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Plans and Specifications Approved in accordance with The New Zealand Building Code and Approved Documents. To be retained on the building site and produced on request
drs 20/04/22

ARTISTIC IMPRESSION

FINAL WORKING DRAWINGS

NEW RESIDENCE for JUSTIN & OLIVIA

LOT 13 WOOING TREE _ CROMWELL

Lot No : 13, Deposited Plan : TBC

Central Otago District Council
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20/04/22

Build 7

PO Box 21191
Edgeware
Christchurch 21191
New Zealand

www.build7.co.nz

GENERAL NOTES:

Ground Conditions
Refer to Geo Technical Report.

Smoke Alarms (hush type)
Smoke Alarms to be fitted within 3.0m of sleeping areas and on escape routes as indicated on plan.

Miscellaneous
Dimensions are shown to frame thickness as shown on plans.
Entry through external doors.
Mechanical ventilation.
Air seals to have PEF rod and low expansion foam.
All windows and doors entered in room unless shown otherwise.

Wall Framing

Designed to:	High Wind Zone
Stud Height:	2400mm, 3710mm max living wall, 3460mm max master wall
External Studs:	90 x 45mm H1.2 SG8 @ 400mm crs
Raking Studs:	2/90 x 45mm H1.2 SG8 @ 400mm crs
Internal Studs:	90 x 45mm H1,2 SG8 @ 600mm crs
All nogs @:	800mm centres max
Nogs @:	480mm crs max for weatherboards

Building Wrap
Masons UNI wrap

Doors

Internal:	1980mm
Wardrobe:	1980mm
Type:	Hollow core flush panel

Roof Cladding
45° pitch. 0.40mm thick Trimline COLORSTEEL®MAXX® on Thermkraft 407 or similar, installed to manufacturers specifications.

Wall Cladding
1) Vertical Shiplap weatherboards
2) Vertical metal tray cladding
All claddings to be installed over 45 x 20mm castellated cavity system, and to be installed to cladding manufacturer's specifications.

Floor Finishes

Carpet:	Bedrooms, Hallway
Tiles:	En-suite, Bathroom, WC
Concrete:	Garage
Vinyl:	Remainder of house

Aluminium Joinery
Double glazed to NZS 4223:3:2016

Water Heating
300L hot water cylinder

Kitchen Cooktop
Electric

FOUNDATION NOTES:

305mm thick 25.0MPa Firth Codemark RibRaft floor reinforced with ductile Class E mesh on 220mm ribraft pods on 0.25mm thick polythene DPM, on 25mm max sand blinding layer, on 150mm min layer compacted granular fill. All dimensions over foundation & slab face.

Avoid construction joints and shrinkage under tiled areas. No shrinkage control cuts to be placed in parallel under framing that is to be used as a bracing element / load bearing wall. Maximum dimension in plan between shrinkage controls is 6m with mesh. Standard joint to be formed with 25mm min saw cut and free joint to be formed at 24m centres max.

Supplementary reinforcing (2/D12 1200mm long) to internal corners where shrinkage control joints do not meet the internal corner in order to comply with NZS 3604:2011 clause 7.5.8.6.4.

WC riser locations have an assumed offset of 140-160mm from internal framing. This offset is to be confirmed by reference to the manufacturers technical specifications. Contractor is to manufacturers documentation to determine the correct location for all waste pipes positioned through floor slabs.

Minimum heights of concrete slab on ground above surrounding ground levels to be 150mm to sealed surface, 225mm to unsealed ground.

Make allowances in slab for earthing of Meter Board. Run Earth wire through PVC pipe. Earth bar to be bonded to the reinforcing mesh.

Provide recess in slab for garage doors, confirm requirements with garage door supplier.

Read foundation & slab plan in conjunction with truss designers layout and specifications for slab thickening locations.

All reinforcing to be Ductility Class 500E, in accordance with NZS.

Bottom Plate Fixings
Pryda Bottom Plate Fixing Anchors as per manufacturers specs @ 900mm crs on all external walls and within 150mm of each end of the bottom plate to interior load bearing wall. DPC between bottom plate and floor slab.

Protection of Fixings
Fixings shall comply with NZS 3604:2011 section 4 Durability Tables 4.1-4.3.

Concrete Strength
All concrete to comply with NZS 3604:2011 Section 4 Durability clause 4.5.2. To be 25.0MPa minimum.

ROOF NOTES:

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Pitch
45°, 36°

Downpipes
80mmØ COLORSTEEL® downpipes to comply with E1 / AS1

Spouting
Continuous COLORSTEEL® spouting with external brackets @ 800mm crs max. Colonial Quad Profile.

Fascia
COLORSTEEL® Endura® 185 Fascia with drip edge

Flashings
0.55 BMT COLORSTEEL® provided by roofing manufacturer to match roof finish

Cladding
0.4mm thick T-Rib COLORSTEEL®Endura® installed to manufacturers specifications. Ironsand finish.

Roofing Underlay
Thermakraft Covertek 407, or similar approved

Purlins
70 x 45 H1.2 treated SG8 purlins @ 900mm crs fixed to trusses / rafters with 80mm x 10g screw

Roof Framing
90 x 45m H1.2 SG8 nail plate trusses @ 900mm crs fixed according to manufacturers specifications.
Scissor trusses over Living, Dining & Master bedroom.
Attic trusses over Garage & Kitchen.
Standard trusses over remainder of house.

Top Plate Fixings
Top plate - stud connection Fixing type B
2 / 90mm nails x 3.15mm dia plain steel wire nails driven vertically into stud +
- LUMBERLOK 6kN Stud Anchor OR
- 2 x LUMBERLOK CPC40 OR
- LUMBERLOK Stud Strap

Bracing
LUMBERLOK high tensile Strip Brace, fixed to top chord and top plate.

Refer to the LUMBERLOK documents in the specifications for purlin / batten fixing, truss fixing, stud to top plate fixing and lintel fixing schedules.

Referenced Documents
MRM
NZ Metal roofing manufacturers inc

Read in conjunction with truss and frame design.

PLUMBING & DRAINAGE NOTES:

General
All Plumbing and Drainage by a Registered Plumber and Drain Layer to comply with current regulations. As built drawings are to be prepared prior to backfilling any trench or covering any work.

Water Supplies
All water supplies are to be installed in accordance with G12 / AS1.
The water supply system shall be tested to ensure watertightness. An acceptable testing method is to:
a) Subject the hot and cold system to a pressure of 1500kPa for a period of not less than 15 minutes, and
b) Inspect the system to make sure there are no leaks.
As per G12 / AS1.

Water Supplies Pipe Sizes
All water pipes Polybutylene. Butline.
Pipe to shower: Ø20mm
Pipe to basin and WC: Ø15mm
Pipe supports located at 1.5m max, at vertical pipe run, and 0.75m max at horizontal pipe run.
Pipe design for runs no greater than 20m.

Water Heating 300L Hot water cylinder

Pipe Insulation
ISOPIPE Closed Cell Elastomeric Insulation or similar 13mm min.

Sanitary Plumbing and Drainage
All Sanitary Plumbing and Drainage to be installed in accordance with AS / NZS 3500.2:2018.

Protection From Freezing
Where there is the likelihood of freezing, hot and cold water supply shall be protected in the following manner
a) Piping outside of the building thermal envelope shall be insulated,
b) Piping buried in the ground shall be insulated or installed below a level affected by freezing, and
Storage water vent pipes shall be insulated.

Pipe Testing
All below ground uPVC drainage pipework is to be tested for watertightness in compliance with AS / NZS 2032. This has to be undertaken before any backfilling of trenches is done.

Note
ORG to be positioned so top of gully dish is no less than 150mm below overflow of lowest fixture.

Stormwater Drainage
All stormwater drainage to be installed in accordance with E1 / AS1.

Drain Bedding / Backfilling
Refer to E1 / AS1 Figure 13.

FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

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ksu 24/02/2022

SCALE : AT A3
DATE : 26/01/2022
PROJECT No : #Pln

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drs 20/04/22

COVERING NOTES

1
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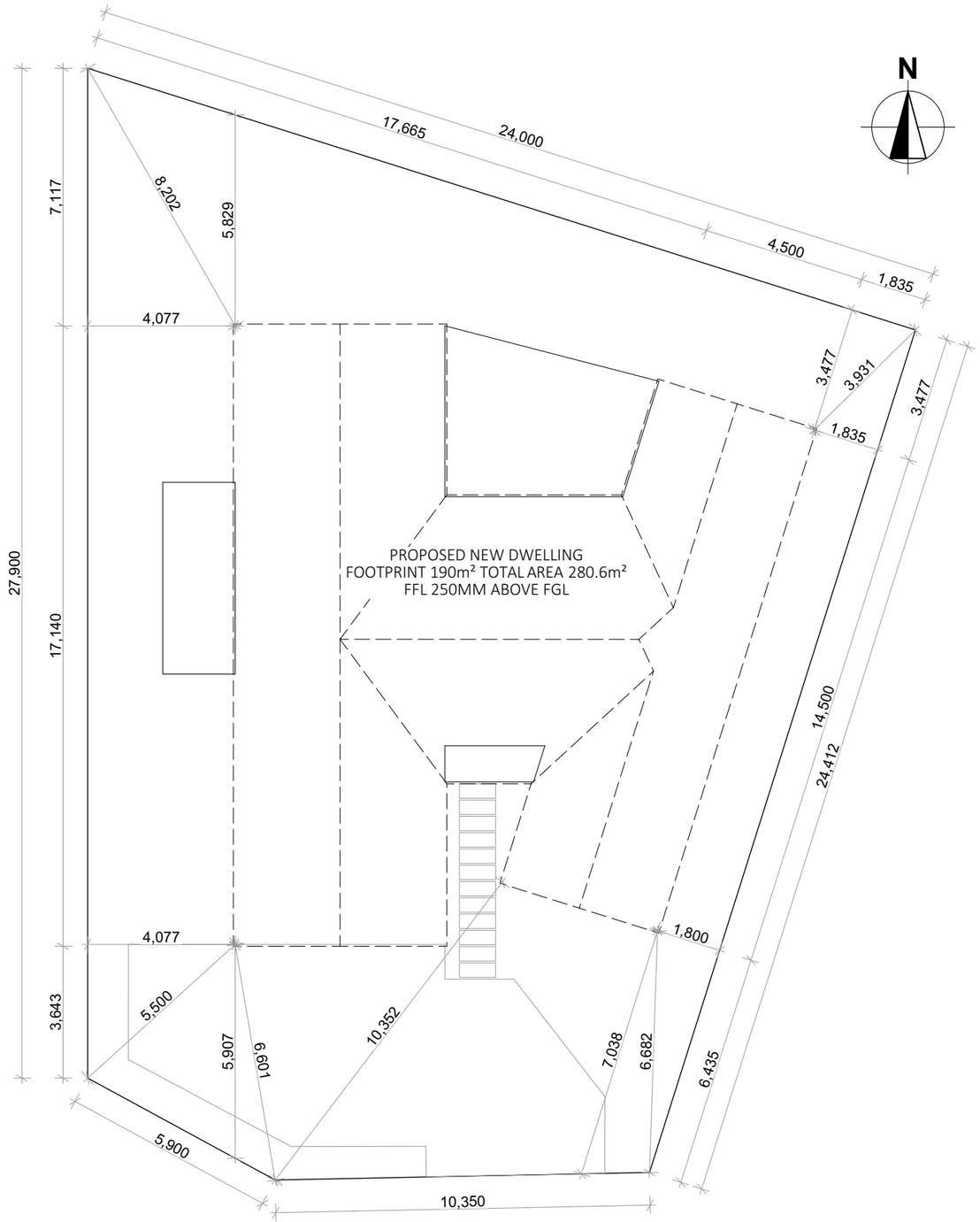

1 Site Plan 1:150

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SITE PLAN NOTES:

LEGAL DESCRIPTION

LOT 13, WOOING TREE, CROMWELL
PARCEL: LOT 13 DP TBC

TA:	CENTRAL OTAGO DISTRICT
PLANNING ZONE:	RURAL RESOURCE AREA

GENERAL SITE NOTES

Wind Zone:	High
Earthquake Zone:	2
Snow Zone:	N4
Exposure Zone:	B
Maximum Building Height:	8m
Site area:	525m²
Maximum building coverage:	40%
Building footprint:	190.3m² over foundation
Driveway & Paths:	69m²
Outdoor areas:	35m²
Site coverage:	190.3m²
Total impermeable	36.2%
Permitted:	40%

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LANDSCAPING

Lawns as shown on plan.
Driveway and paths as shown on plan.
Outdoor areas as shown on plan
Trees as shown on plan.
FGL to be 250mm below FFL.

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GENERAL

Concept subject to TA rules and regulations.
All dimensions to be confirmed on site.

SEDIMENT CONTROL

All ground cover / vegetation outside of immediate build area to be maintained throughout build period, including grass verge street frontage.
Any stockpiles of soil / excavated material are to be kept to the rear of the site and covered with impervious sheets.
Roof downpipes are to be connected to the storm water system as soon as practical when roof cladding is installed. Ensure the water runoff from downpipes is directed away from the build area, but not onto any neighbouring properties.

STEPS & PATHS

Steps / appropriate landscaping is to be provided if the drop from any external door is greater than 190mm FFL TO FGL
All access routes must provide a non-slip surface (NZBC D1/AS)
Floor tiles to be non-slip and have a slip coefficient value of 0.35-0.65 for grit finished ceramic tiles
Convey surface water from sealed driveway to an approved outfall

FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:150 AT A3
DATE : 26/01/2022
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SITE PLAN

2

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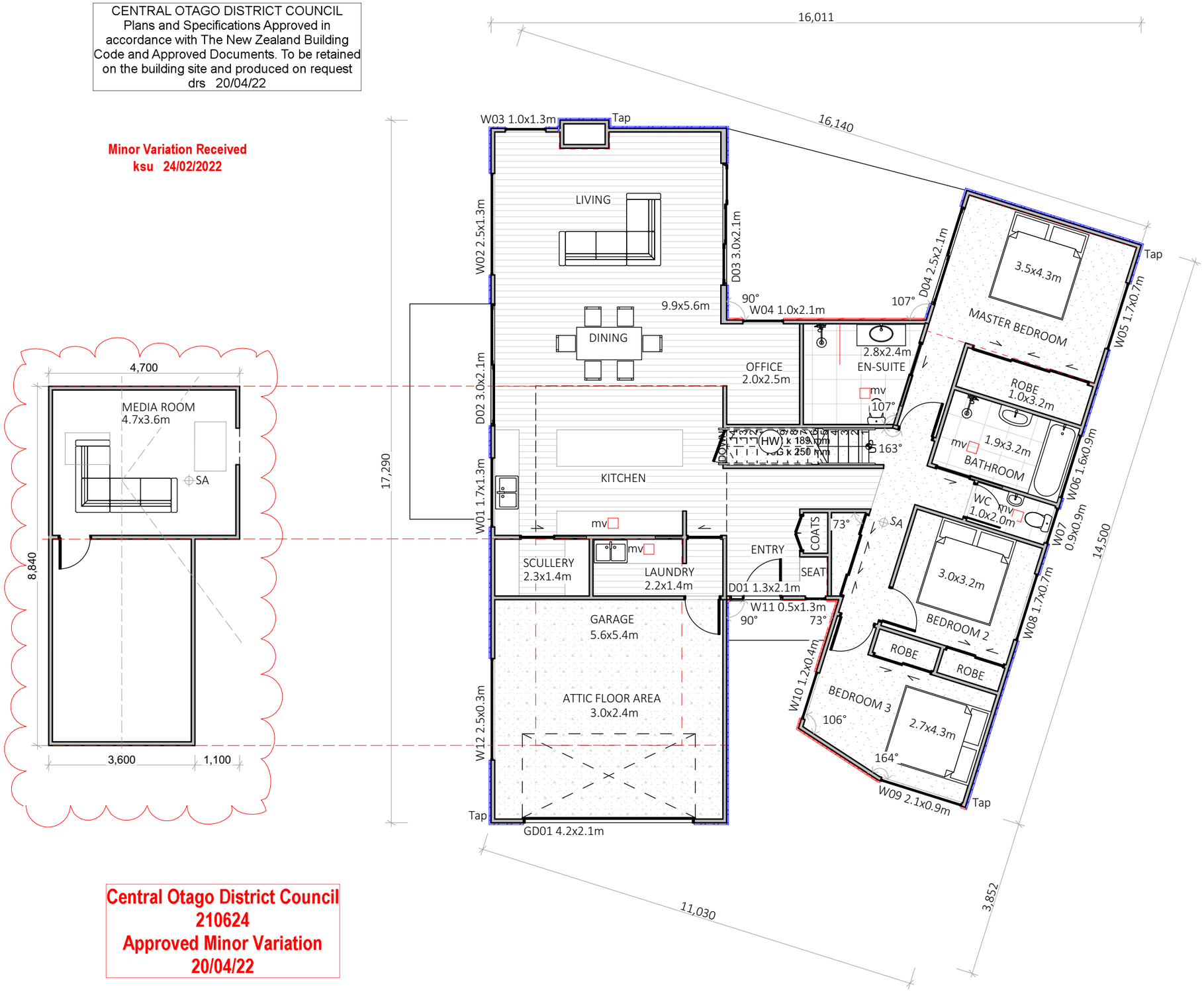

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Floor Plan Notes:

Floor Area (over external framing) 190.3m² + 35.96m²
Total Floor Area 226.26m²
Concrete Pad, FFL FGL + 250mm

- 90 x 45mm H1.2 SG8, 2400mm high wall framing
- Scissor trusses Living, Dining & Master Bedroom
- Attic trusses over Garage
- Standard trusses over remainder of building
- Standard GiB ceilings throughout house
- 13mm GiB ceiling lining, square stopped
- 10mm GiB wall lining, Aqualine to wet areas
- V-groove to master wall, chimney, behind bench seat, indicated on plan with red dashed line
- Concrete floor in garage
- Carpet to bedrooms & Hallway
- Tiles to WC, Bathroom & En-suite
- Laminate flooring to remainder of house
- Internal door heights 1980mm
- All internal door openings 900mm wide
- All aluminium joinery to be double glazed, with Flaxpod finish.
- Window head heights 2070mm
- External door heights 2070mm
- Smoke alarms within 3m of bedrooms
- Mechanical vents to kitchen, bathroom, en-suite & laundry, to be compliant with G4
- 1000x1000mm acrylic shower to Bathroom
- 300L hot water cylinder

Claddings:

- 0.40 Vertical Trib Endura
- 150 x 32 vertical shiplap weatherboards

Claddings are to be installed over 20mm castellated cavity battens. All claddings are to be installed as per manufacturer's specifications.

Openings wxh:

D01	1300 x 2070mm hinged door with side light
D02	3000 x 2070mm sliding door
D03	3000 x 2070mm sliding door
D04	2500 x 2070mm sliding door
GD01	4200 x 2070mm sectional garage door
W01	1700 x 1300mm
W02	2500 x 1300mm
W03	1000 x 1300mm
W04	1000 x 2070mm
W05	1700 x 700mm
W06	1600 x 900mm
W07	900 x 900mm
W08	1700 x 700mm
W09	2080 x 900mm
W10	1200 x 400mm
W11	500 x 1300mm
W12	2500 x 300mm

WORKING DRAWINGS
FINAL

1 Ground Floor Presentation 1:100

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:100 AT A3
DATE : 26/01/2022
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PRESENTATION FLOOR PLAN

3
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Skylighted deleted 24/11/2022 MV

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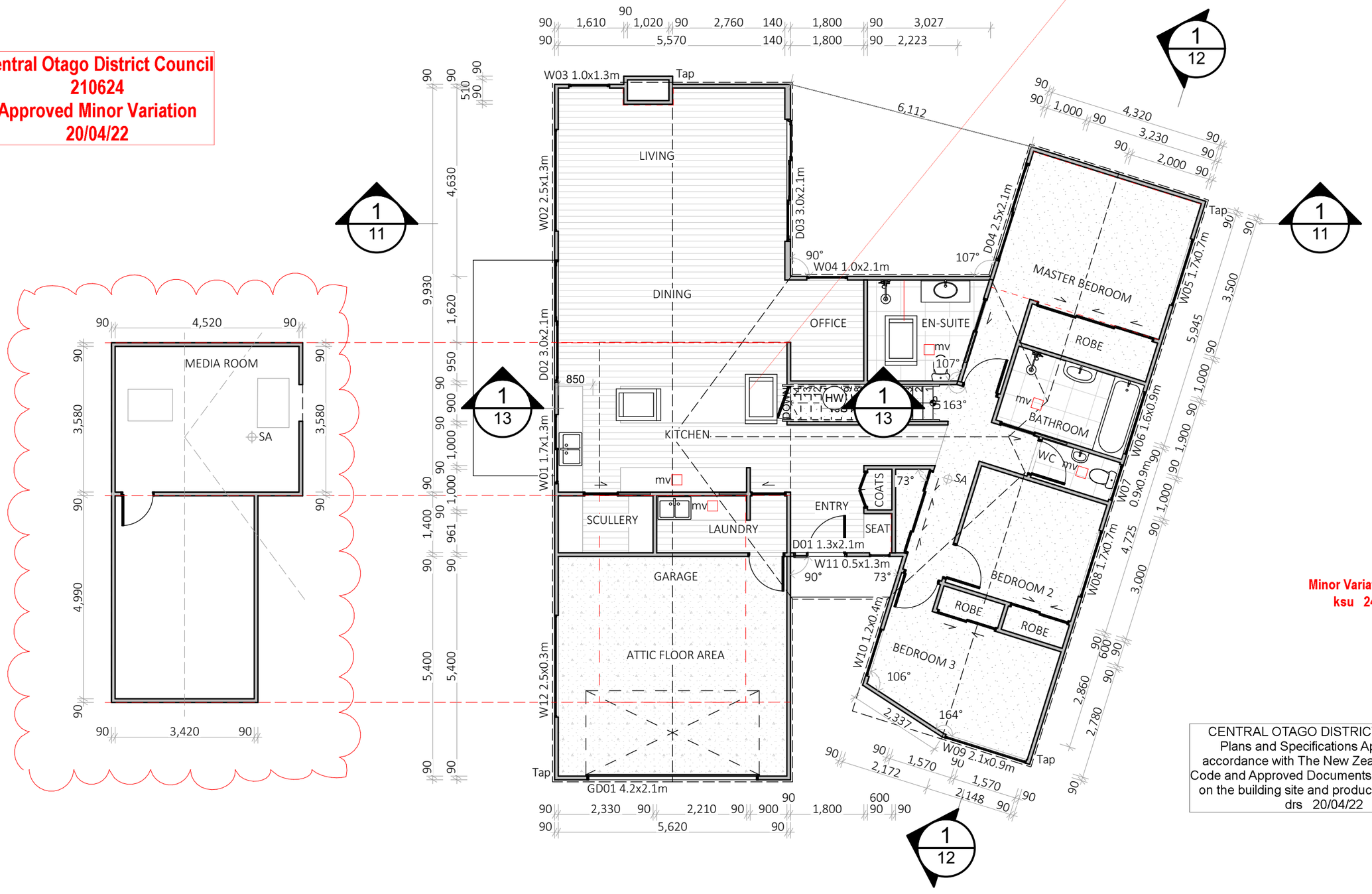

1 Ground Floor Plan 1:100

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FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

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DIMENSIONED FLOOR PLAN

4
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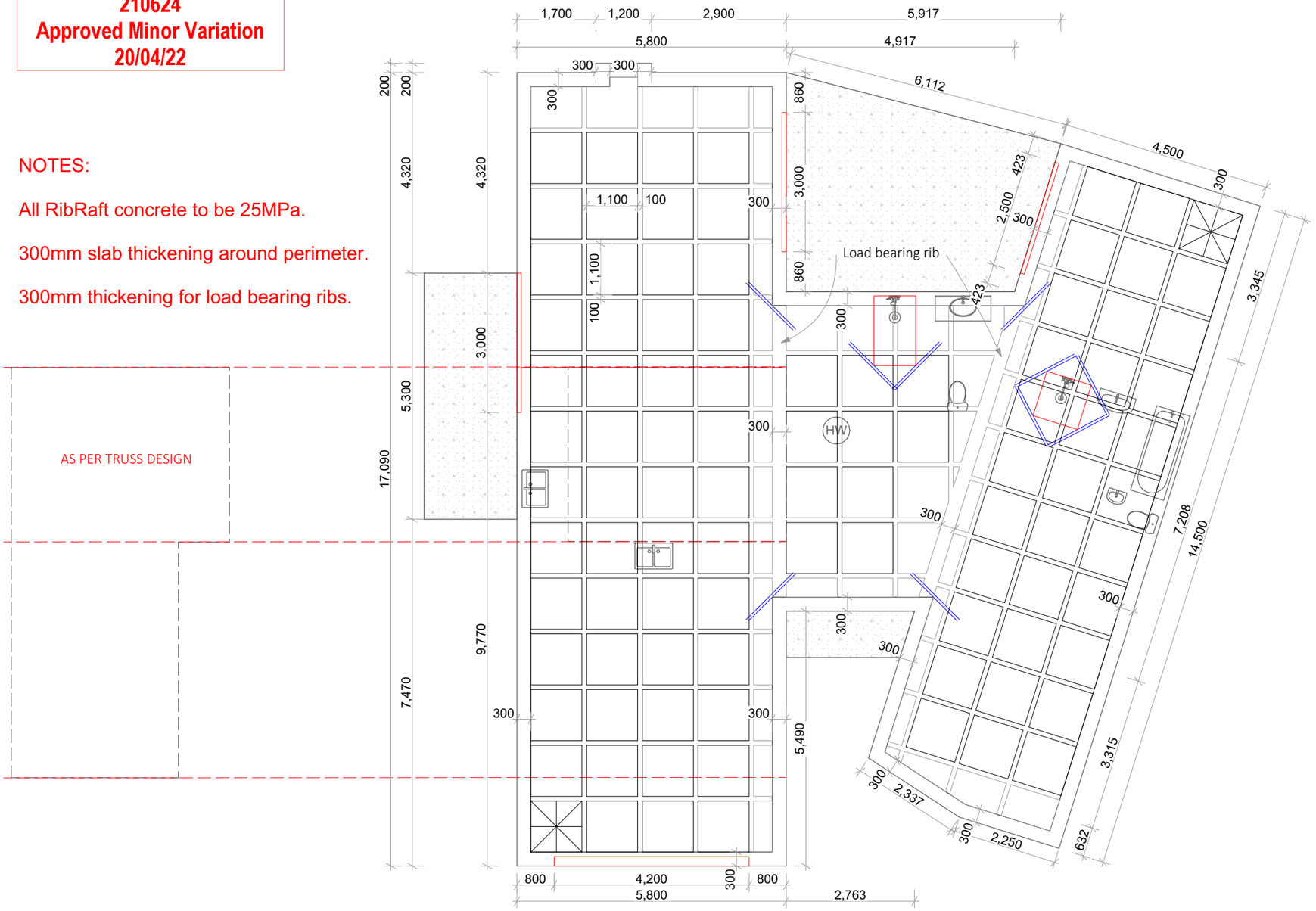
NOTES:

All RibRaft concrete to be 25MPa.

300mm slab thickening around perimeter.

300mm thickening for load bearing ribs.



Legend

- Pod set-out starting location
- Full pod (1100 x 1100mm)
- Partial pod
- Re-entrant corner steel 2HD12
  1.5m long diagonal crack control bars at re-entrant corners and around shower recesses as shown on plan
- Shower rebate
- 120mm thick concrete patio
- 200mm thick concrete

All reinforcing is to be Ductility Class 500E, in accordance with NZS 4671.

NOTE: RIBRAFT SLAB FOUNDATION SYSTEM TO COMPLY WITH MANUFACTURERS REQUIREMENTS FOR FIRTH RIBRAFT

From Firth RibRaft Technical Manual:

- The structure supported by the system is constructed in a location where Seismic Hazord Factor Z (defined in NZ1170.5) is less than or equal to 0.45 (refeer to Figure 6).
- Only ground floor walls of the structure supported by the system are permitted to be "heavy external walls" (as defined in clause 3.3).

Dead load cases of structures covered by these designs are:

- Heavy external walls with total mass greater than 60kg/m² - e.g. timber framing with masonry veneer or partially filled 20 series masonry blocks.
- Midfloors with total mass not exceeding 60kg/m² - e.g. timber framing and flooring, including ceiling linings.

FINAL WORKING DRAWINGS

1 Ground Floor Foundation & Slab Plan 1:100

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

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DATE : 26/01/2022
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FOUNDATION & SLAB PLAN

5
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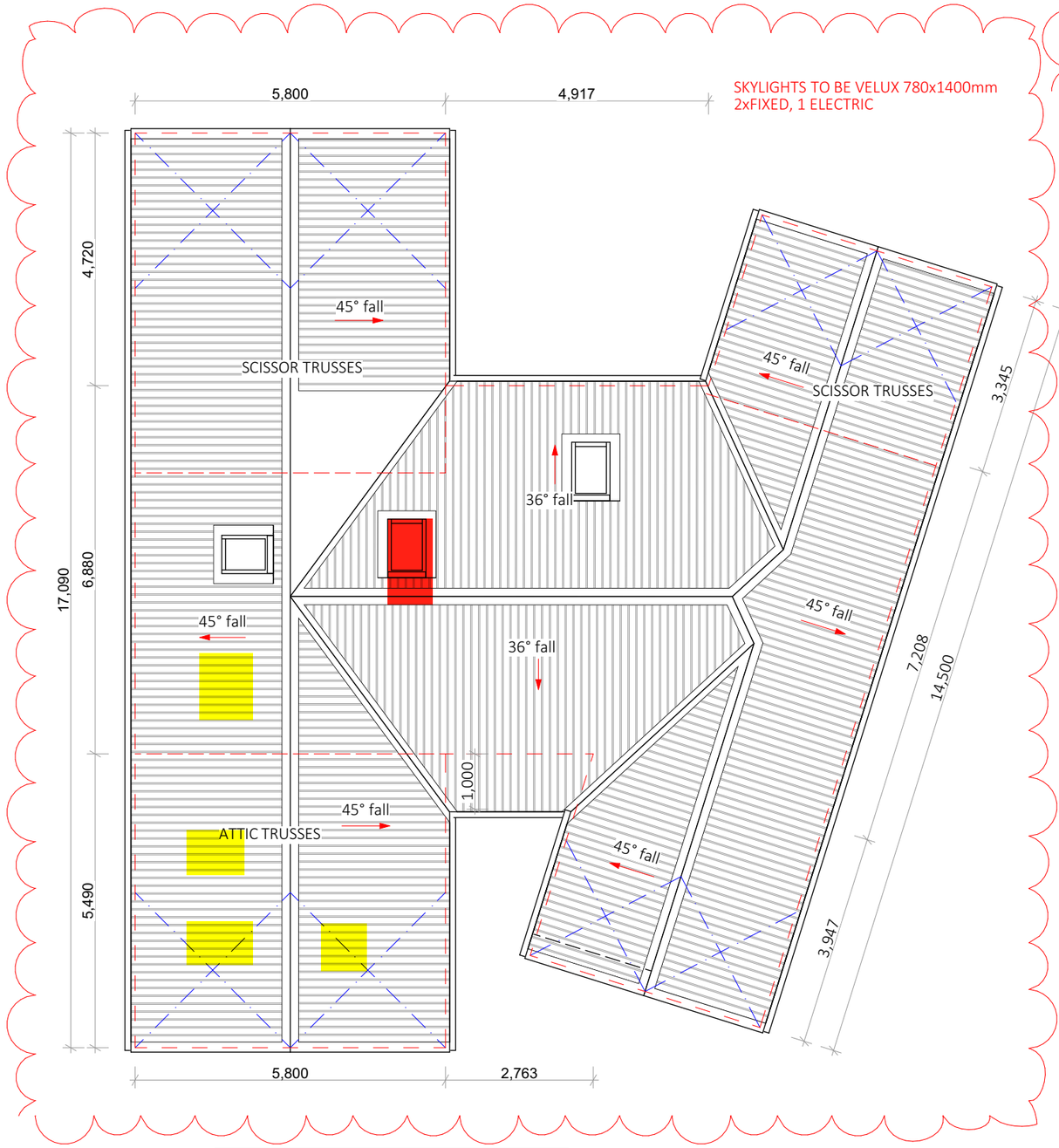

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1 deleted

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ROOF NOTES

Pitch
45° fall, 36° fall as shown on plan

Area
264m²

Eaves
No eaves, 1000mm at Entrance as shown on Plan.

DP
Ø80mm COLORSTEEL® downpipes

Spouting
Continuous COLORSTEEL® spouting, Colonial Quad profile, Endura

Fascia
185 Fascia, COLORSTEEL® Endura with drip edge

Flashings
COLORSTEEL® flashings as provided by roofing manufacturer to match roof finish

Cladding
COLORSTEEL®ENDURA® T-Rib roofing iron, installed to manufacturers specifications

Underlay
Thermakraft 407 self supporting roof underlay, or similar approved

Trusses
- 90 x 45 H1.2 SG8 timber trusses
- Scissor trusses over Living, Dining & Master bedroom
- Attic trusses over Garage & Kitchen
- Standard trusses over rest of building

Red Dashed Line
Outline of building below

Blue Dash-dot-dashed Line
Roof bracing, 90 x 45mm SG8 H1.2 at max 45° as per NZS 3604 fig 10.23

Fixings
Truss fixings as per truss design.
Top plate - stud connection Fixing type B
2 / 90mm nails x 3.15mm dia plain steel wire nails driven vertically into stud +
- LUMBERLOK 6kN Stud Anchor OR
- 2 x LUMBERLOK CPC40 OR
- LUMBERLOK Stud Strap

Penetrations
All roof penetrations shall be flashed as per NZBC E2/AS1 External Moisture section 8.4 profiled metal roof cladding (8.4.17 Roof Penetrations) as shown in Figures 53 & 54.

