

CENTRE FOR AQUACULTURE & ENVIRONMENTAL RESEARCH NEW LABS

DRAWING LIST

ARCHITECTURAL

A0.00	COVER SHEET, LIST OF DRAWINGS LEGEND, ASSEMBLIES, ABBREVIATIONS, NOTES
A1.01	LOCAL SITE PLAN
A1.02	OVERALL SITE PLAN
A2.01	FLOOR PLANS FOUNDATION & FRAMING PLAN
A3.01	FEED LAB EXTERIOR ELEVATIONS
A3.02	ACOUSTICS LAB EXTERIOR ELEVATIONS
A4.01	SECTIONS
A6.01	DETAILS
A6.02	DETAILS
A6.03	DETAILS
A6.04	DETAILS
A6.05	ACOUSTIC LABS STAIR DETAIL
A6.06	FEED LAB RAMP DETAIL
A7.01	INTERIOR ELEVATIONS
A7.02	MILLWORK DETAILS
A8.01	DOOR, WINDOW, & FINISH SCHEDULES, EQUIPMENT TO BE RELOCATED

STRUCTURAL

S1.01	STRUCTURAL NOTES
S2.01	FOUNDATION PLAN, SECTIONS AND DETAILS
S2.02	FLOOR FRAMING PLAN, DETAILS AND SECTIONS

STRUCTURAL (ALUMINUM FRAME ASSEMBLY)

SH1	STRUCTURAL ALUMINUM FRAME, 3D GENERAL ARRANGEMENT, GENERAL NOTES, DRAWING INDEX AND LEGEND
SH2	STRUCTURAL ALUMINUM FRAME, ROOF FRAMING PLAN AND ROOF FRAMING DETAIL
SH3	STRUCTURAL ALUMINUM FRAME, FLOOR FRAMING PLAN AND ROOF FRAMING PLAN
SH4	STRUCTURAL ALUMINUM FRAME, COLUMN PLAN AND DETAILS
SH5	STRUCTURAL ALUMINUM FRAME, COLUMN BASES PLAN AND CABLE BRACING GUSSET PLATE PLAN, SECTIONS AND DETAILS
SH6	STRUCTURAL ALUMINUM FRAME, HALF CROSS SECTIONS
SH7	STRUCTURAL ALUMINUM FRAME, KNEE BRACING AND ROOF BEAM CONNECTION DETAILS, SHEET 1 OF 2
SH8	STRUCTURAL ALUMINUM FRAME, KNEE BRACING AND ROOF BEAM CONNECTION DETAILS, SHEET 2 OF 2
SH9	STRUCTURAL ALUMINUM FRAME, ROOF FRAMING AND FLOOR FLOOR FRAMING, SECTIONS AND DETAILS
SH10	STRUCTURAL ALUMINUM FRAME, COLUMN BASE MK-C81, SECTIONS AND DETAILS
SH11	STRUCTURAL ALUMINUM FRAME, COLUMN BASE MK-C82 AND COLUMN BASE MK-C83, SECTIONS AND DETAILS

MECHANICAL

M1.01	ACOUSTIC LAB & FEED LAB - MECHANICAL AND PLUMBING PLANS
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ELECTRICAL

E1.0	SITE PLAN, LEGEND AND SCHEDULES
E2.0	LAB POWER AND LIGHTING LAYOUTS AND DETAILS

CIVIL

C1.0	SITE PLAN AND SERVICING
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GENERAL NOTES:

- DO NOT SCALE DRAWING.
- THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, DATUMS, AND LEVELS PRIOR TO COMMENCEMENT OF WORK. ALL ERRORS AND OMISSIONS TO BE REPORTED TO THE DEPARTMENTAL REPRESENTATIVE BEFORE PROCEEDING.
- VARIATIONS AND MODIFICATIONS TO WORK SHOWN ON THESE DRAWINGS SHALL NOT BE CARRIED OUT WITHOUT WRITTEN PERMISSION OF DEPARTMENTAL REPRESENTATIVE.
- ALL DIMENSIONS ARE TO GRIDLINES, FACE OF CONCRETE, FACE OF STUDS OR CENTERLINE OF COLUMNS UNLESS NOTED OTHERWISE.
- ALL DIMENSIONS ARE METRIC (mm) UNLESS NOTED OTHERWISE.
- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH AND COORDINATED WITH THE SPECIFICATIONS AND THE DOCUMENTS OF THE OTHER DISCIPLINES THAT FORM THE FULL CONTRACT DOCUMENT PACKAGE. WHERE CONFLICT EXISTS BETWEEN DOCUMENTS, THESE ARE TO BE REPORTED TO THE DEPARTMENTAL REPRESENTATIVE BEFORE PROCEEDING.
- ENSURE COMPATIBILITY OF METAL FASTENERS, SHEET METALS AND OTHER METAL ITEMS WITH EACH OTHER AND WITH PRESSURE TREATED WOOD. PROVIDE ISOLATION WHERE REQUIRED. ALWAYS ISOLATE P.T. WOOD FROM METALS.

WALL ASSEMBLIES

W1	TYPICAL EXTERIOR WALL ASSEMBLY PREFAB EPS WALL PANEL METAL SKIN (PREFINISHED) R24 RIGID INSULATION 152mm THICK PANEL METAL SKIN (PREFINISHED) ALUMINIUM FRAME
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W2	TYPICAL EXTERIOR WALL ASSEMBLY (FRR 45 MINUTE) PREFAB EPS WALL PANEL METAL SKIN (PREFINISHED) R24 RIGID INSULATION 152mm THICK PANEL METAL SKIN (PREFINISHED) 12mm AIR SPACE 92mm STEEL STUD @400 O.C. 16mm TYPE X GWB
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P1	INTERIOR COOLER WALL PREFAB EPS WALL PANEL METAL SKIN (PREFINISHED) R24 RIGID INSULATION 152mm THICK PANEL METAL SKIN (PREFINISHED)
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P2	TYPICAL INTERIOR PARTITION 16mm GYPSUM WALL BOARD 92mm STEEL STUD @400 O.C. 16mm GYPSUM WALL BOARD
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P3	INSULATED INTERIOR PARTITION 16mm GYPSUM WALL BOARD 92mm STEEL STUD @400 O.C. SOUND BATT INSULATION TO FILL CAVITY 16mm GYPSUM WALL BOARD
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P4	COOLER WALL AT SHELVES PREFAB EPS WALL PANEL METAL SKIN (PREFINISHED) R24 RIGID INSULATION 152mm THICK PANEL METAL SKIN (PREFINISHED) 92mm STEEL STUD @400 O.C. 16mm TYPE X GWB LAB SIDE
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P5	INTERIOR PARTITION 16mm GYPSUM WALL BOARD 140mm STEEL STUD @400 O.C. 16mm GYPSUM WALL BOARD
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ROOF ASSEMBLIES

R1	TYPICAL ROOF ASSEMBLY EPS ROOF PANEL: PREFIN. METAL SKIN, EPS INSULATION (R32 203mm), METAL SKIN
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FLOOR ASSEMBLIES

F1	TYPICAL FLOOR ASSEMBLY FLOORING - SEE SCHEDULE 8mm PLYWOOD FINISHED FLOOR UNDERLAYMENT 19mm EXTERIOR GRADE PLYWOOD OVERLAY R32 (203mm) INSULATED FLOOR PANEL GALVANIZED STEEL DECKING PEEL AND STICK ISOLATION MEMBRANE ALUMINIUM FRAME - SEE STRUCT.
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LEGEND:

#	DETAIL NUMBER
A.XX	SHEET NUMBER
◇	ASSEMBLY TYPE R-ROOF, F-FLOOR W-WALL, P-PARTITION
#	GRID MARKER
000	DOOR NUMBER
00	WINDOW NUMBER
➤	SECTION CUT DIRECTION MARKER
ROOM NAME 000	ROOM NAME ROOM NUMBER
ACT 2438	FINISH TYPE HEIGHT ABOVE FINISHED FLOOR
7	MILLWORK ELEVATIONS

ABBREVIATIONS:

AB	AIR BARRIER	(N)	NEW
ACM	ASBESTOS CONTAINING MATERIAL	N.I.C.	NOT IN CONTRACT
ACT	ACOUSTIC CEILING TILE	N.T.S.	NOT TO SCALE
ALT.	ALTERNATE	O.C.	ON CENTER
ALUM.	ALUMINIUM	OP.	OPERABLE
ANOD.	ANODIZED	PT	PAINT
A.F.F.	ABOVE FINISH FLOOR	P.O.	POWER OPERATOR
BLDG.	BUILDING	P.T.	PRESSURE TREATED
CARP.	CARPET	RB	RUBBER BASE
CARP. T.	CARPET TILE	RCP	REFLECTED CEILING PLAN
C.C.	CENTER TO CENTER	RE & RE	REMOVE & RELOCATE / REINSTATE
C.O.	CLEAN OUT	RM.	ROOM
C.J.	CONTROL JOINT	SAM	SELF ADHESIVE MEMBRANE
C/W	COMPLETE WITH	SAN	SANITARY
CONC.	CONCRETE	SEP	SEPARATION
D.G.	DOUBLE GLAZED	SG	SHEET GOODS FLOORING
(E)	EXISTING	SIM.	SIMILAR
ELECT.	ELECTRICAL	SQ.	SQUARE
F.E.	FIRE EXTINGUISHER	S.S.	STAINLESS STEEL
F.E.C.	FIRE EXTINGUISHER CABINET	ST	STEEL
FIN.	FINISH	STRUCT.	STRUCTURAL
FNDT.	FOUNDATION	SV	SHEET VINYL
FRR	FIRE RESISTANCE RATING	TBD	TO BE DETERMINED
FTG	FOOTING	T.G.	TRIPPLE GLAZED
FTG	GYPSUM WALL BOARD	THLD.	THRESHOLD
GA	GAUGE	T.O.	TOP OF
G.I.	GALVANIZED	TYP.	TYPICAL
H.M.	HOLLOW METAL	U.G.	UNDER GROUND
HDWR	HARDWARE	U.N.O.	UNLESS NOTED OTHERWISE
HORIZ.	HORIZONTAL	US	UNDERSIDE
INSUL.	INSULATION	VB	VAPOUR BARRIER
MATL.	MATERIAL	VERT.	VERTICAL
MECH.	MECHANICAL	VCT	VINYL COMPOSITE TILE
MEMB	MEMBRANE	W/	WITH
MB	MOISTURE BARRIER	WD.	WOOD
MIN.	MINIMUM OR MINUTES	W/O	WITH OUT

Name of Project: Building 109 Location: 19 Wing Comox, Lazo BC	
Item	2010 National Building Code Data Matrix Part 3 NBC 2010 Reference
1	Project Description: - <input type="checkbox"/> New <input type="checkbox"/> Addition <input checked="" type="checkbox"/> Renovation 2 New Modular Buildings - Aluminium frame with metal faced rigid insulation panels.
2	Building Area (m ²): 58.2 sq.m. 1.4.1.2[A]
3	Number of Storeys: 1 1.4.1.2[A], 3.2.1.1
4	Separation of Occupancies: N/A 3.1.3.1
5	Number of Streets/Access Routes: 1 3.2.2.10
6	Major Occupancy(s): Acoustics Lab: Group D- Offices Feed Lab Group F - Division 3 3.2.2.62 3.2.2.85
	Required Fire Resistance Ratings (FRR)
	Roof: N/A - 0 Hrs. See Assemblies
	Floors: N/A - 0 Hrs.
	Supporting Walls: N/A - 0 Hrs.
7	Sprinkler System Proposed: <input type="checkbox"/> Entire Building <input checked="" type="checkbox"/> No -
8	Standpipe Required: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 3.2.5.8
9	Fire Alarm Required: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 3.2.4
10	Water Service/Supply is Adequate: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 3.2.5.7
13	High Building: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 3.2.6
14	Permitted Construction: <input type="checkbox"/> Combustible <input type="checkbox"/> Non-Combustible <input checked="" type="checkbox"/> Both 3.2.2.20-83 Actual Construction: <input checked="" type="checkbox"/> Combustible <input type="checkbox"/> Non-Combustible <input type="checkbox"/> Both
15	Spatial Separation - South Exterior Wall - Acoustics Lab only: Area of Wall (m ²): 21.5 sq.m. L.D. (m): 1.8m L.H. or H.L.: N/A Permitted % of Openings: 10% FRR (hours): .75 Hours Combustible Construction Non-Combustible Cladding 3.2.3.1-B 3.2.3.7
16	Occupant Load Based On: <input checked="" type="checkbox"/> m ² /person <input type="checkbox"/> Design of Building 3.1.17 Acoustics Lab 58.2 sq.m. / 9.3 sq.m./person = 6 persons Feed Lab 34.2 sq.m. manufacture / 4.6 sq.m./person = 7 18 sq.m. storage / 28 sq.m./person = 1 Total 8 Persons
17	Barrier-Free Design: <input checked="" type="checkbox"/> Yes (Feed Lab) <input type="checkbox"/> No (Acoustics Lab) - Barrier free accommodated in adjacent building 3.8

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COVER SHEET, LIST OF DRAWINGS, LEGEND, ASSEMBLIES, ABBREVIATIONS, NOTES

Project No./No. du projet

Sheet/ Feuille

Revision no./
La Révision no.

A0.00

2



2	100% REVIEW	2017-11-30
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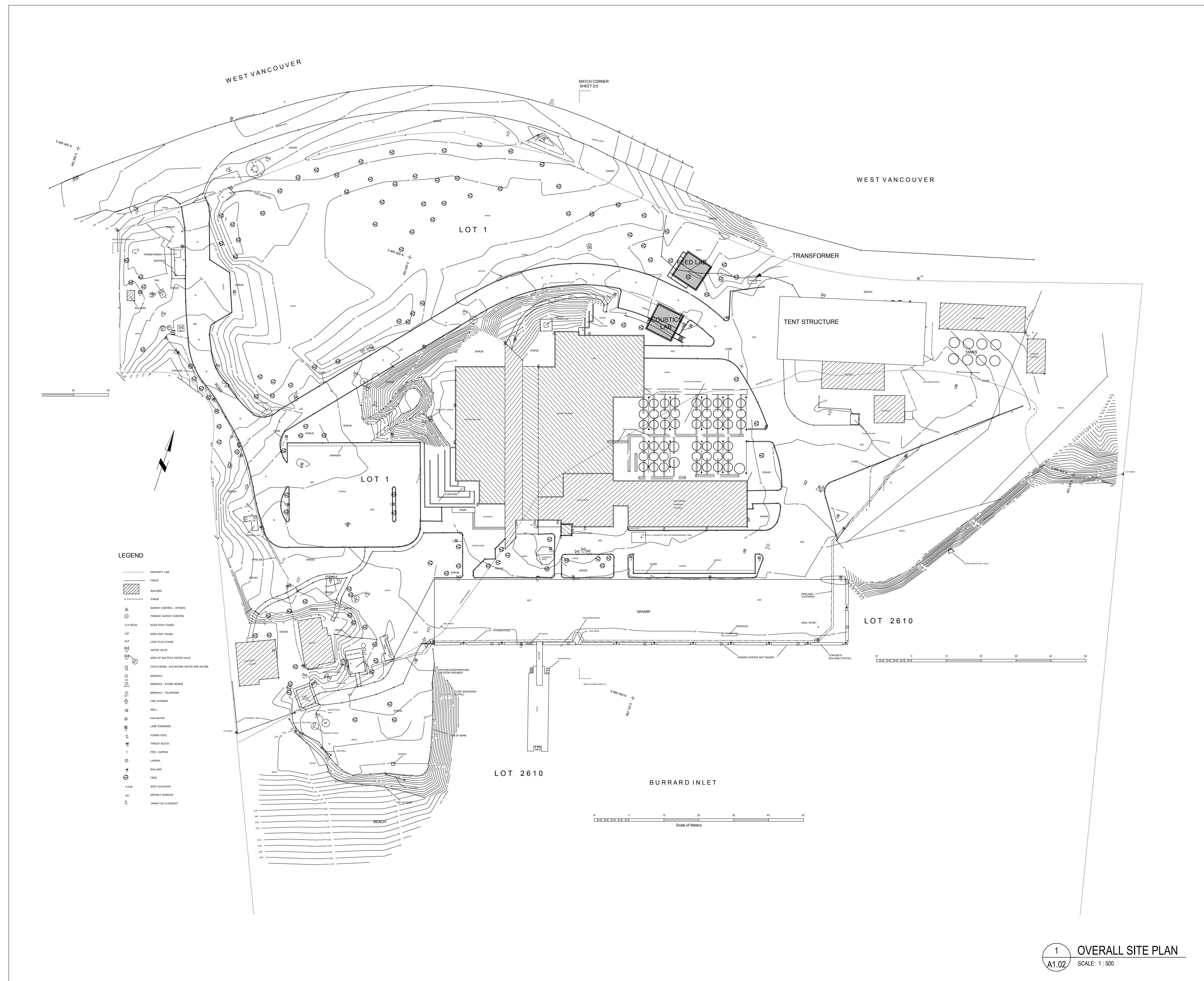
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LOCAL SITE PLAN

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
-	A1.01	2

1 LOCAL SITE PLAN
 SCALE: 1:100





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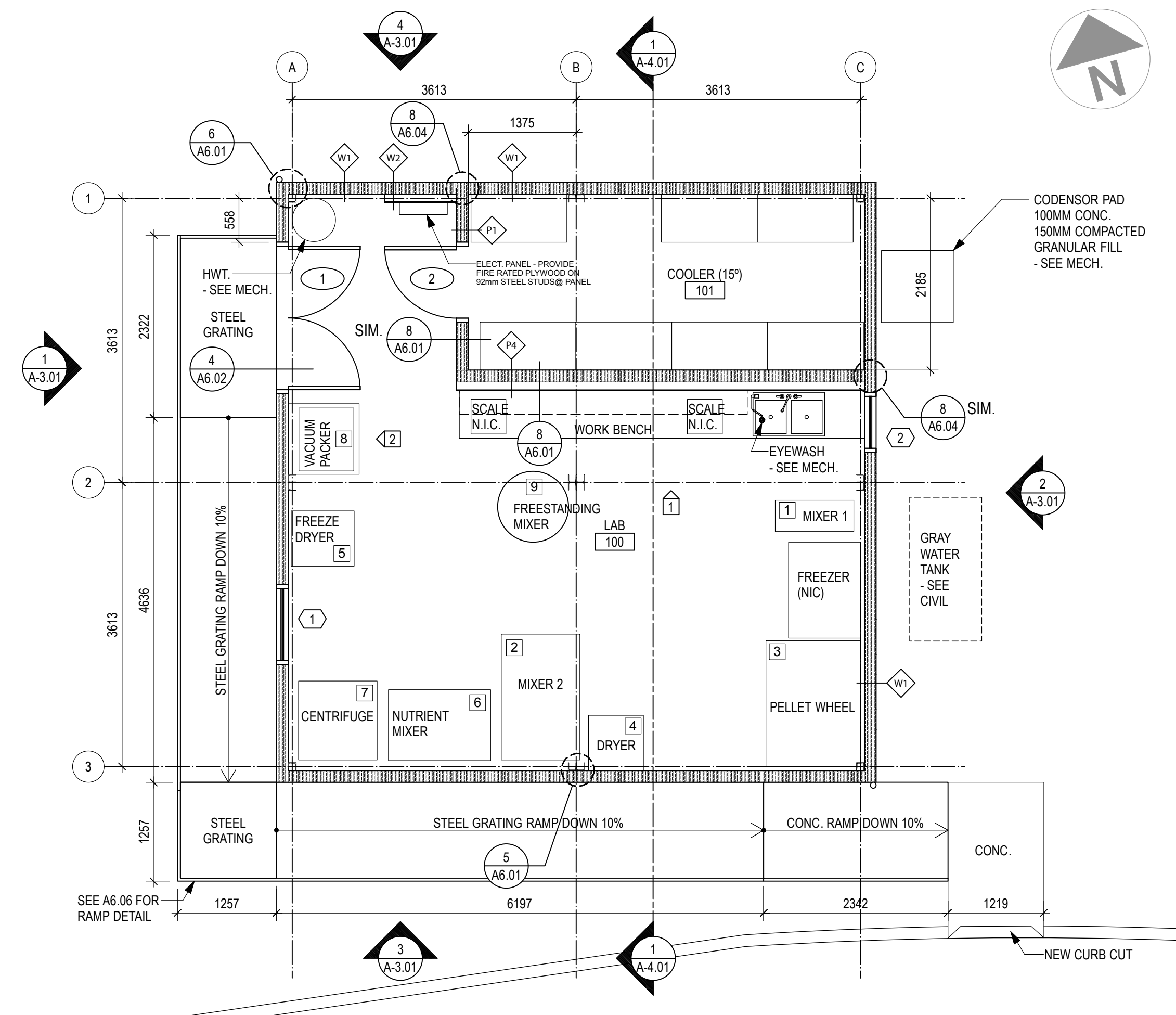
**OVERALL
SITE PLAN**

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
-	A1.02	2

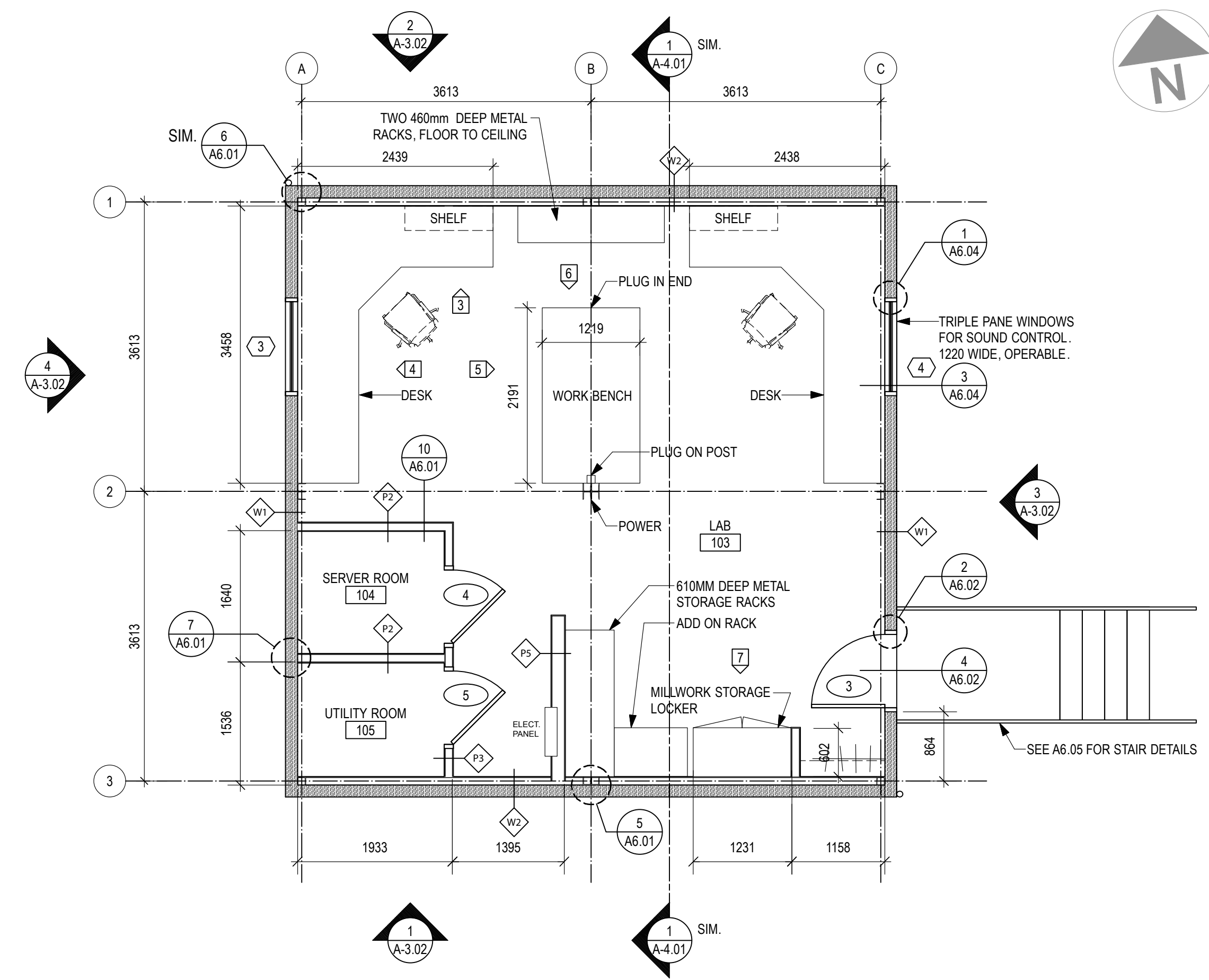
1 OVERALL SITE PLAN
SCALE: 1:500



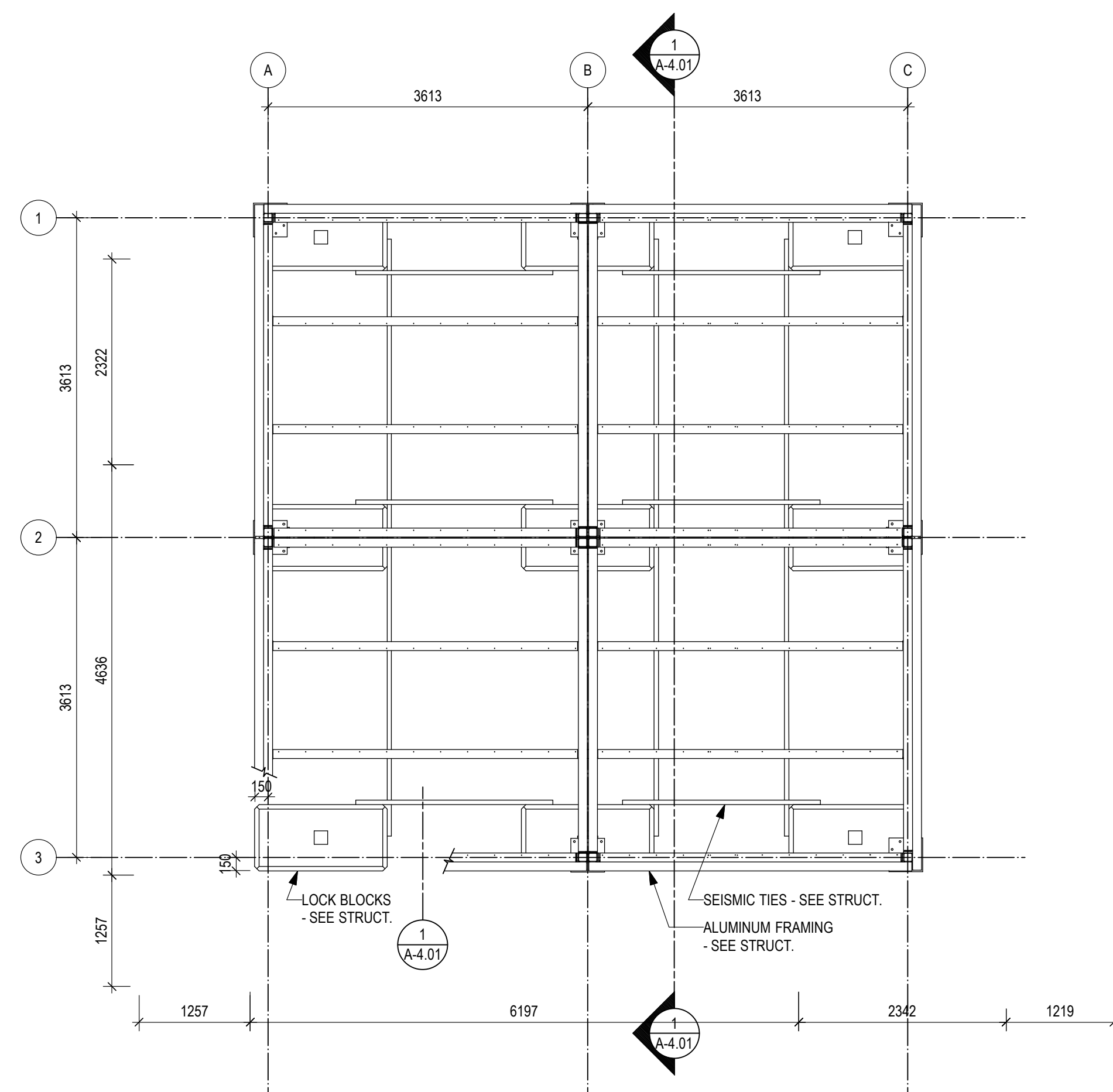
7 SEE A7.01 FOR ELEVATIONS



1 FLOOR PLAN - FEED LAB
 A2.01 SCALE: 1 : 50



2 FLOOR PLAN - ACOUSTICS LAB
 A2.01 SCALE: 1 : 50



3 FOUNDATION & FRAMING PLAN
 A2.01 SCALE: 1 : 50

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1	INSULATED PANEL LAYOUT	2017-11-17
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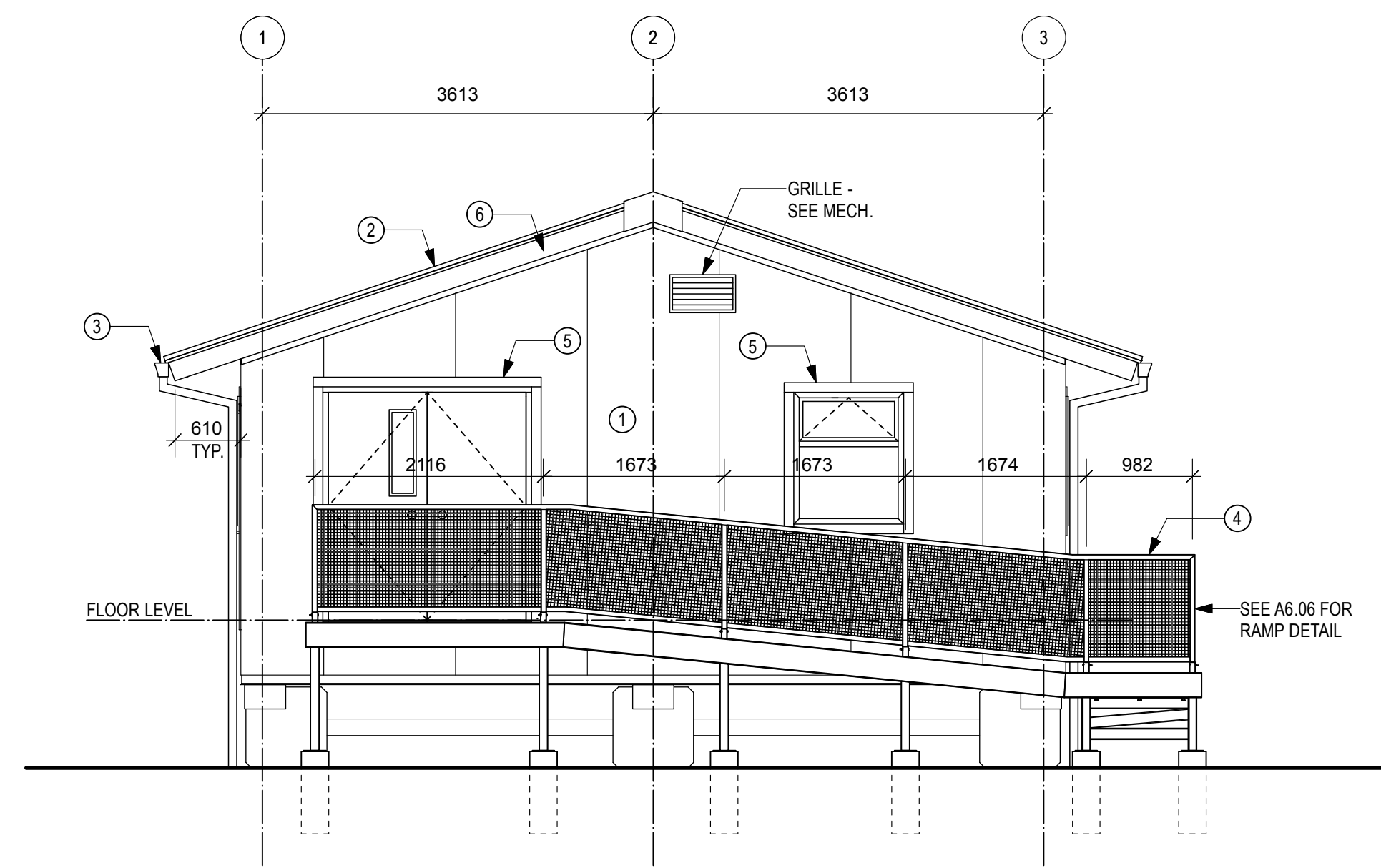
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**FLOOR PLANS
 FOUNDATION &
 FRAMING PLAN**

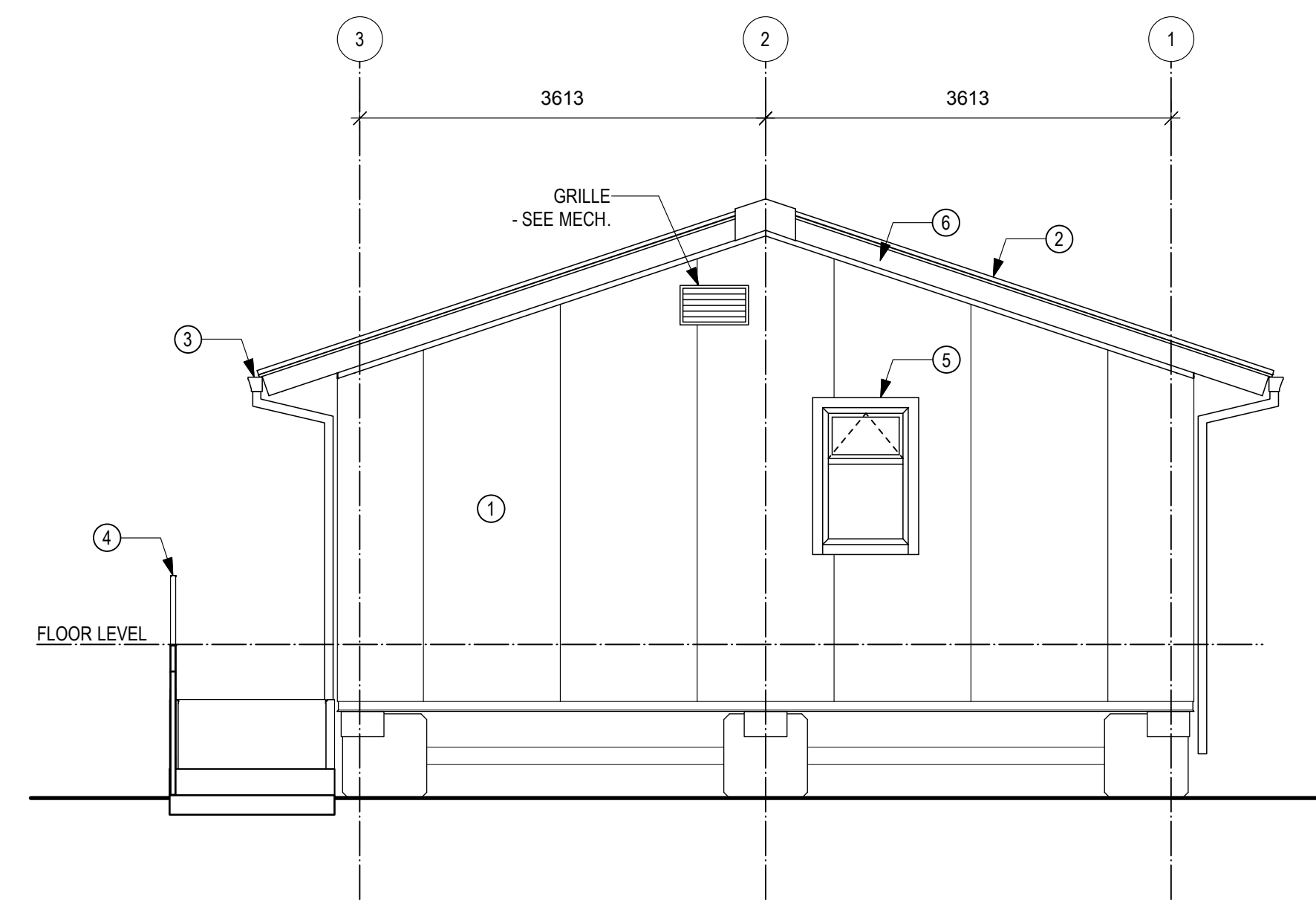
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-	A2.01	2

KEY NOTES:

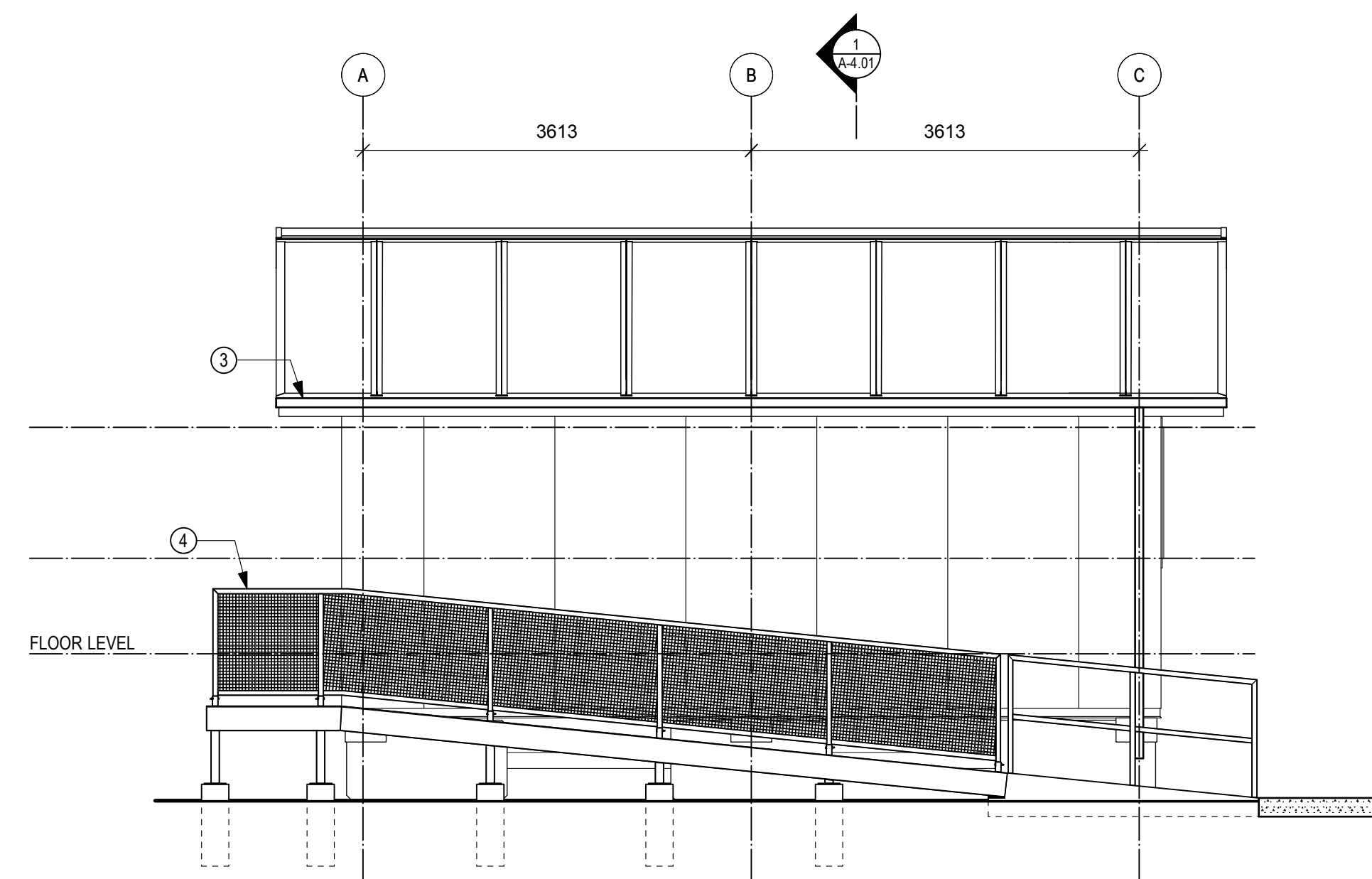
- ① EPS WALL PANEL
- ② METAL ROOF
- ③ ALUMINUM GUTTER & DOWN SPOUT
- ④ STEEL STAIRS, RAMP & RAILINGS
- ⑤ PREFINISHED GALVANIZED STEEL BATTEN FRAME, CONSULTANTS TO SELECT COLOUR FROM STANDARD RANGE
- ⑥ ALUM. FLASHING



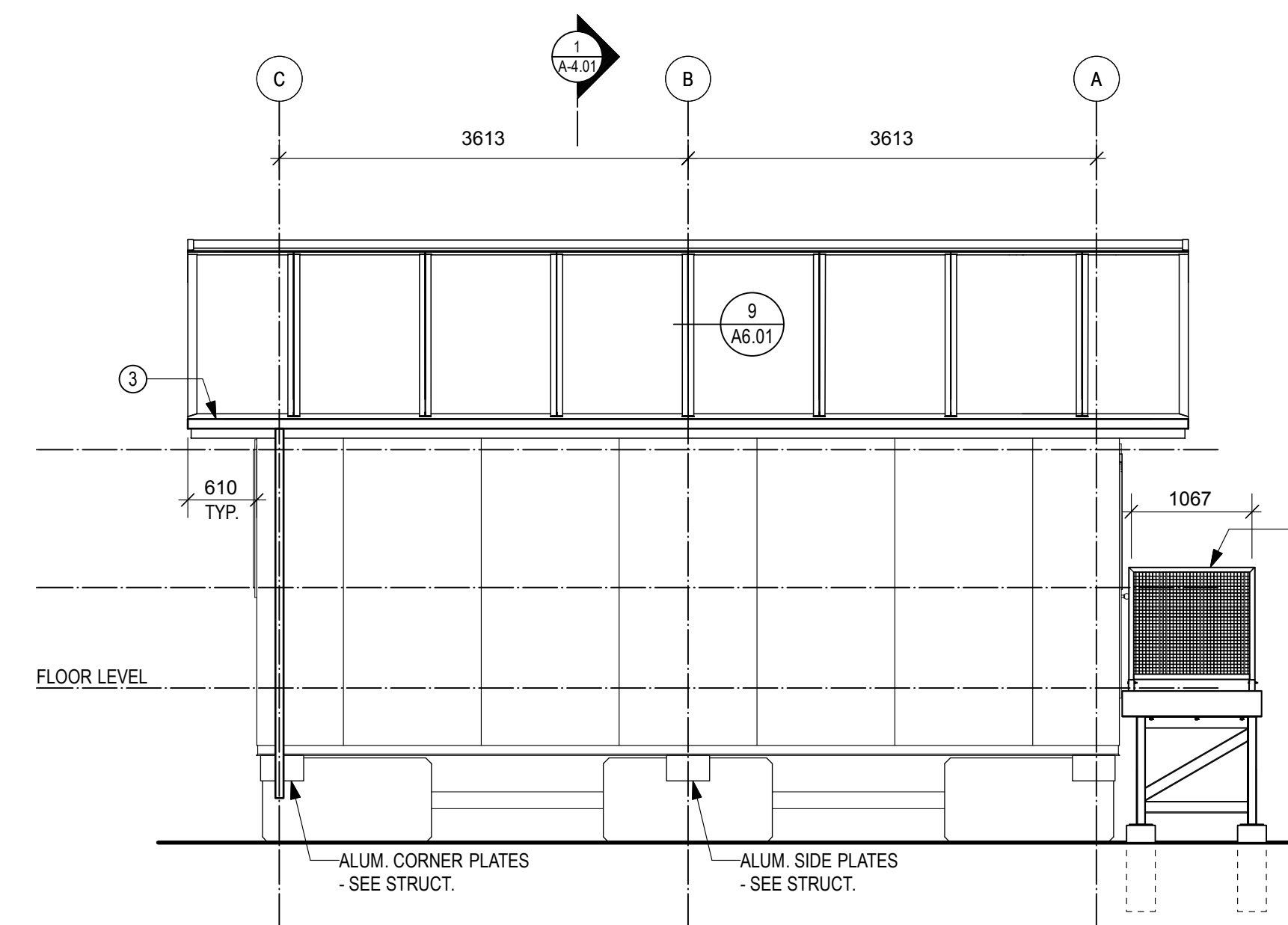
1 ELEVATION
A3.01 SCALE: 1:50



2 ELEVATION
A3.01 SCALE: 1:50



3 ELEVATION
A3.01 SCALE: 1:50



4 ELEVATION
A3.01 SCALE: 1:50

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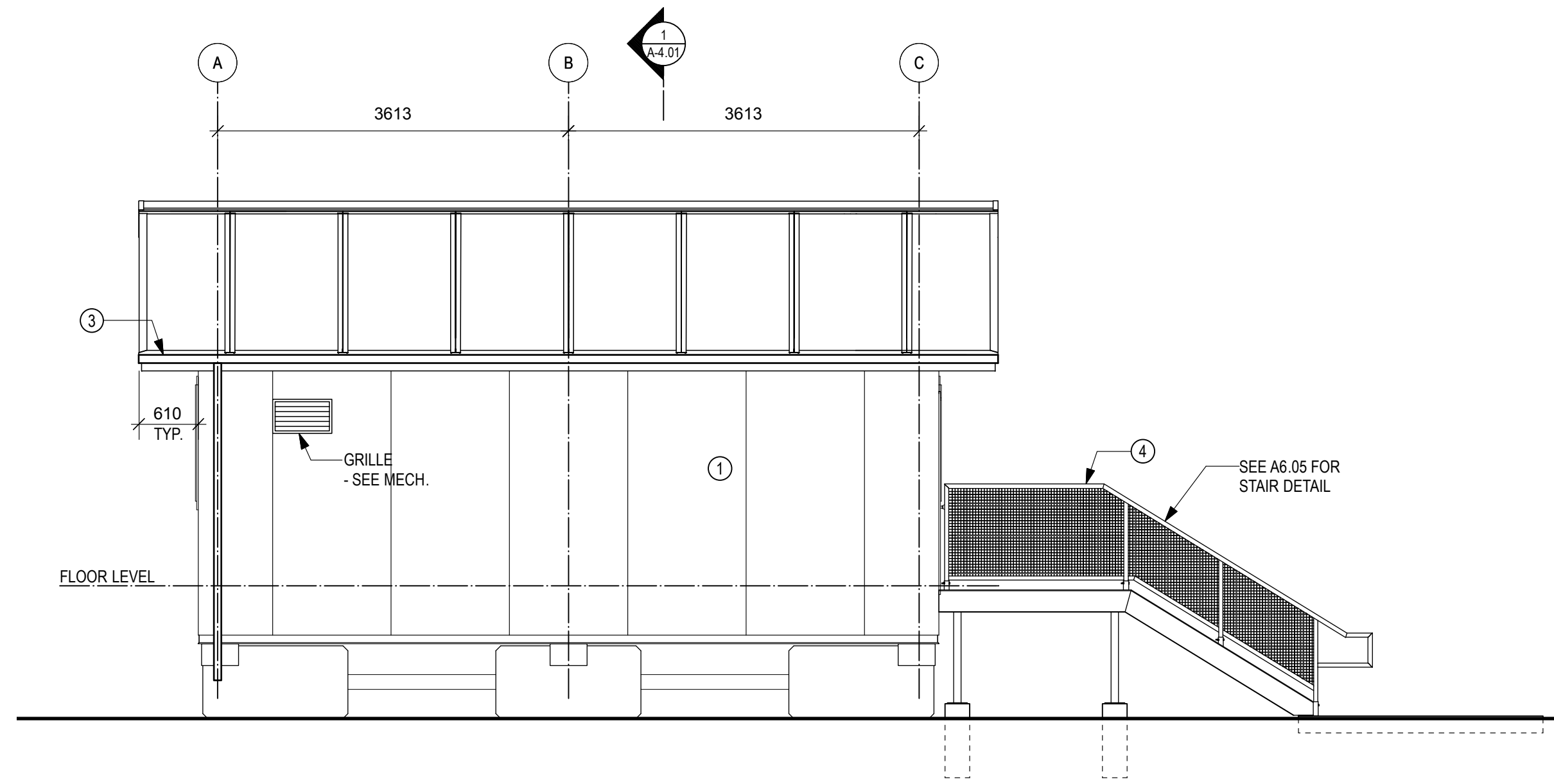
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FEED LAB EXTERIOR ELEVATIONS

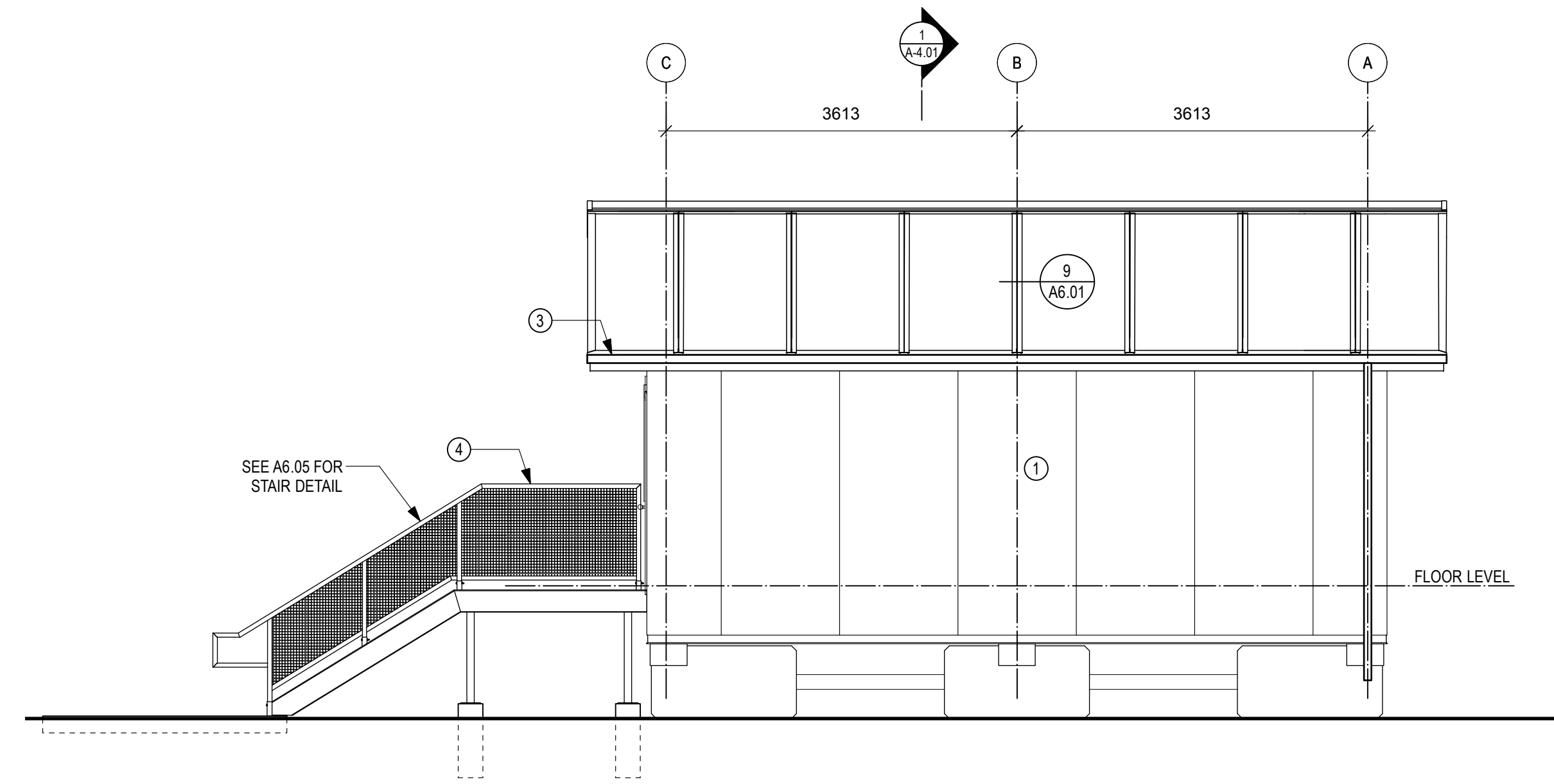
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-	A3.01	2

