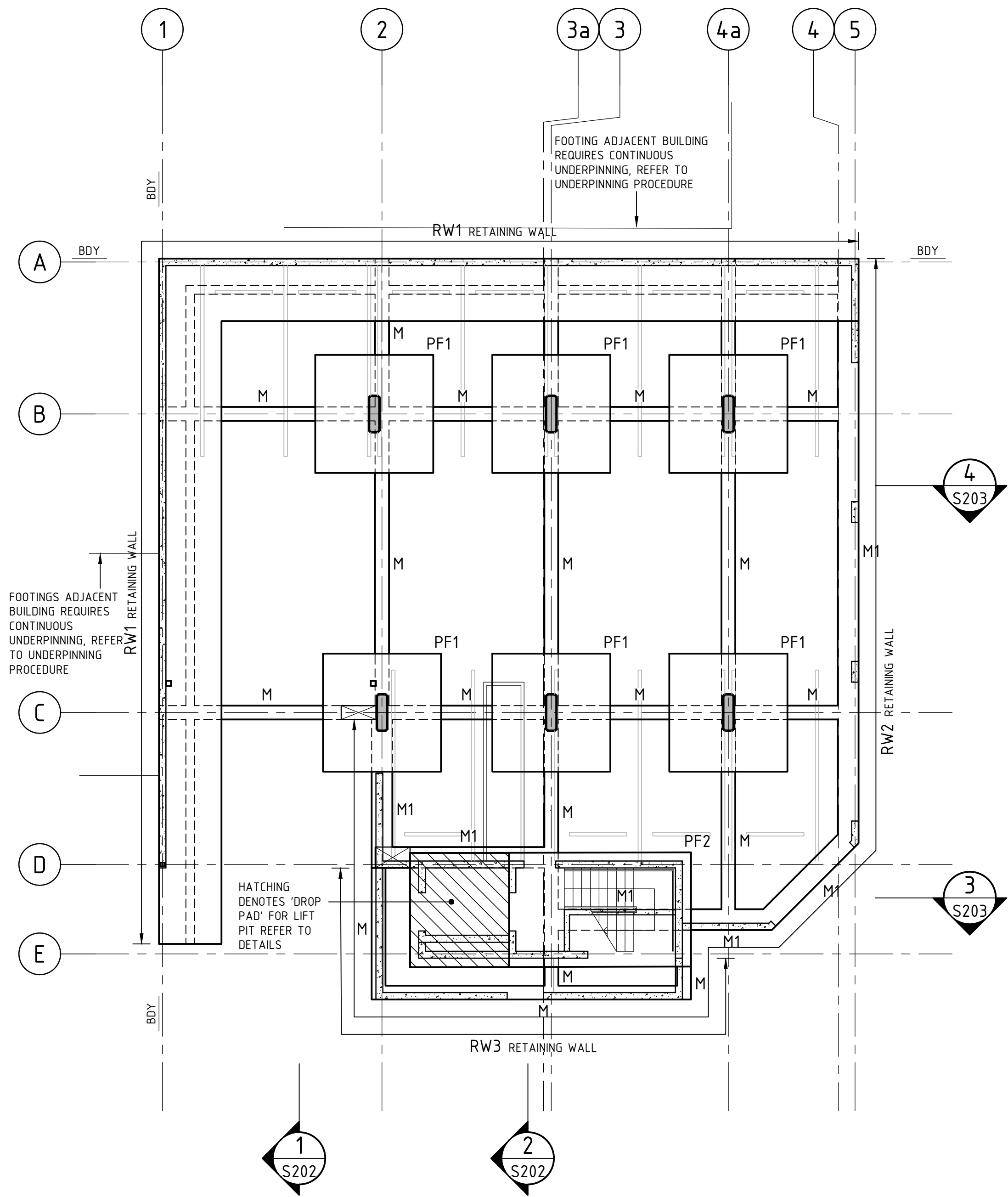


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A	<div><div>1. GENERAL: 1.1 THESE NOTES SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS, THE SPECIFICATIONS AND THE ENGINEER'S FOOTING CONSTRUCTION REPORT/STRUCTURAL DOCUMENTATION, ETC. 1.2 ALL DIMENSIONS AND LEVELS SHALL BE CONFIRMED WITH THE ARCHITECTURAL DRAWINGS AND/OR CHECKED ON SITE. 1.3 ENGINEER'S DRAWINGS MUST NOT BE SCALED. 1.4 THE BUILDER AND/OR AGENT SHALL BE RESPONSIBLE FOR MAINTAINING THE STABILITY OF ALL STRUCTURES AND ANY ELEMENTS UNTIL THEIR COMPLETION AND SHALL ENSURE THAT NO PART OF STRUCTURES OR ANY ELEMENTS ARE OVERSTRESSED BY EXCESSIVE LOADING. 1.5 THE SPECIFICATIONS BELOW SHALL APPLY UNLESS NOTED OTHERWISE. 1.6 REQUEST FOR INFORMATION WILL GENERALLY BE RESPONDED BY THE ENGINEER WITHIN 5 WORKING DAYS, WHILST REVIEWS OF THE SHOP DRAWINGS GENERALLY WITHIN 10 WORKING DAYS.</div><div>2. CONCRETE: 2.1 CONCRETE CONSTRUCTION TO COMPLY WITH AS3600. 2.2 CONCRETE SHALL BE AS FOLLOWS:</div><table><tr><td>ELEMENT</td><td>GRADE (MPa)</td><td>ELEMENT</td><td>GRADE (MPa)</td></tr><tr><td>COLUMN</td><td>50</td><td>FOOTING</td><td>25</td></tr><tr><td>FIRST FLOOR SLAB &amp; BEAMS</td><td>40</td><td>SLAB ON GROUND</td><td>32</td></tr><tr><td>PRECAST PANEL</td><td>40</td><td>TOPPING SLAB</td><td>32</td></tr><tr><td>PAD FOOTING</td><td>32</td><td></td><td></td></tr></table><div>CONCRETE TO HAVE NOMINAL 100mm SLUMP U.N.O FOR SITES WITHIN 1KM OF THE SHORE LINE OF LARGE EXPANSES OF SALTWATER, HEAVY INDUSTRIAL AREAS OR HIGH SULPHATE SOILS WHERE SURFACES (egVERANDAHS, BALCONES, CARPORTS) ARE EXPOSED, THE SURFACE SHALL BE PROTECTED WITH SUITABLE TOPPING, SEALER, TILES (etc) OR THE CONCRETE GRADE SHALL BE NOT LESS THAN N40. 2.3 CONSTRUCTION JOINTS ARE TO BE THOROUGHLY SCABBLED OF ALL LAITANCE AND POORLY COMPACTED MATERIAL. VERTICAL JOINTS TO BE POURED AGAINST SHUTTERING. 2.4 ALL CONCRETE TO BE PROPERLY CURED BY KEEPING ALL EXPOSED SURFACES IN A MOIST, DAMP CONDITION FOR AT LEAST THE FIRST 7 DAYS AFTER PLACING OR BY SPRAYING WITH AN APPROVED CURING COMPOUND, SUBJECT TO COMPATABILITY WITH PROPOSED SURFACE FINISHES. 2.5 MINIMUM STRIPPING TIMES:<ul style="list-style-type: none"><li>• SLAB-SOFFIT 14 DAYS, PROPS 21 DAYS</li><li>• BEAMS-SIDES 3 DAYS, SOFFIT 21 DAYS</li><li>• COLUMNS AND WALLS - (UNLOADED) 3 DAYS</li></ul> 2.6 REINFORCEMENT DESIGNATIONS ARE AS FOLLOWS: R - PLAIN ROUND STRUCTURAL BAR TO AS/NZS 4671 F - HARD DRAWN WIRE FABRIC TO AS/NZS 4671 W - HARD DRAWN WIRE BAR TO AS/NZS 4671 N - HOT ROLLED DEFORMED BAR TO AS/NZS 4671 SL - SQUARE RIBBED FABRIC TO AS/NZS 4671 RL- RECTANGULAR RIBBED FABRIC TO AS/NZS 4671  2.7 PROVIDE 0.2mm HIGH IMPACT RESISTANCE BRANDED POLYETHYLENE MEMBRANE TO AS 2870 THROUGHOUT UNDERSIDE OF FLOOR SLABS ON GROUND, ALL LAPS TO BE 300mm AND SEALED WITH A 50mm WIDE STRIP OF PRESSURE-SENSITIVE WATERPROOF TAPE. 2.8 ALL FILLING TO BE NON-CLAY MATERIAL COMPACTED IN 200mm LAYERS TO 98% MAXIMUM DRY DENSITY WHEN TESTED IN ACCORDANCE WITH AS1289 ES.11 STANDARD (1993). 2.9 WHERE ROD REINFORCEMENT IS SPLICED, THE MINIMUM LAP LENGTH SHALL BE: N12-500 LAP, N16-750 LAP, N20-1000 LAP, N24-1450 LAP, N28-1800 LAP, N32-2150 LAP, N36-2600 LAP. 2.10 LAPS TO SLAB MESH TO BE ONE (1) FULL MESH PANEL PLUS 25mm. 2.11 CLEAR CONCRETE COVER TO REINFORCEMENT (INCLUDING FITMENTS AND WIRE TIES) SHALL BE: SLAB ON FILL - 30mm BOTTOM AND SIDES, 20mm TOP. FOOTINGS PROTECTED BY VAPOUR BARRIER - 40mm BOTTOM AND SIDES, 20mm TOP. RESIDENTIAL FOOTINGS UNPROTECTED BY VAPOUR BARRIER - 40mm TOP, 50mm BOTTOM AND SIDES NON-RESIDENTIAL FOOTINGS UNPROTECTED BY VAPOUR BARRIER - 50mm TOP, BOTTOM AND SIDES SUSPENDED SLABS, BEAMS AND COLUMNS - 20mm INTERNAL, 40mm EXTERNAL. 2.12 CONCRETE TO BE KEPT FREE OF LOAD BEARING BRICKWORK BY TWO (2) LAYERS OF SUITABLE MEMBRANE. 2.13 BRICKWORK MUST NOT BE BUILT ON CONCRETE SLABS OR BEAMS UNTIL FORMWORK AND PROPS SUPPORTING SAME HAVE BEEN REMOVED. 2.14 TENSION CRACKS MAY OCCUR IN SLABS; APPLY SUITABLE SEALANT FOR EXPOSED SURFACES. 2.15 PROVIDE 10mm ISOLATION JOINTS WHERE CONCRETE IS ADJACENT STEELWORK/MASONRY. PROVIDE SUITABLE FILLER AND SEALANT.</div><div>3. MASONRY: 3.1 CONSTRUCTION TO COMPLY WITH AS3700. 3.2 MINIMUM CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH OF UNITS TO BE AS FOLLOWS: CLAY BRICKS 40MPa CONCRETE BRICKS 10MPa CONCRETE HOLLOW BLOCKS 15MPa 3.3 MORTAR: BRICKWORK 1 : 0.25 : 3 (CEMENT : LIME : SAND) BLOCKWORK 1 : 0.5 : 4.5 3.4 INFILL CONCRETE GROUT TO REINFORCED MASONRY TO BE GRADE 20, SLUMP 230 +/- 30, 10mm AGGREGATE. 3.5 FOR HOLLOW BLOCK RETAINING WALLS, ALL CORES ARE TO BE GROUTED. 3.6 GROUTING TO REINFORCED MASONRY SHALL BE COMPACTED BY RODDING WITH A PLAIN ROUND BAR. ALL AIR POCKETS AND BUBBLES MUST BE DISPLACED DURING COMPACTION. HOWEVER, CARE MUST BE TAKEN TO AVOID DAMAGING OR DISLOGGING THE MASONRY OR REINFORCEMENT WHILE COMPACTING THE GROUT.</div><div>4. STEELWORK: 4.1 ALL TO COMPLY WITH AS 4100, AS/NZS 1538, AND AS 2327. 4.2 ALL WELDING TO COMPLY WITH AS 1554, PARTS 1, 2 AND 3. 4.3 ALL FILLET WELDS TO BE 6mm (CATEGORY SP) EXTENDING THE FULL LENGTH OF THE EDGES IN CONTACT, EXCEPT WHERE PLATE THICKNESSES ARE LESS THAN 6mm, USE A WELD SIZE TO MATCH. 4.4 THE STEELWORKER SHALL SUPPLY ALL HD BOLTS, NUTS AND ALL OTHER BOLTS AND WASHERS REQUIRED FOR THE ERECTION OF THE STEELWORK, HOLES FOR HD BOLTS TO BE 3mm OVERSIZE, HOLES FOR OTHER BOLTS TO BE NO MORE THAN 2mm OVERSIZE. 4.5 ALL BOLTING SHALL COMPLY WITH AS 4100 AND BE GRADE 8.8/S UNO. 4.6 ALL BASE PLATES, HD BOLTS AND COLUMNS IN CONCRETE WHICH IS IN CONTACT WITH GROUND TO HAVE CONCRETE COVER OF 75mm MINIMUM. 4.7 MINIMUM EDGE DISTANCE (TAKEN FROM CENTRE OF FASTENER) SHALL BE: SHEARED OR HAND FLAME CUT EDGE - 1750 ROLLED PLATE, MACHINE FLAME CUT SAWN OR PLANED EDGE - 1500 ROLLED EDGE OF A ROLLED SECTION - 1250 (WHERE 'D' IS THE NOMINAL DIAMETER OF THE FASTENER).</div></div>												ELEMENT	GRADE (MPa)	ELEMENT	GRADE (MPa)	COLUMN	50	FOOTING	25	FIRST FLOOR SLAB & BEAMS	40	SLAB ON GROUND	32	PRECAST PANEL	40	TOPPING SLAB	32	PAD FOOTING	32																																																				
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D	<div>4.8 STEELWORK TO BE CONCRETE ENCASED MUST FIRST BE WRAPPED WITH F41 MESH. THE REINFORCEMENT IS TO BE PLACED 25mm FROM THE STEELWORK. 4.9 PROVIDE A 10mm CLEARANCE BETWEEN VERTICAL FACES OF STEELWORK AND ADJACENT MASONRY WALLS. PROVIDE PURPOSE MADE W6 OR SIMILAR APPROVED TIES BETWEEN STEELWORK AND MASONRY AT 600 C/C (MAXIMUM). 4.10 ALL STEELWORK TO BE ADEQUATELY PROPPED AND BRACED DURING CONSTRUCTION UNTIL ALL PERMANENT BRACING, MASONRY AND CLADDING HAS BEEN ERECTED. 4.11 ALL COLD FORMED SECTIONS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. TRIMMING MEMBERS THE SAME SIZE AS THE ADJOINING MEMBERS SHALL BE PROVIDED TO SUPPORT EDGES OF SHEETING ALONG UNSUPPORTED EDGES SUCH AS HIPS, VALLEYS AND ROOF/WALL PENETRATIONS. 4.12 STEELWORK PROTECTIVE COATINGS TO BE:<ul style="list-style-type: none"><li>• EXPOSED EXTERNAL STEELWORK WITHIN 1 km OF BREAKING SURF OR WITHIN 100m OF SALT WATER NOT SUBJECT TO BREAKING SURF OR HEAVY INDUSTRIAL AREAS : HOT-DIP GALVANIZED, AND PAINTED WITH AN APPROVED PAINTING SYSTEM TO AS/NZS 2312.</li><li>• EXPOSED EXTERNAL STEELWORK (NOT EXPOSED TO CORROSIVE ENVIRONMENT) : HOT-DIP GALVANIZED, 'DIMET' TREATED OR ONE COAT SPRAYED INORGANIC ZINC SILICATE PAINT OVER CLASS 2.5 ABRASIVE BLAST SURFACE.</li><li>• STEELWORK ACTING AS DOWNPIPE OR GUTTER : HOT-DIP GALVANIZED.</li><li>• INTERNAL STEELWORK (NOT EXPOSED TO MOISTURE OR CORROSIVE ENVIRONMENT): RED OXIDE ZINC CHROMATE PRIMER (ROZC) OVER WIRE BRUSH SURFACE.</li><li>• STEELWORK IN CONTACT WITH GROUND (e.g. RETAINING WALLS) : 2 COATS OF APPROVED QUALITY BITUMINOUS PAINT, TAR, EPOXY OR SIMILAR.</li><li>• NOTE: ALL STEELWORK IN CONTACT WITH THE GROUND, PAVING OR SOIL ETC SHALL IN ADDITION TO THE PROTECTION REQUIRED ABOVE BE EITHER WRAPPED IN 'DENSO' TAPE OR CONCRETE ENCASED WITH A MINIMUM OF 75mm THICK CONCRETE.</li></ul> 4.13 TWO (2) COPIES OF THE SHOP DETAIL DRAWINGS ARE TO BE SUBMITTED TO THE ENGINEER AND REVIEW OF THE SAME OBTAINED BEFORE COMMENCING FABRICATION. REVIEW WILL NOT COVER DIMENSIONS. SHOP DRAWINGS WILL GENERALLY BE REVIEWED BY THE ENGINEER WITHIN 10 WORKING DAYS.</div> <div>5. TIMBER NOTES: 5.1 ALL TO COMPLY WITH AS 1720 AND AS 1684. 5.2 ALL MGP10 GRADE TIMBER MUST EXCLUDE "HEART IN" MATERIAL TO GIVE THE TIMBER A MINIMUM JOINT GROUP STRENGTH OF JD4 IN ACCORDANCE WITH AS 1720.</div> <div>6. EARTHWORKS: 6.1 ALL TO COMPLY WITH AS 3798 GUIDELINES 6.2 UNLESS OTHERWISE APPROVED BY THE ENGINEER THE LIMITATIONS OF EXCAVATIONS NEAR FOOTINGS SHALL BE AS FOLLOWS: </div> <div>7. SITE INSPECTIONS: 7.1 MUST BE CARRIED OUT AT THE FOLLOWING STAGES.<ul style="list-style-type: none"><li>• AFTER SITE PREPARATION AND TRENCHING FOR THE FOOTING BEAMS</li><li>• AFTER THE PREPARATION OF REINFORCEMENT, PRIOR TO THE PLACEMENT OF ANY CONCRETE.</li><li>• AT THE CONCRETE POUR.</li><li>• AFTER COMPLETION OF THE MASONRY, PRIOR TO CONSTRUCTION OF THE ROOF TO ENSURE CORRECT PLACEMENT OF CONTROL JOINTS.</li><li>• UPON COMPLETION OF THE INSTALLATION OF PAVING, STORMWATER DRAINS, PIPES AND STRUCTURES.</li></ul> 8. SURFACE PROTECTIVE COATINGS: ALL STRUCTURAL MEMBERS AND SURFACES,IE: BEAMS,COLUMNS,WALLS,FLOORS,CEILINGS,ROOFS AND THE LIKE BOTH INTERNALLY AND EXTERNALLY SHALL BE COATED WITH AN APPROVED PROTECTIVE COATING TO SUIT THEIR INTENDED USE/EXPOSURE ENVIRONMENT, WHICH IS TO BE APPLIED IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS.</div> <div>9. TERMITE PROTECTION: TERMITE PROTECTION SYSTEM SHALL BE IN ACCORDANCE WITH AS 3660.1</div> <div>10. RETAINING WALL CONSTRUCTION: 10.1 GENERAL<ul style="list-style-type: none"><li>• THE DESIGNS ARE FOR A SPECIFIC JOB AND/OR SITE AND ARE BASED ON THE INFORMATION PROVIDED REGARDING THE PARTICULAR SUPPORT CONDITIONS WHICH OCCUR ON THE SITE AND THEY SHALL NOT BE USED FOR ANY OTHER PROJECT WITHOUT PRIOR WRITTEN APPROVAL FROM THIS OFFICE.</li><li>• ALL DIMENSIONS AND DETAILS MUST BE CHECKED BY THE BUILDER/CONTRACTOR PRIOR TO THE COMMENCEMENT OF ANY SITE WORKS OR CONSTRUCTION. UNLESS SPECIFICALLY NOTED, THE WALLS ARE DESIGNED ON THE BASIS THAT NO BUILDINGS OR OTHER STRUCTURES ARE BUILT, OR WILL BE BUILT, WITHIN A DISTANCE FROM THE BACK OF THE WALL EQUAL TO THE HEIGHT OF THE WALL. SPECIFIC DESIGNS MUST BE PREPARED IN THE EVENT THAT ANY SUCH BUILDINGS EXIST OR ARE PROPOSED. SIMILARLY, THE DESIGN IS BASED ON THERE BEING NO EXCAVATIONS IN FRONT OF THE FOOTING, EXISTING OR PROPOSED, WHICH ARE DEEPER THAN HALF THE DISTANCE FROM THE FRONT OF THE FOOTING.</li><li>• EXTREME CARE MUST BE TAKEN IN THE EVENT THAT ANY EXCAVATION IS CARRIED OUT IN FRONT OF THE WALL, INCLUDING TRENCHES FOR SERVICES. TEMPORARY PROPPING OF THE WALL MAY BE REQUIRED IN SUCH A CASE, AND ANY EXCAVATIONS MUST HAVE PROPERLY COMPACTED BACKFILL.</li></ul> 10.2 SOIL CONDITIONS<ul style="list-style-type: none"><li>• UNLESS SOIL TESTS HAVE BEEN CARRIED OUT TO ASSESS THE SOIL TYPE, THE DESIGN IS BASED ON LOCAL KNOWLEDGE OF THE SOIL. IN THIS CASE IT REMAINS THE BUILDER/CONTRACTOR'S RESPONSIBILITY TO CHECK THAT THE ACTUAL SOIL TYPE IS CONSISTENT WITH THE DESIGN. IT IS RECOMMENDED THAT SOIL TESTING BE CARRIED OUT BY THIS OFFICE FOR ALL WALLS.</li></ul> 10.3 CONSTRUCTION<ul style="list-style-type: none"><li>• PROPPING DURING CONSTRUCTION CONCRETE/GROUT INFILLED MASONRY RETAINING WALLS ARE TO BE ADEQUATELY PROPPED AND/OR TIED DURING POURING OF CONCRETE TO PREVENT BURSTING OF THE BRICKWORK OR BLOCKWORK. THE CONCRETE FOR THE WALL STRUCTURE SHOULD BE POURED IN STAGES OR LIFTS OF APPROXIMATELY 10M IN HEIGHT. A PERIOD OF APPROXIMATELY FOUR HOURS SHOULD ELAPSE BETWEEN THE POURING OF SUCCESSIVE LIFTS TO ALLOW PREVIOUSLY POURED CONCRETE TO SET ADEQUATELY.</li><li>• CONTROL JOINTS 10MM WIDE CONTROL JOINTS IN MASONRY RETAINING WALLS ARE TO BE PROVIDED AT 12M MAXIMUM C/C AND AT ALL JUNCTIONS. CONTROL JOINTS SHALL BE CONSTRUCTED ACROSS THE FULL WIDTH OF THE WALL AND TIED WITH MASONRY FLEXIBLE ANCHORS AT 600 C/C VERTICALLY (OR 1 W6 ROD 500 LONG, GREASED AT ONE END).</li></ul> 10.4 MATERIALS<ul style="list-style-type: none"><li>• CONCRETE: FOOTINGS; GRADE N20 WALLS; GRADE N25 INFILL GROUT TO MASONRY; GRADE 12, SLUMP 230 + 30, 10MM AGGREGATE.</li></ul></div>																																																																																	
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F	<div>• TIMBER: F11 HARDWOOD, OR TREATED SOFTWOOD, COMPLYING WITH DURABILITY CLASS 1 REQUIREMENTS. • STEEL: GRADE 300+. CORROSION PROTECTION SHALL BE AS NOMINATED. • MASONRY MINIMUM CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH: CLAY BRICKS 40 MPa CONCRETE BLOCKS 12 MPa MORTAR: BRICKWORK 1 : 1/4 : 3 (CEMENT:LIME:SAND) BLOCKWORK 1 : 0 : 3 (CEMENT:LIME:SAND)  10.5 WATERPROOFING / DRAINAGE REQUIREMENTS WATERPROOFING IS TO BE PROVIDED AS SPECIFIED AND USED STRICTLY IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. ALTERNATIVE PRODUCTS OR SYSTEMS MAY BE USED SUBJECT TO APPROVAL. 10.5.1 RETAINING WALLS IN HABITABLE AREAS (OR AREAS WHERE WATERPROOFING IS REQUIRED, EG. CELLARS) PROVIDE AN AGRICULTURAL PIPE AT APPROXIMATELY 200MM BELOW LOWEST FLOOR LEVEL, EXCEPT WHERE THIS LEVEL DOES NOT ALLOW THE DISCHARGE OF THE DRAIN ON THE SITE LOCATE THE PIPE AT THE LOWEST LEVEL POSSIBLE BEHIND THE WALL. PROVIDE A SUMP AND PUMP TO DISCHARGE WATER IF IT CANNOT BE DISCHARGED VIA GRAVITY. • FORMED CONCRETE WALLS: PROVIDE 'MICROPOZ' CONCRETE ADDITIVE AND PURPOSE MADE WATERSTOP AT CONSTRUCTION JOINTS. OR 'POLYTANK' WATERPROOFING SYSTEM (AND WATERSTOP IF GROUND WATER IS EXPECTED TO BE A PROBLEM). • SPRAYED (SHOTCRETE) CONCRETE WALL AND FLOOR (IE. NO CONSTRUCTION JOINTS): PROVIDE 'MICROPOZ' CONCRETE ADDITIVE. • OTHER WALL TYPES: PROVIDE 'POLYTANK' (AND WATERSTOP IF GROUND WATER IS EXPECTED TO BE A PROBLEM). INTERNAL SLAB STEPDOWN GREATER THAN 600MM HIGH AND LESS THAN 1500MM: PROVIDE 2 LAYERS OF VAPOUR BARRIER. 10.5.2 RETAINING WALLS EXTERNAL TO BUILDING (OR WHERE WATERPROOFING IS NOT REQUIRED)<ul style="list-style-type: none"><li>• REINFORCED CONCRETE OR MASONRY RETAINING WALLS. HEEL TYPE OR PART HEEL/TOE TYPE: PROVIDE AN AGRICULTURAL PIPE. TOE TYPE ON BOUNDARY: PROVIDE 'CORDRAIN' AND 'STRIP DRAIN' OR 'STRIP DRAIN' AND WEEP HOLES TOE TYPE NOT ON BOUNDARY: PROVIDE AN AGRICULTURAL PIPE OR WEEP HOLES. • CRIB OR SLEEPER RETAINING WALL: PROVIDE AN AGRICULTURAL PIPE AT THE LOWEST POINT OF THE WALL (OR TOP OF FOOTING).</li></ul> 10.6 BACKFILLING METHOD<ul style="list-style-type: none"><li>• BACK-FILL SHALL NOT BE PLACED AGAINST RETAINING WALLS UNTIL SEVEN DAYS AFTER THE POURING OF THE CONCRETE FOR WALL STRUCTURE UNLESS ADEQUATELY PROPPED ON OTHER SIDE, EXCEPT AS NOTED BELOW.</li><li>• BACK-FILL SHALL NOT BE PLACED AGAINST RETAINING WALLS WHICH ARE DESIGNED TO BE SUPPORTED AT THE TOP BY BEING TIED INTO EITHER SUSPENDED SLABS OR GROUND SLABS UNTIL SEVEN DAYS AFTER THE POURING OF CONCRETE FOR SLABS - UNLESS THE WALL IS PROPPED IN A MANNER WHICH WILL PROVIDE A RESTRAINT TO THE WALL EQUIVALENT TO THE SUPPORT OFFERED BY THE SLAB.</li></ul> 10.7 GROUTING OF MASONRY WALLS<ul style="list-style-type: none"><li>• CAVITIES/CORES TO BE THOROUGHLY CLEANED PRIOR TO POURING. PROVIDE TEMPORARY CLEAN OUT HOLES AT THE BASE OF EACH POUR AS REQUIRED.</li><li>• FOR HOLLOW BLOCK WALLS, ALL CORES ARE TO BE GROUTED, IE. INCLUDING CORES WITHOUT REINFORCEMENT.</li><li>• GROUT SHALL BE COMPACTED BY RODDING WITH A PLAIN ROUND BAR. ALL AIR POCKETS AND BUBBLES MUST BE DISPLACED DURING COMPACTION. HOWEVER, CARE MUST BE TAKEN TO AVOID DAMAGING OR DISLOGGING THE MASONRY OR REINFORCEMENT WHILE COMPACTING THE GROUT.</li></ul> 10.8 BACKFILLING AND DRAINAGE AND DETAILS<ul style="list-style-type: none"><li>• BACKFILL MATERIAL IS TO BE GRANULAR, AND COMPACTED IN LAYERS NOT MORE THAN 200MM DEEP. THE DEGREE AND METHOD OF COMPACTION SHALL BE AS THOROUGH AS POSSIBLE BUT WILL DEPEND ON THE PROPOSED USE OF THE BACKFILLED AREA.</li><li>• THE DRAINAGE SYSTEM BEHIND THE WALL SHALL NOT BE CONNECTED TO THE MAIN DRAINAGE SYSTEM.</li><li>• WHERE AN AGRICULTURAL PIPE IS SPECIFIED, PROVIDE A FINE GRAINED SAND - CLAY MIXTURE BEDDING OR LEAN-MIX CONCRETE BASE SUCH THAT THE PIPE FALL IS NOT LESS THAN 1 IN 100. THE INITIAL 400MM OF FILL ABOVE THE PIPE IS TO BE 16MM SCREENINGS, HAND PLACED CAREFULLY.</li><li>• WHERE WEEPHOLES HAVE BEEN SPECIFIED, PROVIDE APPROXIMATELY 20 LITRES BY VOLUME OF 16MM SCREENINGS BEHIND THE WALL, AT EACH LOCATION, EXCEPT WHERE THE WALL IS ON THE BOUNDARY. THIS IS TO BE PLACED AS THE FILL IS BUILT UP. UNLESS AN ALTERNATIVE DRAINAGE SYSTEM HAS BEEN PROVIDED, AN OPEN GUTTER MUST BE CONSTRUCTED IMMEDIATELY IN FRONT OF THE WALL AND CONNECTED TO THE DRAINAGE SYSTEM.</li></ul></div> <div>11. DESIGN LOADS: 11.1 THE STRUCTURAL ELEMENTS HAVE BEEN DESIGNED FOR THE FOLLOWING SUPERIMPOSED LIVE LOADS IN ACCORDANCE WITH AS 1170, PART 1, DEAD AND LIVE LOADS.</div> <table><tr><td>ELEMENT</td><td>LIVE LOAD (KPa)</td></tr><tr><td>ROOF</td><td>0.25</td></tr><tr><td>APARTMENT FLOORS</td><td>2.0</td></tr><tr><td>TERRACE</td><td>4.0</td></tr><tr><td>BASEMENT SLAB</td><td>5.0</td></tr></table> <div>SOME LOCATIONS WITHIN THE ABOVE GENERAL AREAS HAVE BEEN DESIGNED FOR HEAVIER LOADINGS, REFER TO FLOOR PLANS FOR DETAILS. LIVE LOAD REDUCTIONS IN ACCORDANCE WITH AS 1170 PART 1 HAVE BEEN TAKEN WHERE APPLICABLE.</div> <div>11.2 WIND LOADING HAS BEEN DETERMINED IN ACCORDANCE WITH AS 1170 PART 2. V<sub>sit</sub>,β = 40 m/s (ULTIMATE WINDSPEED)</div> <div>11.3 EARTHQUAKE LOADING HAS BEEN DETERMINED IN ACCORDANCE WITH AS 1170 PART 4.</div>												ELEMENT	LIVE LOAD (KPa)	ROOF	0.25	APARTMENT FLOORS	2.0	TERRACE	4.0	BASEMENT SLAB	5.0																																																												
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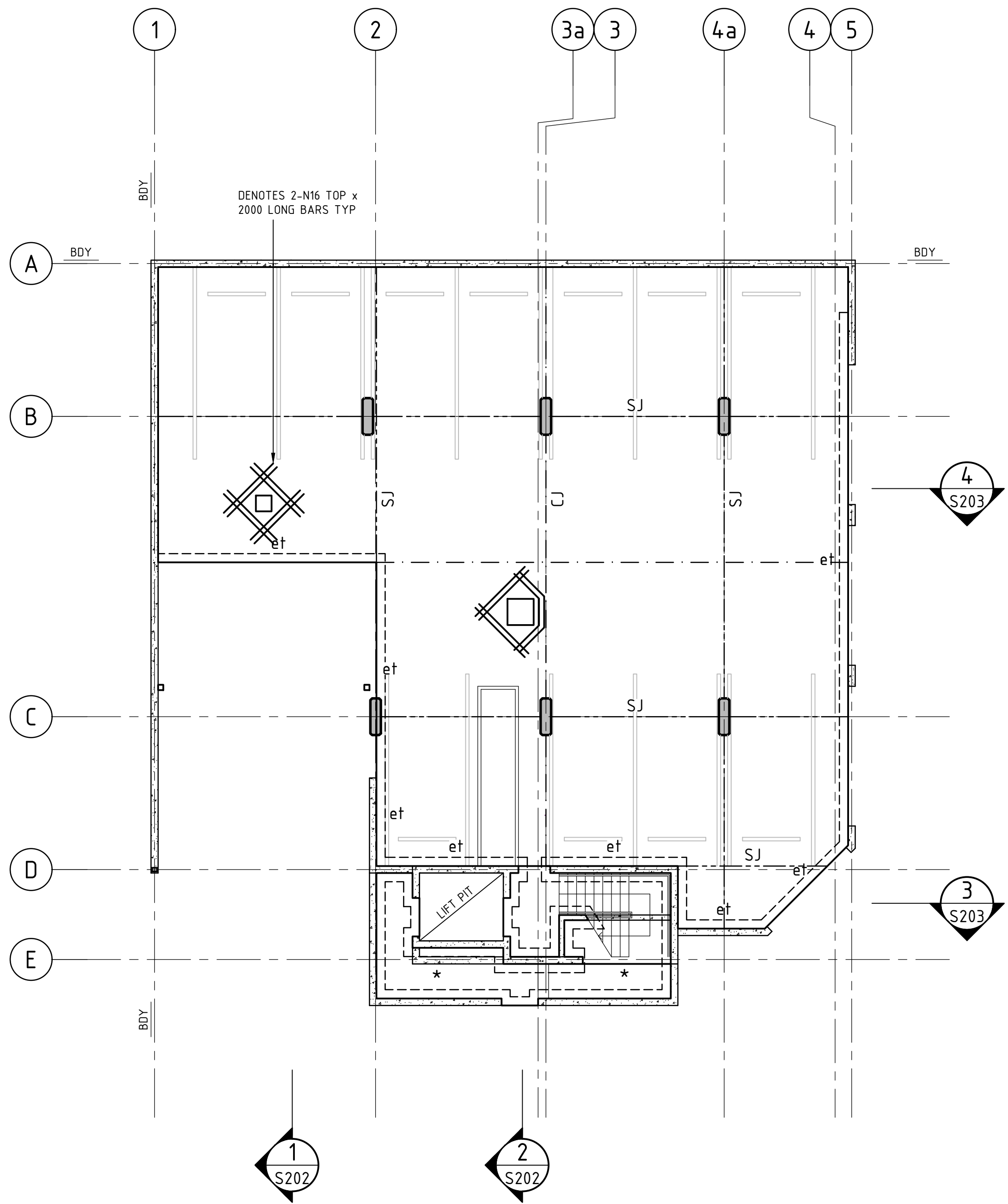
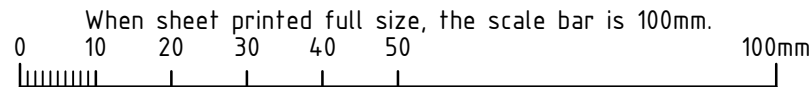


FOOTING PLAN

1:100

FOOTING SCHEDULE			
MARK	WIDTH X DEPTH	REINF.	LIGS. #
STRIP FOOTING			
M	400 x 700	8-N20 (4T,4B)	W10 @ 800 C/C
M1	600 x 700	10-N20 (5T,5B)	W10 @ 800 C/C
et	250 x 250	1-N16 TOP	
PAD FOOTING			
PF1	3400 x 3400 x 700	N20 @ 200 C/C EACH WAY BOTTOM	
PF2	3300 x 8100 x 700	N16 @ 150 C/C EACH WAY BOTTOM	

1. FOOTING NOTES:
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL DWGS & CR1.
3. MAINTAIN SLAB THICKNESS AND FOOTING DEPTH AT ALL SET DOWNS.
4. REINF. CONCRETE STRIP FOOTINGS ARE TO BE CONTINUOUSLY TRENCHED TO 200 MIN. INTO NATURAL GROUND OR CERTIFIED COMPACTED FILL UNO.
5. PAD FOOTINGS ARE TO BE ENTIRELY FOUNDED INTO NATURAL GROUND OR CERTIFIED COMPACTED FILL.
6. GROUND FLOOR SLAB TO BE 130mm THICK REINF. WITH ONE LAYER OF SL82 PLACED 25mm FROM THE TOP & BOTTOM FACE. (UNO)
7. REFER TO DETAIL FOR CORNER REINFORCEMENT AND LAGGING REQUIREMENTS, AND CDS FOR FLEXIBLE CONNECTION REQUIREMENTS IN ACCORDANCE WITH A CLASS 'H2-D' SITE.
8. LAPS IN MESH TO BE ONE FULL SQUARE PLUS 25mm.
9. SETDOWNS, RAMPS, FALLS ETC. TO ARCHITECTURAL / CIVIL DETAIL.
10. EXISTING SERVICES ARE TO BE LOCATED PRIOR TO CONSTRUCTION AND THIS OFFICE IS TO BE CONTACTED IF THESE CLASH WITH THE ABOVE DOCUMENTED FOOTINGS.
11. UNDERGROUND SERVICES & STORMWATER PIPES TO RUN THROUGH THE MIDDLE THIRD OF FOOTINGS. REFER TO TYPICAL DETAILS. PAD / STRIP FOOTING RL'S MAY NEED TO BE LOWERED TO ACHIEVE (CONFIRM ON SITE)
12. ★ DENOTES 130 THICK SLAB WITH SL72 T & B.
13. [X] DENOTES 'STEP IN FOOTING', REFER TO DETAIL.
14. [C] DENOTES CONTRACTION JOINT, REFER TO DETAIL.
15. [S] DENOTES SOFF-CUT JOINT, REFER TO DETAIL.



GROUND FLOOR SLAB PLAN

1:100

PLEASE NOTE:  
THE LOCATION OF EXISTING STRUCTURES ADJACENT TO THE AREA OF CONSTRUCTION ARE TO BE CHECKED ON SITE BY THE BUILDER / CONTRACTOR. SHOULD A RISK OF POTENTIALLY UNDERMINING AN EXISTING STRUCTURE EXIST, THIS OFFICE IS TO BE NOTIFIED IMMEDIATELY.

CONSTRUCTION PROCEDURE FOR UNDERPINNING:

1. ALL BRITTLE MATERIALS & FIXINGS OF EXISTING STRUCTURE (ABOVE CONSTRUCTION AREA) TO BE TEMPORARILY REMOVED.
2. EXCAVATE FOR UNDERPINNING PIERS FOR STAGE 1. PIERS TO BE 1000 LONG x WIDTH OF EXISTING FOOTING FOUNDED 400 BELOW BASE OF PROPOSED FLOOR LEVEL/LIFT PIT. EXCAVATE PIERS FROM EXTERNAL SIDE OF BUILDING IF APPLICABLE.
3. POUR UNDERPINNING PIERS TO WITHIN 50mm OF UNDERSIDE OF EXISTING FOOTING.
4. AFTER 48 HOURS PACK TO UNDERSIDE OF EXISTING FOOTING WITH STEEL WEDGES. RE-TIGHTEN WEDGES AFTER A MINIMUM OF 7 DAYS AND PACK WITH NON-SHRINK GROUT.
5. REPEAT THIS PROCEDURE FOR UNDERPINNING PIERS FOR STAGE 2 (MAX. LENGTH IS 1000mm, IF REQUIRED PROVIDE ADDITIONAL STAGE OF POUR)
6. CONSTRUCTION OF THE PROPOSED ADDITION MAY NOW PROCEED.

C	REVISED BUILDING APPROVAL ISSUE	RPA	RR	11.12.18
B	BUILDING APPROVAL ISSUE	RPA	RR	17.09.18
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PROJECT  
**PROPOSED RESIDENTIAL DEVELOPMENT**  
**AT: 419 REGENCY ROAD PROSPECT**  
**FOR: NIATRON 10 PTY LTD**

DRAWING TITLE  
**FOOTING / GROUND FLOOR SLAB PLAN**

Civil  
Environmental  
Mechanical  
Fire  
Lifts

Structural  
Geotechnical  
Electrical  
Hydraulics  
Green ESD

Level 6, 100 Pirie Street,  
Adelaide SA 5000  
Telephone 08 8238 4100  
Facsimile 08 8410 1405  
Berri Office: 25 Vaughan Terrace,  
Berri SA 5343

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REFER DRAWING S0 FOR GENERAL NOTES

LEVEL 1 FLOOR SUSPENDED SLAB NOTES:

- [275] SUSPENDED SLAB TO BE MIN 275 THICK 'OFF-FORM' (MINUS SETDOWNS). PROVIDE N12 @ 200 C/C EACH WAY TOP & N16 @ 200 C/C EACH WAY BOTTOM & ADDITIONAL REINF' AS NOTED. REFER TO SECTIONS & DETAILS.
- [200] SUSPENDED SLAB TO BE MIN 200 THICK 'OFF-FORM' (MINUS SETDOWNS). PROVIDE N12 @ 200 C/C EACH WAY TOP & N16 @ 200 C/C EACH WAY BOTTOM & ADDITIONAL REINF' AS NOTED. REFER TO SECTIONS & DETAILS.
- [150] SUSPENDED SLAB TO BE 150 THICK 'OFF-FORM'. PROVIDE N12 @ 300 C/C EACH WAY TOP & BOTTOM + ADDITIONAL REINF' AS NOTED. REFER TO SECTIONS & DETAILS.
- MASONRY WALLS ARE NOT TO BE CONSTRUCTED ON SUSPENDED SLAB UNTIL FULLY DEPROPPED.
- REFER TO DETAIL FOR FIRE REQ' TO SUSPENDED SLABS.
- "LMB" DENOTES LOWER MOST BAR.
- "UMB" DENOTES UPPER MOST BAR.
- "L" DENOTES LENGTH OF BAR.
- PROVIDE DRIP GROOVE TO EDGE OF BALCONIES.
- (W) DENOTES SLAB SET DOWN 50mm FOR WET AREA.
- (B) DENOTES SLAB SET DOWN 80mm FOR BALCONY.
- (V) DENOTES VOID IN SLAB.
- (ST) DENOTES STAIRWELL - REFER TO DETAILS.
- (L) DENOTES LIFT SHAFT - REFER TO DETAILS.
- PROVIDE BEARERS WITH SUFFICIENT WIDTH TO MINIMIZE DAMAGE TO DELTACORE PANELS.
- PROVIDE AN APPROVED WATER PROOFING MEMBRANE TO THE MANFACT' SPEC' TO EXTERNAL SLABS.
- CONFIRM ALL SET DOWNS, REBATES, RAMPS, FALLS ETC. WITH ARCH / CIVIL DRAWINGS.
- ALL SERVICE PIPE PENETRATIONS TO BE SLEEVED THROUGH SUSPENDED SLABS & BEAMS.

