

ISSUE	DESCRIPTION	BY	DATE
1	ISSUED FOR BUILDING PERMIT APPLICATION	LC	14 APR 2023
2	RE-ISSUED FOR BUILDING PERMIT APPLICATION	LC	17 MAY 2023

PROPOSED 'METUNG FRAME' (NO TENT COVER)

DAINTREE RESORT, VIXIES ROAD, WONGA BEACH, QLD 4873

TENT COVER (PVC, CANVAS OR OTHER TYPE OF FABRICS) SHALL NOT BE ATTACHED TO ANY PART OF THE 'METUNG FRAME' FRAMEWORKS.

DRAWING LISTS

- C3920-S0 - NOTE SHEET & DRAWING LISTS
- C3920-S1 - MEGA ANCHOR/HULK EARTH ANCHOR LAYOUT & DETAILS
- C3920-S2 - DECK FRAMING PLAN & DETAILS
- C3920-S3 - ROOF FRAMING PLAN & SECTIONAL VIEWS
- C3920-S4 - STRUCTURAL DETAIL SHEET # 1
- C3920-S5 - STRUCTURAL DETAIL SHEET # 2

IMPORTANCE LEVEL OF THE STRUCTURE = 1
DESIGN WORKING LIFE = 25 YEARS
ANNUAL PROBABILITY OF EXCEEDANCE = 1/250
WIND REGION = C
TERRAIN CATEGORY = 1.0
MAXIMUM REGIONAL WIND SPEED (ULS) = 62m/sec

GENERAL NOTES

- G1 These drawings shall be read in conjunction with all Architectural and other consultant's drawings and specifications and such other written instruction as may be issued during the course of the Contract. The Contractor shall inspect the site and satisfy himself that the structure can be built as documented and all levels dimensions and grades are compatible with actual site conditions. Any discrepancies to be referred to the Architect or Engineer before commencing work.
- G2 Set out dimensions shall be obtained from the drawings or on site. These drawings shall not be scaled. All dimensions are in millimetres unless noted otherwise.
- G3 The approval of a substitution shall be sought from the Engineer but is not an authorisation for an extra. Any extra involved must be taken up with the Architect before work commences.
- G4 During construction the structure and adjacent properties shall be maintained in a stable condition at all times and no part overstressed. The Contractor shall allow for additional temporary props and bracing as necessary during construction until permanent bracing is effective and structural elements attain full strength, and provide supporting documentation as may be required by Authorities.
- G5 All work shall comply with current Building Code of Australia and current relevant Australian Standards
- G6 The structural work has been designed for wind and live loads in accordance with AS/NZS1170 and as nominated on this drawing.
- G7 Refer Architectural drawings for all waterproofing tanking and flashing requirements.

TIMBER FRAMING

- T1 All timber framing to conform to the requirements of AS 1684 and AS 1720
- T2 Timber sizes and details not shown on these drawings shall be in accordance to AS1684 or the Architectural drawings. Any discrepancy shall be referred to the Architect.
- T3 Fix double/triple member beams with M10 bolts @ 450 cts.
- T4 Gangnail joint hangers.
- Use 3.15 dia. x 30mm nails
- 5 nails through each wing.
- 3 nails through each side of boot.
- T5 Trip-L-Grips.
- Use 10/2.8 dia. x 30mm nails per Trip-L-Grip.
- T6 All external timbers (including decking), where not pretreated, to be treated with 'Cabots' Bars DK prior to installation.
- T7 Glued laminated radiata pine beams shall be manufactured in accordance with AS1328. Outer laminations F8 continuous, inner laminations F5 butt jointed unless otherwise stated. Camber shall be provided as specified. Beams for external use shall be fabricated using Resorcinol or Phenolic adhesive.
- T8 Bolted connections shall be provided with washers under the head and the nut. All bolts and fittings for external use shall be hot dipped galvanised. No knots or defects shall be allowed within 150mm of bolts or connectors. Where possible bolts shall be re-tightened after 6 weeks and 12 months. End caps shall be provided to exposed beams.
- T9 Preservative where applied shall be made good at checkouts, holes and end grains where surface penetrations exceed 25mm. Refer to the specifications for applied finish to all timber.

ABBREVIATIONS

- A1 THK. - Thick.
A2 TYP. - Typical.
A3 RC - Reinforced Concrete.
A4 MIN. - Minimum.
A5 MAX. - Maximum.
A6 T.B.A. - To be advised.
A7 U.N.O. - Unless Noted Otherwise.
A8 DIM. - Dimension.
A9 C. - Centerline.
A10 CTS. - Centres.
A11 ULS - Ultimate Limit State.
A12 O.D - Outside Diameter.
A13 FSBW - Full Strength Butt Weld.
A14 TC - Wind Terrain Category.
A15 KM/HR - Kilometres per Hour.
A16 m/sec - Metres per Second.

STRUCTURAL STEELWORK

- S1 Steel fabrication and construction shall be in accordance with AS 4100, and shall be ordinary Weldable Grade Steel to AS 3678 & AS 3679 unless noted otherwise.
- S2 Open steel sections shall be Grade 300 except as noted below, which shall be Grade 250;
TFC & TFB sections to 125 deep,
EA sections less than 125x125,
UA sections less than 150x90,
CHS, RHS & SHS shall be Grade 350 u.n.o.
- S3 Before fabrication is commenced the builder shall submit copies of the shop drawings to the Engineer for review. Review does not include checking of dimensions, and does not limit builders responsibility for the correctness of the work.
- S4 Bolts are designated as follows
4.6/S Grade 4.6 bolts Snug tight
8.8/S Grade 8.8 bolts Snug tight
8.8/TF or TB Grade 8.8 bolts Fully Tensioned
- S5 All welding shall comply with AS 1554 part 1 & 2 as applicable.
All butt welds are to be fully prepared and have full penetration. Details of butt welded joints must be shown on shop drawings.
Use 8 mm fillet welds or more shall be Category SP
All other welds shall be category GP uno.
Electrodes shall be E48xx or equivalent uno.
Welds shall be 6 mm continuous fillet welds uno.
The minimum length of weld run shall be 50 mm.
- S6 Connections not detailed shall comprise 10 mm web side cleat, 6 cfw and two M10 8.8/S bolts.
- S7 All steel work except that encased in concrete, or forming the contact surfaces of fully tensioned connections, shall be thoroughly wire brushed to AS 1627 and given one coat of red oxide zinc phosphate primer. Top coats shall be applied on site after erection as specified.
- S8 The fabricator shall provide all holes and cleats for fixing of timber and architectural features and metalwork, as required.
- S9 All steelwork shall be hot-dipped galvanised uno.
All steelwork that is to be hot dipped galvanised shall be done so in accordance with AS/NZS 4680.
(min 610g of zinc per square metre of surface area).
- S10 All steelwork below ground shall be encased in 75mm clear cover of 20 MPa concrete.

