



STRUCTURAL NOTES

STRUCTURAL STEEL

1. Steel members shall be the following grade unless otherwise noted.

| Member              | Grade     |                              |
|---------------------|-----------|------------------------------|
| TFCs, TFBs, EAs     | ≤ 100x100 | 300                          |
| UAs                 | < 150x90  | 300                          |
| UBs, UCs, PFCs, EAs | > 100x100 | 300 plus (typ BHP Australia) |
| UAs                 | ≥ 150x90  | 300 plus (typ BHP Australia) |
| RHS, SHS, CHS       |           | 350                          |

2. All cold formed sections including cold rolled purlins to conform to AS 1538 and shall have a minimum yield stress of 450 MPa, unless otherwise noted.

3. The ends of all hollow sections shall be sealed with 3mm min. steel plate, seal welded unless otherwise noted.

4. All plates shall be 6mm min. unless otherwise noted.

5. All Holding Down bolts and other fixing devices shall have a minimum yield stress of 250 MPa unless otherwise noted.

6. All dry pack non-shrink mortar / grout shall have a compressive strength of at least 30 MPa.

7. Surface preparation and corrosion protection of steel work shall be in accordance with the Architectural Specifications U.N.O. Any damage to the protective coating of steel work shall be made good. Generally all structural steel to be hot dip galvanised to a minimum of 600g/m².

8. Bolts, unless noted otherwise;
- a. Bolts and nuts shall be Grade 8.8 high strength steel to AS 1252: "ISO Metric High Strength Steel Bolts" unless noted otherwise.
- b. Typically all edge distances to be 30mm U.N.O.
- c. Gauge distances shall be 70, 90 or 140 as per AISC.
- d. All bolts shall have at least one washer which shall be not less than twice the nominal bolt size in diameter.
- e. All bolts shall have a spring washer in addition to the washer located directly above the nut.
- f. The bolt shall be selected so that the projection beyond the nut is not less than two threads and not more than 10mm.
- g. Heavy duty square washers to be placed below bolt heads in timber applications.
- h. Heavy duty round washers to be placed below bolt heads in steel applications.
- i. Do not weld bolts under any circumstances
9. Holing:
- a. Holes cut for bolts shall be drilled or punched and not gas cut.
- b. Common detailing components:
- Standard holes - D+2mm
- Standard slotted holes - D+2mm wide and 2.5D long unless noted otherwise.
- H.D. bolts - 1.33D composite simple (standard washer) (fabricated washer).

10. Welds:
- a. All welded connections shall be metal arc welded as shown on the drawings. All welding shall comply with AS 1554:Part 1 "Welding of Steel structures" unless noted otherwise. Welds exposed in the completed building and in particular butt welds of stock lengths shall be neatly finished and ground smooth.
- b. All butt welds shall be full penetration.
- c. Welding of hollow sections shall incorporate internal sections or backing plates as necessary to complete the specified weld.
- d. All welds on drawings unless otherwise noted to be 6mm structural purpose fillet welds all round.

11. Steelwork drawings show the design intent. The Contractor is to prepare shop drawings for review. No fabrication is to commence until shop drawings are reviewed by the Engineer and written notification issued.

12. All reactions shown are in kN.

13. Where the weight of a steel section is omitted, the heaviest commonly available steel section shall be utilized.
14. All bolts shall be a minimum of M12 and all welds shall be a minimum of 6mm continuous fillet (SP)
15. All nuts and turning bolts are to have approved washers. All exposed nuts, bolts and washers to be galvanised and to have protective coatings to match general steelwork, unless noted otherwise.
16. All rod bracing to be a minimum of grade 300 plain reinforcing bar, unless noted otherwise.
17. All sealed sections to be galvanised shall have vent holes. To be shown on shop drawings.
18. Purlin cleats are to be in accordance with the manufacturer's standard details except where the top of the flange of the purlin is more than 300mm above supporting steelwork 75 x 75 x 8 angle cleats shall be used. Purlins shall be fixed using approved flanged bolts and washers.
19. Ceiling systems, ductwork, etc. to be suspended from purlins shall be fixed with hook bolts through purlin web. The flanges of the purlins or girts shall not be holed.
20. All dissimilar metals shall be separated by a DPC layer or other method as approved by the Engineer.
21. All steel elements shall be separated from treated timber by DPC layer or other method as approved by the Engineer.
22. All structural steel fabrication and erection shall be carried out in accordance with the requirements of AS/NZS 5131:2016 for a CC2 Structure.

TIMBER POLE RETAINING WALLS

1. Unless otherwise stated, all round poles shall be "Searle" machine peeled normal density pine complying with the requirements of NZS 3605 "Load Bearing Round Timber Piles" and NZS 3603 "Timber Structures Standard". "Morbark" machine shaved poles may only be used at the approval of the Engineer.
2. All poles are expressed as a minimum "Small End Diameter" (SED) with an average taper of 6 mm per metre length.
3. Unless otherwise stated all square posts shall be visually graded machine stress graded complying with the requirements NZS 3603 "Timber Structures Standard".
4. All poles and posts shall be "tanalised" to a minimum "Tanalith" preservation retention of 16 kg/m³ (H5) or approved equivalent. All poles and posts must be positively identified with their Hazard Class on the butt end of the pole when delivered to site.
5. Poles or posts shall not be rolled or dropped from the delivery vehicle. Any pole with evidence of handling damage shall not be used and shall be removed from the site.
6. Cutting rebates and / or bored holes within the timber shall be avoided wherever possible. If necessary, the exposed surfaces shall be liberally coated with a brush application of either "Ensele", pentachlorophenol, "Tanalith" concentrated solution or copper naphthenate or creosote. Re-protected areas shall not be placed within 300 mm of finished ground level.
7. Unless otherwise noted, concrete encased poles shall be installed SED upwards whilst driven timber piles shall be installed SED downwards.
8. Unless otherwise noted, all timber poles and posts shall be installed with a vertical layback of 1H: 20V and spaced at 1200 centres vertically.
9. All timber rails, unless otherwise noted, shall be rough sawn timber, 150 mm deep with a thickness and grade as specified and tanalised to a minimum "Tanalith" preservative retention of 12 kg/m³ (H4) or approved equivalent.
10. Rails shall be installed horizontally and where possible multi-span with staggered butt joints. All rails shall be securely nailed to the rear of the timber poles with 100mm x 4.0mm galvanised flat head nails.
11. The timber face walls shall be continuous both vertically and horizontally. Hit and miss placement and / or galvanised wire netting is not permitted.

12. Excavation shall be carried out immediately prior to constructing the retaining wall. Exposed cut batters shall be protected with a weather-proof polythene cover until the wall has been constructed.
13. Excavations shall be completed in stages to restrict unsupported lengths of cut batters.
14. Excavations in excess of 1.2 m height or within 1.2 m of a property boundary shall be directly supervised by the Engineer. Notification must be given by the Contractor, to the Engineer, prior to commencing the excavation.
15. Excavations for concrete encasement shall be carried out by a machine auger to the dimensions detailed on the drawings. All surplus spoil shall be removed from the site.
16. The augered excavations shall be accurately located, with sufficient allowance for pole back slope and concrete encasement.
17. Unless otherwise noted, all locating dimensions refer to the front face of the poles at the base of the wall.
18. Unless otherwise noted, the ground profile above and below the wall shall be level and free draining.
19. The foundation encasement shall be Ordinary Grade concrete complying with NZS 3109 "Specification for Concrete", having a minimum 28 day compressive strength of 20.0 MPa.
20. A 100 mm concrete punch pad shall be provided at the base of the excavation prior to placing the timber poles.

21. The concrete encasement shall be well compacted by tamping and/or vibrating ensuring an even concrete encasement cover at the base of the wall. The concrete encasement shall be cast to C.G.L OR to the finish level of the clay subgrade and shall be sloped down and away from the pole base to prevent water ponding at the base of the pole. All timber poles shall be accurately placed and adequately braced prior to placing the concrete encasement. The pole bracing shall not be removed until 48 hours after the placement of the concrete encasement.

22. A 100 mm perforated draincoil shall be placed at the base of the rear of the wall, prior to placing the 20/7 scoria or 40/20 drainage metal or similar approved. The invert of the 100 mm PVC perforated pipe shall be a minimum of 200 mm below the finished ground level in front of the wall. The 100 mm PVC perforated pipe shall be protected with 'filtersok' and be free draining into a sealed stormwater system.

REINFORCED MASONRY

1. Generally all concrete block masonry construction to be in accordance with NZS 4229:2013, and NZS 4210:2001.
2. Refer to figure 8.1, NZS 4229:2013 for D16 trimmers around openings.
3. The top of all the concrete block walls to be continuous bond beam B1 or B2, as per figure 10.1 and 10.2, NZS 4229:2013. Continuous bond beam type B3 (figure 10.2, NZS 4229:2013) to be provided at mid-floor level of 2 storey walls.

4. Minimum reinforcing to be as follow unless shown otherwise:

|         | 15 SERIES  |            | 20 SERIES  |            |
|---------|------------|------------|------------|------------|
|         | VERTICAL   | HORIZONTAL | VERTICAL   | HORIZONTAL |
| RUNNING | D12@800crs | D12@800crs | D12@600crs | D12@600crs |
| STACK   | D10@400crs | D10@400crs | D12@400crs | D12@400crs |

5. In general only load bearing masonry is shown on the structural drawings. All non-load bearing masonry is to be separated from structure by a 12mm compressible joint.
6. Concrete blocks shall have a minimum compressive strength of 12.5MPa, to NZS 4210. Density to be greater than 1750kg/m³.
7. Mortar shall comply with the requirements of NZS 4210.

8. All cores with reinforcement to be grout filled as a minimum. Additional covers filled as noted on the drawings. Grout shall have a slump of 230mm and a compressive strength in accordance with NZS 3604:2011 clause 4.5.3.

9. In general, walls to be full height before grouting cores. Washout ports to be provided at bottom course where vertical bars are located for all walls where poured height exceeds 1.2m. Mortar joints to be 10mm thick with blocks fully bedded and perpendis filled. Joints to be tooled at exposed or rendered surfaces.

10. Cores are to be cleaned of all mortar fines and droppings through washout ports which shall to be closed until inspected by engineer.

11. Grout to be added to ensure fill of cores with a maximum continuous pour height of 3600mm.

12. No construction of masonry on suspended floors is to take place until floor is fully de-propped.

13. All grade A masonry to be supervised by a registered mason, including grouting. In addition, all grade A # B masonry to be inspected by Engineer prior to grouting, or as required by the local authority.

14. Chasing of load bearing masonry only permitted as shown on the Engineer's drawings.

15. All grout shall be 20 MPa unless otherwise noted.

16. All masonry cells shall be solid filled with grout.

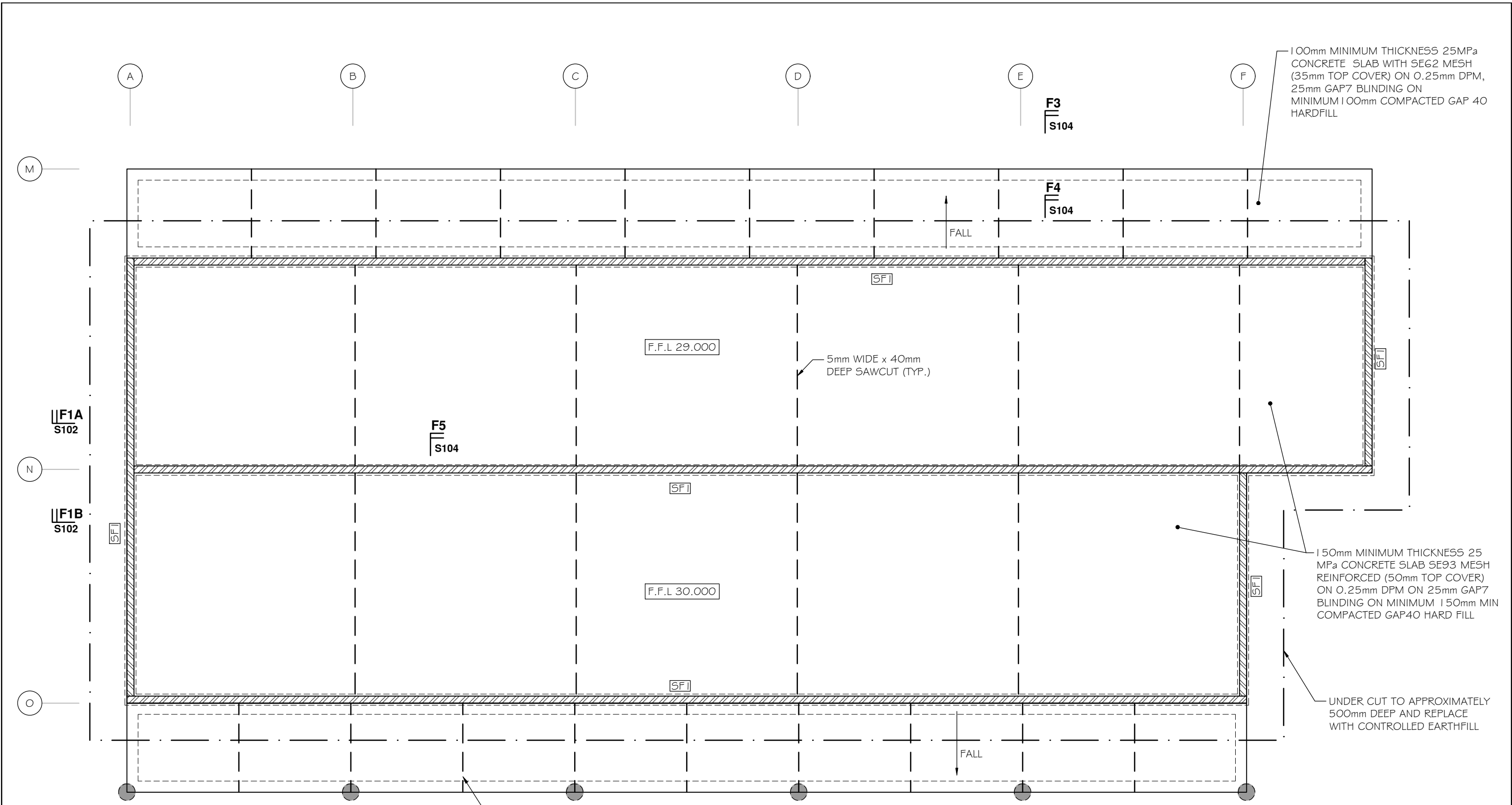
17. Control joints to be provided at no more than 6m centres or to approval of the Engineer, as per NZS4229:2013

