

GENERAL NOTES:

1. THESE DRAWINGS 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. ANY DISCREPANCIES SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
2. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AND CURRENT SAA CODES AND BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION.
3. ALL DIMENSIONS SHOWN SHALL BE VERIFIED BY THE BUILDER ON SITE. ENGINEER'S DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.
4. UNLESS NOTED OTHERWISE ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN MILLIMETRES.

SITE PREPARATION NOTES:

1. STRIP SITE REMOVING ALL TOPSOIL, ORGANIC MATTER, AND DELETERIOUS MATERIAL, PROOF ROLL, MAKE GOOD ANY SOFT SPOTS, AND RAISE TO LEVEL WITH COMPACTED GRANULAR MATERIAL ALL AS SPECIFIED BY THE CIVIL ENGINEER AND THE GEOTECHNICAL ENGINEER. REFER TO PROJECT CONSULTING ENGINEERS DRAWINGS FOR DETAILS OF THE SUB-BASE AND BASE COURSES, AND FOR NOTES ON COMPACTION.
2. EXCAVATE GROUND RESTRAINTS AND EDGE THICKENINGS AS DETAILED ON THE DRAWINGS TO THE SETOUT DIMENSIONS PROVIDED. MINOR FLUCTUATIONS IN THE WIDTH, STRAIGHTNESS, PARALLEL ALIGNMENT ETC WILL ENHANCE THE EFFECTIVENESS OF THE RESTRAINTS AND ARE THEREFORE ENCOURAGED.
- REMOVE ALL LOOSE MATERIAL FROM EXCAVATIONS.
3. ANY SERVICE TRENCHES UNDER THE SLAB SHALL BE BACKFILLED WITH FULLY CONSOLIDATED CLEAN SAND OR OTHER APPROVED COHESIONLESS MATERIAL.

CONCRETE NOTES:

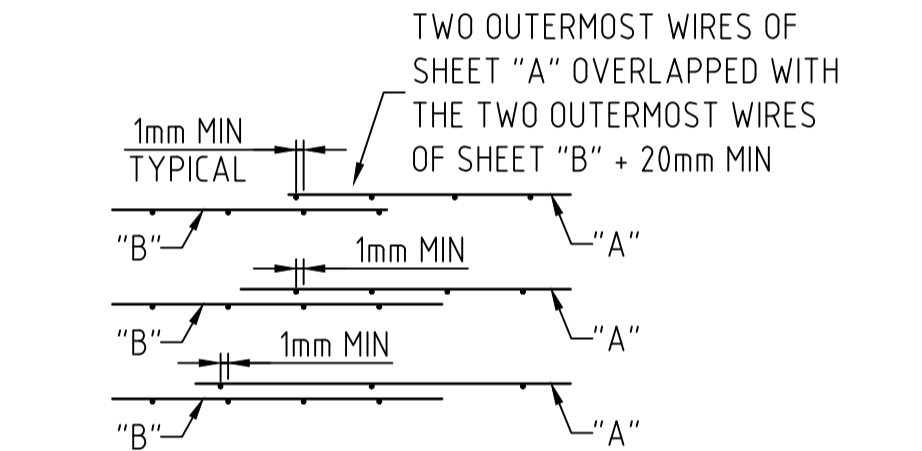
1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600-2018, FORMWORK TO AS3610.1-2018
2. CONCRETE SHALL NOT BE POURED WHEN THE AIR TEMPERATURE IS GREATER THAN 38 DEGREES, NOR LESS THAN 5 DEGREES CELSIUS WITHOUT APPROVAL FROM THE ENGINEER.
3. NO ON SITE WATER IS TO BE ADDED TO THE CONCRETE WITHOUT PERMISSION FROM THE ENGINEER.
4. THE USE OF CALCIUM CHLORIDE SHALL NOT BE PERMITTED.
5. ALL CONCRETE IS TO BE COMPACTED USING A HIGH FREQUENCY VIBRATOR.
6. CONCRETE IS TO BE CURED A MIN OF 7 DAYS
7. SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
8. SPECIFIED COVER IS THE CLEAR DISTANCE BETWEEN ANY REINFORCING (INCLUDING FITMENTS) AND THE FACE OF THE STRUCTURAL ELEMENT.
9. NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DESIGN DRAWINGS SHALL BE MADE IN ANY CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
10. CONSTRUCTION JOINTS SHALL ONLY BE PROVIDED IN LOCATIONS SPECIFICALLY SHOWN IN THE STRUCTURAL DESIGN DRAWINGS.
11. FREE DROPPING OF CONCRETE FROM A HEIGHT GREATER THAN 1000mm IS NOT PERMITTED.
12. CONCRETE SHALL BE SEPARATED FROM SUPPORTING MASONRY BY TWO LAYERS OF DAMP-PROOF COMPRESSIBLE JOINT FILLER. VERTICAL FACES OF CONCRETE SHALL BE KEPT FREE OF ADJOINING SURFACES BY 10mm THICKNESS OF COMPRESSIBLE JOINT FILLER UNLESS NOTED OTHERWISE ON THE DRAWINGS. ALL NON-LOADBEARING WALLS SHALL BE KEPT CLEAR OF THE UNDERSIDE OF SLABS AND BEAMS BY 20mm UNLESS NOTED OTHERWISE ON THE DRAWINGS.
13. BRICKWORK MUST NOT BE BUILT ON CONCRETE SLABS OR BEAMS UNTIL FORMWORK SUPPORTING SAME, HAS BEEN REMOVED.
14. THE FOLLOWING REQUIREMENTS SHALL BE INCORPORATED INTO THE FORMWORK DESIGN AND/OR ALLOWED FOR BY THE FORMWORK SUB-CONTRACTOR AS APPROPRIATE:-

CONCRETE NOTES continued

- A) MINIMUM FORMWORK STRIPPING TIMES ARE TO BE AS FOLLOWS, PROVIDED THE AVERAGE AMBIENT TEMPERATURE OVER THAT PERIOD IS BETWEEN 12 AND 20 DEGREES CELSIUS:-
- (i) VERTICAL SURFACES MAY BE STRIPPED OF FORMWORK WHEN THE MINIMUM MEAN COMPRESSIVE STRENGTH OF THE CONCRETE HAS REACHED 5 MPa OR A MINIMUM OF 2 DAYS AFTER CONCRETE POUR.
- (ii) SOFFITS OF BEAMS AND SLABS MAY BE STRIPPED OF FORMWORK WHEN THE MINIMUM MEAN COMPRESSIVE STRENGTH OF THE CONCRETE HAS REACHED 22 MPa OR A MINIMUM OF 6 DAYS AFTER CONCRETE POUR.
- (ii) REMOVAL OF FORMWORK SUPPORT (PROPS) TO BEAM AND SLAB SOFFITS MAY BE UNDERTAKEN WHEN THE MINIMUM MEAN COMPRESSIVE STRENGTH OF THE CONCRETE HAS REACHED 28 MPa OR A MINIMUM OF 18 DAYS AFTER CONCRETE POUR.
- B) ALL CONCRETE COMPRESSIVE STRENGTH (20-32 MPa) SHALL BE DETERMINED FROM SAMPLE CYLINDER TESTING BY A NATA REGISTERED LABORATORY.

REINFORCEMENT NOTES

1. ALL REINFORCEMENT SHALL BE IN ACCORDANCE WITH AS/NZS 4671-2019.
2. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY, AND IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
3. REINFORCEMENT DESIGNATIONS AS FOLLOWS:
- A) N - GRADE 500N HS DEFORMED BAR
- B) R - GRADE 250R HOT ROLLED BAR
- C) SL AND RL - GRADE 500L SQUARE MESH
- D) TM - GRADE 500L TRENCH MESH
4. TRENCH MESH SHALL BE SPLICED WHERE NECESSARY BY A LAP OF 500mm.
5. A LAPPED SPLICE FOR PROPRIETARY WELDED MESH SHALL BE MADE SO THAT THE TWO OUTERMOST CROSS-BARS OF THE LAPPING SHEET OVERLAP THE TWO OUTERMOST CROSS-BARS OF THE SHEET BEING LAPPED. THE BARS OF THE PROPRIETARY WELDED MESH SHOULD BE SPACED NOT LESS THAN 100mm APART. THE MINIMUM LENGTH OF THE OVER LAP SHALL EQUAL 100mm. REFER BELOW DIAGRAM.



6. REINFORCEMENT STRESS DEVELOPMENT AND LAP SPLICING LENGTHS TO BE IN ACCORDANCE WITH AS3600-2018. REFER TABLE BELOW UNLESS NOTED OTHERWISE ON DRAWINGS.

REINFORCEMENT BAR SCHEDULE		
BAR SIZE	DEVELOPMENT LENGTH & LAP LENGTH BARS IN TENSION (L <sub>sy</sub> , t <sub>b</sub> , lap) mm	BAR COG LENGTHS mm
N12	500	170
N16	730	205
N20	990	245
N24	1220	295
N28	1470	345

NOTE: MULTIPLY ALL VALUES BY 1.3 WHEN SLIP FORMING, WHEN LIGHTWEIGHT CONCRETE IS USED OR WHEN MORE THAN 300mm OF CONCRETE IS CAST BELOW THE BARS. MULTIPLY ALL VALUES BY 1.5 WHEN EPOXY COATED BARS ARE USED.

7. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
8. ALL REINFORCEMENT IS TO BE ADEQUATELY SUPPORTED IN ITS REQUIRED POSITION. MESH AND BAR SUPPORT CHAIRS ARE TO BE AT 800mm MAX CENTERS, BOTH DIRECTIONS. BAR SUPPORT CHAIRS SHALL BE PROVIDED ALONG THE EDGES OF ALL CONSTRUCTION JOINTS.
9. BARS SHALL BE EVENLY DISTRIBUTED OVER THE WIDTH OF THE STRIP UNLESS NOTED OTHERWISE.
10. REINFORCEMENT SHALL NOT BE CUT OR WELDED ON SITE UNLESS APPROVED BY THE ENGINEER. BARS CONFLICTING WITH SMALL HOLES AND OTHER MINOR PENETRATIONS LESS THAN 300mm LONG MAY BE DISPLACED LATERALLY.

STRUCTURAL STEELWORK NOTES

- 1.0 ALL WORKMANSHIP & MATERIALS TO BE IN ACCORDANCE WITH AS4100-2020 STEEL STRUCTURES AND AS/NZS 5131-2016 STRUCTURAL STEELWORK FABRICATION & ERECTION
- 1.1 MATERIALS - ALL STRUCTURAL STEEL TO BE IN ACCORDANCE WITH AS4100-2020 FOR THE BELOW GRADES (UNO)
- a) ROLLED SECTIONS - GRADE 300 PLUS
- b) HOLLOW SECTIONS - GRADE 350
- c) PLATE - GRADE 250
- d) PURLINS/GIRTS - MINIMUM GRADE 450 TO AS1397-2021. TO BE STRAMIT OR LYSAGHT MANUFACTURE AND PROVIDED WITH CONNECTIONS AND BRIDGING TO MANUFACTURERS SPECIFICATION
- 1.2 CONSTRUCTION CATEGORY - IN ACCORDANCE WITH THE REQUIREMENTS OF AS/NZS 5131 THE CONSTRUCTION CATEGORIES FOR THIS PROJECT ARE DEFINED IN THE TABLE BELOW:

ELEMENT	IMPORTANCE LEVEL	SERVICE CATEGORY	FABRICATION CATEGORY	CONSTRUCTION CATEGORY
ALL STRUCTURAL STEELWORK UNO.	IL2	SC1	FC1	CC2

- 2.0 STRUCTURAL STEELWORK FABRICATION - ALL STRUCTURAL STEELWORK SHALL BE FABRICATED IN ACCORDANCE WITH AS/NZS 5131. ALL WORK ON THIS PROJECT SHALL BE UNDERTAKEN BY COMPETENT PERSONNEL. REQUIREMENTS AND EXAMPLES OF QUALIFICATIONS FOR COMPETENT PERSONNEL ARE CONTAINED IN AS/NZS 5131. MEMBER SIZES SHALL BE AS SHOWN ON THE STRUCTURAL DRAWINGS. NO SUBSTITUTION IS PERMITTED WITHOUT APPROVAL IN WRITING FROM THE ENGINEER.

2.1 BOLTING

- 4.6/S COMMERCIAL GRADE 4.6 BOLTS TO AS 1111, AS 1110 TIGHTENED TO A SNUG TIGHT CONDITION TO AS/NZS 5131
- 8.8/S HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS/NZS 1252.1, AS 1110 TIGHTENED TO A SNUG TIGHT CONDITION TO AS/NZS 5131
- 8.8/TB HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS/NZS 1252.1, FULLY TENSIONED TO AS/NZS 5131 AS A BEARING JOINT
- 8.8/TF HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS/NZS 1252.1, FULLY TENSIONED TO AS/NZS 5131 AS A FRICTION JOINT

- 2.2 WELDING - ALL SHOP AND SITE WELDS TO BE - WELD CATEGORY G.P. E48 UNO. WELDING CONSUMABLES SHALL CONFORM TO THE REQUIREMENTS OF AS/NZS 1554, BASED ON THE YIELD STRENGTH OF THE STEEL TO BE WELDED, AS DEFINED BELOW:

- a) NOMINAL YIELD STRENGTH OF STEEL TO BE WELDED ≤ 500MPa TO CONFORM WITH AUSTRALIAN STANDARD AS/NZS 1554.1
- b) NOMINAL YIELD STRENGTH OF STEEL TO BE WELDED >500MPa; ≤ 690MPa TO CONFORM WITH AUSTRALIAN STANDARD AS/NZS 1554.4
- c) NOMINAL YIELD STRENGTH OF STEEL TO BE WELDED ALL STEEL WITH GRADE ≤ 300MPa, NOMINAL TENSILE STRENGTH OF WELD METAL, F<sub>w</sub> 430MPa.
- d) NOMINAL YIELD STRENGTH OF STEEL TO BE WELDED ALL STEEL WITH 300 < GRADE ≤ 450 MPa, NOMINAL TENSILE STRENGTH OF WELD METAL, F<sub>w</sub> 490MPa.

- 2.3 MINIMUM CONNECTION DETAILING GUIDELINES - UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS, CONNECTION DETAILS SHALL BE IN ACCORDANCE WITH THE FOLLOWING MINIMUM REQUIREMENTS:

- a) ALL WELDS SHALL BE 6mm CONTINUOUS FILLET WELD (CFW) ALL AROUND.
- b) ALL STEEL TO STEEL BOLTED CONNECTIONS SHALL BE MINIMUM TWO M20 GRADE 8.8/S BOLTS.
- c) A MINIMUM OF TWO THREADS SHALL EXTEND PAST THE NUT.
- d) ALL PLATES SHALL BE 10mm MINIMUM THICK.
- e) ALL PURLIN CLEATS SHALL BE 8mm MINIMUM THICK.

ALL DETAILING WHERE NOT SPECIFICALLY SHOWN SHALL BE IN ACCORDANCE WITH THE AUSTRALIAN STEEL INSTITUTE (ASI) CURRENT EDITIONS OF THE 'DESIGN CAPACITY TABLES FOR STRUCTURAL STEEL' AND THE ASI STANDARDIZED STRUCTURAL CONNECTION DETAILS CONTAINED THEREIN.

THE ENDS OF HOLLOW SECTION MEMBERS SHALL BE SEALED WITH NOMINAL THICKNESS PLATES AND CONTINUOUS SEAL WELDED UNLESS NOTED OTHERWISE. IF HOLLOW SECTIONS ARE TO BE HOT-DIP GALVANIZED, VENT AND DRAINAGE HOLES SHALL BE PROVIDED CONFORMING TO THE REQUIREMENTS OF AS/NZS 5131 IN NON-VIEWABLE LOCATIONS.

- 2.4 SURFACE TREATMENT AND CORROSION PROTECTION - UNLESS NOTED OTHERWISE IN THE CONTRACTUAL DOCUMENTATION, THE MINIMUM SURFACE TREATMENT OF BOTH INTERNAL AND EXTERNAL STEELWORK SHALL CONFORM TO THE REQUIREMENTS OF AS/NZS 5131. STRUCTURAL STEELWORK TO BE GALVANIZED SHALL CONFORM TO THE REQUIREMENTS OF AS/NZS 5131.

STRUCTURAL STEELWORK NOTES continued

- 3.0 STRUCTURAL STEELWORK ERECTION - STRUCTURAL STEELWORK ERECTION SHALL CONFORM TO THE REQUIREMENTS OF AS/NZS 5131. ALL MEMBERS HAVING A NATURAL CAMBER WITHIN THE STRAIGHTNESS TOLERANCE SHALL BE ERECTED WITH THE NATURAL CAMBER UP.
- 4.0 ADDITIONAL CLAUSES - THE STRUCTURAL STEELWORK ERECTOR SHALL BE RESPONSIBLE FOR TEMPORARY STABILITY DURING ERECTION AND SHALL PROVIDE AND LEAVE IN PLACE UNTIL PERMANENT BRACING ELEMENTS ARE CONSTRUCTED, SUCH TEMPORARY BRACING AS IS NECESSARY TO SECURELY STABILIZE THE STRUCTURE DURING ERECTION.
- 4.1 SHOP DRAWINGS - SHALL BE SUBMITTED FOR APPROVAL. NO STEELWORK SHALL BE FABRICATED UNTIL FINAL APPROVAL OF THE SHOP DETAIL DRAWINGS HAS BEEN RECEIVED AND ALL REVIEW COMMENTS ON THE WORKSHOP DRAWINGS HAVE BEEN RESOLVED.
- 4.2 SITE WELDING - OTHER THAN SITE WELDS (IF ANY) SHOWN ON THE SHOP DRAWINGS, DO NOT WELD ON SITE WITHOUT PRIOR APPROVAL.
- 4.3 CONCRETE ENCASED STEELWORK - SHALL BE UNPAINTED AND FREE OF SCALE. ALL STEELWORK ABOVE GROUND SHALL BE PLACED CENTRALLY WITH 50mm MINIMUM COVER CONCRETE ENCASEMENT. ALL STEELWORK BELOW GROUND SHALL BE PLACED CENTRALLY WITH 75mm MINIMUM COVER CONCRETE ENCASEMENT. REFER TO DRAWINGS FOR ANY REINFORCEMENT REQUIREMENTS.

STRUCTURAL STEELWORK DURABILITY NOTES

1. ATMOSPHERIC CORROSIVITY CATEGORY C2 TO AS4312-2008:
- A) COVERED STEELWORK: CLASS 2.5 BLAST PLUS 75 MICRON ZINC SILICATE COATING TO AS2312.1-2014 OR ILG 100 TO AS4792-2006.
- B) EXPOSED STEELWORK: HDG320 TO AS4680-2006.
- C) COLD FORMED STEELWORK: AZ150 OR AM150 TO AS1397-2011

# HOUSING PLUS ORANGE

## CORE & REFUGE AT 10A PARK STREET EAST MAITLAND NSW

### STRUCTURAL DRAWING SCHEDULE

40560-S101	COVER SHEET & NOTES
40560-S102	CORE BUILDING & STUDIO SLAB PLANS
40560-S103	EXTERNAL PAVEMENT PLAN
40560-S104	DRIVEWAY & CARPARK SLAB PLAN
40560-S201	SLAB & FOOTING DETAILS - SHEET 1
40560-S202	SLAB & FOOTING DETAILS - SHEET 2
40560-S203	SLAB & FOOTING DETAILS - SHEET 3
40560-S204	SLAB & FOOTING DETAILS - SHEET 4
40560-S301	WALL BRACING & TIE DOWN CORE BUILDING
40560-S302	WALL BRACING & TIE DOWN STUDIOS
40560-S303	FIRST FLOOR FRAMING PLAN CORE BUILDING

PRELIMINARY DRAWING

Not to be used for construction purposes

BARNSON PTY LTD

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Rev	Date	Description
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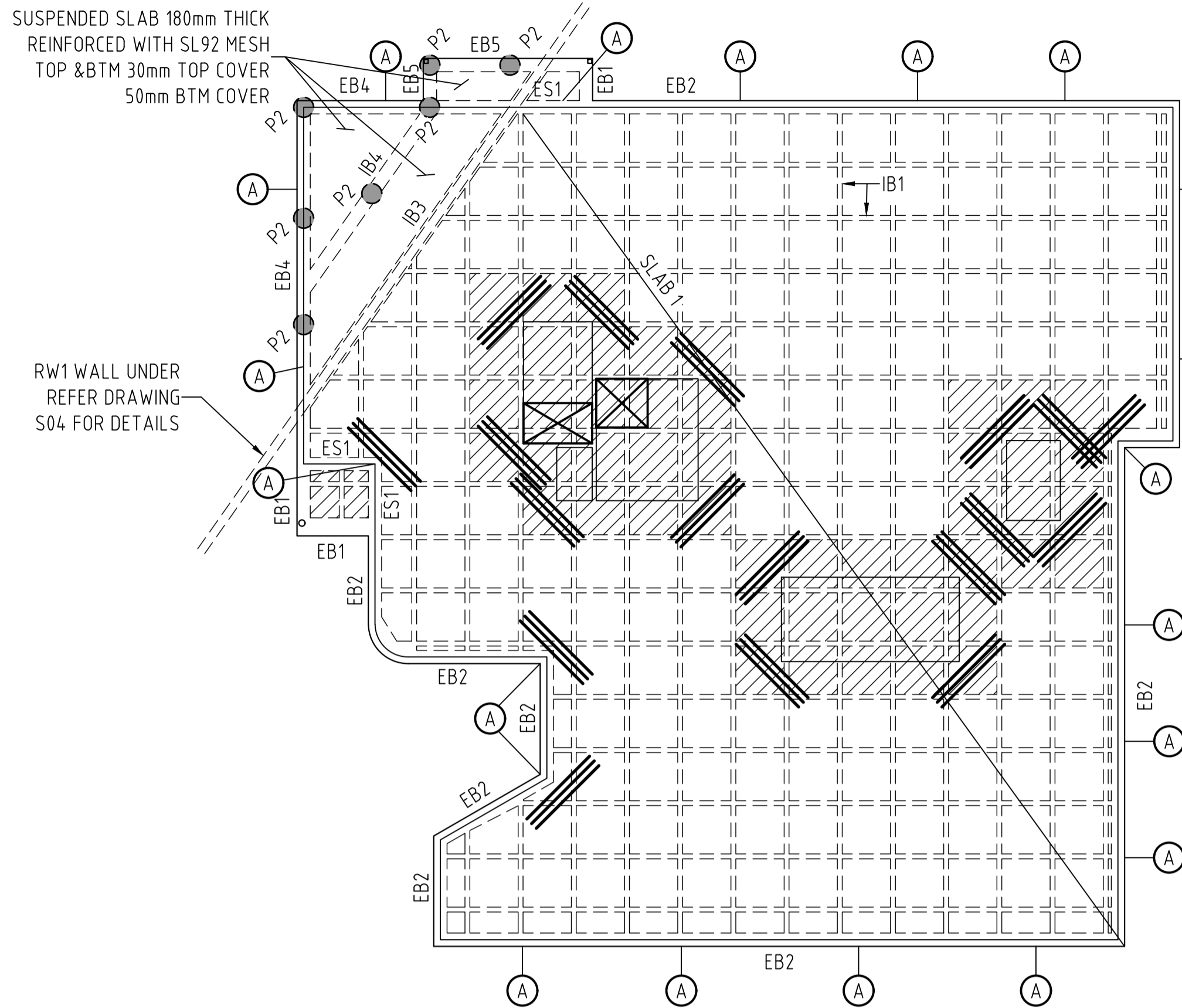
Project  
**PROPOSED CORE & CLUSTER REFUGE AT**  
Site Address  
**10A PARK STREET**  
**EAST MAITLAND NSW 2323**  
Client  
**HOUSING PLUS ORANGE**

