

LOT 74 EARLSBROOK

22 GREENSLADE DRIVE, LINCOLN



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GENERAL NOTES

- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER CONSULTANTS DOCUMENTATION, SPECIFICATIONS, MANUFACTURERS INSTALLATION MANUALS ETC. ALL DOCUMENTS ARE TO BE READ AS ONE.
- CONTRACTOR TO CHECK AND CONFIRM ALL DIMENSIONS ONSITE PRIOR TO COMMENCING WORKS. IF DIMENSIONS DO NOT ADD UP CONTACT THE DESIGNER.
- SHOULD ANY INFORMATION PROVIDED ON THE DRAWINGS AND ASSOCIATED DOCUMENTS BE UNCLEAR, CONTRADICTORY OR REQUIRE FURTHER CLARIFICATION PLEASE CONTACT THE DESIGNER IMMEDIATELY. GENERATE ARCHITECTURE LTD SHALL NOT BE LIABLE FOR EXECUTIVE DECISIONS MADE ON SITE WITHOUT BEING CONTACTED FIRST.
- ALL PROPRIETARY MATERIALS AND COMPONENTS MUST BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS AND OR SUPPLIERS INSTRUCTIONS.
- ALL WORKMANSHIP AND CONSTRUCTION TO COMPLY WITH RELEVANT CURRENT NZ STANDARDS, NZ BUILDING CODE AND LOCAL AUTHORITY BY LAWS.
- THE CONTRACTOR SHALL HAVE A CURRENT COPY OF NZS 3604 ON SITE AS WELL AS STAMPED AND CURRENT DRAWINGS, SPECIFICATIONS AND SUPPORTING DOCUMENTS.
- CONTRACTOR TO ENSURE ALL CONDITIONS ATTACHED THE BUILDING CONSENT ARE CLEARLY UNDERSTOOD PRIOR TO COMMENCING WORKS.

EROSION & SEDIMENT CONTROL

- CONTRACTOR TO INSTALL RELEVANT SITE SPECIFIC EROSION & SILT CONTROL MEASURES BEFORE CONSTRUCTION BEGINS. ALL MEASURES TO BE INSPECTED EACH WORKING DAY AND MAINTAINED IN GOOD WORKING ORDER.
- CONNECT TEMPORARY DOWN PIPES TO SW DRAINS, RENDERING COMPLETE & FUNCTIONAL AS EARLY AS POSSIBLE TO MITIGATE STORMWATER SPILL ONTO SITE.
- ON SLOPING SITES INSTALL SEDIMENT BARRIER FENCE COMPLETE WITH SEDIMENT FABRIC AND GOOD WATAH SPACING 'DOWN STREAM' OF BUILDING AREA. SEDIMENT FABRIC TO BE TRENCHED 200MM MIN INTO THE GROUND, SEE BELOW DIAGRAMS. CLEAR AWAY ANY COLLECTED SEDIMENT REGULARLY.
- CONTRACTORS SHALL MAINTAIN THE SITE ENTRY IN A CLEAN CONDITION AND ENSURE THAT ANY ACCUMULATION OF SEDIMENT ON THE ACCESS ROAD TO THE SITE IS REMOVED. ON SLOPING SITES A STABILISED ENTRY/EXIT BUND MAY BE RQUIRED.

HEALTH & SAFETY & SITE HAZARDS

- THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE HEALTH AND SAFETY AT WORK ACT AND ALL RELEVANT REGULATIONS, CODES OF PRACTICE, STANDARDS AND GUIDELINES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERSONNEL ON THE SITE AND ADJOINING THE SITE WHERE THEIR SAFETY IS AFFECTED BY THE CONSTRUCTION.
- MAIN CONTRACTOR TO PROVIDE 2M HIGH BARRIER OR CHAIN LINK FENCE (min 50 x 50) TO PREVENT UNAUTHORISED ENTRY TO SITE TO COMPLY WITH NZBC/F5 AND MUST BE COMPLETE WITH A LOCKABLE GATE THAT OPENS IN TOWARD THE SITE.
- WHEN WORK IS TAKING PLACE AT A HEIGHT (I.E ROOFING) ENSURE EDGE PROTECTION AND SAFETY NETS ARE INSTALLED AS PER THE WORKING AT HEIGHT SAFETY GUIDELINES.
- HAZARD IDENTIFICATION BOARD SHALL BE ADJACENT TO SITE ENTRY AND IDENTIFY ALL RELEVANT ONSITE HAZARDS. ALL PERSONS ENTERING THE SITE TO FITTED WITH SUITABLE PERSONAL PROTECTIVE EQUIPMENT (PPE).
- MAIN CONTRACTOR TO PROVIDE ONSITE A SITE SPECIFIC HEALTH & SAFETY POLICY WHICH IS TO BE VIEWED AND SIGNED BY ALL PERSONS ENTERING THE SITE.
- GENERATE ARCHITECTURE LTD HAS NO AUTHORITY TO DIRECT ANY PERSON ON THE PROJECT SITE OTHER THAN ITS OWN EMPLOYEES OR ANY OTHER PERSON THERE AT THE REQUEST OF DESIGNER. THE DESIGNER'S ROLE ON THE SITE (IF ANY) SHALL BE LIMITED TO THAT OF AN OBSERVER.



GENERATE ARCHITECTURE

E: info@generatearchitecture.co.nz
W: www.generatearchitecture.co.nz

CONTRACTOR TO CHECK AND CONFIRM ALL DIMENSIONS ONSITE

ALL PROPRIETARY MATERIALS AND COMPONENTS MUST BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS AND OR SUPPLIERS INSTRUCTIONS. ALL CONSTRUCTION TO COMPLY WITH RELEVANT NZ STANDARDS, NZ BUILDING CODE AND LOCAL AUTHORITY BY LAWS.

PROJECT
LOT 74 EARLSBROOK
ADDRESS
22 GREENSLADE DRIVE, LINCOLN

DRAWING
PRELIMINARY & GENERAL SEDIMENT CONTROL

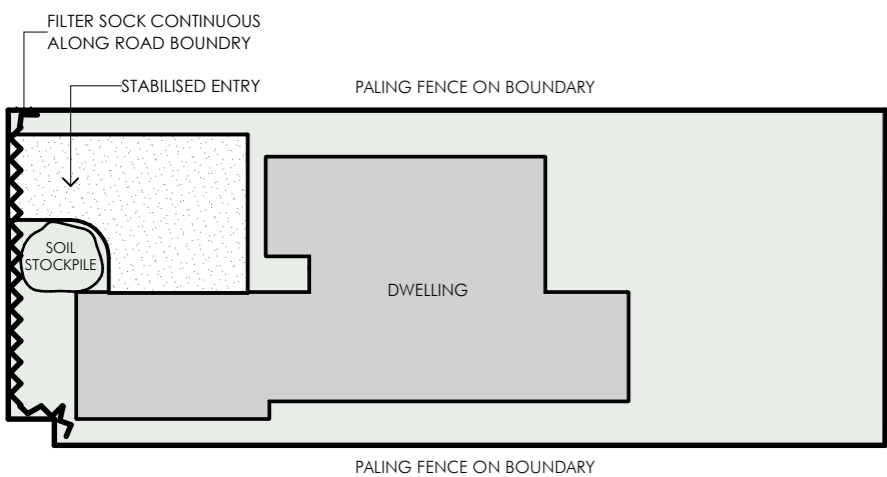
DESIGN D BIRTLES
DRAWN DB, JM
JOB No 25022
SCALE 1:1 @ A3

ISSUE CONSENT
DATE 9/11/2025

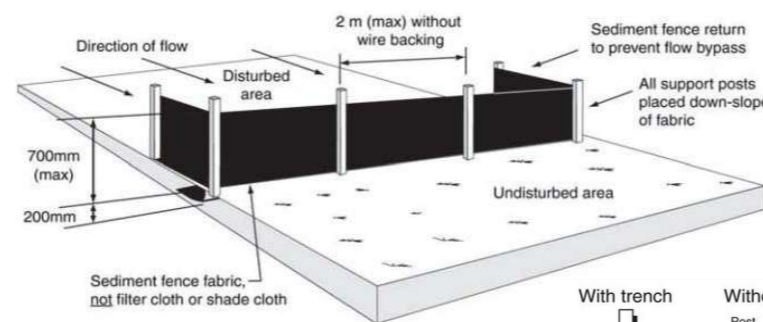
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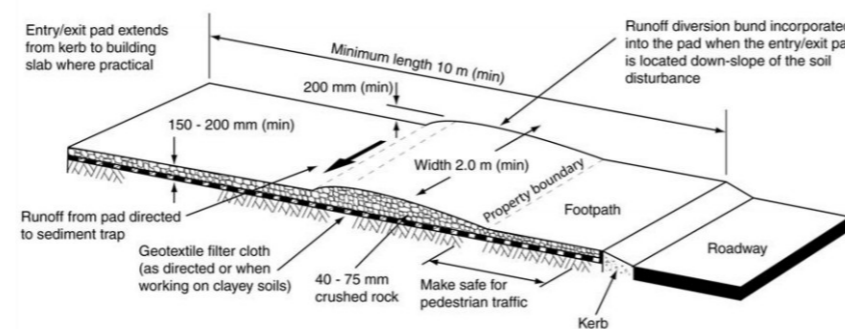
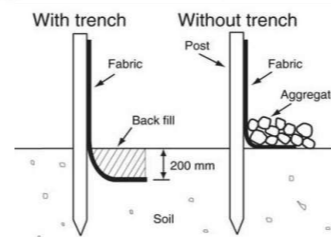


SEDIMENT CONTROL PLAN

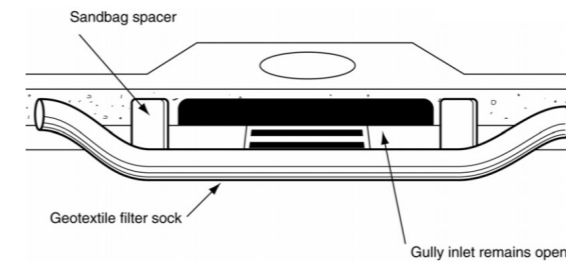


SEDIMENT FENCE ON SLOPING SITES

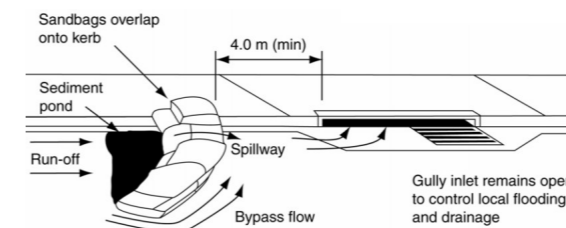
NOTE:
ON FLAT SITES THE SEDIMENT FENCE CAN BE SUBSTITUED FOR A FILTER SOCK LAID ALONG THE BOUNDARY



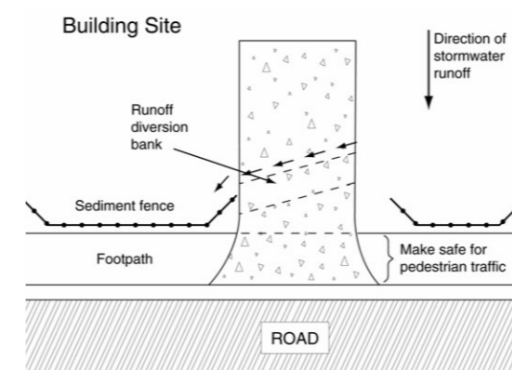
STABILISED ENTRY/EXIT BUND



FLAT SITE ROAD SUMP PROTECTION



HILL SITE ROAD SUMP PROTECTION



STABILISED ENTRY/EXIT BUND PLAN



LOCATION PLAN
SCALE NTS

SITE DESCRIPTION

LEGAL DESCRIPTION: LOT 74, DP 616488
TERRITORIAL AUTHORITY: SDC
PLANNING ZONE: MEDIUM DENSITY RESIDENTIAL

WIND REGION: A
WIND ZONE: HIGH
EQ ZONE: 2
EXPOSURE ZONE: C
SNOW LOAD: UP TO 1kPa
RAINFALL RANGE: 40-50
CLIMATE ZONE: 5

TOTAL FLOOR AREA: 226.92m²

SITE AREA: 677m² APPROX.
SITE COVERAGE AREA: 245.96
SITE COVERAGE: 36.33%

SITE SURVEY

SITE SURVEY BY: BUDGET SETOUTS LTD
REFERENCE No: 06/11/2025 - NZVD 2016

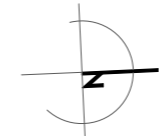
LANDSCAPING & FENCING:

- ENSURE A MINIMUM OF 20% OF THE SITE IS LANDSCAPED WITH GRASS OR PLANTS. THIS CAN INCLUDE THE CANOPY OF TREES.
- EXCLUDING AREAS FOR VEHICLE & PEDESTRIAN ACCESS, THE AREA BETWEEN THE ROAD BOUNDARY AND BUILDING SHALL BE LANDSCAPED WITH A MIX OF LAWN, GARDEN BEDS OR SHRUBS.
- OUTDOOR STORAGE: SHALL NOT BE LOCATED BETWEEN THE ROAD BOUNDARY AND BUILDING SETBACK, SHALL NOT EXCEED THE HEIGHT OF PERMITTED FENCING AND A MAX. TOTAL AREA OF 25m².
- FENCING TO BE A MAX. HEIGHT OF 1.2M WITHIN THE 1.5M ROAD BOUNDARY, ALL OTHER FENCING MAY BE 1.8M HIGH.

LEGEND

PLUMBING AND DRAINAGE TO COMPLY WITH G13 AS1 & AS2
STORMWATER TO COMPLY WITH NZBC E1/AS1

- FOUL SEWER LINE
ALL NEW FOUL WATER DRAINS 100Ø uPVC @ 1:120
- STORMWATER
ALL NEW STORM WATER DRAINS 100Ø uPVC @ 1:120
- PROPRIETARY CHANNEL DRAIN TO DISCHARGE TO STORMWATER SYSTEM VIA 375MM TYPE 1 SUMP
- +8.60 X
DENOTES EXISTING SITE LEVELS



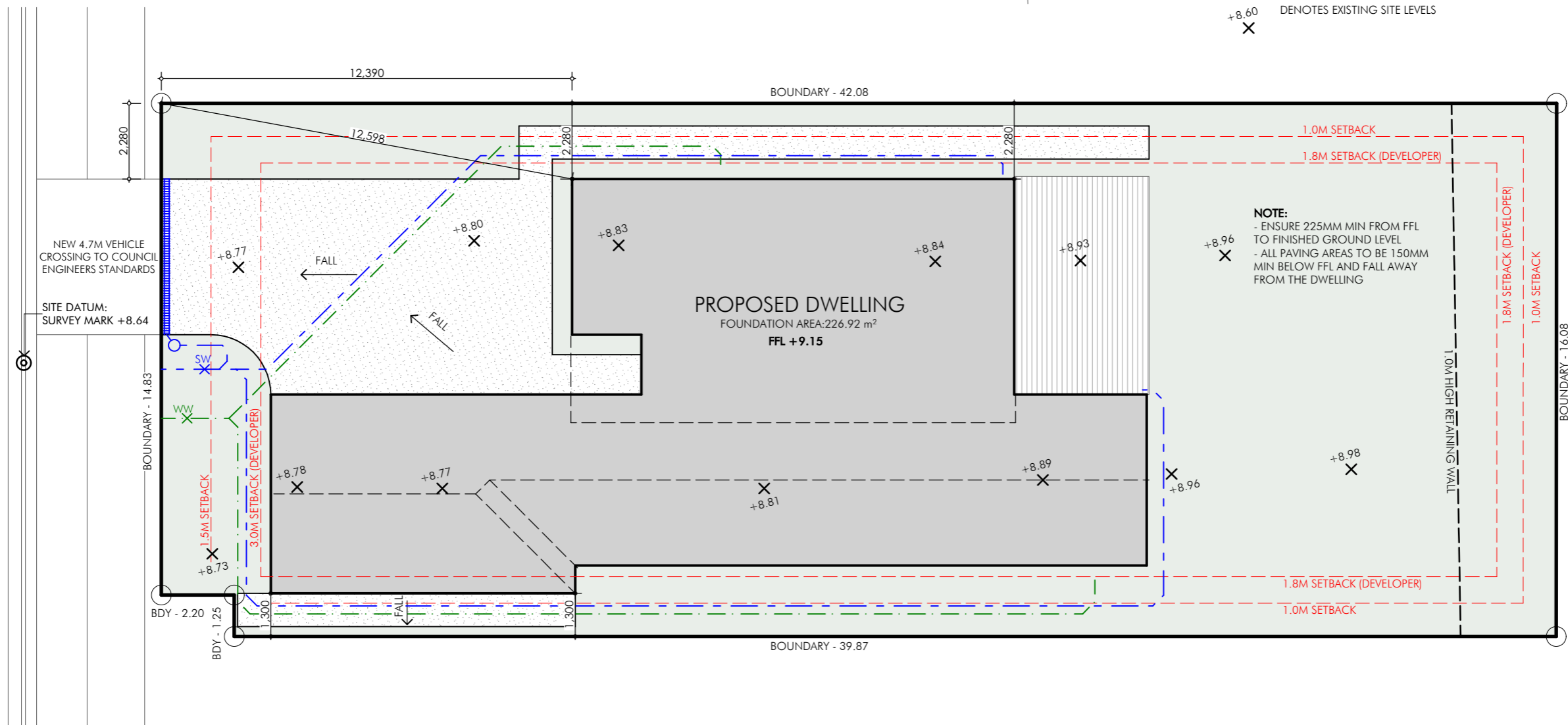
PROJECT
LOT 74 EARLSBROOK
22 GREENSLADE DRIVE, LINCOLN
ADDRESS

DRAWING
SITE & LOCATION PLANS

DESIGN D BIRTLES
DRAWN DB, JM
JOB No 25022
SCALE 1:150 @ A3

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SITE PLAN
SCALE 1:150 (A3)

PROJECT
LOT 74 EARLSBROOK
ADDRESS
22 GREENSLADE DRIVE, LINCOLN

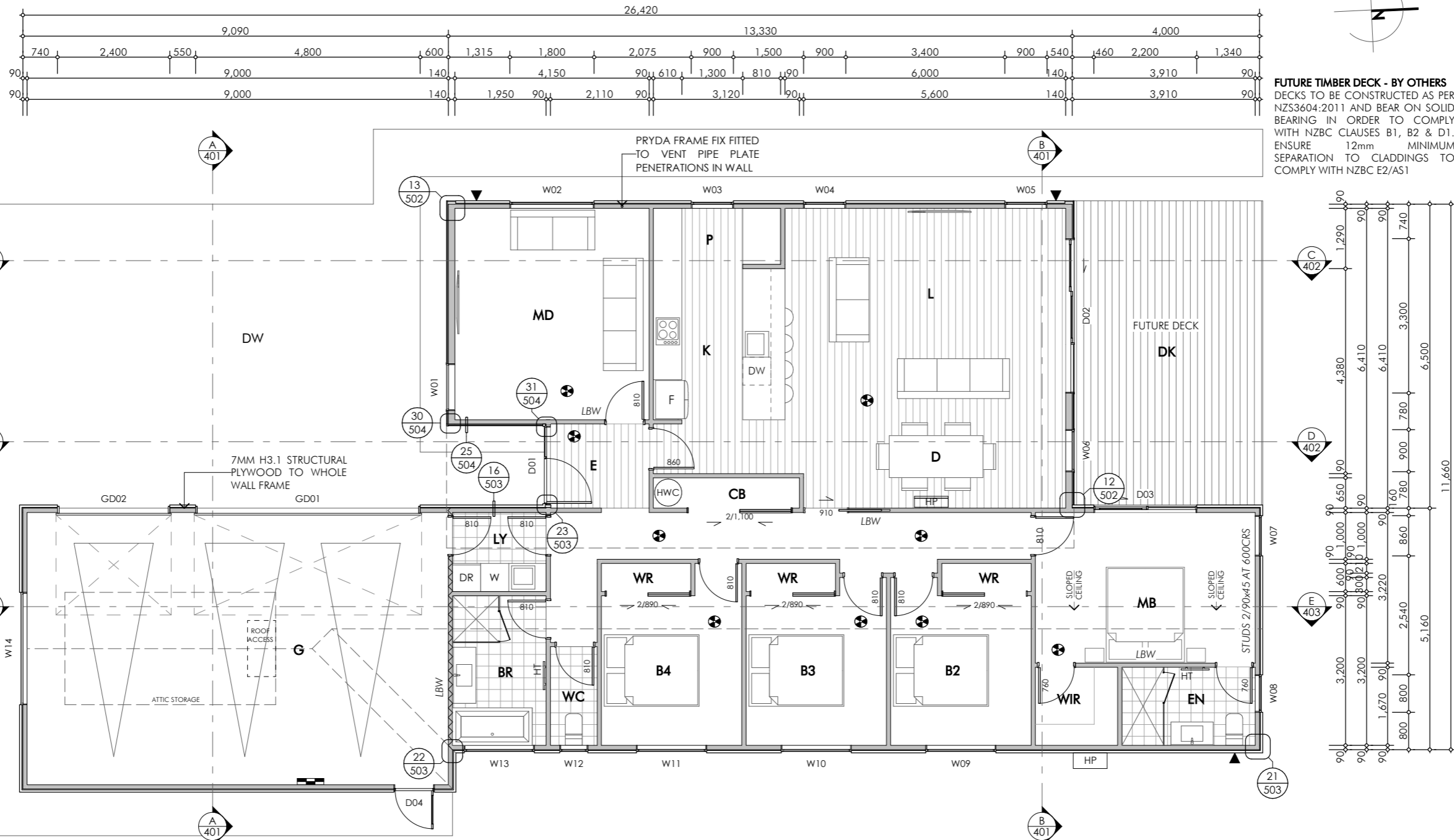
DRAWING
FLOOR PLAN

DESIGN D BIRTLES
DRAWN DB, JM
JOB No 25022
SCALE 1:100 @ A3

ISSUE CONSENT
DATE 9/11/2025

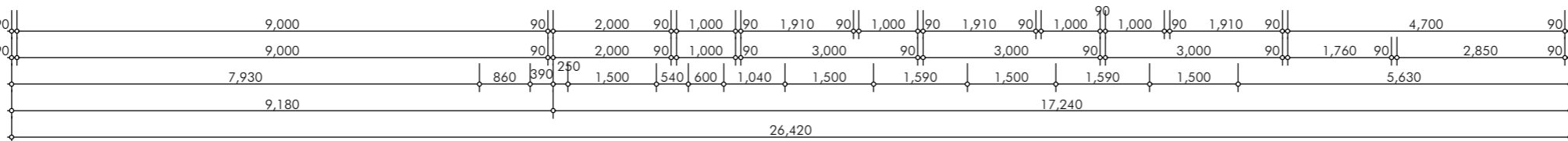
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AREA OVER FRAMES : 226.92 m²

OPENING	LINTEL SIZE	TREATMENT
W01	2/90X45 SG8 - TRU	H1.2
W02	140X90 GL8 - TRU	H1.2
W03	2/90X45 SG8 - TRU	H1.2
W04	2/90X45 SG8 - TRU	H1.2
W05	2/90X45 SG8 - TRU	H1.2
W06	2/90X45 SG8 - TRU	H1.2
W07	2/90X45 SG8 - TRU	H1.2
W08	2/90X45 SG8 - TRU	H1.2
W09	140X90 GL8 - TRU	H1.2
W10	140X90 GL8 - TRU	H1.2
W11	140X90 GL8 - TRU	H1.2
W12	2/90X45 SG8 - TRU	H1.2
W13	140X90 GL8 - TRU	H1.2
W14	190X90 GL8 - TRU	H1.2
D01	140X90 GL8 - TRU	H1.2
D02	240X90 GL8 - TRU	H1.2
D03	190X90 GL8 - TRU	H1.2
D04	2/90X45 SG8 - TRU	H1.2
GD01	290X90 PLX20 - TRU	H1.2
GD02	190X90 GL8 - TRU	H1.2



IMPORTANT:
-TIMBER FRAME CONSTRUCTION IN ACCORDANCE WITH NZS 3604:2011
-ALLOW TO INSTALL 10mm GIB AQUALINE TO BATHROOM, ENSUITE & KITCHEN WALL WET AREAS.
- MASONS BARRICADE FLEXIBLE AIR BARRIER TO ALL EXTERNAL WALLS
- INTERIOR & EXTERIOR WALKING SURFACES TO COMPLY WITH TABLE 2, CLAUSE D1, NZBC.
- SELECTED CARPET TO ALL AREAS UNLESS INDICATED

INTERIOR DOORS:
-ALL INTERNAL DOOR LEAVES INCLUDING WARDROBES TO BE 2,200mm HIGH UNLESS NOTED OTHERWISE

- SELECTED MAINS PRESSURE ELECTRIC HWC TO BE FITTED WITH SIESMIC RESTRAINTS AS PER NZBC G12/AS1 fig14.
- 90x45 H1.2 SG8 EXTERNAL FRAMING @ 600crs MAX TYPICAL.
- 140x45 H1.2 SG8 EXTERNAL FRAMING @ 600crs MAX TYPICAL
- 90x45 H1.2 SG8 INTERNAL FRAMING @ 600crs MAX TYPICAL
- HUSH TYPE INTERCONNECTED SMOKE ALARMS TO COMPLY WITH NZS 4514:2021. INSTALL ON THE CEILING 200MM MIN AWAY FROM WALLS & 400MM AWAY FROM AIR SUPPLY DUCTS, WINDOWS & LIGHT FITTINGS. FIT WITH 10 YEAR LIFE BATTERIES
- SWITCH BOARD & SMART METER
- HOSE TAP
- INSULATED INTERIOR WALL R2.8 BATT TYPE INSULATION
- PROPRIETARY ROOF SPACE ACCESS LADDER
- SELECTED PLANK FLOORING
- SELECTED NON-SLIP FLOOR TILES

- LEGEND OF ABBREVIATIONS**
- BR BATHROOM
 - B BEDROOM
 - CB CUPBOARD
 - D DINING
 - DW DRIVEWAY
 - EN ENSUITE
 - E ENTRY
 - G GARAGE
 - K KITCHEN
 - L LIVING
 - LY LAUNDRY
 - MB MASTER BEDROOM
 - MD MEDIA ROOM
 - P PANTRY
 - WC TOILET
 - WR WARDROBE
 - WIR WALK IN ROBE

*TRU - Refer to Truss & LinTEL Design
*ENG - Refer Structural Documents
*NLB- Non Load Bearing, Trim opening as per NZS 3604:2011

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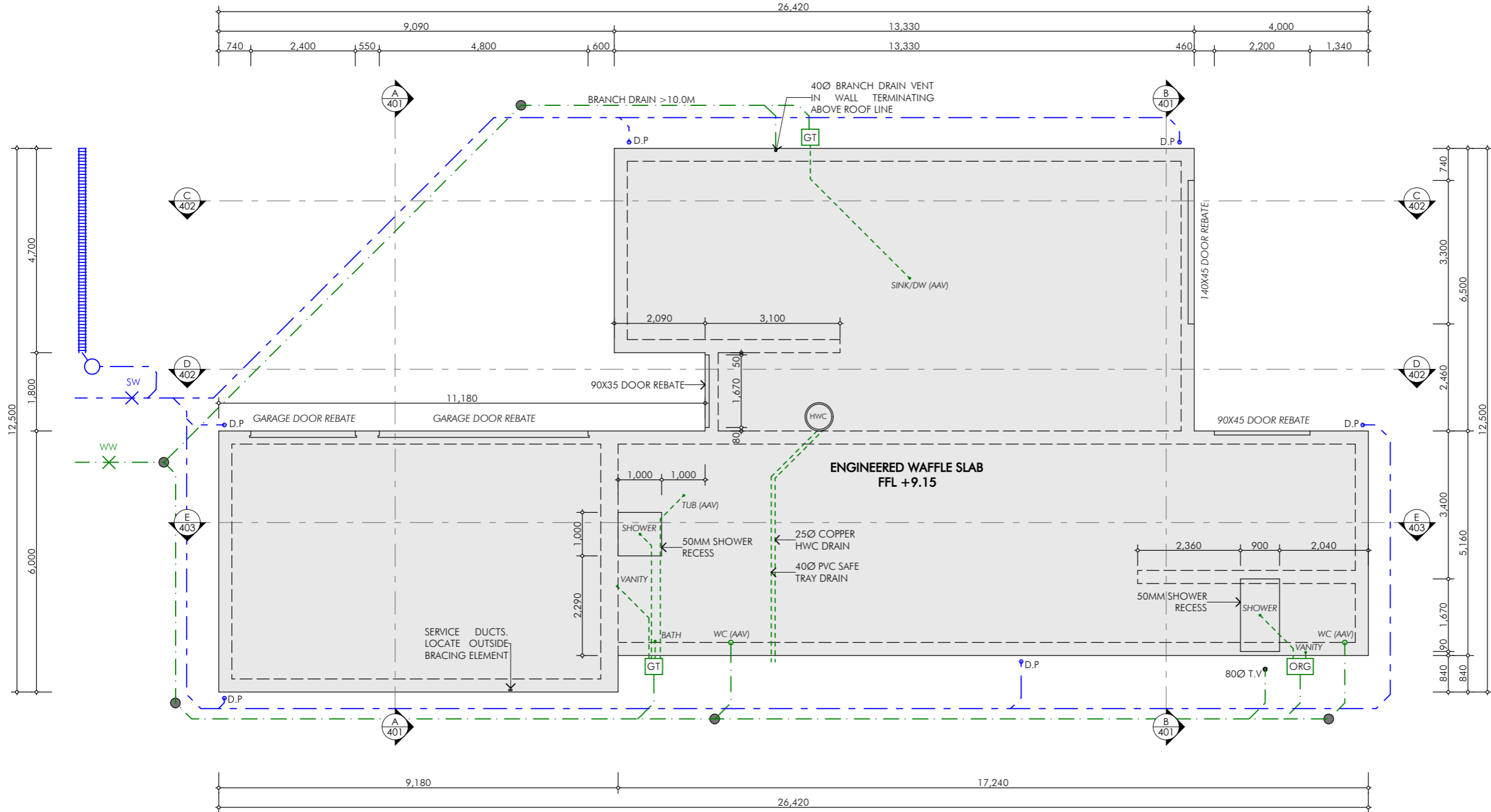
DRAWING
FOUNDATION & DRAINAGE PLAN

DESIGN D BIRTLES
DRAWN DB, JM
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SCALE 1:100 @ A3

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CONCRETE WAFFLE SLAB

ENGINEERED WAFFLE SLAB ON 50MM EPS FOAM NZ R1.47 VH GRADE UNDERSLAB INSULATION - REFER STRUCTURAL DOCUMENTS FOR CONSTRUCTION REQUIREMENTS.

