



**BARNSON PTY LTD**

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# RESIDENTIAL FOOTINGS DESIGN

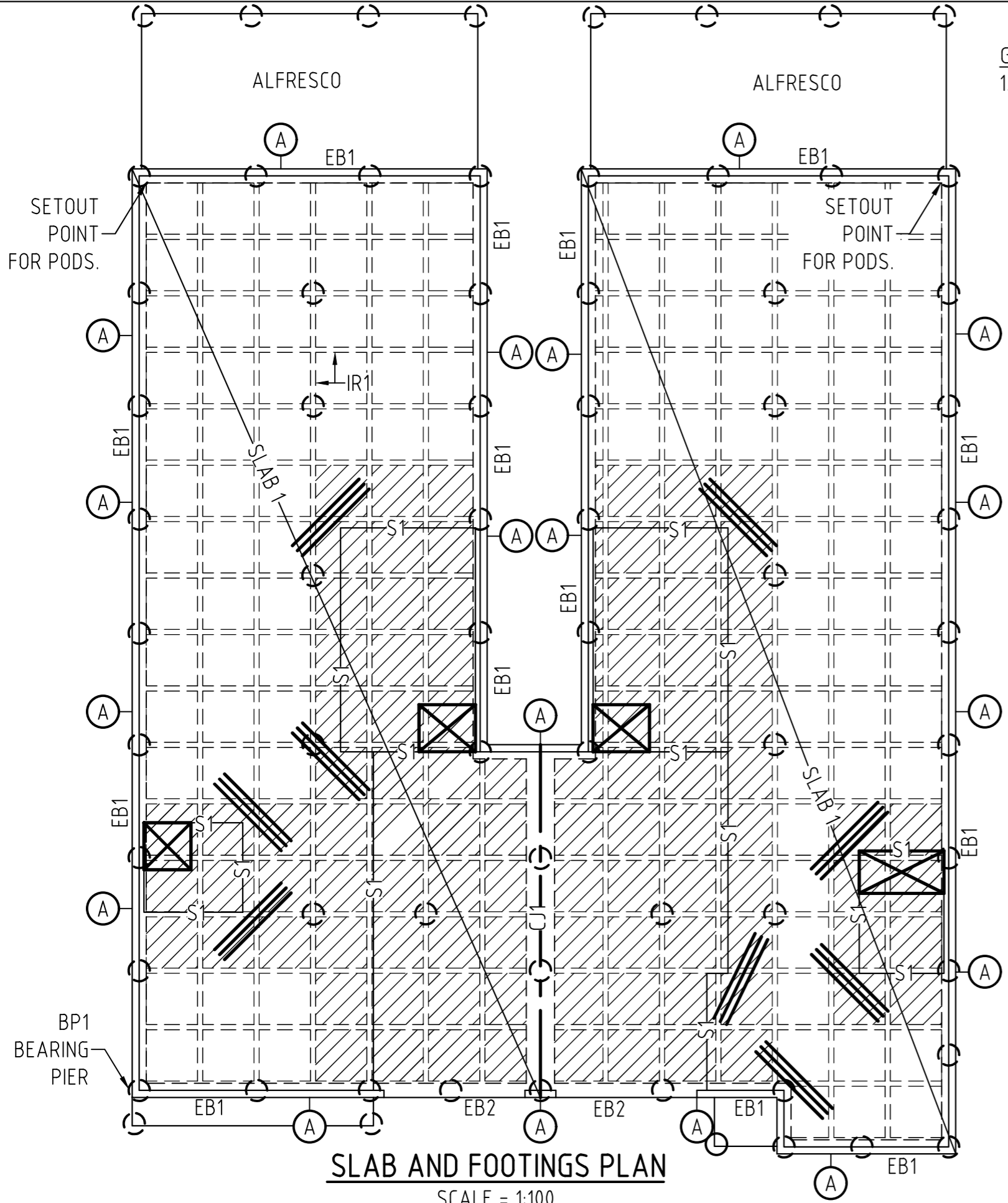
## TO AS2870-2011

Client:

**MUDGEЕ BUILDER**

Project Address:

**60 DAVIES ROAD  
KANDOS NSW 2848**



**GEOTECHNICAL NOTES**  
1. THESE SLABS AND FOOTINGS HAVE BEEN DESIGNED FOR A CLASS "P" SITE WITH A REACTIVITY CLASS "M" AS DEFINED BY AS2870-2011, BASED UPON GEOTECHNICAL REPORT BY BARNSON PTY LTD, REFERENCE 41382-GR01\_A DATED 01-05-2023 DUE TO FILL MATERIAL UP TO 0.7m DEEP.

**WAFFLE POD SLAB NOTES**  
A) SLAB 1  
1. CONCRETE EXPOSURE CLASSIFICATION = A1 TO AS3600-2018  
2. 85mm THICK SLAB REINFORCED WITH ONE LAYER SL92 MESH ON TOP WITH 20mm COVER, BEAM BTM REINFORCEMENT AS SPECIFIED WITH 50mm COVER.  
3. CONCRETE IS TO BE GRADE N25 (25 MPa STRENGTH AT 28 DAYS)  
B) THIS PLAN SHALL BE READ IN CONJUNCTION WITH THE FOLLOWING REFERENCE DRAWINGS WHICH FORM PART OF THE PROJECT SPECIFICATION: G1020, G1021, G1022, G1023, G1024, G1025, G1026, G1027, G1028 AND 41382-S02.

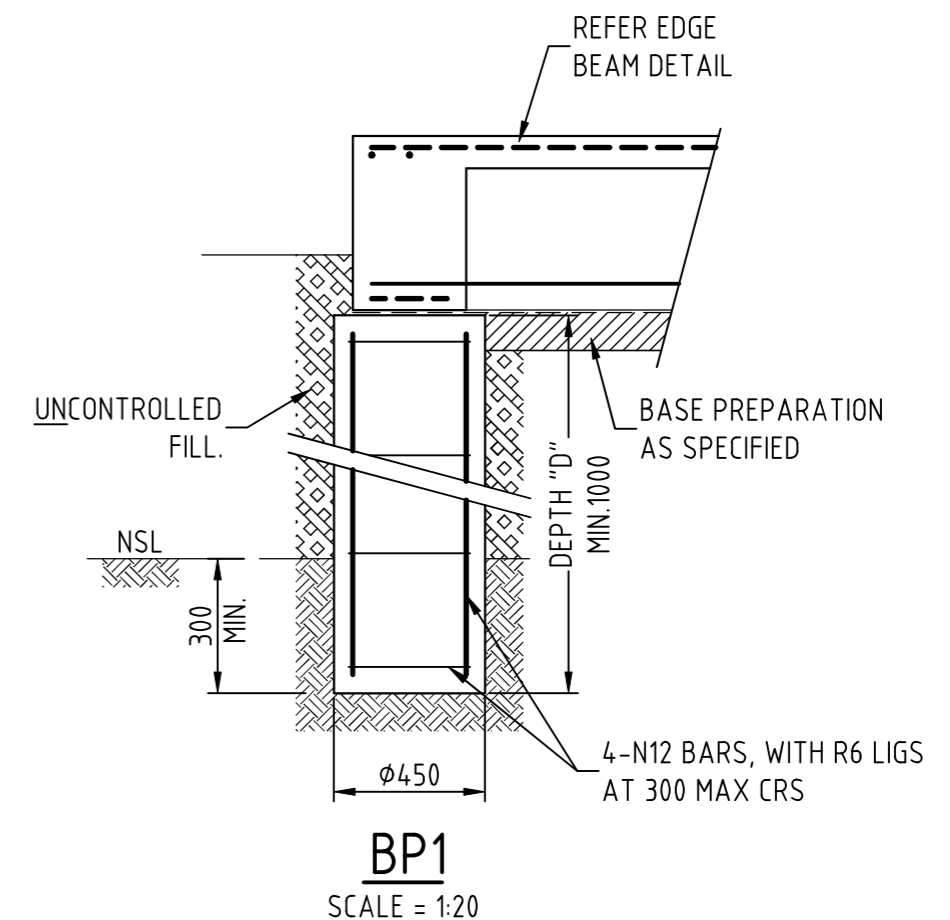
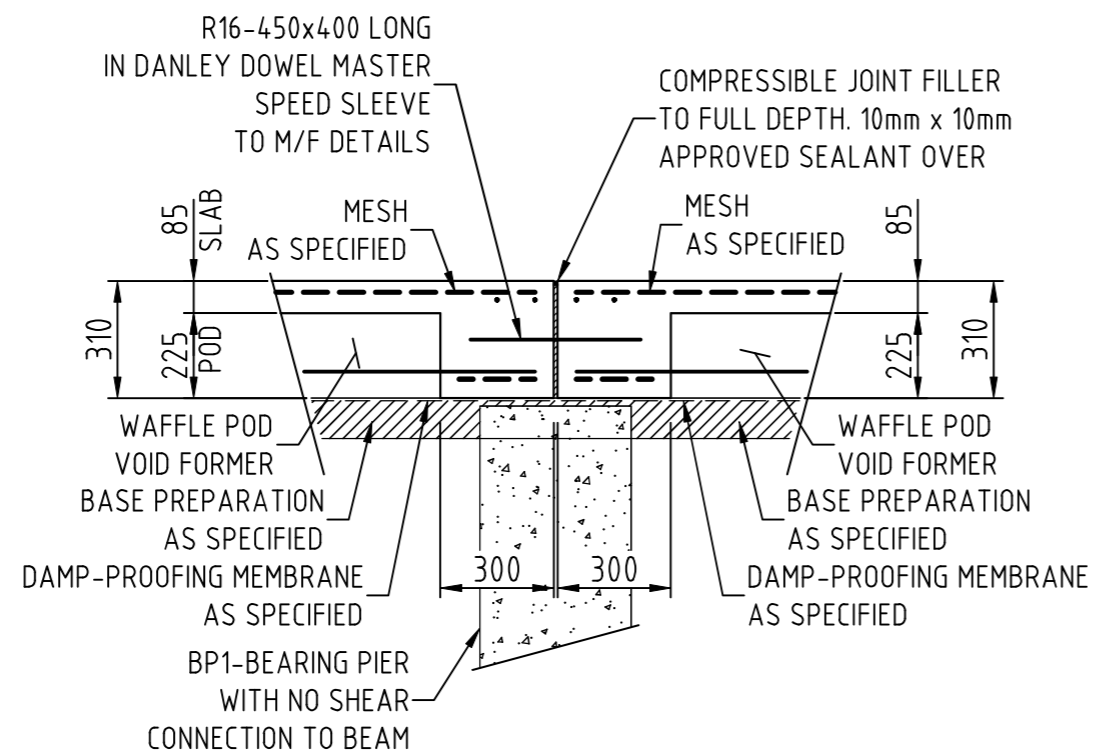
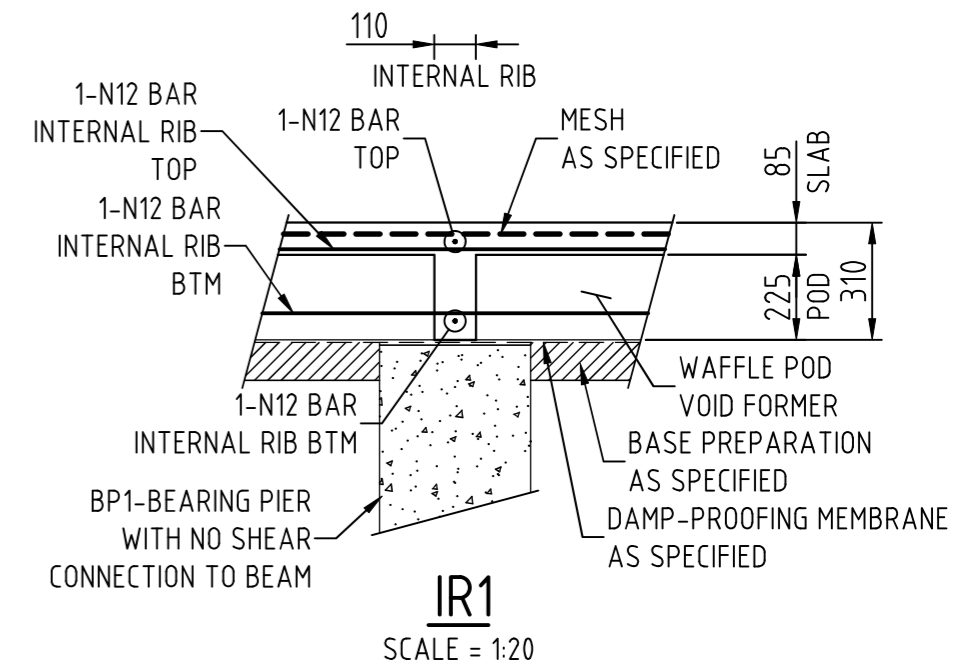
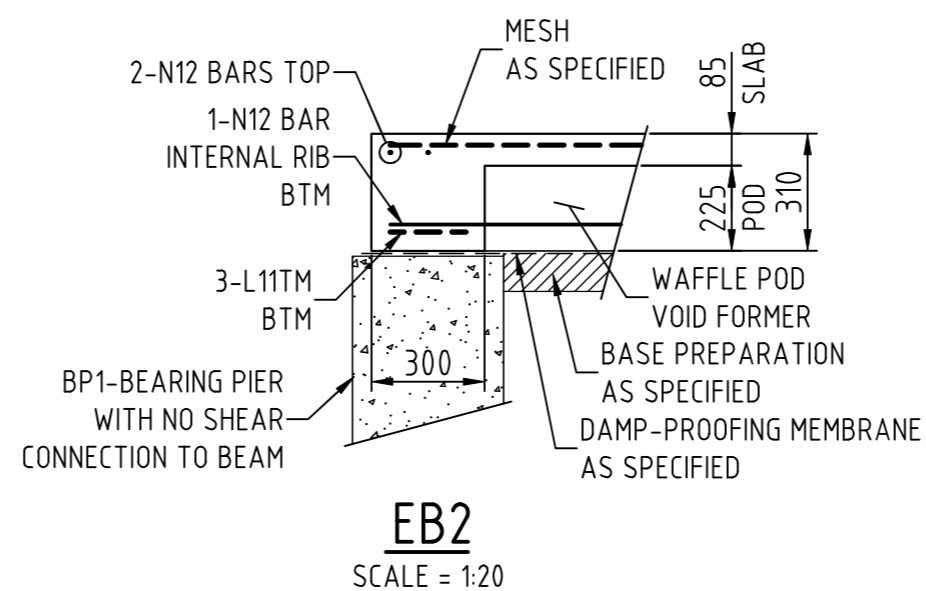
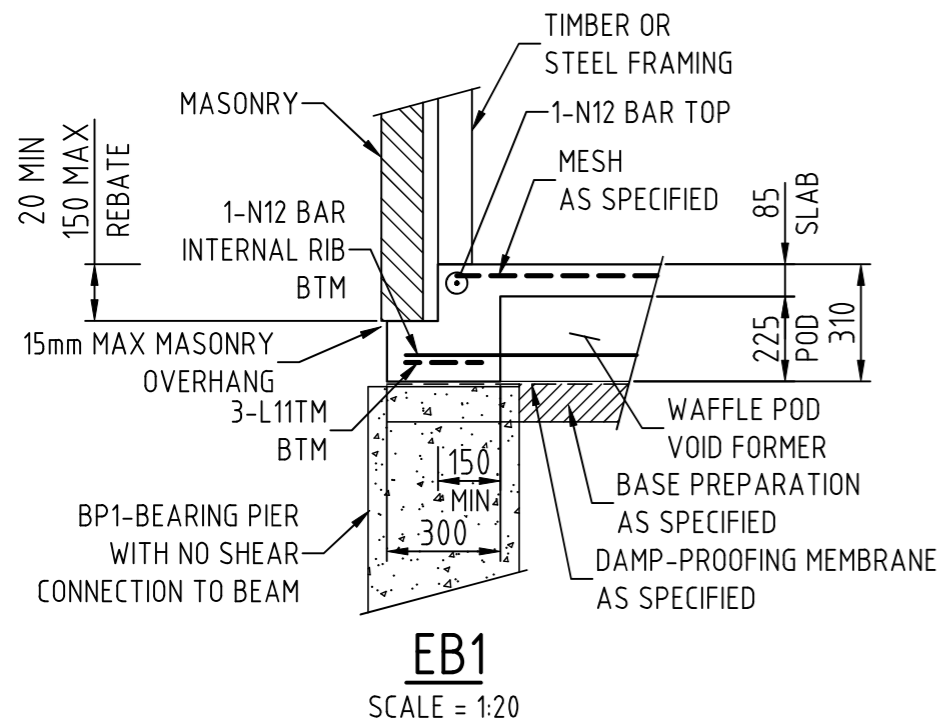
**BEARING PIER NOTES**  
1. CONCRETE EXPOSURE CLASSIFICATION = A1 TO AS3600-2018  
2. CONCRETE IS TO BE GRADE N25 (25 MPa STRENGTH AT 28 DAYS AGE)  
3. FOOTING DEPTH & WIDTH AS PER RELATIVE DETAILS.  
4. FOOTING REINFORCEMENT AS SPECIFIED IN RELEVANT DETAILS WITH 50mm COVER.  
5. BEARING PIERS TO BE Ø450 AND 1000 DEEP REINFORCED WITH 4-N12 BARS VERTICAL, WITH R6 LIGS HORIZONTAL AT 300 MAX. CRS  
6. BEARING PIER POSITIONING SHALL BE AS PER THE MINIMUM SHOWN ON DRAWINGS, OR AS PER THE FOLLOWING MINIMUM SPACING REQUIREMENTS:  
EDGE BEAM: 2400mm MAX. CRS  
INTERNAL RIBS: 3600mm MAX. CRS  
7. ADDITIONAL STEEL REINFORCEMENT IS REQUIRED TO THE TOP OF INTERNAL RIBS IN BOTH DIRECTIONS WHEN LOCATED ABOVE BEARING PIERS.  
8. LOCATE BEARING PIERS AT JUNCTION POINT OF RIBS AND BEAMS.