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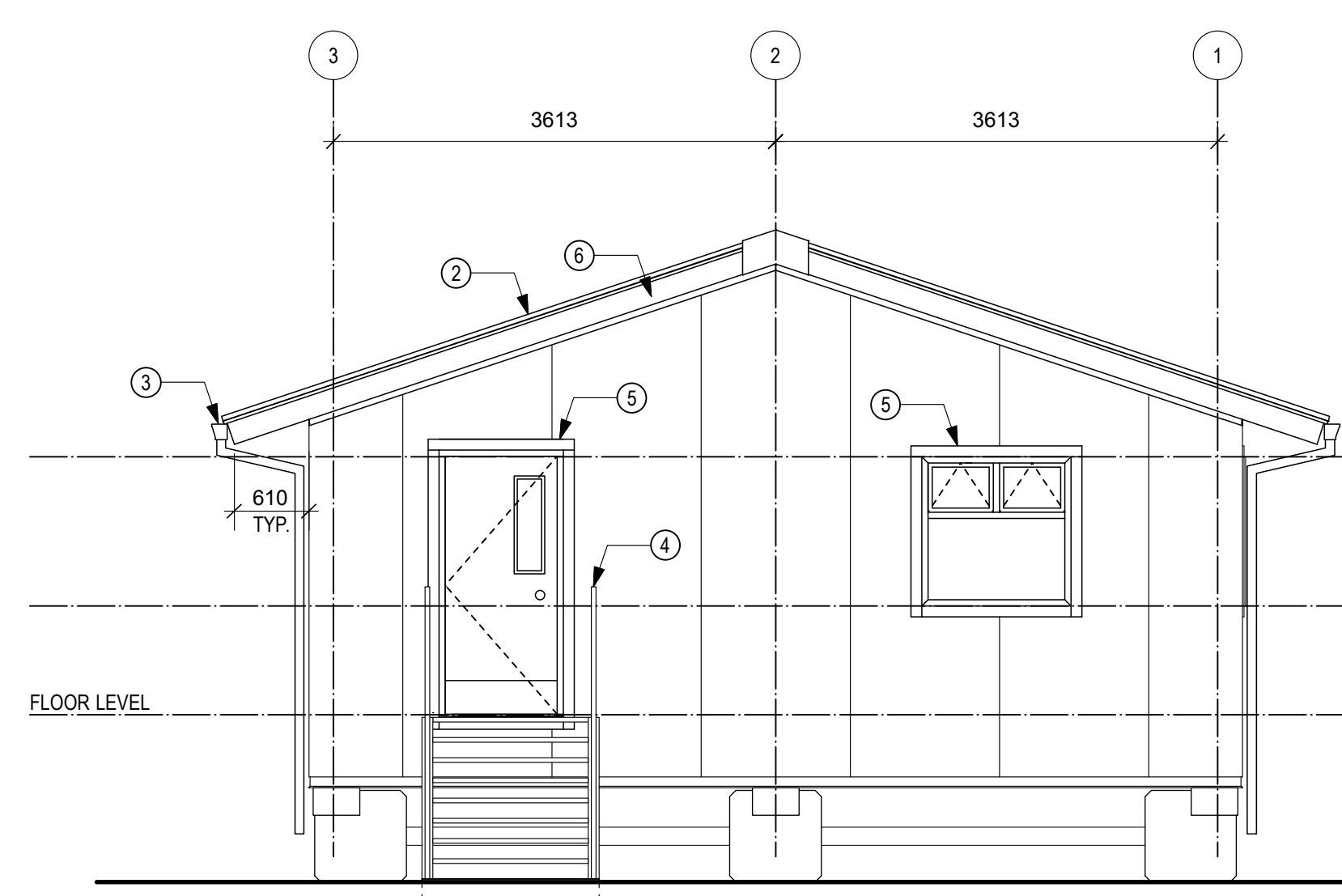
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- ② METAL ROOF
- ③ ALUMINUM GUTTER & DOWN SPOUT
- ④ STEEL STAIRS, RAMP & RAILINGS
- ⑤ PREFINISHED GALVANIZED STEEL BATTEN FRAME, CONSULTANTS TO SELECT COLOUR FROM STANDARD RANGE
- ⑥ ALUM. FLASHING



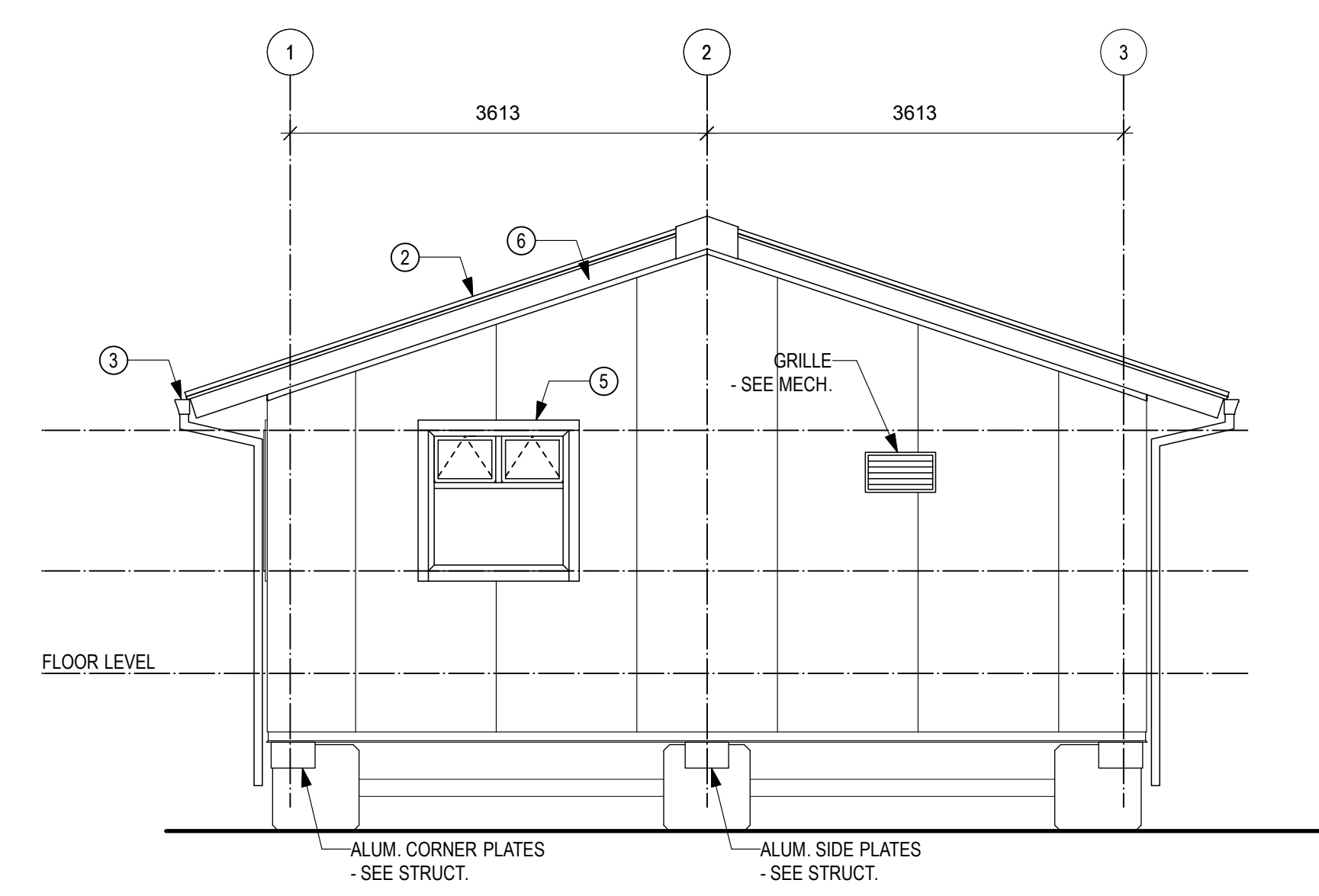
1 ELEVATION
A3.02 SCALE: 1:50



2 ELEVATION
A3.02 SCALE: 1:50



3 ELEVATION
A3.02 SCALE: 1:50



4 ELEVATION
A3.02 SCALE: 1:50

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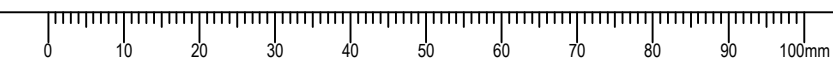
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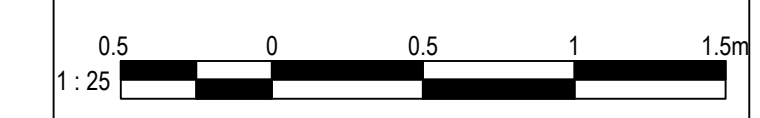
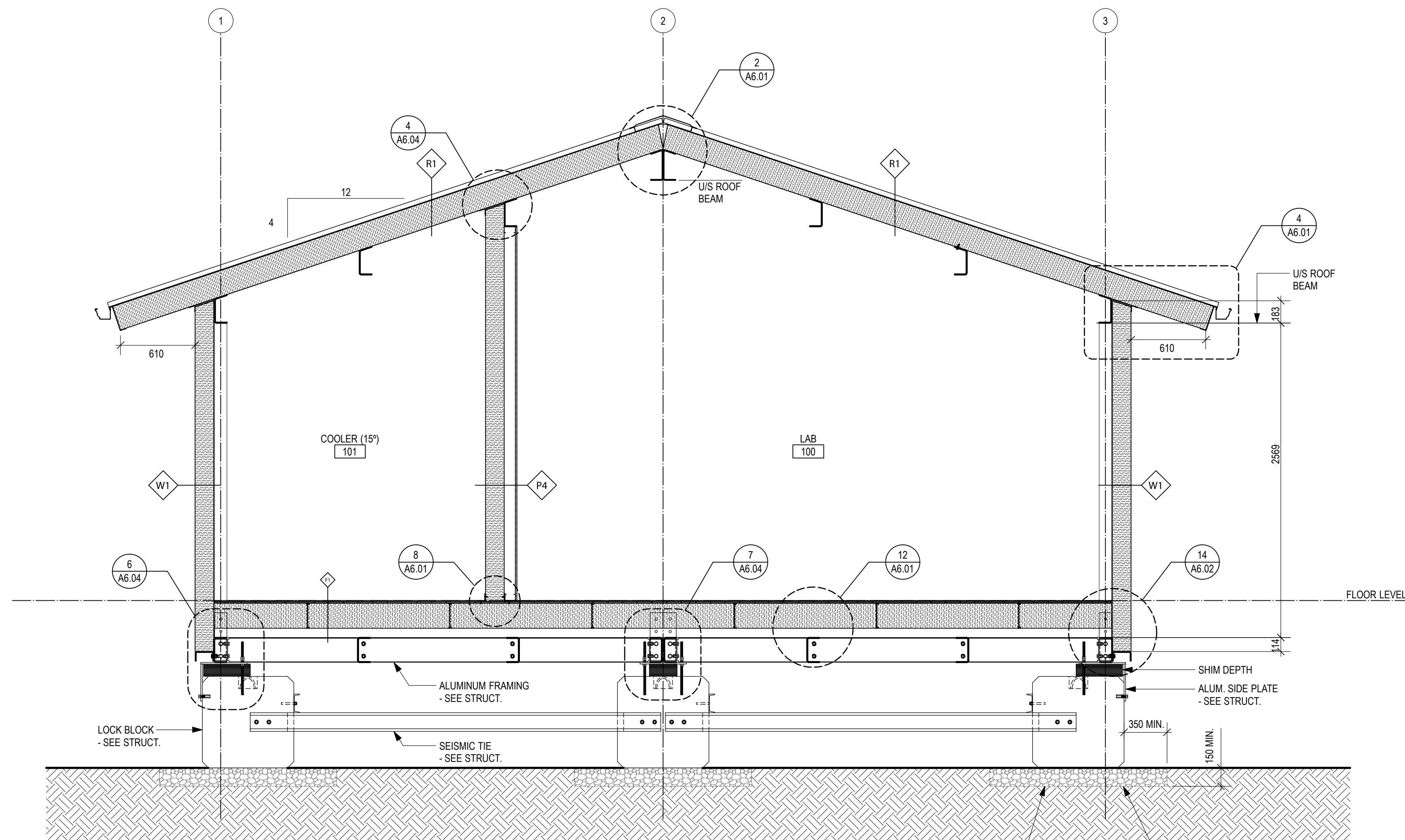
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ACOUSTICS LAB
EXTERIOR ELEVATIONS

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-	A3.02	2

Date: 18.11.18 7:38:04 PM





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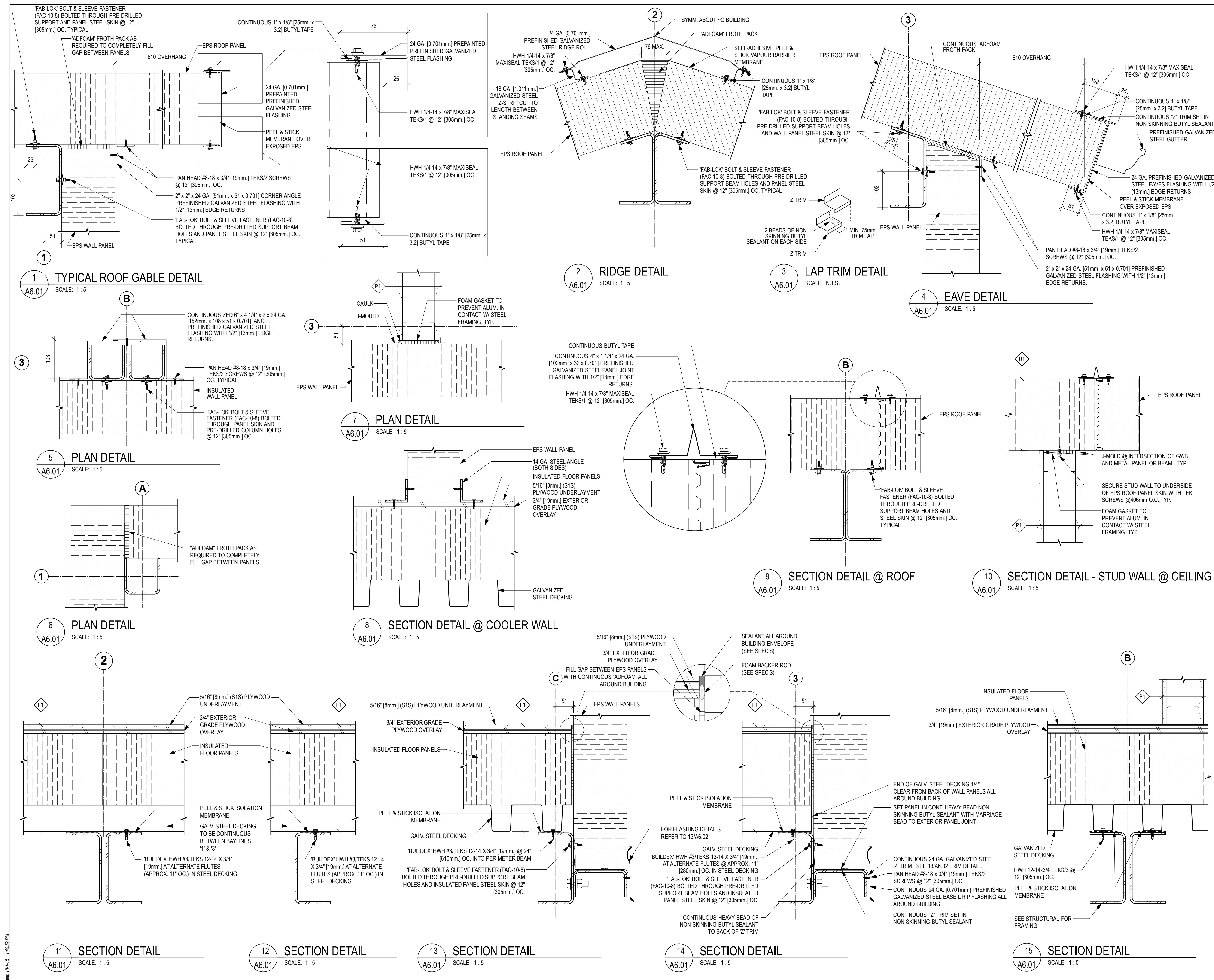
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PROVIDE MINIMUM 150MM THICK LAYER OF WELL GRADED 19MM SAND AND GRAVEL ON SUBGRADE. COMPACTED TO 100% STANDARD PROCTOR DENSITY.
 REMOVE EXISTING GRASS, ALL ORGANICS, AND DELIRIOUS MATERIAL BENEATH CONC. BLOCKS AND WITHIN 350MM BEYOND THE EDGE OF THE BLOCK

1 SECTIONS
 A4.01 SCALE: 1:25

SECTIONS

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-	A4.01	2



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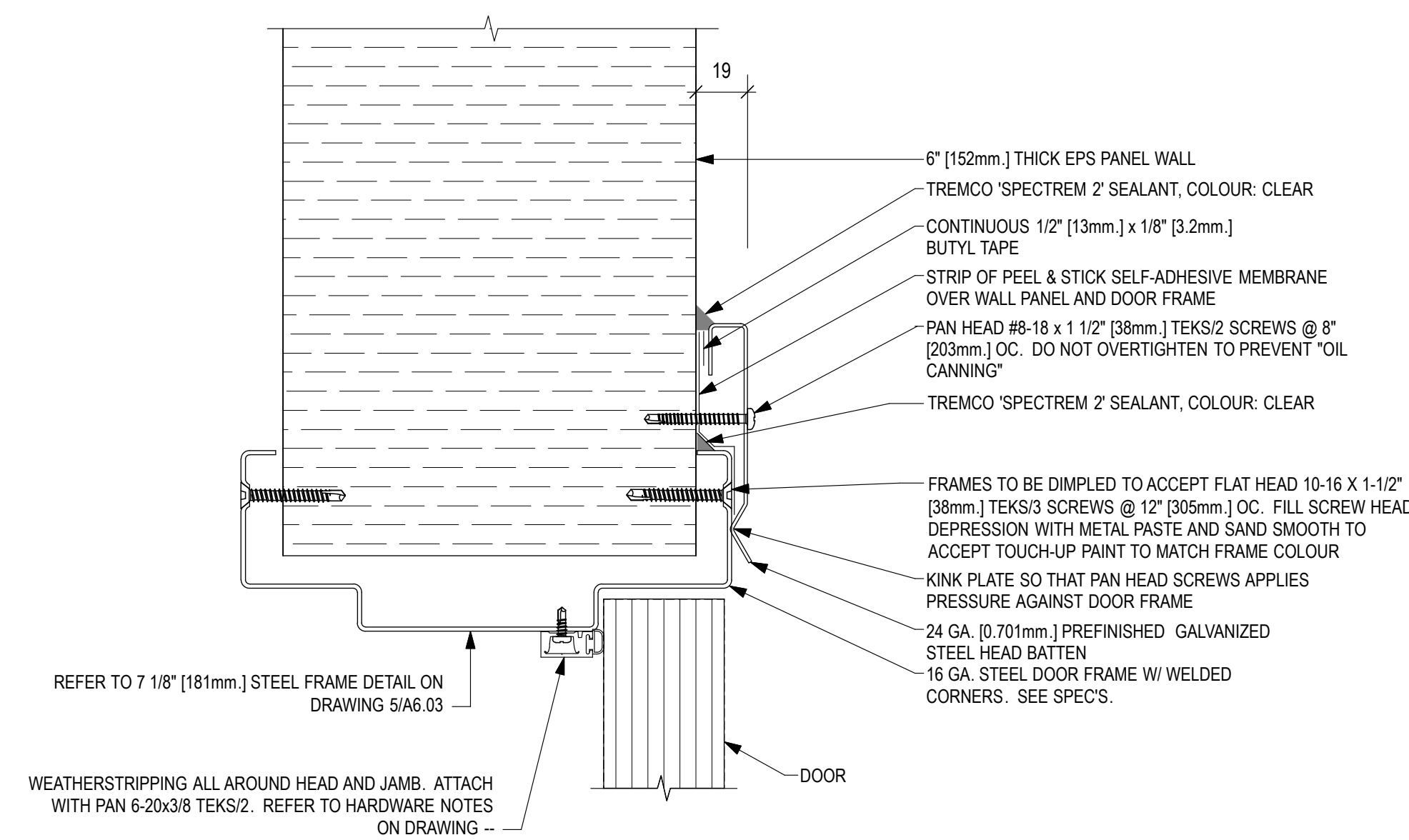
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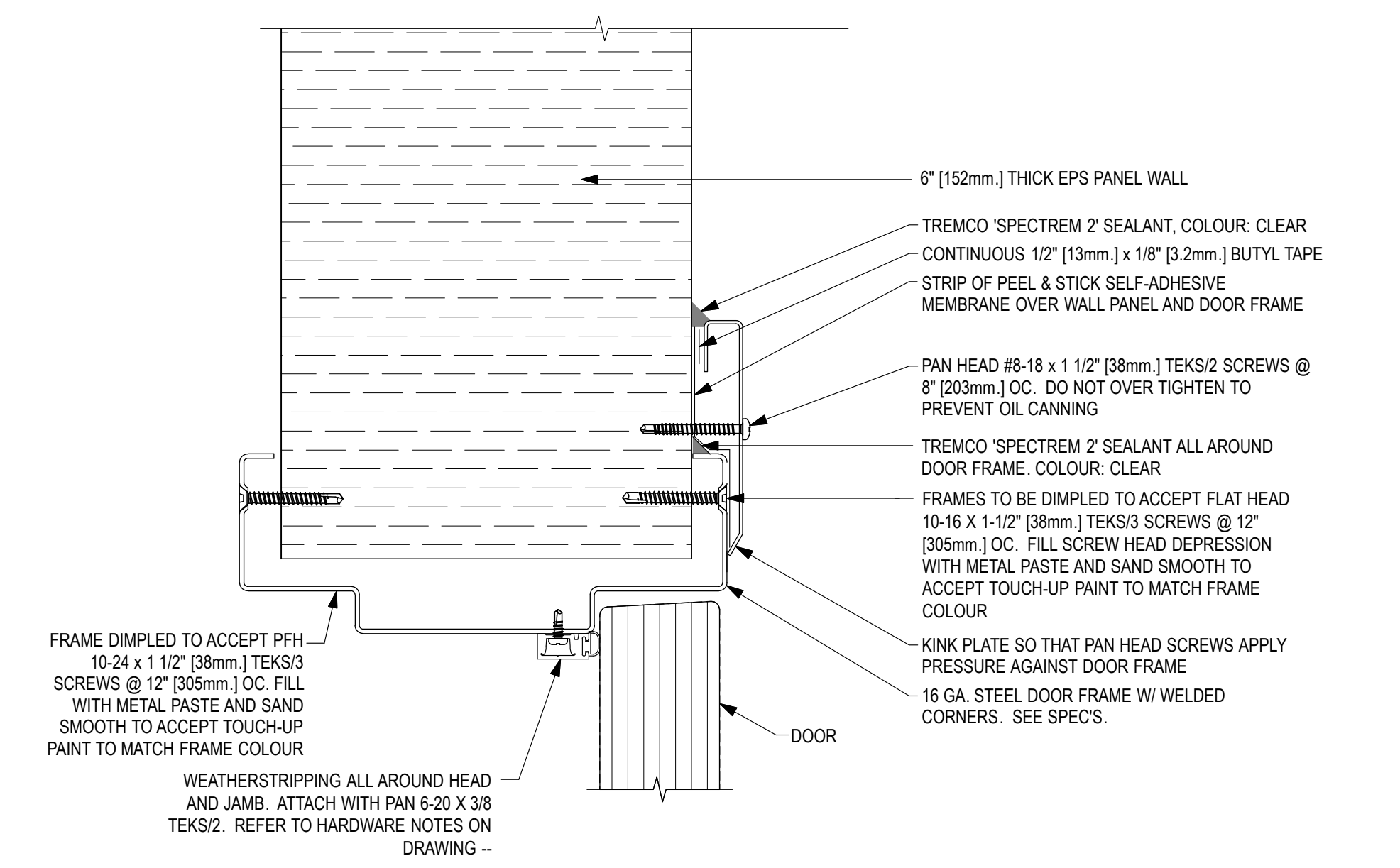
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DETAILS

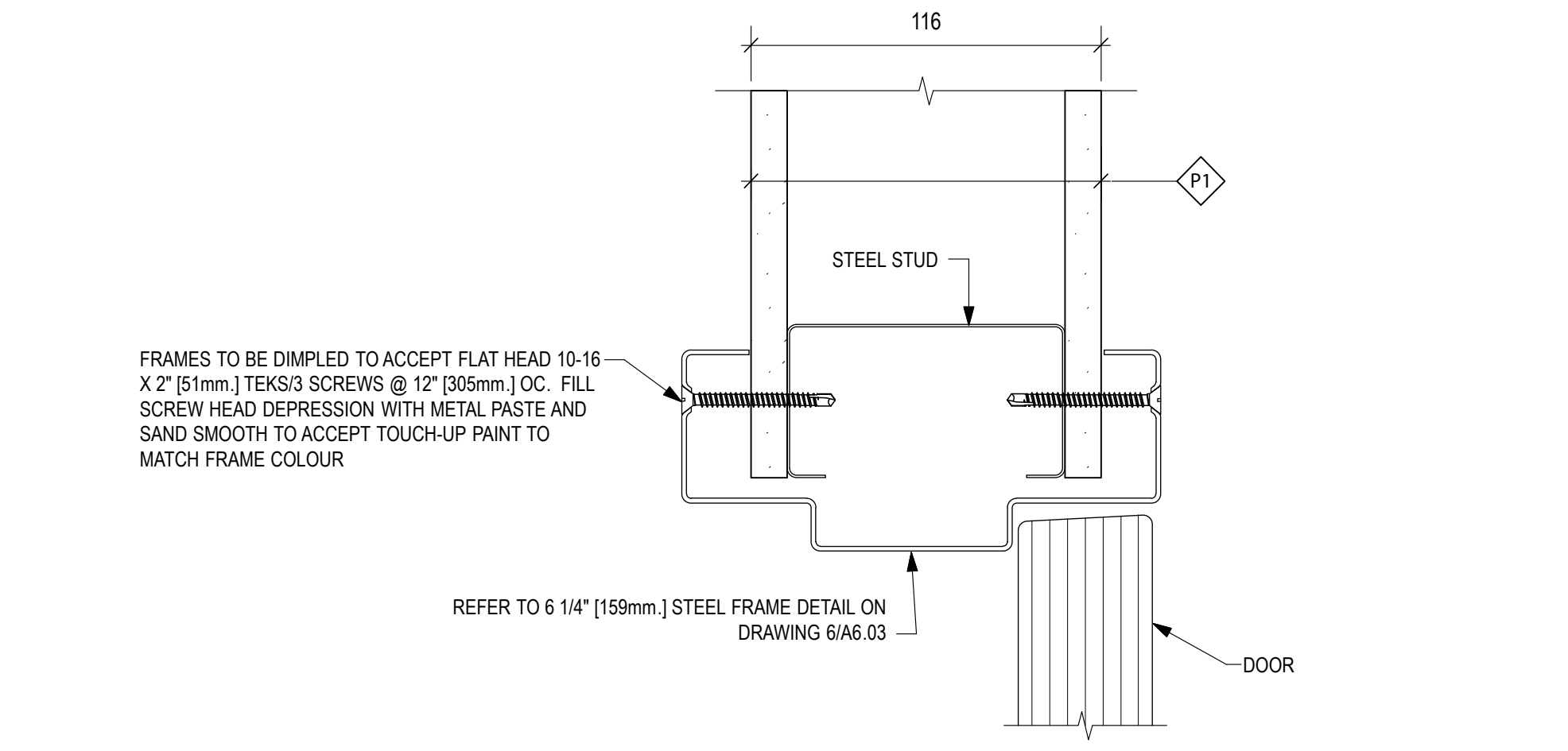
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	A6.01	2



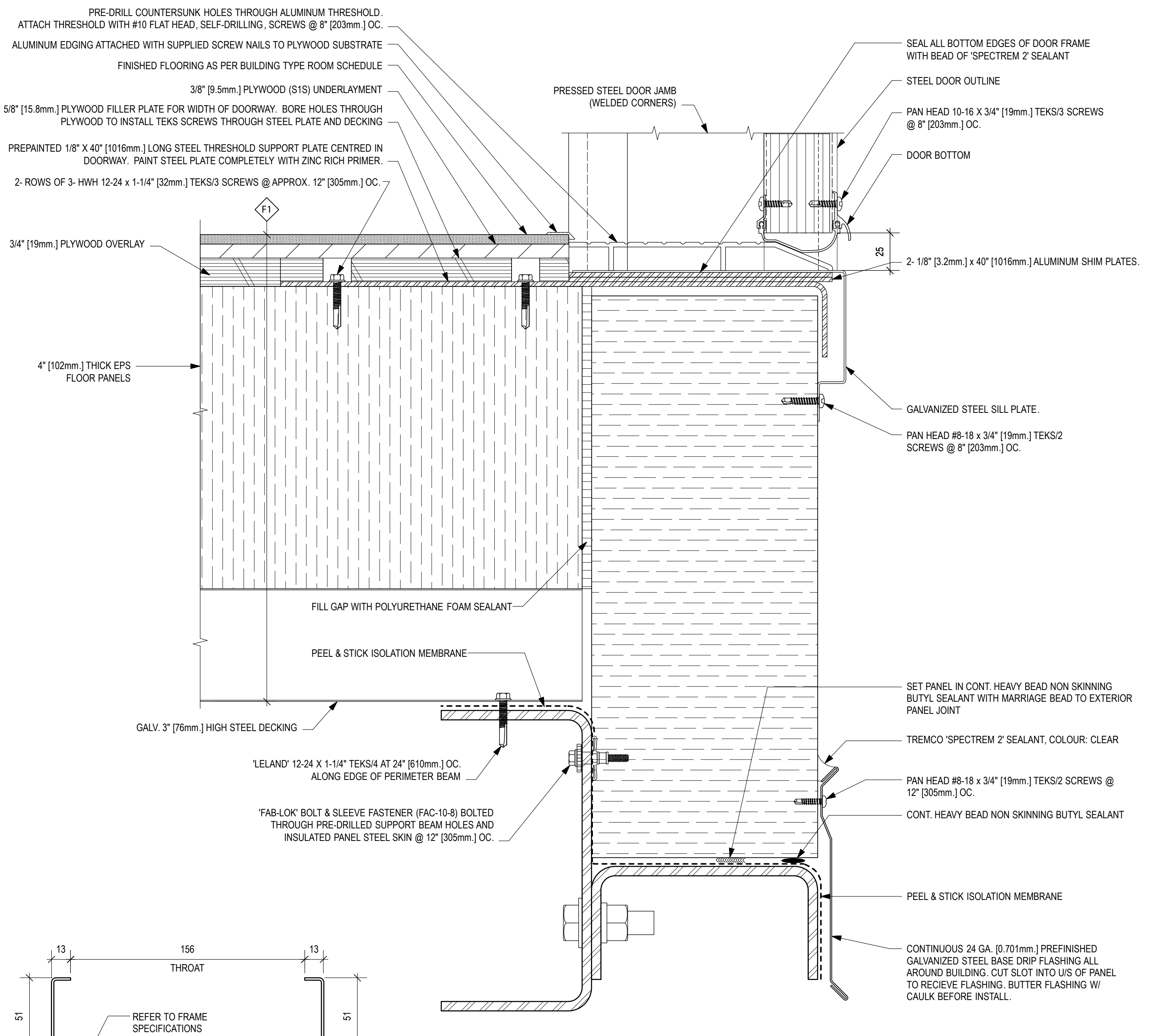
1 EXTERIOR DOOR HEAD DETAIL
 A6.02 SCALE: 1:2



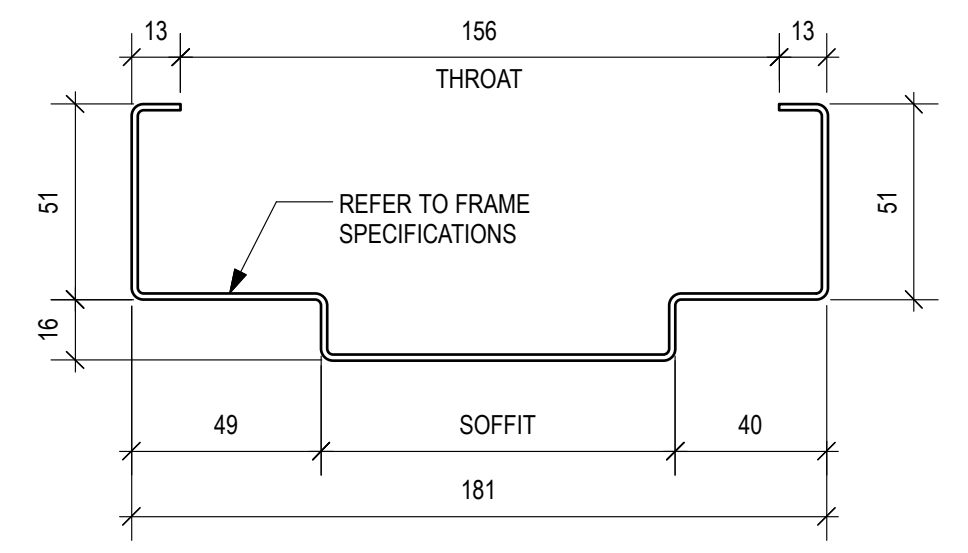
2 EXTERIOR DOOR JAMB DETAIL
 A6.02 SCALE: 1:2



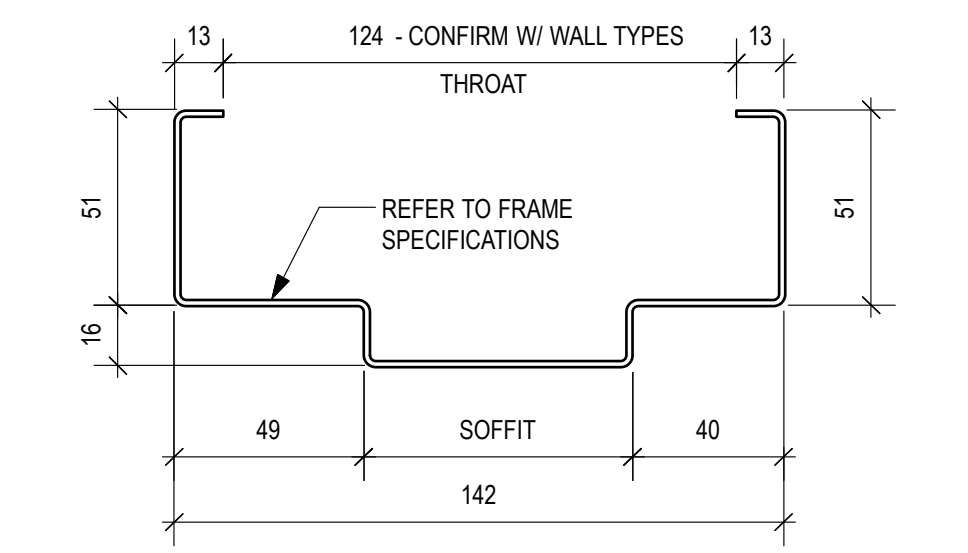
3 INTERIOR DOOR HEAD & JAMB DETAIL
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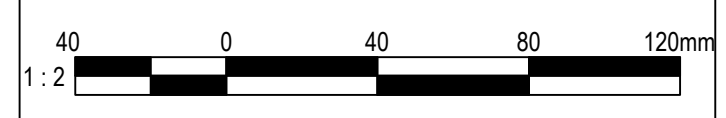
4 EXTERIOR DOOR THRESHOLD DETAIL
 A6.02 SCALE: 1:2



5 EXTERIOR DOOR FRAME
 A6.02 SCALE: 1:2



6 INTERIOR DOOR FRAME
 A6.02 SCALE: 1:2



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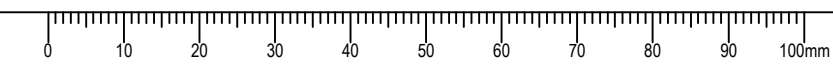
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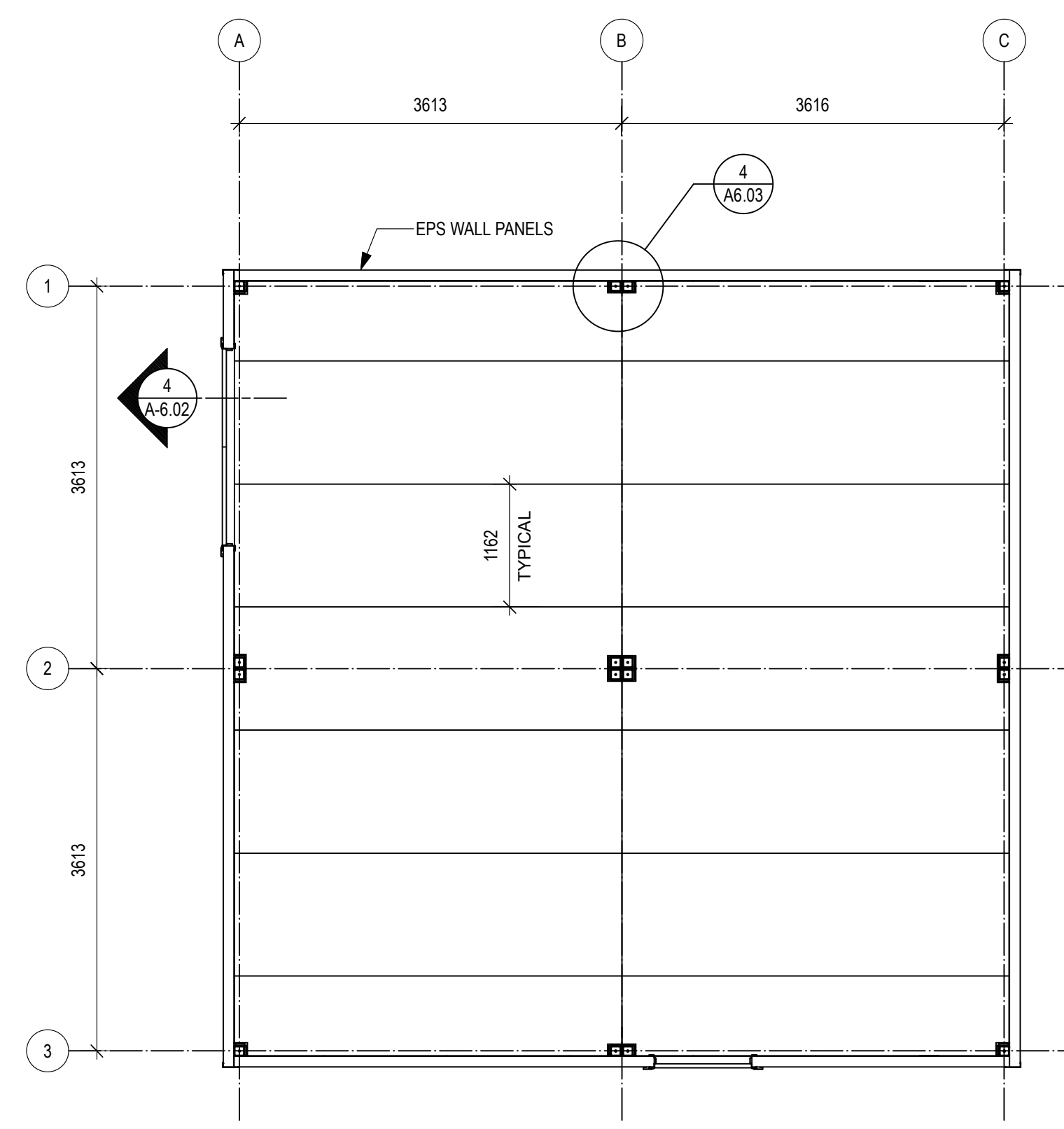
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 Drawing title/Titre du dessin

DETAILS

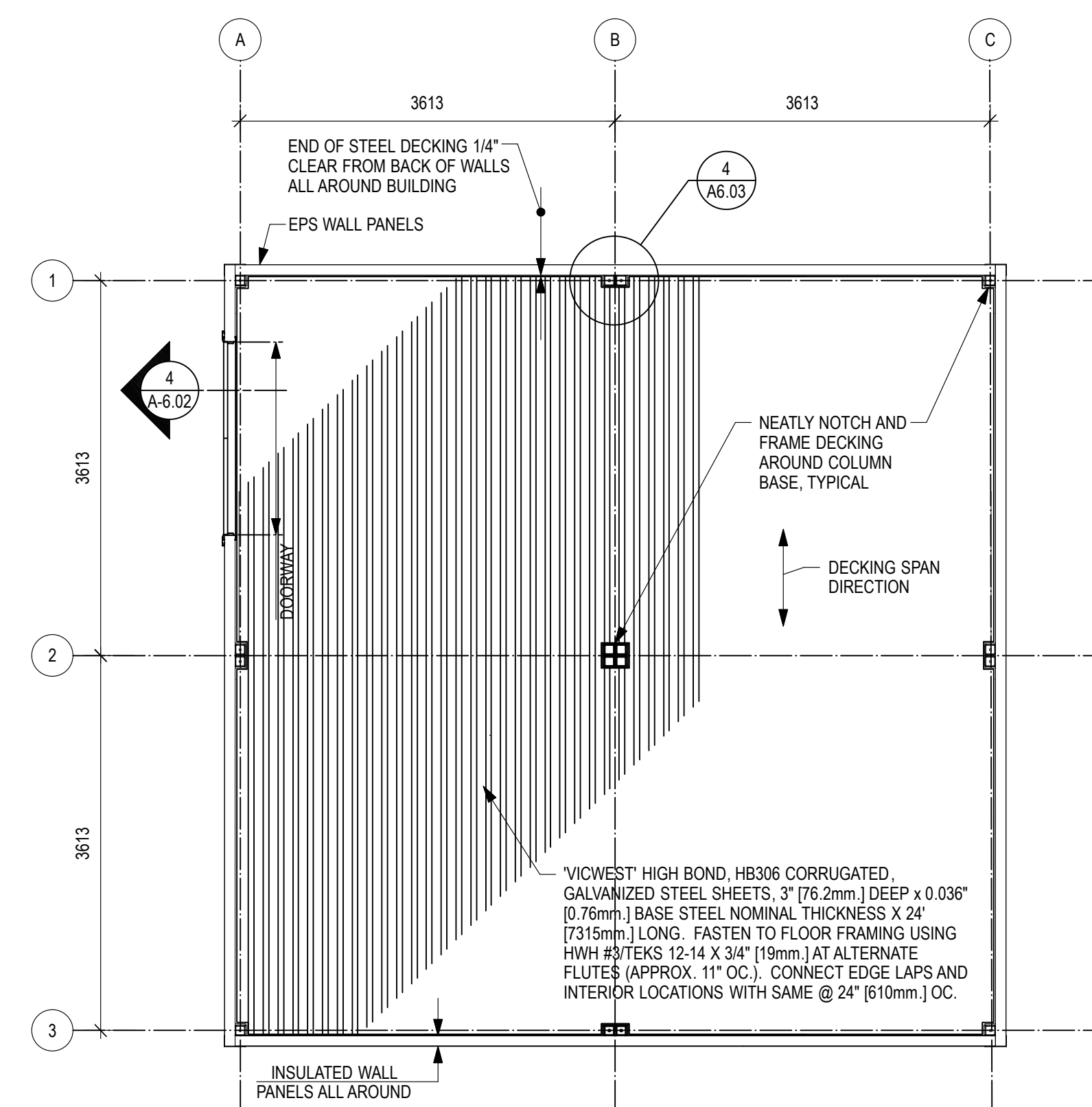
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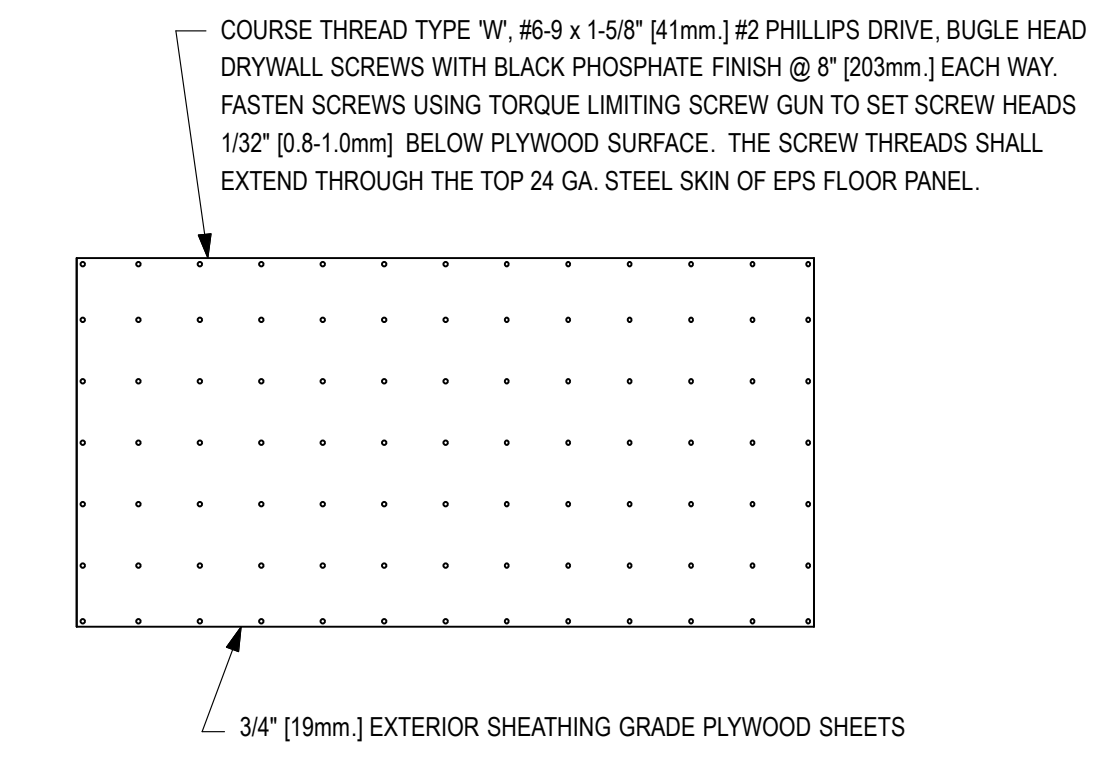




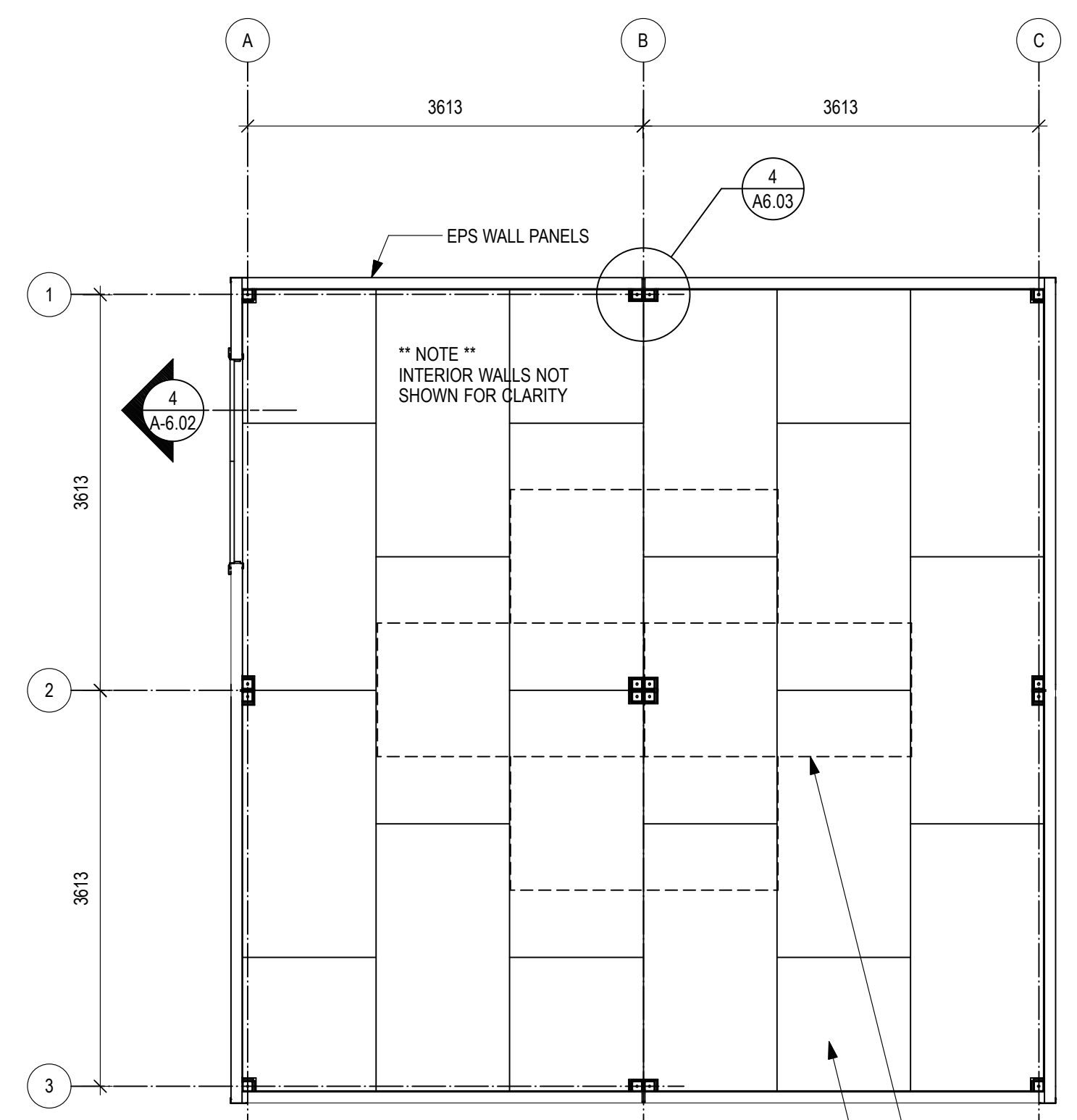
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 A6.03 SCALE: 1:50



