



Our approval of these drawings relates to our specifically designed structural elements only

Paul Jarvie CEng 1018577
Hutchinson Consulting Engineers Ltd

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CONSULTING ENGINEERS

Our approval of these drawings relates to the recommendations of our geotechnical reporting only

Ian Hutchinson CEng 63973
Hutchinson Consulting Engineers Ltd

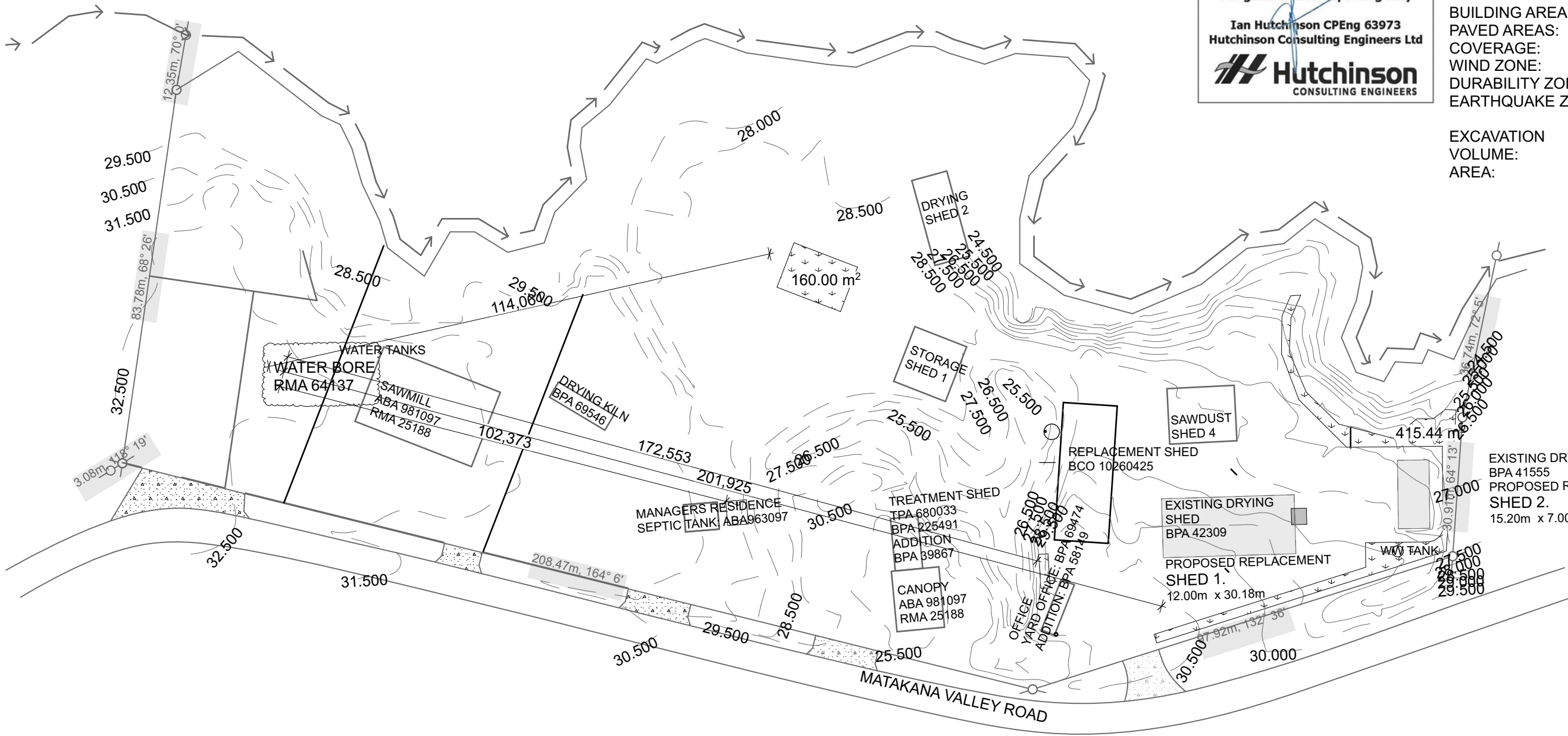
Hutchinson
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SITE INFORMATION:

Sec 1 SO 400726,
PT ALLOTMENT LOT 51
PARISH OF MATAKANA
AUCKLAND COUNCIL
RURAL - RURAL PRODUCTION ZONE
BUILT HERITAGE AND CHARACTER:
HISTORIC OVERLAY EXTENT OF PLACE

AREA:	2.6672 Ha
BUILDING AREA:	EXISTING UNCHANGED
PAVED AREAS:	EXISTING UNCHANGED
COVERAGE:	EXISTING UNCHANGED
WIND ZONE:	H
DURABILITY ZONE:	D
EARTHQUAKE ZONE:	1

EXCAVATION VOLUME:	133 m3
AREA:	488 m2



WHOLE SITE PLAN

1:1000

SHEET TITLE	
REVISION #:	SITE PLAN
A: SKETCH DESIGN	
B: SK REVISED	
C: DRAFT FOR ENG DESIGN	
D: BC ISSUE	
E: BC REVISIONS	
ISSUED:	26/07/23
E PROJECT #:	21015

THREE BLOKES LTD

REPLACEMENT MARKET SHEDS

362 MATAKANA VALLEY ROAD

MATAKANA

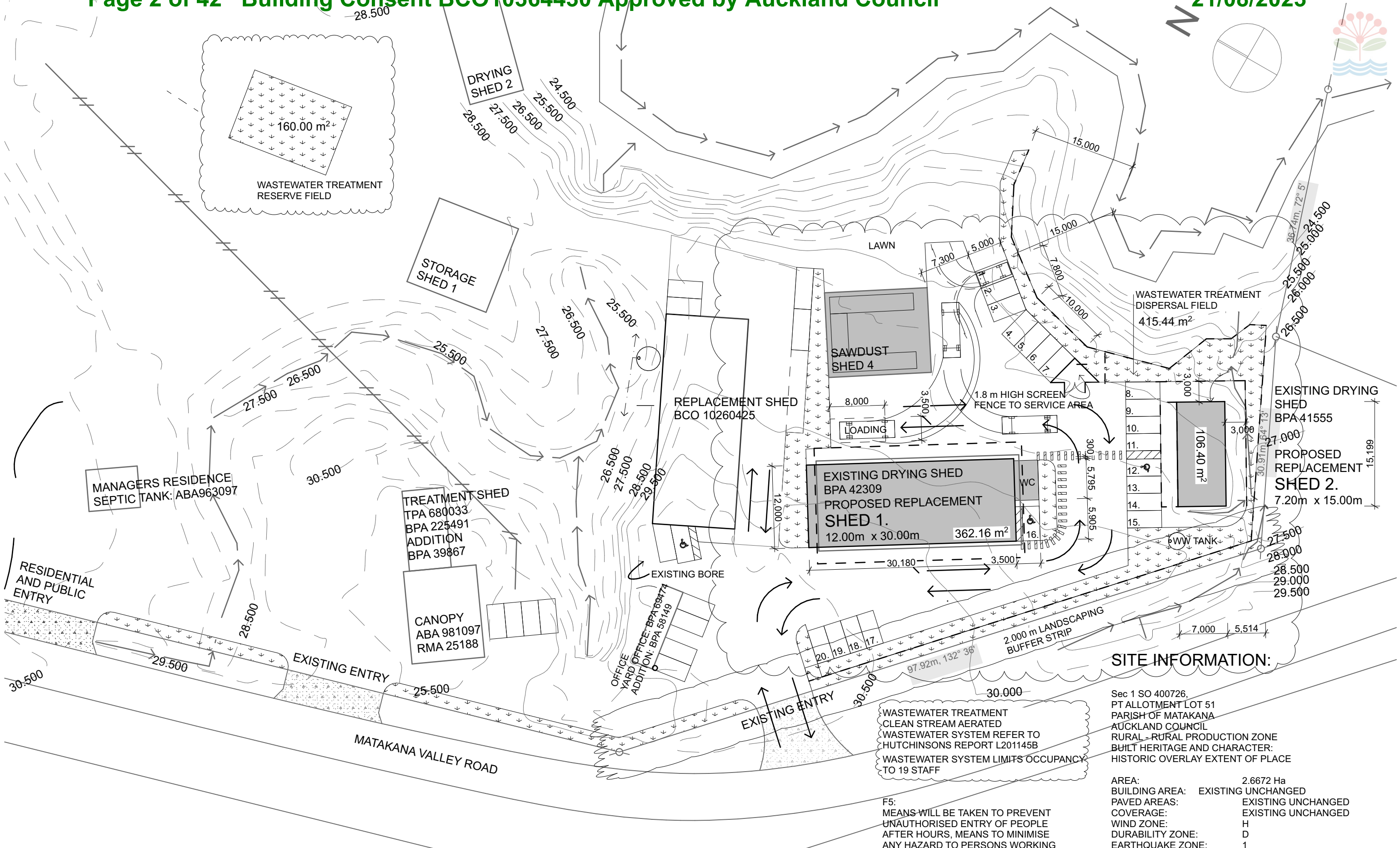
CAMPBELL REGISTERED ARCHITECTS Ltd

202 CAMES ROAD, R.D. 5 WELLSFORD 0975 NEW ZEALAND

~ p: 0274 323 185

~ e: colin@campbell-registered-architects.co.nz

~ w: www.campbell-registered-architects.co.nz



SHEET TITLE: **REVISION #:** **SITE PLAN 1: 500**

SHEET	A: SKETCH DESIGN
	B: SK REVISED
	C: DRAFT FOR ENG DESIGN
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	E: BC REVISIONS
ISSUED:	19/07/23
E PROJECT #:	21015

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362 MATAKANA VALLEY ROAD

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WASTEWATER TREATMENT CLEAN STREAM AERATED WASTEWATER SYSTEM REFER TO HUTCHINSONS REPORT L201145B

WASTEWATER SYSTEM LIMITS OCCUPANCY TO 19 STAFF

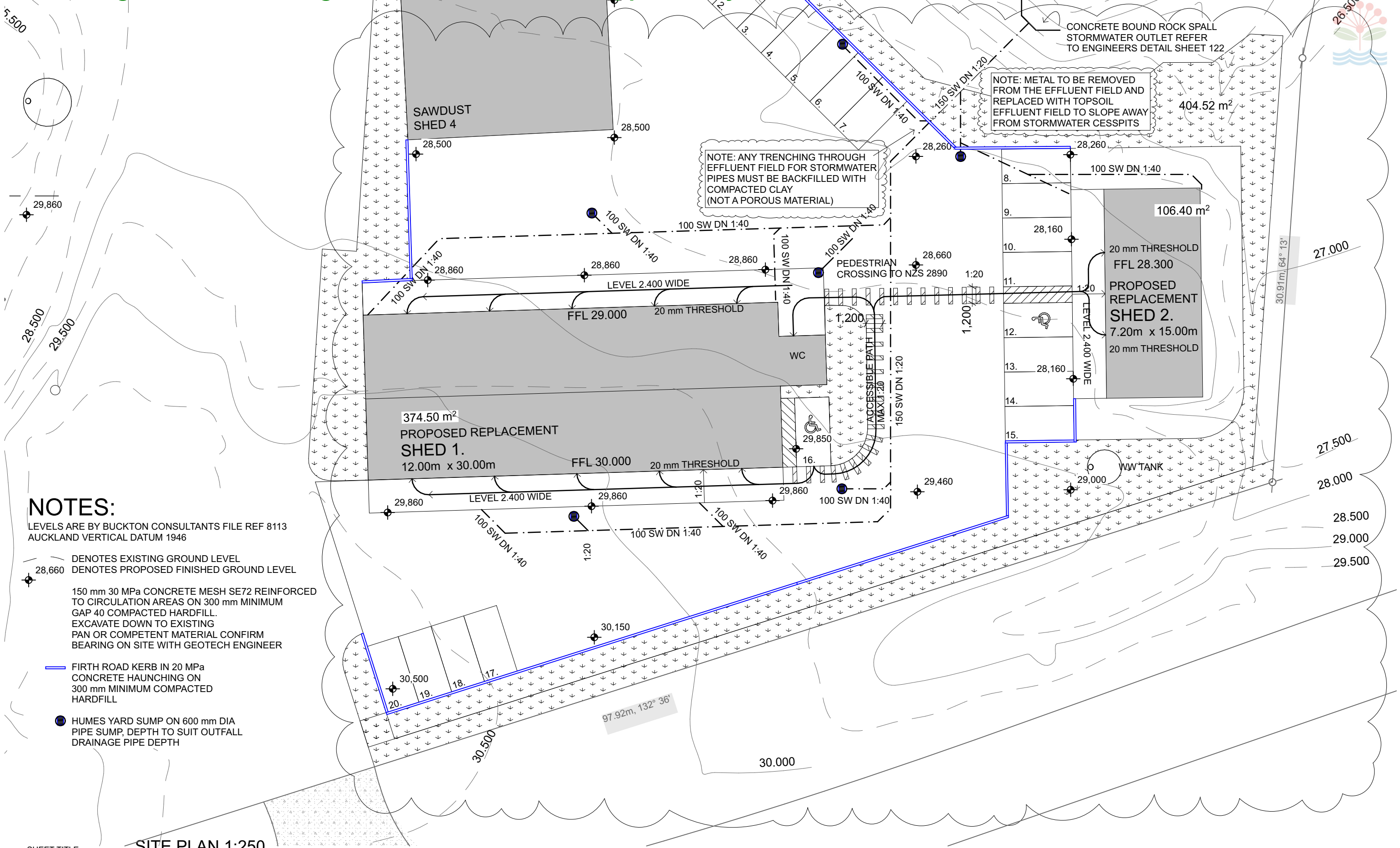
F5:

MEANS WILL BE TAKEN TO PREVENT UNAUTHORISED ENTRY OF PEOPLE AFTER HOURS, MEANS TO MINIMISE ANY HAZARD TO PERSONS WORKING ON OR AROUND THE SITE, MEANS TO PROTECT NEIGHBOURING PROPERTY (WHERE APPLICABLE), AND THE SITE WILL BE KEPT IN A SAFE AND TIDY MANNER

SITE INFORMATION:

Sec 1 SO 400726, PT ALLOTMENT LOT 51 PARISH OF MATAKANA AUCKLAND COUNCIL RURAL - RURAL PRODUCTION ZONE BUILT HERITAGE AND CHARACTER: HISTORIC OVERLAY EXTENT OF PLACE

AREA:	2.6672 Ha
BUILDING AREA:	EXISTING UNCHANGED
PAVED AREAS:	EXISTING UNCHANGED
COVERAGE:	EXISTING UNCHANGED
WIND ZONE:	H
DURABILITY ZONE:	D
EARTHQUAKE ZONE:	1
EXCAVATION VOLUME:	133 m3
AREA:	488 m2



- NOTES:**
 LEVELS ARE BY BUCKTON CONSULTANTS FILE REF 8113
 AUCKLAND VERTICAL DATUM 1946
- DENOTES EXISTING GROUND LEVEL
 DENOTES PROPOSED FINISHED GROUND LEVEL
 - 150 mm 30 MPa CONCRETE MESH SE72 REINFORCED
 TO CIRCULATION AREAS ON 300 mm MINIMUM
 GAP 40 COMPACTED HARDFILL.
 EXCAVATE DOWN TO EXISTING
 PAN OR COMPETENT MATERIAL CONFIRM
 BEARING ON SITE WITH GEOTECH ENGINEER
 - FIRTH ROAD KERB IN 20 MPa
 CONCRETE HAUNCHING ON
 300 mm MINIMUM COMPACTED
 HARDFILL
 - HUMES YARD SUMP ON 600 mm DIA
 PIPE SUMP, DEPTH TO SUIT OUTFALL
 DRAINAGE PIPE DEPTH

SHEET TITLE: REVISION #: SITE PLAN 1:250

SHEET	A: SKETCH DESIGN
	B: SK REVISED
	C: DRAFT FOR ENG DESIGN
	D: BC ISSUE
	E: BC REVISIONS
01.1	ISSUED: 13/07/23
	E PROJECT #: 21015

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~ e: colin@campbell-registered-architects.co.nz

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PLAN SITE 1:250 1:250



SHEET TITLE: SHED 1 FLOOR PLAN	
REVISION #:	
A: SKETCH DESIGN	
B: SK REVISED	
C: DRAFT FOR ENG DESIGN	
D: BC ISSUE	
E: BC REVISIONS	
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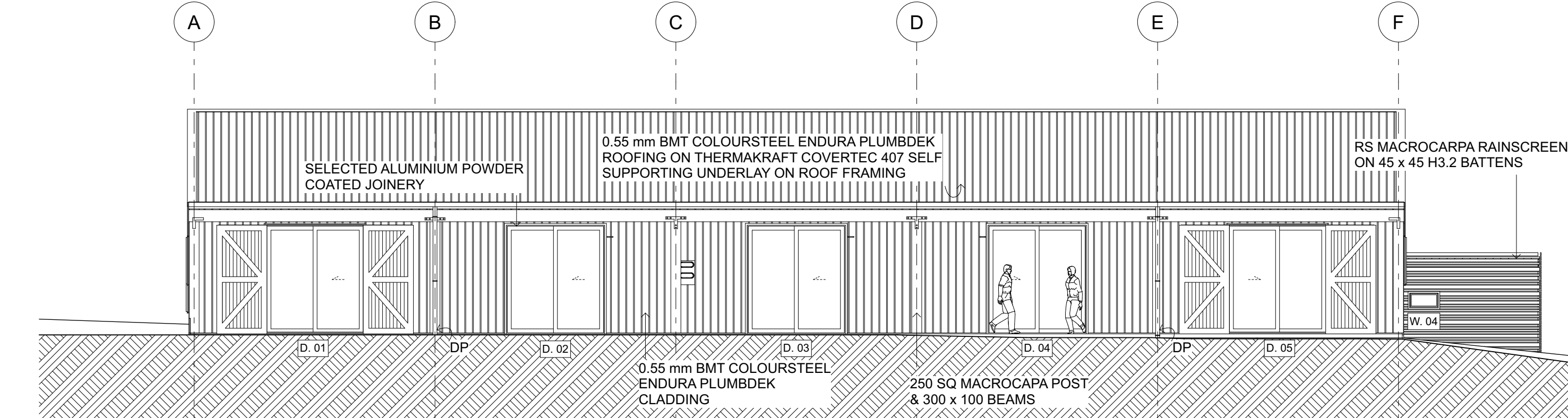
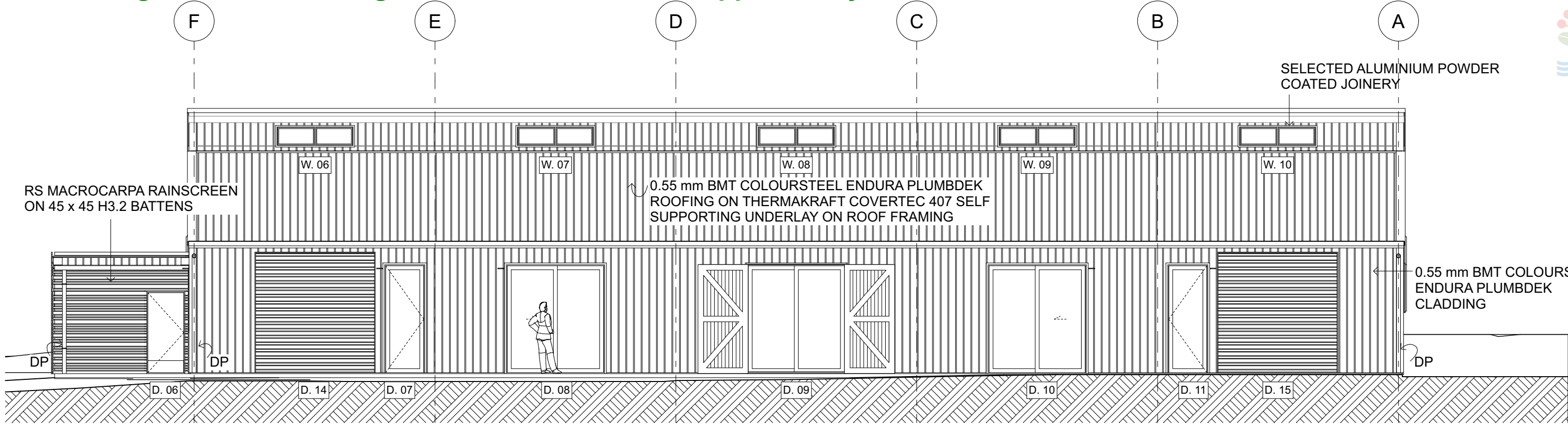
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SHEET TITLE: SHED 1 ELEVATIONS
REVISION #:
SHEET A: SKETCH DESIGN
B: SK REVISED
C: DRAFT FOR ENG DESIGN
D: BC ISSUE
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ISSUED: 1/05/23
E PROJECT #: 21015

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REPLACEMENT MARKET SHEDS
362 MATAKANA VALLEY ROAD
MATAKANA

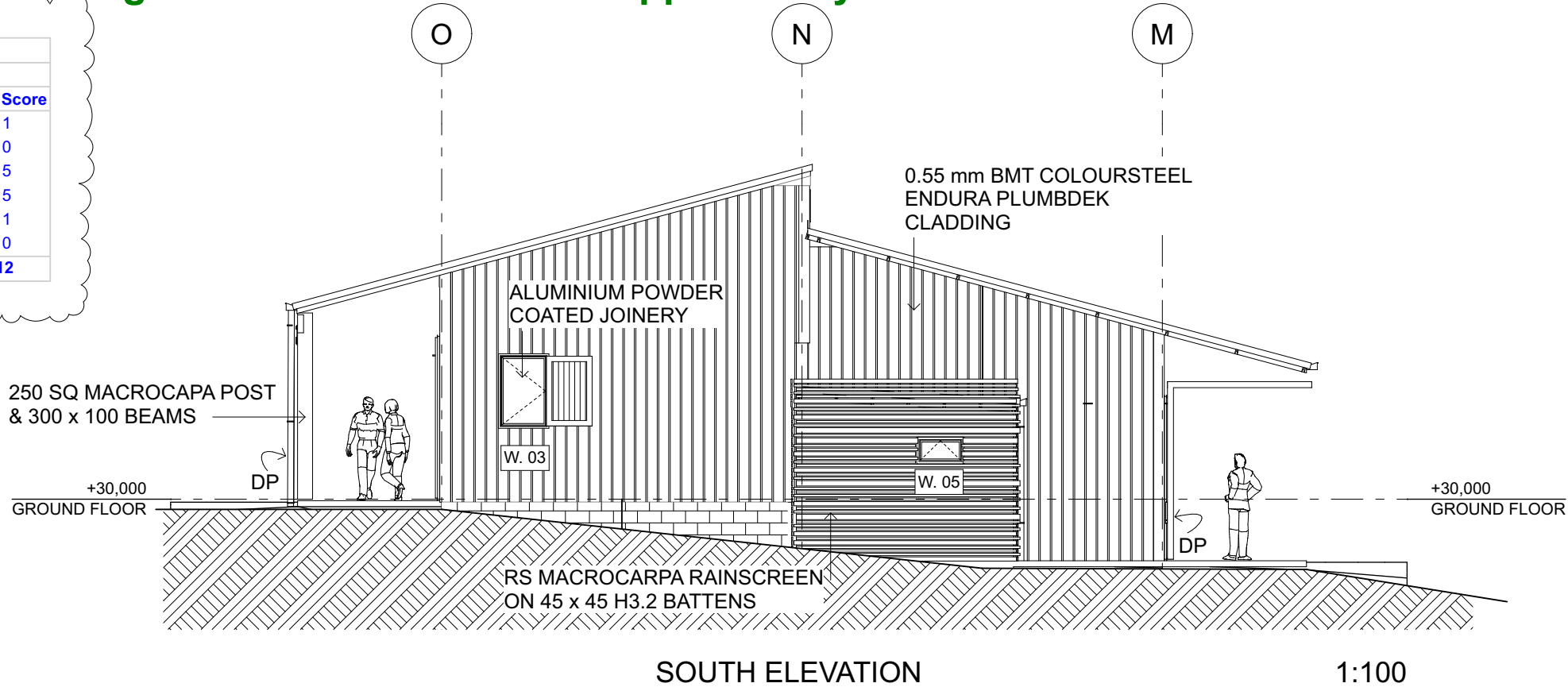
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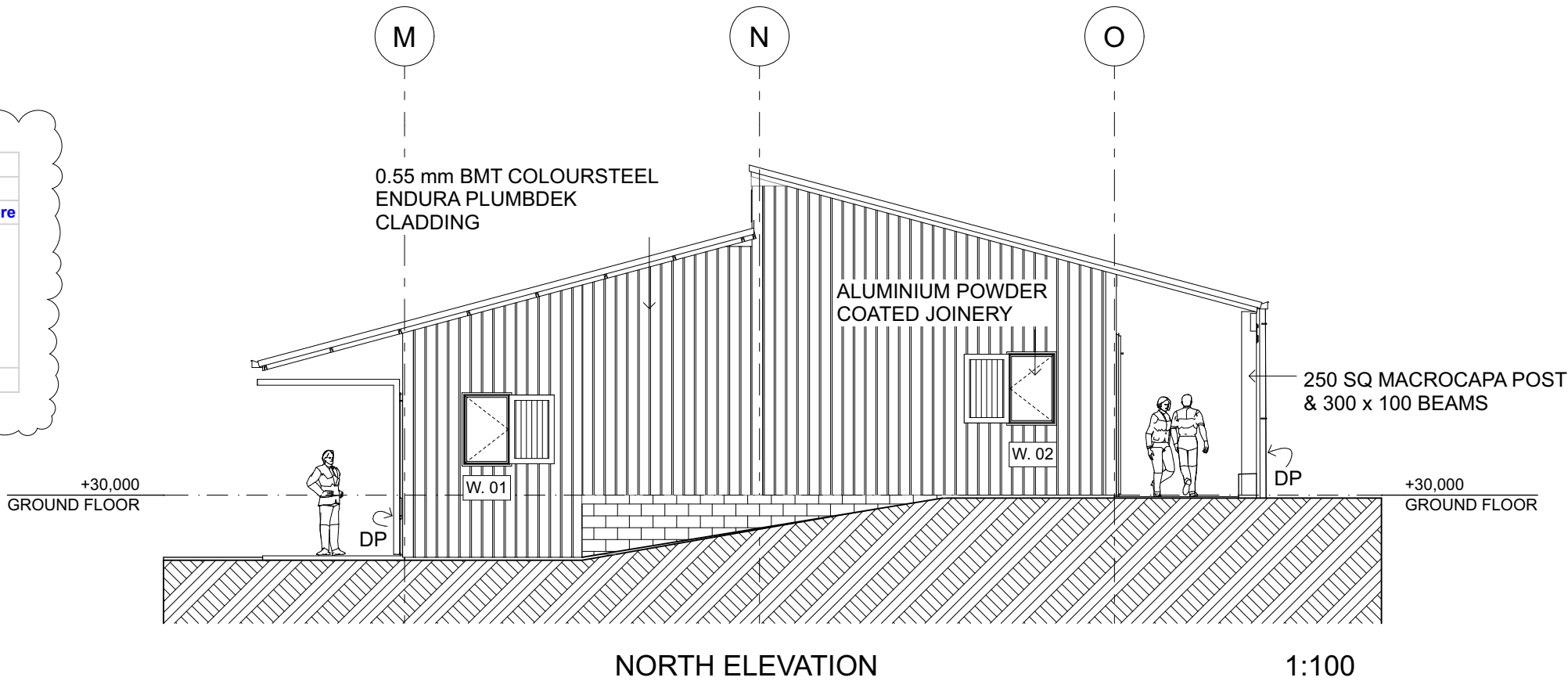
BUILDING ENVELOPE RISK MATRIX EAST & WEST ELEVATION		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Very high risk	5
Eaves width	Very high risk	5
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		12



BUILDING ENVELOPE RISK MATRIX		
SOUTH ELEVATION		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Very high risk	5
Eaves width	Very high risk	5
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		12



BUILDING ENVELOPE RISK MATRIX		
NORTH ELEVATION		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Medium risk	1
Eaves width	Very high risk	5
Envelope complexity	Low risk	0
Deck design	Low	0
Total Risk Score:		7



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SHEET TITLE: SHED 1 ELEVATIONS

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D: BC ISSUE	
E: BC REVISIONS	
ISSUED:	1/05/23
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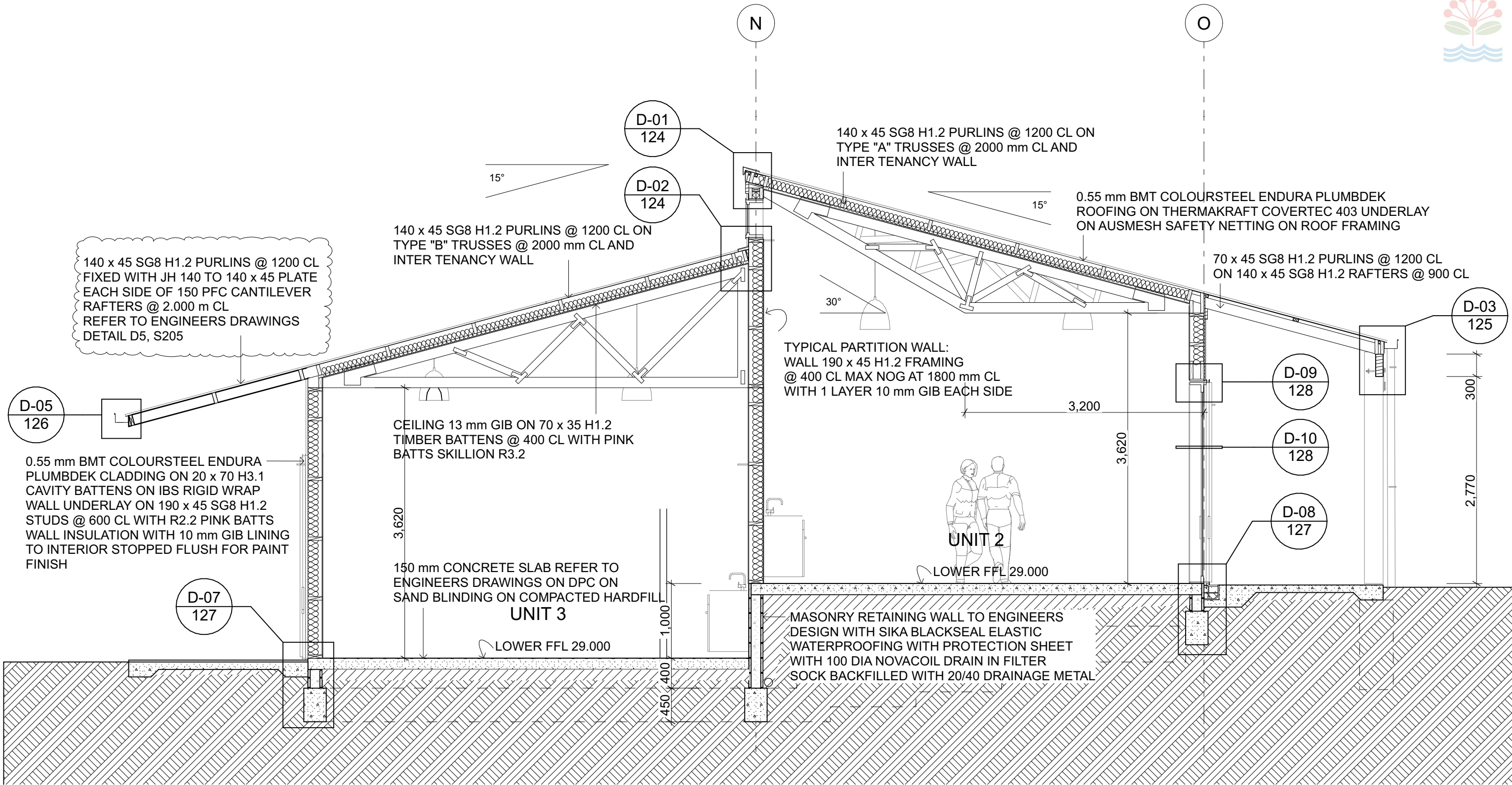
REPLACEMENT MARKET SHEDS

