



PROJECT
PROPOSED NEW DWELLING

ADDRESS
18 SEYMOUR STREET,
BELFIELD, NSW

CLIENT
STROUD HOMES NEPEAN

PROJECT No.
23G8705

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A	ISSUE FOR CONSTRUCTION	MM	RS	SP	28.11.23
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AMENDMENTS					


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GENERAL

1. DESIGN DOCUMENTATION BY GRAND ENGINEERING PTY. LTD SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT AND ENGINEER FOR DECISION BEFORE PROCEEDING WITH THE WORK.
2. ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED. THE ENGINEERS' DRAWINGS SHALL NOT BE SCALED.
3. IT SHOULD BE NOTED THAT DESIGN DOCUMENTATION BY GRAND ENGINEERING PTY. LTD. DEMONSTRATE THE FINAL STRUCTURAL WORKS, THUS NOT NECESSARILY DESCRIBE A WORK METHOD. THE DETERMINATION OF A SAFE WORK METHOD REMAINS THE RESPONSIBILITY OF THE CONTRACTOR. WHERE, THE WORK METHOD POSES UNACCEPTABLE LEVEL OF SAFETY RISK TO ACCOMPLISH THE INTENDED OUTCOME, ADVICE SHALL BE SEEK FROM THE STRUCTURAL ENGINEER. TEMPORARY BRACING AND SUPPORT OF STRUCTURE IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE MAINTAINED THROUGHOUT THE PROJECT DURATION.
4. GRAND ENGINEERING PTY. LTD. WILL NOT BE ABLE TO ISSUE ANY CERTIFICATE FOR ITEMS NOT INSPECTED BY THE ENGINEER REPRESENTING GRAND ENGINEERING PTY. LTD.
5. WORKMANSHIP AND MATERIALS SHALL COMPLY TO THE RELEVANT AND CURRENT CODES TO THEIR LATEST AMENDMENTS, AND THE LOCAL STATUTORY AUTHORITIES, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
6. IT IS THE BUILDERS RESPONSIBILITY TO ACQUIRE APPROVAL OF ANY STRUCTURAL SUBSTITUTION FROM THE ENGINEER, ARCHITECT AND THE CLIENT.
7. ALL DIMENSIONS ARE IN MILLIMETERS, U.N.O. ALL LEVELS ARE EXPRESSED IN METERS.
8. ALL PROPRIETARY ITEMS WHICH MAY FORM PART OF THIS DOCUMENTATION SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS & DETAILS.
13. BUILDER SHOULD NOT RELY COMPLETELY ON THESE DRAWINGS FOR WATERPROOFING REQUIREMENTS. WORKS TO BE COMPLETED BY WATERPROOFING SPECIALISTS IN REFERENCE TO ARCHITECTURAL SPECIFICATION.
14. THE STRUCTURAL WORK SHOWN ON THESE DRAWINGS HAVE BEEN DESIGNED FOR THE FOLLOWING U.N.O:

LIVE LOADS & ADDITIONAL DEAD LOADS: (TO AS/NZS 1170.1)

AREA SUBJECT TO LOADING	LIVE LOAD		ADDITIONAL DEAD LOAD
	UNIFORM	POINT	
RESIDENTIAL AREAS	1.5kPa	1.8kPa	0.50kPa
OFFICE / CLASSROOM AREAS	3.0kPa	2.7kPa	0.50kPa
BALCONIES	2.0kPa	1.8kPa	1.00kPa
STAIRS	2.0kPa	2.7kPa	1.00kPa
STORAGE AREAS	2.4kPa/m height	7.0kPa	0.50kPa
ROOF AREAS	0.25kPa	1.4kPa	0.15kPa
PLANTER AREAS (MAX. 500 SOIL)	1.0kPa	1.4kPa	10.0kPa
DANCE HALLS/GYMNASIA/RETAILS	5.0kPa	3.6kPa	0.50kPa
TRAFFIC LIGHT (GVM <2.5t)	2.5kPa	13.0kPa	0.25kPa

GEOTECHNICAL REFERENCE AND SITE CLASSIFICATION

1. REFER TO GEOTECHINCAL INFORMATION GROUND FLOOR SLAB PLAN FOR SITE CLASS, SOIL CLASS, FOUNDATION MATERIAL AND ALLOWABLE BEARING PRESSURE. IT SHOULD BE NOTED THAT INFORMATION ON THE TABLE ARE TO BE READ IN CONJUNCTION WITH THE REFERENCED GEOTECHNICAL REPORT AS2870 AND OTHER REFERENCED DOCUMENTS IN GEOTECHNICAL REPORT.
2. THE SITE CONDITIONS NOTED ON GEOTECHNICAL REPORT CAN BE ALTERED DUE TO FURTHER EARTHWORKS CARRIED AT SITE AFTER THE ORIGINAL GEOTECHNICAL INVESTIGATION IS CARRIED OUT WHERE FULL NATURE AND SCOPE OF WORKS ARE NOT PROVIDED DURING THE TIME OF INVESTIGATION. THUS, IT IS THE BUILDER'S RESPONSIBILITY TO NOTIFY THE DESIGN ENGINEER AND THE GEOTECHNICAL ENGINEER OF SUCH CHANGES. FURTHER TESTS AND DESIGN MAY BE REQUIRED IN SUCH CONDITIONS.
3. ALL THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT FOR THE SITE SHALL BE FOLLOWED IN ACCORDANCE WITH THE DESIGN GUIDELINES OF THIS DOCUMENT.
4. THE GEOTECHNICAL INVESTIGATION REPORT IS ONLY AN ESTIMATE OF THE SITE CONDITIONS BASED ON SAMPLE TEST SPOTS, IT IS NOT A COMPLETE DESCRIPTION OF THE FOUNDATION.

REINFORCED CONCRETE

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600, AS 3710 AND AS2870, LATEST EDITION, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS
2. ALL REINFORCING STEEL SHOULD BE IN ACCORDANCE WITH AS4671 AND ALL PLANT BATCHED CONCRETE TO COMPLY WITH AS 1379.
3. CONSTRUCTION JOINTS ARE STRICTLY NOT ALLOWED OTHER THAN SHOWN ON PLANS OR APPROVED BY ENGINEER IN WITTING.
4. WHERE CONCRETE SLABS BEAR ON BRICKWORK, THE BEARING SURFACE OF THE BRICKWORK SHALL BE GROUTED WITH 1:3 CEMENT SAND MORTAR TO ACHIEVE LEVEL SURFACE. MALTHOID SLIP JOINT OR SIMILAR SHOULD BE PLACED BEFORE POURING OF CONCRETE.
5. THE FINISHED CONCRETE SHALL BE CURED FOR A MINIMUM OF 5 DAYS FOLLOWED BY PREVENTION OF ABRUPT LOSS OF MOISTURE FOR NEXT 2 DAYS. APPROVED CURING COMPOUND MAY BE SPRAYED TO MANUFACTURER'S SPECIFICATIONS THAT COMPLY WITH AS3799.
6. REINFORCEMENT SHOWN ON PLANS AND DETAILS ARE SYMBOLIC REPRESENTATIONS ONLY. THUS, MAY NOT BE TO SCALE AND TO ACCURATE ORIENTATIONS
7. FINISHES IN SLAB LIKE FALLS, DRIP GROOVES, REGLETS AND CHAMFERS SHALL BE REFERRED TO ARCHITECTS DRAWINGS AND SPECIFICATIONS. CONCRETE COVER AND MIN. THICKNESS IS TO BE MAINTAINED THROUGHOUT.
8. REINFORCEMENT WELDING IS NOT PERMITTED, U.N.O.
9. REFER TO REINFORCEMENT MESH LAPPING DETAIL FOR MESH LAPPING SPECIFICATIONS
10. ALL REINFORCEMENT SHALL BE CHAIRED AT MAXIMUM 800mm CENTERS BOTH WAYS. ADDITIONAL CHAIRS MAY BE REQUIRED AROUND THE PERIMETER TO PROVIDE EXTRA STABILITY FOR WORKERS TO WALK ON.
11. BAR CHAIRS (50mm) or TRIPOD RAILS (45mm SHALL BE USED FOR TRENCH MESH & 4 BAR CHAIRS OR 2 RAILS PER FULL WAFFLE POD SHOULD BE USED.
12. REINFORCEMENT SYMBOLS:

N- DEFORMED BARS, GRADE 500 NORMAL DUCTILITY TO AS/NZS 4671.
R- PLAIN ROUND BARS, GRADE 250 NORMAL DUCTILITY TO AS/NZS 4671.
SL- DEFORMED, GRADE 500 LOW DUCTILITY SQUARE MESH TO AS/NZS 4671.
RL- DEFORMED, GRADE 500 LOW DUCTILITY RECTANGULAR MESH TO AS/NZS 4671.
L##TM- DEFORMED, GRADE 500 LOW DUCTILITY TRENCH MESH TO AS/NZS 4671.

REINFORCED CONCRETE NOTES CONTINUED...

13. ALL REINFORCEMENT TO BE LAPPED AS SHOWN IN TABLE BELOW, U.N.O. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN ON STRUCTURAL DRAWINGS OR OTHERWISE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.

LAP TABLE				
REINFORCEMENT BAR	N12	N16	N20	N24
LAP LENGTH	500	650	800	1000
COG LENGTH	400	400	400	400

14. CONCRETE PROPERTIES SHALL BE AS PER THE TABLE BELOW, U.N.O. AND SHALL BE VERIFIED BY TESTS. REFER TO PLAN FOR CONCRETE STRENGTH (fc)

ELEMENT	SLUMP (mm)	MAX. SIZE AGGREGATE (mm)	CEMENT TYPE	MIN. CONCRETE STRENGTH U.N.O.
STRIP/PAD FOOTINGS	100	20	GP	32MPa
BORED PIERS	120	20	GP	REFER TO PLAN
SLAB ON GROUND	100	20	GP	REFER TO PLAN
SUSPENDED SLAB	80	20	GP	32MPa
STAIRS	80	20	GP	32MPa
CORE-FILLED BLOCK AND FORMED CONCRETE WALLS	180	10	GP	32MPa
SWIMMING POOL	80	20	GP	32MPa

15. REFER TO TABLE BELOW FOR ALL REINFORCEMENT COVER, U.N.O. ON PLAN.

ELEMENT	CLEAR COVER U.N.O. (mm)
STRIP / PAD FOOTINGS	50
BORED PIERS	50
SLAB ON GROUND	20 T&B - INTERNAL 30 T&B - EXTERNAL
SUSPENDED SLAB	20 T&B - INTERNAL 30 T&B - EXTERNAL
STAIRS	30 T&B

16. SAFETY, DESIGN, CONSTRUCTION AND PERFORMANCE OF ALL FORMWORK AND FALSEWORK IS THE RESPONSIBILITY OF THE BUILDER OR RESPECTIVE CONTRACTOR.
17. PROPRIETARY COMPOSITE METAL FORMWORK (eg BONDEK, CONDEK, etc..) NOTED ON STRUCTURAL DRAWINGS SHOULD BE PROPPED & INSTALLED ACCORDING TO THE MANUFACTURERS SPECIFICATIONS U.N.O..
18. APPLIED SURFACE FINISHES (EG. POLISHED CONCRETE) SHOULD NOT COMPROMISE THE DESIGNATED CONCRETE COVER FOR REINFORCEMENT STEEL.
19. ALL CONCRETE INCLUDING SLAB ON GROUND AND FOOTINGS SHALL BE MECHANICALLY VIBRATED TO ACHIEVE A DENSE HOMOGENOUS MASS COMPLETELY FILLING THE FORMWORK THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF VOIDS.
20. ANY KIND OF PENETRATIONS, CUTS AND RECTIFICATIONS TO CONCRETE, SHALL NOT BE DONE WITHOUT THE PERMISSION OF THE ENGINEER.

SITE PREPATATION FOR SLABS ON GROUND

1. STRIP TOPSOIL CONTAINING ORGANIC MATTER. PROOF ROLL FILL SUB GRADE AND REMOVE ANY SOFT ZONES.
2. WHERE ADDITIONAL FILL IS REQUIRED TO THE UNDERSIDE OF SLABS ON GROUND, NON COHESIVE MATERIALS SUCH AS SAND AND GRAVEL DUB SHALL BE PLACED BY "CONTROLLED" COMPACTION IN HORIZONTAL LAYERS OF 200 MM (LOOSE) MAXIMUM DEPTH. THIS FILL SHALL BE COMPACTED TO AT LEAST 95% OF STANDARD MAXIMUM DRY DENSITY (SMDD), IN ACCORDANCE WITH AS 1289.


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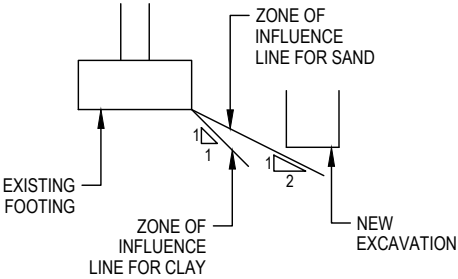
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FOUNDATIONS & FOOTINGS

1. ALL FOOTINGS HAVE BEEN DESIGNED TO AS2870, WITH REFERENCE TO THE SITE CLASSIFICATION AND OTHER INFORMATION LIKE BEARING CAPACITY, SALINITY ETC. PROVIDED IN THE GEOTECH REPORT SPECIFIC TO THE SITE.IT IS THE BUILDER'S RESPONSIBILITY TO REFER TO STRUCTURAL AND GEOTECHNICAL ENGINEERS IF THE TRUE CONDITIONS OF THE SITE IS FOUND TO BE DIFFERENT THEN OUTLINED IN THE REPORT, WHICH MAY BE DUE TO BUT NOT LIMITED TO, EXTENSIVE EARTHWORKS AFTER THE TEST, OR SIMPLY DUE TO SIGNIFICANT DIFFERENCE IN FOUNDATION MATERIAL WITHIN A SHORT DISTANCE.
2. WHILE EVERY CAUTION IS TAKEN IN DESIGNING THE THE FOOTING, MOVEMENT OF THE FOUNDATION WITHIN THE ACCEPTABLE LIMIT AS OUTLINED BY AS2870 MAY CAUSE DAMAGES OF CATEGORY 1 OR 2(AS2870 APPENDIX C). WHERE PREFERENCE IS TO MINIMIZE THOSE EFFECTS ENGINEER SHOULD BE NOTIFIED SO THAT SPECIAL CONSIDERATIONS CAN BE MADE IN THE DESIGN.
3. ALL SITE WORKS AND MATERIALS SHOULD COMPLY TO AS2870 EXCEPT FOR WHERE IT IS OVERWRITTEN BY THE THE CONTRACT DOCUMENT.
4. ALL DESIGNS ARE CARRIED OUT ASSUMING THE UNIFORM BEARING OF THE FOUNDATION. THUS PIERS MAY BE REQUIRED FOR FOOTINGS DESIGNED WITH NO PIERS IF DIFFERENT FOUNDING MATERIALS ARE ENCOUNTERED ON SITE. CONTACT ENGINEER PRIOR TO COMMENCING FURTHER WORKS.
5. TO AVOID ANY ALTERATION TO THE EXISTING CONDITION OF THE PIER HOLES AND FOOTING TRENCHES DUE TO EXTREME DRY OR WET WEATHER, IT IS HIGHLY RECOMMENDED TO COMPLETE THE POURING OF THE CONCRETE ON THE SAME DAY IT IS APPROVED.
6. BORED CONCRETE PIERS SHOULD COMPLY TO AS2159 SAA PILING CODE.
7. ALL PIER HOLES SHOULD BE CLEANED AND FREE OF WATER PRIOR TO POUR.
8. ALL PLUMBING FOR REACTIVE SITES (M,H1,H2,E) SHOULD COMPLY TO THE REQUIREMENT OF AS 2870. FURTHERMORE, OVERLAND FLOW OF STORM WATER SHOULD BE DIRECTED AWAY FROM FOOTING AND SUB FLOOR AREA TO PREVENT EXCESSIVE MOVEMENT OF THE FOUNDATION IN THE FUTURE.
9. PROVIDE ADEQUATE DRAINAGE BEHIND THE RETAINING WALL WITH GRANULAR FILL AND AG. LINE EVERY 1200mm HEIGHT OF RETAINING
10. SPECIFICATIONS IN REGARDS TO THE SCREW PIER DESIGN, SUPPLY AND INSTALLATION IS THE RESPONSIBILITY OF THE CONTRACTOR. ALL ABOVE ASPECTS SHOULD SATISFY S.W.L. NOMINATED BY THE ENGINEER.
11. WHERE THERE IS INFLUENCE OR POTENTIAL INFLUENCE OF TREE ROOTS IN THE FUTURE TO THE FOUNDATION . APPROVED ROOT BARRIER SYSTEM SHALL BE INSTALLED, OR MAY BE REMOVED COMPLETELY. CONTACT ENGINEER FOR SPECIFIC DESIGN IF ABOVE CAN'T BE ACHIEVED
17. WHERE A FURTHER/FUTURE EXCAVATION IS REQUIRED NEXT TO THE EXISTING FOOTING, THE FOUNDATIONS OF EXISTING FOOTING CAN BE COMPROMISED DUE TO UNDERMINING BY EXCAVATIONS. ALL EXCAVATIONS SHOULD BE OUTSIDE THE ZONE OF INFLUENCE OF THE EXISTING FOOTING AS SHOWN IN THE DETAIL BELOW.