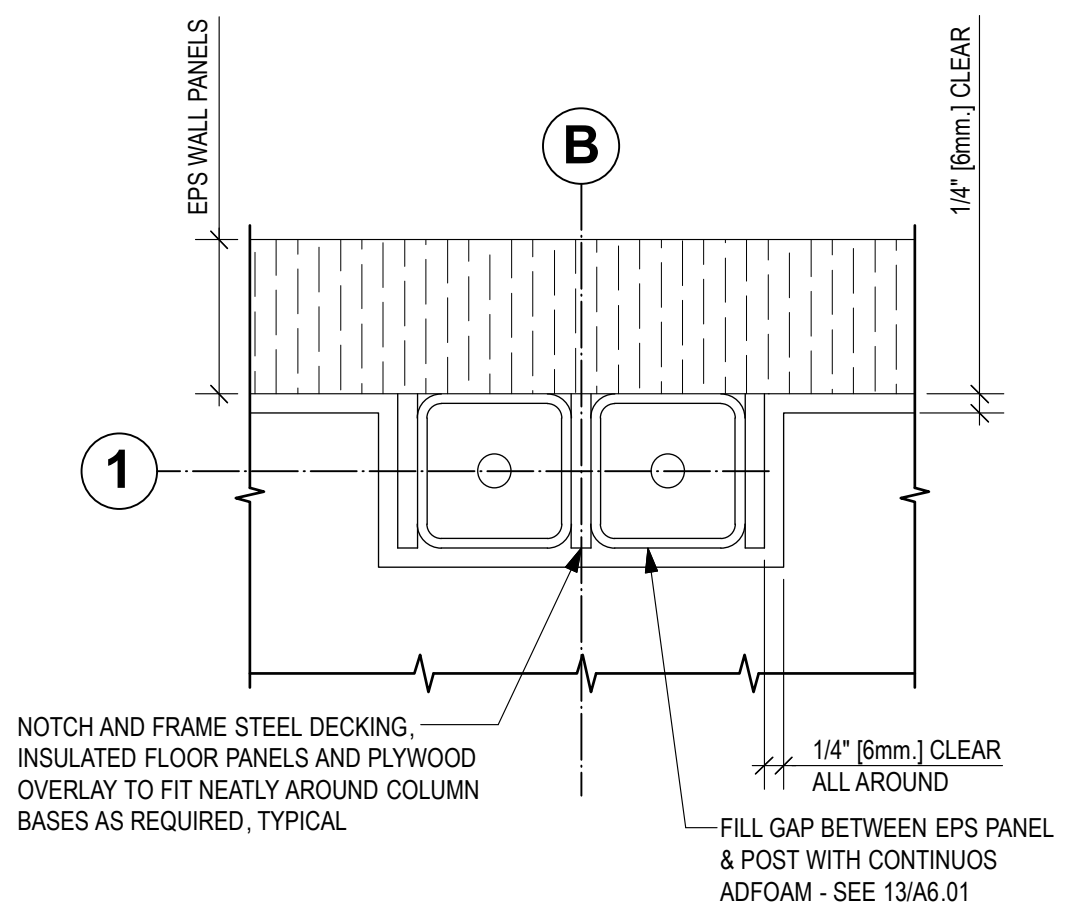
2 CORRUGATED STEEL DECKING PLAN
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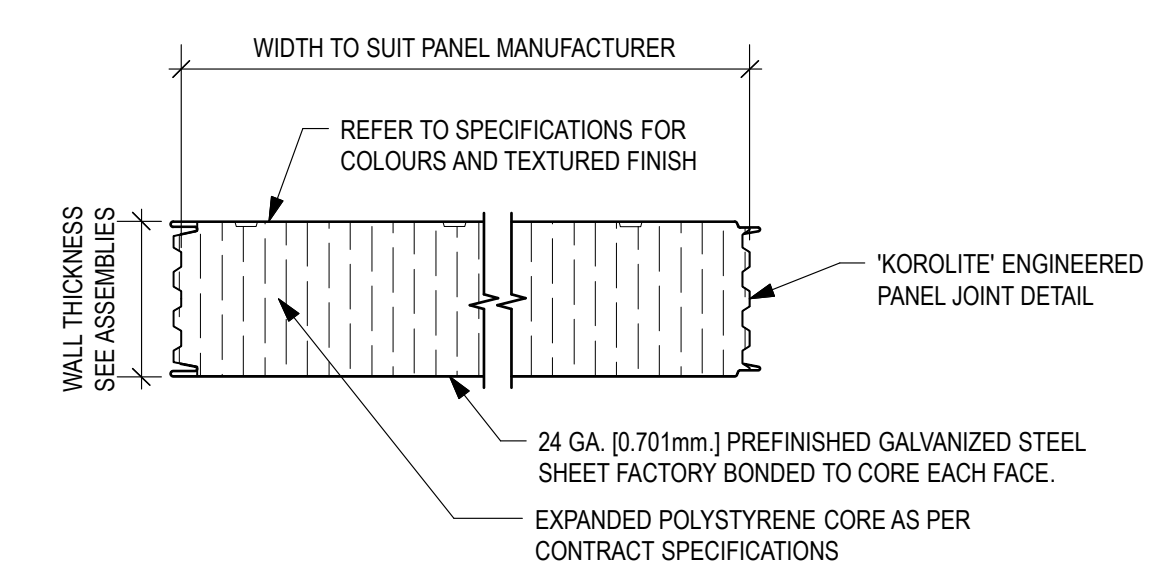
5 TYPICAL PLYWOOD PANEL FASTENING
 A6.03 SCALE: 1:25



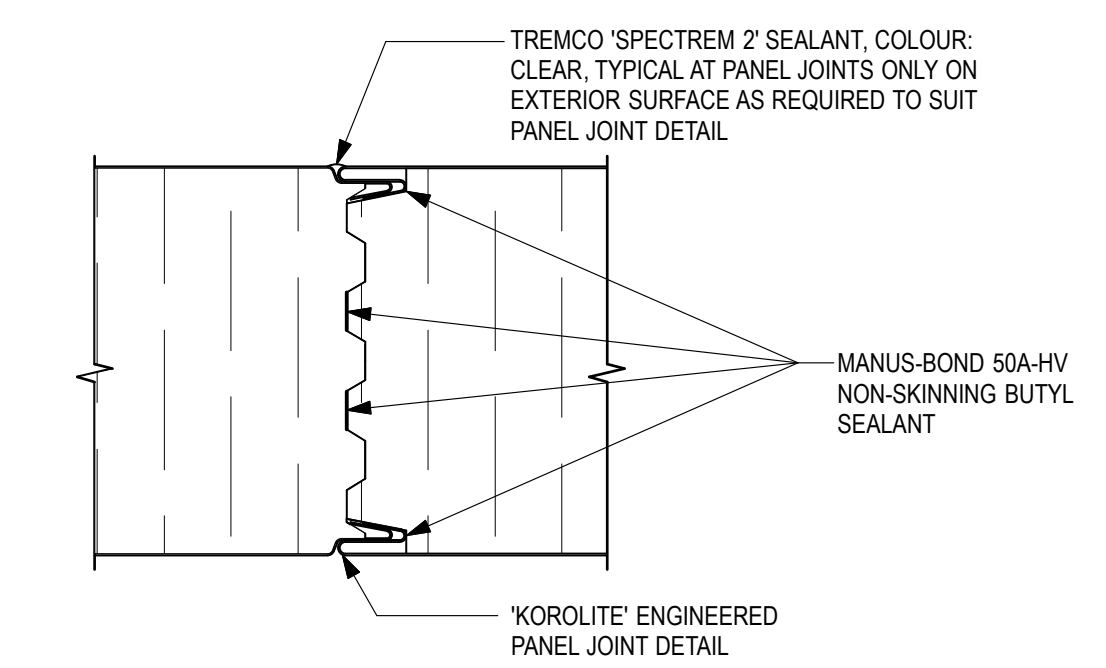
3 PLYWOOD OVERLAY PLAN
 A6.03 SCALE: 1:50



4 DETAIL
 A6.03 SCALE: 1:5



6 TYPICAL INSULATED EXTERIOR AND INTERIOR WALL PANEL
 A6.03 SCALE: 1:5



7 WALL PANEL JOINT DETAIL
 A6.03 SCALE: 1:2

3/4" [19mm] EXTERIOR SHEATHING GRADE, FIR OR SPRUCE PLYWOOD OVERLAY LAID DOWN IN STAGGERED PATTERN OVER EPS FLOOR PANELS. REFER TO 'TYPICAL PLYWOOD PANEL FASTENING' DETAIL.

3/8" [9.5mm] (S1S) PLYWOOD UNDERLAYMENT (NOT ALL DASHED LINES SHOWN) STAPLED TO 3/4" [19mm] PLYWOOD OVERLAY (SANDER SIDE FACING UP) THROUGHOUT ENTIRE AREA. UNDERLAYMENT PANELS SHALL BE NAILED OR STAPLED ALONG PANEL EDGES EVERY 4" [100mm] AND EVERY 6" [150mm] EACH WAY FOR PANEL INTERIOR. USE 25mm RING GROOVED UNDERLAY FLOORING NAILS OR 28mm LONG STAPLES WITH 5mm CROWNS AND NOT LESS THAN 1.2mm SHANK DIAMETER. NAILING OR STAPLING SHOULD BEGIN AT ONE CORNER OF THE UNDERLAYMENT PANEL AND SHOULD PROGRESS DIAGONALLY ACROSS THE PANEL. THE LENGTHS OF UNDERLAYMENT PANELS SHALL BE LAID AT RIGHT ANGLES TO THE LENGTHS OF THE PLYWOOD OVERLAY. THE UNDERLAYMENT PANELS SHALL NOT BE INSTALLED UNTIL THE PLYWOOD OVERLAY HAS DRIED TO THE APPROXIMATE CONDITIONS THAT WILL EXIST IN THE STRUCTURE DURING OCCUPANCY. THE UNDERLAYMENT SHALL BE KEPT DRY WHILE IN STORAGE AND SHALL BE DRY DURING INSTALLATION.

2	100% REVIEW	2017-11-30
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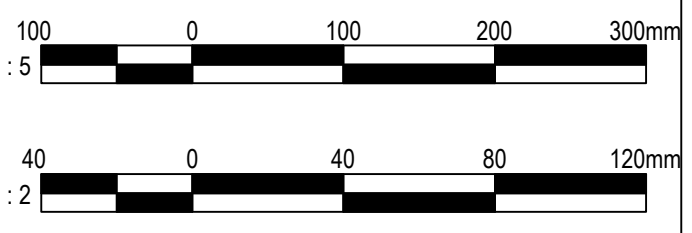
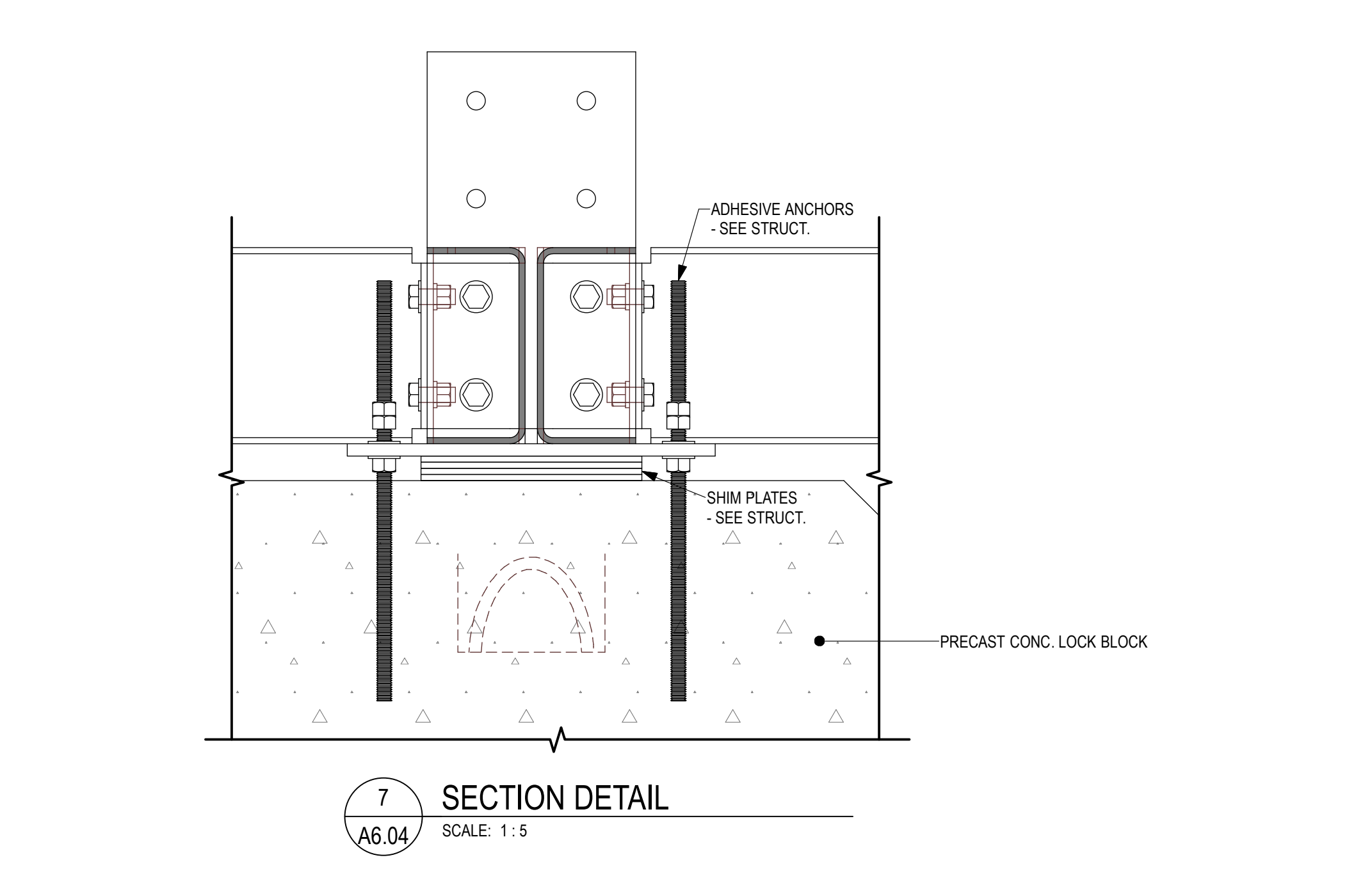
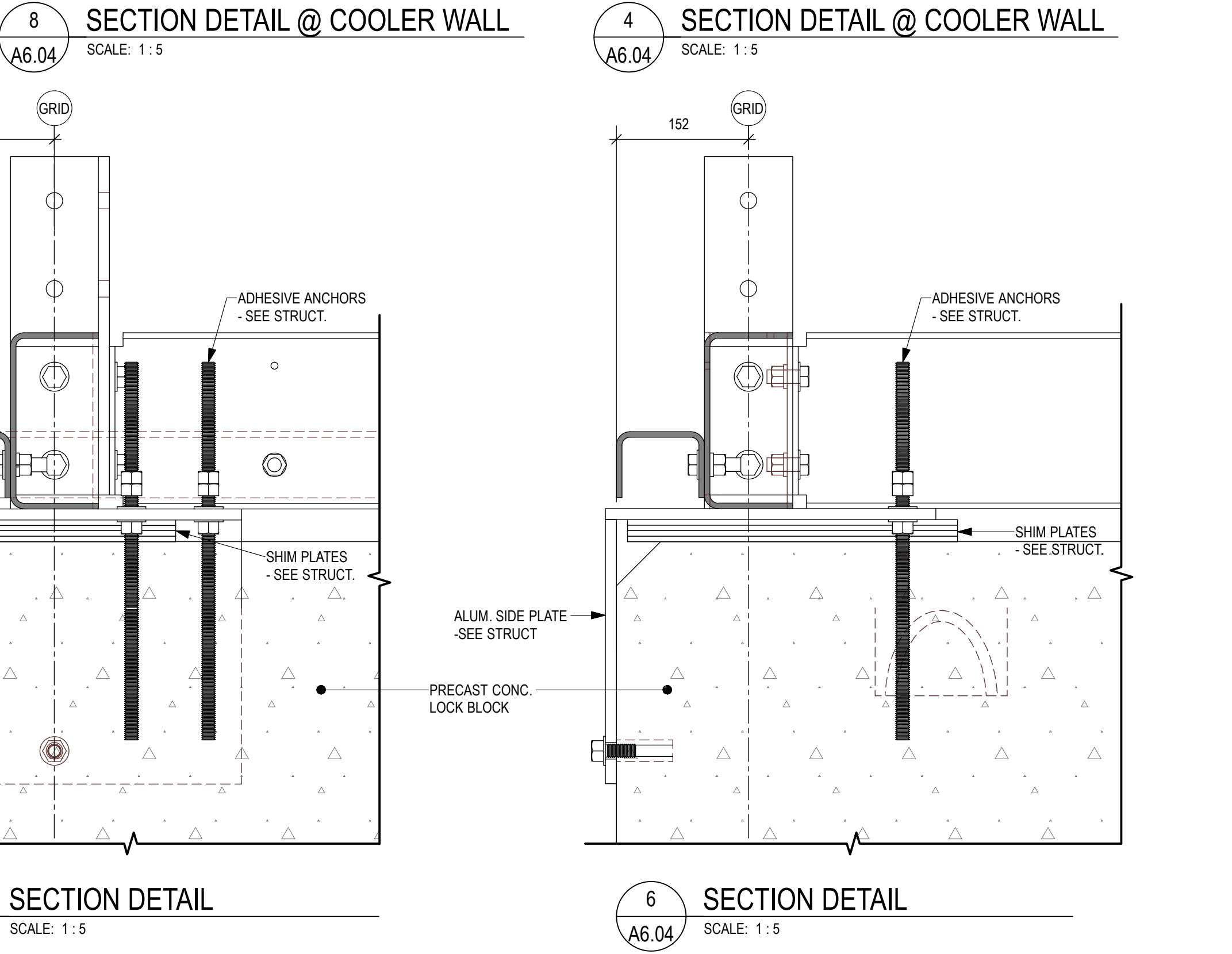
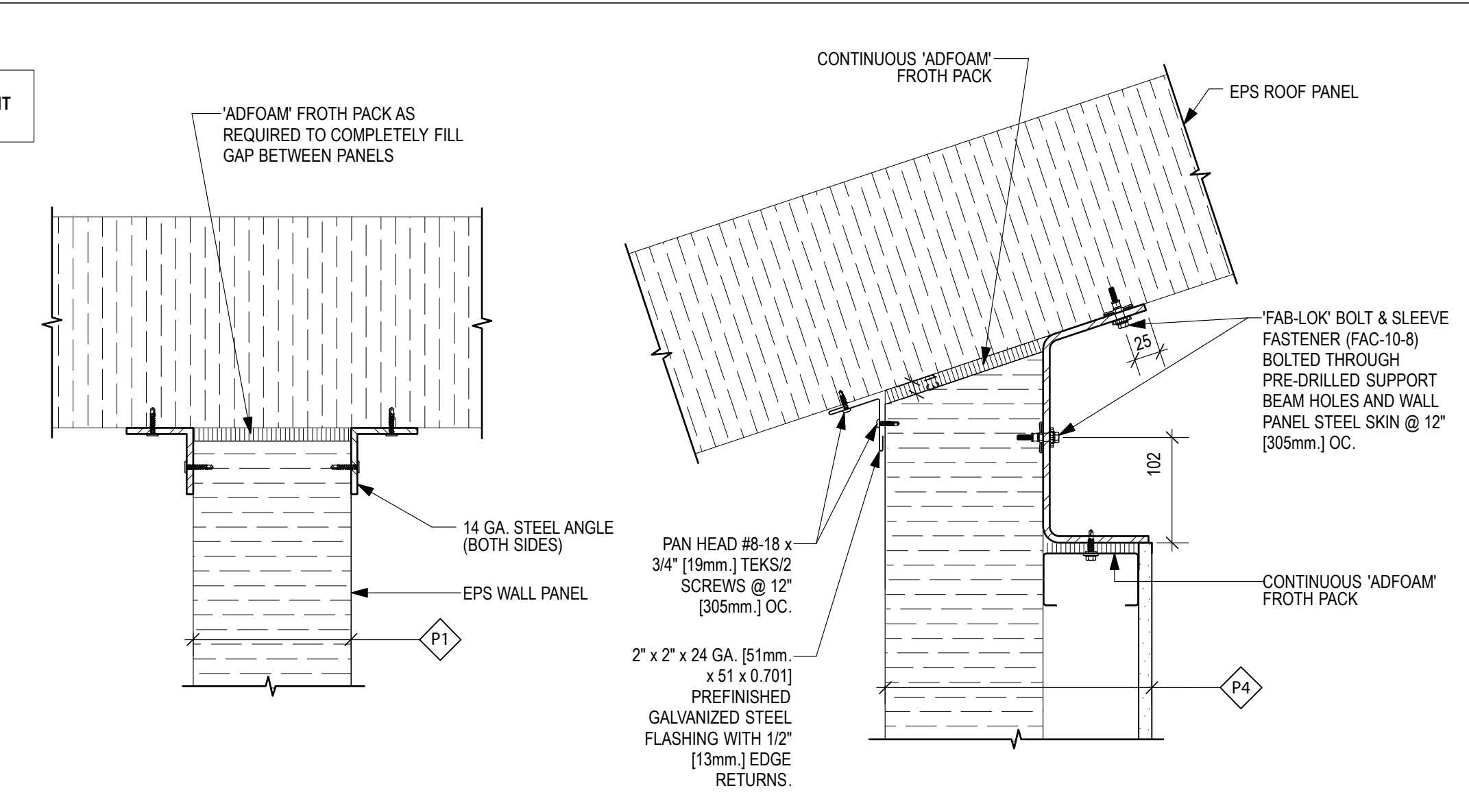
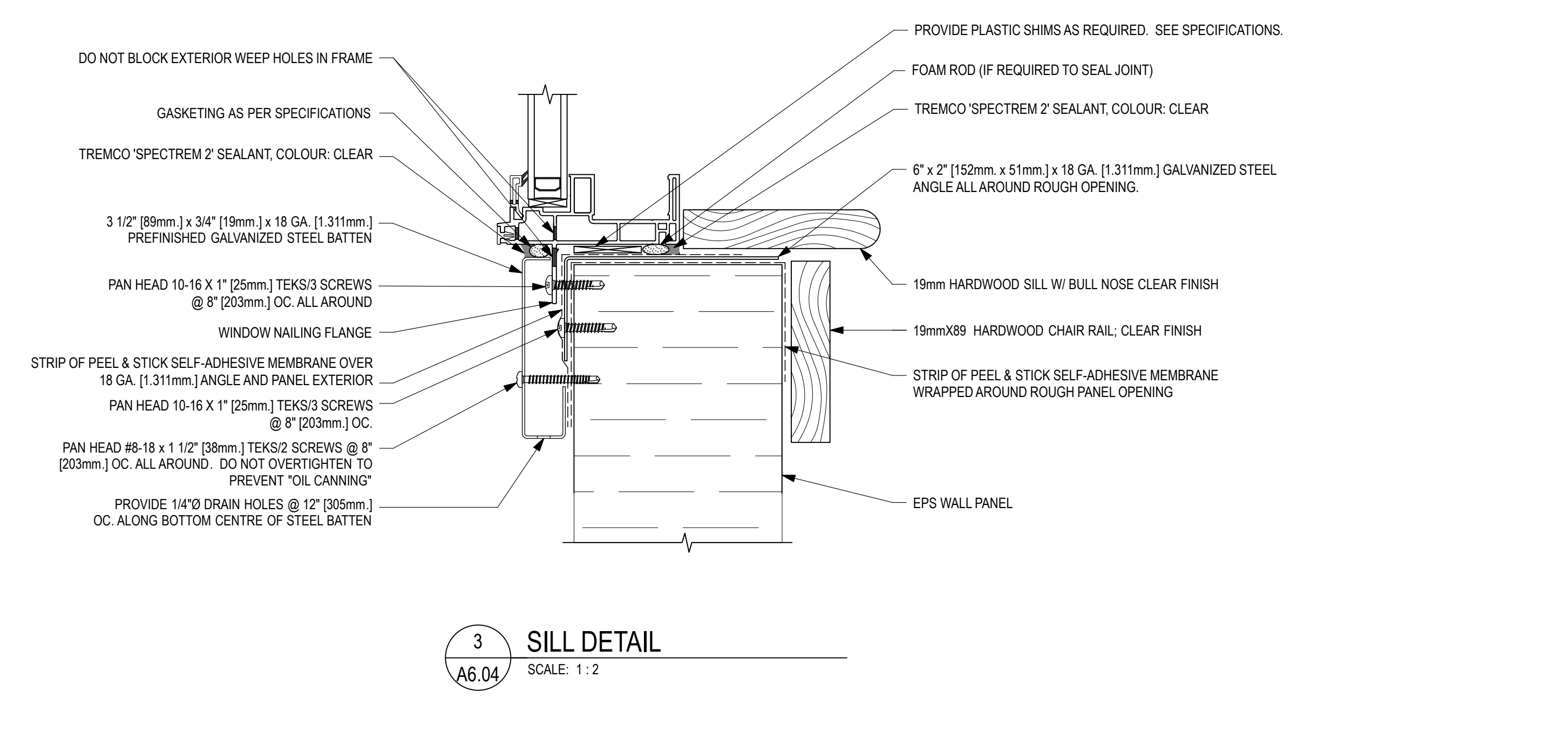
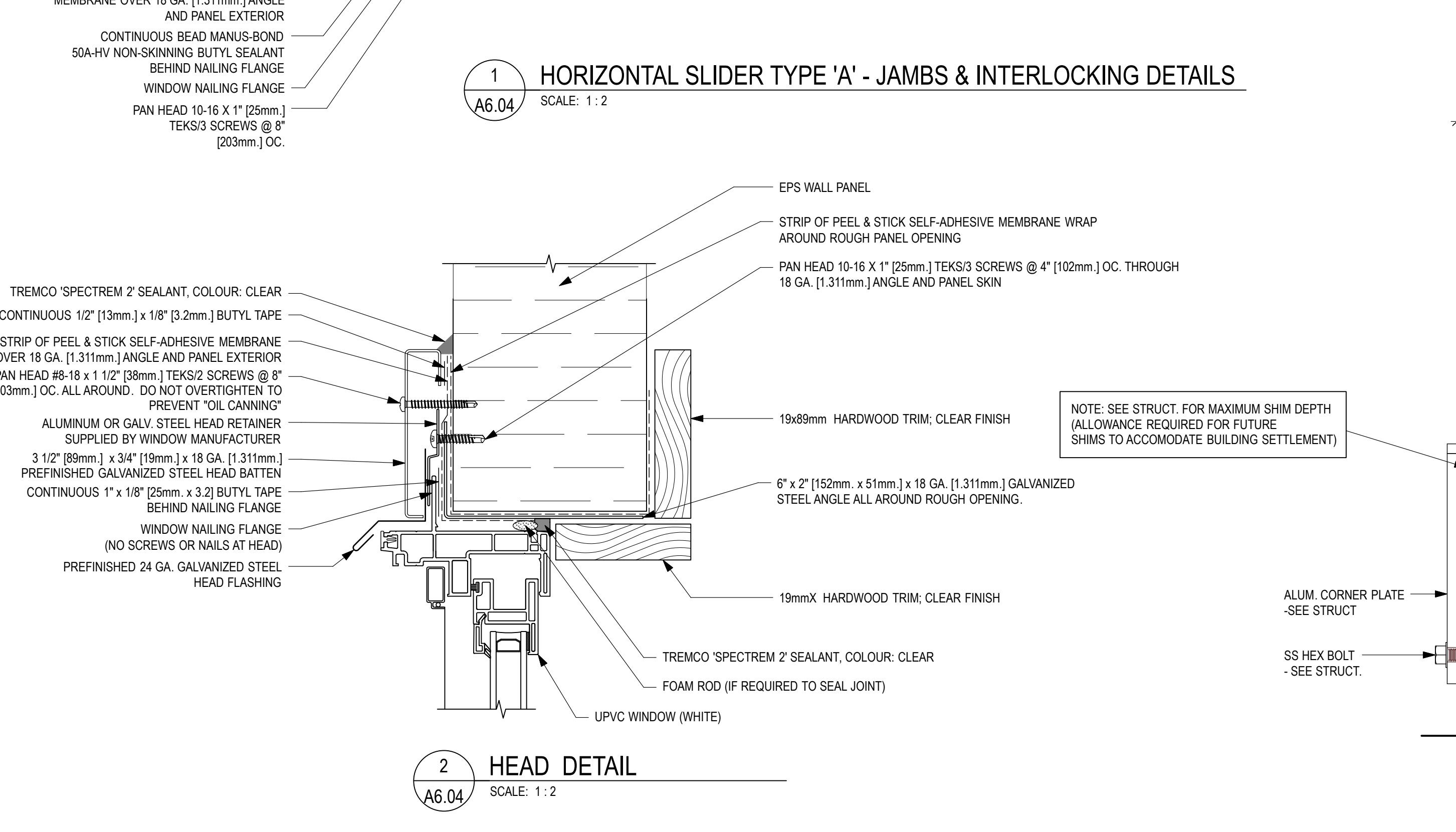
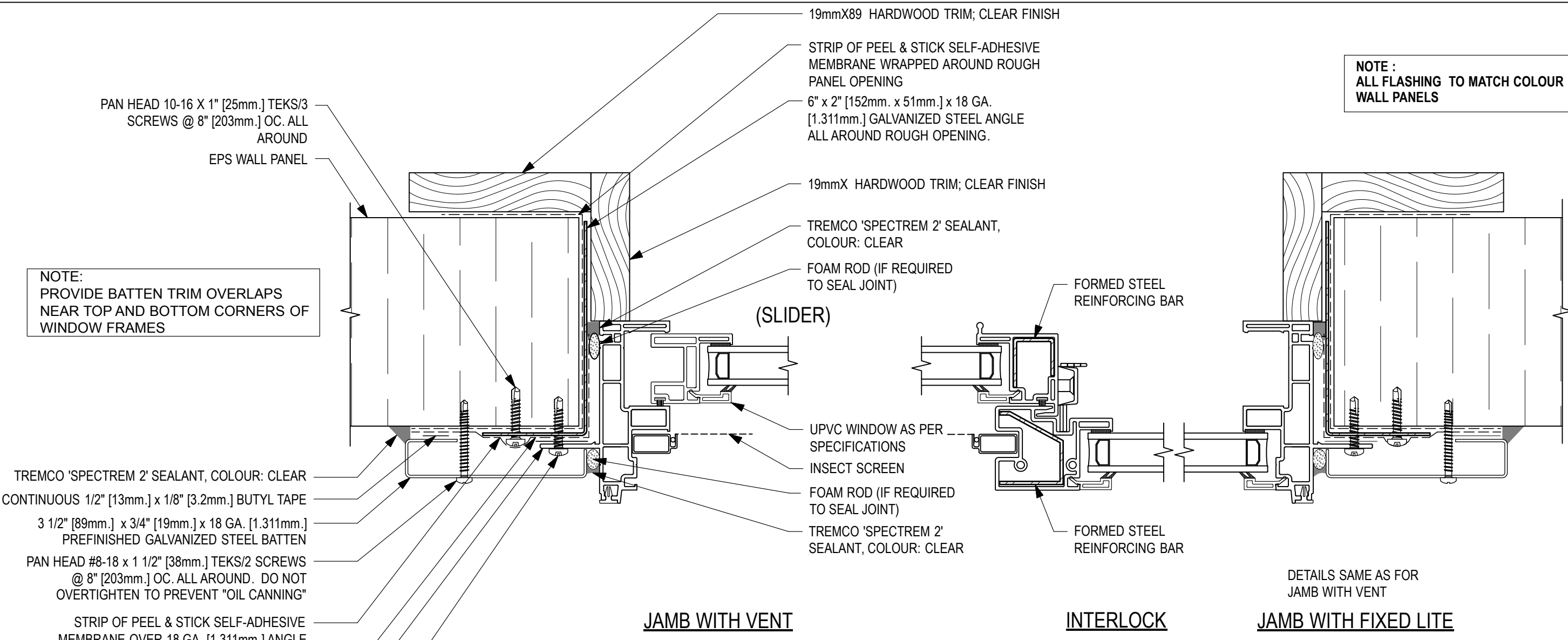
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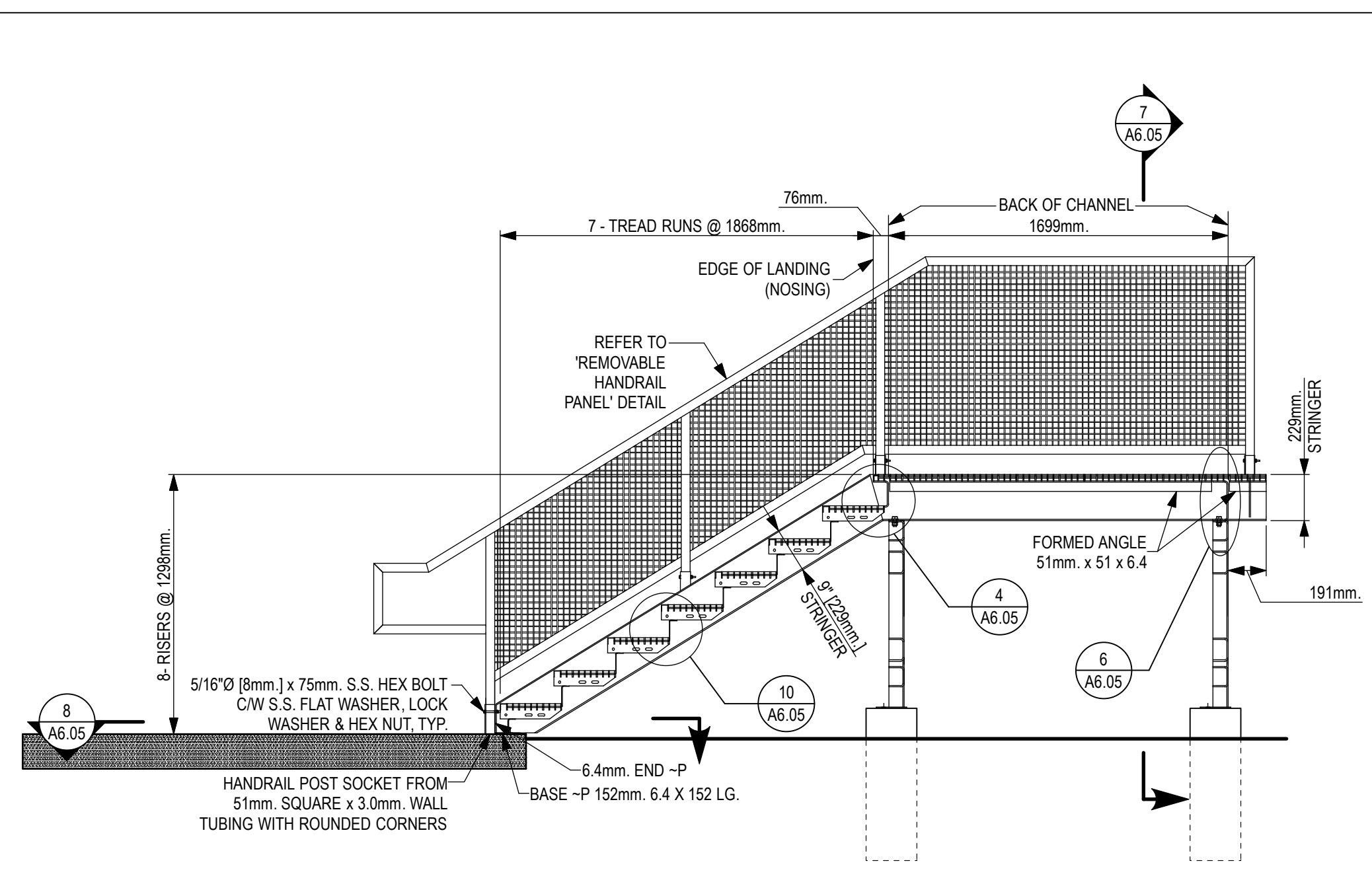
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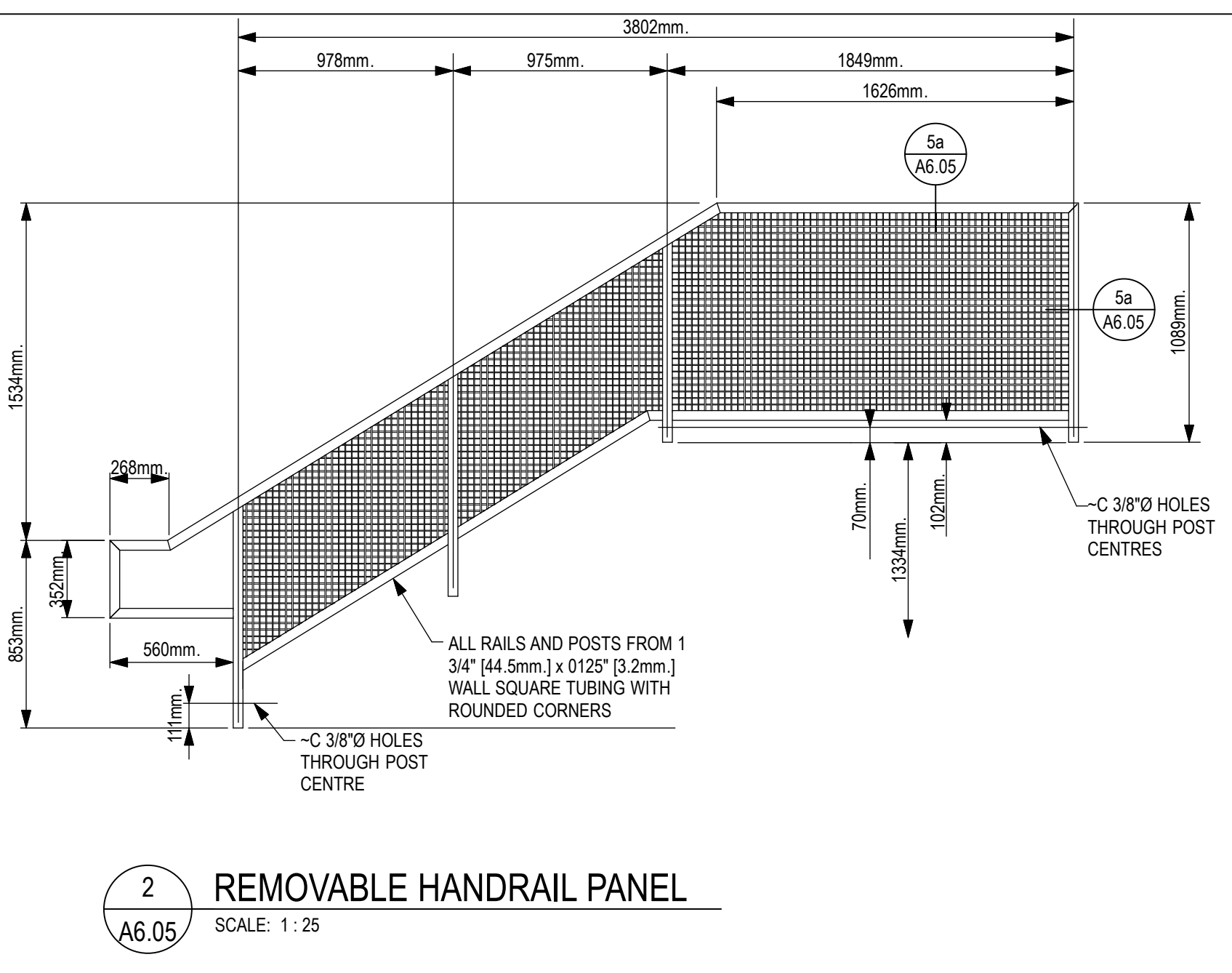
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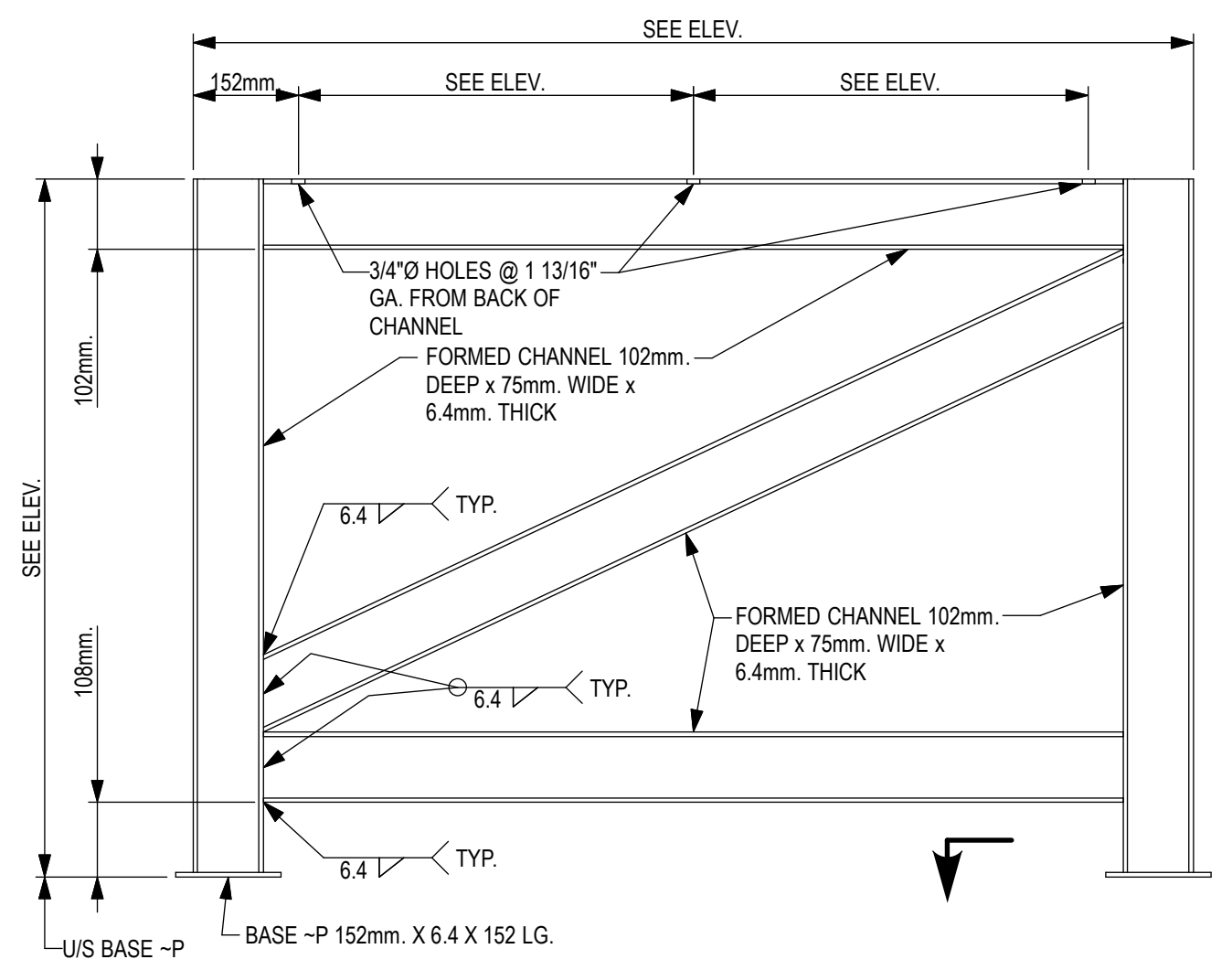
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RAMP AND STAIR COMPONENTS TO BE CONSTRUCTED OF POWDER COATED STEEL.