Drawing Title  
**COVER SHEET & NOTES**

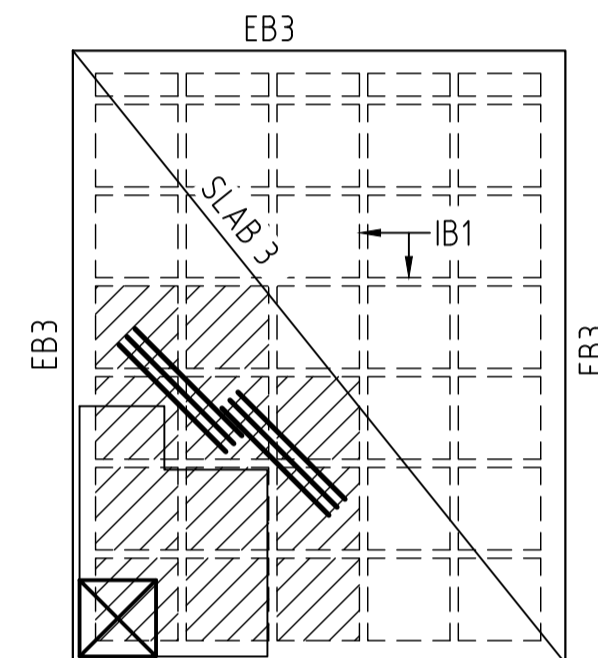
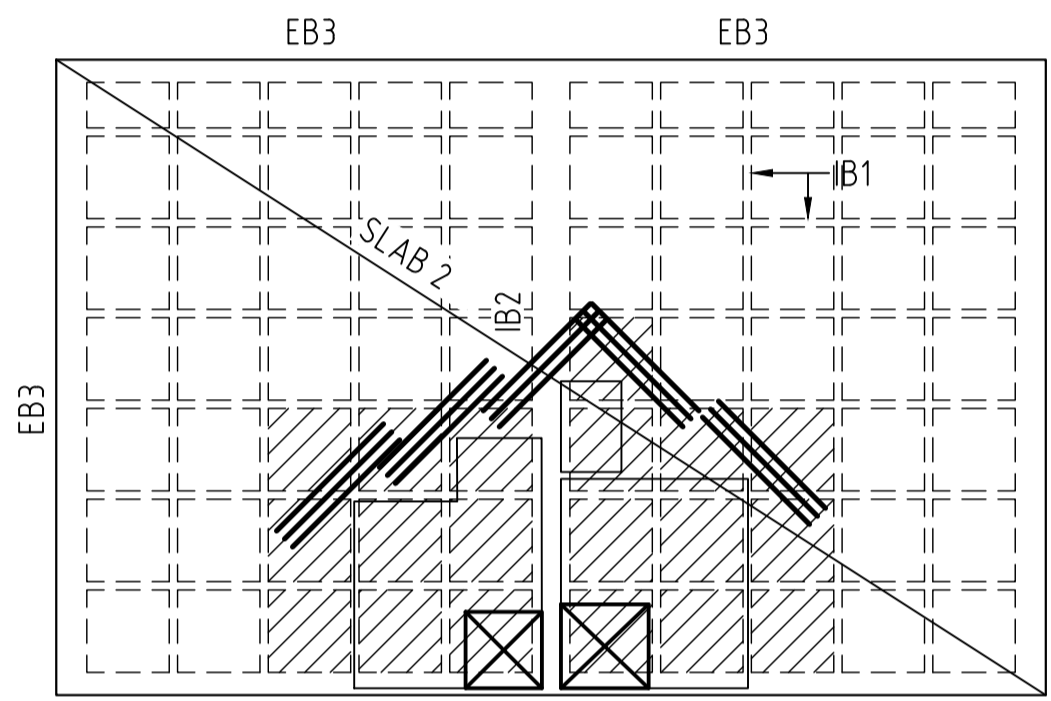
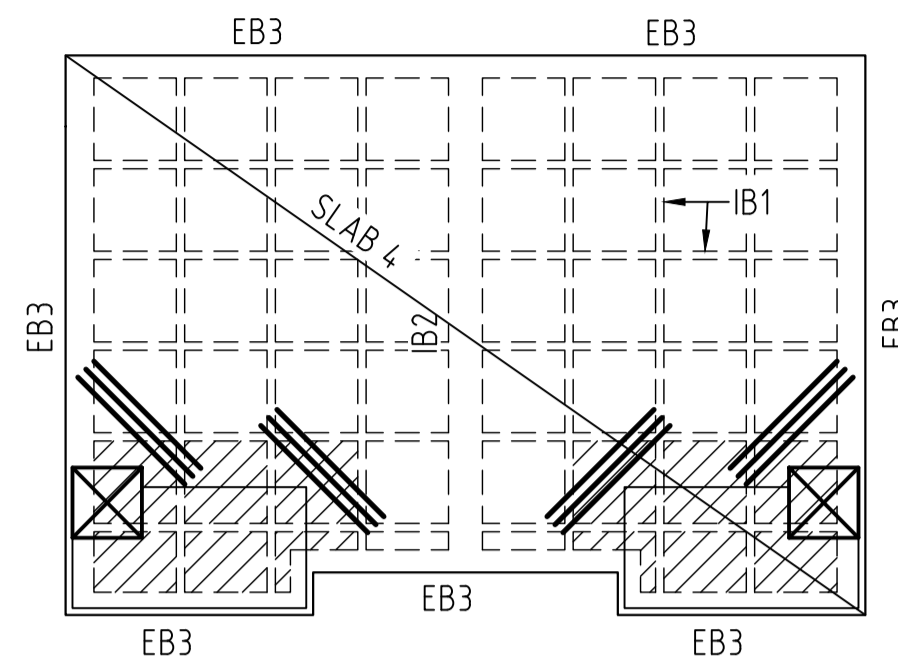
Design	TR	Original Sheet Size	A1
Drawn	EC		
Check	JS	Revision	B

Certification

Project No	40560
Drawing No	S01



⊙ P1  
⊙ P1  
⊙ P1

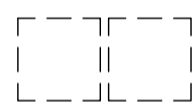


BOUNDARY

### CORE BUILDING AND STUDIO SLAB PLANS

SCALE = 1:100

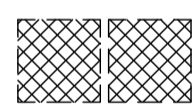
#### SLAB LEGEND



1090 x 1090 x 225 DEEP WAFFLE PODS



1090 x 1090 x 225 DEEP WAFFLE PODS AT SET DOWN & WET AREA



1090 x 1090 PODS REMOVED, PROVIDE SL92 MESH BTM



3-N12 BARS x 2000 LONG OR 3-L11TM x 2000 LONG TIED TO UNDERSIDE OF MESH



DENOTES SHOWER RECESS REFER DETAIL

Ⓐ

MASONRY ARTICULATION JOINTS  
ARTICULATION OF MASONRY SHALL BE IN ACCORDANCE WITH TECHNICAL NOTE 61 - AUGUST 2008 BY THE CEMENT, CONCRETE & AGGREGATES AUSTRALIA

⦿ P2

⌀450 PIERS, SPACED AT MAX 2500 CTS  
REFER S201 FOR DETAILS

⊙ P1

⌀450 PIERS UNDER FIRST FLOOR COLUMNS REFER S201 FOR DETAILS

EB EDGE BEAM REFER S201 FOR DETAILS

IB INTERNAL BEAM REFER S201 FOR DETAILS

#### SLAB LOADING NOTES

- ALL LOADS ARE ACCORDING TO AS1170
- DEAD LOADS:
  - SELF WEIGHT OF STRUCTURE
- LIVE LOADS:
  - 15 kPa RESIDENTIAL FLOOR LOADING TO AS1170.1-2002

#### BORED PIER NOTES

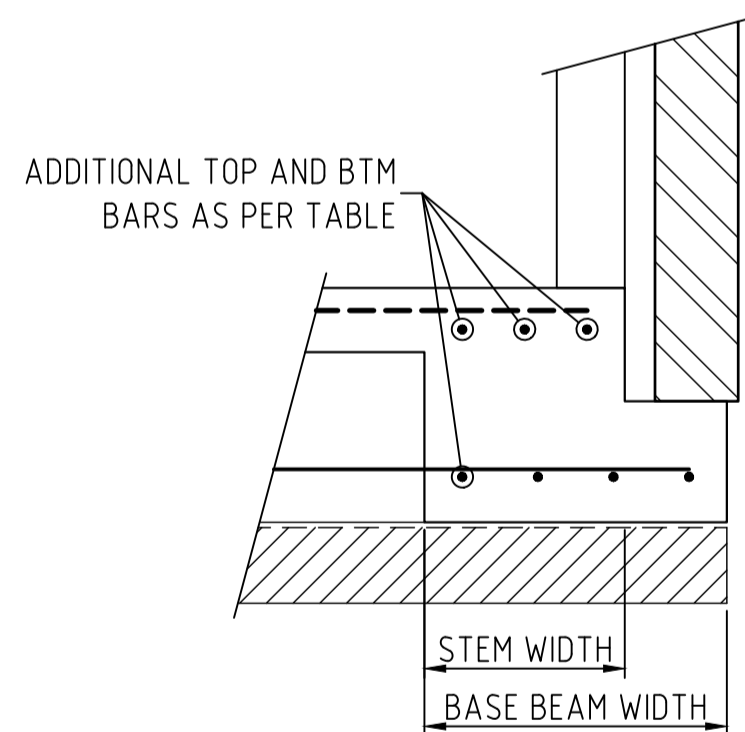
- CONCRETE EXPOSURE CLASSIFICATION = A2 TO AS3600-2018
- CONCRETE IS TO BE GRADE N25 (25 MPa STRENGTH AT 28 DAYS AGE)
- PIERS TO BE ⌀450 MASS CONCRETE, PIERS GREATER THAN 1.5m DEEP SHALL BE ⌀450 REINFORCED WITH 4-N16 BARS VERTICAL, WITH R6 LIGS HORIZONTAL AT 300 MAX CTS.
- SERVICES TO BE PLACED IN A 300mm WIDE x 450mm DEEP TRENCH A MINIMUM OF 600mm FROM EDGE OF BUILDING TO AVOID UNDERMINING OF FOOTINGS.

#### GEOTECHNICAL NOTES

- THESE SLABS AND FOOTINGS HAVE BEEN DESIGNED FOR A CLASS "M" SITE AS DEFINED BY AS2870-2011.  
BASED UPON GEOTECHNICAL REPORT BY REGIONAL GEOTECHNICAL SOLUTIONS, REFERENCE RGS33442.1 - AJ DATED 13TH FEBRUARY 2023. SHOULD CONDITIONS DIFFER ON SITE CONTACT BARNSON.
- FACTORED ULTIMATE BEARING CAPACITIES  $Q_u$  TO BE CONFIRMED ON SITE
  - SLABS = 100 kPa
  - STRIP FOOTING BASE = 150kPa
  - PIER BASE = >250kPa EXTREMELY WEATHERED SILTSTONE
- SKIN FRICTION  $f_s$  TO BE CONFIRMED ON SITE  
PIER SHAFT = 40kPa

#### WAFFLE POD SLAB NOTES

- CONCRETE EXPOSURE CLASSIFICATION = A2 TO AS3600-2018
- SLAB 1: 100mm THICK (T) SLAB PANEL REINFORCED WITH ONE LAYER, SL92 MESH TOP WITH 30mm COVER.  
SLAB BEAM BTM REINFORCEMENT AS SPECIFIED WITH 50mm COVER. WAFFLE POD VOID FORMERS SHALL BE 1090 x 1090 x 225 DEEP.
- SLAB 2-4: 85mm THICK (T) SLAB PANEL REINFORCED WITH ONE LAYER, SL82 MESH TOP WITH 30mm COVER. SLAB BEAM BTM REINFORCEMENT AS SPECIFIED WITH 50mm COVER, WAFFLE POD VOID FORMERS SHALL BE 1090 x 1090 x 225 DEEP.
- CONCRETE IS TO BE GRADE N25 (25 MPa STRENGTH AT 28 DAYS)
- BASE PREPARATION: FILL COMPACTED IN 150mm LAYERS TO 95% COMPACTION.
- A WATERPROOF MEMBRANE CONSISTING OF A 0.2mm NOMINAL THICKNESS POLYETHYLENE FILM, SHALL BE PLACED UNDER ALL SLABS & BEAMS U.N.O. IT SHALL BE HIGH IMPACT RESISTANT IN ACCORD WITH CLAUSES 5.3.3.2 AND 5.3.3.3 OF AS2870-2011.
- EDGE BEAMS TO BE PROVIDED AS PER RELATIVE DETAILS, 300 MIN WIDE.
- ALL INTERNAL RIBS ARE TO BE 110mm WIDE U.N.O.  
FORMED USING A GRID OF STANDARD POD VOID FORMERS 1090mm x 1090mm.
- TOP & BOTTOM REINFORCEMENT BARS ARE TO BE LAPPED 500mm.
- WHERE THERE ARE SITE SPECIFIC REQUIREMENTS TO WIDEN SLAB BEAMS OR STEM WIDTHS, ADDITIONAL REINFORCEMENT TO THAT SHOWN IN THE DETAILS SHALL BE PROVIDED TOP AND BTM ACCORDING TO THE TABLE AND DIAGRAMS BELOW. BAR SIZE IS TO MATCH THE EXISTING SPECIFIED TOP AND BTM BAR SIZE SHOWN IN THE DETAILS.
- SERVICES TO BE PLACED IN A 300mm WIDE x 450mm DEEP TRENCH A MINIMUM OF 600mm FROM EDGE OF BUILDING TO AVOID UNDERMINING OF FOOTINGS.



ADDITIONAL WAFFLE POD BEAM WIDTH REINFORCEMENT		
STEM WIDTH OR BASE BEAM WIDTH (mm)	QTY TOP REINFORCEMENT BARS FOR STEM WIDTH	QTY BTM REINFORCEMENT BARS FOR BASE BEAM WIDTH
110-150	0 STD, 1 OVER PIERS	1
151-220	1	2
221-330	2	3
331-440	3	4

**PRELIMINARY DRAWING**

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#### BARNSON PTY LTD

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Rev	Date	Description
B	14.06.24	ISSUED FOR DA APPROVAL

Project  
**PROPOSED CORE & CLUSTER REFUGE AT**  
Site Address  
10A PARK STREET  
EAST MAITLAND NSW 2323  
Client  
HOUSING PLUS ORANGE

Drawing Title  
**CORE BUILDING & STUDIO SLAB PLANS**

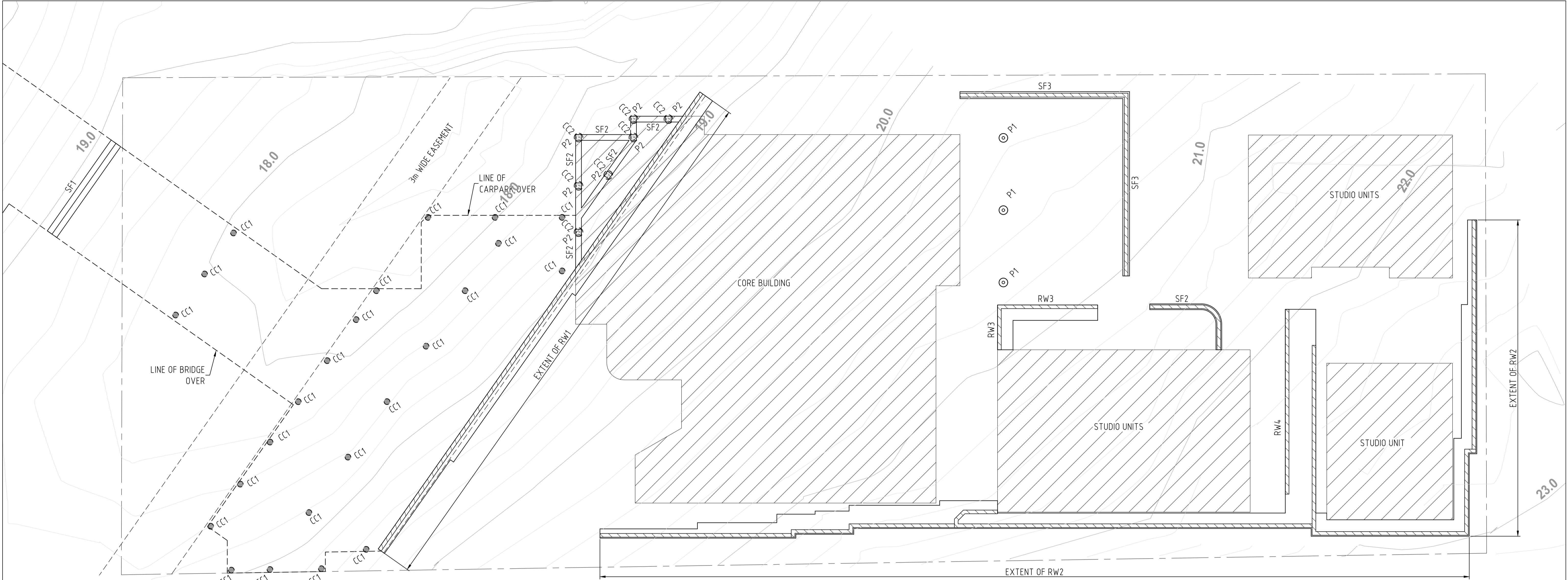
Design TR  
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Check JS

Original Sheet Size  
Revision

A1  
B

Certification  
Project No  
Drawing No

40560  
**S101**



FOOTING & RETAINING WALL PLAN  
SCALE = 1:100

FOOTING LEGEND

- P2  $\phi 450$  PIERS, SPACED AT MAX 2500 CTS REFER S201 FOR DETAILS
- P1  $\phi 450$  PIERS UNDER FIRST FLOOR COLUMNS REFER S201 FOR DETAILS
- CC1  $\phi 300$  REINFORCED CONCRETE COLUMN REFER DETAILS
- CC2  $300 \times 300$  REINFORCED CONCRETE COLUMN REFER DETAILS
- BLOCKWORK ARTICULATION JOINT. REFER TO DRAWING S203 FOR DETAILS. TO BE POSITIONED AT 6m MAXIMUM CENTRES

- RW1 1000 MAX HEIGHT RETAINING WALL REFER TO DRAWING S203 FOR DETAILS
- RW2 1800 MAX HEIGHT RETAINING WALL REFER TO DRAWING S203 FOR DETAILS
- RW3 1000 MAX HEIGHT RETAINING WALL REFER TO DRAWING S204 FOR DETAILS
- RW4 1000 MAX HEIGHT RETAINING WALL REFER TO DRAWING S204 FOR DETAILS
- SF# STRIP FOOTING REFER SPECIFIC DETAILS

RETAINING WALL LOADING NOTES

- ALL LOADS ARE ACCORDING TO AS1170
- DEAD LOADS:
  - A) SELF WEIGHT OF STRUCTURE
- LIVE LOADS:
  - A)  $5.0 \text{ kPa}$  CLASS B RETAINING WALL TO AS 4678 - 2002
- EARTH LOADS:
  - A) BACKFILL SOIL PROPERTIES  
 $K_a = 0.35$ , DENSITY =  $18 \text{ kN/m}^3$

GEOTECHNICAL NOTES

FOR GEOTECHNICAL NOTES REFER DRAWING S02

CARPARK & BRIDGE BORED PIER NOTES

- CONCRETE EXPOSURE CLASSIFICATION = A2 TO AS3600-2018
- CONCRETE IS TO BE GRADE N25 (25 MPa STRENGTH AT 28 DAYS AGE)
- PIER DEPTH & WIDTH AS PER RELATIVE DETAILS
- PIER REINFORCEMENT AS SPECIFIED IN RELEVANT DETAILS WITH 50mm COVER
- SERVICES TO BE PLACED IN A 300mm WIDE x 450mm DEEP TRENCH A MINIMUM OF 600mm FROM EDGE OF BUILDING TO AVOID UNDERMINING OF FOOTINGS.

STRIP FOOTING / RETAINING WALL BASE NOTES

- CONCRETE EXPOSURE CLASSIFICATION = A2 TO AS3600-2018
- CONCRETE IS TO BE GRADE N25 (25 MPa STRENGTH AT 28 DAYS AGE)
- FOOTING DEPTH & WIDTH AS PER RELATIVE DETAILS
- FOOTING REINFORCEMENT AS SPECIFIED IN RELEVANT DETAILS WITH 50mm COVER
- SERVICES TO BE PLACED IN A 300mm WIDE x 450mm DEEP TRENCH A MINIMUM OF 600mm FROM EDGE OF BUILDING TO AVOID UNDERMINING OF FOOTINGS.