REINFORCED MASONRY RETAINING WALLS

1. The rear face of the blockwork shall be protected with three coats of flint-kote, or similar approved waterproofing agent. The waterproofing agent shall be subsequently permanently protected with hardiflex soft board or similar prior to placing scoria backfill. The waterproofing shall extend 200mm above the proposed finished ground level.
2. The drainage blanket behind the wall shall be formed with at least a 300mm thick layer of 20/7 scoria or 40/20 drainage metal or approved equivalent. The 100mm draincoil at the base of the wall shall be free draining to a sealed stormwater system. Filter sock shall be placed between the draincoil and the scoria.
3. All concrete cast against and permanently exposed to the unprotected footing excavation shall provide a 75mm minimum cover to the reinforcing steel.
4. If the masonry retaining wall forms a perimeter foundation wall, the 20/7 scoria / 40/20 drainage metal or approved equivalent shall be completed 200mm below the proposed finished ground level. Filter cloth (Terram 2000 or approved equivalent) shall then be placed over the top level surface of the above mentioned approved drainage media. The filter cloth shall lap 100mm vertically up the wall and 300mm horizontally over the clay/scoria interface. A 200mm compacted depth of topsoil shall then be placed over the filter cloth.
5. The ground profile behind the top of the wall shall direct all overland run-off away from the rear face of the retaining wall.
6. If specified, the lower concrete floor slab shall be poured and cured prior to backfilling behind the masonry retaining wall.
7. Control joints to be adequately waterproofed (Sikadur Combiflex or approved equivalent).
8. Where rear placed reinforcing is specified by the Engineer, reinforcing shall be placed with maximum 60mm cover from the back face of the wall.

|     |                      |       |      |       |          |                                                                                                                                                                                                                          |                   |               |           |                  |                                                                   |                                   |                      |
|-----|----------------------|-------|------|-------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------|-----------|------------------|-------------------------------------------------------------------|-----------------------------------|----------------------|
|     |                      |       |      |       |          |  <p>PO Box 150, Orewa 0946<br/>154 Centreway Road, Orewa 0931<br/>Ph: 09 426 5702 <a href="http://www.hc.co.nz">www.hc.co.nz</a></p> | Design            | P. WILSON     | SEPT 2022 | THREE BLOKES LTD | Project<br>PROPOSED SHEDS<br>362 MATAKANA VALLEY ROAD<br>MATAKANA | Title<br>GENERAL STRUCTURAL NOTES | Sheet No.<br><br>SN2 |
|     |                      |       |      |       |          |                                                                                                                                                                                                                          | Drawn             | L. LIANG      | SEPT 2022 |                  |                                                                   |                                   |                      |
|     |                      |       |      |       |          |                                                                                                                                                                                                                          | Checked           | P. JARVIE     | SEPT 2022 |                  |                                                                   |                                   |                      |
|     |                      |       |      |       |          |                                                                                                                                                                                                                          | Approved          | I. HUTCHINSON | SEPT 2022 |                  |                                                                   |                                   |                      |
|     |                      |       |      |       |          |                                                                                                                                                                                                                          | Scale             | NTS           |           |                  |                                                                   |                                   |                      |
|     |                      |       |      |       |          |                                                                                                                                                                                                                          | Scale vert. exag. |               |           |                  |                                                                   |                                   |                      |
| B   | FOR BUILDING CONSENT | L.L   | P.J  | I.H   | MAR 2023 |                                                                                                                                                                                                                          |                   |               |           |                  |                                                                   |                                   |                      |
| A   | ISSUED FOR APPROVAL  | L.L   | P.J  | I.H   | OCT 2022 |                                                                                                                                                                                                                          |                   |               |           |                  |                                                                   |                                   |                      |
| No. | Revision             | Drawn | Chk. | Appd. | Date     |                                                                                                                                                                                                                          |                   |               |           |                  |                                                                   |                                   |                      |

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FOUNDATION LEGEND:

20 SERIES MASONRY

BP I - Ø450 x 1200mm CONCRETE BORED PILE w/ 4/HD16 & R6 STIRRUPS @ 300mm CRS (75mm COVER)

SF I - 300mm WIDE x 450mm DEEP STRIP FOOTING w/ 4/HD12 + R6@600mm CRS (75mm COVER) 600mm BELOW C.G.L

| CONCRETE SCHEDULE   |        |
|---------------------|--------|
| FILES               | 20 MPa |
| STRIP FOOTINGS      | 20 MPa |
| MASONRY WALLS       | 20 MPa |
| SLAB ON GRADE       | 25 MPa |
| SHED MESH GRADE     | SE93   |
| FOOTPATH MESH GRADE | SE62   |

|     |                      |       |      |       |          |
|-----|----------------------|-------|------|-------|----------|
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|                  |               |           |
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| Design           | P. WILSON     | SEPT 2022 |
| Drawn            | L. LIANG      | SEPT 2022 |
| Checked          | P. JARVIE     | SEPT 2022 |
| Approved         | I. HUTCHINSON | SEPT 2022 |
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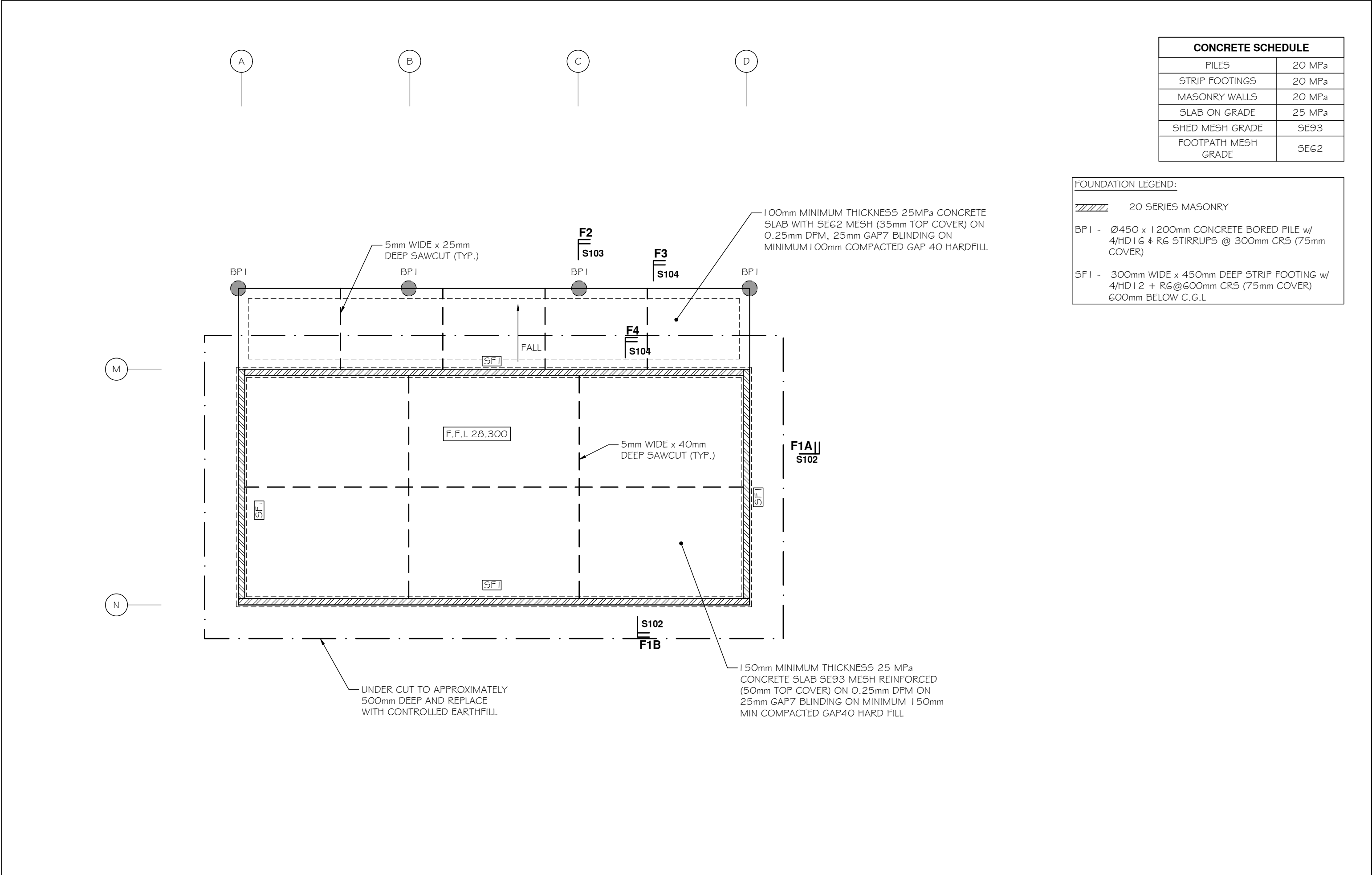
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| Project | PROPOSED SHEDS<br>362 MATAKANA VALLEY ROAD<br>MATAKANA |
|---------|--------------------------------------------------------|

|         |                        |
|---------|------------------------|
| Title   | SHED 1 FOUNDATION PLAN |
| Job No. | 24742                  |

|           |      |
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| Sheet No. | S100 |
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|     |                      |       |      |       |          |  | Design            | P. WILSON     | SEPT 2022    |  |  |  |  |  |  |  |  |  |  |
|     |                      |       |      |       |          |                                                                                      | Drawn             | L. LIANG      | SEPT 2022    |  |  |  |  |  |  |  |  |  |  |
|     |                      |       |      |       |          |                                                                                      | Checked           | P. JARVIE     | SEPT 2022    |  |  |  |  |  |  |  |  |  |  |
|     |                      |       |      |       |          |                                                                                      | Approved          | I. HUTCHINSON | SEPT 2022    |  |  |  |  |  |  |  |  |  |  |
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| B   | FOR BUILDING CONSENT | L.L.  | P.J. | I.H.  | MAR 2023 |                                                                                      |                   |               |              |  |  |  |  |  |  |  |  |  |  |
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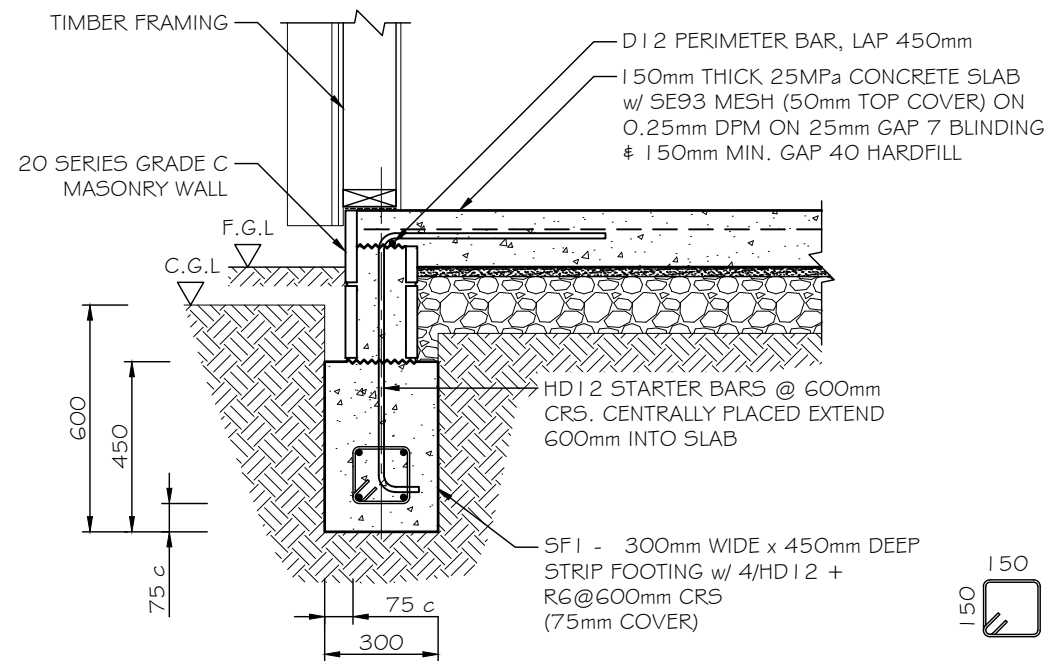
Project  
PROPOSED SHEDS  
362 MATAKANA VALLEY ROAD  
MATAKANA

