOR TO PROVIDE J-BOXES, COVER PLATES, AND ANY ACCESSORIES REQUIRED TO PROVIDE A COMPLETE SYSTEM. SEE ARCHITECTURAL PLANS FOR DEVICE COLORS.
     - 2.2.1. DUPLEX RECEPTACLES SHALL BE TAMPER RESISTANT, 20 AMP, EQUAL TO LEVITON CR20.
     - 2.2.2. TOGGLE WALL SWITCHES SHALL BE EQUAL TO LEVITON CS120-2
     - 2.2.3. DIMMER SWITCHES SHALL BE TESTED WITH FIXTURES AND LAMPS FOR COMPATIBILITY.
3. EMERGENCY LIGHTING
   - 3.1. THE BRANCH CIRCUIT FEEDING THE EMERGENCY FIXTURE SHALL BE THE SAME BRANCH CIRCUIT AS THAT SERVING THE NORMAL LIGHTING IN THE AREA AND CONNECTED AHEAD OF ANY LOCAL SWITCHES.
   - 3.2. FACE OF LOW-LEVEL EXIT SIGNAGE SHALL BE PLACED FACING THE DIRECTION OF TRAVEL. ADJUST SIGNAGE LOCATION AS NEEDED. FINAL LOCATIONS MUST BE APPROVED UPON BUILDING INSPECTION. 2



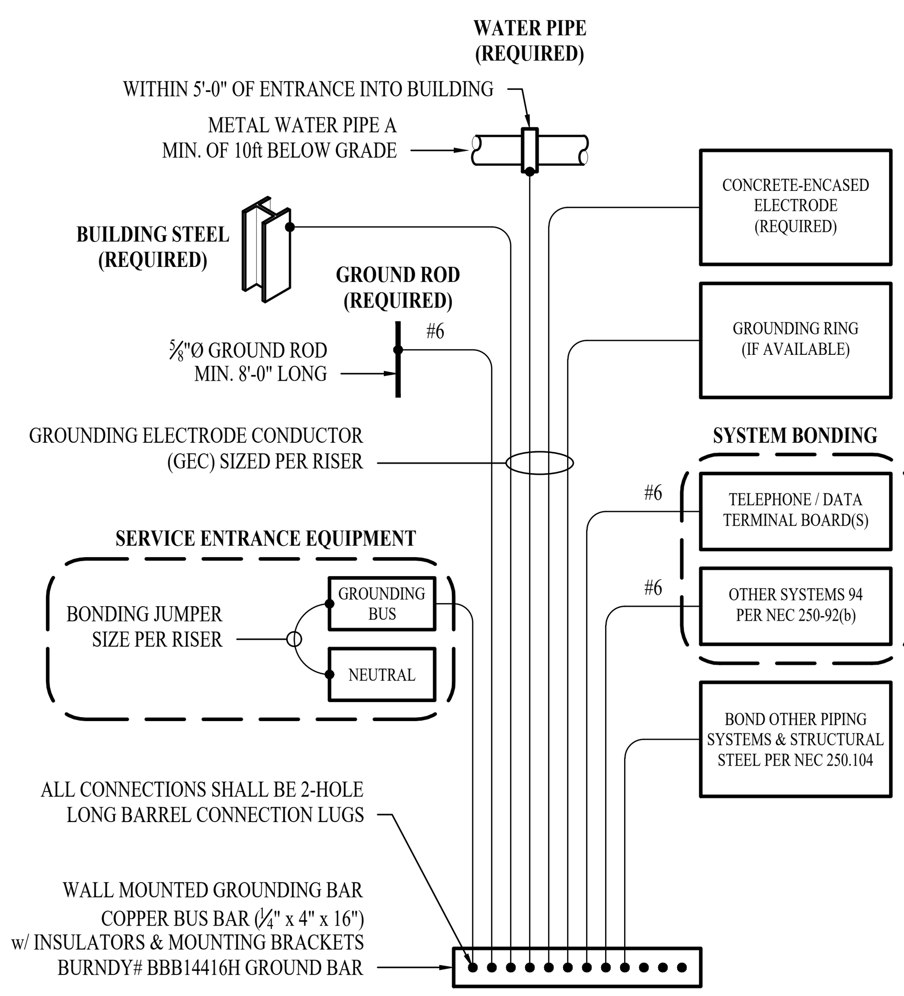
MACHINE - ROOM - LESS ELEVATOR DETAIL

MACHINE ROOM NOTES:

1. ALL ELECTRICAL CONDUCTORS WITHIN ELEVATOR PIT MUST COMPLY WITH NEC 620.21.
2. SUMP PUMP RECEPTACLE, SHAFT / PIT RECEPTACLES, & SHAFT LIGHTING TO ALL BE ON EMERGENCY POWER IF ELEVATOR IS ON EMERGENCY POWER.
3. ADDITIONAL SMOKE DETECTOR REQUIRED IN ELEVATOR MACHINE ROOM (IF APPLICABLE).
4. IN CASES WHERE ELEVATOR IS NOT SHUNT-TRIP PROTECTED, A LABELED SPRINKLER SHUT-OFF MUST BE LOCATED OUTSIDE THE ELEVATOR HOISTWAY AND/OR EQUIPMENT ROOM.
5. PERMANENTLY LABEL ALL CIRCUITS AND FEEDERS.
6. SUMP PUMP DISCHARGE LINE SHALL BE HARD PIPED (NO PVC).

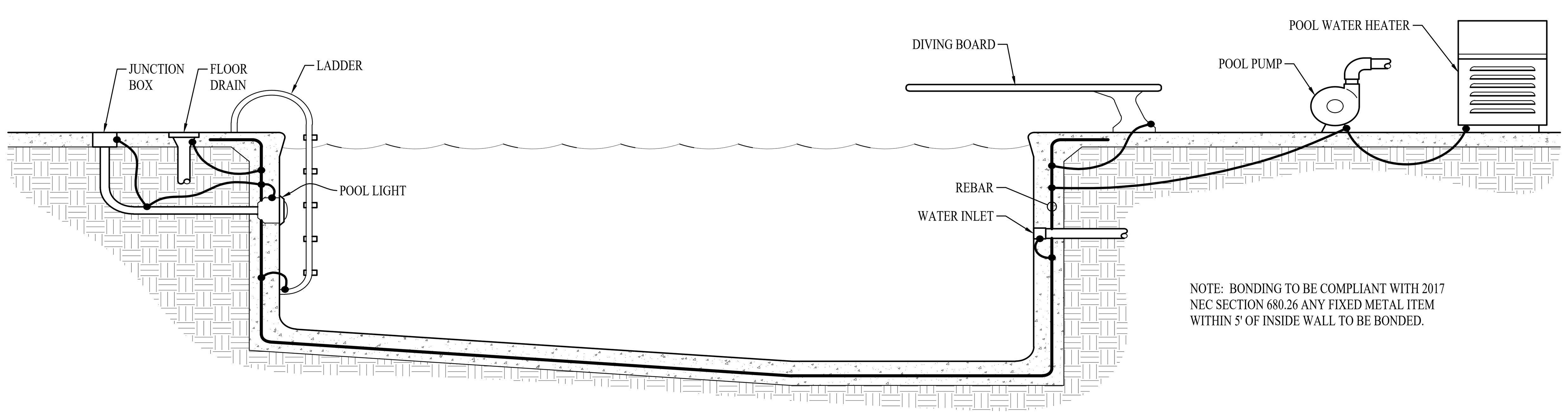
POWER RISER



TYPICAL GROUNDING & BONDING DETAIL

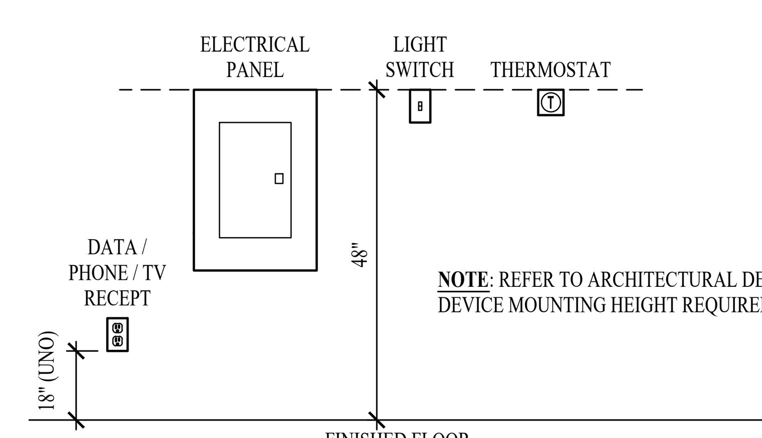
POWER RISER GENERAL NOTES:

1. SEE MEP SITE PLAN FOR APPROXIMATE TRANSFORMER & SERVICE ENTRANCE LOCATIONS.
2. COORDINATE ALL DETAILS OF NEW ELECTRIC SERVICE WITH EVERGY.
3. CONTRACTOR SHALL PROVIDE A SHORT-CIRCUIT AND COORDINATION STUDY INCLUDING ARC FAULT ANALYSIS AND EQUIPMENT LABELING ON ALL SERVICE SWITCHBOARDS AND DISTRIBUTION BOARDS.
4. AIC-RATINGS ARE BASED ON THE FOLLOWING:
   - 4.1. TRANSFORMER LOCATED APPROXIMATELY WHERE SHOWN ON PLANS
   - 4.2. 1000 kVA TRANSFORMER, 100% PF, 5.79% Z
   - 4.3. ELECTRICAL CONTRACTOR TO RECALCULATE REQUIRED AIC-RATINGS IF FIELD CONDITIONS VARY FROM THOSE SHOWN ON PLANS.
5. PERMANENTLY LABEL SERVICE DISCONNECTS AS "1 OF 2" & "2 OF 2".
6. ELECTRICAL CONTRACTOR TO PERFORM SHORT CIRCUIT COORDINATION STUDY INCLUDING ARC FAULT ANALYSIS & INCLUDE EQUIPMENT LABELING ON ALL SWITCHBOARDS & DISTRIBUTION PANELS.
7. ALL DEVICES IN MAIN DISTRIBUTION SHALL BE 100% CONTINUOUSLY RATED.
8. PROVIDE SURGE PROTECTION & LIGHTING ARRESTORS ON EACH MAIN ELECTRICAL SERVICE.
9. PROVIDE MEANS FOR ARC-ENERGY REDUCTION ON MAIN ELECTRIC SERVICE PER NEC 240.87.
10. PROVIDE GFI PROTECTION ON MAIN ELECTRICAL SERVICE PER NEC 215.10.



NOTE: BONDING TO BE COMPLIANT WITH 2017 NEC SECTION 680.26 ANY FIXED METAL ITEM WITHIN 5' OF INSIDE WALL TO BE BONDED.

POOL AREA EQUIPOTENTIAL BONDING DETAIL



NOTE: REFER TO ARCHITECTURAL DETAILS FOR ADDITIONAL DEVICE MOUNTING HEIGHT REQUIREMENTS & DETAILS

TYPICAL ADA MOUNTING HEIGHTS DETAIL (ADA GUESTROOMS ONLY)

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. January 19, 2024
PE-2015017071
MO Certificate of Authority # 2018029680

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J2 PROJECT No:	J21006
J2 DESIGN:	ACW

ISSUE TITLE	DATE
CITY SUBMISSION	11 / 01 / 2023
2 REVISION 2	01 / 19 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE

ELECTRICAL DETAILS

SHEET NUMBER

E501

MAIN DISTRIBUTION PANEL SCHEDULE 'MDP'

VOLTAGE	PANEL SIZE	MOUNTING	AIC RATING		
208Y/120V 3-PH	4000A MLO	SURFACE	65,000	PHASE "A" LOAD	2759
				PHASE "B" LOAD	2789
NEMA RATING: 1				PHASE "C" LOAD	2472

DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION
PANEL 'P2A'	600-3	366	A	137	175-3	DOAS-1
-	-	366	B	137	-	-
-	-	366	C	137	-	-
PANEL 'P2B'	600-3	426	A	137	175-3	DOAS-2
-	-	421.5	B	137	-	-
-	-	351	C	137	-	-
PANEL 'P3A'	600-3	366	A	529	600-3	PANEL 'M1'
-	-	366	B	553	-	-
-	-	366	C	510	-	-
PANEL 'P3B'	600-3	426	A	155	200-3	PANEL 'P1'
-	-	421.5	B	158.5	-	-
-	-	351	C	150.5	-	-
PANEL 'P4A'	600-3	366	A	204	400-3	PANEL 'P1.1'
-	-	366	B	230.5	-	-
-	-	366	C	183	-	-
PANEL 'P4B'	600-3	426	A	32.5	100-3	PANEL 'PP'
-	-	427.5	B	17	-	-
-	-	351	C	16	-	-
OPEN			A			OPEN
OPEN			B			OPEN
OPEN			C			OPEN
OPEN			A			OPEN
OPEN			B			OPEN
OPEN			C			OPEN

NOTES:
- A: PANEL SHALL BE EQUAL TO SQUARE D "QED-2" SERIES SWITCHBOARD
- B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.
- C: AFTER COMPLETION OF WORK, ELECTRICAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.
- D: GUESTROOM ELECTRICAL LOADS AND DISTRIBUTION PANEL LOADS HAVE BEEN CALCULATED PER NEC ARTICLE 220

TYPICAL GUESTROOM PANEL 'PXXX' SCHEDULE

VOLTAGE	PANEL SIZE	MOUNTING	AIC RATING		
120/208V 1-PH	100A MLO	RECESSED	10,000	PHASE "A" LOAD	84.5
				PHASE "B" LOAD	78
NEMA RATING: 1					

CIRCUIT NUMBER	DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION	CIRCUIT NUMBER
1	BATHROOM	20-1	1.5	A	20	30-2	COOKTOP	2
3	***CONVENIENCE RECEPTS.***	***15-1***	***10***	B	20	-	-	4
5	***CONVENIENCE RECEPTS.***	***15-1***	***10***	A	16	20-2	PTAC	6
7	KITCHENETTE RECEPTS.	20-1	8	B	16	-	-	8
9	KITCHENETTE RECEPTS.	20-1	8	A	8	20-1	DISHWASHER/DISPOSAL	10
11	MICROWAVE/RANGE/HOOD	20-1	8	B		20-1	SPARE	12
13	***LIGHTING***	***15-1***	***5***	A			OPEN	14
15	***SPARE***	***15-1***		B			OPEN	16
17	OPEN			A	16	20-2	PTAC (IF APPLICABLE)	18
19	OPEN			B	16	-	-	20

NOTES:
- A: PANEL SHALL BE EQUAL TO SQUARE D MODEL "HOMELINE" SERIES
- B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.
- C: AFTER COMPLETION OF WORK, ELECTRICAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.
- D: OUTLETS SHOWN ABOVE IN ***BOLD ITALIC FONT*** SHALL BE AFCI PROTECTED

PANEL 'EV1' SCHEDULE

VOLTAGE	PANEL SIZE	MOUNTING	AIC RATING		
208Y/120V 3-PH	400A MLO	SURFACE	22,000	PHASE "A" LOAD	200
				PHASE "B" LOAD	120
NEMA RATING: 1				PHASE "C" LOAD	120

CIRCUIT NUMBER	DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION	CIRCUIT NUMBER
1	EXTERIOR EV-CHARGING STATION	50-2	40	A	40	50-2	GARAGE EV-CHARGING STATION	2
3	-	-	40	B	40	-	-	4
5	EXTERIOR EV-CHARGING STATION	50-2	40	C	40	50-2	GARAGE EV-CHARGING STATION	6
7	-	-	40	A	40	-	-	8
9	EXTERIOR EV-CHARGING STATION	50-2	40	B		50-2	SPARE	10
11	-	-	40	C		-	-	12
13	EXTERIOR EV-CHARGING STATION	50-2	40	A		50-2	SPARE	14
15	-	-		B		-	-	16
17	OPEN			C			OPEN	18
19	OPEN			A			OPEN	20
21	OPEN			B			OPEN	22
23	OPEN			C			OPEN	24
25	OPEN			A			OPEN	26
27	OPEN			B			OPEN	28
29	OPEN			C			OPEN	30

NOTES:
- A: PANEL SHALL BE EQUAL TO SQUARE D MODEL "QO"
- B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.
- C: AFTER COMPLETION OF WORK, ELECTRICAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.

POOL PANEL 'PP' SCHEDULE

VOLTAGE	PANEL SIZE	MOUNTING	AIC RATING		
208Y/120V 3-PH	100A MLO	RECSESSED	10,000	PHASE "A" LOAD	32.5
				PHASE "B" LOAD	17
NEMA RATING: 3R				PHASE "C" LOAD	16

CIRCUIT NUMBER	DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION	CIRCUIT NUMBER
1	POOL STORAGE RECEPTS.	20-1	4.5	A	14	20-2	WALL HEATER	2
3	POOL EQUIPMENT RECEPTS.	20-1	3	B	14	-	-	4
5	LIGHTING	20-1	2	C	14	20-2	WALL HEATER	6
7	SPARE	20-1		A	14	-	-	8
9	SPARE	20-1		B			OPEN	10
11	SPARE	20-1		C			OPEN	12
13	SPARE	20-1		A			OPEN	14
15	SPARE	20-1		B			OPEN	16
17	SPARE	20-1		C			OPEN	18
19	SPARE	20-1		A			OPEN	20
21	SPARE	20-1		B			OPEN	22
23	SPARE	20-1		C			OPEN	24

NOTES:
- A. PANEL SHALL BE EQUAL TO SQUARE D MODEL "QO"
- B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.
- C: AFTER COMPLETION OF WORK, ELECTRICAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.

PANEL 'M1' SCHEDULE

VOLTAGE	PANEL SIZE	MOUNTING	AIC RATING		
208Y/120V 3-PH	600A MLO	SURFACE	42,000	PHASE "A" LOAD	529
				PHASE "B" LOAD	553
NEMA RATING: 1				PHASE "C" LOAD	510

CIRCUIT NUMBER	DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION	CIRCUIT NUMBER
1	AHU-1	35-2	24	A	48	60-2	AHU-7	2
3	-	-	24	B	48	-	-	4
5	CU-1	20-2	12	C	27	45-2	CU-7	6
7	-	-	12	A	27	-	-	8
9	AHU-2	35-2	24	B	33	35-2	AHU-8	10
11	-	-	24	C	33	-	-	12
13	CU-2	20-2	12	A	12	20-2	CU-8	14
15	-	-	12	B	12	-	-	16
17	AHU-3	60-2	48	C	48	60-2	AHU-9	18
19	-	-	48	A	48	-	-	20
21	CU-3	45-2	27	B	17	25-2	CU-9	22
23	-	-	27	C	17	-	-	24
25	AHU-4	35-2	24	A	33	35-2	AHU-10	26
27	-	-	24	B	33	-	-	28
29	CU-4	30-2	18	C	18	30-2	CU-10	30
31	-	-	18	A	18	-	-	32
33	AHU-5	60-2	48	B	48	60-2	AHU-11	34
35	-	-	48	C	48	-	-	36
37	CU-5	30-2	19	A	19	30-2	CU-11	38
39	-	-	19	B	19	-	-	40
41	AHU-6	35-2	24	C		20-1	SPARE	42
43	-	-	24	A	8	20-1	WATER HEATER	44
45	AHU-6	60-2	48	B		20-1	SPARE	46
47	-	-	48	C		20-1	SPARE	48
49	CU-6	50-2	33	A	8	20-1	WATER HEATER	50
51	-	-	33	B		20-1	SPARE	52
53	GARAGE HEATER	20-3	14	C		20-1	SPARE	54
55	-	-	14	A	8	20-1	WATER HEATER	56
57	-	-	14	B		20-1	SPARE	58
59	GARAGE HEATER	20-3	14	C		20-1	SPARE	60
61	-	-	14	A	8	20-1	WATER HEATER	62
63	-	-	14	B		20-1	SPARE	64
65	GARAGE HEATER	20-3	14	C		20-1	SPARE	66
67	-	-	14	A	8	20-1	WATER HEATER	68
69	-	-	14	B		20-1	SPARE	70
71	GARAGE HEATER	20-3	14	C		20-1	SPARE	72
73	-	-	14	A		20-1	WATER FILTRATION SYSTEM	74
75	-	-	14	B	14	20-2	WALL HEATER	76
77	OPEN			C	14	-	-	78
79	OPEN			A	14	20-2	WALL HEATER	80
81	OPEN			B	14	-	-	82
83	OPEN			C		20-1	SPARE	84

NOTES:
- A: PANEL SHALL BE EQUAL TO SQUARE D MODEL "QO"
- B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.
- C: AFTER COMPLETION OF WORK, ELECTRICAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.

PANEL 'P1' SCHEDULE

VOLTAGE	PANEL SIZE	MOUNTING	AIC RATING		
208Y/120V 3-PH	200A MLO	SURFACE	22,000	PHASE "A" LOAD	155
				PHASE "B" LOAD	158.5
NEMA RATING: 1				PHASE "C" LOAD	150.5

CIRCUIT NUMBER	DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION	CIRCUIT NUMBER
1	ELECTRICAL ROOM RECEPTS.	20-1	4.5	A	4	20-2	POLE LIGHTS	2
3	FIRE ALARM CONTROL PANEL (FACP)	20-1	3	B	4	-	-	4
5	IRRIGATION CONTROLS	20-1	3	C	8	20-1	MONUMENT SIGN	6
7	MECHANICAL ROOM RECEPTS.	20-1	4.5	A	8	20-1	MONUMENT SIGN	8
9	FLEX RECEPTS.	20-1	6	B	8	20-1	MONUMENT SIGN	10
11	CORRIDOR RECEPTS.	20-1	6	C	8	20-1	ILLUMINATED BOLLARDS	12
13	ICE MACHINE	20-1	8	A	4.5	20-1	EXTERIOR RECEPTS.	14
15	FLEX RECEPTS.	20-1	4.5	B	6	20-1	EXTERIOR RECEPTS.	16
17	COMMUNITY RECEPTS.	20-1	7.5	C	3	20-1	EXTERIOR RECEPTS.	18
19	COMMUNITY RECEPTS.	20-1	9	A	5	20-1	SMOKE CURTAIN	20
21	HUB RECEPTS.	20-1	4.5	B	5	20-1	SMOKE CURTAIN	22
23	FITNESS EQUIPMENT	20-1	8	C	8	20-1	GUEST LAUNDRY WASHING MACHINE	24
25	FITNESS EQUIPMENT	20-1	8	A	8	20-1	GUEST LAUNDRY WASHING MACHINE	26
27	FITTNESS EQUIPMENT	20-1	8	B	8	20-1	GUEST LAUNDRY WASHING MACHINE	28
29	FITNESS EQUIPMENT	20-1	8	C	22	30-2	GUEST LAUNDRY DRYER	30
31	FITNESS EQUIPMENT	20-1	8	A	22	-	-	32
33	FITNESS RECEPTS.	20-1	7.5	B	22	30-2	GUEST LAUNDRY DRYER	34
35	FITNESS RECEPTS.	20-1	6	C	22	-	-	36
37	FITNESS EQUIPMENT	20-1	8	A	22	30-2	GUEST LAUNDRY DRYER	38
39	FITNESS EQUIPMENT	20-1	8	B	22	-	-	40
41	CORRIDOR RECEPTS.	20-1	7.5	C	8	20-1	ELEVATOR SUMP PUMP	42
43	VESTIBULE RECEPTS.	20-1	3	A	1.5	20-1	ELEVATOR PIT RECEPT.	44
45	WELCOME DESK RECEPTS.	20-1	3	B	5	20-1	STRING LIGHTING	46
47	WELCOME DESK RECEPTS.	20-1	3	C	1	20-1	GAS VALVE	48
49	WELCOME DESK RECEPTS.	20-1	3	A		20-1	SPARE	50
51	GENERAL MANAGER RECEPTS.	20-1	6	B		20-1	SPARE	52
53	SALES OFFICE RECEPTS.	20-1	4.5	C		20-1	SPARE	54
55	FITNESS HYDRATION STATION	20-1	5	A		20-1	SPARE	56
57	WORK ROOM RECEPTS.	20-1	6	B		20-1	SPARE	58
59	WORK ROOM RECEPT.	20-1	1.5	C		20-1	SPARE	60
61	TIMELOCK	20-1	5	A		20-1	SPARE	62
63	IN-A-PINCH EQUIPMENT	20-1	5	B		20-1	SPARE	64
65	IN-A-PINCH EQUIPMENT	20-1	5	C		20-1	SPARE	66
67	IN-A-PINCH EQUIPMENT	20-1	5	A			OPEN	68
69	IN-A-PINCH EQUIPMENT	20-1	5	B			OPEN	70
71	RESTROOM RECEPTS.	20-1	3	C			OPEN	72
73	MEETING ROOM RECEPTS.	20-1	7.5	A			OPEN	74
75	MEETING ROOM RECEPTS.	20-1	3	B			OPEN	76
77	MEETING ROOM RECEPTS.	20-1	4.5	C			OPEN	78
79	BACK OF HOUSE RESTROOM RECEPT.	20-1	1.5	A			OPEN	80
81	BREAK ROOM RECEPTS.	20-1	9	B			OPEN	82
83	GUEST LAUNDRY RECEPTS.	20-1	3	C			OPEN	84