362 MATAKANA VALLEY ROAD
MATAKANA

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SECTION A3

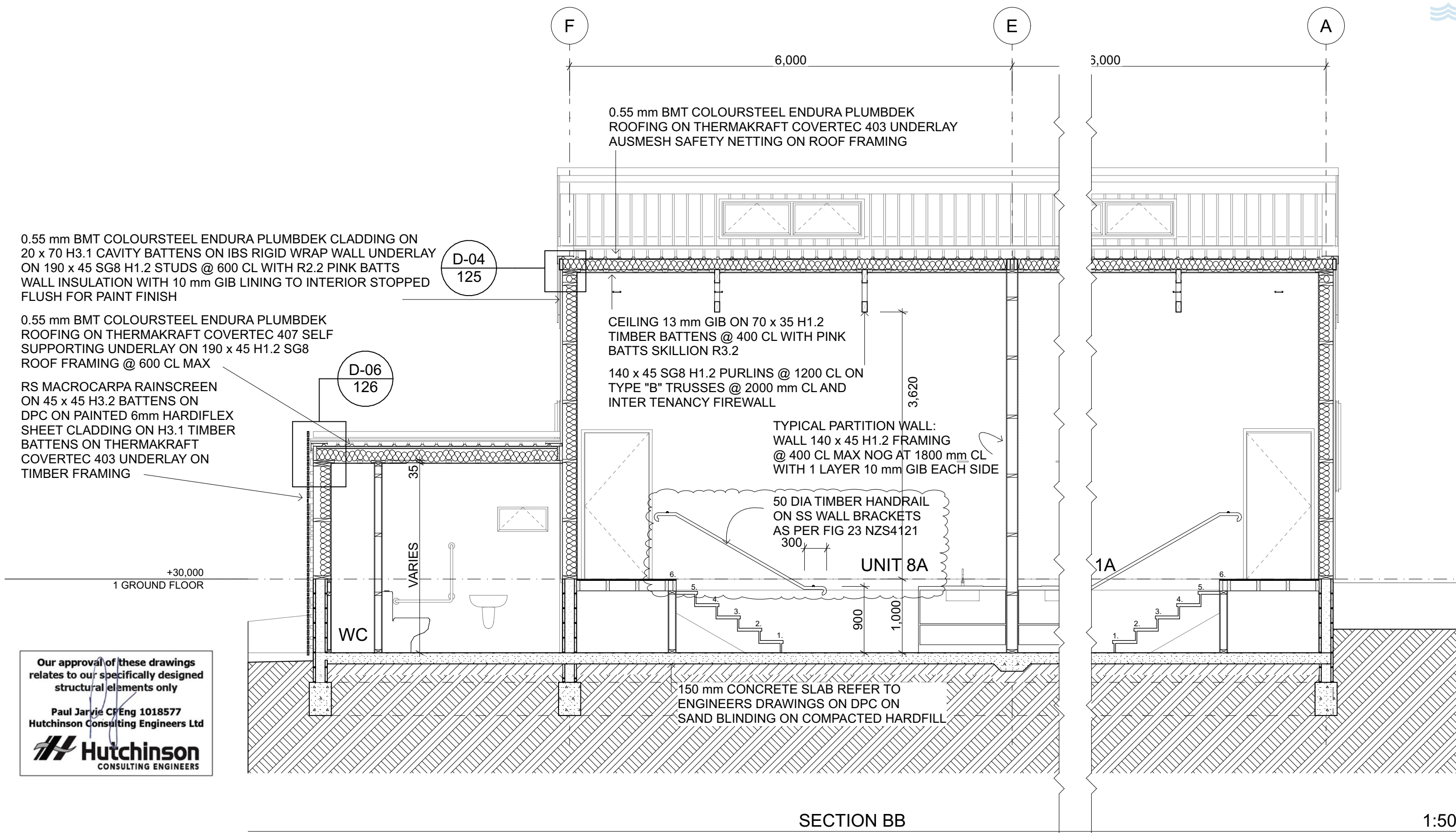
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SHEET TITLE: SHED 1 SECTION A3	
REVISION #:	
SHEET	A: SKETCH DESIGN
	B: SK REVISED
	C: DRAFT FOR ENG DESIGN
	D: BC ISSUE
	E: BC REVISIONS
105	ISSUED: 1/05/23
	E PROJECT #: 21015

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MATAKANA

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NEW ZEALAND
~ p: 0274 323 185
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SHEET TITLE: SHED 1 SECTION BB	
REVISION #:	
A: SKETCH DESIGN	
B: SK REVISED	
C: DRAFT FOR ENG DESIGN	
D: BC ISSUE	
E: BC REVISIONS	
ISSUED:	1/06/23
E PROJECT #:	21015

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REPLACEMENT MARKET SHEDS

362 MATAKANA VALLEY ROAD

MATAKANA

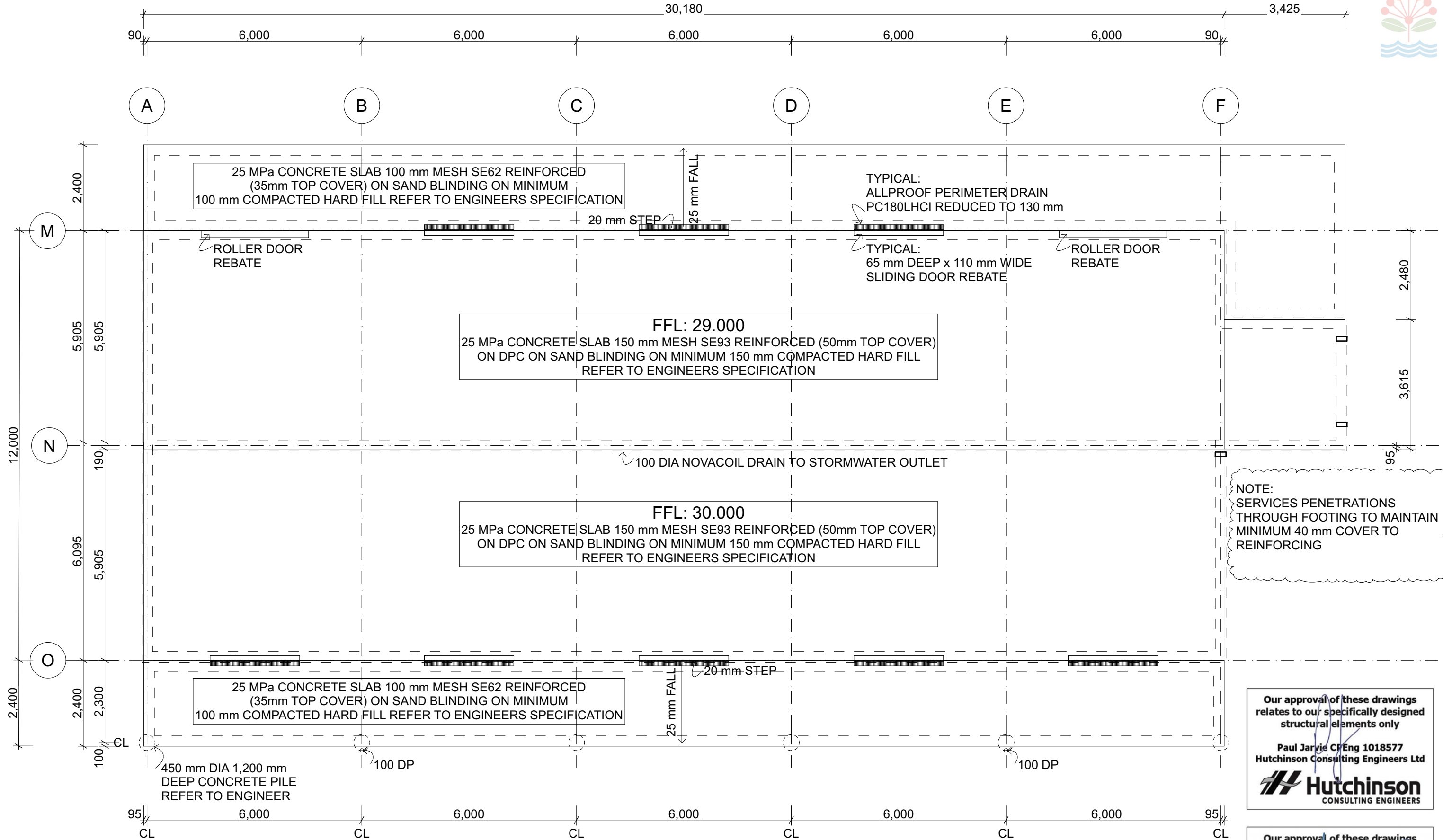
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SHEET TITLE: SHED 1 FOUNDATION PLAN

REVISION #:

107

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	B: SK REVISED
	C: DRAFT FOR ENG DESIGN
	D: BC ISSUE
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E PROJECT #:	21015

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REPLACEMENT MARKET SHEDS

362 MATAKANA VALLEY ROAD

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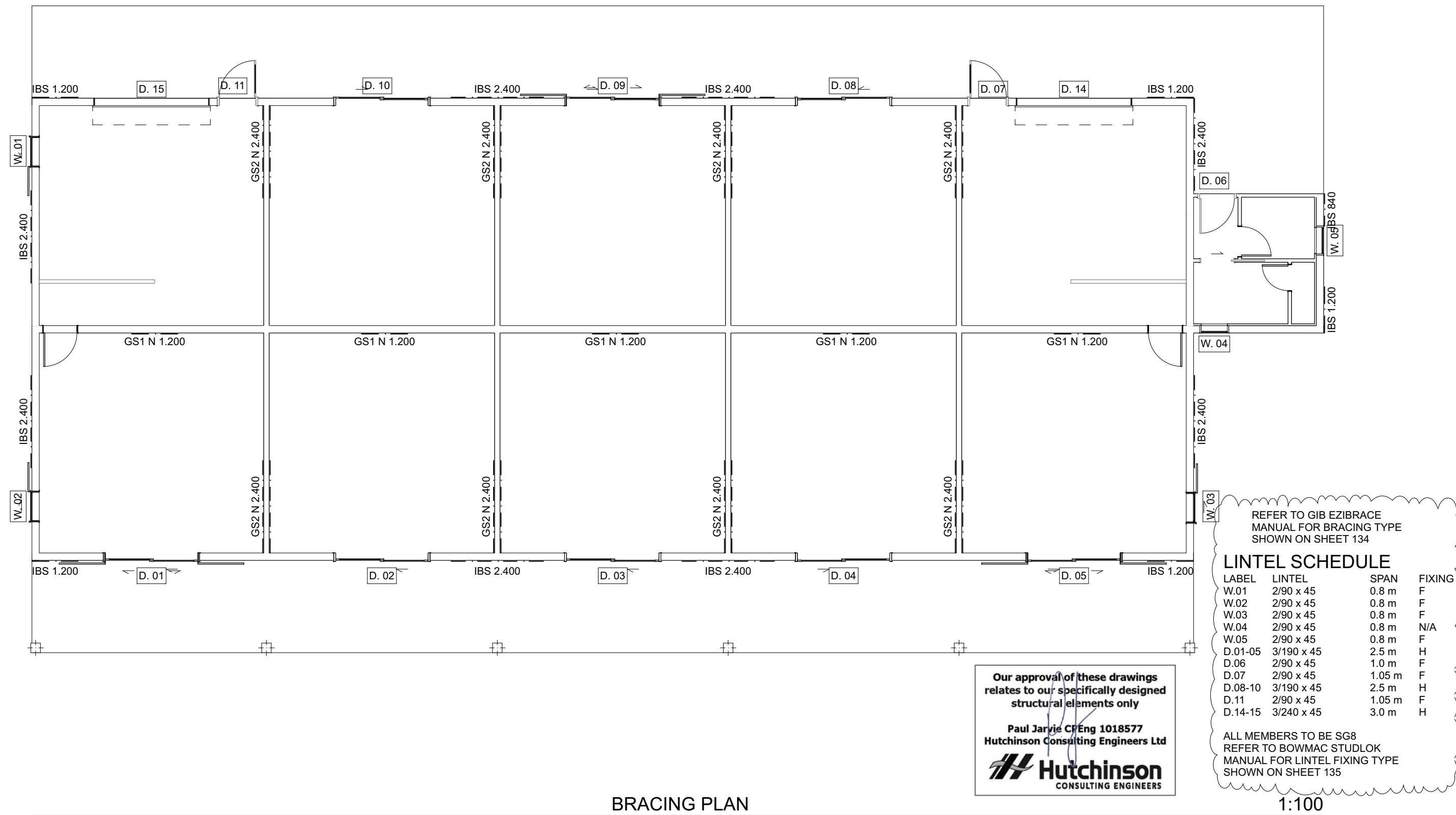
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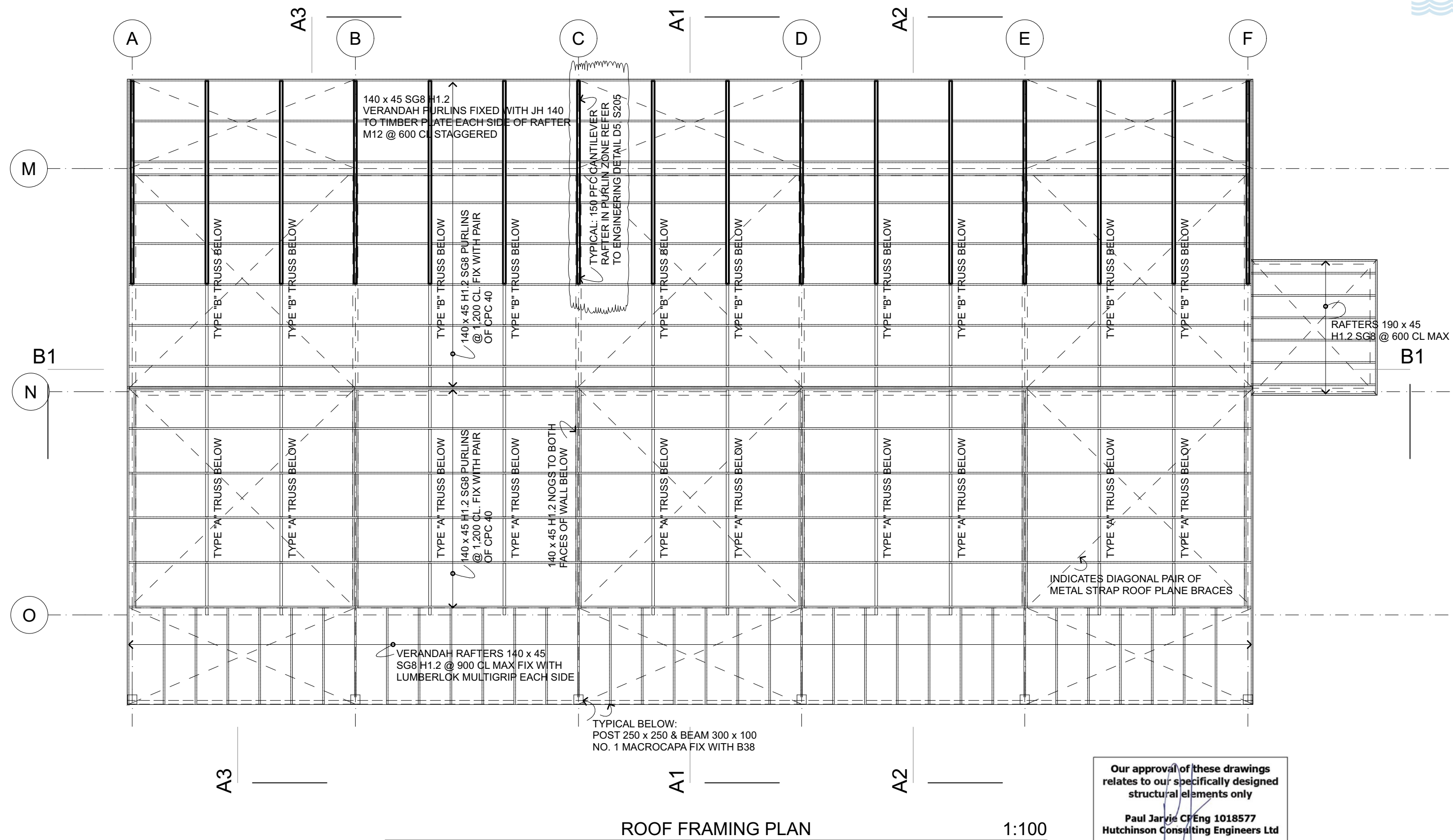
BRACING PLAN

SHEET TITLE: SHED 1 BRACING PLAN

SHEET	A: SKETCH DESIGN
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SHEET TITLE

REVISION #:

SHED 1 ROOF FRAMING PLAN

109

SHEET

A: SKETCH DESIGN

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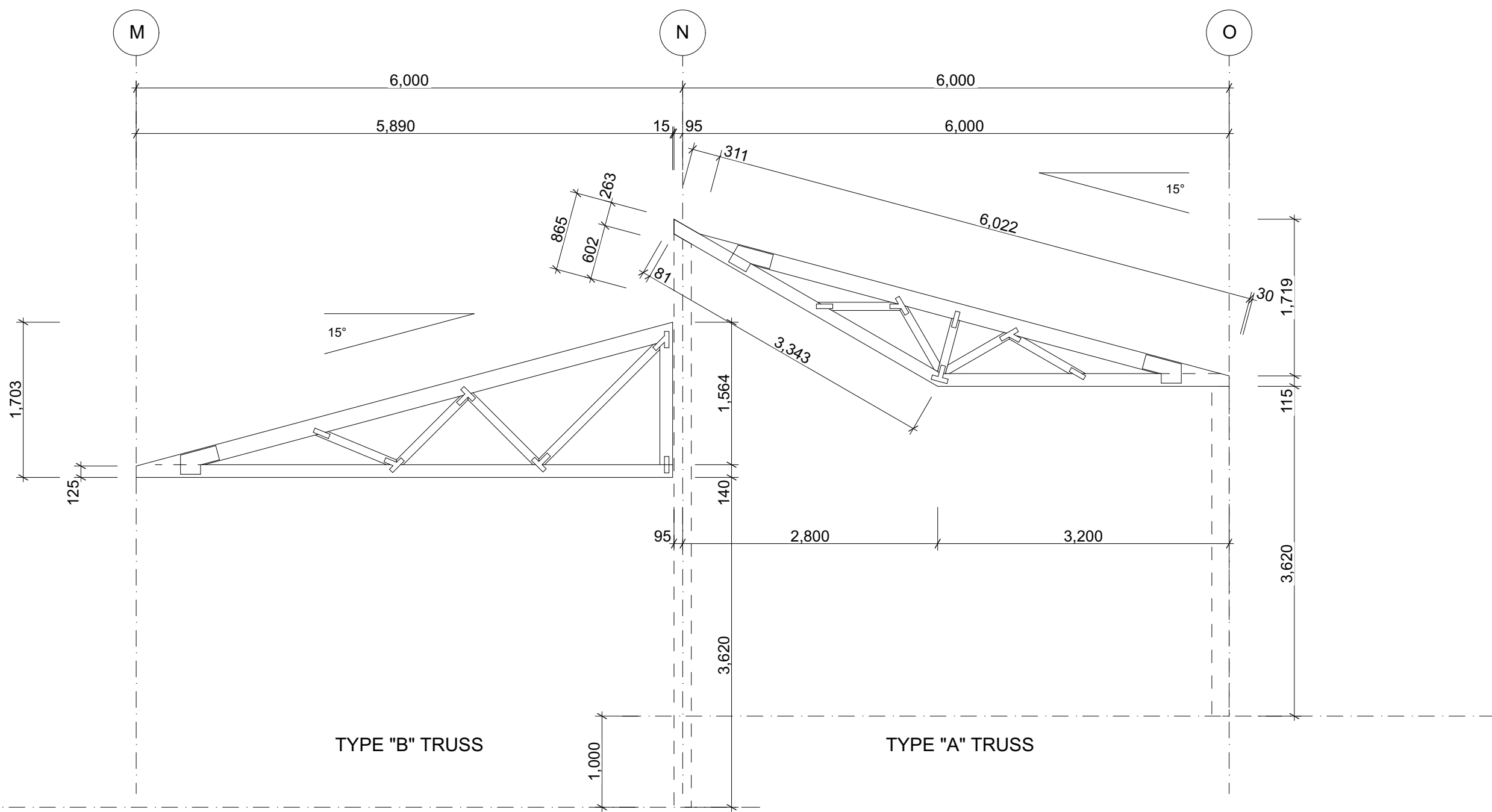
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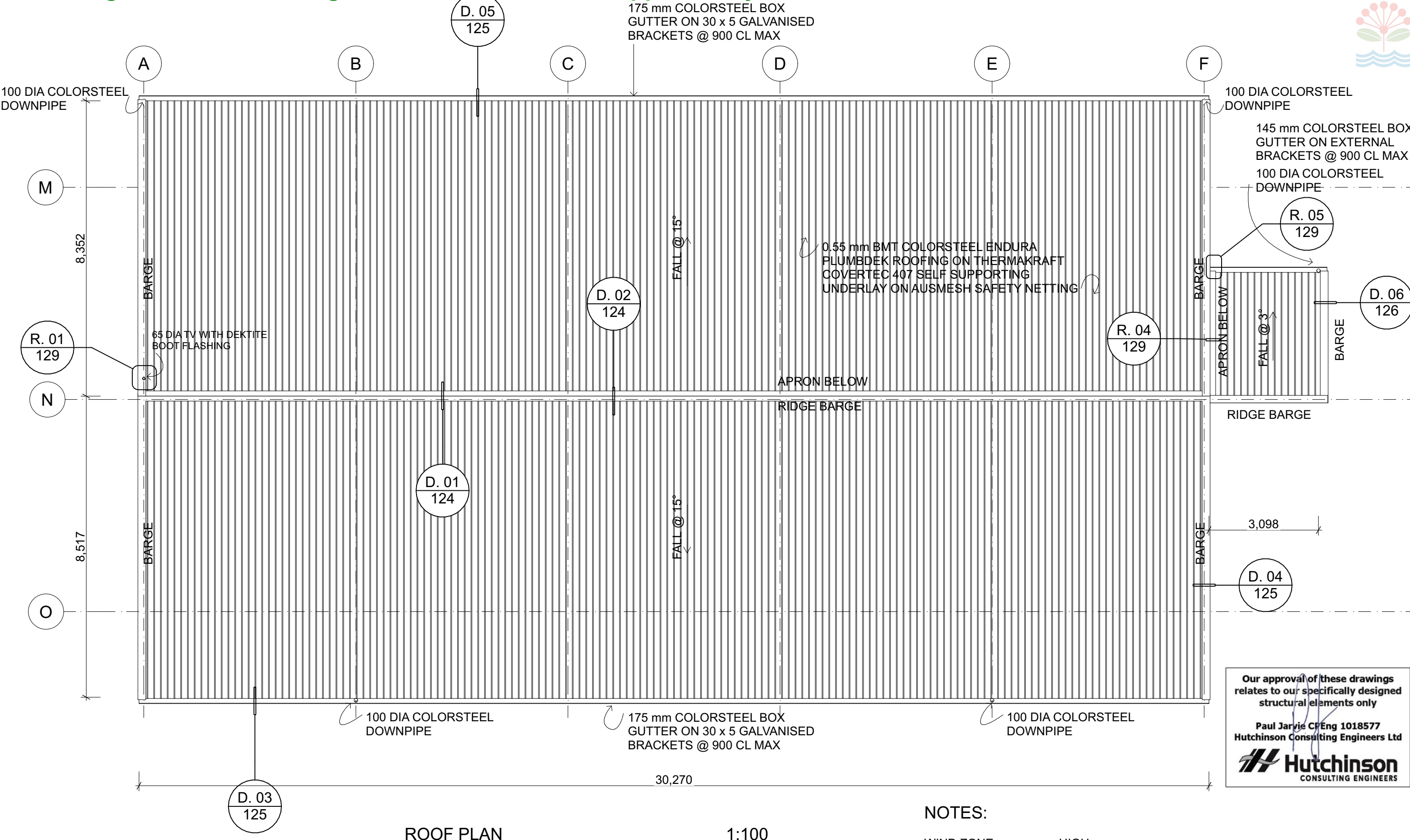
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SHEET TITLE: SHED 1 TRUSSES

SHEET	A: SKETCH DESIGN
	B: SK REVISED
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SHEET TITLE

REVISION #:

SHED 1 ROOF PLAN

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NOTES:

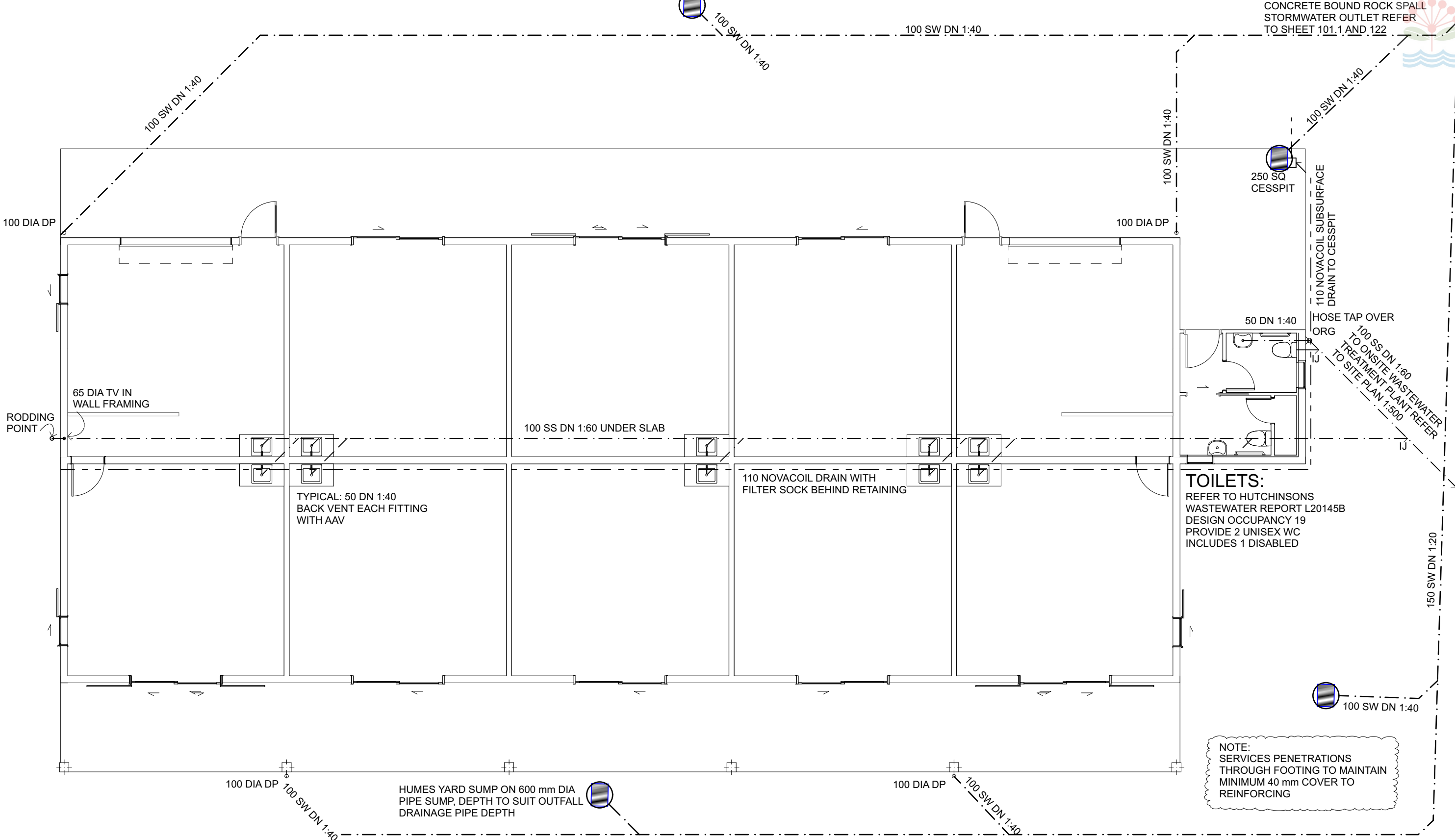
WIND ZONE: HIGH

EXPOSURE ZONE: C

SELECTED COLOUR STEEL AND TUBE PLUMBDEK METAL ROOFING @ 15° PITCH FIXED AS PER MANUFACTURERS INSTRUCTIONS FOR WIND ZONE ON THERMAKRAFT 407 SELF SUPPORTING UNDERLAY ON AUSMESH NETTING

