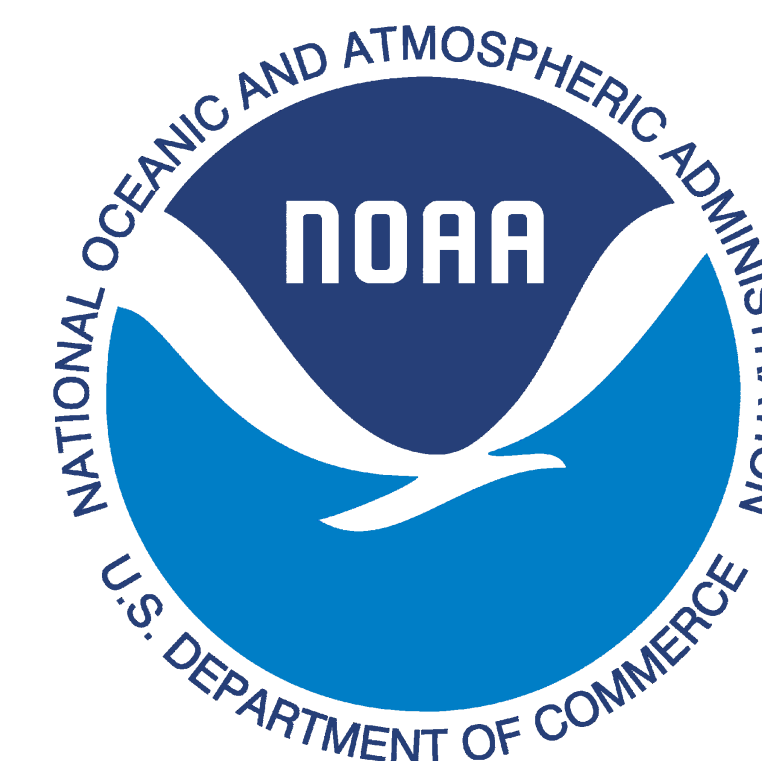
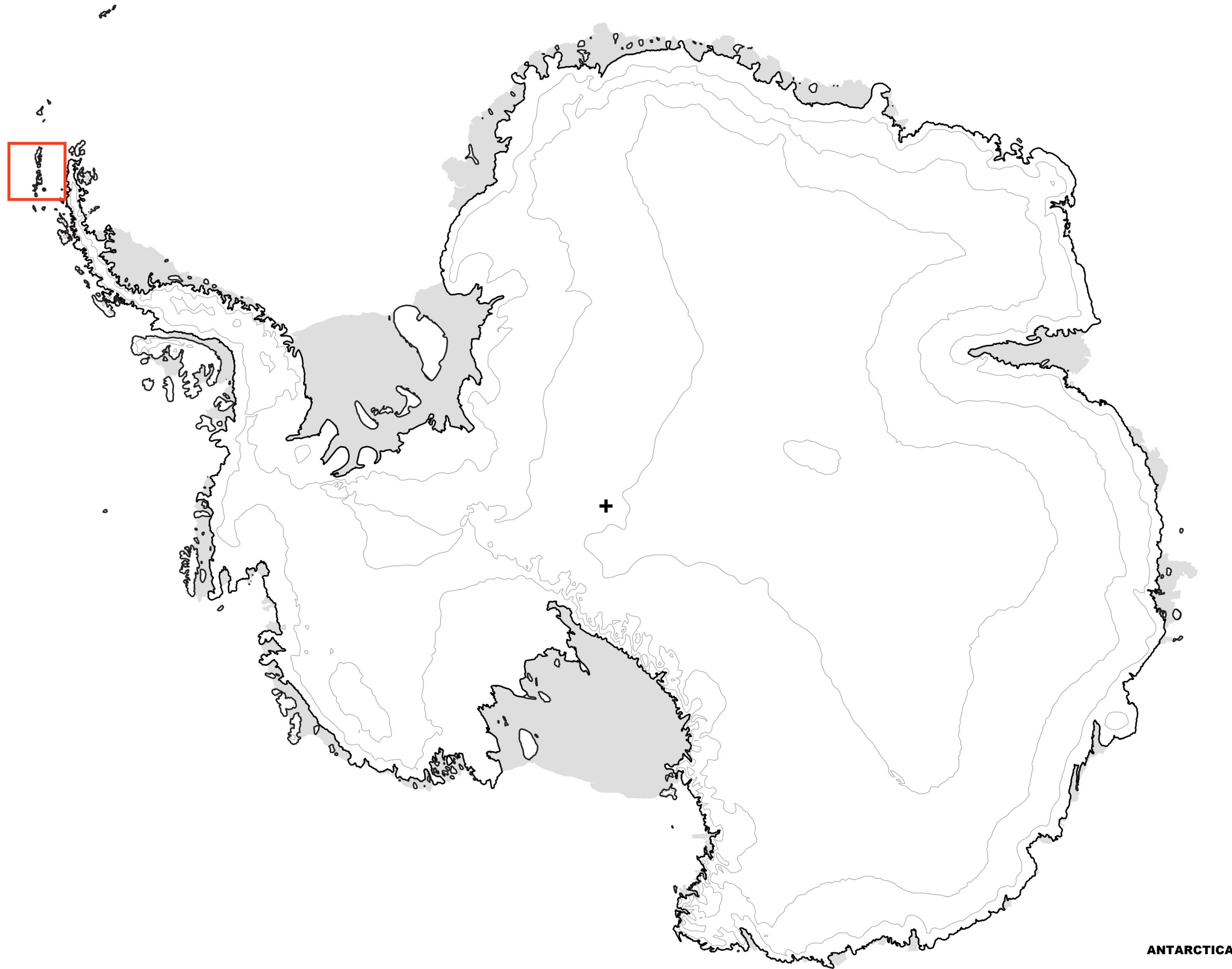


CAPE SHIRREFF FIELD STATION

NOAA AREA FACILITY
LIVINGSTON ISLAND, ANTARCTICA





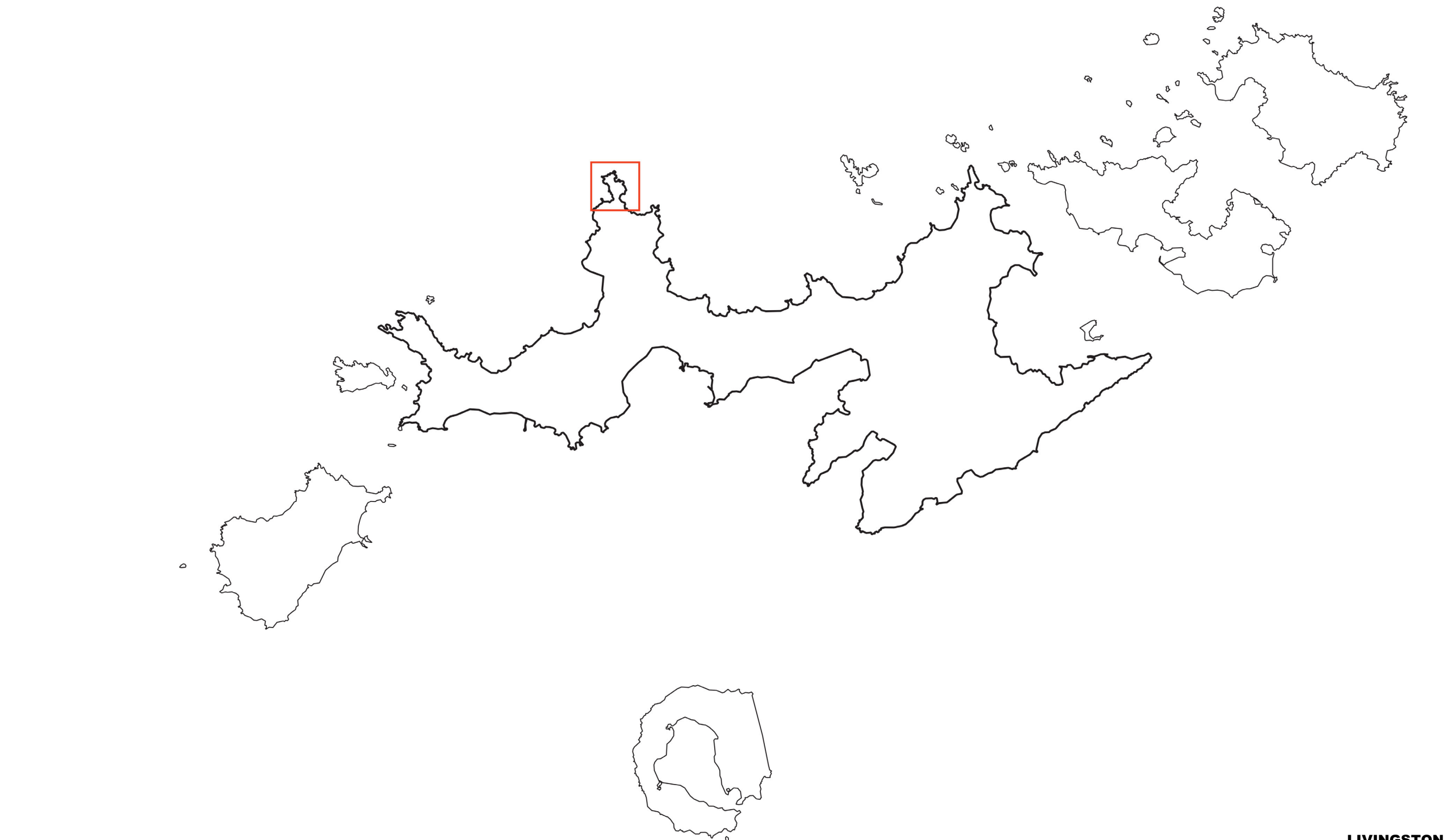
ANTARCTICA

SHEET INDEX

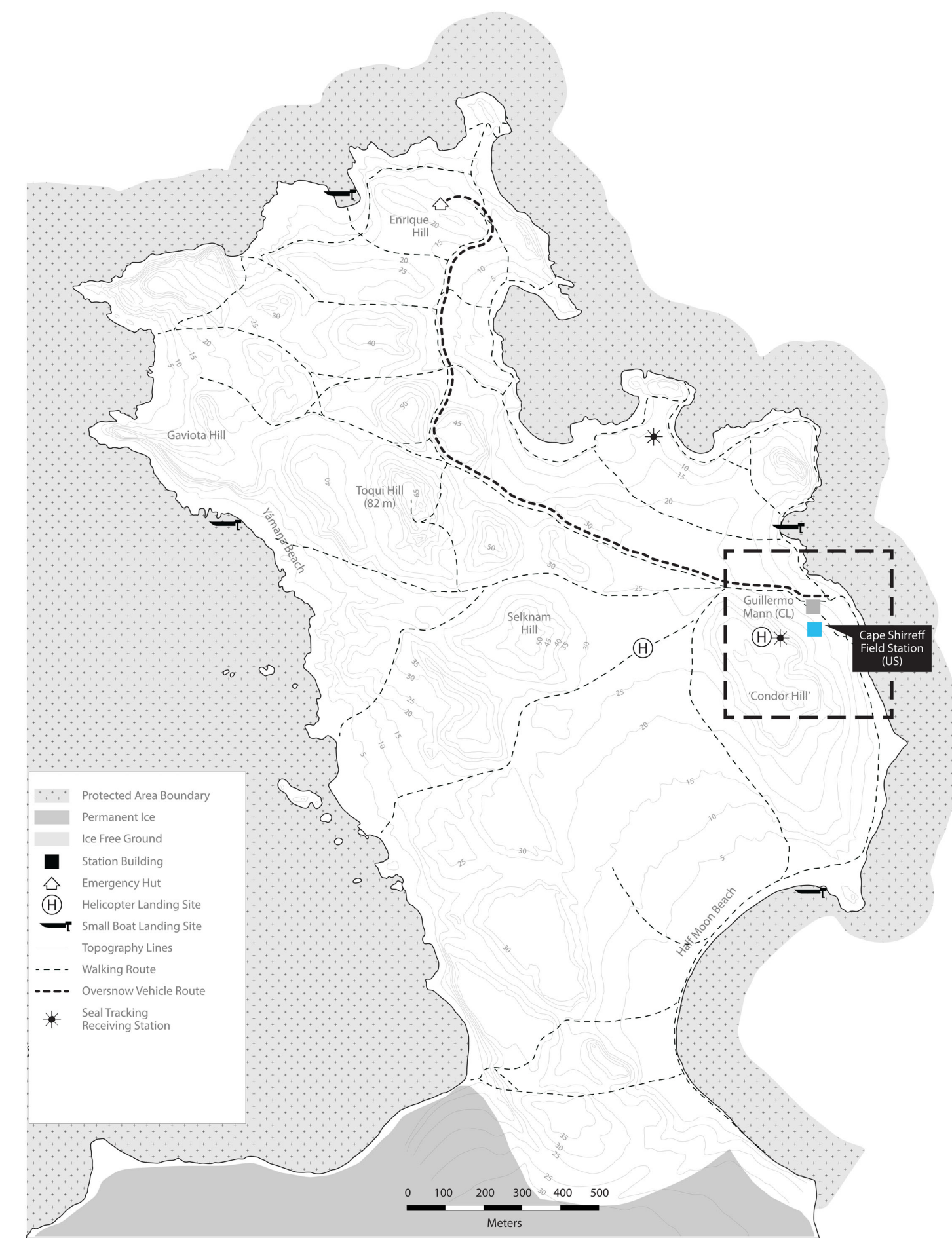
Sheet Number	Sheet Name
A-606	BELLY CLADDING DETAILS
A-607	VAPROSHIELD DETAILS
G-000	COVER SHEET
G-001	DRAWING INDEX & VICINITY MAP
G-101	CODE PLAN
A-102	FLOOR PLAN LEVEL 1
A-101	SITE PLAN
A-201	CAMPUS ELEVATIONS
A-001	SYMBOLS & ABBREVIATIONS
A-501	SCHEDULES
A-601	STAIR DETAILS
A-701	REFLECTED CEILING PLAN
A-801	INTERIOR ELEVATIONS GALLEY
A-401	WALL SECTIONS GALLEY
A-206	AXONS
A-205	AXON EXPLODED
A-301	BUILDING SECTIONS GALLEY
A-302	BUILDING SECTIONS
A-104	ROOF PLAN
A-202	GALLEY ELEVATIONS
A-203	BERTHING ELEVATIONS
A-404	WALL SECTIONS BERTHING
A-802	INTERIOR ELEVATIONS BERTHING
A-402	WALL SECTIONS GALLEY
A-502	WINDOW & DOOR SCHEDULE
A-602	WINDOW DETAILS
A-603	CLADDING DETAILS
A-605	DECKING DETAILS

SHEET INDEX

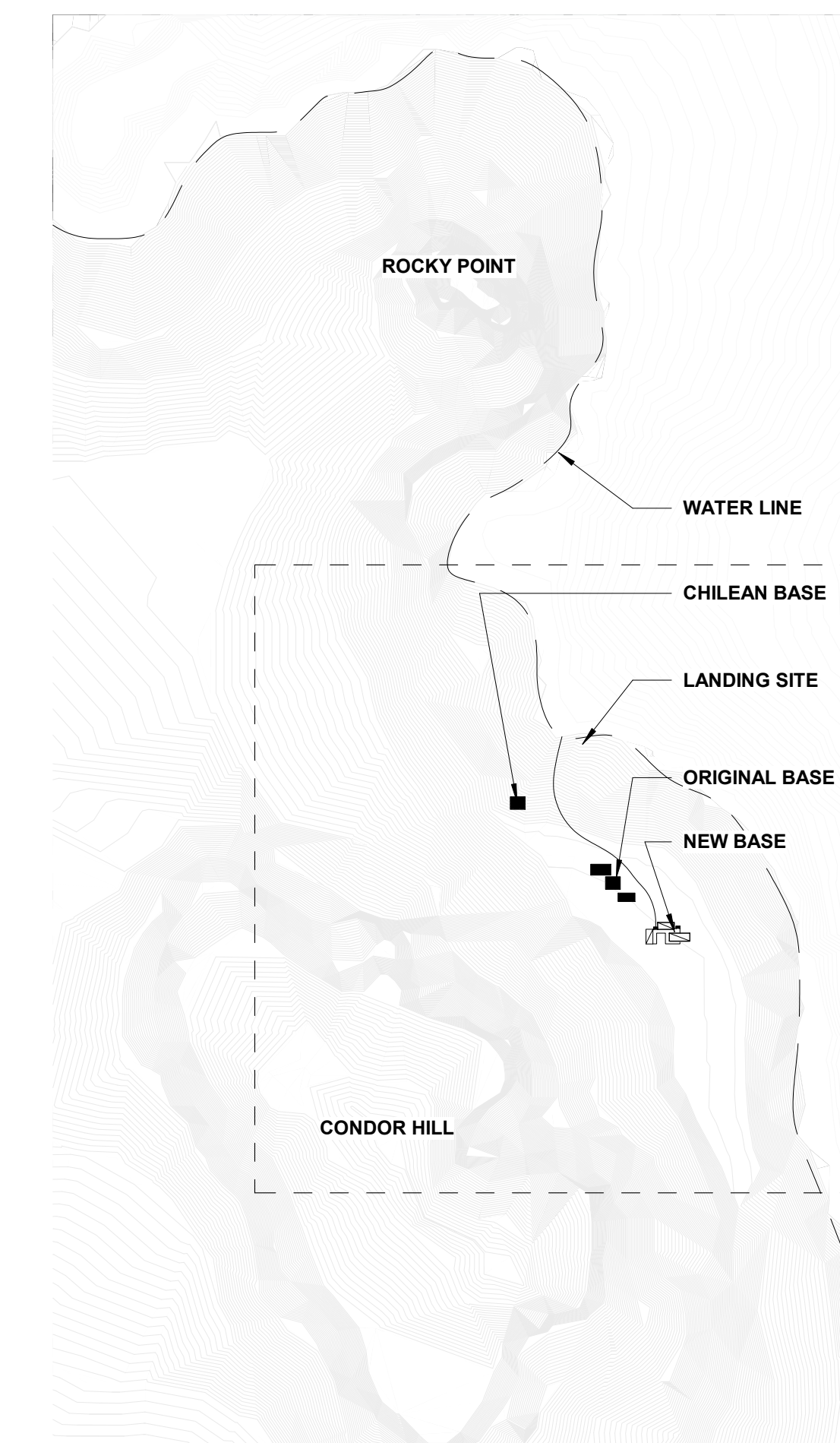
Sheet Number	Sheet Name
A-403	WALL SECTIONS GALLEY
A-604	CLADDING DETAILS - PLAN
A-903	MILLWORK DETAILS BERTHING
A-103	FLOOR PLAN MEZZANINE LEVEL
A-1001	FINISH FLOOR PLAN
A-405	WALL SECTIONS BERTHING
A-901	MILLWORK DETAILS GALLEY
A-902	MILLWORK DETAILS GALLEY
S-101	FLOOR FRAMING PLAN
S-100	FOUNDATION PLAN
S-102	ROOF FRAMING PLAN
S-001	GENERAL NOTES
S-002	GENERAL NOTES
S-300	BUILDING AND WALL SECTIONS
S-402	FLOOR DETAILS
S-500	SCHEDULES
S-403	ROOF DETAILS
S-400	FOUNDATION DETAILS
S-005	TYPICAL DETAILS
S-006	TYPICAL WALL SECTIONS
S-004	LOAD KEYS
S-003	GENERAL NOTES
S-401	WALL FRAMING ELEVATIONS
S-404	BENT FRAME DETAILS & ELEVATIONS
E-101	ELECTRICAL PLAN
E-001	ELEC. NOTES, SPECIFICATIONS & SYMBOLS
E-201	ELECTRICAL SCHEDULES
M-101	MECHANICAL PLAN
M-201	MECHANICAL SCHEDULE AND DETAILS



LIVINGSTON ISLAND



CAPE SHIRREFF



VICINITY MAP
1" = 300'-0"



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DRAWING INDEX
& VICINITY MAP

date: 03/09/22
scale: As indicated

G-001

CODE ANALYSIS

APPLICABLE CODES
 INTERNATIONAL BUILDING CODE, 2021 EDITION
 INTERNATIONAL EXISTING BUILDING CODE, 2015 EDITION
 INTERNATIONAL FIRE CODE, 2015 EDITION
 APPLICABLE STANDARDS
 ACCESSIBILITY STANDARDS PER CHAPTER 11, IBC 2021 EDITION
 ACCESSIBILITY STANDARDS PER ICC ANSI A117.1, 2009 EDITION

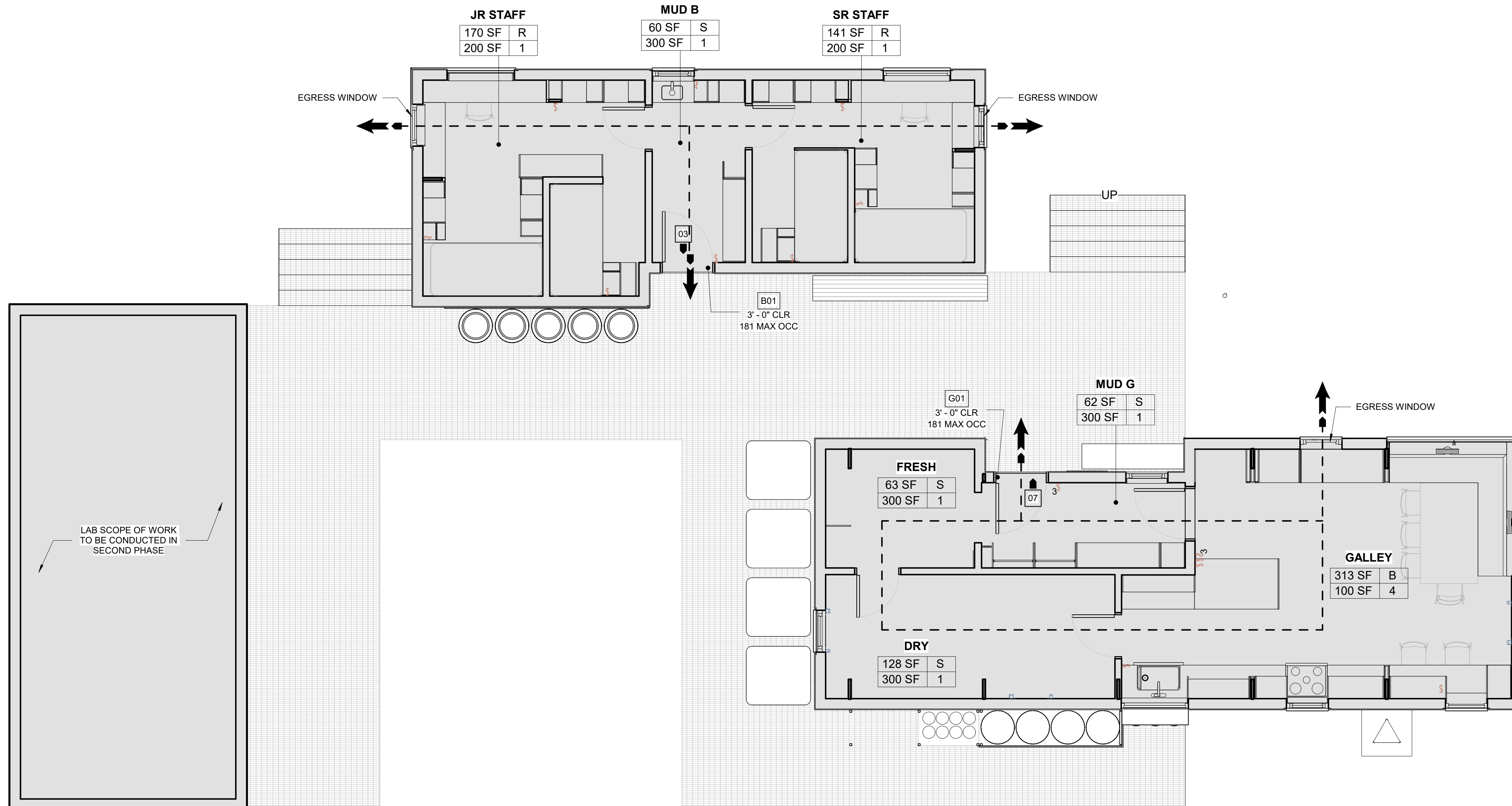
OCCUPANCY GROUP B
 CONSTRUCTION TYPE: TYPE V
 MAXIMUM ALLOWABLE AREA NON-SPRINKLERED TYPE V A: 18,000 SF
 656 SF GALLEY
 444 SF BERTHING
 427 SF LAB
TOTAL SQUARE FOOTAGE: 1,527 SF
 ALLOWABLE BUILDING HEIGHT MAXIMUM: 50 FT
ACTUAL BUILDING HEIGHT: 16 FT
 ALLOWABLE STORIES ABOVE GRADE: 2
ACTUAL NUMBER OF STORIES: 1

MEANS OF EGRESS SIZING
 Table 1005.1 Egress width. Stairways shall use a factor of 0.3, other egress components shall use a factor of 0.2.
 Section 1017 permits 200 foot total path of egress travel for group B without sprinkler system.
 Section 1005 Means of Egress Sizing
 Section 1005.3.1 Stairways. Where stairways serve more than one story, only the occupant load of each story considered individually shall be used in calculating the required capacity of the stairways serving that story.
 Section 1005.6 Egress convergence. Where the means of egress from stories above and below converge at an intermediate level, the capacity of the means of egress from the point of convergence shall not be less than the sum of the required capacities for the two adjacent stories

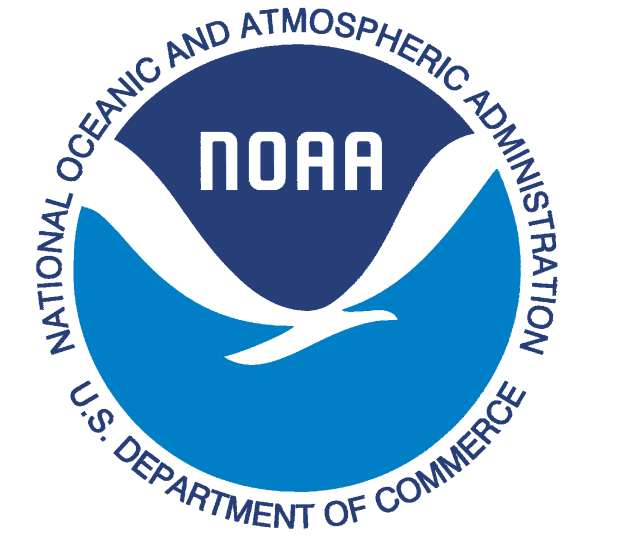
PLUMBING FIXTURE COMPLIANCE
 Total building occupant load: 10
 10 / 2 = 5 MEN + 5 WOMEN
 WATER CLOSETS: 1 per 25 for first 50 and 1 per 50 exceeding 50.
 (5 MEN / 25) = 0.2 rounded to 1.
 (5 WOMEN / 25) = 0.2 rounded to 1.
 LAVATORIES: 1 per 40 for first 80 and 1 per 80 exceeding 80.
 (5 MEN / 40) = 0.125 rounded to 1
 (5 WOMEN / 40) = 0.125 rounded to 1

PROVIDED FIXTURES		
LOCATION	FIXTURE TYPE	COUNT

OCCUPANT SCHEDULE					
Level	NAME	NUMBER	AREA	OLF	OCCUPANT LOAD
LEVEL 1	DRY	G03	128 SF	300 SF	1
LEVEL 1	FRESH	G02	63 SF	300 SF	1
LEVEL 1	GALLEY	G04	313 SF	100 SF	4
LEVEL 1	JR STAFF	B01	170 SF	200 SF	1
LEVEL 1	MUD B	B02	60 SF	300 SF	1
LEVEL 1	MUD G	G01	62 SF	300 SF	1
LEVEL 1	SR STAFF	B03	141 SF	200 SF	1
			936 SF		10



N
 LEVEL 1 EGRESS PLAN
 1/4" = 1'-0"



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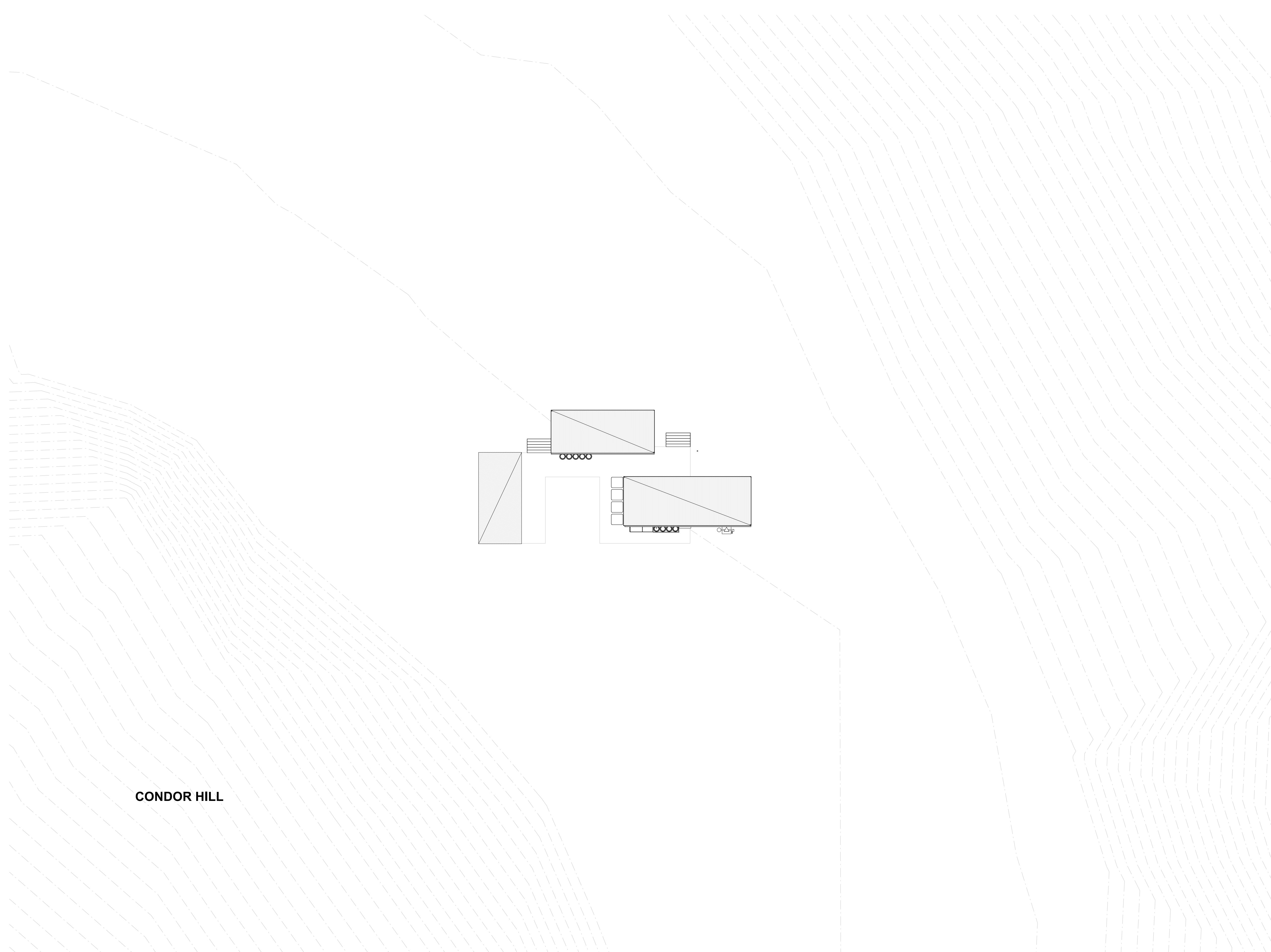
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 REV. DATE: REV. NAME: REV. NO:

CODE PLAN

date: 03/03/21
 scale: As indicated

G-101



CONDOR HILL

N
 ○ SITE PLAN ENLARGED
 1/16" = 1'-0"



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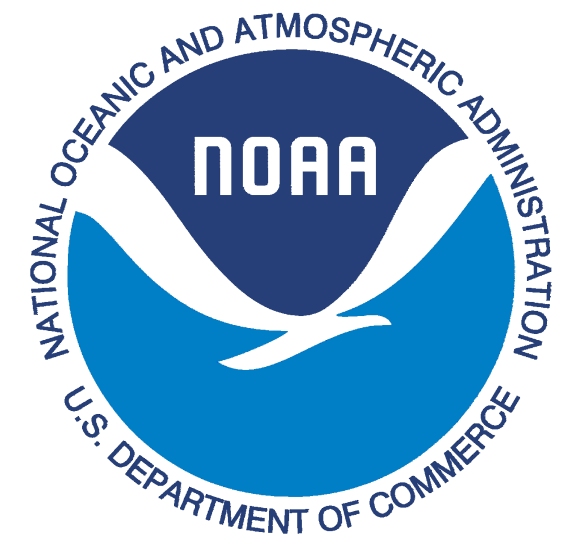
REV. DATE: REV. NAME: REV. NO:

SITE PLAN

date: 03/01/21
 scale: 1/16" = 1'-0"

A-101

4/19/2023 2:03:13 PM



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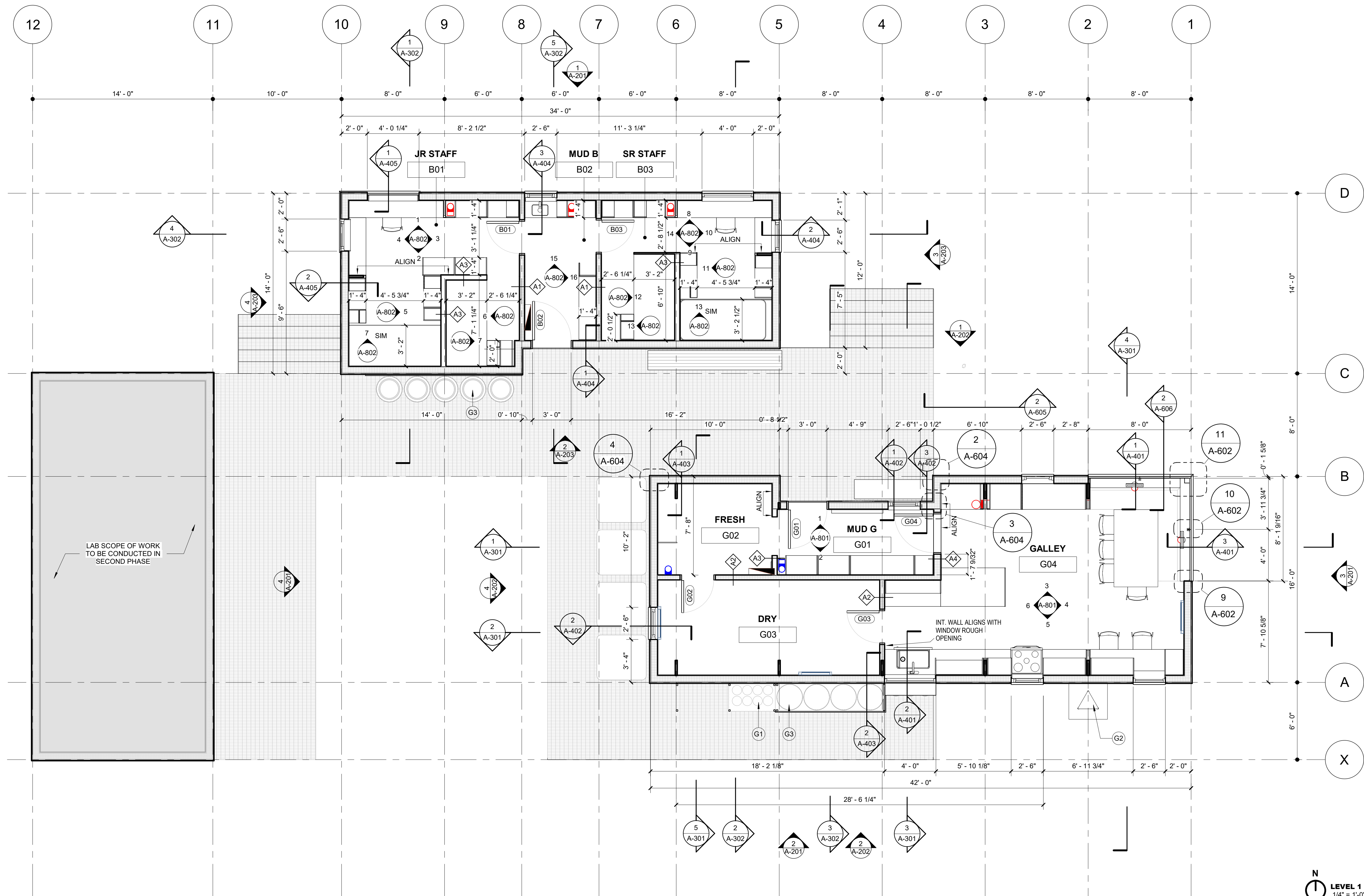
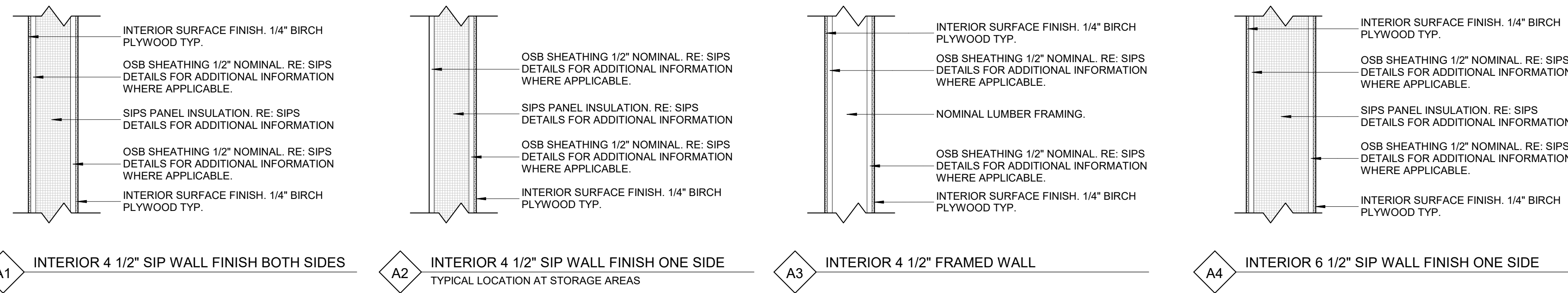
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FLOOR PLAN LEVEL 1

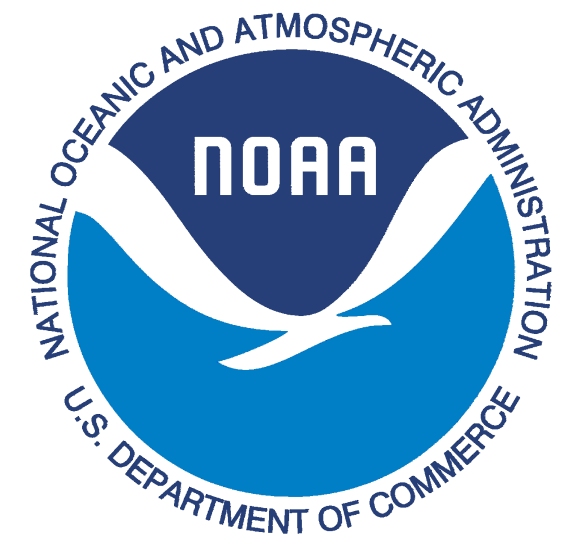
date: 03 MAR 2021
 scale: As indicated

A-102

WORKNOTE LEGEND	
WORK NOTE VALUE	WORKNOTE
G1	PROPANE TANK. OFOI
G2	RADIO ANTENNA MAST. OFCI
G3	RAINWATER COLLECTION BARREL. OFOI



N
 LEVEL 1
 1/4" = 1'-0"



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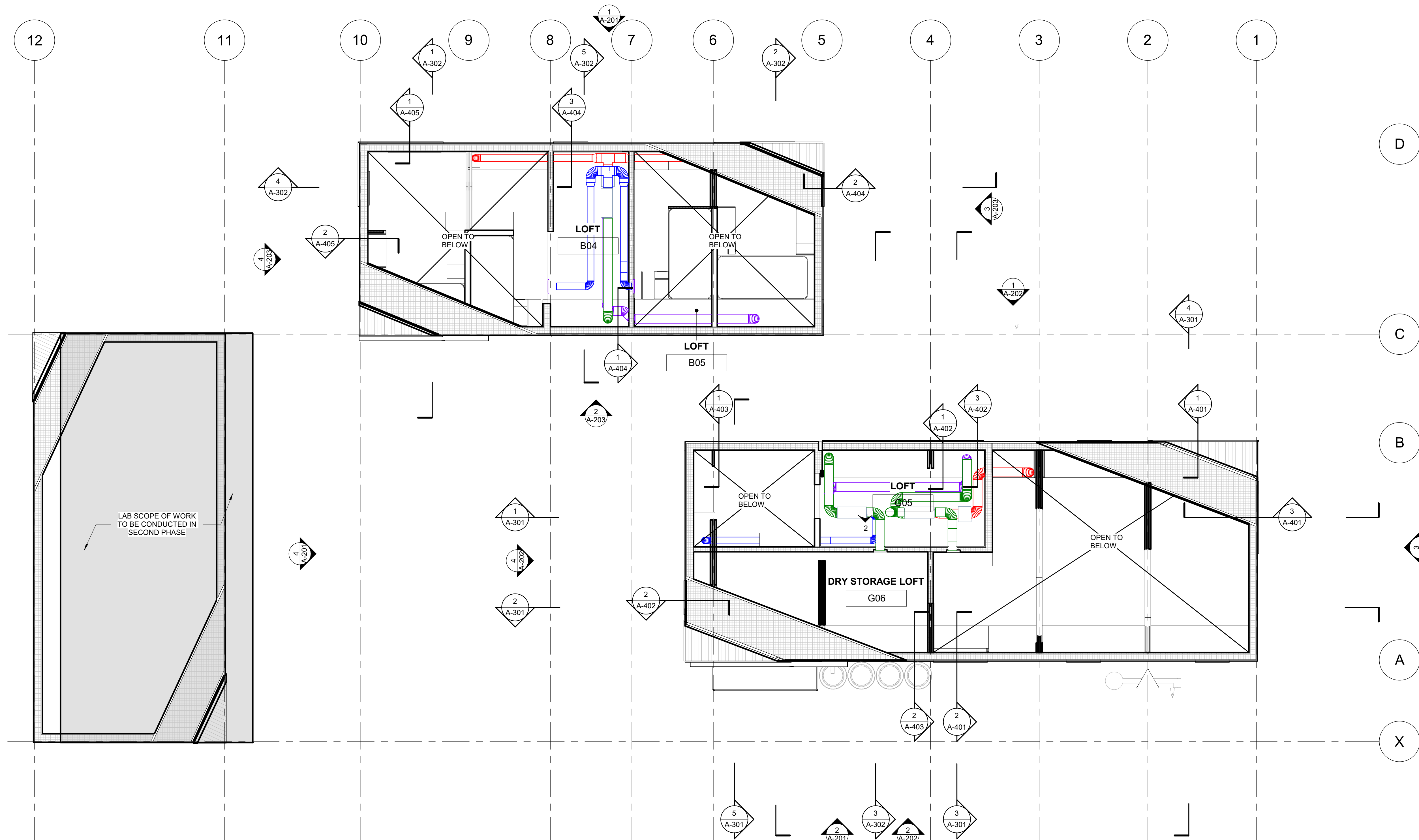
REVISIONS

REV. DATE: REV. NAME: REV. NO:

FLOOR PLAN MEZZANINE LEVEL

date: 03/02/22
scale: 1/4" = 1'-0"

A-103

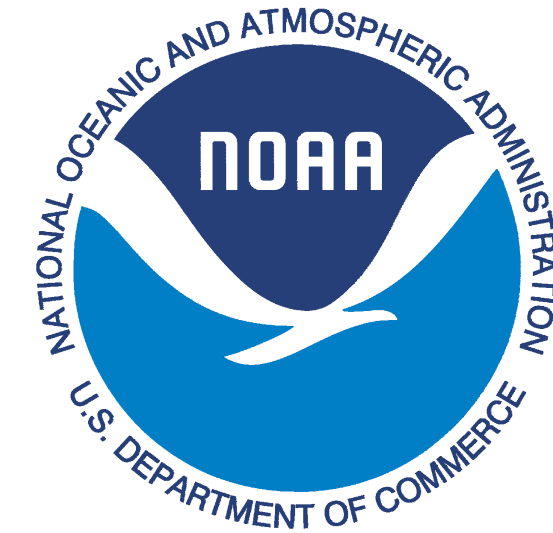
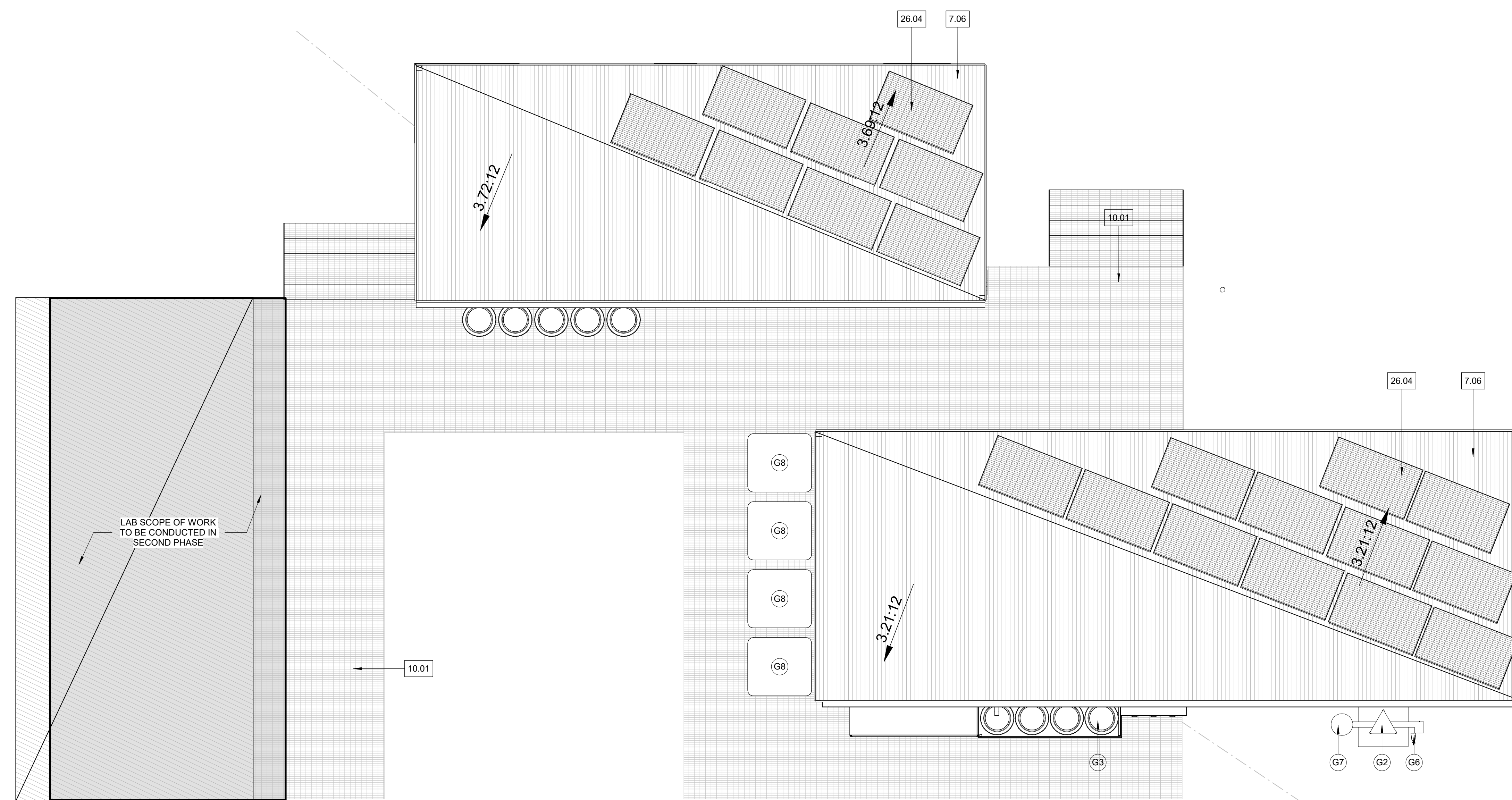


N
LEVEL 1 MEZ
1/4" = 1'-0"

4/12/2022 2:32:38 PM

WORKNOTE LEGEND	
WORK NOTE VALUE	WORKNOTE
G2	RADIO ANTENNA MAST. OFCI
G3	RAINWATER COLLECTION BARREL. OFOI
G6	VHF ANTENNA OFCI
G7	IRIDIUM ANTENNA OFCI
G8	RELOCATED FISH BOXES OFOI

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
7.06	CORRUGATED 316 S.S. METAL CLADDING
10.01	FIBER-GRATE DECKING. RE: STAIR AND DECK DETAILS FOR ADDITIONAL INFORMATION.
26.04	ROOF MOUNTED SOLAR PANELS. RE: ELECTRICAL FOR ADDITIONAL INFORMATION.



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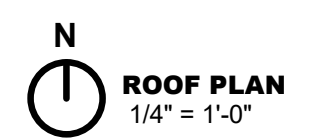
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REV. DATE:	REV. NAME:	REV. NO.:

ROOF PLAN

date: 02/08/22
 scale: 1/4" = 1'-0"



A-104



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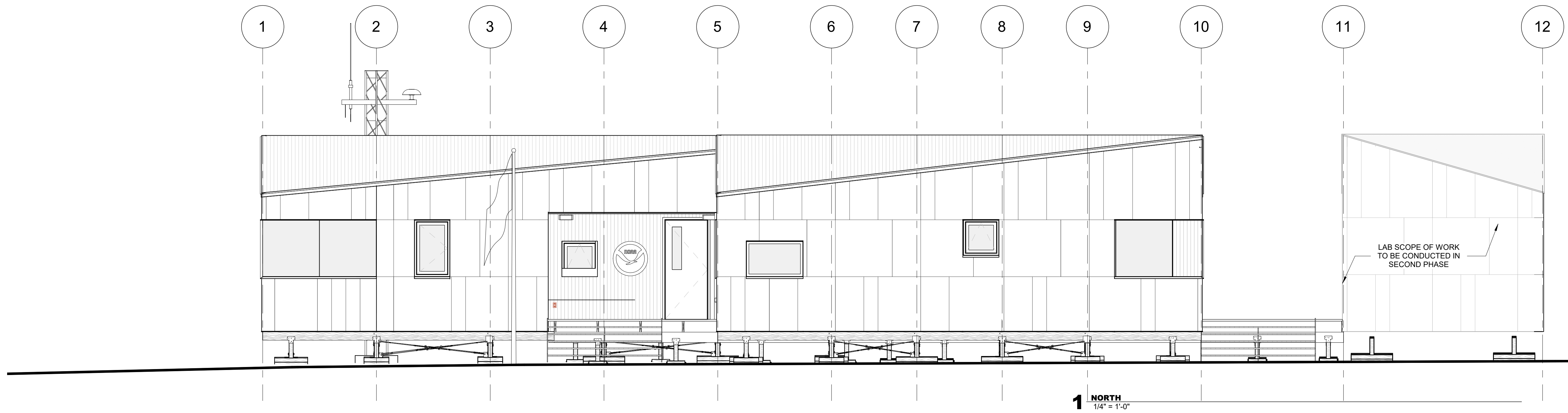
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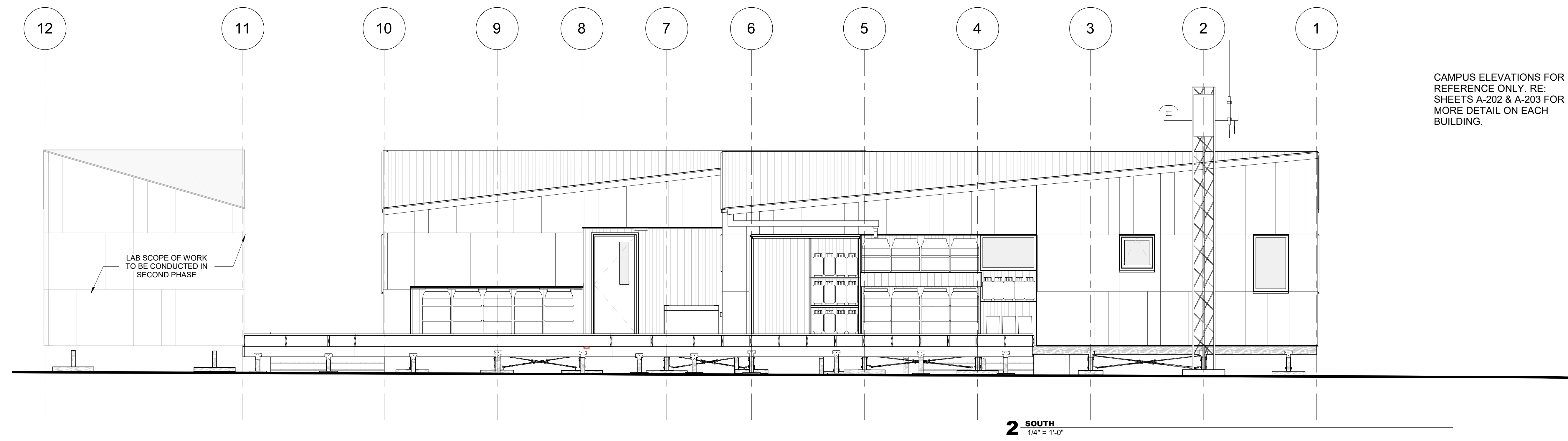
CAMPUS ELEVATIONS

date: 03/01/21
scale: 1/4" = 1'-0"

A-201

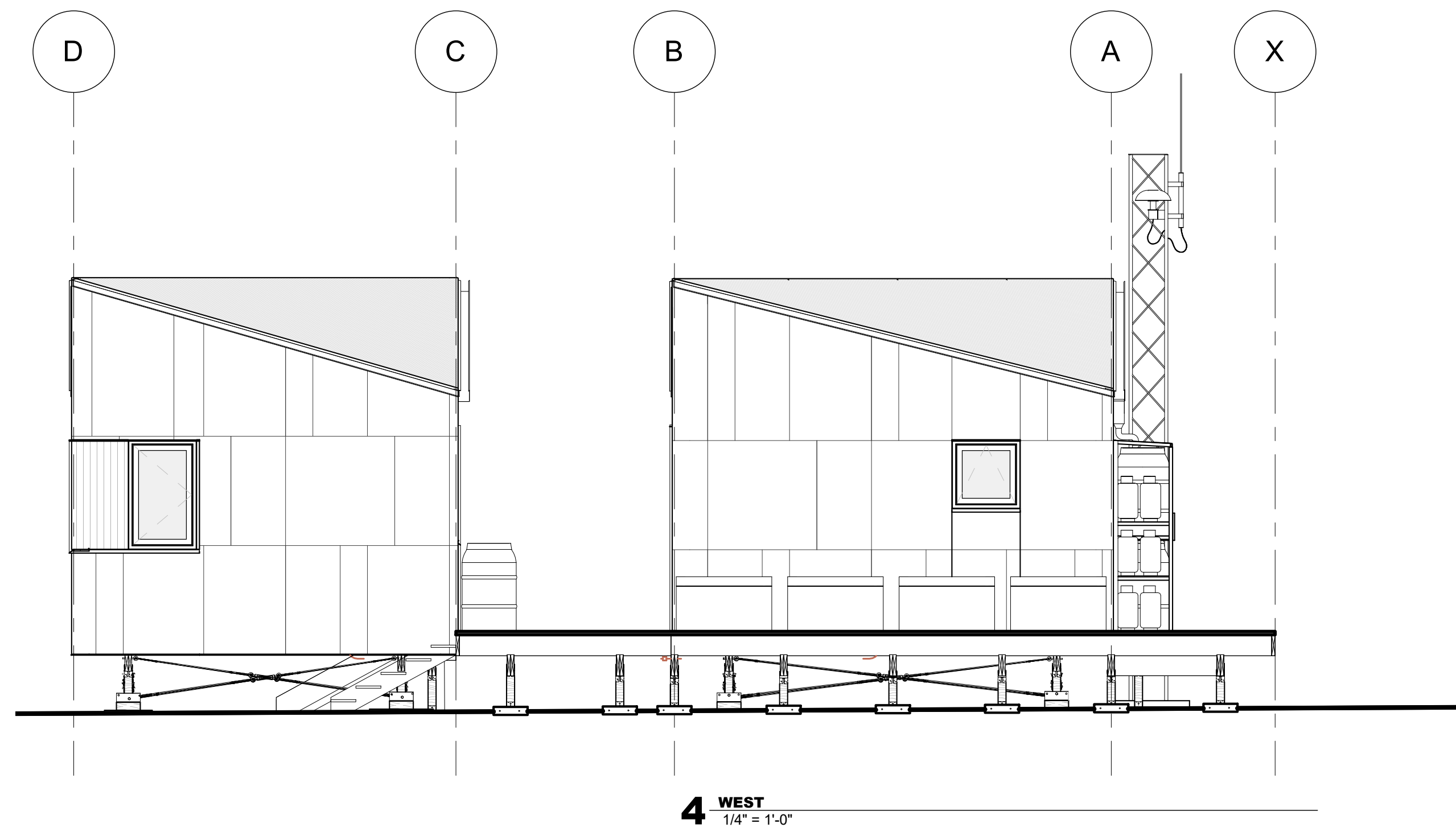


1 NORTH
1/4" = 1'-0"

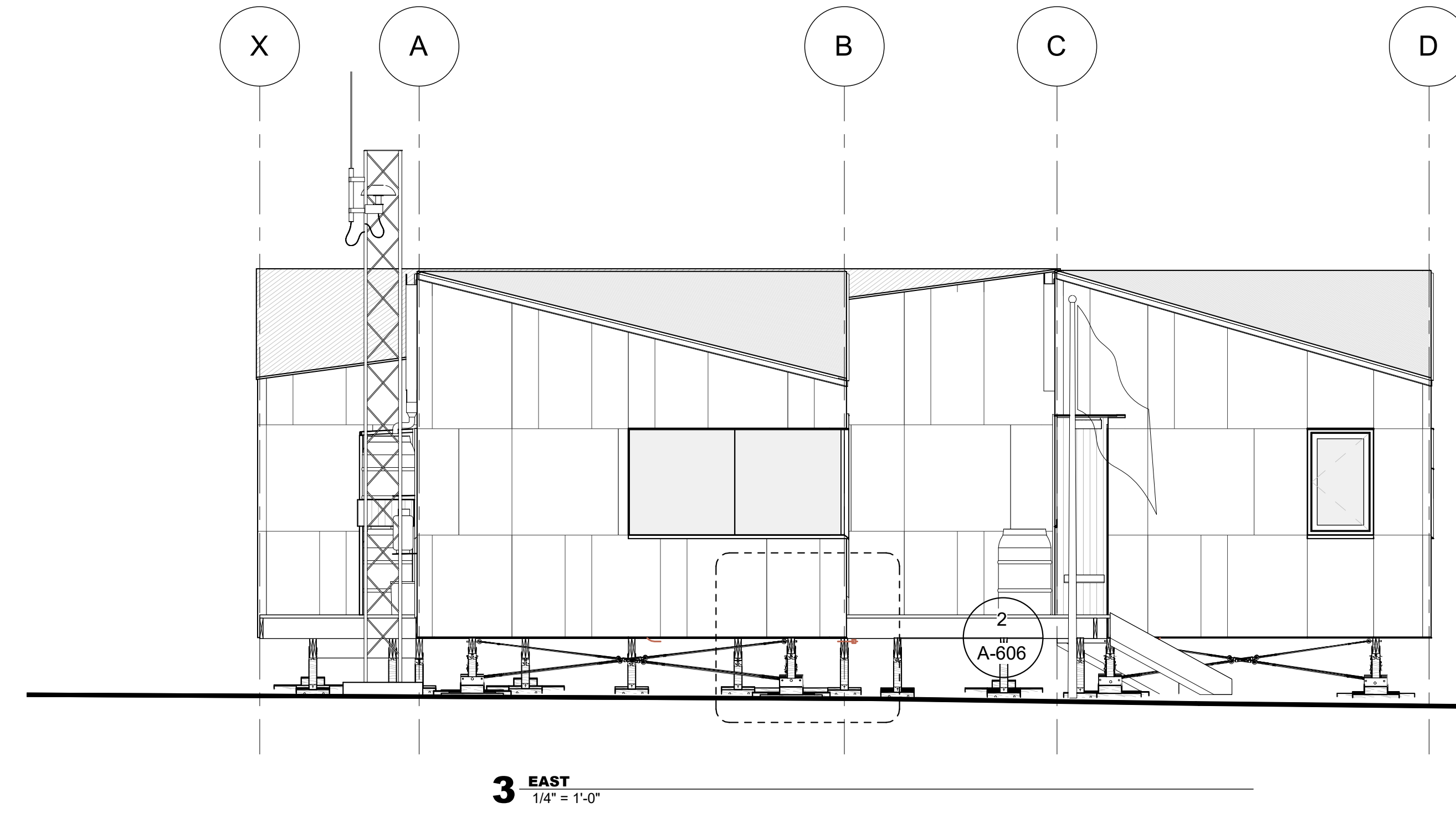


CAMPUS ELEVATIONS FOR
REFERENCE ONLY. RE:
SHEETS A-202 & A-203 FOR
MORE DETAIL ON EACH
BUILDING.

2 SOUTH
1/4" = 1'-0"



4 WEST
1/4" = 1'-0"

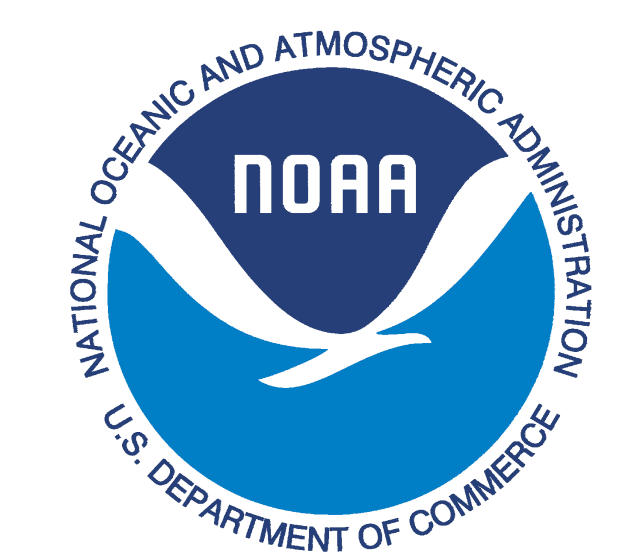


3 EAST
1/4" = 1'-0"

4/12/2023 2:40 PM

WORKNOTE LEGEND	
WORK NOTE VALUE	WORKNOTE
G1	PROPANE TANK. OFOI
G2	RADIO ANTENNA MAST. OFCI
G3	RAINWATER COLLECTION BARREL. OFOI
G4	GREYWATER CATCHMENT BUCKET. OFOI
G6	VHF ANTENNA OFCI
G7	IRIDIUM ANTENNA OFCI
G8	RELOCATED FISH BOXES OFOI

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
7.05	LIC BRONZE FINISH STAINLESS STEEL METAL CLADDING. RE: LEGEND -- FOR TYPICAL PATTERN.
7.06	CORRUGATED 316 S.S. METAL CLADDING
7.12	CUSTOM BREAK METAL SHROUD. RE: CLADDING DETAILS FOR ADDITIONAL INFORMATION.
10.01	FIBER-GRATE DECKING. RE: STAIR AND DECK DETAILS FOR ADDITIONAL INFORMATION.
12.02	EXT. BENCH
12.03	METAL FAB NOAA SIGNAGE



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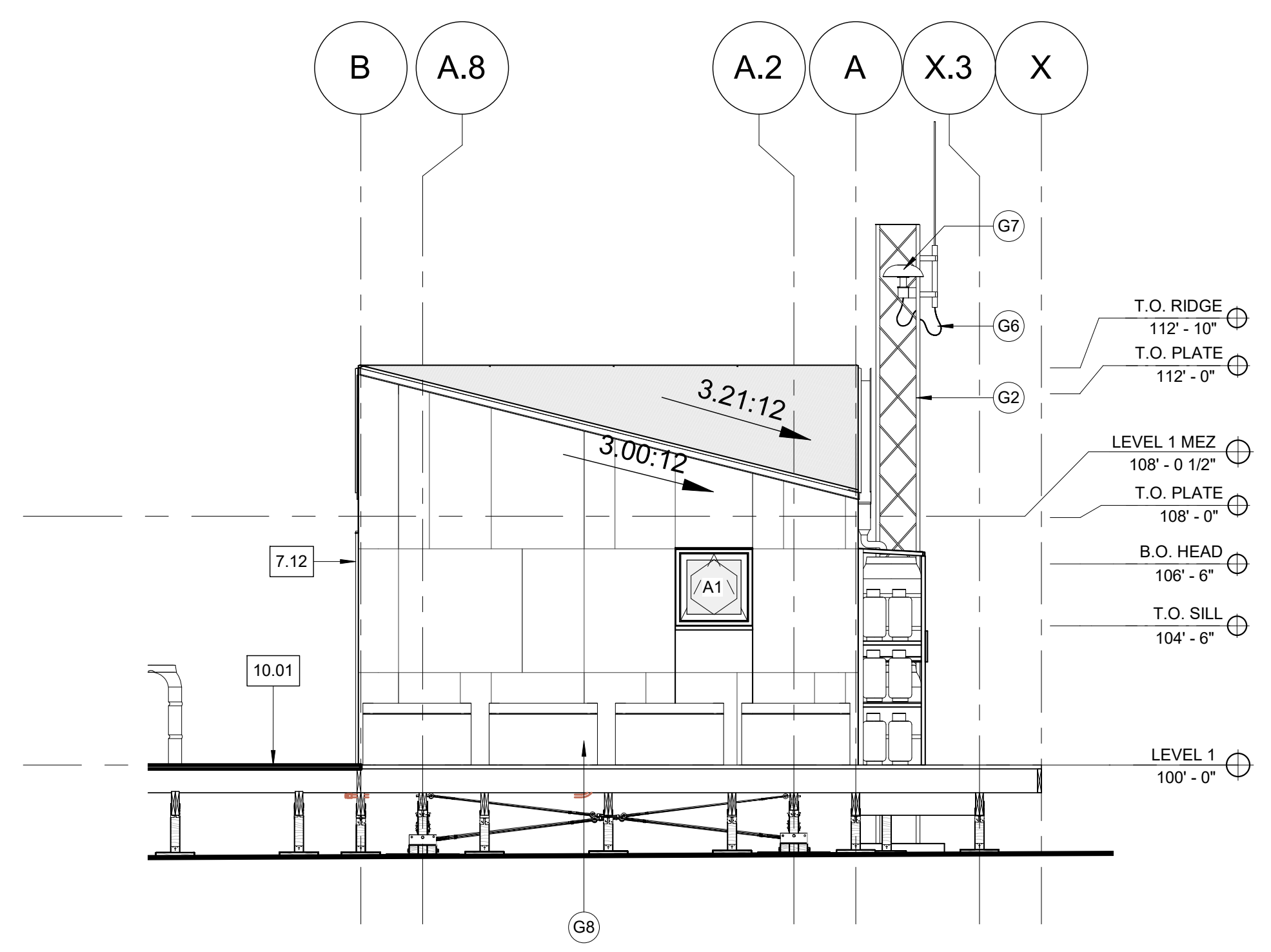
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REV. DATE: REV. NAME: REV. NO:

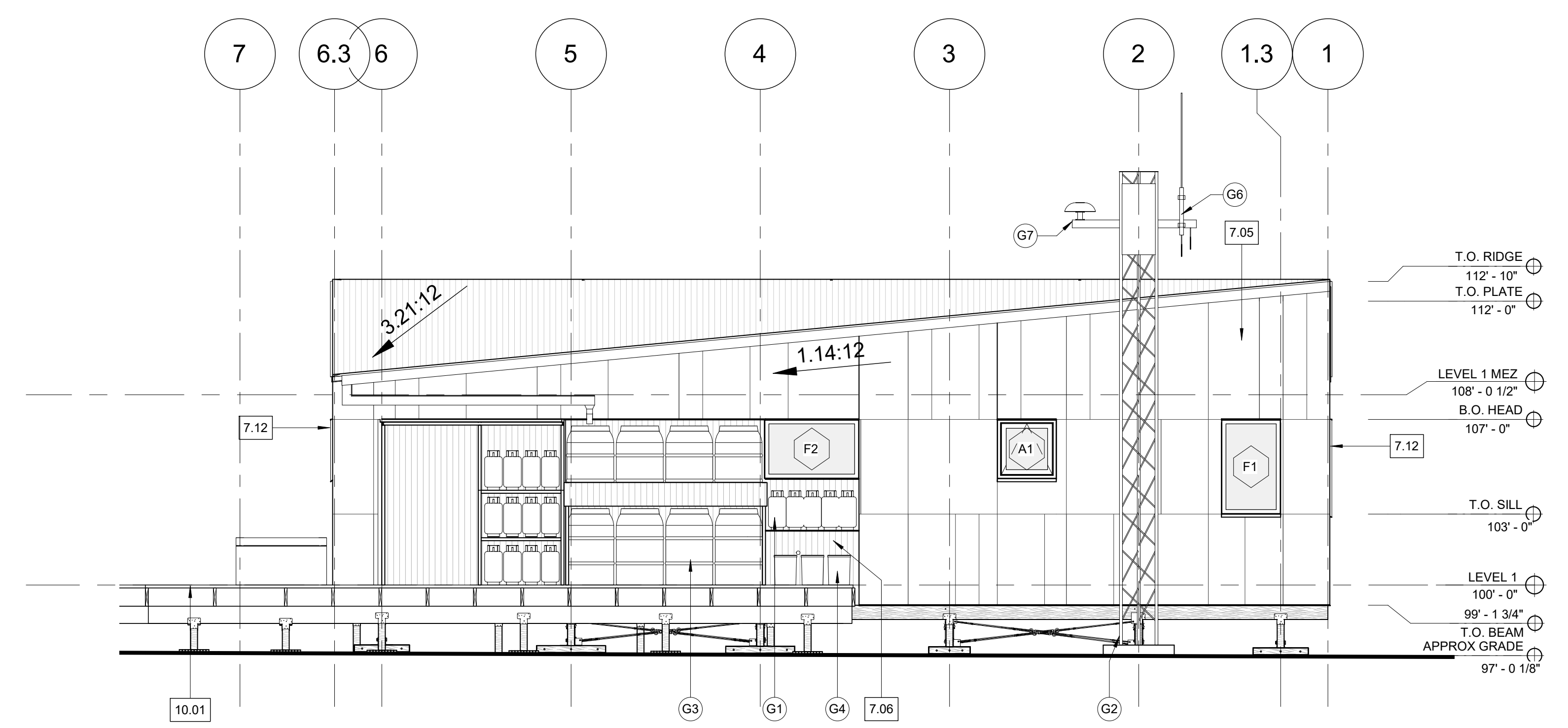
GALLEY ELEVATIONS

date: 02/10/22
scale: 1/4" = 1'-0"

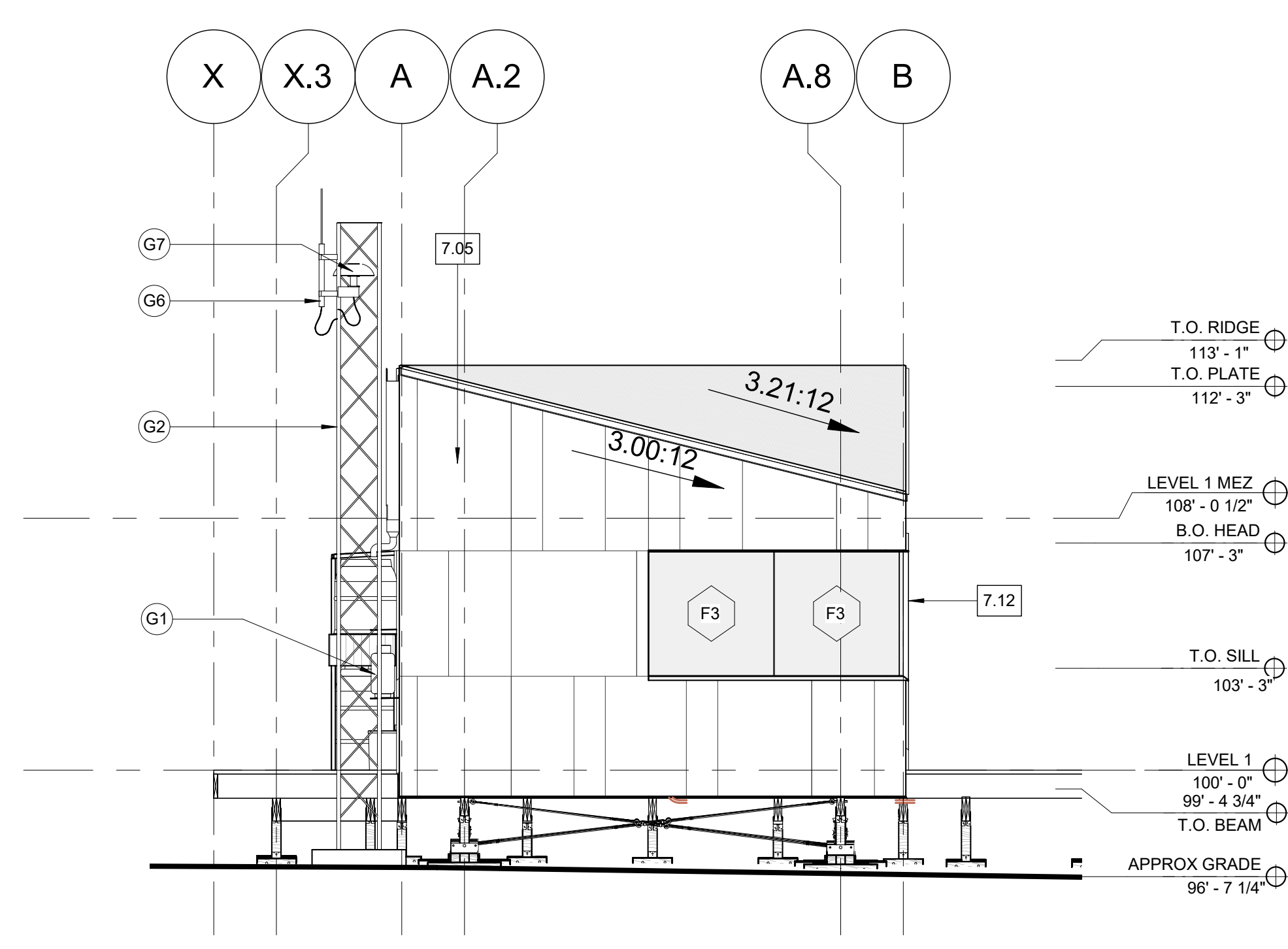
A-202



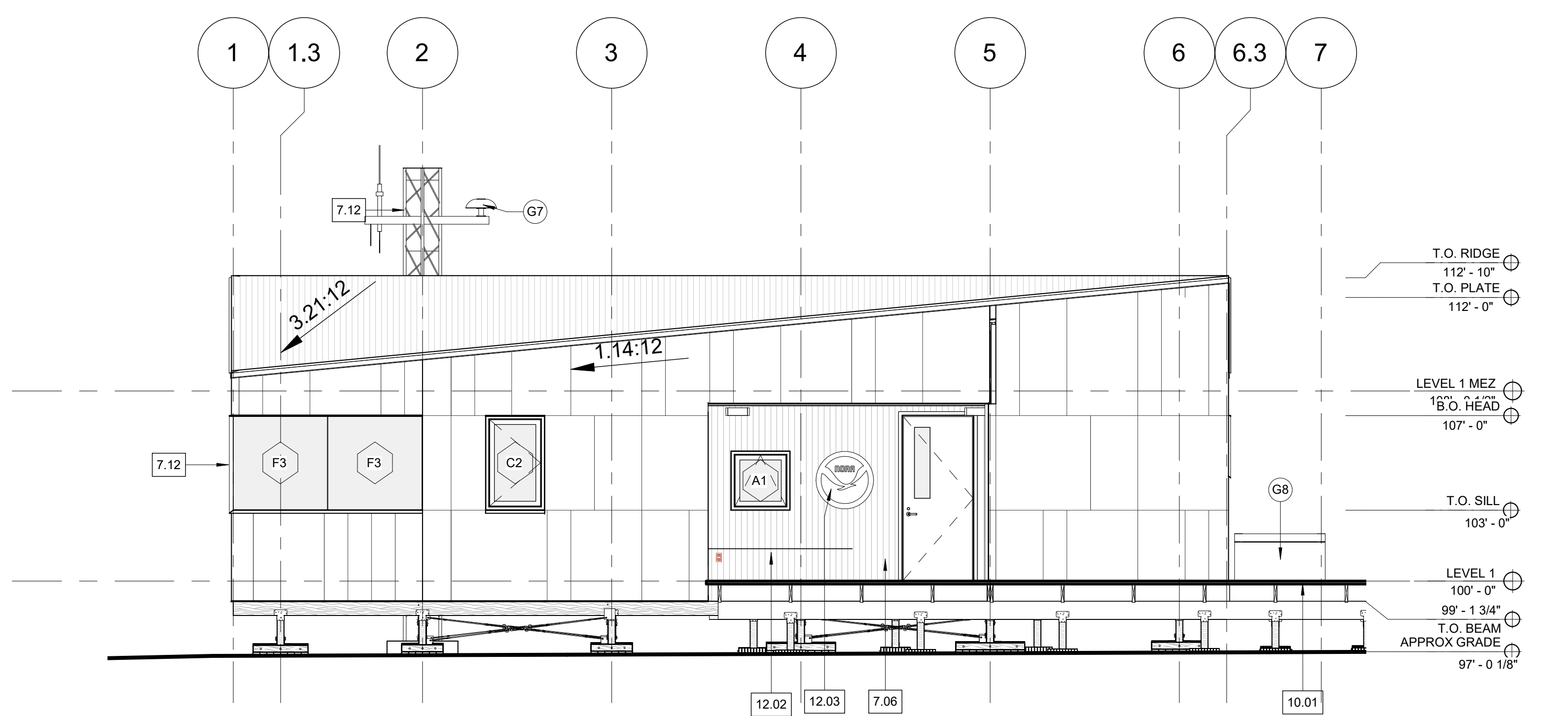
4 GALLEY WEST
1/4" = 1'-0"



2 GALLEY SOUTH
1/4" = 1'-0"



3 GALLEY EAST
1/4" = 1'-0"

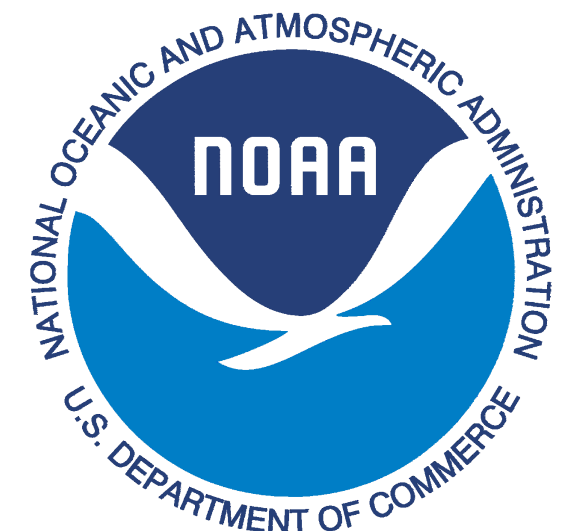


1 GALLEY NORTH
1/4" = 1'-0"

4/20/2022 2:40 PM

WORKNOTE LEGEND	
WORK NOTE VALUE	WORKNOTE
G3	RAINWATER COLLECTION BARREL. OFOI
G9	FLAG POLE

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
7.05	LIC BRONZE FINISH STAINLESS STEEL METAL CLADDING. RE: LEGEND --- FOR TYPICAL PATTERN.
7.06	CORRUGATED 316 S.S. METAL CLADDING
7.12	CUSTOM BREAK METAL SHROUD. RE: CLADDING DETAILS FOR ADDITIONAL INFORMATION.
10.01	FIBER-GRATE DECKING. RE: STAIR AND DECK DETAILS FOR ADDITIONAL INFORMATION.
12.02	EXT. BENCH



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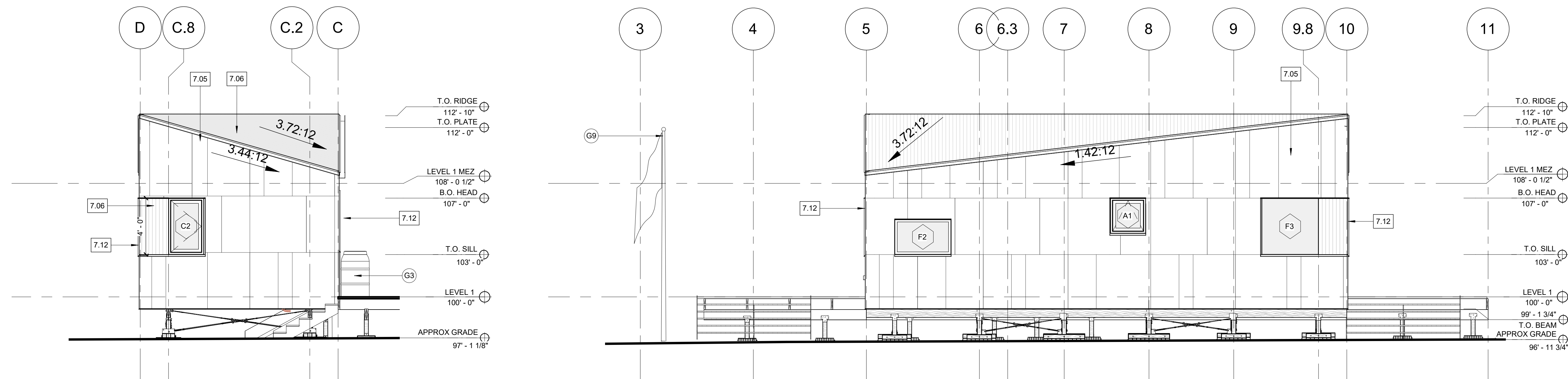


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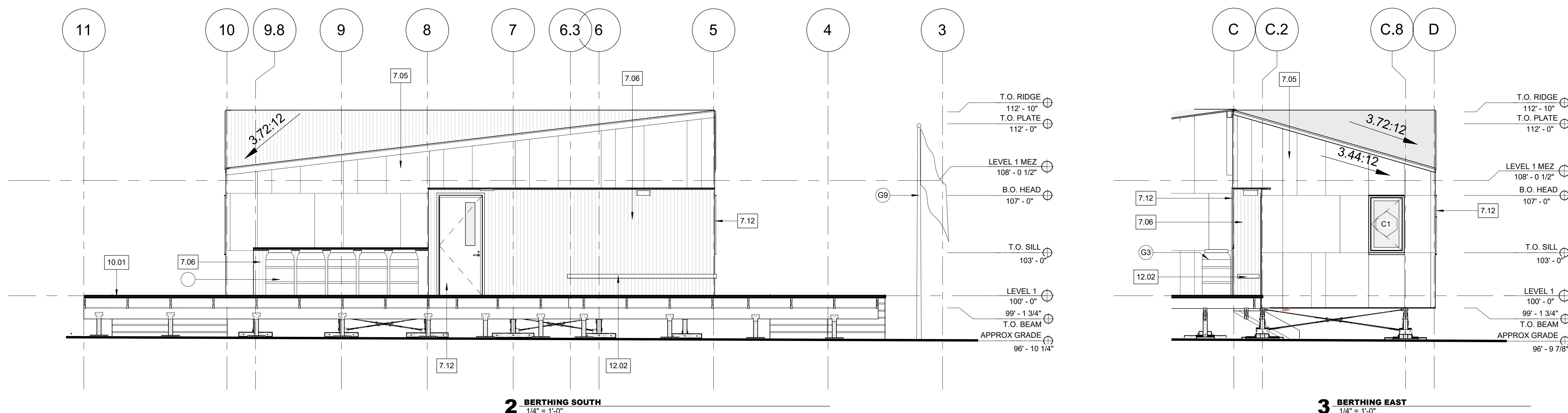
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REV. DATE: REV. NAME: REV. NO:



4 BERTHING WEST
1/4" = 1'-0"

1 BERTHING NORTH
1/4" = 1'-0"



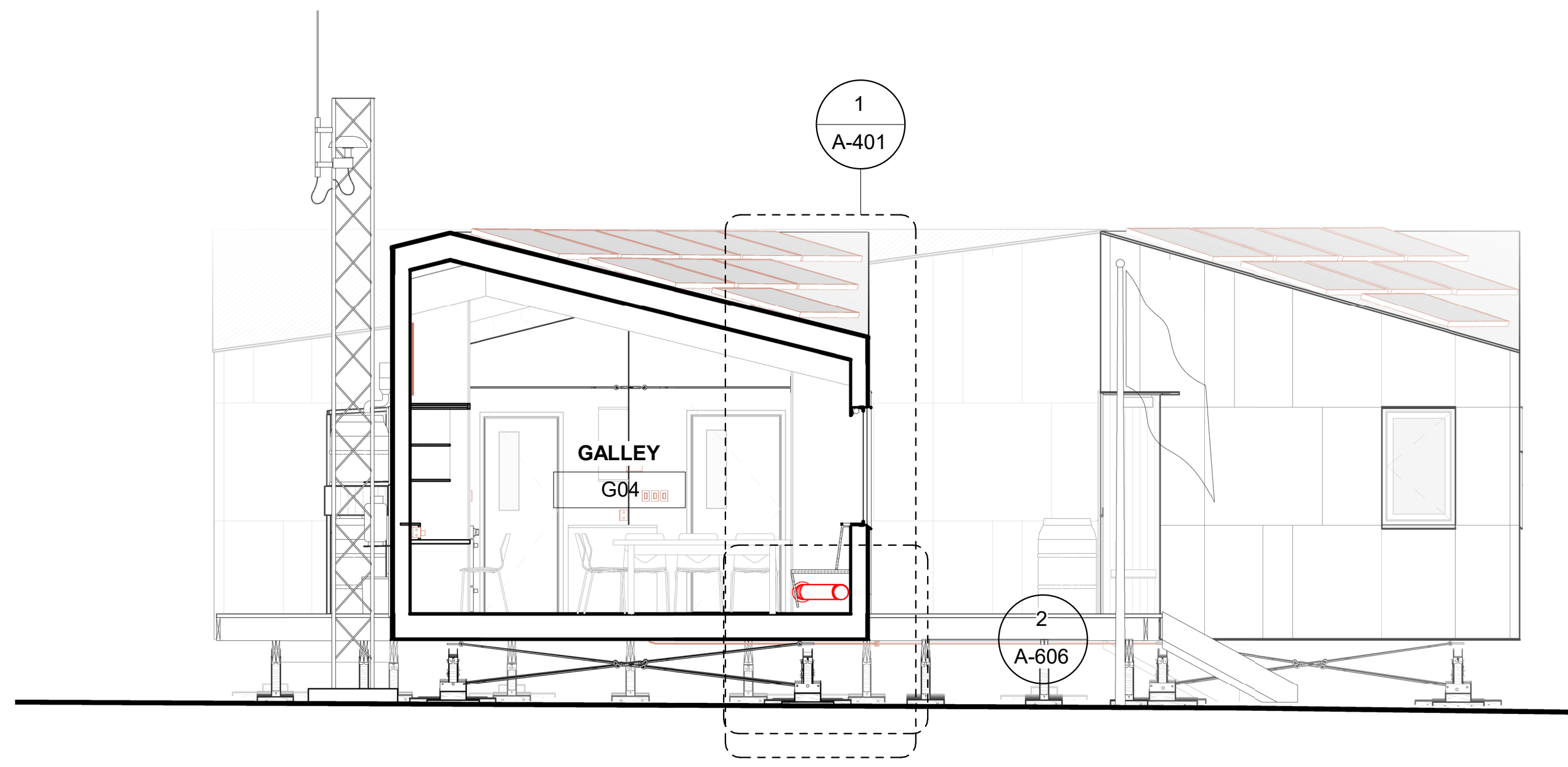
2 BERTHING SOUTH
1/4" = 1'-0"

