PROPOSED: 3 DOUBLE STOREY DWELLINGS
68 KIRKWOOD ROAD, EAGLEHAWK VIC3556

CIVIL / STRUCTURAL ENGINEER - PRIYAN WIJEYERATNE - PE0004228

MOBILE: 04010/23328

DRAWING CONTENTS	
TITLE	SHEET NO
COVER SHEET	1 OF 23
GENERAL SPECIFICATIONS	2 OF 23
RAFT SLAB PLAN DWELLING 1	3 OF 23
RAFT SLAB PLAN DWELLING 2&3	4 OF 23
RAFT BEAM DETAIN 1 (TYPICAL) & LIFT PIT DETAIL	5 OF 23
RAFT BEAM DETAIL 2 (TYPICAL)	6 OF 23
FL. TIMBER FRAMING PLAN DWELLING 1	7 OF 23
RF. TIMBER FRAMING PLAN DWELLING 1	8 OF 23
FL. TIMBER FRAMING PLAN DWELLING 2&3	9 OF 23
RF. TIMBER FRAMING PLAN DWELLING 2&3	10 OF 23
TIMBER FRAMING DETAIL 1 - TYPICAL	11 OF 23
TIMBER FRAMING DETAIL 2 - TYPICAL	12 OF 23
BRACING PLAN DWELLING 1	13 OF 23
BRACING PLAN DWELLING 2&3	14 OF 23
BRACING DETAIL 1 - TYPICAL	15 OF 23
BRACING DETAIL 2 - TYPICAL	16 OF 23
BRACING DETAIL 3 - TYPICAL	17 OF 23
BRACING DETAIL 4 - TYPICAL	18 OF 23
ST. ANGLE & TIMBER LINTEL TABLES	19 OF 23
ARTICULATION JOINTS & DETAIL	20 OF 23
STORMWATER DRAINAGE PLAN	21 OF 23
FILLING, PIPE LAYING, DRIVEWAY & CROSSOVER DETAIL	22 OF 23
& GENERAL NOTES FOR CIVIL WORKS	23 OF 23

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WARNING
ALL SERVICES SHOWN ON THESE DRAWINGS ARE APPROXIMATE ONLY AND EXACT LOCATION IS TO BE CONFIRMED ON SITE BY CONTRACTOR PRIOR TO COMMENCEMENT OF ANY WORKS.

CLIENT:
EVMON MAGTANONG
EMD STUDIO

JOB NO: EM/DSD - 2025

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REGISTERED ENGINEER
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PROJECT:
3 D/S DWELLINGS

PROJECT ADDRESS:
68 KIRKWOOD ROAD,
EAGLEHAWK VIC 3556

SHEET NO: 1//23

SCALE: AS SHOWN

DATE: 22/10/2025

WB CIVIL STRUCTURAL ENGINEERS

REV.	REMARKS/COMMENTS	DATE	APRV.
	ISSUED FOR REVIEW ONLY	11/11/2025	PW

GENERAL SPECIFICATIONS

GENERAL

G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANT'S DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER OR ARCHITECT BEFORE PROCEEDING WITH THE WORK.
G2. ALL DIMENSIONS ARE TO BE OBTAINED FROM THE ARCHITECT'S DRAWINGS OR FROM SITE. ENGINEER'S DRAWINGS MUST NOT BE SCALED.
G3. DURING CONSTRUCTION THE BUILDER SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE IN A STABLE CONDITION AND ENSURING NO PART SHALL BE OVERSTRESSED UNDER CONSTRUCTION ACTIVITIES.
G4. MATERIAL AND WORKMANSHIP ARE TO BE IN ACCORDANCE WITH THE RELEVANT SAA CODES, BCA/NCC REQUIREMENTS UNLESS OTHERWISE NOTED IN THE PROJECT SPECIFICATION.
G5. THE APPROVAL OF A SUBSTITUTION BY THE ENGINEER IS NOT AN AUTHORIZATION FOR AN EXTRA. ANY EXTRA INVOLVED MUST BE TAKEN UP WITH THE ARCHITECT BEFORE WORK COMMENCES.
G6. THE STRUCTURAL WORK SHOWN ON THESE DRAWINGS HAS BEEN DESIGNED FOR THE FOLLOWING LIVE LOADS:-

AREA	LIVE LOAD
FLOOR	1.5 kPa
ROOF	0.25 kPa 'OR' (1.8/A + 0.12) WHICHEVER IS GREATER
BALCONY (IF APPLICABLE)	2.0 kPa

G7. FOUNDATION MATERIAL TO BE APPROVED BEFORE POURING CONCRETE FOR A SAFE BEARING CAPACITY OF: 100 kPa RAFT SLAB

G8. ALL DETAILS SHOWN IN WBCSE DRAWING SETS ARE FOR STRUCTURAL PURPOSES ONLY. THE ARCHITECT AND BUILDER MUST ENSURE ALL CONSTRUCTION REQUIREMENTS SET BY THE BCA/NCC ARE MET.
THIS OFFICE SHOULD BE CONTACTED IF ANY CLARIFICATION IS REQUIRED.

STRUCTURAL STEELWORK

S1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 1250 AND/OR AS4100.
S2. WELDING SHALL BE PERFORMED BY AN EXPERIENCED OPERATOR IN ACCORDANCE WITH AS 1554.
S3. HIGH STRENGTH BOLTING SHALL BE IN ACCORDANCE WITH AS 1511.
S4. TWO COPIES OF THE SHOP DETAIL DRAWINGS ARE TO BE SUBMITTED TO THE ENGINEERS AND APPROVAL OF SAME OBTAINED BEFORE COMMENCING FABRICATION. APPROVAL WILL NOT COVER DIMENSIONS OR LAYOUT.
S5. THE BUILDER SHALL PROVIDE AND LEAVE IN PLACE UNTIL PERMANENT BRACING ELEMENTS ARE CONSTRUCTED SUCH TEMPORARY BRACING AS IS NECESSARY TO STABILIZE THE STRUCTURE DURING ERECTION.
S6. CAMBER TO STRUCTURAL STEEL ROOF BEAMS, TRUSSES, PORTALS, ETC.,TO BE 2mm FOR EVERY 1M OR SPAN UNLESS OTHERWISE NOTED.
S7. ALL CLEAT AND DRILLING FOR FIXING OF TIMBER MEMBERS, ETC., TO BE PROVIDED BY FABRICATOR.
S8. EXCEPT WHERE OTHERWISE SHOWN CONNECTIONS SHALL HAVE 6mm CONTINUOUS FILLET WELDS, 2-M16 8.8/S BOLTS IN 1.5mm CLEARANCE HOLES AND 10mm THICK CLEAT PLATE.
S9. CONCRETE ENCASED STEELWORK SHALL BE WRAPPED WITH SLAB FABRIC, UNLESS OTHERWISE SHOWN.
S10.STEELWORK SHALL BE THOROUGHLY WIRE BRUSHED AND GIVEN ONE SHOP COAT OF APPROVED PRIMER EXCEPT THAT NONE SHALL BE APPLIED AT CONTACT SURFACES WHERE H.S. BOLTS USED.
S11.ALL STEEL BEAMS AND LINTELS ARE TO HAVE 100mm MIN. END BEARING UP TO 1.0m & 150mm MIN. END BEARING OVER 1.0m, UNLESS OTHERWISE NOTED.
S12.STEEL FRAMING MUST BE PROTECTED FROM CORROSION WHERE REQUIRED IN ACCORDANCE WITH BCA 2016 3.4.2.2

CONCRETE

C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600.
C2. CONCRETE COVER TO ALL REINFORCEMENT (FINISHES NOT INCLUDED).

ELEMENT	FORMED AND SHELTERED	FORMED AND EXPOSED	NO FORM WORK
SLABS AND WALLS	20mm	30mm	65mm
BEAMS	25mm	40mm	65mm
COLUMNS	40mm	50mm	75mm
FOOTINGS		65mm	75mm

C3.CONCRETE SIZES SHOWN DO NOT INCLUDE FINISH AND MUST NOT BE REDUCED OR HOLED IN ANY WAY WITHOUT THE ENGINEER APPROVAL.
C4. DEPTHS OF BEAMS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS.
C5. CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE PROPERLY FORMED AND LOCATED TO THE APPROVAL OF THE ENGINEER.
C6. REINFORCEMENT IS SHOWN DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION.
C7. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN. WELDING OF REINFORCEMENT WILL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.
C8. REINFORCEMENT SYMBOLS:-
L LOW DUCTILITY BARS TO AS 4671 : 2001
N NORMAL DUCTILITY BARS TO AS 4671 : 2001
E SEISMIC (EARTHQUAKE) DUCTILITY BAR TO AS 4671 : 2001
THE NUMBER FOLLOWING THE BAR SYMBOL IS THE NOMINAL BAR DIAMETER IN MILLIMETRES.
C9. ALL CONCRETE SHALL BE GRADE 20MPa - 100mm SLUMP (U.N.O.)
C10. ALL REINFORCEMENT SHALL BE SUPPORTED IN ITS CORRECT POSITION SO AS NOT TO BE DISPLACED DURING CONCRETING ON APPROVED BAR CHAIRS AT 1.0m MAX CRS BOTH WAYS. WHERE REQUIRED PROVIDE SUPPORT BARS
C11.CONCRETE TO BE KEPT FREE OF SUPPORTING BRICKWORK BY TWO LAYERS OF A SUITABLE MEMBRANE (MALTHOID, ETC.), OR AS DIRECTED BY THE ENGINEER. VERTICAL FACES OF CONCRETE TO BE KEPT FREE BY 10mm
C12.WHERE WALLS ARE NON-LOAD BEARING AT EITHER HORIZONTAL OR VERTICAL FACES THEY SHALL BE SEPARATED FROM CONCRETE OR BRICKWORK BY 10mm THICK CANITE.
C13.ALL REINFORCEMENT FOR ANY ONE POUR SHALL BE COMPLETELY PLACED AND TIED PRIOR TO INSPECTION BY THE ENGINEER OR ARCHITECT. NO CONCRETE SHALL BE POURED UNTIL REINFORCEMENT HAS BEEN INSPECTED AND APPROVED.
C14.WHERE SLABS AND BEAMS ARE TO SUPPORT BRICKWORK OVER, FORMWORK AND PROPS MUST BE REMOVED BEFORE COMMENCEMENT OF BRICKWORK.
C15.TRENCH MESH IN BEAMS TO BE LAID CONTINUOUSLY WITH EACH LAYER BEING LAPPED FOR ITS FULL WIDTH AT INTERSECTIONS AND FOR A MINIMUM OF 500mm AT SPLICES. THE TRENCH MESH SHALL BE OVERLAPPED BY THE WIDTH OF THE FABRIC AT T & L JUNCTIONS.
C16.WHEN NEW FOOTING IS ABUTTED TO THE ADJACENT STRUCTURES OF NEIGHBOURING BUILDING AT BOUNDARY, A MINIMUM OF 10mm THICK "ABLEFLEX" (OR APPROVED EQUIVALENT) MUST BE PLACED BETWEEN STRUCTURES (UNLESS OTHERWISE NOTED ON ENGINEERING DRAWINGS TYPICAL)

BRICKWORK

B1. THE UNCONFINED COMPRESSIVE STRENGTH OF A BRICK UNIT TO BE MIN. OF 15MPa AND COMPRESSIVE STRENGTH OF MASONRY TO BE A MIN. OF 5.4 MPa
B2. THE MORTAR MIX FOR BRICKWORK SHALL BE 1:1:6
B3. FOR NON-LOAD BEARING WALLS SEE NOTE C13.
B4. ARTICULATION (OR EXPANSION) JOINT SPACING MUST BE IN ACCORDANCE WITH AS4773.1 - 2015, AS4773.2 - 2015 & TECHNICAL NOTE 61 (AUG 2008) FOR ARTICULATED WALLING UNLESS NOTED OTHERWISE.
B5. ALL WALL TIES MUST BE GALVANISED.

STRUCTURAL TIMBER

T1. ALL TIMBER FRAMING IS TO BE IN ACCORDANCE WITH AS 1684-2010 RESIDENTIAL TIMBER FRAMED CONSTRUCTION.
T2. ALL TIMBER STRESS GRADES NOMINATED SHALL BE IN ACCORDANCE WITH THE RELEVANT CODES AND MEANS THE STRUCTURAL QUALITY OF A TIMBER SECTION (REFER TO AS 1720).
T3. TIMBER SHALL BE STORED AND HANDLED SO AS NOT TO BE DETRIMENTAL TO THEIR PERFORMANCE OR DAMAGE THEM. REFER APPENDIX H AS 1684-2:2010
T4. ALL TIMBER SHALL BE DRY, IE: LESS THAN 15% MOISTURE CONTENT AT THE TIME OF CONSTRUCTION AND SHALL BE PROTECTED AND/OR TREATED AS NOTED.
T5. ALL TIMBER BEAMS AND LINTELS ARE TO BEAR ON DOUBLE STUDS (ONE JAMB AND ONE BEARING STUD), UNLESS OTHERWISE NOTED.
T6. BEAMS/STUDS HAVING MORE THAN 1 MEMBER TO BE NAIL LAMINATED TOGETHER IN ACCORDANCE WITH AS 1684-2010.
T7. ALL EXPOSED TIMBER TREATMENT MUST BE IN ACCORDANCE WITH EXPOSURE CLASSIFICATION AS1684.2 TABLE B1, MINIMUM H3 TREATED OR DURABLE SPECIES TO BE ADOPTED TYPICAL U.N.O.

FRAMING

F1. PROVIDE SOLID BLOCKING (45 WIDE x D-25 DEEP) SECURELY NAILED TO JOISTS/RAFTERS (D=DEPTH OF JOIST/RAFTER) AT 1800 MAX. CRS.
F2. ALL EXTERNAL OR EXPOSED STEELWORK TO BE HOT DIP GALVANISED.
F3. WATERPROOFING TO ARCHITECTS DETAILS.
F4. ALL TIMBER FRAMING & BRACING NOT SHOWN TO COMPLY WITH AS1684 TIMBER FRAMING MANUAL.
F5. ALL BRICKWORK LINTELS TO ARCHITECTS DETAILS. ALL BRICKWORK LINTELS TO COMPLY WITH F.3.3.3.5 OF B.C.A 2012 VOLUME 2.
F6. ALL BEAMS/GIRDER & HIP TRUSSES TO BE SUPPORTED ON DOUBLE STUDS EACH END U.N.O.
F7. ALL LINTELS TO BE SUPPORTED ON SINGLE STUD AND JAMB STUD U.N.O.
F8. ALL TRUSSES & WALL FRAMES TO MANUFACTURER'S DESIGN & DETAILS.
F9. TRUSS DIRECTION ASSUMED AS SHOWN (IF APPLICABLE). CONTACT THIS OFFICE IF DIFFERENT TRUSS LAYOUT IS USED SO LINTELS ETC CAN BE REDESIGNED (IF REQUIRED).
F10.ALL TIMBER LINTELS TO BE DESIGNED BY THE TRUSS MANUFACTURER. TYPICAL U.N.O
F11. BUILDER TO SUPPLY MANUFACTURERS TRUSS LAYOUT TO THIS OFFICE FOR APPROVAL PRIOR TO CONSTRUCTION. TRUSS DESIGN MUST BE IN ACCORDANCE WITH AS1720 AND AS1684. TRUSS FABRICATOR/BUILDER IS RESPONSIBLE FOR PROVIDING ADEQUATE ROOF/WALL BRACING TO ENSURE STABILITY OF THE STRUCTURE IN ACCORDANCE TO AS1684.
F12.ALL INTERNAL WALLS TO BE NON-LOAD BEARING (TYPICAL) UNLESS HATCHED OTHERWISE ON PLANS.

INSPECTIONS

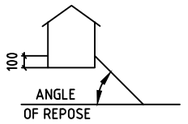
I1. ALL STRUCTURAL WORK MUST BE INSPECTED AND APPROVED IN WRITING PRIOR TO ANY WORK PROCEEDING. 48 HOUR MIN. NOTICE IS REQUIRED FOR ALL INSPECTIONS.

SITE DRAINAGE

D1. AT THE TIME OF THE PREPARATION OF THIS DOCUMENT, IF THE DRAINAGE DESIGN WAS NOT PREPARED OR CERTIFIED BY THIS OFFICE THEN THE DRAINAGE SYSTEM MAY NEED TO BE DOCUMENTED BY A SUITABLY QUALIFIED PERSON TO COMPLY WITH AS2870-2011. THE DRAINAGE DESIGNER SHOULD ENSURE THAT THE ELEMENTS OF THE DRAINAGE SYSTEM DESIGN ARE CONSIDERED WITH RESPECT TO THE PROPOSED FOOTING SYSTEM.WE RECOMMEND THAT WBCSE OR AN EQUIVALENT CERTIFIED PRACTITIONER, REVIEW ALL THE DOCUMENTATION TO ENSURE COMPLIANCE.
D2. SITES SHOULD BE DRAINED SO THAT WATER CANNOT POND AGAINST OR NEAR THE HOUSE. THE GROUND IMMEDIATELY ADJACENT TO THE HOUSE SHOULD BE GRADED TO FALL 50mm OVER THE FIRST METRE.WHERE THIS IS IMPRACTICABLE (IE: ON SEVERAL SLOPING SITES) USE A.G. DRAINS ADJACENT TO FOOTINGS WHERE THE GROUND FALLS TOWARDS THE BUILDING.

FOOTING: ANGLE OF REPOSE

A1. FOOTING MUST NOT UNDERMINE EXISTING FOOTING OR BE UNDERMINED BY PROPOSED EXCAVATION.
A2. ENSURE ADEQUATE ANGLE OF REPOSE AT ALL TIMES (REFER DETAILS BELOW).
A3. NOTIFY THIS OFFICE IF FOOTING UNDERMINE OCCURS.
A4. PIPE DEPTH & LOCATION MUST BE CONFIRMED PRIOR TO CONSTRUCTION.



ANGLE OF REPOSE
30° MAX IN SAND/SILT
45° MAX IN CLAY
60° MAX IN ROCK

OH & SAFETY

O1. FOR ALL WORKS CONDUCTED ON THIS PROJECT, THE BUILDER SHALL HAVE ALL APPROPRIATE AND SUFFICIENT SAFETY MEASURES AND PROCEDURES IN PLACE.
O2. DEEP TRENCHES MAY EXIST ON THIS SITE. BUILDER TO ENSURE NECESSARY SAFETY MEASURES ARE TAKEN TO PREVENT FALL AND TRIPPING HAZARDS ARE ELIMINATED.
O3. FOR LARGE SPAN BEAMS (SAY6000mm), BUILDER TO ENSURE SEAT PLATES/ANGLES TO STEEL COLUMNS FOR MAJOR BEAMS AND LINTELS ARE INSTALLED FOR SAFER CONNECTION, BOLTING AND SITE WELDING.
O4. ADEQUATE PROPPING MAY BE REQUIRED FOR ANY RETAINING/LOAD BEARING WALLS ON BOUNDARIES. TEMPORARY SHORING MAY BE REQUIRED.
O5. PROVISIONS SHALL BE MADE FOR APPROPRIATE DISTANCE FOR ROOF BATTENS/RAFTERS TO PROVIDE A SAFE WORKING PLATFORM DURING ROOF INSTALLATION AND WORKING AT HEIGHTS.
O6. BUILDER MAY NEED TO BE AWARE OF APPROPRIATE MEASURES TO DEAL WITH HAZARDOUS MATERIALS SUCH AS ASBESTOS THAT MAY BE FOUND IN SERVICE PITS.
O7. IF A CRANE IS REQUIRED, THE BUILDER IS TO PROVIDE ADEQUATE SAFETY MEASURES FOR CRANE USAGE AROUND POWER LINES.
O8. IF ANY DIGGING IS REQUIRED OUTSIDE OF SITE BOUNDARIES, INFORMATION REGARDING EXISTING COUNCIL ASSETS NEED TO BE SOUGHT FROM "DIAL BEFORE YOU DIG".
O9. THE SAFETY CONCERNS AND HAZARDS IDENTIFIED ABOVE REPRESENT COMMONLY OCCURRING RISKS. THE LIST DOES NOT COVER THE FULL RANGE OF RISK AVOIDANCE MEASURES REQUIRED.

CLIENT:
EVMON MAGTANONG
EMD STUDIO

JOB NO: EM/DSD - 2025

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REGISTERED ENGINEER
BUSINESS LICENSING AUTHORITY, VICTORIA

PRIYAN WIJEYERATNE
PE 2448, F.I.E.(AUST)., C.P.ENG.
M.Eng(Struct)., M.Tech.(Mgt.), BSc(Civil)

PROJECT:
3 D/S DWELLINGS

PROJECT ADDRESS:
68 KIRKWOOD ROAD,
EAGLEHAWK VIC 3556

SHEET NO: 2//23

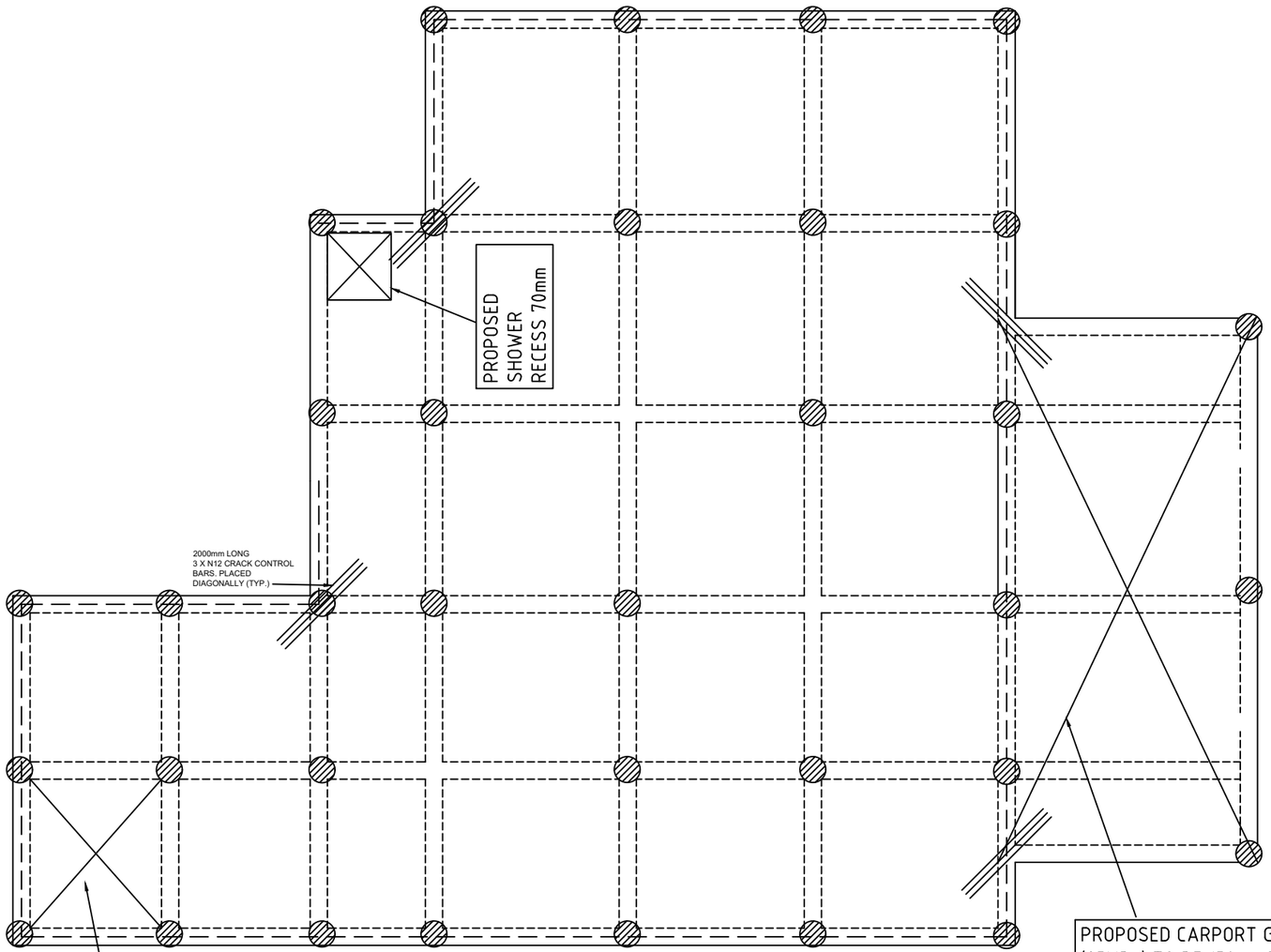
SCALE: AS SHOWN

DATE: 22/10/2025

WB CIVIL STRUCTURAL ENGINEERS

RAFT SLAB PLAN - DWELLING 1

SUPPLY & INSTALL A MODULAR DECKING SYSTEM AS PER ARCHITECTURAL DRAWINGS



RAFT SLAB SCHEDULE

1. ALL BEAMS DEPTH MIN. - 400mm
4. ALL BEAMS WIDTH - 300mm
5. SLAB THICKNESS - 100mm
6. CARPORT SLAB THICKNESS - 150mm
7. VAPOUR BARRIER IN ACCORDANCE WITH NCC TO BE LAPPED 200mm MIN. AND TAPED AT LAP-JOINTS, TO BE LAID ON A 50mm QUARRY PRODUCT.
8. CONCRETE STRENGTH TO BE 25MPa AT 28 DAYS WITH A SLUMP OF 100mm AT POURING. CONCRETE COVER TO REO. TO BE 30mm MIN.