**PRELIMINARY DRAWING**  
Not to be used for construction purposes

BARNSON PTY LTD

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email [generalenquiry@barnson.com.au](mailto:generalenquiry@barnson.com.au)  
web [barnson.com.au](http://barnson.com.au)

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Rev	Date	Description
B	14.06.24	ISSUED FOR DA APPROVAL

Project  
**PROPOSED CORE & CLUSTER REFUGE AT**  
Site Address  
**10A PARK STREET  
EAST MAITLAND NSW 2323**  
Client  
**HOUSING PLUS ORANGE**

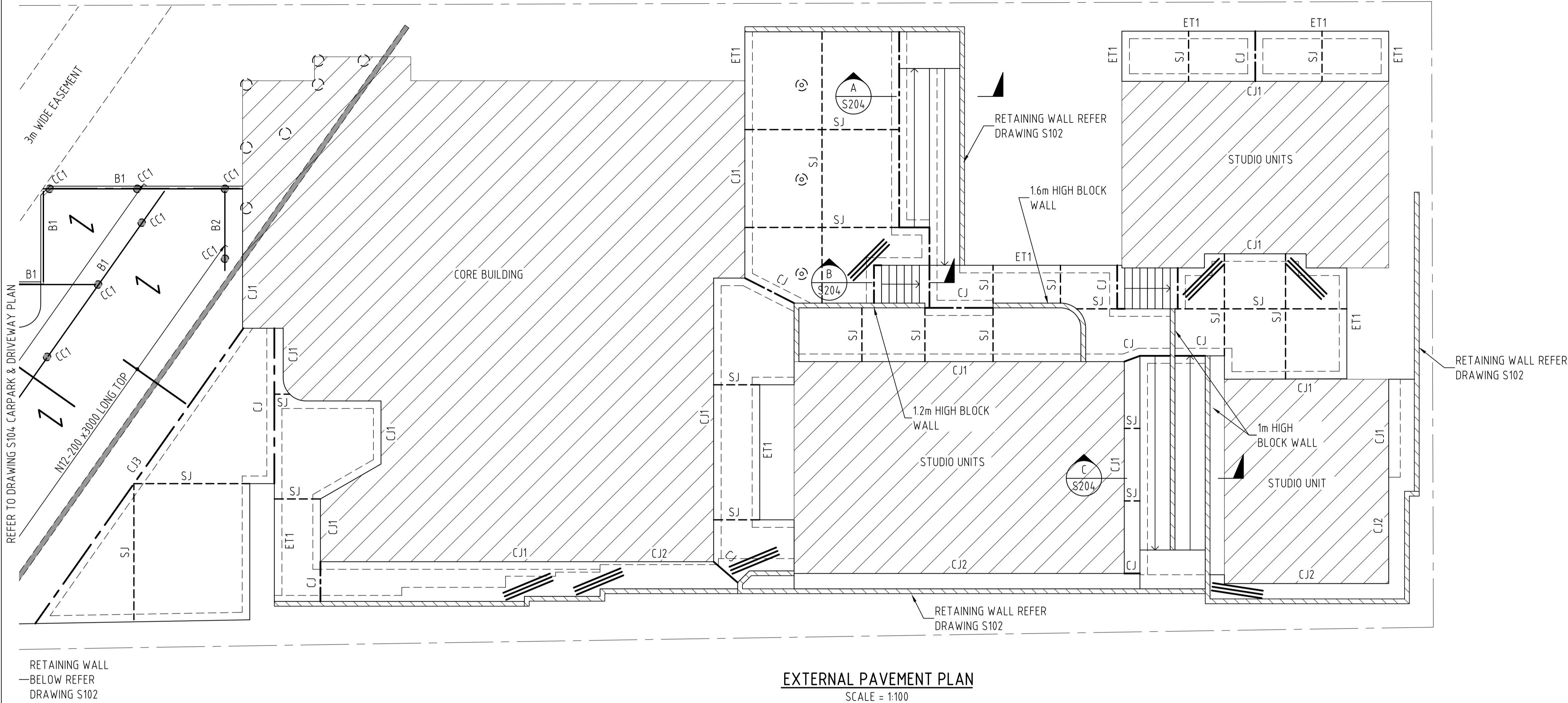
Drawing Title  
**FOOTING & RETAINING WALL PLAN**

Design TR  
Drawn EC  
Check JS

Original Sheet Size  
Revision

Certification  
Project No  
Drawing No

40560  
**S102**



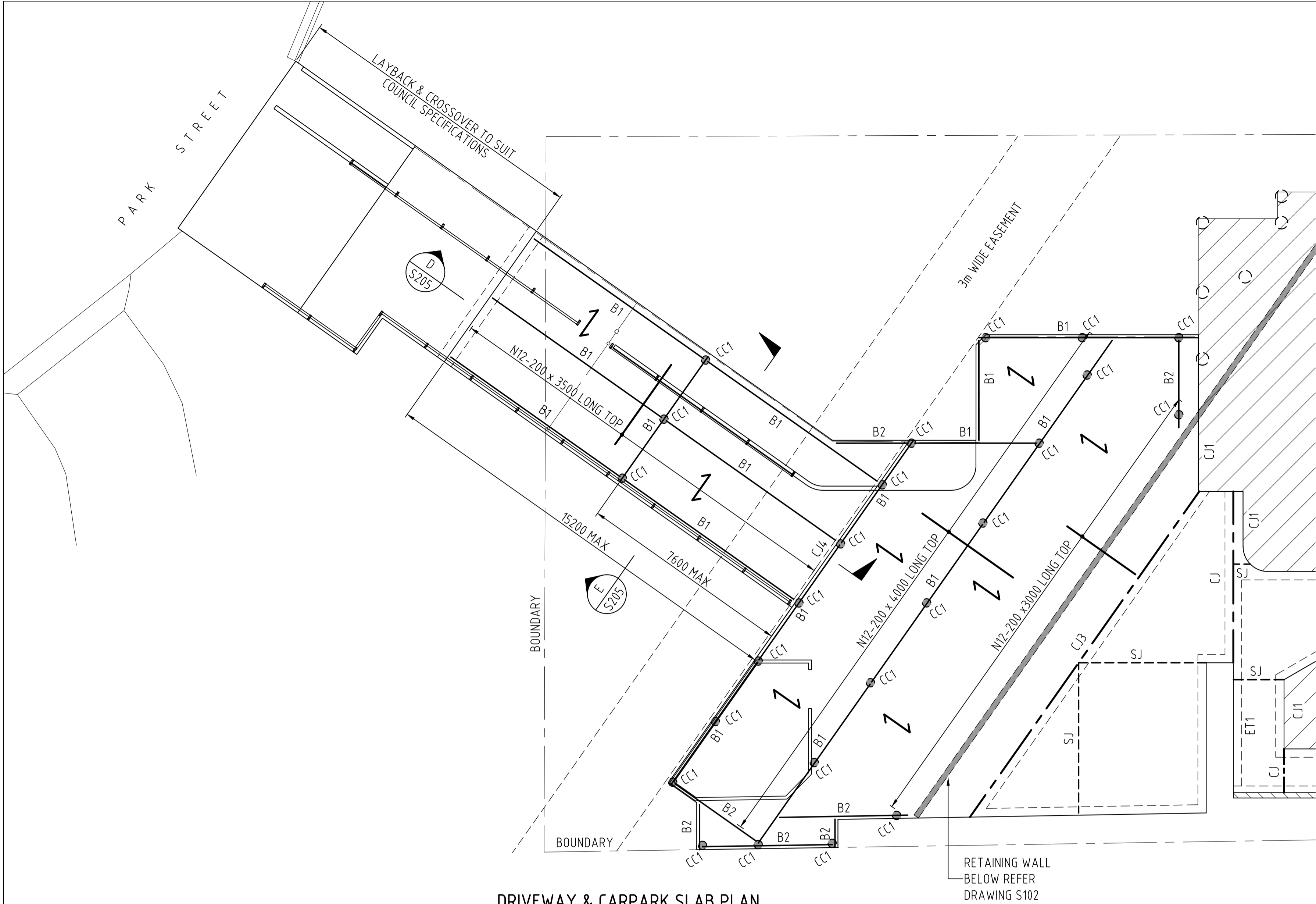
- SLAB LEGEND**
- /// DENOTES 3-N12 BARS x 2000 LONG OR 3-L11TM x 2000 LONG TIED TO UNDERSIDE OF MESH
  - SJ- TOOL JOINT OR SAW CUT TO 1/3 SLAB DEPTH, PLACED WITHIN 24 HOURS OF CONCRETE POUR REFER DETAIL
  - CJ- CONSTRUCTION JOINT - REFER S04 FOR DETAILS

**GEOTECHNICAL NOTES**  
FOR GEOTECHNICAL NOTES REFER DRAWING S02

- SLAB ON GROUND NOTES**  
RAMPS, FOOTPATHS, LANDINGS & CARPARK
1. CONCRETE EXPOSURE CLASSIFICATION = A2 TO AS3600-2018
  2. 100mm THICK (T) SLAB PANEL REINFORCED WITH ONE LAYER SL72 MESH TOP WITH 30mm COVER.
  3. CONCRETE IS TO BE GRADE N25 (25 MPa STRENGTH AT 28 DAYS)
  4. BASE PREPARATION: MIN. 100mm HARD-CORE BASE (DGB20 OR SIMILAR APPROVED) COMPACTED IN 150mm LAYERS TO 98% STANDARD. COMPACTION.
  5. A WATERPROOF MEMBRANE CONSISTING OF A 0.2mm NOMINAL THICKNESS POLYETHYLENE FILM, SHALL BE PLACED UNDER ALL SLABS & BEAMS U.N.O. IT SHALL BE HIGH IMPACT RESISTANT IN ACCORD WITH CLAUSES 5.3.3.2 AND 5.3.3.3 OF AS2870-2011.
  6. SERVICES TO BE PLACED IN A 300mm WIDE x 450mm DEEP TRENCH A MINIMUM OF 600mm FROM EDGE OF BUILDING TO AVOID UNDERMINING OF FOOTINGS.

- SLAB LOADING NOTES**
1. ALL LOADS ARE ACCORDING TO AS1170
  2. DEAD LOADS:
    - A) SELF WEIGHT OF STRUCTURE
  3. LIVE LOADS:
    - A) 15 kPa RESIDENTIAL FLOOR LOADING TO AS1170.1-2002
    - B) CARPARK SLAB - 20kPa MEDIUM VEHICLE LOADING TO AS1170.1-2002

**PRELIMINARY DRAWING**  
Not to be used for construction purposes



DRIVEWAY & CARPARK SLAB PLAN  
SCALE = 1:100

SLAB LEGEND

- DENOTES 3-N12 BARS x 2000 LONG OR 3-L11TM x 2000 LONG TIED TO UNDERSIDE OF MESH
- TOOL JOINT OR SAW CUT TO 1/3 SLAB DEPTH, PLACED WITHIN 24 HOURS OF CONCRETE POUR REFER DETAIL
- CONSTRUCTION JOINT - REFER S04 FOR DETAILS
- BLOCKWORK ARTICULATION JOINT. REFER SPECIFIC DETAIL. TO BE POSITIONED AT 6m MAXIMUM CENTRES
- DENOTES SPAN DIRECTION OF 0.75 BONDEK SLAB
- Ø300 REINFORCED CONCRETE COLUMN REFER DETAILS

STEELWORK MEMBER SCHEDULE		
MARK	MEMBER SIZE	REMARKS
B1	530UB82	GRADE 300 BEAM
B2	TO BE CONFIRMED	GRADE 300 BEAM

LOADING NOTE: SIGNAGE TO BE PROVIDED THAT VEHICLES OVER 10 TONNE ARE NOT PERMITTED TO USE THE DRIVEWAY

GEOTECHNICAL NOTES  
FOR GEOTECHNICAL NOTES REFER DRAWING S02

- DRIVEWAY & CARPARK SUSPENDED SLAB NOTES
- CONCRETE EXPOSURE CLASSIFICATION = B1 TO AS3600-2018
  - DRIVEWAY - 125mm THICK (T) SLAB ON 0.75 BMT BONDEK REINFORCED WITH ONE LAYER SL92 MESH TOP WITH 30mm COVER.  
CARPARK - 150mm THICK (T) SLAB ON 0.75 BMT BONDEK REINFORCED WITH ONE LAYER SL92 MESH TOP WITH 30mm COVER.
  - CONCRETE IS TO BE GRADE N32 (32 MPa STRENGTH AT 28 DAYS)
  - BONDEK TO HAVE MIN BEARING DISTANCE 50mm, AND TO BE INSTALLED AS PER MANUFACTURERS SPECIFICATIONS.
  - ONE ROW OF TEMPORARY PROPS TO BE PROVIDED FOR EACH SPAN >1.8m.
  - TEMPORARY PROPS AND FORMWORK TO REMAIN IN PLACE UNTIL CONCRETE REACHES MIN 20 MPa STRENGTH, AS DETERMINED BY SAMPLE CYLINDER TESTING BY A NATA REGISTERED LABORATORY.
  - M19 x 75mm SHEAR STUDS COMPLYING WITH AS2327.1-2003 ARE TO BE PROVIDED TO STEELWORK SUPPORTS AT 200 MAX CTS, USING A HAND HELD ARC STUD WELDING GUN TO AS1554-2011.

- DRIVEWAY & CARPARK LOADING NOTES
- ALL LOADS ARE ACCORDING TO AS1170
  - DEAD LOADS:
    - A) SELF WEIGHT OF STEELWORK STRUCTURE
    - B) CONCRETE SLAB = 25kN/m<sup>3</sup>
  - LIVE LOADS:
    - A) 20kPa MEDIUM VEHICLE LOADING TO AS1170.1-2002
  - WIND LOADS:
    - A) REGION A, TERRAIN CATEGORY 2.5 TO AS1170.2 : 2021
    - B) Mf=Ms=1.0, STRUCTURAL IMPORTANCE LEVEL 2 TO AS1170.2-2021

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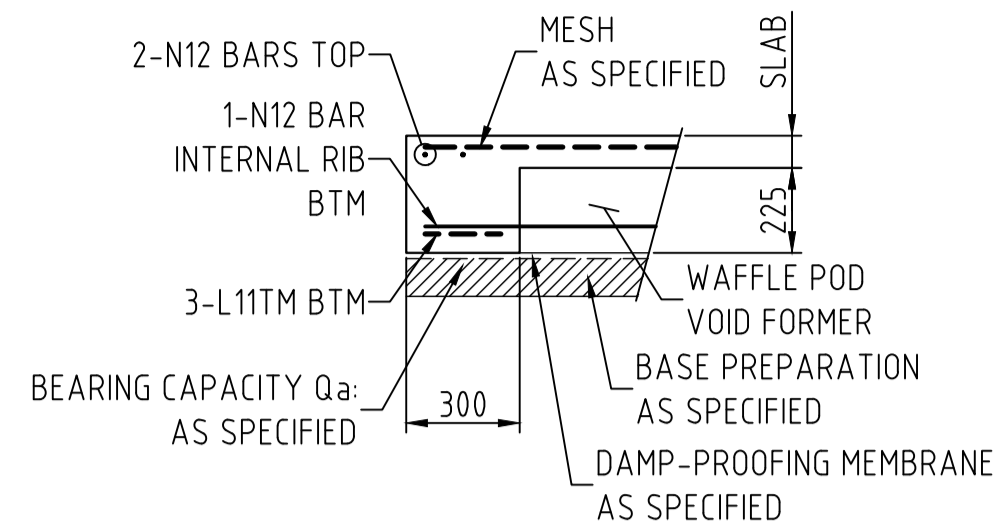
Drawing Title  
**DRIVEWAY & CARPARK SLAB PLAN**