3 BERTHING EAST
1/4" = 1'-0"

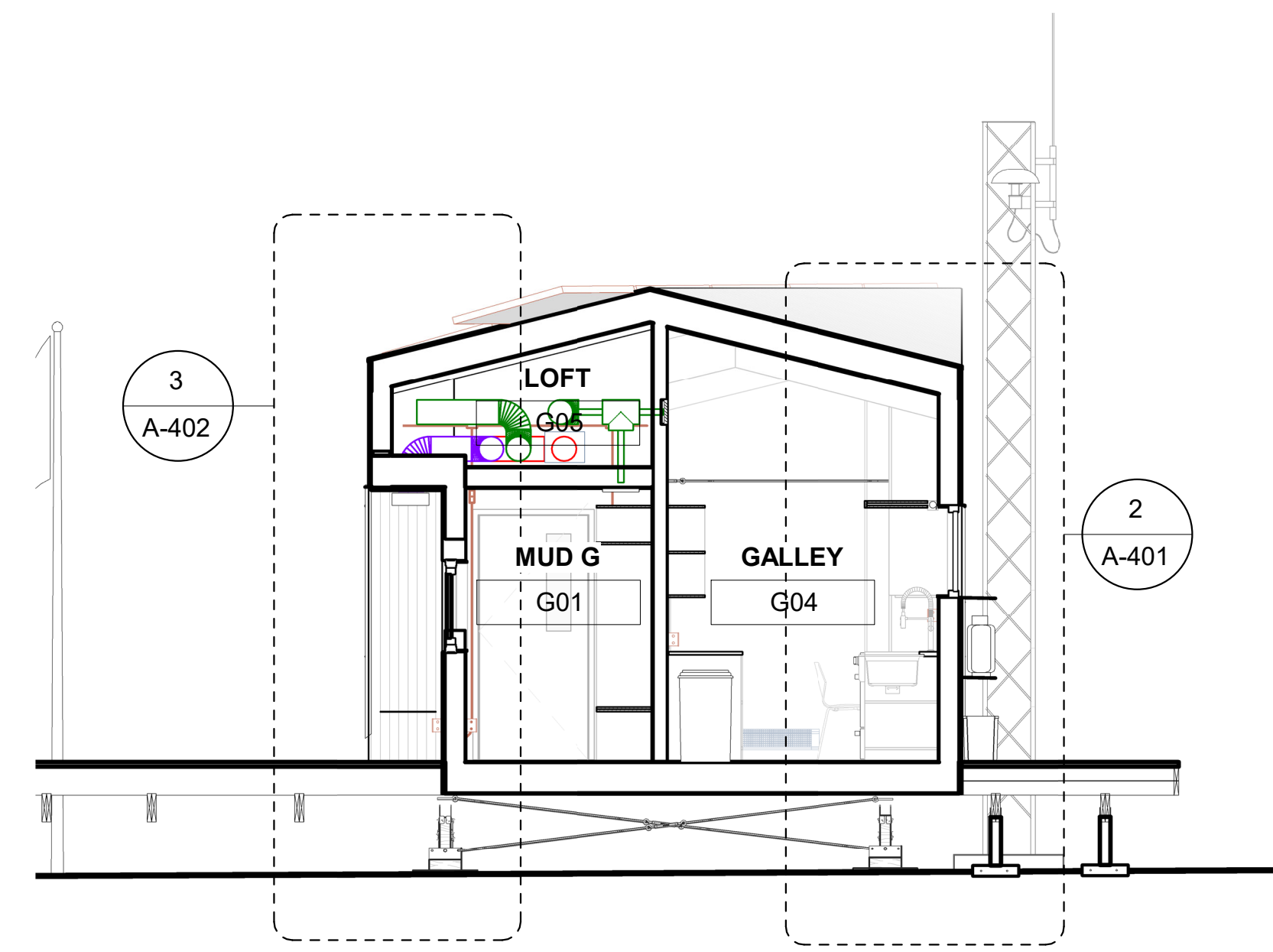
BERTHING ELEVATIONS

date: 02/10/22
scale: 1/4" = 1'-0"

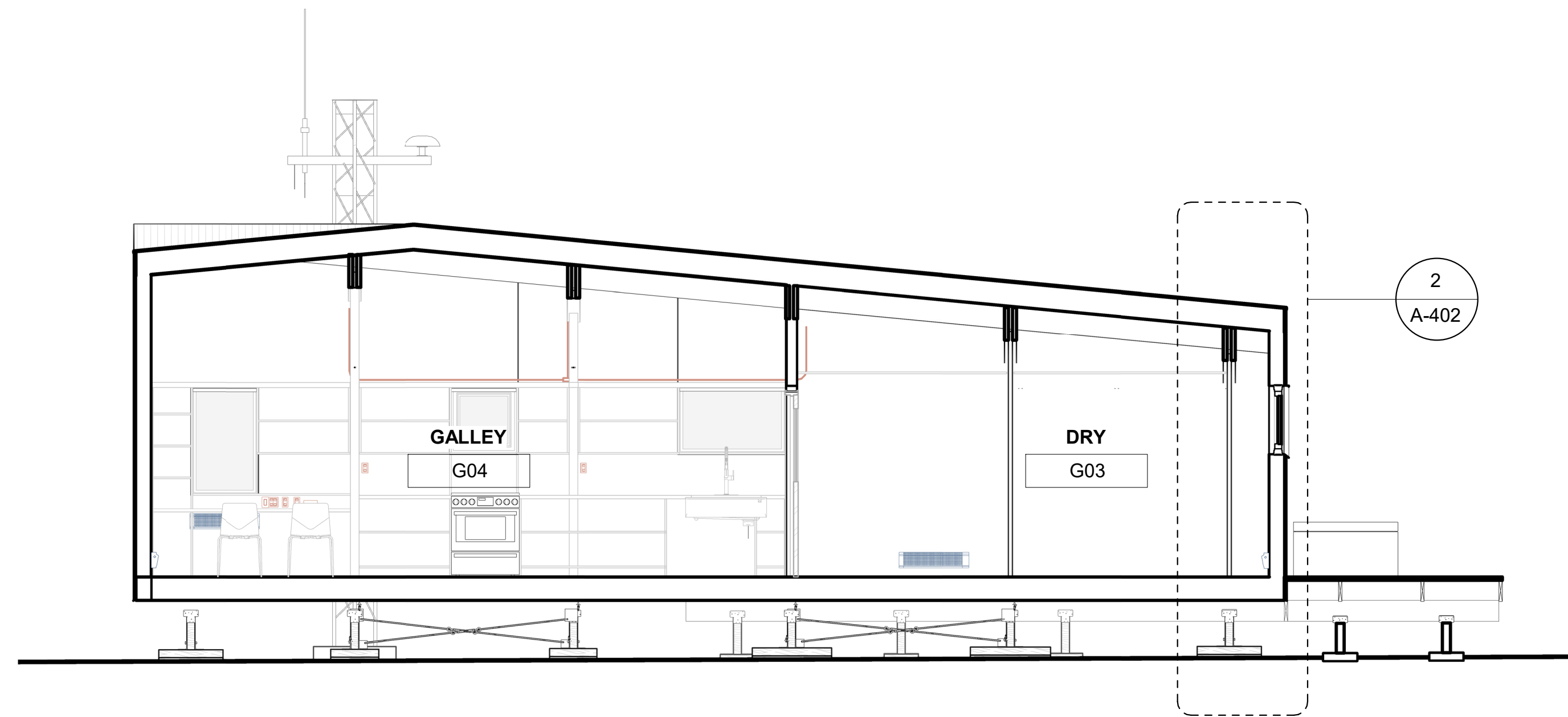
4/12/2022 2:24:20 PM



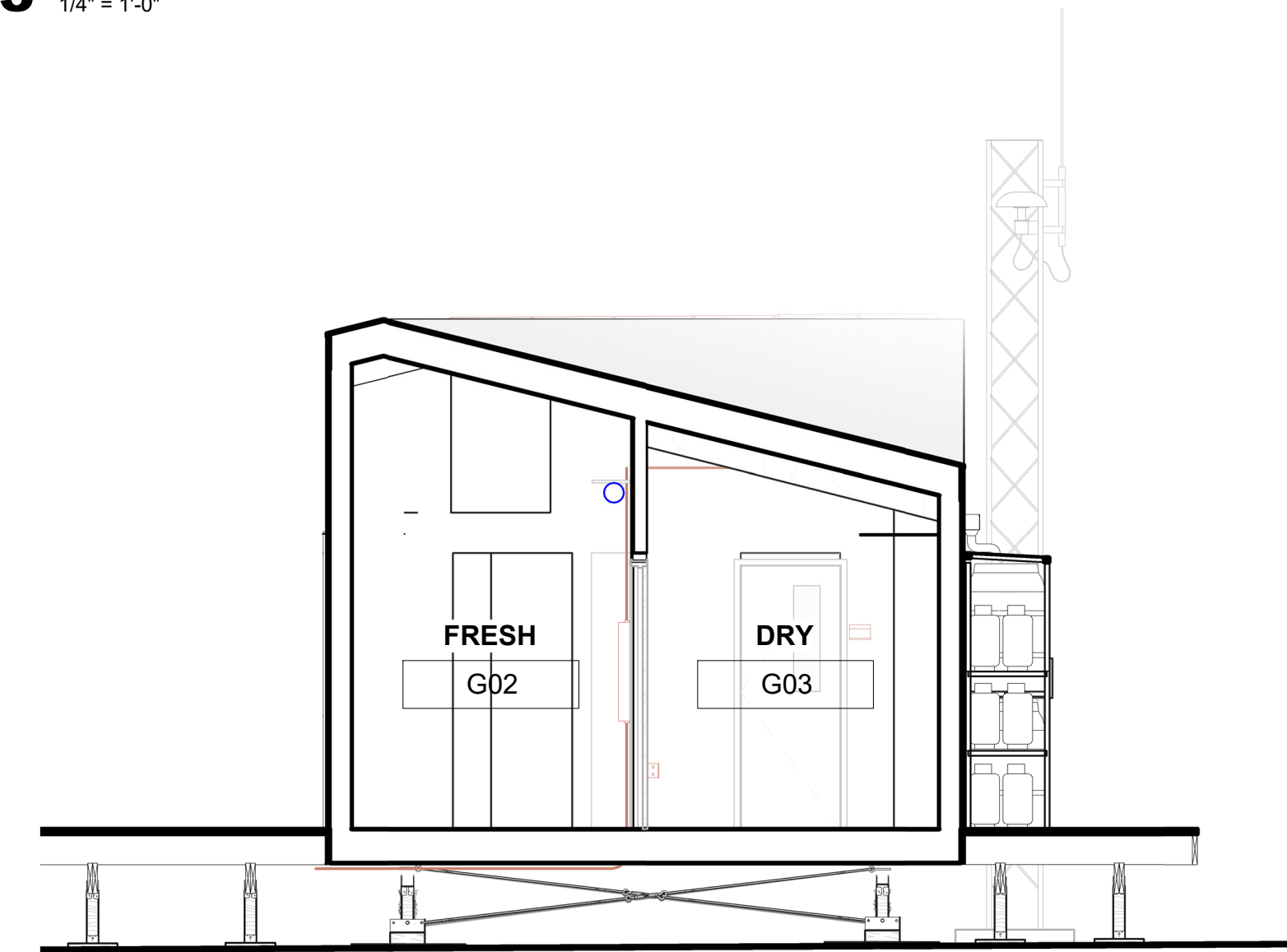
4 GALLEY LOOKING WEST
1/4" = 1'-0"



3 GALLEY LOOKING EAST
1/4" = 1'-0"



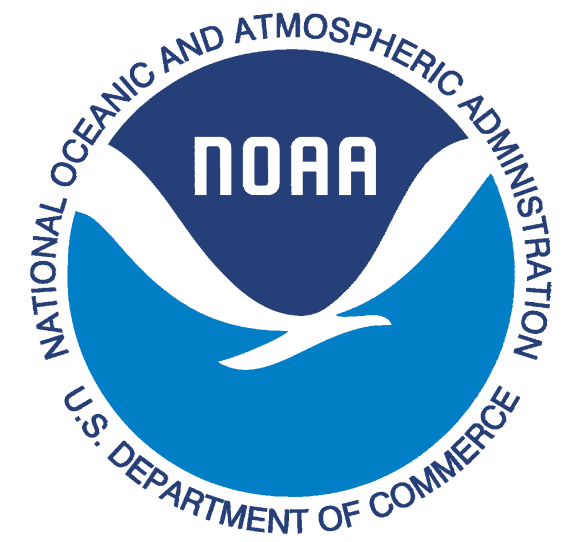
2 GALLEY LOOKING SOUTH
1/4" = 1'-0"



5 GALLEY STORAGE WEST
1/4" = 1'-0"



1 GALLEY LOOKING NORTH
1/4" = 1'-0"



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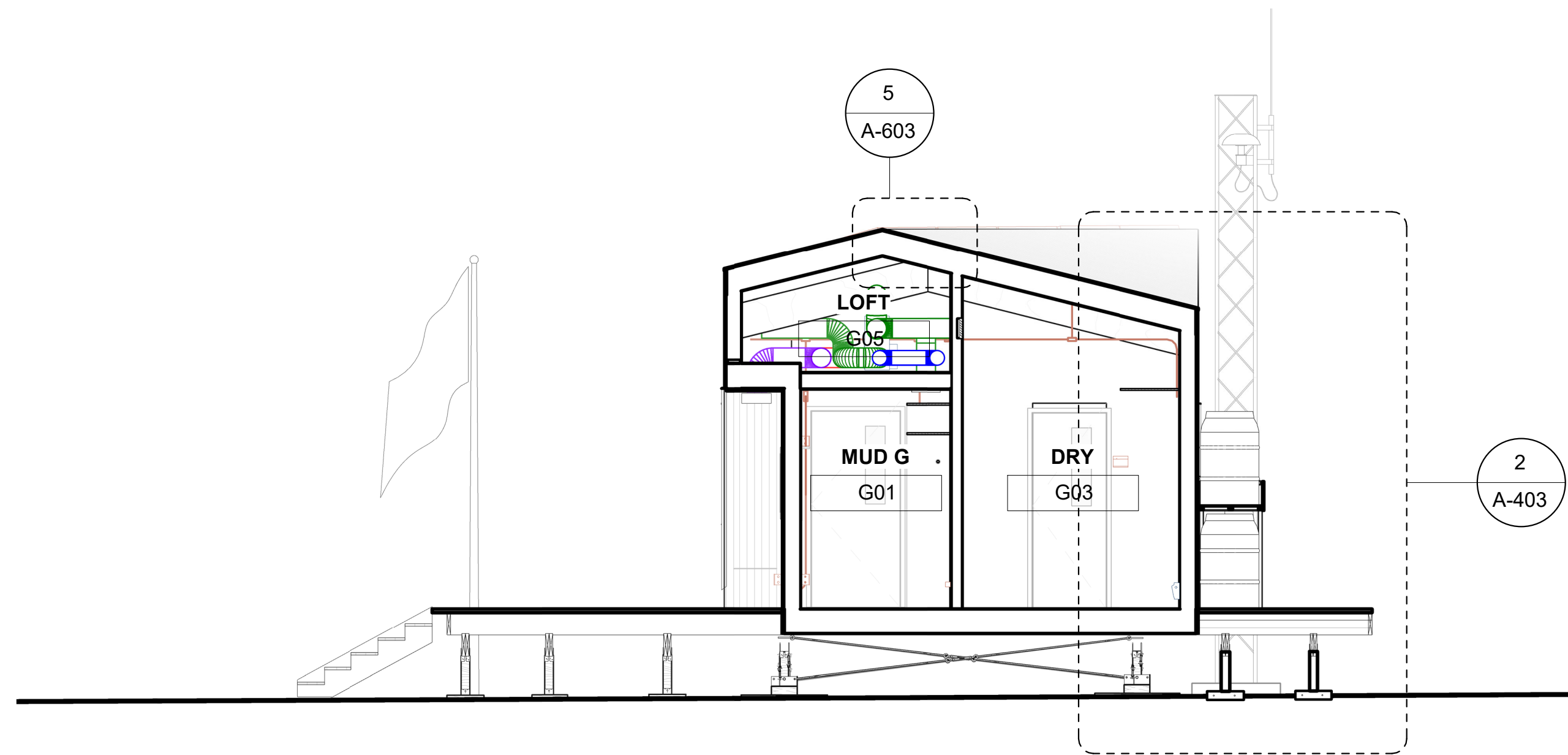
REVISIONS

REV. DATE: REV. NAME: REV. NO:

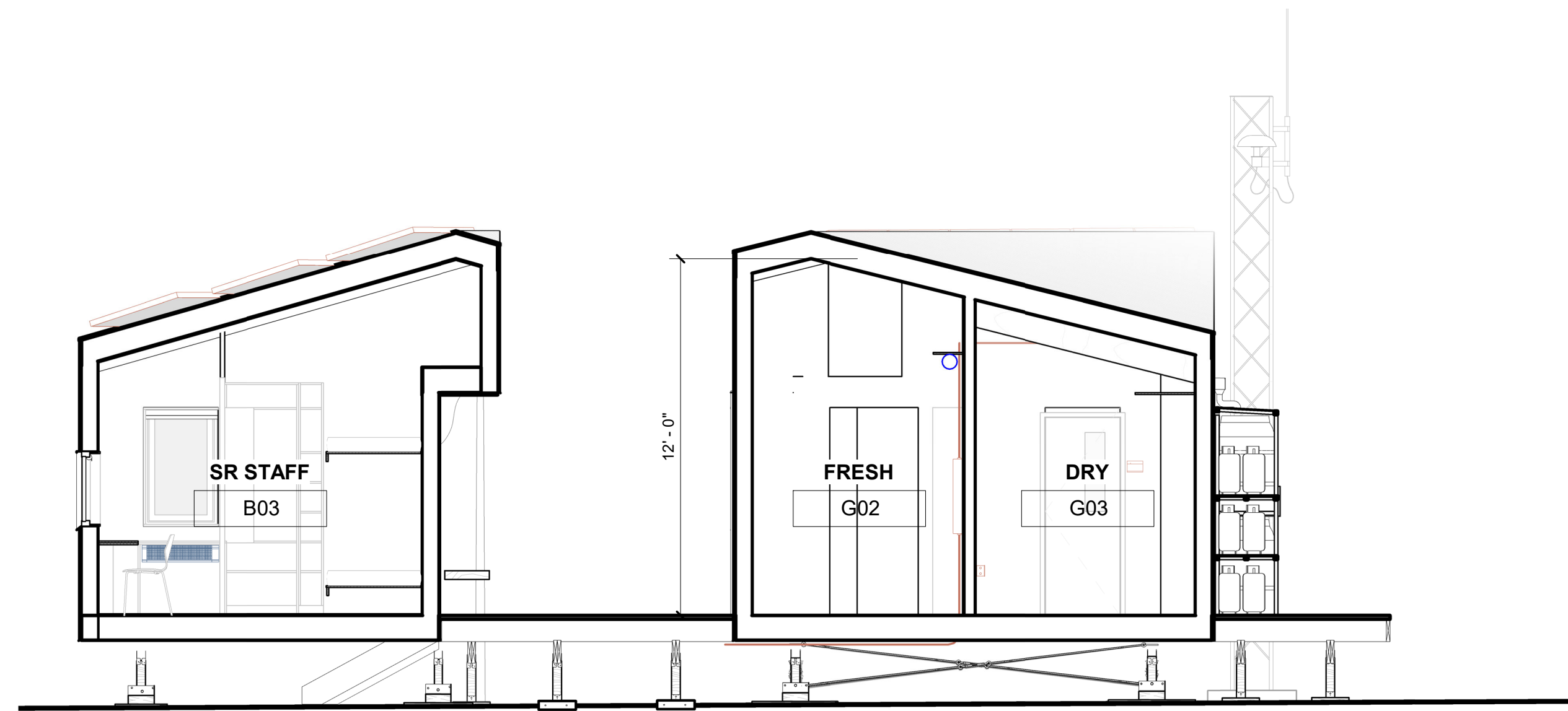
**BUILDING
SECTIONS
GALLEY**

date: 02/06/22
scale: 1/4" = 1'-0"

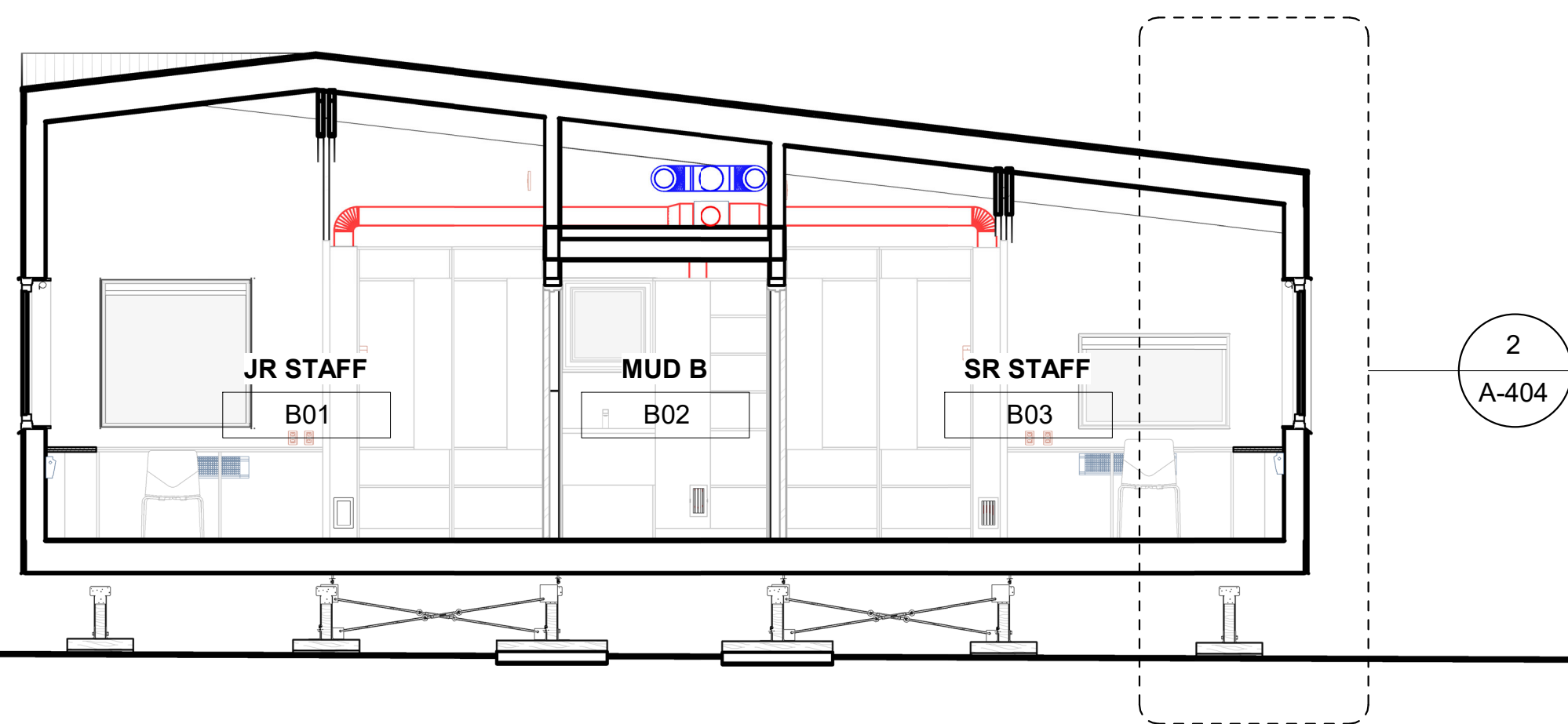
A-301



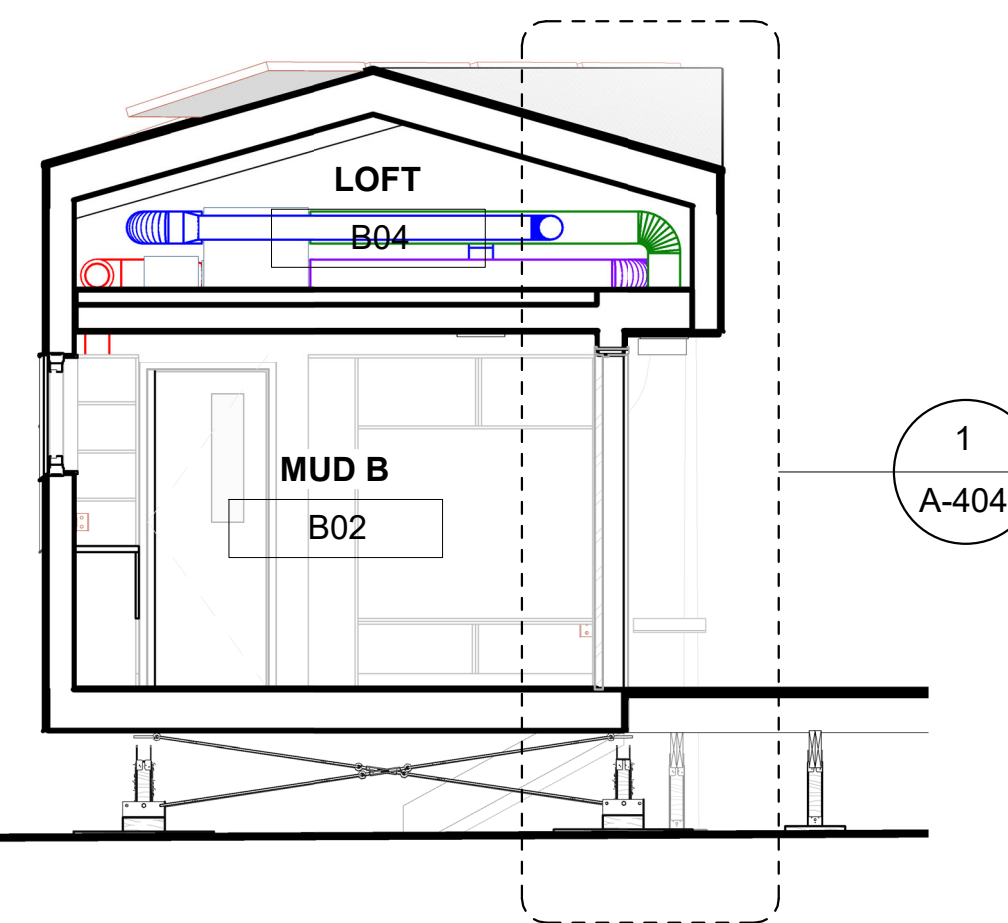
3 GALLEY MUD LOOKING EAST
1/4" = 1'-0"



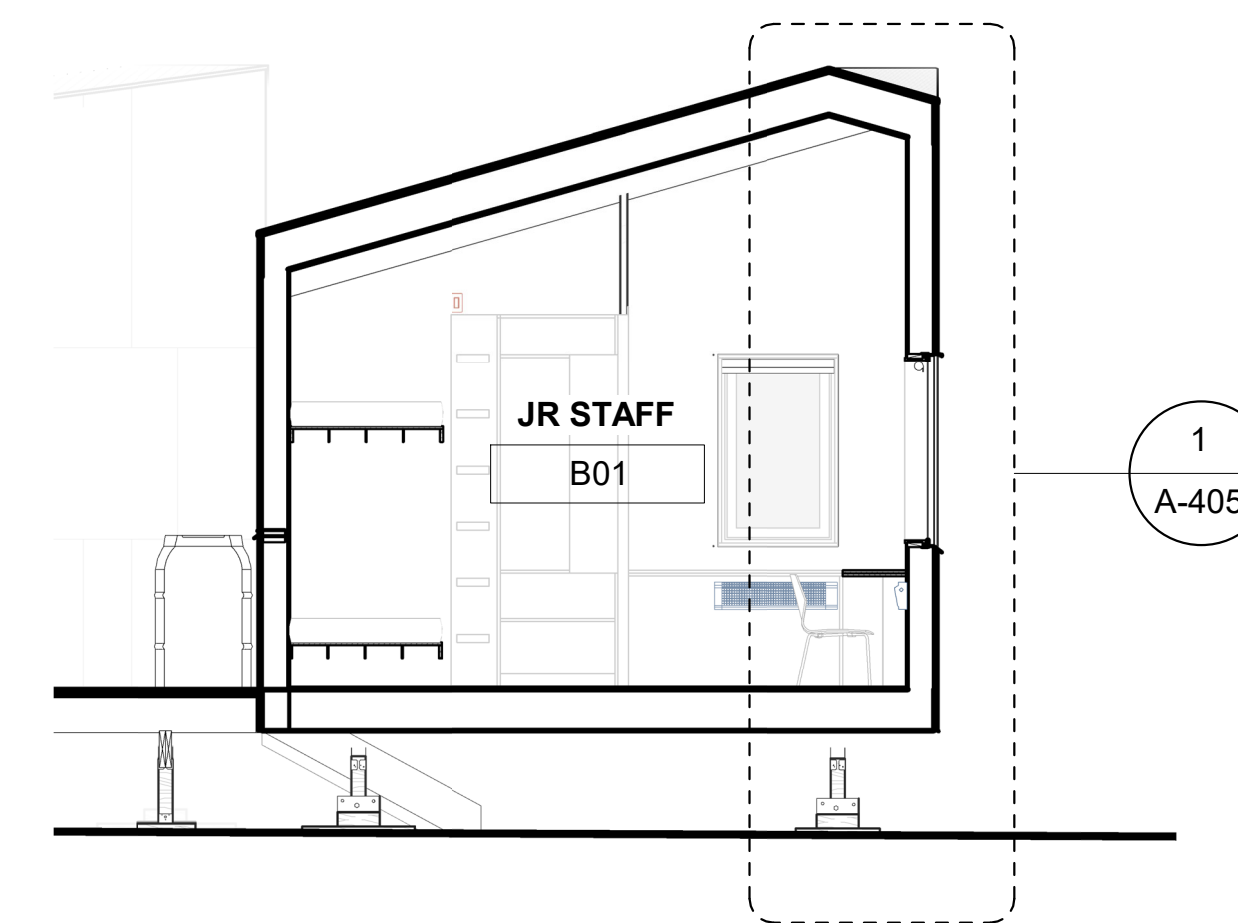
2 GALLEY EAST STORAGE/BERTHING
1/4" = 1'-0"



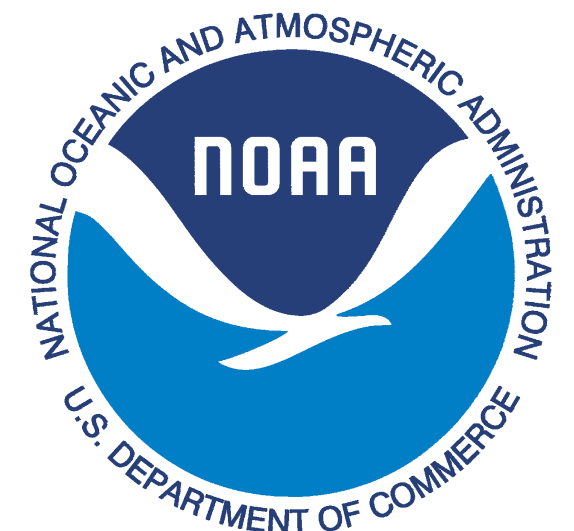
4 BERTHING LOOKING SOUTH
1/4" = 1'-0"



5 BERTHING MUD LOOKING EAST
1/4" = 1'-0"



1 BERTHING LOOKING WEST
1/4" = 1'-0"



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**BUILDING
SECTIONS**

date: 02/06/22
scale: 1/4" = 1'-0"

A-302

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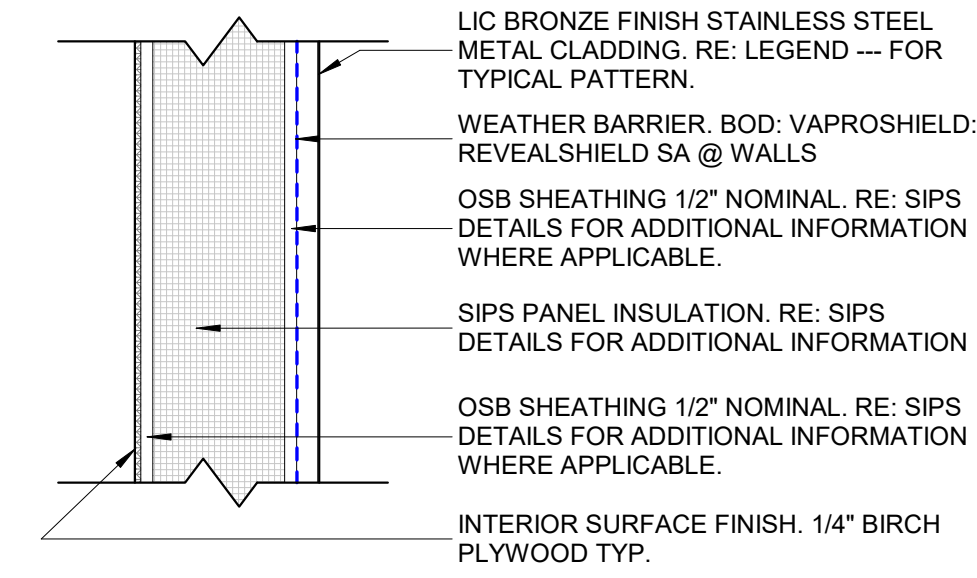
REVISIONS

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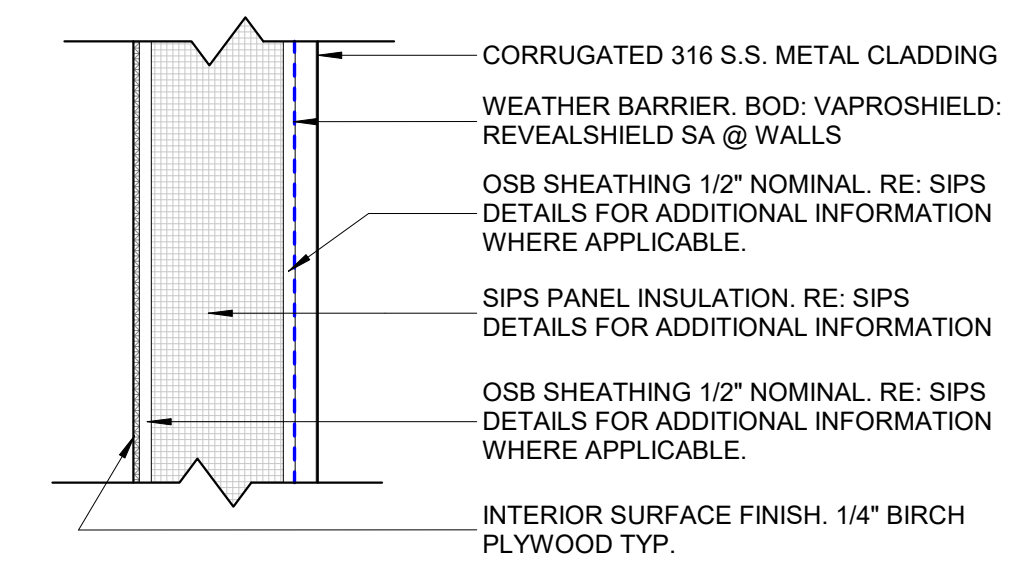
WALL SECTIONS GALLEY

date: 12/06/21
scale: As indicated

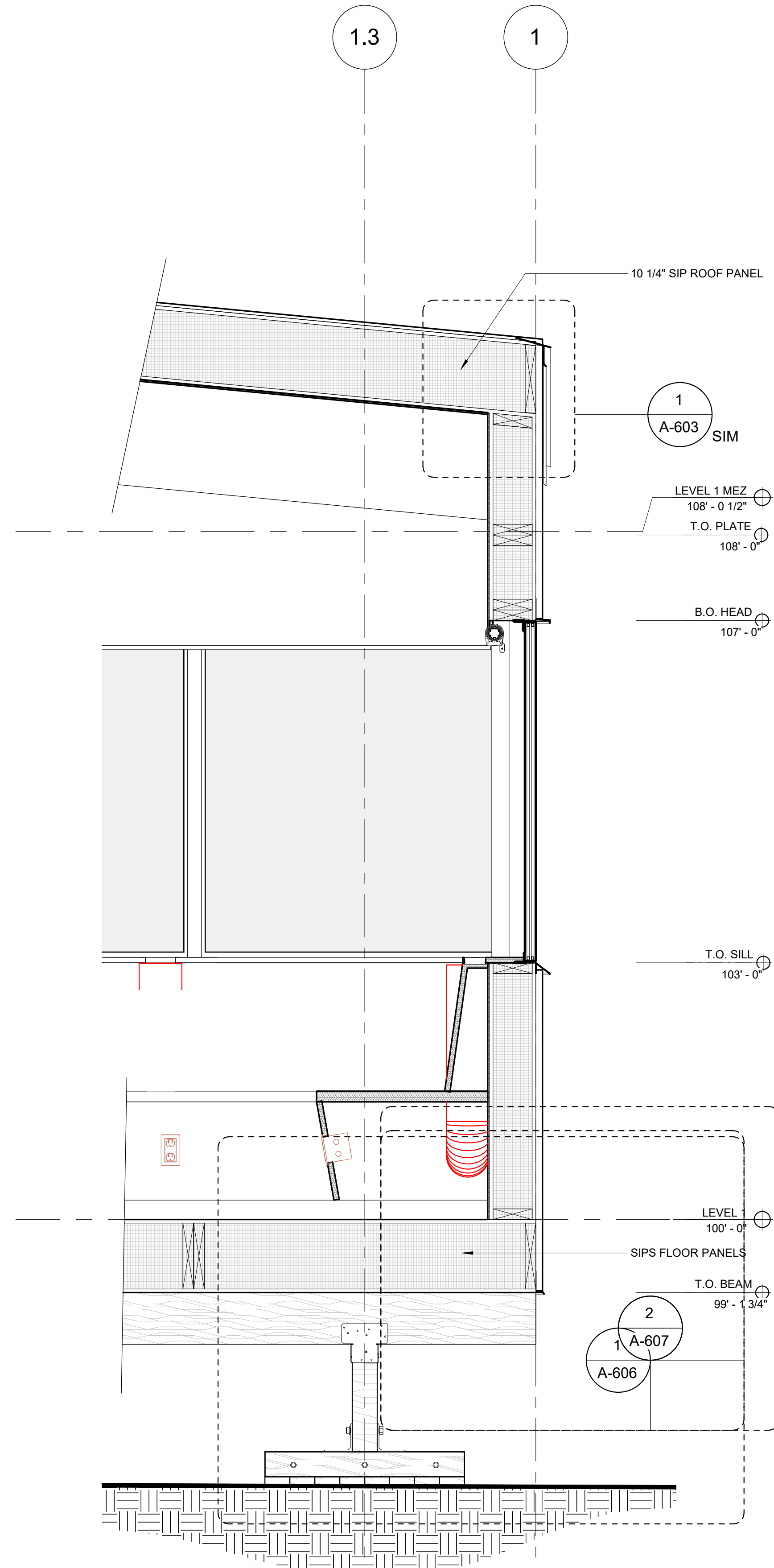
A-401



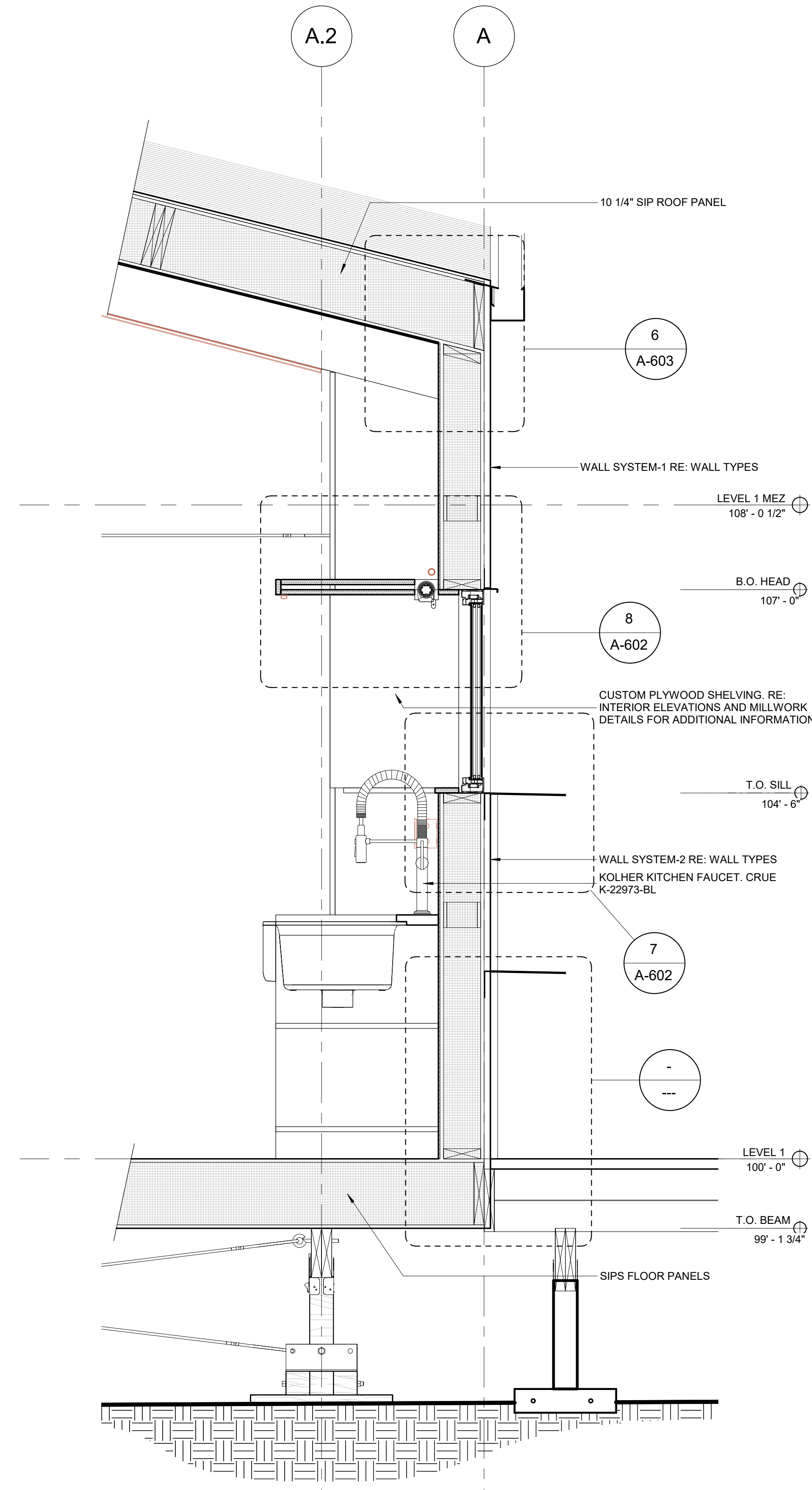
WALL SYSTEM - 1



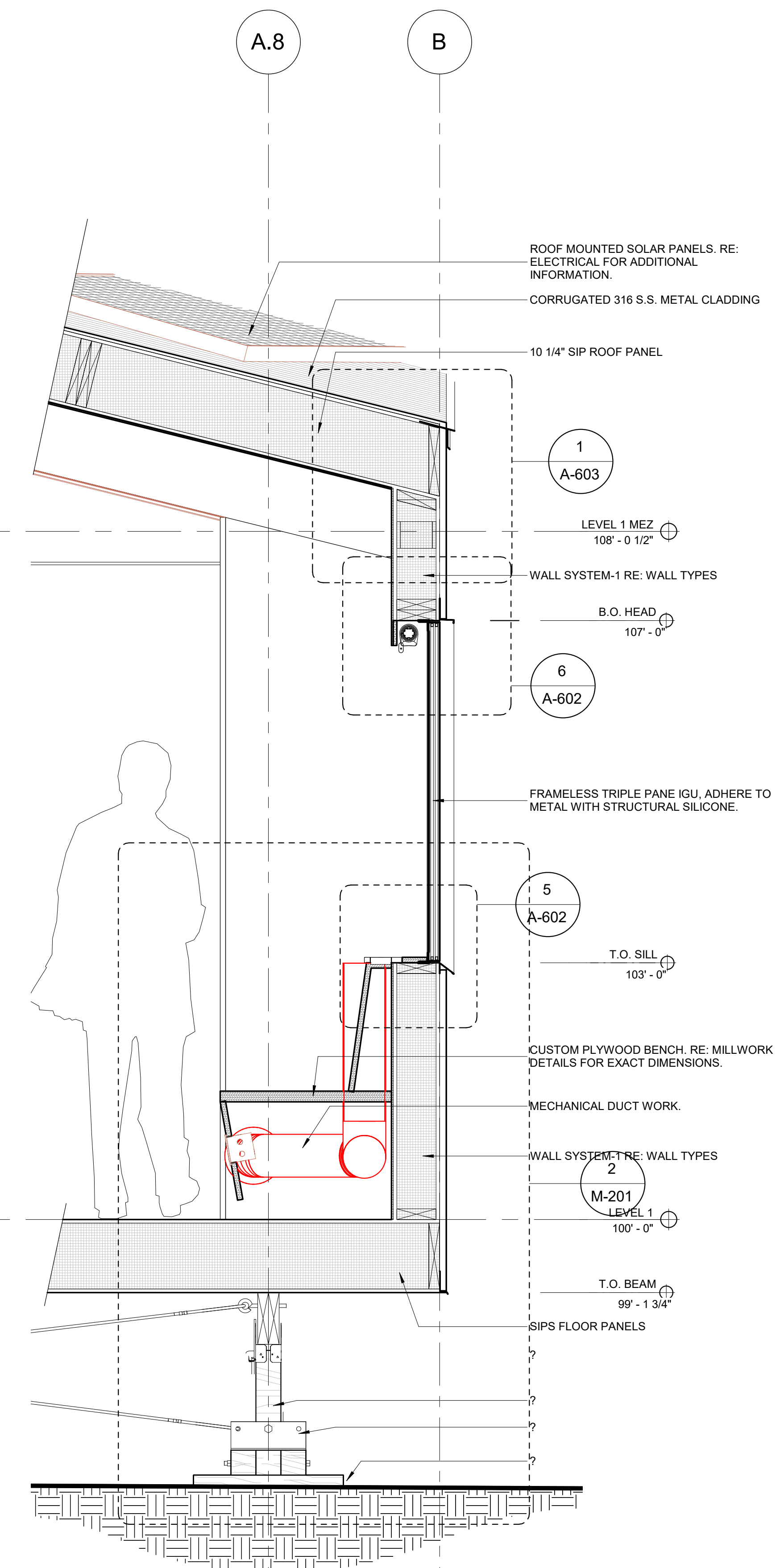
WALL SYSTEM - 2



3 GALLEY EAST WALL SECTION
1" = 1'-0"



2 GALLEY SOUTH WALL SECTION
1" = 1'-0"



1 GALLEY NORTH WALL SECTION
1" = 1'-0"

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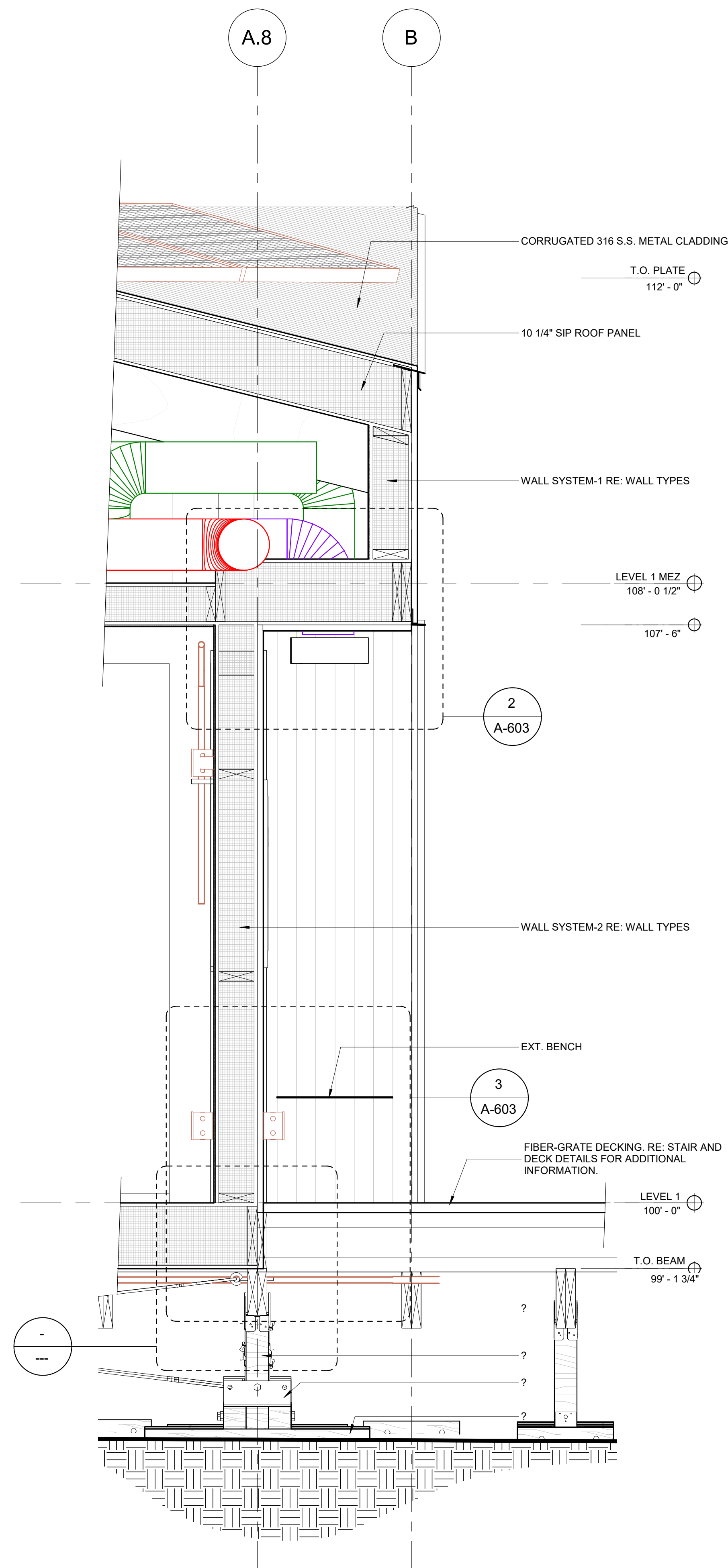
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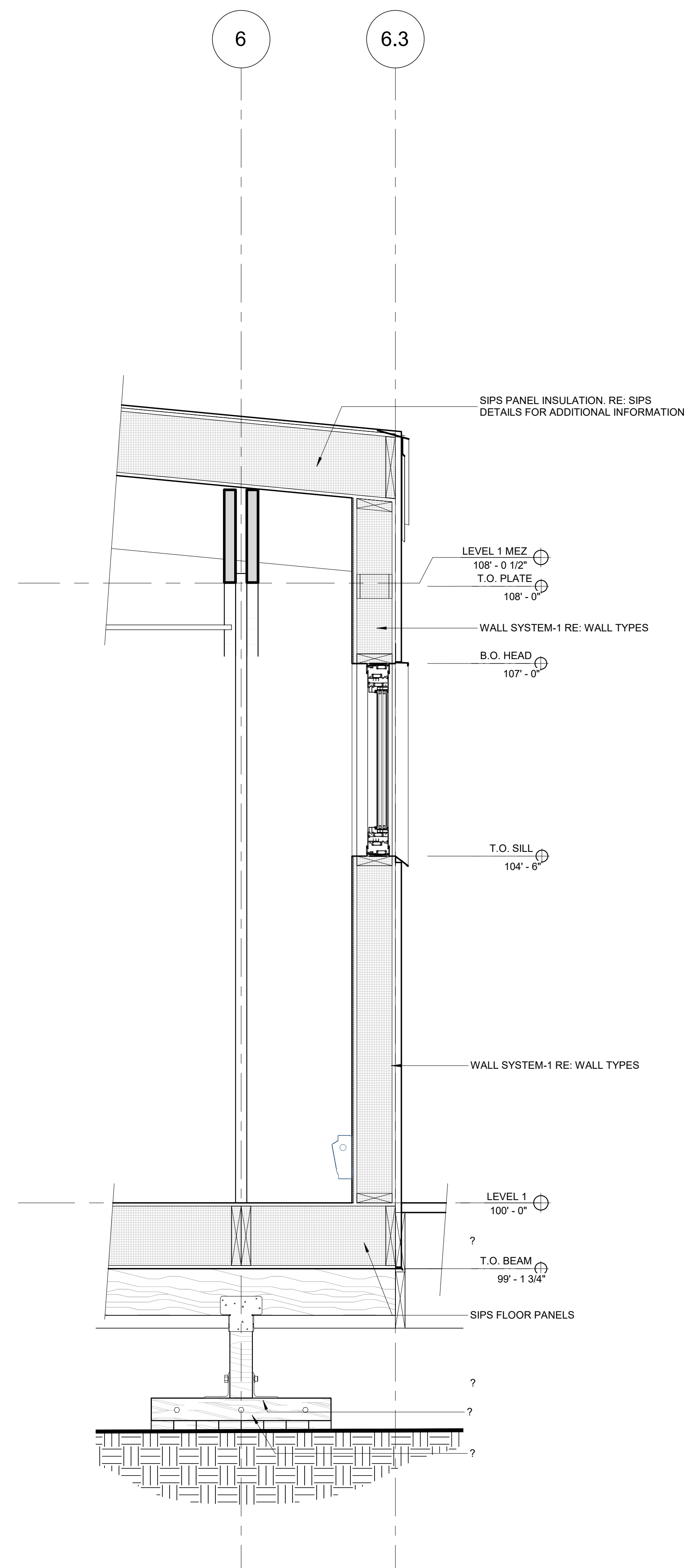
**WALL SECTIONS
GALLEY**

date: 02/17/22
scale: 1" = 1'-0"

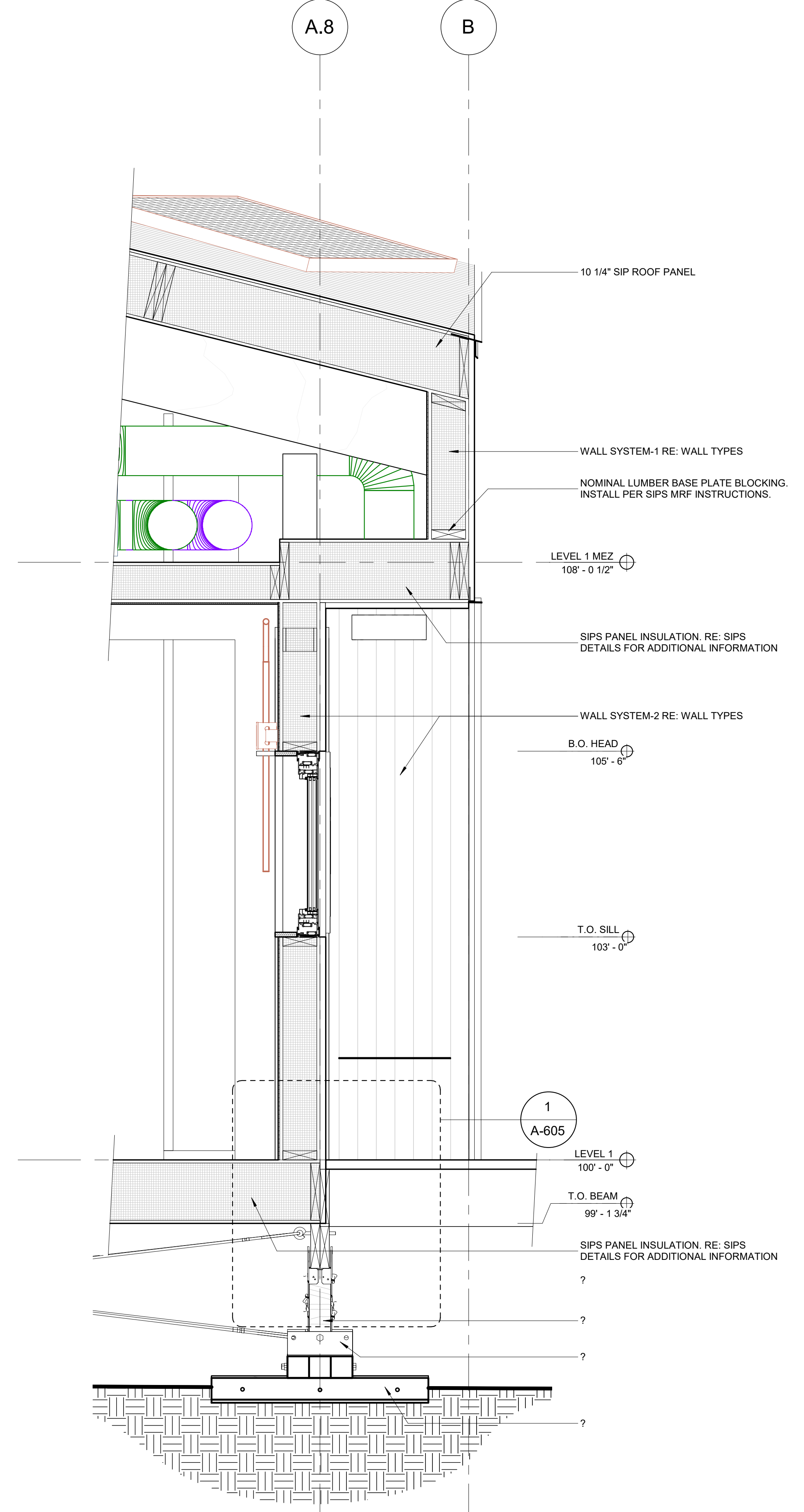
A-402



3 GALLEY BITE WALL SECTION 2
1" = 1'-0"

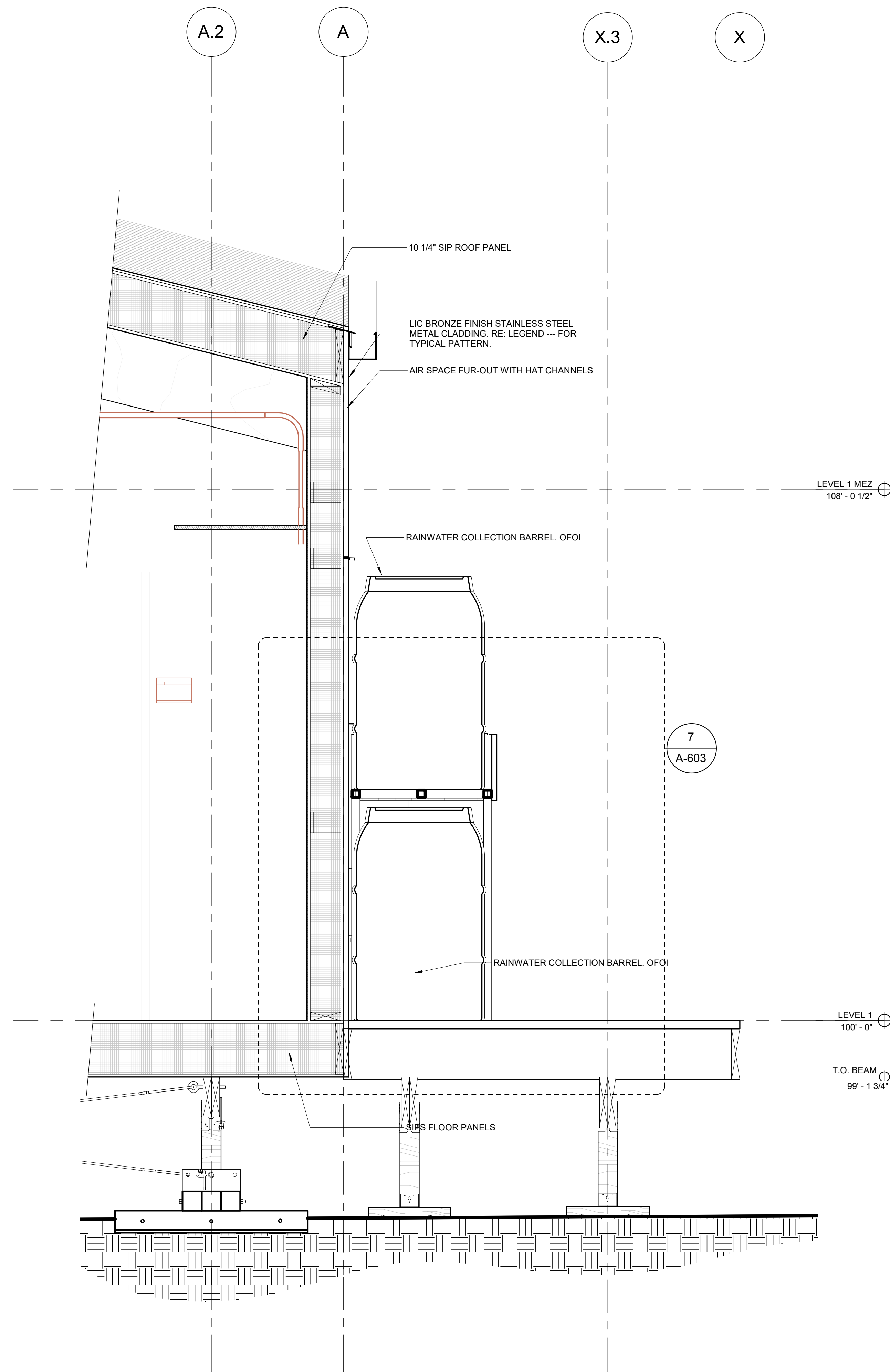


2 GALLEY WEST WALL SECTION
1" = 1'-0"

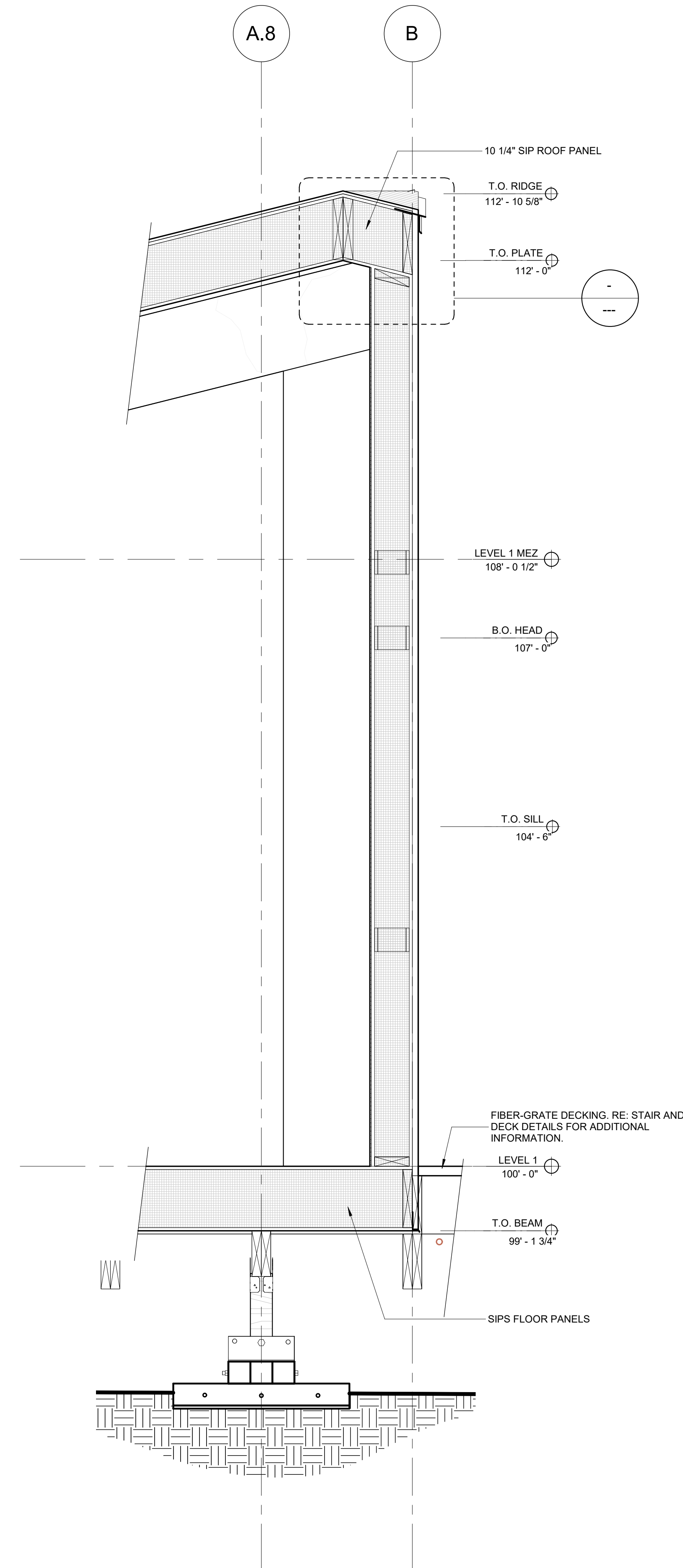


1 GALLEY BITE WALL SECTION
1" = 1'-0"

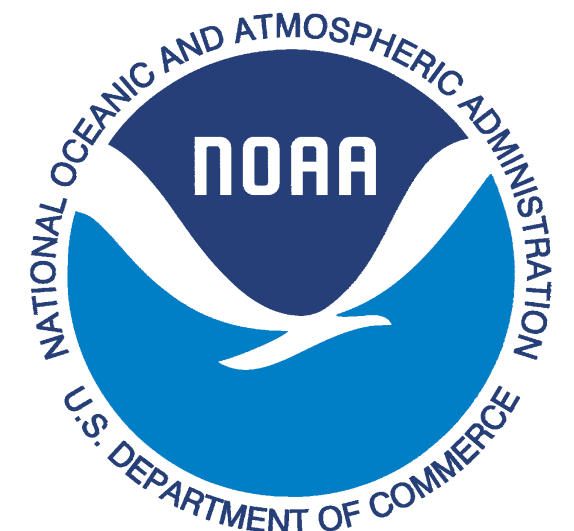
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2 GALLEY WATER TABLE WALL SECTION
1" = 1'-0"



1 GALLEY - NORTH WALL SECTION
1" = 1'-0"



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**WALL SECTIONS
GALLEY**

date: 03/02/22
scale: 1" = 1'-0"

A-403

4/12/2022 2:35:25 PM

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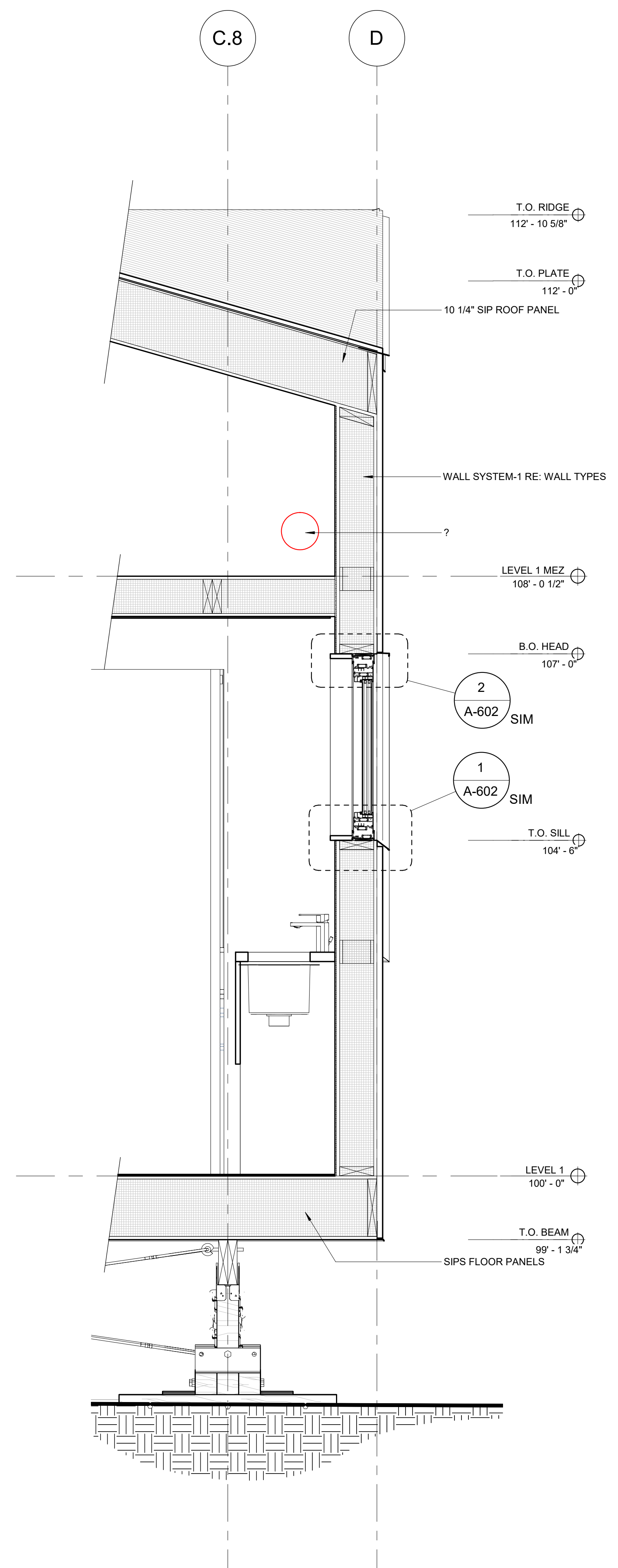
REVISIONS

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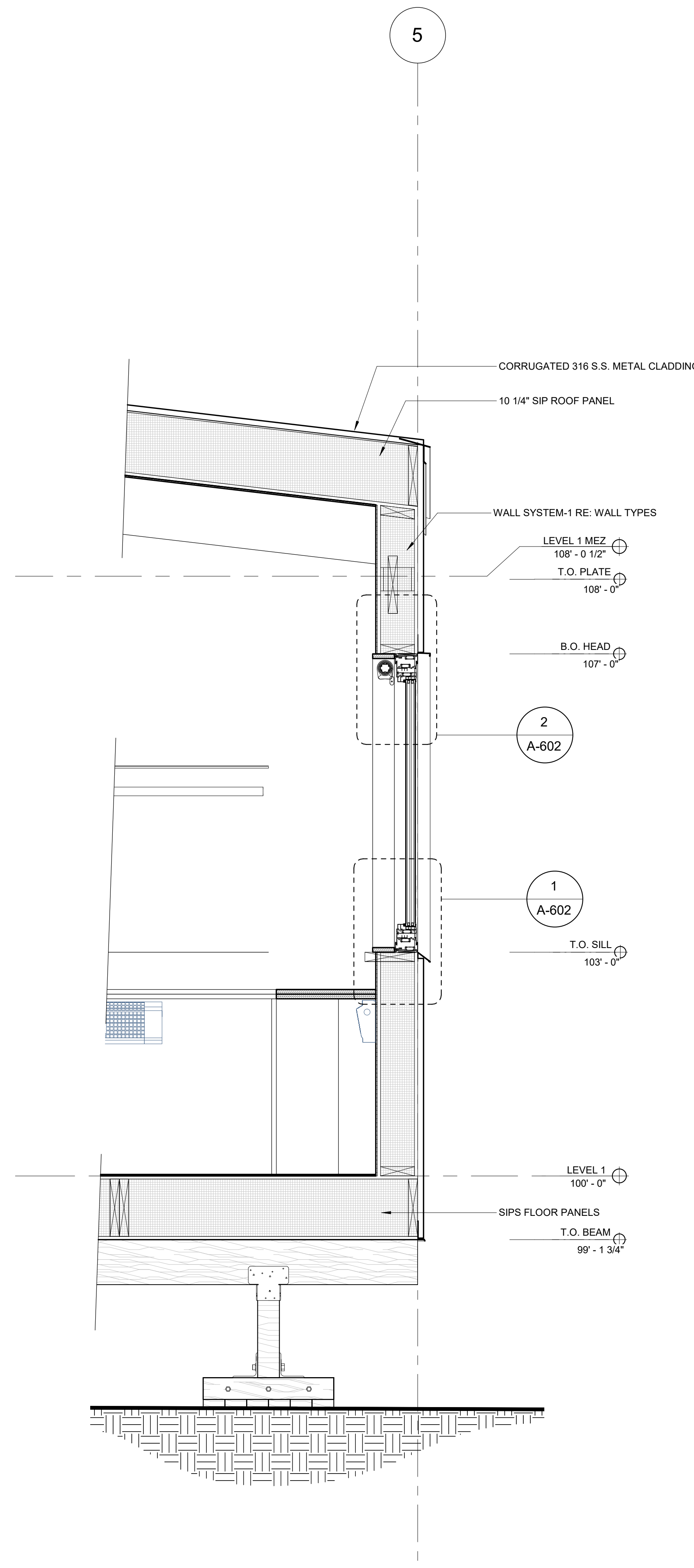
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BERTHING**

date: 02/10/22
scale: 1" = 1'-0"

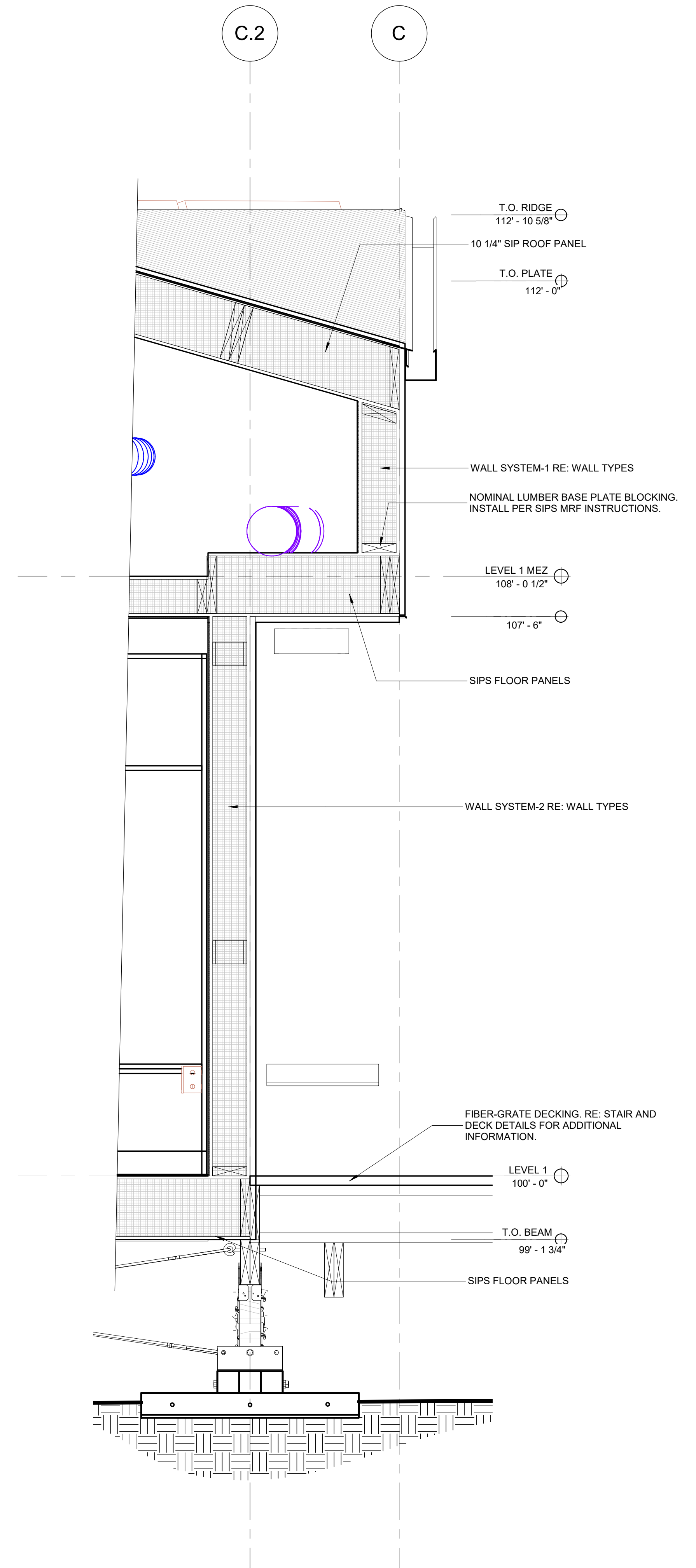
A-404



3 Section 5
1" = 1'-0"



2 Section 6
1" = 1'-0"



1 Section 8
1" = 1'-0"

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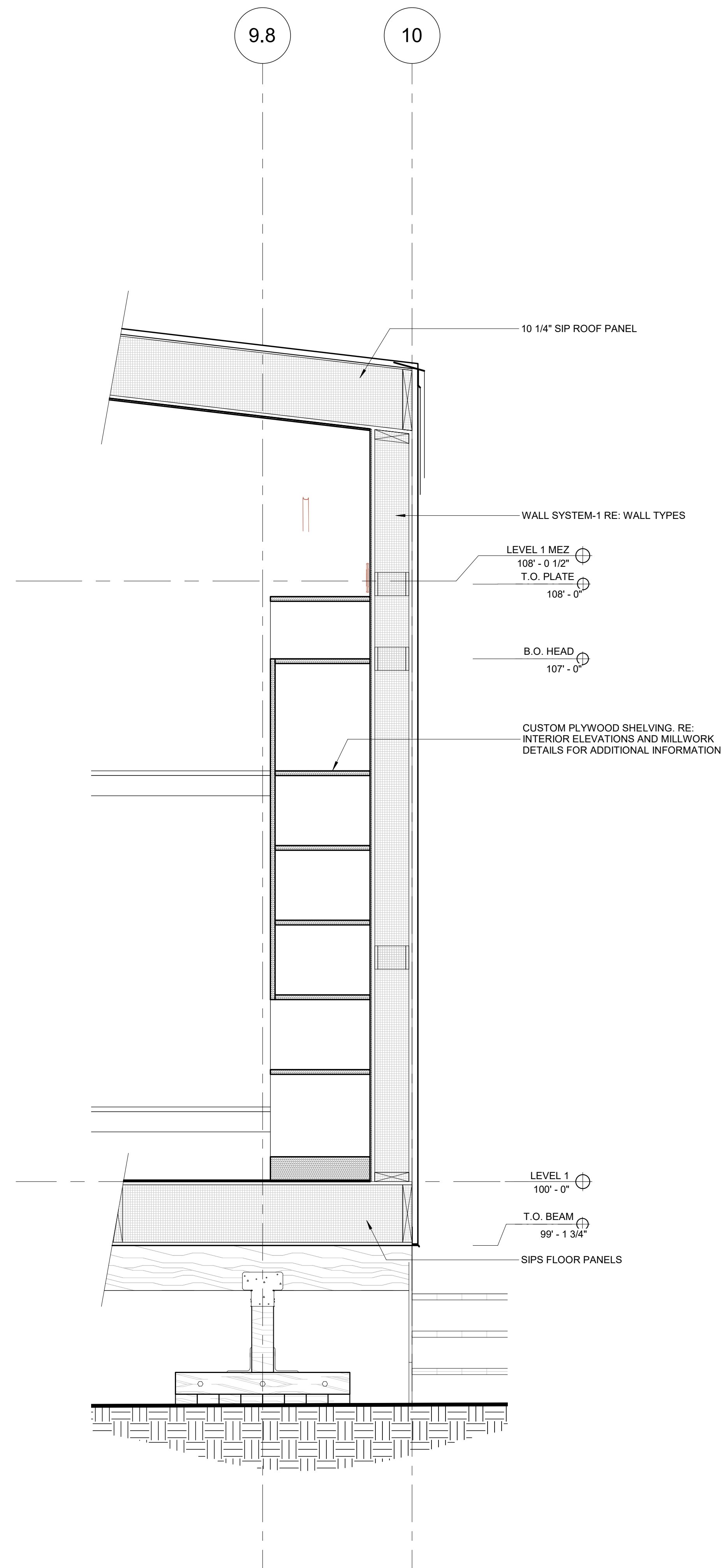
REVISIONS

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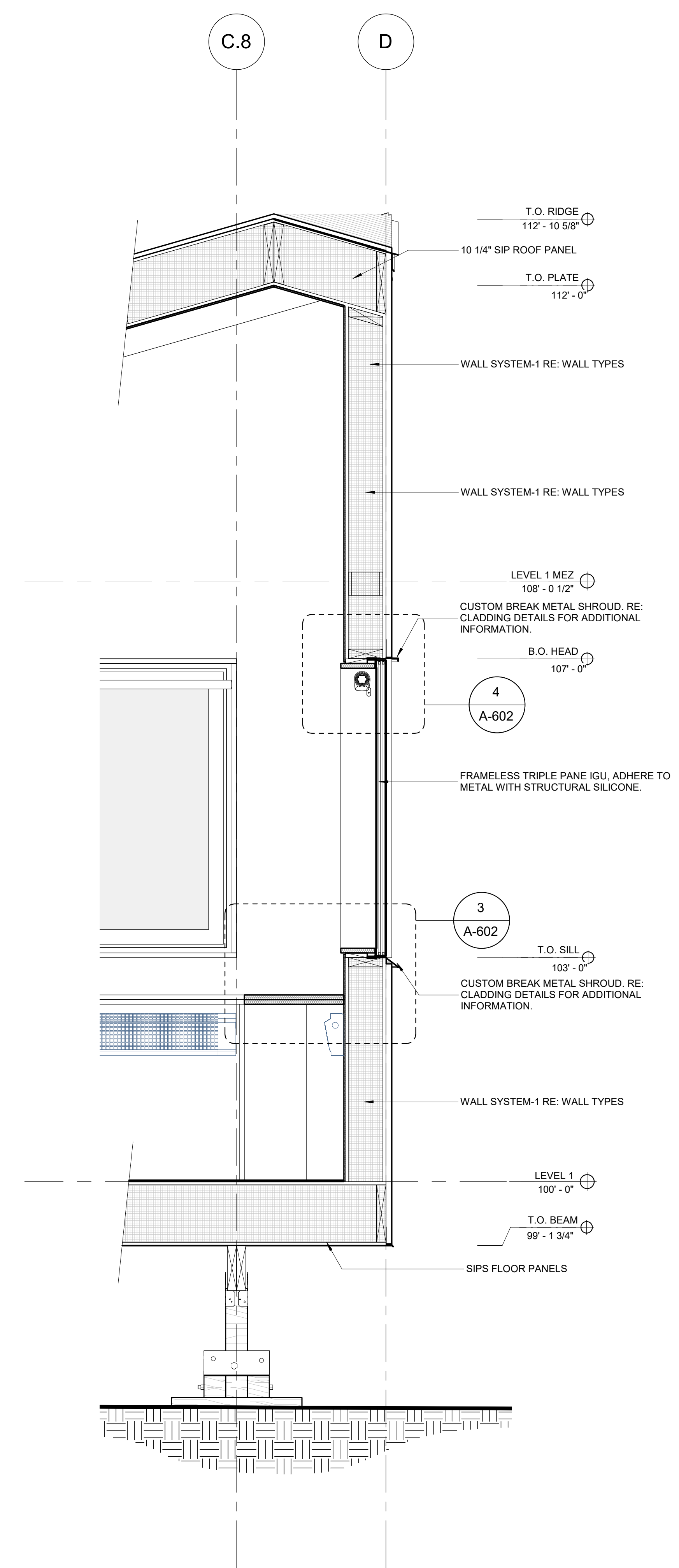
**WALL SECTIONS
BERTHING**

date: 03/05/22
scale: 1" = 1'-0"

A-405



2 Section 9
1" = 1'-0"



1 Section 1
1" = 1'-0"

MILLWORK ACCESSORY SCHEDULE										
Level	Width	Depth	Finish Material	Hardware Finish	Pull Height	Pull Type A	Pull Type B	Description	Family and Type	Count
LEVEL 1	2' - 4 1/2"							Hanging Rod: Hanging Rod		2

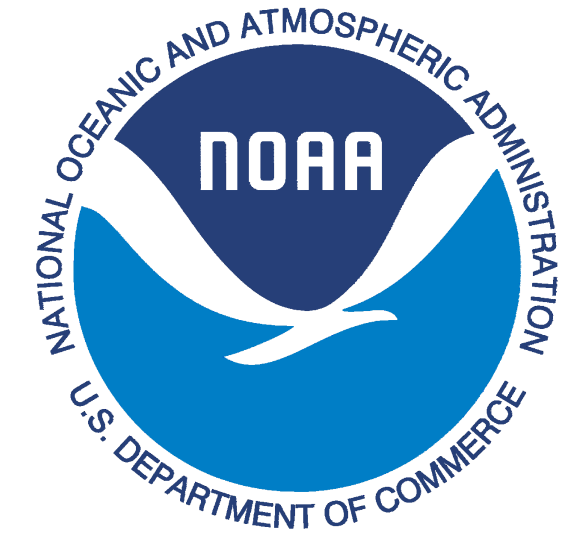
COUNTER SCHEDULE									
Width	Depth	Height	Thickness	Finish Material	Description	Count	Area	Volume	Sheets of Material
6' - 1 1/16"	1' - 6"		0' - 0 1/8"			1	9 SF	0.10 CF	0.2854
4' - 4 3/8"	2' - 0"		0' - 1"			1	9 SF	0.73 CF	0.272786
<varies>	3' - 0"		0' - 1"			3	45 SF	3.73 CF	1.397461
2' - 6"	1' - 4"		0' - 1 1/2"			1	3 SF	0.42 CF	0.104167
<varies>	2' - 0"		0' - 1 1/2"			3	41 SF	5.10 CF	1.276042
10' - 5"	1' - 6"		0' - 3 1/2"			1	16 SF	4.56 CF	0.488281
2' - 4 1/2"						2	0 SF	0.00 CF	0
Grand total: 12							122 SF	14.63 CF	3.824137

WINDOW SHADE SCHEDULE						
MARK	MODEL	QUANTITY	LENGTH	MANUFACTURER	DESCRIPTION	COMMENTS
RS-1		1	3' - 9 1/4"			BERTHING
RS-1		1	2' - 4 1/2"			BERTHING
RS-1		1	2' - 5 1/4"			BERTHING
RS-1		1	3' - 10 1/2"			BERTHING
RS-1		1	7' - 3 7/8"			GALLEY
RS-1		1	7' - 6 5/8"			GALLEY
RS-1		1	2' - 4 1/2"			GALLEY
RS-1		1	3' - 11"			GALLEY
RS-1		1	2' - 4 1/2"			GALLEY

SHELVING SCHEDULE										
WIDTH	DEPTH	HEIGHT	THICKNESS	MATERIAL	DESCRIPTION	QUANTITY	AREA	VOLUME	# OF SHEETS	
7' - 1 3/4"	0' - 3 1/4"		0' - 0 1/4"			6	12 SF	0.24 CF	0.362874	
3' - 11 1/4"	0' - 4 1/2"		0' - 0 1/4"			1	1 SF	0.03 CF	0.046143	
3' - 11 1/4"	0' - 4 3/4"		0' - 0 1/4"			1	2 SF	0.03 CF	0.048706	
<varies>	0' - 5 1/4"		0' - 0 1/4"			4	13 SF	0.28 CF	0.419281	
10' - 6 3/4"	1' - 3 1/4"		0' - 0 1/4"			2	27 SF	0.56 CF	0.838949	
<varies>	1' - 11 1/4"		0' - 0 1/4"			5	92 SF	1.92 CF	2.873454	
8' - 8"	2' - 4 1/4"		0' - 0 1/4"			1	20 SF	0.43 CF	0.637587	
0' - 2 5/8"	7' - 10"		0' - 0 1/4"			1	2 SF	0.04 CF	0.053548	
<varies>	8' - 0"		0' - 0 1/4"			9	70 SF	1.45 CF	2.171875	
<varies>	0' - 2 1/4"		0' - 0 3/4"			7	7 SF	0.41 CF	0.20343	
<varies>	0' - 3"		0' - 0 3/4"			8	6 SF	0.39 CF	0.195394	
<varies>	0' - 3 1/4"		0' - 0 3/4"			10	19 SF	1.17 CF	0.586806	
<varies>	0' - 3 1/2"		0' - 0 3/4"			9	7 SF	0.43 CF	0.214193	
<varies>	0' - 3 3/4"		0' - 0 3/4"			4	12 SF	0.73 CF	0.367294	
<varies>	0' - 4"		0' - 0 3/4"			5	5 SF	0.32 CF	0.158203	
<varies>	0' - 6"		0' - 0 3/4"			11	16 SF	1.03 CF	0.513184	
0' - 4"	0' - 7 1/4"		0' - 0 3/4"			2	0 SF	0.03 CF	0.012587	
5' - 10 1/8"	0' - 8"		0' - 0 3/4"			1	4 SF	0.24 CF	0.121745	
<varies>	0' - 9 1/4"		0' - 0 3/4"			6	5 SF	0.30 CF	0.149048	
<varies>	1' - 0"		0' - 0 3/4"			24	53 SF	3.33 CF	1.666015	
3' - 7 1/8"	1' - 1 1/4"		0' - 0 3/4"			1	4 SF	0.25 CF	0.124003	
3' - 8 5/8"	1' - 2"		0' - 0 3/4"			1	4 SF	0.27 CF	0.135579	
<varies>	1' - 3 1/4"		0' - 0 3/4"			67	176 SF	11.01 CF	5.506944	
<varies>	1' - 4"		0' - 0 3/4"			130	493 SF	30.83 CF	15.415797	
2' - 6"	1' - 4 1/2"		0' - 0 3/4"			1	3 SF	0.21 CF	0.107422	
7' - 10"	1' - 5"		0' - 0 3/4"			1	11 SF	0.69 CF	0.346788	
<varies>	1' - 6"		0' - 0 3/4"			24	169 SF	10.53 CF	5.265625	
<varies>	1' - 7 3/4"		0' - 0 3/4"			2	13 SF	0.83 CF	0.416816	
<varies>	1' - 11 1/4"		0' - 0 3/4"			11	164 SF	10.22 CF	5.112427	
<varies>	2' - 0"		0' - 0 3/4"			60	427 SF	26.69 CF	13.344141	
8' - 8"	2' - 4 1/4"		0' - 0 3/4"			1	20 SF	1.28 CF	0.637587	
<varies>	2' - 11 1/4"		0' - 0 3/4"			2	20 SF	1.26 CF	0.63206	
3' - 0"	3' - 0"		0' - 0 3/4"			1	9 SF	0.56 CF	0.28125	
<varies>	3' - 2"		0' - 0 3/4"			8	174 SF	10.90 CF	5.451221	
1' - 0"	4' - 5 1/4"		0' - 0 3/4"			1	4 SF	0.28 CF	0.138672	
1' - 0"	4' - 6 3/4"		0' - 0 3/4"			8	37 SF	2.28 CF	1.140625	
1' - 6"	6' - 7 1/4"		0' - 0 3/4"			1	10 SF	0.62 CF	0.30957	
1' - 0"	6' - 11 1/4"		0' - 0 3/4"			1	7 SF	0.43 CF	0.216797	
<varies>	7' - 10"		0' - 0 3/4"			8	59 SF	3.70 CF	1.85203	
0' - 2"	8' - 0"		0' - 0 3/4"			2	3 SF	0.17 CF	0.083333	
4' - 0"	0' - 2 1/4"		0' - 2"			1	1 SF	0.13 CF	0.023438	
<varies>	1' - 4"		0' - 4"			14	48 SF	16.11 CF	1.510417	
0' - 10 1/2"	2' - 0"		0' - 4"			2	4 SF	1.17 CF	0.109375	
<varies>	0' - 3 1/2"		0' - 0 3/4"			2	2 SF	0.12 CF	0.058675	
3' - 10 3/4"	0' - 5 1/2"		0' - 0 3/4"			1	2 SF	0.11 CF	0.0558	
<varies>	0' - 8 3/4"		0' - 0 3/4"			2	11 SF	0.68 CF	0.341085	
2' - 5 1/4"	1' - 7"		0' - 0 3/4"			1	4 SF	0.24 CF	0.120605	
<varies>	0' - 3 1/2"		0' - 0 1/2"			2	4 SF	0.18 CF	0.135579	
<varies>	0' - 3 1/2"		0' - 0 3/4"			2	2 SF	0.12 CF	0.058105	
4' - 0"	0' - 5"		0' - 0 3/4"			1	2 SF	0.10 CF	0.052083	
<varies>	0' - 5 1/2"		0' - 0 3/4"			3	5 SF	0.33 CF	0.163222	
2' - 4 1/2"						2	0 SF	0.00 CF	0	
Grand total: 481							2265 SF	145.66 CF	70.787385	

