

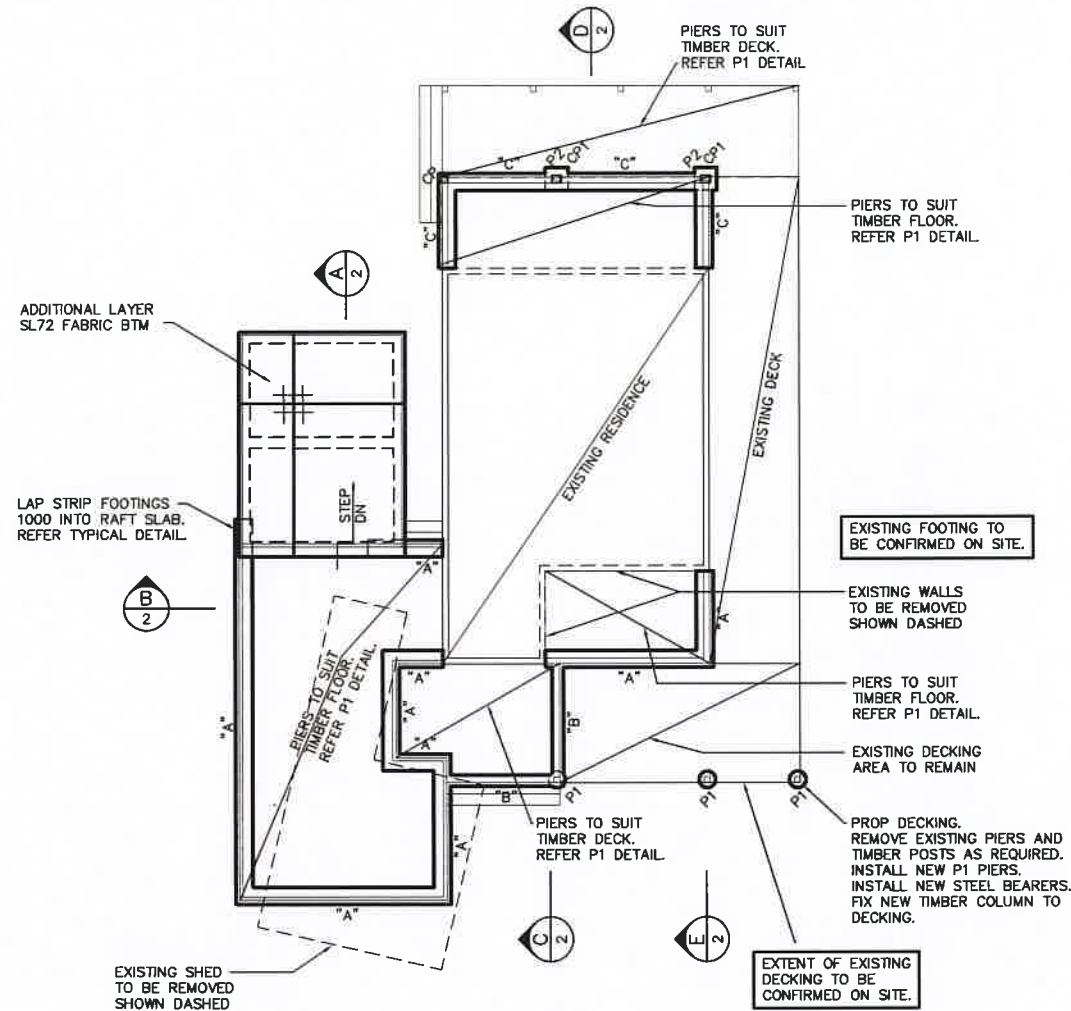


NOTE: DURING EXCAVATION TRENCHES ARE TO BE CAREFULLY EXAMINED FOR THE PRESENCE OF ANY FILL. IF ANY FILL IS DETECTED OR IN DOUBT CONTACT XEROS PICCOLO ENGINEERS.

NOTE: WALL FRAME BRACING AND TIE DOWN TO BE IN ACCORDANCE WITH AS 1684. TO DETAILS BY OTHERS. THIS SLAB DESIGN HAS NO PROVISION FOR INTERNAL LOAD BEARING WALLS AND THEREFORE IS TO BE CONFIRMED WITH TRUSS MANUFACTURERS LAYOUT PRIOR TO CONSTRUCTION.

NOTE FOR EXTENSIONS:

THE FRAME AND ARCHITECTURAL FINISH IS TO BE CONSTRUCTED TO MAKE PROVISIONS FOR MINOR RELATIVE MOVEMENT BETWEEN NEW AND EXISTING BUILDINGS. WHERE NOT DETAILED, ADVICE SHOULD BE SOUGHT FROM THE "BUILDING DESIGNER".