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FINAL WORKING DRAWINGS

1 Roof Plan 1:100

Build 7

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ROOF PLAN

6

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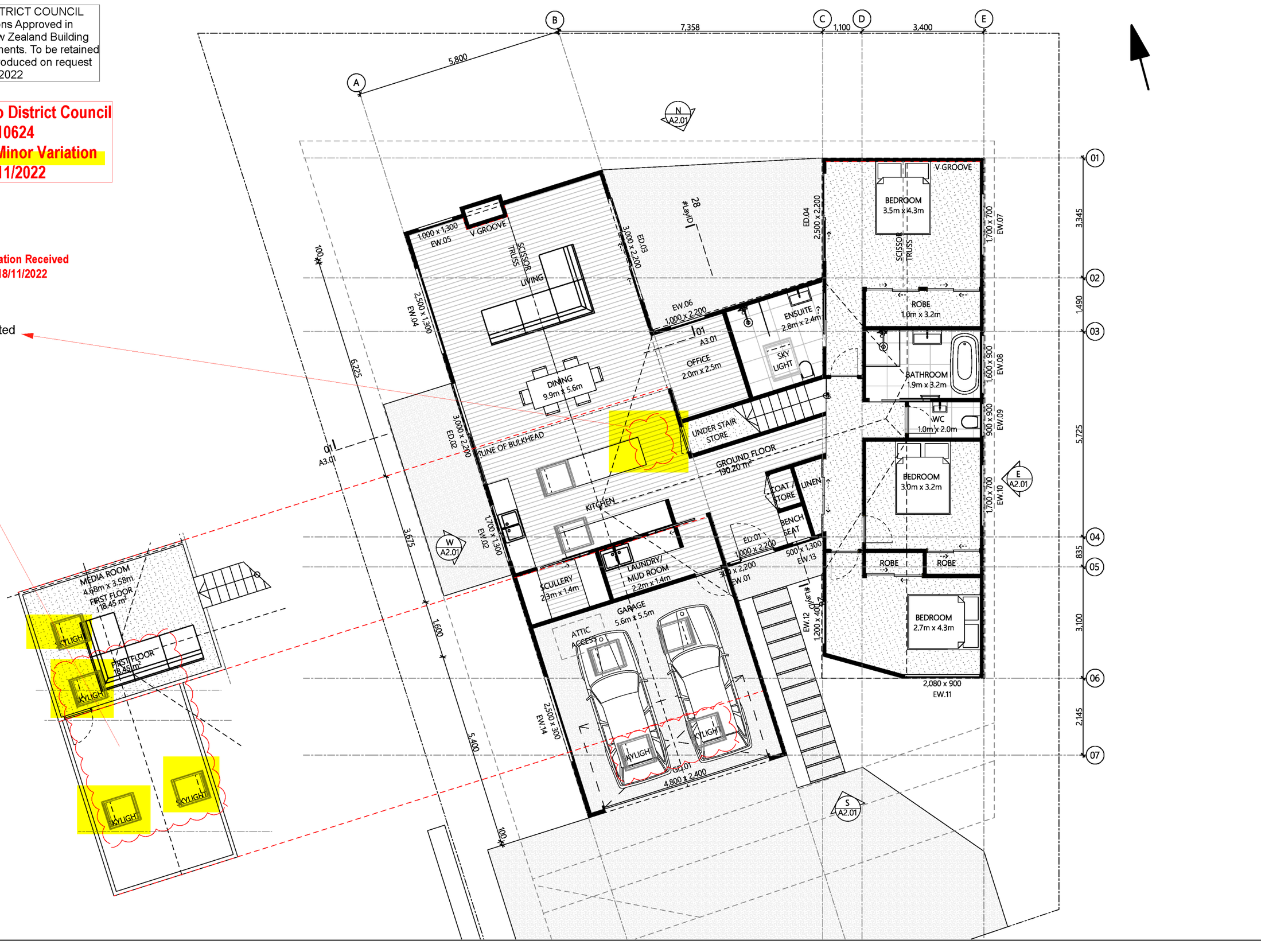
4 x skylights added 1 deleted



BLACK FOLDER

Build 7

NEW RESIDENCE for
Justin + Olivia

LOT 13 WOOING TREE_Cromwell
Lot No: 13, Deposited Plan: TBC

SCALE : 1:5, 1:100 AT A3
DATE : 18/11/2022
PROJECT No : #Pln

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GROUND FLOOR PLAN

A1.04

REVISION NO BF-05

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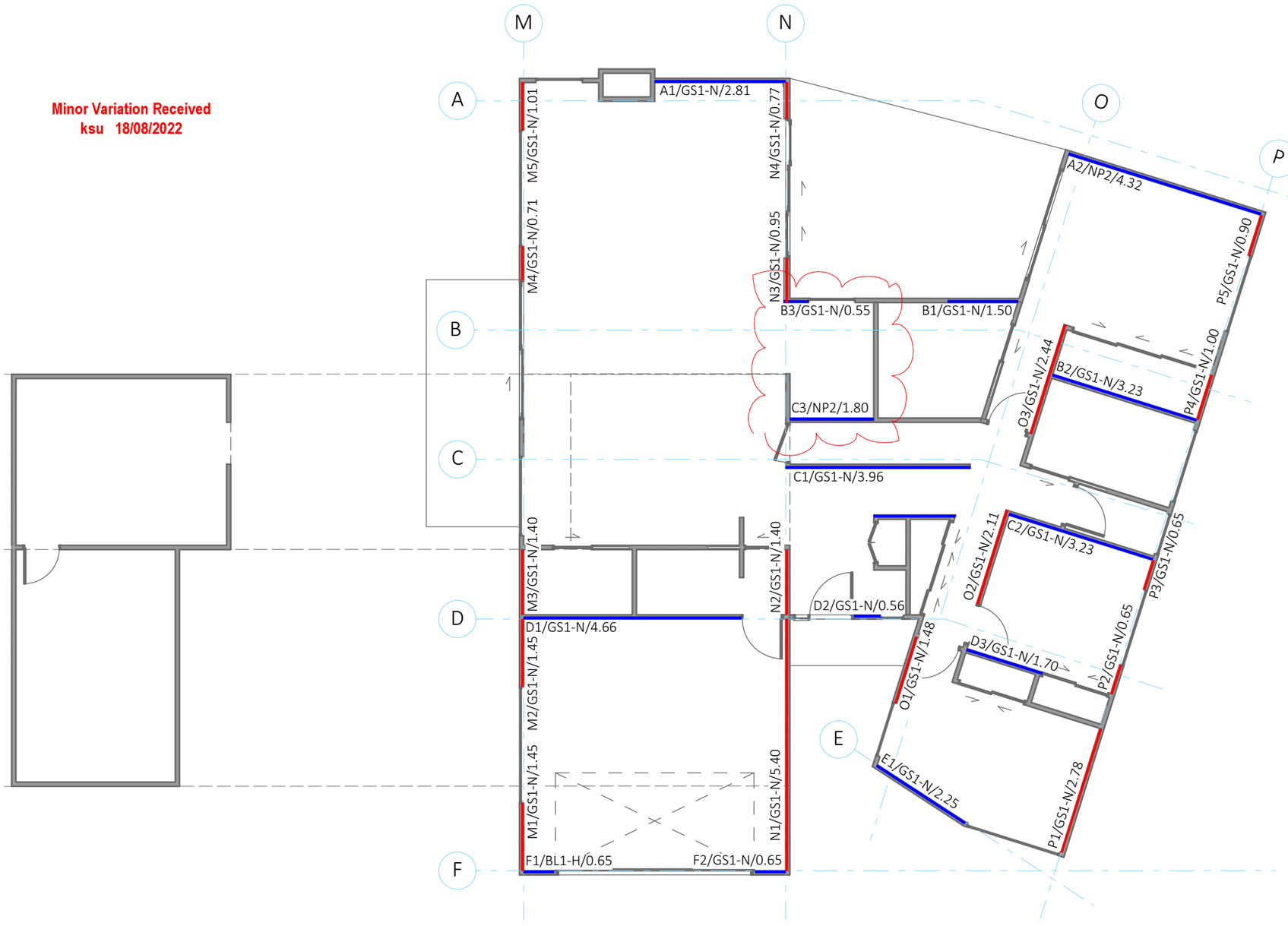

BRACING PLAN NOTES

Refer to the MiTek documents in the specifications for purlin / batten fixing, truss fixing, stud to top plate fixing and lintel fixing schedules.

Lintels are shown on the Truss design. All Lintels SG8 unless stated otherwise.

Each wall that contains one or more bracing elements shall be connected at the top plate level, either directly or through a framing member in the line of the wall, to external walls at right angles to it. Top plate fixings of the capacity in tension or compression along the line of the wall bracing element are given as follows:

a) For each wall containing wall bracing elements with a total bracing capacity of not more than 125 bracing units: to at least one such external wall by fixing as shown in NZS 3604:2011 figure 8.16 of 6kN capacity:

b) For each wall containing wall bracing elements with a total bracing capacity of not more than 250 bracing units: to at least one such external wall by fixing as shown in NZS 3604:2011 figure 8.16 of 6kN capacity:

c) For each wall containing wall bracing elements with a total bracing capacity of more than 250 bracing units: to at least one such external wall by fixing as shown in NZS 3604:2011 figure 8.16 each having a rating of not less than 2.4kN per 100 bracing units.

LEGEND

Light blue lines	Brace lines
Dark Blue	Bracing Along
Red	Bracing Across
Red dashed lines	Ceiling Diaphragm
Black dashed lines	Change in truss type

Bracing as Element / Brace type / Length (m)

GS1-N	GiB standard plaster board 10mm
BL1-H	GiB Braceline plaster board 10mm
NP2	9mm IBS PanelLine Bracing

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1 Ground Floor Bracing Plan 1:100

FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:100 AT A3
DATE : 9/08/2022
PROJECT No : #Pln

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CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO COMMENCING WORK

BRACING PLAN

7

REVISION NO

GIB EzyBrace® Bracing Software

Demand Calculation Sheet

Job Details

Name:	Justin & Olivia
Street and Number:	Lot 13 Wooing Tree
Lot and DP Number:	LOT 13 DP TBC
City/Town/District:	Cromwell
Designer:	Zippy
Company:	Build 7
Date:	Wednesday, 26 January 2022

Building Specification

Number of Storeys	1
Floor Loading	2 kPa
Foundation Type	Slab
	Single
Cladding Weight	Light
Roof Weight	Light
Room in Roof Space	12.5 to 25%
Roof Pitch (degrees)	45
Roof Height above Eaves (m)	3.3
Building Height to Apex (m)	5.85
Ground to Lower Floor (m)	0.2
Average Stud Height (m)	2.4
Building Length (m)	17.3
Building Width (m)	16.1
Building Plan Area (m²)	190.3

Minor Variation Received
ksu 18/08/2022

Building Location

Wind Zone = High

Earthquake Zone 2

Soil Type D & E (Deep to Very Soft)

Annual Prob. of Exceedance: 1 in 500 (Default)

Bracing Units required for Wind

	Along	Across
Single Level	**1091**	**1385**

Bracing Units required for Earthquake

	Along & Across
Single Level	**1201**

Single Level Along Resistance Sheet

Job Name: Justin & Olivia

									Wind	EQ
									Demand	
									1091	1201
									Achieved	
Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind (BUs)	EQ (BUs)	2358 216%	2120 177%
A	1	2.81		3.71	GS1-N	GIB®	125	109		
	2	4.32	17	3.46	NP2	IBS Panel	430	401		
									555 OK	510 OK
B	1	1.50		2.4	GS1-N	GIB®	104	90		
	2	3.23	17	2.4	GS1-N	GIB®	213	185		
	3	0.56		2.4	GS1-N	GIB®	31	32		
									348 OK	308 OK
C	1	3.96		2.4	GS1-N	GIB®	273	238		
	2	3.23	17	2.4	GS1-N	GIB®	213	185		
	3	1.80		2.4	NP2	IBS Panel	270	252		
									756 OK	675 OK
D	1	4.66		2.4	GS1-N	GIB®	322	280		
	2	0.56		2.4	GS1-N	GIB®	31	33		
	3	1.70	17	2.4	GS1-N	GIB®	112	98		
									465 OK	410 OK
E	1	2.25	33	2.4	GS1-N	GIB®	130	113		
									130 OK	113 OK
F	1	0.65		2.4	BL1-H	GIB®	66	66		
	2	0.65		2.4	GS1-N	GIB®	38	38		
									103 OK	104 OK

Single Level Across Resistance Sheet

Job Name: Justin & Olivia

									Wind	EQ
									Demand	
									1385	1201
									Achieved	
Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind (BUs)	EQ (BUs)	1802 130%	1648 137%
M	1	1.45		2.4	GS1-N	GIB®	100	87		
	2	1.45		2.4	GS1-N	GIB®	100	87		
	3	1.40		2.4	GS1-N	GIB®	97	84		
	4	0.71		2.4	GS1-N	GIB®	42	42		
	5	1.01		2.4	GS1-N	GIB®	66	60		
									405 OK	360 OK
N	1	5.40		2.4	GS1-N	GIB®	373	324		
	2	1.40		2.4	GS1-N	GIB®	97	84		
	3	0.95		2.4	GS1-N	GIB®	61	56		
	4	0.77		2.4	GS1-N	GIB®	47	45		
									577 OK	510 OK
O	1	1.48	17	2.4	10mm	Triboard	149	177		
	2	2.11	17	2.4	GS1-N	GIB®	139	121		
	3	2.44	17	2.4	GS1-N	GIB®	161	140		
									449 OK	438 OK
P	1	2.78	17	2.4	GS1-N	GIB®	183	160		
	2	0.65	17	2.4	GS1-N	GIB®	36	36		
	3	0.65	17	2.4	GS1-N	GIB®	36	36		
	4	1.00	17	2.4	GS1-N	GIB®	62	57		
	5	0.90	17	2.4	GS1-N	GIB®	54	51		
									372 OK	340 OK

FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:1 AT A3
DATE : 9/08/2022
PROJECT No : #Pln

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BRACING CALCULATIONS

REVISION NO

Central Otago District Council
210624
Approved Minor Variation
20/04/22

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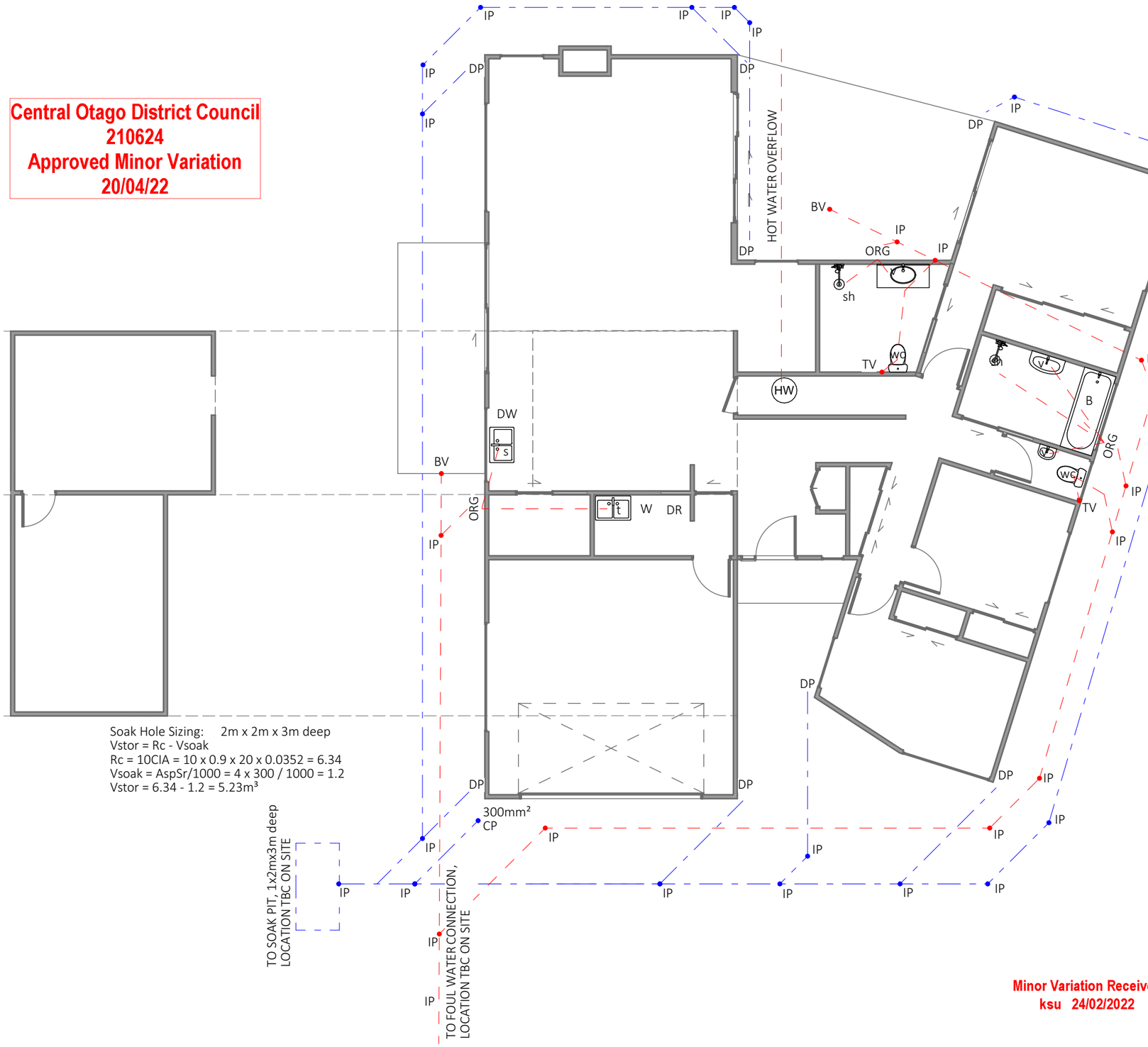

LEGEND AS / NZS 3500.2:2018

Ref	Fixture	Waste Size	Gradient	DUs
s	Kitchen sink	65mm	1:40	3
DW	Dish washer	20mm	N / A	3
t	Laundry sink	65mm	1:40	5
W	Washing machine	N / A	N / A	5
DR	Dryer	N / A	N / A	N / A
Sh	Shower	65mm	1:40	2
v	Vanity	65mm	1:40	1
wc	Water closet	100mm	1:60	4
B	Bath tub	65mm	1:40	2
FD	Floor drain	65mm	1:40	2
AAV	Air admittance valve	50mm	N / A	N / A
ORG	Overflow relief	100mm	1:80	N / A
GT	Gully trap	100mm	1:80	N / A
IP	Inspection point	100mm	N / A	N / A
DP	Downpipe	Ø80mm	N / A	N / A
TV	Terminal vent	50mm	N / A	N / A
BV	Branch vent	50mm	N / A	N / A

Ø100mm Storm water line @ 1:100

Ø100mm Waste water line @ 1:60

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ksu 24/02/2022

FINAL WORKING DRAWINGS

1 Ground Floor Plumbing Plan 1:100

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:100 AT A3
DATE : 26/01/2022
PROJECT No : #Pln

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PLUMBING PLAN

9

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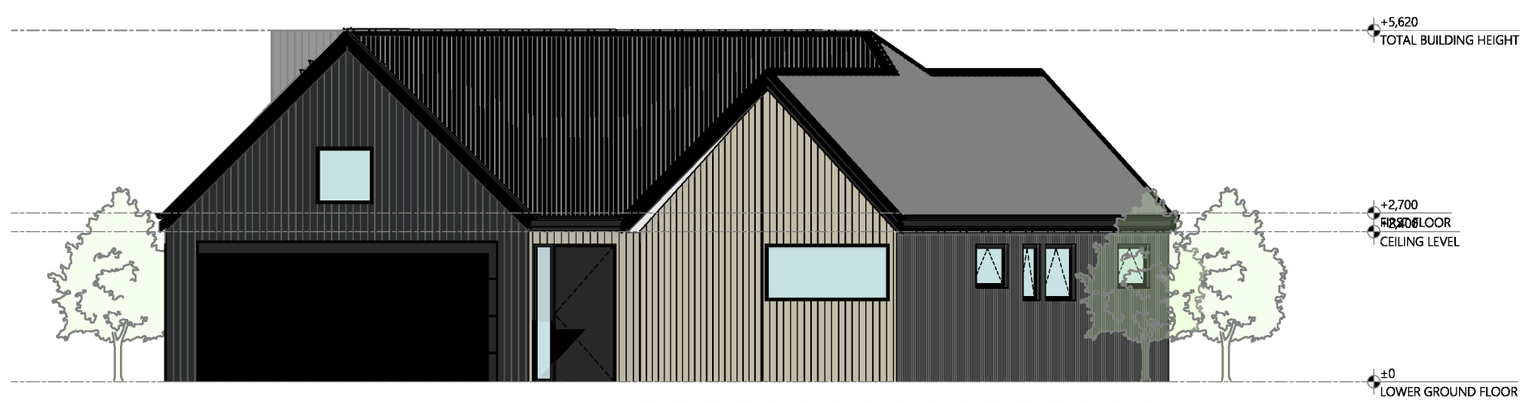
SOUTH S
SCALE 1:100 A1.04, A1.05



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24/11/2022

WEST W
SCALE 1:100 A1.04, A1.05

TOPOGRAPHICAL INFORMATION

Earthquake Zone :	Zone 2
Region :	A
Lee Zone :	No
Site Exposure :	Zone B
Wind Zone :	HIGH

The wind loading categories are from NZS 3604:2011. Very high wind speed = 50m/s, high wind speed = 44m/s, medium wind speed = 37m/s, low wind speed = 32m/s. Wind speeds above are maximun ultimate limit state speeds for each wind zone.

Add 4x skylights and delete 1

STUD SIZING
2.4m STUD HEIGHT

EXTERIOR 01
90x45 H1.2 TIMBER STUDS @ 600CRS UP TO 2.4m, DWANGS @ 600CRS

INTERIOR 01
90x45 SG8 TIMBER STUDS @ 600CRS UP TO 2.4m, DWANGS @ 600CRS

FINISHES LEGEND

ROOFING
COLOURSTEEL ROOFING LAID AT 45° & 36° FALL.

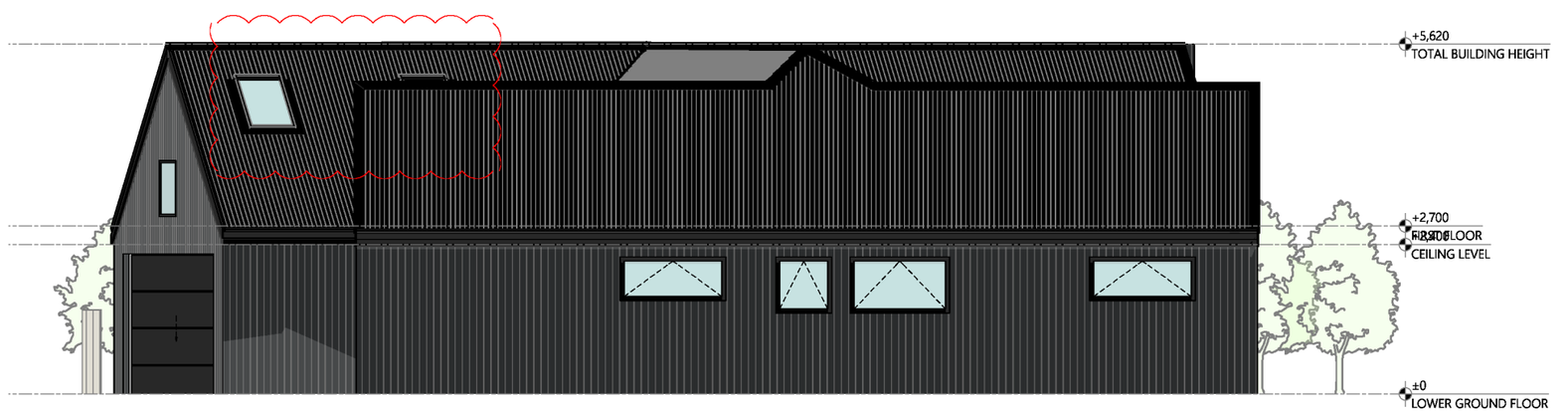
JOINERY
DOUBLE GLAZED, ALUMINIUM JOINERY.

CLADDING
EXTERIOR CLADDING 01 - - EX 150X32 DURALARCH, EKF1 GRADE, CP1742 VERTICAL SHIPLAP WEATHERBOARDS BSFX210mm. (TO MATCH CORNER FEATURE WALL)

EXTERIOR CLADDING 02 - VERTICAL TRIB, COLOUR TO MATCH ROOF SELECTION.

NORTH N
SCALE 1:100 A1.04, A1.05

EAST E
SCALE 1:100 A1.04, A1.05



BLACK FOLDER

Build 7

NEW RESIDENCE for
Justin + Olivia

LOT 13 WOOING TREE_Cromwell
Lot No: 13, Deposited Plan: TBC

SCALE : 1:100 AT A3
DATE : 18/11/2022
PROJECT No : #Pln

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EXTERIOR ELEVATIONS

A2.01

REVISION NO BF-05

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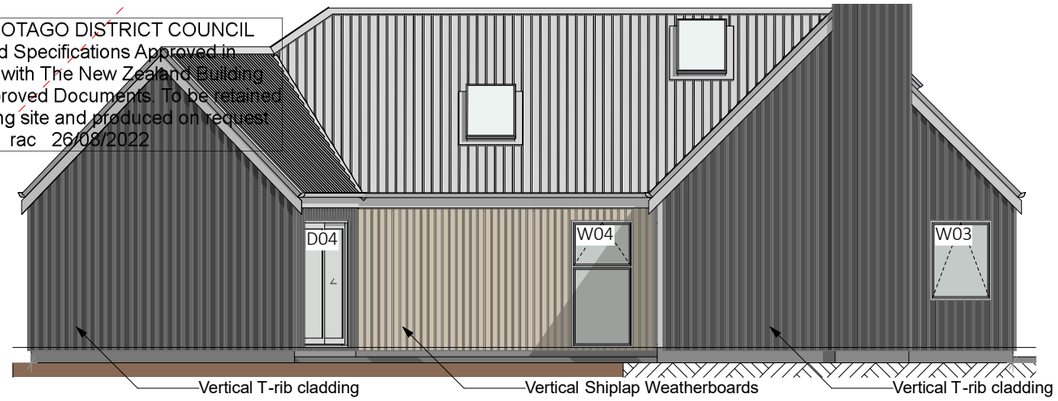
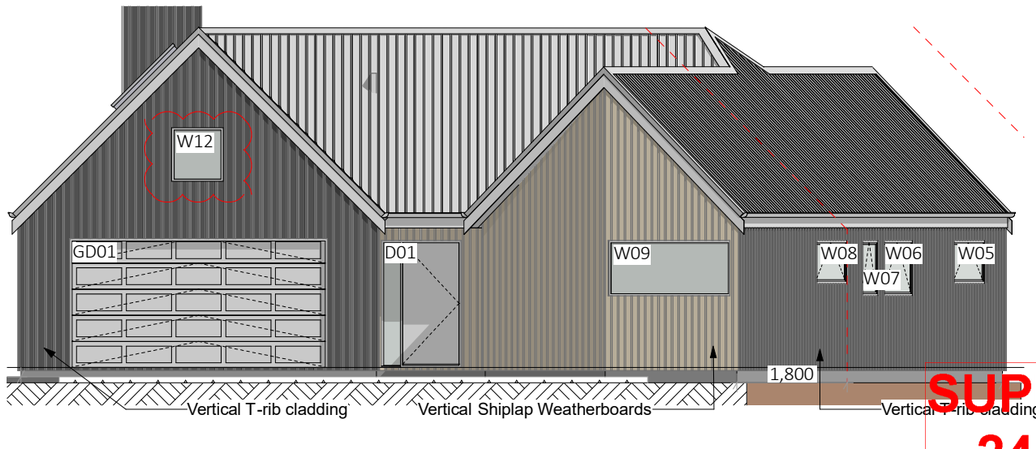


1 North Elevation 1:100

2 East Elevation 1:100



3 South Elevation 1:100

4 West Elevation 1:100

SUPERSEDED
24/11/2022

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ksu 18/08/2022

FINAL WORKING DRAWINGS

BUILDING ENVELOPE RISK MATRIX		
SCALE 1:1		
North & South Elevaon		
Risk Factor	Risk Factor	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of Storeys	Low risk	0
Roof / wall intersecon design	Medium risk	1
Eaves width	Very high risk	5
Envelope complexity	Medium risk	1
Deck Design	Low risk	0
Total Risk Score		8
East & West Elevaons		
Risk Factor	Risk Factor	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of Storeys	Low risk	0
Roof / wall intersecon design	Medium risk	1
Eaves width	Very high risk	5
Envelope complexity	Low risk	0
Deck Design	Low risk	0
Total Risk Score		7

Elevaon Notes

Building Height to Apex
5.85m

Roof Height Above Eaves
3.3m

FFL
250mm above FGL

Roof - pitch 45°, 36° central pitch
COLORSTEEL®ENDURA® T-Rib roofing iron with matching flashings, on Thermakra 407 or similar, installed to manufacturers specificaons . Colour: Flaxpod. Entry soffit colour: Resene Element.

Downpipes
Ø80mm COLORSTEEL®ENDURA® downpipes as per E1 / AS1

Spoung
COLORSTEEL®ENDURA®, Colonial Quad profile

Fascia
185 COLORSTEEL®ENDURA® fascia with drip edge

Walls
1) Ex 150 x 32 Duralarch Shiplap Weatherboards
Colour: Resene Wood-X Goldrush
2) 0.40 Vercal Trib Endura . Colour: Flaxpod

All claddings to be installed over 45 x 20mm castellated cavity system. All claddings to be installed according to cladding manufacturer's specificaons .

Aluminium Joinery
Double glazed to NZS 4223:3:2016. Head height 2100mm.
Obscure glazing to Bathroom, WC & En-suite.