Title  
SHED 2 FOUNDATION PLAN

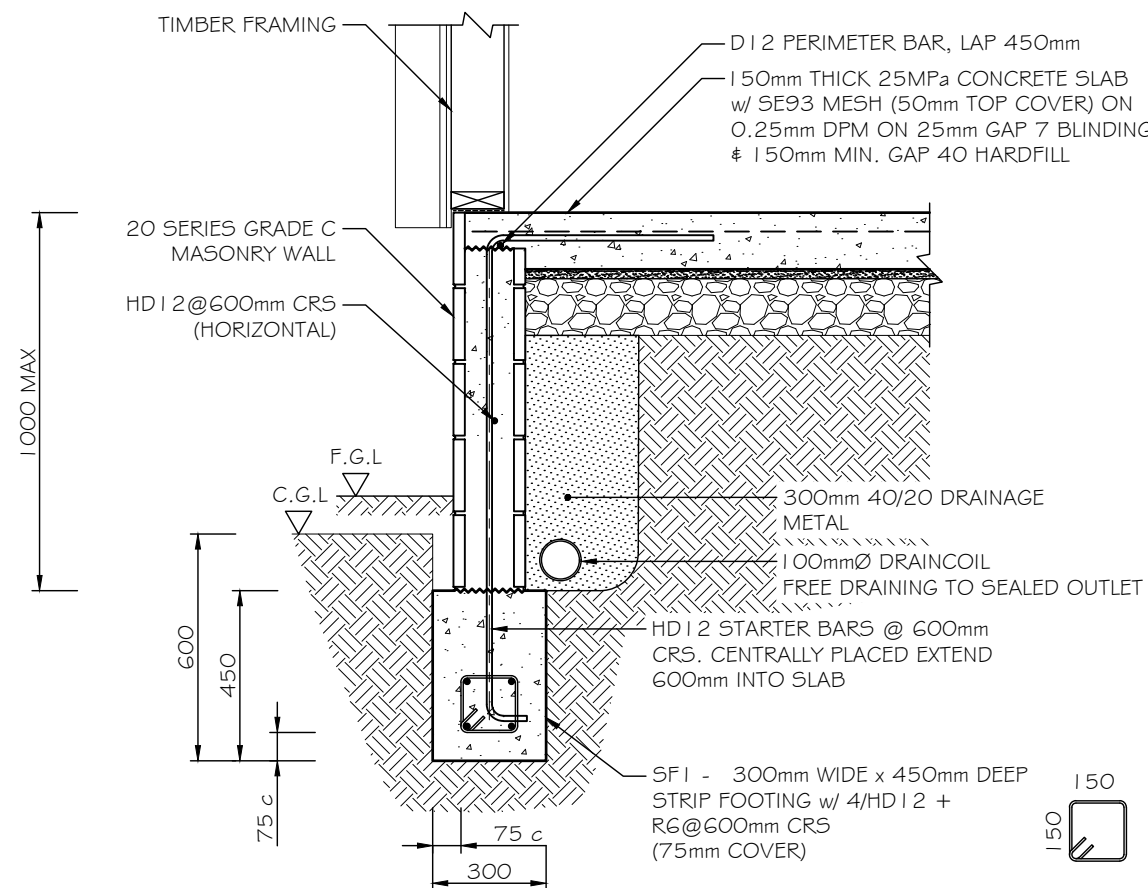
Sheet No.  
S101

Job No.  
24742

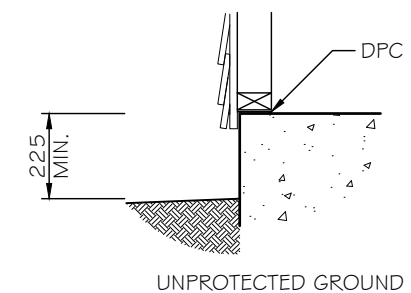
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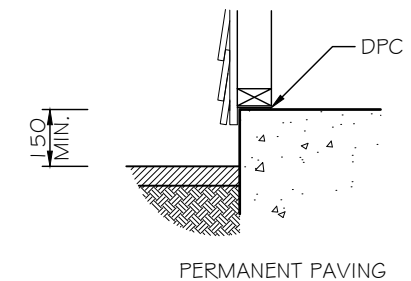
**F1A TYPICAL PERIMETER FOUNDATION DETAIL**  
SCALE 1:20



**F1B TYPICAL PERIMETER FOUNDATION WALL DETAIL**  
SCALE 1:20



PART OF NZS3604: 2011  
FIGURE 7.1.1 - MINIMUM  
HEIGHTS OF FINISHED  
CONCRETE (RESIDENTIAL,  
HABITABLE)  
SLAB-ON-GROUND FLOORS  
ABOVE ADJOINING  
FINISHED GROUND LEVEL  
(SEE 7.5.2.1)



FINISHED GROUND LEVEL  
TO BE SLOPED AWAY FROM  
BUILDING 1.0m @ 1:25  
(SEE 7.5.2.2)

|     |                      |       |      |       |          |
|-----|----------------------|-------|------|-------|----------|
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| Drawn            | L. LIANG      | SEPT 2022 |
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| Approved         | I. HUTCHINSON | SEPT 2022 |
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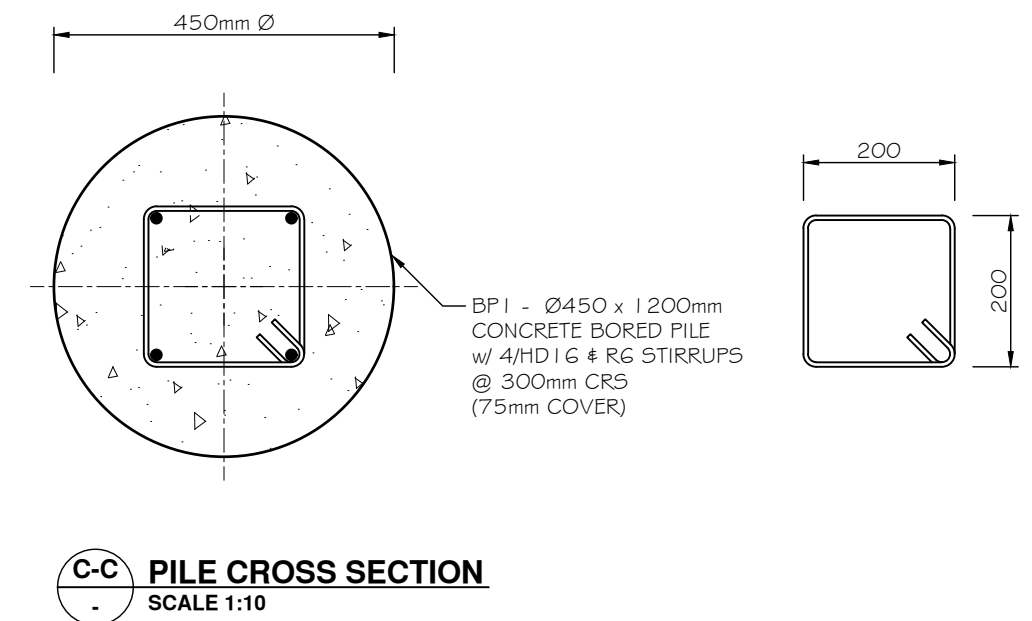
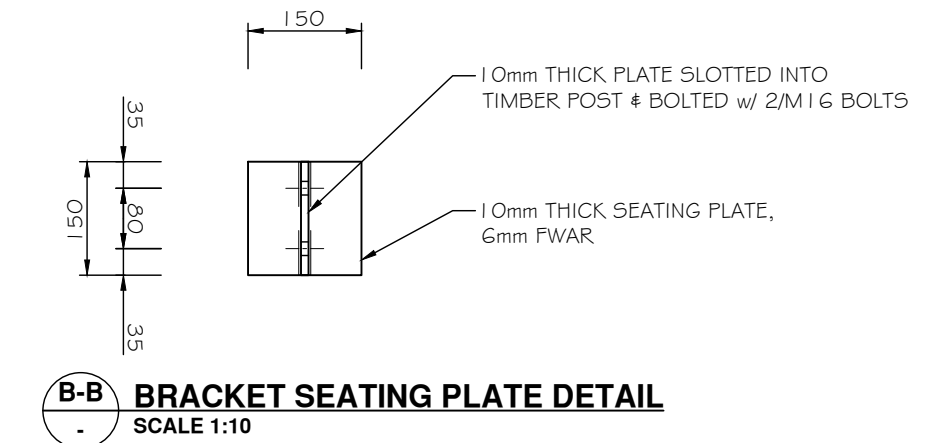
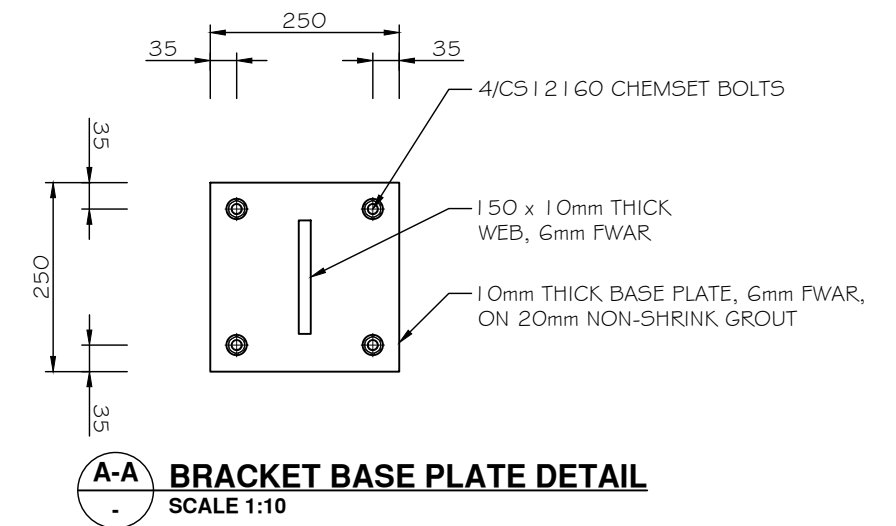
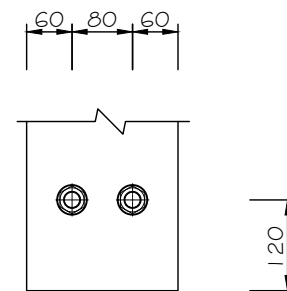
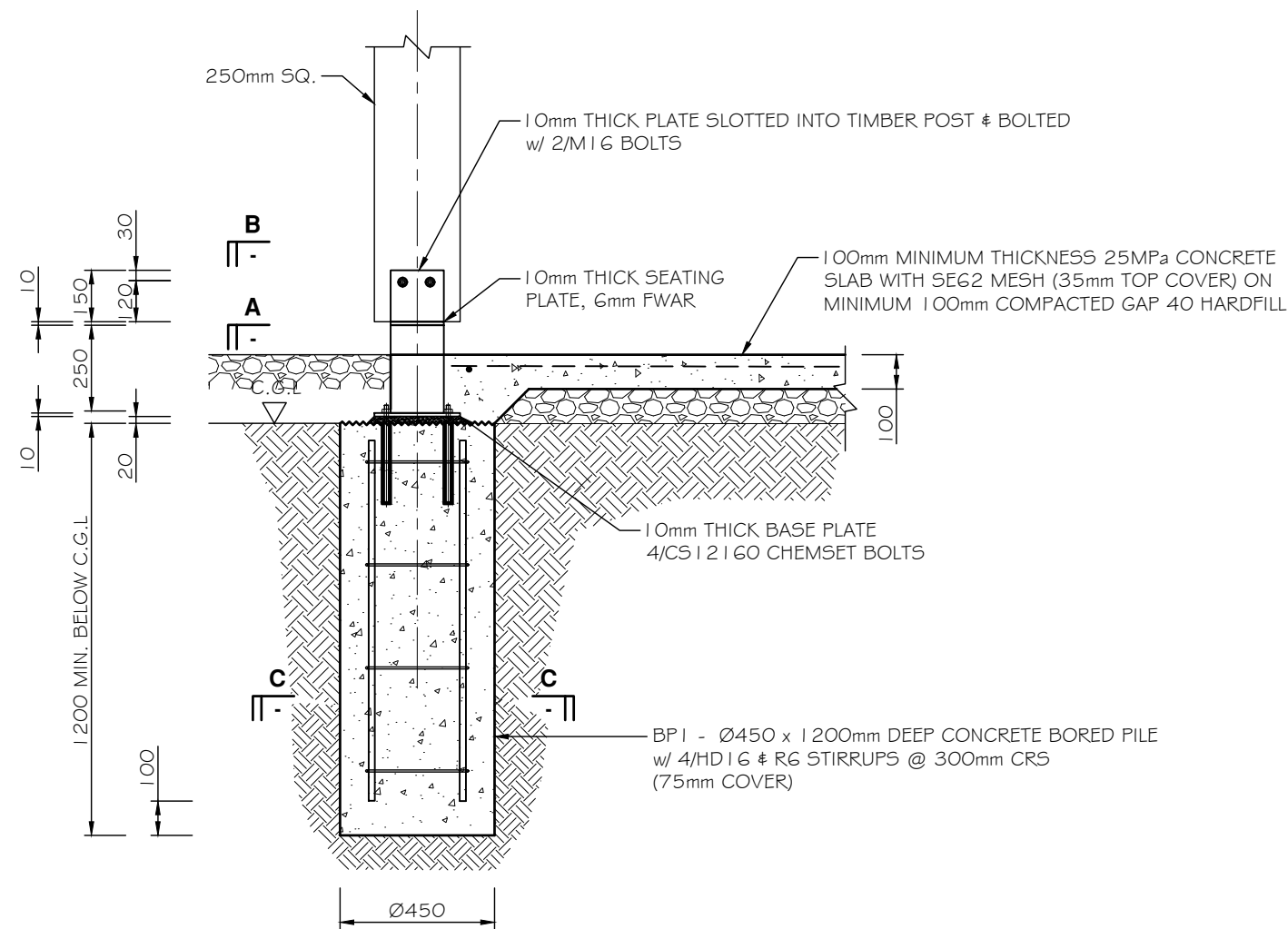
Project  
**PROPOSED SHEDS**  
362 MATAKANA VALLEY ROAD  
MATAKANA