REINFORCEMENT

TOP

9. SLAB MESH - SL92
10. CARPORT MESH - SL92
11. ALL BEAMS 3-L12TM200 + 1 N16

BOTTOM

12. CARPORT SLAB MESH - SL92
13. ALL BEAMS - 3-L12TM200 + 2xN16

MINIMUM LAP LENGTHS

14. 3-L12TM: 500mm
15. SL 92/82 MESH: 250mm
16. N16 BARS: 300mm

AT BEAM GRID 'L' s, 'T' s & '+' s

17. LAPs TO TRENCH MESH TO BE MIN. FULL WIDTH OF BEAM

MASS CONCRETE PIERS (BORED)

18. 450mm DIA. 25MPa CONCRETE.
19. FOUNDING DEPTH MIN. 1200mm FROM GROUND LEVEL, MIN 300mm INTO NATURAL STIFF SOIL.
20. ALL PIERS TO BE POURED & CAST AT ONCE BEFORE SLAB IS POURED.

NOTES

- REFER TO SHEET NO: 4/23 FOR SLAB NOTES.
- REFER TO ARCHITECTURAL DRAWINGS FOR FINISHED SLAB LEVEL AND LOCALISED RECESS DETAIL FOR BATHROOM(S)/TOILET(S).
- SOIL REPORT NO:5098 DATED: 7/10/2025 BY CENTRAL VICTORIA SOIL TESTING.
- SITE SOIL CLASSIFICATION: CLASS P.

RC SLAB PLAN - DWELLING 1

SCALE 1: 100

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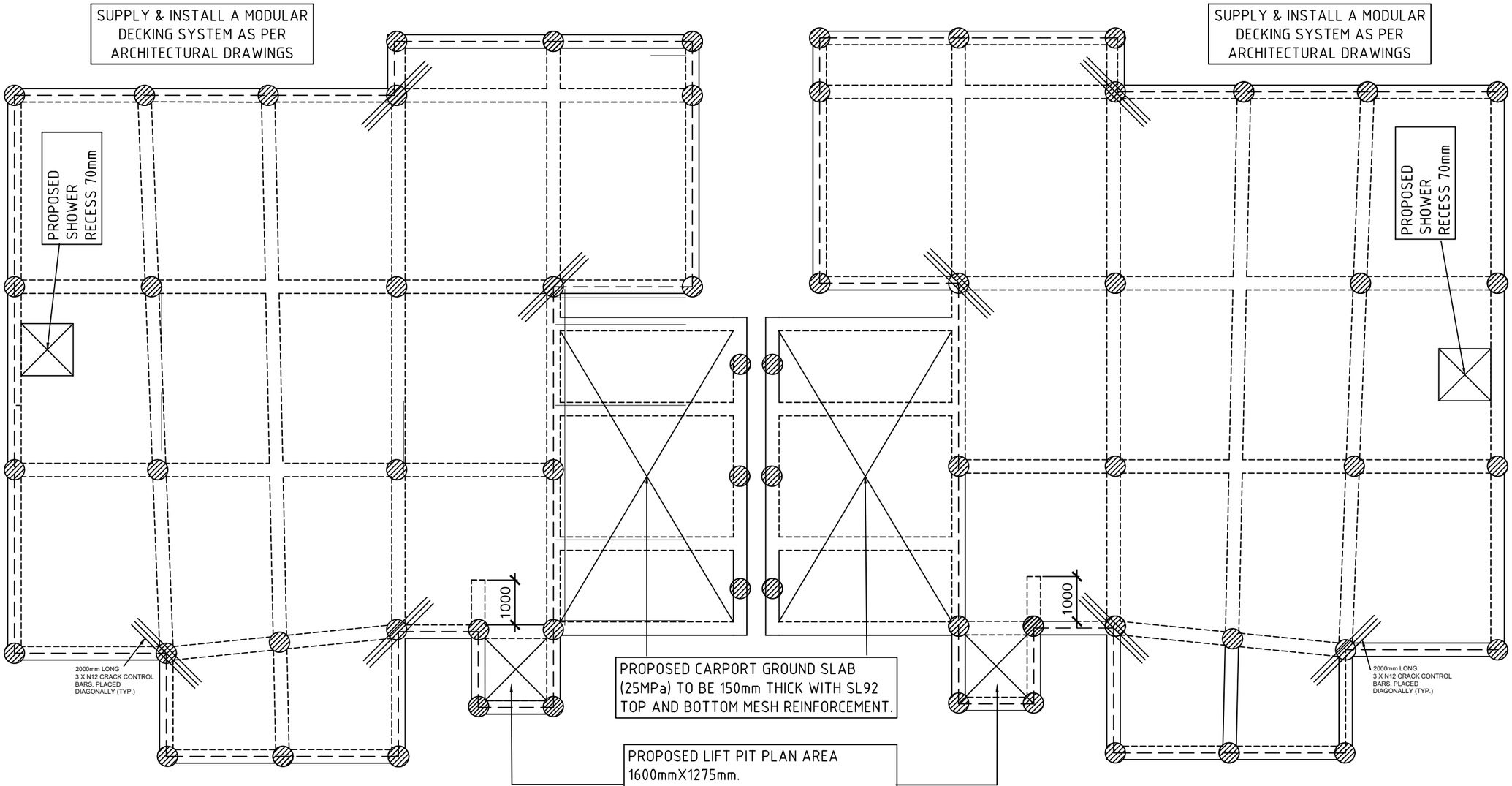
WB CIVIL STRUCTURAL ENGINEERS

RAFT SLAB PLAN - DWELLINGS 2&3

SLAB NOTES:

- REFER TO SHEET NO: 3/? FOR SLAB & BEAMS REINFORCEMENT SPECIFICATION.
- SLAB REINFORCEMENT TO BE LAPPED NOT LESS THAN 225mm OR 2 CROSS WIRES. SUPPORT MESH ON BAR CHAIRS AT 1000mm MAXIMUM SPACING IN BOTH DIRECTION.
- BEAM/RIB REINFORCEMENT TO BE LAPPED AND TIED A MINIMUM OF 500mm AT SPLICES. LAP FULL BEAM WIDTH AT RIB INTERSECTIONS.
- REINFORCEMENT SHALL BE FIXED IN POSITION BY BAR CHAIRS OR APPROVED SIMILAR.
- CONCRETE SHALL BE TRANSPORTED, PLACED, VIBRATED AND CURED IN ACCORDANCE WITH AS 2870 & GOOD BUILDING PRACTICE.
- SET DOWN SLAB SURFACE RECESSES AS SPECIFIED IN ARCHITECTURAL DRAWINGS.
- FINISHED FLOOR LEVELS AS PER ARCHITECTURAL DRAWINGS.
- IT IS BUILDER'S RESPONSIBILITY TO CARRYOUT SETTING OUT ACCURATELY AS PER ARCHITECTURAL DRAWINGS AND DOUBLE CHECK BEFORE POURING CONCRETE.



RC SLAB PLAN - DWELLING 2 SCALE 1: 100

RC SLAB PLAN - DWELLING 3 SCALE 1: 100

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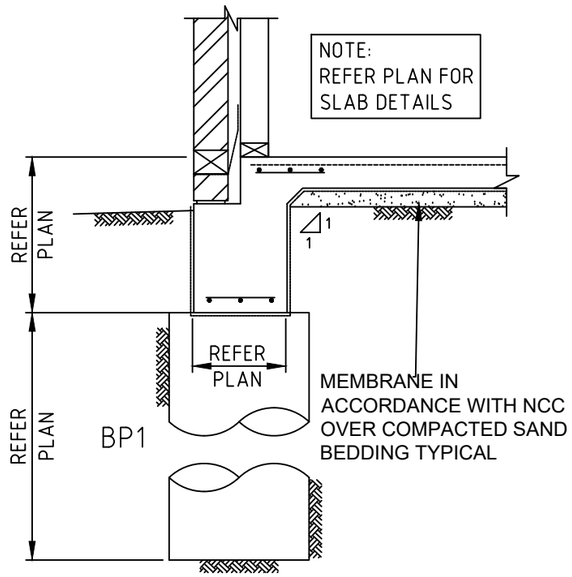
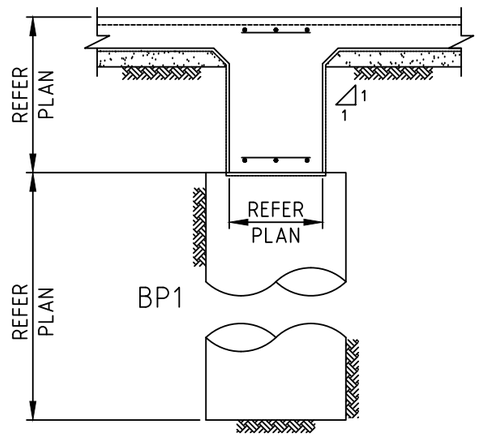
WB CIVIL STRUCTURAL ENGINEERS

RAFT BEAM DETAIL 1 (TYPICAL) & LIFT PIT DETAIL



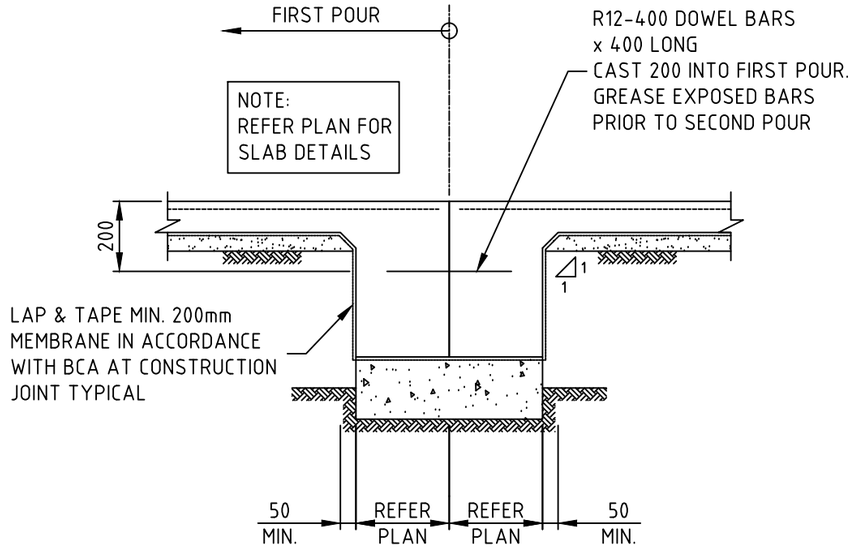
TYPICAL EXTERNAL RIB ON PIER

SCALE = 1:20



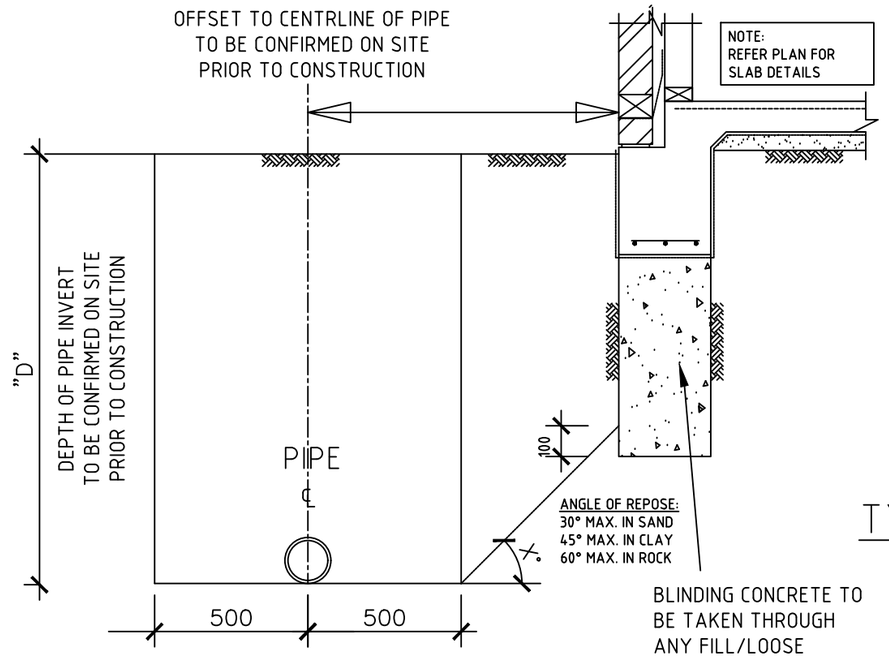
TYPICAL INTERNAL RIB ON PIER

SCALE = 1:20



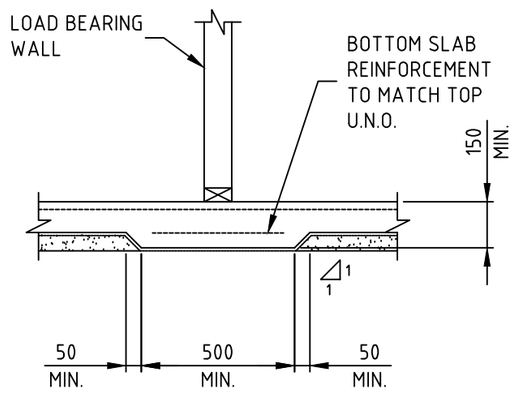
TYPICAL CONSTRUCTION & EXPANSION JOINT DETAIL

SCALE = 1:20



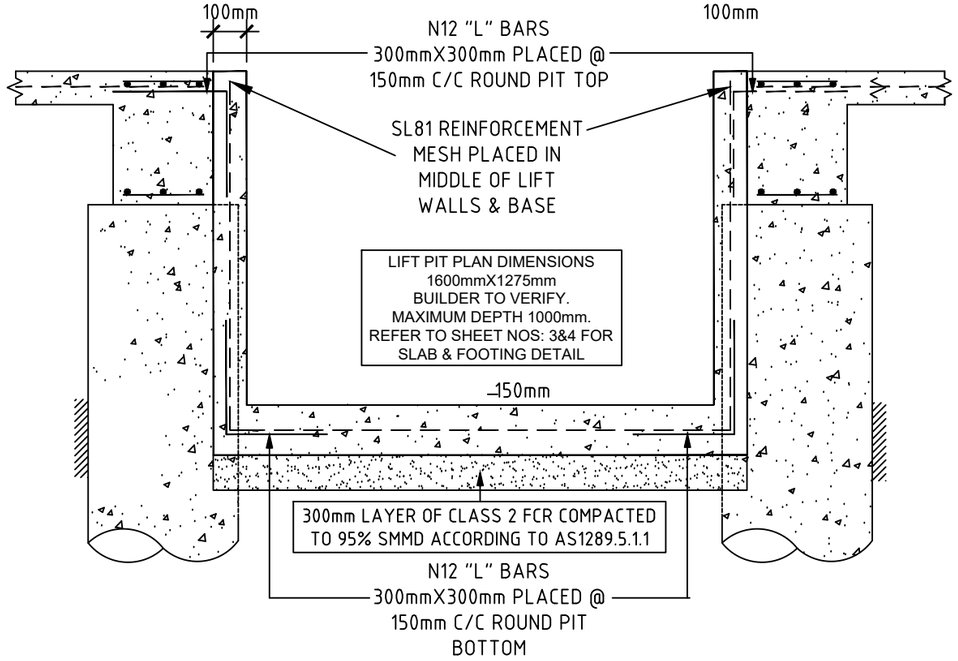
TYPICAL ANGLE OF REPOSE DETAIL (IF REQUIRED)

SCALE = 1:20



TYPICAL LOAD BEARING WALL ON SLAB DETAIL

SCALE = 1:20



LIFT PIT STRUCTURAL DETAIL

SCALE = 1:20

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EVMON MAGTANONG
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JOB NO: EM/DSD - 2025

WB CIVIL STRUCTURAL ENGINEERS
ABN: 84119322436

OFFICE:
NO: 6 TENDULKAR DRIVE, ROCKBANK VIC 3335
Mobile: 04010/23328 / Ph: 03 9746 0089
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REGISTERED ENGINEER
BUSINESS LICENSING AUTHORITY, VICTORIA

PRIYAN WIJEYERATNE
PE 2448, F.I.E.(AUST)., C.P.ENG.
M.Eng(Struct)., M.Tech.(Mgt.), BSc(Civil)

PROJECT:
3 D/S DWELLINGS

PROJECT ADDRESS:
68 KIRKWOOD ROAD,
EAGLEHAWK VIC 3556

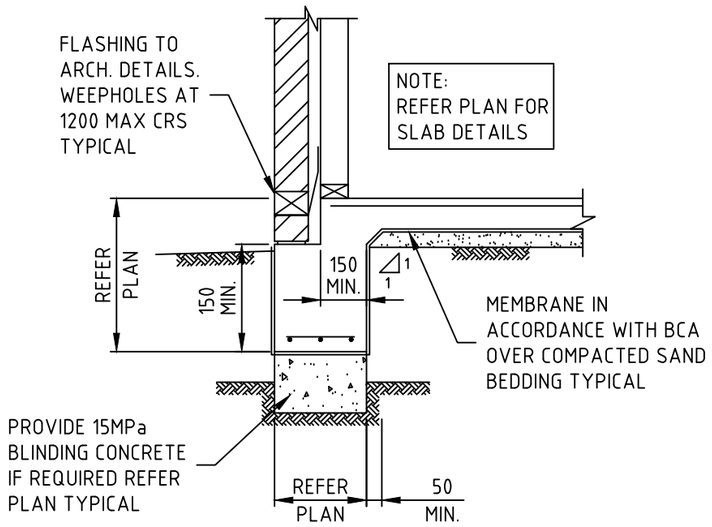
SHEET NO: 5//23

SCALE: AS SHOWN

DATE: 22/10/2025

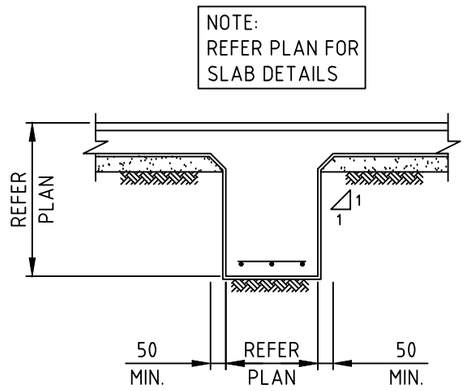
WB CIVIL STRUCTURAL ENGINEERS

RAFT BEAM DETAIL 2 (TYPICAL)



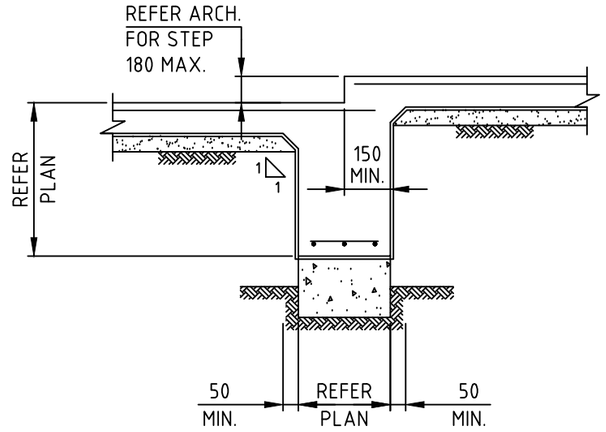
TYPICAL EXTERNAL RIB DETAIL

SCALE = 1:20



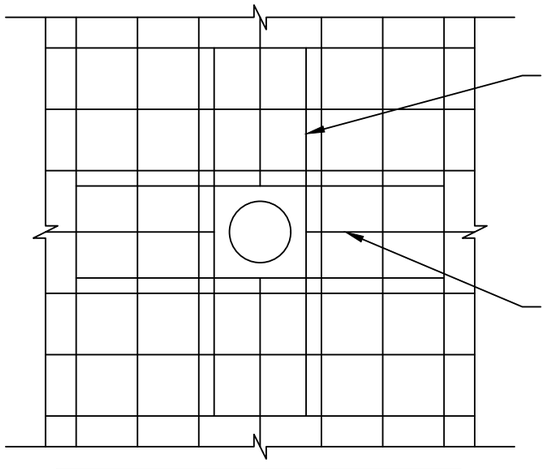
TYPICAL INTERNAL RIB DETAIL

SCALE = 1:20



TYPICAL STEPDOWN AT INTERNAL RIB DETAIL

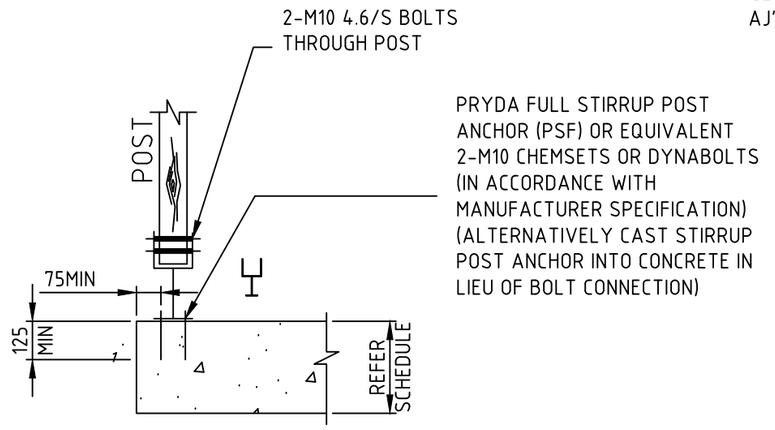
SCALE = 1:20



NOTE:
ADDITIONAL BARS MUST BE PLACED AROUND PIPE OPENING IF SLABS CUT, DAMAGED OR BENT (TYPICAL)