REMOVE ALL TOP SOIL TO BUILDING FOOTPRINT, ALL FOUNDATIONS TO BEAR ON SOLID BEARING. PLEASE REFER GEOTECH REPORT IN SUPPORTING DOCUMENTS FOR ADEQUATE BEARING DEPTHS

ALL DIMENSIONS AND REBATES ARE TO BE READ IN CONJUNCTION WITH ENTIRE SET OF PLANS, MANUALS, AND SPECIFICATIONS BEFORE CONSTRUCTION COMMENCES. CONTACT DESIGNER IF DIMENSIONS DO NOT ADD UP.

-AAV - INSTALL AIR ADMITTANCE VALVE, WHERE POSSIBLE TAKE UP THROUGH WALL CAVITY & VENT IN CEILING.

-WC - SELECTED WC WITH AN ASSUMED RISER OFFSET OF 160MM FROM WALL FRAME. (manufacturers technical specs to be consulted to confirm)

LEGEND

PLUMBING AND DRAINAGE TO COMPLY WITH NZBC G13/AS1 & AS2
STORMWATER TO COMPLY WITH NZBC E1/AS1

- FOUL SEWER LINE
- NEW FOUL WATER DRAINS 100Ø uPVC @ 1:120
- STORMWATER
- NEW STORM WATER DRAINS 100Ø uPVC @ 1:120
- PROPRIETARY CHANNEL DRAIN TO DISCHARGE TO STORMWATER SYSTEM VIA 375MM TYPE 1 SUMP

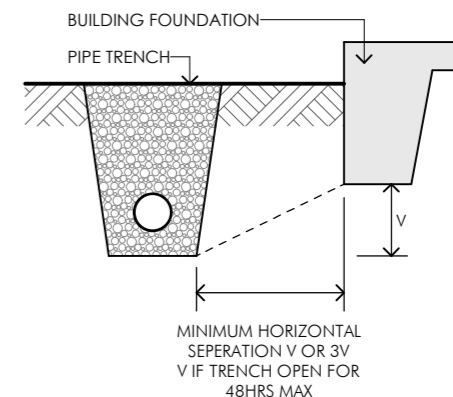
- R.P. RODDING/ACCESS POINTS
- D.P. DOWNPIPE
- GT GULLY TRAP, OVERFLOW RELIEF GULLY
- ORG

SANITARY FIXTURE

	Min DIA	Min GRADE
BASIN / VANITY	40mm	1:40
KITCHEN SINK (WITH DW)	50mm	1:40
SHOWER	40mm	1:40
BATH	40mm	1:40
TUB	40mm	1:30
TOILET (WC)	100mm	1:60



HOT WATER CYLINDER
SELECTED MAINS PRESSURE ELECTRIC HWC TO BE FITTED WITH SEISMIC RESTRAINTS AS PER NZBC G12/AS1 fig14. FIT HWC WITH 25MM COPPER PIPE DRAIN. SAFE TRAY TO COMPLY WITH NZBC G12/AS1 CLAUSE 5.2.3. FIT SAFE TRAY WITH 40 DIA UPVC DRAIN. BOTH DRAINS TO TERMINATE OUTSIDE THE DWELLING TO GROUND



DRAINAGE TRENCHING
SCALE NTS

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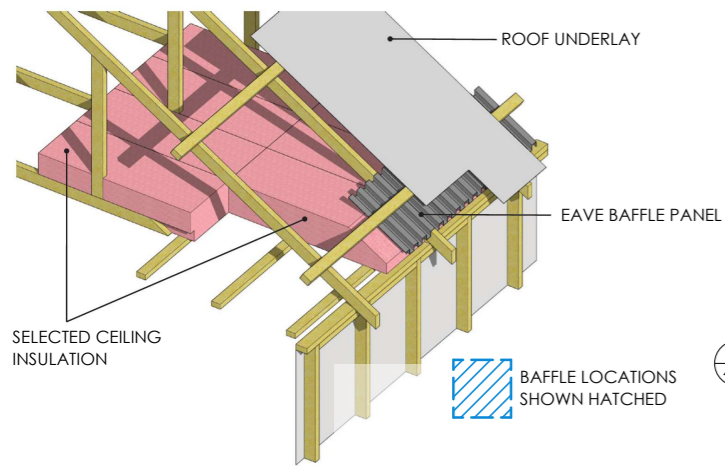
DRAWING
ROOF FRAMING PLAN

DESIGN D BIRTLES
DRAWN DB, JM
JOB No 25022
SCALE 1:100 @ A3

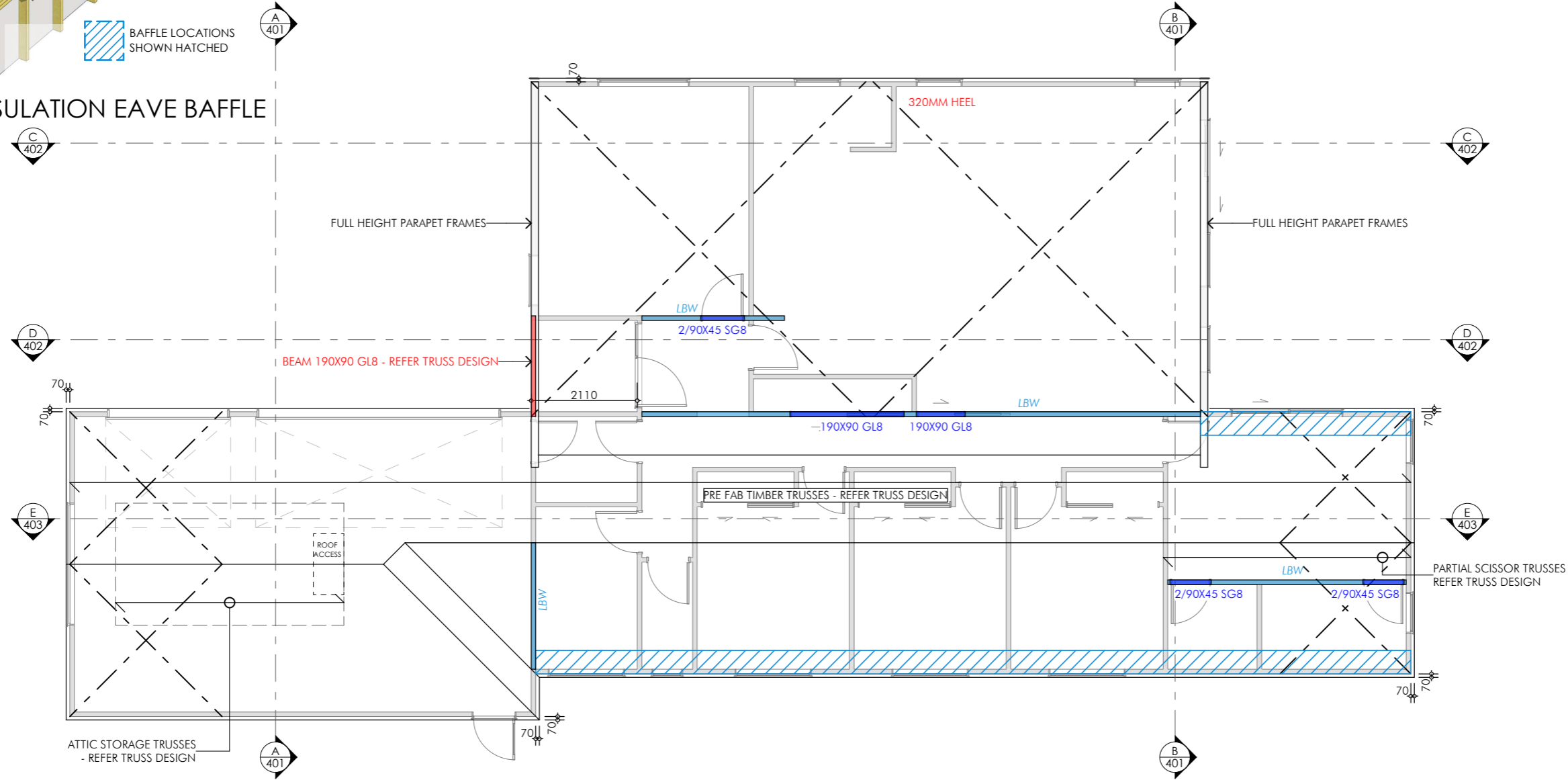
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COMPRESSED INSULATION EAVE BAFFLE
SCALE NTS



IMPORTANT

- METALCRAFT 0.40MM T-RIB LONGRUN COLORSTEEL ROOFING INSTALLED TO MANUFACTURERS INSTRUCTIONS
- THERMAKRAFT 215 SELF SUPPORTING ROOF UNDERLAY
- METALCRAFT COLORSTEEL QUAD SPOUTING & 80MM DIA DOWNPIPES WITH PIPE CLIPS @ 1200CRS. MAX ALLOWABLE CATCHMENT = 70m²
- METALCRAFT 185MM COLORSTEEL FASCIA THROUGHOUT
- ALL FLASHINGS TO BE 0.55MM BMT COLORSTEEL. CHECK ALL SIZES ONSITE BEFORE COMENCING.
- JAMES HARDIE 4.5MM HARDIEFLEX SOFFIT WITH PVC JOINTERS TYPICAL FOR PAINT FINISH
- H1.2 SG8 PRE FAB TIMBER TRUSSES AT 900 CRS MAX TO MANUFACTURERS DESIGN

- 70X45 H1.2 SG8 PURLINS AT 900 CRS MAX SPACED TO SUIT ROOF CLADDING (EDGE PURLIN 600mm)
- ROOF STRUCTURE TO COMPLY WITH NZBC B1/VM1& NZS 3604:2011.
- FIX SOLID BLOCKING BETWEEN ALL RAFTERS/TRUSSES OVER LOAD BEARING WALLS

ROOF INSULATION
- R5.2 (210MM) EARTHWOOL CEILING BATTS TYPICAL. COMPRESSED 430MM STRIP AT PERIMETER WITH EAVES BAFFLE INSTALLED OVER TRUSS

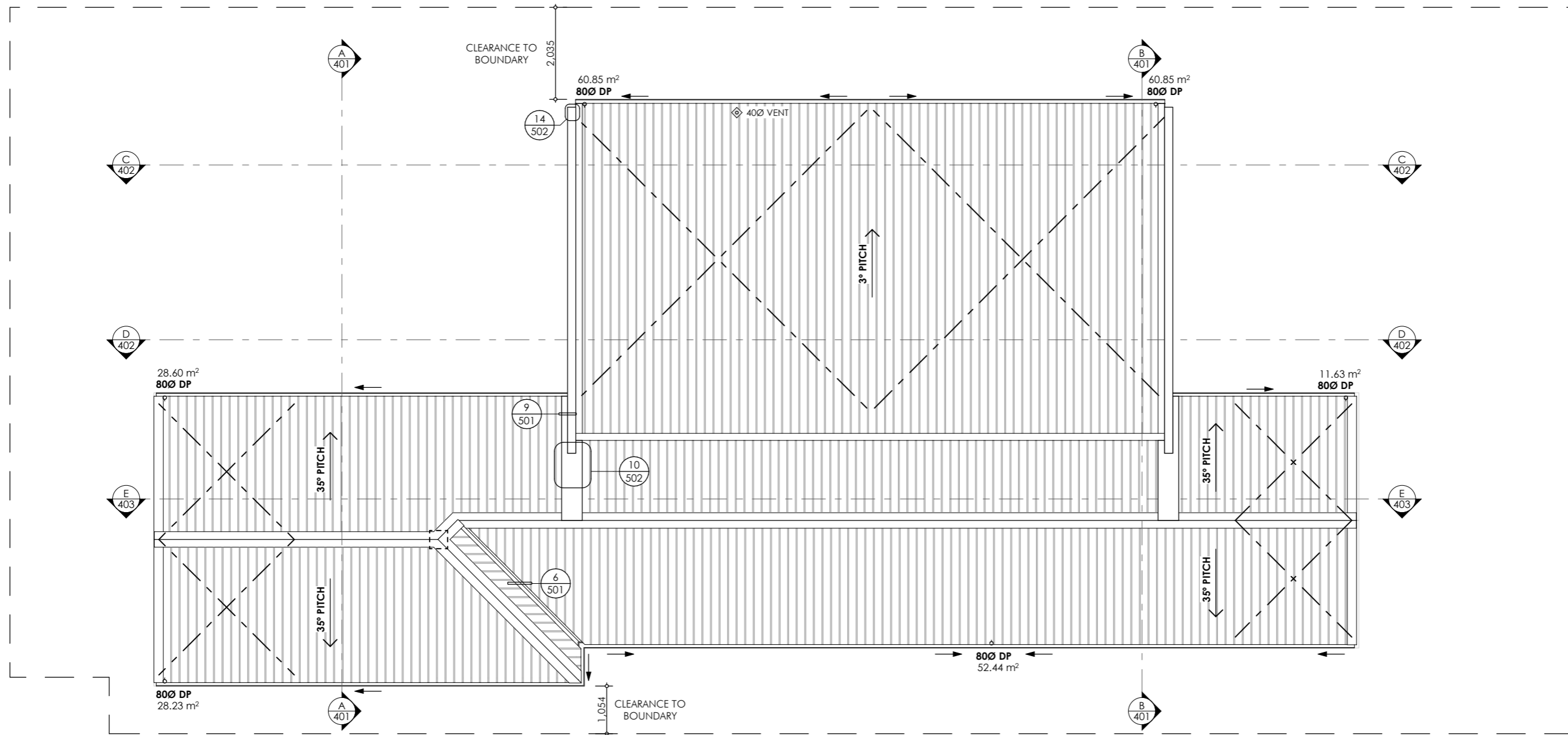
FIXING SCHEDULE	ALTERNATIVE	
PURLIN TO RAFTER / TRUSS	10G SELF-DRILLING SCREW, 80MM LONG	MIN 2.4KN
RAFTER TO SUPPORT	2/90x3.15 SKEW NAILS + 2WIRE DOGS	MIN 4.7KN

LUMBERLOK STRAP BRACING

A DIAGONALLY OPPOSING PAIR OF CONTINUOUS 25 X 1MM GALV STRAP WITH MIN 4KN TENSION FIXED TO EACH TOPCHORD THAT IS INTERSECTED AND RETURN TO TOP PLATE AND STUD MIN 150MM . FULLY NAIL EACH HOLE OVER TIMBER WITH 30X2.75MM CLEATS

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IMPORTANT

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- ROOF INSULATION**
- R5.2 (210MM) EARTHWOOL CEILING BATTS TYPICAL. COMPRESSED 430MM STRIP AT PERIMETER WITH EAVES BAFFLE INSTALLED OVER TRUSS

FIXING SCHEDULE	ALTERNATIVE
PURLIN TO RAFTER / TRUSS	10G SELF-DRILLING SCREW, 80MM LONG MIN 2.4KN
RAFTER TO SUPPORT	2/90x3.15 SKEW NAILS + 2WIRE DOGS MIN 4.7KN

LUMBERLOK STRAP BRACING
A DIAGONALLY OPPOSING PAIR OF CONTINUOUS 25 X 1MM GALV STRAP WITH MIN 4KN TENSION FIXED TO EACH TOPCHORD THAT IS INTERSECTED AND RETURN TO TOP PLATE AND STUD MIN 150MM . FULLY NAIL EACH HOLE OVER TIMBER WITH 30X2.75MM CLEATS

--- BUTYNOL UNDER FLASHING AS PER NZBC E2/AS1 FIG 43

DRAWING
ROOF PLAN

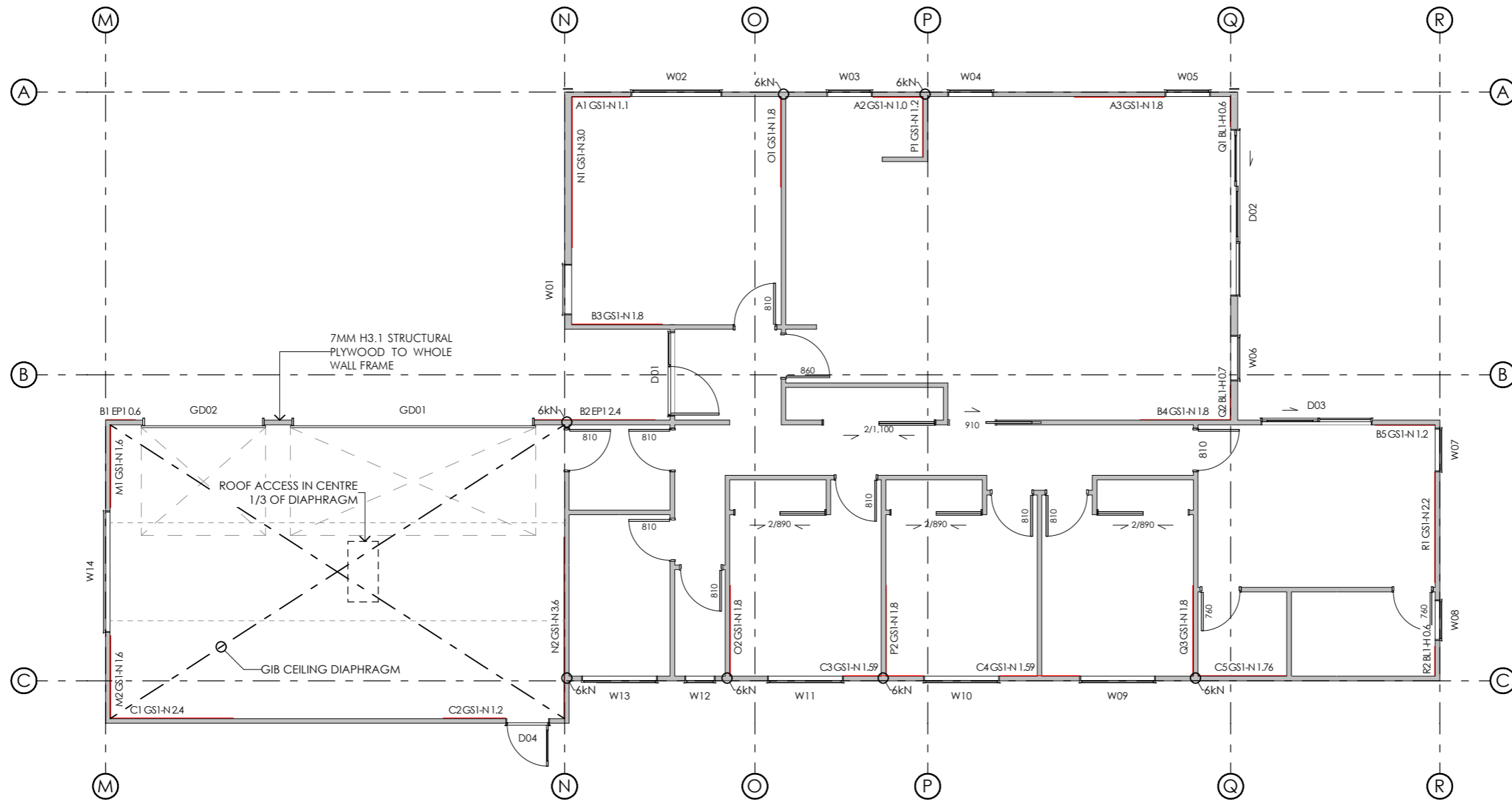
DESIGN D BIRTLES
DRAWN DB, JM
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SCALE 1:100 @ A3

ISSUE CONSENT
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REVISION	
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REVISION	
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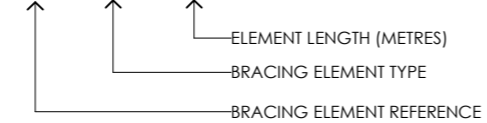


BRACING:

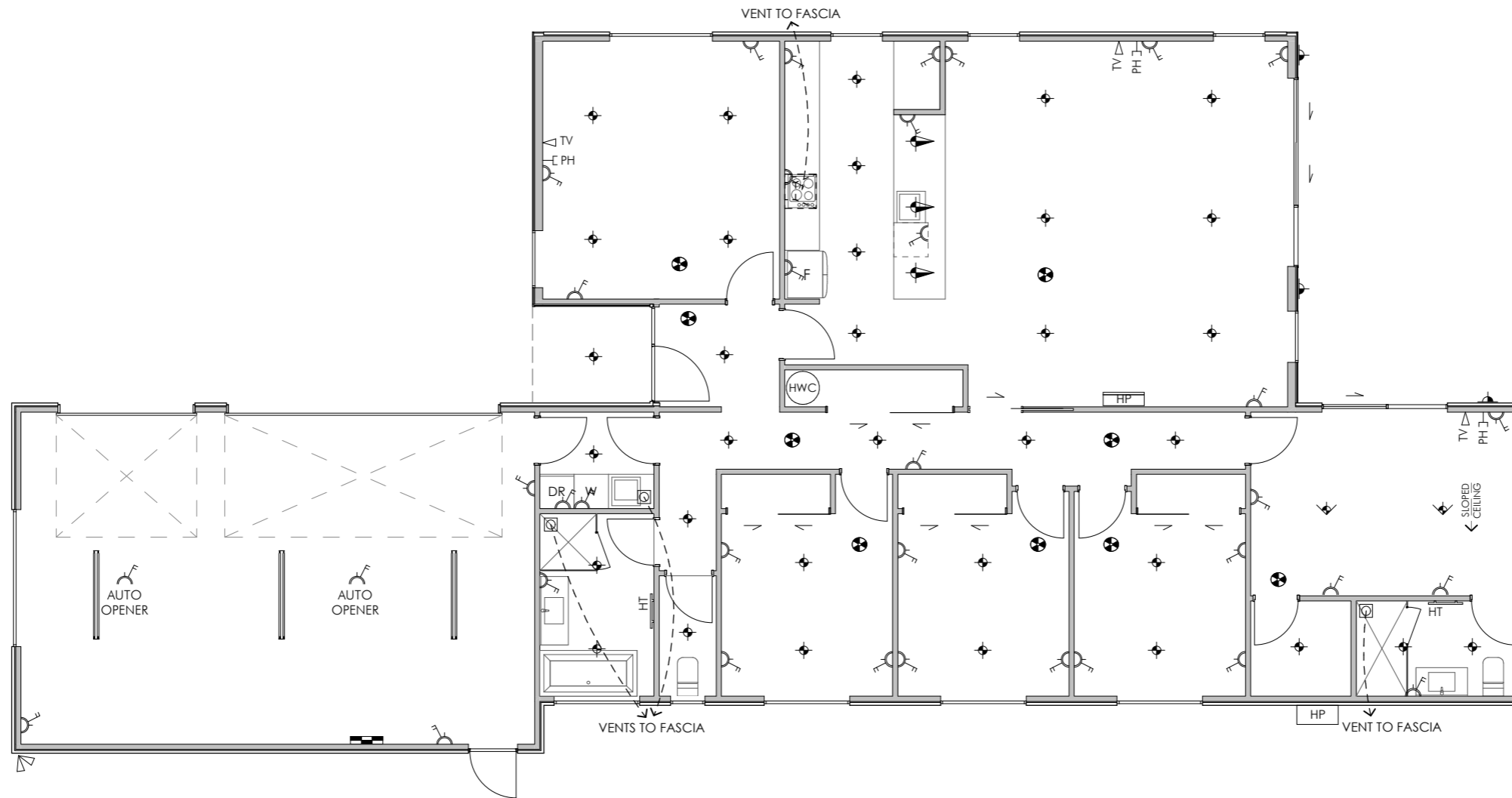
- REFER ALSO SUPPORTING DOCS FOR BRACING CALCS.
- BRACING SYSTEMS TO BE INSTALLED AS PER MAUNFACTURERS INSTRUCTIONS.
- ENSURE ELEMENTS ARE INSTALLED TO THE SIDE OF THE FRAME THEY ARE NOTED.
- ELEMENT LENGTHS ARE MINIMUMS ONLY AND ACTUAL LENGTHS MAY VARY.
- FOR MANUFACTURERS DOCUMENTATION & BEST PRACTICE GUIDES, PLEASE SEE THE FOLLOWING LITERITURE:
- GIB EZYBRACE SYSTEMS (AUG 2016)
- GIB SITE GUIDE (SEPT 2024)
- ECOPLY SPECIFICATION & INSTALLATION GUIDE (DEC 2023)

WIND REGION: A
WIND ZONE: HIGH
EQ ZONE: 2

A1 GS1-N 1.0



CONTINUOUS TOP PLATE TO CONNECT INTERNAL BRACED WALL TO EXTERNAL WALL. FIX WITH 6kN CONNECTION AS PER NZS 3604:2011 FIGURE 8.16



GENERAL NOTES:
 -ALL FITTINGS, SWITCHES ETC TO BE CONFIRMED WITH THE OWNER PRIOR TO THE PREWIRE COMMENCING.
 -ALL ELECTRICAL INSTALLATIONS TO COMPLY WITH NZBC G9
 -ANY RECESSED DOWN LIGHTS TO BE IC-F RATED TO COMPLY WITH NZBC H1/AS1
 -ALLOW TO WIRE IN HOT WATER CYLINDER. HWC TO BE INSTALLED WITH SEISMIC RESTRAINTS IN ACCORDANCE WITH NZBC G12/AS1 fig14.
 -ALL LIGHTING TO BE LED UNLESS NOTED OTHERWISE

ELECTRICAL LEGEND:

- | | | | | | |
|--|--|--|--|--|--|
| | SMART METER & SWITCH BOARD | | CEILING RECESSED LED LIGHT | | HEATPUMP OUTDOOR UNIT |
| | SINGLE SOCKET | | CEILING RECESSED LED DIRECTIONAL SPOTLIGHT | | SELECTED RESIDENTIAL RANGE HOOD WITH INLINE EXHAUST FAN 50 l/s MIN DUCTED EITHER TO SOFFIT OR ROOF |
| | DOUBLE SOCKET | | WALL MOUNTED LIGHT FITTING | | HUSH TYPE INTERCONNECTED SMOKE ALARMS TO COMPLY WITH NZS 4514:2021. INSTALL ON THE CEILING 200MM MIN AWAY FROM WALLS & 400MM AWAY FROM AIR SUPPLY DUCTS, WINDOWS & LIGHT FITTINGS. FIT WITH 10 YEAR LIFE BATTERIES |
| | PHONE / DATA POINT | | PENDANT LIGHT FITTING | | |
| | TELEVISION AERIAL | | LED BATTEN CEILING MOUNTED FITTING | | |
| | HEATED TOWEL RAIL | | SECURITY LIGHT WITH SENSOR | | |
| | MECHANICAL INLINE EXHAUST FAN 50 l/s MIN DUCTED EITHER TO SOFFIT OR ROOF | | SELECTED WALL MOUNTED HEATPUMP | | |

PROJECT
LOT 74 EARLSBROOK

22 GREENSLADE DRIVE, LINCOLN
ADDRESS

DRAWING
ELECTRICAL PLAN

DESIGN D BIRTLES
DRAWN DB, JM
JOB No 25022
SCALE 1:100 @ A3

ISSUE CONSENT
DATE 9/11/2025

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GENERATE ARCHITECTURE

E: info@generatearchitecture.co.nz
W: www.generatearchitecture.co.nz

CONTRACTOR TO CHECK AND CONFIRM ALL DIMENSIONS ONSITE

ALL PROPRIETARY MATERIALS AND COMPONENTS MUST BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS AND/OR SUPPLIERS INSTRUCTIONS. ALL CONSTRUCTION TO COMPLY WITH RELEVANT N.Z. STANDARDS, NZ BUILDING CODE AND LOCAL AUTHORITY BY LAWS.