Skylights
780 x 1400mm velux skylights
1 x electric VSE M08
2 x fixed FSM04

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Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:100 AT A3
DATE : 18/08/2022
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ELEVATIONS

10

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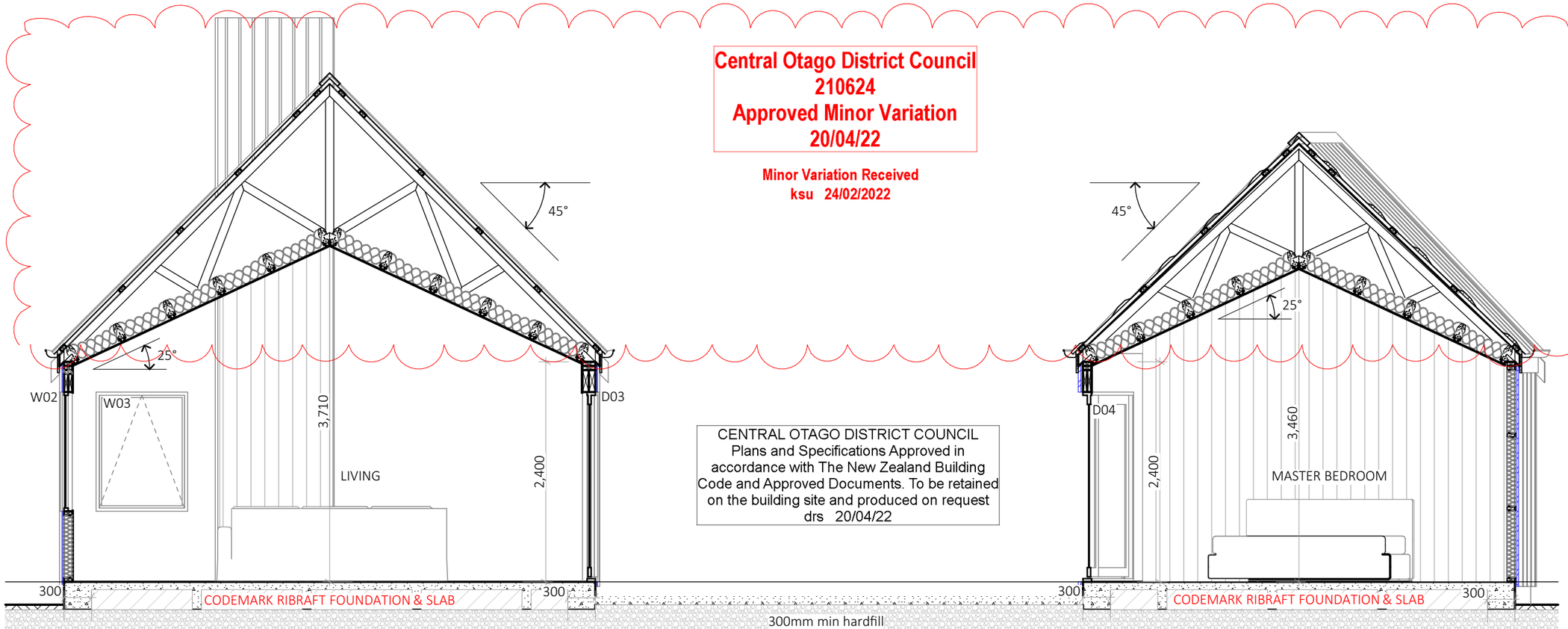

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1 Section AA 1:50

FINAL WORKING DRAWINGS

CROSS SECTION NOTES

Building Height to Apex	Roof Height Above Eaves	FFL
5.85m	3.3m	FGL + 250mm

Roof	
Scissor Trusses	Over Living & Dining areas, & Master Bedroom H1.2 SG8 trusses @ 900mm crs max to Mitek design
Attic Trusses	Over Garage & Kitchen H1.2 SG8 trusses @ 900mm crs max to Mitek design
Standard Trusses	Over remainder of house H1.2 SG8 trusses @ 900mm crs max to Mitek design
Purlins	70 x 45 mm H1.2 SG8 purlins @ 900mm crs max Fix to trusses with 80mm x 10g screw or as per Mitek design
Underlay	Thermakraft Covertek 407, or similar approved
Roofing	COLORSTEEL®Endura® T-Rib, profiled washers
Soffits	4.5mm Hardiflex soffit linings
Fascia	COLORSTEEL® Endura, 185 Fascia with drip edge
Spouting	COLORSTEEL® Endura, Colonial Quad profile
Downpipes	80mmØ COLORSTEEL® downpipes

Walls	
External	90 x 45mm H1.2 SG8 @ 400mm crs max, nogs @ 800mm crs max
External Raking	2 / 90 x 45mm H1.2 SG8 @ 400mm crs max, nogs @ 800mm crs max
Underlay	Masons UNI wrap
Cladding	1) Ex 150 x 32 Duralarch Shiplap Weatherboard 2) 0.40 Vertical Trib Endura Claddings to be installed over 20mm castellated cavity battens Claddings to be installed as per manufacturer's specifications.
Internal	90 x 45mm H1.2 SG8 @ 600mm crs max, nogs @ 800mm crs max
Top plate	2 / 90 x 45mm H1.2 SG8; Fixing type B
Bottom plate	90 x 45mm H1.2 SG8 fixings: Pryda bottom plate anchors

Aluminium Joinery
Double glazed
2100mm head height

Slab	
Slab	RibRaft system as per manufacturers specifications 305mm thick 25.0MPa Firth Codemark Ribraft floor reinforced with ductile Class E mesh on 220mm ribraft pods on 0.25mm thick polythene DPM
Fill	25mm sand blinding on 300mm min compacted GAP40 / GAP65
Control cuts	not required for RibRaft
Linings	
Ceilings	13mm GiB on rondo battens @ 600mm crs max, Aqualine to wet areas Square stopped
Walls	10mm GiB, Aqualine to wet areas, Square stopped Feature V groove behind master bed wall, around fire & behind bench seat
Insulation	
Ceilings	R3.6 175mm Ceiling Knauf Earthwool Glasswool
Walls	R2.8 90mm Wall Knauf Earthwool Glasswool
Midfloor	R3.6 175mm Ceiling Knauf Earthwool Glasswool
Finishings	
Architraves	60mm Eco Edge Single Bevel MDF
Skitings	60mm Eco Edge Single Bevel MDF
Internal doors	1980mm Hollow Core Flush Panel

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:50 AT A3
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SECTION AA

11

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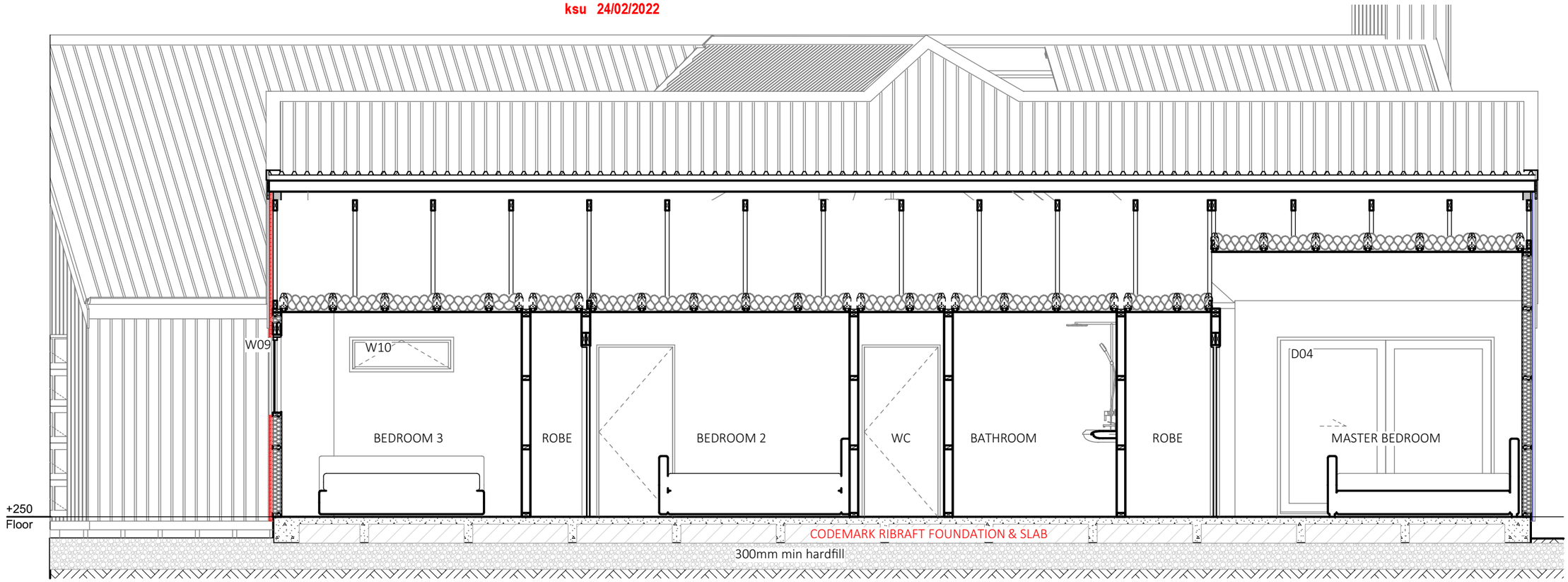

1 Section BB 1:50

FINAL WORKING DRAWINGS

CROSS SECTION NOTES

Building Height to Apex	Roof Height Above Eaves	FFL
5.85m	3.3m	FGL + 250mm

Roof

Scissor Trusses	Over Living & Dining areas, & Master Bedroom H1.2 SG8 trusses @ 900mm crs max to Mitek design
Attic Trusses	Over Garage & Kitchen H1.2 SG8 trusses @ 900mm crs max to Mitek design
Standard Trusses	Over remainder of house H1.2 SG8 trusses @ 900mm crs max to Mitek design
Purlins	70 x 45 mm H1.2 SG8 purlins @ 900mm crs max Fix to trusses with 80mm x 10g screw or as per Mitek design
Underlay	Thermakraft Covertek 407, or similar approved
Roofing	COLORSTEEL®Endura® T-Rib, profiled washers
Soffits	4.5mm Hardiflex soffit linings
Fascia	COLORSTEEL® Endura, 185 Fascia with drip edge
Spouting	COLORSTEEL® Endura, Colonial Quad profile
Downpipes	80mmØ COLORSTEEL® downpipes

Walls

External	90 x 45mm H1.2 SG8 @ 400mm crs max, nogs @ 480mm crs max for weatherboard (red)
Underlay	Masons UNI wrap
Cladding	1) Ex 150 x 32 Duralarch Shiplap Weatherboard 2) 0.40 Vertical Trib Endura Claddings to be installed over 20mm castellated cavity battens Claddings to be installed as per manufacturer's specifications.
Internal	90 x 45mm H1.2 SG8 @ 600mm crs max, nogs @ 800mm crs max
Top plate	2 / 90 x 45mm H1.2 SG8; Fixing type B
Bottom plate	90 x 45mm H1.2 SG8 fixings: Pryda bottom plate anchors

Aluminium Joinery
Double glazed
2100mm head height

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Slab

Slab	RibRaft system as per manufacturers specifications 305mm thick 25.0MPa Firth Codemark Ribraft floor reinforced with ductile Class E mesh on 220mm ribraft pods on 0.25mm thick polythene DPM
Fill	25mm sand blinding on 300mm min compacted GAP40 / GAP65
Control cuts	not required for RibRaft

Linings

Ceilings	13mm GiB on rondo battens @ 600mm crs max, Aqualine to wet areas Square stopped
Walls	10mm GiB, Aqualine to wet areas, Square stopped Feature V groove behind master bed wall, around fire & behind bench seat

Insulation

Ceilings	R3.6 175mm Ceiling Knauf Earthwool Glasswool
Walls	R2.8 90mm Wall Knauf Earthwool Glasswool
Midfloor	R3.6 175mm Ceiling Knauf Earthwool Glasswool

Finishings

Architraves	60mm Eco Edge Single Bevel MDF
Skitings	60mm Eco Edge Single Bevel MDF
Internal doors	1980mm Hollow Core Flush Panel

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

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SECTION BB

12

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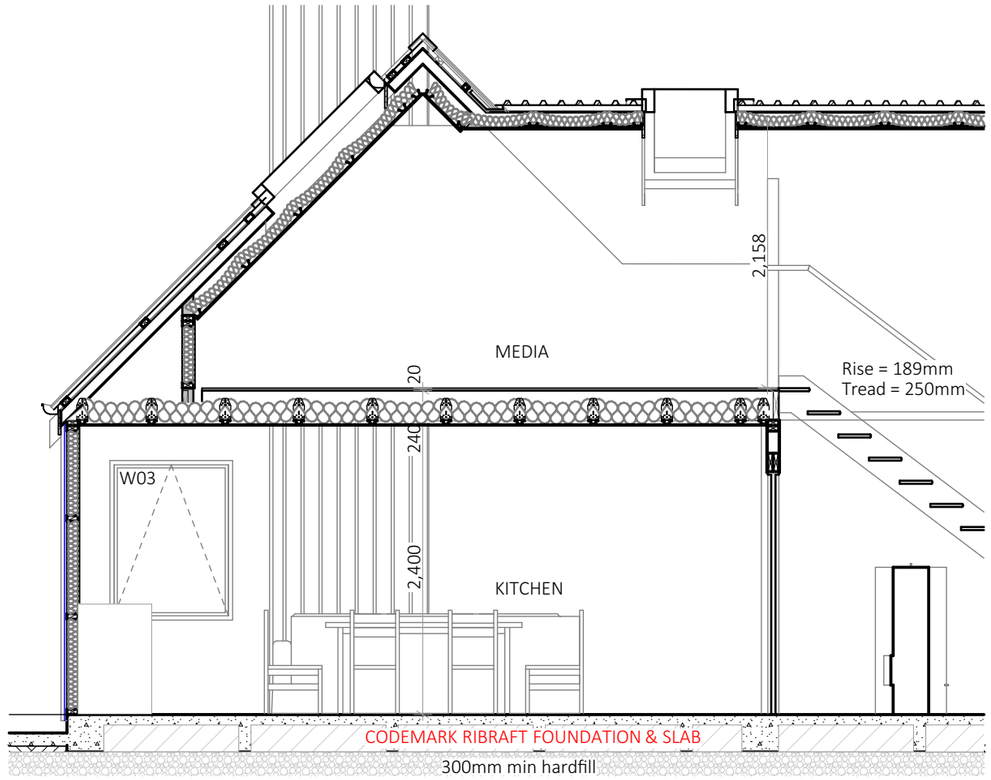

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H1 CALCULATIONS - SCHEDULE METHOD

	REQUIRED	CONSTRUCTION R-VALUE ACHIEVED
Wall insulation	R2.0	R2.2
Roof Insulation	R3.2	R3.2
Floor Insulation	R1.3	R1.3
Glazing	R0.26	R0.26

Note: Construction R-Values are sourced from BRANZ House Insulation Guide or Design Navigator.

GLAZING vs. WALL AREA CALCULATIONS

Wall facing	m² of wall	m² of glazing	% glazing of wall
East	46.13	10.84	
South	67.32	9.87	
West	41.50	12.42	
Total	154.95	33.13	21.4%

TOTAL GLAZING OF EAST, SOUTH & WEST WALLS IS LESS THAN 30% OF THESES WALLS TOTAL WALL AREA SO PASSES THE H1 SCHEDULE METHOD

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FINAL WORKING DRAWINGS

CROSS SECTION NOTES

Building Height to Apex	Roof Height Above Eaves	FFL
5.85m	3.3m	FGL + 250mm

Roof

Scissor Trusses	Over Living & Dining areas, & Master Bedroom H1.2 SG8 trusses @ 900mm crs max to Mitek design
Attic Trusses	Over Garage & Kitchen H1.2 SG8 trusses @ 900mm crs max to Mitek design
Standard Trusses	Over remainder of house H1.2 SG8 trusses @ 900mm crs max to Mitek design
Purlins	70 x 45 mm H1.2 SG8 purlins @ 900mm crs max Fix to trusses with 80mm x 10g screw or as per Mitek design
Underlay	Thermakraft Covertek 407, or similar approved
Roofing	COLORSTEEL®Endura® T-Rib, profiled washers
Soffits	4.5mm Hardiflex soffit linings
Fascia	COLORSTEEL® Endura, 185 Fascia with drip edge
Spouting	COLORSTEEL® Endura, Colonial Quad profile
Downpipes	80mmØ COLORSTEEL® downpipes

Walls

External	90 x 45mm H1.2 SG8 @ 400mm crs max, nogs @ 800mm crs max
Underlay	Masons UNI wrap
Cladding	1) Ex 150 x 32 Duralarch Shiplap Weatherboard 2) 0.40 Vertical Trib Endura Claddings to be installed over 20mm castellated cavity battens Claddings to be installed as per manufacturer's specifications.
Internal	90 x 45mm H1.2 SG8 @ 600mm crs max, nogs @ 800mm crs max
Top plate	2 / 90 x 45mm H1.2 SG8; Fixing type B
Bottom plate	90 x 45mm H1.2 SG8 fixings: Pryda bottom plate anchors

Aluminium Joinery
Double glazed
2100mm head height

Slab

Slab	RibRaft system as per manufacturers specifications 305mm thick 25.0MPa Firth Codemark Ribraft floor reinforced with ductile Class E mesh on 220mm ribraft pods on 0.25mm thick polythene DPM
Fill	25mm sand blinding on 300mm min compacted GAP40 / GAP65
Control cuts	not required for RibRaft

Linings

Ceilings	13mm GiB on rondo battens @ 600mm crs max, Aqualine to wet areas Square stopped
Walls	10mm GiB, Aqualine to wet areas, Square stopped Feature V groove behind master bed wall, around fire & behind bench seat

Insulation

Ceilings	R3.2 105mm Ceiling Knauf Earthwool Glasswool
Walls	R2.8 90mm Wall Knauf Earthwool Glasswool
Midfloor	R3.6 175mm Ceiling Knauf Earthwool Glasswool

Finishings

Architraves	60mm Eco Edge Single Bevel MDF
Skitings	60mm Eco Edge Single Bevel MDF
Internal doors	1980mm Hollow Core Flush Panel

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:50 AT A3
DATE : 26/01/2022
PROJECT No : #Pln

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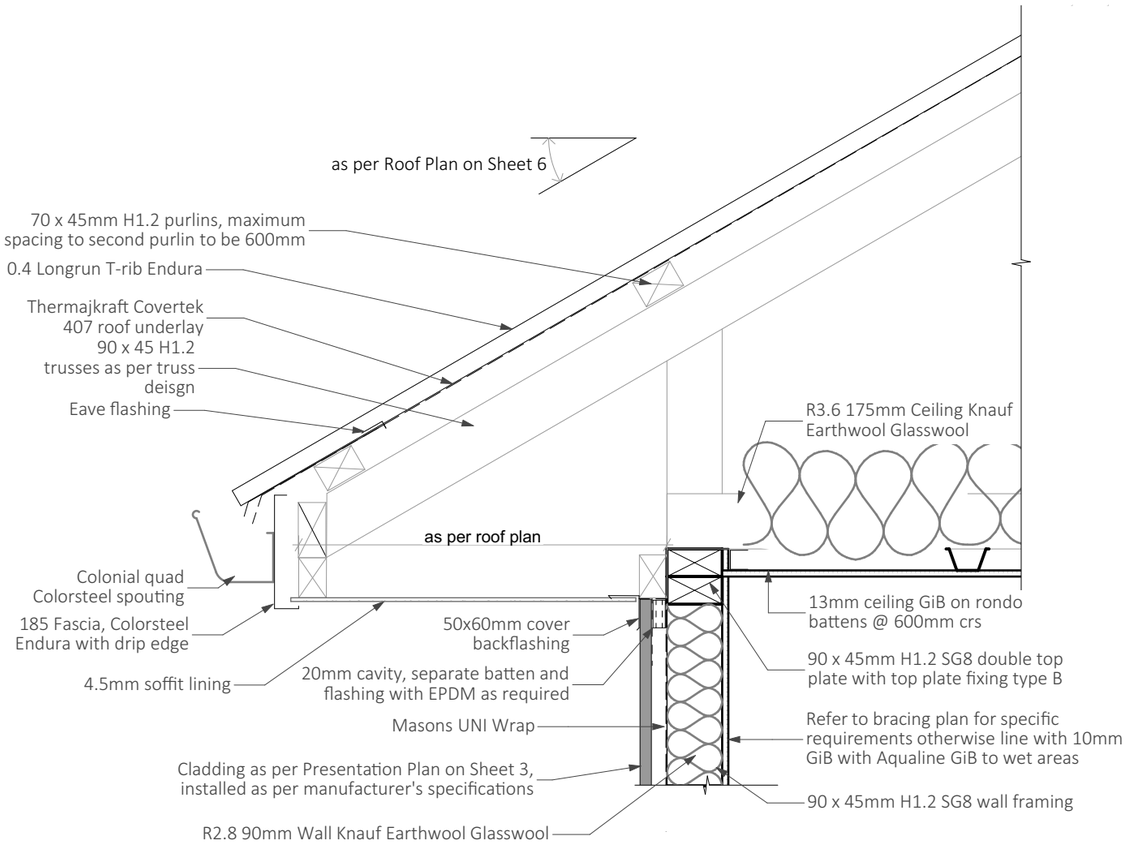
SECTION CC

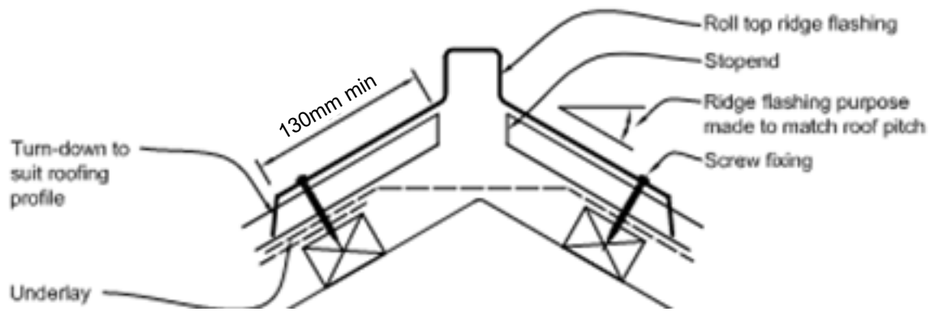
13

REVISION NO



Eave Detail @ 1:10

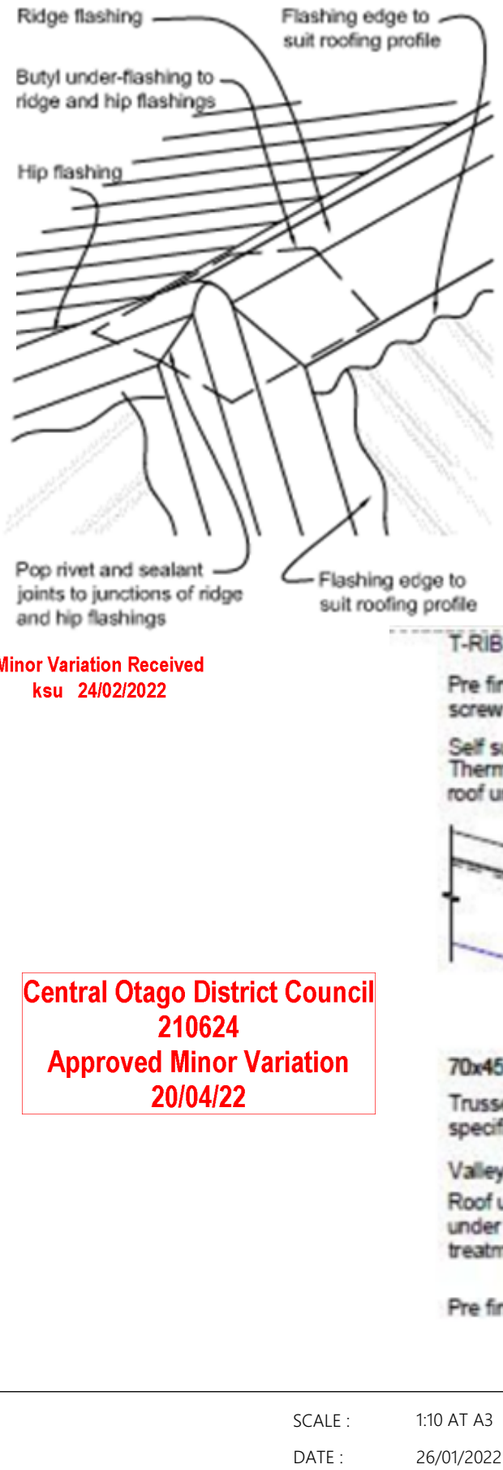
Figure 46: Ridge and hip flashings for profiled metal
Paragraphs 4.6.1.2, 8.4.11 and 8.4.12 d)



NOTES:
ROOF CLADDING COLORSTEEL®ENDURA® T-RRIB ROOFING IRON,
INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.
COLORSTEEL® LASHINGS AS PROVIDED BY ROOFING MANUFACTURER, TO MATCH ROOF FINISH.
ROOF UNDERLAY TO BE THERMAKRAFT COVERTEK 407, OR SIMILAR APPROVED.
ROOF PITCH AS PER ROOF PLAN ON SHEET 8.

Figure 43: Ridge to hip flashings
Paragraphs 8.4.11 and 8.4.12

NOTE: *Flashing* cover varies according to *wind* zone - refer Table 7.
For other ridge to hip flashings refer to New Zealand Metal Roofing and Wall Cladding Code of Practice.



Minor Variation Received
ksu 24/02/2022

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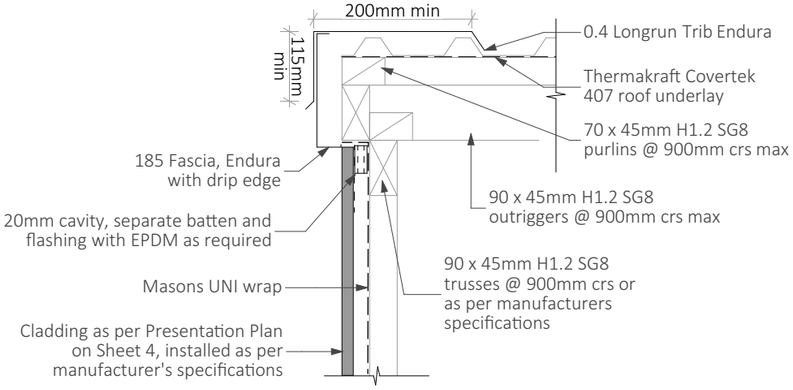
210624
Approved Minor Variation
20/04/22



Barge Detail @ 1:10

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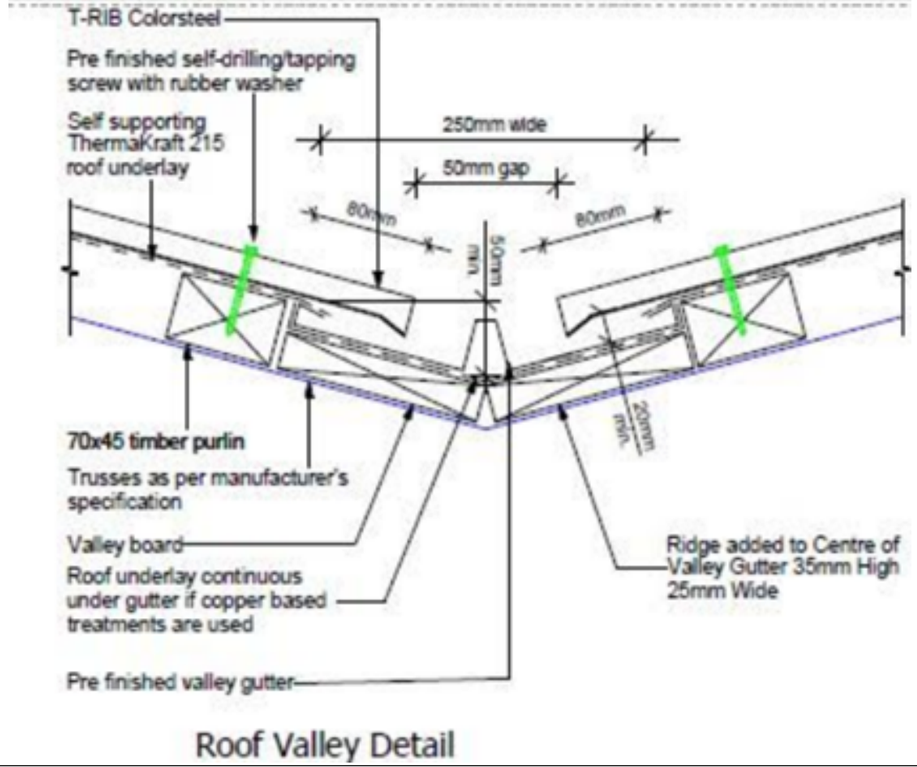

Roof Valley Detail

FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:10 AT A3
DATE : 26/01/2022
PROJECT No : #Pln

DO NOT SCALE DRAWING
CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO COMMENCING WORK

ROOF DETAILS

14

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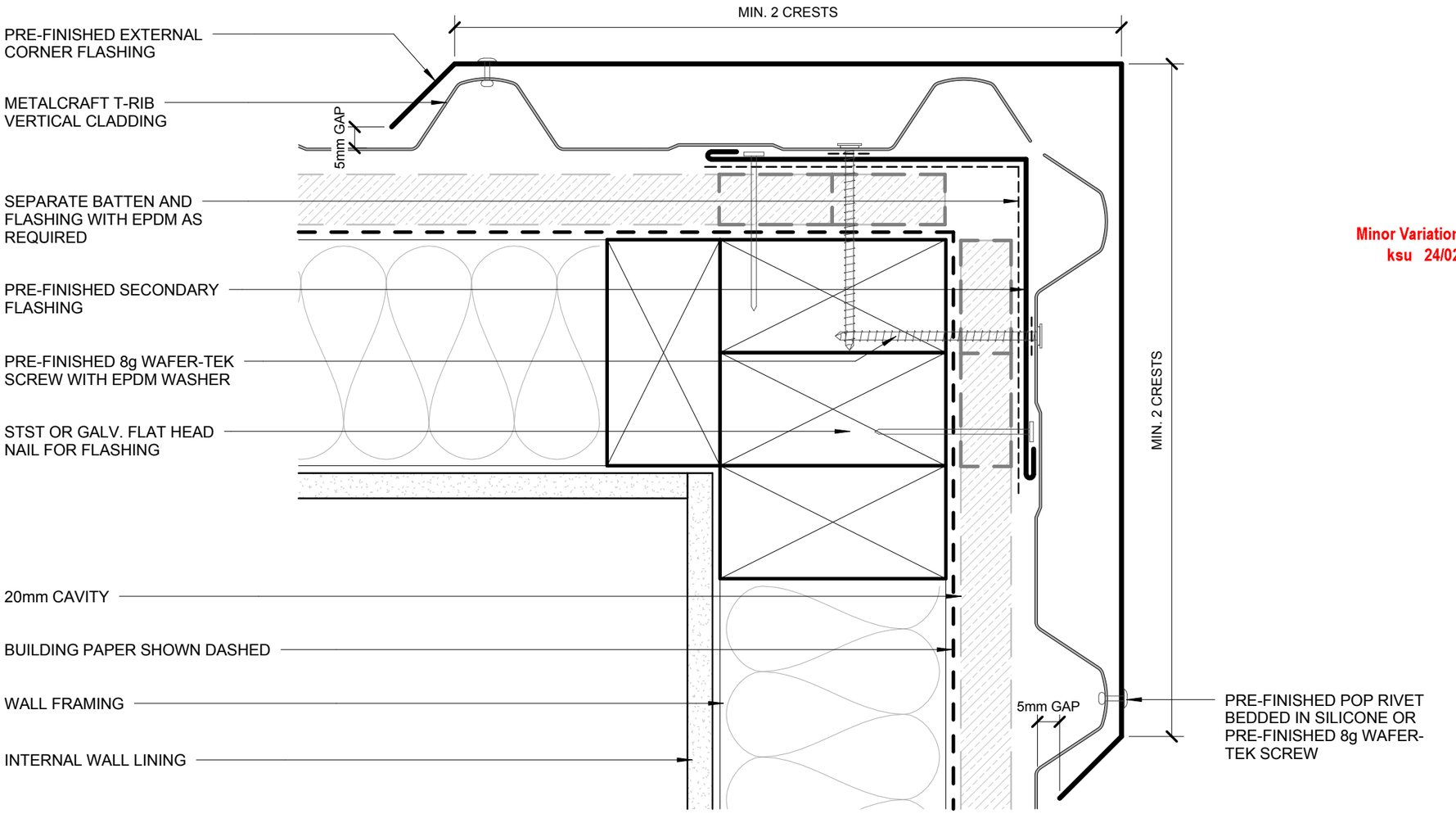

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20/04/22

FINAL WORKING DRAWINGS

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Metalcraft Roofing

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EXTERNAL CORNER
T-Rib
RESIDENTIAL VERTICAL CLADDING

Reference RVTRI Date 2015 Scale 1 : 2 Sheet **16 / 20**

1 rvtri_residential-vertical-t-rib 1:1

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:1 AT A3
DATE : 26/01/2022
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T-RIB EXTERNAL CORNER

15
REVISION NO

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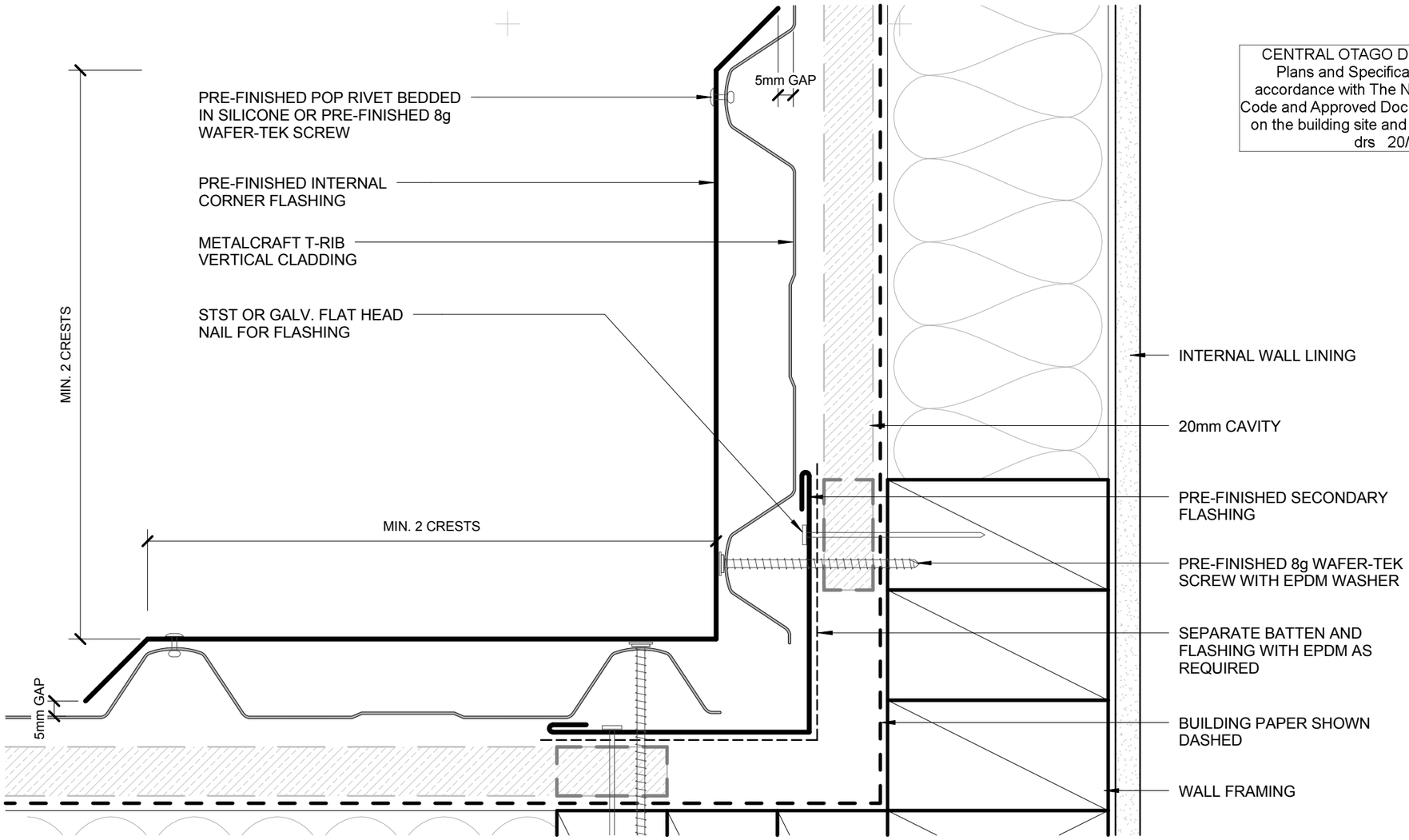

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INTERNAL CORNER

T-Rib — RESIDENTIAL VERTICAL CLADDING

Reference RVTRI | Date 2015 | Scale 1 : 2 | Sheet 15 / 20

1 rvtri_residential-vertical-t-rib 1:1

FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:1 AT A3
DATE : 26/01/2022
PROJECT No : #Pln