ROOF SCHEDULE				
Type Mark	Area	Type	Thickness	Comments
	452 SF	Corrugated Roof	0' - 0 7/8"	LAB
	70 SF	Corrugated Roof	0' - 0 7/8"	MOC-UP
	506 SF	Corrugated Roof	0' - 0 7/8"	BERTHING
	705 SF	Corrugated Roof	0' - 0 7/8"	
Grand total:		1733 SF		
4				

WALL SCHEDULE							
Type Mark	Type	Width	Length	Area	Function	Type Comments	Comments
	<varies>	0' - 7 11/16"	<varies>	96 SF	Exterior		
WS-1	<varies>	0' - 7 11/16"	<varies>	1826 SF	Exterior		
WS-2	Wall - 2	0' - 7 11/16"	<varies>	499 SF	Exterior		
WS-1	Wall - 1	0' - 7 11/16"	1' - 10"	24 SF	Exterior		MOCK-UP
Grand total: 70				2446 SF			



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SCHEDULES

date: 03/01/21
scale:

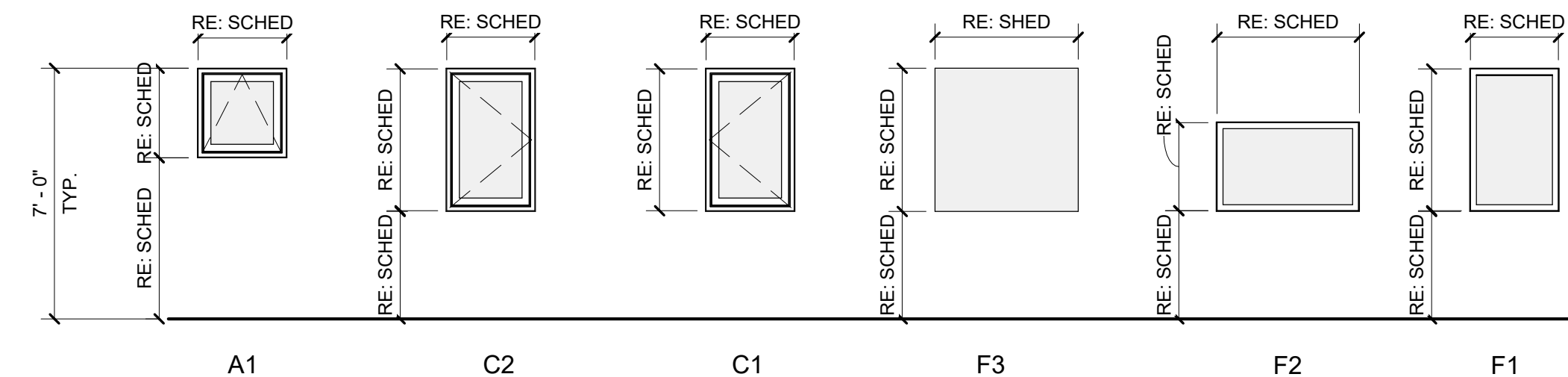
A-501

DOOR SCHEDULE																	
LEVEL	MARK	DOOR						FRAME				HARDWARE				COMMENTS	
		WIDTH	HEIGHT	THICKNESS	PANEL A TYPE	PANEL A WIDTH	PANEL MATERIAL	PANEL FINISH	FRAME TYPE	FRAME DEPTH	FRAME MATERIAL	FRAME FINISH	ASTRAGAL	KICK PLATE	CLOSER		THRESHOLD
LEVEL 1	B01	2' - 6"	6' - 8"	0' - 2"	NV			TBD	WD - A	0' - 5"		DARK BRONZE					INTERIOR
LEVEL 1	B02	3' - 0"	7' - 0"	0' - 2"	NV			TBD	WD - A	0' - 7 11/16"		DARK BRONZE				•	EXTERIOR
LEVEL 1	B03	2' - 6"	6' - 8"	0' - 2"	NV			TBD	WD - A	0' - 5"		DARK BRONZE					INTERIOR
LEVEL 1	G01	3' - 0"	7' - 0"	0' - 2"	NV			TBD	WD - A	0' - 7 11/16"		DARK BRONZE				•	EXTERIOR
LEVEL 1	G02	2' - 6"	6' - 8"	0' - 2"	NV			TBD	WD - A	0' - 4 3/4"		DARK BRONZE					INTERIOR
LEVEL 1	G03	2' - 6"	6' - 8"	0' - 2"	NV			TBD	WD - A	0' - 4 3/4"		DARK BRONZE					INTERIOR
LEVEL 1	G04	3' - 0"	6' - 8"	0' - 2"	NV			TBD	WD - A	0' - 7"		DARK BRONZE					INTERIOR

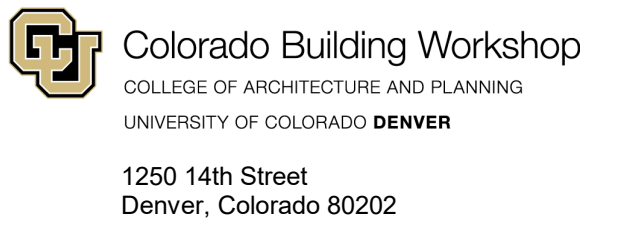
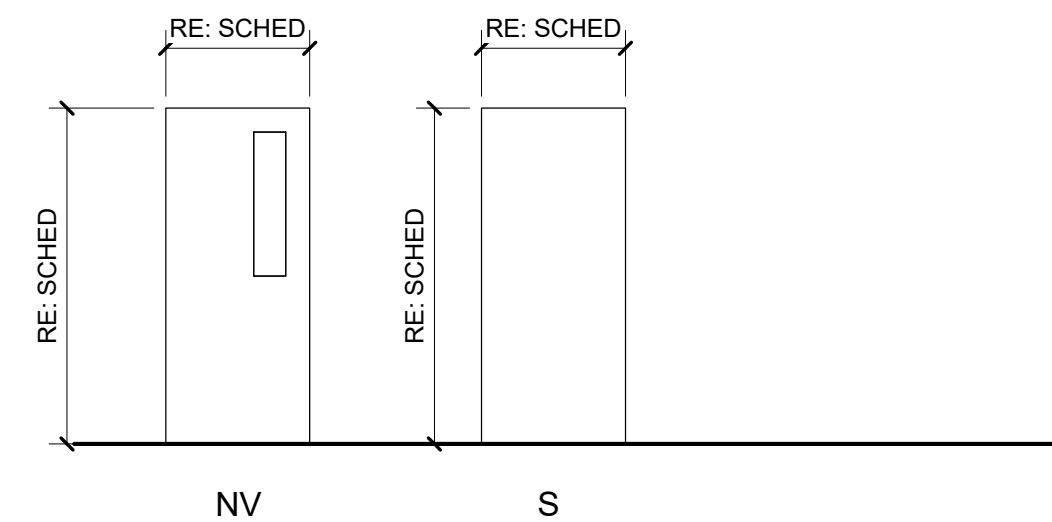
WINDOWS SCHEDULE ORDER 1												
MARK	SILL HEIGHT	HEIGHT	WIDTH	ROUGH WIDTH	ROUGH HEIGHT	AREA	FRAME FINISH	GLAZING GRADE	IGU Type	TYPE	DESCRIPTION	COMMENTS
A1	3' - 0"	2' - 3 3/4"	2' - 3 3/4"	2' - 6"	2' - 6"	5 SF	DARK BRONZE	GLASS STANDARD	IGU - 3 Pane	3232 XPT AWNING		GALLEY MUD
A1	4' - 6"	2' - 3 3/4"	2' - 3 3/4"	2' - 6"	2' - 6"	5 SF	DARK BRONZE	GLASS STANDARD	IGU - 3 Pane	3232 XPT AWNING		DRY GOODS
A1	4' - 6"	2' - 3 3/4"	2' - 3 3/4"	2' - 6"	2' - 6"	5 SF	DARK BRONZE	GLASS STANDARD	IGU - 3 Pane	3232 XPT AWNING		BERTHING MUD
A1	4' - 6"	2' - 3 3/4"	2' - 3 3/4"	2' - 6"	2' - 6"	5 SF	DARK BRONZE	GLASS STANDARD	IGU - 3 Pane	3232 XPT AWNING		KITCHEN
C1	3' - 0"	3' - 9 3/4"	2' - 3 3/4"	2' - 6"	4' - 0"	9 SF	DARK BRONZE	GLASS STANDARD	IGU - 3 Pane	3232 XPT CASEMENT		SR STAFF
C2	3' - 0"	3' - 9 3/4"	2' - 3 3/4"	2' - 6"	4' - 0"	9 SF	DARK BRONZE	GLASS STANDARD	IGU - 3 Pane	3232 XPT CASEMENT		JR STAFF
C2	3' - 0"	3' - 9 3/4"	2' - 3 3/4"	2' - 6"	4' - 0"	9 SF	DARK BRONZE	GLASS STANDARD	IGU - 3 Pane	3232 XPT CASEMENT		GALLEY
F1	3' - 0"	3' - 11 1/2"	2' - 5 1/2"	2' - 6"	4' - 0"	10 SF	DARK BRONZE	GLASS STANDARD	IGU - 2 Pane	3232 XPT FIXED		COMS
F2	3' - 0"	2' - 5 1/2"	3' - 11 1/2"	4' - 0"	2' - 6"	10 SF	DARK BRONZE	GLASS STANDARD	IGU - 2 Pane	3232 XPT FIXED		SR STAFF
F2	4' - 6"	2' - 5 1/2"	3' - 11 1/2"	4' - 0"	2' - 6"	10 SF	DARK BRONZE	GLASS STANDARD	IGU - 2 Pane	3232 XPT FIXED		KITCHEN
Grand total: 10						77 SF						

FRAMELESS IGU SCHEDULE												
MARK	SILL HEIGHT	HEIGHT	WIDTH	ROUGH WIDTH	ROUGH HEIGHT	AREA	FRAME FINISH	GLAZING GRADE	IGU TYPE	TYPE	DESCRIPTION	COMMENTS
F3	3' - 0"	3' - 11 1/2"	3' - 11 3/4"	4' - 0 1/4"	4' - 0"	16 SF	TBD	GLASS STANDARD	IGU - 3 Pane			SIZE TBD
F3	3' - 0"	3' - 11 1/2"	3' - 11 3/4"	4' - 0 1/4"	4' - 0"	16 SF	TBD	GLASS STANDARD	IGU - 3 Pane			SIZE TBD
F3	3' - 0"	3' - 11 1/2"	3' - 11 3/4"	4' - 0 1/4"	4' - 0"	16 SF	TBD	GLASS STANDARD	IGU - 3 Pane			SIZE TBD
F3	3' - 0"	3' - 11 1/2"	3' - 11 3/4"	4' - 0 1/4"	4' - 0"	16 SF	TBD	GLASS STANDARD	IGU - 3 Pane			SIZE TBD
F3	3' - 0"	3' - 11 1/2"	3' - 11 3/4"	4' - 0 1/4"	4' - 0"	16 SF	TBD	GLASS STANDARD	IGU - 3 Pane			SIZE TBD
Grand total: 5						79 SF						

WINDOW TYPES



DOOR PANEL TYPES



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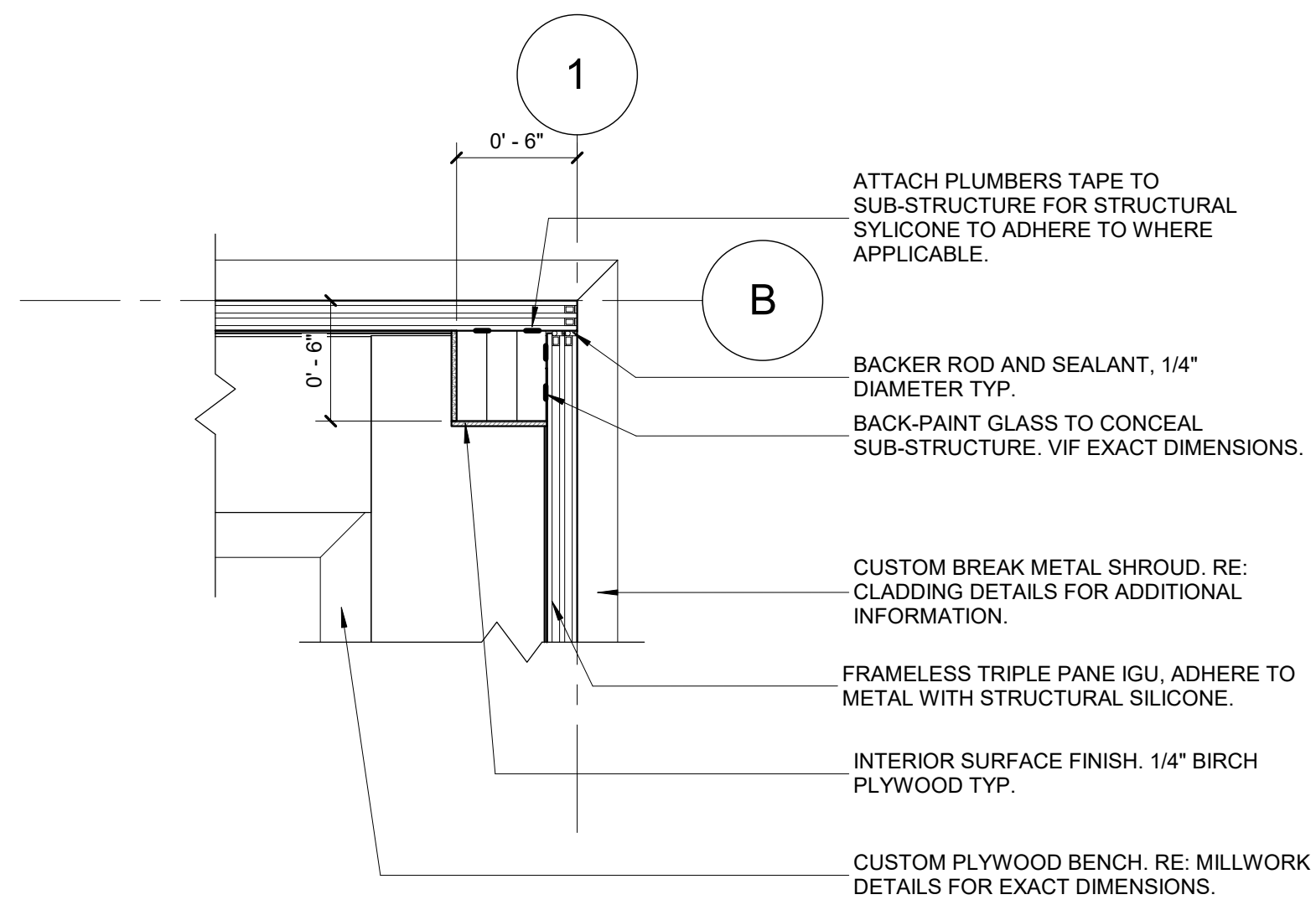
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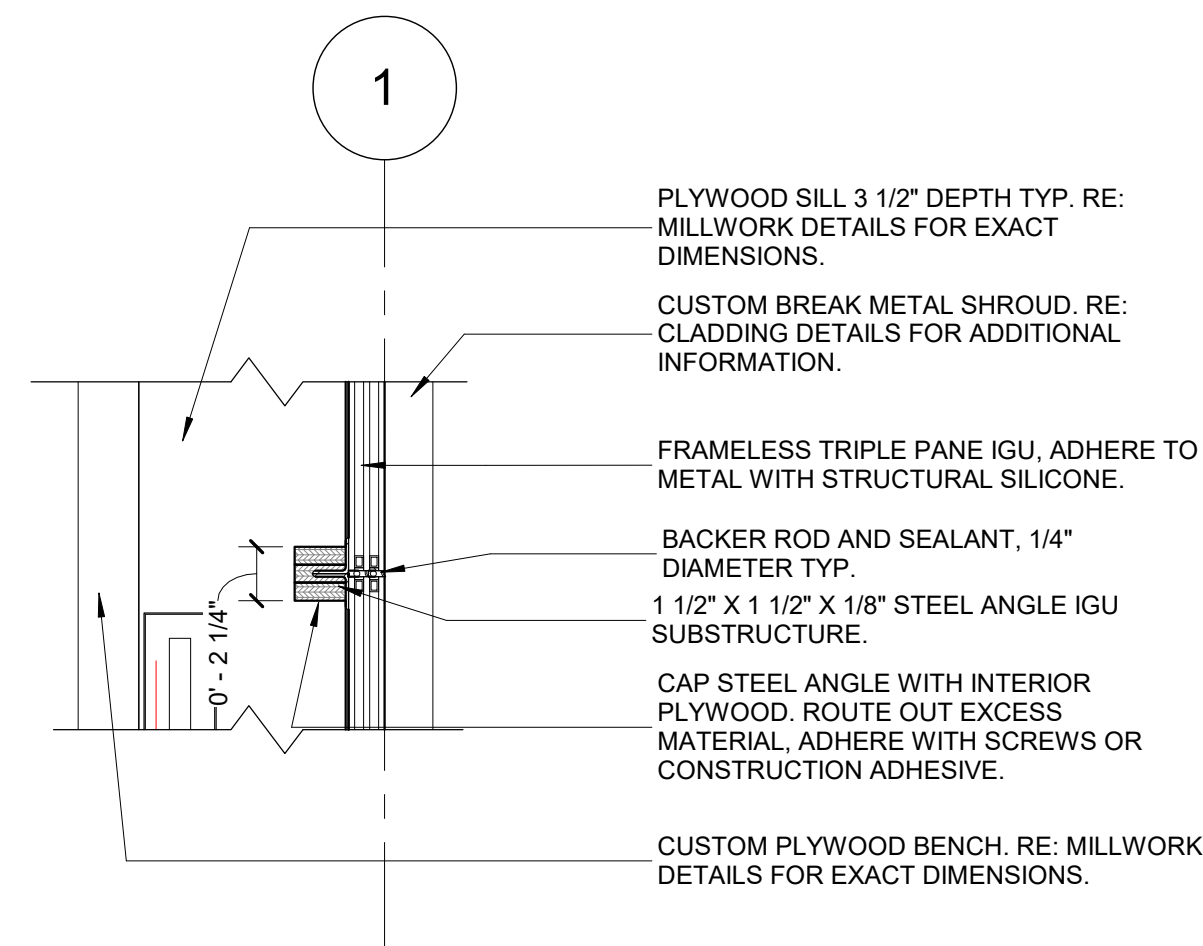
**WINDOW &
DOOR
SCHEDULE**

date: 03/01/22
scale: 1/4" = 1'-0"

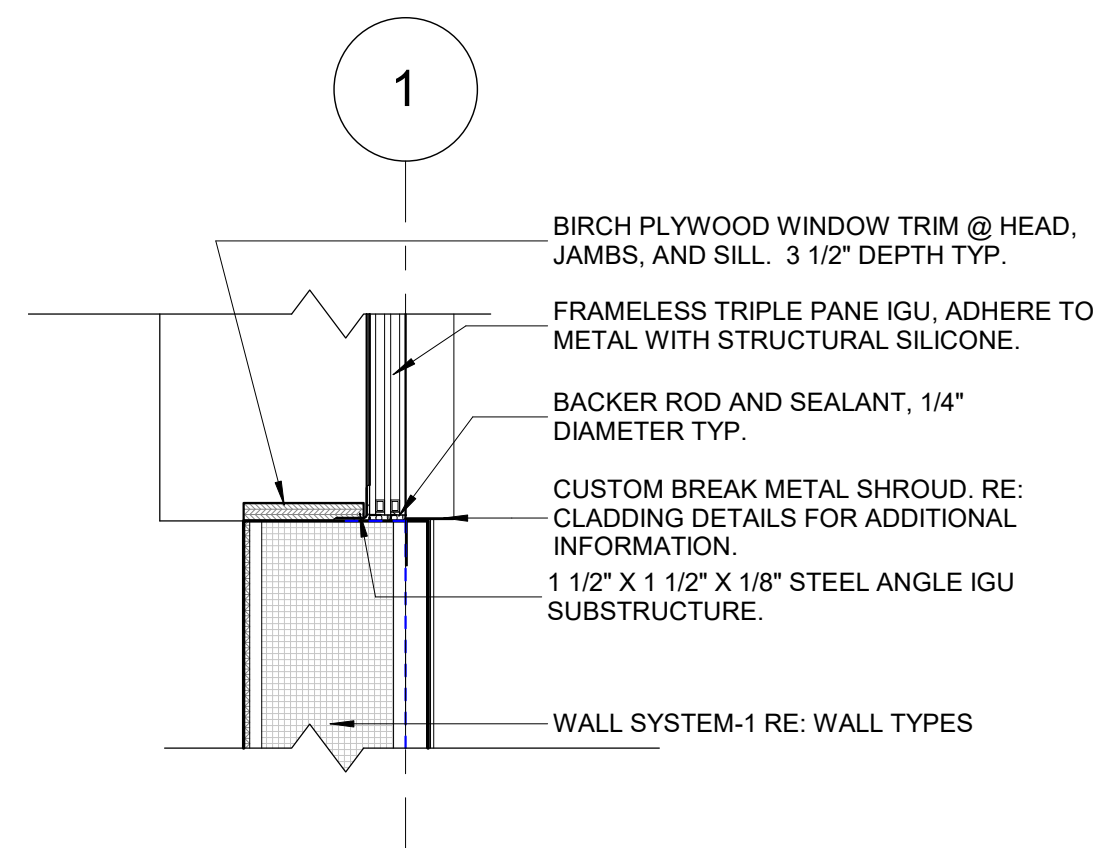
A-502



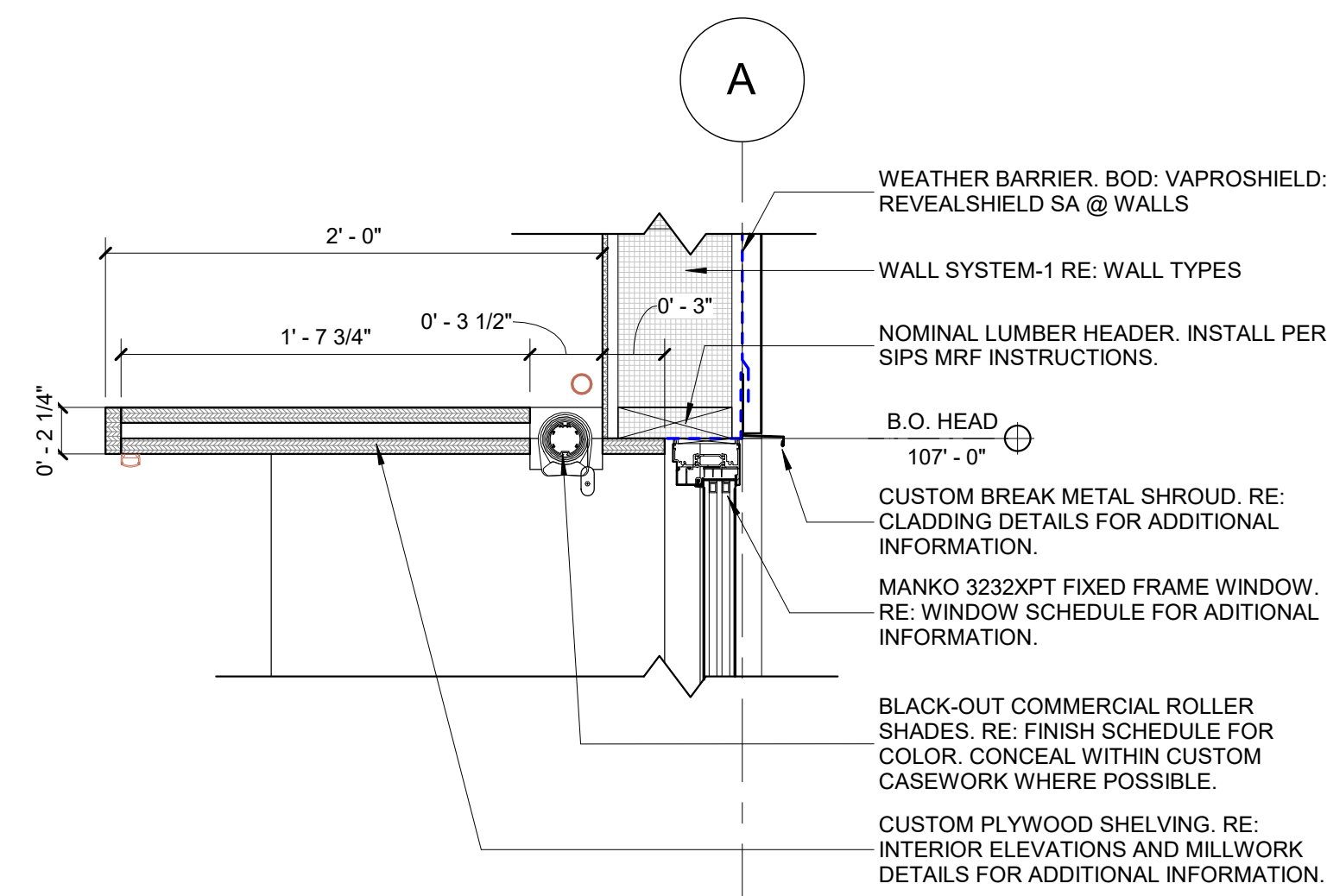
11 GALLEY CORNER WINDOW PLAN DETAIL
1 1/2" = 1'-0"



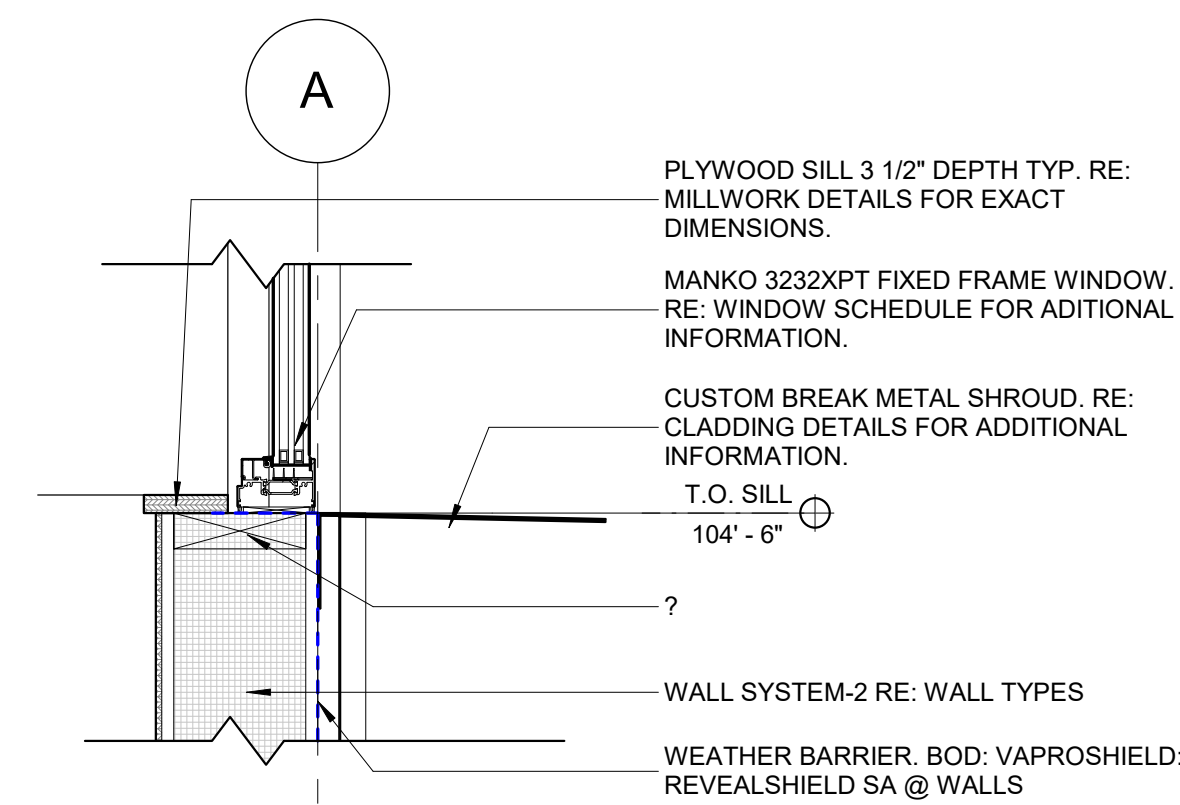
10 FRAMELESS MULLION DETAIL TYP.
1 1/2" = 1'-0"



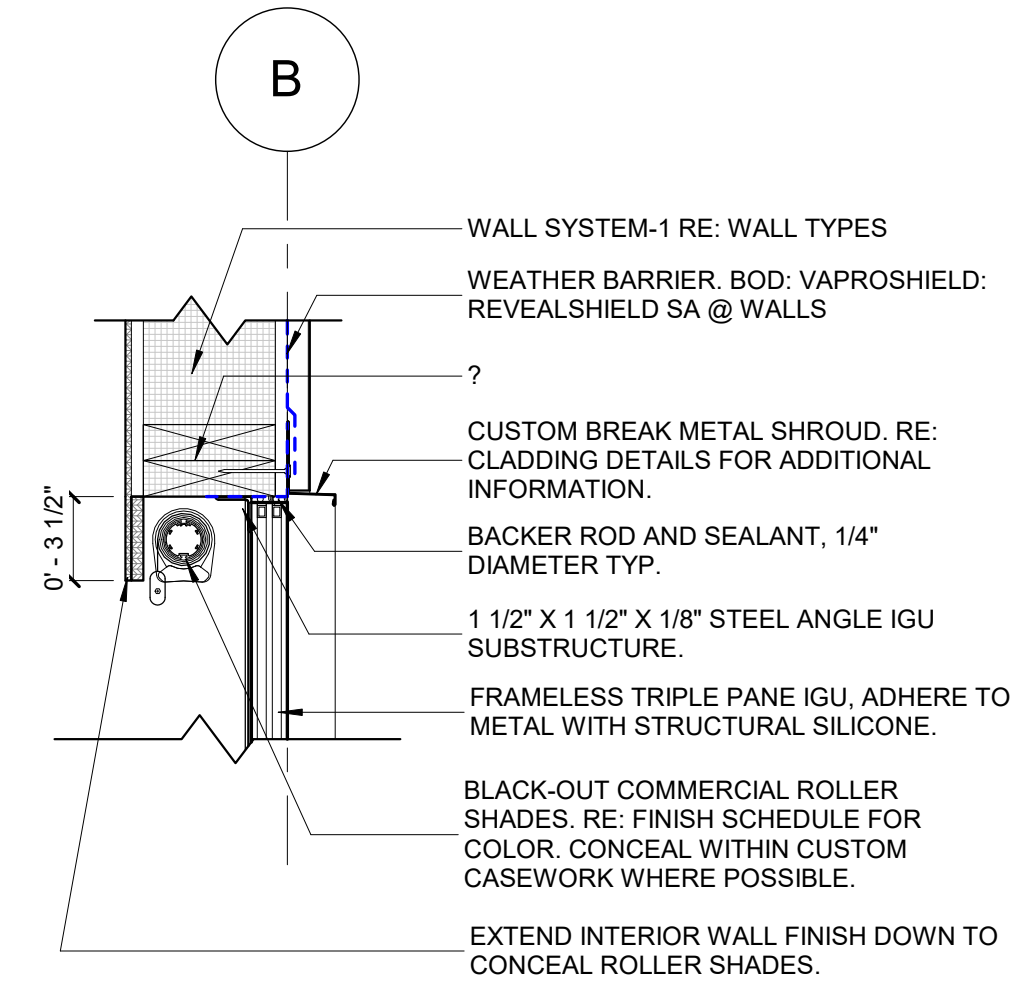
9 FRAMELESS WINDOW JAMB DETAIL
1 1/2" = 1'-0"



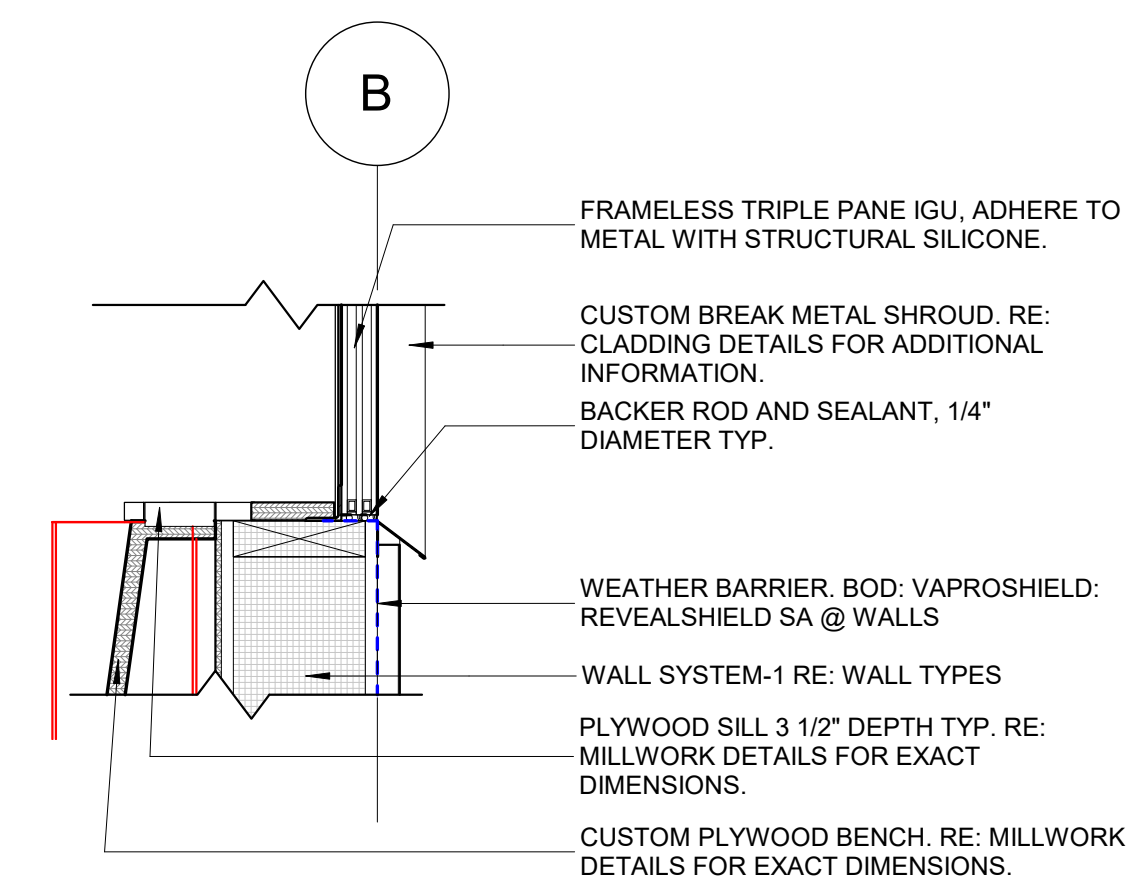
8 FIXED FRAME HEAD @ GALLEY SHELF
1 1/2" = 1'-0"



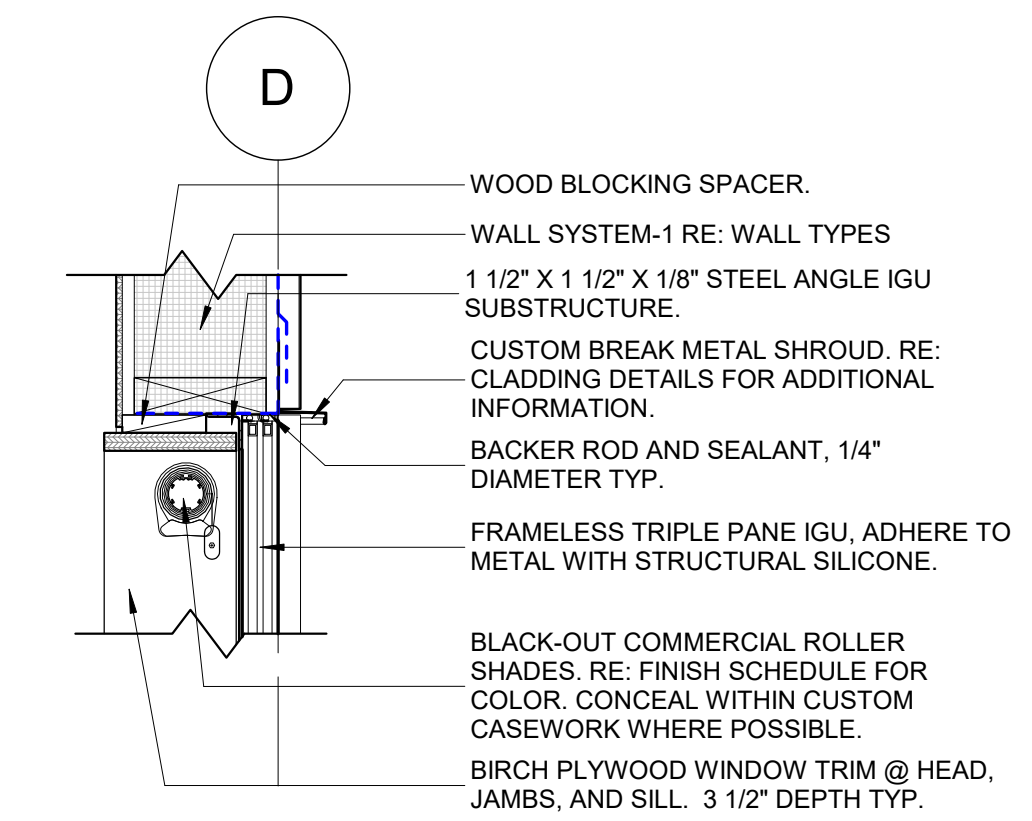
7 WINDOW DETAIL @ PROPANE SHED
1 1/2" = 1'-0"



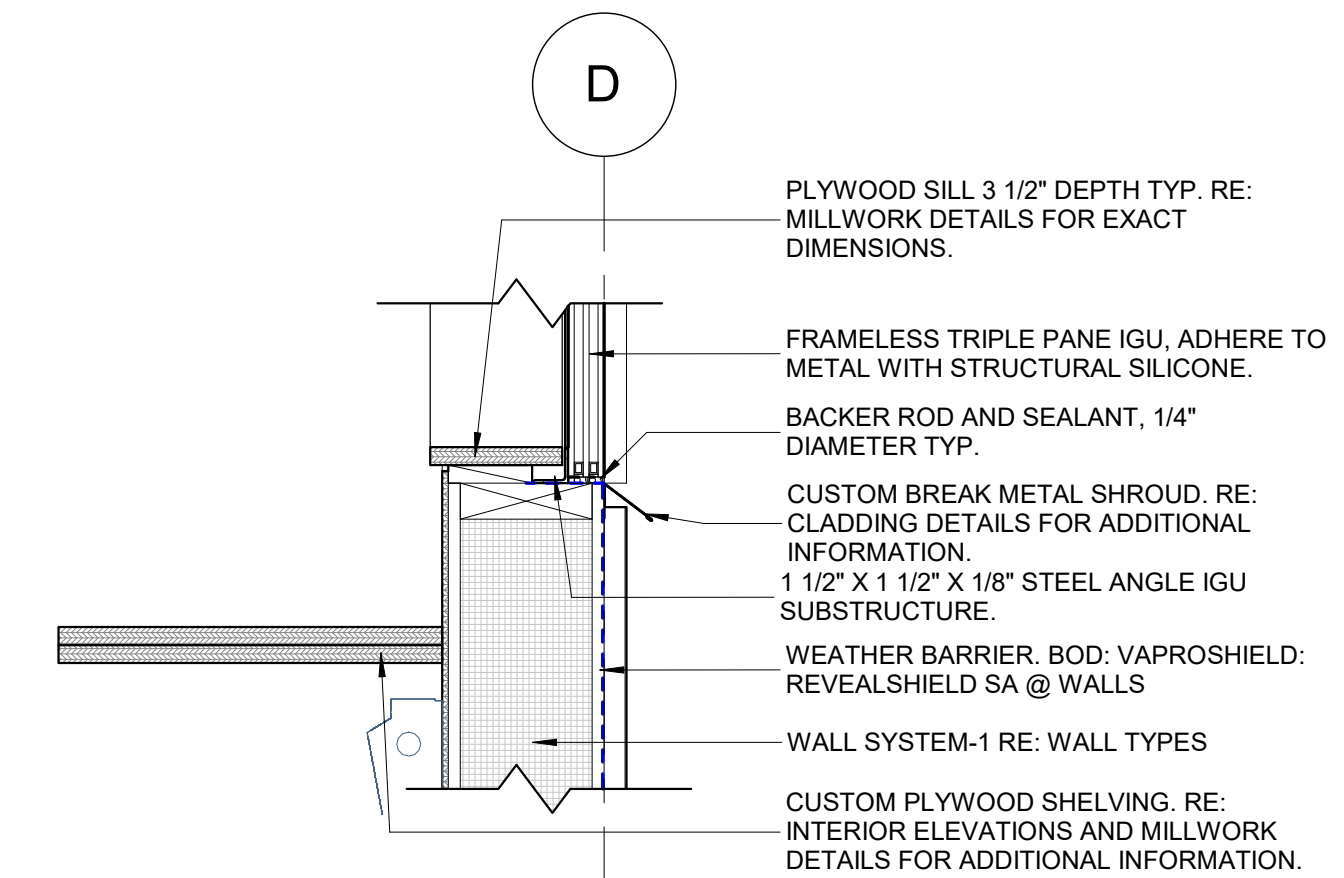
6 FRAMELESS WINDOW HEADER DETAIL @ GALLEY
1 1/2" = 1'-0"



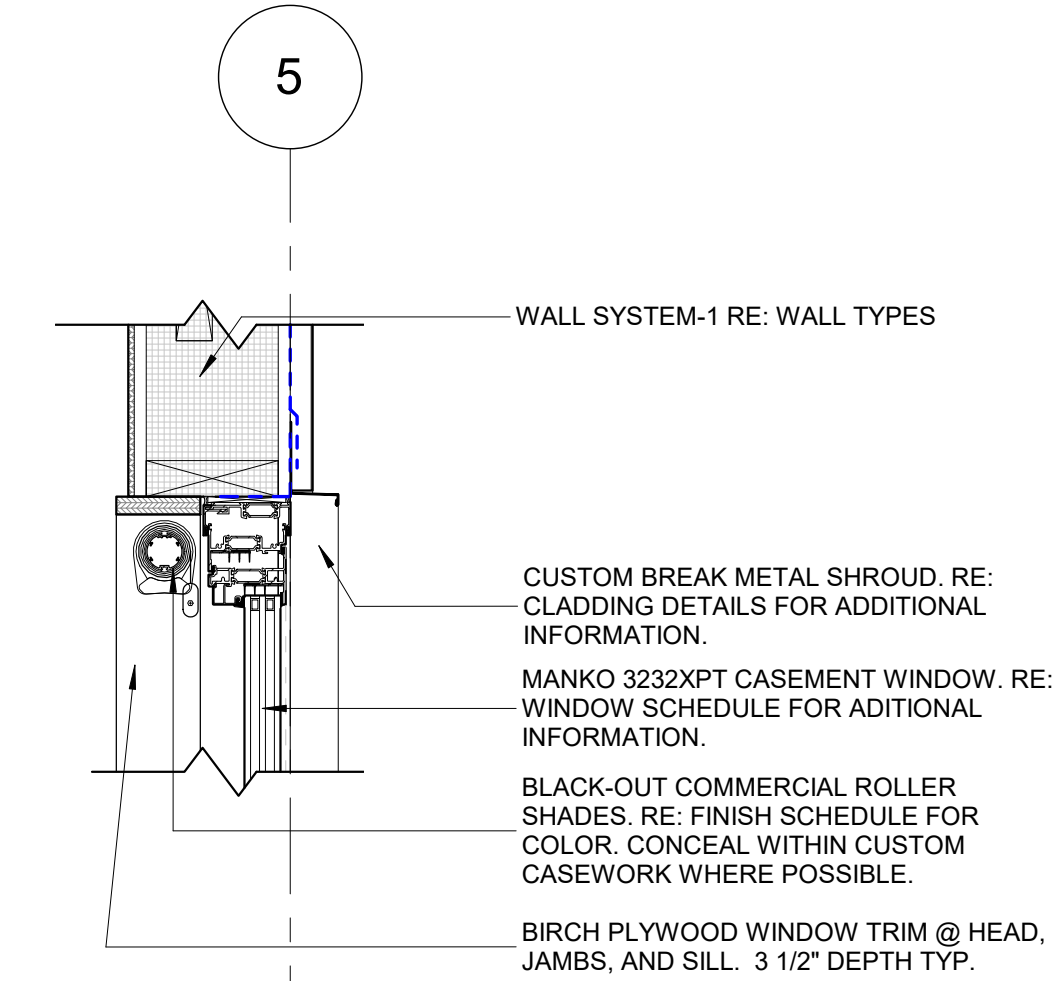
5 FRAMELESS WINDOW SILL DETAIL @ GALLEY
1 1/2" = 1'-0"



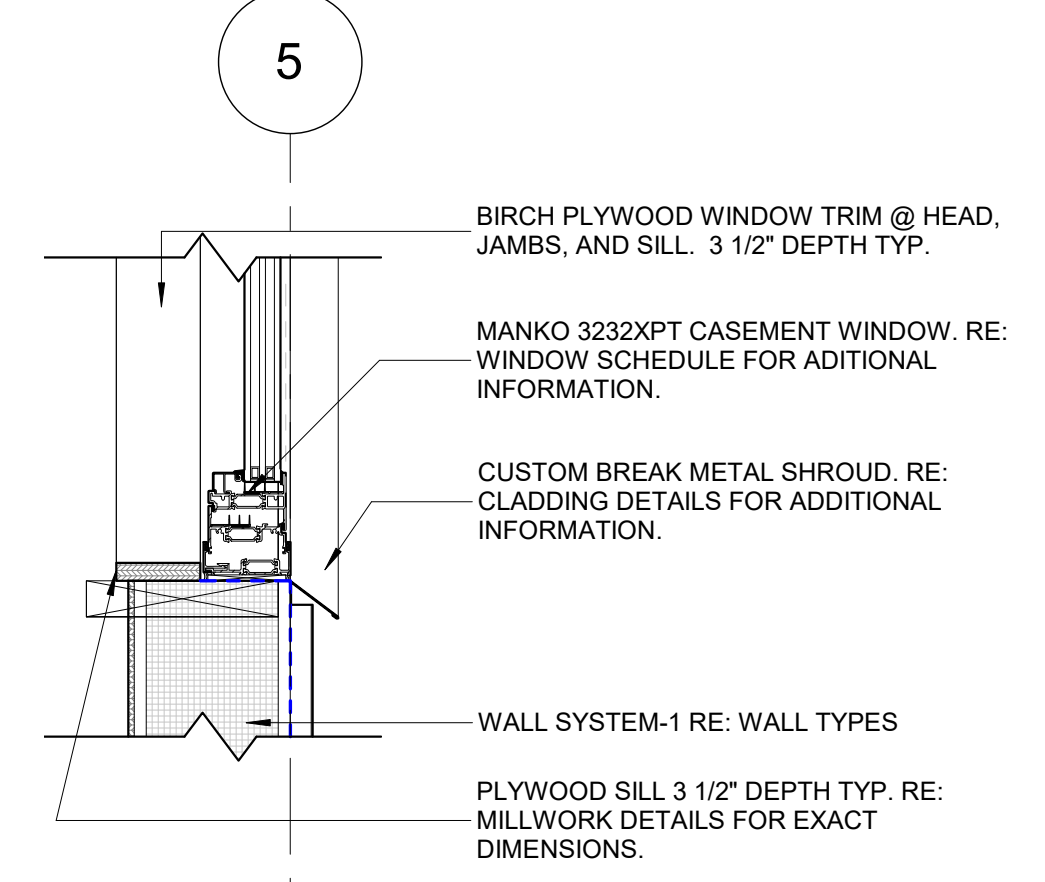
4 FRAMELESS WINDOW HEAD DETAIL @ BERTHING
1 1/2" = 1'-0"



3 FRAMELESS WINDOW SILL DETAIL @ BERTHING
1 1/2" = 1'-0"



2 OPERABLE WINDOW HEAD DETAIL TYP.
1 1/2" = 1'-0"



1 OPERABLE WINDOW SILL DETAIL TYP.
1 1/2" = 1'-0"



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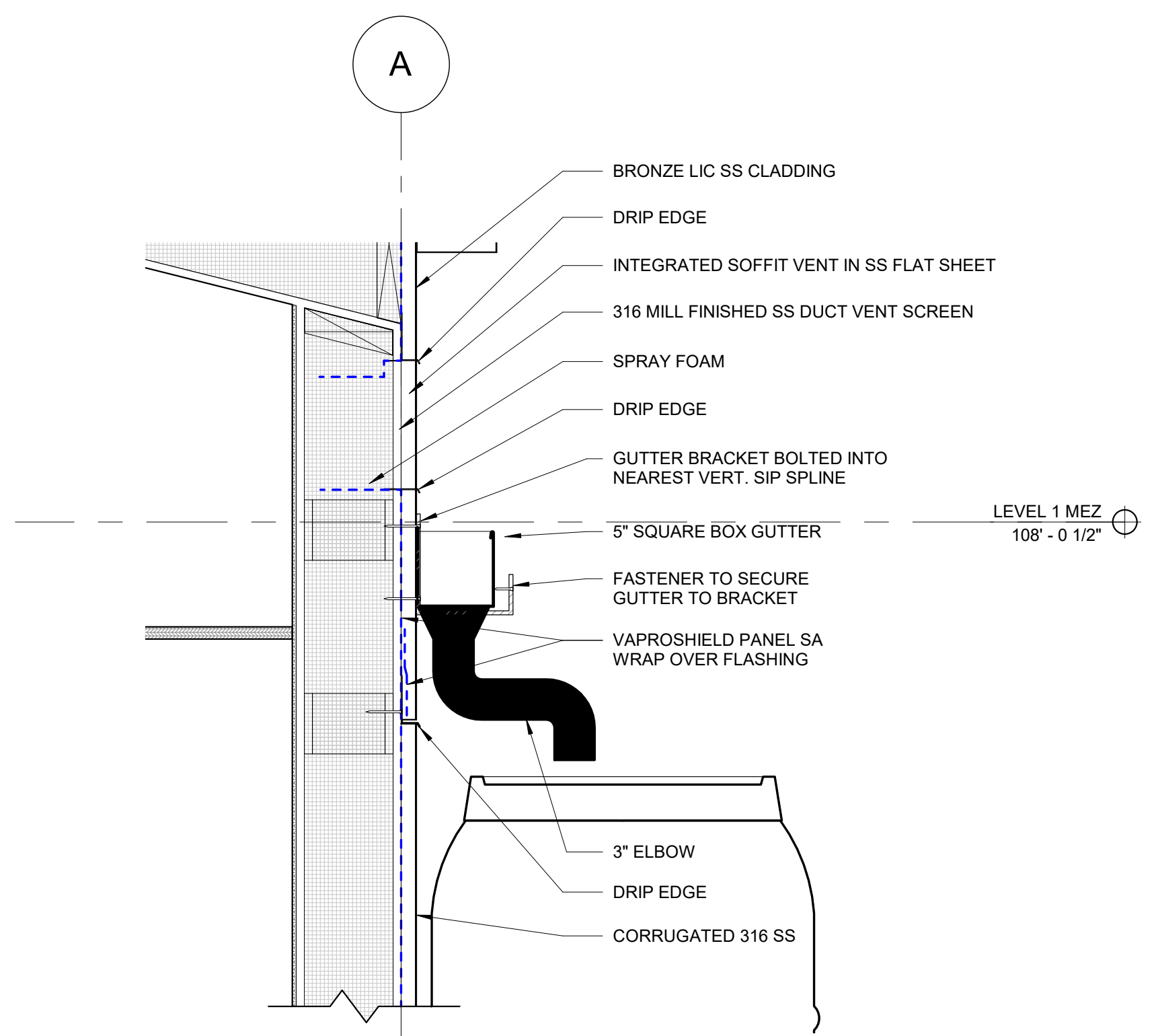
REVISIONS

REV. DATE:	REV. NAME:	REV. NO.:

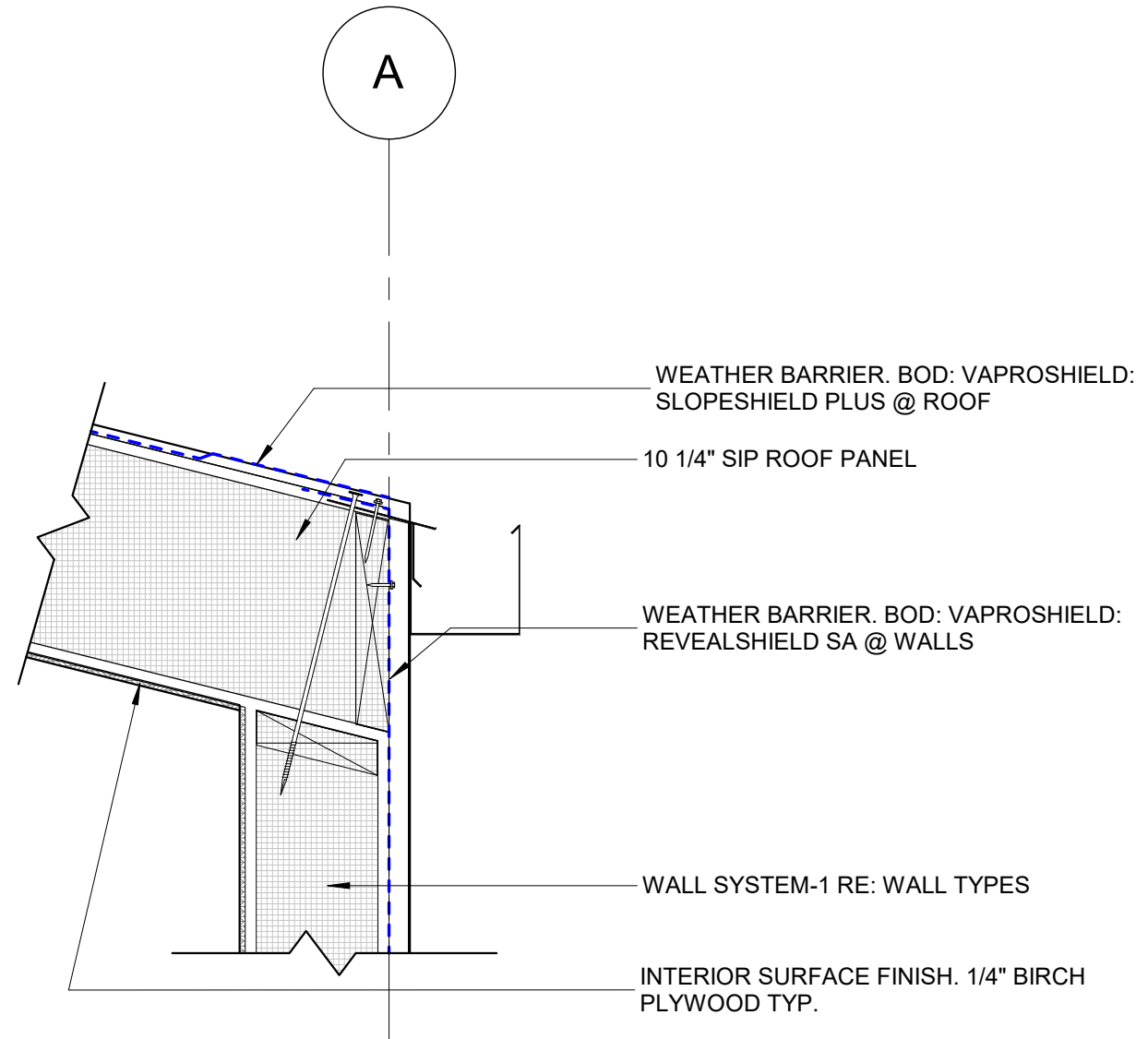
WINDOW DETAILS

date: 03/01/22
scale: 1 1/2" = 1'-0"

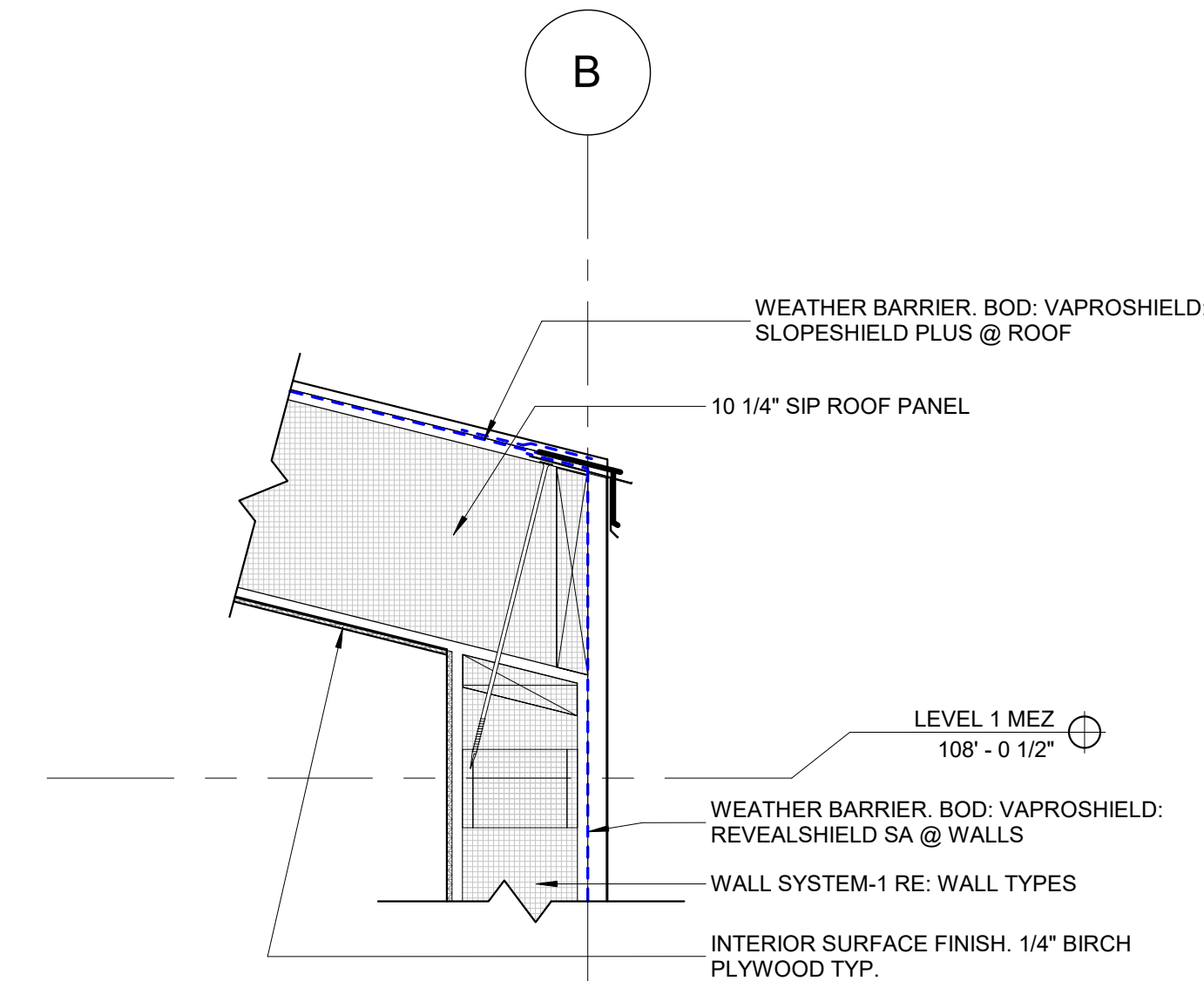
A-602



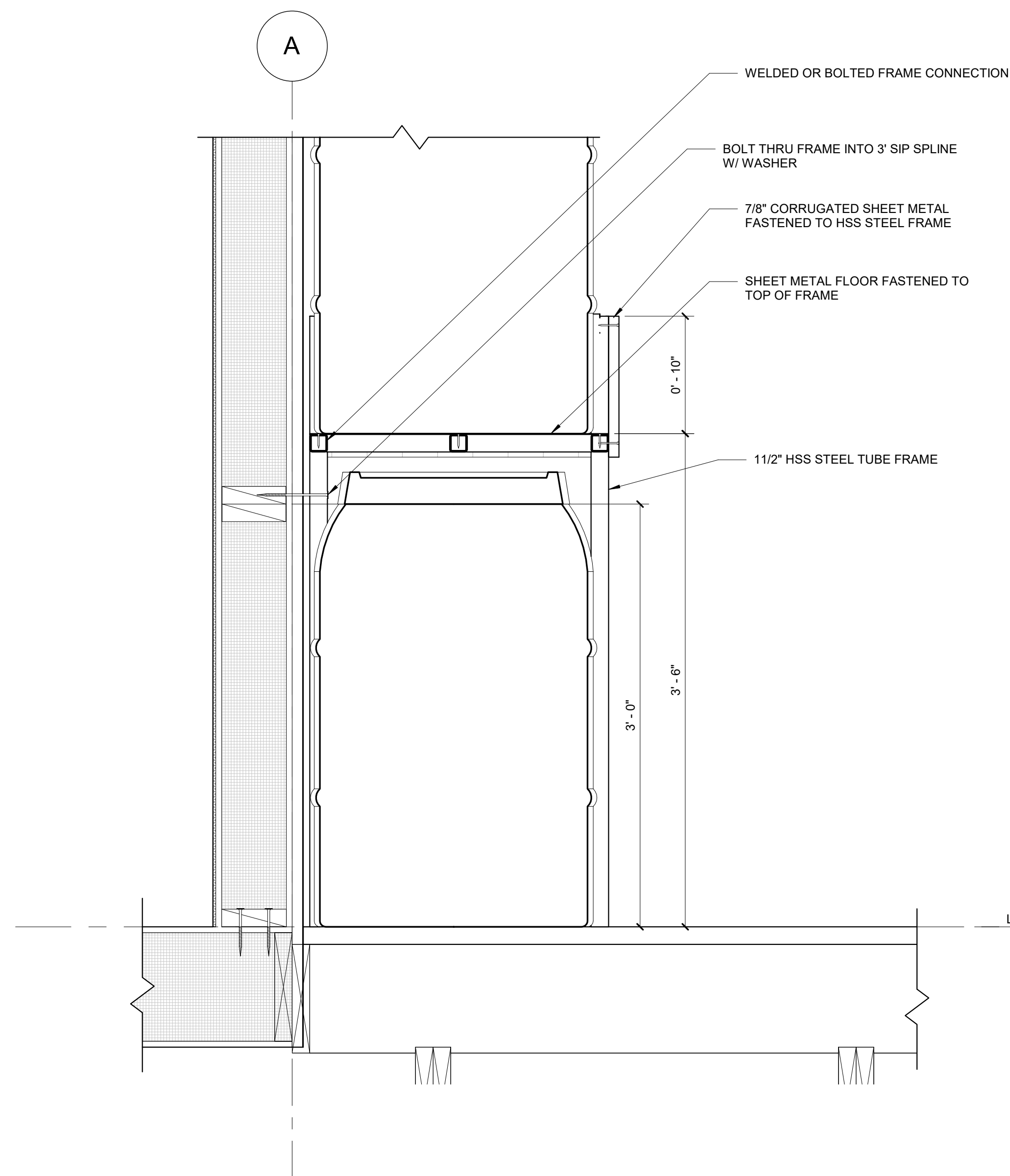
4 GUTTER TO BARREL CONNECTION
1 1/2" = 1'-0"



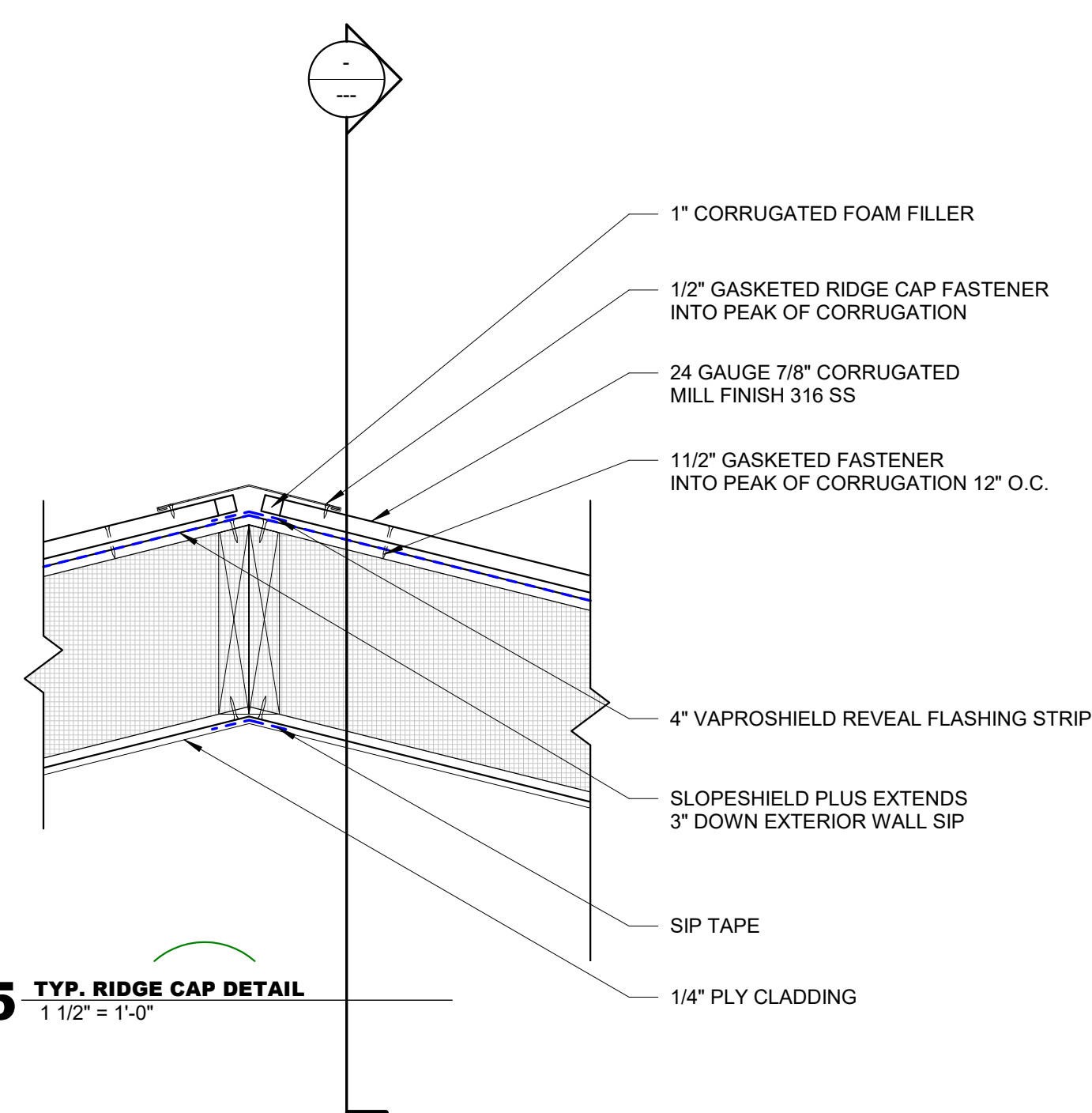
6 TYP. GUTTER CONNECTION
1 1/2" = 1'-0"



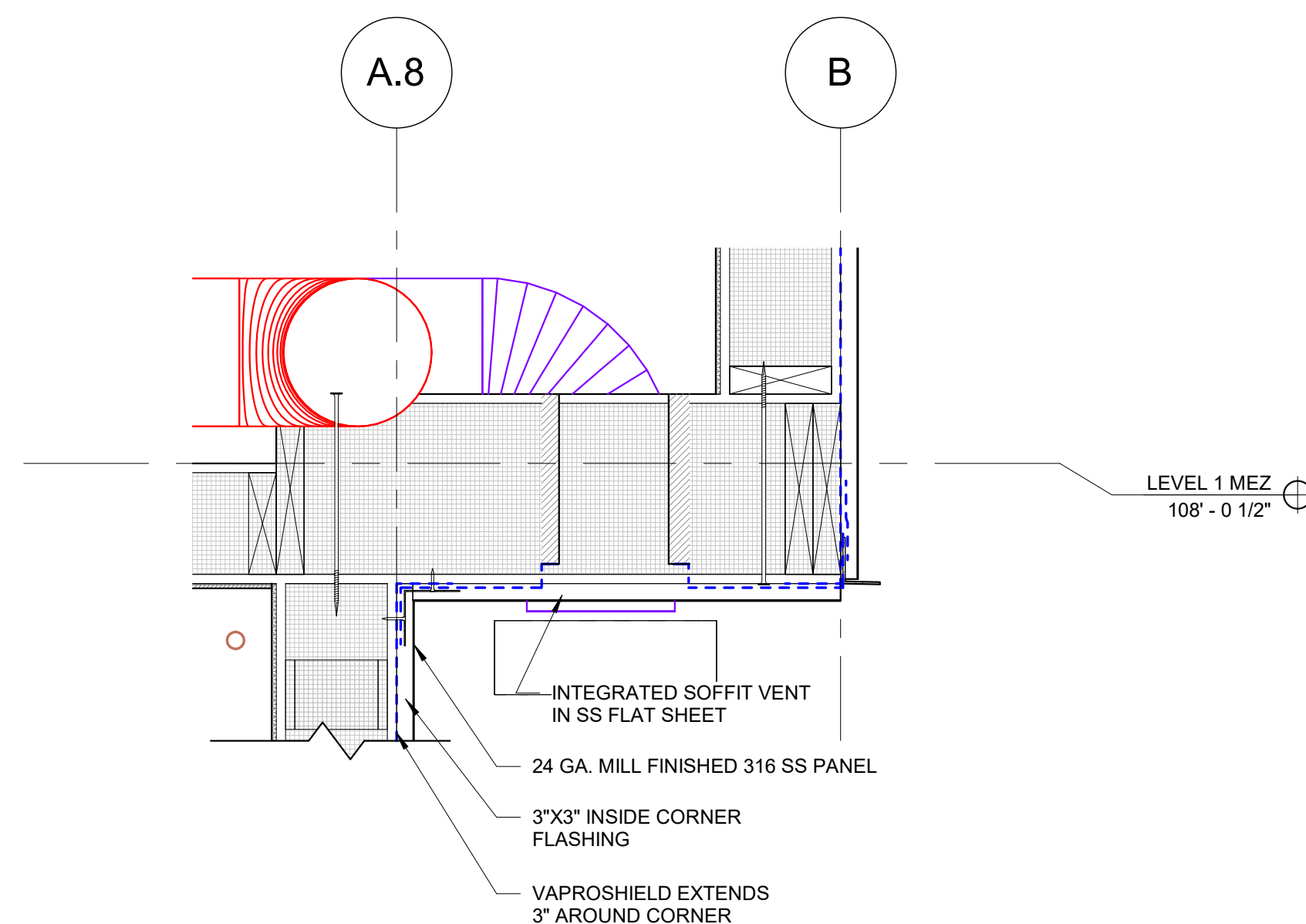
1 TYP. ROOF/WALL DETAIL
1 1/2" = 1'-0"



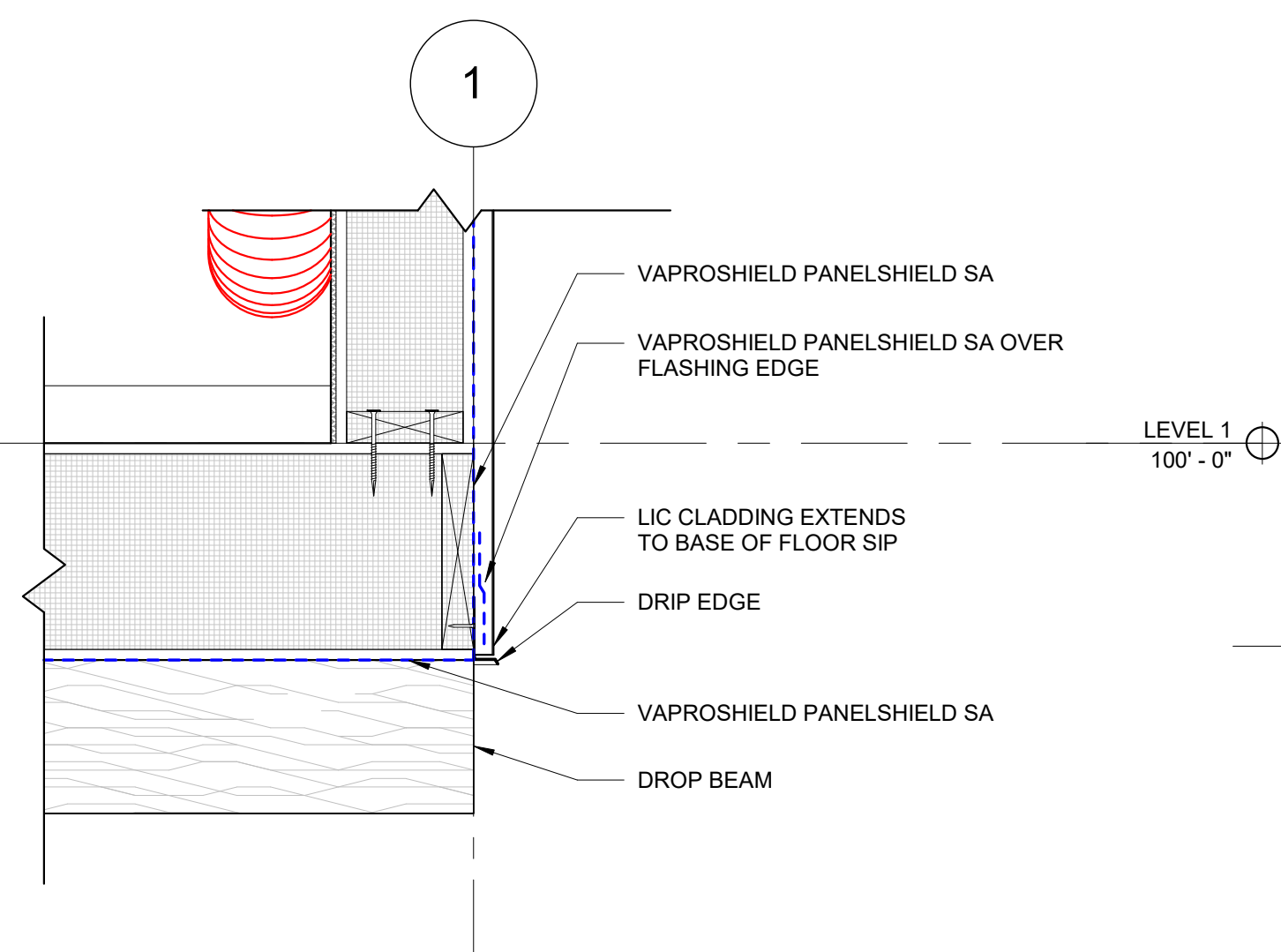
7 BARREL SHELF CONNECTION DETAIL
1 1/2" = 1'-0"



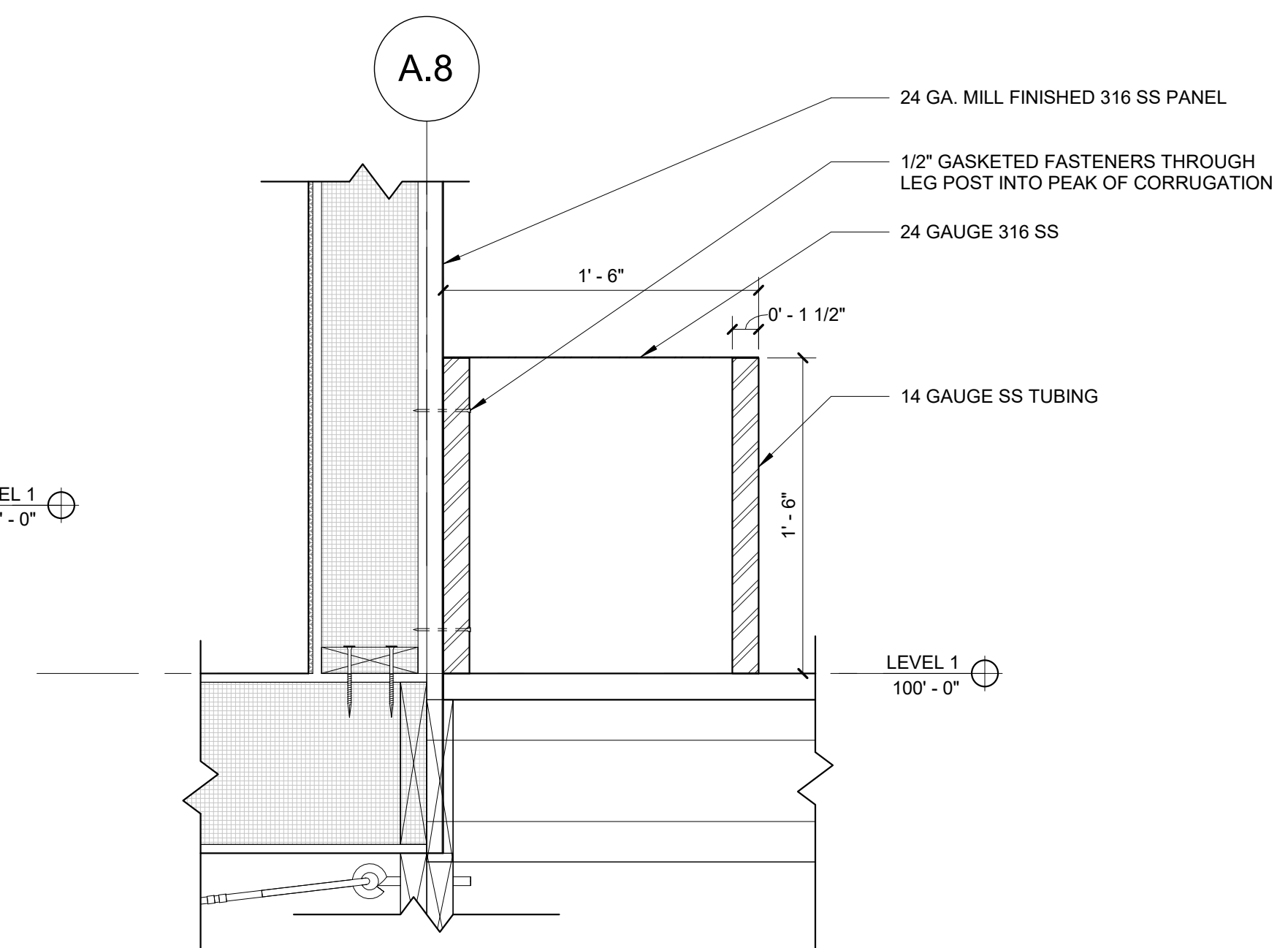
5 TYP. RIDGE CAP DETAIL
1 1/2" = 1'-0"



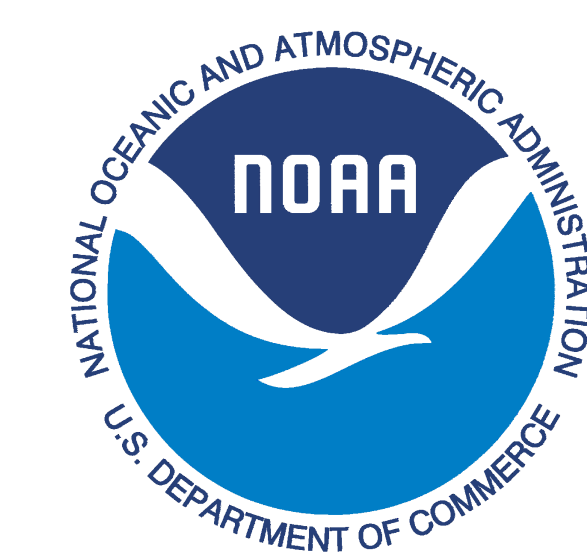
2 BITE-OUT SOFFIT DETAIL
1 1/2" = 1'-0"



8 CLADDING WALL TO FLOOR DETAIL
1 1/2" = 1'-0"



3 EXTERIOR BENCH CONNECTION DETAIL
1 1/2" = 1'-0"



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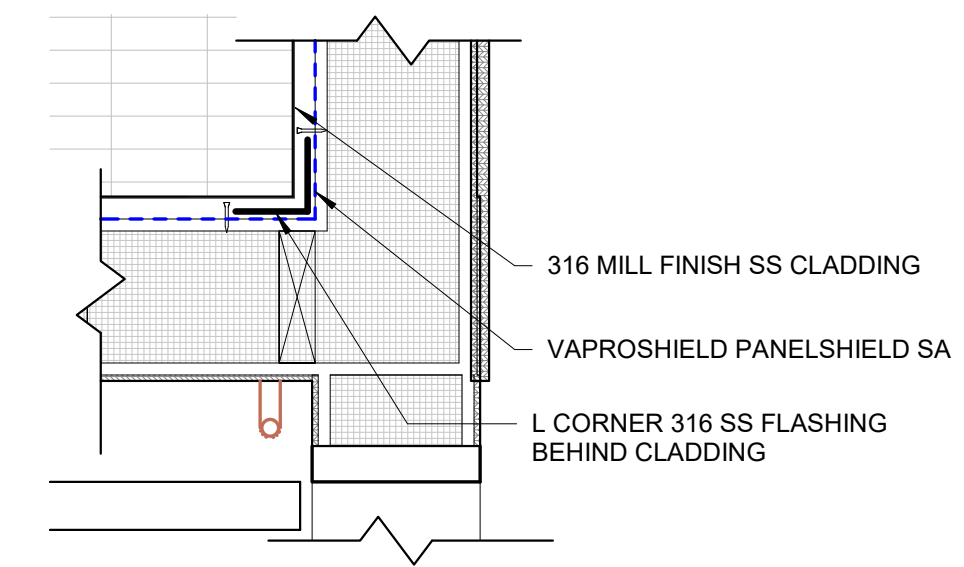
REVISIONS

REV. DATE:	REV. NAME:	REV. NO.:

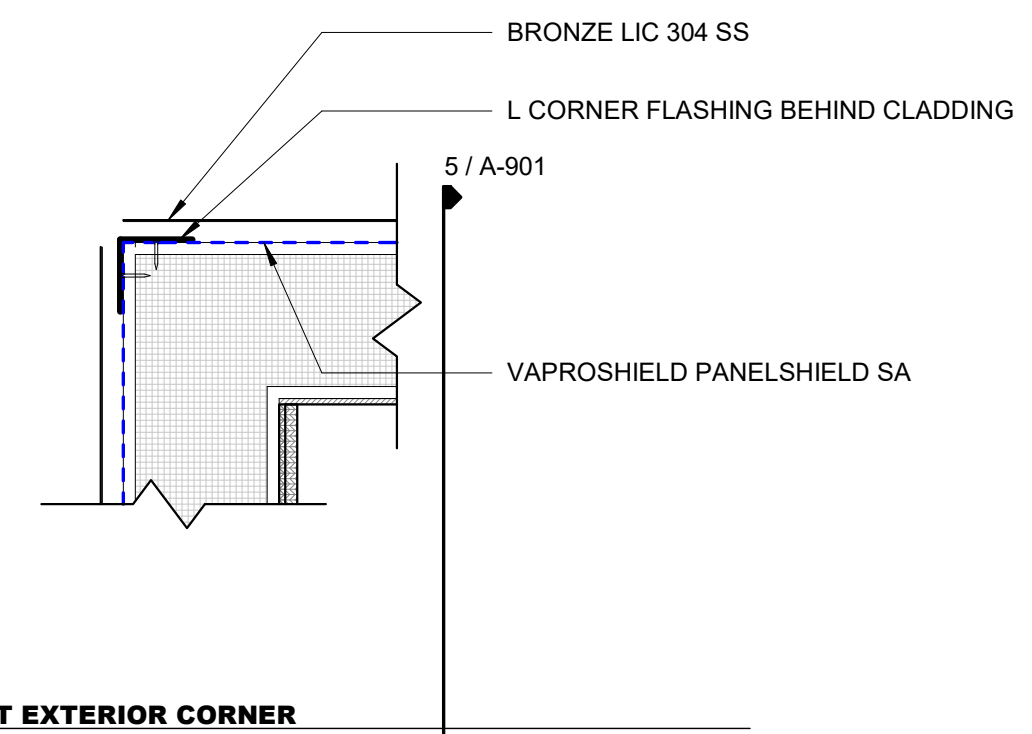
CLADDING DETAILS

date: 03/01/22
scale: 1 1/2" = 1'-0"

A-603

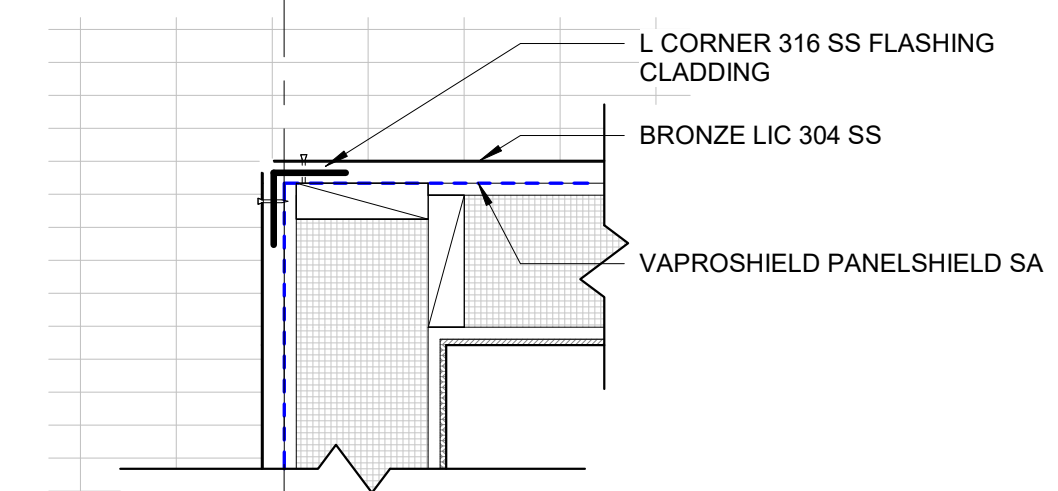


3 GALLEY BITE-OUT INTERIOR CORNER
1 1/2" = 1'-0"



2 GALLEY BITE OUT EXTERIOR CORNER
1 1/2" = 1'-0"

6.3



4 TYP. CORNER CLADDING DETAIL
1 1/2" = 1'-0"



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**CLADDING
DETAILS - PLAN**

date: 03/02/22
scale: 1 1/2" = 1'-0"