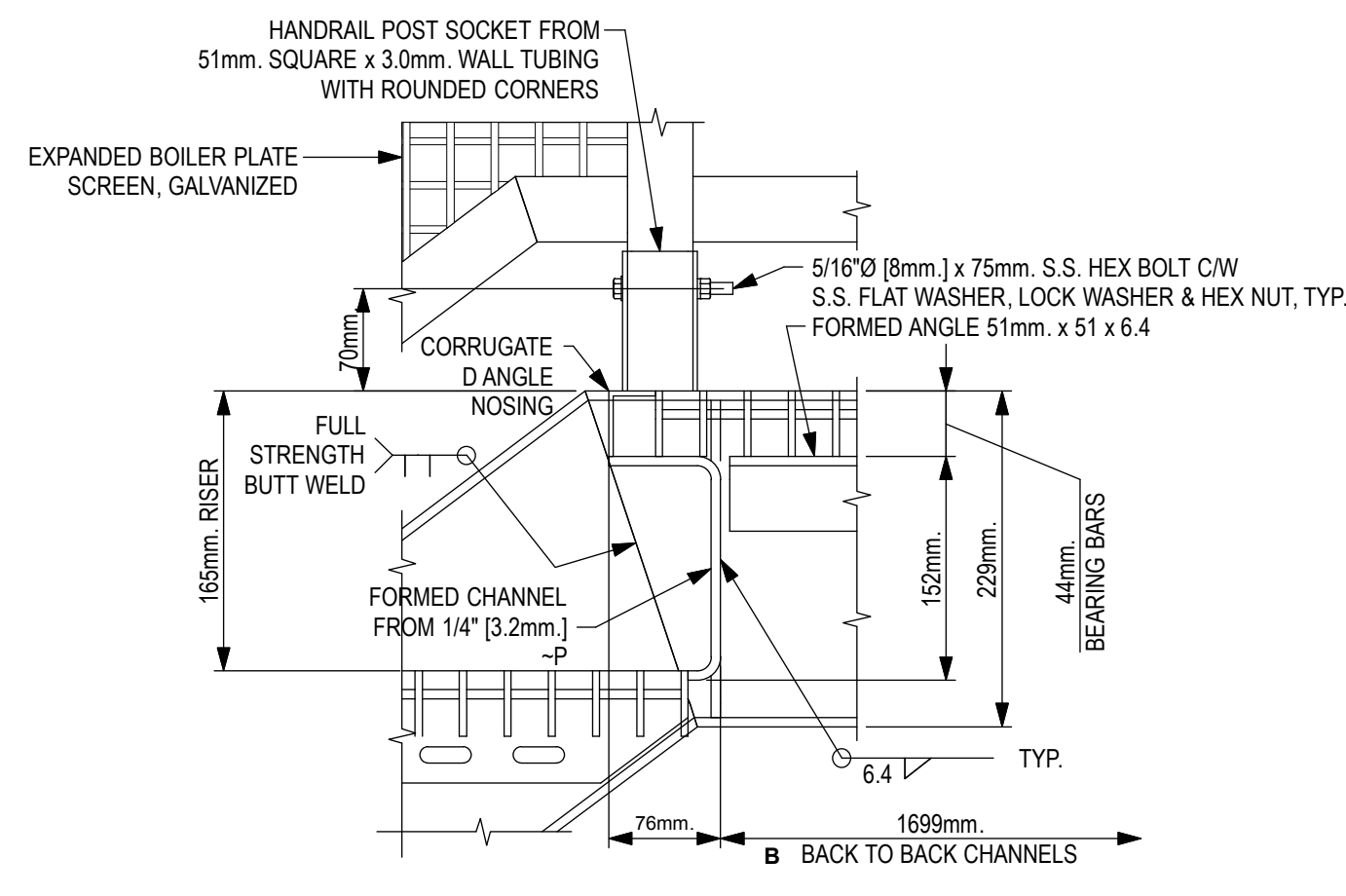
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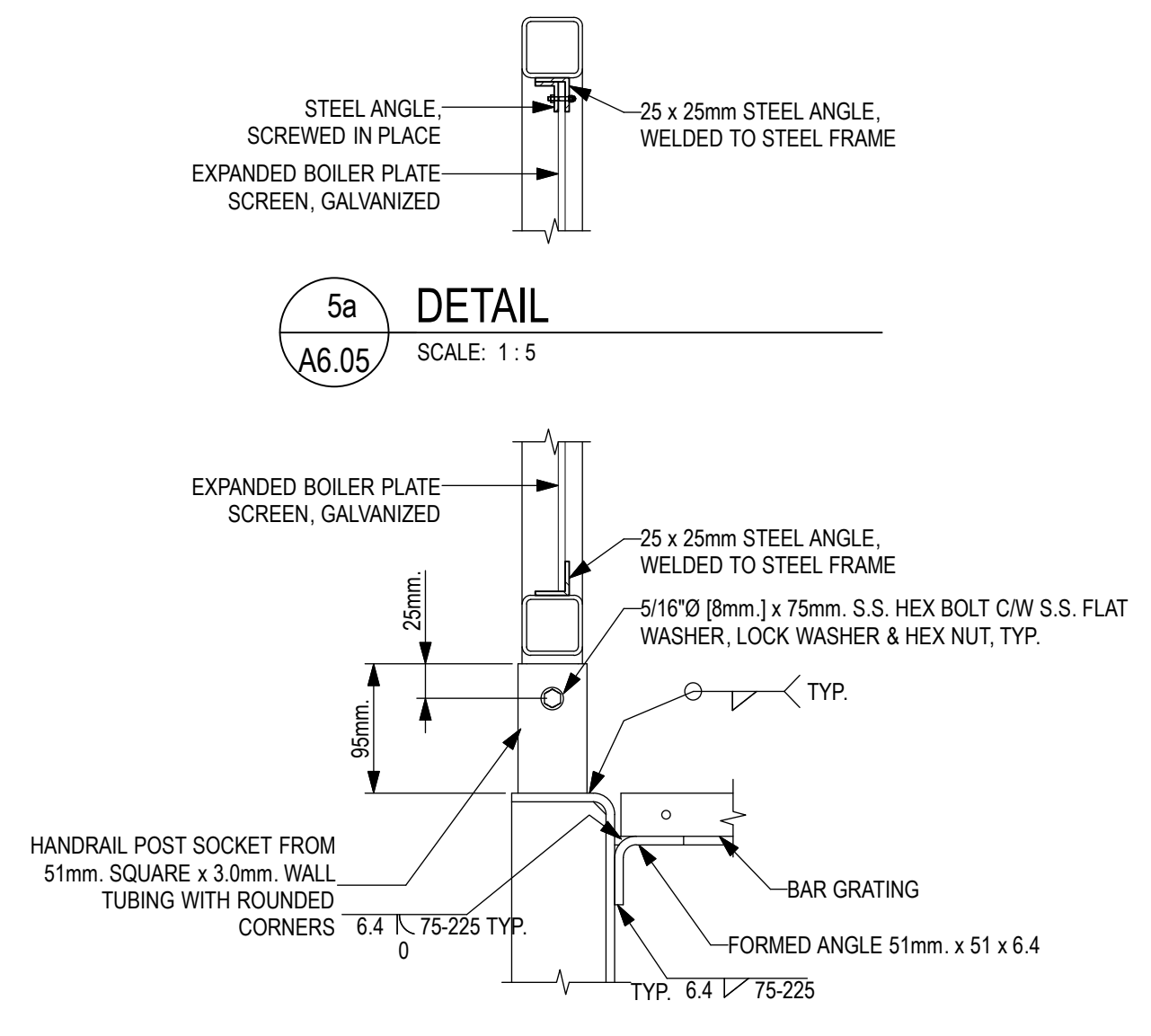
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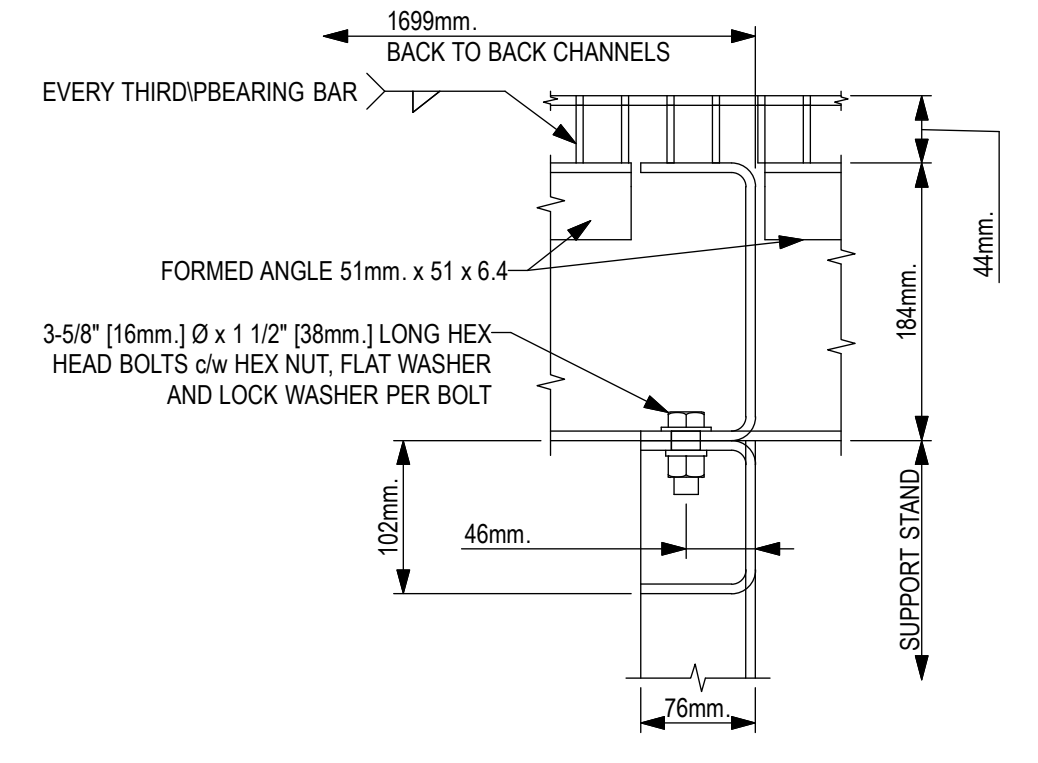
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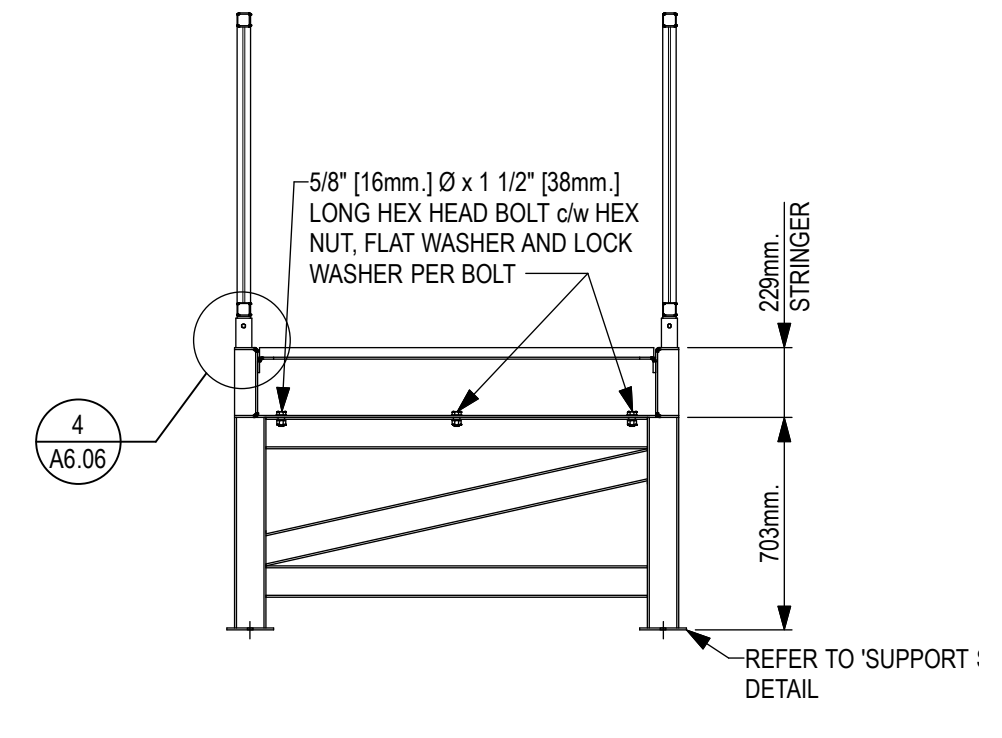
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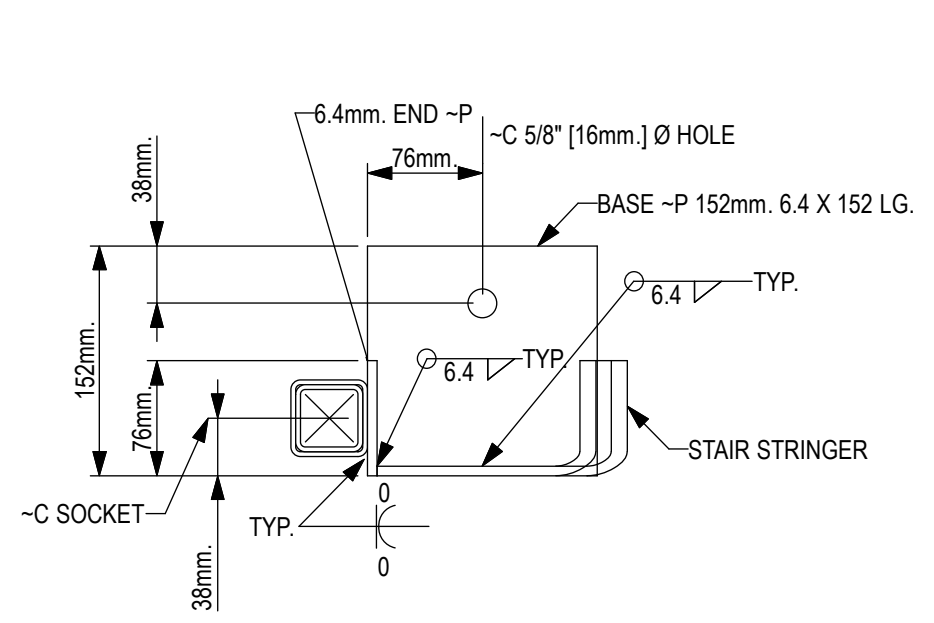
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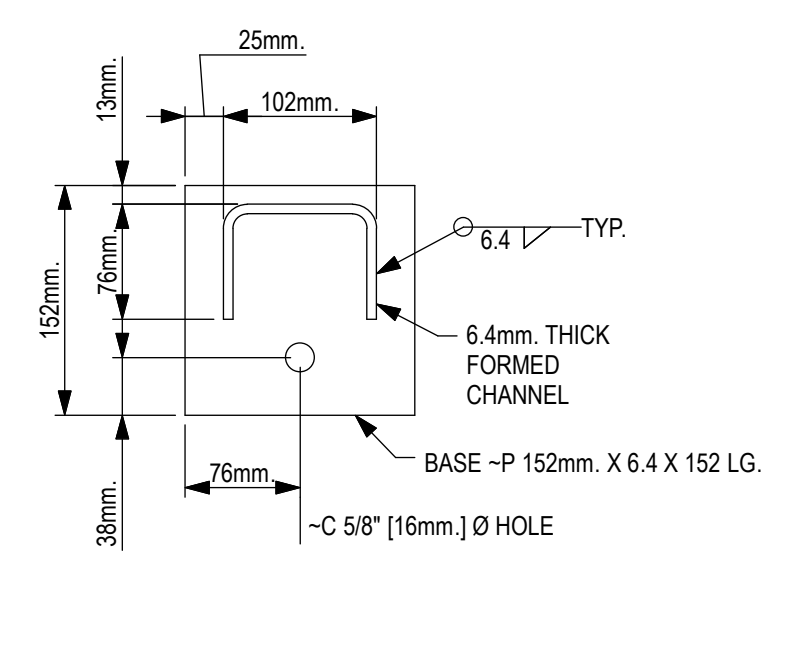
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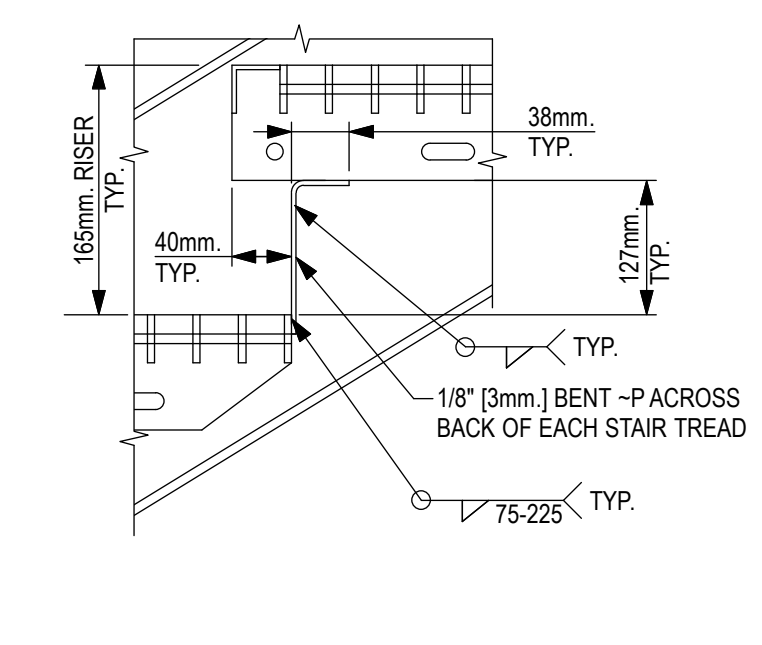
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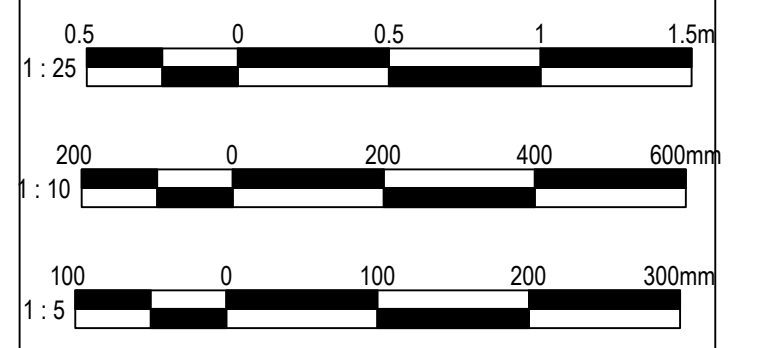
8 DETAIL
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9 DETAIL
A6.05 SCALE: 1:5



10 DETAIL
A6.05 SCALE: 1:5



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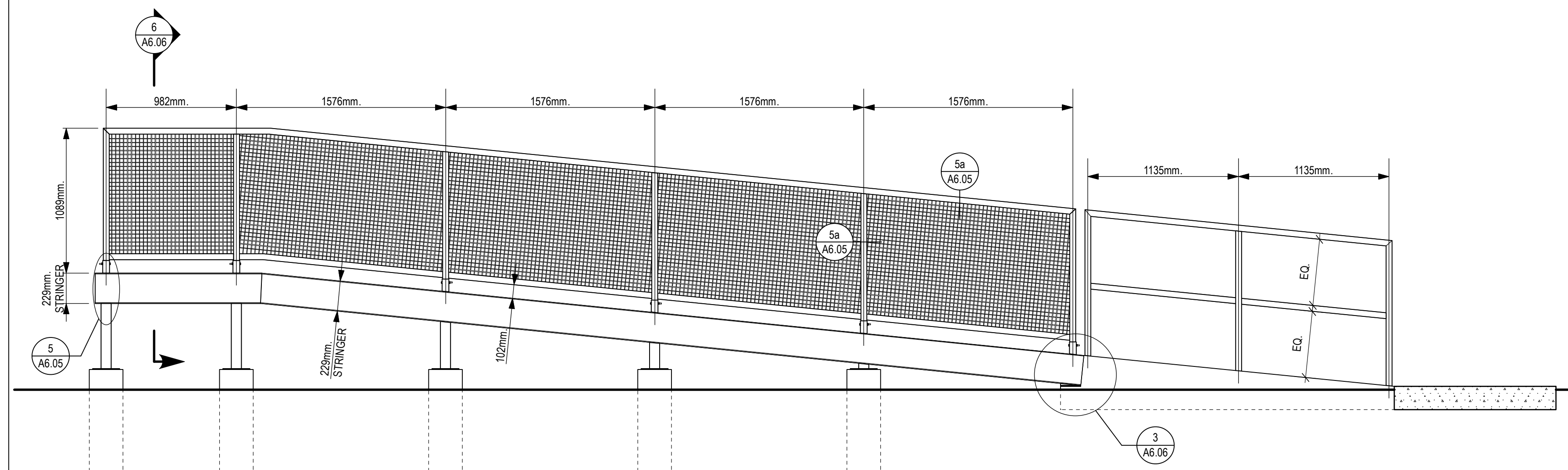
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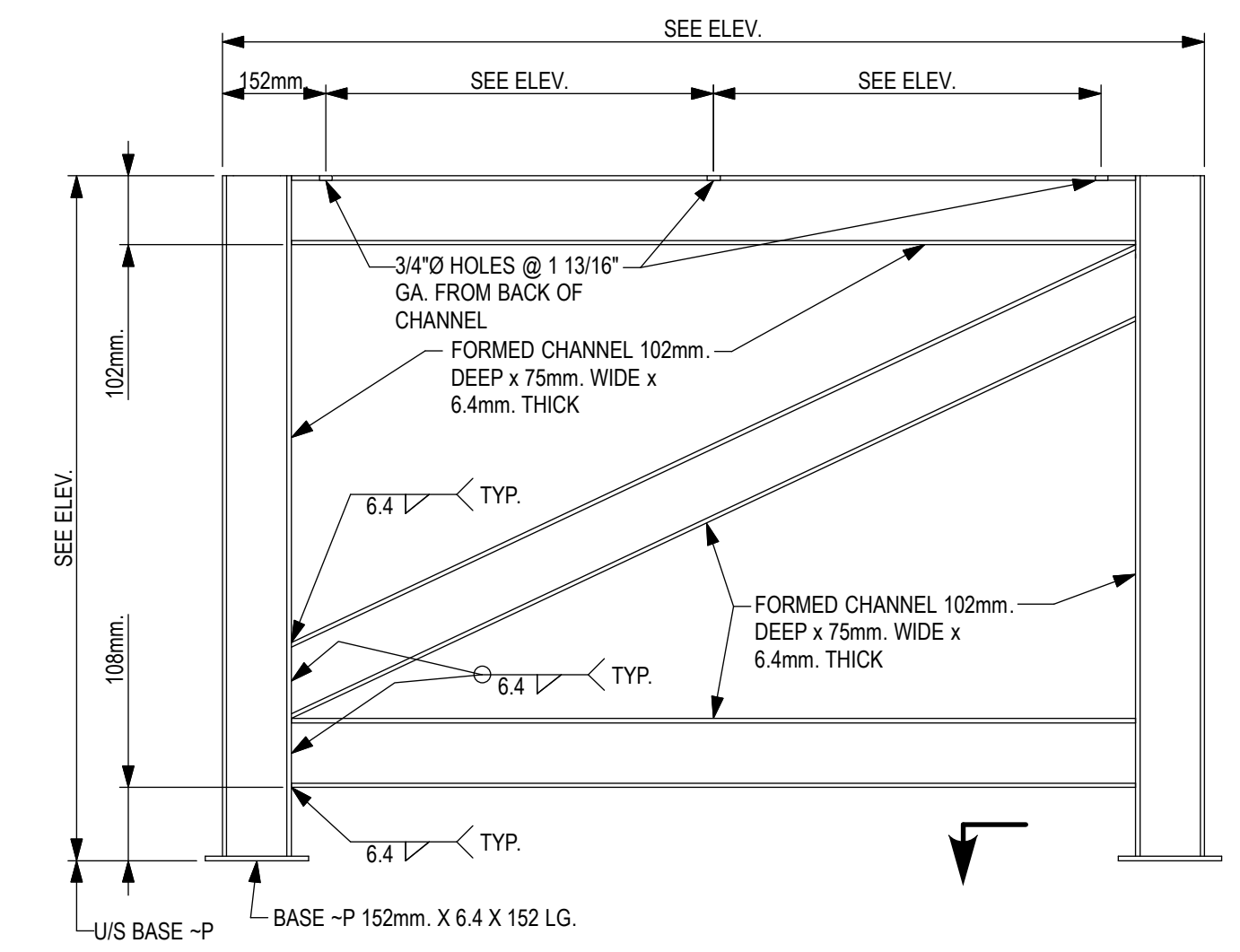
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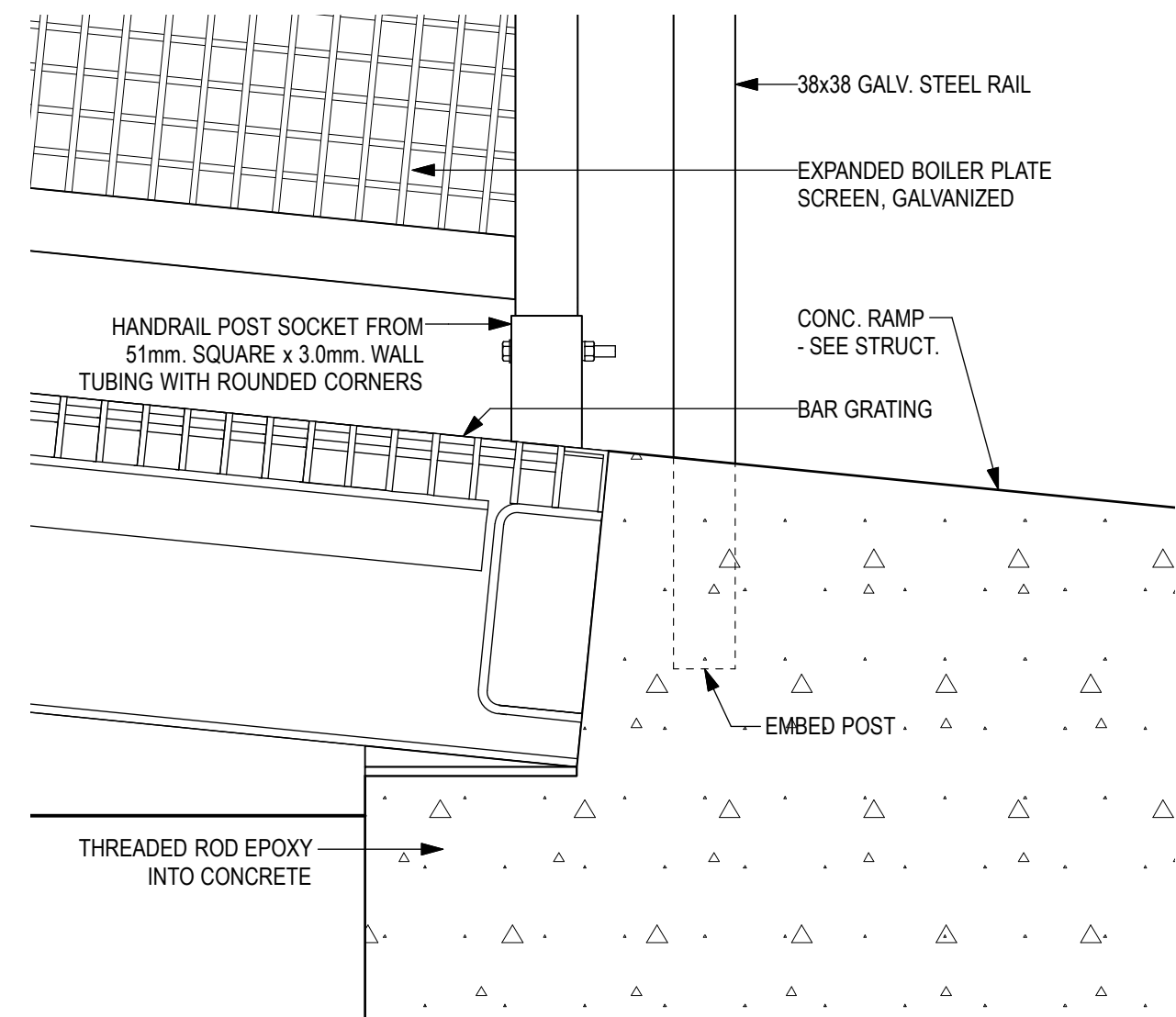
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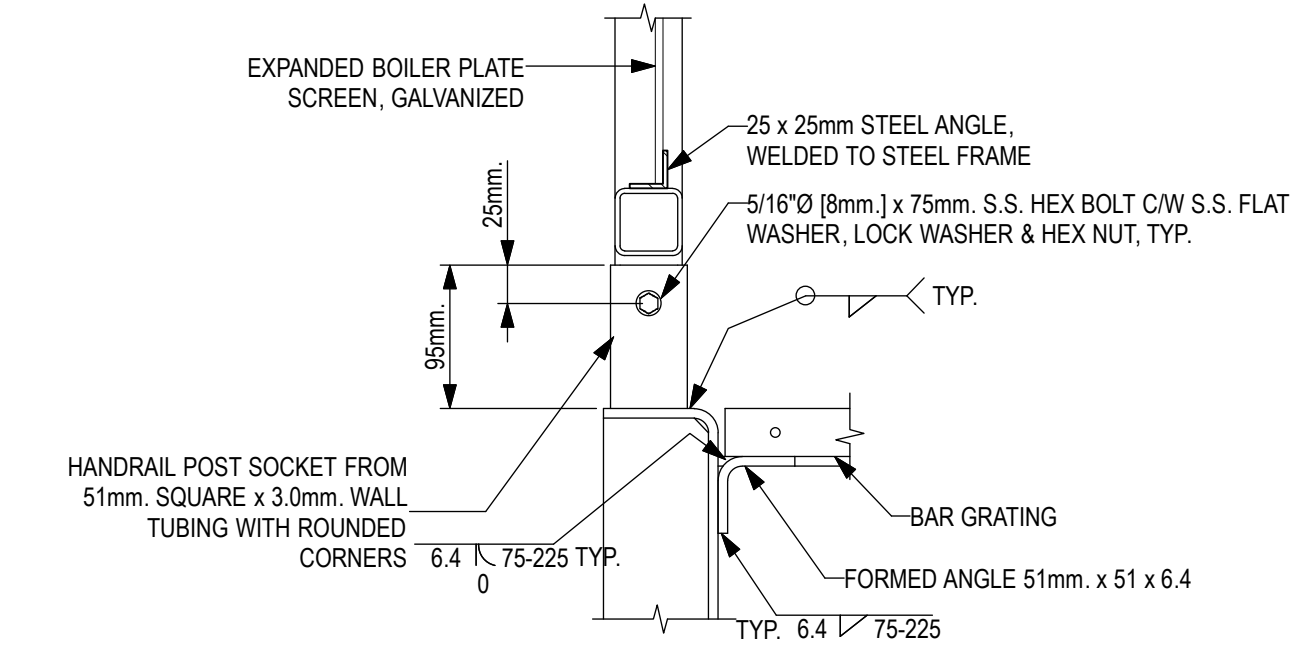
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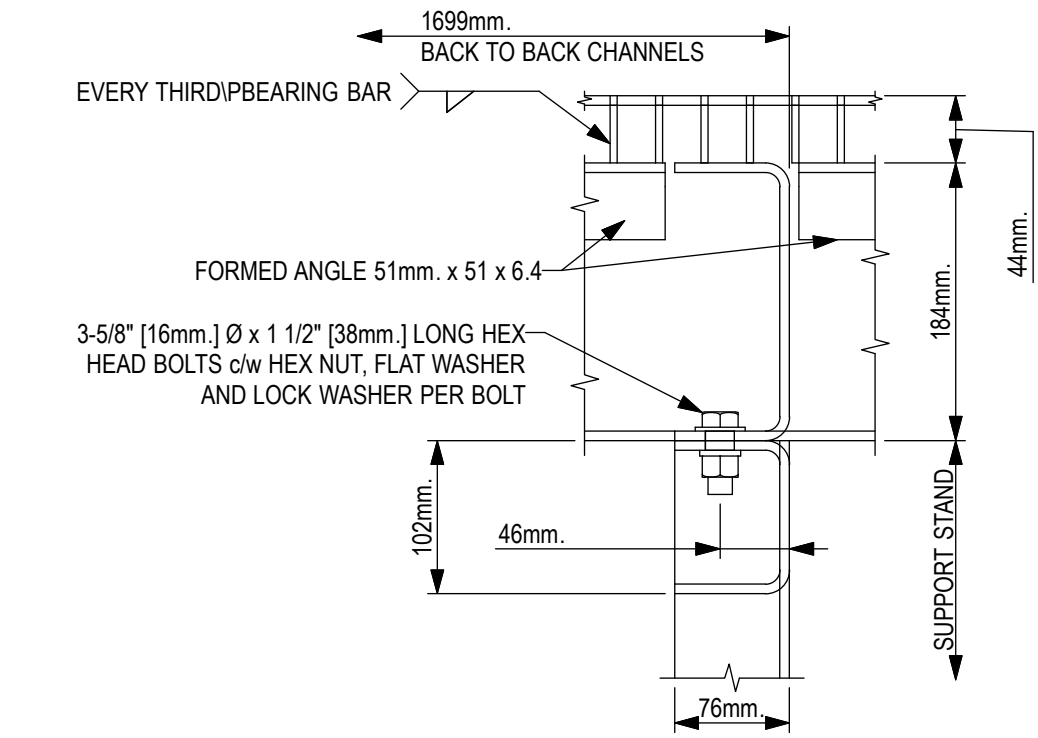
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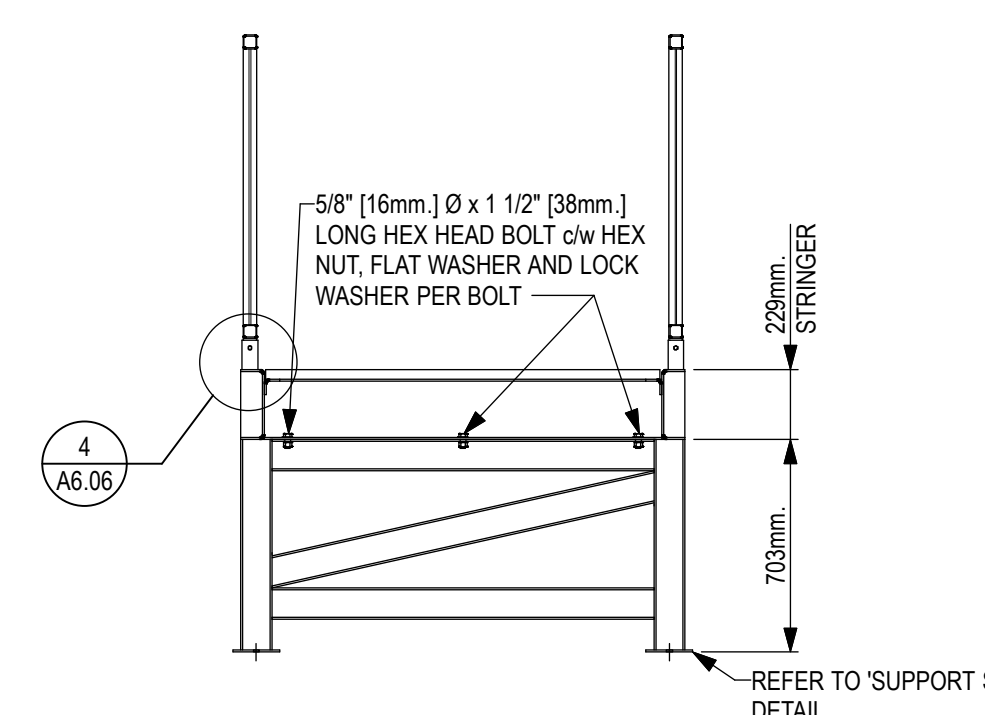
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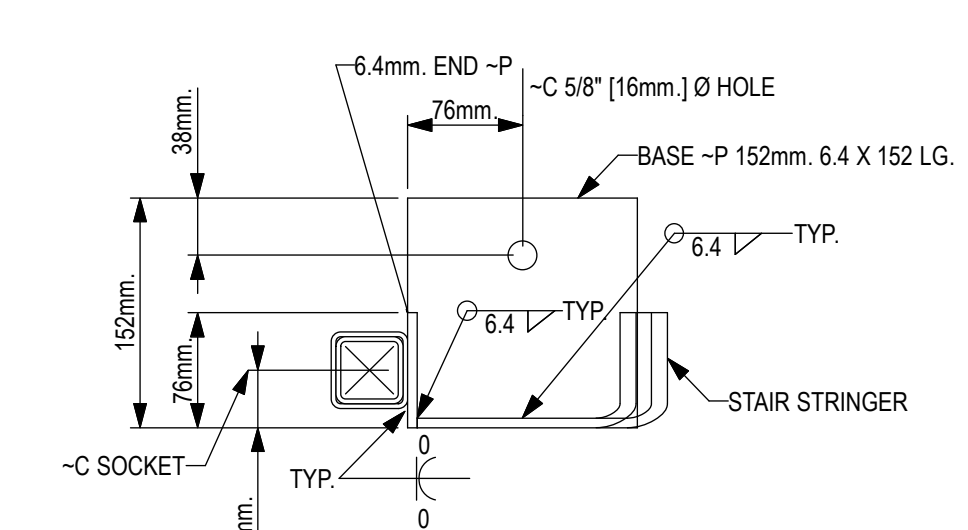
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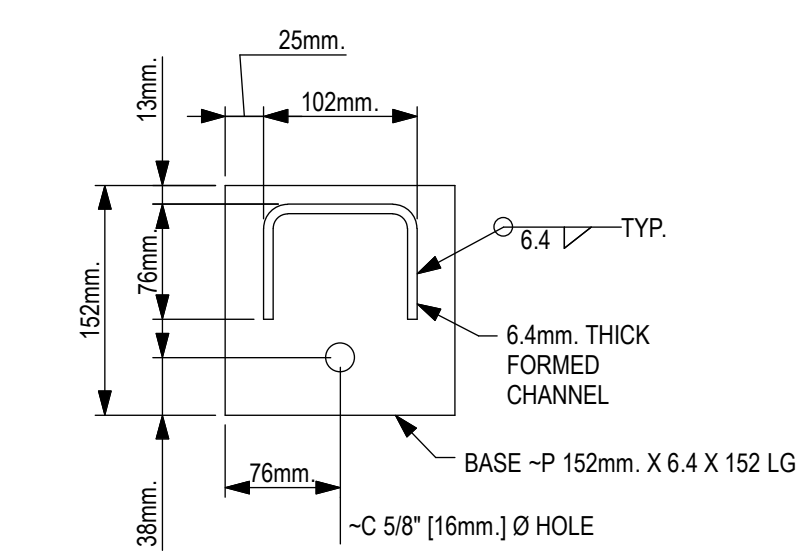
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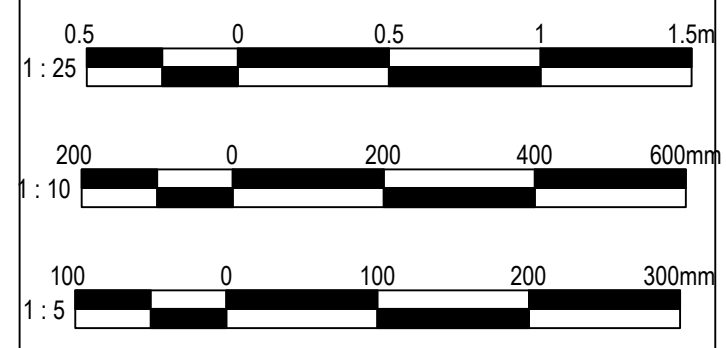
6 RAMP SECTION
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7 DETAIL
 SCALE: 1:5



8 DETAIL
 SCALE: 1:5



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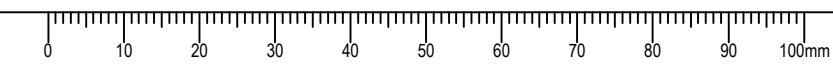
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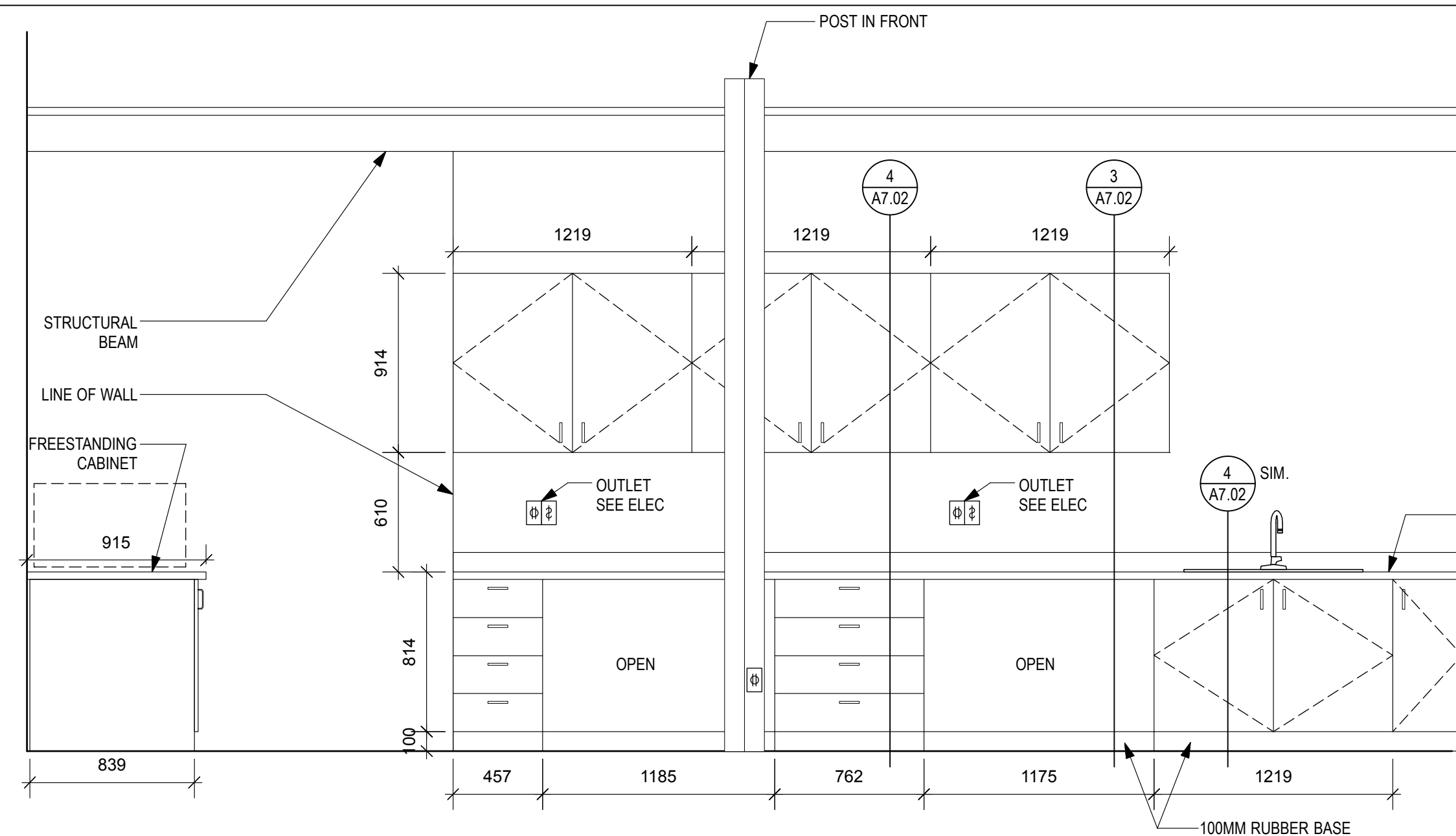
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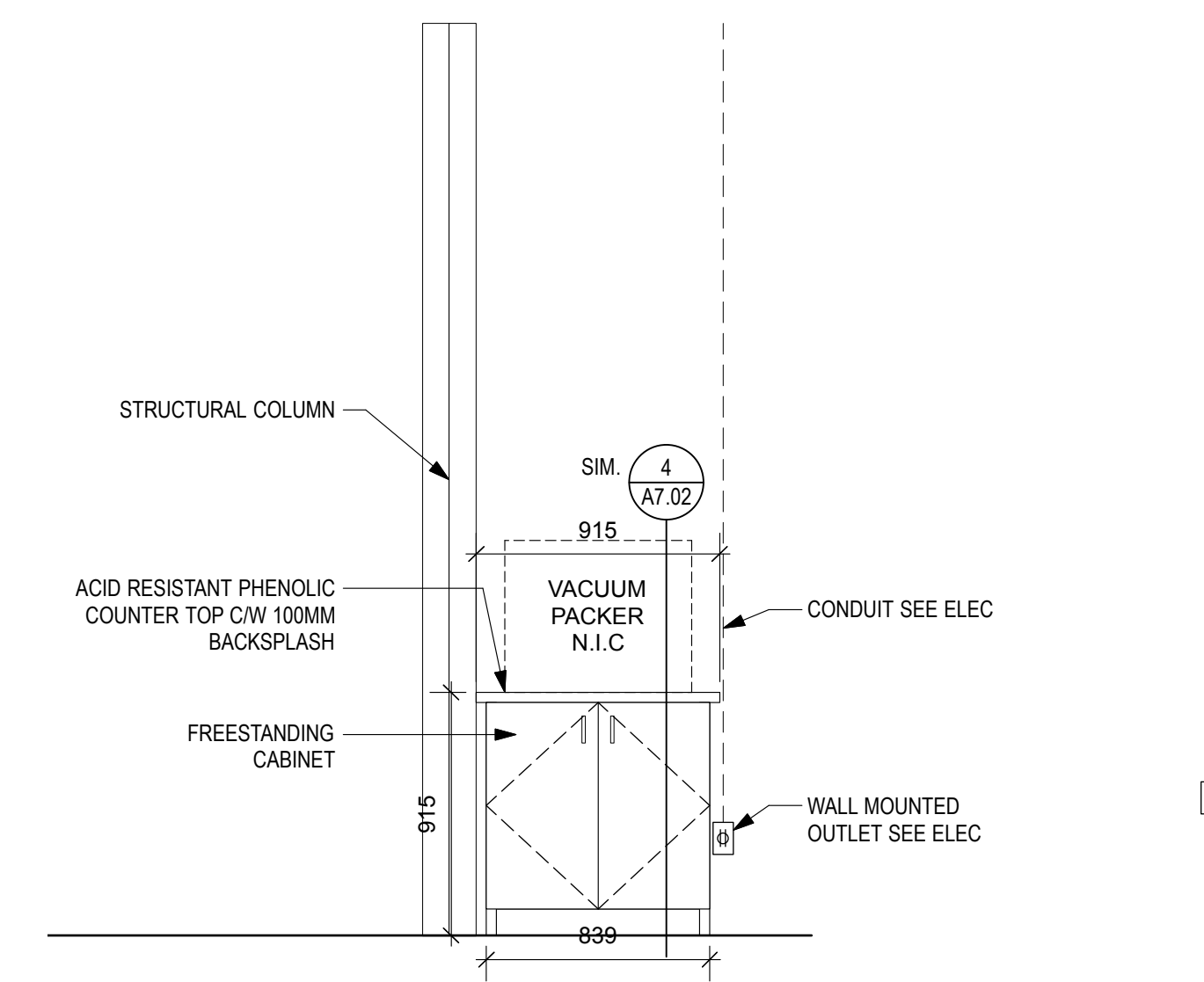
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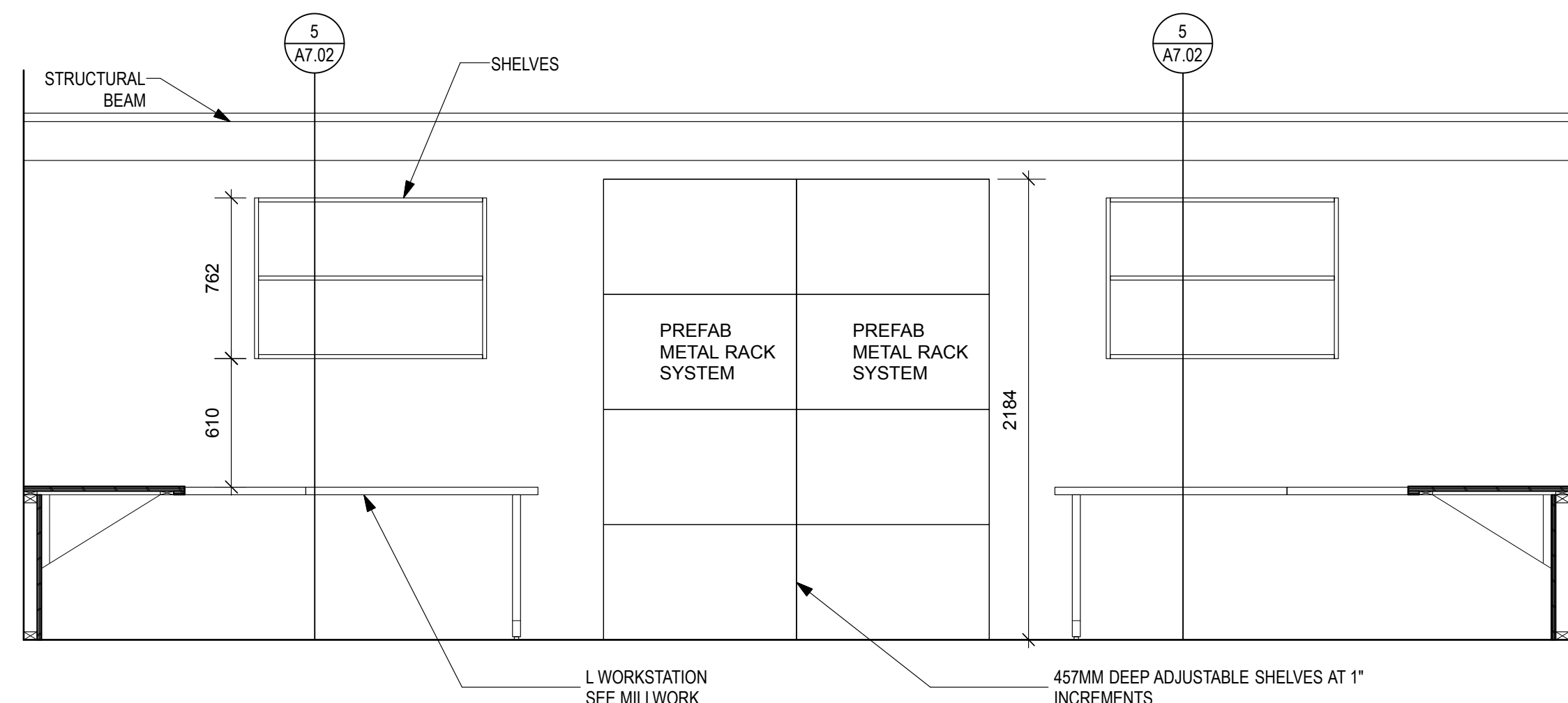




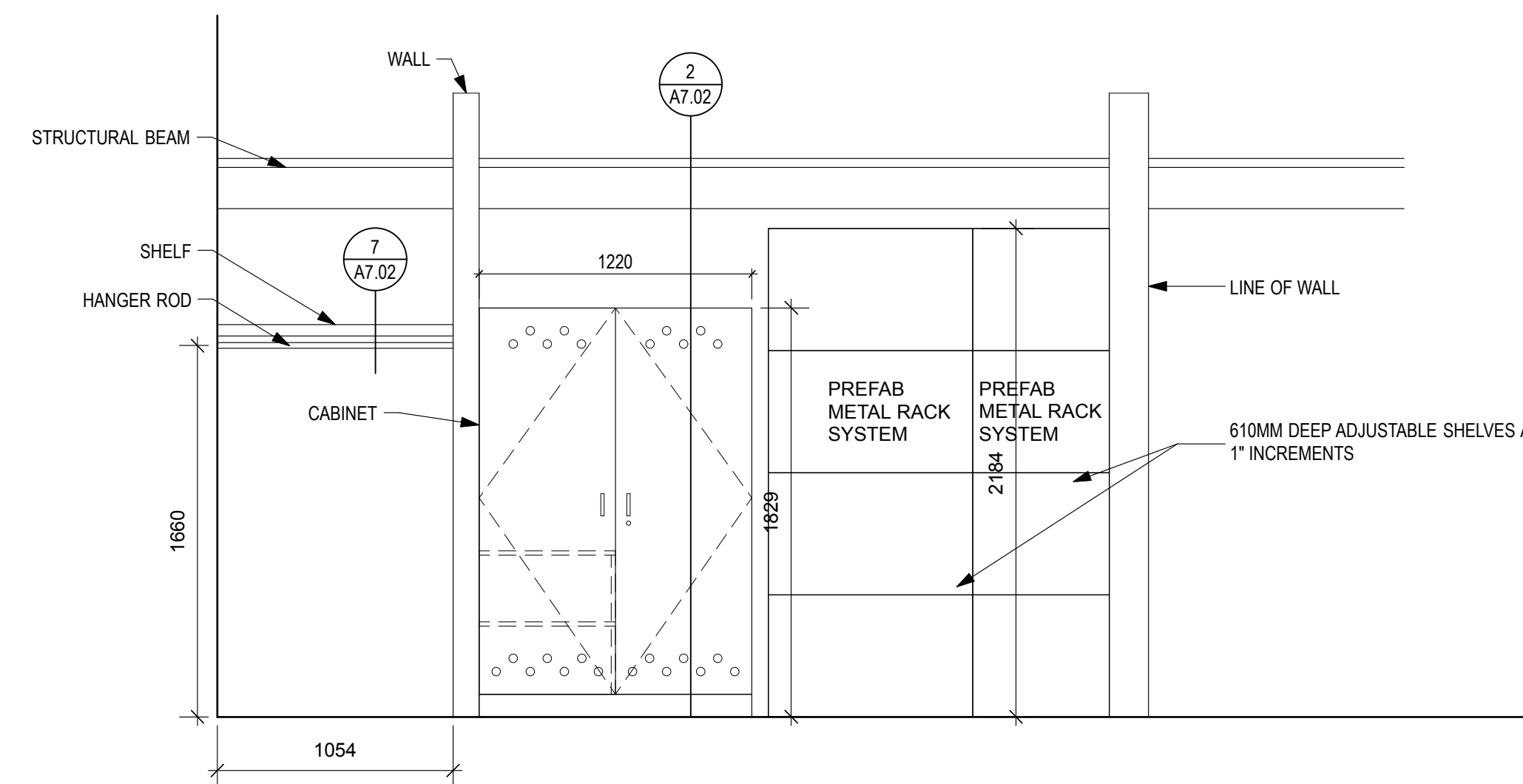
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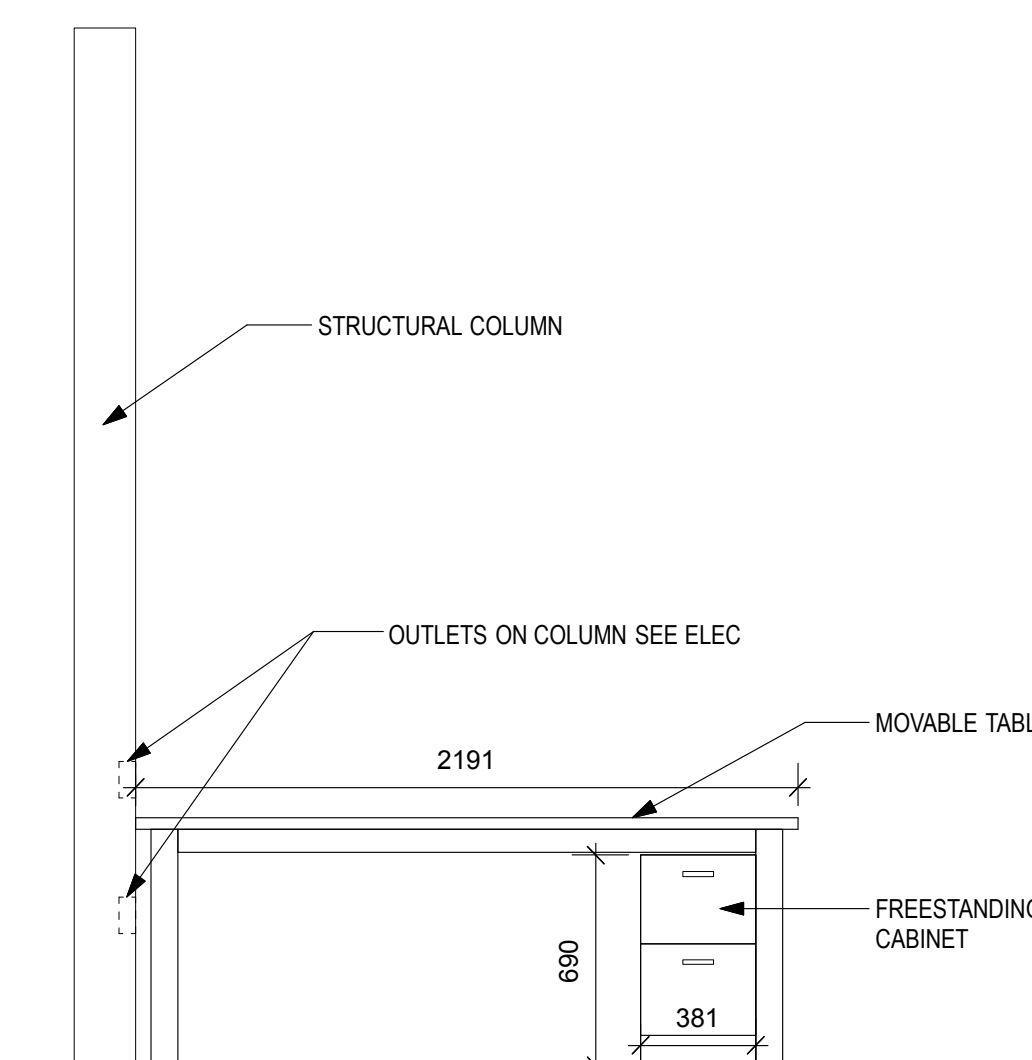
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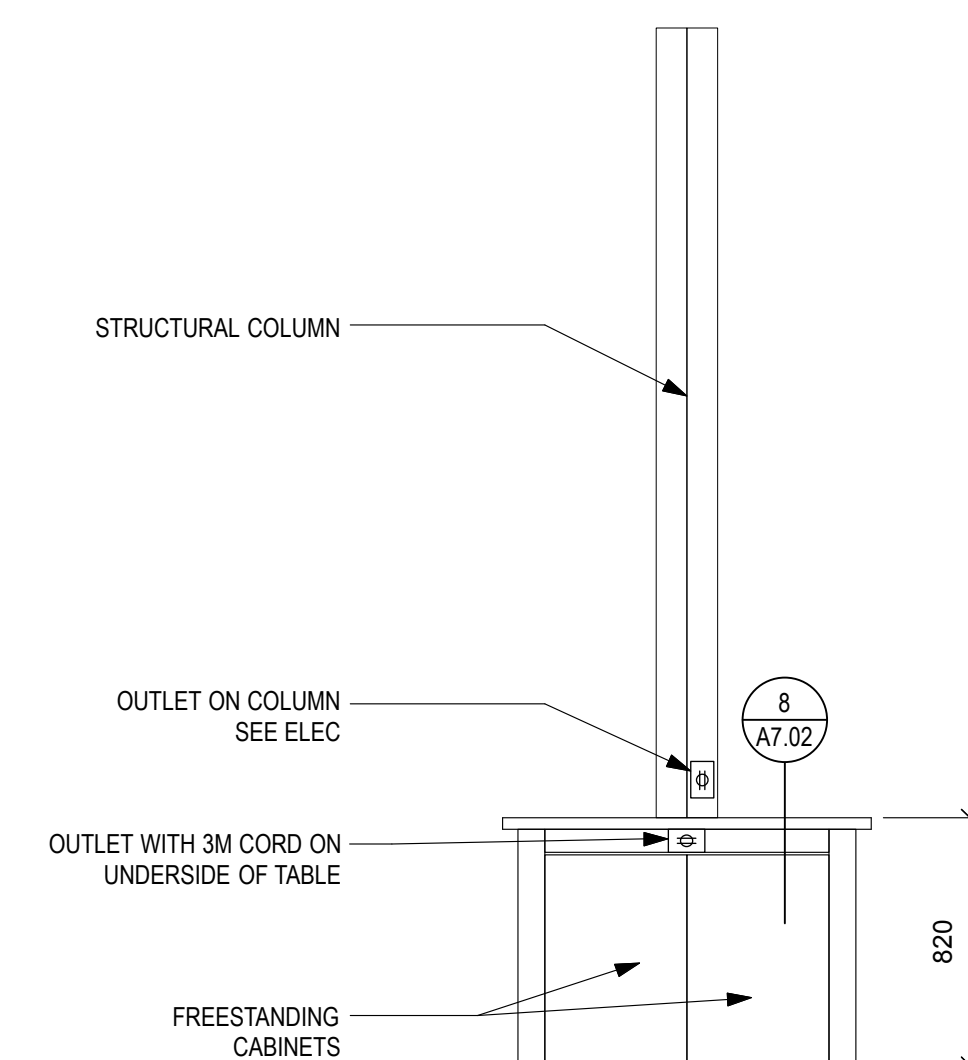
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4 ENTRY - ACOUSTICS LAB (103)
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5 WORKBENCH - ACOUSTICS LAB (103)
 A7.01 SCALE: 1:50