LOADING

- L1 This structure has been designed for the following superimposed loads:
A. Uniformly distributed live loads acting on:
- | | |
|--|---------|
| Roof (access not permitted) | 0 kPa |
| Deck (for domestic self-contained dwellings) | 2.0 kPa |
- L2 Wind loading to comply with the requirements of AS/NZS 1170.2 - Section 4. Designs are based on:-
- No 1 Importance Level as derived from Table F1 of AS1170.0.
- Maximum Regional Wind Speed of Vu = 62m/sec derived from a design life of 25 years with 1/250 annual probability of exceedance.
- Maximum Regional Wind Speed of Vs = 47m/sec derived from 1/25 annual probability of exceedance.
- Wind Region (C) Cyclonic and Terrain Category 1.0.

Mr Leon Chuah
RPEQ MIEAust NER

CERTIFIED DATE : 17 MAY 2023
CERTIFIED BY : LEON CHUAH

Signature 

Registered Professional Engineer of Queensland
RPEQ 25593



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DAINTREE RESORT, VIXIES ROAD, WONGA BEACH, QLD**

NOTE SHEET & DRAWING LISTS

DATE OF PLOT: 17 MAY 2023

SCALE: AS SHOWN

DRAWN: LC

DESIGNED: LC

APPROVED:

GHC  **ENGINEERING CONSULTANTS**

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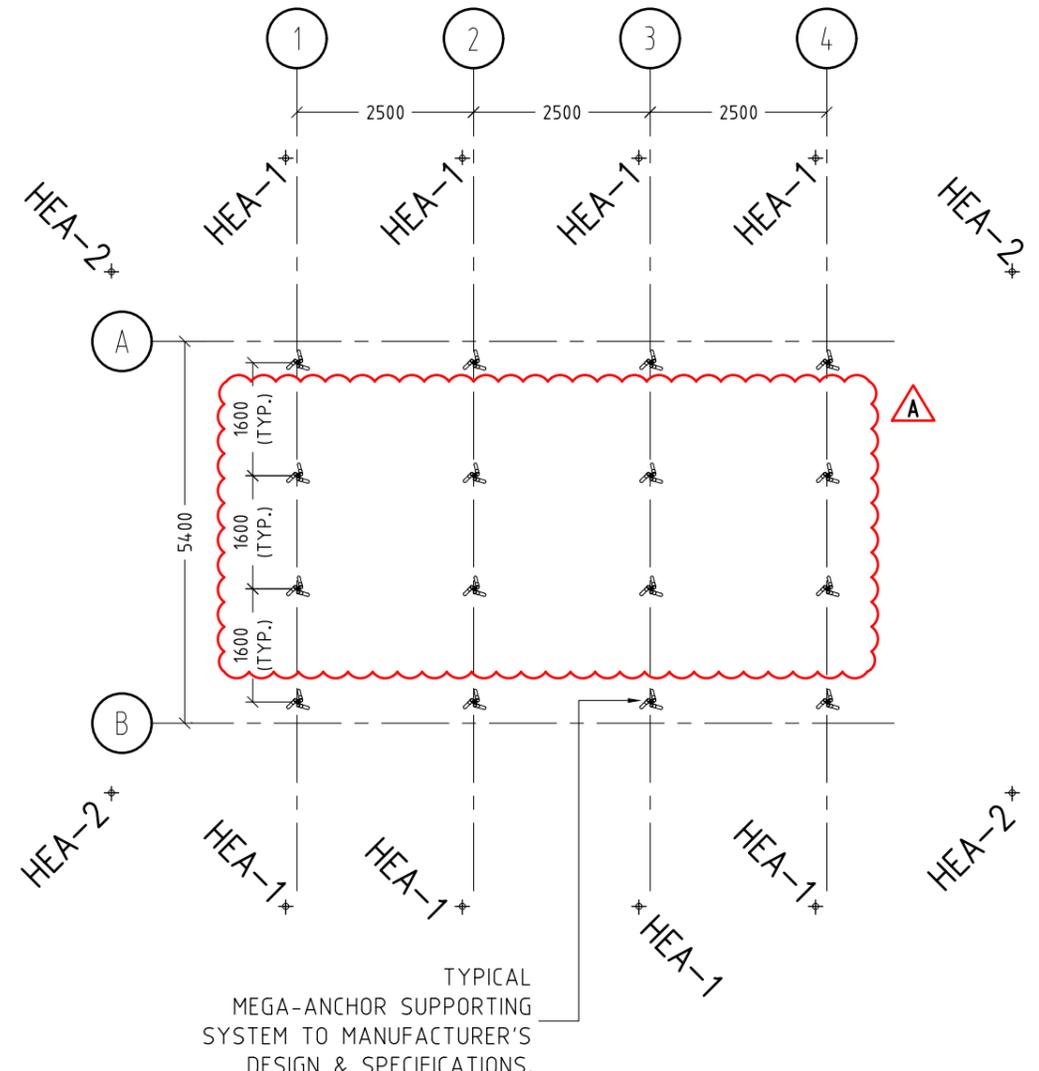
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MEGA ANCHOR/HULK EARTH ANCHOR LAYOUT
SCALE 1:100

MEGA ANCHOR (OR APPROVED EQUIVALENT)
TYPICAL BEARERS TO BE SUPPORTED ON MEGA-ANCHOR SYSTEM TO MANUFACTURER'S DESIGN & SPECIFICATION TO CARRY THE FOLLOWING DESIGN ACTIONS (ULS):

DOWNWARD FORCE = 25 kN.
 UPLIFT FORCE = 25 kN.
 BASE SHEAR FORCE = 7 kN.
 BASE MOMENT = 6 kNm.