- (X) DENOTES EXTENT OF 275 THICK OFF-FORM SLAB
- (Y) DENOTES EXTENT OF 200 THICK OFF-FORM SLAB
- (Z) DENOTES EXTENT OF 150 THICK OFF-FORM SLAB

REINFORCEMENT SCHEDULE	
MARK	DESCRIPTION
a	N16 @ 200 C/C x 3600 L BOTTOM
b	N16 @ 400 C/C x 6000 L BOTTOM
c	N16 @ 200 C/C x 8000 L TOP
d	N16 @ 200 C/C x 3600 L TOP
e	N16 @ 300 C/C x 6000 L UMB
f	N16 @ 200 C/C x 5500 L UMB

C	REVISED BUILDING APPROVAL ISSUE	RPA	RR	11.12.18
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PROJECT

**PROPOSED RESIDENTIAL DEVELOPMENT**

**AT: 419 REGENCY ROAD PROSPECT**

**FOR: NIATRON 10 PTY LTD**


DRAWING TITLE

**LEVEL 1 - FLOOR PLANS**

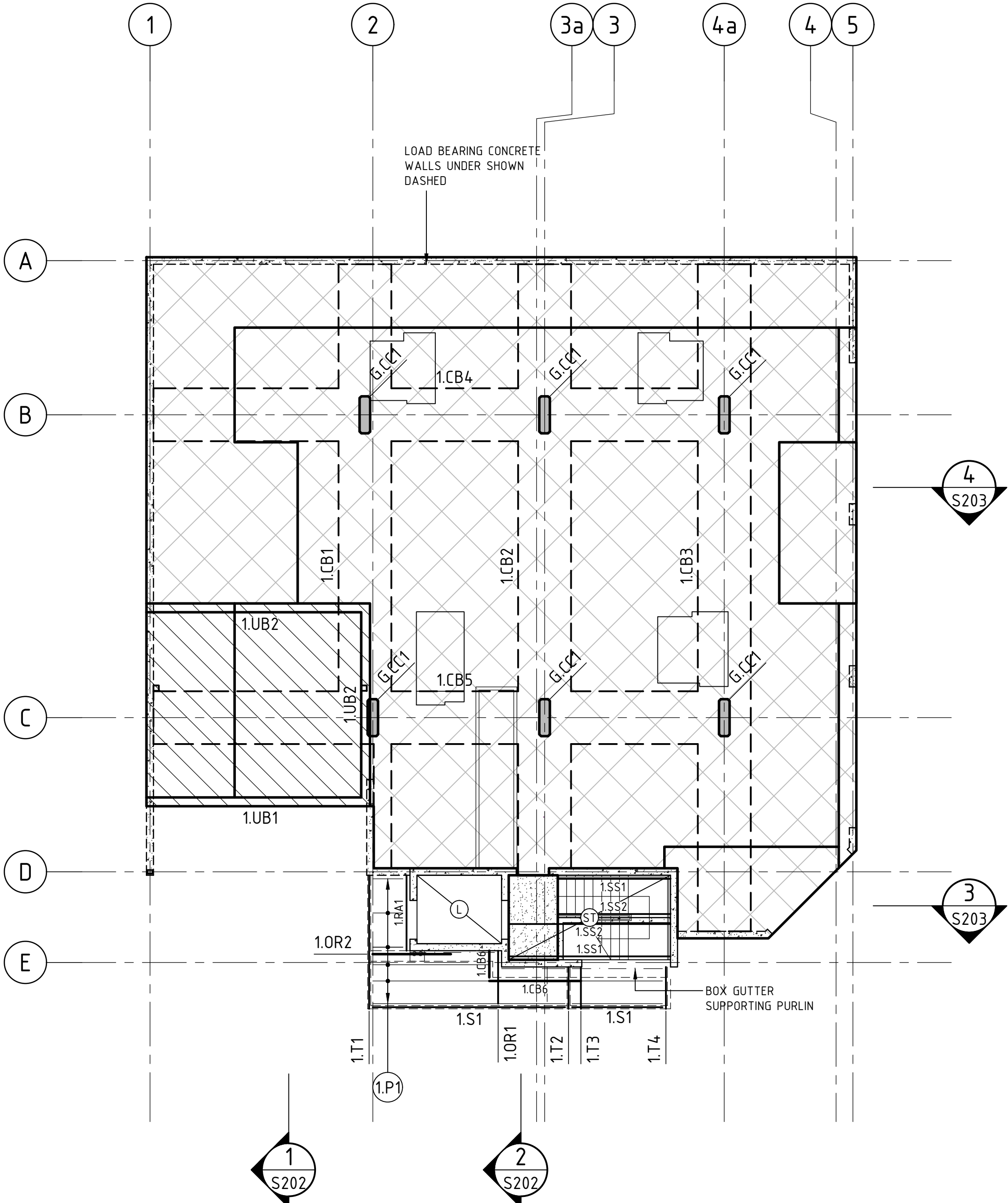
Civil  
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LEVEL 1 FLOOR MARKING PLAN

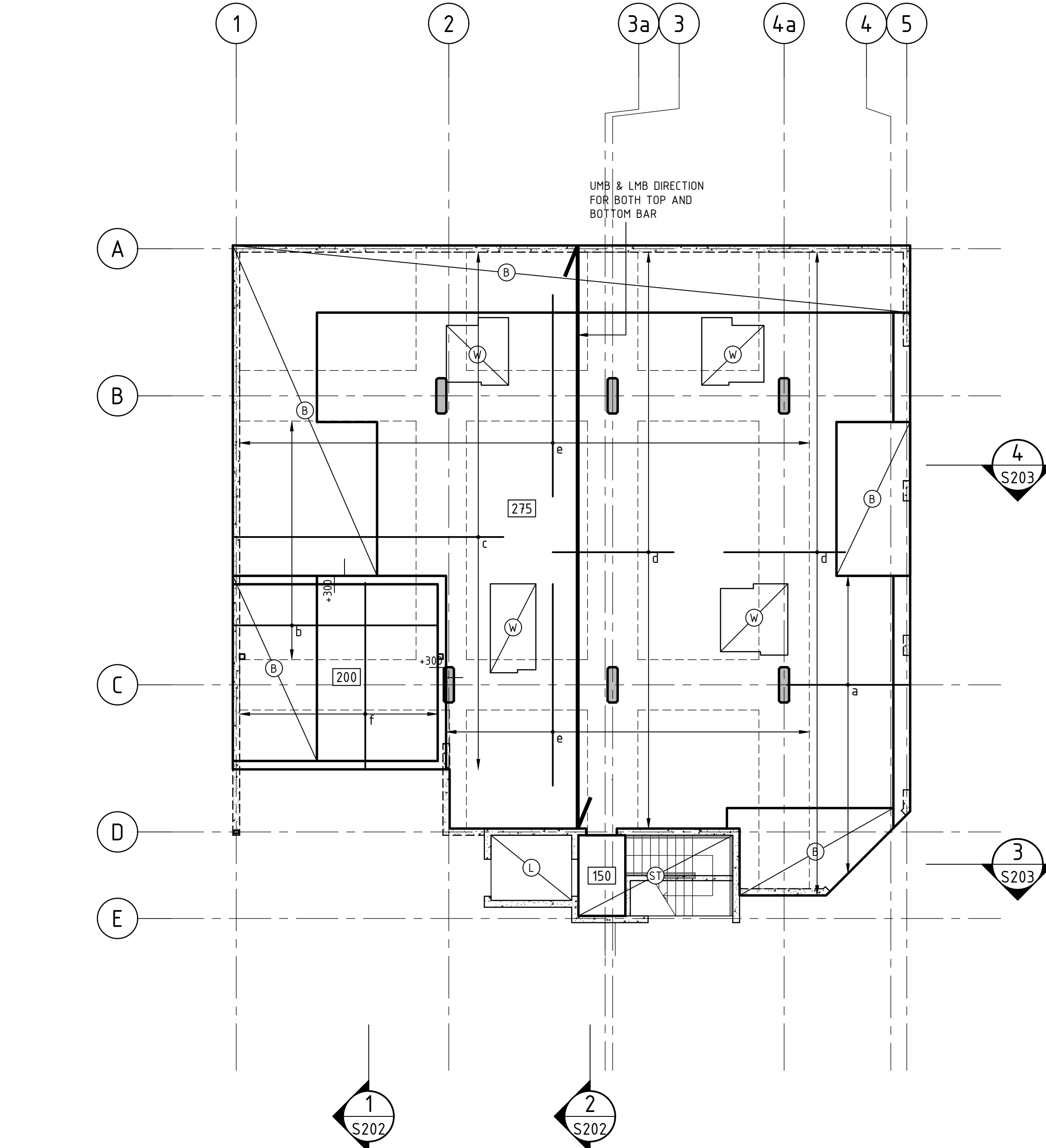
1:100

CONCRETE BEAM SCHEDULE			
MARK	WIDTH x DEPTH	REINF.	LIGS.
1.CB1	1500 x 650	REFER TO ELEVATION	
1.CB2	1500 x 650	REFER TO ELEVATION	
1.CB3	1500 x 650	REFER TO ELEVATION	
1.CB4	1500 x 650	REFER TO ELEVATION	
1.CB5	1500 x 650	REFER TO ELEVATION	
1.UB1	250 x 900	3-N32 TOP, 5-N32 BOTTOM N12 @ 200 C/C EACH FACE, N12 LIGS @ 150 C/C	
1.UB2	250 WIDE	6-N24 (3T,3B)	W10 @ 200 C/C

CONCRETE COLUMN SCHEDULE			
MARK	WIDTH x LENGTH	REINF.	LIGS.
G.CC1	300 x 1050	10-N28	REFER TO DETAIL

MEMBER SCHEDULE		
MARK	MEMBER	REMARKS
1.T1	TRUSS	REFER TO ELEVATION
1.T2	TRUSS	REFER TO ELEVATION
1.T3	TRUSS	REFER TO ELEVATION
1.T4	TRUSS	REFER TO ELEVATION
1.SS1	250 PFC	STAIR STRINGER - PROVIDE 1-M16 FERRULES @ 600 C/C MAX TO WALL PANEL. REFER TO DETAIL
1.SS2	250 PFC	STAIR STRINGER - REFER TO DETAIL
1.SA1	150 x 90 x 10.0 UA	SEATING ANGLE - REFER TO DETAIL
1.0R1	125 PFC	OUTRIGGER - FULLY WELDED TO CAST-IN PLATE CP1 ONE END AND CAST IN ANGLE CA2 OTHER END
1.0R2	150 PFC	OUTRIGGER - PROVIDE 8-M16 FERRULES (4 EACH END)
1.CB6	100 PFC	CARRY BEAM - 8 CLEAT PL, 2-M12 BOLTS
1.RA1	125 x 75 x 8.0 UA	RACKING ANGLE
1.S1	65 x 65 x 4.0 SHS	STRUT - FULLY WELDED
1.P1	C100-19	PULTRIN @ 1200 C/C MAX, 1 ROW BRIDGING FOR SPAN GREATER THAN 2m

- STEELWORK NOTES:
- ALL STEELWORK TO BE GRADE 300+
  - ALL STEEL HOLLOW SECTION MEMBERS TO BE GRADE C350 UNO.
  - ALL BOLTS TO BE GRADE 8.8/5. UNO



LEVEL 1 FLOOR SLAB PLAN

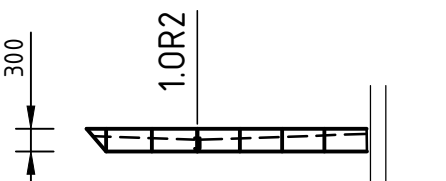
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NOTE:  
FLAT SLAB IS DESIGNED TO TAKE LOADS FROM FLOOR ABOVE

**1.T1 TRUSS ELEVATION**

1:100

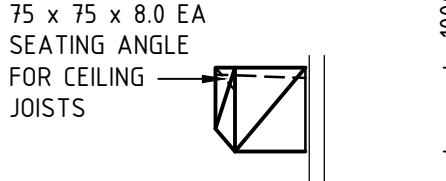
NOTE:  
TOP CHORD - 65 x 65 x 4.0 SHS  
BOTTOM CHORD - 65 x 65 x 4.0 SHS  
VERTICAL MEMBER - 65 x 65 x 4.0 SHS  
END VERTICAL - 65 x 65 x 8.0 EA  
RACKING ANGLE - 75 x 75 x 6.0 EA,  
WELDED TO EACH VERTICAL MEMBER  
PROVIDE 2-M20 FERRULES TO CONNECT TO PRE-CAST WALL PANEL



**1.T2 TRUSS ELEVATION**

1:100

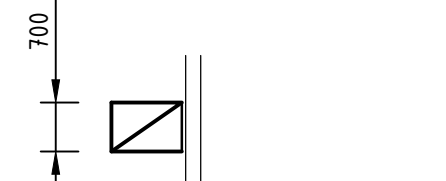
NOTE:  
TOP CHORD - 65 x 65 x 4.0 SHS  
BOTTOM CHORD - 65 x 65 x 4.0 SHS  
VERTICAL MEMBER - 65 x 65 x 4.0 SHS  
END VERTICAL - 65 x 65 x 8.0 EA  
RACKING ANGLE - 75 x 75 x 6.0 EA,  
WELDED TO EACH VERTICAL MEMBER  
PROVIDE 5-M20 FERRULES TO CONNECT TO PRE-CAST WALL PANEL



**1.T3 TRUSS ELEVATION**

1:100

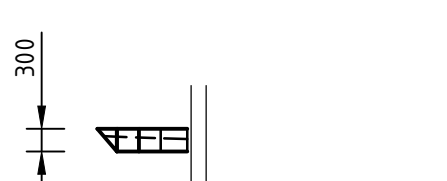
NOTE:  
TOP CHORD - 65 x 65 x 4.0 SHS  
BOTTOM CHORD - 65 x 65 x 4.0 SHS  
VERTICAL MEMBER - 65 x 65 x 4.0 SHS  
DIAGONAL MEMBER - 65 x 65 x 4.0 SHS  
END VERTICAL - 65 x 65 x 8.0 EA  
PROVIDE 4-M20 FERRULES TO CONNECT TO PRE-CAST WALL PANEL

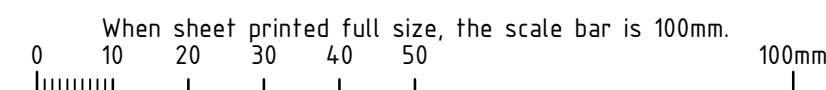


**1.T4 TRUSS ELEVATION**

1:100

NOTE:  
TOP CHORD - 65 x 65 x 4.0 SHS  
BOTTOM CHORD - 65 x 65 x 4.0 SHS  
VERTICAL MEMBER - 65 x 65 x 4.0 SHS  
END VERTICAL - 65 x 65 x 8.0 EA  
RACKING ANGLE - 75 x 75 x 6.0 EA,  
WELDED TO EACH VERTICAL MEMBER  
PROVIDE 4-M20 FERRULES TO CONNECT TO PRE-CAST WALL PANEL (2 EACH PANEL)







REFER DRAWING S0 FOR GENERAL NOTES

LEVEL 2 FLOOR SUSPENDED SLAB NOTES:

1. **180** SUSPENDED SLAB TO BE MIN 180 THICK 'OFF-FORM' (MINUS SETDOWNS). PROVIDE N12 @ 200 C/C EACH WAY. TOP & BOTTOM & ADDITIONAL REINF' AS NOTED. REFER TO SECTIONS & DETAILS.
2. **150** SUSPENDED SLAB TO BE 150 THICK 'OFF-FORM'. PROVIDE N12 @ 300 C/C EACH WAY TOP & BOTTOM + ADDITIONAL REINF' AS NOTED. REFER TO SECTIONS & DETAILS.
3. **180** SUSPENDED SLAB TO BE 150 THICK ON 0.75 BMT 'BONDEK' OR 'KINGFLOR RF55'. PROVIDE SL82 FABRIC TOP & ADDITIONAL REINF' AS NOTED.
4. **DC1** DENOTES DC200.12 (0.5) DELTACORE PANELS WITH TOPPING SLAB. TOPPING SLAB TO BE 80 THICK REINFORCED WITH SL82 FABRIC TOP & ADDITIONAL REINF' AS NOTED.
5. DELTACORE PANELS & 'BONDEK' / 'KINGFLOR RF55' SLABS TO BE CONSTRUCTED STRICTLY IN ACCORDANCE WITH THE MANUFACT' SPEC'. MASONRY WALLS ARE NOT TO BE CONSTRUCTED ON SUSPENDED SLAB UNTIL FULLY DEPROPPED.
6. REFER TO DETAIL FOR FIRE REQ' TO SUSPENDED SLABS.
7. "LMB" DENOTES LOWER MOST BAR
8. "UMB" DENOTES UPPER MOST BAR
9. "L" DENOTES LENGTH OF BAR
10. PROVIDE DRIP GROOVE TO EDGE OF BALCONIES.
11. **(W)** DENOTES SLAB SET DOWN 80mm FOR WET AREA (NO TOPPING SLAB).
12. **(B)** DENOTES SLAB SET DOWN 80mm FOR BALCONY (NO TOPPING SLAB).
13. **(V)** DENOTES VOID IN SLAB.
14. **(ST)** DENOTES STAIRWELL - REFER TO DETAILS
15. **(L)** DENOTES LIFT SHAFT - REFER TO DETAILS.
16. PROVIDE BEARERS WITH SUFFICIENT WIDTH TO MINIMIZE DAMAGE TO DELTACORE PANELS & 'BONDEK' / 'KINGFLOR RF55'.
17. PROVIDE AN APPROVED WATER PROOFING MEMBRANE TO THE MANFACT' SPEC' TO EXTERNAL SLABS.
18. CONFIRM ALL SET DOWNS, REBATES, RAMPS, FALLS ETC. WITH ARCH / CIVIL DRAWINGS.
19. PROVIDE NOMINAL N20 STUDS @ 1000 C/C UNO (HEIGHT VARIES REFER TO DETAILS) TO NON-COMPOSITE FLOOR BEAMS, WELDED TO TOP FLANGE. ALL COMPOSITE BEAMS ARE TO BE PROPPED AT MID-SPAN FOR 14 DAYS AFTER CONCRETE POUR.
20. PROVIDE SUITABLE PROTECTIVE COATING TO STRUCTURAL STEEL AS REQUIRED TO ACHIEVE THE SPECIFIED FRL.
21. PROVIDE ADDITIONAL N12 @ 300 C/C TOP PERPENDICULAR TO 'BONDEK' DIRECTION AT ALL TILED AREAS.
22. ALL SERVICE PIPE PENETRATIONS TO BE SLEEVED THROUGH SUSPENDED SLABS & BEAMS.

- (180)** DENOTES EXTENT OF 180 THICK OFF-FORM SLAB
- (150)** DENOTES EXTENT BONDEK SLAN
- (DC1)** DENOTES EXTENT OF 80mm TOPPING SLAB
- (W)** DENOTES EXTENT OF 150 THICK OFF-FORM SLAB

LEVEL 2 FLOOR MARKING PLAN

1:100

LEVEL 2 FLOOR SLAB PLAN

1:100

MEMBER SCHEDULE

MARK	MEMBER	REMARKS
1.C1	100 x 100 x 5.0 SHS	COLUMN - 10 CAP PL, 4-M16 BOLTS. 12 BASE PL, 4-M16 CHEM ANCHORS
1.C2	150 x 150 x 10.0 SHS	COLUMN - 20 CAP PL, 4-M20 BOLTS. 20 BASE PL, 4-M20 CHEM ANCHORS. REFER TO DETAIL FOR CONNECTION TO WALL PANEL
2.FB1	200 UB 25	FLOOR BEAM - REFER TO DETAIL
2.FB2	300 PFC	FLOOR BEAM - REFER TO DETAIL
2.FB3	200 PFC + 120 x 10 PL	FLOOR BEAM - REFER TO DETAIL
2.FB4	300 PFC + 250 x 10 PL	FLOOR BEAM - PROVIDE 6-M20 FERRULES 200 APART FOR FACE FIX TO PRECAST PANEL, REFER TO DETAIL
2.CB1	300 PFC	CARRY BEAM - REFER TO DETAIL
2.CB2	310 UC 158	CARRY BEAM - 12 END PL, 4-M20 BOLTS TO 2.FB2, REFER TO DETAIL
2.SA1	150 x 90 x 10 UA	SEATING ANGLE - REFER TO DETAIL
2.SS1	250 PFC	STAIR STRINGER - PROVIDE 1-M16 FERRULES @ 600 C/C MAX TO WALL PANEL, REFER TO DETAIL
2.SS2	250 PFC	STAIR STRINGER - REFER TO DETAIL
2.SCB1	250 PFC	STAIR STRINGER CARRY BEAM - PROVIDE 4-M16 FERRULES (2 EACH SIDE) @ EACH STRINGER CONNECTION LOCATION.

STEELWORK NOTES:

1. ALL STEELWORK TO BE GRADE 300+
2. ALL STEEL HOLLOW SECTION MEMBERS TO BE GRADE C350 UNO.
3. ALL BOLTS TO BE GRADE 8.8/S. UNO

When sheet printed full size, the scale bar is 100mm.

0 10 20 30 40 50 100mm

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PROJECT

**PROPOSED RESIDENTIAL DEVELOPMENT**

**AT: 419 REGENCY ROAD PROSPECT**

**FOR: NIATRON 10 PTY LTD**

DRAWING TITLE

**LEVEL 2 FLOOR PLANS**

Civil  
Environmental  
Mechanical  
Fire  
Lifts

Structural  
Geotechnical  
Electrical  
Hydraulics  
Green ESD

Level 6, 100 Pirie Street,  
Adelaide SA 5000  
Telephone 08 8238 4100  
Facsimile 08 8410 1405  
Berri Office: 25 Vaughan Terrace,  
Berri SA 5343

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REFER DRAWING S0 FOR GENERAL NOTES

LEVEL 3 FLOOR SUSPENDED SLAB NOTES:

- 180 SUSPENDED SLAB TO BE MIN 180 THICK 'OFF-FORM' (MINUS SETDOWNS). PROVIDE N12 @ 200 C/C EACH WAY, TOP & BOTTOM & ADDITIONAL REINF' AS NOTED. REFER TO SECTIONS & DETAILS.
- 150 SUSPENDED SLAB TO BE 150 THICK 'OFF-FORM'. PROVIDE N12 @ 300 C/C EACH WAY TOP & BOTTOM + ADDITIONAL REINF' AS NOTED. REFER TO SECTIONS & DETAILS.
- 180 SUSPENDED SLAB TO BE 150 THICK ON 0.75 BMT 'BONDEK' OR 'KINGFLOR RF55'. PROVIDE SL82 FABRIC TOP & ADDITIONAL REINF' AS NOTED.
- DC1 DENOTES DC200.12 (0.5) DELTACORE PANELS WITH TOPPING SLAB.
- TOPPING SLAB TO BE 80 THICK REINFORCED WITH SL82 FABRIC TOP & ADDITIONAL REINF' AS NOTED.
- DENOTES DC250.12 (4,12) DELTACORE PANELS WITH TOPPING SLAB.
- TOPPING SLAB TO BE 80 THICK REINFORCED WITH SL82 FABRIC TOP & ADDITIONAL REINF' AS NOTED.
- DELTA CORE PANELS & 'BONDEK' / 'KINGFLOR RF55' SLABS TO BE CONSTRUCTED STRICTLY IN ACCORDANCE WITH THE MANUFACT' SPEC'. PROVIDE PROPPING TO SLAB AS PER THE MANUFACT' SPEC'.
- MASONRY WALLS ARE NOT TO BE CONSTRUCTED ON SUSPENDED SLAB UNTIL FULLY DEPROPPED.
- REFER TO DETAIL FOR FIRE REQ' TO SUSPENDED SLABS.
- "LMB" DENOTES LOWER MOST BAR
- "UMB" DENOTES UPPER MOST BAR
- "L" DENOTES LENGTH OF BAR
- PROVIDE DRIP GROOVE TO EDGE OF BALCONIES.
- W DENOTES SLAB SET DOWN 80mm FOR WET AREA (NO TOPPING SLAB).
- B DENOTES SLAB SET DOWN 80mm FOR BALCONY (NO TOPPING SLAB).
- V DENOTES VOID IN SLAB.
- ST DENOTES STAIRWELL - REFER TO DETAILS.
- L DENOTES LIFT SHAFT - REFER TO DETAILS.
- PROVIDE BEARERS WITH SUFFICIENT WIDTH TO MINIMIZE DAMAGE TO DELTACORE PANELS & 'BONDEK' / 'KINGFLOR RF55'.
- PROVIDE AN APPROVED WATER PROOFING MEMBRANE TO THE MANFACT' SPEC' TO EXTERNAL SLABS.
- CONFIRM ALL SET DOWNS, REBATES, RAMPS, FALLS ETC. WITH ARCH / CIVIL DRAWINGS.
- PROVIDE NOMINAL N20 STUDS @ 1000 C/C UNO (HEIGHT VARIES REFER TO DETAILS) TO NON-COMPOSITE FLOOR BEAMS, WELDED TO TOP FLANGE.
- ALL COMPOSITE BEAMS ARE TO BE PROPPED AT MID-SPAN FOR 14 DAYS AFTER CONCRETE POUR.
- PROVIDE SUITABLE PROTECTIVE COATING TO STRUCTURAL STEEL AS REQUIRED TO ACHIEVE THE SPECIFIED FRL.
- PROVIDE ADDITIONAL N12 @ 300 C/C TOP PERPENDICULAR TO 'BONDEK' DIRECTION AT ALL TILED AREAS.
- ALL SERVICE PIPE PENETRATIONS TO BE SLEEVED THROUGH SUSPENDED SLABS & BEAMS.

- 180 DENOTES EXTENT OF 180 THICK OFF-FORM SLAB
- 150 DENOTES EXTENT BONDEK SLAN
- 80mm DENOTES EXTENT OF 80mm TOPPING SLAB
- 150 DENOTES EXTENT OF 150 THICK OFF-FORM SLAB

C	REVISED BUILDING APPROVAL ISSUE	RPA	RR	11.12.18
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PROJECT

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**AT: 419 REGENCY ROAD PROSPECT**

**FOR: NIATRON 10 PTY LTD**

DRAWING TITLE

**LEVEL 3 FLOOR PLANS**

Civil Structural  
Environmental Geotechnical  
Mechanical Electrical  
Fire Hydraulics  
Lifts Green ESD

Level 6, 100 Pirie Street,  
Adelaide SA 5000  
Telephone 08 8238 4100  
Facsimile 08 8410 1405  
Berri Office: 25 Vaughan Terrace,  
Berri SA 5343

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LEVEL 3 FLOOR MARKING PLAN

1:100

MEMBER SCHEDULE		
MARK	MEMBER	REMARKS
2.C1	89 x 89 x 6.0 SHS	COLUMN - 10 CAP PL, 4-M16 BOLTS. 10 BASE PL 4-M16 BOLTS
2.C2	100 x 100 x 9.0 SHS	COLUMN - 16 CAP PL, 2-M20 BOLTS. 12 BASE PL, 4-M16 BOLTS
3.FB1	200 UB 22	FLOOR BEAM - REFER TO DETAIL
3.FB2	300 PFC	FLOOR BEAM - PROVIDE 150 x 90 x 12 UA CLEAT PL, 3-M20 BOLTS TO 3.FB2. REFER TO DETAIL
3.FB3	200 PFC + 150 x 10 PL	FLOOR BEAM - REFER TO DETAIL
3.FB4	300 PFC + 250 x 10 PL	FLOOR BEAM - TOP FLANGE RESTRAINED @ 1000 C/C. 6-M20 FERRULES (200 APART) FOR FACE FIX TO WALL PANEL, REFER TO DETAIL
3.CB1	300 PFC	CARRY BEAM - REFER TO DETAIL
3.SA1	150 x 90 x 10 EA	SEATING ANGLE - REFER TO DETAIL
3.SA2	150 x 150 x 10 UA	SEATING ANGLE - REFER TO DETAIL
3.SS1	250 PFC	STAIR STRINGER - PROVIDE 1-M16 FERRULES @ 600 C/C MAX TO WALL PANEL. REFER TO DETAIL
3.SS2	250 PFC	STAIR STRINGER - REFER TO DETAIL
3.SCB1	250 PFC	STAIR STRINGER CARRY BEAM - PROVIDE 4-M16 FERRULES (2 EACH SIDE) @ EACH STRINGER CONNECTION LOCATION.

STEELWORK NOTES:

1. ALL STEELWORK TO BE GRADE 300+
2. ALL STEEL HOLLOW SECTION MEMBERS TO BE GRADE C350 UNO.
3. ALL BOLTS TO BE GRADE 8.8/S. UNO

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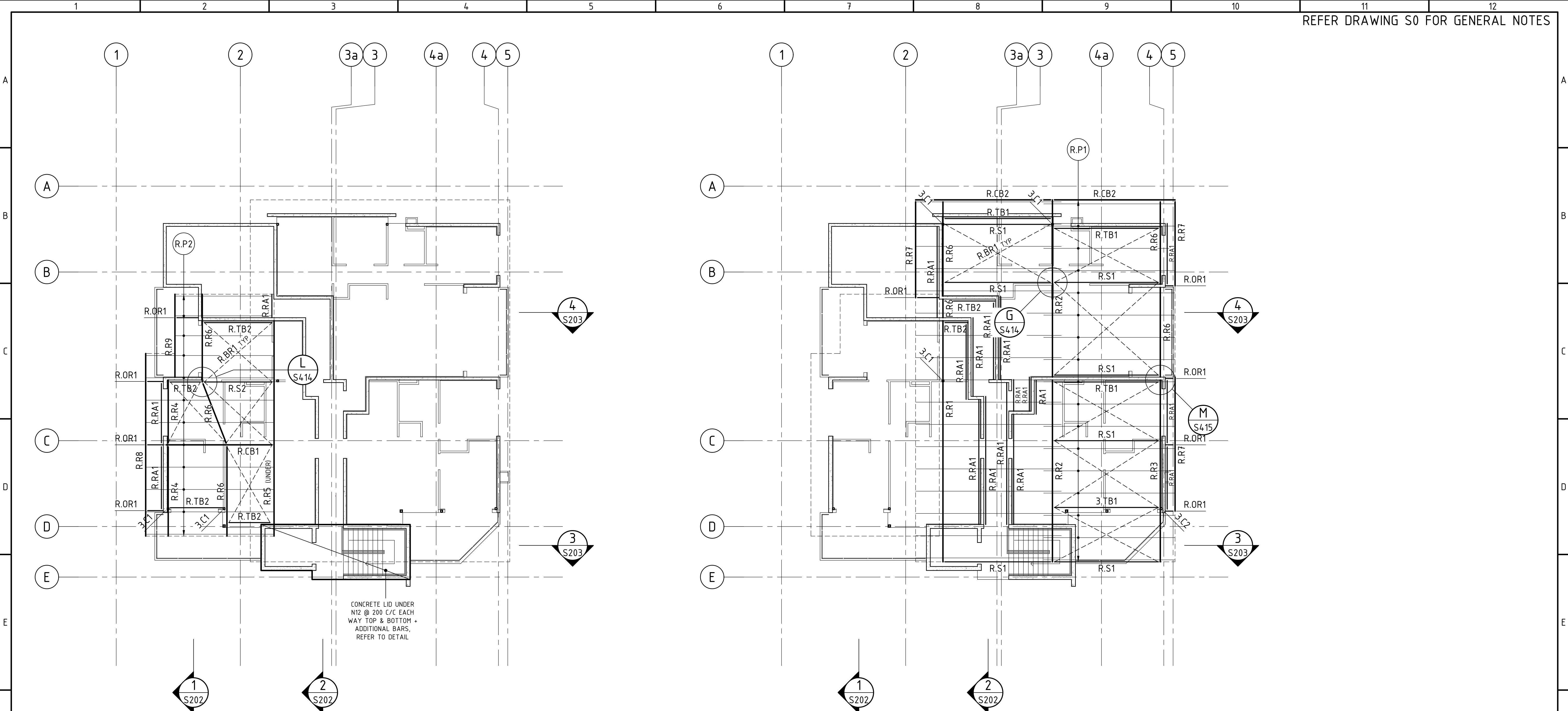
0 10 20 30 40 50 100mm

LEVEL 3 FLOOR SLAB PLAN

1:100



REFER DRAWING S0 FOR GENERAL NOTES



ROOF PLAN - LOWER ROOF

1:100

ROOF PLAN - UPPER ROOF

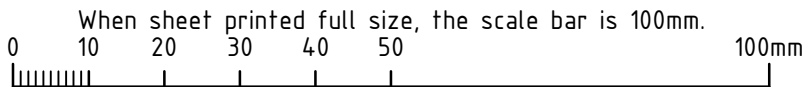
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MEMBER SCHEDULE		
MARK	MEMBER	REMARKS
3.C1	89 x 89 x 3.5 SHS	COLUMN - 10' CAP PL, 2-M16 BOLTS, 10' BASE PL, 2-M16 BOLTS
3.C2	100 x 100 x 6.0 SHS	COLUMN - 12' CAP PL, 2-M20 BOLTS, 12' BASE PL, 2-M20 BOLTS
R.R1	230 PFC	RAFTER
R.R2	250 UB 26	RAFTER - FLY BRACE EVERY THIRD PURLIN
R.R3	230 PFC	RAFTER - REFER TO DETAIL
R.R4	150 PFC	RAFTER - 10' CLEAT PL, 2-M16 BOLTS
R.R5	230 PFC	RAFTER
R.R6	150 PFC	RAFTER - CONNECTION SIMILAR TO R.RA1
R.R7	C200-24	RAFTER - 8' CLEAT PL, 2-M12 BOLTS
R.R8	C150-24	RAFTER - 8' CLEAT PL, 2-M12 BOLTS
R.R9	100 PFC	RAFTER - 10' END PL, 2-M16 BOLTS TO R.0R1, REFER TO DETAIL
R.TB1	180 PFC 'ON FLAT'	TIE BEAM - 10' CLEAT PL, 2-M16 BOLTS, REFER TO DETAIL
R.TB2	125 PFC 'ON FLAT'	TIE BEAM - 8' CLEAT PL, 2-M12 BOLTS, REFER TO DETAIL
R.S1	100 x 100 x 4.0 SHS	STRUT - REFER TO DETAIL
R.S2	89 x 89 x 3.5 SHS	STRUT - REFER TO DETAIL
R.RA1	125 x 75 x 8.0 UA	RACKING ANGLE - REFER TO DETAIL
R.0R1	150 PFC	OUTRIGGER - 12' END PL, 4-M16 FERRULES OR FULLY WELDED TO CAST-IN PLATE
R.CB1	180 PFC	CARRY BEAM - 10' CLEAT PL, 2-M16 BOLTS
R.CB2	150 PFC	CARRY BEAM - 10' CLEAT PL, 2-M16 BOLTS
R.BR1	65 x 65 x 5.0 EA	ROOF BRACE - REFER TO DETAIL

PURLIN SCHEDULE	
MARK	DESCRIPTION
R.P1	Z200-15 @ 1200 C/C MAX EDGE PURLIN @ 600 C/C MAX 900mm LAP.
R.P2	Z150-12 @ 1200 C/C MAX EDGE PURLIN @ 600 C/C MAX 900mm LAP. 1 ROW BRIDGING MIDSPAN

STEELWORK NOTES:

- ALL STEELWORK TO BE GRADE 300+
- ALL STEEL HOLLOW SECTION MEMBERS TO BE GRADE C350 UNO.
- ALL BOLTS TO BE GRADE 8.8/S. UNO



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PROJECT  
**PROPOSED RESIDENTIAL DEVELOPMENT**  
**AT: 419 REGENCY ROAD PROSPECT**  
**FOR: NIATRON 10 PTY LTD**

DRAWING TITLE  
**ROOF PLAN**

Civil  
Environmental  
Mechanical  
Fire  
Lifts

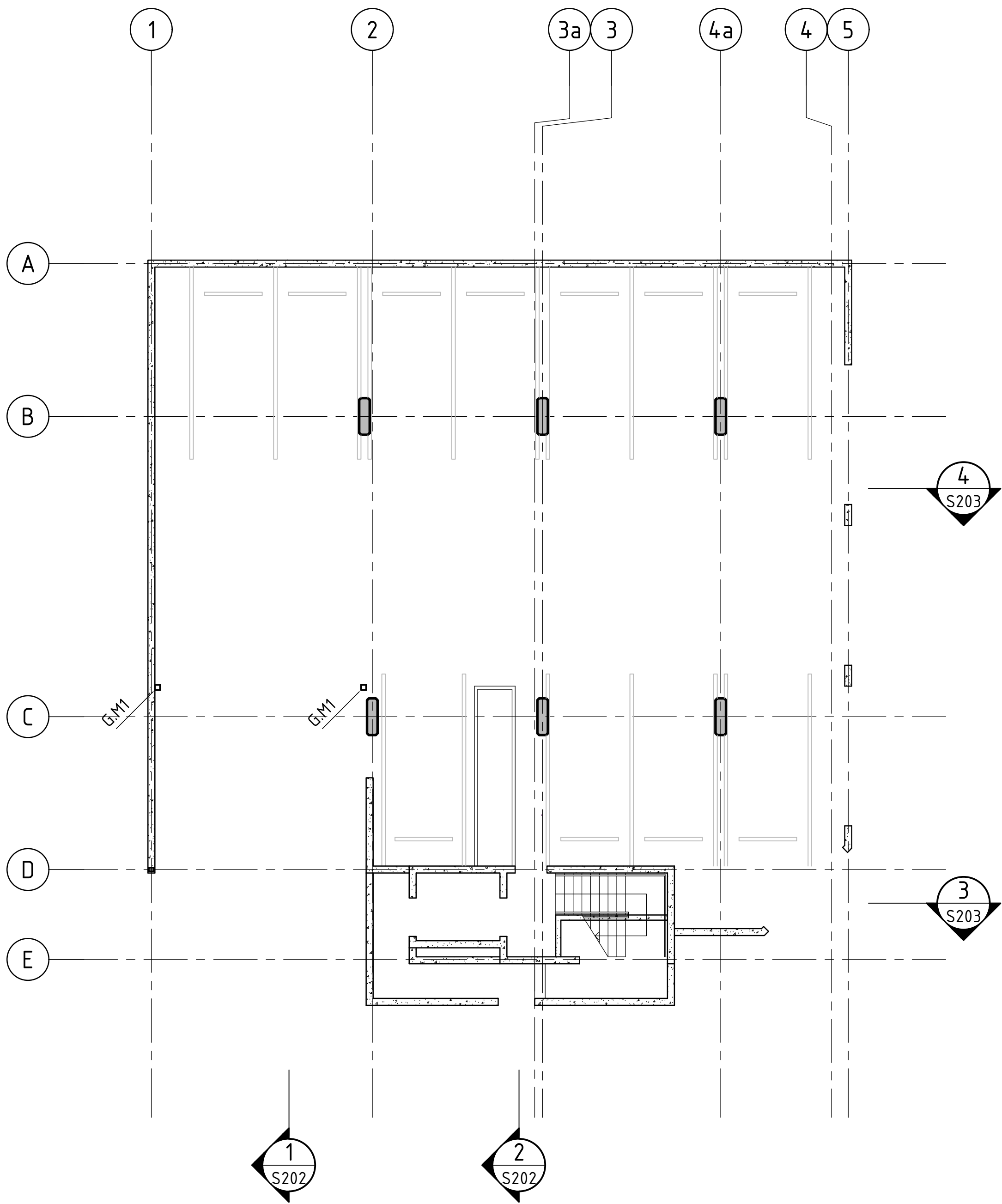
Structural  
Geotechnical  
Electrical  
Hydraulics  
Green ESD