EXTERNAL GUTTER CALCULATION:
MAXIMUM ROOF AREA COLLECTED
REFER TO D. 01 SHEET 212

132 m²



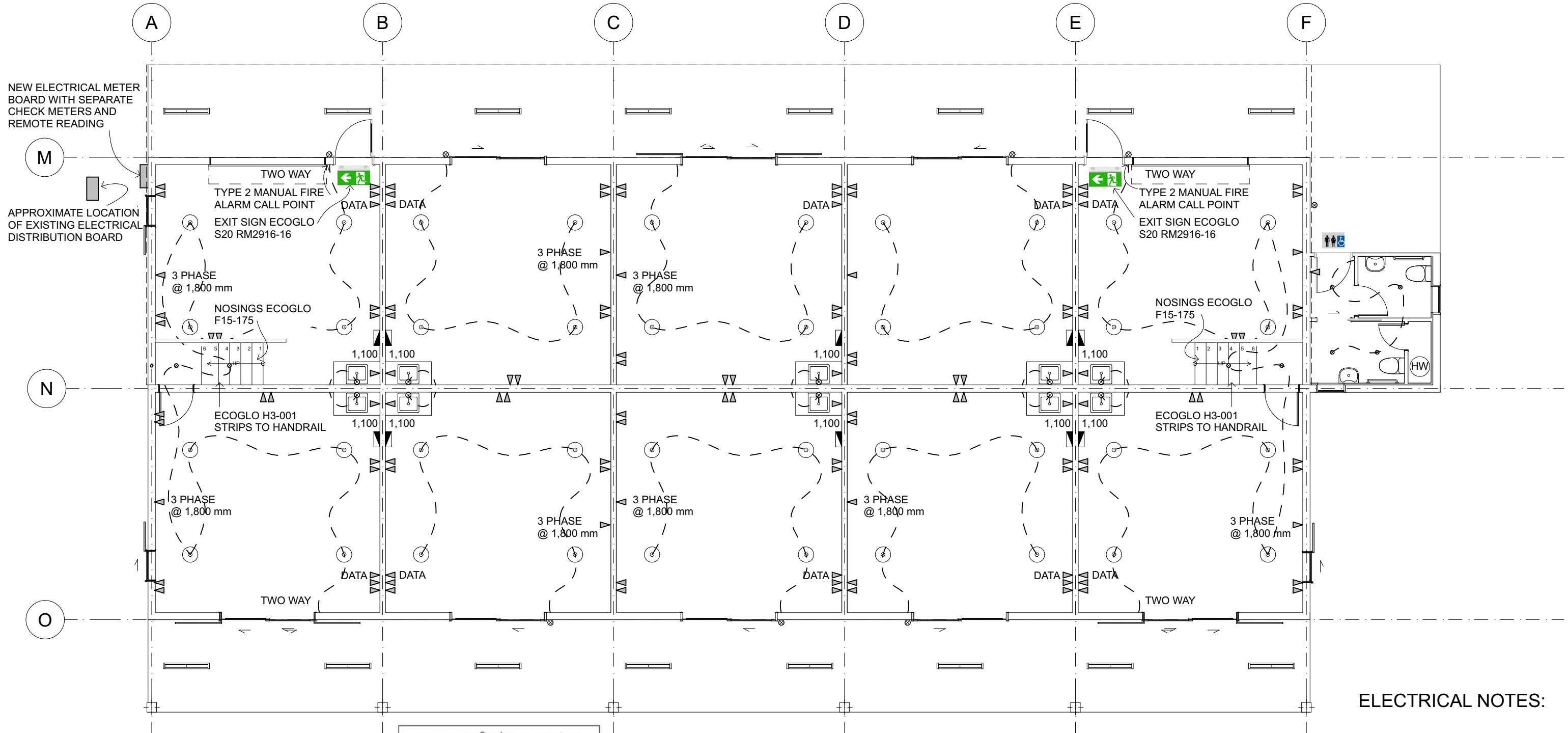
SHEET TITLE: SHED 1 DRAINAGE PLAN

SHEET	A: SKETCH DESIGN
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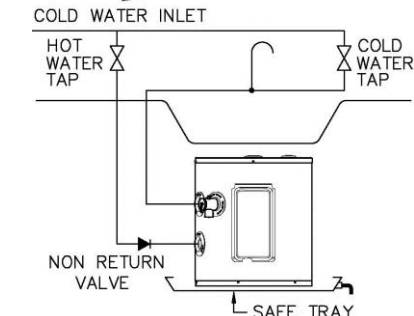
NEW ELECTRICAL METER BOARD WITH SEPARATE CHECK METERS AND REMOTE READING

APPROXIMATE LOCATION OF EXISTING ELECTRICAL DISTRIBUTION BOARD

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ACCESSIBILITY SIGNAGE:



ELECTRICAL NOTES:

- DATA
- INDICATES DOUBLE POWER POINT @ 400 mm AFL UNLESS NOTED OTHERWISE
- LIGHT SWITCHES @ 1,000 mm AFL
- EXTERIOR LIGHTS ON COMMON POWER CIRCUIT
- PROVIDE UNDER BENCH HOT WATER CYLINDER RHEEM MPVE 31202519V TO EACH UNIT AND TO WC UNIT
- INSTALL IN SAFE TRAY WITH OVERFLOW TO TUNDISH INTO SINK UNIT DRAIN
- SWITCHBOARD

SHEET TITLE: **SHED 1 ELECTRICAL PLAN**

REVISION #:

SHEET	REVISION
A:	SKETCH DESIGN
B:	SK REVISED
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113

ISSUED: 1/06/23

E PROJECT #: 21015

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REPLACEMENT MARKET SHEDS

362 MATAKANA VALLEY ROAD

MATAKANA

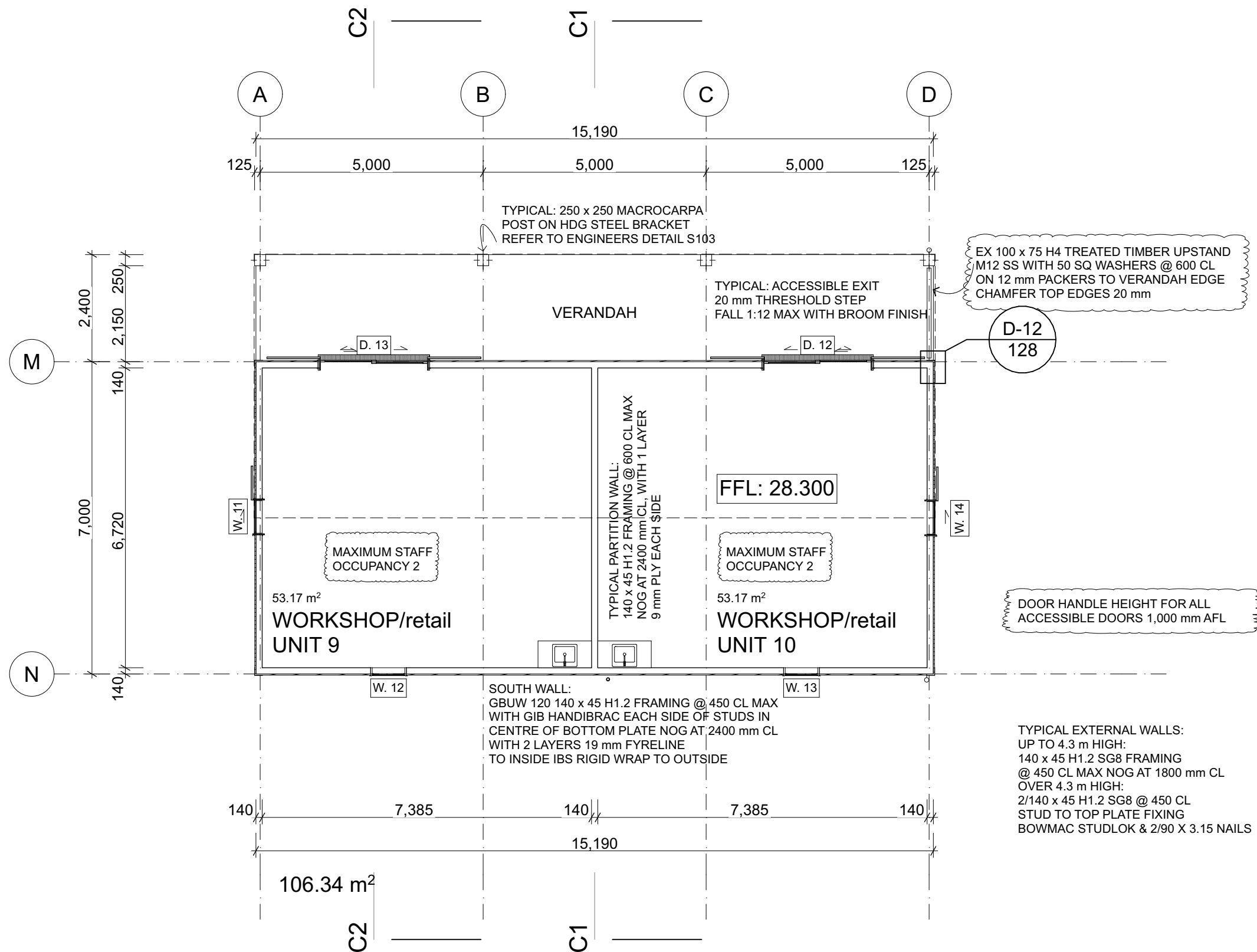
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~ p: 0274 323 185

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FLOOR PLAN 1:100

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SHEET TITLE: SHED 2 FLOOR PLAN	
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REPLACEMENT MARKET SHEDS

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NEW ZEALAND

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STRUCTURAL STABILITY

In order to satisfy the requirements of NZBC Clause C6 – Structural Stability, designers must ensure that fire rated elements are supported by elements having at least the same FRR. Collapse of elements having a lesser FRR shall not cause the consequential collapse of elements required to have a higher FRR.

For example, a column must have at least the same structural adequacy rating as the floor it is supporting, and the same applies to a section of wall providing lateral support to a fire-cell boundary.

Note also that an FRR represents the result against a standard furnace test for fire resistance where a specimen is exposed from one side. A supporting element located entirely within a fire-cell will potentially be exposed to fire from multiple sides simultaneously. In this case, 'universal' or 'one way' lining protection needs to be provided to all relevant sides. If such an element provides lateral support, then the bracing element must be protected with a 'universal' or 'one way' lining system.

STABILITY OF BOUNDARY WALLS

When a building is located sufficiently close to a property boundary, an FRR is often required to manage the risk of fire spread to adjacent property. NZBC Clause B1 – Verification Method B1/VM1 provides guidelines for checking the lateral stability of fire rated boundary walls. The simplest and most commonly applied criterion is the ability to resist 'a uniformly distributed face load of 0.5kPa in any direction'.

Buildings complying with Acceptable Solutions that do not mention post-fire stability do not need separate assessment for compliance with B1/VM1.

This means that low-risk single and small multi-unit dwellings and residential garages designed and constructed in accordance with Acceptable Solutions B1/AS1 and C/AS1 are exempt from separate B1/VM1 analysis.

For higher risk or more complex structures, such as public facilities, multi-storey buildings or portal frame industrial structures, specific design is required. The building designer must ensure that structural stability is maintained for the specified time of fire resistance in accordance with the provisions of B1/VM1. The solution will often require project-specific considerations and could involve fire rated return walls, a fire rated ceiling or cantilever external wall details.

SINGLE-STOREY, LIGHT TIMBER-FRAMED BOUNDARY FIREWALL

The following details have been developed for simple single-storey, light timber-framed structures that require design for structural stability as a consequence of fire.

The detail relies on bottom plate fixing and cantilever action of the wall to resist an imposed 0.5kPa face load in any direction.

The minimum requirements for concrete slab and timber-framing details, grade and treatment, are in accordance with the latest versions of NZS3604 and NZS3602.

- Walls with a height of 2.4m require a minimum stud size of nominally 140 x 45mm at 600mm centres.
- Walls with a height of 3.0m require a minimum stud size of nominally 140 x 45mm at 400mm centres.
- With the GIB HandiBrac®, use a proprietary concrete anchor with a minimum characteristic uplift capacity of 8kN, as verified by the supplier.

The required FRR is determined in accordance with NZBC Clause C Acceptable Solutions or Verification Method. If located more than 1m from the relevant boundary, check to see if a one way protection is permitted.

Select the relevant one way or two way FRR system and GIB® specification from this literature.

If a two way FRR is required, note that sheet joints and fastener heads in the GIB® plasterboard under the external cladding do not require stopping.

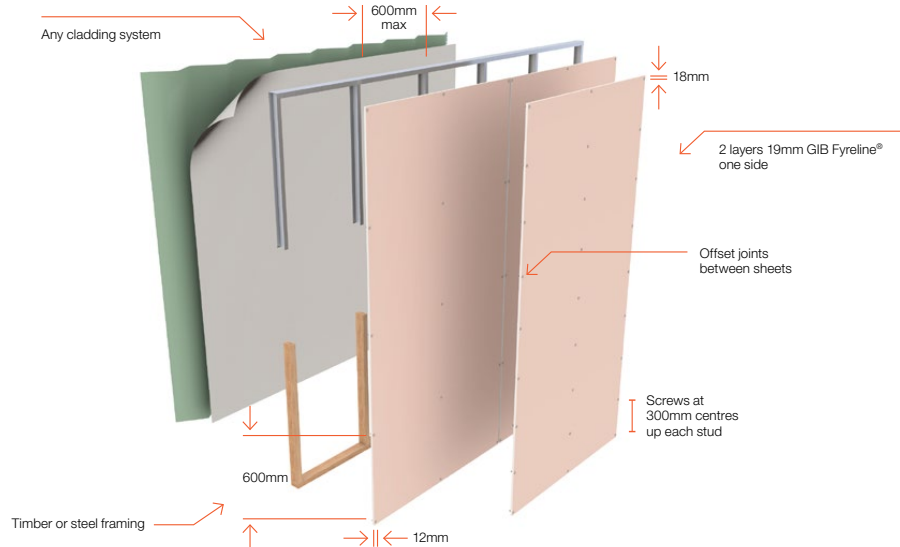
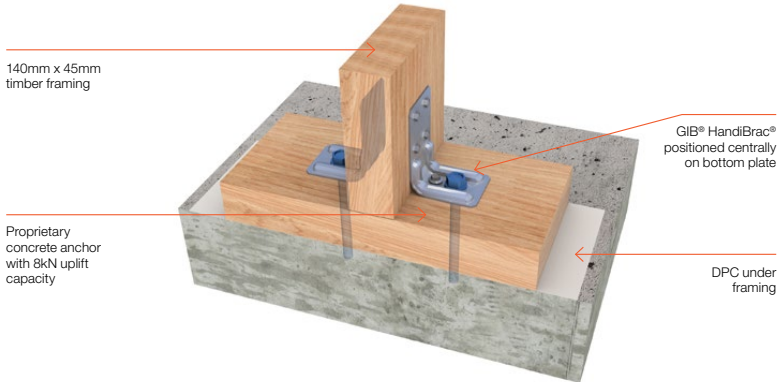
All cladding system types, including vertical profile metal cladding, must be separated from GIB® plasterboard by means of a flexible underlay and drained cavity system. Cladding details must otherwise comply with NZBC Clause E2.

Keep the GIB® plasterboard dry during installation and maintain the cladding system to ensure that the GIB® plasterboard remains dry in-service.

GIB® plasterboard behind an NZBC E2/AS1 compliant cladding system, drained cavity and flexible underlay, has a serviceable life in excess of 15 years and satisfies the requirements of NZBC Clause B2 – Durability for an external wall cladding.

Use claddings with exterior surface finish properties that fall within the limits set by NZBC Clause C Verification Method or Acceptable Solutions.

HOLD DOWN DETAIL (ALL STUDS)



One way FRR — timber or steel frame

Specification number	Performance	Specifications
GBUW 120	FRR 120/120/120	Lining 2 layers 19mm GIB Fyrelite® one side LB/NLB Load bearing

FRAMING AND WALL HEIGHT

Timber or steel frame designed to meet durability and structural criteria for strength and serviceability under dead and live loads.

The width of framing supporting the linings shall be 35mm minimum.

The cavity depth shall be 90mm minimum.

Framing spacing shall be at 600mm centres maximum.

Timber frame height and dimensions as determined by NZS 3604 stud tables or specific design.

LINING (FIRE SIDE)

2 layers of 19mm GIB Fyrelite® to one side of the frame.

Vertical or horizontal fixing permitted. For vertical fixing, full height sheets shall be used where possible.

Sheets shall be touch fitted.

All sheet joints must be formed over framing, except for longitudinal joints when the outer layer is fixed horizontally.

When sheet end butt joints are unavoidable, they shall be formed over nogs.

Offset sheet joints between layers.

In steel-framed options, linings are installed hard to floor.

FASTENING THE LINING

Fasteners

Layer	Timber frame	Steel frame
Inner layer	41mm x 6g GIB® Grabber® High Thread Drywall Screws	32mm x 6g GIB® Grabber® Self Tapping Drywall Screws
Outer layer	57mm x 7g GIB® Grabber® High Thread Drywall Screws	51mm x 7g GIB® Grabber® Self Tapping Drywall Screws

Fastener centres

Inner layer: 600mm centres up each stud.

Outer layer: 300mm centres up each stud.

Place fasteners 12mm from longitudinal sheet edges and 18mm from sheet ends.

Place fasteners at 200mm centres along sheet end butt joints.

JOINTING

Inner layer: Unstopped.

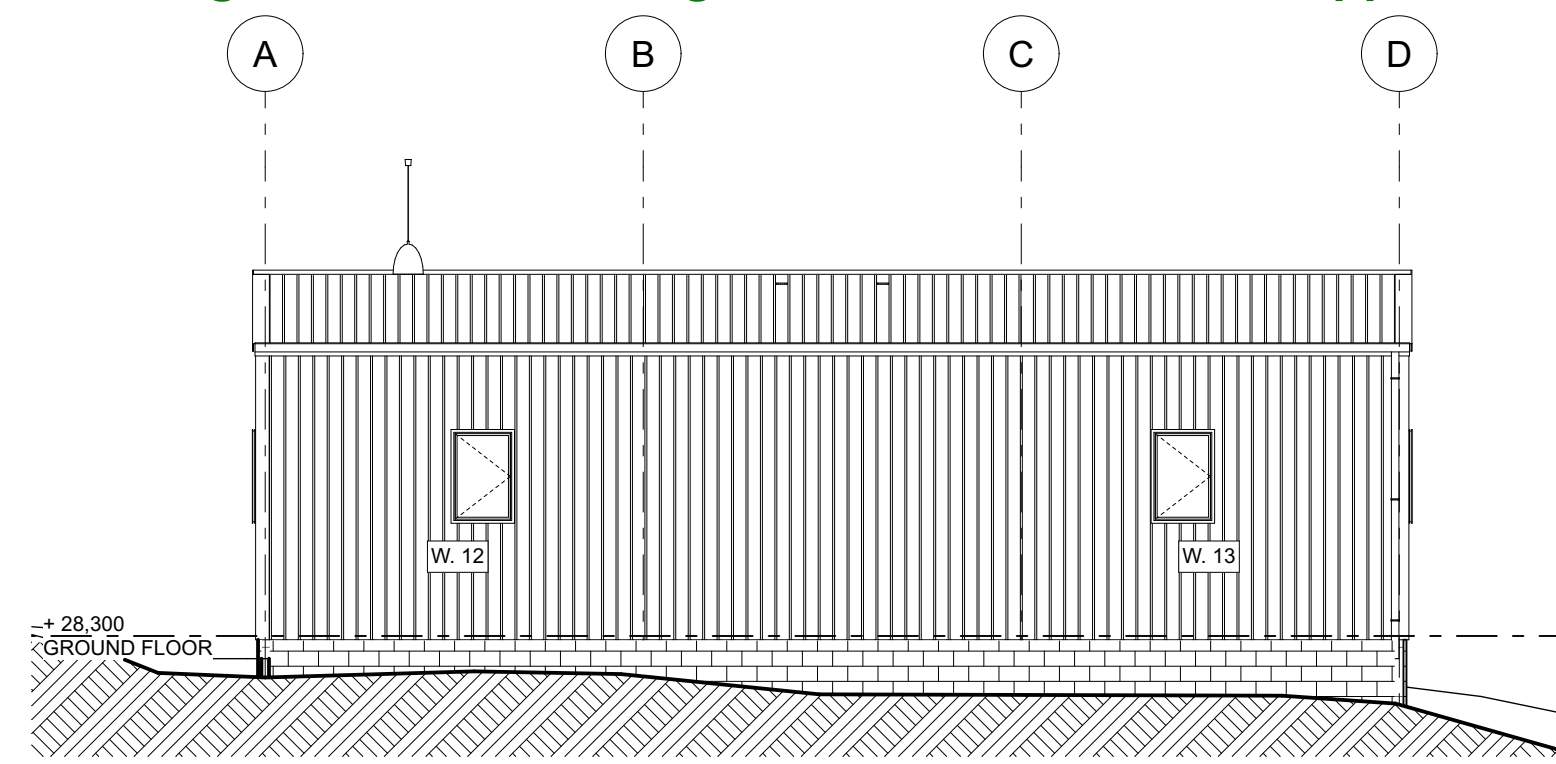
Outer layer: All screw heads stopped and all sheet joints tape reinforced and stopped in accordance with the publication entitled "GIB® Site Guide".

SHEET TITLE: FIREWALL DETAILS

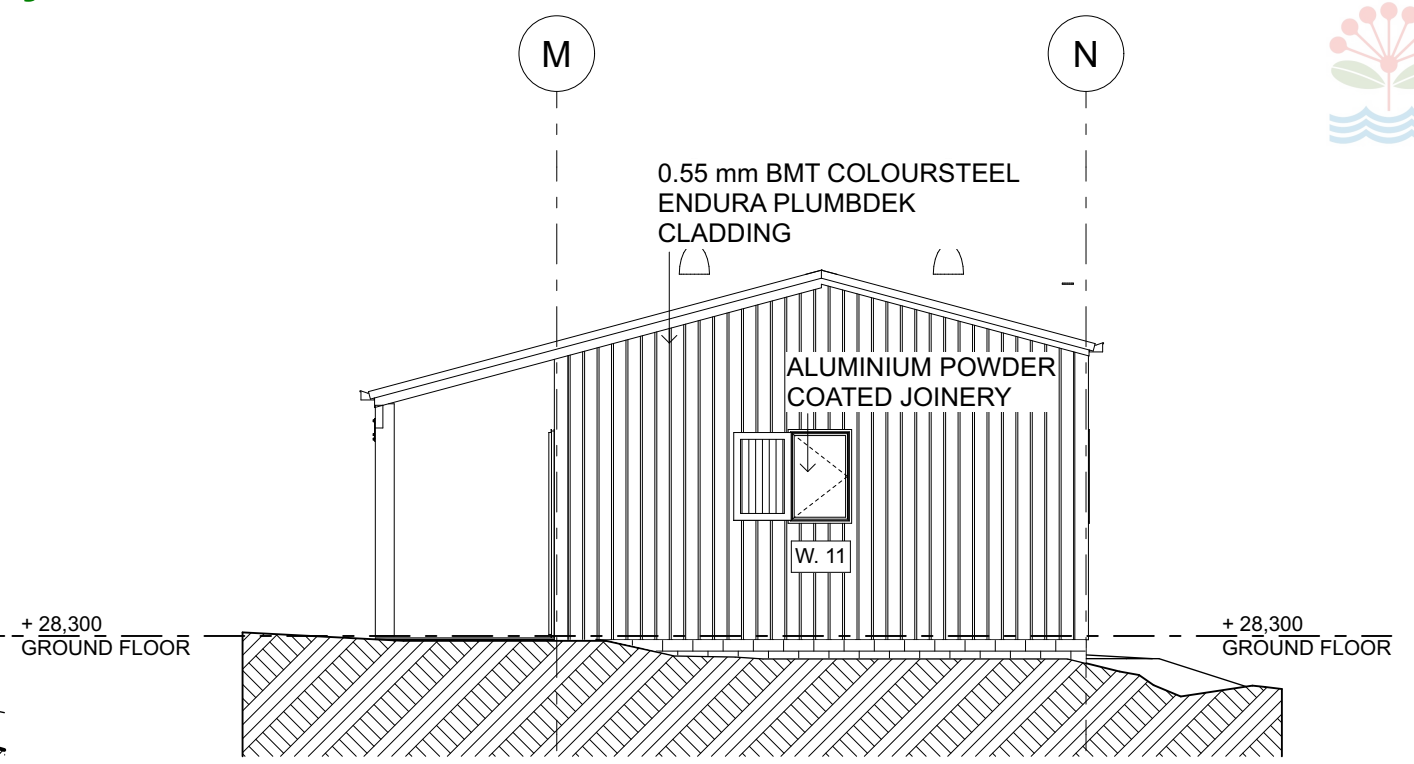
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REPLACEMENT MARKET SHEDS
362 MATAKANA VALLEY ROAD
MATAKANA

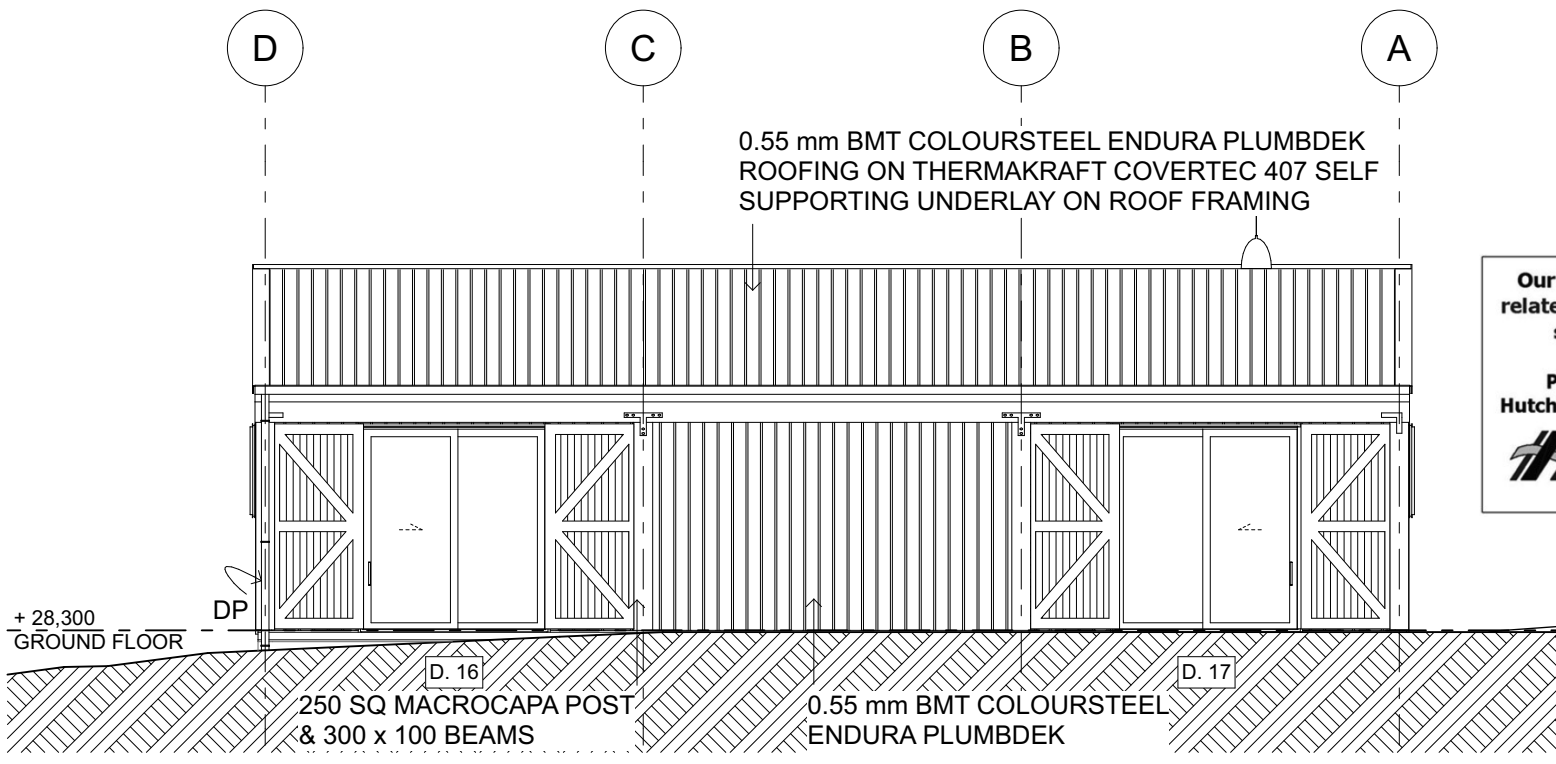
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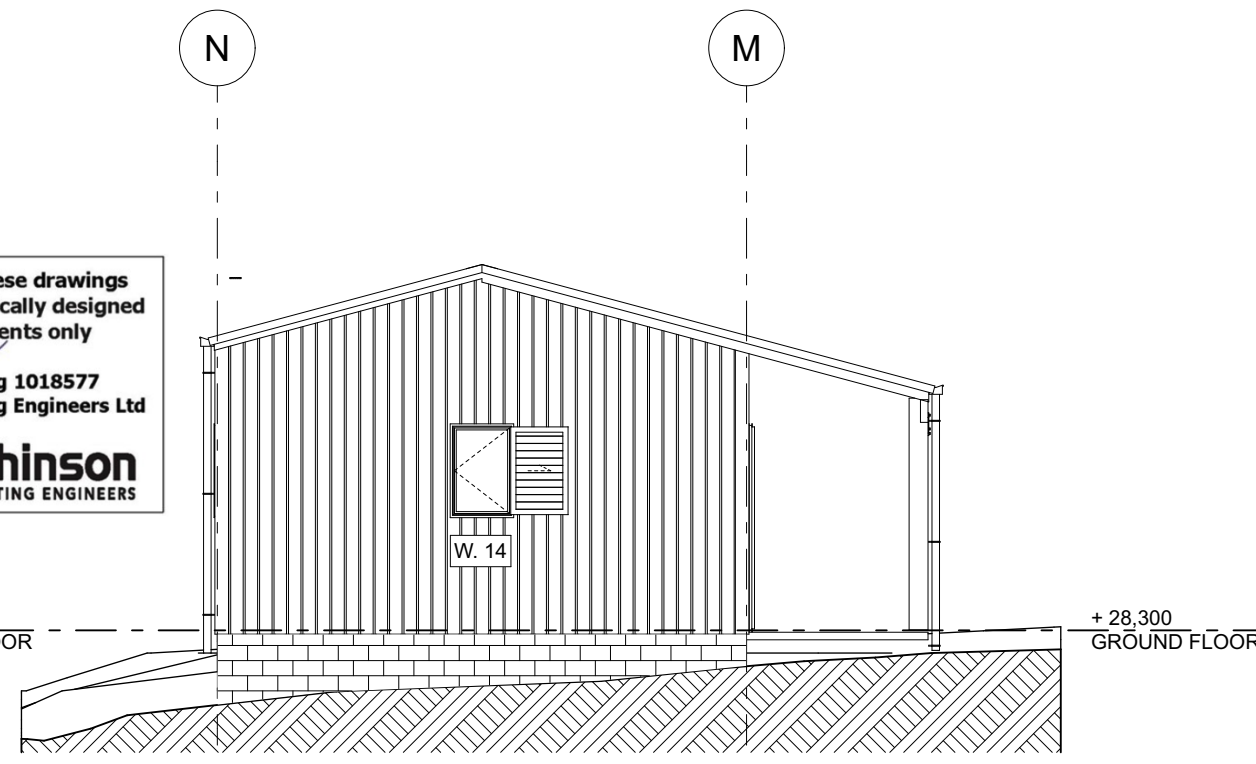
SOUTH ELEVATION 1:100



WEST ELEVATION 1:100



NORTH ELEVATION 1:100



EAST ELEVATION 1:100

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SHEET TITLE: SHED 2 ELEVATIONS