Title  
**FOUNDATION DETAIL**

Job No.  
**24742**

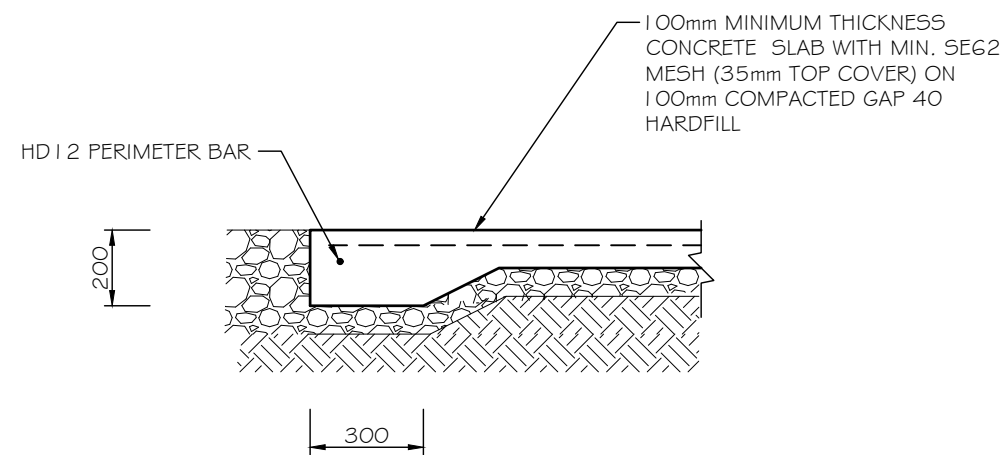
Sheet No.  
**S102**

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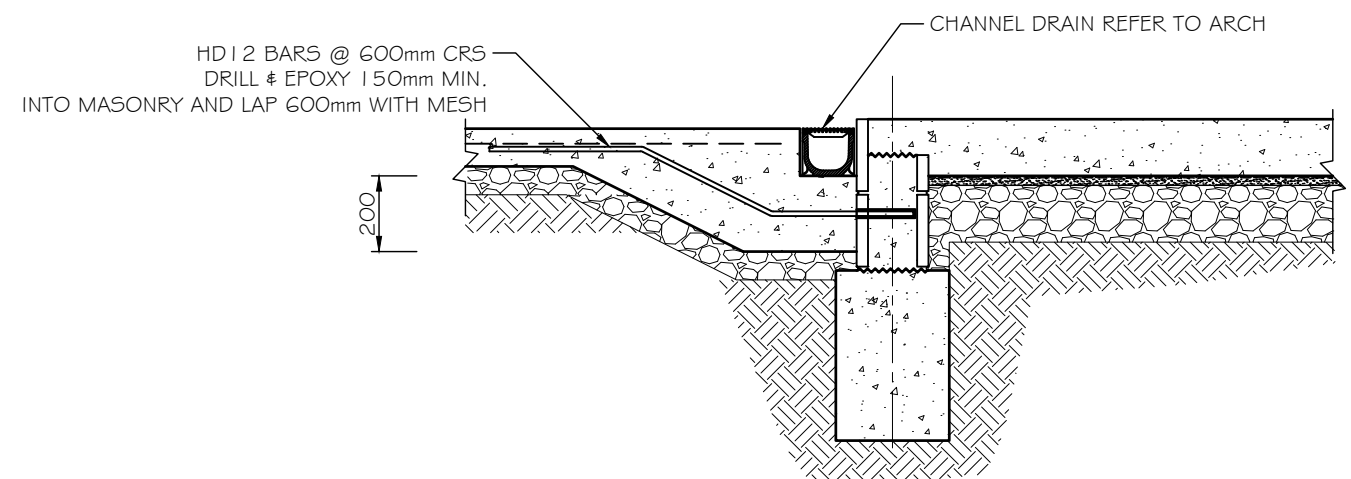
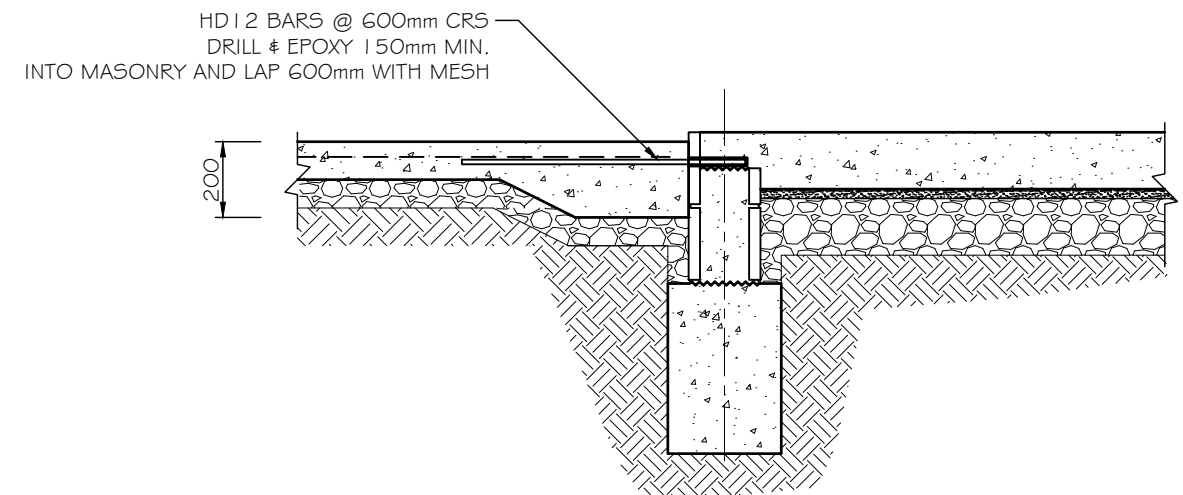


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|     |                      |       |      |       |          |  <div><b>Hutchinson</b><br/>ENGINEERING</div> | Design            | P. WILSON     | SEPT 2022 | THREE BLOKES LTD | Project<br><b>PROPOSED SHEDS</b><br><b>362 MATAKANA VALLEY ROAD</b><br><b>MATAKANA</b> | Title<br><b>FOUNDATION DETAIL</b> | Sheet No.<br><br><b>S103</b> |
|     |                      |       |      |       |          |                                                                                                                                   | Drawn             | L. LIANG      | SEPT 2022 |                  |                                                                                        |                                   |                              |
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|     |                      |       |      |       |          |                                                                                                                                   | Approved          | I. HUTCHINSON | SEPT 2022 |                  |                                                                                        |                                   |                              |
|     |                      |       |      |       |          |                                                                                                                                   | Scale             | SCALE: 1:20   |           |                  |                                                                                        |                                   |                              |
| B   | FOR BUILDING CONSENT | L.L   | P.J  | I.H   | MAR 2023 | PO Box 150, Orewa 0946<br>154 Centreway Road, Orewa 0931<br>Ph: 09 426 5702 <a href="http://www.hc.co.nz">www.hc.co.nz</a>        | Scale vert. exact |               |           |                  | Job No.<br><br><b>24742</b>                                                            |                                   |                              |
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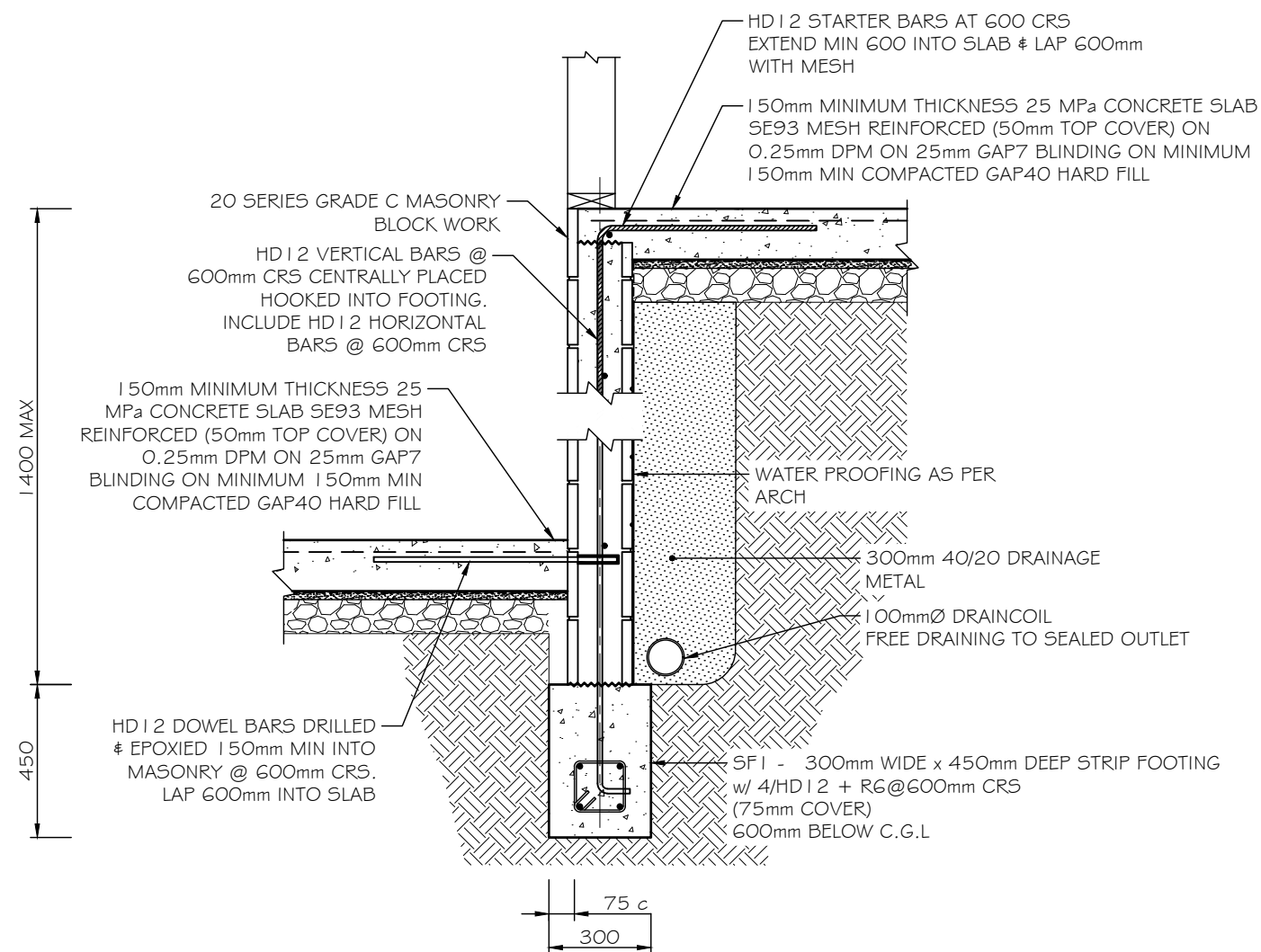
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**F3 TYPICAL SLAB EDGE DETAIL**  
S100 SCALE 1:20