TYPICAL PENETRATION AT SLAB ON GROUND DETAIL

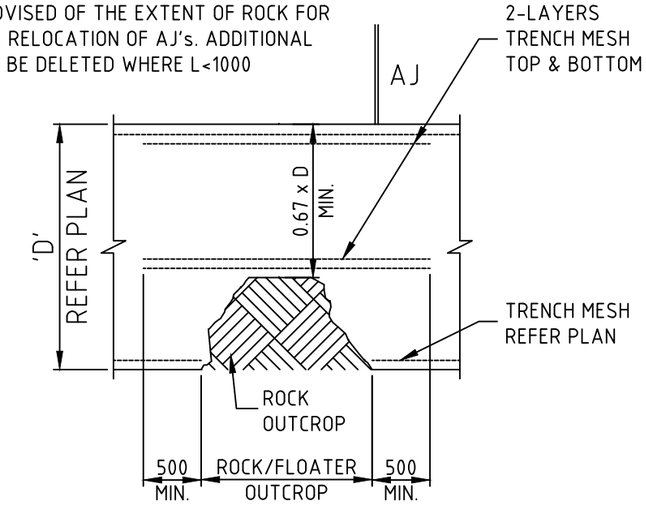
SCALE = NTS



TYPICAL TIMBER FULL STIRRUP POST ON CONCRETE SLAB/FOOTING DETAIL

SCALE = 1:20

NOTE:
ARTICULATION JOINTS (AJ) TO BE LOCATED ON ROCK FLOATER JUNCTIONS TYPICAL. ENGINEER TO BE ADVISED OF THE EXTENT OF ROCK FOR GENERAL RELOCATION OF AJ's. ADDITIONAL AJ's CAN BE DELETED WHERE L<1000

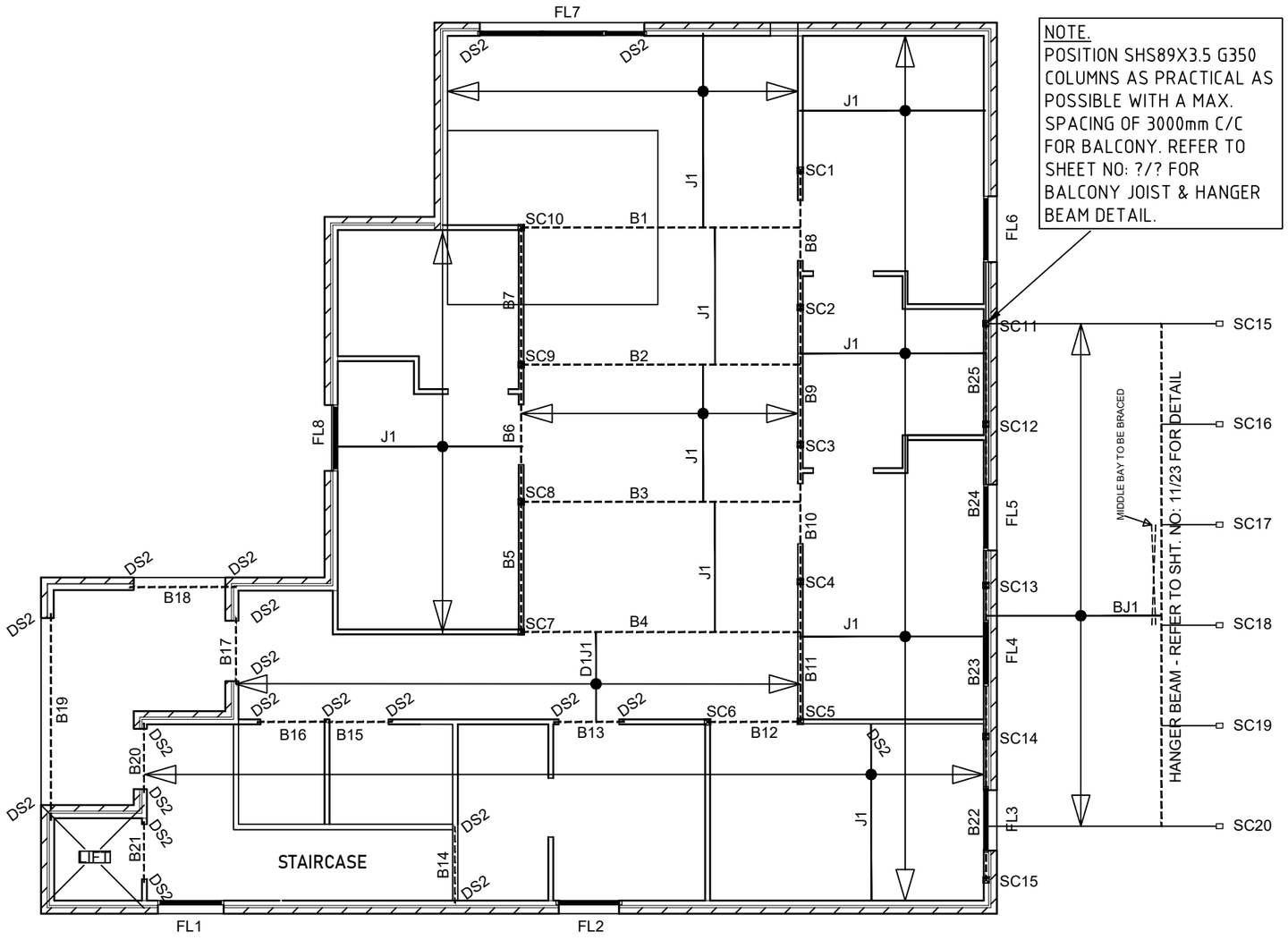


DETAIL WHERE ROCK FLOATER 'LOCALLY' PROJECTS INTO FOOTING

SCALE = NTS

CLIENT: EVMON MAGTANONG EMD STUDIO JOB NO: EM/DSD - 2025	**WB CIVIL STRUCTURAL ENGINEERS** ABN: 84119322436 OFFICE: NO: 6 TENDULKAR DRIVE, ROCKBANK VIC 3335 Mobile: 04010/23328 / Ph: 03 9746 0089 Email: priyan@wbcse.com.au	REGISTERED ENGINEER BUSINESS LICENSING AUTHORITY, VICTORIA PRIYAN WIJEYERATNE PE 2448, F.I.E.(AUST)., C.P.ENG. M.Eng(Struct)., M.Tech.(Mgt.), BSc(Civil)	**PROJECT:** 3 D/S DWELLINGS PROJECT ADDRESS: 68 KIRKWOOD ROAD, EAGLEHAWK VIC 3556	SHEET NO: 6//23 SCALE: AS SHOWN DATE: 22/10/2025	WB CIVIL STRUCTURAL ENGINEERS

FLOOR TIMBER FRAMING PLAN - DWELLING 1



NOTE.
POSITION SHS89X3.5 G350 COLUMNS AS PRACTICAL AS POSSIBLE WITH A MAX. SPACING OF 3000mm C/C FOR BALCONY. REFER TO SHEET NO: ?/? FOR BALCONY JOIST & HANGER BEAM DETAIL.

GROUND FRAME - DWELLING 1

NOTE.
BEAMS SUCH AS B5 TO B7, B8 TO B11 & B22 TO B25 MAY BE CONTINUOUS OVER SUPPORTS.

MEMBER SCHEDULE DWELLING 1 - FLOOR		
MARK	SECTION	REMARKS/CONNECTIONS
B1	200UB22.3	G300
B2	200UB22.3	G300
B3	200UB22.3	G300
B4	200UB22.3	G300
B5	200UB22.3	G300
B6	200UB22.3	G300
B7	200UB22.3	G300
B8	200UB22.3	G300
B9	200UB22.3	G300
B10	200UB22.3	G300
B11	200UB22.3	G300
B12	200UB22.3	G300
B13	190mmx35mm	MGP12
B14	190mmx35mm	MGP12
B15	190mmx35mm	MGP12
B16	190mmx35mm	MGP12
B17	190mmx35mm	MGP12
B18	190mmx35mm	MGP12
B19	2/240mmx45mm	MGP12
B20	190mmx35mm	MGP12
B21	190mmx35mm	MGP12
B22	200UB22.3	G300
B/23	200UB22.3	G300
B24	200UB22.3	G300
B24	200UB22.3	G300
FL1	140mmx35mm	MGP12
FL2	140mmx35mm	MGP12
FL3	140mmx35mm	MGP12
FL4	140mmx35mm	MGP12
FL5	140mmx35mm	MGP12
FL6	140mmx35mm	MGP12
FL7	240mmX45mm	F17 KDHW
J1	300mm @ 450 C/C	POSI -STRUT - AS PER MANUFACTURER'S SPECIFICATION
BJ1	300mm @ 450 C/C	POSI -STRUT - AS PER MANUFACTURER'S SPECIFICATION
SC1 TO SC15	SHS 89mmX3.5mm th.	G350
DSX	WHERE DOUBLE STUDS MARKED, REFER TO TABLE ON SHT. NO: ?/?	
TIMBER STUD WALLS TO BE LOAD BEARING - 2/90X45 F7 - TOP PLATES & 1/90X45 F7 - BOTTOM PLATE - STUD SPACING 450mm C/C - BOTH STOREYS		
BEAMS WHERE POSSIBLE AND ECONOMICAL MAY BE CONTINUOUS OVER SUPPORTS		
LINTEL SIZES PICKED FROM TABLE IN SHEET NO: ?/?		

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EMD STUDIO

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PROJECT:
3 D/S DWELLINGS

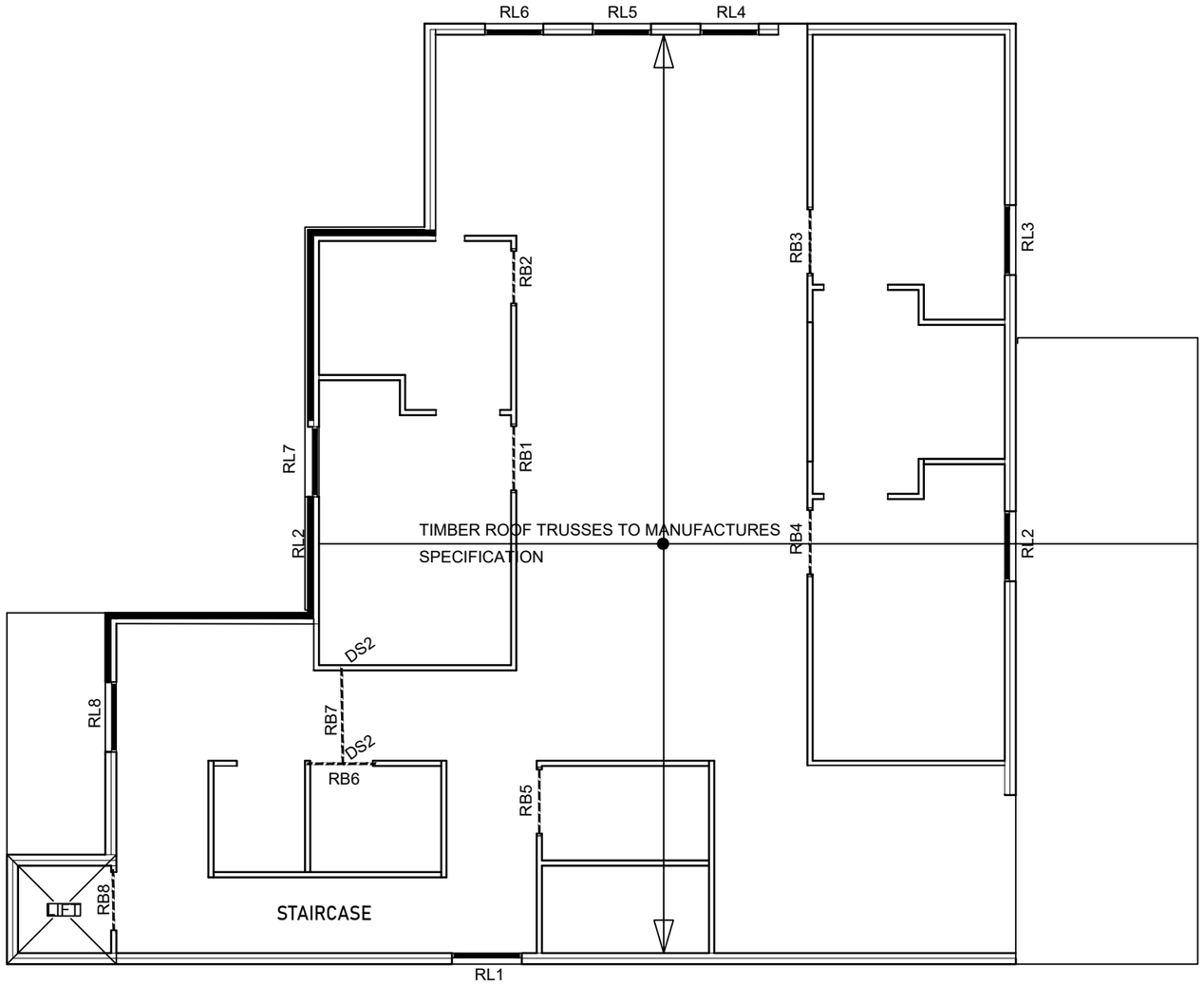
PROJECT ADDRESS:
68 KIRKWOOD ROAD,
EAGLEHAWK VIC 3556

SHEET NO: 7//23

SCALE: AS SHOWN

DATE: 22/10/2025

ROOF TIMBER FRAMING PLAN - DWELLING 1



UPPER FRAME - DWELLING 1

MEMBER SCHEDULE DWELLING 1 - ROOF		
MARK	SECTION	REMARKS/CONNECTIONS
RB1	190mmx35mm	MGP12
RB2	190mmx35mm	MGP12
RB3	190mmx35mm	MGP12
RB4	190mmx35mm	MGP12
RB5	190mmx35mm	MGP12
RB6	190mmx35mm	MGP12
RB7	190mmx35mm	MGP12
RB8	190mmx35mm	MGP12
RL1	140mmx35mm	MGP12
RL2	140mmx35mm	MGP12
RL3	140mmx35mm	MGP12
RL4	140mmx35mm	MGP12
RL5	140mmx35mm	MGP12
RL6	140mmx35mm	MGP12
RL7	140mmx35mm	MGP12
SC1 TO SC20	SHS 89mmX3.5mm th.	G350
DSX	WHERE DOUBLE STUDS MARKED, REFER TO TABLE ON SHT. NO: ?/?	
TIMBER STUD WALLS TO BE LOAD BEARING - 2/90X45 F7 - TOP PLATES & 1/90X45 F7 - BOTTOM PLATE - STUD SPACING 450mm C/C - BOTH STOREYS		
BEAMS WHERE POSSIBLE AND ECONOMICAL MAY BE CONTINUOUS OVER SUPPORTS		
LINTEL SIZES PICKED FROM TABLE IN SHEET NO: ?/?		

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PROJECT:
3 D/S DWELLINGS

PROJECT ADDRESS:
68 KIRKWOOD ROAD,
EAGLEHAWK VIC 3556

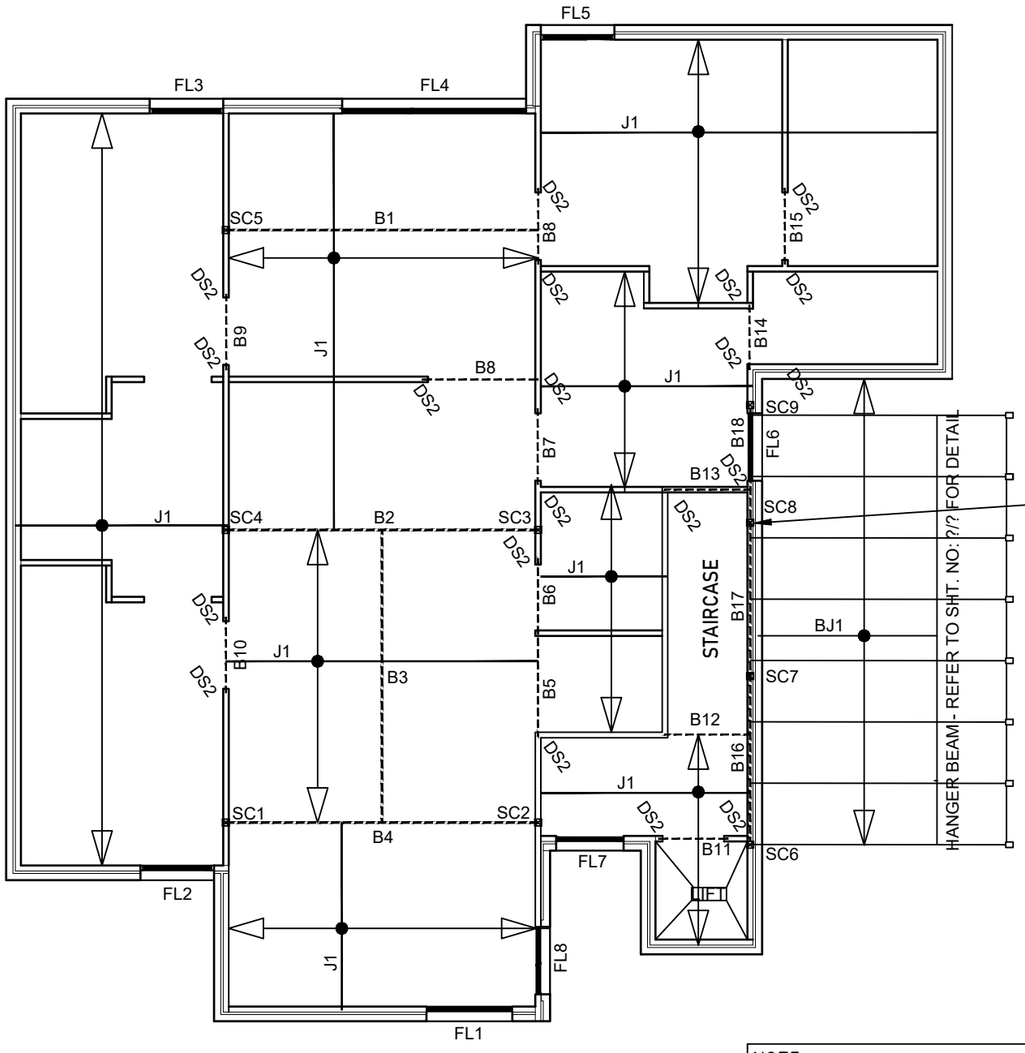
SHEET NO: 8//23

SCALE: AS SHOWN

DATE: 22/10/2025

WB CIVIL STRUCTURAL ENGINEERS

FLOOR TIMBER FRAMING PLAN - DWELLINGS 2 & 3



NOTE.
POSITION SHS89X3.5 G350 COLUMNS AS PRACTICAL AS POSSIBLE WITH A MAX. SPACING OF 3000mm C/C FOR BALCONY. REFER TO SHEET NO: ?/? FOR BALCONY JOIST & HANGER BEAM DETAIL.

DWELLING 2&3
GRF

NOTE.
BEAMS B16 TO B18 MAY BE CONTINUOUS OVER SUPPORTS.

NOTE.
DWELLING 3 IS NOT SHOWN FOR CLARITY. IT IS MIRROR IMAGE OF DWELLING 2

MEMBER SCHEDULE DWELLING 2&3 - FLOOR		
MARK	SECTION	REMARKS/CONNECTIONS
B1	200UB22.3	G300
B2	200UB22.3	G300
B3	200UB22.3	G300
B4	200UB22.3	G300
B5	190mmx35mm	MGP12
B6	190mmx35mm	MGP12
B7	190mmx35mm	MGP12
B8	190mmx35mm	MGP12
B9	190mmx35mm	MGP12
B10	190mmx35mm	MGP12
B11	190mmx35mm	MGP12
B12	190mmx35mm	MGP12
B13	190mmx35mm	MGP12
B14	190mmx35mm	MGP12
B15	190mmx35mm	MGP12
B16	200UB22.3	G300
B17	200UB22.3	G300
B18	200UB22.3	G300
FL1	140mmx35mm	MGP12
FL2	140mmx35mm	MGP12
FL3	140mmx35mm	MGP12
FL4	240mmX45mm	F17 KDHW
FL5	140mmx35mm	MGP12
FL6	140mmx35mm	MGP12
FL7	140mmx35mm	MGP12
FL8	140mmx35mm	MGP12

J1	300mm @ 450 C/C	POSI -STRUT - AS PER MANUFACTURER'S SPECIFICATION
BJ1	300mm @ 450 C/C	POSI -STRUT - AS PER MANUFACTURER'S SPECIFICATION
SC1 TO SC20	SHS 89mmX3.5mm th.	G350
DSX	WHERE DOUBLE STUDS MARKED, REFER TO TABLE ON SHT. NO: ?/?	
TIMBER STUD WALLS TO BE LOAD BEARING - 2/90X45 F7 - TOP PLATES & 1/90X45 F7 - BOTTOM PLATE - STUD SPACING 450mm C/C - BOTH STOREYS		
BEAMS WHERE POSSIBLE AND ECONOMICAL MAY BE CONTINUOUS OVER SUPPORTS		
LINTEL SIZES PICKED FROM TABLE IN SHEET NO: ?/?		

