

G GENERAL

- G1 ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE DRAWINGS, THE SPECIFICATION, CURRENT RELEVANT AUSTRALIAN STANDARDS, THE BUILDING CODE OF AUSTRALIA AND OTHER STATUTORY REQUIREMENTS.
- G2 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS, THE SPECIFICATION AND ALL OTHER WRITTEN INSTRUCTIONS THAT ARE ISSUED DURING THE COURSE OF THE WORKS.
- G3 REFER TO ARCHITECTURAL DRAWINGS FOR ALL SETOUT AND OVERALL DIMENSIONS. DIMENSIONS SHOWN ON THESE DRAWINGS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE (U.N.O.). DO NOT SCALE DRAWINGS.
- G4 ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT/ENGINEER FOR CLARIFICATION BEFORE PROCEEDING. NOTIFY THE ARCHITECT/ENGINEER OF ALL VARIATIONS ARISING FROM THE RESOLUTION OF THE DISCREPANCY BEFORE PROCEEDING WITH THE WORKS.
- G5 THE BUILDER SHALL CONFIRM ALL RELEVANT DIMENSIONS BEFORE COMMENCING CONSTRUCTION/FABRICATION.
- G6 NO SUBSTITUTION SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. THE APPROVAL OF ANY SUBSTITUTION IS NOT AN AUTHORISATION FOR AN EXTRA. ANY EXTRAS INVOLVED MUST BE TAKEN UP WITH THE CLIENT AND/OR PROJECT MANAGER PRIOR TO WORK COMMENCING.
- G7 THE BUILDER SHALL MAINTAIN THE WORKS IN A SAFE AND STABLE CONDITION ENSURING THAT NO PART IS OVER-STRESSED DURING CONSTRUCTION.
- G8 UNLESS NOTED OTHERWISE, THE STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING LIVE LOADS & ADDITIONAL DEAD LOAD (TO AS1170.1):
- | AREA SUBJECT TO LOADING | LIVE LOAD | | ADDITIONAL DEAD LOAD |
|-------------------------|-----------|--------|----------------------|
| | UNIFORM | POINT | |
| ROOF | 0.25 kPa | 1.4 kN | 0.1 kPa |
| FLOORS-RESIDENTIAL | 1.5 kPa | 1.8 kN | 0.5 kPa |
| STAIRS-RESIDENTIAL | 2.0 kPa | 2.7 kN | 0.5 kPa |
| GARAGES-RESIDENTIAL | 2.5 kPa | 13 kN | 0.0 kPa |
- G9 UNLESS NOTED OTHERWISE, THE STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING WIND LOADING CRITERIA: (TO AS4055)
- REGION: A
- TERRAIN CATEGORY: 3
- TOPOGRAPHICAL CLASS: T1
- FILL SHIELDING: FS
- WIND CLASSIFICATION: N1
- WIND VELOCITY: Vu = 34m/s (ULTIMATE)
Vs = 26m/s (SERVICEABILITY)

F FOUNDATIONS AND FOOTINGS

- F1 ALL WORK AND MATERIALS SHALL COMPLY WITH AS2870 & AS3798.
- F2 ALL EXCAVATIONS SHALL BE INSPECTED ON SITE AND THE ENGINEER NOTIFIED IMMEDIATELY IF CONDITIONS OTHER THAN THOSE DESCRIBED IN THE SOIL REPORT ARE ENCOUNTERED.
- F3 FOOTINGS SHALL BE FOUNDED IN MATERIAL AND AT THE DEPTHS SHOWN ON THE DRAWINGS OR, WHEN NOT ON THE DRAWINGS, AS SHOWN IN THE SITE GEOTECHNICAL REPORT No.58289 DATED 7TH NOVEMBER 2024. PREPARED BY FOUNDATION EXPLORATION.
- F4 THE SITE HAS BEEN CLASSIFIED AS CLASS "P" (PROBLEMATIC SITE) IN ACCORDANCE WITH AS2870, HOWEVER FOR THE SECTIONS OF THE BUILDING AREA WHERE THE SOIL MOISTURE CONDITIONS ARE NORMAL CLASS "M" (MODERATELY REACTIVE) RECOMMENDATIONS IN ACCORDANCE WITH AS2870 MAY BE USED AS DETAILED IN THE GEOTECHNICAL REPORT.
- F5 STIFFENED RAFT SLAB EDGE AND INTERNAL BEAMS ARE TO EXTEND THROUGH THE FILLING AND BE FOUNDED A MINIMUM OF 100mm INTO NATURAL CLAY WITH AN ALLOWABLE BEARING CAPACITY OF AT LEAST 150 kPa.
- F6 STRIP & PAD FOOTINGS ARE TO EXTEND THROUGH THE FILL/SAND AND BE FOUNDED A MINIMUM OF 700mm & 1000mm RESPECTIVELY BELOW NATURAL SURFACE LEVEL AND AT LEAST 100mm IN THE UNDERLYING NATURAL CLAY WITH AN ALLOWABLE BEARING PRESSURE OF AT LEAST 150 kPa. REFER TO GEOTECHNICAL REPORT FOR FOUNDDING DEPTH.
- F7 BORED PIERS ARE TO EXTEND THROUGH THE FILLING AND BE FOUNDED AT LEAST 2400mm BELOW SURFACE LEVEL AND A MINIMUM 1000mm INTO THE UNDERLYING CLAY WITH AN ALLOWABLE BEARING CAPACITY OF AT LEAST 250 kPa.
- F8 FOUNDATION MATERIAL SHALL BE INSPECTED AND APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER BEFORE LYING MEMBRANES, FIXING REINFORCEMENT OR ORDERING CONCRETE.

RS RESIDENTIAL SLABS AND FOOTINGS

- RS1 ALL WORK AND MATERIALS SHALL COMPLY WITH AS2870.
- RS2 THE SITE OF THE WORKS SHALL BE STRIPPED OF ALL GRASS, ROOTS, VEGETABLE MATTER AND TOP SOIL.
- RS3 THE NATURAL GROUND BELOW SLABS SHALL BE PROOF ROLLED WITH AN APPROVED HEAVY COMPACTOR. ANY "SOFT SPOTS" SHALL BE REMOVED AND REPLACED WITH COMPACTED CRUSHED ROCK OR APPROVED FILLING IN ACCORDANCE AS2807 & AS3798.
- RS4 WHERE REQUIRED THE SLAB PANELS AND NON-LOAD BEARING INTERNAL BEAMS AND THICKENINGS MAY BE FOUNDED ON CONTROLLED OR ROLLED FILL IN ACCORDANCE WITH AS2870. ROLLED FILLED CONSISTS OF MATERIAL COMPACTED IN LAYERS BY REPEATED ROLLING WITH AN EXCAVATOR. ROLLED FILL SHALL NOT EXCEED 600mm COMPACTED IN 300mm LAYERS FOR SAND MATERIAL OR 300mm COMPACTED IN 150mm LAYERS FOR OTHER MATERIAL.
- RS5 EDGE BEAM AND LOAD BEARING INTERNAL BEAMS ARE ARE TO BE FOUNDED IN ORIGINAL UNDISTURBED GROUND WITH AN ALLOWABLE BEARING PRESSURE OF AT LEAST 100 kPa. EDGE BEAM AND INTERNAL BEAMS ARE NOT TO FOUNDED ON ROLLED FILL.
- RS6 TERMITE PROTECTION SHALL BE PROVIDED AS REQUIRED BY LOCAL STATUTORY AUTHORITY IN ACCORDANCE WITH AUSTRALIAN STANDARD AS3990.
- RS7 SLABS SHALL BE LAID ON A 0.2mm POLYTHENE MEMBRANE, CONTINUOUS, LAPPED AND TAPED 200mm WHERE REQUIRED AND TAPED AT PUNCTURES AND SERVICE AND PIPE PENETRATIONS. MEMBRANE TO EXTEND UNDER AND TO THE SIDES OF ALL SLABS, BEAMS AND THICKENINGS.
- RS8 TRENCH MESH IN BEAMS SHALL BE OVERLAPPED BY THE WIDTH OF FABRIC AT T- AND L- INTERSECTIONS. WHERE NECESSARY, TRENCH MESH SHALL BE SPLICED BY A LAP OF 500mm
- RS9 FABRIC IN SLABS SHALL BE LAPPED A MINIMUM OF TWO WIRES PLUS 25mm AND SHALL BE SET OUT SUCH THAT NO MORE THAN THREE THICKNESS OF FABRIC OCCUR AT ANY LOCATION.
- RS10 HOT WATER HEATING PIPES MAY BE EMBEDDED IN THE SLAB IF THE THICKNESS IS INCREASED BY 25mm AND PIPES ARE LAID ON SLS2 MESH
- RS11 THE GROUND SURROUNDING THE SLAB SHALL BE AT LEAST 150mm LOWER THAN THE SLAB SURFACE AND BE GRADED AWAY FROM THE SLAB EDGE TO THE SITE DRAINAGE SYSTEM.
- RS12 OWNERS SHALL MAINTAIN THE SLAB AS NOTED IN APPENDIX B OF AS2870 AND IN THE CSIRO PUBLICATION "BT176 FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE - A HOMEOWNERS GUIDE." IT IS THE BUILDERS RESPONSIBILITY TO ENSURE THAT THE OWNER IS INFORMED OF THESE REQUIREMENTS.

SG SUB GRADE PREPARATION (INFILL & PAVING SLABS ON GROUND)

- SG1 THE SITE OF THE WORKS SHALL BE STRIPPED OF ALL GRASS, ROOTS, VEGETABLE MATTER AND TOP SOIL.
- SG2 PRIOR ANY ANY FILLING, THE NATURAL GROUND BELOW SLABS SHALL BE PROOF ROLLED AND COMPACTED TO 98% STANDARD DRY DENSITY RATIO IN ACCORDANCE WITH AS1289. ANY "SOFT SPOTS" SHALL BE REMOVED AND REPLACED WITH APPROVED COMPACTED MATERIAL AS NOTED BELOW.
- SG3 CLAY MATERIAL FREE OF ORGANIC MATTER FROM CUT AREAS MAY BE USED AS ENGINEERED FILL, PROVIDED IT HAS BEEN TESTED. ALL IMPORTED SELECTED FILL SHALL TESTED AND APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER.
- SG4 ALL FILL SHALL BE PLACED IN 150mm LAYERS AND COMPACTED TO NOT LESS THAN 95% STANDARD DRY DENSITY RATIO WITHIN ±2% OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH AS1289.
- SG5 CRUSHED ROCK FILLING UNDER SLABS SHALL BE COMPACTED TO NOT LESS THAN 95% MODIFIED DRY DENSITY RATIO WITHIN ±2% OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH AS1289.
- SG6 ALL FILLING SHALL BE CONDUCTED UNDER THE SUPERVISION OF THE PROJECT GEOTECHNICAL ENGINEER.
- SG7 THE PROJECT GEOTECHNICAL ENGINEER SHALL SUPPLY CERTIFICATES FOR THE COMPACTION OF THE SITE.