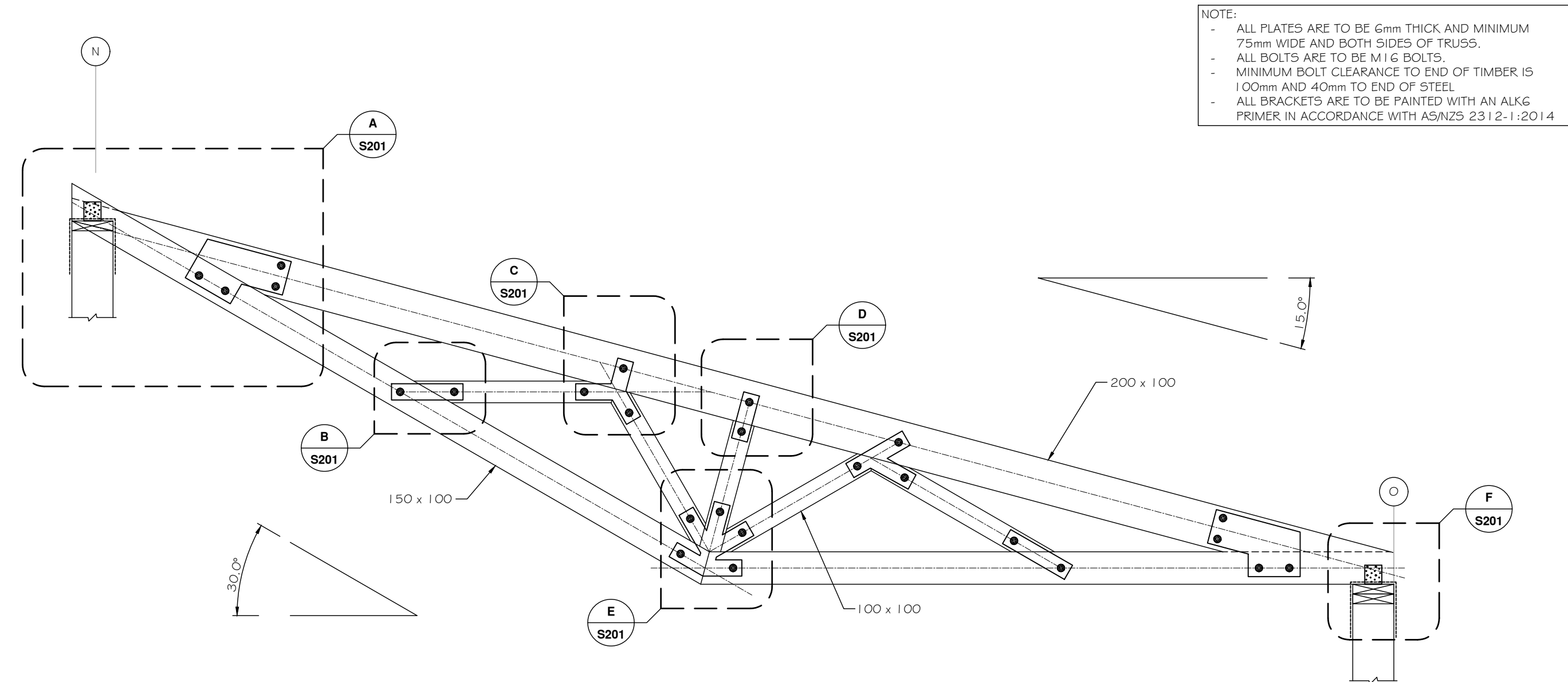
**F4 TYPICAL SLAB DETAIL**  
S100 SCALE 1:20



**F5 TYPICAL PILED FOOTING DETAIL**  
S100 SCALE 1:20

|     |                      |       |      |       |          |                                                                                                                                                                                                                                                                           |                  |               |           |                  |                                                                   |                            |                       |
|-----|----------------------|-------|------|-------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------|-----------|------------------|-------------------------------------------------------------------|----------------------------|-----------------------|
|     |                      |       |      |       |          |  <div><b>Hutchinson</b><br/>ENGINEERING</div> <div>PO Box 150, Orewa 0946<br/>154 Centreway Road, Orewa 0931<br/>Ph: 09 426 5702 <a href="http://www.hc.co.nz">www.hc.co.nz</a></div> | Design           | P. WILSON     | SEPT 2022 | THREE BLOKES LTD | Project<br>PROPOSED SHEDS<br>362 MATAKANA VALLEY ROAD<br>MATAKANA | Title<br>FOUNDATION DETAIL | Sheet No.<br><br>S104 |
|     |                      |       |      |       |          |                                                                                                                                                                                                                                                                           | Drawn            | L. LIANG      | SEPT 2022 |                  |                                                                   |                            |                       |
|     |                      |       |      |       |          |                                                                                                                                                                                                                                                                           | Checked          | P. JARVIE     | SEPT 2022 |                  |                                                                   |                            |                       |
|     |                      |       |      |       |          |                                                                                                                                                                                                                                                                           | Approved         | I. HUTCHINSON | SEPT 2022 |                  |                                                                   |                            |                       |
|     |                      |       |      |       |          |                                                                                                                                                                                                                                                                           | Scale            | SCALE: 1:20   |           |                  |                                                                   |                            |                       |
|     |                      |       |      |       |          |                                                                                                                                                                                                                                                                           | Scale ver: exact |               |           |                  |                                                                   |                            |                       |
| B   | FOR BUILDING CONSENT | L.L   | P.J  | I.H   | MAR 2023 |                                                                                                                                                                                                                                                                           |                  |               |           |                  | Job No.<br><br>24742                                              |                            |                       |
| A   | ISSUED FOR APPROVAL  | L.L   | P.J  | I.H   | OCT 2022 |                                                                                                                                                                                                                                                                           |                  |               |           |                  |                                                                   |                            |                       |
| No. | Revision             | Drawn | Chk. | Appd. | Date     |                                                                                                                                                                                                                                                                           |                  |               |           |                  |                                                                   |                            |                       |

BCO10364430 Received by Auckland Council 10/03/2023

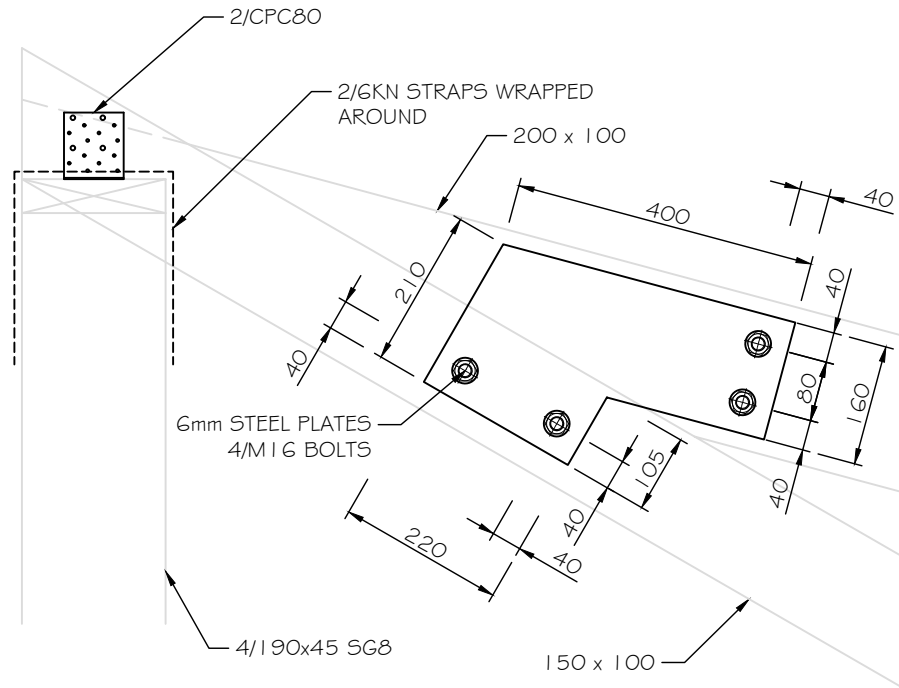


**D1 TYPICAL TYPE "A" TRUSS**  
SCALE 1:20

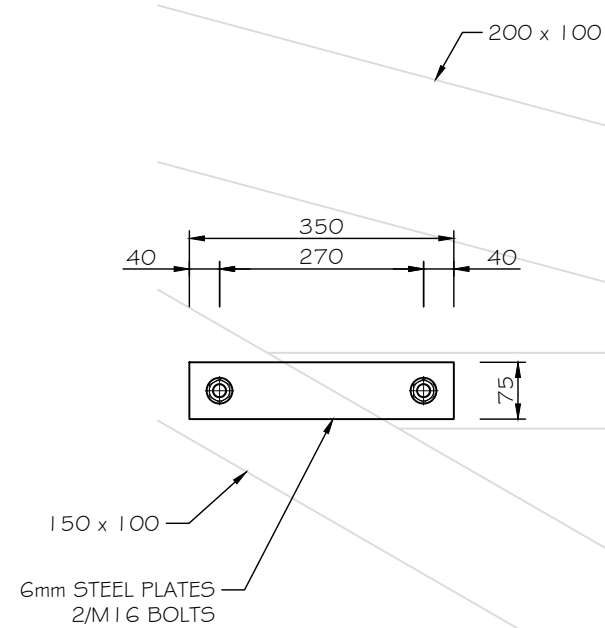
|     |                      |       |      |       |          |                                                                                                                                                                                                                                                                   |          |               |           |                  |                                                                                        |                                              |                              |
|-----|----------------------|-------|------|-------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------|-----------|------------------|----------------------------------------------------------------------------------------|----------------------------------------------|------------------------------|
|     |                      |       |      |       |          |  <p><b>Hutchinson</b><br/>ENGINEERING</p> <p>PO Box 150, Orewa 0946<br/>154 Centreway Road, Orewa 0931<br/>Ph: 09 426 5702 <a href="http://www.hc.co.nz">www.hc.co.nz</a></p> | Design   | P. WILSON     | SEPT 2022 | THREE BLOKES LTD | Project<br><b>PROPOSED SHEDS</b><br><b>362 MATAKANA VALLEY ROAD</b><br><b>MATAKANA</b> | Title<br><b>STRUCTURAL CONNECTION DETAIL</b> | Sheet No.<br><br><b>S200</b> |
|     |                      |       |      |       |          |                                                                                                                                                                                                                                                                   | Drawn    | L. LIANG      | SEPT 2022 |                  |                                                                                        |                                              |                              |
|     |                      |       |      |       |          |                                                                                                                                                                                                                                                                   | Checked  | P. JARVIE     | SEPT 2022 |                  |                                                                                        |                                              |                              |
|     |                      |       |      |       |          |                                                                                                                                                                                                                                                                   | Approved | I. HUTCHINSON | SEPT 2022 |                  |                                                                                        |                                              |                              |
|     |                      |       |      |       |          |                                                                                                                                                                                                                                                                   | Scale    | SCALE: 1:20   |           |                  |                                                                                        |                                              |                              |
|     |                      |       |      |       |          | Scale vert. exact                                                                                                                                                                                                                                                 |          |               |           |                  |                                                                                        |                                              |                              |
| B   | FOR BUILDING CONSENT | L.L   | P.J  | I.H   | MAR 2023 |                                                                                                                                                                                                                                                                   |          |               |           |                  |                                                                                        |                                              |                              |
| A   | ISSUED FOR APPROVAL  | L.L   | P.J  | I.H   | OCT 2022 |                                                                                                                                                                                                                                                                   |          |               |           |                  |                                                                                        |                                              |                              |
| No. | Revision             | Drawn | Chk. | Appd. | Date     |                                                                                                                                                                                                                                                                   |          |               |           |                  |                                                                                        |                                              |                              |
|     |                      |       |      |       |          |                                                                                                                                                                                                                                                                   |          |               |           |                  |                                                                                        | Job No.<br><b>24742</b>                      |                              |

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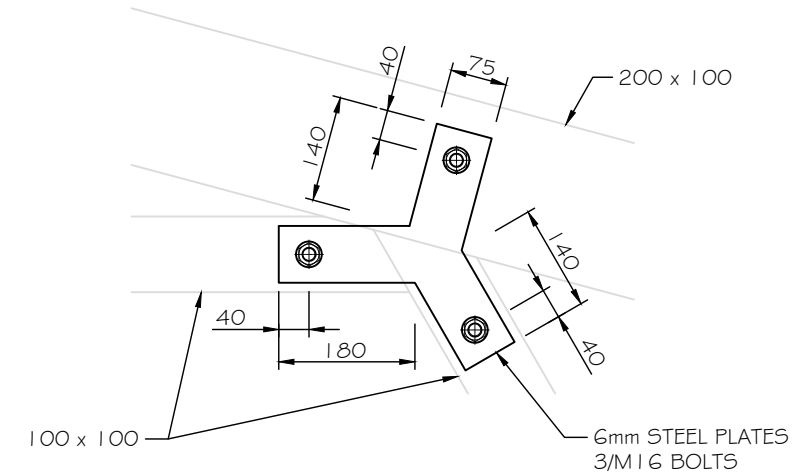




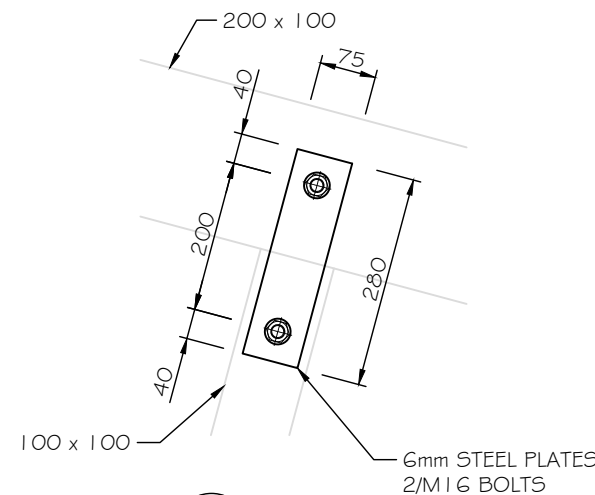
**A-A ENLARGE DETAIL**  
S200 SCALE 1:10