**TILE NOTES**  
TILE FLOOR AREAS >16sq.m. SHOULD BE PROVIDED WITH ONE OR MORE OF THE FOLLOWING;  
1. ALLOW ALL CONCRETE MINIMUM 90 DAYS TO CURE PRIOR TO FIXING OF FLOOR TILES.  
2. USE RUBBER BASED ADHESIVE FOR ALL FLOOR TILES.

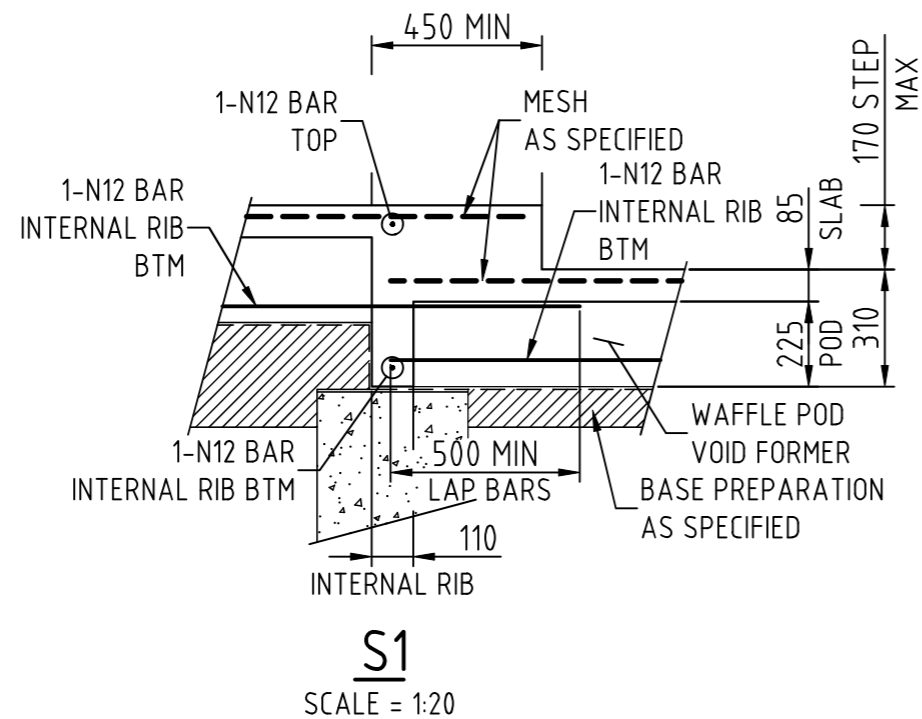
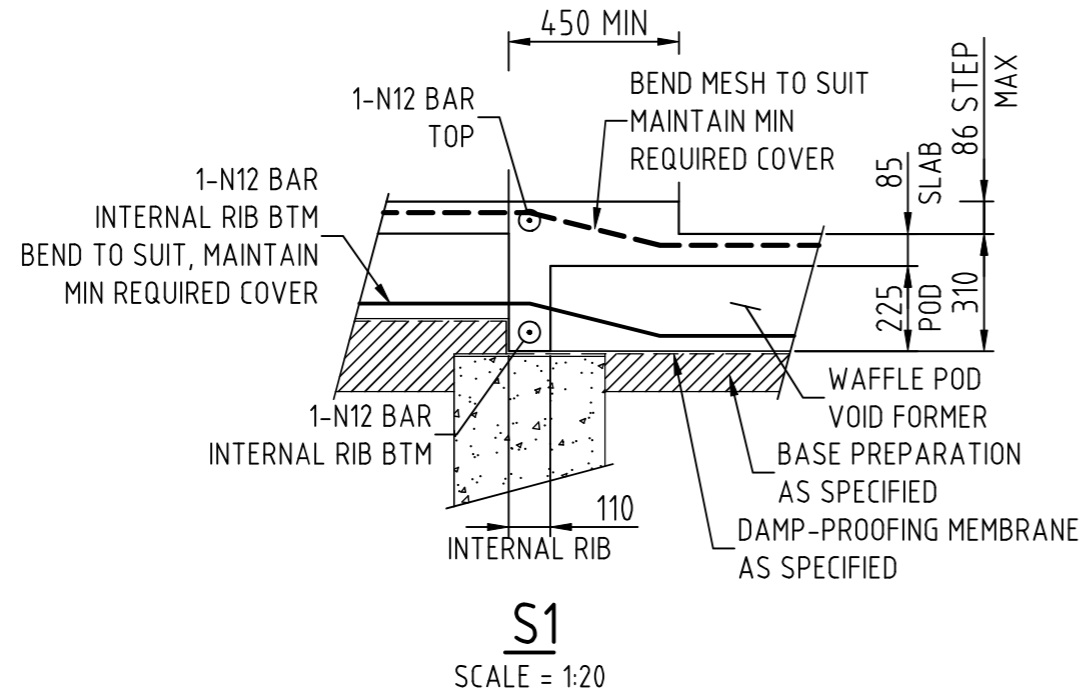
ANY FALL OR STEP WITHIN SLAB SURFACE TO ARCHITECTS SPECIFICATION

PORCH & ALFRESCO SLAB POURED SEPARATE TO MAIN SLAB. 100mm THICK, SL82 MESH. N16 DOWELLS 400 LONG @ 400CTS TO MAIN SLAB. TOOL JOINTS AT 4m MAX SPACING.

ISSUED FOR CONSTRUCTION



ISSUED FOR CONSTRUCTION



ISSUED FOR CONSTRUCTION

GENERAL

- 1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH OTHER WORKING DRAWINGS AND SPECIFICATIONS RELEVANT TO THIS PROJECT. ANY DISCREPANCIES SHALL BE REFERRED TO BARNSON PTY LTD FOR A DECISION PRIOR TO PROCEEDING.
- 2. ANY NOTES OR DETAILS APPEARING IN THE "PROJECT SPECIFIC" DRAWING SET ARE TO TAKE PRECEDENCE OVER ANY NOTES OR DETAILS APPEARING IN THE "GENERIC" DRAWING SET.
- 3. DO NOT SCALE FROM THESE DRAWINGS
- 4. MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH RELEVANT SAA CODES AND LOCAL AUTHORITY REGULATIONS.
- 5. THE CONTRACTOR SHALL OBTAIN A COPY OF THE SITE GEOTECHNICAL REPORT PRIOR TO CONSTRUCTION, TO FAMILIARISE HIMSELF WITH THE EXPECTED NATURALLY OCCURRING FOUNDATION SOILS.
- 6. IF SOIL IS ENCOUNTERED DURING CONSTRUCTION THAT IS DIFFERENT TO THAT REFFERED TO IN THE GEOTECHNICAL REPORT, BARNSON PTY LTD SHALL BE CONTACTED IMMEDIATELY PRIOR TO FURTHER WORK TAKING PLACE.
- 7. DURING CONSTRUCTION, THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION, AND NO PART SHALL BE OVERSTRESSED.
- 8. ALL CARE SHOULD BE TAKEN TO ENSURE THAT ADEQUATE SITE DRAINAGE IS PROVIDED TO ENSURE THAT WATER IS DIVERTED AWAY FROM THE BUILDING DURING AND AFTER CONSTRUCTION.
- 9. ALL FORMWORK SHALL BE IN ACCORDANCE WITH AS3610-1995.
- 10. PREPOUR INSPECTIONS FOR ALL FOOTINGS AND SLABS SHALL BE CARRIED OUT BY BARNSON PTY LTD OR THE CERTIFYING AUTHORITY. 24 HOURS NOTICE FOR INSPECTIONS IS REQUIRED. NO CONCRETE IS TO BE POURED WITHOUT ATTAINING APPROVAL.
- 11. FOR SLAB ON GROUND, FINISHED SLAB HEIGHTS ABOVE EXTERNAL FINISHED SURFACES MUST NOT BE LESS THAN:
  - A) 150mm ABOVE FINISHED GROUND LEVEL
  - B) 100mm ABOVE SANDY, WELL DRAINED AREAS
  - C) 50mm ABOVE EXTERNAL SEALED AREAS THAT HAVE A SLOPE OF NOT LESS THAN 50mm OVER THE FIRST 1m FROM THE BUILDING
- 12. SLABS & FOOTINGS HAVE BEEN DESIGNED BASED ON STANDARD DESIGNS CONTAINED IN SECTION 3 AND ENGINEERING PRINCIPALS CONTAINED IN SECTION 4 OF AS2870-2011, AND ENGINEERING PRINCIPALS FROM AS3600-2009
- 13. DIMENSIONS GIVEN FOR BEAMS AND STRIP FOOTINGS ARE THE MINIMUM REQUIRED AS PER DESIGN PRINCIPALS NOTED ABOVE. IF THERE ARE SITE SPECIFIC REQUIREMENTS TO WIDEN, OR DEEPEN BEAMS OR STRIP FOOTINGS, IT SHALL BE PERFORMED AS FOLLOWS:
  - A) WHERE STRIP FOOTINGS ARE WIDER THAN THAT SPECIFIED, AN EXTRA BOTTOM BAR OR EQUIVALENT OF THE SAME BAR SIZE IS REQUIRED FOR EACH 100mm ADDITIONAL WIDTH.
  - B) WHERE STRIP FOOTINGS OR SLAB BEAMS ARE DEEPER THAN THAT SPECIFIED, THE BOTTOM REINFORCEMENT SPECIFIED IN AS2870 FOR THE GREATER BEAM OR STRIP FOOTING DEPTH IS TO BE USED.
  - C) WHERE ADJUSTMENTS IN WIDTH FOR WAFFLE POD SLAB BEAMS REINFORCED WITH BARS ARE REQUIRED, THIS SHALL BE PREFORMED IN ACCORDANCE WITH REINFORCEMENT NOTE 11 ON GENERIC DRAWING G1020.
- 14. SITE MAINTENANCE IS THE RESPONSIBILITY OF THE OWNER. CSIRO'S - FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE: A HOMEOWNERS GUIDE - BUILDING TECHNOLOGY FILE 18, SHOULD BE REFERRED TO FOR ONGOING SITE MAINTENANCE REQUIREMENTS.

