

NOTES

GENERAL

- G1. THE DRAWINGS ARE TO BE READ TOGETHER WITH ALL ARCHITECTS DRAWINGS AND SPECIFICATIONS
- G2. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING FROM THE DRAWINGS. ALL SETTING OUT DIMENSIONS SHALL BE VERIFIED AND DISCREPANCIES SHALL BE REFERRED TO THE ENGINEER PRIOR TO COMMENCEMENT OF WORK.
- G3. CARE IS REQUIRED DURING CONSTRUCTION SO THAT STRUCTURAL ELEMENTS ARE NOT OVERSTRESSED AND KEPT STABLE AT ALL TIMES
- G4. DESIGN, MATERIALS AND WORKMANSHIP ARE TO BE IN ACCORDANCE WITH CURRENT S.A.A. STANDARDS AND STATUTORY AUTHORITY REGULATIONS EXCEPT WHERE VARIED BY CONTRACT DOCUMENTS.

FOOTINGS AND RETAINING

- F1. FOOTINGS HAVE BEEN DESIGNED TO BE CAST IN CLASS M REACTIVE CLAY HAVING AN ALLOWABLE BEARING CAPACITY OF 150 kPa.
- F2. FOUATION MATERIAL SHALL BE APPROVED BEFORE PLACING MEMBRANE, REINFORCEMENT OR CONCRETE AND SHALL BE INSPECTED BY THE ENGINEER PRIOR TO PLACING CONCRETE.
- F3. FOOTINGS TO BE CONSTRUCTED AND BACKFILLED AS SOON AS POSSIBLE FOLLOWING EXCAVATION TO AVOID SOFTENING BY RAIN OR DRYING OUT BY EXPOSURE

STRUCTURAL STEEL

- S1. ALL STEEL WORK TO BE GRADE 250 STEEL. HOLLOW SECTION TO BE 250 OR 350 AS APPROPRIATE. DESIGN FABRICATION AND ERECTION TO BE IN ACCORDANCE WITH AS 4100.
- S2. STEELWORK SHALL HAVE A CORROSION PROTECTION TREATMENT.
- ALL BOLTS TO BE M16 GRADE 8.8/S AND ALL FILLET WELDS TO BE 6mm CONTINUOUS UNLESS NOTED OTHERWISE. ALL BOLTS, NUTS AND WASHERS ARE TO BE HOT DIPPED GALVANISED.

CONCRETE

C1. ALL WORK TO BE IN ACCORDANCE WITH AS3600 CURRENT EDITIONS WITH AMENDMENTS

CONCRETE CHARACTERISTICS

ELEMENT	COMPRESSIVE STRENGTH $f_c - 28$ DAYS MPa	SLUMP mm	MAX AGG SIZE mm
SUSPENDED SLABS & COLUMNS	32	80	20
PIERS AND FOOTINGS	25	80	20
R.C. RETAINING WALL	25	140	10
ELSEWHERE	25	80	20

- C2. CONCRETE SHALL HAVE NO ADMIXTURES WITHOUT THE ENGINEER'S APPROVAL.
- C3. REINFORCEMENT SYMBOLS:

N 500N GRADE DEFORMED BAR

S 250S GRADE DEFORMED BAR

R 250R GRADE ROUND BAR

SL 500L GRADE WIRE MESH

THE NUMBER FOLLOWING THESE SYMBOLS IS THE BAR DIAMETER IN MM.

ALL WELDED MESH FABRIC SHALL BE SUPPLIED IN FLAT SHEETS AND SHALL COMPLY WITH CURRENT AS1304 AND AMENDMENTS.

- C3. ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON MILD STEEL PLASTIC TIPPED CHAIRS OR CONCRETE CHAIRS AT NOT GREATER THAN 1 METRE CENTRES BOTH WAYS. BARS SHALL BE TIED AT ALTERNATE INTERSECTIONS. IN EXPOSURE CONDITIONS B1 USE PLASTIC CHAIRS.
- C4. FORMWORK IS TO BE ERECTED TO COMPLY WITH CURRENT AS3610.
- C5. THE FINISHED CONCRETE SHALL BE A DENSE HOMOGENEOUS MASS, COMPLETELY FILLING THE FORMWORK, THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. ALL CONCRETE INCLUDING SLABS ON GROUND AND FOOTINGS SHALL BE COMPACTED WITH MECHANICAL VIBRATORS.
- C6. CLEAR CONCRETE COVER TO ALL REINFORCEMENT SHALL BE AS FOLLOWS (UNO)