C CONCRETE

- C1 ALL WORK AND MATERIALS SHALL COMPLY WITH AS 3600.
- C2 CONCRETE COMPONENTS SHALL HAVE A CHARACTERISTIC COMPRESSIVE STRENGTHS AS FOLLOWS U.N.O.
- | ELEMENT | f'c (MPa) | SLUMP (mm) | MAX. AGG. SIZE (mm) |
|-----------------|-----------|------------|---------------------|
| BLINDING | 15 | 75 | 20 |
| FOOTINGS | 25 | 75 | 20 |
| COLUMNS | 40 | 75 | 20 |
| SLABS ON GROUND | 25 | 75 | 20 |
| SUSPENDED SLABS | 32 | 75 | 20 |
- C3 CONCRETE SHALL BE CURED BY AN APPROVED METHOD FOR AT LEAST 7 DAYS AFTER PLACEMENT.
- C4 MINIMUM CLEAR CONCRETE COVER TO REINFORCEMENT, INCLUDING TIES AND STIRRUPS, SHALL BE AS FOLLOWS U.N.O.
- | ELEMENT | SURFACES IN CONTACT WITH GROUND | SURFACES IN INTERIOR ENVIRONMENT | ABOVE GROUND EXTERIOR ENVIRONMENT |
|-----------------|---------------------------------|----------------------------------|-----------------------------------|
| FOOTINGS | 75 | - | - |
| COLUMNS | 45 | 30 | 40 |
| SLABS ON GROUND | 50 | 25 | 40 |
| SUSPENDED SLABS | 45 | 20 | 40 |
- C5 ALL REINFORCEMENT AND INSERTS SHALL BE SUPPORTED AND HELD IN THE DESIGN LOCATION BY APPROVED BAR CHAIRS, SPACERS OR TIES. BARS CHAIRS SHALL BE SPACED AT A MAXIMUM OF 1000mm CTS.
- C6 ALL CONCRETE SHALL BE MECHANICALLY VIBRATED. VIBRATION OF FORMS IS NOT ACCEPTABLE AND CONCRETE SHALL NOT BE SPREAD BY VIBRATING.
- C7 CONCRETE ELEMENTS SHOWN ARE MINIMUM SIZES AND DO NOT INCLUDE THICKNESS OF APPLIED FINISHES. SIZES SHALL NOT BE REDUCED IN ANY WAY WITHOUT THE APPROVAL OF THE ENGINEER.
- C8 DEPTH OF BEAMS ARE GIVEN FIRST ADN INCLUDE SLAB THICKNESS.
- C9 SLABS AND BEAMS ARE TO BE POURED TOGETHER.
- C10 NO HOLES OR CHASES OTHER THAN SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
- C11 CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO APPROVAL OF THE ENGINEER. ALL CONSTRUCTION JOINTS SHALL BE SCABBLED OVER THE WHOLE FACE AND ANY UNSOUND MATERIAL REMOVED.
- C12 REINFORCEMENT IS SHOWN DIAGRAMMATICALLY AND NOT IN TRUE PROJECTION.
- C13 SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN OR AS APPROVED BY THE ENGINEER. WHERE THE LAP LENGTH IT SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT AS SPECIFIC IN AS3600. COGS AND HOOKS SHALL BE STANDARD U.N.O.
- C14 WELDING OF REINFORCEMENT IS NOT PERMITTED UNLESS SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER.
- C15 PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER.
- C16 REINFORCEMENT NOTATIONS
N DENOTES DEFORMED GRADE 500 NORMAL DUCTILITY REINFORCING BARS TO AS/NZS 4671
R DENOTES PLAN ROUND GRADE 250 NORMAL DUCTILITY REINFORCING BARS TO AS/NZS 4671
SL DENOTES DEFORMED GRADE 500 LOW DUCTILITY REINFORCING MESH TO AS/NZS 4671
RL DENOTES DEFORMED GRADE 500 LOW DUCTILITY REINFORCING MESH TO AS/NZS 4671
- C17 ALL REINFORCING FABRIC SHALL COMPLY WITH AS1303 AND AS1304 AND SHALL BE SUPPLIED IN FLAT SHEETS
- C18 REINFORCEMENT SHALL BE EVENLY DISTRUBUTED OVER THE WIDTHS SHOWN U.N.O.
- C19 PROVIDE 2 NO. N12 X 1200 DIAGONALLY ACROSS ALL RE-ENTRANT CORNERS OF SLABS TIED UNER TOP REINFORCING.
- C20 STRIPPING OF FORMS AND REMOVAL OF FORMWORK SHALL TAKE PLACE IN ACCORDANCE WITH A PROCEDURE AGREED WITH THE ENGINEER.
- C21 CONCRETE MUST BE SEPARATED FROM SUPPORTING MASONRY BY TWO LAYERS OF A SUITABLE DEBONDING MEMBRANE
- C22 ALL PROPS AND FORMWORK FOR BEAMS AND SLABS SHALL BE REMOVED, ONCE CONCRETE HAS ATTAINED 28 DAY STRENGTH, BEFORE CONSTRUCTION OF ANY MASONRY WALLS OR PARTITIONS OVER THE FLOOR.
- C23 ALL NON LOAD BEARING WALLS SHALL BE KEPT CLEAR OF THE UNDERSIDE OF SLABS AND BEAMS BY 20mm U.N.O.

S STRUCTURAL STEEL


- S1 ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH AS4100.
- S2 FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH AS4100 AND SAA/SNZ HB62.
- S3 ALL WELDING TO BE CARRIED OUT IN ACCORDANCE WITH AS1544.1. WELDING CONSUMABLES TO BE E48XX OR W50X U.N.O. ALL WELDS SHALL BE CATEGORY SP (STRUCTURAL PURPOSES). BUTT WELDS WHERE INDICATED ON THE DRAWINGS SHALL BE COMPLETE PENETRATION BUTT WELDS AS DEFINED IN AS1544.1.
- S4 UNLESS NOTED OTHERWISE ALL WELDS SHALL BE 6mm CONTINUOUS FILLET WELDS CATEGORY SP.
- S5 INSPECTION AND TESTING OF WELDS TO BE CARRIED OUT IN ACCORDANCE WITH AS1544.1.
- S6 BOLT NOTATION
4.6/5 COMMERCIAL BOLTS OF GRADE 4.6 TO AS1111 TIGHTENED TO A SNUG FIT
8.8/5 HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 TIGHTENED TO A SNUG FIT
8.8/7B HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 FULLY TENSIONED AS A BEARING JOINT
8.8/7F HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 FULLY TENSIONED AS A FRICTION JOINT WITH FACING SURFACES LEFT UNDATED.
- S7 HIGH STRENGTH TB AND TF BOLTS SHALL BE INSTALLED USING APPROVED LOAD INDICATING WASHERS.
- S8 UNLESS NOTED OTHERWISE, FOR ALL STEEL TO STEEL CONNECTIONS PROVIDE 10mm THICK CLEAT PLATE AND AT LEAST 2 M20 8.8/5 BOLTS IN 2mm CLEARANCE HOLES.
- S9 HOLDING DOWN BOLTS SHALL BE GALVANIZED GRADE 4.6/5 BOLTS IN 6mm CLEARANCE HOLES. PROVIDE OVERSIZE WASHERS TO SUIT.
- S10 THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AS IS REQUIRED TO STABILIZE THE STRUCTURE DURING CONSTRUCTION.
- S11 THE CONTRACTOR SHALL PROVIDE ALL CLEATS AND DRILL ALL HOLES NECESSARY FOR FIXING STEEL TO STEEL AND TIMBER TO STEEL WHETHER OR NOT DETAILED ON THE DRAWINGS.
- S12 THE ENDS OF ALL TUBULAR MEMBERS SHALL BE SEALED WITH A 3mm PLATE U.N.O.
- S13 TUBULAR MEMBERS TO BE HOT DIP GALVANIZED ARE TO ADEQUATELY VENTED BY THE FABRICATOR.
- S14 PURLINS AND GIRTS SHALL BE IN ACCORDANCE WITH AS/NZS 4600, GALVANIZED AND INSTALLED WITH THE MANUFACTURERS RECOMMENDATIONS
- S15 THE CONTRACTOR SHALL SUBMIT TWO (2) COPIES TO THE ENGINEER OF ALL SHOP DRAWINGS FOR REVIEW. FABRICATION SHALL NOT COMMENCE UNTIL REVIEW HAS BEEN COMPLETED. THIS REVIEW DOES NOT REMOVE THE RESPONSIBILITY FOR THE INTERPRETATION OF THE DRAWINGS, DIMENSIONAL ACCURACY SNO THE STEEL FABRICATION FROM THE FABRICATOR/CONTRACTOR.

T TIMBER

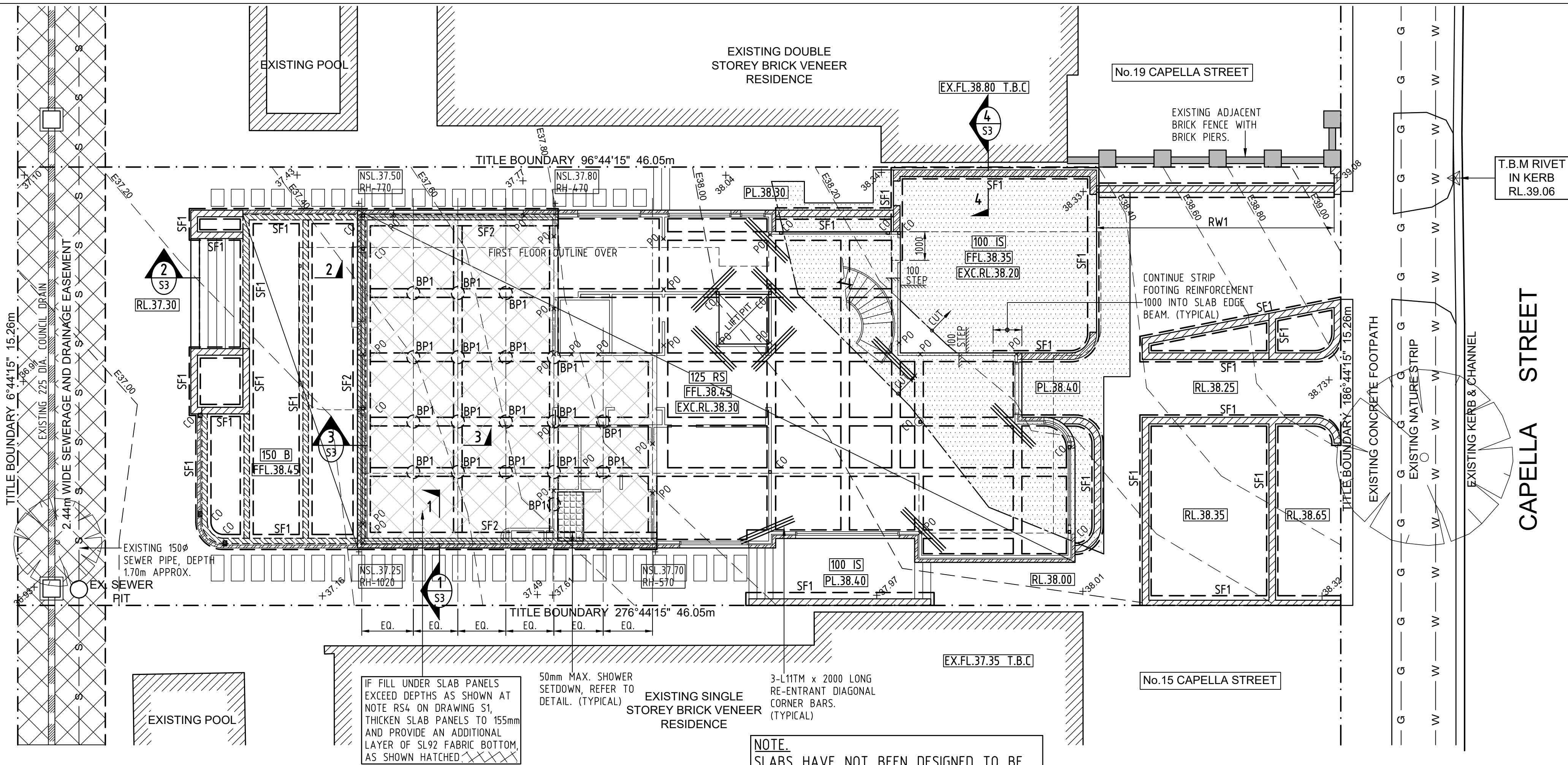
- T1 ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH AS1720 AND AS1684.
- T2 STRUCTURAL TIMBER SHOWN ON THE DRAWINGS SHALL HAVE THE FOLLOWING MINIMUM STRESS GRADES, U.N.O.
- | SPECIES | MOISTURE CONDITION | GRADE | STRENGTH GROUP | JOINT GROUP |
|---------------------|--------------------|----------|----------------|-------------|
| K.D. HARDWOOD | SEASONED | F17 | SD4 | J03 |
| O.B. HARDWOOD | UNSEASONED | F8 | S4 | J3 |
| RADIATA PINE | SEASONED | F5 | SD6 | J04 |
| K.D. PINE | SEASONED | F7 | SD6 | J04 |
| MACHINE GRADED PINE | SEASONED | MGP10 | SD6 | J05 |
| MACHINE GRADED PINE | SEASONED | MGP12/15 | SD6 | J04 |
| LVL | SEASONED | F16 | TBA | TBA |
- T3 ALL TIMBER FRAMING TO BE SEASONED U.N.O. SEASONED TIMBER IS TO HAVE A MOISTURE CONTENT LESS THAN 15%.
- T4 ANY TIMBER FRAMING NOT SHOWN ON THE ENGINEERING DRAWINGS IS TO BE IN ACCORDANCE WITH AS1684.
- T5 ALL TIMBER FIXINGS, TIE DOWNS, BRACING, ETC. ARE TO BE IN ACCORDANCE WITH AS1684.
- T6 ALL BOLTED CONNECTIONS SHALL USE WASHERS UNDER BOLT HEAD AND NUT. ALL EXTERNAL BOLTS, NUTS ADN WASHERS SHALL BE HOT DIPPED GALVANISED. NO KNOTS OR DEFECTS SHALL OCCUR WITHIN 150mm OF BOLT GROUP OR CONNECTIONS. WHERE POSSIBLE, RETIGHTEN BOLTS AFTER 6 WEEKS AND AGAIN AT 12 MONTHS.
- T7 MAKE GOOD PRESERVATIVE TREATMENT WHERE CHECKOUTS, HOLES AND CUTS EXPOSE UNTREATED TIMBER.
- T8 ALL EXTERNAL TIMBERS SHALL BE DURABLE, SUITABLE FOR EXTERNAL USE AND COMPLY WITH THE APPROPRIATE HAZARD LEVELS FOR SPECIFIC SERVICE CONDITIONS.
- T9 GLUED LAMINATED TIMBER BEAMS SHALL BE MANUFACTURED IN ACCORDANCE WITH AS1328. CAMBER SHALL BE AS NOTED ON THE DRAWINGS OR AS SPECIFIED, AND INSTALLED WITH HOG UP. BEAMS FOR EXTERNAL USE SHALL BE FABRICATED USING RESORCINOL OR PHELONIC ADHESIVE.
- T10 ALL PROPRIETARY FIXINGS SHALL BE INSTALLED TO DEVELOP THEIR MAXIMUM CAPACITY AND IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
- T11 THE BUILDER SHALL SUBMIT ONE SET OF TRUSS MANUFACTURERS LAYOUT DRAWINGS AND COMPUTATIONS FOR REVIEW 48 HOURS PRIOR TO FABRICATION.
- T12 METAL FIXINGS SHALL BE COMPATIBLE WITH TIMBER GLUES AND PRESERVATIVE TREATMENTS.
- T13 NO PENETRATIONS OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN TIMBER MEMBERS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