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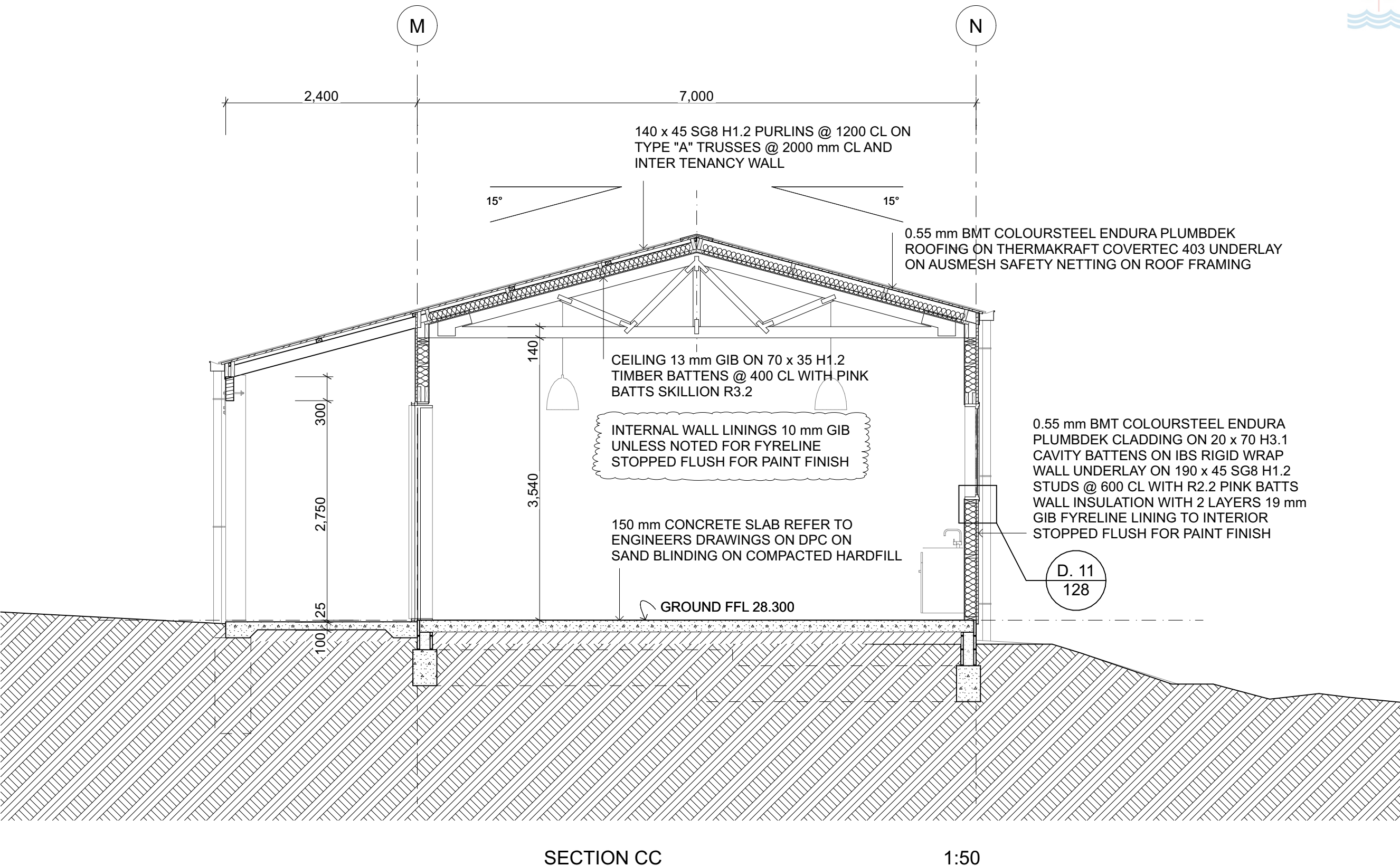
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BUILDING ENVELOPE RISK MATRIX		
ALL ELEVATIONS		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Medium risk	1
Eaves width	Very high risk	5
Envelope complexity	Low risk	0
Deck design	Low	0
Total Risk Score:		7



SHEET TITLE		REVISION #:	SHED 2 SECTION CC
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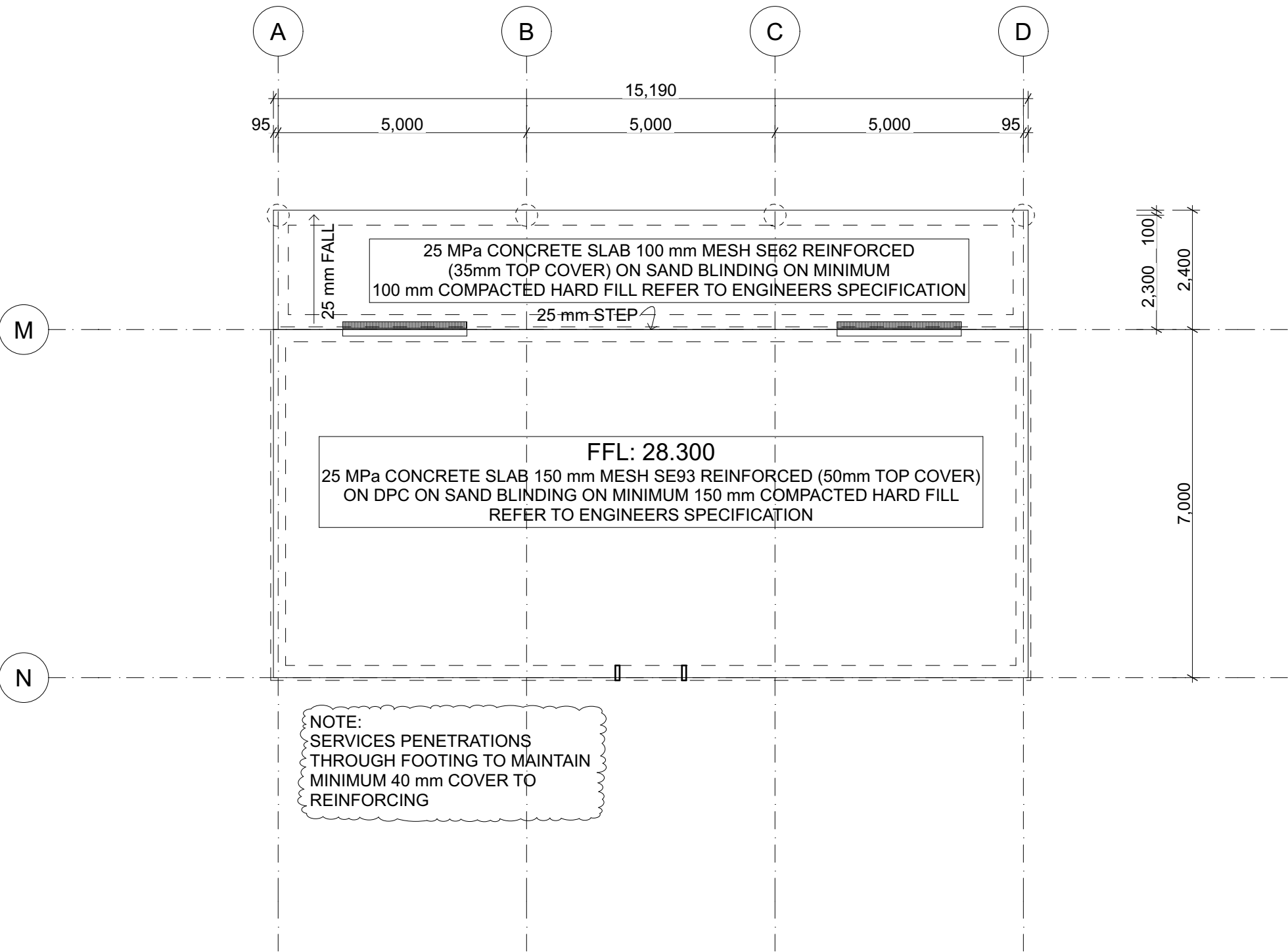
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Our approval of these drawings relates to the recommendations of our geotechnical reporting only

Ian Hutchinson CPEng 63973
Hutchinson Consulting Engineers Ltd

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FOUNDATION PLAN

1:100

SHEET TITLE: SHED 2 FOUNDATION PLAN

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SHEET	REVISION #
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B: SK REVISED	
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BRACING NOTES:

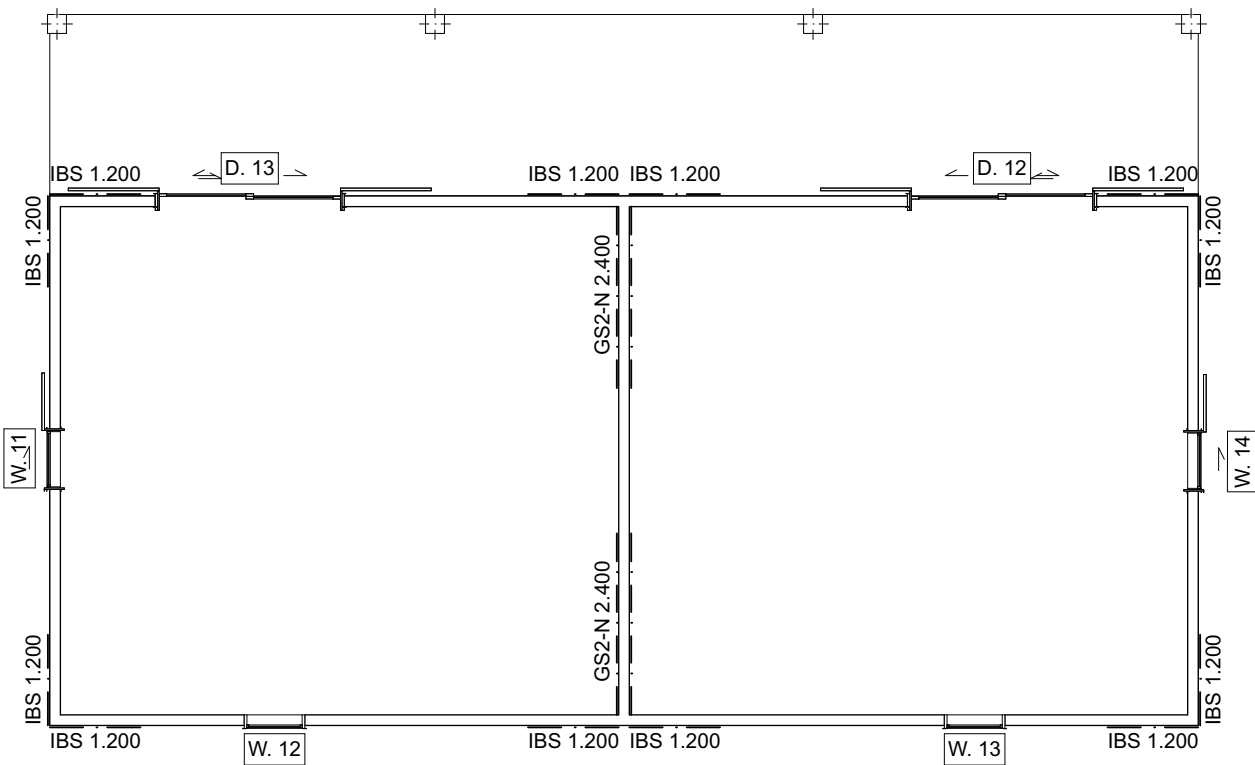
BRACING ELEMENT TYPE & LENGTH
IBS 1.200

REFER TO GIB EZIBRACE
MANUAL FOR BRACING TYPE
SHOWN ON SHEET 134

LINTEL SCHEDULE

LABEL	LINTEL	SPAN	FIXING
W.11	2/90 x 45	0.8 m	F
W.12	2/90 x 45	0.8 m	F
W.13	2/90 x 45	0.8 m	F
W.14	2/90 x 45	0.8 m	F
D.12-13	2/240 x 45	2.5 m	G

ALL MEMBERS TO BE SG8
REFER TO BOWMAC STUDLOK
MANUAL FOR LINTEL FIXING TYPE
SHOWN ON SHEET 135



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BRACING PLAN

1:100

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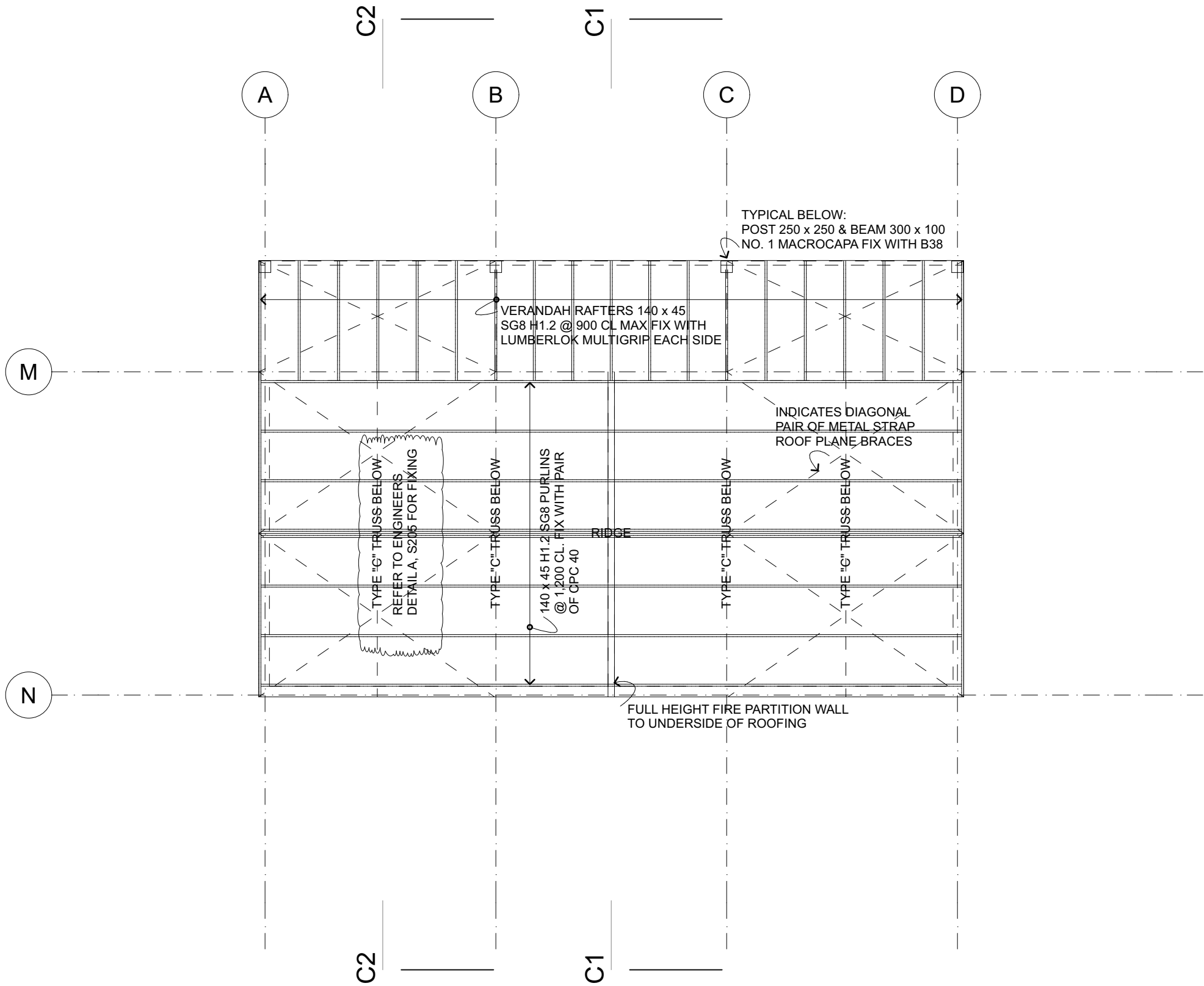
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ROOF FRAMING PLAN

1:100

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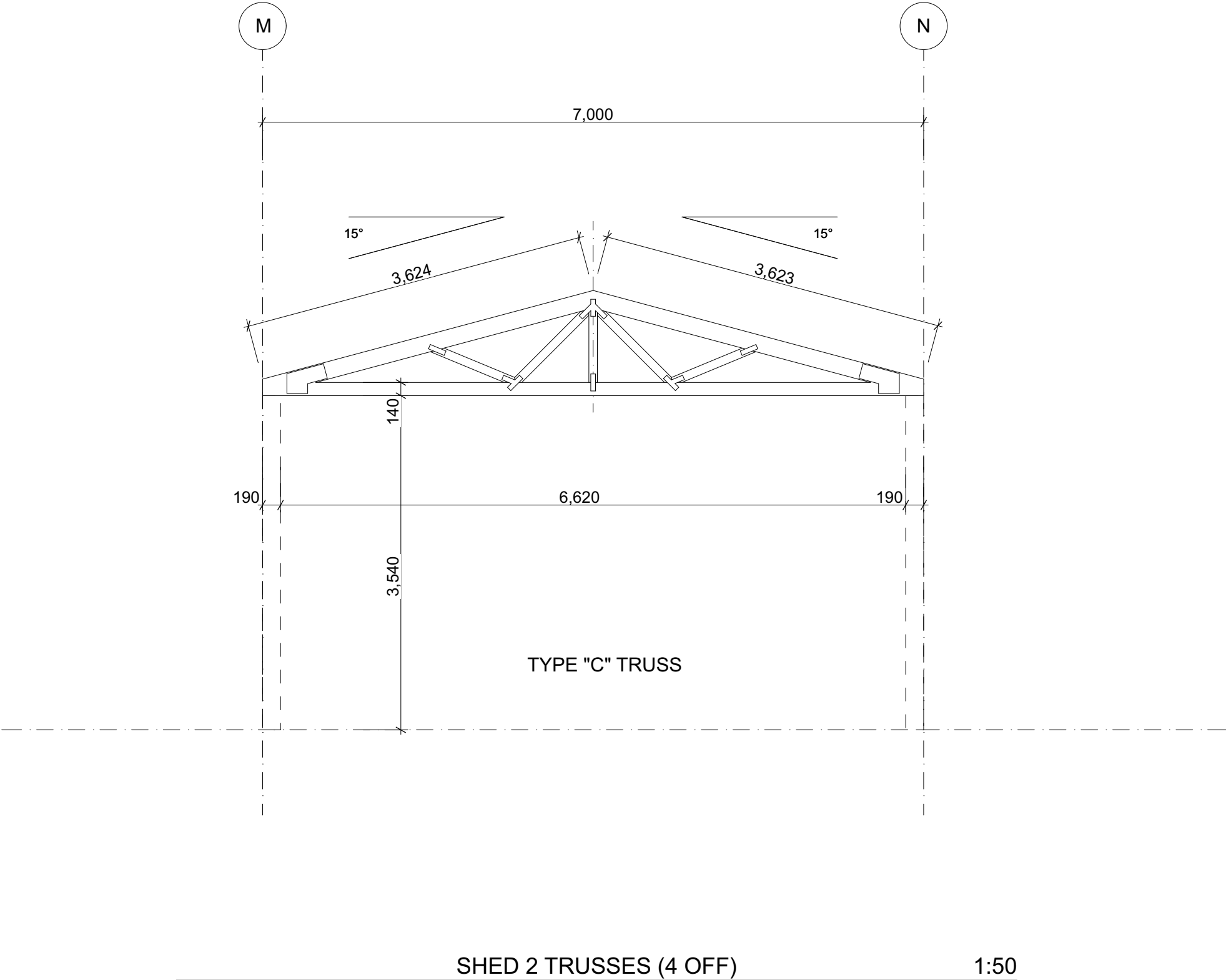
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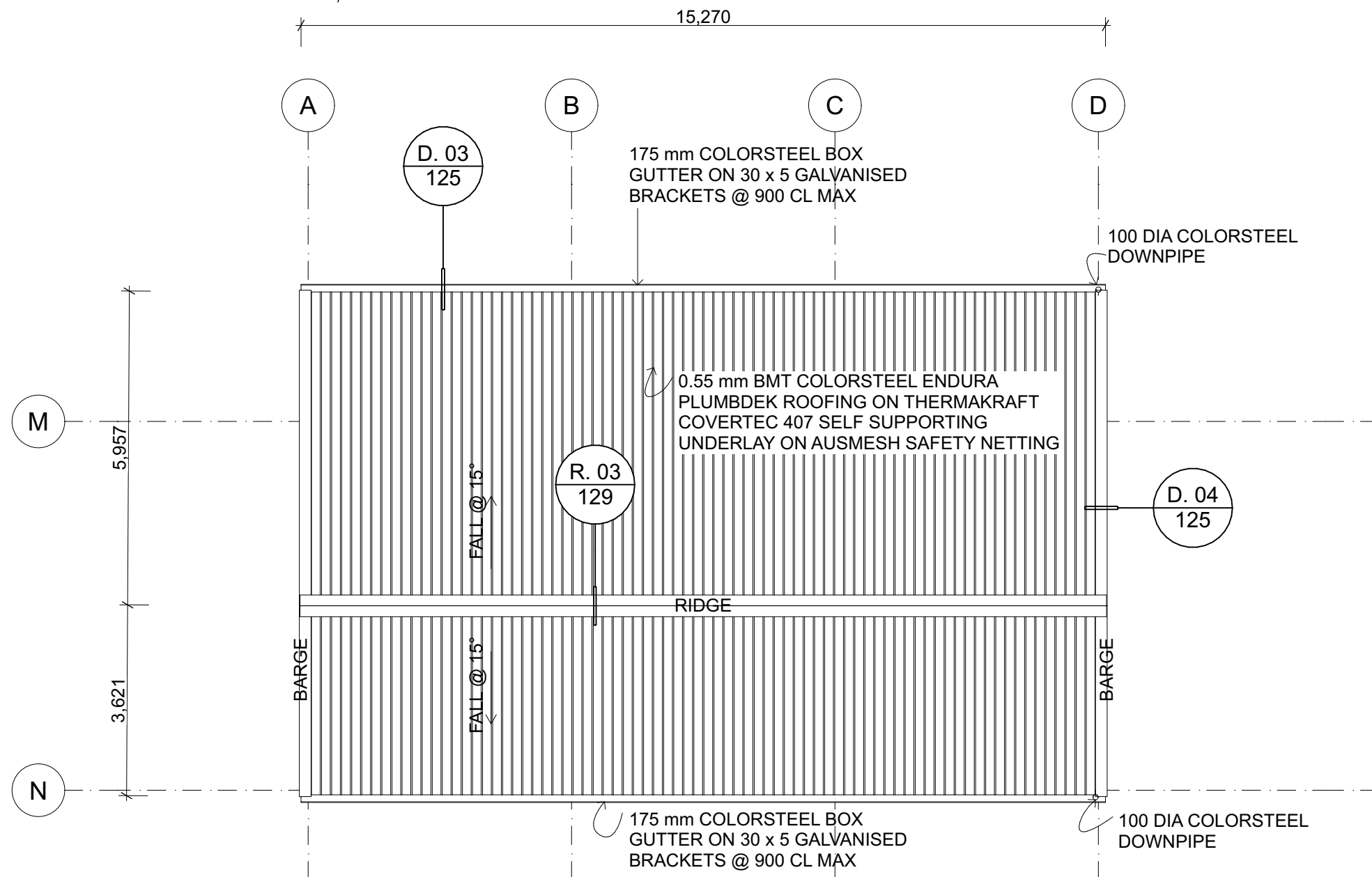
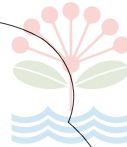
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BCO10364430 Received by Auckland Council 01/05/2023



NOTES:

WIND ZONE: HIGH
EXPOSURE ZONE: C
SELECTED COLOUR STEEL AND TUBE PLUMBDEK METAL ROOFING @ 15° PITCH
FIXED AS PER MANUFACTURERS INSTRUCTIONS FOR WIND ZONE ON
THERMAKRAFT 407 SELF SUPPORTING UNDERLAY ON AUSMESH NETTING

EXTERNAL GUTTER CALCULATION:
MAXIMUM ROOF AREA COLLECTED
REFER TO D. 01 SHEET 212
93 m²

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ROOF PLAN

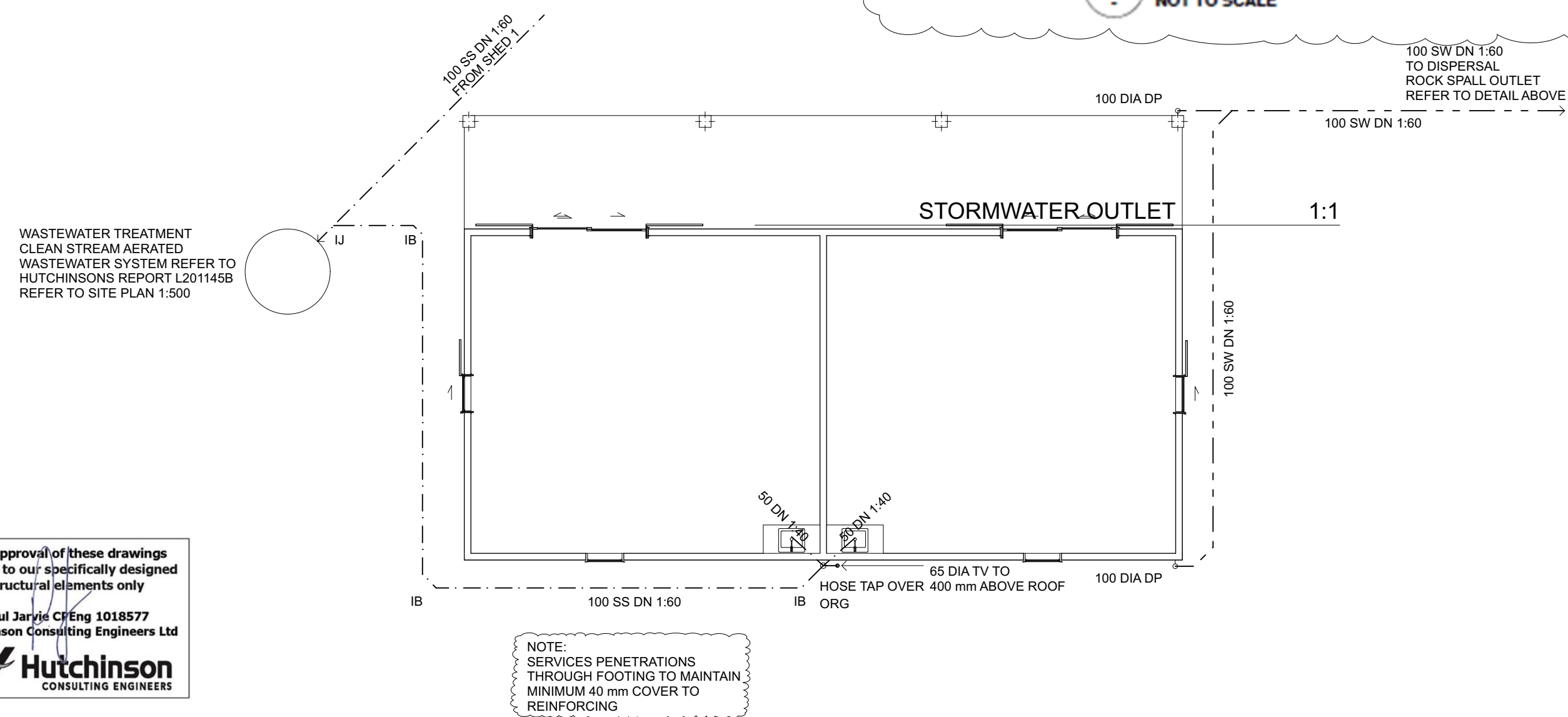
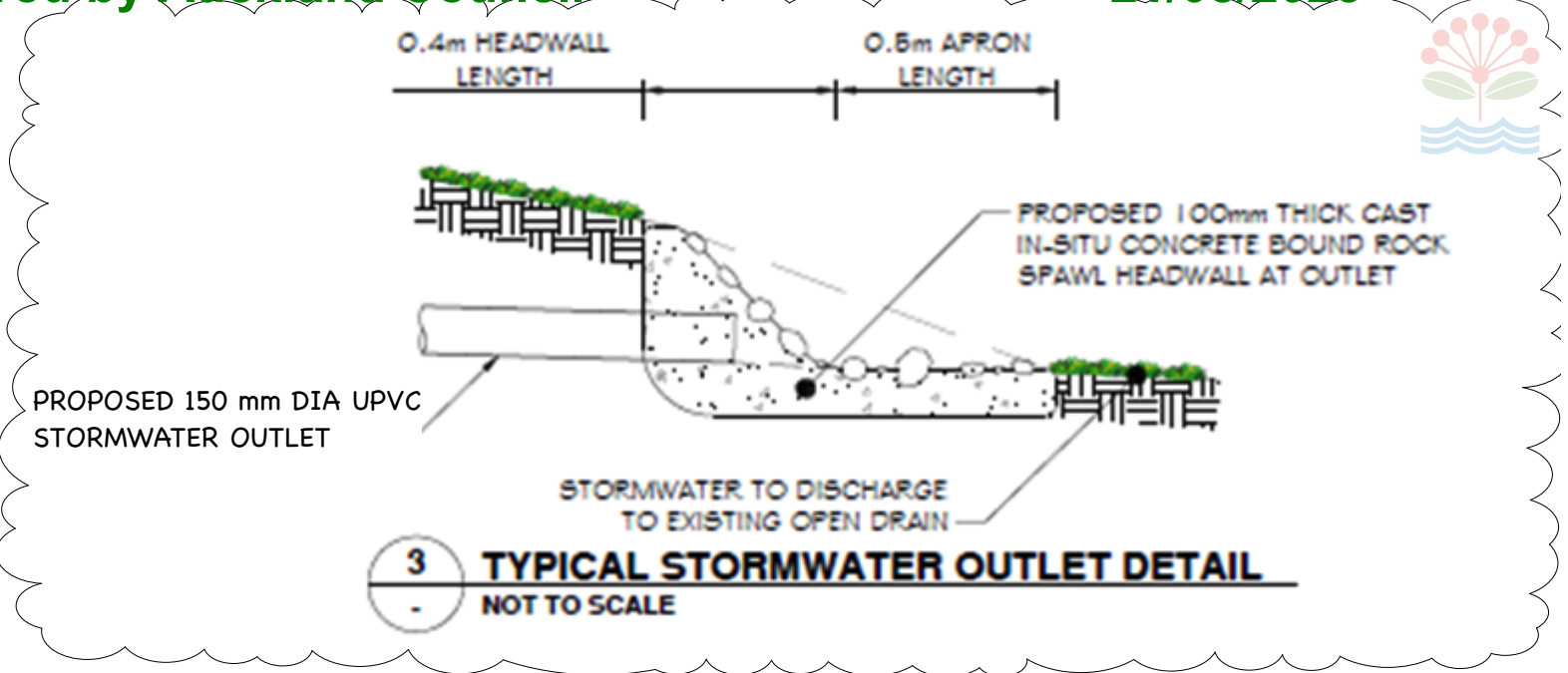
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WASTEWATER TREATMENT
CLEAN STREAM AERATED
WASTEWATER SYSTEM REFER TO
HUTCHINSONS REPORT L201145B
REFER TO SITE PLAN 1:500

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NOTE:
SERVICES PENETRATIONS
THROUGH FOOTING TO MAINTAIN
MINIMUM 40 mm COVER TO
REINFORCING