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T-RIB INTERNAL CORNER

16

REVISION NO

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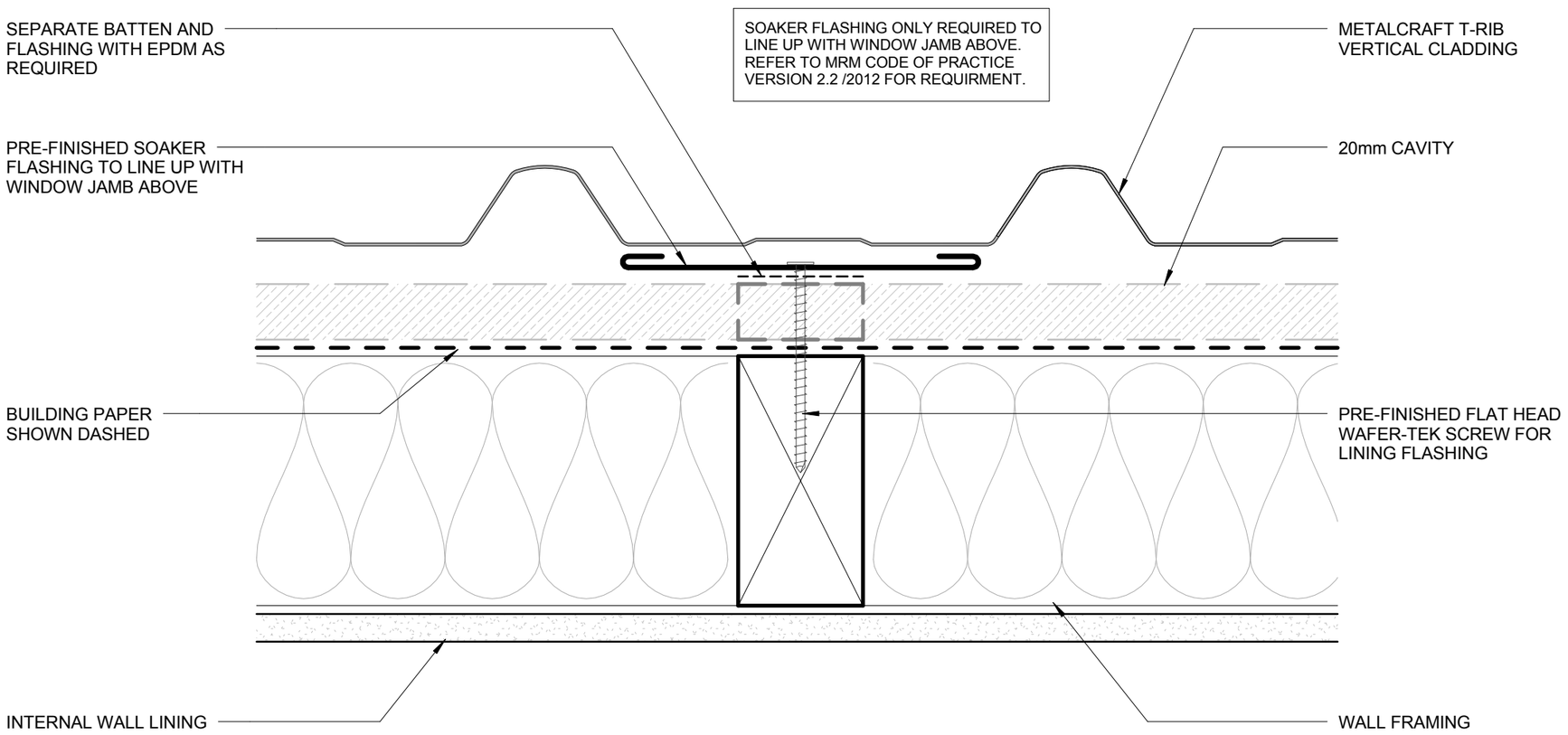
ksu 24/02/2022



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SOAKER FLASHING
T-Rib
RESIDENTIAL VERTICAL CLADDING

Reference RVTRI Date 2015 Scale 1 : 2 Sheet **17 / 20**

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:1 AT A3
DATE : 26/01/2022
PROJECT No : #Pln

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T-RIB SOAKER FLASHING

17
REVISION NO

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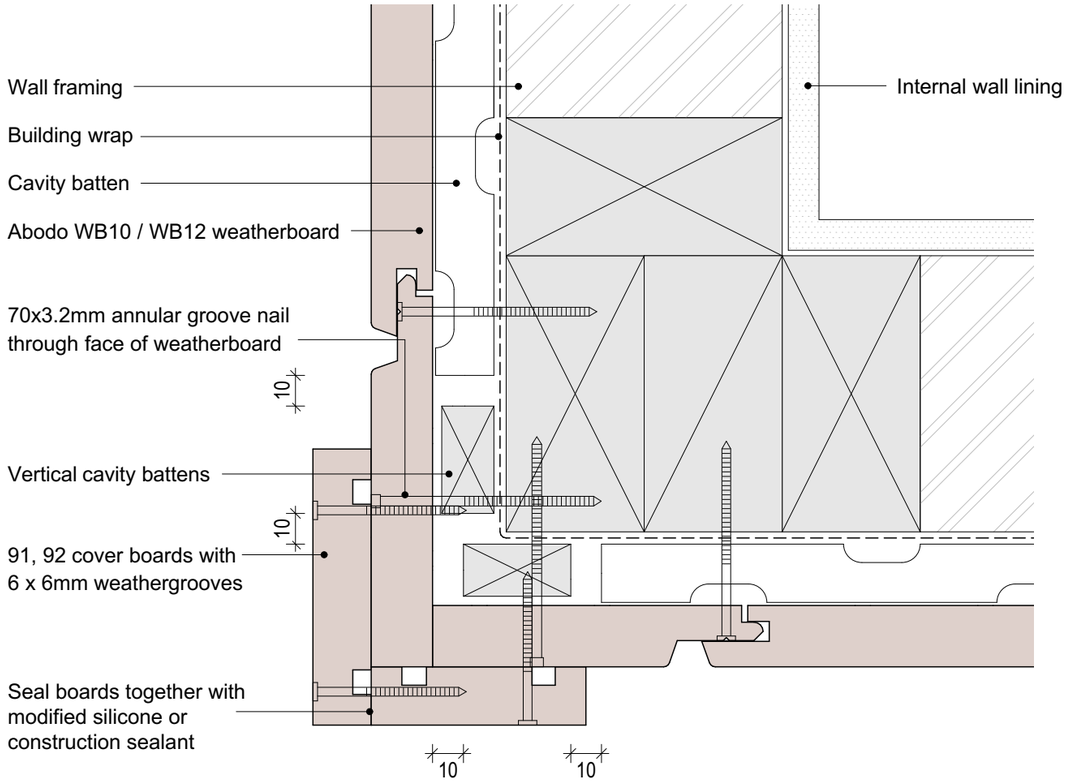


Central Otago District Council
210624
Approved Minor Variation
20/04/22

ABODO

scale in millimetres
0 20 40 60 80 100

CM70046 CodeMark™

info@abodo.co.nz
T +64 (9) 249 0100

Abodo Wood Ltd.
62 Ascot Road, Mangere,
Auckland 2022, New Zealand

SHEET TITLE: External 90° Corner - Boxed

PROFILE: Vulcan WB10 / WB12 Vertical Weatherboard

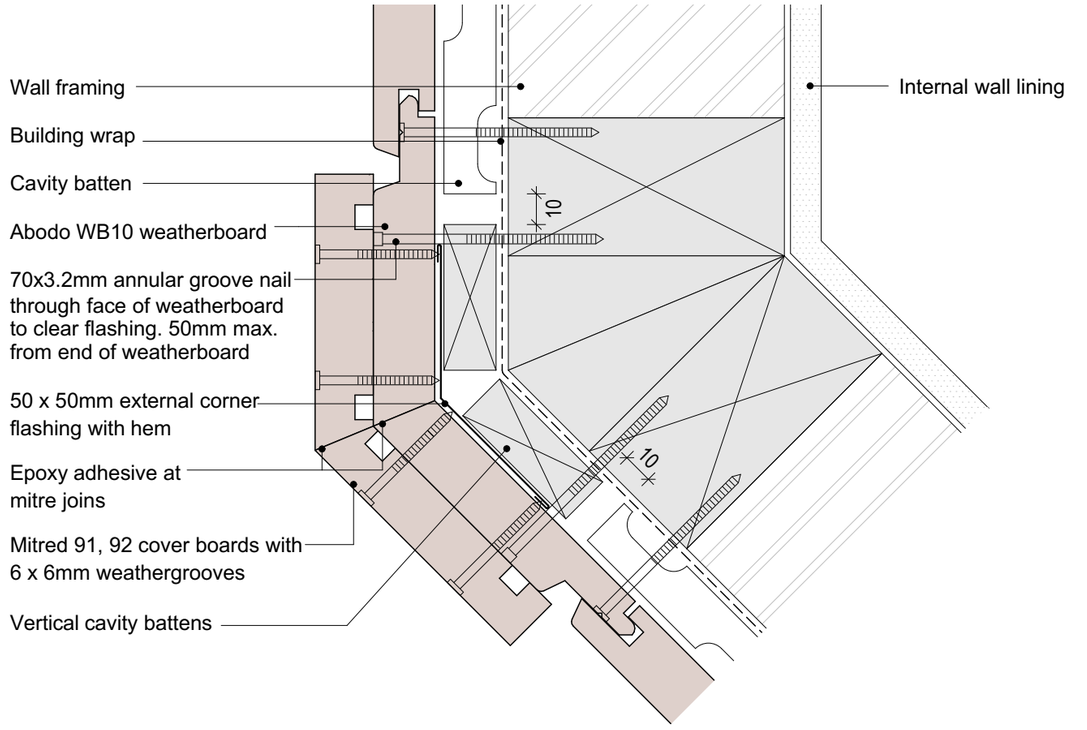
SCALE: 1:2 @ A4

PRINT DATE: 01/04/2020

SHEET NUMBER: H.V.10

REVISION: 01

1 WB12-Vertical-Flexible-Underlay-PDF-Compiled(1) 1:1



1. Weatherboards must be coated with at least one coat all sides prior to fixing.
2. Fixing points must be pre-drilled minimum 1mm smaller than the fastener.
3. Cut ends and exposed timber must be sealed with an approved coating or end seal.

ABODO

scale in millimetres
0 20 40 60 80 100

CM70046 CodeMark™

info@abodo.co.nz
T +64 (9) 249 0100

Abodo Wood Ltd.
62 Ascot Road, Mangere,
Auckland 2022, New Zealand

SHEET TITLE: External 135° Corner - Boxed

PROFILE: Vulcan WB10 / WB12 Vertical Weatherboard

SCALE: 1:2 @ A4

PRINT DATE: 01/04/2020

SHEET NUMBER: H.V.11

REVISION: 01

2 WB12-Vertical-Flexible-Underlay-PDF-Compiled(1) 1:1

FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

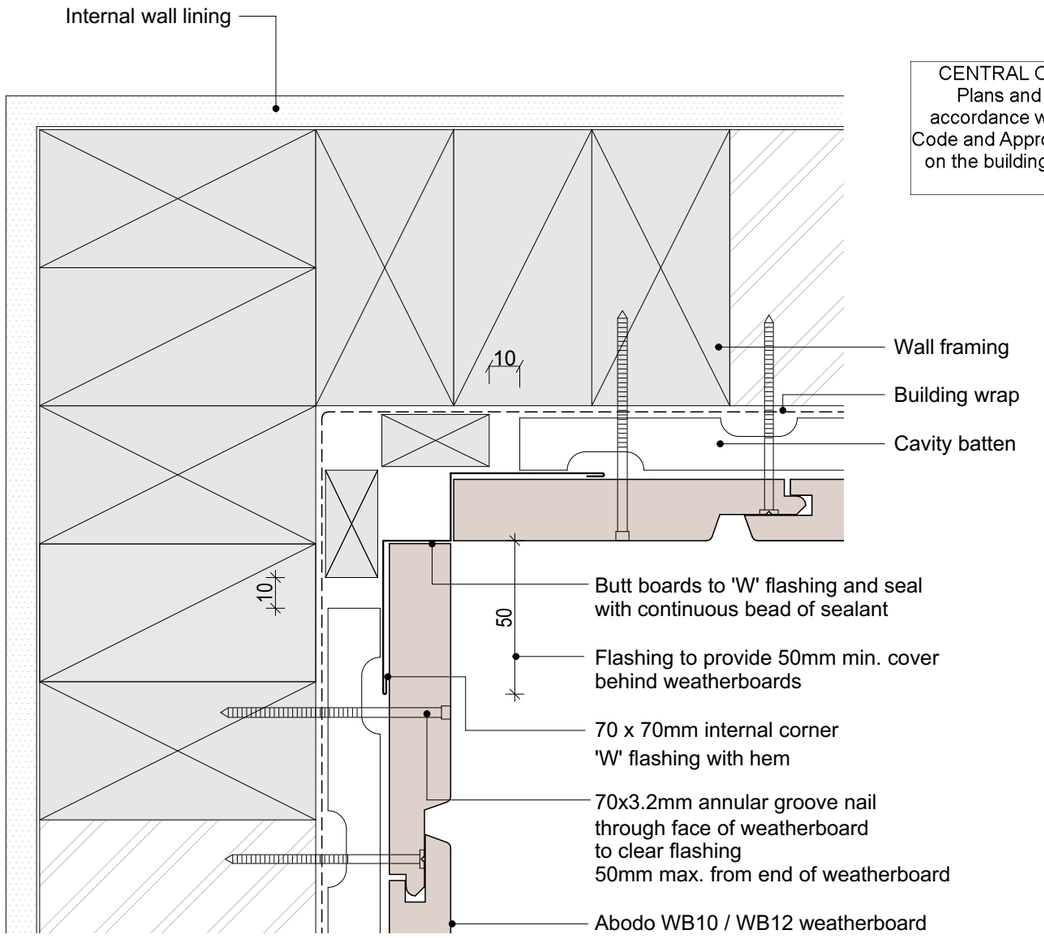
LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:1 AT A3
DATE : 26/01/2022
PROJECT No : #Pln

DO NOT SCALE DRAWING
CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO COMMENCING WORK

SHIPLAP EXTERNAL CORNER

18 REVISION NO



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drs 20/04/22

Minor Variation Received
ksu 24/02/2022

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210624
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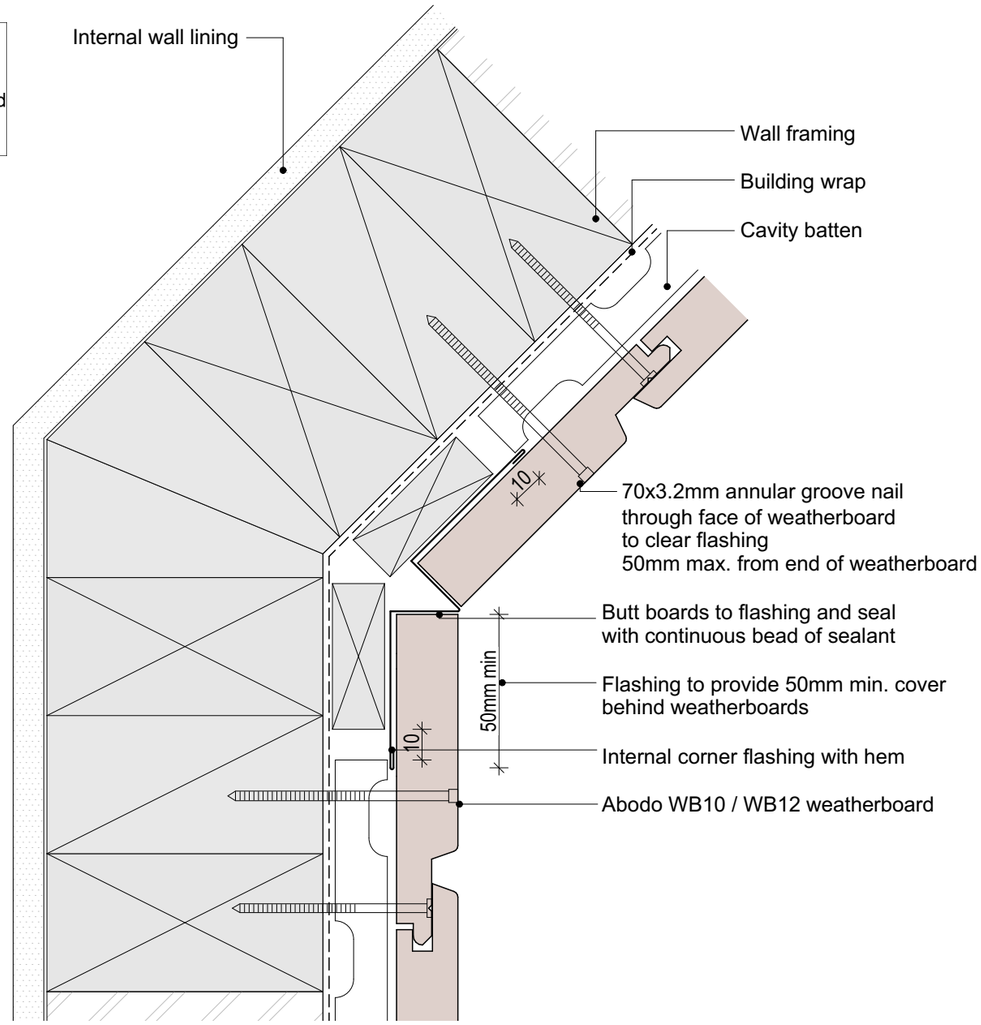
20/04/22



FINAL WORKING DRAWINGS

ABODO

scale in millimetres
0 20 40 60 80 100

CM70046 CodeMark™

info@abodo.co.nz
T +64 (9) 249 0100

Abodo Wood Ltd.
62 Ascot Road, Mangere,
Auckland 2022, New Zealand

SHEET TITLE: Internal 90° Corner - W Flashing

PROFILE: Vulcan WB10 / WB12 Vertical Weatherboard

SCALE: 1:2 @ A4

PRINT DATE: 01/04/2020

SHEET NUMBER: H.V.16

REVISION: 01

1 WB12-Vertical-Flexible-Underlay-PDF-Compiled(1) 1:1

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T +64 (9) 249 0100

Abodo Wood Ltd.
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Auckland 2022, New Zealand

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PROFILE: Vulcan WB10 / WB12 Vertical Weatherboard

SCALE: 1:2 @ A4

PRINT DATE: 01/04/2020

SHEET NUMBER: H.V.17

REVISION: 01

2 WB12-Vertical-Flexible-Underlay-PDF-Compiled(1) 1:1

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:1 AT A3
DATE : 26/01/2022
PROJECT No : #Pln

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SHIPLAP INTERNAL CORNER

19

REVISION NO

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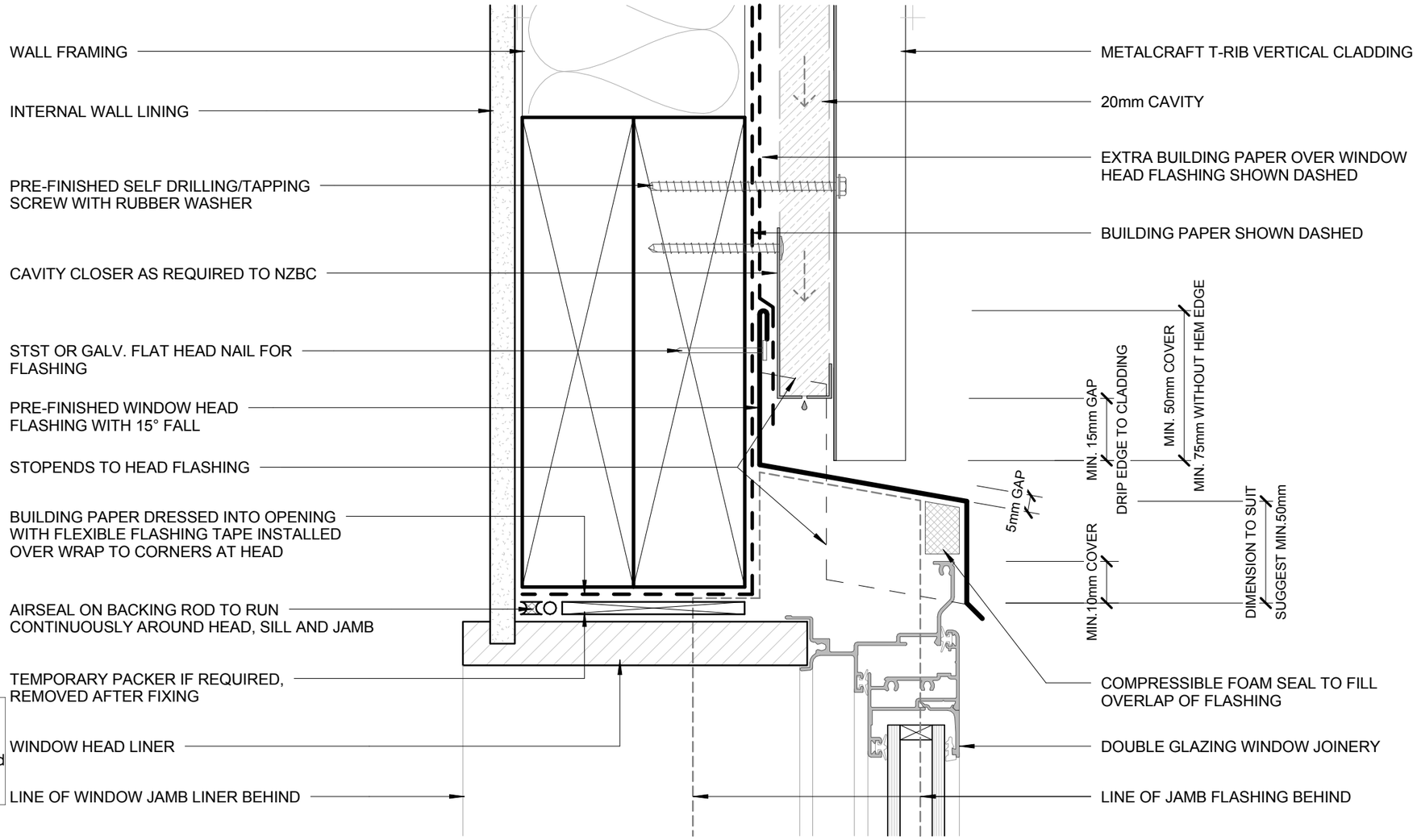
20/04/22

Minor Variation Received
ksu 24/02/2022



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Metalcraft Roofing

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FLUSH WINDOW HEAD
T-Rib
RESIDENTIAL VERTICAL CLADDING

Reference RVTRI Date 2015 Scale 1 : 2 Sheet 03 / 20

1 rvtri_residential-vertical-t-rib 1:1

FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:1 AT A3
DATE : 26/01/2022
PROJECT No : #Pln

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T-RIB WINDOW HEAD

20
REVISION NO

Central Otago District Council
210624
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20/04/22

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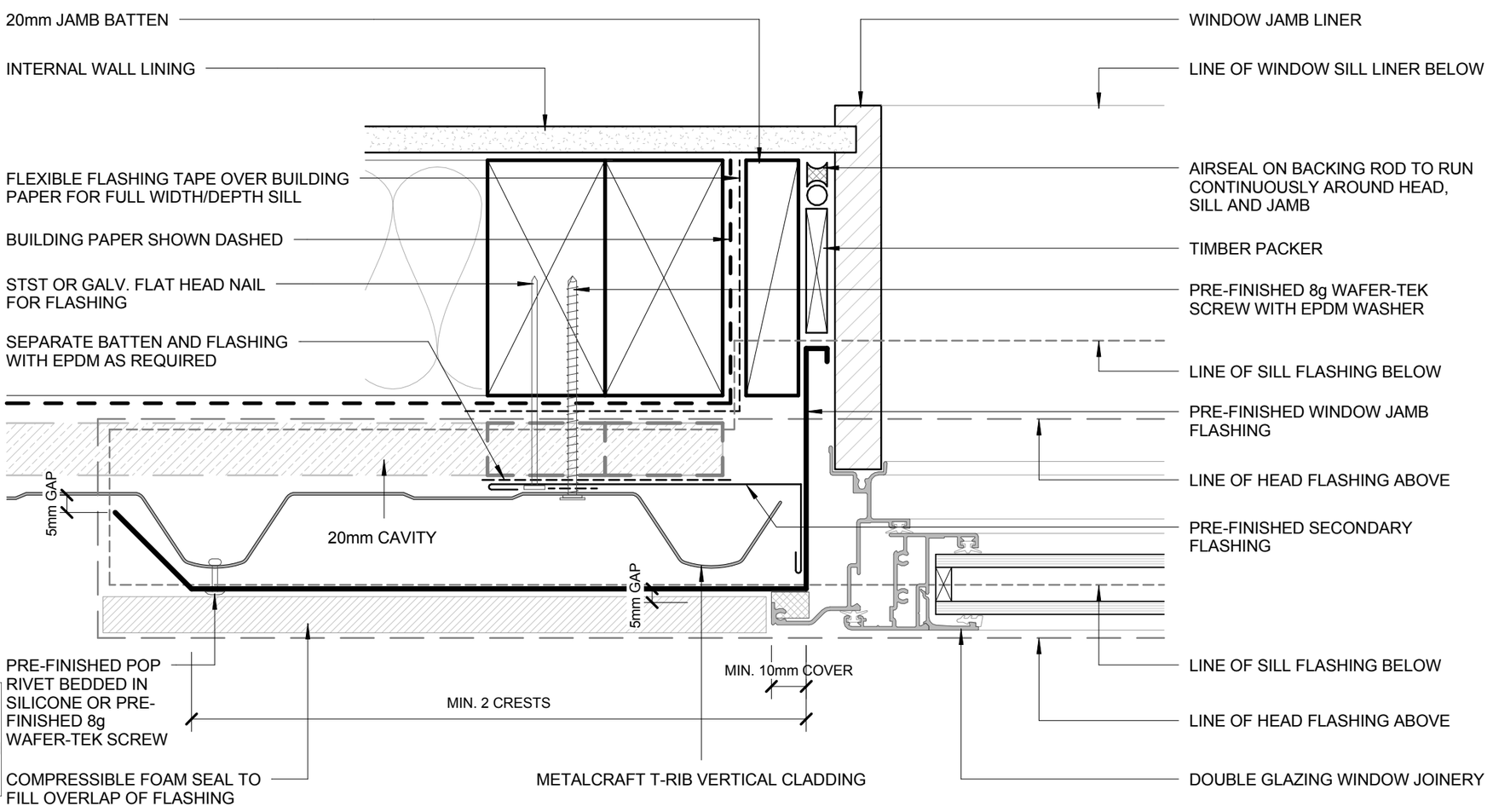
ksu 24/02/2022



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FLUSH WINDOW JAMB
T-Rib
RESIDENTIAL VERTICAL CLADDING

Reference RVTRI Date 2015 Scale 1 : 2 Sheet 05 / 20

1 rvtri_residential-vertical-t-rib 1:1

FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:1 AT A3
DATE : 26/01/2022
PROJECT No : #Pln

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T-RIB WINDOW JAMB

21
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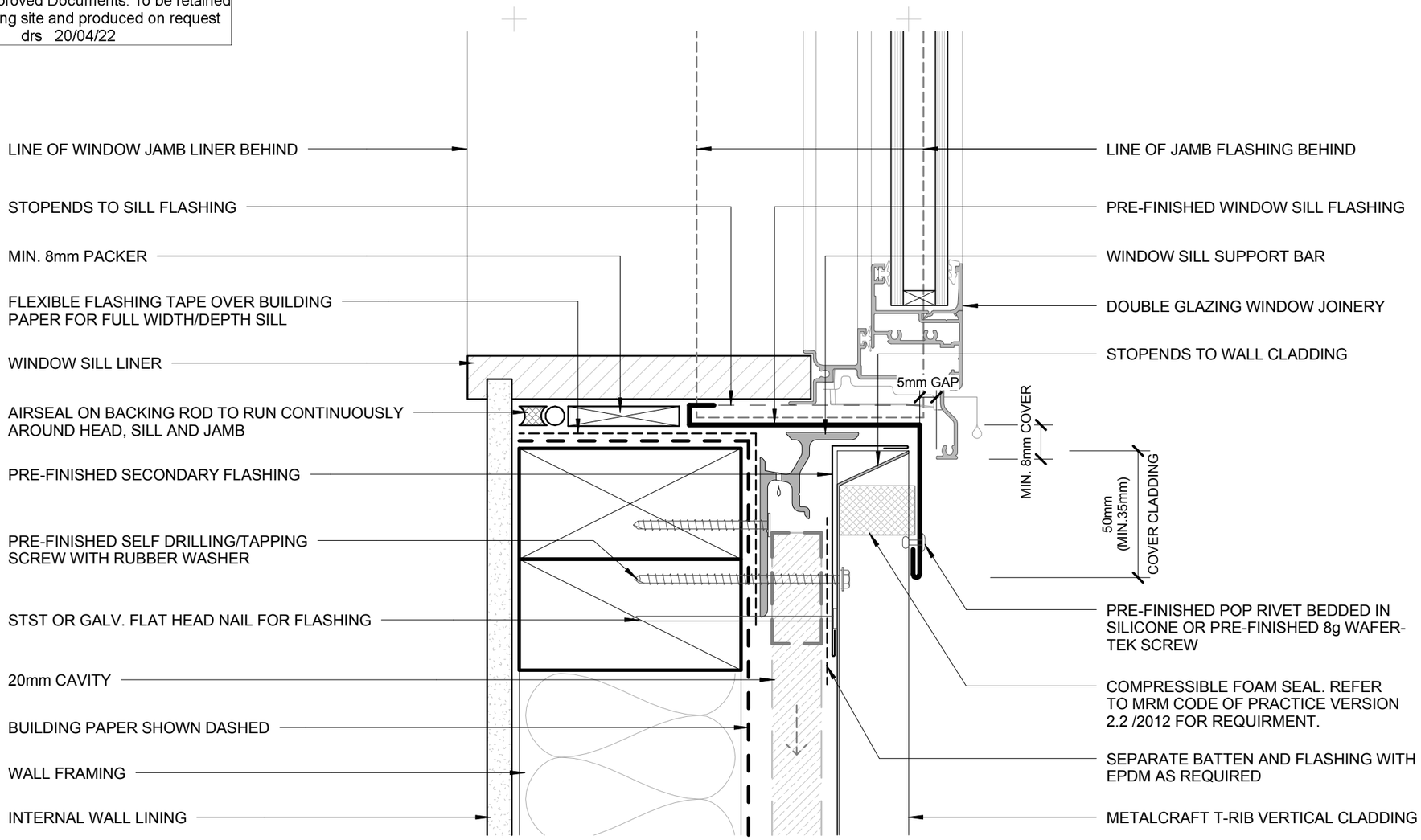
ksu 24/02/2022



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FLUSH WINDOW SILL
T-Rib
RESIDENTIAL VERTICAL CLADDING

Reference RVTRI Date 2015 Scale 1 : 2 Sheet 04 / 20

1 rvtri_residential-vertical-t-rib 1:1

FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:1 AT A3
DATE : 26/01/2022
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DO NOT SCALE DRAWING
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T-RIB WINDOW SILL

22
REVISION NO

Minor Variation Received
ksu 24/02/2022

1. Weatherboards must be coated with at least one coat all sides prior to fixing.
2. Fixing points must be pre-drilled minimum 1mm smaller than the fastener.
3. Cut ends and exposed timber must be sealed with an approved coating or end seal.