MASONRY

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF AS3700, AS4773, AS2733, AS4455 AND BCA VOL. 2
2. ALL BLOCKWORK SHALL BE CONSTRUCTED IN GRADE 16 BLOCKS (15MPa) ACCORDING TO AS4455. ALL BRICKS SHALL HAVE A MINIMUM UNCONFINED COMPRESSIVE STRENGTH OF 20MPa, FOR LOAD BEARING WALLS, AND 10MPa FOR NON LOAD BEARING WALLS.
3. ALL MASONRY SUPPORTING OR SUPPORTED BY CONCRETE FLOORS SHALL BE PROVIDED WITH VERTICAL JOINTS TO MATCH ANY CONTROL JOINTS IN THE CONCRETE.
4. NON LOAD BEARING WALLS SHALL BE SEPARATED FROM CONCRETE ABOVE BY 12MM THICK CLOSE CELL POLYETHYLENE STRIPS.
5. NO CHASES OR RECESSES ARE PERMITTED IN THE LOAD BEARING MASONRY AND JOINT THICKNESS SHOULD NOT EXCEED 12mm.
6. THE NOMINAL PROPORTIONS BY VOLUME OF MORTAR SHALL BE 1 : 1/4 : 3 OF CEMENT, LIME AND SAND WITH NO ADMIXTURE, U.N.O.
7. GROUT USED TO FILL CAVITIES AND CORES IN REINFORCED MASONRY SHALL BE MIN. 15MPa AND A SLUMP OF 200mm (+/- 25MM). MAXIMUM AGGREGATE SIZE OF 10MM ROUNDED GRAVEL. NOMINAL PROPORTIONS SHALL BE 1 : 0.3 : 3 : 2 OF CEMENT, LIME, SAND AND AGGREGATE AND WITH STRENGTH NOT LESS THAN 20MPa, U.N.O.
8. ALL TIES AND REINFORCEMENT SHALL HAVE A MINIMUM CLEAR COVER OF 50MM TO EXTERNAL FACE OF MASONRY.
9. ALL WALLS SHALL BE TIED OR BONDED AT THEIR INTERSECTIONS.NO CAVITY OR CORE SHALL BE FILLED TO A HEIGHT GREATER THAN 1500mm WITHOUT SUITABLE SHORING.
10. PROVIDE VERTICAL CONTROL JOINTS AT 5M MAXIMUM CENTERS AND 3M MAXIMUM FROM CORNERS IN ALL MASONRY WALLS, U.N.O.
11. WHILE EXTENDING BRICKWORK STARTING FROM EXISTING BRICKWORK, PROVIDE VERTICAL CONTROL JOINT AND TIE THE NEW BRICKWORK WITH THE EXISTING BRICKWORK WITH APPROVED SYSTEM AT EVERY THIRD COURSE.
12. BACKFILL TO RETAINING WALLS TO BE FREE DRAINING GRANULAR MATERIAL UNLESS NOTED OTHERWISE. PROVIDE SUBSOIL DRAIN TO WEEP HOLES.
13. DO NOT CONSTRUCT MASONRY WALLS ON SUSPENDED CONCRETE SLABS UNTIL SLAB HAS BEEN STRIPPED AND DE-PROPPED TO ALLOW THE CONCRETE SLAB TO GAIN ITS DEAD LOAD DEFLECTION.
16. CAVITIES SHALL NOT BE LESS THAN 40mm AND NOT EXCEEDING 100mm. ALL CAVITY CONSTRUCTION TO HAVE GALVANISED/STAINLESS STEEL WALL TIES INSTALLED AS PER CLAUSE 3.4 IN AS 3700. MAXIMUM SPACING OF WALL TIES SHALL NOT EXCEED 600mm AND 300 FROM DISCONTINUOUS EDGE OF MASONRY WALLS.

CORROSION PROTECTION FOR WALL TIES BCA VOL 2 TABLE 3.3.3.1		
ZONE	EXPOSURE CONDITION	TIE SPECIFICATION
1	<1km FROM BREAKING SURF	● GRADE 316L STAINLESS STEEL
	<100m FROM SALT WATER WITHIN HEAVY INDUSTRIAL AREAS	● APPROVED ENGINEERED POLYMER
2	1km TO 10km FROM BREAKING SURF	● GALVANISED SHEET STEEL TIES 470gm/m ² COATING MASS
	100m TO 1000m FROM SALT WATER	● GALVANISED WIRE TIES - 470g/m ² COATING MASS
3	ALL OTHER AREAS	● GALVANISED SHEET STEEL - Z600 ● GALVANISED SHEET STEEL TIES 300g/m ² COATING MASS, GALVANISED AFTER MANUFACTURE

STRUCTURAL STEEL

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 4100, AS 1163, AS 1554.1 AND AS 4600
2. THE STRUCTURAL DESIGN HAS BEEN BASED ON THE FOLLOWING STEEL GRADES, U.N.O:
- HOT ROLLED UNIVERSAL BEAMS, COLUMNS, CHANNELS & ANGLES: 300PLUS
- CIRCULAR, SQUARE & RECTANGULAR HOLLOW SECTIONS: C350/C450LO
- COLD FORMED OPEN DURAGAL PROFILES: C400/C450LO
- COLD FORMED LIPPED C/Z PURLINS & GIRTS: G550/G500/G450
3. THE STRUCTURAL DESIGN HAS BEEN BASED ON MBPMA NOMINAL SIZE CEE & ZED LIPPED PURLINS. ALL PURLIN PROFILES SHALL BE IN ACCORDANCE WITH THE MBPMA SPECIFICATIONS.
4. QUALIFICATIONS OF WELDING PROCEDURES AND PERSONNEL SHALL CONFORM TO SECTION 4 OF AS 1554. ALL WELDS SHALL BE 6mm CONTINUOUS FILLET TYPE SP, U.N.O. ALL BUTT WELDS SHALL BE COMPLETE PENETRATION IN ACCORDANCE WITH AS 1554, U.N.O. NON DESTRUCTIVE TESTING OF WELD SHALL INCLUDE 100% VISUAL INSPECTION.
5. ALL BOLTS TO BE GALVANIZED 8.8/S. U.N.O. BOLTS AT MOMENT CONNECTIONS (eg. PORTAL FRAMES) AND BEAM SPLICES SHALL BE 8.8/TB TO BE USED WITH APPROVED LOAD INDICATOR WASHERS. WHERE NOT SPECIFIED IN THE DRAWINGS ALL BOLTS TO BE MIN. 2M20 or 3M16.
6. ALL STIFFENER AND CONNECTION PLATES TO BE 10mm THICK, U.N.O.
7. WHERE CHEMICAL ANCHORS ARE NOMINATED ON PLAN, PROVIDE RAMSET CHEMSET 5.8 GRADE STEEL ANCHOR STUDS WITH CHEMSET MAXIMA SPIN CAPSULE OR CHEMSET REO 5.2, U.N.O. AND INSTALLED TO MANUFACTURER'S SPECIFICATIONS
8. WELDING OF BOLTS IS NOT PERMITTED
9. THE CONTRACTOR SHALL PREPARE AND SUBMIT TWO (2) COPIES OF ALL WORKSHOP DRAWINGS FOR APPROVAL. FABRICATION SHALL NOT COMMENCE UNTIL APPROVAL HAS BEEN OBTAINED.
10. WHERE FULLY ENCLOSED AND PROTECTED FROM WEATHER, STRUCTURAL STEEL SHALL BE BLAST CLEANED TO CLASS 2.5 TO AS1627.4 AND PAINT COATED WITH MIN. 100µm HIGH BUILD ALKYD PRIMER. ALL EXTERNAL AND WEATHER EXPOSED STEEL, SHALL BE BLAST CLEANED TO CLASS 2.5 TO AS1627.4 AND HOT DIP GALVANIZED TO AS4680 WITH A MINIMUM COATING MASS OF 600m² or ALTERNATIVELY STRUCTURAL STEEL MAY BE GIRT BLASTED TO CLASS 2.5 AND PAINT COATED WITH BLUE ZINC PHOSPHATE 75µm DRY FILM THICKNESS OR HIGHER IF OVERWRITTEN BY CONTRACT DOCUMENTS.
11. REFER TO BELOW FOR THE ACCEPTABLE LEVEL OF WEATHER PROTECTION OF STEEL WORKS BASED ON THE SEVERITY OF THE OF THE EXPOSURE TO THE ENVIRONMENT

EXPOSURE CLASSIFICATION	STEELWORK PROTECTION REQUIRED
A1 / A2	POWER TOOL CLEAN TO AS1627 CLASS 1 1 COAT ALKYD PRIMER (ZINC PHOSPHATE)
B1	125µm DFT OF DULUX METALSHIELD COLD GALV. PRIMER OR EQUIVALENT IN 2 COATS
B2	APPLY 2 COATS OF 2 PACK EPOXY ZINC TO AS3750.9, TO A TOTAL OF 150µm DFT, FOLLOWED BY 2 PACK EPOXY ENAMEL TO A TOTAL OF 150µm DFT

12. WHERE SEALED TUBE MEMBERS ARE HOT DIP GALVANIZED, THE FABRICATOR SHALL PROVIDE DRILL HOLES AS NECESSARY.
13. ALL TRANSPORT AND INSTALLATION DAMAGES, SITE WELD ETC. SHALL BE REINSTATED TO EQUIVALENT FINISH.

TIMBER

1. ALL MATERIAL,WORKMANSHIP AND DESIGN WHERE COMPLETED BY A LICENSED MANUFACTURER OR CARPENTER REGARDING STRUCTURAL TIMBER TO BE IN ACCORDANCE WITH THE CURRENT EDITION OF AS 1684, SAA TIMBER FRAMING CODE AS 1720, SAA TIMBER ENGINEERING CODE AS 1320 - GLUED LAMINATED STRUCTURAL TIMBER
2. ALL FIXINGS AND STANDARD CONNECTIONS TO NOMINAL NAILING AS SPECIFIED IN AS 1684, U.N.O. IN DETAILS AND DRAWINGS
3. IT IS ASSUMED THAT THE FRAMING/ TRUSS MANUFACTURER OR LICENSED CARPENTER HAVE THOROUGH KNOWLEDGE OF AS1684 THUS EXPECTED TO PROVIDE REQUIRED DESIGN, DETAILS AND CERTIFICATIONS OF THE CONTRACTED WORKS
4. ALL DESIGN ACTIONS SHALL BE IN ACCORDANCE WITH SAA LOADING CODE, AS 1170.1; AS 1170.2 & SAA TIMBER STRUCTURE CODE AS 1720.1.
5. ALL DESIGN STRUCTURAL ELEMENTS AND PROCESSES TO SATISFY THE WIND CLASSIFICATION AS SPECIFIED.
6. BUILDER TO PROVIDE TEMPORARY BRACING REQUIRED TO MAINTAIN THE STABILITY OF THE FRAME AND TRUSS SYSTEM DURING CONSTRUCTION.
7. MIN. TREATMENT OF TIMBER ELEMENTS FOR DURABILITY

APPLICATION	SOFTWOODS INCLUDING ENGINEERED TIMBER	HARDWOODS INCLUDING ENGINEERED TIMBER
INTERNAL ABOVE GROUND	H2 TREATED	CLASS 1 OR 2
EXTERNAL ABOVE GROUND	H3 TREATED	CLASS 1 OR 2
BELOW GROUND	H4 TREATED	CLASS 1

ABBREVIATIONS

ALT.	- ALTERNATE
B	- BOTTOM FACE
B/S	- BOTH SIDES
CENT	- CENTRALLY PLACED
CJ	- CONSTRUCTION / CONTRACTION JOINT
CL	- CENTRE LINE
CTS	- CENTRES
D	- DEPTH / DEEP
DJ	- DOWEL JOINT
DWG	- DRAWING
EF	- EACH FACE
EJ	- EXPANSION JOINT
EQ	- EQUAL
EW	- EACH WAY
H	- HEIGHT / HIGH
HORIZ	- HORIZONTAL
IJ	- ISOLATION JOINT
KJ	- KEY JOINT
L	- LENGTH/LONG
MJ	- MOVEMENT JOINT
NOM.	- NOMINAL
NTS	- NOT TO SCALE
(O)	- OVER
OPP	- OPPOSITE
PL	- PLATE
PT	- POST TENSION
REINF.	- REINFORCEMENT
REQ'D.	- REQUIRED
SIM.	- SIMILAR
SJ	- SAW JOINT
T	- TOP FACE
T&B	- TOP & BOTTOM
TJ	- TOOL JOINT
TYP.	- TYPICAL
(U)	- UNDER
U.N.O.	- UNLESS NOTED OTHERWISE
VERT.	- VERTICAL
W	- WIDTH/WIDE



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Structural Geotech Stormwater

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A	ISSUE FOR CONSTRUCTION	MM	RS	SP	28.11.23
REV	REVISION	DRAWN	ENG	CHECK	DATE
AMENDMENTS					

SITE:

18 SEYMOUR STREET,
BELFIELD, NSW

CLIENT:

STROUD HOMES NEPEAN

STATUS:

ISSUE FOR CONSTRUCTION

DRAWING TITLE:

GENERAL STRUCTURAL NOTES

SCALE AT A3:

N/A

DATE:

28.11.23

DRAWN:

MM

CHECKED:

RS

PROJECT NO:

23G8705

DRAWING NO:

S-002

REVISION:

A

GEOTECHNICAL SPECIFICATIONS	
SITE CLASS	P
SOIL CLASS	H1
WIND CLASS	N2
CONC. EXPOSURE	B1 - VERY SALINE
BEARING CAPACITY	- kPa MIN.