ROOF CLADDING:
- 0.40MM BMT METACRAFT T-RIB COLORSTEEL ROOFING INSTALLED TO MANUFACTURERS INSTRUCTIONS

FASCIA, SPOUTING & SOFFIT:
- METACRAFT COLORSTEEL QUAD SPOUTING & 80MM DIA DOWNPIPES, PIPE CLIPS @ 1200CRS. MAX ALLOWABLE CATCHMENT = 70m²
- METACRAFT 185MM COLORSTEEL FASCIA
- JAMES HARDIE 4.5MM HARDIFLEX SOFFIT FOR PAINT FINISH TYPICAL

WALL CLADDINGS:
- RCS 50MM INTEGRA PANEL ON 20MM CAVITY WITH PLASTER FINISH INSTALLED TO MANUFACTURERS INSTRUCTIONS
- JSC TMT TAXON VERTICAL SHIPLAP WEATHERBOARDS INSTALLED TO MANUFACTURERS INSTRUCTIONS

BUILDING UNDERLAYS:
ROOF: THERMAKRAFT 215 SELF SUPPORTING ROOF UNDERLAY
WALLS: MASONS BARRICADE FLEXIBLE AIR BARRIER TO ALL EXTERNAL WALLS

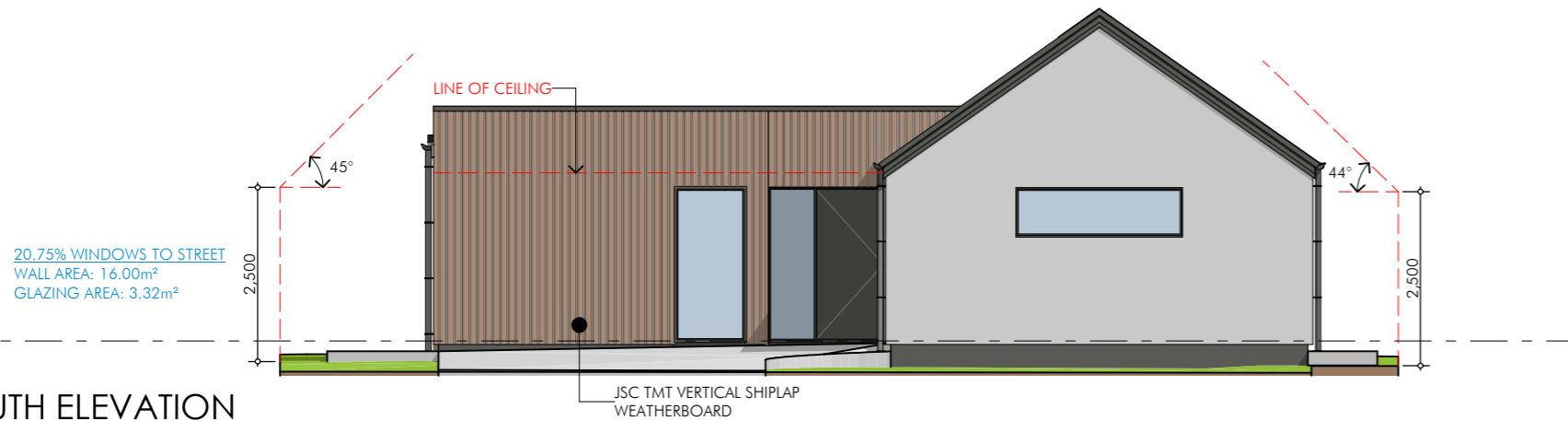
EXTERNAL WINDOW & DOOR JOINERY:
- FAIRVIEW THERMAL LINEAR 40 RESIDENTIAL SERIES THERMALLY BROKEN POWDERCOATED ALUMINIUM DOUBLE GLAZED JOINERY
- ALL GLAZING TO COMPLY WITH NZS 4223

INSULATION (EXCLUDING GARAGE):
- R5.2 (210MM) EARTHWOOL CEILING BATTS TYPICAL COMPRESSED 430MM STRIP AT PERIMETER WITH EAVES BAFFLE INSTALLED OVER TRUSS
- R2.8 (90MM) EARTHWOOL WALL BATTS TO EXTERNAL WALLS & INT GARAGE WALL

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	High risk	3
Eaves width	Very high risk	5
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		10



NORTH ELEVATION
SCALE 1:100 (A3)



SOUTH ELEVATION
SCALE 1:100 (A3)



EAST ELEVATION
SCALE 1:100 (A3)



WEST ELEVATION
SCALE 1:100 (A3)

PROJECT
LOT 74 EARLSBROOK
ADDRESS
22 GREENSLADE DRIVE, LINCOLN

DRAWING
ELEVATIONS

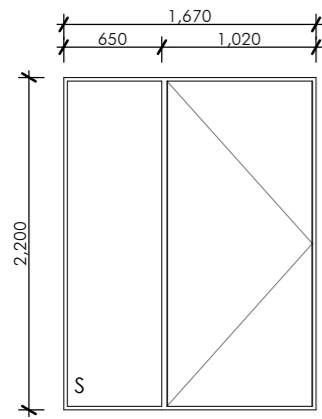
DESIGN D BIRTLES
DRAWN DB, JM
JOB No 25022
SCALE 1:100 @ A3

ISSUE CONSENT
DATE 9/11/2025

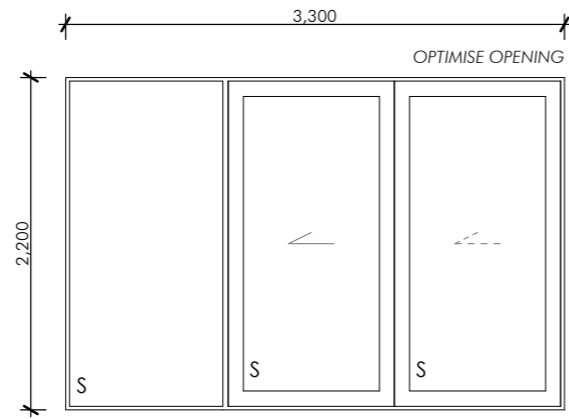
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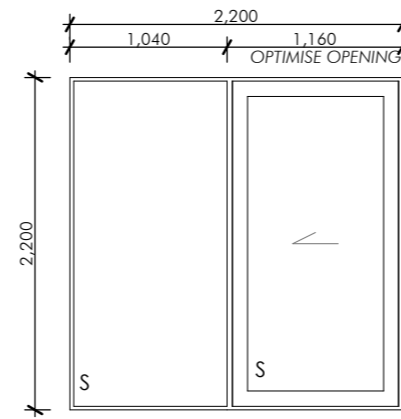
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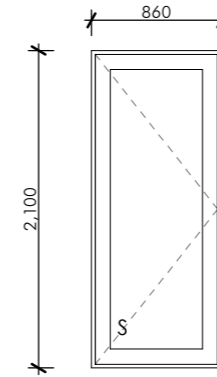
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SELECTED ENTRY DOOR



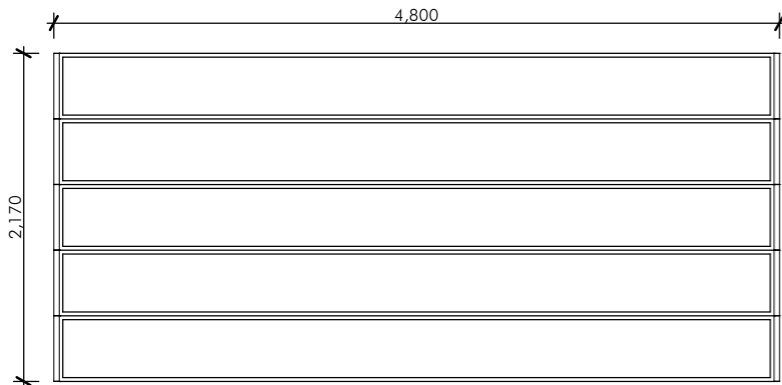
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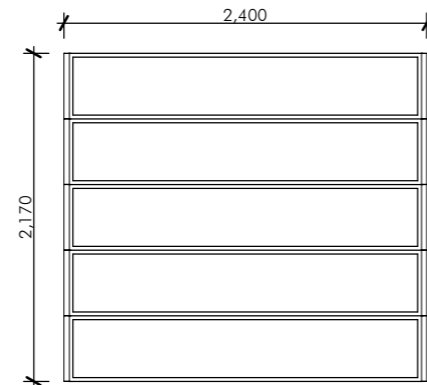
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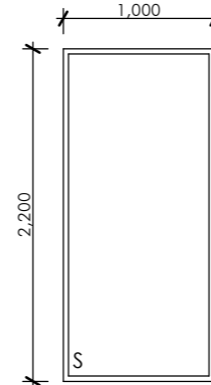
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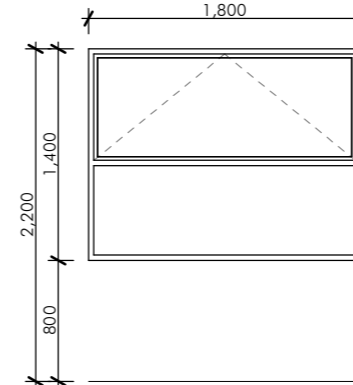
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AUTOMATIC SECTIONAL COLORSTEEL GARAGE DOOR



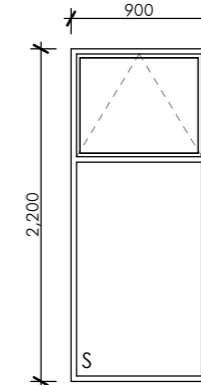
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AUTOMATIC SECTIONAL COLORSTEEL GARAGE DOOR



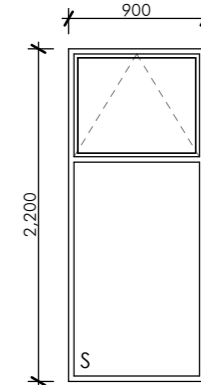
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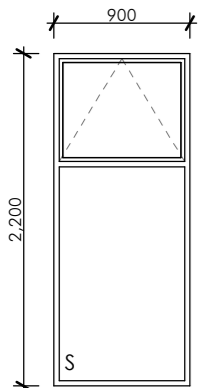
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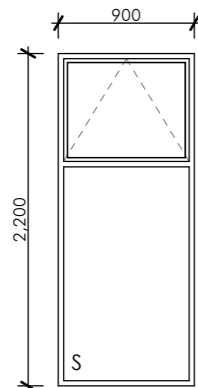
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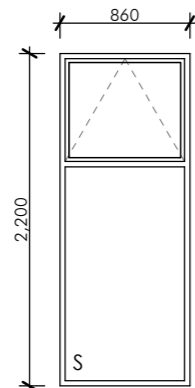
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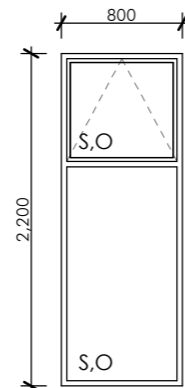
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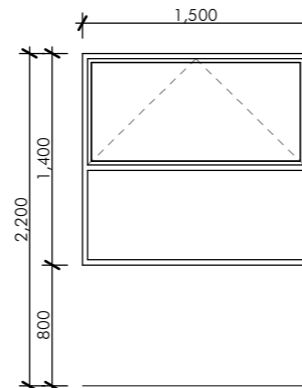
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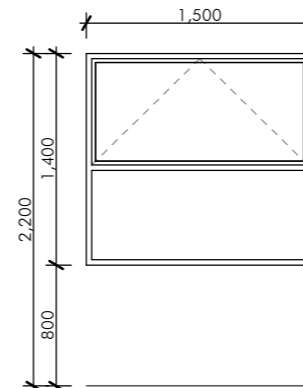
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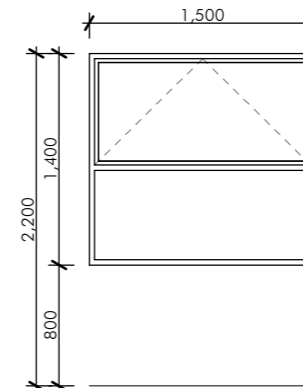
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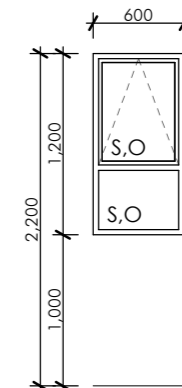
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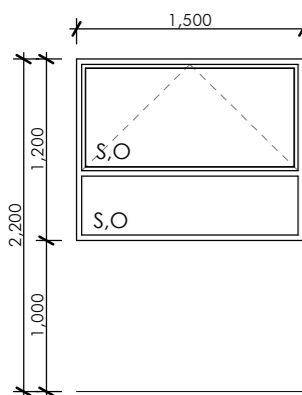
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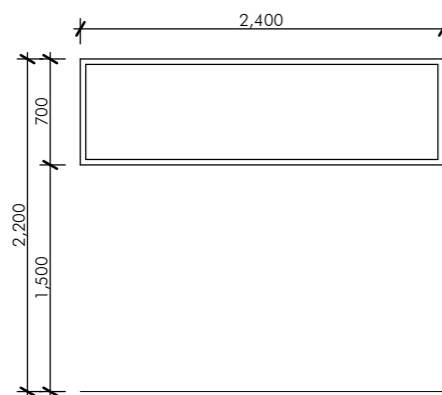
W11



W12



W13



W14

NOTES

FAIRVIEW THERMAL LINEAR 40 THERMALLY BROKEN
POWDERCOATED ALUMINIUM DOUBLE GLAZED JOINERY
ALL UNITS VIEWED FOR EXTERIOR

ALL DIMENSIONS ARE TO ROUGH OPENINGS AND ALL DIMENSIONS MUST BE SITE VERIFIED PRIOR TO MANUFACTURE. CARE TO BE TAKEN SO NEW UNITS BEST MATCH EXISTING

INSTALL SAFETY STAYS TO OPENING WINDOWS WHERE THERE IS A RISK OF FALLING 1.0M AND OVER IN ACCORDANCE WITH NZBC CLAUSE F4

ALL EXTERNAL DOORS LOCKS TO BE OPENABLE WITHOUT KEY

ALL GLAZING TO COMPLY WITH NZS 4223

O = OBSCURED
S = GRADE A TOUGHENED SAFETY GLAZING

JOINERY & GLAZING TO BE R0.50 MIN
SPACER: THERMALLY IMPROVED
GLASS: LOW E4/CLEAR
GAS: ARGON
FRAME: THERMALLY BROKEN
R VALUE ACHIEVED = R0.48

IMPORTANT
JOINERY SUITE AND PANE SIZE TO BE
CONFIRMED FOR HIGH WIND ZONE BY
MANUFACTURER. PLEASE NOTIFY DESIGNER
BEFORE COMMENCING MANUFACTURE IF ANY
CHANGE IS REQUIRED

PROJECT
LOT 74 EARLSBROOK

22 GREENSLADE DRIVE, LINCOLN
ADDRESS

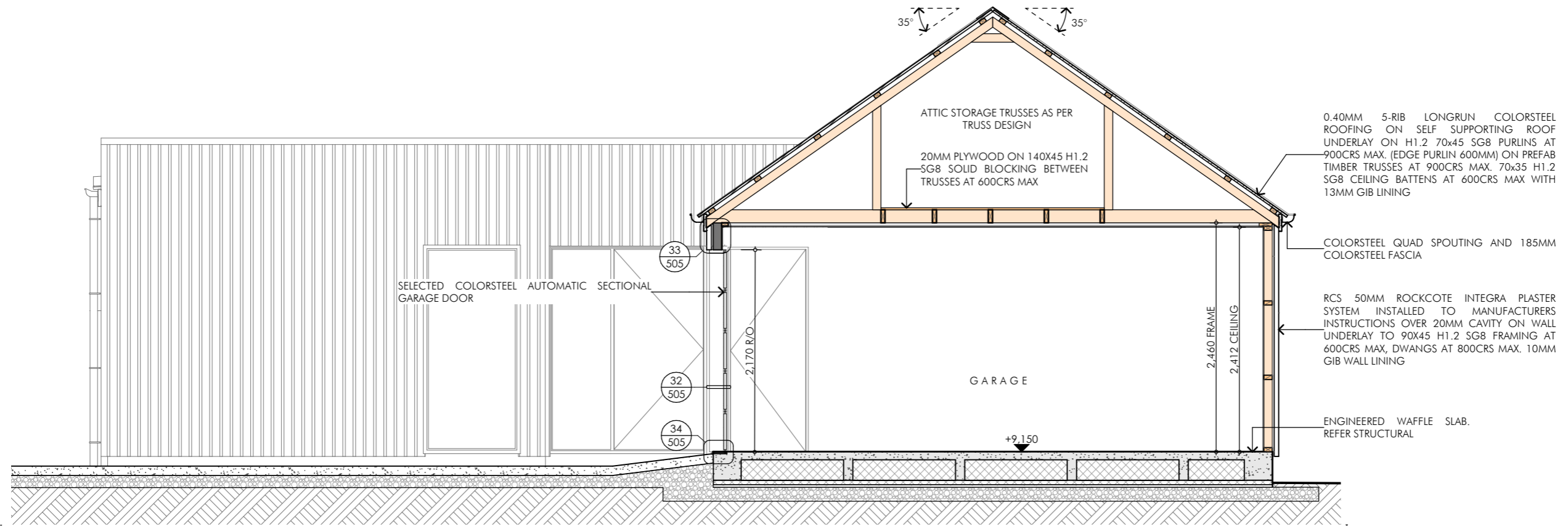
DRAWING
**WINDOW & DOOR
SCHEDULE**

DESIGN D BIRTLES
DRAWN DB, JM
JOB No 25022
SCALE 1:50 @ A3

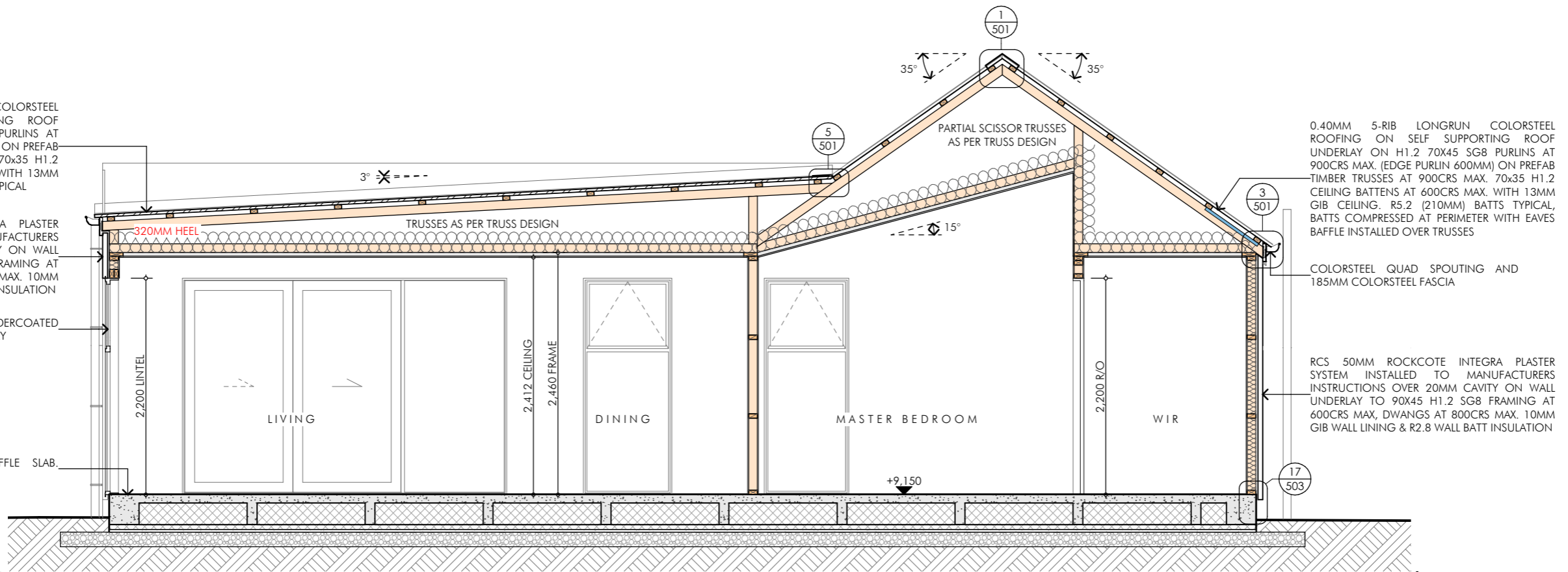
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DATE 9/11/2025

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302



SECTION A-A
SCALE 1:50 (A3)



SECTION B-B
SCALE 1:50 (A3)

PROJECT
LOT 74 EARLSBROOK
ADDRESS
22 GREENSLADE DRIVE, LINCOLN

DRAWING
SECTIONS A & B

DESIGN D BIRTLES
DRAWN DB, JM
JOB No 25022
SCALE 1:50 @ A3

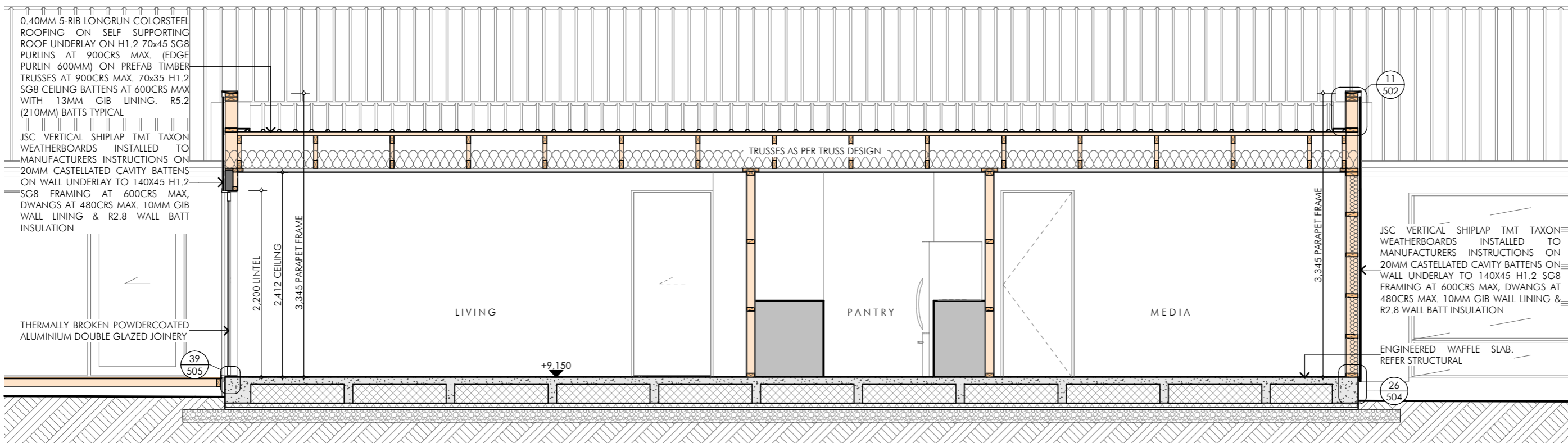
ISSUE CONSENT
DATE 9/11/2025

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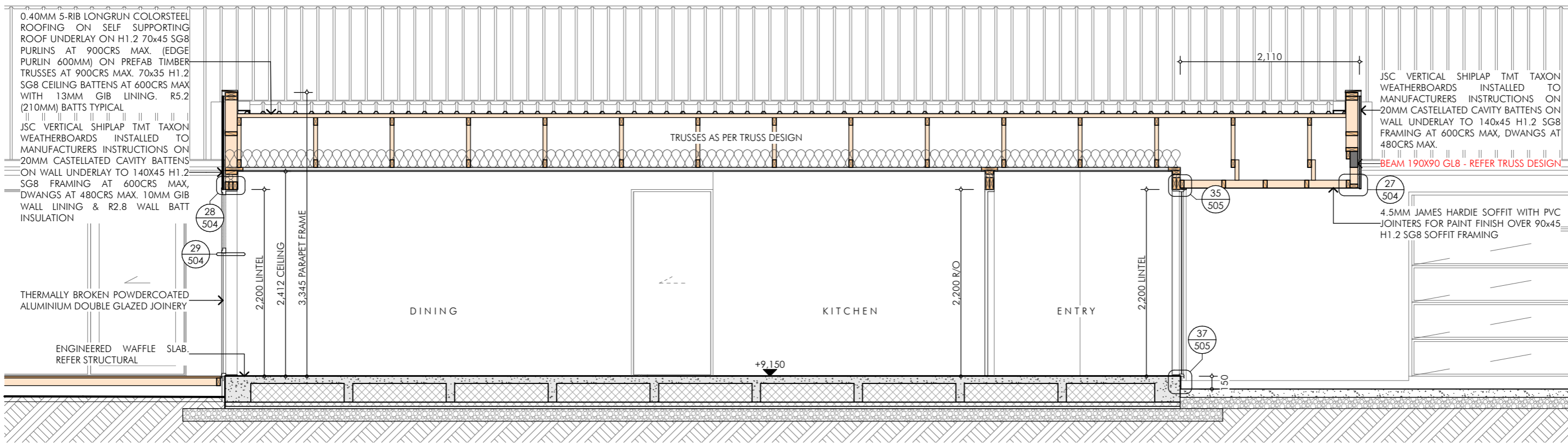
401

PROJECT **LOT 74 EARLSBROOK**

22 GREENSLADE DRIVE, LINCOLN
ADDRESS



SECTION C-C
SCALE 1:50 (A3)



SECTION D-D
SCALE 1:50 (A3)

DRAWING **SECTIONS C & D**

DESIGN D BIRTLES
DRAWN DB, JM
JOB No 25022
SCALE 1:50 @ A3

ISSUE CONSENT
DATE 9/11/2025

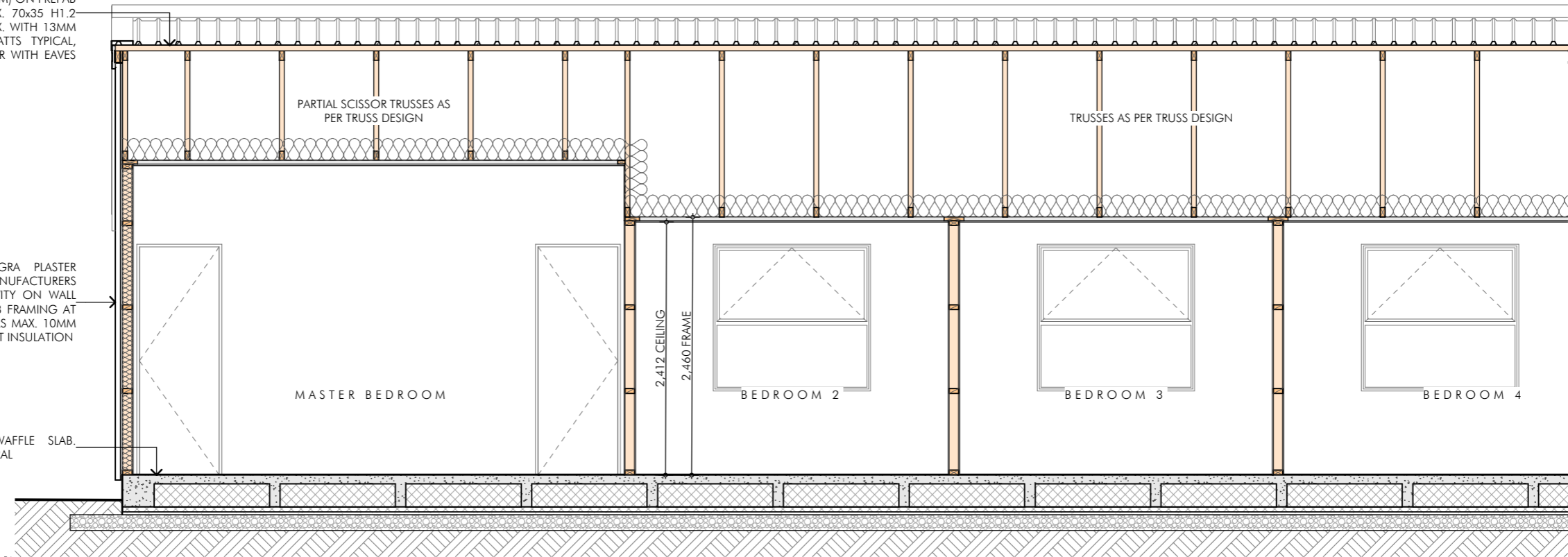
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REVISION	
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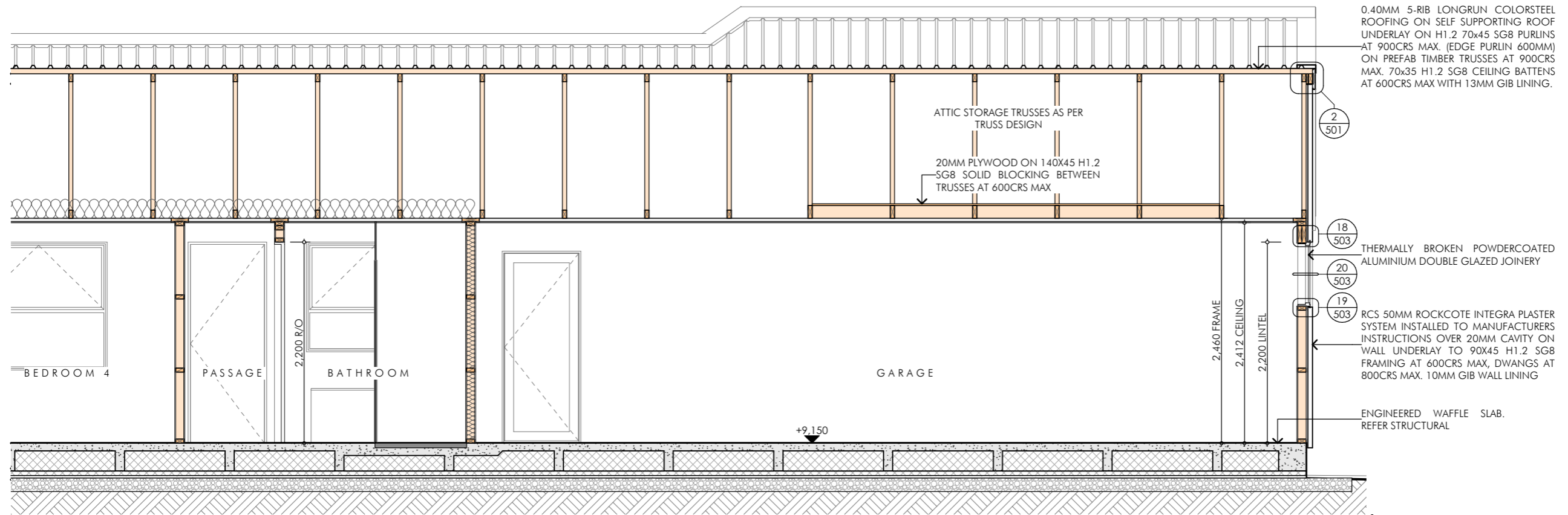
0.40MM 5-RIB LONGRUN COLORSTEEL ROOFING ON SELF SUPPORTING ROOF UNDERLAY ON H1.2 70X45 SG8 PURLINS AT 900CRS MAX. (EDGE PURLIN 600MM) ON PREFAB TIMBER TRUSSES AT 900CRS MAX. 70x35 H1.2 CEILING BATTENS AT 600CRS MAX. WITH 13MM GIB CEILING. R5.2 (210MM) BATTS TYPICAL, BATTS COMPRESSED AT PERIMETER WITH EAVES BAFFLE INSTALLED OVER TRUSSES