**TMK**  
CONSULTING ENGINEERS

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Adelaide SA 5000  
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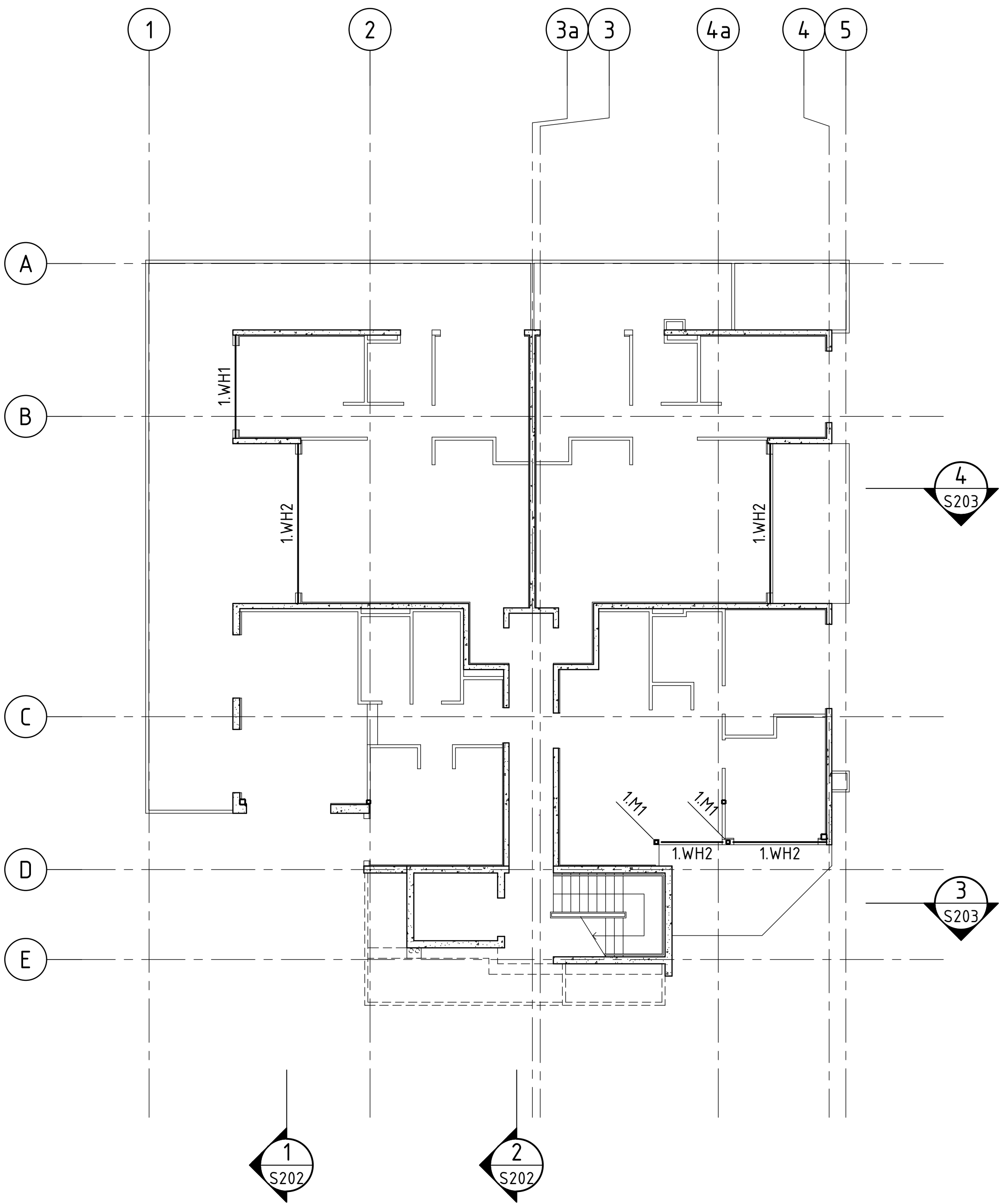
GROUND LEVEL STRUCTURAL PLAN

1:100

MEMBER SCHEDULE		
MARK	MEMBER	REMARKS
G.M1	100 x 100 x 5.0 SHS	MULLION - 10 BASE PL, 2-M16 CHEM ANCHORS
1.M1	89 x 89 x 3.5 SHS	MULLION - 10 BASE PL, 2-M16 CHEM ANCHORS
1.WH1	150 PFC 'ON FLAT	WINDOW HEAD - 10 CLEAT PL, 2-M16 BOLTS TO STEEL COLUMN & 8 END PL, 2-M16 FERRULES TO PRE-CAST PANEL
1.WH2	150 x 100 x 4.0 RHS	WINDOW HEAD - 10 END PL, 2-M16 FERRULES TO WALL PANEL

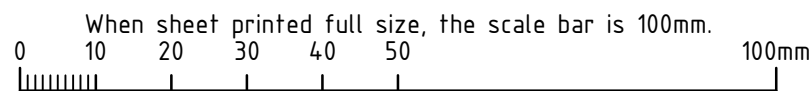
STEELWORK NOTES:

- ALL STEELWORK TO BE GRADE 300+
- ALL STEEL HOLLOW SECTION MEMBERS TO BE GRADE C350 UNO.
- ALL BOLTS TO BE GRADE 8.8/S. UNO



LEVEL 1 STRUCTURAL PLAN

1:100



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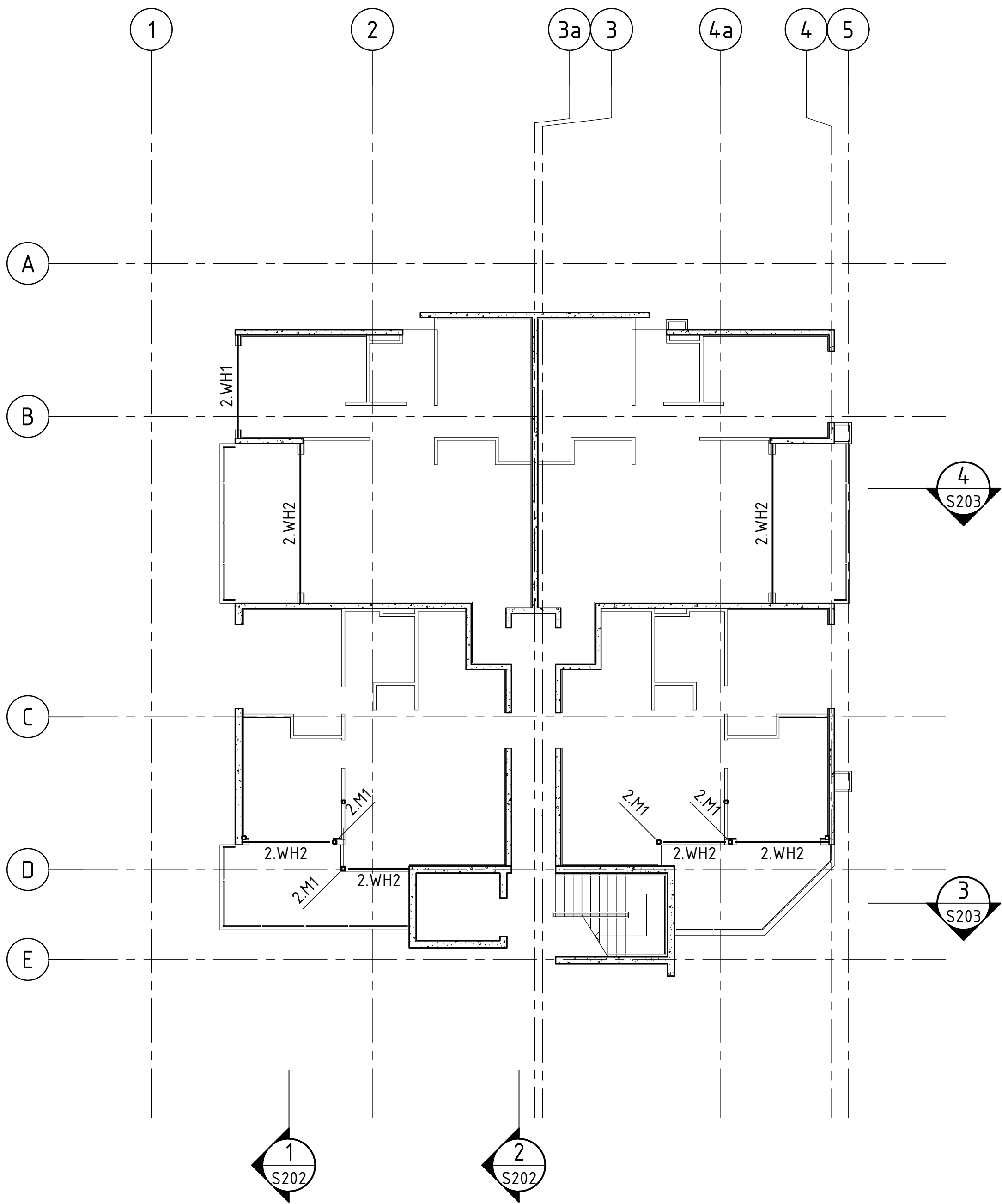
PROJECT  
PROPOSED RESIDENTIAL  
DEVELOPMENT  
AT: 419 REGENCY ROAD  
PROSPECT  
FOR: NIATRON 10 PTY LTD

DRAWING TITLE  
GROUND LEVEL & LEVEL 1 STRUCTURAL PLANS

Civil  
Environmental  
Mechanical  
Fire  
Lifts  
Structural  
Geotechnical  
Electrical  
Hydraulics  
Green ESD  
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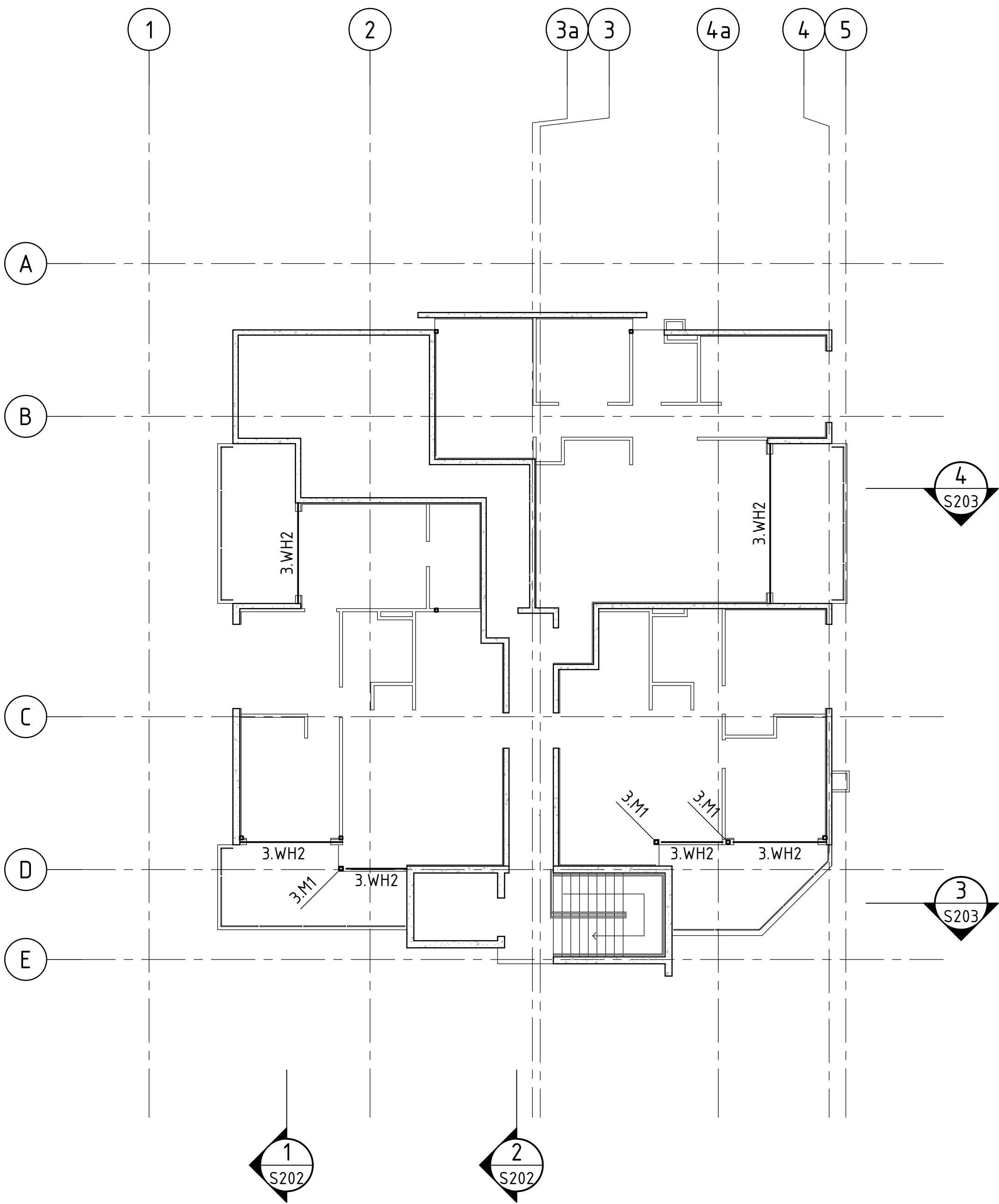
LEVEL 2 STRUCTURAL PLAN

1:100

MEMBER SCHEDULE		
MARK	MEMBER	REMARKS
2.M2	89 x 89 x 3.5 SHS	MULLION - 10 BASE PL, 2-M16 CHEM ANCHORS
3.M2	89 x 89 x 3.5 SHS	MULLION - 10 BASE PL, 2-M16 CHEM ANCHORS
2.WH1	150 PFC 'ON FLAT'	WINDOW HEAD - 10 CLEAT PL, 2-M16 BOLTS TO STEEL COLUMN & 8 END PL, 2-M16 FERRULES TO PRE-CAST PANEL
2.WH2	150 x 100 x 4.0 RHS	WINDOW HEAD - 10 END PL, 2-M16 FERRULES TO WALL PANEL
3.WH1	150 PFC 'ON FLAT'	WINDOW HEAD - 10 CLEAT PL, 2-M16 BOLTS TO STEEL COLUMN & 8 END PL, 2-M16 FERRULES TO PRE-CAST PANEL
3.WH2	150 x 100 x 4.0 RHS	WINDOW HEAD - 10 END PL, 2-M16 FERRULES TO WALL PANEL

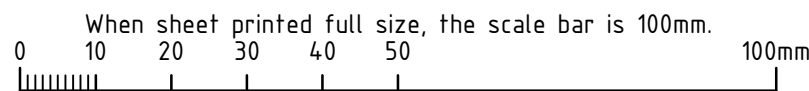
STEELWORK NOTES:

- ALL STEELWORK TO BE GRADE 300+
- ALL STEEL HOLLOW SECTION MEMBERS TO BE GRADE C350 UNO.
- ALL BOLTS TO BE GRADE 8.8/S. UNO



LEVEL 3 STRUCTURAL PLAN

1:100



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DEVELOPMENT  
AT: 419 REGENCY ROAD  
PROSPECT  
FOR: NIATRON 10 PTY LTD

DRAWING TITLE  
LEVEL 2 & 3 STRUCTURAL PLANS

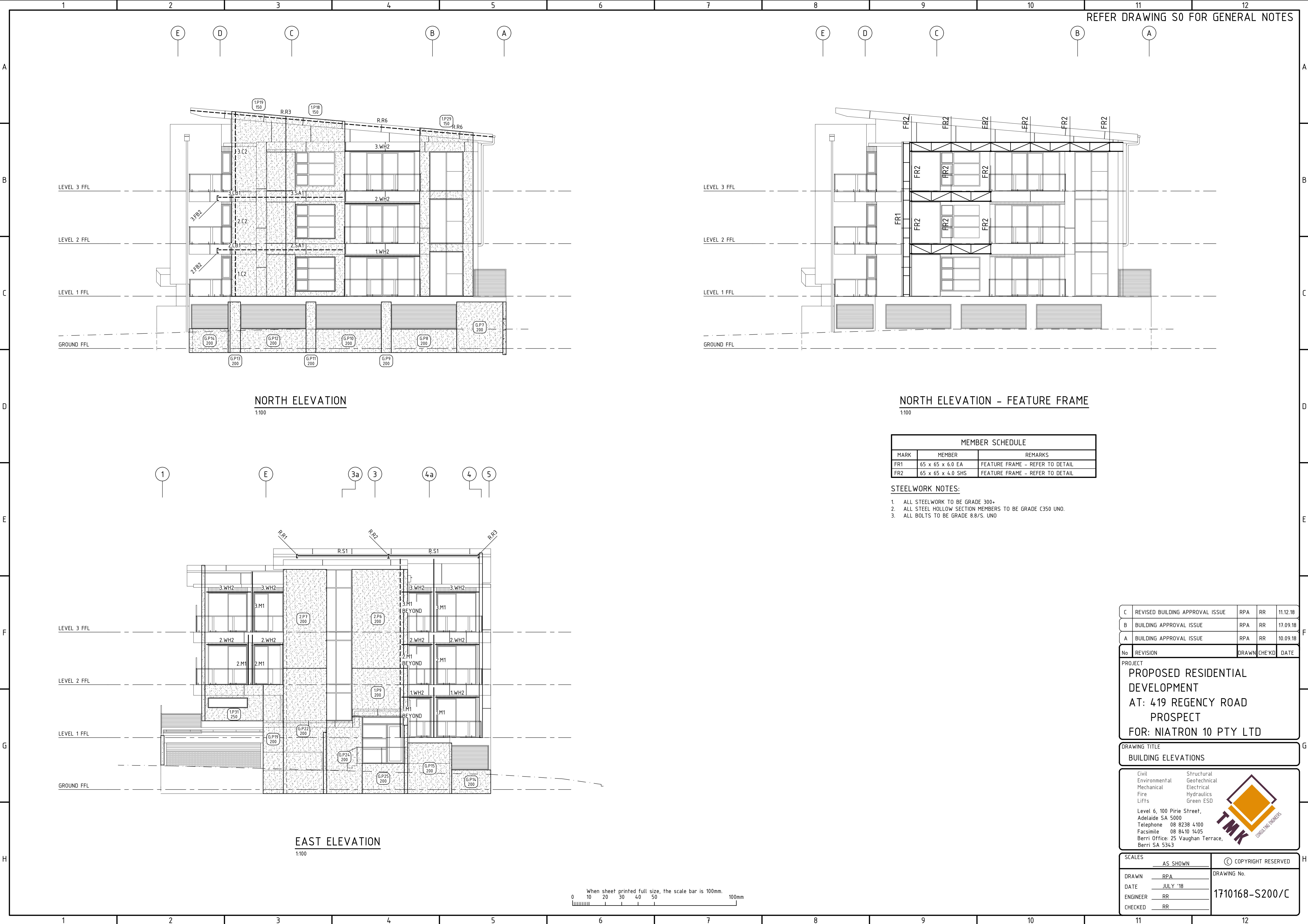
Civil  
Environmental  
Mechanical  
Fire  
Lifts

Structural  
Geotechnical  
Electrical  
Hydraulics  
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NORTH ELEVATION

1:100

NORTH ELEVATION - FEATURE FRAME

1:100

MEMBER SCHEDULE

MARK	MEMBER	REMARKS
FR1	65 x 65 x 6.0 EA	FEATURE FRAME - REFER TO DETAIL
FR2	65 x 65 x 4.0 SHS	FEATURE FRAME - REFER TO DETAIL

STEELWORK NOTES:

- ALL STEELWORK TO BE GRADE 300+.
- ALL STEEL HOLLOW SECTION MEMBERS TO BE GRADE C350 UNO.
- ALL BOLTS TO BE GRADE 8.8/S. UNO

EAST ELEVATION

1:100

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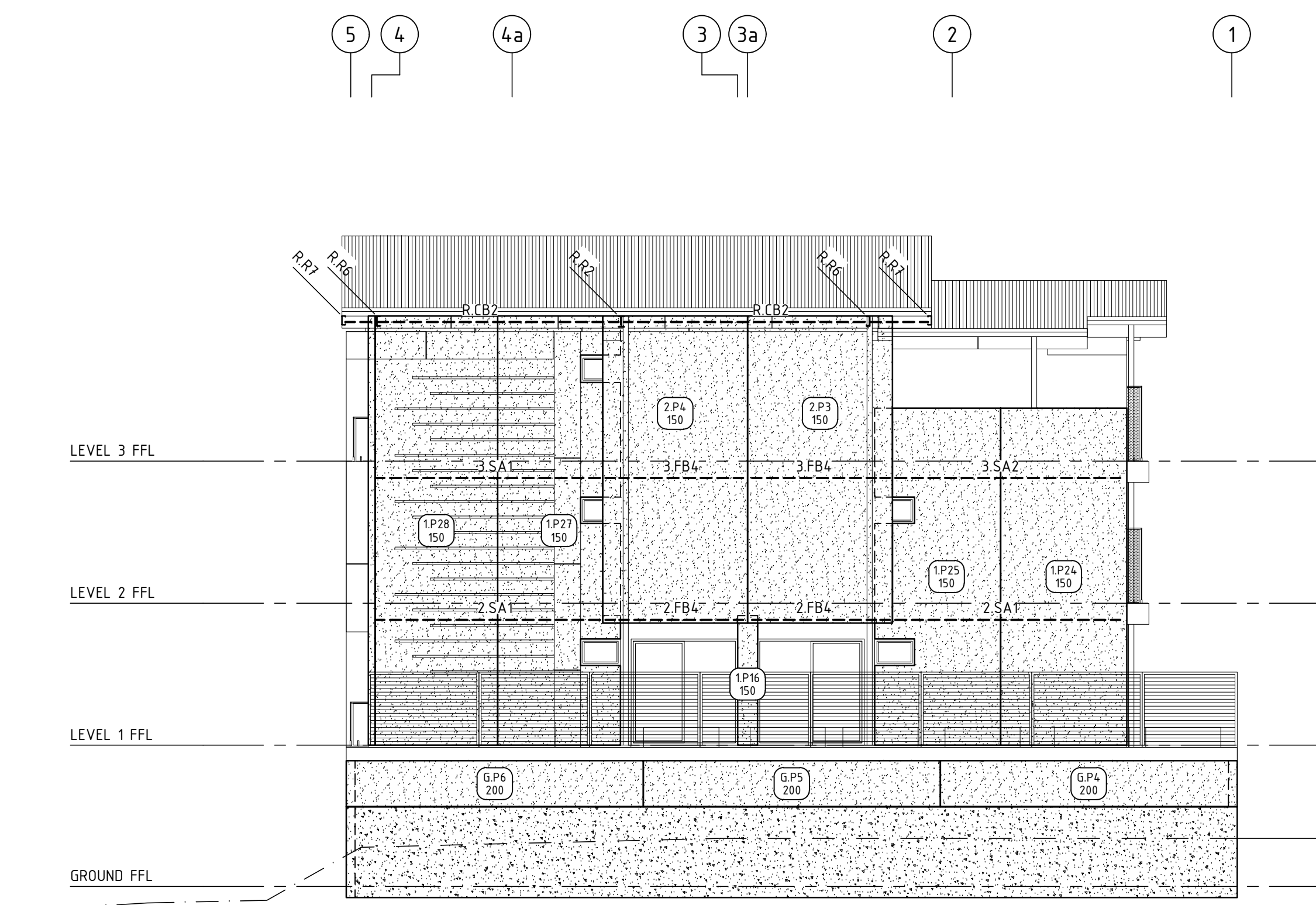
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PROSPECT  
FOR: NIATRON 10 PTY LTD

DRAWING TITLE  
BUILDING ELEVATIONS

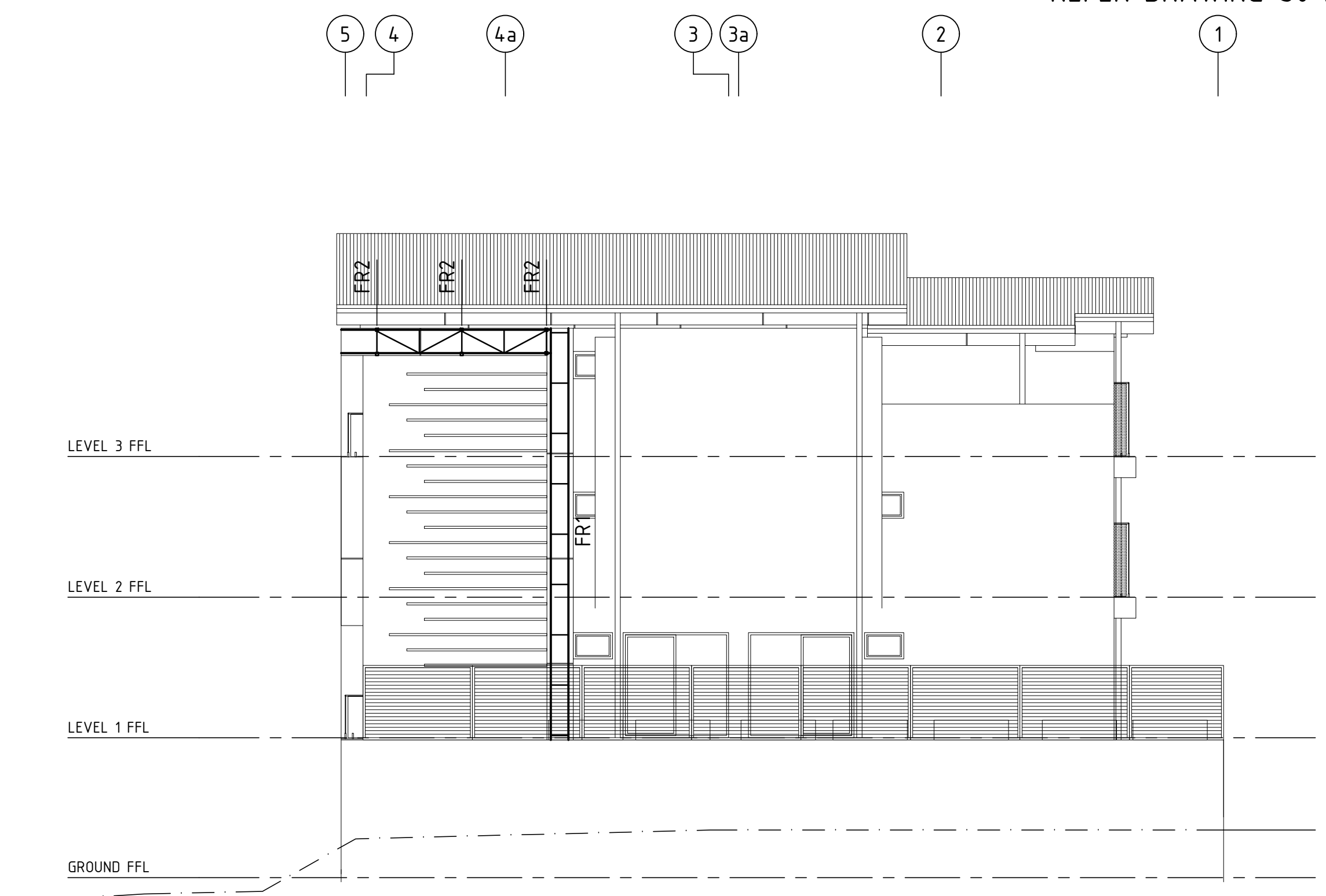
Civil  
Environmental  
Mechanical  
Fire  
Lifts  
Structural  
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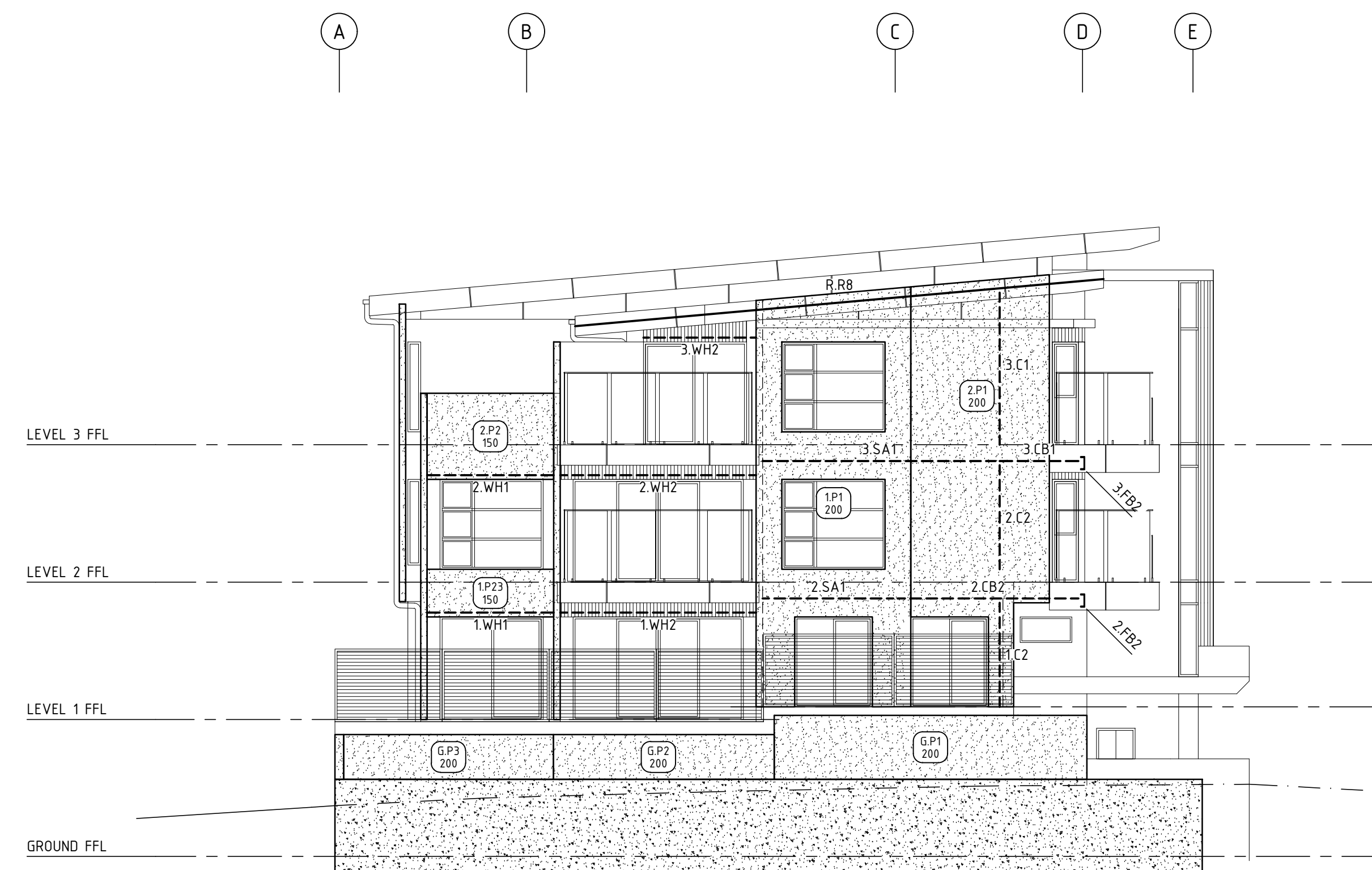
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WEST ELEVATION  
1:100



WEST ELEVATION - FEATURE FRAME



SOUTH ELEVATION

---

1:100

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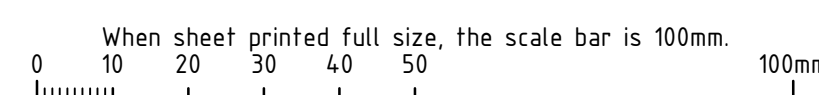
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BUILDING ELEVATIONS

Civil	Structural
Environmental	Geotechnical
Mechanical	Electrical
Fire	Hydraulics
Lifts	Green ESD

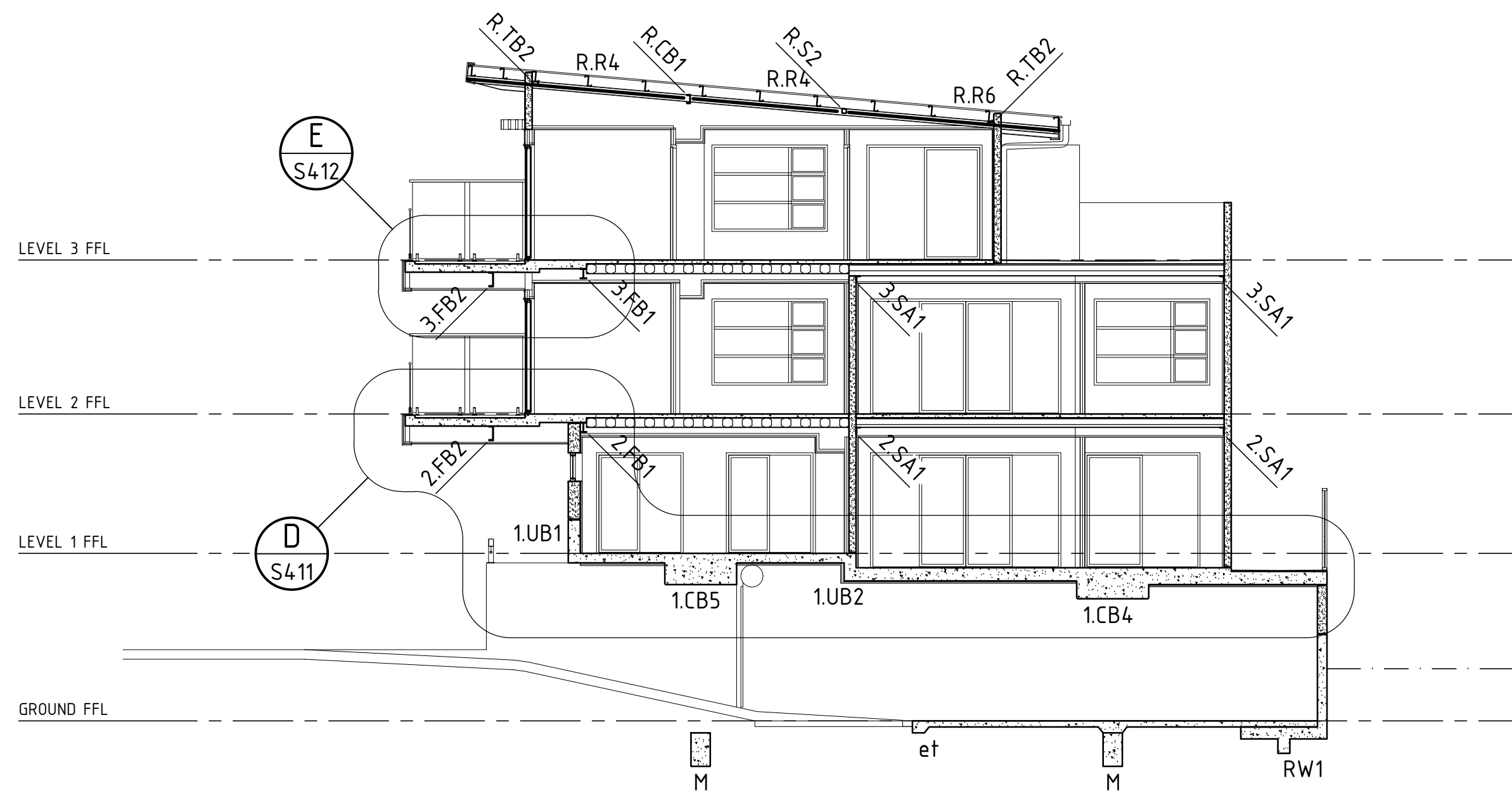
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This architectural section drawing illustrates the structural layout of a building across four levels: LEVEL 3 FFL, LEVEL 2 FFL, LEVEL 1 FFL, and GROUND FFL. The drawing includes various structural components and callouts:

- Roof Structure:** The roof is shown with a sloped section on the left and a flat section on the right. Callouts include RS1, R.R1, R.TB2, R.R6, and R.C1.
- Columns:** Vertical structural elements are labeled 3.C1, 2.FB3, 2.FB4, 1.CB2, and G.CC1.
- Beams:** Horizontal structural elements are labeled 2.FB3 and 2.FB4.
- Levels:** The drawing is divided into four horizontal sections corresponding to the floor levels: LEVEL 3 FFL, LEVEL 2 FFL, LEVEL 1 FFL, and GROUND FFL.
- Foundation and Ground Level:** The ground level is marked with GROUND FFL. Foundation elements include RW3, PF2, PF1 BEYOND, and RW1.
- Other Callouts:** Additional labels include N, S413, H, S410, and M.

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DRAWING TITLE  
BUILDING SECTIONS

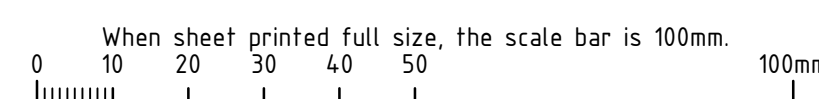
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Environmental	Geotechnical	
Mechanical	Electrical	
Fire	Hydraulics	
Lifts	Green ESD	

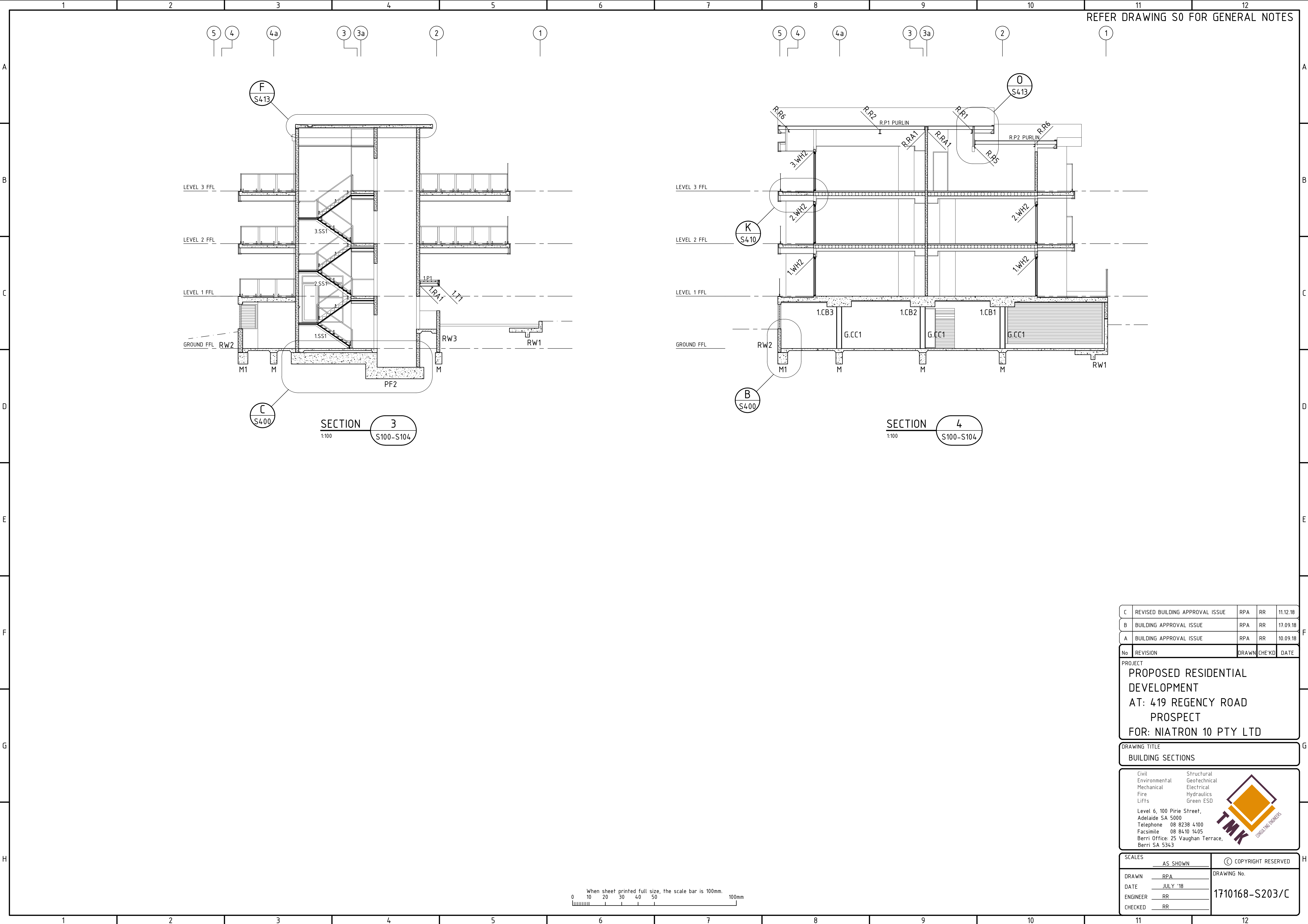
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AT: 419 REGENCY ROAD  
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FOR: NIATRON 10 PTY LTD

DRAWING TITLE  
BUILDING SECTIONS

Civil  
Environmental  
Mechanical  
Fire  
Lifts  
Structural  
Geotechnical  
Electrical  
Hydraulics  
Green ESD

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0 10 20 30 40 50 100mm



REFER DRAWING S0 FOR GENERAL NOTES

WALL PANEL NOTES:

- WALL PANELS 150 THICK (25mm MAX. GROOVE DEPTH) SL92 CENTRAL + N20 EDGE BARS CENTRAL TO 3 SIDES & N16 EDGE BARS EACH FACE BOTTOM (UNO) & ADDITIONAL REINFORCEMENT AS NOTED.
- WALL PANELS 200 THICK (25mm MAX. GROOVE DEPTH) SL82 EACH FACE (UNO) + N16 EDGE BARS EACH FACE (UNO) & ADDITIONAL REINFORCEMENT AS NOTED.
- WALL PANELS 250 THICK (25mm MAX. GROOVE DEPTH) N12 @ 200 C/C EACH WAY, EACH FACE + N16 EDGE BARS EACH FACE (UNO) & ADDITIONAL REINFORCEMENT AS NOTED.
- REFER TO WALL PANEL ELEVATIONS & DETAILS FOR DOWEL FIXINGS.
- CONFIRM PANEL SIZES WITH PRECAST CONTRACTOR, THE ENGINEER IS TO BE NOTIFIED IF PANEL SIZES ARE TO BE ADJUSTED.
- REINFORCEMENT SPECIFIED IS FOR 'IN POSITION' LOADING ONLY. THE MANUFACTURER IS TO PROVIDE ANY ADDITIONAL REINFORCEMENT IF REQUIRED FOR CASTING, TRANSPORTATION, LIFTING, ERECTION ETC.
- REFER TO ARCHITECTURAL DRAWINGS FOR ANY ARCH FEATURES, PENETRATIONS, DP'S ETC.
- REFER TO SECTIONS & ELEVATIONS FOR ADDITIONAL REINFORCEMENT.
- ENSURE APPROPRIATE COVER TO CAST IN PLATE LUGS AT GROOVE LOCATIONS THE ENGINEER IS TO BE NOTIFIED IF SUCH CLASHING OCCURS.
- PENETRATIONS IN WALL PANELS FOR SERVICES ARE TO BE CONSTRUCTED DURING CASTING OF WALL PANELS.
- ALL FERRULES TO BE RAMSET ROUND FERRULES x 96mm LONG WITH N12 x 300 LONG BACKING ROD UNO.
- PROVIDE MINIMUM CLEAR COVER OF 35mm TO ALL REINFORCEMENT.
- PROVIDE 'XYPEX' OR SIMILAR APPROVED MOISTURE PROOFING ADDITIVE TO ALL WALL PANELS RETAINING SOIL, TO MANUFACTURERS SPECIFICATION.