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TENT COVER (PVC, CANVAS OR OTHER TYPE OF FABRICS) SHALL NOT BE ATTACHED TO ANY PART OF THE 'METUNG FRAME' FRAMEWORKS.

MAXIMUM DISPLACEMENT OF MEGA-ANCHOR RISER UNDER SERVICEABILITY WIND LOAD SHALL BE LIMITED TO THE RATIO OF HEIGHT/150. THIS REQUIREMENT SHALL BE VERIFIED AND CERTIFIED BY MEGA-ANCHOR MANUFACTURING COMPANY.

SITE SOIL CLASSIFICATION ASSUMED CLASS 'P'
 IN ACCORDANCE WITH AS2870-2011. TO BE CONFIRMED BY THE BUILDER OR BUILDING SURVEYOR.

HULK EARTH ANCHOR (HEA-1)
(OR APPROVED EQUIVALENT ANCHOR SYSTEM)

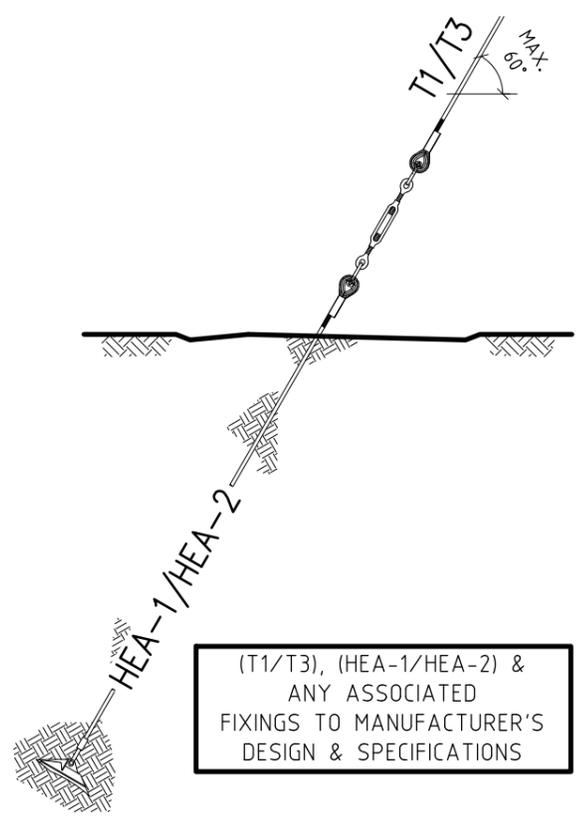
TIE CABLE (T1) TO BE FIXED TO (HEA-1). (HEA-1) TO MANUFACTURER'S DESIGN & SPECIFICATION TO CARRY THE FOLLOWING DESIGN ACTION (ULS):

PULL OUT AXIAL TENSILE FORCE = 30 kN.

HULK EARTH ANCHOR (HEA-2)
(OR APPROVED EQUIVALENT ANCHOR SYSTEM)

TIE CABLE (T3) TO BE FIXED TO (HEA-2). (HEA-2) TO MANUFACTURER'S DESIGN & SPECIFICATION TO CARRY THE FOLLOWING DESIGN ACTION (ULS):

PULL OUT AXIAL TENSILE FORCE = 40 kN.



TYPICAL (T1/T3)-(HEA) DETAILS
SCALE 1:20

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**MEGA ANCHOR/HULK EARTH ANCHOR
 LAYOUT & DETAILS**
 DATE OF PLOT: 17 MAY 2023

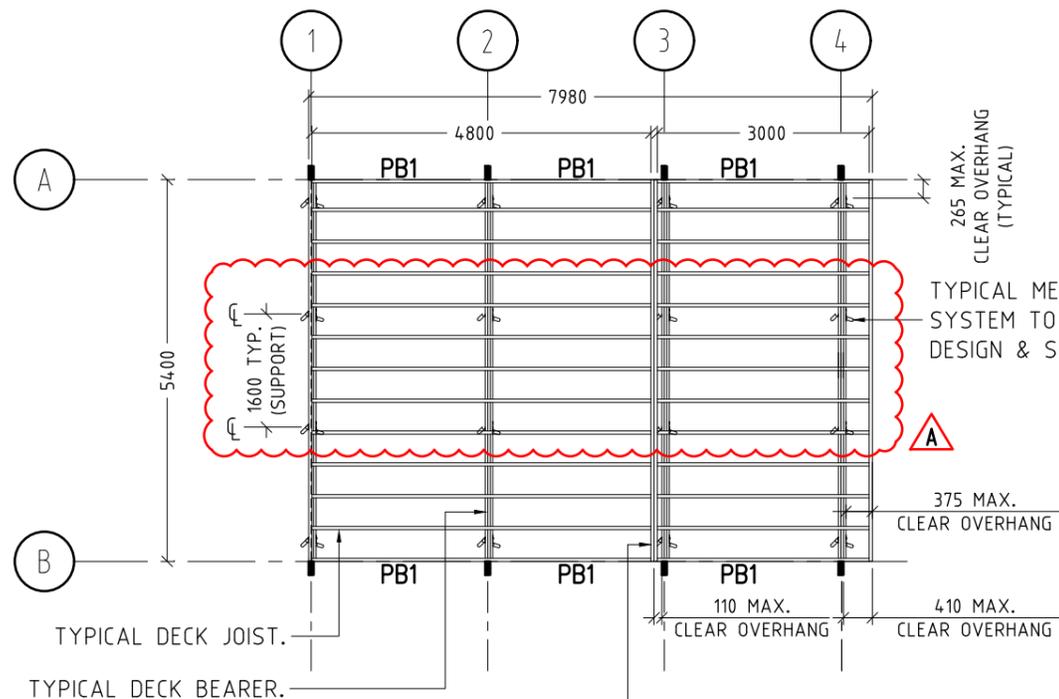
SCALE: AS SHOWN
 DRAWN: LC
 DESIGNED: LC
 APPROVED:

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2/ 140 x 45 (MGP10) TRIMMERS TO END OF DECK JOISTS. PRESERVATIVE TREATED TO (H3) LEVEL. HOT-DIPPED GALVANISED M10 4.6/S BOLTS AT 450 STAGGERED SPACING, 40mm MIN. TIMBER EDGE DISTANCE & 50mm MIN. TIMBER END DISTANCE.