RCS 50MM ROCKCOTE INTEGRA PLASTER SYSTEM INSTALLED TO MANUFACTURERS INSTRUCTIONS OVER 20MM CAVITY ON WALL UNDERLAY TO 2/90X45 H1.2 SG8 FRAMING AT 600CRS MAX, DWANGS AT 800CRS MAX. 10MM GIB WALL LINING & R2.8 WALL BATT INSULATION

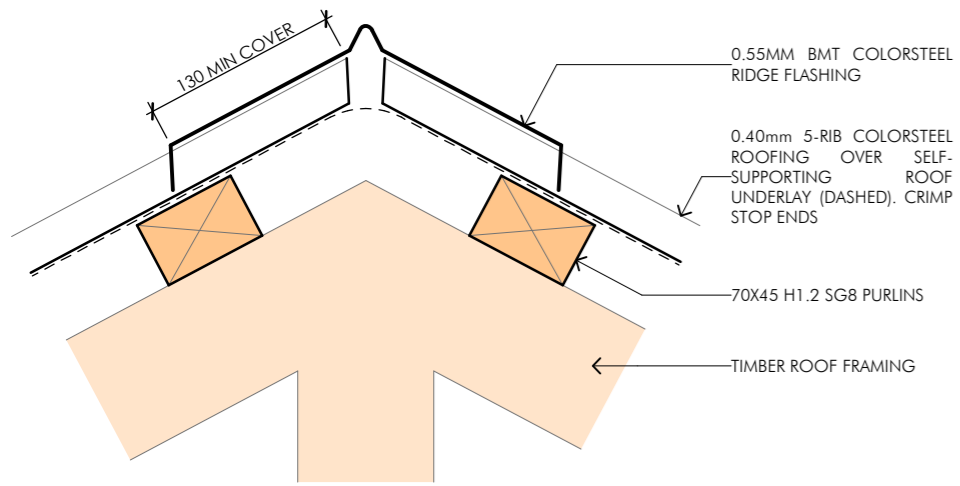
ENGINEERED WAFFLE SLAB. REFER STRUCTURAL



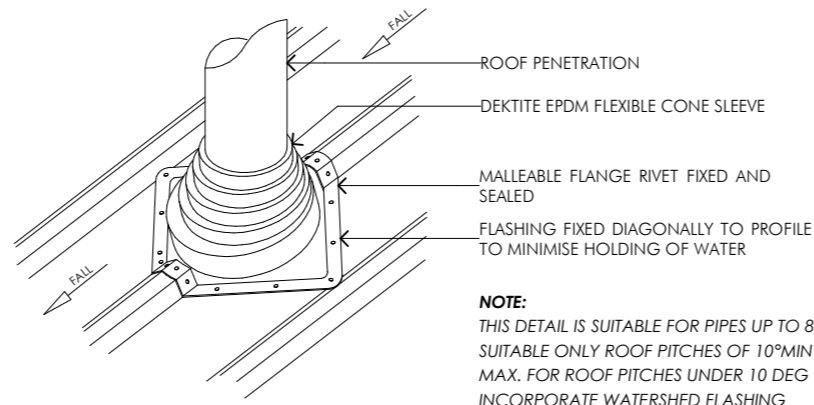
SECTION E-E
SCALE 1:50 (A3)



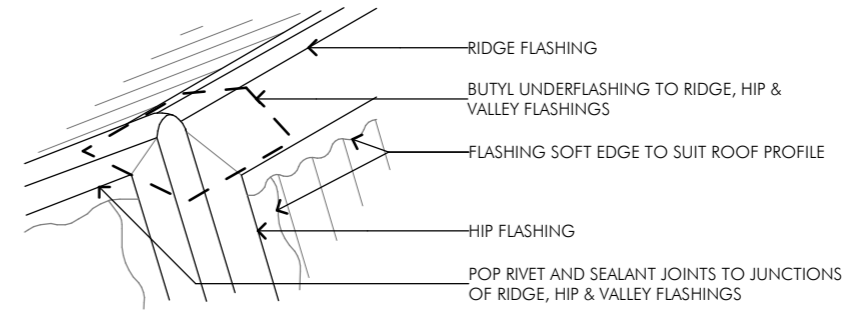
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SCALE 1:50 (A3)



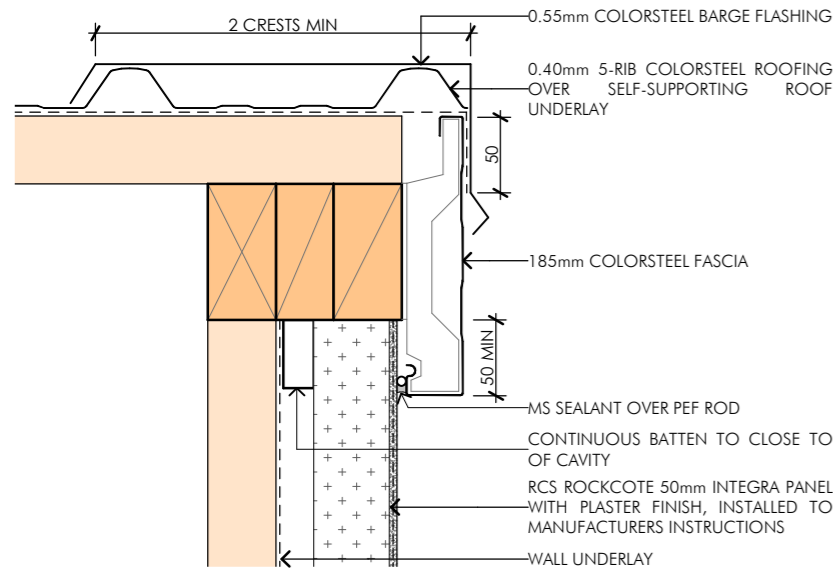
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401 RIDGE DETAIL TYPICAL
SCALE 1:5



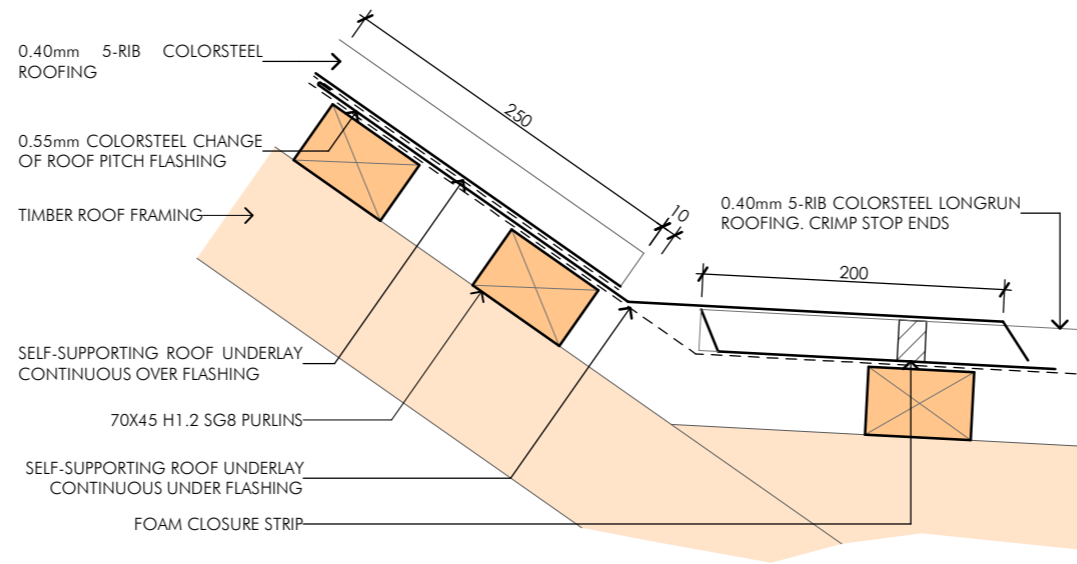
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- ROOF PENETRATION TYPICAL
SCALE NTS



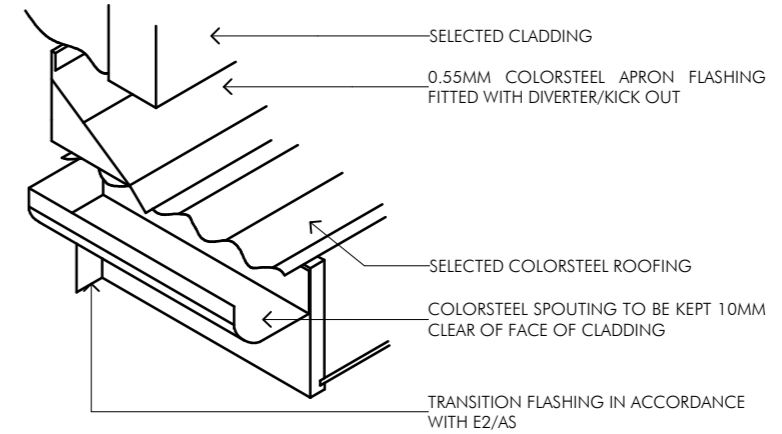
7
- BUTYNOL UNDER FLASHING
SCALE 1:5



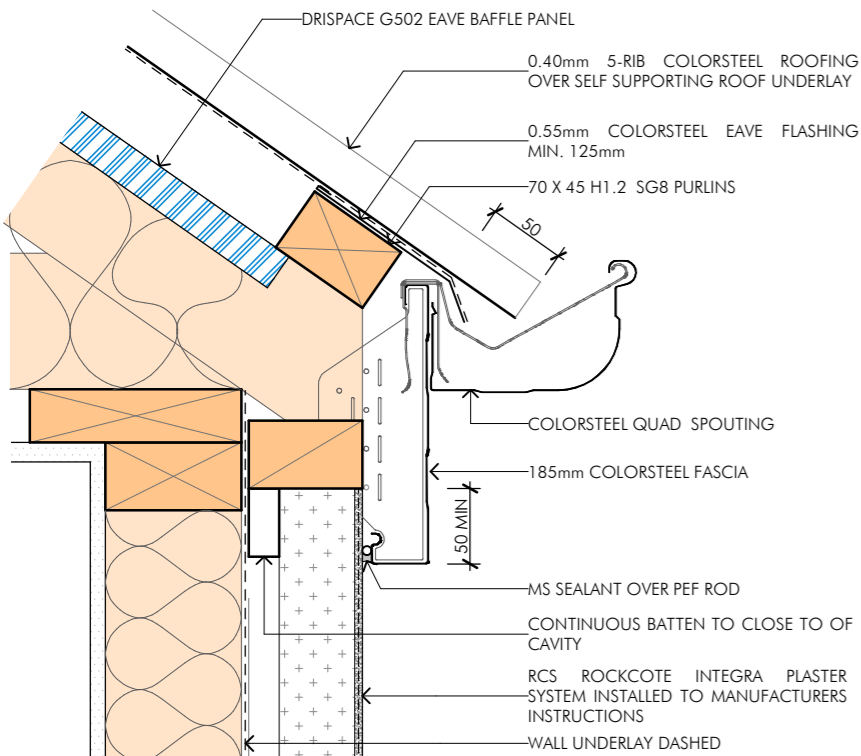
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403 INTEGRA BARGE DETAIL
SCALE 1:5



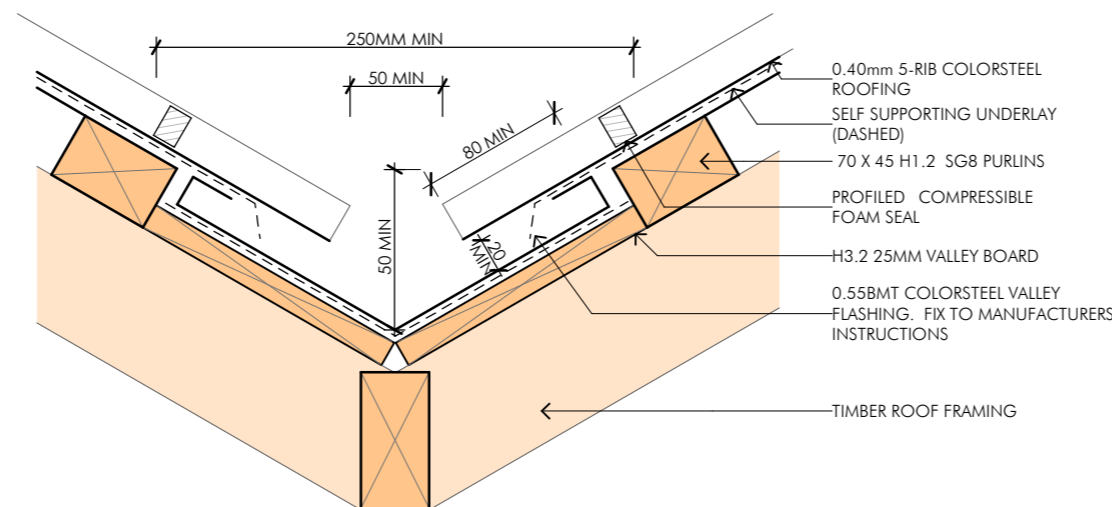
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401 CHANGE OF ROOF PITCH DETAIL
SCALE 1:5



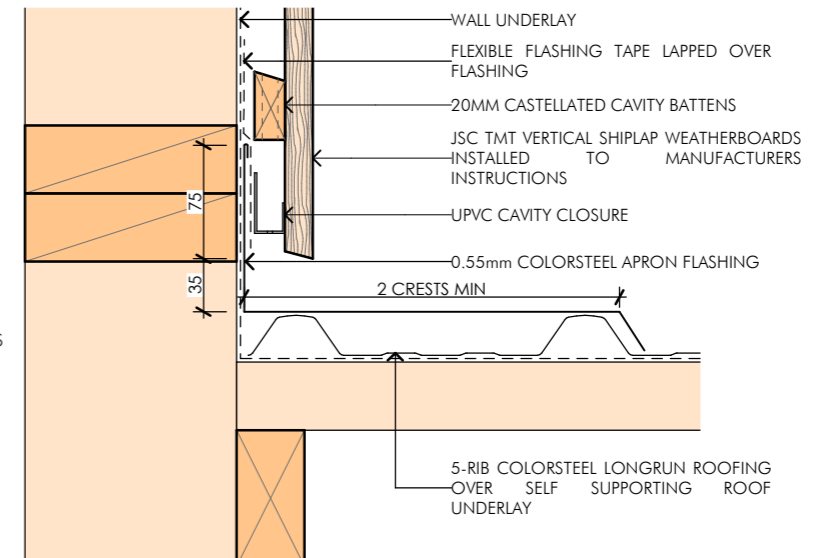
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- APRON DIVERTER
SCALE NTS



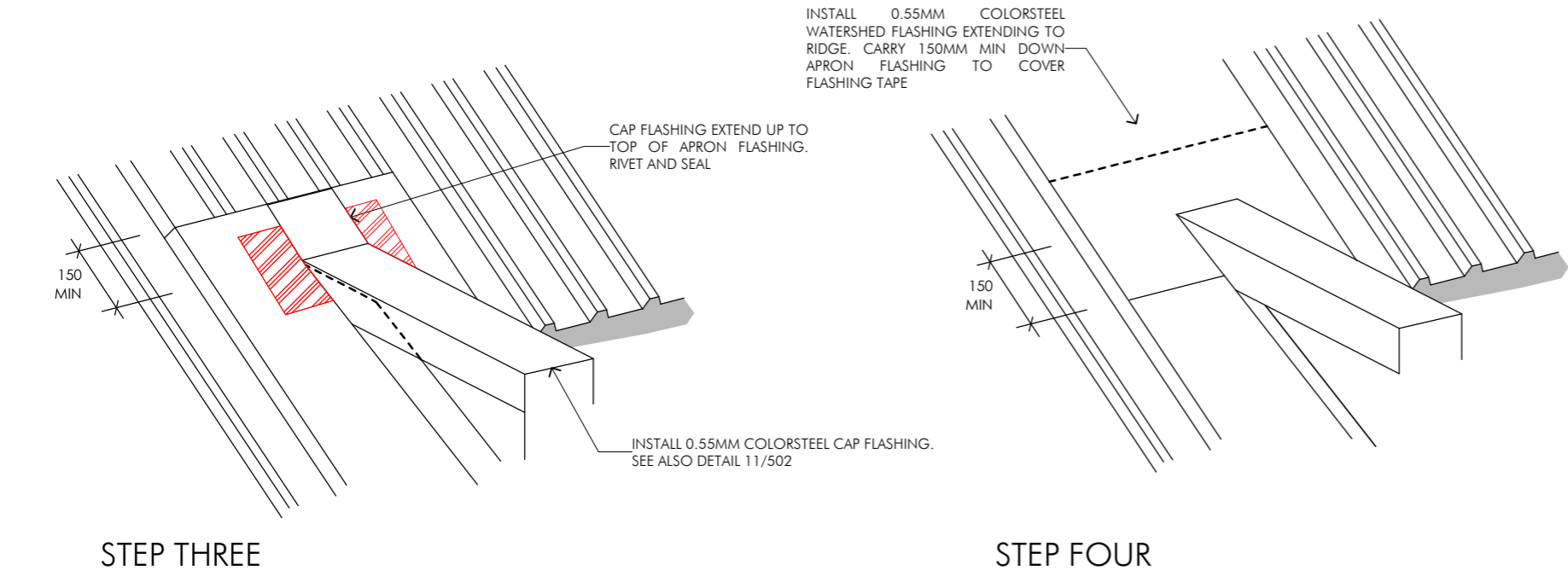
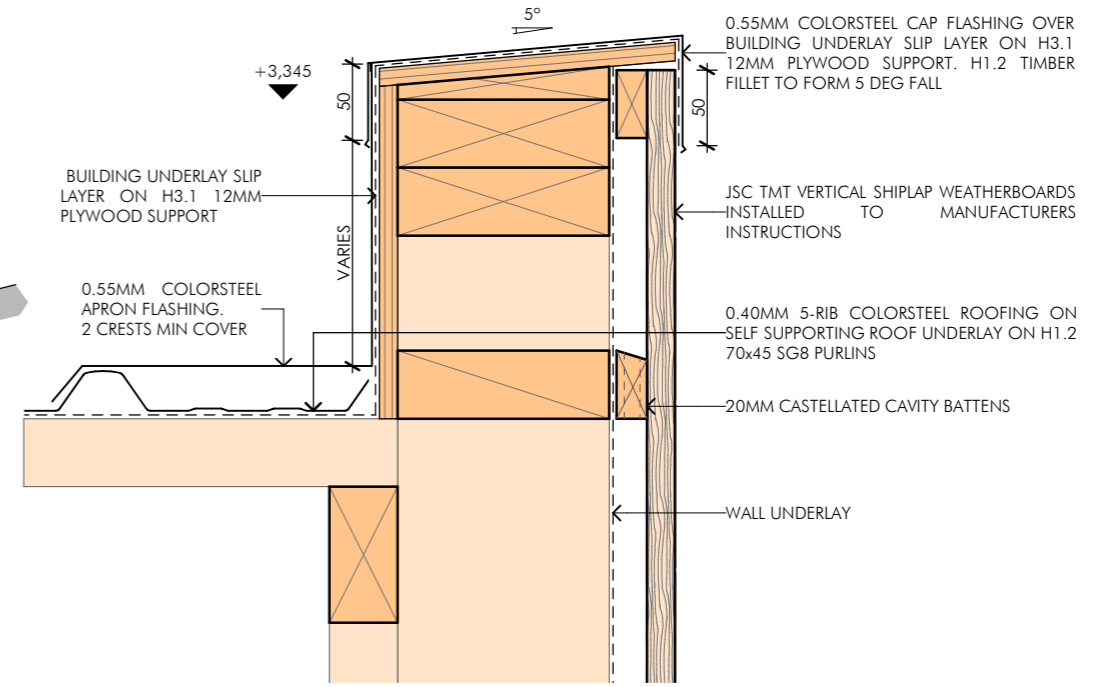
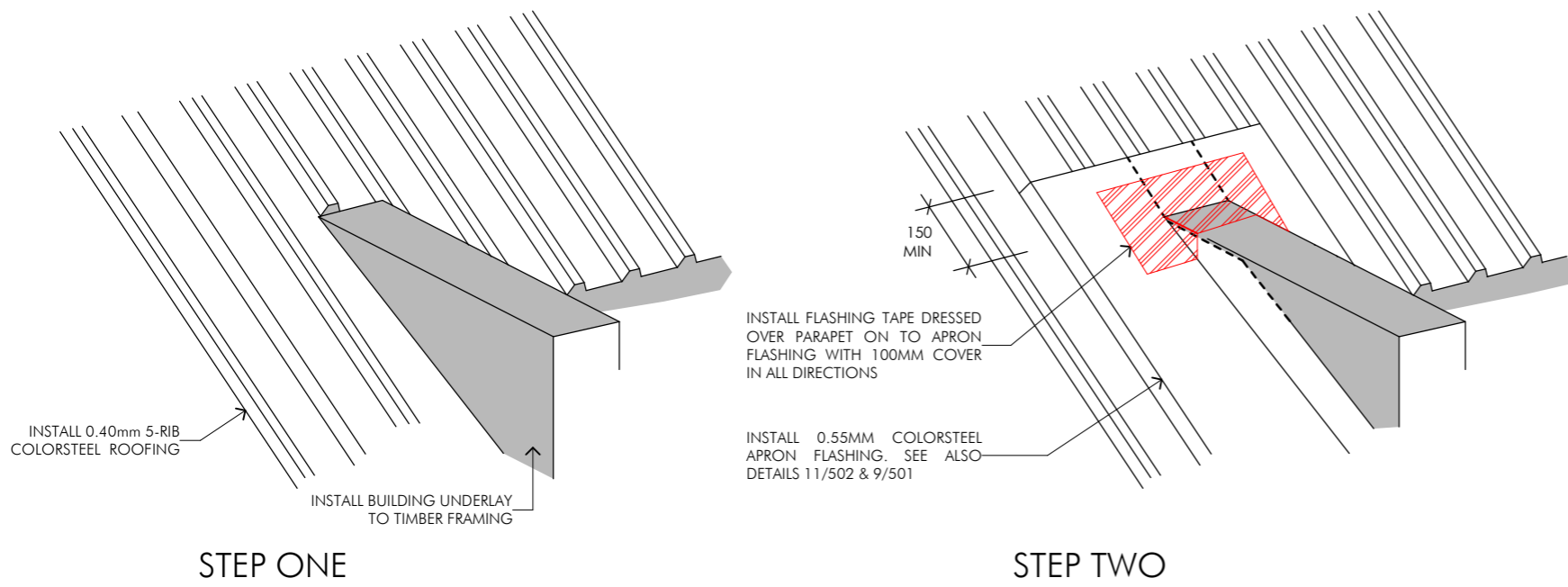
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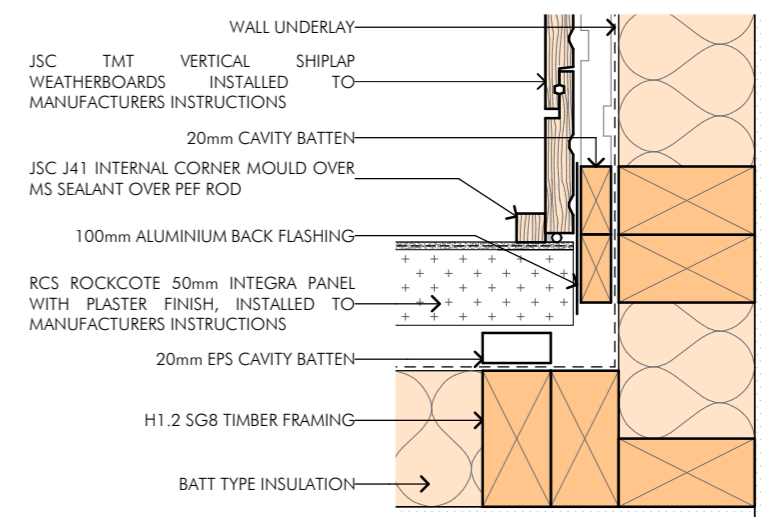
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204 VALLEY DETAIL TYPICAL
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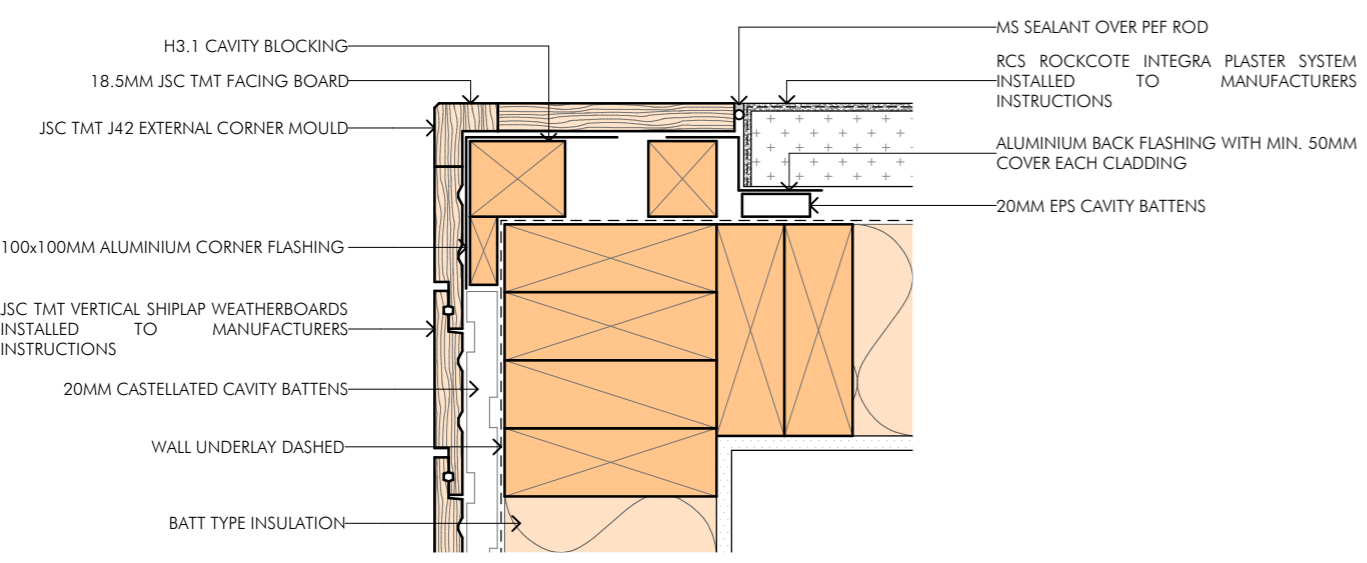
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204 JSC TMT WB APRON DETAIL
SCALE 1:5



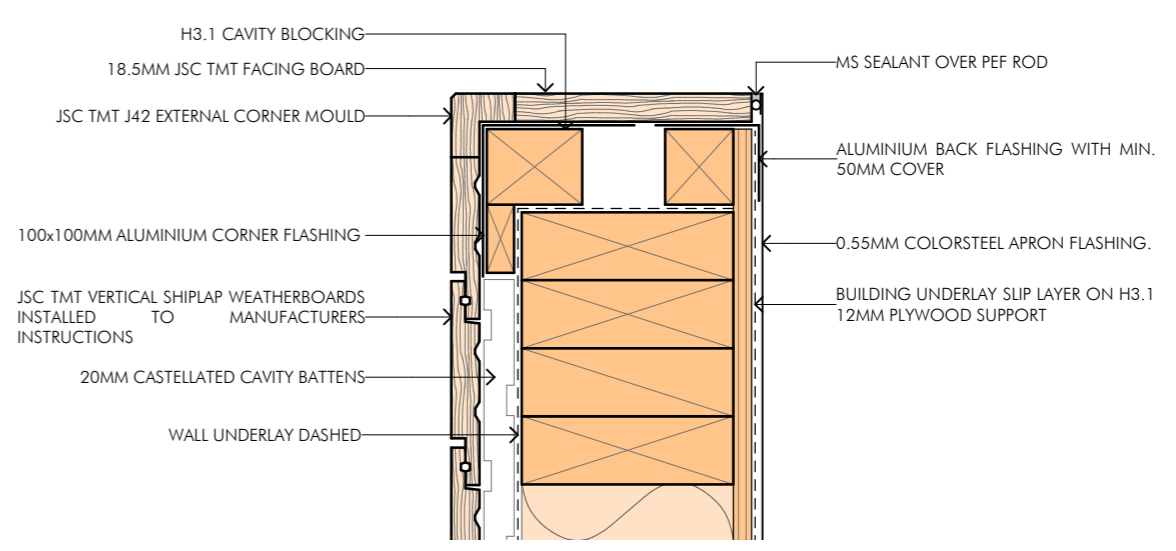
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402 JSC TMT WB PARAPET & APRON
SCALE 1:5



10
204 PARAPET WALL TO COLORSTEEL ROOF JUNCTION
SCALE NTS



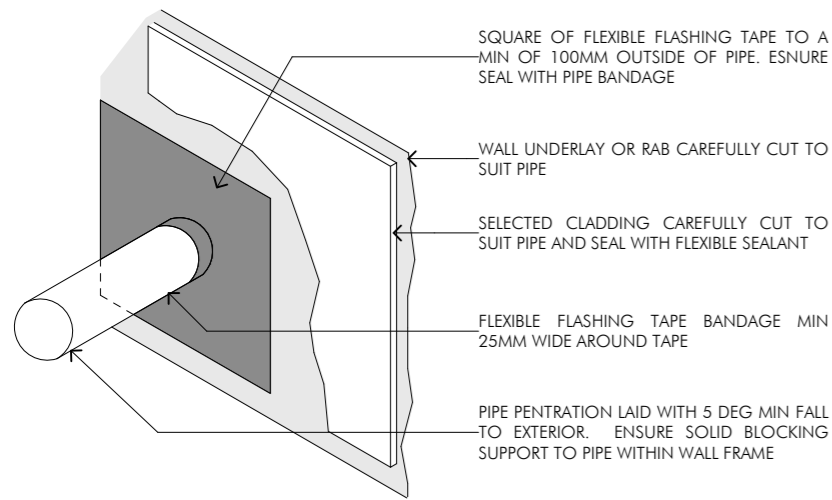
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201 JSC TMT WB TO INTEGRA INTERNAL CORNER
SCALE 1:5