A-604



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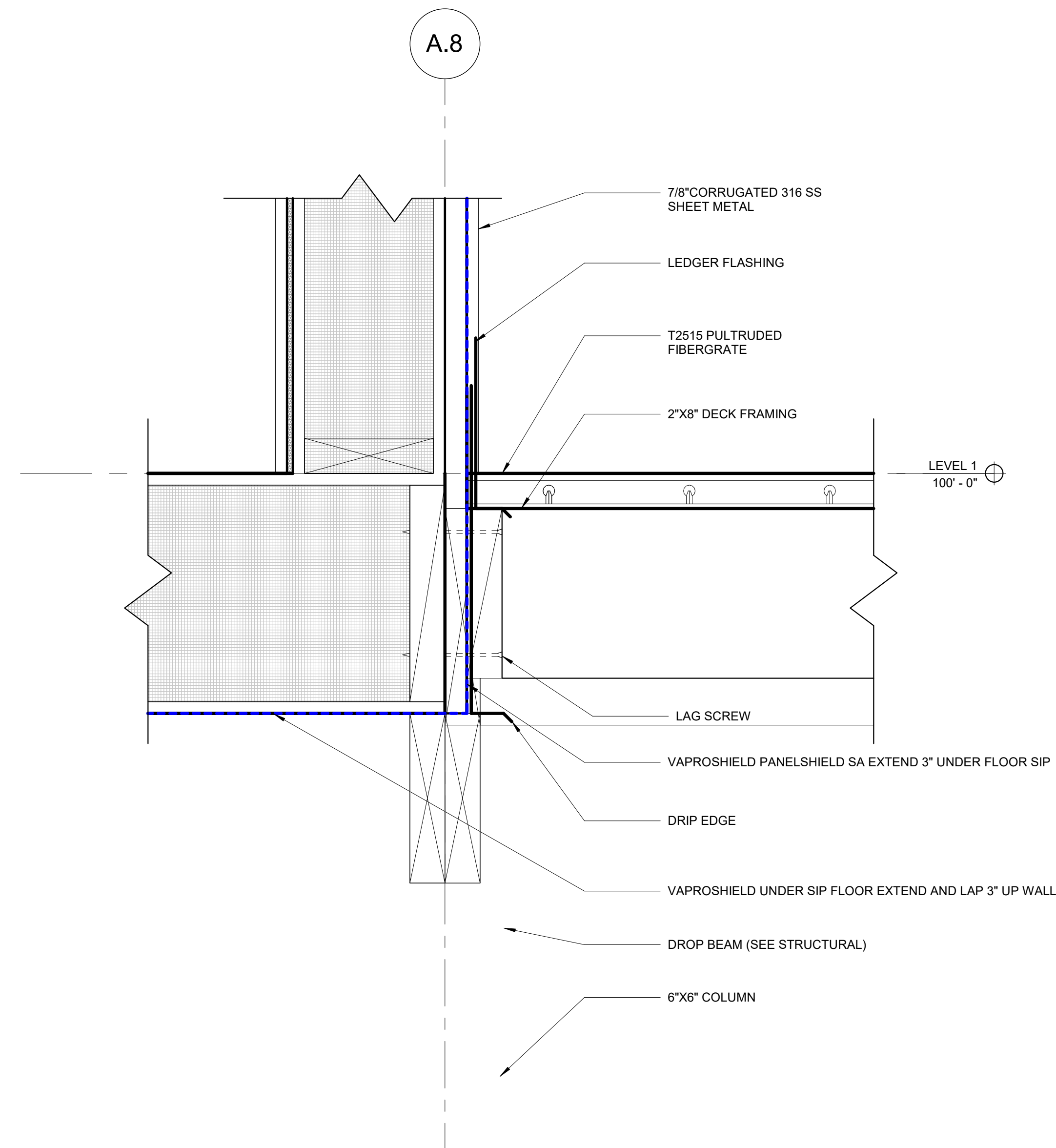
REVISIONS

REV. DATE: REV. NAME: REV. NO:

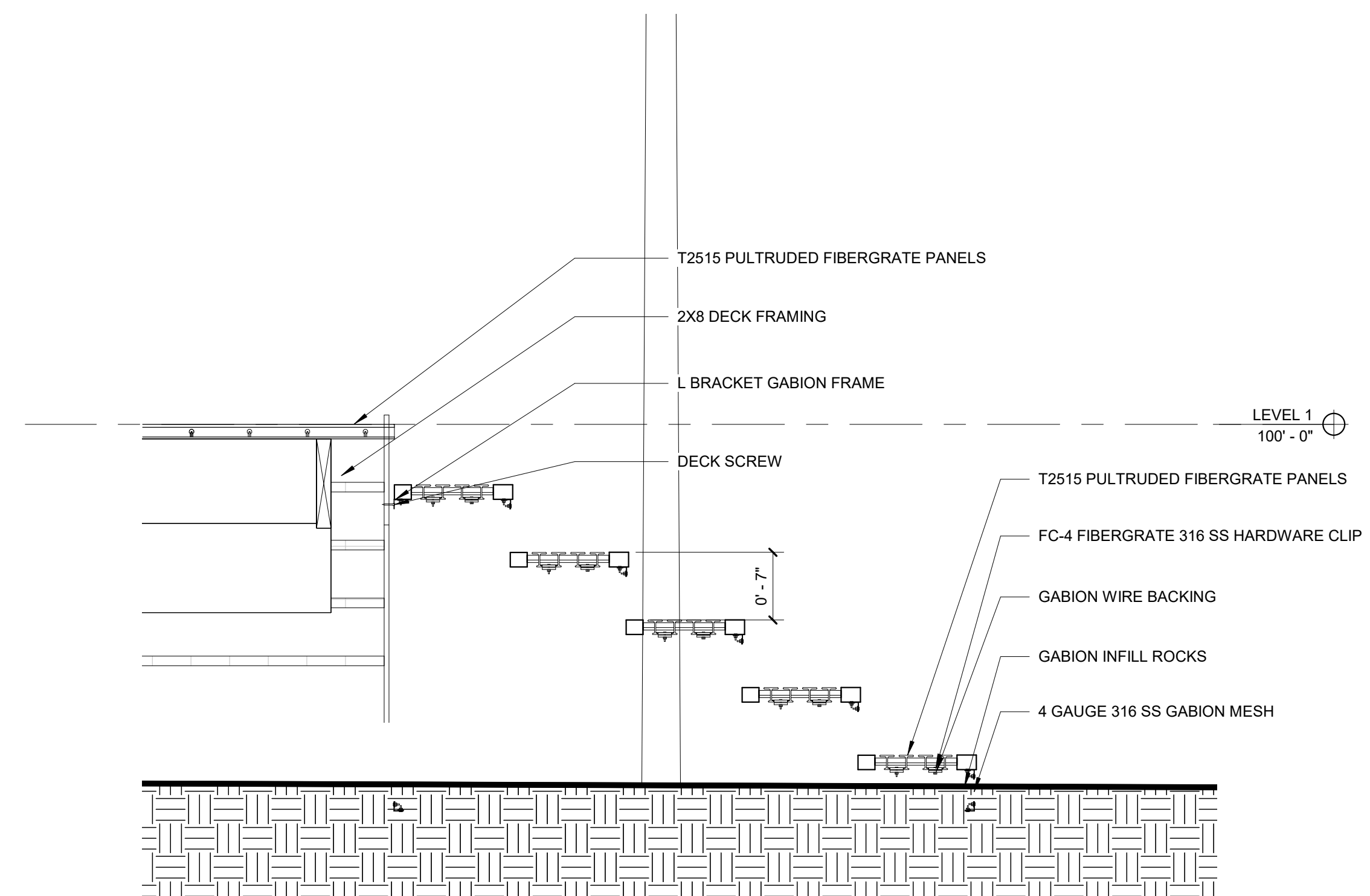
DECKING DETAILS

date: 03/01/22
 scale: As indicated

A-605



1 DECKING TO SIP PANEL
 3\"/>



2 DECKING & GABION CONNECTION SECTION
 1\"/>

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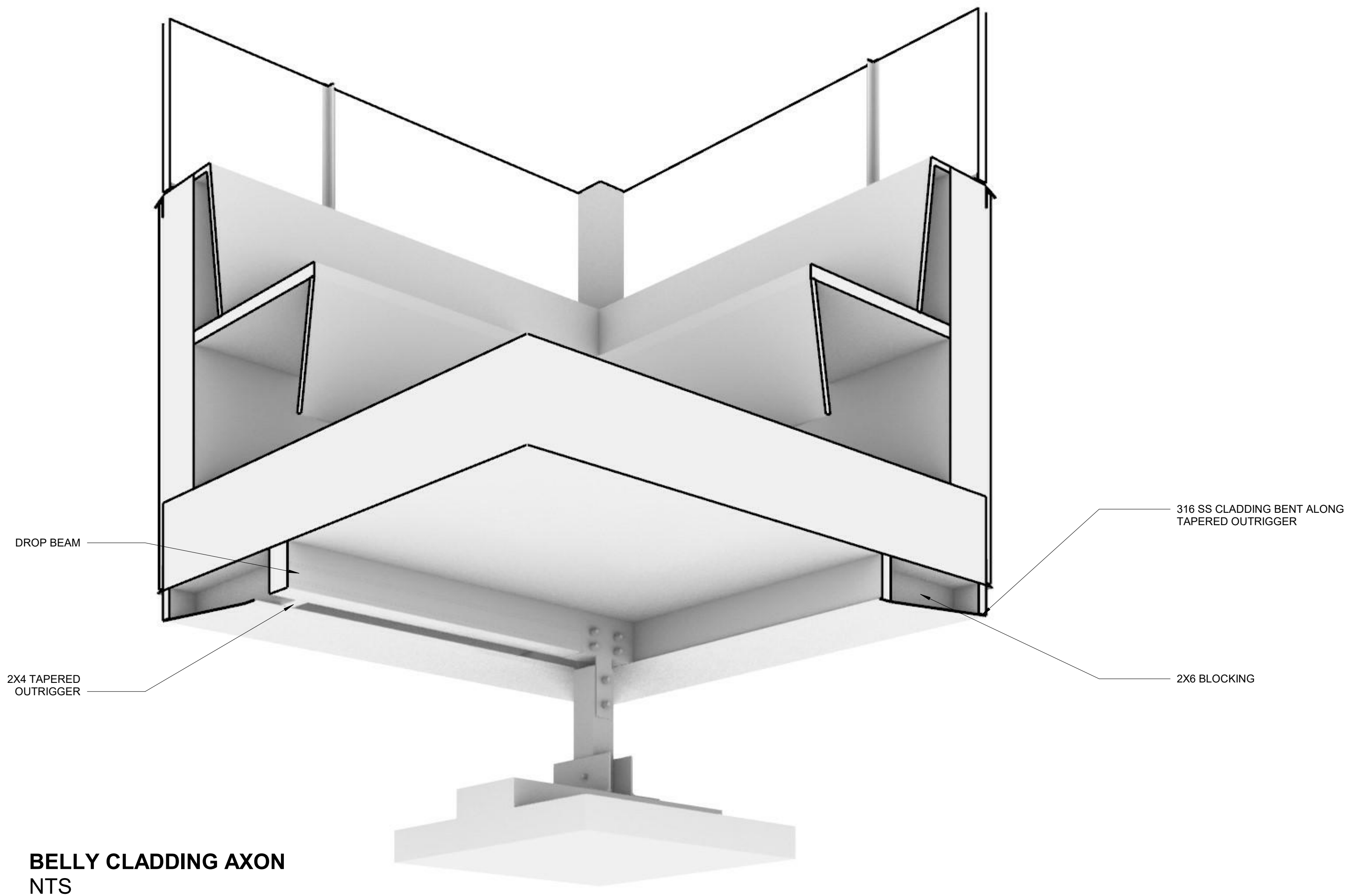
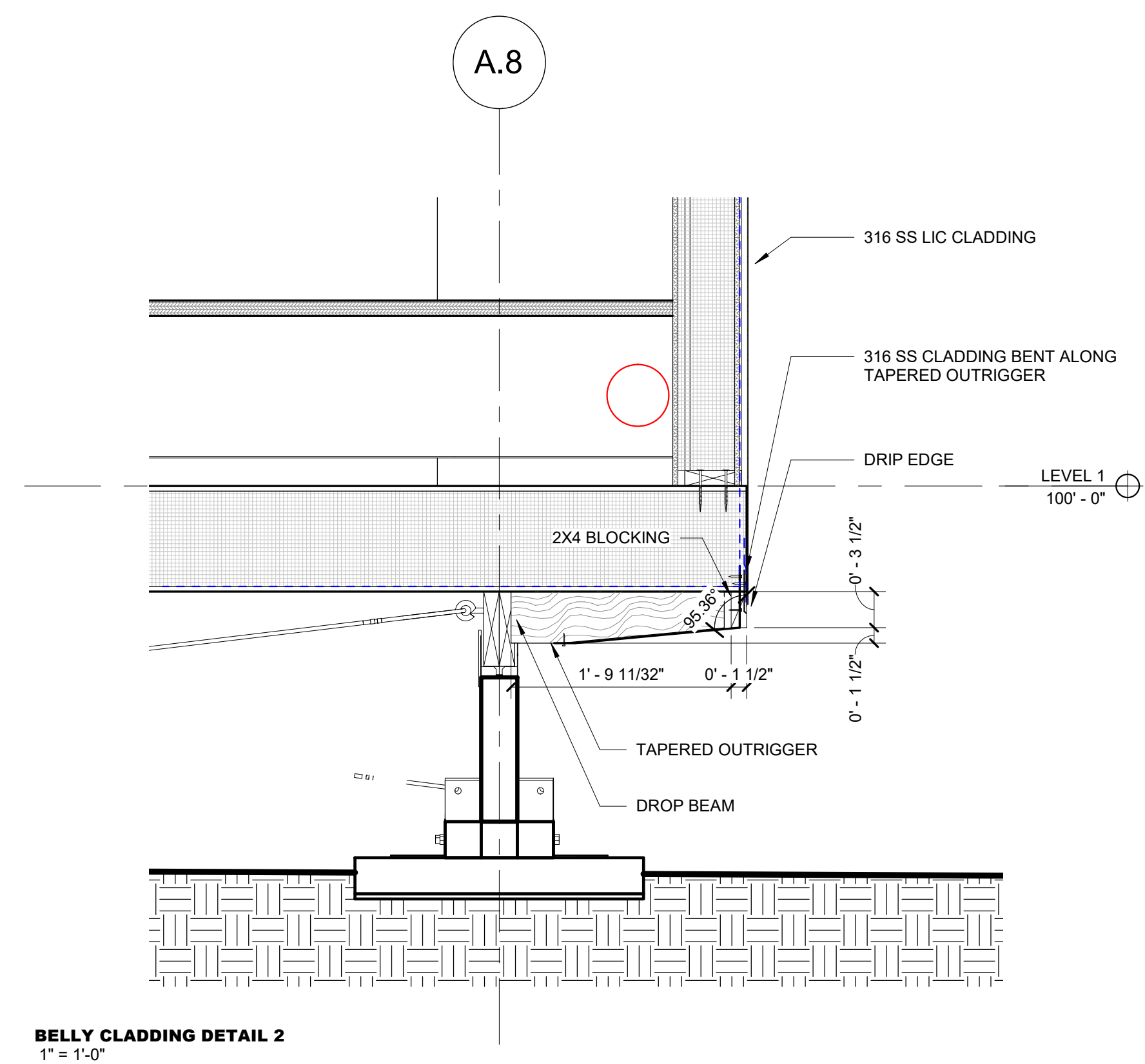
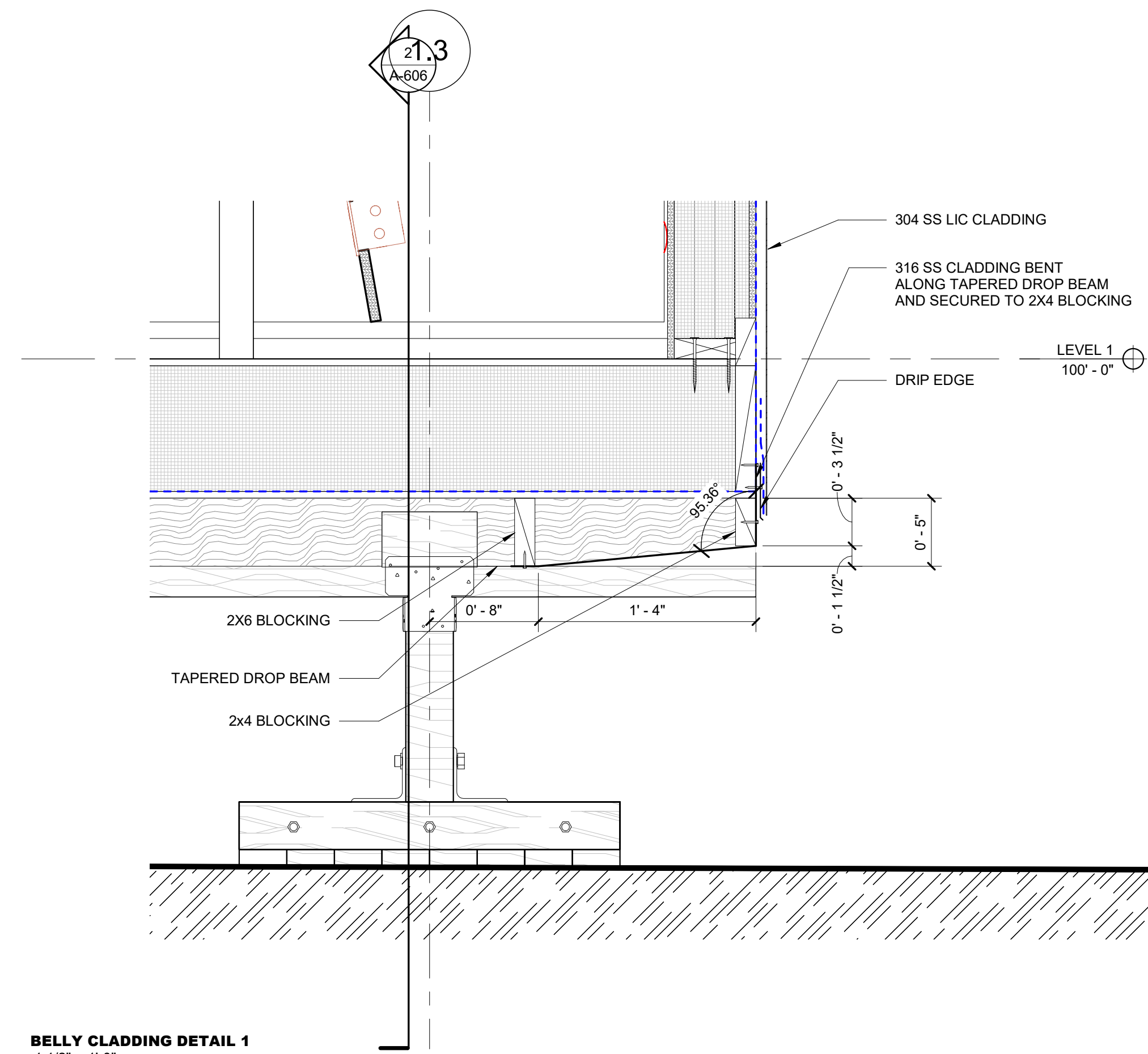
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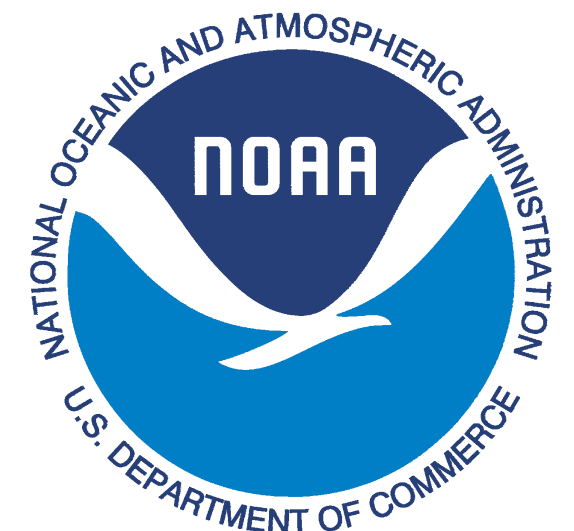
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REV. DATE: REV. NAME: REV. NO:

**BELLY
CLADDING
DETAILS**

date: 04/09/22
scale: As indicated





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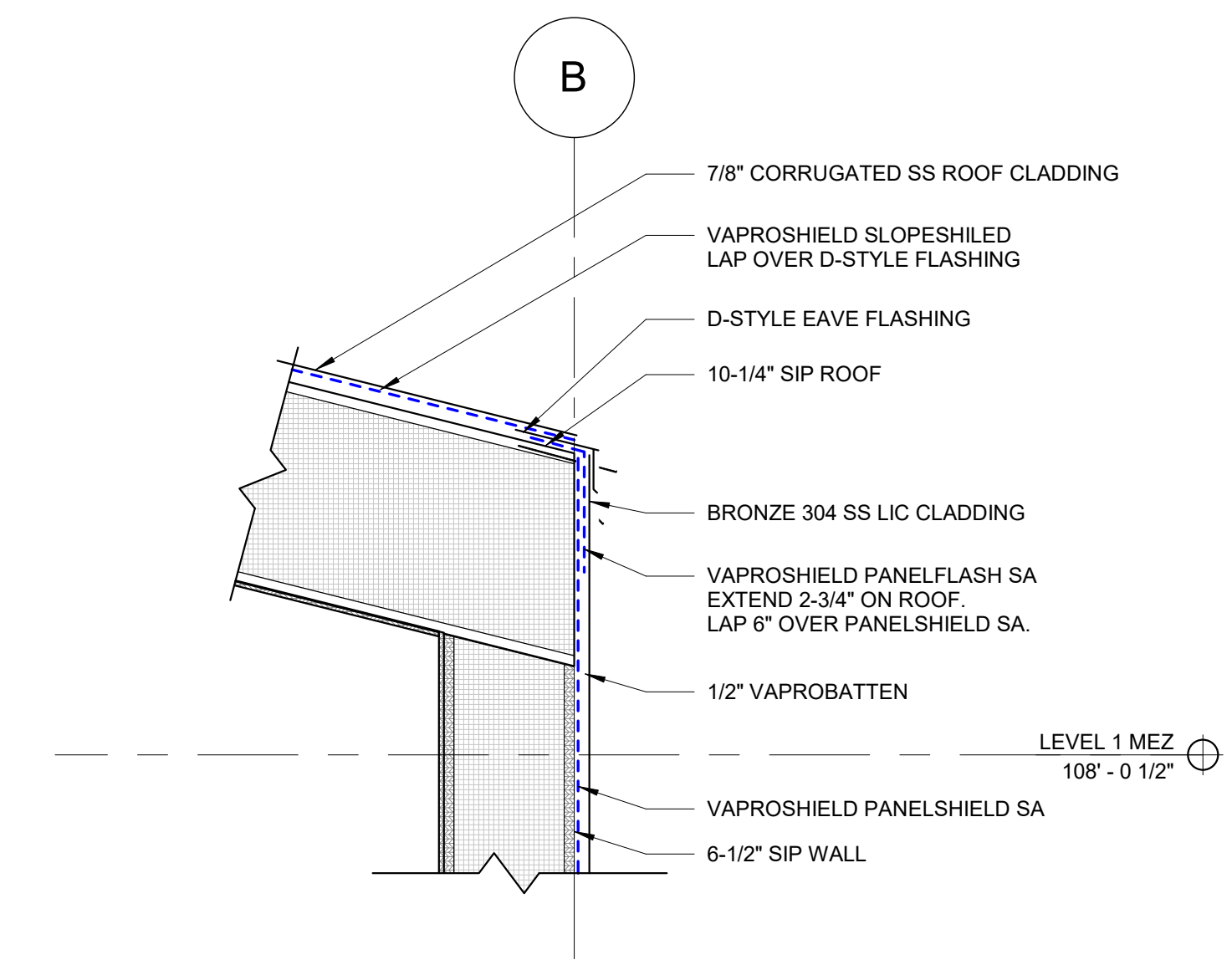


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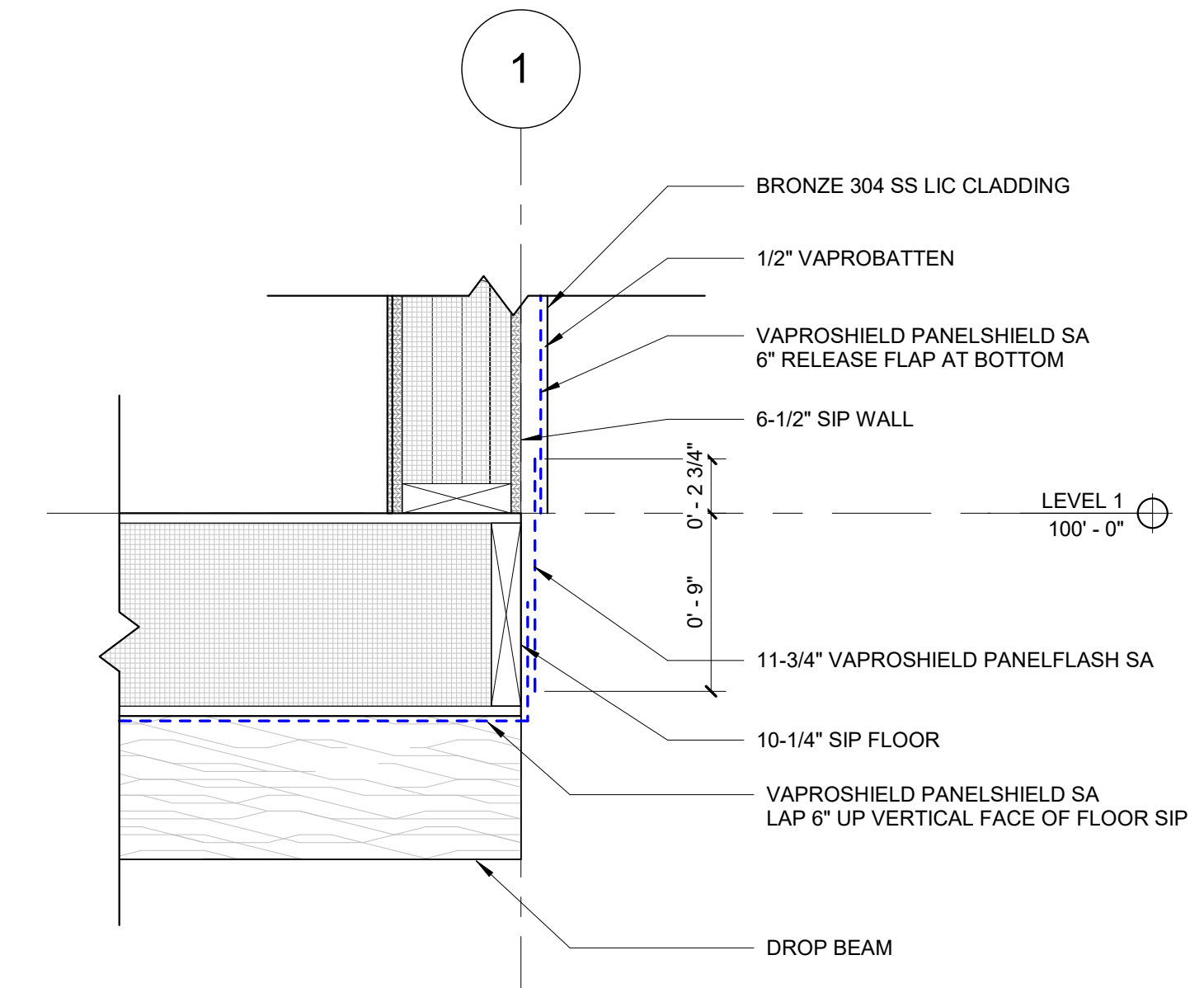
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TYP. ROOF/WALL DETAIL - VAPROSHIELD
 1 1/2" = 1'-0"



TYP. CLADDING WALL TO FLOOR DETAIL - VAPROSHIELD
 1 1/2" = 1'-0"

VAPROSHIELD DETAILS

date: 04/11/22
 scale: 1 1/2" = 1'-0"

A-607

WORKNOTE LEGEND	
WORK NOTE VALUE	WORKNOTE
G1	PROPANE TANK. OFOI
G3	RAINWATER COLLECTION BARREL. OFOI

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
6.11	OSB SHEATHING 1/2" NOMINAL. RE: SIPS DETAILS FOR ADDITIONAL INFORMATION WHERE APPLICABLE.
7.06	CORRUGATED 316 S.S. METAL CLADDING
9.01	INTERIOR SURFACE FINISH. 1/4" BIRCH PLYWOOD TYP.
23.02	MECHANICAL DUCT WORK.
26.00	Division 26 - Electrical



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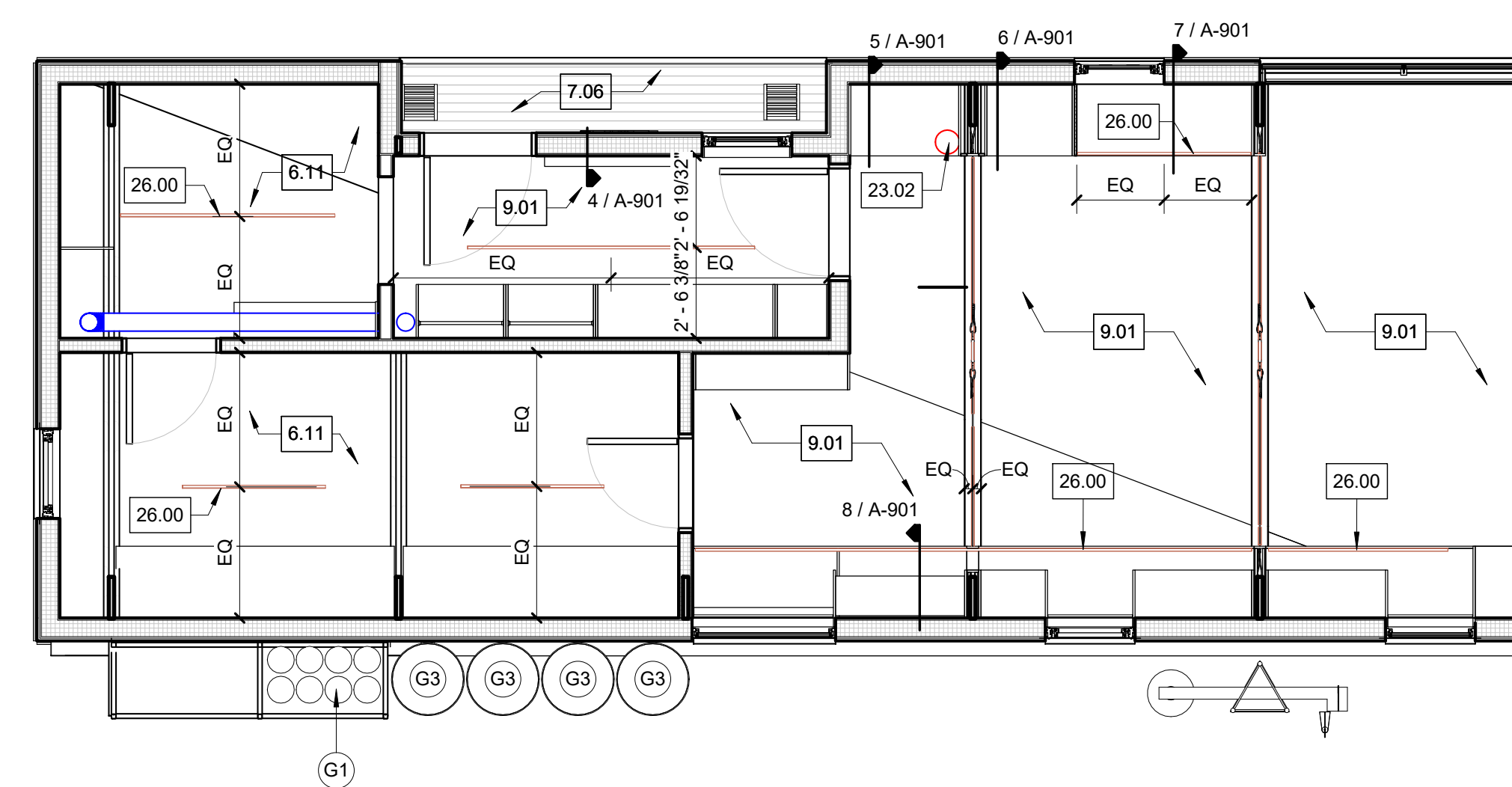
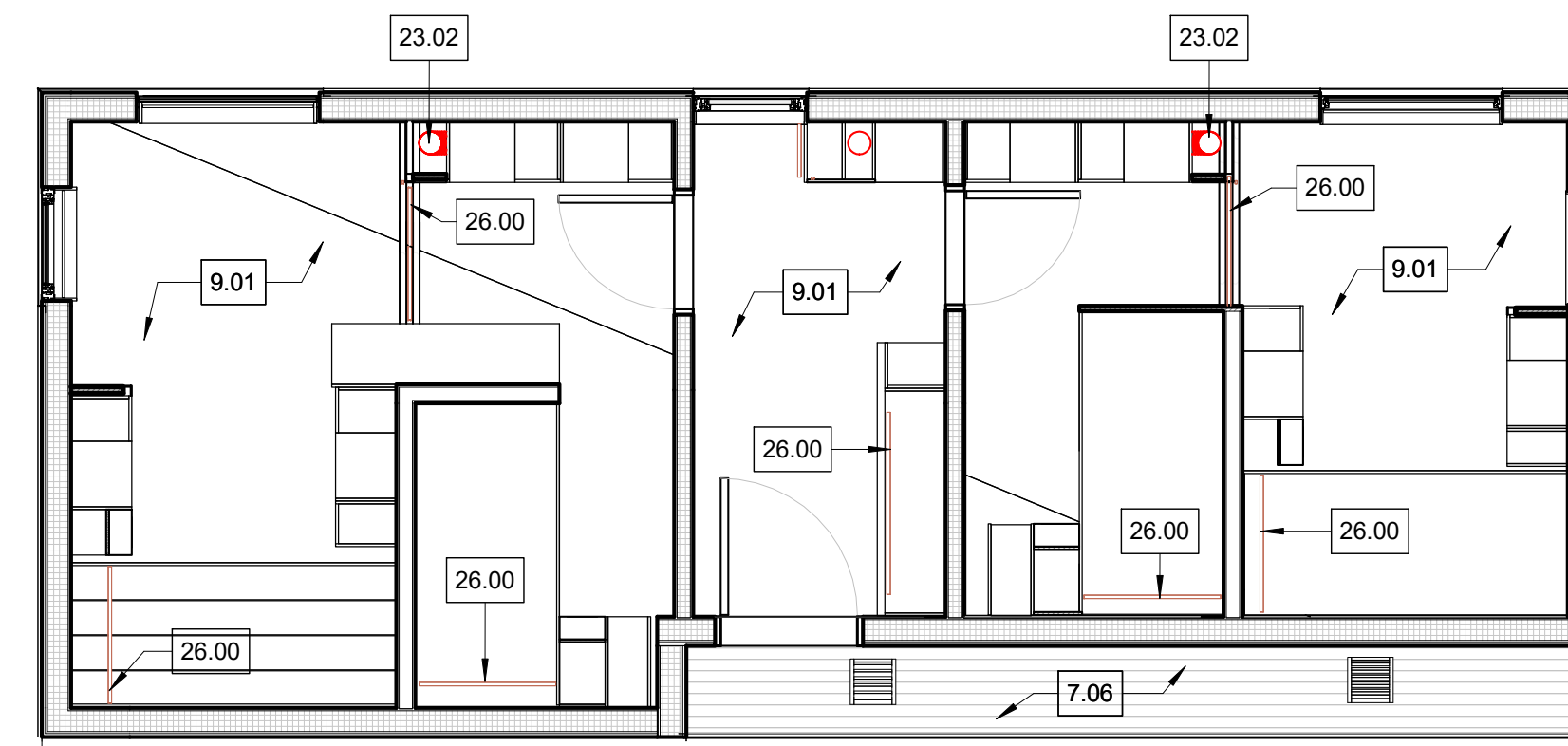
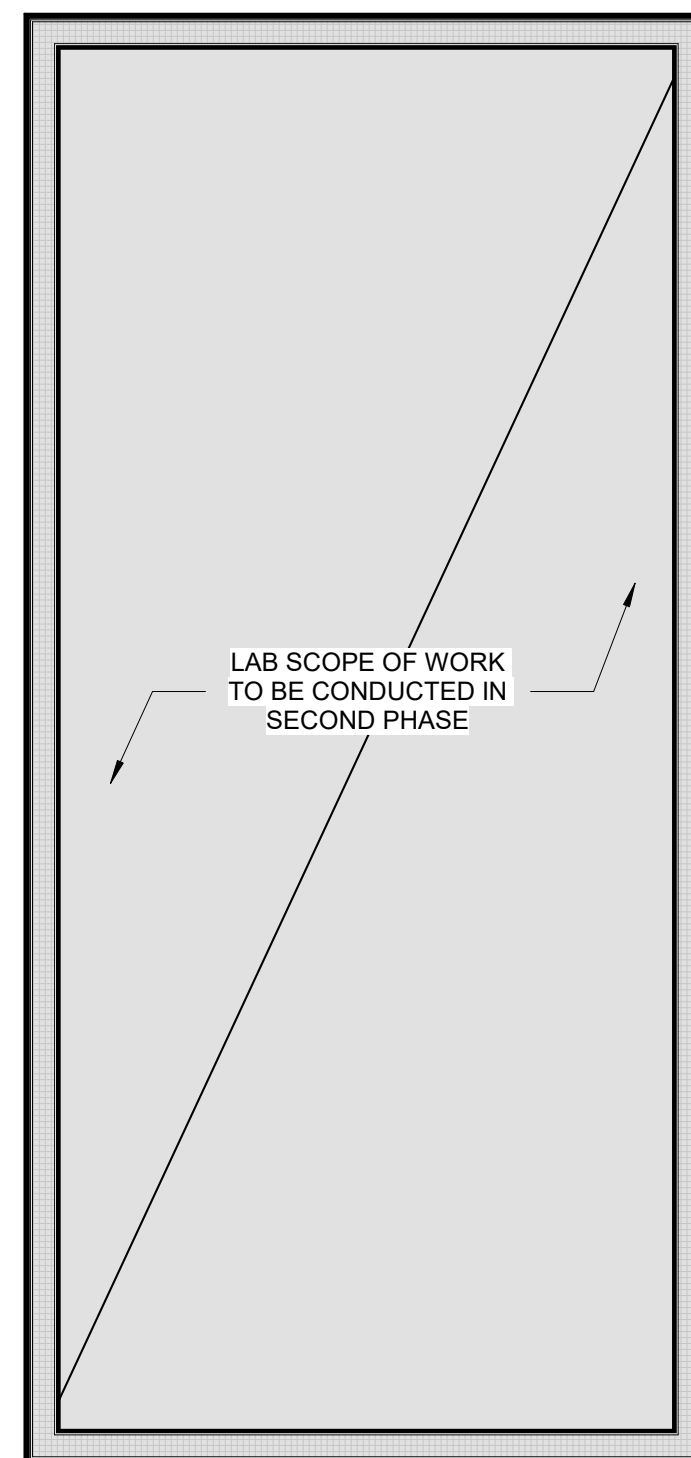


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**REFLECTED
 CEILING PLAN**

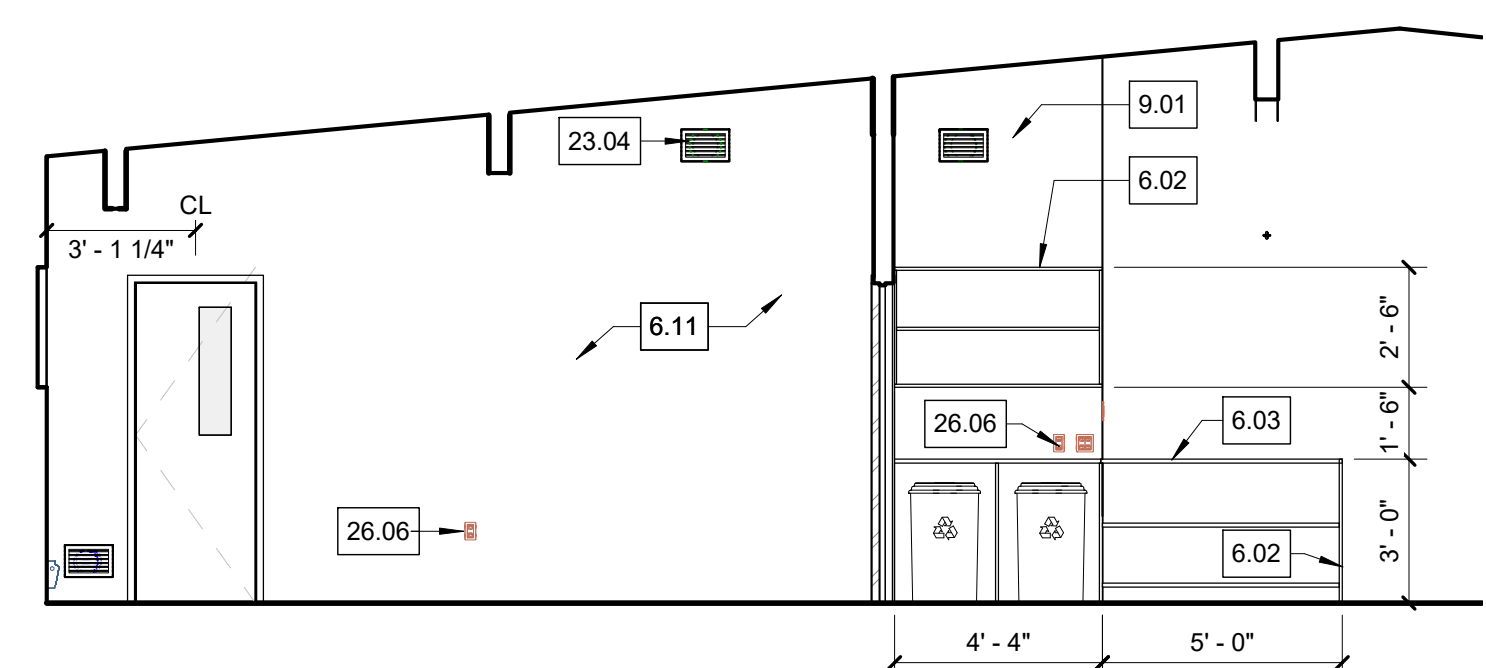
date: 03/01/21
 scale: 1/4" = 1'-0"

A-701

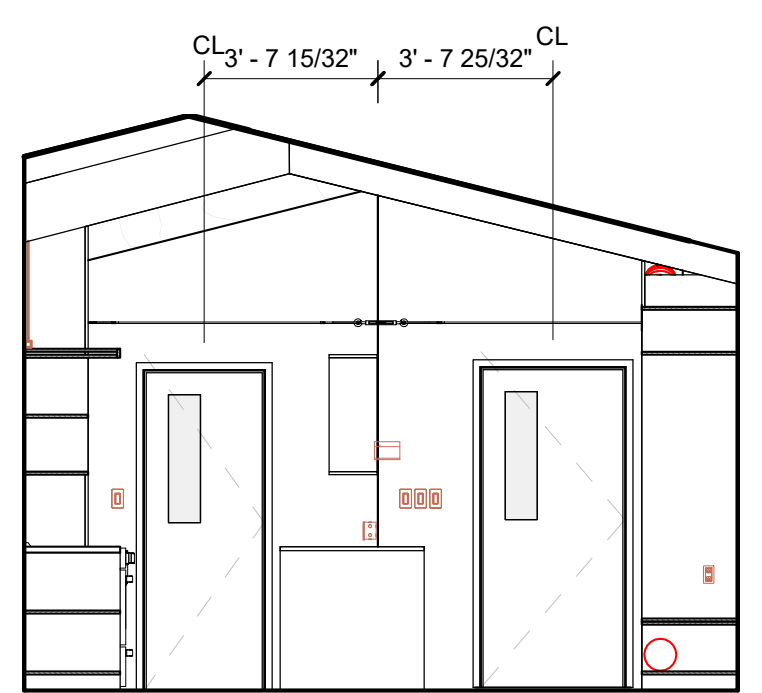
WORKNOTE LEGEND	
WORK NOTE VALUE	WORKNOTE

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT

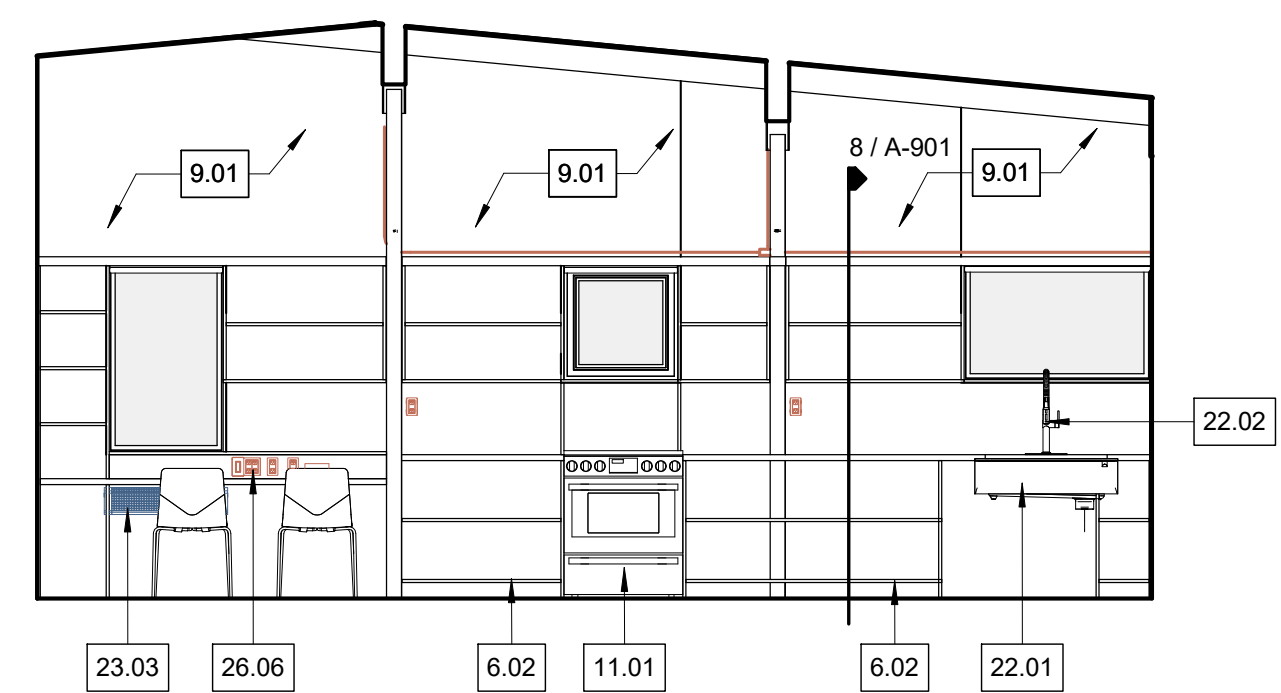
6.02	CUSTOM PLYWOOD SHELVING. RE: INTERIOR ELEVATIONS AND MILLWORK DETAILS FOR ADDITIONAL INFORMATION.
6.03	CUSTOM GLASS FIBER REINFORCED CONCRETE COUNTERTOP.
6.11	OSB SHEATHING 1/2" NOMINAL. RE: SIPS DETAILS FOR ADDITIONAL INFORMATION WHERE APPLICABLE.
6.13	CUSTOM PLYWOOD BENCH. RE: MILLWORK DETAILS FOR EXACT DIMENSIONS.
8.05	FRAMELESS TRIPLE PANE IGU, ADHERE TO METAL WITH STRUCTURAL SILICONE.
9.01	INTERIOR SURFACE FINISH. 1/4" BIRCH PLYWOOD TYP.
11.01	STAINLESS STEEL RANGE. MFR TO BE DETERMINED.
12.04	BLACK-OUT COMMERCIAL ROLLER SHADES. RE: FINISH SCHEDULE FOR COLOR. CONCEAL WITHIN CUSTOM CASEWORK WHERE POSSIBLE.
22.01	KOLHER KITCHEN SINK. CAIRN K-25786
22.02	KOLHER KITCHEN FAUCET. CRUE K-22973-BL
23.02	MECHANICAL DUCT WORK.
23.03	MECHANICAL CONVECTOR
23.04	MECHANICAL LOUVER
26.06	ELECTRICAL FIXTURE RE: ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION.



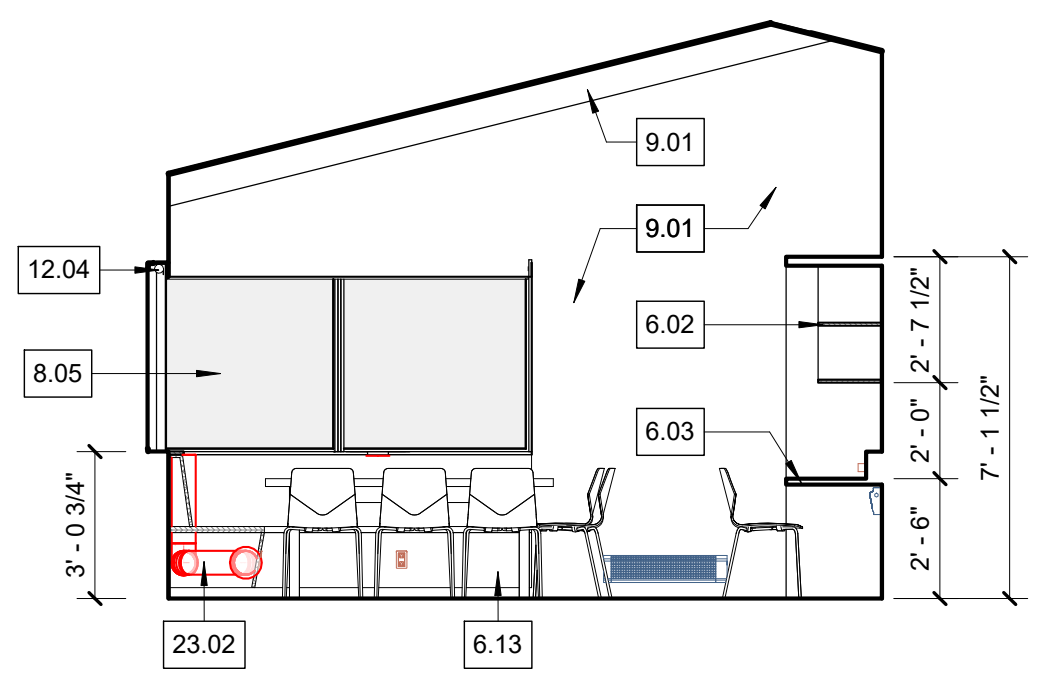
7 DRY GOODS / KITCHEN LOOKING NORTH
1/4" = 1'-0"



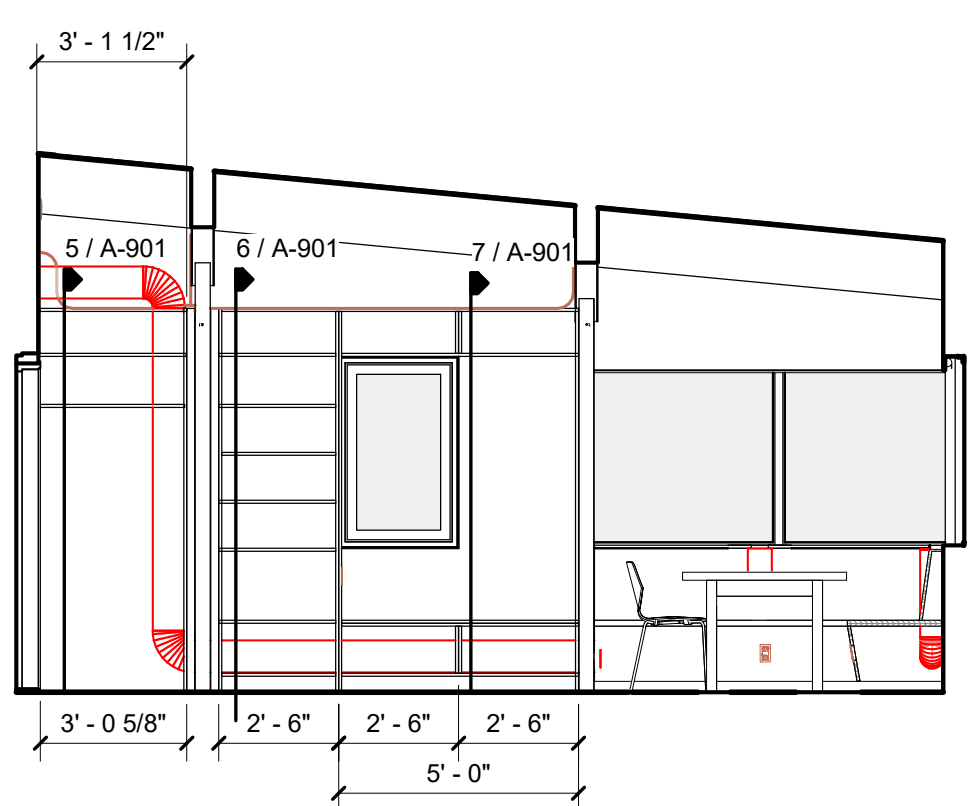
6 GALLEY WEST INT
1/4" = 1'-0"



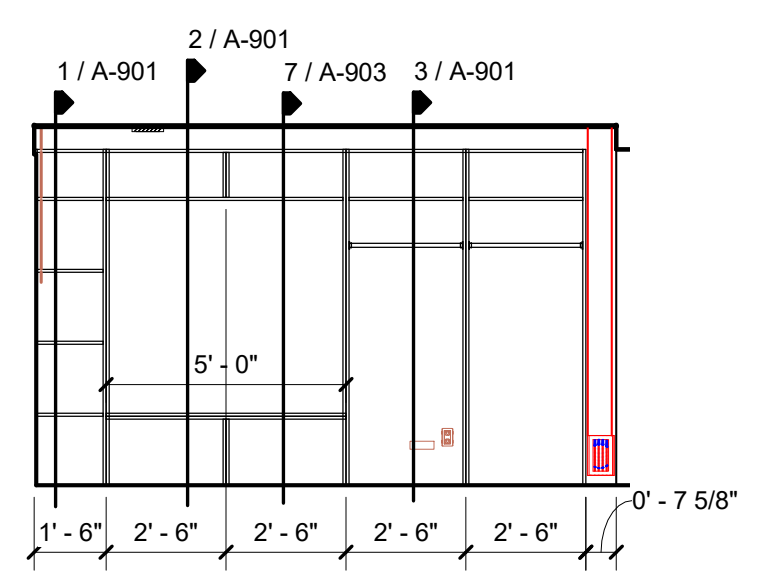
5 GALLEY SOUTH INT
1/4" = 1'-0"



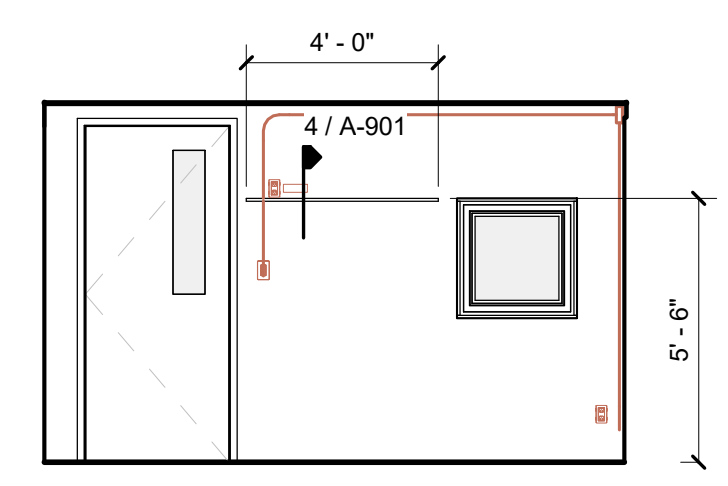
4 GALLEY EAST INT
1/4" = 1'-0"



3 GALLEY NORTH INT
1/4" = 1'-0"



2 MUD SOUTH
1/4" = 1'-0"



1 MUD NORTH
1/4" = 1'-0"



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INTERIOR ELEVATIONS GALLEY

date: 03/01/21
scale: 1/4" = 1'-0"

A-801

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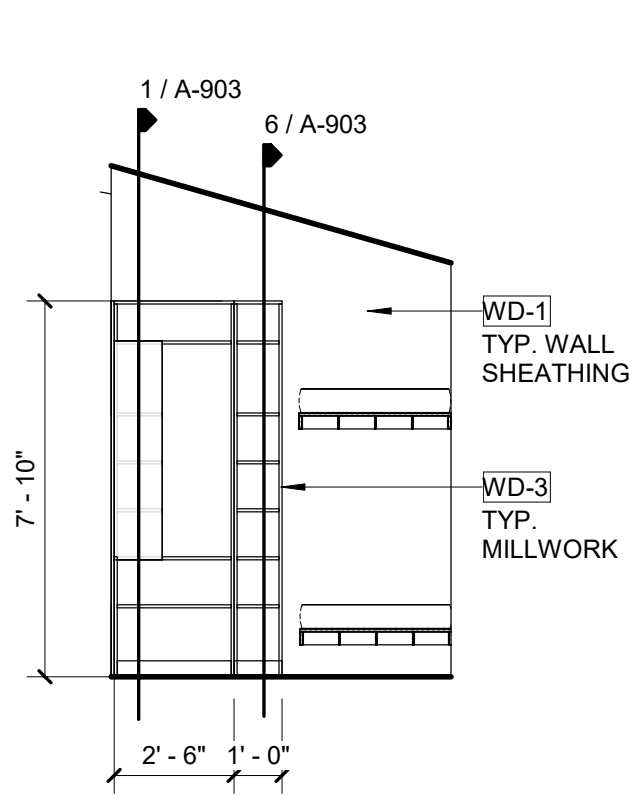
REVISIONS

REV. DATE:	REV. NAME:	REV. NO.:

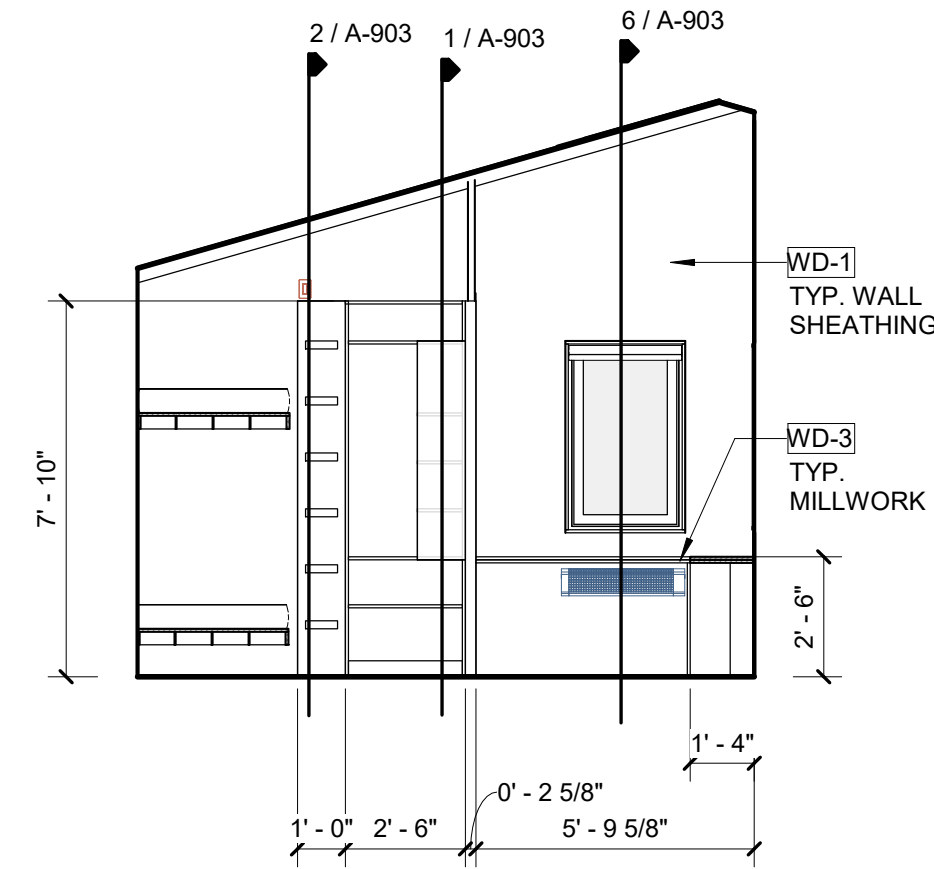
INTERIOR ELEVATIONS BERTHING

date: 02/12/22
scale: 1/4" = 1'-0"

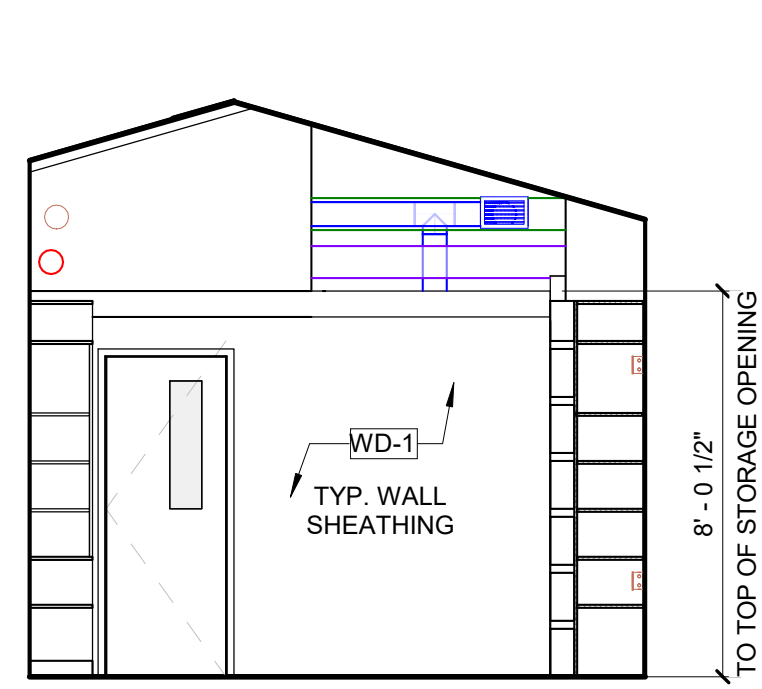
A-802



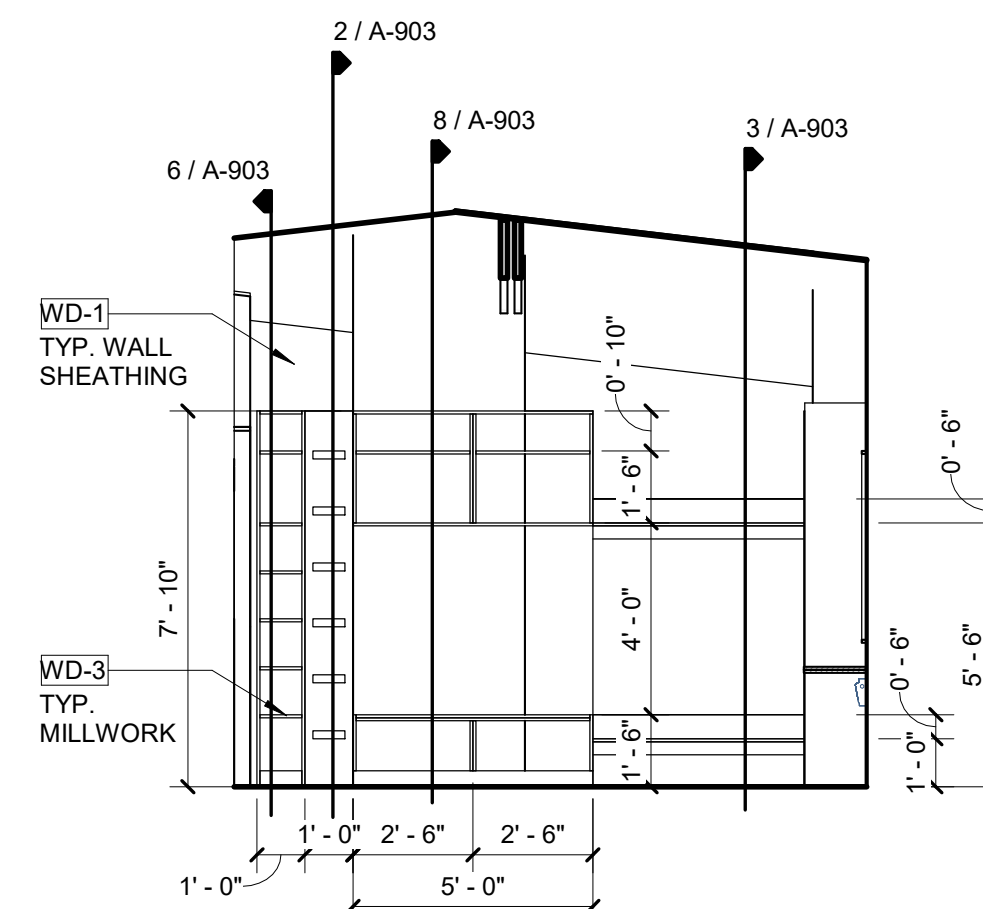
5 ELEVATION AT JR STAFF ROTATED LOCKERS
1/4" = 1'-0"



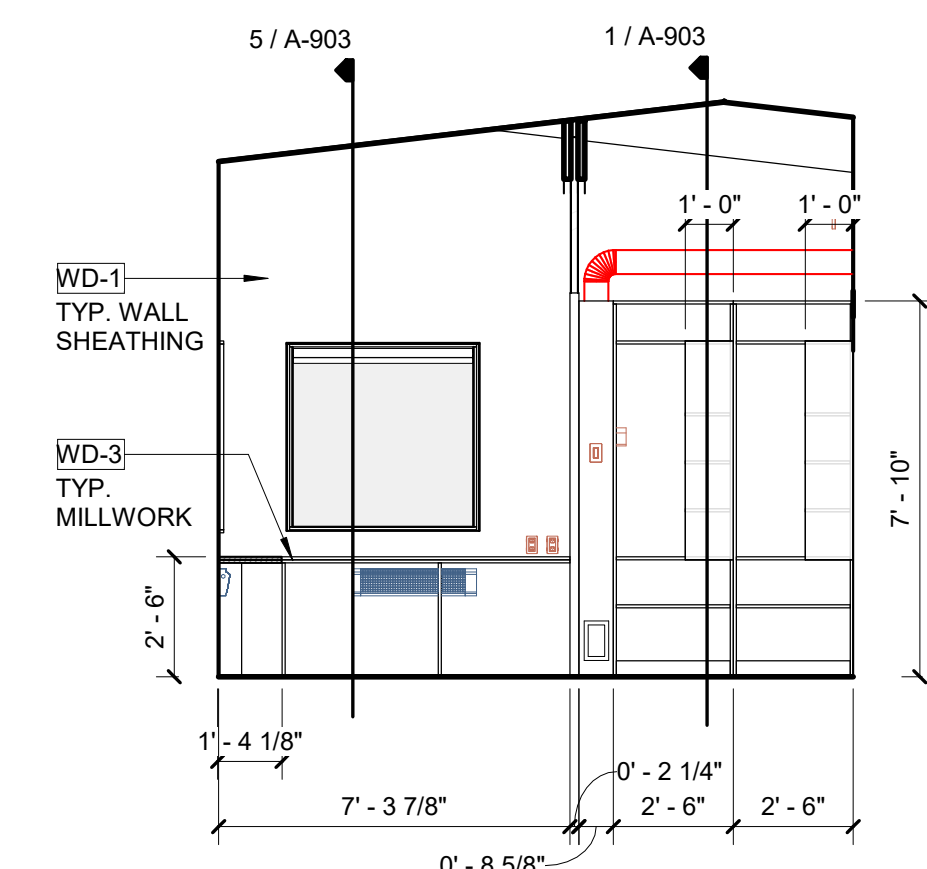
4 ELEVATION AT JR STAFF WEST
1/4" = 1'-0"



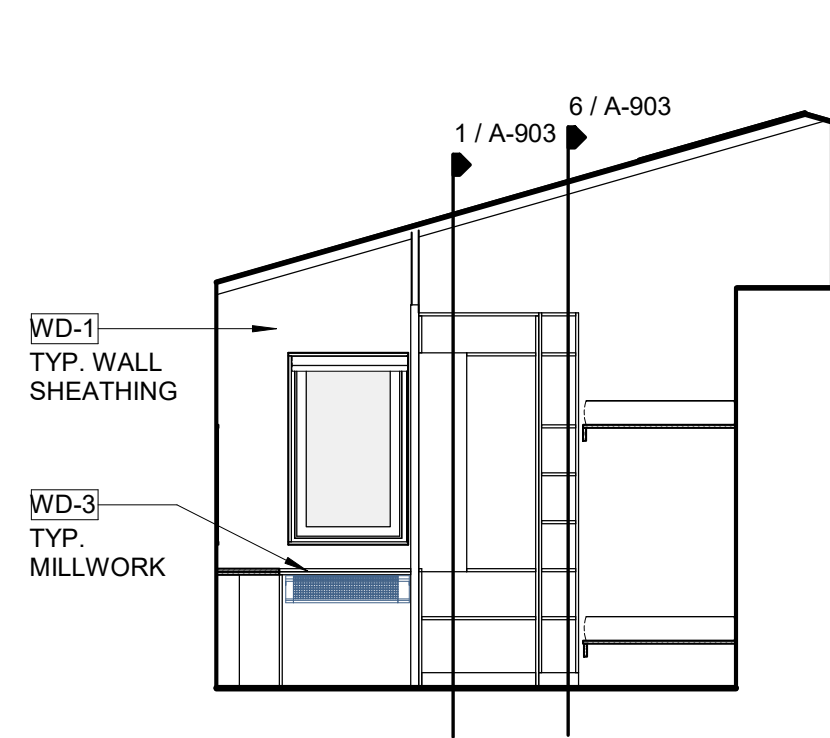
3 ELEVATION AT JR STAFF EAST
1/4" = 1'-0"



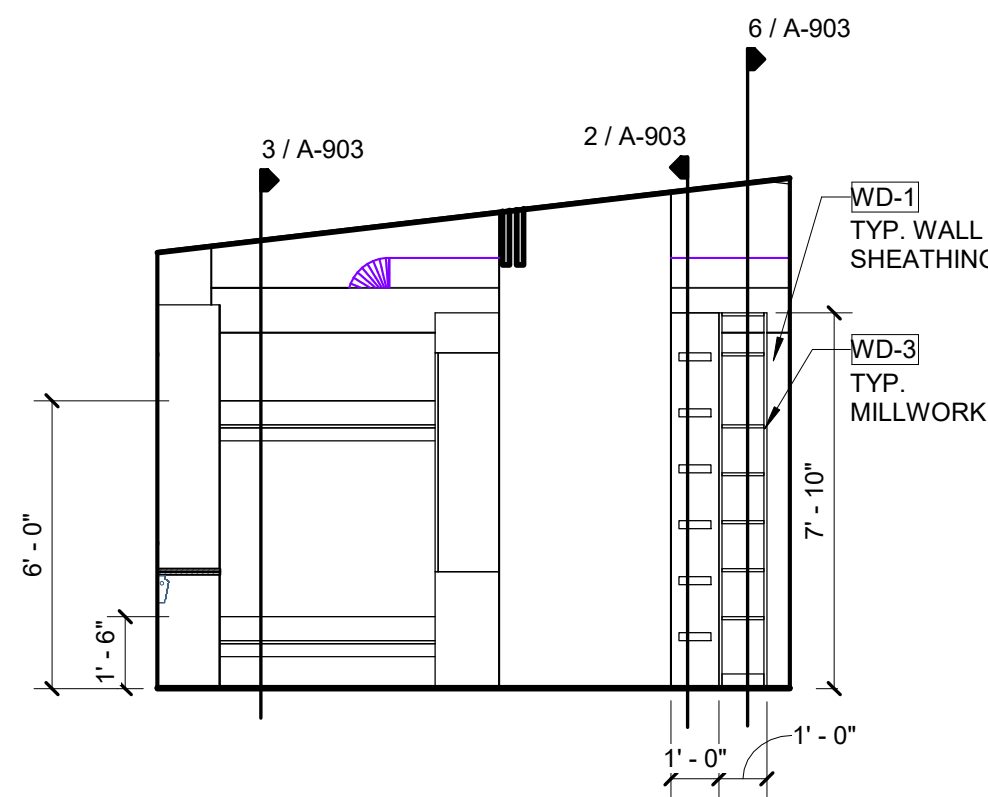
2 ELEVATION AT JR STAFF SOUTH
1/4" = 1'-0"



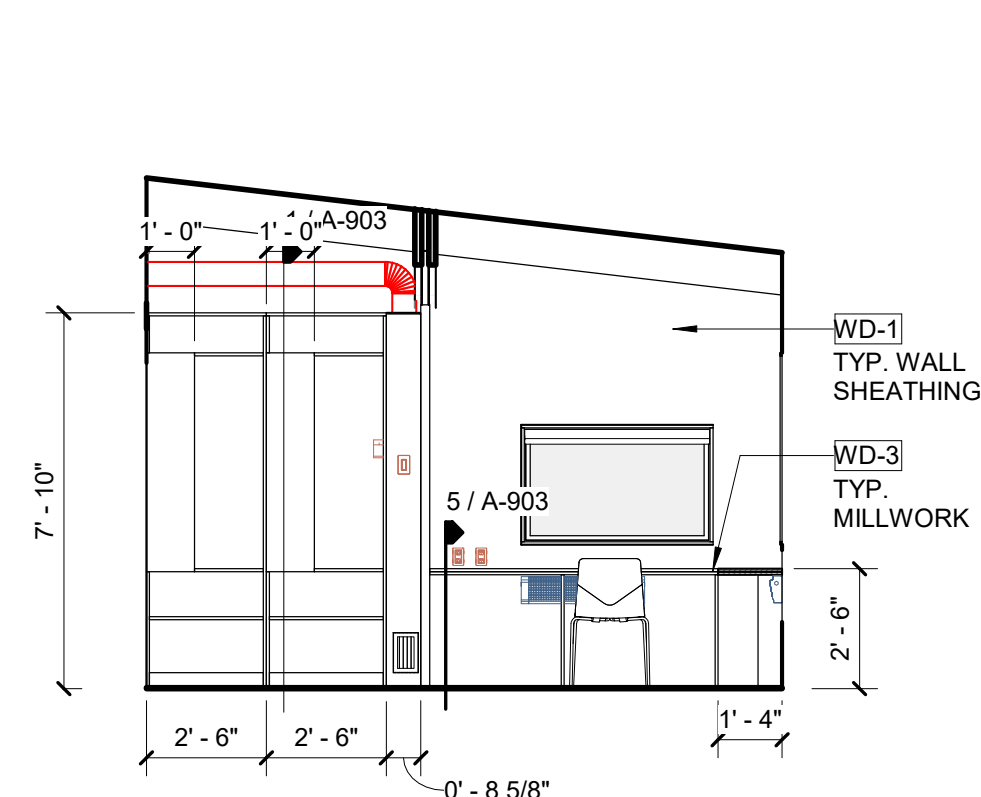
1 ELEVATION AT JR STAFF NORTH
1/4" = 1'-0"



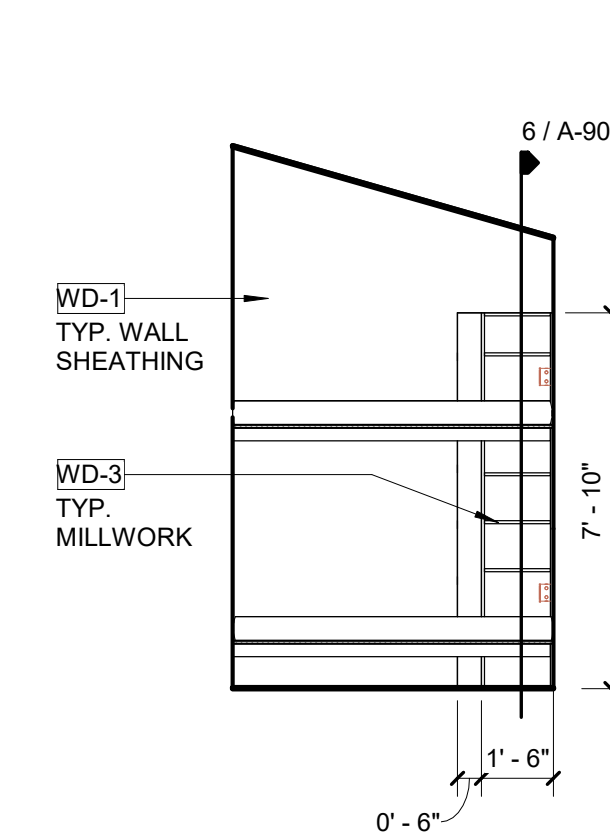
10 ELEVATION AT SR STAFF EAST
1/4" = 1'-0"



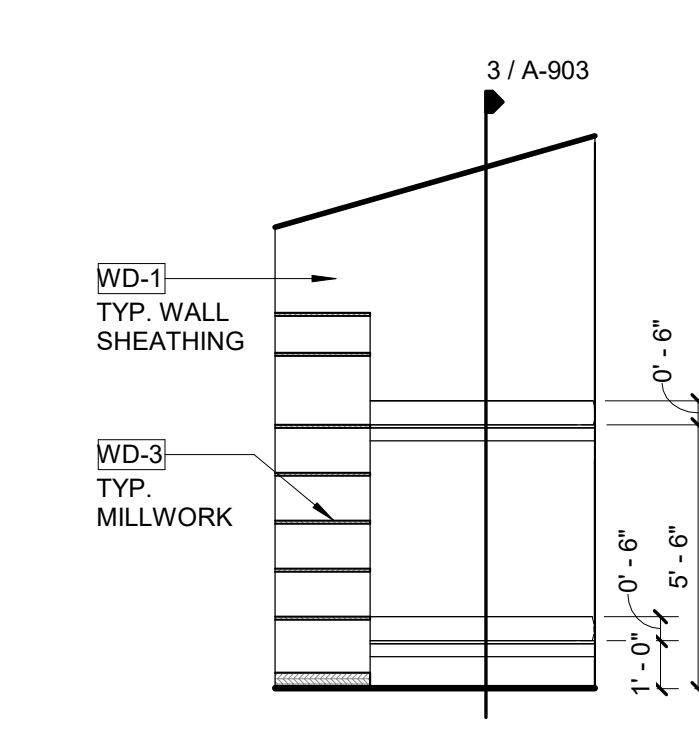
9 ELEVATION AT SR STAFF SOUTH
1/4" = 1'-0"



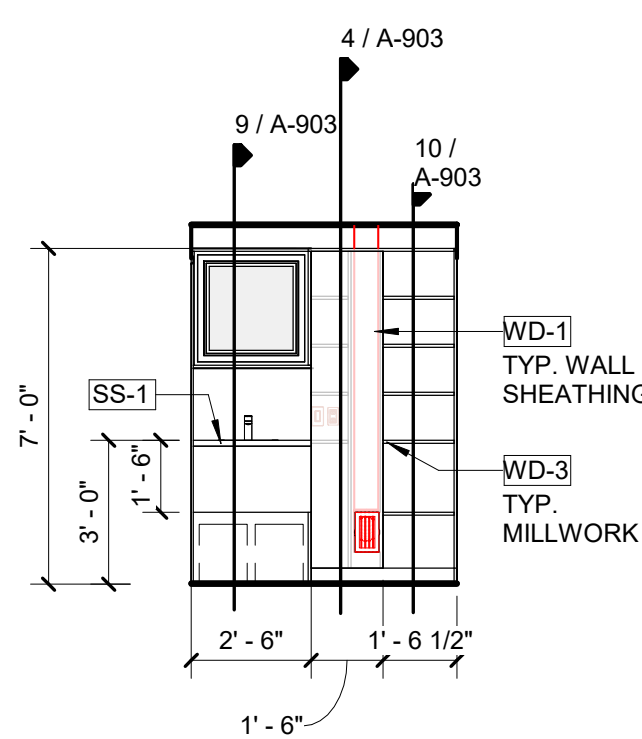
8 ELEVATION AT SR STAFF NORTH
1/4" = 1'-0"



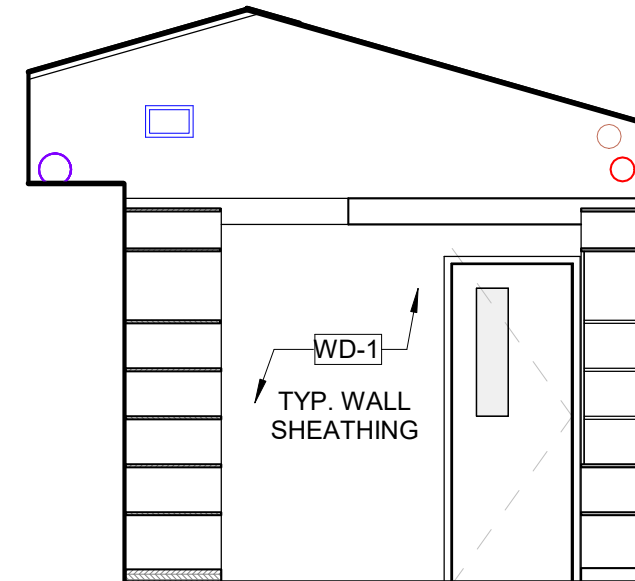
7 ELEVATION AT JR STAFF SIDE BUNK STORAGE 1
1/4" = 1'-0"



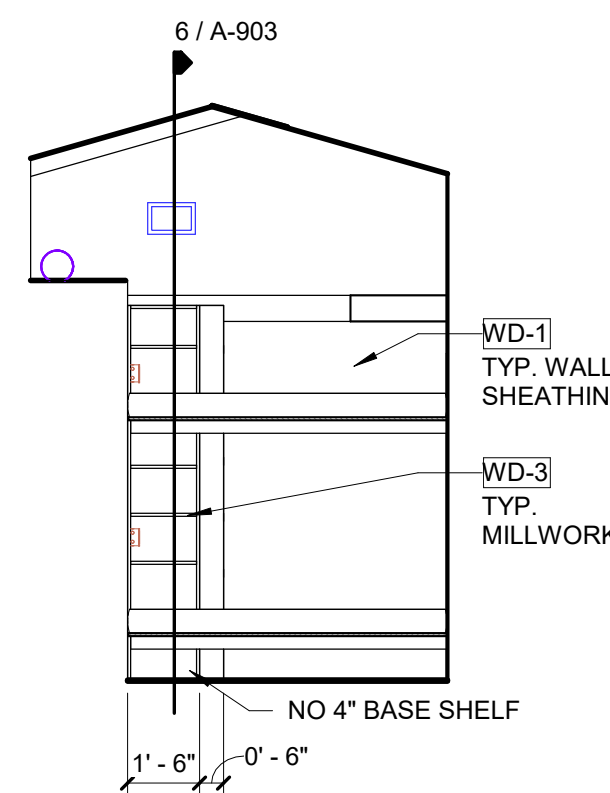
6 ELEVATION AT JR STAFF BUNK STORAGE
1/4" = 1'-0"



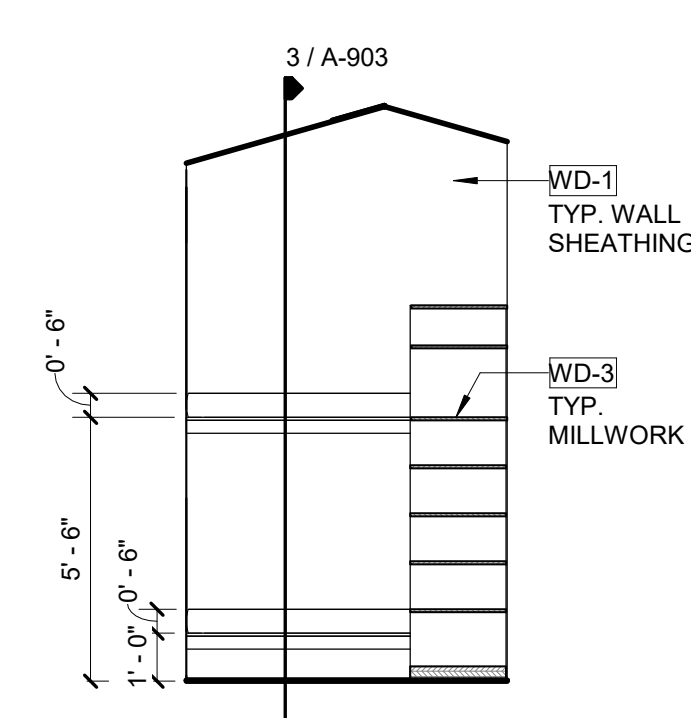
15 ELEVATION AT MUD ROOM NORTH
1/4" = 1'-0"



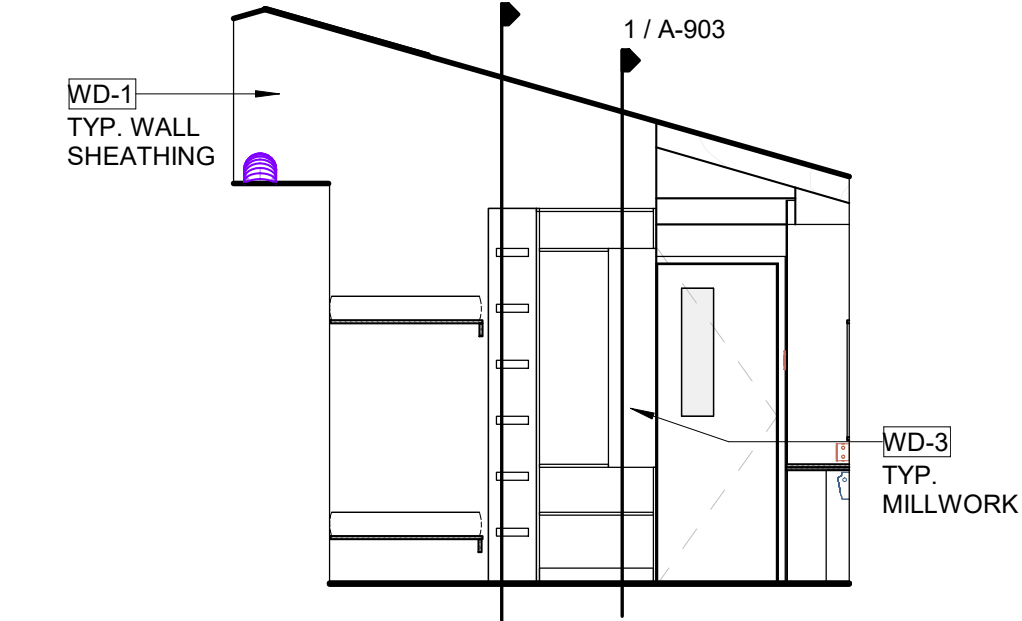
14 ELEVATION AT SR STAFF WEST
1/4" = 1'-0"



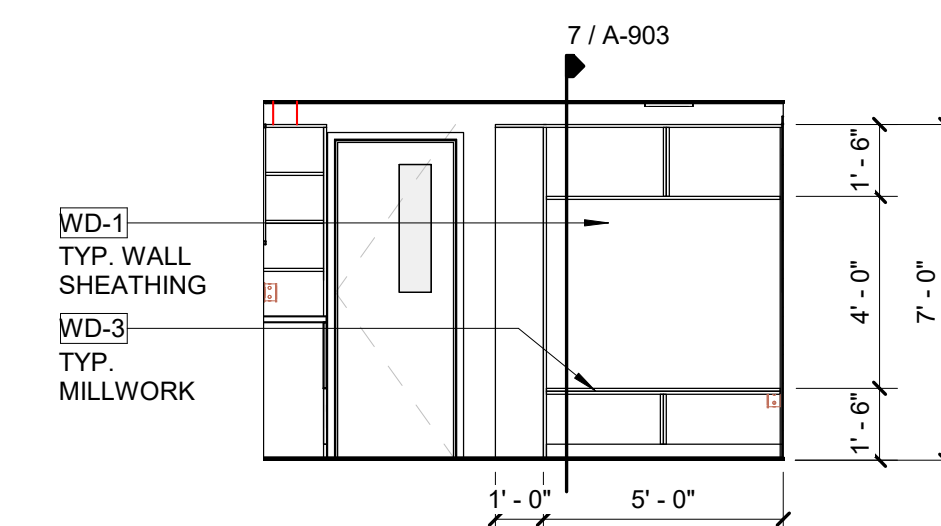
13 ELEVATION AT SR SIDE BUNK STORAGE
1/4" = 1'-0"