DRAINAGE PLAN

1:100

SHEET TITLE: SHED 2 DRAINAGE PLAN

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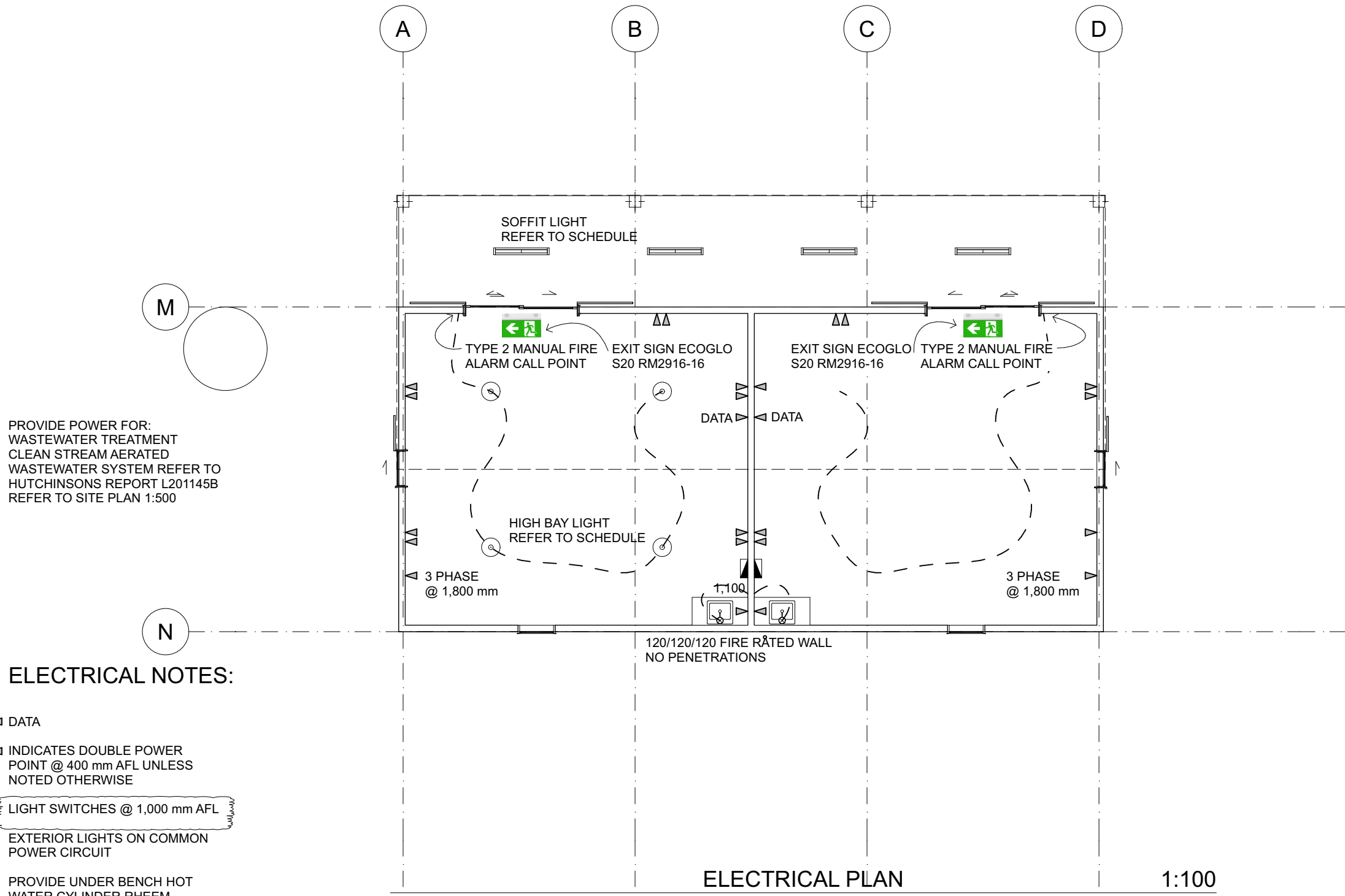
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122



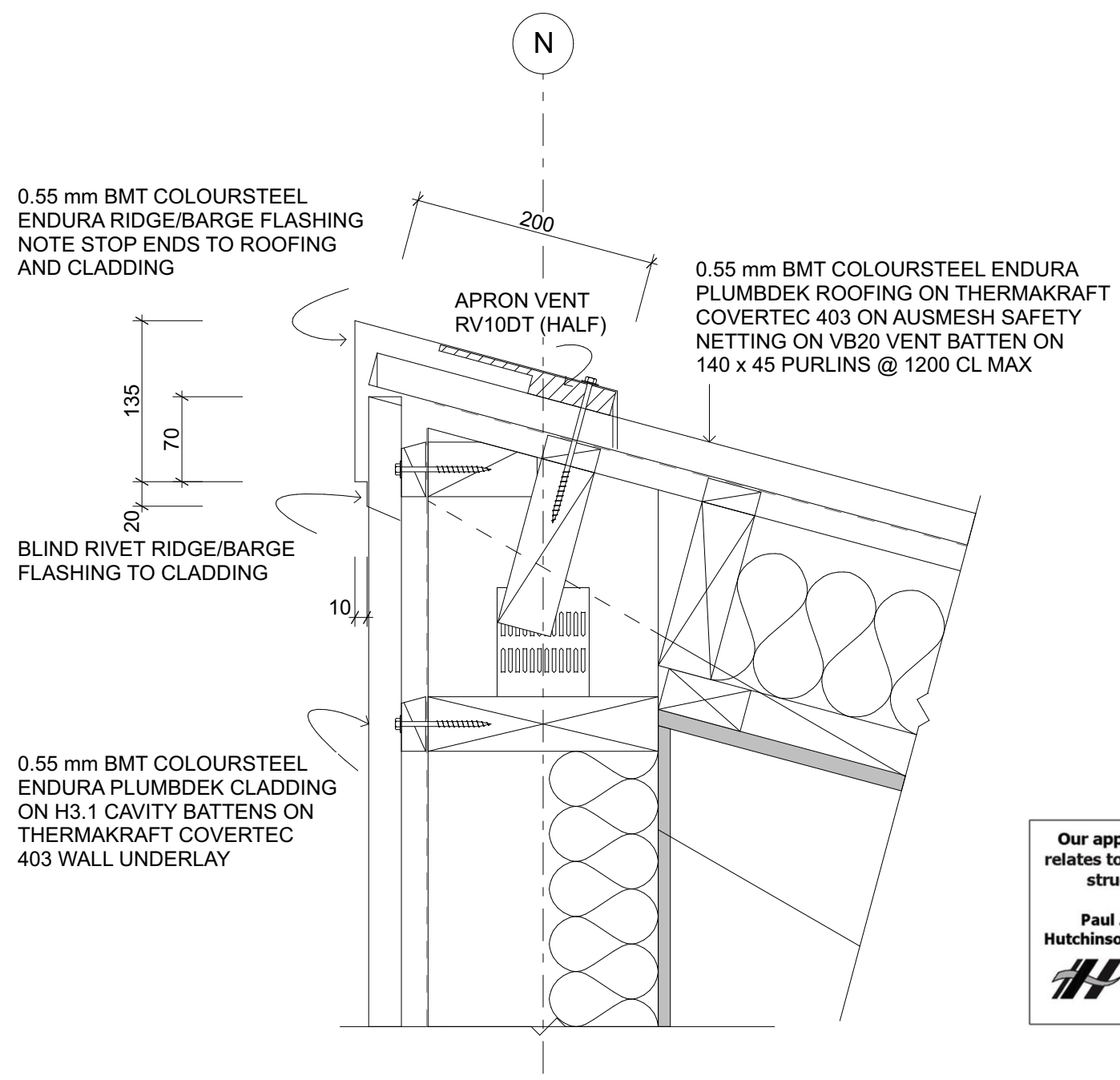
ELECTRICAL NOTES:

- DATA
- INDICATES DOUBLE POWER POINT @ 400 mm AFL UNLESS NOTED OTHERWISE
- LIGHT SWITCHES @ 1,000 mm AFL
- EXTERIOR LIGHTS ON COMMON POWER CIRCUIT
- PROVIDE UNDER BENCH HOT WATER CYLINDER RHEEM MPVE 31202519V TO EACH UNIT INSTALL IN SAFE TRAY WITH OVERFLOW TO TUNDISH INTO SINK UNIT DRAIN
- SWITCHBOARD

SHEET TITLE: SHED 2 ELECTRICAL PLAN	
REVISION #:	
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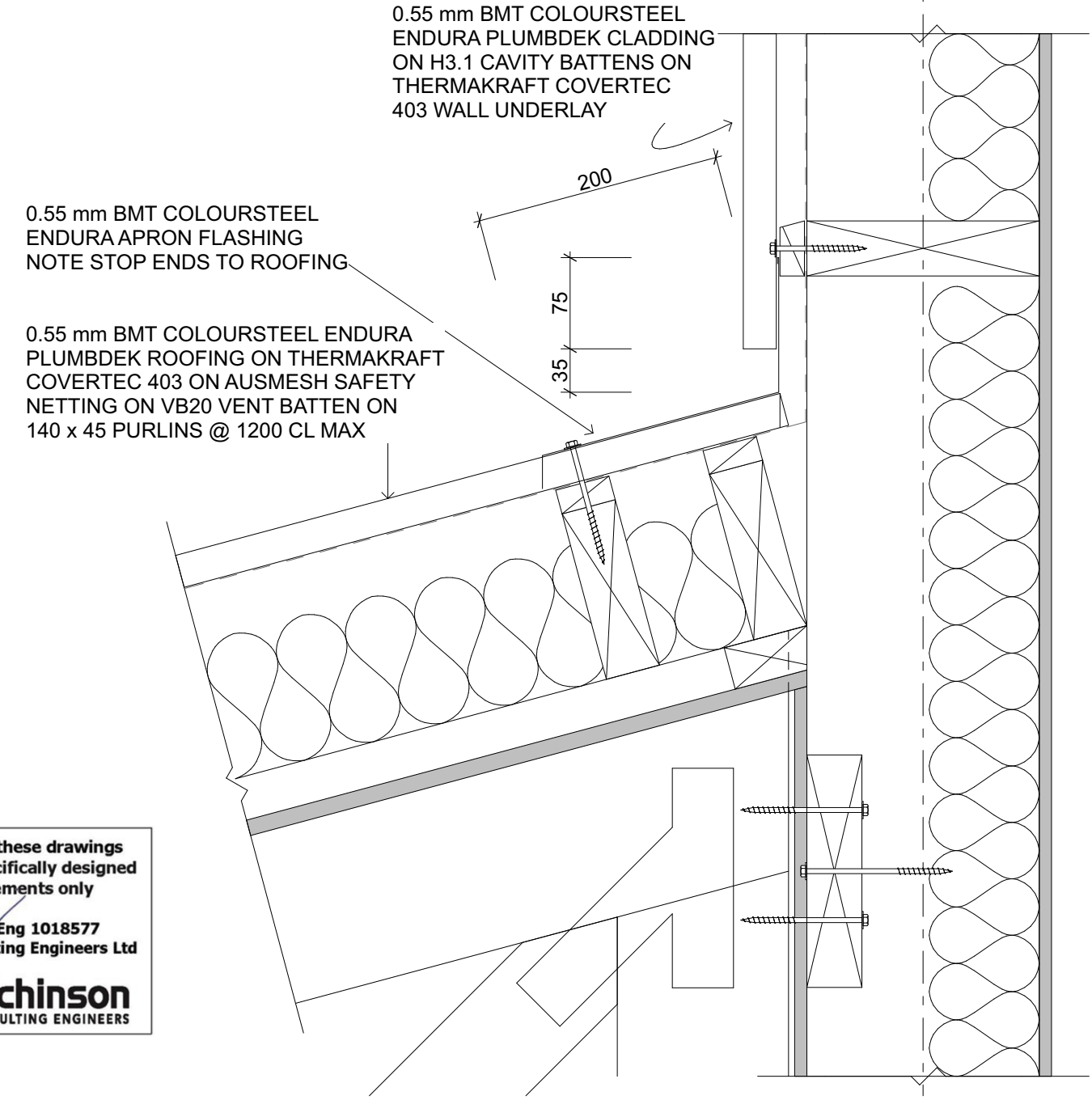


D-01 RIDGE BARGE 1:5

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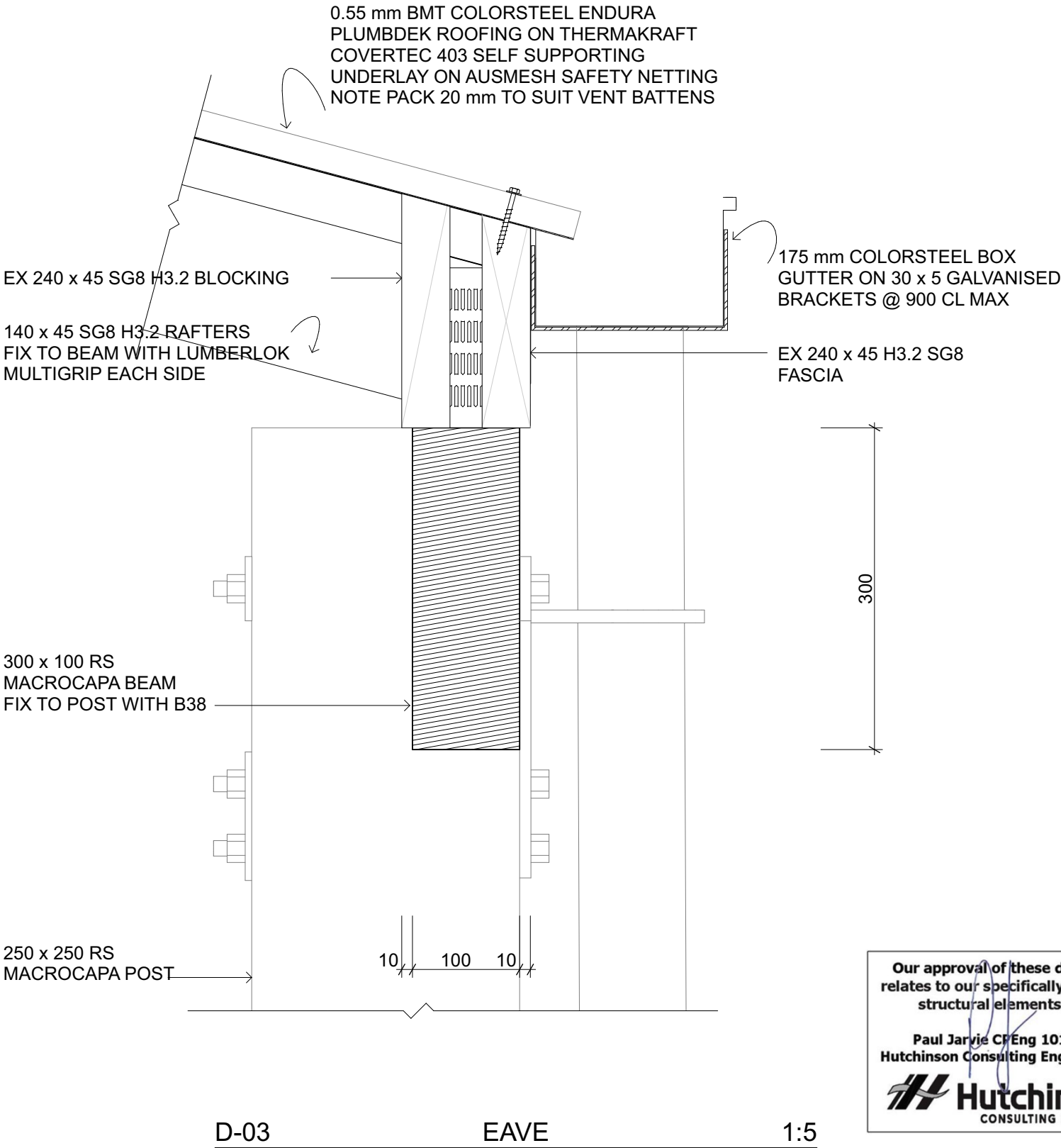
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D-02 APRON ROOF 1:5

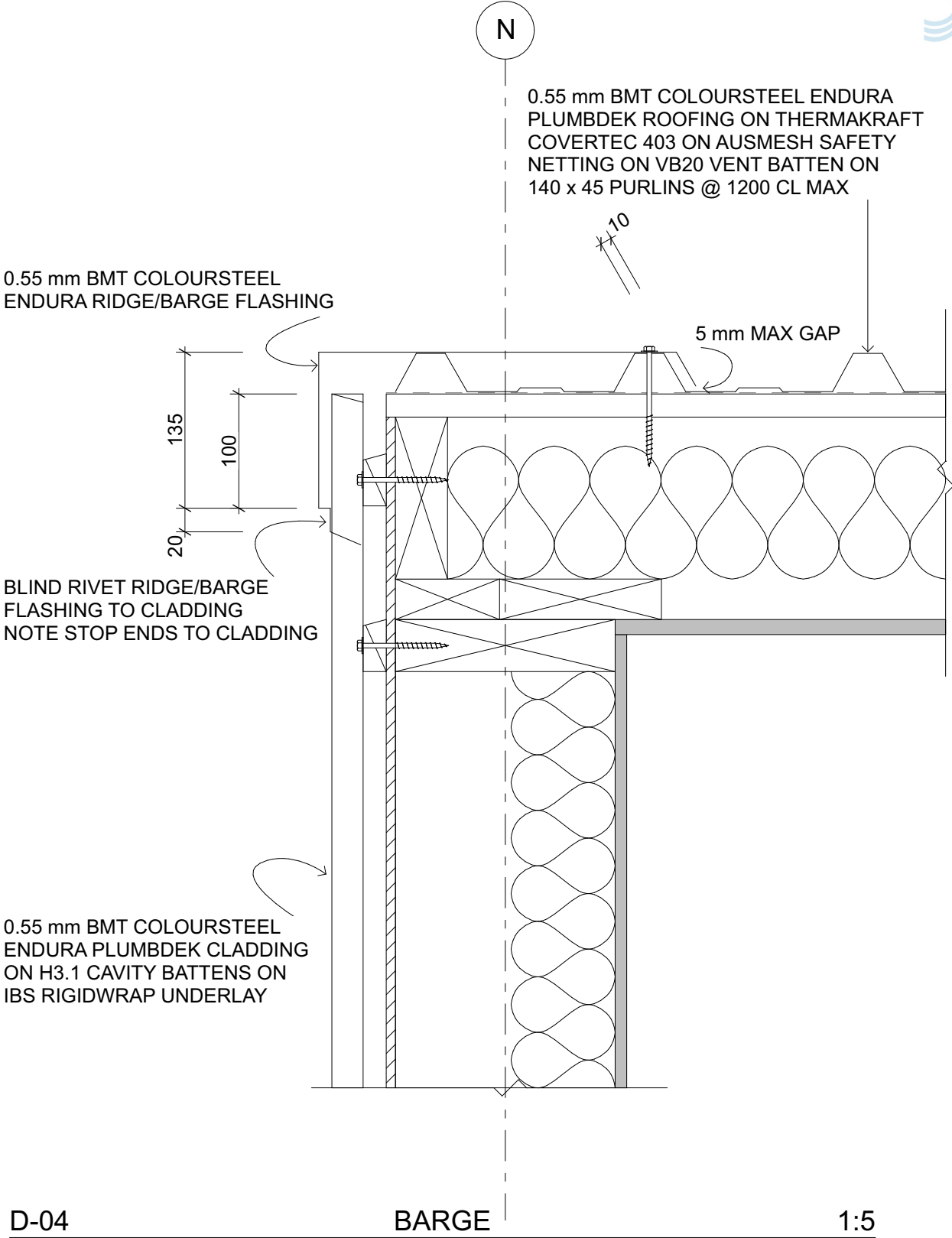
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124	SHEET	A: SKETCH DESIGN	THREE BLOKES LTD REPLACEMENT MARKET SHEDS 362 MATAKANA VALLEY ROAD MATAKANA	
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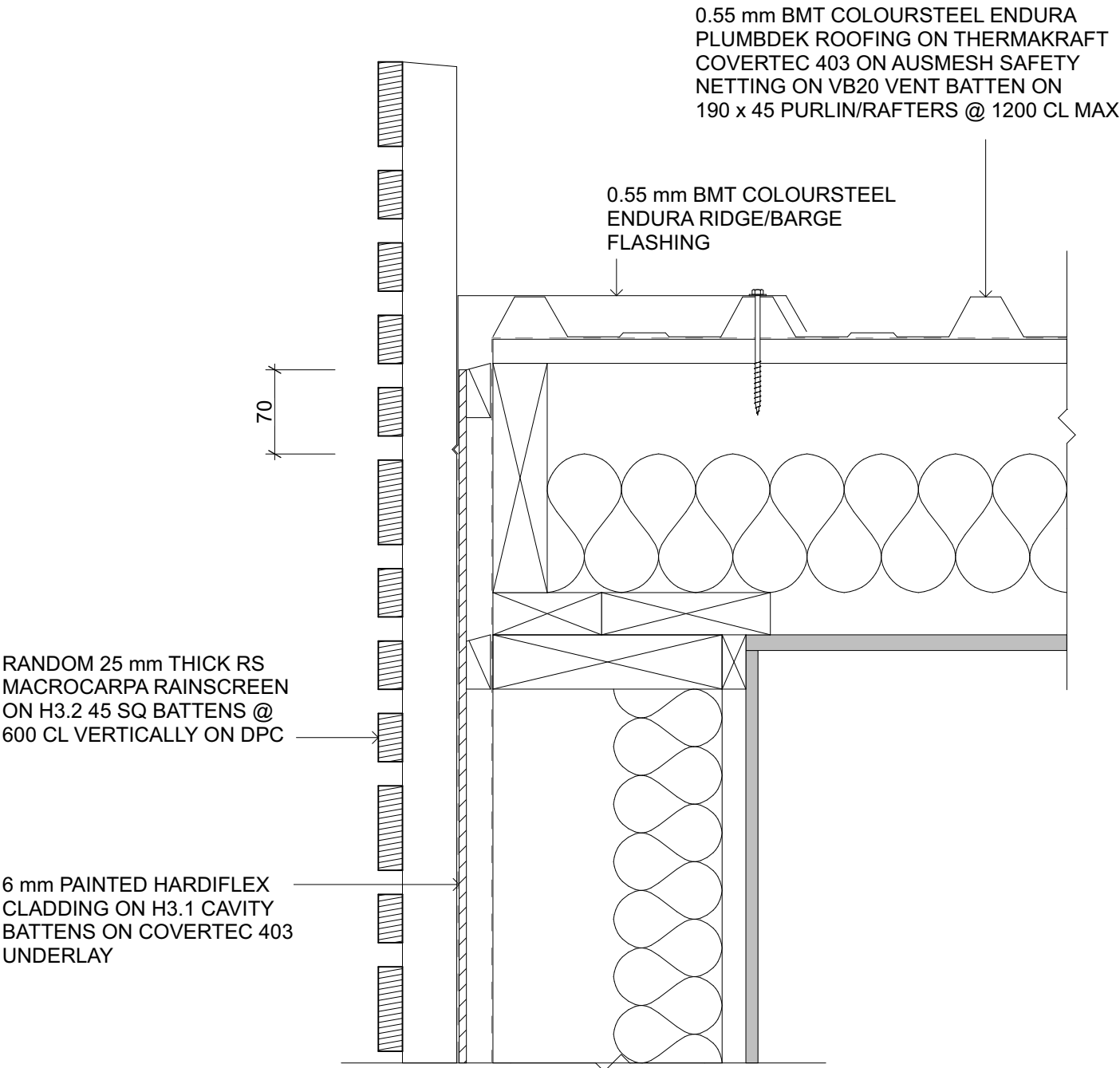
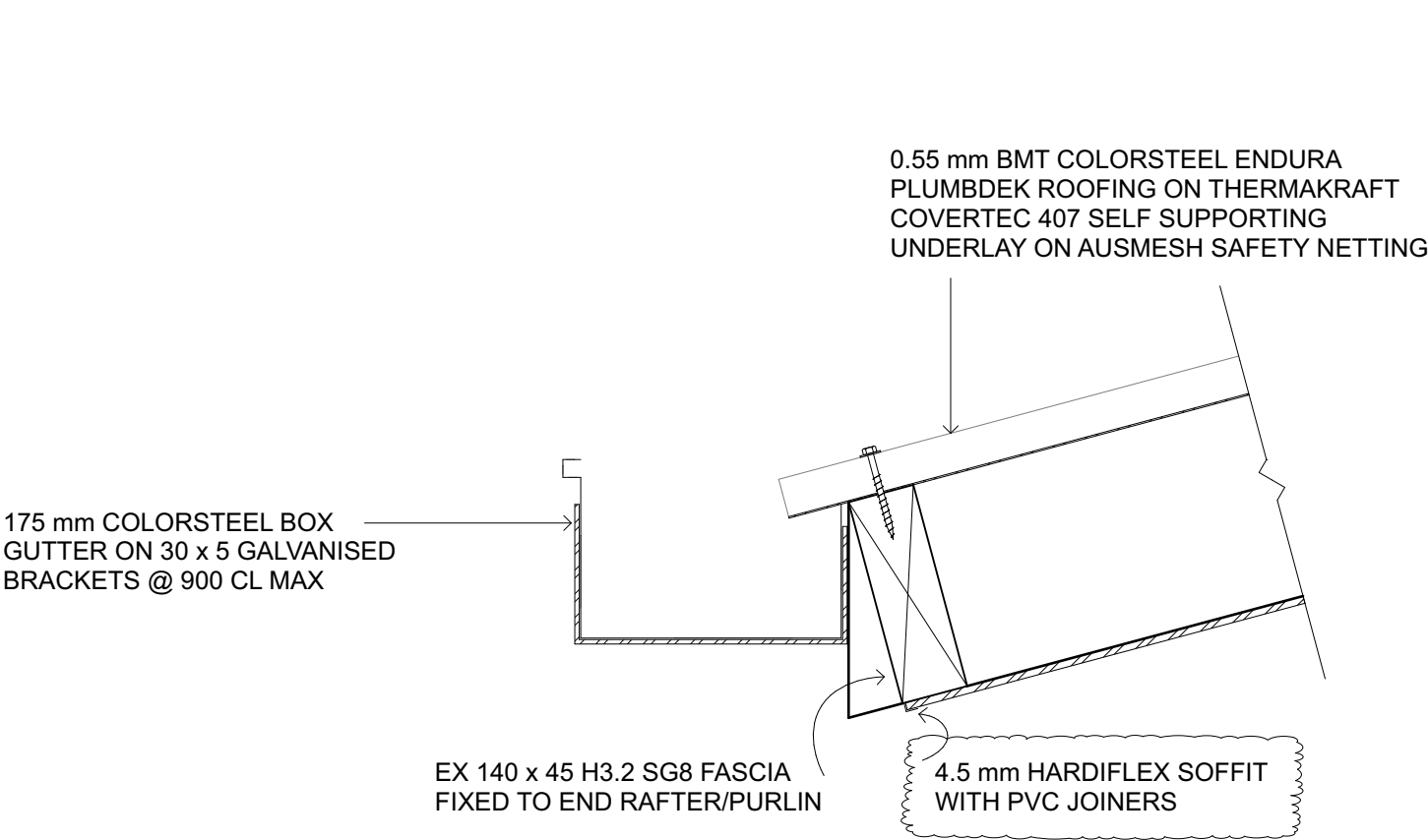
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D-05 CANTILEVER CANOPY EAVE 1:5

D-06 WC BARGE 1:5

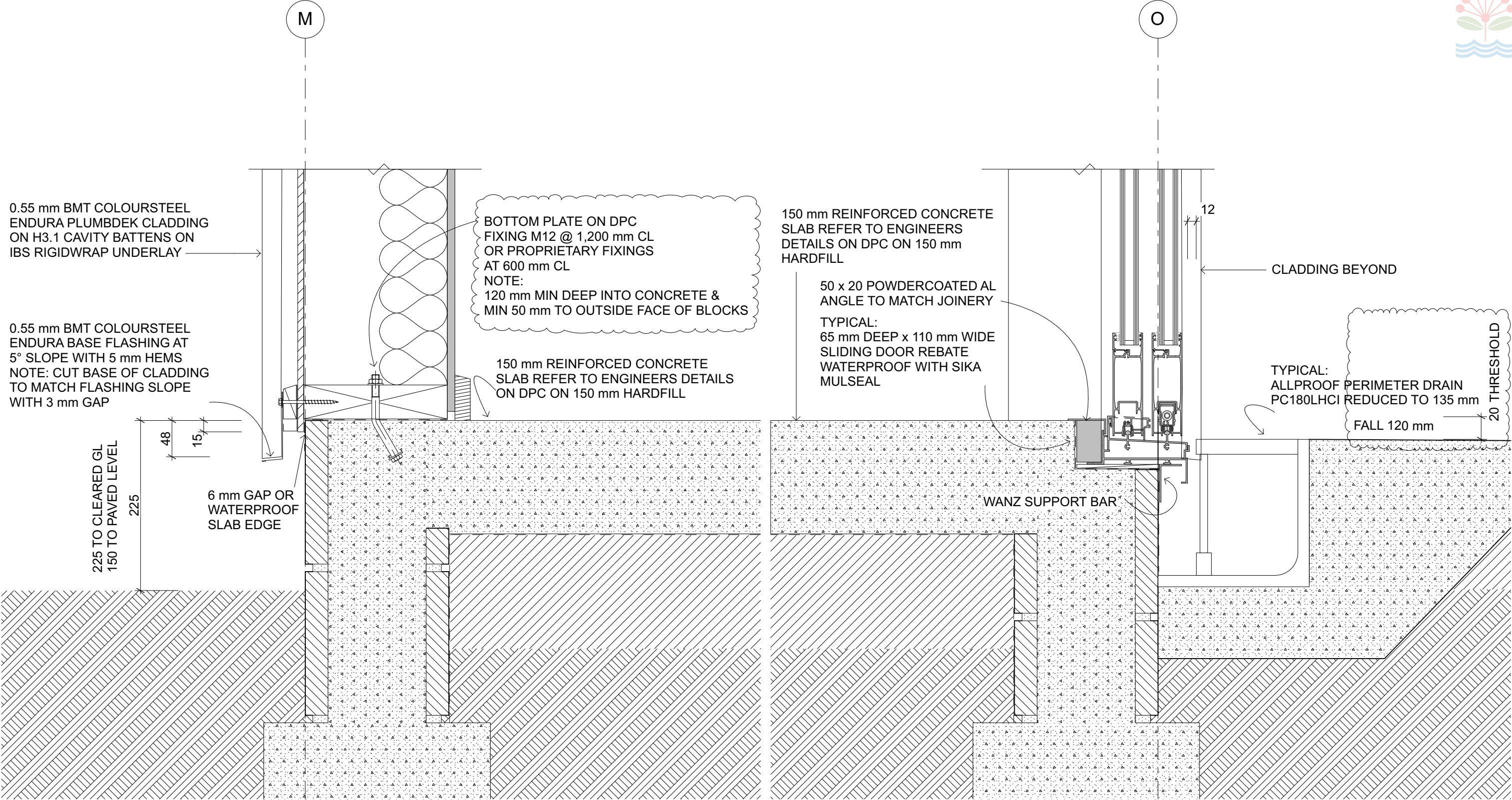
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D-07 TYPICAL BASE 1:5