Design TR  
Drawn EC  
Check JS

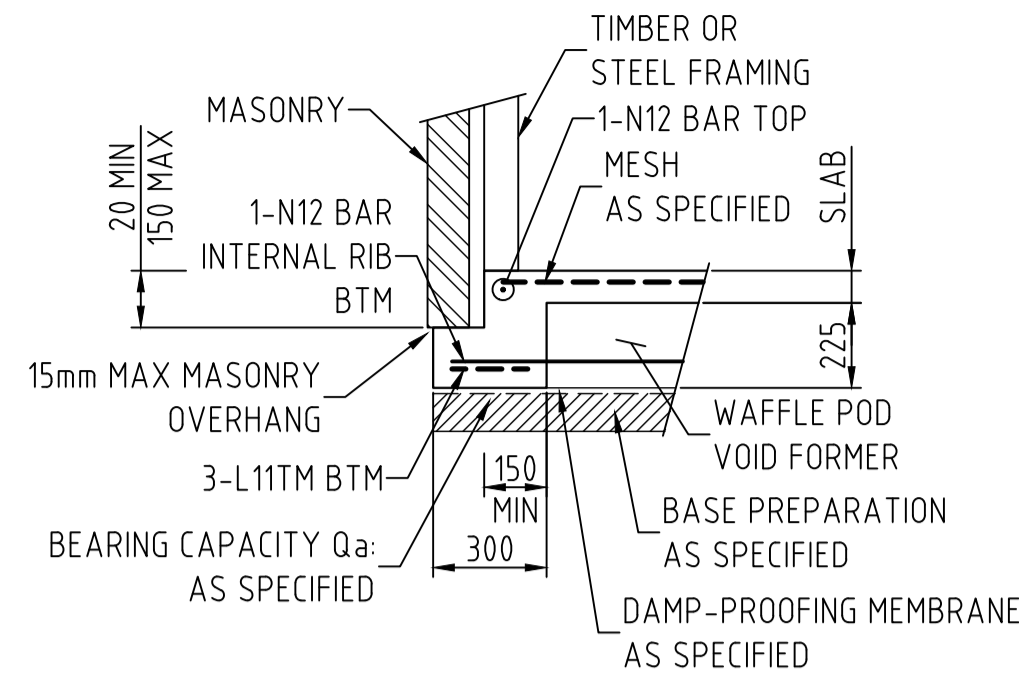
Original Sheet Size  
Revision

Certification  
Project No  
Drawing No

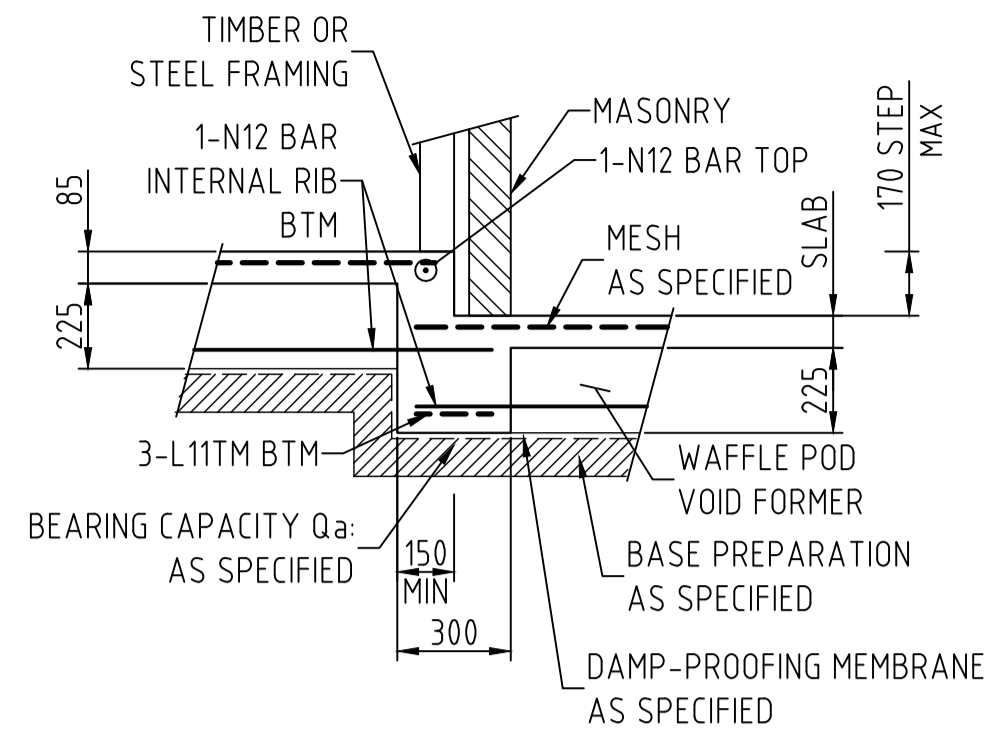
40560  
**S104**



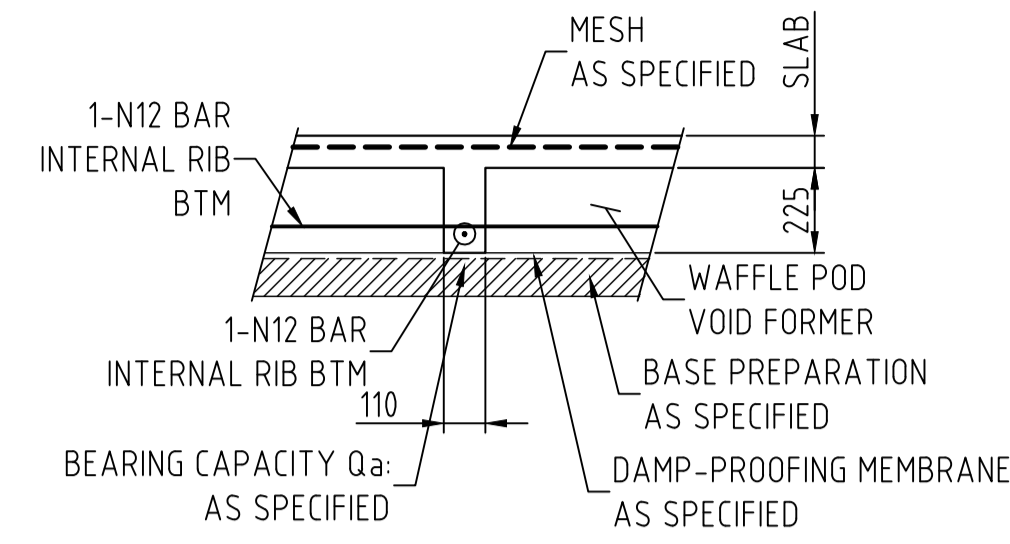
**EB1 - EDGE BEAM**  
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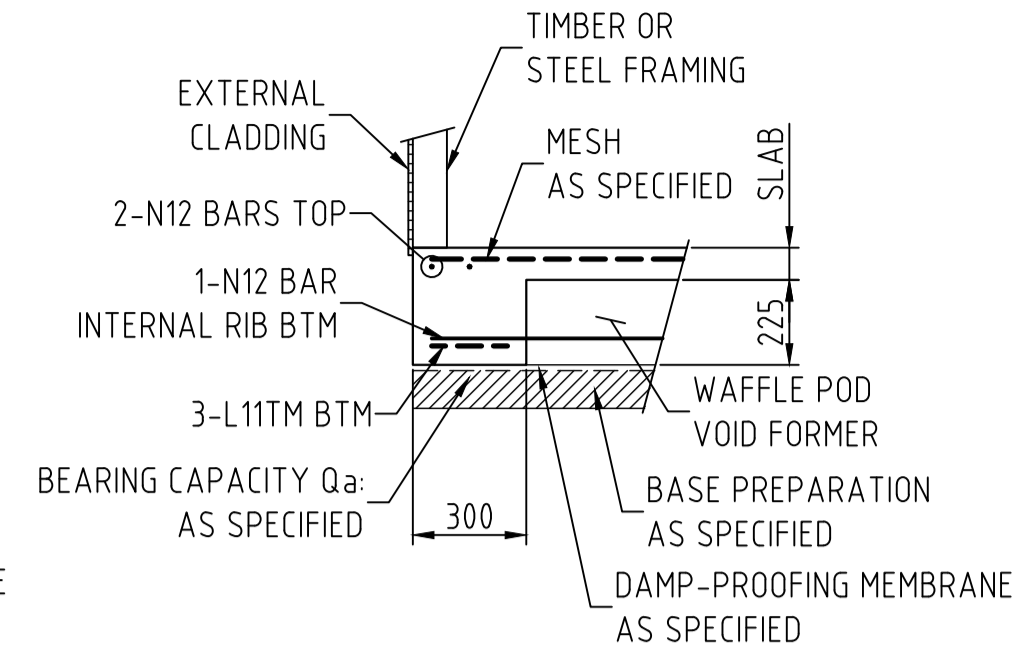
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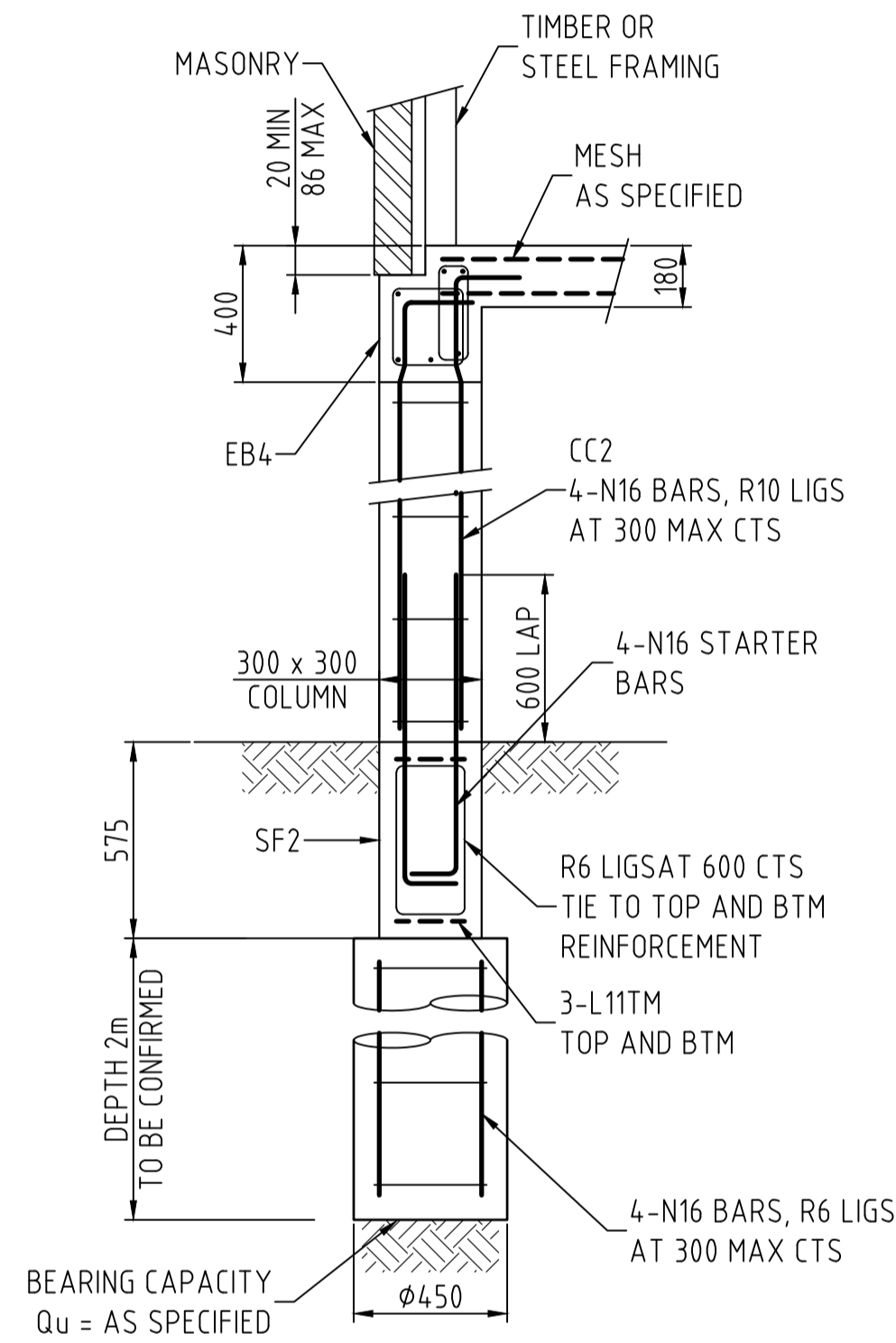
**ES1 - EXTERNAL STEP**  
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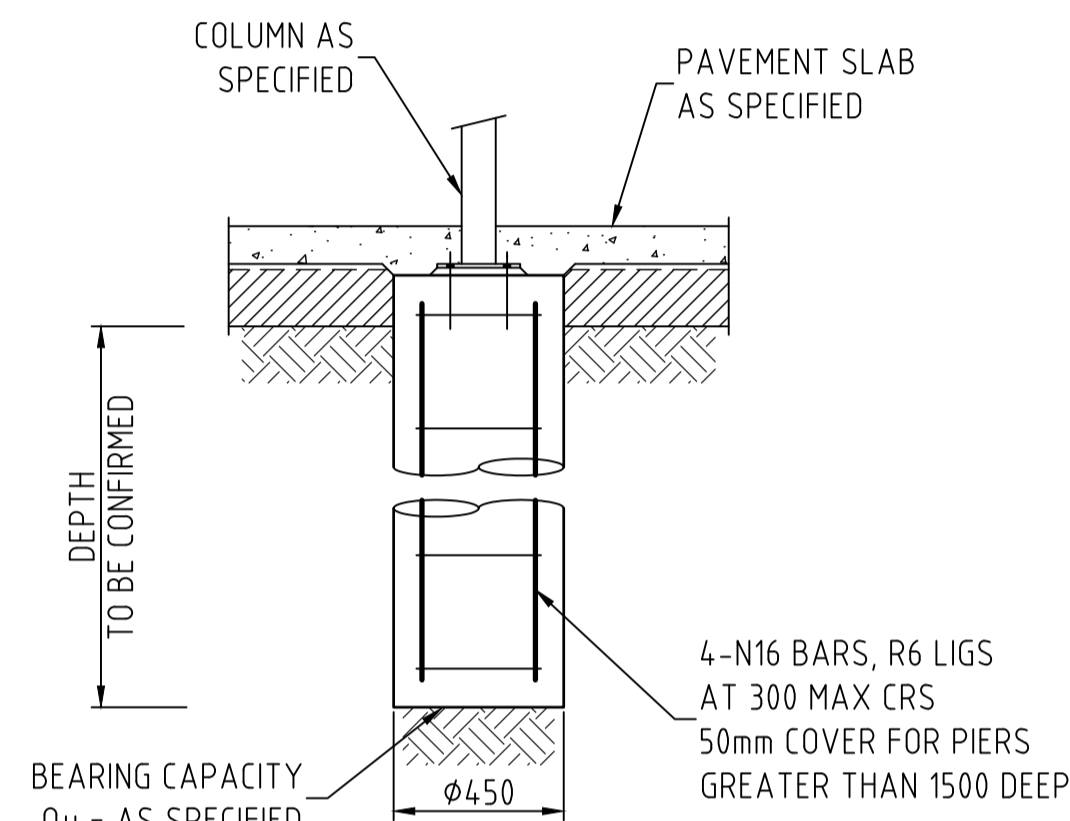
**IB1 - INTERNAL BEAM**  
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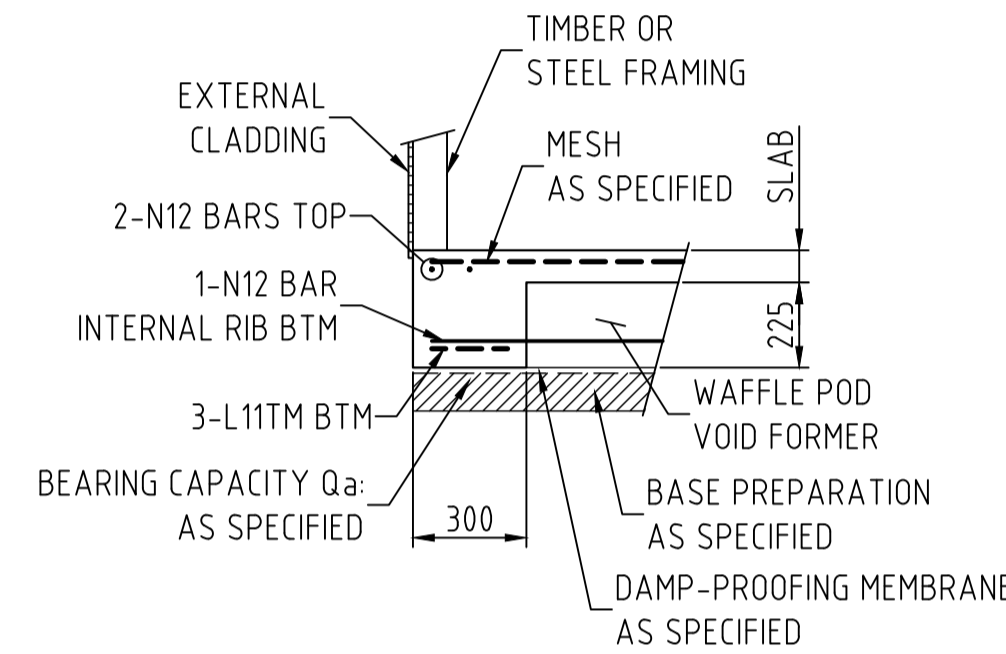
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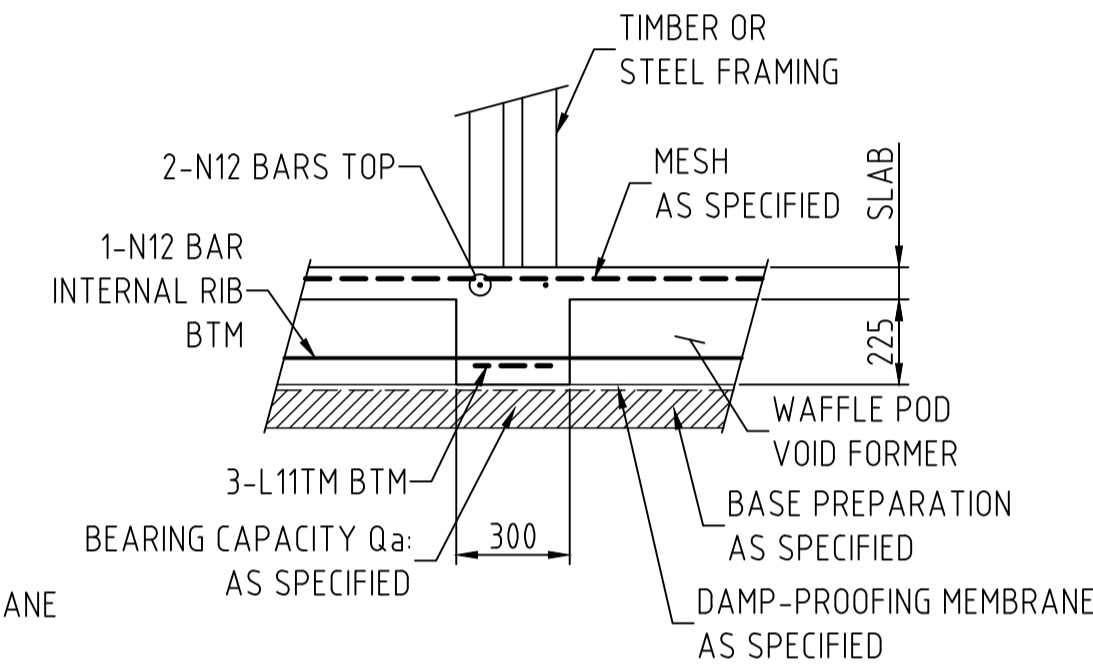
**P2 - PIER + SF2 - STRIP FOOTING**  
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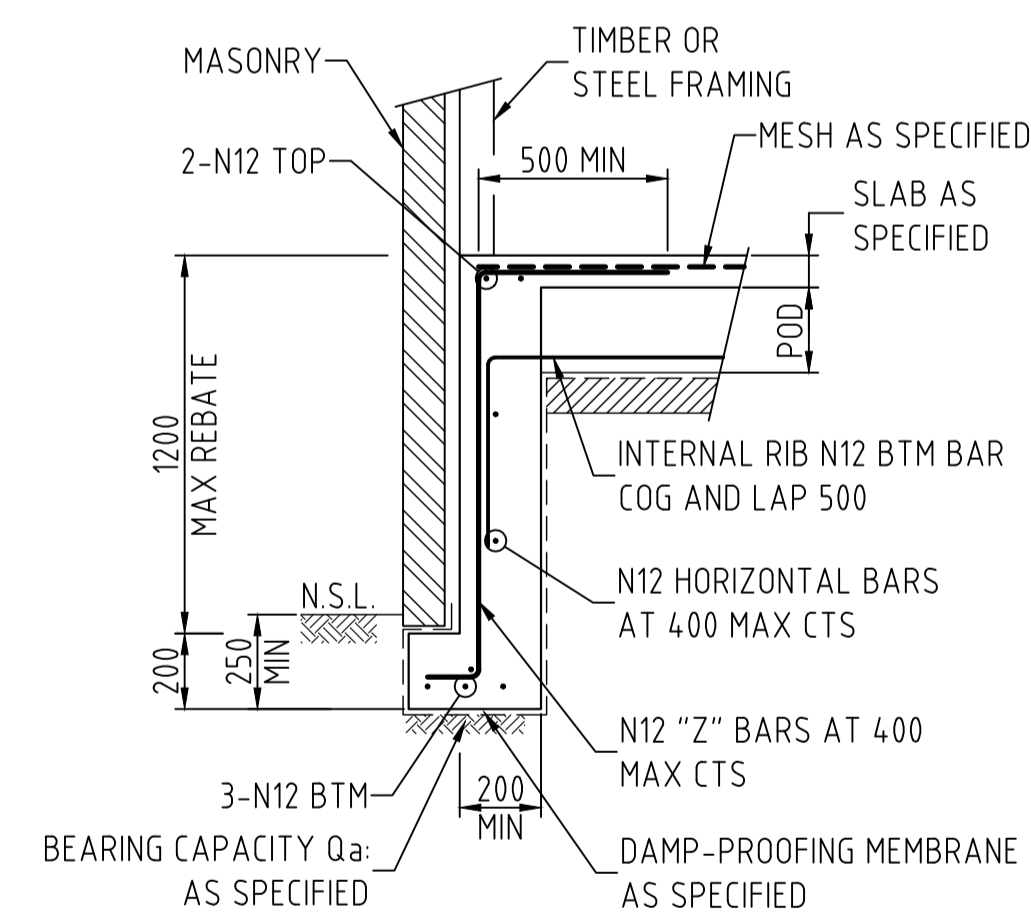
**P1 - PIER**  
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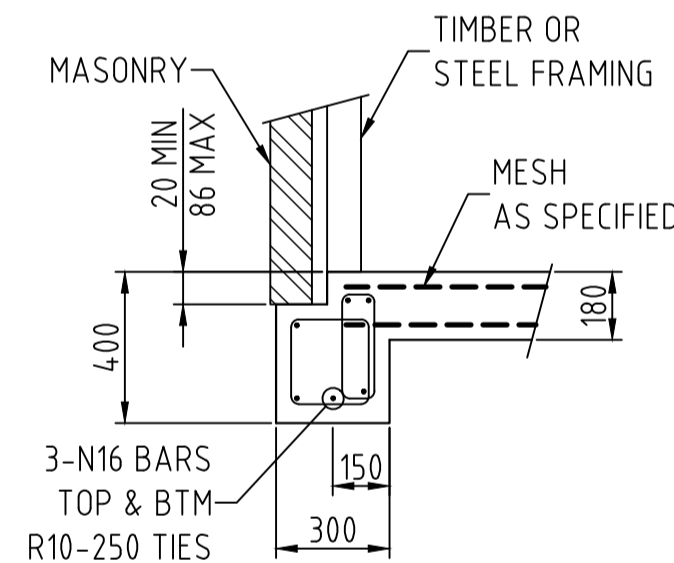
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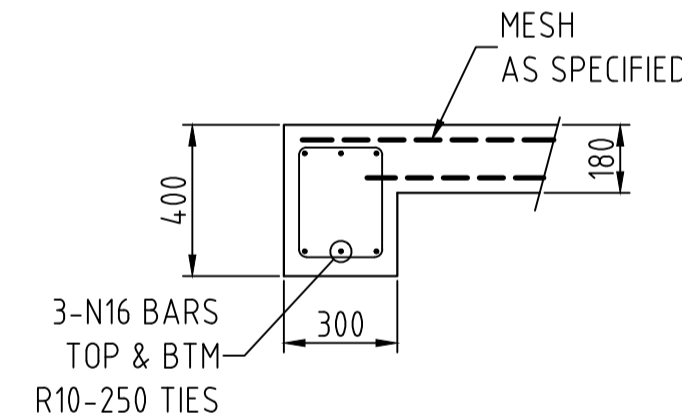
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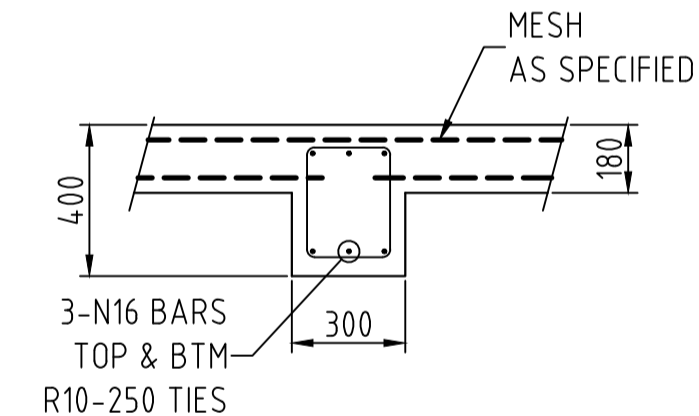
**1200mm MAX REBATE**  
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**EB4 - EDGE BEAM**  
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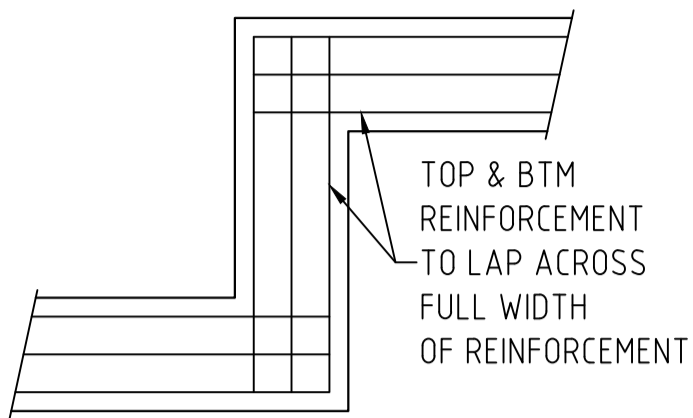


**EB5 - EDGE BEAM**  
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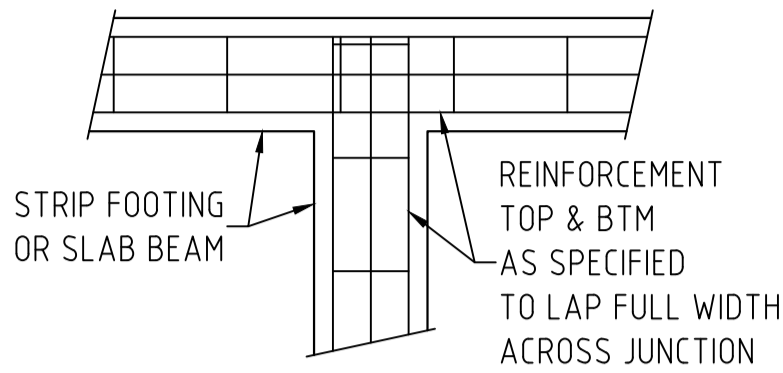


**IB4 - INTERNAL BEAM (IB3 SIMILAR)**  
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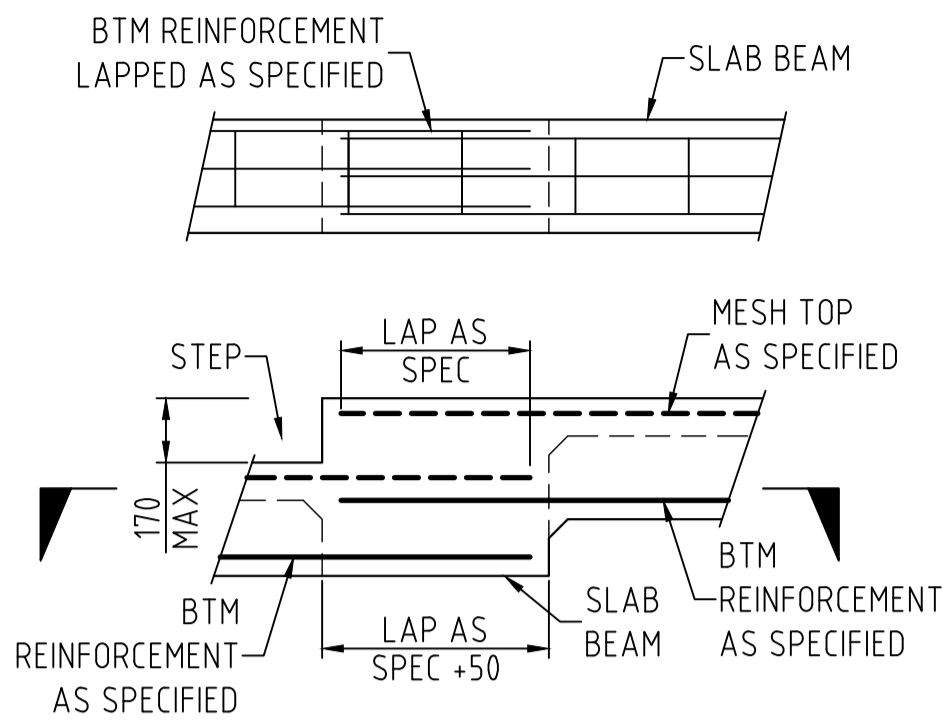
**PRELIMINARY DRAWING**  
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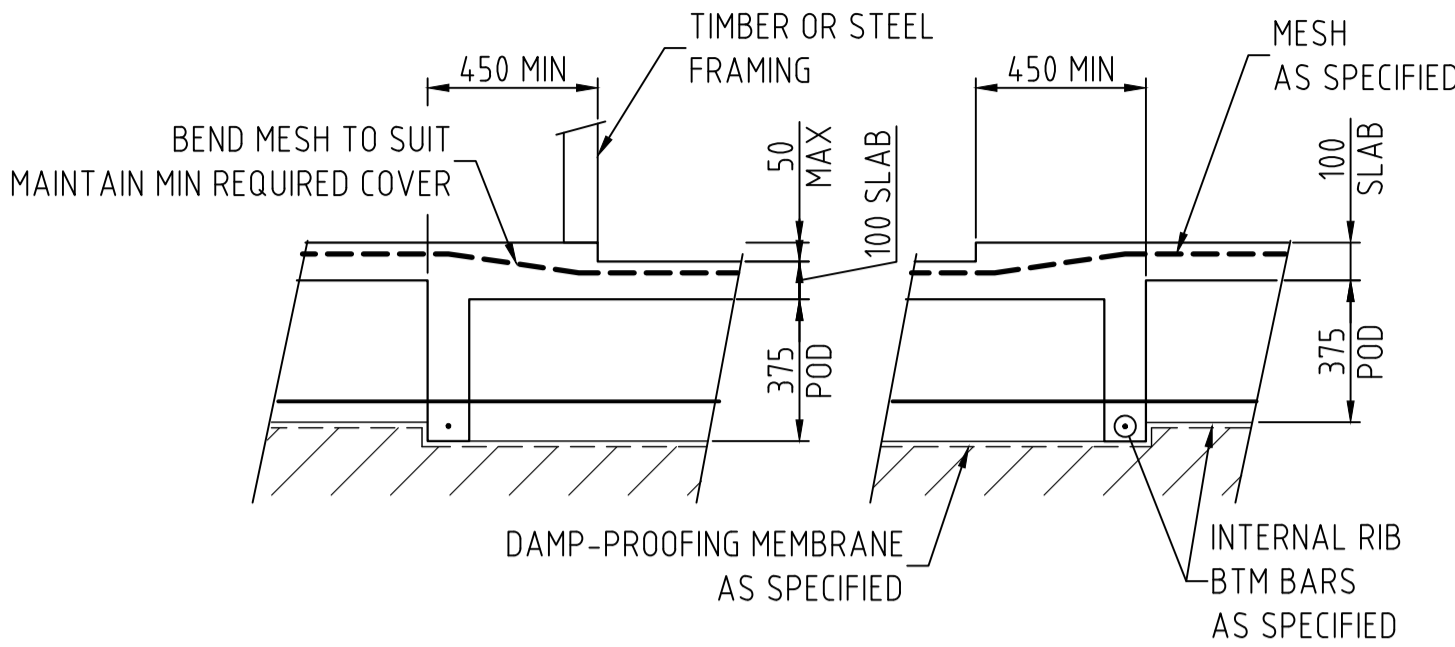
**BEAM "L" INTERSECTION DETAIL**  
SCALE = 1:20