CONCRETE GRADE	CAST AGAINST GROUND	CAST IN FORMS AND EXPOSED	CAST IN FORMS AND NOT EXPOSED
25	50mm	30mm	20mm
32	60mm	40mm	-
40	65mm	45mm	-

- C7. CURING OF ALL CONCRETE TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET FOR A PERIOD OF 7 DAYS. APPROVED SPRAYED ON CURING COMPOUNDS MAY BE USED WHERE NO FLOOR FINISHES ARE PROPOSED. WET HESSIAN MAY BE USED FOR CURING.
- C8. CONSTRUCTION SUPPORT PROPPING IS TO BE LEFT IN PLACE TO AVOID OVERSTRESSING THE STRUCTURE DUE TO CONSTRUCTION LOADING. NO BRICKWORK OR PARTITION WALLS ARE TO BE CONSTRUCTED ON SUSPENDED SLABS UNTIL ALL PROPPING IS REMOVED AND THE SLAB HAS ABSORBED ITS DEAD LOAD DEFLECTION AND ACHIEVED DESIGN STRENGTH.
- C9. CONSTRUCTION JOINTS IF NOT SHOWN ON DRAWINGS SHALL BE LOCATED ACCORDING TO THE ENGINEER INSTRUCTIONS.

C10. THE ENGINEER SHALL BE GIVEN 24 HOURS NOTICE FOR REINFORCEMENT INSPECTION AND CONCRETE SHALL NOT BE DELIVERED UNTIL THE REINFORCEMENT IS IN ACCORDANCE WITH THE DESIGN.

BRICKWORK

- Br.1. BRICKWORK IS TO BE CONSTRUCTED WITH MORTAR IN THE RATIO 1:1:6. CEMENT:LIME:SAND AND TO BE ADEQUATELY CURED PRIOR TO BEING LOADED.
- SAND TO BE CLEAN SAND WITH NO CLAY CONTENT. MASONRY TO BE CONSTRUCTED TO CURRENT AS3700.
- Br.2. BRICKS USED IN THE CONSTRUCTION OF LOAD-BEARING WALLS SHALL HAVE MINIMUM 20MPa COMPRESSIVE STRENGTH.
- Br.3. TWO LAYERS OF APPROVED METAL BASED SLIP MATERIAL SHALL BE USED OVER ALL LOAD-BEARING WALLS THAT SUPPORT CONCRETE SLABS. NON LOAD-BEARING WALLS SHALL HAVE 10mm COMPRESSIBLE MATERIAL AND TIES TO THE SLAB SOFFIT.
- Br.4. NO BRICKWORK OR BLOCKWORK SHALL BE CONSTRUCTED ON SUSPENDED SLABS UNTIL ALL PROPPING HAS BEEN REMOVED FROM THE UNDERSIDE OF SLAB AND THE CONCRETE HAS THE SPECIFIED 28 DAY CYLINDER STRENGTH VERIFIED BY TESTS.

BLOCKWORK

- Bl.1. CONCRETE BLOCKS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 15MPa. AND CONFORM TO AS1600. MORTAR IS TO BE 1:1/2:3. CEMENT:LIME:SAND. MASONRY TO BE CONSTRUCTED TO CURRENT AS1700.
- Bl.2. WHERE CORES OF HOLLOW BLOCKS ARE TO BE FILED A PROPERLY COMPACTED 25MPa. CONCRETE USING 10mm AGGREGATE WITH 140mm SLUMP SHALL BE USED.
- Bl.3. REINFORCEMENT STARTIER BARS TO BE ACCURATELY LOCATED TO SUIT BLOCK CORES. ALLOW 65mm COVER FROM OUTSIDE OF BOCKWORK.
- ALL REINFORCEMENT LAP LENGTHS TO BE IN ACCORDANCE WITH CURRENT AS3600.