NOTES:
- A: PANEL SHALL BE EQUAL TO SQUARE D MODEL "QO"
- B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.
- C: AFTER COMPLETION OF WORK, ELECTRICAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. November 1, 2023
PE-2015017071
MO Certificate of Authority # 2018029680

J-SQUARED ENGINEERING
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J2 PROJECT No:	J21006
J2 DESIGN:	ACW
ISSUE TITLE	DATE
CITY SUBMISSION	11 / 01 / 2023

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE

ELECTRICAL SCHEDULES

SHEET NUMBER

E601

PANEL 'P1.1' SCHEDULE

VOLTAGE		PANEL SIZE		MOUNTING		AIC RATING		
208Y/120V 3-PH		400A MLO		SURFACE		42,000	PHASE "A" LOAD	204
							PHASE "B" LOAD	230.5
NEMA RATING: 1							PHASE "C" LOAD	183

CIRCUIT NUMBER	DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION	CIRCUIT NUMBER
1	BUFFET EQUIPMENT	20-1	8	A	20	30-2	WASHING MACHINE	2
3	BUFFET EQUIPMENT	20-1	8	B	20	-	-	4
5	BUFFET EQUIPMENT	20-1	8	C			OPEN	6
7	BUFFET EQUIPMENT	20-1	8	A			OPEN	8
9	BUFFET EQUIPMENT	20-1	8	B	20	30-2	WASHING MACHINE	10
11	BUFFET EQUIPMENT	20-1	8	C	20	-	-	12
13	BUFFET EQUIPMENT	20-1	8	A	10	20-1	DRYER	14
15	BUFFET EQUIPMENT	20-1	8	B	10	20-1	DRYER	16
17	BUFFET EQUIPMENT	20-1	8	C			OPEN	18
19	BUFFET EQUIPMENT	20-1	8	A	42	60-3 ST	ELEVATOR	20
21	BUFFET EQUIPMENT	20-1	8	B	42	-	-	22
23	EXTERIOR RECEPTS.	20-1	3	C	42	-	-	24
25	ACCESS CONTROL GATE	20-1	5	A		ST	SHUNT TRIP SPACE	26
27	ACCESS CONTROL GATE	20-1	5	B	5	20-1 ST	ELEVATOR LIGHTS & MISC.	28
29	SPARE	20-1		C		ST	SHUNT TRIP SPACE	30
31	LAUNDRY RECEPTS.	20-1	7.5	A			OPEN	32
33	LAUNDRY RECEPTS.	20-1	4.5	B	42	60-3 ST	ELEVATOR	34
35	LAUNDRY RECEPTS.	20-1	3	C	42	-	-	36
37	BREAK ROOM RECEPT.	20-1	5	A	42	-	-	38
39	BREAK ROOM RECEPT.	20-1	5	B		ST	SHUNT TRIP SPACE	40
41	BREAK ROOM RECEPT.	20-1	5	C	5	20-1 ST	ELEVATOR LIGHTS & MISC.	42
43	BREAK ROOM RECEPT.	20-1	5	A		-	SHUNT TRIP SPACE	44
45	EXTERIOR RECEPTS.	20-1	6	B			OPEN	46
47	GARAGE RECEPTS.	20-1	3	C			OPEN	48
49	GARAGE RECEPTS.	20-1	3	A			OPEN	50
51	STAIR LIGHTING	20-1	5	B			OPEN	52
53	STAIR LIGHTING	20-1	5	C			OPEN	54
55	INTERIOR LIGHTING	20-1	10	A			OPEN	56
57	INTERIOR LIGHTING	20-1	10	B			OPEN	58
59	INTERIOR LIGHTING	20-1	10	C			OPEN	60
61	EXTERIOR LIGHTING	20-1	10	A			OPEN	62
63	SPARE	20-1		B			OPEN	64
65	SPARE	20-1		C			OPEN	66
67	FOOD PREP COUNTER RECEPTS.	20-1	3	A			OPEN	68
69	FOOD PREP REFRIGERATOR	20-1	8	B			OPEN	70
71	FOOD PREP COFFEE MAKER	20-1	8	C			OPEN	72
73	FOOD PREP COUNTER RECEPT.	20-1	1.5	A			OPEN	74
75	FOOD PREP MICROWAVE	20-1	8	B			OPEN	76
77	FOOD PREP DISHWASHER	20-1	8	C			OPEN	78
79	FOOD PREP REFRIGERATOR	20-1	8	A			OPEN	80
81	FOOD PREP REFRIGERATOR	20-1	8	B			OPEN	82
83	FOOD PREP RECEPTS.	20-1	5	C			OPEN	84

NOTES:
- A: PANEL SHALL BE EQUAL TO SQUARE D MODEL "QO"
- B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.
- C: AFTER COMPLETION OF WORK, ELECTRICAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.

DISTRIBUTION PANEL 'P2A'

VOLTAGE	PANEL SIZE		MOUNTING		AIC RATING		
208Y/120V 3-PH	600A MLO		SURFACE		22,000	PHASE "A" LOAD	366
						PHASE "B" LOAD	366
NEMA RATING: 1						PHASE "C" LOAD	366

DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION
GUESTROOM 200 PANEL	100-2	65	A	65	100-2	GUESTROOM 212 PANEL
-	-	65	B	65	-	-
GUESTROOM 201 PANEL	100-2	65	C	65	100-2	GUESTROOM 213 PANEL
-	-	65	A	65	-	-
GUESTROOM 202 PANEL	100-2	65	B	65	100-2	GUESTROOM 214 PANEL
-	-	65	C	65	-	-
GUESTROOM 203 PANEL	100-2	65	A	65	100-2	GUESTROOM 215 PANEL
-	-	65	B	65	-	-
GUESTROOM 204 PANEL	100-2	65	C	65	100-2	GUESTROOM 216 PANEL
-	-	65	A	65	-	-
GUESTROOM 205 PANEL	100-2	65	B	65	100-2	GUESTROOM 217 PANEL
-	-	65	C	65	-	-
GUESTROOM 206 PANEL	100-2	65	A	65	100-2	GUESTROOM 218 PANEL
-	-	65	B	65	-	-
GUESTROOM 207 PANEL	100-2	65	C	65	100-2	GUESTROOM 219 PANEL
-	-	65	A	65	-	-
GUESTROOM 208 PANEL	100-2	65	B	65	100-2	GUESTROOM 220 PANEL
-	-	65	C	65	-	-
GUESTROOM 209 PANEL	100-2	65	A	65	100-2	GUESTROOM 221 PANEL
-	-	65	B	65	-	-
GUESTROOM 210 PANEL	100-2	65	C		100-2	SPARE
-	-	65	A		-	-
GUESTROOM 211 PANEL	100-2	65	B			OPEN
-	-		C			OPEN
OPEN			A			OPEN
OPEN			B			OPEN
OPEN			C			OPEN

NOTES:
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- B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.
- C: AFTER COMPLETION OF WORK, ELECTRICAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.
- D: GUESTROOM ELECTRICAL LOADS AND DISTRIBUTION PANEL TOTAL LOAD HAVE BEEN CALCULATED PER NEC ARTICLE 220

DISTRIBUTION PANEL 'P2B'

VOLTAGE	PANEL SIZE		MOUNTING		AIC RATING		
208Y/120V 3-PH	600A MLO		SURFACE		22,000	PHASE "A" LOAD	426
						PHASE "B" LOAD	421.5
NEMA RATING: 1						PHASE "C" LOAD	351

DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION
GUESTROOM 222 PANEL	100-2	65	A	65	100-2	GUESTROOM 234 PANEL
-	-	65	B	65	-	-
GUESTROOM 223 PANEL	100-2	65	C	65	100-2	GUESTROOM 235 PANEL
-	-	65	A	65	-	-
GUESTROOM 224 PANEL	100-2	65	B	65	100-2	GUESTROOM 236 PANEL
-	-	65	C	65	-	-
GUESTROOM 225 PANEL	100-2	65	A	65	100-2	GUESTROOM 237 PANEL
-	-	65	B	65	-	-
GUESTROOM 226 PANEL	100-2	65	C	65	100-2	GUESTROOM 238 PANEL
-	-	65	A	65	-	-
GUESTROOM 227 PANEL	100-2	65	B	65	100-2	GUESTROOM 239 PANEL
-	-	65	C	65	-	-
GUESTROOM 228 PANEL	100-2	65	A	65	100-2	GUESTROOM 240 PANEL
-	-	65	B	65	-	-
GUESTROOM 229 PANEL	100-2	65	C	65	100-2	GUESTROOM 241 PANEL
-	-	65	A	65	-	-
GUESTROOM 230 PANEL	100-2	65	B	75	100-2	PANEL 'P2.1'
-	-	65	C	70.5	-	-
GUESTROOM 231 PANEL	100-2	65	A		100-2	SPARE
-	-	65	B		-	-
GUESTROOM 232 PANEL	100-2	65	C			OPEN
-	-	65	A			OPEN
GUESTROOM 233 PANEL	100-2	65	B			OPEN
-	-	65	C			OPEN
OPEN			A			OPEN
OPEN			B			OPEN
OPEN			C			OPEN

NOTES:
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- C: AFTER COMPLETION OF WORK, ELECTRICAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.
- D: GUESTROOM ELECTRICAL LOADS AND DISTRIBUTION PANEL TOTAL LOAD HAVE BEEN CALCULATED PER NEC ARTICLE 220

DISTRIBUTION PANEL 'P3A'

VOLTAGE	PANEL SIZE		MOUNTING		AIC RATING		
208Y/120V 3-PH	600A MLO		SURFACE		22,000	PHASE "A" LOAD	366
						PHASE "B" LOAD	366
NEMA RATING: 1						PHASE "C" LOAD	366

DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION
GUESTROOM 300 PANEL	100-2	65	A	65	100-2	GUESTROOM 312 PANEL
-	-	65	B	65	-	-
GUESTROOM 301 PANEL	100-2	65	C	65	100-2	GUESTROOM 313 PANEL
-	-	65	A	65	-	-
GUESTROOM 303 PANEL	100-2	65	B	65	100-2	GUESTROOM 314 PANEL
-	-	65	C	65	-	-
GUESTROOM 303 PANEL	100-2	65	A	65	100-2	GUESTROOM 315 PANEL
-	-	65	B	65	-	-
GUESTROOM 304 PANEL	100-2	65	C	65	100-2	GUESTROOM 316 PANEL
-	-	65	A	65	-	-
GUESTROOM 305 PANEL	100-2	65	B	65	100-2	GUESTROOM 317 PANEL
-	-	65	C	65	-	-
GUESTROOM 306 PANEL	100-2	65	A	65	100-2	GUESTROOM 318 PANEL
-	-	65	B	65	-	-
GUESTROOM 307 PANEL	100-2	65	C	65	100-2	GUESTROOM 319 PANEL
-	-	65	A	65	-	-
GUESTROOM 308 PANEL	100-2	65	B	65	100-2	GUESTROOM 320 PANEL
-	-	65	C	65	-	-
GUESTROOM 309 PANEL	100-2	65	A	65	100-2	GUESTROOM 321 PANEL
-	-	65	B	65	-	-
GUESTROOM 310 PANEL	100-2	65	C		100-2	SPARE
-	-	65	A		-	-
GUESTROOM 311 PANEL	100-2	65	B			OPEN
-	-		C			OPEN
OPEN			A			OPEN
OPEN			B			OPEN
OPEN			C			OPEN

NOTES:
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- B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.
- C: AFTER COMPLETION OF WORK, ELECTRICAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.
- D: GUESTROOM ELECTRICAL LOADS AND DISTRIBUTION PANEL TOTAL LOAD HAVE BEEN CALCULATED PER NEC ARTICLE 220

DISTRIBUTION PANEL 'P3B'

VOLTAGE	PANEL SIZE		MOUNTING		AIC RATING		
208Y/120V 3-PH	600A MLO		SURFACE		22,000	PHASE "A" LOAD	426
						PHASE "B" LOAD	421.5
NEMA RATING: 1						PHASE "C" LOAD	351

DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION
GUESTROOM 322 PANEL	100-2	65	A	65	100-2	GUESTROOM 334 PANEL
-	-	65	B	65	-	-
GUESTROOM 323 PANEL	100-2	65	C	65	100-2	GUESTROOM 335 PANEL
-	-	65	A	65	-	-
GUESTROOM 324 PANEL	100-2	65	B	65	100-2	GUESTROOM 336 PANEL
-	-	65	C	65	-	-
GUESTROOM 325 PANEL	100-2	65	A	65	100-2	GUESTROOM 337 PANEL
-	-	65	B	65	-	-
GUESTROOM 326 PANEL	100-2	65	C	65	100-2	GUESTROOM 338 PANEL
-	-	65	A	65	-	-
GUESTROOM 327 PANEL	100-2	65	B	65	100-2	GUESTROOM 339 PANEL
-	-	65	C	65	-	-
GUESTROOM 328 PANEL	100-2	65	A	65	100-2	GUESTROOM 340 PANEL
-	-	65	B	65	-	-
GUESTROOM 329 PANEL	100-2	65	C	65	100-2	GUESTROOM 341 PANEL
-	-	65	A	65	-	-
GUESTROOM 330 PANEL	100-2	65	B	75	100-2	PANEL 'P3.1'
-	-	65	C	70.5	-	-
GUESTROOM 331 PANEL	100-2	65	A		100-2	SPARE
-	-	65	B		-	-
GUESTROOM 332 PANEL	100-2	65	C			OPEN
-	-	65	A			OPEN
GUESTROOM 333 PANEL	100-2	65	B			OPEN
-	-	65	C			OPEN
OPEN			A			OPEN
OPEN			B			OPEN
OPEN			C			OPEN

NOTES:
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- C: AFTER COMPLETION OF WORK, ELECTRICAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.
- D: GUESTROOM ELECTRICAL LOADS AND DISTRIBUTION PANEL TOTAL LOAD HAVE BEEN CALCULATED PER NEC ARTICLE 220

DISTRIBUTION PANEL 'P4A'

VOLTAGE	PANEL SIZE		MOUNTING		AIC RATING		
208Y/120V 3-PH	600A MLO		SURFACE		22,000	PHASE "A" LOAD	366
						PHASE "B" LOAD	366
NEMA RATING: 1						PHASE "C" LOAD	366

DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION
GUESTROOM 400 PANEL	100-2	65	A	65	100-2	GUESTROOM 412 PANEL
-	-	65	B	65	-	-
GUESTROOM 401 PANEL	100-2	65	C	65	100-2	GUESTROOM 413 PANEL
-	-	65	A	65	-	-
GUESTROOM 402 PANEL	100-2	65	B	65	100-2	GUESTROOM 414 PANEL
-	-	65	C	65	-	-
GUESTROOM 403 PANEL	100-2	65	A	65	100-2	GUESTROOM 415 PANEL
-	-	65	B	65	-	-
GUESTROOM 404 PANEL	100-2	65	C	65	100-2	GUESTROOM 416 PANEL
-	-	65	A	65	-	-
GUESTROOM 405 PANEL	100-2	65	B	65	100-2	GUESTROOM 417 PANEL
-	-	65	C	65	-	-
GUESTROOM 406 PANEL	100-2	65	A	65	100-2	GUESTROOM 418 PANEL
-	-	65	B	65	-	-
GUESTROOM 407 PANEL	100-2	65	C	65	100-2	GUESTROOM 419 PANEL
-	-	65	A	65	-	-
GUESTROOM 408 PANEL	100-2	65	B	65	100-2	GUESTROOM 420 PANEL
-	-	65	C	65	-	-
GUESTROOM 409 PANEL	100-2	65	A	65	100-2	GUESTROOM 421 PANEL
-	-	65	B	65	-	-
GUESTROOM 410 PANEL	100-2	65	C		100-2	SPARE
-	-	65	A		-	-
GUESTROOM 411 PANEL	100-2	65	B			OPEN
-	-		C			OPEN
OPEN			A			OPEN
OPEN			B			OPEN
OPEN			C			OPEN

NOTES:
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- B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.
- C: AFTER COMPLETION OF WORK, ELECTRICAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.
- D: GUESTROOM ELECTRICAL LOADS AND DISTRIBUTION PANEL TOTAL LOAD HAVE BEEN CALCULATED PER NEC ARTICLE 220

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. November 1, 2023
PE-2015017071
MO Certificate of Authority # 2018029680

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J2 PROJECT No:	J21006
J2 DESIGN:	ACW
ISSUE TITLE	DATE
CITY SUBMISSION	11 / 01 / 2023

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE

ELECTRICAL SCHEDULES

SHEET NUMBER

E602

DISTRIBUTION PANEL 'P4B'

VOLTAGE	PANEL SIZE	MOUNTING	AIC RATING		
208Y/120V 3-PH	600A MLO	SURFACE	22,000	PHASE "A" LOAD	426
				PHASE "B" LOAD	427.5
NEMA RATING: 1				PHASE "C" LOAD	351

DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION
GUESTROOM 422 PANEL	100-2	65	A	65	100-2	GUESTROOM 434 PANEL
-	-	65	B	65	-	-
GUESTROOM 423 PANEL	100-2	65	C	65	100-2	GUESTROOM 435 PANEL
-	-	65	A	65	-	-
GUESTROOM 424 PANEL	100-2	65	B	65	100-2	GUESTROOM 436 PANEL
-	-	65	C	65	-	-
GUESTROOM 425 PANEL	100-2	65	A	65	100-2	GUESTROOM 437 PANEL
-	-	65	B	65	-	-
GUESTROOM 426 PANEL	100-2	65	C	65	100-2	GUESTROOM 438 PANEL
-	-	65	A	65	-	-
GUESTROOM 427 PANEL	100-2	65	B	65	100-2	GUESTROOM 439 PANEL
-	-	65	C	65	-	-
GUESTROOM 428 PANEL	100-2	65	A	65	100-2	GUESTROOM 440 PANEL
-	-	65	B	65	-	-
GUESTROOM 429 PANEL	100-2	65	C	65	100-2	GUESTROOM 441 PANEL
-	-	65	A	65	-	-
GUESTROOM 430 PANEL	100-2	65	B	75	100-2	PANEL 'P4.1'
-	-	65	C	76.5	-	-
GUESTROOM 431 PANEL	100-2	65	A		100-2	SPARE
-	-	65	B		-	-
GUESTROOM 432 PANEL	100-2	65	C			OPEN
-	-	65	A			OPEN
GUESTROOM 433 PANEL	100-2	65	B			OPEN
-	-	65	C			OPEN
OPEN			A			OPEN
OPEN			B			OPEN
OPEN			C			OPEN

NOTES:

A: PANEL SHALL BE EQUAL TO SQUARE D "I-LINE" SERIES

B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.

C: AFTER COMPLETION OF WORK. ELECTRICAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL

D: GUESTROOM ELECTRICAL LOADS AND DISTRIBUTION PANEL TOTAL LOAD HAVE BEEN CALCULATED PER NEC ARTICLE 220

PANEL 'P2.1' SCHEDULE

VOLTAGE	PANEL SIZE	MOUNTING	AIC RATING		
120/208V 1-PH	100A MLO	RECESSED	10,000	PHASE "A" LOAD	75
				PHASE "B" LOAD	70.5

CIRCUIT NUMBER	DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION	CIRCUIT NUMBER
1	CORRIDOR RECEPTS.	20-1	6	A	16	20-2	PTAC	2
3	LINEN STORAGE RECEPTS.	20-1	4.5	B	16	-	-	4
5	STORAGE RECEPTS.	20-1	4.5	A	16	20-2	PTAC	6
7	CORRIDOR RECEPTS.	20-1	6	B	16	-	-	8
9	I.T. RECEPTS.	20-1	4.5	A	14	25-2	I.T. MINI-SPLIT (FCU-1 / HP-1)	10
11	I.T. RECEPTS.	20-1	3	B	14	-	-	12
13	I.T. RECEPTS.	20-1	3	A			OPEN	14
15	SMOKE CURTAIN	20-1	3	B			OPEN	16
17	SMOKE CURTAIN	20-1	3	A			OPEN	18
19	LIGHTING	20-1	8	B			OPEN	20
21	LIGHTING	20-1	8	A			OPEN	22
23	SPARE	20-1		B			OPEN	24
25	SPARE	20-1		A			OPEN	26
27	SPARE	20-1		B			OPEN	28
29	SPARE	20-1		A			OPEN	30

NOTES:

A: PANEL SHALL BE EQUAL TO SQUARE D MODEL "QO"

B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.

C: AFTER COMPLETION OF WORK, ELECTRICAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.

PANEL 'P3.1' SCHEDULE

VOLTAGE	PANEL SIZE	MOUNTING	AIC RATING		
120/208V 1-PH	100A MLO	RECESSED	10,000	PHASE "A" LOAD	75
				PHASE "B" LOAD	70.5

CIRCUIT NUMBER	DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION	CIRCUIT NUMBER
1	CORRIDOR RECEPTS.	20-1	6	A	16	20-2	PTAC	2
3	LINEN STORAGE RECEPTS.	20-1	4.5	B	16	-	-	4
5	STORAGE RECEPTS.	20-1	4.5	A	16	20-2	PTAC	6
7	CORRIDOR RECEPTS.	20-1	6	B	16	-	-	8
9	I.T. RECEPTS.	20-1	4.5	A	14	25-2	I.T. MINI-SPLIT (FCU-1 / HP-1)	10
11	I.T. RECEPTS.	20-1	3	B	14	-	-	12
13	I.T. RECEPTS.	20-1	3	A			OPEN	14
15	SMOKE CURTAIN	20-1	3	B			OPEN	16
17	SMOKE CURTAIN	20-1	3	A			OPEN	18
19	LIGHTING	20-1	8	B			OPEN	20
21	LIGHTING	20-1	8	A			OPEN	22
23	SPARE	20-1		B			OPEN	24
25	SPARE	20-1		A			OPEN	26
27	SPARE	20-1		B			OPEN	28
29	SPARE	20-1		A			OPEN	30

NOTES:

A. PANEL SHALL BE EQUAL TO SQUARE D MODEL "QO"

B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.

C: AFTER COMPLETION OF WORK, ELECTRICAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.

PANEL 'P4.1' SCHEDULE

VOLTAGE	PANEL SIZE	MOUNTING	AIC RATING		
120/208V 1-PH	100A MLO	RECESSED	10,000	PHASE "A" LOAD	75
				PHASE "B" LOAD	76.5

CIRCUIT NUMBER	DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION	CIRCUIT NUMBER
1	CORRIDOR RECEPTS.	20-1	6	A	16	20-2	PTAC	2
3	LINEN STORAGE RECEPTS.	20-1	4.5	B	16	-	-	4
5	STORAGE RECEPTS.	20-1	4.5	A	16	20-2	PTAC	6
7	CORRIDOR RECEPTS.	20-1	6	B	16	-	-	8
9	I.T. RECEPTS.	20-1	4.5	A	14	25-2	I.T. MINI-SPLIT (FCU-1 / HP-1)	10
11	I.T. RECEPTS.	20-1	3	B	14	-	-	12
13	I.T. RECEPTS.	20-1	3	A			OPEN	14
15	SMOKE CURTAIN	20-1	3	B			OPEN	16
17	SMOKE CURTAIN	20-1	3	A			OPEN	18
19	LIGHTING	20-1	8	B			OPEN	20
21	LIGHTING	20-1	8	A			OPEN	22
23	ROOFTOP RECEPTS.	20-1	6	B			OPEN	24
25	SPARE	20-1		A			OPEN	26
27	SPARE	20-1		B			OPEN	28
29	SPARE	20-1		A			OPEN	30

NOTES:

A: PANEL SHALL BE EQUAL TO SQUARE D MODEL "QO"

B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.

C: AFTER COMPLETION OF WORK, ELECTRICAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.