DECK FRAMING PLAN

SCALE 1:100

TIMBER DECK FRAMING

140 x 45 (MGP10) DECK JOISTS @ MAX. 450 CTS. PRESERVATIVE TREATED TO (H3) LEVEL. MAXIMUM CLEAR CONTINUOUS SPAN = 2400mm. MAXIMUM CLEAR OVERHANG = 410mm.

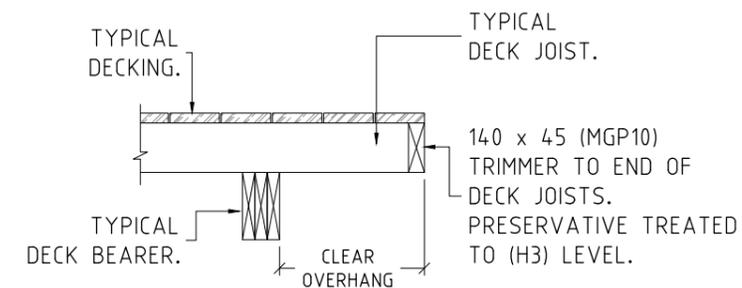
2/ 190 x 35 (MGP12) PLUS 1/ 190 x 45 (MGP12) DECK BEARERS @ 2500 CTS. PRESERVATIVE TREATED TO (H3) LEVEL.

MAXIMUM CONTINUOUS SPAN = 1600mm. MAXIMUM CLEAR OVERHANG FOR DOUBLE BEARERS = 265mm.

140mm WIDE x MIN. 22mm THK. (F7) TREATED PINE DECKING OR APPROVED EQUIVALENT.

TYPICAL BEARERS TO BE SUPPORTED ON MEGA-ANCHOR SYSTEM TO MANUFACTURER'S DESIGN & SPECIFICATION. REFER DRAWING SHEET (S1) FOR DESIGN ACTIONS.

ALL EXPOSED STEELWORKS TO BE HOT DIPPED GALVANISED.

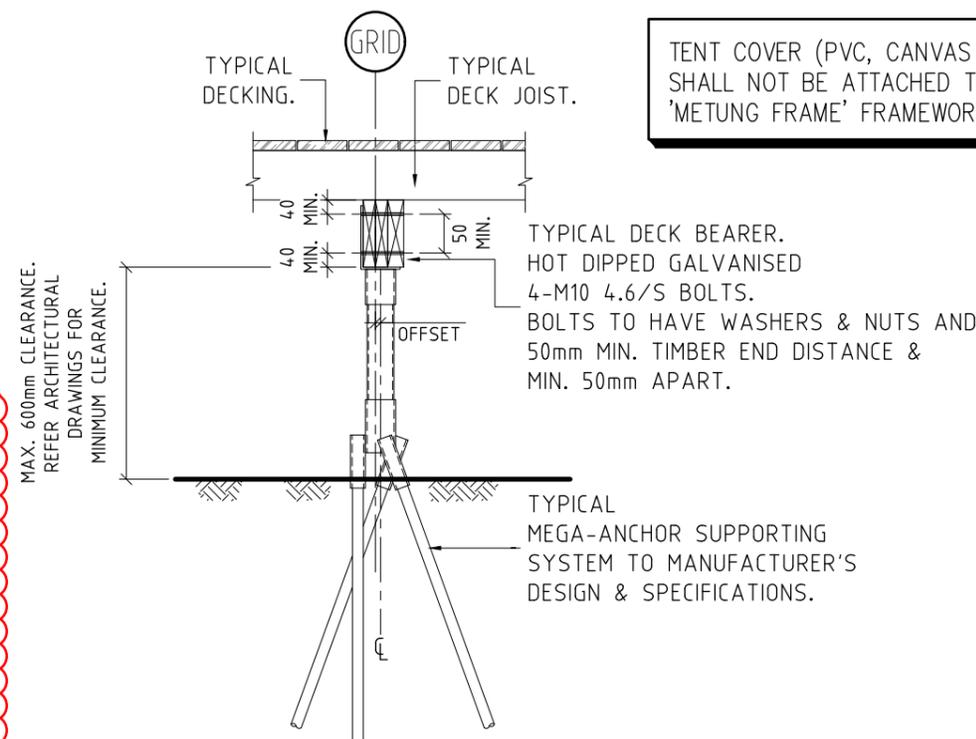


TYPICAL DECK JOIST OVERHANG DETAILS

SCALE 1:20

ALL FIXINGS SHALL BE IN ACCORDANCE WITH AS1684 TO BUILDER'S SPECIFICATIONS

MEMBER SCHEDULE		
MARK	SIZE	REMARKS
PB1	190 x 45 (MGP12)	PERIMETER BEAM. PRESERVATIVE TREATED TO (H3) LEVEL.