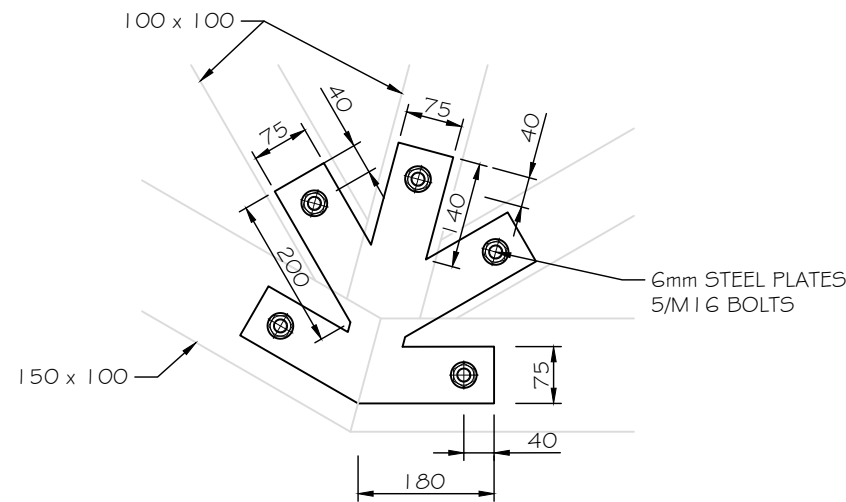
**B-B ENLARGE DETAIL**  
S200 SCALE 1:10



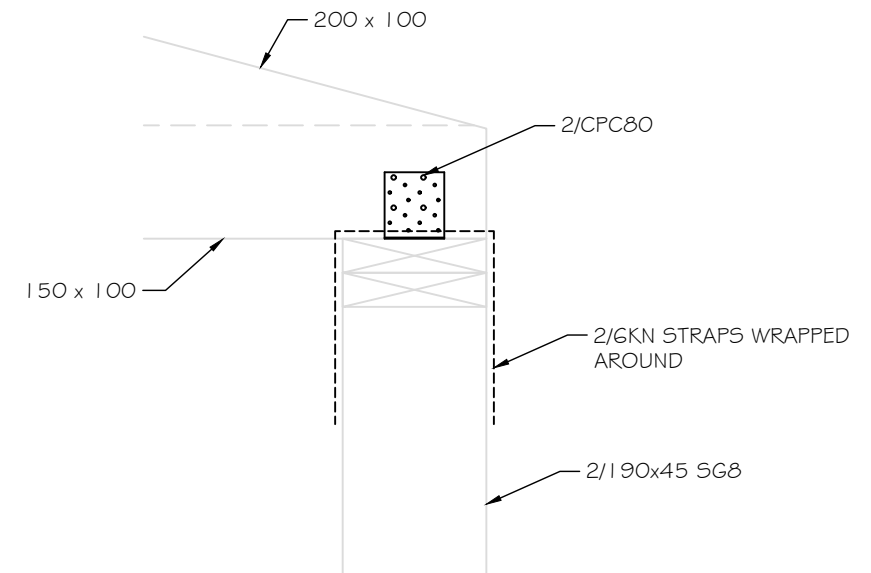
**C-C ENLARGE DETAIL**  
S200 SCALE 1:10



**D-D ENLARGE DETAIL**  
S200 SCALE 1:10



**E-E ENLARGE DETAIL**  
S200 SCALE 1:10



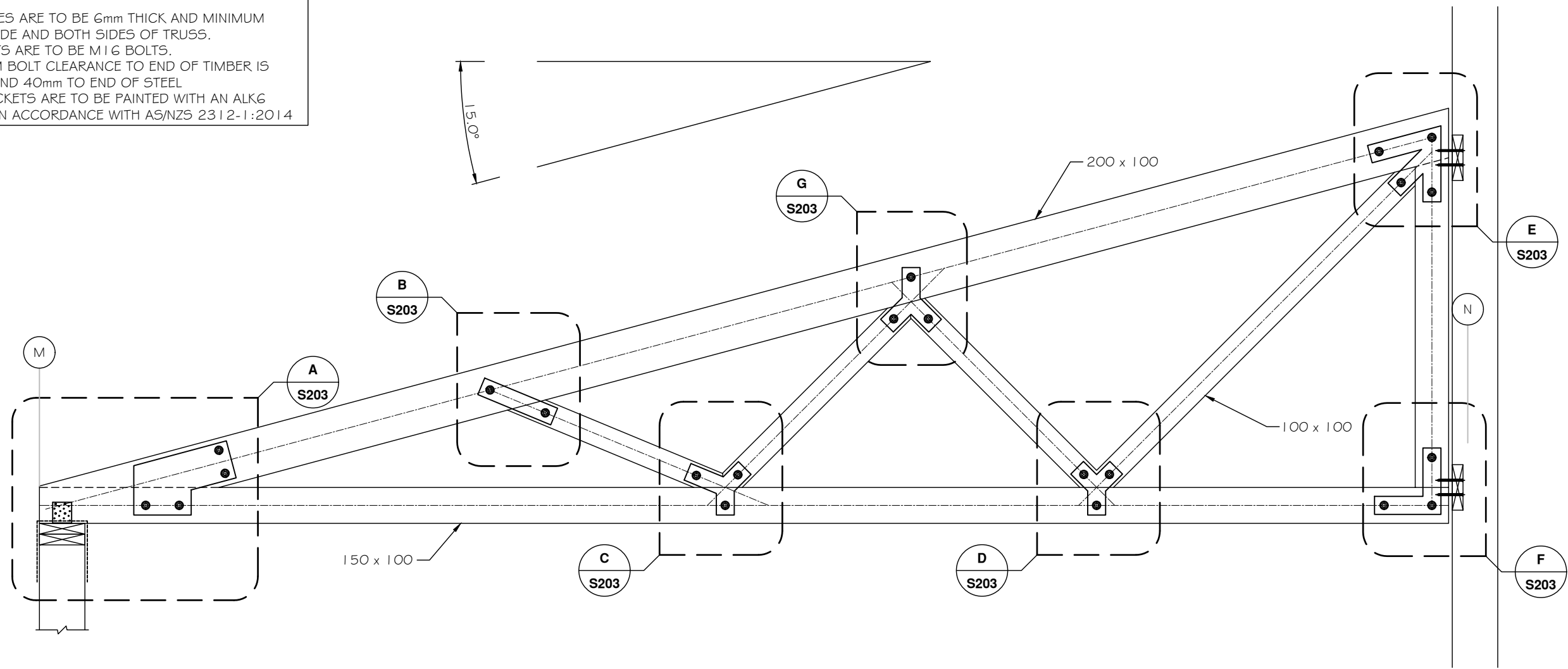
**F-F ENLARGE DETAIL**  
S200 SCALE 1:10

|                                                                                                                                                                                                                          |                      |       |      |       |          |                                                                                                                                                                                                        |                         |  |                                                                                        |                                              |              |                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------|------|-------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--|----------------------------------------------------------------------------------------|----------------------------------------------|--------------|--------------------------|
|  <p>PO Box 150, Orewa 0946<br/>154 Centreway Road, Orewa 0931<br/>Ph: 09 426 5702 <a href="http://www.hc.co.nz">www.hc.co.nz</a></p> |                      |       |      |       |          | Design <b>P. WILSON</b> SEPT 2022<br>Drawn <b>L. LIANG</b> SEPT 2022<br>Checked <b>P. JARVIE</b> SEPT 2022<br>Approved <b>I. HUTCHINSON</b> SEPT 2022<br>Scale <b>SCALE: 1:10</b><br>Scale vert. exact | <b>THREE BLOKES LTD</b> |  | Project<br><b>PROPOSED SHEDS</b><br><b>362 MATAKANA VALLEY ROAD</b><br><b>MATAKANA</b> | Title<br><b>STRUCTURAL CONNECTION DETAIL</b> |              | Sheet No.<br><b>S201</b> |
| <b>B</b>                                                                                                                                                                                                                 | FOR BUILDING CONSENT | L.L.  | P.J. | I.H.  | MAR 2023 |                                                                                                                                                                                                        |                         |  |                                                                                        |                                              |              |                          |
| <b>A</b>                                                                                                                                                                                                                 | ISSUED FOR APPROVAL  | L.L.  | P.J. | I.H.  | OCT 2022 |                                                                                                                                                                                                        |                         |  |                                                                                        |                                              |              |                          |
| No.                                                                                                                                                                                                                      | Revision             | Drawn | Chk. | Appd. | Date     |                                                                                                                                                                                                        |                         |  |                                                                                        | Job No.                                      | <b>24742</b> |                          |

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NOTE:

- ALL PLATES ARE TO BE 6mm THICK AND MINIMUM 75mm WIDE AND BOTH SIDES OF TRUSS.
- ALL BOLTS ARE TO BE M16 BOLTS.
- MINIMUM BOLT CLEARANCE TO END OF TIMBER IS 100mm AND 40mm TO END OF STEEL
- ALL BRACKETS ARE TO BE PAINTED WITH AN ALK6 PRIMER IN ACCORDANCE WITH AS/NZS 2312-1:2014



**D2** TYPICAL TYPE "B" TRUSS  
SCALE 1:20

|     |                      |       |      |       |          |
|-----|----------------------|-------|------|-------|----------|
|     |                      |       |      |       |          |
|     |                      |       |      |       |          |
| B   | FOR BUILDING CONSENT | L.L.  | P.J. | I.H.  | MAR 2023 |
| A   | ISSUED FOR APPROVAL  | L.L.  | P.J. | I.H.  | OCT 2022 |
| No. | Revision             | Drawn | Chk. | Appd. | Date     |



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|                  |               |           |
|------------------|---------------|-----------|
| Design           | P. WILSON     | SEPT 2022 |
| Drawn            | L. LIANG      | SEPT 2022 |
| Checked          | P. JARVIE     | SEPT 2022 |
| Approved         | I. HUTCHINSON | SEPT 2022 |
| Scale            | SCALE: 1:20   |           |
| Scale ver: exact |               |           |

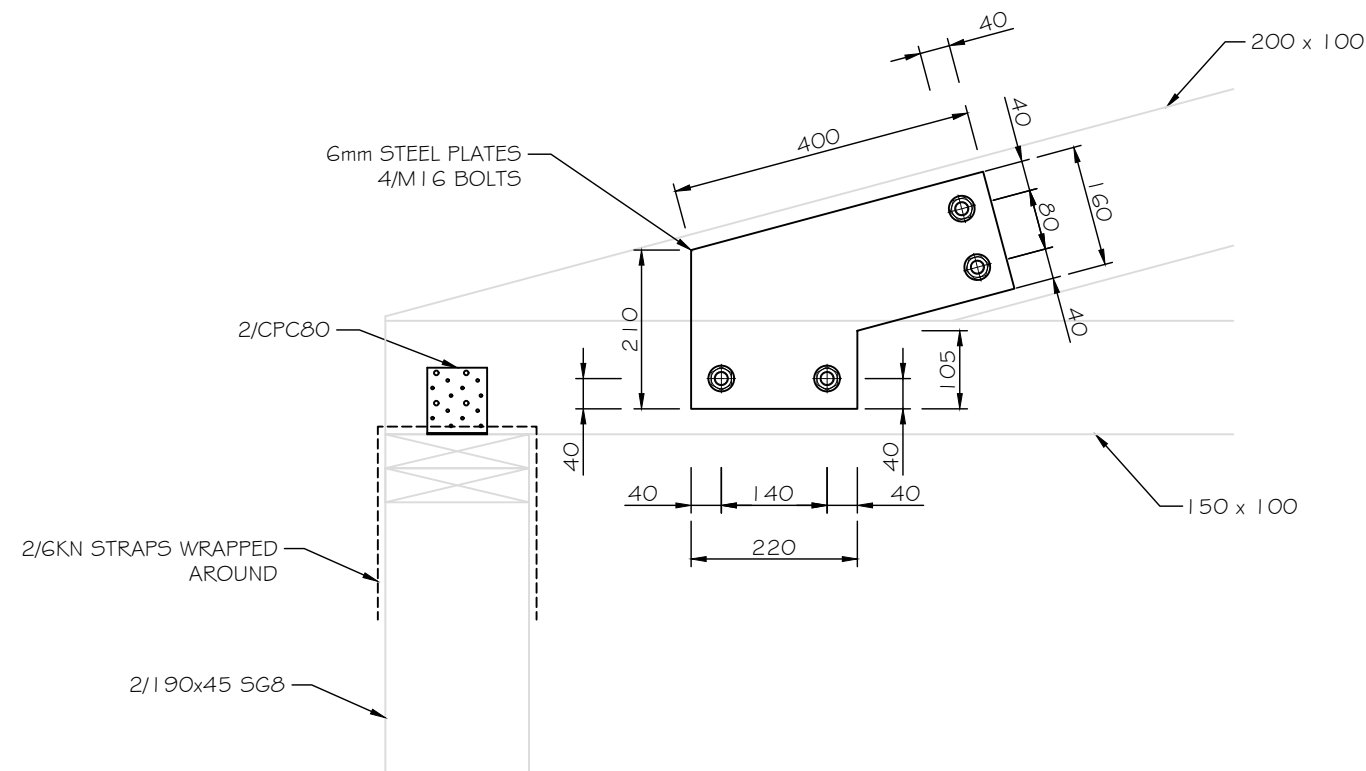
THREE BLOKES LTD

|         |                                                        |
|---------|--------------------------------------------------------|
| Project | PROPOSED SHEDS<br>362 MATAKANA VALLEY ROAD<br>MATAKANA |
|---------|--------------------------------------------------------|