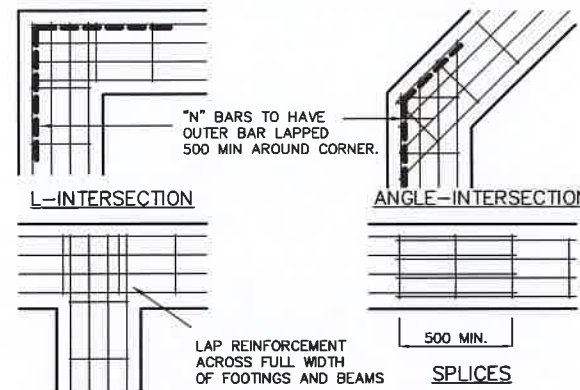
RAFT SLAB PLAN

- SITE TO BE STRIPPED OF VEGETATION AND EXPOSED SURFACE PROOF ROLLED. ANY SOFT OR HEAVING AREAS SHALL BE EXCAVATED AND REPLACED AND COMPACTED WITH GRANULAR SELECT FILL AS REQUIRED.
- WHERE FILL IS REQUIRED UNDER SLABS ROLLED FILL IS TO BE USED—ROLLED FILL CONSISTS OF MATERIAL COMPACTED IN LAYERS BY REPEATED ROLLING WITH AN EXCAVATOR. ROLLED FILL SHALL NOT EXCEED 600 COMPACTED IN LAYERS NOT MORE THAN 300 THICK FOR SAND MATERIAL OR 300 COMPACTED IN LAYERS NOT MORE THAN 150 THICK FOR OTHER MATERIAL.
- DEPTH OF FILL IS NOT TO EXCEED THESE LIMITS WITHOUT PRIOR APPROVAL FROM XEROS PICCOLO CONSULTING ENGINEERS.
- UNLESS NOTED OTHERWISE, SLAB TO BE MINIMUM 100mm MINIMUM THICK ON 50mm SAND BLINDING AND REINFORCED WITH 1 LAYER SL72 FABRIC PLACED 30mm FROM TOP OF SLAB WITH ADDITIONAL REINFORCEMENT AS INDICATED.
- INTERNAL AND EXTERNAL BEAMS ARE TO BEAR ONTO NATURAL CLAY MATERIAL, APPROXIMATELY 200mm BELOW NATURAL SURFACE.
- PROVIDE A 0.2mm THICK HIGH IMPACT RESISTANT DAMP PROOFING MEMBRANE TO THE UNDERSIDE OF SLAB.

NOTE: THIS DESIGN IS BASED ON NEW RESIDENTIAL SLABS AND FOOTINGS CODE AS 2870-2011

FOOTING PLAN

FOOTINGS ARE TO BE FOUNDED BELOW THE TOPSOIL AND INTO THE UNDISTURBED NATURAL MATERIAL APPROXIMATELY 600 BELOW NATURAL SURFACE WITH AN ALLOWABLE BEARING CAPACITY OF 100kPa

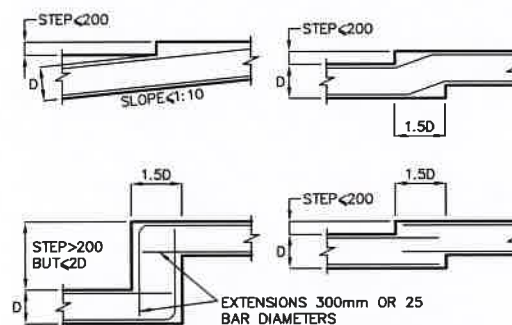


REINFORCEMENT LAPPING DETAILS

DETAILS ARE TYPICAL FOR TOP AND BOTTOM OF STRIP FOOTINGS AND BOTTOM OF RAFT SLAB BEAMS.

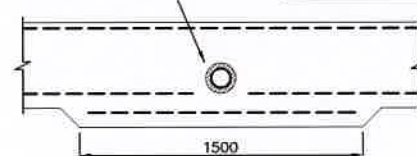
MINIMUM LAP REQUIREMENT

REINFORCEMENT	MIN SPLICES	MIN LAP AT "T" INTERSECTIONS	MIN LAP AT "L" INTERSECTIONS
REINFORCING BAR(N BARS)	500	FULL WIDTH ACROSS JUNCTION	L-BAR LAPPED 500 MIN
TRENCH MESH	500	FULL WIDTH ACROSS JUNCTION	FULL WIDTH ACROSS JUNCTION



ACCEPTABLE METHODS OF STEPPING STRIP FOOTINGS

WRAP PIPE USING MIN. 20mm COMPRESSIVE MATERIAL (FOR M & H1 SITES) & 40mm (FOR H2 & E SITES.)

