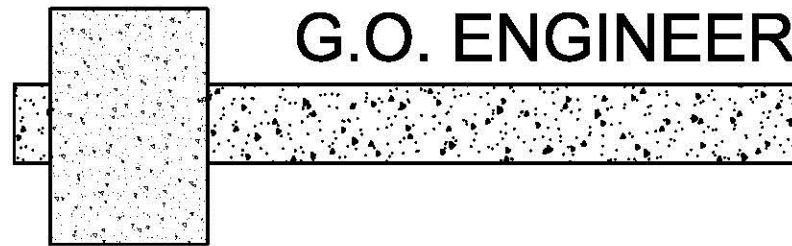


PROPOSED ALTERATIONS AND ADDITIONS TO  
EXISTING DWELLING AT  
FEATHERS LODGE LOT 603 MOUNTAIN DRIVE,  
WOODRIDGE, THREDBO, NSW 2625



**G.O. ENGINEERING CONSULTANTS P/L**

ACN 111 921 389

All workmanship and materials to conform with latest edition of the Building Code of Australia and relevant Australian Standards.

The contractor is to confirm all dimensions prior to commencing any works on site.

Refer to specification for other relevant information details.

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**Drawing Title:**

PROPOSED ALTERATIONS &  
ADDITIONS TO EXISTING  
DWELLING AT LOT 603  
MOUNTAIN RIVE, WOODRIDGE,  
THREDBO, NSW 2625.

**Client:**

Adam Hosie

**Structural Sheet No. S01 of 5**

**Scale:** NTS

**Date:** 9.10.2014

**Drawing No:** 20140814

COVER

**Sheet Size:-** A3

**Designed:** O Boaru

**Drawn:** D Boaru

**Checked:** G Bowland

**Approved:**

Ovi Boaru MIEAust CPEng

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# STRUCTURAL DRAWING LIST

SHEET NO	TITLE
S01	COVER
S02	SPECIFICATIONS
S03	FOOTING & SLAB PLAN & DETAILS
S04	GROUND FLOOR FRAMING PLAN
S05	FIRST FLOOR FRAMING PLAN

## NOTES:

1. All workmanship and materials to conform with the latest edition of the building code of Australia and relevant Australian standards.
2. It is not implied or guaranteed that all structural designs and details shown in these plans are complete. The scope of the work has been determined by the Engineer based on the information supplied by the client or the clients consultants. The Engineer will provide further designs if required, but is not responsible for any associated cost where design details have not been specifically requested.
3. All dimensions on these plans should be checked on site by the builder and verified using Architectural plans and other contract documents. Discrepancies to be referred to the Architect or Engineer.
4. DO NOT SCALE FROM THESE DRAWINGS
5. The structural details shown in these plans are applicable to the Architectural plans and building elements by DAVID LAW Architect indicated therein:  
Plans No. - Hosie - Murray - DA  
Plan date. - 30 / 9 /14  
Roof Structure. - Timber Rafters, Trusses & Colorbond.  
Wall Structure. - Timber Frame.  
Floor Structure. - Concrete Slab on Ground & Suspended timber floor.
6. Reference to UNO = Unless Noted Otherwise & NA = Not Applicable.
7. Handrail construction to BCA requirements.
8. Where disturbed existing building must have bracing and tie-down investigated by the builder and referred to the Engineer for compliance checking.

## SITE CONDITIONS:

1. Stability/Vegetation - NA
2. Drainage - NA
3. Soil Type/profile - NA
4. AS2870 - 2011 site classification - Class 'P' as per Asset Geotechnical Geotechnical Investigation report No 2696 R1 dated 21 November 2014, author Mark Bartel.
5. AS4055 - 2006 wind classification N3 50m/s (Vh,u).
6. AS1170.3 - 2002 Design Roof Snow Load for 1/150 annual probability of exceedance at (1,380m altitude) - Thredbo - Mountain Drive, NSW for:- 30° pitch = 2.08 - KPa (ultimate load)  
10° pitch = 3.47 - KPa (ultimate load)

## CONCRETE:

1. All concrete works to be in accordance with AS3600 2001
2. Concrete strength cover and durability details (refer AS3600)  
Footings - 25MPa  
Internal Slab -25MPa  
External Slab - 32 MPa  
Beams/Columns - NA
3. All reinforcement to be adequately supported on bar chairs in correct positions.
4. Concrete to be formed as required by AS3610 and compacted in accordance with AS3600 and AS3610 to achieve specified or relevant density durability and strength.
5. All reinforced fabric to be lapped one mesh panel plus 25mm and reinforcement bars lapped 40 bar diameters, UNO.