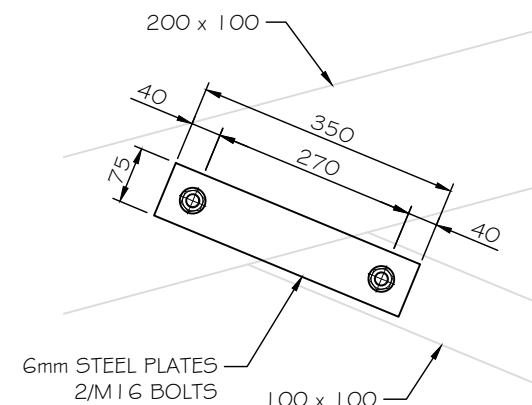
|         |                              |
|---------|------------------------------|
| Title   | STRUCTURAL CONNECTION DETAIL |
| Job No. | 24742                        |

|           |      |
|-----------|------|
| Sheet No. | S202 |
|-----------|------|

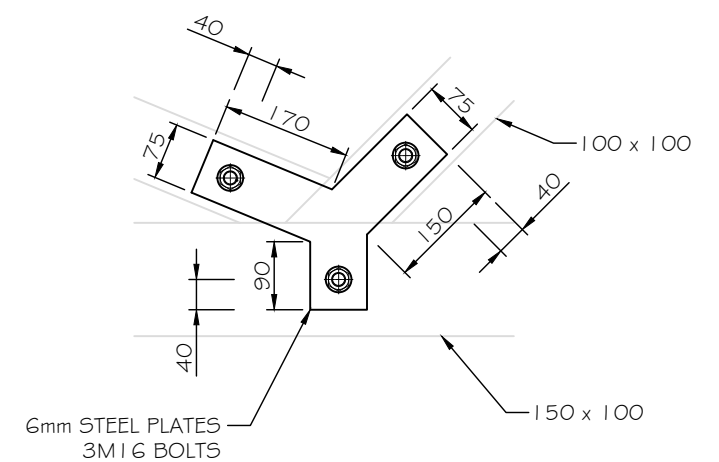
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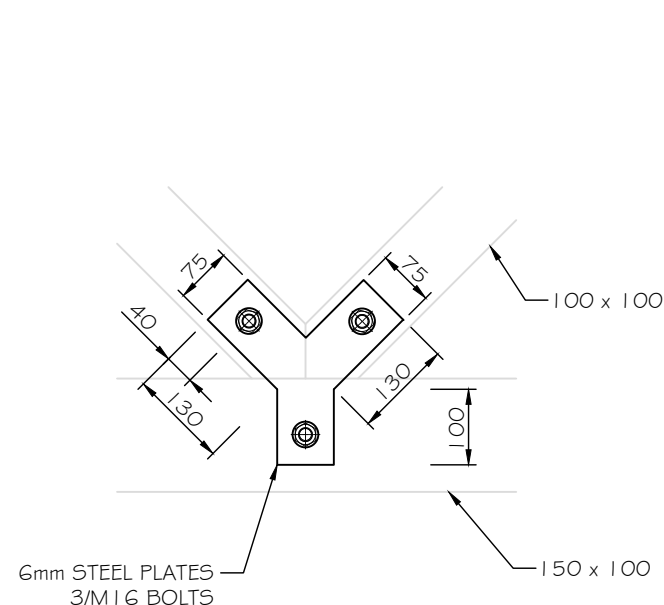
**A-A ENLARGE DETAIL**  
SCALE 1:10



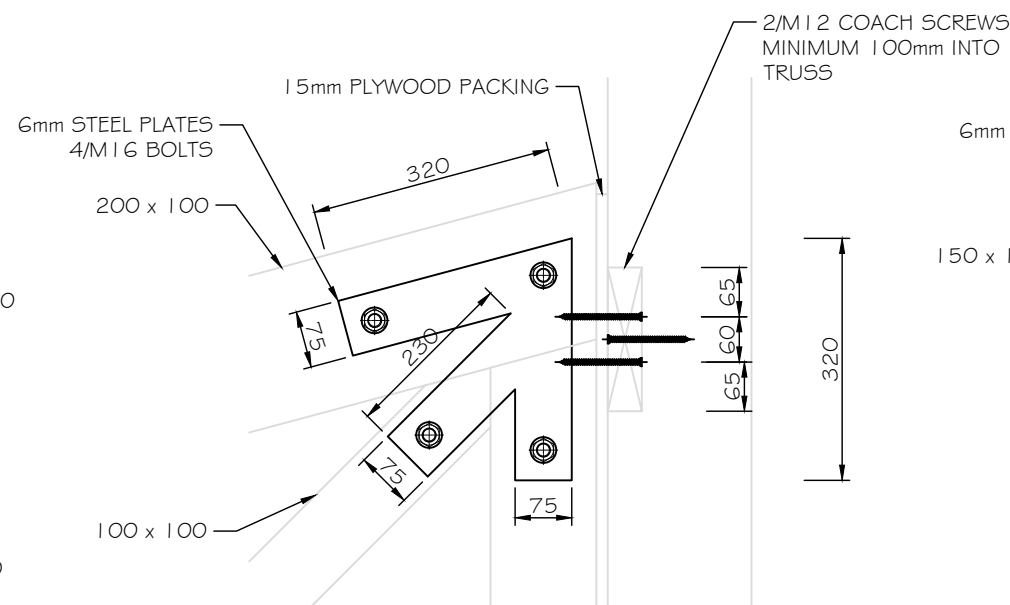
**B-B ENLARGE DETAIL**  
SCALE 1:10



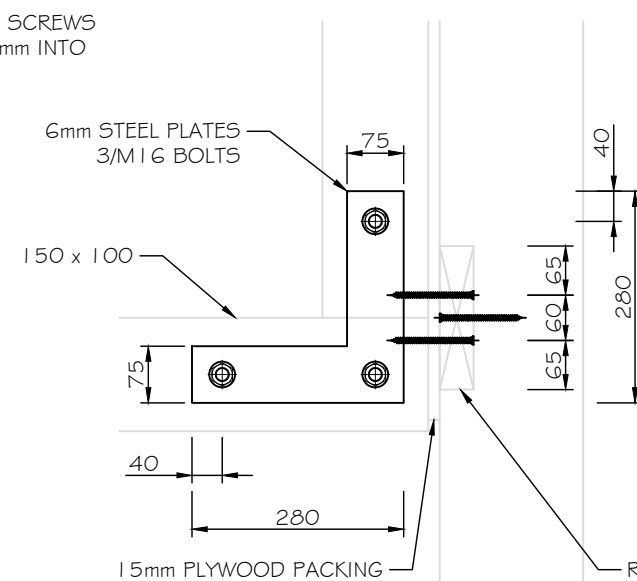
**C-C ENLARGE DETAIL**  
SCALE 1:10



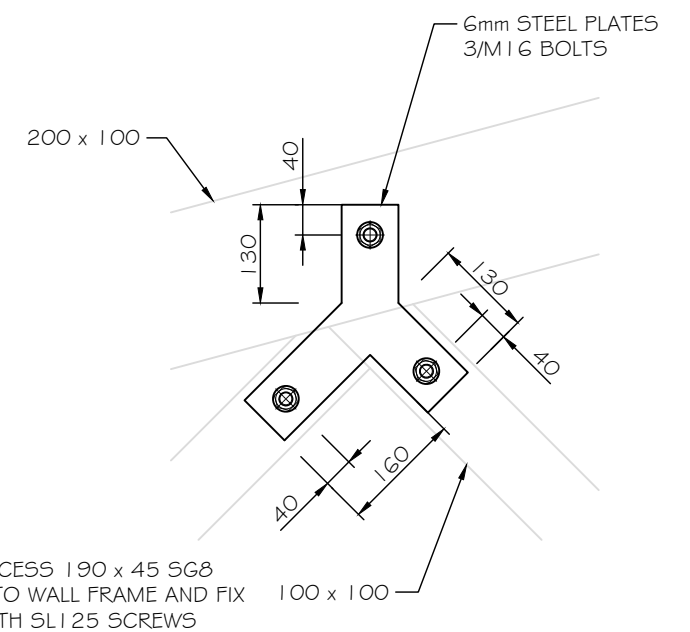
**D-D ENLARGE DETAIL**  
SCALE 1:10



**E-E ENLARGE DETAIL**  
SCALE 1:10



**F-F ENLARGE DETAIL**  
SCALE 1:10



**G-G ENLARGE DETAIL**  
SCALE 1:10

| No. | Revision             | Drawn | Chk. | Appd. | Date     |
|-----|----------------------|-------|------|-------|----------|
| B   | FOR BUILDING CONSENT | L.L.  | P.J. | I.H.  | MAR 2023 |
| A   | ISSUED FOR APPROVAL  | L.L.  | P.J. | I.H.  | OCT 2022 |

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|                  |               |           |
|------------------|---------------|-----------|
| Design           | P. WILSON     | SEPT 2022 |
| Drawn            | L. LIANG      | SEPT 2022 |
| Checked          | P. JARVIE     | SEPT 2022 |
| Approved         | I. HUTCHINSON | SEPT 2022 |
| Scale            | SCALE: 1:10   |           |
| Scale ver: exact |               |           |

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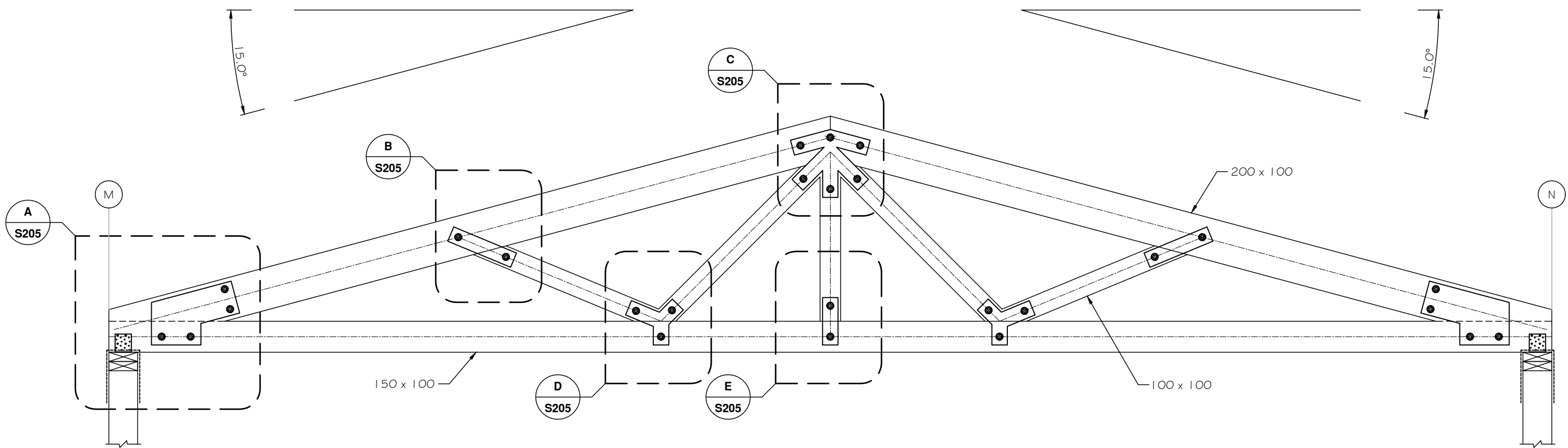
Project  
**PROPOSED SHEDS**  
362 MATAKANA VALLEY ROAD  
MATAKANA

|         |                                     |
|---------|-------------------------------------|
| Title   | <b>STRUCTURAL CONNECTION DETAIL</b> |
| Job No. | <b>24742</b>                        |

Sheet No.  
**S203**

**BCO10364430 Received by Auckland Council 10/03/2023**

- NOTE:
- ALL PLATES ARE TO BE 6mm THICK AND MINIMUM 75mm WIDE AND BOTH SIDES OF TRUSS.
  - ALL BOLTS ARE TO BE M16 BOLTS.
  - MINIMUM BOLT CLEARANCE TO END OF TIMBER IS 100mm AND 40mm TO END OF STEEL
  - ALL BRACKETS ARE TO BE PAINTED WITH AN ALK6 PRIMER IN ACCORDANCE WITH AS/NZS 2312-1:2014