6 WORKBENCH - ACOUSTICS LAB (103)
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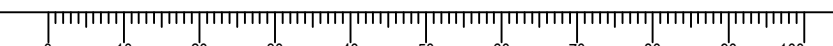
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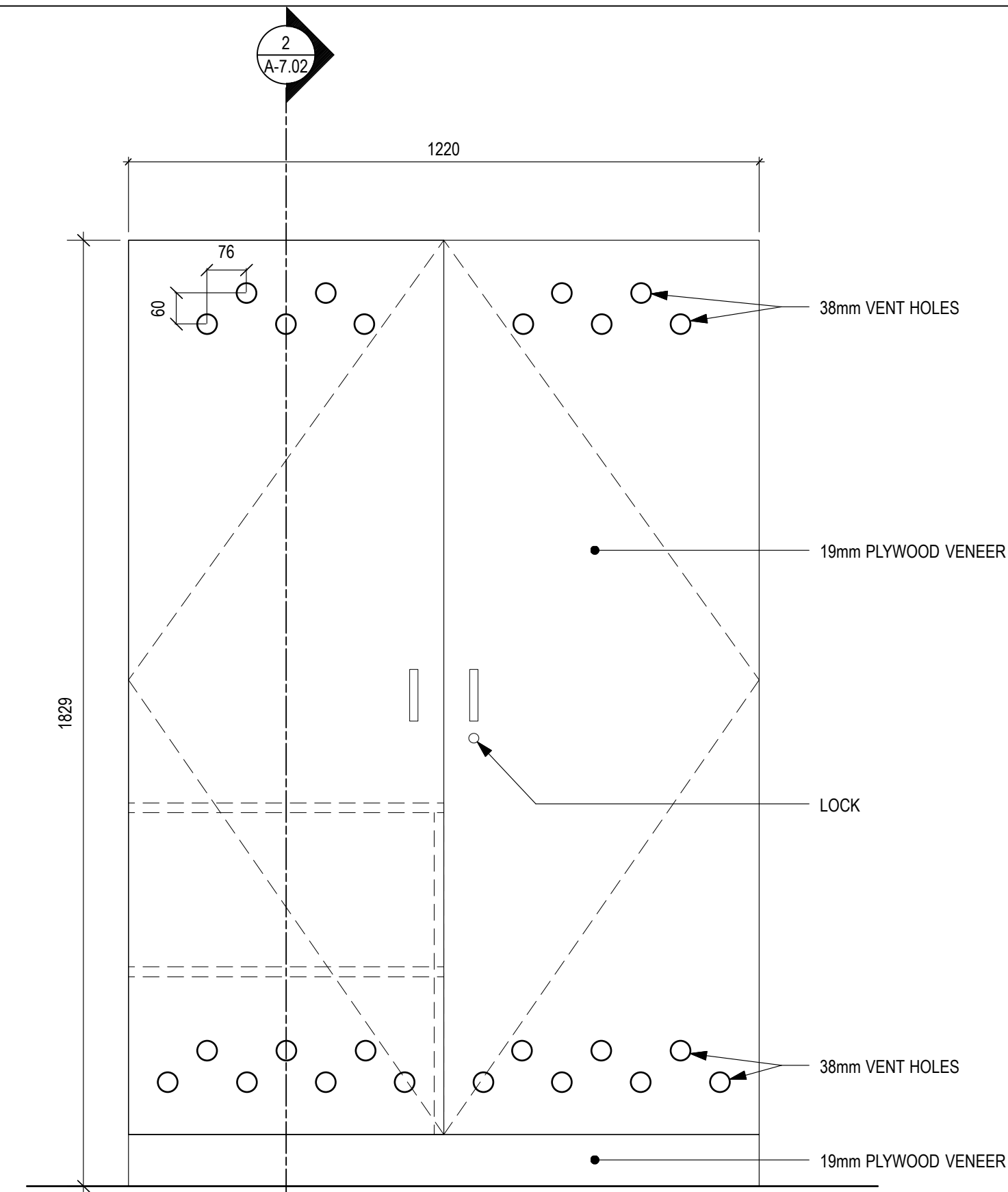
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INTERIOR ELEVATIONS

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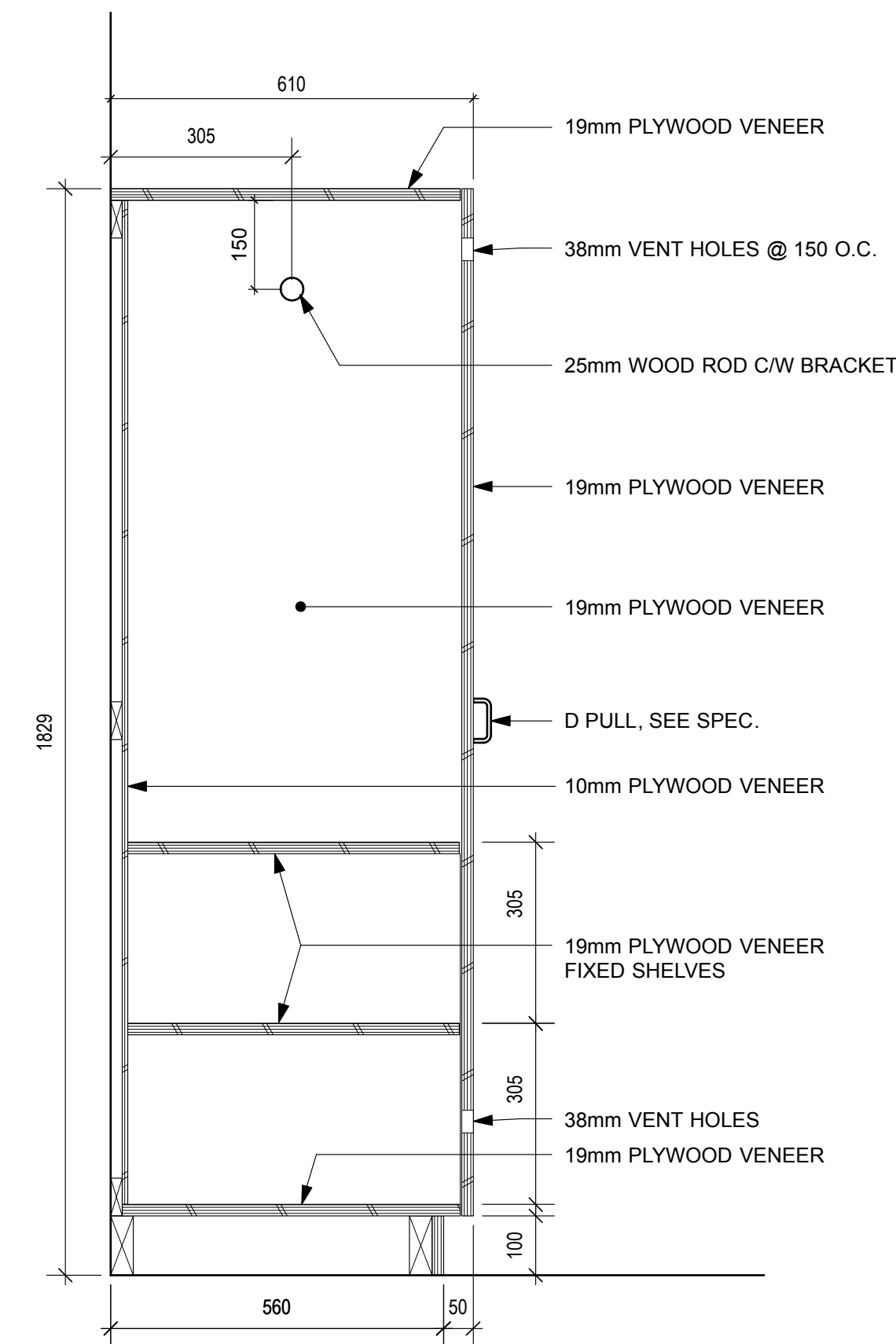
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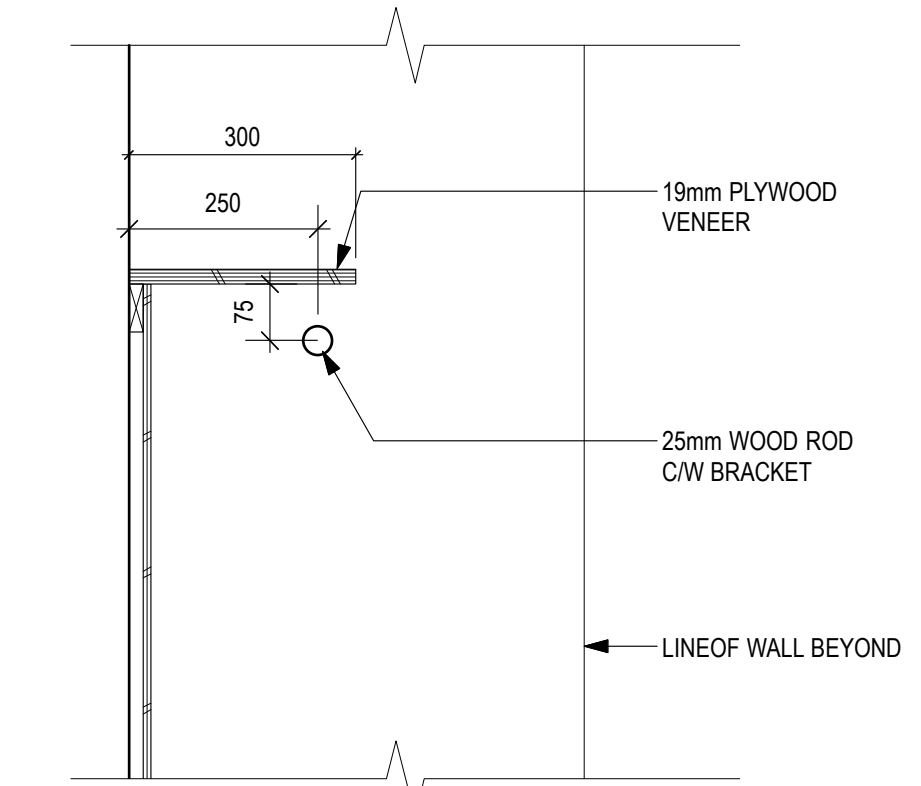




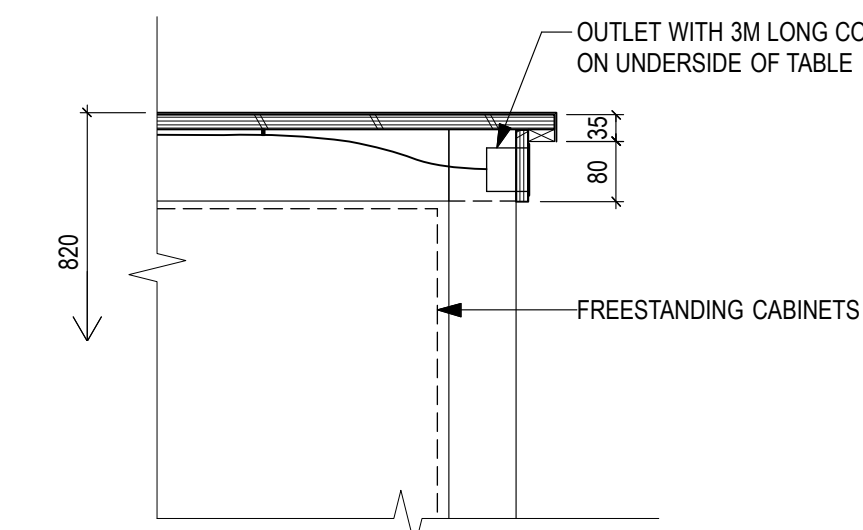
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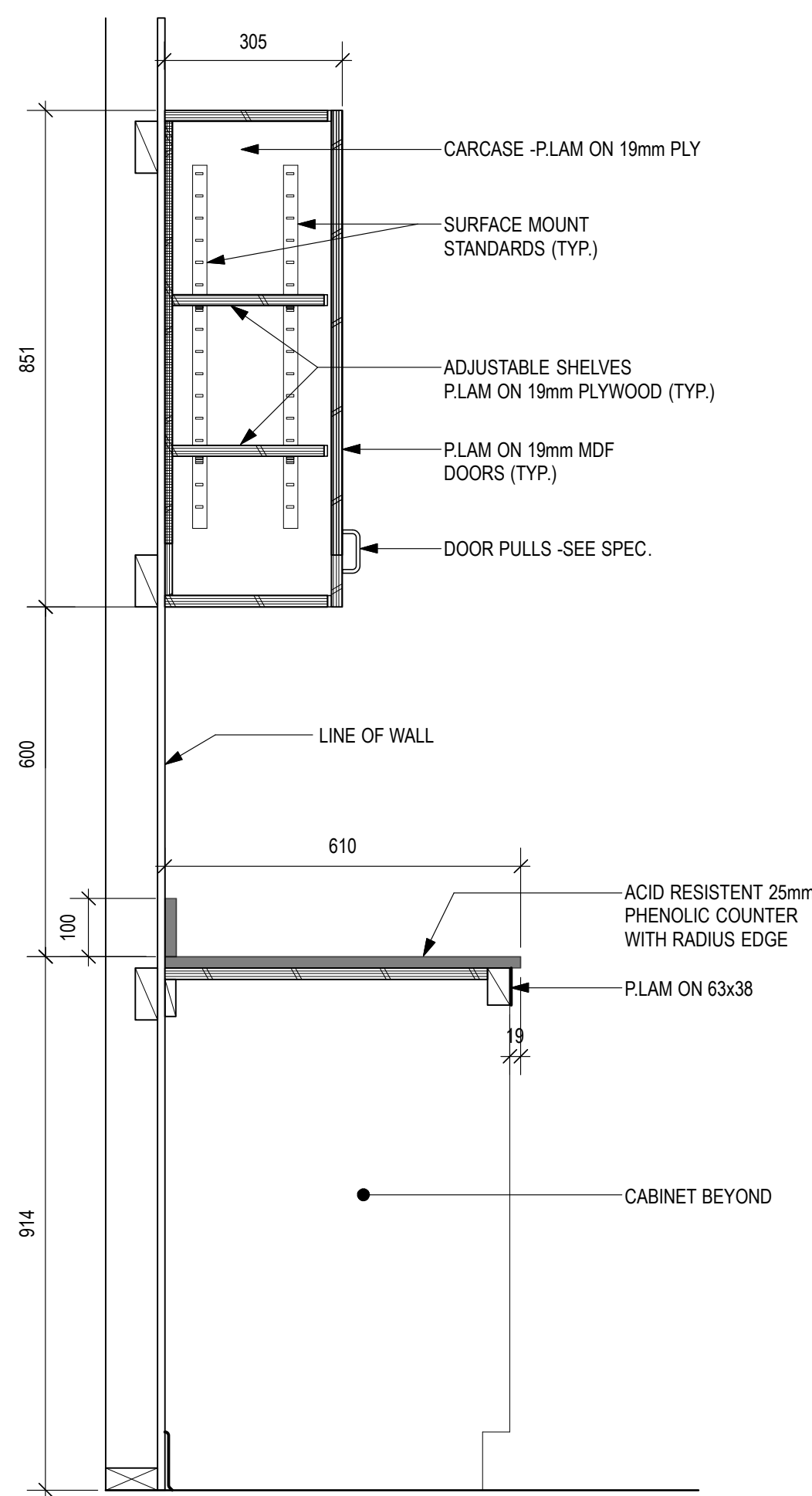
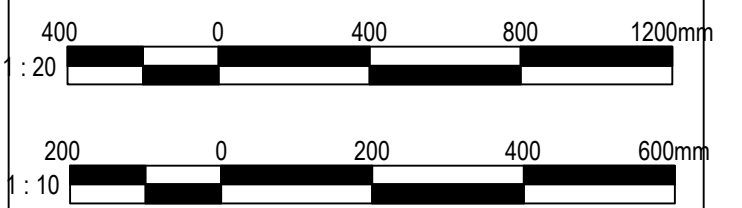
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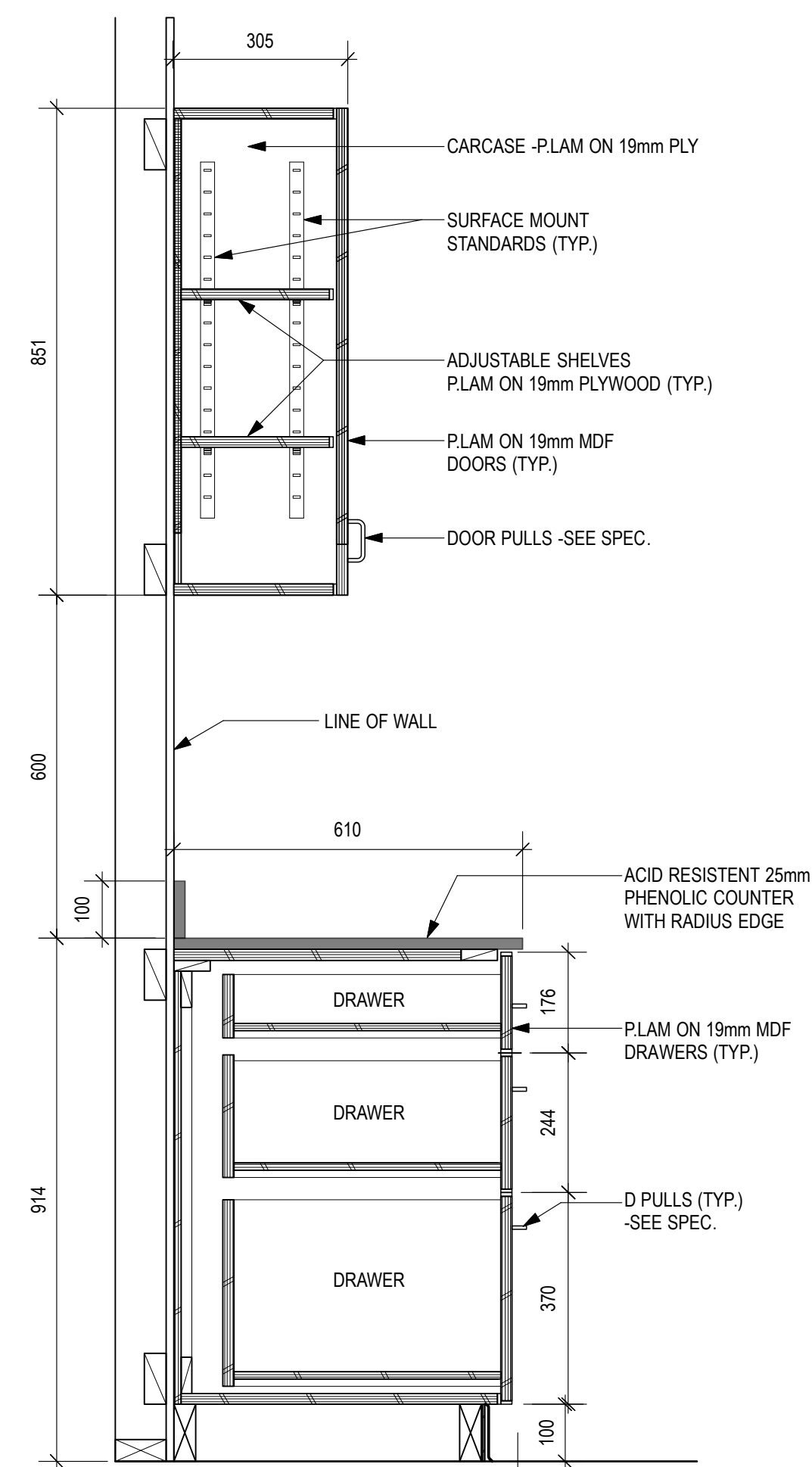
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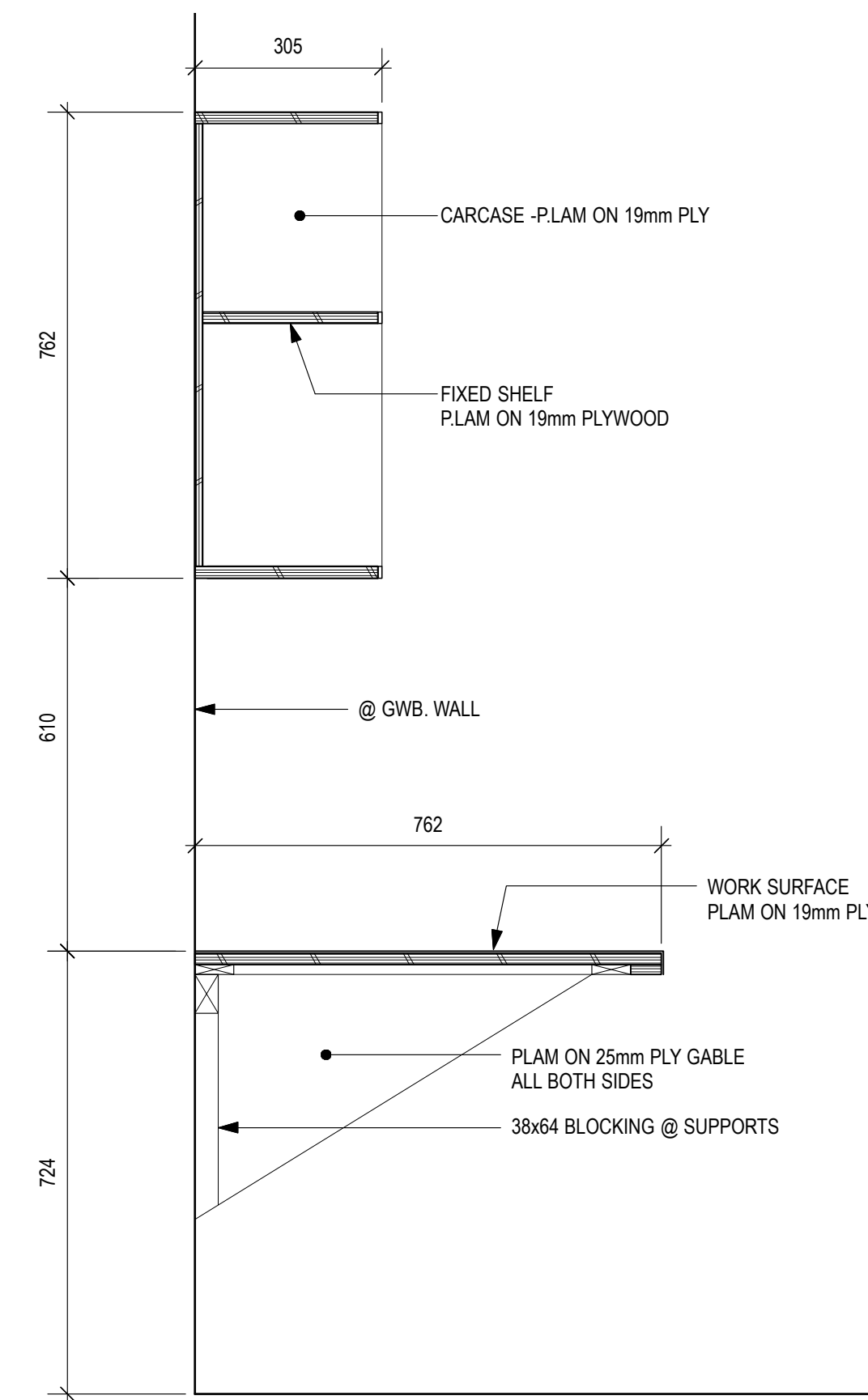
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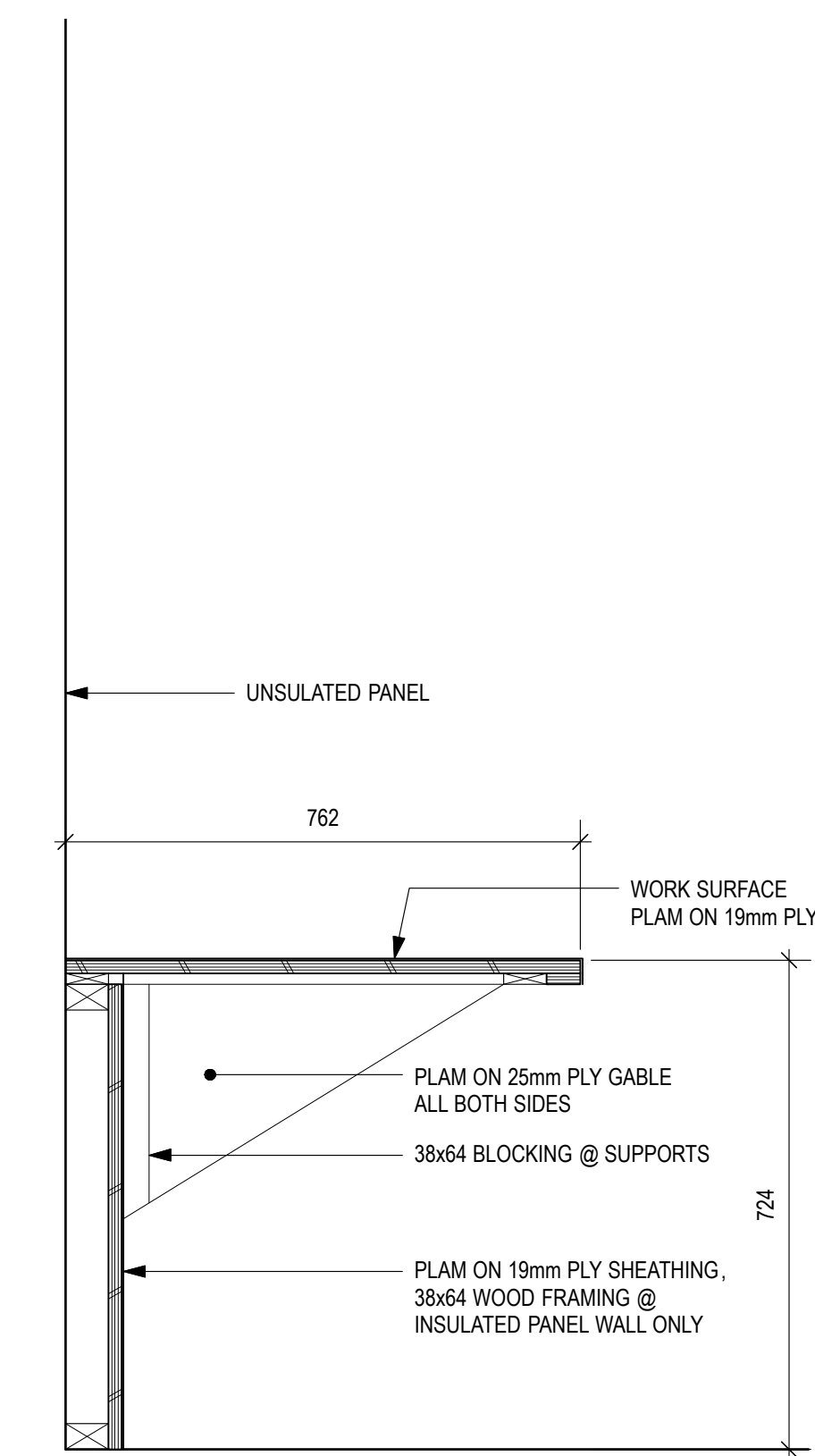
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4 FEED LAB (100) WORK BENCH
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5 ACOUSTICS LAB (103) WORK DESK
A7.02 SCALE: 1:10



6 ACOUSTICS LAB (103) WORK DESK
A7.02 SCALE: 1:10

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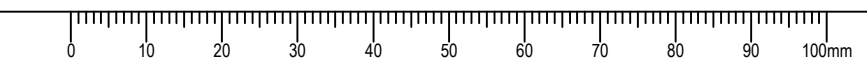
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	A7.02	2

DWG: 16-115 - 14319.PLM





DOOR SCHEDULE																
FEED LAB BUILDING																
OPENING		DOOR							FRAME							
NUM.	SIZE (W x H x THICK)	ROOM NAME	FRR	HDWR	TYPE	MATL	CORE	FINISH	COLOR	GLAZ.	MATL	TYPE	FINISH	COLOR	GLAZ.	REMARKS
1	1828 x 2032 x 45	FEED LAB	-	1	D	MTL	INSU.	PT		D.G. TEMP.	H.M.	B	PT			LOCK; CLOSER; KICK PLATE; THRESHOLD; WEATHER STRIPPING; SWEEP
2	914 x 2032 x 102	COOLER	-	2	C	MTL	INSU.	P.F.			H.M.	A	P.F.			GASKET; SELF RISING HINGES; SAFETY RELEASE FASTENER - COOLER TYPE DOOR

ACOUSTIC LAB BUILDING																
OPENING		DOOR							FRAME							
NUM.	SIZE (W x H x THICK)	FROM	FRR	HDWR	TYPE	MATL	CORE	FINISH	COLOR	GLAZ.	MATL	TYPE	FINISH	COLOR	GLAZ.	REMARKS
3	914 x 2032 x 45	OPEN OFFICE	-	3	B	MTL	INSU.	PT		D.G. TEMP.	H.M.	A	PT			LOCK; CLOSER; KICK PLATE; THRESHOLD; WEATHER STRIPPING; SWEEP
4	914 x 2032 x 45	SERVER ROOM	-	4	A	MTL	INSU.	PT			H.M.	A	PT			PASSAGE SET; KICK PLATE
5	914 x 2032 x 45	UTILITY ROOM	-	5	A	MTL	INSU.	PT			H.M.	A	PT			PASSAGE SET; KICK PLATE; WEATHER STRIPPING

SCHEDULE ABBREVIATIONS:

ALUM.	ALUMINUM	INSUL.	INSULATED	P.F.	PRE-FINISHED
ARG.	ARGON FILL	MATL.	MATERIAL	PT.	PAINT
D.G.	DOUBLE GLAZED	MIN.	MINUTES or MINIMUM	T.B.	THERMALLY BROKEN
FRR	FIRE RESISTANCE RATING	MTL.	METAL	T.G.	TRIPLE GLAZED
GLAZ.	GLAZING (OR GLAZED)	NAT.	NATURAL	TEMP.	TEMPERED
H.M.	HOLLOW METAL	OBS.	OBSCURED	WD.	WOOD
HDWR	HARDWARE				

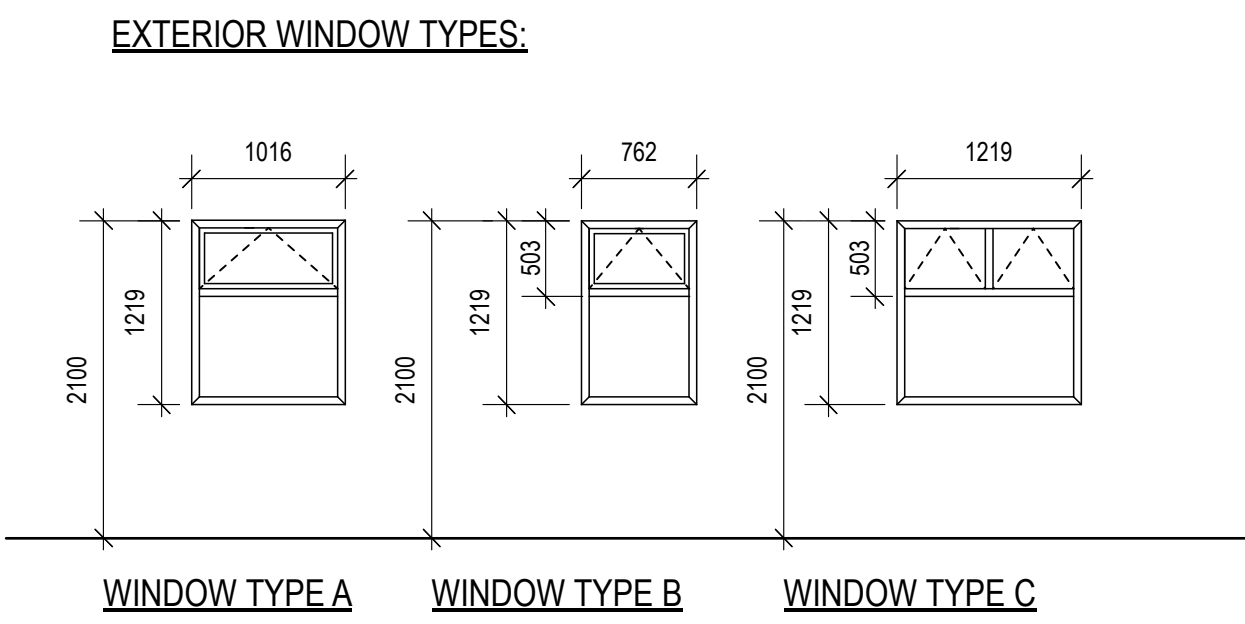
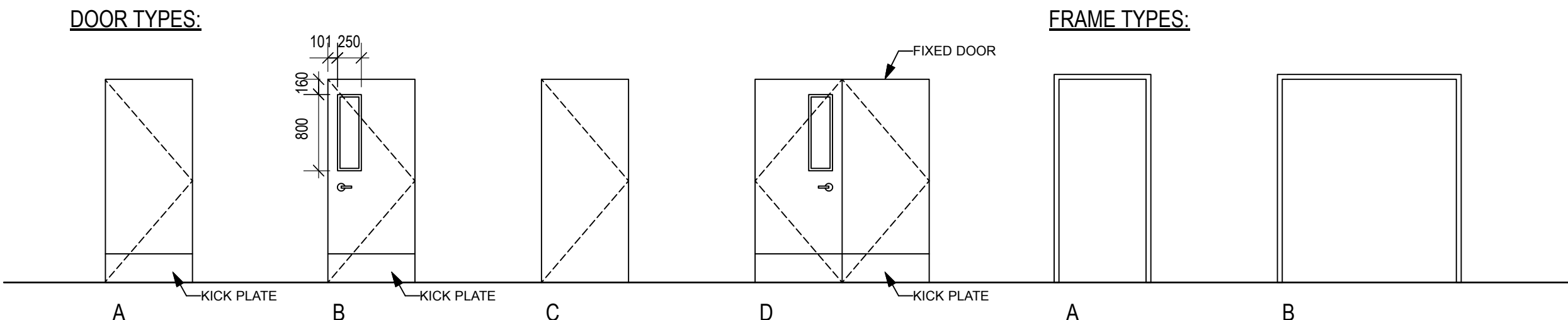
WINDOW SCHEDULE

FEED LAB BUILDING							
NUM.	R.O. SIZE (W x H)	TYPE	FRAME MATL	GLAZING	FINISH	COLOUR	REMARKS
1	1016x1219 mm	A	VINYL	D.G.		WHITE	
2	762x1219 mm	B	VINYL	D.G.		WHITE	

ACOUSTIC LAB BUILDING							
NUM.	R.O. SIZE (W x H)	TYPE	FRAME MATL	GLAZING	FINISH	COLOUR	REMARKS
3	1219x1219 mm	C	VINYL	T.G.		WHITE	
4	1219x1219 mm	C	VINYL	T.G.		WHITE	

FINISH SCHEDULE ABBREVIATIONS:

ACT	ACOUSTIC CEILING TILE	F.R.	NON-CONDUCTIVE, FIRE RETARDANT PAINT	SL.	SEALED TO BE DETERMINED
AS.	ANTI-STATIC	OP	OPERABLE	T.B.D.	TILE CERAMIC TILE
CARP.	CARPET TILE	S.R.	SHEET RUBBER	VCT	VINYL COMPOSITE TILE
CONC.	CONCRETE	PT.	PAINTED	W. COV.	WALL COVERING
GWB	GYPSTUM METAL BOARD	S.V.	SHEET VINYL	M.P.	POLISHED METAL PANEL - WHITE



FINISH SCHEDULE

FEED LAB BUILDING																						
NUM.	ROOM NAME	FLOOR		BASE		CEILING			NORTH WALL			EAST WALL			SOUTH WALL			WEST WALL			REMARKS	
		FINISH	COLOUR	MATERIAL	SIZE	COLOUR	MATERIAL	FINISH	COLOUR	MATERIAL	FINISH	COLOUR	MATERIAL	FINISH	COLOUR	MATERIAL	FINISH	COLOUR	MATERIAL	FINISH		COLOUR
100	LAB	S.R.		RUBBER	100mm		M.P.	PRE-FINISHED	WHITE	GWB.	PAINT		M.P.	PRE-FINISHED	WHITE	M.P.	PRE-FINISHED	WHITE	M.P.	PRE-FINISHED	WHITE	
101	COOLER	S.R.		RUBBER	100mm		M.P.	PRE-FINISHED	WHITE	M.P.	PRE-FINISHED	WHITE	M.P.	PRE-FINISHED	WHITE	M.P.	PRE-FINISHED	WHITE	M.P.	PRE-FINISHED	WHITE	

ACOUSTIC LAB BUILDING																						
NUM.	ROOM NAME	FLOOR		BASE		CEILING			NORTH WALL			EAST WALL			SOUTH WALL			WEST WALL			REMARKS	
		FINISH	COLOUR	MATERIAL	SIZE	COLOUR	MATERIAL	FINISH	COLOUR	MATERIAL	FINISH	COLOUR	MATERIAL	FINISH	COLOUR	MATERIAL	FINISH	COLOUR	MATERIAL	FINISH		COLOUR
103	LAB	S.R.		RUBBER	100mm		M.P.	PRE-FINISHED	WHITE	GWB.	PAINT		M.P.	PRE-FINISHED	WHITE	M.P.	PRE-FINISHED	WHITE	M.P.	PRE-FINISHED	WHITE	
104	SERVER ROOM	S.R.		RUBBER	100mm		M.P.	PRE-FINISHED	WHITE	GWB.	PAINT		M.P.	PRE-FINISHED	WHITE	M.P.	PRE-FINISHED	WHITE	M.P.	PRE-FINISHED	WHITE	
105	UTILITY ROOM	S.R.		RUBBER	100mm		M.P.	PRE-FINISHED	WHITE	GWB.	PAINT		M.P.	PRE-FINISHED	WHITE	M.P.	PRE-FINISHED	WHITE	M.P.	PRE-FINISHED	WHITE	

2	100% REVIEW	2017-11-30
Revision/Revision	Description/Description	Date/Date
Client/client		
FISHERIES AND OCEANS, REAL PROPERTY, SAFETY AND SECURITY		
VANCOUVER, BC 200-401 BURRARD ST.		
Project title/Titre du projet CENTER FOR AQUACULTURE & ENVIRONMENTAL RESEARCH		
MODULAR LABS 4160 Marine Dr. West Vancouver		
Consultant Signature Box Only		
Designed by/Concept par RH		
Drawn by/Dessiné par CM		
PWGSC Project Manager/Administrateur de Projets TPSGC ---		
PWGSC Regional Manager, Architectural and Engineering Services/ Gestionnaire régionale, Services d'architectural et de génie, TPSGC PREETIPAL PAUL		
Drawing title/Titre du dessin DOOR, WINDOW, & FINISH SCHEDULES, EQUIPMENT TO BE RELOCATED		
Project No./No. du projet -	Sheet/ Feuille A8.01	Revision no./ La Révision no. 2

GENERAL

- THIS IS A METRIC PROJECT. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN MILLIMETERS AND ALL FORCES ARE IN METRIC UNITS.
- "WSP-S" REFERS TO WSP CANADA STRUCTURAL CONSULTANT.
- PRIOR TO CONSTRUCTION, REVIEW STRUCTURAL DRAWINGS IN CONJUNCTION WITH DRAWINGS PROVIDED BY ALL OTHER CONSULTANTS.
- REPORT ANY DISCREPANCIES OR CONFLICTS BEFORE PROCEEDING WITH THE WORK.
- DO NOT CUT OR DRILL ANY OPENINGS IN STRUCTURAL MEMBERS WITHOUT WRITTEN PERMISSION FROM WSP-S.
- EXISTING STRUCTURAL INFORMATION IS BASED UPON SEALED PREFABRICATED BUILDING MODEL 24X72-S1 STRUCTURAL ALUMINUM FRAME DRAWINGS PREPARED ON MAY 11, 2015.
- VERIFY EXISTING DIMENSIONS AND CONDITIONS ON SITE PRIOR TO CONSTRUCTION.
- USE THESE DRAWINGS ONLY FOR THE PURPOSE IDENTIFIED IN THE REVISIONS COLUMN. DO NOT CONSTRUCT FROM THESE DRAWINGS UNLESS MARKED "ISSUED FOR CONSTRUCTION".
- DO NOT USE INFORMATION ON THESE DRAWINGS FOR ANY OTHER PROJECT OR WORKS.
- DO NOT SCALE THESE DRAWINGS.
- ALL SECTIONS, DETAILS AND STATEMENTS NOTED AS "TYPICAL" APPLY TO LIKE / SIMILAR CONDITIONS IN THE STRUCTURE.
- REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR WATERPROOFING, SEALERS, ETC.
- REFER TO GEOTECHNICAL LETTER AND ARCHITECTURAL / CIVIL DRAWINGS AND SPECIFICATIONS FOR ALL SOIL WORKS.
- DRAWINGS SHOW COMPLETED FOUNDATION STRUCTURE ONLY. THEY DO NOT SHOW TEMPORARY WORKS FOR WHICH THE CONTRACTOR IS RESPONSIBLE AND WHICH MAY BE REQUIRED FOR EXECUTION OF THE PROJECT, INCLUDING TEMPORARY SHORING, BRACING, GUYS AND TIE DOWNS. THE CONTRACTOR TO ESTABLISH CONSTRUCTION PROCEDURE AND SEQUENCE TO ENSURE SAFETY OF THE WHOLE STRUCTURE AND ALL ITS COMPONENTS DURING ERECTION.
- EXTENT OF ALL TEMPORARY SHORING FOR EXCAVATION WHICH MAY BE REQUIRED IS NOT NECESSARILY SHOWN ON STRUCTURAL DRAWINGS, CONTRACTOR TO DETERMINE.
- DESIGN AND CONSTRUCTION REVIEW OF ALL TEMPORARY WORKS TO BE CARRIED OUT BY A PROFESSIONAL ENGINEER RETAINED BY THE CONTRACTOR, LICENSED IN THE PLACE WHERE THE PROJECT IS LOCATED.
- ANCHOR BOLTS AND OTHER EMBEDDED ITEMS ARE DESIGNED FOR LOADS ACTING ON THE COMPLETED STRUCTURE ONLY AND ARE NOT TO BE USED OR RELIED UPON FOR TEMPORARY SUPPORT OR BRACING DURING ERECTION UNLESS REVIEWED AND APPROVED BY THE CONTRACTOR'S ENGINEER RESPONSIBLE FOR THE ERECTION PROCEDURES.
- CONSTRUCTION LOADS ON COMPLETED STRUCTURE NOT TO EXCEED DESIGN LOADS INDICATED ON DRAWINGS.
- UNLESS SHOWN ON STRUCTURAL DRAWINGS, DESIGN OF NON STRUCTURAL AND SECONDARY STRUCTURAL ELEMENTS AND THEIR CONNECTIONS TO THE PRIMARY BUILDING STRUCTURE ARE NOT WITHIN THE SCOPE OF SERVICES PROVIDED BY WSP-S. SUCH ELEMENTS INCLUDE (BUT ARE NOT LIMITED TO) THE FOLLOWING:
 - MISCELLANEOUS STEEL ELEMENTS: STAIRS, RAILINGS, GUARDRAILS.
 - PARTITIONS: MASONRY, GLASS, WOOD AND STEEL STUDS, PREFABRICATED PANELS
 - ARCHITECTURAL PRECAST, PRECAST STAIRS.
 - EXTERIOR CLADDING: PRECAST PANELS, METAL WALL SYSTEMS, CURTAIN WALLS AND WINDOWS.
 - ROOF ANCHORS.
 - SUPPORTS FOR MECHANICAL AND ELECTRICAL EQUIPMENT: HANGERS, BRACES, POSTS, RACKS, SLEEPERS, SEISMIC RESTRAINTS, SUPPORT PLATFORMS AND PADS, SERVICE PLATFORMS.
 - SUPPORTS AND SEISMIC RESTRAINTS FOR OTHER EQUIPMENT, SUCH AS MEDICAL AND SPORTS EQUIPMENT.
 - STORAGE RACKS.
 - LANDSCAPING ELEMENTS: WALLS, CURBS, BENCHES, PLANTERS, WATER FEATURES.
 - LIGHT POLES, FLAG POLES, SIGNS AND THEIR FOUNDATIONS.

WSP-S WILL NOT REVIEW DESIGN, DETAILING AND INSTALLATION OF THESE ELEMENTS, FOR WHICH SUPPLIERS AND / OR SPECIALTY PROFESSIONAL ENGINEERS ARE RESPONSIBLE. THE ONLY REVIEW PROVIDED (WHERE APPLICABLE) WILL BE FOR IMPACT ON THE BASE BUILDING STRUCTURE.
- MAINTAIN A QUALITY CONTROL PLAN FOR STRUCTURAL WORK, AND MAKE IT AVAILABLE TO THE CONSULTANT UPON REQUEST. AT A MINIMUM, THE PLAN TO INCLUDE:
 - NAMES OF PERSONNEL RESPONSIBLE FOR EXECUTION OF THE PLAN.
 - MEANS AND METHODS FOR CONFIRMING MATERIAL COMPLIANCE WITH SPECIFICATIONS AND ASSOCIATED DOCUMENTATION PROCEDURES.
 - PROGRAM FOR CONFIRMING AND DOCUMENTING COMPLIANCE WITH REQUIRED SUB-TRADE QUALIFICATIONS AND QUALIFICATIONS OF THEIR INDIVIDUAL EMPLOYEES AND SUB-CONTRACTORS.
 - PROCEDURES FOR REVIEWING FIELD COMPLIANCE WITH CONSTRUCTION DOCUMENTS, INCLUDING DOCUMENTATION OF LOCATIONS REVIEWED, PHOTOGRAPHS TAKEN AND TIMING OF REVIEW. THE CONTRACTOR'S REVIEW TO BE COMPLETED PRIOR TO REVIEW BY THE CONSULTANT.
 - PROCEDURES FOR RECTIFYING DEFICIENCIES NOTED BY THE CONTRACTOR, SUB-CONTRACTORS, CONSULTANTS AND INDEPENDENT INSPECTION AGENCIES.
- FOR INSPECTION AND TESTING REQUIREMENTS, REFER TO SPECIFICATIONS.
- IN CASE OF DISCREPANCY BETWEEN GENERAL NOTES, DRAWINGS AND SPECIFICATIONS, COMPLY WITH THE MOST STRINGENT REQUIREMENTS.