TIMBER

- T1. ALL TIMBER CONSTRUCTION TO BE IN ACCORDANCE WITH AS1684 & AS1720. ALL OREGON TO BE GRADED F7 UNLESS NOTED OTHERWISE.
- ALL HARDWOOD TO BE MINIMUM GRADE F14.
- EXPOSED TIMBER TO BE TREATED RADIAITA PINE TO AS1604, OR HARDWOOD DURABILITY CLASS 1 OR 2.
- T2. ALL JOISTS TO HAVE BLOCKING OVER SUPPORT BEARERS AND AT MAXIMUM 3m CENTRES.
- T3. ROOF TRUSSES TO BE DESIGNED BY THE MANUFACTURER TO AS1720.
- T4. ALL HOLES FOR BOLTS TO BE EXACT SIZE.
- WASHERS TO BE USED UNDER ALL HEADS AND NUTS AND TO BE AT LEAST 2.5 TIMES THE BOLT DIAMETER. BOLTS TO BE M16 GRADE 4.6/S UNLESS NOTED OTHERWISE.

DRAWINGS REGISTER

SHEET No.	DRAWING TITLE	Rev.
1	SPECIFICATIONS	A
2	WAFFLE PODS PLAN	A
3	WAFFLE PODS ENGINEERING DETAILS	A
4	FIRST FLOOR BEAMS LAYOUT-PLAN & STEEL BEAMS DETAILS	A

CLIENT:

FOR MR WAHBA

PROJECT: TWO STOREY B/V DUPLEX

AT:LOT 52 (No. 15) WOODBURN AVENUE

PANANIA NSW 2213

Address:

242 The River Rd.
Revesby 2212 NSW

TEL: (02) 9792 4899

FAX: (02) 9792 4899

MOB: 0414 979377

E-MAIL: gbcon@msn.com

Ghaly Botros

Structural Civil Engineers

& ENGINEERING SERVICES P/L

TITLE:

NOTES & SPECIFICATION

DATE: 28/11/2017

SCALE:
AS SHOWN

DESIGN BY:

Ghaly Botros

CHECKED BY:

DRAWN BY:

R.Rizkallah

APPROVED:

SHEET No.

S1 OF 4

DWG No:

61/17

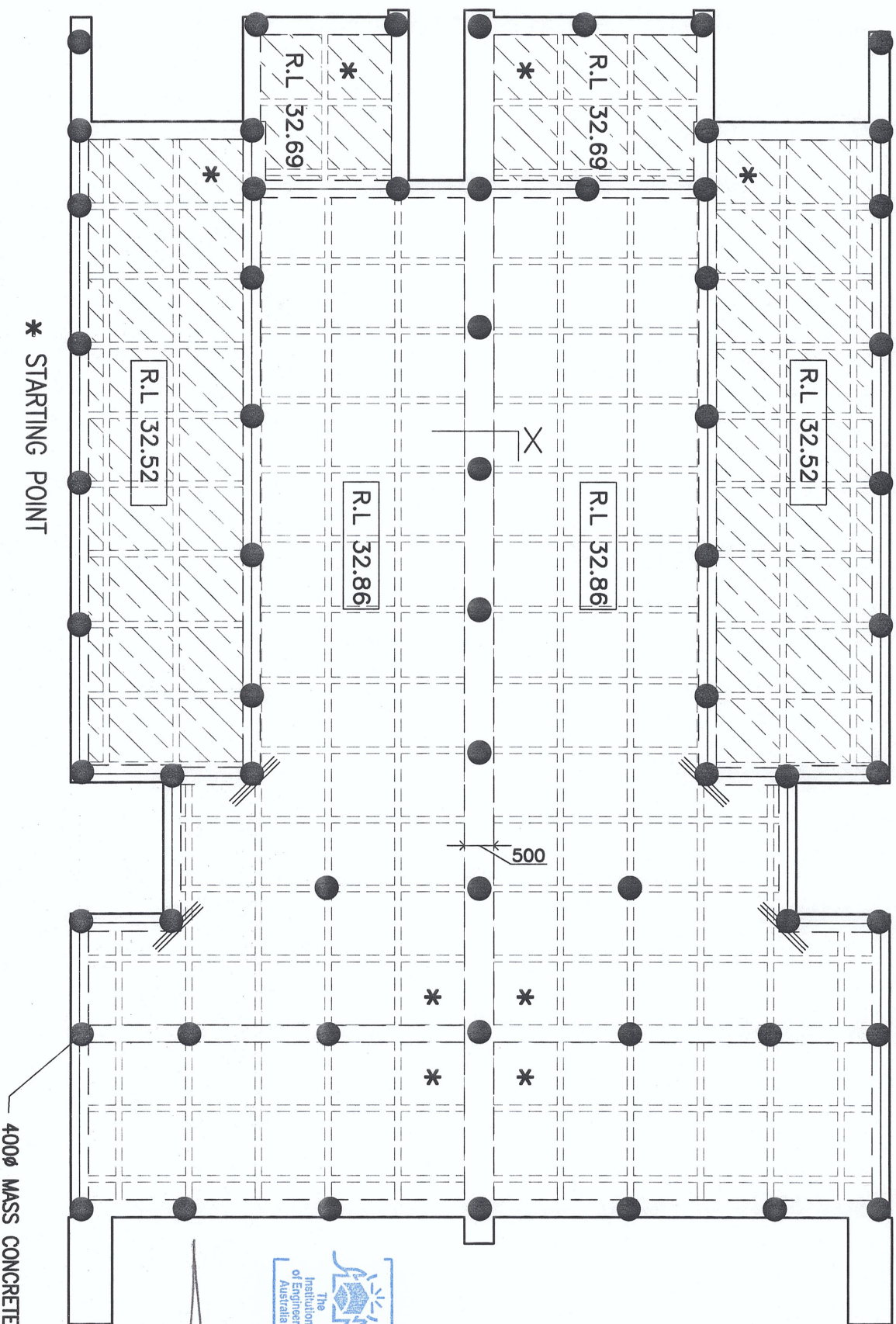
REV:

A



29/11/17

H1 CLASS



Ghaly Botros
MIEAust CP Eng
Chartered Professional Engineer
Membership No. 520049

[Signature]
29/11/17

* PROVIDE VERTICAL JOINTS (MASONRY ARTICULATION JOINTS) AT 6M MAXIMUM CENTERS, AND 4M MAXIMUM DISTANCE FROM CORNERS IN ALL BRICK WALLS AND ALL ACCORDING TO CLAUSE 3.3.1.8 OF BCA 2009

* BUILDER TO ADHERE TO NUMBER OF PIERS & ARRANGEMENT AS SHOWN ON PLAN WITH 1800mm CRS MAXIMUM SPACING

WAFFLE TYPE

POD HEIGHT 300mm unless noted otherwise
SLAB THICKNESS 100mm
OVERALL DEPTH 400mm, unless noted otherwise
RIB SPACING (max.) 1090mm
RIB WIDTH 110mm

SOIL CLASS : H1
SYSTEM : WR
BUILDING: VENEER

REINFORCEMENT

EXTERNAL RIB 4N12 BOT
INTERNAL RIB 1N12 BOT
SLAB MESH SL82
COVER (min) 20mm

CLIENT:

FOR MR WAHBA

PROJECT: TWO STOREY B/V DUPLEX

AT: LOT 52 (No. 15) WOODBURN AVENUE
PANANIA NSW 2213

WAFFLE POD SLAB PLAN

SCALE 1 : 100

ARTICULATED MASONRY VENEER

THIS PLAN IS DONE IN ACCORDANCE WITH AS 2870

NOTE:

FILL TO BE COMPACTED IN ACCORDANCE WITH CLAUSE 6.4.2, AS2870
VERTICAL ARTICULATION JOINTS IN ACCORDANCE WITH CLAUSE 3.3.1.8 OF THE BUILDING CODE OF AUSTRALIA
FOR PIERS DEEPER THAN 2.5m PROVIDE REINFORCEMENT 4N12 & TIES R6 @ 450mm

CONCRETE PIERS MUST BE $f_c=32MPa$
CONCRETE SLAB MUST BE $f_c=32MPa$

3XN12 BARS, 1200 LONG
TIED TO UNDERSIDE OF FABRIC
TYPICAL BARS MAY BE DELETED
IF FABRIC LAPS AT INTERNAL CORNERS



HATCHED AREA INDICATES
GARAGE, PATIO, ALFRESCO

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TITLE:

WAFFLE PODS PLAN

DATE: 28/11/2017

SCALE:
AS SHOWN

DESIGN BY:
Ghaly Botros

CHECKED BY:

DRAWN BY:
R. Rizkallah

APPROVED:

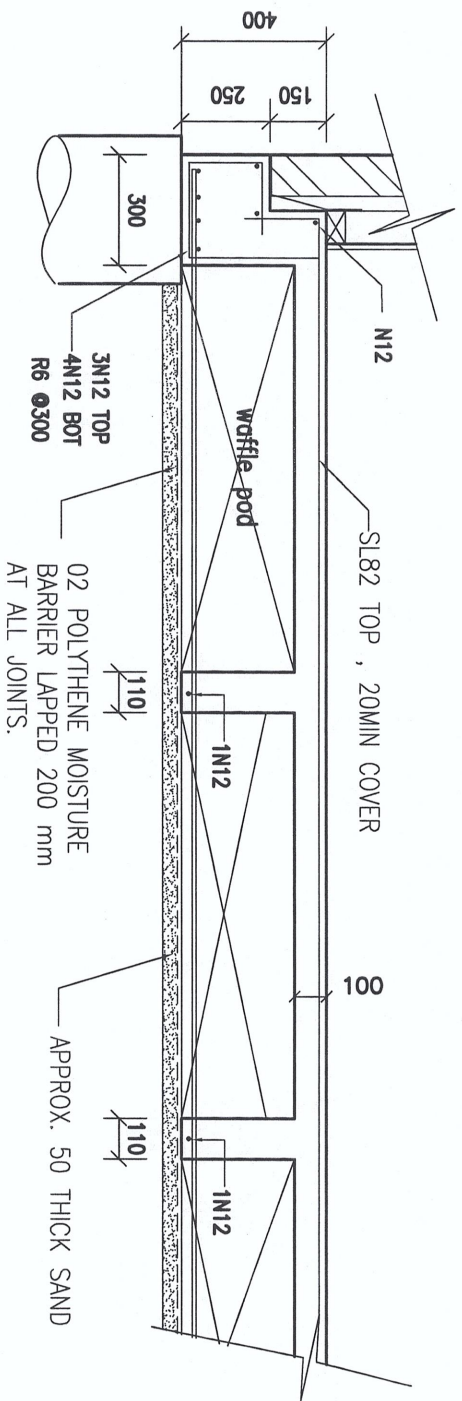
SHEET No.