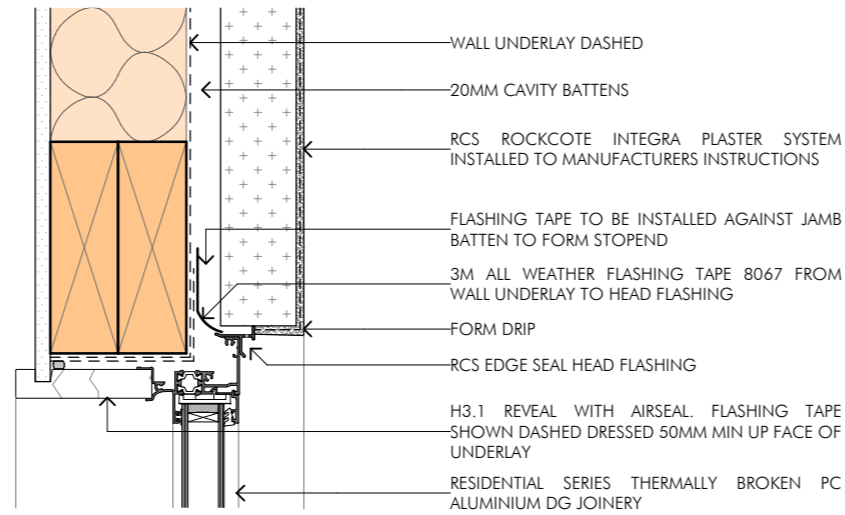
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201 JSC TMT WB EXTERNAL CORNER TO INTEGRA
SCALE 1:5

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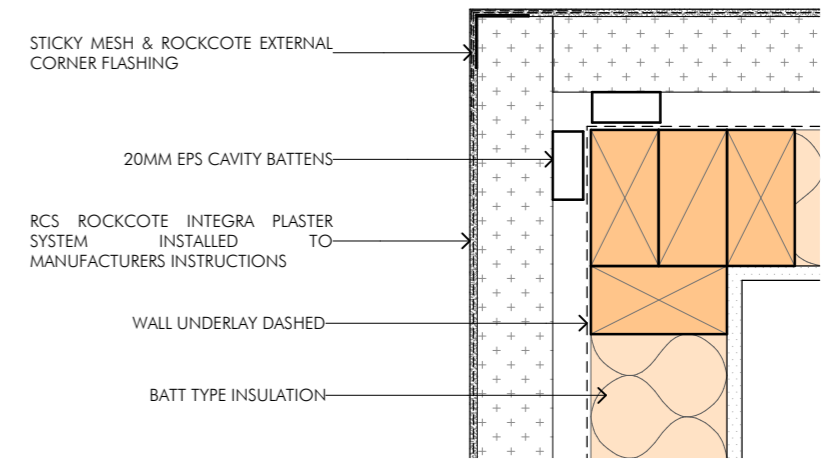
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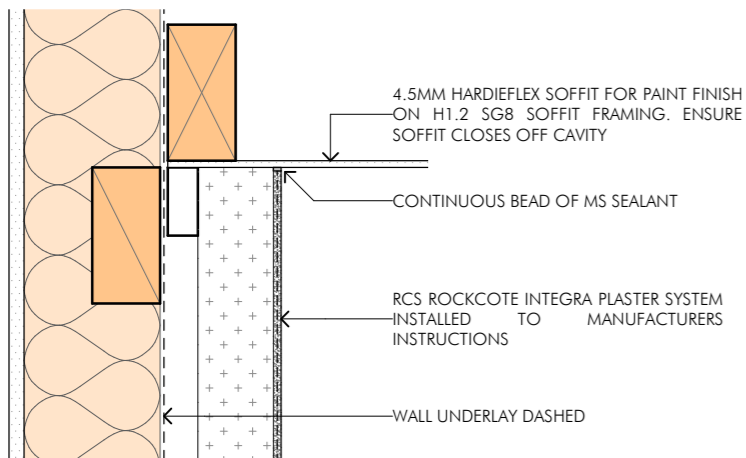
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INTEGRA PIPE PENETRATION
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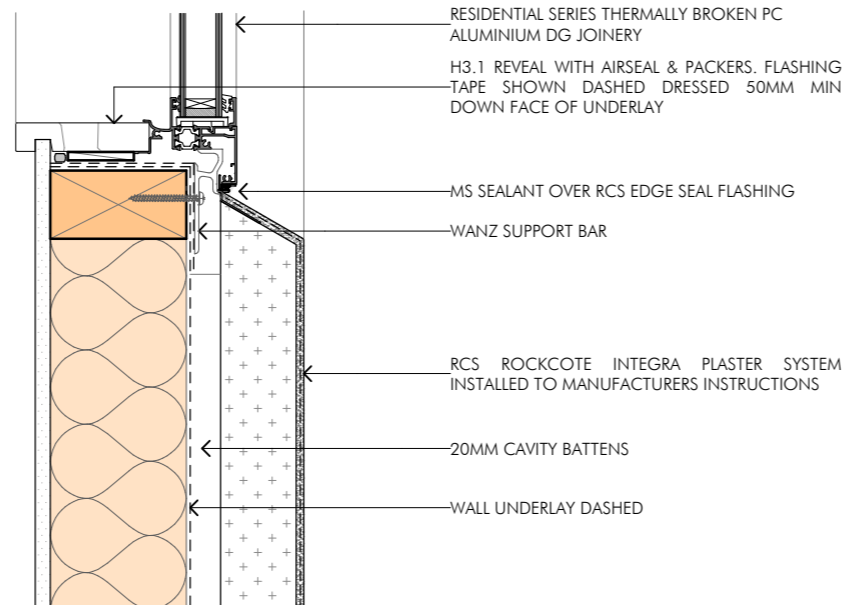
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INTEGRA WINDOW HEAD
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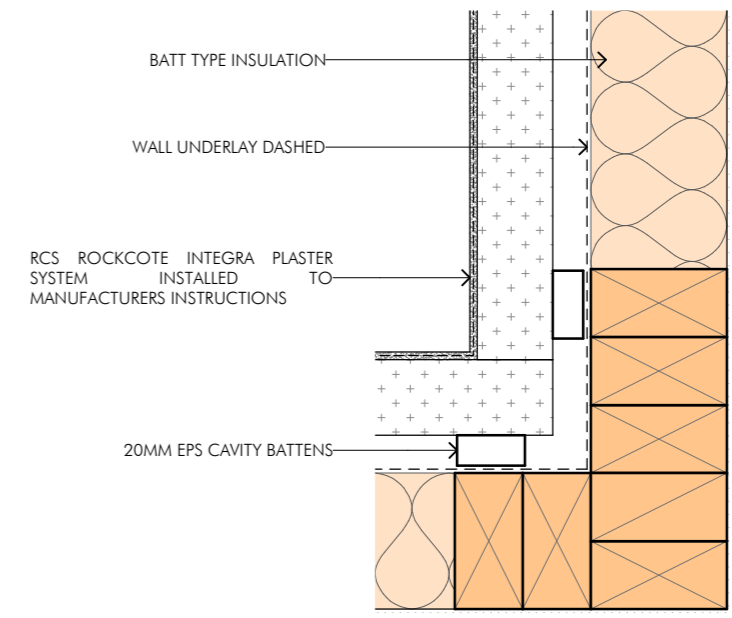
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INTEGRA EXTERNAL CORNER
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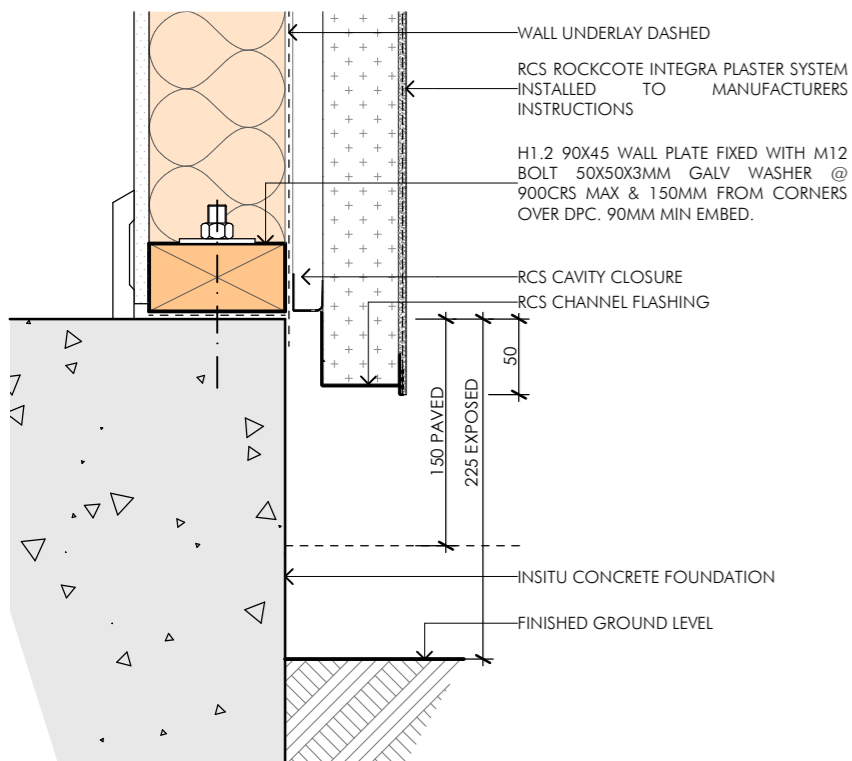
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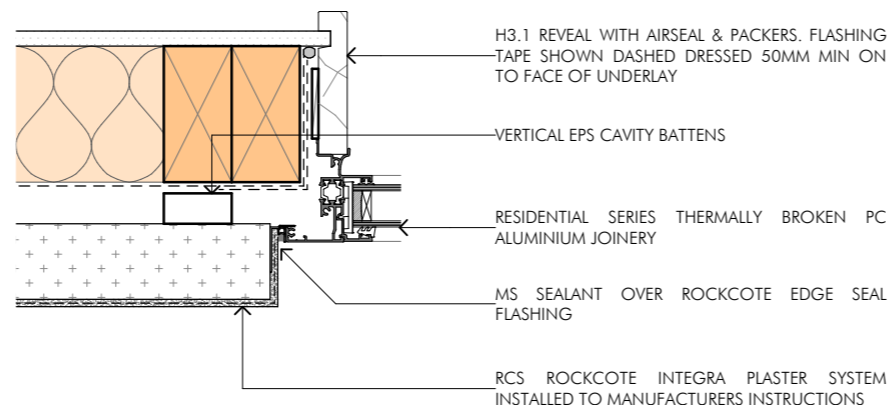
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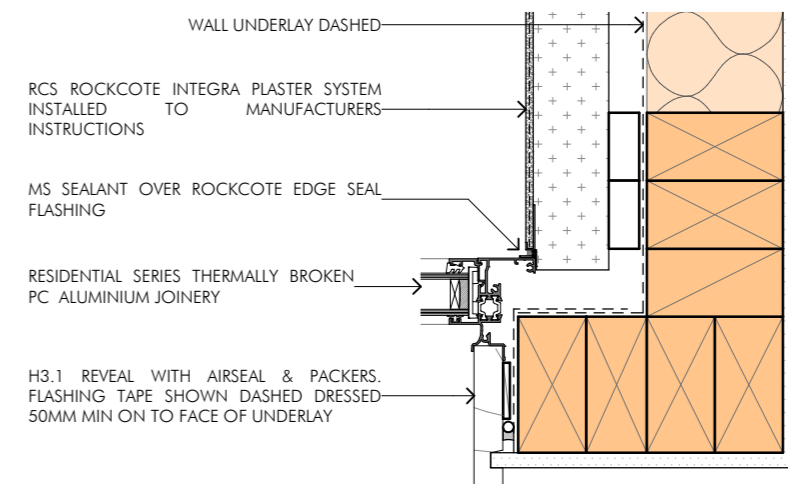
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INTEGRA INTERNAL CORNER
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17
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INTEGRA TO FOUNDATION
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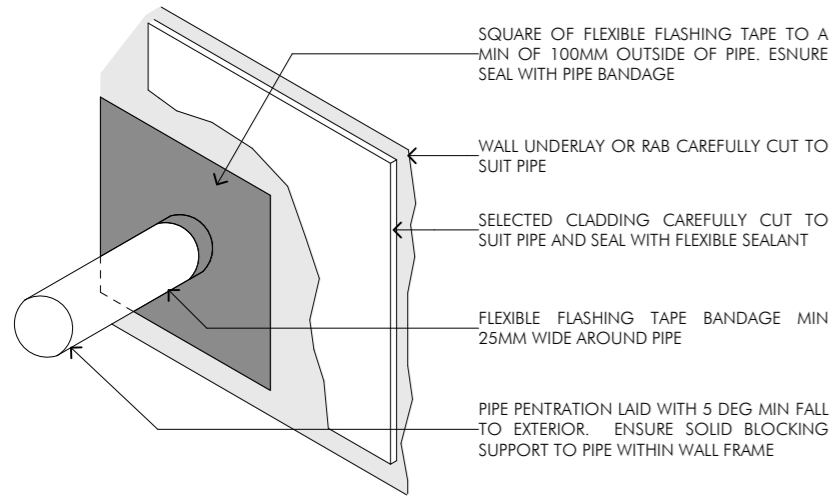


20
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INTEGRA WINDOW JAMB 1
SCALE 1:5

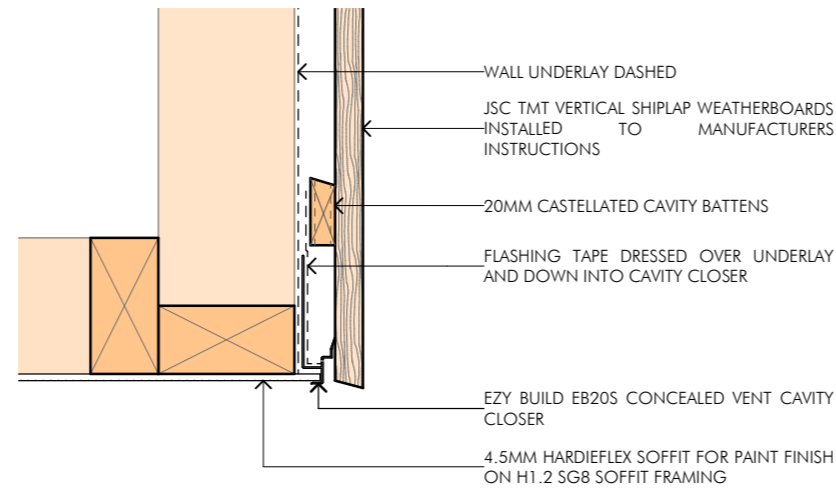


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INTEGRA WINDOW JAMB 2
SCALE 1:5

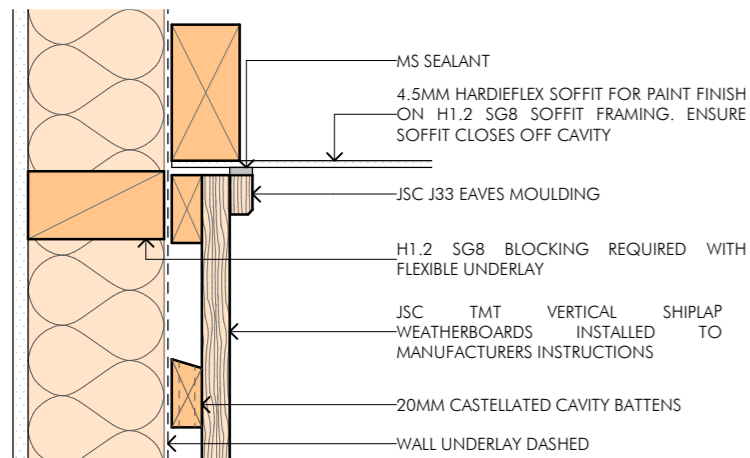
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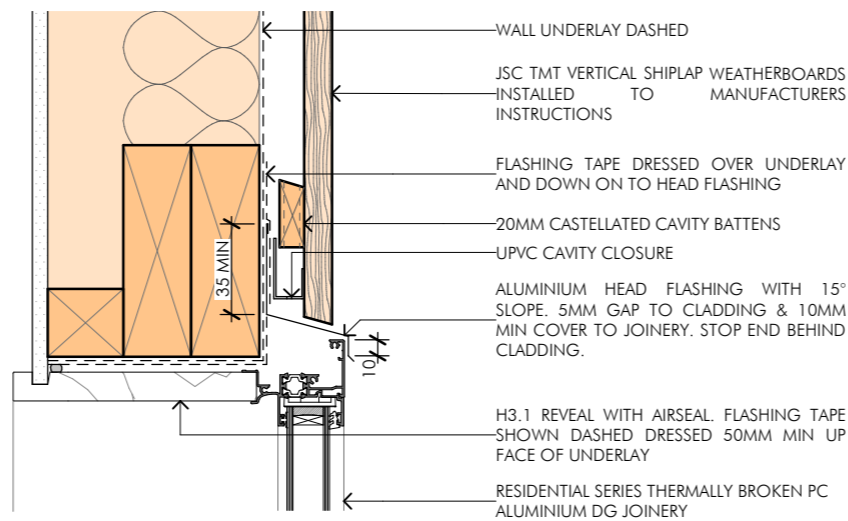
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JSC TMT WB PIPE PENETRATION
SCALE 1:5



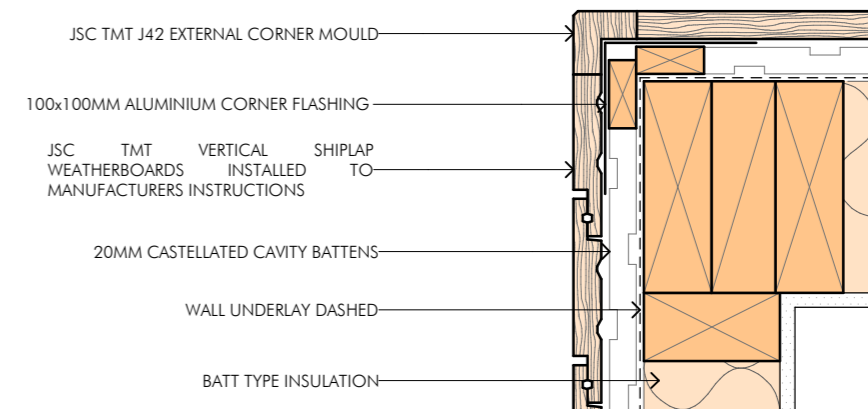
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JSC TMT WB TO SOFFIT 2
SCALE 1:5



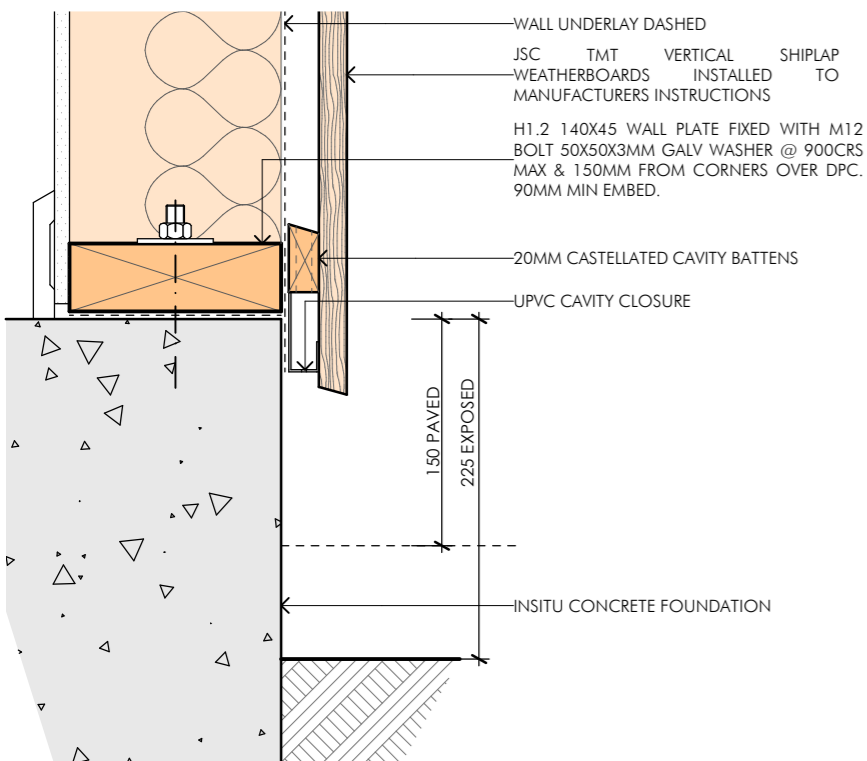
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JSC TMT WB TO SOFFIT 1
SCALE 1:5



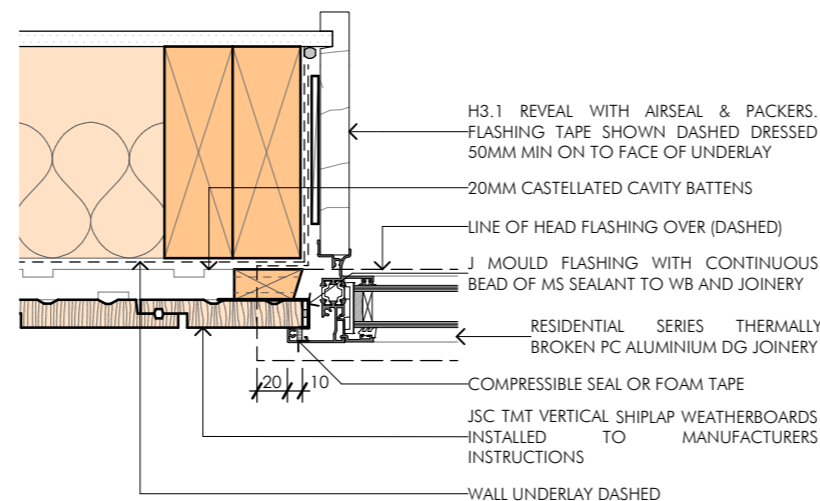
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JSC TMT WB WINDOW HEAD
SCALE 1:5



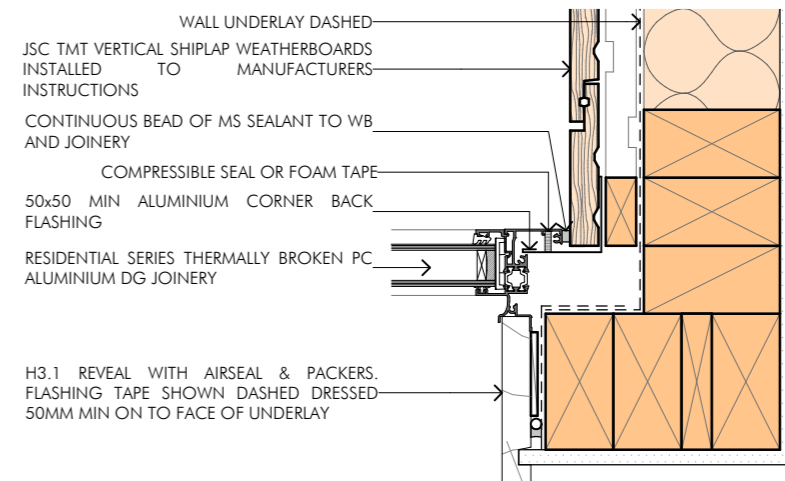
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JSC TMT WB EXTERNAL CORNER
SCALE 1:5



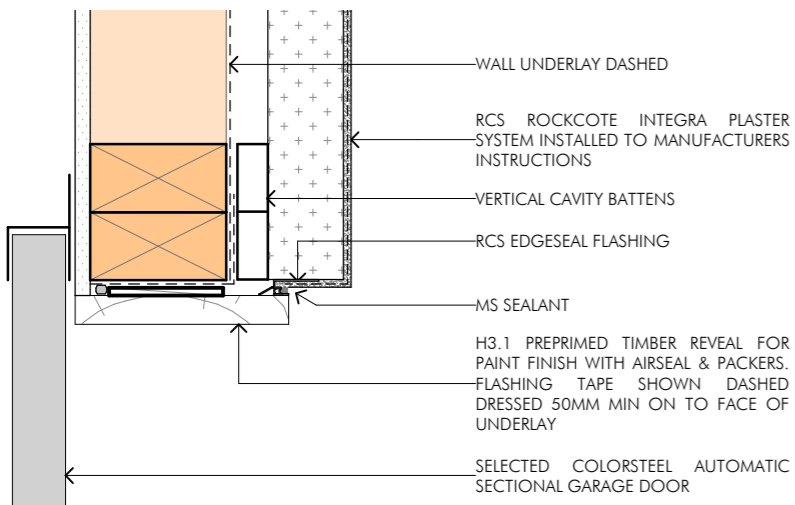
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402
JSC TMT WB TO FOUNDATION
SCALE 1:5



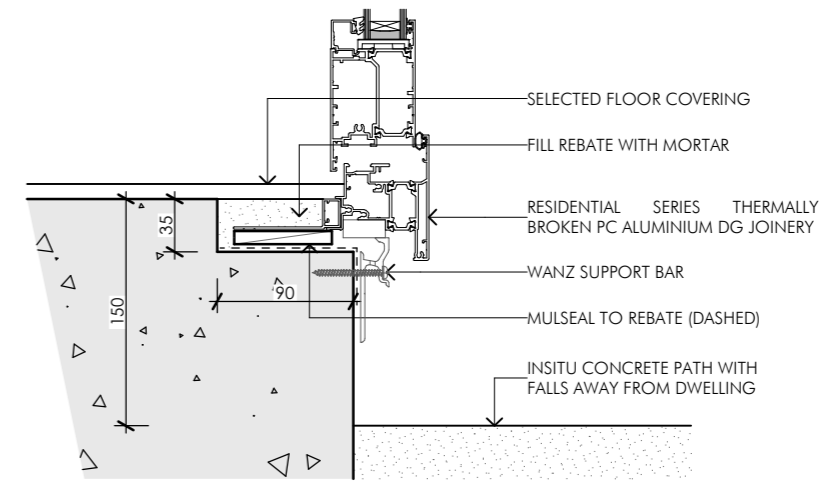
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JSC TMT WB WINDOW JAMB 1
SCALE 1:5



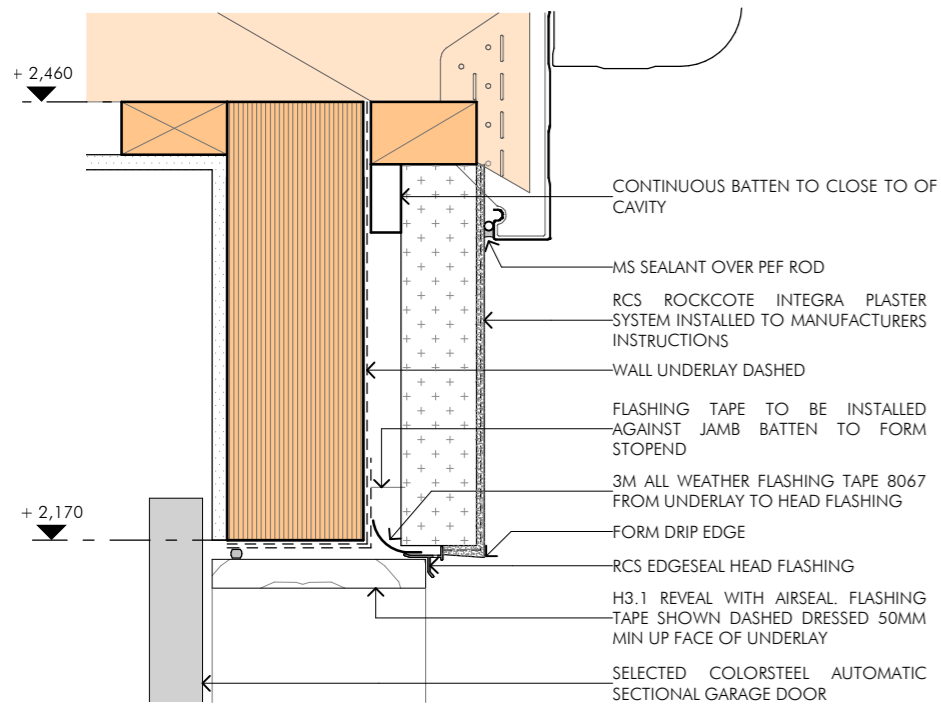
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201
JSC TMT WB WINDOW JAMB 2
SCALE 1:5



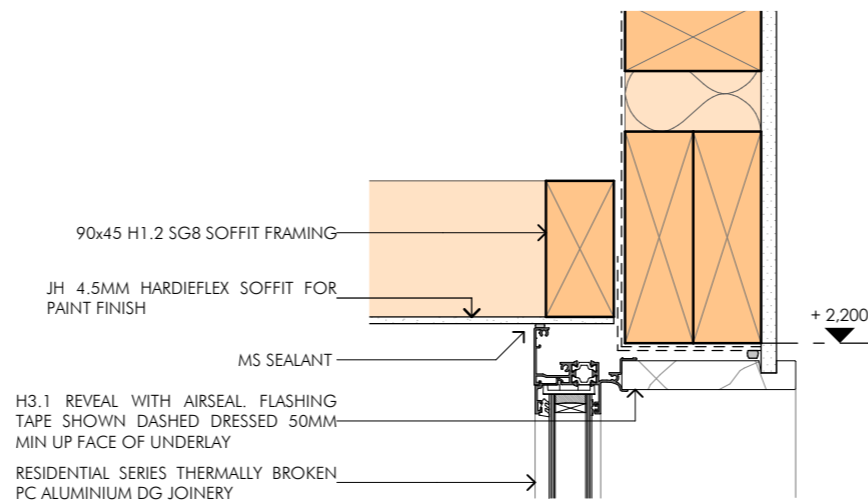
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401 INTEGRA GARAGE DOOR JAMB
SCALE 1:5