DESIGN DATA

- STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE 2015 NATIONAL BUILDING CODE (NBC), SUPPLEMENTED BY THE USER'S GUIDE - NBC 2015 STRUCTURAL COMMENTARIES.
- STEEL ELEMENTS ARE DESIGNED PER CSA S16-09 - LIMIT STATE DESIGN OF STEEL STRUCTURES.
- THE VALUES FOR CLIMATIC DATA USED IN THE DETERMINATION OF DESIGN LOADS HAVE BEEN OBTAINED FROM THE 2015 NBC FOR THE SPECIFIC LOCATION OF WEST VANCOUVER.
- BASED ON THE USE AND OCCUPANCY, THE BUILDING IS DESIGNED TO THE REQUIREMENTS OF A NORMAL IMPORTANCE CATEGORY.
- SELF WEIGHT (SWT) IS DUE TO THE WEIGHT OF THE STRUCTURE ITSELF. IT VARIES WITH THE STRUCTURAL SYSTEM.
- SUPERIMPOSED DEAD LOADS (SDL) ARE NON-STRUCTURAL DEAD LOADS DUE TO NON-STRUCTURAL TOPPING, FINISHES, PARTITIONS, ROOFING MATERIALS, SUSPENDED EQUIPMENT, PAVERS, SOIL, ETC.
- DEAD LOAD (DL) IS THE SELF WEIGHT OF THE STRUCTURE PLUS THE SUPERIMPOSED DEAD LOAD.
- LIVE LOAD (LL) REDUCTION HAS NOT BEEN USED.
- UNLESS OTHERWISE NOTED, DESIGN LOADS SHOWN ON DRAWINGS ARE SPECIFIED (UNFACTORED) LOADS, TO BE USED FOR ULS DESIGN. FOR SLS DESIGN, THESE LOADS CAN BE REDUCED BY MULTIPLYING WITH THE RATIO OF APPROPRIATE IMPORTANCE FACTORS $k_f(SLS) / k_f(ULS)$ GIVEN BELOW.

- IF ONLY ONE VALUE IS GIVEN FOR A LOAD, CONSIDER IT LIVE LOAD.
- SNOW:
 $S_s = 2.4 \text{ kPa}$ $S_r = 0.2 \text{ kPa}$ $I_s (ULS) = 1.0$ $I_s (SLS) = 0.9$
 MINIMUM UNFACTORED SNOW LOAD = $2.1 \text{ kPa} \times I_s$
- LATERAL LOADS ON THE FOUNDATION ARE DETERMINED BASED ON THE WIND AND SEISMIC DATA BELOW.
 WIND:
 $q_{50} = 0.48 \text{ kPa}$ $I_w (ULS) = 1.0$ $I_w (SLS) = 0.75$
 BUILDING IS: LOW RISE
 TERRAIN TYPE: OPEN
 $C_e = 0.9$
 INTERNAL PRESSURE CATEGORY: 2
 WIND LOAD AT GRADE LEVEL FOR DESIGN OF OVERALL BUILDING LATERAL LOAD RESISTING SYSTEM:
 1.2 kPa
 FACTORED BASE SHEARS & OVERTURNING MOMENTS:
 $V(NS) = 45 \text{ kN}$
 $M(NS) = 239 \text{ kNm}$
 $V(EW) = 45 \text{ kN}$
 $M(EW) = 239 \text{ kNm}$
- $S_a(0.2) = 0.818$ $PGA = 0.356$ $I_e F_a S_a(0.2) = 0.79$
 $S_a(0.5) = 0.721$ $R_d = 1.0$
 $S_a(1.0) = 0.41$ $R_o = 1.0$ SITE CLASSIFICATION = D
 $S_a(2.0) = 0.25$ $I_e = 1.0$
 SEISMIC FORCE RESISTING SYSTEM (SFRS): ALUMINUM MOMENT FRAMES (ASSUMED)
 FACTORED BASE SHEARS & OVERTURNING MOMENTS:
 $V(NS) = 133 \text{ kN}$
 $M(NS) = 615 \text{ kNm}$
 $V(EW) = 133 \text{ kN}$
 $M(EW) = 615 \text{ kNm}$

SHOP DRAWINGS

- REFER TO SPECIFICATIONS FOR SHOP DRAWINGS WHICH NEED TO BE SUBMITTED FOR REVIEW.
- REVIEW OF SHOP DRAWINGS BY WSP-S IS ON A SAMPLING BASIS. FOR GENERAL CONFORMITY WITH STRUCTURAL CONTRACT DOCUMENTS, IT IS NOT A DETAILED CHECK AND MUST NOT BE CONSTRUED AS RELIEVING THE CONTRACTOR OF HIS RESPONSIBILITY TO MAKE THE WORK ACCURATE AND IN CONFORMITY WITH ALL THE CONTRACT DOCUMENTS. TO REVIEW SHOP DRAWINGS AND TO COORDINATE WORK OF INTERFACING TRADES AND MANUFACTURE OF INTERFACING PRODUCTS.
- REVIEW OF SHOP DRAWINGS DOES NOT IMPLY ANY CHANGE IN ANY OTHER CONSULTANTS' OR PROFESSIONALS' RESPONSIBILITIES RELATED TO DESIGN OF SPECIFIC ITEMS AS OUTLINED BY THE SPECIFICATIONS.
- ALLOW A MINIMUM OF 10 WORKING DAYS FOR REVIEW OF EACH SUBMISSION OF SHOP DRAWINGS IN WSP-S OFFICE. ALLOW MORE TIME WHEN LARGE QUANTITIES OF SHOP DRAWINGS ARE SUBMITTED. SUBMIT IN GENERAL CONFORMITY WITH THE SEQUENCE OF CONSTRUCTION INTENDED.
- AFTER REVIEW, THE DRAWINGS WILL BE STAMPED AND RETURNED. DO NOT COMMENCE FABRICATION UNTIL RETURNED SHOP DRAWINGS HAVE BEEN EXAMINED.
- SHOP DRAWINGS MARKED "REVIEWED" CAN BE USED FOR FABRICATION. DO NOT MAKE ANY CHANGES OR ADDITIONS TO THESE DRAWINGS WITHOUT NOTIFYING THE CONSULTANT.
- SHOP DRAWINGS MARKED "REVIEWED AS NOTED" CAN BE USED FOR FABRICATION AFTER THE REVISIONS NOTED ARE IMPLEMENTED. DO NOT MAKE ANY FURTHER CHANGES OR ADDITIONS TO THESE DRAWINGS WITHOUT NOTIFYING THE CONSULTANT.
- SHOP DRAWINGS MARKED "REVISE AND RESUBMIT" REQUIRE SUBSTANTIAL REVISIONS AND MUST BE RESUBMITTED FOR ADDITIONAL REVIEW PRIOR TO FABRICATION. ALL CHANGES AND ADDITIONS TO THE PREVIOUS SUBMISSION TO BE CLEARLY IDENTIFIED ON THE RESUBMITTED DRAWINGS.
- SHOP DRAWINGS MARKED "REVIEWED FOR IMPACT ON BASE STRUCTURE ONLY" SHOW WORKS WHICH ARE NOT WITHIN THE SCOPE OF STRUCTURAL CONSULTING SERVICES BUT AFFECT BEHAVIOUR OF THE BASE STRUCTURE. WSP-S WILL NOT REVIEW DESIGN OF THESE WORKS AND ASSUMES THAT THE INDICATED WEIGHTS AND ALL OTHER LOADS IMPOSED ON THE BASE STRUCTURE ARE CORRECTLY IDENTIFIED BY THE DESIGNER / SUPPLIER OF THESE ELEMENTS.
- DRAWINGS MARKED "NOT REVIEWED" SHOW WORKS WHICH ARE NOT WITHIN THE SCOPE OF STRUCTURAL CONSULTING SERVICES AND DO NOT IMPACT THE BASE BUILDING STRUCTURE.
- EXCEPT FOR EXCAVATION SHORING (WHICH WILL BE REVIEWED FOR IMPACT ON THE BASE STRUCTURE ONLY), WSP-S WILL NOT REVIEW DESIGN AND IMPLEMENTATION OF ANY TEMPORARY WORKS, NOR ASSESS IMPACT OF THESE WORKS ON THE BASE STRUCTURE. THE CONTRACTOR AND / OR THE PROFESSIONAL ENGINEER ENGAGED BY THE CONTRACTOR MUST ENSURE THAT THE BASE STRUCTURE IS NOT ADVERSELY AFFECTED BY THE TEMPORARY WORKS AND CONSTRUCTION PROCESS AND THAT TEMPORARY LOADS DO NOT EXCEED THE DESIGN LOADS INDICATED ON STRUCTURAL DRAWINGS.
- DO NOT USE SHOP DRAWINGS AS A MEANS TO PROPOSE SUBSTITUTIONS OR ALTERNATIVES TO THE MATERIALS, PRODUCTS OR DETAILS INDICATED IN CONTRACT DOCUMENTS. SUCH SHOP DRAWINGS WILL BE MARKED "REVISE AND RESUBMIT".
- PROVIDE FINAL RECORD DRAWINGS AFTER ALL CORRECTIONS ARE MADE.

FIELD REVIEW

- WSP-S WILL PROVIDE PERIODIC FIELD REVIEW OF A REPRESENTATIVE SAMPLE OF THE STRUCTURAL WORKS DETAILED ON THESE DRAWINGS FOR GENERAL CONFORMANCE WITH CONTRACT DOCUMENTS. THESE REVIEWS DO NOT REPLACE THE CONTRACTOR'S RESPONSIBILITY TO IMPLEMENT AND MAINTAIN A QUALITY CONTROL PROGRAM, AND DO NOT MAKE WSP-S A GUARANTOR OF THE CONTRACTOR'S WORK.
- CONSTRUCTION REVIEW REPORTS WILL OUTLINE ANY DEFICIENCIES FOUND.
- ASSIST WSP-S DURING FIELD REVIEW, AND PROVIDE SAFE ACCESS TO WORK AREAS AS REQUIRED.
- CHECK THE WORK PRIOR TO FIELD REVIEW TO CONFIRM IT IS COMPLETED AND IN ACCORDANCE WITH CONTRACT DOCUMENTS.
- BRING TO THE ATTENTION OF WSP-S ANY DEFICIENCIES FOUND IN THE WORK TOGETHER WITH A PROPOSAL FOR REMEDY. WSP-S WILL DECIDE WHAT CORRECTIVE ACTION MAY BE TAKEN AND ISSUE THE NECESSARY INSTRUCTIONS.
- PROVIDE REASONABLE NOTICE (NOT LESS THAN 24 HOURS) TO ALLOW FOR THE FIELD REVIEW OF THE FOLLOWING:
 - STRUCTURAL STEEL BEFORE COVERING UP OR PLACING ALUMINUM BUILDING
- SCHEDULE REVIEW WORK TO OCCUR DURING NORMAL BUSINESS HOURS.
- ORGANIZE FOR FIELD REVIEW OF ALL PROPRIETARY PRODUCTS AND OTHER STRUCTURAL WORKS DESIGNED BY SPECIALTY ENGINEERS. THE REVIEW TO BE BY THE ENGINEERS RESPONSIBLE FOR THE DESIGN OR BY OTHER ENGINEERS DESIGNATED BY THE ENGINEERS RESPONSIBLE FOR THE DESIGN AND LICENSED IN THE PLACE WHERE THE PROJECT IS LOCATED. SUBMIT CONSTRUCTION REVIEW REPORTS FOR CONSULTANT'S RECORD.

FOUNDATIONS

- STRUCTURAL DESIGN IS BASED ON THE GEOTECHNICAL LETTER PREPARED BY: THURBER ENGINEERING LTD. DATED: DECEMBER 11, 2017.
- REFER TO THE GEOTECHNICAL LETTER FOR DETAILED INFORMATION ON GEOTECHNICAL CONDITIONS, FOUNDATION RECOMMENDATIONS, AND FOR ALL EARTH-WORK INCLUDING SUBGRADE PREPARATION.
- ASSUMED FOOTING BEARING RESISTANCE:
 70 kPa AT ULS (ULTIMATE LIMIT STATES DESIGN)
 50 kPa AT SLS (SERVICEABILITY LIMIT STATES DESIGN)
- CONSTRUCT ALL FOOTINGS ON STRATA CAPABLE TO PROVIDE THE BEARING RESISTANCE NOTED, BUT NOT ABOVE THE ELEVATIONS INDICATED ON DRAWINGS.
- STRUCTURAL DRAWINGS SHOW FOOTINGS AT ELEVATIONS WHERE THE REQUIRED BEARING RESISTANCE IS ANTICIPATED. GEOTECHNICAL CONSULTANT TO REVIEW AND APPROVE IN WRITING ALL BEARING SURFACES PRIOR TO CONSTRUCTING FOOTINGS.
- IF THE ASSUMED BEARING RESISTANCE IS NOT OBTAINED AT THE UNDERSIDE OF FOOTING ELEVATION INDICATED ON DRAWINGS, EXTEND EXCAVATION UNTIL COMPETENT SOIL IS REACHED, AND PROVIDE LEAN CONCRETE FILL TO UNDERSIDE OF FOOTING.
- PROVIDE MIN. 50 (2") DEEP MUD SLAB AS REQUIRED TO PROTECT BOTTOM OF EXCAVATION, AND IN ALL CASES WHERE RECOMMENDED IN GEOTECHNICAL REPORT OR SHOWN ON DRAWINGS.
- UNLESS OTHERWISE NOTED, THE LONGER DIMENSION OF BLOCK FOOTINGS TO BE PARALLEL TO THE LONGER COLUMN DIMENSION.
- UNLESS OTHERWISE NOTED, CENTRE FOOTINGS UNDER CENTROID OF COLUMNS.
- LOCATE ALL EXISTING UNDERGROUND SERVICES PRIOR TO EXCAVATION.
- KEEP EXCAVATION (IF REQUIRED) DRAINED AND FREE OF WATER AT ALL TIMES.
- PROTECT FOOTINGS AND ADJACENT SOIL AGAINST FREEZING AND FROST ACTION AT ALL TIMES DURING CONSTRUCTION.

CAST-IN-PLACE CONCRETE

- CONCRETE IS SPECIFIED PER ALTERNATIVE 1 - PERFORMANCE SPECIFICATION, AS OUTLINED IN CSA A23.1. THE CONTRACTOR AND THE CONCRETE SUPPLIER TO MEET ALL CERTIFICATION, DOCUMENTATION, AND QUALITY CONTROL REQUIREMENTS.
- CONTRACTOR AND CONCRETE SUPPLIER TO ENSURE THAT PLASTIC AND HARDENED MIX PROPERTIES MEET SITE REQUIREMENTS FOR PLACING, FINISHING AND THE SPECIFIED PERFORMANCE REQUIREMENTS.
- CEMENT TO BE PORTLAND CEMENT TYPE GU UNLESS NOTED OTHERWISE OR REQUIRED BY EXPOSURE CLASS.
- CONCRETE TO BE NORMAL DENSITY (MIN. 2300 kg/m^3) UNLESS NOTED OTHERWISE.
- NOMINAL MAXIMUM SIZE OF COARSE AGGREGATE TO BE 20 (3/4") UNLESS NOTED OTHERWISE.
- UNLESS NOTED OTHERWISE, CONCRETE TO BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

ELEMENT	COMPRESSIVE STRENGTH (MPa) AT 28 DAYS (SEE NOTE #3 BELOW)	EXPOSURE CLASS	SPECIAL REQUIREMENTS & REMARKS
LOCK BLOCK FOOTINGS	20 MPa	F-2	DESIGNED AND SUPPLIED BY OTHERS
LEAN CONCRETE, MUDSLABS	10	N	
UNSHRINKABLE FILL	0.4 MAX.		
- REFER TO CSA A23.1 FOR THE MAXIMUM WATER/CEMENT RATIO, MINIMUM COMPRESSIVE STRENGTH, AIR CONTENT, CURING REQUIREMENTS, CHLORIDE ION PENETRABILITY AND ALTERNATE CEMENT TYPES TO MEET THE REQUIREMENTS FOR THE NOTED EXPOSURE CLASS.
- WHERE REQUIRED BY SPECIFICATIONS, PROVIDE MINIMUM AMOUNT OF SUPPLEMENTAL CEMENTING MATERIALS SPECIFIED FOR THE OVERALL PROJECT.
- DO NOT ADD WATER TO CONCRETE ON SITE.
- CONVEY CONCRETE FROM TRUCK TO FINAL LOCATION BY METHODS WHICH WILL PREVENT SEPARATION OR LOSS OF MATERIAL. MAXIMUM FREE FALL NOT TO EXCEED 1.5m (5'-0"). CONSOLIDATE CONCRETE USING MECHANICAL VIBRATORS.
- PLACE CONCRETE AS CLOSE AS POSSIBLE TO FINAL LOCATION TO AVOID SEGREGATION. VIBRATE ALL CONCRETE.
- PROTECT CONCRETE FROM FREEZING. DO NOT PLACE CONCRETE AGAINST FROZEN GROUND. USE COLD WEATHER CONCRETING METHODS IN ACCORDANCE WITH CSA-A23.1.
- PROTECT CONCRETE FROM EXCESSIVE HEAT AND DRYING. USE HOT WEATHER CONCRETING METHODS IN ACCORDANCE WITH CSA-A23.1.

POST-INSTALLED ANCHORS AND DOWELS

- ANCHORAGE TO CONCRETE TO BE AS NOTED ON DRAWINGS.
- ANCHORS LOCATED OUTSIDE THE BUILDING ENVELOPE'S VAPOUR BARRIER TO BE STAINLESS STEEL.
- CONCRETE TO BE MINIMUM 28 DAYS OLD AT THE TIME OF ANCHOR INSTALLATION.
- USE DRILLING AND INSTALLATION TOOLS AND PROCEDURES PER MANUFACTURER'S RECOMMENDATIONS. DO NOT CORE DRILL UNLESS SPECIFICALLY NOTED ON DRAWINGS. HOLE DIAMETERS NOT TO EXCEED THOSE REQUIRED BY MANUFACTURER.
- WHERE CORE DRILLING IS SPECIFIED, CLEAN AND ROUGHEN HOLES PER MANUFACTURER'S RECOMMENDATION.
- ARRANGE FOR THE ANCHOR MANUFACTURER TO CONDUCT ON SITE TRAINING FOR INSTALLATION OF ALL THE PRODUCTS SPECIFIED, AND FOR ALL CONDITIONS ENCOUNTERED.
- ARRANGE FOR A MANUFACTURER'S TECHNICAL REPRESENTATIVE TO BE PRESENT DURING INSTALLATION OF FIRST FEW ANCHORS. SUBMIT SITE REPORTS INDICATING ANCHOR TYPES AND SIZES INSTALLED, LOCATIONS AND INSTALLERS' NAMES.
- ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ADJACENT ANCHORS AND THEIR PROXIMITY TO CONCRETE EDGES; THEREFORE, ALL ANCHORS MUST BE INSTALLED WITH CLEARANCES AND EDGE DISTANCES INDICATED ON DRAWINGS
- WHEN OBSTRUCTIONS PREVENT DRILLING HOLES IN SPECIFIED LOCATIONS TO THE REQUIRED DEPTH, RELOCATE AT NO EXTRA COST TO THE CONTRACT. OBTAIN WSP-S APPROVAL OF NEW LOCATIONS BEFORE DRILLING; MODIFICATIONS TO CONNECTED MEMBERS AND ADDITIONAL ANCHORS / DOWELS MAY BE REQUIRED. FILL ABANDONED HOLES WHICH ARE CLOSER THAN 3 TIMES THE HOLE DIAMETER FROM THE RELOCATED ANCHORS WITH HILTI HY-200 ADHESIVE. DO NOT TIGHTEN ANCHORS UNTIL THE ADHESIVE HAS FULLY CURED.
- DO NOT BEND POST INSTALLED DOWELS AND RODS AFTER INSTALLATION.
- DO NOT WELD TO PLATES FASTENED WITH ADHESIVE ANCHORS AFTER THE ADHESIVE IS PLACED.

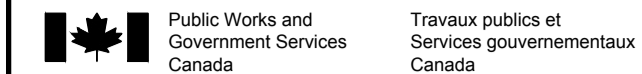
STRUCTURAL STEEL

- CONFORM TO CSA S16.
- MATERIALS: TO CSA G40.21 UNLESS OTHERWISE NOTED, WITH THE FOLLOWING GRADES:

- CHANNELS: 350W
- PLATES, BARS: 300W
- ANCHOR RODS: STAINLESS STEEL TO ASTM F993 GROUP 1 MIN 206 MPA YIELD STRENGTH
- SHIM PLATES: STAINLESS STEEL
- DETAILS ON STRUCTURAL DRAWINGS SHOW DESIGN INTENT. REFER TO SPECIFICATIONS FOR DETAILING, FABRICATION, AND ERECTION REQUIREMENTS.
 - DO NOT CUT HOLES OR OTHERWISE MODIFY STRUCTURAL MEMBERS ON SITE.
 - IF STRUCTURAL STEEL IS IN DIRECT CONTACT WITH GROUND, PROTECT WITH EPOXY PAINT.
 - PROVIDE ALL ERECTION BRACING REQUIRED TO KEEP THE STRUCTURE STABLE AND IN ALIGNMENT DURING CONSTRUCTION.
 - DO NOT APPLY LATERAL LOADS TO MEMBERS UNLESS APPROVED BY THE CONSULTANT.

ABBREVIATIONS

AB	-	ANCHOR BOLT
ALT	-	ALTERNATE
APPROX	-	APPROXIMATELY
ARCH	-	ARCHITECT
BOT	-	BOTTOM
BP	-	BASE PL
BS	-	BOTH SIDES
CP	-	COMPLETE PENETRATION WELD
CW	-	COMPLETE WITH
DWG	-	DRAWING
(E)	-	EXISTING
EF	-	EACH FACE
EL	-	ELEVATION
EW	-	EACH WAY
FS	-	FAR SIDE
GALV	-	GALVANIZED
HORIZ	-	HORIZONTAL
LG	-	LONG
MAX	-	MAXIMUM
MIN	-	MINIMUM
NS	-	NEAR SIDE
NTS	-	NOT TO SCALE
OC	-	ON CENTER
SS	-	STAINLESS STEEL
STD	-	STANDARD
TYP	-	TYPICAL
UN	-	UNLESS NOTED
US	-	UNDERSIDE
VERT	-	VERTICAL



REAL PROPERTY SERVICES
Pacific Region
SERVICES IMMOBILIERS
Région de Pacifique



JOB No. 171-1710-00

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0	TENDER	2017.12.18
Revision / Révision	Description / Description	Date / Date

Client / client

**FISHERIES AND OCEANS,
REAL PROPERTY,
SAFETY AND SECURITY**

VANCOUVER, BC
200-401 BURRARD ST.

Project title / Titre du projet

4160 Marine Dr., West Vancouver

MODULAR LABS

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Designed by / Concept par

CP

Drawn by / Dessiné par

RCM/2017.12.08

PWGSC Project Manager / Administrateur de Projets TPSGC

--

Regional Manager, Architectural and Engineering Services
Gestionnaire régionale, Services d'architectural et de génie, TPSGC
PREETIPAL PAUL

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STRUCTURAL NOTES

Project No. / No. du projet

PROJECT_NO

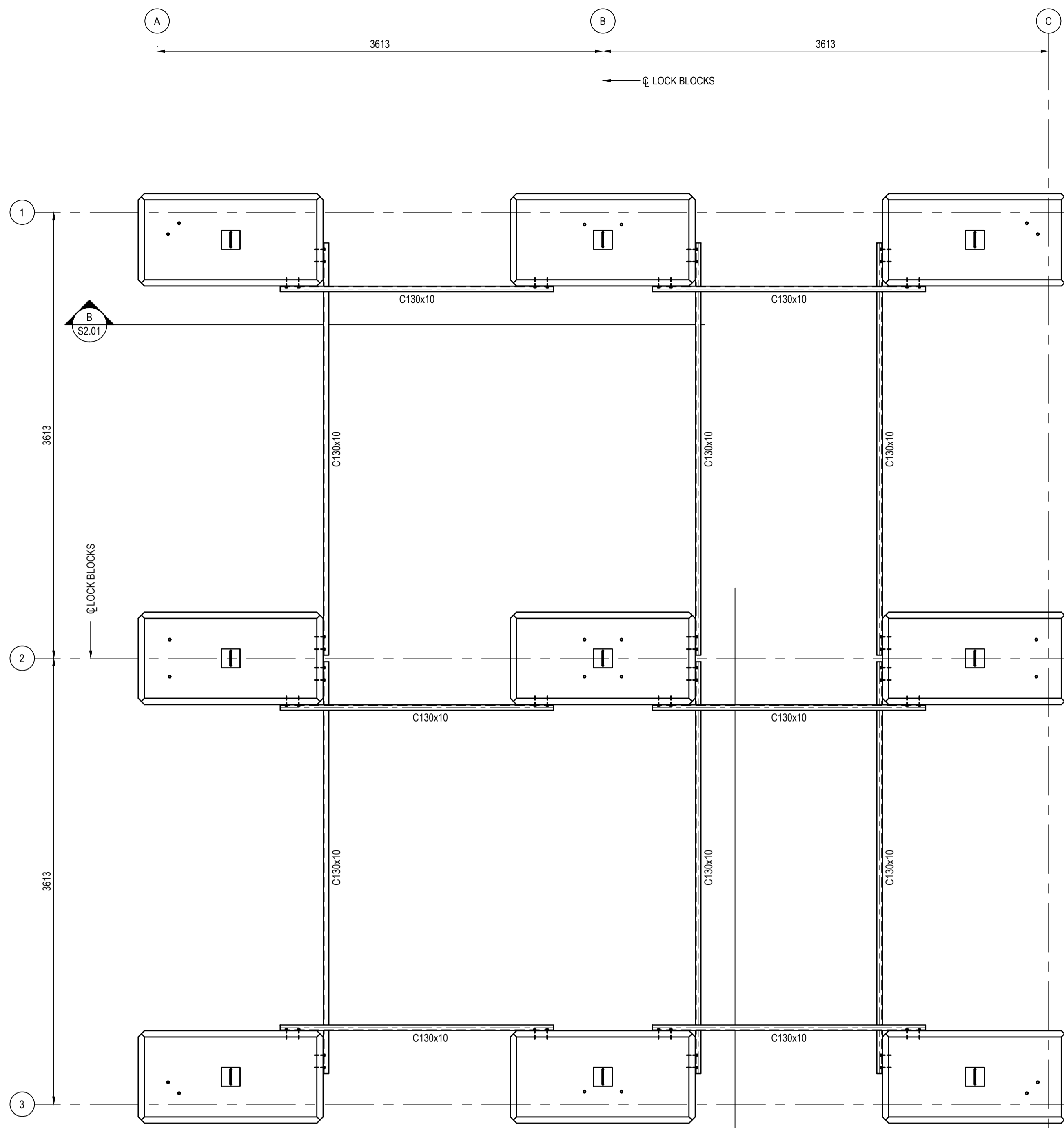
Sheet / Feuille

S1.01

OF XX

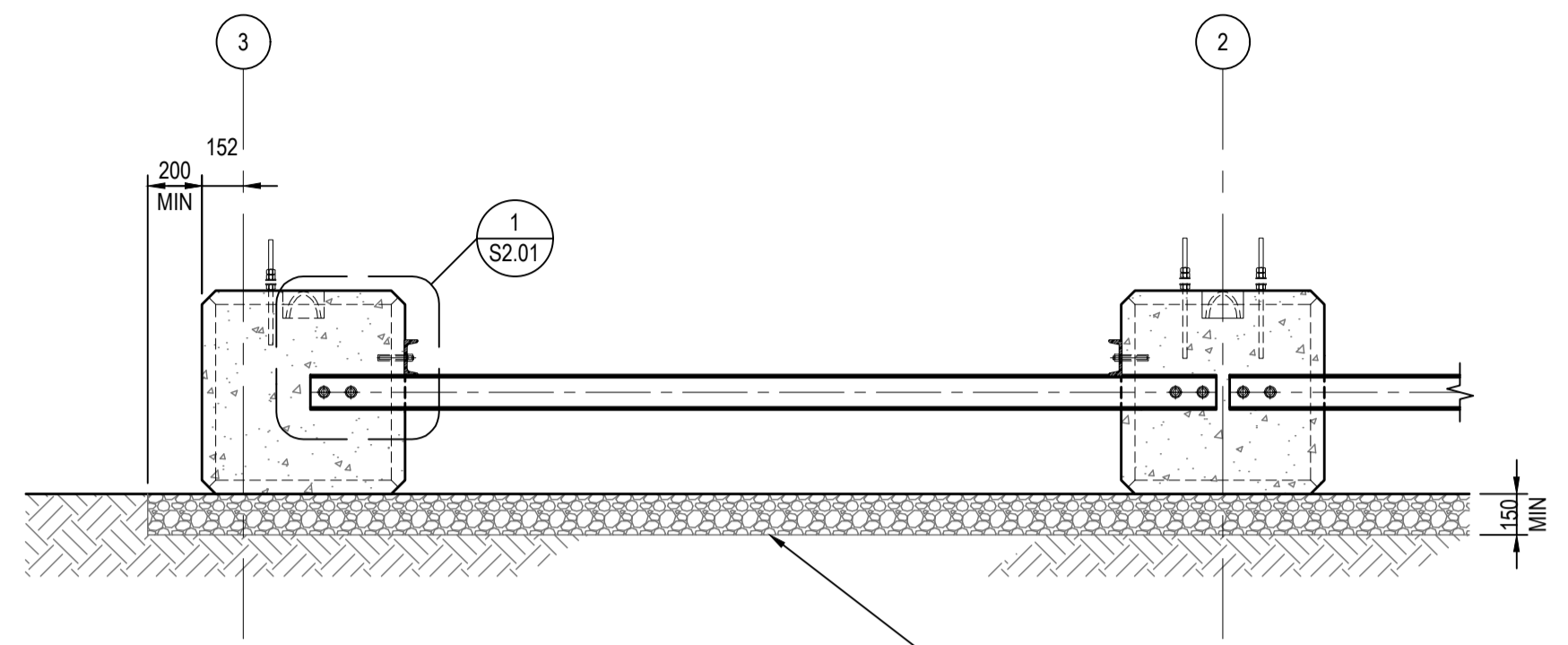
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No. Révision

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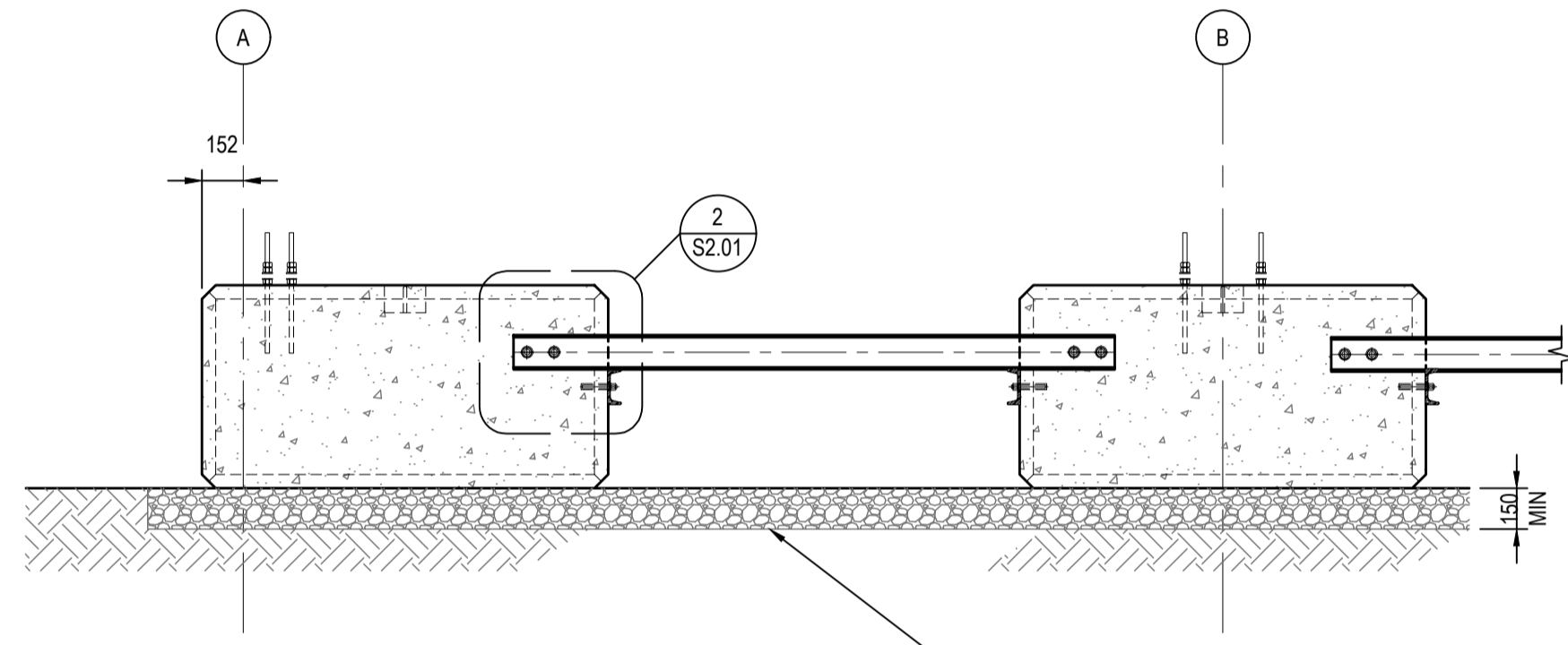


FOUNDATION PLAN
SCALE: 1:25

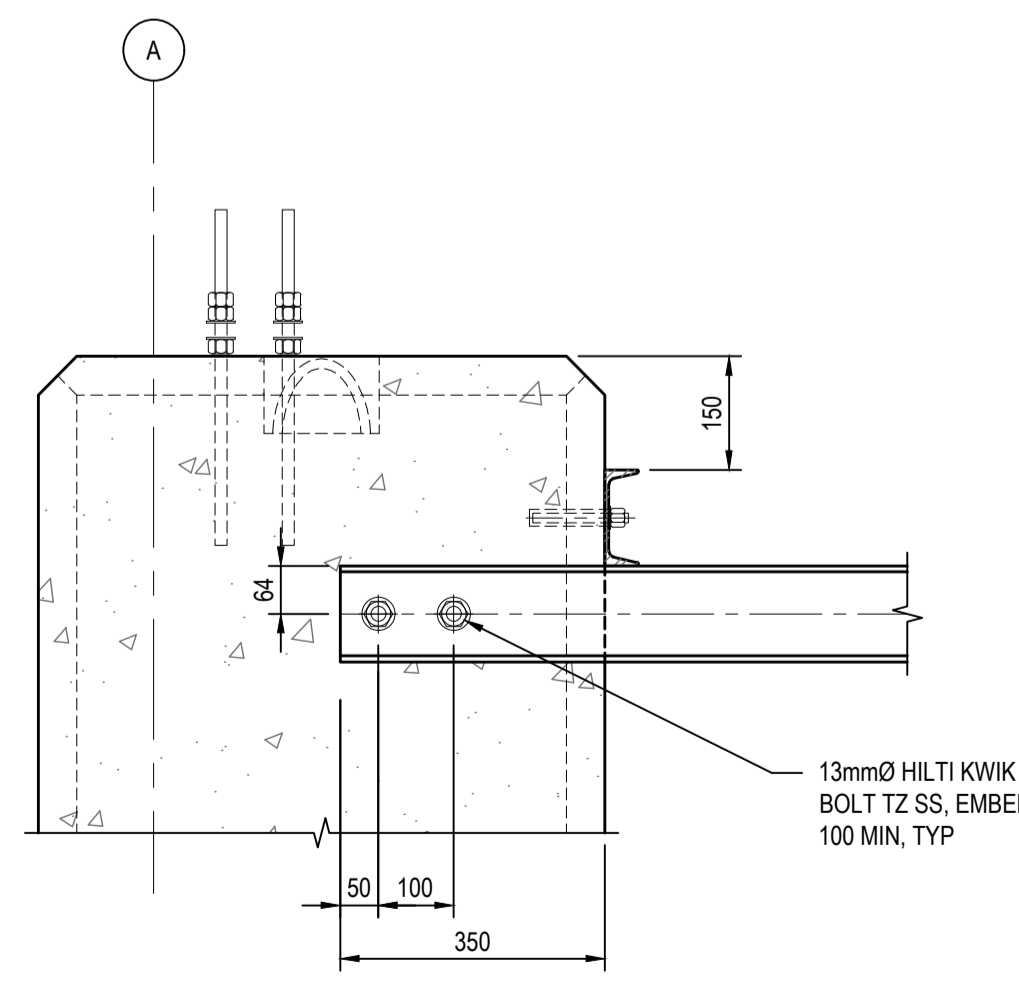
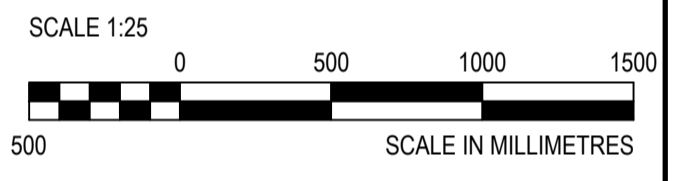
NOTE:
ALUMINUM FRAMING DESIGN BY OTHERS.
THE SEISMIC TIES SHALL BE INSTALLED AFTER THE STRUCTURAL ALUMINUM FLOOR FRAMING HAS BEEN INSTALLED.



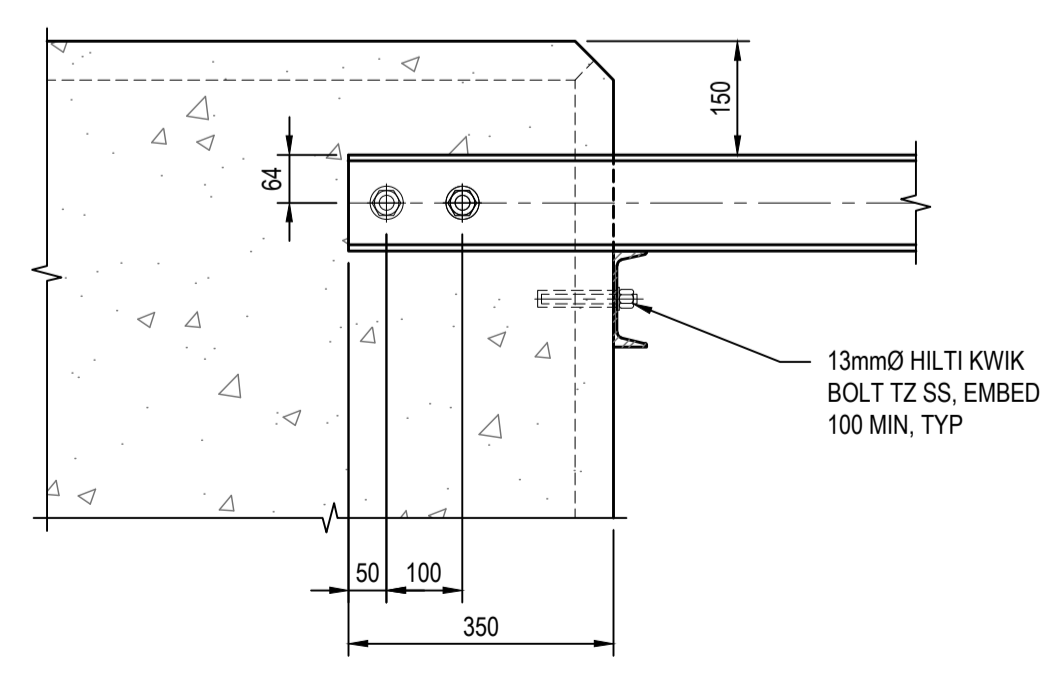
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SCALE: 1:25



B SECTION
SCALE: 1:25



1 DETAIL
SCALE: 1:10



2 DETAIL
SCALE: 1:10

Revision/	Description/Description	Date/Date
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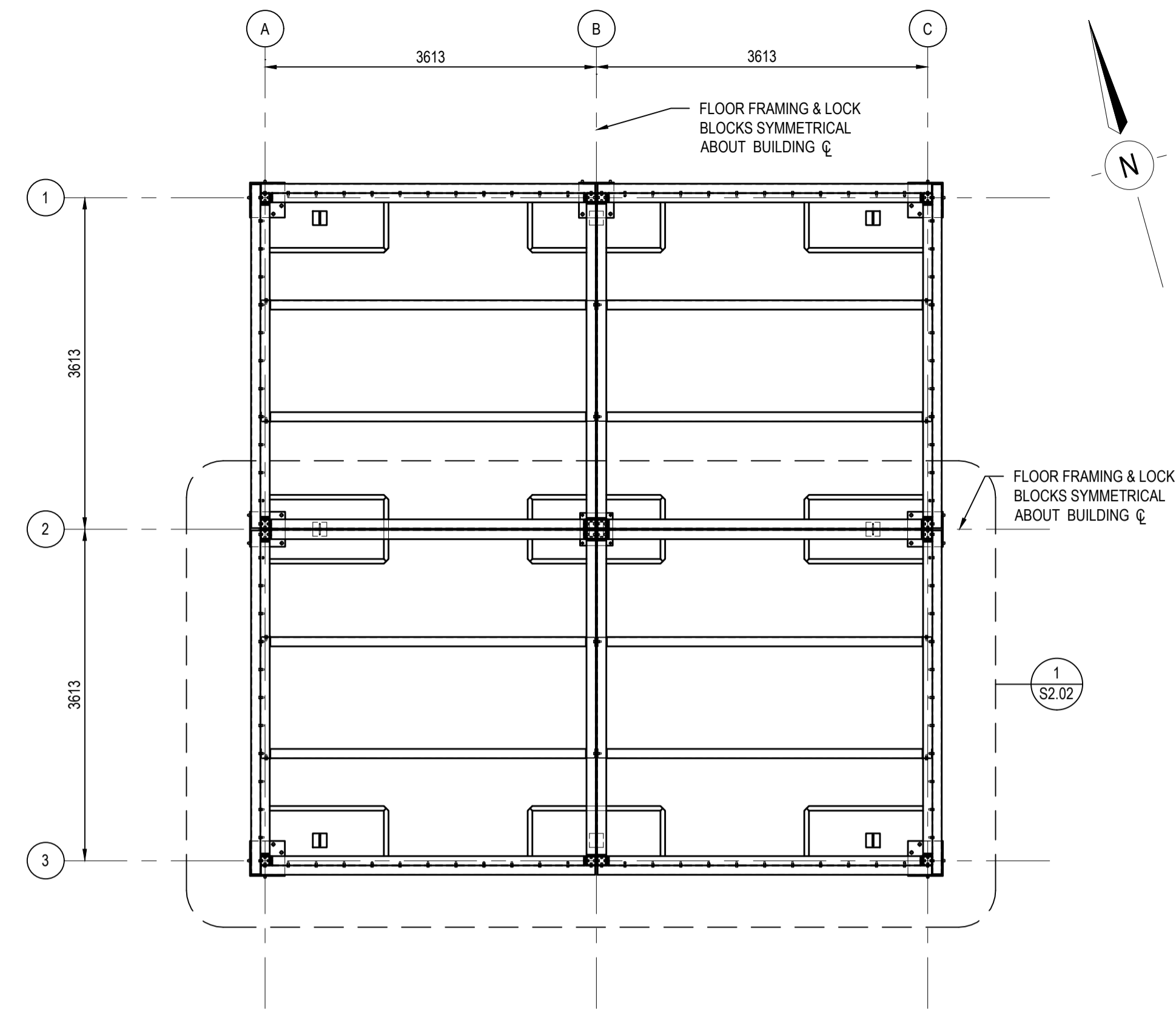
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VANCOUVER, BC
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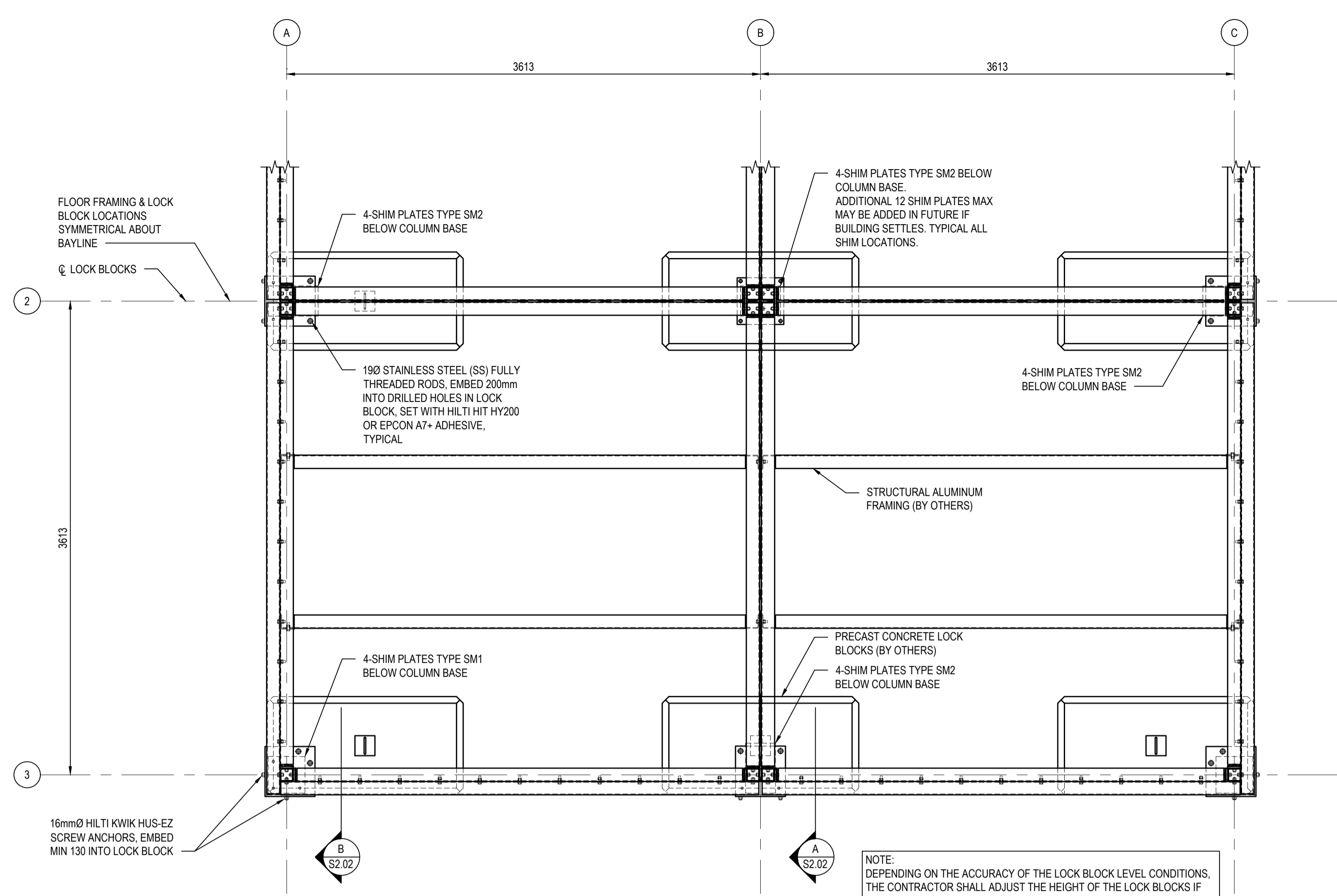
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Regional Manager, Architectural and Engineering Services
Gestionnaire régionale, Services d'architectural et de génie, TPSGC
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**FOUNDATION PLAN
SECTIONS AND DETAILS**