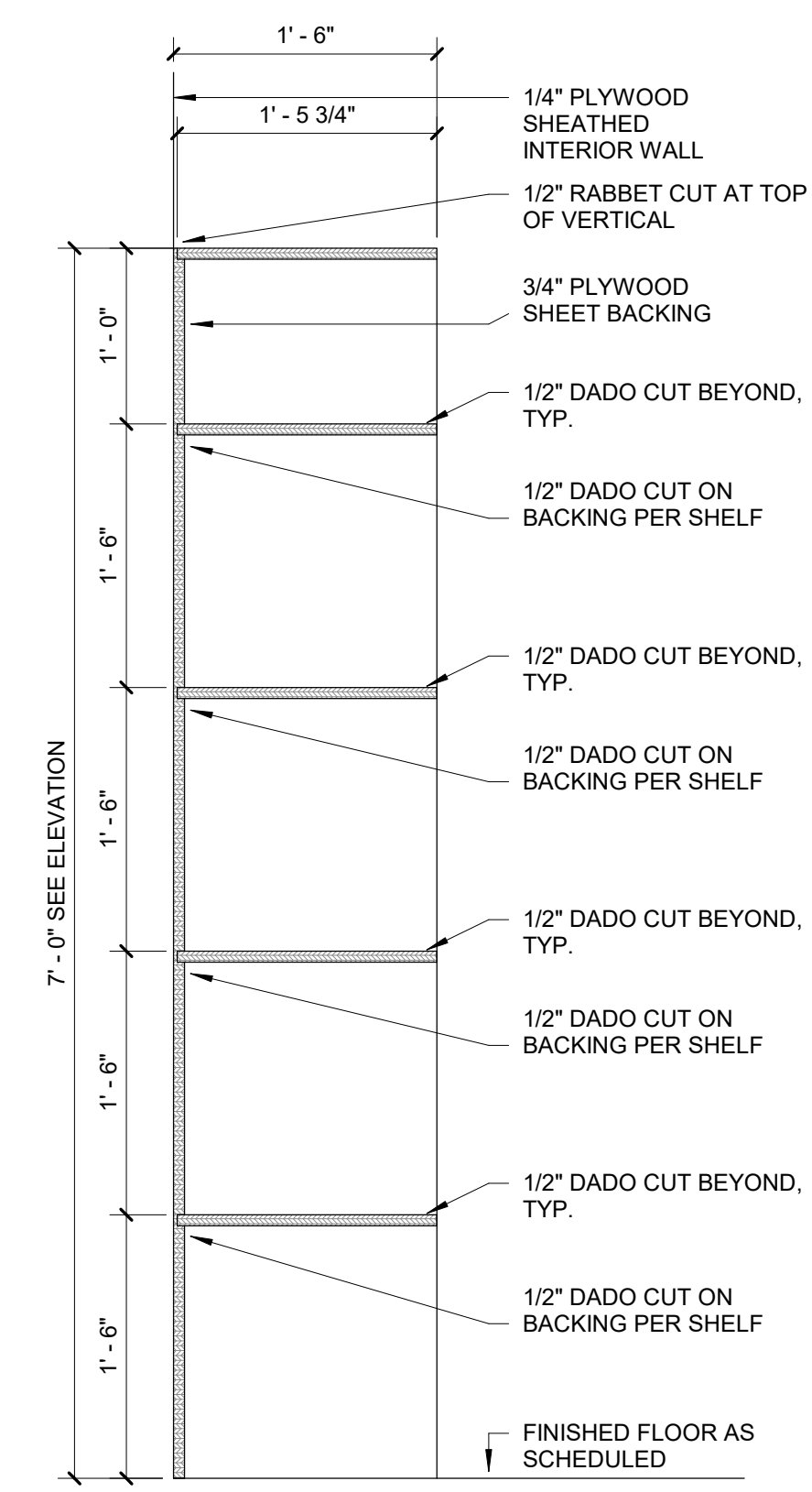
12 ELEVATION AT SR BUNK STORAGE
1/4" = 1'-0"



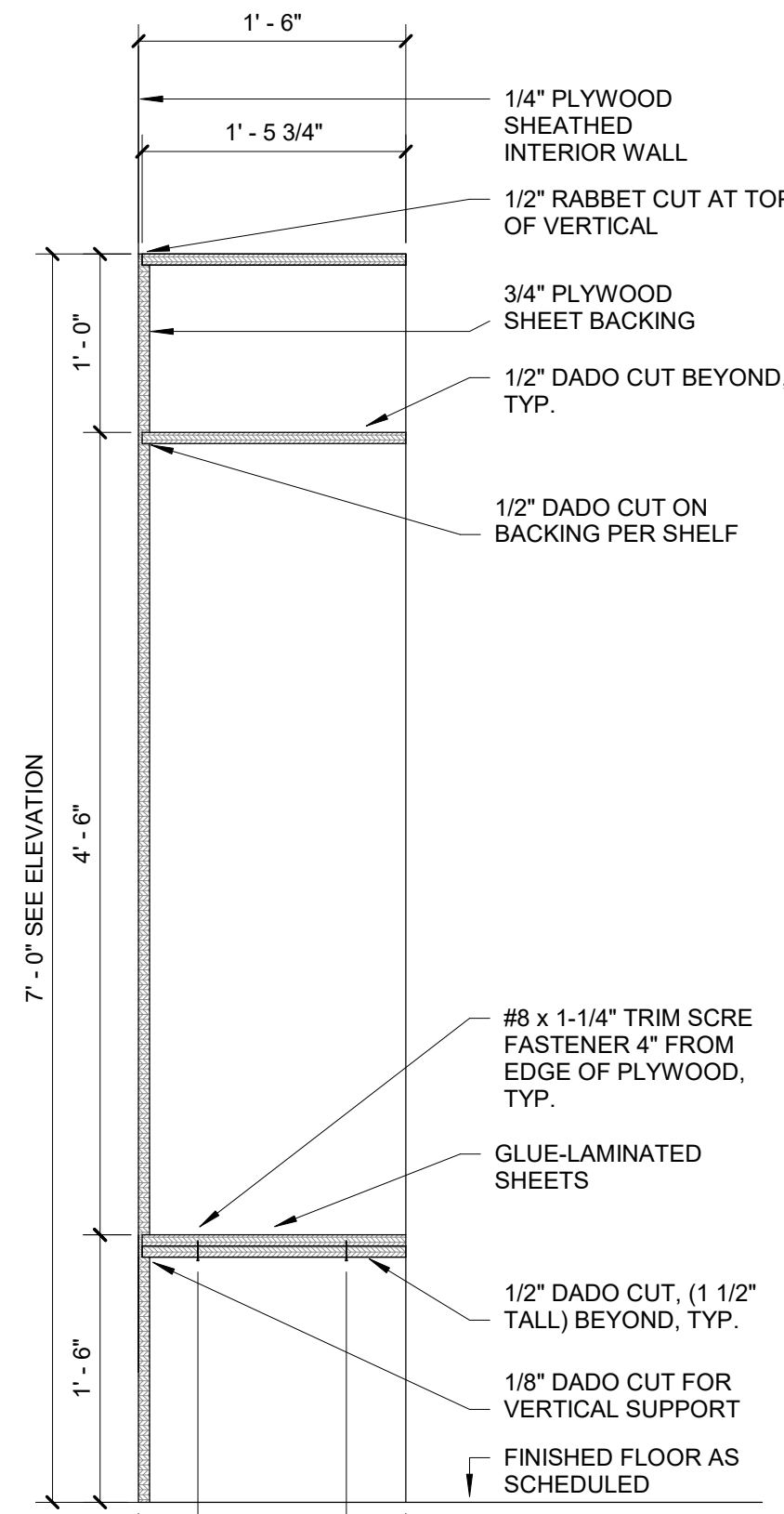
11 ELEVATION AT SR STAFF ROTATED LOCKERS
1/4" = 1'-0"



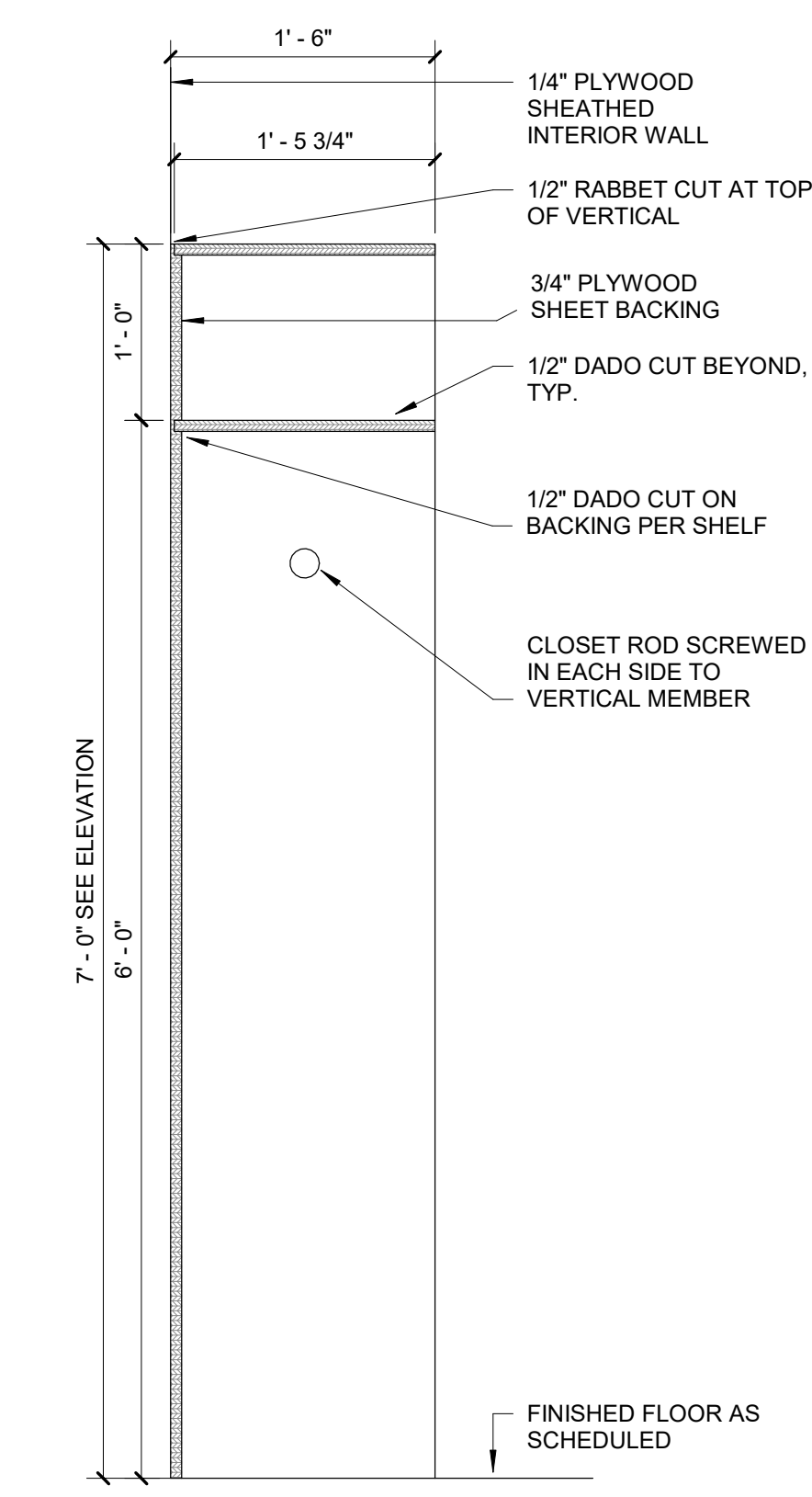
16 ELEVATION AT MUD ROOM EAST
1/4" = 1'-0"



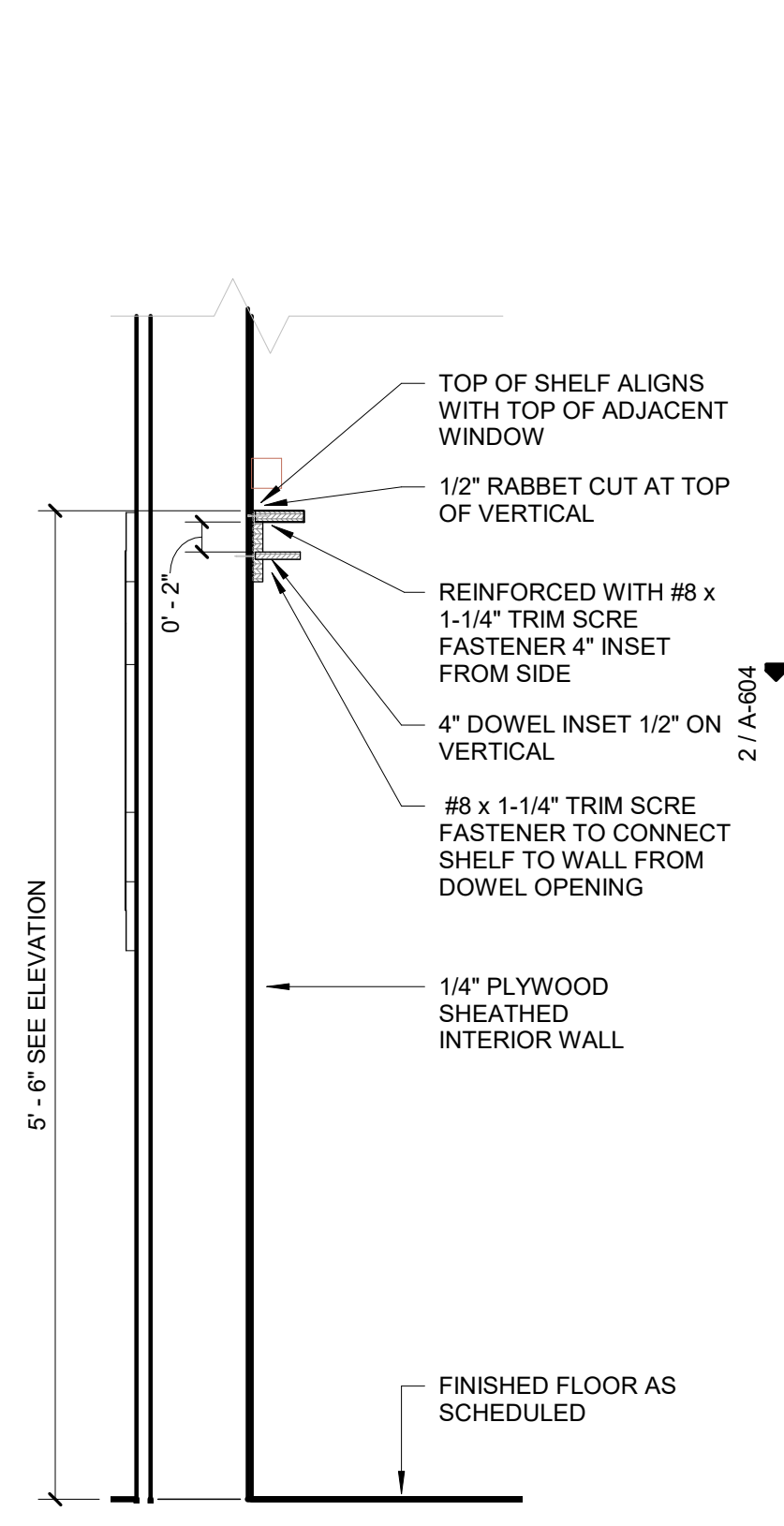
1 SECTION AT MUDROOM EAST BAY
1" = 1'-0"



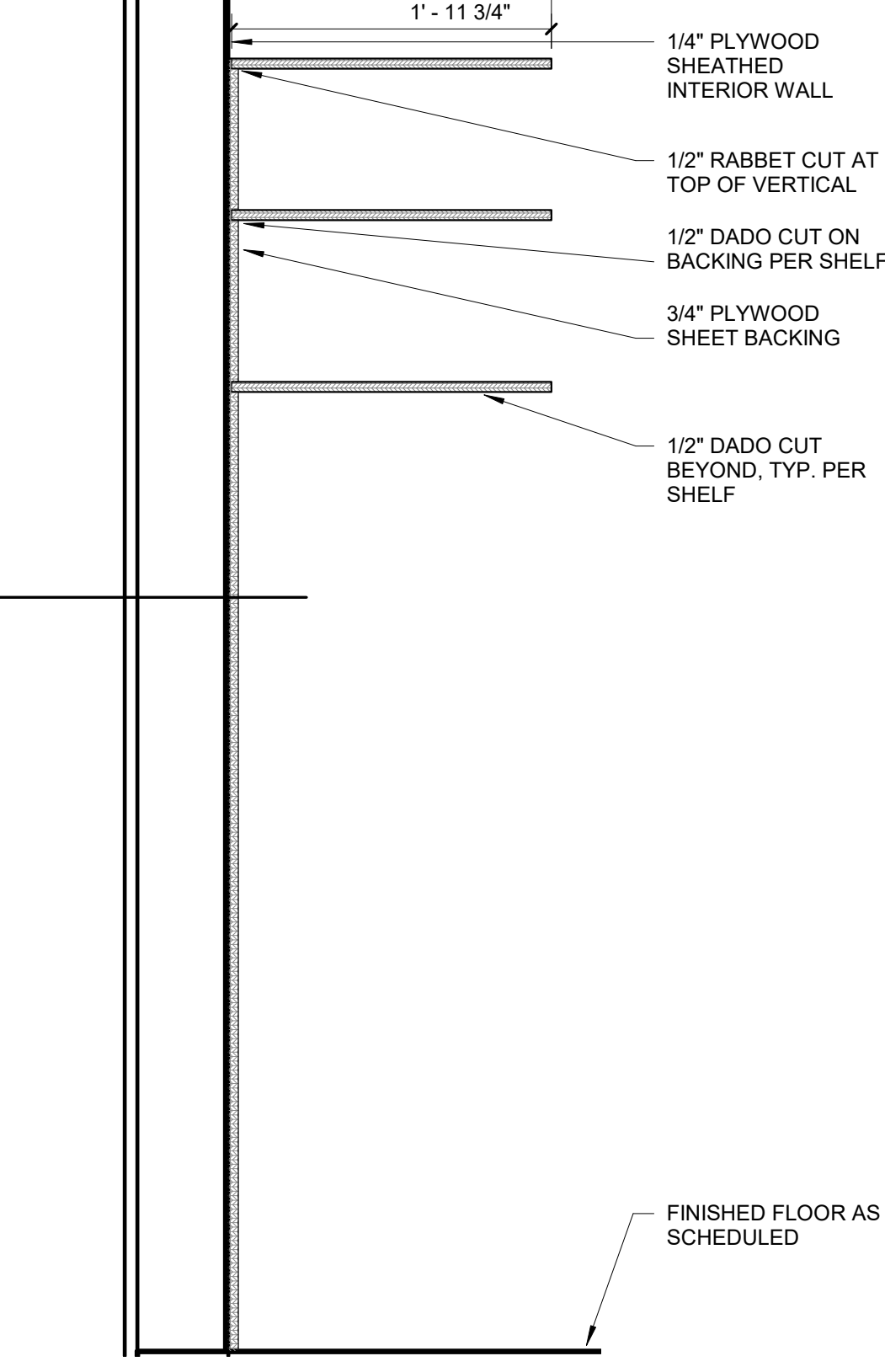
2 SECTION AT MUDROOM BENCH
1" = 1'-0"



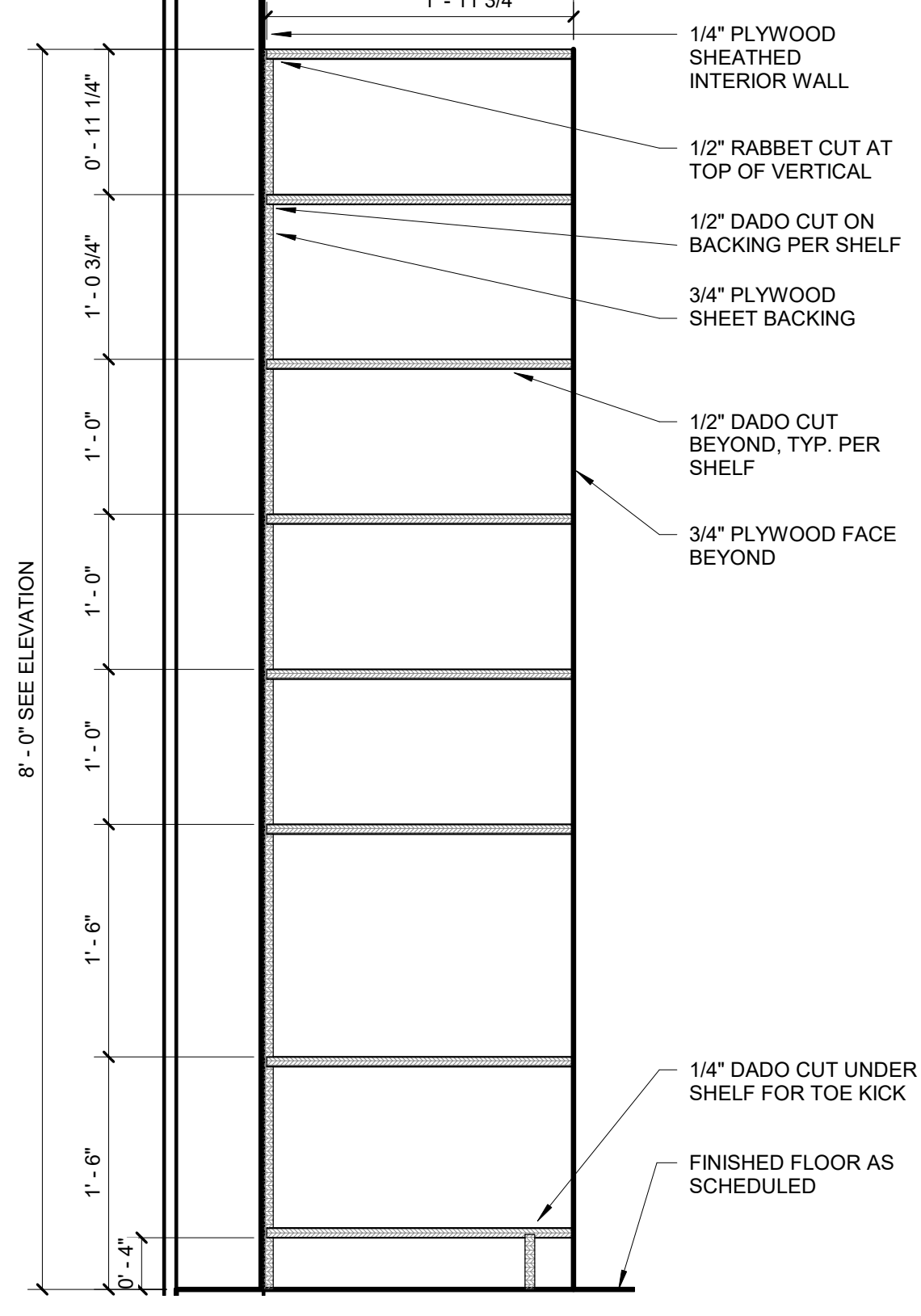
3 SECTION AT MUDROOM WEST BAY
1" = 1'-0"



4 SECTION AT MUDROOM NORTH WALL
1" = 1'-0"

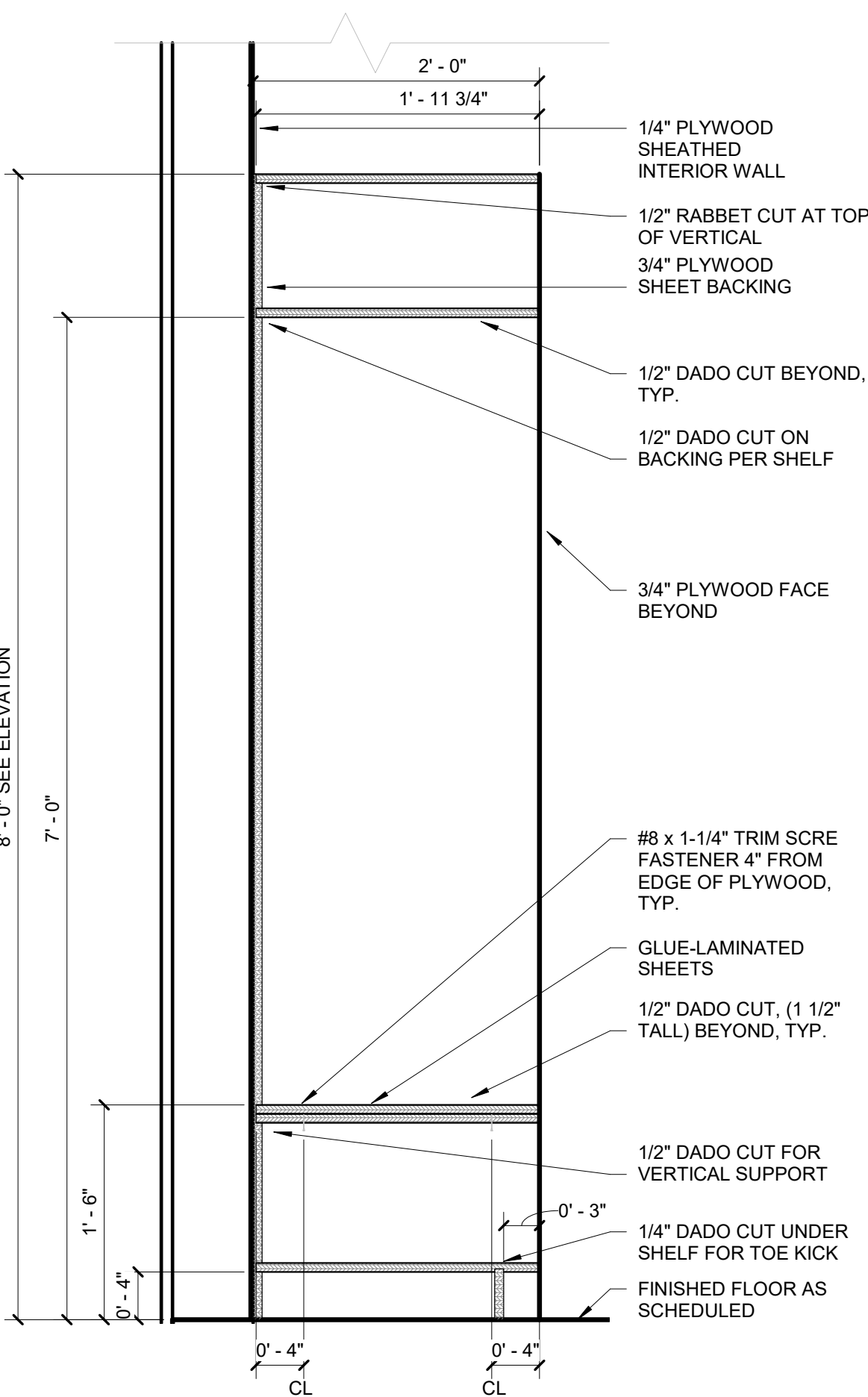


5 SECTION AT GALLEY NORTH WALL WEST BAY
1" = 1'-0"

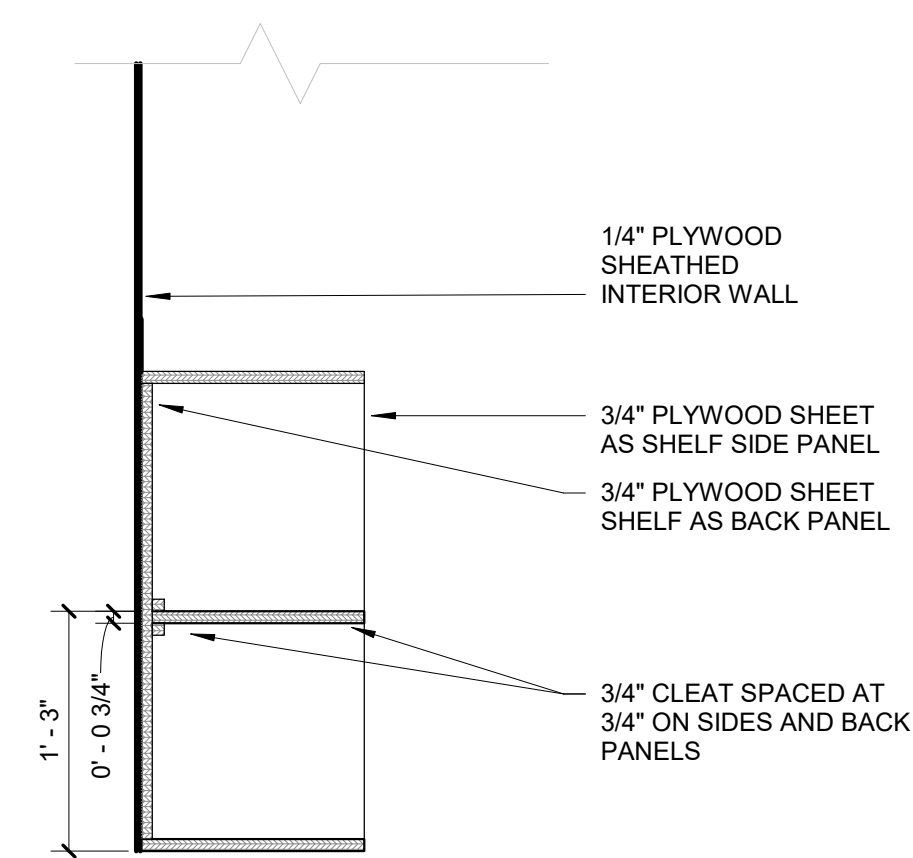


6 SECTION AT GALLEY NORTH WALL MIDDLE BAY
1" = 1'-0"

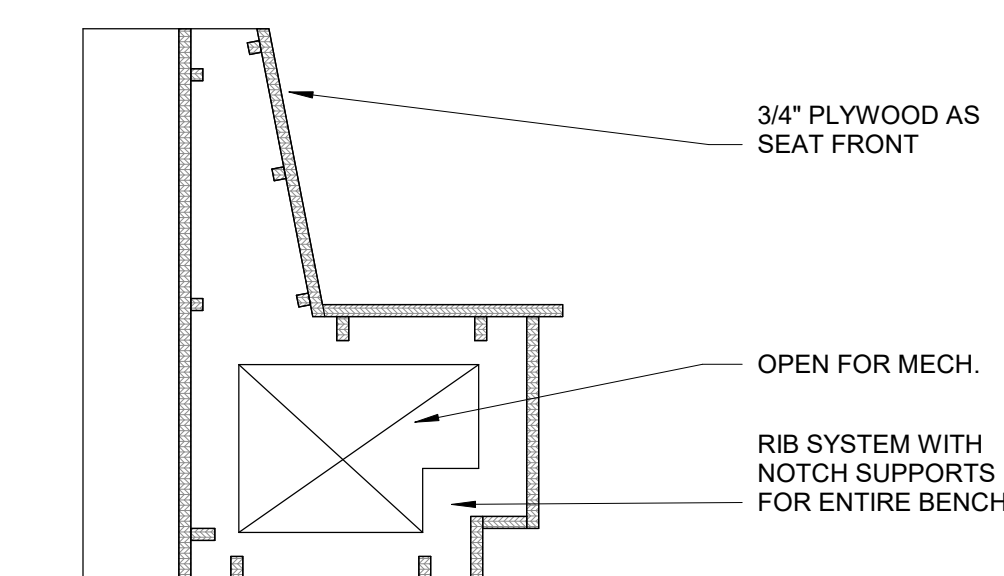
**SEE ELEVATIONS:
ADJUSTABLE SHELVING UNITS OCCUR
A) ALONG SOUTH WALL KITCHEN
B) SOUTH-EAST COMMS CORNER**



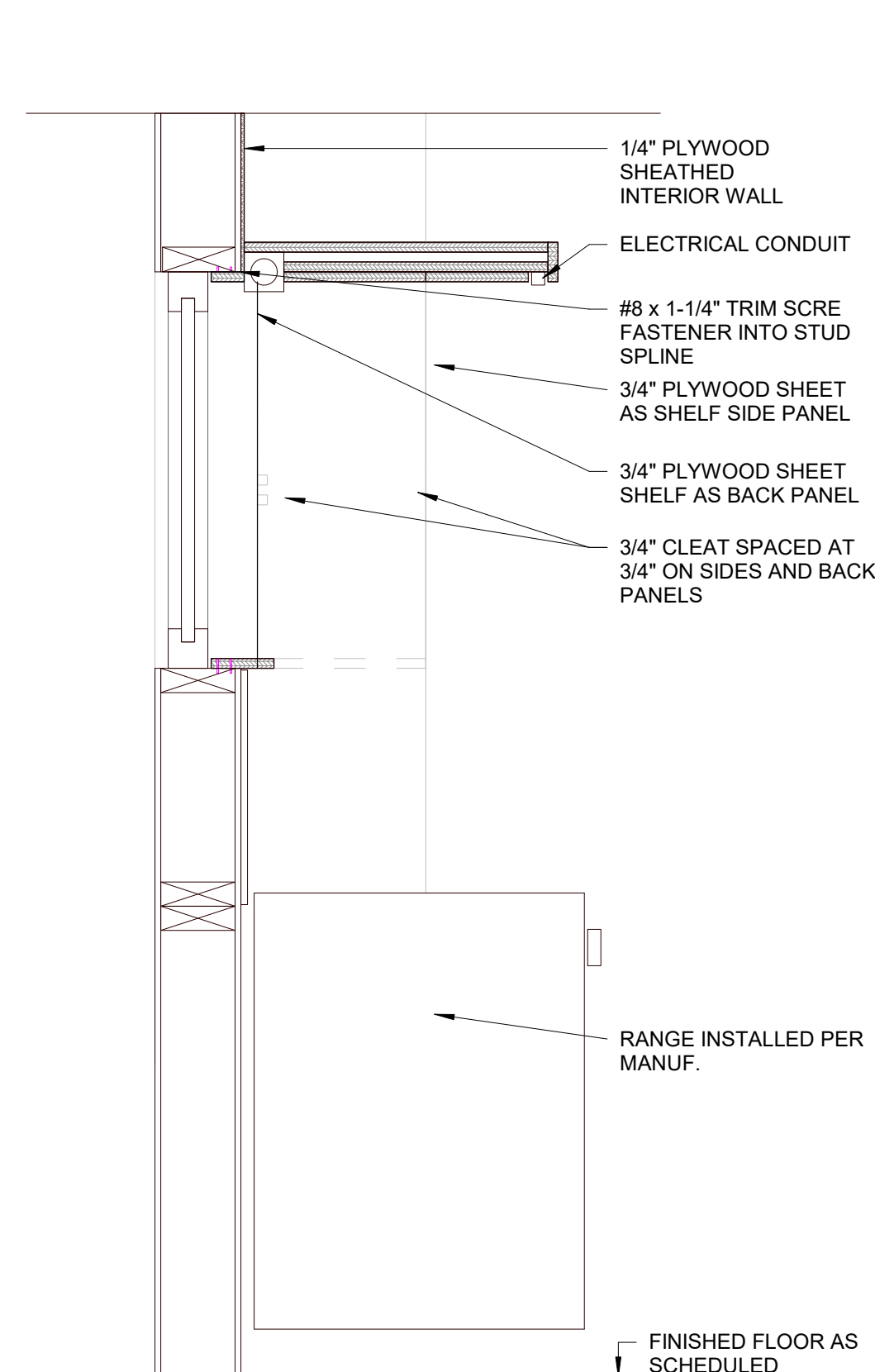
7 SECTION AT GALLEY NORTH BENCH NOOK
1" = 1'-0"



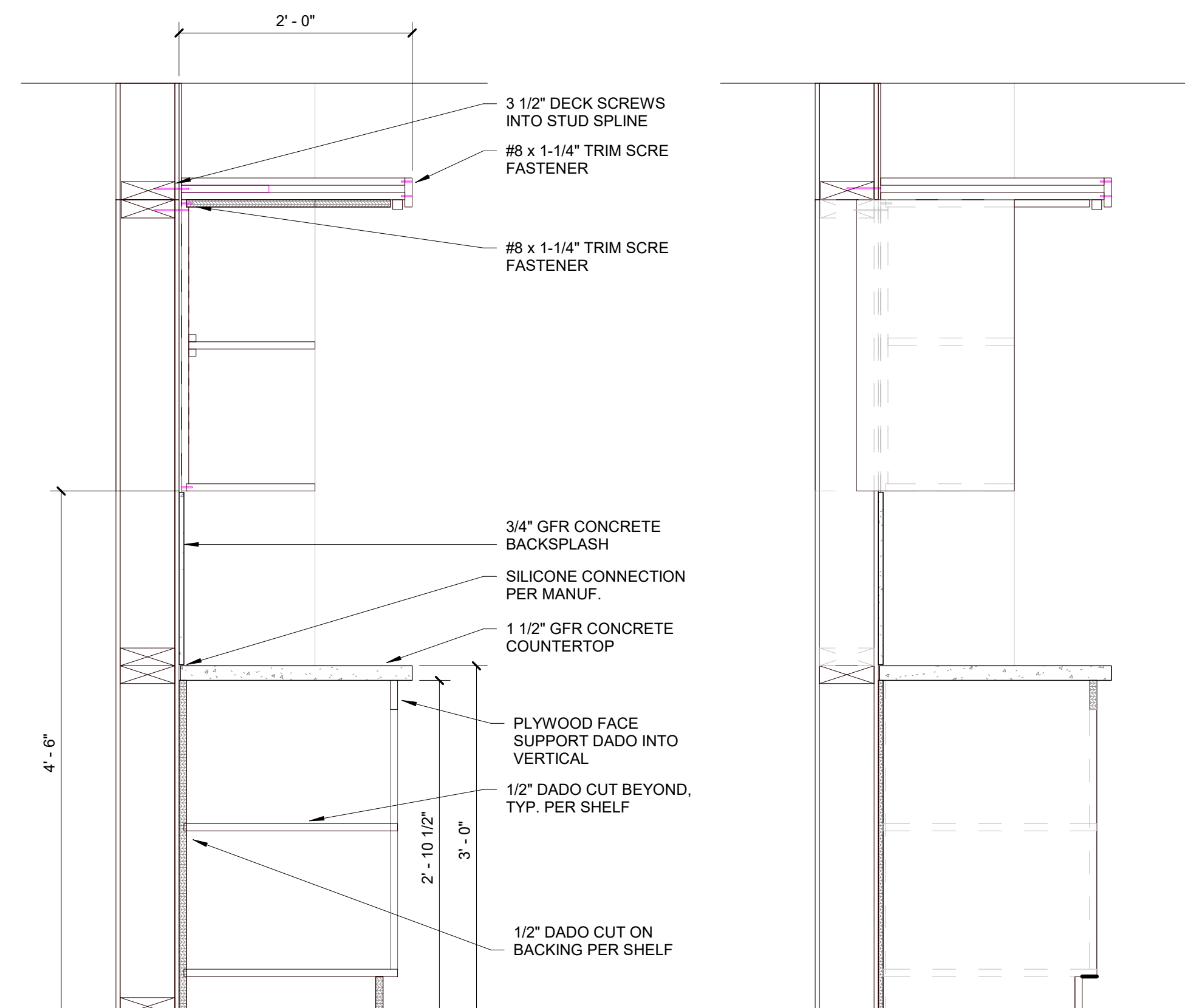
8 SECTION AT ADJUSTABLE SHELVING UNITS
1" = 1'-0"



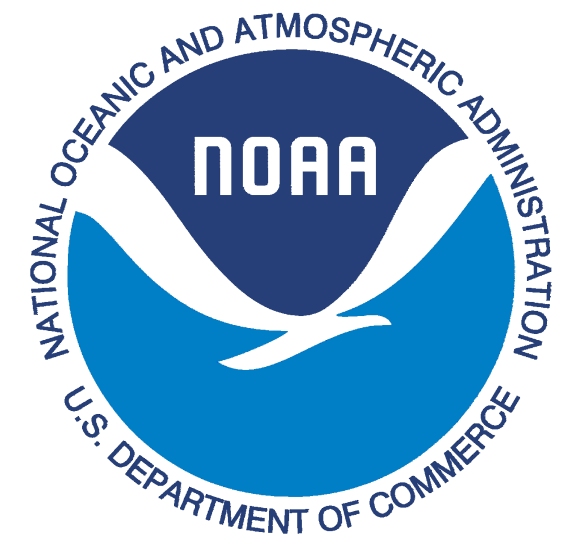
10 SECTION AT NORTHEAST BENCH
1" = 1'-0"




9 SECTION AT KITCHEN
1" = 1'-0"



9 SECTION AT KITCHEN
1" = 1'-0"



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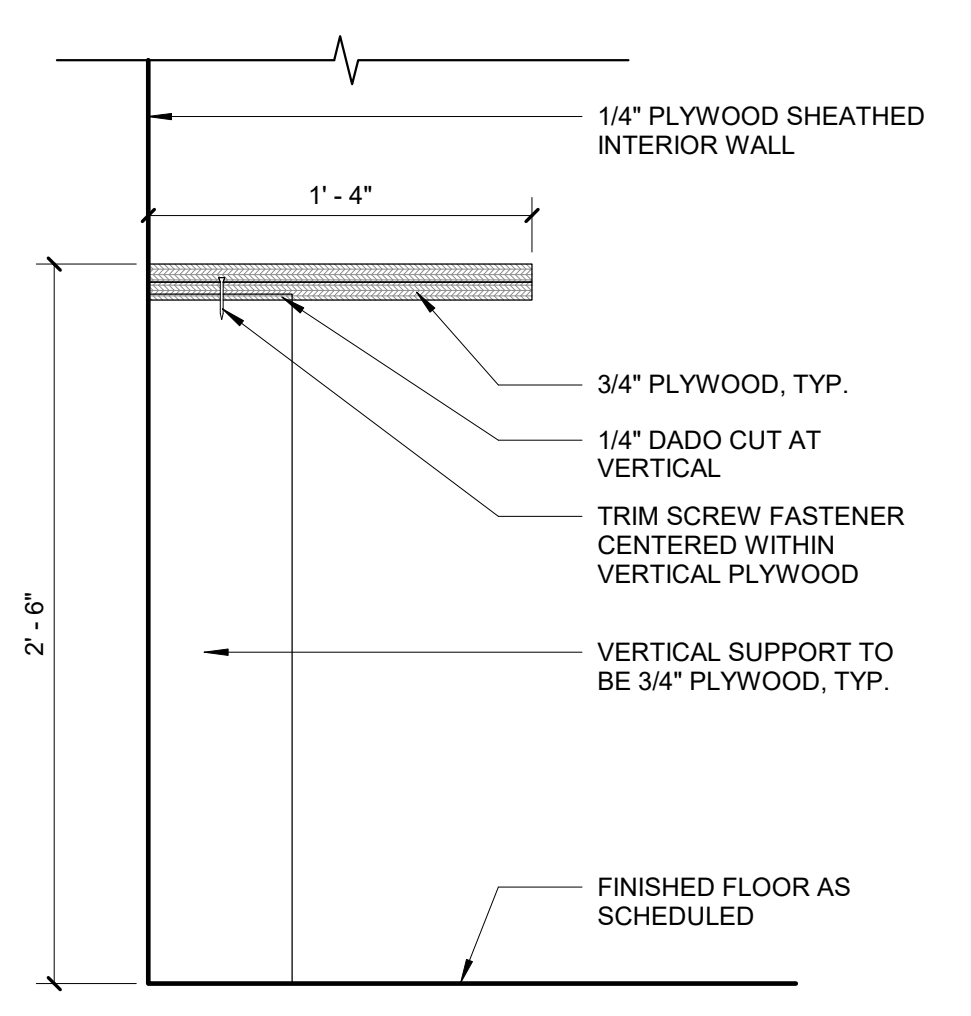
Cape Shirreff - Livingston Island
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REV. DATE: REV. NAME: REV. NO:

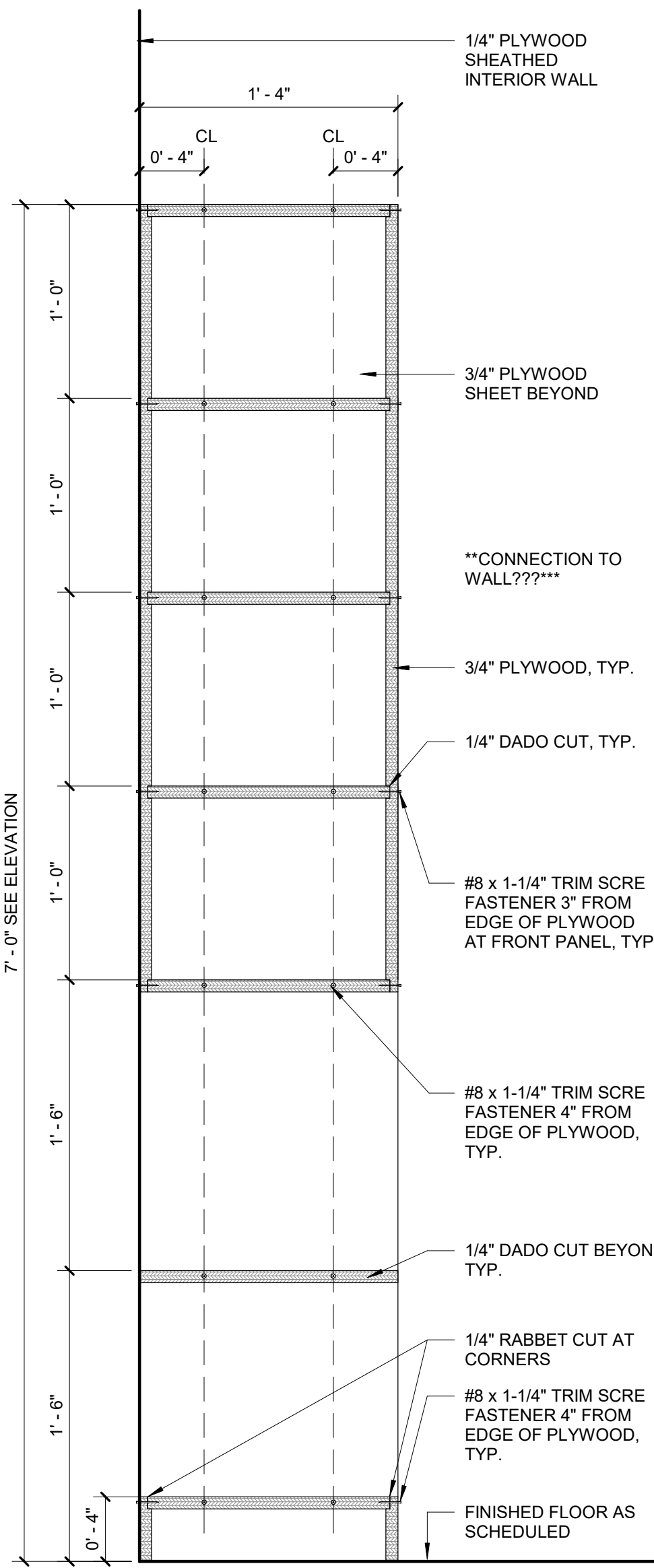
**MILLWORK
DETAILS GALLEY**

date: 03/16/22
scale:

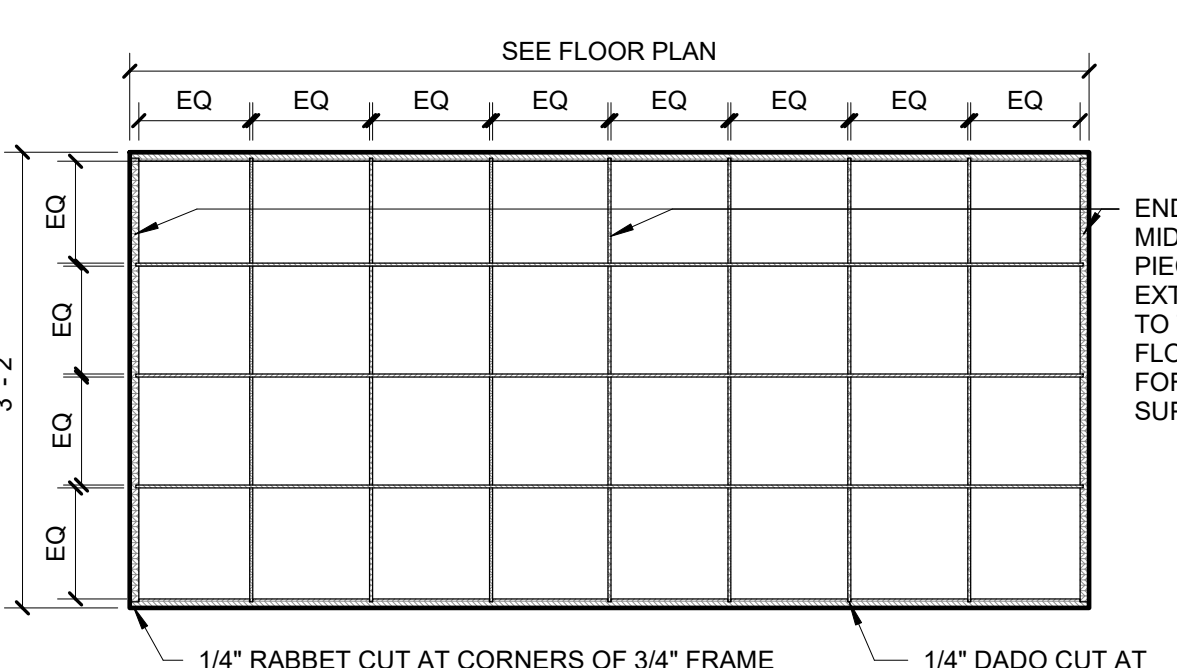
A-902



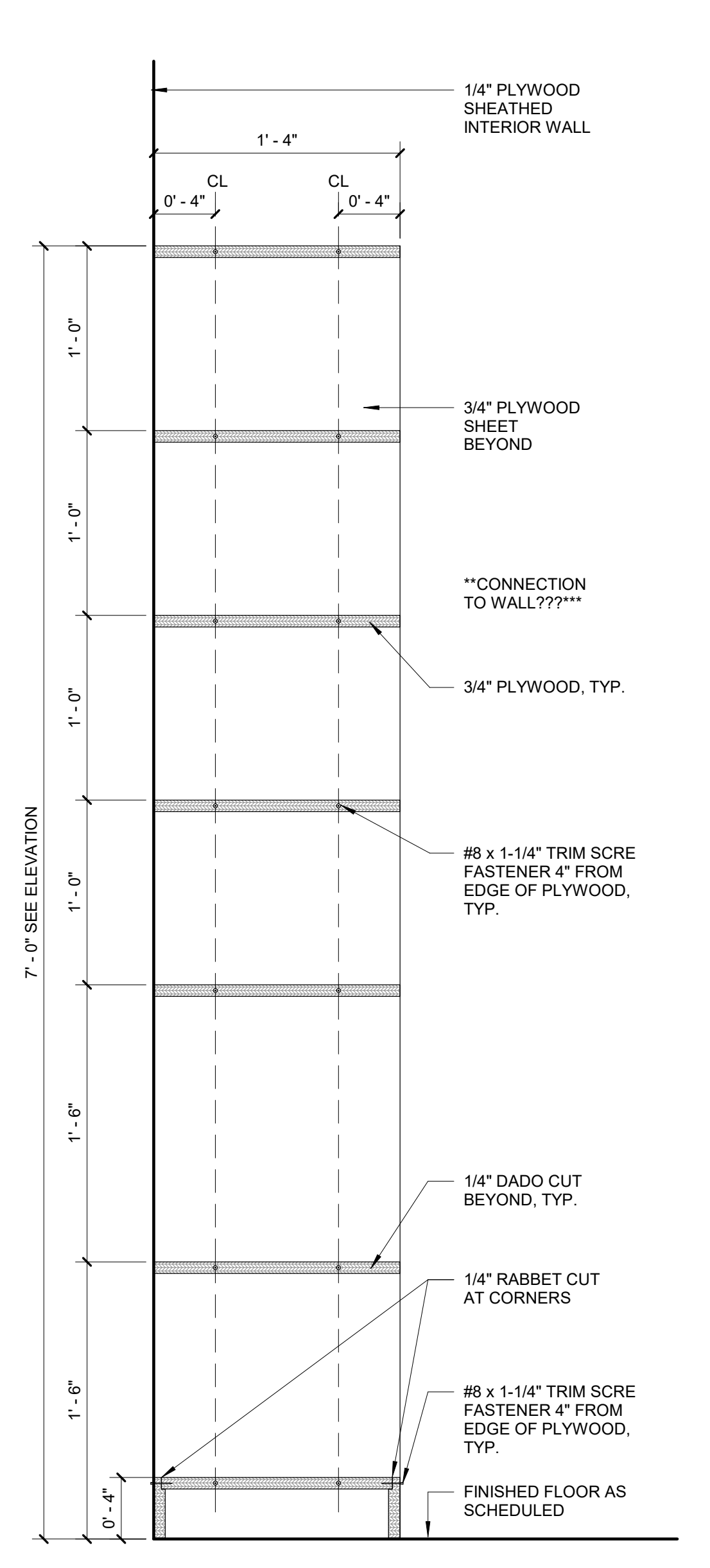
5 SECTION AT OPEN DESK
1 1/2" = 1'-0"



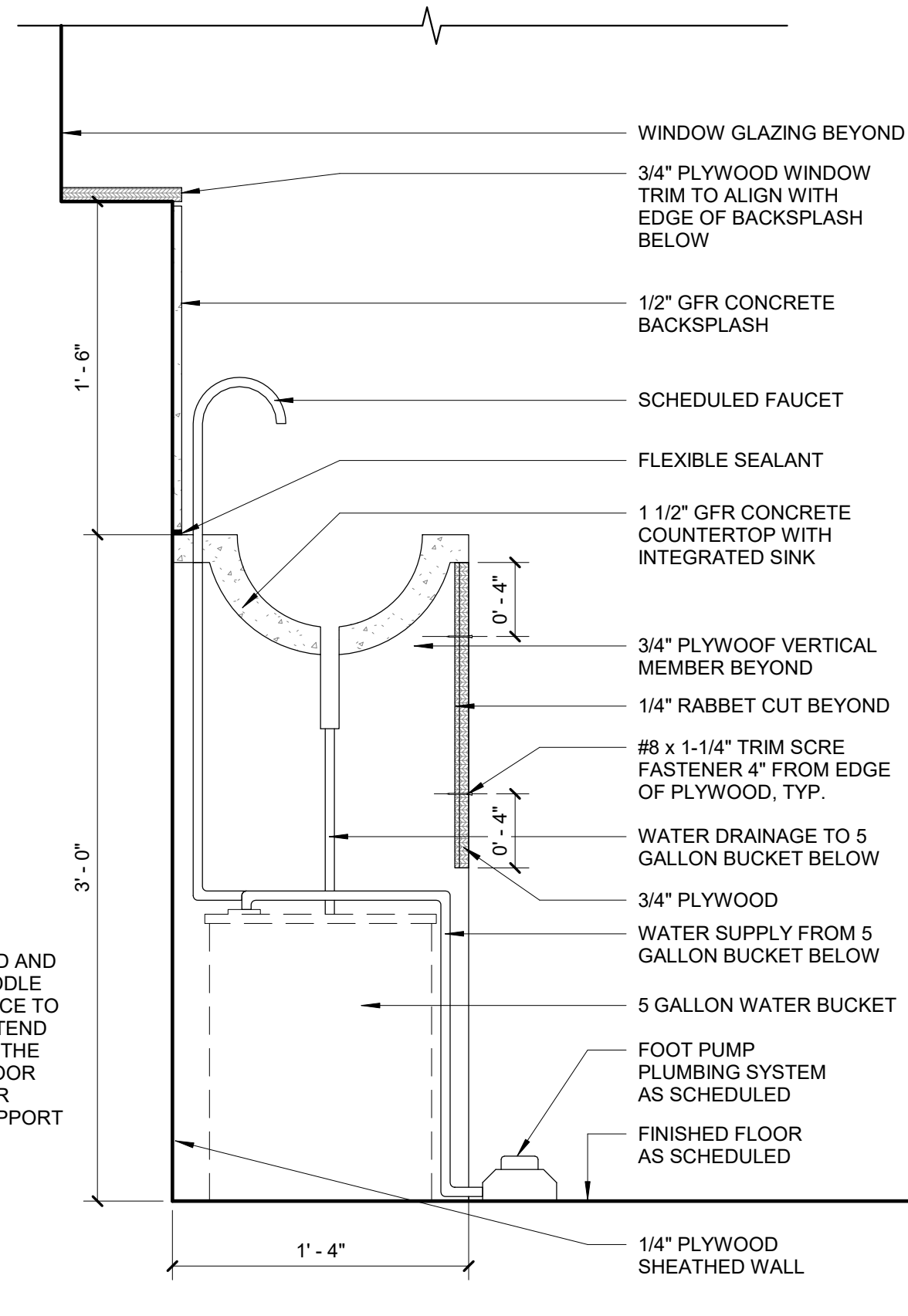
4 SECTION AT MUD ROOM STORAGE BLANK PANEL
1 1/2" = 1'-0"



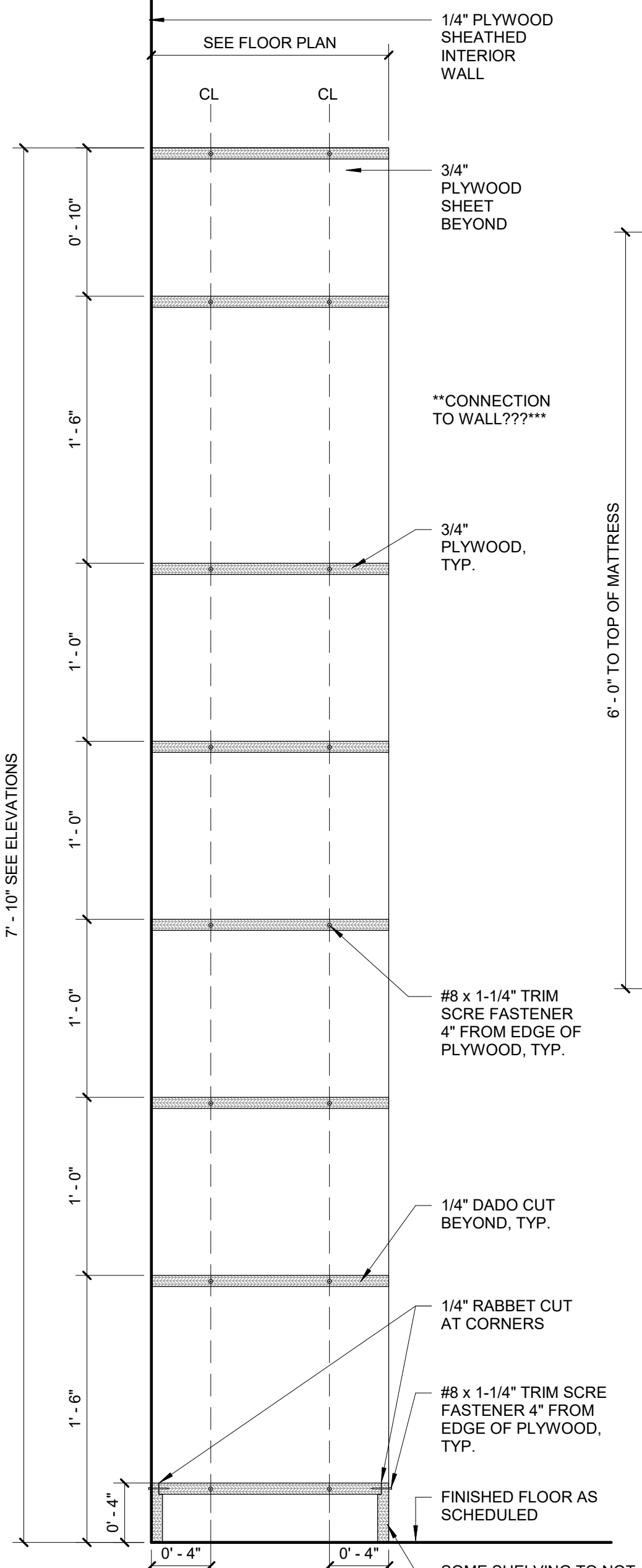
11 WAFFLE GRID PLAN DETAIL
3/4" = 1'-0"



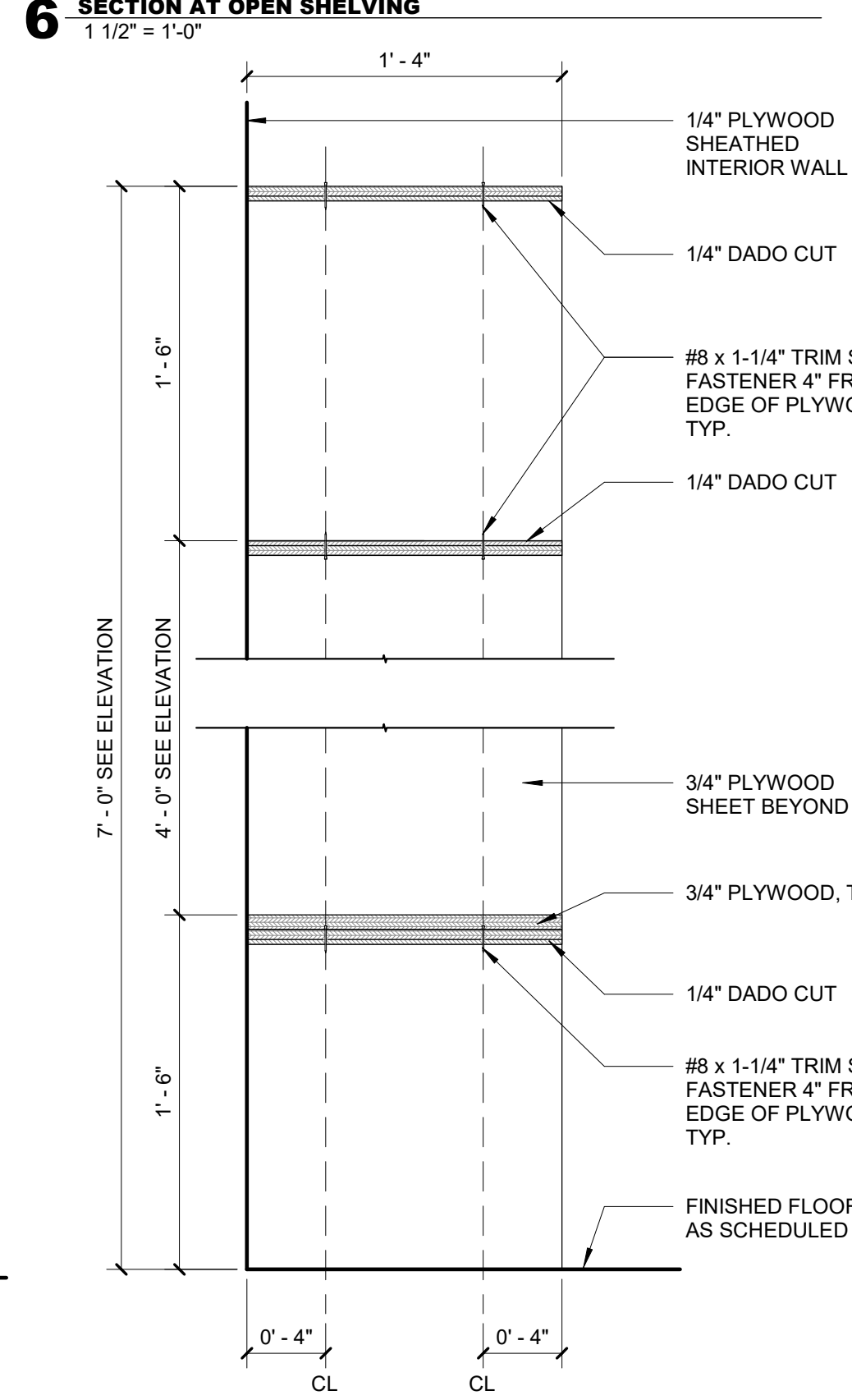
10 SECTION AT MUD ROOM STOR.
1 1/2" = 1'-0"



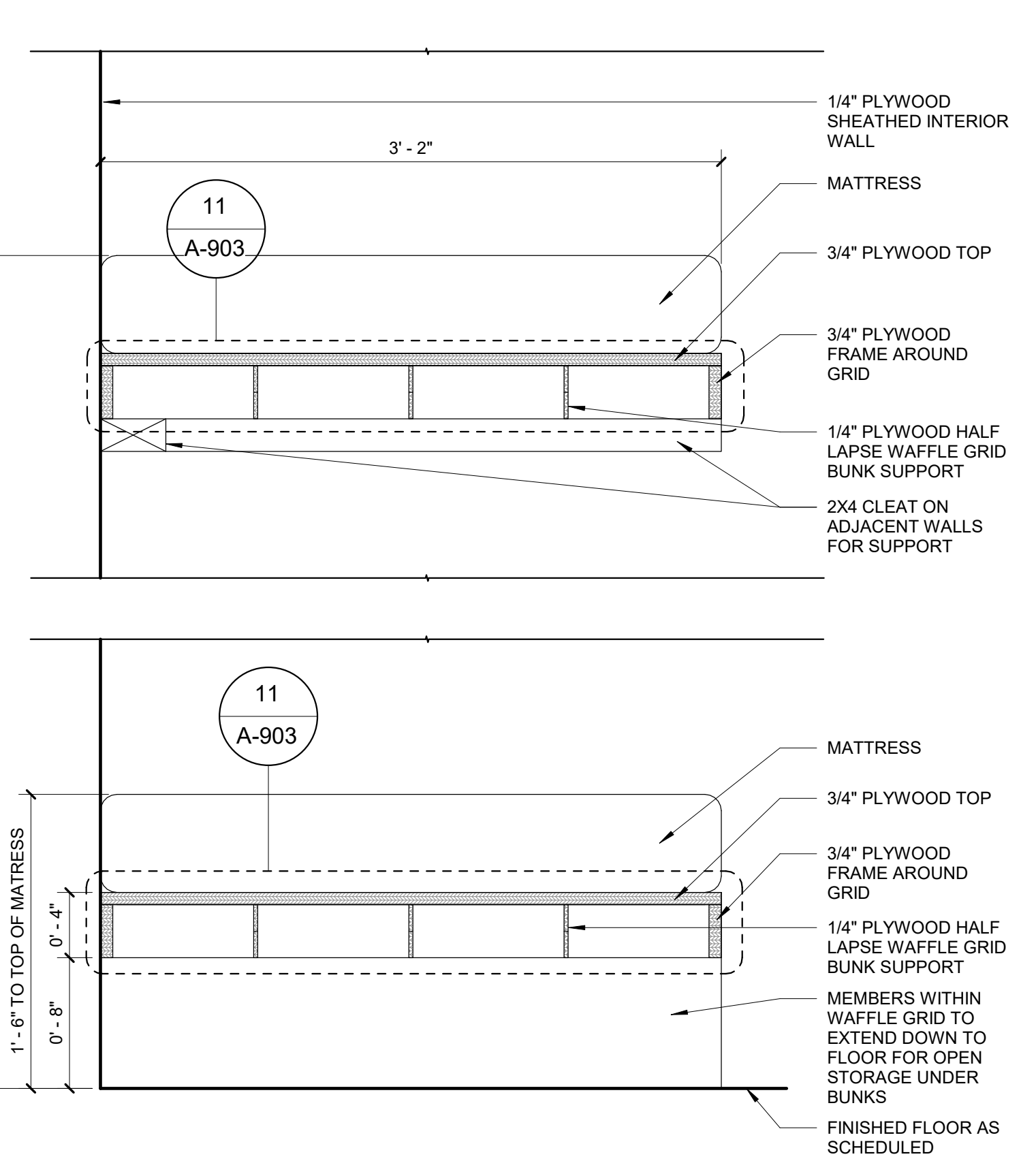
9 SECTION AT MUD ROOM SINK
1 1/2" = 1'-0"



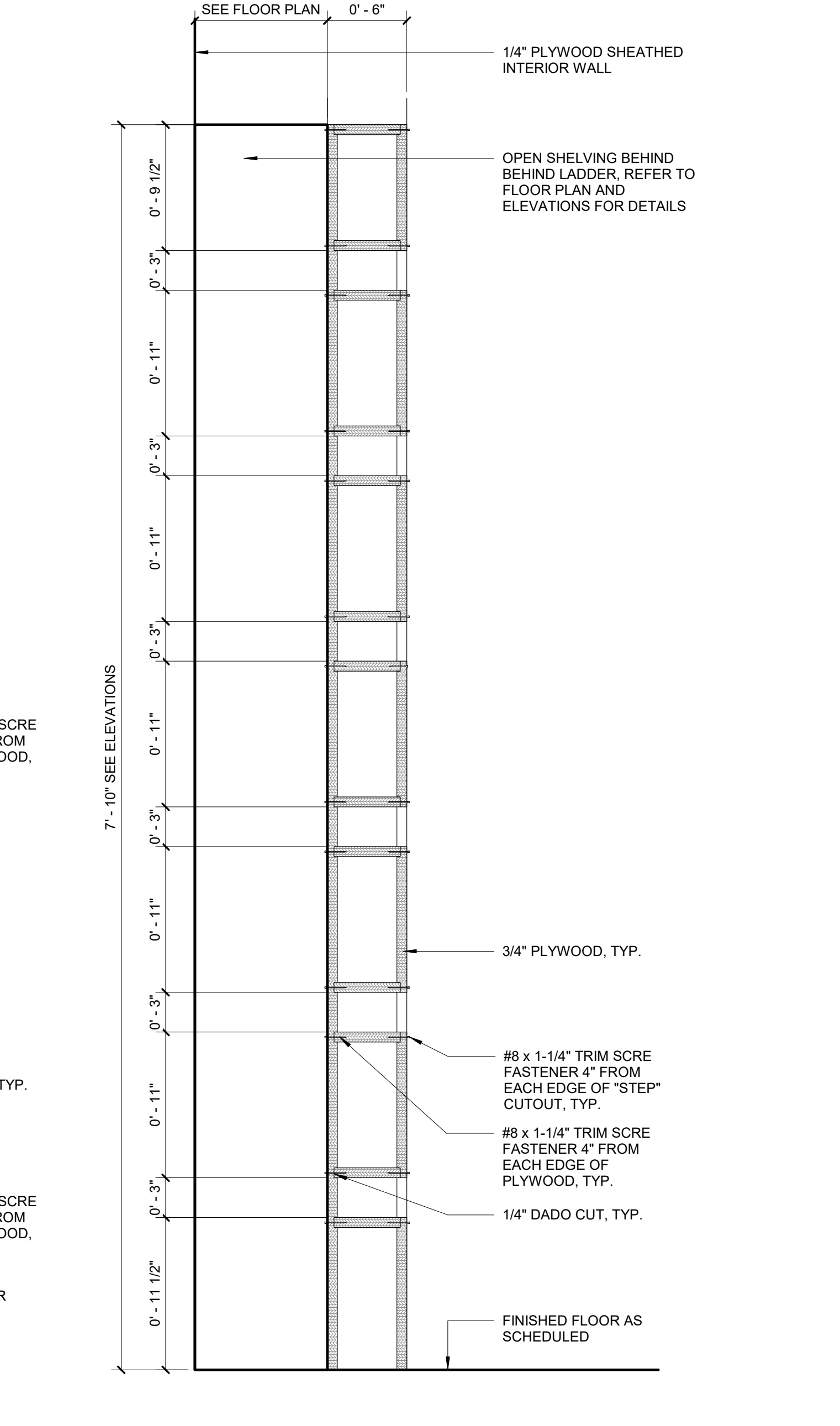
6 SECTION AT OPEN SHELVING
1 1/2" = 1'-0"



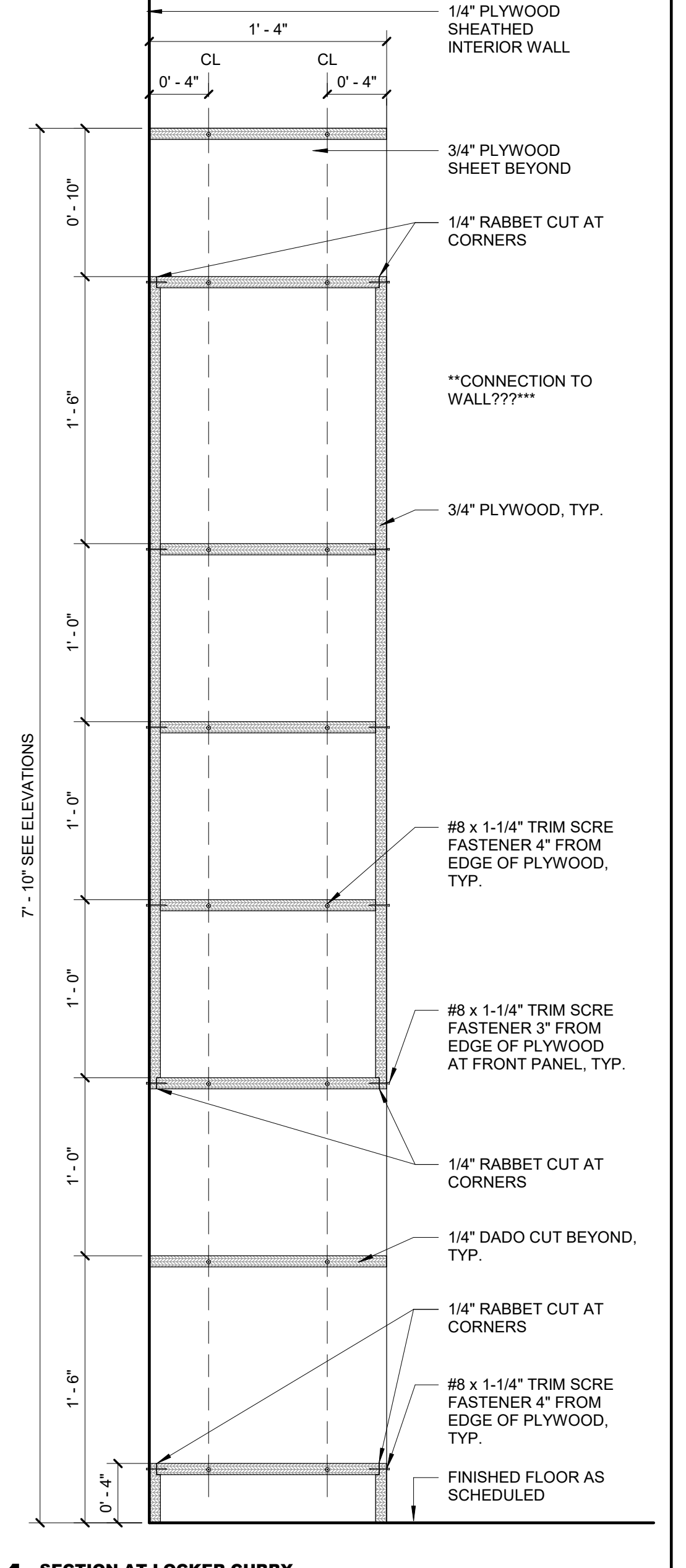
7 SECTION AT MUD ROOM BENCH
1 1/2" = 1'-0"



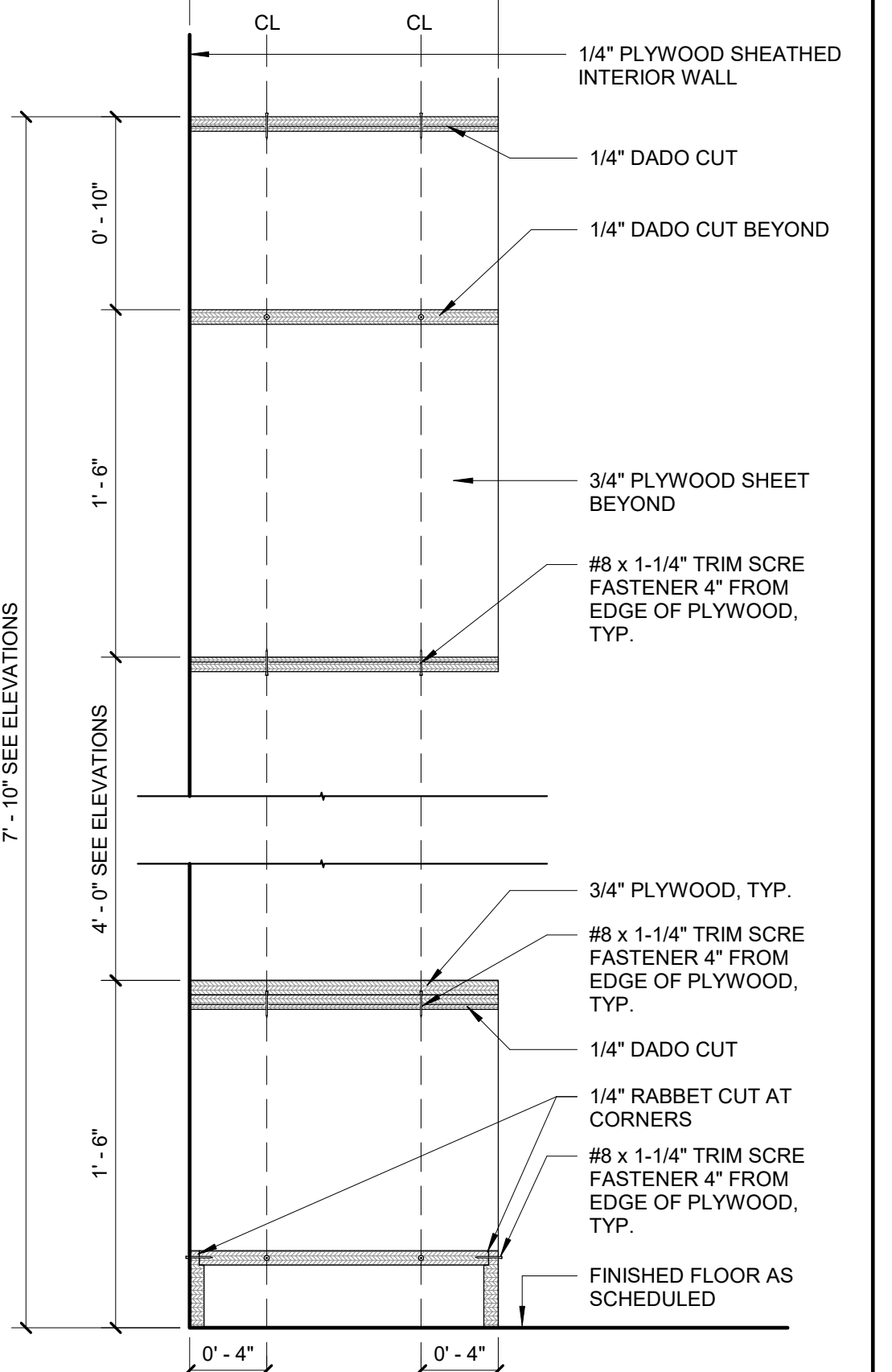
3 SECTION AT BUNK STORAGE
1 1/2" = 1'-0"



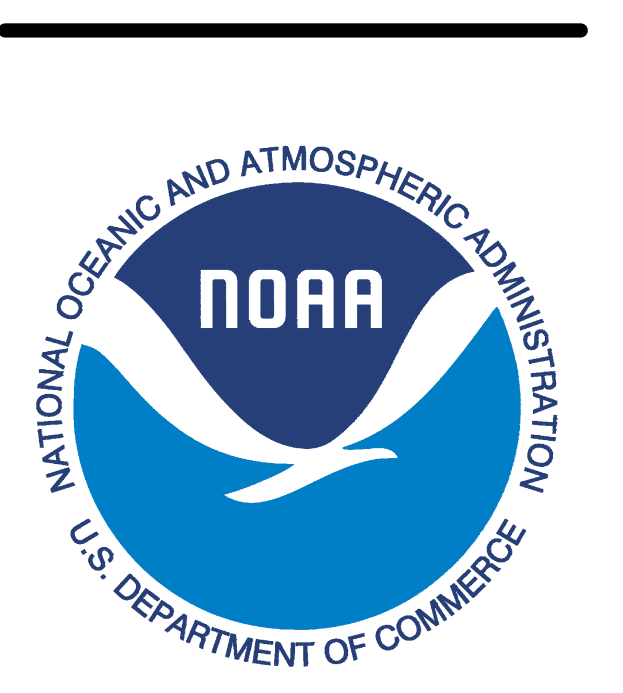
2 SECTION AT LADDER
1 1/2" = 1'-0"



1 SECTION AT LOCKER CUBBY
1 1/2" = 1'-0"



8 SECTION AT S BENCH SEATING
1 1/2" = 1'-0"



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REV. DATE:	REV. NAME:	REV. NO.:

**MILLWORK
DETAILS
BERTHING**

date: 03/02/22
scale: As indicated

A-903



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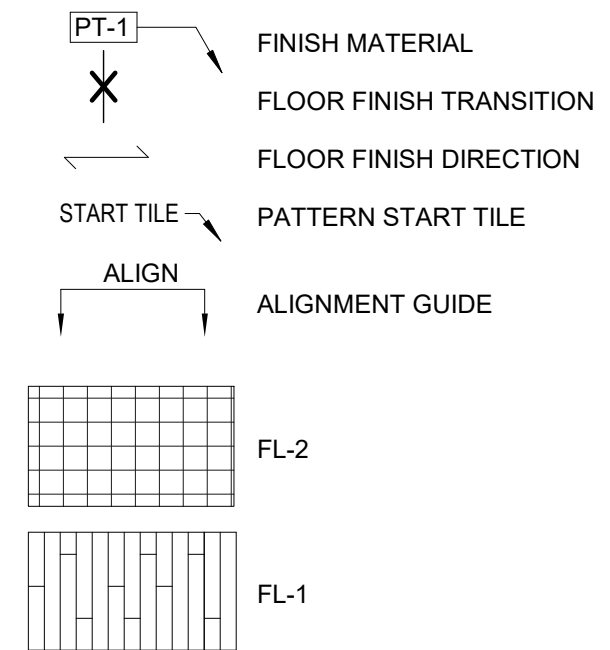
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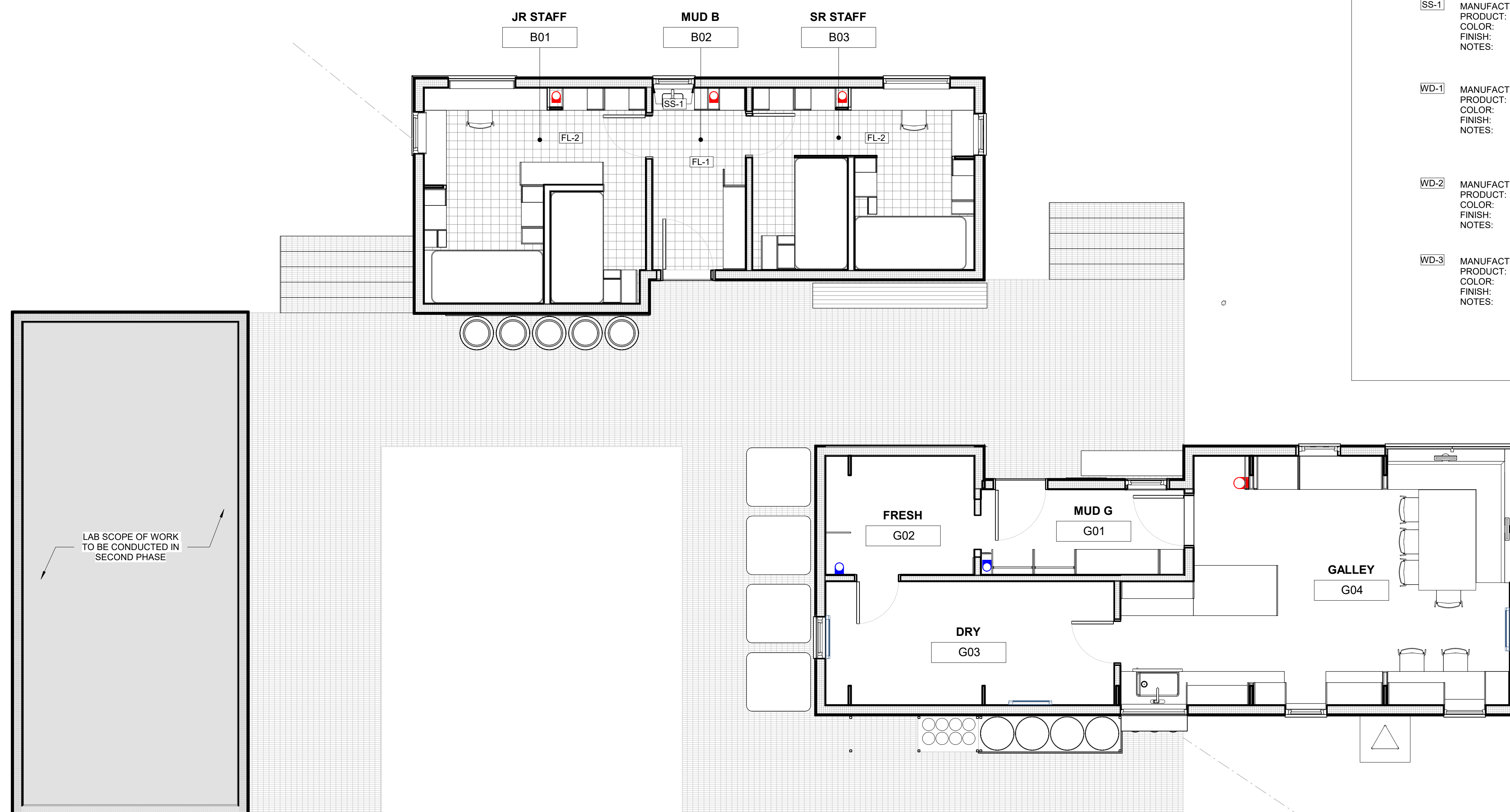
REV. DATE: REV. NAME: REV. NO:

LEGEND



FINISH SPECIFICATIONS

FL-1	MANUFACTURER: PRODUCT: COLOR: FINISH: NOTES:	VINYL TILE
FL-2	MANUFACTURER: PRODUCT: COLOR: FINISH: NOTES:	HARDWOOD
SS-1	MANUFACTURER: PRODUCT: COLOR: FINISH: NOTES:	GFR CONCRETE
WD-1	MANUFACTURER: PRODUCT: COLOR: FINISH: NOTES:	1/4" PLYWOOD ALL INTERIOR WALLS AND CEILING TO BE SHEATHED WITH WD-1, U.O.N.
WD-2	MANUFACTURER: PRODUCT: COLOR: FINISH: NOTES:	1/2" PLYWOOD
WD-3	MANUFACTURER: PRODUCT: COLOR: FINISH: NOTES:	3/4" PLYWOOD ALL BUILT IN MILLWORK TO BE WD-3, U.O.N.