M MASONRY

- M1 ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3700.
- M2 BRICKS SHALL HAVE A CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH OF AT LEAST 30 MPa U.N.O.
- M3 BLOCKS SHALL HAVE A CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH OF AT LEAST 15 MPa U.N.O.
- M4 MORTAR SHALL BE PROPORTIONED BY VOLUME AND CONSIST OF 1 PART CEMENT, 1 PART HYDRATED LIME AND 6 PARTS SAND, UNLESS REQUIRED OTHERWISE IN ACCORDANCE WITH AS3700.
- M5 LOAD BEARING MASONRY SHALL HAVE FULL BED JOINTS, U.N.O.
- M6 MASONRY TIES SHALL BE INSTALLED IN ACCORDANCE WITH AS2870.
- M7 ALL CAVITIES BELOW GROUND SHALL BE MORTAR OR GROUT FILLED.
- M8 VERTICAL ARTICULATION JOINTS SHALL COMPLY WITH TECHNICAL NOTE TN61 PUBLISHED BY THE CEMENT AND CONCRETE ASSOCIATION AT 6.0m MAXIMUM SPACING U.N.O. JOINTS SHALL BE A MINIMUM OF 10mm WIDE AND BE FREE OF NON-COMPRESSIBLE MATERIAL.
- M9 NON-LOAD BEARING WALLS SHALL BE KEPT 20mm CLEAR OF THE UNDERSIDE OF FLOORS AND SHELF ANGLES, U.N.O.
- M10 CONCRETE BEAMS AND SLABS SHALL BE SEPARATED FROM THE TOP OF SUPPORTING MASONRY BY 2 LAYERS OF MALTHOOD OR AN APPROVED ALTERNATIVE MEMBRANE ON TOP OF MORTAR LEVELING SCREED.
- M11 BUILDER SHALL PROVIDE DETAILS AND PROCEDURES OF NEEDLE AND PROPPING IN MASONRY WALLS FOR APPROVAL BY THE ENGINEER PRIOR TO WORK COMMENCING.

P1	PRELIMINARY ISSUE	20/01/25
REV.	DESCRIPTION	DATE
<div><div></div><div><div>SHACKELFORD</div><div>CONSULTING ENGINEERS</div></div></div>		
U3, 2-4 Joseph Street, Blackburn North, Vic 3130		
Phone: 03 9890 7233		
Email: admin@shackelford.com.au		
CLIENT: DAWOUĐ ROWAIS		
PROJECT: PROPOSED RESIDENCE AT 17 CAPELLA STREET, BALWYN NORTH.		
ARCHITECT: AXIOMPLUS ARCHITECTS		
DRAWING TITLE: GENERAL NOTES		
	DESIGNED: C.S.	JOB NO.
	DRAWN: H.G.	24135
	SCALE: AS SHOWN	DWG NO.
ORIGINAL SIZE:	DATE: NOV. 2024	P1

PRELIMINARY DRAWING ONLY
FOR CO-ORDINATION PURPOSES ONLY
NOT FOR PRICING OR CONSTRUCTION



GROUND FLOOR SLAB & FOOTING PLAN

SCALE 1:100

NOTE: A.J. DENOTES ARTICULATION JOINT IN BRICKWORK, TO BE ACCORDANCE WITH AS 3700, AS 4773 AND COMPLY WITH CEMENT & CONCRETE ASSOCIATION TECHNICAL NOTE TN61.

IF FILL UNDER SLAB PANELS EXCEED DEPTHS AS SHOWN AT NOTE RS4 ON DRAWING S1, THICKEN SLAB PANELS TO 155mm AND PROVIDE AN ADDITIONAL LAYER OF SL92 FABRIC BOTTOM, AS SHOWN HATCHED.

50mm MAX. SHOWER SETDOWN, REFER TO DETAIL. (TYPICAL)

EXISTING SINGLE STOREY BRICK VENEER RESIDENCE

NOTE: SLABS HAVE NOT BEEN DESIGNED TO BE POLISHED, BURNISHED OR EXPOSED. ALL BRITTLE FLOOR FINISHES (TILES) TO BE INSTALLED MIN. 90 DAYS AFTER CONCRETE SLAB POUR.

3-L11TM x 2000 LONG RE-ENTRANT DIAGONAL CORNER BARS. (TYPICAL)

STRIP FOOTING SCHEDULE					
MARK	DIMENSIONS		REINFORCEMENT		
	WIDTH	DEPTH	TOP	BOTTOM	LIGS
SF1	350	500	3-L11 TM	3-L11 TM	-
SF2	600	500	6-L11 TM	6-L11 TM	-

NOTES:
1. FOR MINIMUM FOUNDING DEPTH AND BEARING CAPACITY, REFER TO FOOTING AND FOUNDATION NOTES ON DRAWING S1.

BORED PIER SCHEDULE					
MARK	DIMENSIONS		REINFORCEMENT		
	DIA.	SPACING	DEPTH	VERT.	TIES
BP1	450	AS SHOWN	REFER TO FOUNDING NOTES	MASS CONCRETE	

NOTES:
1. FOR MINIMUM FOUNDING DEPTH AND BEARING CAPACITY, REFER TO FOOTING AND FOUNDATION NOTES ON DRAWING S1.

BONDEK SLAB SCHEDULE 150 B			
SLAB THICKNESS	150mm		
SLAB FABRIC	SL92 TOP		
REINFORCEMENT COVER	30mm COVER		
BONDEK TRAY THICKNESS	1.00mm		

NOTE:
• ALL BONDEK IS TO BE INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
• THE BUILDER SHALL PROVIDE ALL FIXING EDGE TRIMMINGS ETC. AS SPECIFIED & INDICATED ON THE MANUFACTURER'S DESIGN AND CONSTRUCTION MANUAL.
• THE DIRECTION OF ALL BONDEK RIBS IS SHOWN ON PLAN.
• PROP BONDEK TRAY AT MAX. 1800 CTS U.N.O.
• NO PROPS REQUIRED FOR BONDEK SPANS LESS THAN OR EQUAL TO 1800mm.

RAFT SLAB SCHEDULE 125 RS (HYDRONIC HEATING)	
SLAB THICKNESS	125mm
SLAB FABRIC	SL92 TOP (60 COVER)
HYDRONIC HEATING PIPES	
ADDITIONAL FABRIC	SL52 TOP (30 COVER)
MEMBRANE UNDER SLAB	0.2mm POLYTHENE
SUB-BASE PREPARATION	50mm COMP. SAND

EDGE BEAM WIDTH	300mm
EDGE BEAM DEPTH	500mm MIN.
EDGE BEAM REINFORCEMENT	3-L11TM BOTTOM

INTERNAL BEAM WIDTH	300mm
INTERNAL BEAM DEPTH	500mm MIN.
INT. BEAM REINFORCEMENT	3-L11TM BOTTOM

NOTE:
• WHERE EDGE BEAMS/RIBS ARE WIDER THAN SPECIFIED PROVIDE AN ADDITIONAL BAR OF THE SAME SIZE FOR EVERY 100mm IN WIDTH.

INFILL SLAB SCHEDULE 100 IS	
SLAB THICKNESS	100mm
SLAB FABRIC	SL72 TOP
REINFORCEMENT COVER	30mm COVER
MEMBRANE UNDER SLAB	0.2mm POLYTHENE
SUB-BASE PREPARATION	50mm COMP. SAND

NOTE:
• OVER PREPARED SUBGRADE AS NOTED ON DRAWING S1.

WALL FRAMING SCHEDULE (GROUND FLOOR WALLS)	
TOP PLATE	2/90x35 MGP10
BOTTOM PLATE	90x45 MGP10
STUDS	90x45 MGP10 AT 450 CTS
NOGGINGS	70x35 MGP10 AT 1350 CTS
JAMB STUDS AT SIDES OF OPENINGS	
OPENING (mm)	MEMBER
0 - 900	90x45 MGP10
901 - 1800	2/90x45 MGP10
1801 - 2400	2/90x45 MGP10
2401 - 3000	3/90x45 MGP10

NOTES:
1. THIS SCHEDULE IS TO BE USED ONLY FOR WALL STUDS WHICH HAVE AN UNSUPPORTED LENGTH OF UP TO 3050mm.
2. REFER TO TIMBER LINTEL SCHEDULE AND/OR MEMBER SCHEDULE FOR LINTEL SIZES.

P1	PRELIMINARY ISSUE	20/01/25
REV.	DESCRIPTION	DATE

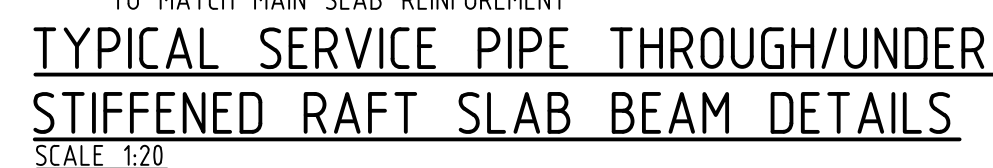
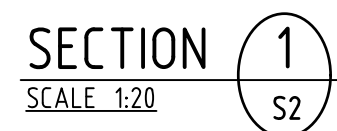


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DAWOD ROWAIS
PROJECT:
PROPOSED RESIDENCE
AT 17 CAPELLA STREET,
BALWYN NORTH.