D-08 DOOR THRESHOLD 1:5

SHEET TITLE: DETAILS

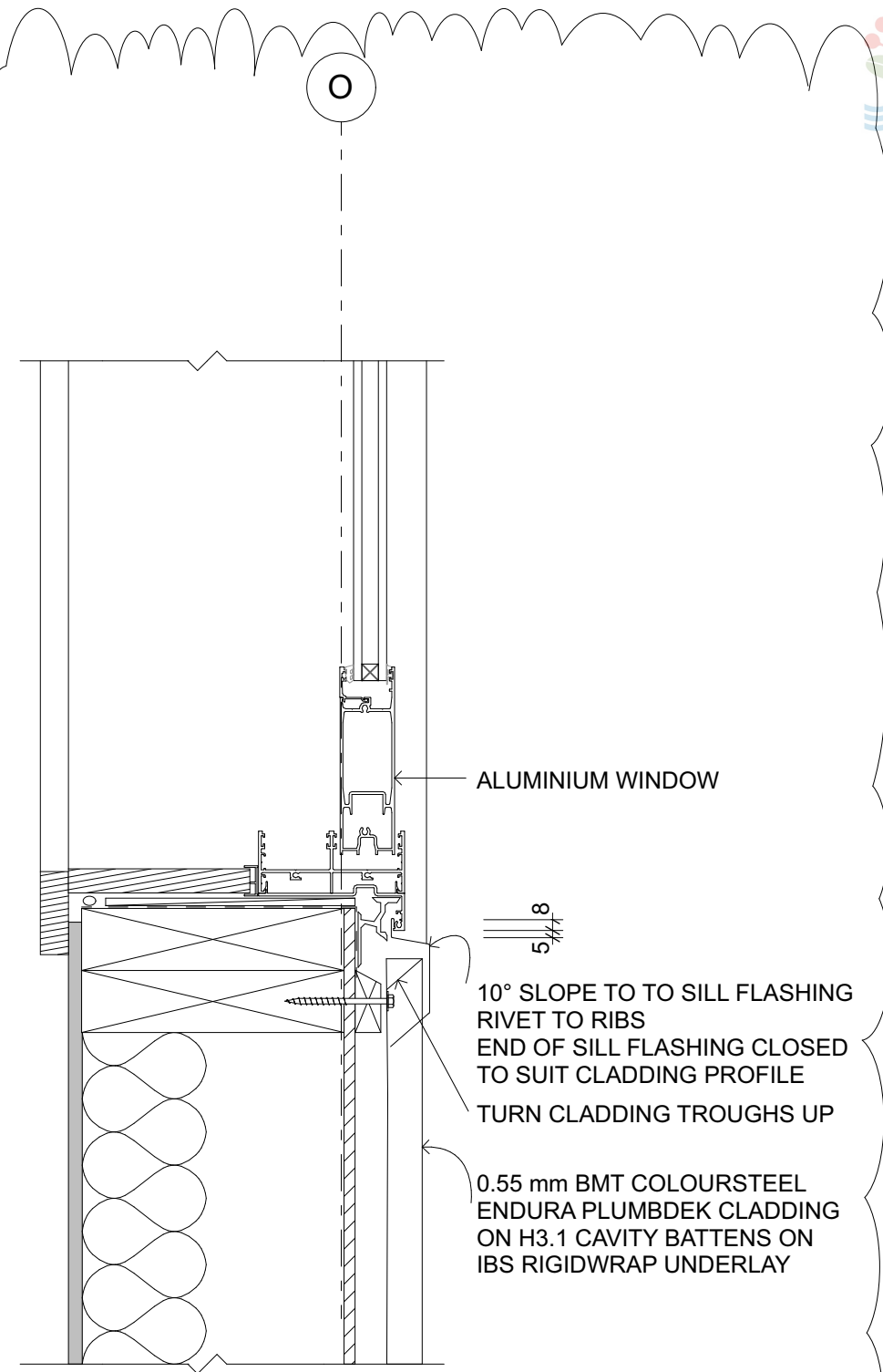
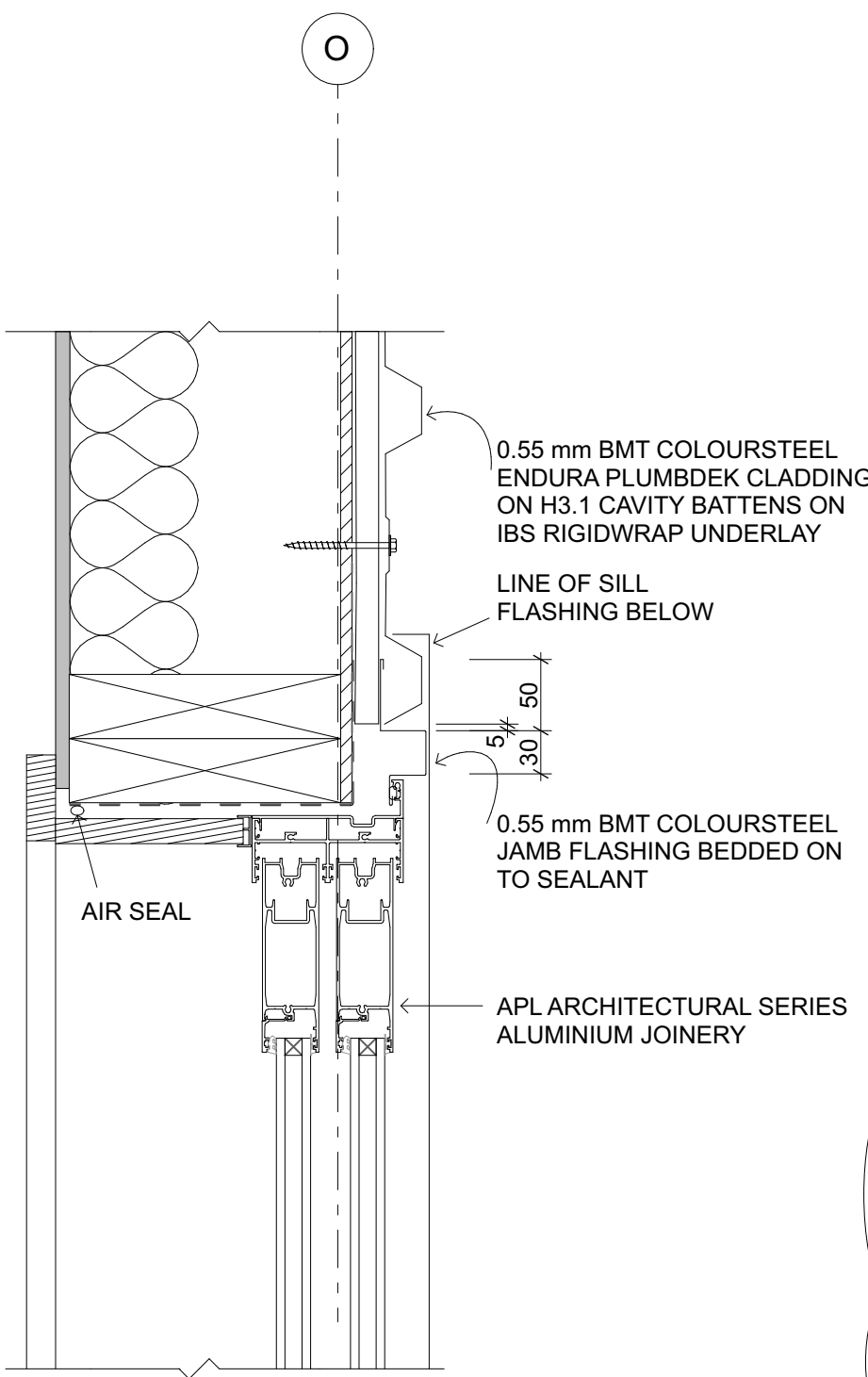
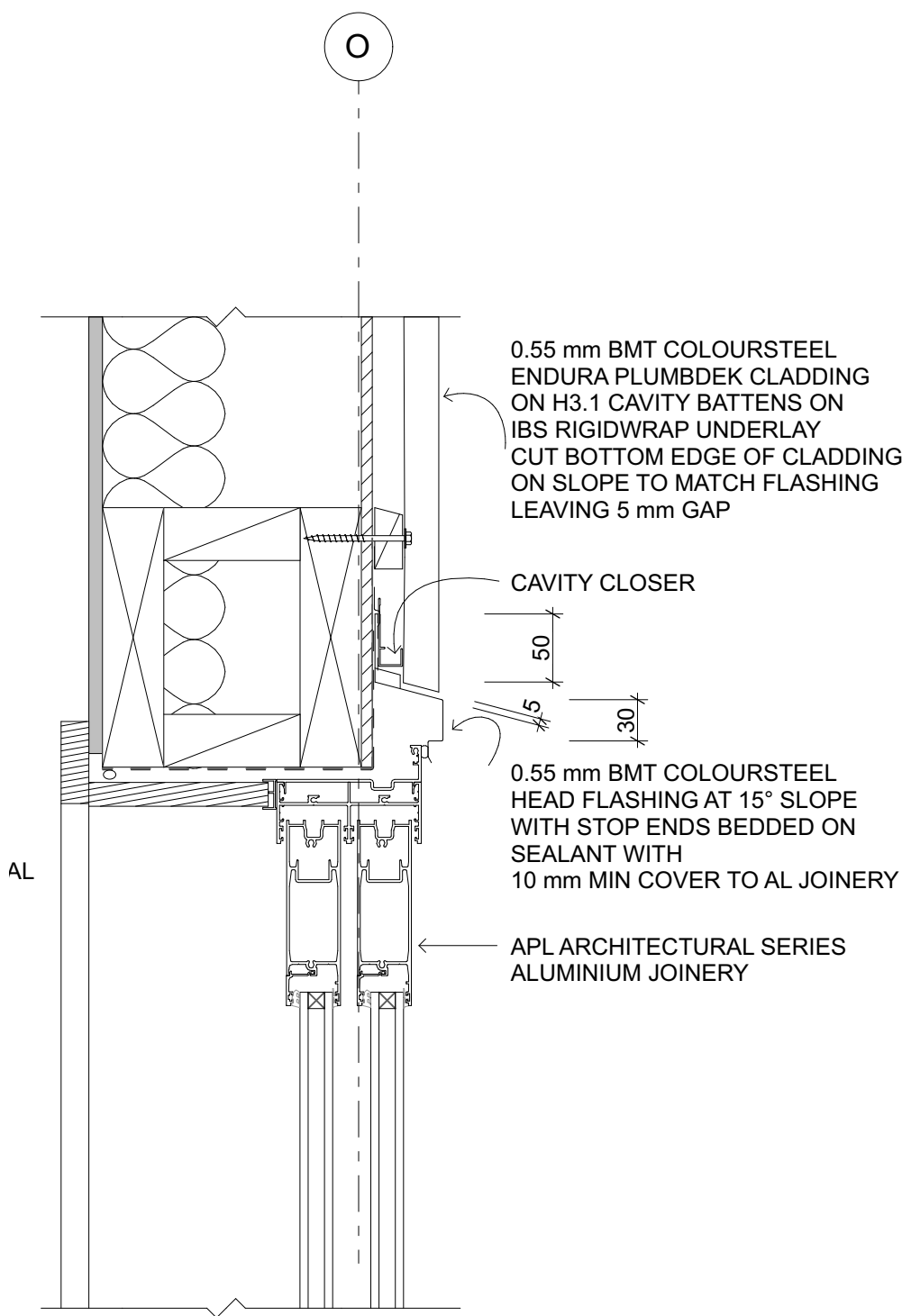
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D-09 DOOR HEAD 1:5
WINDOW HEAD SIMILAR

D-10 DOOR JAMB 1:5
WINDOW JAMB SIMILAR

D-11 WINDOW SILL 1:5

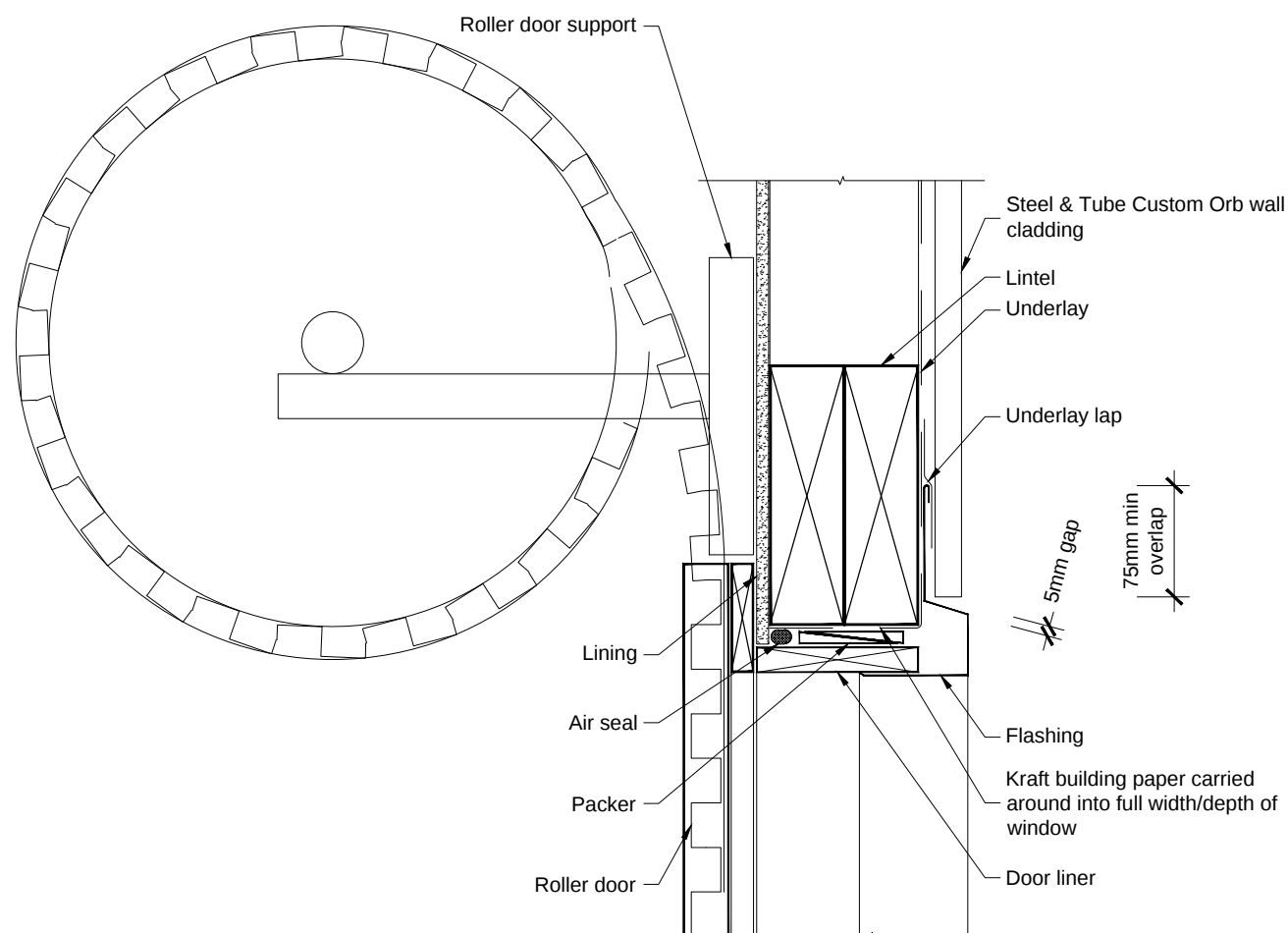
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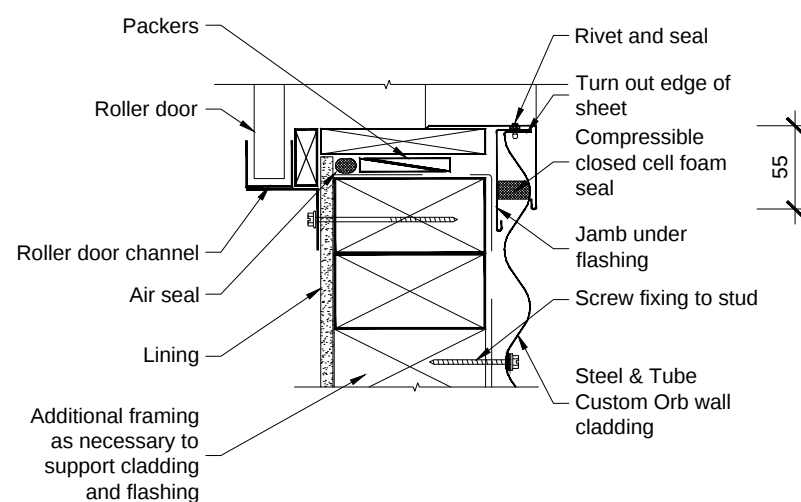
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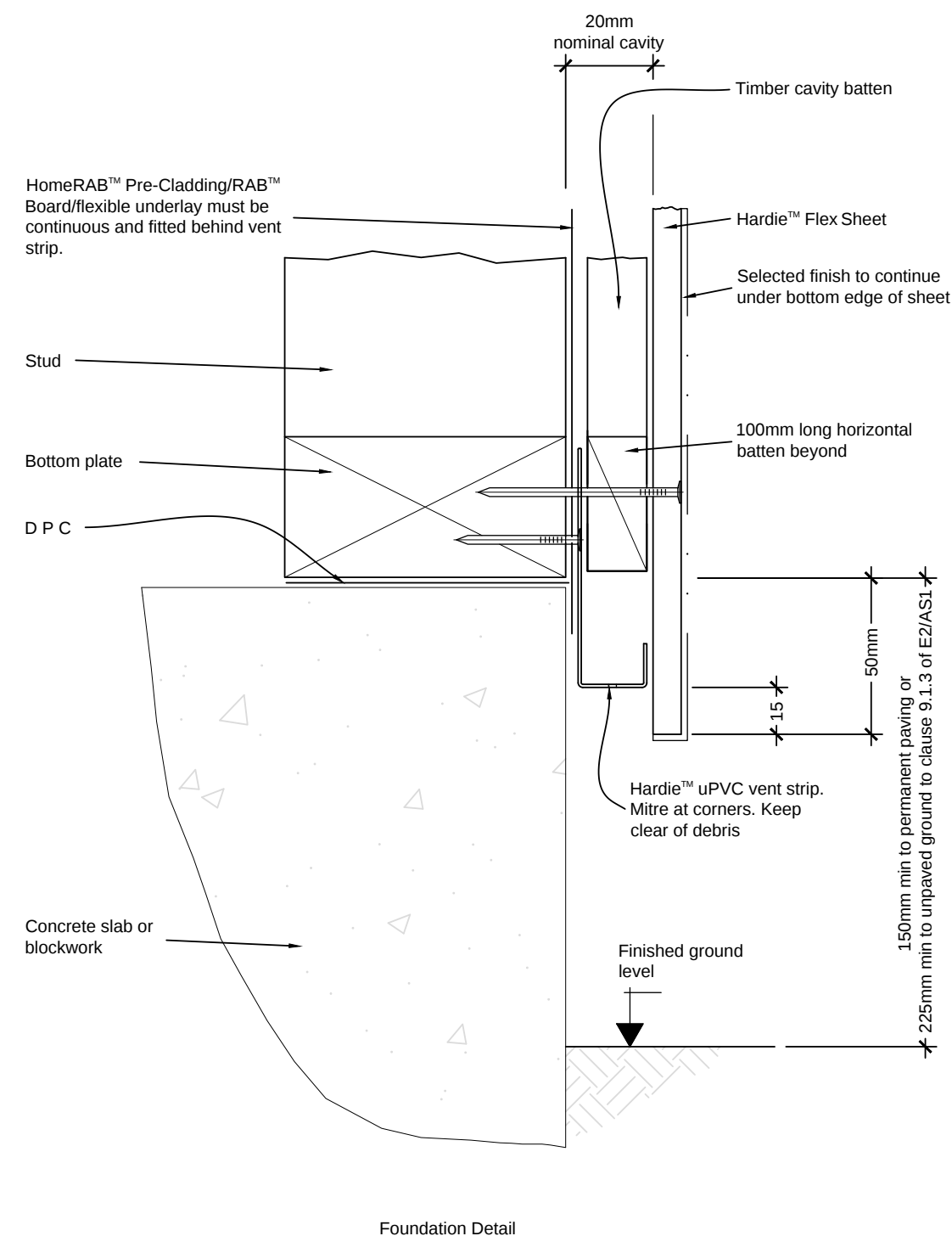


Head Detail



Jamb Detail

Figure 22: Cavity concrete foundation detail



Foundation Detail

HARDI FLEX BASE DETAIL

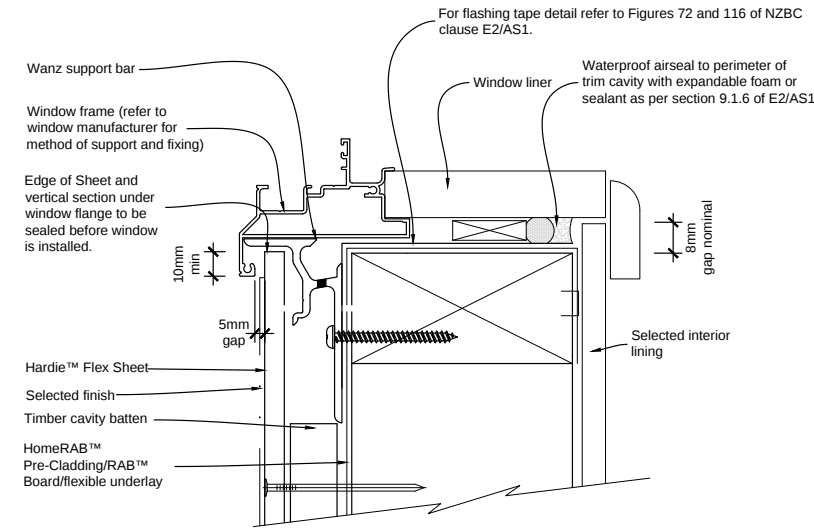
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Figure 35: Cavity window sill

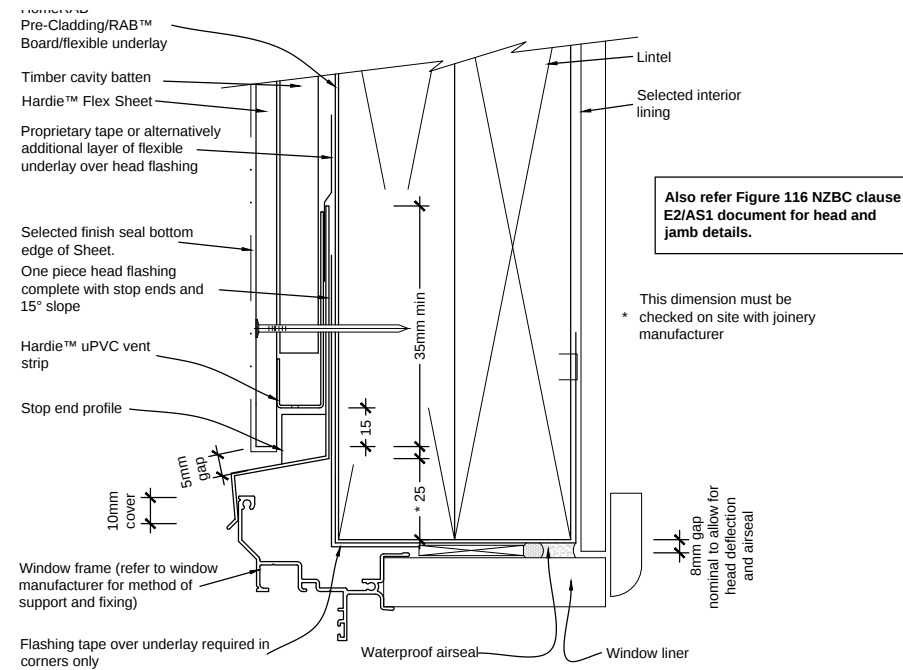


General notes for materials selection

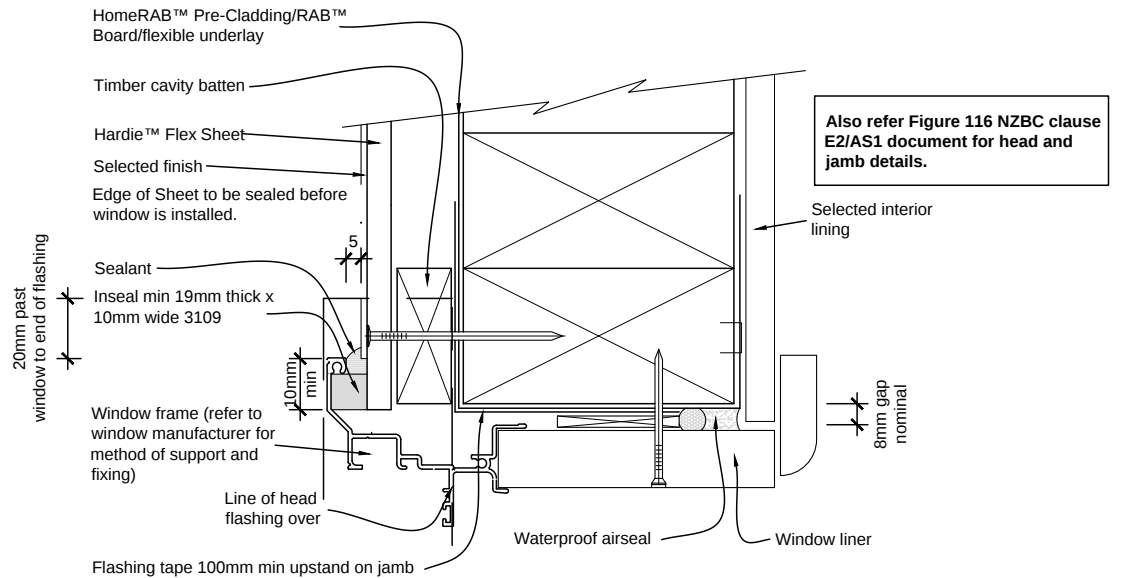
1. Flashing materials must be selected based on environmental exposure, refer to NZS 3604 and Table 20 of NZBC clause 'E2/AS1'.
2. Flexible underlay must comply with acceptable solution NZBC clause 'E2/AS1' and NZS 3604.
3. Flashing tape must have proven compatibility with the selected flexible underlay and other materials with which it comes into contact as per Table 21 of NZBC clause 'E2/AS1'.

Refer to the manufacturer or supplier for technical information for these materials.

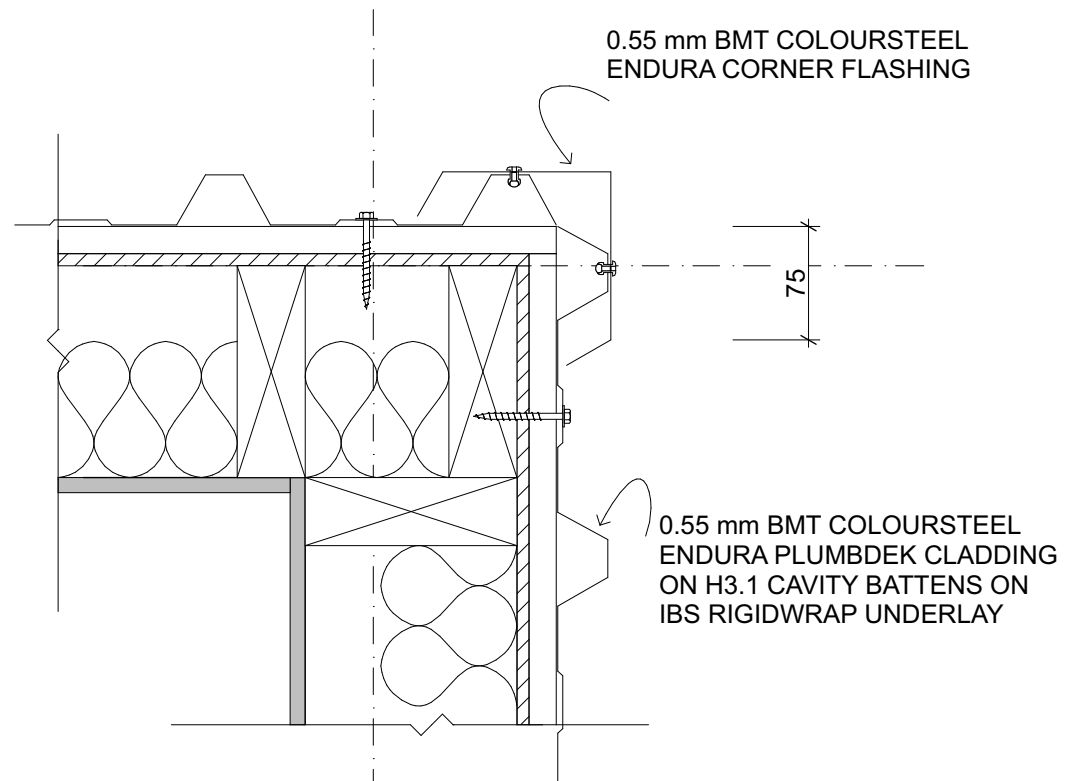
Figure 36: Cavity window head



HARDIFLEX WINDOW HEAD & SILL



HARDIFLEX JAMB



D-12

EXTERNAL CORNER

1:5

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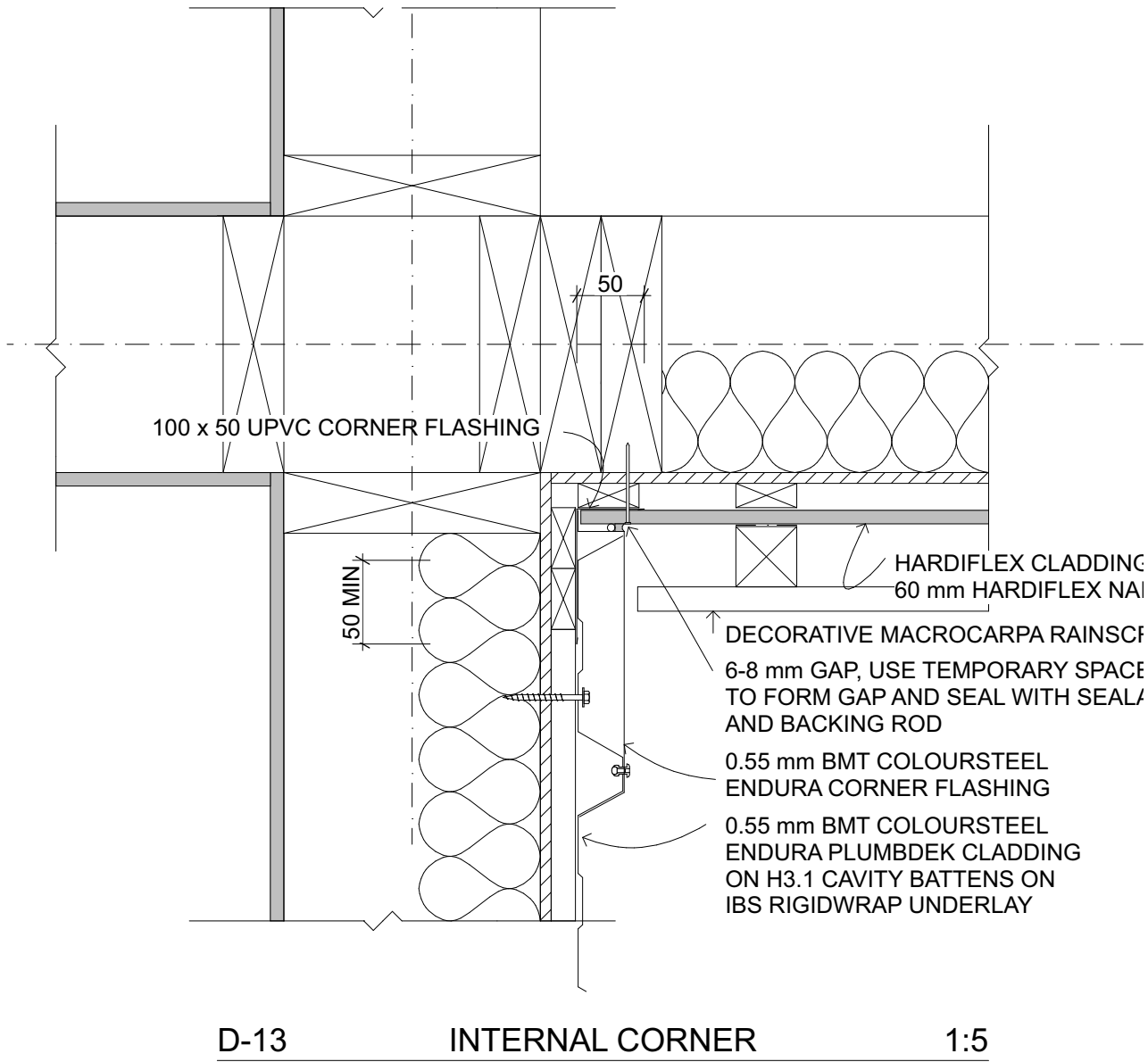
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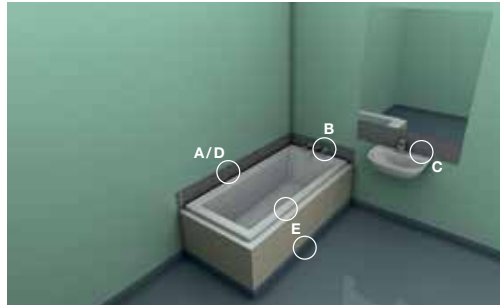
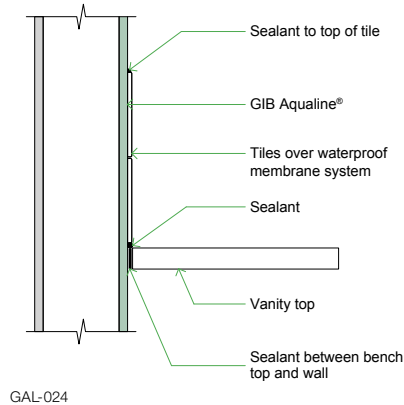
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C: VANITY TOP LINING JUNCTION