## FOOTINGS:

1. Footings and slabs on ground designs conform with AS 2870-1996.

## MASONRY:

1. All masonry (clay, stone and concrete) to comply with AS3700 2001. masonry code.
2. Masonry control joints to AS3700.
3. Core fill grout mix for hollow block fill to be 20 MPa.

## TIMBER:

1. All timber construction to comply with Australian Framing Code AS1684.2 - 2006.
2. Bracing and tie down as shown on These Sheets comply with AS 1684.2-2006.
3. For external use, use Class 1 or Class 2 HW or Treated Timbers.

## STEEL:

1. All steel construction to comply with AS4100 steel structures code and AISC Connection Details.

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### Drawing Title:

PROPOSED ALTERATIONS & ADDITIONS TO EXISTING DWELLING AT LOT 603 MOUNTAIN RIVE, WOODRIDGE, THREDBO, NSW 2625.

### Client:

Adam Hosie

Structural Sheet No. S02 of 5

Scale: NTS

Date: 9.10.2014

Drawing No: 20140814

SPECIFICATIONS

Sheet Size:- A3

Designed: O Boaru

Drawn: D Boaru

Checked: G Bowland

### Approved:

Ovi Boaru MIEAust CPEng

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**Drawing Title:**  
 PROPOSED ALTERATIONS & ADDITIONS TO EXISTING DWELLING AT LOT 603 MOUNTAIN RIVE, WOODRIDGE, THREDBO, NSW 2625.