EXCAVATION

- 1. TOPSOIL CONTAINING GRASS ROOTS OR VEGETATION SHALL BE REMOVED FROM THE FOUNDATION AREA. IT SHALL THEN BE PROOF ROLLED PRIOR TO FILLING.
- 2. FOOTING EXCAVATIONS MUST BE FREE OF LOOSE EARTH, TREE ROOTS, MUD OR DEBRIS IMMEDIATELY BEFORE POURING CONCRETE.
- 3. EXCAVATION FOR FOOTINGS, INCLUDING THICKENINGS FOR SLABS AND PADS MUST BE CLEAN CUT WITH VERTICAL SIDES, WHEREVER POSSIBLE.
- 4. FOR EXCAVATION REQUIREMENTS ON SLOPING SITES WHERE STEPPED BEAMS OR STEPPED STRIP FOOTINGS ARE TO BE USED, PLEASE REFER GENERIC DRAWING G1022.
- 5. BARNSON PTY LTD SHOULD BE CONSULTED BEFORE COMMENCING ANY EXCAVATIONS NEAR THE EDGE OF A BUILDING.
- 7. WHERE PROPOSED FOOTINGS ARE NEAR EXISTING BUILDINGS OR SERVICES, BARNSON PTY LTD MUST BE CONTACTED AS DESIGN CHANGES MAY BE NECESSARY.
- 8. FOR ALLOWABLE EMBANKMENTS, FILL & CUT TYPE EXCAVATIONS, PLEASE REFER GENERIC DRAWING G1026 . TO BE READ IN CONJUNCTION WITH SECTION 6 OF AS2870-2011, AND BCA VOLUME 2, PART 3.1.1 FOR ADDITIONAL INFORMATION.

BASE PREPARATION - FILL

- 1. FILLING USED IN THE CONSTRUCTION OF A SLAB, EXCEPT WHERE THE SLAB IS SUSPENDED, SHALL CONSIST OF CONTROLLED FILL AS FOLLOWS:
  - CONTROLLED FILL:
    - A) MINIMUM 100mm DEEP MAXIMUM 300mm DEEP UNDER PERIMETER FOOTINGS. IT SHALL BE WELL COMPACTED IN 150mm LAYERS BY A MECHANICAL ROLLER TO A MINIMUM 95% STANDARD COMPACTION FOR A SINGLE STORY DWELLING, AND 98% STANDARD COMPACTION FOR A DOUBLE STORY DWELLING. FILL SHALL BE OF LESS REACTIVITY THAN NATURAL SOIL.
- 2. FILL WITH A GREATER DEPTH THAN THAT SPECIFIED ABOVE SHALL BE INSTALLED AND CERTIFIED BY A NATA ACCREDITED LABORATORY IN ACCORDANCE WITHAS3798-2007, LEVEL 2.
- 3. FILL SHALL BE EXTENDED PAST THE EDGE OF THE RESIDENCE AND SHALL BE RETAINED OR BATTERED BY A SLOPE AS SPECIFIED ON DRAWING G1025 OF THE GENERIC DRAWING SET. FOR FILLING REQUIREMENTS IN RELATION TO EDGE BEAMS, PLEASE REFER GENERIC DRAWING G1025.

BASE PREPARATION - FOUNDATIONS

- 1. FOUNDATION MATERIAL, WHETHER NATURALLY OCCURRING OR FILL, SHALL HAVE A MINIMUM UNIFORM ALLOWABLE BEARING CAPACITY (Qa) OF 100 kPa
- 2. ALL TESTING TO BE UNDERTAKEN BY A NATA REGISTERED LABORATORY.
- 3. THE ATTACHED PROJECT SPECIFIC RESIDENTIAL FOOTING DESIGN, HAS BEEN PREPARED BASED ON A SITE CLASSIFICATION CARRIED OUT IN ACCORDANCE WITH AS2870-2011. REFER PROJECT SPECIFIC PLAN FOR METHOD USED.
- 4. INTERNAL BEAMS/RIBS AND SLAB PANELS SHALL BE FOUNDED ON CONTROLLED OR ROLLED FILL.
- 5. ALL EDGE BEAMS SHALL BE FOUNDED IN NATURAL SOIL OR CONTROLLED FILL, UNLESS SUPPORTED BY PIERS.

DAMP-PROOFING MEMBRANE

- 1. A DAMP-PROOFING MEMBRANE CONSISTING OF A 0.2mm NOMINAL THICKNESS POLYETHYLENE FILM, SHALL BE PLACED UNDER ALL SLABS & BEAMS AND EXTEND TO FINISH AT GROUND LEVEL TO THE SLAB PERIMETER U.N.O.
- 2. IT SHALL BE HIGH IMPACT RESISTANT IN ACCORD WITH CLAUSES 5.3.3.2 AND 5.3.3.3 OF AS2870-2011, AND BE BRANDED CONTINUOUSLY "AS2870 CONCRETE UNDERLAY, 0.2mm HIGH IMPACT RESISTANCE"
- 3. IT SHALL BE INSTALLED WITH MIN 200mm LAPS AT ALL JOINTS, AND TAPED OR SEALED WITH A CLOSE FITTING SLEEVE AROUND SERVICE PENETRATIONS.

REINFORCEMENT

- 1. ALL REINFORCEMENT SHALL BE IN ACCORDANCE WITH AS/NZS 4671-2001.
- 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 - GRADE 500L SQUARE MESH
  - D) TM - GRADE 500L TRENCH MESH
- 4. FOR LAPPING JOINTS OF SLAB FABRIC, PLEASE REFER DRAWING G1022 OF THE GENERIC DRAWING SET FOR DETAILS.
- 5. TRENCH MESH SHALL BE SPLICED WHERE NECESSARY BY A LAP OF 500mm.
- 6. REINFORCEMENT BARS TO BE LAPPED AS FOLLOWS:
  - A) MESH-2 OUTER BARS OVERLAPPED WITH 2 OUTER BARS+20mm
  - B) N12 BARS = 500mm MIN
  - C) N16 BARS = 700mm MIN
- 7. ALL REINFORCEMENT IS TO BE ADEQUATELY SUPPORTED IN ITS REQUIRED POSITION. SUPPORT CHAIRS ARE TO BE AT 800mm MAX CENTRES, BOTH DIRECTIONS.
- 8. SERVICE PENETRATIONS SHALL BE APPROVED BY BARNSON PTY LTD PRIOR TO POURING. ALL SERVICES THAT PENETRATE CONCRETE MEMBERS SHALL BE LAGGED OR SLEEVED. PLEASE REFER GENERIC DRAWING G1023 FOR DETAILS.
- 9. NO CHASES OR HOLES ARE TO BE MADE IN CONCRETE MEMBERS U.N.O. WITHOUT THE APPROVAL OF BARNSON PTY LTD.
- 10. PLEASE REFER GENERIC DRAWING G1022 FOR REINFORCEMENT REQUIREMENTS ON SLOPING SITES WHERE STEPPED BEAMS OR STEPPED STRIP FOOTINGS ARE TO BE USED, AND FOR WHERE "L" AND "TEE" INTERSECTIONS OF BEAMS OCCUR.
- 11. 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.

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

CONCRETE

- 1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600-2009, FORMWORK TO AS3610-1995
- 2. CONCRETE SHALL NOT BE POURED WHEN THE AIR TEMPERATURE IS GREATER THAN 38 DEGREES, OR LESS THAN 5 DEGREES CELSIUS WITHOUT APPROVAL FROM BARNSON PTY LTD.
- 3. CONCRETE SHALL BE GRADE N20 (20MPa STRENGTH AT 28 DAYS), HAVE A 20mm NOMINAL AGGREGATE SIZE, AND HAVE A NOMINAL 100mm SLUMP.
- 4. NO ON SITE WATER IS TO BE ADDED TO THE CONCRETE WITHOUT PERMISSION OF BARNSON PTY LTD.
- 5. ALL CONCRETE IS TO BE VIBRATED
- 6. CONCRETE IS TO BE CURED A MIN OF 7 DAYS
- 7. COVER TO REINFORCEMENT SHALL BE AS FOLLOWS:
  - A) WAFFLE POD SLAB PANELS = 20mm (TOP)
  - B) RAFT SLAB PANELS = 30mm (TOP)
  - C) WAFFLE POD RIBS = 30mm (SIDE)
  - D) WAFFLE AND RAFT SLAB BEAMS = 50mm (BOTTOM & SIDE)
  - E) STRIP & PAD FOOTINGS = 50mm (ALL SIDES)

MASONRY

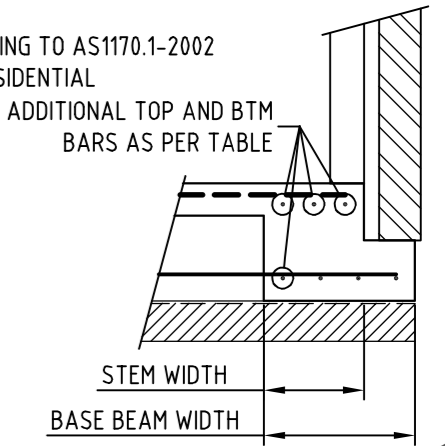
- 1. ALL WORKMANSHIP AND MATERIALS TO BE IN ACCORDANCE WITH AS3700-2001.
- 2. MASONRY SHALL NOT BE CONSTRUCTED ON CONCRETE ELEMENTS WITHIN 14 DAYS OF CASTING WITHOUT THE APPROVAL OF BARNSON PTY LTD.
- 3. ARTICULATION OF MASONRY SHALL BE IN ACCORDANCE WITH TECHNICAL NOTE 61 BY THE CEMENT, CONCRETE & AGGREGATES AUSTRALIA. www.concrete.net.au

SITES WITH SALINE AND SULFATE SOILS


- 1. IN AREAS ADVISED BY THE LOCAL AUTHORITY TO HAVE AGGRESSIVE SOILS THE FOLLOWING MINIMUM REQUIREMENTS ARE TO TAKE PRECEDENCE OVER ANY NOTATION WITHIN THE DRAWING SET:
  - A) THE DAMP-PROOFING MEMBRANE SHALL CONSIST OF A SUITABLE 0.5mm THICK DAMP-PROOFING MATERIAL COMPLYING WITH AS/NZS 2904 AND LAPPED A MINIMUM OF 75mm VERTICALLY OR HORIZONTALLY. DAMP-PROOFING MEMBRANE IS TO BE INSTALLED AND TERMINATED AT FINISHED GROUND OR PAVING LEVEL.
  - B) CONCRETE IS TO BE MINIMUM GRADE N32 (32 MPa STRENGTH AT 28 DAYS AGE). ACTUAL CONCRETE GRADE TO BE UTILISED ON SITE IS TO BE IN ACCORDANCE WITH TABLE 5.3 OF AS2870-2011. TABLE 5.3 IS TO BE READ IN CONJUNCTION WITH TABLES 5.1 AND 5.2 OF AS2870-2011 FOR SITE EXPOSURE CLASS FOR SALINE OR SULFATE SOILS.


LOADING NOTES


- 1. ALL LOADS ARE ACCORDING TO AS1170.1-2002
- 2. LIVE LOADS: 1.5 kPa RESIDENTIAL

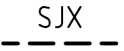



LEGEND OF DIAGRAMMATIC REFERENCES

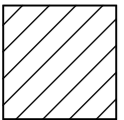
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DENOTES 3-N12 BARS x 2000 LONG OR  
3-L11TM x 2000 LONG TIED TO UNDERSIDE OF MESH
- 

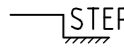
DENOTES MASONRY ARTICULATION JOINTS  
ARTICULATION OF MASONRY SHALL BE IN ACCORDANCE  
WITH TECHNICAL NOTE 61 – AUGUST 2008 BY  
THE CEMENT, CONCRETE & AGGREGATES AUSTRALIA.  
www.concrete.net.au
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BLOCKWORK ARTICULATION JOINT. REFER SPECIFIC DETAIL.  
TO BE POSITIONED AT 6m MAXIMUM CENTRES.
- 