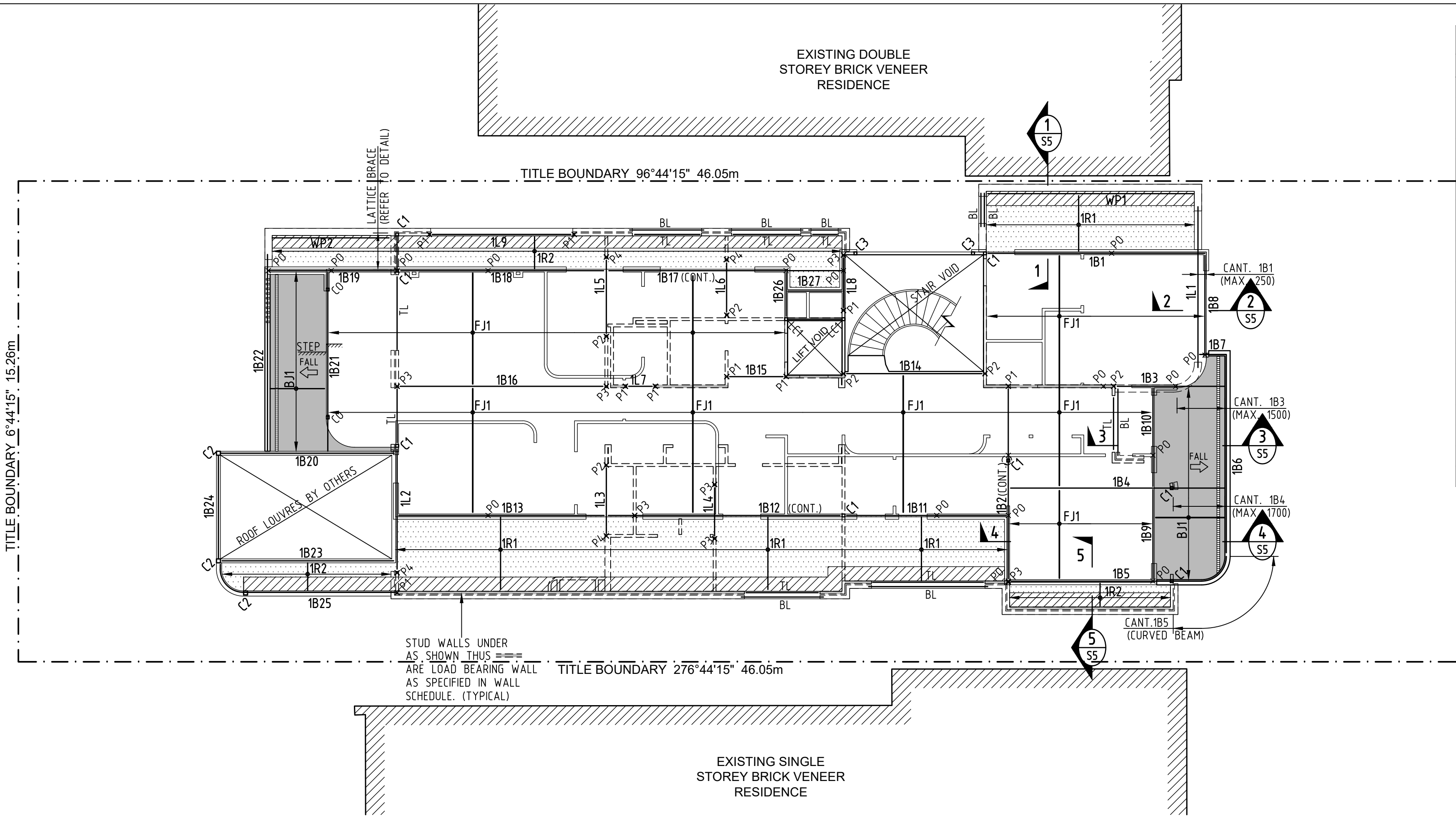
ARCHITECT:
AXIOMPLUS ARCHITECTS
DRAWING TITLE:
GROUND FLOOR SLAB AND
FOOTING PLAN

	DESIGNED:	C.S.	24135	
	DRAWN:	H.G.		
	SCALE:	AS SHOWN	DWG NO.	REV.
	ORIGINAL SIZE:	DATE:	S2	P1

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NOT FOR PRICING OR CONSTRUCTION



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FIRST FLOOR & LOWER ROOF FRAMING PLAN
SCALE 1:100

FIRST FLOOR FRAMING SCHEDULE		
MARK	MEMBER	REMARKS
1L1	300x90 PFC + 200x10mm PLATE	REFER TO DETAILS
1L2	250x90 PFC	REFER TO DETAILS
1L3	180x75 PFC	REFER TO DETAILS
1L4	2/290x45 F17 HW	NAIL LAMINATED
1L5	200x75 PFC	REFER TO DETAILS
1L6	180x75 PFC	REFER TO DETAILS
1L7	140x45 F17 HW	
1L8	2/290x45 F17 HW	NAIL LAMINATED
1L9	190x45 F17 HW	
1R1	140x45 MGP10 RAFTERS AT 600 CTS	(MAX. SPAN 2400 GRADED BATTENS OVER)
1R2	90x45 MGP10 RAFTERS AT 600 CTS	(MAX. SPAN 1100 GRADED BATTENS OVER)
WP1	140x45 MGP10 WALL PLATE	
WP2	90x45 MGP10 WALL PLATE	
TL	TIMBER LINTEL	REFER TO TIMBER LINTEL SCHEDULE
BL	BRICKWORK LINTEL	REFER TO BRICK LINTEL SCHEDULE
1FJ1	360 DEEP POSI JOISTS AT 450 CTS	(MAX. SPAN 4500)
BJ1	190x42 LVL 15 JOISTS AT 450 CTS	(MAX. SPAN 2300)
ALL EXPOSED STEELWORK TO BE HOT DIP GALVANISED		

TIMBER LINTEL SCHEDULE (DENOTED AS TL ON PLAN)	
OPENING (mm)	MEMBER
0 - 1000	90x45 F17 HW
1001 - 1900	140x45 F17 HW
1901 - 2500	190x45 F17 HW
2501 - 3100	240x45 F17 HW
3101 - 3700	290x45 F17 HW
NOTES: 1. THIS SCHEDULE IS TO BE USED ONLY FOR LINTELS SUPPORTING ROOFS OF METAL DECK CONSTRUCTION WITH A MAXIMUM LOAD WIDTH OF 4500mm. 2. REFER TO WALL FRAMING SCHEDULE FOR REQUIREMENTS OF STUDS AT SIDES OF OPENINGS.	

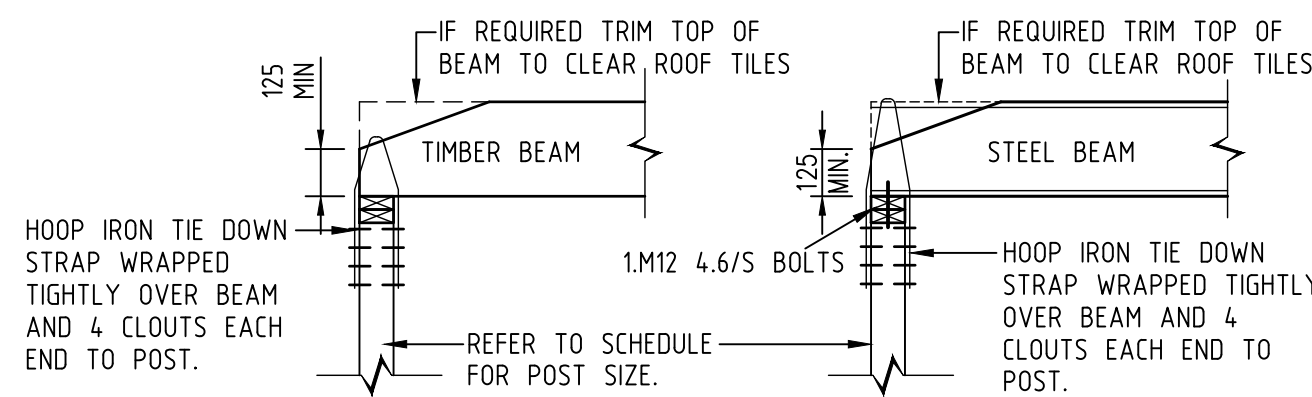
BRICKWORK LINTEL SCHEDULE (DENOTED AS BL ON PLAN)	
OPENING (mm)	MEMBER
0 - 1000	90x6 MS FLAT PLATE
1001 - 1800	100x100x8 E.A.
1801 - 2400	150x90x8 E.A.
2401 - 3000	150x100x10 U.A. (150 VERT.)
3001 - 3600	150x100x10 U.A. (MAX. 6 COURSES)
NOTES: 1. THIS SCHEDULE IS TO BE USED LINTELS SUPPORTING BRICKWORK ONLY. FOR LINTELS SUPPORTING OTHER LOADS REFER TO MEMBER SCHEDULE. 2. ALL LINTELS TO BE HOT DIP GALVANISED. 3. ALL LINTELS TO HAVE A MINIMUM END BEARING AT EACH END OF 150mm ONTO A BED OF MORTAR.	

WALL FRAMING SCHEDULE (FIRST FLOOR WALLS)	
TOP PLATE	2/90x35 MGP10
BOTTOM PLATE	90x45 MGP10
STUDS	90x45 MGP10 AT 450 CTS
NOGGINGS	70x35 MGP10 AT 1350 CTS
JAMB STUDS AT SIDES OF OPENINGS	
OPENING (mm)	MEMBER
0 - 900	90x45 MGP10
901 - 1800	2/90x35 MGP10
1801 - 2400	2/90x45 MGP10
2401 - 3000	2/90x45 MGP10
NOTES: 1. THIS SCHEDULE IS TO BE USED ONLY FOR WALL STUDS WHICH HAVE AN UNSUPPORTED LENGTH OF UP TO 2700mm. 2. REFER TO TIMBER LINTEL SCHEDULE AND/OR MEMBER SCHEDULE FOR LINTEL SIZES.	

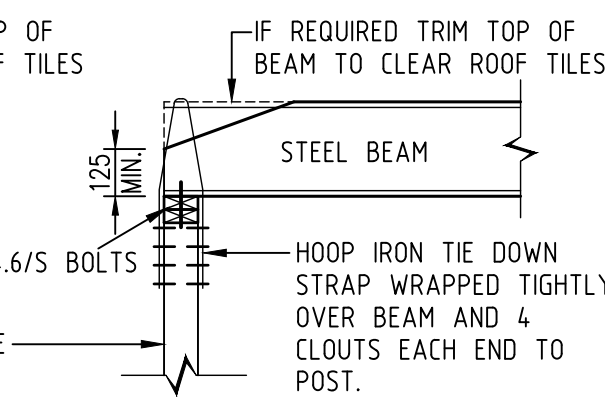
FIRST FLOOR FRAMING SCHEDULE		
MARK	MEMBER	REMARKS
C1	89x89x5.0 SHS	REFER TO DETAILS
C2	125x125x5.0 SHS	REFER TO DETAILS
C3	100x100x9.0 SHS	REFER TO DETAILS
LC1	89x89x5.0 SHS	REFER TO DETAILS
SC1	89x89x5.0 SHS	REFER TO DETAILS
P1	2/90x45 MGP10 STUDS	NAIL LAMINATED
P2	3/90x45 MGP10 STUDS	NAIL LAMINATED
P3	3/90x45 F17 HW STUDS	NAIL LAMINATED
P4	4/90x45 F17 HW STUDS	NAIL LAMINATED
PO	POST OVER	
CO	COLUMN OVER	
1B1	380x100 PFC	REFER TO DETAILS
1B2	250x90 PFC	REFER TO DETAILS
1B3	250x90 PFC	REFER TO DETAILS
1B4	250UB31	REFER TO DETAILS
1B5	250x90 PFC	REFER TO DETAILS
1B6	250x90 PFC	REFER TO DETAILS
1B7	250x90 PFC	REFER TO DETAILS
1B8	250x90 PFC	REFER TO DETAILS
1B9	2/360x42 LVL 15	NAIL LAMINATED
1B10	2/360x42 LVL 15	NAIL LAMINATED
1B11	250x90 PFC	REFER TO DETAILS
1B12	250x90 PFC	REFER TO DETAILS
1B13	380x100 PFC	REFER TO DETAILS
1B14	2/360x42 LVL 15	NAIL LAMINATED
1B15	2/360x42 LVL 15	NAIL LAMINATED
1B16	360UB51	REFER TO DETAILS
1B17	2/300x42 LVL 15	NAIL LAMINATED
1B18	250x90 PFC	REFER TO DETAILS
1B19	250x90 PFC	REFER TO DETAILS
1B20	380x100 PFC	REFER TO DETAILS
1B21	250x90 PFC	REFER TO DETAILS
1B22	250x90 PFC	REFER TO DETAILS
1B23	250x90 PFC	REFER TO DETAILS
1B24	250x90 PFC	REFER TO DETAILS
1B25	250x90 PFC	REFER TO DETAILS
1B26	2/140x42 LVL 15	NAIL LAMINATED
1B27	2/140x42 LVL 15	NAIL LAMINATED

P1		PRELIMINARY ISSUE		20/01/25
REV.	DESCRIPTION			DATE
 SHACKELFORD CONSULTING ENGINEERS				
U3, 2-4 Joseph Street, Blackburn North, Vic 3130 Phone: 03 9890 7233 Email: admin@shackelford.com.au				
CLIENT: DAWOD ROWAIS				
PROJECT: PROPOSED RESIDENCE AT 17 CAPELLA STREET, BALWYN NORTH.				
ARCHITECT: AXIOMPLUS ARCHITECTS				
DRAWING TITLE: FIRST FLOOR FRAMING & LOWER ROOF FRAMING PLAN				
	DESIGNED: C.S.	24135		
	DRAWN: H.G.			
ORIGINAL SIZE: A1	SCALE: AS SHOWN	DWG NO.	REV.	
	DATE: NOV. 2024	S4	P1	