SLAB SPECIFICATIONS	
DESIGN CLASS	H1
BEAM DEPTH (mm)	450 MIN.
BEAM WIDTH (mm)	600 MIN.
SLAB THICKNESS (mm)	120 (UNO)
CONCRETE STRENGTH (F'c AT 28 DAYS)	32 MPa

DAMP PROOFING MEMBRANE SPECIFICATIONS	
APPROVED HIGH IMPACT RESISTANT MEMBRANE WITH A CONTINUOUS BRANDING OF THE WORDS 'AS2870 CONCRETE. UNDERLAY, 0.2mm - HIGH IMPACT RESISTANCE'	

REINFORCEMENT SPECIFICATIONS	
SLAB MESH	SL82 TOP
EDGE BEAM	5N12 TOP 5N12 BARS BTM N12-300 TIES 3N12 TOP
INTERNAL BEAM	3N12 BARS BTM N12-300 TIES
CRACK CONTROL BARS	3N12 BARS or 3-L11TM

REINFORCEMENT COVER	
INTERNAL SURFACE	20 mm
EXTERNAL SURFACE	30 mm
UNPROTECTED SURFACE	55 mm

PIERING SPECIFICATIONS	
PIER TYPE	Ø400 CONCRETE
PIER FOUNDATION	600kPa ROCK
AVERAGE APPROXIMATE DEPTH (mm) (MEASURED FROM EXISTING GROUND LEVEL)	2000
CONCRETE STRENGTH (F'c AT 28 DAYS)	32 MPa

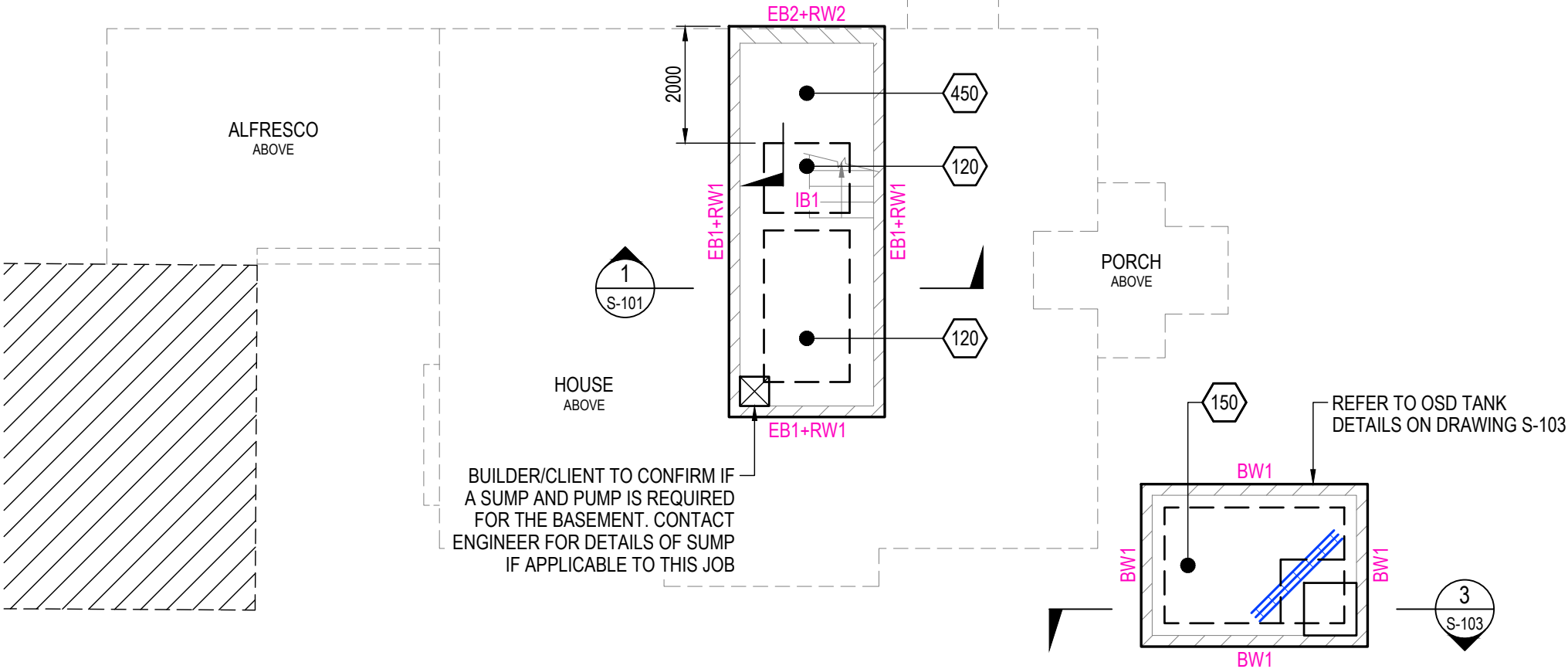
NOTES:

DE-WATERING OF THE BASEMENT DURING CONSTRUCTION MUST BE COMPLETED AND IN ACCORDANCE WITH GEOTECH AND STORMWATER ENGINEERS SPECIFICATIONS IN ORDER TO STOP THE UPLIFT OF BASEMENT.

BUILDER TO DE-WATER BASEMENT DURING CONSTRUCTION PHASE IN ORDER TO PREVENT THE UPLIFT OF BASEMENT DUE TO HYDROSTATIC PRESSURE. BASEMENT HAS NOT BEEN DESIGNED AS TANKED. CONTACT ENGINEER IF THIS CAN NOT BE ACHIEVED

BASEMENT MUST HAVE A PUMP OUT PIT TO COLLECT WATER IF THE STORMWATER COLLECTION PIT IS HIGHER THAN THE BASE OF THE BASEMENT.

BOUNDARY





Director/Principal Engineer
Santosh Paudel
B. Eng (Civil/Structural) MIE (Aust)
santosh@grandengineering.com.au
0411348603



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Structural Geotech Stormwater

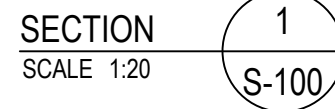
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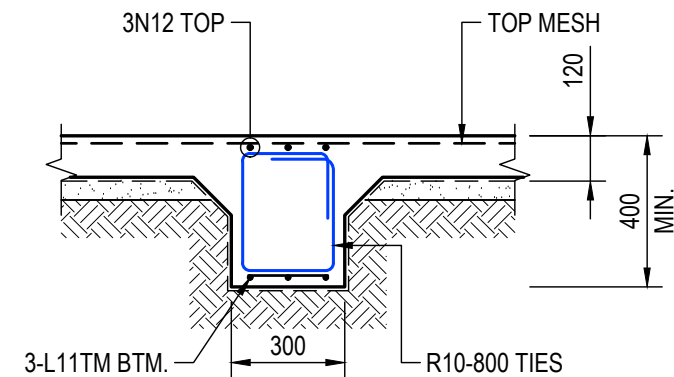
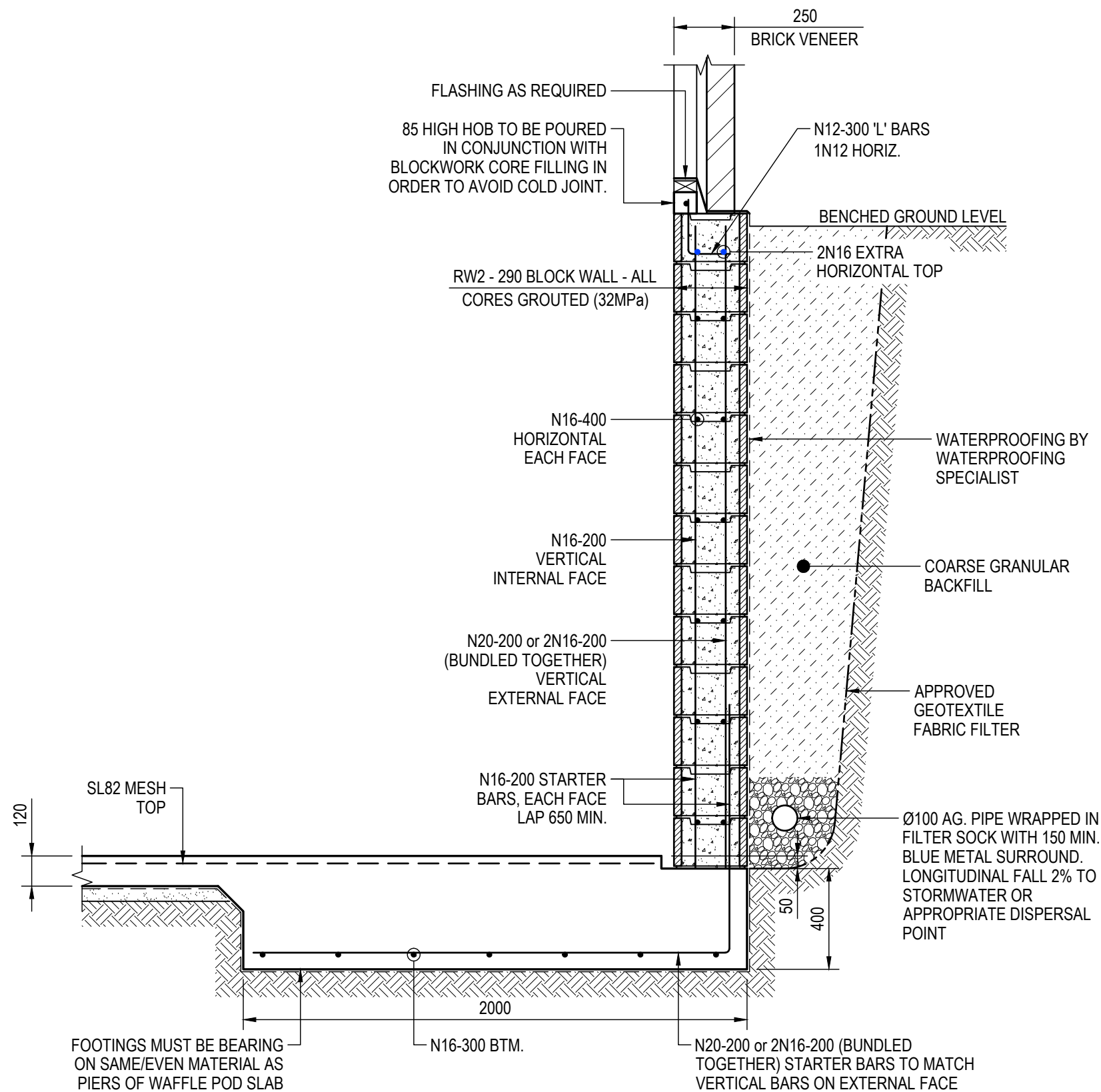
REV	REVISION	DRAWN	ENG	CHECK	DATE
A	ISSUE FOR CONSTRUCTION	MM	RS	SP	28.11.23
AMENDMENTS					

SITE:	18 SEYMOUR STREET, BELFIELD, NSW
CLIENT:	STROUD HOMES NEPEAN

STATUS:			
ISSUE FOR CONSTRUCTION			
DRAWING TITLE:			
BASEMENT SLAB PLAN			
SCALE AT A3:	DATE:	DRAWN:	CHECKED:
1:100	28.11.23	MM	RS
PROJECT NO:	DRAWING NO:	REVISION:	
23G8705	S-100	A	



STATUS:			
ISSUE FOR CONSTRUCTION			
DRAWING TITLE:			
BASEMENT SECTIONS - SHEET 1			
SCALE AT A3:	DATE:	DRAWN:	CHECKED:
1:20	28.11.23	MM	RS
PROJECT NO:	DRAWING NO:	REVISION:	
23G8705	S-101	A	



INTERNAL BEAM - IB1

SECTION
SCALE 1:20

2
S-100

NOTE:

275 DINCEL WALL PANELS MAY BE USED IN LIEU OF BLOCKWORK REINFORCEMENT TO BE AS FOLLOWS:

VERTICAL INTERNAL FACE REINFORCEMENT - N16-333
VERTICAL EXTERNAL FACE REINFORCEMENT - N20-333
HORIZONTAL EACH FACE REINFORCEMENT - N16-300

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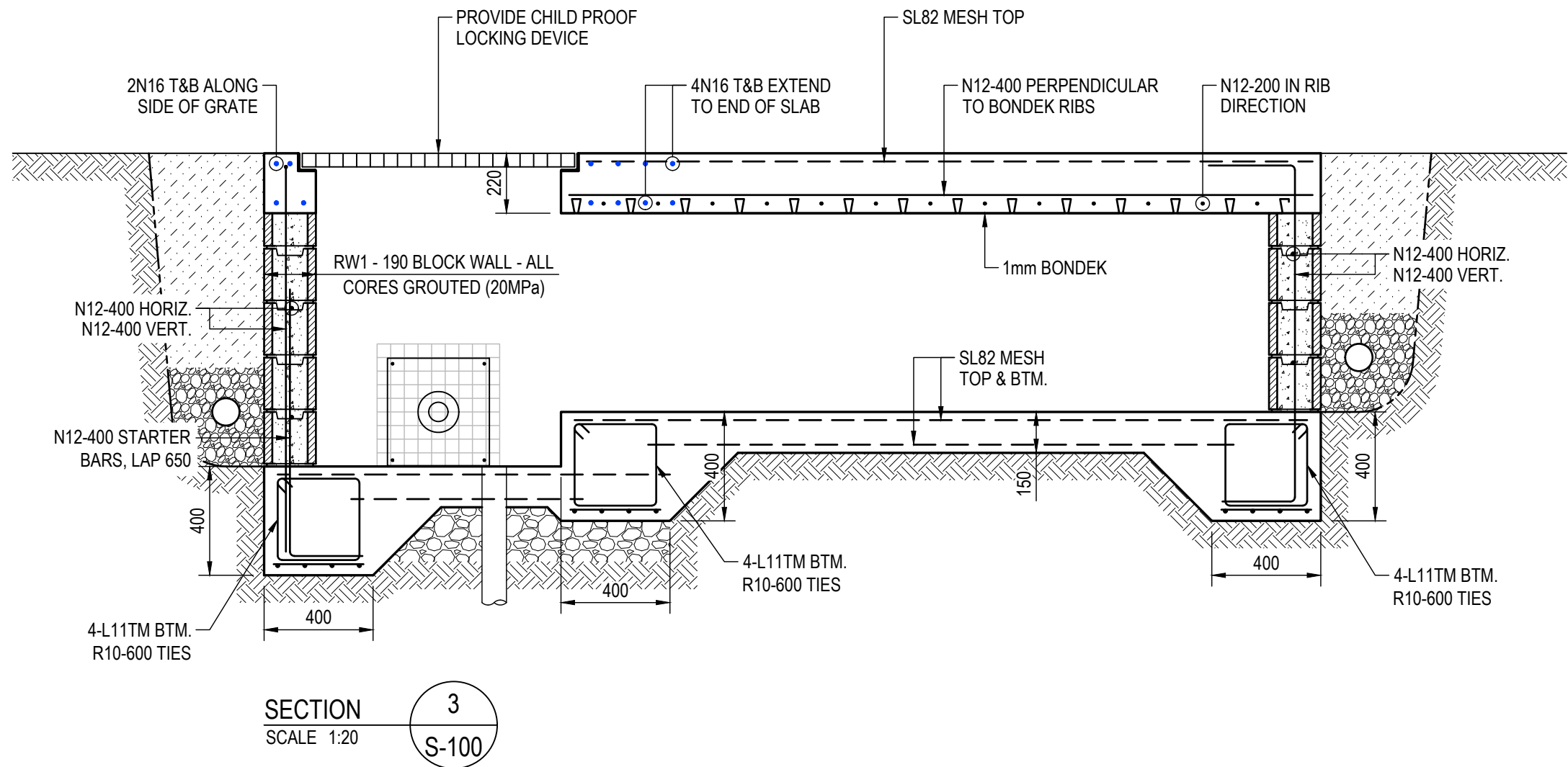
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A	ISSUE FOR CONSTRUCTION	MM	RS	SP	28.11.23
AMENDMENTS					

SITE:
18 SEYMOUR STREET,
BELFIELD, NSW

CLIENT:
STROUD HOMES NEPEAN

STATUS: ISSUE FOR CONSTRUCTION			
DRAWING TITLE: BASEMENT SECTIONS - SHEET 2			
SCALE AT A3: 1:20	DATE: 28.11.23	DRAWN: MM	CHECKED: RS
PROJECT NO: 23G8705	DRAWING NO: S-102	REVISION: A	



NOTE:
200 DINCEL WALL PANELS MAY BE USED IN LIEU OF BLOCKWORK
REINFORCEMENT TO BE AS FOLLOWS:
VERTICAL REINFORCEMENT - N12-333
HORIZONTAL REINFORCEMENT - N12-300

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A	ISSUE FOR CONSTRUCTION	MM	RS	SP	28.11.23
AMENDMENTS					

SITE:
18 SEYMOUR STREET,
BELFIELD, NSW
CLIENT: STROUD HOMES NEPEAN

STATUS:
ISSUE FOR CONSTRUCTION
DRAWING TITLE:
OSD TANK TYPICAL SECTION
SCALE AT A3: 1:20 DATE: 28.11.23 DRAWN: MM CHECKED: RS
PROJECT NO: 23G8705 DRAWING NO: S-103 REVISION: A

GEOTECHNICAL SPECIFICATIONS	
SITE CLASS	P
SOIL CLASS	H1
WIND CLASS	N2
CONC. EXPOSURE	B1 - VERY SALINE
BEARING CAPACITY	600kPa MIN.