BRANCH CIRCUIT CONDUCTOR SCHEDULE

AMPACITY	COPPER AWG SIZE	MAXIMUM DISTANCE (FEET)				MINIMUM CONDUIT SIZE
		1Ø		3Ø		
		120V	277V	208V	480V	
20	12	55'	130'	115'	260'	1/2"
	10	90'	205'	180'	415'	3/4"
30	10	60'	135'	120'	275'	3/4"
	8	95'	220'	190'	445'	1"
35	8	80'	190'	165'	380'	1"
	6	130'	300'	260'	605'	1"
40	8	70'	165'	145'	330'	1"
	6	110'	260'	225'	525'	1"
45	6	100'	235'	200'	470'	1'
	4	160'	370'	325'	750'	1-1/4"
50	6	90'	210'	180'	420'	1-1/4"
	4	145'	335'	290'	675'	1-1/4"
60	6	75'	175'	150'	350'	1-1/4"
	4	120'	280'	240'	560'	1-1/4"
70	4	105'	240'	205'	480'	1-1/4"
	3	130'	300'	260'	605'	1-1/4"
80	4	55'	210'	180'	420'	1-1/4"
	3	90'	260'	230'	530'	1-1/4"
90	3	100'	235'	200'	470'	1-1/4"
	2	125'	295'	255'	595'	1-1/4"
100	3	90'	210'	180'	420'	1-1/4"
	2	115'	265'	230'	535'	1-1/4"

NOTES:

1. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER. ALL WIRE SIZES SHOWN ARE BASED ON CONDUCTOR TEMPERATURE RATING OF 75°C & AMBIENT TEMPERATURE OF 30°C PER NEC.
2. DISTANCE SHOWN ABOVE IS LENGTH FROM OVERCURRENT PROTECTION TO DEVICE/EQUIPMENT.
3. REFER TO PLAN SHEETS FOR BRANCH CONDUCTOR SIZING LENGTHS GREATER THAN SHOWN ABOVE.
4. VOLTAGE DROP CALCULATIONS BASED ON 3% DROP, 80% CIRCUIT LOAD, THHN/THWN INSULATION, 100% POWER FACTOR, BALANCED LOAD, NEGLIGIBLE REACTANCE, & SIX OR LESS CURRENT-CARRYING CONDUCTORS IN RACEWAY.

FEEDER CONDUCTOR SCHEDULE

AMPACITY	CONDUCTORS					EQUIPMENT GROUND		MINIMUM CONDUIT SIZE (PER SET)
	# OF SETS	QUANTITY PER SET		AWG SIZE		AWG SIZE		
		3Ø 'WYE'	1Ø OR 3Ø ▲	COPPER	ALUMINUM	COPPER	ALUMINUM	
30	1	4	3	10	8	10	8	3/4"
40	1	4	3	8	8	8	8	1"
45	1	4	3	8	6	8	8	1"
50	1	4	3	8	6	10	8	1"
60	1	4	3	6	4	10	6	1"
70	1	4	3	4	2	8	6	1-1/4"
80	1	4	3	4	2	8	6	1-1/4"
90	1	4	3	3	2	8	6	1-1/4"
100	1	4	3	3	1	8	6	1-1/4"
110	1	4	3	2	1/O	6	4	1-1/4"
125	1	4	3	1	2/O	6	4	2"
150	1	4	3	1/O	3/O	6	4	2"
175	1	4	3	2/O	4/O	6	4	2"
200	1	4	3	3/O	250	6	4	2-1/2"
225	1	4	3	4/O	300	4	2	2-1/2"
250	1	4	3	250	350	4	2	3"
300	1	4	3	350	500	4	2	4"
350	1	4	3	400	600	3	1	4"
400	1	4	3	500	750	3	1	4"
500	2	4	3	250	350	2	1/O	4"
600	2	4	3	350	500	1	2/O	4"
800	2	4	3	500	750	1/O	3/O	4"
1000	3	4	3	400	350	2/O	4/O	4"
1200	4	4	3	350	500	3/O	250	4"
1600	5	4	3	400	750	4/O	350	4"
2000	6	4	3	400	750	250	400	4"

NOTES:

1. ALLWIRE SIZES SHOWN ARE BASED ON CONDUCTOR TEMPERATURE RATING OF 75°C & AMBIENT TEMPERATURE RATING OF 30°C PER NEC.
2. MAXIMUM ALLOWABLE VOLTAGE DROP FOR FEEDER CONDUCTORS SHALL BE 2%.
3. ELECTRICAL CONTRACTOR TO ADJUST CONDUCTOR SIZES FOR LONG CIRCUIT LENGTHS & AMBIENT TEMPERATURES HIGHER THAN 30°C.

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. November 1, 2023
PE-2015017071
MO Certificate of Authority # 2018029680

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J2 PROJECT No:	J21006
J2 DESIGN:	ACW
ISSUE TITLE	DATE
CITY SUBMISSION	11 / 01 / 2023

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE

ELECTRICAL SCHEDULES

SHEET NUMBER

E603

LIGHT FIXTURE SCHEDULE

TAG	MANUFACTURER (OR EQUAL)	MODEL NUMBER (OR EQUAL)	DESCRIPTION	MOUNTING	LUMEN OUTPUT	CCT (°K)	CRI	VOLTS	WATTS	NOTES
C1	HALO	HC620D010-HM60525930-61MDH	6" RECESSED DOWNLIGHT	CEILING / RECESSED	2000	3000	90	120	20	
C2	HALO	H550ICAT/ML5609930/592H	5" RECESSED DOWNLIGHT	CEILING / RECESSED	842	3000	90	120	13	
C3	HALO	HC615D010-HM612930-61MDH	6" RESCSEED DONWLIGHT	CEILING / RECESSED	1235	3000	90	120	14	
C4	HALO	H550ICAT/ML5609930/595WW	5" RECESSED DOWNLIGHT	CEILING / RECESSED	842	3000	90	120	13	WALL WASH
C5	HALO	E55ICAT-ML5609930-592W	5" RECESSED DOWNLIGHT	CEILING / RECESSED	832	3000	90	120	9	
D1	-	-	DECORATIVE PENDANT	CEILING / SUSPENDED	-	-	-	120	20 MAX	SEE INTERIOR DESIGNER PLANS (WELCOME DESK)
D2	-	-	DECORATIVE LINEAR STRIP	CEILING / RECESSED	-	-	-	-	50 MAX	SEE INTERIOR DESIGNER PLANS (WELCOME DESK)
D3	-	-	DECORATIVE PENDANT	CEILING / SUSPENDED	-	-	-	-	50 MAX	SEE INTERIOR DESIGNER PLANS (HUB)
D4	-	-	DECORATIVE PENDANT	CEILING / SUSPENDED	-	-	-	-	50 MAX	SEE INTERIOR DESIGNER PLANS (COMMUNITY)
D5	-	-	DECORATIVE SCONCE	WALL / SURFACE	-	-	-	-	20 MAX	SEE INTERIOR DESIGNER PLANS (ELEVATOR LOBBY)
D6	-	-	DECORATIVE FLUSH MOUNT	CEILING / SURFACE	-	-	-	-	20 MAX	SEE INTERIOR DESIGNER PLANS (CORRIDORS)
D7	-	-	DECORATIVE FLUSH MOUNT	CEILING / SURFACE	-	-	-	-	20 MAX	SEE INTERIOR DESIGNER PLANS (GUESTROOM)
D8	-	-	DECORATIVE TRACK LIGHTING SYSTEM	CEILING / SURFACE	-	-	-	-	30 MAX	SEE INTERIOR DESIGN PLANS (GUESTROOM)
D9	-	-	DECORATIVE WALL SCONCE	WALL / SURFACE	-	-	-	-	10 MAX	SEE INTERIOR DESIGNER PLANS (GUESTROOM)
D10	-	-	DECORATIVE WALL SCONCE	WALL / SURFACE	-	-	-	-	20 MAX	SEE INTERIOR DESIGN PLANS (GUESTROOM)
E1	SURELITES	APX7R	INTERIOR EXIT LIGHT WITH HEADS	WALL / CEILING	-	-	-	120	1	
E2	SURELITES	APCH7R WITH APWR2	INTERIOR EXIT LIGHT WITH EXTERIOR REMOTE HEAD	WALL / CEILING	-	-	-	120	-	
E3	SURELITES	SEL60	EMERGENCY EGRESS LIGHT	WALL	-	-	-	120	1	
E4	MULE	CWL-1-R-WH	EXTERIOR EXIT LIGHT WITH HEADS	WALL / CEILING	-	-	-	120	3.6	WITH RED LETTERS
E5	MULE	CWL-1-R-WH WITH R-ASRLED-2-WP	EXTERIOR EXIT LIGHT WITH HEADS WITH EXTERIOR REMOTE HEAD	WALL / CEILING	-	-	-	120	5	WITH RED LETTERS & REMOTE HEADS
E6	MULE	EOE-BB-10L3	EXTERIOR EMERGENCY LIGHT	WALL / CEILING	-	-	-	120	10	
G1	MCGRAW-EDISON	TT-D4-740-U-MQ	LED PARKING GARAGE LIGHT	SURFACE / CEILING	8002	4000	70	120	58	
L1	NEO-RAY	S123DS-8C340D830JB-8FO/8-U-DD-F-W	8' LINEAR STRIP	CEILING / SURFACE	2720	3000	80	120	24	
L2	HALO	HU1124D9SMB	24" UNDERCABINET	SURFACE	660	3000	90	120	8	
L3	HALO	HU1148D9SMB	48" UNDERCABINET	SURFACE	1320	3000	90	120	16	
L4	COOPER	LM-05L-940-120-ODD-UNV-SSM-ST-D-2F	2" LINEAR STRIP	SURFACE	1254	4000	90	120	10	
L5	COOPER	LM-10L-940-120-OD-UNV-SSM-ST-D-2F	2" LINEAR STRIP	SURFACE	1180	4000	90	120	10	
L6	ACCLAIM LIGHTING	DCD.142.DABE / DCD.142.AABE	COVE LIGHTING	SURFACE	575/FT	3000	85	120	12/FT	WITH START & LINK CABLES
S1	METALUX	4WNLED-LD4-40SL-FUNV-L835-CD1-U	4' SURFACE WRAP							
S2	METALUX	4VT-LD5-6-DR-UNV-L840-UNV	4' VAPORTITE LED	ELEVATOR PIT	6000	4000	80	120	51	WITH 'EL10W' BATTERY PACK WHERE INDICATED
S3	HAFELE	833 SERIES	45"L x 1" LED STRIP	CEILING / SURFACE	891	3000	90	120	11	WITH 833.73547 / 833.74.960 / 833.89.003 / 833.89.128 / 833.89.092 / 833.89.142 ACCESSORIES
T1	METALUX	24GR-LD5-48-F1-UNV-L835-CD1-U	2x4 LED FLAT PANEL	CEILING / A.C.T.						WITH 'EL14W' BATTERY PACK WHERE INDICATED
T2	METALUX	22GR-LD5-43-F1-UNV-L835-CD1-U	2x2 LED TROFFER							
T3	METALUX	22GR-LD5-43-F1-UNV-L835-CD1-U	2x2 LED TROFFER							
T4	METALUX	22CZ2039-UNV-L835-CD1-U	2x2 LED TROFFER						32	
T5	METALUX	24SR-LD2-39-C-UNV-L835-CD1-U	2x4 LED TROFFER							
W1	LUMARK	XTOR2B-W	LED WALLPACK	EXTERIOR WALL	1523	3500	70	120	18	
W2	SHAPER	673-16WP-L3-830-BM-UNV-2VTB-PC-BC	LED WALL SCONCE	EXTERIOR WALL	2000	3000	80	120	19	

NOTES:
1. VERIFY LIGHT FIXTURE FINISHES WITH OWNER / ARCHITECT PRIOR TO INSTALLATION

LIGHTING CONTROL SCHEDULE

SPACE DETAILS		SENSOR					DIGITAL CONTROLS								ANALOG WALL SWITCH			NOTES
CONTROLS CIRCUIT TAG (SEE PLANS)	LOCATION / NAME	VACANCY MODE	OCCUPANCY MODE	SENSOR TIMEOUT PERIOD (MIN.)	SENSOR TYPE	OVERRIDE SWITCH	ASTRONOMICAL TIMECLOCK	SCHEDULED ON TIME	SCHEDULED OFF TIME	PHOTOCELL INPUT	SCHEDULE OVERRIDE FUNCTION	SCENE SWITCH	DIMMING	BAS INTEGRATION	MANUAL OFF/ON	MANUAL DIMMING	SWITCH LOCATION	
A	STAIRTOWER LIGHTING	-	X	30	DUAL TECH	-	-	-	-	-	-	-	X	X	-	-	-	DIM TO 50% AFTER 30 MINUTES WITHOUT OCCUPANCY DETECTION.
B	MECHANICAL / ELECTRICAL ROOMS	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	WITHIN ROOM	LOCAL ON/OFF SWITCHING
C	FOOD PREP	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	WITHIN ROOM	LOCAL ON/OFF SWITCHING
D	FLEX ROOM	-	-	-	-	-	X	ON DURING OCCUPIED HOURS		-	X	X	X	X	-	-	-	DIM TO 50% OUTSIDE OF OCCUPIED HOURS; WITH LOCAL OVERRIDE
E	BUFFET UNDERCOUNTER	-	-	-	-	-	X	ON DURING OCCUPIED HOURS		-	X	X	X	X	-	-	-	DIM TO 50% OUTSIDE OF OCCUPIED HOURS; WITH LOCAL OVERRIDE
F	BUFFET CEILING	-	-	-	-	-	X	ON DURING OCCUPIED HOURS		-	X	X	X	X	-	-	-	DIM TO 50% OUTSIDE OF OCCUPIED HOURS; WITH LOCAL OVERRIDE
G	COMMUNITY	-	-	-	-	-	X	ALWAYS ON		-	X	X	X	X	-	-	-	WITH LOCAL SCENCE SWITCH
H	COMMUNITY DECORATIVE PENDANT	-	-	-	-	-	X	ALWAYS ON		-	X	X	X	X	-	-	-	WITH LOCAL SCENCE SWITCH
I	FITNESS BEVERAGE STATION	-	X	30	DUAL TECH	-	-	-	-	-	-	-	X	X	-	-	-	DIM TO 50% AFTER 30 MINUTES WITHOUT OCCUPANCY DETECTION.
J	FITNESS LIGHTING	-	X	30	DUAL TECH	KEYED	-	-	-	-	-	-	X	X	-	-	-	DIM TO 50% AFTER 30 MINUTES WITHOUT OCCUPANCY DETECTION.
K	HUB COVE LIGHTING	-	-	-	-	-	X	ALWAYS ON		-	X	-	X	X	-	-	-	WITH LOCAL DIMMING SWITCH
L	HUB RECESSED LIGHTING	-	-	-	-	-	X	ALWAYS ON		-	X	-	X	X	-	-	-	WITH LOCAL DIMMING SWITCH
M	HUB DECORATIVE LIGHTING	-	-	-	-	-	X	ALWAYS ON		-	X	-	X	X	-	-	-	WITH LOCAL DIMMING SWITCH
N	ELEVATOR LOBBY SCONCES	-	-	-	-	-	X	ALWAYS ON		-	X	-	X	X	-	-	-	
O	IN-A-PINCH LIGHTING	-	-	-	-	-	X	ON DURING OCCUPIED HOURS		-	X	X	X	X	-	-	-	DIM TO 50% OUTSIDE OF OCCUPIED HOURS; WITH LOCAL OVERRIDE
P	LOBBY RECESSED LIGHTING	-	-	-	-	-	-	ON DURING OCCUPIED HOURS		-	-	-	X	X	-	-	-	WITH DIMMING CONTROLS AT WELCOME DESK
Q	CORRIDOR LIGHTING	-	-	-	-	-	-	ON DURING OCCUPIED HOURS		-	-	-	X	X	-	-	-	WITH DIMMING CONTROLS AT WELCOME DESK
R	VESTIBULE LIGHTING	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	UNSWITCHED, ALWAYS ON
S	LOBBY DECORATIVE PENDANTS	-	-	-	-	-	-	ON DURING OCCUPIED HOURS		-	-	-	X	X	-	-	-	WITH DIMMING CONTROLS AT WELCOME DESK
T	WELCOME DESK PENDANT	-	-	-	-	-	-	ON DURING OCCUPIED HOURS		-	-	-	X	X	-	-	-	WITH DIMMING CONTROLS AT WELCOME DESK
U	WORK / OFFICE	-	X	30	DUAL TECH	X	-	-	-	-	-	-	X	X	-	-	-	WITH LOCAL OVERRIDE/DIMMER SWITCHES
V	MEETING	-	X	30	DUAL TECH	X	-	-	-	-	-	X	X	X	-	-	-	WITH LOCAL SCENCE SWITCH
W	EMPLOYEE BREAK ROOM	-	X	30	DUAL TECH	X	-	-	-	-	-	-	X	X	-	-	-	WITH LOCAL OVERRIDE/DIMMER SWITCHES
X	RESTROOMS	-	X	30	DUAL TECH	KEYED	-	-	-	-	-	-	-	X	-	-	-	
Y	STAFF LAUNDRY	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	WITHIN ROOM	
Z	GUEST LAUNDRY	-	X	30	DUAL TECH	-	-	-	-	-	-	-	X	X	-	-	-	DIM TO 50% AFTER 30 MINUTES WITHOUT OCCUPANCY DETECTION.
AA	POLE LIGHTS (EXTERIOR)	-	-	-	-		X	DUSK	DAWN	X	X	-	X	X	-	-	-	WITH MOTION SENSING DIMMING
BB	MONUMENT SIGN (EXTERIOR)	-	-	-	-		X	DUSK	DAWN	X	X	-	X	X	-	-	-	
CC	ILLUMINATED BOLLARDS (EXTERIOR)	-	-	-	-		X	DUSK	DAWN	X	X	-	X	X	-	-	-	
DD	BUILDING PERIMETER LIGHTING (EXTERIOR)	-	-	-	-		X	DUSK	DAWN	X	X	-	X	X	-	-	-	
EE	CANOPY LIGHTING (EXTERIOR)	-	-	-	-		X	DUSK	DAWN	X	X	-	X	X	-	-	-	
FF	I.T. CLOST LIGHTING	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	WITHIN ROOM	
GG	UPPER LEVEL GUEST CORRIDORS	-	X	30	DUAL TECH	-	X	ALWAYS ON		-	-	-	-	X	-	-	-	
HH	GARAGE LIGHTING	-	-	-	-	-	X	ALWAYS ON		-	-	-	-	X	-	-	-	DIM TO 50% AFTER 30 MINUTES WITHOUT OCCUPANCY DETECTION.
JJ	PATIO STRING LIGHTING	-	-	-	-	-	X	DUSK	DAWN	X	X	-	X	X	-	-	-	WITH LOCAL DIMMER/OVERRIDE SWITCH
KK	WELCOME DESK COVE LIGHTING	-	-	-	-	-	-	ON DURING OCCUPIED HOURS		-	-	-	X	X	-	-	-	WITH DIMMING CONTROLS AT WELCOME DESK

NOTES:
1. VERIFY ALL LIGHTING CONTROLS WITH OWNER / ARCHITECT PRIOR TO PURCHASE OF INSTALLATION & MATERIALS
2. REFER TO BRAND STANDARDS/GUIDELINES FOR ADDITIONAL CONTROLS INFORMATION AND REQUIREMENTS.
3. 'LOCAL' SWITCH LOCATION REFERS TO SWITCH LOCATED WITHIN AREA TO BE CONTROLLED.

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. December 22, 2023
PE-2015017071
MO Certificate of Authority # 2018029680

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J2 PROJECT No:	J21006
J2 DESIGN:	ACW

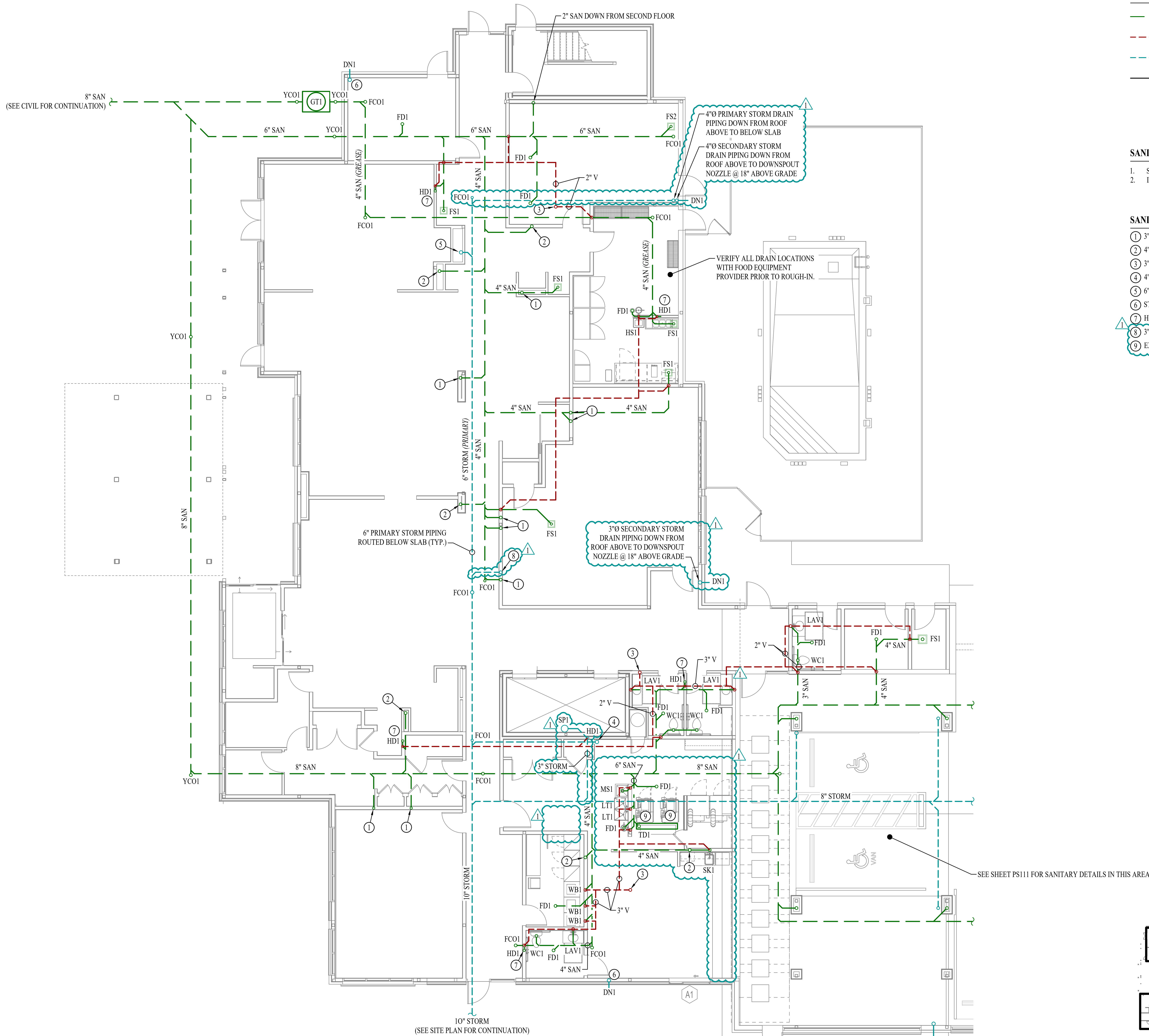
ISSUE TITLE	DATE
CITY SUBMISSION	11 / 01 / 2023
1 REVISION 1	12 / 22 / 2023

Mechanical - Electrical - Plumbing Design Drawings for
Towneplace Suites By Marriott
1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE
ELECTRCIAL SCHEDULES

SHEET NUMBER
E604



SANITARY SEWER PLAN - 1ST FLOOR - AREA A

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

SANITARY SEWER PLAN SYMBOL LEGEND

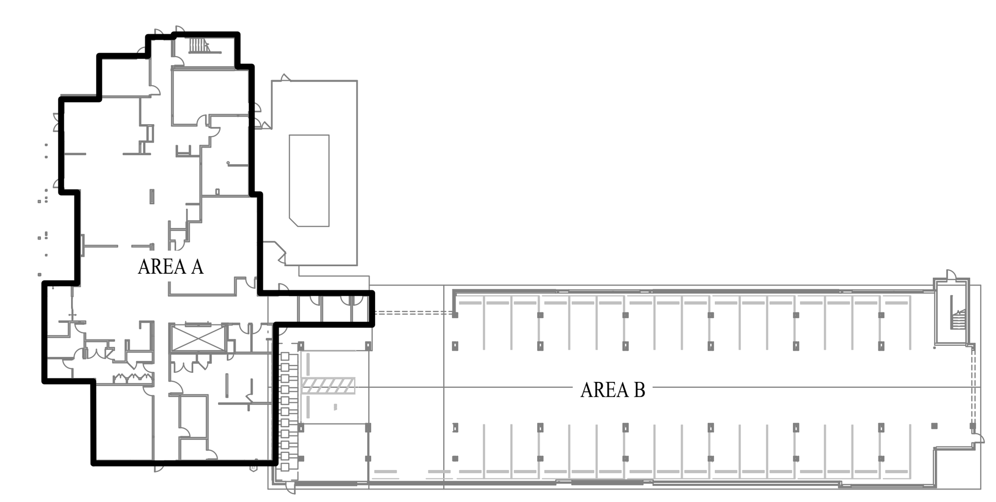
- SANITARY SEWER PIPING
- VENT PIPING
- STORM PIPING
- PIPING TURNED DOWN / TURNED UP
- TIE INTO EXISTING

SANITARY SEWER PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
2. INCLUDE ACCESSIBLE CLEANOUT WITH ACCESS COVER AT BASE OF EACH SANITARY STACK.