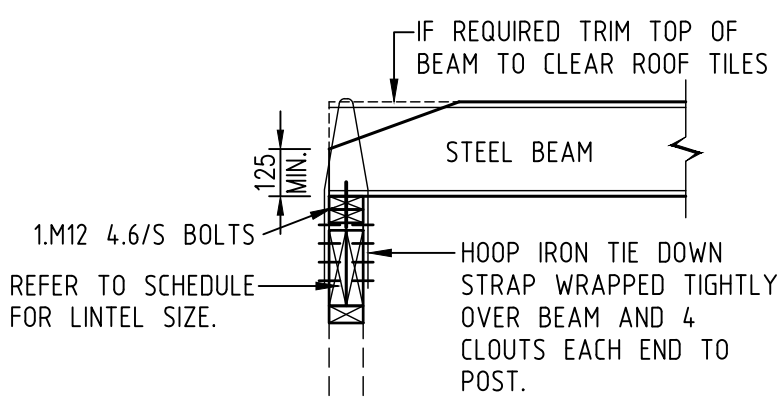
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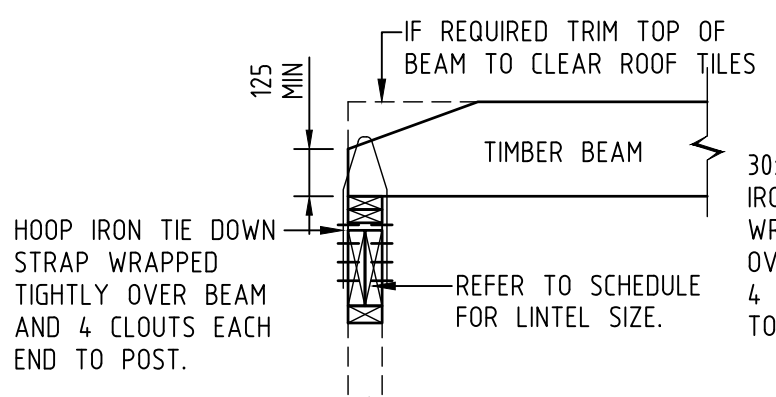
TYPICAL TIMBER BEAM SEATING DETAIL
SCALE 1:20



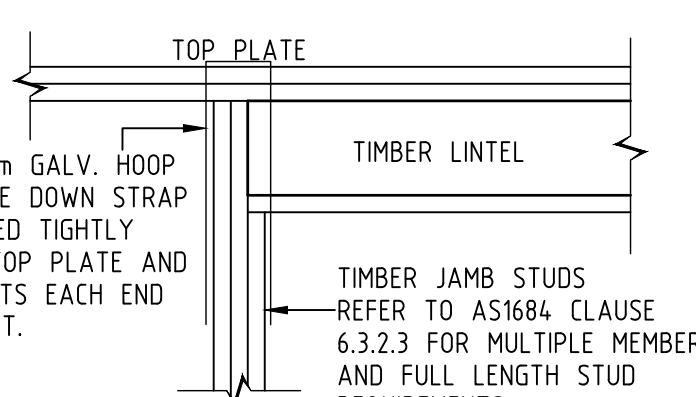
TYPICAL STEEL BEAM SEATING DETAIL
SCALE 1:20



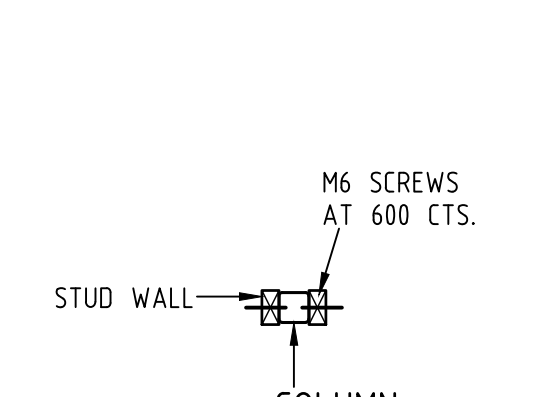
TYPICAL STEEL BEAM TO LINTEL SEATING DETAIL
SCALE 1:20



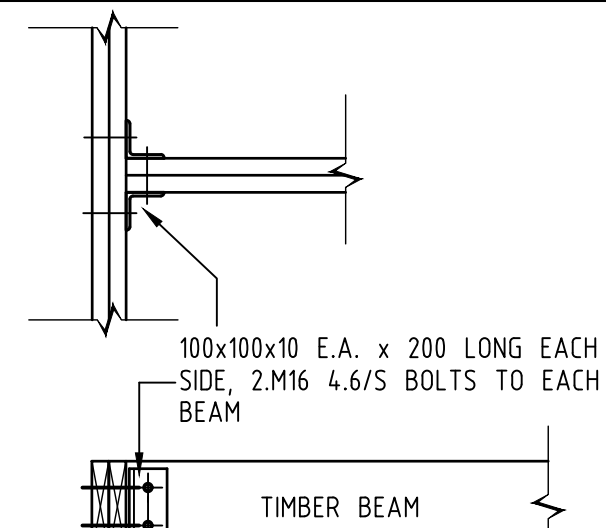
TYPICAL TIMBER BEAM TO LINTEL SEATING DETAIL
SCALE 1:20



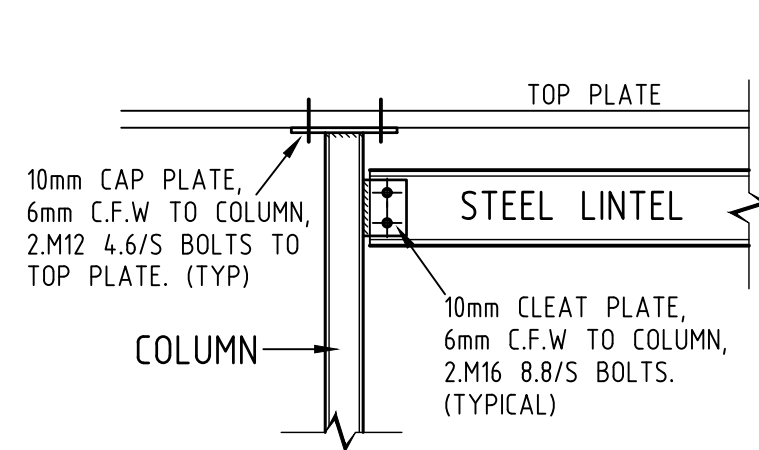
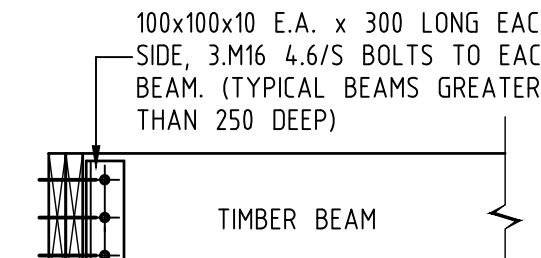
TYPICAL TIMBER LINTEL TO TIMBER JAMB STUD DETAIL
SCALE 1:20



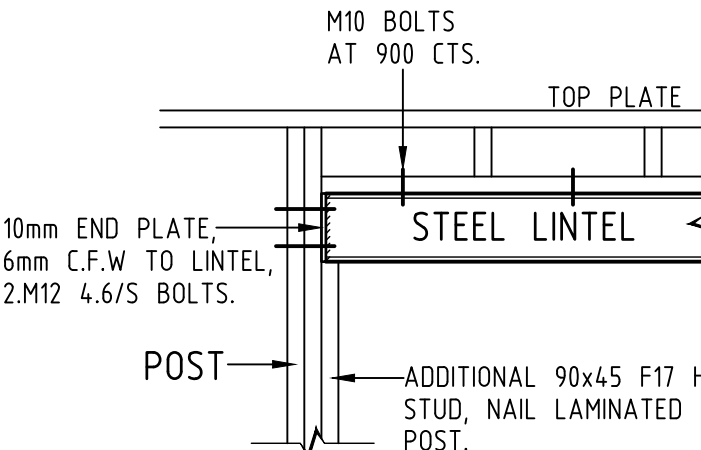
TYPICAL STUD FRAME TO COLUMN DETAIL
SCALE 1:20



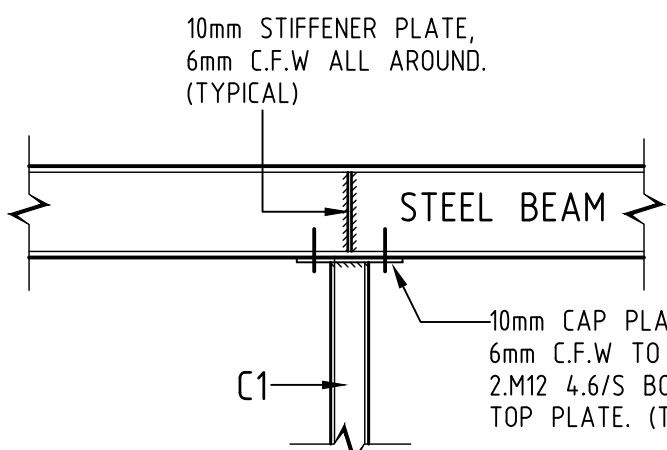
TYPICAL TIMBER TO TIMBER BEAM CONNECTION DETAILS
SCALE N.T.S.



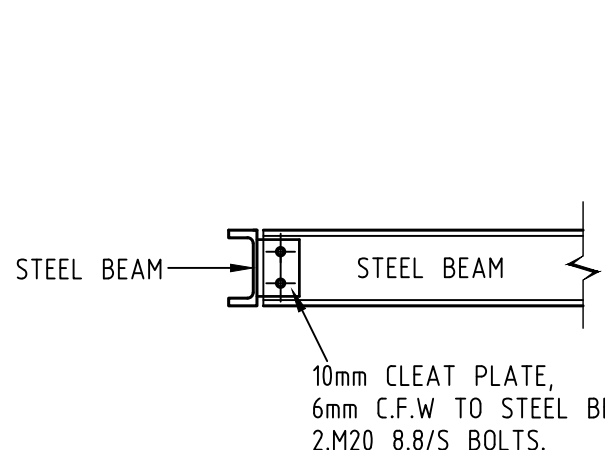
TYPICAL LINTEL/COLUMN CONNECTION DETAIL
SCALE 1:20



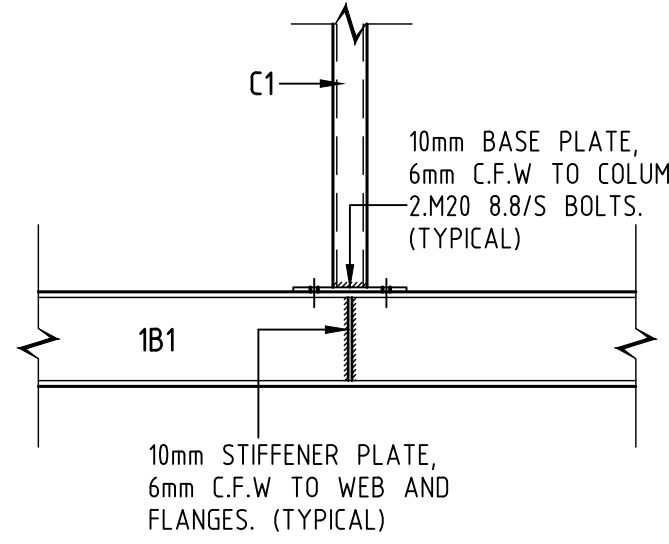
TYPICAL STEEL LINTEL/TIMBER POST SEATING DETAIL
SCALE 1:20