LEGEND

- P1 150 DENOTES 150 THICK WALL PANEL TYPE
- P1 200 DENOTES 200 THICK WALL PANEL TYPE
- P1 250 DENOTES 250 THICK WALL PANEL TYPE
- NP1 200 DENOTES NON-LOAD BEARING WALL PANEL TYPE
- CC DENOTES CORNER PANEL CONNECTION REFER TO DETAILS
- SC DENOTES SUSPENDED WALL PANEL CONNECTION REFER TO DETAILS
- SCC DENOTES SUSPENDED CORNER PANEL CONNECTION REFER TO DETAILS

WALL PANEL PLAN - GROUND FLOOR

1:100

WALL PANEL PLAN - LEVEL 1

1:100

When sheet printed full size, the scale bar is 100mm.

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AT: 419 REGENCY ROAD  
PROSPECT  
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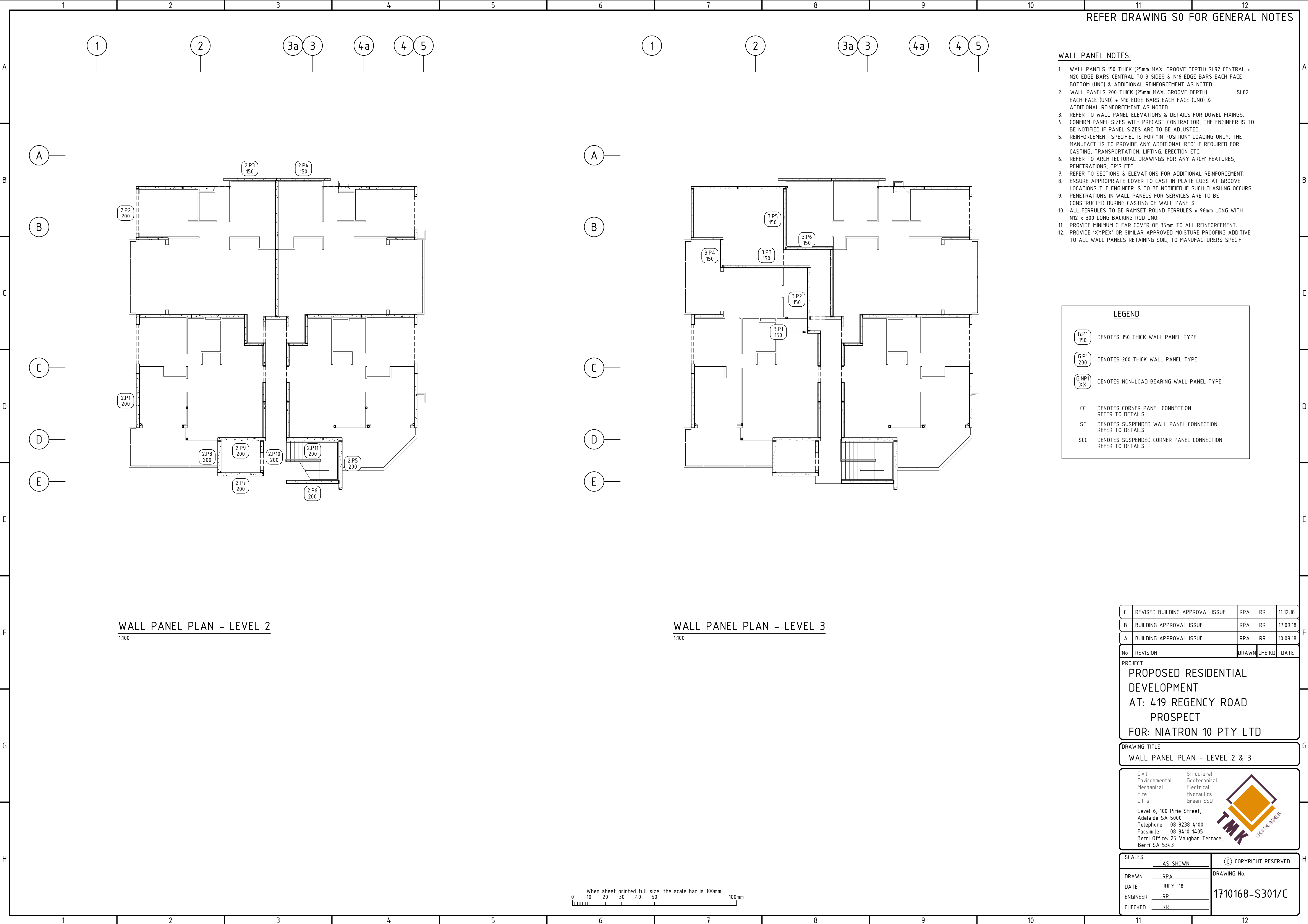
DRAWING TITLE  
WALL PANEL PLAN - GROUND & LEVEL 1

Civil  
Environmental  
Mechanical  
Fire  
Lifts

Structural  
Geotechnical  
Electrical  
Hydraulics  
Green ESD

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Adelaide SA 5000  
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WALL PANEL NOTES:

- 1. WALL PANELS 150 THICK (25mm MAX. GROOVE DEPTH) SL92 CENTRAL + N20 EDGE BARS CENTRAL TO 3 SIDES & N16 EDGE BARS EACH FACE BOTTOM (UNO) & ADDITIONAL REINFORCEMENT AS NOTED.
- 2. WALL PANELS 200 THICK (25mm MAX. GROOVE DEPTH) SL82 EACH FACE (UNO) + N16 EDGE BARS EACH FACE (UNO) & ADDITIONAL REINFORCEMENT AS NOTED.
- 3. REFER TO WALL PANEL ELEVATIONS & DETAILS FOR DOWEL FIXINGS.
- 4. CONFIRM PANEL SIZES WITH PRECAST CONTRACTOR, THE ENGINEER IS TO BE NOTIFIED IF PANEL SIZES ARE TO BE ADJUSTED.
- 5. REINFORCEMENT SPECIFIED IS FOR "IN POSITION" LOADING ONLY. THE MANUFACT' IS TO PROVIDE ANY ADDITIONAL REQ' IF REQUIRED FOR CASTING, TRANSPORTATION, LIFTING, ERECTION ETC.
- 6. REFER TO ARCHITECTURAL DRAWINGS FOR ANY ARCH' FEATURES, PENETRATIONS, DP'S ETC.
- 7. REFER TO SECTIONS & ELEVATIONS FOR ADDITIONAL REINFORCEMENT.
- 8. ENSURE APPROPRIATE COVER TO CAST IN PLATE LUGS AT GROOVE LOCATIONS THE ENGINEER IS TO BE NOTIFIED IF SUCH CLASHING OCCURS.
- 9. PENETRATIONS IN WALL PANELS FOR SERVICES ARE TO BE CONSTRUCTED DURING CASTING OF WALL PANELS.
- 10. ALL FERRULES TO BE RAMSET ROUND FERRULES x 96mm LONG WITH N12 x 300 LONG BACKING ROD UNO.
- 11. PROVIDE MINIMUM CLEAR COVER OF 35mm TO ALL REINFORCEMENT.
- 12. PROVIDE 'XYPEX' OR SIMILAR APPROVED MOISTURE PROOFING ADDITIVE TO ALL WALL PANELS RETAINING SOIL, TO MANUFACTURERS SPECIF'

LEGEND

- G.P1 150 DENOTES 150 THICK WALL PANEL TYPE
- G.P1 200 DENOTES 200 THICK WALL PANEL TYPE
- G.NP1 XX DENOTES NON-LOAD BEARING WALL PANEL TYPE
- CC DENOTES CORNER PANEL CONNECTION REFER TO DETAILS
- SC DENOTES SUSPENDED WALL PANEL CONNECTION REFER TO DETAILS
- SCC DENOTES SUSPENDED CORNER PANEL CONNECTION REFER TO DETAILS

WALL PANEL PLAN - LEVEL 2  
1:100

WALL PANEL PLAN - LEVEL 3  
1:100

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PROJECT  
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AT: 419 REGENCY ROAD PROSPECT  
FOR: NIATRON 10 PTY LTD

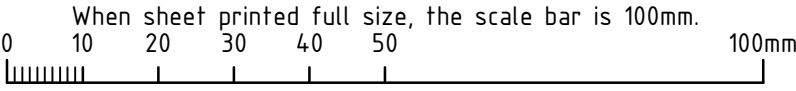
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WALL PANEL PLAN - LEVEL 2 & 3

Civil  
Environmental  
Mechanical  
Fire  
Lifts

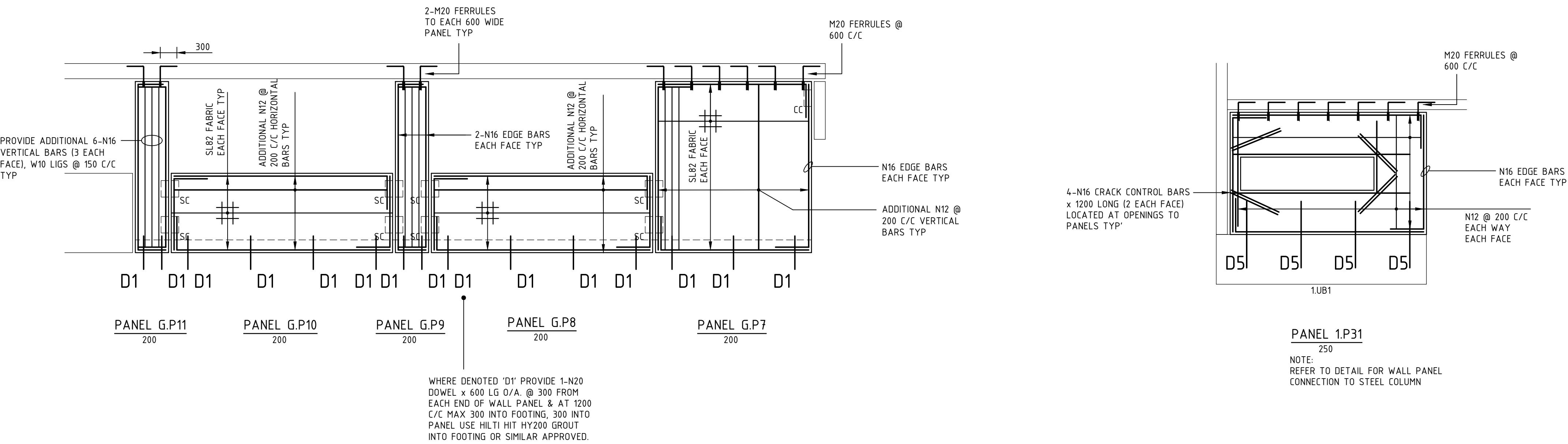
Structural  
Geotechnical  
Electrical  
Hydraulics  
Green ESD

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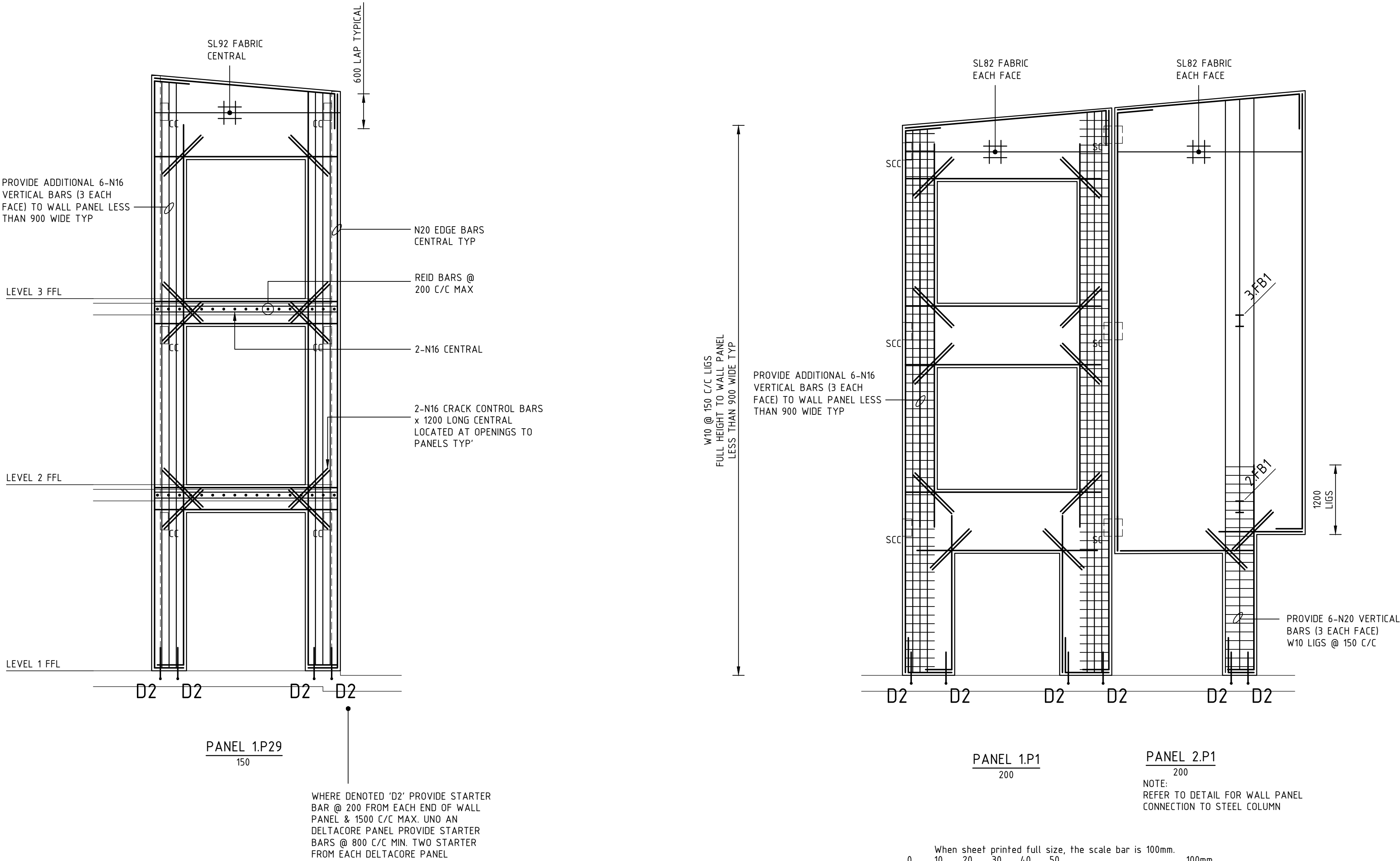






TYP' WALL PANEL ELEVATIONS

1:50



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PROJECT

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AT: 419 REGENCY ROAD PROSPECT

FOR: NIATRON 10 PTY LTD

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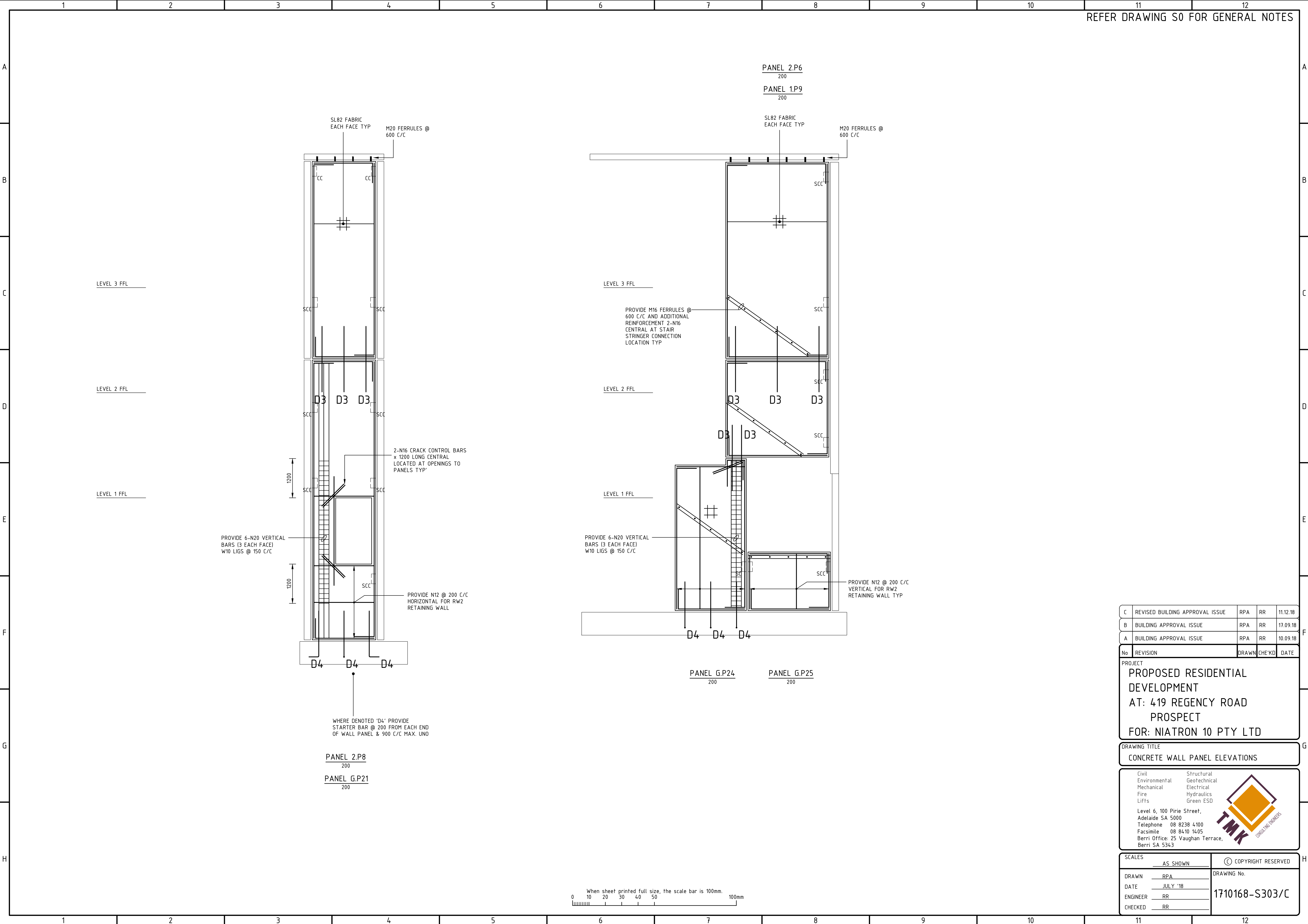
CONCRETE WALL PANEL ELEVATIONS

Civil  
Environmental  
Mechanical  
Fire  
Lifts

Structural  
Geotechnical  
Electrical  
Hydraulics  
Green ESD

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PROJECT  
PROPOSED RESIDENTIAL  
DEVELOPMENT  
AT: 419 REGENCY ROAD  
PROSPECT  
FOR: NIATRON 10 PTY LTD

DRAWING TITLE  
CONCRETE WALL PANEL ELEVATIONS

Civil  
Environmental  
Mechanical  
Fire  
Lifts

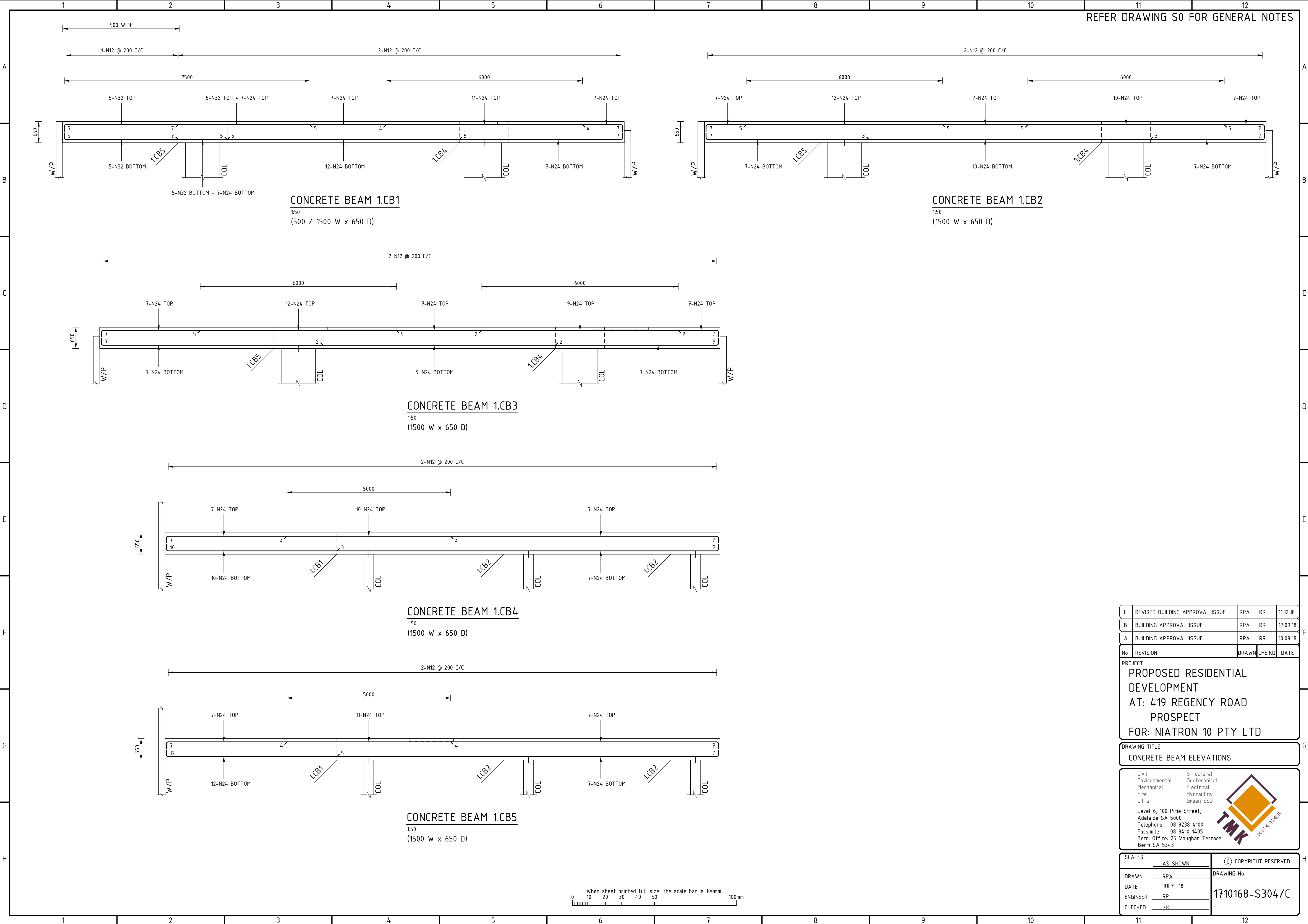
Structural  
Geotechnical  
Electrical  
Hydraulics  
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CONCRETE BEAM 1.CB1  
150  
(500 / 1500 W x 650 D)

CONCRETE BEAM 1.CB2  
150  
(1500 W x 650 D)

CONCRETE BEAM 1.CB3  
150  
(1500 W x 650 D)

CONCRETE BEAM 1.CB4  
150  
(1500 W x 650 D)

CONCRETE BEAM 1.CB5  
150  
(1500 W x 650 D)

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DRAWING TITLE  
CONCRETE BEAM ELEVATIONS

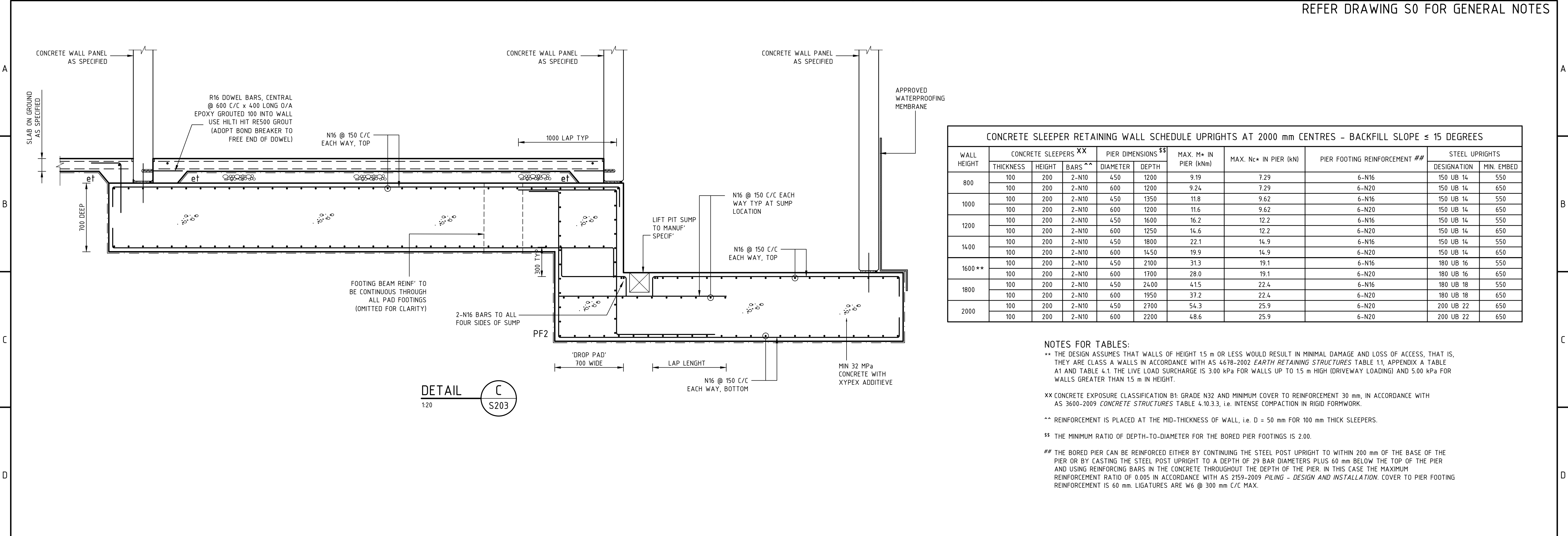
Civil  
Environmental  
Mechanical  
Fire  
Lifts

Structural  
Geotechnical  
Electrical  
Hydraulics  
Green ESD

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When sheet printed full size, the scale bar is 100mm.  
0 10 20 30 40 50 100mm



**NOTES FOR TABLES:**

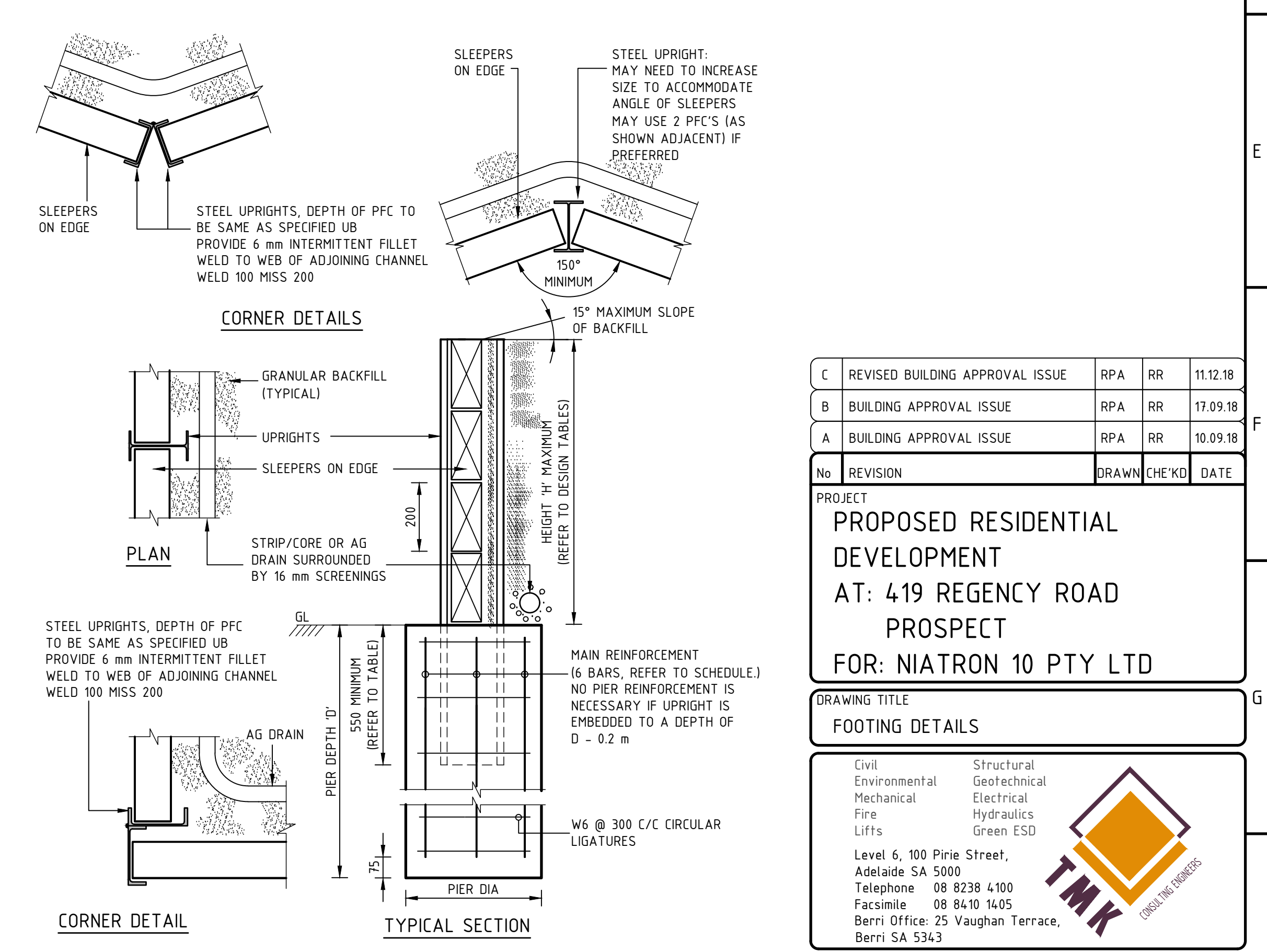
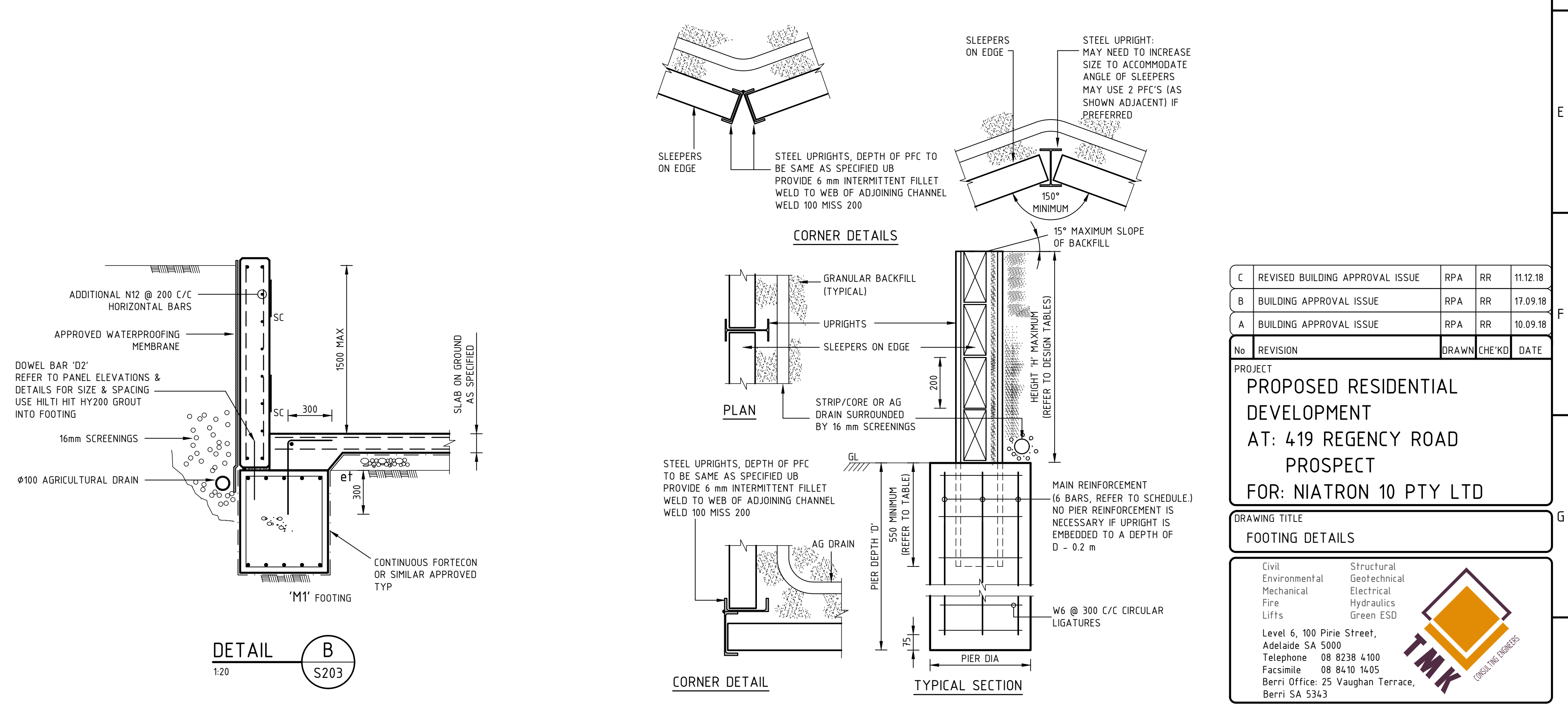
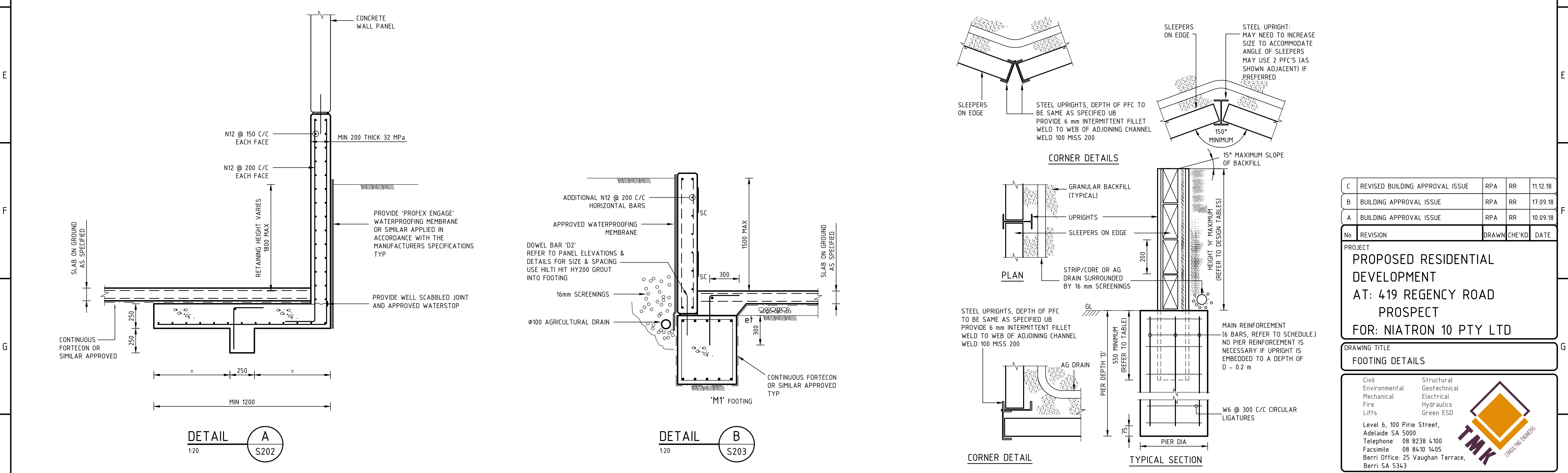
## THE DESIGN ASSUMES THAT WALLS OF HEIGHT 15 m OR LESS WOULD RESULT IN MINIMAL DAMAGE AND LOSS OF ACCESS, THAT IS, THEY ARE CLASS A WALLS IN ACCORDANCE WITH AS 4678-2002 *EARTH RETAINING STRUCTURES* TABLE 11, APPENDIX A TABLE A1 AND TABLE 4.1. THE LIVE LOAD SURCHARGE IS 3.00 kPa FOR WALLS UP TO 15 m HIGH (DRIVEWAY LOADING) AND 5.00 kPa FOR WALLS GREATER THAN 15 m IN HEIGHT.

XX CONCRETE EXPOSURE CLASSIFICATION B1: GRADE N32 AND MINIMUM COVER TO REINFORCEMENT 30 mm, IN ACCORDANCE WITH AS 3600-2009 *CONCRETE STRUCTURES* TABLE 4.10.3.3, i.e. INTENSE COMPACTION IN RIGID FORMWORK.

^^ REINFORCEMENT IS PLACED AT THE MID-THICKNESS OF WALL, i.e. D = 50 mm FOR 100 mm THICK SLEEPERS.

\$\$ THE MINIMUM RATIO OF DEPTH-TO-DIAMETER FOR THE BORED PIER FOOTINGS IS 2.00.

## THE BORED PIER CAN BE REINFORCED EITHER BY CONTINUING THE STEEL POST UPRIGHT TO WITHIN 200 mm OF THE BASE OF THE PIER OR BY CASTING THE STEEL POST UPRIGHT TO A DEPTH OF 29 BAR DIAMETERS PLUS 60 mm BELOW THE TOP OF THE PIER AND USING REINFORCING BARS IN THE CONCRETE THROUGHOUT THE DEPTH OF THE PIER. IN THIS CASE THE MAXIMUM REINFORCEMENT RATIO OF 0.005 IN ACCORDANCE WITH AS 2159-2009 *PILING - DESIGN AND INSTALLATION*. COVER TO PIER FOOTING REINFORCEMENT IS 60 mm. LIGATURES ARE W6 @ 300 mm C/C MAX.