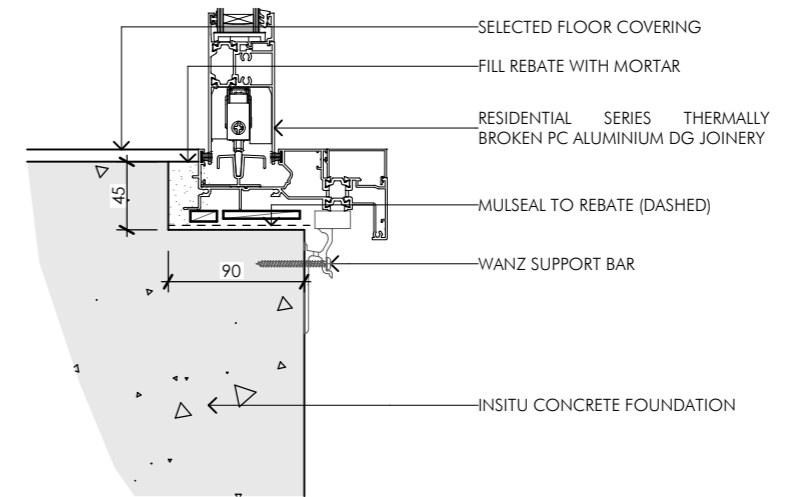
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402 ENTRY DOOR SILL
SCALE 1:5



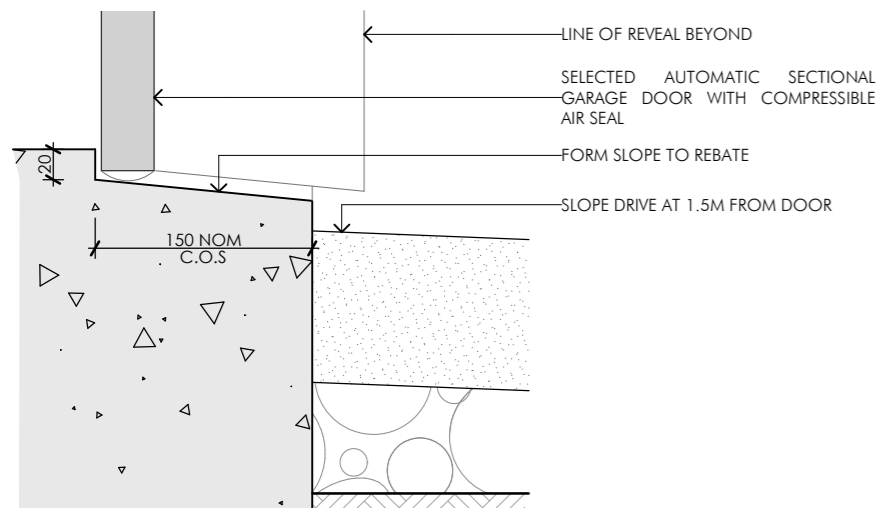
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401 INTEGRA GARAGE DOOR HEAD
SCALE 1:5



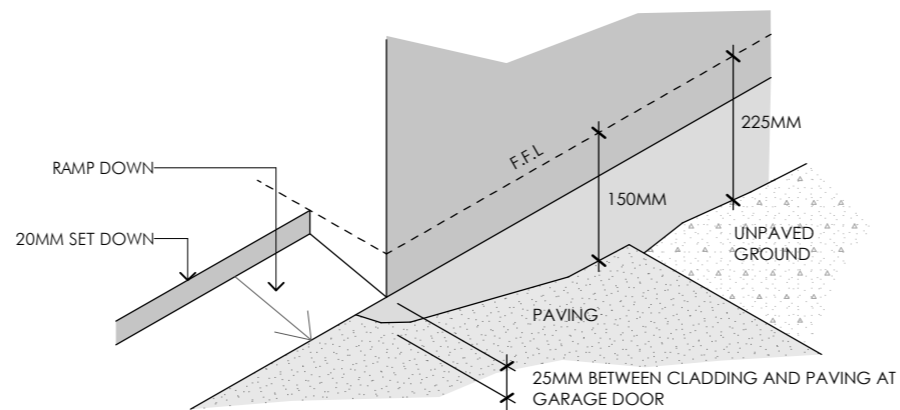
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402 WINDOW HEAD TO SOFFIT
SCALE 1:5



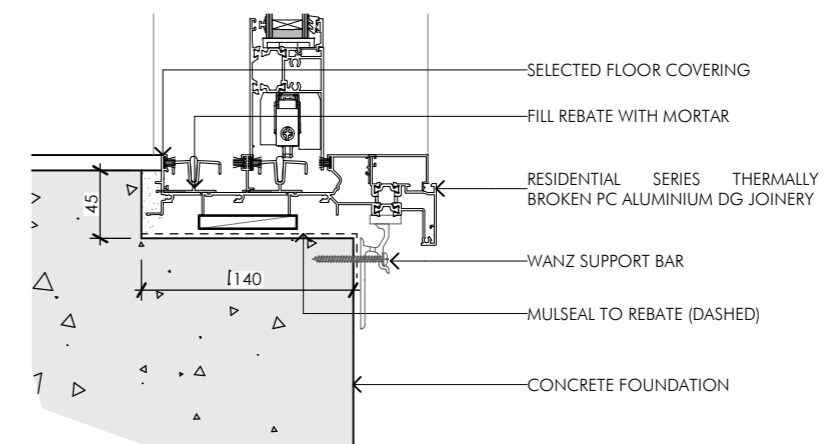
38
301 SLIDING DOOR SILL
SCALE 1:5



34
401 GARAGE DOOR REBATE
SCALE 1:5



36
- GARAGE DOOR THRESHOLD
SCALE NTS



39
402 STACKING SLIDER DOOR SILL
SCALE 1:5



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CONTRACTOR TO CHECK AND CONFIRM ALL DIMENSIONS ONSITE

ALL PROPRIETARY MATERIALS AND COMPONENTS MUST BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS AND/OR SUPPLIERS INSTRUCTIONS. ALL CONSTRUCTION TO COMPLY WITH RELEVANT N.Z. STANDARDS, NZ BUILDING CODE AND LOCAL AUTHORITY BY LAWS.

PROJECT
LOT 74 EARLSBROOK

22 GREENSLADE DRIVE, LINCOLN
ADDRESS

DRAWING
DETAILS

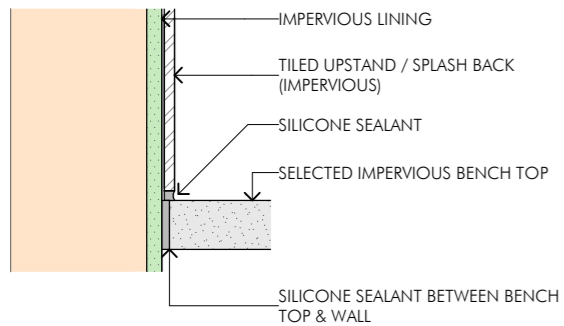
DESIGN D BIRTLES
DRAWN DB, JM
JOB No 25022
SCALE 1:5 @ A3

ISSUE CONSENT
DATE 9/11/2025

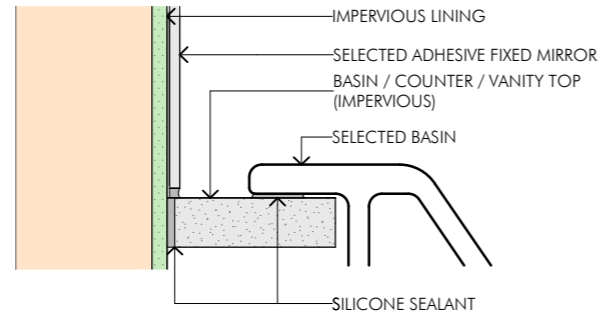
REVISION	
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505

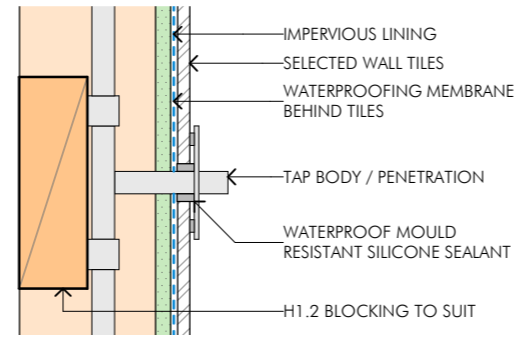
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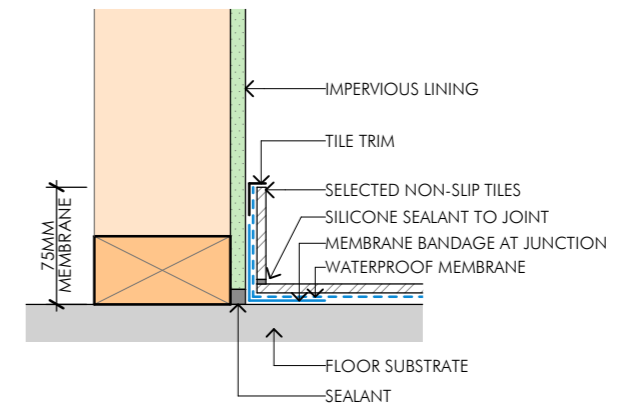
A KITCHEN BENCH TO WALL
SCALE 1:5



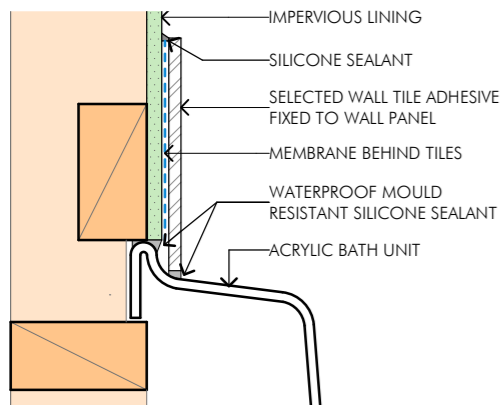
B BASIN / VANITY TO WALL
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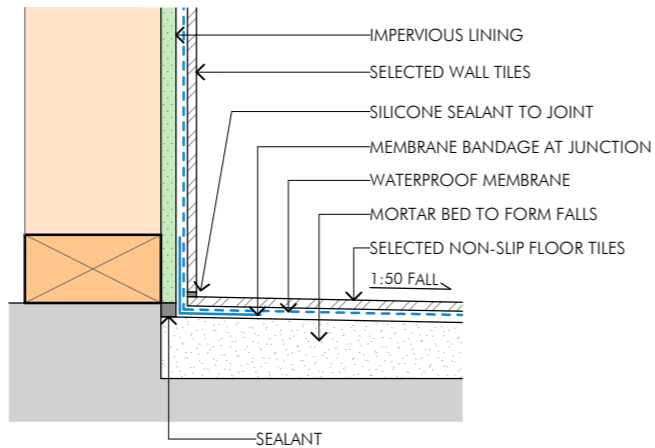
C SHOWER PENETRATION
SCALE 1:5



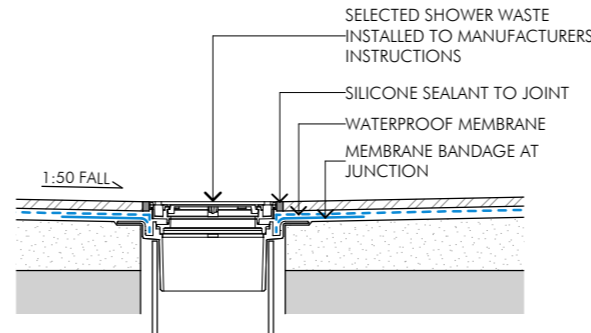
D TILED SKIRTING TO WALL
SCALE 1:5



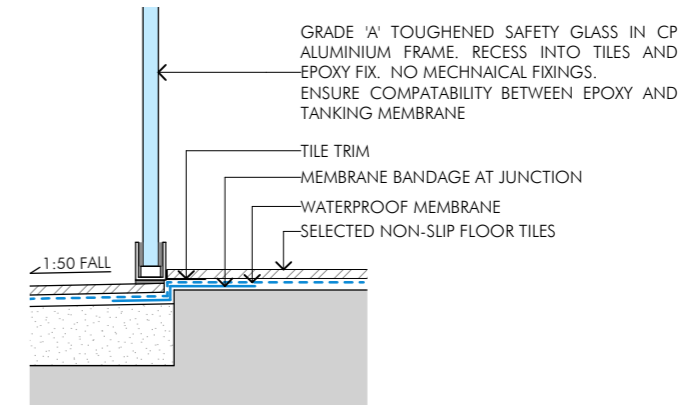
E ACRYLIC BATH TO WALL
SCALE 1:5



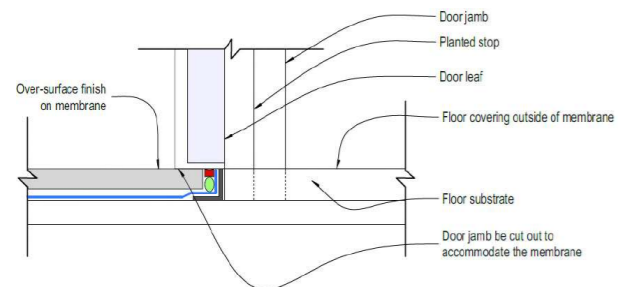
F TILED SHOWER TO WALL
SCALE 1:5



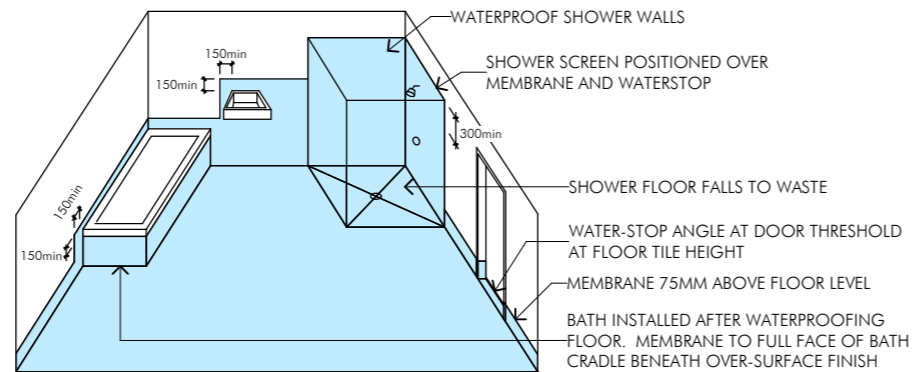
G TILED SHOWER OUTLET
SCALE 1:5



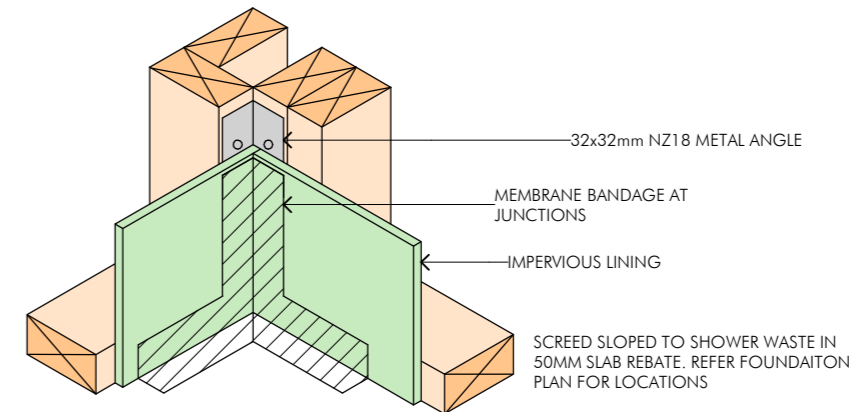
H SHOWER SCREEN TO TILES
SCALE 1:5



I WATER STOP DETAIL
SCALE NTS



J HOBLESS SHOWER - EXTENT OF MEMBRANE
SCALE NTS



K SHOWER WALL INTERNAL CORNER
SCALE NTS

PROJECT
LOT 74 EARLSBROOK

22 GREENSLADE DRIVE, LINCOLN
ADDRESS

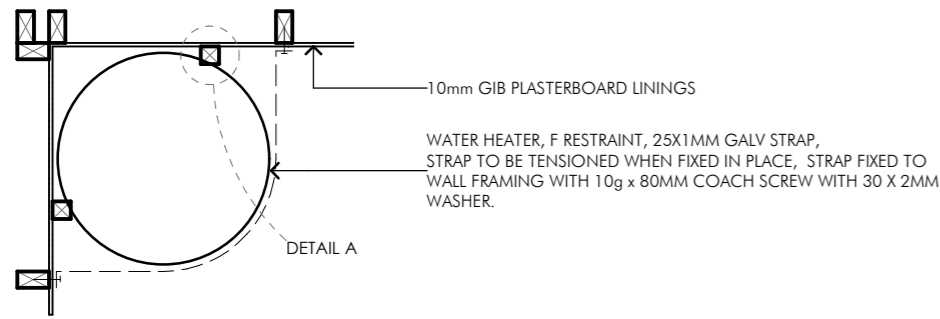
DRAWING
DETAILS

DESIGN D BIRTLES
DRAWN DB, JM
JOB No 25022
SCALE 1:5 @ A3

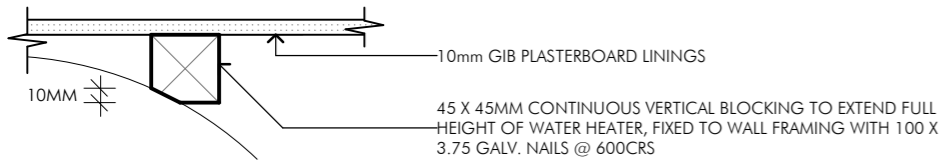
ISSUE CONSENT
DATE 9/11/2025

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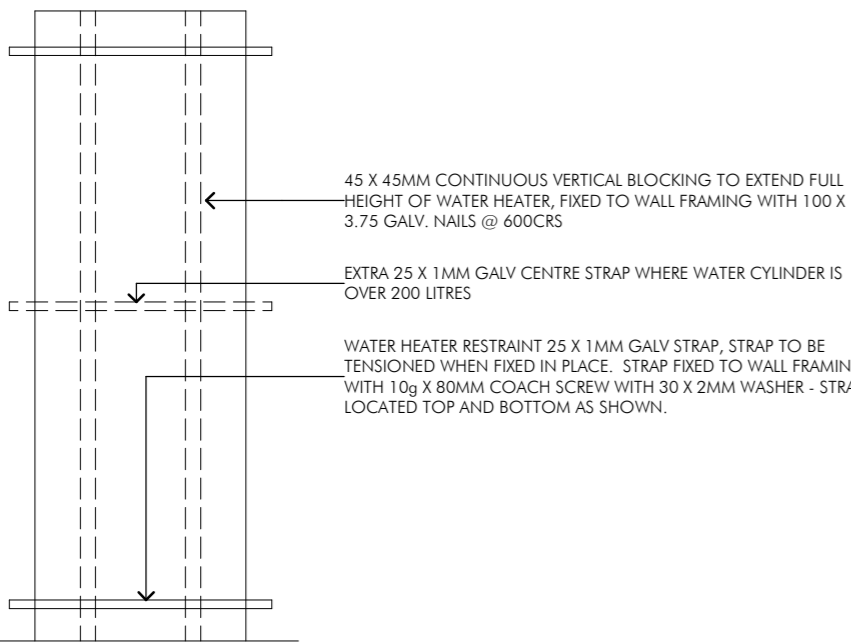
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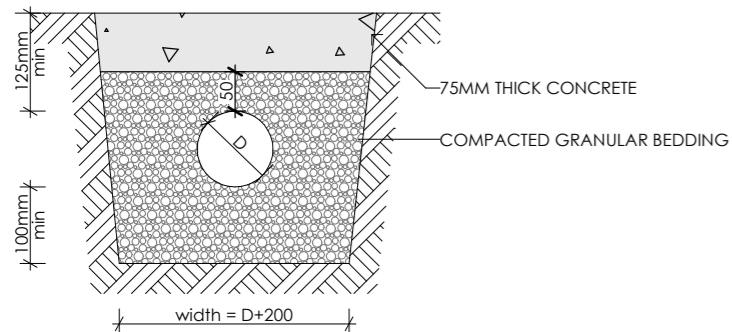
CORNER MOUNTED HWC PLAN
SCALE NTS



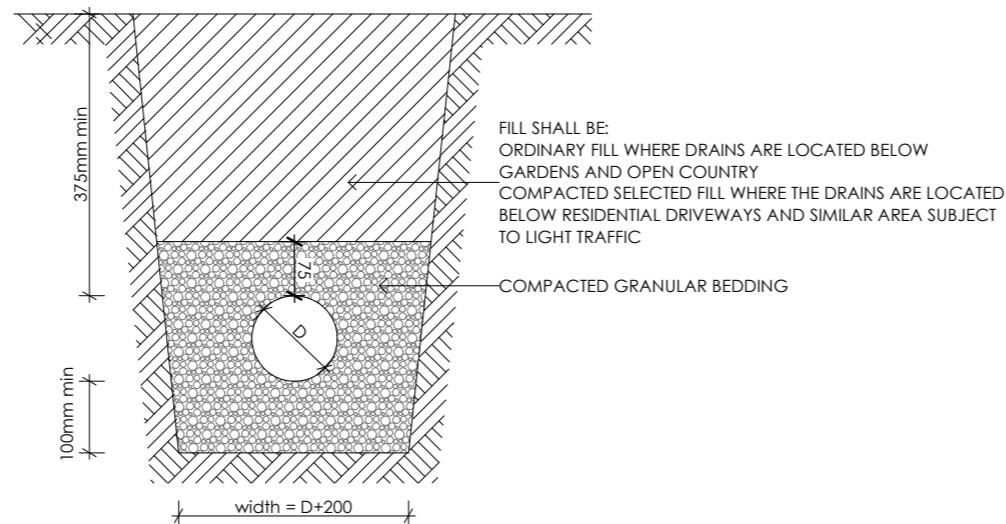
DETAIL A



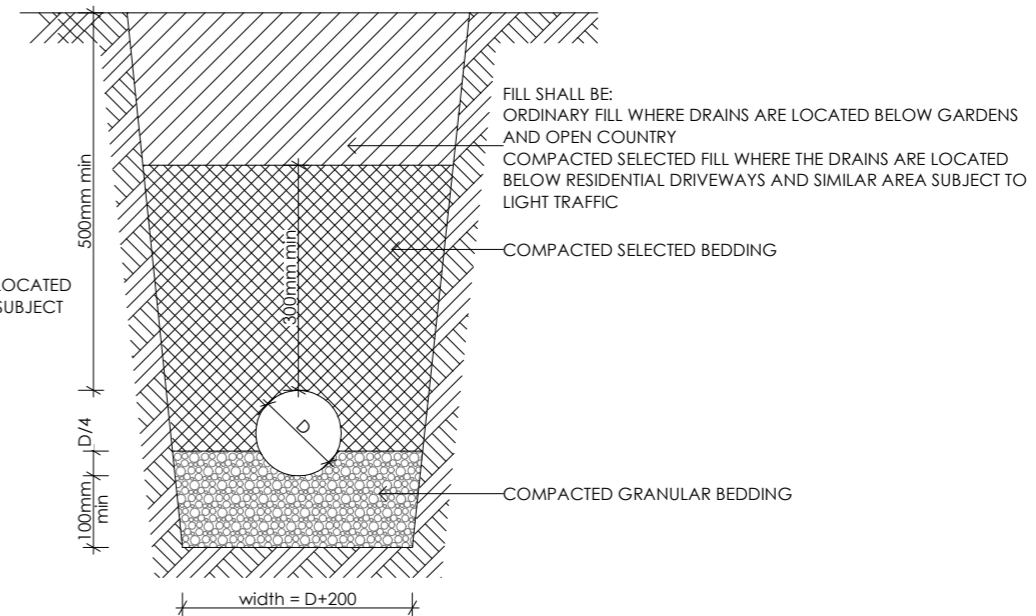
HWC SEISMIC RESTRAINT
SCALE NTS



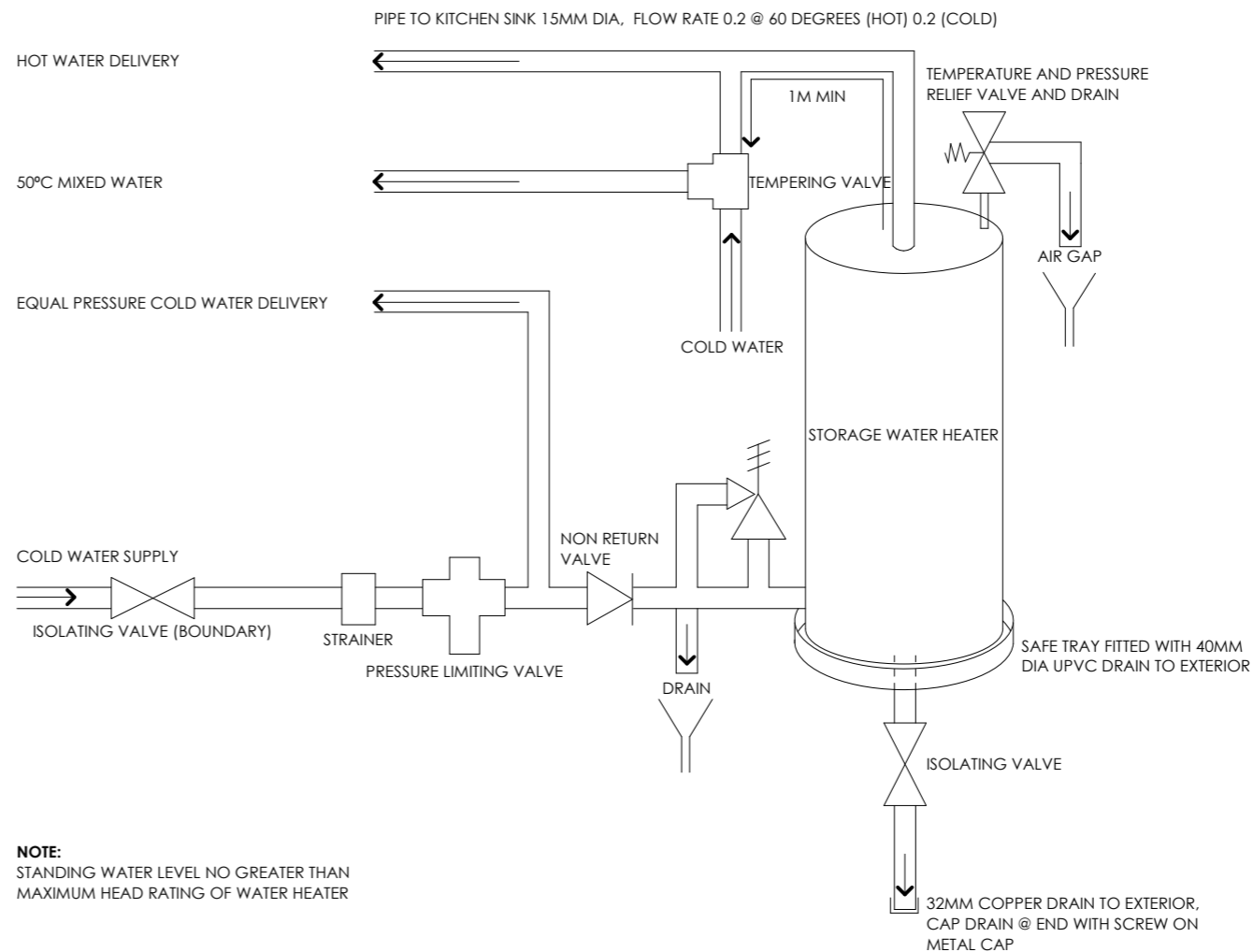
PIPE COVER BETWEEN 125MM-375MM
SCALE NTS



BEDDING TYPE 'D' OF NZS 7643 > 375MM
SCALE NTS



BEDDING TYPE 'B' OF NZS 7643 > 500MM
SCALE NTS



NOTE:
STANDING WATER LEVEL NO GREATER THAN MAXIMUM HEAD RATING OF WATER HEATER

HWC VALVES DIAGRAM
SCALE NTS

RESIDENTIAL DEVELOPMENT

22 GREENSLADE DRIVE
LINCOLN

BUILDING CONSENT

JOB NO. **25253**

07/11/2025



	DRAWING INDEX	REVISION
S0 - SERIES		
S0.01	FOUNDATION PLAN	1
S0.01	GENERAL NOTES	1
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GENERAL

- The structural drawings shall be read in conjunction with the structural specification, Architectural drawings and the drawings / documentation of other disciplines. No dimensions are to be scaled from this drawing. All dimensions are in mm and to be confirmed on site UNO.
- The copyright of this drawing belongs to Structural Design Lab Ltd (SDL).
- Any discrepancies shall be referred to the Engineer for resolution prior to the construction of work. The Contractor shall assume the more expensive option applies for any cost allowances prior to resolution.
- Unless otherwise specified or detailed on the drawings, these standard details and notes shall apply. Inclusion of general notes sheets does not imply that all the details occur in this contract.
- All work and materials to comply with the New Zealand Building Code.
- Substitution for or amendment of specified details or materials shall not be carried out without approval of the Engineer.
- All general and proprietary items and systems shall be supplied, stored, installed and maintained in strict accordance with the manufacturer's specifications and instructions unless specifically noted otherwise. The Engineer reserves the right to charge the costs of any investigations, redesign, and monitoring to the Contractor for any requests for product substitutions or alternative construction methods.
- Refer to the Architectural drawings and NZS3604 for elements not requiring specific engineering design. Weather-tightness and other architectural aspects and services are not considered or in any way a part of the scope of the Structural Design Lab Ltd design.
- The Contractor is responsible for identifying the location of all existing services (ensuring these are not adversely affected by construction activities), confirming all dimensions and setout requirements on site, and considering site conditions before and during construction. All services made redundant by the works shall be completely removed.
- The presence, location and details of ribs, upstands, recesses, plinths, penetrations, inserts, sleeves, chases, rebates, cast-in fixings, brackets, holes, flashings, damp-proofing, waterproofing, fire protection, corrosion protection, etc. are not necessarily shown on the structural drawings. Refer to the architectural drawings and the drawings / documentation of other disciplines for these items.
- The location, size and details of all penetrations, recesses, sleeves, holes, etc. in structural members, must be approved by the Structural Engineer prior to construction commencing unless shown on the structural dwgs. These items shall be cast-in, formed, or shop fabricated and shall not be cut or cored on site uno on the project dwgs or approved by the Structural Engineer.
- The Contractor shall be responsible for identifying and design of all temporary works necessary for the construction and erection of the building works. Any notes regarding propping on the drawings and specification shall be carried out noting that these are not exhaustive and may not cover all propping requirements for this project. The information presented reflects the design for the permanent works only and does not include for any staging or construction procedure or temporary works.
- All standards referenced to in the drawings shall be the latest version / issue including all current amendments (at the time of preparing the drawings).
- All waterproofing and waterproofing details shall be in accordance with the architectural drawings & specification. Unless specified otherwise, waterproofing details included in the structural drawings and any outlines / references to waterproofing are shown indicatively for information only
- SDL Limited accepts no liability for unauthorised changes to details and information contained in these dwgs.