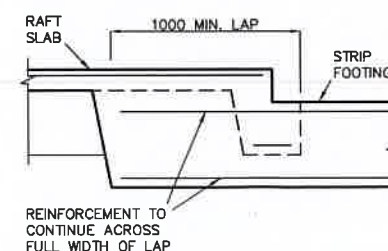


PIPE PENETRATION DETAIL

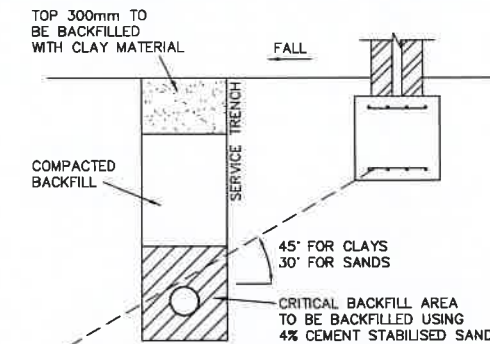
PENETRATIONS THRU BEAMS TO OCCUR IN THE MIDDLE THIRD OF THE BEAM DEPTH. LOCALLY DEEPEN BEAM AS REQUIRED & PROVIDE AN ADDITIONAL LAYER TRENCH MESH IN THIS AREA.

NOTE: WHERE PIPES PASS UNDER THE FOOTING SYSTEM, THE TRENCH SHALL BE BACKFILLED FULL DEPTH WITH CLAY TO ACT AS A BARRIER TO THE INGRESS OF WATER BENEATH THE FOOTINGS.

THE BASE OF ALL TRENCHES SHALL BE SLOPED AWAY FROM THE BUILDING.

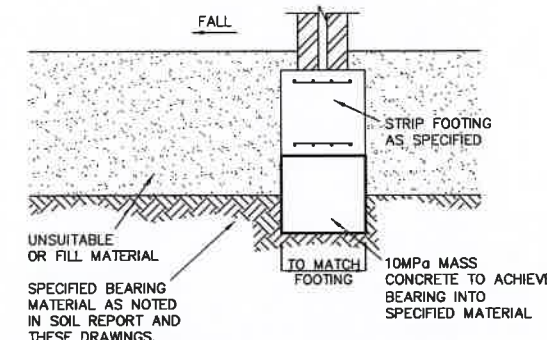


STRIP FOOTING TO RAFT SLAB LAPPING DETAIL

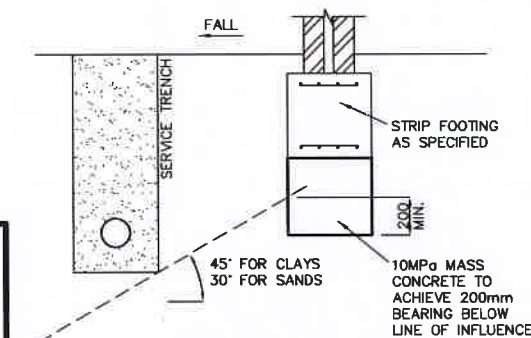


SERVICE TRENCH

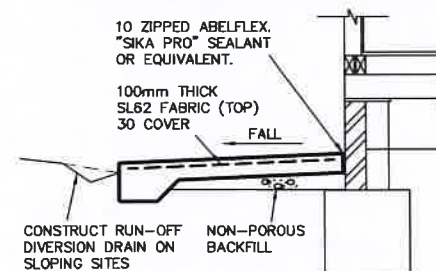
STABILITY OF SERVICE TRENCHES TO BE MAINTAINED DURING CONSTRUCTION



UNDERPIN DETAIL TO ACHIEVE MINIMUM BEARING



UNDERPIN DETAIL AT EXISTING SERVICE TRENCH



TYPICAL PATHWAY DETAIL

PATHWAY WITH FALL AWAY FROM BUILDING RECOMMENDED TO PERIMETER OF BUILDING. PROVIDE CONTROL JOINTS AT MAX. 3000CTS.

GENERAL NOTES:

- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE APPROVED BUILDING DESIGNER AND CONSULTANT'S DRAWINGS AND SPECIFICATION AND WITH WRITTEN INSTRUCTION ISSUED DURING THE CONTRACT PERIOD.
- DISCREPANCIES SHALL BE REFERRED TO THE BUILDING DESIGNER AND XEROS PICCOLO PRIOR TO CONSTRUCTION.
- DO NOT SCALE OFF THESE DRAWINGS. SETTING OUT DIMENSIONS MUST BE VERIFIED BY THE BUILDING CONTRACTOR ON SITE.