VANITY JUNCTION

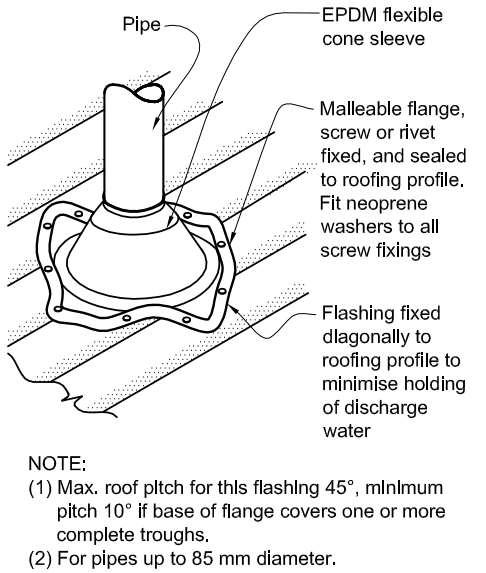
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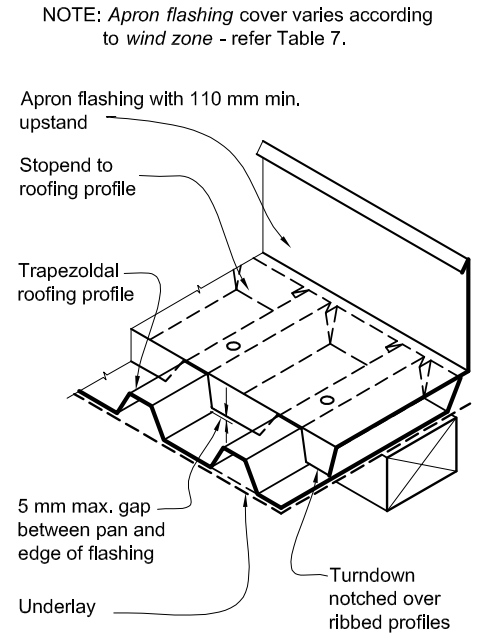
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Figure 53: Flashing for small pipes
Paragraphs 8.3.10, 8.4.17, 9.6.8.5 and 9.6.9.6

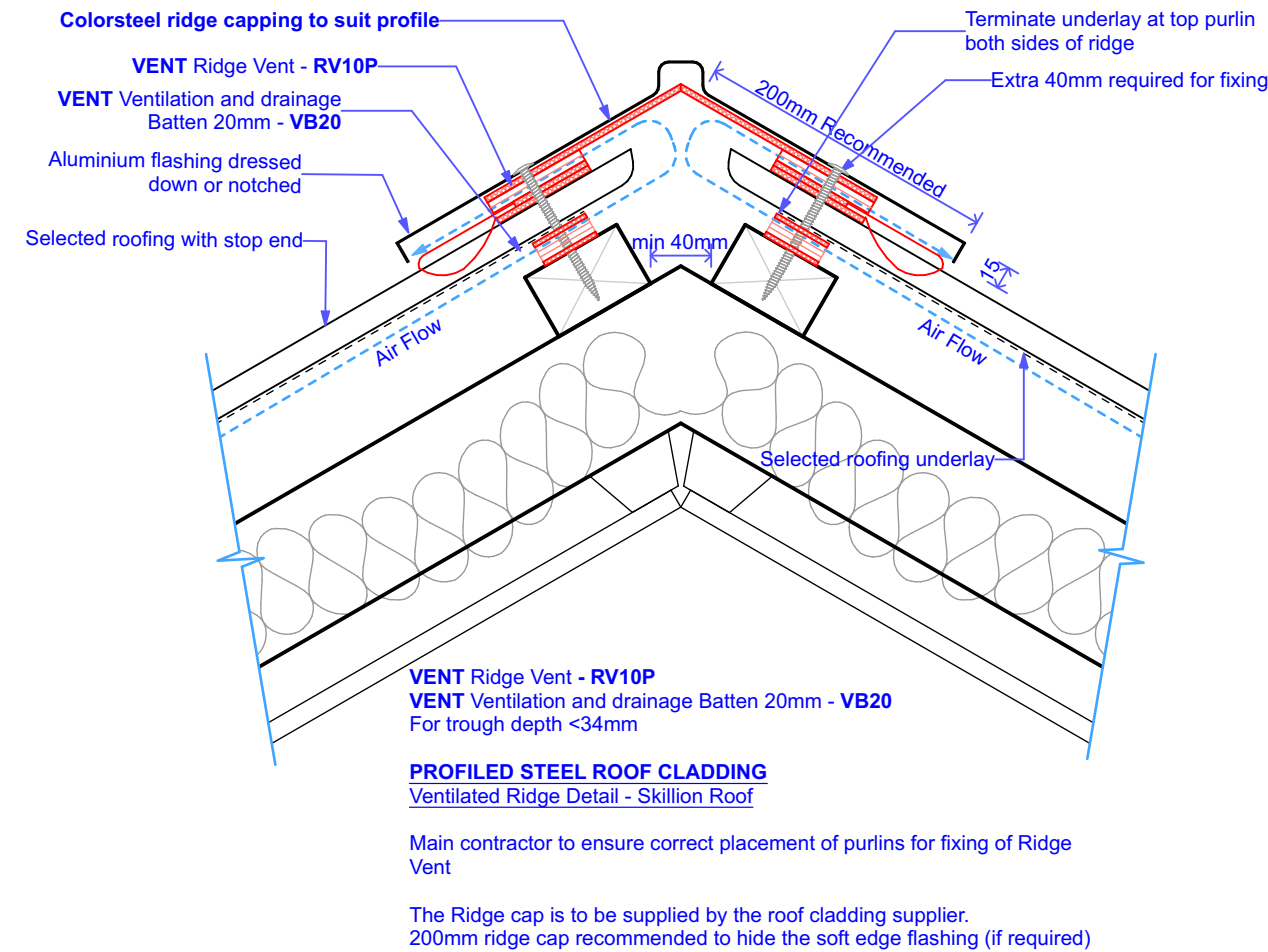
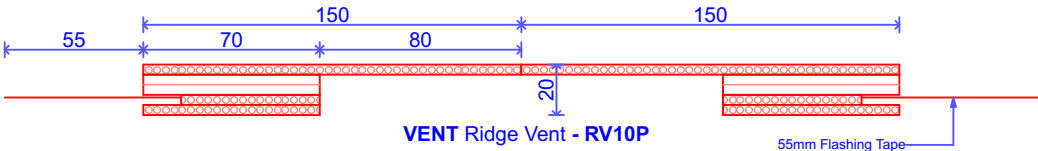


R. 01 DEKTITE FLASHING

Figure 42: Trapezoidal notched flashing
Paragraphs 4.5, 8.4.11 and 8.4.12



R. 02 TYPICAL APRON FLASHING



R. 03 TYPICAL VENTED RIDGE

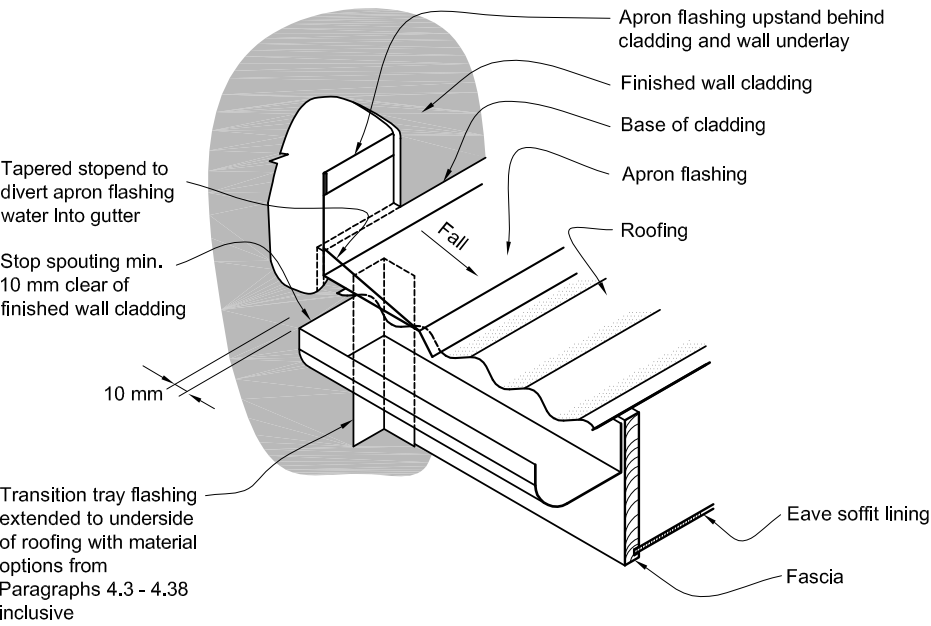
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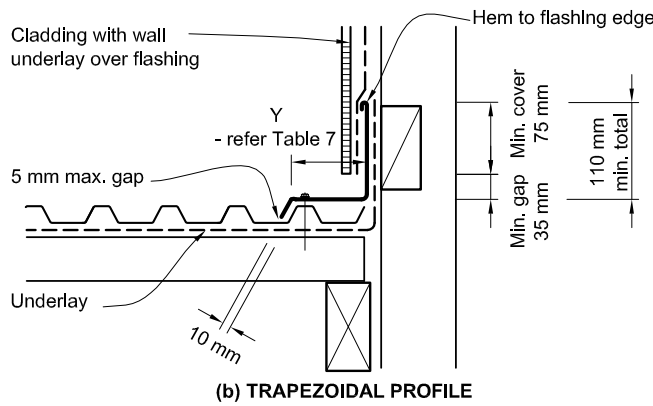
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Figure 8B: Gutter/wall junction
Paragraphs 5.1 and 5.2

NOTE: (1) The upstand at the lower edge of the apron flashing may be preformed to a larger size and then trimmed on site to suit.
(2) The transition flashing bridges gap at the end of the fascia to protect the soffit framing.
(3) Wall underlay omitted for clarity.



R. 05 GUTTER TO WALL DETAIL



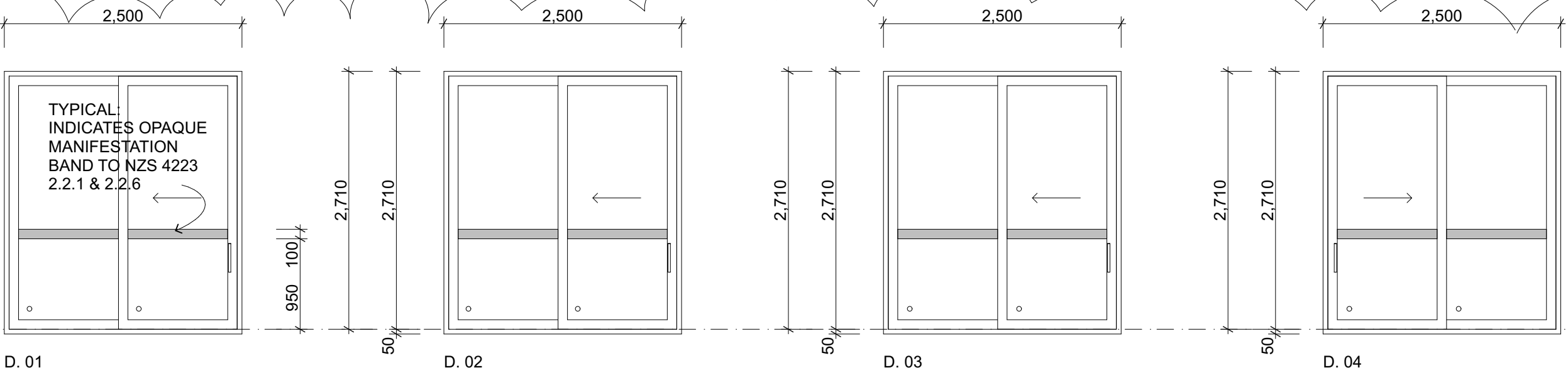
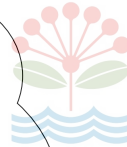
R. 04 PARALLEL APRON FLASHING

SHEET TITLE: ROOFING DETAILS

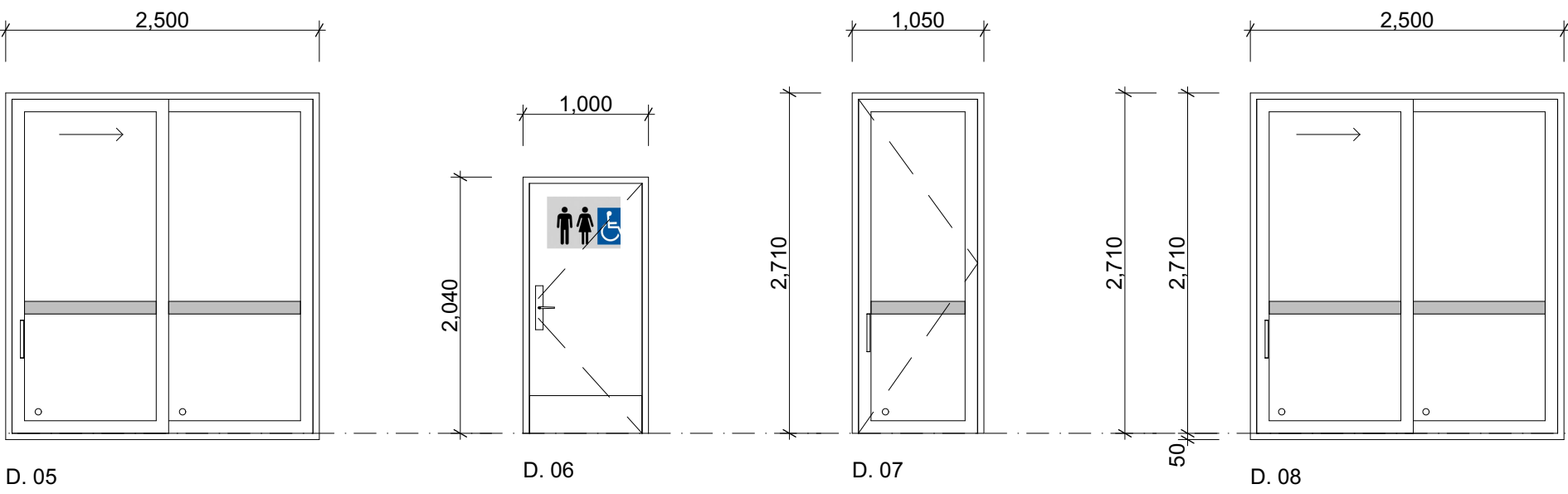
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- D. 01
NOTES:
- 1. WIND ZONE: HIGH
 - 2. ARCHITECTURAL SERIES TWINLINE FLUSHLINE
 - 3. POWDER COATED COLOUR: COAL DUST
 - 4. HARDWARE: ICON
 - 5. LOW E DOUBLE GLAZED
 - 6. INDICATES TOUGHENED SAFETY GLASS
 - 7. SELECTED MAINIFESTATIONS
 - 8. PQF TIMBER JAMBS SQUARE DRESSED FOR ARCHITRAVES
 - 9. LOW E DOUBLE GLAZED FOR R0.341
 - 10. MANIFESTATIONS TO NZS 4223.3 CLAUSE 2.2.1 & 2.2.6



- D. 06
NOTES:
- 1. SOLID CORE PQF
 - 2. ARCHITECTURAL SERIES
NO SILL USE RAVEN
THRESHOLD PLATE
SS KICK PLATE
 - 3. HARDWARE PC SUM
 - 4. PQF TIMBER JAMBS
SQUARE DRESSED
FOR ARCHITRAVES

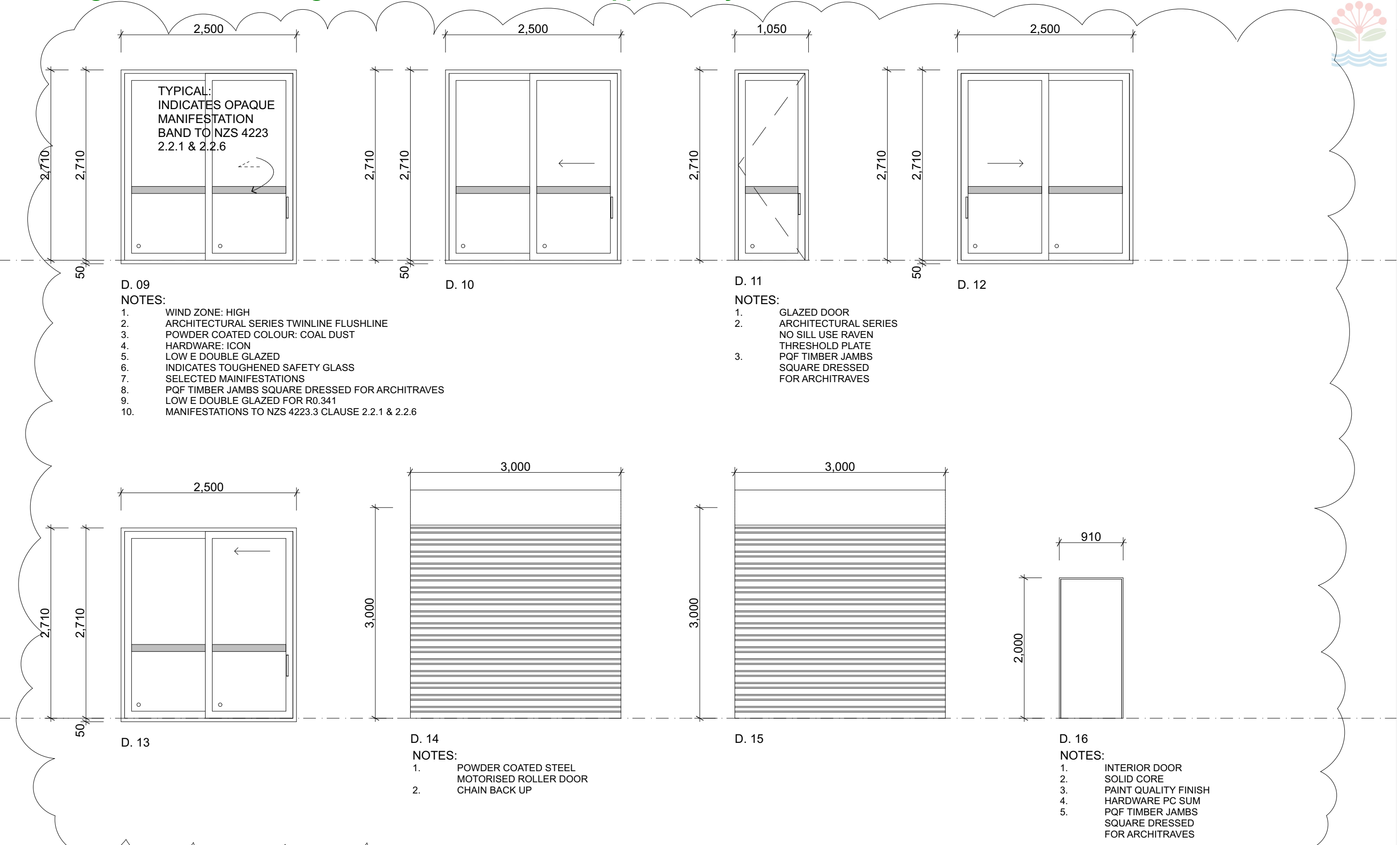
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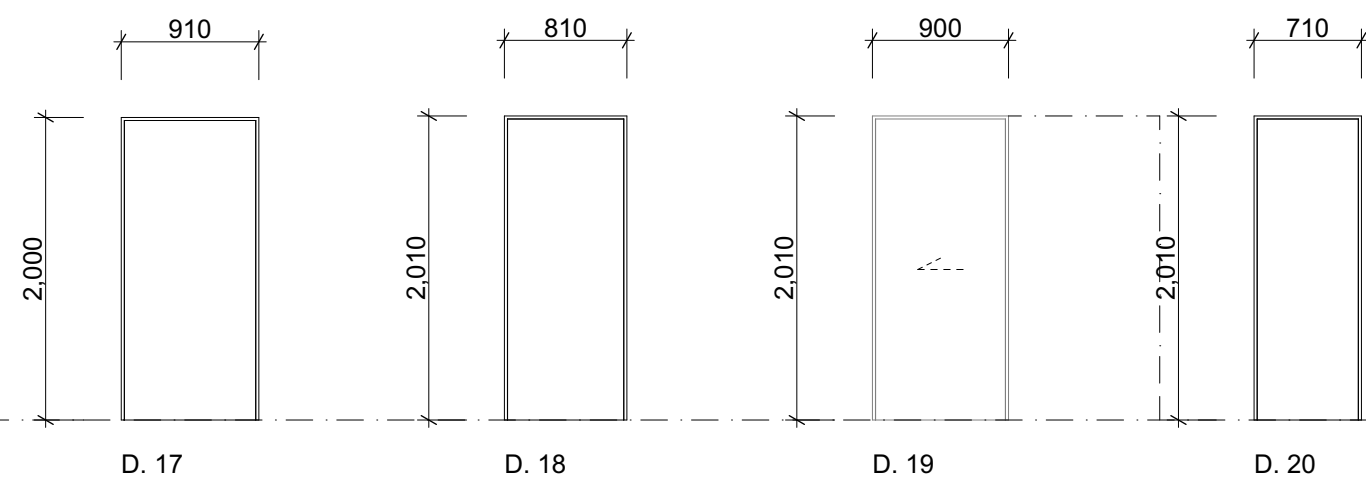
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D. 17

D. 18

D. 19

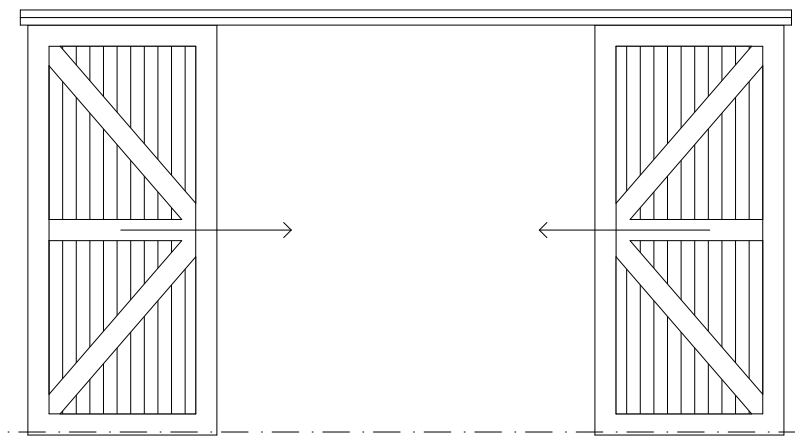
D. 20

NOTES:

- 1. INTERIOR DOOR
- 2. SOLID CORE
- 3. PAINT QUALITY FINISH
- 4. HARDWARE PC SUM
- 5. PQF TIMBER JAMBS
- SQUARE DRESSED FOR ARCHITRAVES

NOTES:

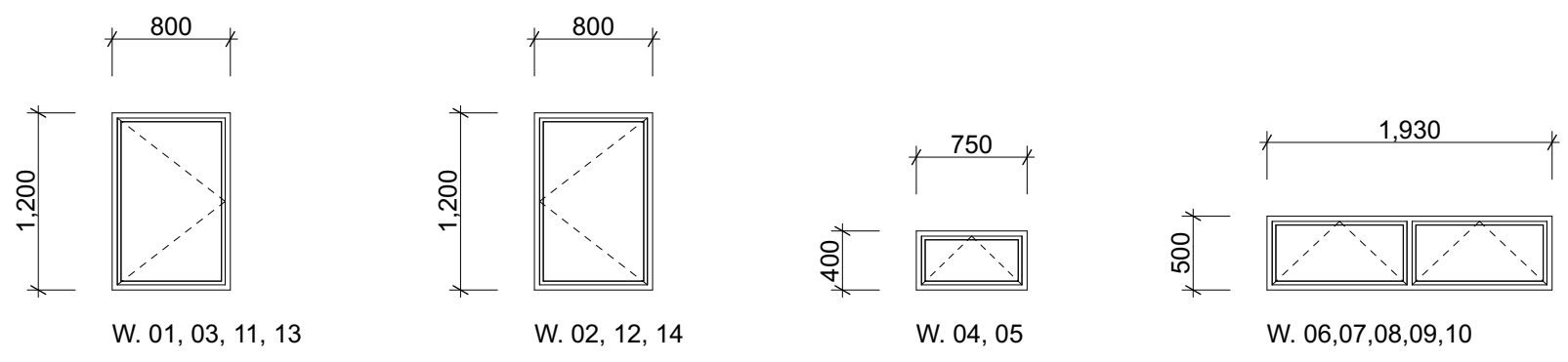
- 1. INTERIOR DOOR CAVITY SLIDER
- 2. SOLID CORE
- 3. PAINT QUALITY FINISH
- 4. HARDWARE PC SUM
- 5. PQF TIMBER JAMBS
- SQUARE DRESSED FOR ARCHITRAVES



EXTERIOR SLIDING DOORS BY OWNER

NOTES:

- 1. HEART MACROCARPA SLIDING DOOR AND WINDOW
- 2. SLIDING DOOR GEAR HENDERSON COASTAL 250 EXTERIOR TIMBER



NOTES:

- 1. WIND ZONE: HIGH
- 2. ARCHITECTURAL SERIES
- 3. POWDER COATED COLOUR: COAL DUST
- 4. HARDWARE: ICON
- 5. LOW E DOUBLE GLAZED FOR R0.37
- 6. INDICATES TOUGHENED SAFETY GLASS
- 7. SELECTED MAINIFESTATIONS
- 8. PQF TIMBER JAMBS SQUARE DRESSED FOR ARCHITRAVES

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WINDOW SCHEDULE

1:50

DOOR & WINDOW SCHEDULE

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132

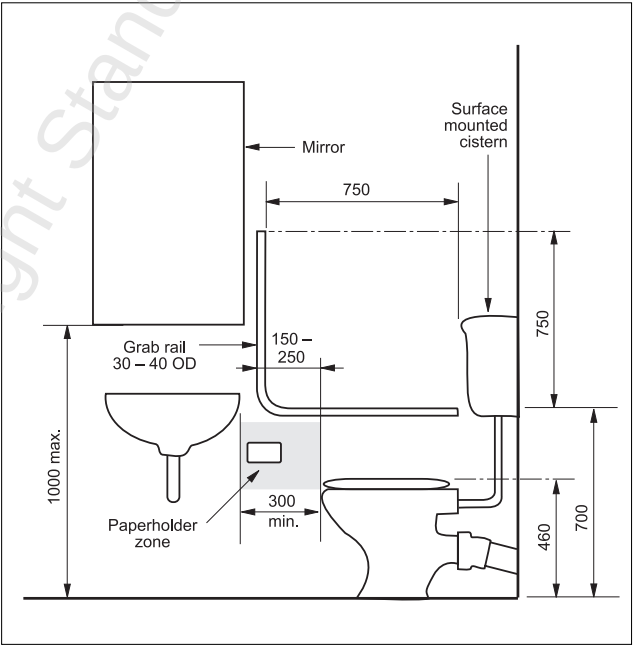
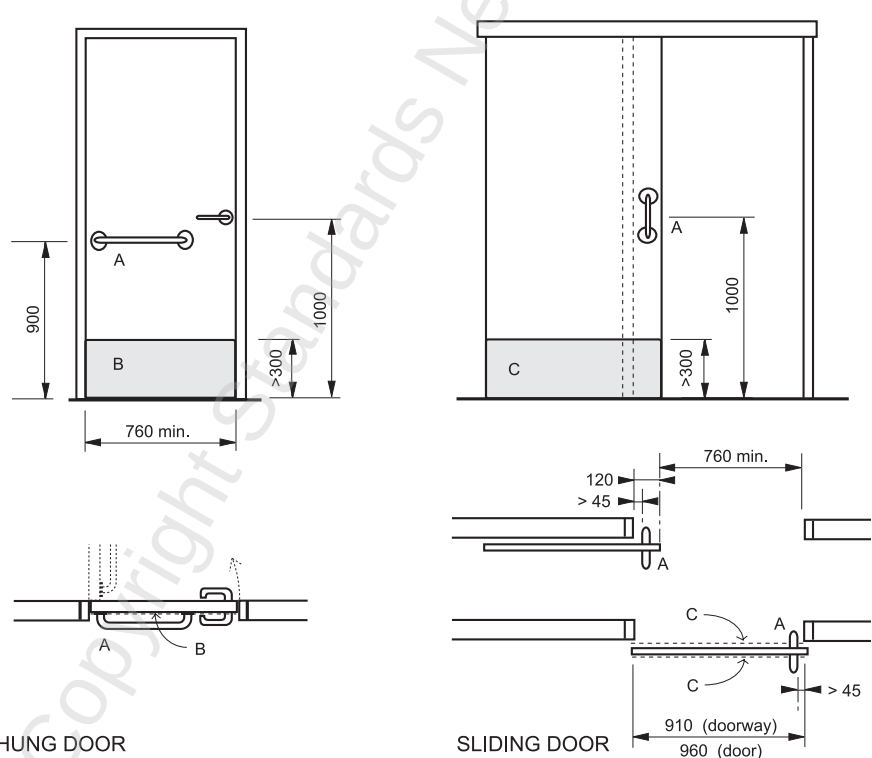


Figure 31 - Toilet unit fittings - positioning of grab rail and paper roll holder

ACCESSIBLE WC FITOUT



SIDE HUNG DOOR

SLIDING DOOR

KEY

- A Grabrail on the cubicle side of the door.
- B Kick plates on the cubicle side of the door.
- C Kick plates on both sides of the door.