**Client:**  
 Adam Hosie

**Structural Sheet No.** S03 of 5

**Scale:** AS SHOWN  
**Date:** 9.10.2014  
**Drawing No:** 20140814  
**SLAB & FOOTING DETAILS**

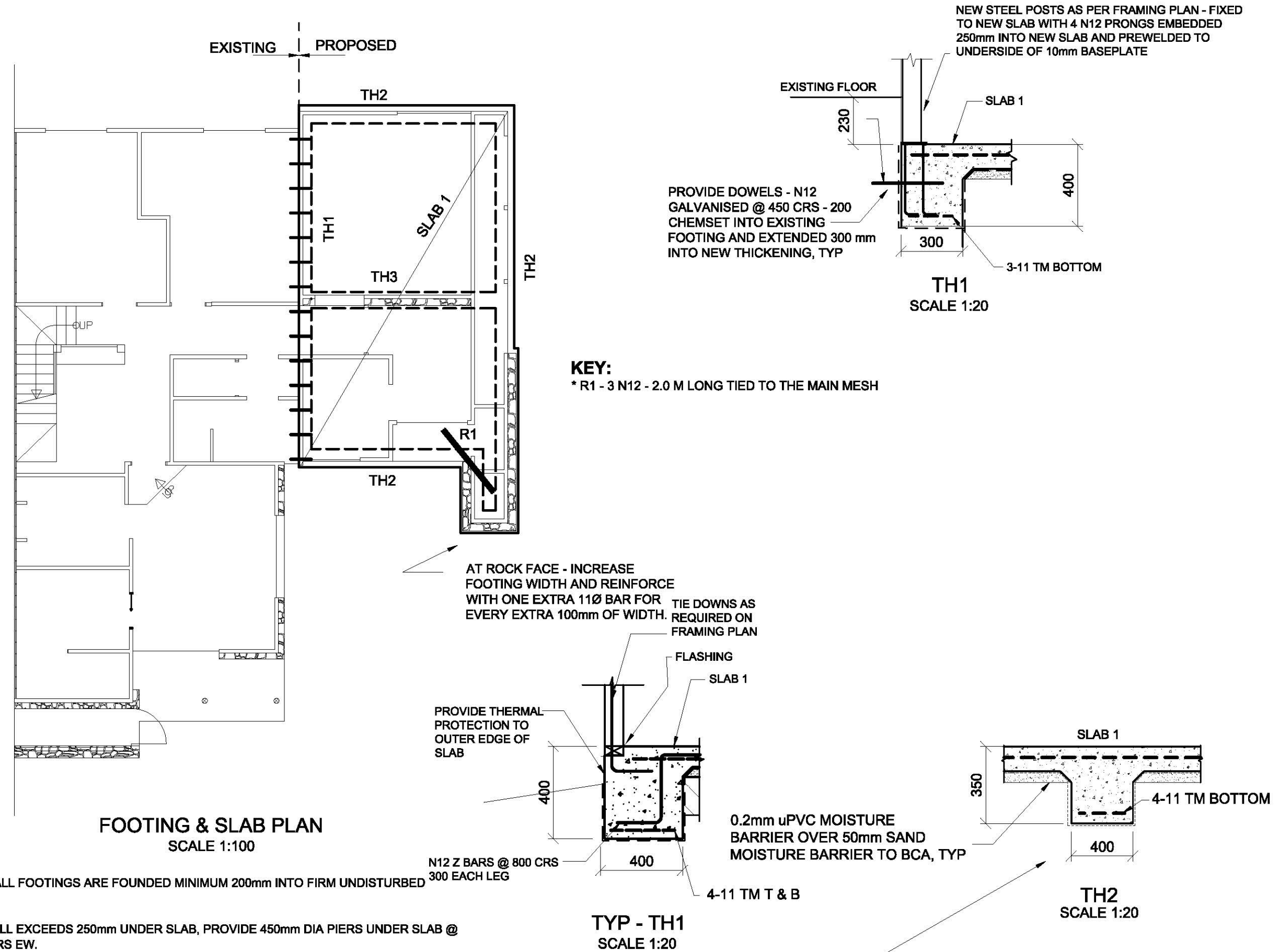
**Sheet Size:-** A3  
**Designed:** O Boaru  
**Drawn:** D Boaru  
**Checked:** G Bowland