SANITARY SEWER PLAN KEY NOTES:

1. 3" SAN DOWN FROM SECOND FLOOR.
2. 4" SAN DOWN FROM SECOND FLOOR.
3. 3" VENT UP TO SECOND FLOOR.
4. 4" STORM DRAIN PIPING DOWN FROM SECOND FLOOR.
5. 6" STORM DRAIN PIPING DOWN FROM SECOND FLOOR.
6. STORM PIPING DOWN FROM SECOND FLOOR TO DOWNSPOUT NOZZLE AT 18" ABOVE GRADE.
7. HUB DRAIN IN WALL WITH ACCESS PANEL FOR CONDENSATE FROM GUEST ROOM PTACS.
8. 3"Ø STORM DRAIN PIPING DOWN FROM SECOND FLOOR.
9. EXTEND FULL-SIZE DRAIN FROM COMMERCIAL CLOTHES WASHER TO OVER LAUNDRY TROUGH.



KEY PLAN

SCALE: 1" = 50 ft

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. December 22, 2023
PE-2015017071
MO Certificate of Authority # 2018029680

J-SQUARED ENGINEERING
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J2 PROJECT No:	J21006
J2 DESIGN:	ACW

ISSUE TITLE	DATE
CITY SUBMISSION	11 / 01 / 2023
REVISION 1	12 / 22 / 2023

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

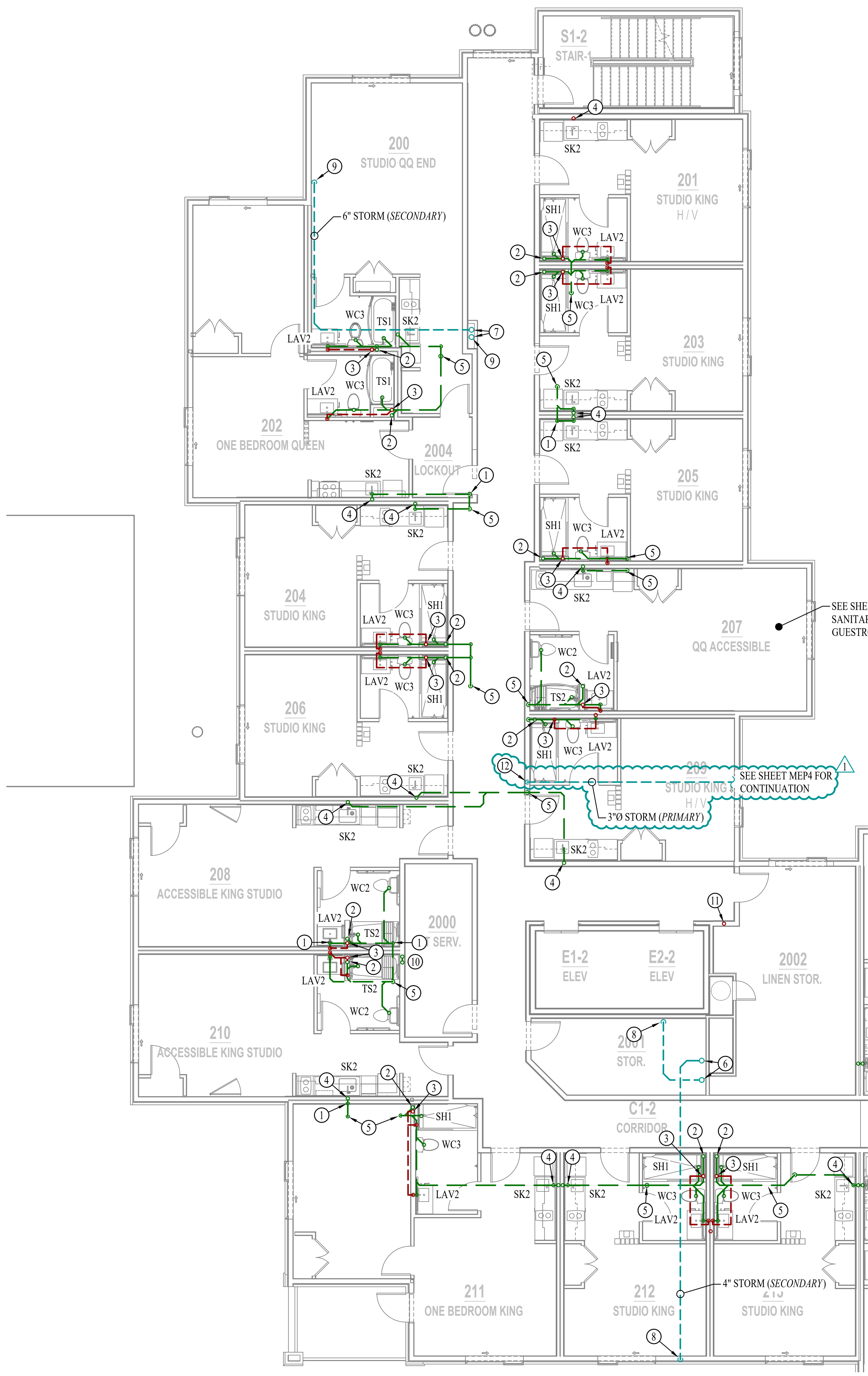
AHJ APPROVAL STAMP

SHEET TITLE

SANITARY SEWER PLAN - 1ST FLOOR - AREA A

SHEET NUMBER

PS101



SANITARY SEWER PLAN - 2ND FLOOR - AREA A

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

SANITARY SEWER PLAN SYMBOL LEGEND

- SANITARY SEWER PIPING
- VENT PIPING
- STORM PIPING
- PIPING TURNED DOWN / TURNED UP
- TIE INTO EXISTING

SANITARY SEWER PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.

SANITARY SEWER PLAN KEY NOTES:

1 PLUMBING DROP TO OFFSET AROUND STRUCTURAL TEE.

2 3" SANITARY STACK DOWN FROM THIRD FLOOR; SEE SHEET PS401 FOR THIRD AND FOURTH FLOOR SANITARY PLANS.

3 3" VENT STACK UP TO THIRD FLOOR; SEE SHEET PS401 FOR THIRD AND FOURTH FLOOR VENT PIPING PLANS.

4 2" COMBINATION DRAIN / VENT STACK DOWN FROM THIRD FLOOR.

5 4" SANITARY DOWN TO FIRST FLOOR; SEE SHEET PS102 FOR CONTINUATION.

6 4" STORM DRAIN PIPING DOWN FROM ROOF.

7 6" STORM DRAIN PIPING DOWN FROM ROOF.

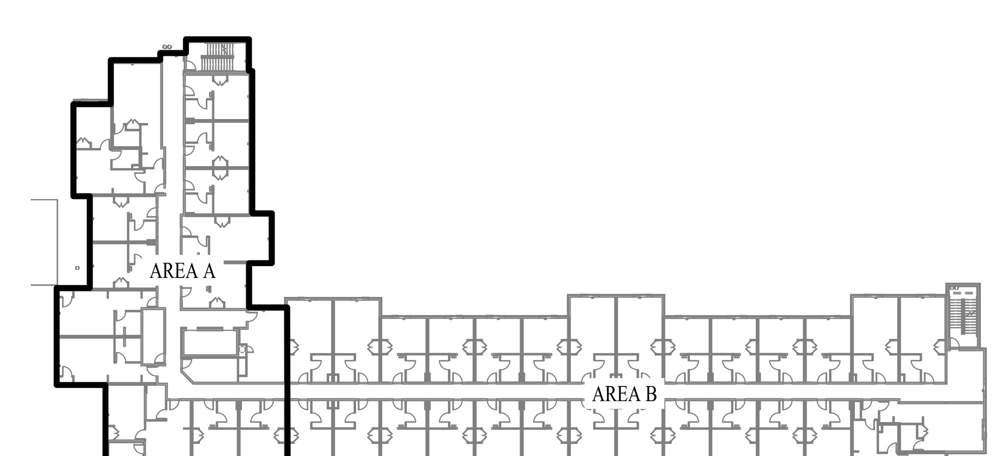
8 4" STORM DRAIN PIPING DOWN TO FIRST FLOOR.

9 6" STORM DRAIN PIPING DOWN TO FIRST FLOOR.

10 1" SANITARY STACK UP IN I.T. CLOSET WALL TO HUB DRAINS (WITH ACCESS PANELS) ON FLOORS 2,3,&4 FOR I.T. MINI SPLIT.

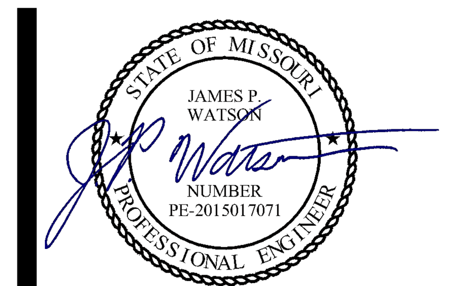
11 3" VENT UP FROM BELOW; CONTINUES UP TO 3" VTR.

1 12 3"Ø STORM DRAIN PIPING DOWN TO FIRST FLOOR.



KEY PLAN

SCALE: 1" = 50 ft



James Watson, P.E. December 22, 2023
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Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

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Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE

SANITARY SEWER PLAN - 2ND FLOOR - AREA A

SHEET NUMBER

PS102

SANITARY SEWER PLAN SYMBOL LEGEND

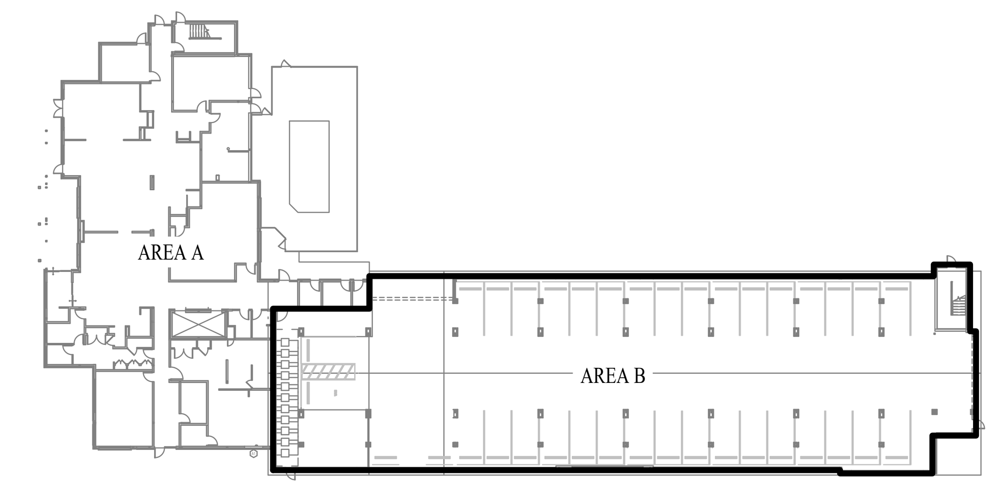
— — — (green)	SANITARY SEWER PIPING
— — — (red)	VENT PIPING
— — — (cyan)	STORM PIPING
—→ •—	PIPING TURNED DOWN / TURNED UP
✕	TIE INTO EXISTING

SANITARY SEWER PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.

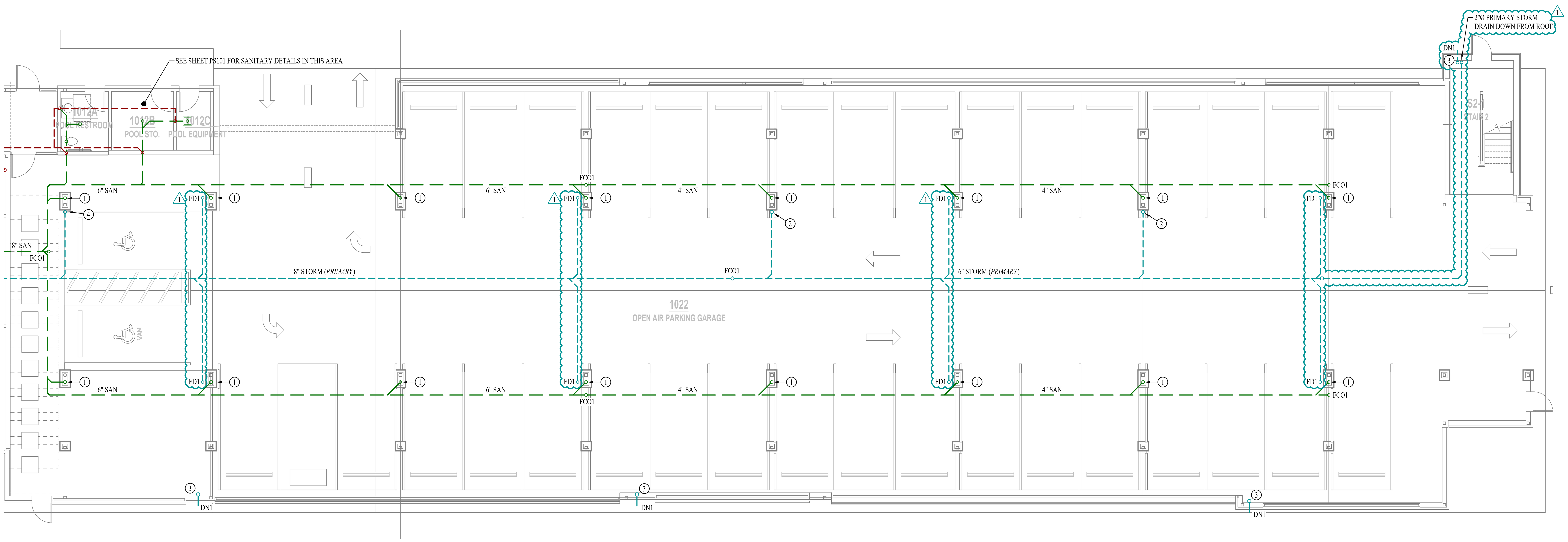
SANITARY SEWER PLAN KEY NOTES:

1. 4" SANITARY DOWN FROM SECOND FLOOR NEXT TO COLUMN.
2. 6" STORM DRAIN PIPING DOWN FROM ABOVE.
3. STORM DRAIN PIPING DOWN TO DOWNSPOUT NOZZLE AT 18" ABOVE GRADE.
4. 4" STORM DRAIN PIPING DOWN FROM ABOVE.



KEY PLAN

SCALE: 1" = 50 ft



SANITARY SEWER PLAN - 1ST FLOOR - AREA B

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

STATE OF MISSOURI
JAMES P. WATSON
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SHEET TITLE

SANITARY SEWER PLAN - 1ST FLOOR - AREA B

SHEET NUMBER

PS111

SANITARY SEWER PLAN SYMBOL LEGEND

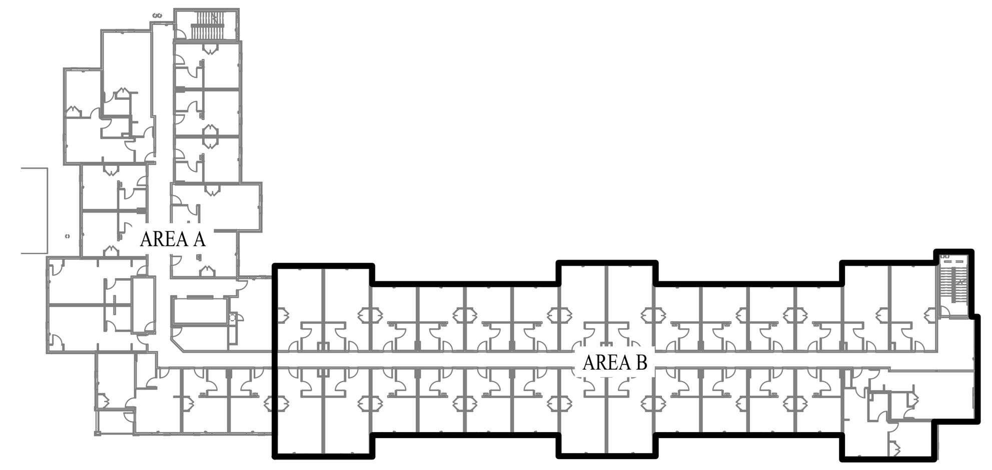
- SANITARY SEWER PIPING
- VENT PIPING
- STORM PIPING
- PIPING TURNED DOWN / TURNED UP
- TIE INTO EXISTING

SANITARY SEWER PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.

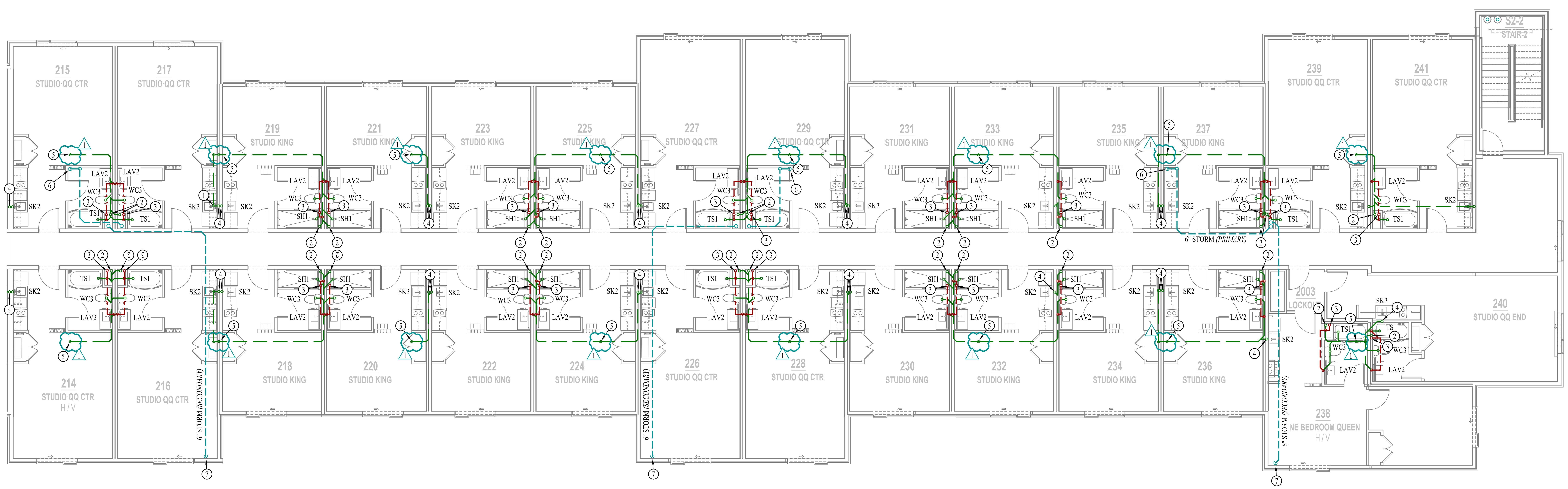
SANITARY SEWER PLAN KEY NOTES:

1. NOT USED
2. 3" SANITARY STACK DOWN FROM THIRD FLOOR; SEE SHEET PS401 FOR THIRD AND FOURTH FLOOR SANITARY PLANS.
3. 3" VENT STACK UP TO THIRD FLOOR; SEE SHEET PS401 FOR THIRD AND FOURTH FLOOR VENT PIPING PLANS.
4. 2" COMBINATION DRAIN / VENT STACK DOWN FROM THIRD FLOOR.
5. 4" SANITARY DOWN TO FIRST FLOOR; SEE SHEET PS102 FOR CONTINUATION.
6. 6" PRIMARY STORM DRAIN ROUTED DOWN NEXT TO COLUMN ON 1ST FLOOR.
7. 6" SECONDARY STORM DRAIN DOWN TO DOWNSPOUT NOZZLE 'DN1' ON 1ST FLOOR.



KEY PLAN

SCALE: 1" = 50 ft



SANITARY SEWER PLAN - 2ND FLOOR - AREA B

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

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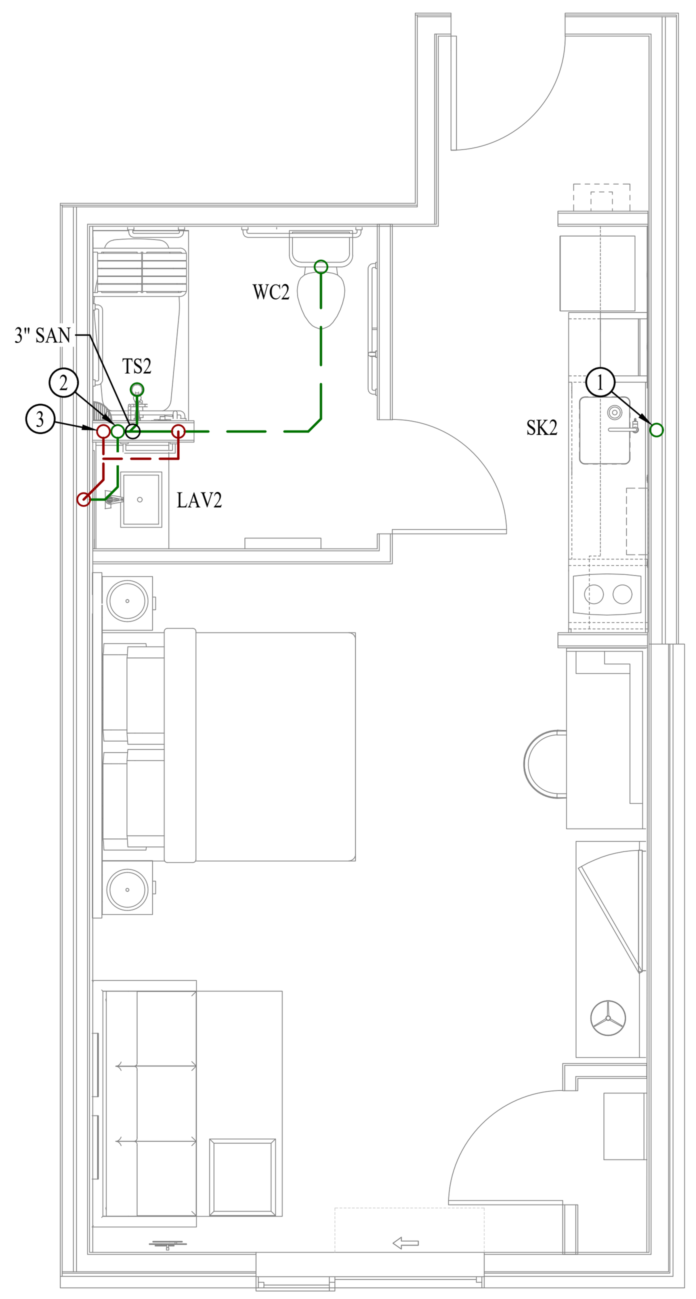
AHJ APPROVAL STAMP