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TYPICAL SUB-FLOOR SECTIONAL VIEW

SCALE 1:20

ALL OTHER FIXINGS SHALL BE IN ACCORDANCE WITH AS1684 TO BUILDER'S SPECIFICATIONS

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DECK FRAMING PLAN & DETAILS

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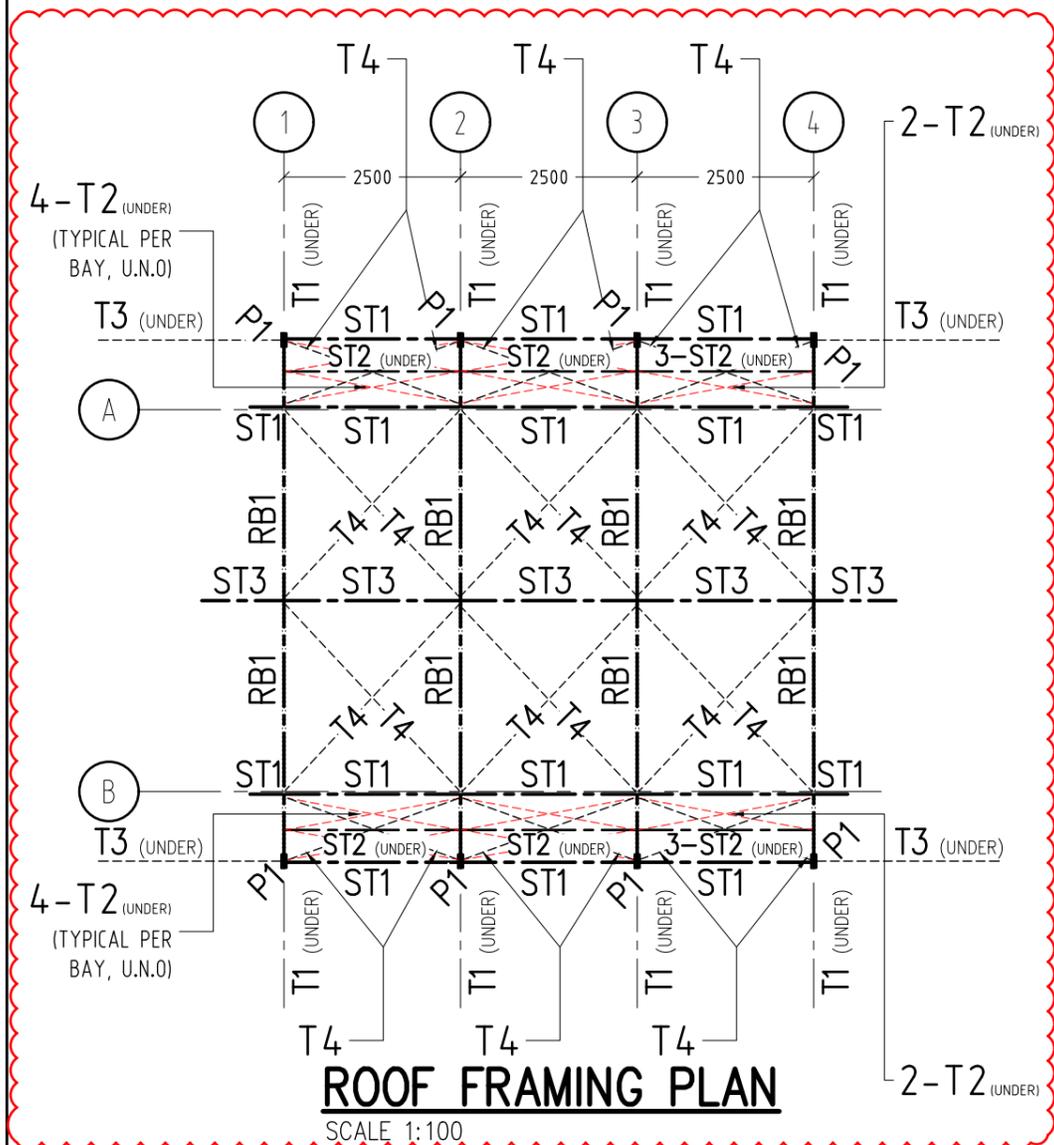
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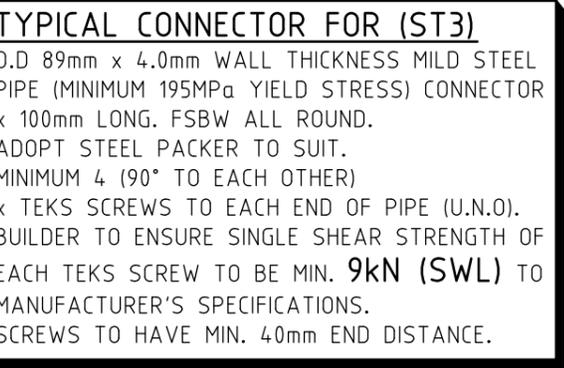
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ROOF FRAMING PLAN