Project No./No. du projet PROJECT_NO	Sheet/Feuille S2.01 OF XX	Revision no./No. de la Révision 0
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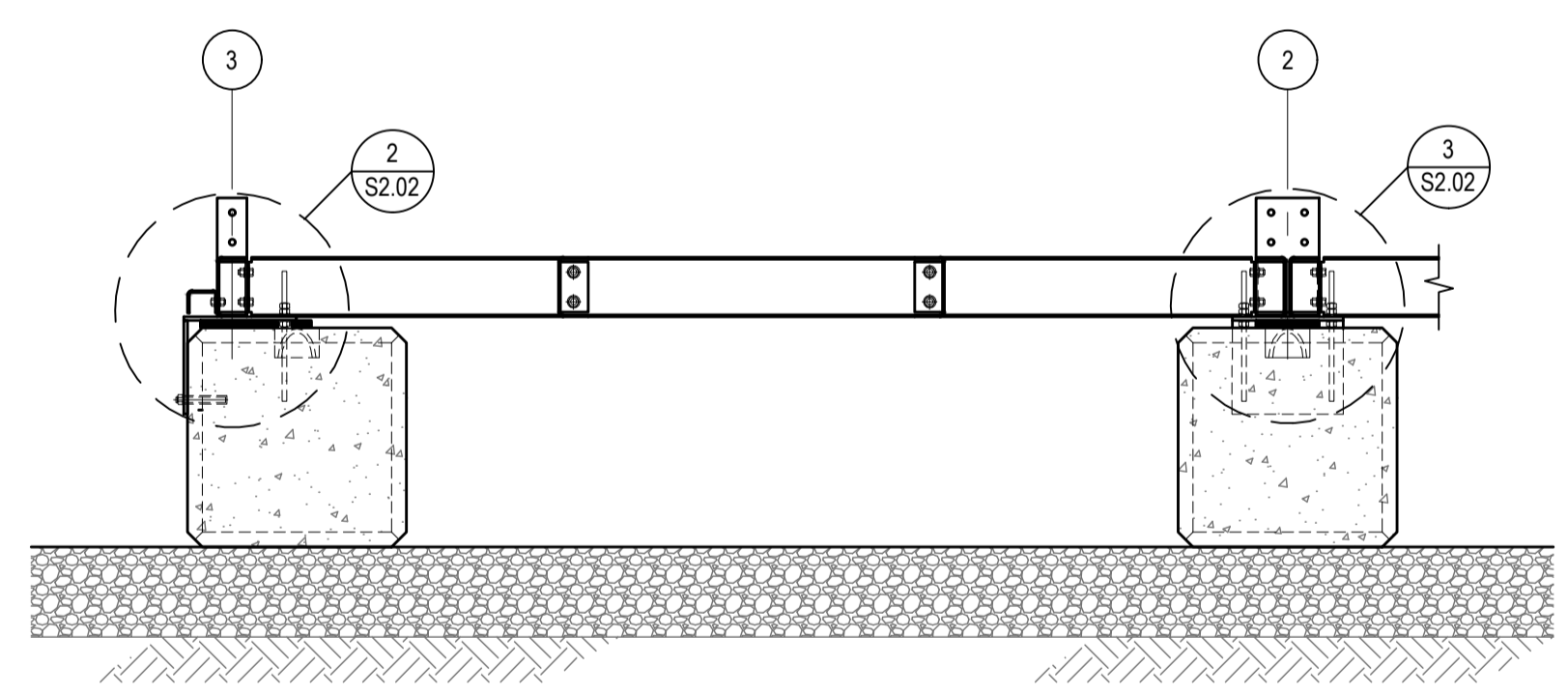
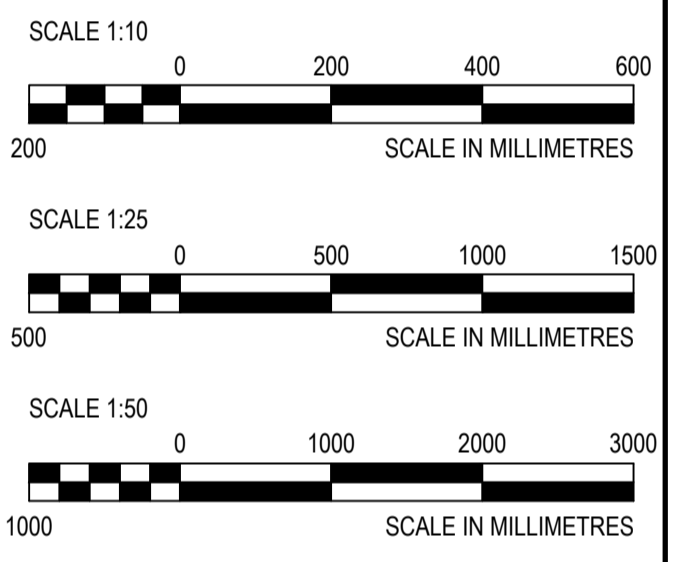


FOUNDATION & FLOOR FRAMING PLAN
SCALE: 1:50

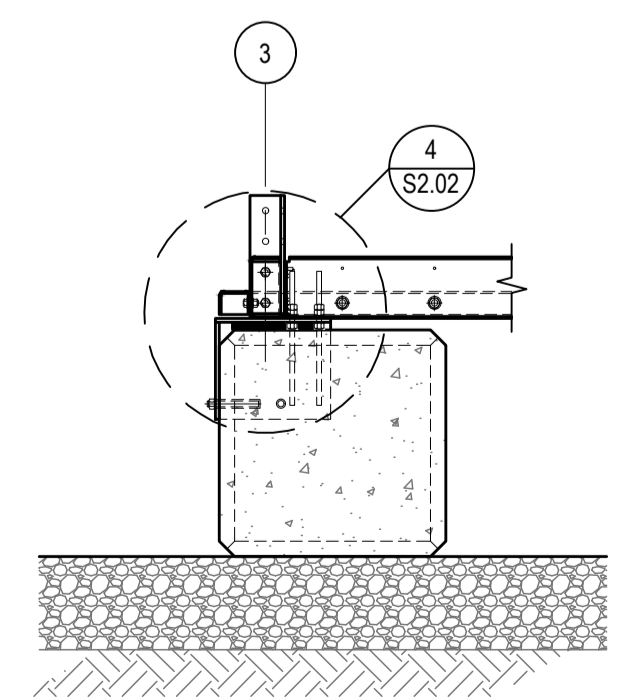


1 DETAIL
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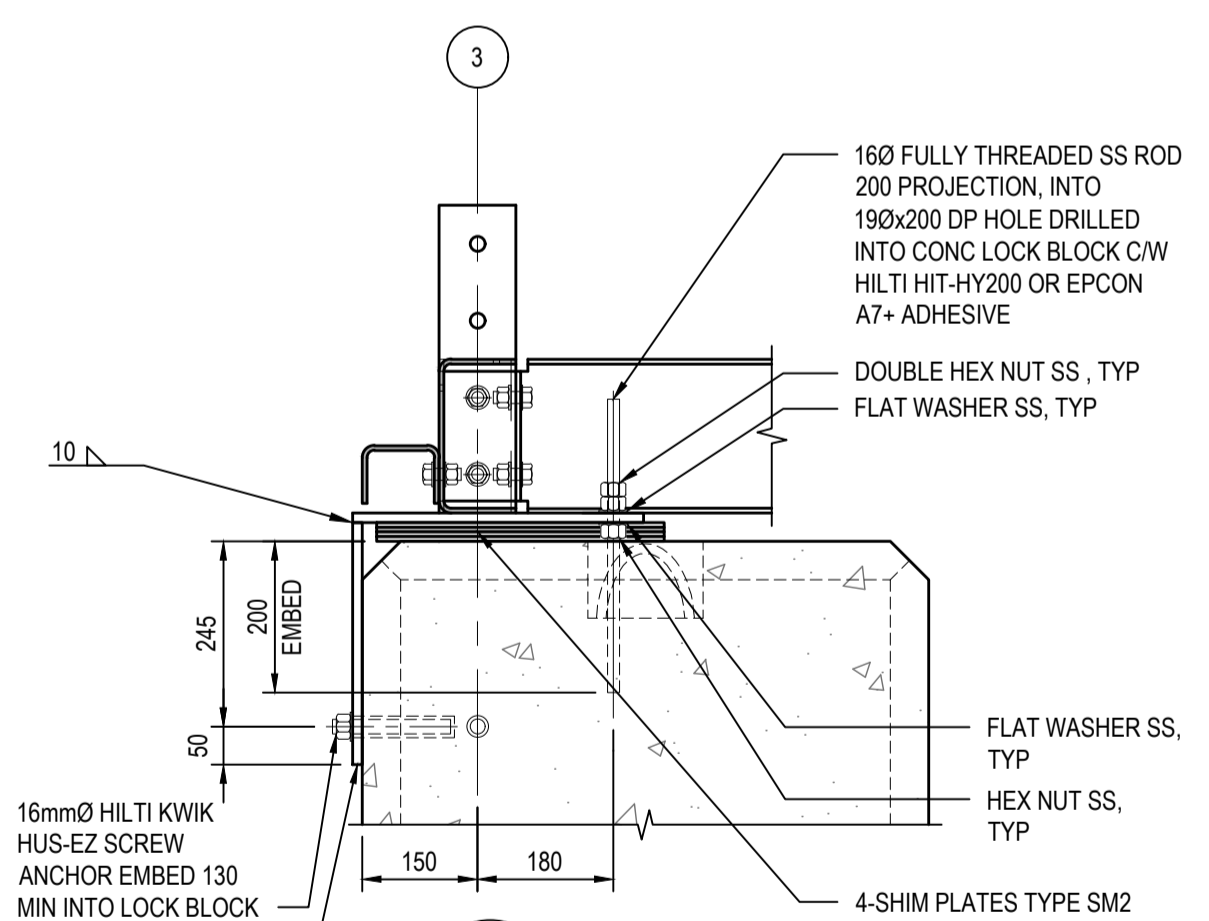
NOTE:
DEPENDING ON THE ACCURACY OF THE LOCK BLOCK LEVEL CONDITIONS, THE CONTRACTOR SHALL ADJUST THE HEIGHT OF THE LOCK BLOCKS IF NECESSARY BY CONSOLIDATING EXTRA GRAVEL FILL BELOW THE BLOCKS AS REQUIRED AND PREPARE THE NON-SHRINK GROUT USED BELOW EACH COLUMN BASE TO MAINTAIN FLOOR LEVEL. THE CONTRACTOR SHALL ALSO FINE ADJUST THE HORIZONTAL POSITION OF THE LOCK BLOCKS AS REQUIRED TO ACCURATELY INSTALL THE STRUCTURAL FLOOR FRAMING.



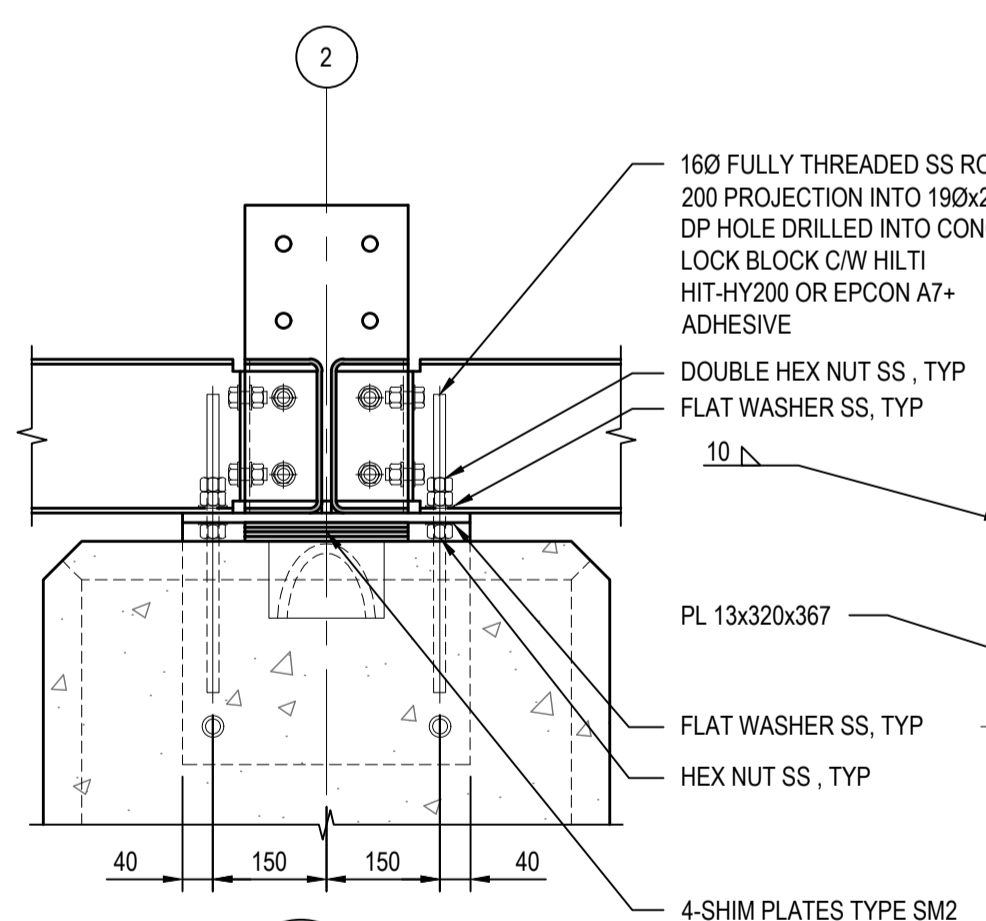
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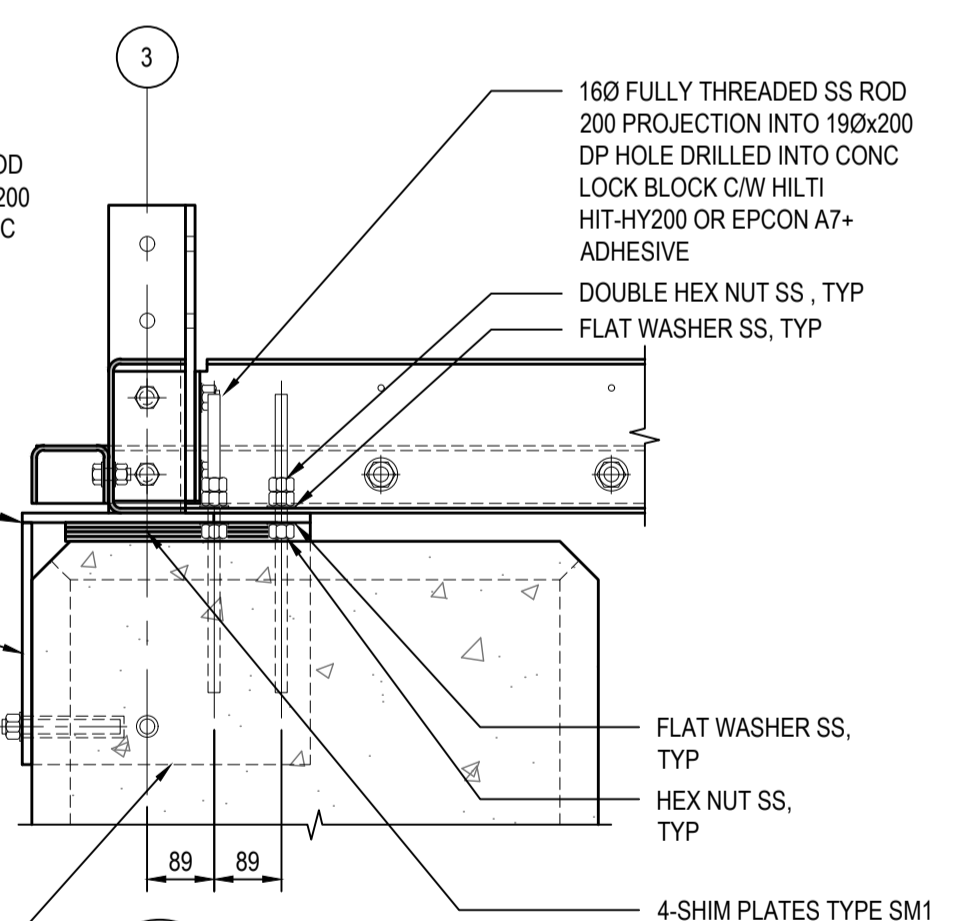
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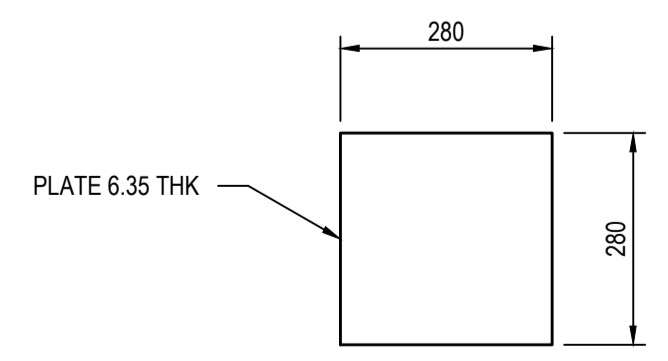
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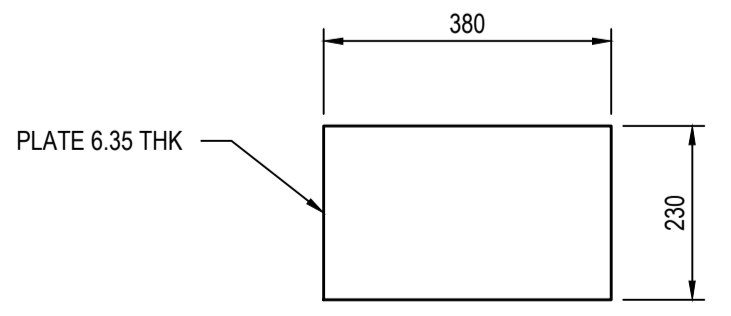
3 DETAIL
SCALE: 1:10



4 DETAIL
SCALE: 1:10



5 SHIM PLATE TYPE SM1
SCALE: 1:10



6 SHIM PLATE TYPE SM2
SCALE: 1:10

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VANCOUVER, BC
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4160 Marine Dr., West Vancouver
MODULAR LABS CENTER FOR AQUACULTURE & ENVIRONMENTAL RESEARCH

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CP

Drawn by/Dessiné par
RCM/2017.12.08

PWGSC Project Manager/Administrateur de Projets TPSGC
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Regional Manager, Architectural and Engineering Services
Gestionnaire régionale, Services d'architectural et de génie, TPSGC
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FLOOR FRAMING PLAN DETAILS AND SECTIONS

Project No./No. du projet
PROJECT_NO

Sheet/Feuille
S2.02
OF XX

Revision no./No. de Révision
0

TAG	LOCATION	SERVICE	AIR FLOW l/s / cfm	EXT. STATIC PRESS. Pa / in	SONES	EFFICIENCY				ELECT DATA			NOTES		
						O/A EAT °C / °F	E/A EAT °C / °F	S/A LAT °C / °F	SENSIBLE	TOTAL	MOTOR HP	VOLTS		PHASE	
HRV-100	FEED LAB CEILING	OUTDOOR AIR EXHAUST AIR	155 / 330 155 / 330	80 / 0.33 80 / 0.33	1.5	WINTER	-6.7 / 20	22.2 / 72	14.7 / 58.5	70.0%	74.0%	330 W	208	1	1
HRV-103	ACOUSTIC LAB CEILING	OUTDOOR AIR EXHAUST AIR	150 / 315 150 / 315	80 / 0.33 80 / 0.33	1.5	WINTER	-6.7 / 20	22.2 / 72	14.7 / 58.5	70.0%	74.0%	330 W	208	1	1

NOTE:
1. INTERNAL UNIT COMPLETE WITH VIBRATION ISOLATION, FLEXIBLE CONNECTIONS, FILTERS, CROSSFLOW CORE, MOTORIZED DAMPERS INCLUDING BYPASS DAMPERS FOR FREE COOLING.

TAG	SERVICE	COOLING				EVAPORATOR (INDOOR) UNIT				CONDENSER (OUTDOOR) UNIT				NOTES
		SENSIBLE kW / MBH	TYPE	AIR FLOW L/s / cfm	NO. OF FANS	MOTOR HP	VOLTS	PHASE	TYPE	MOTOR HP	VOLTS	PHASE		
E-100 CU-100	FEED LAB COOLER	1.3 / 4.5	LOW PROFILE	450 / 950	1	1/15	120	1	AIR COOLED	1/2	208	1	1, 2	

NOTE:
1. R-404a REFRIGERANT (HCFC REFRIGERANTS SHALL NOT BE USED).
2. COOLER UNITS SHALL BE RATED AT:
EVAPORATOR: EVAP TEMP: -4°C [25°F], BOX TEMP: 15°C [59°F].
CONDENSER: EVAP TEMP: -4°C [25°F], AMBIENT TEMP: 32°C [90°F].

TAG	TYPE	BORDER	MATERIAL	CORE STYLE	LOUVER ORIENT.	VOLUME DAMPER	FASTENING	FINISH
SR1	SUPPLY GRILLE/ REGISTER	NOTE 1	ALUMINUM	AIRFOIL DOUBLE DEFLECTION	L	YES	SCREW	BAKED ENAMEL, ALUMINUM

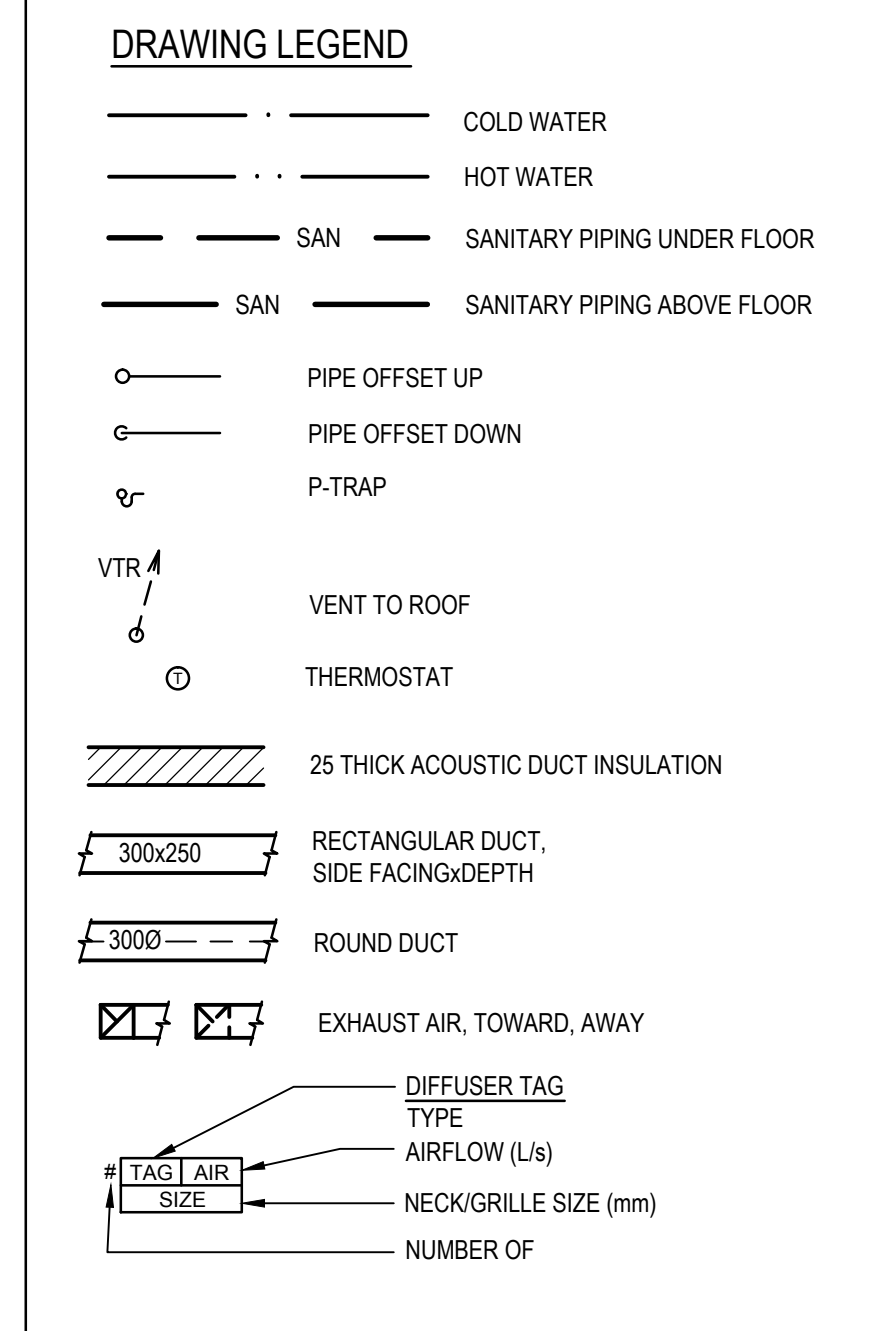
NOTE:
1. BORDER MOUNTING FRAME: ALUMINUM CURVED FOR SURFACE MOUNT TO SUIT APPLICATION.

TAG	SERVICE	TYPE	ORIENTATION	VOLUME L / Us gal	RECOVERY LPH / GPH	DIMENSIONS mm	TOP TAPPINGS # - mm	FRONT TAPPINGS # - mm	MAX. WORKING PRESSURE kPa / psi	ELECT DATA			NOTES
										kW	VOLTS	PHASE	
T-DHW	FEED LAB DOMESTIC HOT WATER	ELECTRIC	VERTICAL, CEILING MOUNTED	72 / 19	42 / 11	ØL: 600mm DIA: 450mm	2 - 20 IN, 20 OUT	TOP: T & P MID: NONE BOTTOM: DRAIN	1035 / 150	2.5	120	1	1, 2, 3

NOTE:
1. TAPPINGS ARE FOR PIPE CONNECTIONS. PROVIDE ADDITIONAL TAPPINGS AS REQUIRED FOR SENSORS AND SAFETY VALVES.
2. RECOVERY AT 50°C [122°F] TEMPERATURE RISE.
3. REFER TO SPECIFICATIONS.

TAG	BUILDING	TYPE	DUCT SIZE (WxH) mm	AIR FLOW l/s / cfm	ELECT DATA			NOTES
					kW	VOLTS	PHASE	
EHC-100	FEED LAB	ELEC HEATING COIL	250x250	155 / 330	4.5	208	3	1
EHC-103	ACOUSTICS LAB	ELEC HEATING COIL	250x250	155 / 330	4.5	208	3	1
EBB-103	ACOUSTICS LAB	ELEC BASEBOARD	-	- / -	1.5	120	1	-
EBB-104	ACOUSTICS LAB	ELEC BASEBOARD	-	- / -	0.5	120	1	-
EBB-105	ACOUSTICS LAB	ELEC BASEBOARD	-	- / -	0.5	120	1	-

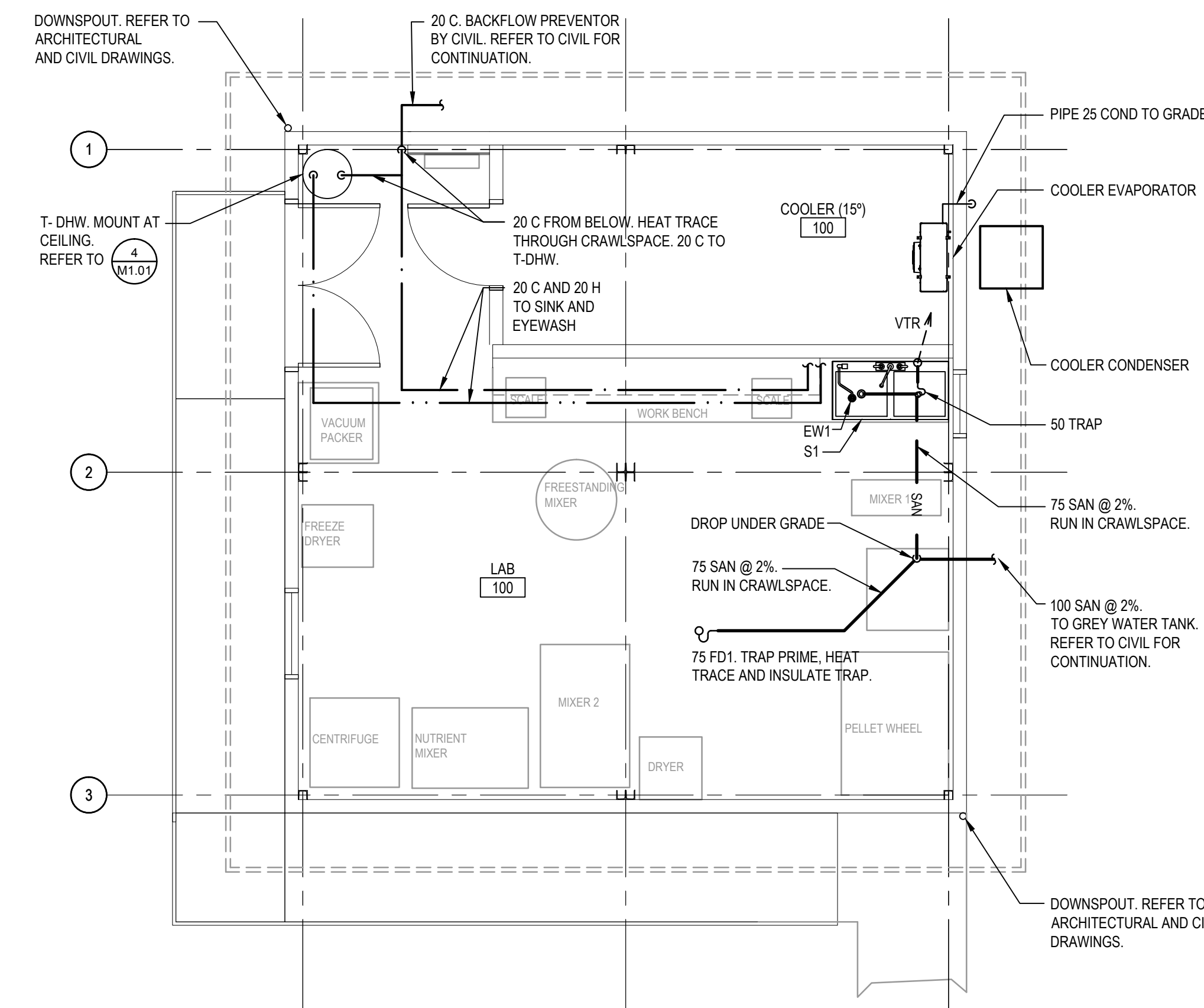
NOTE:
1. COMPLETE WITH AIR PROVING SWITCH, SCR CONTROL, ROOM THERMOSTAT



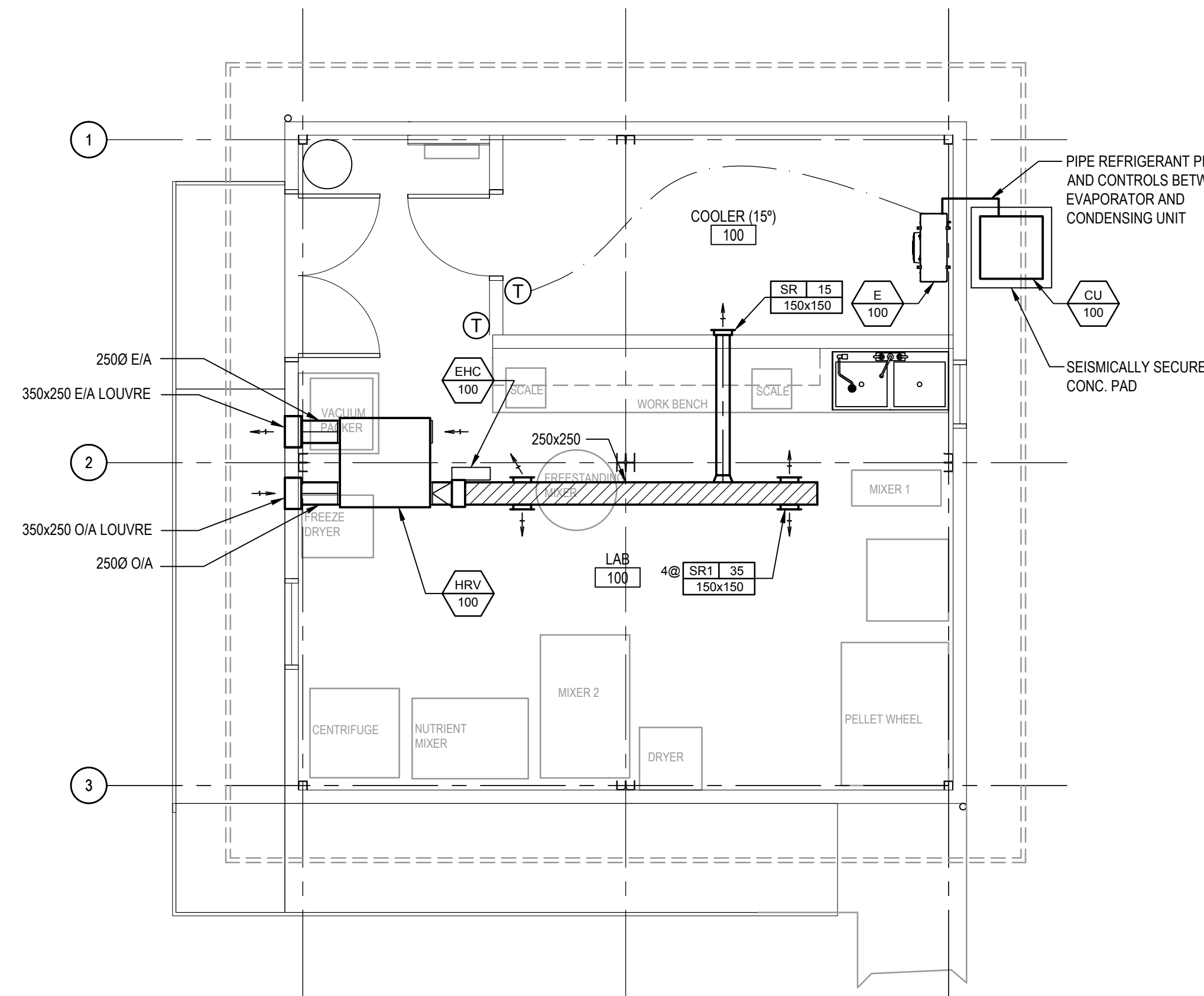
GENERAL ABBREVIATIONS:

- | | | | |
|-----|-----------------------|-----|--------------------------|
| C | DOMESTIC COLD WATER | HRV | HEAT RECOVERY VENTILATOR |
| H | DOMESTIC HOT WATER | O/A | OUTDOOR AIR |
| E/A | EXHAUST AIR | SR | SUPPLY REGISTER |
| EBB | ELECTRIC BASEBOARD | EF | EXHAUST FAN |
| EHC | ELECTRIC HEATING COIL | VTR | VENT TO ROOF |

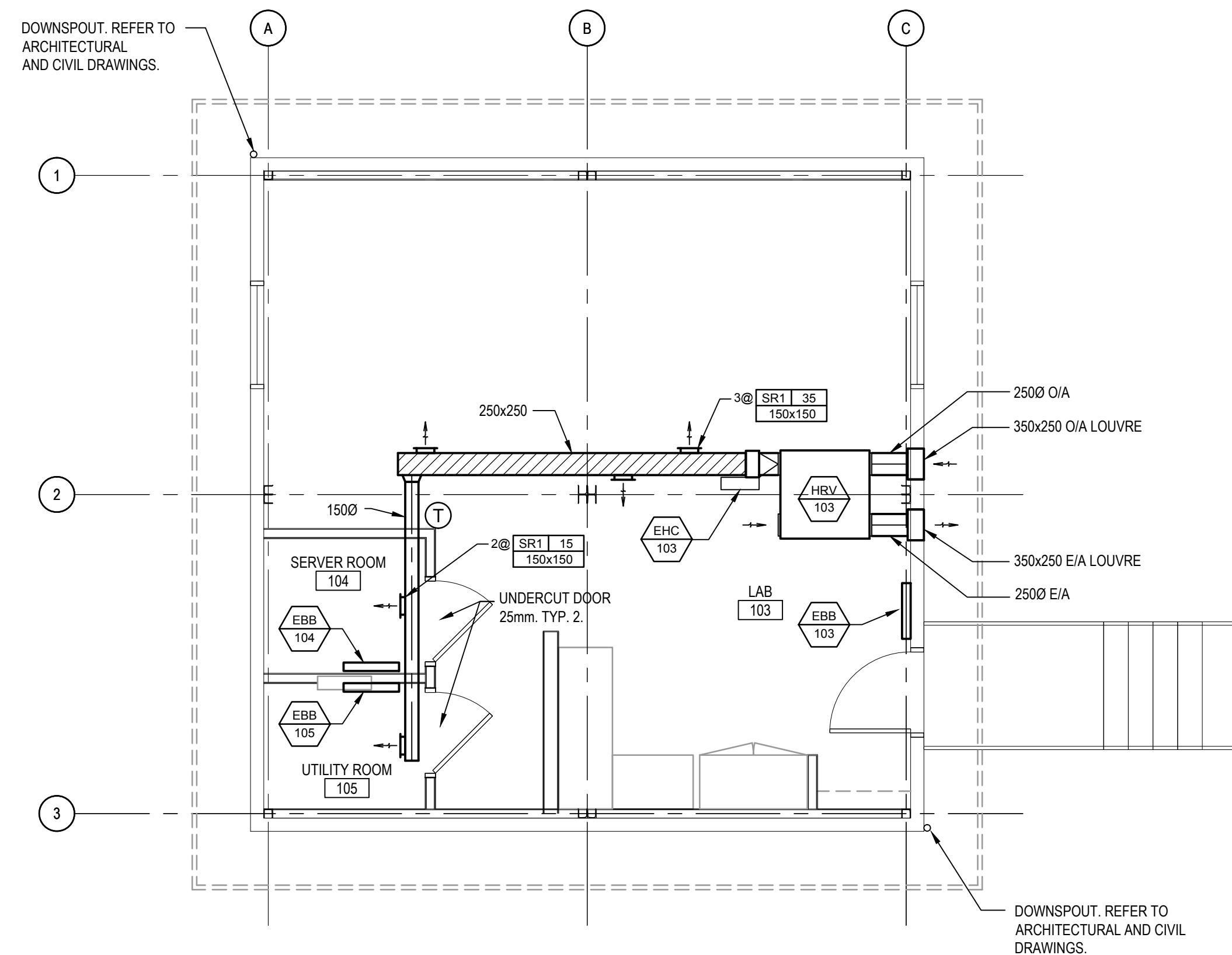
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DRAWING NO.	DRAWING NAME	SCALE
M1.01	ACOUSTIC LAB AND FEED LAB MECHANICAL AND PLUMBING PLANS	AS NOTED



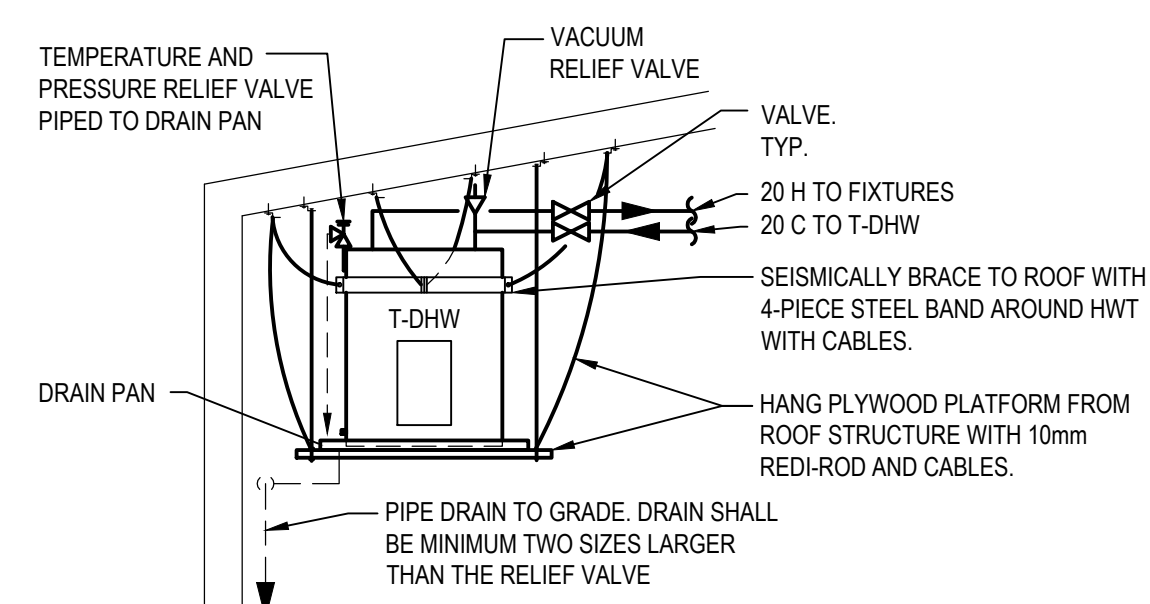
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FEED LAB - PLUMBING



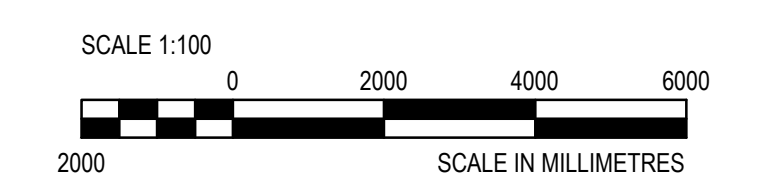
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FEED LAB - MECHANICAL



3
M1.01 SCALE: 1:50
ACOUSTIC LAB - MECHANICAL & PLUMBING



4
M1.01 SCALE: N.T.S.
T-DHW SCHEMATIC



1.	ISSUED FOR TENDER	2017.11.30
Revision/	Description/Description	Date/Date

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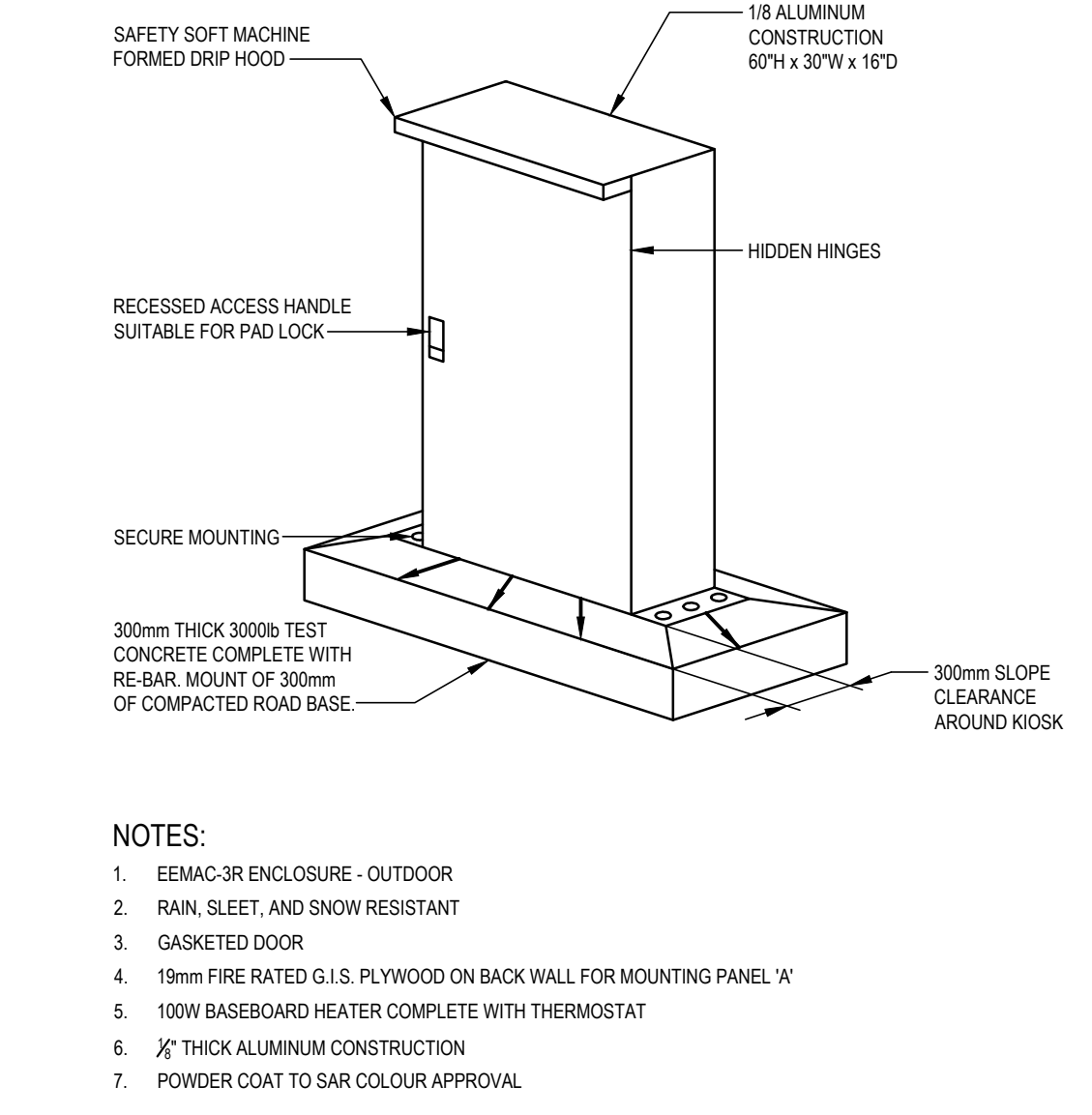
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**ACOUSTIC LAB & FEED LAB
MECHANICAL AND
PLUMBING PLANS**

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
-	M1.01	1

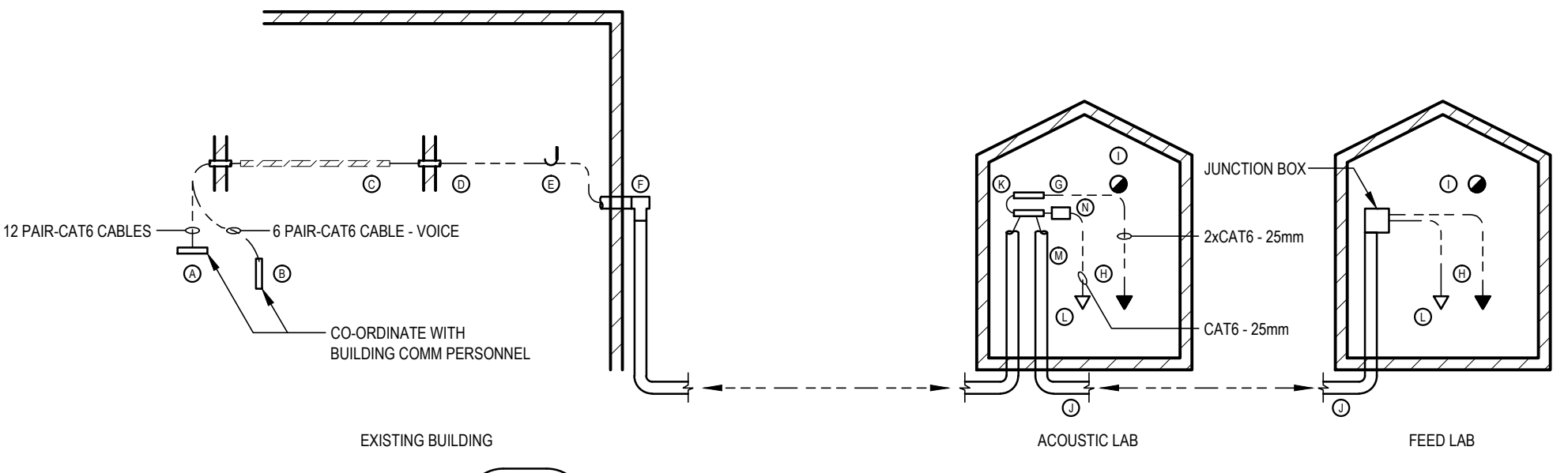
PANELBOARD SCHEDULE						
JOB NO./NAME : 1-17-274 - FISHERIES AND OCEANS						
PANEL : A						
SYSTEM : 120/208V						
TYPE : CDP						
LOCATION : EXTERIOR						
MOUNTING : SURFACE						
NO. CIRCUITS : 42						
BUS SIZE : 600A						
SYM. FAULT RATING : 22k						
DESCRIPTION	BRK	POLE	CCT	POLE	BRK	DESCRIPTION
TENT STRUCTURE	200	3	01 03 04 05 06	02 03	200	MODULAR LAB
ACOUSTICS LAB	100	3	07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41	08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	100W BASEBOARD RECEPTACLE	
* GFCI Breaker						
** Arc Fault Breaker						
PANEL CW 600A - 3P MAIN BREAKER						

PANELBOARD SCHEDULE						
JOB NO./NAME : 1-17-274/FISHERIES AND OCEANS - ACOUSTICS LAB						
PANEL : C						
SYSTEM : 120/208V						
TYPE : LOAD CENTER						
LOCATION : ACOUSTICS LAB						
MOUNTING : RECESSED						
NO. CIRCUITS : 42						
BUS SIZE : 200A						
SYM. FAULT RATING : 22k						
DESCRIPTION	BRK	POLE	CCT	POLE	BRK	DESCRIPTION
LIGHTS	15	1	01 02 03 04	02 03	15	EMERGENCY LIGHTING RECEPTACLE
RECEPTACLE	15	1	05 06 07 08 09 10 11 12 13 14 15	06 07 08 09 10 11 12 13 14 15	15	RECEPTACLE
SMOKE DETECTORS	15	1	11 12 13 14 15	11 12 13 14 15	15	RECEPTACLE
HRV-103	15	2	11 12 13 14 15	11 12 13 14 15	15	EHC-103 4 SW
SPARE	15	1	15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	15	EBB-103 FUTURE FAN
* GFCI Breaker						
** Arc Fault Breaker						
PANEL CW 100A - 3P MAIN BREAKER						

PANELBOARD SCHEDULE						
JOB NO./NAME : 1-17-274 - FISHERIES AND OCEANS - MODULAR LAB						
PANEL : B						
SYSTEM : 120/208V						
TYPE : LOAD CENTER						
LOCATION : MODULAR LAB						
MOUNTING : SURFACE						
NO. CIRCUITS : 60						
BUS SIZE : 225A						
SYM. FAULT RATING : 22k						
DESCRIPTION	BRK	POLE	CCT	POLE	BRK	DESCRIPTION
MIXER 1	15	3	01 03 04 05 06	02 03	15	MIXER 2
MIXER	15	2	07 08 09 10	08 09	30	CENTRIFUGE
VACUUM PACKER	15	1	11 12 13 14 15 16	11 12 13 14	15	NUTRIENT MIXER
FREEZE DRYER	15	2	17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32	17 18 19 20 21 22 23 24 25 26 27 28 29 30	15	PELLET WHEEL
DRYER	15	1	33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	15	FREEZER SPARE SPARE SPARE
* GFCI Breaker						
** Lock On						
PANEL CW 200A - 3P MAIN BREAKER						