DENOTES TOOL JOINT OR SAW CUT REFER MARK FOR DETAIL
- 

DENOTES CONSTRUCTION JOINT – REFER MARK FOR DETAIL
- 

DENOTES SLAB RECESS. REFER SPECIFIC DETAILS.  
REFER ARCHITECTURAL DRAWINGS FOR DEPTH
- 

DENOTES SHOWER RECESS. REFER SPECIFIC DETAIL.
- 

DENOTES SLAB STEP – REFER MARK FOR DETAIL
- 

DENOTES FALLING LEVELS TO FINISHED SURFACE OF SLAB

- 

DENOTES BEARING PIERS BELOW  
REFER MARK FOR DETAILS
- 

DENOTES 1090x1090xSPECIFIED DEPTH WAFFLE PODS
- 

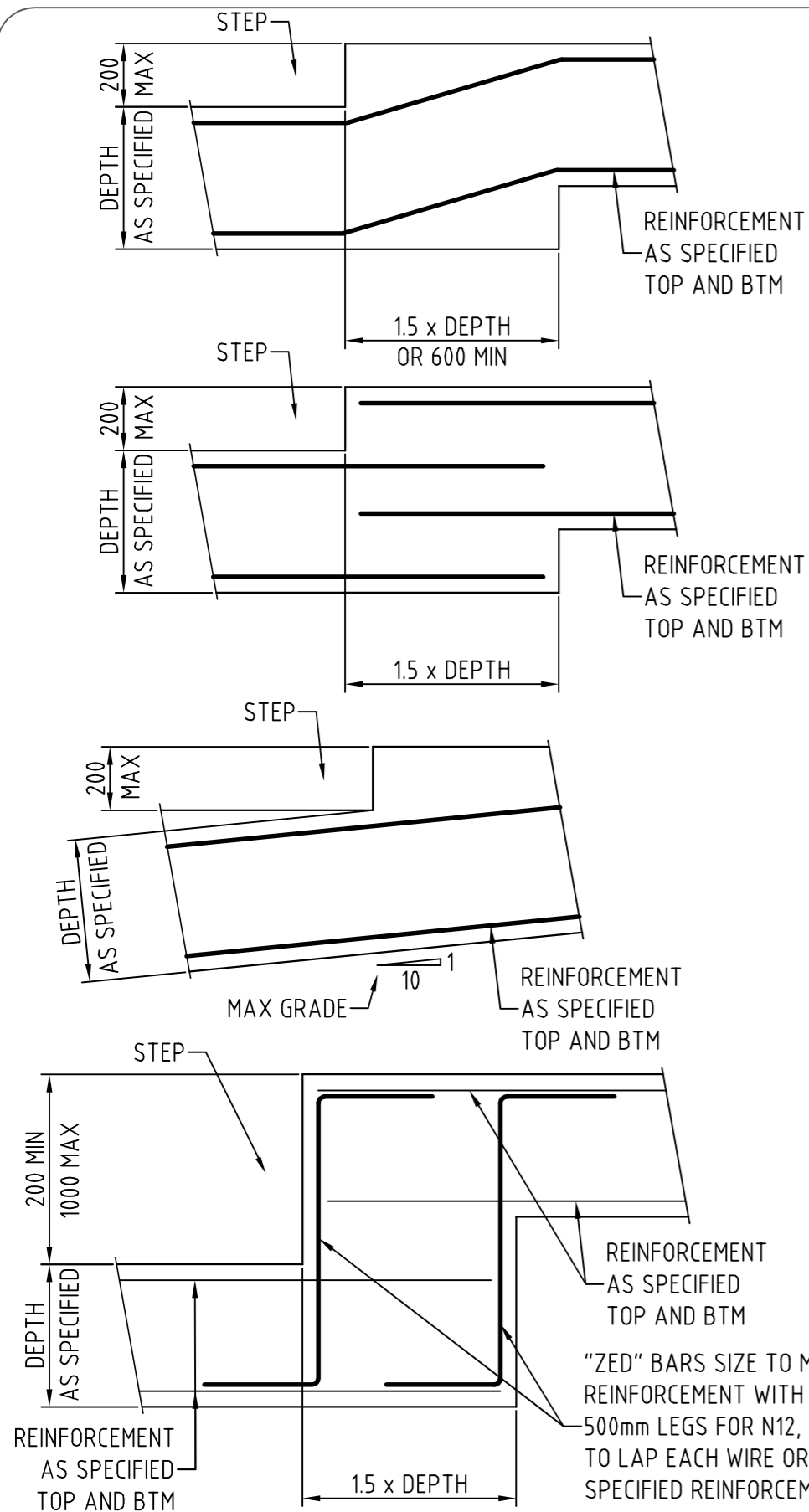
DENOTES 1090x1090xSPECIFIED DEPTH WAFFLE PODS  
AT RECESSES, SETDOWNS & EXTERNAL SLABS  
LOWER LEVELS CREATED BY EXCAVATION
- 

DENOTES MASS POUR CONCRETE PAD TO DEPTH OF DESIGN  
WAFFLE PODS. REMOVE WAFFLE PODS TO ACHIEVE.  
PLACE MESH TO BOTTOM AS WELL AS TO TOP.
- 

DENOTES SPAN DIRECTION OF SUSPENDED SLAB  
PERMANENT FORMWORK – e.g. BONDEK OR CONDEK  
REFER PROJECT SPECIFIC DESIGN FOR SPECIFICATIONS.

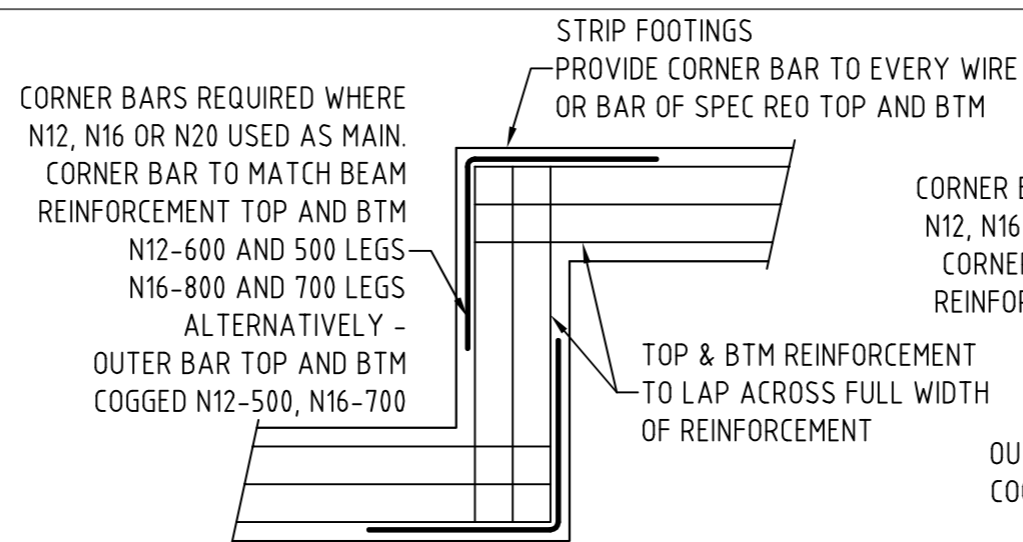
GLOSSARY OF TERMS

- F.S.L. FINISHED SURFACE LEVEL AT COMPLETION OF  
CONSTRUCTION & LANDSCAPING
- N.S.L. NATURAL SURFACE LEVEL OF SOIL EXPOSED  
ON SITE AFTER STRIPPING OF TOPSOIL



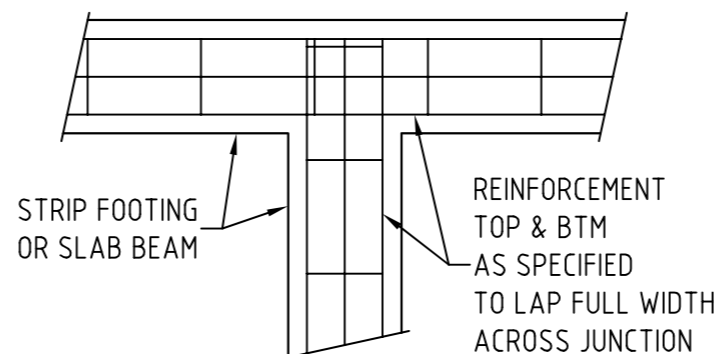
## STRIP FOOTING STEPPING DETAILS

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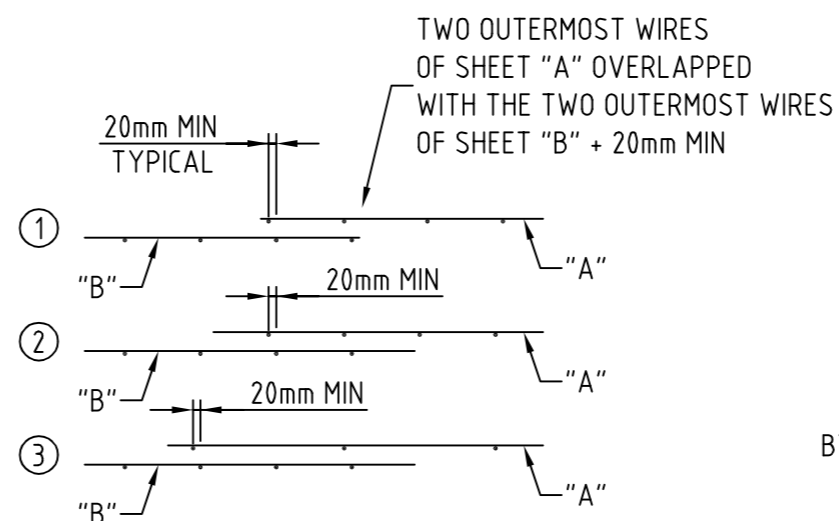
## BEAM "L" INTERSECTION DETAIL

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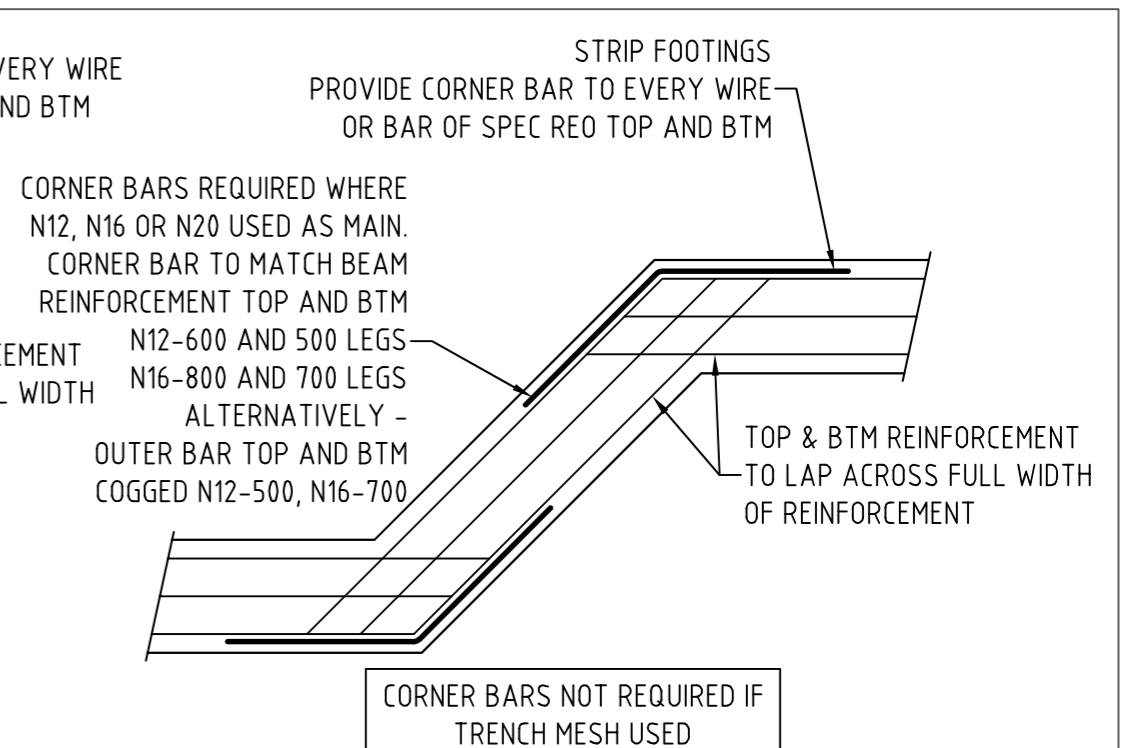
## BEAM "TEE" INTERSECTION DETAIL

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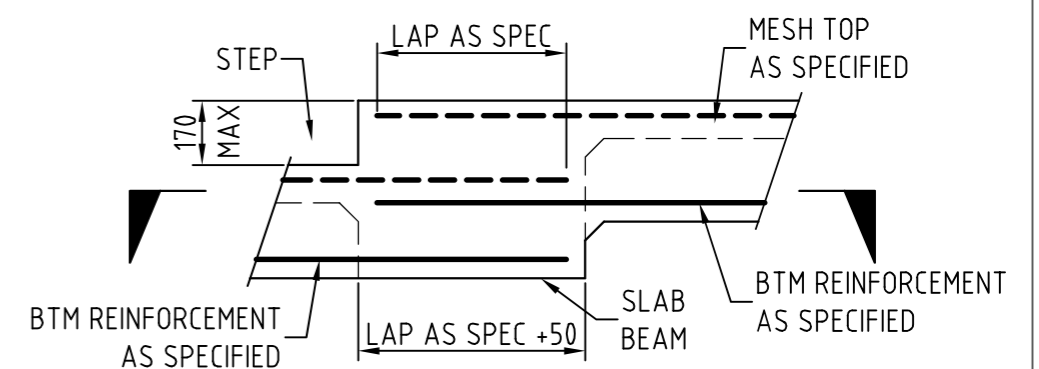
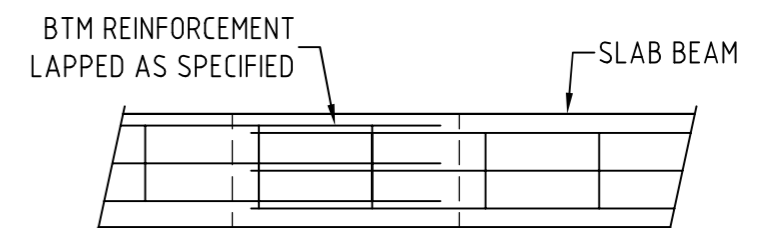
## MESH LAPPING DETAILS