**Approved:**

Ovi Boaru MIEAust CPEng

ISSUE	DATE	AMENDMENT	INITIALS

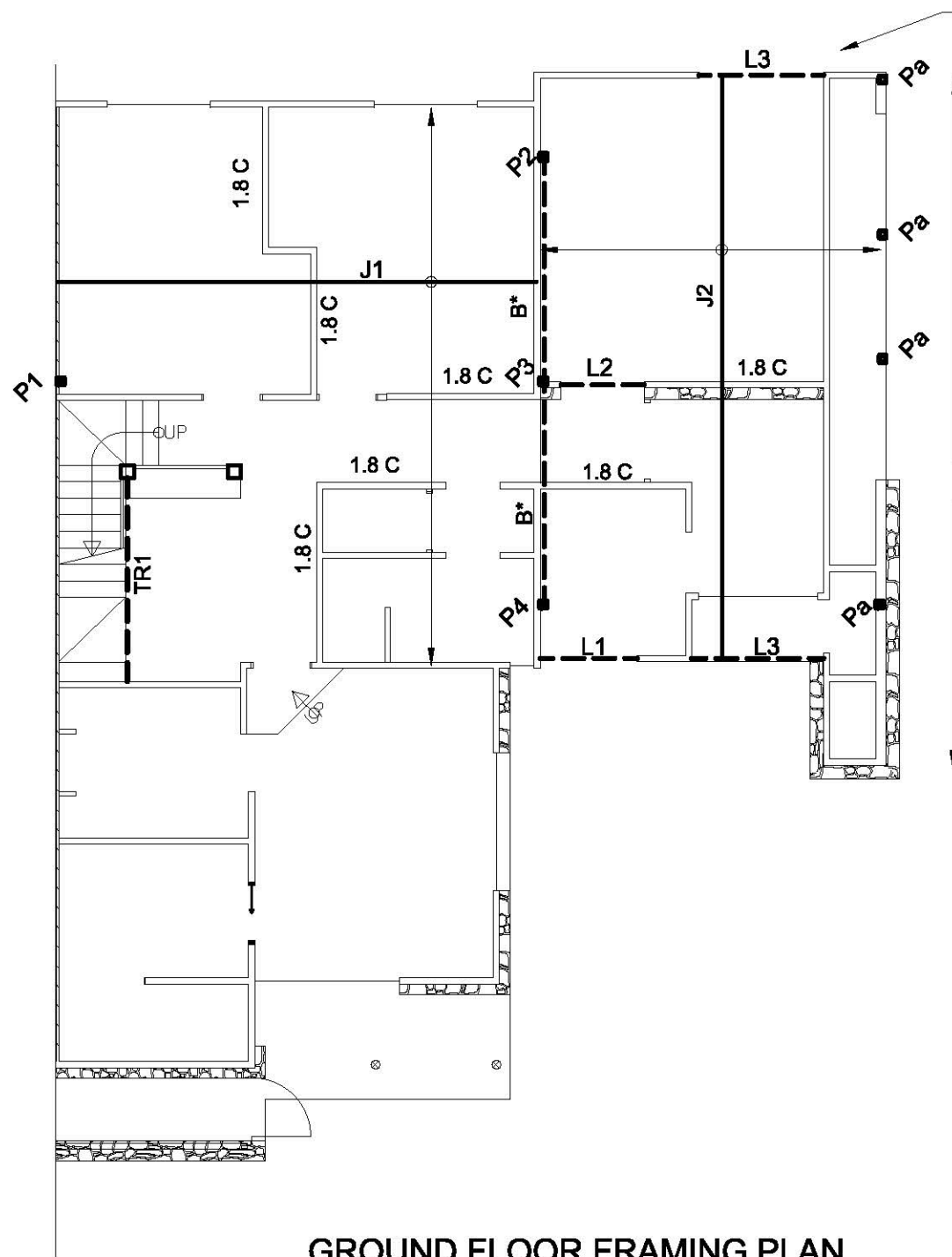
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- NOTES:**
1. ENSURE ALL FOOTINGS ARE FOUNDED MINIMUM 200mm INTO FIRM UNDISTURBED GROUND.
  2. WHERE FILL EXCEEDS 250mm UNDER SLAB, PROVIDE 450mm DIA PIERS UNDER SLAB @ MAX 1800 CRS EW. AT EACH PIER PROVIDE 800 x 800 SL72 EXTRA LAYER OF MESH ON SLAB MESH.
  3. THE BUILDER TO ENSURE THAT HOUSE SLAB IS MIN 150mm ABOVE FINISHED OUTSIDE SURFACE.
  4. GRADE SURFACE AWAY FROM THE BUILDING MIN 1.0 METERS ALL AROUND AND SUFFICIENT TO DRAIN AWAY FROM THE HOUSE SITE TO BCA.
  5. THIS DESIGNED HAS BEEN PREPARED IN ACCORDANCE WITH ADVICE FROM GEOTECHNICAL ENGINEERING REPORT BY MR. MARK BARTEL OF ASSET GEOTECHNICAL - REPORT NUMBER 2696R1 - DATED 21 NOVEMBER 2014

FOUND FOOTINGS ON NATURAL DECOMPOSED GRANITE AS ASSESSED BY GEOTECHNICAL'S ENGINEER MANDATORY VISIT BEFORE PLACING ANY STEEL OR CONCRETE. FOOTING DEPTH MAY EXCEED 400mm IN DPETH IN ORDER TO ACHIEVE THIS REQUIREMENT. SEE ALSO DETAILS FROM REPORT QUOTED AT NOTE 5.

FULLY STRUCTURALLY PLYWOOD  
ALL EXTERNAL WALLS, TYPICAL



**GROUND FLOOR FRAMING PLAN**  
SCALE 1:100

USE 140 x 45 F7 TIMBER STUDS ALONG THIS WALL AND WATER PROOF WALL AT THE BOTTOM AND AT LEAST ONE METER UP TO PREVENT ROTTING FROM SNOW BUILT UP. WATER PROOFING OF EXTERNAL WALLS IS REQUIRED TYPICAL WHERE SNOW BUILT UP IS HIGHLY LIKELY.