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PROJECT:
3 D/S DWELLINGS

PROJECT ADDRESS:
68 KIRKWOOD ROAD,
EAGLEHAWK VIC 3556

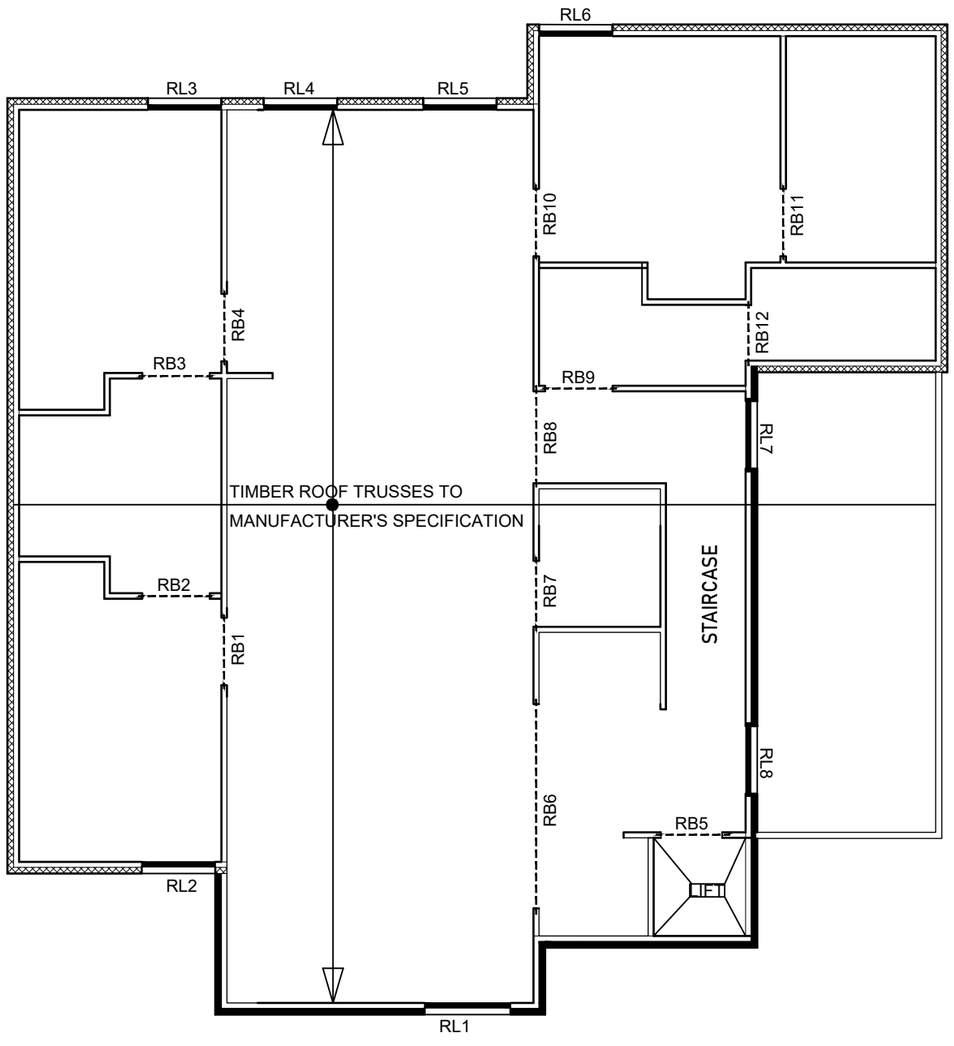
SHEET NO: 9//23

SCALE: AS SHOWN

DATE: 22/10/2025

WB CIVIL STRUCTURAL ENGINEERS

ROOF TIMBER FRAMING PLAN - DWELLING 2 & 3



DWELLING 2&3
UPP FL

MEMBER SCHEDULE DWELLING 2&3 - ROOF		
MARK	SECTION	REMARKS/CONNECTIONS
B1	200UB22.3	G300
B2	200UB22.3	G300
B3	200UB22.3	G300
B4	200UB22.3	G300
B5	200UB22.3	G300
B6	200UB22.3	G300
B7	200UB22.3	G300
B8	200UB22.3	G300
B9	200UB22.3	G300
B10	200UB22.3	G300
B11	200UB22.3	G300
B12	200UB22.3	G300
RL1	140mmx35mm	MGP12
RL2	140mmx35mm	MGP12
RL3	140mmx35mm	MGP12
RL4	140mmx35mm	MGP12
RL5	140mmx35mm	MGP12
RL6	140mmx35mm	MGP12
RL7	140mmx35mm	MGP12
RL8	140mmx35mm	MGP12
SC1 TO SC20	SHS 89mmX3.5mm th.	G350
DSX	WHERE DOUBLE STUDS MARKED, REFER TO TABLE ON SHT. NO: ?/?	
TIMBER STUD WALLS TO BE LOAD BEARING - 2/90X45 F7 - TOP PLATES & 1/90X45 F7 - BOTTOM PLATE - STUD SPACING 450mm C/C - BOTH STOREYS		
BEAMS WHERE POSSIBLE AND ECONOMICAL MAY BE CONTINUOUS OVER SUPPORTS		
LINTEL SIZES PICKED FROM TABLE IN SHEET NO: ?/?		

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PROJECT:
3 D/S DWELLINGS

PROJECT ADDRESS:
68 KIRKWOOD ROAD,
EAGLEHAWK VIC 3556

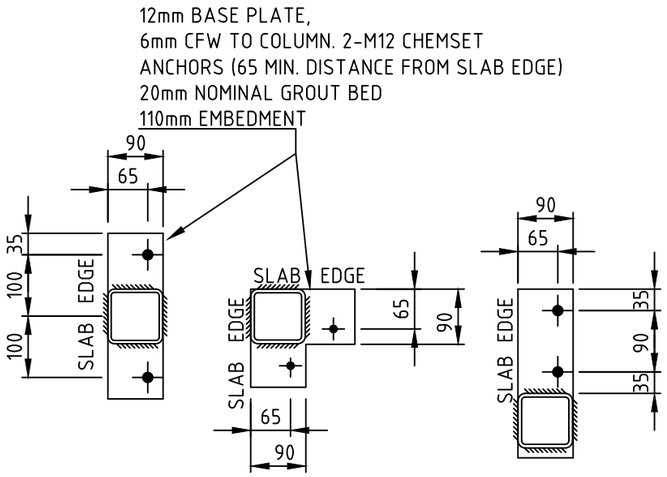
SHEET NO: 10//23

SCALE: AS SHOWN

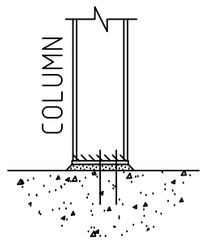
DATE: 22/10/2025

WB CIVIL STRUCTURAL ENGINEERS

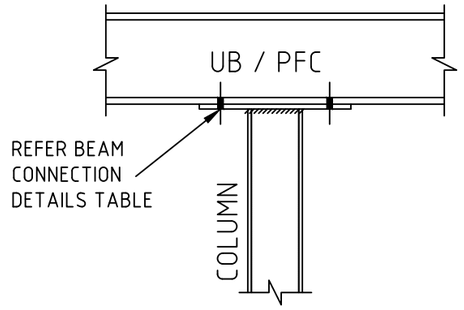
TIMBER FRAMING DETAIL 1 - TYPICAL (NTS)



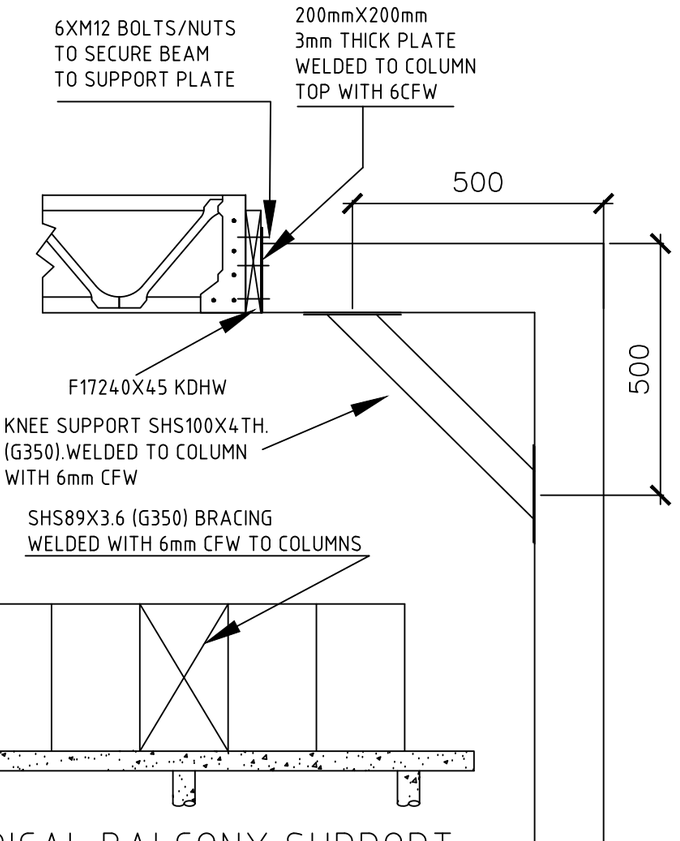
BASE PLATE PLAN

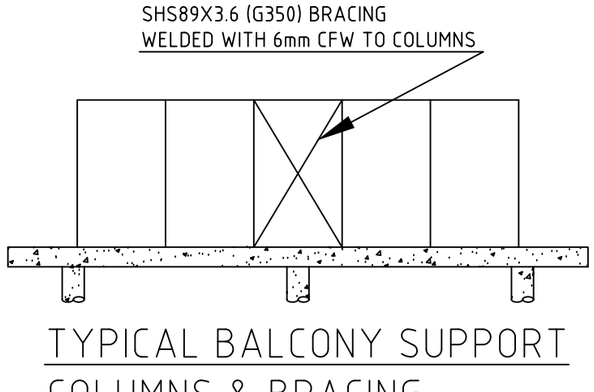


TYPICAL COLUMN BASE CONNECTION DETAILS

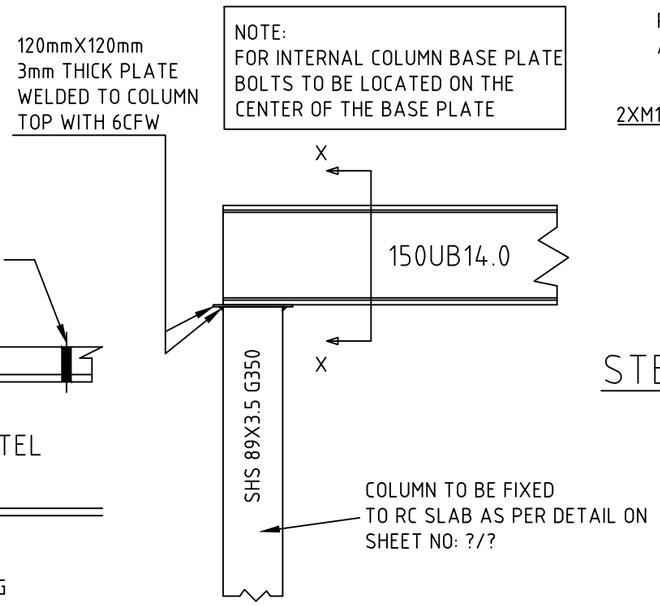


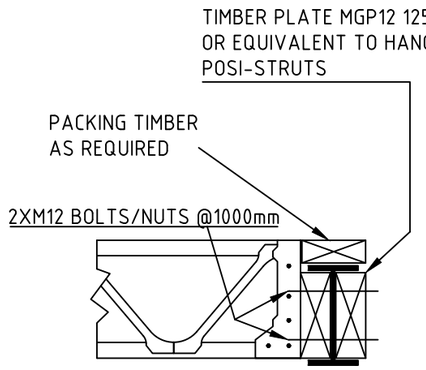
TYPICAL STEEL BEAM TO STEEL COLUMN DETAIL



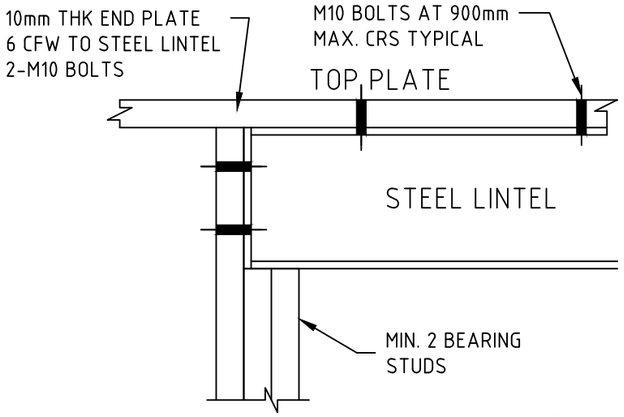


TYPICAL BALCONY SUPPORT COLUMNS & BRACING





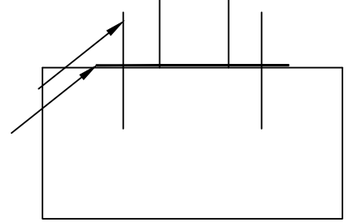
SECTION X-X
STEEL BEAM TO POSI STRUT CONNECTION DETAIL



TYPICAL STEEL LINTEL TO DOUBLE STUD DETAIL

STEEL COLUMN TO STEEL BEAM CONNECTION DETAIL

NOTE
UBs MAY BE SUBSTITUTED WITH EQUIVALENT PFCs.



PROPOSED CARPORT STEEL COLUMN & BALCONY JOISTS CONNECTION DETAIL (TYP.)

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PROJECT:
3 D/S DWELLINGS

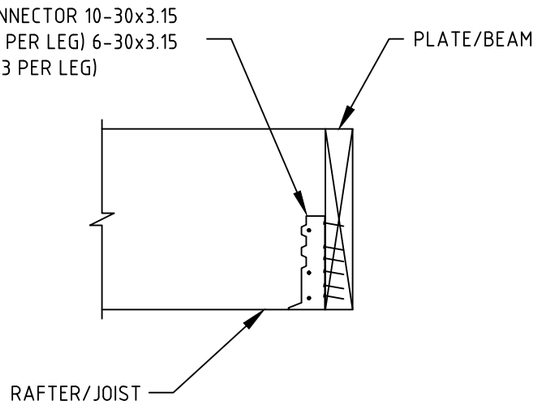
PROJECT ADDRESS:
68 KIRKWOOD ROAD,
EAGLEHAWK VIC 3556

SHEET NO: 11/23

SCALE: AS SHOWN

DATE: 22/10/2025

TIMBER FRAMING DETAIL 2 - TYPICAL (NTS)

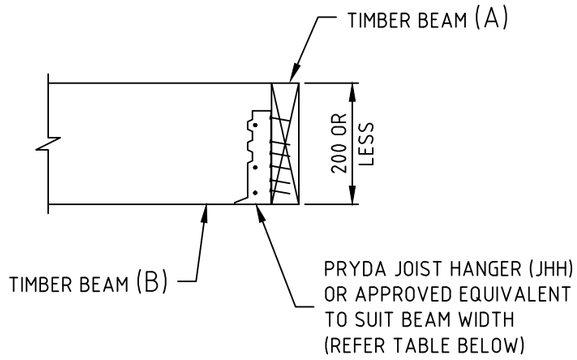


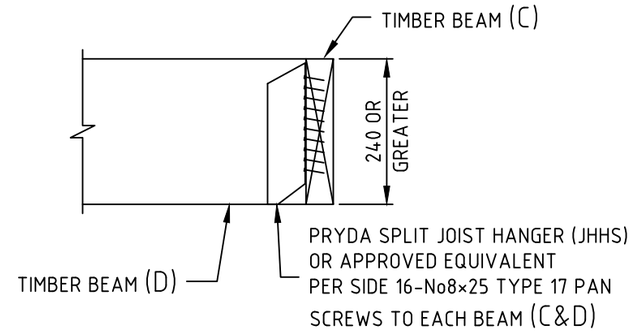
NOTE:

1. AT DOUBLE JOIST TO DOUBLE JOIST USE JOIST HANGER TO ONE JOIST AND TRIP L GRIP FIXING TO SECOND JOIST WITH 5 NAILS/LEG. (15 NAILS)

2. AT DOUBLE JOIST TO WALL PLATE USE JOIST HANGER TO ONE JOIST AND TRIP L GRIP FIXING TO SECOND JOIST WITH 5 NAILS/LEG. (15 NAILS)
2-16ø DYNABOLTS TO WALL
SPACE DYNABOLTS AT 80mm CRS AND 80mm EDGE DISTANCE

TYPICAL TIMBER TO TIMBER RAFTER/JOIST CONNECTION

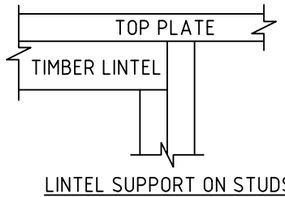




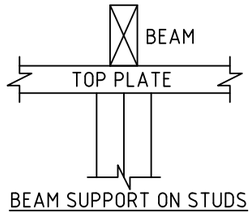
BEAM WIDTH (B)	BRACKET	FIXING
63	JHH65	20-No12×35 TYPE 17 HEX HEAD SCREWS TO BEAM (A) 16-No12x35 TYPE 17 HEX HEAD SCREWS TO BEAM (B)
70	JHH75	20-No12×35 TYPE 17 HEX HEAD SCREWS TO BEAM (A) 16-No12x35 TYPE 17 HEX HEAD SCREWS TO BEAM (B)
90	JHH100	24-No12×35 TYPE 12 HEX HEAD SCREWS TO BEAM (A) 18-No12x35 TYPE 12 HEX HEAD SCREWS TO BEAM (B)

ALTERNATIVE TIMBER BEAM TO TIMBER BEAM CONNECTIONS (FOR PORCH AND/OR ALFRESCO AREAS ONLY)

ALL STUDS SHALL BE NAIL LAMINATED IN ACCORDANCE WITH AS1684.2		DS1	DS2	DS3	DS4	TS1	TS2	TS3	QS1	QS2	FS1	FS2
		90x45	90x45	70x45	120x45	90x45	90x45	70x45	90x45	90x45	90x45	90x45
		MGP10	F17 KD HW	F17 KD HW	MGP10	MGP10	F17 KD HW	F17 KD HW	MGP10	F17 KD HW	MGP10	F17 KD HW
LINTEL	NO. OF BEARING STUD	1	1	1	1	1	1	1	2	2	2	2
LINTEL	NO. OF JAMB STUD	1	1	1	1	2	2	2	2	2	3	3
BEAM	NO. OF BEARING STUD	2	2	2	2	3	3	3	4	4	5	5

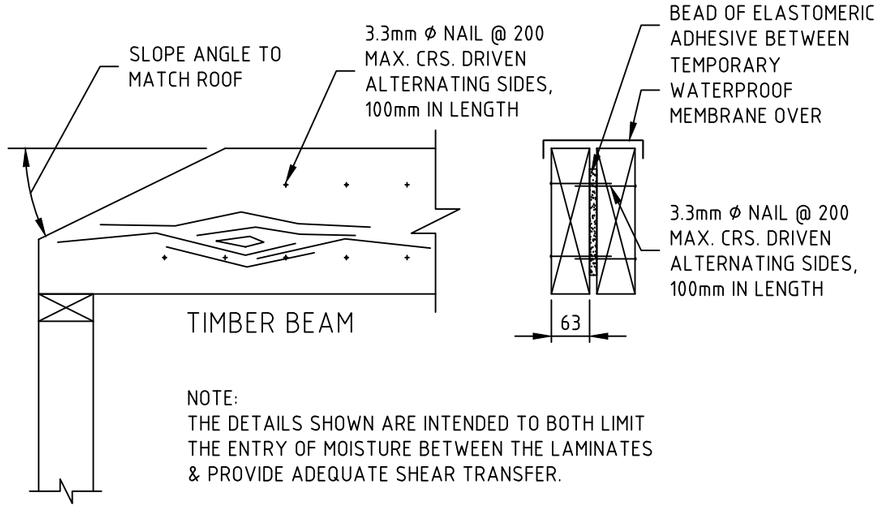


LINTEL SUPPORT ON STUDS



BEAM SUPPORT ON STUDS

TIMBER STUDS SCHEDULE



NOTE:
THE DETAILS SHOWN ARE INTENDED TO BOTH LIMIT THE ENTRY OF MOISTURE BETWEEN THE LAMINATES & PROVIDE ADEQUATE SHEAR TRANSFER.

TIMBER CHAMFER DETAIL

CLIENT:
EVMON MAGTANONG
EMD STUDIO

JOB NO: EM/DSD - 2025

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PROJECT:
3 D/S DWELLINGS

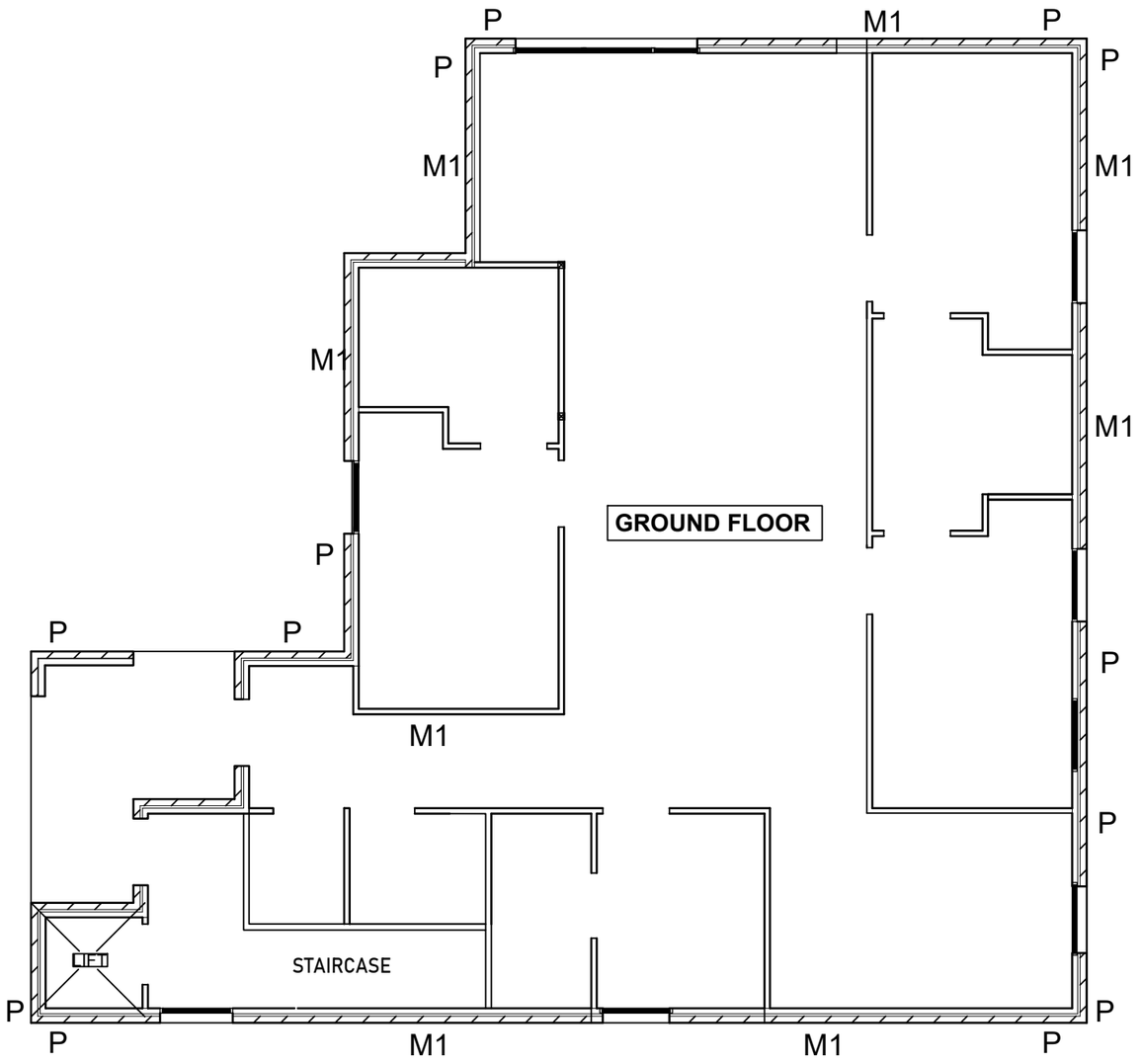
PROJECT ADDRESS:
68 KIRKWOOD ROAD,
EAGLEHAWK VIC 3556