WAFFLE SLAB SPECIFICATIONS	
DESIGN CLASS	H1
WAFFLE POD HEIGHT (mm)	300 & 225
WAFFLE POD SIZE (mm)	1090 x 1090
BEAM / OVERALL DEPTH (mm)	385 & 310
EDGE BEAM WIDTH (mm)	300
INTERNAL BEAM WIDTH (mm)	300
RIB WIDTH (mm)	110
SLAB THICKNESS (mm)	85
CONCRETE STRENGTH (F _c at 28 DAYS)	32 MPa

DAMP PROOFING MEMBRANE SPECIFICATIONS APPROVED HIGH IMPACT RESISTANT MEMBRANE WITH A CONTINUOUS BRANDING OF THE WORDS 'AS2870 CONCRETE. UNDERLAY, 0.2mm - HIGH IMPACT RESISTANCE'
--

REINFORCEMENT SPECIFICATIONS	
SLAB FABRIC	SL82 TOP
EDGE BEAM	1-N12 TOP 3-N12 BARS or 3-L11TM BTM
INTERNAL BEAM	1-N12 TOP 3-N12 BARS or 3-L11TM BTM
INTERNAL RIB	1-N12 BTM
CRACK CONTROL BARS	3-N12 BARS or 3-L11TM

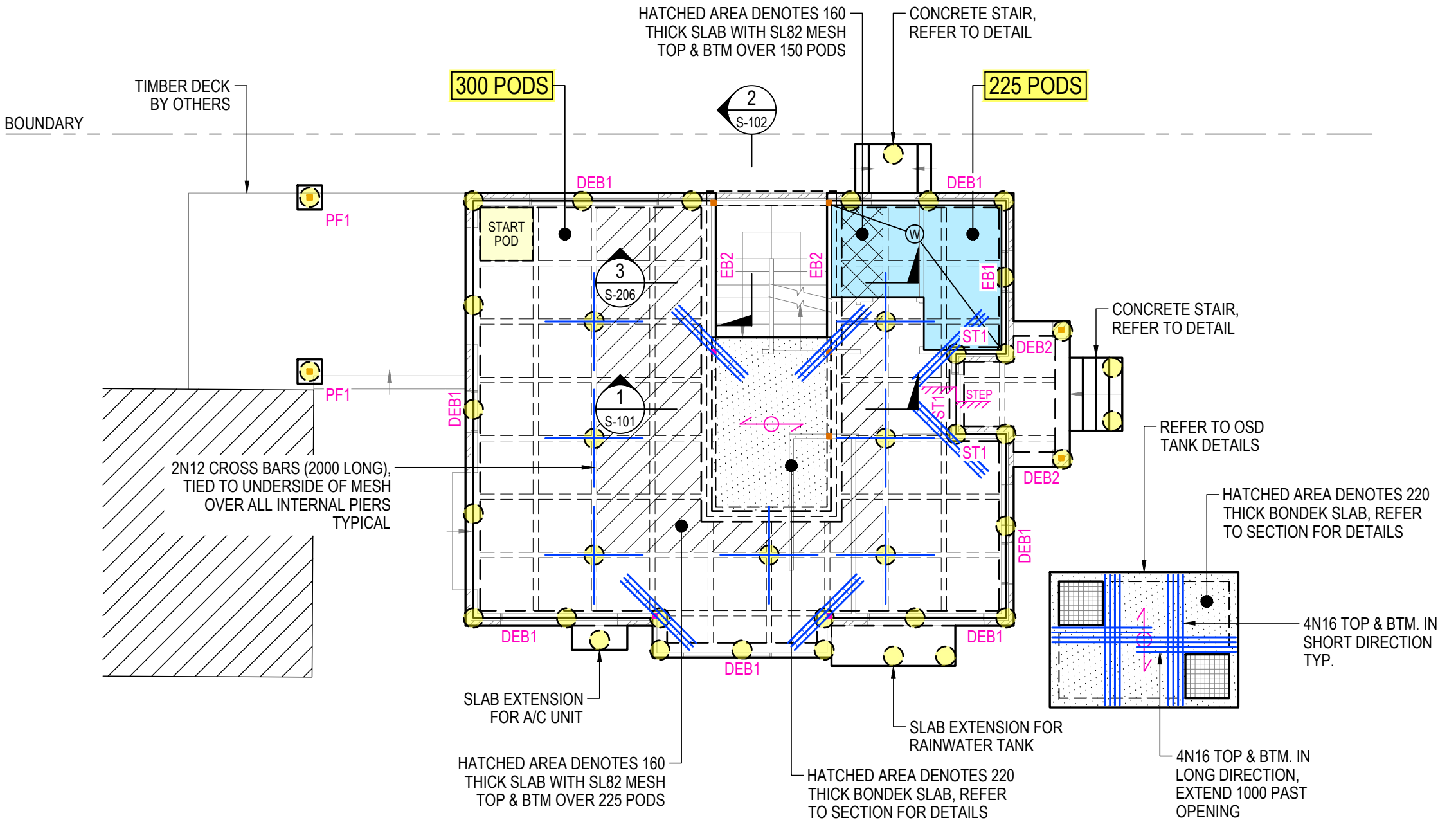
REINFORCEMENT COVER	
INTERNAL SURFACE	20 mm
EXTERNAL SURFACE	30 mm
UNPROTECTED SURFACE	55 mm

PIERING SPECIFICATIONS	
PIER TYPE	Ø400 CONCRETE
PIER FOUNDATION	600kPa ROCK
APPROXIMATE DEPTH (mm) (MEASURED FROM EXISTING GROUND LEVEL)	2000
CONCRETE STRENGTH (F _c AT 28 DAYS)	32 MPa

SCREW PIER OPTION
SCREW PIERS WITH A MIN. SWL OF 80kN MAY BE USED IN LIEU OF CONCRETE PIERS. REFER TO SHEET S-205.

NOTE:

ALL FLOOR, WALL AND ROOF FRAMING,
BRACING AND TIE DOWNS TO AS1684 BY
FRAMING CONTRACTOR OR LICENSED
CARPENTER.



LEGEND

- | | | | |
|---|---|---|--|
|  | DENOTES BORED CONCRETE PIER |  | DENOTES CHANGE IN SLAB LEVEL
REFER TO ARCHITECTURAL PLANS FOR
CONFIRMATION |
|  | DENOTES 2000mm LONG CRACK CONTROL BARS
TIED TO UNDERSIDE OF SLAB MESH. REFER TO
REINFORCEMENT SUMMARY FOR
SPECIFICATIONS |  | DENOTES BONDEK RIB DIRECTION |
|  | DENOTES WET-AREA SET-DOWN
USE SHALLOW PODS UNDER WET AREA |  | DENOTES BRICK VENEER WALLS |
| | |  | DENOTES TIMBER FRAMED WALLS |
| | |  | DENOTES WALLS UNDER |

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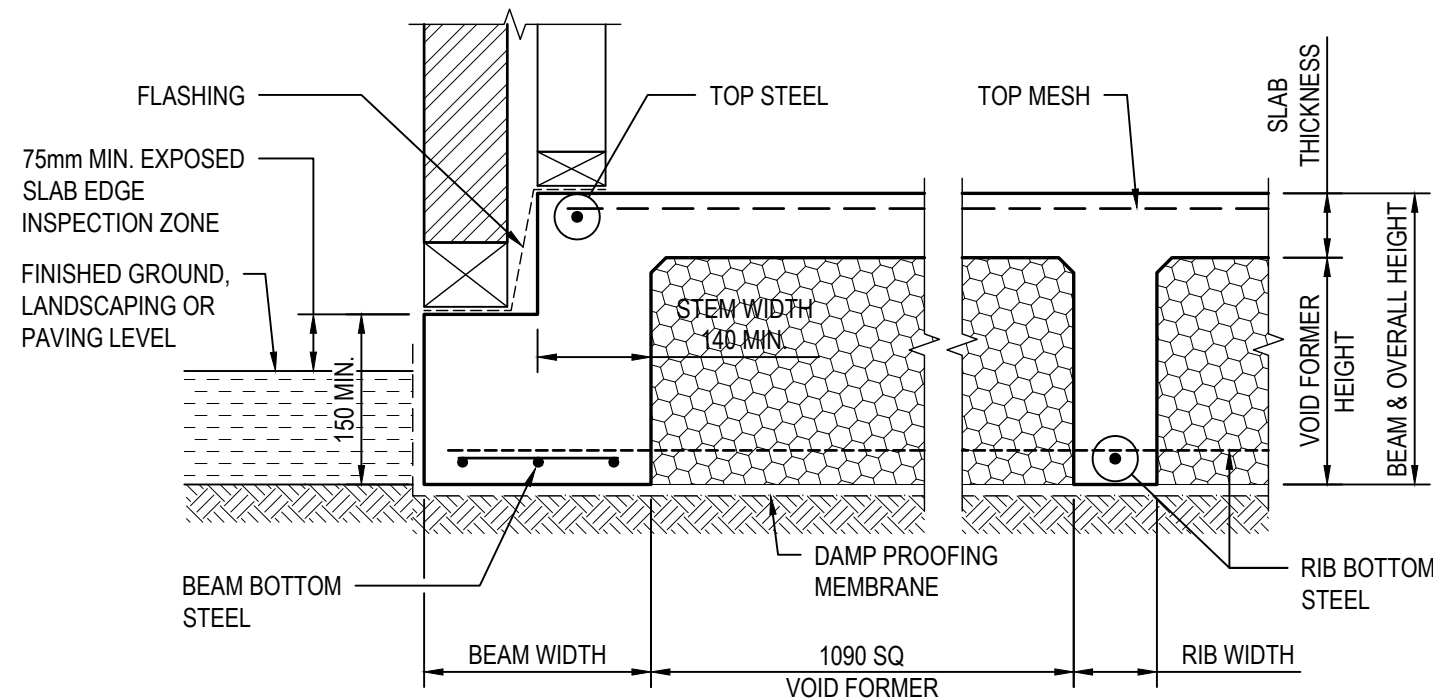
SITE:
18 SEYMOUR STREET,
BELFIELD, NSW

CLIENT: STROUD HOMES NEPEAN

STATUS: ISSUE FOR CONSTRUCTION

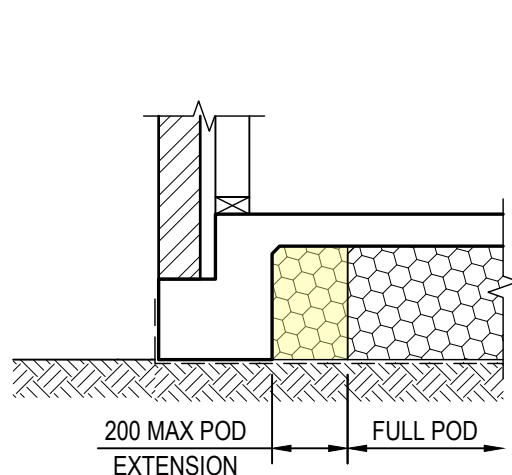
DRAWING TITLE:	GROUND FLOOR SLAB PLAN
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SCALE AT A3: 1:100	DATE: 28.11.23	DRAWN: MM	CHECKED: RS
PROJECT NO: 23G8705	DRAWING NO: S-200	REVISION: A	

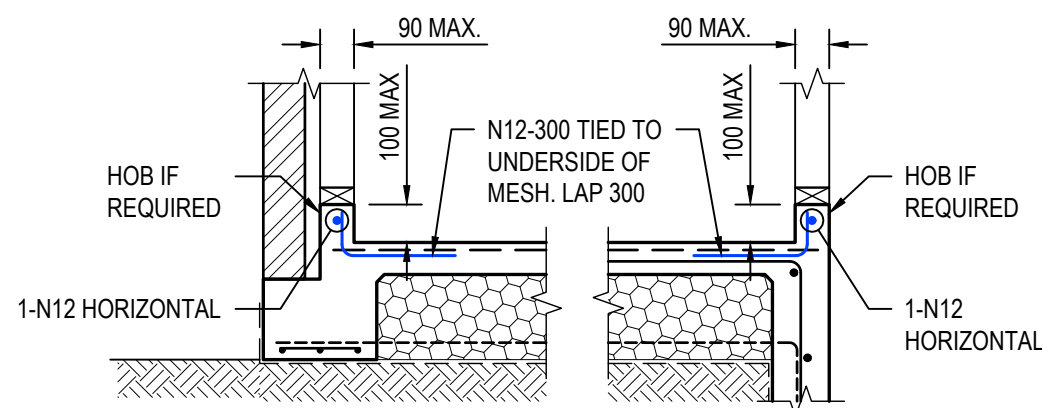


NOMINAL REINFORCEMENT SUMMARY FOR RIBS, BEAMS AND STEMS (U.N.O.)		
BEAM/RIB WIDTH AT REO LOCATION	TOP STEEL	BOTTOM STEEL
0-139	-	1 - N12 BAR
140-250	1 - N12 BAR	2 - N12 BAR
251 TO 350	1 - N12 BAR	3 - N12 BARS OR 3-L11 TM
351 TO 440	3 - N12 BARS	4 - N12 BARS OR 4-L11 TM
441 TO 500	N12-150 CTS	N12-100 CTS

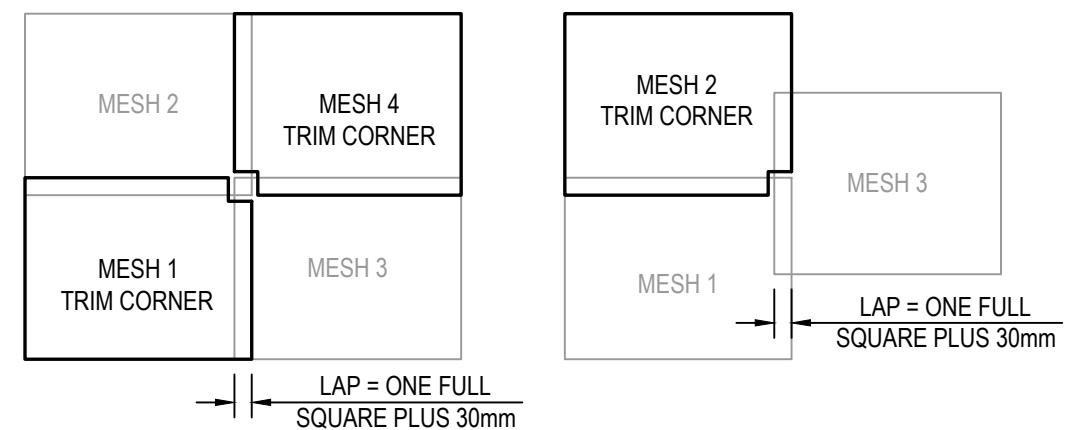
TYPICAL WAFFLE SLAB ARRANGEMENT & REINFORCING



POD EXTENSION

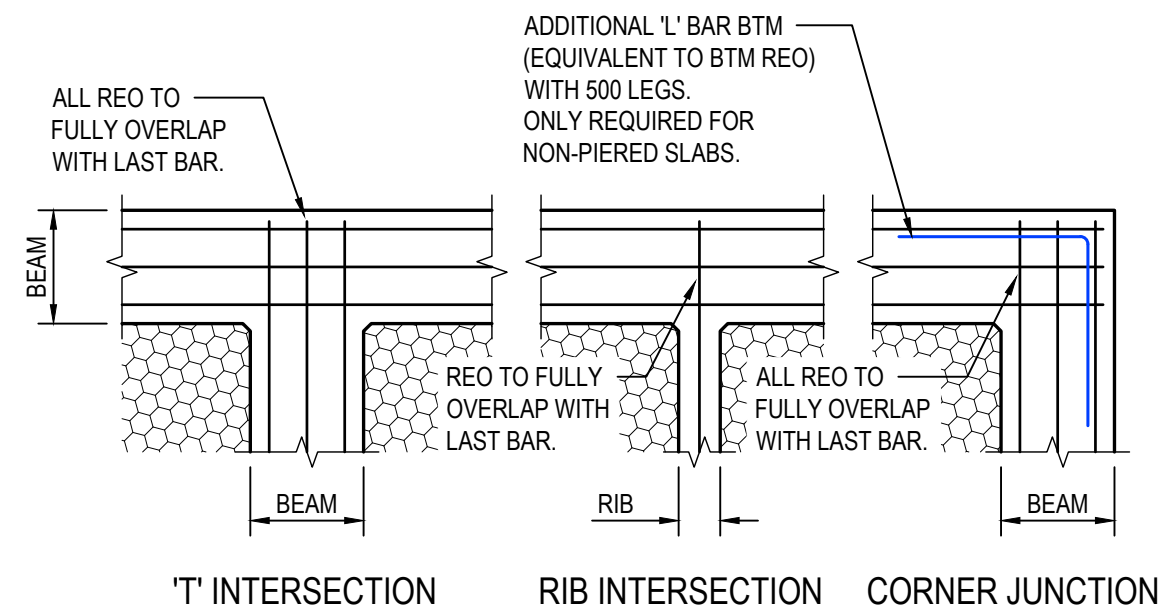


TYPICAL HOB DETAILS



REINFORCING MESH LAPPING DETAIL

MAINTAIN MINIMUM 2 MESH LAPS AND TRIM THE REST IN THE ORDER SHOWN ABOVE WHERE MORE THAN 2 MESH PANELS OVERLAP



BEAM & RIB INTERSECTION DETAIL

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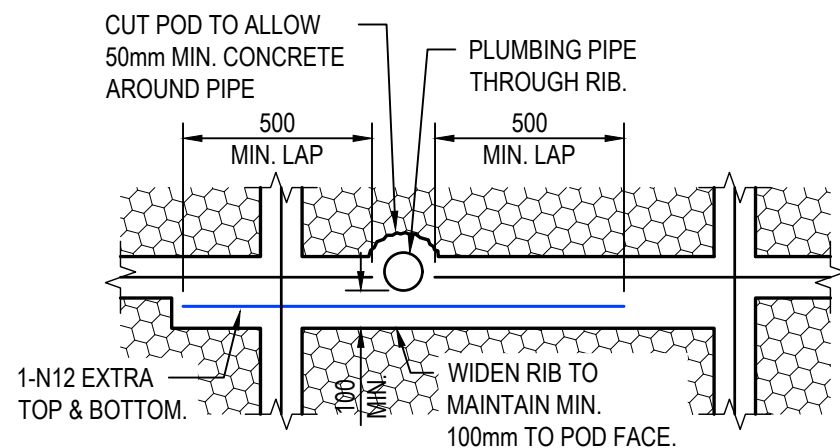
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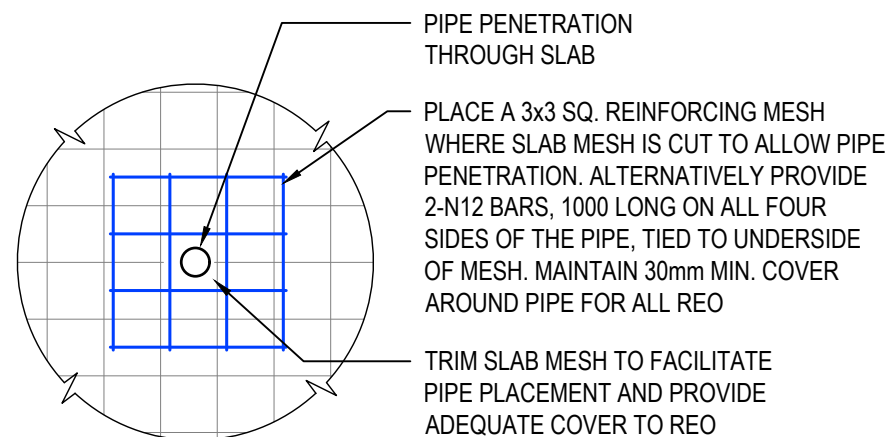
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A	ISSUE FOR CONSTRUCTION	MM	RS	SP	28.11.23
AMENDMENTS					