N
 FINISH FLOOR PLAN
 1/4" = 1'-0"

FINISH FLOOR PLAN

date: 03/02/22
 scale: As indicated

A-1001



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South Shetland Islands
Antarctica

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REV. DATE: REV. NAME: REV. NO:

GENERAL NOTES

date: 02/27/22
scale: As indicated

S-001

FOUNDATIONS

FOOTING NOTATION
F7 = FOOTING TYPE RE: SCHEDULE
XX-XX' = T/FTG ELEVATION

PLAN KEYS AND SYMBOLS

ELEVATION VIEW
1 = DRAFTING NUMBER
S101 = SHEET NUMBER

WALL / BUILDING SECTION
1 = DRAFTING NUMBER
S101 = SHEET NUMBER

SECTION CUT
1 = DRAFTING NUMBER
S101 = SHEET NUMBER

DETAIL CALL OUT
1 = DRAFTING NUMBER
S101 = SHEET NUMBER

ADDENDUM NUMBER

STEPS AND SLOPES IN DECKS & SLABS
YY" = STEP HEIGHT

ELEVATION CALL OUT
REFERENCE = T/OBJECT OR B/OBJECT
XXX-YY" = OBJECT ELEVATION

GRADE BEAM TYPE
GB1 = GRADE BEAM TYPE, RE: SCHEDULE

COLUMN TYPE
CX = COLUMN TYPE, RE: SCHEDULE
BPX = BASE PLATE, RE: SCHEDULE
xxK = TRANSFER LOAD
ENG TO CHOOSE

SPLICE IN BEAM/GIRDER, RE: TYPICAL DETAILS

MOMENT CONNECTIONS THROUGH BEAM

MOMENT CONNECTIONS TO COLUMN

STEEL BEAM WITH CONCRETE EMBED, RE: TYPICAL DETAILS
AX = EMBED TYPE, WHEN TAG NOT SHOWN ON PLAN, BEAM WITH BEAM FOOTER IN TYPICAL DETAILS

STEEL BEAM PENETRATION, RE: BEAM PENETRATION SCHEDULE
e = CENTER OF BEAM PENETRATION FROM TOP OF BEAM
DIRECTION OF DECK SPAN OR DIRECTION OF REINFORCING

DIRECTION OF DECK SPAN
D# = DECK TYPE, RE: SCHEDULE

WOOD JOIST HANGER
H1 = JOIST HANGER TYPE, RE: SCHEDULE

KEYED NOTE
K = KEYED NOTE, RE: SCHEDULE

COLLECTOR BEAM TYPE
SC-1 = COLLECTOR TYPE, RE: SCHEDULE
Xk = DESIGN AXIAL FORCE THROUGH CONNECTION

WALLS AND COLUMNS

WOOD FRAMED WALL ABOVE

WALL BELOW (ALL MATERIALS)

WALL ABOVE W/ WINDOW *

WALL ABOVE W/ DOOR *

STEEL COLUMN ABOVE

WOOD COLUMN ABOVE

COLUMNS BELOW (ALL MATERIALS)

SECTIONS AND DETAILS

SOIL FILL

UNDISTURBED SOIL

STEEL BRACE PLAN KEY

STEEL BRACING ABOVE FLOOR/ROOF

STEEL BRACING BELOW FLOOR/ROOF

WOOD FRAMING

CUSTOM TRUSS

HEAVY TIMBER FRAMING

BEAM / GIRDER

JOIST / RAFTER

PREMANUFACTURED FLOOR/ ROOF TRUSS

WOOD SHEAR WALL PLAN KEY

SHEAR WALL ABOVE FLOOR/ROOF

SHEAR WALL BELOW FLOOR/ROOF

SHEAR WALL ABOVE & BELOW FLOOR/ROOF

WOOD SHEAR WALL DESIGNATION AND MINIMUM REQUIRED LENGTH

HOLD DOWN FOR WOOD SHEAR WALL, RE: HOLD DOWN SCHEDULE

ABBREVIATIONS

AB	anchor bolt
ADDNL	additional
AFF	above finish floor
ALT	alternate
ARCH	architectural
B/	bottom of
BLDG	building
BM	beam
BOT	bottom
BRG	bearing
BS	both sides
BTWN	between
CJP	complete joint penetration
CLR	clear
COL	column
CONN	connection
CONST	construction
CONT	continuous
D	depth
DIA, ∅	diameter
DIM	dimension
DK	deck
DTL	detail
DWGS	drawings
EA	each
EF	each face
ELEV	elevation
EOx	edge of (S=slab, C=conc, etc)
EW	each way
EXP	expansion
EXT	exterior
FDN	foundation
FLR	floor
FOx	face of (S=slab, C=conc, etc)
FS	far side
FTG	footing
GA	gage
GC	general contractor
GEN	general
GLB	glulam beam
GLC	glulam column
HDG	hot dip galvanize
HDR	header
HORIZ	horizontal
I/F	inside face
INT	interior
JST	joist
JT	joint
KIP, K	1000 pounds

ABBREVIATIONS

KLF	1000 pounds per lineal foot
L	length
LAT	lateral
LBS	pounds
LLH	long leg horizontal
LLV	long leg vertical
LONG	longitudinal
LSL	laminated strand lumber
LVL	laminated veneer lumber
MAX	maximum
MECH	mechanical
MFR	manufacturer
MIN	minimum
MTL	metal
No	Number
NOM	nominal
NS	near side
O/F	outside face
OC	on center
OH	opposite hand
OPNG	opening
PERP	perpendicular
PJP	partial joint penetration
PL	plate
PLF	pounds per lineal foot
PSL	parallel strand lumber
PT	pressure treated
RE:	reference
REINF	reinforcement
REQD	required
RET	retaining
SC	slip critical
SCHED	schedule
SCL	structural composite lumber
SIP	structural insulated panel
SPA	spacing
STFNR	stiffener
STL	steel
T/	top of
THK	thickness
TL	transfer load
TRAN	transverse
TYP	typical
UNO	unless noted otherwise
VERT	vertical
VIF	verify in field
W	width
WP	work point

NEW SHEET = n REVISED DRAWING = 0
NO MODIFICATIONS = 0 SHEET DELETED = 0

SHEET NO.	SHEET NAME	ISSUE DATE AND TITLE
S-001	GENERAL NOTES	
S-002	GENERAL NOTES	
S-003	GENERAL NOTES	
S-004	LOAD KEYS	
S-005	TYPICAL DETAILS	
S-006	TYPICAL WALL SECTIONS	
S-100	FOUNDATION PLAN	
S-101	FLOOR FRAMING PLAN	
S-102	ROOF FRAMING PLAN	
S-300	BUILDING AND WALL SECTIONS	
S-400	FOUNDATION DETAILS	
S-401	WALL FRAMING ELEVATIONS	
S-402	FLOOR DETAILS	
S-403	ROOF DETAILS	
S-404	BENT FRAME DETAILS & ELEVATIONS	
S-500	SCHEDULES	

SHEET LABEL KEY

STRUCTURAL DRAWING SHEET

SHEET NUMBER
000 SERIES = GEN NOTES, LOAD KEYS AND TYP DETAILS
100 SERIES = COMPOSITE PLANS
200 SERIES = AREA PLANS
300 SERIES = ELEVATIONS
400 SERIES = DETAILS
500 SERIES = SCHEDULES

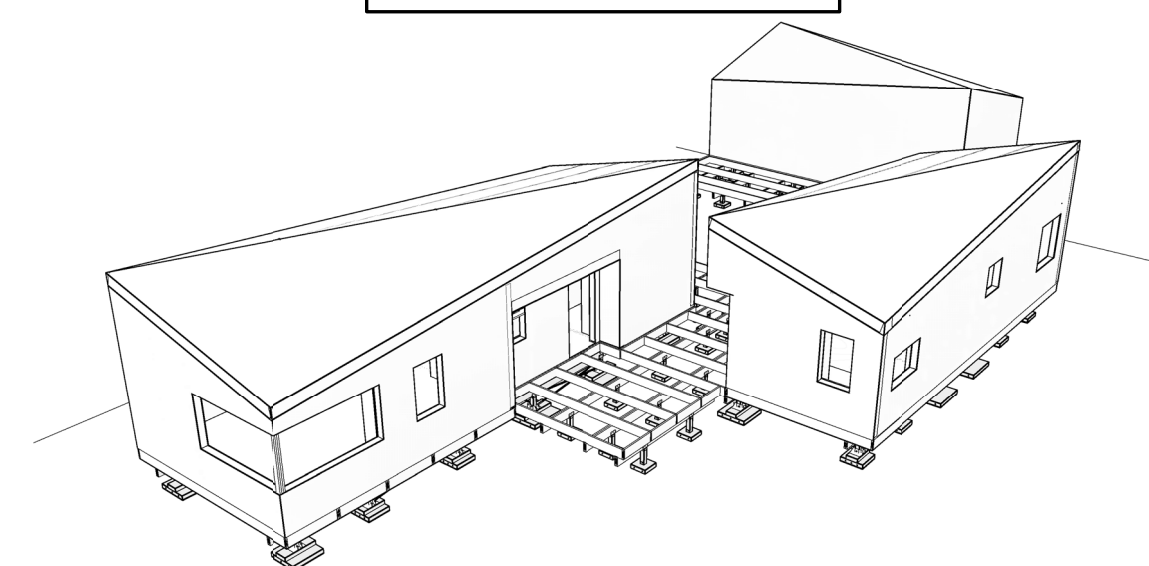
PLAN AREA DESIGNATION
A = AREA A
B = AREA B

CONTENT DESIGNATION
REINFORCED SLABS
1 = FOUNDATION/CONCRETE PLAN
2 = BOTTOM REINFORCEMENT PLAN
3 = TOP REINFORCEMENT PLAN
4 = FRAMING PLAN

POST-TENSIONED SLABS
1 = FRAMING PLAN
2 = REINFORCEMENT PLAN
3 = BANDED PT PLAN
4 = UNIFORM PT PLAN
5 = FRAMING PLAN

BUILDING IS NOT DIVIDED INTO AREAS
100 SERIES SHALL BE TYPICAL DETAILS AND THE 200 SERIES SHALL BE PLANS
REMOVE CONTENT DESIGNATION IF PLAN PT OR

3D IMAGE IS FOR VISUALIZATION ONLY. REFER TO PLANS AND DETAILS FOR SPECIFIC INFORMATION.



PROJECT DESCRIPTION

- 1. Project consists of (1) level above grade . Foundations consist of shallow timber footings. Superstructure is SIP roof, wall and floor panels supported by timber framing. Lateral systems are SIP shearwalls.
- 2. This description is for general orientation only. The General Contractor is responsible for all scope items described in the drawings as well as for all material and labor that can reasonably be inferred there from.

GENERAL APPLICATION

- 1. These drawings must be used in conjunction with the architectural drawings on the project to clearly define all requirements for construction.
- 2. No Contractor should attempt to bid nor construct any portion of this project without consulting the project architectural, mechanical, and electrical documents.
- 3. All things which, in the opinion of the Contractor, appear to be deficiencies, omissions, contradictions or ambiguities in the drawings shall be brought to the attention of the Structural Engineer. Corrections or written interpretations shall be issued before affected work may proceed.
- 4. The Contractor shall inform the Structural Engineer, clearly and explicitly in writing of any deviation or substitution from requirements of the contract documents. Contractor shall not be relieved of any requirement of the contract documents by virtue of the Structural Engineer's review of shop drawings, project data, etc., unless the Contractor has clearly and explicitly informed the Structural Engineer in writing of any deviations or substitutions at time of submission.

FUTURE EXPANSION

- 1. West Side: One-story future expansion is anticipated. No additional structural loads are included in present design for future construction.

MISCELLANEOUS NOTES

- 1. The Contractor is solely responsible for all safety regulations, programs, and precautions related to all work on this project.
- 2. The Contractor is solely responsible for the protection of persons and property either on or adjacent to the project and shall protect it against injury, damage, or loss.
- 3. Means and methods of construction and erection of structural materials are solely the Contractor's responsibility.
- 4. The structure is designed to function as a unit upon completion of construction of the project and then, only to support the design loads indicated. The Contractor is responsible for means, methods and sequence of construction, and the adequacy of the structure to support loads occurring during construction of the project. Furnish all temporary bracing, shoring, and/or support as may be required.
- 5. No openings, nor any change in size, dimension or location shall be made in any structural element without written approval of the Structural Engineer.
- 6. Where dimensions or weights of MEP equipment or systems are variable from manufacturer to manufacturer, verify dimensions and weights shown on drawings with selected manufacturer prior to ordering materials. Notify Structural Engineer of discrepancies.
- 7. Do not place equipment when shipping or operating weight exceeds weight indicated on structural drawings.
- 8. Openings 1'-4" or less on a side are generally not shown on the structural drawings. Refer to drawings of other consultants for such openings.
- 9. Openings through floors and/or roofs for passage of utilities are not located nor dimensioned on structural drawings. Contractor shall obtain and coordinate such locations and dimensions with the contractor requiring the opening.
- 10. Show all openings through structural members on shop drawings and submit for review. Openings not shown on structural drawings are subject to acceptance and shall be specifically indicated for review and acceptance.
- 11. Do not scale these drawings, use the dimensions shown. In case of conflict, request clarification from Architect and Structural Engineer.
- 12. No structural modifications, alterations, or repairs shall be made without prior review by Structural Engineer. Submit details and calculations prepared by a professional engineer registered in state where project is located and employed by Contractor.
- 13. Where structure is to be used for staging or temporary storage area, the Contractor shall verify that unit loads do not exceed the design loads for the structure.

QUALITY ASSURANCE AND QUALITY CONTROL

- 1. The Contractor is responsible for assuring quality, including workmanship and materials furnished by subcontractors and suppliers.
- 2. Inspection or testing by the Owner does not relieve the Contractor of the responsibility to perform the work in accordance with the Contract Documents.
- 3. Workmanship: The Contractor is responsible and shall bear the cost of correcting work which does not conform to the specified requirements.
- 4. Correct deficient work by means acceptable to the Architect. The cost of extra work incurred by the Architect to approve corrective work shall be borne by the Contractor.
- 5. The Owner's Testing Agency shall perform testing and special inspections required by the structural documents, building code and the local authority. The Testing Agency shall comply with ASTM E329 and upon completion of work, the Testing Agency shall furnish a certificate of compliance, signed by the professional engineer overseeing special inspections and testing. The professional engineer must be registered and licensed in the state where the project is located.
- 6. The individual employed by the Testing Agency, responsible for overseeing testing and inspection of soils and foundations shall be a professional engineer practicing the discipline of geotechnical engineering, referred to as the Geotechnical Engineer in the structural portion of the construction documents. The Geotechnical Engineer is responsible for testing and inspections of soils, earthwork and foundations for conformance to the foundation design and the geotechnical report. See foundation section of the general notes.
- 7. See special inspections section of the general notes for required testing and inspection.

SPECIAL INSPECTION

- 1. Special inspection and testing shall be performed as required by the local jurisdiction, the building code and the construction documents. See quality assurance section of the general notes.
- 2. Coordinate and schedule inspection and testing prior to the start of work requiring inspection and testing while providing special inspector reasonable notice.
- 3. All deficiencies shall be corrected for acceptance by the testing agency.
- 4. Inspections performed by the local jurisdiction do not replace inspection or testing required by the owners testing agency.
- 5. Special inspection and testing is required for the items shown in the special inspections and testing table.

SPECIFICATIONS

- 1. These General Notes are intended to function as the structural portion of project specifications.

SUBMITTALS

- 1. See Material sections of these General Notes for required shop drawings.
- 2. Submit one (1) copy of the required information (Manufacturers Data, Shop Drawings, etc) via electronic media (PDF or similar).
- 3. Reproducible copies of contract documents shall not be used.
- 4. Submittals shall be sent directly to the Architect for review and distribution.
- 5. Submittals shall be reviewed by Contractor and Subcontractor prior to submission. Drawings shall bear Contractor's approval stamp accepting responsibility for coordination of dimensions shown in the contract documents, quantities, and coordination with other trades.
- 6. Allow 14 calendar days in the Structural Engineer's office for review of submittals.
- 7. Submittals will be returned to the Architect with Structural Engineer's review comments via electronic media.

DEFERRED SUBMITTALS

- 1. Submit shop drawings along with calculations noted to be signed by a registered Engineer in the state where the project is located when required by specification. These deferred submittals (shop drawings) shall first be submitted to the project Architect and/or Engineer of record for review and coordination. Following the completion of the review and coordination by the Architect/Engineer of record; a submittal may then be made by the Contractor to the local Building Department for review and approval, which shall include a letter stating this review and coordination has been performed and completed and plans and calculations for the deferred items are found to be acceptable (e.g., with regard to geometry, load conditions, etc.) with no exceptions.
- 2. The list of items for deferred submittals includes the following items:
 - Premanufactured wood trusses
 - Pre-fabricated stair units and their connections
 - Premanufactured hand/stair railings and their connections
 - Exterior cold-formed steel curtain walls & connections to the structure
 - Solar panel racking systems and associated connections
 - All others required by the local jurisdiction

STRUCTURAL DESIGN CRITERIA			
Building Code: 2021 International Building Code	(Note 1)		
Local Jurisdiction: NOAA, NSF, and USAP			
Risk Category: II			
IEBC Alteration Level: []			
Change of Occupancy: [No: Yes, ___ to ___; Yes, see load keys]			
Historic Designation: [Yes; No]			
Wind Loading			
Basic Wind Speed	Vult= 130 MPH	Vasd=101 MPH	
Exposure Category	D		
GCpi	+/- 0.18		
Ground Elevation Factor, Ke	1.0		
Elevation used for Ke (feet above sea level)	30 ft		
[Ultimate,ASD] Wind Base Shear			
East/West	[] kips		
North/South	[] kips		
Torsional Moment	[] kip-ft		
[Ultimate,ASD] Wind Design Pressure Components & Cladding, PSF	20R²	50R²	100R²
Interior Roof Zone (Zone 1)	[] / []	[] / []	[] / []
Roof End Zone (Zone 2)	[] / []	[] / []	[] / []
Corner Roof Zone (Zone 3)	[] / []	[] / []	[] / []
Interior Wall Zone (Zone 4)	[] / []	[] / []	[] / []
Wall end Zone (Zone 5)	[] / []	[] / []	[] / []

Seismic Loading	
Seismic Importance Factor, Ie	1.0
Mapped Spectral Response Acceleration	
Ss	1.5
Sd	0.6
Site Class	D (assumed)
Spectral Response Coefficients	
Sds	1.0
Sd	0.68
Seismic Design Category	D
Basic Seismic Force Resisting System	Structural Wood Shear Panels
Response Modification Factor, R	6.5
Over-Strength Factor, Ω	2.5
Deflection Amplification Factor, Cd	4
Seismic Response Coefficient, Cs	0.154
Analysis Procedure Used	Equivalent Lateral Force
Ultimate Seismic Base Shear	
East/West	[] kips
North/South	[] kips
Torsional Moment	[] kip-ft

Snow Loading (Notes 2,3,4,6)	
Ground Snow Load, Pg	[] PSF
Minimum Flat Roof Snow Load, Pf	[] PSF
Importance Factor, Is	[]
Terrain Category	[]
Exposure Factor, Ce	[]
Thermal Factor, Ct	[]
Slope Factor, Cs	[]

Live Loads and Superimposed Dead Loads (Notes 5,6)	
Foundations	
Active Equivalent Fluid Pressure	35 PSF/FT
Passive Equivalent Fluid Pressure	300 PSF/FT
Sliding Friction Coefficient	0.45
Allowable Bearing Capacity	1500 PSF
Minimum Frost Depth	12 IN
Foundation Schedule Located on:	S-x,xx
Referenced Datum	100'-0" = First Floor Elevation =33' USGS

- NOTES:**
- 1. The governing building code defines the applicable edition of referenced codes and standards. Where governing building code does not define referenced codes and standards, the latest edition shall be used.
 - 2. Minimum uniform and concentrated live loads as well as partition loads and applicable live load reductions are determined according to [Section 1607 of the IBC].
 - 3. See Load Keys for numerical definition and area designation of snow, live, and other gravity loads used in design.

SPECIAL INSPECTIONS AND TESTING						
Category/Material	Component/Work	Class				
		1	2	3	4	5
Soils and Foundations	Footing Soil Bearing Material		X			
	Compaction	X	X	X		
	Permanent Soil Retention Elements	X	X	X		
Structural Steel	Bolts in Snug Tight Joints	X	X			
	Connection Erection and Assembly	X	X			
	All Welds other than Complete Joint Penetrations Groove Welds	X	X			X
	Complete Penetration Groove Welds	X	X	X		X
Wood Framing	Galvanized Structural Steel Members	X	X			
	Prefabricated Wood Joists and Trusses	X	X		X	
	Interior Bearing Wall Studs	X	X			
	Exterior Stud Framing	X	X			
	Shear Wall Framing, Sheathing, Nailing, Anchors, and Holdowns	X	X			
	Drag Struts and Collectors	X	X			
	Floor/Roof Sheathing and Nailing	X	X			
Hangers and Connections		X	X			
	Mechanical, Electrical, and Plumbing Penetrations	X	X			

- 1. Special inspection and testing are to conform to chapter 17 of the IBC and the local building department.
- 2. Unless noted as continuous inspection, all inspections are periodic. Periodic inspection is defined as part-time or intermittent inspection of the work. It is the Special Inspector's responsibility to determine and coordinate the frequency and duration of the inspection relative to the Contractor's schedule and sequencing of the work in order to meet the inspection and reporting requirements.
- 3. Class 1: Inspection verification of size, location, quantity, and tolerance.
- 4. Class 2: Inspection and testing verification of strength, grade, classification, quality, density, proportions, and manufacturers certified test reports.
- 5. Class 3: Continuous inspection and verification of operations and conditions.
- 6. Class 4: Audit and inspection of fabrication facility's quality control program, and collection of facilities records during the course of fabrication for Class 2 and 3 inspections and testing.
- 7. Class 5: Verification of certifications.

NOTES SPECIFIC TO STRUCTURAL STEEL SPECIAL INSPECTIONS:

- 1. Special inspection and testing shall conform to all requirements of AISC 360 Ch. N, unless noted otherwise.
- 2. Special inspection shall be required for all shop fabricated members, unless the fabrication facility has been approved to perform such work without special inspection by an approved agency.
- 3. Special inspection and testing of welding shall conform to Tables N5.4-1, N5.4-2, and N5.4-3. 100% of all CJP groove welds shall be tested by approved nondestructive test methods (NDT). Where the fabricator performs the NDT, the special inspector shall review the fabricator's NDT reports.
- 4. Special inspection and testing of high-strength bolting shall conform to Tables N5.6-1, N5.6-2, and N5.6-3.
- 5. Special inspector shall inspect exposed cut surfaces and corners of HSS members for cracks after galvanizing.

SPECIAL INSPECTIONS AND TESTING FOR SEISMIC RESISTANCE	
Category/Material	Component/Work
Wood Framing in Seismic Category C, D, E, or F	Continuous special inspection of field gluing operation of elements in the seismic force-resisting system. Periodic special inspection of nailing, bolting, anchoring, and other fastening elements of the seismic force-resisting system, including wood shear walls, wood diaphragms, drag struts, braces, and hold-downs.

NOTES:

- 1. Special inspections and testing for seismic resistance is required per IBC 1705.12 and 1705.13

SPECIAL INSPECTIONS AND TESTING FOR WIND RESISTANCE	
Material	Component/Work
Wood Framing	Continuous special inspection of field gluing operation of elements in the main wind force-resisting system.
	Periodic special inspection of nailing, bolting, anchoring, and other fastening elements of the main wind force-resisting system, including wood shear walls, wood diaphragms, drag struts, braces, and hold-downs.
	Periodic special inspection of roof covering, roof deck, and roof framing connections, and exterior wall covering and wall connections to roof and floor diaphragms and framing.

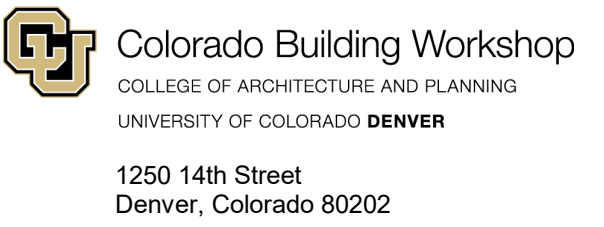
NOTES:

- 1. Special inspections for wind resistance shall be performed for structures in wind exposure Category B where Vasd is 120 mph or greater, or wind exposure Category C where Vasd is 110 mph or greater per IBC 1705.11.

FOUNDATIONS

GENERAL:

- 1. The foundations have been designed based on the design criteria and the Geotechnical Report referenced in the Structural Design Criteria section. Earthwork and foundation soil preparation shall be performed to provide soil properties meeting the design criteria.
- 2. Contractor shall provide continuous site drainage by a mechanical method to control surface and underground water as required to maintain a dry working site.
- 3. Foundation drainage and waterproofing is not shown or specified within the structural portion of the construction documents. Reference other portions of the construction documents for drainage, waterproofing and items associated with other disciplines.



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S-002

STRUCTURAL STEEL (NON-HIGH SEISMIC)

GENERAL:

- All structural steel work shall conform to AISC 360 and tolerances shall conform to AISC 303 unless noted otherwise. Contractor shall keep a copy of these references on site at all times.
- Materials – See Steel Materials Table
- Qualifications - Fabricator and Erector shall be experienced in fabrication and erection of projects of similar size and complexity.

TESTING:

- Tests and inspections shall be performed in compliance with AISC 360 and Chapter 17 of the IBC. Inspections include: Welding, high strength bolting, anchor rod placement, proper use of joint details, fabricated steel, and erected steel frame. Testing includes: UT of full penetration welds, bolt tensioning procedures, shear stud bend tests.
- See "Special Inspections and Testing" Table.

SUBMITTALS:

- Submittals shall conform to AISC 360.
- Submittals for structural steel shall include erection drawings, shop drawings, and mill test reports.
- Erection drawings shall include plan drawings at 1/8"=1'-0" minimum scale complete with sections, elevations, and details as required to properly erect the structural steel frame.
- Shop drawings shall include piece drawings which indicate cuts, connections, camber, holes, welds and dimensions as required for fabrication of the members. Part drawings are not required to be submitted unless specifically requested.

CONNECTIONS:

- Engineer of Record (EOR) has designed all connections. If a connection design is inadvertently omitted from contract documents the contractor shall request specific connection design from the EOR.
- Connection Design Forces: Factored LRFD values [Unfactored ASD values]
- Simple Beam Connections: Select connections with capacities equal to or greater than beam reactions shown on the drawings. Single sided connections shall be detailed to use the maximum number of bolt rows that can fit into the supported beam web. Double sided connections shall be detailed such that the angle or bent plate length is at least 60% of the supported beam "T" dimension.
- HSS Cap Plates: Provide 1/4" cap plates at top of all HSS columns, uno.
- Unframed end of wide flange beams: At the end of wide flange beams without incoming framing or other means of restraint of rotation of the beam, provide a pair of 3/8" full depth stiffeners or a 3/8" full depth end plate at the end of the beam.

BOLTS:

- Where indicated on the drawings as slip critical and where oversized or long-slotted holes are utilized in shear, bolted joints shall be slip critical. Faying surfaces shall be prepared to meet the requirements of a Class A surface, and bolts shall be installed to the fully tensioned condition.
- Where bolts are subject to non-static loading, are utilized to interconnect parts of a built up compression member, or all Group B fasteners loaded in tension shall be installed to the fully tensioned condition.
- Bolts not subject to the requirements for slip critical connections and not required to be fully tensioned may be installed to the snug-tight condition.
- A307 bolts may be used only where indicated.

WELDS:

- Fillet Welds: Size as indicated, but not less than AISC minimum size.
- Groove Welds: Full penetration unless noted otherwise.
- Welds are continuous unless noted otherwise.

COLUMN BASE PLATES:

- Provide flowable grout with a minimum compressive strength tested in accordance with ASTM C109 to achieve a strength of 3,000 psi after one day and the minimum of two times the concrete strength that the base plate is bearing on or 8,000 psi after 28 days.
- Grout shall show a minimum positive expansion of 0.03% when tested in accordance with ASTM C827.
- For base plates greater than 21" in length, provide a single 3" diameter witness hole near the center of the plate.
- Trim grout to 45 degrees where bearing surface allows. Finish vertical when edge of bearing surface aligns with edge of bearing plate.
- Grout column bases prior to pouring any elevated slab on deck.

ACCESSORIES:

- Headed Stud Anchors: Shop weld except where applied through metal deck or where shop installation would result in a tripping hazard.

SHOP CLEANING AND PAINTING:

- Uncoated Steel: All steel not specifically indicated as painted steel, steel to receive spray-on-fireproofing or to be galvanized, and faying surfaces of slip critical connections shall be uncoated. Prepare surface per SSPC-SP1.
- Primed Steel: Steel indicated to painted, with no specific paint requirements stated, shall have the surface prepared per SSPC-SP2 minimum and receive one coat of fabricator's standard rust-inhibitive primer paint applied to a minimum dry-film thickness of 1 mil.
- Galvanized Steel: Steel indicated to be galvanized shall be cleaned, prepared, and galvanized in accordance with ASTM A123. Repair minor defects, damaged areas, and welded joints in accordance with ASTM A780. Provide vent holes as required in tube members. Provide vent hole plugs at all vertically oriented tubes.
- Other specified coatings: Where indicated on the drawings, provide specified coating system as indicated. Clean and prepare steel as required by the specification or coating manufacture.

ERECTION:

- No final bolting or welding shall be performed until as much of the structure which will be stiffened thereby has been properly aligned.
- Field correction of fabrication or other errors will be permitted only when approved by the EOR. Finish gas-cut sections in accordance with AWS D1.1.

STEEL MATERIALS DESIGNATION	
Material	Standard
W and WT Sections	ASTM A992 (50ksi) or ASTM A572 Gr. 50 (50ksi)
M, S, C, MC, L, MT, ST Sections	ASTM A36 (36ksi)
HP Sections	ASTM A572 Gr. 50 (50ksi)
Pipe	ASTM A53 Gr. B (35ksi)
Rectangular HSS	ASTM A500 Gr. C (50ksi)
Round HSS	ASTM A500 Gr. C (46ksi)
Plates, Bars, and Threaded Rod	
- typical	ASTM A36 (36ksi)
- when noted as 50ksi	ASTM A572 Gr. 50 (50ksi)
Anchor Rods	ASTM F1554 Gr. 55 w/ Supplement S1
Bolts	
- typical (Group A)	ASTM F3125 Grade A325 or F1852
- where noted as Group B	ASTM F3125 Grade A490 or F2280
- where indicated as A307	ASTM A307 Gr. A
Nuts	ASTM A563, Heavy Hex
Washers	ASTM F436, except plate washers to be ASTM A36
Direct-Tension-Indicator Washers	ASTM F959
Headed Stud Anchors	ASTM A108/A29
All Threaded Rod and Threaded Studs, UNO	ASTM A36
High Strength Threaded Studs	ASTM A29 or A572
Weld Electrodes	E70 (70ksi)

BOLT GRADES	
Standard	Bolt Size, Joint Type and Designation on Drawings
3/4"ø Bolt, ASTM F3125 Grade A325 or F1852	3/4"ø A325 Bolt
3/4"ø Bolt, ASTM F3125 Grade A325 or F1852 with Class A Faying Surface and Bolt Tightened to Slip Critical	3/4"ø A325 SC-A Bolt
1"ø Bolt, ASTM F3125 Grade A490 or F2280	1"ø A490 Bolt
1"ø Bolt, ASTM F3125 Grade A490 or F2280 with Class A Faying Surface and Bolt Tightened to Slip Critical	1"ø A490 SC-A Bolt
1/2"ø or 3/4"ø Bolt, ASTM A307 Gr. A	1/2"ø or 3/4"ø A307 Bolt

NOTES:

- Reference plan, details, and connection tables for bolt size and joint type.
- All bolts are snug tight, unless indicated on plan or details as slip critical or fully tensioned.
- Holes may be short slotted transverse to applied load, unless plans, details, or connection tables indicate a standard or oversize hole.
- Where bolts are indicated as slip critical or fully tensioned, pretension bolt as defined by AISC 360, Table J3.1.
- Class A faying surfaces are unprimed surfaces or hot dip galvanized surfaces with hand wire brush roughening, as defined by AISC 360.
- Class B faying surfaces are blast cleaned surfaces as defined by AISC 360.
- Bolted connections to follow all requirements indicated in the Specification for Structural Joints Using High Strength Bolts (RCSC).

WOOD FRAMING

GENERAL:

- All wood construction work shall conform to ANSI/AF&PA NDS unless noted otherwise. Contractor shall keep a copy of these references on site at all times.
- Materials – See Wood Materials Tables
- Qualifications – Carpenter shall be experienced in construction of projects of similar size and complexity and shall be knowledgeable of conventional light frame construction practices and minimum nailing requirements of the IBC.

SUBMITTALS:

- All submittals shall be reviewed by the Contractor prior to Engineer/Architect review and shall bear Contractor's review stamp. Contractor is responsible for reviewing submittals for conformance with all contract documents and coordination with all trades.
- Submittals are required for the following wood framing elements: premanufactured wood trusses, heavy timber framing, log framing, glulam framing, and manufactured framing including I-joists open web joists, and structural composite lumber in shear walls.
- Premanufactured truss submittals shall include dimensioned layout drawings that identify truss types, geometries, and locations as well as truss design calculations that indicate all design loads. Calculations shall be signed and sealed by the manufacturer's engineer licensed in the state where the project is located.
- Heavy timber submittals shall include shop drawings for trusses including connection material and details.
- Log framing submittals shall include shop drawings for trusses including connection material and details.
- Glulam framing submittals shall include shop drawings for trusses including connections.
- Manufactured framing submittals shall include dimensioned layout plans indicating joist and beam types, locations, and connection hardware.
- Wood I-joist and wood open web joist submittals shall include dimensioned layout plans indicating joist types, locations, and connection hardware.
- Structural composite lumber shear wall framing submittals shall include a current ICC-ES report.
- Rim Board: Rim Board shall confirm to ANSI/APA PRR-410, grade B1 or better with a minimum thickness of 1 1/4" and match the floor or roof system depth. [Rim Board shall be Structural Composite Lumber (SCL) with a minimum thickness of 1 3/4" and matching the floor or roof system depth.]

PRODUCTS:

- All wood framing shall be at a moisture content of 19% or less and shall be marked S-Dry (surface dried) or KD (kiln dried).
- Unless noted otherwise, all sizes noted on these drawings are nominal. Actual sizes are based on "Minimum Dressed-Dry" dimensions according to American Softwood and Lumber Standard PS20-10. Members which the architect, engineer, or inspector judge to be misgraded shall be reinspected by a qualified lumber grader. Members which have permissible grade characteristics in such combination to affect the performance of the member are also subject to replacement at the discretion of the architect, engineer, or inspector.
- Unless noted otherwise, all glulam framing sizes are minimum dressed dimensions in accordance with American Institute of Timber Construction AITC113.
- Unless noted otherwise, all manufactured framing sizes are based on specified manufacturers published information.
- Wall studs to be Douglas Fir-Larch (DFL) No2 [Hem-Fir (HF) No2, Laminated Strand Lumber (LSL)] @16"OC, unless noted otherwise in the drawings.
- Wood I-joists: where framing members are noted TJ1 on the drawings, use engineered products by Weyerhaeuser or approved equal.
- Wood open-web joists: where framing members are noted "Red-L", "Red-LT", "Red-W", "Red-S", "Red-M", and "Red-H", use engineered products by Red Built or approved equal.
- Structural Panels: Sheathing for roofs and walls shall conform to APA PS-2 standards. All panels shall be Exposure 1, unless noted otherwise.
- Sills: Sill plates shall be pressure treated Douglas Fir-Larch stamped to show compliance with AWWA standards.
- Shear wall framing members (including studs, plates, and blocking) to be Douglas Fir-Larch (DFL) or one of the following approved Structural Composite Lumber products:
 - Tolko - 1.35E LSL, 1.55E LSL
 - Louisiana Pacific - 1.35E LSL (or higher), 1.5E LVL (or higher)
 - Boise Cascade - 1.3E LVL thru 2.2E LVL
 - Weyerhaeuser - 1.6E LSL

For products not on this list that are intended for shear wall use, submit code report to the Engineer for review prior to procurement.

WOOD FRAMING (continued)

CONNECTORS:

- All bolts, metal connectors, hangers, anchors, and fasteners in contact with preservative treated wood shall be hot dipped galvanized [G90 or G185] or stainless steel type 304 or 316.
- Provide 5/8" diameter anchor bolts @48"OC at the top of all foundation elements for attaching sill plates, except at shear walls. See Shear Wall Nailing Schedule for shear wall anchor bolt spacing. As a minimum, provide two bolts, each within 12" max and 5" min of the ends of each piece of sill plate.
- J and L type bolts are allowed for anchorage of wood sills. Anchor material to be ASTM F1554 Grade 36 (min).
- Anchor bolts shall be cast into concrete or grouted into masonry with a minimum embedment of 7" .
- Provide plate washers at all shear wall anchor bolt connections to wall plates. See "Typical Wood Shear Walls - Nailing Schedule and Details" for more information.
- Nailing shall conform to the minimum requirements contained in Table [2304.10.2,2304.10.1, 2304.9.1] of the IBC unless more stringent requirements are shown on these drawings or in these notes.
- All nails are to be steel common wire nails and conform to ASTM F1667.
- Bolts shall confirm to ASTM A307 Grade A.
- Pre-drill nail holes when necessary to prevent splitting.
- Steel plates for wood construction shall conform to ASTM A36.
- Bolts are to conform to ASTM A307.
- All exposed bolts in wood structure which are not in contact with preservative treated wood shall be plain, uncoated steel.
- Holes for bolts shall be 1/16" oversized.
- Retighten all bolts prior to closing in.
- Lag screws shall penetrate the main member a minimum of eight times the shaft diameter unless noted otherwise.
- Diagonal (toe-nail) lag screws shall be installed with a minimum edge distance of four times the shaft diameter.

INSTALLATION:

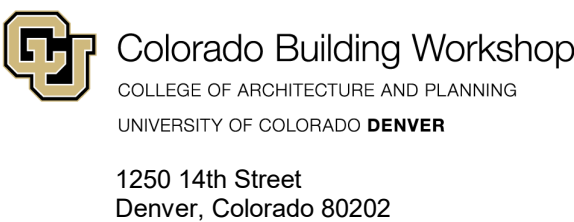
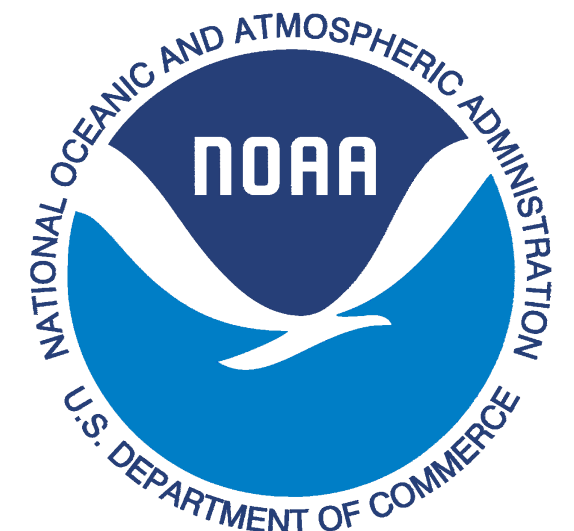
- Built-up Columns: Where hidden in a wall, at contractor's option, wood columns may be built-up from 2x laminations. Laminations shall be stitched nailed with staggered 16d@4"OC. Do not splice laminations.
- Truss rods and connections shall be tightened after installation and leveling.
- At roofs and floors, lay panels with long dimension perpendicular to supports with short edges staggered.
- Glue and nail floor sheathing to supports with [8d@4"OC edges, 8d@6"OC edges] and 8d@12"OC field.
- Nail roof sheathing to supports with [8d@4"OC edges, 8d@6"OC edges] and 8d@12"OC field.
- See plans for areas of special blocking and nailing.
- Nail vertical sheathing to supports with 8d@6"OC edges and 8d@12"OC field for walls not designated as shear walls.
- Where shear walls are noted on the plans, the sheathing is used as part of the lateral load resisting system. See typical details for attachment of sheathing to supports for wood structural panel shear walls.

FRAMING TOLERANCES:

- Layout of walls and partitions: within 1/4" of intended position.
- Plates and runners: 1/4" in 8' from a straight line.
- Studs: 1/4" in 8' out of plumb, not cumulative.
- Face of framing: 1/4" in 8' from a true plane.

COMMON NAIL DIMENSIONS		
Common Nail (Steel Wire)	Minimum Diameter (in)	Minimum Length (in)
6d	0.113	2
8d	0.131	2 1/2
10d	0.148	3
12d	0.148	3 1/4
16d	0.162	3 1/2
20d	0.192	4

DESIGN VALUES FOR DIMENSIONAL LUMBER				
Species & Grade	Flexural Stress	Compressive Stress	Horizontal Shear Stress	Modulus of Elasticity
DOUGLAS FIR-LARCH (DFL)				
Select Structural	1,500 psi	1,700 psi	180 psi	1,900 ksi
No1	1,000 psi	1,500 psi	180 psi	1,700 ksi
No2	900 psi	1,350 psi	180 psi	1,600 ksi
Stud	700 psi	850 psi	180 psi	1,400 ksi
SPRUCE-PINE-FIR (SPF)				
Select Structural	1,250 psi	1,400 psi	135 psi	1,500 ksi
No1/No2	875 psi	1,150 psi	135 psi	1,400 ksi
Stud	675 psi	725 psi	135 psi	1,200 ksi
HEM-FIR (HF)				
Select Structural	1,400 psi	1,500 psi	150 psi	1,600 ksi
No1	975 psi	1,350 psi	150 psi	1,500 ksi
No2	850 psi	1,300 psi	150 psi	1,300 ksi
Stud	675 psi	800 psi	150 psi	1,200 ksi



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S-003

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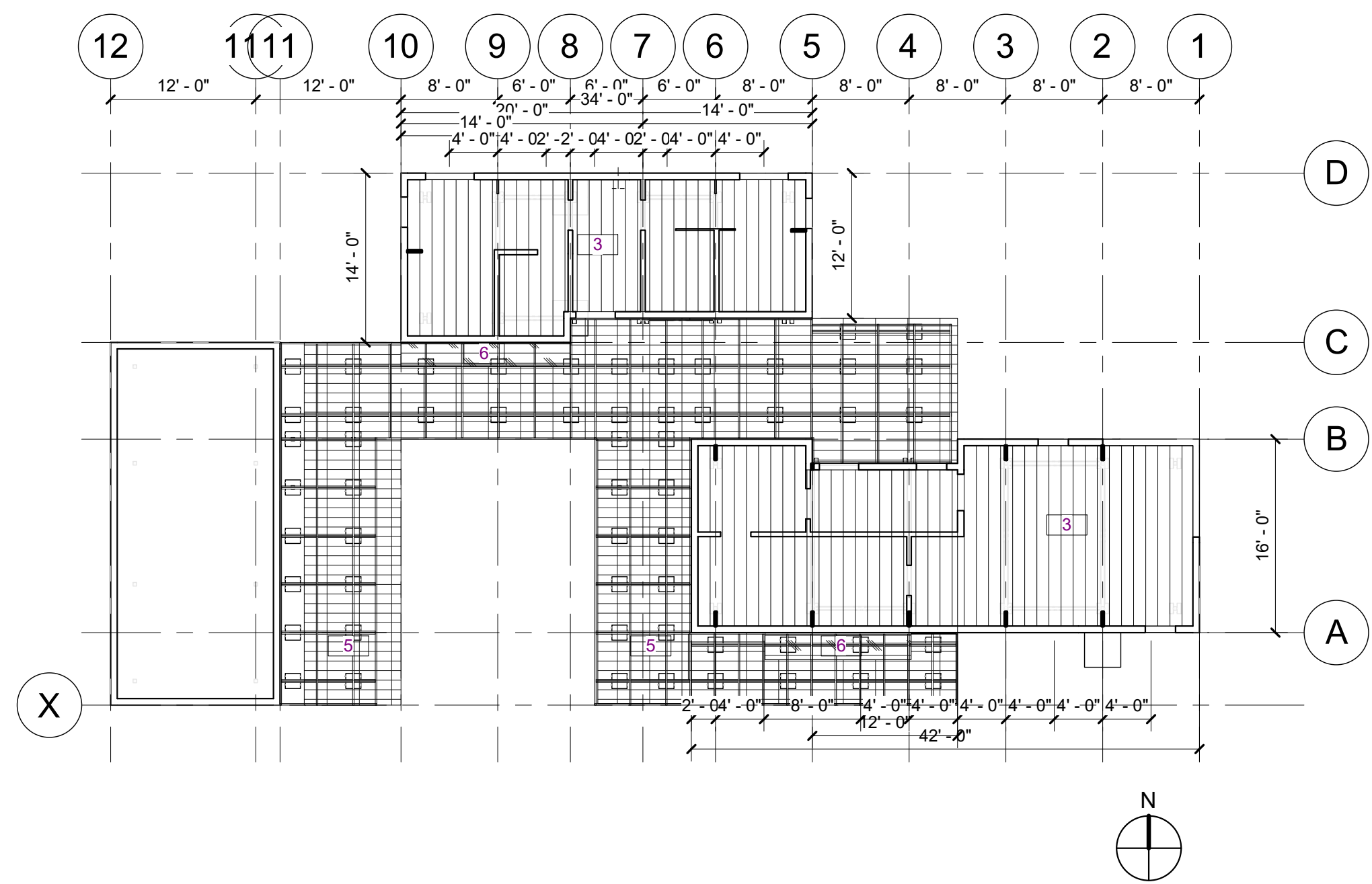
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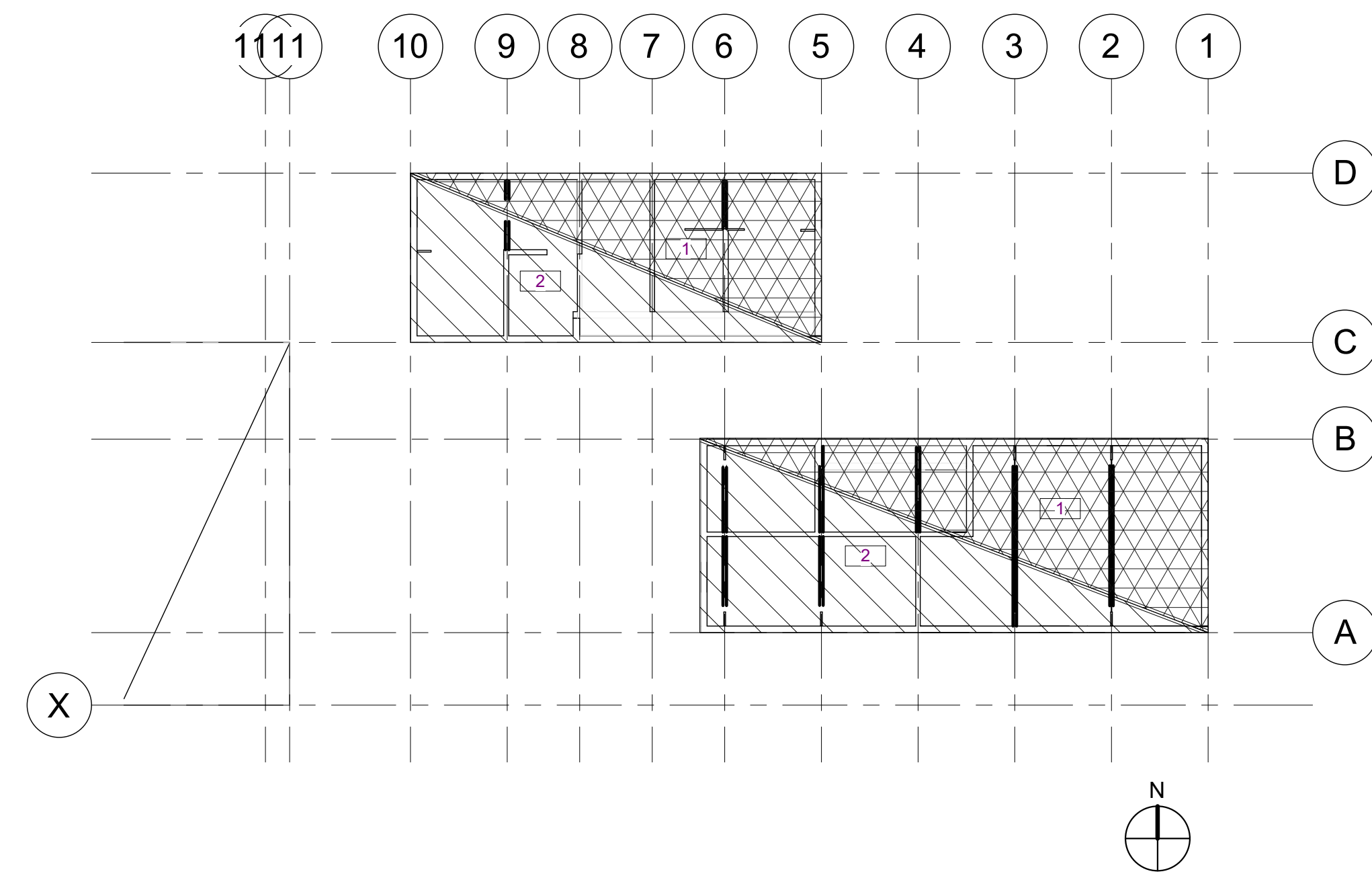
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1 FLOOR LOAD PLAN
S-004 3/32" = 1'-0"



2 ROOF LOAD PLAN
S-004 3/32" = 1'-0"

LOAD AREA	PATTERN	SELF WEIGHT (psf)	SUPERIMPOSED LOADS				DESCRIPTION OF LOAD	NOTES
			DEAD LOAD (psf)	LIVE LOAD (psf)	SNOW LOAD (psf)	VERT WIND LOAD (psf)		
1	[Pattern 1]	10	5	20	81	--	TYPICAL ROOF	--
2	[Pattern 2]	10	25	20	81	--	TYP ROOF W/ PV	
3	[Pattern 3]	10	45	40	--	--	TYPICAL FLOOR	
4	[Pattern 4]	60	40	125	--	--	LIGHT STORAGE	
5	[Pattern 5]	??	??	60	??	--	TYPICAL DECK	
6	[Pattern 6]	??	??	??	??	--	TYP DECK W/ STORAGE	

NOTES:

- STAIRS TO BE DESIGNED BY STAIR MANUFACTURER. SELF-WEIGHT AND SUPERIMPOSED DEAD LOADS TO BE DETERMINED BY STAIR MANUFACTURER.
- DRIFTING SNOW LOADS ARE DEFINED BY DIAGRAM TO THE RIGHT.
- ROOF LIVE AND SNOW LOADS DO NOT ACT CONCURRENTLY.
- VERTICAL WIND LOADS ARE MWFRS LOADS AND HAVE NOT BEEN REDUCED BY DEAD LOADS. NEGATIVE LOADS ARE UPLIFT. RE: STRUCTURAL DESIGN CRITERIA TABLE FOR COMPONENTS AND CLADDING DESIGN CRITERIA.
- NEGATIVE LOADS ARE UPLIFT AND HAVE NOT BEEN REDUCED BY DEAD LOADS.
- WHERE PREMANUFACTURED ROOF TRUSSES OCCUR, APPLY LOADS AS FOLLOWS:
CASE #1: APPLY TABULATED LOADS TO TOP CHORDS.
CASE #2: APPLY TABULATED LOADS TO TOP CHORDS W/ 8 PSF LOAD REDUCTION. APPLY 8 PSF DEAD LOAD TO BOTTOM CHORD. APPLY XX PSF LIVE LOAD TO BOTTOM CHORD.

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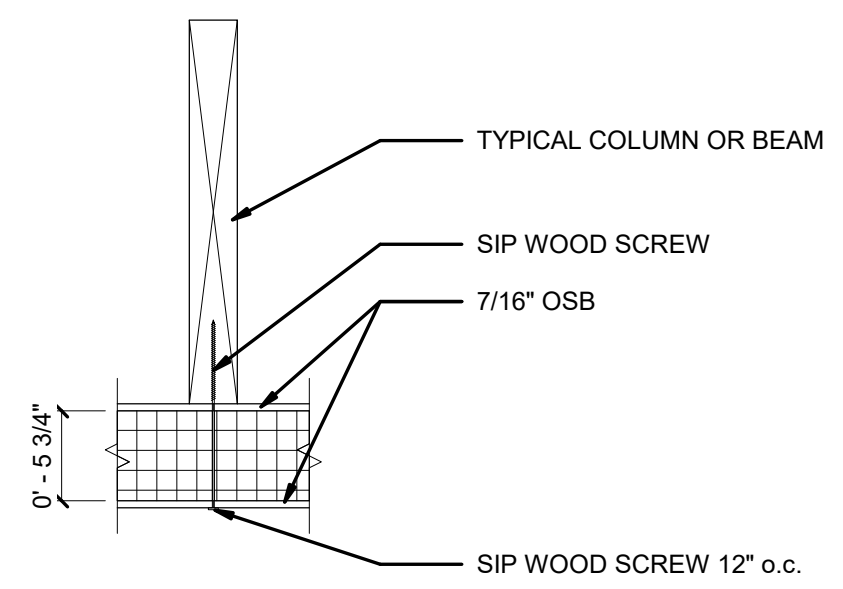
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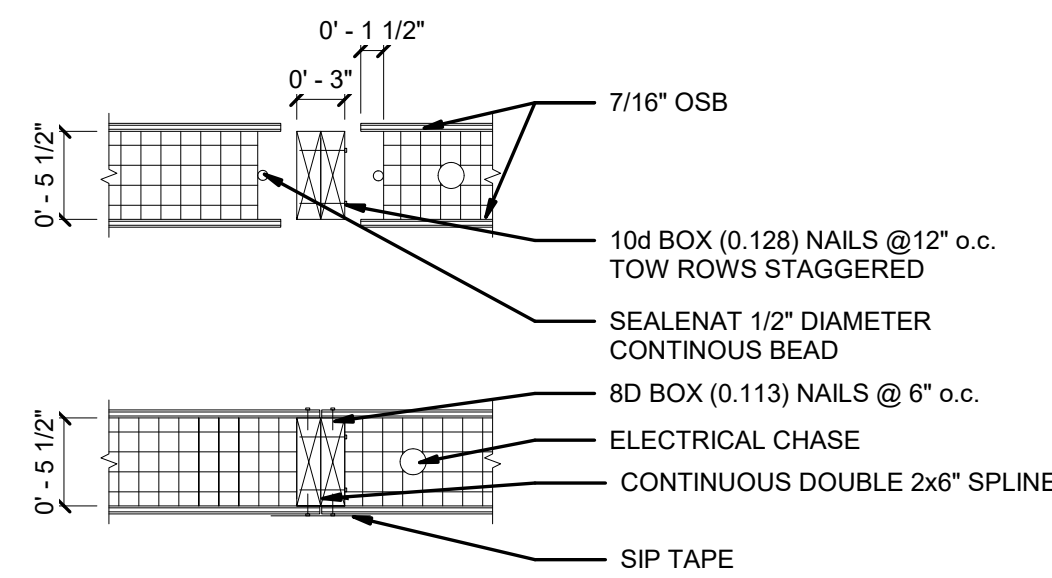
TYPICAL
DETAILS

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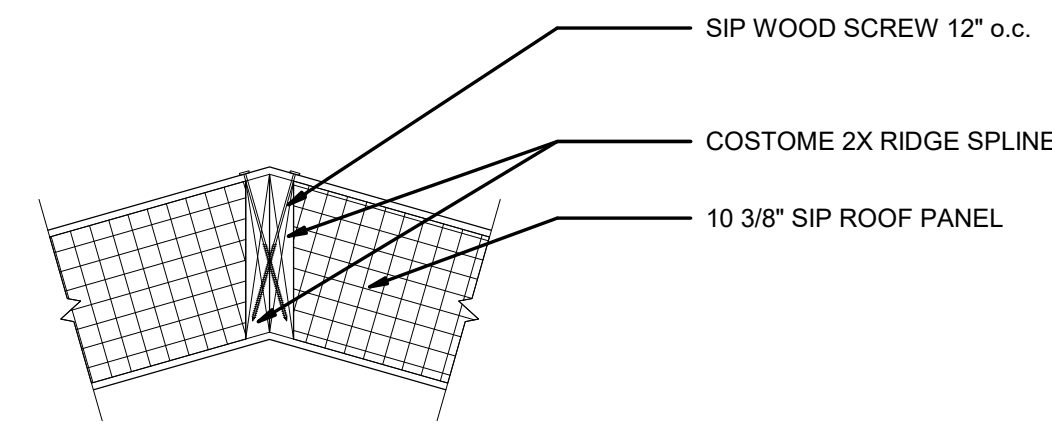
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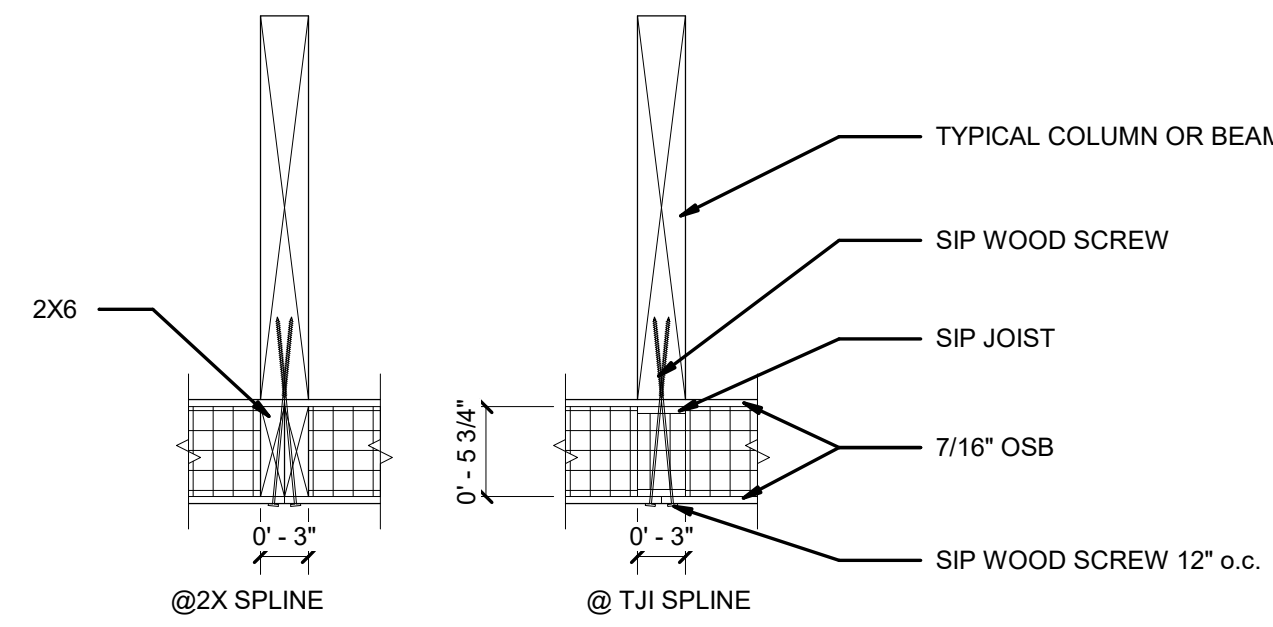
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S-005
TYPICAL SIP PANEL DETAIL COLUMN CONNECTION
1" = 1'-0"



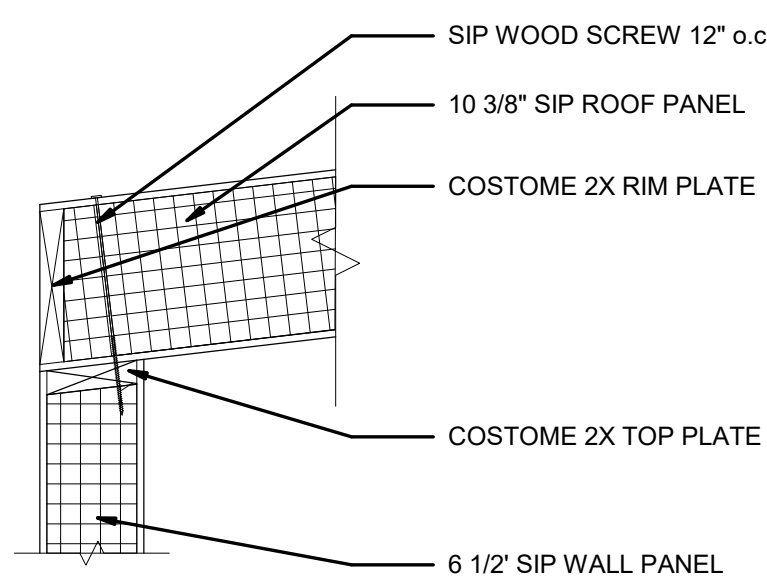
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S-005
TYPICAL SIP PANEL DETAIL 2X SPLINE
1" = 1'-0"



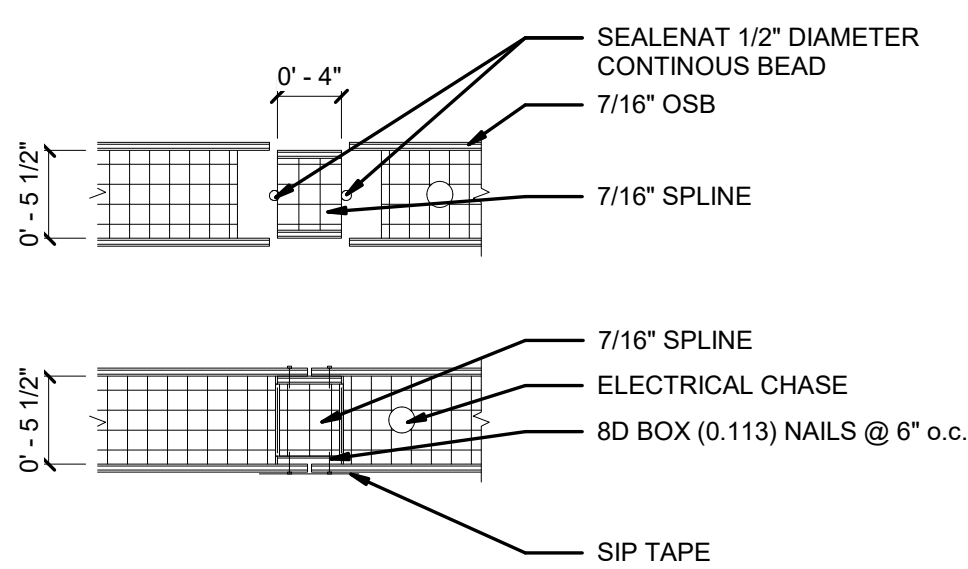
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S-005
TYPICAL SIP PANEL DETAIL ROOF SPINE
1" = 1'-0"



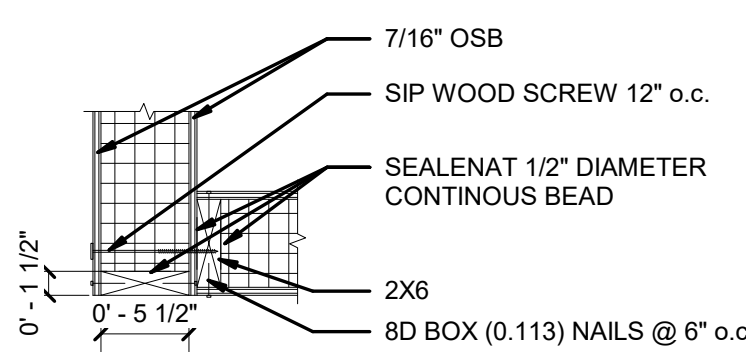
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S-005
TYPICAL SIP PANEL DETAIL COLUMN CONNECTION @ SIP JOINT
1" = 1'-0"



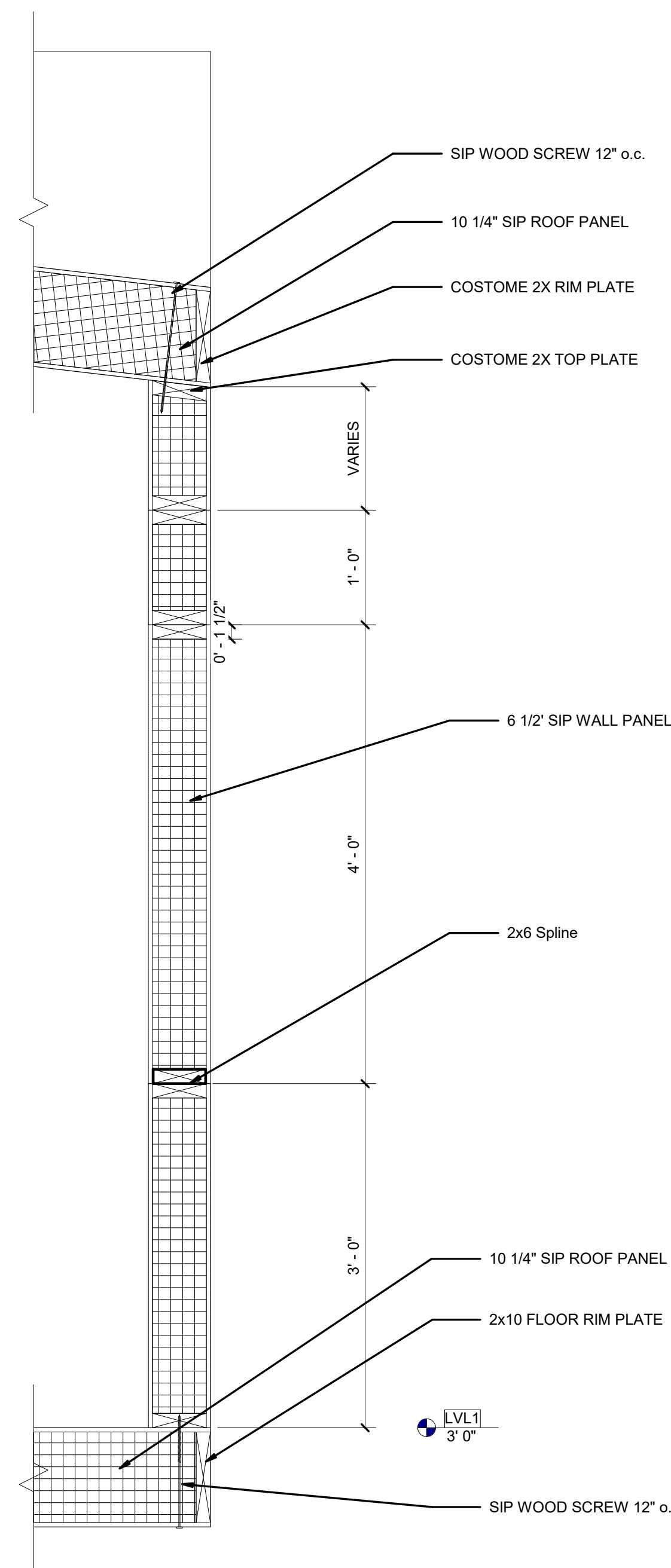
7
S-005
TYPICAL SIP PANEL DETAIL WALL TO ROOF
1" = 1'-0"



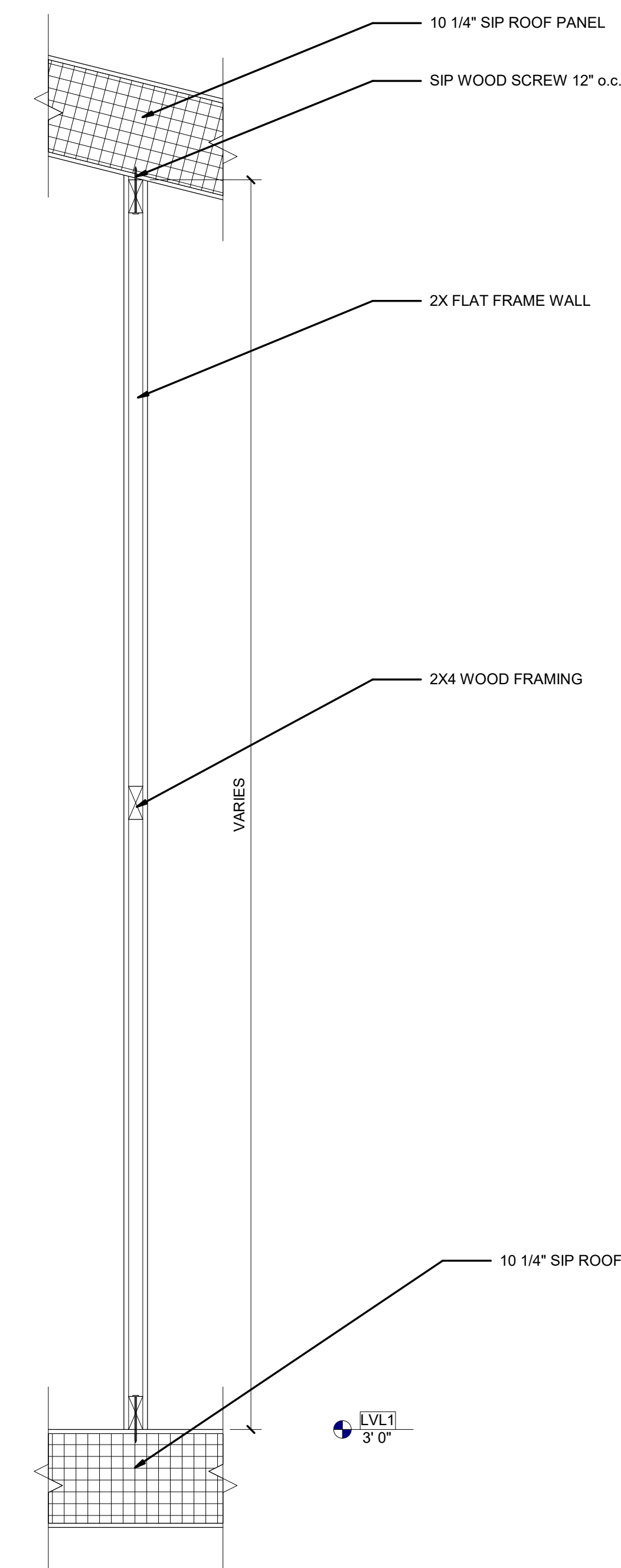
5
S-005
TYPICAL SIP PANEL DETAIL SIP SPLINE
1" = 1'-0"



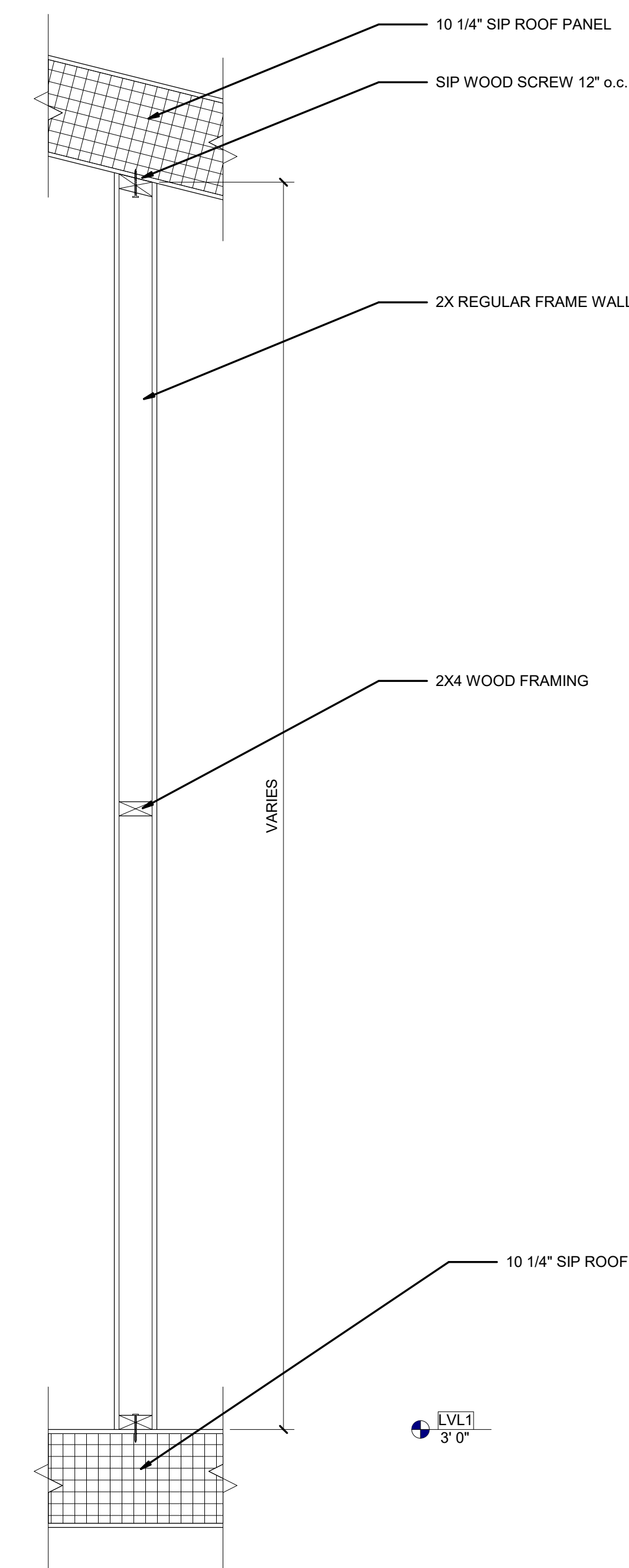
4
S-005
TYPICAL SIP PANEL DETAIL EXTERIOR CORNER
1" = 1'-0"



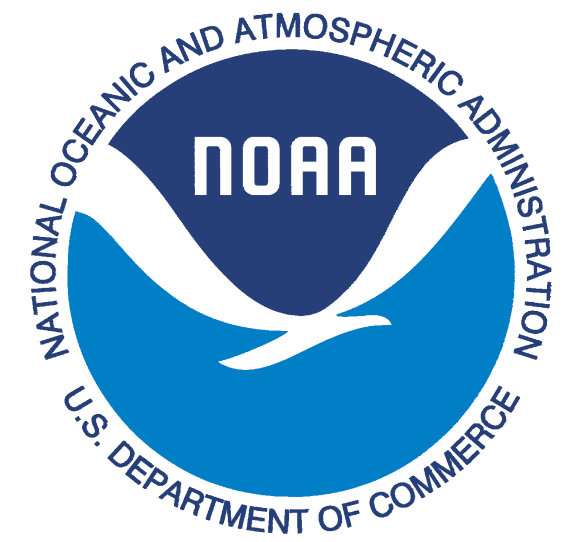
10
S-005
TYPICAL SIP PANEL DETAIL WALL SECTIONS
1" = 1'-0"



9
S-005
TYPICAL WALL SECTION FLAT 2X STICK FRAME
1" = 1'-0"



6
S-005
TYPICAL WAL SECTION 2X STICK FRAME
1" = 1'-0"



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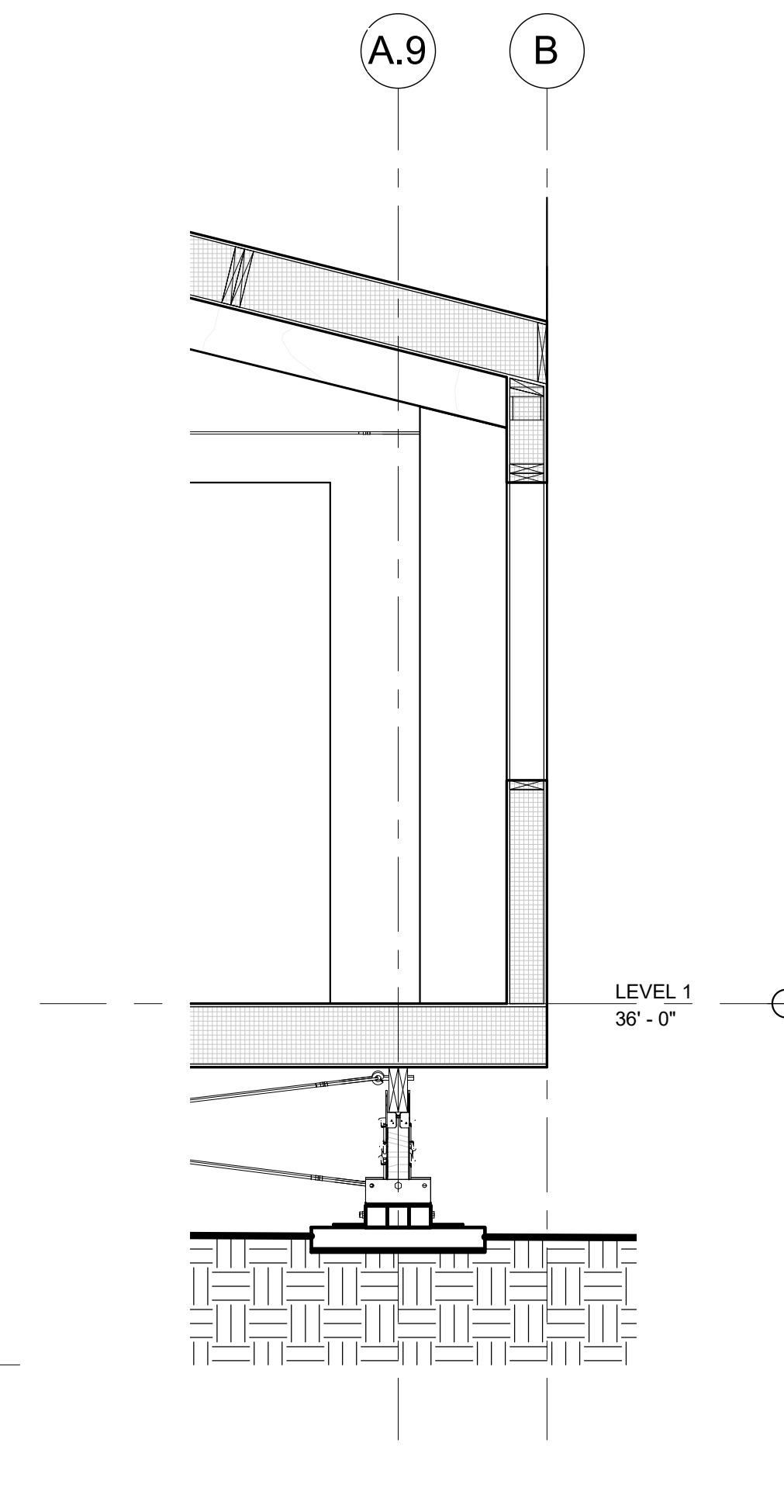
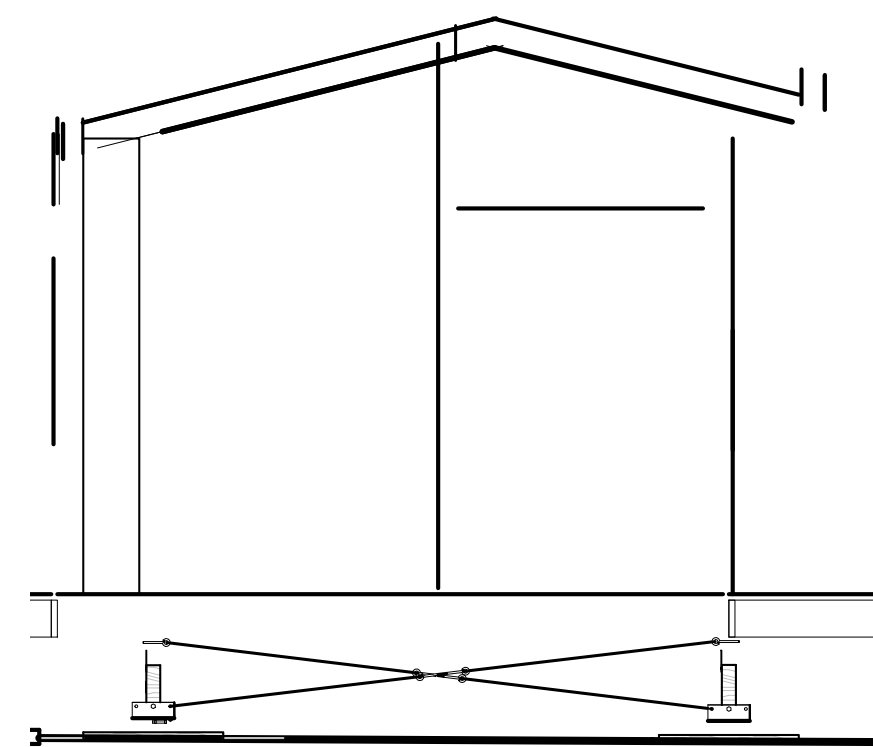
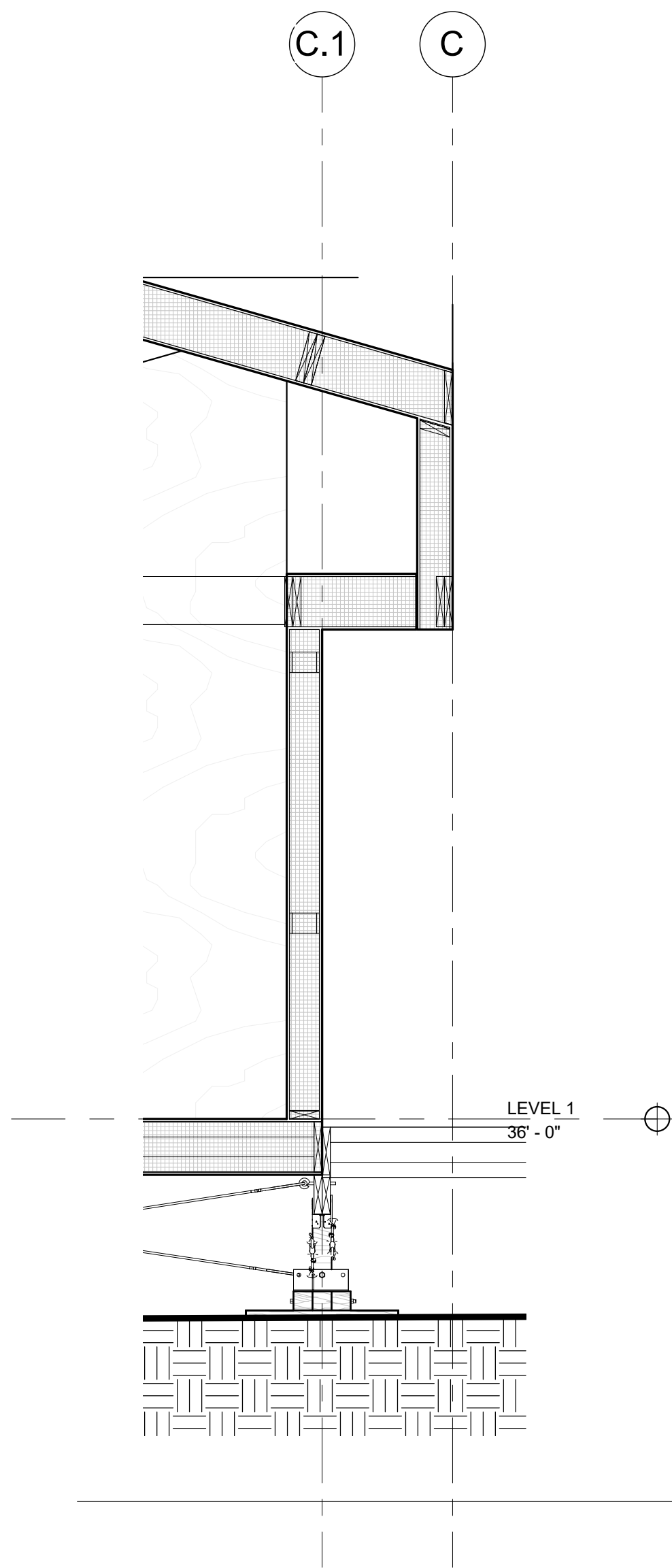
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REV. DATE:	REV. NAME:	REV. NO.:

TYPICAL WALL SECTIONS

date: 02/27/22
scale: As indicated

S-006



BALLAST SCHEDULE:

??????