**KEY:**

- \* J1 - EXISTING TIMBER JOISTS TO BE KEPT. WHERE DEMOLITION OF EXISTING WALLS REMOVES SUPPORT FOR JOISTS, THE BUILDER IS TO SAFELY PROP THE FLOOR AND ENGAGE THIS OFFICE FOR FURTHER SPECIFICATIONS REGARDING NEW BEARERS.
- \* J2 - 200 x 45 LVL F17 @ 400 CRS PLUS ONE BLOCKING AT ENDS AND ONE AT MID SPAN, MAXIMUM SPAN 4.5m
- \* Pa - 90 x 3.5 SHS - EXTENDED THROUGH TO TOP OF HANDRAIL FOR LATERAL SUPPORT
- \* TR 1 - 200 x 45 LVL TRIMMER TO SUPPORT EXISTING FLOOR JOISTS.
- \* P1 & P3 - 89 x 6.0 SHS - BOLTED TO FLOOR WITH 4 M12 CHEMSET AND EXTENDED TO SUPPORT THE ROOF RIDGE LOCATED ON THE FIRST FLOOR. P3 - MAY BE WELDED TO A CAST IN PLACE AS PER POST P2.
- \* P2 & P4 - 89 x 5.0 SHS - FIXED TO NEW FOOTING WITH 4 N12 PRONGS - 120 LONG THROUGH A 8mm BASEPLATE. WELD POSTS TO BEAMS TO PROVIDE LATERAL STABILITY OF THE WESTERN ELEVATION.
- \* L1 - 2 / 140 x 45 F7 LAMINATED - MAX SPAN 1.4m
- \* L2 - 2 / 140 x 45 F7 - MAX SPAN 1.2m
- \* L3 - 2 / 170 x 45 F7 - LAMINATED MAX SPAN 1.8m
- \* B - 89 x 6.0 SHS FULLY WELDED TO POSTS - NON LOAD BEARING - USED FOR BRACING

**NOTES:**

1. ENSURE NEW EXISTING ROOF TRUSSES AND NEW RAFTERS ARE FIXED TO TOP PLATE WITH ON CYCLONE STRAP AROUND AND BOLTED TO SUPPORTED FRAME.
2. ROOF BRACING AND BLOCKING AND ALL TIMBER WORK TO AS 1684.
3. ENSURE BRACING SHEETING IS NAILED FROM TOP PLATE TO BOTTOM PLATE.
4. EMBED 10mm Ø TIEDOWN RODS MIN 300mm INTO NEW SLAB EXTEND THROUGH TO ROOFING AND SECURELY FIX.  
ALTERNATIVELY CHEMSET TIE DOWN RODS WITH HAMMER CAPSULES OR WITH CHEMSET REO 502, EMBEDDED MIN 150mm INTO SLAB.
5. ALL EXTERNAL STRUCTURAL TIMBER TO BE EITHER TREATED PINE OR CLASS 1 OR CLASS 2 HARDWOOD TIMBER.
6. CHEMSET INSTALLATION TO MANUFACTURER'S SPECIFICATIONS.

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The contractor is to confirm all dimensions prior to commencing any works on site.

Refer to specification for other relevant information details.

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**Drawing Title:**

PROPOSED ALTERATIONS & ADDITIONS TO EXISTING DWELLING AT LOT 603 MOUNTAIN RIVE, WOODRIDGE, THREDBO, NSW 2625.