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Central Otago District Council
210624
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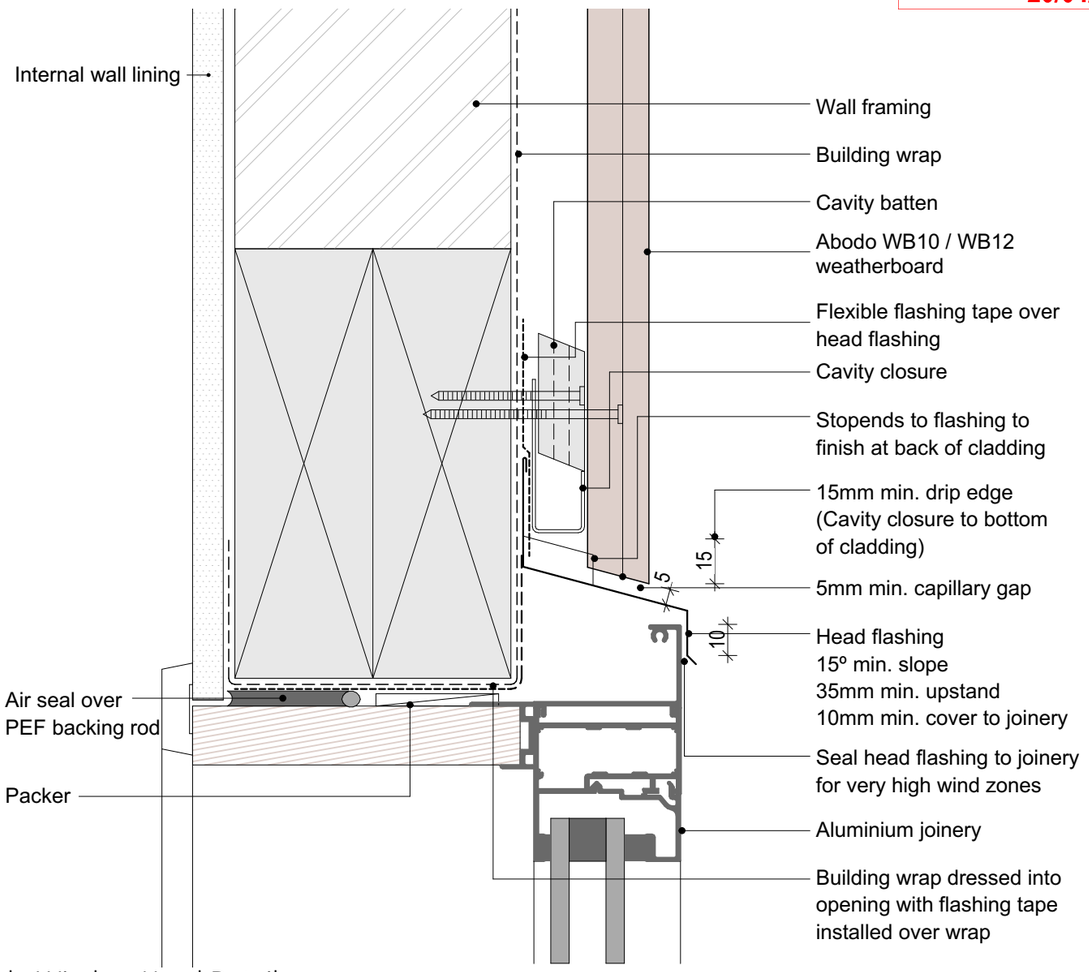
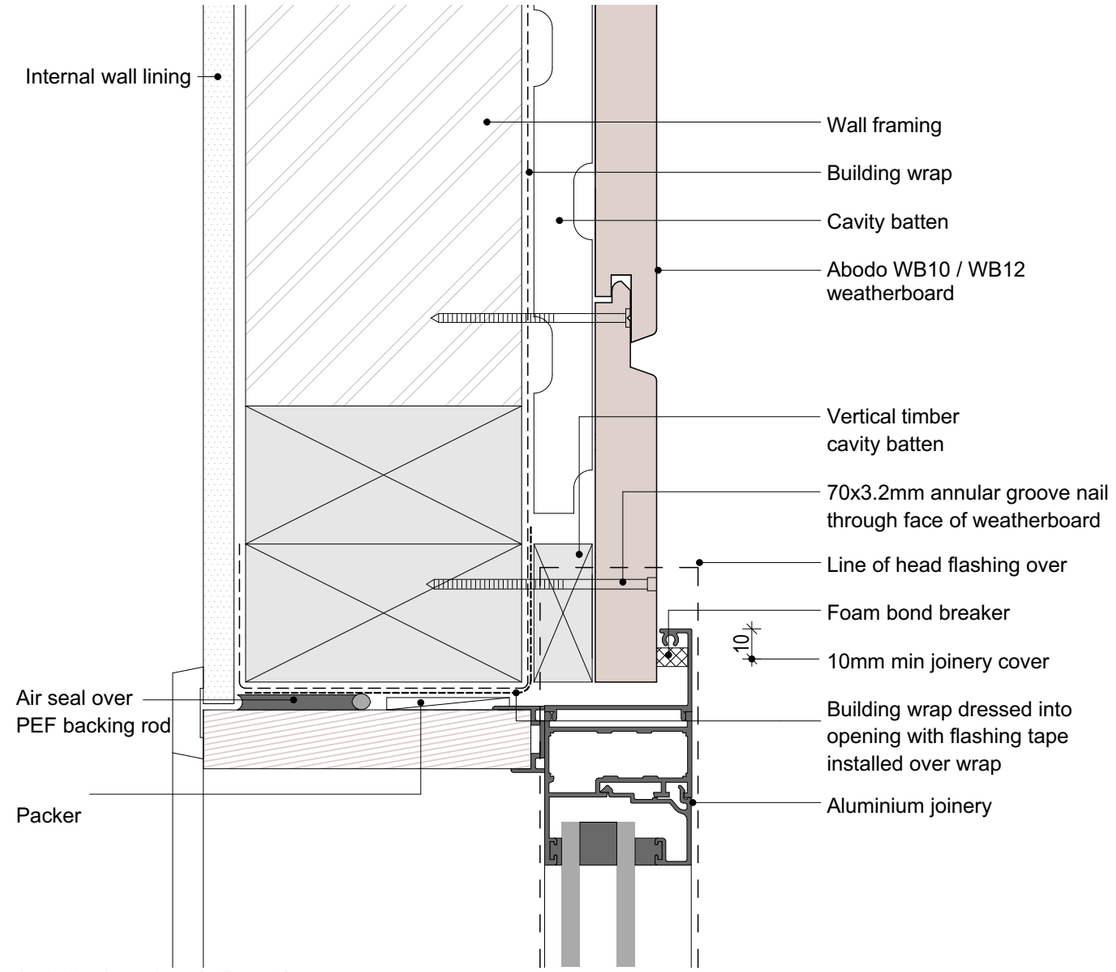


Abodo Window Head Detail



Abodo Window Jamb Detail

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FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:1 AT A3
DATE : 26/01/2022
PROJECT No : #Pln

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SHIPLAP WINDOW DETAILS

23

REVISION NO

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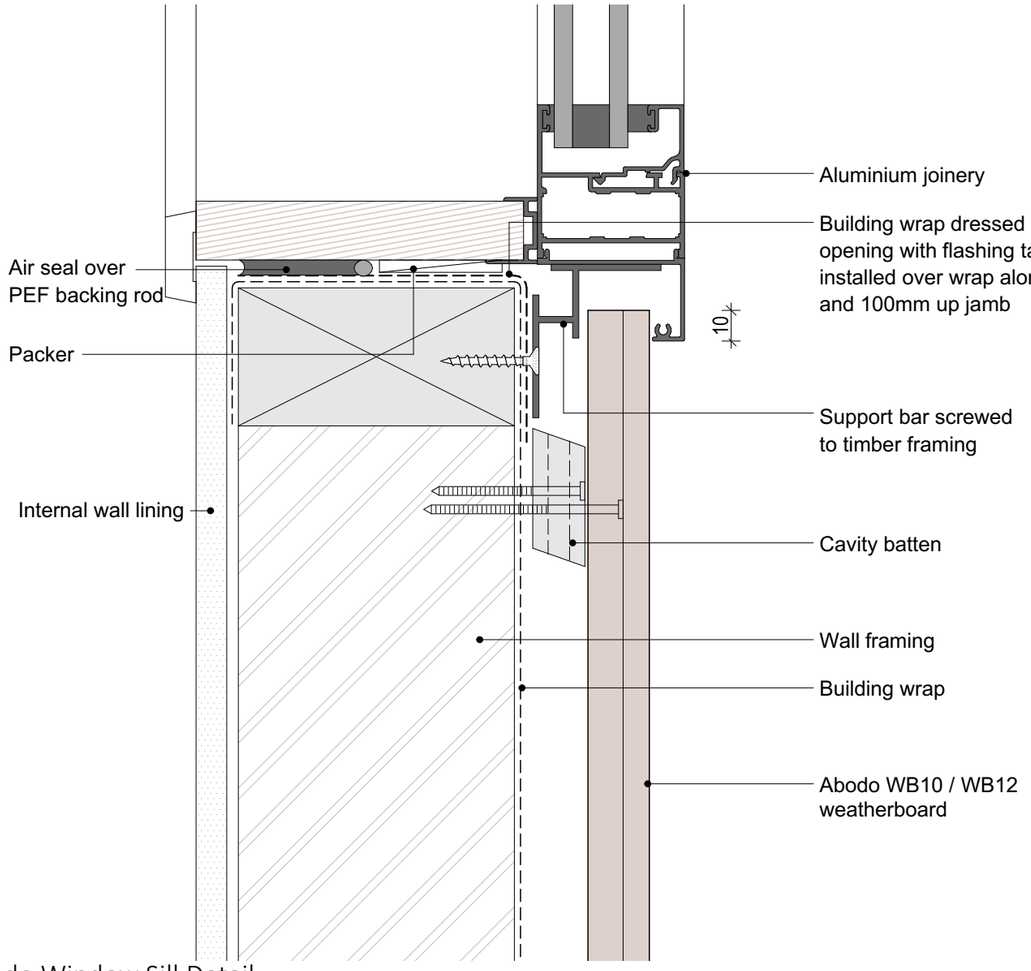
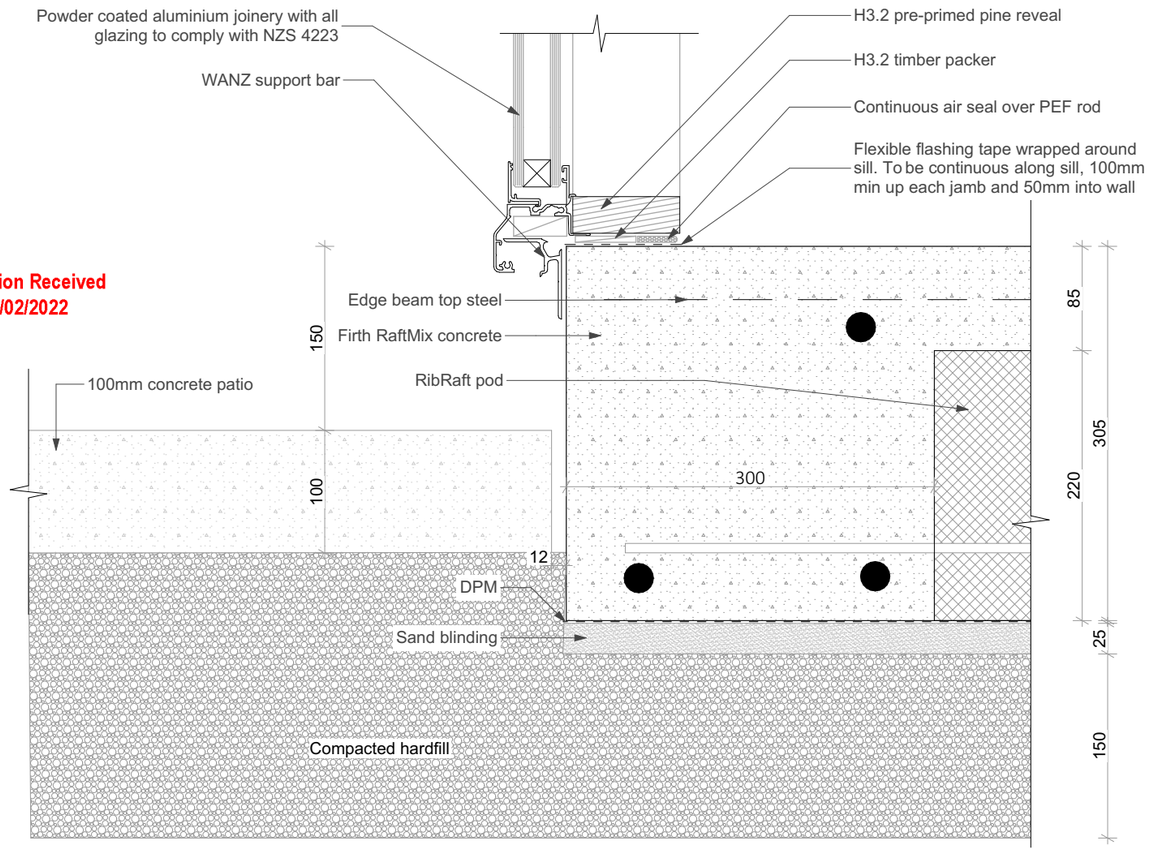


Abodo Window Sill Detail

Minor Variation Received
ksu 24/02/2022



Door Sill Detail

1 Aluminium Joinery Details 1:5

FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:5, 1:1 AT A3
DATE : 26/01/2022
PROJECT No : #Pln

DO NOT SCALE DRAWING
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ALUMINIUM JOINERY DETAILS

24
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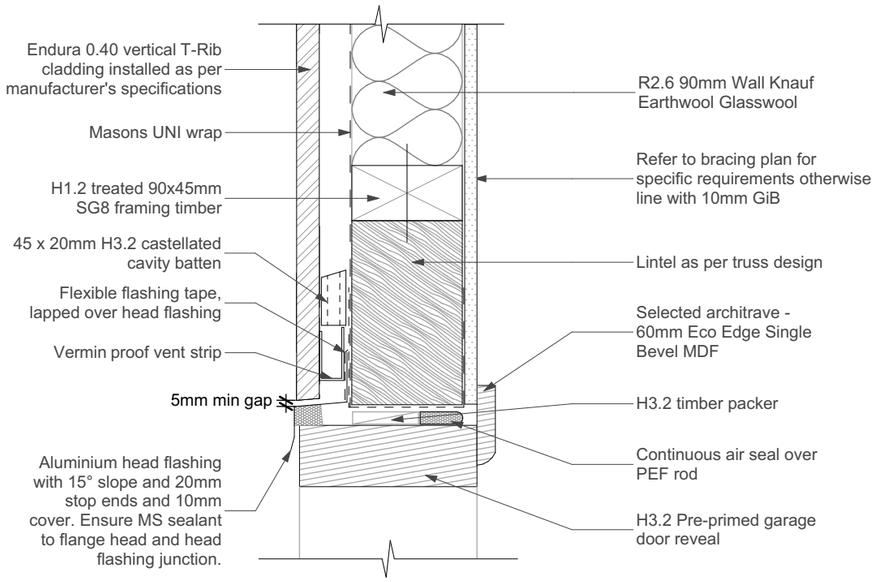
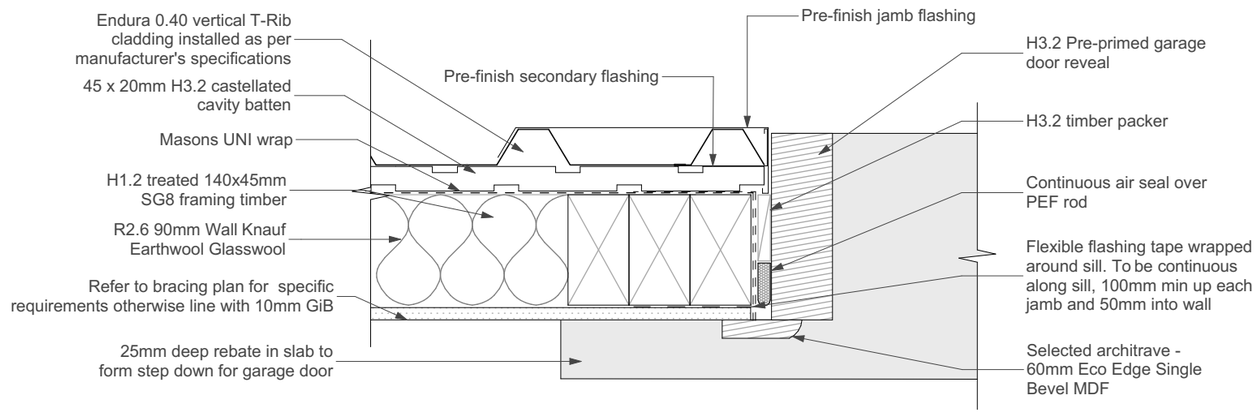
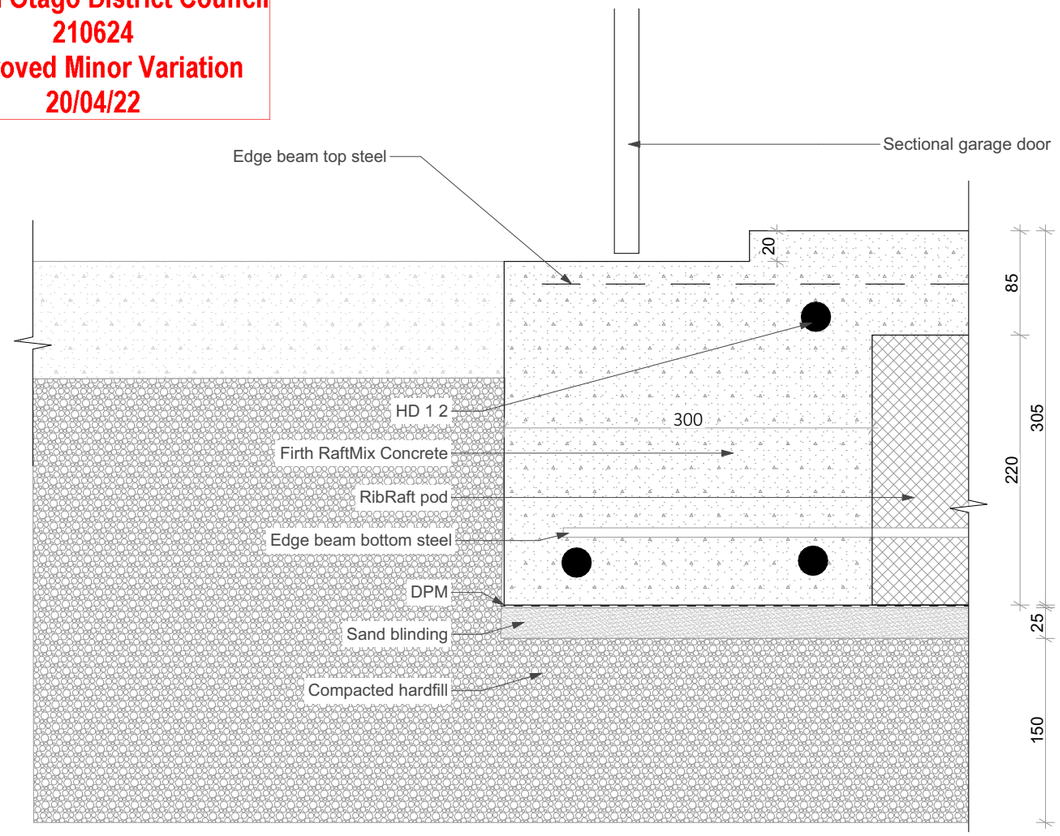


Garage Door Head Detail

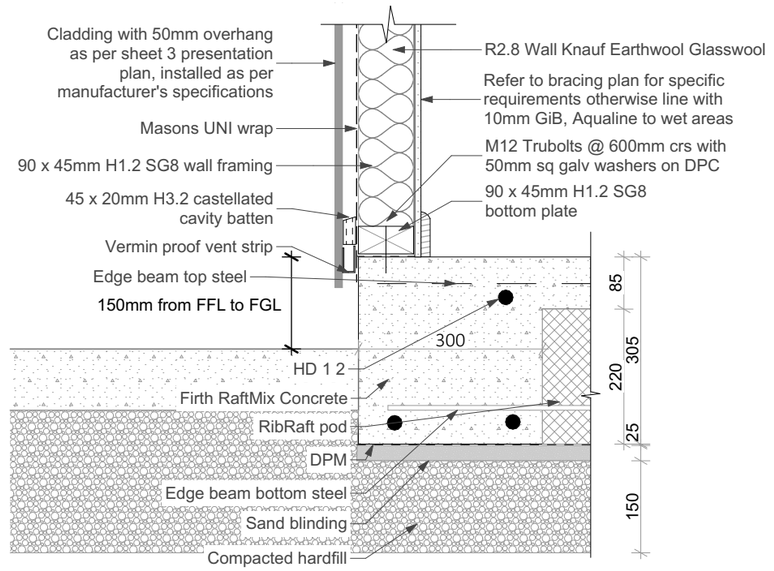
NOTE: ALL CLADDINGS TO BE INSTALLED AS PER CLADDING MANUFACTURER'S SPECIFICATIONS



Garage Door Jamb Detail



Garage Door Transition Detail



Cladding Foundation Detail @ 1:10

FINAL WORKING DRAWINGS

1 Garage Details 1:5

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:5, 1:10 AT A3
DATE : 26/01/2022
PROJECT No : #Pln

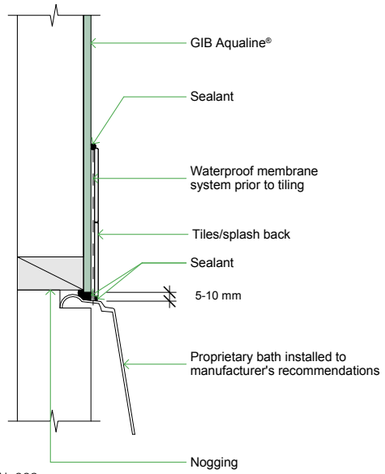
DO NOT SCALE DRAWING
CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO COMMENCING WORK

GARAGE & FOUNDATION DETAILS
25

REVISION NO

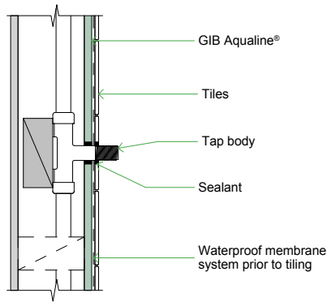
BATH – TILED UPSTAND DETAILS

A: BATH LINING JUNCTION



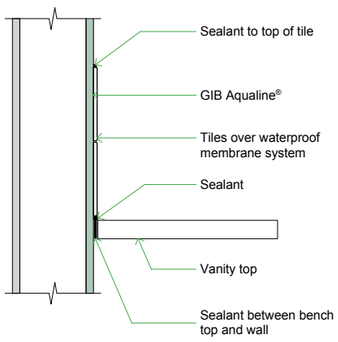
GAL-009

B: SEALING SEMI WET AREA PENETRATION



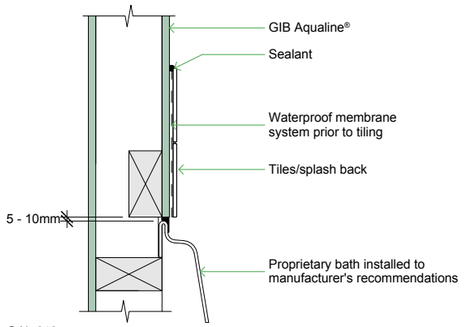
GAL-020

C: VANITY TOP LINING JUNCTION



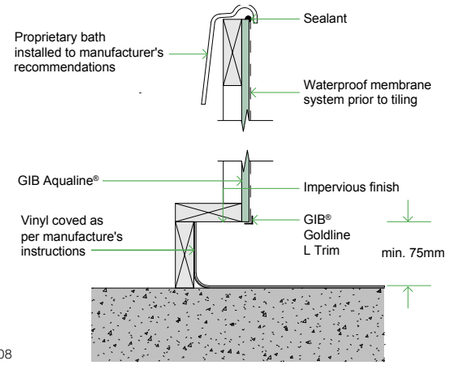
GAL-024

D: BATH LINING JUNCTION

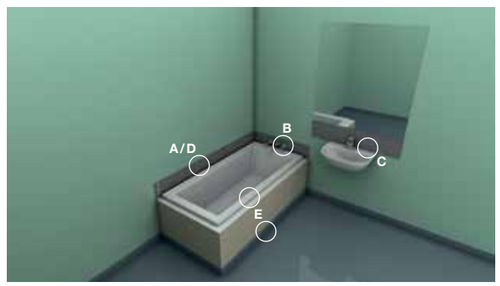


GAL-010

E: CRADLE VINYL LINING JUNCTION

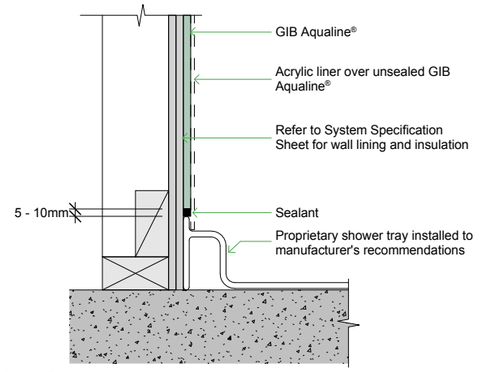


GAL-008



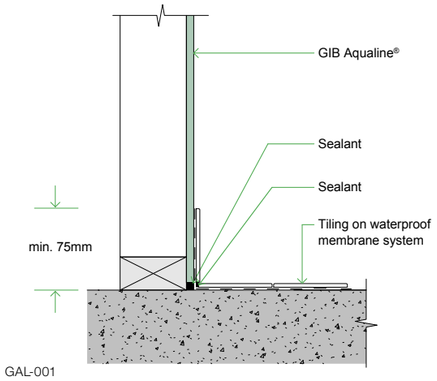
SHOWER – ACRYLIC LINER AND BASE DETAILS

A: MOULDED SHOWER TRAY DOUBLE LINING JUNCTION



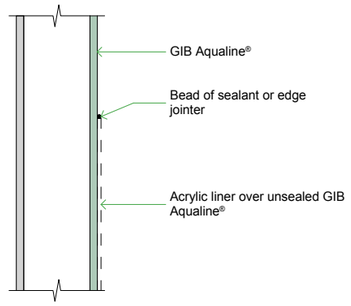
GAL-015

B: CERAMIC FLOOR SKIRTING LINING JUNCTION



GAL-001

C: UNSEALED PLASTERBOARD LINING



GAL-028

D: SHOWER MIXER PENETRATION IN WET WALL LININGS

Refer to the shower mixer manufacturer for shower mixer installation detailing including the use of proprietary products to prevent water or moisture ingress behind the wet wall lining.

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FINAL WORKING DRAWINGS

Build 7

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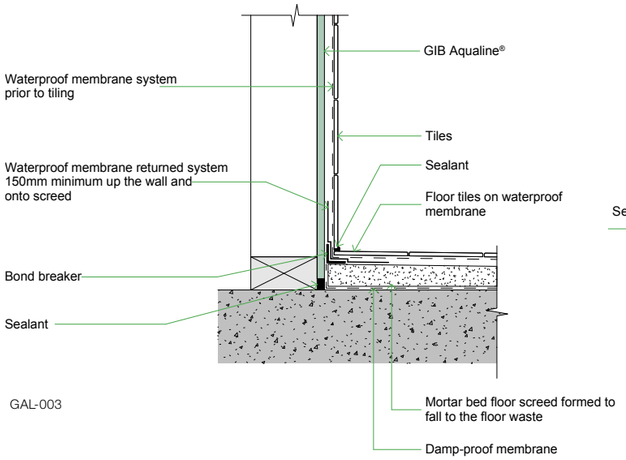
WET AREA DETAILS

26

REVISION NO

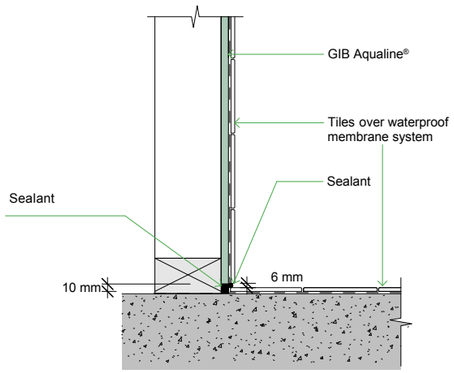
GIB SHOWER – TILED WALL AND BASE DETAILS

A: MORTAR UNDER CERAMIC FLOOR LINING JUNCTION



GAL-003

C: CERAMIC FLOOR LINING JUNCTION

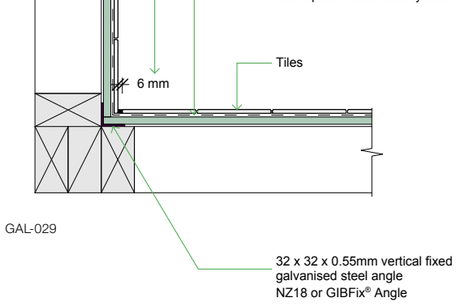


GAL-002A

PREFORMED SHOWER BASE JUNCTIONS

Refer to the shower base manufacturer for proprietary shower tray installation detailing including wet wall lining junction detailing.

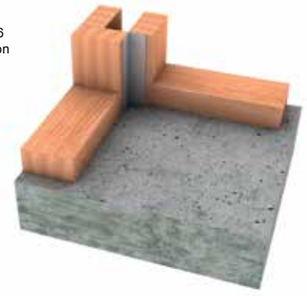
B: TILED INTERNAL CORNER



GAL-029

D: TILED INTERNAL CORNER METAL ANGLE POSITION

Refer to page 16 of this publication for specification and installation guidance.



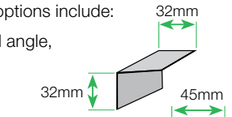
E: SHOWER MIXER PENETRATION IN WET WALL LININGS

Refer to the shower mixer manufacturer for shower mixer installation detailing including the use of proprietary products to prevent water or moisture ingress behind the wet wall lining.

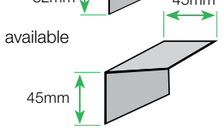
GIB METAL ANGLES AND MAXIMUM TILE WEIGHTS

METAL ANGLES FOR TILED INTERNAL CORNERS

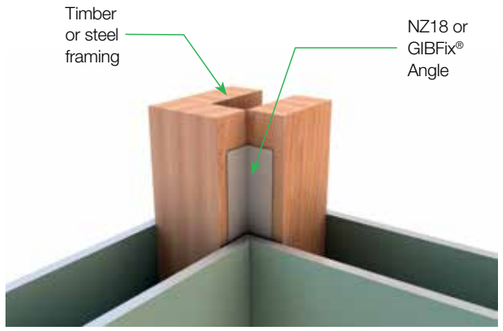
- Prior to lining in tiled areas (shower cubicles and shower over bath only) the internal corners shall be reinforced with a minimum 32 x 32 x 0.55mm galvanised metal angle.
- Suitable GIB® metal angle options include:
  - GIB® Rondo® NZ18 metal angle, available length: 3.0m



  - GIBFix® Angle metal angle, available lengths: 2.4m and 2.7m



- Angles need to be temporarily held in place until secured by the lining fixings
- Minimum height of the metal angle is 1800mm



WATERPROOF MEMBRANE SYSTEMS

A waterproof membrane system must be applied to all lining materials used as a substrate for ceramic tiles in a shower or shower over a bath application, or any other tiled application exposed to frequent water splash.

For further information see p10.

TILES AND TILE WEIGHTS

In areas likely to be directly exposed to water, tiles may be ceramic, porcelain or stone must comply with the over-surface finish requirements of the IWAM Code of Practice and be bedded with a suitable tile adhesive on the waterproof membrane system. See page 10 for the minimum extent of wall surfaces requiring impervious sheet materials or waterproof membrane systems prior to tiling.

Smaller mosaic tiles are often lighter, but the integrity of grout joints might be more prone to impact, whilst heavier tiles are larger and have less and deeper grout and sealant joints. For more information also see AS 3958:2007 Ceramic tiles – Guide to the installation of ceramic tiles.

Table 2: Recommended maximum tile weights

Maximum Tile Weights for GIB Aqualine®, GIB Toughline® Aqua or GIB Weatherline®			
Stud Centre (maximum)	**Fasteners Centre (maximum)**	**Lining Thickness**	**Tile Weight**
600mm maximum	150mm maximum	10mm	26kg/m²
		13mm	40kg/m²

ADHESIVE AND GROUT WEIGHTS

The weight of adhesive and grout can vary depending on the type of tile and the installation process used. The maximum tile weights stated in table 2 are conservative and refer to the tile weight excluding grout and adhesive used. An additional 3kg/m² has been factored into tile adhesion testing on top of the above stated tile weights to account for adhesive and grout weight used during the installation of the tile.