SITE: 18 SEYMOUR STREET, BELFIELD, NSW
CLIENT: STROUD HOMES NEPEAN

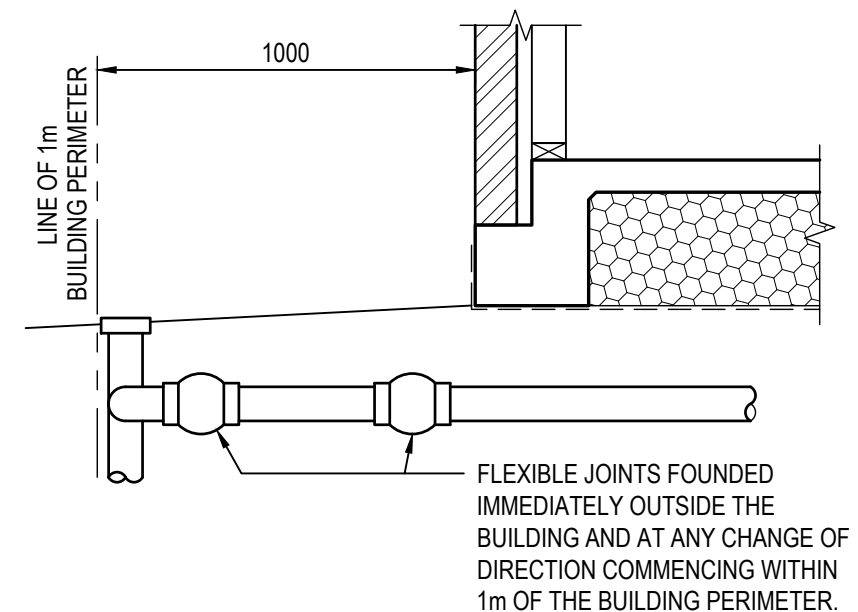
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DRAWING TITLE: GENERAL DETAILS			
SCALE AT A3: 1:20	DATE: 28.11.23	DRAWN: MM	CHECKED: RS
PROJECT NO: 23G8705	DRAWING NO: S-201	REVISION: A	



PIPE PENETRATION THROUGH RIB

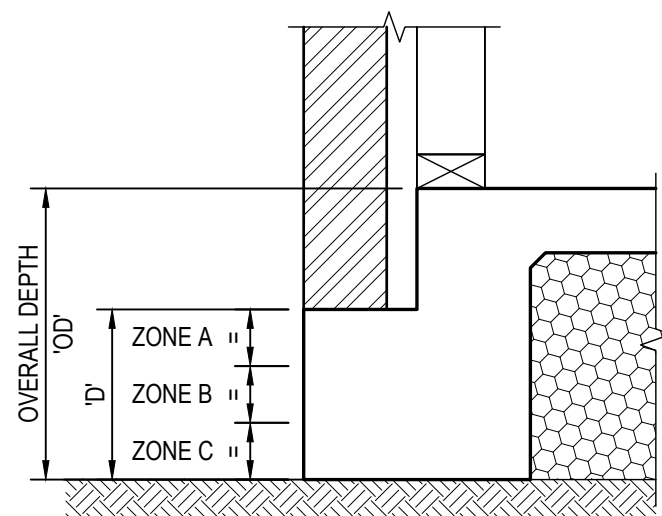


PIPE PENETRATION THROUGH SLAB



**UNDER EDGE BEAM PLUMBING
DETAIL FOR H1, H2, P AND E SITES**

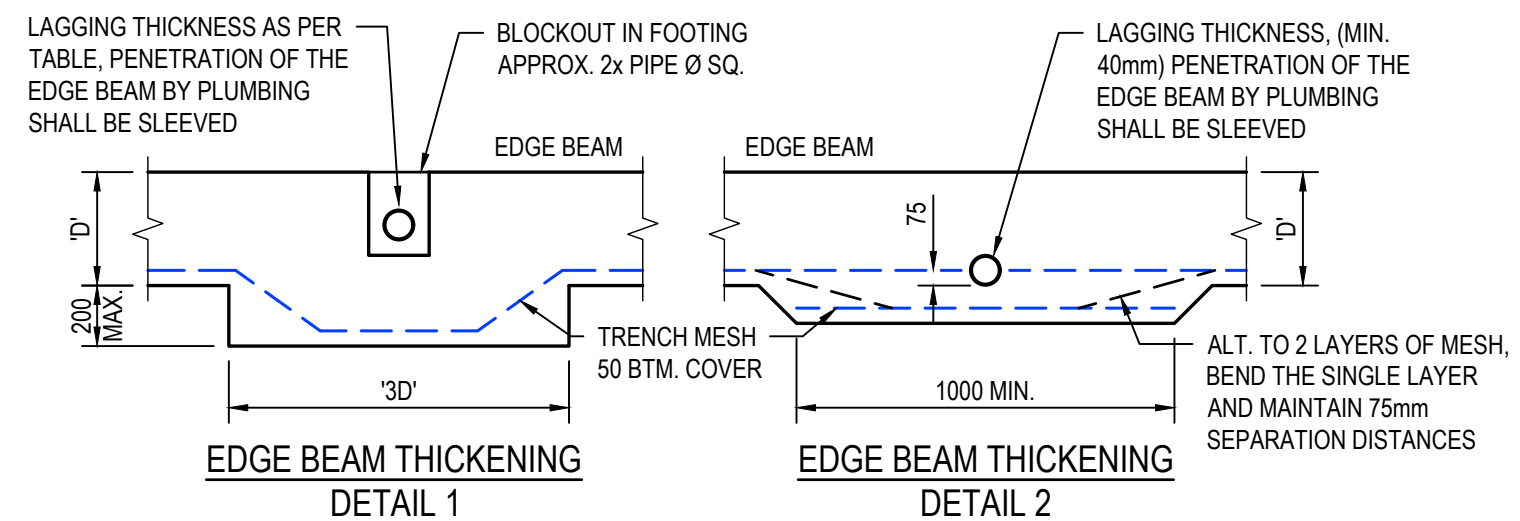
DRAINS ATTACHED TO OR EMERGING FROM UNDERNEATH THE BUILDING SHALL INCORPORATE FLEXIBLE JOINTS IMMEDIATELY OUTSIDE THE BUILDING AND COMMENCING WITHIN 1m OF THE BUILDING PERIMETER. THE FLEXIBLE JOINTS SHALL ACCOMMODATE A TOTAL RANGE OF DIFFERENTIAL MOVEMENT OF THE SITE YS VALUE. SEEK SPECIALIST ADVICE FROM A SUITABLY QUALIFIED PLUMBER



PIPE PLACEMENT

ZONE A	REFER DETAIL 1
ZONE B	NO THICKENING REQ'D
ZONE C	REFER DETAIL 2

MINIMUM REQUIREMENTS FOR LAGGING THICKNESS	
SITE CLASS	MINIMUM LAGGING THICKNESS (mm)
"M"	20
"H1"	20
"H2"	40
"E"	40
"P"	40



PLUMBING PIPE PENETRATION DETAILS

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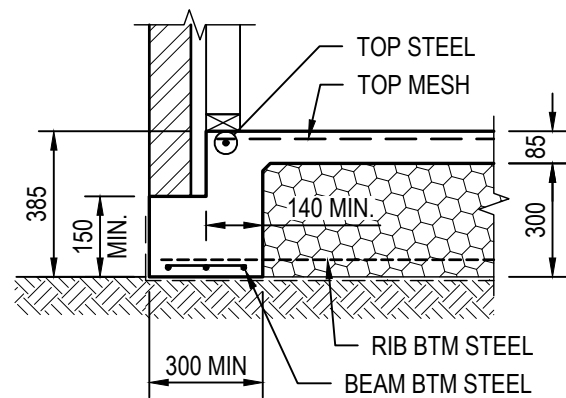
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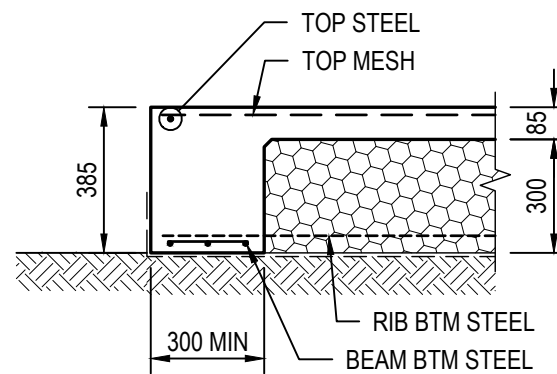
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A	ISSUE FOR CONSTRUCTION	MM	RS	SP	28.11.23
AMENDMENTS					

SITE: 18 SEYMOUR STREET, BELFIELD, NSW
CLIENT: STROUD HOMES NEPEAN

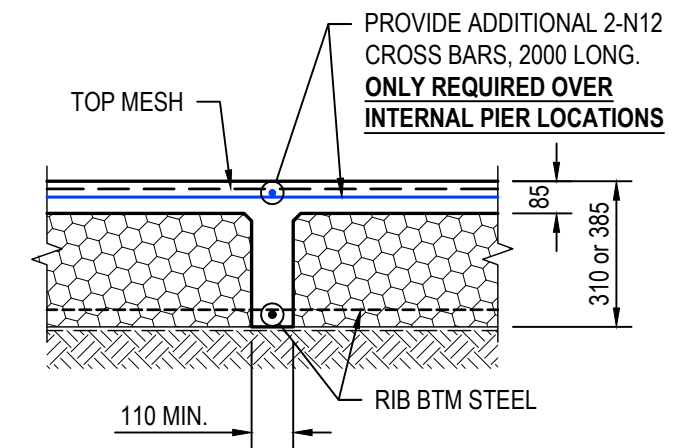
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DRAWING TITLE: PLUMBING DETAILS			
SCALE AT A3: 1:20	DATE: 28.11.23	DRAWN: MM	CHECKED: RS
PROJECT NO: 23G8705	DRAWING NO: S-202	REVISION: A	



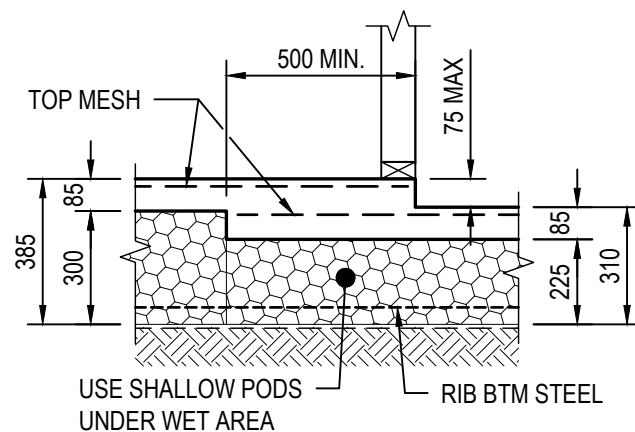
TYPICAL EDGE BEAM - EB1
WHERE 300 PODS ARE USED



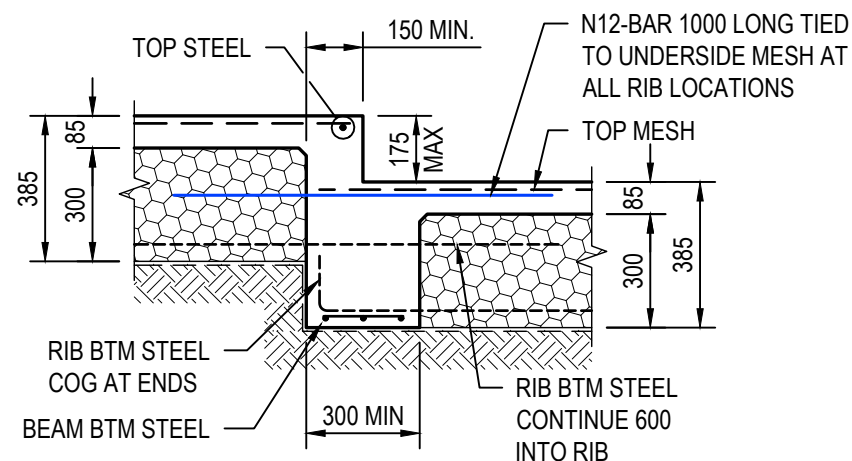
**PORTICO/ALFRESCO
EDGE BEAM - EB2**
WHERE 300 PODS ARE USED