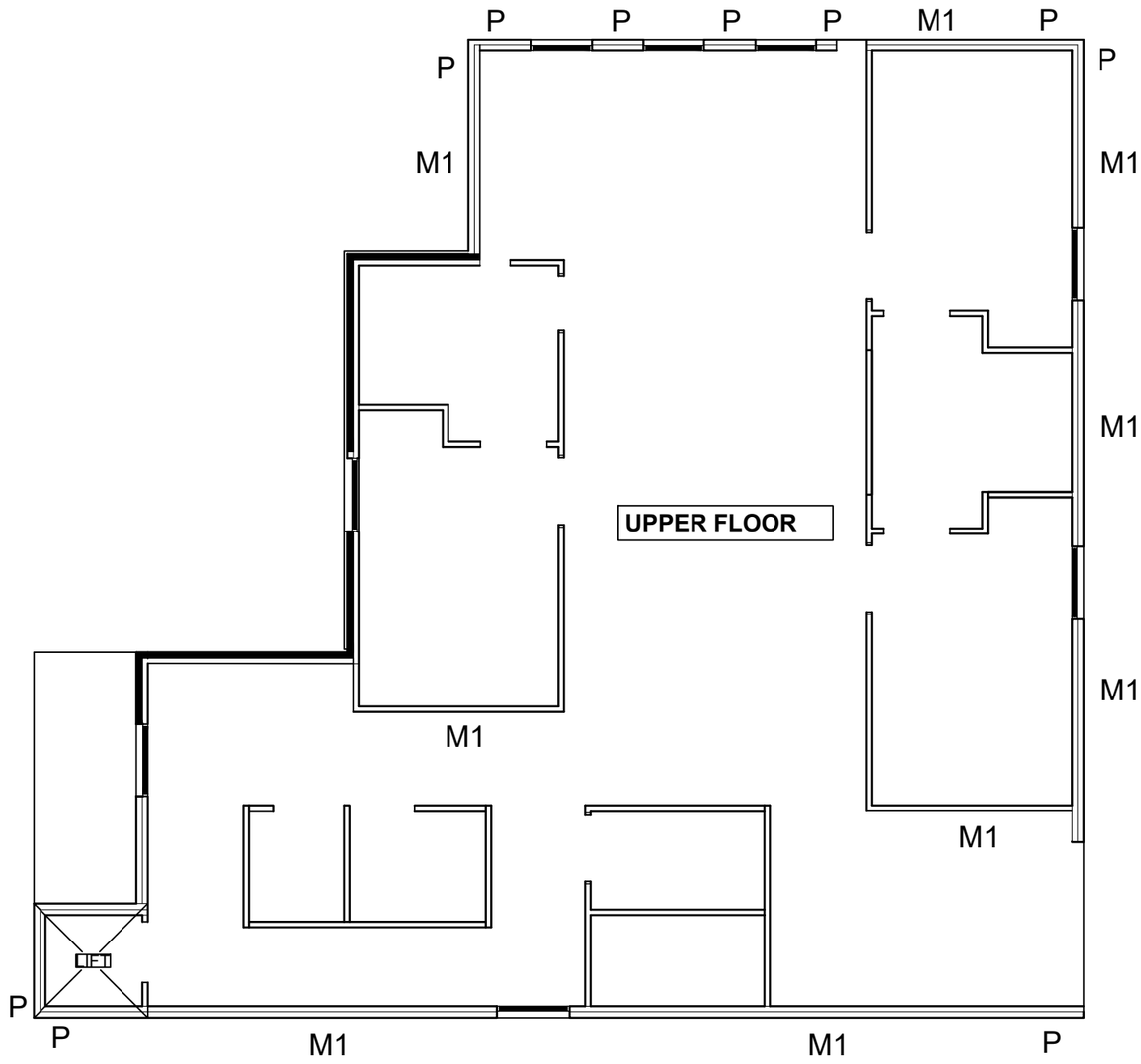
SHEET NO: 12/23

SCALE: AS SHOWN

DATE: 22/10/2025

BRACING PLAN DWELLING 1 - NTS





BRACING LEGEND

M - 1.5kN/m CAPACITY BRACING - REFER TO TYPICAL DETAILS
P - 3.4kN/m CAPACITY PLYWOOD BRACING - REFER TO TYPICAL DETAILS
O - PLYWOOD BRACING OVER ALL WALL AREA, AROUND OPENINGS - REFER TO TYPICAL DETAILS

WIND RATING - N2

- MAXIMUM DESIGN GUST WIND SPEED FOR THIS SITE IS 40 M/S;
- WIND SPEED CALCULATION (VH) FOR USE IN ULTIMATE LIMIT STATE DESIGN ONLY, CALCULATED IN ACCORDANCE WITH THE LIMITATIONS AS IN AS 4055, SECTION 2.1.

ALTERNATIVE BRACING METHOD NOTE:

- OTHER EQUIVALENT CAPACITY BRACING METHOD IS PERMITTED IN LIEU OF SPECIFIED BRACING METHOD SHOWN ON DRAWINGS;
- INSTALLATION OF ALL BRACING UNITS MUST BE IN ACCORDANCE WITH THE RESIDENTIAL TIMBER FRAMED CONSTRUCTION MANUALS AS 1684.2-2010

CLIENT:
EVMON MAGTANONG
EMD STUDIO

JOB NO: EM/DSD - 2025

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PROJECT:
3 D/S DWELLINGS

PROJECT ADDRESS:
68 KIRKWOOD ROAD,
EAGLEHAWK VIC 3556

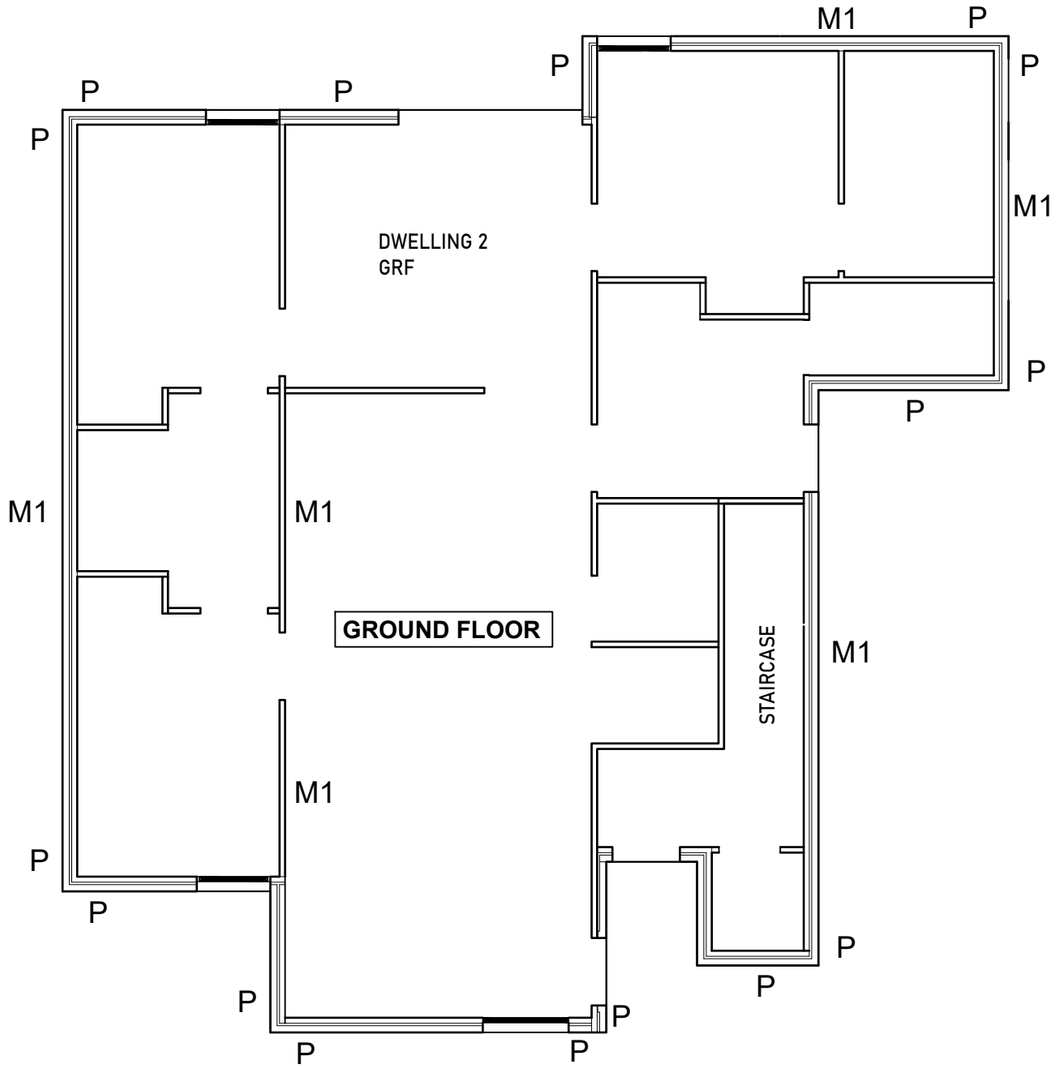
SHEET NO: 13/23

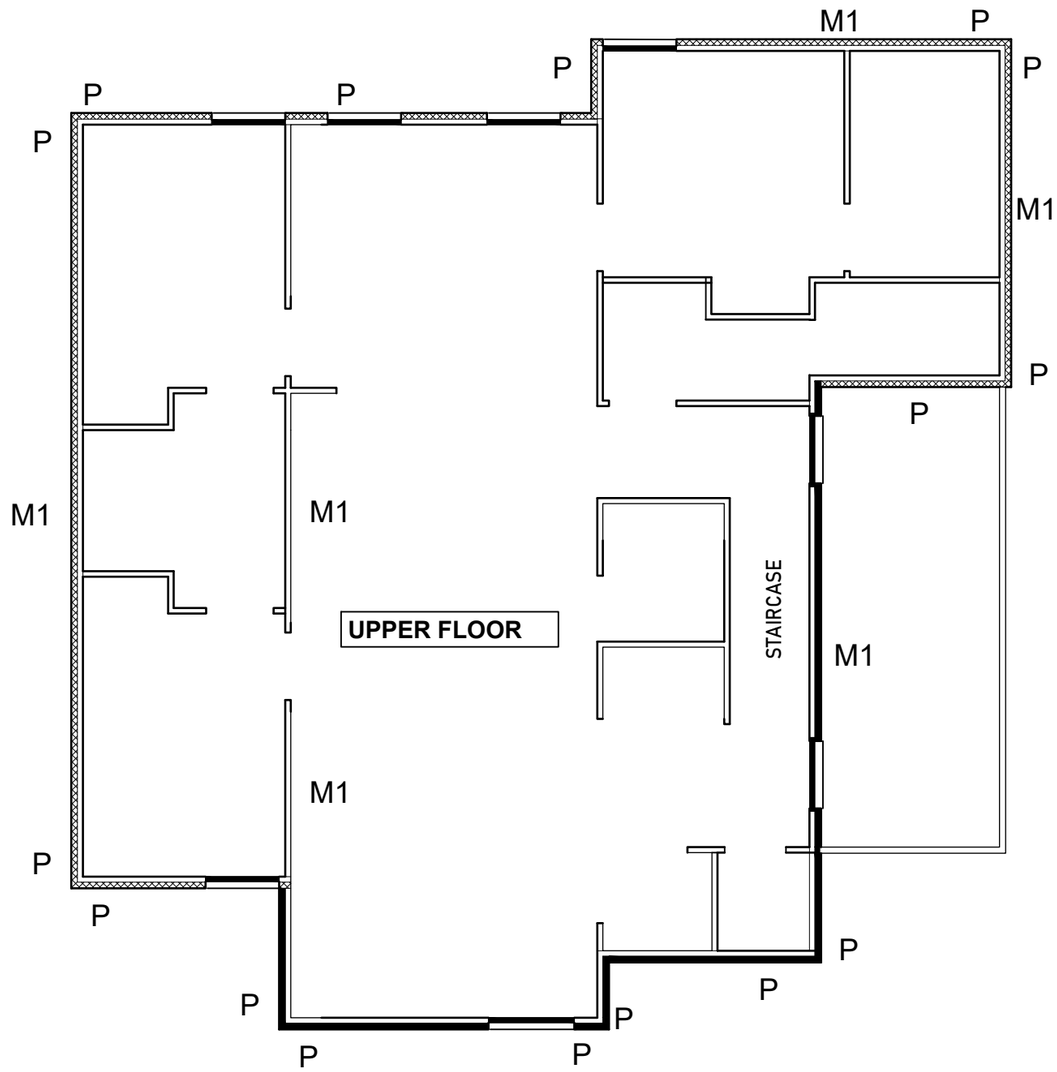
SCALE: AS SHOWN

DATE: 22/10/2025

WB CIVIL STRUCTURAL ENGINEERS

BRACING PLAN DWELLING 2 & 3 - NTS





BRACING LEGEND

M - 1.5kN/m CAPACITY BRACING - REFER TO TYPICAL DETAILS
P - 3.4kN/m CAPACITY PLYWOOD BRACING - REFER TO TYPICAL DETAILS
O - PLYWOOD BRACING OVER ALL WALL AREA, AROUND OPENINGS - REFER TO TYPICAL DETAILS

WIND RATING - N2

- MAXIMUM DESIGN GUST WIND SPEED FOR THIS SITE IS 40 M/S;
- WIND SPEED CALCULATION (VH) FOR USE IN ULTIMATE LIMIT STATE DESIGN ONLY, CALCULATED IN ACCORDANCE WITH THE LIMITATIONS AS IN AS 4055, SECTION 2.1.

ALTERNATIVE BRACING METHOD NOTE:

- OTHER EQUIVALENT CAPACITY BRACING METHOD IS PERMITTED IN LIEU OF SPECIFIED BRACING METHOD SHOWN ON DRAWINGS;
- INSTALLATION OF ALL BRACING UNITS MUST BE IN ACCORDANCE WITH THE RESIDENTIAL TIMBER FRAMED CONSTRUCTION MANUALS AS 1684.2-2010

CLIENT:
EVMON MAGTANONG
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PROJECT:
3 D/S DWELLINGS

PROJECT ADDRESS:
68 KIRKWOOD ROAD,
EAGLEHAWK VIC 3556

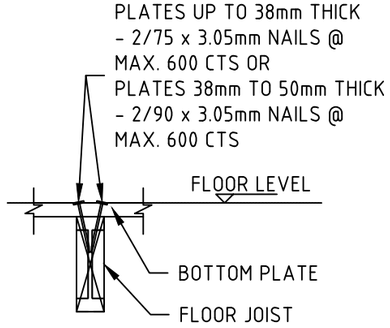
SHEET NO: 14/23

SCALE: AS SHOWN

DATE: 22/10/2025

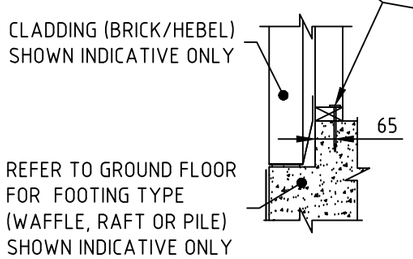
WB CIVIL STRUCTURAL ENGINEERS

BRACING DETAIL 1 - TYPICAL (NTS)

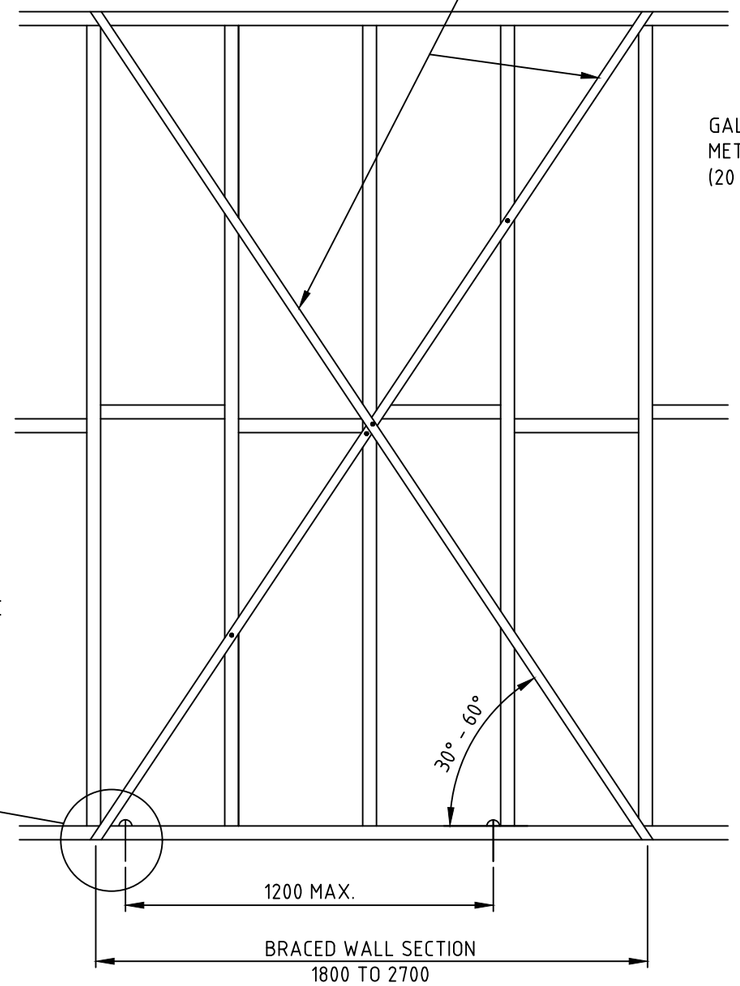


BOTTOM WALL PLATE
TO FLOOR JOIST DETAIL

FIX ONE 75MM MASONRY NAIL
(HAND-DRIVEN AT SLAB EDGE) OR
SCREW OR BOLT TO THE BOTTOM PLATE
AT MAXIMUM 1200mm CRS.
(IF PANEL WIDTH IS LESS THAN 1200mm,
NAIL TO BE AT EACH END OF PANEL)



BOTTOM WALL PLATE TO
CONCRETE SLAB FIXING DETAIL
DETAIL A-A

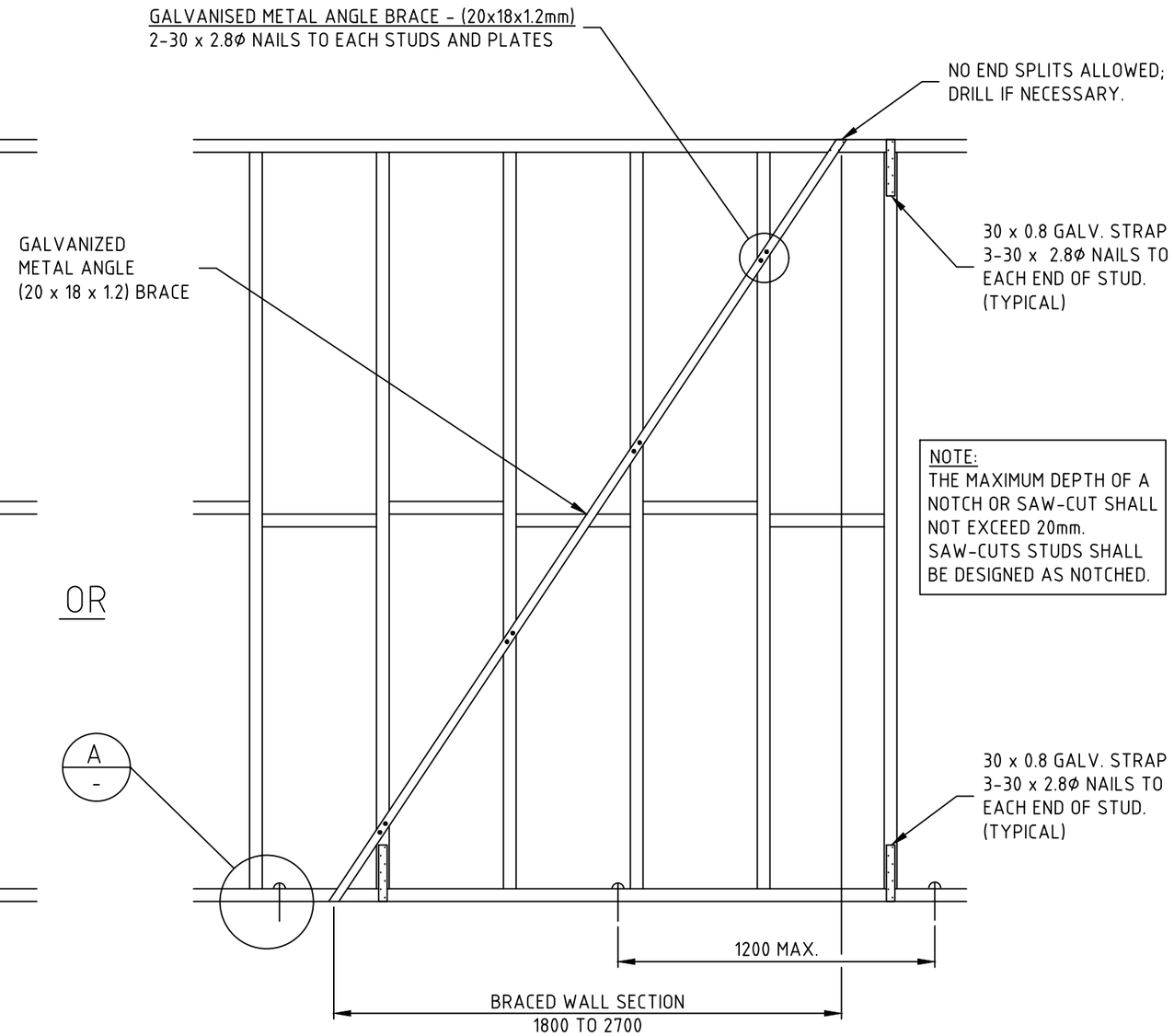


DOUBLE DIAGONAL METAL TENSION STRAPS
(BRACING CAPACITY -1.5 kN/m)

SCALE: NTS DENOTED AS M1 ON PLAN

EQUIVALENT SPEEDBRACE CAN BE ADOPTED

OR



DIAGONAL METAL ANGLE BRACES
(BRACING CAPACITY - 1.5 kN/m)

SCALE: NTS DENOTED AS M1 ON PLAN

NOTE:
THE MAXIMUM DEPTH OF A
NOTCH OR SAW-CUT SHALL
NOT EXCEED 20mm.
SAW-CUTS STUDS SHALL
BE DESIGNED AS NOTCHED.