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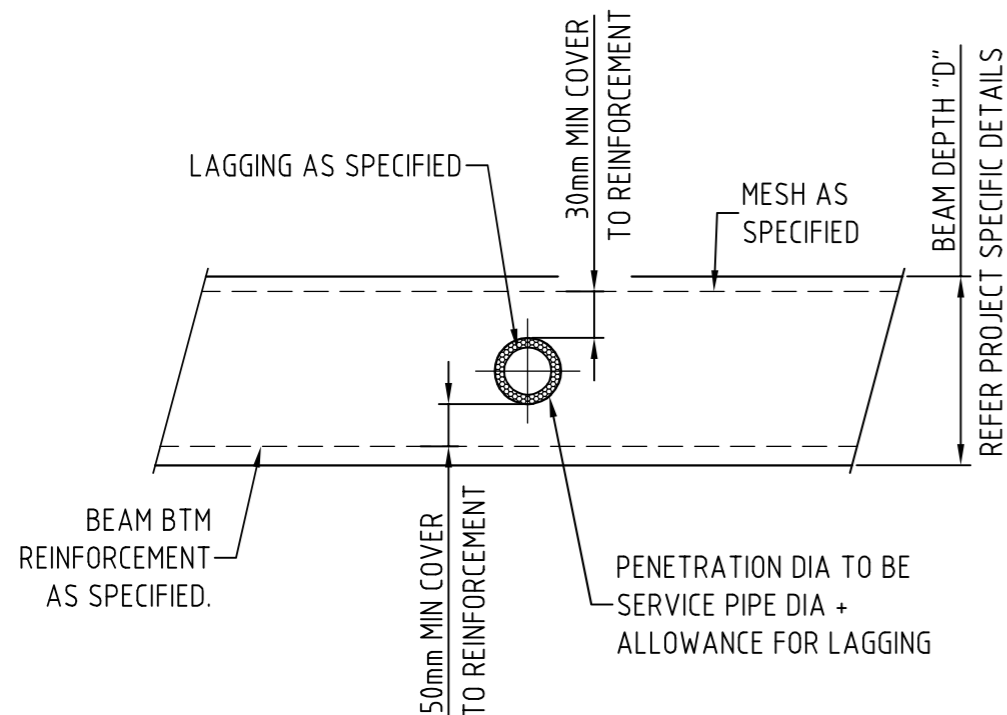
## BEAM BAY WINDOW INTERSECTION DETAIL

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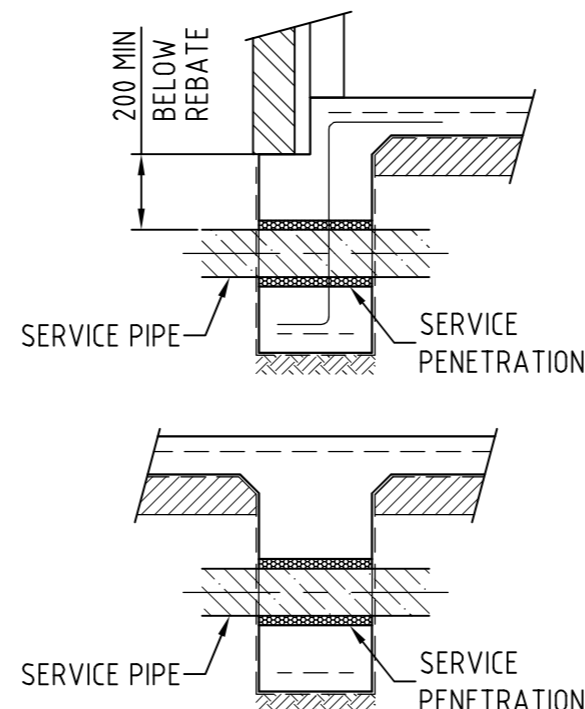
## CONTINUOUS SLAB BEAMS WITH DIFFERENT FOUNDING LEVELS

SCALE = 1:20



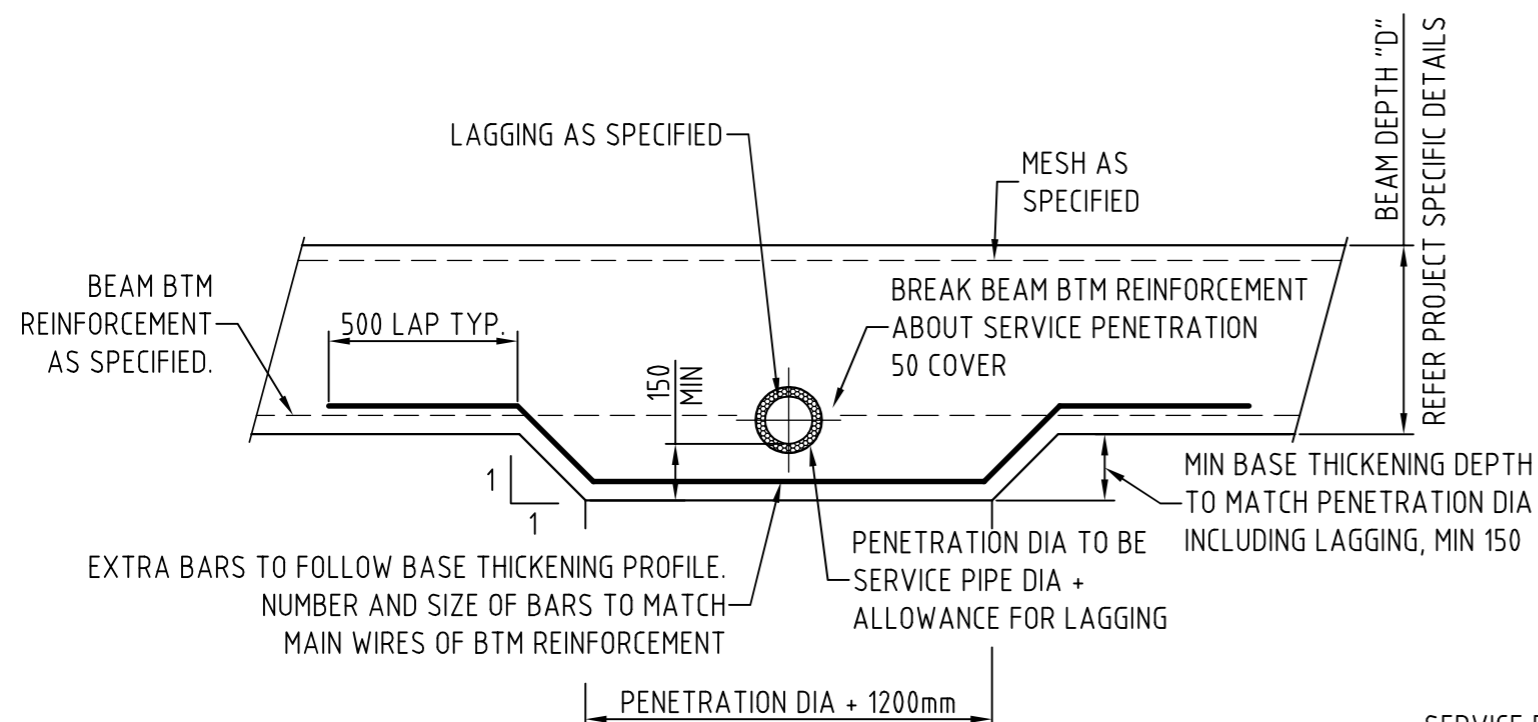
## HORIZONTAL SERVICE PIPE PENETRATION THRU MIDDLE THIRD OF BEAM

SCALE = 1:20



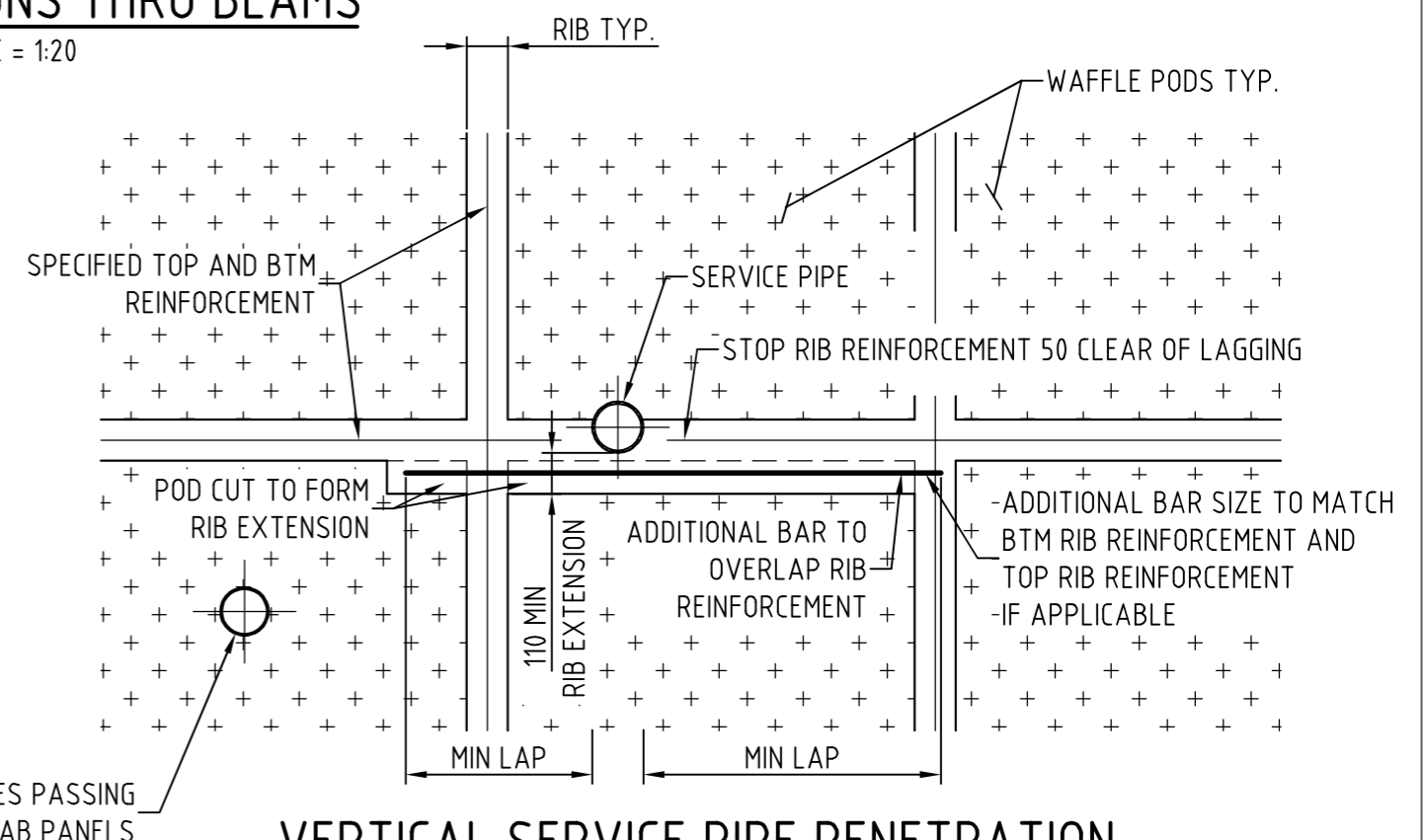
## SERVICE PIPE PENETRATION TYPICAL SECTIONS THRU BEAMS