SITE SUPERVISION:

- THE ADEQUACY OF DESIGN DETAILS ON THESE DRAWINGS HAS BEEN DETERMINED BY PRE DESIGN SITE INVESTIGATION AND MUST BE VERIFIED DURING CONSTRUCTION BY XEROS PICCOLO.

SITE CLASSIFICATION:

IN ACCORDANCE WITH AS 2870 RESIDENTIAL SLABS AND FOOTINGS:

TYPE OF CONSTRUCTION	CLAD FRAME
SITE CLASSIFICATION	"M-D"
CLASSIFIED BY	XEROS PICCOLO CONSULTING ENGINEERS
SELECTED FOOTING SYSTEM	STR/SR

SALT AFFECTED AREAS:

MINIMUM REQUIREMENTS IN SALT AFFECTED AREAS:

- 25MPa CONCRETE (W/C = 0.45)
- 50mm COVER
- MECHANICAL VIBRATION
- 0.2mm HIGH IMPACT RESISTANT DAMP-PROOFING MEMBRANE
- TYPE SR CEMENT
- DAMP CURE FOR 3 DAYS
- EXPOSURE CATEGORY BRICKS BELOW DAMP PROOF COURSE

CONCRETE NOTES:

- WORKMANSHIP AND MATERIALS TO BE IN ACCORDANCE WITH AS 3600 CONCRETE STRUCTURES AND CURRENT SAA CODES.

CONCRETE CHARACTERISTICS:

ELEMENT	GRADE (MPa 28 DAYS)	SLUMP (mm)	MAX. AGG. (mm)	ADDITIVES
FOOTING	N20	80	20	NIL
SLAB	N25	80	20	NIL

CONCRETE TO BE PLACED USING MECHANICAL VIBRATORS.

SLAB THICKNESS DO NOT INCLUDE FINISH.

REINFORCING BARS AND REINFORCING FABRIC TO BE IN ACCORDANCE WITH RESPECTIVE SAA CODES.

- (i) AS 4671 STEEL REINFORCING BARS FOR CONCRETE:
- R DENOTES PLAIN ROUND STRUCTURAL GRADE BARS, $f_{sy}=250\text{MPa}$
 - N DENOTES STRUCTURAL GRADE DEFORMED BARS, $f_{sy}=500\text{MPa}$
- (ii) AS 4671 WELDED WIRE REINFORCING FABRIC FOR CONCRETE:
- L DENOTES HIGH TENSILE WELDED WIRE FABRIC, $f_{sy}=500\text{MPa}$

CLEAR CONCRETE COVER TO REINFORCEMENT TO BE:

ELEMENT	COVER (mm)
SURFACES IN CONTACT WITH GROUND	
- WITHOUT MEMBRANE	50
- WITH MEMBRANE	30
SLAB	50
FOOTING	30
ABOVE GROUND INTERIOR	30
ABOVE GROUND EXTERIOR	30

MASONRY SUPPORTING SLABS TO HAVE 2 LAYERS ALCOR "SLIP JOINT" BETWEEN THE TWO SURFACES.

SLABS ABUTTING MASONRY OR CONCRETE TO HAVE 10mm ZIPPED ABELFLEX BETWEEN THE SURFACE AND SEALED WITH AN APPROVED EXTERNAL GRADE POLYURETHANE SEALANT "SIKA PRO" OR SIMILAR.

TERMITE AND DAMP PROOFING:

- TERMITE PROTECTION TO BE IN ACCORDANCE WITH NCC REQUIREMENTS AND AS 3660 PROTECTION OF BUILDINGS FROM SUBTERRANEAN TERMITES.
- DAMP PROOFING TO BE IN ACCORDANCE WITH NCC REQUIREMENTS.

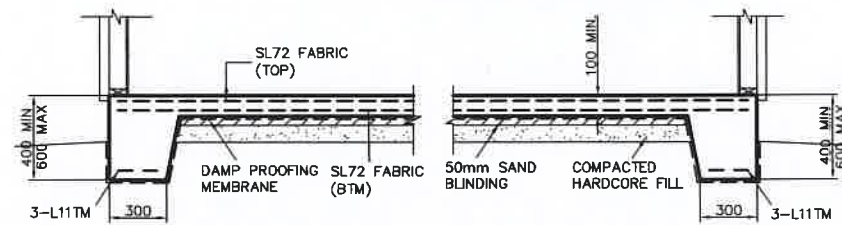
FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE:

- THE OWNER'S ATTENTION IS DRAWN TO APPENDIX B OF AS 2870 PERFORMANCE CRITERIA AND FOUNDATION MAINTENANCE AND CSIRO INFORMATION SHEET NO.BTF 18(2011) - GUIDE TO HOME OWNERS ON FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE WHICH HAS BEEN ATTACHED TO THIS DOCUMENTATION AND IS AVAILABLE IN THE OFFICES OF XEROS PICCOLO CONSULTING ENGINEERS FOR PERUSAL.
- ATTENTION IS DRAWN IN PARTICULAR TO THE EXISTENCE OF TREES ON CLAY SITES AND PROVISION OF SURFACE DRAINAGE.