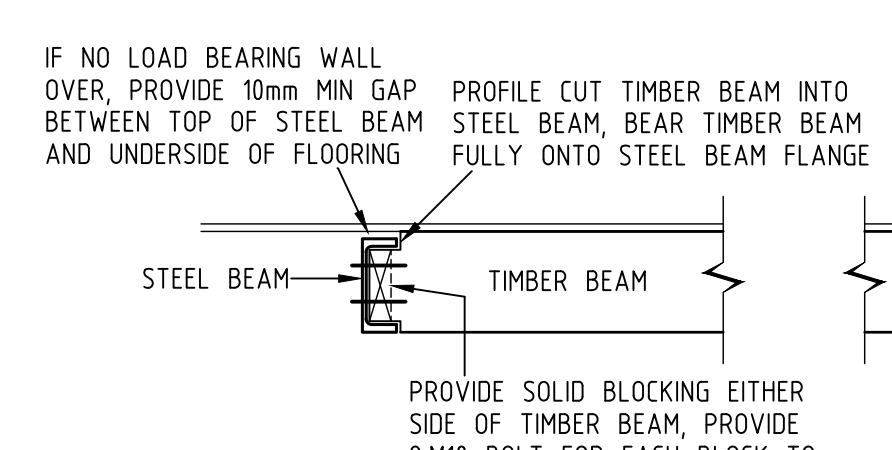
TYPICAL LINTEL/COLUMN CONNECTION DETAIL
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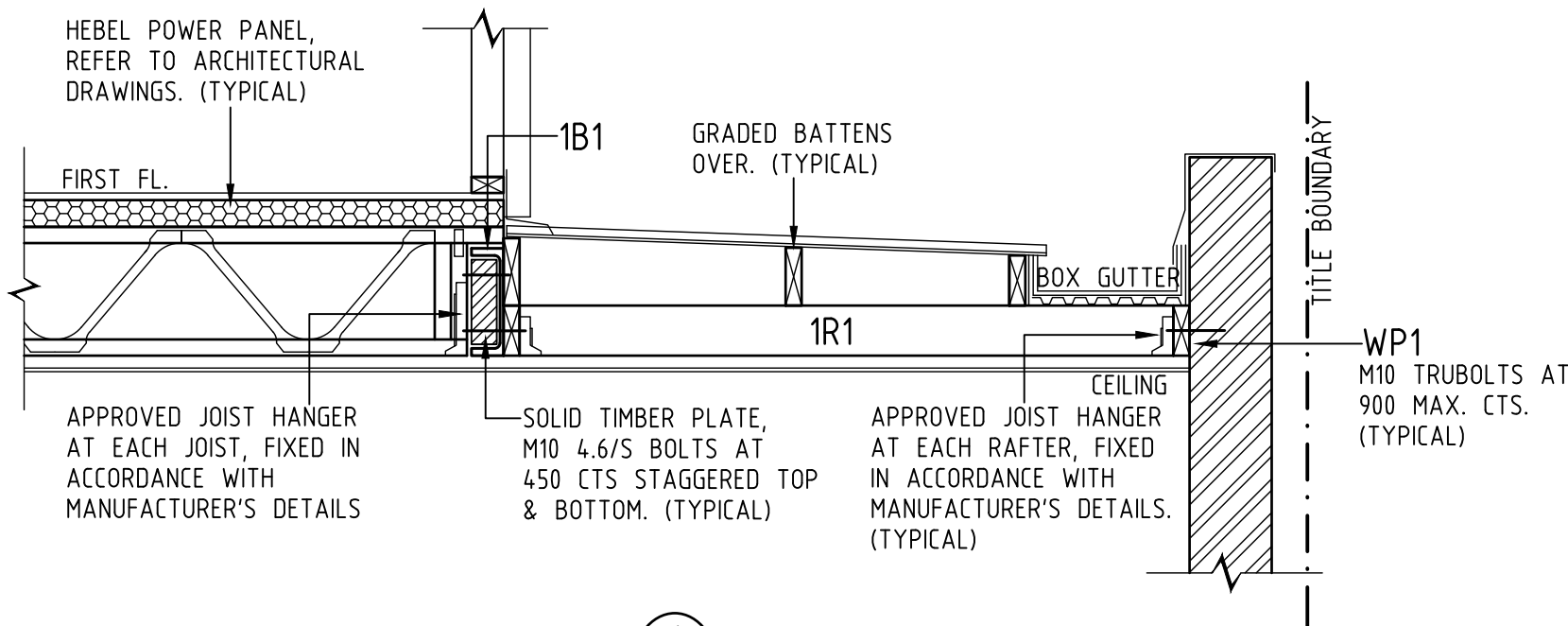
TYPICAL STEEL TO STEEL BEAM CONNECTION DETAIL
SCALE 1:20



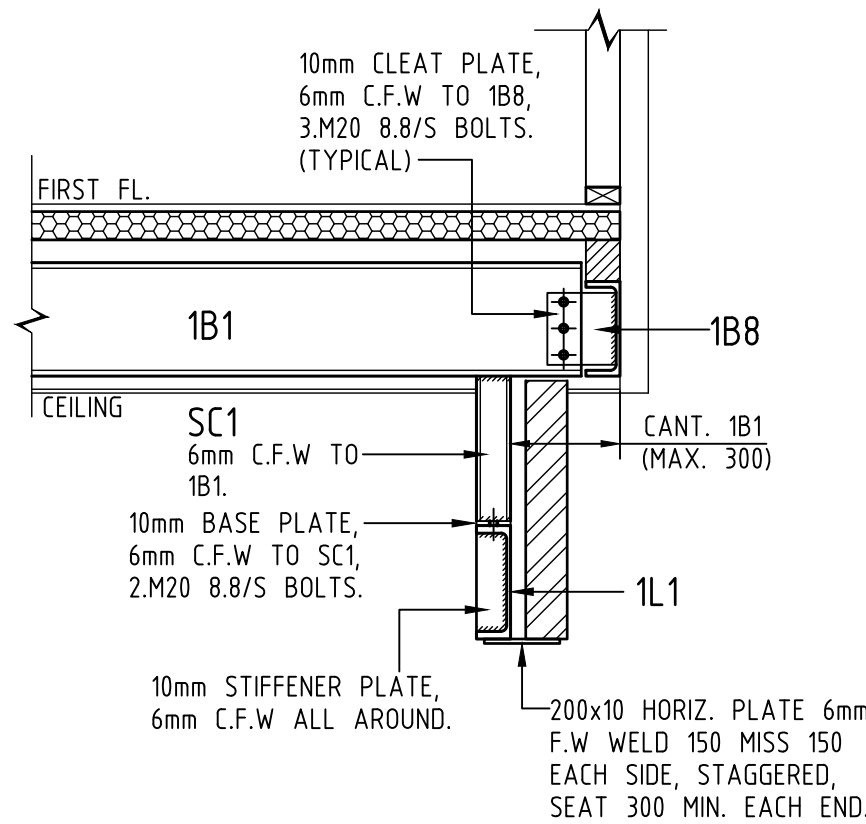
TYPICAL COLUMN BASE CONNECTION DETAIL
SCALE 1:20



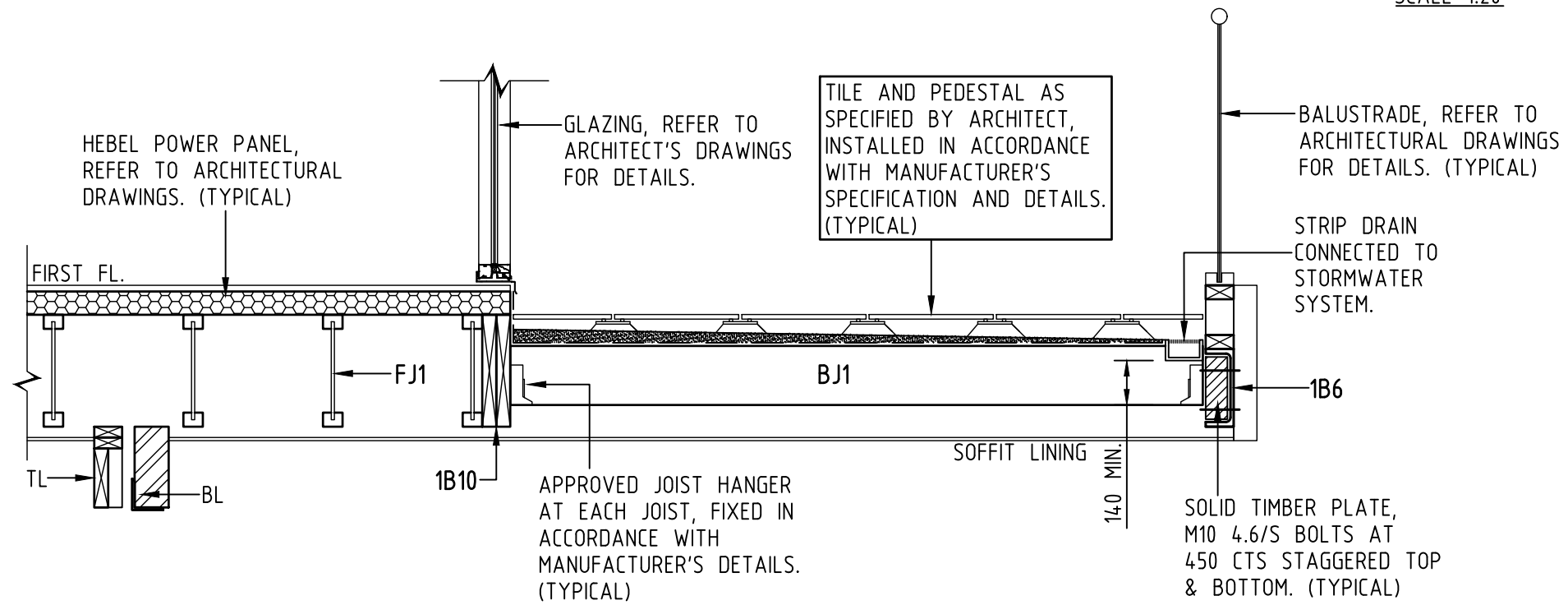
TYPICAL TIMBER TO STEEL BEAM CONNECTION DETAILS
SCALE 1:20



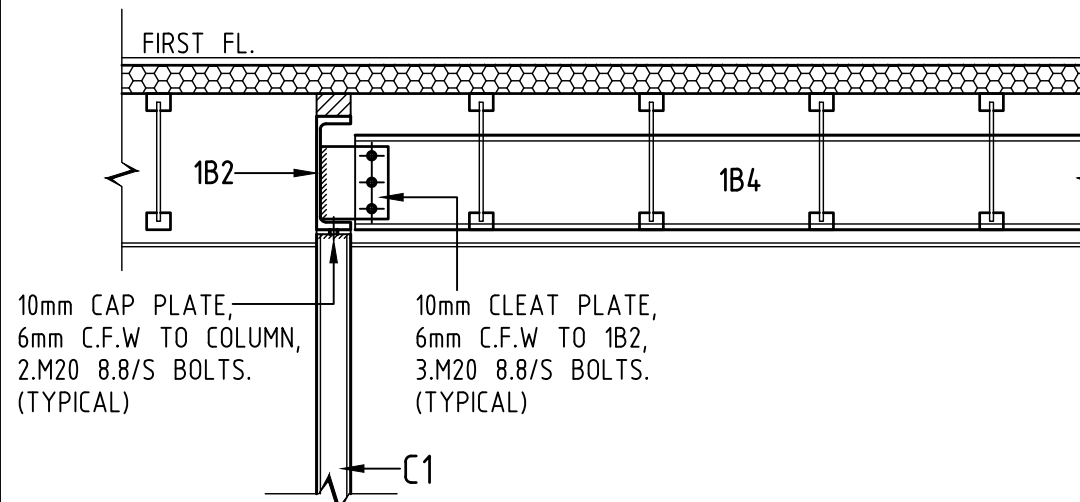
SECTION 1
SCALE 1:20



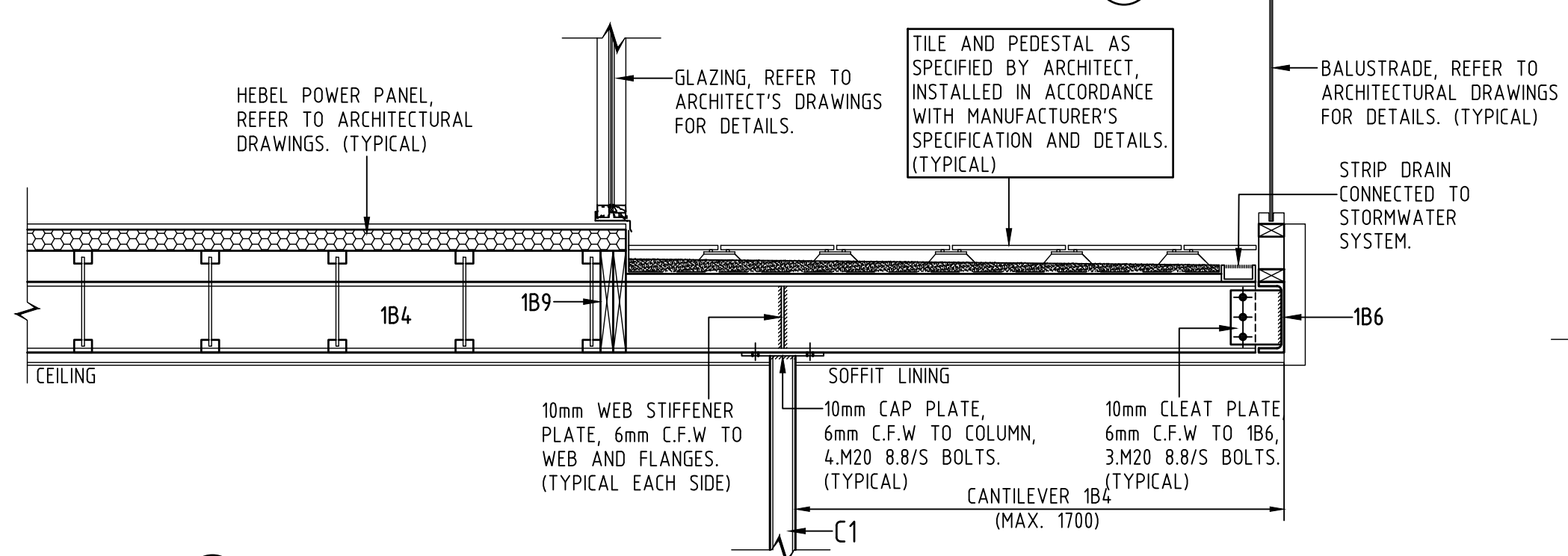
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SCALE 1:20