INSPECTIONS

- The Contractor shall ensure that all inspections listed on the inspection schedule are completed before proceeding with further work. Failure to ensure that the inspections have been completed may result in the need for additional testing (including destructive) at the contractors cost to establish compliance. Structural Design Lab Ltd may not be able to issue a PS4 for the work if all inspections have not been completed.
- Refer to the building consent conditions for any inspections that are required by the building consent authority (BCA).
- The following inspections shall be allowed for to enable PS4 sign off, contact the Engineer at least 2 working days prior to inspection uno.

**Foundation subgrade
Foundation beams, pads and slabs**

STANDARD ABBREVIATIONS

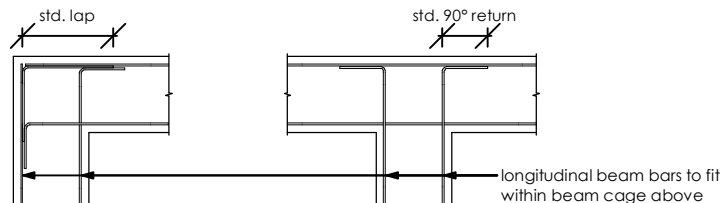
alt.	alternate	FRR	fire resistance rating	typ.	typical
approx.	approximate	FWAR	fillet weld all round	u/s	underside
arch.	architect / architectural	FGL	finished ground level	UA	unequal angle
blig.	building	galv.	galvanised	UB	universal beam
bos	bottom of steel	horiz.	horizontal	UC	universal column
c/c	centre to centre	ID	inside diameter	UNO.	unless noted otherwise
CHS	circular hollow section	lg.	long	vert.	vertical
CJ	construction joint	max.	maximum	WB	welded beam
cl	centre line	min.	minimum	WC	welded column
cos	check on site	n/a	not applicable	WP	weld plate
conc.	concrete	no.	number of		
crs.	centres	nom	nominal		Reinforced Concrete
cvr.	cover to reinforcing	NTS	not to scale		
CWB	custom welded beam	o/a	overall	B	bottom bars
DHS	diamond hi-span purlins	OD	outside diameter	Bb	bottom bars, bottom layer
Ø	diameter	PC	precast panel	Bt	bottom bars, top layer
diag	diagonal	PFC	parallel flange channel	T	top
dim	dimension	rad	radius	Tb	top bars, bottom layer
DPM	damp-proof membrane	req'd	required	Tt	top bars, top layer
dwgs.	drawings	RHS	rectangular hollow section	t&b	top and bottom
EA	equal angle	RL	reduced level	ff	far face
ee	each end	SC	saw cut joint	nf	near face
ef	each face	SHS	square hollow section	reinf.	reinforcement
es	each side	sim	similar	LD	development length
ew	each way	spec	specification	R	plain round rebar grade 300E
FB	fly brace	sq	square	HR	plain round rebar grade 500E
found.	foundation	ss	stainless steel	D	deformed rebar grade 300E
FFL	finished floor level	stgd	staggered	HD	deformed rebar grade 500E
FL	steel flat	thru	through	RB	deformed reid bar grade 500E
FPBW	full penetration butt weld	tos	top of steel		

EXCAVATIONS

- Strip the site of all rubbish, demolition material, top soil or organic material and excavate for foundation elements as shown on the drawings or deeper as necessary to provide clean dry subgrade on natural ground. Excavations to be inspected by a suitably qualified Engineer prior to covering.
- The contractor shall locate all underground services prior to working in any area. All services made redundant by the works shall be completely removed.
- Hardfill material shall be laid and compacted in layers of uniform thickness and quality. The thickness of each layer shall be not more than 200mm, and not less than 130mm. Fill shall be placed and compacted to a uniformly dense condition of at least 95% maximum dry density as determined by NZ Vibrating Hammer Test and defined by NZS4431. Compaction of each layer shall continue until the whole layer has attained the required uniform density.
- Where new foundation excavations extend deeper than existing foundations, the Contractor shall allow to underpin existing foundations to ensure excavations for new foundations do not undermine existing foundations. Contractor to submit proposed methodology to Engineer prior to construction. Notify the Engineer if excavation is required at a distance closer than 1 to 2 (vertical to horizontal), or as advised by the geotechnical engineer, to existing boundaries or other structures. Contractor to allow for temporary shoring in these cases at their own cost, designed by others.
- The Contractor shall make allowance for over excavation and backfilling with engineered fill or site concrete where soft soil / fill is encountered.
- All foundations shall be constructed and backfilled as soon as possible to avoid softening or drying out of the soil by exposure.
- Excavations shall be maintained free of water. If water enters excavations that are meant to receive concrete, the water shall be pumped out. Any soft materials unsuitable for receiving concrete shall be removed and replaced with clean compacted hardfill or site concrete to the required levels.
- Maintain all excavations in a stable condition by either: cutting to a stable batter as directed by a Geotechnical Engineer or by installing temporary retaining designed and constructed by the Contractor.
- All services trenches to be backfilled and compacted in accordance with the specification.
- Provide flexible connections to all pipes where they exit the foundations.

CONCRETE

- All workmanship and materials shall comply with NZS3109. Tolerances for erection and fabrication shall comply with NZS3101. Surface finishes shall comply with NZS3114 and as per the Architectural drawings.
- Provide a DPM in accordance with NZS3604 & arch. documentation (sealed around all penetrations) on 20mm min. sand blinding beneath the foundations.
- Where the drawings or specifications state the size of the concrete elements, this size does not include the thickness of any applied finishes.
- All construction joints / interfaces shall be roughened to 5mm amplitude UNO (type 'B' in accordance with NZS3109) with all laitance removed. No cuts shall be made to the concrete work other than those shown on the drawings.
- Where underfloor heating is required but not noted on the structural drawings, allow for the concrete slab thickness to be increased by 20mm. TBC with engineer & arch. in writing prior to construction.
- Where concrete polishing occurs, the floor thickness shall be increased so that the final thickness is no less than that shown on the drawings. Where concrete polishing has not been noted on the structural drawings, the contractor shall allow for additional slab reinforcing & saw-cuts over the polished area. Extent to be confirmed with the Structural Engineer & arch.
- Note that sawcuts and shrinkage control joints do not guarantee elimination of all visible or unwanted cracks but help minimise the number and size of cracks. Where possible, saw cuts and free joints should not pass through tiled or polished concrete areas.
- All re-entrant corners and penetrations through concrete slabs and precast walls shall be trimmed by 2-HD12 bars on all sides and extend 600mm min. e.s. uno.
- Contractor to take care to protect and cure all concrete adequately, and in general accordance with NZS3109. Apply a curing compound to all concrete floor slabs immediately on completion of the surface finishing, or alternatively, cure by ponding.
- Internal beam/ foundation thickening locations are indicative only. Contractor to notify engineer and align these below load bearing walls and bracing walls which require hold downs e.g. BL1-H etc.
- Longitudinal beam bars shall not be cranked unless shown on the drawings or specifically discussed with the Structural Engineer. Provide stirrup hoops and links to support every longitudinal bar at bar crank bend locations (two min per crank).
- All foundation longitudinal reinforcing shall lap adequately at corners and internal joints as shown below (or similar approved) uno:



- Concrete shall have the following minimum strength at 28 days, in all cases the concrete strength shall not exceed twice the specified 28 day strength.
- Foundation and slab to be formed in single pour using 20MPa or higher concrete
- Refer manufacturer for polystyrene details, use VH grade under all load bearing concrete elements uno.
- Edge beams and thickenings may be wider than that shown to simplify construction. Provide an additional HD12 in the top and bottom for every 100mm increase in concrete width.

DRILLED AND EPOXIED FIXINGS

- Drill and epoxy grout fixings into concrete as shown on the drawings or when specifically instructed by the Engineer and as per the structural specification. Generally, this will only be required for connecting into existing concrete. Epoxy grouting is not an alternative construction method to the details shown on the drawings. The epoxy grout shall be Hilti HIT-RE500-V4, Ramset EPCON C8 Xtrem or Fisher FIS EM Plus (or equivalent with written approval of the Engineer) installed in strict accordance with the manufacturer's instructions. Do not cut or damage any existing reinforcing.

REINFORCING

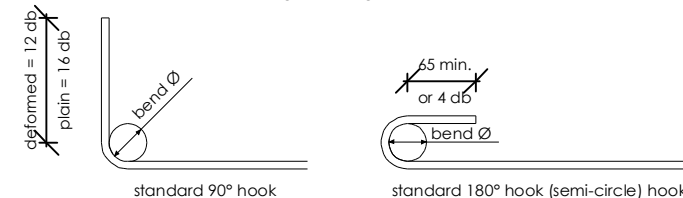
- All bend diameters shall comply with NZS3109. Welding and re-bending of reinforcing is not allowed unless approved in writing by the Structural Engineer.
- UNO otherwise on the drawings, the following minimum covers apply. Concrete covers for foundations shall be 50mm min. when cast against dpm or boxing in ground, 75mm min. when cast against the ground and 35mm when cast against insulation. The minimum concrete cover for formed or free surfaces shall be as per the drawings / specification and shall be measured to the edge of chamfers, recesses, rebates, etc where applicable. No reinforcement or wire ties shall project into the minimum concrete cover thickness.
- All reinforcing bars shall comply with AS/NZS4671
- All reinforcing and mesh shall be supported on plastic chairs (for lighter reinforcing cages only) or spacers to maintain specified cover uno. Cementitious spacers / chairs (if required) shall at least match the quality of the concrete being cast & shall have a min. concrete strength of 40MPa.
- UNO on the drawings, minimum laps shall be as specified in the following table unless more than 300mm of fresh concrete is cast below the bars, in which case the lap lengths in the table shall be increased by 1.3x.
- For bars spliced by non-contact laps, where bars are spaced more than 3 x bar diameter apart, the lap length shall be as per the above plus 1.5x the bar spacing. Position of laps where not shown on the dwgs shall be approved by the Engineer and staggered where possible.

Concrete Strength	20MPa		25MPa		30MPa		40MPa	
	D	HD	D	HD	D	HD	D	HD
Ø 10mm	350	570	300	560	275	460	240	400
Ø 12mm	410	680	360	600	330	550	290	480
Ø 16mm	540	900	480	800	440	740	380	640
Ø 20mm	680	1120	600	1000	550	920	480	800

- All mesh shall be ductility class E as per NZS4671 and shall be lapped as per the below table and shall extend to within 50mm of slab edges. Sheets shall be cut diagonally at the corners to limit overlapping to 2 of the 4 sheets.

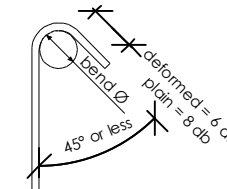
Min. lap lengths for reinforcing mesh as per below: unless manufacturers specifications states otherwise		
Mesh	Lapping on ends	Lapping side
SE62	250 (1 1/4 squares)	250 (1 1/4 squares)
SE72	250	250
SE73	350 (1 1/4 squares)	250 (1 1/4 squares)
SE73 DE	150	150
SE82	250 (1 1/4 squares)	250 (1 1/4 squares)
SE82 DE	150	150
SE92	250	250
SE92 DE	160	160
SE93	150	150

- Steel fixing shall comply with NZS3109. Reinforcing shall not be cut or bent on site without the Engineer's written approval. Where the formed surface may be visible in the completed works, care shall be taken to select a form of spacer which shall have a minimum impact on the exposed surface which shall be discussed with the Architect. Reinforcing shall not be welded without written approval from the Engineer and shall never be tack welded.
- Reinforcement shall be clean and free from mud, loose rust / mill scale, concrete laitance oil, etc at the time concrete is placed. All reinforcement shall be adequately secured against displacement.
- All longitudinal bars terminating at concrete edges shall be provided with a std hook UNO.
- All hooks and bends in reinforcing shall comply with NZS3101.
- All hooks on stirrups and ties must fit closely around main bars UNO. First stirrup to be placed no further than the lesser of 1/2 stirrup spacing or 50mm from support face.
- Unless noted otherwise on the structural drawings, bending of all bars except stirrups and ties shall be as noted below:



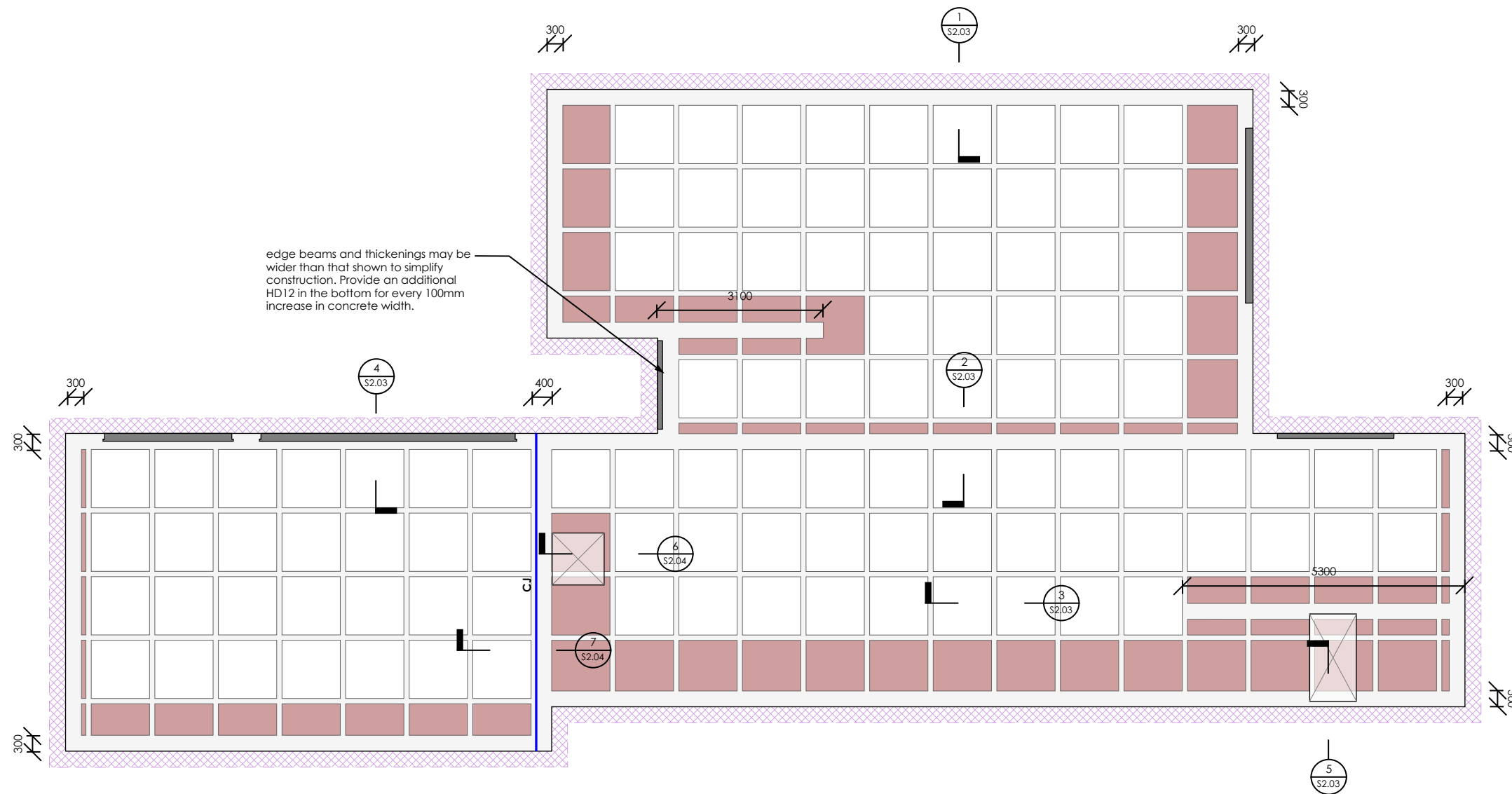
Reinforcing grade	Bar Ø	Minimum bend Ø db
300MPa or 500MPa	6 - 20	5 bar diameter
	24 - 32	6 bar diameter

- Unless noted otherwise on the structural drawings, bends for stirrups and ties shall be as shown below. All hooks on stirrups, ties and spirals must be anchored and fit closely around main bars, the diameter of the bar bend shall be equal to that of the enclosed bar, but not less than the values in the table below:



Reinforcing grade	Bar Ø	Minimum bend Ø db	
		Plain bars	Deformed bars
300MPa or 500MPa	6 - 20	2 bar diameter	4 bar diameter
	24 - 32	3 bar diameter	6 bar diameter

No dimensions are to be scaled from this drawing, contractor must verify dimensions on site. Drawings are to be read in conjunction with architect's drawings when available.	Structural Design Lab Ltd New Zealand mob: 027 260 4088 email: info@structuraldesignlab.co.nz		DATE	PROJECT ISSUE	REVISION	ARCHITECT	DESIGN	DRAWN	PROJECT	
			07-11-2025	BUILDING CONSENT	1	GA	HDM	HDM	RESIDENTIAL DEVELOPMENT 22 GREENSLADE DRIVE LINCOLN	
These drawings are to be read in colour	The documents are subjected to COPYRIGHT and may not be reproduced without consent from © Structural Design Lab Ltd 2021					SCALE @ A3	1:100	SHEET NAME FOUNDATION PLAN		
						DATE	07-11-2025	PROJECT NO.	25253	SHEET NO.



GENERAL NOTES

- no dims. are to be scaled from these dwgs, contractor must check and confirm all dims., heights and levels (including of shop drawings) prior to commencement of works on site.
- for materials and workmanship generally refer to Structural Design Lab Structural Specification.
- refer to arch. for all slab dimensions, setouts, insulation, rebates, recesses, nibs, services, drainage, plumbing, waterproofing & penetrations.
- notify the structural engineer of any discrepancies immediately prior to continuation of work.
- all timber construction not shown on the structural drawings to be as per arch. and NZS3604.

FOUNDATION / GROUND FLOOR NOTES

- slab drawn to Architectural framing and does not account for any overhang, use Architectural drawings for setout and any framing overhang which may affect slab dimensions.
- locations shown of internal floor beams thickenings are indicative only, it shall be the responsibility of the contractor to ensure that they are located under the load bearing walls to which they pertain and any bracing walls which require hold downs e.g. BL1-H etc.
- all steel 75mm min. cover to ground, 50mm min. cover to DPM., where possible saw cuts and free joints should not pass through tiled or polished concrete areas.
- foundation and slab to be formed in single pour using concrete grade shown on plan or higher concrete.

DRAINAGE NOTES

- all pipes or conduit to be located 25mm (min.) below the DPM. & 150mm. below DPM at load bearing / perimeter beams.
- 25mm min. clearance between reinforcing and pipework
- contractor to confirm pipe locations on site.
- installation to be done before placing DPM and commencing foundation construction.

refer S2.01 for excavation and hardfill / platform details

CONCRETE NOTES

- take care to protect and cure all concrete adequately, and in accordance with NZS 3109.
- apply a curing compound to all concrete slabs immediately on completion of surface finishing or alternatively cure by ponding.

FOUNDATION / GROUND FLOOR KEY

	lightweight joinery rebate • refer arch. dwgs. for details
	external cladding rebate (if applicable) • refer arch. dwgs. for details
	slab rebate (if applicable) • refer arch. dwgs. for details
	RibRaff polystyrene • refer manufacturer for details • 1100x1100 pods
	RibRaff polystyrene • refer manufacturer for details • cut pods
	gravel platform extent
	CJ construction / thermal joint (if applicable) • refer S2 series for details
	2-HD12, 1200g., re-entrant bars • 200mm apart • 50mm slab edge cover
	concrete foundation element • refer plan & S2 series for details

FOUNDATION AND SLAB TO BE FORMED IN SINGLE POUR USING 20MPa OR HIGHER RAFTMIX CONCRETE

No dimensions are to be scaled from this drawing, contractor must verify dimensions on site. Drawings are to be read in conjunction with architect's drawings when available. These drawings are to be read in colour	Structural Design Lab Ltd New Zealand mob: 027 260 4088 email: info@structuraldesignlab.co.nz The documents are subjected to COPYRIGHT and may not be reproduced without consent from © Structural Design Lab Ltd 2021		DATE 07-11-2025	PROJECT ISSUE BUILDING CONSENT	REVISION 1	ARCHITECT 	DESIGN HDM	DRAWN HDM	PROJECT RESIDENTIAL DEVELOPMENT 22 GREENSLADE DRIVE LINCOLN
			SCALE @ A3 1:100			SHEET NAME GENERAL NOTES			
			DATE 07-11-2025	PROJECT NO. 25253	SHEET NO. S0.01	REVISION 1			

GENERAL NOTES

- no dims. are to be scaled from these dwgs, contractor must check and confirm all dims., heights and levels (including of shop drawings) prior to commencement of works on site.
- for materials and workmanship generally refer to Structural Design Lab Structural Specification.
- refer to arch. for all slab dimensions, setouts, insulation, rebates, recesses, nibs, services, drainage, plumbing, waterproofing & penetrations.
- notify the structural engineer of any discrepancies immediately prior to continuation of work.
- all timber construction not shown on the structural drawings to be as per arch. and NZS3604.

FOUNDATION / GROUND FLOOR NOTES

- slab drawn to Architectural framing and does not account for any overhang, use Architectural drawings for setout and any framing overhang which may affect slab dimensions.
- locations shown of internal floor beams thickenings are indicative only, it shall be the responsibility of the contractor to ensure that they are located under the load bearing walls to which they pertain and any bracing walls which require hold downs e.g. BL1-H etc.
- all steel 75mm min. cover to ground, 50mm min. cover to DPM., where possible saw cuts and free joints should not pass through tiled or polished concrete areas.
- foundation and slab to be formed in single pour using concrete grade shown on plan or higher concrete.



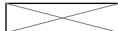



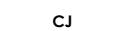


CONCRETE NOTES

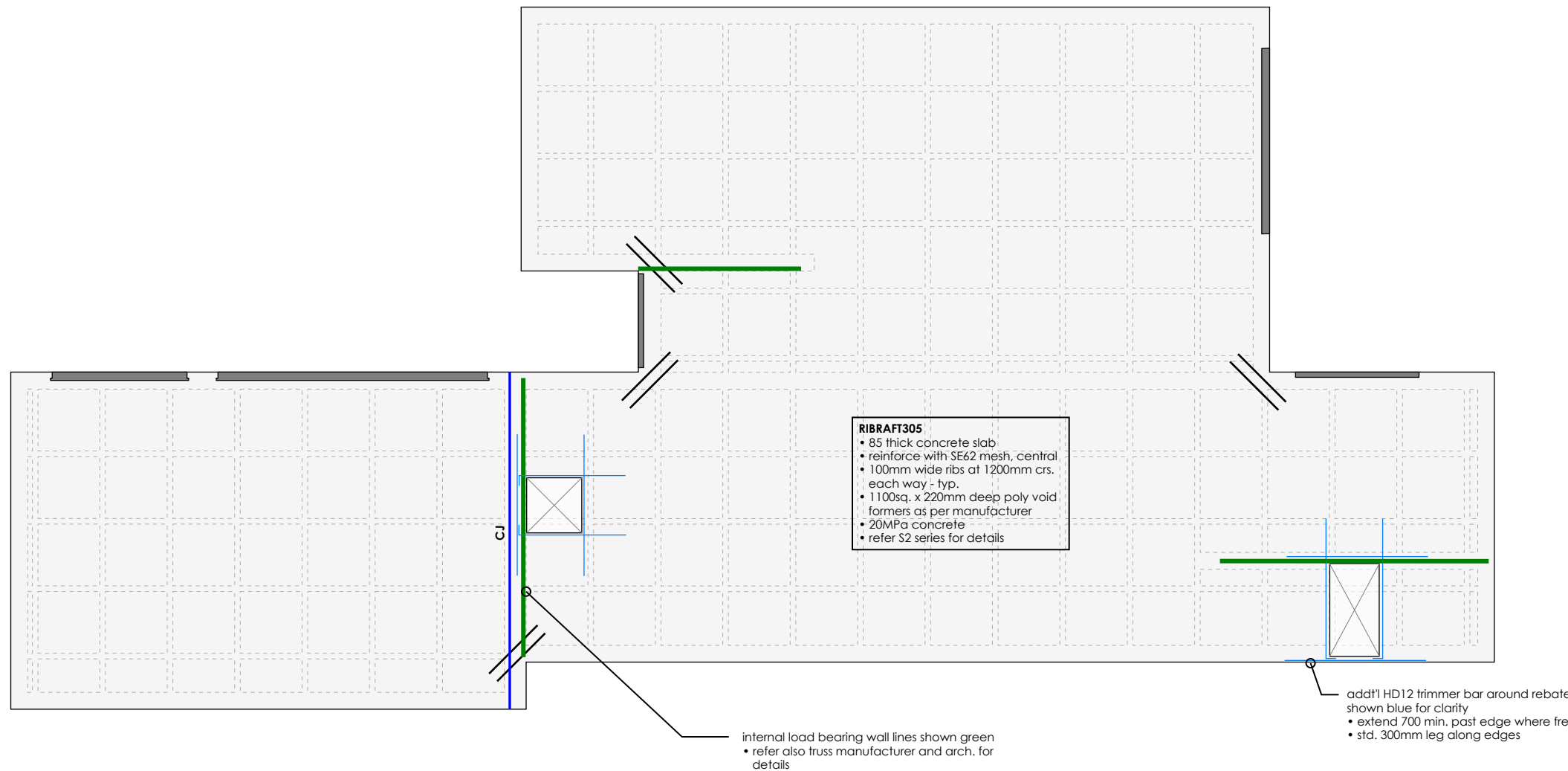
- take care to protect and cure all concrete adequately, and in accordance with NZS 3109.
- apply a curing compound to all concrete slabs immediately on completion of surface finishing or alternatively cure by ponding.

SHOWER RECESS NOTES



- fall slab locally (50mm max.) or create 50mm recess for shower, refer to arch. dwgs. for details.
- 100mm min. slab thickness to be maintained throughout.
- refer arch. dwgs. for setout dimensions.