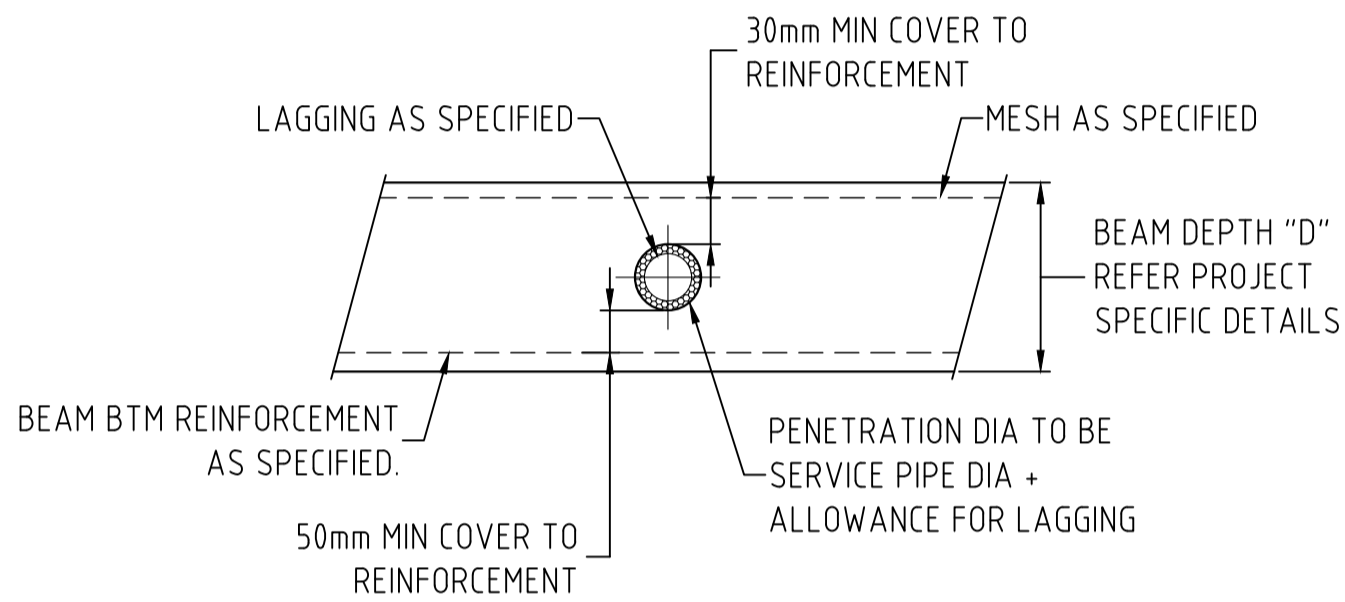
**BEAM "T" INTERSECTION DETAIL**  
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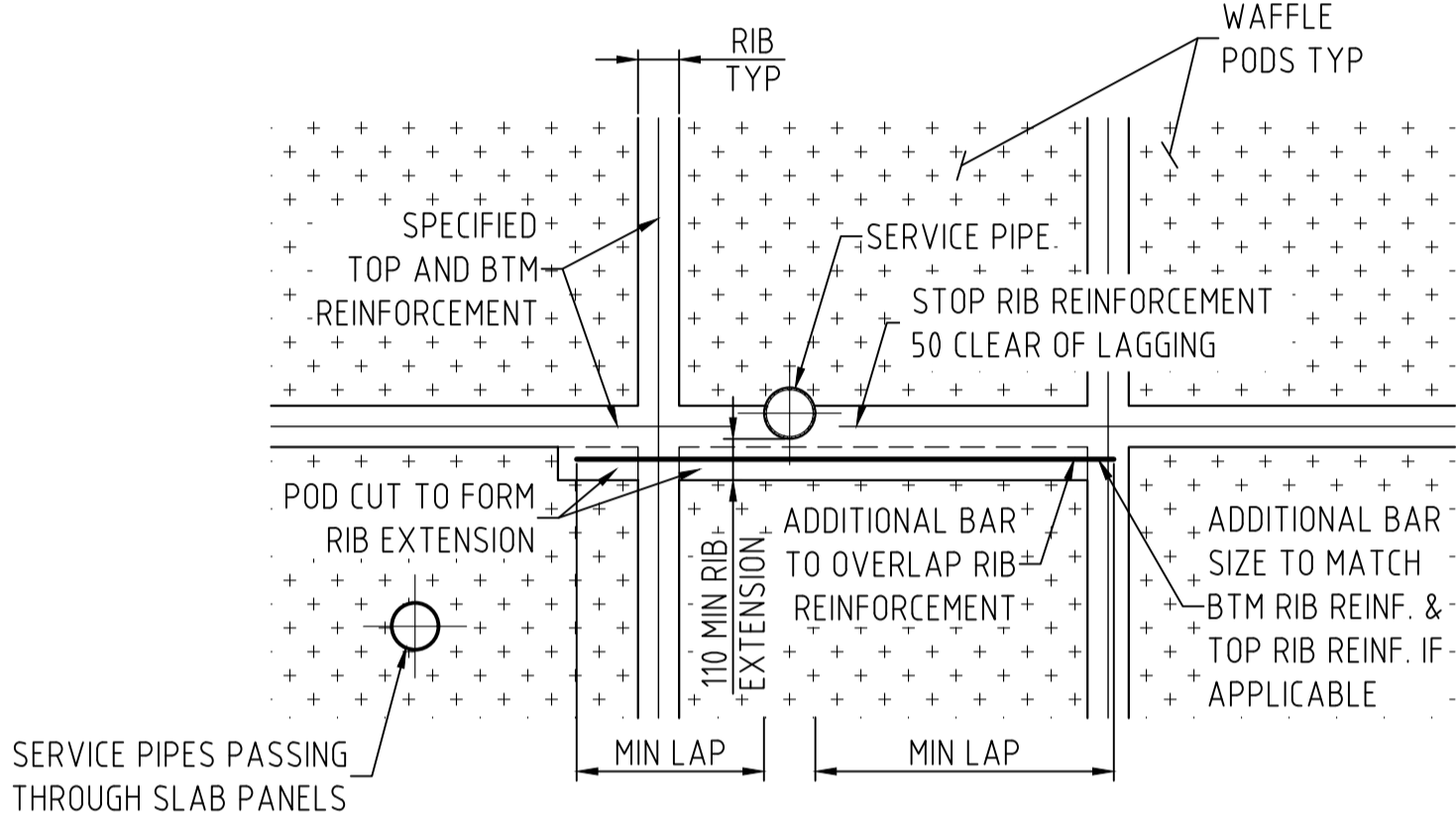
**CONTINUOUS SLAB BEAMS  
WITH DIFFERENT FOUNDING LEVELS**  
SCALE = 1:20



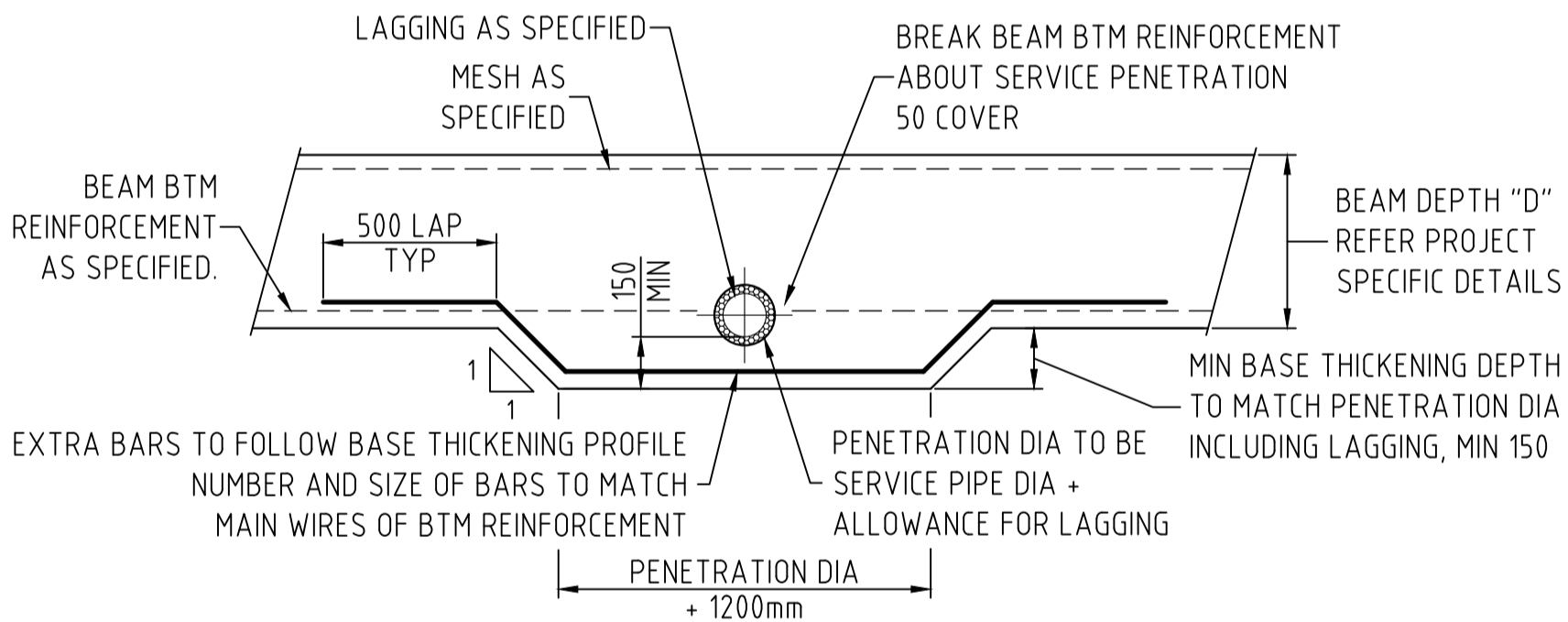
**WET AREA RECESS**  
SCALE = 1:20



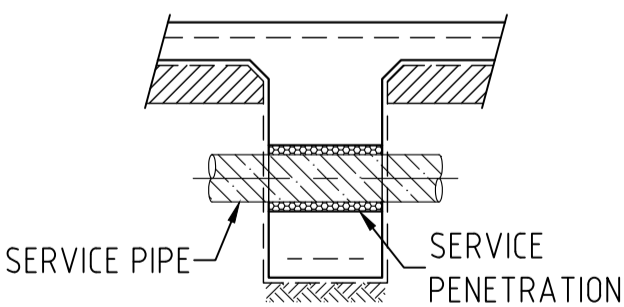
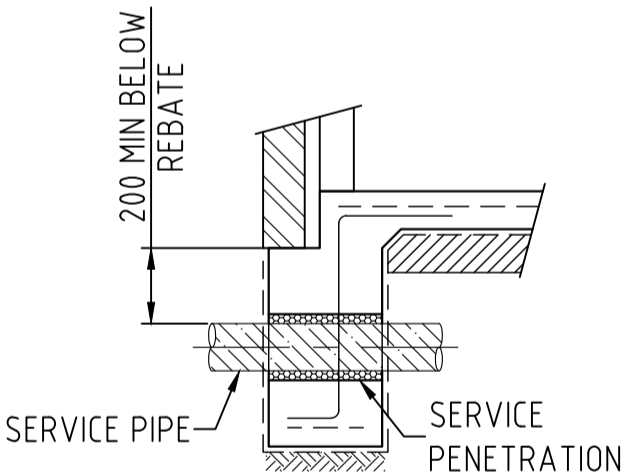
**HORIZONTAL SERVICE PIPE PENETRATION  
THRU MIDDLE THIRD OF BEAM**  
SCALE = 1:20



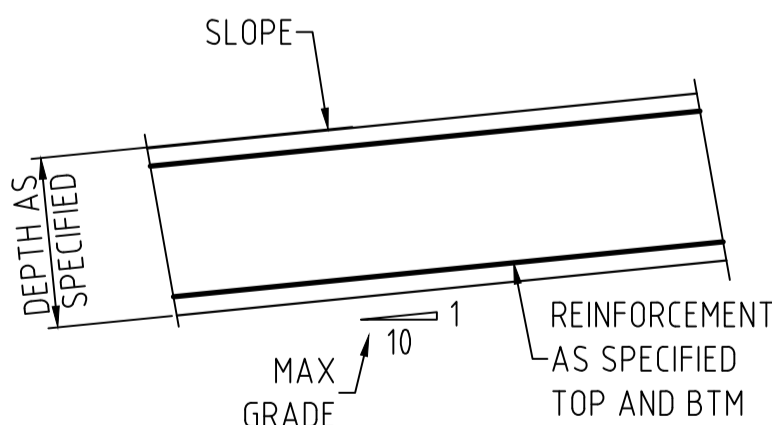
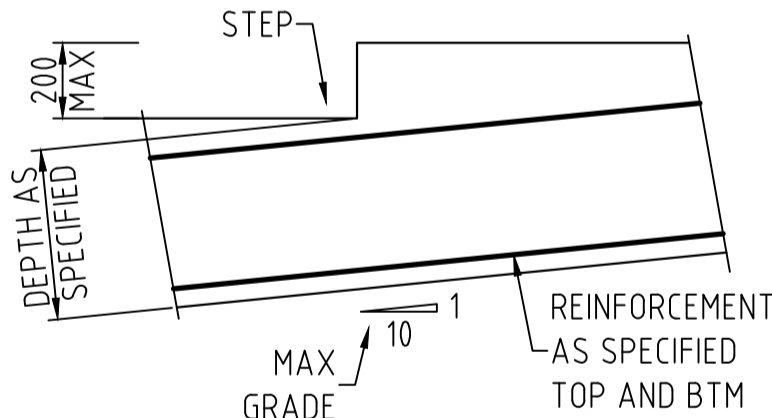
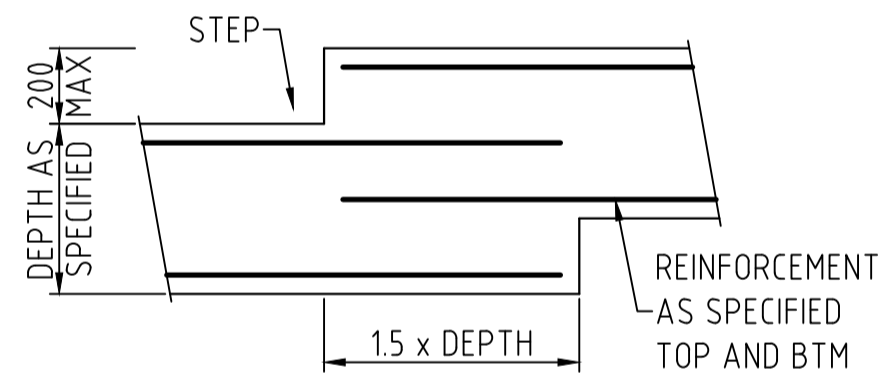
**VERTICAL SERVICE PIPE PENETRATION  
THRU WAFFLE POD RIB**  
SCALE = 1:20



**HORIZONTAL SERVICE PIPE PENETRATION  
THRU LOWER REGION OF BEAM**  
SCALE = 1:20



**SERVICE PIPE PENETRATION  
TYPICAL SECTIONS THRU BEAMS**  
SCALE = 1:20

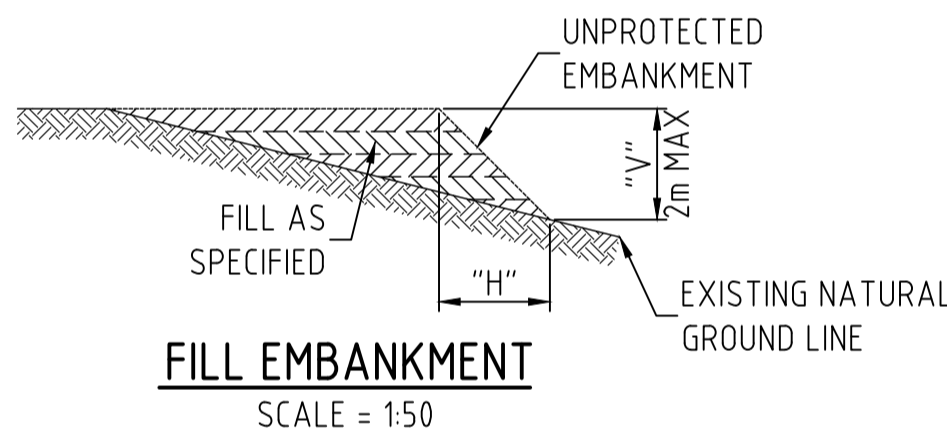


**TYPICAL FOOTING STEP DETAILS**  
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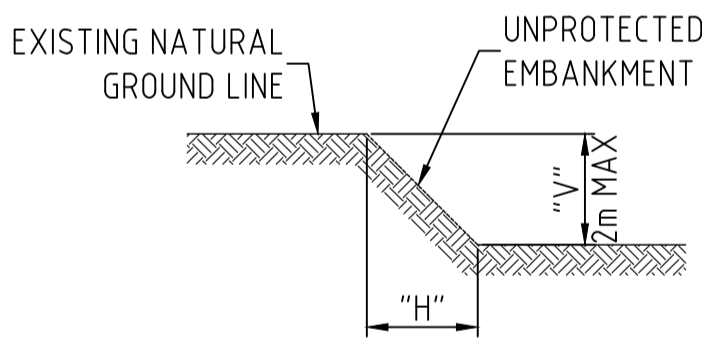
**EXCAVATION NOTES**

- ANY PERMANENT VERTICAL OR NEAR VERTICAL EXCAVATION WITHIN 2m OF A BUILDING, AND DEEPER THAN 600mm SHALL BE BATTERED OR RETAINED.
- THE GRADIENT OF UNPROTECTED EMBANKMENT FOR EXCAVATION INCLUDING BOTH CUT AND FILL SHALL BE ASCERTAINED FROM THE "UNPROTECTED EMBANKMENTS" TABLE.
- EXCAVATION ADJACENT EXISTING BUILDINGS:
  - EXCAVATION WORK FOR FOOTINGS, DRAINAGE TRENCHES OR OTHER SIMILAR WORKS ARE TEMPORARY.
  - ELEMENTS REQUIRED SHOULD BE INSTALLED & CONSTRUCTED AS SOON AS PRACTICABLE AFTER EXPOSING THE EXISTING BUILDING FOOTING.
  - THE EXISTING FOOTING SHOULD NOT REMAIN EXPOSED AFTER THE COMPLETION OF WORKS.
- RETAINING WALLS OR OTHER TYPES OF SOIL RETAINING METHODS MUST BE INSTALLED WHERE:
  - THE GRADIENT RATIO IS GREATER THAN THAT DESCRIBED IN THE "UNPROTECTED EMBANKMENTS" TABLE.
  - SITE SOIL CLASSIFICATION OR DESCRIPTION IS NOT DESCRIBED IN THE "UNPROTECTED EMBANKMENTS" TABLE.
- FILL SHALL BE PLACED AS FOLLOWS:
  - THE GRADIENT RATIO OF FILL DETAILS SHALL BE ASCERTAINED FROM THE "UNPROTECTED EMBANKMENTS" TABLE.
  - GENERAL FILL SHALL BE PLACED AND COMPACTED IN LAYERS WITH A VIBRATING PLATE OR SIMILAR COMPACTION EQUIPMENT TO ATTAIN STABILITY.
  - WHERE FILL IS TO BE USED TO SUPPORT FOOTINGS OR SLABS, IT SHALL BE **CONTROLLED FILL**.
- EMBANKMENTS THAT ARE TO BE LEFT EXPOSED AT THE END OF CONSTRUCTION WORKS MUST BE STABILISED BY VEGETATION OR SIMILAR WORKS TO PREVENT SOIL EROSION.