CLIENT:
EVMON MAGTANONG
EMD STUDIO

JOB NO: EM/DSD - 2025

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PROJECT:
3 D/S DWELLINGS

PROJECT ADDRESS:
68 KIRKWOOD ROAD,
EAGLEHAWK VIC 3556

SHEET NO: 15/23

SCALE: AS SHOWN

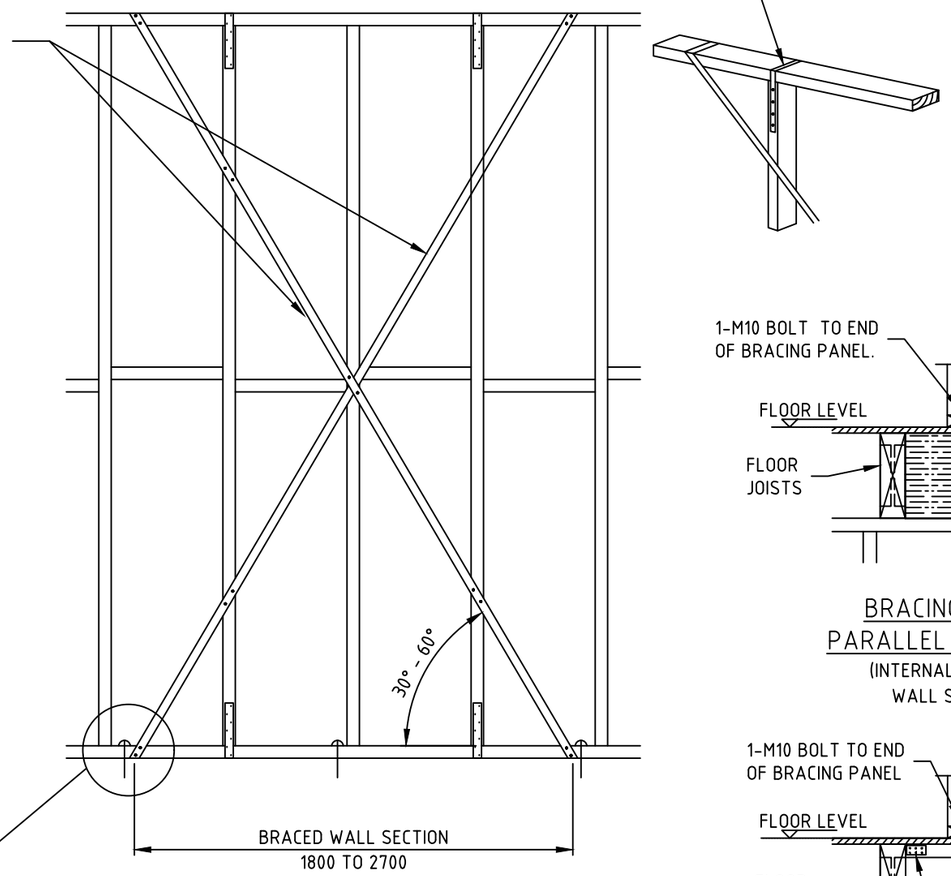
DATE: 22/10/2025

WB CIVIL STRUCTURAL ENGINEERS

BRACING DETAIL 2 - TYPICAL (NTS)

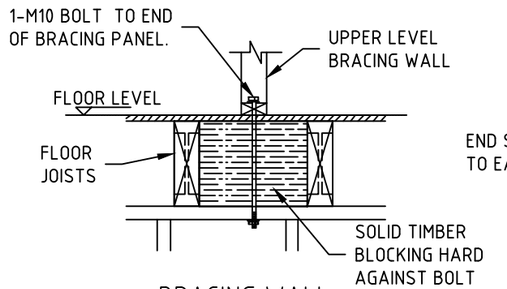
TENSION GALVANISED METAL STRAPS
NOMINAL 30 x 0.8mm GALV. STRAP (OR EQUIVALENT)
NAILED TO PLATES WITH 4-30x2.8ø GALVANISED FLATHEAD NAILS TO EACH END
2 NAILS TO EACH STUD AND 4 NAILS TO THE STRAP RETURN OVER TOP OF PLATE & UNDER BOTTOM PLATE, STRAPS MUST BE PROPERLY TENSIONED.

METAL STRAPS TO PLATE FIXING
30 x 0.8mm METAL STRAP LOOPED OVER PLATE AND FIXED TO STUD WITH 4-30 x 2.8ømm FLATHEAD NAILS TO EACH END. ALTERNATIVELY PROVIDE SINGLE STRAP TO BOTH SIDES, WITH 4 NAILS PER STRAP END, OR EQUIVALENT ANCHORS OR OTHER FASTENERS.

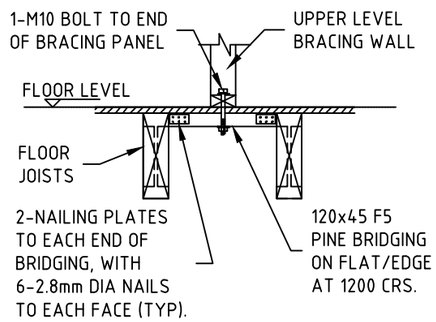


DOUBLE DIAGONAL METAL TENSION STRAPS
(BRACING CAPACITY - 3.0 kN/m)
SCALE: 1:20
DENOTED AS M2 ON PLAN.
EQUIVALENT SPEEDBRACE CAN BE ADOPTED

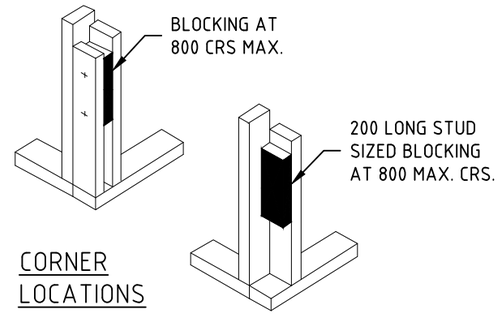
BOTTOM WALL PLATE TO CONCRETE SLAB FIXING DETAIL



BRACING WALL PARALLEL TO JOISTS
(INTERNAL BRACING WALL SHOWN)

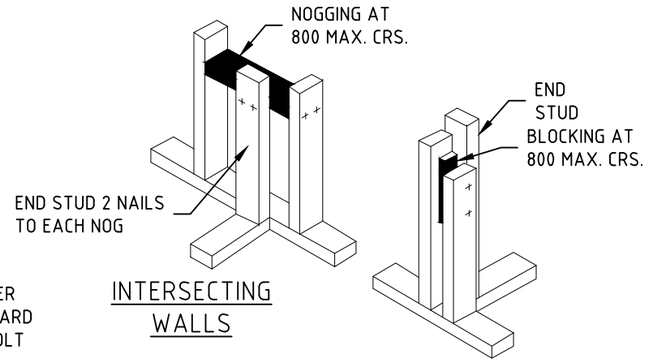


BRACING WALL PARALLEL TO JOISTS
(NO STUD WALL UNDER)



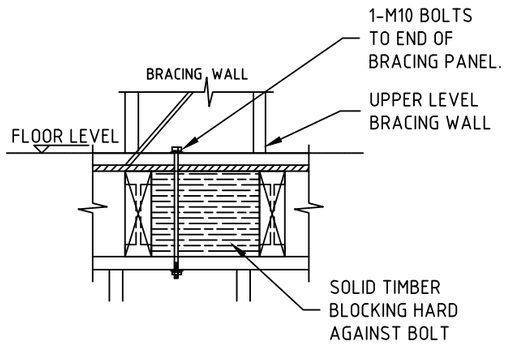
CORNER LOCATIONS

2 NAILS THOUGH EACH STUD TO BLOCKING OR NOGGING.



INTERSECTING WALLS

WALL JUNCTION DETAIL
(APPLIES TO ALL BRACING TYPES)



BRACING WALL AT PERPENDICULAR TO JOISTS

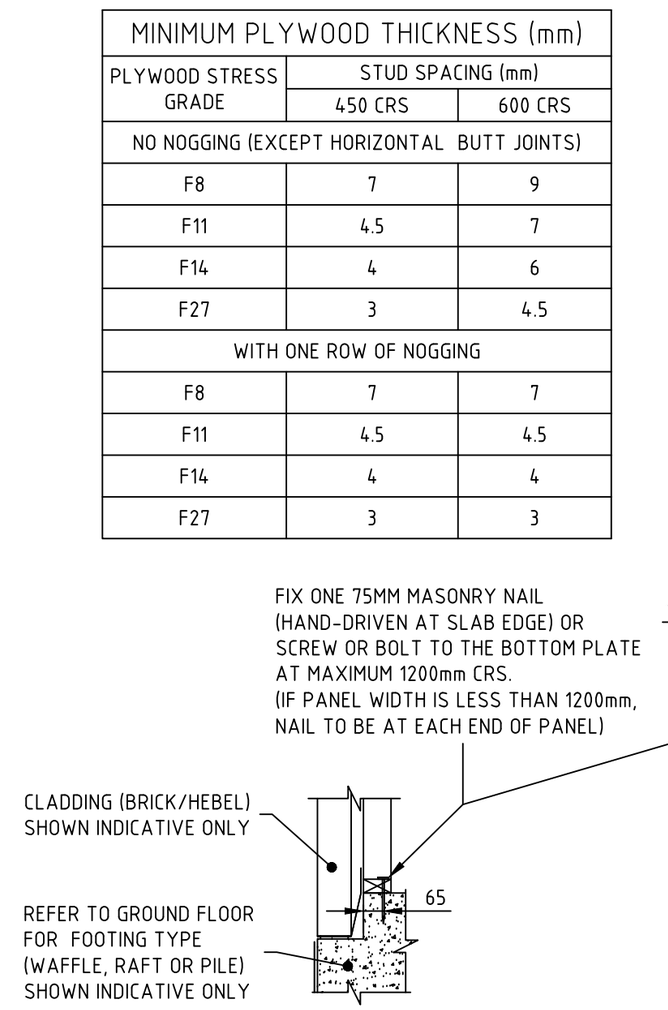
CLIENT: EVMON MAGTANONG EMD STUDIO **JOB NO: EM/DSD - 2025**	**WB CIVIL STRUCTURAL ENGINEERS** ABN: 84119322436 OFFICE: NO: 6 TENDULKAR DRIVE, ROCKBANK VIC 3335 Mobile: 04010/23328 / Ph: 03 9746 0089 Email: priyan@wbcse.com.au	REGISTERED ENGINEER BUSINESS LICENSING AUTHORITY, VICTORIA PRIYAN WIJEYERATNE PE 2448, F.I.E.(AUST)., C.P.ENG. M.Eng(Struct)., M.Tech.(Mgt.), BSc(Civil)	**PROJECT:** 3 D/S DWELLINGS PROJECT ADDRESS: 68 KIRKWOOD ROAD, EAGLEHAWK VIC 3556	SHEET NO: 16/23 SCALE: AS SHOWN DATE: 22/10/2025	WB CIVIL STRUCTURAL ENGINEERS

BRACING DETAIL 3 - TYPICAL (NTS)

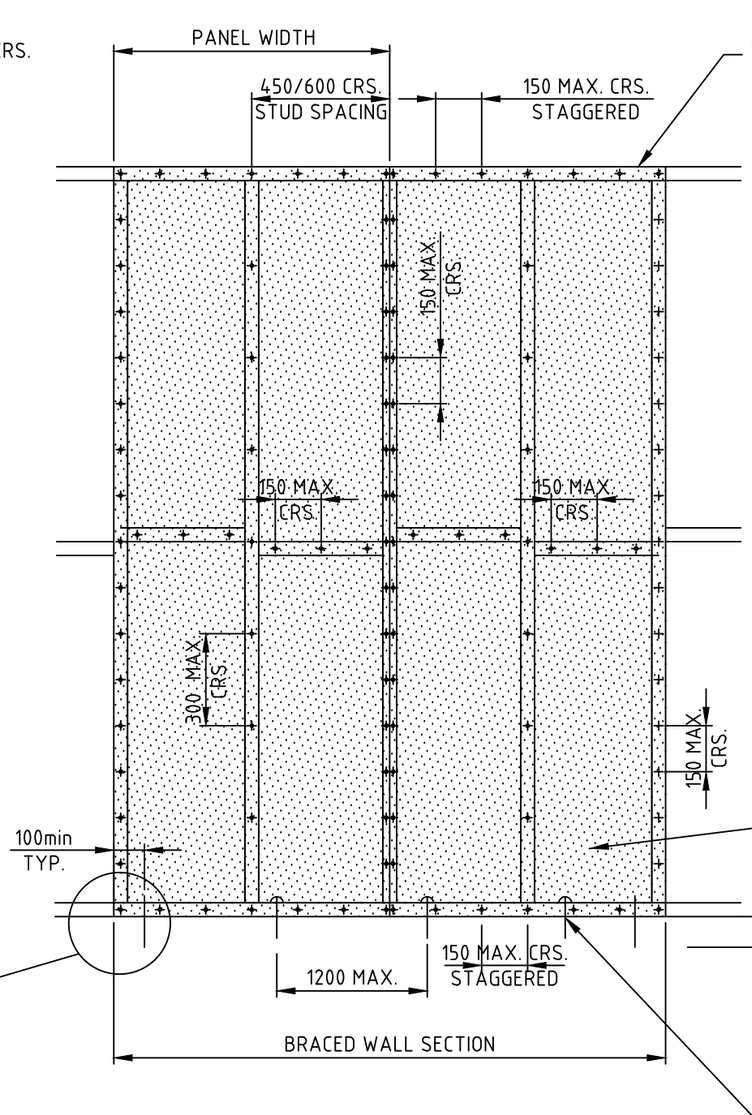
NOTES:

1. PLYWOOD BUTT JOINTS SHALL BE AT A COMMON STUD WITH CLOUTS AT CRS. SHOWN.
2. HORIZONTAL BUTT JOINTS TO BE FIXED TO NOGGING AT 150 CRS.
3. ALLOW TO PACK OUT ADJACENT STUDS WITH CONTINUOUS STRIPS OF PLY TO RECEIVE WALL LINING.
4. POWER FIX TOP PLATE AND END STUDS TO ADJACENT STEELWORK AT 600 CRS.

MINIMUM PLYWOOD THICKNESS (mm)		
PLYWOOD STRESS GRADE	STUD SPACING (mm)	
	450 CRS	600 CRS
NO NOGGING (EXCEPT HORIZONTAL BUTT JOINTS)		
F8	7	9
F11	4.5	7
F14	4	6
F27	3	4.5
WITH ONE ROW OF NOGGING		
F8	7	7
F11	4.5	4.5
F14	4	4
F27	3	3

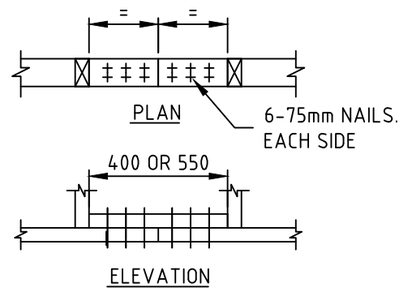


BOTTOM WALL PLATE TO CONCRETE SLAB FIXING DETAIL (END FIXING)



PLYWOOD WALL BRACING
(BRACING CAPACITY - 3.4 kN/m)
DENOTED AS P1 ON PLAN

WHERE TOP AND BOTTOM PLATES IN BRACED SECTIONS ARE NOT CONTINUOUS THEY MUST BE SPLICED AS PER DETAIL BELOW:

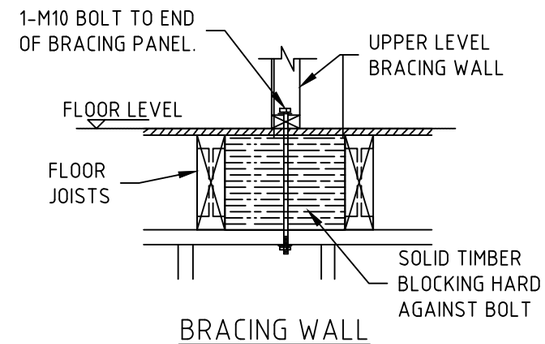


NOTES:
- SPLICE PLATE MUST BE SAME SIZE & STRESS GRADE AS TOP & BOTTOM PLATES
- WHERE TOP & BOTTOM PLATES IN BRACED SECTIONS ARE DISCONTINUED, THEY MUST BE SPLICED AS SHOWN IN THIS DETAIL

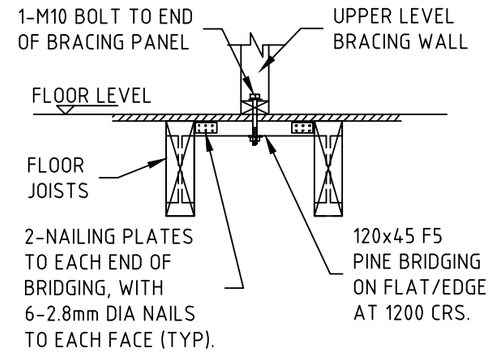
TYPICAL TOP & BOTTOM PLATE SPLICE DETAIL

FIXING TO TIMBER FRAME:
PAA APPROVED STRUCTURAL PLYWOOD FIXED WITH 2.8ø x 30 GALV. FLATHEAD NAILS AT 150 CRS. TO TOP AND BTM. WALL PLATES. & NOGGINGS
150 CRS. TO STUDS AT VERT. EDGES.
300 CRS. TO INTERNAL STUDS.

INTERMEDIATE FIXING
FIX ONE 75MM MASONRY NAIL (HAND-DRIVEN AT SLAB EDGE) OR SCREW OR BOLT TO THE BOTTOM PLATE AT MAXIMUM 1200mm CRS.



BRACING WALL PARALLEL TO JOISTS
(INTERNAL BRACING WALL SHOWN)



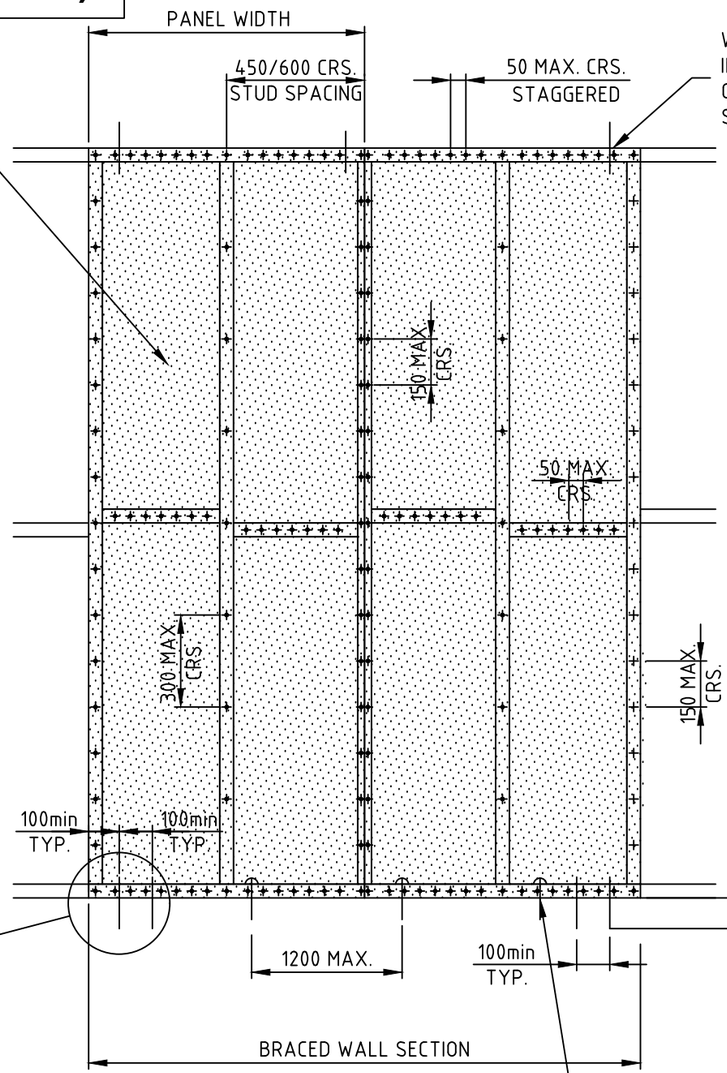
BRACING WALL PARALLEL TO JOISTS
(NO STUD WALL UNDER)

CLIENT: EVMON MAGTANONG EMD STUDIO JOB NO: EM/DSD - 2025	**WB CIVIL STRUCTURAL ENGINEERS** ABN: 84119322436 OFFICE: NO: 6 TENDULKAR DRIVE, ROCKBANK VIC 3335 Mobile: 04010/23328 / Ph: 03 9746 0089 Email: priyan@wbcse.com.au	REGISTERED ENGINEER BUSINESS LICENSING AUTHORITY, VICTORIA PRIYAN WIJEYERATNE PE 2448, F.I.E.(AUST)., C.P.ENG. M.Eng(Struct)., M.Tech.(Mgt.), BSc(Civil)	**PROJECT:** 3 D/S DWELLINGS PROJECT ADDRESS: 68 KIRKWOOD ROAD, EAGLEHAWK VIC 3556	SHEET NO: 17/23 SCALE: AS SHOWN DATE: 22/10/2025	WB CIVIL STRUCTURAL ENGINEERS

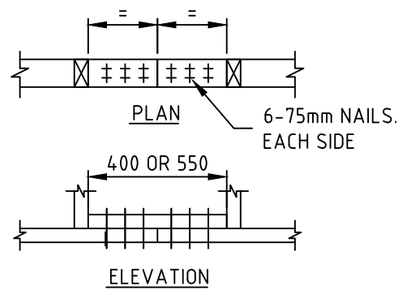
BRACING DETAIL 4 TYPICAL (NTS)

FIXING TO TIMBER FRAME:
PAA APPROVED STRUCTURAL PLYWOOD FIXED WITH 3.15ø x 30 GALV. FLATHEAD NAILS AT 50 CRS. TO TOP AND BTM. WALL PLATES. & NOGGINGS
150 CRS. TO STUDS AT VERT. EDGES.
300 CRS. TO INTERNAL STUDS.