SCALE = 1:20



## HORIZONTAL SERVICE PIPE PENETRATION THRU LOWER REGION OF BEAM

SCALE = 1:20

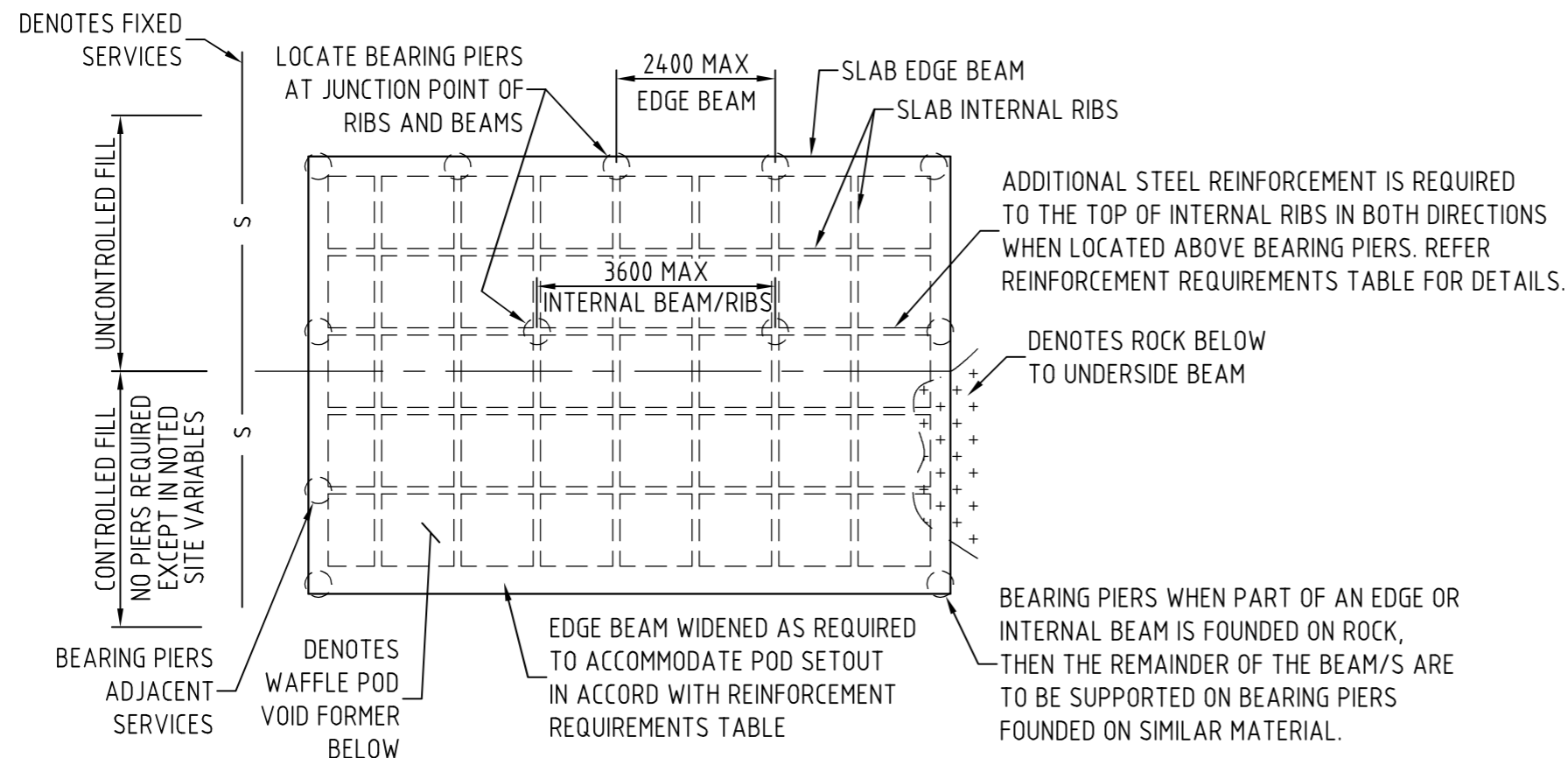


## VERTICAL SERVICE PIPE PENETRATION THRU WAFFLE POD RIB

SCALE = 1:20

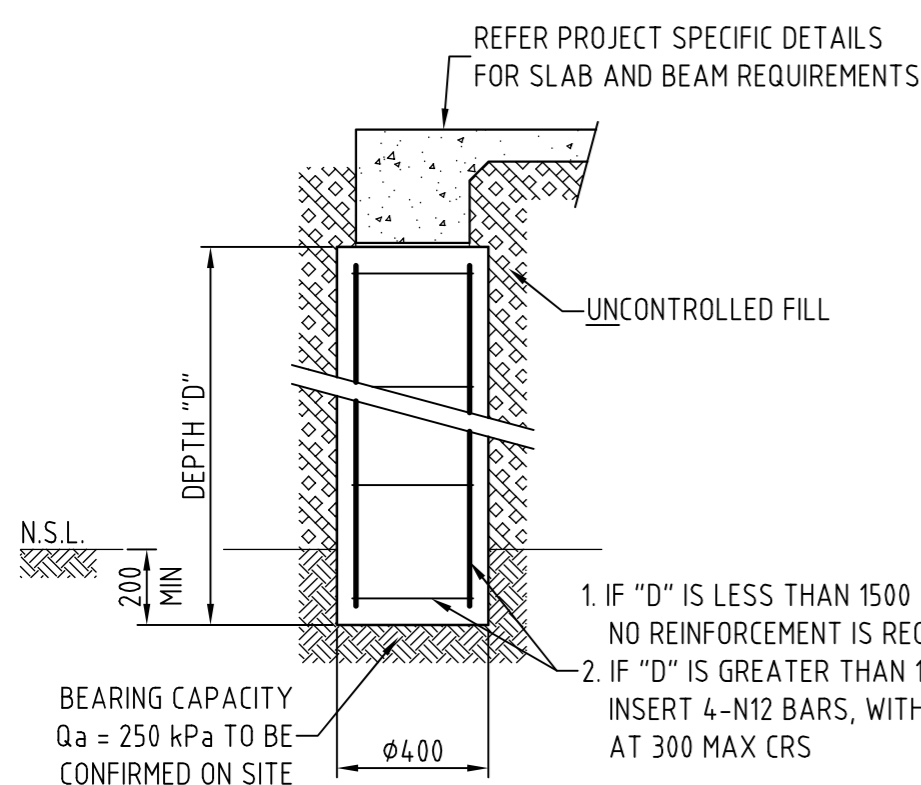
### SERVICE PENETRATION NOTES

1. 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.
2. 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 SHALL BE A MINIMUM 20mm THICK ON CLASS M, M-D, H1 AND H1-D SITES. LAGGING SHALL BE A MINIMUM 40mm THICK ON CLASS H2, H2-D AND E SITES. OR ALTERNATIVELY PROVIDE SLEEVE WITH SIMILAR ALLOWABLE MOVEMENT.
3. LAGGING NOT REQUIRED FOR VERTICAL SERVICE PANEL PENETRATIONS.
4. WAFFLE POD SLAB TOP AND BOTTOM REINFORCEMENT REQUIRED SHALL BE ASCERTAINED FROM THE REINFORCEMENT REQUIREMENTS TABLE ON DRAWING G1020.



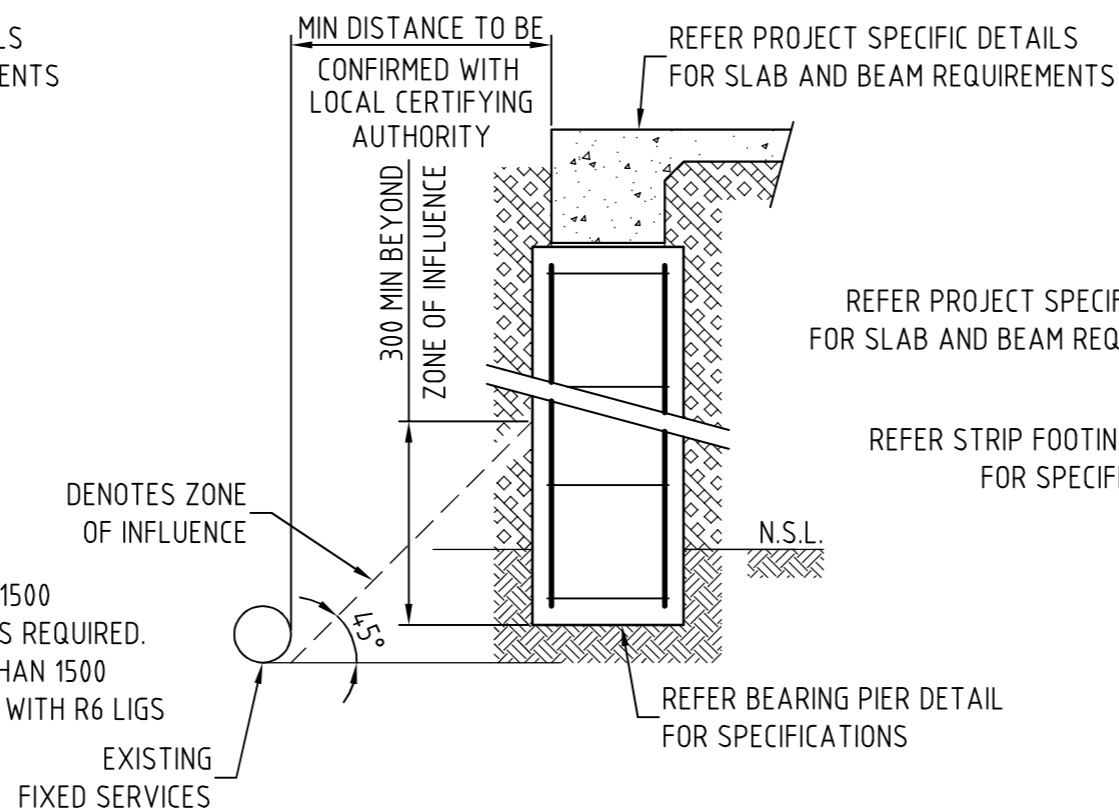
## WAFFLE POD SLAB BEARING PIER REQUIREMENTS DIAGRAM

SCALE = 1:100



## BEARING PIER DETAIL

SCALE = 1:20

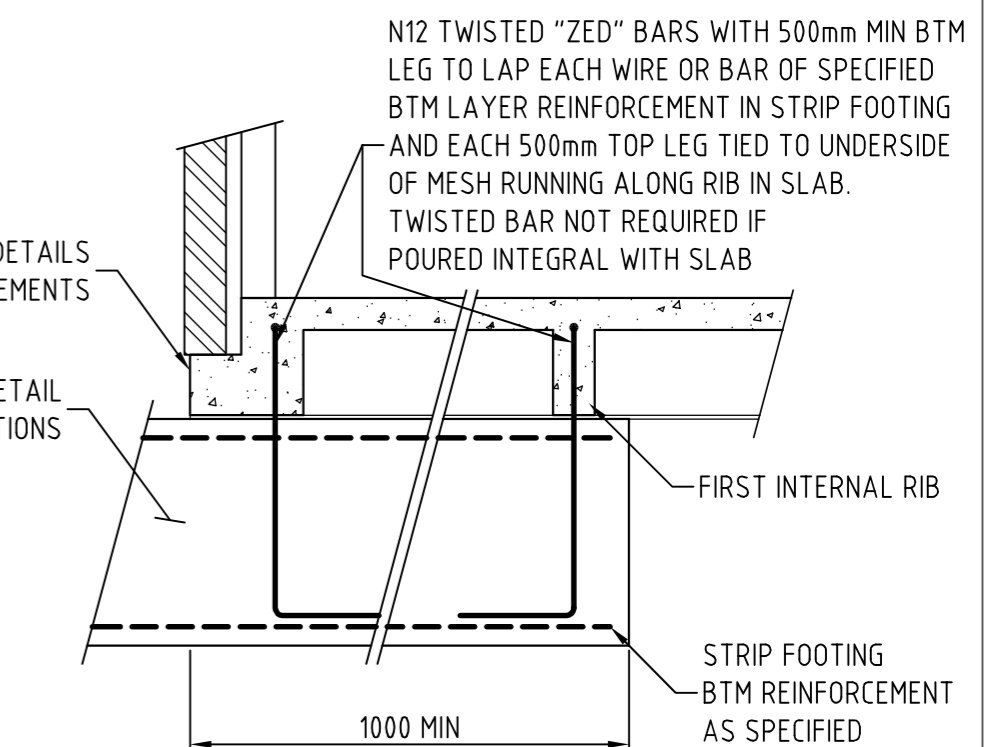


## BEARING PIER ADJACENT SERVICES

SCALE = 1:20

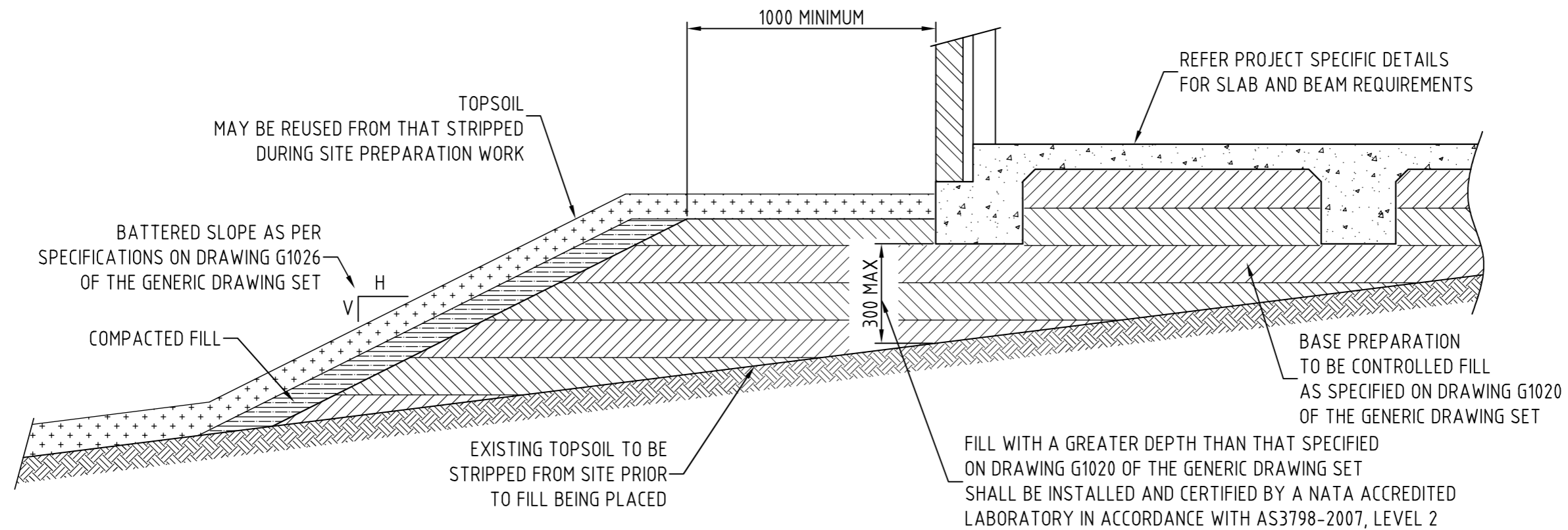
## WAFFLE POD SLAB PIERING REQUIREMENTS

- BEARING PIERS TO BE UTILISED IN THE FOLLOWING SITUATIONS:
  - EDGE BEAMS & LOAD BEARING INTERNAL WALLS ARE FOUNDED ON UNCONTROLLED FILL.
  - ANY INTERNAL BEAMS/RIBS ARE LOCATED ON GREATER THAN 300mm OF UNCONTROLLED FILL.
  - WHEN THE FOUNDATION MATERIAL HAS AN ALLOWABLE BEARING CAPACITY  $Q_a$  OF LESS THAN THAT SPECIFIED IN GEOTECHNICAL NOTES.
  - WHEN PART OF AN EDGE OR INTERNAL BEAM IS FOUNDED ON ROCK, THEN THE REMAINDER OF THE BEAM/S ARE TO BE SUPPORTED ON BEARING PIERS FOUNDED ON SIMILAR MATERIAL.
  - WHEN PART OF AN EDGE BEAM IS FOUNDED ADJACENT EXISTING FIXED SERVICES OR AN EASEMENT.
- BEARING PIERS TO BE POSITIONED FROM UNDERSIDE OF BEAM/RIB TO BELOW NATURAL GROUND LEVEL.
- BEARING PIERS TO BE  $\phi 400$  MASS CONCRETE UP TO 1500mm DEEP. DEEPER PIERS SHALL BE  $\phi 400$  REINFORCED WITH 4-N12 BARS VERTICAL, WITH R6 LIGS HORIZONTAL AT 300 MAX CRS.
- BEARING PIER POSITIONING SHALL BE AS PER THE MINIMUM SHOWN ON DRAWINGS, OR AS PER THE FOLLOWING MINIMUM SPACING REQUIREMENTS:
  - # EDGE BEAM: 2400mm MAX CRS
  - # INTERNAL RIBS: 3600mm MAX CRS
- ADDITIONAL STEEL REINFORCEMENT IS REQUIRED TO THE TOP OF INTERNAL RIBS WHEN LOCATED ABOVE BEARING PIERS. REFER REINFORCEMENT REQUIREMENTS TABLE FOR DETAILS.