S2 OF 4

DWG No: 61/17

REV: A

A	28/11/17	CONSTRUCTION CERTIFICATE
ISSUE	DATE	DESCRIPTION

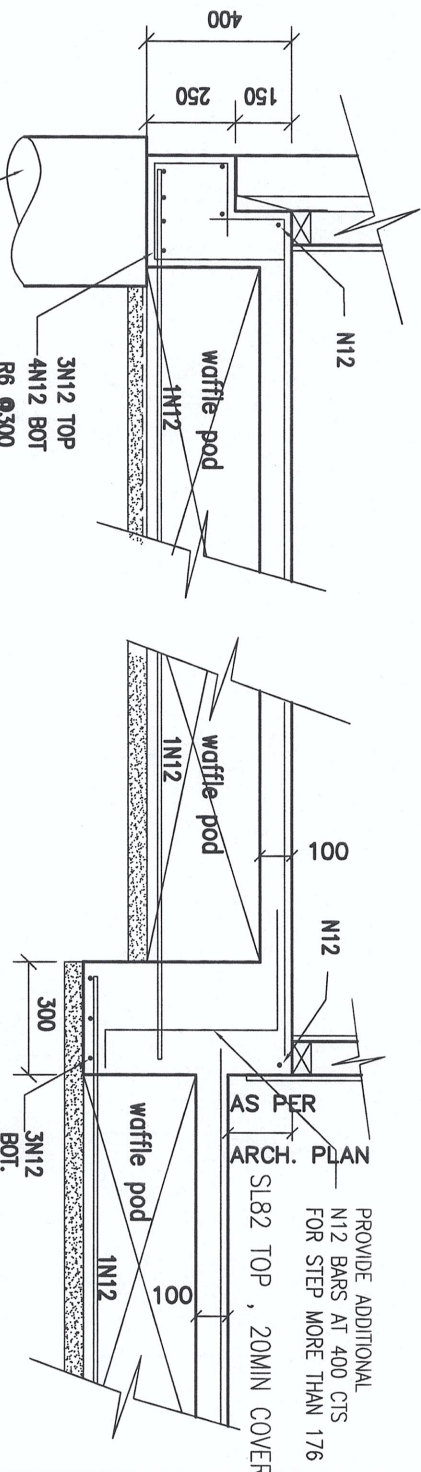


EDGE & INTERNAL RIB

SCALE 1 : 20

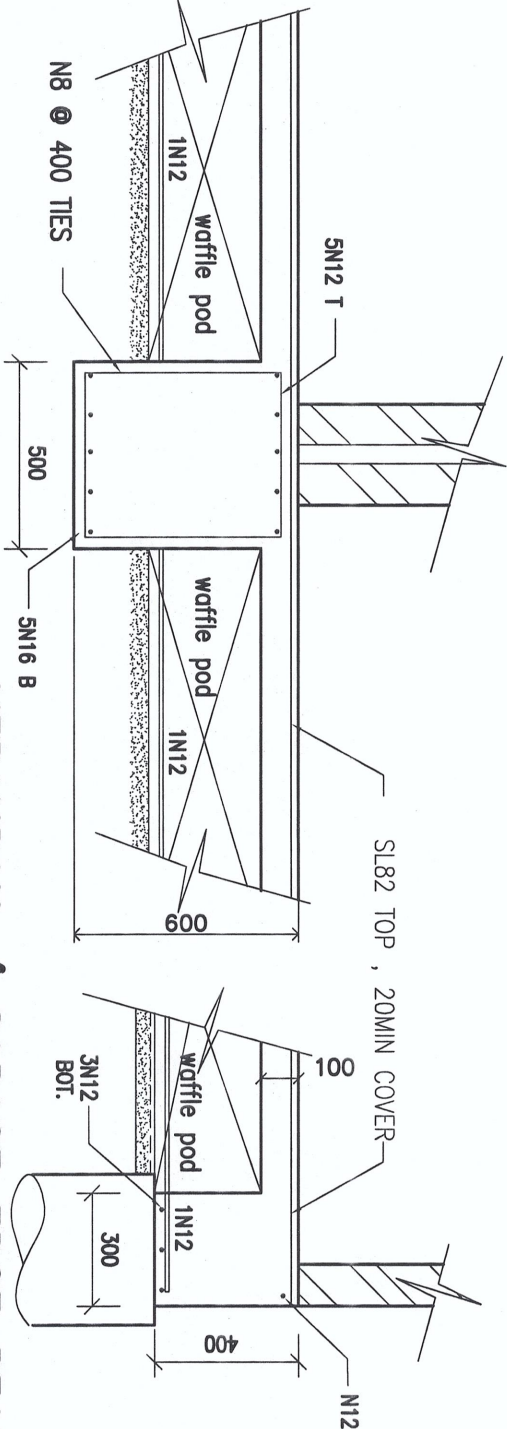
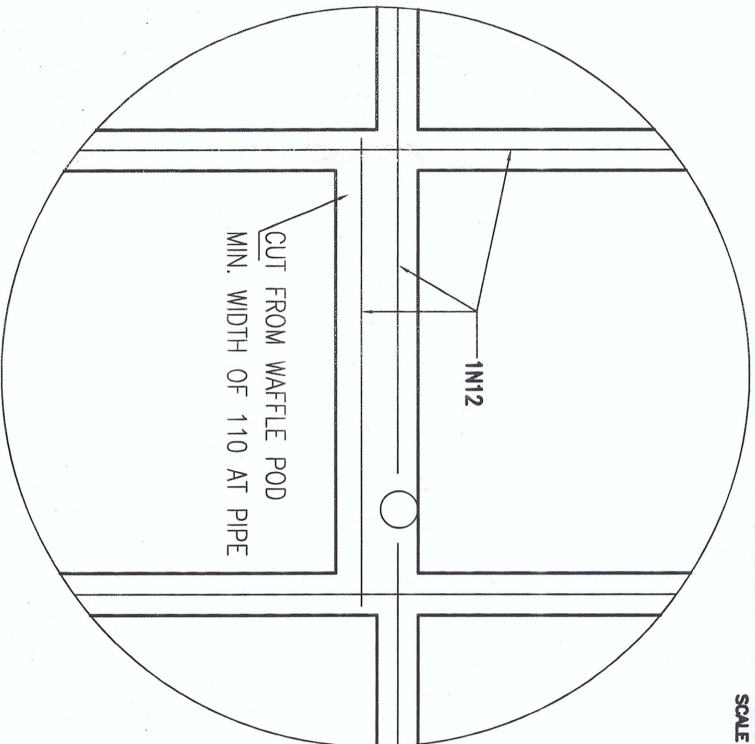
TYPICAL PIERING REQUIREMENTS