SCALE 1:100

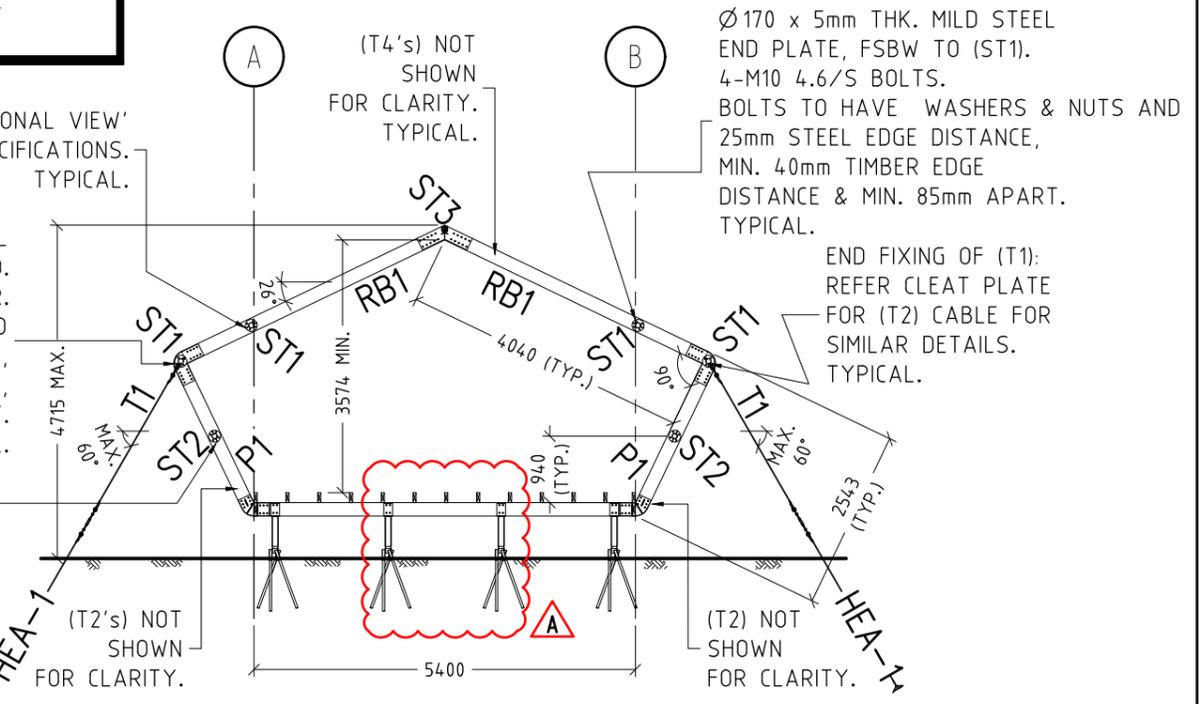
TYPICAL CONNECTOR FOR (ST3)
 O.D 89mm x 4.0mm WALL THICKNESS MILD STEEL PIPE (MINIMUM 195MPa YIELD STRESS) CONNECTOR x 100mm LONG. FSBW ALL ROUND. ADOPT STEEL PACKER TO SUIT. MINIMUM 4 (90° TO EACH OTHER) x TEKS SCREWS TO EACH END OF PIPE (U.N.O). BUILDER TO ENSURE SINGLE SHEAR STRENGTH OF EACH TEKS SCREW TO BE MIN. 9kN (SWL) TO MANUFACTURER'S SPECIFICATIONS. SCREWS TO HAVE MIN. 40mm END DISTANCE.



ALL EXPOSED STEELWORKS TO BE HOT DIPPED GALVANISED.

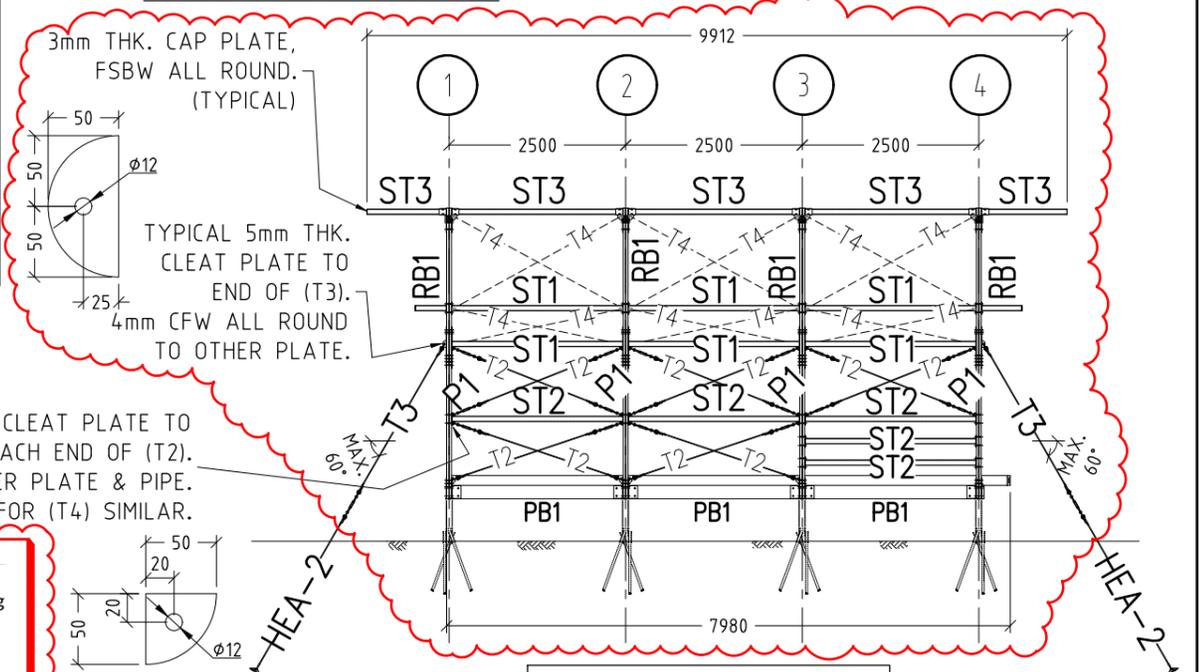
TYPICAL 5mm THK. CLEAT PLATE TO EACH END OF (T2). 4mm CFW ALL ROUND TO OTHER PLATE & PIPE. CLEAT PLATE FOR (T4) SIMILAR.

Mr Leon Chuah
 RPEQ MIEAust NER
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 Signature: *[Signature]*
 Registered Professional Engineer of Queensland RPEQ 25593



GRID LINE (2) SECTIONAL VIEW

SCALE 1:100
 TYPICAL CROSS SECTIONAL VIEW



GRID LINE (B) SECTIONAL VIEW

SCALE 1:100
 GRID LINE (A) SECTIONAL VIEW SIMILAR

MEMBER SCHEDULE		
MARK	SIZE	REMARKS
RB1	2/ 190 x 35 (MGP12)	PRESERVATIVE TREATED TO (H3) LEVEL.
ST1	O.D 76mm x 4mm WALL THICKNESS	MILD STEEL PIPE (MINIMUM 195MPa YIELD STRESS)
ST2	O.D 76mm x 4mm WALL THICKNESS	MILD STEEL PIPE (MINIMUM 195MPa YIELD STRESS)
ST3	O.D 76mm x 4mm WALL THICKNESS	MILD STEEL PIPE (MINIMUM 195MPa YIELD STRESS)
T1	TIE CABLE, RIGGING SCREWS & TURNBUCKLE/TENSIONER	MIN. SWL = 17 kN.
T2	TIE CABLE, RIGGING SCREWS & TURNBUCKLE/TENSIONER	MIN. SWL = 18 kN.
T3	TIE CABLE, RIGGING SCREWS & TURNBUCKLE/TENSIONER	MIN. SWL = 26 kN.
T4	TIE CABLE, RIGGING SCREWS & TURNBUCKLE/TENSIONER	MIN. SWL = 11 kN.
P1	2/ 190 x 35 (MGP12)	PRESERVATIVE TREATED TO (H3) LEVEL.