**Client:**

Adam Hosie

Structural Sheet No. S04 of 5

Scale: 1:100  
Date: 9.10.2014  
Drawing No: 20140814  
G.F. FRAMING PLAN

Sheet Size:- A3  
Designed: O Boaru  
Drawn: D Boaru  
Checked: G Bowland

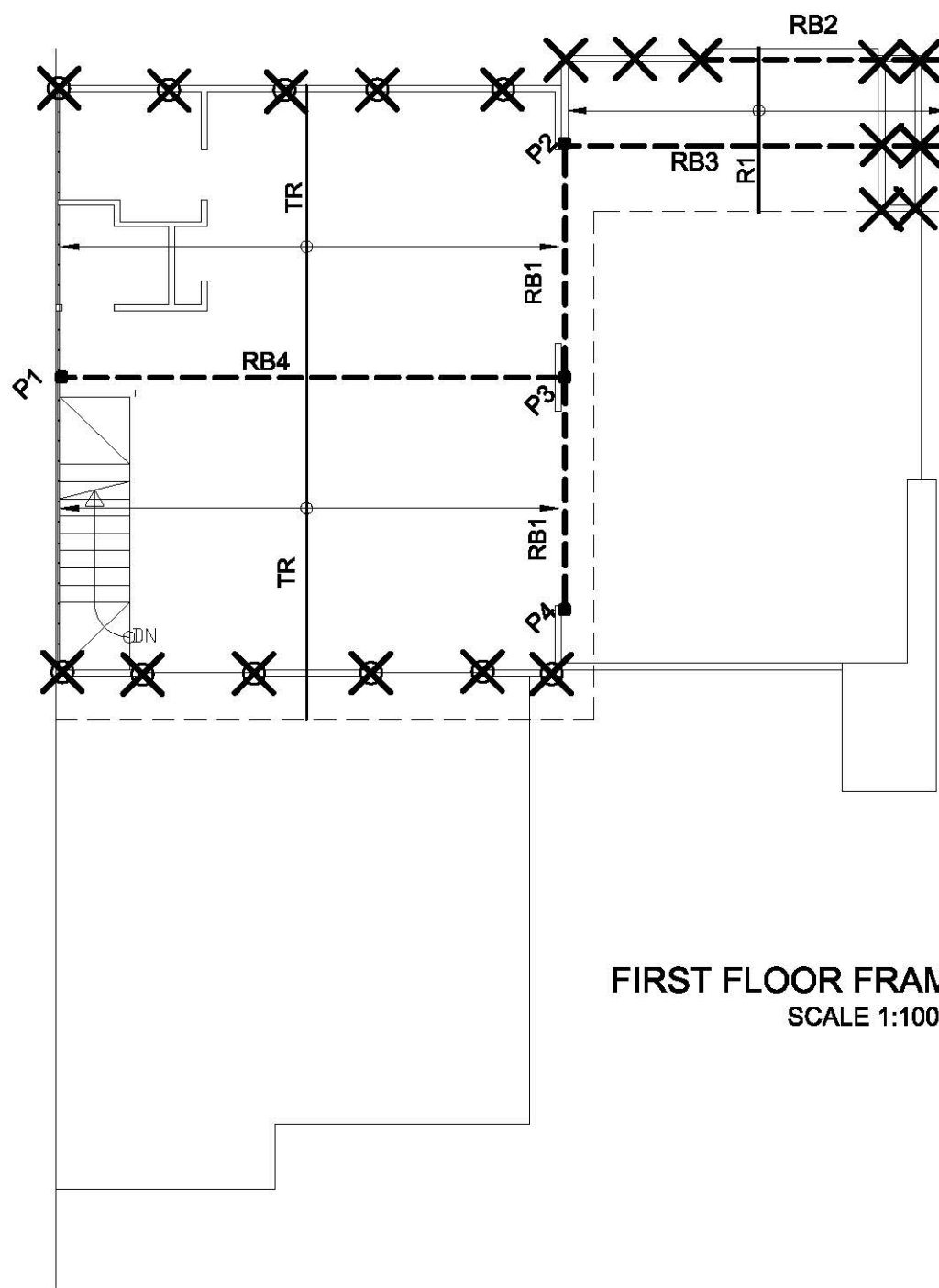
**Approved:**

Ovi Boaru MIEAust CPEng

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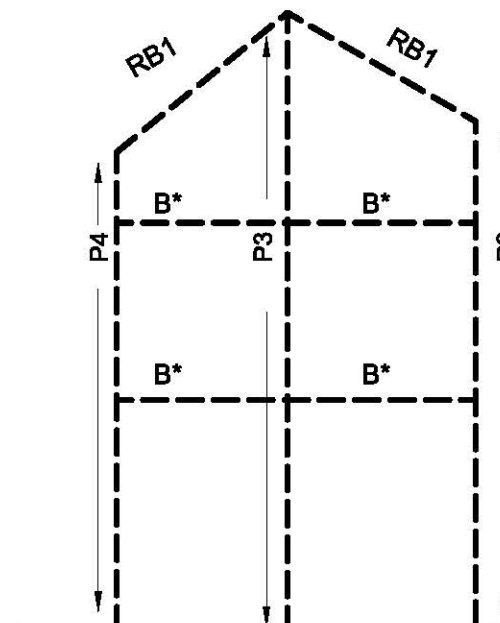
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**FIRST FLOOR FRAMING PLAN**  
SCALE 1:100