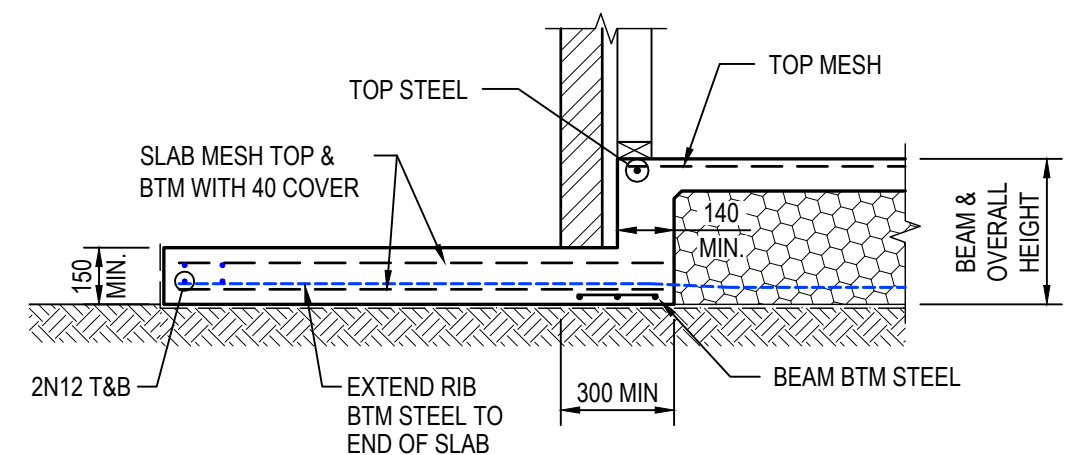
TYPICAL INTERNAL RIB



TYPICAL WET AREA RECESS
WHERE 300 & 225 PODS ARE USED



STEP BEAM - 76 TO 175 MAX - ST1
EXCAVATION OF NEW PLATFORM LEVEL REQUIRED



SLAB EXTENSION > 800mm
PIERS MAY BE REQUIRED. REFER TO PLAN

NOTES:
WAFFLE SLAB BEAMS NOTED ON PLAN WITH (*) DENOTES BEAM WITH WIDTHS ADJUSTED TO SUIT WAFFLE POD LAYOUT

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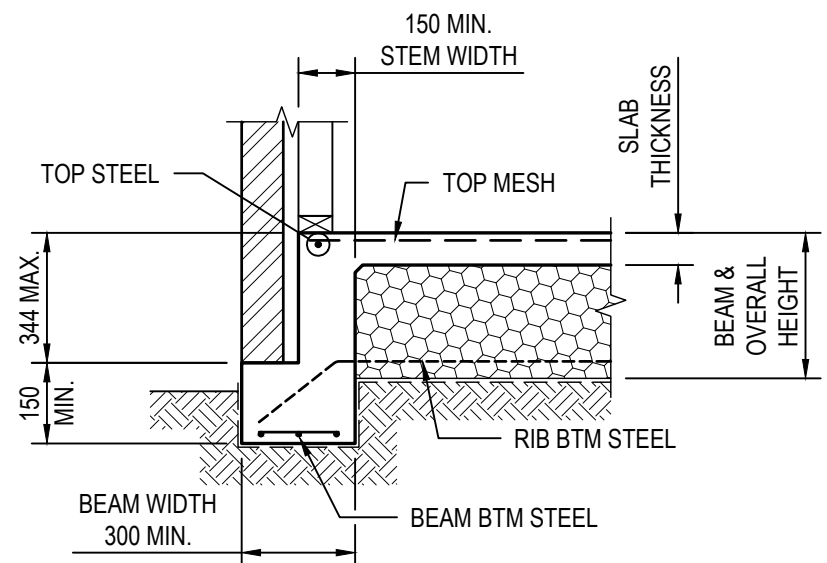
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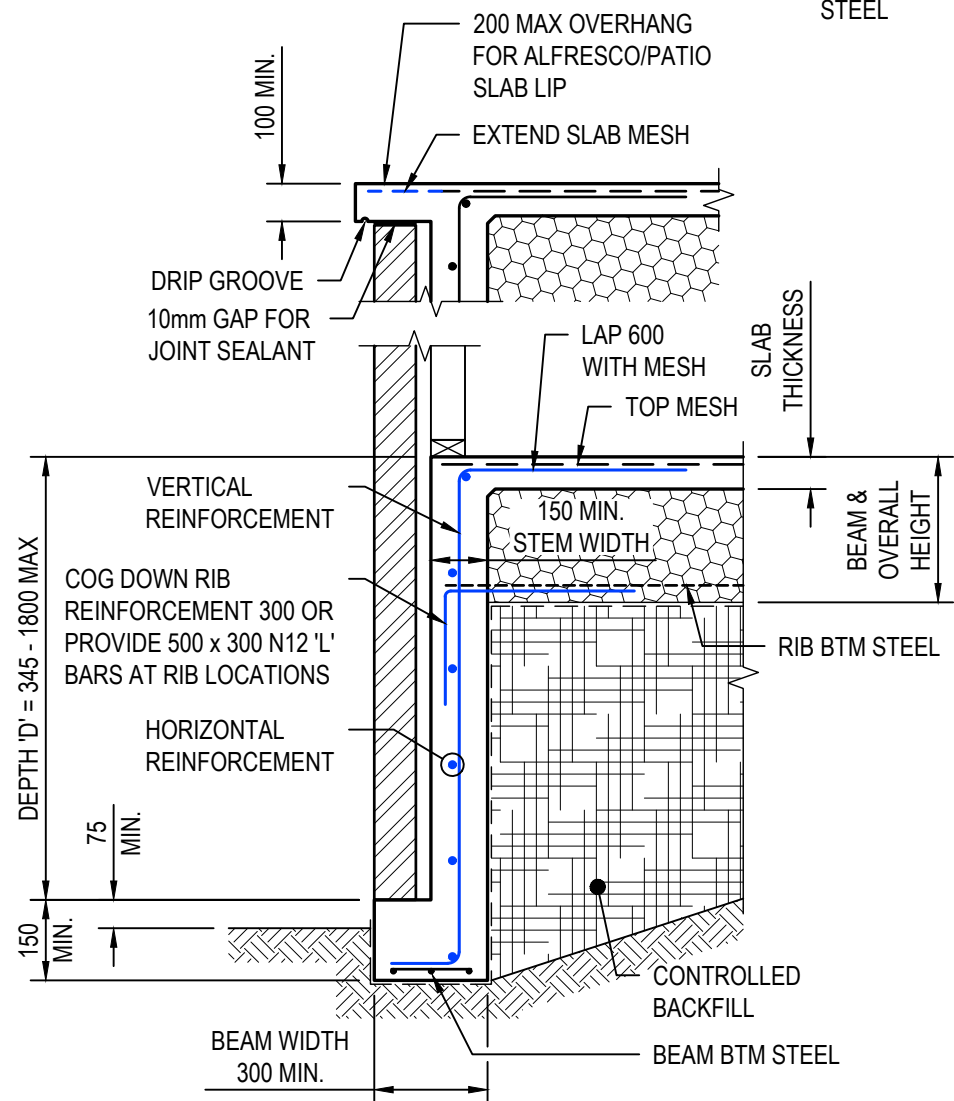
SITE:	18 SEYMOUR STREET, BELFIELD, NSW
CLIENT:	STROUD HOMES NEPEAN

STATUS:			
ISSUE FOR CONSTRUCTION			
DRAWING TITLE:			
CONCRETE SLAB DETAILS			
SCALE AT A3:	DATE:	DRAWN:	CHECKED:
1:20	28.11.23	MM	RS
PROJECT NO:	DRAWING NO:	REVISION:	
23G8705	S-203	A	

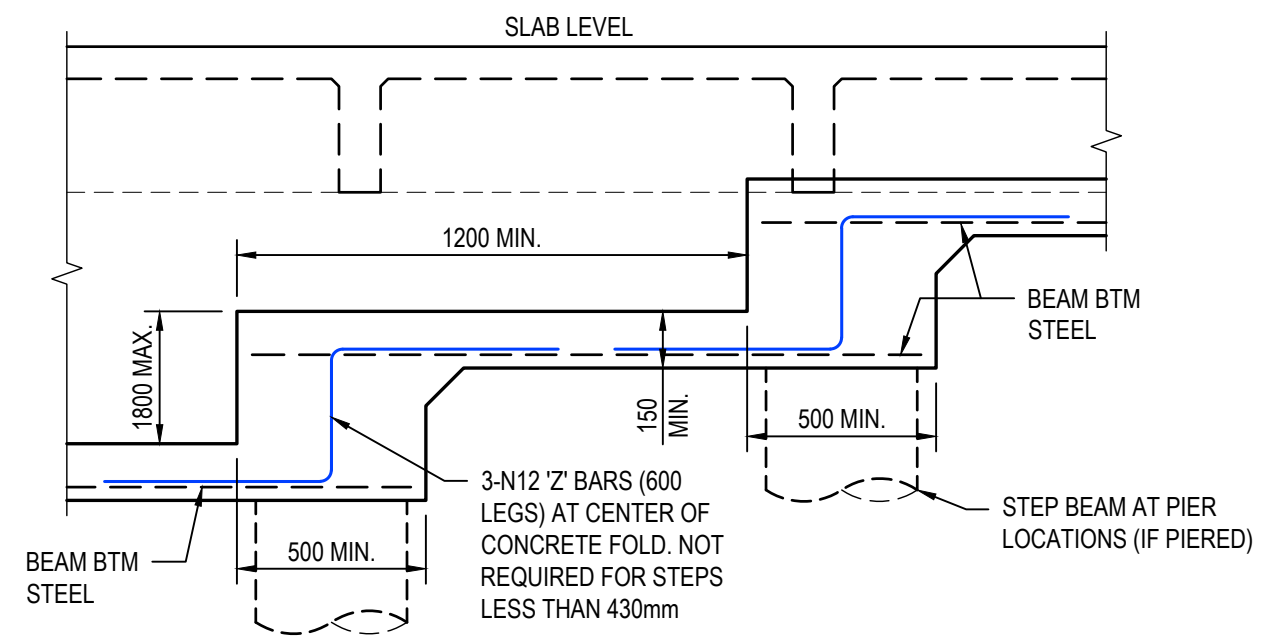
ADDITIONAL REINFORCEMENT FOR DEEP BEAMS		
BEAM DEPTH (mm) 'D'	VERTICAL REINFORCEMENT	HORIZONTAL REINFORCEMENT
176 TO 400	N12-400 (FOR INTERNAL STEP BEAM ONLY)	-
401 TO 900	N12-400	N12-400
901 TO 1200	N12-300	N12-400
1201 TO 1800	N12-200	N12-300



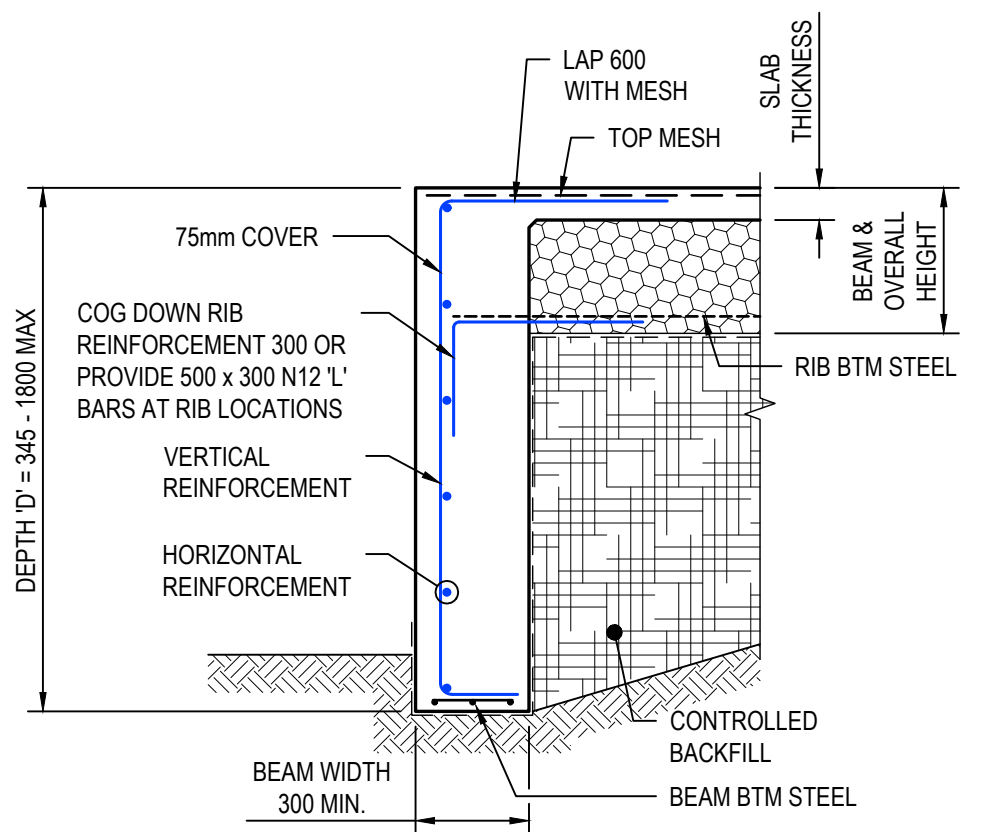
4 COURSE REBATE EDGE BEAM
EDGE BEAM WITH A MAXIMUM OF 4 BRICK COURSE (344mm)
REBATE DOES NOT REQUIRE ANY ADDITIONAL REINFORCING.



DEEP EDGE BEAM - DEB1



EDGE BEAM STEPPING DETAIL

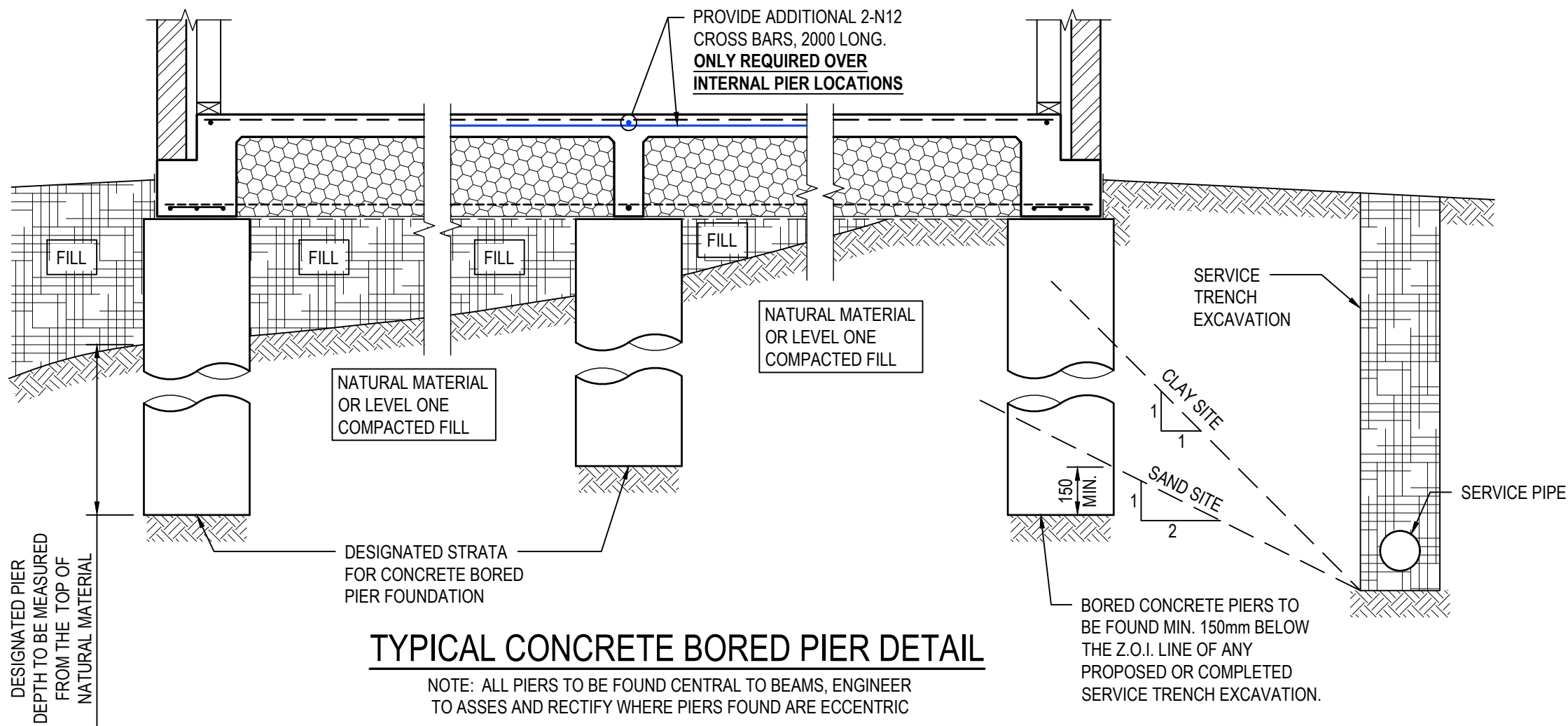


DEEP EDGE BEAM - DEB2

REV	REVISION	DRAWN	ENG	CHECK	DATE
A	ISSUE FOR CONSTRUCTION	MM	RS	SP	28.11.23
AMENDMENTS					

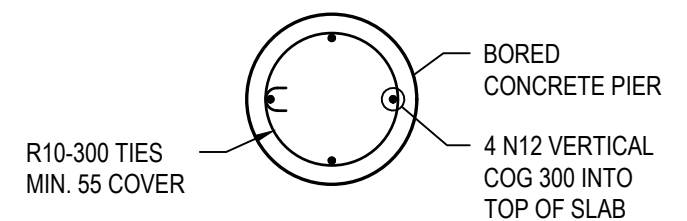
SITE:	18 SEYMOUR STREET, BELFIELD, NSW
CLIENT:	STROUD HOMES NEPEAN

STATUS:			
ISSUE FOR CONSTRUCTION			
DRAWING TITLE:			
DEEP BEAM DETAILS			
SCALE AT A3:	DATE:	DRAWN:	CHECKED:
1:20	28.11.23	MM	RS
PROJECT NO:	DRAWING NO:	REVISION:	
23G8705	S-204	A	