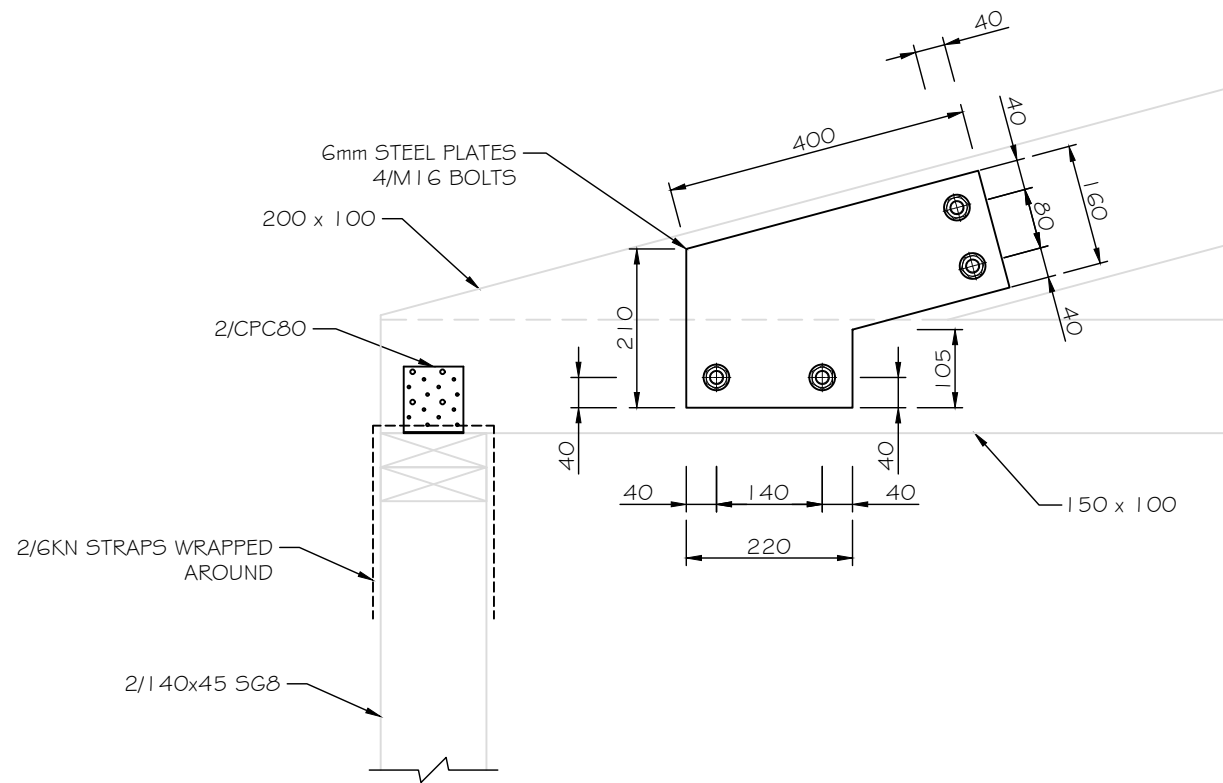


**D3** TYPICAL TYPE "C" TRUSS  
SCALE 1:20

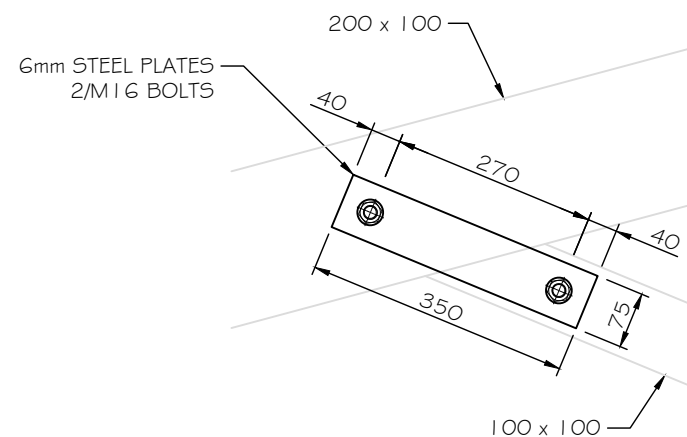
|                      |                      |       |      |       |          |                                                                                                                                                                                                                                                         |                   |               |           |                         |                                                                          |                                              |                          |  |
|----------------------|----------------------|-------|------|-------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------|-----------|-------------------------|--------------------------------------------------------------------------|----------------------------------------------|--------------------------|--|
|                      |                      |       |      |       |          |  <b>Hutchinson</b><br>ENGINEERING<br><br>PO Box 150, Orewa 0946<br>154 Centreway Road, Orewa 0931<br>Ph: 09 426 5702 <a href="http://www.hc.co.nz">www.hc.co.nz</a> | Design            | P. WILSON     | SEPT 2022 | <b>THREE BLOKES LTD</b> | Project<br><b>PROPOSED SHEDS</b><br>362 MATAKANA VALLEY ROAD<br>MATAKANA | Title<br><b>STRUCTURAL CONNECTION DETAIL</b> | Sheet No.<br><b>S204</b> |  |
|                      |                      |       |      |       |          |                                                                                                                                                                                                                                                         | Drawn             | L. LIANG      | SEPT 2022 |                         |                                                                          |                                              |                          |  |
|                      |                      |       |      |       |          |                                                                                                                                                                                                                                                         | Checked           | P. JARVIE     | SEPT 2022 |                         |                                                                          |                                              |                          |  |
|                      |                      |       |      |       |          |                                                                                                                                                                                                                                                         | Approved          | I. HUTCHINSON | SEPT 2022 |                         |                                                                          |                                              |                          |  |
|                      |                      |       |      |       |          |                                                                                                                                                                                                                                                         | Scale             | SCALE: 1:20   |           |                         |                                                                          |                                              |                          |  |
| B                    | FOR BUILDING CONSENT | L.L   | P.J  | I.H   | MAR 2023 | PO Box 150, Orewa 0946<br>154 Centreway Road, Orewa 0931<br>Ph: 09 426 5702 <a href="http://www.hc.co.nz">www.hc.co.nz</a>                                                                                                                              | Scale vert. exact |               |           |                         |                                                                          |                                              |                          |  |
| A                    | ISSUED FOR APPROVAL  | L.L   | P.J  | I.H   | OCT 2022 |                                                                                                                                                                                                                                                         |                   |               |           |                         |                                                                          |                                              |                          |  |
| No.                  | Revision             | Drawn | Chk. | Appd. | Date     |                                                                                                                                                                                                                                                         |                   |               |           |                         |                                                                          |                                              |                          |  |
| Job No. <b>24742</b> |                      |       |      |       |          |                                                                                                                                                                                                                                                         |                   |               |           |                         |                                                                          |                                              |                          |  |

BCO10364430 Received by Auckland Council 10/03/2023

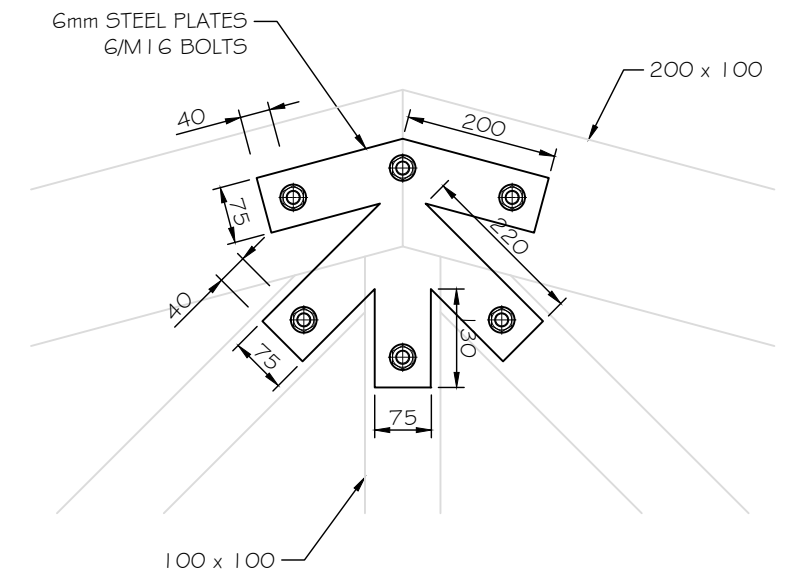




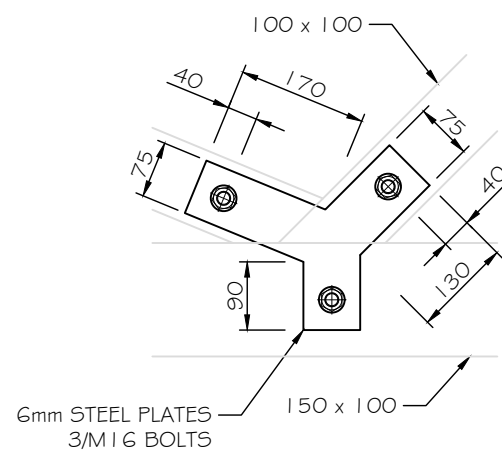
**A-A ENLARGE DETAIL**  
S204 SCALE 1:10



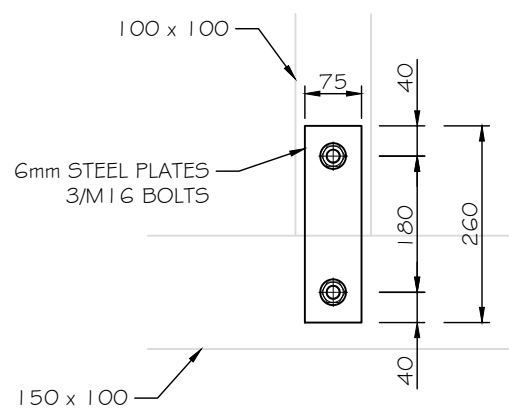
**B-B ENLARGE DETAIL**  
S204 SCALE 1:10



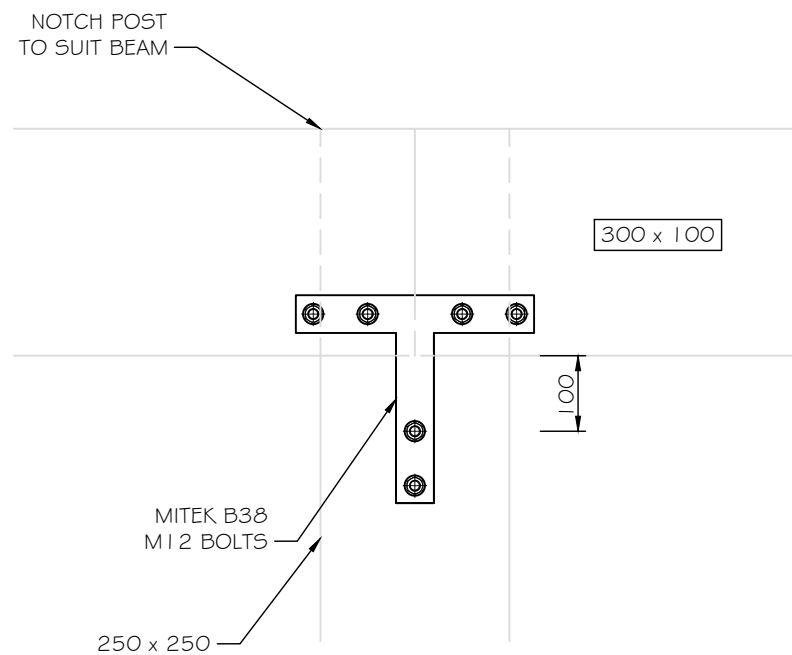
**C-C ENLARGE DETAIL**  
S204 SCALE 1:10



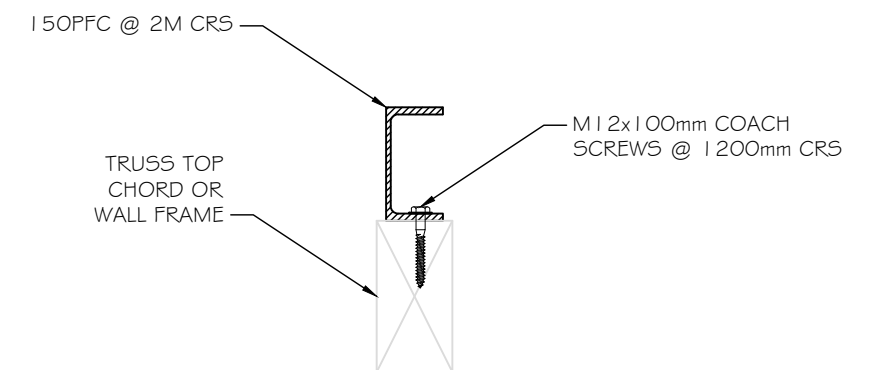
**D-D ENLARGE DETAIL**  
S204 SCALE 1:10



**E-E ENLARGE DETAIL**  
S204 SCALE 1:10



**D4 TYPICAL VERANDAH BEAM DETAIL**  
SCALE 1:10



**D5 TYPICAL CANTILEVERED EAVE BEAM DETAIL**  
SCALE 1:10

| No. | Revision             | Drawn | Chk. | Appd. | Date     |
|-----|----------------------|-------|------|-------|----------|
| B   | FOR BUILDING CONSENT | L.L.  | P.J. | I.H.  | MAR 2023 |
| A   | ISSUED FOR APPROVAL  | L.L.  | P.J. | I.H.  | OCT 2022 |

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|                  |               |           |
|------------------|---------------|-----------|
| Design           | P. WILSON     | SEPT 2022 |
| Drawn            | L. LIANG      | SEPT 2022 |
| Checked          | P. JARVIE     | SEPT 2022 |
| Approved         | I. HUTCHINSON | SEPT 2022 |
| Scale            | SCALE: 1:10   |           |
| Scale ver: exact |               |           |

THREE BLOKES LTD

Project  
**PROPOSED SHEDS**  
362 MATAKANA VALLEY ROAD  
MATAKANA

Title  
**STRUCTURAL CONNECTION DETAIL**

Job No.  
**24742**

Sheet No.  
**S205**

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