FINAL WORKING DRAWINGS

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WET AREA DETAILS

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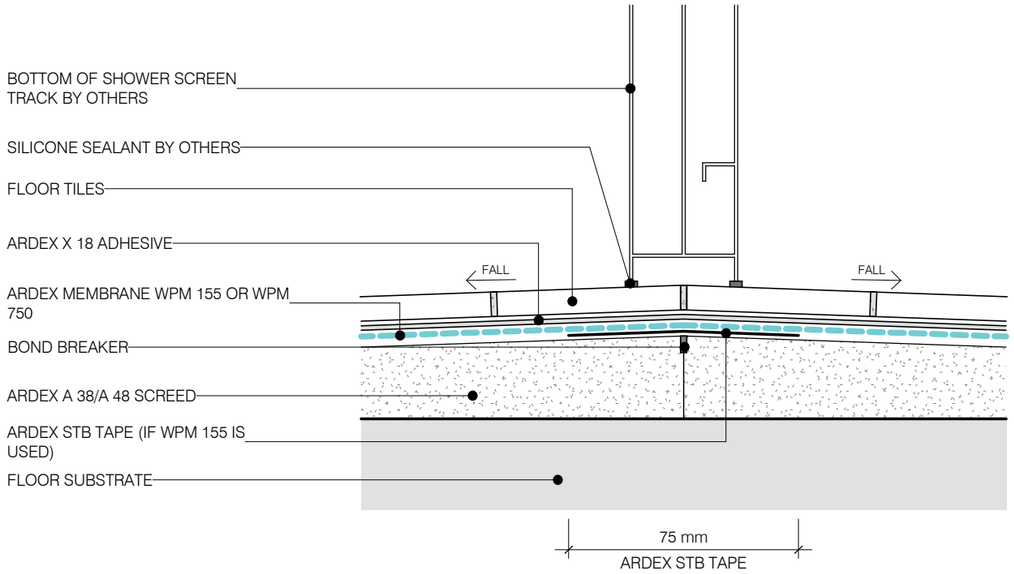
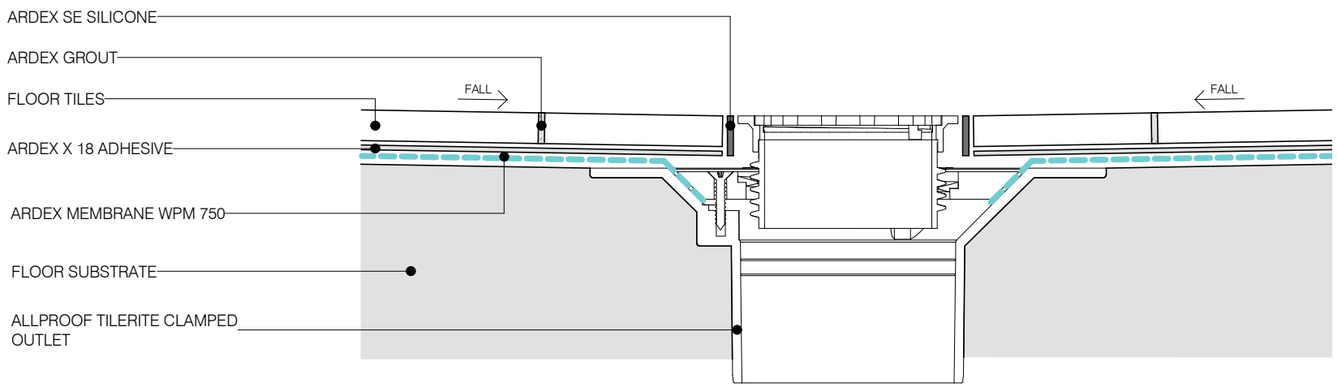


TYPICAL HOBLESS CONSTRUCTION DETAIL



CLAMP WASTE DETAIL

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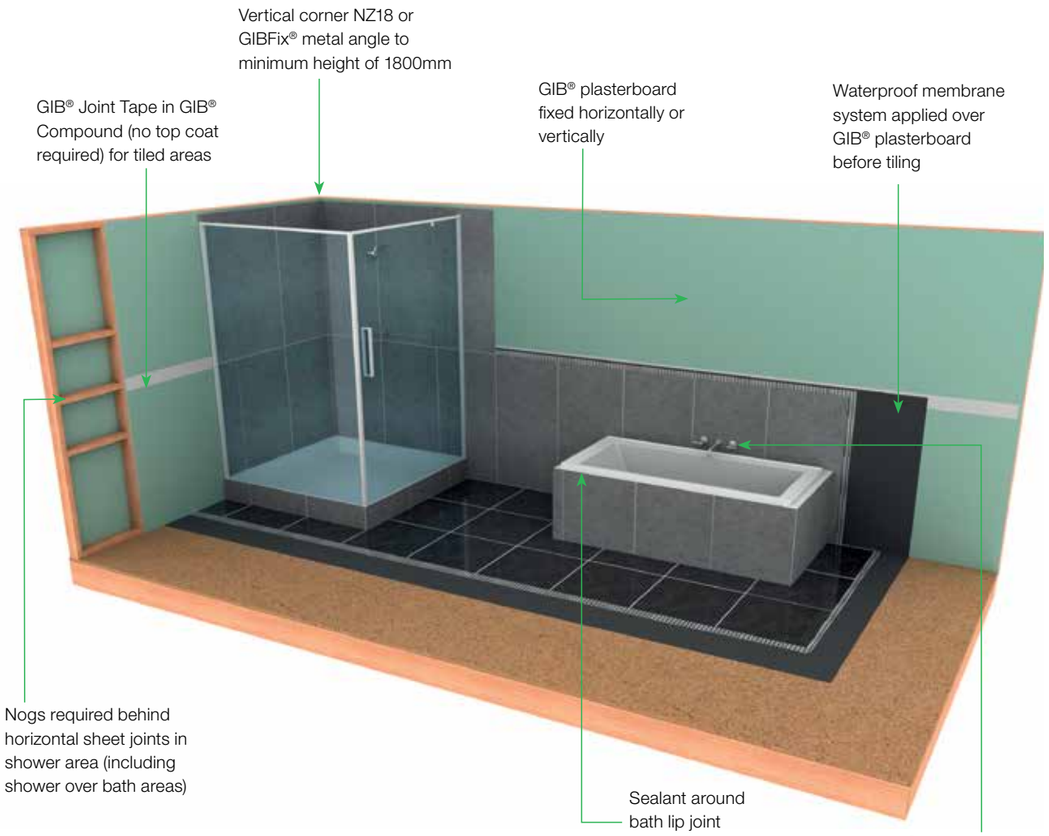
GIB SHOWER AND BATH - TILED WALLS DETAILS



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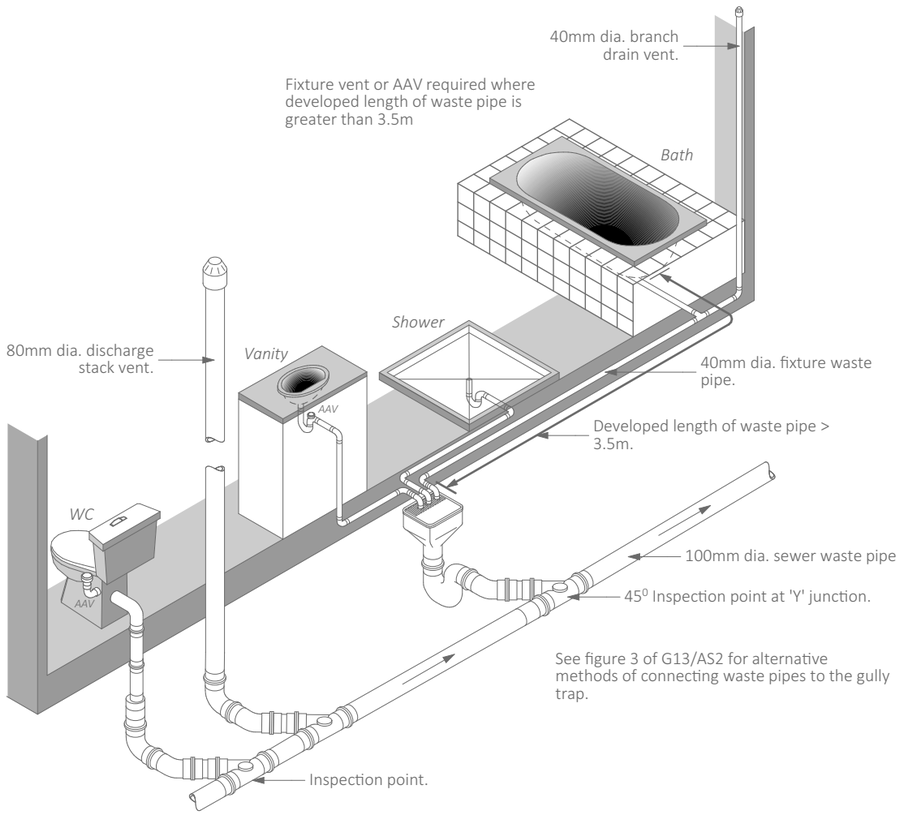
WET AREA DETAILS

28

REVISION NO



1 Typical Plumbing Schematic 1:50

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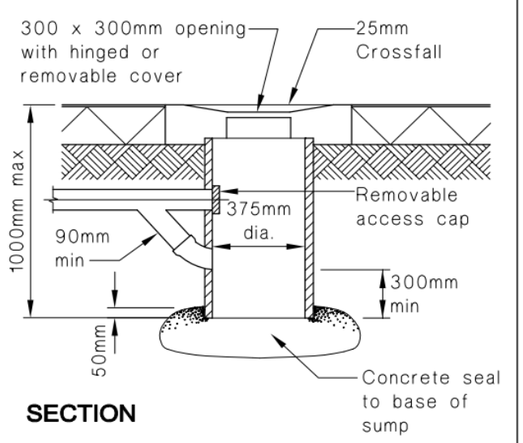
Figure 8: Type-one Surface Water Sump
Paragraph 3.6.2



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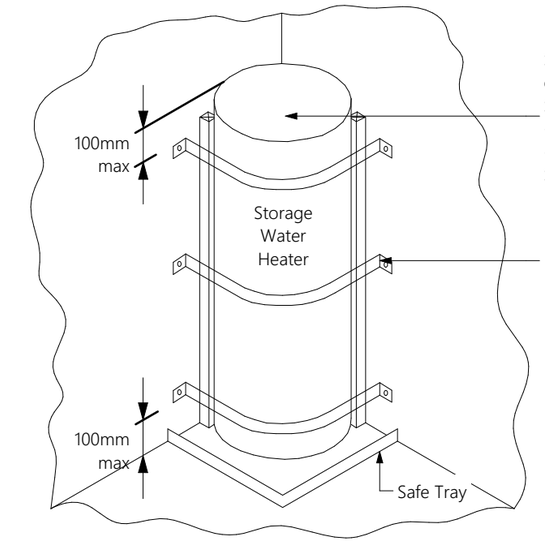
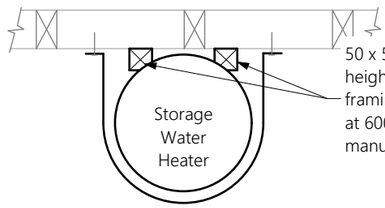
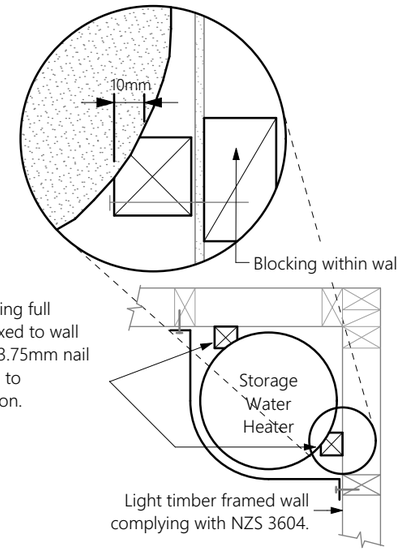


Storage water heaters to be restrained with 25 x 1mm galvanised steel straps tensioned when fixed in place.
Straps to be fixed to wall framing with:
- 1 No. 8mm coach screw with 30 x 2mm thick washer, or
- 2 No. 20 x 2.5mm thick washers.
Screws to penetrate timber framing a minimum of 50mm.

Extra centre strap for water heaters exceeding 200 litres.



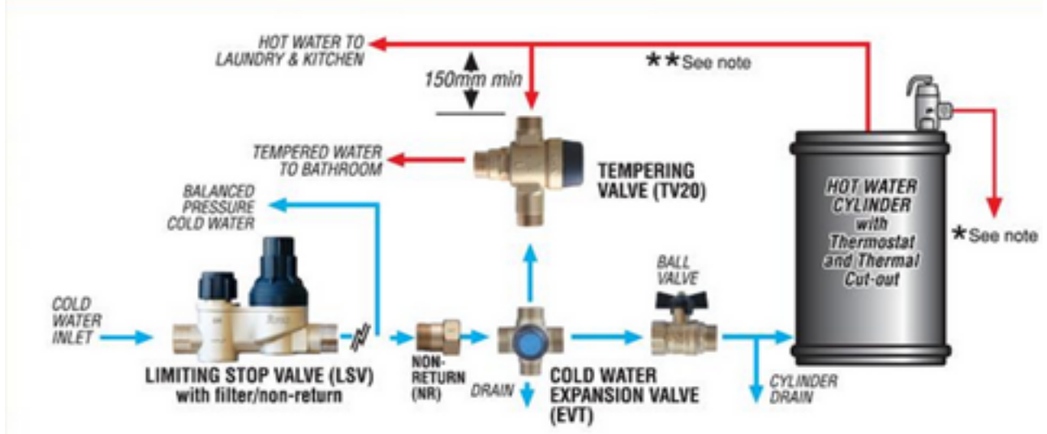
50 x 50mm vertical blocking full height of water heater, fixed to wall framing with 1 No. 100 x 3.75mm nail at 600 crs max according to manufacturers specification.



2 HWC Restraint 1:50

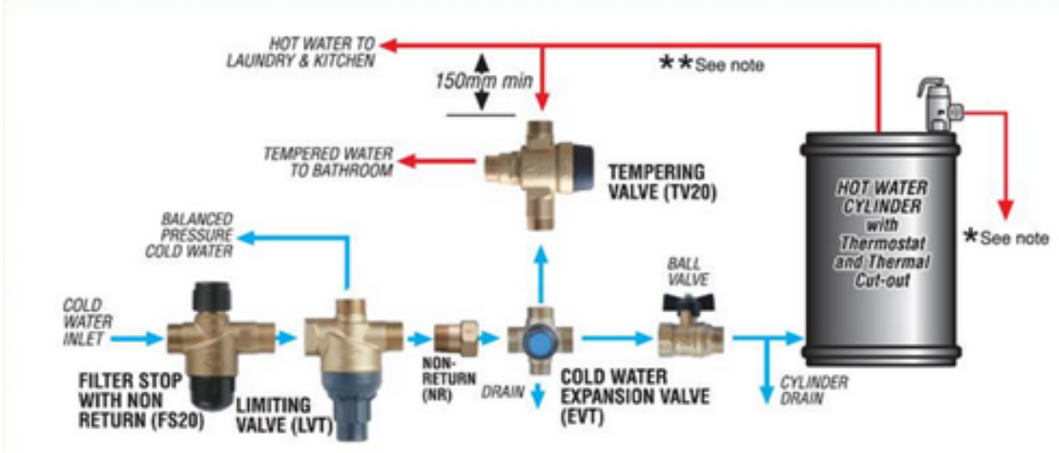
FINAL WORKING DRAWINGS

HIGH PRESSURE - Valve Vented



Note: hot water could be up to 95ºC

HIGH PRESSURE - Valve Vented



Note: hot water could be up to 95ºC

Build 7

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PLUMBING SCHEMATICS

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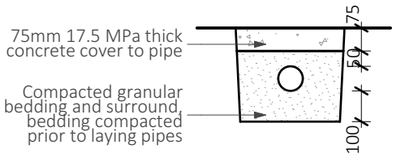
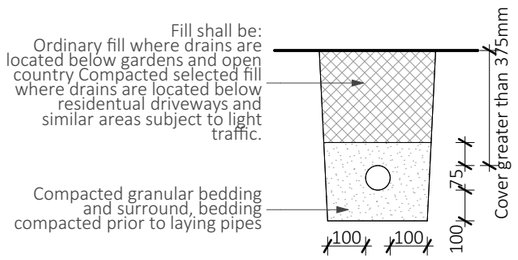
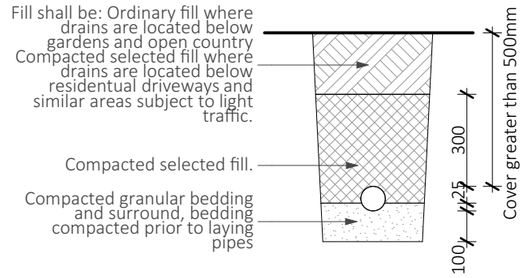
REVISION NO



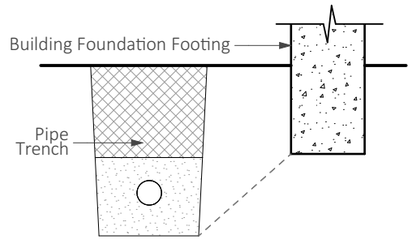
Bedding & Back Filling 125mm - 375mm cover



Bedding & Back Filling 375mm - 500mm cover

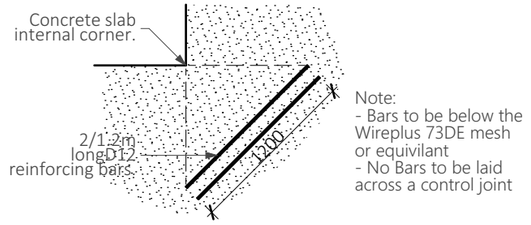


Bedding & Back Filling 500mm or more cover



Minimum horizontal seperation V.
(3V if trench is open longer than 48hrs).

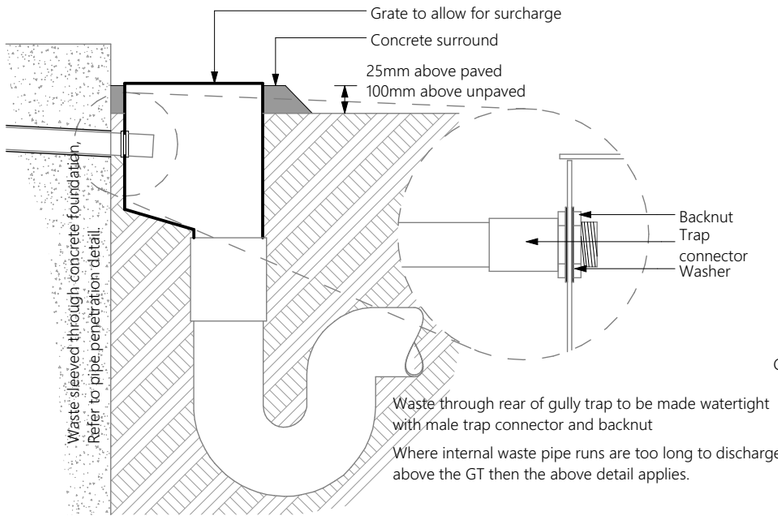
Relationship of pipe trench to building foundation



Note: only required where a shrinkage control (saw cut or proprietary crack former) doesn't meet an internal corner

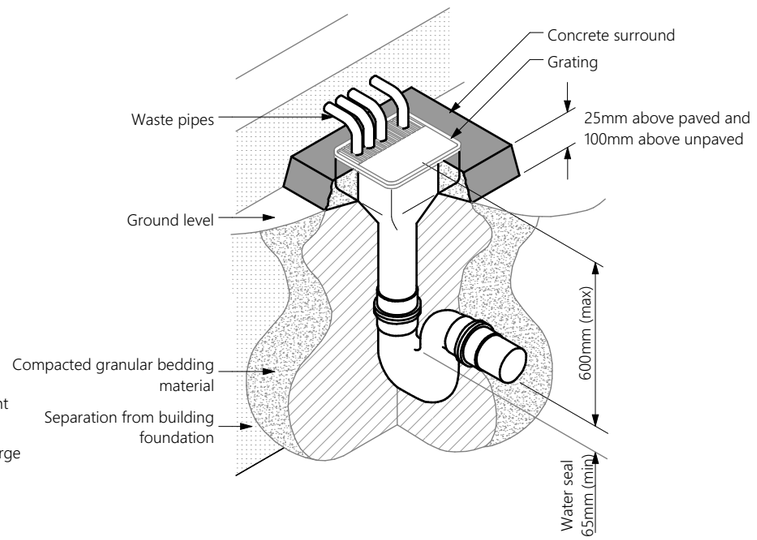
Supplymentry reinforcing to floor slab internal corners

1 Trench & Pipe Details 1:20

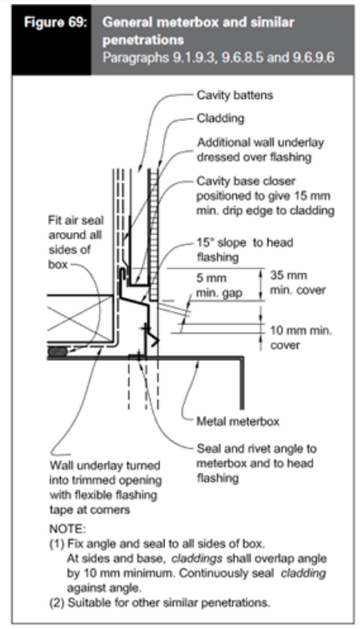


Waste through rear of gully trap to be made watertight with male trap connector and backnut

Where internal waste pipe runs are too long to discharge above the GT then the above detail applies.



2 Gully Trap 1:50



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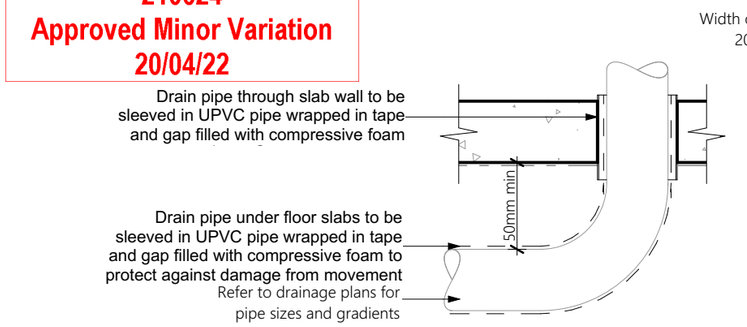
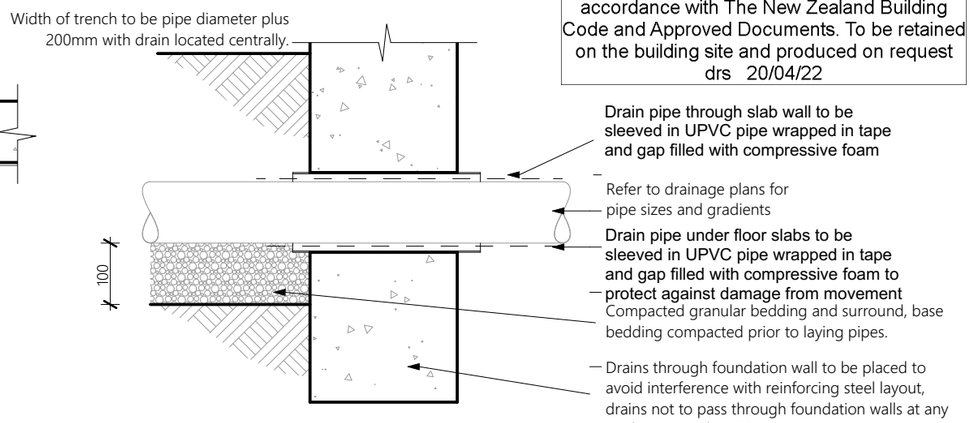
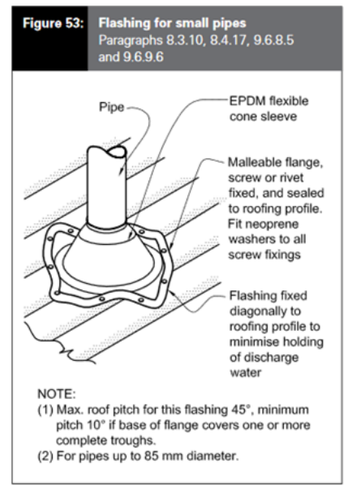


All drains under floor slab to be:
-50mm min clearance from underside of floor slab.
-laid straight with even gradient along length of drain.



3 Slab Penetration 1:10



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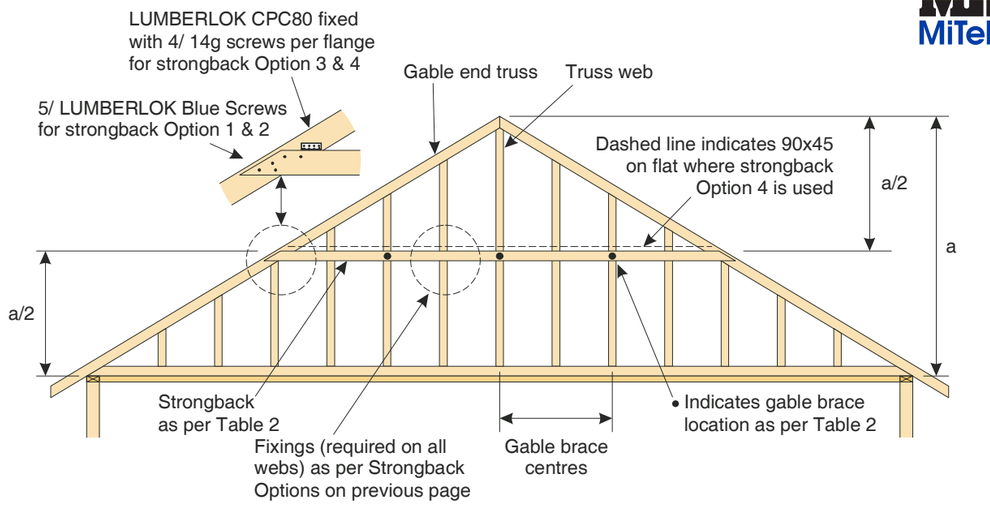
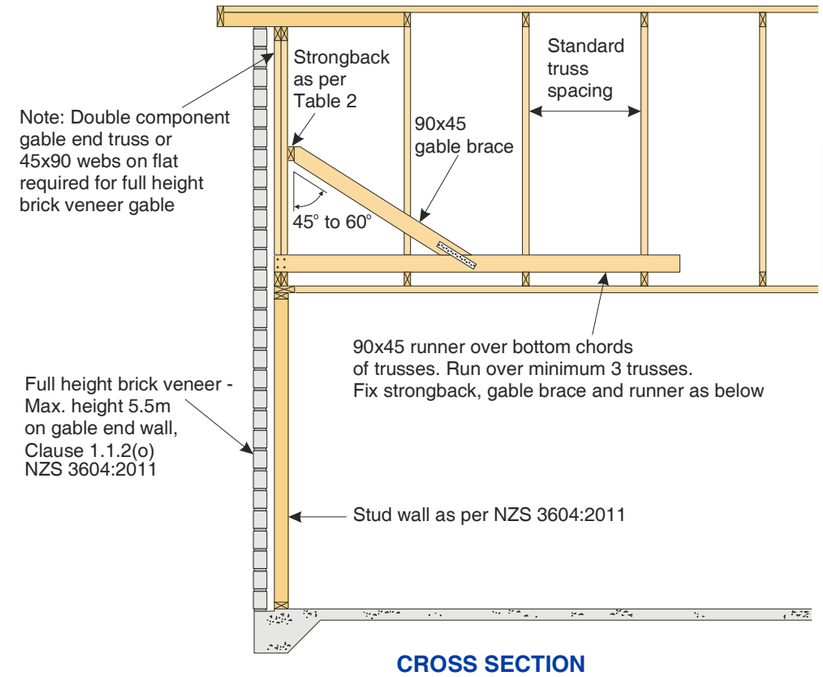
TRENCH & PIPE DETAILS

30

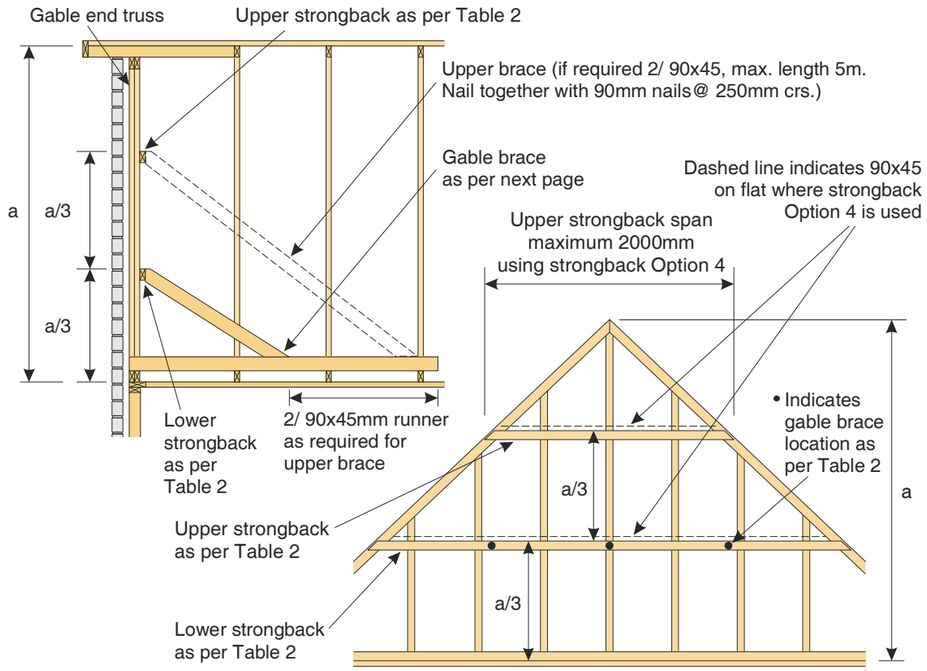
REVISION NO



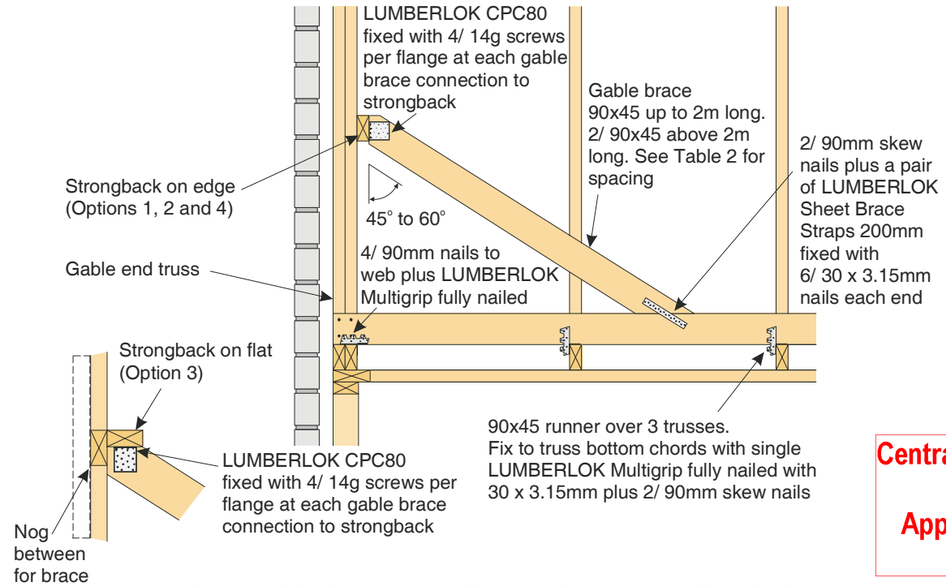
SINGLE STRONGBACK DETAILS



CROSS SECTION
(full height brick veneer option shown)



DOUBLE STRONGBACK DETAILS FOR ALL GABLE END OPTIONS
(full height brick veneer option shown)



GABLE BRACE DETAIL FOR ALL GABLE END OPTIONS
(full height brick veneer option shown)

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FINAL WORKING DRAWINGS

Minor Variation Received
ksu 24/02/2022

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Approved Minor Variation
20/04/22

MiTek New Zealand Limited
AUCKLAND
PO Box 58-014, Botany 2163
Phone: 09-274 7109
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CHRISTCHURCH
PO Box 8387, Riccarton 8440
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www.miteknz.co.nz
MITEK® LUMBERLOK® BOWMAC®

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:0.6941 AT A3
DATE : 26/01/2022
PROJECT No : #Pln

DO NOT SCALE DRAWING
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ROOF STRUCTURE

31

REVISION NO

Minor Variation Received
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GENERAL NOTES

Insulation:	R5.2 290mm Terra Lana roof insulation R3.6 140mm terra Lana wall insulation R1.4 60mm Terra Lana acoustic insulation
Maximum stud height:	2400mm to underside of trusses
Window lintel height:	As per opening schedule
Internal door leaf height:	As per opening schedule
Internal door leaf width:	As per opening schedule
General:	Internal non-loadbearing walls to be SG8 graded All dimensions to be confirmed on site

FIXING SCHEDULE

Exterior Bottom plate to concrete floor:Pryda bottom plate anchors.

Refer to bracing plan for additional hold down fixings.

Interior bottom plate to concrete floor: 75x8mm shot fired fastenings with 16mm washers @ 600mm crs, within 150mm each end of plate.

Refer to bracing plan for additional hold down fixings.

Stud to bottom or top plate:	4/100 x 3.15mm skewed nails
Dwang to stud:	2/100 x 3.15mm skewed nails
Fish plate to straightened stud:	4/60 x 2.8mm nails each side
Half joint in top plate:	4/100 x 3.15mm skewed nails
Lintel to trimming stud:	4/100 x 3.15mm skewed nails
Standard soffit stringer to stud:	2/100 x 3.75mm nails
Sill trimmer to trimming stud for:	
- Trimmer not exceeding 2400mm:	2/100 x 3.75mm end nails
- Trimmer not exceeding 3000mm:	3/100 x 3.75mm end nails
- Trimmer not exceeding 3600mm:	4/100x3.75mm end nails
Double top plate to top plate:	2/100 x 3.75mm @ 500mm crs
Trimming studs together at openings, studs & blocking at wall intersections:	100 x 3.75mm nails @ 600mm crs
Trimming stud to doubling stud immediately under lintels:	2/100 x 3.75mm nails
Trusses to top plate:	Fixing Type B
Ceiling battens to truss bottom chord:	2/75 x 3.15mm nails @ 600mm crs
Outrigger to gable top plate:	1/14g self drilling screw, 150mm long
Outrigger to truss:	2/100 x 3.75mm end nails
Flying rafter to outrigger:	2/100 x 3.75mm end nails
Outrigger blocking to top plate:	4/100 x 3.75mm skewed nails
Purlins to truss:	80mm x 10g screw

SCHEDULE OF FRAMING TIMBERS - GRADING AND TREATMENT

Wall framing	
Exterior walls & lintels	SG8, H1.2, Pinus radiata
Interior walls (loadbearing)	SG8, H1.2, Pinus radiata
Interior walls (non-loadbearing)	SG8, H1.2, Pinus radiata
Roof framing	
Roof trusses - typical	SG8, H1.2, Pinus radiata
Gable end truss	SG8, H1.2, Pinus radiata
Coved or attic trusses	SG8, H1.2, Pinus radiata
Purlins/Battens	SG8, H1.2, Pinus radiata
Valley boards, barge boards	SG8, H1.2, Pinus radiata
Windows	
Framing and reveals	Dressed, H3.1, Pinus radiata

TIMBER MOISTURE CONTENT & DURABILITY

The Building Code clause B2 Durability sets out minimum durability requirements for building materials and components. The expected life depends on the location of the material or element in the building and its function.

Generally, timber components must have a minimum durability of not less than:
- 5 years for components that are easy to access and replace, such as interior finishing timber.
- 15 years for components that are moderately difficult to replace, such as cladding, exterior trim and exterior joinery.
- The life of the building, but not less than 50 years, for structural components such as bearers, joists and studs.

Where timber may be subjected to moisture in use or is used externally, it must be:
a naturally durable species, or treated with a wood preservative to make it resistant to decay fungi or wood-boring insects (borer) and render it sufficiently durable.