SHEET TITLE

SANITARY SEWER PLAN - 2ND FLOOR - AREA B

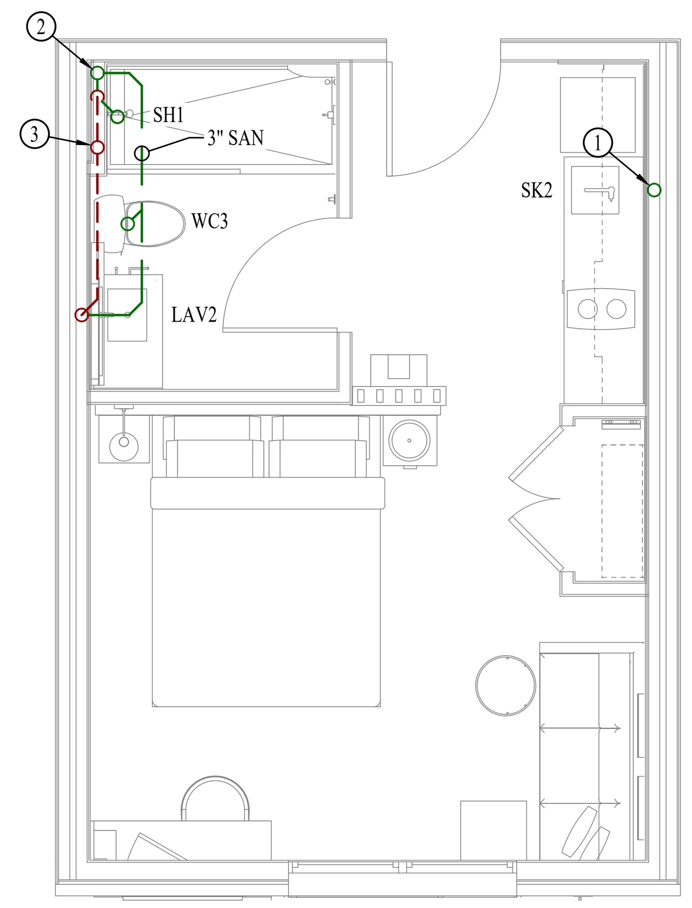
SHEET NUMBER

PS112



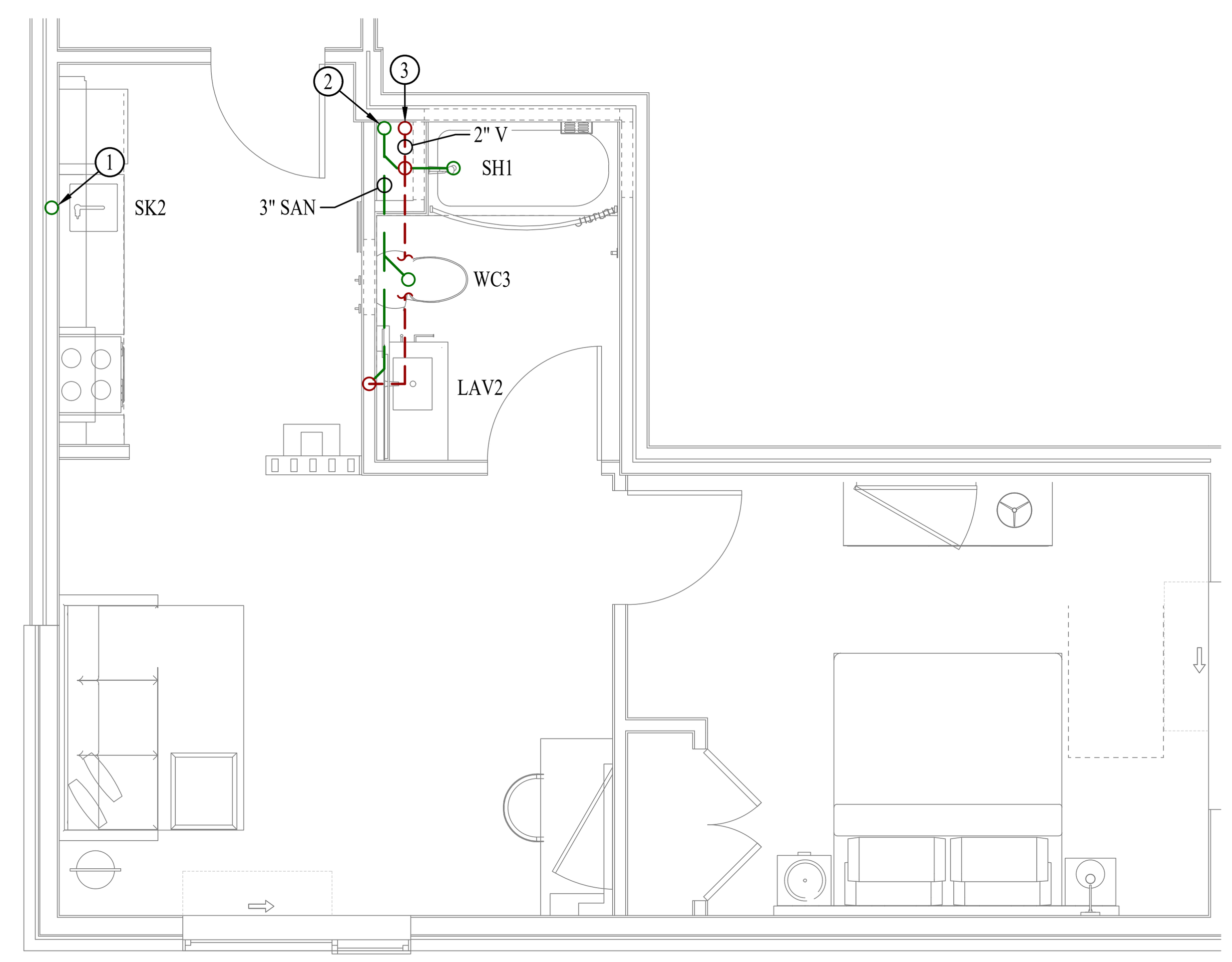
SANITARY SEWER PLAN - KING ACCESSIBLE

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



SANITARY SEWER PLAN - KING STUDIO

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



SANITARY SEWER PLAN - ONE BED KING

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

SANITARY SEWER PLAN SYMBOL LEGEND

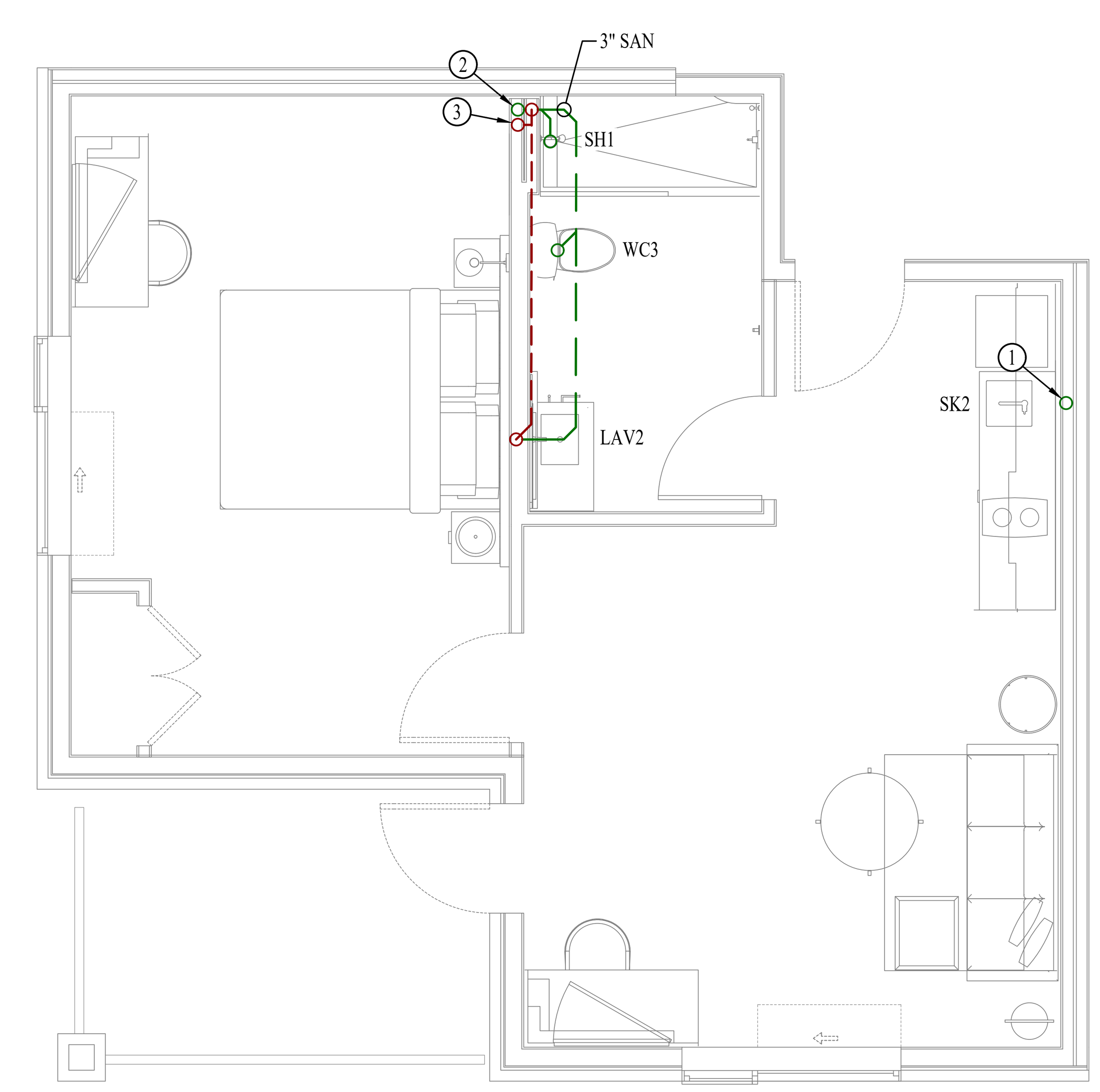
- SANITARY SEWER PIPING
- VENT PIPING
- STORM PIPING
- PIPING TURNED DOWN / TURNED UP
- TIE INTO EXISTING

SANITARY SEWER PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
2. SANITARY PLANS SHOWN APPLY TO FLOORS 3 & 4. SEE PS100 SERIES SHEETS FOR SANITARY PLANS FOR FLOORS 1 & 2.

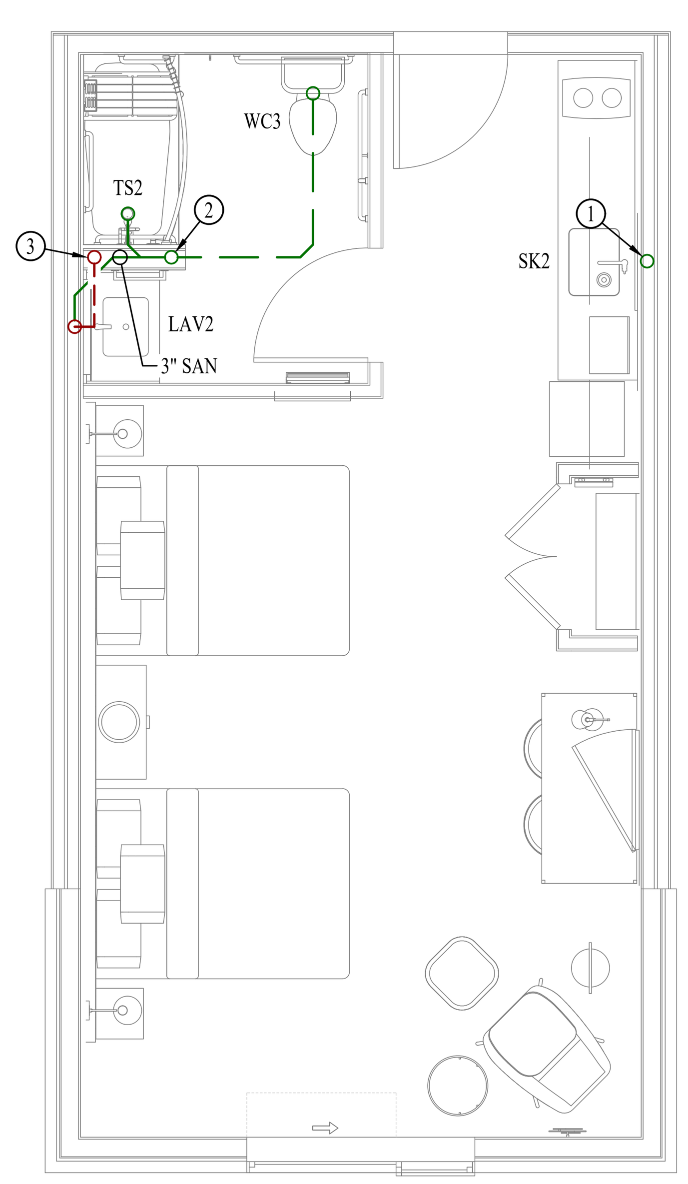
SANITARY SEWER PLAN KEY NOTES:

1. 2" COMBINATION DRAIN/VENT STACK DOWN FROM FOURTH FLOOR ROOM TO THIRD FLOOR ROOM; VENT STACK TO COMBINE ABOVE FOURTH FLOOR FINISHED CEILING TO A 2" VENT THRU ROOF (VTR). SEE PS100 SERIES SHEETS FOR FIRST AND SECOND FLOOR SANITARY PLANS.
2. 3" SANITARY STACK DOWN FROM FOURTH FLOOR TO COLLECT THIRD FLOOR; SEE PS100 SERIES SHEETS FOR FIRST AND SECOND FLOOR SANITARY PLANS.
3. 3" SANITARY STACK UP FROM SECOND FLOOR TO 3" VENT THRU ROOF (VTR). SEE PS100 SERIES SHEETS FOR FIRST AND SECOND FLOOR VENT PLANS.



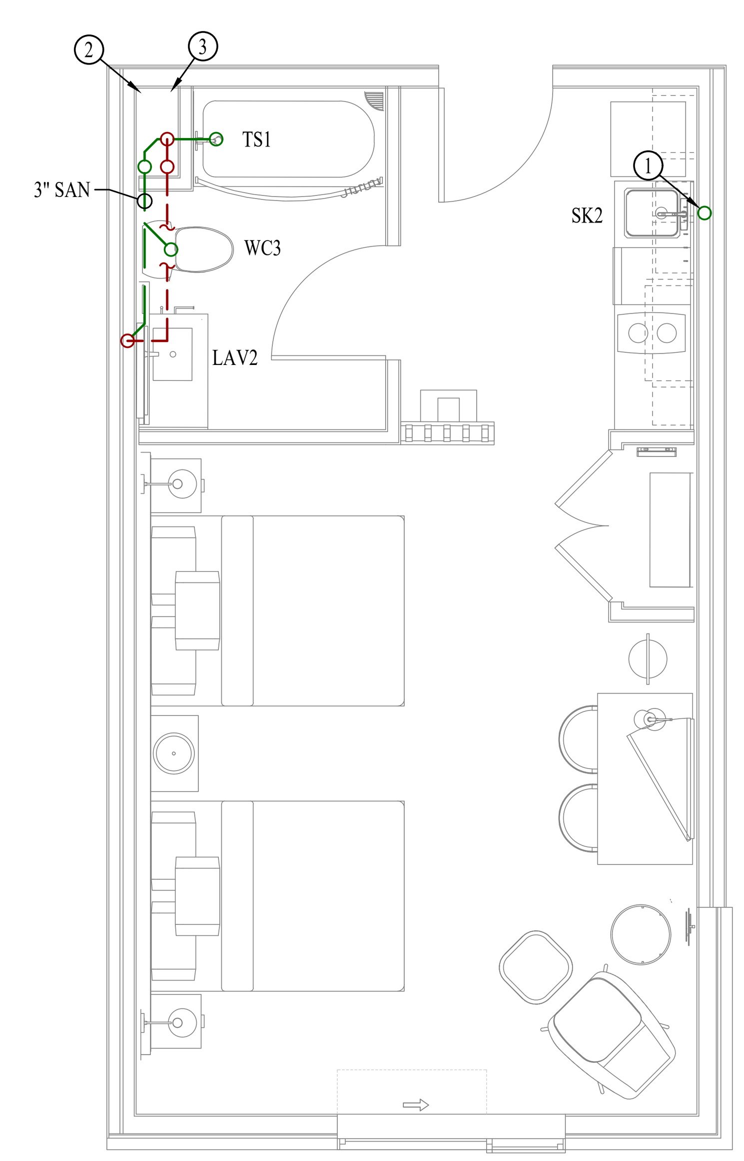
SANITARY SEWER PLAN - ONE BED KING W/ BALCONY

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



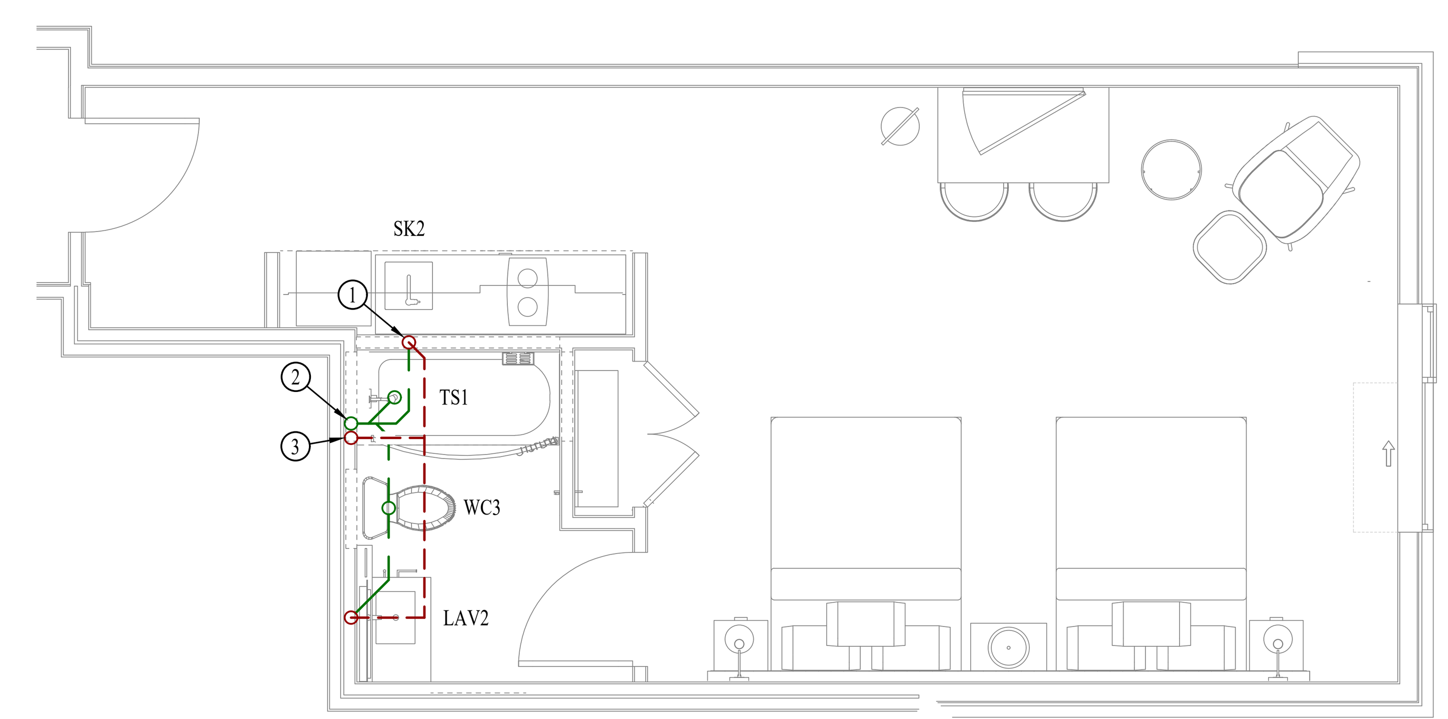
SANITARY SEWER PLAN - STUDIO DOUBLE QUEEN ACCESSIBLE

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



SANITARY SEWER PLAN - STUDIO DOUBLE QUEEN CENTER

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



SANITARY SEWER PLAN - STUDIO DOUBLE QUEEN END

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

STATE OF MISSOURI
JAMES P. WATSON
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PROFESSIONAL ENGINEER

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ISSUE TITLE	DATE
CITY SUBMISSION	11 / 01 / 2023

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

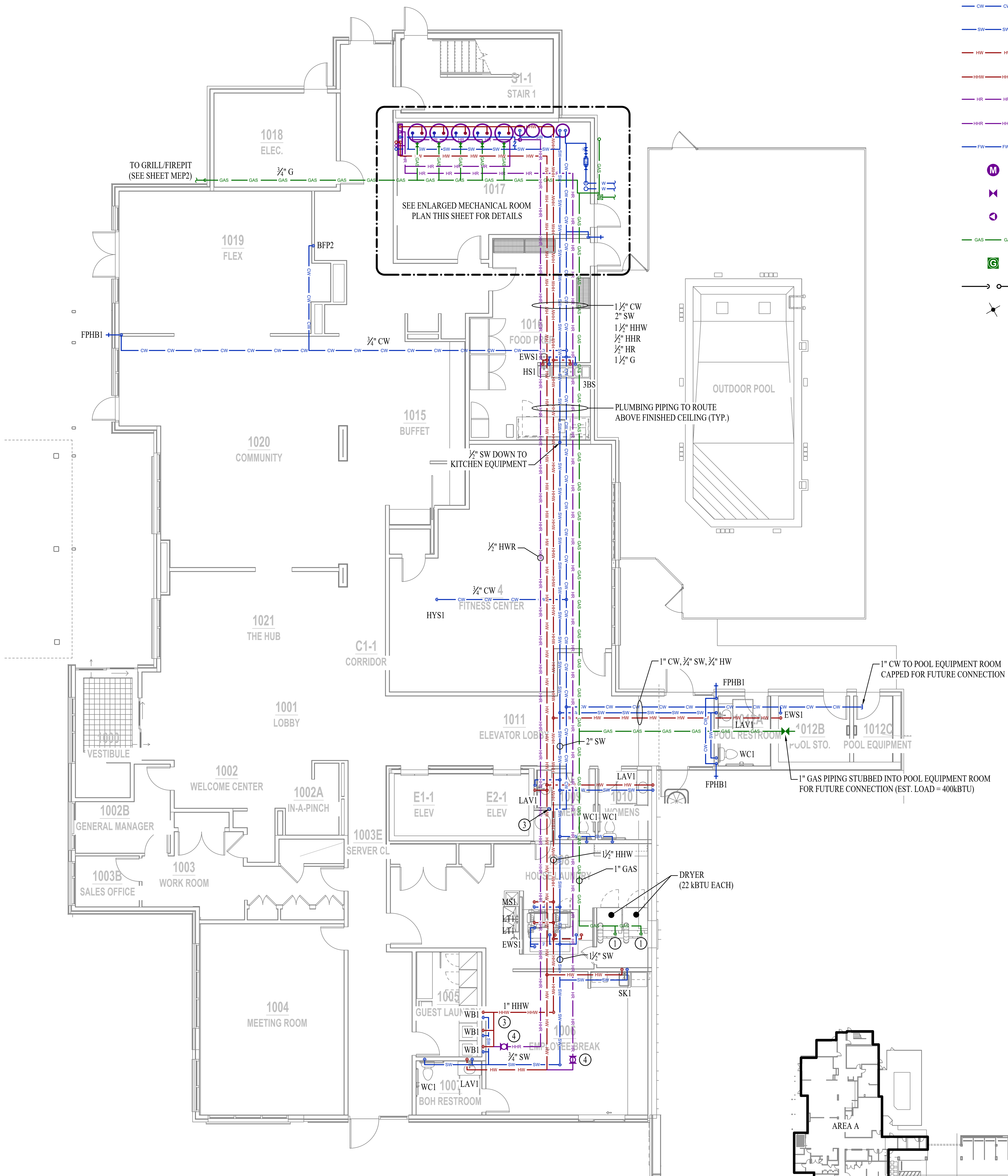
AHJ APPROVAL STAMP

SHEET TITLE

SANITARY SEWER PLAN - GUEST ROOMS

SHEET NUMBER

PS401



WATER & GAS PLAN - 1ST FLOOR - AREA A

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

WATER & GAS PLAN SYMBOL LEGEND

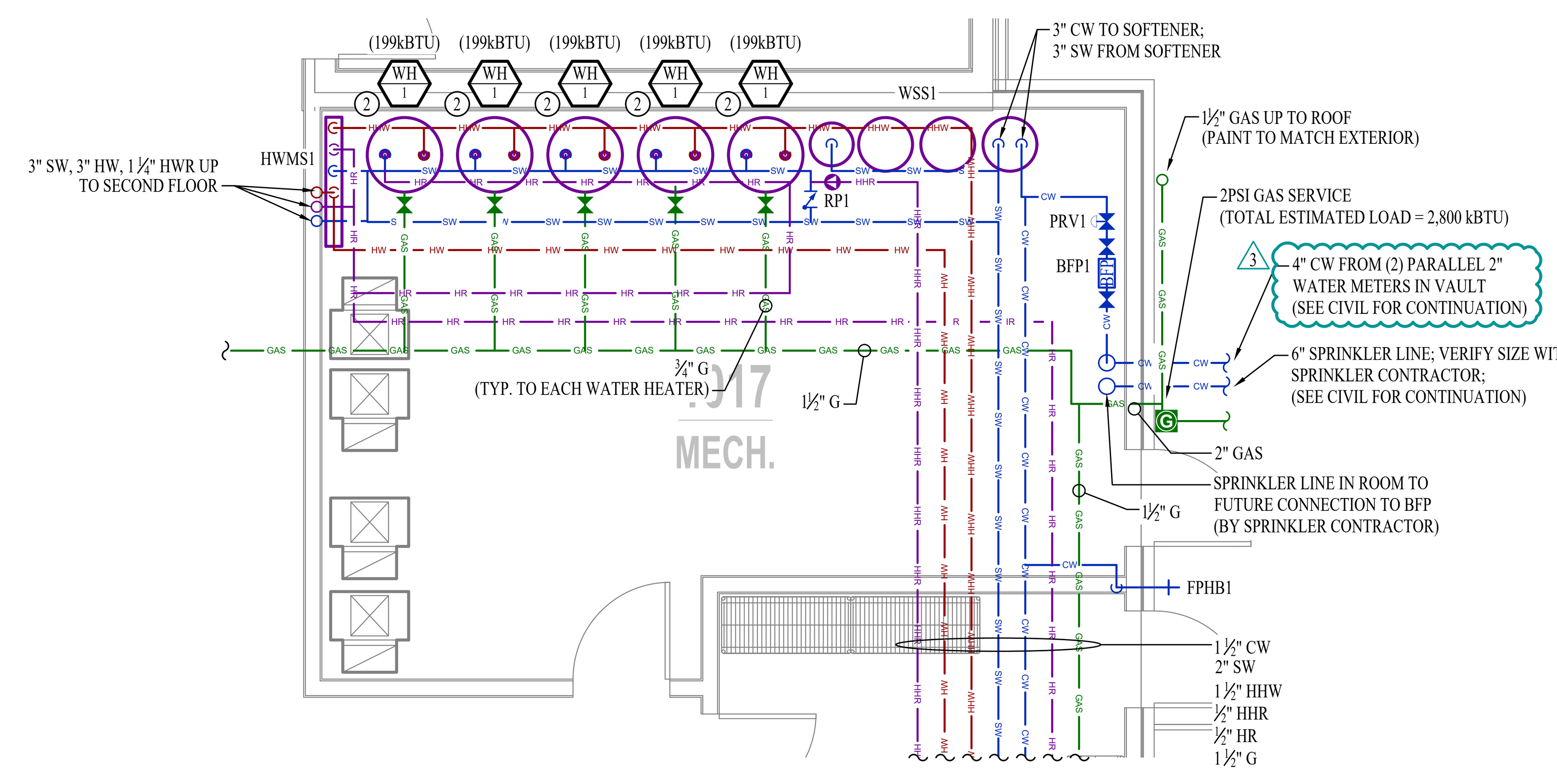
- COLD WATER LINE
- COLD SOFT WATER LINE
- HOT (120°F) WATER LINE
- HOT (140°F) WATER LINE
- HOT (120°) WATER RECIRCULATION LINE
- HOT (140°) WATER RECIRCULATION LINE
- FILTERED WATER LINE
- WATER METER
- VALVE
- PUMP
- GAS LINE
- GAS METER
- PIPING TURNED DOWN / TURNED UP
- TIE INTO EXISTING