UNPROTECTED EMBANKMENTS		
SITE CLASSIFICATION OR NATURAL SOIL MATERIAL DESCRIPTION	COMPACTED FILL V-H GRADIENT RATIO	CUT V-H GRADIENT RATION
CLASS "A"- STABLE ROCK	2 : 3	8 : 1
CLASS "A"- SAND	1 : 2	1 : 2
CLASS "S", "M", "M-D" - FIRM CLAY	1 : 2	1 : 1
CLASS "S", "M", "M-D"- SOFT CLAY	NOT SUITABLE	2 : 3
CLASS "H1", "H1-D", "H2", "H2-D", "P"- SOFT SOILS	NOT SUITABLE	NOT SUITABLE
CLASS "P"- SILT	1 : 4	1 : 4



**FILL EMBANKMENT**  
SCALE = 1:50

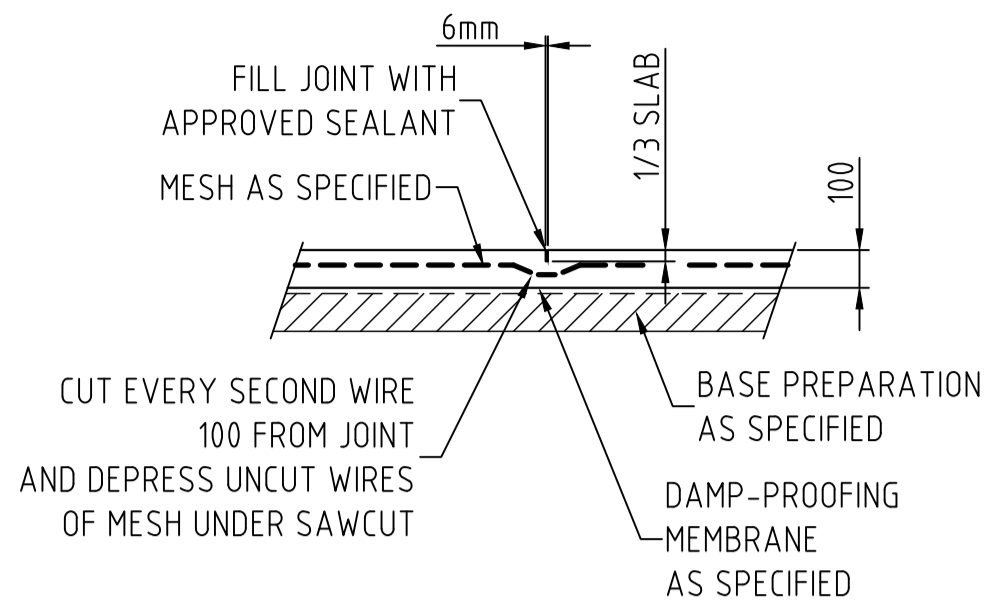


**CUT EMBANKMENT**  
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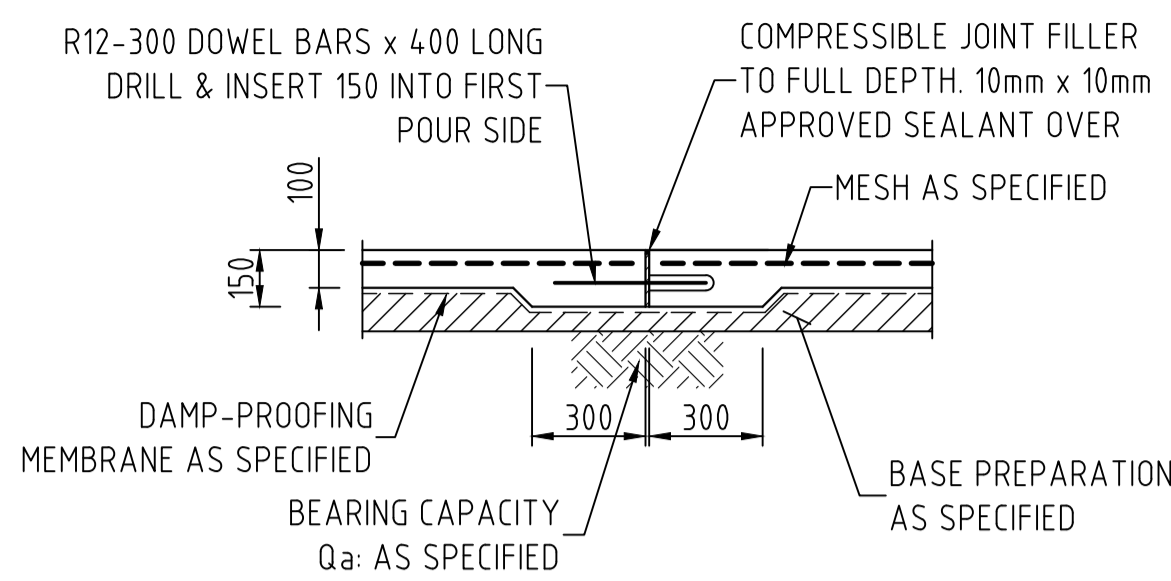
**SERVICE PENETRATION NOTES**

- HORIZONTAL SERVICE PENETRATIONS AS DEPICTED ARE DESIGNED TO SUIT PIPES UP TO A MAXIMUM DIAMETER OF ONE THIRD OF THE DESIGN BEAM DEPTH. i.e. D/3.
- ALL HORIZONTAL PIPE PENETRATIONS THROUGH SLAB BEAMS OR RIBS ARE TO BE WRAPPED IN CLOSED CELL POLYETHYLENE LAGGING TO SUIT THE SITE CLASSIFICATION. NO LAGGING IS REQUIRED FOR SITE CLASSIFICATIONS A AND S. LAGGING NOT REQUIRED FOR VERTICAL SERVICE PANEL PENETRATIONS
- WAFFLE POD SLAB TOP AND BOTTOM REINFORCEMENT REQUIRED SHALL BE ASCERTAINED FROM THE REINFORCEMENT REQUIREMENTS TABLE ON DRAWING S02

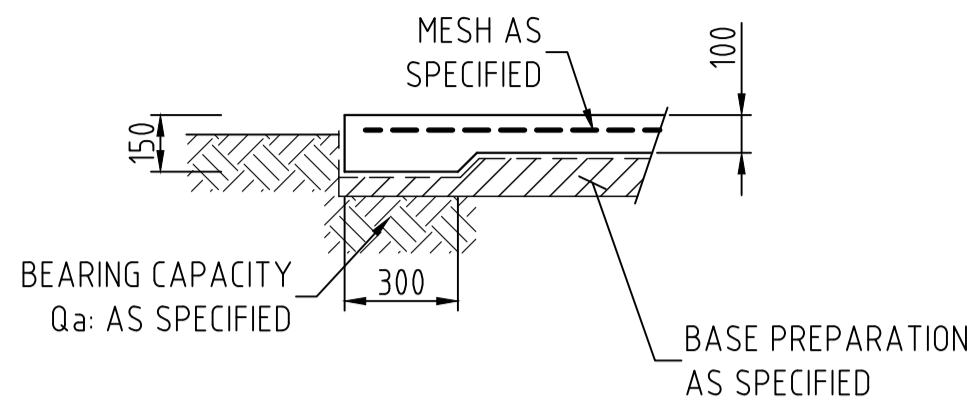
**PRELIMINARY DRAWING**  
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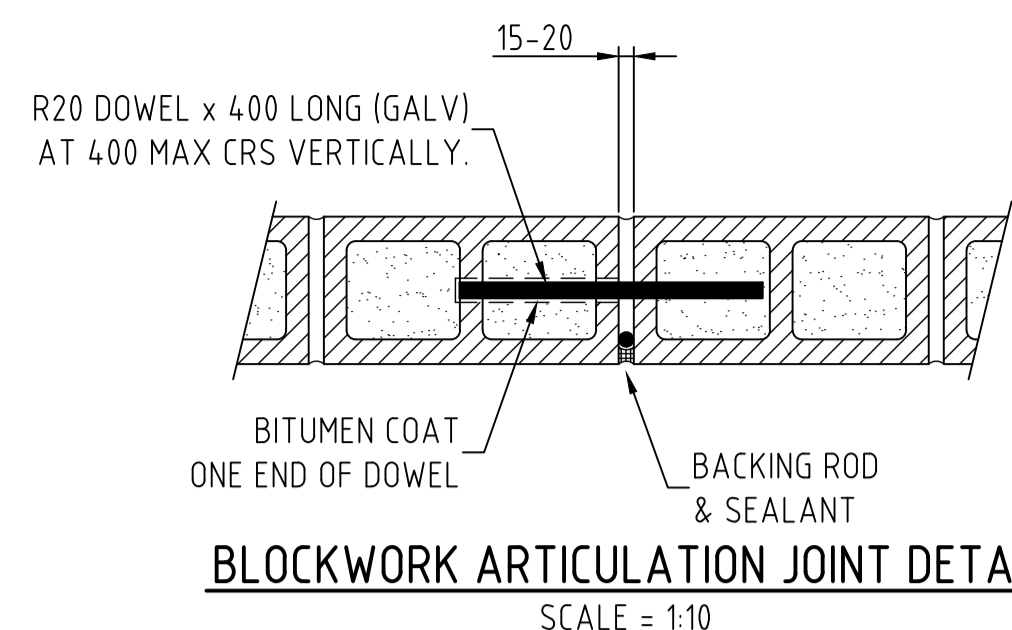
**FOOTPATH SAW JOINT - SJ**  
SCALE = 1:20



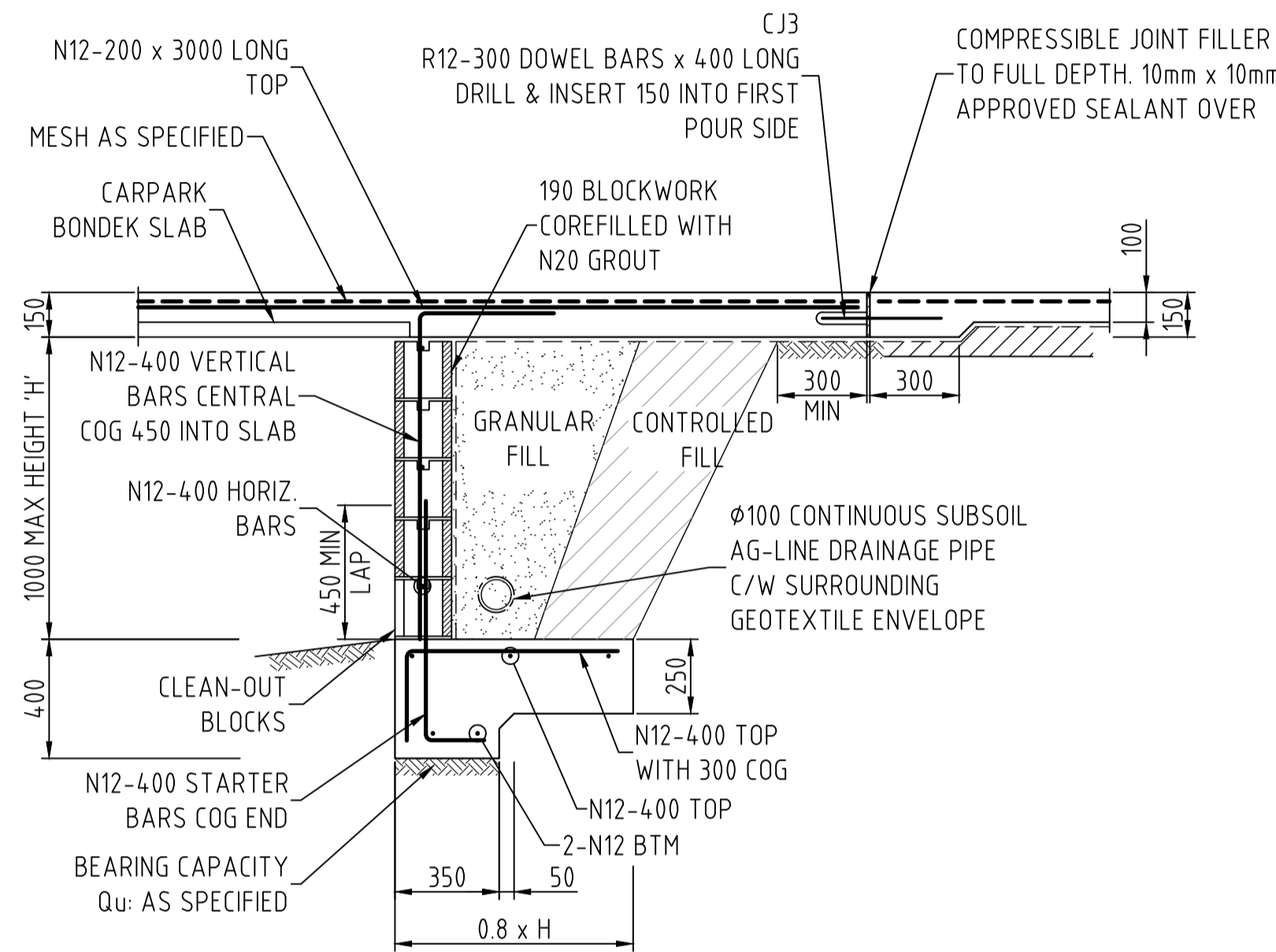
**FOOTPATH CONSTRUCTION JOINT - CJ**  
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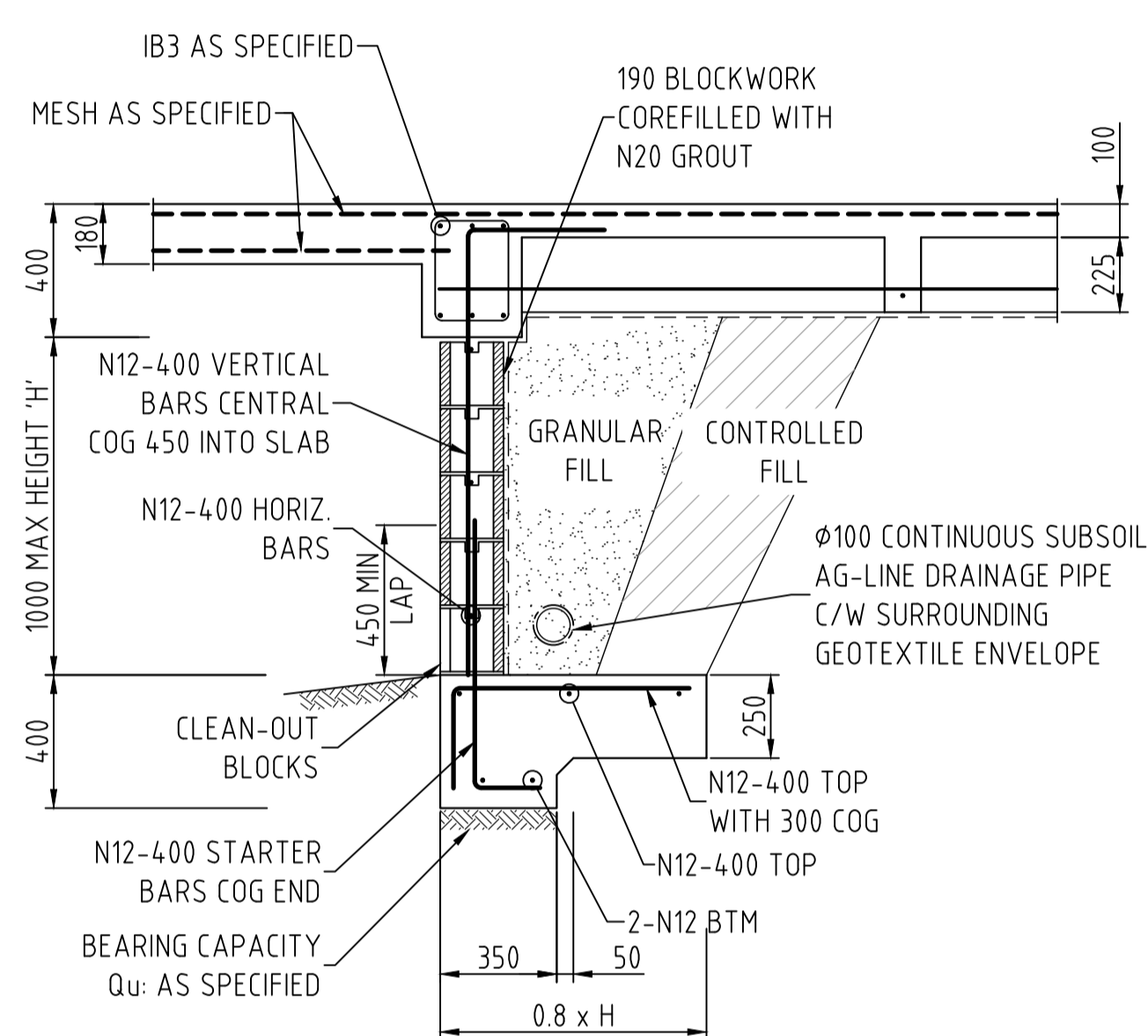
**EDGE THICKENING - ET1**  
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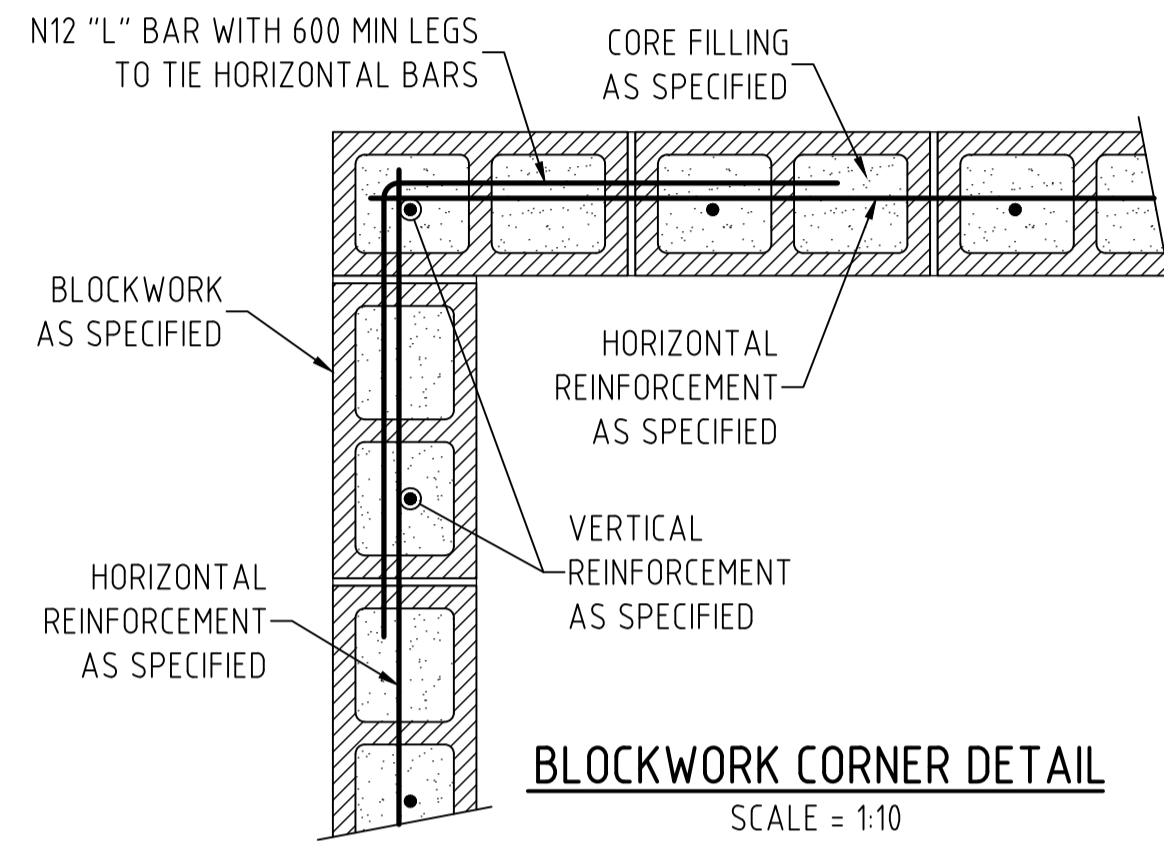
**BLOCKWORK ARTICULATION JOINT DETAIL**  
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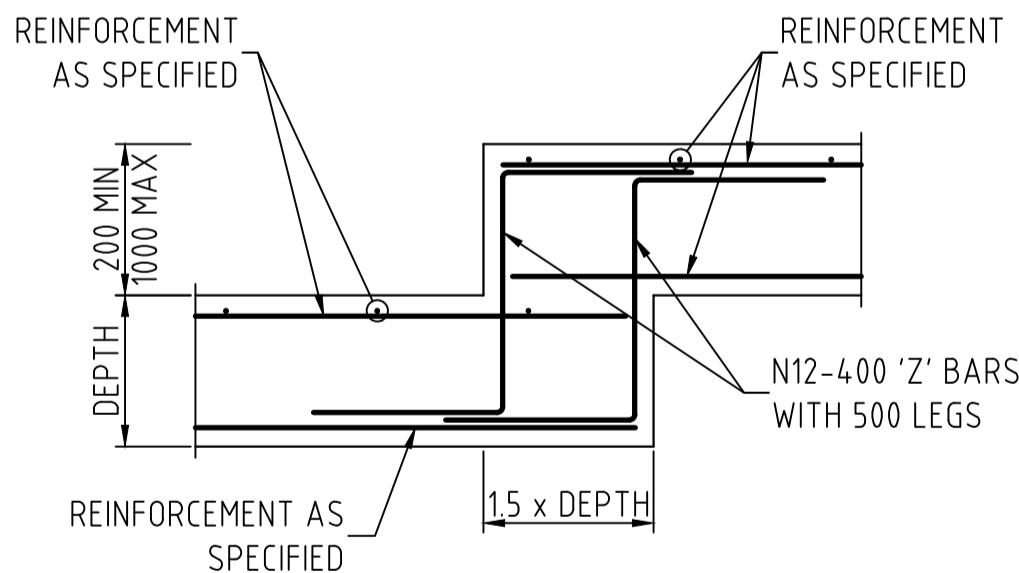
**RETAINING WALL - RW1 AT CARPARK**  
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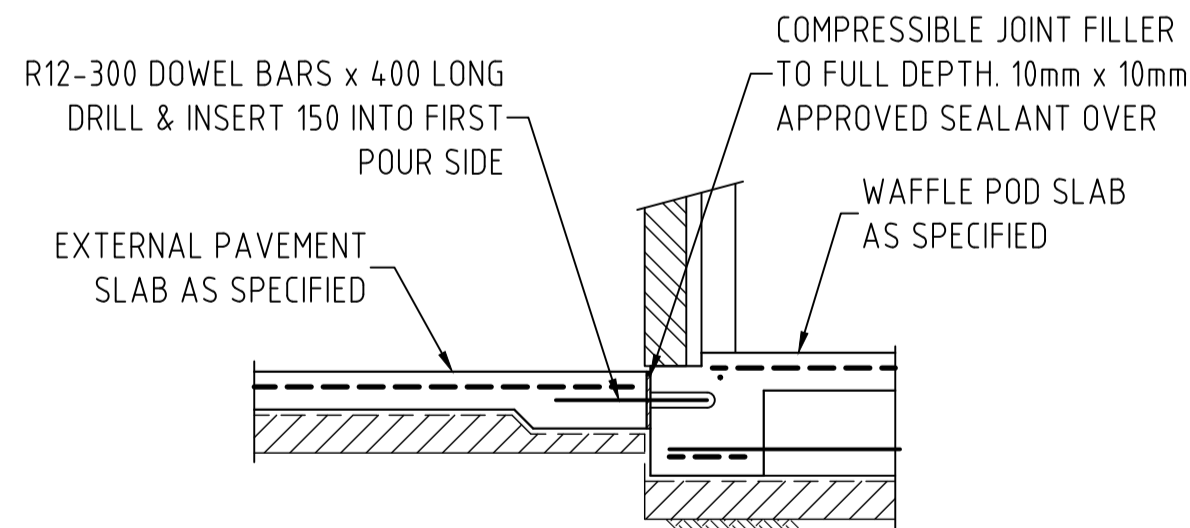
**RETAINING WALL - RW1 AT CORE BUILDING**  
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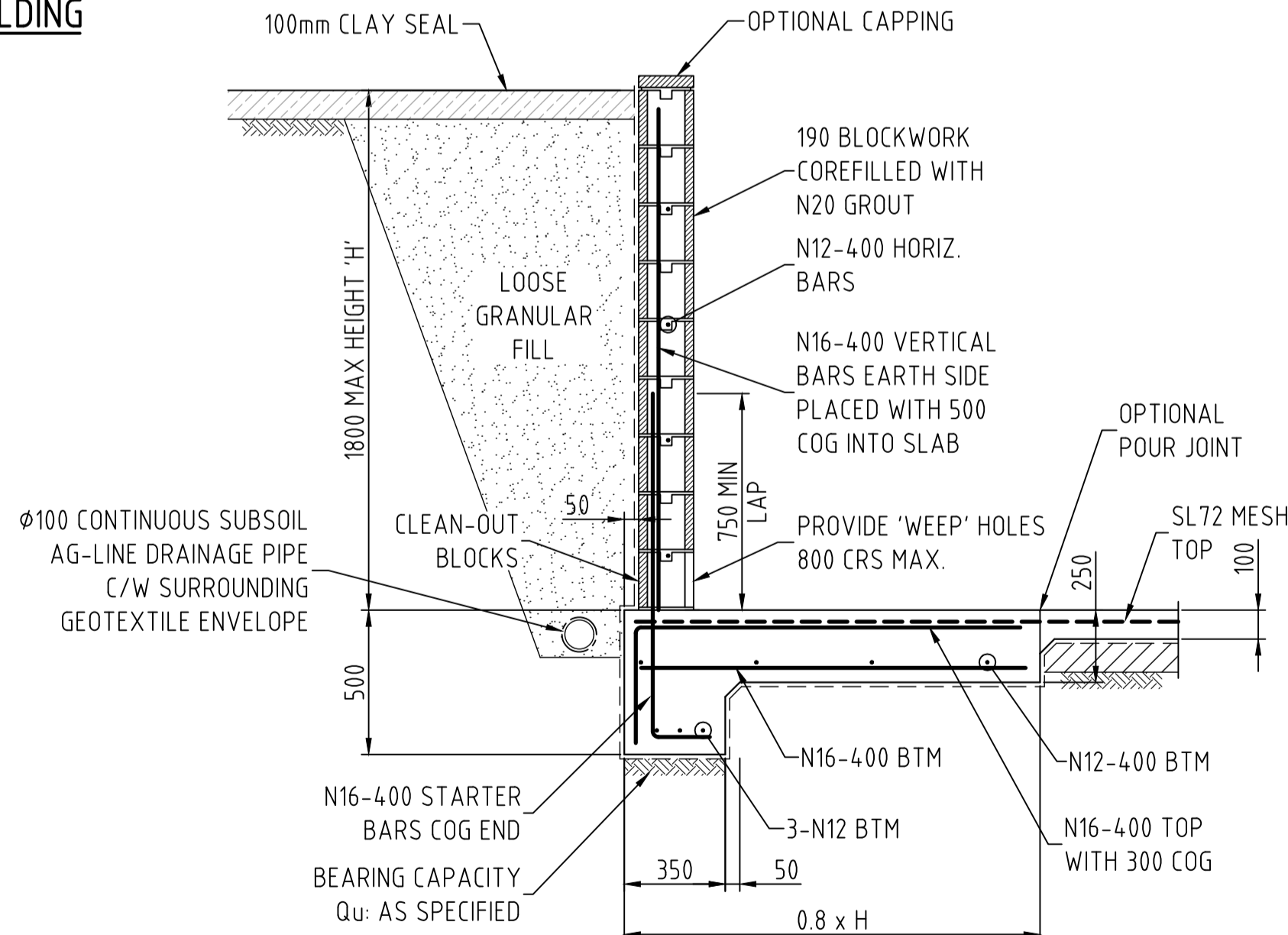
**BLOCKWORK CORNER DETAIL**  
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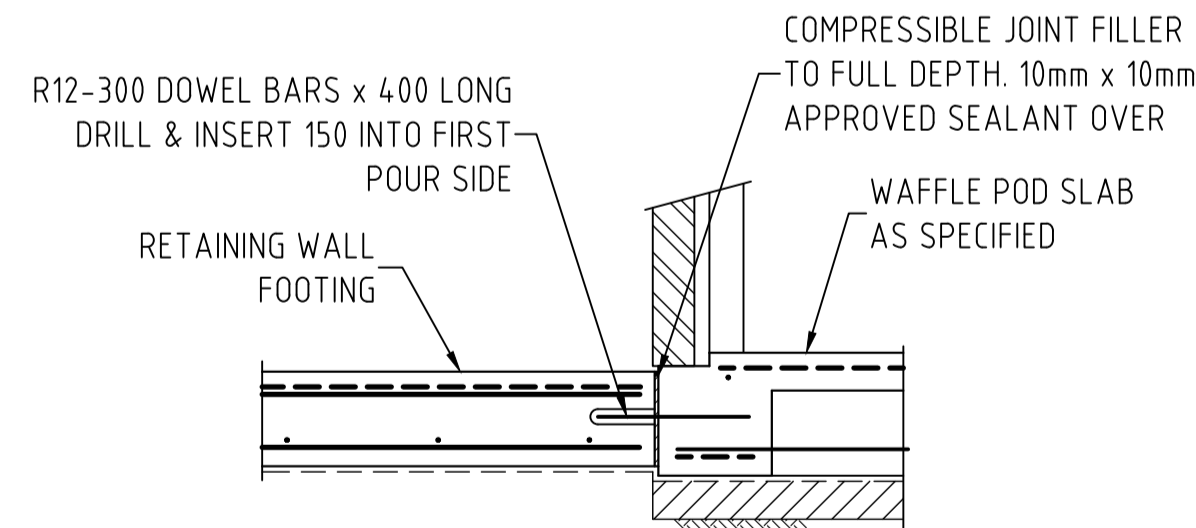
**TYPICAL RETAINING WALL FOOTING STEP DETAIL**  
SCALE = 1:20