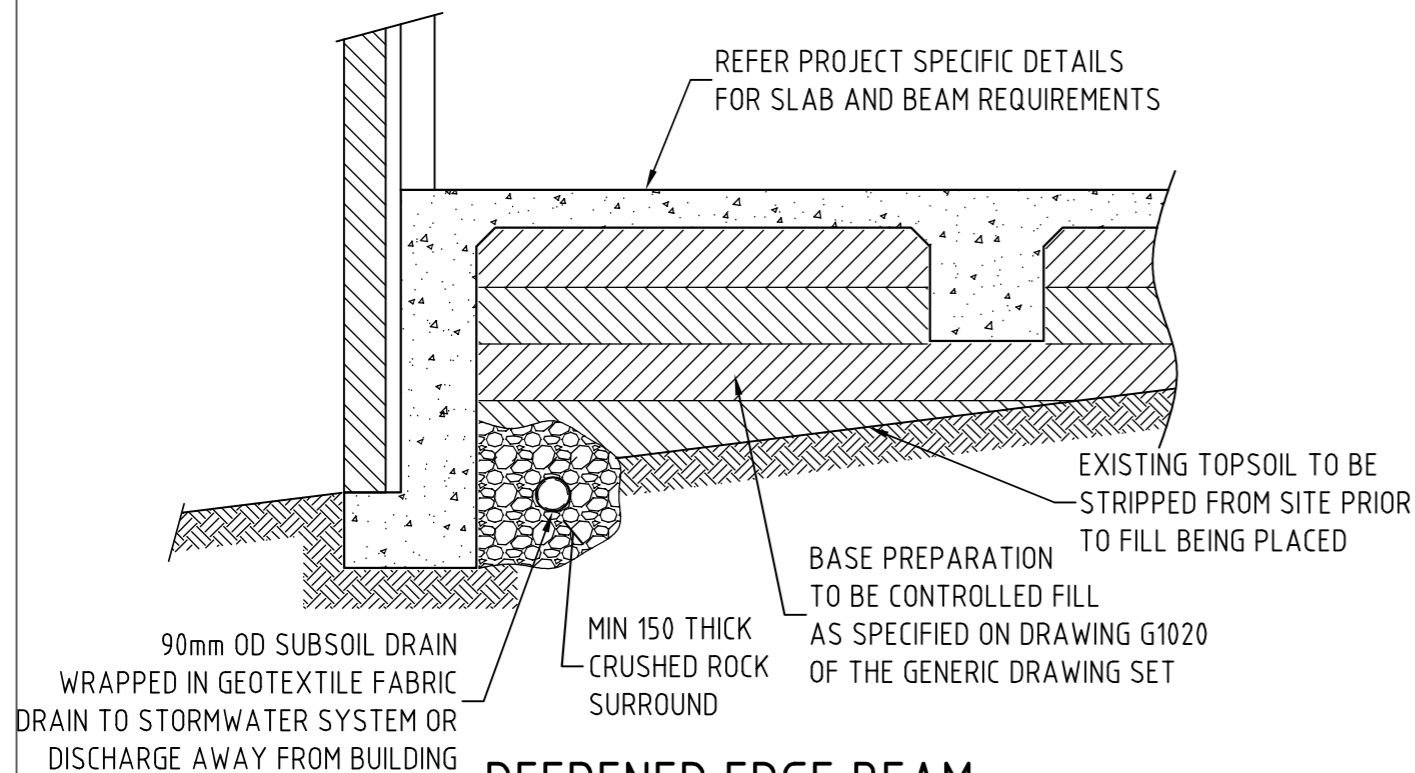
## STRIP FOOTING/WAFFLE JUNCTION

SCALE = 1:20



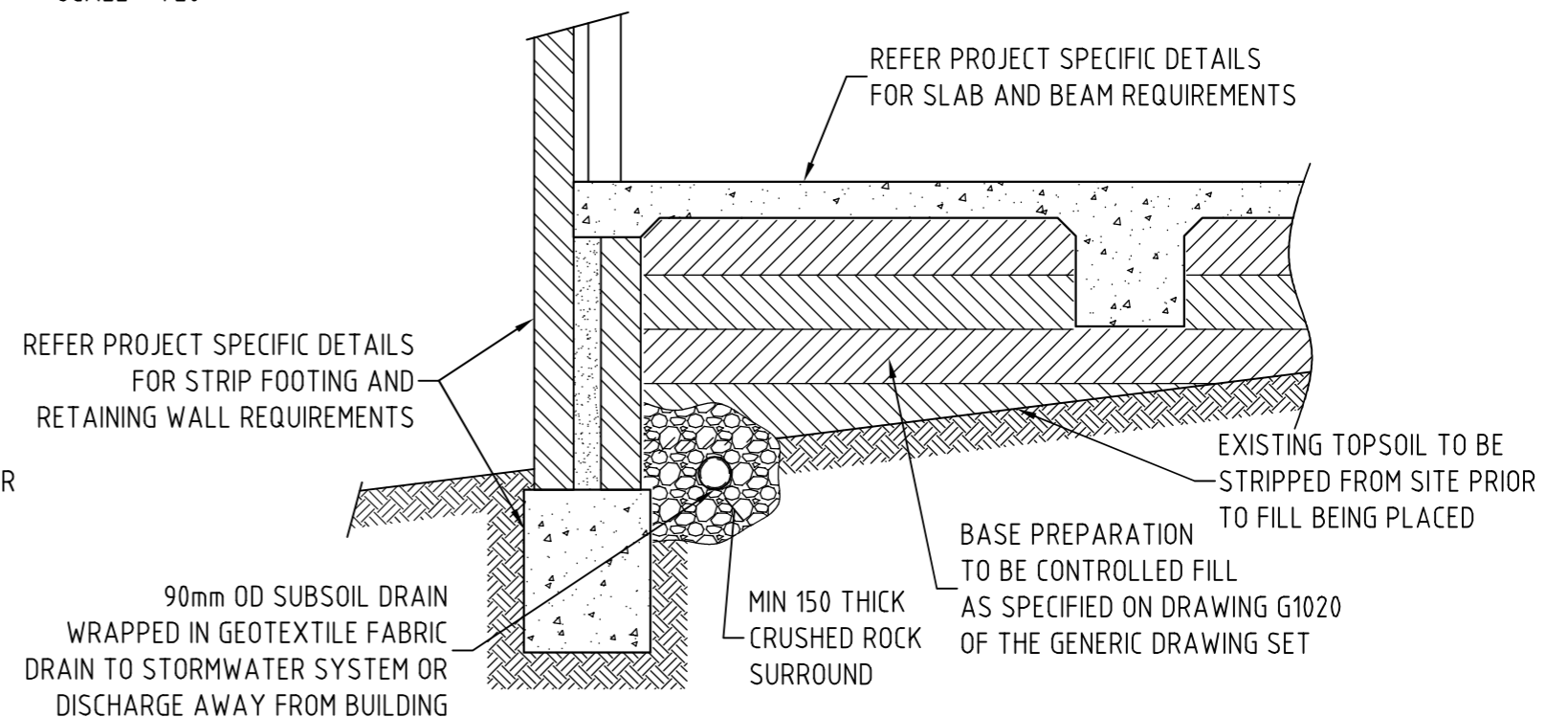
## SLAB EDGE & INTERNAL BEAMS FOUNDED IN CONTROLLED FILL

SCALE = 1:20



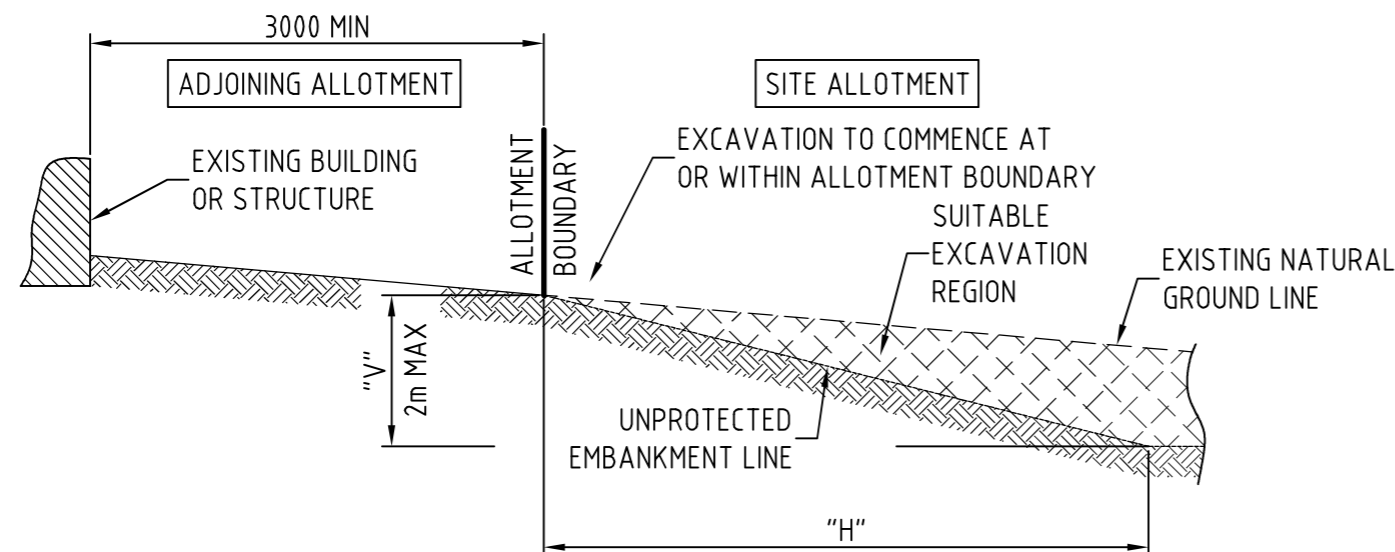
## DEEPEINED EDGE BEAM FOUNDED IN NATURAL SOIL

SCALE = 1:20



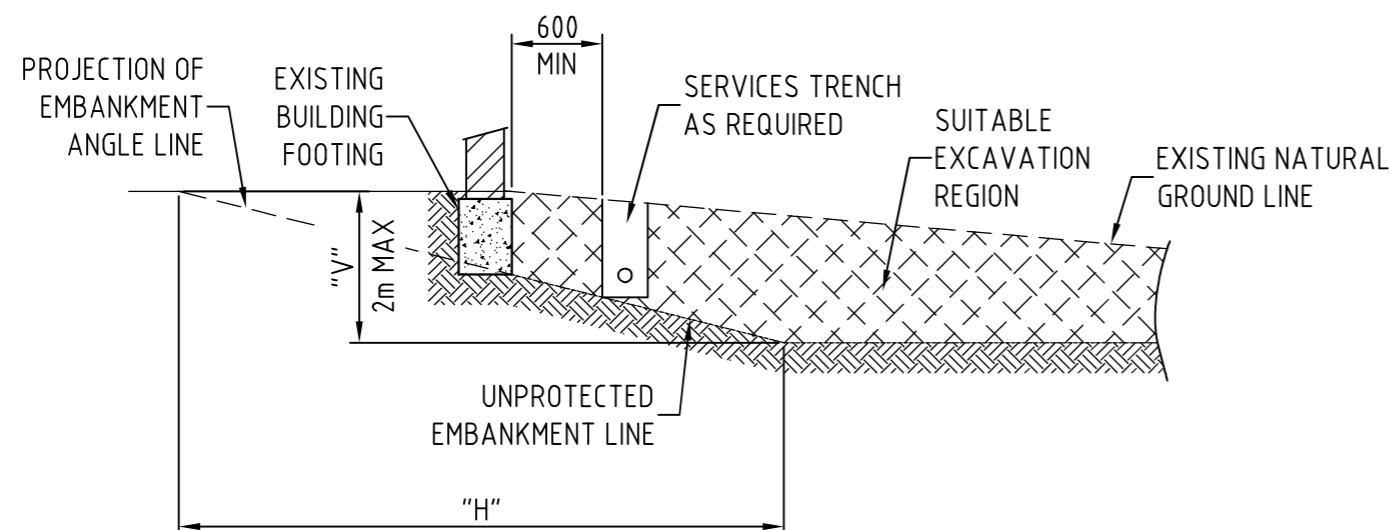
## RETAINING WALL WITH INFILL SLAB FOUNDED IN NATURAL SOIL