FOUNDATION / GROUND FLOOR KEY

	lightweight joinery rebate • refer arch. dwgs. for details
	external cladding rebate (if applicable) • refer arch. dwgs. for details
	slab rebate (if applicable) • refer arch. dwgs. for details
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	RibRaft polystyrene • refer manufacturer for details • cut pods
	gravel platform extent
	CJ construction / thermal joint (if applicable) • refer S2 series for details
	2-HD12, 1200g, re-entrant bars • 200mm apart • 50mm slab edge cover
	concrete foundation element • refer plan & S2 series for details

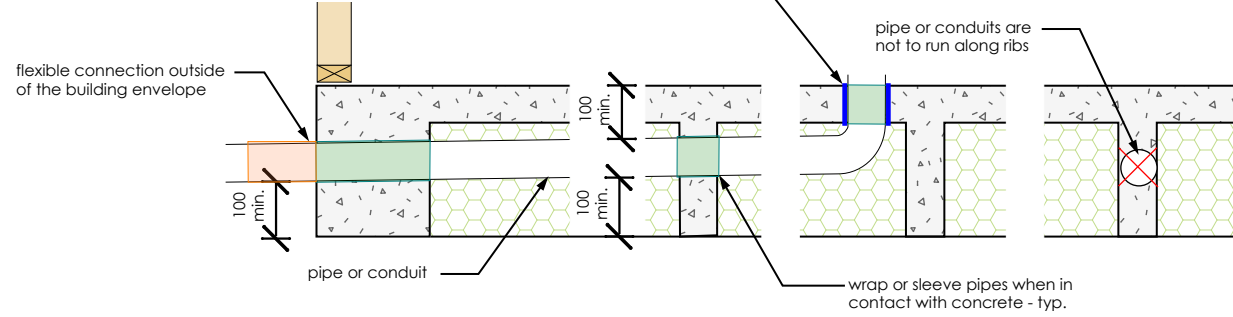


FOUNDATION AND SLAB TO BE FORMED IN SINGLE POUR USING 20MPa OR HIGHER RAFTMIX CONCRETE

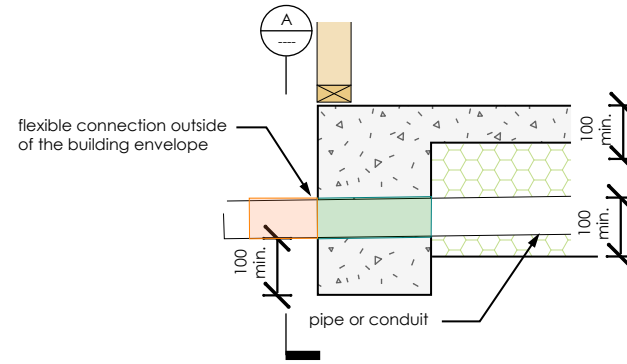
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			SCALE @ A3 1:100			SHEET NAME GROUND FLOOR PLAN			
			DATE 07-11-2025	PROJECT NO. 25253	SHEET NO. S0.02	REVISION 1			

refer MBIE guidance part A fig. 5.14

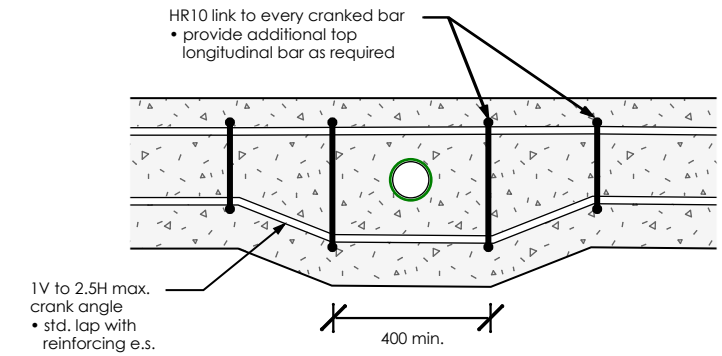
- clearance around the pipe is required to minimise the risk of shearing & critically damaging the services in a ULS earthquake (ultimate limit state - where limits are to preserve life safety only)
- adopt 25mm min. clearance, 63mm min. clearance is recommended as per the MBIE guidance



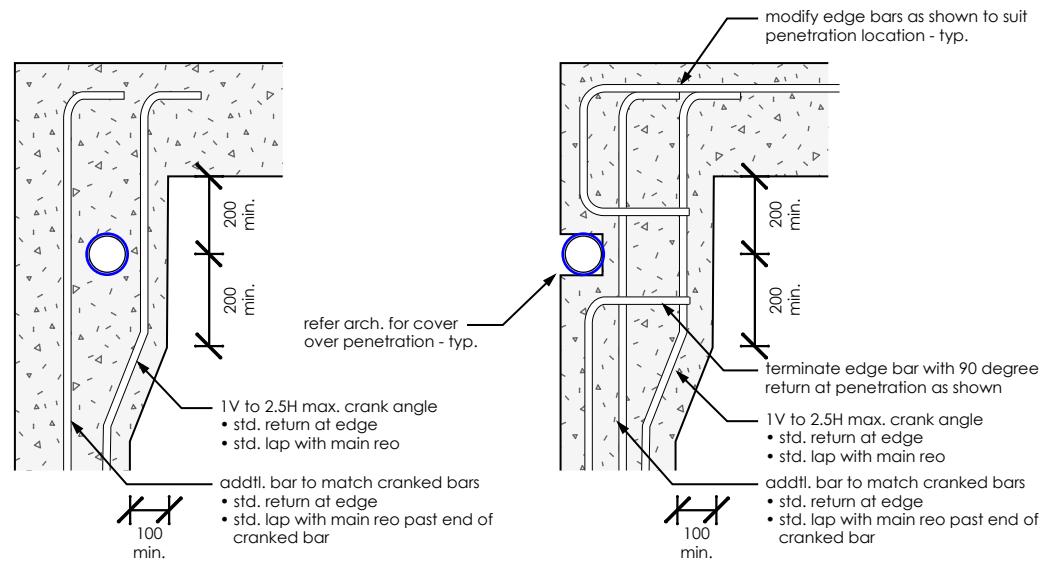
TYP. PIPE PENETRATION THRU. BEAM AND RIB
NTS



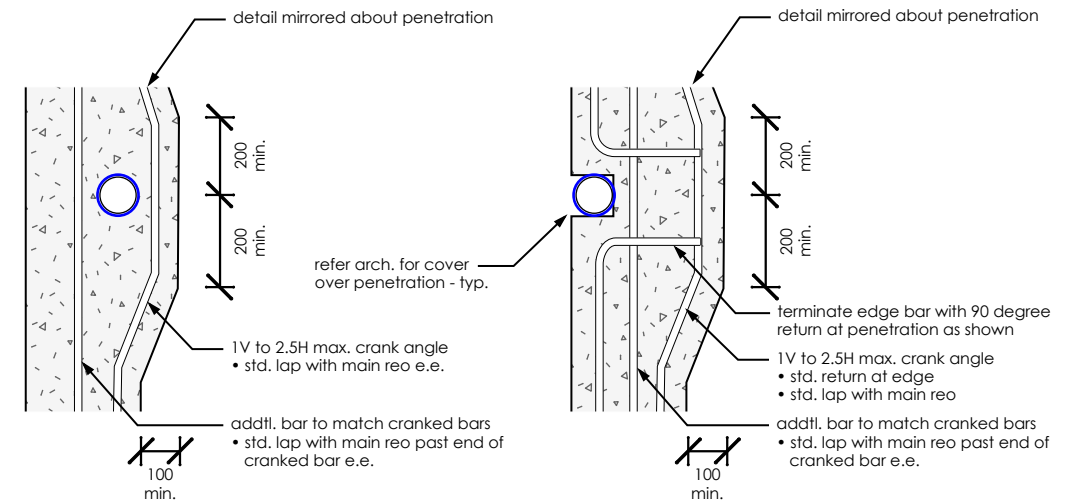
TYP. PIPE PENETRATION THRU. BEAM THICKENING (RIB SIMILAR)
NTS



DETAIL A - TYP. THICKENING OF BEAM

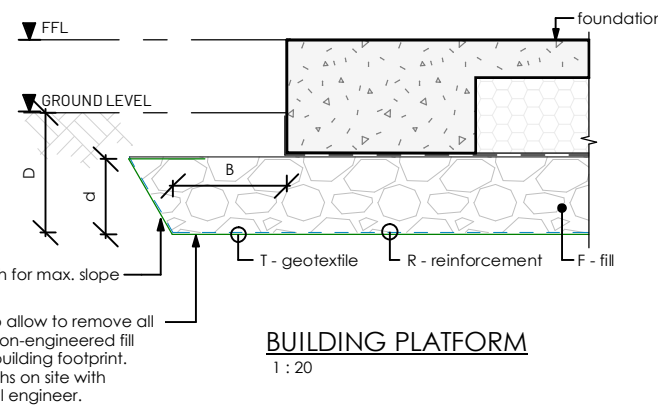


TYP. PIPE PENETRATION THRU. BEAM TOP NEAR EDGE
NTS
only affected reinforcing by penetration shown above, refer typical junction details for additional reinforcing not shown



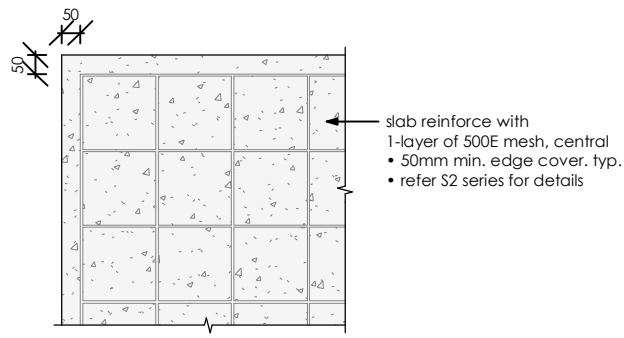
TYP. PIPE PENETRATION THRU. BEAM TOP NEAR MIDDLE
NTS
only affected reinforcing by penetration shown above, refer typical junction details for additional reinforcing not shown

- DRAINAGE NOTES**
- all pipes or conduit to be located 25mm (min.) below the DPM. & 150mm min. below DPM at perimeter.
 - 25mm min. clearance between reinforcing and pipework
 - contractor to confirm pipe locations on site.
 - installation to be done before placing DPM and commencing foundation construction.
 - member sizes and reinforcing shown are indicative only, details shown on raftslab plan & details shall take precedence over the details shown here.
 - also refer to separate details for pipes running within floor depth.
 - maximum pipe diameter for vertical penetration through foundation elements < 500mm width is 50NB
 - all pipes in contact with concrete shall be lagged with an impermeable material of at least 6mm thickness. DPM to be sealed around all penetrations - typical.
 - maximum bar crank angle to be at 1 vert to 2.5 horiz.
 - no vert. penetrations thru. ribs - typ. uno or approved.



BUILDING PLATFORM
1 : 20

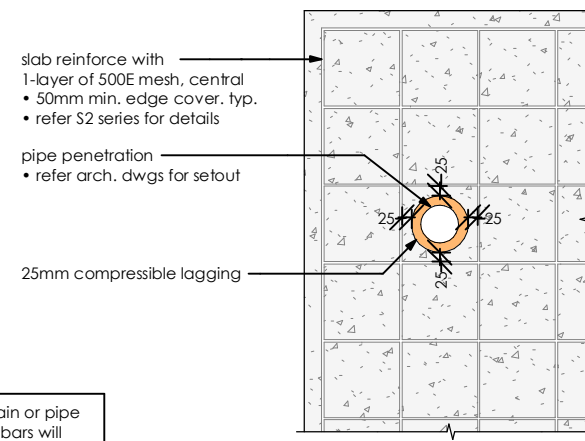
BUILDING PLATFORM TABLE	
d	depth of gravel fill to suit excavated depth (150min. depth below founds.), place and compact on approved subgrade in layers not exceeding 200mm thickness and no less than 130mm, NDM testing required for thickness greater or equal to 300mm, extent tbc with engineer
D	remove all topsoil and non-engineered fill from below foundation footprint. depth of excavation varies between 0.35-0.4m min. bgl to suitable bearing of 200kPa (refer geotech), compact cut surface with heavy vibratory/static roller
B	larger of 'd' or 300mm min. or as per Geotechnical Engineer uno.
F	GAP65 or similar approved by geotechnical engineer compacted to achieve a relative compaction of at least 95% of the maximum dry density
T	geotextile not required uno by Geotechnical Engineer
R	geogrid reinforcement not required uno by Geotechnical Engineer



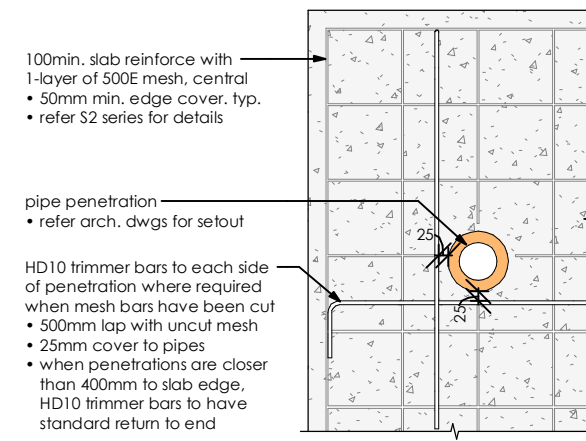
TYP. MESH LAYOUT PLAN

if square forms are used for drain or pipe recesses in the slab re-entrant bars will also be required running at 45 degrees at each corner

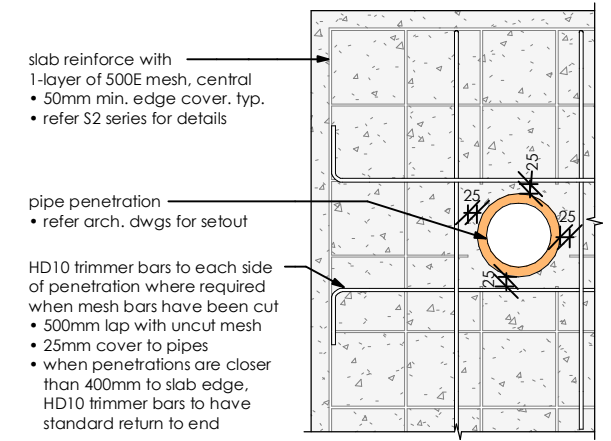
where penetrations are **not** closer than 400mm to edge of slab, a section of mesh may be used to replace the cut bar/bars in lieu of HD10 bars
• lap mesh a minimum of 2-cross wires but no less than 225mm



PIPE CENTRAL THRU MESH

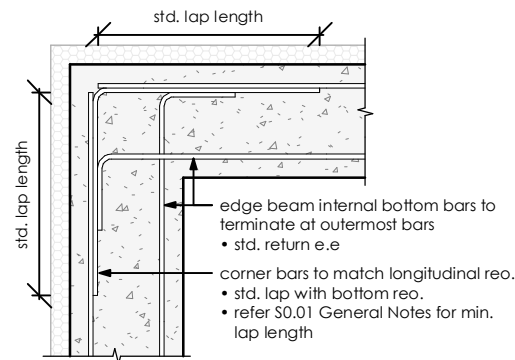


PIPE CUTTING THRU 1-MESH BAR EACH DIRECTION

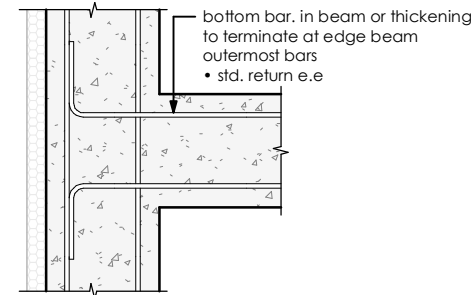


PIPE CUTTING THRU 2-MESH BARS EACH DIRECTION

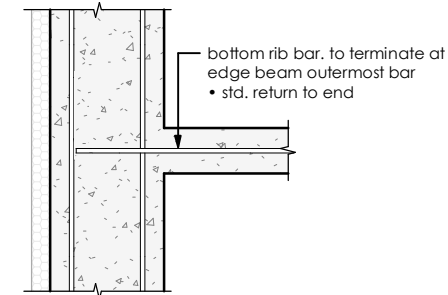
NOTE
number of bars and position shown are indicative only
• refer specific details for number, size and, layout of bars



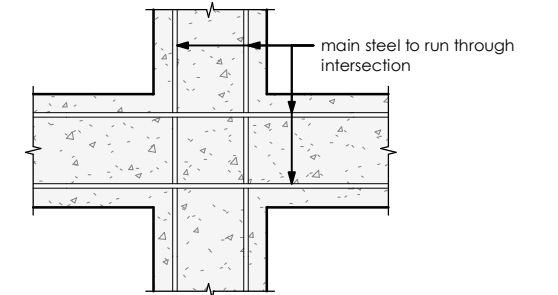
MAIN BEAM CORNER JUNCTION
(BOTTOM BARS)



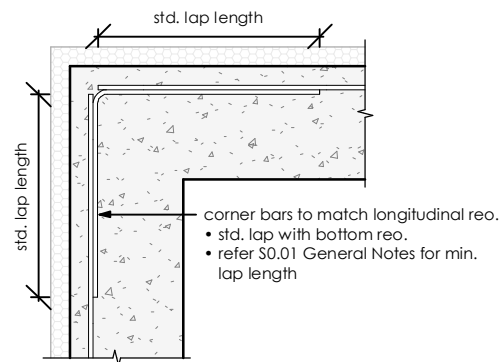
MAIN BEAM 'TEE' JUNCTION
(BOTTOM BARS)



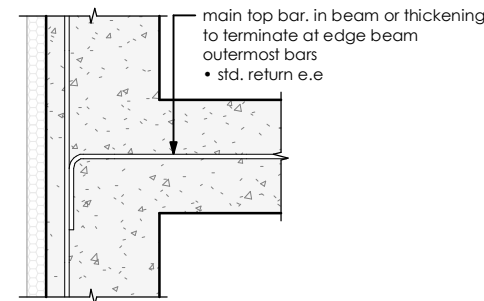
MAIN BEAM RIB JUNCTION
(BOTTOM BARS)



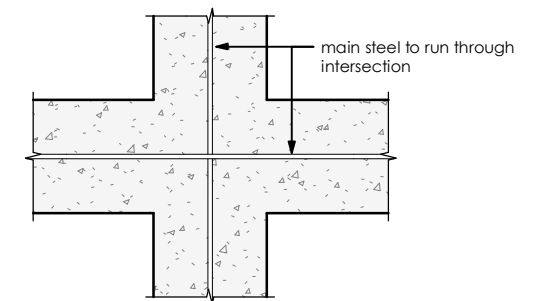
INTERNAL JUNCTION
(BOTTOM BARS)



MAIN BEAM CORNER JUNCTION
(TOP BARS)

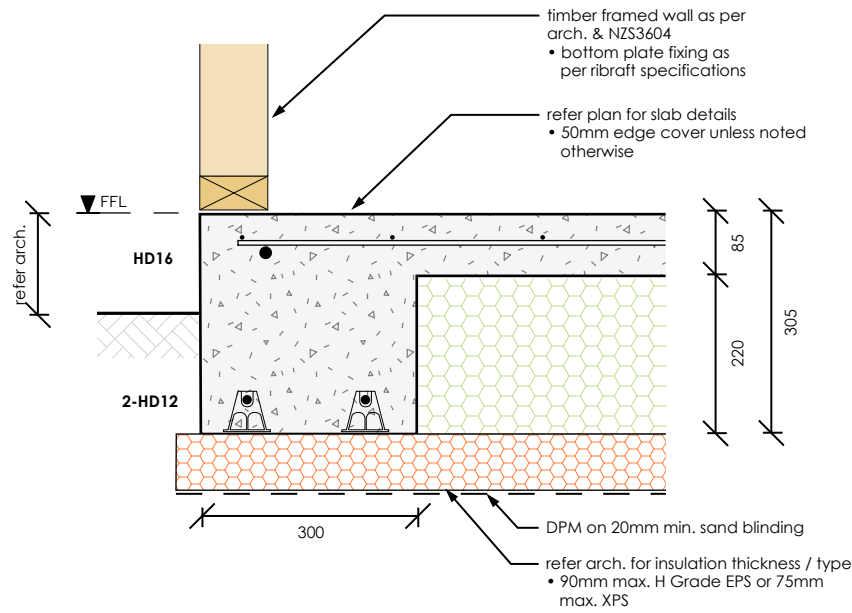


MAIN BEAM 'TEE' JUNCTION
(TOP BARS)

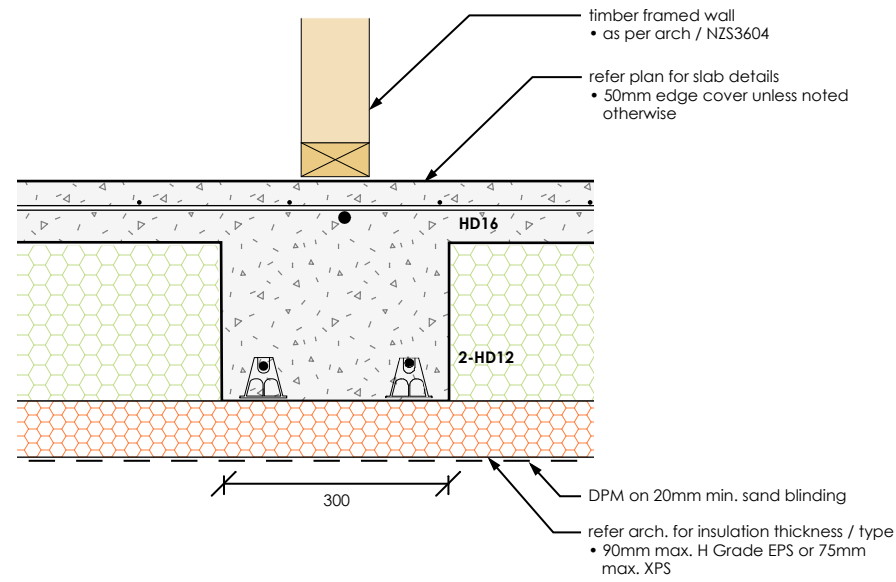


INTERNAL JUNCTION
(TOP BARS)

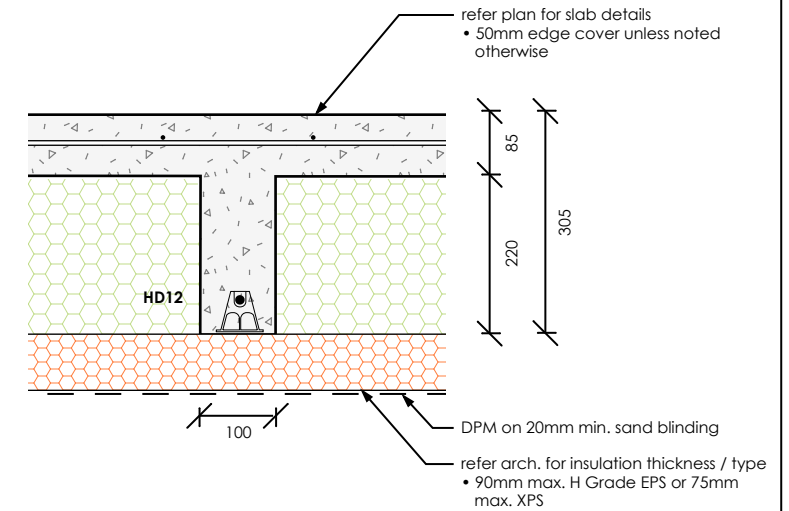
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			SCALE @ A3: As indicated	SHEET NAME: FOUNDATION DETAILS				
			DATE: 07-11-2025	PROJECT NO.: 25253	SHEET NO.: S2.02	REVISION: 1		



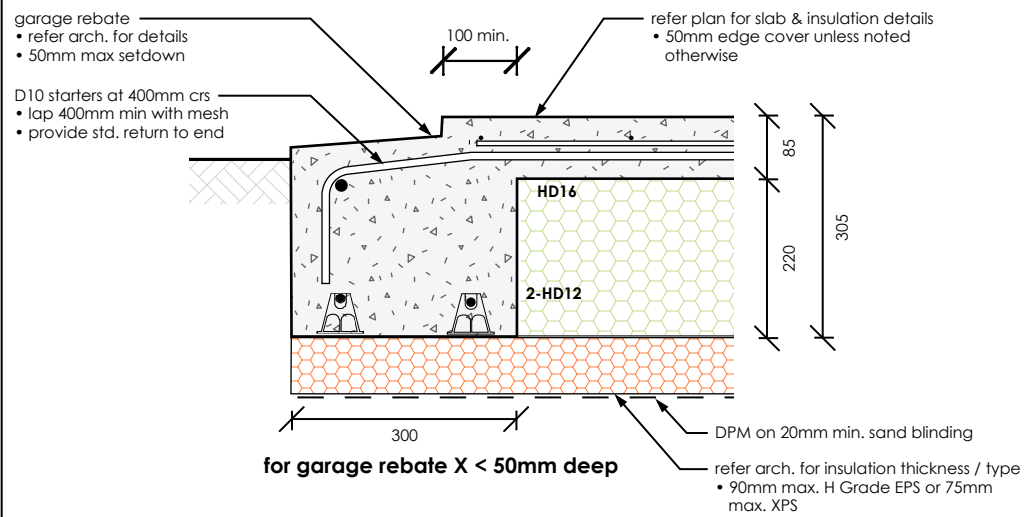
1 TYP. FOUNDATION PERIMETER
S1.01 NTS



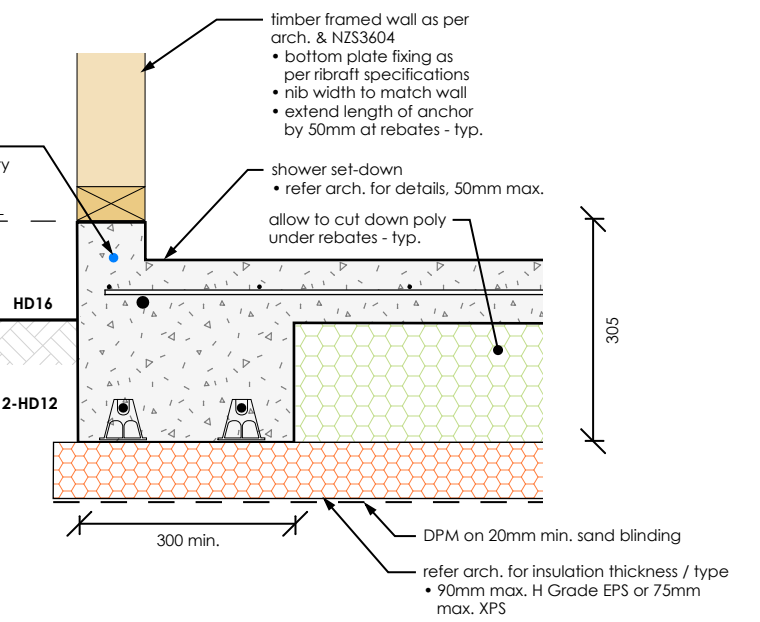
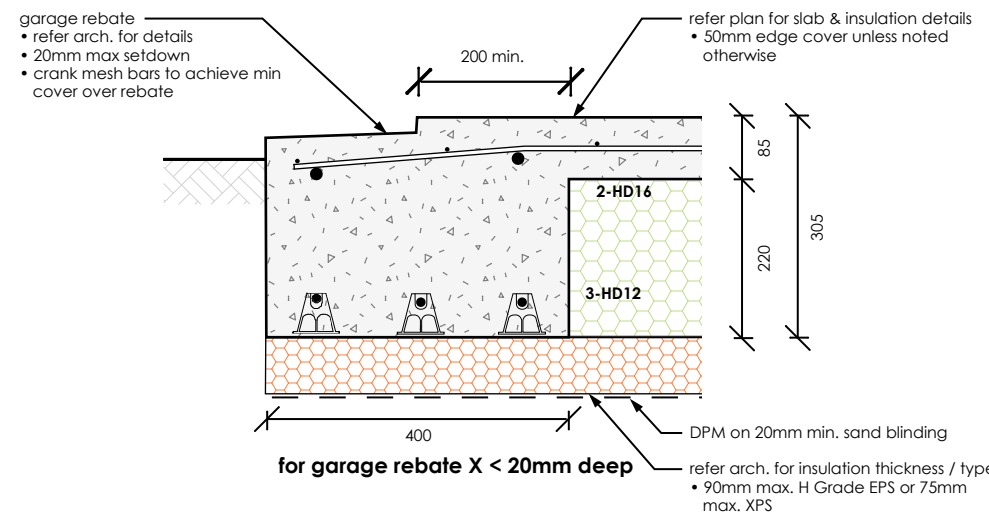
2 TYP. INTERNAL BEAM WITH LOAD BEARING WALL
S1.01 NTS



3 TYP. RIB DETAIL
S1.01 NTS



4 TYP. GARAGE DOOR REBATE
S1.01 NTS



5 TYP. SHOWER REBATE AT EDGE
S1.01 NTS

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PROJECT ISSUE: BUILDING CONSENT
REVISION: 1

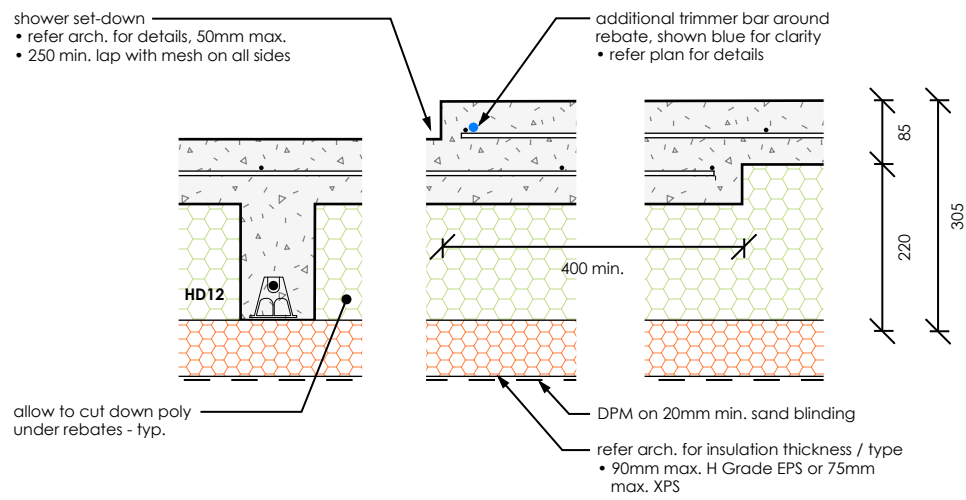
ARCHITECT



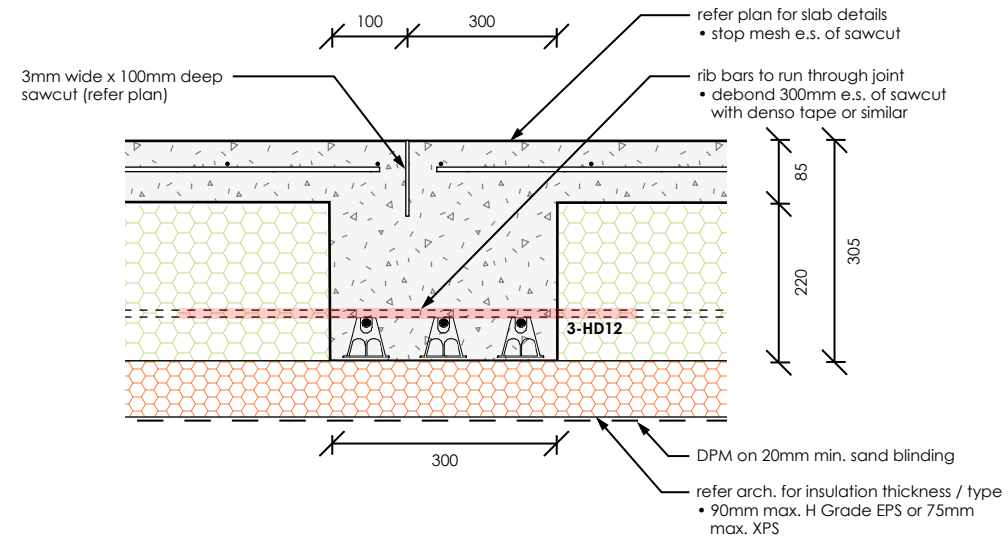
DESIGN HDM	DRAWN HDM	PROJECT RESIDENTIAL DEVELOPMENT 22 GREENSLADE DRIVE LINCOLN		
SCALE @ A3		SHEET NAME FOUNDATION DETAILS		
DATE 07-11-2025	PROJECT NO. 25253	SHEET NO. S2.03	REVISION 1	

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6 TYPICAL SHOWER REBATE INTERNALLY & OVER RIB
 S1.01 NTS



7 TYP. CONSTRUCTION JOINT DETAIL
 S1.01 NTS

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			DATE 07-11-2025	PROJECT NO. 25253	SHEET NO. S2.04	REVISION 1			