Untreated non-durable timber at less than 18% moisture content and protected from wetting is not particularly susceptible to borer attack or fungal decay but is not permitted for use as framing (the exception being Douglas fir used in low-risk building and meeting the requirements of B2/AS1 paragraph 3.2.2.2).

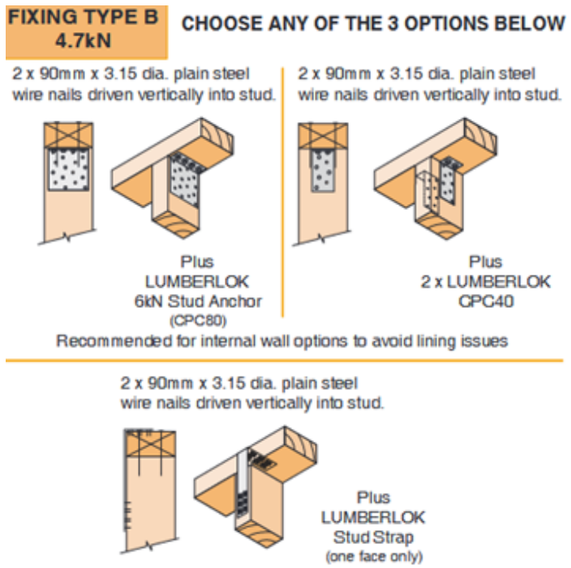
TIMBER USE AND PRESERVATIVE STANDARD TREAMENTS

The requirements for timber use in buildings are defined by NZS 3602:2003 Timber and wood-based products for use in building. This standard also specifies the minimum preservative treatment levels for given end uses.

The requirements of specific treatment regimes are contained in NZS 3640:2003 Chemical preservation of round and sawn timber. It contains detailed treatment specifications, the types of chemicals that may be used, the minimum preservative retention and penetration into the timber, identification of treated timber and quality control requirements.

SIZING OF TIMBER PLATES

Bottom plate:	45mm thick, width to match stud. SG8, H1.2, Pinus Radiata.
Top plate:	45mm thick, width to match stud. Additional top plate 35mm thick, 140mm wide if 90mm wall, 190mm wide if 140mm wall. Typically SG8, H1.2, Pinus Radiata, as indicated on details.



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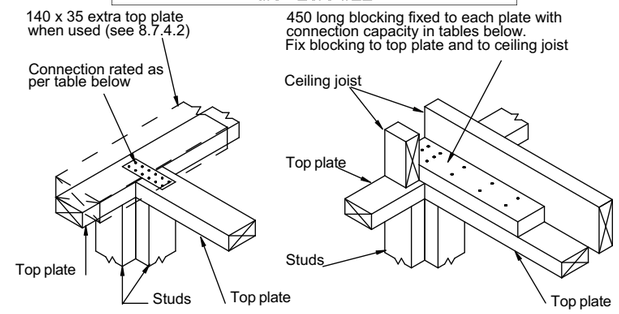
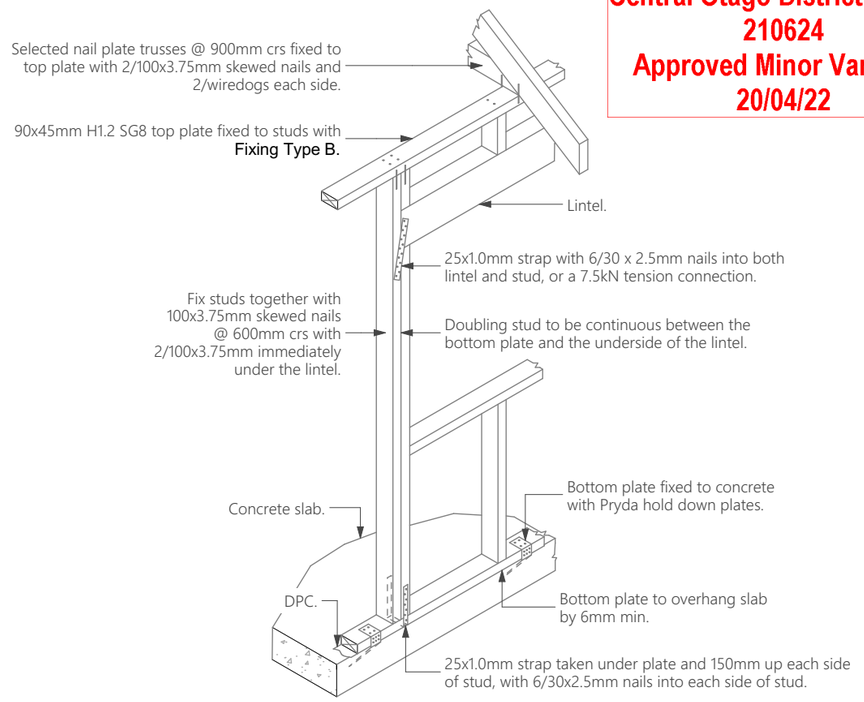


Capacities of metal plate joints		Capacities of nailed joints	
Up to 3 kN Up to 6 kN	3 / 30 x 3.15 mm nails per side 6 / 30 x 3.15 mm nails per side	Up to 3 kN Up to 6 kN	3 / 100 x 3.75 mm nails per side 6 / 100 x 3.75 mm nails per side

NOTE wire dogs See section 4 for durability requirements.
Unless otherwise stated, all dimensions are in mm.

PLATE CONNECTION AT TOP PLATE - RIGHT ANGLE
Not to Scale



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FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:1 AT A3
DATE : 26/01/2022
PROJECT No : #Pln

DO NOT SCALE DRAWING
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FRAMING NOTES & SPECS

32

REVISION NO

IBS PanelLine Bracing Rating Table

TYPE	MINIMUM LENGTH (MM)	LINING	OTHER REQUIREMENTS	BU/m W	BU/m EQ
NP1	600	9mm IBS PanelLine Bracing regular MDF one side	n/a	80	75
NP2	1200	9mm IBS PanelLine Bracing regular MDF one side	Panel hold-downs	150*	140*

NOTES: * Timber floors - A limit of 120BU/m applies to NZS 3604:2011 timber floors.
For wall heights greater than 2.4m, the bracing rating is calulated by multiplying the appropriate values shown in the above table by a factor f=2.4/H where H is the wall height in metres. Walls lower than 2.4m shall be rated as if they were 2.4m.

Braced wall elements longer than those given in the above table, shall have their bracing capacity determined by multiplying the bracing rating given in the above table by the length of the wall. The end studs of the bracing element must be provided with hold-down details as required in the above table.

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Figure 1: System NP2
Concrete floors - Internal Walls - End strap

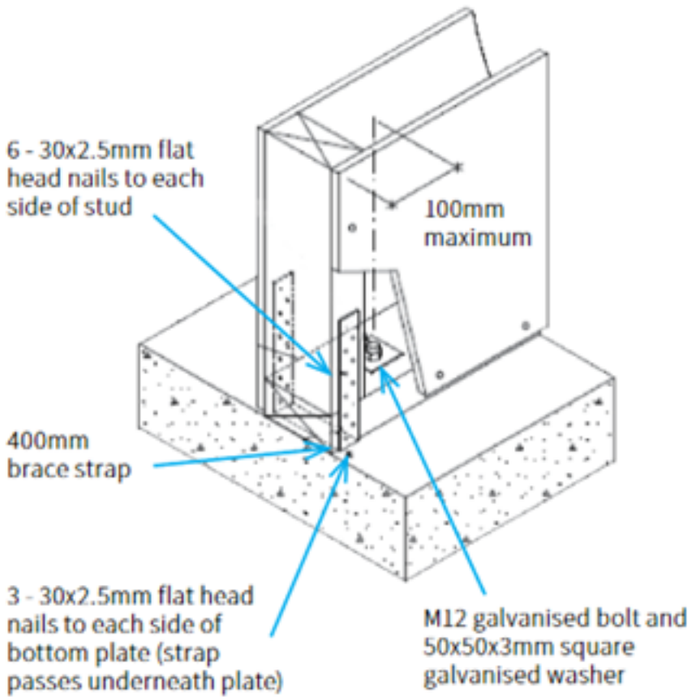


Figure 2: System NP2
Concrete floors - Internal Walls - GIB HandiBrac®

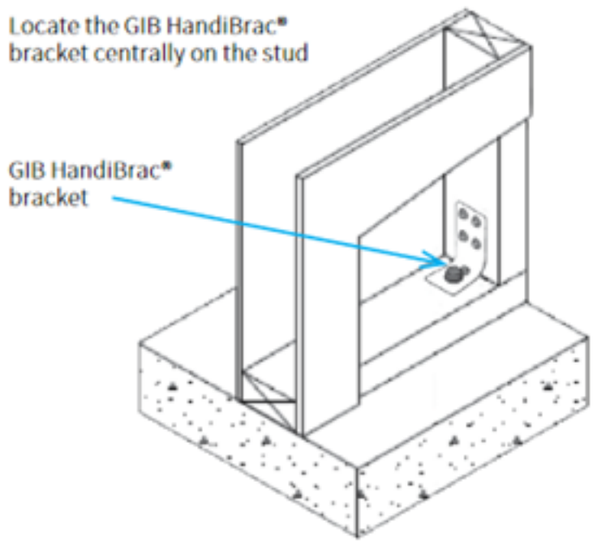
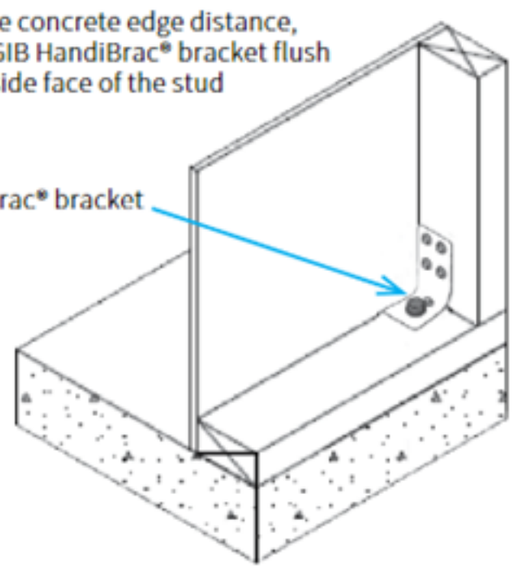


Figure 3: System NP2
Concrete floors - External Walls - GIB HandiBrac®



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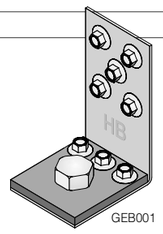
Bottom Plate Fixing

JUNE 2011

Bottom plate fixings for GIB® Bracing Elements			
Brace type	**Concrete slabs**		**Timber floors**
	External wall	**Internal wall**	**External and Internal walls**
GS1-N	As per NZS 3604:2011. No specific additional fastening required	As per NZS 3604:2011. Alternatively use 75 x 3.8mm shot-fired fasteners with 16mm washers, 150mm and 300mm from each end of the bracing element and at 600mm thereafter.	Pairs of 100 x 3.75mm flat head hand driven nails or 3 / 90 x 3.15mm power driven nails at 600mm centres in accordance with NZS 3604:2011
GS2-N	Not applicable		
GSP-H BL1-H BLP-H	Intermediate fastenings to comply with NZS 3604:2011. In addition: GIB Handibrac® fixings or metal wrap-around strap fixings and bolt as illustrated on pages 19 and 20.		Pairs of 100 x 3.75mm flat head hand driven nails or 3 / 90 x 3.15mm power driven nails at 600mm centres in accordance with NZS 3604:2011. In addition: GIB Handibrac® fixings or metal wrap-around strap fixings and bolt as illustrated below.
BLG-H	Not applicable	As for GSP-N, BL1-H, BLP-H on concrete slab above	

Panel Hold-down Details

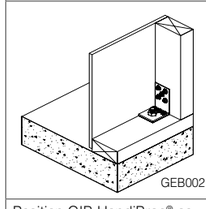
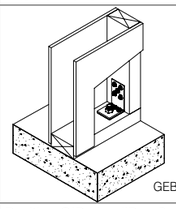
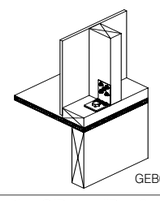
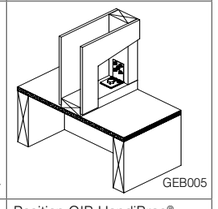
GIB HandiBrac® – RECOMMENDED METHOD



GEB001

Developed in conjunction with MiTek™ NZ, the GIB HandiBrac® has been designed and tested for use as a hold-down in GIB® BL and GSP bracing elements.

- The GIB HandiBrac® registered design provides for quick and easy installation
- The GIB HandiBrac® provides a flush surface for the wall linings because it is fitted inside the framing. There is no need to check in the framing as recommended with conventional straps
- The GIB HandiBrac® is suitable for both new and retrofit construction
- The design also allows for installation and inspection at any stage prior to fitting internal linings

Concrete Floor		Timber Floor	
External walls	**Internal walls**	**External walls**	**Internal walls**
 GEB002	 GEB003	 GEB004	 GEB005
Position GIB HandiBrac® as close as practicable to the internal edge of the bottom plate	Position GIB HandiBrac® at the stud / plate junction	Position GIB HandiBrac® in the centre of the perimeter joist or bearer	Position GIB HandiBrac® in the centre of floor joist or full depth solid block
Hold-down fastener requirements			
A mechanical fastening with a minimum characteristic uplift capacity of 15kN.		12x150mm galvanised coach screw	

Refer to gib.co.nz/cad for CAD details.

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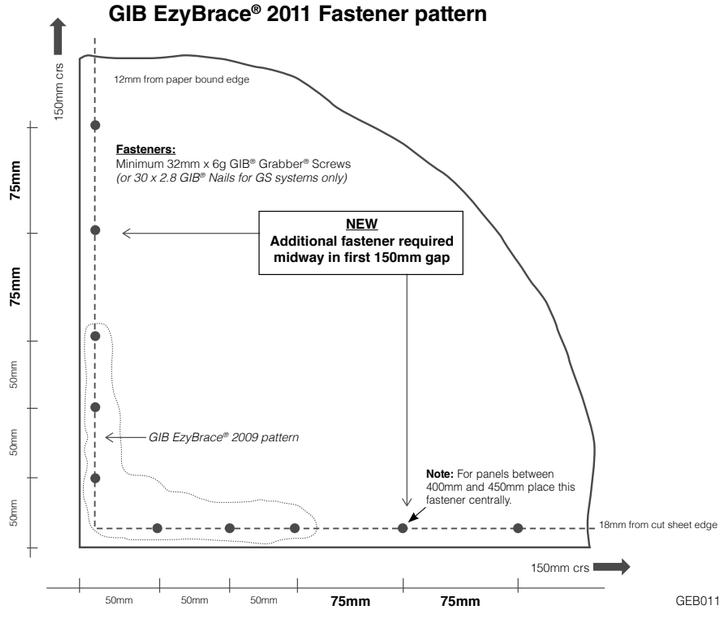
Construction Details

JUNE 2011

Revised Fastener Pattern for *all four corners* of GIB EzyBrace® Elements

As GIB Braceline® screws are no longer required for BL bracing elements, two additional fasteners must be installed in ***all four corners*** of GIB EzyBrace® GS and BL elements, as shown.
Fasteners must be placed no closer than 12mm from the paper bound sheet edge and no closer than 18mm from sheet ends or cut edges.

GIB EzyBrace® 2011 Fastener pattern



GEB011

Refer to gib.co.nz/cad for CAD details.

PERMITTED GIB® PLASTERBOARD SUBSTITUTIONS IN GIB EZYBRACE® SYSTEMS

GIB Ezybrace® Systems have been designed and tested using only the products specified. Occasionally additional properties may be required to be provided by a different GIB® Plasterboard product. The following table provides acceptable substitution options.

Specified	Permitted alternative GIB® Plasterboard products								
	GIB® Standard	GIB Ultraline®	GIB Braceline/ Noiseline®	GIB Aqualine®	GIB Toughline®	GIB Fyreline®			
						10mm	13mm	16mm	19mm
GIB® Standard		OK	OK	OK	OK	OK	NOTE 2		
GIB Braceline®	X	X		NOTE 1	OK	X	NOTES 1 and 2		

NOTE 1 The element must be 900mm or longer. Use 32mm x 6g GIB® Grabber® drywall screws at ***100mm*** centres to the perimeter of the bracing element. The bracing corner fastening pattern, as illustrated above, applies to all four corners of the element. Panel hold-down fixings are required.

NOTE 2 The fastener type and length must be as required for the relevant FRR system but the fixing pattern must be as shown

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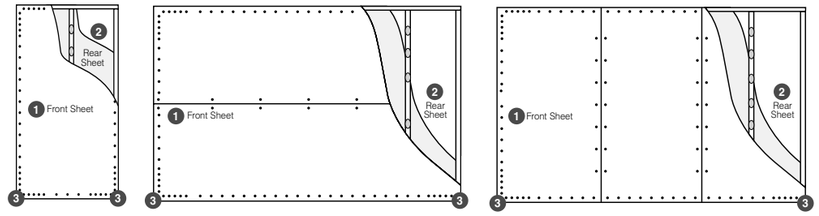

System	Lining one side 1		Lining opposite side 2		Panel Hold-Down Fixings 3	Fastener spacing
	Lining	Fasteners	Lining	Fasteners		
GS1-N	Any 10mm or 13mm GIB® Plasterboard	30mm GIB® nails, or minimum 32mm x 6g GIB® Grabber® high thread screws	Not required	Not required	Not required	*GIB® Plasterboard* Corner fastening pattern as illustrated above Fasteners at 150mm to bracing element perimeter, and: • at 300mm centres to intermediate sheet joints for vertical fixing, or • at stud / sheet junction for horizontally fixed elements, and • GIBFix adhesive daubs at 300mm crs to intermediate framing *Plywood* Fasteners at 150mm around the perimeter of every sheet and at 300mm centres to intermediate studs. Place fasteners no closer than 7mm from sheet edges. Plasterboard corner fastener pattern does not apply to plywood.
GS2-N			Any 10mm or 13mm GIB® Plasterboard	30mm GIB® nails, or minimum 32mm x 6g GIB® Grabber® high thread screws		
GSP-H			Minimum 7mm Ecoply manufactured to AS/NZS 2269	50mm x 2.8mm Flat head galvanised or stainless steel nails	Yes, see Pages 19 and 20	
BL1-H	10mm or 13mm GIB Braceline®	minimum 32mm x 6g GIB® Grabber® high thread screws GIB Braceline® Nails may be used for 10mm GIB Braceline® ONLY	Not required	Not required		
BLG-H			Any 10mm or 13mm GIB® Plasterboard	30mm GIB® nails, or minimum 32mm x 6g GIB® Grabber® high thread screws		
BLP-H			Minimum 7mm Ecoply manufactured to AS/NZS 2269	50mm x 2.8mm flat head galvanised or stainless steel nails		

FIN

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210624
Approved Minor Variation
20/04/22

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:50 AT A3
DATE : 26/01/2022
PROJECT No : #Pln

DO NOT SCALE DRAWING
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GIB BRACING DOCUMENTS

REVISION NO

Ceiling diaphragms

GIB® plasterboard ceiling diaphragms are stiff and strong horizontal elements which effectively transfer loads to bracing walls. They themselves do not have a bracing unit rating but are used when bracing lines exceed 6m separation. The basic shape of a ceiling diaphragm is square or rectangular. Protrusions are permitted but cut-outs are not. The length of a ceiling diaphragm shall not exceed twice its width. Dimensions are measured between supporting bracing lines. Supporting bracing lines shall have a bracing capacity no less than the greater of 100 bracing units or 15 bracing units per metre of diaphragm dimension, measured at right angles to the line being considered, see figure 21.

Limitations for GIB® plasterboard ceiling diaphragms

Ceiling diaphragms may be constructed using any GIB® plasterboard provided perimeter fixing is at;

150mm centres for: Diaphragms up to 7.5m in length, no steeper than 15°.

100mm centres for: Diaphragms up to 7.5m in length, no steeper than 45°. Diaphragms up to 12m in length, no steeper than 25°.

Diaphragms outside these parameters must be specifically designed.

General fixing requirements for GIB® Ceiling Diaphragms:

- Linings must be installed over the entire area of the diaphragm.
- Fastening must be no less than 12mm from sheet edges and not less than 18mm from sheet ends.
- Sheets must be supported by framing members (e.g., ceiling battens) spaced at no more than 500mm centres for 10mm GIB® plasterboard and at no more than 600mm centres for 13mm GIB® plasterboard.
- Sheets within the diaphragm area may be fastened and finished conventionally in accordance with the publication entitled, "GIB® Site Guide". All joints shall be GIB® Joint Tape reinforced and stopped. It is recommended that sheet butt joints are formed off framing and back-blocked (see "GIB® Site Guide").
- Use full width sheets where possible. At least 900mm wide sheets with a length not less than 1800mm shall be used. Sheets less than 900mm wide but no less than 600mm may be used provided all joints with adjacent sheets are back-blocked (see "GIB® Site Guide" and figure 22).
- Fasteners are placed at the specified centres around the ceiling diaphragm with the corners fastened using the GIB EzyBrace® fastener pattern.

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FIGURE 20: PROTRUSIONS AND CUTOUTS

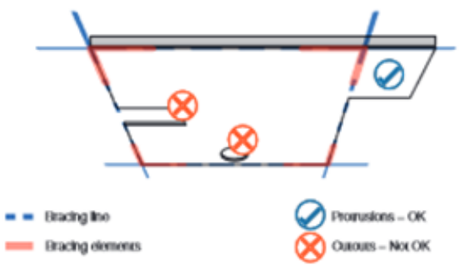


FIGURE 21: DIAPHRAGM BRACING LINING SPACINGS

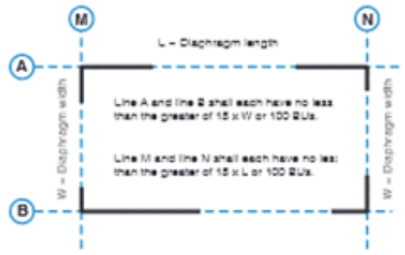
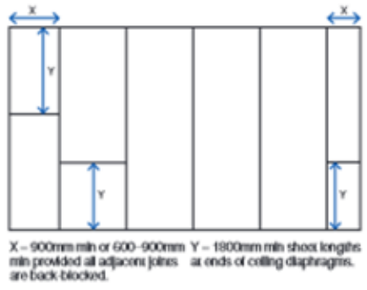
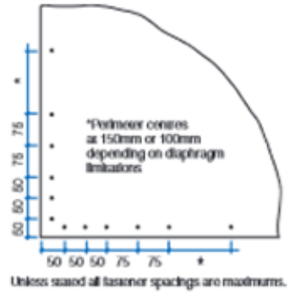


FIGURE 22: GIB® CEILING DIAPHRAGM SHEET WIDTHS AND LENGTHS



X – 900mm min or 600–900mm min provided all adjacent joins are back blocked. Y – 1800mm min sheet lengths at ends of ceiling diaphragms.

FIGURE 23: GIB EZYBRACE® FASTENER PATTERN



Unless stated all fastener spacings are maximums.

GEB015

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Ceiling battens in ceiling diaphragms

Ceiling diaphragms may be constructed using steel or timber ceiling battens.

Battens shall be spaced at a maximum of:
- 500mm for 10mm GIB® plasterboard.
- 600mm for 13mm GIB® plasterboard.

Timber battens shall be fixed in accordance with the requirements of NZS 3604:2011.

Metal battens shall be GIB® Rondo® battens with two external flanges of 8mm to allow direct screw fixing to roof framing.

GIB® Rondo® metal battens shall be fixed with 2/32mm x 8g GIB® Grabber® Wafer Head Self Tapping screws to supporting framing.

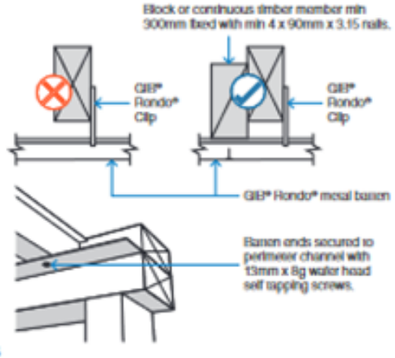
GIB® Rondo® metal battens must be fixed directly to the roof framing. If a clip system has been used, a timber block (min 300mm) or a continuous timber member can be fixed alongside the bottom chord to permit a direct connection to the batten, see figure 26.

For GIB® Rondo® metal battens, a GIB® Rondo® metal channel or metal angle is required at the perimeter of the diaphragm. The perimeter channel shall be fastened to the top plate with 32mm x 8g GIB® Grabber® Wafer Head Self Tapping screws or 32mm x 7g GIB® Grabber® Dual Thread screw at 300mm centres maximum.

Linings are fastened to metal using 25mm x 6g GIB® Grabber® Self Tapping screws and to timber framing using 32mm x 6g GIB® Grabber® High Thread screws. Alternatively 32mm x 7g GIB® Grabber® Dual Thread screws can be used in both cases. Fastener centres are specified on p.18.

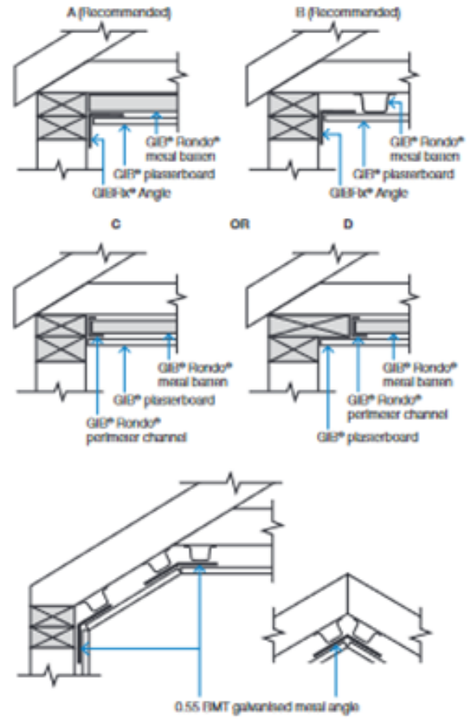
Cavod ceiling diaphragms can be achieved by using nominally 32 x 32 x 0.55mm proprietary galvanised metal angles ("back-flashing") at the changes in direction. These angles shall be:
- Fastened at 300mm on each edge to metal battens using 32mm x 8g GIB® Grabber® Wafer Head Self Tapping screws or 32mm x 7g GIB® Grabber® Dual Thread screws.
- Fastened to timber framing using 32mm x 7g GIB® Grabber® Dual Thread screws when linings are installed.

FIGURE 26: GIB® RONDO® METAL CEILING BATTEN INSTALLATION



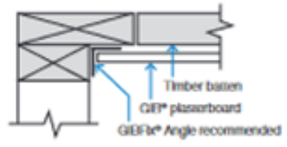
GEB016

FIGURE 27: GIB® RONDO® METAL CEILING BATTENS WITH CORNER ANGLES



GEB017

FIGURE 28: TIMBER CEILING BATTENS*



GEB018

Central Otago District Council
210624
Approved Minor Variation
20/04/22

FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : AT A3
DATE : 26/01/2022
PROJECT No : #Pln

DO NOT SCALE DRAWING
CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO COMMENCING WORK

CEILING DIAPHRAGM DOCS

35

REVISION NO

CENTRAL OTAGO DISTRICT COUNCIL
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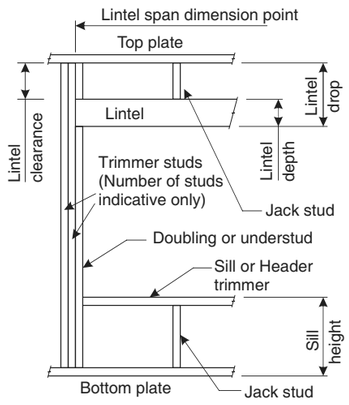
LINTEL FIXING SCHEDULE
ALTERNATIVE TO TABLE 8.14 & FIGURE 8.12 NZS 3604:2011

NOTE:

- All fixings are designed for vertical loads only. Dead loads include the roof weight and standard ceiling weight of 0.20 kPa.
- Refer to Table 8.19 NZS 3604:2011 for nailing schedule to resist horizontal loads.
- These fixings assume the correct choice of rafter/truss to top plate connections have been made.
- All fixings assume bottom plate thickness of 45mm maximum. Note: TYLOK options on timber species.
- Wall framing arrangements under girder trusses are not covered in this schedule.
- All timber selections are as per NZS 3604:2011.

DEFINITIONS



Minor Variation Received
ksu 24/02/2022

Lintel Supporting Girder Trusses:

Roof Tributary Area	Light Roof Wind Zone			Heavy Roof Wind Zone		
	L, M, H	VH	EH	L, M, H	VH	EH
8.6 m²	G	G	H	G	G	H
11.6 m²	G	H	H	G	G	H
12.1 m²	G	H	H	G	H	H
15.3 m²	H	H	-	G	H	H
19.1 m²	H	-	-	G	H	-
20.9 m²	H	-	-	H	H	-
21.8 m²	H	-	-	H	-	-
34.3 m²	-	-	-	H	-	-

Notes:
1) Roof Tributary Area = approx. 1/2 x (Total roof area on girder and rafter trusses supported by lintel)
2) Assumed girder truss is at mid-span or middle third span of lintel
3) Use similar fixings for both ends of lintel
4) All other cases require specific engineering design

SELECTION CHART FOR LINTEL FIXING

Lintel Span	Loaded Dimension (See Fig. 1.3 NZS 3604:2011)	Light Roof Wind Zone					Heavy Roof Wind Zone				
		L	M	H	VH	EH	L	M	H	VH	EH
0.7	2.0	E	E	E	E	F	E	E	E	E	E
	3.0	E	E	E	F	F	E	E	E	E	F
	4.0	E	E	F	F	F	E	E	E	F	F
	5.0	E	F	F	F	G	E	E	F	F	F
	6.0	E	F	F	G	G	E	E	F	F	G
0.9	2.0	E	E	E	F	F	E	E	E	E	F
	3.0	E	E	F	F	F	E	E	E	F	F
	4.0	E	E	F	F	F	E	E	F	F	F
	5.0	E	F	F	F	G	E	E	F	F	F
	6.0	E	F	F	G	G	E	E	F	F	G
1.0	2.0	E	E	E	F	F	E	E	E	E	F
	3.0	E	E	F	F	F	E	E	E	F	F
	4.0	E	F	F	F	G	E	E	F	F	F
	5.0	E	F	F	G	G	E	E	F	F	G
	6.0	E	F	F	G	G	E	E	F	F	G
1.2	2.0	E	E	F	F	F	E	E	E	F	F
	3.0	E	E	F	F	F	E	E	F	F	F
	4.0	E	F	F	G	G	E	E	F	F	G
	5.0	E	F	F	G	G	E	E	F	F	G
	6.0	F	F	G	G	H	E	E	F	G	G
1.5	2.0	E	E	F	F	F	E	E	E	F	F
	3.0	E	F	F	F	G	E	E	F	F	F
	4.0	E	F	F	G	G	E	E	F	F	G
	5.0	F	F	G	G	H	E	E	F	G	G
	6.0	F	F	G	H	H	E	E	F	G	H
2.0	2.0	E	F	F	F	G	E	E	F	F	F
	3.0	E	F	F	G	G	E	E	F	F	G
	4.0	F	F	G	G	H	E	E	F	G	G
	5.0	F	F	G	H	H	E	E	F	G	H
	6.0	F	G	G	H	H	E	F	G	H	H
2.4	2.0	E	F	F	G	G	E	E	F	F	G
	3.0	F	F	G	G	H	E	E	F	G	G
	4.0	F	F	G	H	H	E	E	F	G	H
	5.0	F	G	G	H	H	E	F	G	H	H
	6.0	F	G	H	H	-	E	F	G	H	H
3.0	2.0	E	F	F	G	G	E	E	F	F	G
	3.0	F	F	G	H	H	E	E	F	G	H
	4.0	F	G	G	H	H	E	F	G	H	H
	5.0	F	G	H	H	-	E	F	G	H	H
	6.0	F	G	H	-	-	E	F	G	H	-
3.6	2.0	F	F	G	G	H	E	E	F	G	G
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	6.0	G	H	H	-	-	E	F	H	-	-
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	5.0	G	H	-	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	F	H	-	-

LINTEL FIXING OPTIONS

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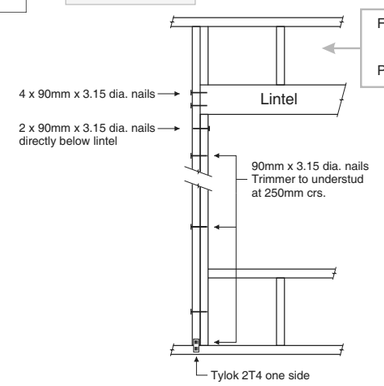

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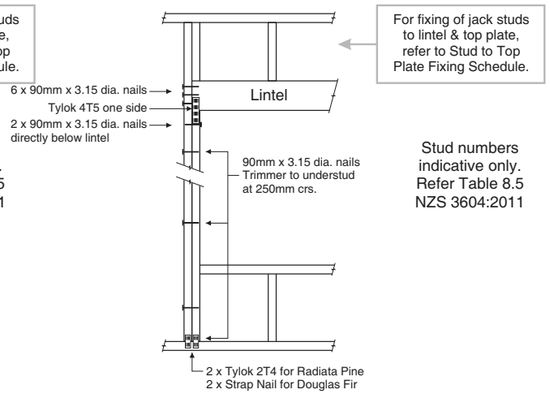