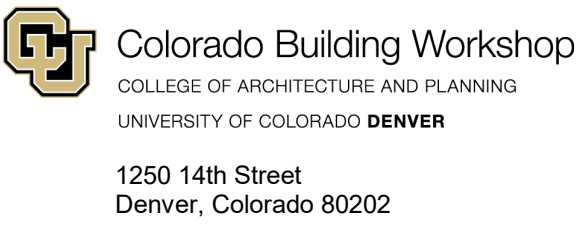
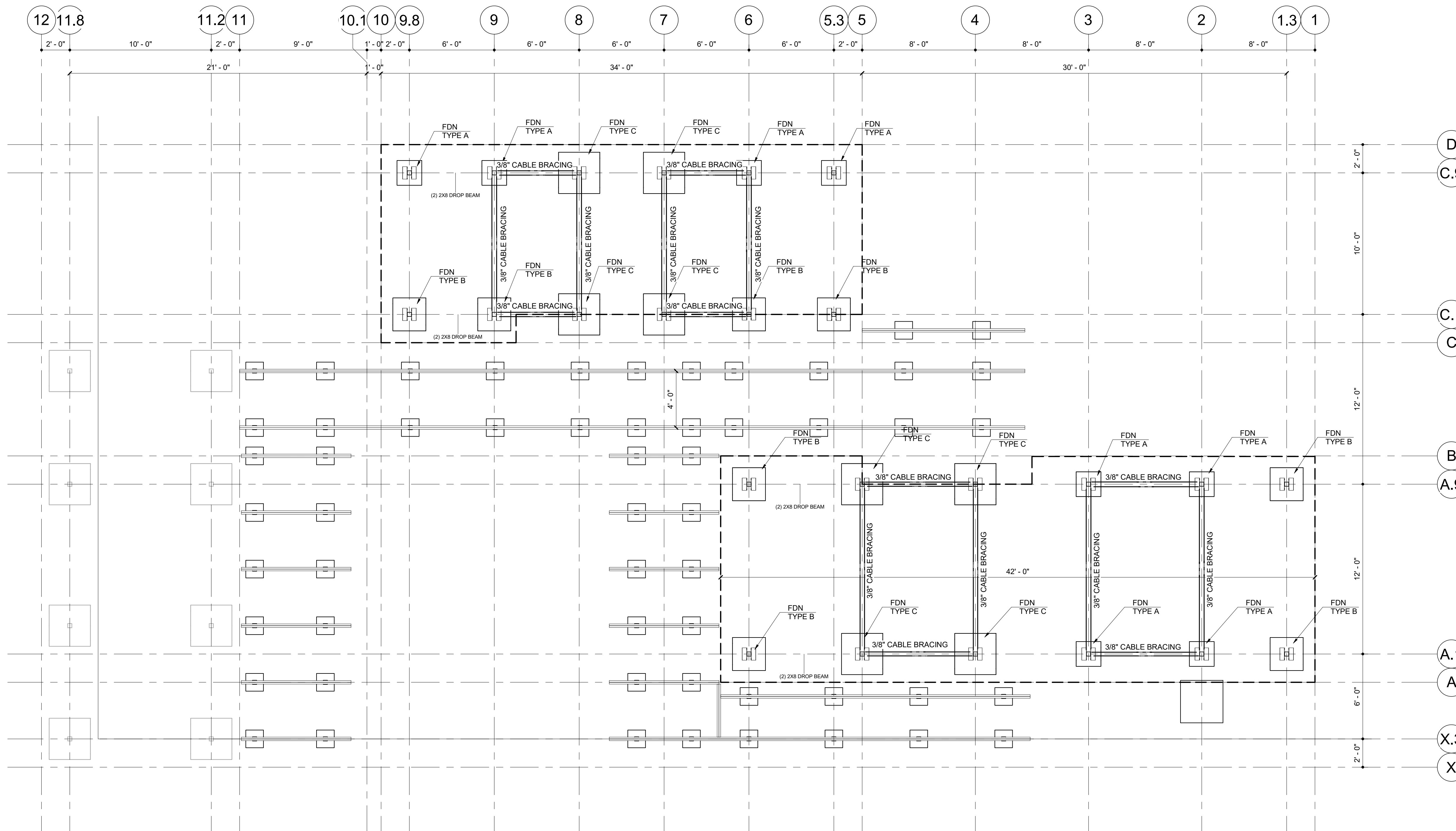
FOOTING SCHEDULE:

FDN TYPE A = 6PLY (21X21 NOMINAL)
FDN TYPE B = 8 PLY (32X32 NOMINAL)
FDN TYPE C = 10PLY (40X40 NOMINAL)

FOUNDATION PLAN NOTES:

1. All foundation lumber shall be pressure treated Hem Fir No. 2 or Better u.n.o.
2. All steel hardware shall be corrosion resistant
3. See footing schedule for footing size and buildup
4. See sheet S-400 for typical foundation details
5. X-Brace shall be capable of providing a safe working load of x,xxxlb in tension
6. Columns shall be 4x4 u.n.o.
7. Top of footing elevation TBD by contractor based on topography at site, maintaining a column height between xx" (min) and xx" (max)
8. Ballast weight and corresponding volume shown is minimum required based on gabion filled basket and rock density of 100pcf. contractor to determine final configuration of ballast to provide minimum weight shown

update drop beams



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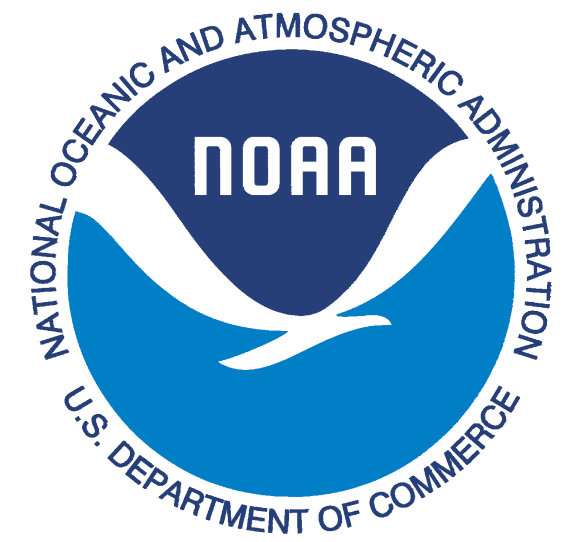
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REV. DATE:	REV. NAME:	REV. NO.:

FOUNDATION PLAN

date: 02/07/22
scale: 1/4" = 1'-0"

S-100



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REV. DATE: REV. NAME: REV. NO:

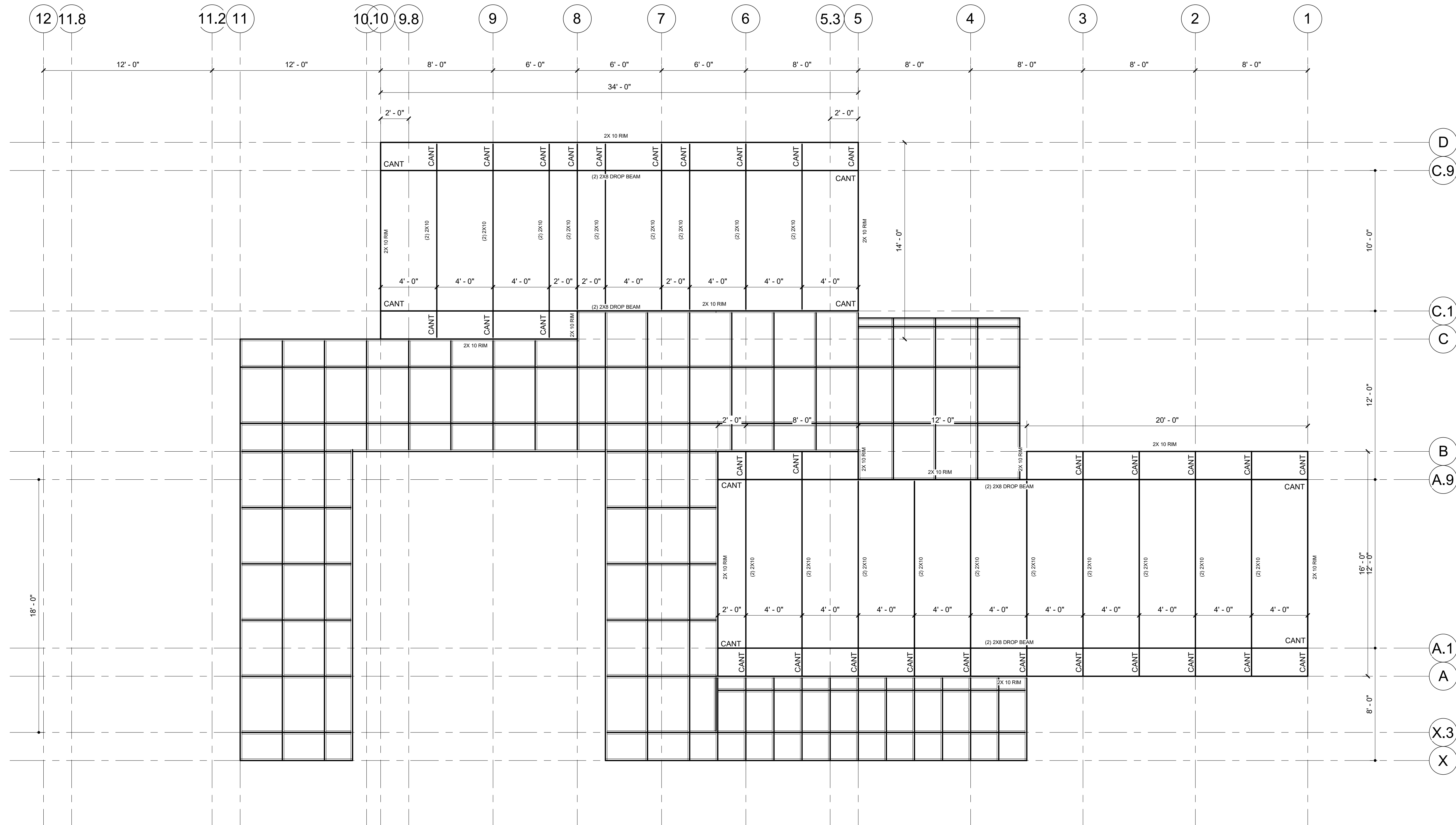
**FLOOR FRAMING
 PLAN**

date: 03/01/21
 scale: 1/4" = 1'-0"

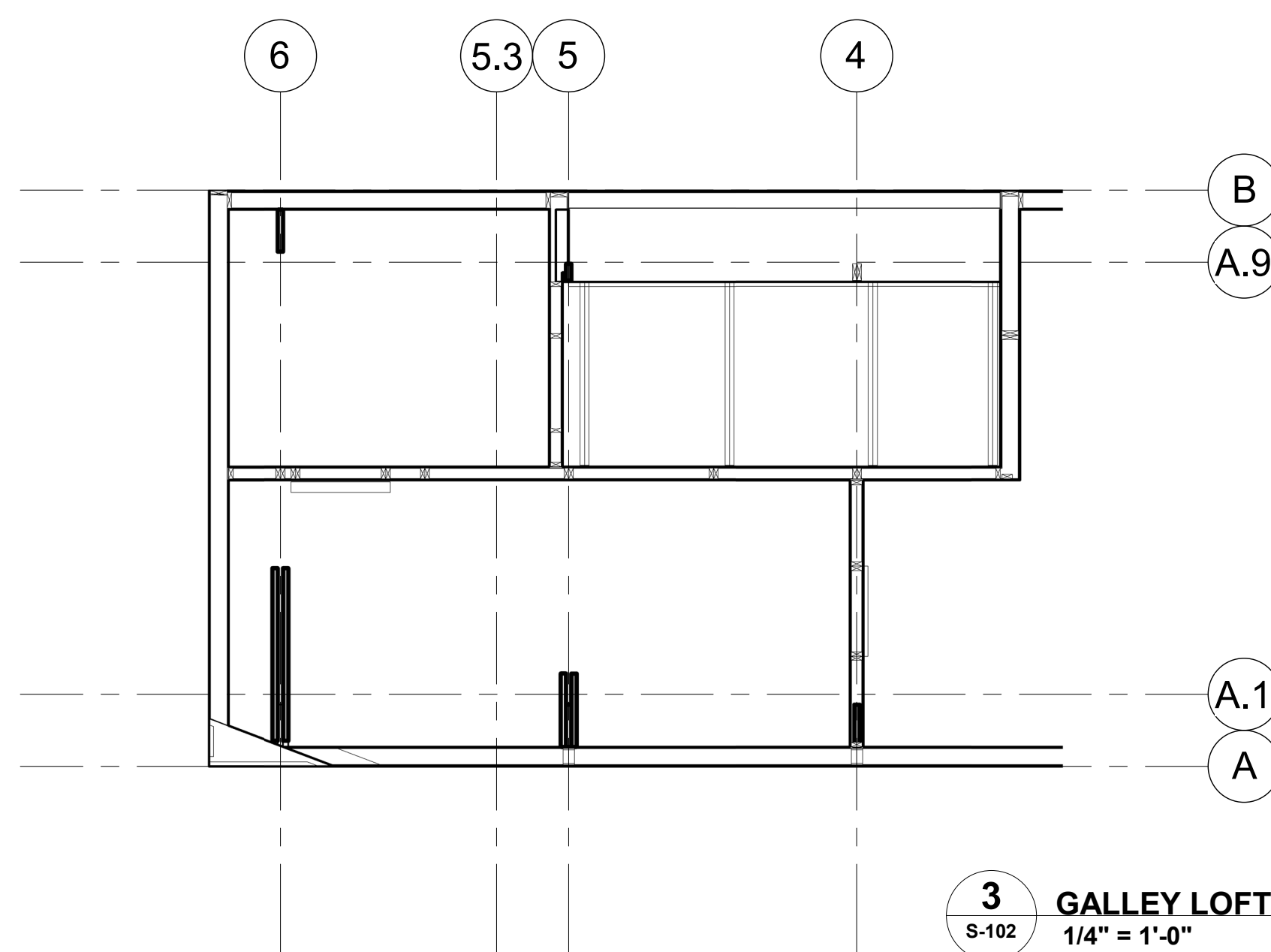
S-101

FLOOR FRAMING PLAN NOTES:

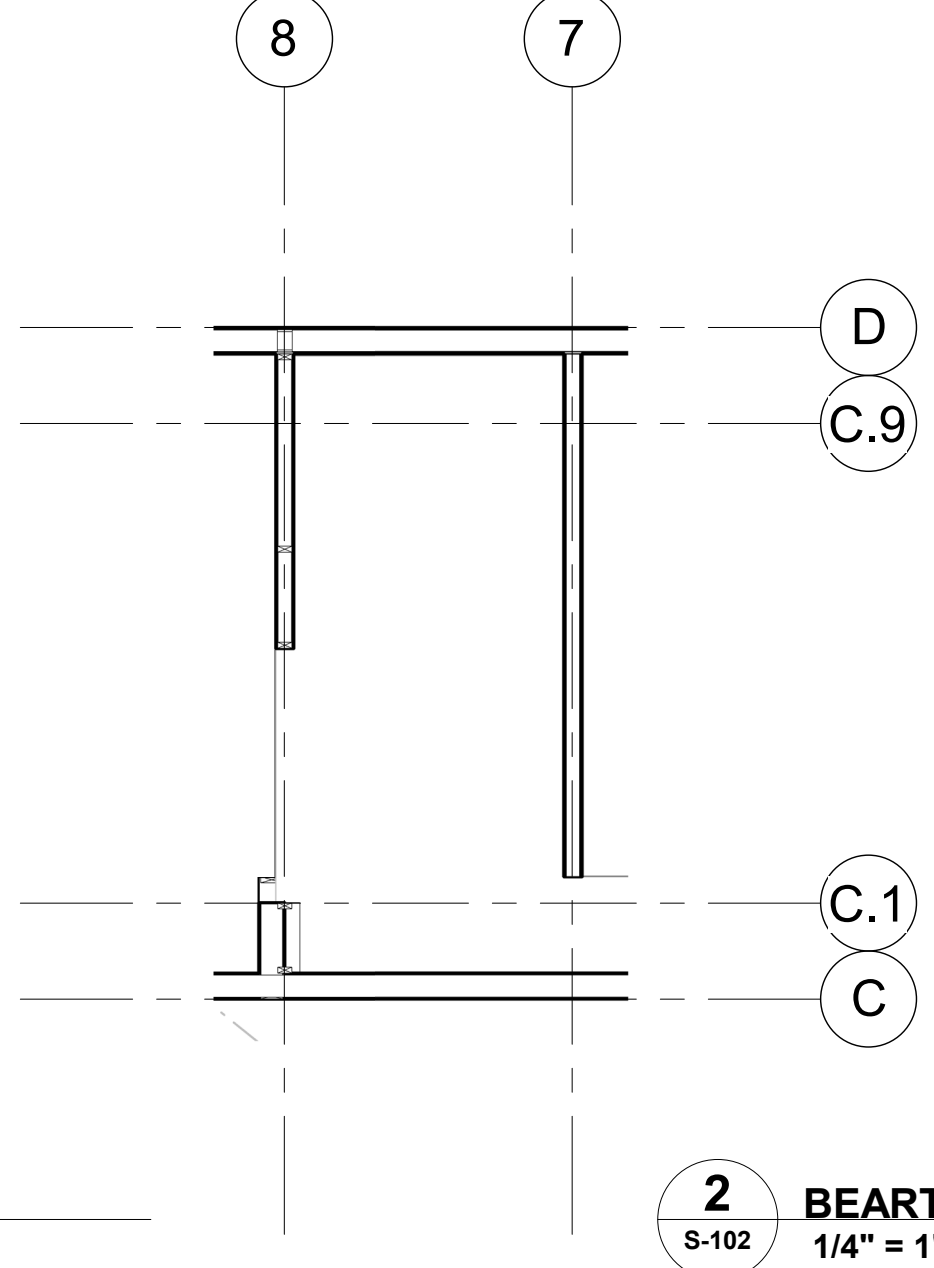
- 1.
- 2.
- 3.
- 4.
- 5.
- 6.



1 FLOOR FRAMING PLAN
 S-101
 1/4" = 1'-0"

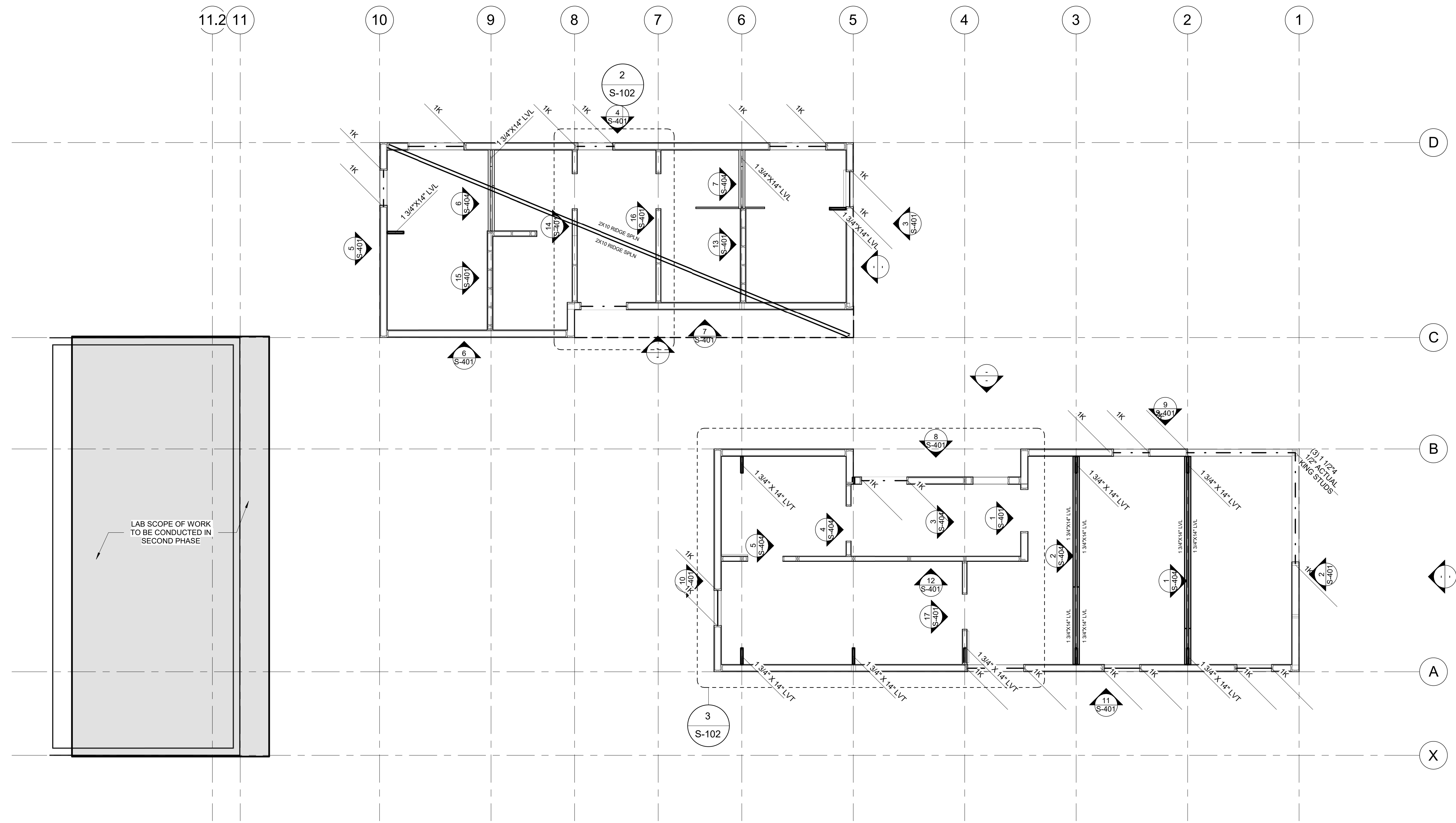


3 GALLEY LOFT
S-102
1/4" = 1'-0"

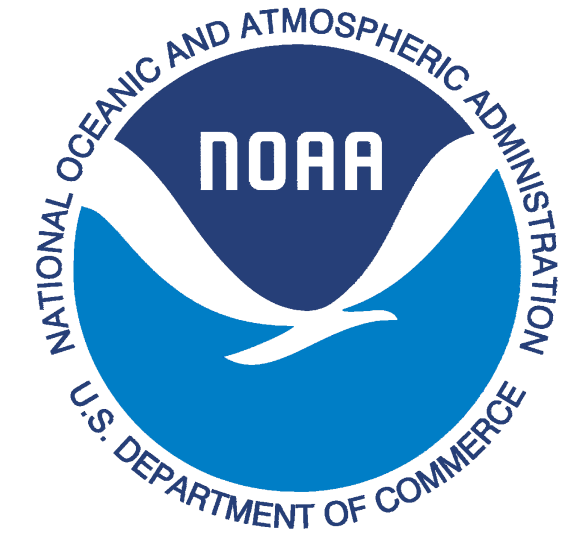


2 BEARING LOFT
S-102
1/4" = 1'-0"

- ROOF FRAMING PLAN NOTES:
- 1.
 - 2.
 - 3.
 - 4.
 - 5.
 - 6.



1 ROOF FRAMING PLAN
S-102
1/4" = 1'-0"



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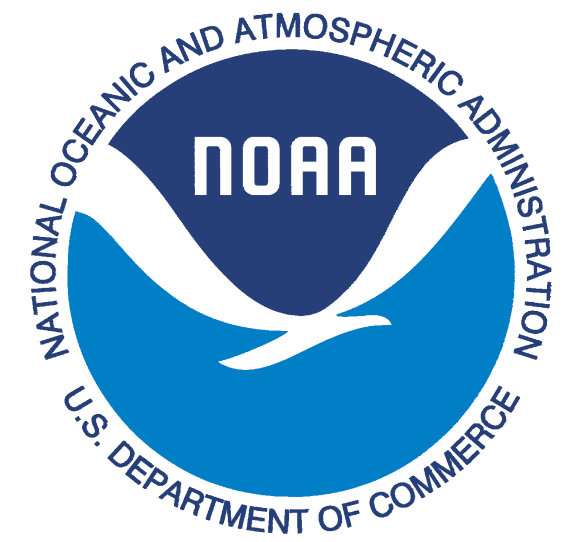
REVISIONS

REV. DATE:	REV. NAME:	REV. NO.:

**ROOF FRAMING
PLAN**

date: 02/20/22
scale: 1/4" = 1'-0"

S-102



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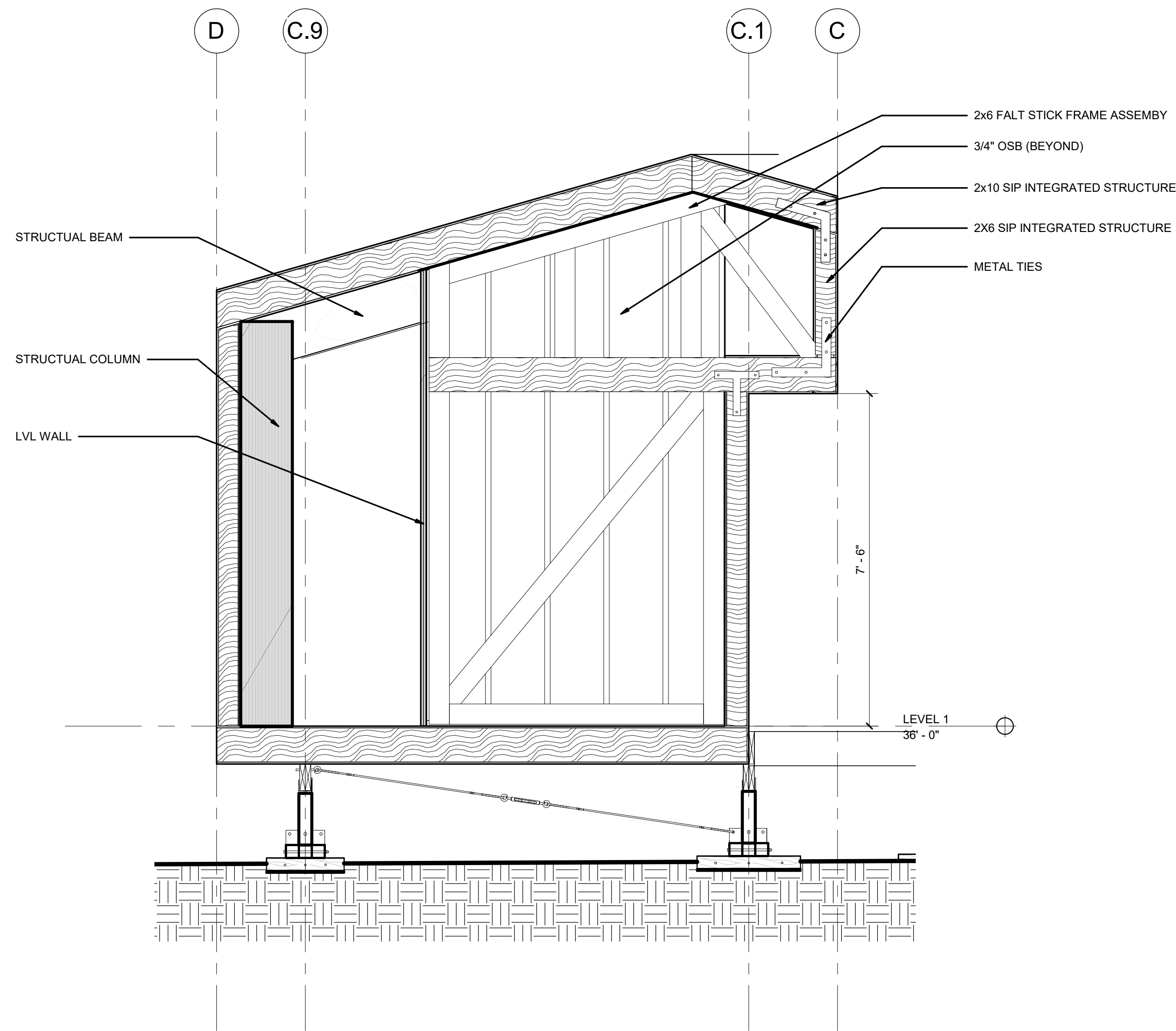
REVISIONS

REV. DATE:	REV. NAME:	REV. NO.:

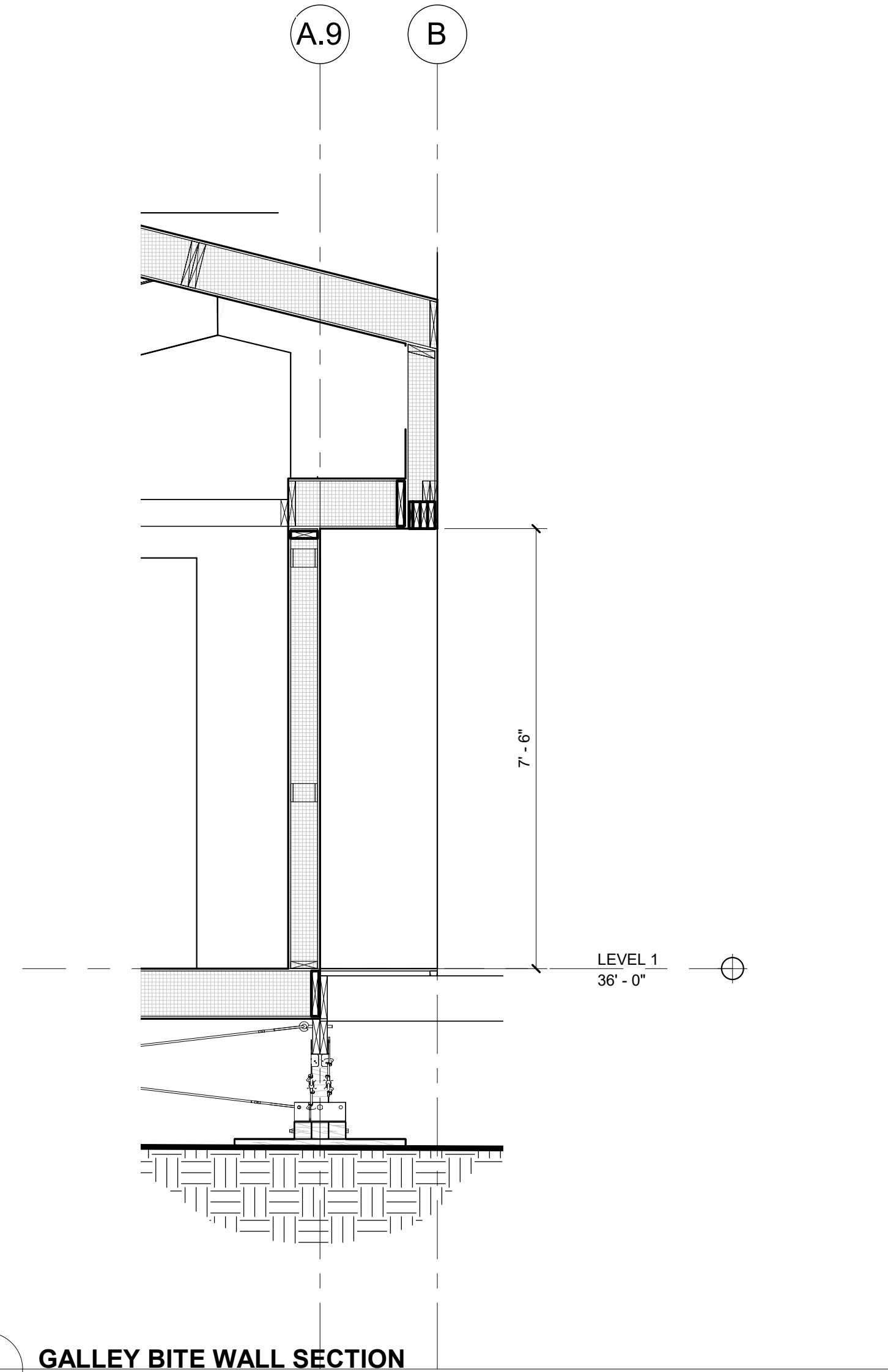
**BUILDING AND
 WALL SECTIONS**

date: 02/27/22
 scale: 1/2" = 1'-0"

S-300



1 BerthingWallStructure
 S-300
 1/2" = 1'-0"



2 GALLEY BITE WALL SECTION
 S-300
 1/2" = 1'-0"

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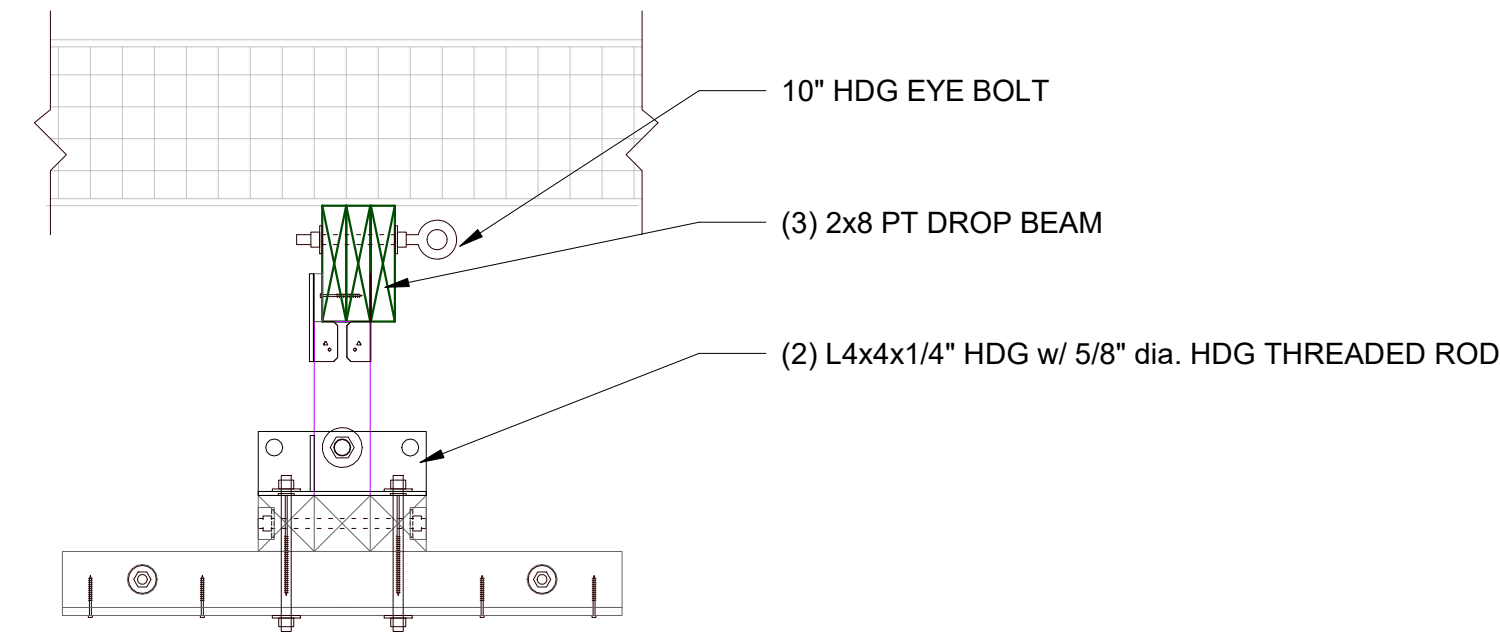
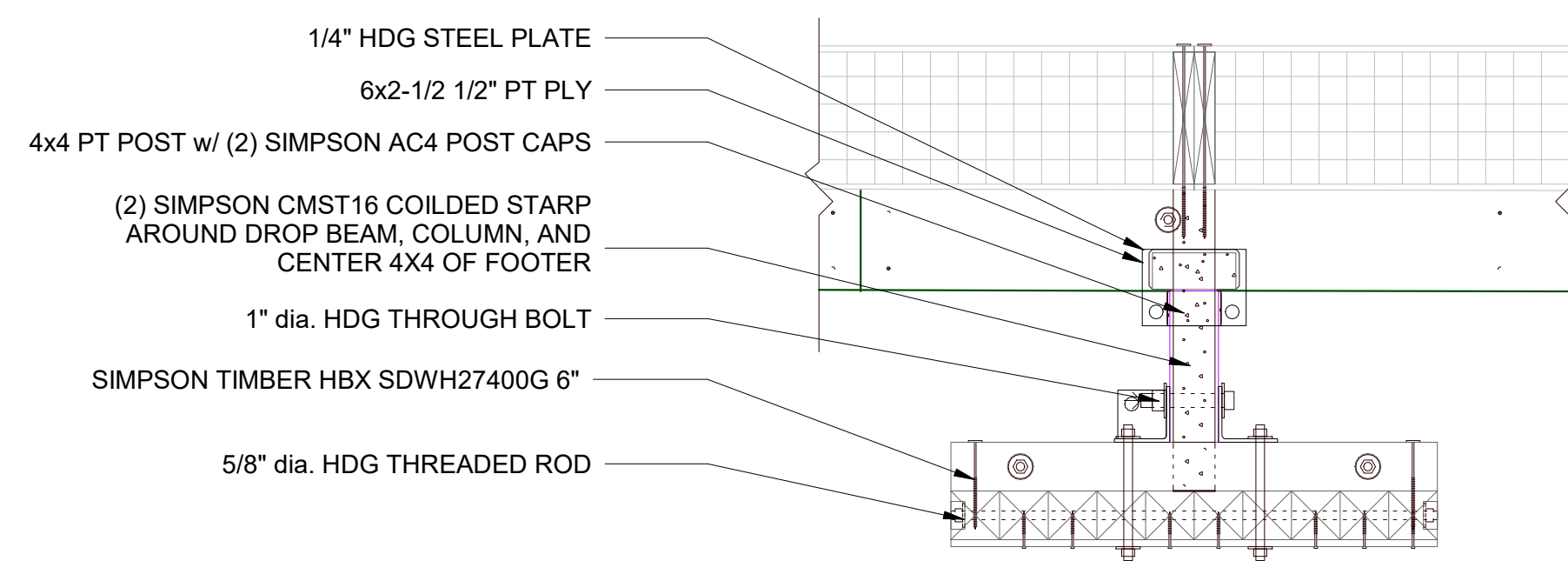
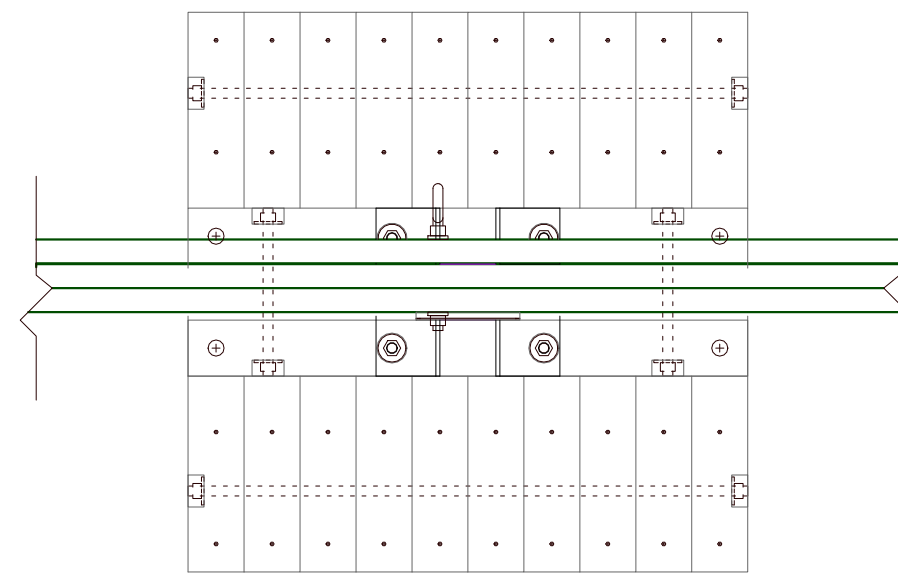
REVISIONS

REV. DATE: REV. NAME: REV. NO:

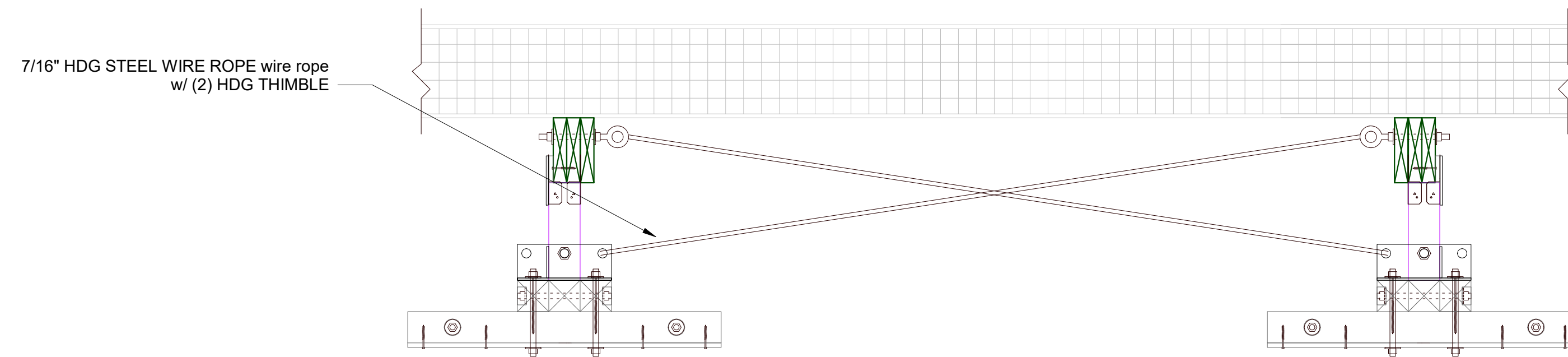
**FOUNDATION
DETAILS**

date: 02/27/22
scale: 1" = 1'-0"

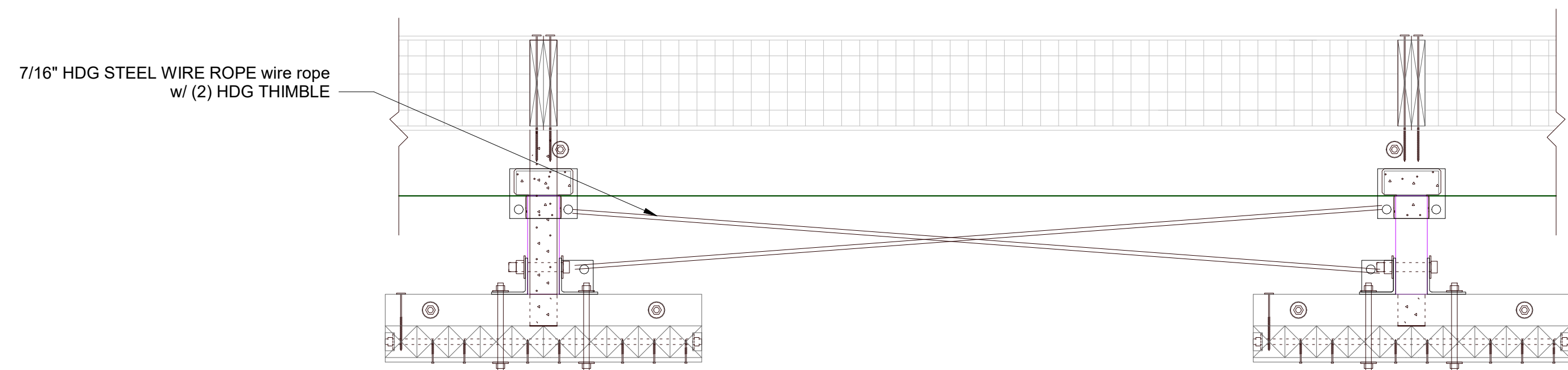
S-400



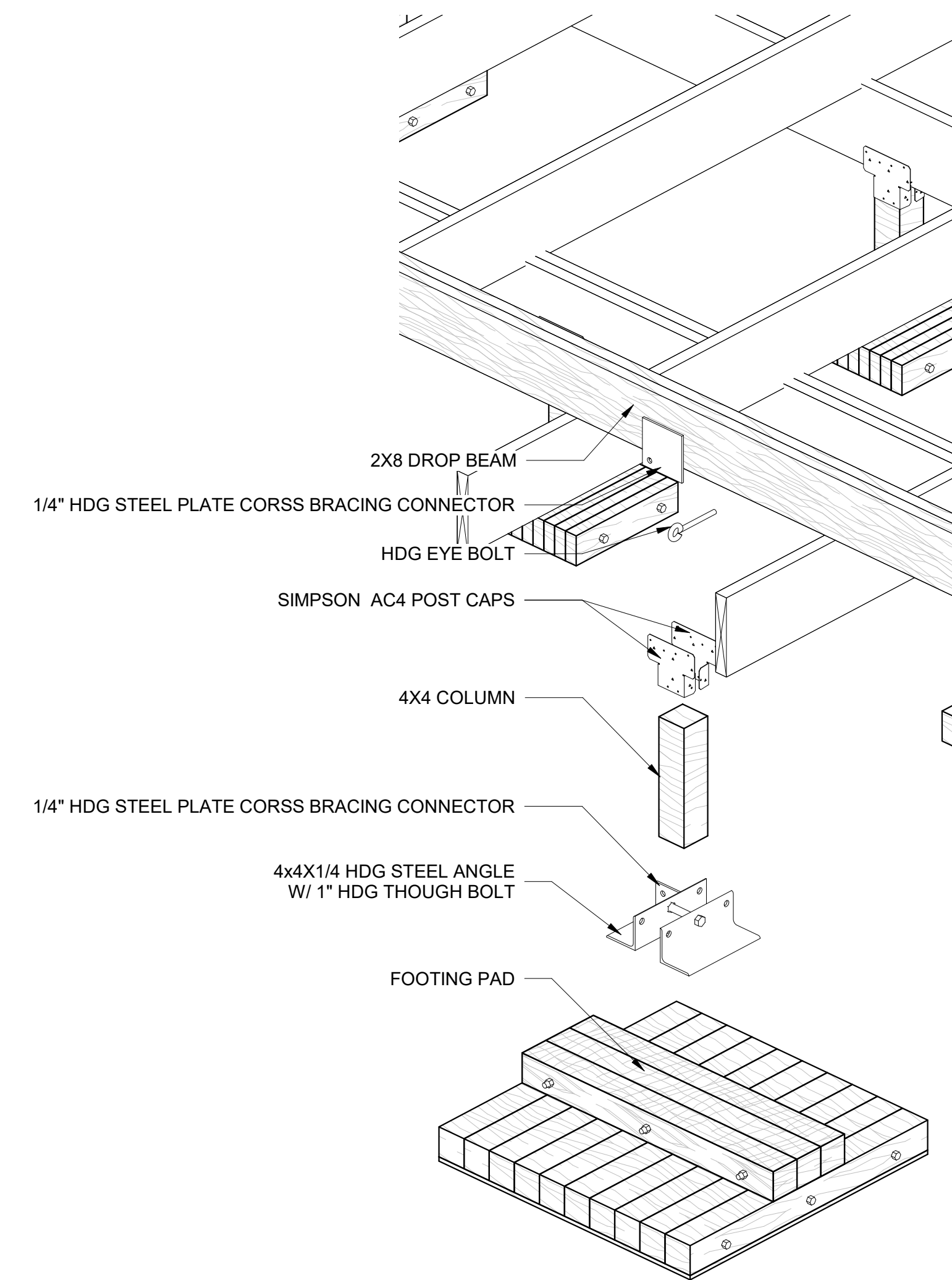
1 TYPICAL FOOTING DETAIL
S-400 1" = 1'-0"



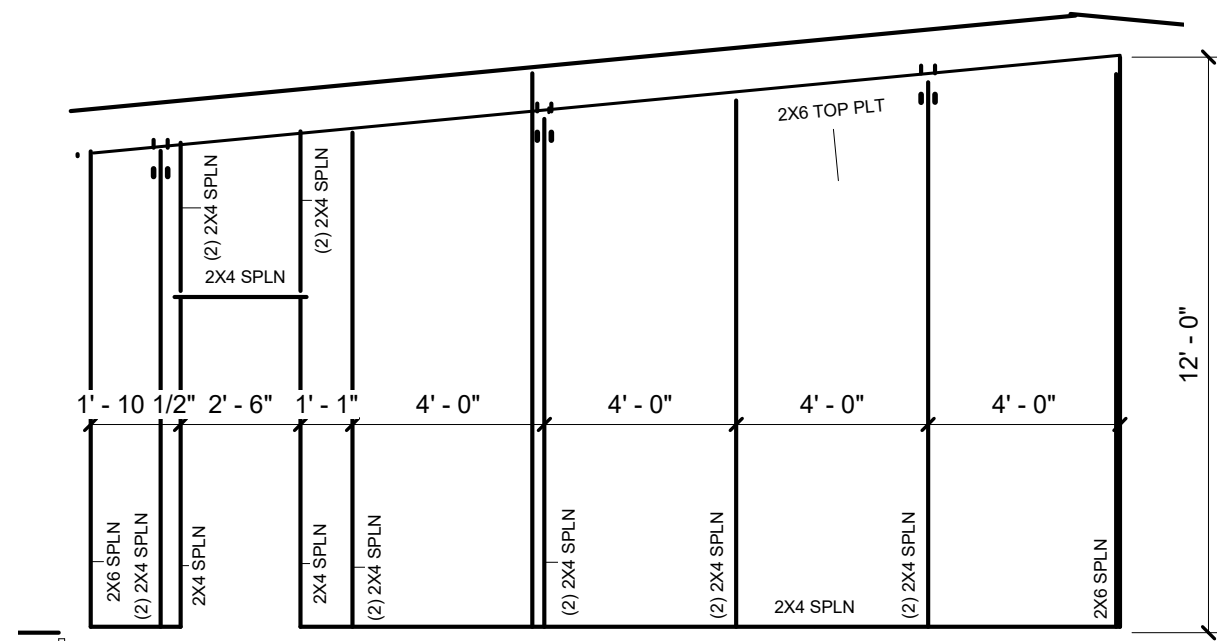
4 TYPICAL FOOTING NORTH-SOUTH CROSS-BRACING
S-400 1" = 1'-0"



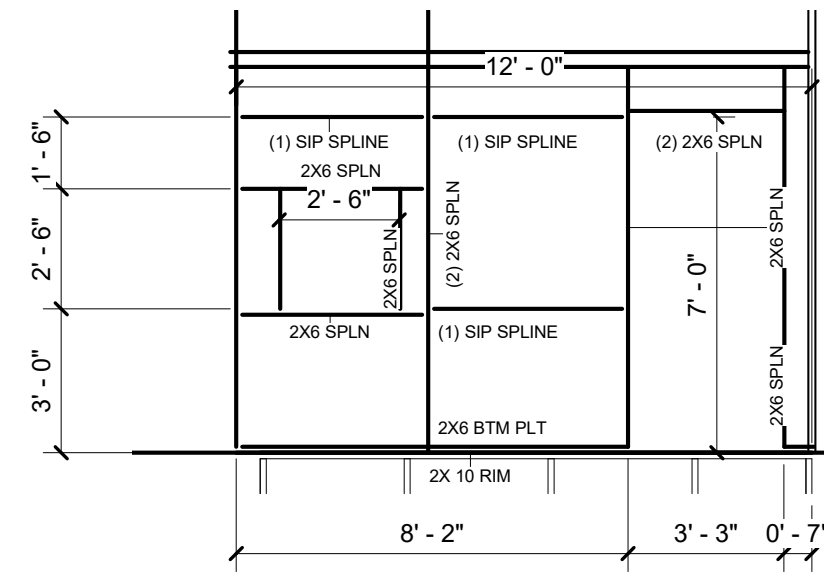
3 TYPICAL FOOTING EAST-WEST CROSS-BRACING
S-400 1" = 1'-0"



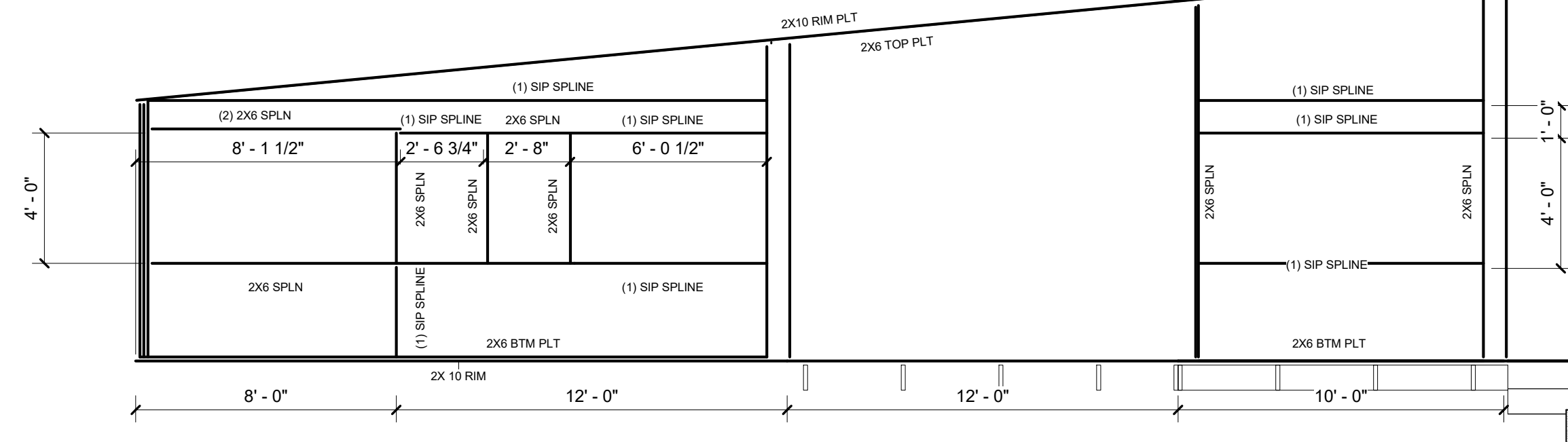
2 TYPICAL FOUNDATION AXON
S-400



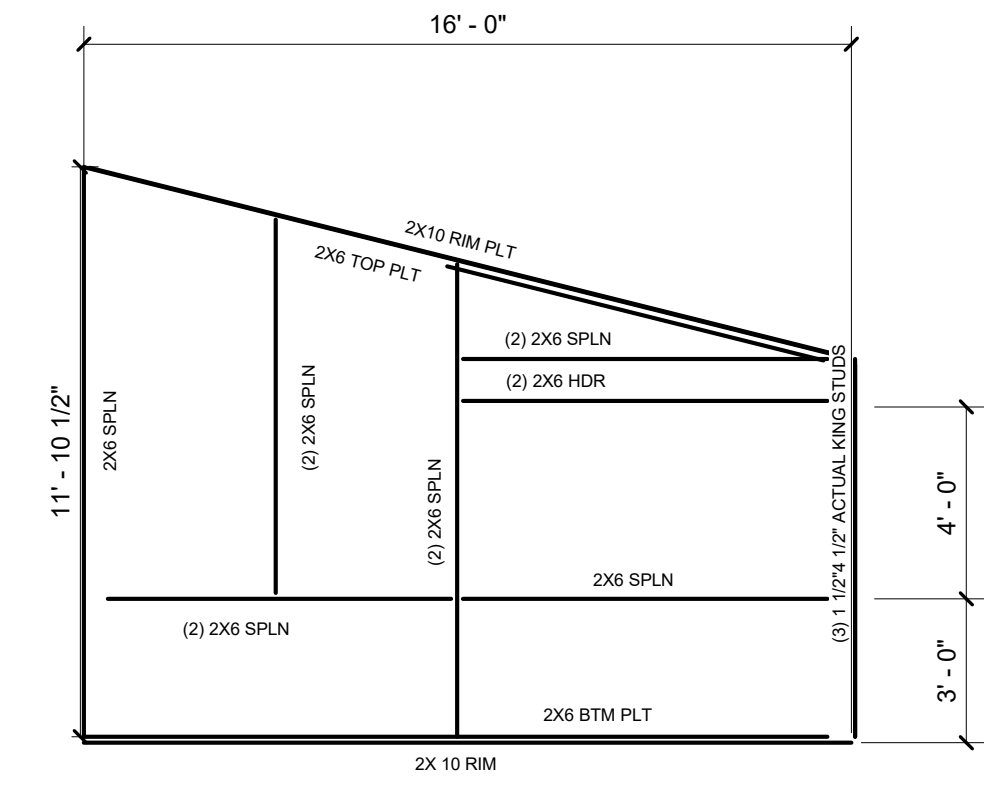
12 DRYGOOD NORTH
S-401 1/4" = 1'-0"



8 GALLEY MUD NORTH FRAMING ELEVATION
S-401 1/4" = 1'-0"

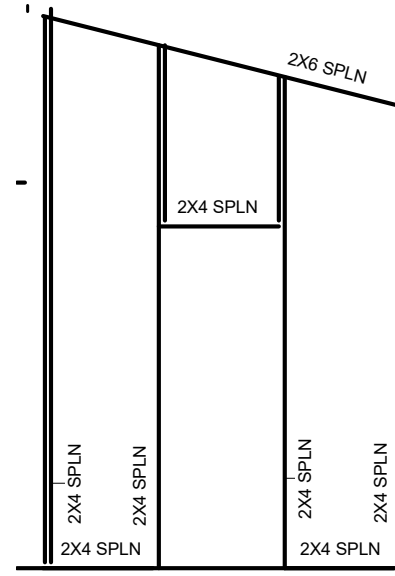


9 GALLEY NORTH FRAMING ELEVATION
S-401 1/4" = 1'-0"

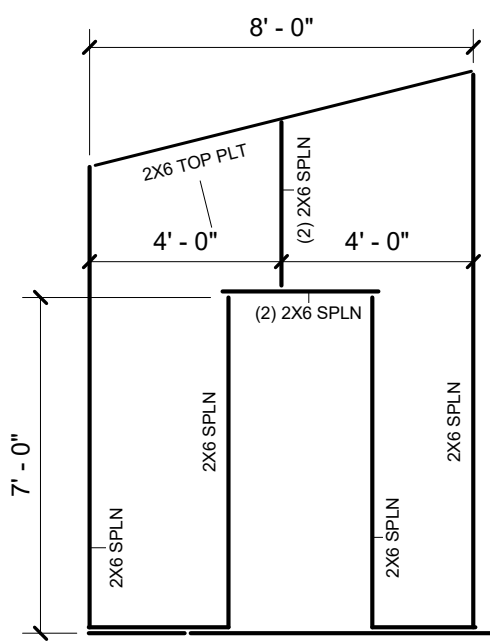


2 GALLEY EAST WALL FRAMING
S-401 1/4" = 1'-0"

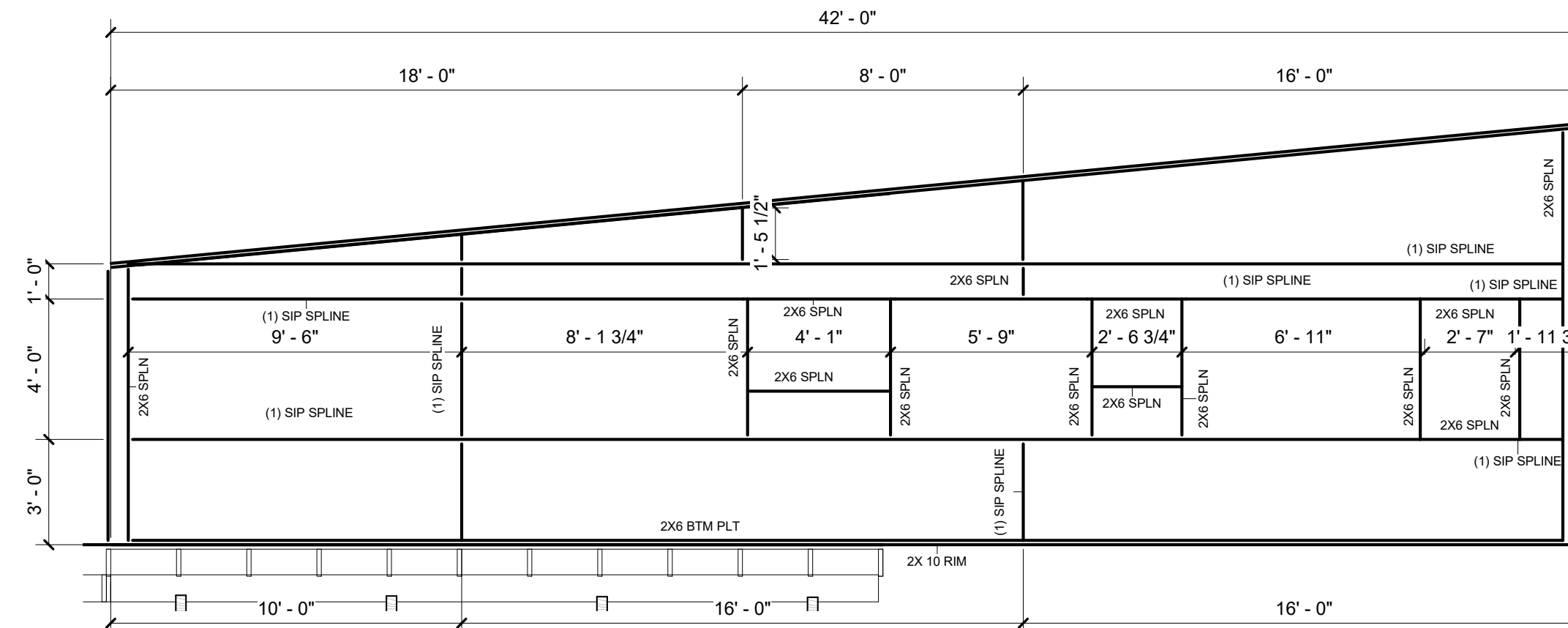
update to



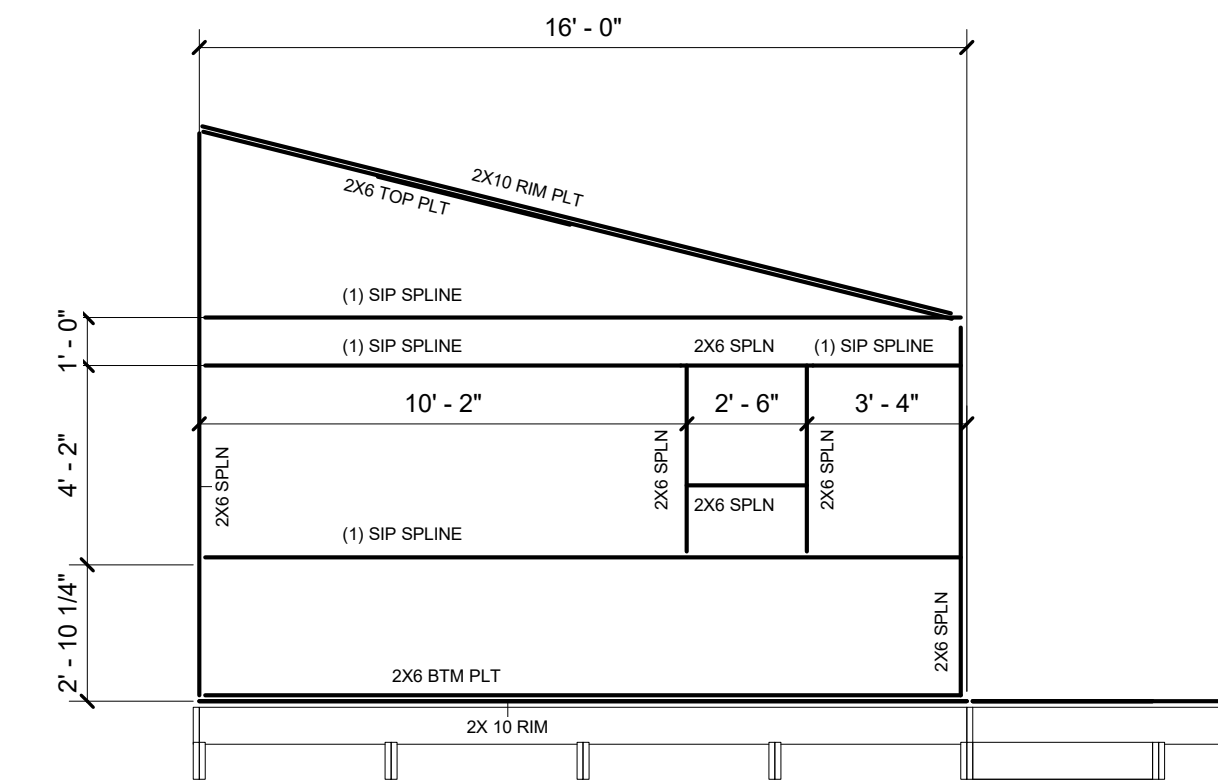
17 GALLEY DRY GOODS EAST
S-401 1/4" = 1'-0"



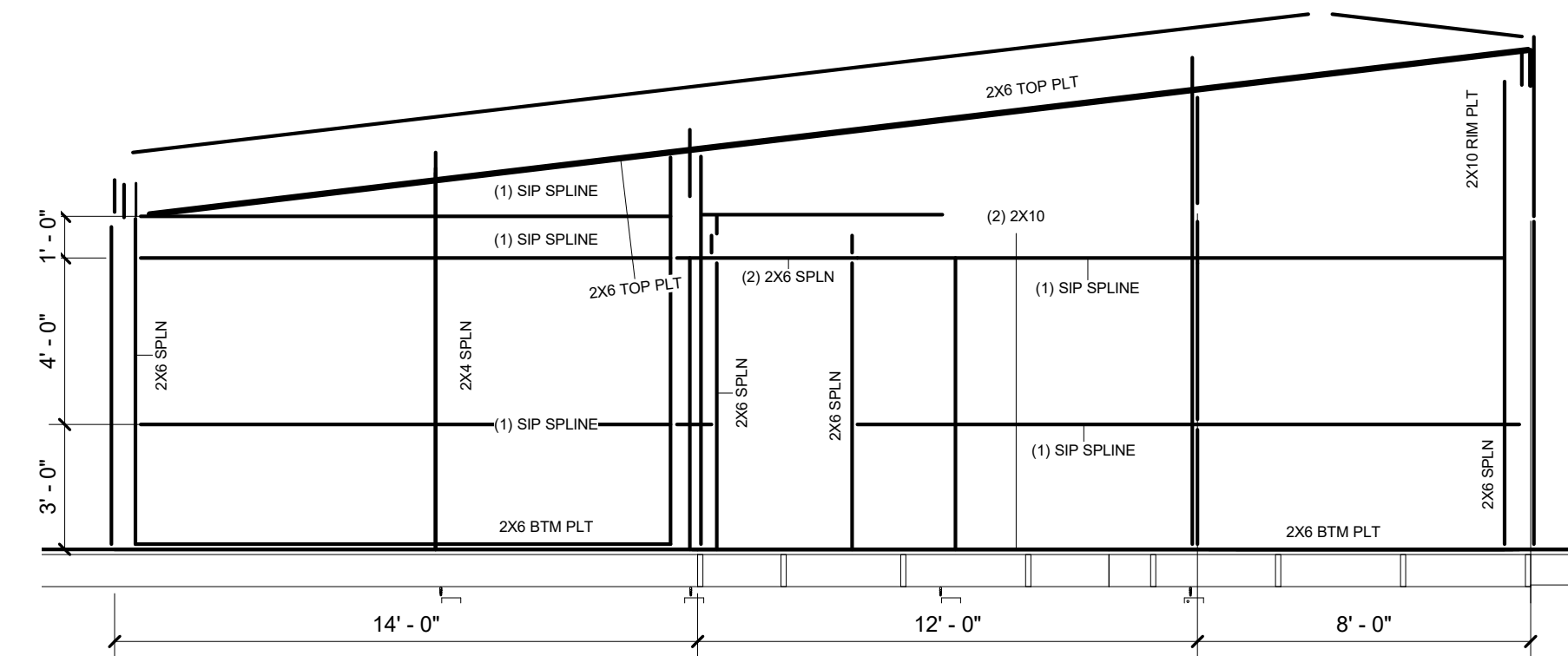
1 GALLEY MUDROOM EAST
S-401 1/4" = 1'-0"



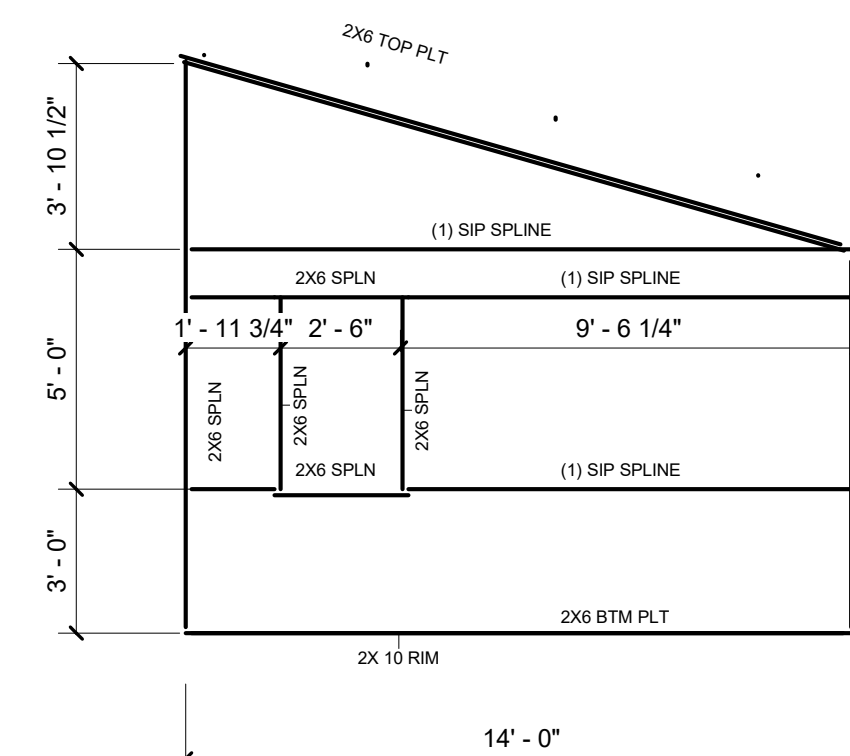
11 GALLEY SOUTH FRAMING ELEVATION
S-401 1/4" = 1'-0"



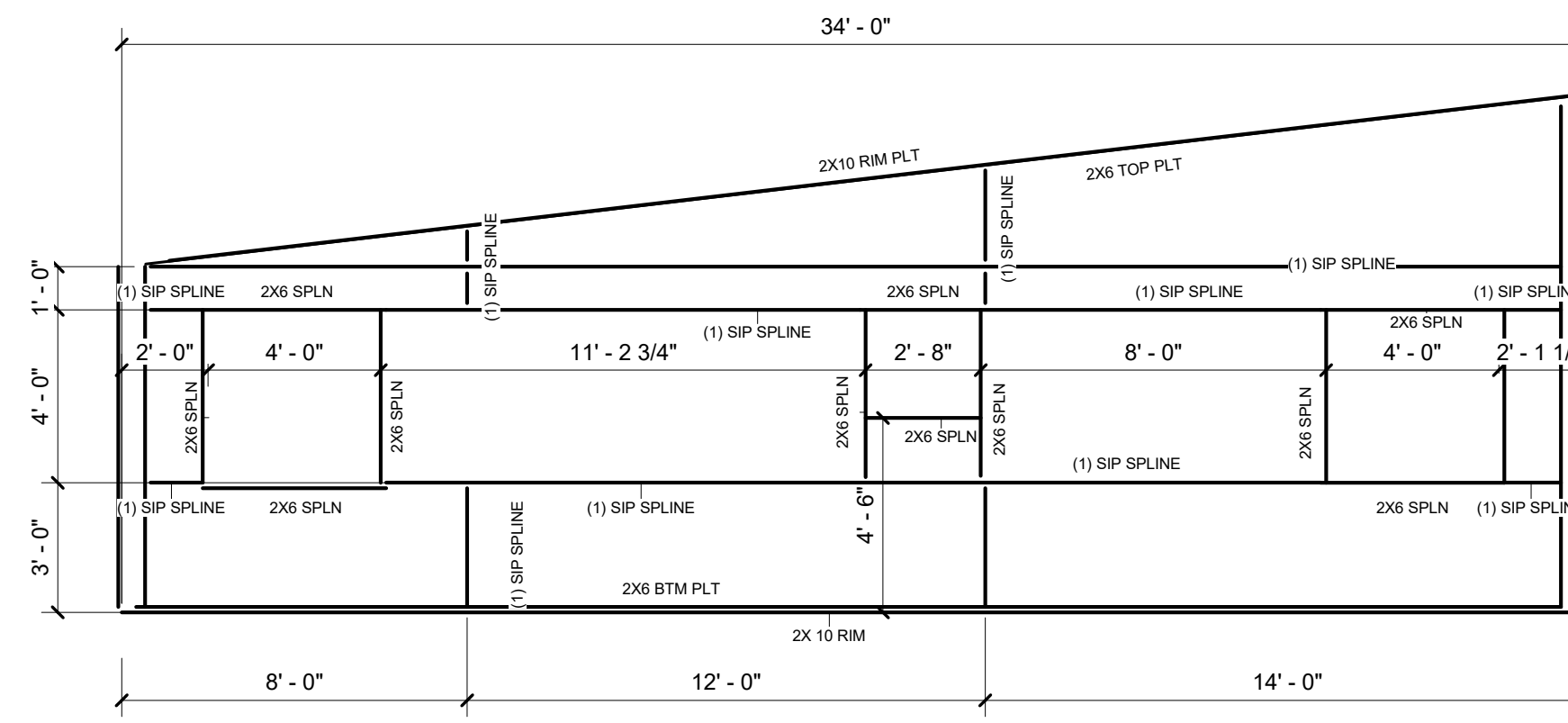
10 GALLEY FRAMING ELEVATION WEST
S-401 1/4" = 1'-0"



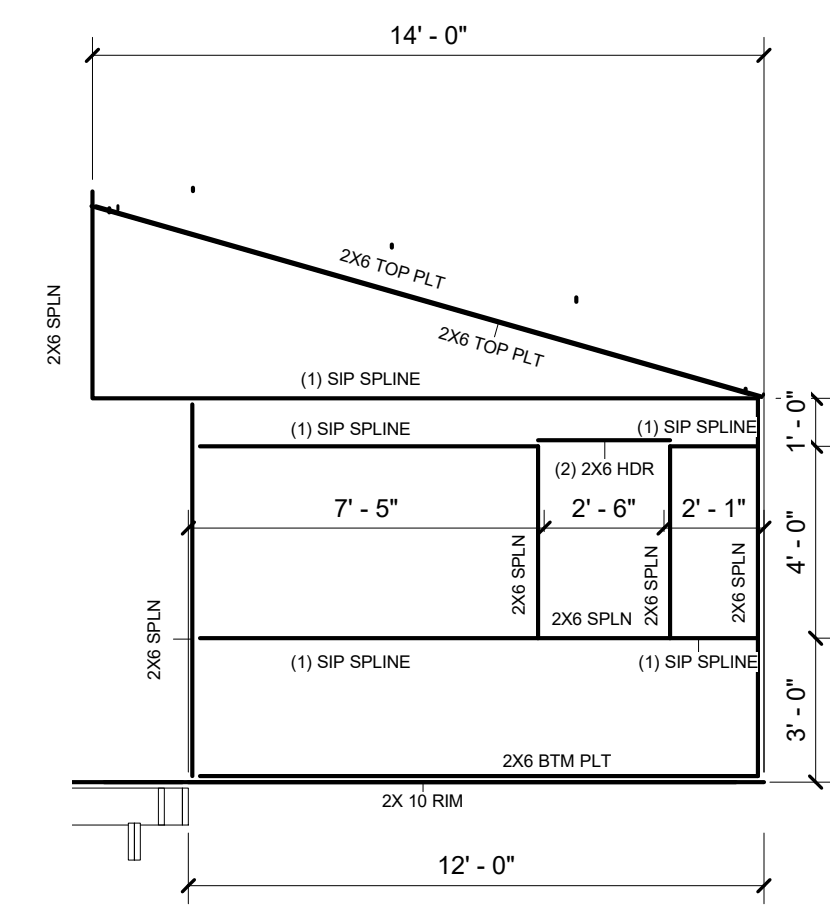
6 BERTHING SOUTH FRAMING ELEVATION A
S-401 1/4" = 1'-0"



5 BERTHING WEST FRAMING ELEVATION
S-401 1/4" = 1'-0"

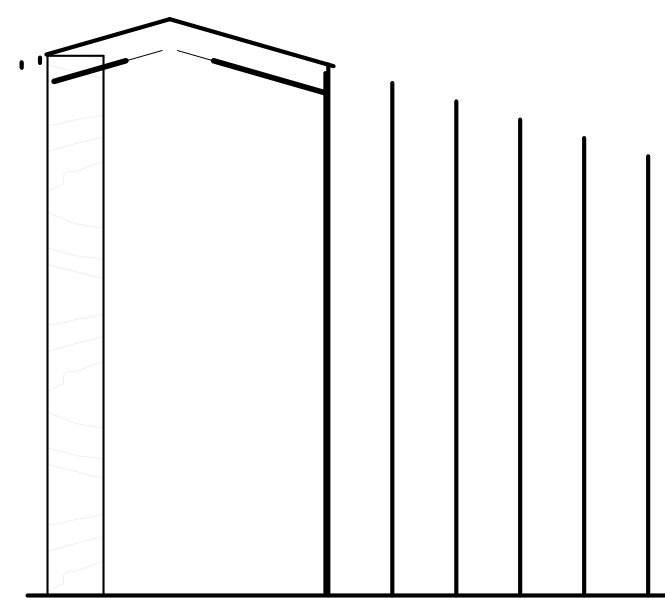


4 BERTHING NORTH FRAMING ELEVATION
S-401 1/4" = 1'-0"

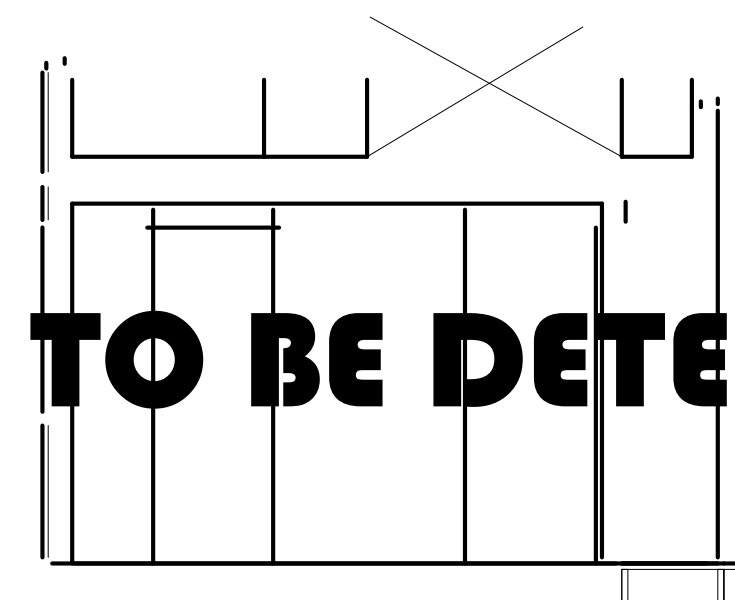


3 BERTHING EAST FRAMING ELEVATION
S-401 1/4" = 1'-0"

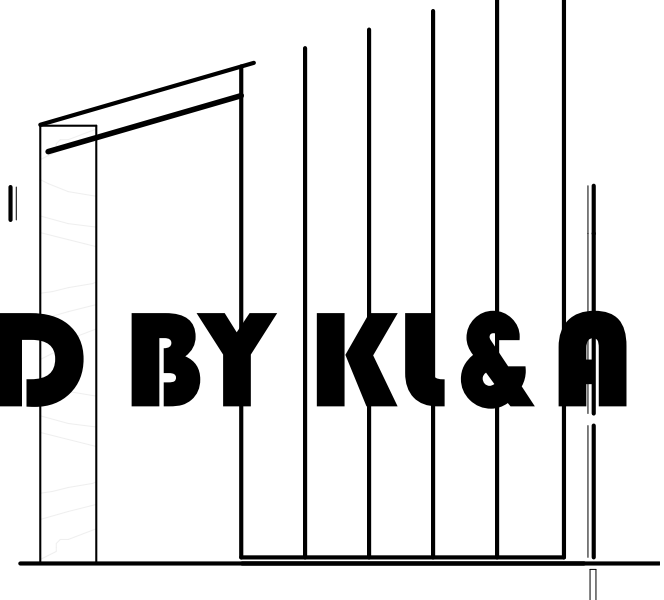
TO BE DETERMINED BY KL&A



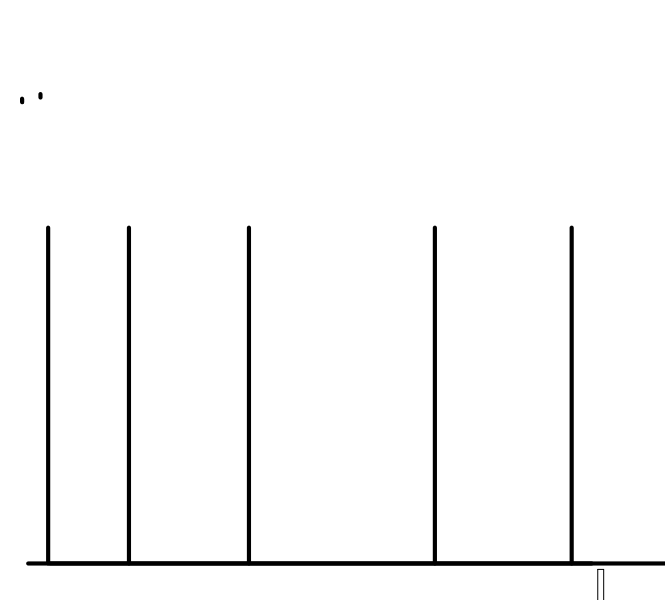
15 BERTHING BENT FRAME @ JR STAFF 1
S-401 1/4" = 1'-0"



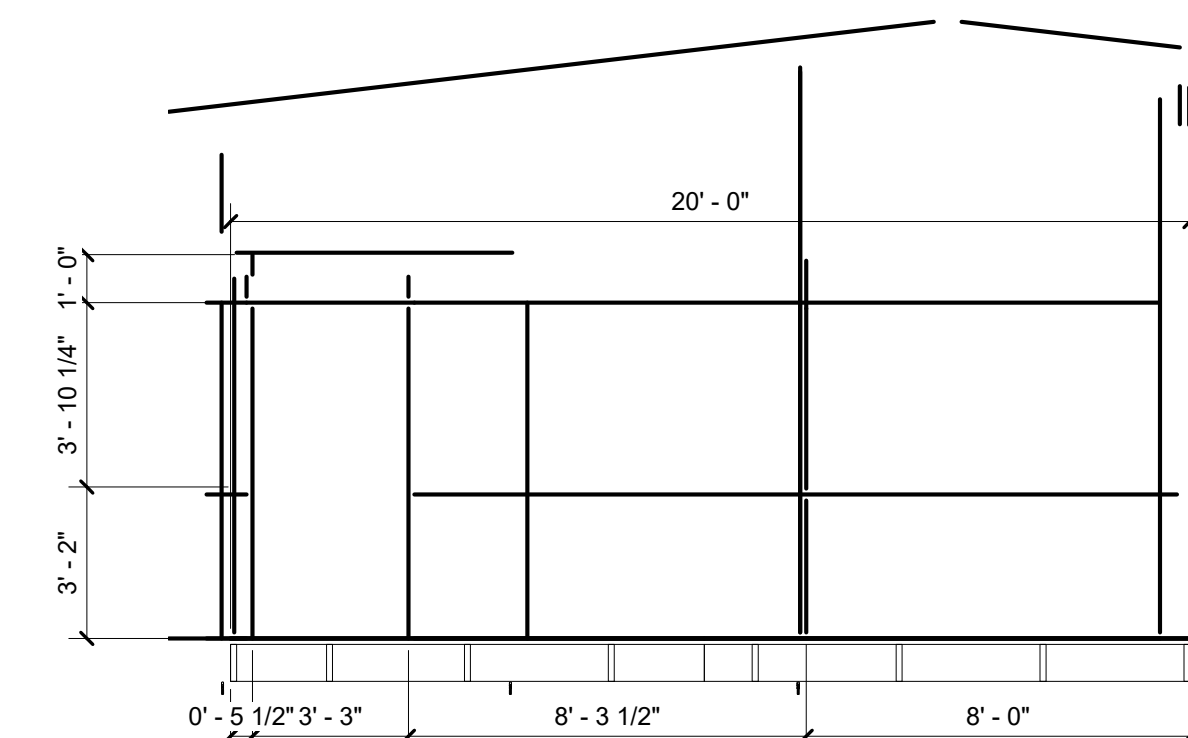
14 BERTHING MIDROOM WALL @ JR STAFF
S-401 1/4" = 1'-0"



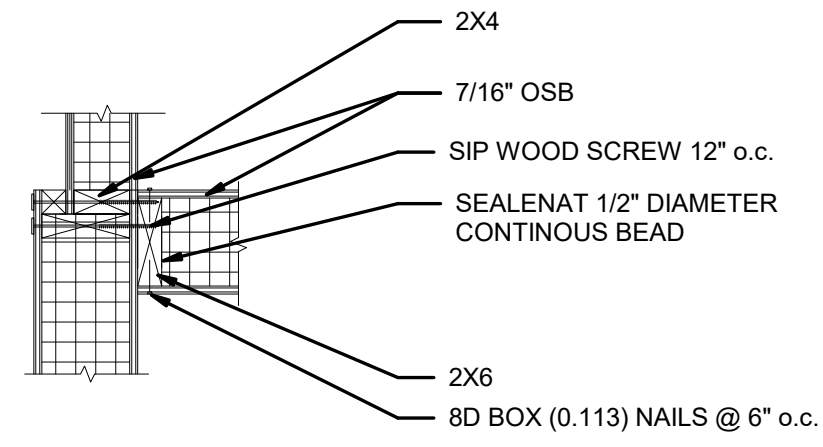
13 BERTHING SR FRAMED WALL
S-401 1/4" = 1'-0"



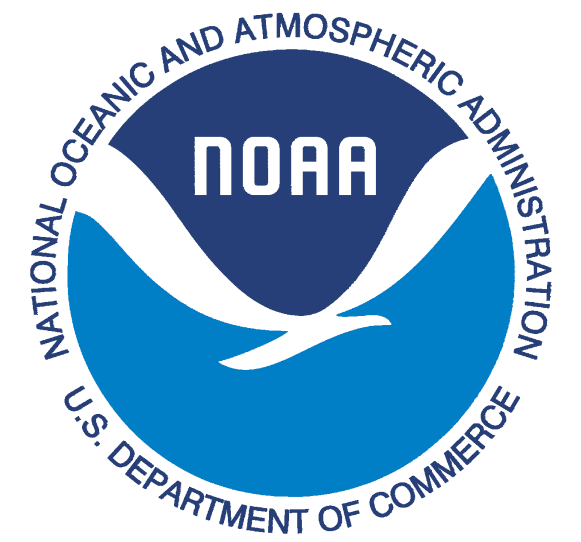
16 BERTHING MUDROOM WALL @ SR STAFF
S-401 1/4" = 1'-0"



7 BERTHING SOUTH FRAMING ELEVATION B
S-401 1/4" = 1'-0"



1 INTERIOR CORNER @ BERTHING
 S-402 1" = 1'-0"



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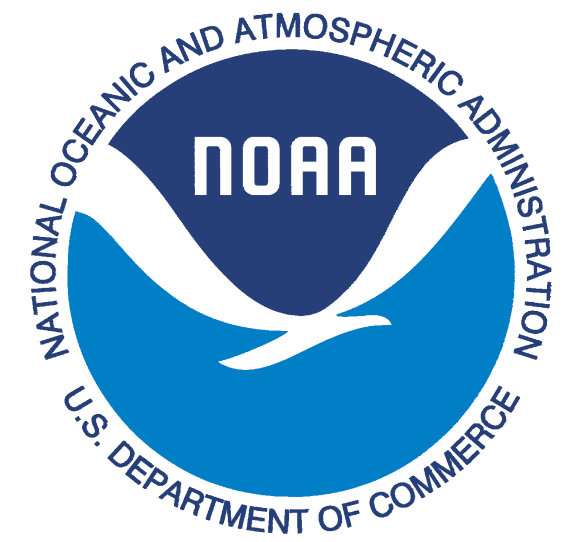
REVISIONS

REV. DATE: REV. NAME: REV. NO:

FLOOR DETAILS

date: 02/27/22
 scale: 1" = 1'-0"

S-402



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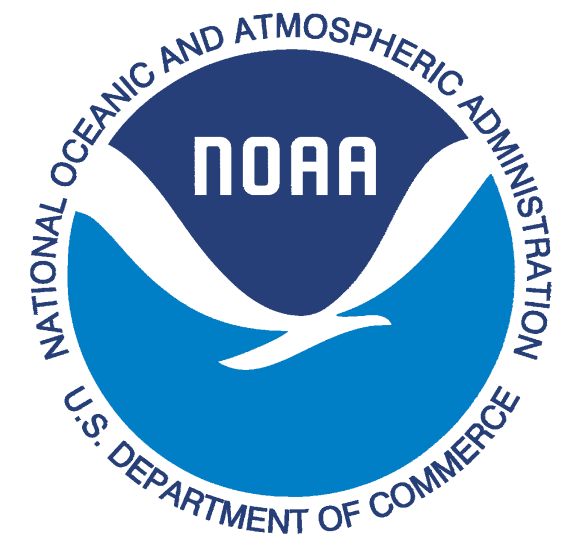
REVISIONS

REV. DATE: REV. NAME: REV. NO:

ROOF DETAILS

date: 02/27/22
scale:

S-403



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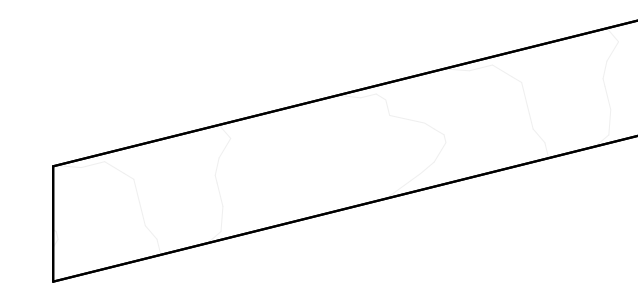
REVISIONS

REV. DATE: REV. NAME: REV. NO:

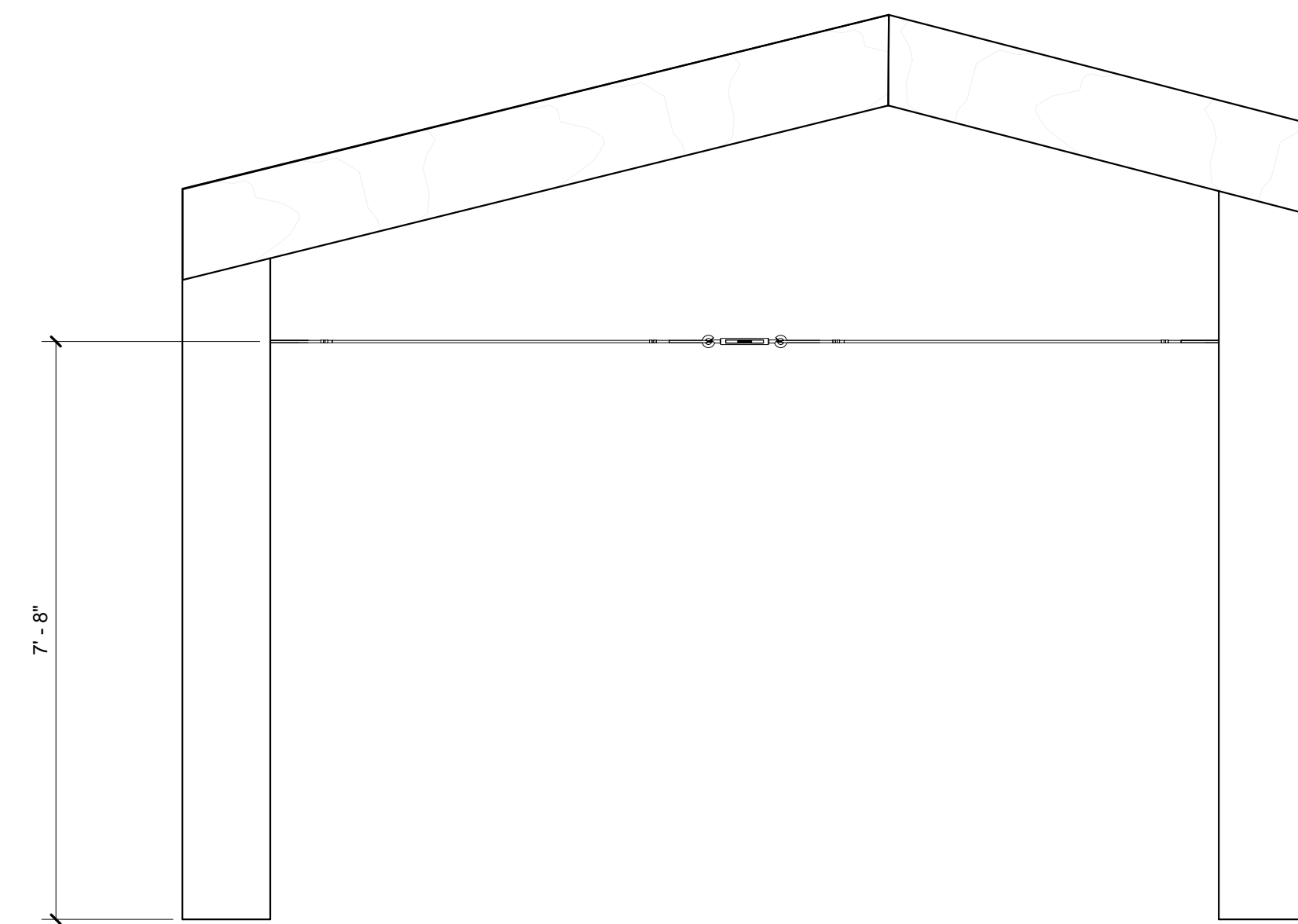
BENT FRAME DETAILS & ELEVATIONS

date: 04/01/22
scale: 1/2" = 1'-0"