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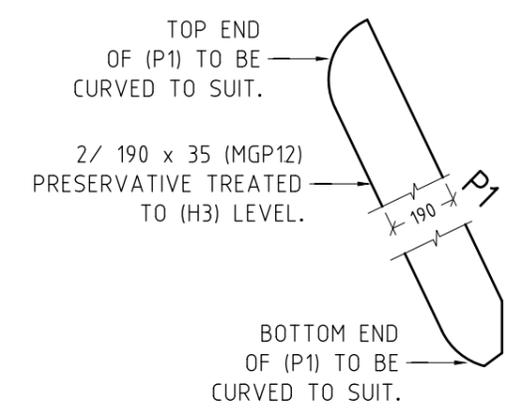
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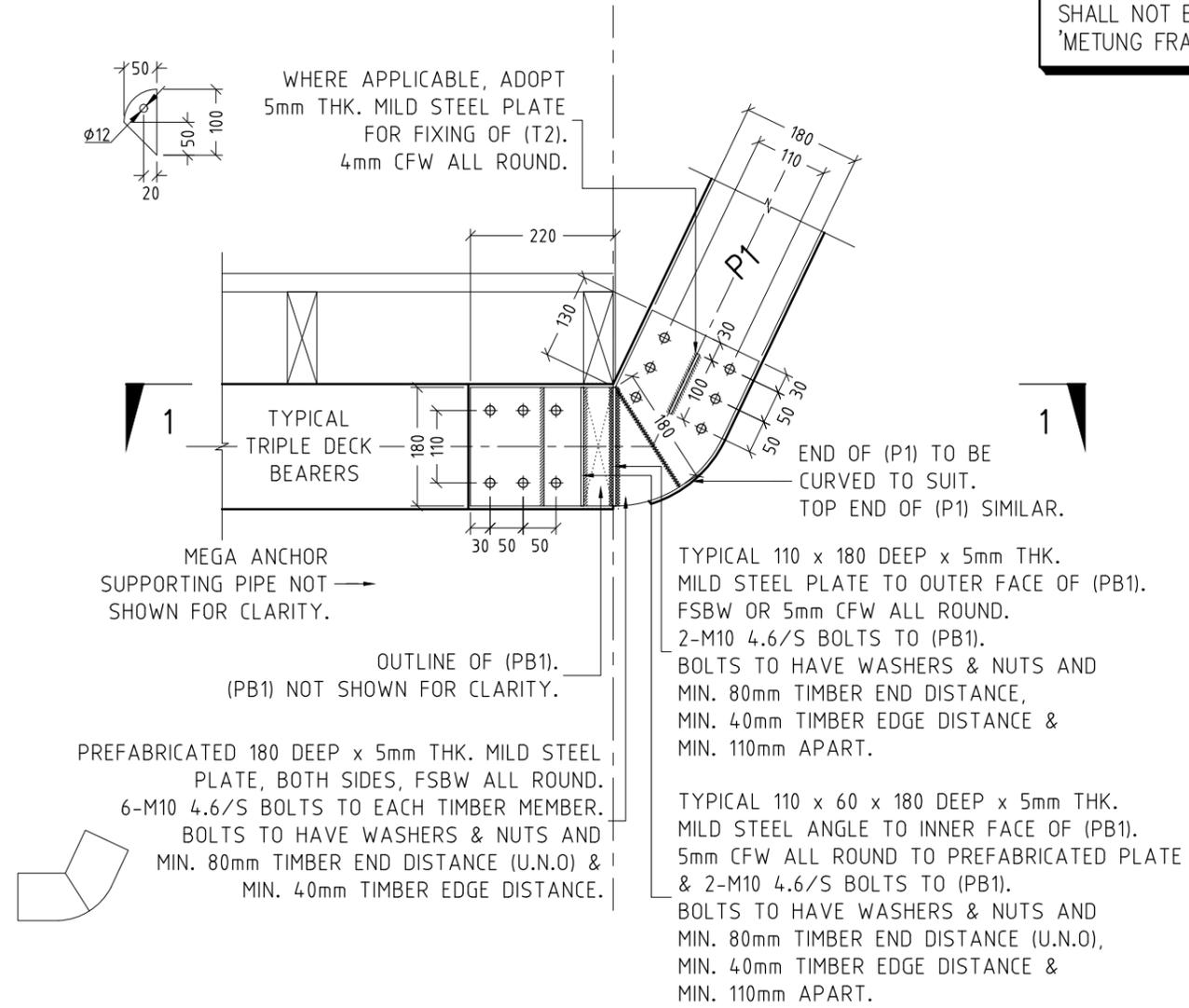
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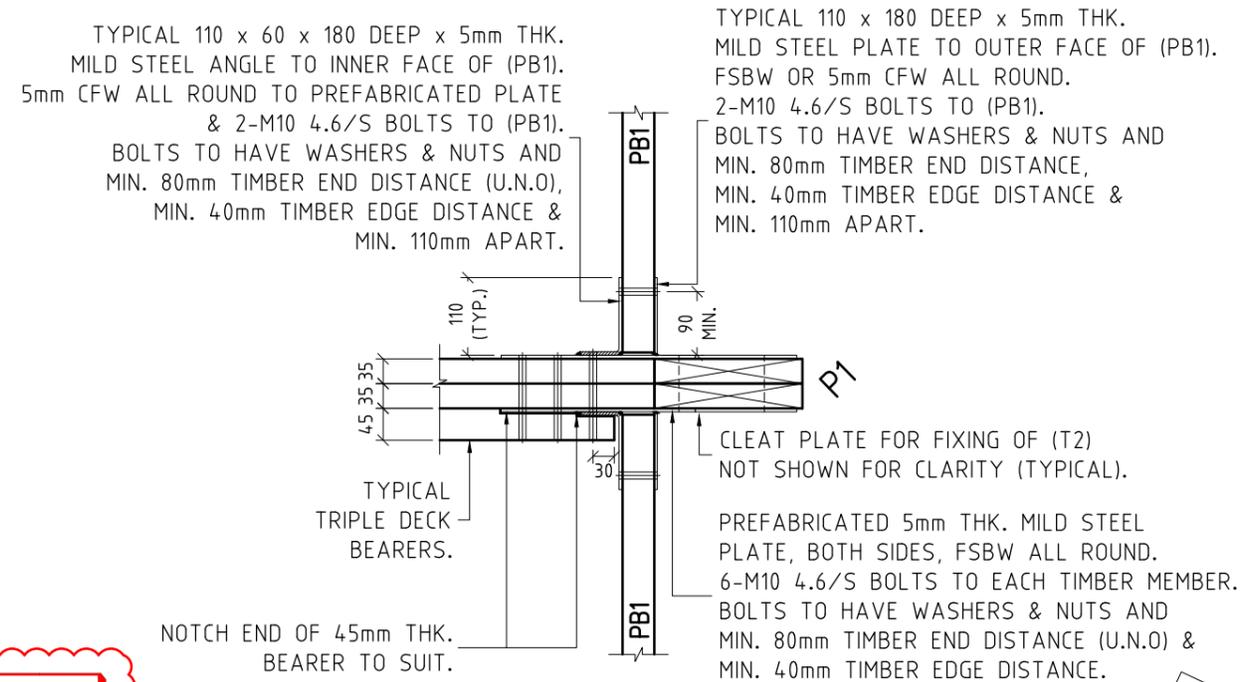
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TYPICAL (P1) ELEVATION VIEW
SCALE 1:20