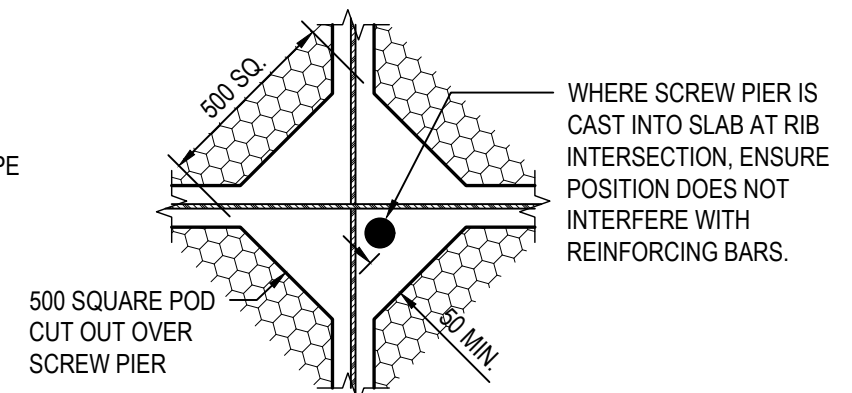
TYPICAL CONCRETE BORED PIER DETAIL

NOTE: ALL PIERS TO BE FOUND CENTRAL TO BEAMS, ENGINEER TO ASSES AND RECTIFY WHERE PIERS FOUND ARE ECCENTRIC



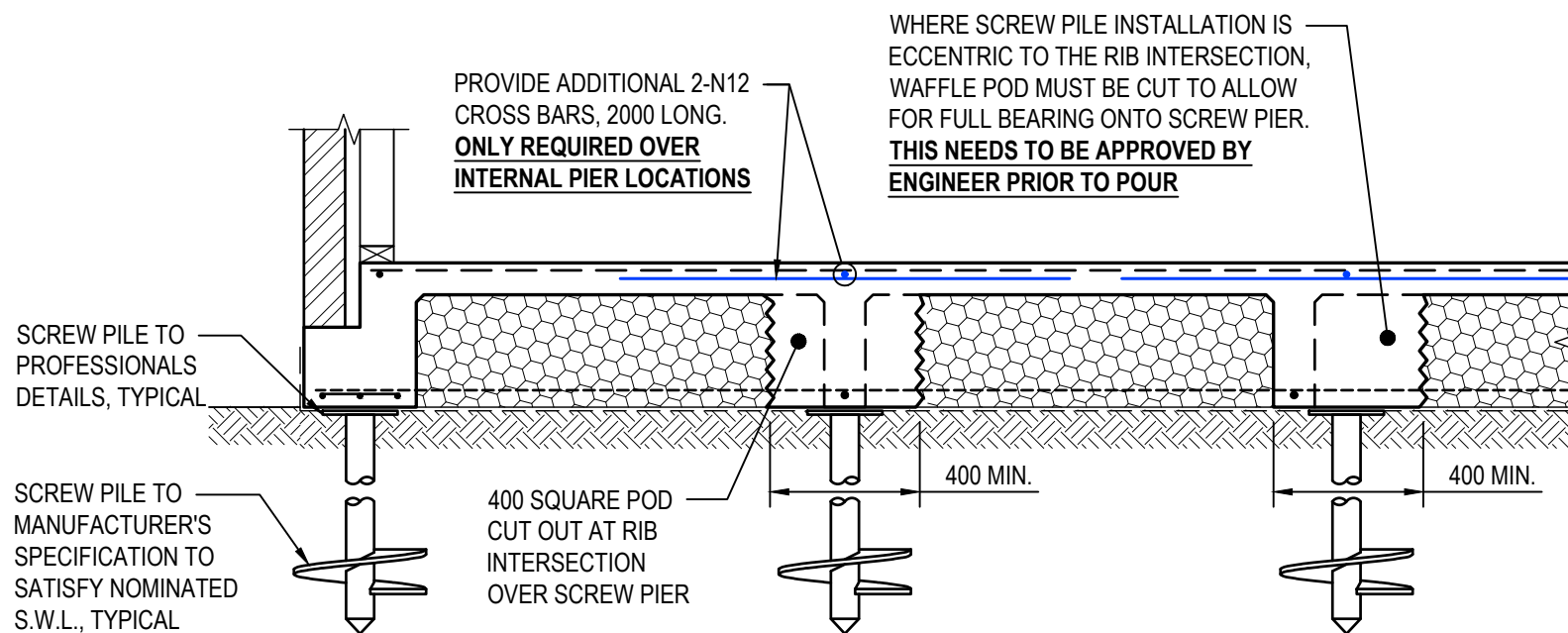
TYPICAL PIER REINFORCEMENT DETAIL

REINFORCE PIERS WHERE PIER DEPTH EXCEEDS 2800 OR 2000 FOR 'P' SITE THAT EXCEED FILL OF MORE THAN 1000



LOCAL THICKENING AT CAST IN SCREW PILE LOCATION

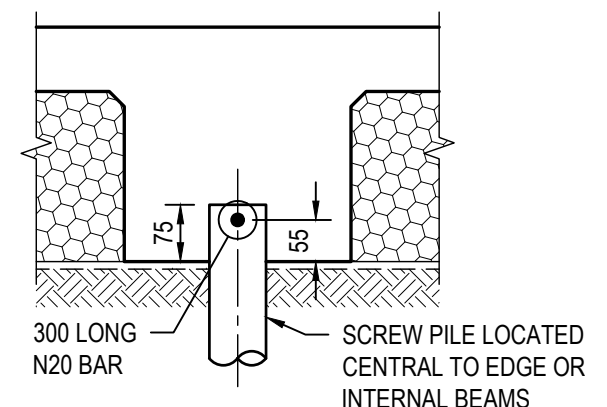
FOR CAST-IN SCREW PIER OPTION ONLY. THIS OCCURS AT RIB INTERSECTIONS ONLY.



TYPICAL SCREW PILE DETAIL

NOTE:

1. NOMINATED DEPTH FOR BORED PIER IS NOT APPLICABLE FOR SCREW PILES.
2. DEPTH OF SCREW PILES SHOULD NOT BE LESS THAN 1.25 Hs. (REFER TO GEOTECH REPORT).
3. WHERE SCREW PILE DEPTH IS NOMINATED, IT IS AN ESTIMATE ONLY.
4. DESIGN AND INSTALLATION OF SCREW PILES IS THE RESPONSIBILITY OF THE PILING CONTRACTOR AND SHALL SATISFY THE S.W.L. NOMINATED BY ENGINEER.
5. IT IS ASSUMED THAT THE PILING CONTRACTOR IS QUALIFIED AND HAS ADEQUATE EXPERIENCE TO CARRY OUT INSTALLATION AND CERTIFY THE WORKS COMPLETED.
6. PERMITTED SCREW PILE CONNECTION TYPES ARE:
 - 6.1. BEARING CAP PLATE
STEEL BEARING PLATES TO BE MIN. 200x200x6mm.
 - 6.2. CAST IN SCREW PILE WITH N BAR
CAST IN PILES TO HAVE A 300 LONG N20 BAR THROUGH SHEAR HOLE.



CAST IN SCREW PILE DETAIL

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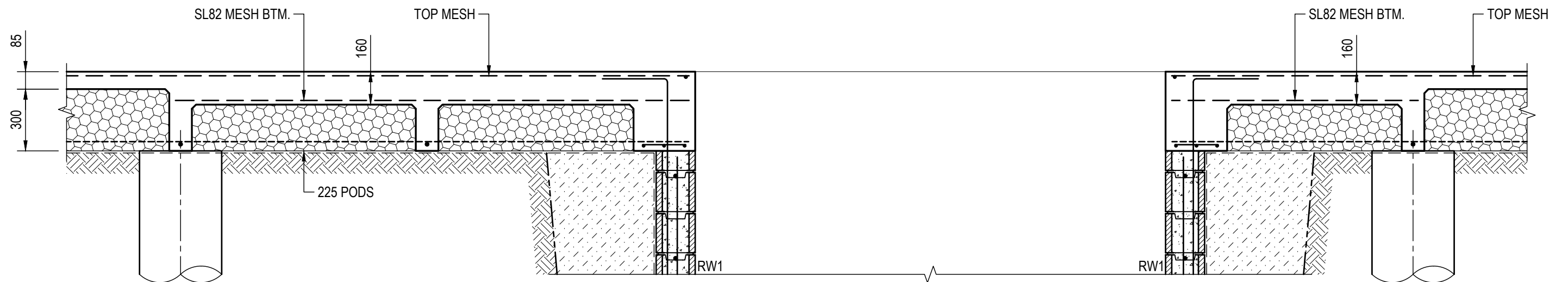
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AMENDMENTS					
REV	REVISION	DRAWN	ENG	CHECK	DATE
A	ISSUE FOR CONSTRUCTION	MM	RS	SP	28.11.23

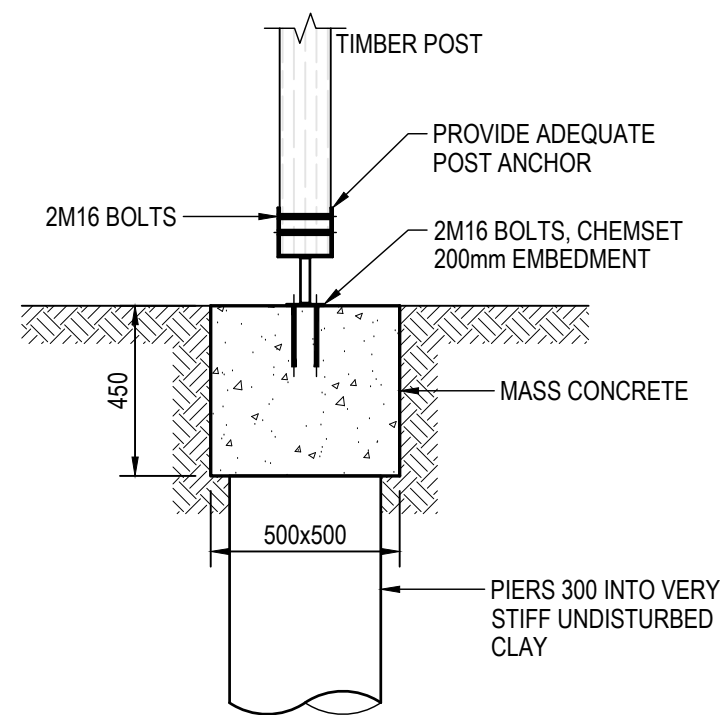
SITE:
18 SEYMOUR STREET,
BELFIELD, NSW

CLIENT: STROUD HOMES NEPEAN

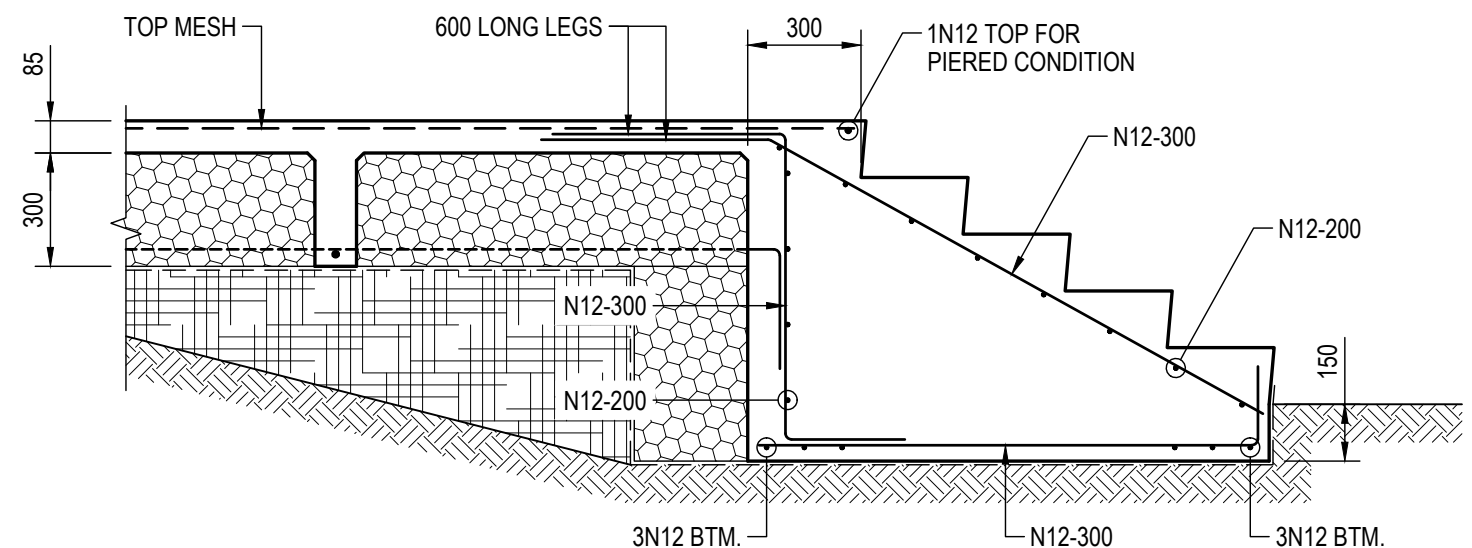
STATUS: ISSUE FOR CONSTRUCTION			
DRAWING TITLE: PIERING DETAILS			
SCALE AT A3: 1:20	DATE: 28.11.23	DRAWN: MM	CHECKED: RS
PROJECT NO: 23G8705	DRAWING NO: S-205	REVISION: A	



SECTION 3
SCALE 1:20
S-200



PAD FOOTING - PF1



CONCRETE STAIR DETAIL

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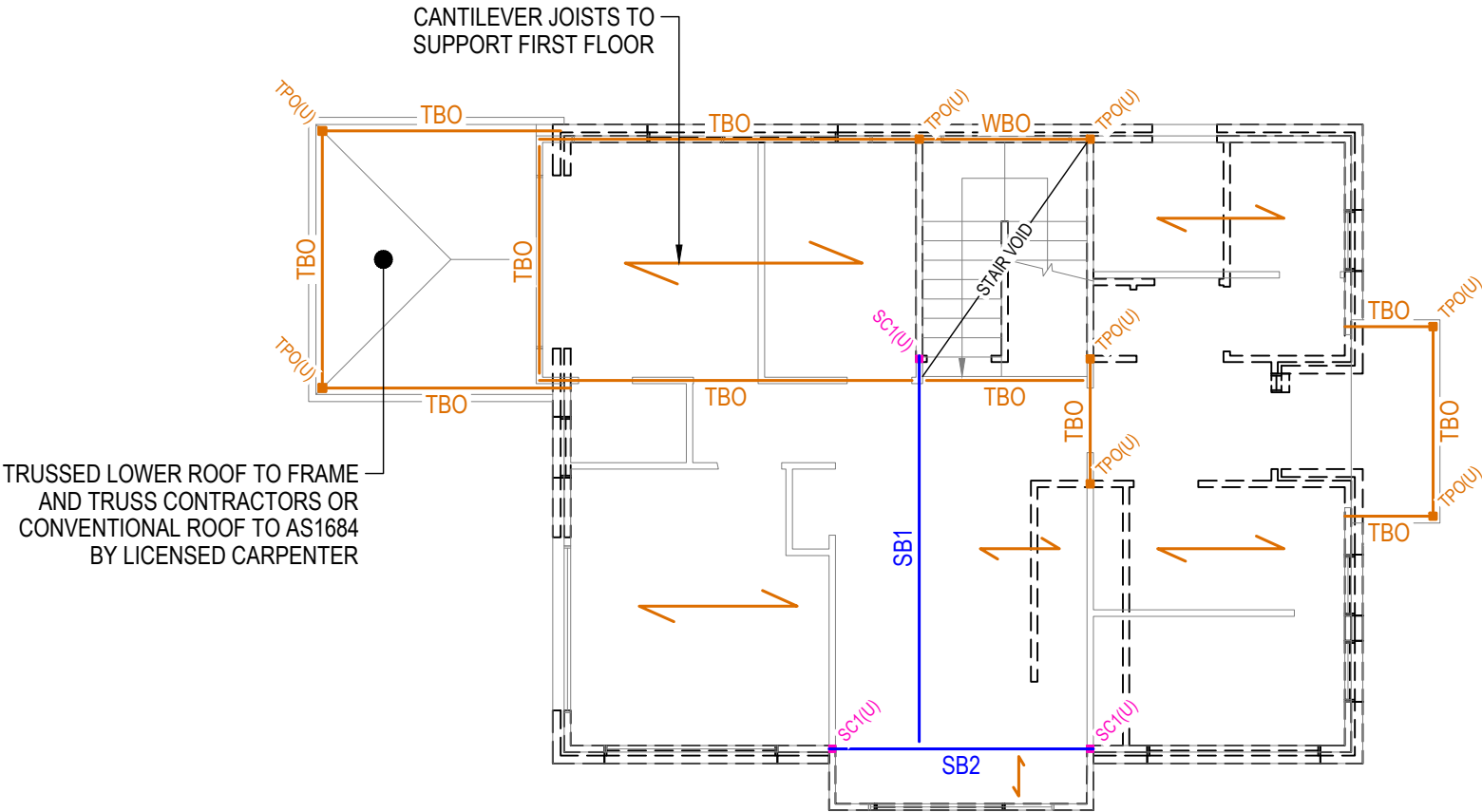
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REV	REVISION	DRAWN	ENG	CHECK	DATE
A	ISSUE FOR CONSTRUCTION	MM	RS	SP	28.11.23
AMENDMENTS					