SCALE 1 : 20



GARAGE SET-DOWN

SCALE 1 : 20

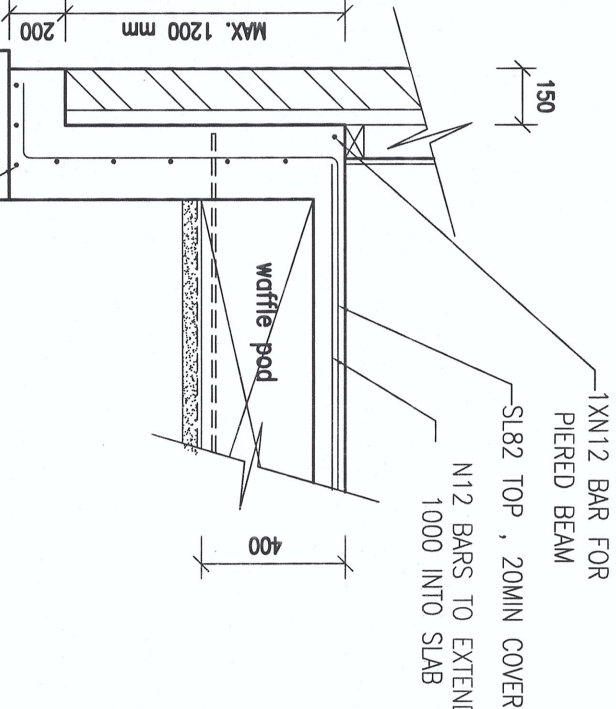


SECTION X

SCALE 1 : 20

VERANDAH / GARAGE EDGE BEAM

SCALE 1 : 20



DROP EDGE BEAM

SCALE 1 : 20

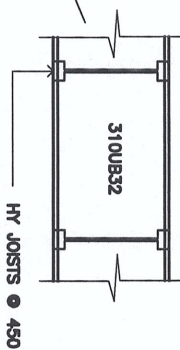
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SCALE 1 : 20