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PROSPECT  
FOR: NIATRON 10 PTY LTD

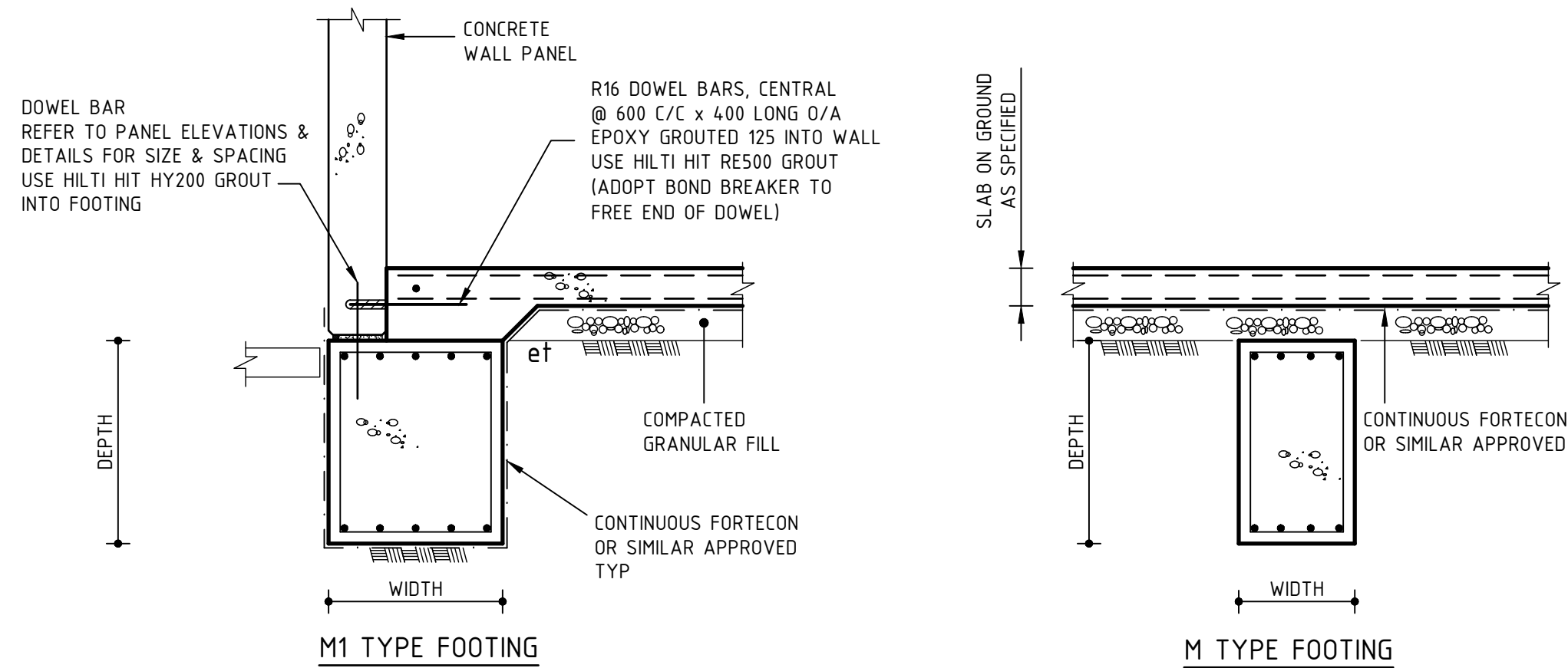
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FOOTING DETAILS

Civil	Structural
Environmental	Geotechnical
Mechanical	Electrical
Fire	Hydraulics
Lifts	Green ESD

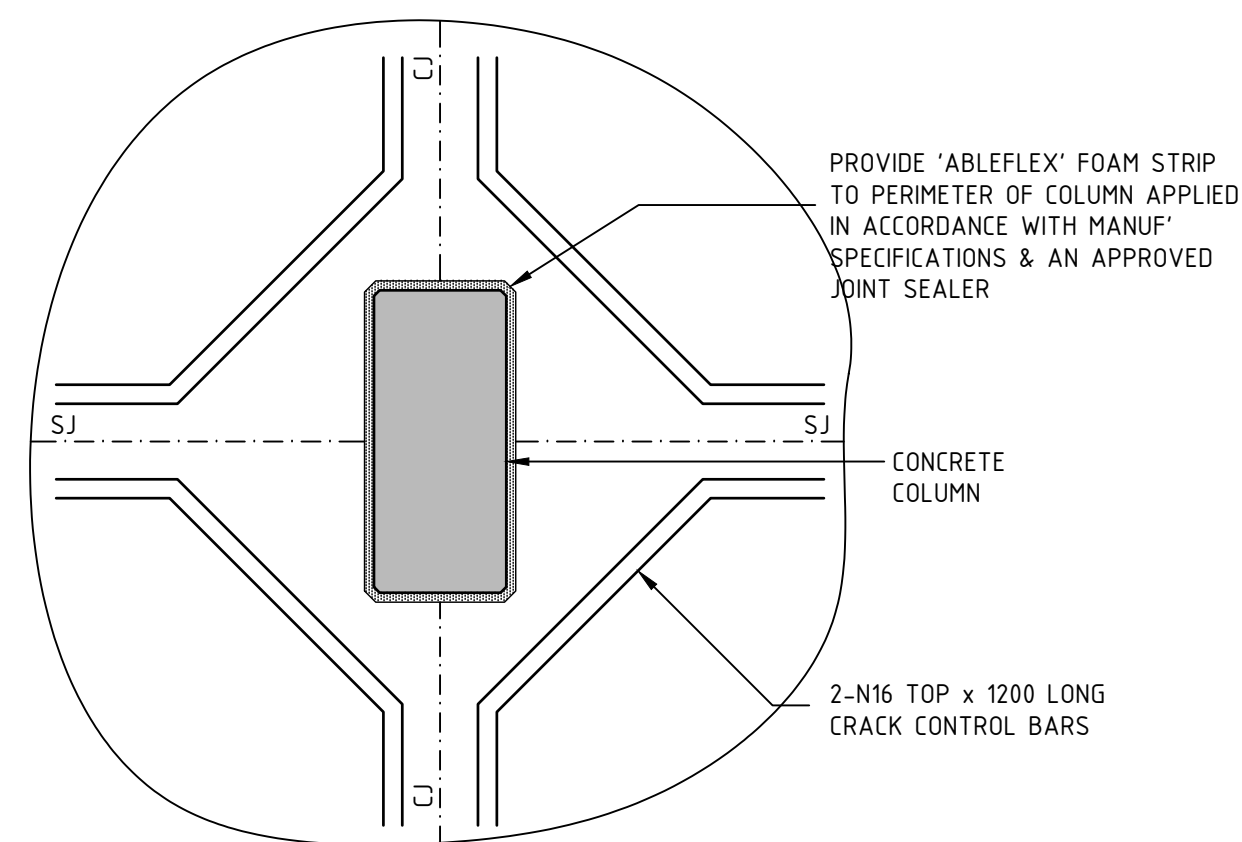
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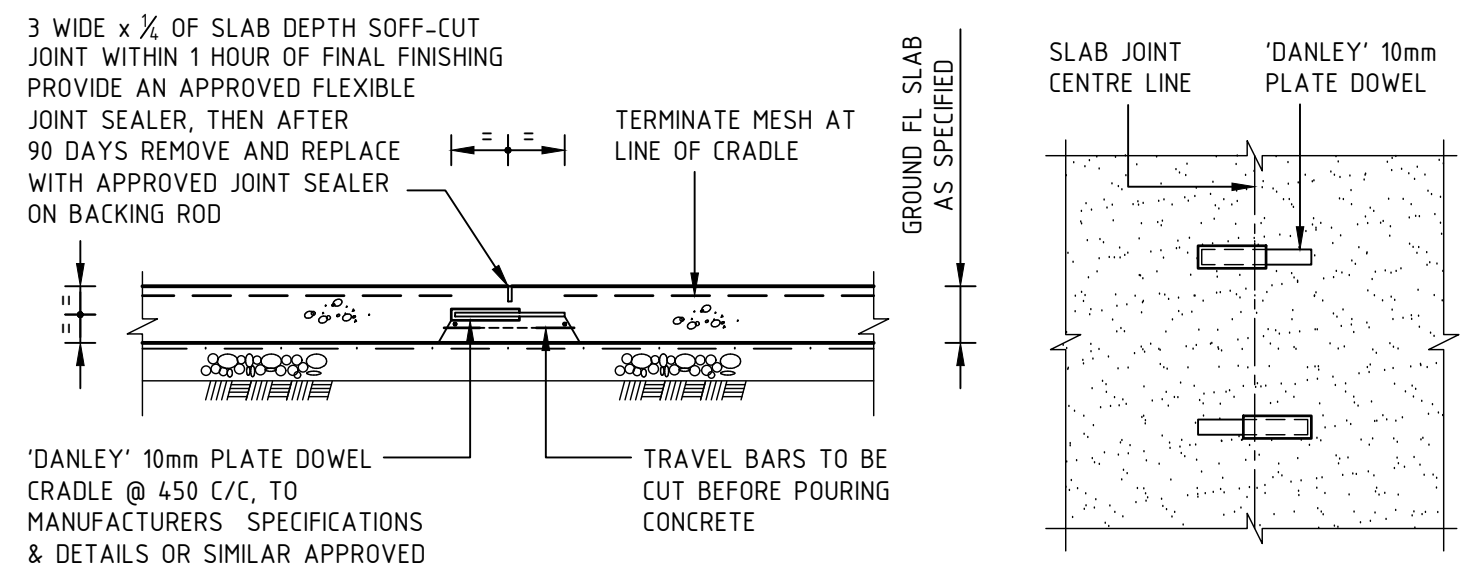
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TYPICAL FOOTING BEAM DETAILS  
1:20

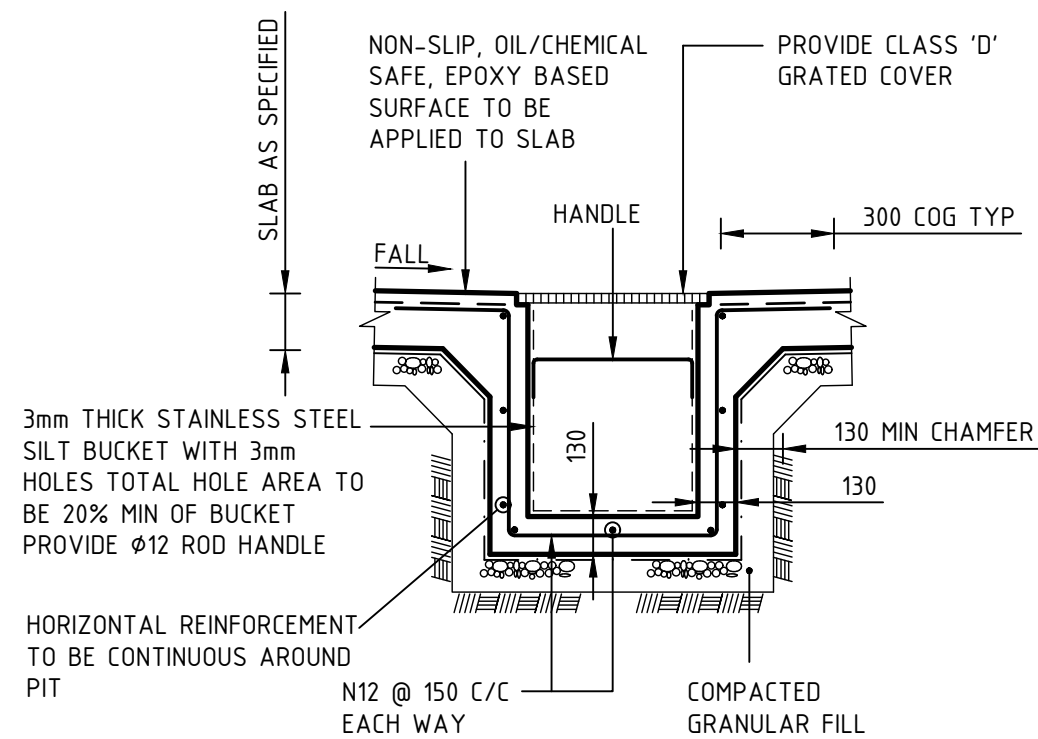


TYPICAL CONCRETE COLUMN ISOLATION JOINT  
NTS

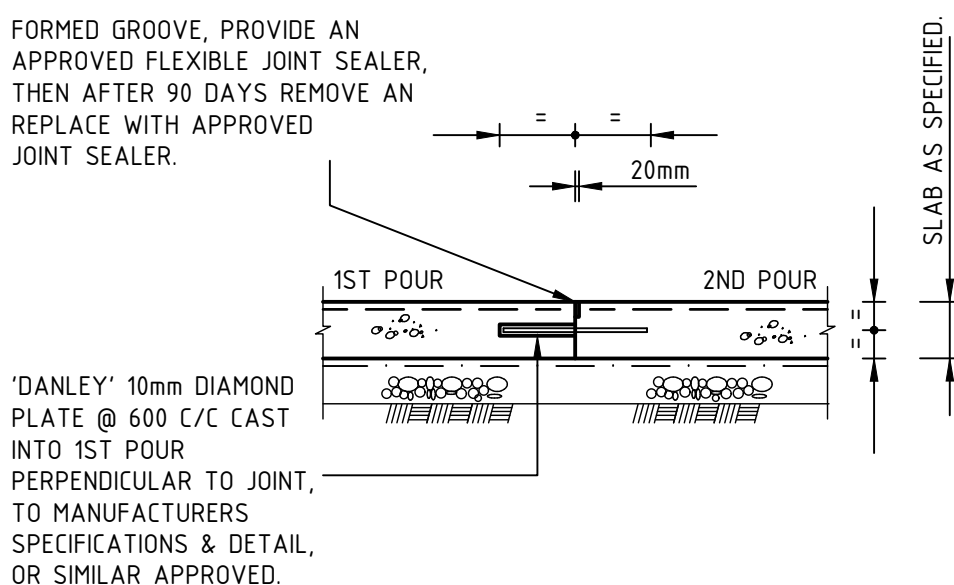


CONTRACTION JOINT DETAIL  
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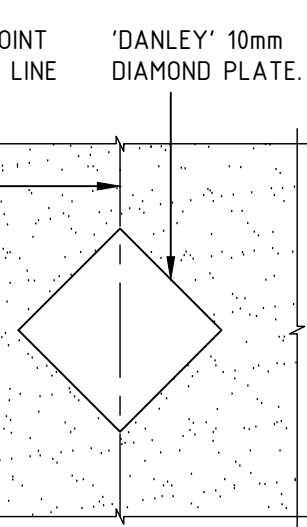
PLAN VIEW  
1:20



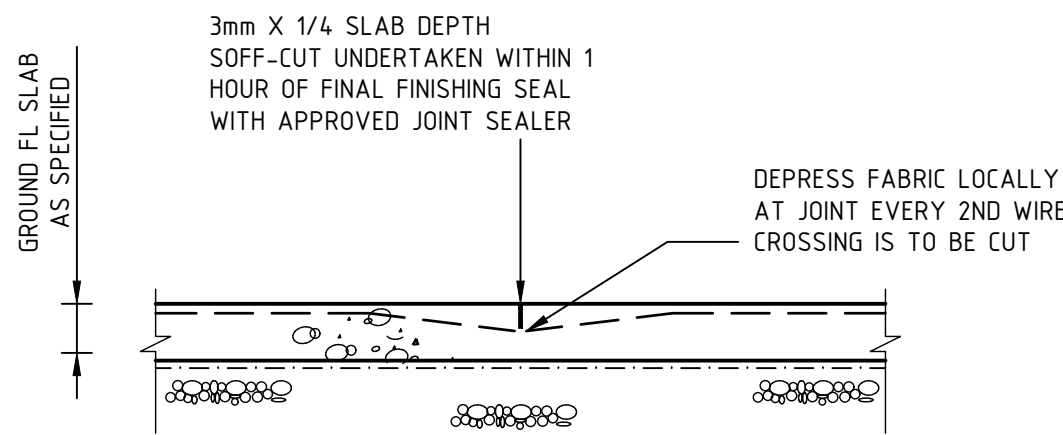
TYPICAL GRATED FLOOR SUMP  
NTS



CONSTRUCTION JOINT  
1:20

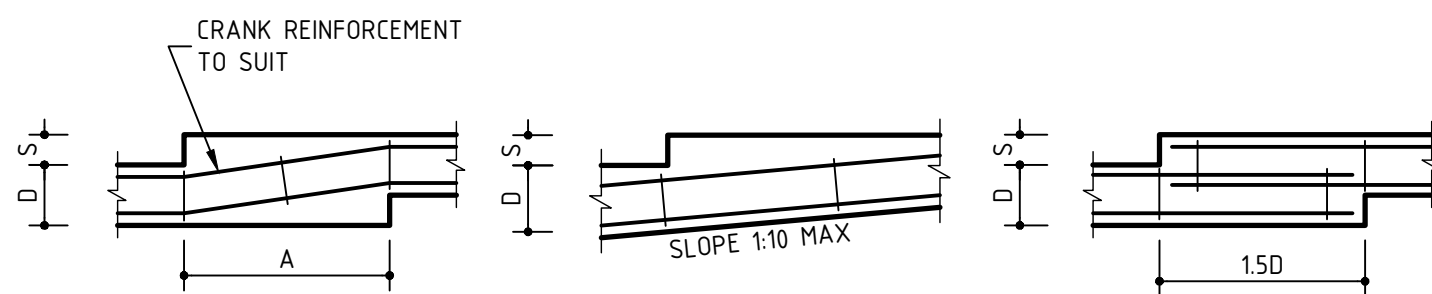


PLAN VIEW  
1:20



SOFF-CUT CONTROL JOINT DETAIL  
1:20

STEP LENGTH	
MAX STEP HEIGHT S, mm	DIMENSION A, mm
100 (1 COURSE)	600
200 (2 COURSES)	1200



OPTION 1  
STEP 'S' FOR 2 MASONRY COURSES (200 mm OR LESS)

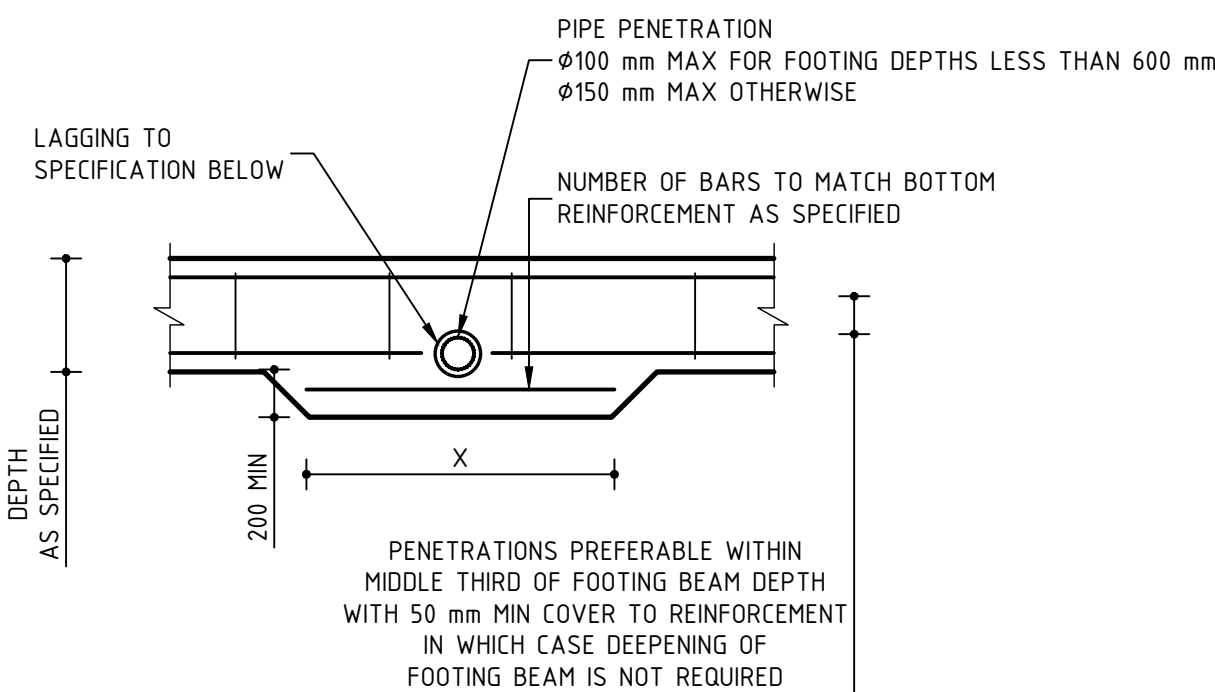
OPTION 2

OPTION 3

STEP 'S' GREATER THAN 200,  
AND LESS THAN '2D'

STEP 'S' GREATER THAN '2D'  
(DROP PIER)  
COGS MAY BE OMITTED IF 'X' IS GREATER  
THAN OR EQUAL TO SPECIFIED COG LENGTH

TYPICAL FOOTING STEP DETAILS  
NTS

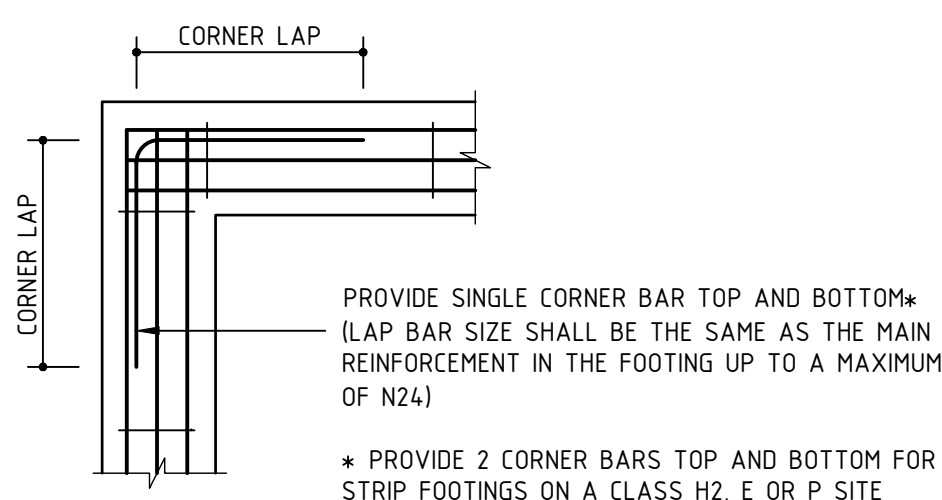
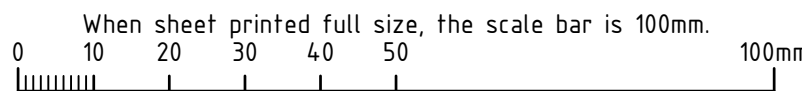


LAP BAR IN DEEPEENED FOOTING	
LAP BAR LENGTH X, mm	MAIN (& LAP) BAR REINF SIZE
1200	N12
1700	N16
2200	N20
3100	N24

SERVICE PIPE LAGGING	
SITE SOIL CLASSIFICATION	CLOSED CELL POLYETHYLENE LAGGING THICKNESS, mm
S	20*
M, H1	20
H2, E, P	40
* NEED NOT BE CLOSED CELL	

FOOTING SERVICE PENETRATION DETAIL

NTS  
NOTE:  
FOOTING PENETRATIONS NOT COVERED BY THE ABOVE ARE NOT  
PERMITTED WITHOUT SPECIFIC ADVICE & APPROVAL FROM THIS OFFICE



CORNER LAP LENGTHS

N12, 16, 20 - 500mm MIN.  
N24, 28, 32 - 1000mm MIN.

ADDITIONAL CORNER REINFORCEMENT  
NTS

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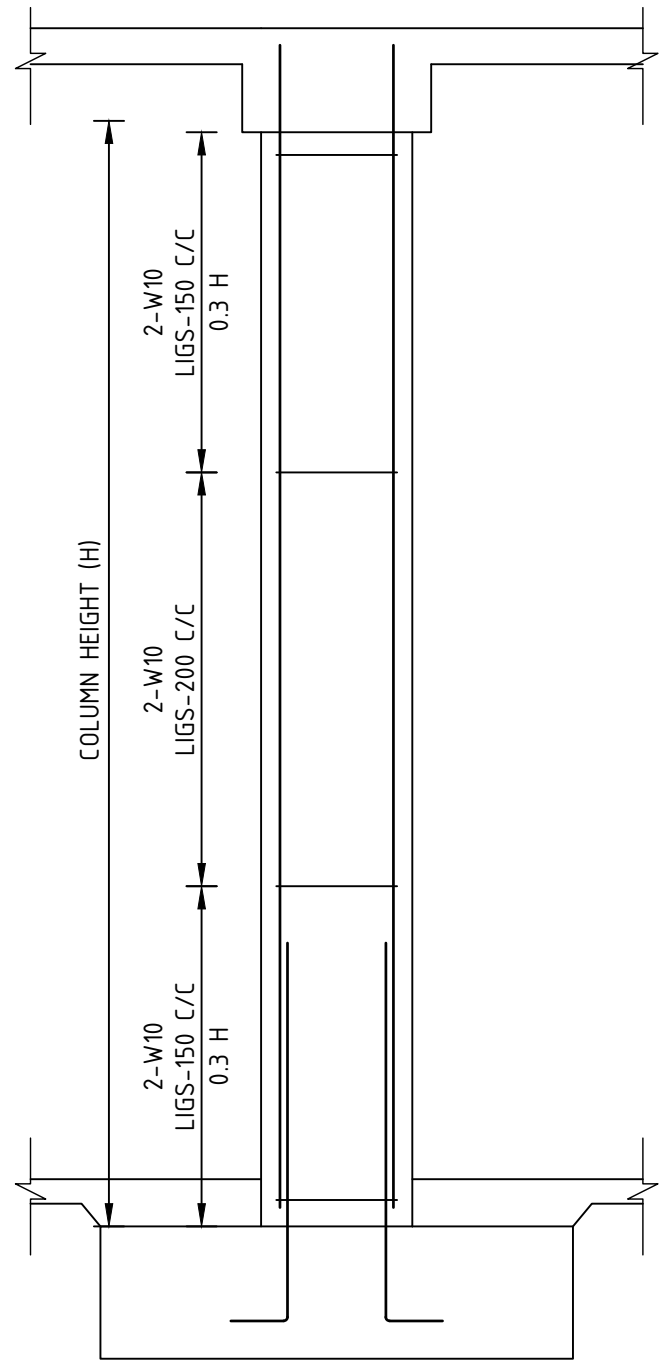
PROJECT  
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AT: 419 REGENCY ROAD  
PROSPECT  
FOR: NIATRON 10 PTY LTD**

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**FOOTING DETAILS**

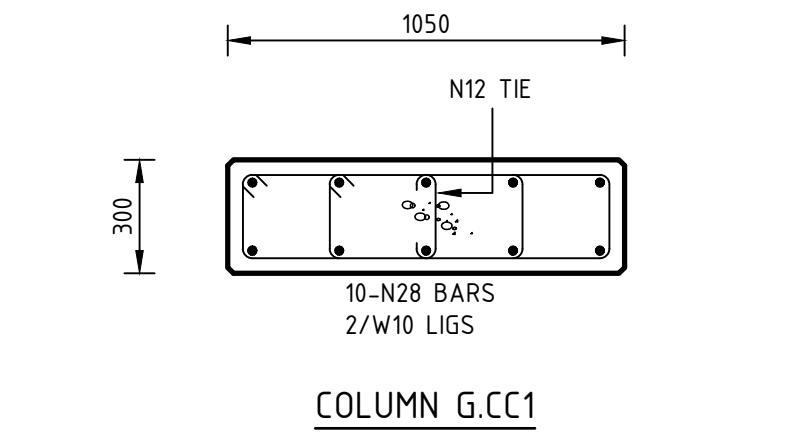
Civil Environmental Mechanical Fire Lifts	Structural Geotechnical Electrical Hydraulics Green ESD
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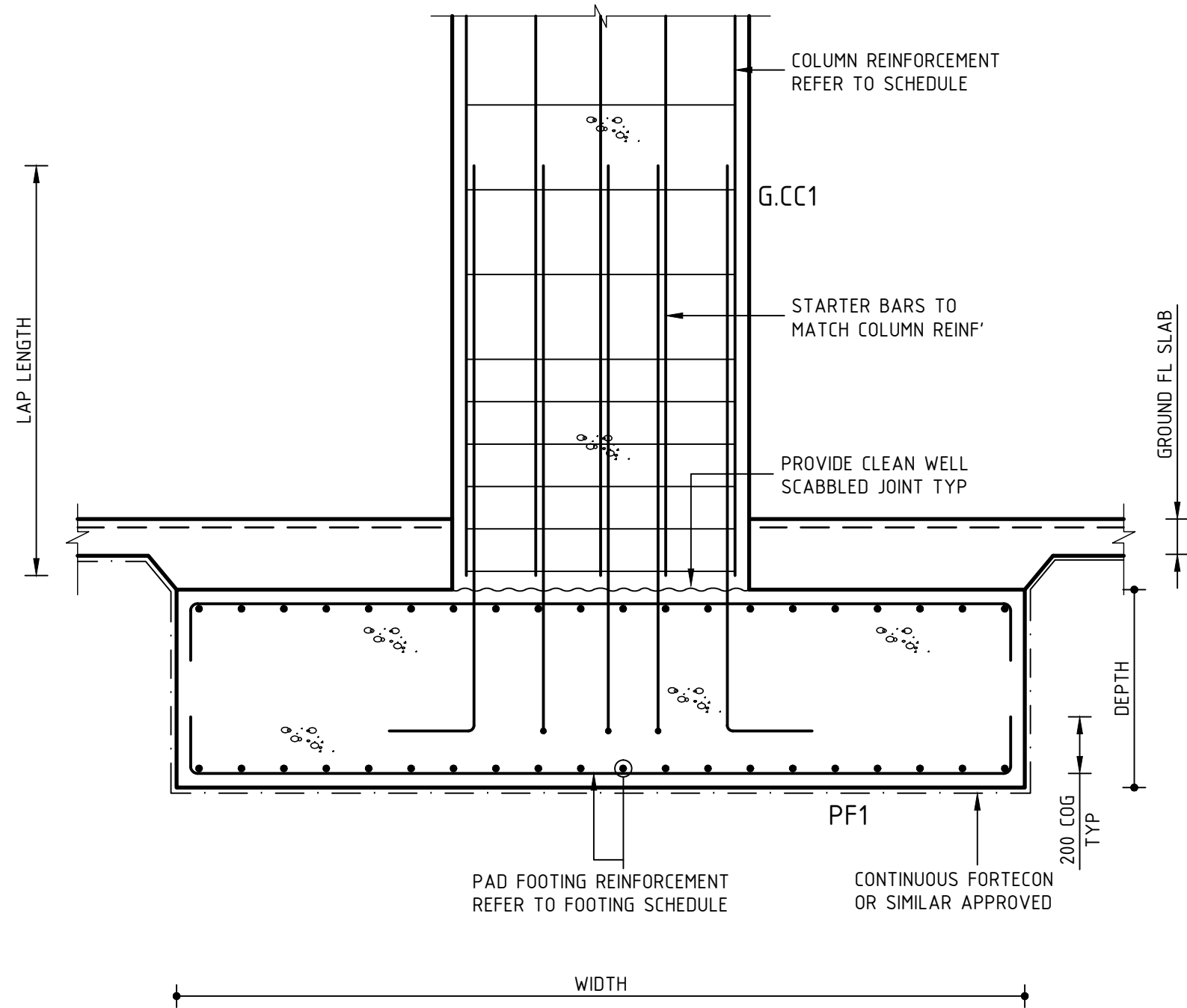
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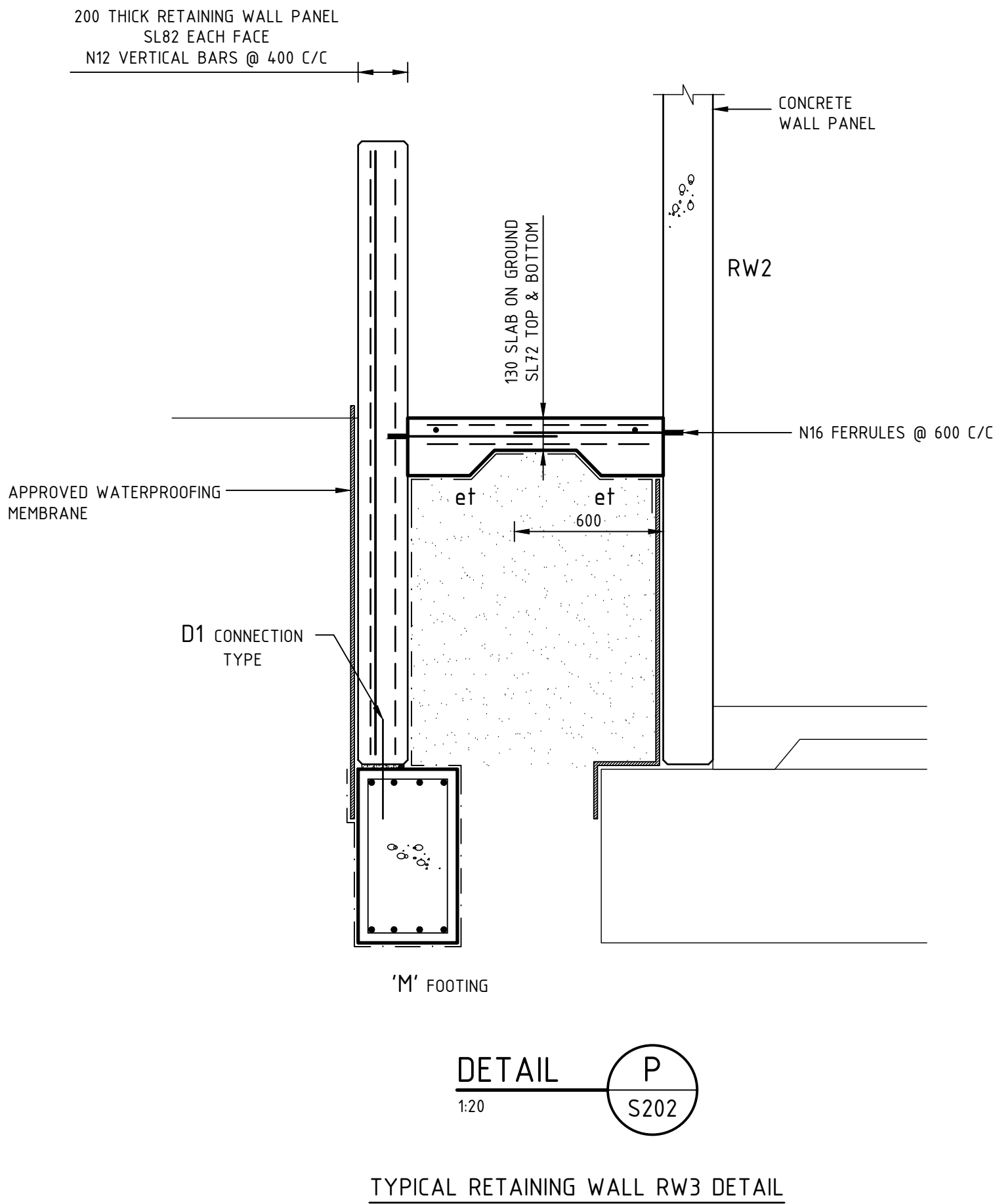
CONCRETE COLUMN LIGITURE SPACING (UNO)  
NTS



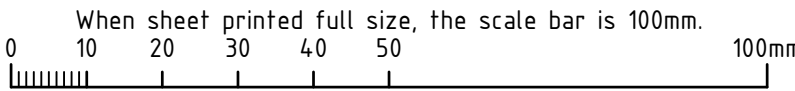
PLAN VIEW ON CONCRETE COLUMN  
1:20



TYPICAL CONCRETE COLUMN TO PAD FOOTING DETAIL  
1:20



TYPICAL RETAINING WALL RW3 DETAIL



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FOOTING DETAILS

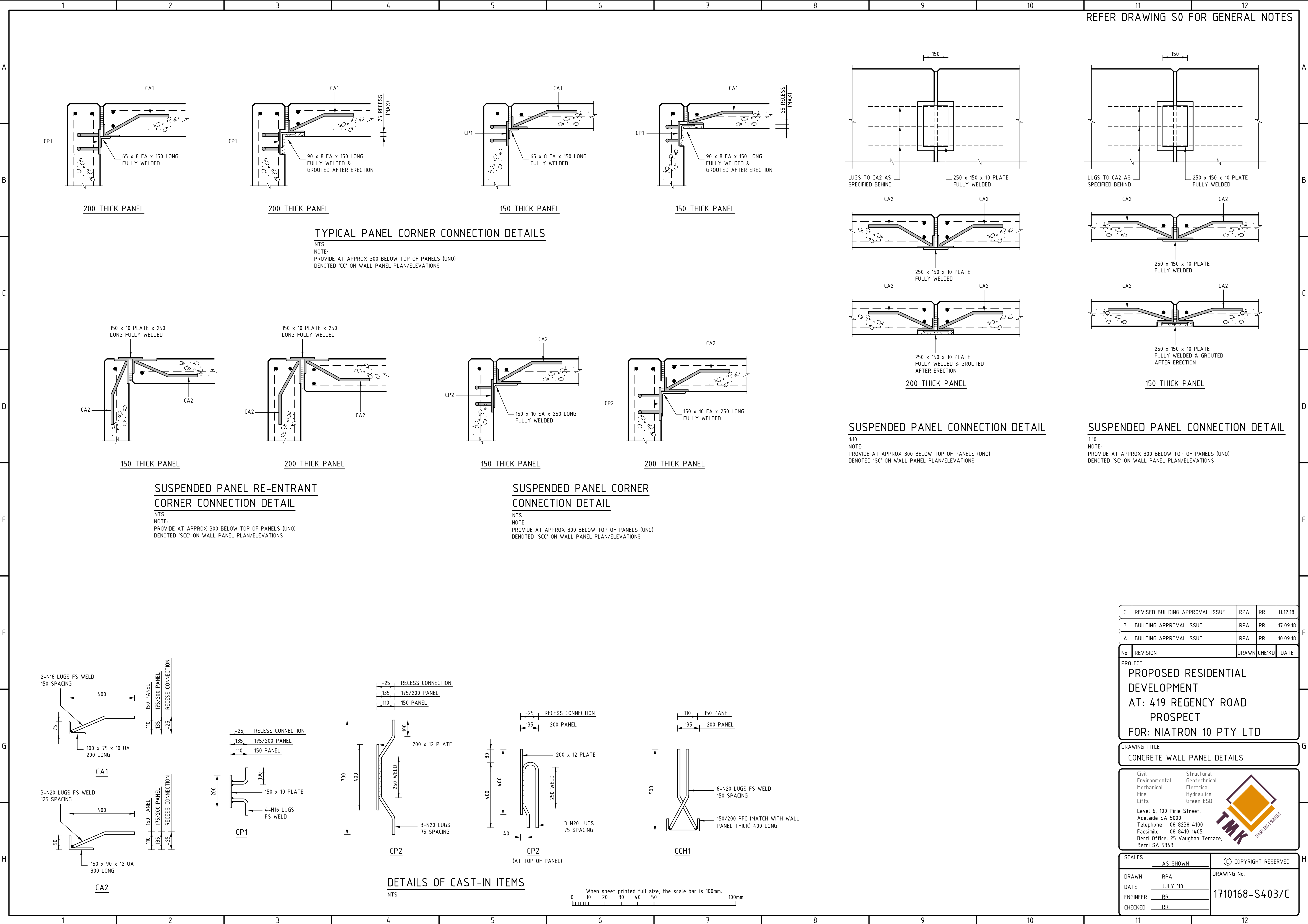
Civil  
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TYPICAL PANEL CORNER CONNECTION DETAILS

NTS  
NOTE:  
PROVIDE AT APPROX 300 BELOW TOP OF PANELS (UNO)  
DENOTED 'CC' ON WALL PANEL PLAN/ELEVATIONS

SUSPENDED PANEL CONNECTION DETAIL

1:10  
NOTE:  
PROVIDE AT APPROX 300 BELOW TOP OF PANELS (UNO)  
DENOTED 'SC' ON WALL PANEL PLAN/ELEVATIONS

SUSPENDED PANEL CONNECTION DETAIL

1:10  
NOTE:  
PROVIDE AT APPROX 300 BELOW TOP OF PANELS (UNO)  
DENOTED 'SC' ON WALL PANEL PLAN/ELEVATIONS

SUSPENDED PANEL RE-ENTRANT CORNER CONNECTION DETAIL

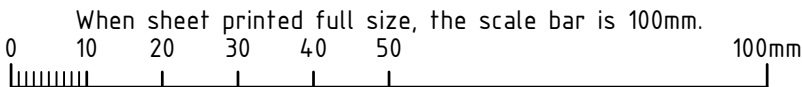
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NOTE:  
PROVIDE AT APPROX 300 BELOW TOP OF PANELS (UNO)  
DENOTED 'SCC' ON WALL PANEL PLAN/ELEVATIONS

SUSPENDED PANEL CORNER CONNECTION DETAIL

NTS  
NOTE:  
PROVIDE AT APPROX 300 BELOW TOP OF PANELS (UNO)  
DENOTED 'SCC' ON WALL PANEL PLAN/ELEVATIONS

DETAILS OF CAST-IN ITEMS

NTS



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**CONCRETE WALL PANEL DETAILS**

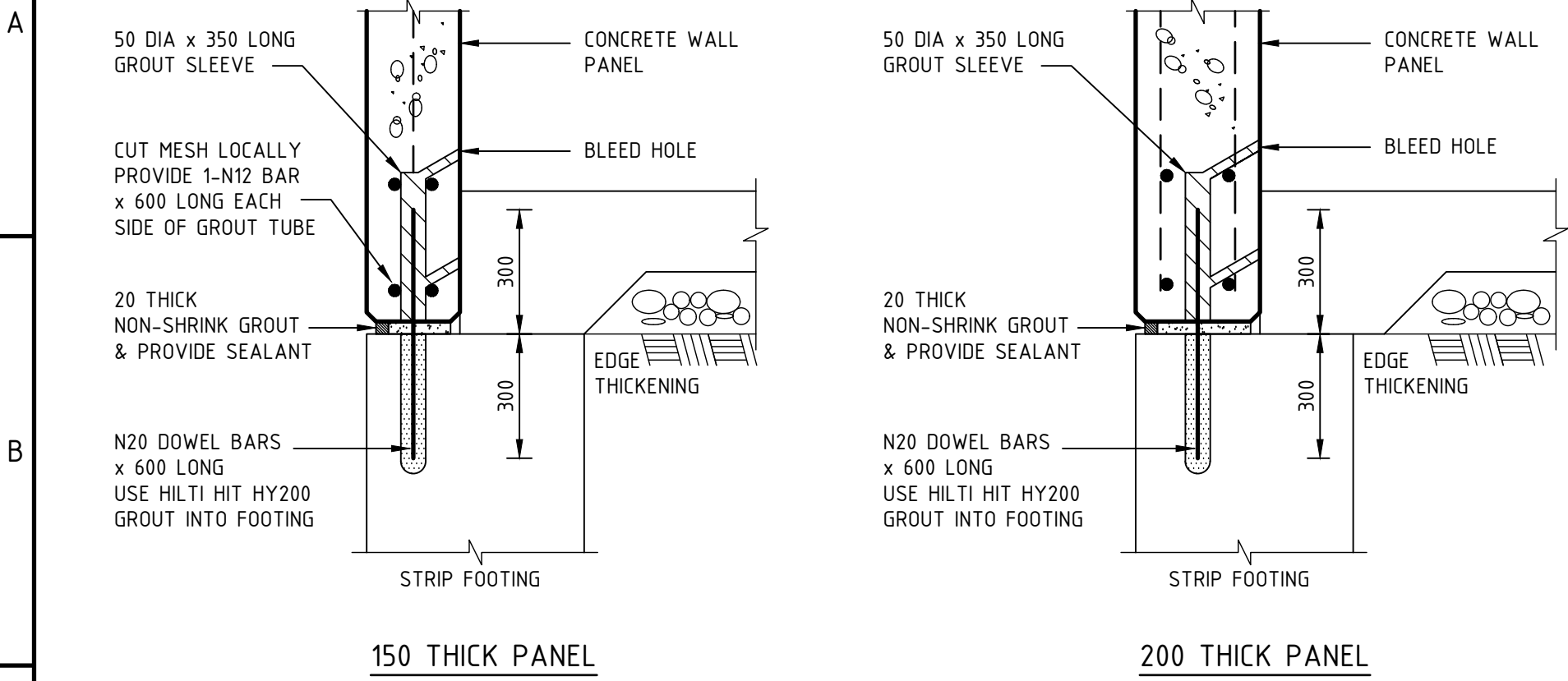
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Fire  
Lifts