FULLY STRUCTURALLY PLYWOOD  
ALL EXTERNAL WALLS, TYPICAL



**WESTERN STEEL FRAME ELEVATION**  
SCALE 1:100

**NOTES:**

1. ENSURE NEW EXISTING ROOF TRUSSES AND NEW RAFTERS ARE FIXED TO TOP PLATE WITH ON CYCLONE STRAP AROUND AND BOLTED TO SUPPORTED FRAME.
2. ROOF BRACING AND BLOCKING AND ALL TIMBER WORK TO AS 1684.
3. ENSURE BRACING SHEETING IS NAILED FROM TOP PLATE TO BOTTOM PLATE.
4. EMBED 10mm Ø TIEDOWN RODS MIN 300mm INTO NEW SLAB EXTEND THROUGH TO ROOFING AND SECURELY FIX. ALTERNATIVELY CHEMSET TIE DOWN RODS WITH HAMMER CAPSULES OR WITH CHEMSET REO 502, EMBEDDED MIN 150mm INTO SLAB.
5. ALL EXTERNAL STRUCTURAL TIMBER TO BE EITHER TREATED PINE OR CLASS 1 OR CLASS 2 HARDWOOD TIMBER.
6. CHEMSET INSTALLATION TO MANUFACTURER'S SPECIFICATIONS.

**KEY:**

- \* TR - EXISTING TIMBER TRUSSES SECURELY BOLTED WITH MIN 2 M16 TO NEW RIDGE BEAM AND TIED DOWN TO WALLS WITH NEW M12 RODS AS SHOWN.
- \* R1 - 170 x 45 HW CLASS 1 @ 600 CRS MAXIMUM CANTILEVER 900mm AND TIED DOWN AS SHOWN.
- P1 & P3 - 89 x 6.0 SHS - BOLTED TO FLOOR WITH 4 M12 CHEMSET AND EXTENDED FROM GROUND FLOOR AND WELDED TO RB1 OR BOLTED WITH 3 M20..
- P2, P3 & P4 - 89 x 5.0 SHS - FIXED TO NEW FOOTING WITH 4 N12 PRONGS - 120 LONG THROUGH A 8mm BASEPLATE. WELD POSTS TO BEAMS TO PROVIDE LATERAL STABILITY OF THE WESTERN ELEVATION.
- \* RB2 - 2 / 200 x 45 LVL LAMINATED - MAXIMUM SPAN 2.4m
- \* RB3 - 300 x 63 F17 - WEATHER PROTECTED - MAXIMUM SPAN 4.3m
- \* B\* & RB1 - 89 x 6.0 SHS FULLY WELDED TO POSTS - NON LOAD BEARING - USED FOR BRACING
- \* RB4 - 400 x 75 F27 or 450 x 63 F27 or 310 UB 40

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PROPOSED ALTERATIONS & ADDITIONS TO EXISTING DWELLING AT LOT 603 MOUNTAIN RIVE, WOODRIDGE, THREDBO, NSW 2625.

**Client:**  
Adam Hosie

**Structural Sheet No.** S05 of 5

**Scale:** 1:100  
**Date:** 9.10.2014  
**Drawing No:** 20140814  
FRAMING

**Sheet Size:-** A3  
**Designed:** O Boaru  
**Drawn:** D Boaru  
**Checked:** G Bowland

**Approved:**

Ovi Boaru MIEAust CPEng

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SYMBOL	SPECIFICATION
0.9B	900mm LONG F11 PLYWOOD AS1684 TYPE g, MAX 2700 HIGH x4.5mm THICK
1.8 C	DIAGONAL TO AS1684 TYPE 8.18 (d) - 30mm x 0.8mm GALV METAL STRAP MINIMUM 1.8m LONG
X	10MM DIA TIEDOWN ROD SEE NOTES ONPLAN