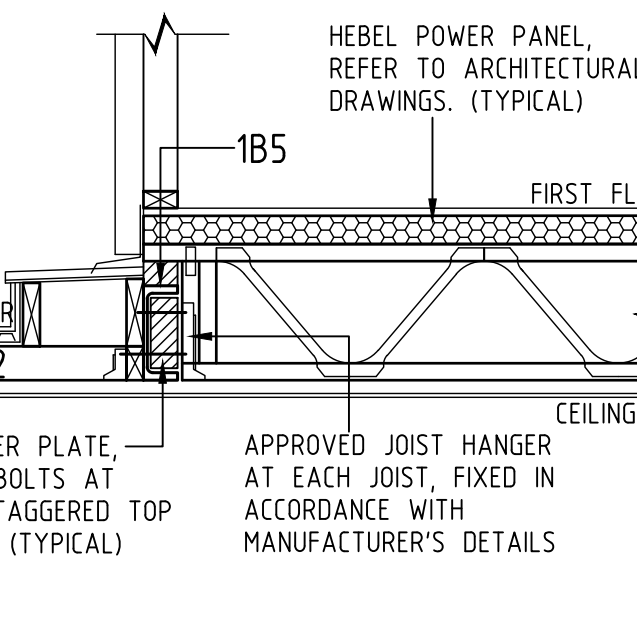
SECTION 3
SCALE 1:20



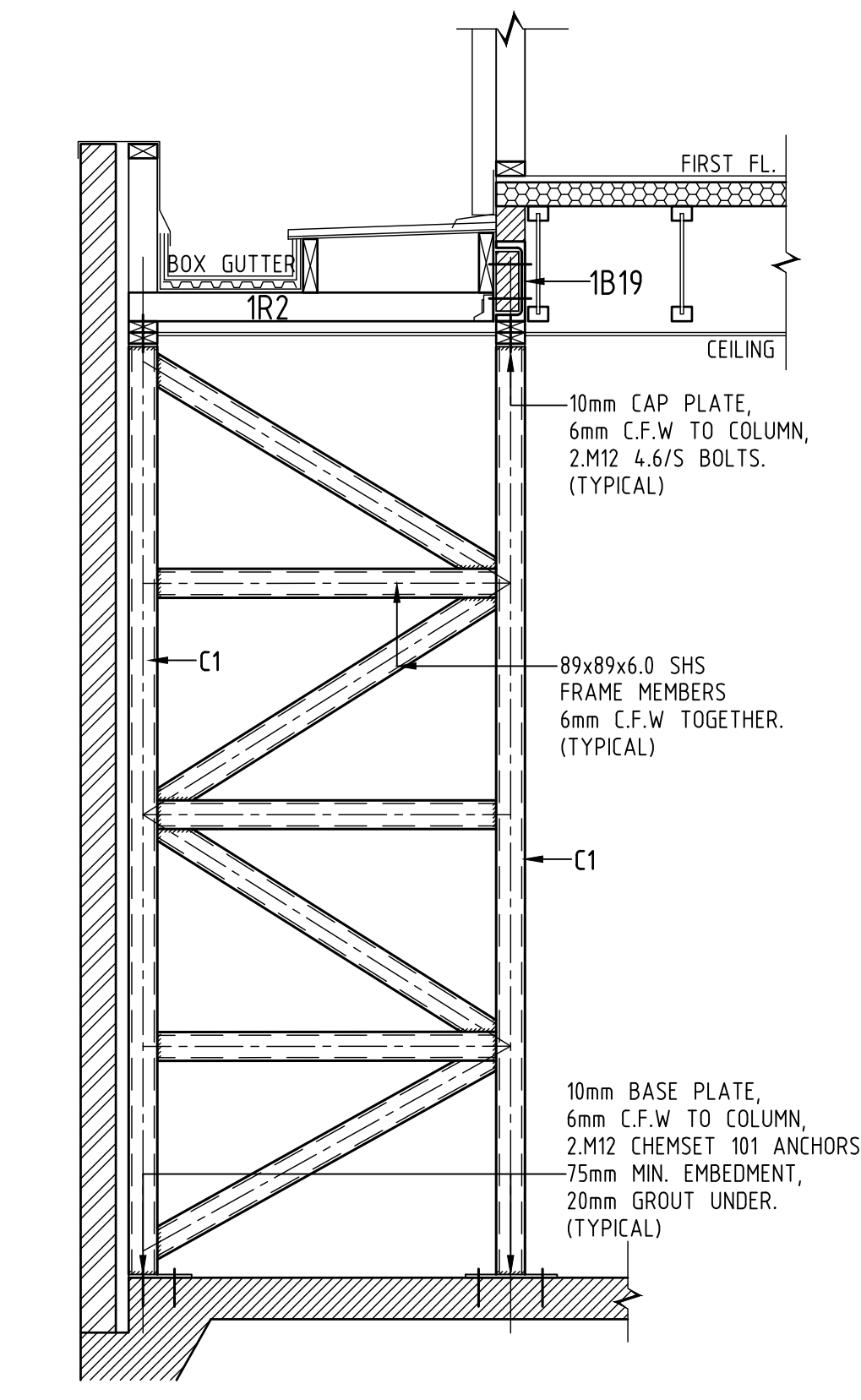
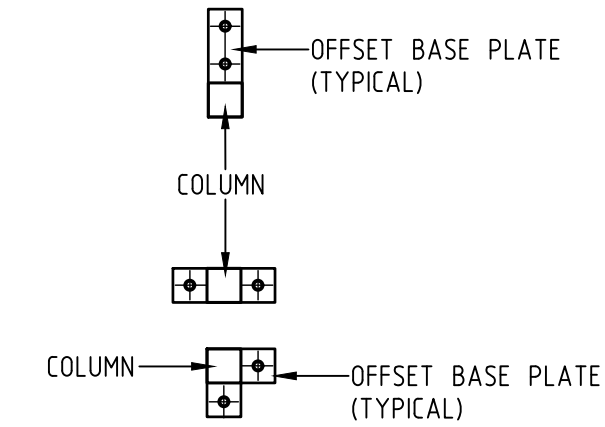
SECTION 4
SCALE 1:20



SECTION 5
SCALE 1:20




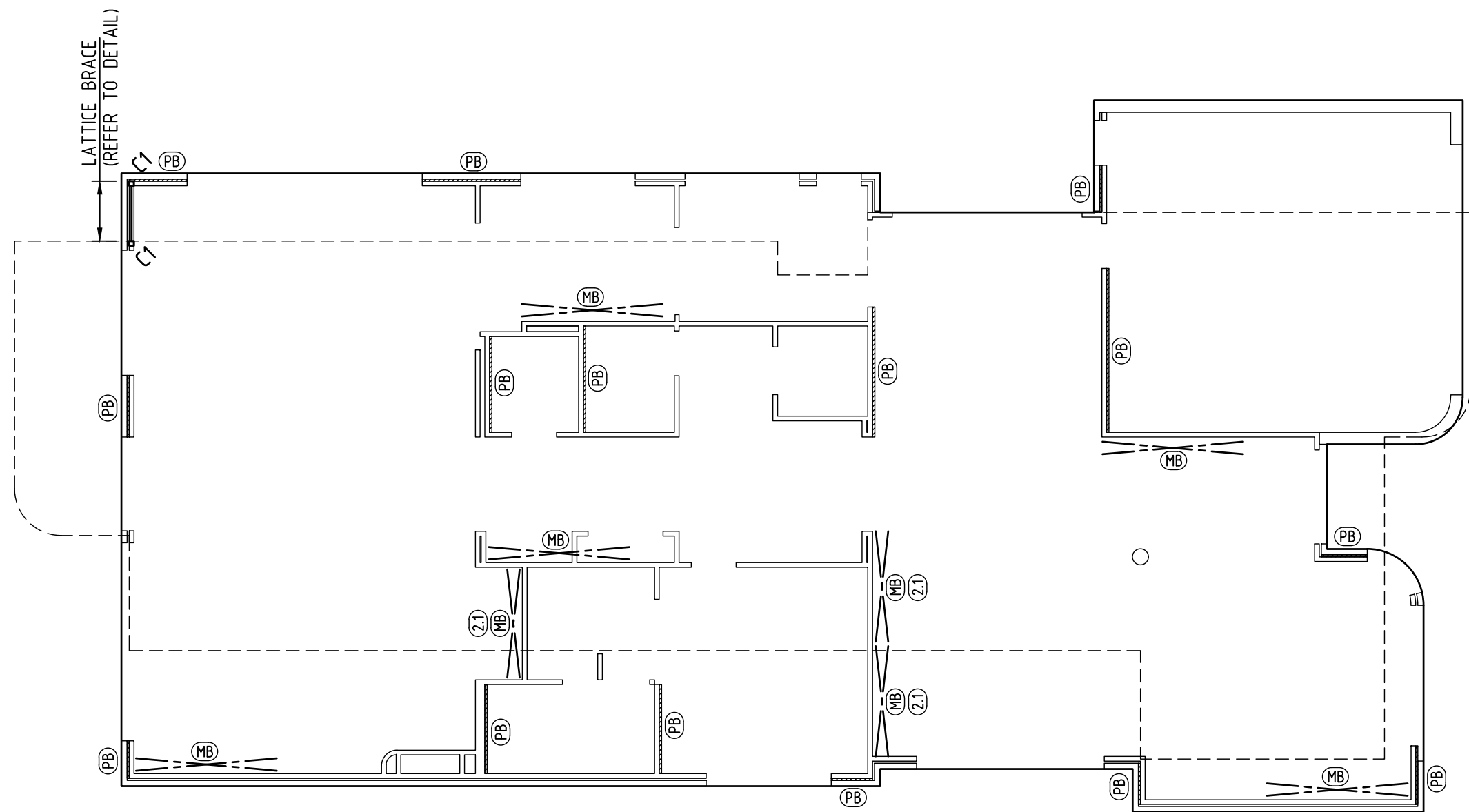
BASE PLATE PLAN DETAILS
SCALE 1:20



TYPICAL LATTICE BRACE DETAIL
SCALE 1:20

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REV.	DESCRIPTION	DATE		
<div><div></div><div><div>SHACKELFORD</div><div>CONSULTING ENGINEERS</div></div></div>				
U3, 2-4 Joseph Street, Blackburn North, Vic 3130				
Phone: 03 9890 7233				
Email: admin@shackelford.com.au				
CLIENT:				
DAWOUD ROWAIS				
PROJECT:				
PROPOSED RESIDENCE				
AT 17 CAPELLA STREET,				
BALWYN NORTH.				
ARCHITECT:				
AXIOMPLUS ARCHITECTS				
DRAWING TITLE:				
FIRST FLOOR FRAMING DETAILS				
	DESIGNED:	C.S.	JOB NO.	
	DRAWN:	H.G.		
	SCALE:	AS SHOWN	DWG NO.	REV.
	ORIGINAL SIZE:	DATE:	S5	
A1	NOV. 2024	P1		