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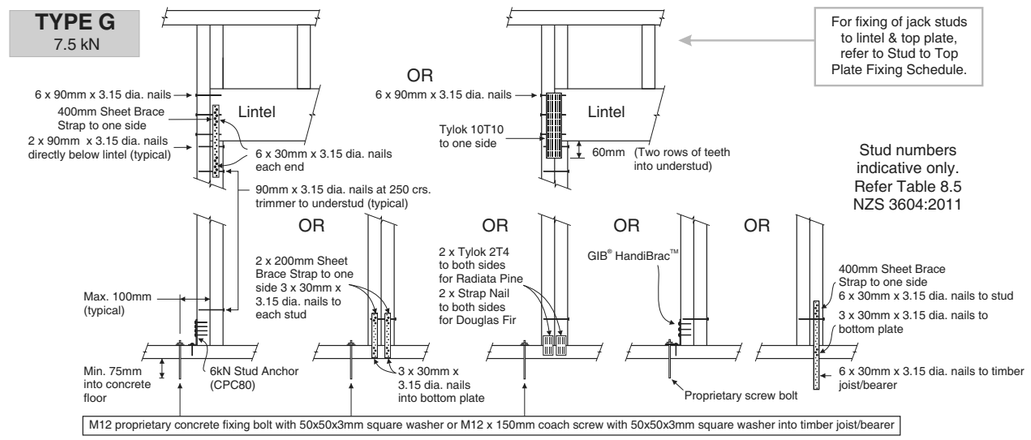

TYPE H
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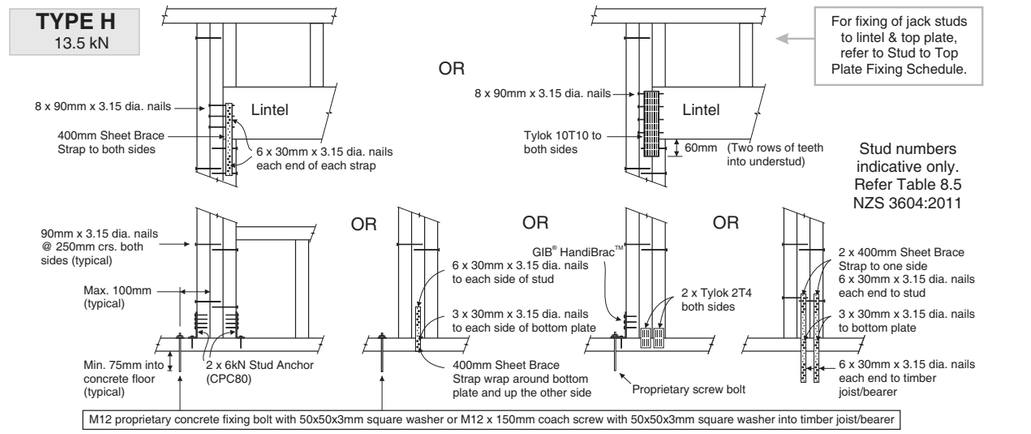

FINAL WORKING DRAWINGS

MiTek New Zealand Limited
AUCKLAND
PO Box 58-014, Botany 2163
Phone: 09-274 7109
Fax: 09-274 7100
CHRISTCHURCH
PO Box 8387, Riccarton 8440
Phone: 03-348 8691
Fax: 03-348 0314
www.miteknz.co.nz
GANG-NAIL® LUMBERLOK® BOWMAC®

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

Central Otago District Council
210624
Approved Minor Variation
20/04/22

SCALE : 1:1.1000, 1:1.1066
DATE : AT A3 26/01/2022

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PROJECT No : #Pln

LINTEL FIXING DOCUMENTS

36

REVISION NO

Central Otago District Council
210624
Approved Minor Variation
20/04/22

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ksu 24/02/2022

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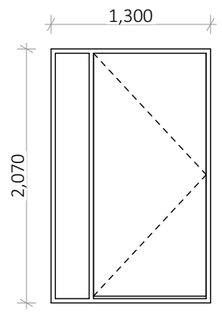

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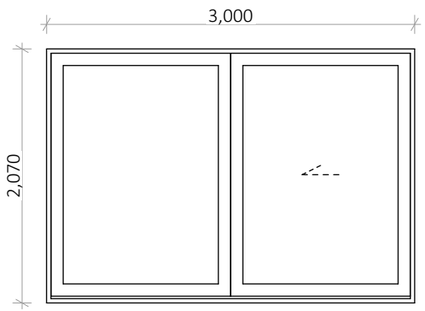

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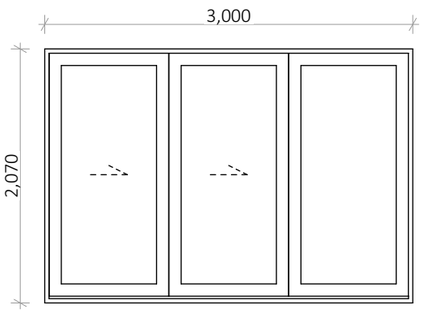

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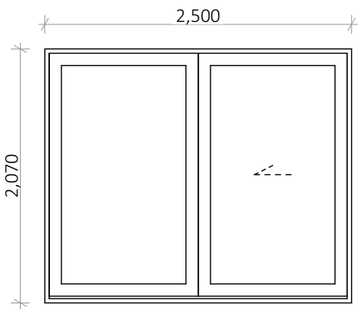

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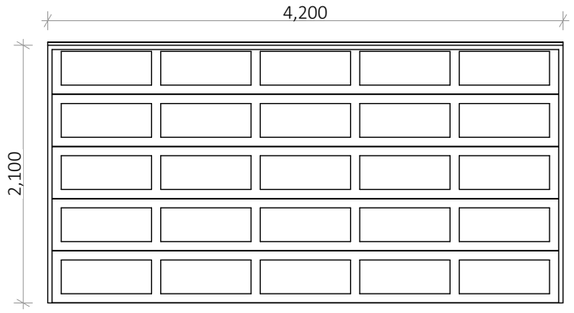

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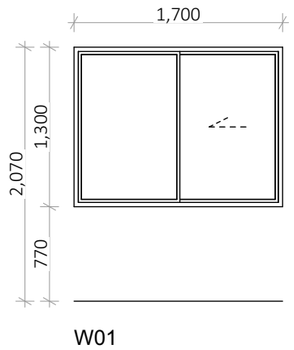

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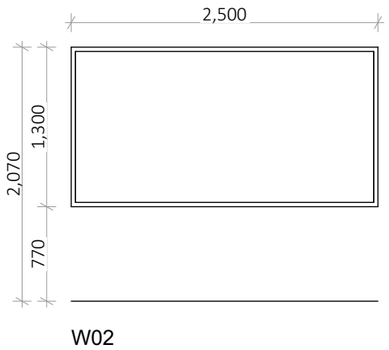

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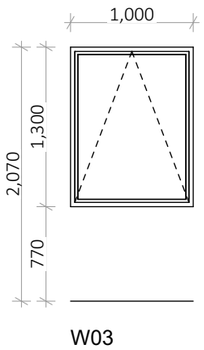

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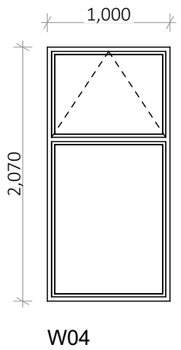

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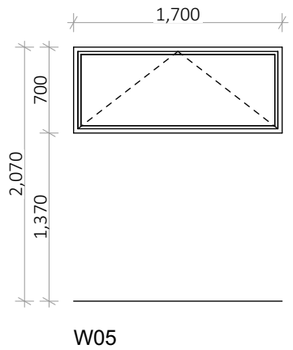

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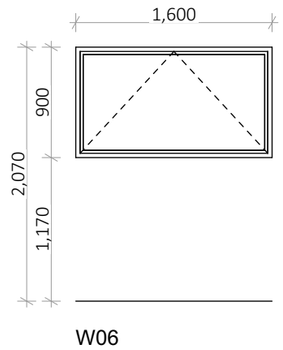

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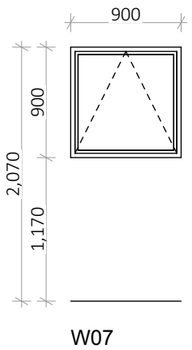

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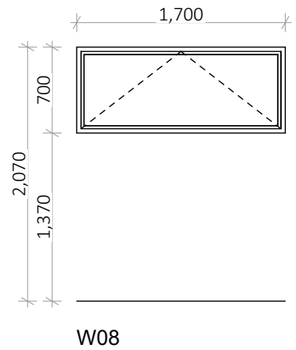

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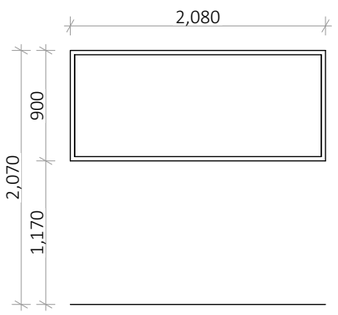

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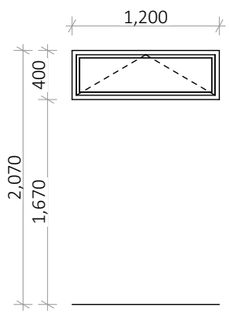

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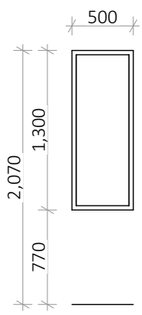

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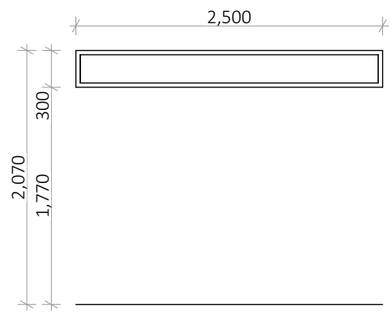

W12

OPENING SCHEDULE NOTES

- Sizes shown above are rough opening sizes.
- Confirm all opening sizes on site prior to installation.
- Refer to framing plan for accurate opening location.

Joinery
All exterior window and doors to be Colorsteel powder coated aluminium framed with double glazing and dressed timber reveals unless noted otherwise. Flaxpod finish, with thermally broken Low E glass. Please refer to specification

Safety Glazing
- To all windows less than 500mm above FFL, unless a transom is less than 1.0m from FL.
- To all windows in wet areas less than 2.0m above FFL.
- To all windows in wet areas less than 2.0m above FFL.
- To all doors (bottom panel only where a transom is used)

Obscure Glazing To Bathroom, WC and En-suite
Lintels AS PER TRUSS DESIGN

1 Opening Schedule 1:50

FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:50 AT A3
DATE : 26/01/2022
PROJECT No : #Pln

DO NOT SCALE DRAWING
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OPENING SCHEDULE

37

REVISION NO

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drs 20/04/22

Minor Variation Received
ksu 24/02/2022

FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
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LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

Central Otago District Council
210624
Approved Minor Variation
20/04/22

SCALE : AT A3
DATE : 26/01/2022
PROJECT No : #Pln

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3D VIEWS

38

REVISION NO

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20/04/22

FINAL WORKING DRAWINGS

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ksu 24/02/2022

Build 7

NEW RESIDENCE for
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LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : AT A3
DATE : 26/01/2022
PROJECT No : #Pln

DO NOT SCALE DRAWING
CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO COMMENCING WORK

3D VIEWS

39

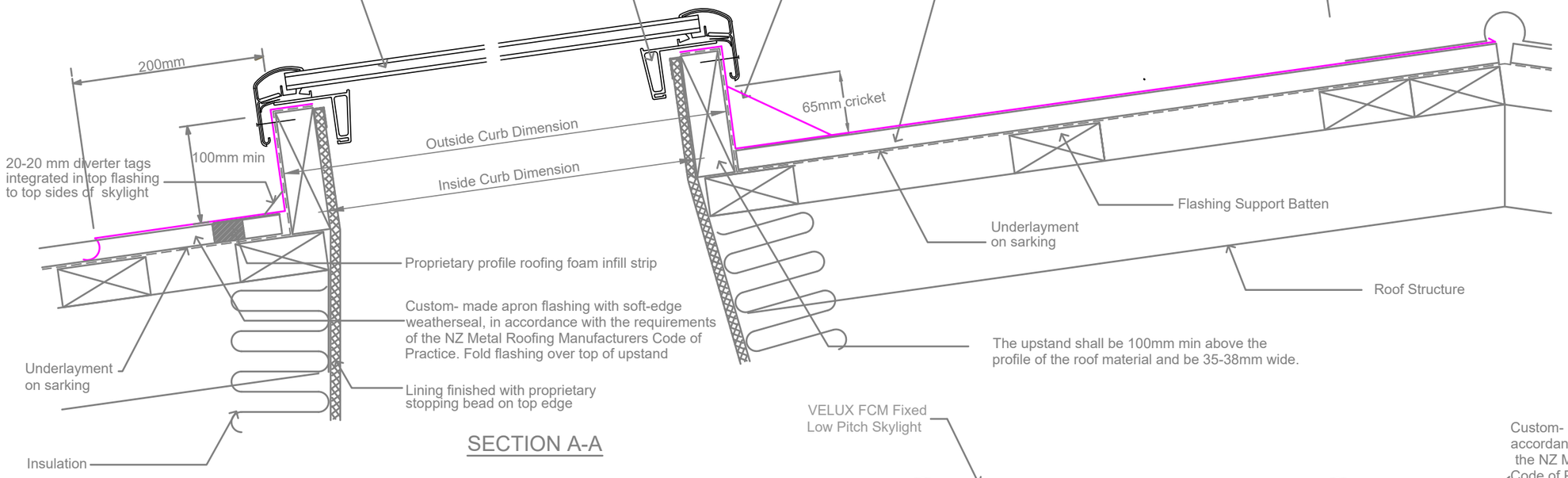
REVISION NO

FCM,

Custom

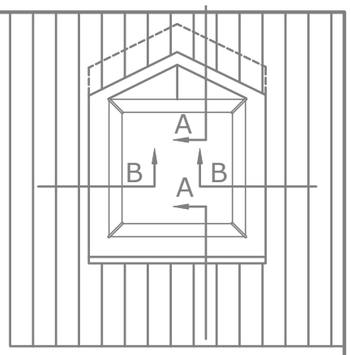
PROFILED METAL SHEETS

THIS DETAIL APPLIES TO METAL CORRUGATE ROOF PROFILES WITH ROOFPITCHES BETWEEN 8 AND 60 DEGREES.



ELEVATION

SECTION A-A



Custom-made metal flashing in accordance with New Zealand Metal Roofing Manufacturers Code of Practice. Ensure all flashings meet the requirements for your projects' location.

Please note:
Below 15 degrees:- Any condensation that forms on the glass due to high humidity may drip

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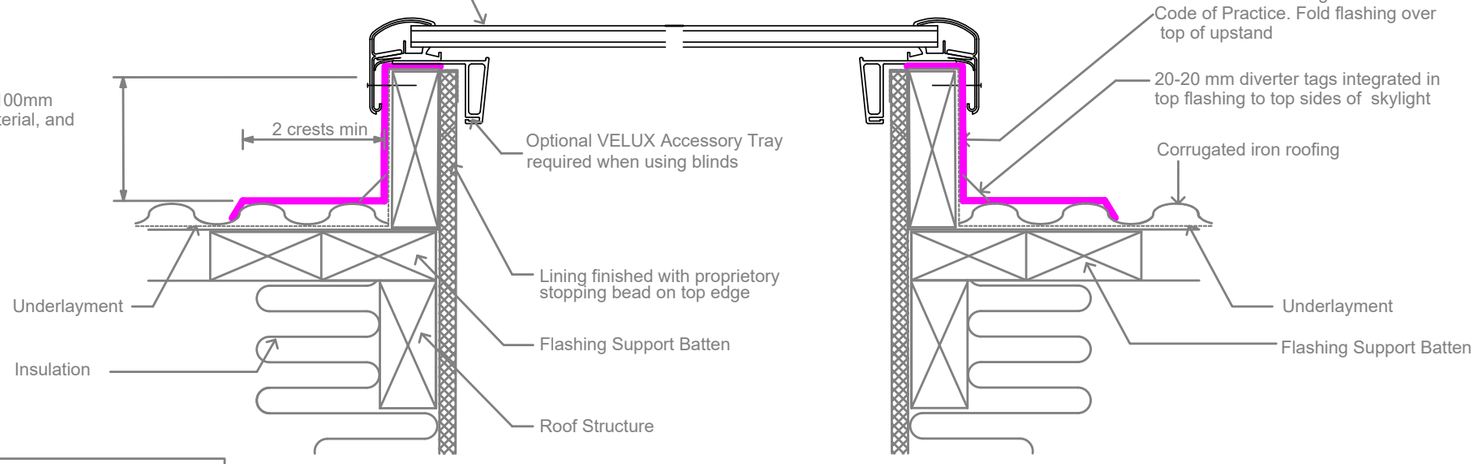
The upstand shall extend min. 100mm above the profile of the roof material, and be 35-38mm wide.

Minor Variation Received
ksu 24/02/2022



SECTION B-B

BRANZ APPRAISED CUSTOM WATER-SHED FLASHING

No cricket or diverter required when skylight is less than 600mm wide, and catchment less than 40 sqm.

Custom flashings must be designed to meet the requirements set out in the latest version of the New Zealand Metal Roof and Wall Cladding Code of Practice, and shall be manufactured and installed by a specialist flashing contractor to the latest trade practices.

The flashing and installation must be guaranteed against weathertightness by the specialist flashing contractor.

Insulation material meeting the requirements of NZBC/H1 is required in the cavities of the lightwell structure.

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VELUX Sky-Product Management

NEW ZEALAND LTD.
0800 650 445

	Name	Date
Drawn by		Feb 19
Checked by		Feb 19
Drawing No.		

VELUX FCM Fixed Low Pitch Skylight in Corrugated Steel Roof with metal water-shed flashing (8-60 degrees)

FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:0.6751 AT A3
DATE : 26/01/2022
PROJECT No : #Pln

DO NOT SCALE DRAWING
CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO COMMENCING WORK

SKYLIGHT DETAILS

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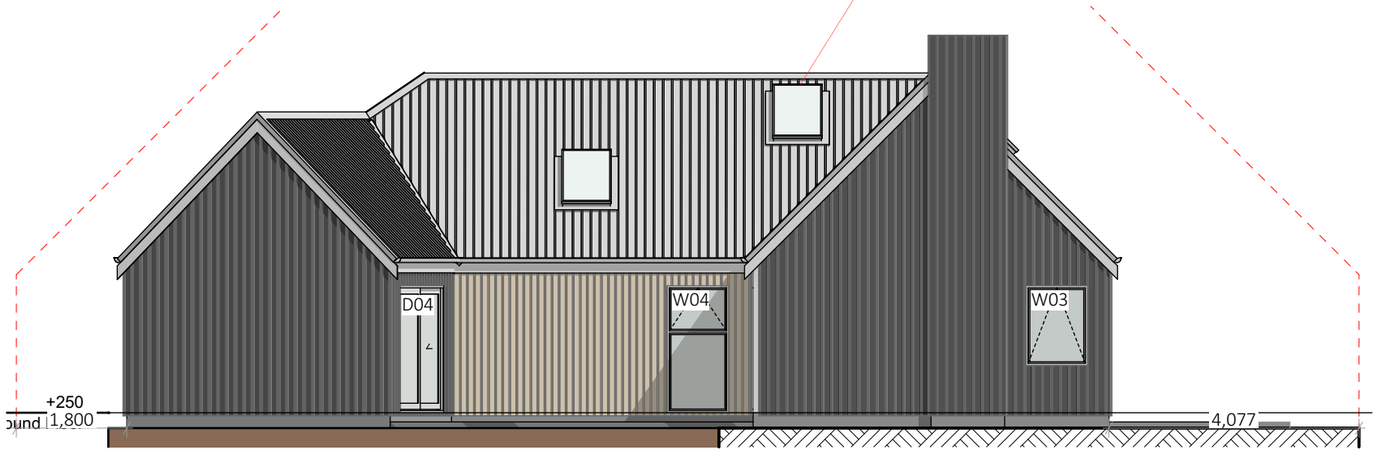
REVISION NO

deleted mv 14/11/2022



1 North Elevation 1:100

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Plans and Specifications Approved in accordance with The New Zealand Building Code and Approved Documents. To be retained on the building site and produced on request
drs 20/04/22

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Minor Variation Received
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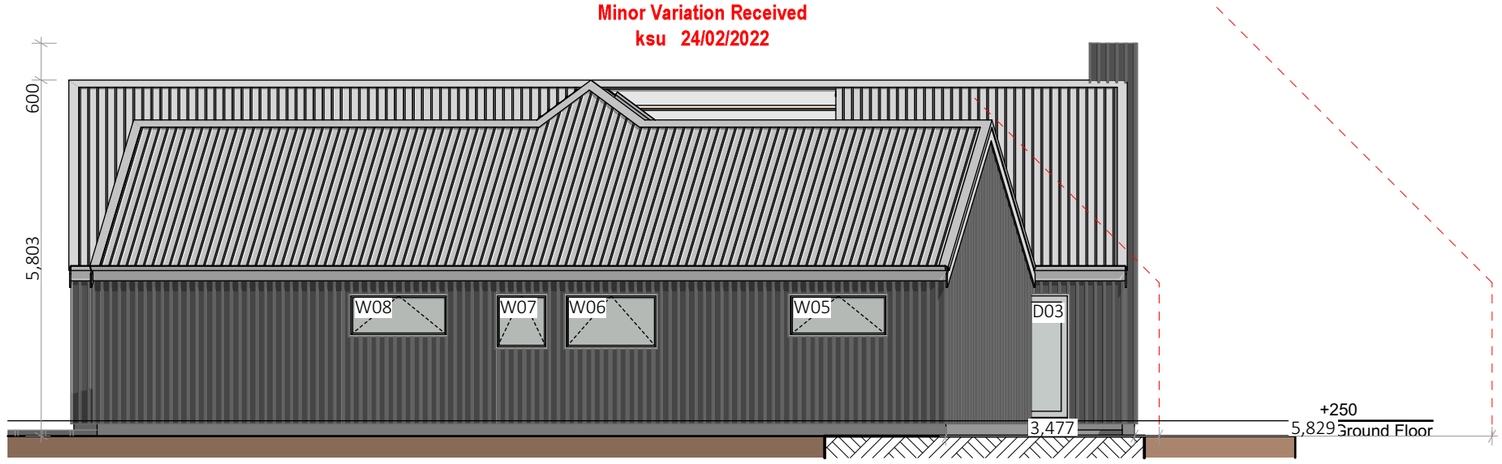

2 East Elevation 1:100

FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:100 AT A3
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RECESSION PLANES

40 REVISION NO

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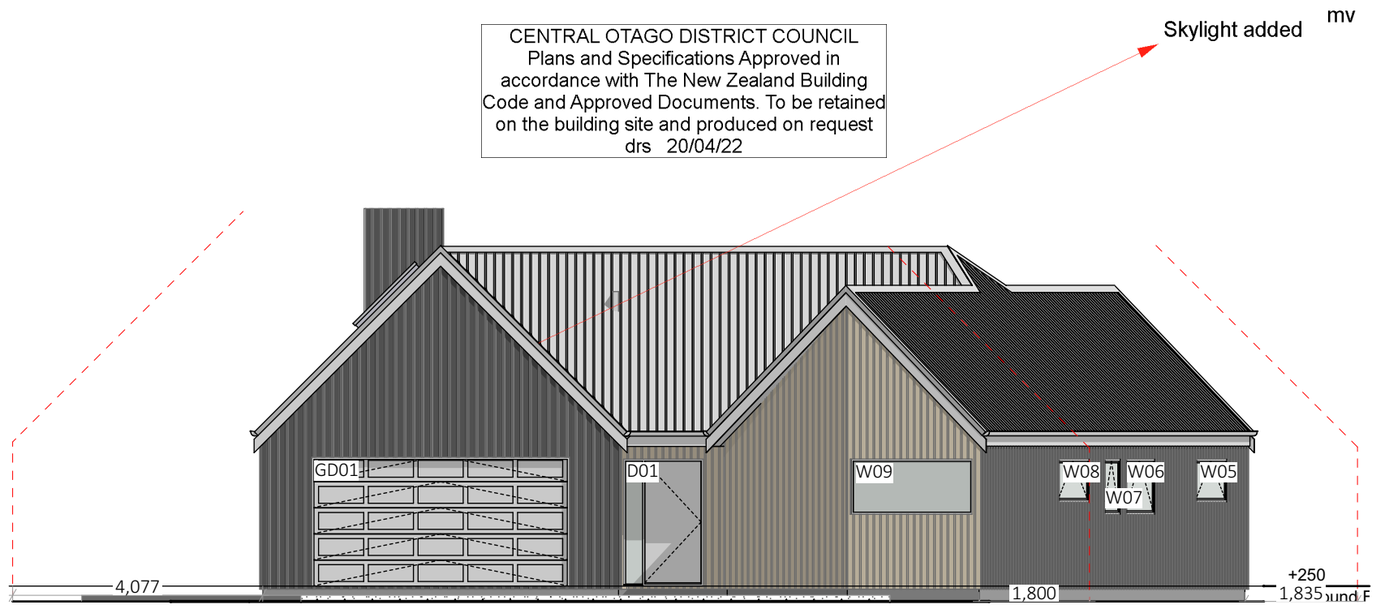

1 South Elevation 1:100

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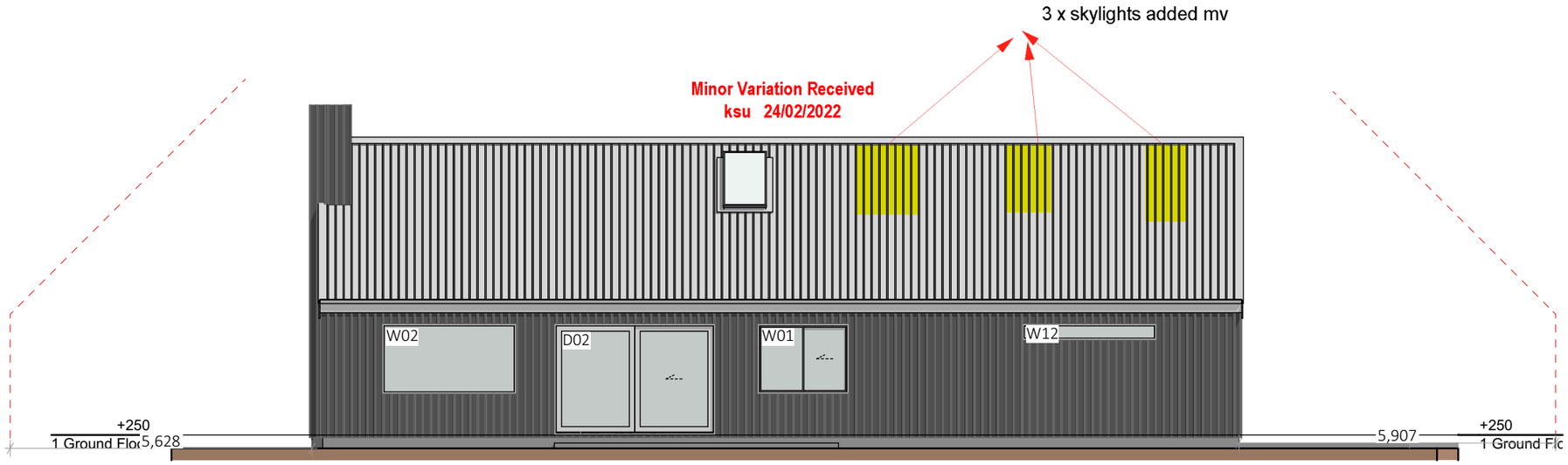
ksu 24/02/2022



2 West Elevation 1:100

FINAL WORKING DRAWINGS

Build 7

NEW RESIDENCE for
JUSTIN & OLIVIA

LOT 13 WOOING TREE_CROMWELL
Lot No: 13 Deposited Plan: TBC

SCALE : 1:100 AT A3
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DO NOT SCALE DRAWING
CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO COMMENCING WORK

RECESSION PLANES

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REVISION NO

DESIGN CERTIFICATE

Technical basis for structural design methodology contained in designIT for houses - New Zealand.

designIT for houses, New Zealand has been developed by experienced timber engineers to assist designers in selecting appropriate sizes of structural laminated veneer lumber products manufactured by Carter Holt Harvey LVL Limited (including hySPAN, hy90, hyONE and hyJOIST) and other generic stress grades of timber, to be used as structural elements for the construction of buildings that fall within the scope of NZS 3604.

The design methodology used for the software complies with the loading and general design requirements contained within AS/NZS 1170 and with timber structural design in accordance with NZS 3603:1993 including Amendment 4 (Verification method B1/VM1, 6.1).

designIT relies on the accurate input of span and loading information by the user. Where accurate inputs are submitted the product and/or stress grade and the size given will comply with the structural requirements of the New Zealand Building Code (NZBC), provided the installation is in accordance with the installation requirements provided by designIT and/or in product literature and/or NZS 3604, or specific engineering design, as appropriate.

Futurebuild LVL and SG8 components, when used and treated to the required treatment levels prescribed in NZS 3602 and NZS 3604, as modified by Acceptable Solution B2/AS1, will comply with the requirements of the NZBC (Acceptable Solution B2/AS1, 3.2).

References:
1. NZS 3603:1993 Timber Structures Standard.
2. NZS 3604:2011 Timber-framed buildings.
3. AS/NZS 1170:2002 Structural design actions, Parts 0 and 1.
4. AS/NZS 1170:2011 Structural design actions, Part 2: Wind actions.
5. AS/NZS 1170:2003 Structural design actions, Part 3: Snow and ice actions.
6. AS 1720.1:2010 Timber structures. Part 1: Design methods.
7. AS 1720.3:2016 Timber structures. Part 3: Design criteria for timber-framed residential buildings.

This Design Certificate, and any associated warranty/certification, is void where there has been substitution of alternate products not detailed within the Member Specification.

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Version date: 11 April, 2022

For further information or advice contact:
Carter Holt Harvey LVL Limited,
173 Captain Springs Road, Onehunga. Auckland
Telephone: 0800 808 131
Email: designit@futurebuild.co.nz
Web: https://futurebuild.co.nz/

Specifier details:

Specifier:	Gtraham Clayworth
Business name:	Worth Detail and Design
Email:	worthdetail@xtra.co.nz

Project & site details:

Project:	Build 7
Site address:	Lot 13 Wooing Tree Cromwell
For (owner/s):	Justin and Olivia
Design wind zone	Very high
Snow loading	Design snow zone: N5, Altitude: 220 m (sub-alpine), Ground snow load, $S_g^{1,2}$ = 0.9 kPa

1. designIT does not include any allowance for the effects of drifting and sliding of snow.
2. Snow loads are applied to roofed over structures only, the design of exposed floors/decks are not covered by designIT.

MEMBER DESIGN DETAILS

Member 1

1) Member code and description	Floor Joist - Floor joist - Supporting floor loads only
2) Date prepared	25 July 2022

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3) Serviceability criteria AS 1720.1: 2010 and AS 1720.3: 2016

4) Design inputs

Span	5.6 m - single span
Joist spacing	450 mm
Floor dead load	40 kg/m²
Floor live load	1.5 kPa/1.8 kN

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5) Member specification

Size, stress grade/product	Use 300 x 90 hySPAN
Material type	Structural Laminated Veneer Lumber to AS/NZS 4357

6) Serviceability

Load case	Limit[3] on average deflection[2]	Estimated average deflection[2]	Rigidity ratio[4]
Long term load - G + $\Psi_L Q$	15.0 mm	5.6 mm (long term)	2.7
Live load - $\Psi_s Q$	9.0 mm	3.3 mm	2.7
Floor flexibility - $\Psi_s Q^*$	2.0 mm	0.8 mm	2.4

*Critical serviceability load case
See 'Notes for interpretation of serviceability data' at the end of this report

7) Reactions

Load case	k_1[1]	Limit States Design Reaction[2,3] End kN[4]
1.35G	0.60	-2.1
1.2G + 1.5Q	0.80	-4.0
1.2G + 1.5Q	0.94	-3.9

8) Installation requirements

- Provide at least 30 mm bearing at end supports (floor loads only)
- Bearing requirements for joists supporting load bearing walls may be greater - refer published literature/ Floor joist calculator for guidance

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Notes for interpretation of serviceability data

1. 'average deflection' is an engineering concept based upon a notional estimated load, notional member rigidity and, in some cases, an approximate model of material response to environmental conditions. These parameters are, 'standardised' in AS 1170 and AS 1720.

2. Deflection is the flexural response to load 'out-of-level' measurements of installations are not necessarily deflections and can incorporate 'initial out-of-straightness', whether intended or not. Furthermore, loads can be higher/lower than the notional estimate and in any comparison with measured levels, material variability needs to also be considered. AS 1720 gives the following basis for estimation of upper bound deflections for various materials.

No 1 Framing – visually graded to NZS 3631	Average + 100%
SG grades - mechanically graded to AS/NZS 1748	Average + 43%
GL grades for glulam to AS 1328	Average + 33%
LVL to AS/NZS 4357 (includes hySPAN and hyJOIST)	Average +18%

As can be seen, comparison of the 'average deflection' for different materials, even if calculated on the same basis, does not give the whole picture!

3. The limits referred are those specified in AS 1720.3 for the stated load case.

4. 'Rigidity ratio' expresses the rigidity of the specified beam relative to the rigidity of a notional beam just meeting the serviceability requirements detailed.

Notes for interpretation of reaction data

1. Duration of load factor 'k_1' for strength as per NZS 3603:1993
2. Negative (-) reactions relate to the 'gravity' or 'downwards' force on the support
3. Positive reactions relate to the 'upwards' forces or 'tie-down' requirement on the support
4. End reaction includes allowance for overhang/cantilever where one has been designed

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