PIPE PENETRATION THROUGH RIB

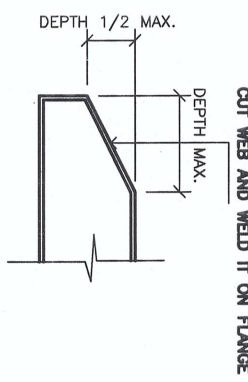
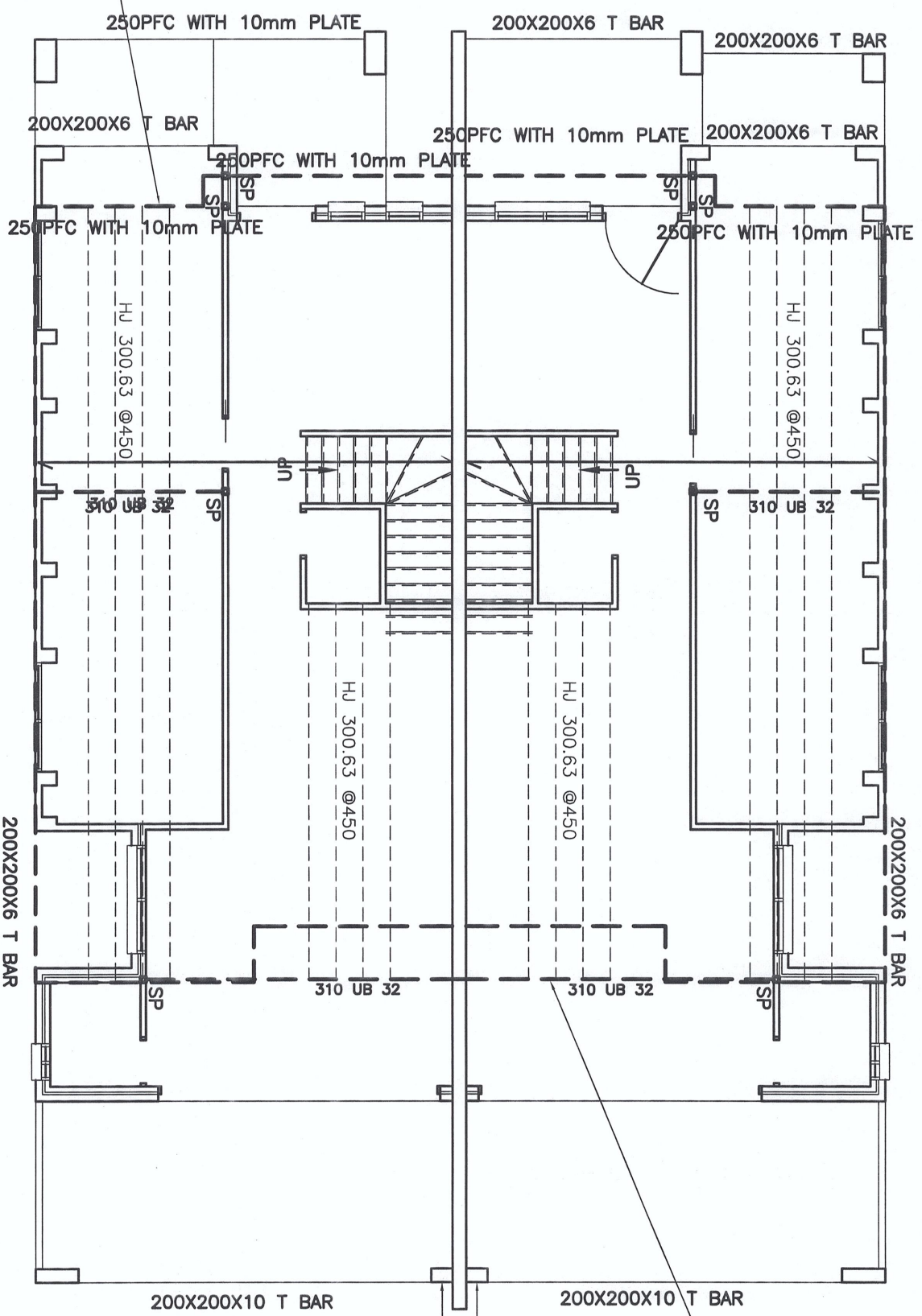
CLIENT: FOR MR WAHBA		PROJECT: TWO STOREY B/V DUPLEX		AT: LOT 52 (No. 15) WOODBURN AVENUE PANANIA NSW 2213	
REINFORCEMENT FOR EXTERNAL BEAMS WHERE WIDTH EXCEEDS 270mm		Width		Top Steel	
		Bottom Steel			
271 – 330mm		1x N12		3X N12	
331 – 440mm		2X N12		4X N12	
441 – 550mm		3X N12		5X N12	
551 – 660mm		4X N12		6X N12	

Address: 242 The River Rd. Revesby 2212 NSW		TITLE: WAFFLE PODS ENGINEERING DETAILS		DATE: 28/11/2017	
Ghaly Botros Structural Civil Engineers & ENGINEERING SERVICES P/L TEL: (02) 9792 4899 FAX: (02) 9792 4899 MOB: 0414 979377 E-MAIL: gbcon@msn.com		ENGINEERING DETAILS		SCALE: AS SHOWN	
DESIGN BY: Ghaly Botros		CHECKED BY:		DATE: 28/11/2017	
DRAWN BY: R. Rizkollah		APPROVED:		SCALE: AS SHOWN	
SHEET No. S3 OF 4		DWG No: 61/17		REV: A	



TYPICAL BEAM CONNECTION

SCALE 1 : 20



TYPICAL CUT IN BEAM DETAIL

SCALE 1 : 20

STEEL BEAM

SCALE 1 : 100

SP 90X90X6 SHS
TP 90X90 HARD WOOD

TYPICAL COLUMN & BEAM DETAIL

SCALE 1 : 20

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FAX: (02) 9792 4899

MOB: 0414 979377

E-MAIL: gbcon@msn.com

TITLE:

FIRST FLOOR BEAMS LAYOUT-PLAN

DATE: 28/11/2017

SCALE: AS SHOWN

DESIGN BY:
Ghaly Botros

CHECKED BY:

DRAWN BY:
R. Rizkallah

APPROVED:

SHEET No.

S4 OF 4

DWG No: 61/17

REV: A

A	28/11/17	CONSTRUCTION CERTIFICATE
ISSUE	DATE	DESCRIPTION