ACCESSIBLE DOORS

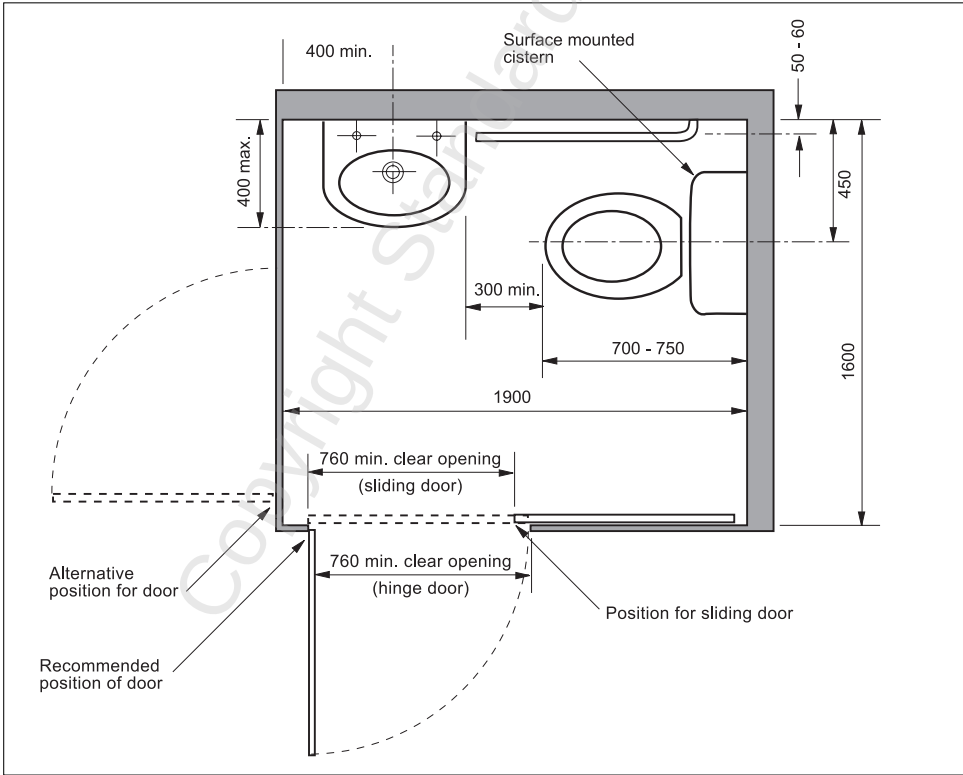
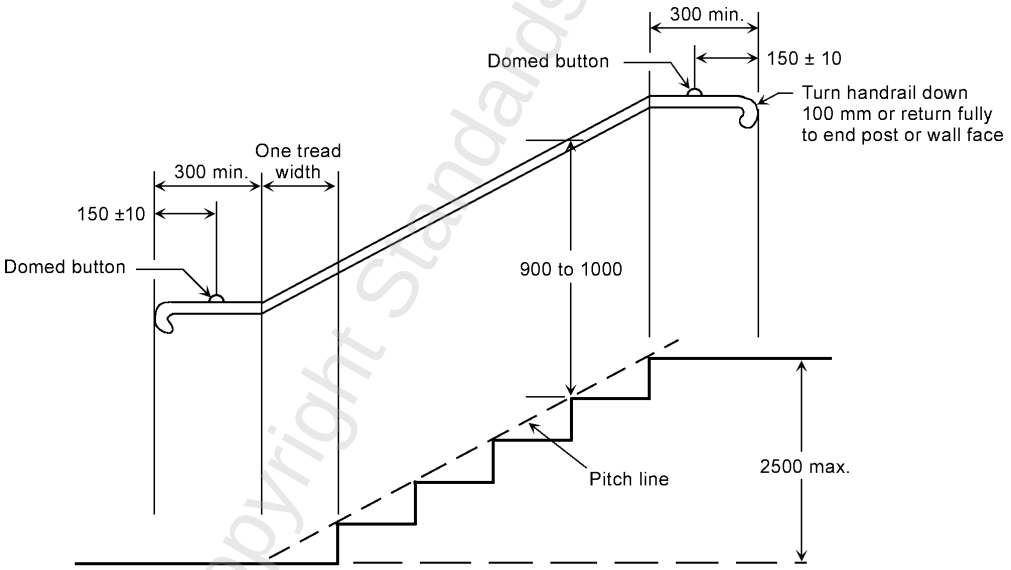


Figure 27 - Accessible toilet units

ACCESSIBLE WC PLAN



- NOTE -
- (1) The dimensions indicating the heights of handrails are taken from the nosing of the tread to the top of the handrail.
 - (2) The 300 mm extension is not required where the handrail is continuous, e.g. on the inside of an intermediate landing.

ACCESSIBLE HANDRAIL

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GIB EzyBrace® Systems specification GS1-N

Specification code	Minimum length (m)	Lining requirement
GS1-N	0.4	Any 10mm or 13mm GIB® Standard plasterboard to one side only

WALL FRAMING

Wall framing to comply with;

- NZBC B1 — Structure B1/AS1 Clause 3 Timber (NZS 3604:2011).
- NZBC B2 — Durability B2/AS1 Clause 3.2 Timber (NZS 3602).

Framing dimensions and height as determined by NZS 3604:2011 stud and top plate tables for load bearing and non-bearing walls. The use of kiln dried stress graded timber is recommended.

BOTTOM PLATE FIXING

Timber floor

Pairs of hand driven 100 x 3.75mm nails at 600mm centres; or three power driven 90 x 3.15mm nails at 600mm centres.

Concrete floor

Internal Wall Bracing Lines: In accordance with the requirements of NZS 3604:2011 for internal wall plate fixing or 75 x 3.8mm shot fired fasteners with 16mm discs spaced at 150mm and 300mm from end studs and 600mm centres thereafter.

External Wall Bracing Lines: In accordance with the requirements of NZS 3604:2011 for external wall bottom plate fixing.

WALL LINING

- Any 10mm or 13mm GIB® plasterboard lining.
- Sheets can be fixed vertically or horizontally.
- Sheet joints shall be touch fitted.
- Use full length sheets where possible.

PERMITTED ALTERNATIVES

For permitted GIB® plasterboard alternatives refer to p. 5 in GIB EzyBrace® Systems literature.

FASTENING THE LINING

Fasteners

32mm x 6g GIB® Grabber® High Thread Screws, 32mm x 7g GIB® Grabber® Dual Thread Screws or 30mm GIB® Nails. If using the GIBFix® Angle use only 32mm x 7g GIB® Grabber® Dual Thread Screws.

Fastener centres

50,100,150, 225, 300mm maximum from each corner and 150mm thereafter around the perimeter of the bracing element. For vertically fixed sheets place fasteners at 300mm maximum centres to intermediate sheet joints. For horizontally fixed sheets place single fasteners to the sheet edge where it crosses the stud. Use daubs of GIBFix® adhesive at 300mm maximum centres to intermediate studs. Place fasteners no closer than 12mm from paper bound sheet edges and 18mm from any sheet end or cut edge.

JOINTING

Joint strength is important in delivering bracing system performance. All fastener heads stopped and all sheet joints GIB® Joint Tape reinforced and stopped in accordance with the GIB® Site Guide.

GIB EzyBrace® Systems specification GS2-NOM

Specification code	Minimum length (m)	Lining requirement
GS2-NOM	0.4	Any 10mm or 13mm GIB® Standard plasterboard fixed to each side of the wall framing

WALL FRAMING

Wall framing to comply with;

- NZBC B1 — Structure B1/AS1 Clause 3 Timber (NZS 3604:2011).
- NZBC B2 — Durability B2/AS1 Clause 3.2 Timber (NZS 3602).

Framing dimensions and height as determined by NZS 3604:2011 stud and top plate tables for load bearing and non-bearing walls. The use of kiln dried stress graded timber is recommended.

BOTTOM PLATE FIXING

Timber floor

Pairs of hand driven 100mm x 3.75mm nails at 600mm centres; or three power driven 90mm x 3.15mm nails at 600mm centres.

Concrete floor

Internal Wall Bracing Lines: In accordance with the requirements of NZS 3604:2011 for internal wall plate fixing or 75mm x 3.8mm shot fired fasteners with 16mm discs spaced at 150mm and 300mm from end studs and then 600mm centres thereafter.

WALL LINING

- A layer of 10mm or 13mm GIB® plasterboard to each side of the wall.
- Sheets can be fixed vertically or horizontally.
- Sheet joints shall be touch fitted.
- Use full length sheets where possible.

PERMITTED ALTERNATIVES

For permitted GIB® plasterboard alternatives refer to p. 5 in GIB EzyBrace® Systems literature.

FASTENING THE LINING

Fasteners

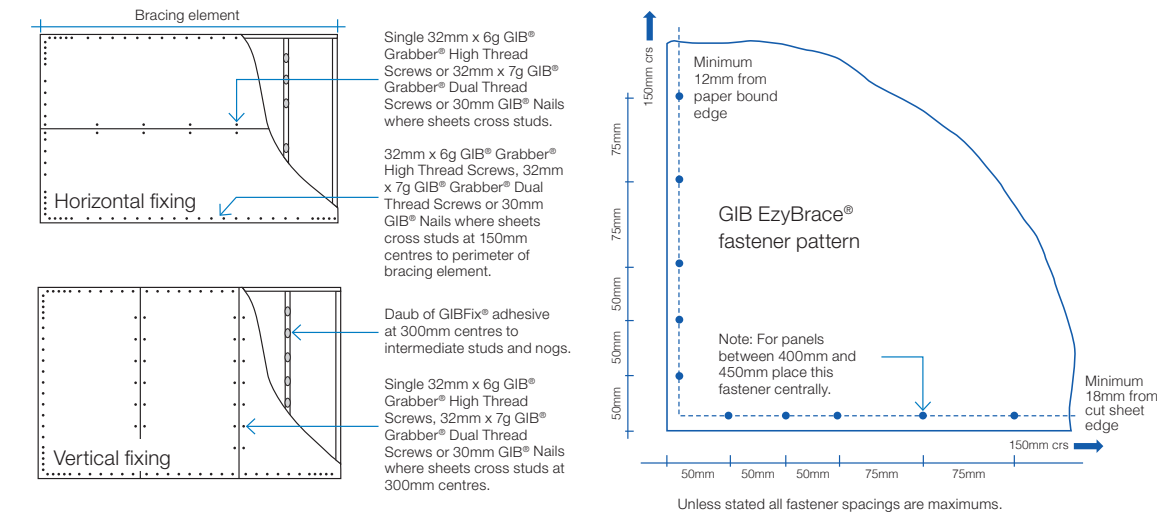
32mm x 6g GIB® Grabber® High Thread Screws or 32mm x 7g GIB® Grabber® Dual Thread Screws. If using the GIBFix® Angle use 32mm x 7g GIB® Grabber® Dual Thread Screws.

Fastener centres

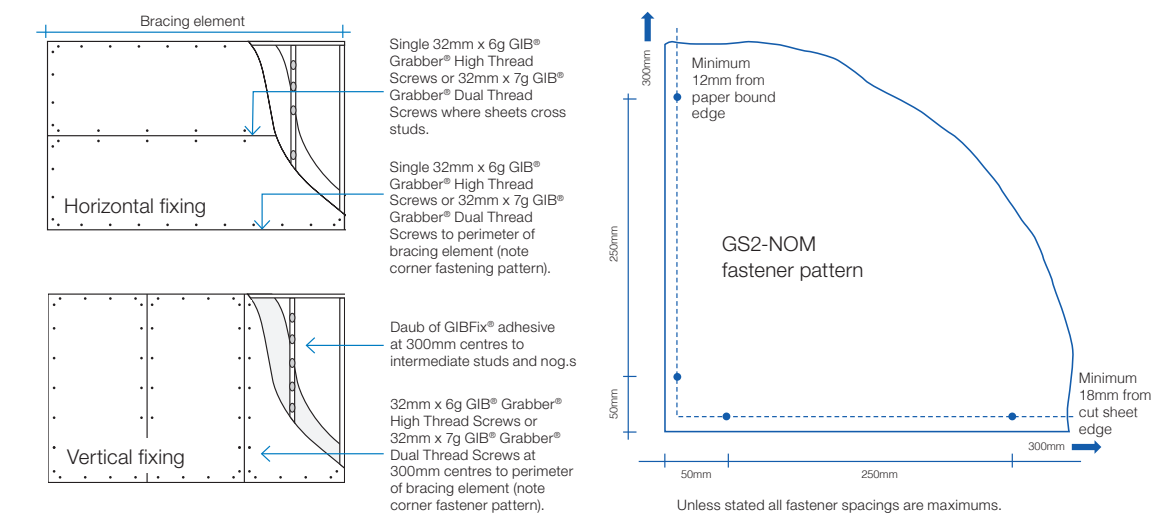
50, 300mm from each corner and 300mm maximum thereafter around the perimeter of the bracing element. For horizontally fixed sheets place single fasteners to the sheet edge where it crosses the stud. Use daubs of GIBFix® adhesive at 300mm maximum centres to intermediate studs. Place fasteners no closer than 12mm from paper bound sheet edges and 18mm from any sheet end or cut edge.

JOINTING

Joint strength is important in delivering bracing system performance. All fastener heads stopped and all sheet joints GIB® Joint Tape reinforced and stopped in accordance with the GIB® Site Guide.



In order for GIB® systems to perform as tested, all components must be installed exactly as prescribed. Substituting components produces an entirely different system and may seriously compromise performance. Follow the specifications. This specification sheet is issued in conjunction with the publication GIB EzyBrace® Systems



In order for GIB® systems to perform as tested, all components must be installed exactly as prescribed. Substituting components produces an entirely different system and may seriously compromise performance. Follow the specifications. This specification sheet is issued in conjunction with the publication GIB EzyBrace® Systems

GS-1N

GIB BRACING

GS2-N

GIB BRACING

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STUDLOK™ LINTEL FIXING OPTIONS FOR ON-SITE

ALTERNATIVE TO TABLE 8.14 & FIGURE 8.12 NZS 3604:2011

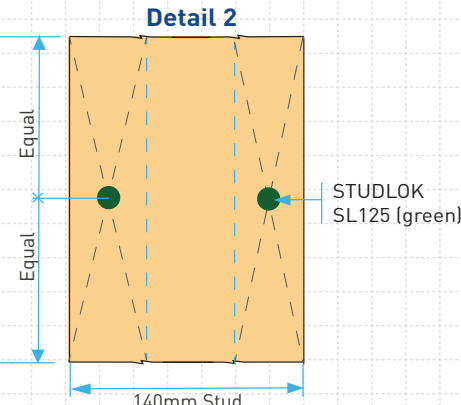
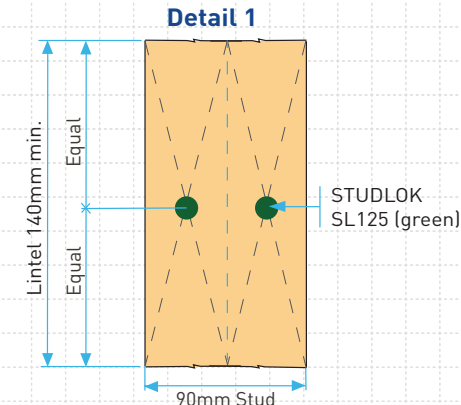
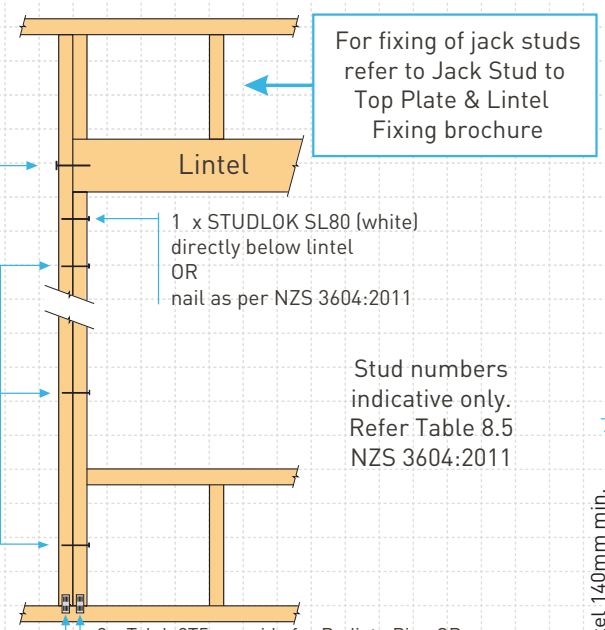
STUDLOK™ LINTEL FIXING OPTIONS FOR ON-SITE

ALTERNATIVE TO TABLE 8.14 & FIGURE 8.12 NZS 3604:2011



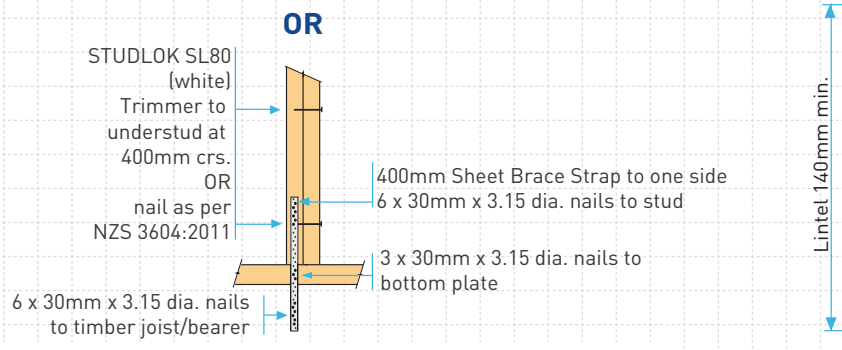
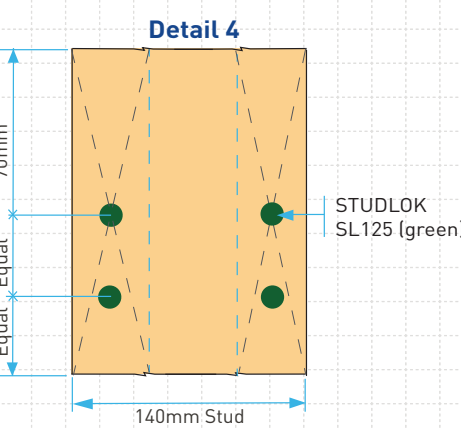
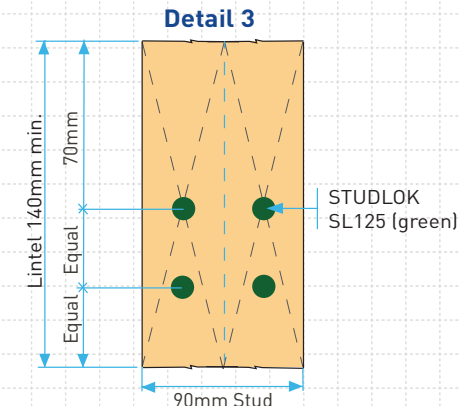
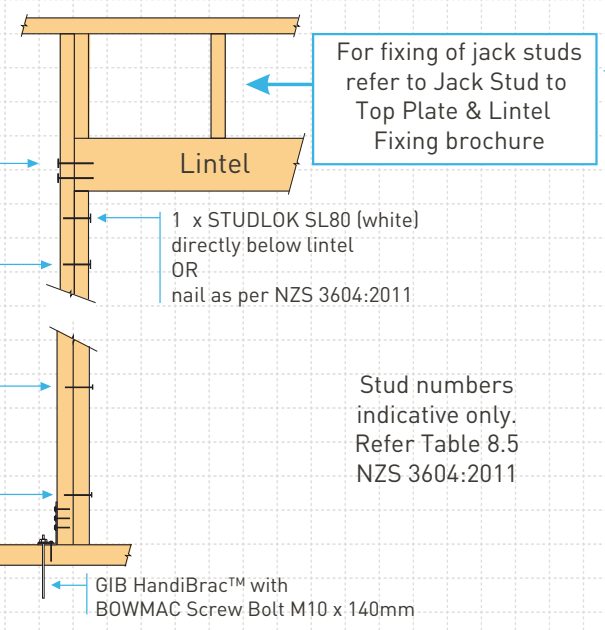
TYPE F 4.0kN

For Lintel 140mm min.
2 x STUDLOK SL125
(green)
Refer Detail 1 for
90mm Stud
Refer Detail 2 for
140mm Stud



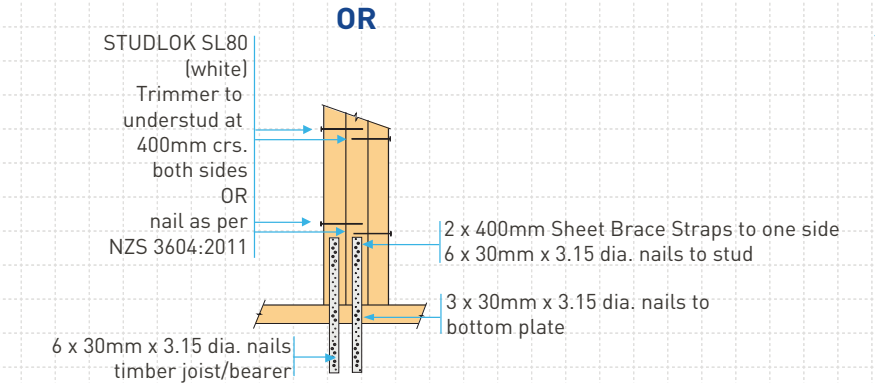
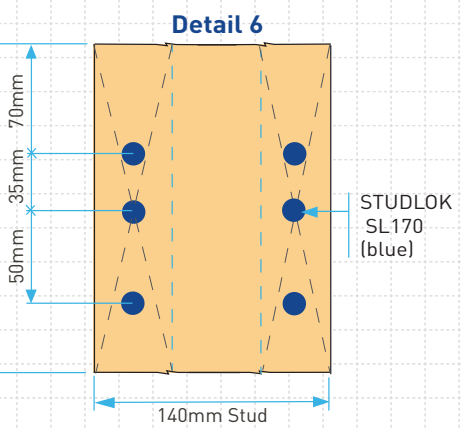
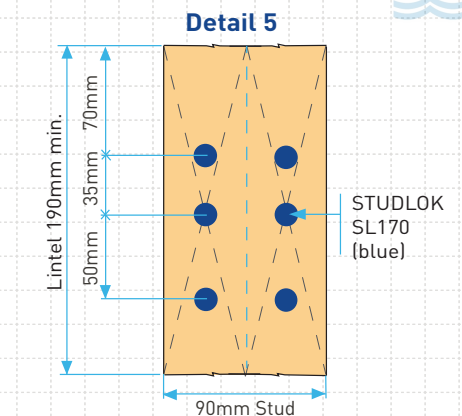
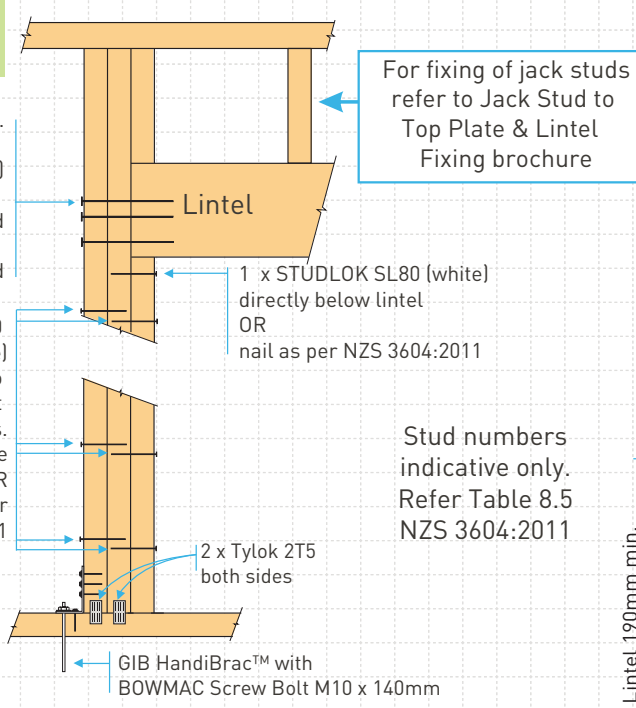
TYPE G 7.5kN

For Lintel 140mm min.
4 x STUDLOK SL125
(green)
Refer Detail 3 for
90mm Stud
Refer Detail 4 for
140mm Stud



TYPE H 13.5kN

For Lintel 190mm min.
6 x STUDLOK SL170
(blue)
Refer Detail 5 for
90mm Stud
Refer Detail 6 for
140mm Stud



NOTE: STUDLOK TYPE F 4.0 kN fixing can be used for TYPE E 1.4 kN fixing

Our approval of these drawings
relates to our specifically designed
structural elements only

Paul Jarvie CP Eng 1018577
Hutchinson Consulting Engineers Ltd

Hutchinson
CONSULTING ENGINEERS

SHEET TITLE: LINTEL FIXING

SHEET	A: SKETCH DESIGN
	B: SK REVISED
	C: DRAFT FOR ENG DESIGN
	D: BC ISSUE
	E: BC REVISIONS
ISSUED:	1/05/23
E PROJECT #:	21015

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REPLACEMENT MARKET SHEDS
362 MATAKANA VALLEY ROAD
MATAKANA

CAMPBELL REGISTERED
ARCHITECTS Ltd
202 CAMES ROAD, R.D. 5 WELLSFORD 0975
NEW ZEALAND
~ p: 0274 323 185
~ e: colin@campbell-registered-architects.co.nz
~ w: www.campbell-registered-architects.co.nz



SECTION 4 – DURABILITY

NZS 3604:2011

Table 4.1 – Protection required for steel fixings and fastenings excluding nails and screws⁽¹⁾ (see 4.4.1)

ZONES	FIXING FASTENING	ENVIRONMENT		MATERIAL
ALL ZONES	Nail plates	CLOSED AND ROOF SPACES		Continuously coated galvanized steel ⁽²⁾
	Wire dogs & bolts			Hot-dipped galvanized steel ⁽²⁾
	All other structural fixings	CLOSED		Mild steel (uncoated, non-galvanized) ⁽³⁾
ZONE D	All structural fixings	SHELTERED ⁽⁴⁾ AND EXPOSED		Type 304 stainless steel ⁽⁵⁾
ZONES B AND C	Treated timber pile connections more than 600 mm from the ground and all subfloor connections	Subfloors vented 7000 mm ² or less	SHELTERED ⁽⁴⁾	Hot-dipped galvanized steel ⁽²⁾
		Subfloors vented more than 7000 mm ²	EXPOSED	Type 304 stainless steel ⁽⁵⁾
	Treated timber pile connections within 600 mm of the ground	SHELTERED ⁽⁴⁾ AND EXPOSED		Type 304 stainless steel ⁽⁵⁾
	All other structural fixings, except fabricated brackets ⁽⁶⁾	SHELTERED ⁽⁴⁾		Hot-dipped galvanized steel ⁽²⁾
		EXPOSED		Type 304 stainless steel ⁽⁵⁾

(1) Items described in this table are steel fasteners required to last not less than 50 years, used for joining timber, such as nail plates, bolts, brackets, wire dogs and similar, but not including nails or screws (which are described in table 4.3).

(2) All galvanizing weights to steel shall be as given in table 4.2.

(3) Steel fixings in timber treated with copper-based timber preservatives shall be as per 4.4.4.

(4) “Sheltered” shall be that above a 45° line drawn from the lower edge of a projecting weathertight structure such as a floor, roof or deck. “Exposed” shall be below that 45° line. See figure 4.3(a) and (b).

(5) Type 304 stainless steel is sufficient to comply with NZBC requirements, but may have surface rust. Type 316 may be used where appearance is a consideration but exceeds the requirements of the NZBC.

(6) “Fabricated brackets” shall be made from 5 mm (minimum thickness) mild steel and shall be hot-dipped galvanized.

4.4.2

Galvanized steel components shall have galvanized coating masses in accordance with table 4.2.

NZS3604

TABLE 4.1

SECTION 4 – DURABILITY

NZS 3604:2011

Table 4.2 – Galvanizing of steel components other than nails and screws (see 4.4.2)

Component	Standard	Protection required
Bolts in any location that require galvanizing (see table 4.1)	AS/NZS 4680 and AS 1214	600 g/m ² average
Nail plates used in sheltered locations Nail plates used in exposed locations	AS 1397 AS/NZS 4680	Z275 pre-galvanized sheet 390 g/m ²
Brackets used in sheltered locations Brackets used in exposed locations	AS/NZS 4680 AS/NZS 4680	390 g/m ² 600 g/m ²
Nail plates used in roof spaces	AS 1397	Z275 pre-galvanized sheet
Wire dogs in any location that require galvanizing (see table 4.1)	AS/NZS 4534	150 g/m ² (Zn + 5 % Al)

4.4.3 Nails

The materials for nails and screws shall be as given in table 4.3.

Table 4.3 – Steel items such as nails and screws used for framing and cladding (see 4.4.3)

Building location	Nail or screw use				
	Cladding that acts as bracing (50-year durability)	Non-structural cladding (15-year durability)	Framing in “Closed” areas ⁽¹⁾ including roof spaces	Framing in “Sheltered” areas ⁽¹⁾	Framing in “Exposed” areas ⁽¹⁾
Zone D	Stainless steel ⁽²⁾ or silicon bronze or protected galvanized steel ⁽³⁾	Galvanized steel ⁽⁴⁾	Mild steel ⁽⁵⁾	Galvanized steel ⁽⁵⁾	Stainless steel ⁽²⁾
Zones B & C	Galvanized steel ⁽⁴⁾	Galvanized steel ⁽⁴⁾	Mild steel ⁽⁵⁾	Galvanized steel ⁽⁵⁾	Galvanized steel ⁽⁵⁾

(1) For definitions of “closed”, “sheltered”, and “exposed” see table 4.1 and figure 4.3(a) and (b).

(2) Stainless steel nails shall be minimum Type 304 and shall have annular grooves to provide similar withdrawal resistance to hot-dipped galvanized nails.

(3) Protection of galvanized steel nails shall consist of putty and an exterior painting system consisting of a primer undercoat and 2 top coats of oil-based or acrylic paint.

(4) Where the cladding is a corrosive timber, such as western red cedar or redwood, or is treated with copper-based ACQ or CuAz preservatives, use stainless steel⁽²⁾ or silicon bronze.

(5) Steel fixings in timber treated with copper-based preservatives shall be as per 4.4.4.

(6) Irrespective of the above, nails and screws shall be compatible with any fixing plate that is used with them.

(7) Nails and screws and other fixings into piles within 600 mm of the ground shall be stainless steel.

(8) Galvanized nails shall be hot-dipped galvanized to a minimum of 320 g/m²; galvanized screws shall be mechanically zinc plated in accordance with AS 3566: Part 2, Class 4.

(9) Type 304 stainless steel is sufficient to comply with NZBC requirements, but may have surface rust. Type 316 may be used where appearance is a consideration but exceeds the requirements of the NZBC.

NZS3604

TABLE 4.3

SHEET TITLE: DURABILITY

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