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Berri SA 5343

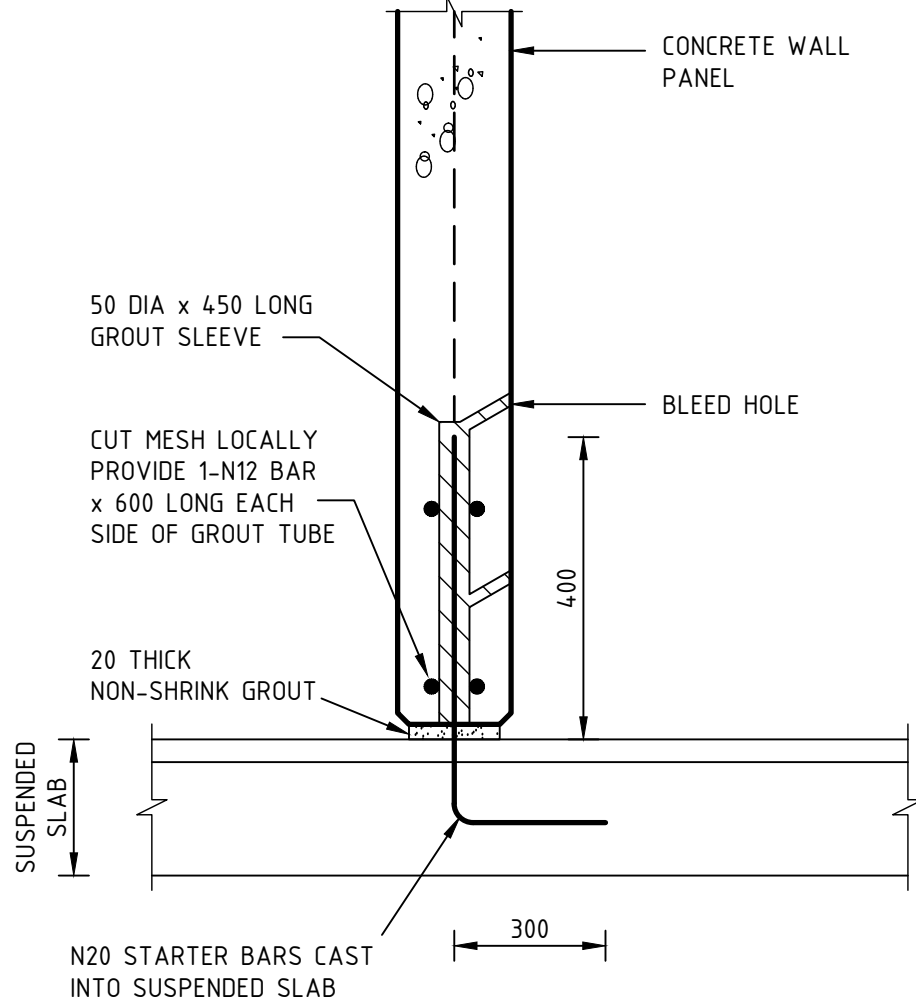
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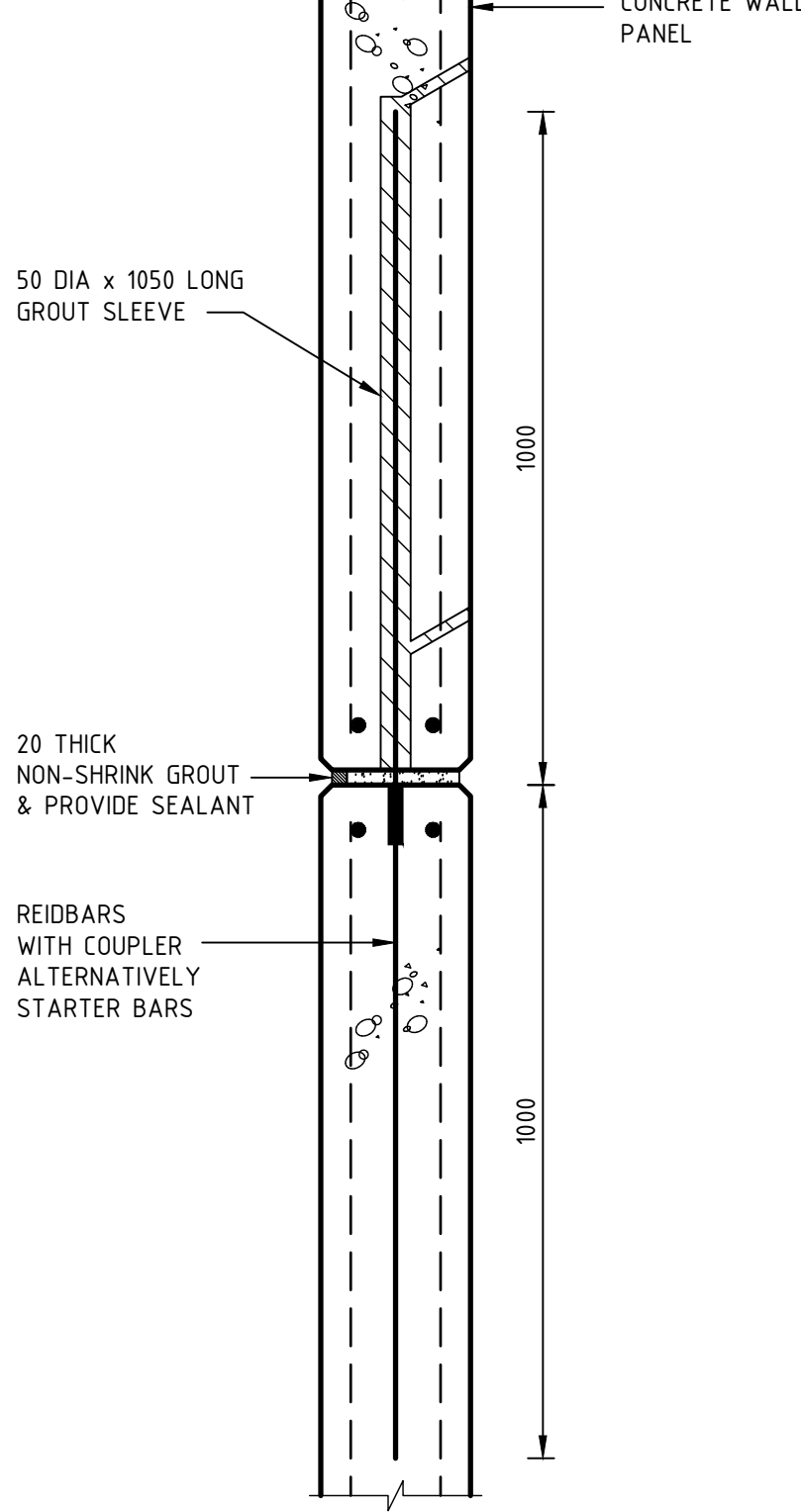
PANEL BASE CONNECTION TYPE - D1

NTS  
NOTE:  
DOWEL BAR AT 200 FROM EACH END OF WALL PANEL  
REFER TO PANEL ELEVATIONS & NOTES FOR DOWEL  
BAR LOCATIONS & SPACING



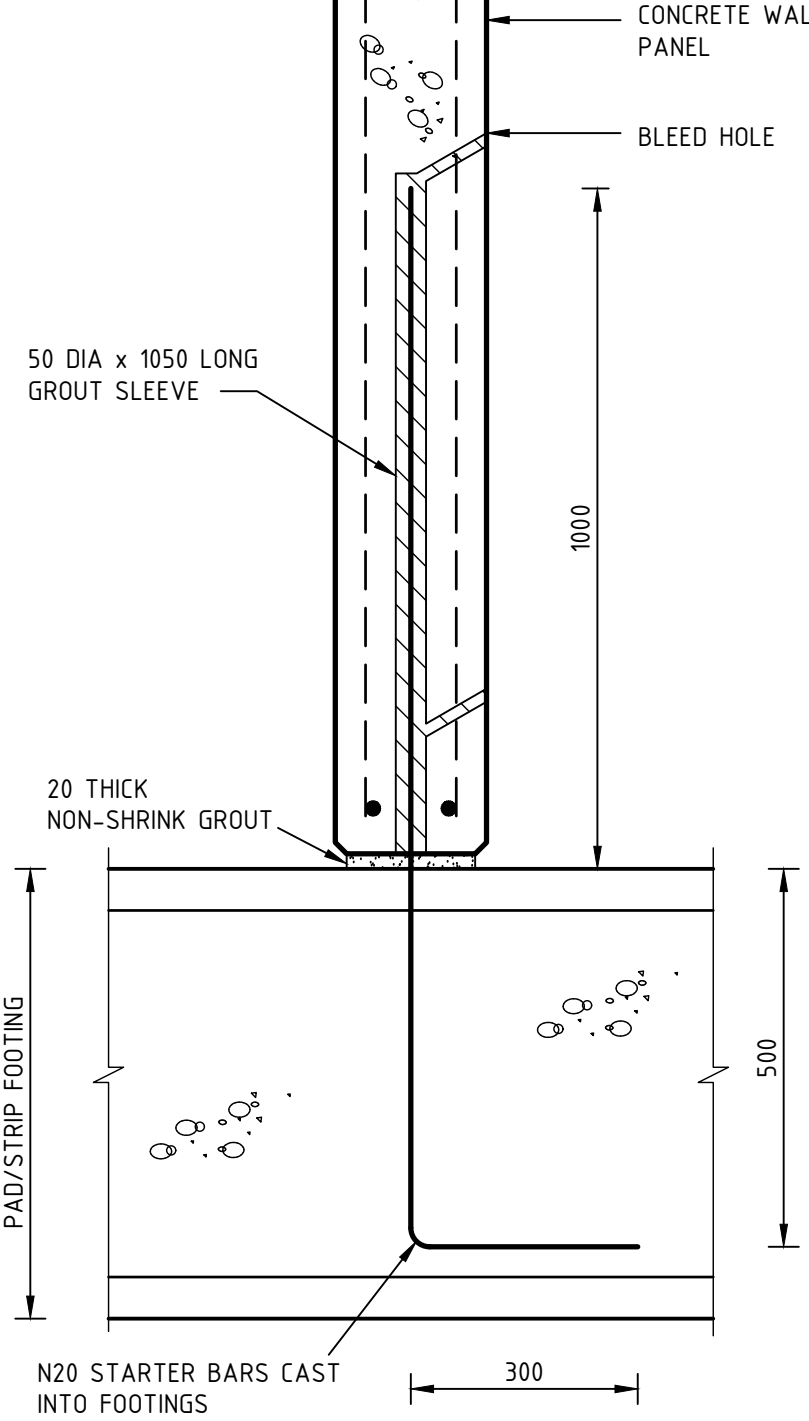
PANEL BASE CONNECTION TYPE - D2

NTS  
NOTE:  
STARTER BAR @ 200 FROM EACH END OF WALL PANEL & 1500  
C/C MAX. UNO AN DELTACORE PANEL PROVIDE STARTER BARS  
@ 800 C/C MIN. TWO STARTER FROM EACH DELTACORE PANEL



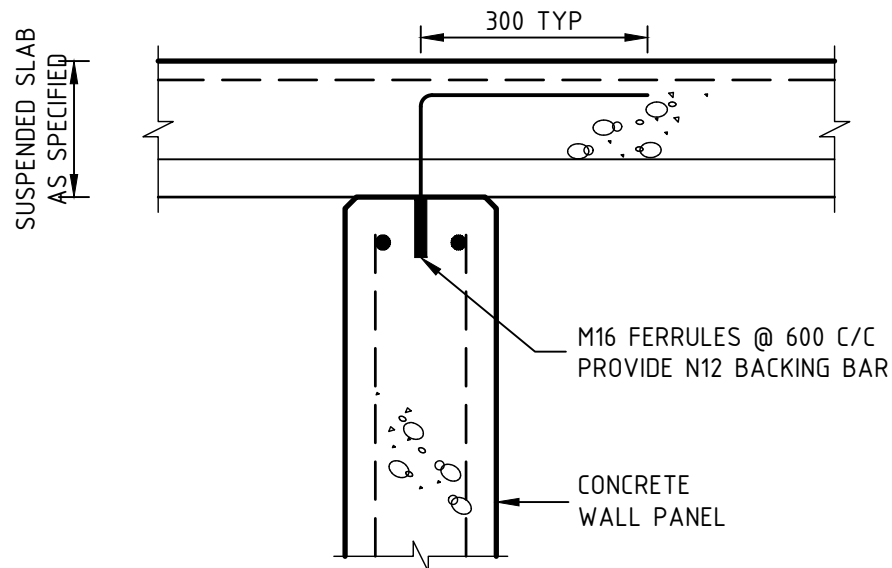
PANEL TO PANEL CONNECTION TYPE - D3

NTS  
NOTE:  
DOWEL BAR AT 200 FROM EACH END OF WALL PANEL & @ 1200 C/C MAX.



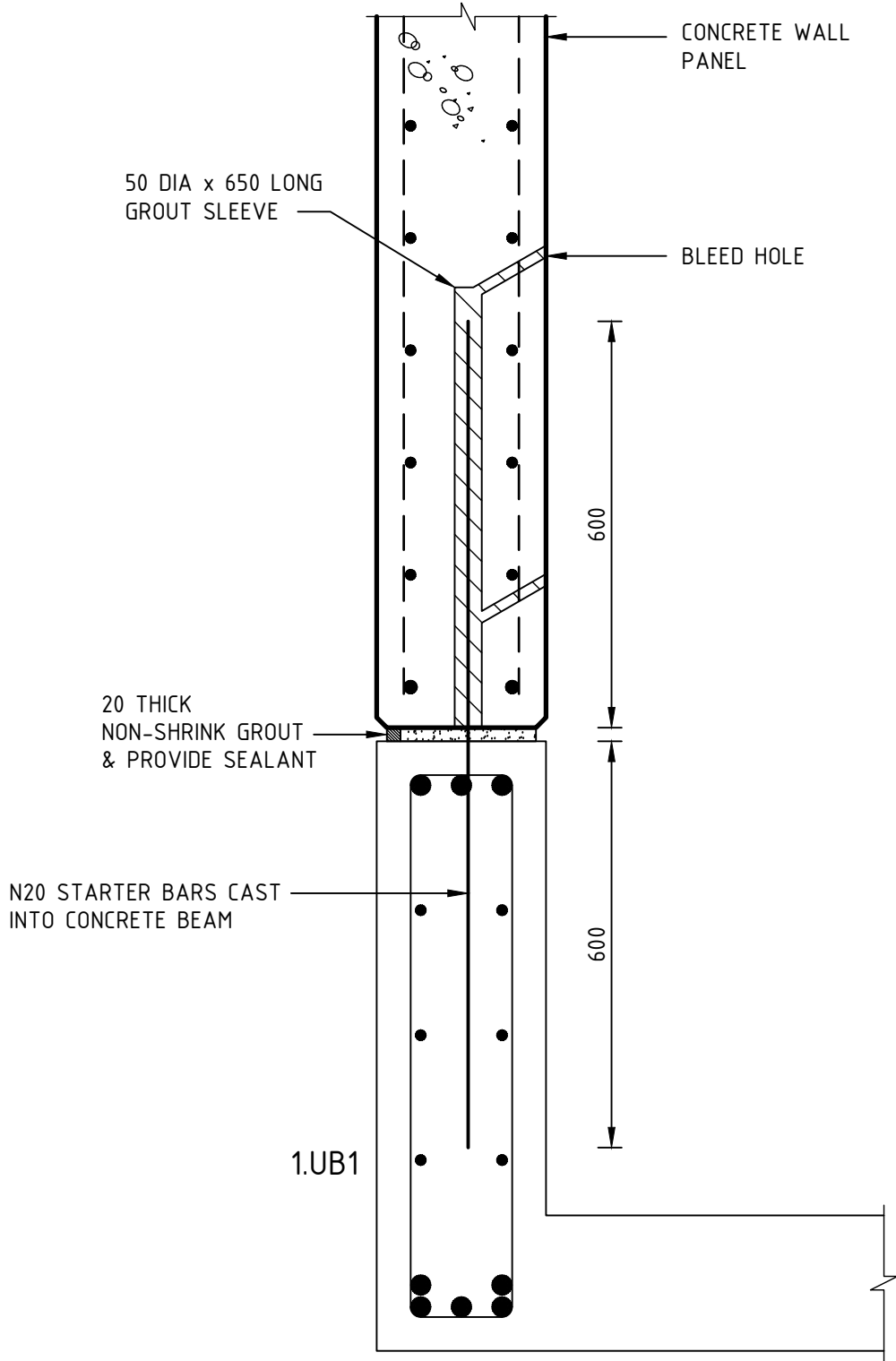
STAIR & LIFT SHAFT PANEL BASE CONNECTION TYPE - D4

NTS  
NOTE:  
DOWEL BAR AT 200 FROM EACH END OF WALL PANEL & @ 900 C/C MAX.



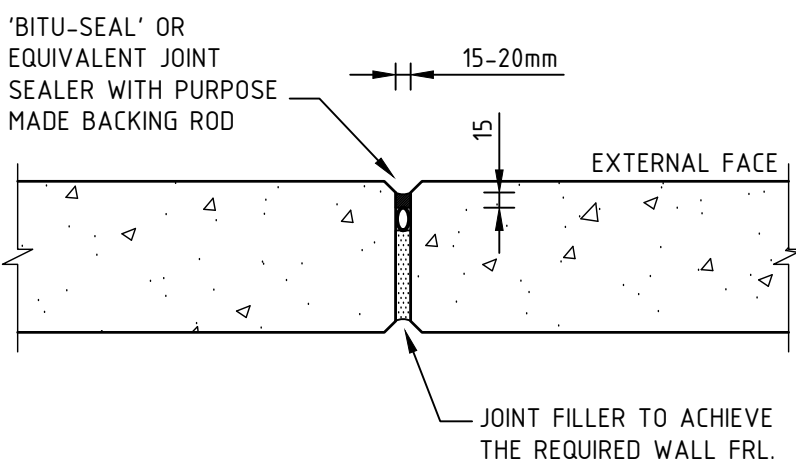
WALL PANEL TO SUSPENDED SLAB DETAIL

NTS



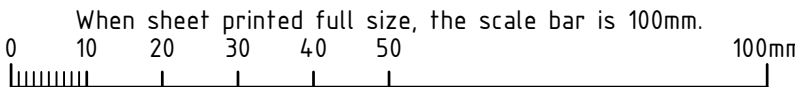
PANEL TO PANEL CONNECTION TYPE - D5

NTS  
NOTE:  
STARTER BAR AT 200 FROM EACH END OF WALL PANEL & @ 1200 C/C MAX.



TYPICAL VERTICAL JOINT DETAIL

NTS  
NOTE:  
JOINTS SHOULD BE THOROUGHLY PREPARED AND THE  
JOINTING MATERIAL APPLIED STRICTLY ACCORDING TO  
THE SUPPLIERS SPECIFICATIONS




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PROSPECT  
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DRAWING TITLE  
CONCRETE WALL PANEL DETAILS

Civil  
Environmental  
Mechanical  
Fire  
Lifts

Structural  
Geotechnical  
Electrical  
Hydraulics  
Green ESD



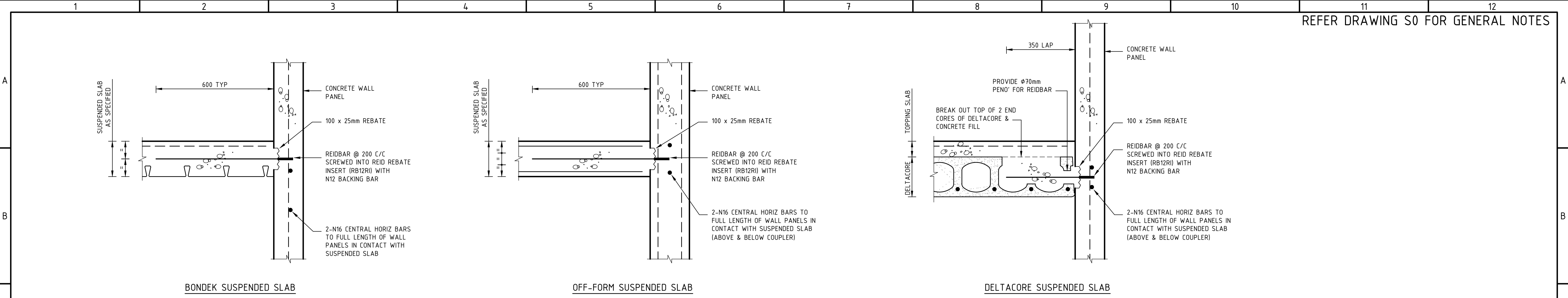
TMK  
CONCRETE LOGISTICS

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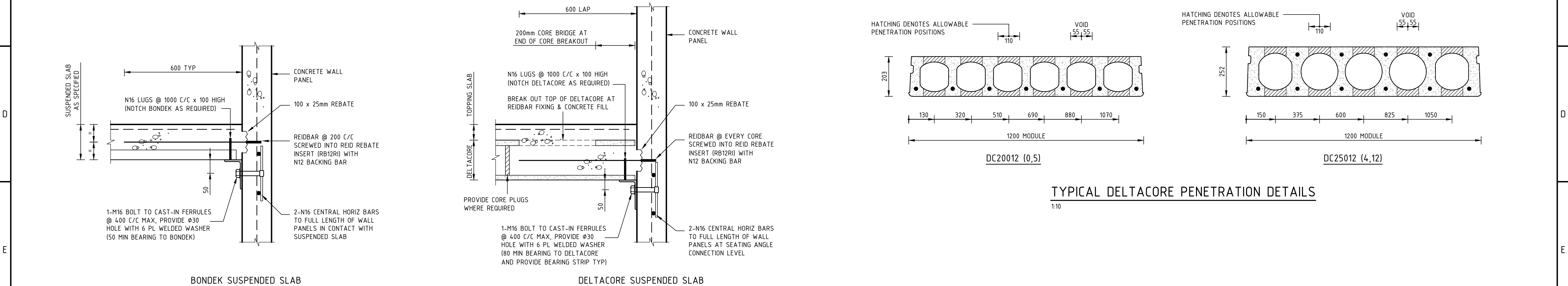
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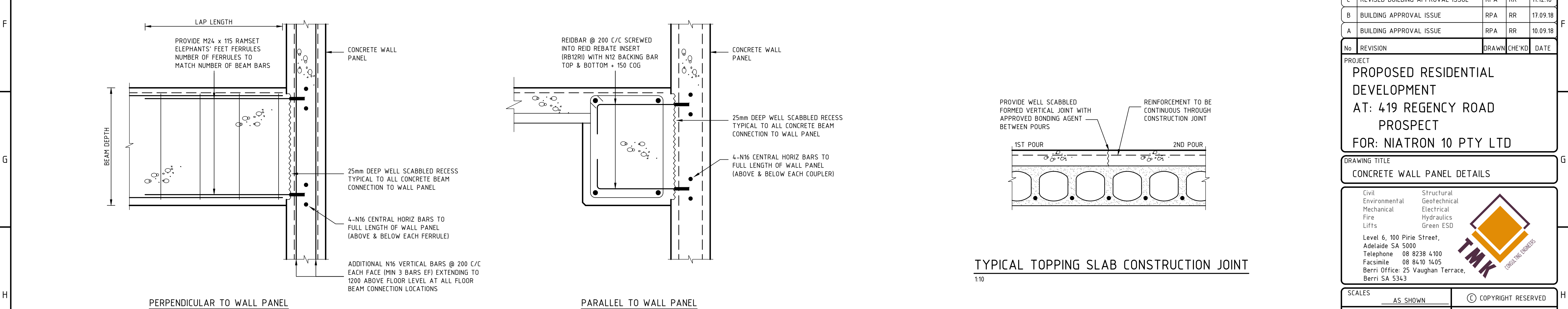


TYPICAL SUSPENDED SLAB TO WALL PANEL DETAILS  
NTS

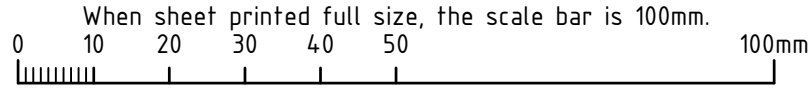


TYPICAL DELTACORE PENETRATION DETAILS  
1:10

TYPICAL SEATING ANGLE SA1 DETAILS  
NTS

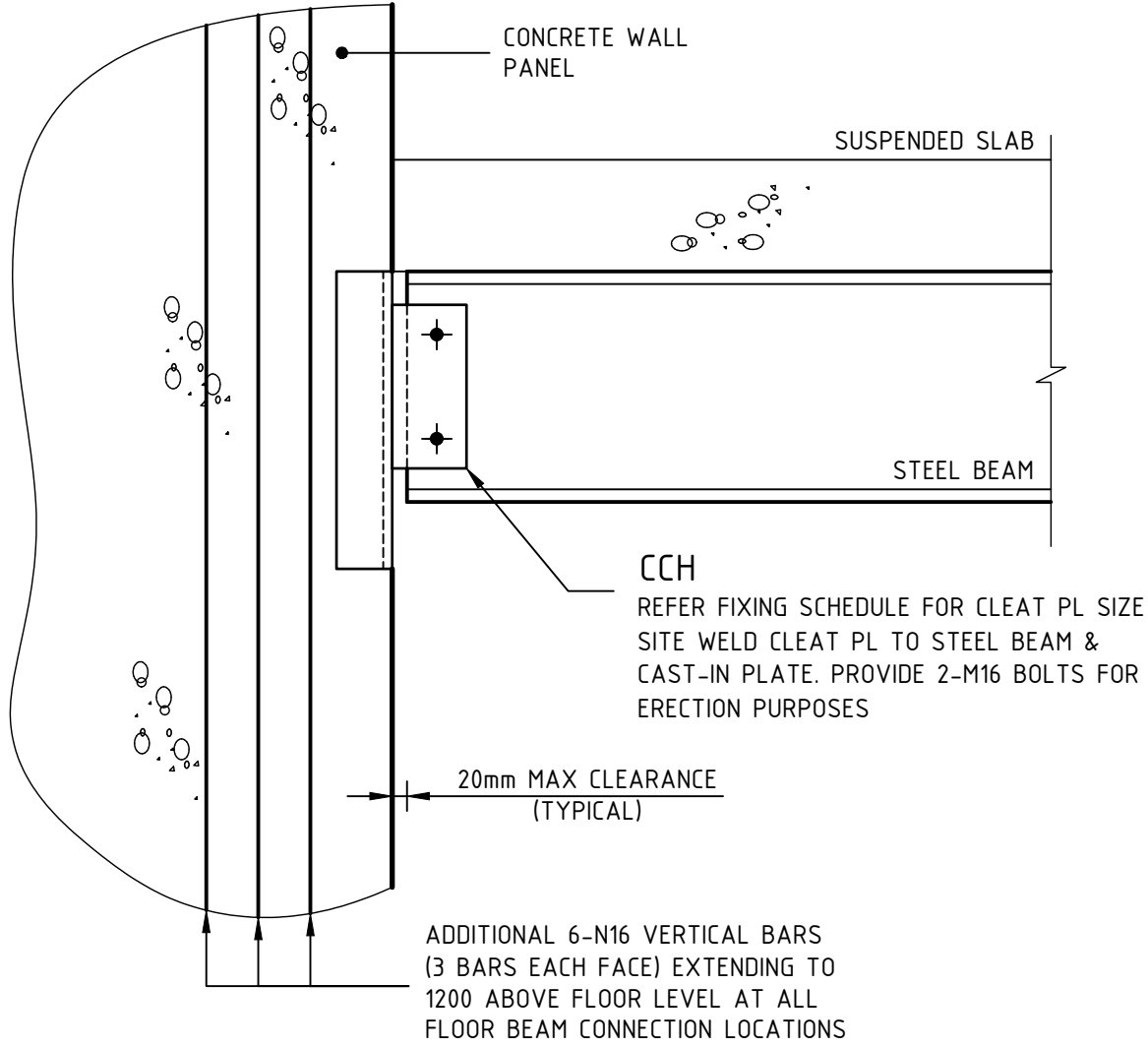


TYPICAL CONCRETE BEAM TO WALL PANEL DETAILS  
NTS



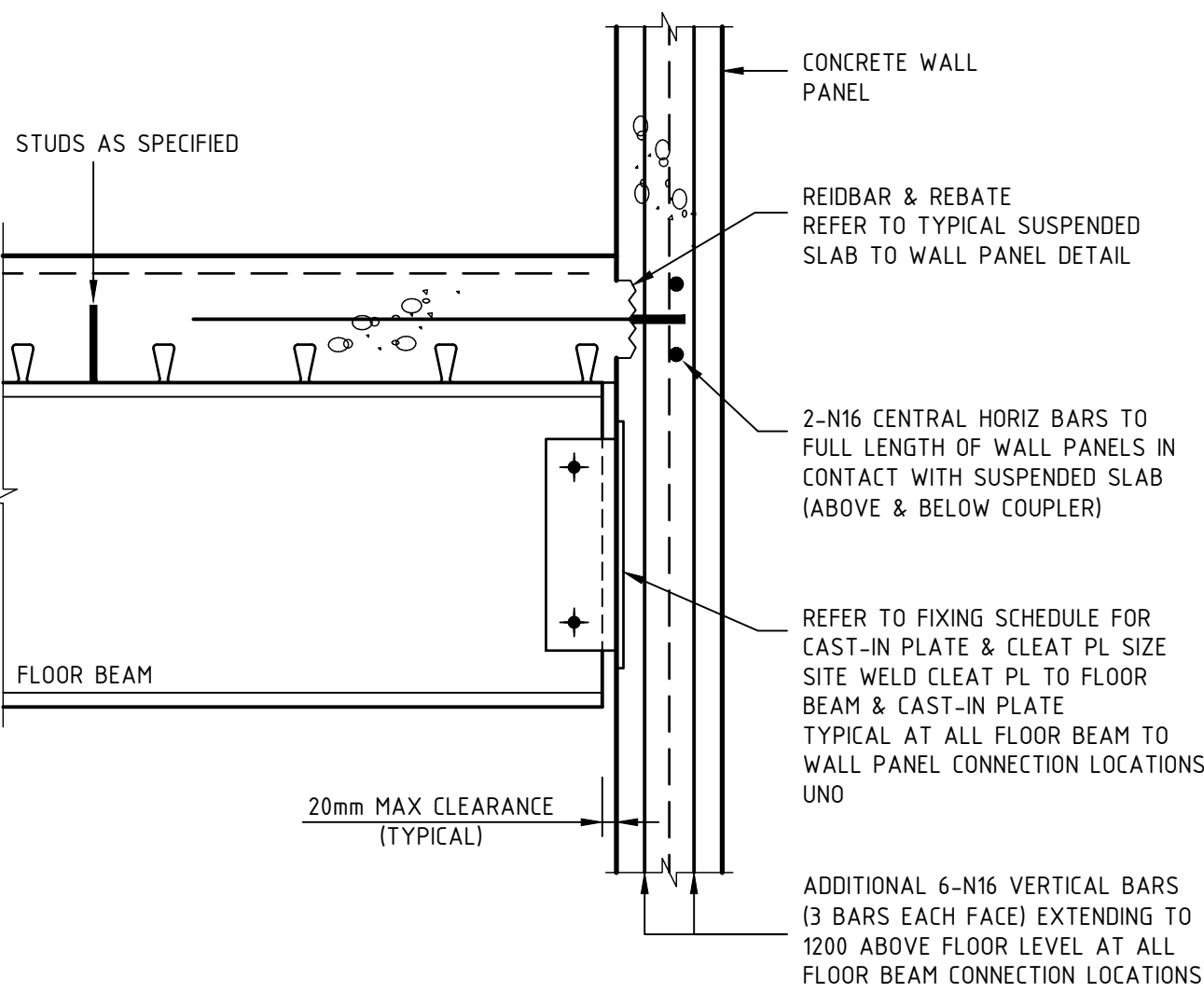
TYPICAL TOPPING SLAB CONSTRUCTION JOINT  
1:10

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PROJECT				
PROPOSED RESIDENTIAL DEVELOPMENT				
AT: 419 REGENCY ROAD PROSPECT				
FOR: NIATRON 10 PTY LTD				
DRAWING TITLE				
CONCRETE WALL PANEL DETAILS				
Civil Environmental Mechanical Fire Lifts Structural Geotechnical Electrical Hydraulics Green ESD				
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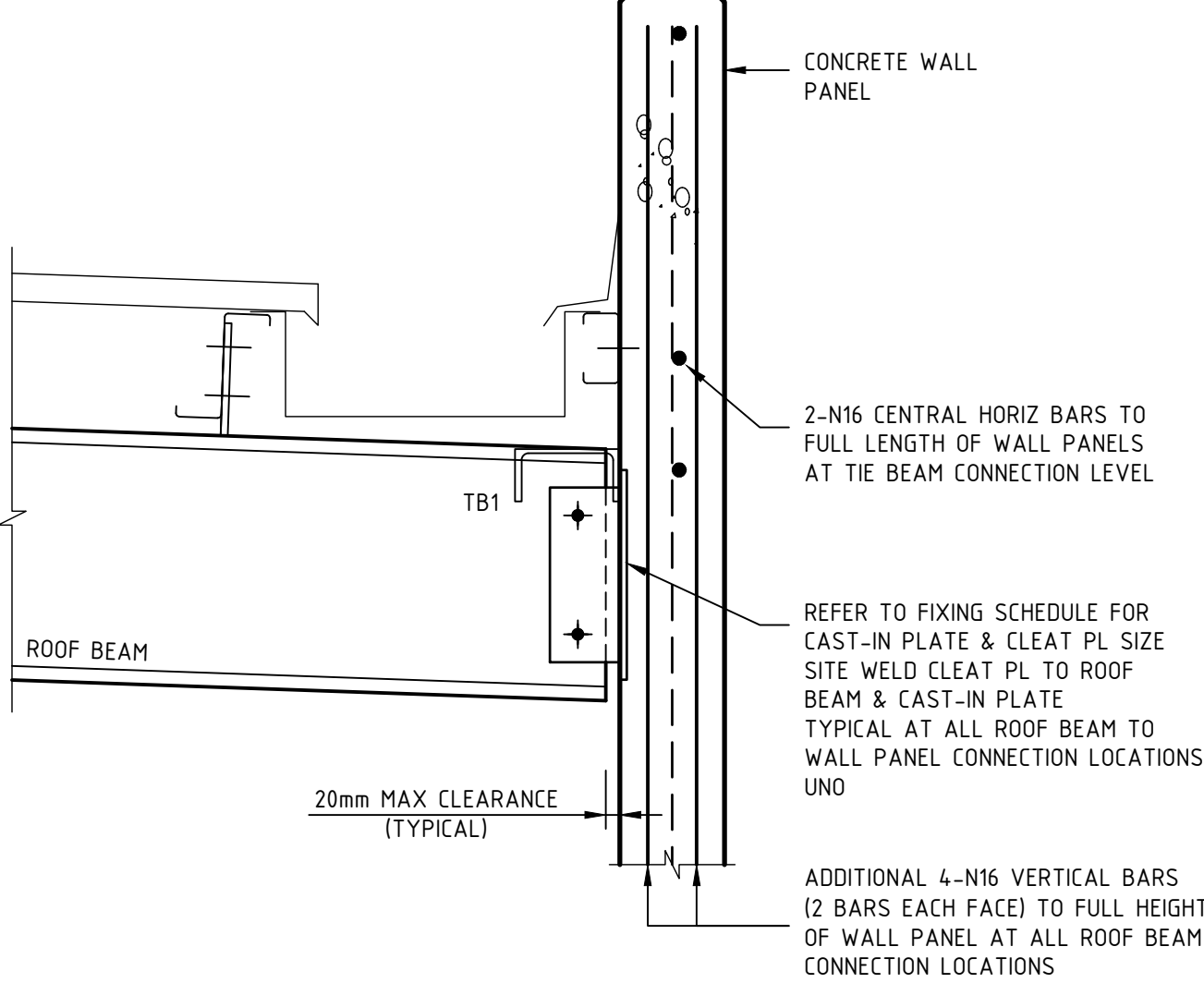
TYPICAL STEEL BEAM TO WALL PANEL EDGE DETAIL

NTS  
NOTE:  
ADDITIONAL SLAB REINFORCEMENT NOT SHOWN  
REFER TO DETAILS



TYPICAL STEEL BEAM TO WALL PANEL DETAIL

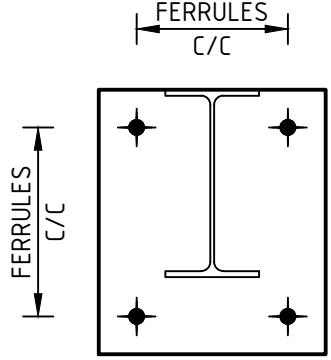
NTS  
NOTE:  
ADDITIONAL SLAB REINFORCEMENT NOT SHOWN  
REFER TO DETAILS



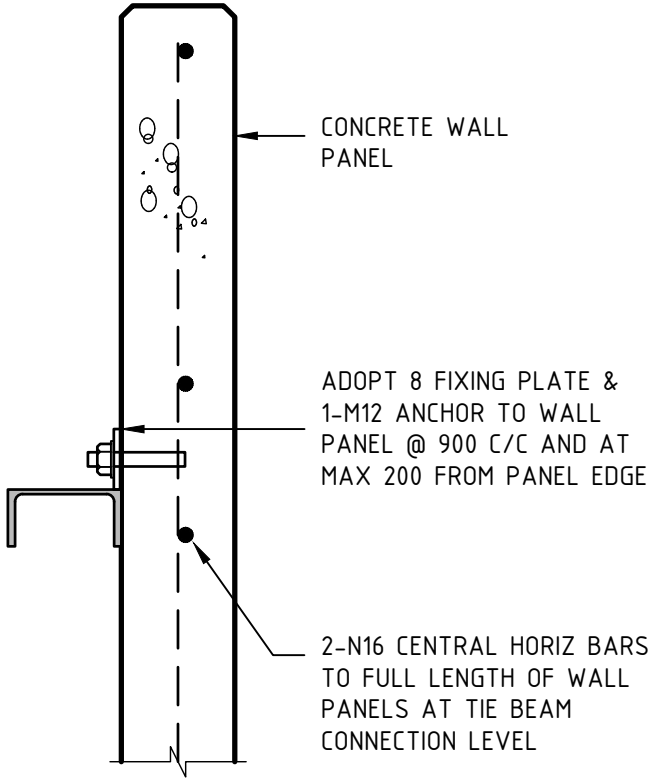
TYPICAL ROOF BEAM TO WALL PANEL DETAIL

NTS

STEEL BEAM TO WALL PANEL FIXING SCHEDULE - END PLATE					
UB / PFC	FLOOR BEAM		ROOF BEAM		FERRULES C/C
150	250 x 250 x 8 PL	4-M16 FERRULES	100 x 250 x 8 PL	2-M16 FERRULES	150mm MINIMUM
180	250 x 250 x 8 PL	4-M16 FERRULES	100 x 250 x 8 PL	2-M16 FERRULES	150mm MINIMUM
200	250 x 300 x 8 PL	4-M16 FERRULES	100 x 300 x 8 PL	2-M16 FERRULES	150mm MINIMUM
230	300 x 350 x 10 PL	4-M20 FERRULES	300 x 300 x 10 PL	4-M16 FERRULES	200mm MINIMUM
250	300 x 350 x 10 PL	4-M20 FERRULES	300 x 350 x 10 PL	4-M16 FERRULES	200mm MINIMUM
310/300	300 x 500 x 10 PL	6-M20 FERRULES	300 x 350 x 10 PL	4-M20 FERRULES	200mm MINIMUM

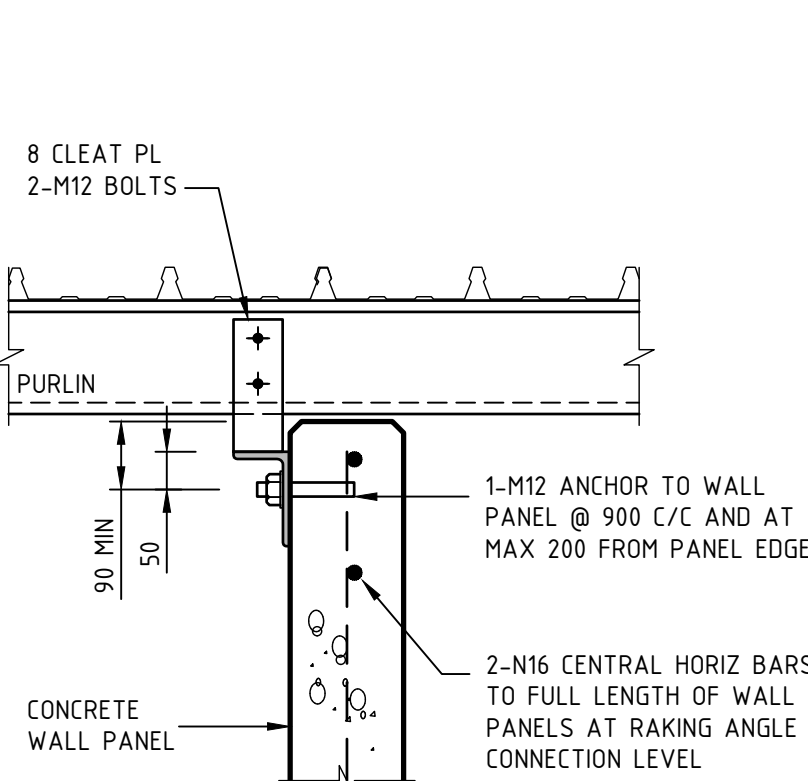
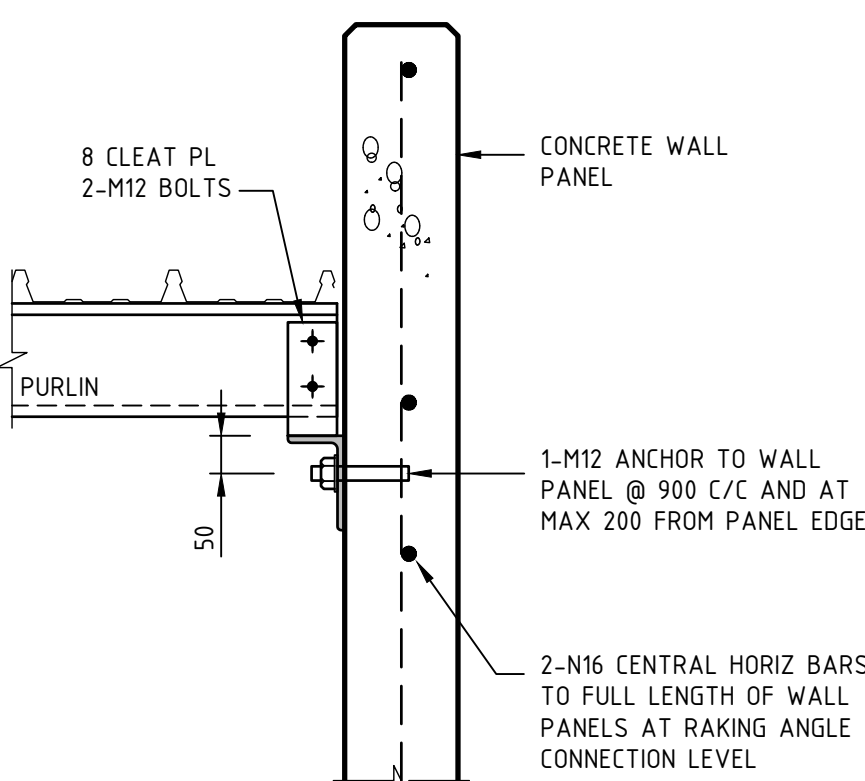