TYPICAL (PB1) TO DOUBLE BEARERS/POLE DETAILS
SCALE 1:10



SECTION 1-1
SCALE 1:10

Mr Leon Chuah
RPEQ MIEAust NER

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STRUCTURAL DETAIL SHEET # 1

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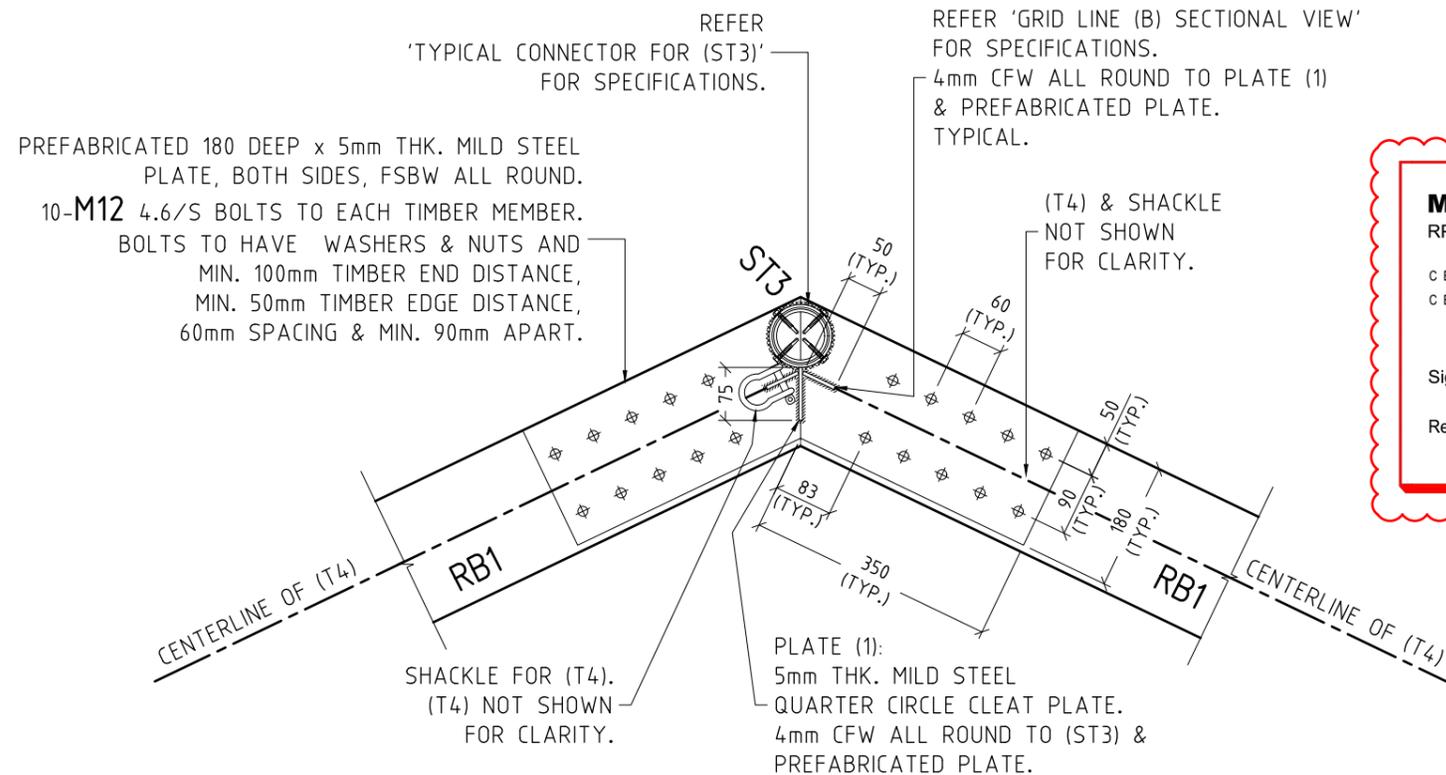
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S4

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TYPICAL (T4)-(ST3/RB1) DETAILS

SCALE 1:10

TYPICAL (ST3)-(RB1) DETAILS

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STRUCTURAL DETAIL SHEET # 2

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