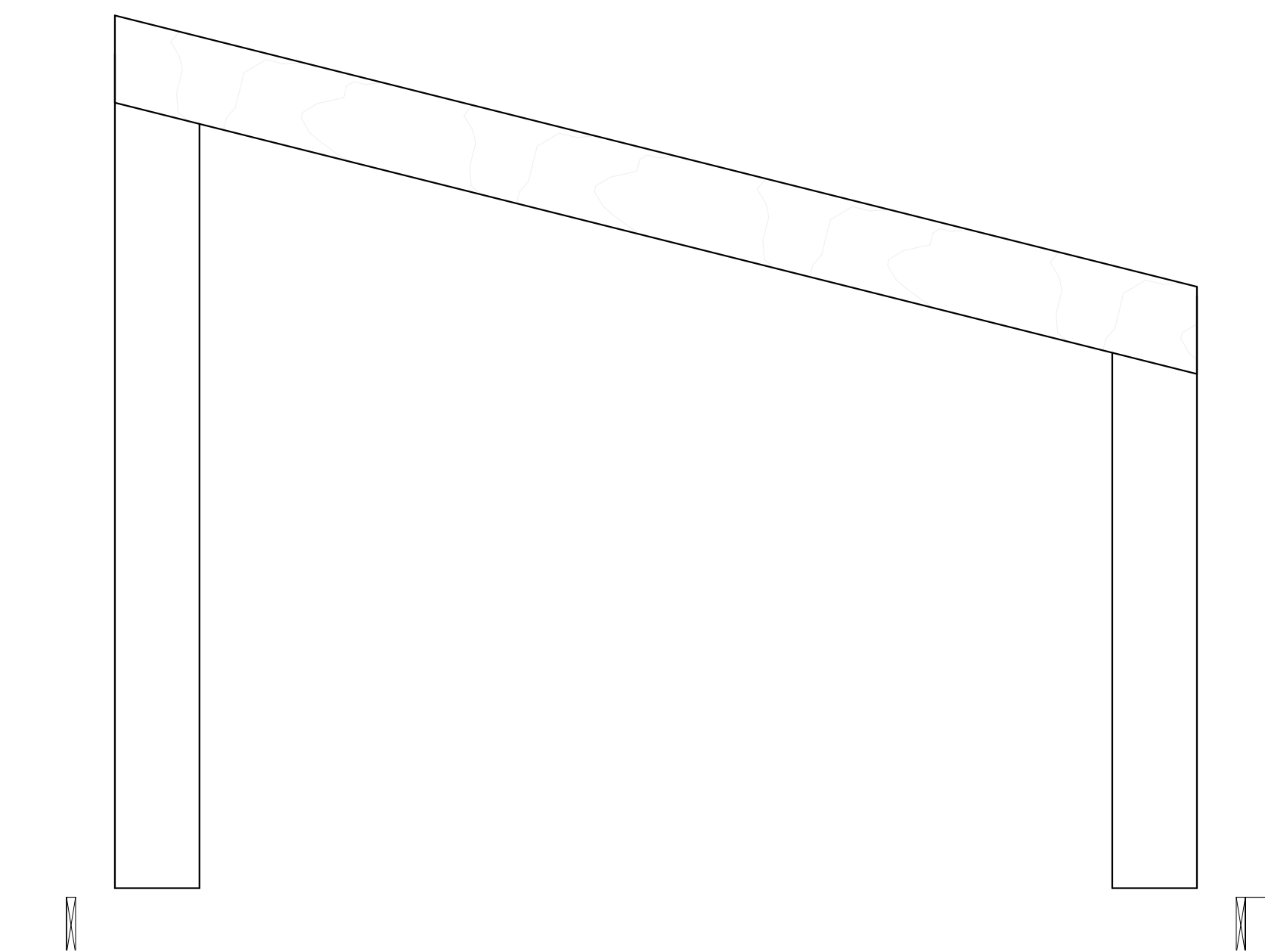
S-404



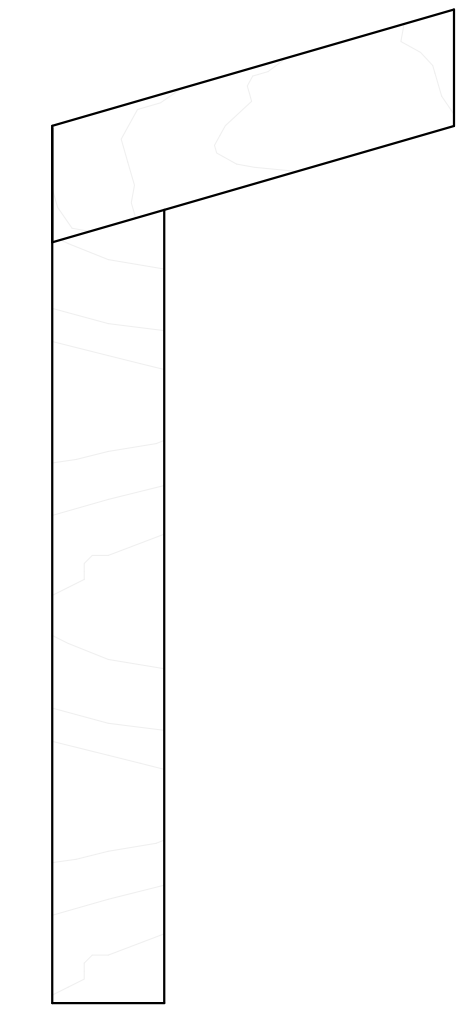
3 GALLEY BENT FRAME @ GRID 4
S-404 1/2" = 1'-0"



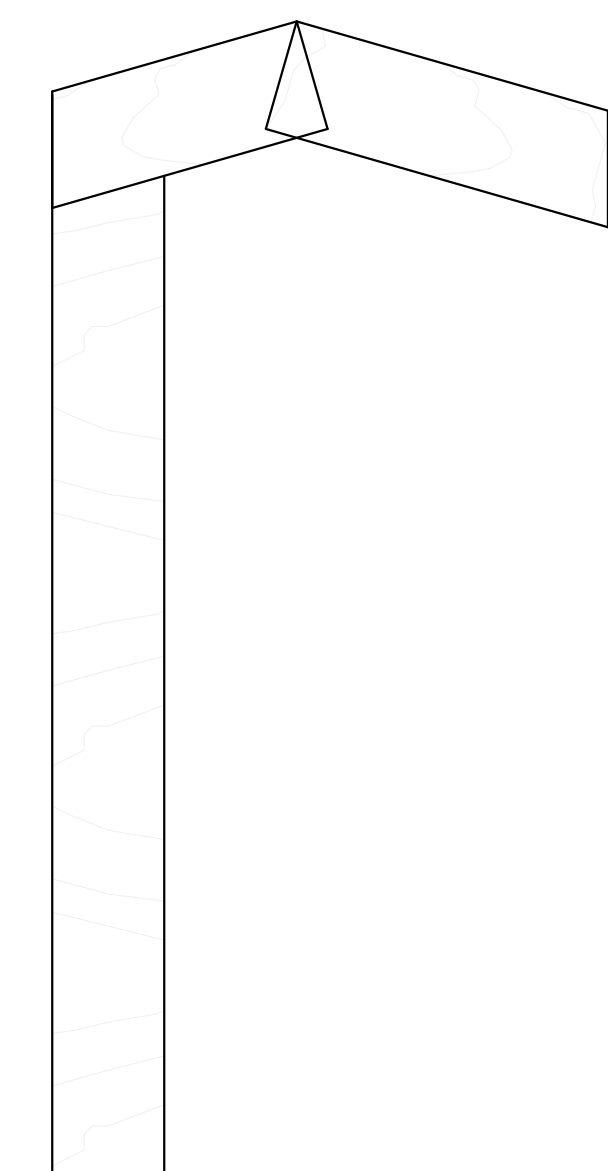
2 GALLEY BENT FRAME @ GRID 3
S-404 1/2" = 1'-0"



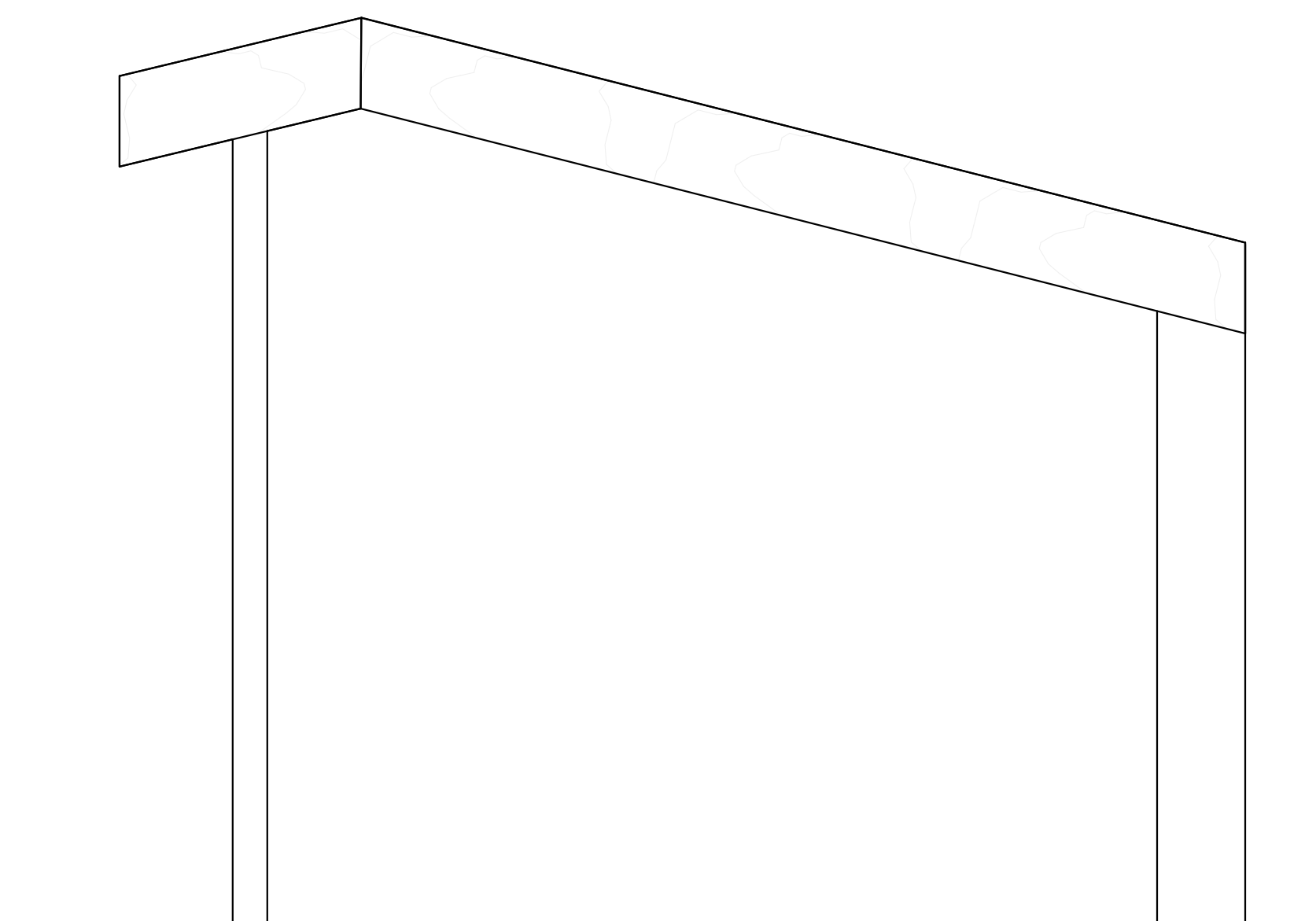
5 GALLEY BENT FRAME @ GRID 6
S-404 1/2" = 1'-0"



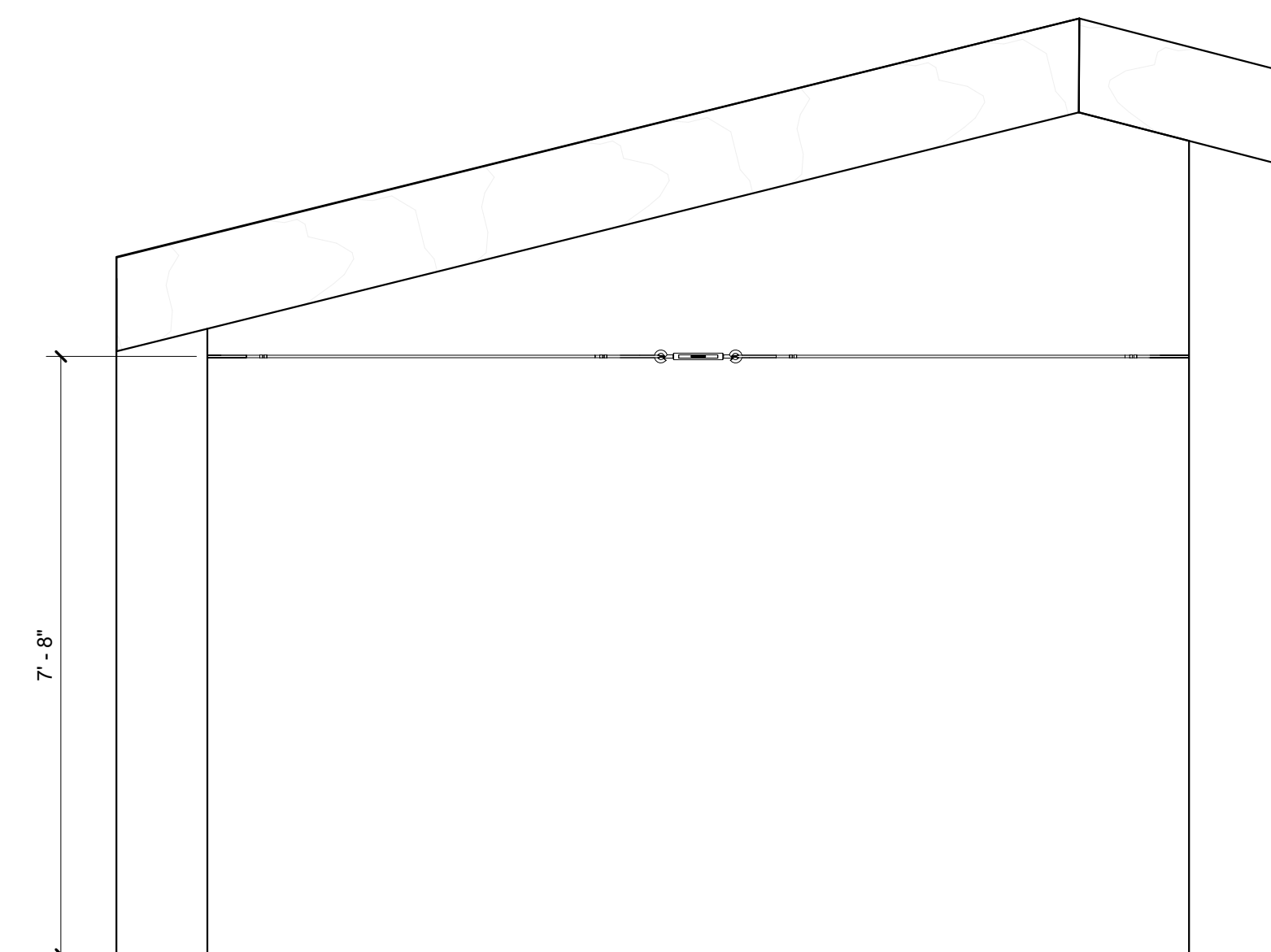
7 BERTHING BENT FRAME @ SR STAFF
S-404 1/2" = 1'-0"



6 BERTHING BENT FRAME @ JR STAFF
S-404 1/2" = 1'-0"

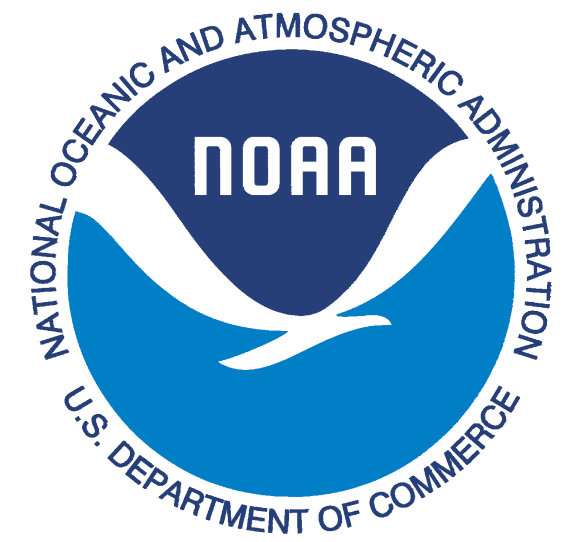



4 GALLEY BENT FRAME @ GRID 5
S-404 1/2" = 1'-0"



1 GALLEY BENT FRAME @ GRID 2
S-404 1/2" = 1'-0"

4/12/2022 5:53:39 PM



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REVISIONS

REV. DATE: REV. NAME: REV. NO:

SCHEDULES

date: 02/27/22
scale:

S-500

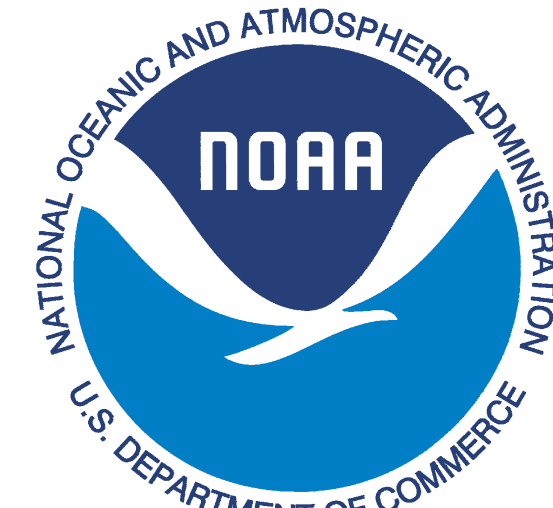
ELECTRICAL LEGEND							
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
Ⓢ	SWITCH	— — —	CONDUIT RUN	Ⓢ	110 V DUPLEX OUTLET	Ⓢ	12V BUS BATTERY
Ⓢ3	3-WAY SWITCH	■	VERTICAL SURFACE-MOUNTED LED TAPE	Ⓢ	110 V QUADRUPLEX RECEPTACLE	■	DRIVER
ⓈD	DIMMER SWITCH	■	ROTATING VERTICAL SURFACE-MOUNTED LED TAPE	Ⓢ ^{WP}	110 V DUPLEX OUTLET - WATERPROOF	ⓈD	SMOKE DETECTOR
—	SURFACE-MOUNTED LED TAPE IN EXTRUSION, MOUNTED ON WALL SURFACE, UNDER-CABINET	●	FIRE EXTINGUISHER UNDER CABINET	Ⓢ	110 V DUPLEX OUTLET W/ INTEGRATED USB	ⓈCM	CARBON MONOXIDE DETECTOR
—	LED TAPE IN EXTRUSION, SUSPENDED FROM BEAM, OR ON CEILING SURFACE	●	ANTENNA	▼	COMMUNICATIONS JACK		
—	ROTATING SURFACE-MOUNTED LED TAPE IN EXTRUSION	Ⓢ	110 V DUPLEX OUTLET- GROUND FAULT CIRCUIT INTERRUPTER	■	PANELBOARD		

ABBREVIATIONS AND SYMBOLS	
A	AMPERE(S)
AC	ABOVE COUNTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERES INTERRUPTING CAPACITY
C	CONDUIT
EC	ELECTRICAL CONTRACTOR
G	GROUND
GC	GENERAL CONTRACTOR
IDF	INTERMEDIATE DISTRIBUTION FACILITY
KVA	KILOVOLT AMPERE(S)
KW	KILOWATT(S)
LTG	LIGHTING
MLO	MAIN LUGS ONLY
N	NEW
PH, ∅	PHASE
PNL	PANEL
PDE	POWER OVER ETHERNET
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
V	VOLT(S)
W	WATT(S) OR WIRE
WP	WEATHERPROOF

LIGHTING FIXTURES	
A _a	LUMINAIRE TYPE, REFERENCING LUMINAIRE SCHEDULE, TYPICAL ALL FIXTURES. SUBSCRIPT, IF SHOWN, REFERENCES WALL SWITCH OR RELAY/ZONE CONTROL.
—	SURFACE OR PENDANT MOUNTED LUMINAIRE
Ⓢ	LIGHTING CONTROL MOTION SENSOR

WIRING DEVICES	
Ⓢ	JUNCTION BOX
Ⓢ	WALL MOUNTED J-BOX

ELECTRICAL GENERAL NOTES	
1.	THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL NECESSARY FOR A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM.
2.	MATERIALS AND INSTALLATION SHALL COMPLY WITH CODES, LAWS AND ORDINANCES OF FEDERAL, STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.
3.	MATERIALS AND EQUIPMENT SHALL BE LISTED AND/OR LABELED BY U.L., ETL, CSA OR ANOTHER RECOGNIZED TESTING LAB.
4.	ALL WORK REQUIRED FOR THE INSTALLATION AS SHOWN ON DRAWINGS INCLUDING LABOR, EQUIPMENT AND MATERIALS SHALL BE IN STRICT COMPLIANCE WITH THE BUILDING STANDARDS, EXCEPT AS NOTED OTHERWISE.
5.	THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES, TAXES AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE ELECTRICAL WORK.
6.	THE CONTRACTOR SHALL PREPARE AND SUBMIT TO GOVERNMENTAL AGENCIES AND UTILITY COMPANIES SHOP DRAWINGS, WHICH ARE REQUIRED BY THESE AGENCIES, FOR THEIR APPROVAL.
7.	THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER/OWNER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
8.	THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, AND THOROUGHLY BECOME FAMILIAR WITH THE BUILDING STANDARDS AND LOCAL CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
9.	ALL MATERIALS, AND EQUIPMENT SHALL BE ERRECTED, INSTALLED, CONNECTED, CLEANED, ADJUSTED, TESTED, CONDITIONED, AND PLACED IN SERVICE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.
10.	ALL CUTTING, DRILLING AND PATCHING OF MASONRY, STEEL OR IRON WORK BELONGING TO THE BUILDING MUST BE DONE BY THIS CONTRACTOR IN ORDER THAT HIS WORK MAY BE PROPERLY INSTALLED, BUT UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTION OF THE ARCHITECT-DESIGNER OR THEIR REPRESENTATIVE.
11.	SHOP DRAWINGS SHALL INCLUDE MANUFACTURER'S NAMES, CATALOG NUMBERS, CUTS, DIAGRAMS AND OTHER SUCH DESCRIPTIVE DATA AS MAY BE REQUIRED TO IDENTIFY AND REVIEW THE EQUIPMENT. SUBMITTALS SHALL BE IN LOGICAL GROUPS, FOR EXAMPLE, ALL LIGHTING FIXTURES, PARTIAL SUBMITTALS WILL NOT BE REVIEWED.
12.	SUBMIT (1) ELECTRONIC PDF COPY OF THE FOLLOWING SHOP DRAWINGS FOR REVIEW: A. LIGHT FIXTURES & POWER SUPPLIES B. LIGHTING CONTROLS C. VIDEO SURVEILLANCE CAMERAS D. CARD READERS E. LOW VOLTAGE DATA CABLES F. PROVIDE "AS-BUILT" DRAWINGS AND SUBMIT TO ARCHITECT/DESIGNER.
16.	PROVIDE THE FOLLOWING INFORMATION, PER IECC 2015 C408.2.5.2 TO THE PARTY RESPONSIBLE FOR PROJECT COMMISSIONING PLAN (COMMISSIONING AGENT/ MECHANICAL ENGINEER) AND ELECTRICAL ENGINEER: a. CUTSHEETS FOR ALL INSTALLED LIGHTING AND LIGHTING CONTROLS. b. OPERATION AND MAINTENANCE MANUALS FOR EACH PIECE OF INSTALLED LIGHTING, REQUIRED ROUTINE MAINTENANCE ACTIONS, CLEANING AND RECOMMENDED RELAMPING SHALL BE CLEARLY IDENTIFIED. c. SCHEDULE FOR INSPECTING AND RECALIBRATING ALL LIGHTING CONTROLS. INSPECTION OF ALL LIGHTING CONTROLS SHALL BE PERFORMED PRIOR TO ELECTRICAL ENGINEER'S COMMISSIONING SITE VISIT. RECALIBRATION OF LIGHTING CONTROLS SHALL BE PERFORMED FOLLOWING SITE VISIT AND SHALL BE BASED UPON THE RECOMMENDATIONS OF THE ELECTRICAL ENGINEER.
17.	ALL MATERIAL, EQUIPMENT, WIRING DEVICES, ETC. SHALL BE NEW, UNLESS SPECIFICALLY INDICATED AS EXISTING TO BE REUSED.
18.	ALL NEW CIRCUIT BREAKERS FOR NEW OR EXISTING PANELBOARDS SHALL MATCH EXISTING BUILDING PANELBOARD MANUFACTURER AND BREAKER TYPE. THE CONTRACTOR SHALL PROVIDE NEW TYPE WRITTEN PANEL DIRECTORIES FOR ALL NEW PANELS AND EXISTING PANELS WHICH HAVE CHANGED. PANELBOARD SHALL BE MARKED WHERE THE SOURCE OF POWER SUPPLY ORIGINATES, AND IF SERIES COMBINATION SYSTEMS ARE UTILIZED AND THEIR LISTED AMPERE RATING.
19.	DO NOT SHARE NEUTRAL CONDUCTORS FOR MULTI-WIRE BRANCH CIRCUITS.
20.	SHOULD ACTUAL FIELD CONDITIONS REQUIRE INDICATED CIRCUIT DESIGNATIONS TO VARY, INDICATE THE CIRCUIT NUMBER USED ON THE "AS-BUILT" DRAWINGS.
21.	PROVIDE COMPLETE METAL RACEWAY SYSTEMS AND ENCLOSURES FOR ALL WIRING THROUGHOUT THE EXTENT OF THE REQUIRED DISTRIBUTION SYSTEM. A. UTILIZE RIGID POLYVINYL CHLORIDE CONDUIT (PVC) IN THE FOLLOWING LOCATIONS: a. UNDERGROUND B. UTILIZE ELECTRICAL METALLIC TUBING (EMT), MINIMUM SIZE OF 3/4", IN THE FOLLOWING LOCATIONS: a. POWER CIRCUIT HOMERUN b. BRANCH CIRCUITS IN CONCEALED OR EXPOSED LOCATIONS c. DATA/CATV ROUGH-IN C. UTILIZE METAL-CLAD CABLE (MC) IN THE FOLLOWING LOCATIONS: a. BRANCH CIRCUIT IN CONCEALED LOCATIONS
24.	ALL NEW CIRCUITS SHALL HAVE A GROUND WIRE INSTALLED.
25.	ALL WIRING NOT INSTALLED IN CONDUIT AND INSTALLED IN THE CEILING SPACE SHALL BE PLENUM RATED.
26.	EACH SWITCH, LIGHT, RECEPTACLE AND OTHER MISCELLANEOUS DEVICE SHALL BE PROVIDED WITH A GALVANIZED OR PRESSED STEEL OUTLET BOX OF THE KNOCKOUT TYPE, OF NOT LESS THAN NO. 14 U.S. GAUGE STEEL. CONDUITS SHALL BE FASTENED WITH LOCKNUTS AND BUSHINGS AND ALL UNUSED KNOCKOUTS MUST BE LEFT SEALED. THERE MUST BE SUFFICIENT ROOM FOR WIRES AND BUSHINGS AND DEEP BOXES SHALL BE INSTALLED WHERE REQUIRED. BOXES SHALL BE SECURELY AND ADEQUATELY SUPPORTED.
27.	IN EXPOSED AND SUSPENDED CEILING APPLICATIONS, ROUTE CONDUIT AS CLOSE TO STRUCTURAL SLAB OR DECK AS POSSIBLE, AND SUPPORT CONDUIT AND JUNCTION BOXES DIRECTLY FROM THE STRUCTURAL SLAB, DECK, OR FRAMING PROVIDED FOR THAT PURPOSE. LIGHTING BRANCH CIRCUIT CONDUITS SHALL NOT BE CLIPPED TO THE CEILING SYSTEM HAS BEEN SPECIFICALLY DESIGNED FOR THAT PURPOSE.
28.	ALL EXPOSED CONDUIT SHALL BE CONCEALED TO THE GREATEST EXTENT POSSIBLE, AND SHALL BE INSTALLED PARALLEL AND CLOSE TO STRUCTURAL MEMBERS. GENERAL CONTRACTOR SHALL PAINT CONDUIT TO MATCH ADJACENT FINISHES.
29.	ALL FACE PLATE AND DEVICE COLORS SHALL BE APPROVED BY ARCHITECT OR OWNER.
30.	ALL DIMMED LIGHTING CIRCUITS ARE TO RECEIVE DEDICATED NEUTRALS. DO NOT SHARE NEUTRALS ON DIMMED LIGHTING CIRCUITS.
31.	THE CONTRACTOR SHALL VERIFY THE CEILING TYPE BEFORE ORDERING LIGHTING LIXTURES.
32.	THE POWER AND CONTROL REQUIREMENTS FOR ALL EQUIPMENT CONNECTIONS SHALL BE CONFIRMED WITH APPROVED SHOP DRAWINGS PRIOR TO ELECTRICAL ROUGH-IN. FINAL POWER REQUIREMENTS, DIMENSIONED ROUGH-IN LOCATIONS, LOW VOLTAGE SYSTEM CONNECTIONS, ETC. SHALL BE CONFIRMED AND MODIFIED AS REQUIRED.
33.	ALL EXISTING ELECTRICAL SERVICES NOT SPECIFICALLY INDICATED TO BE REMOVED OR ALTERED SHALL REMAIN AS THEY PRESENTLY EXIST.
34.	CONTRACTOR TO CONDUCT FUNCTIONAL TESTING OF LIGHTING CONTROLS EQUIPMENT AS REQUIRED BY IECC 2012/2015, SECTION C408.3. AFTER THIS TESTING IS OBSERVED AND COMPLETED, THE COMMISSIONING AUTHORITY SHALL PROVIDE DOCUMENTATION TO THE AHJ THAT CERTIFIES THAT THE INSTALLATION MEETS THE DOCUMENTED PERFORMANCE CRITERIA OF SECTION C405.A
35.	IDENTIFY EACH RECEPTACLE WITH PANELBOARD IDENTIFICATION AND CIRCUIT NUMBER. USE HOT, STAMPED, OR ENGRAVED MACHINE PRINTING WITH BLACK-FILLED LETTERING ON FACE OF PLATE, AND DURABLE FIRE MARKERS OR TAGS INSIDE OUTLET BOXES.



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NOAA ANTARCTIC RESEARCH STATION

Cape Shirreff - Livingston Island
Antarctica

REVISIONS		
REV. DATE:	REV. NAME:	REV. NO.:

ELEC. NOTES, SPECIFICATIONS & SYMBOLS

date: 03/31/22
scale: As indicated

E-001



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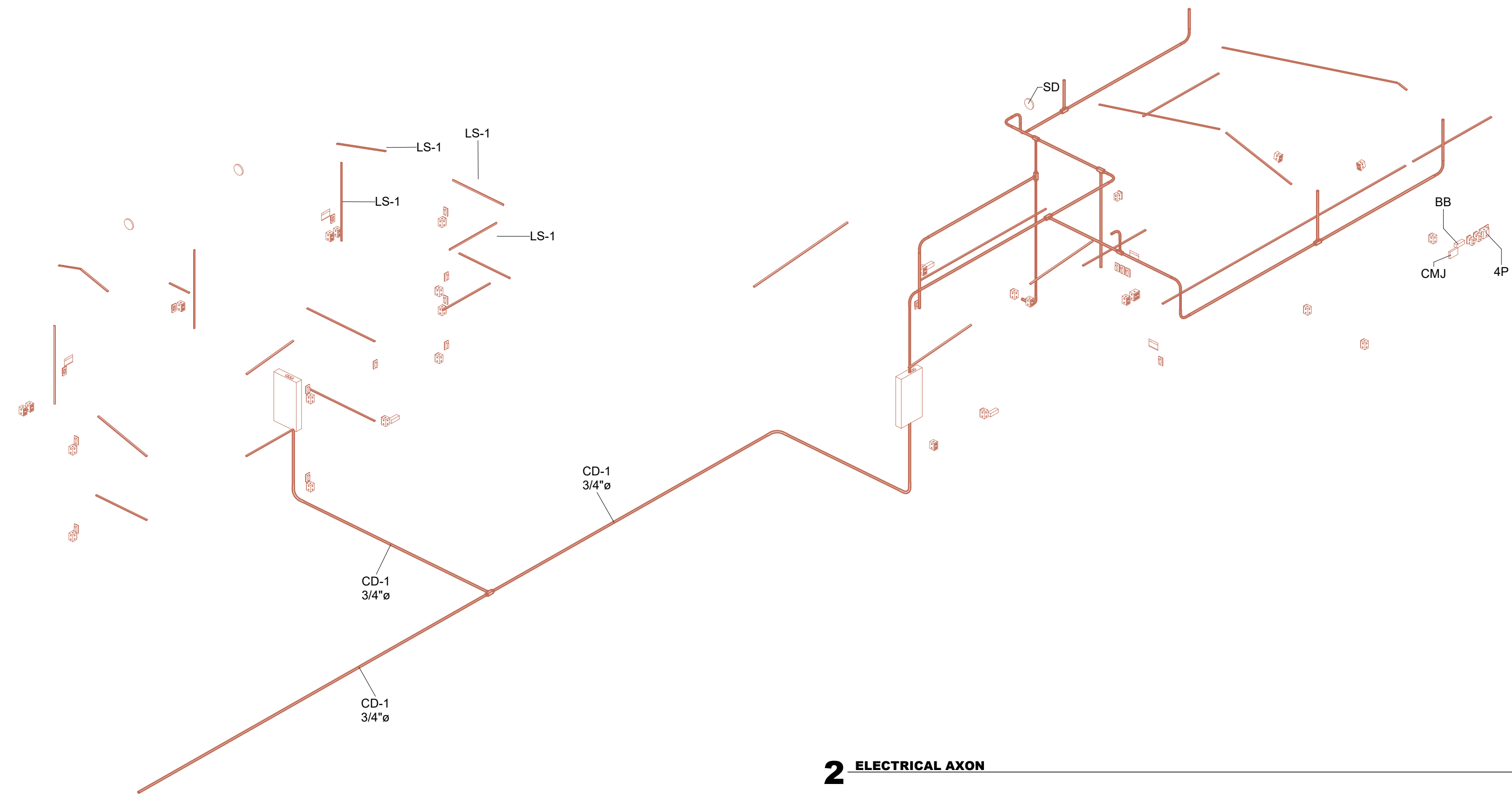
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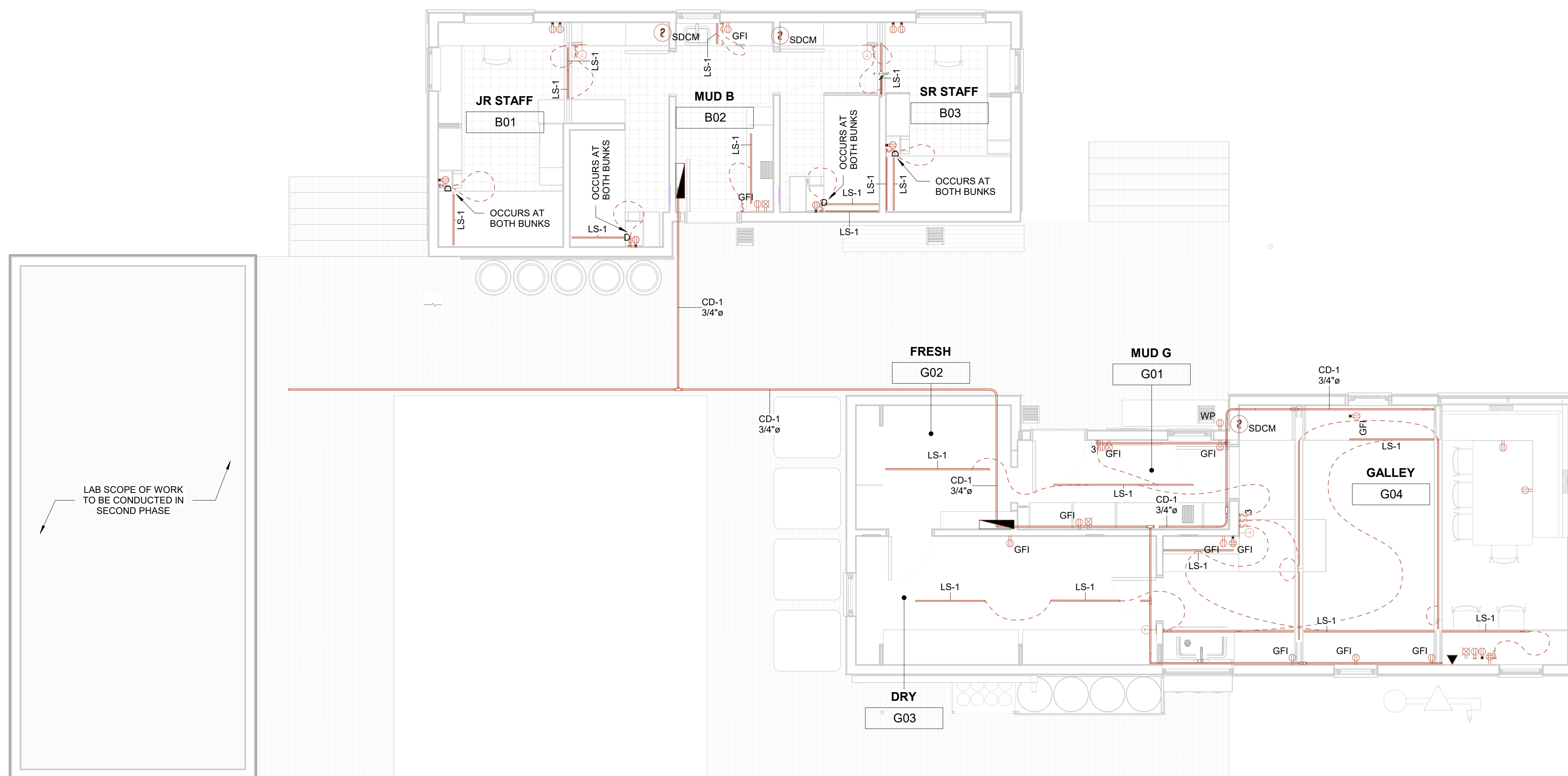
ELECTRICAL PLAN

date: 03/01/21
scale: 1/4" = 1'-0"

E-101



2 ELECTRICAL AXON



1 CAMPUS ELECTRICAL
1/4" = 1'-0"

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HVAC LEGEND	
	INSULATED FLEXIBLE DUCT (MAXIMUM 6'-0" LONG)
	BRANCH DUCT WITH 45° TAP AND MANUAL VOLUME DAMPER
	ELBOW WITH TURNING VANES
	SUPPLY OR OUTSIDE AIR DUCT UP
	SUPPLY OR OUTSIDE AIR DUCT DOWN
	RETURN OR TRANSFER AIR DUCT UP
	RETURN OR TRANSFER AIR DUCT DOWN
	EXHAUST AIR DUCT UP
	EXHAUST AIR DUCT DOWN
	TYPE, NECK SIZE, CFM AT SUPPLY DIFFUSER OR REGISTER
	TYPE, THROAT SIZE, CFM AT RETURN GRILLE OR REGISTER
	TYPE, SIZE AT EXHAUST GRILLE OR REGISTER
	MANUAL VOLUME DAMPER
	SQUARE TO ROUND TRANSITION
	SENSORS: T= TEMPERATURE CO= CARBON MONOXIDE
	FIRE DAMPER
	RADIATION DAMPER
	FIRE/SMOKE DAMPER
	SMOKE DAMPER
	MOTORIZED DAMPER
	ROUND/OVAL DUCT RISER
	RECTANGULAR DUCT (PLAN DIMENSION SHOWN FIRST)
	ROUND DUCT
	FLAT OVAL DUCT (PLAN DIMENSION SHOWN FIRST)
	TRANSITION IN DUCT SIZE
MISC. LEGEND	
	SECTION CUT: UPPER NUMBER INDICATED DRAWING NUMBER LOWER NUMBER INDICATES SHEET NUMBER
	CONNECTION POINT OF NEW WORK TO EXISTING
	CONNECTION POINT OF DEMOLITION TO EXISTING
	DETAIL REFERENCE: UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER
	RISER DESIGNATION
	NOTE REFERENCE SYMBOL
	EXISTING LINEWORK
	DEMOLITION LINEWORK
	NEW LINEWORK
PIPING LEGEND	
HYDRONIC	
	CONDENSATE DRAIN PIPING
	REFRIGERANT PIPING

DESIGN ASSUMPTIONS	
LOCATION: CAPE SHIRREFF, ANTARCTICA	
MINIMUM DESIGN TEMPERATURE (DURING OCCUPANCY): 0 DEGREES F	
MINIMUM DESIGN TEMPERATURE (UNOCCUPIED): -20 DEGREES F	
MAXIMUM FULL TIME OCCUPANCY: 8 PEOPLE	
MTG, HEIGHTS U.O.N.	
TERMOSTATS (USER ADJ.)	48" AFF
CONTROLS (CENTERLINE)	48" AFF
ABBREVIATIONS	
A/C	AIR CONDITIONING
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STRUCTURE
BTU	BRITISH THERMAL UNIT
CH	CHILLER
CFM	CUBIC FEET PER MINUTE
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT
CRCU	COMPUTER ROOM CONDENSING UNIT
CT	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET AIR HEATER
(D)	DEMOLISHED
DB	DRY RUB
DDC	DIRECT DIGITAL CONTROL
DN	DOWN DX DIRECT EXPANSION
(E)	EXISTING TO REMAIN
EAT	ENTERING AIR TEMPERATURE
EDB	ENTERING DRY BULB
EF	EXHAUST FAN
ERV	ENERGY RECOVERY VENTILATOR
EWB	ENTERING WET BULB
EWT	ENTERING WATER TEMPERATURE
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FSD	FIRE/SMOKE DAMPER
GPM	GALLONS PER MINUTE
HD	HEAD
HP	HORSEPOWER, HEAT PUMP
HOA	HAND OFF AUTOMATIC
HRV	HEAT RECOVERY VENTILATOR
HSTAT	HUMIDISTAT
HTG	HEATING
IN WC	INCHES OF WATER COLUMN
LAT	LEAVING AIR TEMPERATURE
LRA	LOCKED ROTOR AMPS
LWT	LEAVING WATER TEMPERATURE
MAU	MAKE UP AIR UNIT
MBH	1000 BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MFR	MANUFACTURER
MMBH	1,000,000 BTU PER HOUR
(N)	NEW
NA	NOT APPLICABLE
NC	NOISE CRITERIA, NORMALLY CLOSED
NO	NORMALLY OPEN
OA	OUTSIDE AIR
PH, Ø	PHASE
PRV	PRESSURE REDUCING VALVE
(R)	RELOCATED EXISTING
RA	RETURN AIR
RH	RELATIVE HUMIDITY
RLA	RUNNING LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
SA	SUPPLY AIR
SD	SMOKE DAMPER
SF	SQUARE FEET, SUPPLY FAN
SP	STATIC PRESSURE
SS	STAINLESS STEEL
ST	SOUND TRAP, STEAM TRAP
STM	STEAM
TA	TRANSFER AIR OPENING
TD	TRANSFER DUCT
TDH	TOTAL DYNAMIC HEAD
TSTAT	THERMOSTAT
TYP	TYPICAL
UH	UNIT HEATER
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
W	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER COLUMN
WPD	WATER PRESSURE DROP

MECHANICAL GENERAL NOTES	
1.	THE PLANS ARE, TO A GREAT EXTENT, DIAGRAMMATIC IN NATURE. DRAWING SCALES SHOULD BE VERIFIED FROM DIMENSIONS ON ARCH PLANS. THE INFORMATION PRESENTED IS AS EXACT AS COULD BE SECURED. THE CONTRACTOR SHALL OBTAIN EXACT LOCATION, MEASUREMENTS, LEVELS, ECT. AT THE SITE AND SHALL SATISFACTORILY ADAPT THE WORK TO THE ACTUAL CONDITIONS AT THE PROJECT SITE.
2.	ALL WORK SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES, LAWS, ACTS AND ORDINANCES, AND ALL AUTHORITIES HAVING JURISDICTION.
3.	THE COMPLETED INSTALLATION SHALL BE IN ACCORDANCE WITH ALL ENGINEERING REQUIREMENTS, THE OWNER'S DESIGN CRITERIA, UTILITY COMPANY REQUIREMENTS, APPLICABLE INDUSTRY STANDARDS OF GOOD PRACTICE AND SAFETY, AND THE MANUFACTURER'S STRICTEST RECOMMENDATIONS FOR EQUIPMENT AND PRODUCT APPLICATION AND INSTALLATION.
4.	RECORD DRAWINGS - PREPARE AND SUBMIT TO THE OWNER RECORD DRAWINGS INDICATING THE EXACT LOCATION OF ALL EQUIPMENT INCLUDING THE EQUIPMENTS "AS INSTALLED" SIZES; MANUFACTURER, MODEL NUMBERS, AND PERFORMANCE RATINGS.
5.	SUPPORTS - EQUIPMENT, PIPING, DUCTWORK OR ANY OTHER ACCESSORY SHALL NOT BE SUPPORTED FROM OTHER PIPING, DUCTWORK, METAL ROOF DECK, LATERAL BRACING BRIDGING OR CONDUIT. ITEMS SHALL ONLY BE SUPPORTED FROM BUILDING STRUCTURE.
6.	COORDINATE EXACT LOCATION OF ALL DUCTWORK, AIR TERMINAL UNITS, PIPING, ECT. WITH STRUCTURAL, ARCHITECTURAL, ELECTRICAL, AND OTHER MECHANICAL SYSTEMS.
7.	WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED, INSTALL MECHANICAL SERVICES AND OVERHEAD EQUIPMENT TO PROVIDE THE MAXIMUM HEADROOM POSSIBLE.
8.	ALL DUCTWORK, PIPING AND TEMPERATURE CONTROL CONDUIT TO VIBRATING EQUIPMENT SHALL HAVE FLEXIBLE CONNECTORS.
9.	COORDINATE ALL ROOF AND CHASE PENETRATIONS WITH STRUCTURAL DRAWINGS AND ROOF INSTALLER.
10.	ALL TESTS SHALL BE COMPLETED BEFORE ANY MECHANICAL EQUIPMENT OR PIPING INSULATION IS APPLIED.
11.	ALL SA DUCT BRANCH TAKE-OFFS TO DIFFUSER TO BE SAME SIZE AS DIFFUSER NECK UNLESS OTHERWISE NOTED.
12.	ALL DUCTWORK DIMENSIONS, AS SHOWN ON THE DRAWINGS, ARE INTERNAL CLEAR DIMENSIONS AND DUCT SIZE SHALL BE INCREASED TO COMPENSATE FOR DUCT LINING THICKNESS.
13.	PROVIDE MINIMUM OF 5'-0" DUCT FROM ROOM TERMINAL UNITS TO FIRST DIFFUSER TAKE-OFFS.
14.	CONTRACTOR SHALL COORDINATE LOCATION OF ALL DIFFUSERS AND GRILLES WITH STRUCTURAL, ELECTRICAL AND ARCHITECTURAL REFLECTED CEILING PLANS.
15.	BEFORE INSTALLATION, EQUIPMENT CONTRACTOR SHALL VERIFY THAT COILS CAN BE REMOVED WITHOUT INTERFERENCE. CONTRACTOR SHALL PROVIDE ADEQUATE ACCESS AND COIL REMOVAL SPACE FOR ALL EQUIPMENT.
16.	ACCESS PANELS ARE REQUIRED (MIN 18" X 18") FOR ACCESS TO EVERY VALVE, DAMPER, AIR TERMINAL UNIT, AND CONTROL SENSOR IF NOT OTHERWISE ACCESSIBLE.
HVAC SPECIFICATIONS	
CODE COMPLIANCE AND STANDARDS: IMC 2021	
DUCTWORK: GALVANIZED SHEET METAL, ASTM A572 COATING DESIGNATION G90 INSTALL TURNING VANES IN ALL SQUARE ELBOWS	
DUCT INSULATION INTERIOR: 1-1/2" 3/4 LB DENSITY FLEXIBLE FIBERGLASS WRAO ASTM C553 TYPE II CLASS F-1	
DUCT INSULATION JACKET INTERIOR: SCRIM FOIL FACED VAPOR BARRIER, ASTM C921 TYPE 1	
FIRE HAZARD CLASSIFICATION FOR INSULATING MATERIALS: FLAME SPREAD 25 OR LESS, SMOKE RATING 50 OR LESS	
ADHESIVE & FASTENERS: COMPLY WITH NFPA 90A AND INDUSTRY STANDARD	
DUCT CONSTRUCTION & INSTALLATION: CONSTRUCT IN ACCORDANCE TO LATEST EDITION OF SMACNA "HVAC DUCT CONSTRUCTION STANDARDS"	
FLEXIBLE DUCTWORK: INSULATED PRESSURE RATING SUITABLE FOR APPLICATION MAXIMUM LENGTH IS 5'-0"	
FIRE HAZARD CLASSIFICATIONS FOR INSULATING MATERIALS: FLAME SPREAD RATINGS OF 25 OR LESS SMOKE DEVELOPED RATING OF 50 OR LESS	
PIPING MATERIAL: COPPER TUBING, ASTM B 280, TYPE ACR, OR ASTM B 88, TYPE L HARD DRAWN STRAIGHT LENGTHS, AND SOFT ANNEALED COILS, SEAMLESS COPPER TUBING	
FITTINGS: WROUGHT-COPPER FITTINGS-ANSI B16.22 STREAMLINED PATTERN	
JOINING MATERIALS: BRAZING FILLER METALS: AWS A5.8, CLASSIFICATION BAG-1 (SILVER) INSULATE SUCTION LINES WITH 3/4" FLEXIBLE ELASTOMERIC INSULATION	
PIPING INSTALLATION: INSTALL IN ACCORDANCE WITH ASHRAE STANDARD 15 - "THE SAFETY CODE FOR MECHANICAL REFRIGERATION" INSTALL PIPING INDICATED TO BE EXPOSED AND PIPING IN EQUIPMENT ROOMS AND SERVICE AREAS AT RIGHT ANGLES OR PARALLEL TO BUILDING WALLS INSTALL PIPING FREE OF SAGS AND BENDS SELECT SYSTEM COMPONENTS WITH PRESSURE RATING EQUAL TO OR GREATER THAN SYSTEM OPERATING PRESSURE LOCATIONS TO ALLOW FOR SERVICE AND INSPECTION INSTALL PIPING AS SHORT AND DIRECT AS POSSIBLE, WITH A MINIMUM NUMBER OF JOINTS, ELBOWS, AND FITTINGS. INSTALL VALVES AND SPECIALTIES IN ACCESSIBLE LOCATIONS TO ALLOW FOR SERVICE AND INSPECTION INSTALL PIPE SLEEVES AT PENETRATIONS IN EXTERIOR WALLS AND FLOOR ASSEMBLIES INSTALL SLEEVES THROUGH FLOORS, WALLS, OR CEILINGS, SIZED TO PERMIT INSTALLATION OF FULL THICKNESS INSULATION SLOPE REFRIGERANT PIPING AS FOLLOWS: INSTALL HORIZONTAL HOT-GAS DISCHARGE PIPING WITH A UNIFORM SLOPE DOWNWARD AWAY FROM COMPRESSOR INSTALL HORIZONTAL SUCTION LINES WITH A UNIFORM SLOPE DOWNWARD TO COMPRESSOR INSTALL TRAPS AND DOUBLE RISERS TO ENTRAIN OIL IN VERTICAL RUNS LIQUID LINES MAY BE INSTALLED LEVEL	
PIPE JOINT CONSTRUCTION: REAM ENDS OF PIPES AND TUBES AND REMOVE BURRS REMOVE SCALE, SLAG, DIRT, AND DEBRIS FROM INSIDE AND OUTSIDE OF PIPE AND FITTINGS BEFORE ASSEMBLY SOLDERED JOINTS: CONSTRUCT JOINTS ACCORDING TO ASTM 828 OR CDA'S "COPPER TUBE HANDBOOK" BRAZED JOINTS: CONSTRUCT JOINTS ACCORDING TO AWS'S "BRAZING HANDBOOK", CHAPTER "PIPE AND TUBE"	
HANGERS AND SUPPORTS: INSTALLS THE FOLLOWING PIPE ATTACHMENTS: ADJUSTABLE STEEL CLEVIS HANGERS FOR INDIVIDUAL HORIZONTAL RUNS LESS THAN 20 FEET LONG ROLLER HANGERS AND SPRING HANGERS FOR INDIVIDUAL HORIZONTAL RUNS 20 FEET OR LONGER COPPER-CLAD HANGERS AND SUPPORTS FOR HANGERS AND SUPPORTS IN DIRECT CONTACT WITH COPPER PIPE INSTALL HANGERS FOR COPPER TUBING WITH THE FOLLOWING MAXIMUM SPACING AND MINIMUM ROD SIZES: NPS 1/2": MAXIMUM SPAN, 60 INCHES, MINIMUM ROD SIZE, 1/4 INCH NPS 3/8": MAXIMUM SPAN, 60 INCHES, MINIMUM ROD SIZE, 1/4 INCH NPS 1": MAXIMUM SPAN, 72 INCHES, MINIMUM ROD SIZE, 1/4 INCH NPS 1-1/4": MAXIMUM SPAN, 96 INCHES, MINIMUM ROD SIZE, 3/8 INCH NPS 1-1/2": MAXIMUM SPAN, 96 INCHES, MINIMUM ROD SIZE, 3/8 INCH	
PLUMBING SPECIFICATIONS	
CODE COMPLIANCE: LOCAL PLUMBING CODE, UL, ASSOCIATED FACTORY MUTUAL RESEARCH	
CW AND HW PIPING: TYPE L COPPER TUBE ASTM B88 WITH WROUGHT COPPER 95-5 TIN-ANTIMONY SOLDER - JOINT FITTINGS ANSI B16.22	
PEX PIPING FOR DOMESTIC CW AND HW PIPING: PEX TUBE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) UTILIZING THE HIGH PRESSURE PEROXIDE METHOD (PEXA) WITH A MINIMUM CROSSLINKING OF 70-89% ASTM F 876/877, PEX 3006, 9 SDR, ASTM F2023. COLOR - BLUE FOR CW, RED FOR HW, WHITE FOR HWC, MAX FLAME SPREAD OF 25/50 PER ASTM E 84. FITTINGS MUST MEET ASTM F 1960-2159 PEX SHALL NOT BE USED WITH INSTANTANEOUS WATER HEATERS. THERE SHALL BE A MINIMUM OF 18-INCHES FROM THE CONNECTION FROM THE WATER HEATER TO PEX PIPING. PEX SHALL ONLY BE USED ABOVE GROUND	
ABOVE GRADE WASTE AND VENT: HUBLESS CAST IRON SERVICE WEIGHT SOIL PIPE AND FITTINGS CISPI STANDARD 301 WITH ASTM C 564 RUBBER SLEEVE OR GASKET WITH CORROSION-RESISTANT FASTENERS PVC PLASTIC PIPE, SCHEDULE 40	
ABOVE GRADE CONDENSATE PIPING: TYPE L COPPER	
BELOW GRADE WASTE AND VENT: PVC PLASTIC PIPE, SCHEDULE 40	
FITTINGS FOR WASTE AND VENT: PVC SOCKET FITTINGS AND SOLVENT-CEMENTED JOINTS INSTALL HANGERS FOR ABS AND PVC PLASTIC PIPING WITH THE FOLLOWING MAXIMUM SPACING AND MINIMUM ROD DIAMETERS LESS THAN 2-INCH-NPS: MAXIMUM HORIZONTAL SPACING, 48 INCHES WITH 3/8 INCH MINIMUM ROD DIAMETER, MAXIMUM VERTICAL SPACING, 48 INCHES	
EXPOSED PVC PIPING: PROTECT PLUMBING VENTS EXPOSED TO SUNLIGHT WITH 2 COATS OF WATER-BASED LATEX PAINT	
SUPPLY PIPING INSULATION: FIBERGLASS, PERFORMED RIGID PIPE INSULATION, ASTM C547, CLASS I JACKETED, CW, HW AND HWC ARE TO BE INSULATED. CW PIPING IS TO HAVE A VAPOR BARRIER JACKET. FIRE HAZARD CLASSIFICATION OF FLAME SPREAD 25 OR LESS, SMOKE DEVELOPED 50 OR LESS COLD WATER NPS SIZES 1" AND SMALLER: 1/2" THICKNESS COLD WATER NPS SIZES 1-1/4" AND LARGER: 1" THICKNESS HOT WATER (<140F) NPS SIZES 1-1/4" AND SMALLER: 1" THICKNESS HOT WATER (<140F) NPS SIZES 1-1/2" AND LARGER: 1-1/2" THICKNESS HOT WATER (>140F) NPS SIZES 1-1/4" AND SMALLER: 1-1/2" THICKNESS HOT WATER (>140F) NPS SIZES 1-1/2" AND LARGER: 2" THICKNESS	
CW AND HW VALVES: TWO OR THREE PIECE BRONZE BODY WITH CHROME PLATED BALL, TEFLON OR TFE SEAT RATED FOR 400 WOG PRESSURE. ALL STOP VALVES AT FIXTURES SHALL BE BALL TYPE, 1/4-TURN AND LEAD FREE, DZR VALUES	
SUPPORT AND EXPANSION: PROVIDE ACCEPTABLE SUPPORTING DEVICES FOR ALL PIPING. ALLOW FOR PIPE EXPANSION	
TESTING AND FILLING: AFTER INSTALLATION IS COMPLETE, PRESSURE TEST NEW DOMESTIC WASTE, VENT, CW AND HW SYSTEMS PER LOCAL PLUMBING CODE. ISOLATE AND CHLORINATE ALL NEW DOMESTIC WATER PIPING PRIOR TO USE	



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NOAA ANTARCTIC RESEARCH STATION

Cape Shirreff - Livingston Island
Antarctica

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MECHANICAL NOTES AND SPECIFICATIONS

date: 04/08/22
scale: 1/8" = 1'-0"

M-001

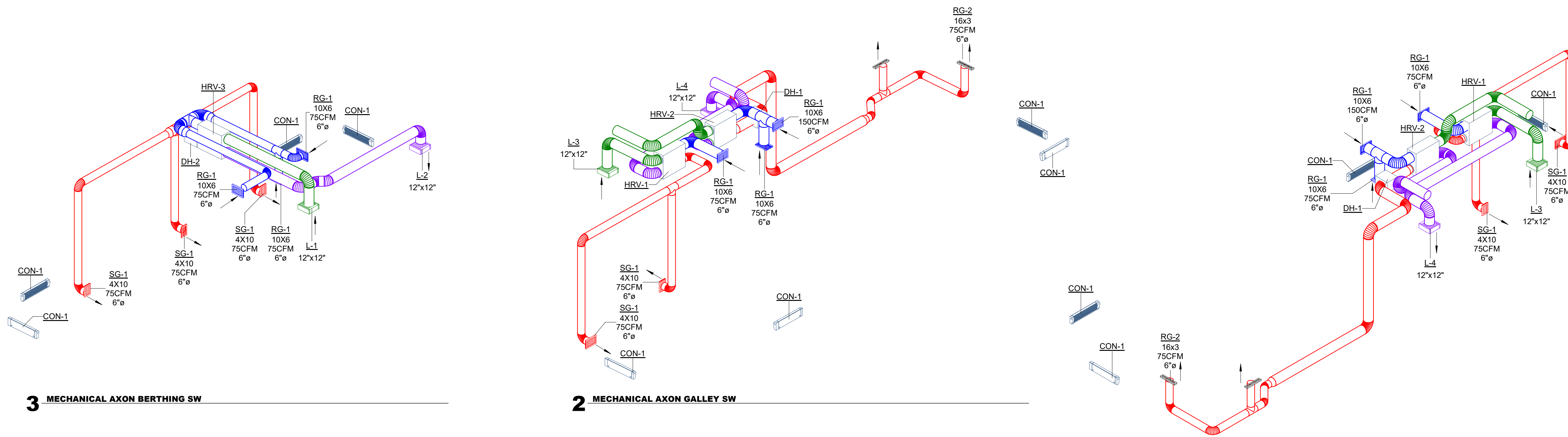
REVISIONS

REV. DATE: REV. NAME: REV. NO:

**MECHANICAL
PLAN**

date: 03/10/22
scale: 1/4" = 1'-0"

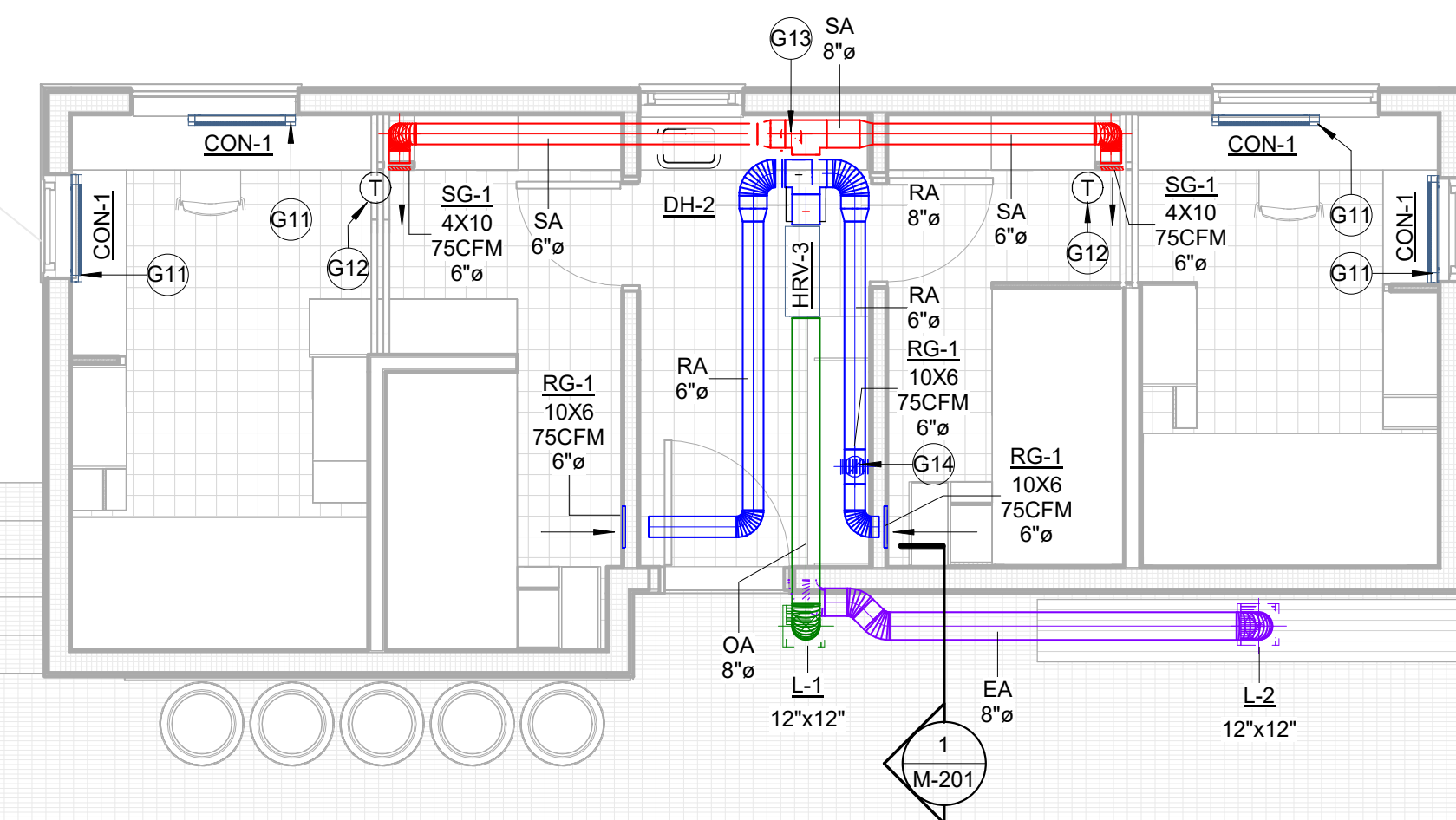
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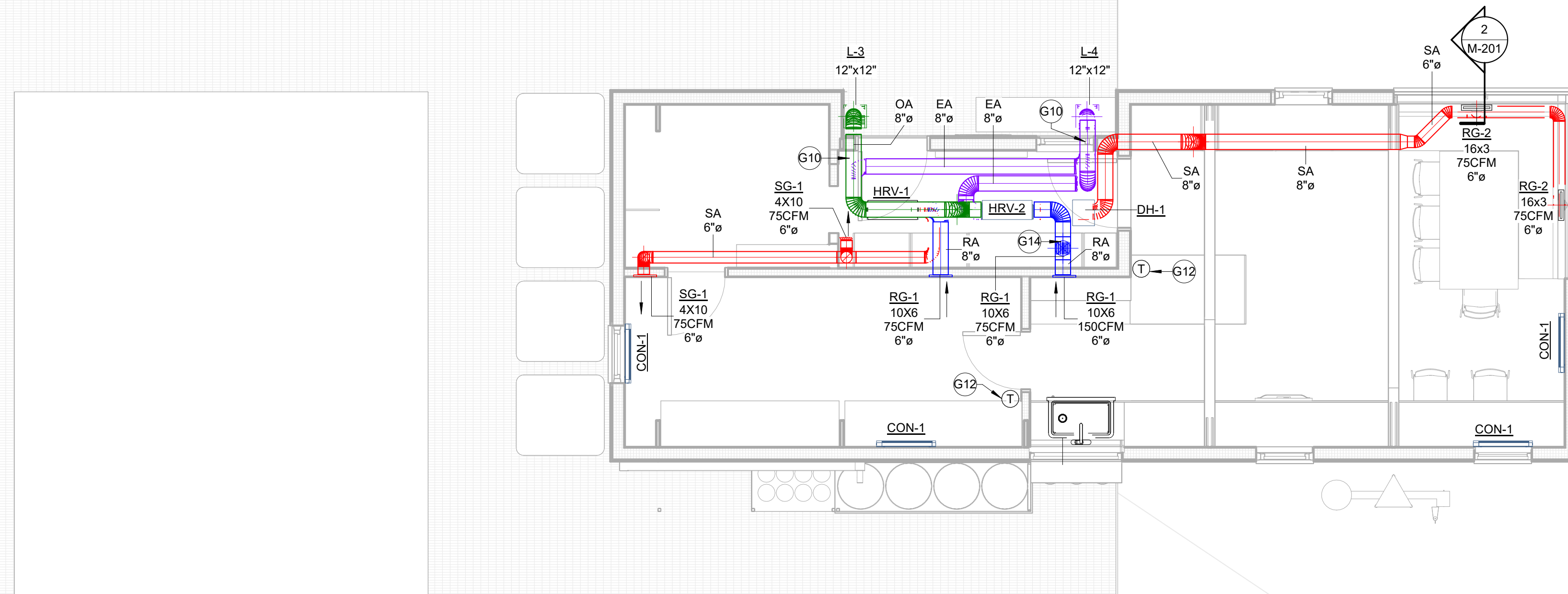
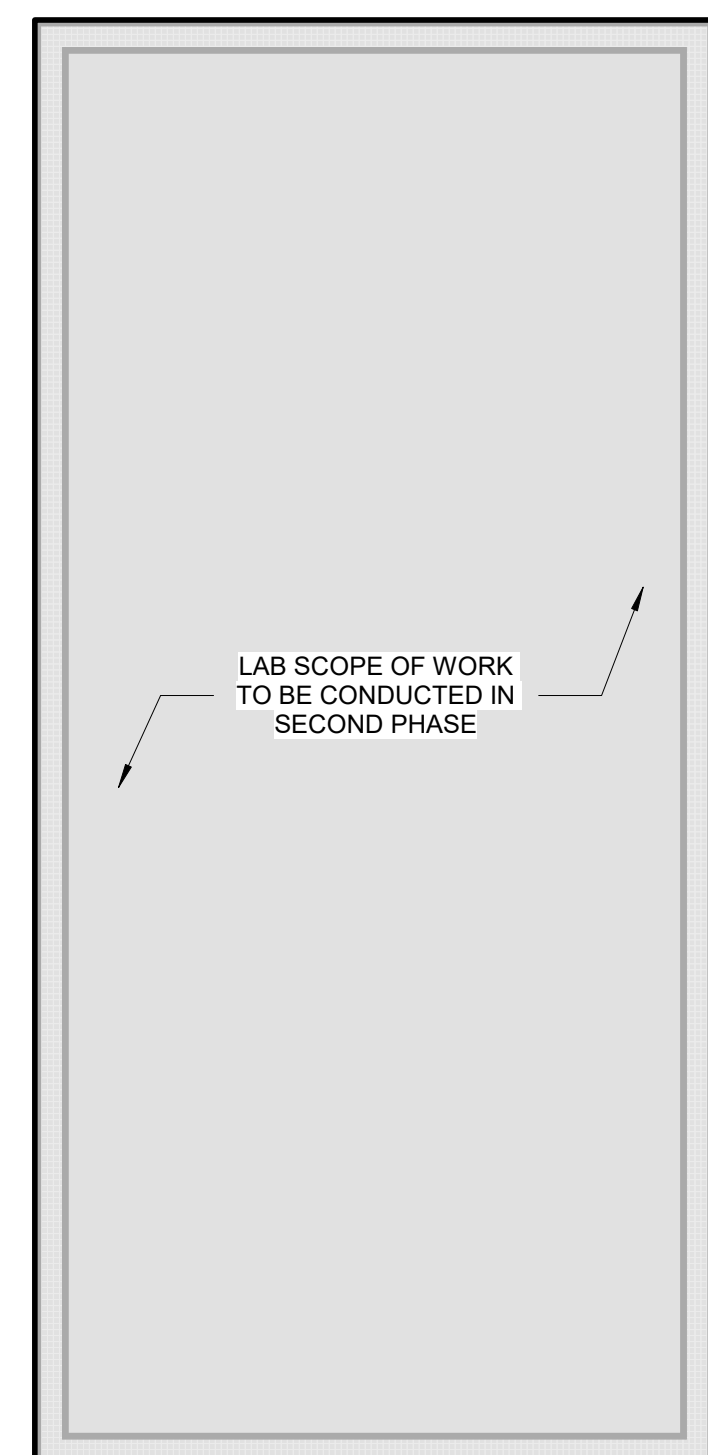
3 MECHANICAL AXON BERTHING SW

2 MECHANICAL AXON GALLEY SW

4 MECHANICAL AXON GALLEY NE



WORKNOTE LEGEND	
WORK NOTE VALUE	WORKNOTE
G10	STACKED DUCTWORK 8"DIAMETER SA AT HIGHEST POINT, 8"DIAMETER LOWER. REFER TO SECTIONS AND 3D AXONS FOR FURTHER INFORMATION
G11	GRILL TO BE INTEGRATED INTO DESKTOP OF MILLWORK ABOVE LOCATION OF COVECTOR
G12	LOCATION OF THERMOSTAT AND ERV CONTROLLER
G13	SUPPLY TO MUDROOM TO BE INTEGRATED INTO MILLWORK BELOW
G14	RETURN GRILL FROM MUDROOM TO BE INTEGRATED INTO CEILING



1 MECHANICAL PLAN
1/4" = 1'-0"

MECHANICAL CONTROLS

ERV CONTROLS:

GALLEY HRV-1 SHALL OPERATE AT THE FOLLOWING CONDITIONS:

TIMES	SPEED
12AM - 6AM	OFF
6AM - 10AM	HIGH
10AM - 4PM	LOW
4PM - 10PM	HIGH
10PM - 12AM	LOW

GALLEY HRV-2 SHALL OPERATE AT THE FOLLOWING CONDITIONS:

TIMES	SPEED
12AM - 6AM	OFF
6AM - 10AM	LOW
10AM - 4PM	OFF
4PM - 10PM	LOW
10PM - 12AM	OFF

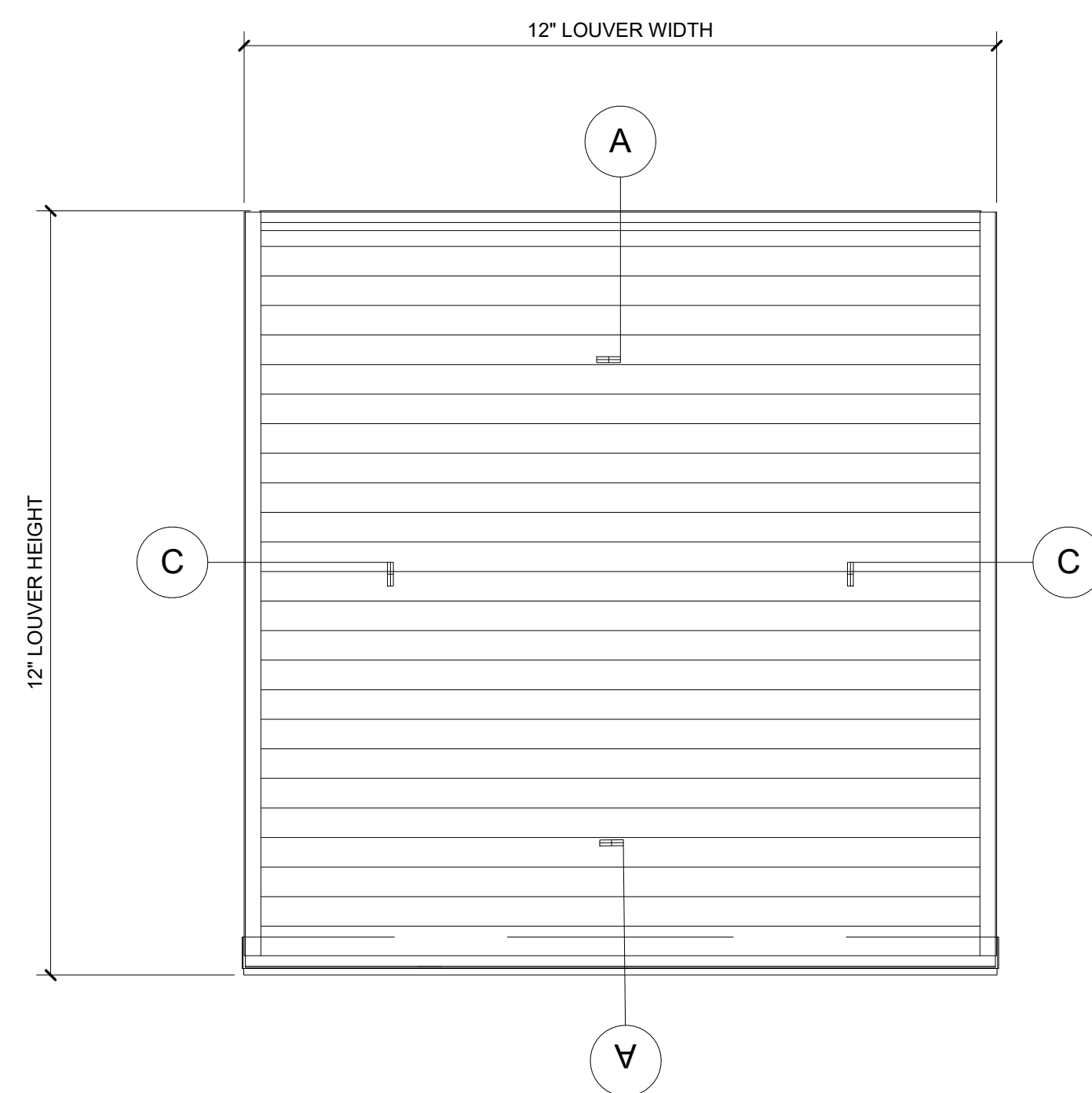
GALLEY HRV-2 SHALL OPERATE AT THE FOLLOWING CONDITIONS:

TIMES	SPEED
12AM - 6AM	HIGH
6AM - 10AM	LOW
10AM - 4PM	OFF
4PM - 10PM	LOW
10PM - 12AM	HIGH

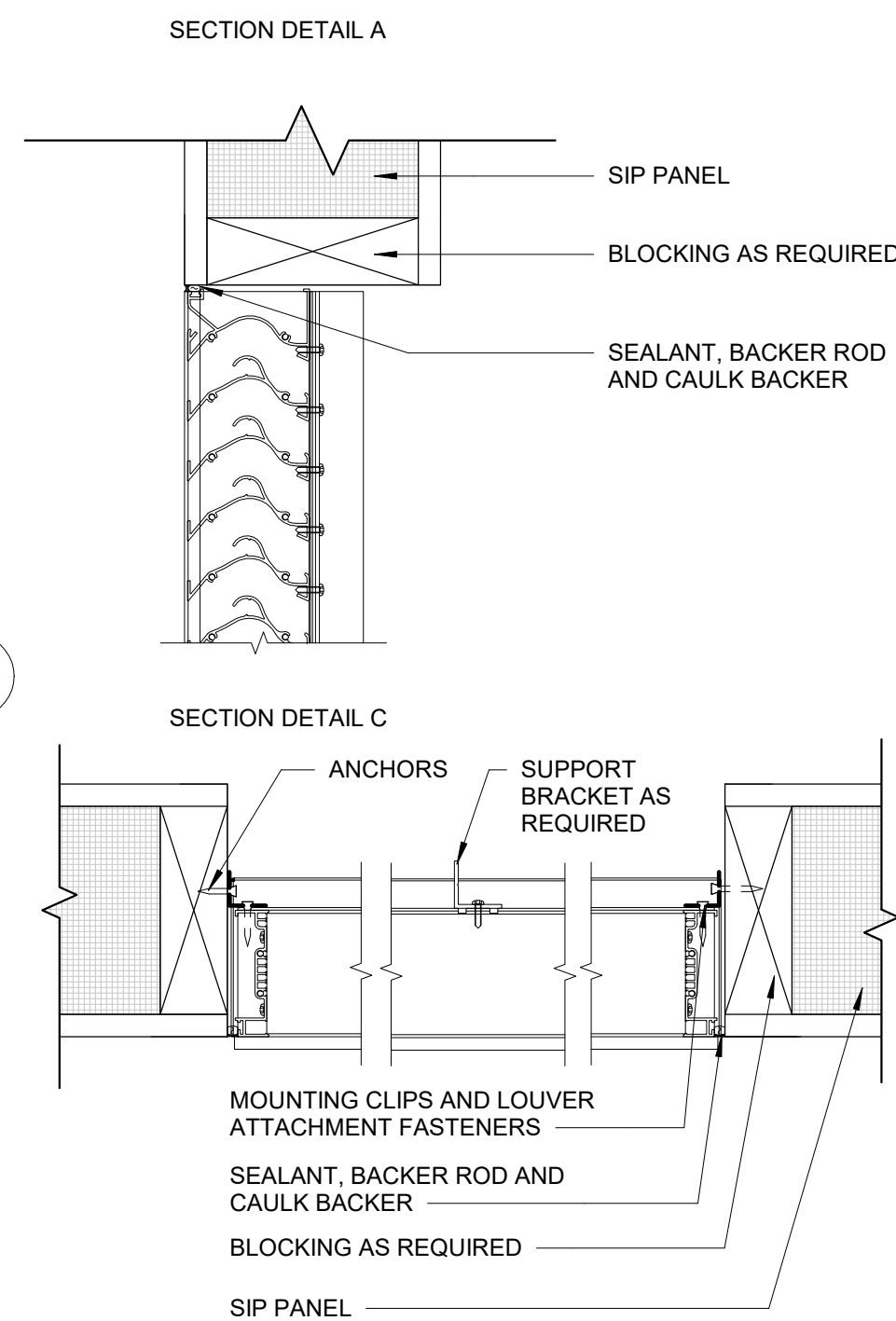
ALL CONTROLS SHALL BE FULLY ADJUSTABLE BY OWNER AND OPERATOR

MECHANICAL SCHEDULE

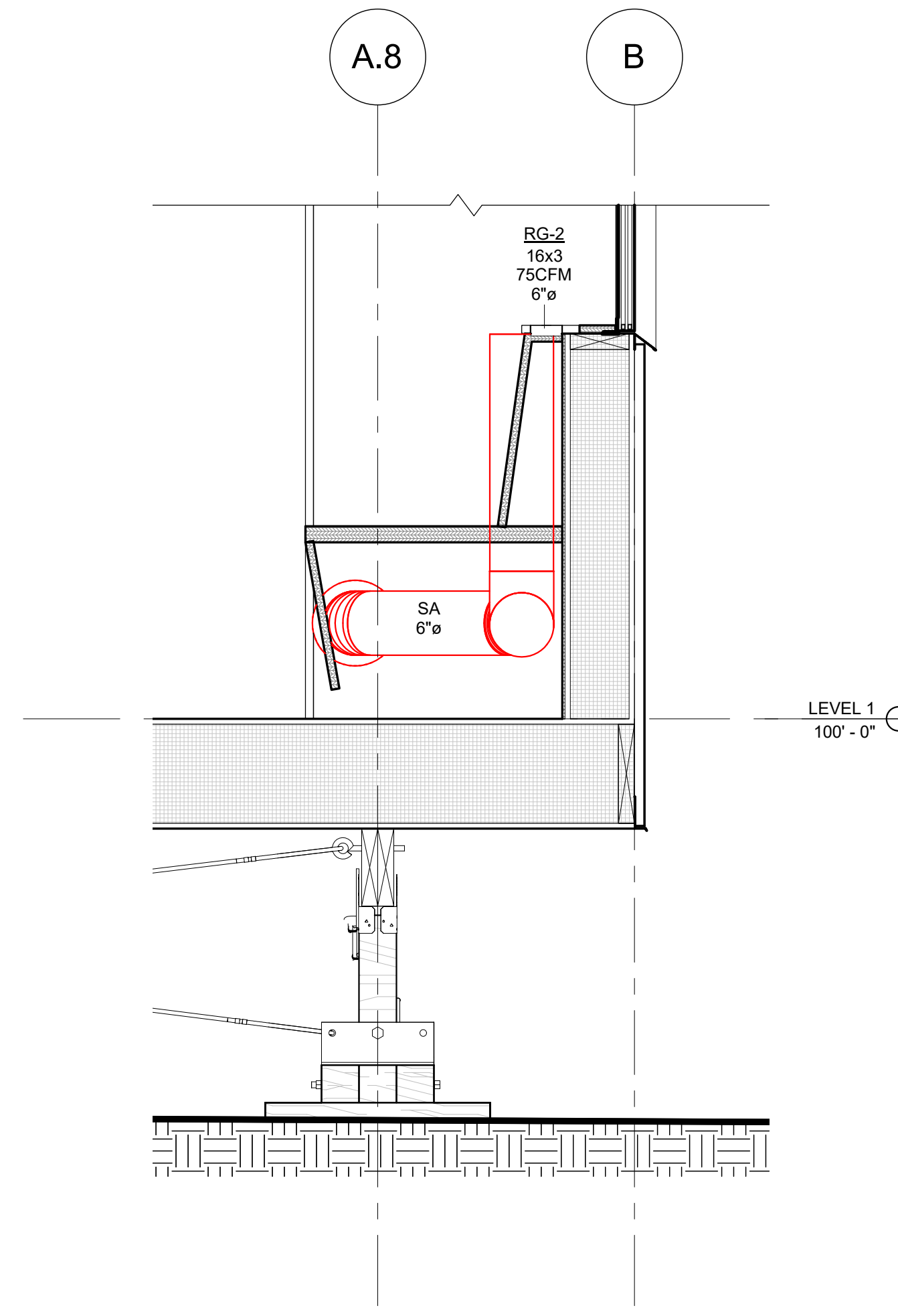
TYPE MARK	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	SIZE	LOCATION	FINISH	ELECTRICAL INFORMATION	NOTES	QTY.
HRV-1	HEAT RECOVERY VENTILATOR (HRV)	GREENHECK	SYNC 180	22" H X 26" W X 10" D	GALLEY	N/A	120V / 1PH / 60 HZ	PROVIDE WITH WALL MOUNT TIMER AND FAN CONTROLLER	1
HRV-2	HEAT RECOVERY VENTILATOR (HRV)	GREENHECK	SYNC 180	22" H X 26" W X 10" D	GALLEY	N/A	120V / 1PH / 60 HZ	PROVIDE WITH WALL MOUNT TIMER AND FAN CONTROLLER	1
HRV-3	HEAT RECOVERY VENTILATOR (HRV)	GREENHECK	SYNC 180	22" H X 26" W X 10" D	BERTHING	N/A	120V / 1PH / 60 HZ	PROVIDE WITH WALL MOUNT TIMER AND FAN CONTROLLER	1
DH-1	ELECTRIC DUCT HEATER	RENEWAIRE	RH SERIES - 1KW	10" H X 11-1/2" W X 13-1/2" D	GALLEY	N/A	120V / 1PH / 60 HZ HEATER 1 KW		1
DH-2	ELECTRIC DUCT HEATER	RENEWAIRE	RH SERIES - 1KW	10" H X 11-1/2" W X 13-1/2" D	BERTHING	N/A	120V / 1PH / 60 HZ HEATER 1 KW		1
SG-1	SUPPLY GRILLE	PRICE	540/640	4" X 10"	GALLEY & BERTHING	ADB ANODIZED DARK BRONZE	N/A	DOUBLE DEFLECTION	4
SG-2	SUPPLY GRILLE	PRICE	LBP CORE 15A	2.5" X 18"	GALLEY	ADB ANODIZED DARK BRONZE	N/A	PROVIDE WITH ADJUSTABLE PLENUM	2
RG-1	RETURN GRILLE	PRICE	10	6" X 10"	GALLEY & BERTHING	ADB ANODIZED DARK BRONZE	N/A		4
L-1	LOUVER	GREENHECK	EHH-401	12" H X 12" W X 4" D	BERTHING	CLEAR ANODIZE	N/A	INCLUDE GRAVITY BACKDRAFT DAMPER	1
L-2	LOUVER	GREENHECK	EHH-401	12" H X 12" W X 4" D	BERTHING	CLEAR ANODIZE	N/A	INCLUDE GRAVITY BACKDRAFT DAMPER	1
L-3	LOUVER	GREENHECK	EHH-401	12" H X 12" W X 4" D	GALLEY	CLEAR ANODIZE	N/A	INCLUDE GRAVITY BACKDRAFT DAMPER	1
L-4	LOUVER	GREENHECK	EHH-401	12" H X 12" W X 4" D	GALLEY	CLEAR ANODIZE	N/A	INCLUDE GRAVITY BACKDRAFT DAMPER	1
CON-1	CONVECTOR BASEBOARD HEATER	QMARK	2500 SERIES	6-3/4" H X 2'-6" W X 2-7/8" D	GALLEY & BERTHING	NORTHERN WHITE	120V / 1PH / 60 HZ HEATER 0.5 KW		9



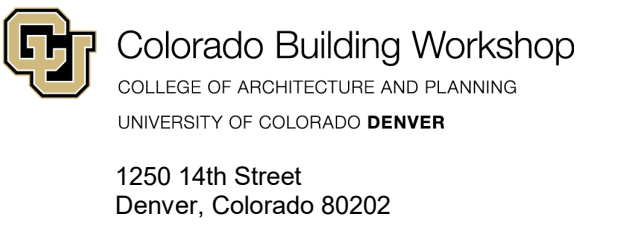
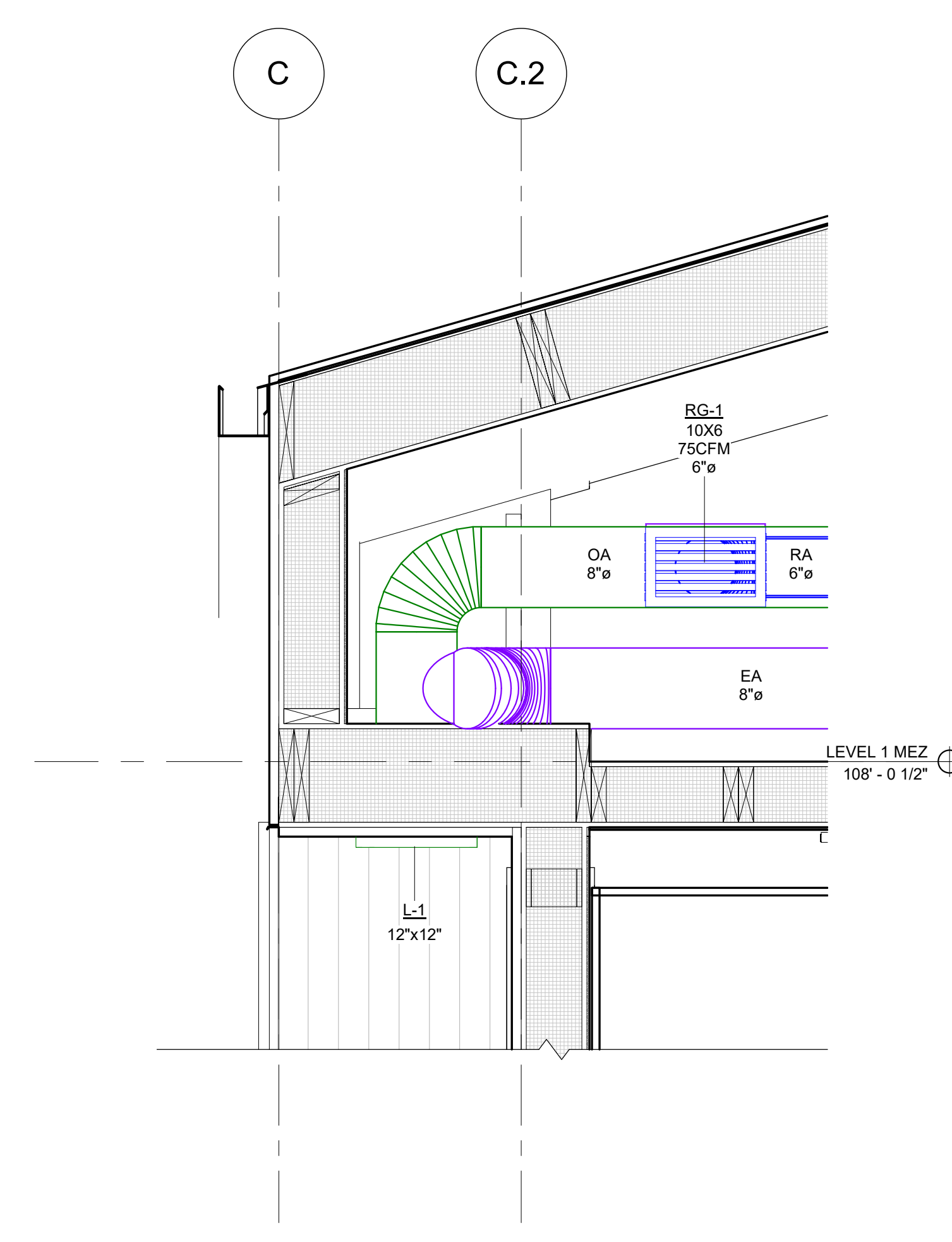
3 LOUVER TO SOFFIT DETAIL
3" = 1'-0"



2 SECTION AT GALLEY BENCH HVAC
1" = 1'-0"



1 SECTION AT BERTHING SOFFIT HVAC
1" = 1'-0"



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Antarctica

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MECHANICAL SCHEDULE AND DETAILS

date: 04/03/22
scale: As indicated

M-201