No.	DATE	AMENDMENTS	BY
C	SEPT 2021	GENERAL REVISIONS	BX
B	FEB 2021	ISSUED FOR CONSTRUCTION	BX
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Project: PROPOSED ALTERATIONS & ADDITIONS LOT 1, 907 RIVER ROAD. WELAREGANG for H. McGRATH			
Sheet Subject: FOOTING PLAN & DETAILS			
Client: JONES DESIGNS			
Scale: 1:100, 1:20(A1)	Design: N.G.		
XEROS PICCOLO CONSULTING ENGINEERS		Drawn: A.B.X.	
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NOTE: 1 LAYER SL92 FABRIC (TOP) MAY BE USED IN STORE ROOM IN-LIEU OF 2 LAYERS OF FABRIC.



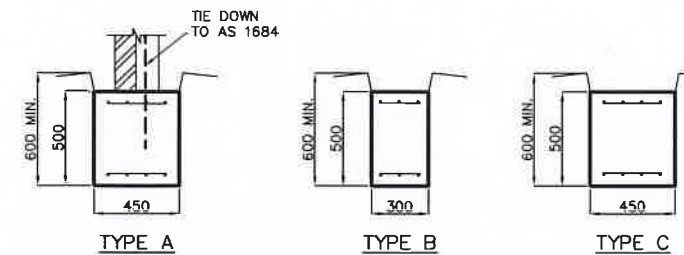
TYPICAL SECTION THRU STORE ROOM

WHERE BEAM DEPTH EXCEEDS LIMITS REFER TABLE FOR ADDITIONAL REINFORCEMENT.

ADDITIONAL REINFORCEMENT TABLE (BOTTOM STEEL)

BEAM DEPTH	BEAM REINFORCEMENT
<600	3-L11TM
600-850	3-L11TM +1N12
850-1200	3-L11TM +2N16
>1200	CONSULT ENGINEER

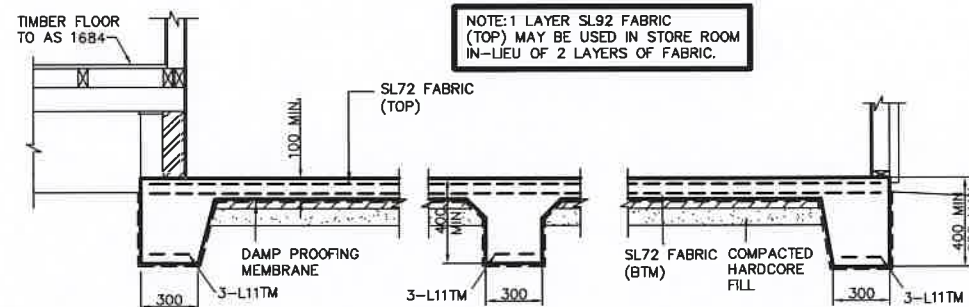
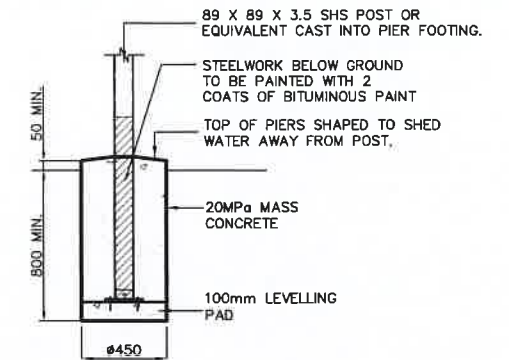
FOR BEAM DEPTHS >600 PROVIDE MINIMUM 2N12 BARS TOP TO BEAMS
NOTE: WHERE EXTERNAL BEAMS ARE RETAINING >750 PROVIDE ADDITIONAL SL82 FABRIC VERTICAL OR N12 BARS AT 400 CTS BOTH WAYS. (VERTICAL BARS TO BE COGGED 300 INTO SLAB)