MINIMUM PLYWOOD THICKNESS (mm)		
PLYWOOD STRESS GRADE	STUD SPACING (mm)	
	450 CRS	600 CRS
F8	7	9
F11	6	7
F14	4	6
F27	4	4.5

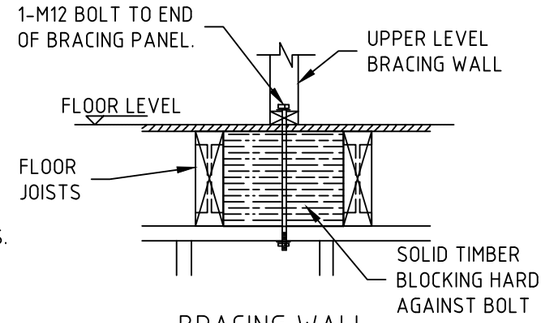


WHERE TOP AND BOTTOM PLATES IN BRACED SECTIONS ARE NOT CONTINUOUS THEY MUST BE SPLICED AS PER DETAIL BELOW:

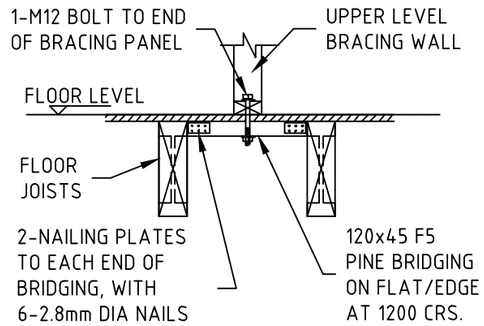


NOTES:
- SPLICE PLATE MUST BE SAME SIZE & STRESS GRADE AS TOP & BOTTOM PLATES
- WHERE TOP & BOTTOM PLATES IN BRACED SECTIONS ARE DISCONTINUED, THEY MUST BE SPLICED AS SHOWN IN THIS DETAIL

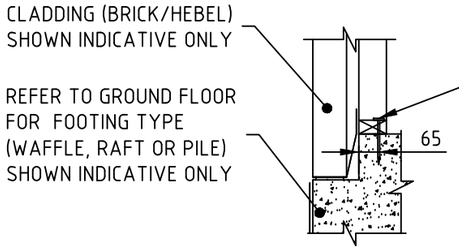
TYPICAL TOP & BOTTOM PLATE SPLICE DETAIL



BRACING WALL PARALLEL TO JOISTS
(INTERNAL BRACING WALL SHOWN)



BRACING WALL PARALLEL TO JOISTS
(NO STUD WALL UNDER)

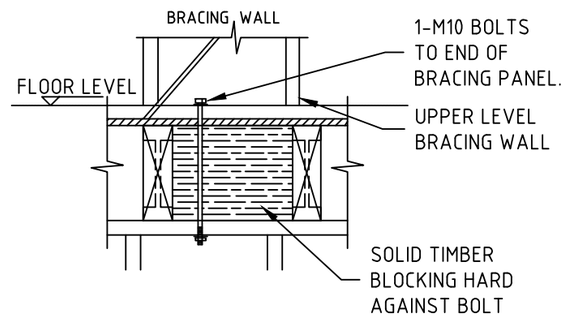


BOTTOM WALL PLATE END FIXINGS:
2-M8 CHEMSET (ALTERNATIVELY EXCALIBUR SCREWBOLT OR APPROVED EQUIVALENT) TO EACH END OF BRACED SECTION.

BOTTOM WALL PLATE TO CONCRETE SLAB FIXING DETAIL (END FIXING)

INTERMEDIATE FIXING
FIX ONE 75MM MASONRY NAIL (HAND-DRIVEN AT SLAB EDGE) OR SCREW OR BOLT TO THE BOTTOM PLATE AT MAXIMUM 1200mm CRS.

PLYWOOD WALL BRACING
(BRACING CAPACITY - 6.0 kN/m)
SCALE: NTS
DENOTED AS P2 ON PLAN.



BRACING WALL AT PERPENDICULAR TO JOISTS

CLIENT: EVMON MAGTANONG EMD STUDIO JOB NO: EM/DSD - 2025	**WB CIVIL STRUCTURAL ENGINEERS** ABN: 84119322436 OFFICE: NO: 6 TENDULKAR DRIVE, ROCKBANK VIC 3335 Mobile: 04010/23328 / Ph: 03 9746 0089 Email: priyan@wbcse.com.au	REGISTERED ENGINEER BUSINESS LICENSING AUTHORITY, VICTORIA PRIYAN WIJEYERATNE PE 2448, F.I.E.(AUST)., C.P.ENG. M.Eng(Struct)., M.Tech.(Mgt.), BSc(Civil)	**PROJECT:** 3 D/S DWELLINGS PROJECT ADDRESS: 68 KIRKWOOD ROAD, EAGLEHAWK VIC 3556	SHEET NO: 18/23 SCALE: AS SHOWN DATE: 22/10/2025	WB CIVIL STRUCTURAL ENGINEERS

STEEL ANGLE & TIMBER LINTEL TABLES (TYPICAL)

ANGLE LINTEL TABLE (L)		
ANGLE LINTEL SPAN (mm)	BRICK HEIGHT	
	800mm MAX.	3200mm MAX.
0 - 900	100 x 100 x 6 EA	100 x 100 x 8 EA
901 - 1600	100 x 100 x 6 EA	100 x 100 x 10 EA
1601 -2100	100 x 100 x 6 EA	150 x 100 x 10 UA
2101 - 2600	150 x 100 x 10 UA	150 x 100 x 10 UA + 50 x 10 EXT. PL
2601 - 3100	150 x 100 x 10 UA	150 x 100 x 12 UA + 75 x 12 EXT. PL
3101 - 3600	150 x 100 x 12 UA	N/A

NOTES:
1. ANGLE LINTEL TO EACH MASONRY SKIN TYPICAL
2. SET ANGLES WITH LONG LEG VERTICAL TYPICAL U.N.O.
3. HOT DIP GALVANISED TO ALL EXPOSED ANGLE LINTELS TYPICAL

TIMBER ROOF LINTEL SCHEDULE (RL)	
SPAN (mm)	SECTION
0 - 1200	190 x 45 F7 KD PINE
1201 - 1800	190 x 45 F17 KD HW
1801 - 2400	240 x 45 F17 KD HW
2401 - 3000	2 - 240 x 45 F17 KD HW OR 2 - 240 x 45 HYSPAN
3001 - 3600	2 - 290 x 45 F17 KD HW OR 2 - 300 x 45 HYSPAN

METAL ROOF-FOR MAXIMUM LOAD WIDTH OF 6.0m
EQUIVALENT TIMBER GRADES & SECTIONS MAY BE USED

1st FLOOR TIMBER LINTEL SCHEDULE (FL)	
SPAN (mm)	SECTION
900	90 x 45 F7 KD PINE
1200	120 x 35 F7 KD PINE
1800	190 x 45 F7 KD PINE
2400	240 x 45 F7 KD PINE
3000	240 x 45 F17 KD HW OR 240 x 45 HYSPAN

SUPPORTING METAL ROOF-LOAD WIDTH OF 2.5m MAX AND FIRST FLOOR LOAD WITH OF 3.0m MAX
EQUIVALENT TIMBER GRADES & SECTIONS MAY BE USED

CLIENT:
EVMON MAGTANONG
EMD STUDIO

JOB NO: EM/DSD - 2025

WB CIVIL STRUCTURAL ENGINEERS
ABN: 84119322436

OFFICE:
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REGISTERED ENGINEER
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PROJECT:
3 D/S DWELLINGS

PROJECT ADDRESS:
68 KIRKWOOD ROAD,
EAGLEHAWK VIC 3556

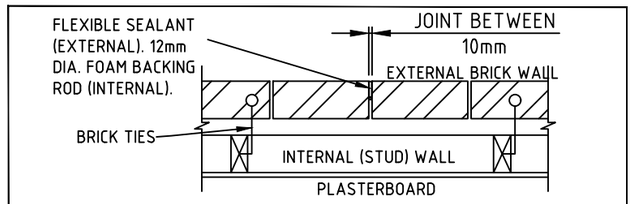
SHEET NO: 19/23

SCALE: AS SHOWN

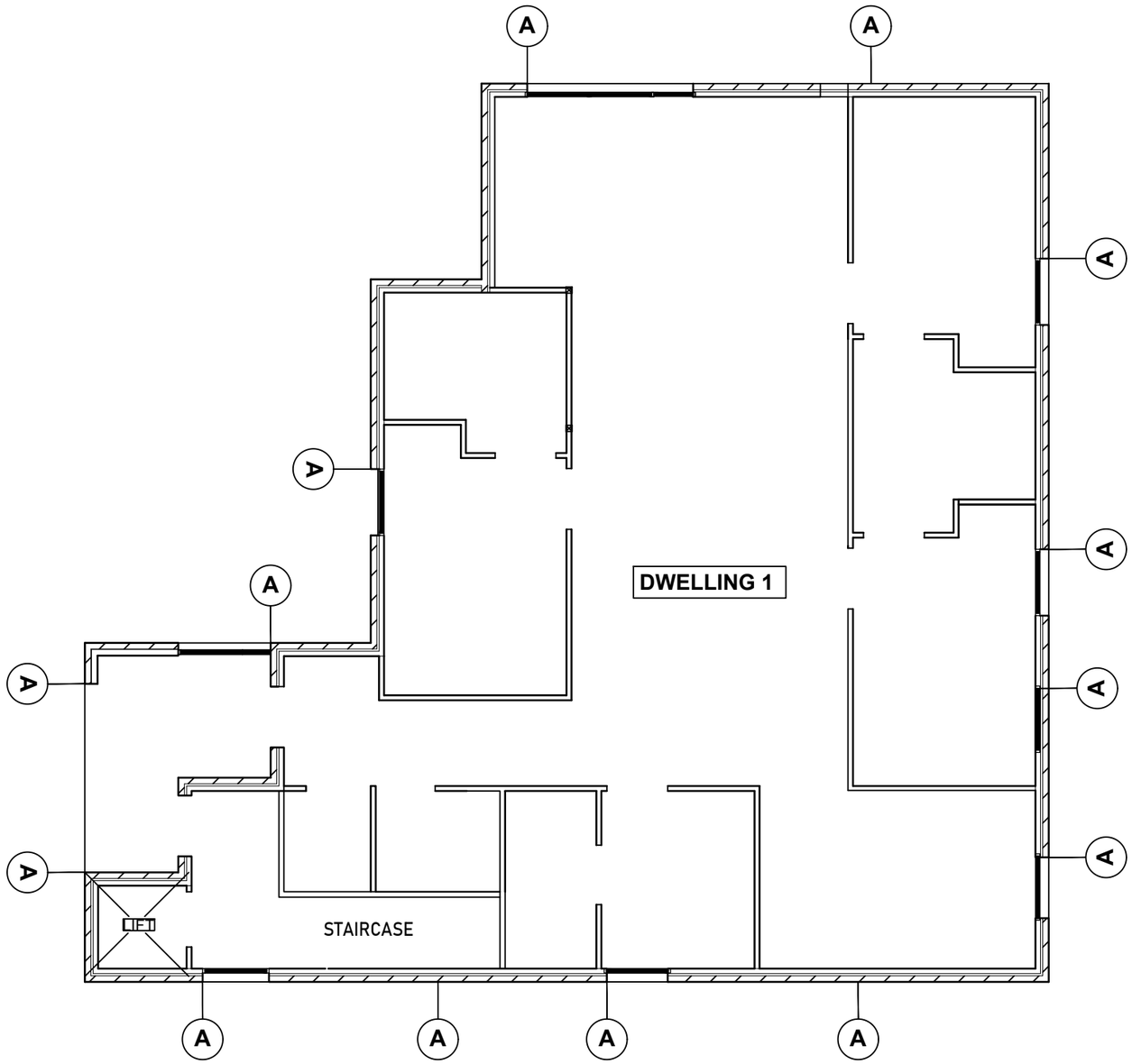
DATE: 22/10/2025

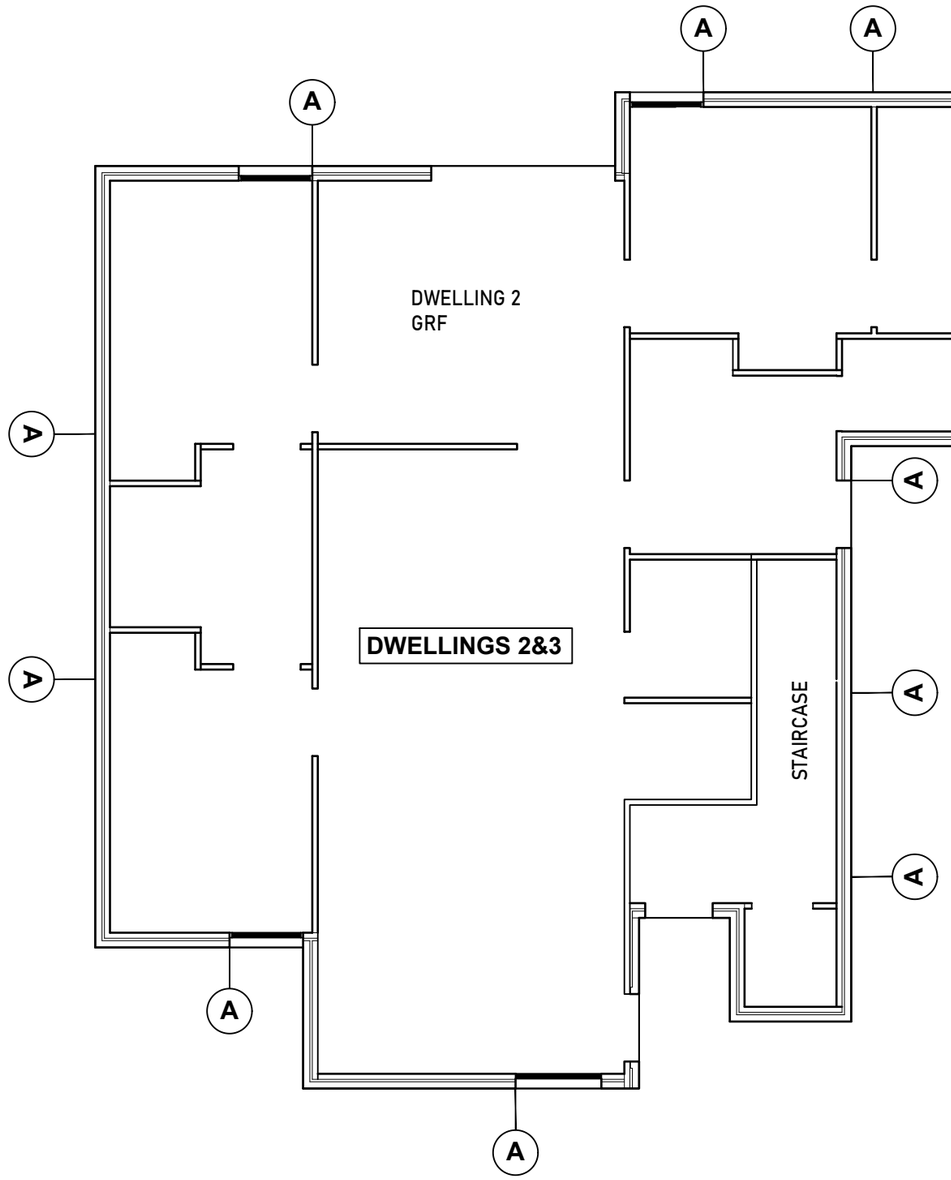
WB CIVIL STRUCTURAL ENGINEERS

ARTUCULATION JOINTS & DETAIL (NTS)



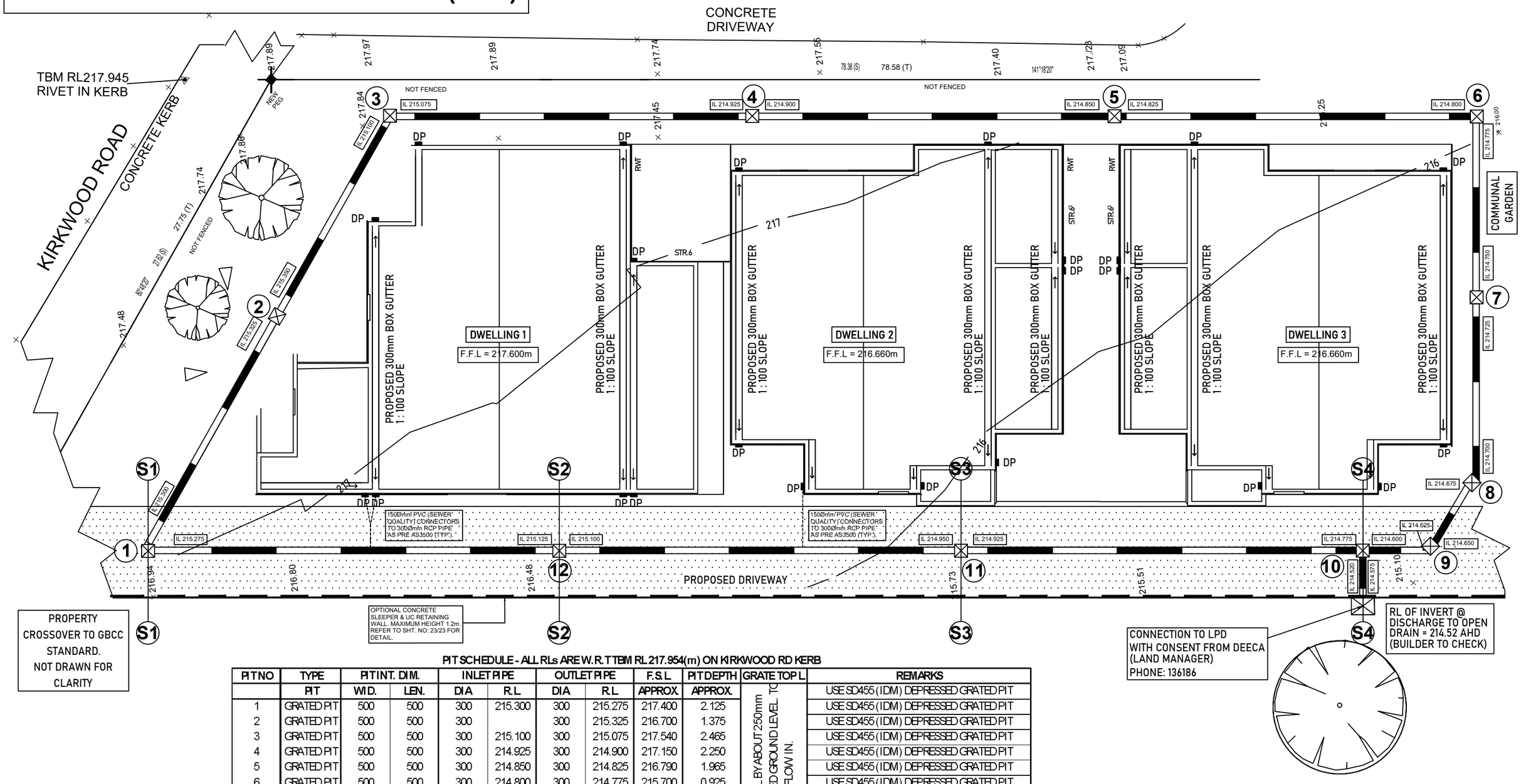
BRICK VENEER WALL ARTICULATION JOINT DETAILS





CLIENT: **EVMON MAGTANONG** **EMD STUDIO** **JOB NO: EM/DSD - 2025**	**WB CIVIL STRUCTURAL ENGINEERS** **ABN: 84119322436** **OFFICE:** NO: 6 TENDULKAR DRIVE, ROCKBANK VIC 3335 Mobile: 04010/23328 / Ph: 03 9746 0089 Email: priyan@wbcse.com.au	**REGISTERED ENGINEER** **BUSINESS LICENSING AUTHORITY, VICTORIA** **PRIYAN WIJEYERATNE** PE 2448, F.I.E.(AUST)., C.P.ENG. M.Eng(Struct)., M.Tech.(Mgt.), BSc(Civil)	**PROJECT:** **3 D/S DWELLINGS** **PROJECT ADDRESS:** **68 KIRKWOOD ROAD,** **EAGLEHAWK VIC 3556**	**SHEET NO: 20/23** **SCALE: AS SHOWN** **DATE: 22/10/2025**

STORMWATER DRAINAGE PLAN (NTS)



PIT SCHEDULE - ALL RLs ARE W.R.T TBM RL 217.954(m) ON KIRKWOOD RD KERB

PIT NO	TYPE	PIT INT. DIM.		INLET PIPE		OUTLET PIPE		F.S.L	PIT DEPTH	GRATE TOP L	REMARKS
	PIT	WID.	LEN.	DIA	R.L	DIA	R.L	APPROX.	APPROX.		
1	GRATED PIT	500	500	300	215.300	300	215.275	217.400	2.125	SET GRATE LEVEL BY ABOUT 250mm BELOW AV. FINISHED GROUND LEVEL TO ALLOW FLOW IN.	USE SD455 (IDM) DEPRESSED GRATED PIT
2	GRATED PIT	500	500	300		300	215.325	216.700	1.375		USE SD455 (IDM) DEPRESSED GRATED PIT
3	GRATED PIT	500	500	300	215.100	300	215.075	217.540	2.465		USE SD455 (IDM) DEPRESSED GRATED PIT
4	GRATED PIT	500	500	300	214.925	300	214.900	217.150	2.250		USE SD455 (IDM) DEPRESSED GRATED PIT
5	GRATED PIT	500	500	300	214.850	300	214.825	216.790	1.965		USE SD455 (IDM) DEPRESSED GRATED PIT
6	GRATED PIT	500	500	300	214.800	300	214.775	215.700	0.925		USE SD455 (IDM) DEPRESSED GRATED PIT
7	GRATED PIT	500	500	300	214.750	300	214.725	215.500	0.775		USE SD455 (IDM) DEPRESSED GRATED PIT
8	GRATED PIT	500	500	300	214.700	300	214.675	216.500	1.825		USE SD455 (IDM) DEPRESSED GRATED PIT
9	GRATED PIT	500	500	300	214.650	300	214.625	216.460	1.835		USE SD455 (IDM) DEPRESSED GRATED PIT
10	GRATED PIT	500	500	300	214.775	300	214.600	216.460	1.860		USE SD455 (IDM) DEPRESSED GRATED PIT
11	GRATED PIT	500	500	300	214.950	300	214.925	216.460	1.535		USE SD455 (IDM) DEPRESSED GRATED PIT
12	GRATED PIT	500	500	300	215.125	300	215.100	217.400	2.300		USE SD455 (IDM) DEPRESSED GRATED PIT

GBCC USES IDM STANDARDS - RCP OR EQUIVALENT STRENGTH APPROVED PIPE MAY BE USED

CLIENT:
EVMON MAGTANONG
EMD STUDIO

JOB NO: EM/DSD - 2025

WB CIVIL STRUCTURAL ENGINEERS
ABN: 84119322436

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PE 2448, F.I.E.(AUST)., C.P.ENG.
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PROJECT:
3 D/S DWELLINGS

PROJECT ADDRESS:
68 KIRKWOOD ROAD,
EAGLEHAWK VIC 3556

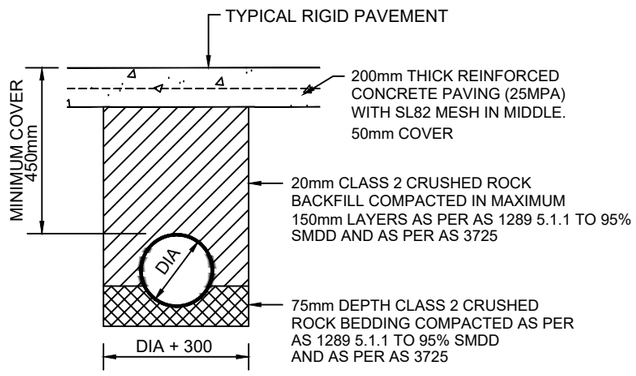
SHEET NO: 21/23

SCALE: AS SHOWN

DATE: 22/10/2025

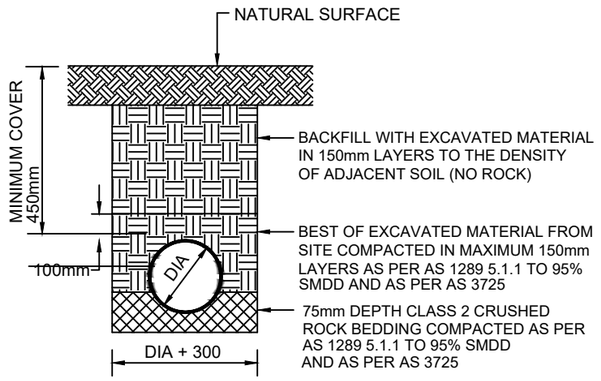
WB CIVIL STRUCTURAL ENGINEERS

FILLING, PIPE LAYING, DRIVEWAY & CROSSOVER DETAIL (NTS)



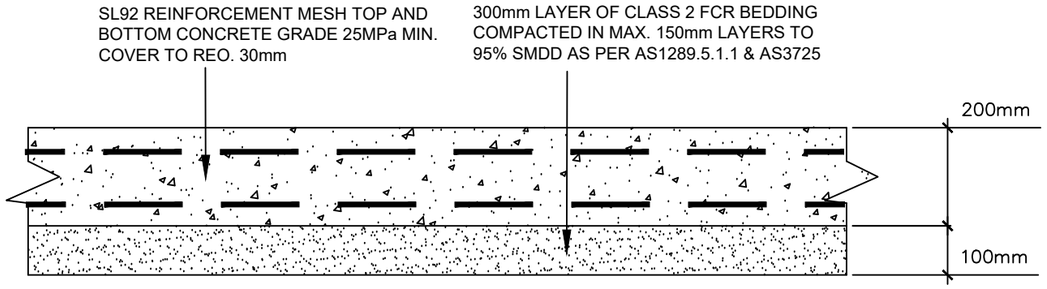
INTERNAL PIPE LAYING DETAILS

(VEHICULAR TRAFFIC)



INTERNAL PIPE LAYING DETAILS

NON - VEHICULAR TRAFFIC)



DRIVEWAY RC DETAIL

CROSSOVER DESIGN

ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT CITY OF GREATER BENDIGO & INFRASTRUCTURE DESIGN MANUAL SPECIFICATIONS AND STANDARD DRAWINGS.