WATER & GAS PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
2. PROVIDE & INSTALL 2PSI TO 11"W.C. VENTLESS REGULATOR & SHUT-OFF VALVE AT ALL GAS EQUIPMENT.
3. CALCULATED WATER DEMAND FOR THIS FACILITY IS 900 WSFU'S (APPROXIMATELY 180GPM)

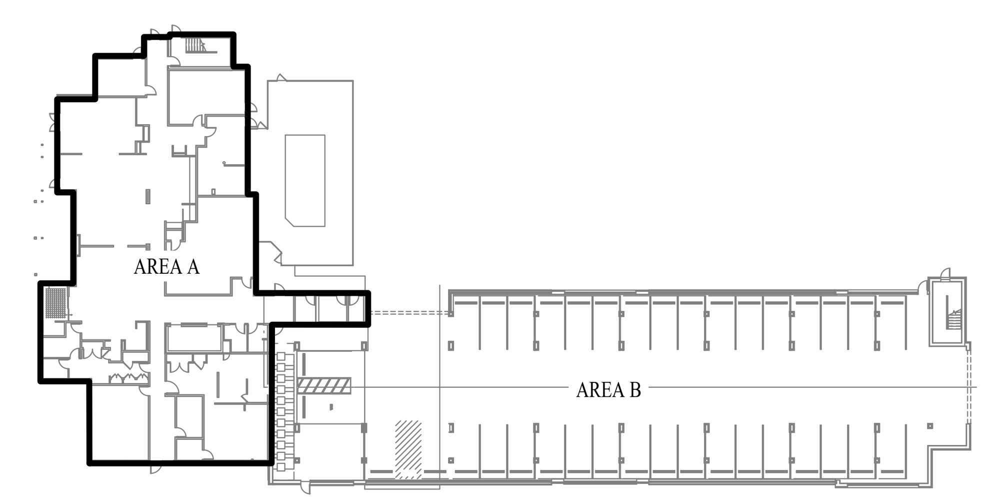
WATER & GAS PLAN KEY NOTES:

1. PROVIDE UNION, 3" MINIMUM DIRT LEG, SHUT-OFF VALVE, & PRESSURE REGULATOR IN GAS PIPING AT CONNECTION TO EQUIPMENT. VENT PRESSURE REGULATOR TO OUTSIDE AS REQUIRED. PROVIDE A UNION ON BOTH SIDES OF REGULATOR. REGULATOR MUST BE INSTALLED IN HORIZONTAL POSITION DOWNSTREAM OF DIRT LEG.
2. PROVIDE & INSTALL WATER HEATER VENT & COMBUSTION AIR TO EXTERIOR PER MANUFACTURER'S SPECIFICATIONS.
3. ¾" CW UP TO ROOF HYDRANT(S) ON ROOF. (SEE SHEET MEP4 FOR HYDRANT LOCATIONS)
4. PROVIDE & INSTALL AUTOMATIC FLOW BALANCING VALVE EQUAL TO WATTS #LFiDROSET IN HWR LINE IN ACCESSIBLE LOCATION IN CORRIDOR; SET FLOW TO ½" GPM.



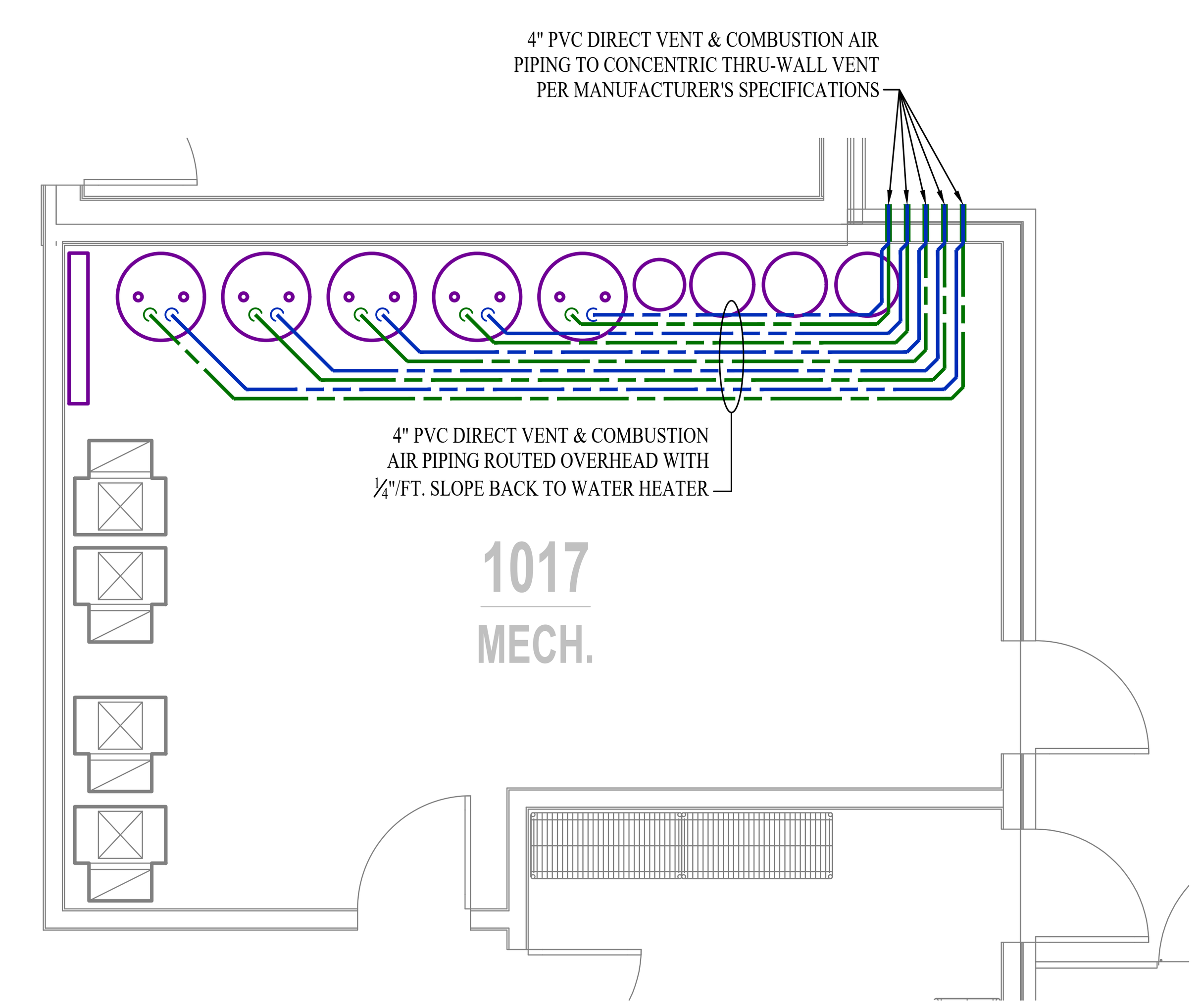
ENLARGED MECHANICAL ROOM PLAN

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



KEY PLAN

SCALE: 1" = 50 ft



ENLARGED MECHANICAL ROOM PLAN (WATER HEATER VENT ROUTING)

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

STATE OF MISSOURI JAMES P. WATSON NUMBER PE-2015017071 PROFESSIONAL ENGINEER

James Watson, P.E. March 06, 2024
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J2 PROJECT No:	J21006
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REVISION 1	12 / 22 / 2023
REVISION 3	03 / 06 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

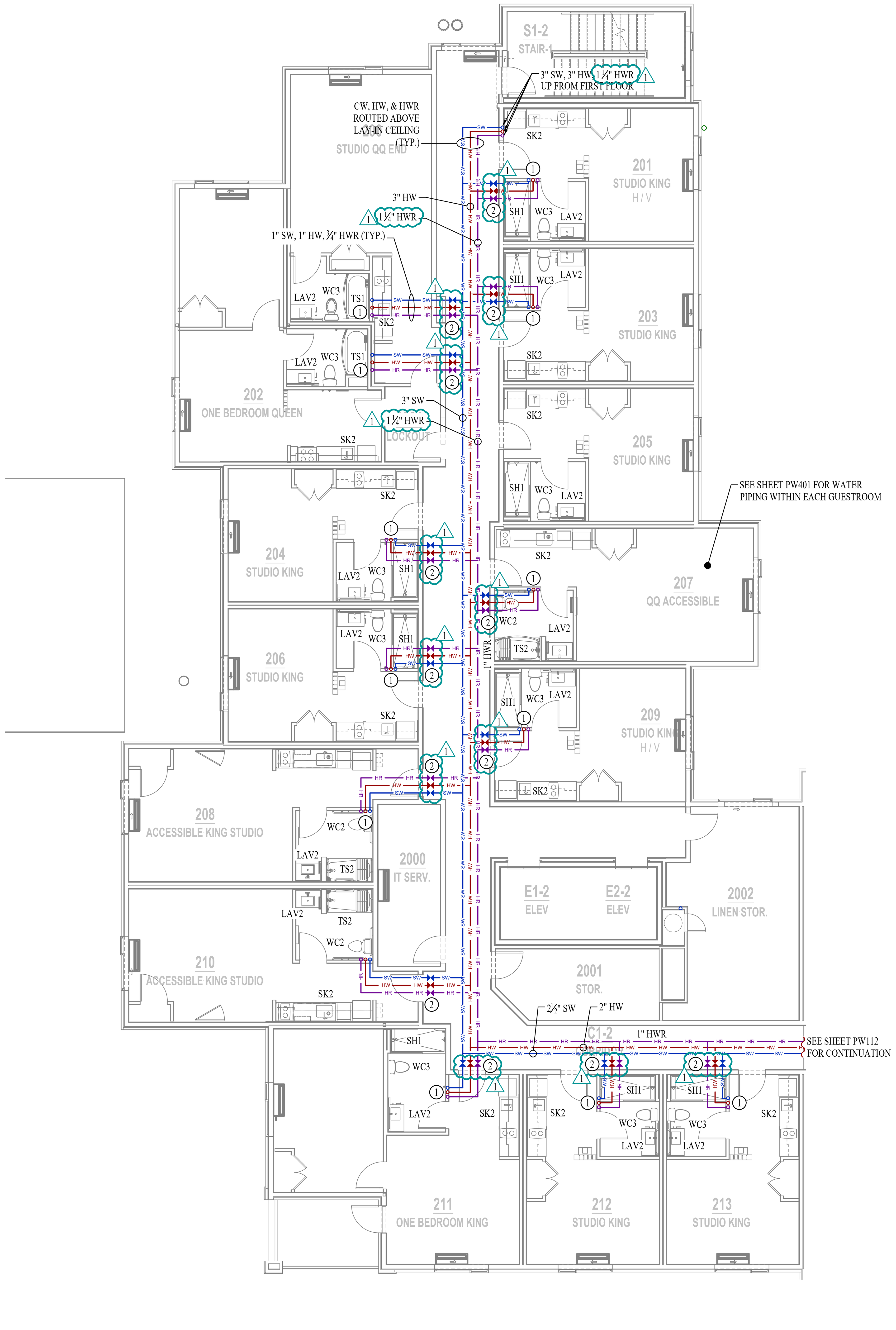
AHJ APPROVAL STAMP

SHEET TITLE

WATER & GAS PLAN - 1ST FLOOR - AREA A

SHEET NUMBER

PW101



WATER & GAS PLAN - 2ND FLOOR - AREA A

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

WATER & GAS PLAN SYMBOL LEGEND

CW	COLD WATER LINE
SW	COLD SOFT WATER LINE
HW	HOT (120°F) WATER LINE
HHW	HOT (140°F) WATER LINE
HR	HOT (120°) WATER RECIRCULATION LINE
HHR	HOT (140°) WATER RECIRCULATION LINE
FW	FILTERED WATER LINE
M	WATER METER
	VALVE
	PUMP
GAS	GAS LINE
G	GAS METER
	PIPING TURNED DOWN / TURNED UP
	TIE INTO EXISTING

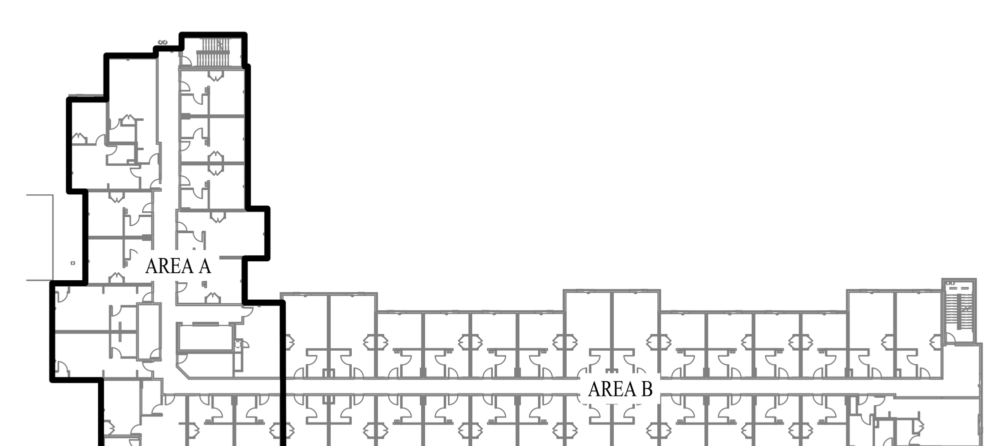
WATER & GAS PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.

WATER & GAS PLAN KEY NOTES:

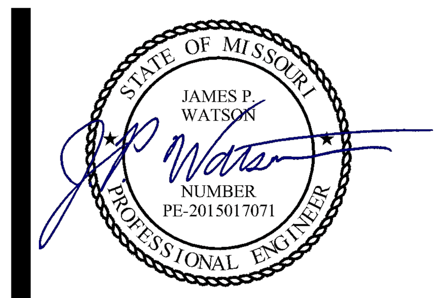
(1) 3/4" HW & 3/4" SW TO SERVE GUESTROOM ON SECOND FLOOR; 1" HW, 1" SW, 3/4" HWR TO CONTINUE UP TO SERVE THIRD FLOOR GUESTROOM, 3/4" HW, 3/4" SW, 3/4" HWR CONTINUE UP FROM THIRD FLOOR TO SERVE FOURTH FLOOR. SEE SHEET PW401 FOR DETAILS.

(2) PROVIDE & INSTALL AUTOMATIC FLOW BALANCING VALVE EQUAL TO WATTS #LFiDROSET IN HWR LINE IN ACCESSIBLE LOCATION IN CORRIDOR; SET FLOW TO 1/2 GPM.



KEY PLAN

SCALE: 1" = 50 ft



James Watson, P.E. December 22, 2023
PE-2015017071
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Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

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Lee's Summit, Missouri 64064

AHJ APPROVAL STAMP

SHEET TITLE

WATER & GAS PLAN - 2ND FLOOR - AREA A

SHEET NUMBER

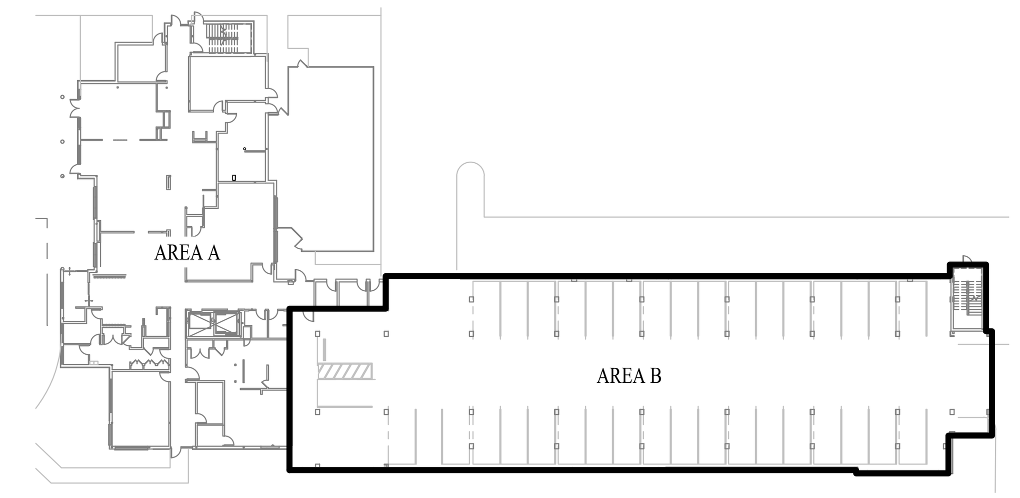
PW102

WATER & GAS PLAN SYMBOL LEGEND

CW — CW	COLD WATER LINE
	COLD SOFT WATER LINE
HW — HW	HOT (120°F) WATER LINE
	HOT (140°F) WATER LINE
HR — HR	HOT (120°) WATER RECIRCULATION LINE
	HOT (140°) WATER RECIRCULATION LINE
FW — FW	FILTERED WATER LINE
M	WATER METER
	VALVE
	PUMP
GAS — GAS	GAS LINE
G	GAS METER
	PIPING TURNED DOWN / TURNED UP
	TIE INTO EXISTING

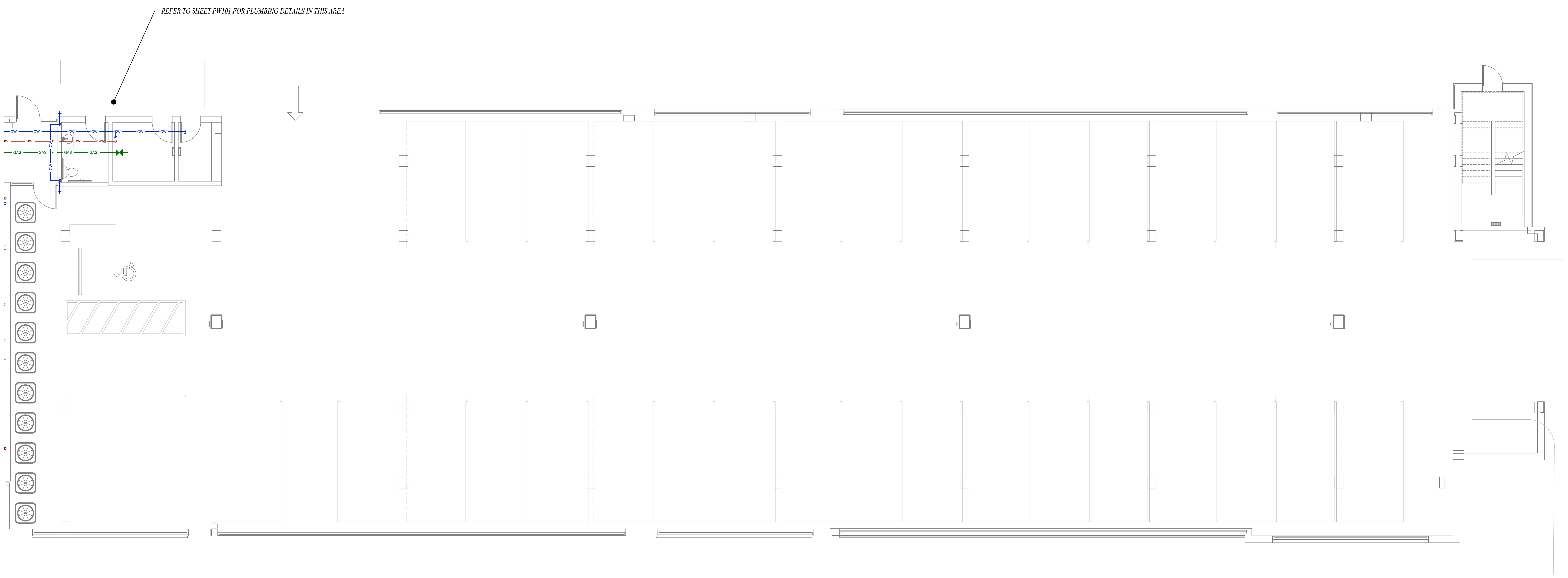
WATER & GAS PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.



KEY PLAN

SCALE: 1" = 50 ft



WATER & GAS PLAN - 1ST FLOOR - AREA B

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

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. November 1, 2023
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WATER & GAS PLAN - 1ST FLOOR - AREA B

SHEET NUMBER

PW111

WATER & GAS PLAN SYMBOL LEGEND

CW — CW	COLD WATER LINE
	COLD SOFT WATER LINE
HW — HW	HOT (120°F) WATER LINE
	HOT (140°F) WATER LINE
HR — HR	HOT (120°) WATER RECIRCULATION LINE
	HOT (140°) WATER RECIRCULATION LINE
FW — FW	FILTERED WATER LINE
M	WATER METER
	VALVE
	PUMP
GAS — GAS	GAS LINE
G	GAS METER
	PIPING TURNED DOWN / TURNED UP
	TIE INTO EXISTING

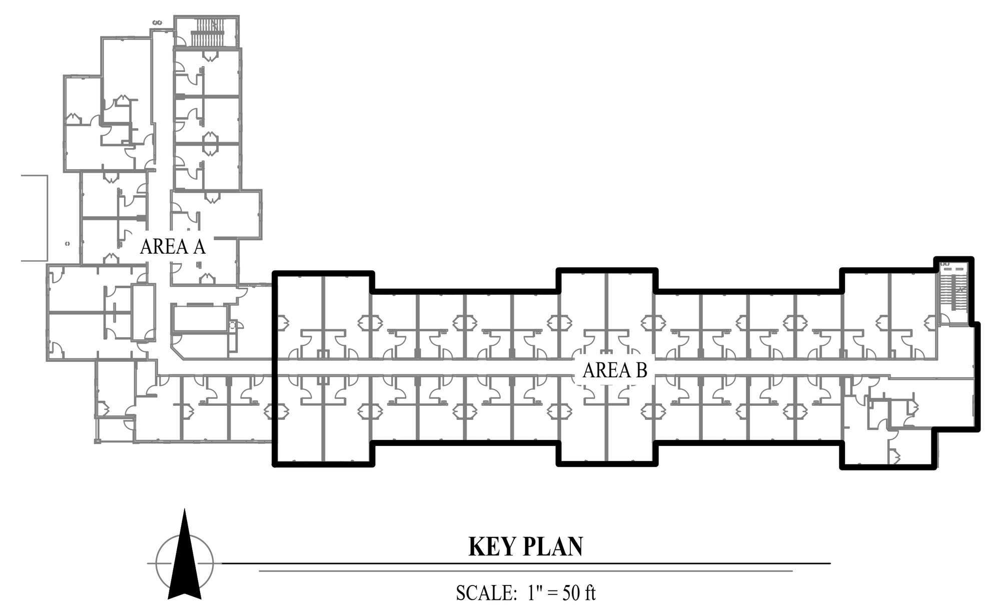
WATER & GAS PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.