STRIP FOOTING DETAILS

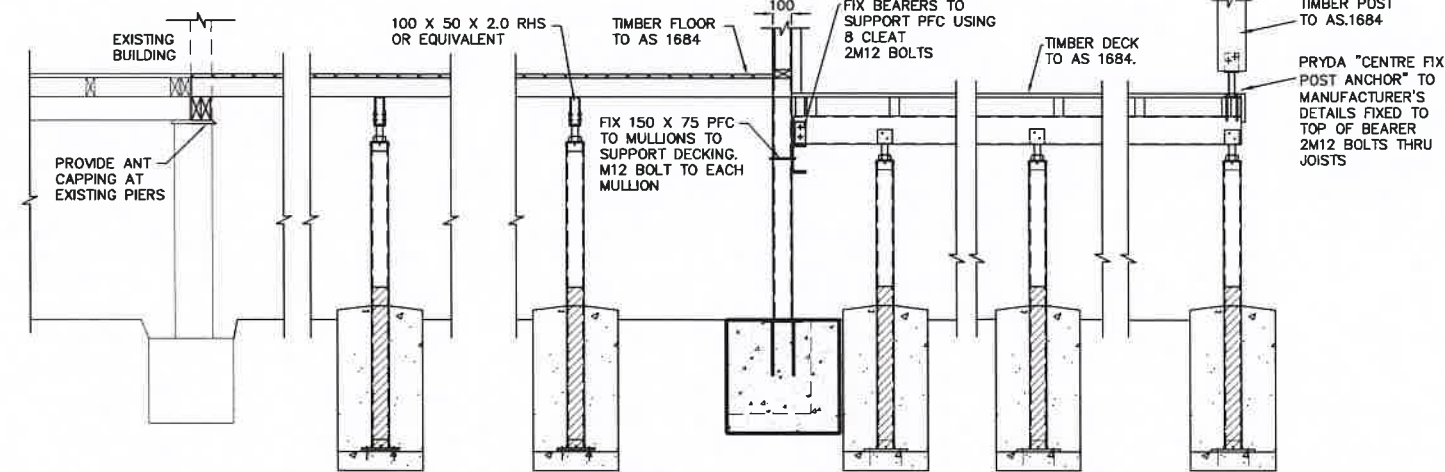
UNLESS NOTED OTHERWISE, STRIP FOOTINGS ARE TO BE REINFORCED WITH L11TM TOP AND BOTTOM AND TIED WITH (400mm) BOGAR CLIPS OR EQUIVALENT AT MAXIMUM 900CTS.

TYPICAL PIER(P1) DETAIL TO SUIT TIMBER FLOOR LAYOUT (MAX. 1.8m CTS)

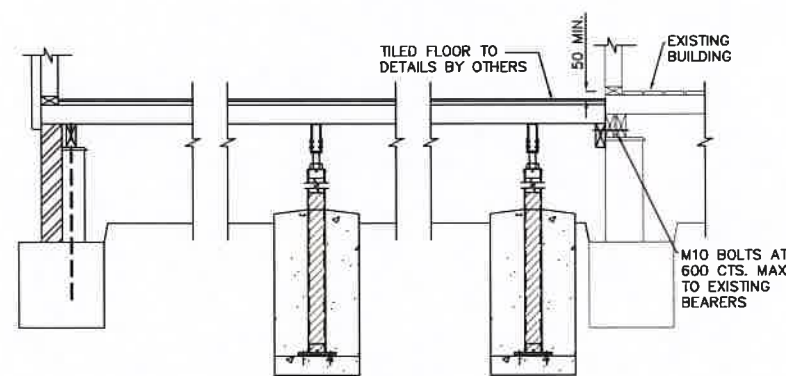


SECTION A

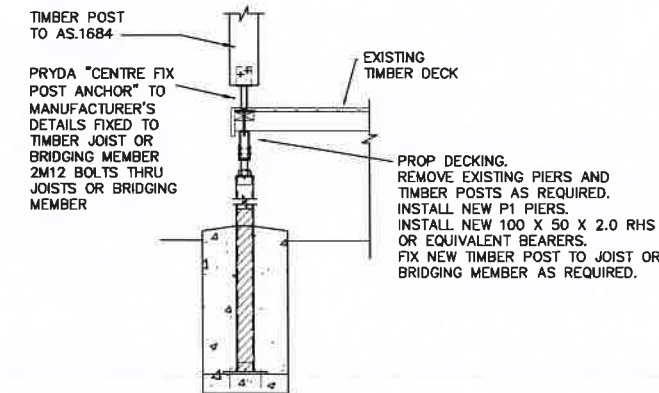
WHERE BEAM DEPTH EXCEEDS LIMITS REFER TABLE FOR ADDITIONAL REINFORCEMENT.