**CONSTRUCTION JOINT - CJ1**  
SCALE = 1:20



**RETAINING WALL - RW2**  
SCALE = 1:20

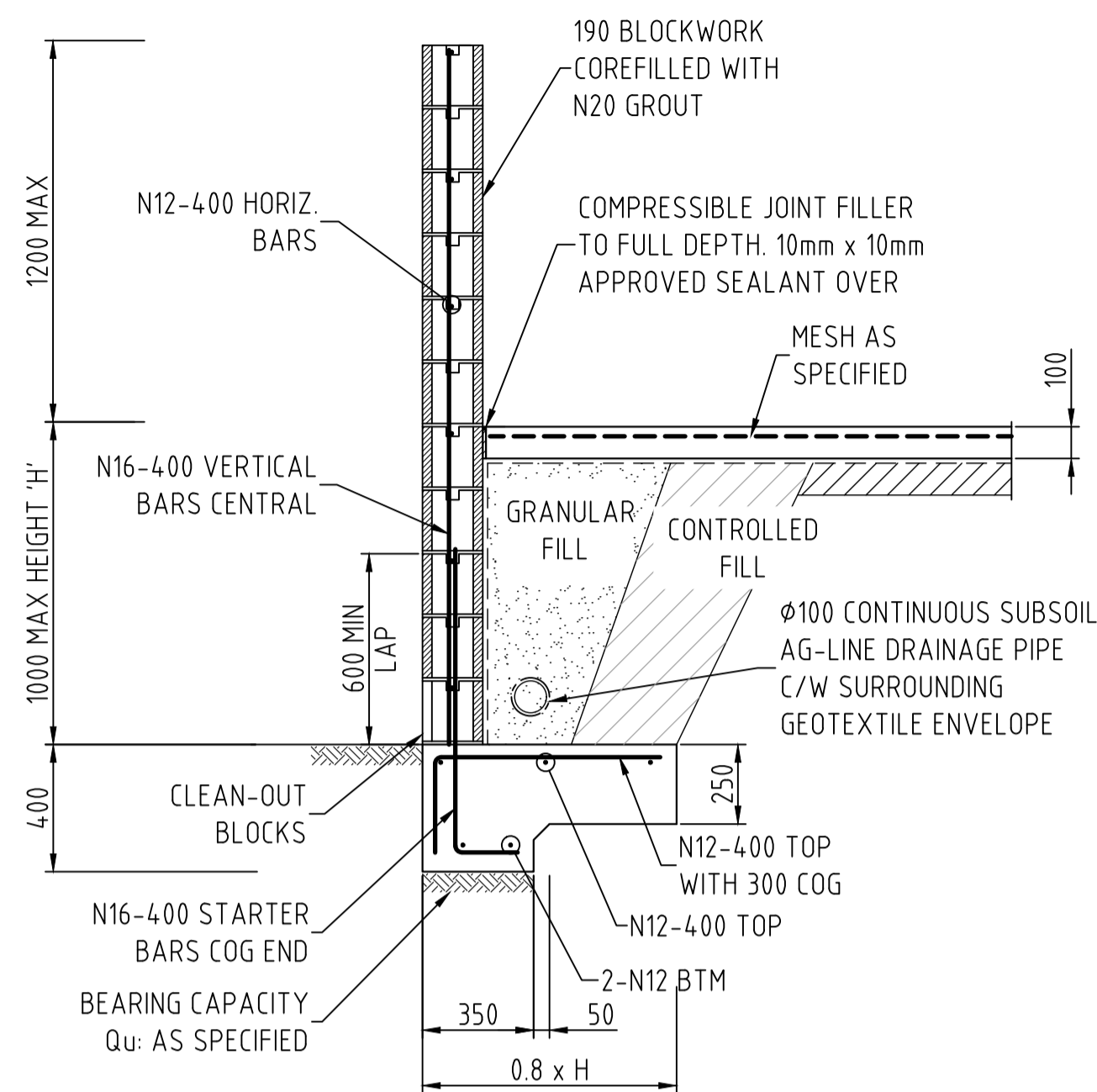


**CONSTRUCTION JOINT - CJ2**  
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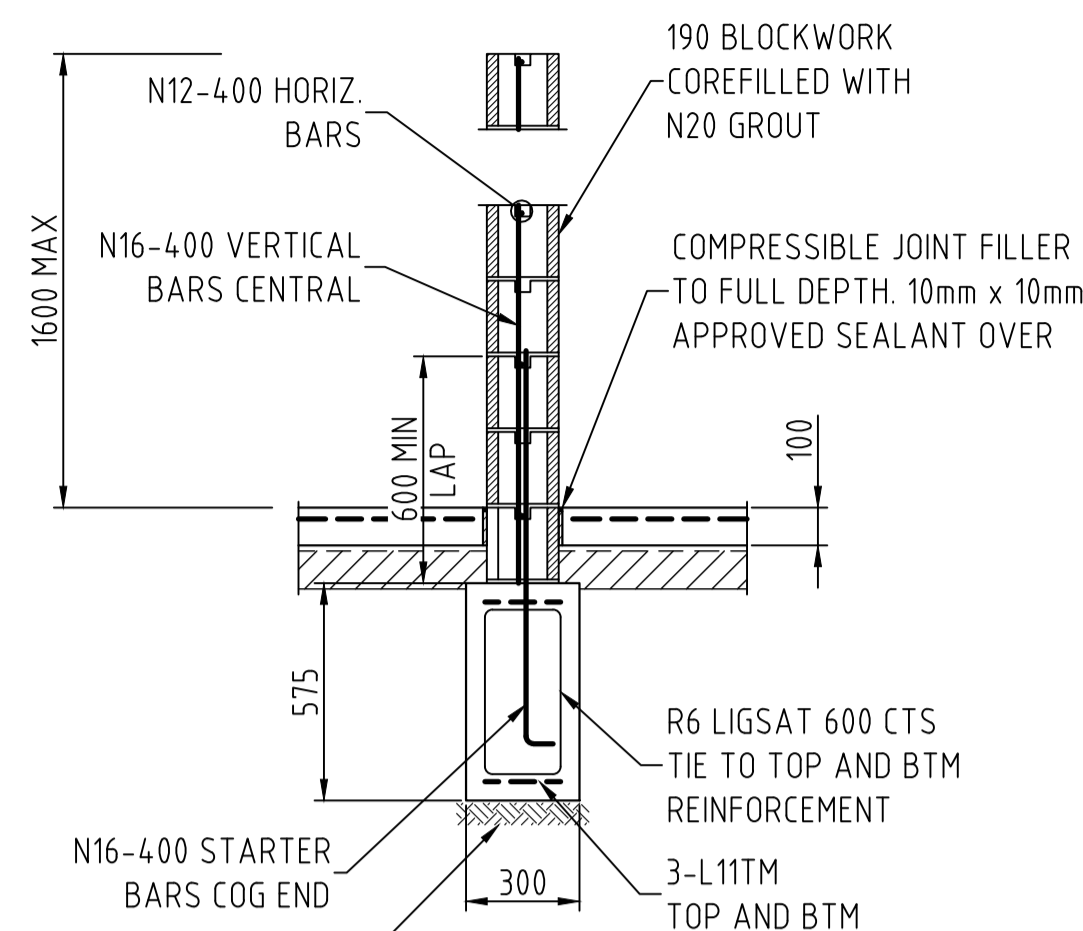
- MASONRY NOTES**
1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3700-2001.
  2. THE DESIGN STRENGTH OF MASONRY SHALL BE IN ACCORDANCE WITH THE MASONRY SCHEDULE BELOW. MORTAR ADMIXTURES SHALL NOT BE USED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
  3. MORTAR JOINTS SHALL BE 10mm THICK AND HAVE A MAXIMUM TOOLED DEPTH OF 3mm UNLESS NOTED OTHERWISE.
  4. CLEANOUT HOLES SHALL BE PROVIDED AT THE BASE OF ALL CORES OR CAVITIES WHICH ARE TO BE GROUTED OR FILLED.
  5. REINFORCING STEEL SHALL BE FIXED SECURELY IN POSITION PRIOR TO GROUTING.
  6. ALL MORTAR OBSTRUCTIONS IN CORES OR CAVITIES SHALL BE REMOVED PRIOR TO GROUTING & FILLING. THIS MAY BE DONE USING A ROD FROM THE TOP OF THE WALL. ALL MORTAR THUS REMOVED SHALL BE CLEANED FROM THE BOTTOM OF THE WALL PRIOR TO CLEAN OUT HOLES BEING CLOSED FOR GROUTING.
  7. GROUT FOR BOND BEAMS, LINTELS, CORE FILLING OR CAVITY FILLING SHALL COMPRISE OF A MIX OF CEMENT : LIME : 10mm AGGREGATE = 1:0.25:3 UNLESS OTHERWISE NOTED. MAXIMUM SLUMP TO BE 230mm.
  8. CORES AND CAVITIES SHALL BE FILLED IN 1000mm MAXIMUM LIFTS WHERE REQUIRED.
  9. GROUT SHALL BE THOROUGHLY COMPACTED USING A PLAIN BAR.
  10. NO CHASES SHALL BE CUT INTO LOAD BEARING MASONRY WALLS WITHOUT THE APPROVAL OF THE ENGINEER.
  18. ALL MASONRY ANCHORS ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.

MASONRY SCHEDULE		
ELEMENT	CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH (MPa)	MORTAR MIX CEMENT : LIME : SAND
LOADBEARING BLOCK WALLS	12	
LOADBEARING BRICK WALLS	40	

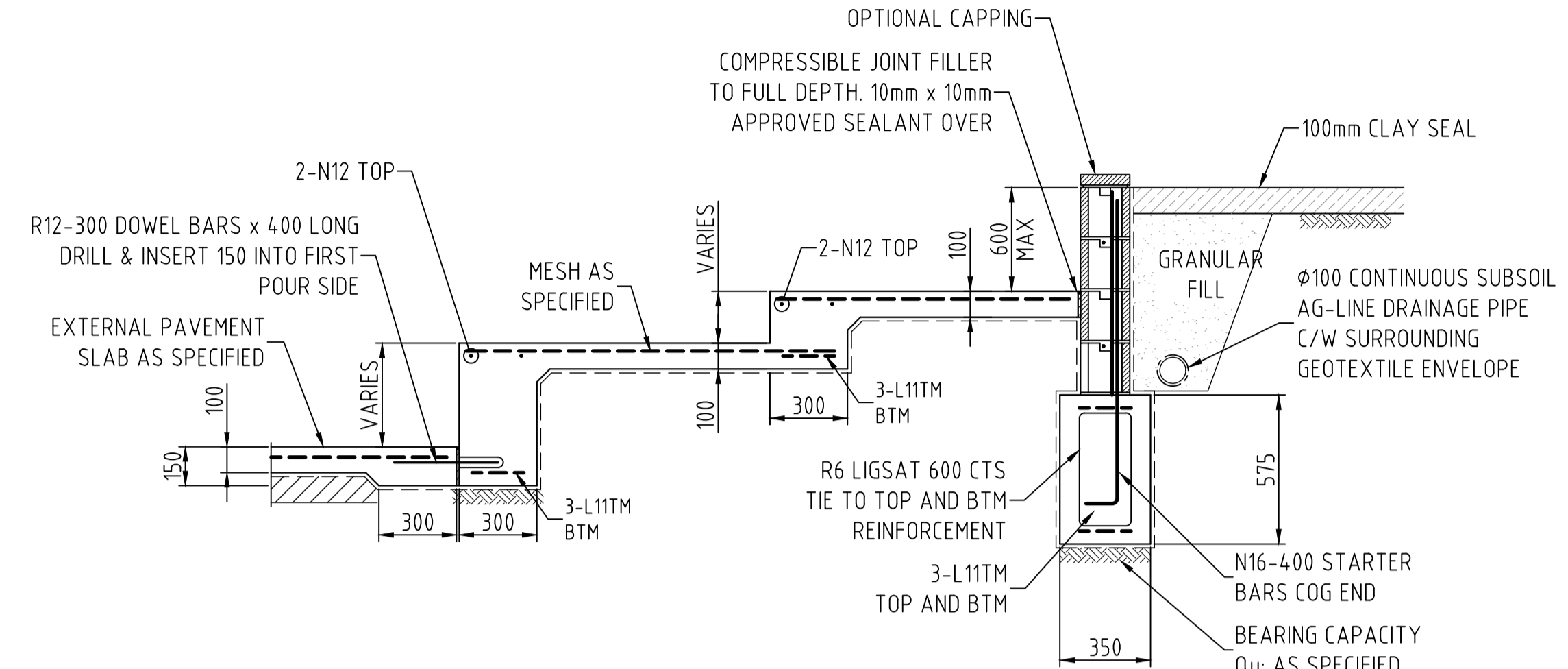
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**RETAINING WALL - RW3**  
SCALE = 1:20