SCALE = 1:20



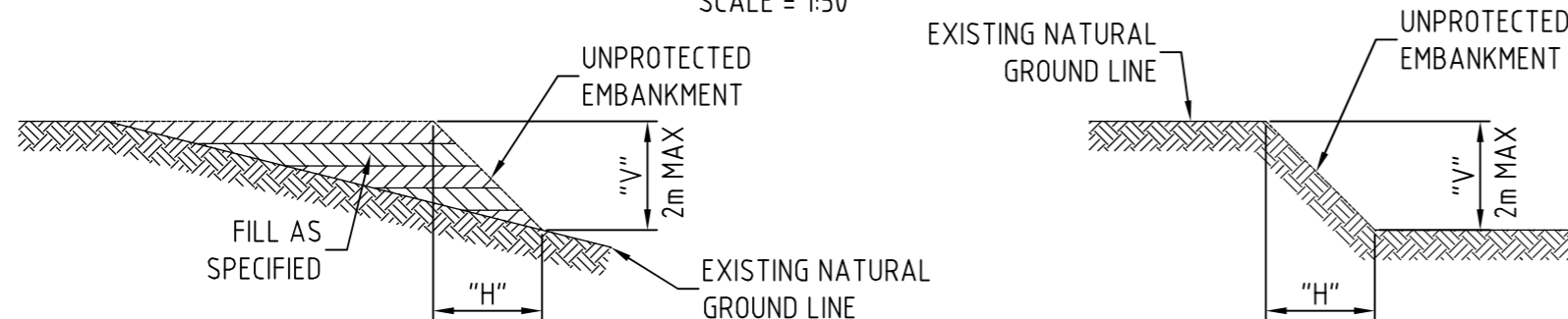
## PERMANENT OR TEMPORARY EXCAVATION WORKS ADJACENT ADJOINING ALLOTMENT

SCALE = 1:50



## TEMPORARY EXCAVATION WORKS ADJACENT EXISTING BUILDINGS

SCALE = 1:50



### FILL EMBANKMENT DETAIL

SCALE = 1:50

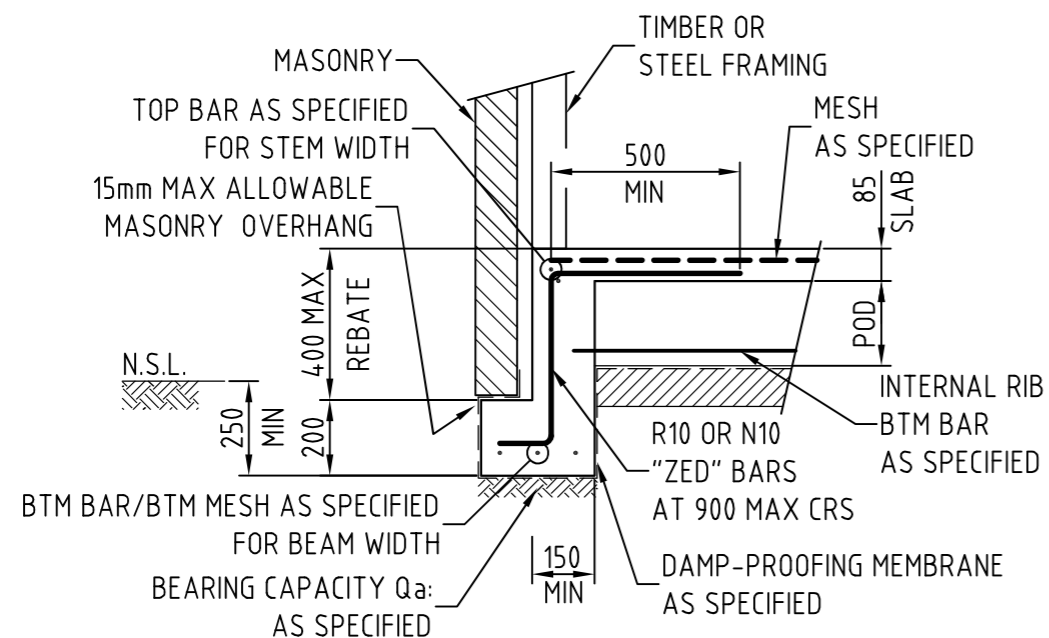
### CUT EMBANKMENT DETAIL

SCALE = 1:50

## EXCAVATION NOTES

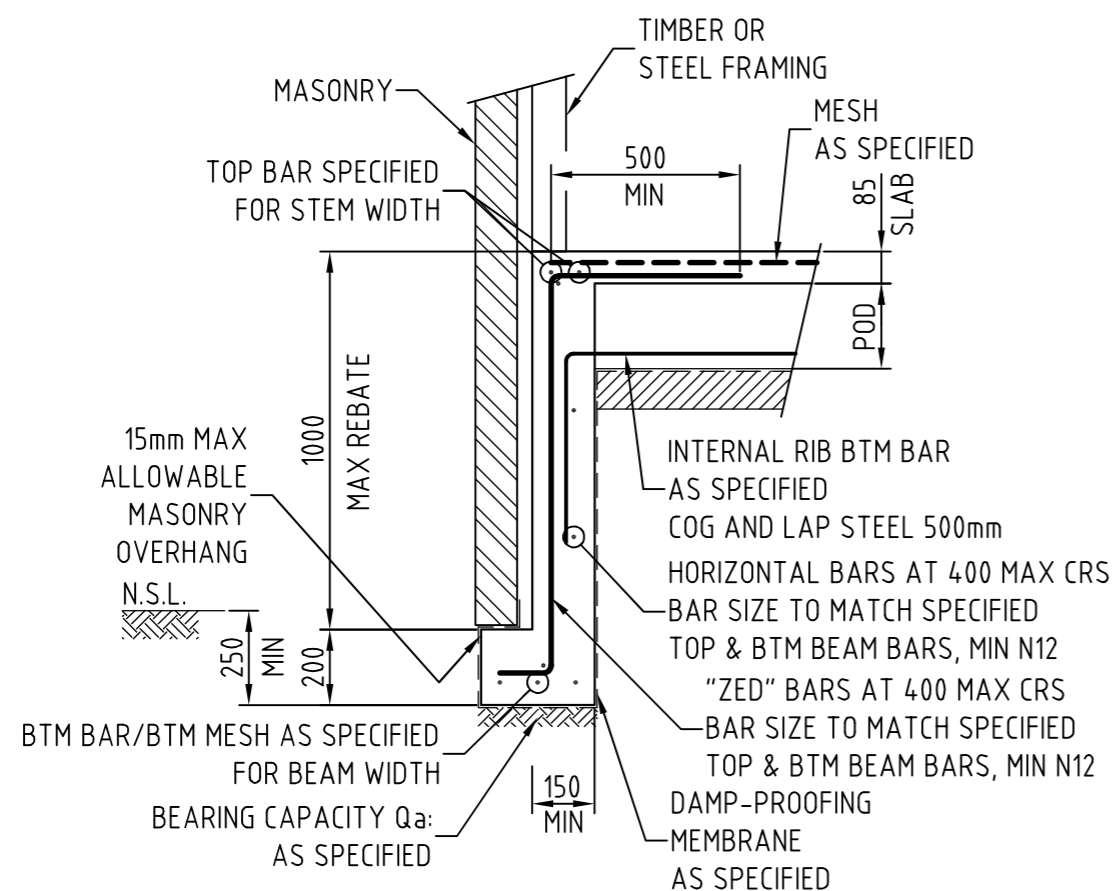
1. ANY PERMANENT VERTICAL OR NEAR VERTICAL EXCAVATION WITHIN 2m OF A BUILDING, AND DEEPER THAN 600mm SHALL BE BATTERED OR RETAINED.
2. THE GRADIENT OF UNPROTECTED EMBANKMENT FOR EXCAVATION INCLUDING BOTH CUT AND FILL SHALL BE ASCERTAINED FROM THE "UNPROTECTED EMBANKMENTS" TABLE.
3. EXCAVATION ADJACENT EXISTING BUILDINGS:
  - A) EXCAVATION WORK FOR FOOTINGS, DRAINAGE TRENCHES OR OTHER SIMILAR WORKS ARE TEMPORARY.
  - B) ELEMENTS REQUIRED SHOULD BE INSTALLED & CONSTRUCTED AS SOON AS PRACTICABLE AFTER EXPOSING THE EXISTING BUILDING FOOTING.
  - C) THE EXISTING FOOTING SHOULD NOT REMAIN EXPOSED AFTER THE COMPLETION OF WORKS.
4. RETAINING WALLS OR OTHER TYPES OF SOIL RETAINING METHODS MUST BE INSTALLED WHERE:
  - A) THE GRADIENT RATIO IS GREATER THAN THAT DESCRIBED IN THE "UNPROTECTED EMBANKMENTS" TABLE.
  - B) SITE SOIL CLASSIFICATION OR DESCRIPTION IS NOT DESCRIBED IN THE "UNPROTECTED EMBANKMENTS" TABLE.
5. FILL SHALL BE PLACED AS FOLLOWS:
  - A) THE GRADIENT RATIO OF FILL DETAILS SHALL BE ASCERTAINED FROM THE "UNPROTECTED EMBANKMENTS" TABLE.
  - B) GENERAL FILL SHALL BE PLACED AND COMPACTED IN LAYERS WITH A VIBRATING PLATE OR SIMILAR COMPACTION EQUIPMENT TO ATTAIN STABILITY.
  - C) WHERE FILL IS TO BE USED TO SUPPORT FOOTINGS OR SLABS, IT SHALL BE CONTROLLED FILL AS DESCRIBED IN GENERIC DRAWING G1020.
6. 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 RATIO
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



400mm MAX REBATE

SCALE = 1:20

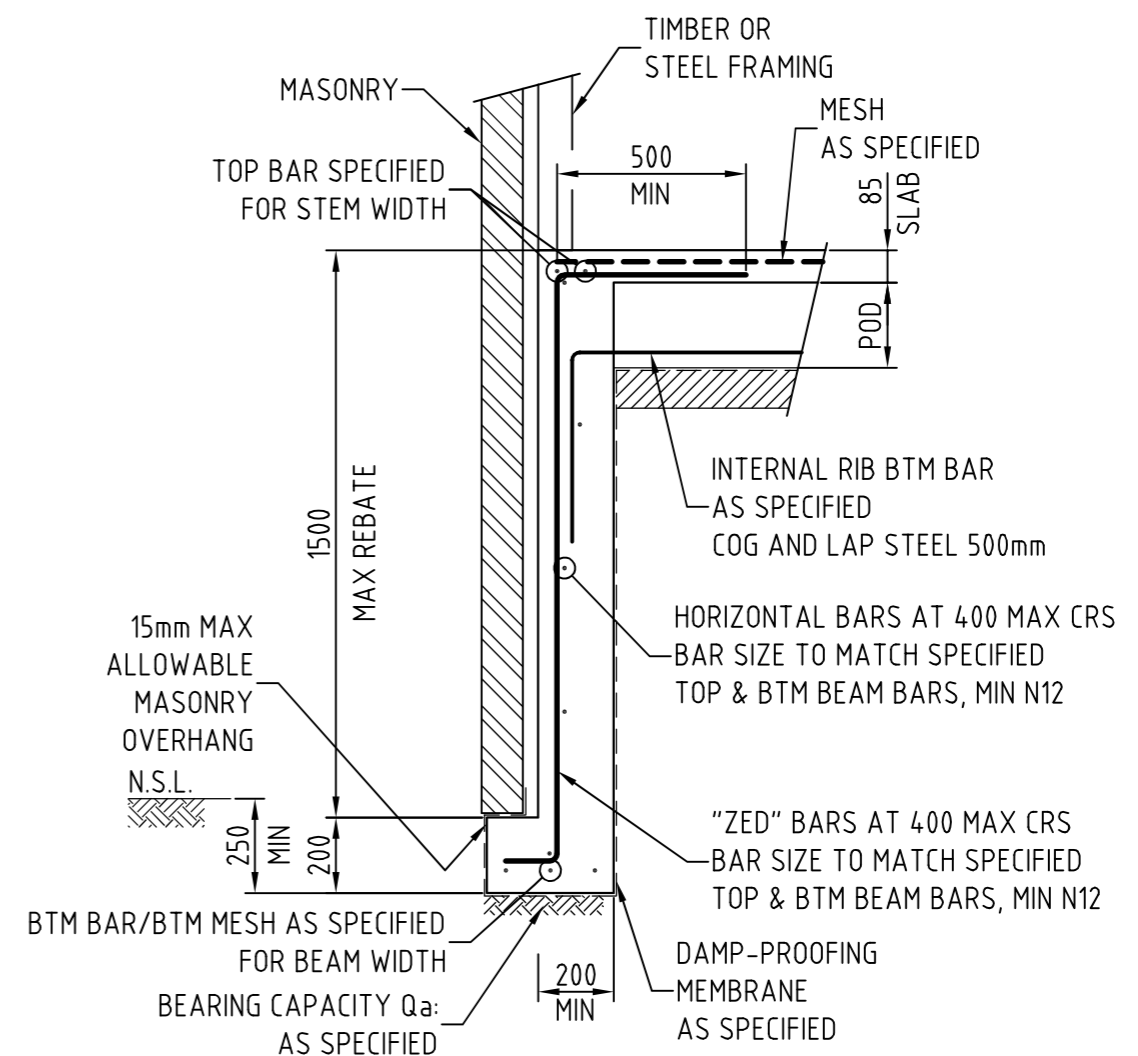


1000mm MAX REBATE

SCALE = 1:20

## DEEPENED EDGE BEAM NOTES

1. DEEPEEN EDGE BEAMS ACCORDING TO THE METHOD OF CONSTRUCTION DEPICTED MAY BE UTILISED IN LIEU OF ANY STANDARD EDGE BEAM DETAILS PROVIDED WITHIN THE PROJECT SPECIFIC DRAWING SET, TO SUIT SITE REQUIREMENTS.
2. WAFFLE POD SLAB TOP AND BTM REINFORCEMENT REQUIRED SHALL BE ASCERTAINED FROM THE REINFORCEMENT REQUIREMENTS TABLE ON GENERIC DRAWING G1020.
3. FOR PROJECTS REQUIRING DESIGN BEYOND THE PARAMETERS PROVIDED, PLEASE REFER BACK TO BARNSON PTY LTD FOR ADDITIONAL DESIGN SERVICES.



1500mm MAX REBATE

SCALE = 1:20