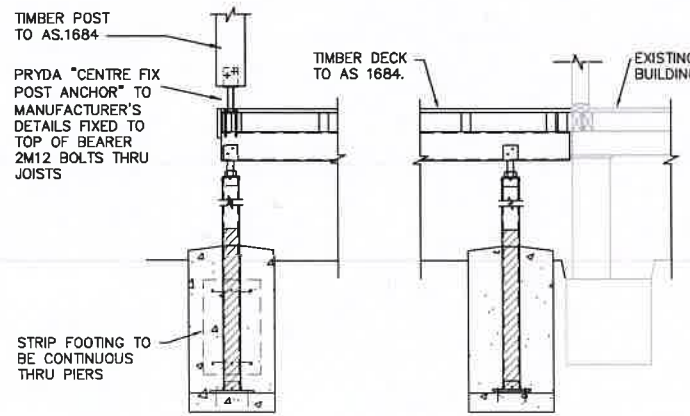
SECTION D



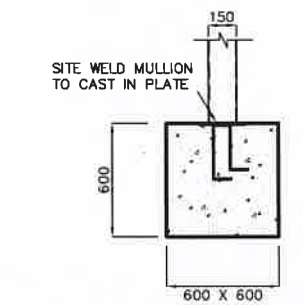
SECTION B



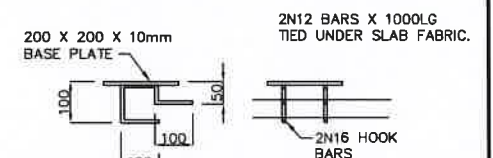
SECTION E



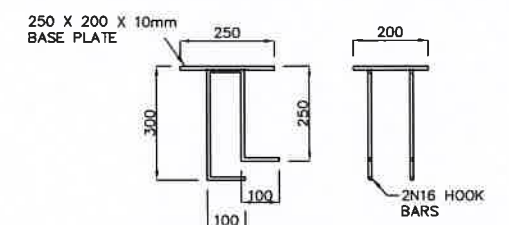
SECTION C



TYPICAL PAD(P2) DETAIL



TYPICAL CAST IN PLATE DETAIL "CP"



TYPICAL CAST IN PLATE DETAIL "CP1"

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Project:
PROPOSED ALTERATIONS & ADDITIONS
LOT 1, 907 RIVER ROAD, WELAREGANG
for H. McGRATH

Sheet Subject:
DETAILS

Client: JONES DESIGNS

Scale: 1:20, 1:10 (A1)

Design: N.G.

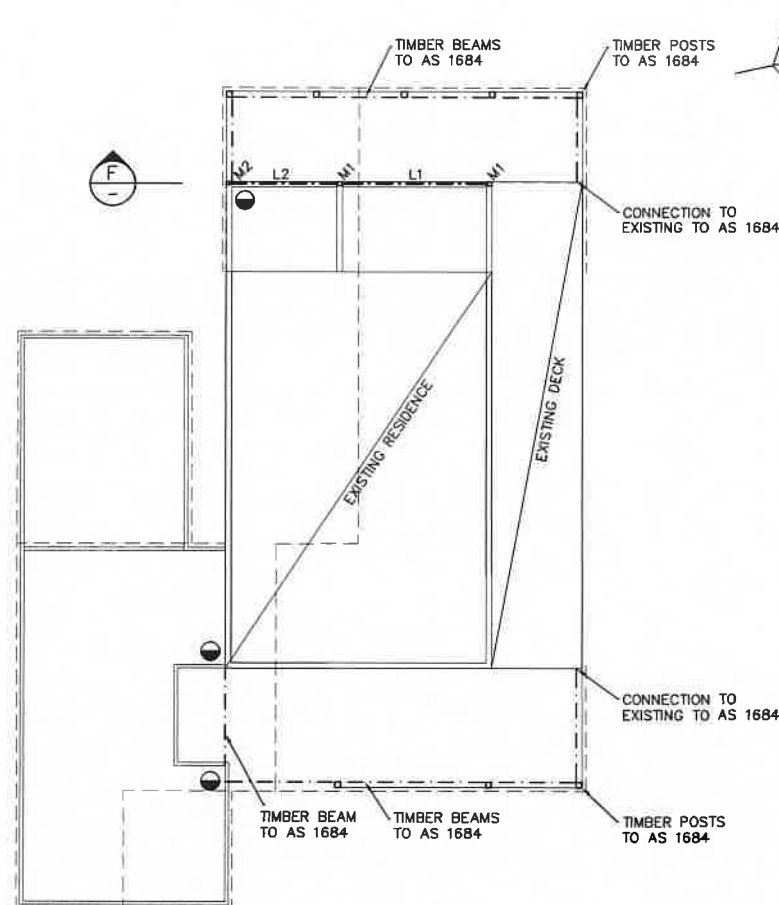
Drawn: A.B.X.