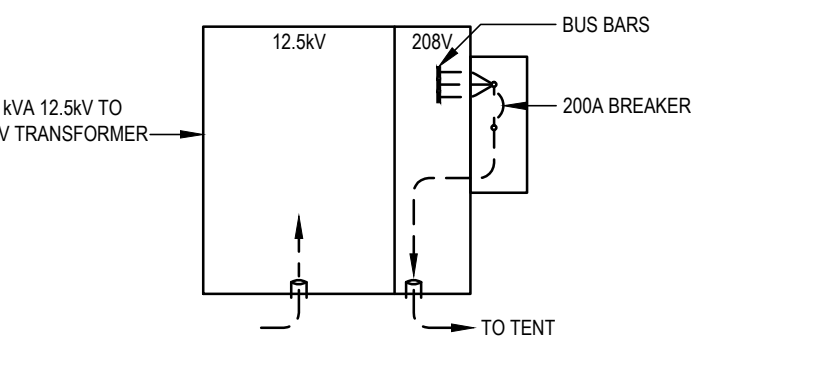


3 E1.0 NOT TO SCALE

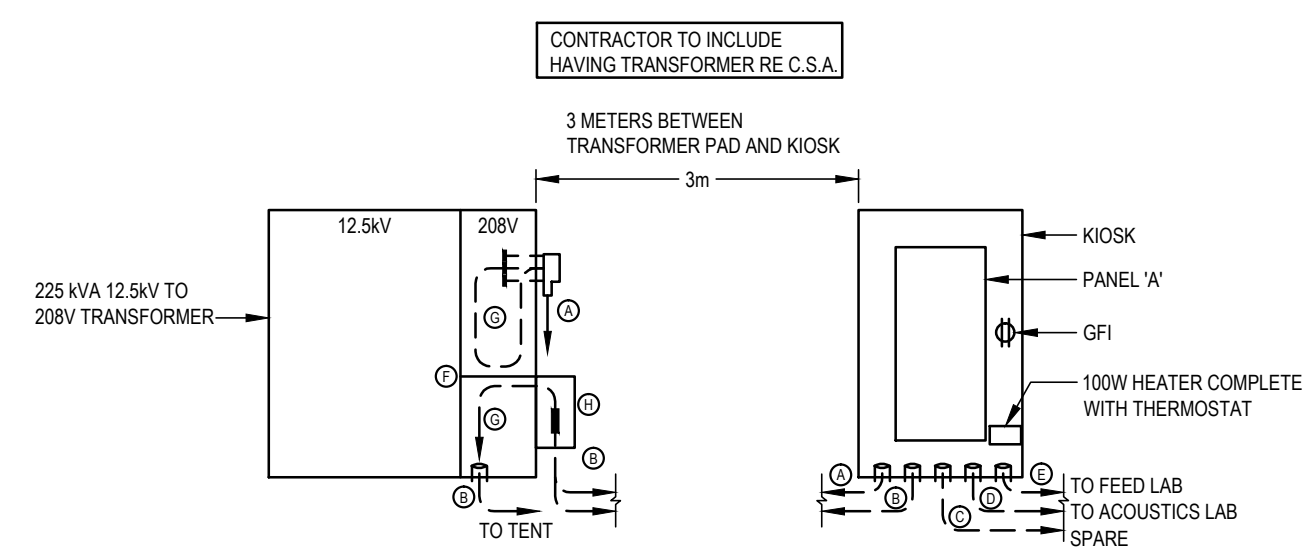


2 E1.0 COMMUNICATION AND SMOKE DETECTOR SCHEMATIC NOT TO SCALE

- NOTES:
 A. PROVIDE A 24 PORT RACK MOUNTED COPPER PATCH PANEL AND INSTALL IN EXISTING RACK. TERMINATE CAT 6 CABLES. (DATA) PROVIDE PATCH CORDS
 B. EXISTING BIX BLOCK (VOICE) PUNCH DOWN CAT 6 CABLES.
 C. INSTALL VOICE AND DATA ALONG CORRIDORS. INSTALL WHERE THERE IS EXISTING CABLE TRAY.
 D. PROVIDE 2x50mm CONDUIT SLEEVES WHEN PENETRATING FIRE SEPARATIONS. FIRE SEAL CONDUIT TO RATING WALL. SEAL CONDUIT WITH FIRE WOOL.
 E. PROVIDE WIDE 'J' HOOKS, ATTACHED TO STRUCTURAL CEILING WHERE THERE IS NO CABLE TRAY.
 F. PROVIDE 2x50mm RPVC CONDUITS DOWN EXTERIOR AND OVER TO ACOUSTIC AND LAB.
 G. PROVIDE WALL MOUNTING RACK COMPLETE WITH 2x16 PORT COPPER DATA PATCH PANELS (HORIZONTAL AND RISER). PROVIDE GROUND BARS.
 H. INSTALL CAT 6 CABLES IN CONDUITS.
 I. PROVIDE COMBINATION SMOKE/CARBON MONOXIDE DETECTORS. EXTEND CABLES TO DDC PANEL IN BASE BUILDING COMMUNICATIONS ROOM.
 J. 50mm RPVC CONDUITS
 K. PROVIDE PATCH CORDS
 L. PROVIDE CAT6 CABLE TO EACH OUTLET INSTALL IN CONDUIT (VOICE)
 M. SPLICE HORIZON AND RISER CAT6 TOGETHER IN JUNCTION BOX
 N. BIX BLOCK FOR VOICE (HORIZONTAL AND RISER)



4 E1.0 EXISTING DISTRIBUTION DETAIL NOT TO SCALE

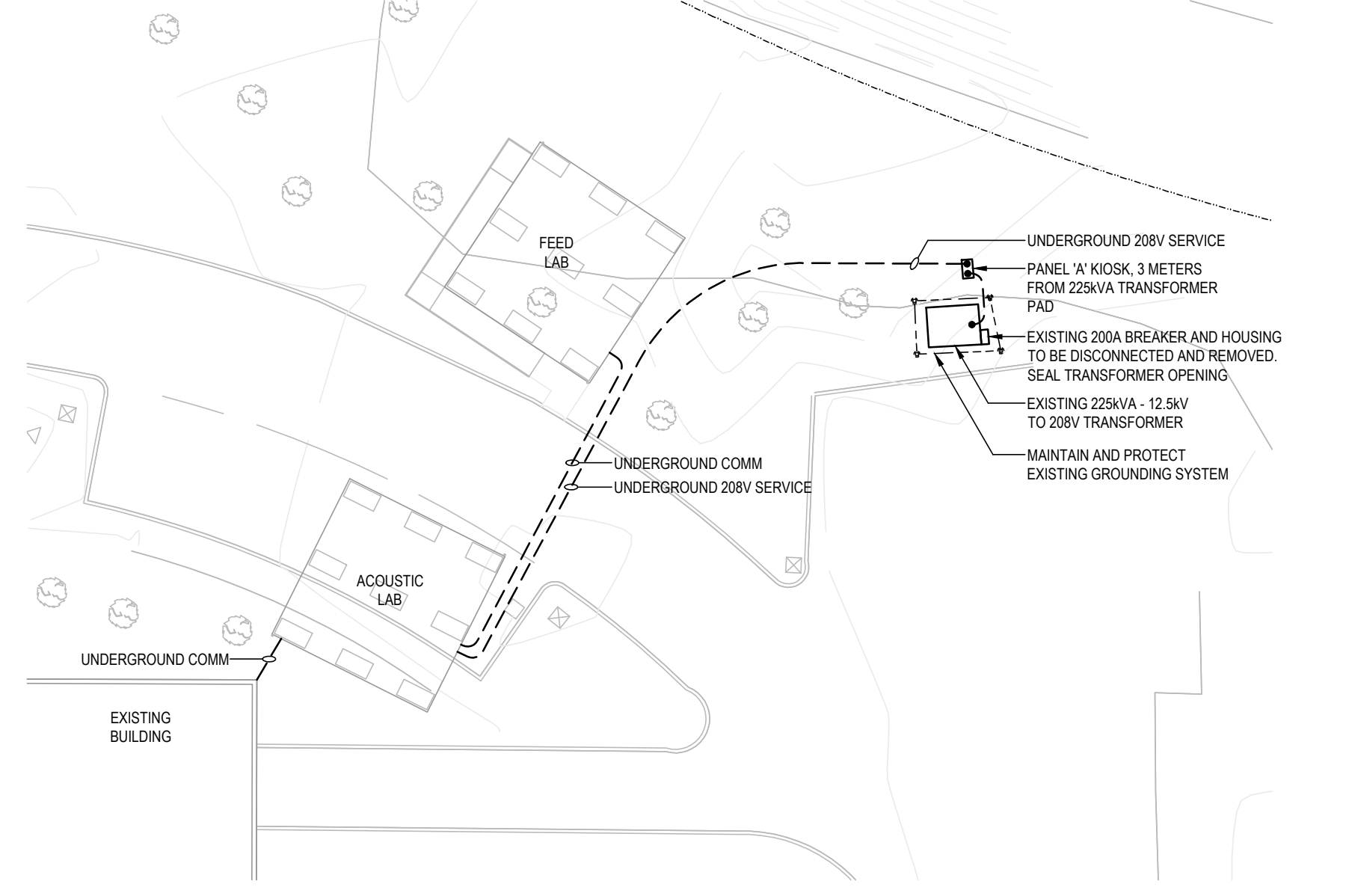


- NOTES:
 A. 600A - 3 RUNS 443/0 RWU90 - 100mm PANEL 'A'
 B. 200A - 4#3/0 RWU90 - 53mm TENT
 C. -53mm RPVC SPARE SPARE
 D. 100A - 4#3 RWU90 - 53mm ACOUSTIC
 E. 200A 443/0 RWU90 - 53mm FEED
 F. PROVIDE BARRIER BETWEEN 600A AND 200A
 G. BOND EXISTING 200A FEEDER
 H. PROVIDE WEATHERPROOF JUNCTION BOX ON SITE OF TRANSFORMER FOR SPLICING OF EXISTING AND NEW 200A WIRING

5 E1.0 PROPOSED DISTRIBUTION DETAIL NOT TO SCALE

Q#	DESCRIPTION	EQUIPMENT LOCATION	LOAD		VOLTS	PHASE	UNIT			STARTER			DISC.			CONTROL			SUPPLY PANEL		WIRE & CONDUIT			NOTE								
			MCA	KW			HP	SUPPLY	MOUNT	CONNECT	SUPPLY	MOUNT	CONNECT	SUPPLY	MOUNT	CONNECT	SUPPLY	MOUNT	CONNECT	TYPE	FIRE ALARM	PANEL #	PANEL LOCATION		AMPS	P	CCT NO'S	WIRE SIZE	NO.	CONDUIT SIZE (mm)	TOTAL AMPS	
	FEED LAB																															
EHC-100	ELECTRIC HEAT COIL	CEILING	-	4.5	-	208	3	M	M	E	-	-	-	-	E	E	E	M	M	M	-	-	B	FEED LAB	20	3	-	12	4	-	-	-
E-100	COOLER EVAPORATION	IN COOLER	-	-	-	208	1	M	M	E	-	-	-	-	E	E	E	M	M	M	-	-	B	FEED LAB	20	2	-	12	3	-	-	1
CU-100	COOLER CONDENSER	EXTERIOR	-	-	-	208	1	M	M	E	-	-	-	-	E	E	E	M	M	M	-	-	B	FEED LAB	20	2	-	12	3	-	-	1
HRV-100	HEAT RECOVERY VENTILATOR	CEILING	-	0.3	-	208	1	M	M	E	-	-	-	-	E	E	E	M	M	M	-	-	B	FEED LAB	15	2	-	12	3	-	-	-
TDHW	DOMESTIC HOT WATER TANK	-	-	2.5	-	-	1	M	M	E	-	-	-	-	E	E	E	M	M	M	-	-	B	FEED LAB	30	1	-	10	2	-	-	-
-	HEAT TRACE	-	-	-	-	120	1	M	M	E	-	-	-	-	-	-	-	-	-	-	-	-	B	FEED LAB	15	1	-	12	2	-	-	2
	ACOUSTICS LAB																															
EHC-103	ELECTRIC HEAT COIL	CEILING	-	4.5	-	208	3	M	M	E	-	-	-	-	E	E	E	M	M	M	-	-	C	ACOUSTICS LAB	20	3	-	12	4	-	-	-
EBB-103	ELECTRIC BASEBOARD	ENTRANCE	-	1.5	-	-	1	M	M	E	-	-	-	-	E	E	E	M	M	M	-	-	C	ACOUSTICS LAB	15	1	-	12	2	-	-	-
-	FUTURE EXHAUST FAN	SERVER ROOM	-	-	-	FHP	-	1	M	M	E	M	M	E	-	-	-	-	-	-	-	-	C	ACOUSTICS LAB	15	1	-	12	2	-	-	3
HRV-103	HEAT RECOVERY VENTILATION	CEILING	-	0.3	-	208	1	M	M	E	-	-	-	-	E	E	E	M	M	M	-	-	C	ACOUSTICS LAB	15	2	-	12	3	-	-	-

OWNER EQUIPMENT										
Q#	DESCRIPTION	ELECTRICAL				CIRCUIT NUMBER	BREAKER	WIRE SIZE	RECEPTACLES	DISCONNECT/CONNECTION
		V	PH	kW	hp					
1	MIXER 1	208V	3	-	-	B1.3.5	15A-3P	-	-	30A DISCONNECT + CONNECTION
2	MIXER 2	208V	3	-	-	B2.4.6	15A-3P	-	-	30A DISCONNECT + CONNECTION
3	MIXER	208V	1	-	-	B7.9	15A-2P	-	RECEPTACLE	-
4	VACUUM PACKER	120V	1	-	-	B11	15A-1P	-	RECEPTACLE	-
5	CENTRIFUGE	208V	1	-	-	B8.10	30A-2P	-	TWIST LOCK	-
6	NUTRIENT MIXER	208V	3	-	-	B12.14.16	15A-3P	-	TWIST LOCK	-
7	FREEZE DRYER	208V	1	-	-	B13.15	15A-2P	-	RECEPTACLE	-
8	DRYER	120V	1	-	-	B17	15A-1P	-	RECEPTACLE	-
9	PELLET WHEEL	208V	3	-	-	B18.20.22	15A-3P	-	RECEPTACLE	-



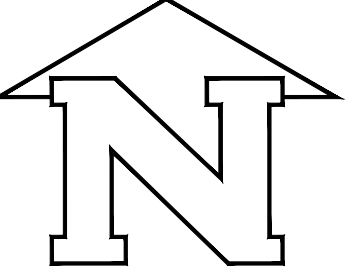
1 E1.0 SITE PLAN

- NOTES:
 1. BEFORE ANY EXCAVATION CONTRACTOR TO LOCATE 12.5 kV SERVICE.

Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work

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REV	DESCRIPTION	DATE
1	ISSUED FOR 100% REVIEW	11/30/2017

PROJECT NAME:
SAR Vancouver Laboratory Buildings

4160 Marine Dr
 West Vancouver, British Columbia

DRAWING TITLE:
SITE PLAN, LEGEND, AND SCHEDULES

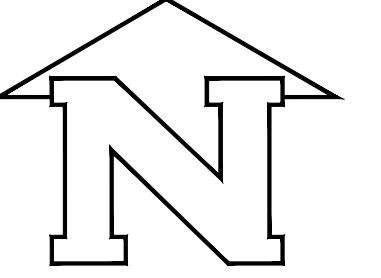
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Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work

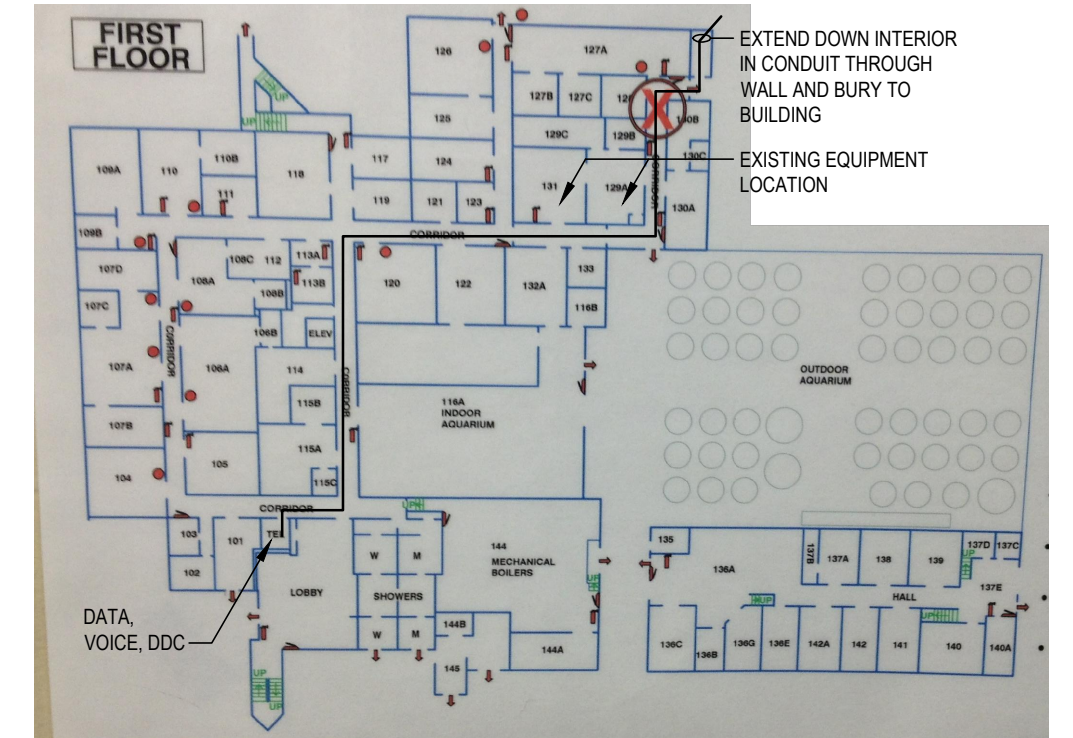
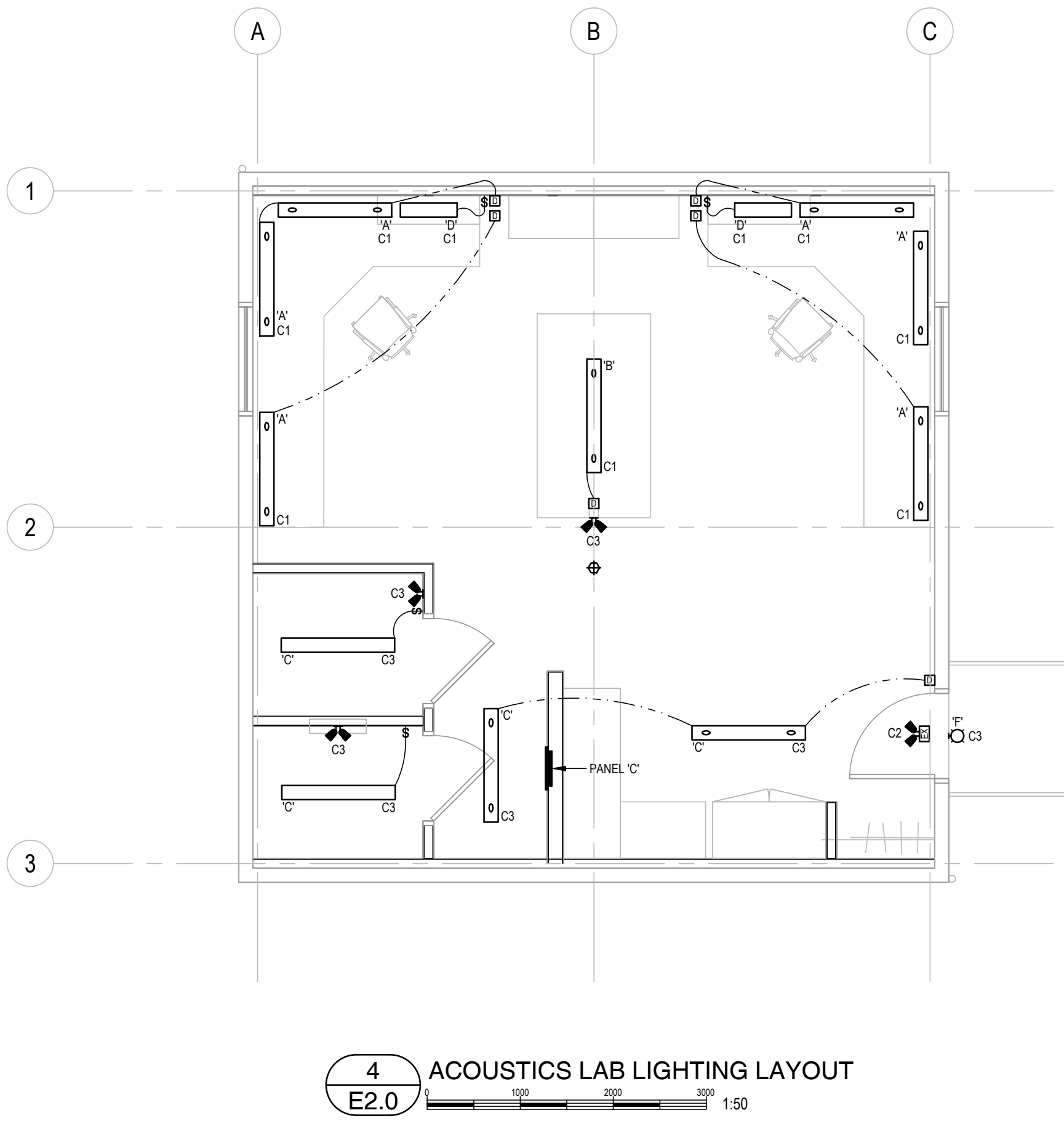
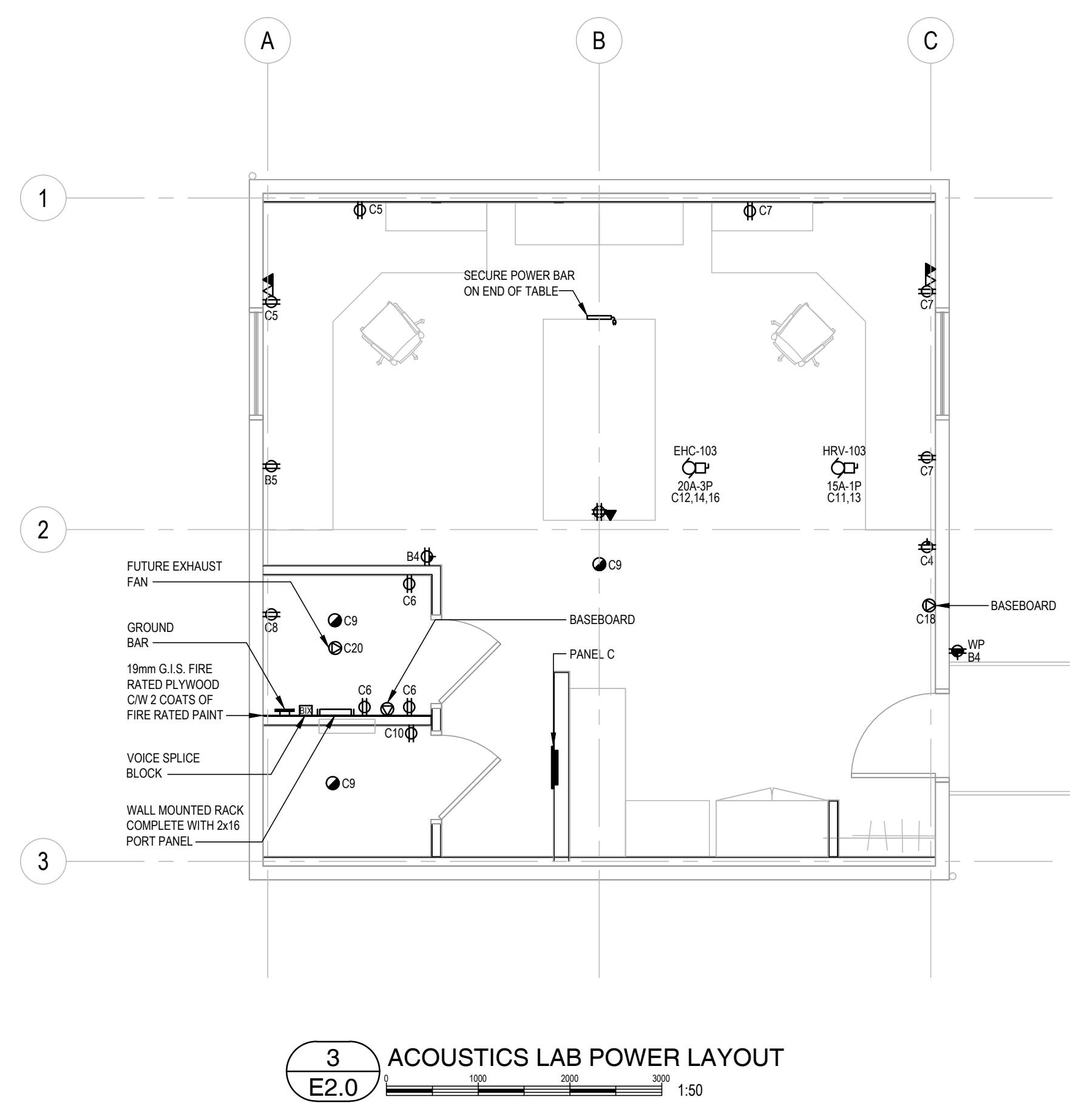
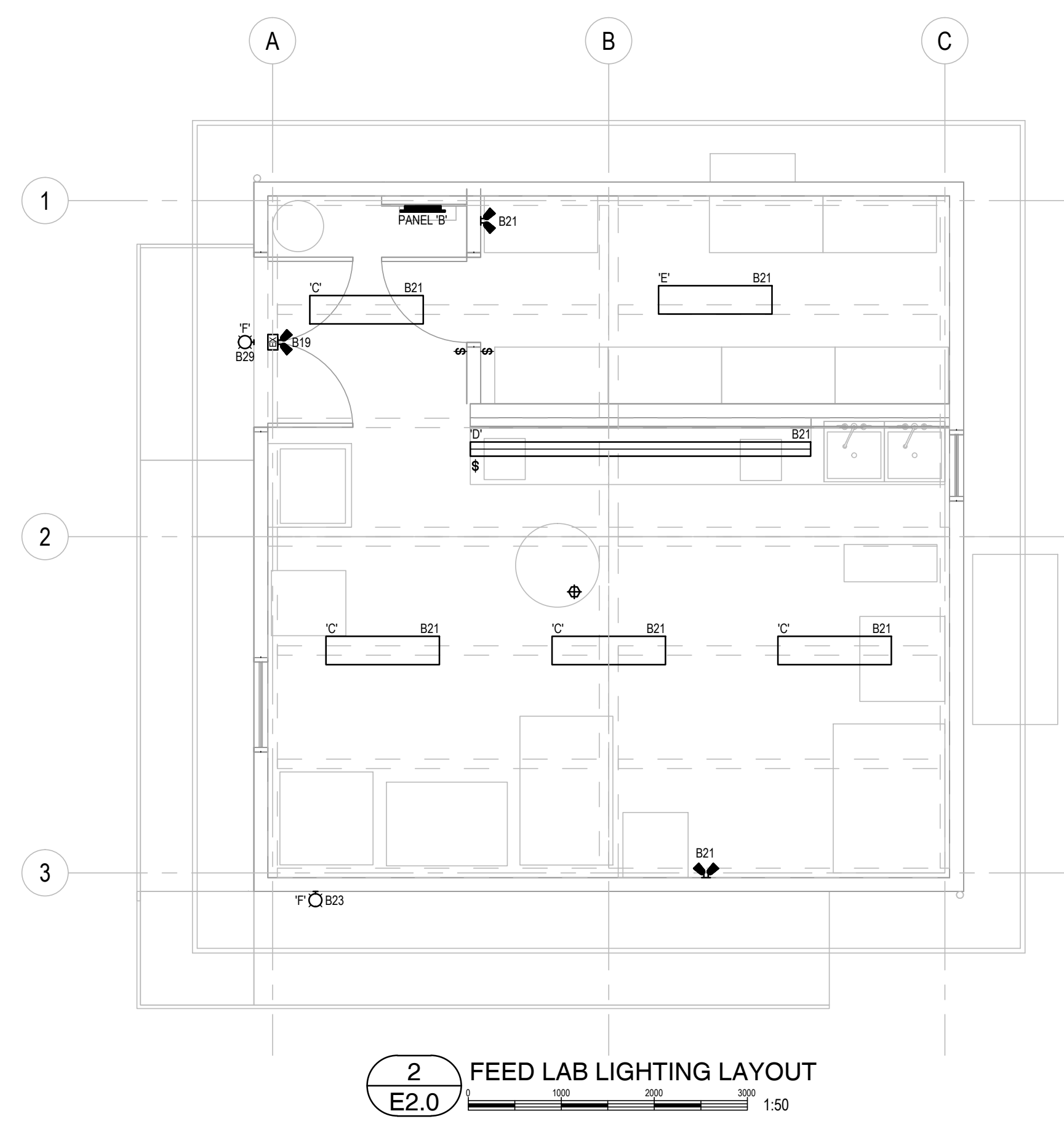
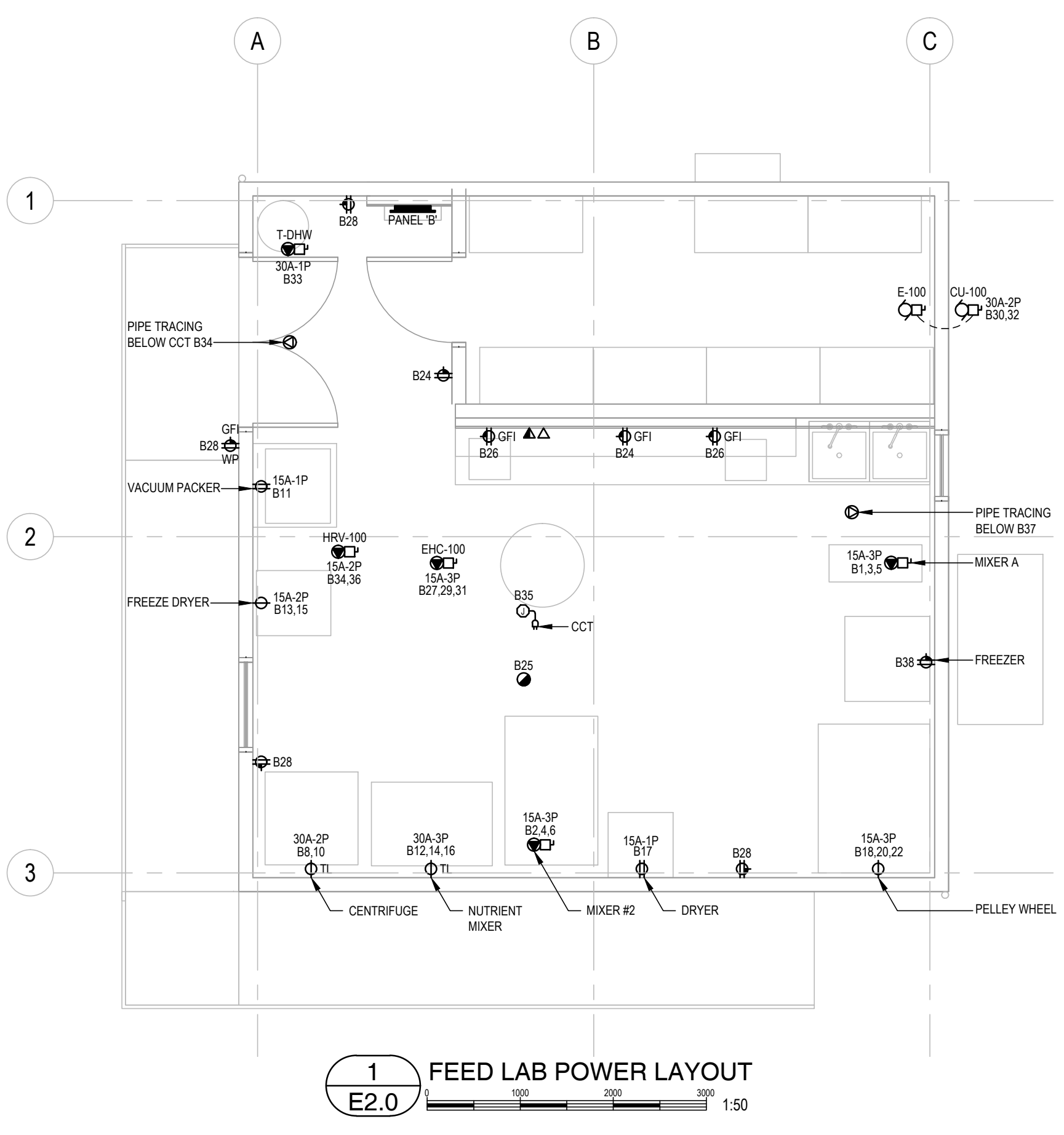
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NOTES:
 1. CABLES TO BE INSTALLED IN EXISTING CABLE TRAY WHERE AVAILABLE.
 2. PROVIDE WIDE 'J' HOOKS BEYOND CABLE TRAY. SECURE TO BUILDING STRUCTURE.
 3. FIRE SEAL RATED CORRIDOR WALL SEPARATIONS.



LUMINAIRE SCHEDULE:

	TYPE 'A' WALL MOUNTED LED LINEAR PROFILE UNIT. LUMINAIRE CAN BE ROTATED 350°, FROSTED WHITE ACRYLIC LENS, DIMMING DRIVER, BLACK, 700mm LONG, 1680 LUMENS 3000K
	TYPE 'B' SUSPENDED 1219mm LONG LED LUMINAIRE COMPLETE WITH SYMMETRICAL LENS, 3200 LUMENS, 30K, 120V, 0-10V DIMMING.
	TYPE 'C' SURFACE AND SUSPENDED 1200mm LONG LED LUMINAIRE COMPLETE WITH FROSTED LENS, 4000 LUMENS, 30K, 120V, 0-10V DIMMING.
	TYPE 'D' UNDER CABINET LUMINAIRE C/W ALUMINUM BODY WHITE FINISH, ACRYLIC LENS, 2700K, 90 CRI, REMOTE SWITCH CONTROL.
	TYPE 'E' IP65 RATED 4000K, 5000L, RUST PROOF, POLYCARBONATE ENCLOSURE AND LENS
	TYPE 'F' MINI WALL PACK, 1000L, 4000K, 120V, PHOTO CELL AND BRONZE FINISH
	EXIT GREEN PICTOGRAM STYLE (RUNNING MAN) WITH WITH 2x6V LED LAMPS AND EMERGENCY BATTERY BACK-UP
	EMERG LED EMERGENCY LUMINAIRE COMPLETE WITH 2x6W-12V LAMPS AND LONG LIFE MAINTENANCE FREE SEALED LED ACID BATTERY

1	ISSUED FOR 100% REVIEW	11/30/2017
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PROJECT NAME:

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4160 Marine Dr
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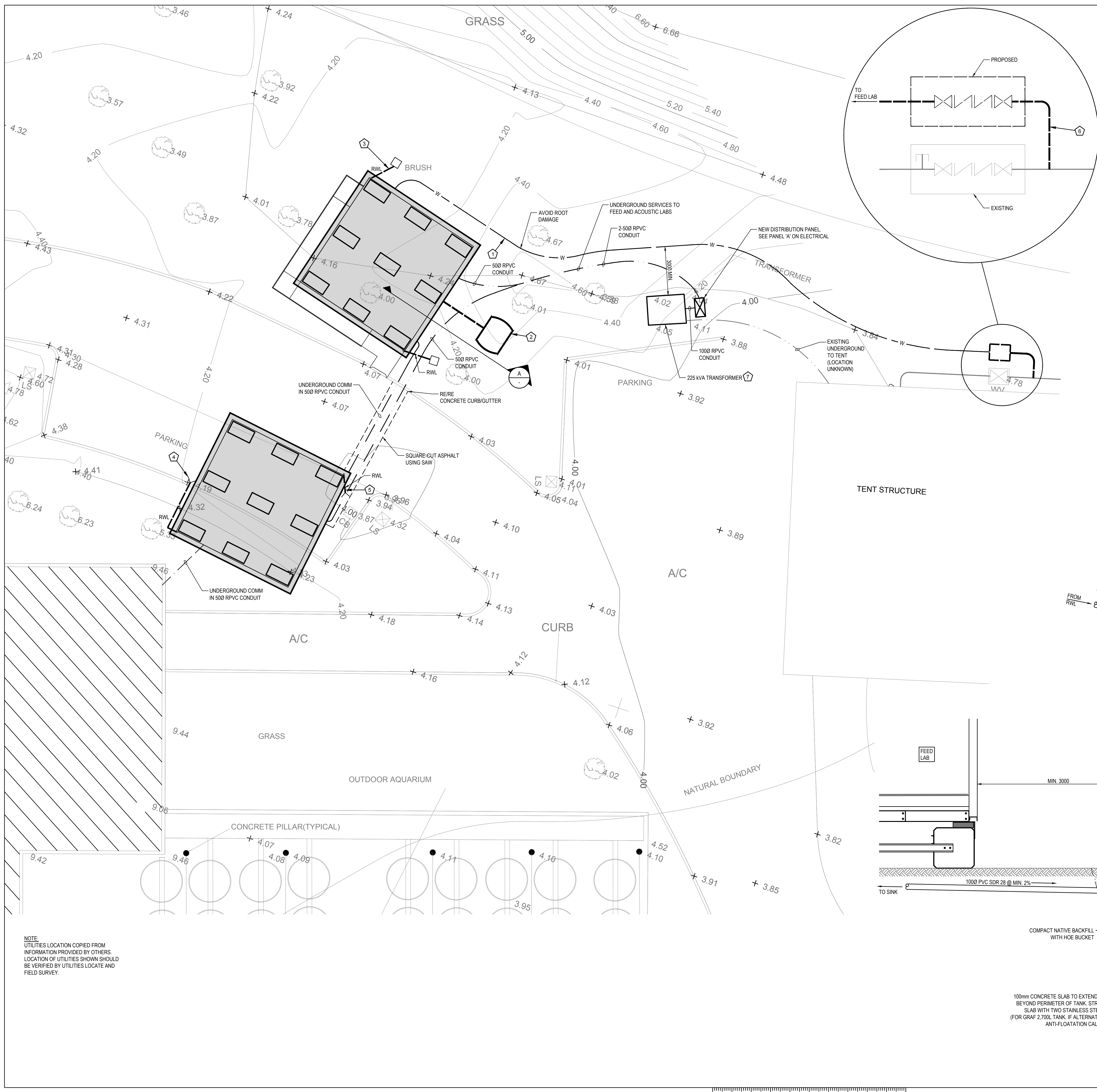
DRAWING TITLE:

LAB POWER AND LIGHTING LAYOUTS, AND DETAILS

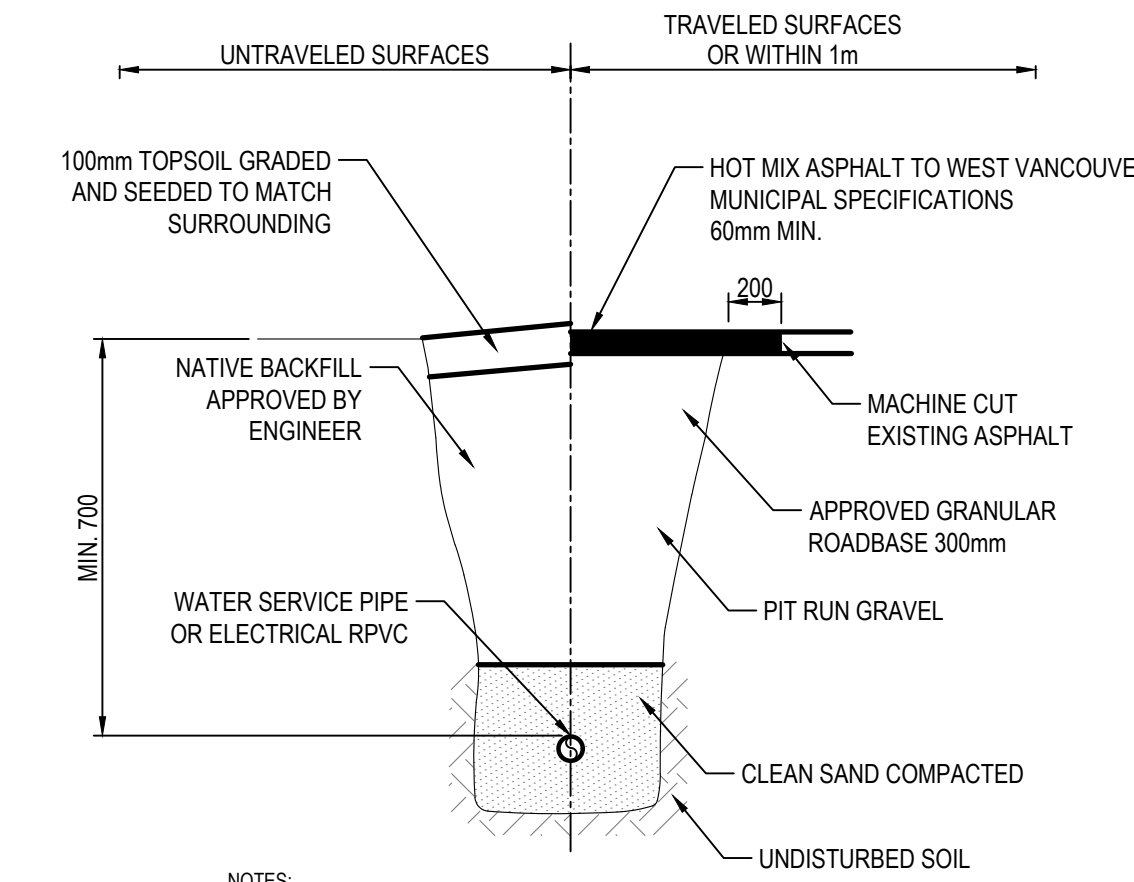
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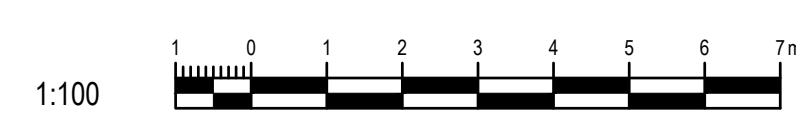
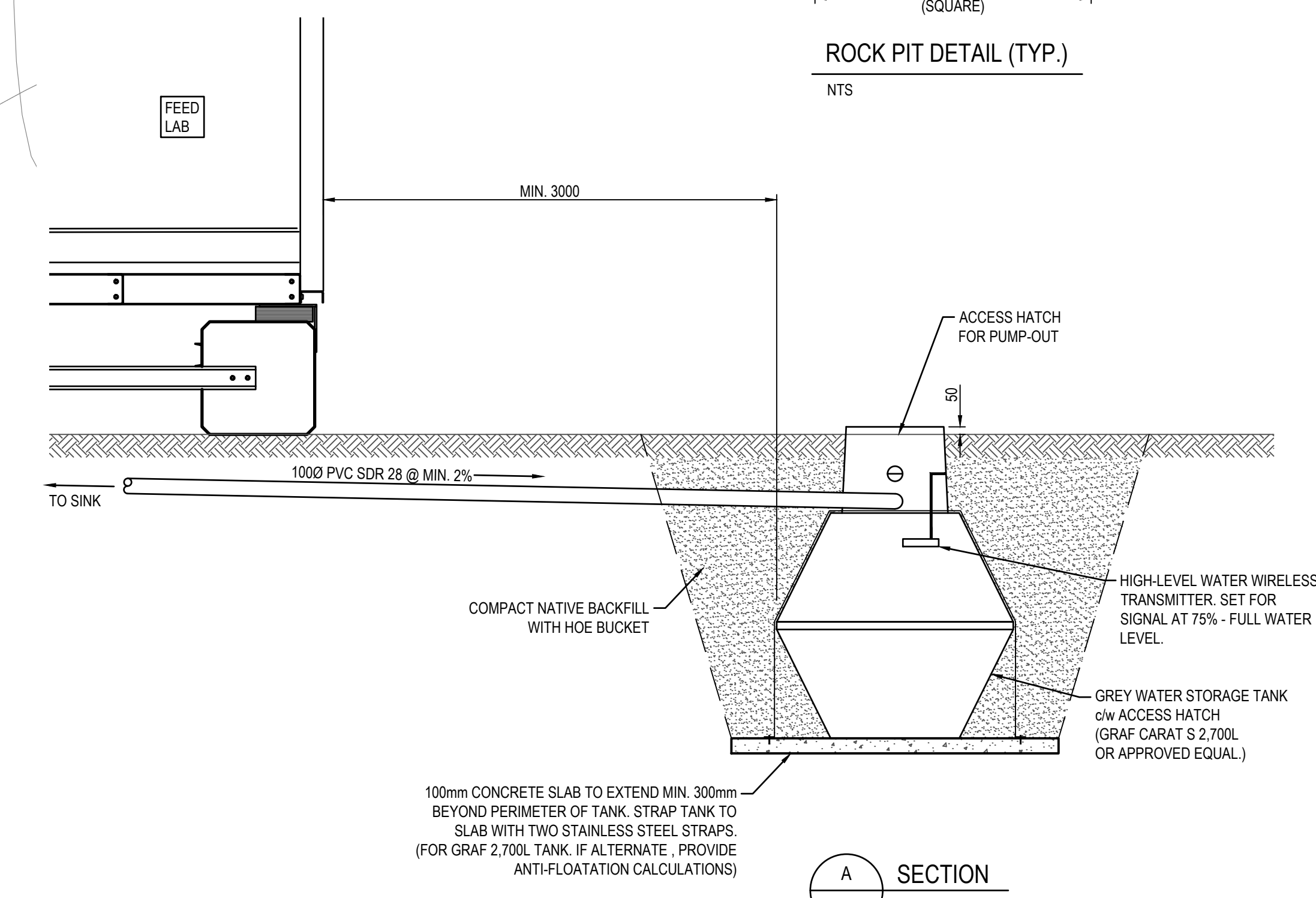
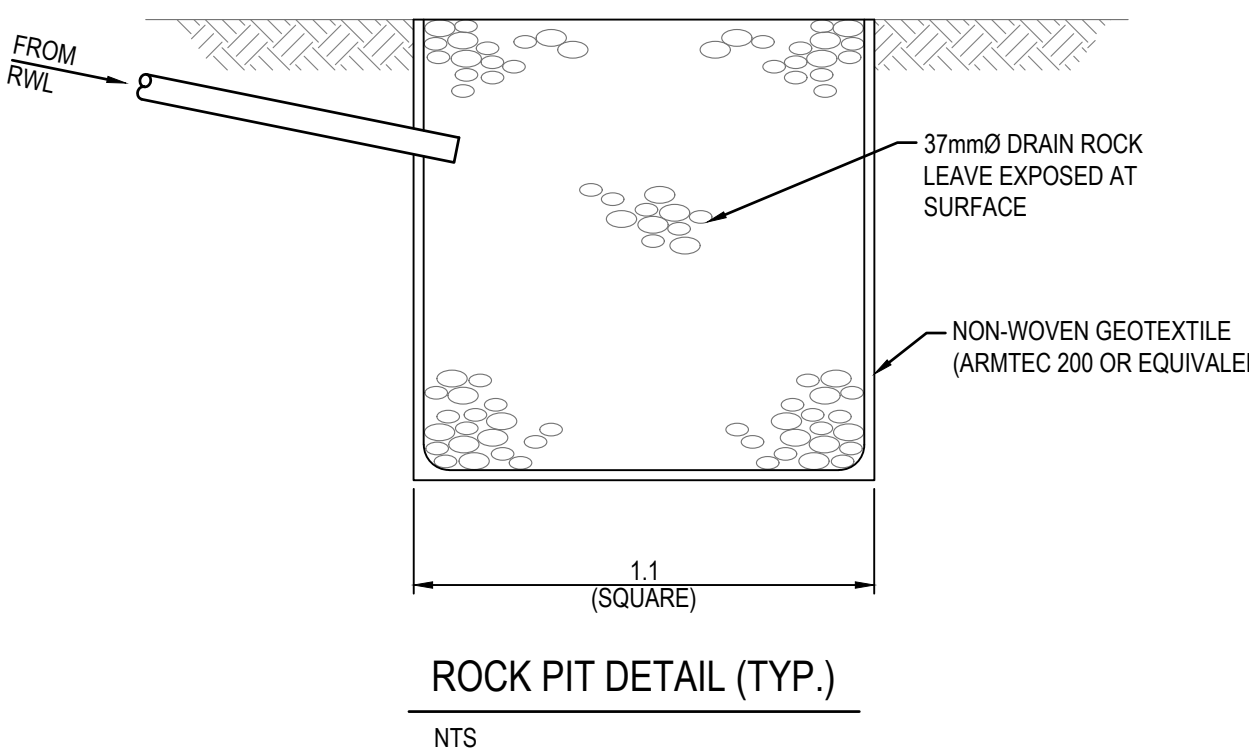
E2.0



- KEYNOTES:**
- 1. EXTEND 19mm PN10 PE SERVICE TO EXISTING 50mm PVC WATERMAIN. MAINTAIN MINIMUM 3.0m CLEARANCE FROM TRANSFORMER COUNTERPOISE. INSULATE AND HEAT-TRACE EXPOSED PIPE BELOW NEW FEED LAB (SEE ELECTRICAL AND MECHANICAL).
 - 2. GREY WATER STORAGE TANK c/w ACCESS HATCH. ACCEPTABLE PRODUCT "GRAF CARAT S 2700L". TANK TO BE EQUIPPED WITH WIRELESS LEVEL MONITOR WITH ALARM PANEL MOUNTED IN FEED LAB.
 - 3. APPROVED PRODUCT "AQUATEL D110". FINAL LOCATION TO BE DETERMINED IN FIELD.
 - 4. RAIN WATER LEADER: CONNECT TO ROCK-PIT. SEE DETAIL ON THIS SHEET. (TYPICAL FOR 2)
 - 5. DIRECT RAIN WATER LEADER DISCHARGE TO GUTTERLINE. DO NOT BLOCK GUTTERLINE TO ALLOW ROAD DRAINAGE TO CATCH BASIN.
 - 6. DISCHARGE RAIN WATER LEADER OVER PAVEMENT TO CATCH BASIN.
 - 7. MAKE CONNECTION TO EXISTING PVC MAINLINE UPSTREAM OF EXISTING DCV. INSTALL NEW DVC IN VALVE BOX. ACCEPTABLE PRODUCT = WATTS 007. DVC TO INCLUDE 2 BALL VALVES AND TEST COCKS. VALVE BOX TO BE INSULATED. ALL JOINTS TO BE WELDED OR MECHANICALLY RESTRAINED.
 - 8. CONTRACTOR TO LOCATE EXISTING ELECTRICAL SERVICES TOPFROM TRANSFORMER PRIOR TO CONSTRUCTION.
 - 9. EXISTING SERVICES SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY AND CANNOT BE GUARANTEED FOR ACCURACY. CONTRACTOR TO CONFIRM LOCATION OF ALL EXISTING SERVICES IN THE FIELD PRIOR TO CONSTRUCTION.
 - 10. CONTACT BC-1 (1-800-474-6886), BC HYDRO, SHAW CABLE, AND FORTIS GAS FOR UNDERGROUND UTILITY LOCATIONS PRIOR TO CONSTRUCTION.



- NOTES:**
1. UNDER ROADS AND WALKWAYS, BACKFILL SHALL BE PITRUN GRAVEL COMPACTED TO 95% SPD.
 2. ALL TRENCHES AND EXCAVATIONS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS AND REGULATIONS OF THE WORKERS COMPENSATION BOARD.



NOTE:
UTILITIES LOCATION COPIED FROM INFORMATION PROVIDED BY OTHERS. LOCATION OF UTILITIES SHOWN SHOULD BE VERIFIED BY UTILITIES LOCATE AND FIELD SURVEY.

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numberTEN architectural group

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JOB NO. 171-16763-00

2	100% REVIEW	2017/11/30
1	INSULATED PANEL ORDER	
Revision/Revision	Description/Description	Date/Date
Client/Client		

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PREETIPAL PAUL

Drawing title/Titre du dessin

**SITE PLAN
AND SERVICING**

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
-	C1.0 OF	2