REFER TO FOLLOWING FOR PROPOSED CROSSOVER DETAIL:

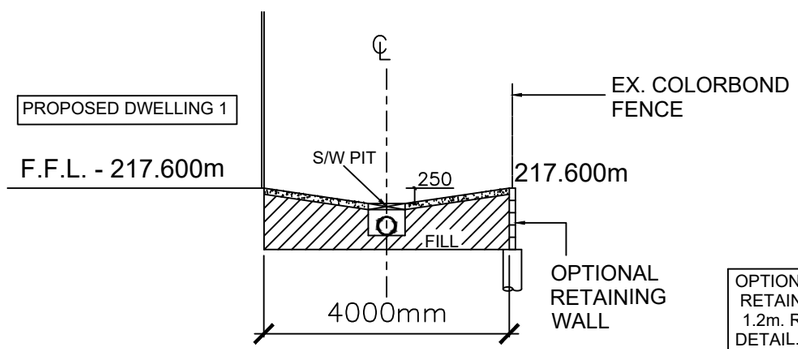
1. IDM STANDARD DRAWING NOS: SD115, SD/236, SD255 & SD260.
2. IDM SECTION 12.9.1 & 12.9.2.
3. AN INDUSTRIAL CROSSOVER IS PREFERRED AS THE PROPOSED DRIVEWAY WILL BE SERVING THREE (3) DOUBLE STOREY DWELLINGS.
4. LATEST COPY OF IDM & STANDARD DRAWINGS MAY BE DOWNLOADED FROM: https://www.designmanual.com.au

FILLING SPECIFICATION

WHERE GROUND LEVELS NEED TO BE RAISED TO COMPLY WITH NDIS REQUIREMENTS (OR SIMILAR), FOLLOW SPECIFICATION BELOW:

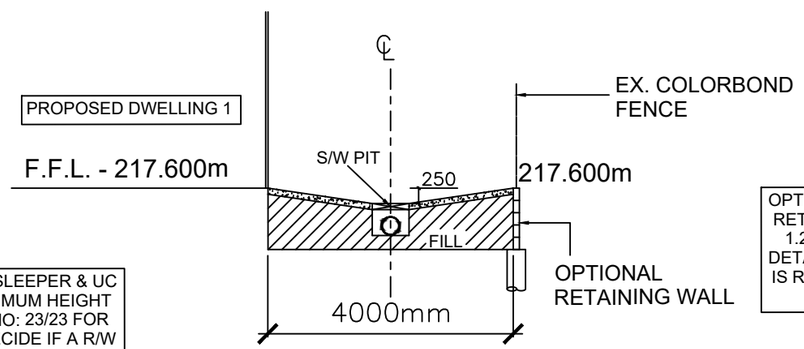
CONTROLLED FILL

- PLACEMENT AND COMPACTION OF CONTROLLED FILL MATERIAL SHALL BE IN ACCORDANCE WITH AS3798.
- SAND FILL PLACED UP TO 800mm DEEP, WELL COMPACTED IN NOT MORE THAN 300mm THICK LAYERS BY A VIBRATING PLATE OR VIBRATING ROLLER. USE PENETROMETER TEST DESCRIBED IN AS1289.F3.3 FOR COMPACTION TESTING.
- NON-SAND FILL UP TO 400mm DEEP, WELL COMPACTED IN NOT MORE THAN 150mm LAYERS BY A MECHANICAL ROLLER.



PROPOSED DRIVEWAY SECTION S1 & S2 (NTS)

OPTIONAL CONCRETE SLEEPER & UC RETAINING WALL. MAXIMUM HEIGHT 1.2m. REFER TO SHT. NO: 23/23 FOR DETAIL. BUILDER TO DECIDE IF A R/W IS REQUIRED ON SITE ON CHECKING LEVELS etc.



PROPOSED DRIVEWAY SECTION S3 & S4 (NTS)

OPTIONAL CONCRETE SLEEPER & UC RETAINING WALL. MAXIMUM HEIGHT 1.2m. REFER TO SHT. NO: ?/? FOR DETAIL. BUILDER TO DECIDE IF A R/W IS REQUIRED ON SITE ON CHECKING LEVELS etc.

CLIENT:
EVMON MAGTANONG
EMD STUDIO

JOB NO: EM/DSD - 2025

WB CIVIL STRUCTURAL ENGINEERS
ABN: 84119322436

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PROJECT:
3 D/S DWELLINGS

PROJECT ADDRESS:
68 KIRKWOOD ROAD,
EAGLEHAWK VIC 3556

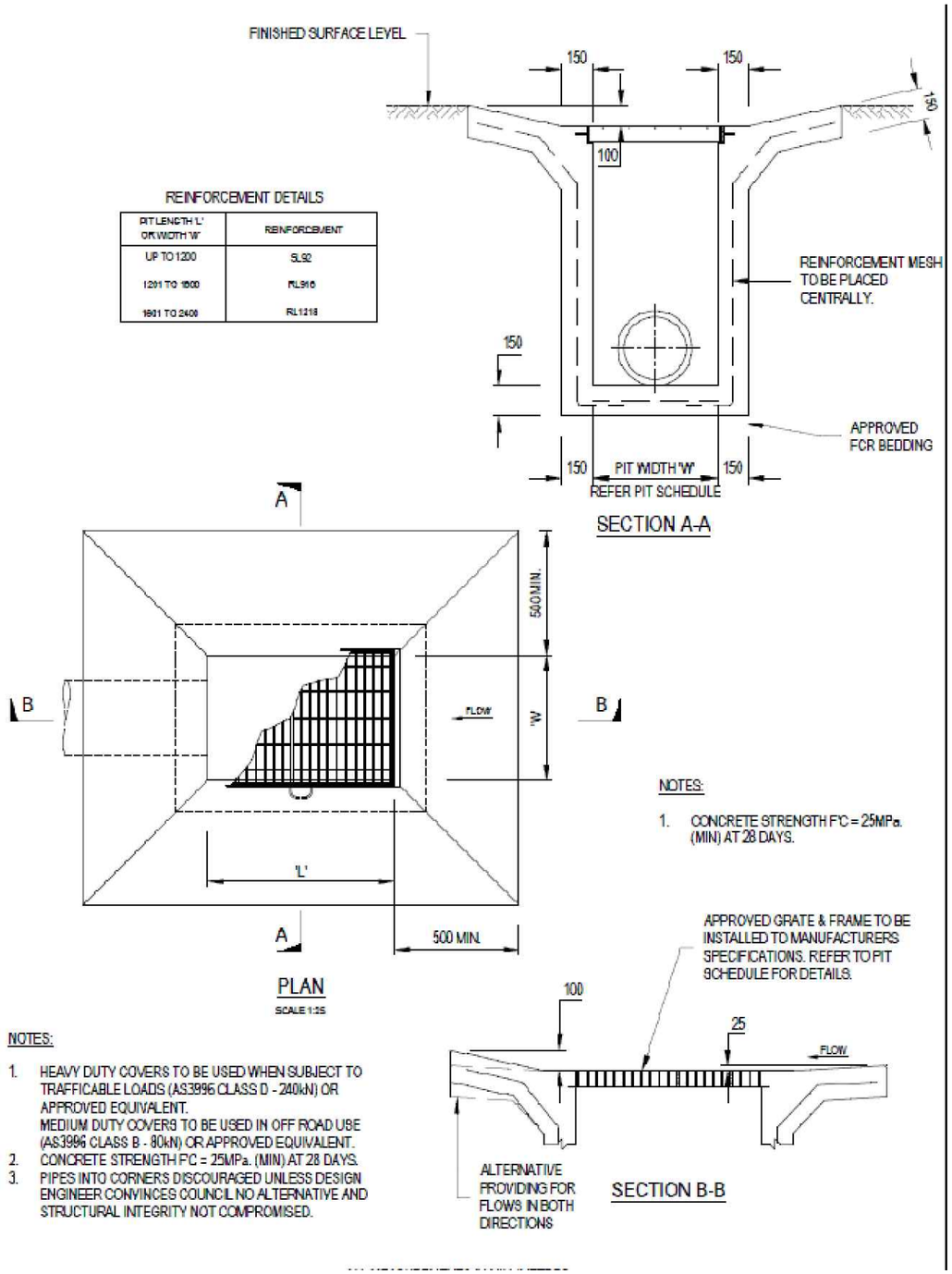
SHEET NO: 22//23

SCALE: AS SHOWN

DATE: 22/10/2025

WB CIVIL STRUCTURAL ENGINEERS

IDM SD455 - STORMWATER PIT DETAIL (NTS) & GENERAL NOTES FOR CIVIL DESIGN



REINFORCEMENT DETAILS

PIT LENGTH 'L' OR WIDTH 'W'	REINFORCEMENT
UP TO 1200	SL92
1201 TO 1800	RL916
1801 TO 2400	RL1218

NOTES:

1. HEAVY DUTY COVERS TO BE USED WHEN SUBJECT TO TRAFFICABLE LOADS (AS3996 CLASS D - 240kN) OR APPROVED EQUIVALENT.
   MEDIUM DUTY COVERS TO BE USED IN OFF ROAD USE (AS3996 CLASS B - 80kN) OR APPROVED EQUIVALENT.
2. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.
3. PIPES INTO CORNERS DISCOURAGED UNLESS DESIGN ENGINEER CONVINCES COUNCIL NO ALTERNATIVE AND STRUCTURAL INTEGRITY NOT COMPROMISED.

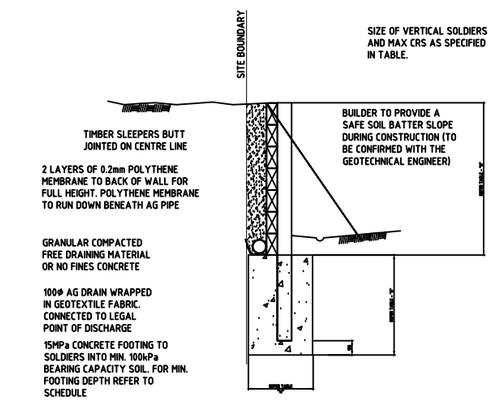
NOTES:

1. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.

GENERAL NOTES FOR CIVIL WORKS

1. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE APPROVED TOWN PLANNING & BUILDING PLANS FOR THIS UNIT DEVELOPMENT INCLUDING ADDITIONAL PAVEMENT DETAILS AND TEMPORARY BENCHMARKS FOR PROPOSED AND EXISTING LEVELS AND CONTOURS.
2. BEFORE COMMENCING WORK ON TRENCHES IN EXCESS OF 1.5m DEEP, NOTICE OF SUCH PROPOSAL IS TO BE SENT TO THE SECRETARY OF MINERALS & ENERGY IN ACCORDANCE WITH CLAUSE 202 OF THE MINES & TRENCHES REGULATIONS 1982.
3. PIPES WILL BE SEWER CLASS QUALITY U.P.V.C
4. ALL PIPES 300Ø AND OVER TO BE RUBBER RING JOINTED CLASS 2 REINF. CONC. OR FIBRE REINF. CONC. PIPES UNLESS SHOWN OTHERWISE.
5. ALL DRAINAGE TRENCHES UNDER RIGID PAVEMENTS TO BE BACK FILLED WITH CLASS 3 F.C.R UNLESS SHOWN OTHERWISE.
6. THE CONTRACTOR SHALL TAKE ALL REASONABLE CARE TO PRESERVE THE SURVEY MARKS.
7. CONTRACTOR TO VERIFY SITE DIMENSIONS PRIOR TO COMMENCEMENT OF WORK.
8. EX. SUB-GRADE UNDER PROPOSED CONCRETE DRIVEWAY IS TO BE COMPACTED AS PER AS 1289 5.1.1 TO 98% SMDD WITHIN +2% OF OPTIMUM MOISTURE CONTENT.
9. ANY SOFT SPOTS UNDER PROPOSED DRIVEWAY TO BE EXCAVATED OUT AND BACKFILLED WITH CLASS 3, 20mm NOM SIZE CRUSHED ROCK COMPACTED IN MAXIMUM 150mm LAYERS AND AS PER AS 1289 5.1.1 TO 98% SMDD.
10. PITS OVER 1.0m DEEP TO BE PROVIDED WITH 20mm GALV. MILD STEEL STEP IRONS AT 300mm CENTRES.
11. ALL WORK SHALL BE IN ACCORDANCE WITH ALL RELEVANT LOCAL AUTHORITIES REQUIREMENTS.
12. ALL PITS AND DRAINAGE CONNECTIONS TO BE CONSTRUCTED AND CARRIED OUT AS PER LOCAL COUNCIL STANDARDS, SPECIFICATIONS AND REQUIREMENTS.
13. ALL TRAFFICABLE PITS TO HAVE BICYCLE SAFE GRATES BE PROVIDED WITH BICYCLE SAFETY GRATES.
14. ALL A.G DRAINS TO BE 100Ø P.V.C LAID AT 1 in 100 min GRADE UNLESS SHOWN OTHERWISE WITH 200mm MIN COVER AT PIT.
15. THE LOCATION OF EXISTING SERVICES SHOULD BE DETERMINED BY THE CONTRACTOR PRIOR TO ANY EXCAVATION BY CONTACTING ALL LOCAL AUTHORITIES. ANY EXISTING SERVICES SHOWN ON THE DRAWINGS ARE OFFERED AS A GUIDE ONLY & ARE NOT GUARANTEED AS CORRECT.
16. NO TREE ROOT SHALL BE CUT WITHOUT THE SPECIFIC PERMISSION OF COUNCIL'S CONSTRUCTION SUPERVISOR.
17. ALL CONCRETE TO BE SAWCUT AND BROKEN OUT TO NEAREST JOINT.
18. FINISHED SURFACE LEVEL TO BE SLOPED AWAY FROM PROPOSED DWELLINGS & SLOPED TOWARDS NEAREST PIT(S) OR TRENCH GRATE.

RETAINING WALL DETAIL TYPICAL (NTS)



TYPICAL RETAINING WALL DETAIL

SCALE 1:20

WALL DESIGNED FOR MAX SURCHARGE LOAD OF 5.0kPa

RETAINING WALL SEQUENCE

1. BULK EXCAVATE SITE TO ALLOW SAFE BATTER SLOPE INSIDE PROPERTY BOUNDARIES IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERS RECOMMENDATIONS.
2. DRILL BORED PIERS HOLES SIZES AS REQUIRED AND ENSURE HOLES ARE CLEAN OF LOOSE SOIL AND DEBRIS
3. CAST IN VERTICAL GALVANISED POST TO THE APPROPRIATE DEPTH AND ALIGNMENT.
4. POUR FOOTING UP TO 100mm BELOW FINISH CUT LEVEL (FCL).
5. CAREFULLY EXCAVATE BETWEEN TWO POSTS AT ONE TIME AND INSERT RETAINING SLEEPERS AND GEOTEXTILE FABRIC IMMEDIATELY AFTER EXCAVATION. THEN BACKFILL WITH COMPACTED FREE DRAINING MATERIAL AS SHOWN ON TYPICAL DETAILS
6. REPEAT ITEMS 2-5 ONLY WHEN PREVIOUSLY RETAINING BAY HAS BEEN FULLY CONSTRUCTED AND BACKFILLED. AT NO STAGE ARE TWO BAYS BETWEEN POSTS TO BE CONSTRUCTED AT THE SAME TIME. NOTE: RETAINING WALL CONSTRUCTION SEQUENCE IS PERMISSIBLE TO BE OMITTED ONLY IF

1) THERE IS NO SIGHTING OF ADJACENT NEIGHBOUR FOOTING OR OVER EXCAVATION, AND
2) SOIL RETAINING HEIGHT IS UP TO 1000mm, AND
3) RETAINING SOIL DOES NOT CONTAIN ANY SILT OR SAND MATERIAL, AND
4) RETAINING WALL CONSTRUCTION IS COMPLETED WITHIN 24 HOURS AFTER EXCAVATION

SOLDIER PILE AND SLEEPER RETAINING WALL TABLE

RETAINING WALL HEIGHT 'H' (mm)	SOLDIER PILE SIZE AND GRADE	MAX. SPACING OF SOLDIER POST (mm)	SLEEPER SIZE AND GRADE	FOOTING DEPTH 'D' (mm)	FOOTING WIDTH 'W'(mm)
-	-	2400	-	-	450Ø
-	-	2400	-	-	450Ø
-	-	-	-	-	450Ø

NOTE: AS PER STATE ENVIRONMENTAL PLANNING POLICY 2008, RW HEIGHT CANNOT EXCEED 1000mm WITHIN 1000mm OF SITE BOUNDARY.

NOTE: NO CONSIDERATION IS MADE FOR ANGLE OF REPOSE CONDITIONS OF SUB-SURFACE SERVICES. A SUITABLY QUALIFIED ENGINEER MUST SPECIFY FOOTING DEPTH AND CONFIRM PRIOR TO CONSTRUCTION.

NOTE: FOOTING DEPTH 'D' TO BE CONFIRMED PRIOR TO CONSTRUCTION BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER. SPECIFIED FOOTING DEPTH IS INDICATIVE ONLY AND IS SUBJECT TO CHANGE.

NOTE:
IF SOIL REPORT INDICATES BASALT FLOATERS/ROCK FROM ITS BORELOG, IT IS LIKELY THAT SOME DIFFICULTY MAY BE ENCOUNTERED WHEN UNDERTAKING EXCAVATIONS AT THIS SITE. IT SHOULD BE NOTED THAT IF SIGNIFICANT EXCAVATIONS ARE PLANNED AT THIS SITE IT IS POSSIBLE THAT ROCK BREAKING EQUIPMENT WILL BE REQUIRED.

NOTE: THE BUILDER IS TO MAINTAIN STABILITY OF EXISTING SITE CUT DURING CONSTRUCTION BY SHORING, PROPPING ETC. AS REQUIRED.

NOTE: BUILDER IS TO ENSURE RETAINING WALL CUT DOES NOT CAUSE INSTABILITY TO EXISTING TREES ON SITE. EXISTING TREES LOCATION TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION THIS OFFICE IS TO BE CONFIRMED FOR FURTHER GUIDANCE.

NOTE:
THE SOIL/GROUND CONDITIONS REQUIRED TO ENSURE THIS DESIGN IS SATISFACTORY.

BORED PIERS TO BE DRILLED INTO NATURAL GROUND WITH 100 K.P.A BEARING CAPACITY.

SITE INSPECTION OF SOIL PRIOR TO POURING OF PIERS IS RECOMMENDED.

RETAINING POSITION MAY VARY DUE TO SITE CONDITIONS, CONTRACTOR TO ADOPT SCHEDULE TO SUIT.

PLACE AN (I/O) INSPECTION OPENING AT EVERY CHANGE IN PIPE DIRECTION.

NOTE:
NO EXCAVATION IS TO BE CARRIED OUT BEYOND THE SITE BOUNDARY

THE BUILDER IS TO MAINTAIN STABILITY OF EXISTING SITE CUT AND EXCAVATION DURING CONSTRUCTION BY SHORING, PROPPING ETC. AS REQUIRED

NOTE: PROVIDE TERMITE PROTECTION IN ACCORDANCE WITH A.S. 3660.1 IF REQUIRED (REFER RESPONSIBLE AUTHORITY)

SAFE EXCAVATED BATTERS:

A BUILDER FAMILIAR WITH THIS TYPE OF EXCAVATION WORK MUST ENSURE ADEQUATE STABILITY OF EXCAVATED SLOPES DURING CONSTRUCTION.
ALL EXCAVATION SHOULD BE INSPECTED BY A REPRESENTATIVE OF THIS OFFICE OR GEOTECHNICAL SOIL ENGINEER TO ENSURE THAT THE STABILITY OF THE SLOPE IS ADEQUATE AND TO IDENTIFY ANY POSSIBLE ZONES OF INSTABILITY. IF SAFE EXCAVATED BATTERS CANNOT BE ACHIEVED AN ALTERNATIVE DESIGN MAY BE TO CONSTRUCT THE RETAINING WALL IN STAGES . CONTACT THIS OFFICE FOR FURTHER ADVICE.

SOIL TYPE SLOPE	MAXIMUM
SILT/SAND/FILLING	20 DEGREES
CLAY	35 DEGREES
WEATHERED ROCK	60 DEGREES

CLIENT:
EVMON MAGTANONG
EMD STUDIO

JOB NO: EM/DSD - 2025

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ABN: 84119322436

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REGISTERED ENGINEER
BUSINESS LICENSING AUTHORITY, VICTORIA

PRIYAN WIJEYERATNE
PE 2448, F.I.E.(AUST)., C.P.ENG.
M.Eng(Struct)., M.Tech.(Mgt.), BSc(Civil)

PROJECT:
3 D/S DWELLINGS

PROJECT ADDRESS:
68 KIRKWOOD ROAD,
EAGLEHAWK VIC 3556

SHEET NO: 23//23

SCALE: AS SHOWN

DATE: 22/10/2025

WB CIVIL STRUCTURAL ENGINEERS