SITE:	18 SEYMOUR STREET, BELFIELD, NSW
CLIENT:	STROUD HOMES NEPEAN

STATUS: ISSUE FOR CONSTRUCTION			
DRAWING TITLE: SECTION & PAD FOOTING DETAILS			
SCALE AT A3:	DATE:	DRAWN:	CHECKED:
1:20	28.11.23	MM	RS
PROJECT NO: 23G8705	DRAWING NO: S-206	REVISION: A	

STRUCTURAL FRAMING MEMBERS SCHEDULE		
MARK	SIZE	COMMENTS
BEAMS		
SB1	310UB32	-
SB2	310UB32	-
WBO	WIND BEAM BY OTHERS	-
TBO	TIMBER BEAM BY OTHERS	-
POSTS		
SC1	75x75x5 SHS	-
TPO	TIMBER POST BY OTHERS	-



LEGEND

- DENOTES FLOOR JOIST DIRECTION
- DENOTES BRICK VENEER WALLS
- DENOTES TIMBER FRAMED WALLS
- DENOTES WALLS UNDER

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**GRAND
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Structural Geotech Stormwater

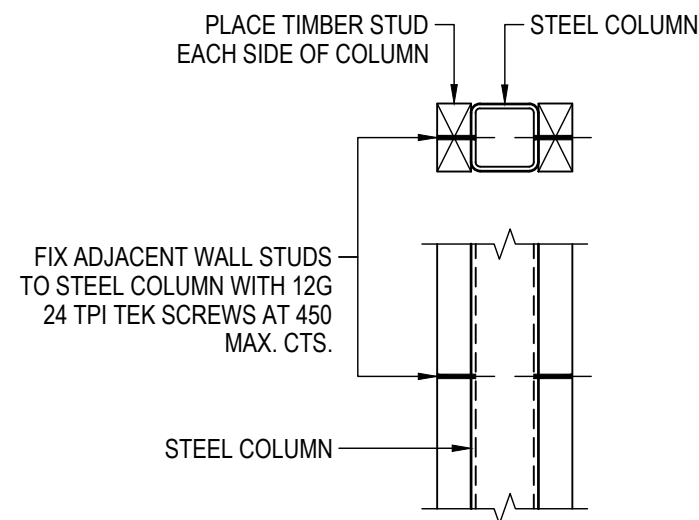
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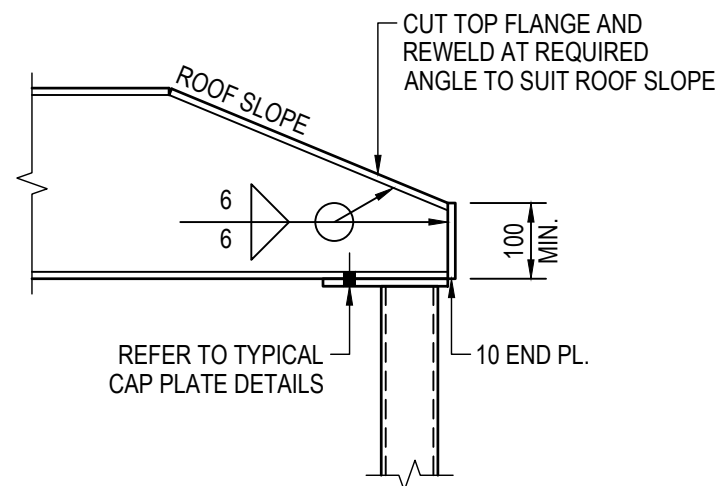
REV	REVISION	DRAWN	ENG	CHECK	DATE
A	ISSUE FOR CONSTRUCTION	MM	RS	SP	28.11.23
AMENDMENTS					

SITE:		18 SEYMOUR STREET, BELFIELD, NSW	
CLIENT:		STROUD HOMES NEPEAN	

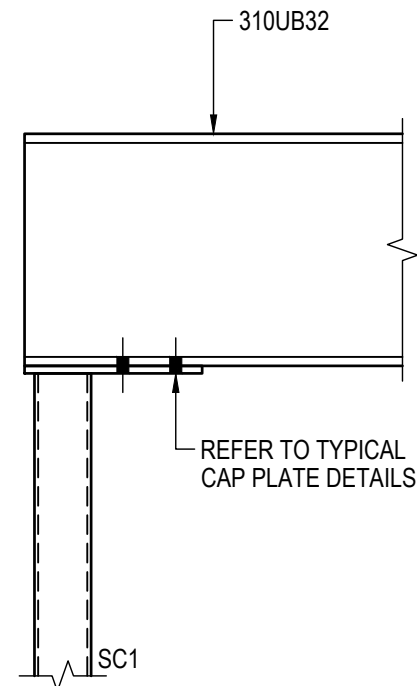
STATUS:				ISSUE FOR CONSTRUCTION			
DRAWING TITLE:							
FIRST FLOOR FRAMING PLAN							
SCALE AT A3:	DATE:	DRAWN:	CHECKED:				
1:100	28.11.23	MM	RS				
PROJECT NO:		DRAWING NO:		REVISION:			
23G8705		S-300		A			



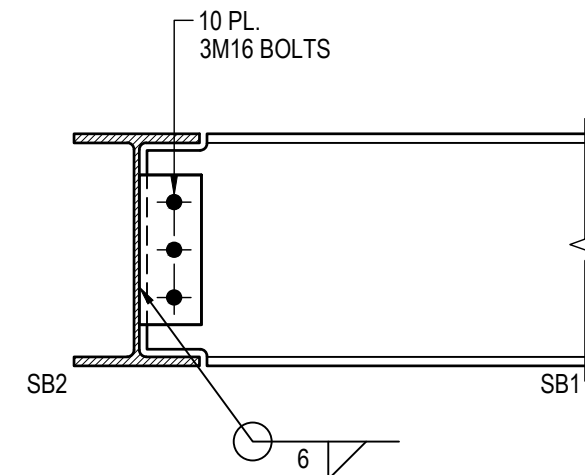
**TYPICAL STEEL POST
SECURING DETAIL**



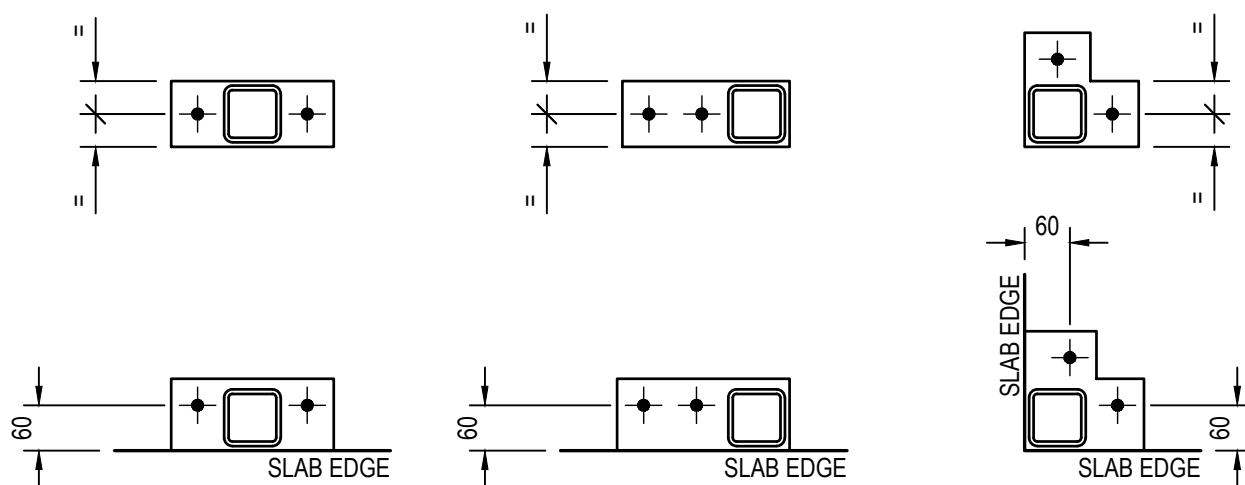
**TYPICAL STEEL
BEAM SPLAY DETAIL**



**UB TO SHS
CONNECTION DETAIL**



**SB1 TO SB2
CONNECTION DETAIL**



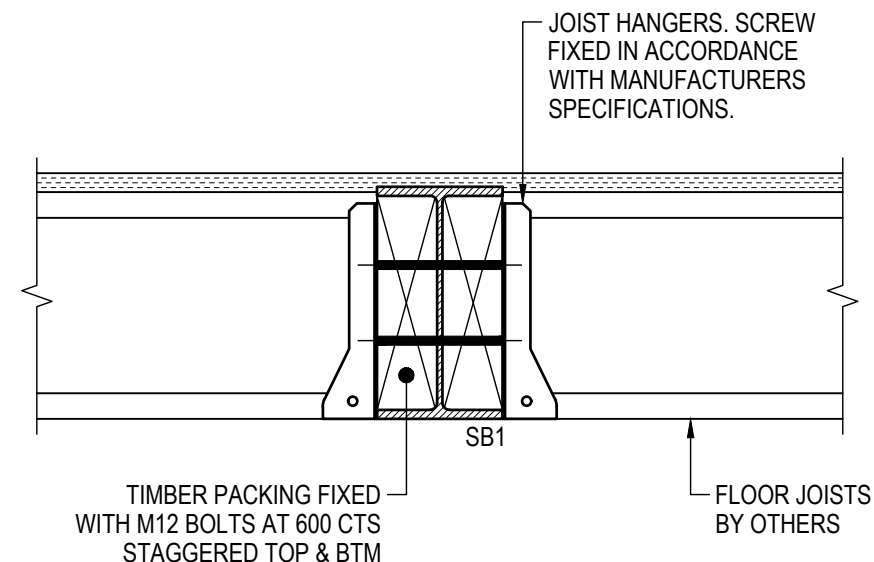
**TYPICAL BASE & CAP PLATE OPTIONS
FOR SHS COLUMNS**

BASE PLATE

- 10mm BASE PLATE UNO.
- USE AT LEAST 2M16 CHEMICAL ANCHORS UNO.
- 125mm EMBEDMENT UNO.
- 20mm MAX. LEVELING GROUT.

CAP PLATE

- 8mm CAP PLATE UNO.
- USE AT LEAST 2M16 BOLTS UNO.
- 1 BOLT EACH SIDE OF BEAM WEB WHERE POSSIBLE.



**SB1 TO SB2
CONNECTION DETAIL**

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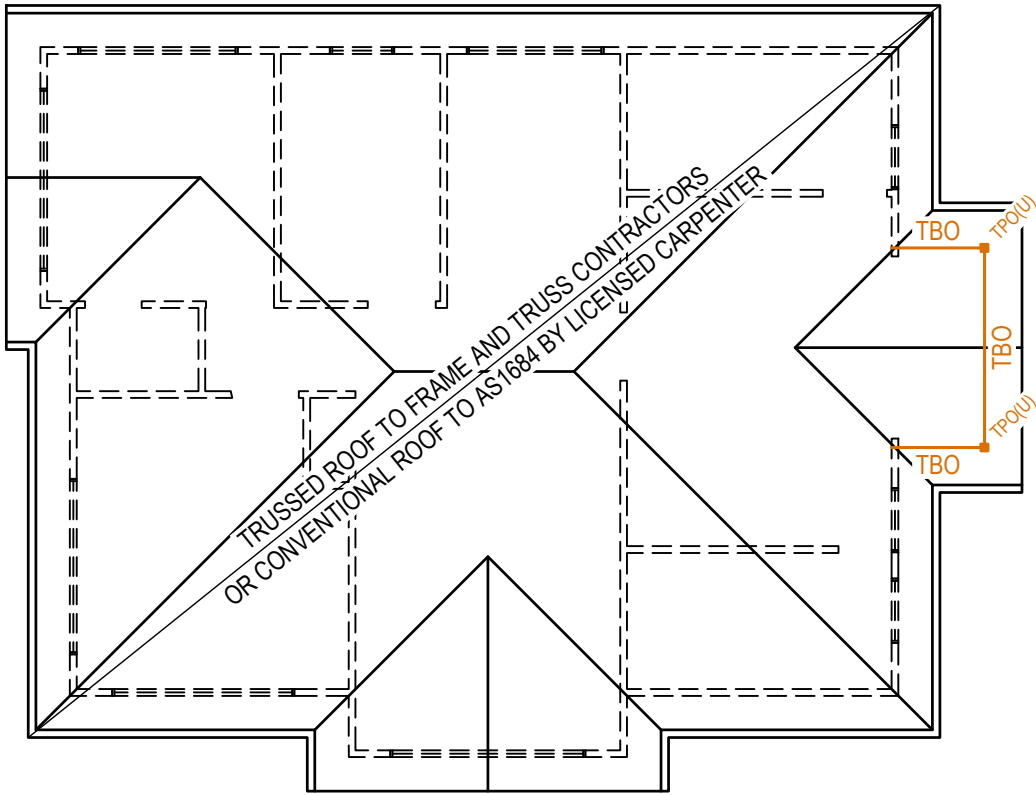
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REV	REVISION	DRAWN	ENG	CHECK	DATE
A	ISSUE FOR CONSTRUCTION	MM	RS	SP	28.11.23
AMENDMENTS					

SITE: 18 SEYMOUR STREET, BELFIELD, NSW
CLIENT: STROUD HOMES NEPEAN

STATUS: ISSUE FOR CONSTRUCTION			
DRAWING TITLE: STEEL DETAILS			
SCALE AT A3: 1:10	DATE: 28.11.23	DRAWN: MM	CHECKED: RS
PROJECT NO: 23G8705	DRAWING NO: S-301	REVISION: A	

STRUCTURAL FRAMING MEMBERS SCHEDULE		
MARK	SIZE	COMMENTS
BEAMS		
TBO	TIMBER BEAM BY OTHERS	
POSTS		
TPO	TIMBER POST BY OTHERS	-



LEGEND

== == == == DENOTES WALLS UNDER



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A	ISSUE FOR CONSTRUCTION	MM	RS	SP	28.11.23
REV	REVISION	DRAWN	ENG	CHECK	DATE
AMENDMENTS					

SITE:

18 SEYMOUR STREET,
BELFIELD, NSW

CLIENT:

STROUD HOMES NEPEAN

STATUS:

ISSUE FOR CONSTRUCTION

DRAWING TITLE:

ROOF FRAMING PLAN

SCALE AT A3:

1:100

DATE:

28.11.23

DRAWN:

MM

CHECKED:

RS

PROJECT NO:

23G8705

DRAWING NO:

S-400

REVISION:

A

DESIGN CERTIFICATION

PROJECT: PROPOSED NEW DWELLING

Project No: 23G8705.ST-DCA

Client: STROUD HOMES NEPEAN

**Address: 18 SEYMOUR STREET,,
BELFIELD, NSW**

We at Grand Engineering Pty. Ltd, the practicing structural Engineers hereby advise that we are responsible for the structural design & documentation for the proposed residential development at the above address.

All structural elements have been designed in accordance with the provisions of the Building Code of Australia and other relevant Australian Standards namely:

- AS1170.1 Structural Design actions
 - Part 0 General Principles
 - Part 1 Permanent, Imposed and Other actions
 - Part 2 Wind Actions
- AS3600 Concrete Structures Code
- AS2159 Piling Code
- AS2870 Residential Slabs & Footings Code
- AS3700 Masonry Structures Code
- AS4100 Steel Structures Code
- AS4678 Earth Retaining Structures Code
- AS1684 Timber Framing Code

We are appropriately qualified and competent people in this area and as such can certify that the design and performance of the design systems comply with the above and are detailed on the structural drawings with the project number 23G8705, Revision A , Dated 28.11.23.

Certified By:



Director/Principal Engineer

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