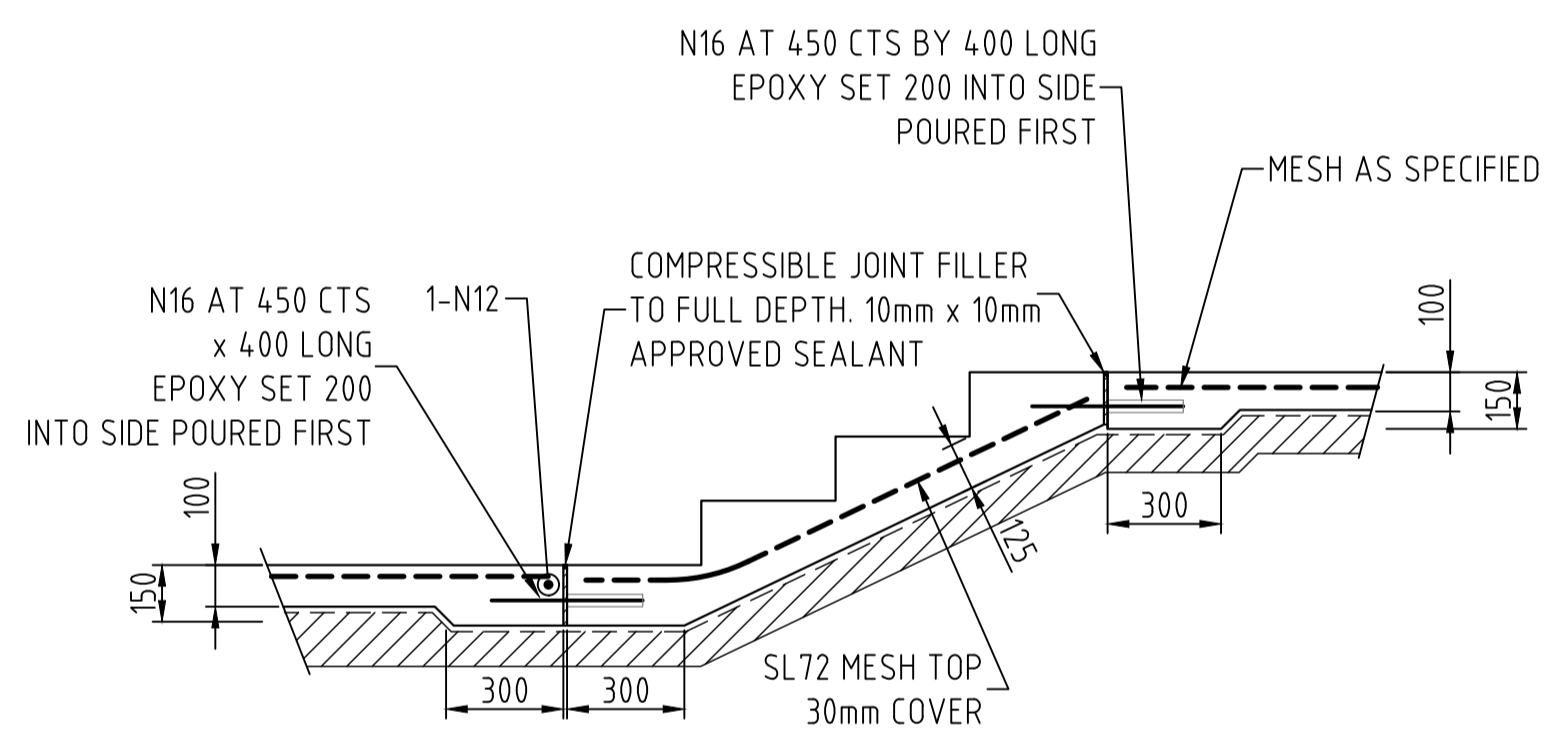


**STRIP FOOTING - SF2**  
SCALE = 1:20

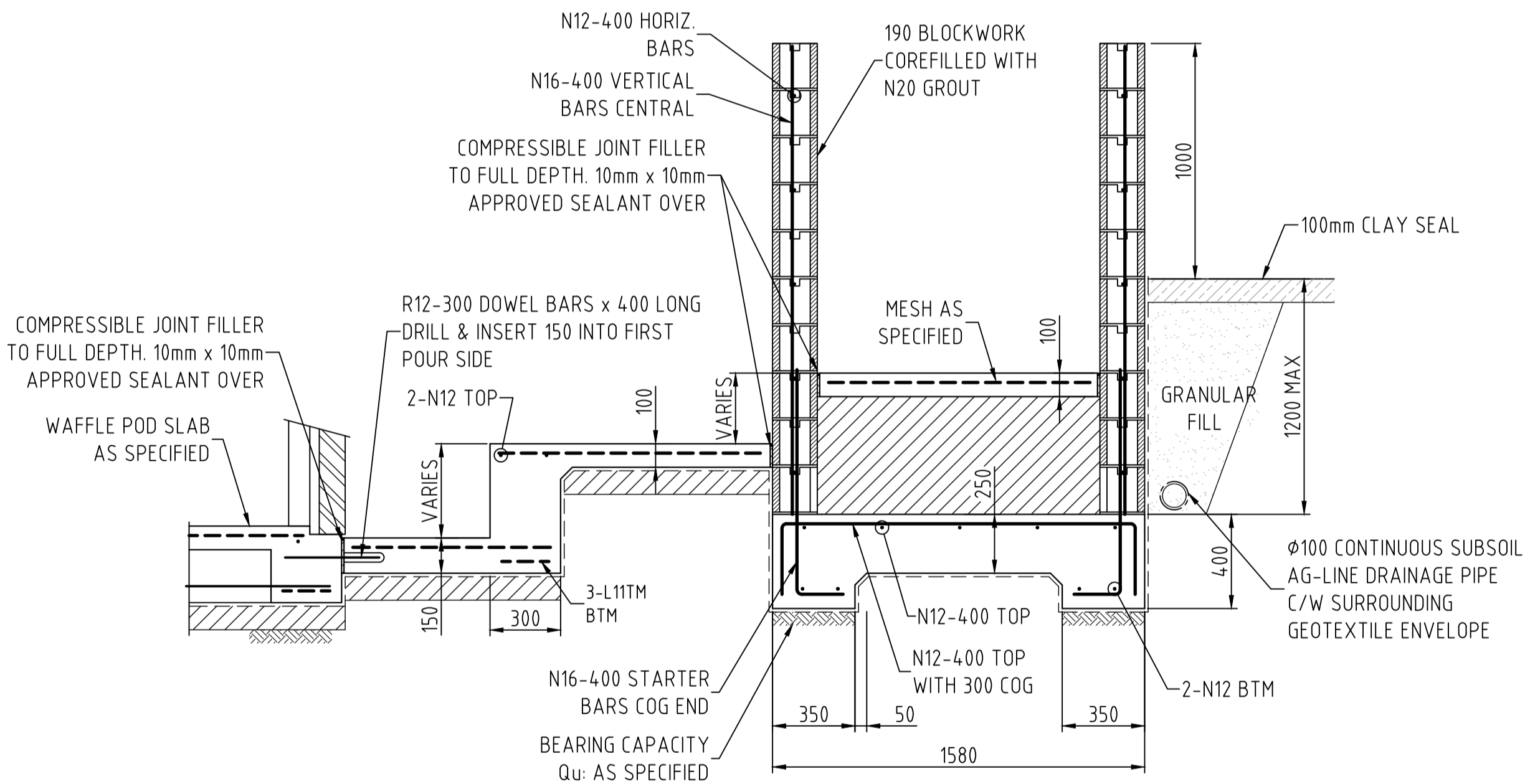


**SECTION A**  
SCALE = 1:20  
S103

**STRIP FOOTING - SF3**



**SECTION B**  
SCALE = 1:20  
S103

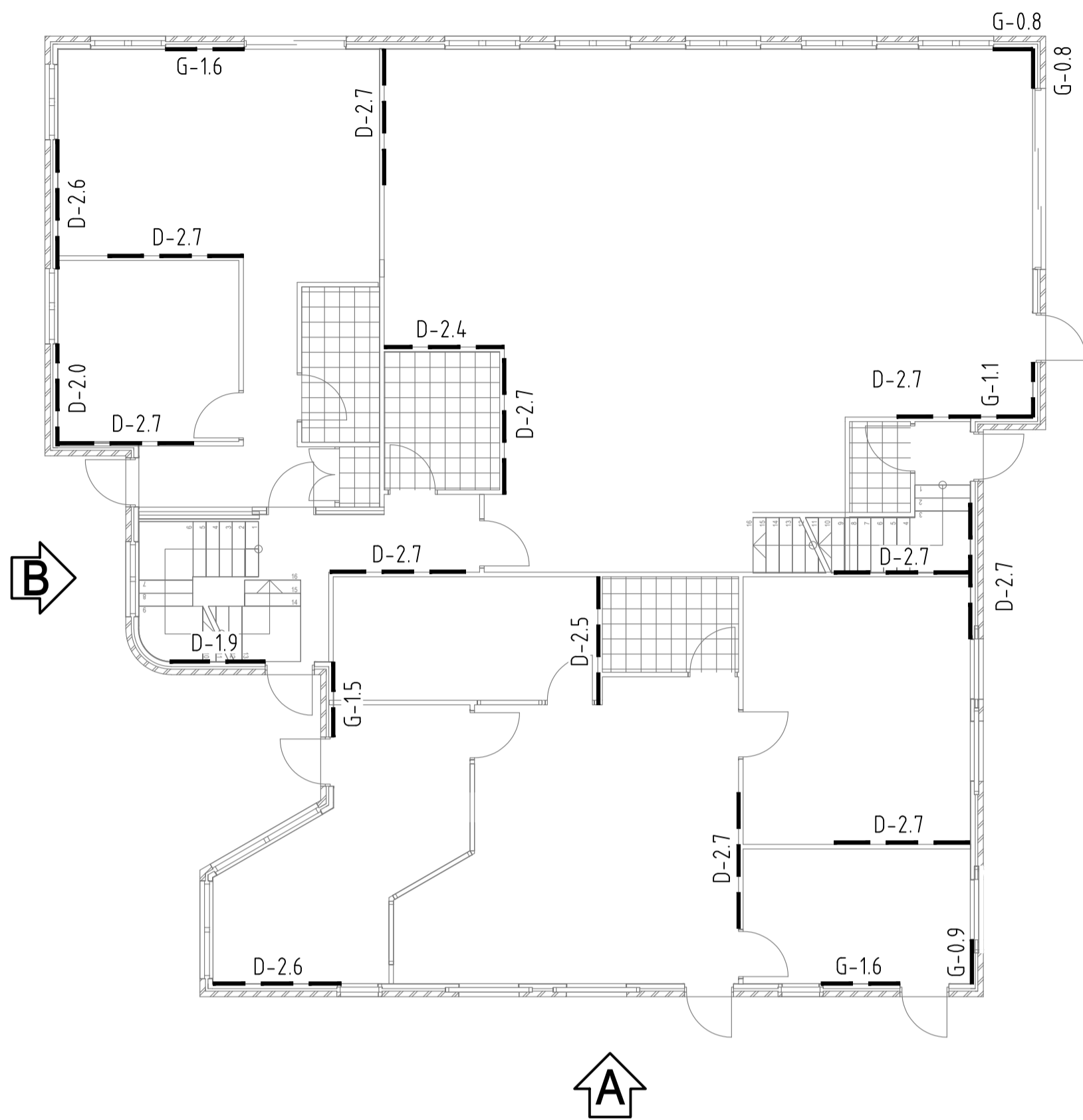


**RETAINING WALL - RW4**

**SECTION C**  
SCALE = 1:20  
S103

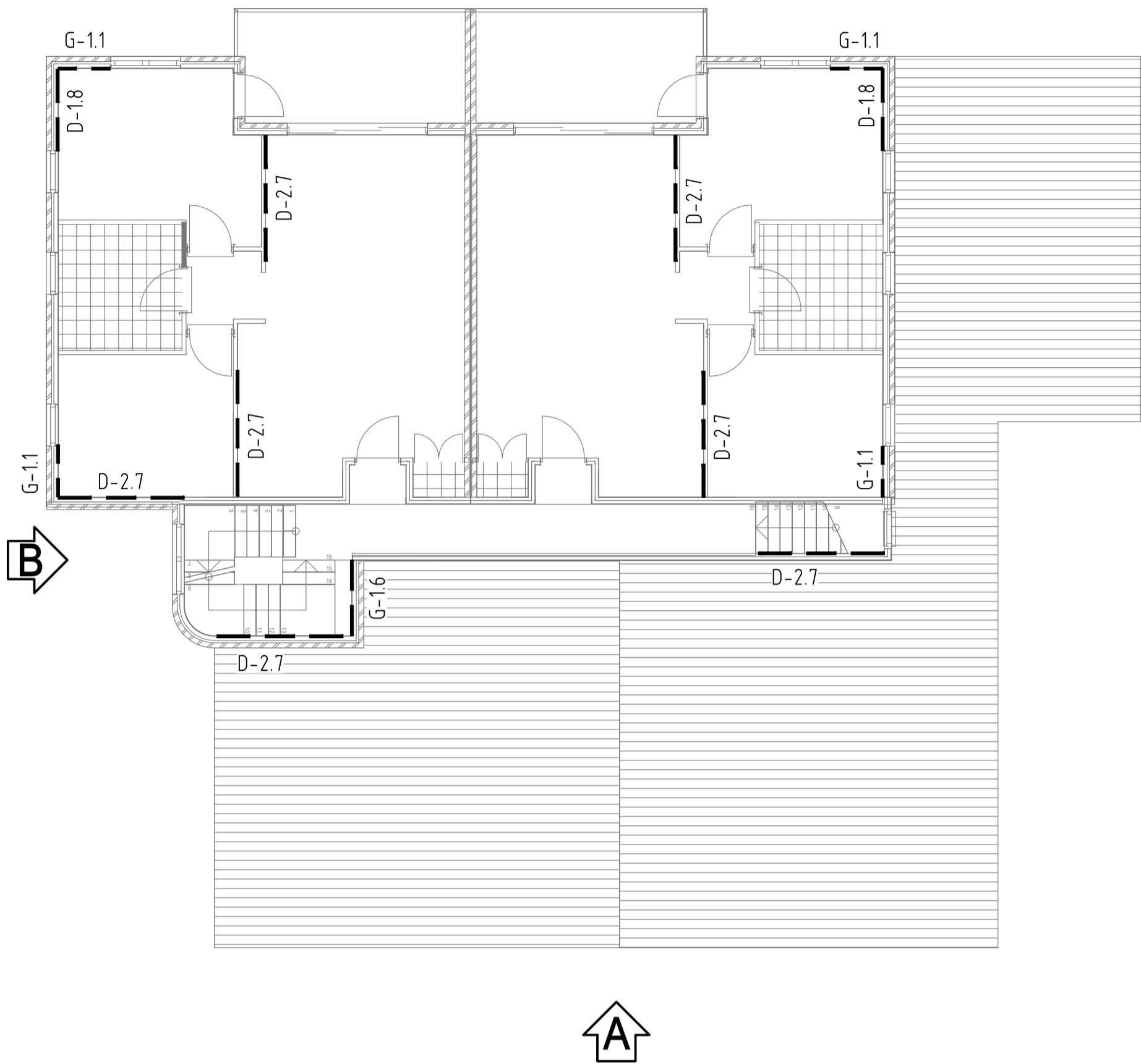
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CORE BUILDING GROUND FLOOR WALL BRACING PLAN  
SCALE = 1:200

GROUND FLOOR WIND BRACING	
DIRECTION A	AREA OF ELEVATION = 77.3m <sup>2</sup>
TOTAL RACKING FORCE (kPa) = PROJECTED AREA OF ELEVATION (m <sup>2</sup> ) x LATERAL WIND PRESSURE	
DIRECTION A = 77.3m <sup>2</sup> x 0.76 = 58.7kN TOTAL	
BRACING USED = TYPE 'D' BRACING UNITS (17.9m x 3kN/m) = 53.7kN AND TYPE 'G' BRACING UNITS (4.3m x 3.4kN/m) = 14.6kN	
TOTAL = 53.7kN + 14.6kN = 68.3kN	
THEREFORE OK	
DIRECTION B	AREA OF ELEVATION = 80.4m <sup>2</sup>
TOTAL RACKING FORCE (kPa) = PROJECTED AREA OF ELEVATION (m <sup>2</sup> ) x LATERAL WIND PRESSURE	
DIRECTION B = 80.4m <sup>2</sup> x 0.87 = 69.9kN	
BRACING USED = TYPE 'D' BRACING UNITS (23.1m x 3kN/m) = 69.3kN AND TYPE 'G' BRACING UNITS (4.0m x 3.4kN/m) = 13.6kN	
TOTAL = 69.3kN + 13.6kN = 82.9kN	
THEREFORE OK	



CORE BUILDING FIRST FLOOR WALL BRACING PLAN  
SCALE = 1:200

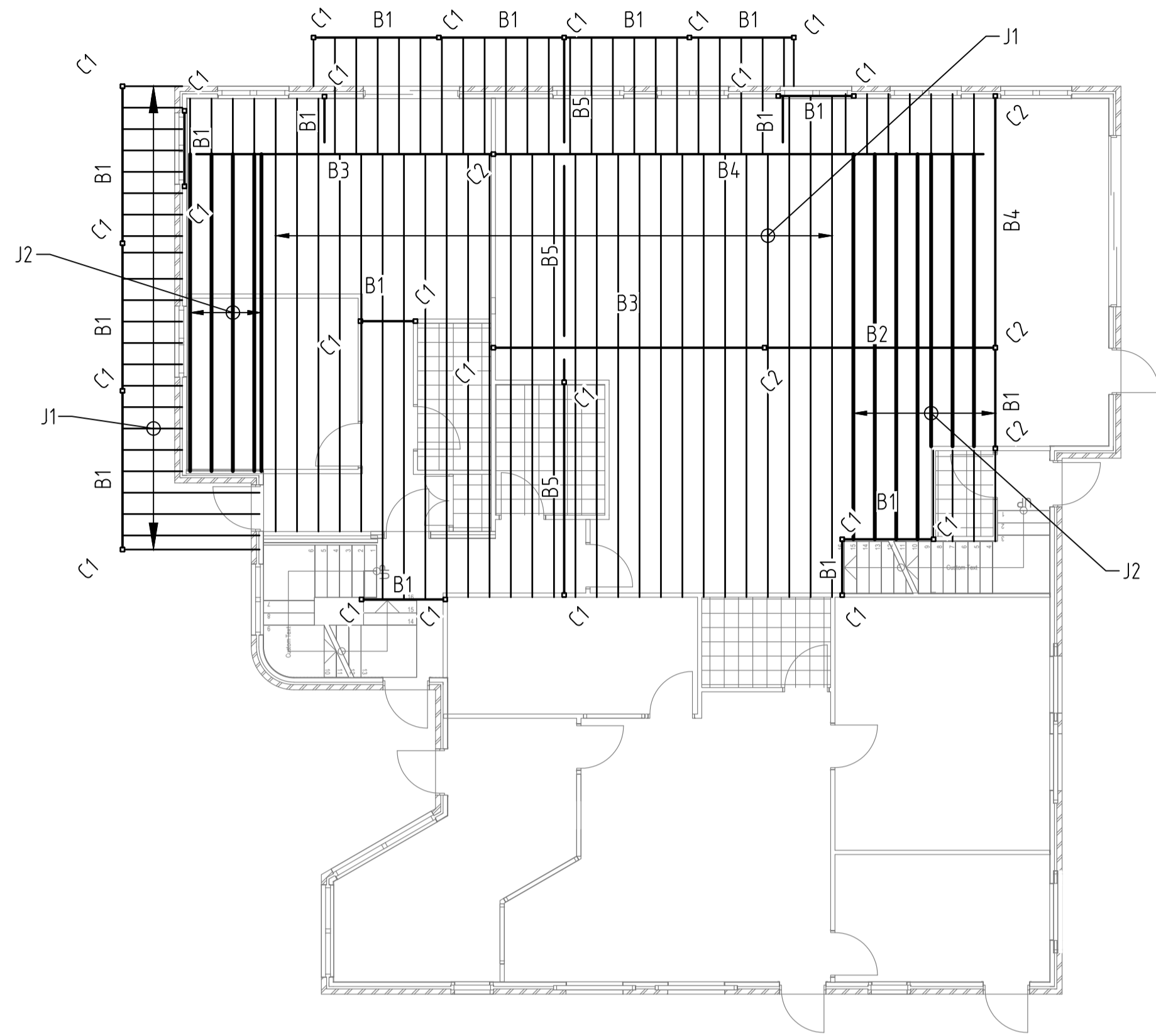
FIRST FLOOR WIND BRACING	
DIRECTION A	AREA OF ELEVATION = 22.8m <sup>2</sup>
TOTAL RACKING FORCE (kPa) = PROJECTED AREA OF ELEVATION (m <sup>2</sup> ) x LATERAL WIND PRESSURE	
DIRECTION A = 22.8m <sup>2</sup> x 0.62 = 14.1kN TOTAL	
BRACING USED = TYPE 'D' BRACING UNITS (14.4m x 3kN/m) = 43.2kN AND TYPE 'G' BRACING UNITS (3.8m x 3.4kN/m) = 12.9kN	
TOTAL = 43.2kN + 12.9kN = 56.1kN	
THEREFORE OK	
DIRECTION B	AREA OF ELEVATION = 32.1m <sup>2</sup>
TOTAL RACKING FORCE (kPa) = PROJECTED AREA OF ELEVATION (m <sup>2</sup> ) x LATERAL WIND PRESSURE	
DIRECTION B = 32.1m <sup>2</sup> x 0.56 = 17.9kN	
BRACING USED = TYPE 'D' BRACING UNITS (8.1m x 3kN/m) = 24.3kN AND TYPE 'G' BRACING UNITS (2.2m x 3.4kN/m) = 7.5kN	
TOTAL = 24.3kN + 7.5kN = 31.8kN	
THEREFORE OK	

SPECIFICATION WIND CLASS: N2		
REGION: A		TERRAIN CATEGORY (TC) : 2
TOPOGRAPHICAL CLASSIFICATION: T0		SHIELDING : PS
DESIGN DATA		
ROOF UPLOAD WIDTH = Xm	ROOF = COLORBOND ROOF SHEETING	PITCH = 5°
BATTEN SPACING = Xmm	TRUSS SPACING = Xmm	RAFTER SPACING = Xmm
JOINT TYPE		
MEMBER	SPECIES	TYPE
TRUSSES	MGP10	JD4
FRAMES - STUDS @ 600 CTS	TREATED F7 OR MGP10 MIN	JD4
JOINT DETAIL		
CONNECTION	TIE DOWN	ALLOWABLE LOAD
BATTENS @ 900 TRUSS SPACINGS UPLIFT (GEN 0.79 kN, EDGES 15kN)	GENERAL = 2 /75x 3.05 DEFORMED SHANK NAIL EDGES = 1 No14 TYPE 117 SCREW x 75mm	GENERAL = 1.3kN EDGES = 4.5kN
RAFTER/WALL FRAME @ 600 CTS UPLIFT 4.0kN	30 x 0.8mm G.I. STRAP C/W 3/ø2.8mm NAILS	4.7kN
TRUSS TO WALL FRAME @ 900 CTS, UPLIFT = 6.6kN	2 /30x0.8mm G.I. STRAPS WITH c/w 3 /ø2.8mm NAILS	8.4kN
BOTTOM PLATE TO FLOOR SLAB @ 1200 CTS UPLIFT = 3.0kN	1 /M10 CHEMSET ANCHOR 60mm EMBEDMENT @ 1200 CTS	6kN
BRACING TYPES		
A. Two diagonally opposed pairs of timber or metal angle braces. 1.8m - 2.7m = 0.8kN/m	H. Plywood - 1-M12 rod top to btm = 6.4kN/m or No rod but sheathing = 6.0kN/m Intermediate studs 300mm	
B. Metal straps - Tensioned 1.8m - 2.7m = 1.5kN/m	I. Plywood - Vertical Nail spacing 100mm, 1-M12 rod top to btm. 4.5mm Ply = 7.5kN/m or 7mm Ply = 8.7kN/m	
C. Timber & Metal angle braces 1.8m - 2.7m = 1.5kN/m	J. Decorative Plywood - Nail spacing top & btm plates & vertical edges = 100mm 2.1kN/m	
D. Metal straps - Tensioned - With Stud Straps. 1.8m - 2.7m = 3.0kN/m	K. Decorative Plywood Glued & Nailed - Nail spacing top & btm plates & vertical edges = 200mm 5.3kN/m	
E. Diagonal timber wall lining or cladding - Minimum thickness of Board 12mm Provide 30 x 0.8 G.I. strap to each corner of 2.1m wide x 2.7m max high panel Nail spacing 60mm = 2.1kN/m Nail spacing 40mm = 3.0kN/m	L. Hardboard Type A - Nail spacing top & btm plates = 80mm, Nail spacing vertical edges = 150mm. Min width = 900mm 3.4kN/m	
F. Other timber, metal angle and strap bracing shall be designed & installed in accordance with engineering principles = T.B.A.kN	M. Hardboard Types B & C - Nail Spacing top & btm plate = 40mm, Nail spacing vertical edges = 150mm. Min width = 900mm Type B - Btm plate fixed w/M10 bolts each end & 1200 cts = 6.0kN/m Type C - M12 rod top to btm each end & 1800 cts = 9.0kN/m	
G. Plywood = 3.4kN/m	N. Hardboard Types D & E - Nail spacing top & btm plate = 80mm Type D, 40mm Type E, Nail spacing vert. edges = 150mm Min width = 460mm TypeD - M10 coach screw each corner =3.4kN/m TypeE - M12 rod each end = 6.0kN/m	
ALL TIE DOWN DETAILING IN ACCORDANCE WITH THE REQUIREMENTS OF AS1684.2 - 2010. ALL TIE DOWN TO BE CONFIRMED AND APPROVED BY TRUSS AND FRAME MANUFACTURERS PRIOR TO THE COMMENCEMENT OF ANY WORKS		

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**PRELIMINARY DRAWING**  
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CORE BUILDING FIRST FLOOR FRAMING PLAN  
SCALE = 1:100

STEELWORK MEMBER SCHEDULE		
MARK	MEMBER SIZE	REMARKS
J1	360x90	hYJOIST @ 450 CTS
J2	300x45	hyJOIST @ 450 CTS
B1	150 PFC	GRADE 300 BEAM
B2	250 UB 37.3	GRADE 300 BEAM
B3	360 UB 56.7	GRADE 300 BEAM
B4	410 UB 59.7	GRADE 300 BEAM
B5	200 UB 25.4	GRADE 300 BEAM
C1	89x3.5 SHS	GRADE 350 COLUMN
C2	100x6 SHS	GRADE 350 COLUMN

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Rev	Date	Description
B	14.06.24	ISSUED FOR DA APPROVAL

Project  
PROPOSED CORE &  
CLUSTER REFUGE AT  
Site Address  
10A PARK STREET  
EAST MAITLAND NSW 2323  
Client  
HOUSING PLUS ORANGE

Drawing Title	
FIRST FLOOR FRAMING PLAN CORE BUILDING	
Design	TR
Drawn	EC
Check	JS
Original Sheet Size	
Revision	

Certification	
A1	Project No
B	Drawing No

40560  
S303