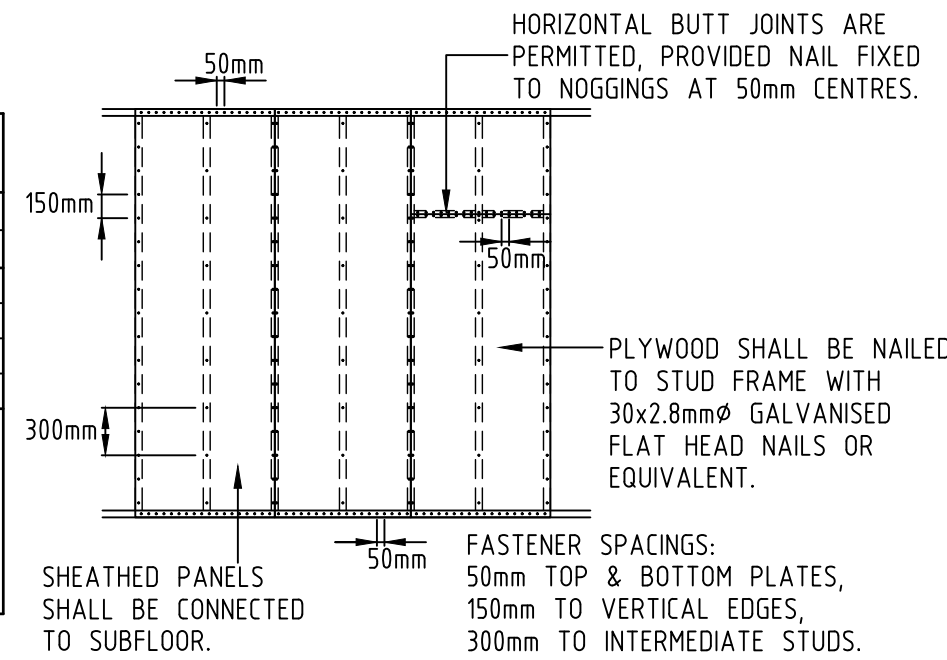
GROUND FLOOR WALL BRACING LAYOUT PLAN

SCALE 1:100

MARK	MEMBER	REMARKS
MB	METAL STRAP-TENSIONED WITH STUD STRAPS	FIXED IN ACCORDANCE WITH TABLE 8.18 (d) AS1684.2 (3.0 kN/m CAPACITY) ALL STRAP BRACES TO BE MIN. LENGTH OF 2.7m U.N.O
PB	PLYWOOD WALL BRACING	FIXED IN ACCORDANCE WITH TABLE 8.18 (h) AS1684.2 (6.0 kN/m CAPACITY)

MIN. PLYWOOD THICKNESS (mm)		
STRESS GRADE	STUD SPACINGS	
	450	600
F8	7	9
F11	6	7
F14	4	6
F27	4	4.5

FIXING OF BOTTOM PLATE TO FLOOR FRAME OR SLAB PROVIDE A 13kN CAPACITY CONNECTION AT EACH END AND INTERMEDIATELY AT MAX. 1200mm CTS.



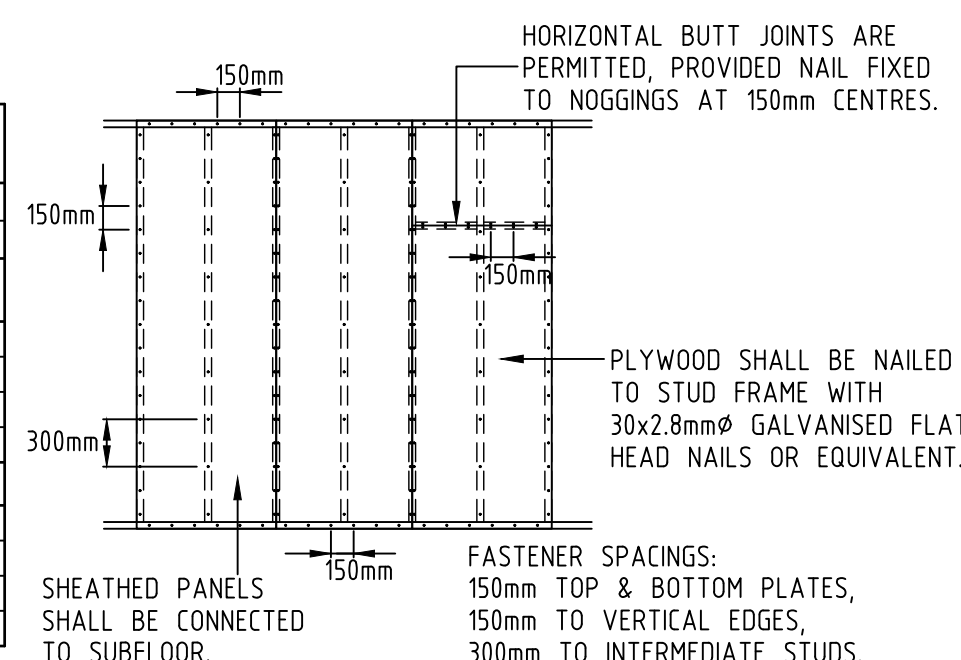
PLYWOOD WALL BRACING

(h) 6.0kN/m CAPACITY

MIN. PLYWOOD THICKNESS (mm)		
STRESS GRADE	STUD SPACINGS	
	450	600
F8	7	9
F11	4.5	7
F14	4	6
F27	3	4.5

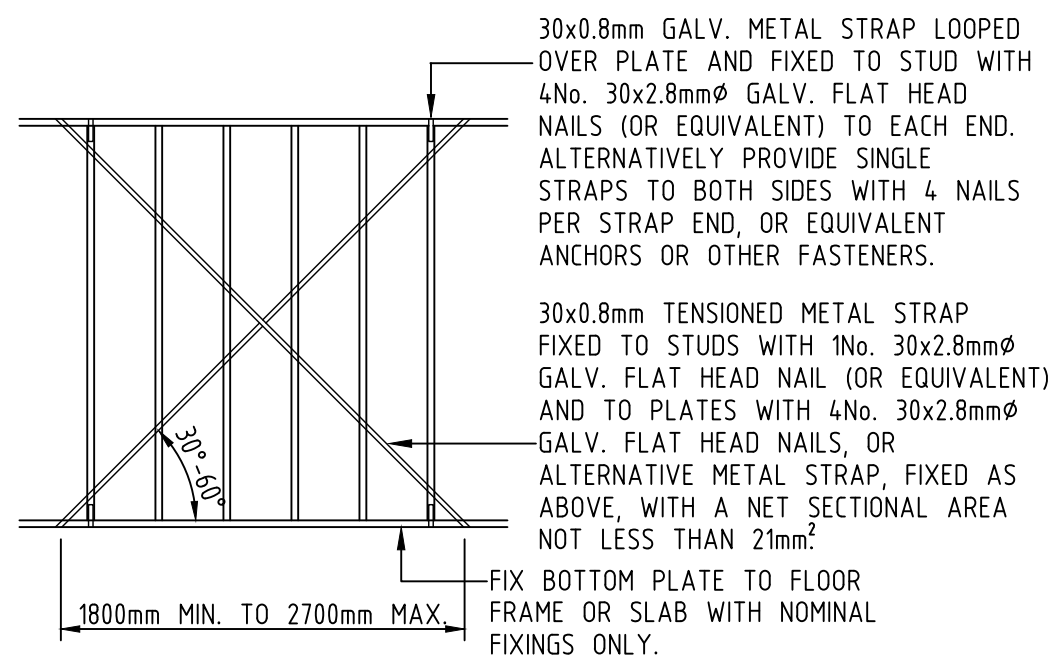
NO NOGGING (EXCEPT HORIZONTAL BUTT JOINTS)

ONE ROW OF NOGGINGS



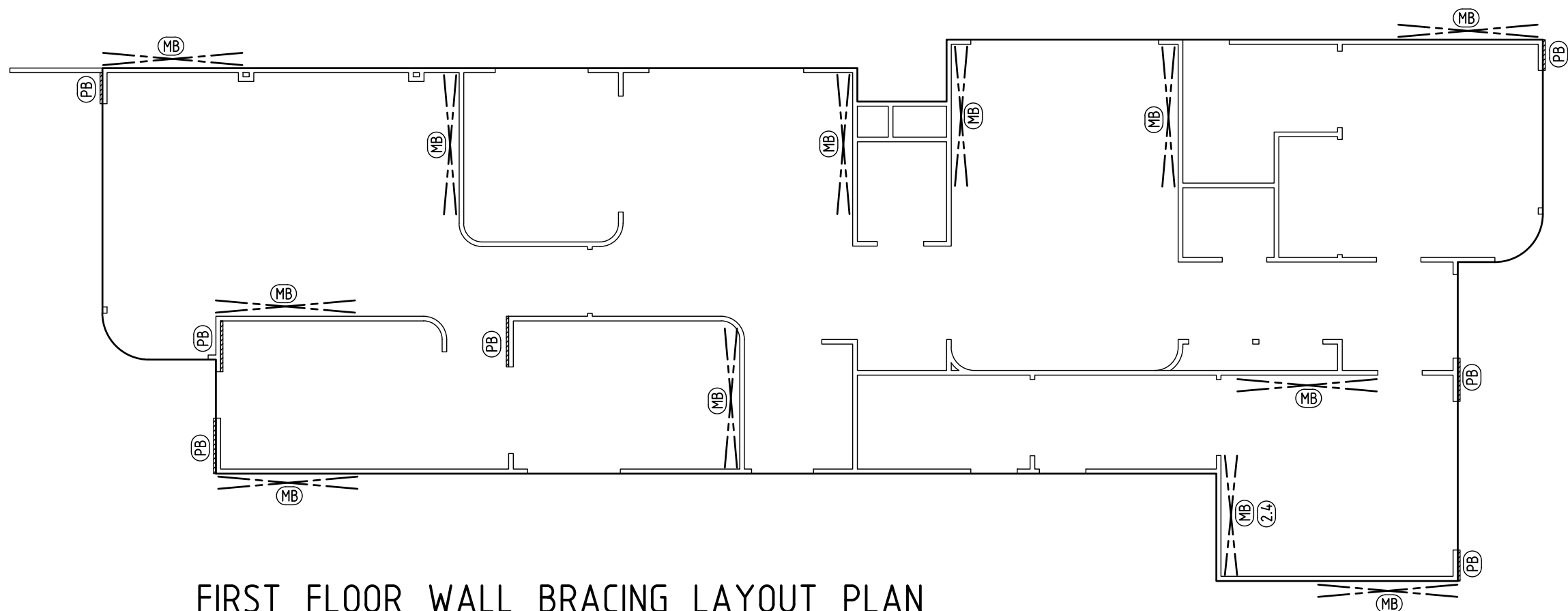
PLYWOOD WALL BRACING

(g) 3.4kN/m CAPACITY



METAL STRAP-TENSIONED

(d) 3.0kN/m CAPACITY



FIRST FLOOR WALL BRACING LAYOUT PLAN

SCALE 1:100

MARK	MEMBER	REMARKS
MB	METAL STRAP-TENSIONED WITH STUD STRAPS	FIXED IN ACCORDANCE WITH TABLE 8.18 (d) AS1684.2 (3.0 kN/m CAPACITY) ALL STRAP BRACES TO BE MIN. LENGTH OF 2.7m U.N.O
PB	PLYWOOD WALL BRACING	FIXED IN ACCORDANCE WITH TABLE 8.18 (g) AS1684.2 (3.4 kN/m CAPACITY)

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 SHACKELFORD CONSULTING ENGINEERS					
U3, 2-4 Joseph Street, Blackburn North, Vic 3130 Phone: 03 9890 7233 Email: admin@shackelford.com.au					
CLIENT: DAWOUD ROWAIS					
PROJECT: PROPOSED RESIDENCE AT 17 CAPELLA STREET, BALWYN NORTH.					
ARCHITECT: AXIOMPLUS ARCHITECTS					
DRAWING TITLE: WALL BRACING LAYOUT PLANS AND DETAILS					
	DESIGNED:	C.S.		24135	
	DRAWN:	H.G.			
	SCALE:	AS SHOWN		DWG NO.	REV.
	ORIGINAL SIZE:	DATE:	NOV. 2024	S7	P1