- NOTES:
- IF BEAM CONNECTION OCCURS AT WALL PANEL JOINT LOCATION  
WIDEN END PLATE TO ACHIEVE 150mm MIN FROM WALL PANEL JOINT



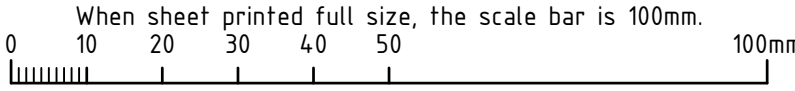
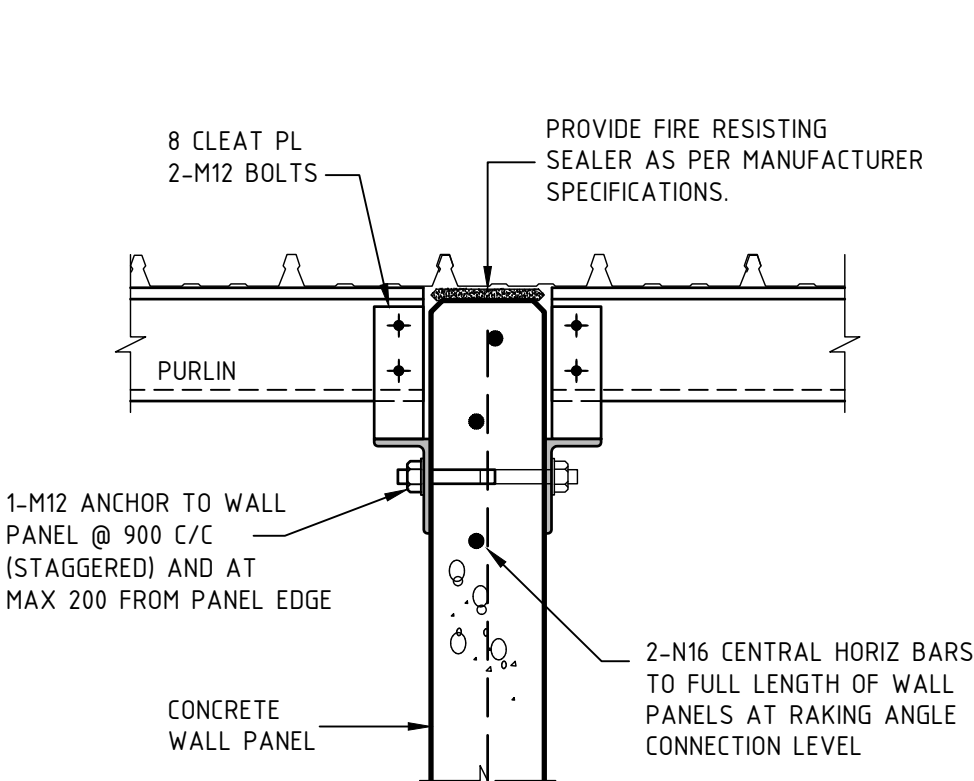
TYPICAL TIE BEAM TB1 DETAIL

1:10



TYPICAL RAKING ANGLE RA1 DETAILS

NTS



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PROJECT

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**AT: 419 REGENCY ROAD PROSPECT**  
**FOR: NIATRON 10 PTY LTD**

DRAWING TITLE

**CONCRETE WALL PANEL DETAILS**

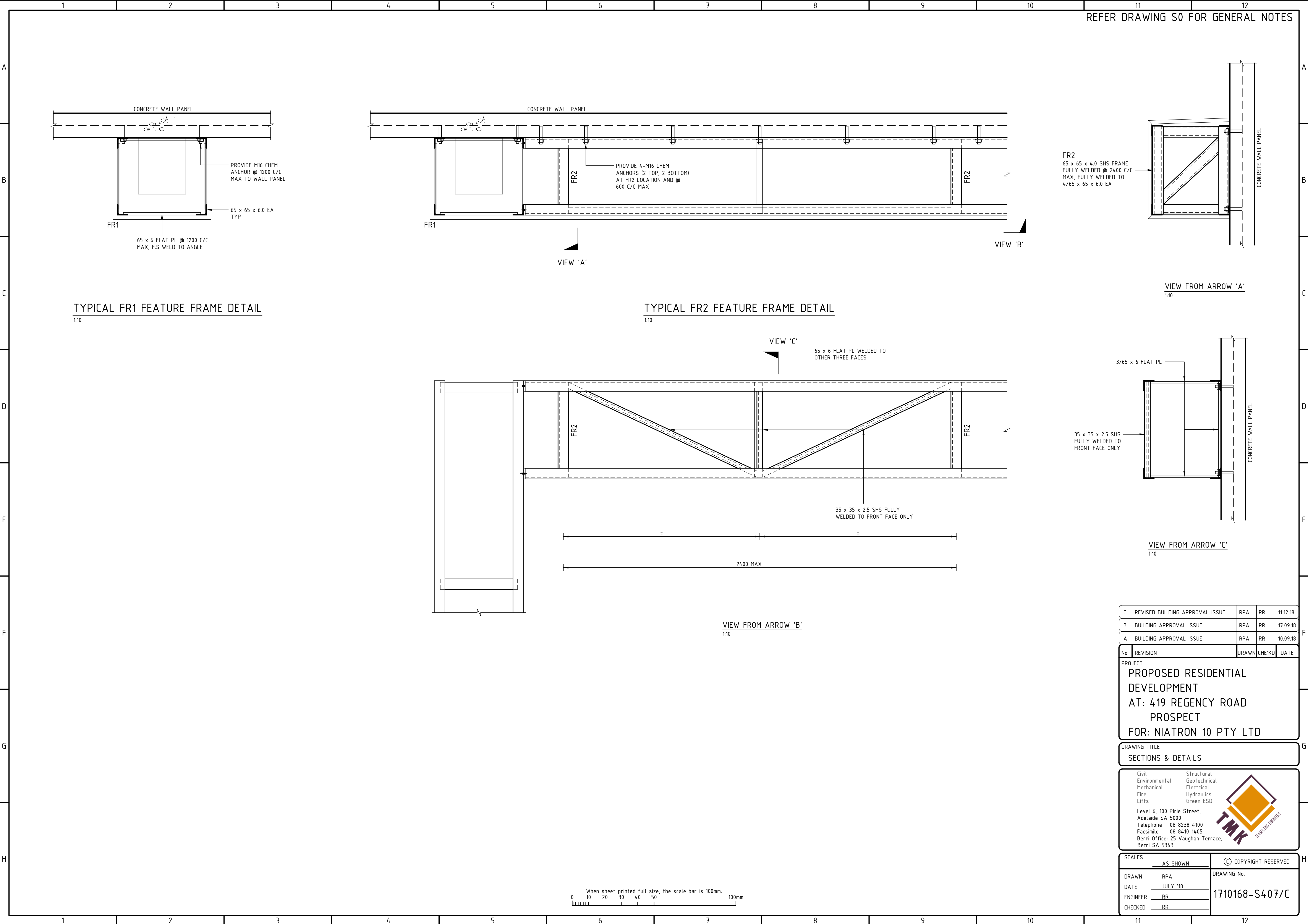
Civil	Structural
Environmental	Geotechnical
Mechanical	Electrical
Fire	Hydraulics
Lifts	Green ESD

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FR2  
65 x 65 x 4.0 SHS FRAME  
FULLY WELDED @ 2400 C/C  
MAX, FULLY WELDED TO  
4/65 x 65 x 6.0 EA

VIEW FROM ARROW 'A'  
1:10

3/65 x 6 FLAT PL  
35 x 35 x 2.5 SHS  
FULLY WELDED TO  
FRONT FACE ONLY

VIEW FROM ARROW 'C'  
1:10

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PROJECT  
PROPOSED RESIDENTIAL  
DEVELOPMENT  
AT: 419 REGENCY ROAD  
PROSPECT  
FOR: NIATRON 10 PTY LTD

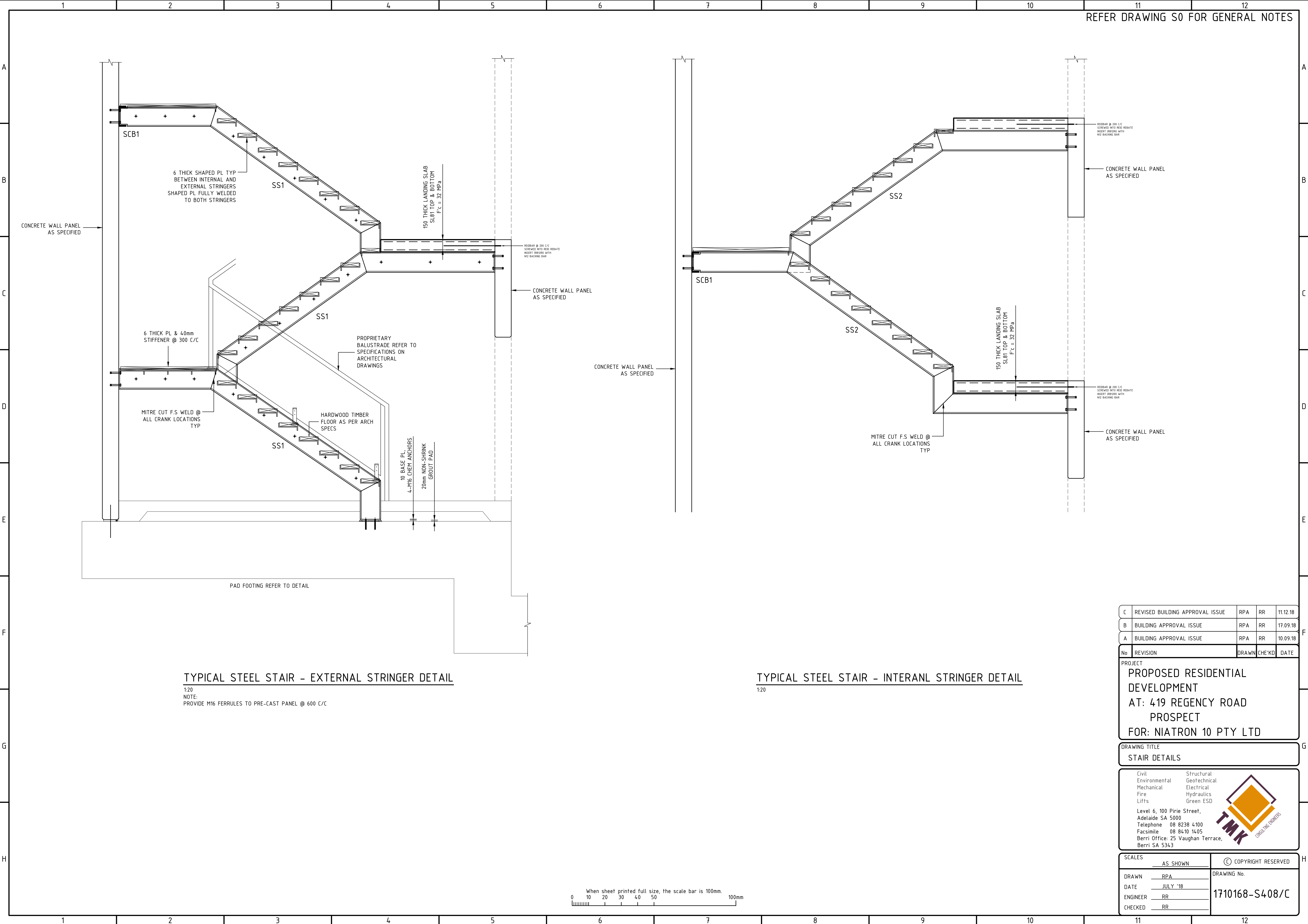
DRAWING TITLE  
SECTIONS & DETAILS

Civil  
Environmental  
Mechanical  
Fire  
Lifts

Structural  
Geotechnical  
Electrical  
Hydraulics  
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TYPICAL STEEL STAIR - EXTERNAL STRINGER DETAIL  
1:20  
NOTE:  
PROVIDE M16 FERRULES TO PRE-CAST PANEL @ 600 C/C

TYPICAL STEEL STAIR - INTERANL STRINGER DETAIL  
1:20

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PROPOSED RESIDENTIAL  
DEVELOPMENT  
AT: 419 REGENCY ROAD  
PROSPECT  
FOR: NIATRON 10 PTY LTD

DRAWING TITLE  
STAIR DETAILS

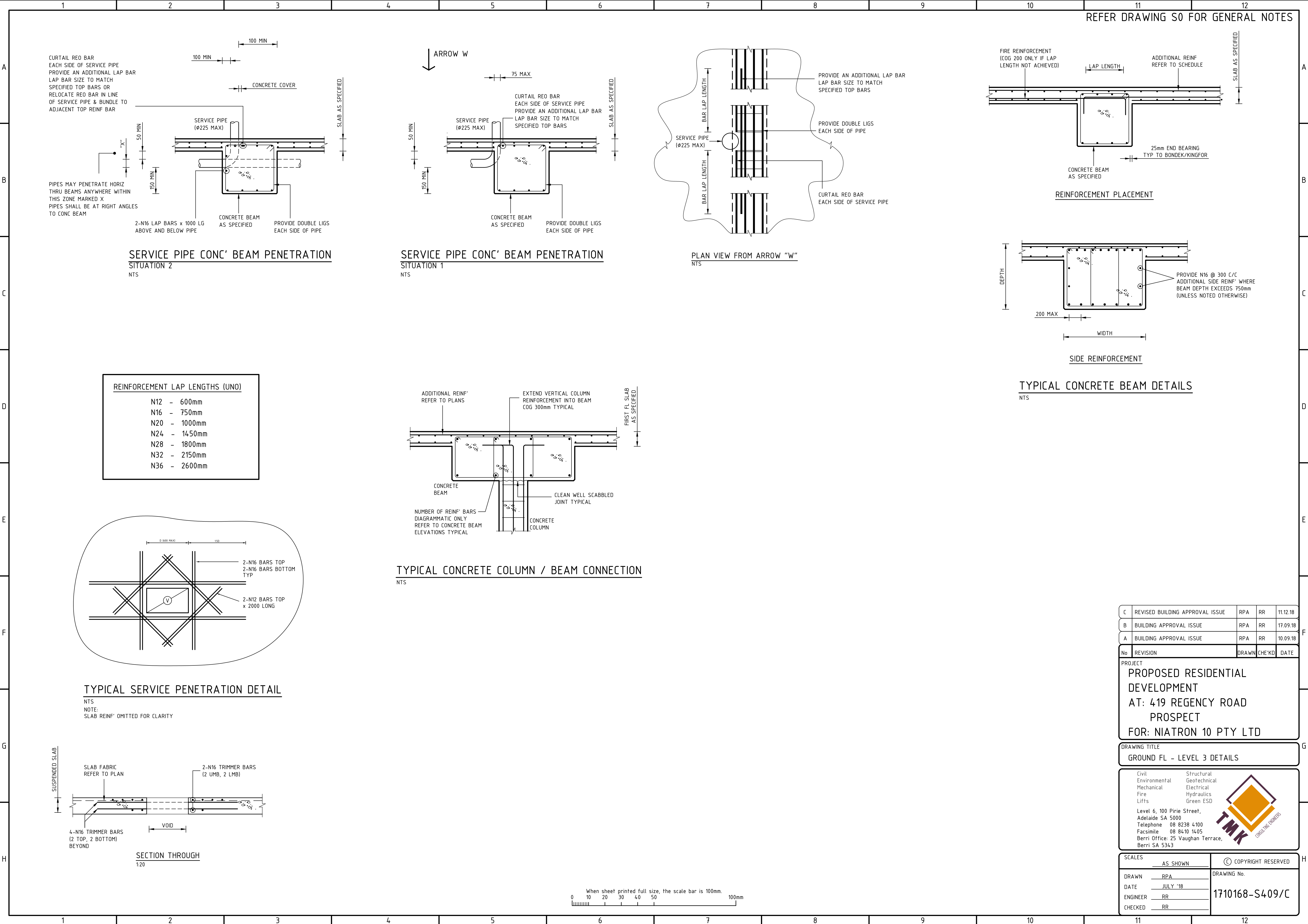
Civil  
Environmental  
Mechanical  
Fire  
Lifts

Structural  
Geotechnical  
Electrical  
Hydraulics  
Green ESD

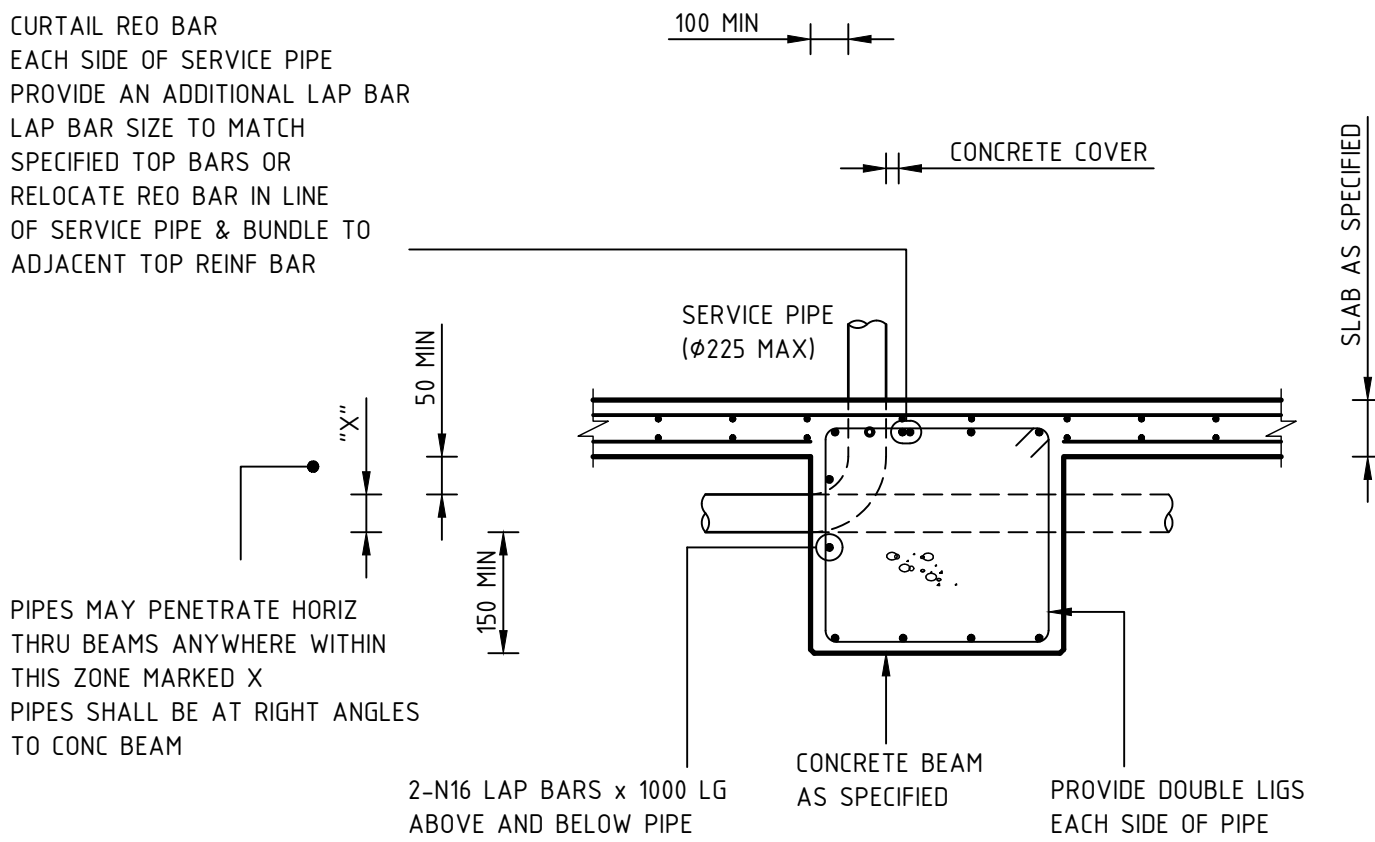
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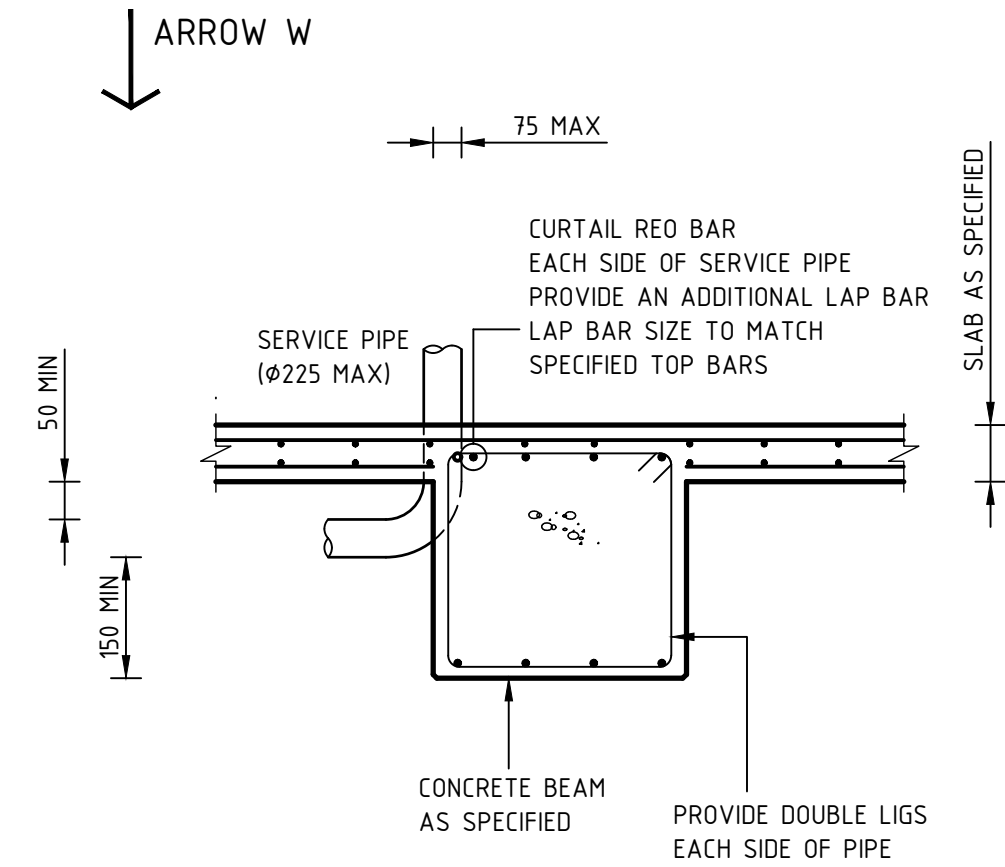




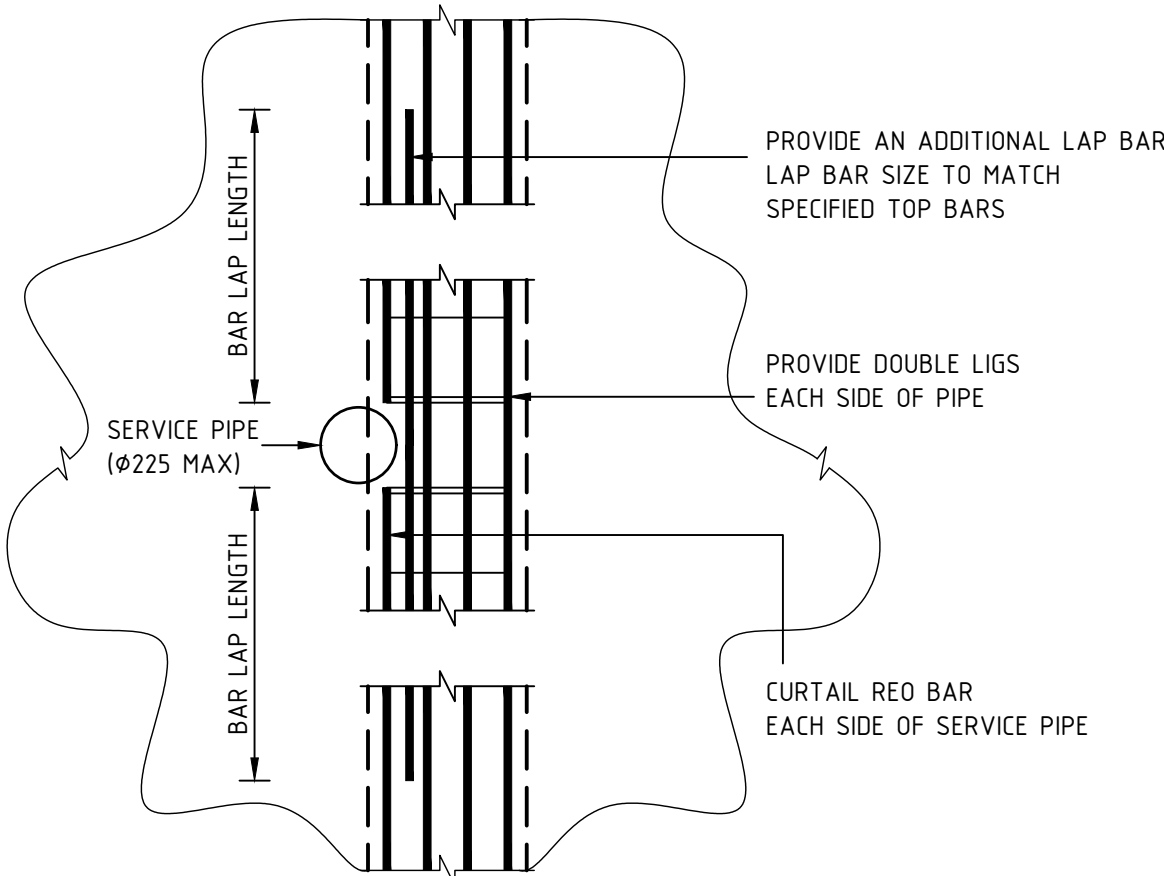
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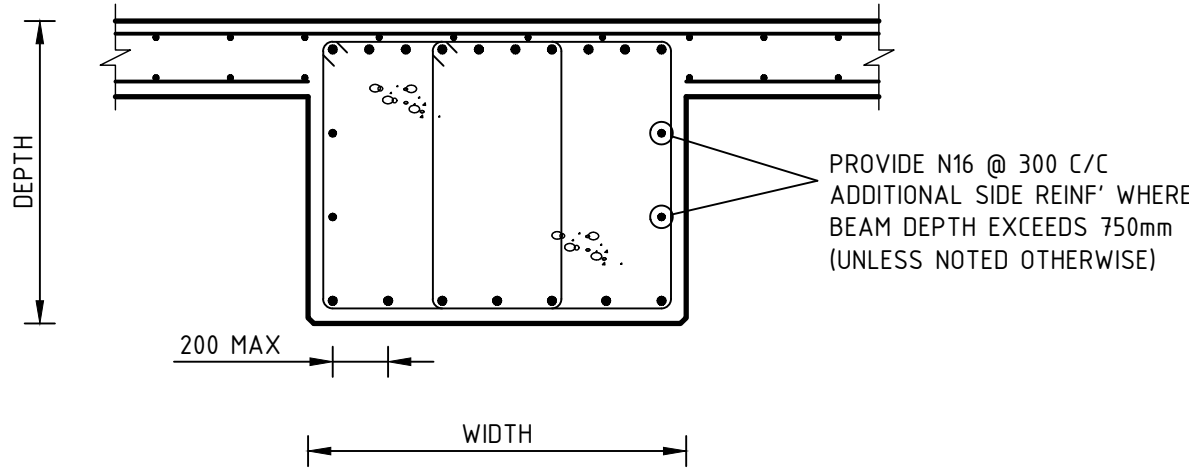
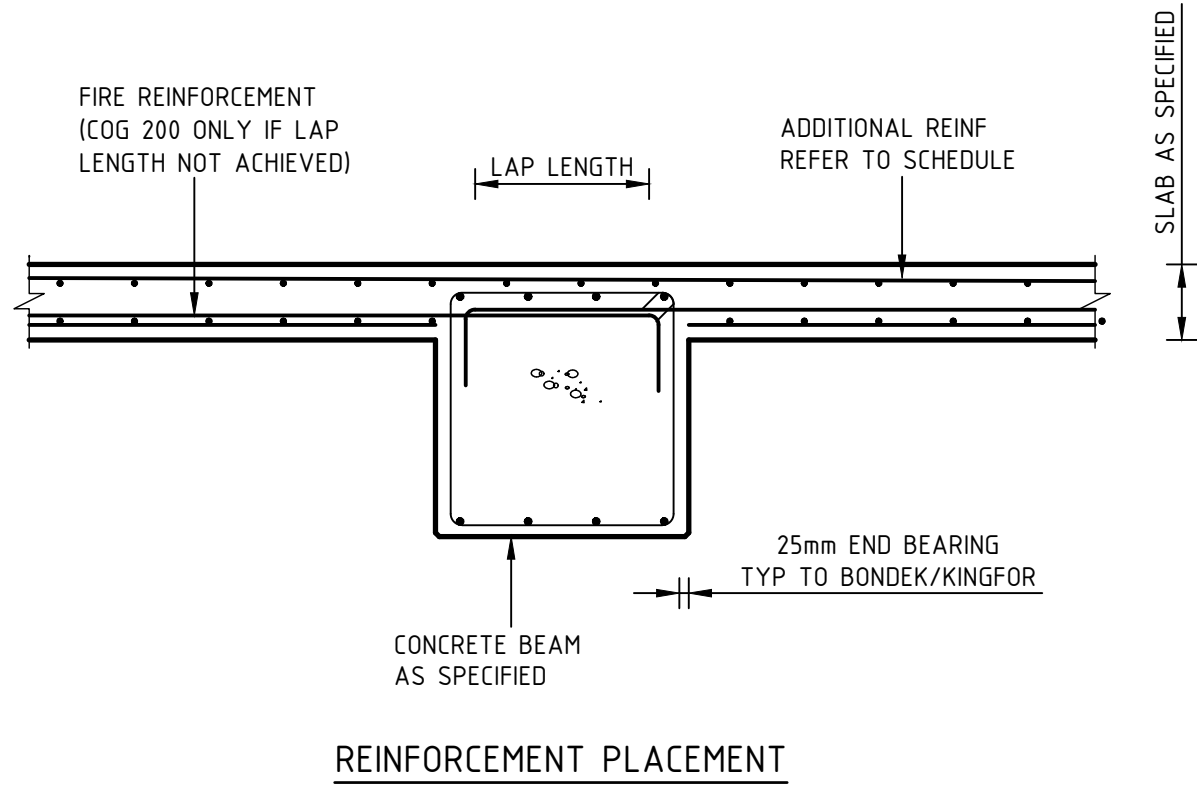
SERVICE PIPE CONC' BEAM PENETRATION  
SITUATION 2  
NTS



SERVICE PIPE CONC' BEAM PENETRATION  
SITUATION 1  
NTS



PLAN VIEW FROM ARROW "W"  
NTS

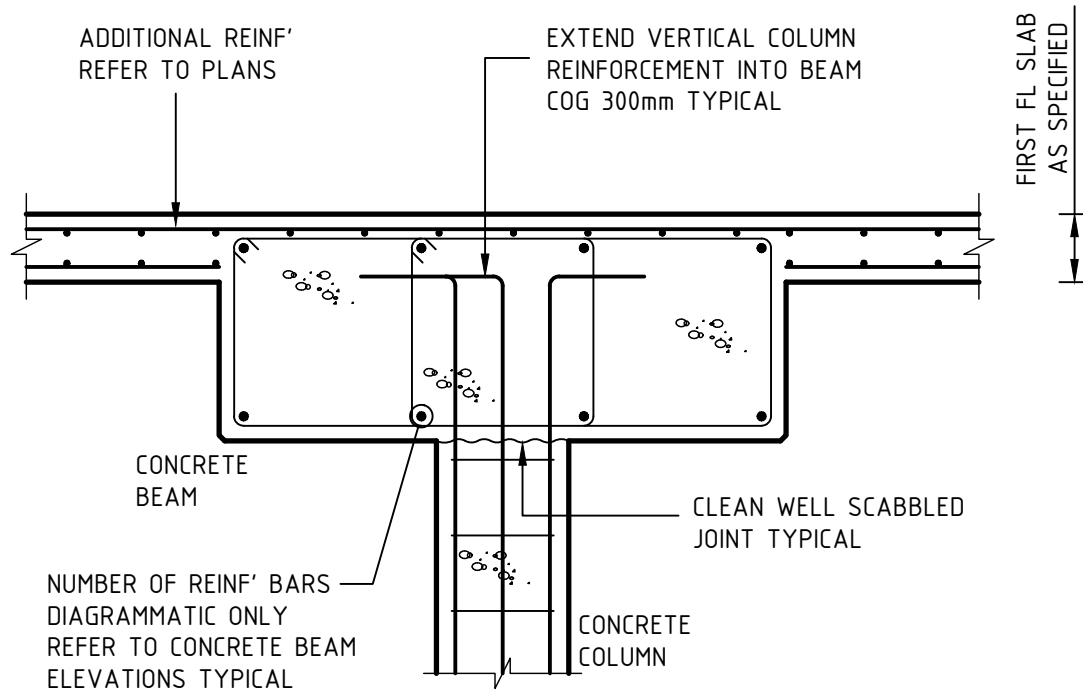


SIDE REINFORCEMENT

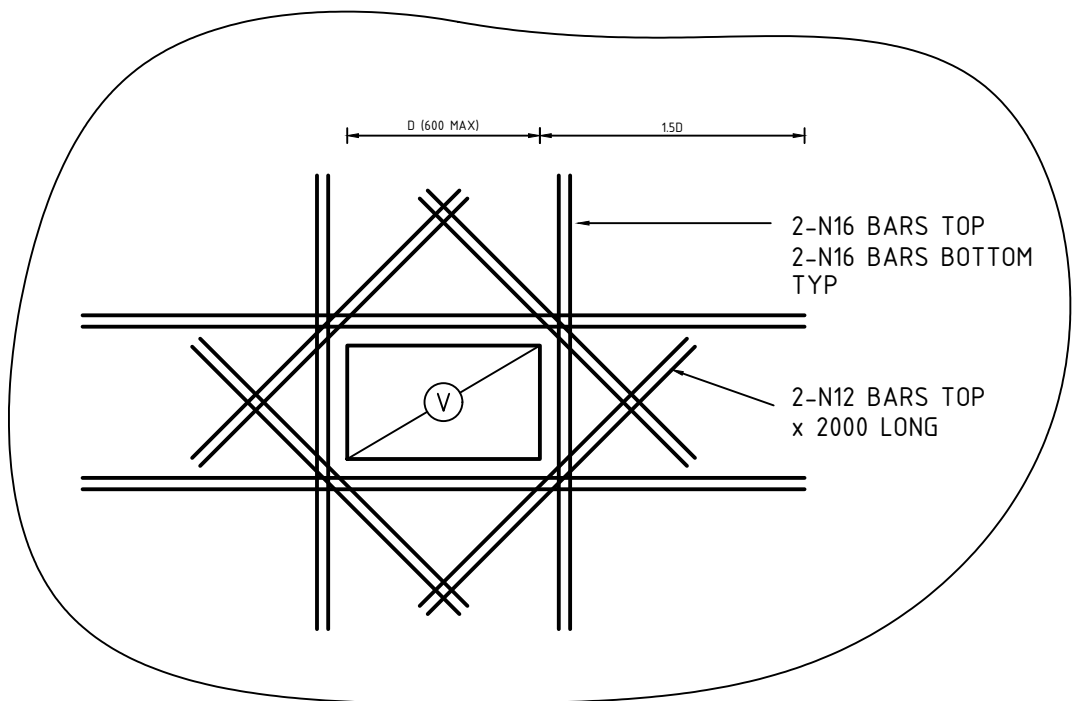
TYPICAL CONCRETE BEAM DETAILS  
NTS

REINFORCEMENT LAP LENGTHS (UNO)

N12	-	600mm
N16	-	750mm
N20	-	1000mm
N24	-	1450mm
N28	-	1800mm
N32	-	2150mm
N36	-	2600mm

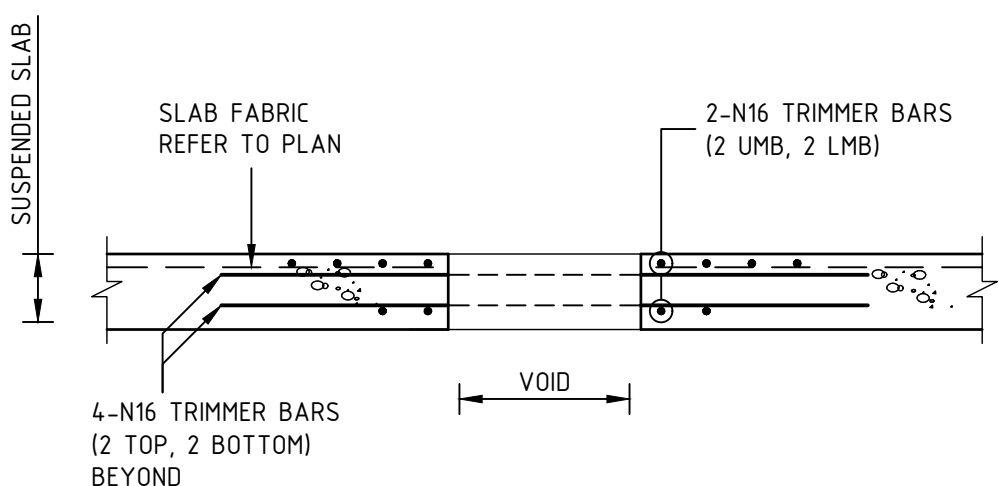


TYPICAL CONCRETE COLUMN / BEAM CONNECTION  
NTS

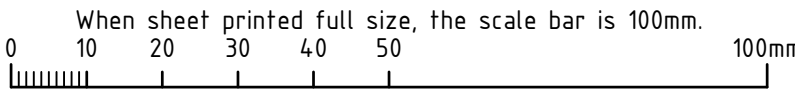


TYPICAL SERVICE PENETRATION DETAIL

NTS  
NOTE:  
SLAB REINF' OMITTED FOR CLARITY



SECTION THROUGH  
1:20



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PROJECT  
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PROSPECT  
FOR: NIATRON 10 PTY LTD

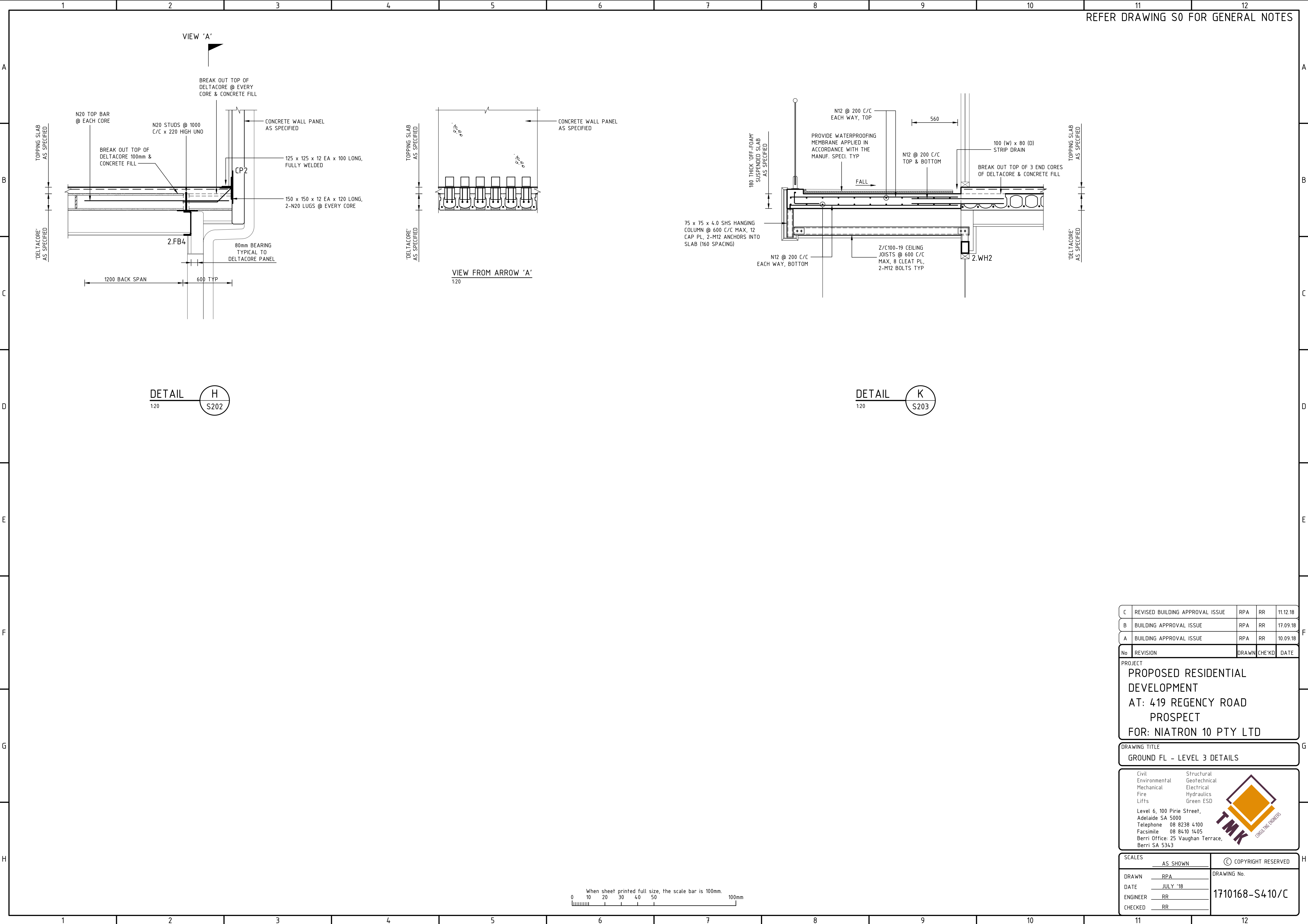
DRAWING TITLE  
GROUND FL - LEVEL 3 DETAILS