WATER & GAS PLAN KEY NOTES:

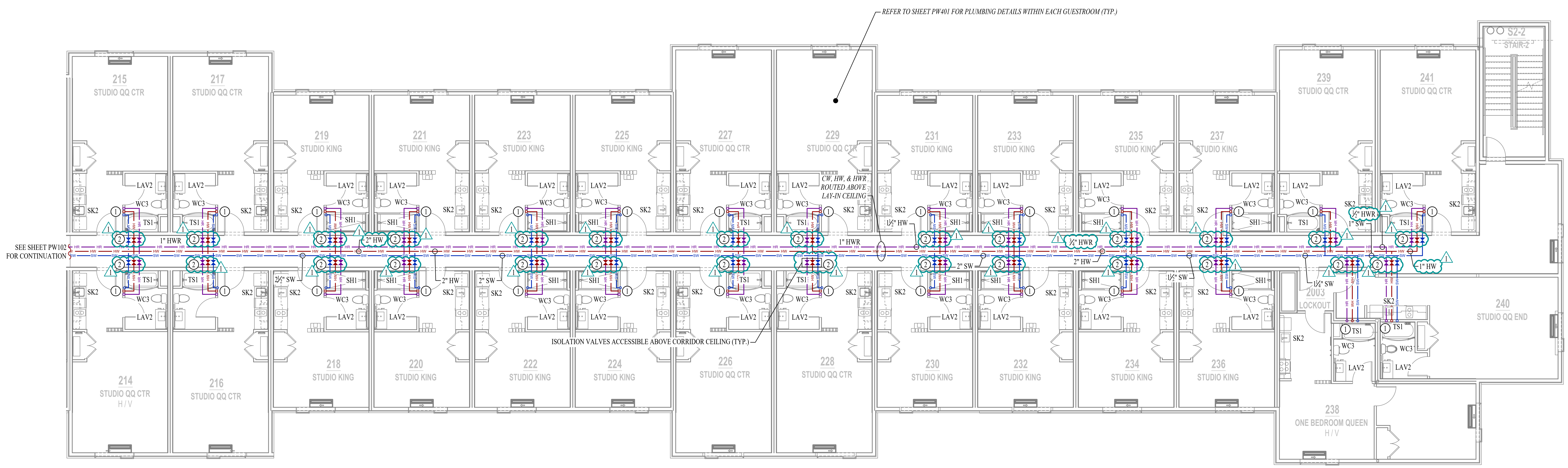
(1) ¾" HW & ¾" SW TO SERVE GUESTROOM ON SECOND FLOOR; 1" HW & 1" SW CONTINUE UP TO SERVE THIRD FLOOR GUESTROOM, ¾" HW & ¾" SW CONTINUE UP FROM THIRD FLOOR TO SERVE FOURTH FLOOR. SEE SHEET PW401 FOR DETAILS.

1 (2) PROVIDE & INSTALL AUTOMATIC FLOW BALANCING VALVE EQUAL TO WATTS #LFiDROSET IN HWR LINE IN ACCESSIBLE LOCATION IN CORRIDOR; SET FLOW TO ½ GPM.



KEY PLAN

SCALE: 1" = 50 ft



WATER & GAS PLAN - 2ND FLOOR - AREA B

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

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. December 22, 2023
PE-2015017071
MO Certificate of Authority # 2018029680

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J2 PROJECT No:	J21006
J2 DESIGN:	ACW

ISSUE TITLE	DATE
CITY SUBMISSION	11 / 01 / 2023
1 REVISION 1	12 / 22 / 2023

Mechanical - Electrical - Plumbing Design Drawings for

Towneplace Suites By Marriott

1810 Northeast Douglas St.
Lee's Summit, Missouri 64064

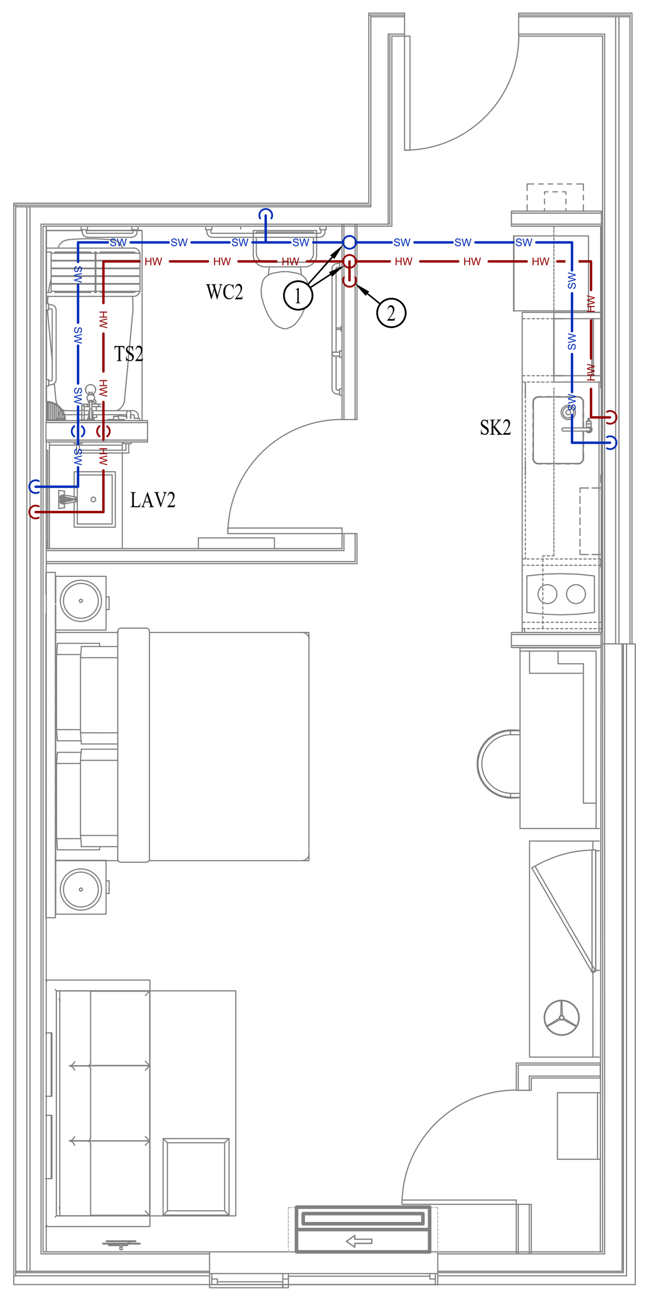
AHJ APPROVAL STAMP

SHEET TITLE

WATER & GAS PLAN - 2ND FLOOR - AREA B

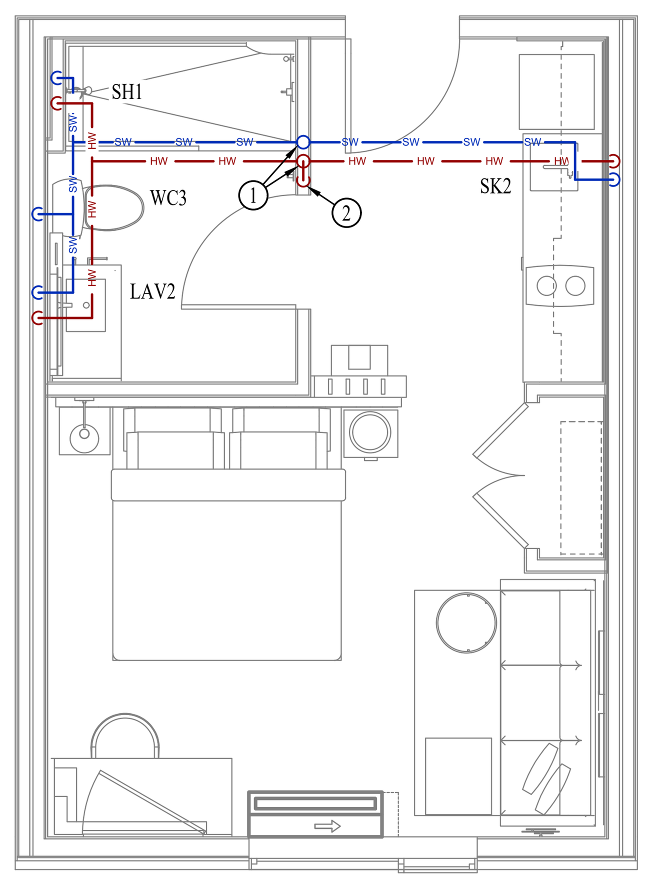
SHEET NUMBER

PW112



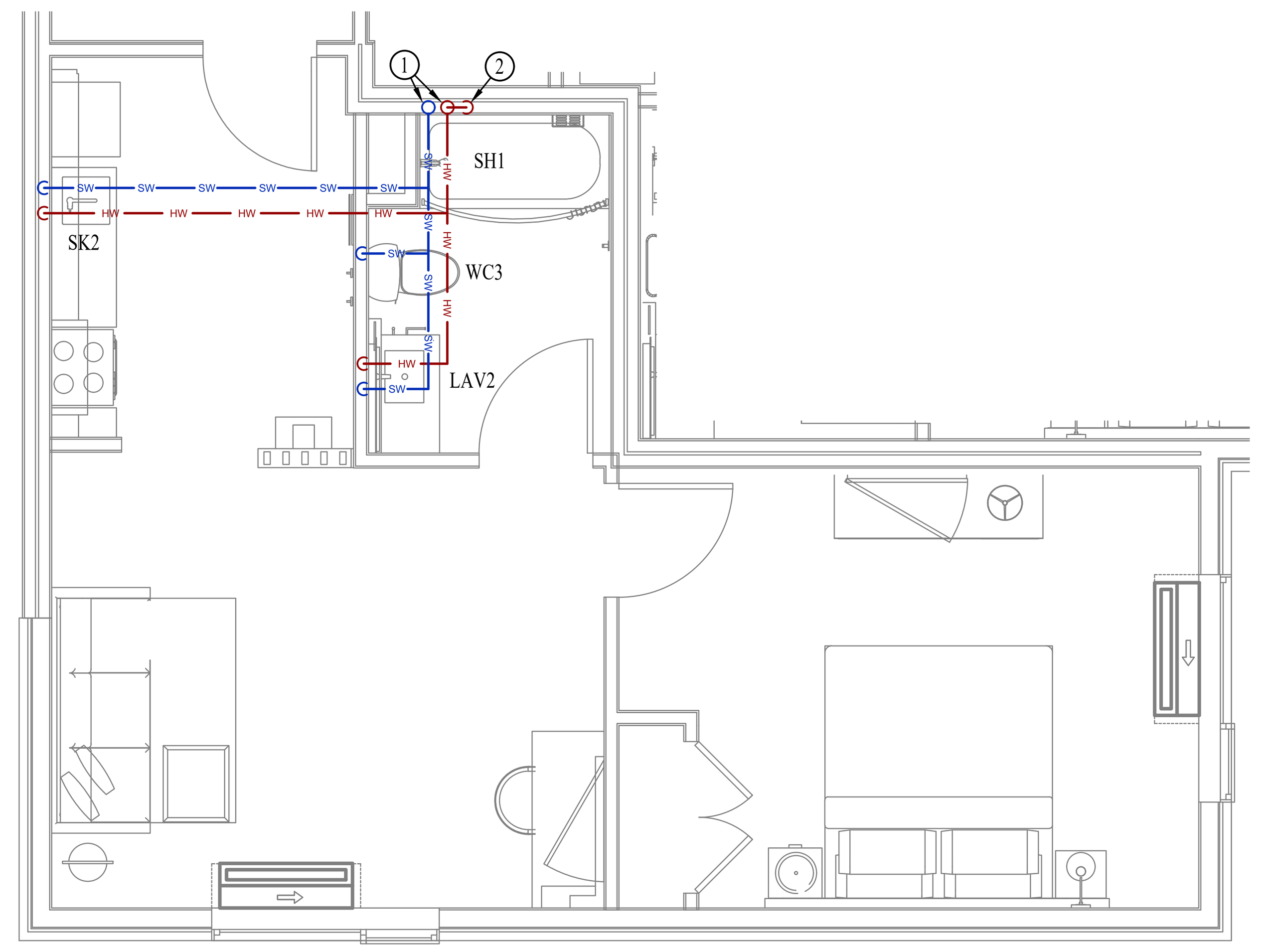
POWER PLAN - KING ACCESSIBLE

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



POWER PLAN - KING STUDIO

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



POWER PLAN - ONE BED KING

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

WATER & GAS PLAN SYMBOL LEGEND

CW — CW	COLD WATER LINE
SW — SW	COLD SOFT WATER LINE
HW — HW	HOT (120°F) WATER LINE
HHW — HHW	HOT (140°F) WATER LINE
HR — HR	HOT (120°) WATER RECIRCULATION LINE
HHR — HHR	HOT (140°) WATER RECIRCULATION LINE
FW — FW	FILTERED WATER LINE
M	WATER METER
	VALVE
	PUMP
GAS — GAS	GAS LINE
G	GAS METER
	PIPING TURNED DOWN / TURNED UP
	TIE INTO EXISTING

WATER & GAS PLAN GENERAL NOTES:

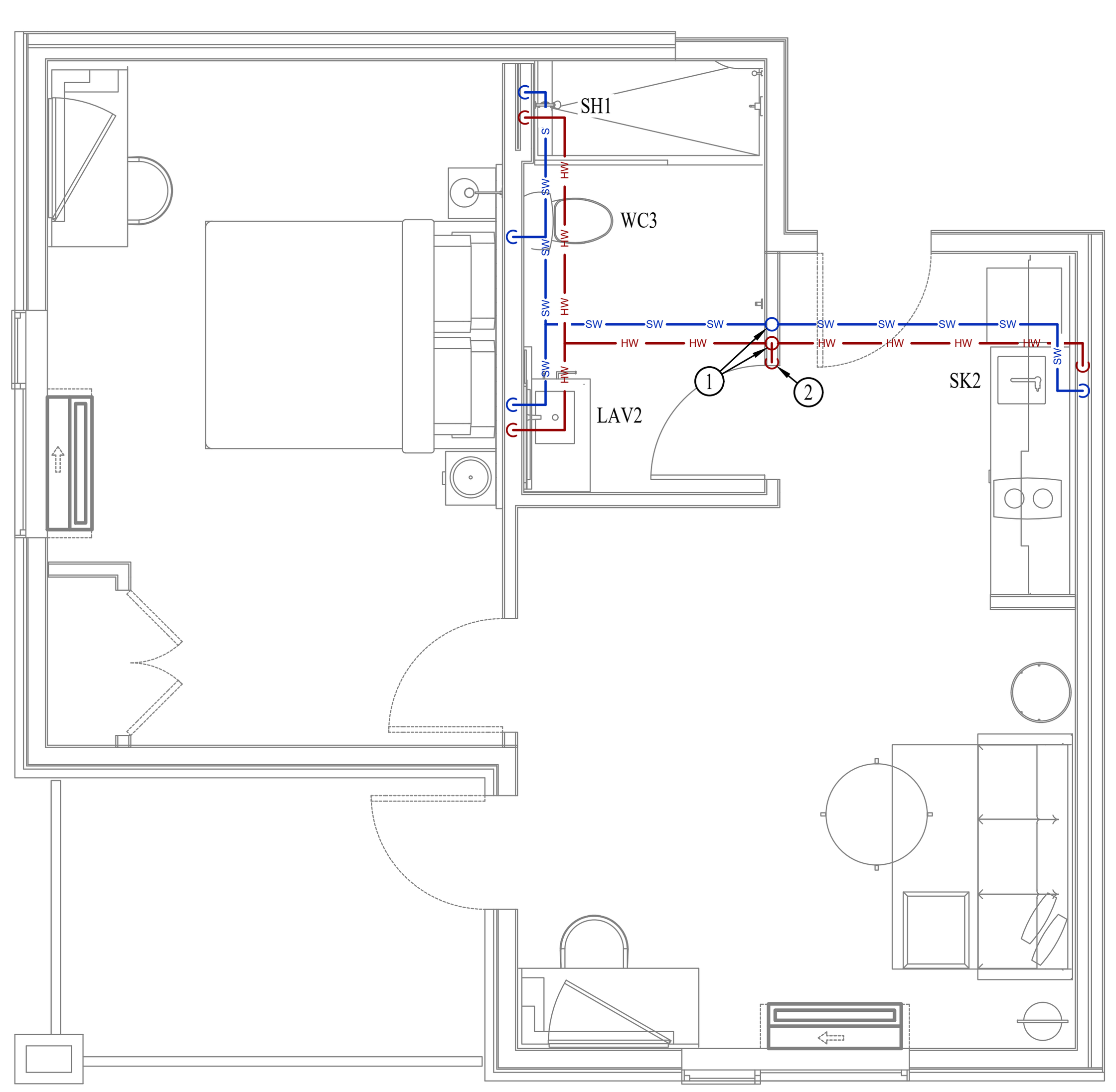
1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
2. WATER PLAN SHOWN APPLIES TO SECOND, THIRD, AND FOURTH FLOORS. SEE PW100 SERIES SHEETS FOR WATER PLAN FOR FIRST AND SECOND FLOOR.

WATER & GAS PLAN KEY NOTES:

1. 1" HW & 1" SW UP FROM SECOND FLOOR TO THIRD FLOOR; ¾" HW & ¾" SW CONTINUE UP TO FOURTH FLOOR.

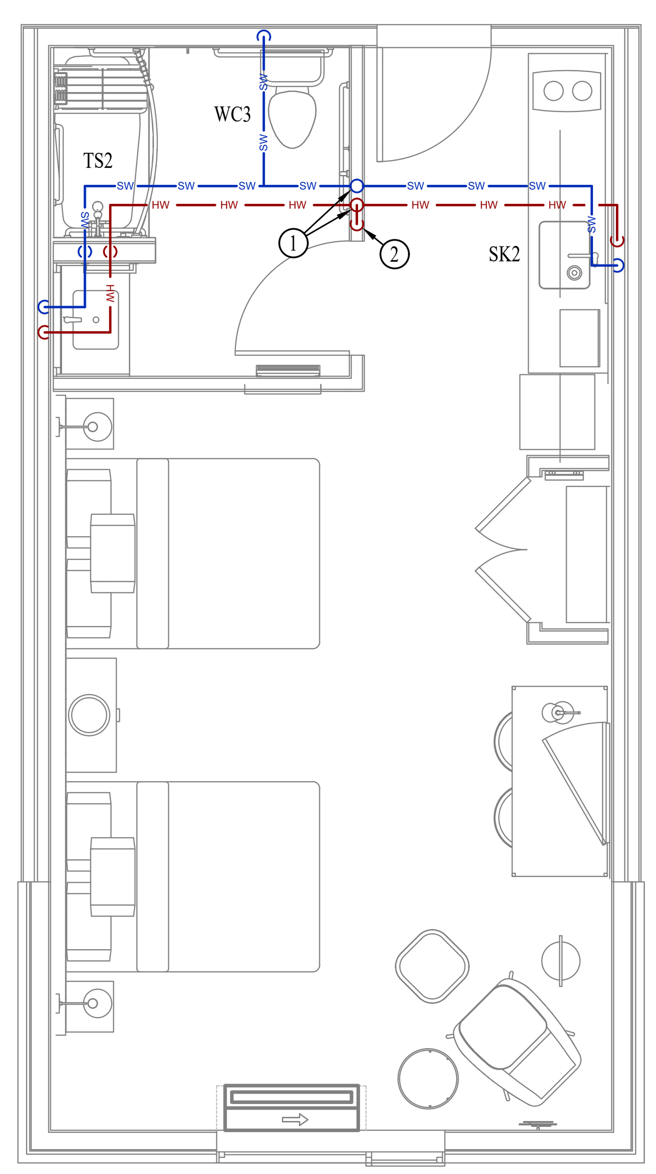
1

2. ON FOURTH FLOOR ONLY, CONNECT ¾" HW TO ¾" HWR AND RETURN TO SECOND FLOOR.



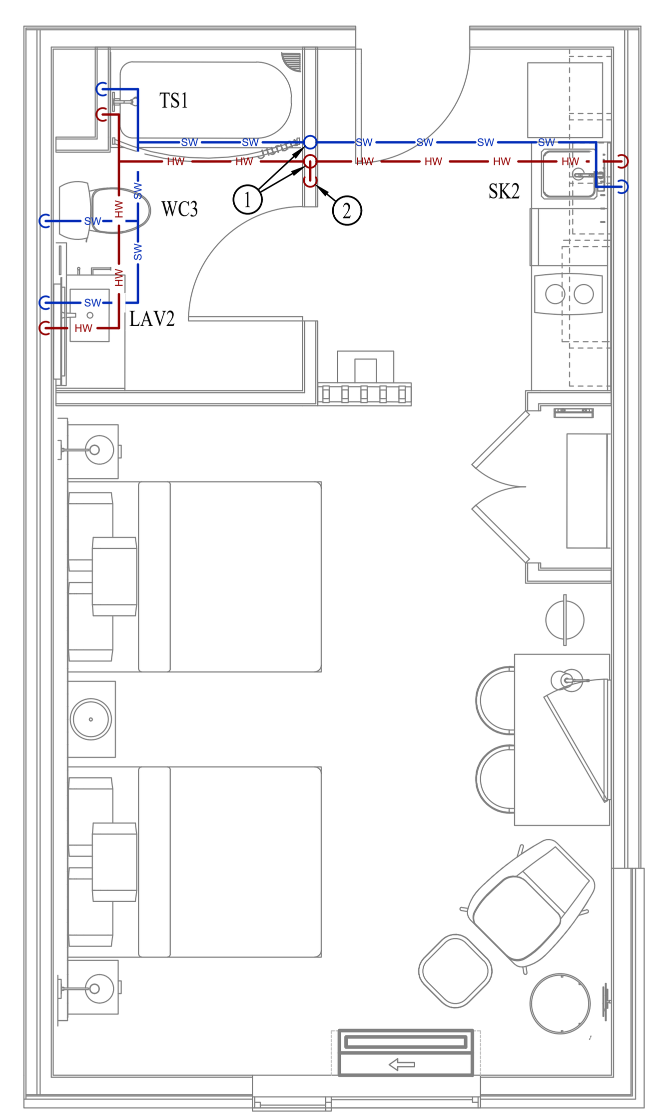
POWER PLAN - ONE BED KING W/ BALCONY

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



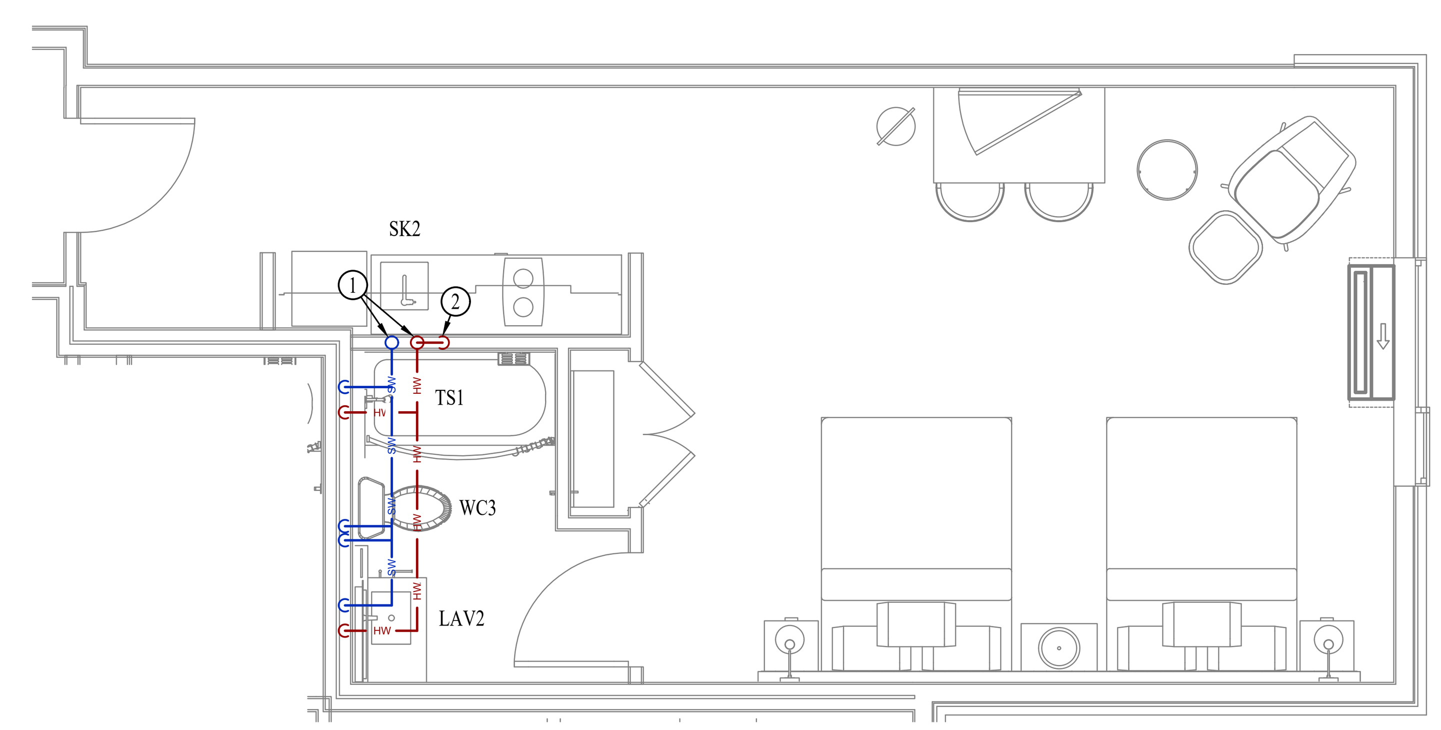
POWER PLAN - STUDIO DOUBLE QUEEN ACCESSIBLE