Civil  
Environmental  
Mechanical  
Fire  
Lifts

Structural  
Geotechnical  
Electrical  
Hydraulics  
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VIEW 'A'

BREAK OUT TOP OF DELTACORE @ EVERY CORE & CONCRETE FILL

N20 TOP BAR @ EACH CORE

N20 STUDS @ 1000 C/C x 220 HIGH UNO

CONCRETE WALL PANEL AS SPECIFIED

BREAK OUT TOP OF DELTACORE 100mm & CONCRETE FILL

125 x 125 x 12 EA x 100 LONG, FULLY WELDED

150 x 150 x 12 EA x 120 LONG, 2-N20 LUGS @ EVERY CORE

2.FB4

80mm BEARING TYPICAL TO DELTACORE PANEL

1200 BACK SPAN

600 TYP

DETAIL

H

1:20

S202

VIEW FROM ARROW 'A'

1:20

CONCRETE WALL PANEL AS SPECIFIED

DETAIL

K

1:20

S203

180 THICK 'OFF-FOAM' SUSPENDED SLAB AS SPECIFIED

N12 @ 200 C/C EACH WAY, TOP

PROVIDE WATERPROOFING MEMBRANE APPLIED IN ACCORDANCE WITH THE MANUF. SPECI. TYP

FALL

560

N12 @ 200 C/C TOP & BOTTOM

100 (W) x 80 (D) STRIP DRAIN

BREAK OUT TOP OF 3 END CORES OF DELTACORE & CONCRETE FILL

75 x 75 x 4.0 SHS HANGING COLUMN @ 600 C/C MAX, 12 CAP PL, 2-M12 ANCHORS INTO SLAB (160 SPACING)

N12 @ 200 C/C EACH WAY, BOTTOM

Z/C100-19 CEILING JOISTS @ 600 C/C MAX, 8 CLEAT PL, 2-M12 BOLTS TYP

2.WH2

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GROUND FL - LEVEL 3 DETAILS

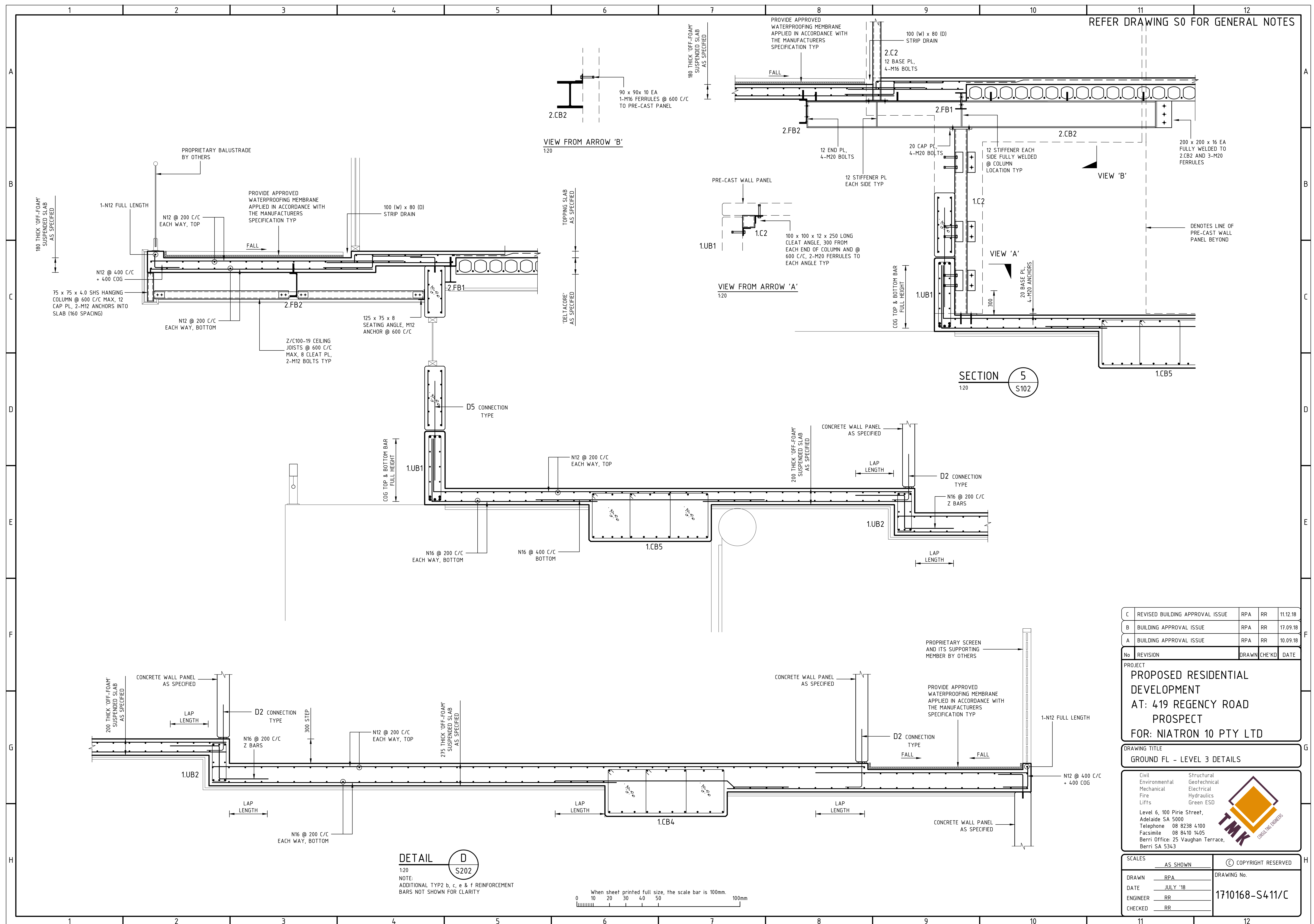
Civil  
Environmental  
Mechanical  
Fire  
Lifts

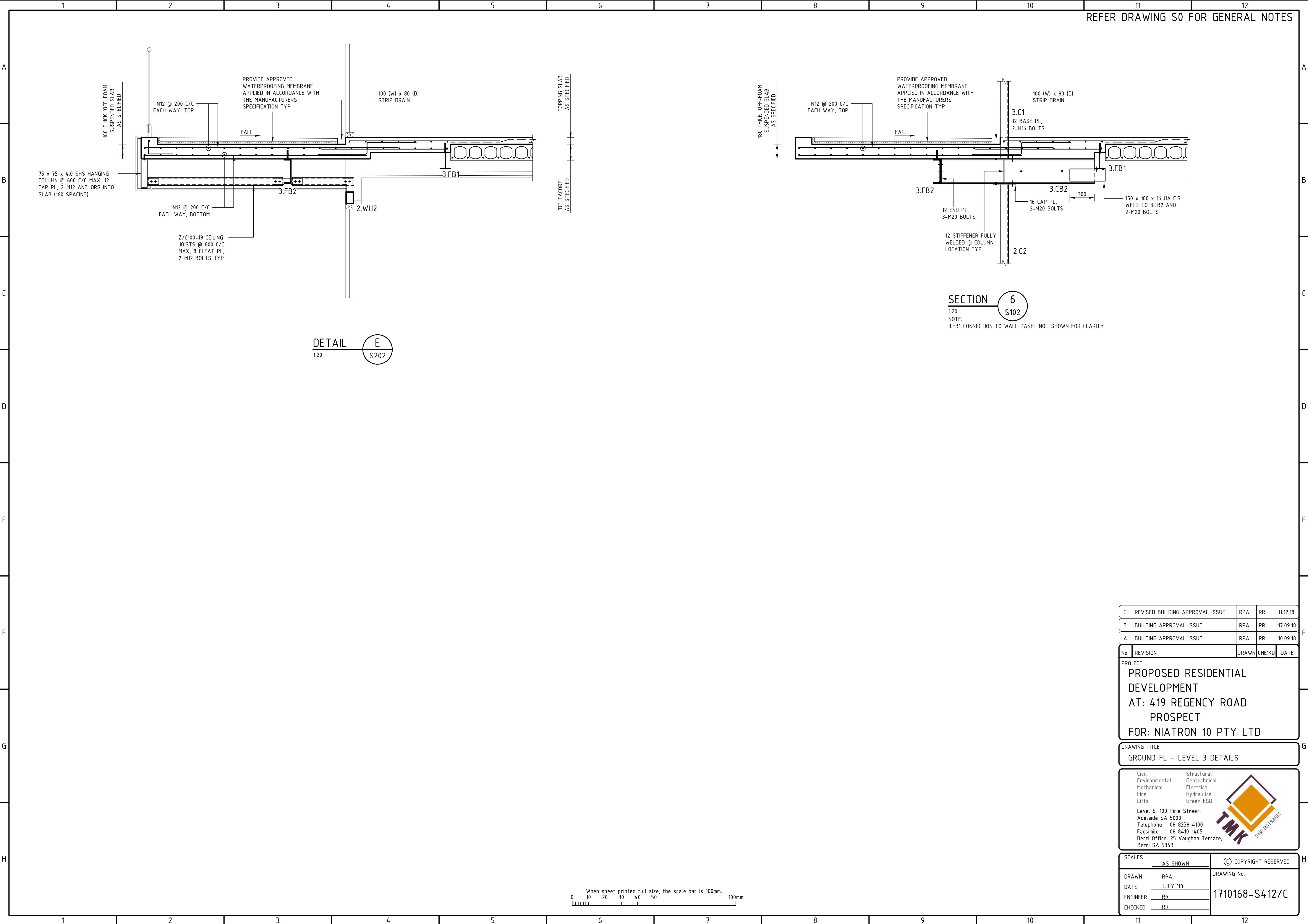
Structural  
Geotechnical  
Electrical  
Hydraulics  
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DETAIL E  
1:20

SECTION 6  
S102

NOTE:  
3.FB1 CONNECTION TO WALL PANEL NOT SHOWN FOR CLARITY

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GROUND FL - LEVEL 3 DETAILS

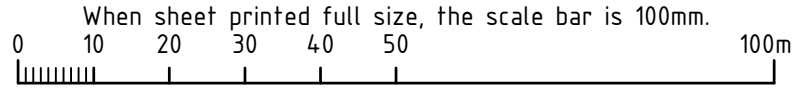
Civil  
Environmental  
Mechanical  
Fire  
Lifts

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Geotechnical  
Electrical  
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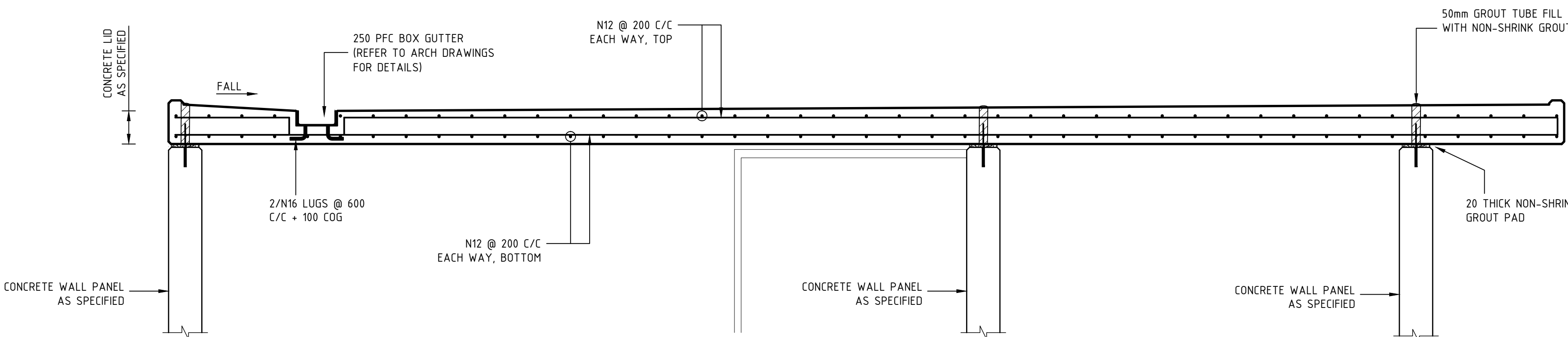


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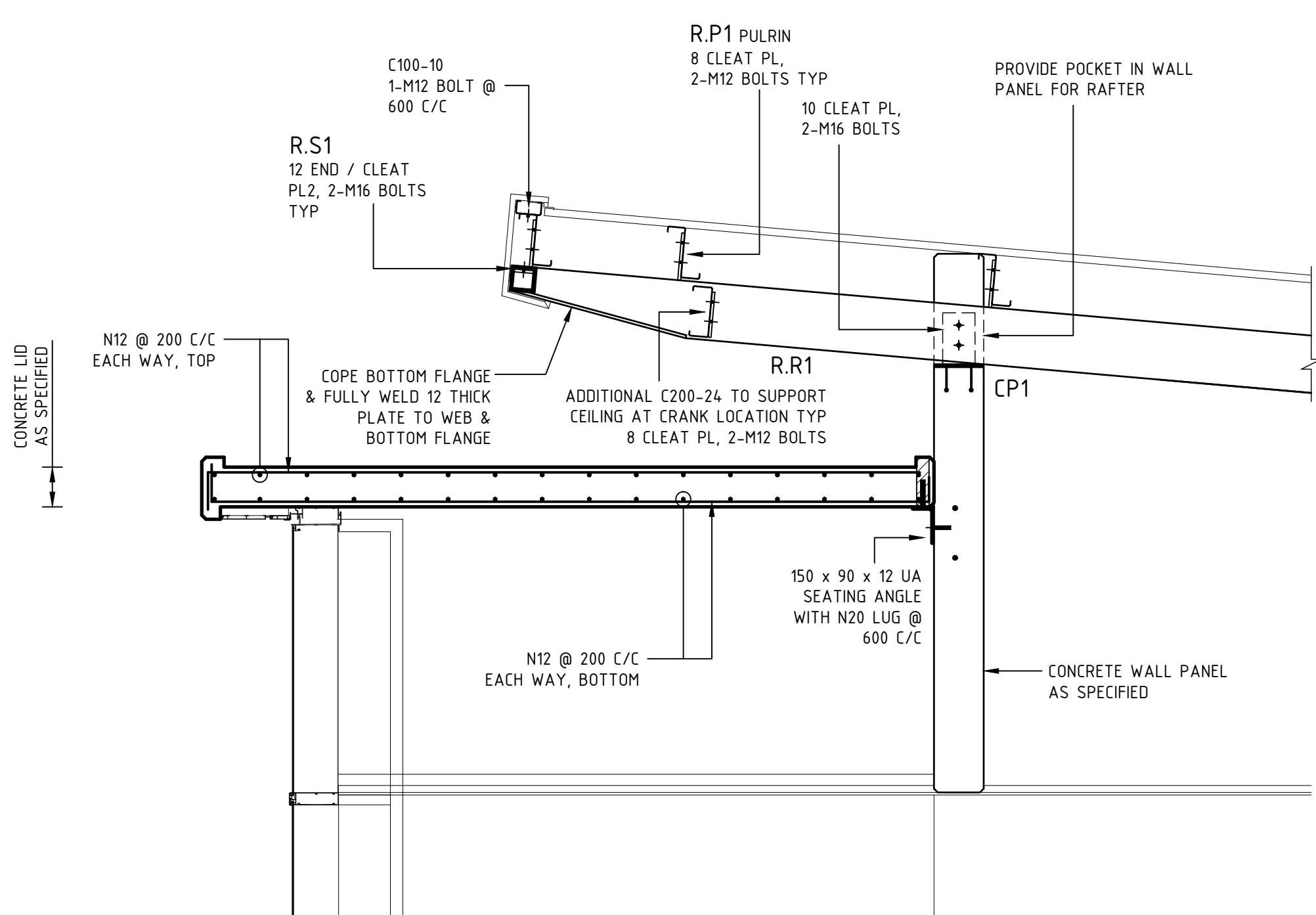




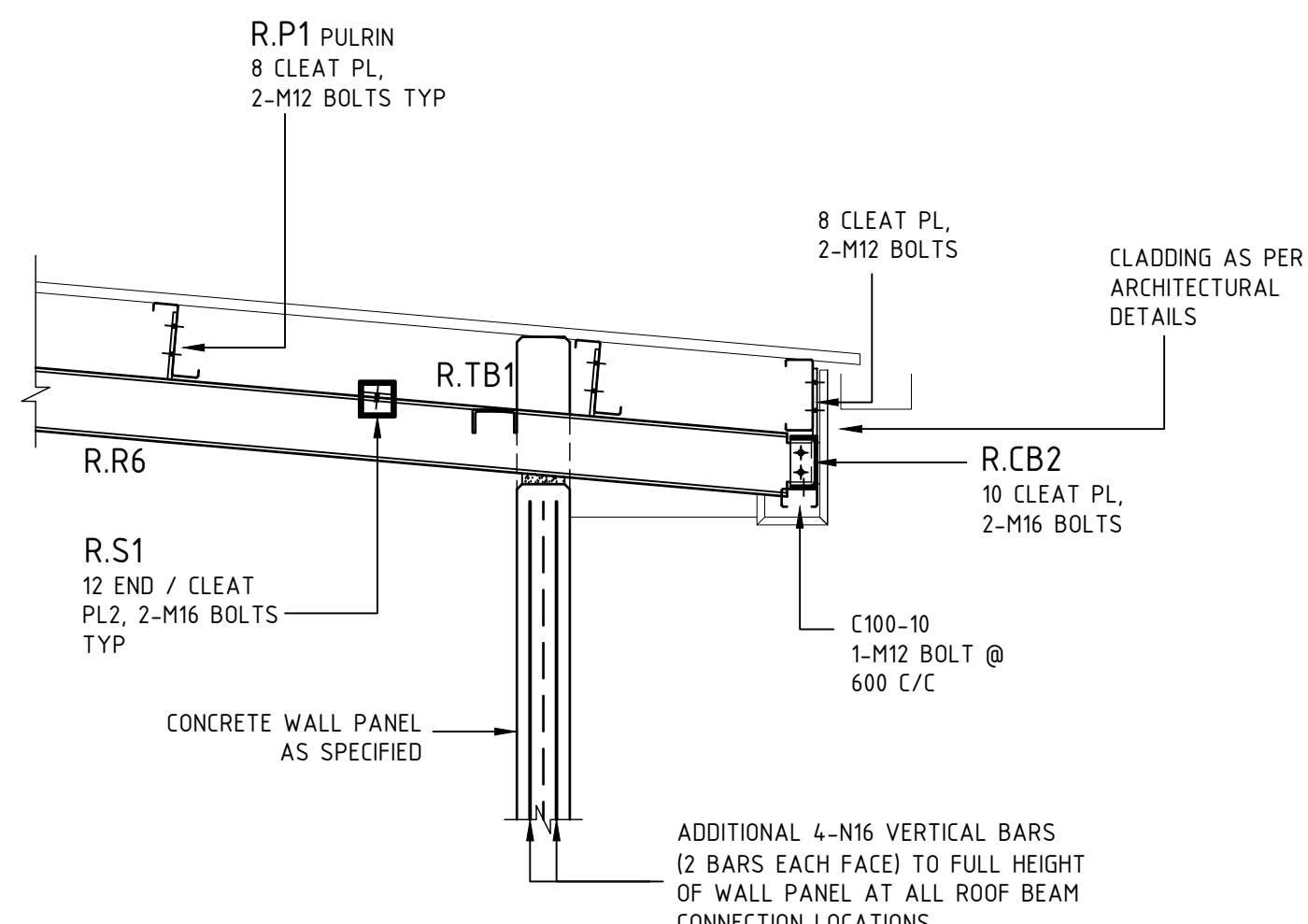
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DETAIL F  
1:20  
NOTE:  
MIN 200 THICK PRE-CAST LID F<sub>c</sub> = 40 MPa WITH XYPEX ADDITIVE

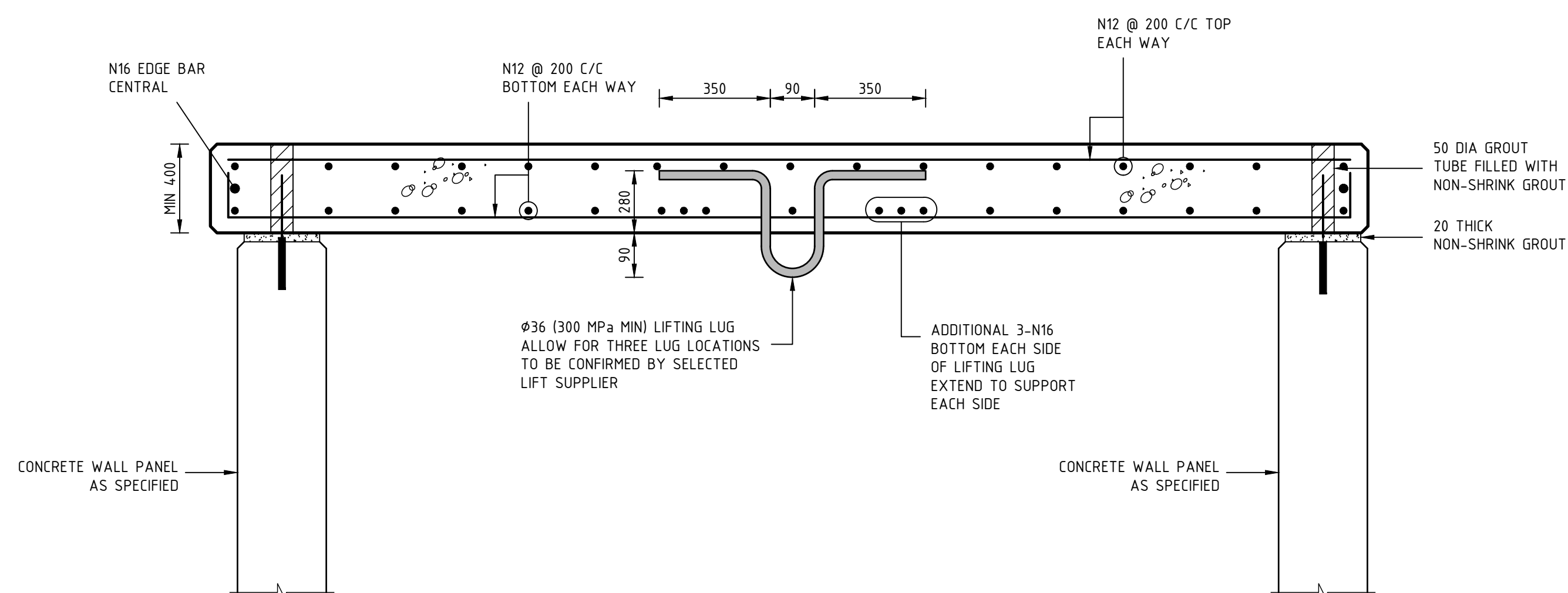


DETAIL J  
1:20

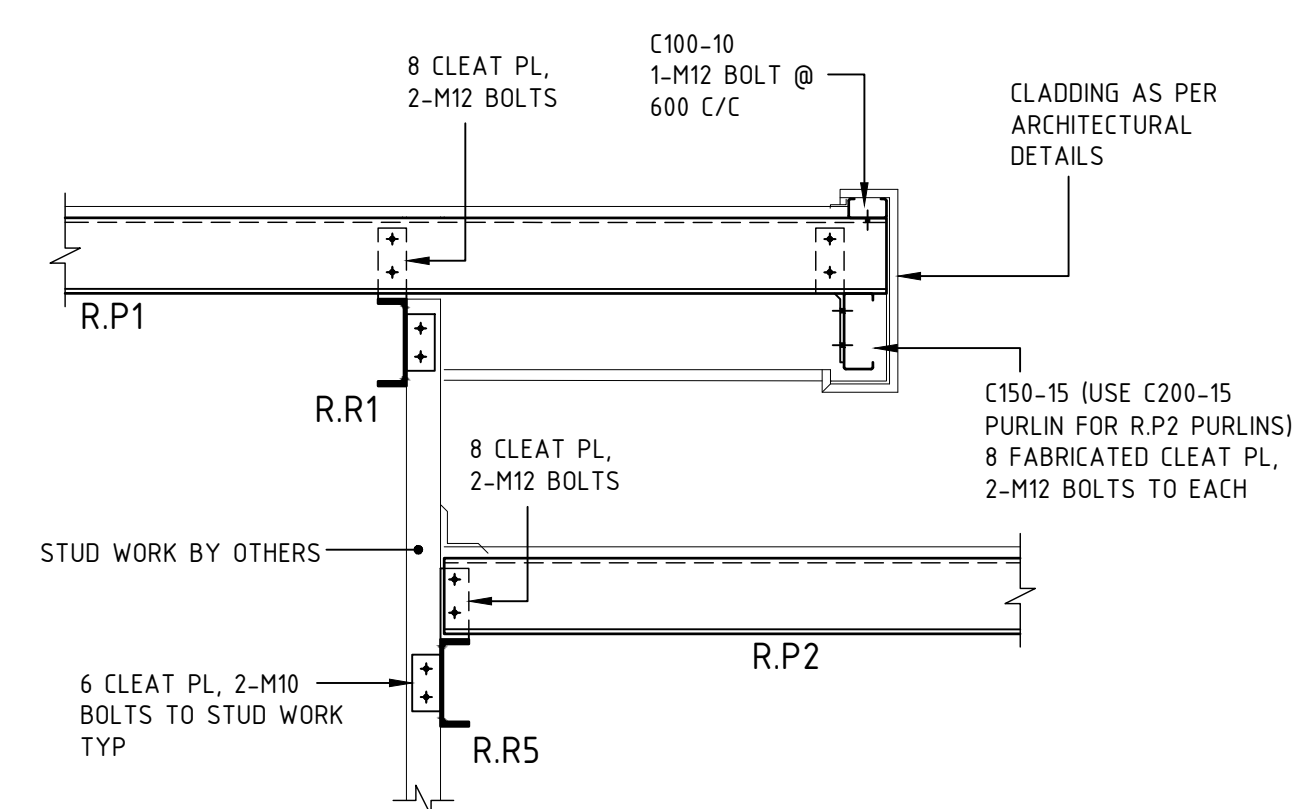


DETAIL N  
1:20

When sheet printed full size, the scale bar is 100mm.



TYPICAL LIFTING LUG DETAIL  
1:10



DETAIL O  
1:20

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**FOR: NIATRON 10 PTY LTD**

DRAWING TITLE  
**ROOF DETAILS**

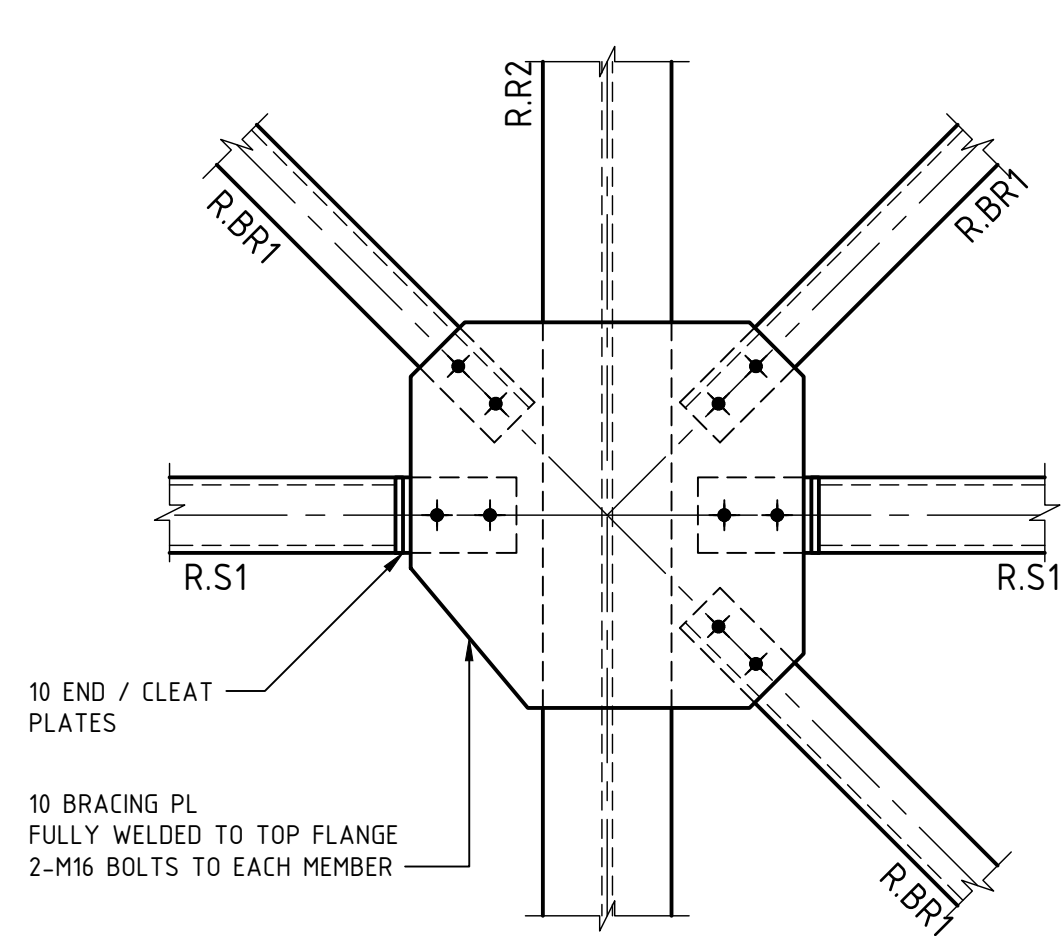
Civil  
Environmental  
Mechanical  
Fire  
Lifts

Structural  
Geotechnical  
Electrical  
Hydraulics  
Green ESD

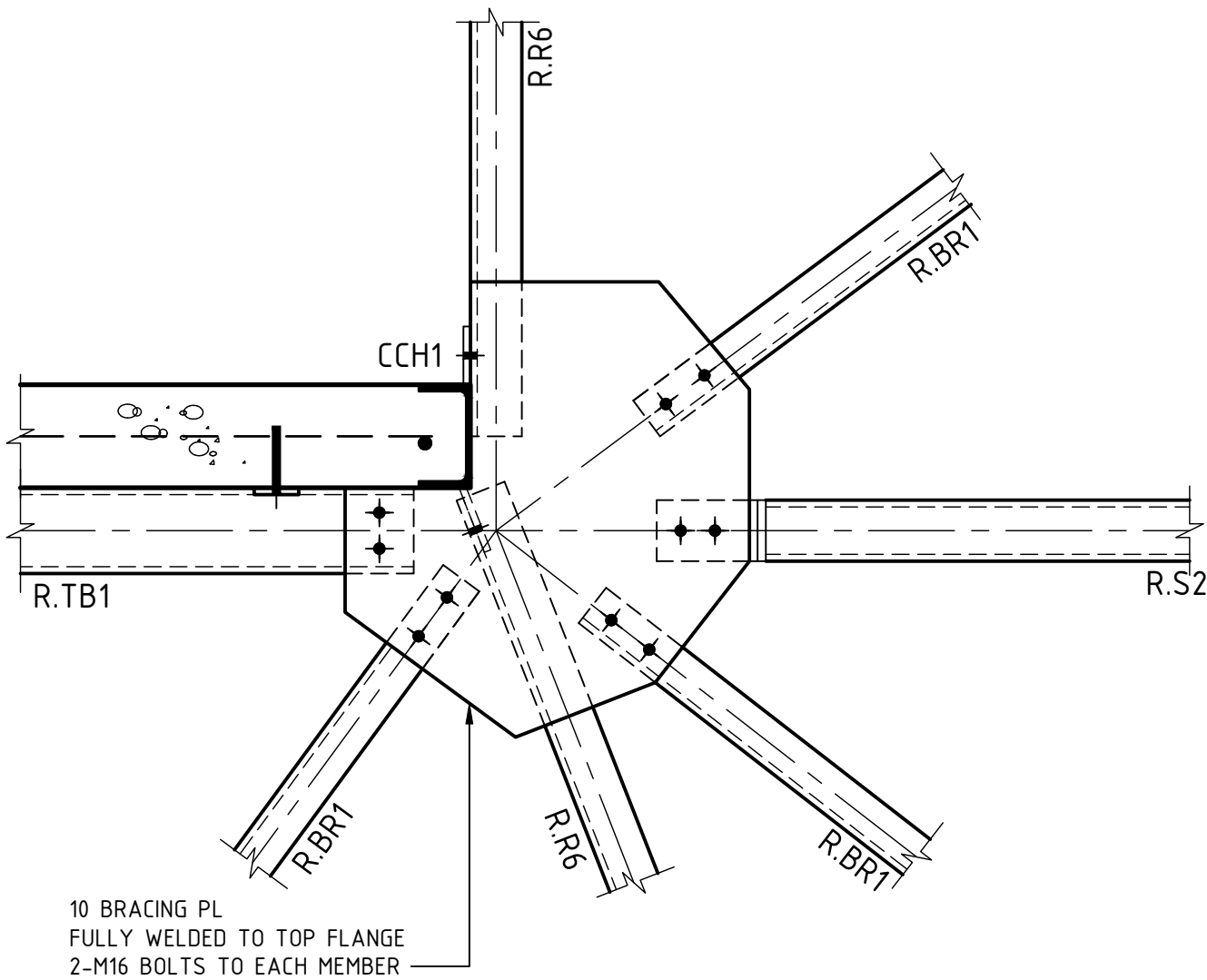
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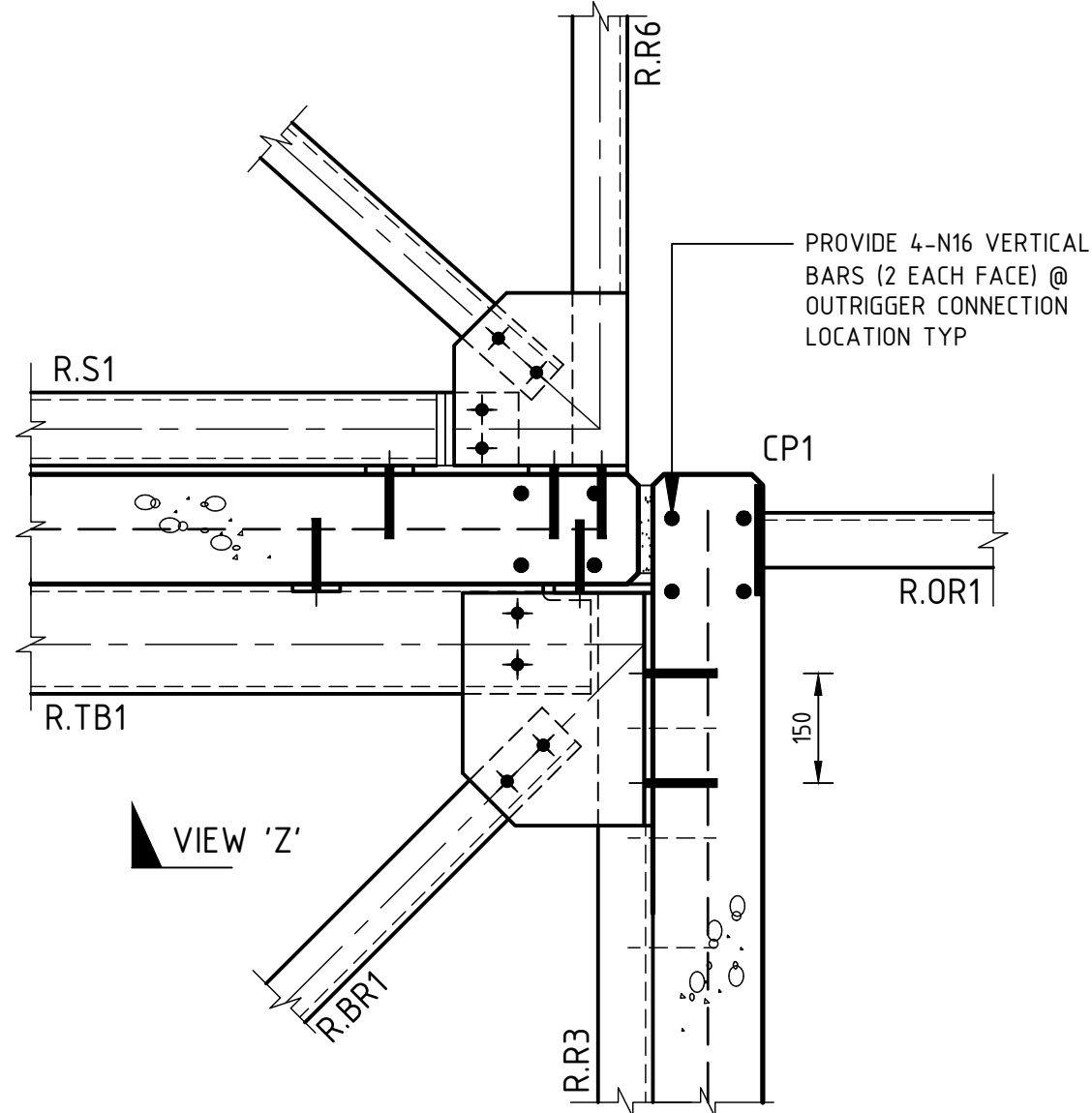
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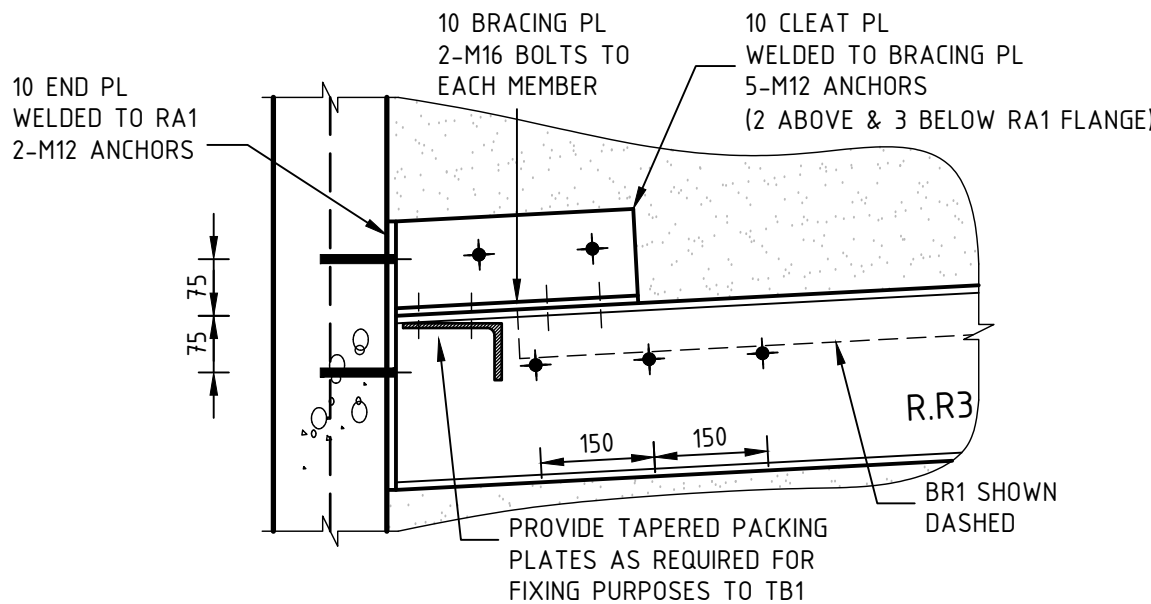
DETAIL G  
1:10  
NOTE:  
PURLINS OMITTED FOR CLARITY



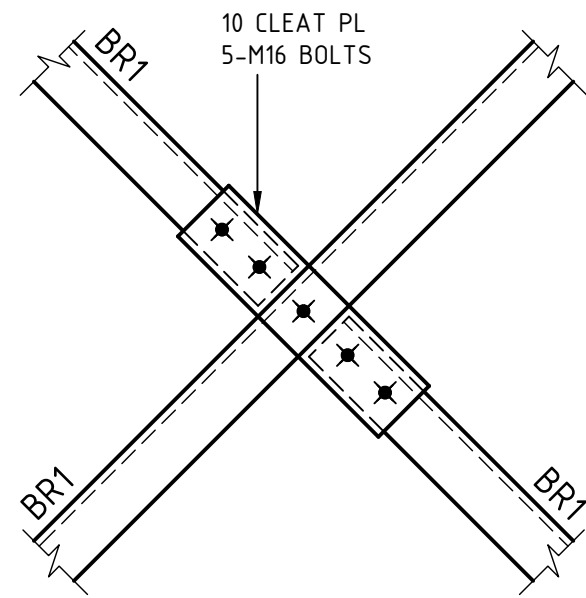
DETAIL L  
1:10  
NOTE:  
PURLINS OMITTED FOR CLARITY



DETAIL M  
1:10  
NOTE:  
PURLINS OMITTED FOR CLARITY



VIEW FROM ARROW 'Z'  
1:10



TYPICAL BR1 CROSS OVER DETAIL  
NTS  
NOTE:  
PURLINS OMITTED FOR CLARITY

When sheet printed full size, the scale bar is 100mm.  
0 10 20 30 40 50 100mm

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PROJECT  
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DEVELOPMENT  
AT: 419 REGENCY ROAD  
PROSPECT  
FOR: NIATRON 10 PTY LTD

DRAWING TITLE  
ROOF DETAILS

Civil  
Environmental  
Mechanical  
Fire  
Lifts  
Structural  
Geotechnical  
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