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



POWER PLAN - STUDIO DOUBLE QUEEN CENTER

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



POWER PLAN - STUDIO DOUBLE QUEEN END

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

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AHJ APPROVAL STAMP

SHEET TITLE

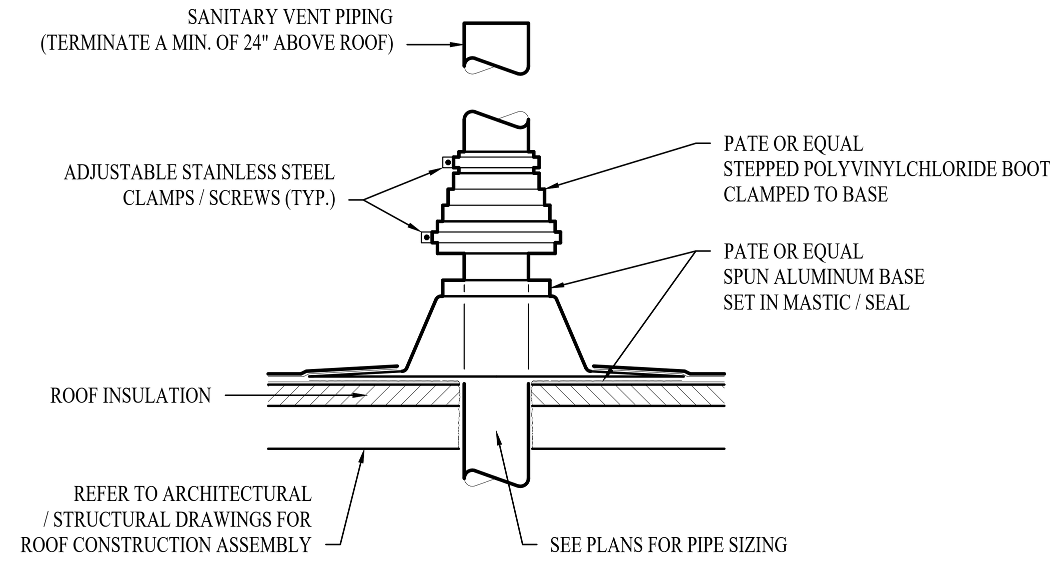
WATER PLAN - GUEST ROOMS

SHEET NUMBER

PW401

PLUMBING SPECIFICATIONS

1. GENERAL
   - 1.1. PLUMBING CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL ESCUTCHEONS, ¼ TURN STOPS, P-TRAPS, AND SUPPLY LINES TO PROVIDE A COMPLETE SYSTEM AT EACH FIXTURE INDICATED ON PLANS UNLESS NOTED OTHERWISE.
2. SANITARY
   - 2.1. BELOW AND ABOVE GRADE WASTE AND VENT PIPING IN BUILDING TO BE SOLID CORE SCH. 40 PVC DWV.
   - 2.2. NO PIPE SMALLER THAN 2" BELOW GRADE.
   - 2.3. WASTE AND VENT PIPING IN PLENUMS TO BE CAST IRON, OR PVC WITH AN INSULATION WRAP LISTED FOR USE AS SUCH AN ASSEMBLY.
   - 2.4. ALL VENT PIPE TERMINATIONS ARE TO BE LOCATED EITHER 10' HORIZONTALLY OR 3' ABOVE MECHANICAL AIR INTAKE LOCATIONS.
3. DOMESTIC WATER
   - 3.1. DOMESTIC WATER PIPING TO BE EITHER COPPER OR PEX. WHERE PEX PIPING IS USED, IT SHALL BE INCREASED ONE PIPE SIZE FROM WHAT IS INDICATED ON PLANS FOR ALL PORTIONS OF THE SYSTEM.
   - 3.2. PEX-A MAY BE INSTALLED AT SIZES INDICATED ON PLANS IF AN ENGINEERED PLAN IS SUBMITTED SHOWING ACCEPTABLE PRESSURE DROPS AND FLUID VELOCITIES, APPROVAL MUST BE GRANTED PRIOR TO PURCHASE AND INSTALLATION.
   - 3.3. COPPER WATER PIPING BELOW GRADE SHALL BE TYPE "K". BELOW GRADE JOINTS SHALL BE SILVER SOLDERED. THERE SHALL BE NO JOINTS IN WATER PIPING LOCATED BENEATH BUILDING SLAB.
   - 3.4. COPPER WATER PIPING ABOVE GRADE SHALL BE TYPE "L".
   - 3.5. PROVIDE WATER HAMMER ARRESTORS AT ALL QUICK-CLOSE VALVES. FIXTURES REQUIRING WATER HAMMER ARRESTORS INCLUDE BUT ARE NOT LIMITED TO FLUSH VALVES, SENSOR FAUCETS, AND WASHING MACHINE BOXES. AIR CHAMBERS ARE NOT ACCEPTABLE.
   - 3.6. ALL DOMESTIC WATER PIPING SHALL BE ROUTED WITHIN THERMAL ENVELOPE AND WITHIN WALL CAVITIES, ABOVE FINISHED CEILINGS, OR BELOW SLAB TO REMAIN CONCEALED UNLESS OTHERWISE NOTED. NOTIFY ENGINEER OF ANY NECESSARY ADJUSTMENTS THAT REQUIRE PIPING TO BE EXPOSED.
   - 3.7. DOMESTIC WATER PIPING INSULATION
     - 3.7.1. ALL HW PIPING, WHETHER COPPER OR PEX, SHALL BE INSULATED WITH PLENUM RATED CLOSED CELL ELASTOMERIC INSULATION. FOR PIPING LESS THAN 1½", INSULATION THICKNESS TO BE 1". FOR PIPING 1½" OR GREATER, INSULATION THICKNESS SHALL BE 1½".
     - 3.7.2. CW COPPER PIPING TO INSULATED WITH ½" PLENUM RATED CLOSED CELL ELASTOMERIC INSULATION. CW PEX NEED NOT BE INSULATED UNLESS NOTED OTHERWISE.
4. GAS PIPING
   - 4.1. ABOVE GRADE NATURAL GAS AND LP PIPING TO BE SCH. 40 BLACK STEEL WITH CLASS 150 THREADED FITTINGS.
   - 4.2. WHERE PIPING IS EXPOSED ON EXTERIOR FACE OF BUILDING, PAINT TO MATCH BUILDING. PAINT YELLOW IN ALL OTHER LOCATIONS.
   - 4.3. ON ROOFTOPS, INSTALL GAS PIPE WITH "ROOFTOP BLOX" PER MANUFACTURE'S INSTRUCTION.
5. STORM DRAIN PIPING
   - 5.1. ABOVE AND BELOW GRADE STORM PIPING SHALL BE SOLID CORE SCHEDULE 40 PVC.
   - 5.2. ALL PRIMARY & SECONDARY STORM DRAIN PIPING & FITTINGS SHALL BE INSULATED WITH ½" FIBERGLASS INSULATION WITH ASJ JACKET.

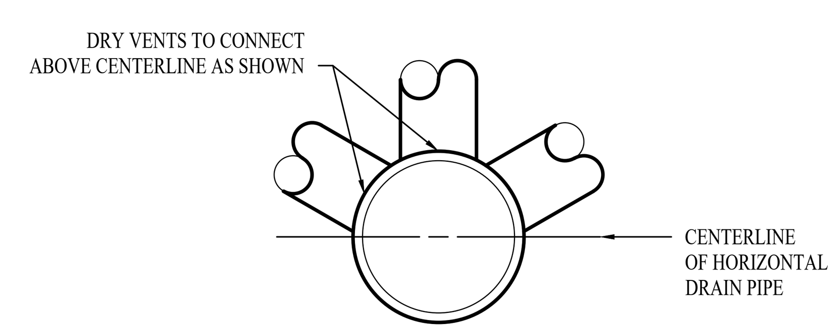


SANITARY VENT THRU ROOF DETAIL

PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	MANUFACTURER (OR EQUAL)	MODEL (OR EQUAL)	NOTES
BFP1	BACKFLOW PREVENTER	WILKINS	375	RPZ - 3"
BFP2	BACKFLOW PREVENTER	ZURN	950XLT	2" DOUBLE-CHECK FOR IRRIGATION
DN1	DOWNSPOUT NOZZLE	ZURN	Z199	
EXP1	EXPANSION TANK	WATTS	DETA-100	
FCO1	FLOOR CLEANOUT	ZURN	1400	
FD1	FLOOR DRAIN	ZURN	Z415-BZ	WITH Z1072 TRAP SEAL
FPHB1	FROST PROOF HOSE BIB	WOODFORD	MODEL 67	
FS1	FLOOR SINK	ZURN	FD2370	WITH HALF GRATE & DOME STRAINER
FS2	FLOOR SINK	ZURN	Z1920	WITH HALF GRATE
GT1	GREASE TRAP	SCHIER	GB-75	
HD1	HUB DRAIN	-	-	WITH Z1072 TRAP SEAL
HS1	HAND SINK	REGENCY	600HS17	
HWMS1	HOT WATER MIXING STATION	WATTS	INTELLISTATION LFIS200	2 1/2", WITH BAS INTEGRATION, WITH 'RP1' RECIRCULATION PUMP
LAV1	LAVATORY (DROP-IN W/ BATTERY SENSOR FAUCET)	AMERICAN STANDARD	0475.028	WITH ZURN Z6915-XL-L-TMV-1 FAUCET, 1/4 TURN STOPS, AND BRAIDED STAINLESS STEEL SUPPLIES
LAV2	LAVATORY (INTEGRAL BOWL)	-	-	WITH ZURN Z81104-XL FAUCET, 1/4 TURN STOPS, AND BRAIDED STAINLESS STEEL SUPPLIES
LT1	LAUNDRY TUB	SWAN	MF4F	WITH ZURN Z812J4-XL
MS1	MOP SINK	FIAT	MSB2424	WITH ZURN Z843M1 FAUCET WITH WALL HOOK
PRV1	PRESSURE REDUCING VALVE	WATTS	LFF127W	
RH1	ROOF HYDRANT	WOODFORD	SRH-MS	
RP1	HOT WATER RECIRCULATION PUMP	GRUNDFOS	MAGNA 1	WITH BAS INTEGRATION; ~23 GPM AT 25' TDH
SH1	SHOWER	AQUATIC	16030STT	60x30 ALCOVE ONE-PIECE SHOWER, WITH MOEN POSI-TEMP SHOWER VALVE & TRIM KIT
SK1	SINGLE COMPARTMENT SINK (22x19x7)	ELKAY	LR2219	WITH TWO HANDLED ZURN Z871C4-XL FAUCET
SK2	SINGLE COMPARTMENT SINK (22x19x7)	ELKAY	LR2219	WITH TWO HANDLED ZURN Z871C4-XL FAUCET
SK3	SINGLE COMPARTMENT SINK (22x19x7)	ELKAY	LR2219	WITH TWO HANDLED ZURN Z871C4-XL FAUCET
SP1	SUMP PUMP	ZOELLER	153-0002	120V, 1/2 HP
RD1	ROOF DRAIN	ZURN	Z100	
TD1	TRENCH DRAIN	JAY R SMITH	SQ-TD-O885	FABRICATED 11 GAUGE 304 STAINLESS STEEL LINT TOUGH WITH LOOSE SET SS LIGHT DUTY BAR GRATE WITH 1" SPACING BETWEEN BARS, REMOVABLE FILTER SCREENS WITH 3/8" PERFORATED HOLES & 4" BOTTOM OUTLET WITH SS MESH OVER DOME BOTTOM STRAINER
TS1	TUB / SHOWER	AQUATIC	260330	60x30 ALCOVE ONE-PIECE TUB/SHOWER; WITH MOEN POSI-TEMP SHOWER VALVE & TRIM KIT
TS2	TUB / SHOWER - ADA	AQUATIC	2603CTH	60x30 ADA WITH HANDHELD SHOWER & SLIDE BAR, GRAB BARS, REMOVABLE SEAT, MIXING VALVE, TRIM KIT
WB1	WASHER BOX	OATEY	38529	WASHER BOX W/ 1/4 TURN VALVES
WC1	WATER CLOSET - ADA HEIGHT - TANK	AMERICAN STANDARD	215AA.004	WITH CHURCH 9500SSCT SELF SUSTAINING SEAT, STAINLESS BRAIDED SUPPLY, AND 1/4 TURN SHUT-OFF.
WC2	WATER CLOSET - ADA HEIGHT - TANK	AMERICAN STANDARD	215AA.004	WITH CHURCH 9500SSCT SELF SUSTAINING SEAT, STAINLESS BRAIDED SUPPLY, AND 1/4 TURN SHUT-OFF.
WC3	WATER CLOSET - STANDARD HEIGHT - TANK	AMERICAN STANDARD	215CA.004	WITH CHURCH 9500SSCT SELF SUSTAINING SEAT, STAINLESS BRAIDED SUPPLY, AND 1/4 TURN SHUT-OFF.
WH1	WATER HEATER - GAS	AO SMITH	BTH-199	199kBTU, 100 GALLON, WITH 'EXP1'
WSS1	WATER SOFTENER SYSTEM	CULLIGAN	HCE-450-3	3", 160GPM CONTINUOUS, 210GPM PEAK
YCO1	YARD CLEAN OUT	ZURN	Z1400	

NOTES:
1. VERIFY NECESSARY FIXTURES MEET ADA REQUIREMENTS WITH ARCHITECT PRIOR TO INSTALLATION
2. VERIFY ALL FIXTURES WITH OWNER & BRAND REQUIREMENTS PRIOR TO PURCHASE

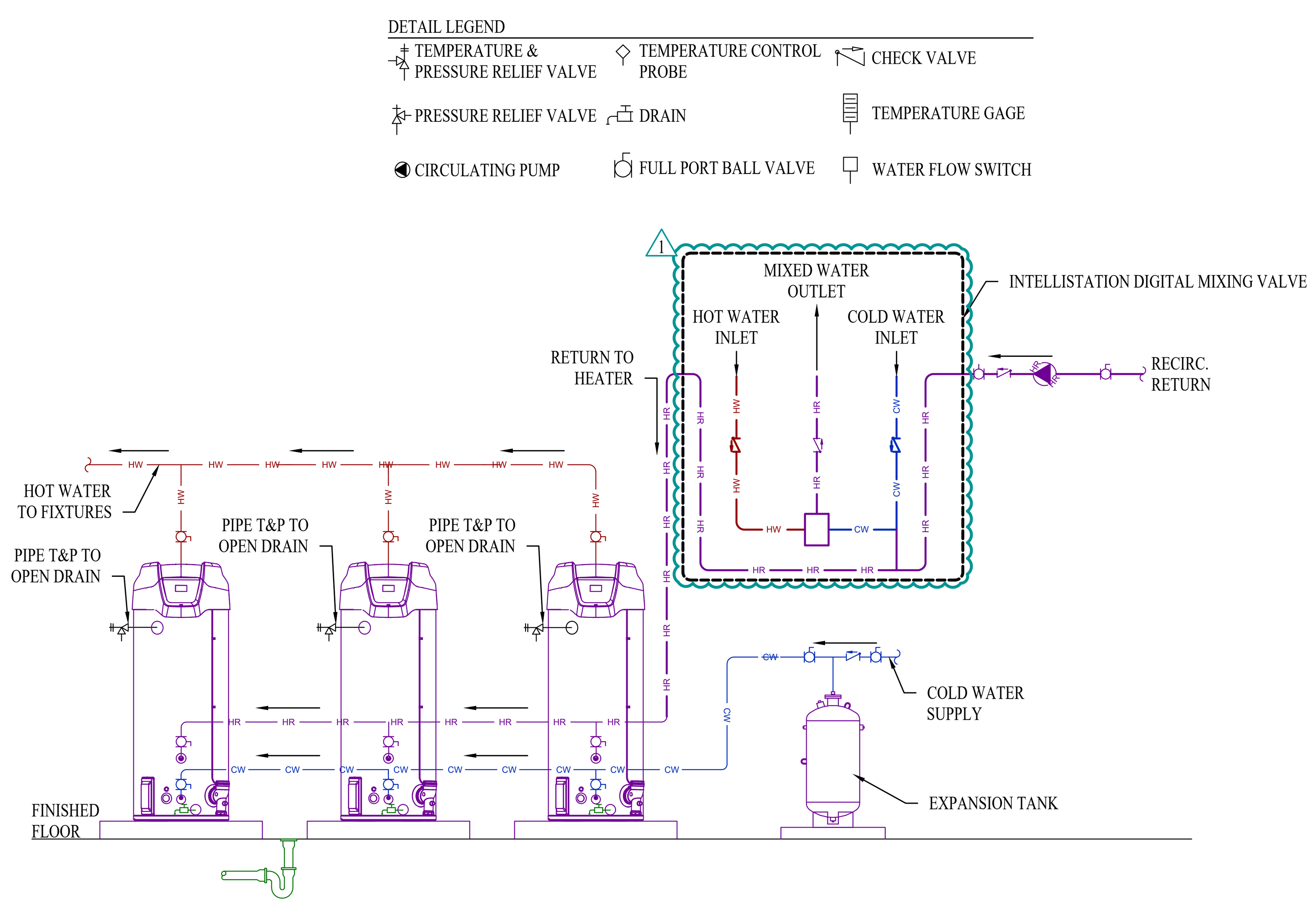


DRY VENT DETAIL

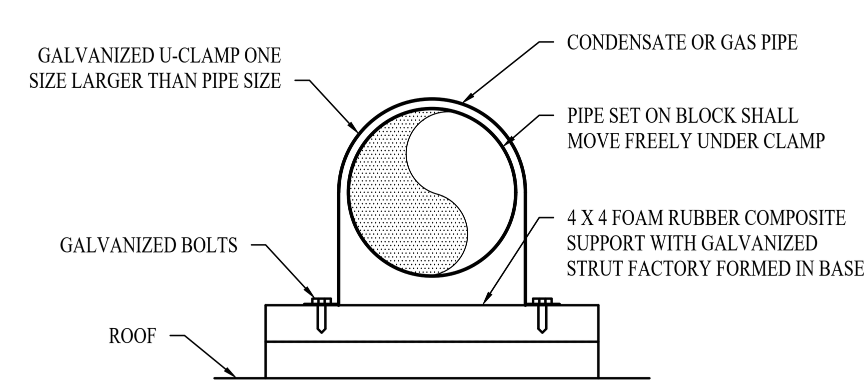
PLUMBING CONNECTION SIZING SCHEDULE

FIXTURE		SANITARY PIPING		SUPPLY PIPING	
TYPE	TYPICAL ABBREVIATION	WASTE CONNECTION	VENT CONNECTION	COLD WATER CONNECTION	HOT WATER CONNECTION
DRINKING FOUNTAIN	DF	1-1/2"	1-1/4"	1/2"	-
FLOOR DRAIN	FD	3"	2"	-	-
HAND / HAIR SINK	HS / SK	2"	1-1/4"	1/2"	1/2"
HOSE BIBB	HB	-	-	3/4"	-
LAVATORY	LAV	1-1/2"	1-1/4"	1/2"	1/2"
MOP SINK	MS	3"	1-1/2"	1/2"	1/2"
ICE MAKER OUTLET BOX	REF	-	-	1/2"	-
SHOWER	SH	3"	1-1/2"	1/2"	1/2"
URINAL	UR	2"	1-1/4"	3/4"	-
WATER CLOSET (FLUSH TANK)	WC	4"	2"	1/2"	-
WATER CLOSET (FLUSH VALVE)	WC	4"	2"	1"	-

NOTES:
1. SIZES SHOWN ABOVE ARE TYPICAL UNLESS NOTED OTHERWISE ON PLANS



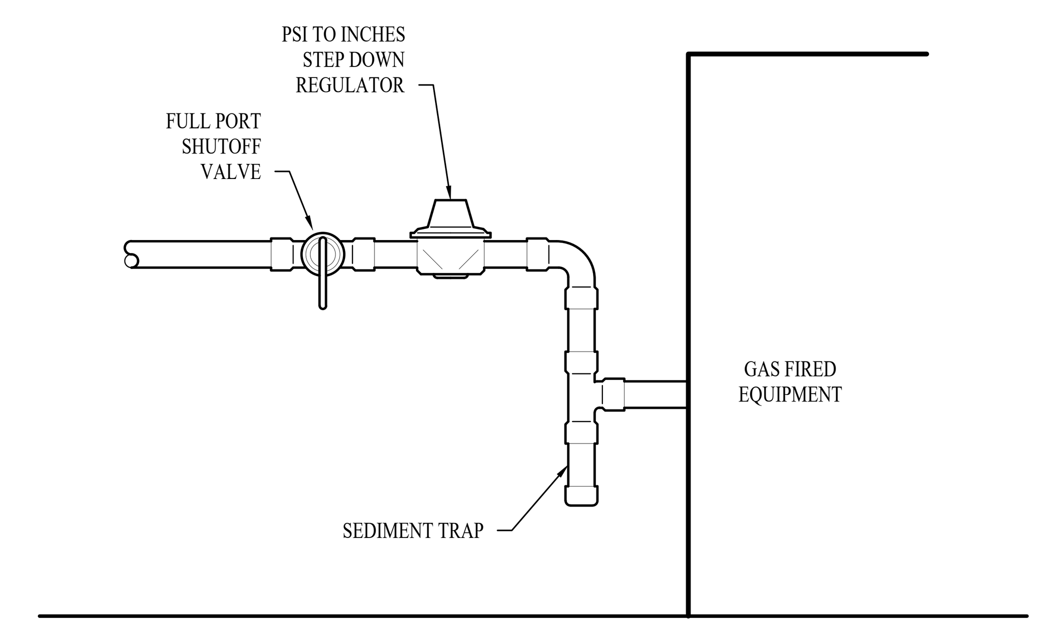
MULTIPLE WATER HEATER PIPING DETAIL WITH RECIRCULATION AND DIGITAL MIXING VALVE



STEEL PIPE NOMINAL SIZE OF PIPE (IN.)	SPACING OF SUPPORTS (FT.)
½"	6
¾" OR 1"	8
1¼" OR LARGER (HORIZONTAL)	10

NOTE:
INSTALL SUPPORTS ACCORDING TO NATIONAL FUEL GAS CODE 2015 EDITION

PIPE SUPPORT DETAIL



GAS EQUIPMENT SUPPLY DETAIL W/ REGULATOR

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