Date: NOV 2020

Chk'd: [Signature]

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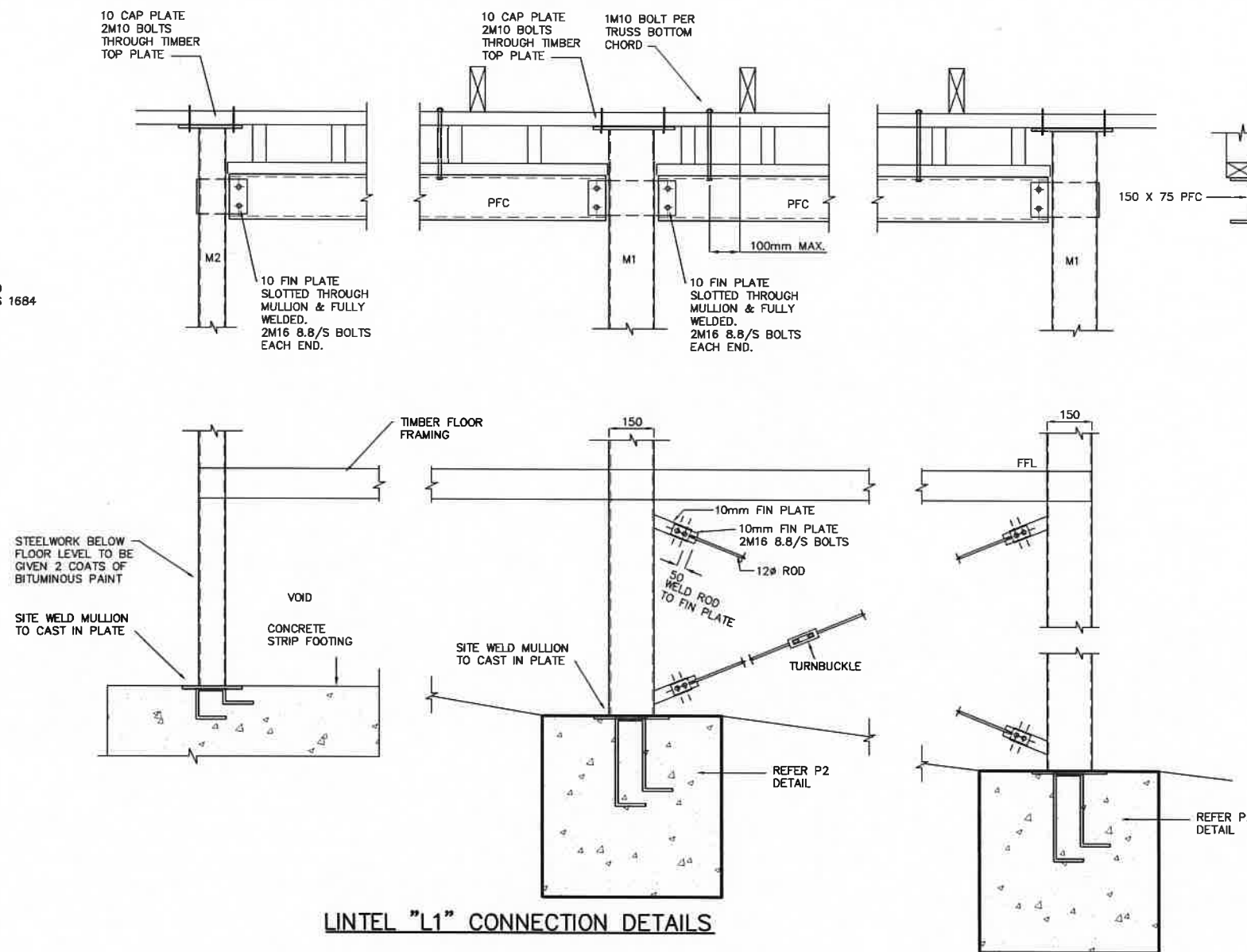


STEEL MARKING PLAN

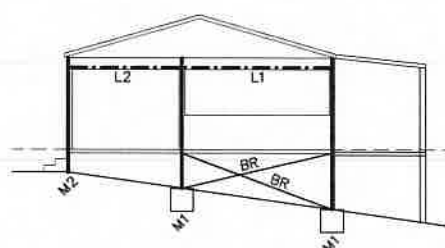
STRUCTURAL SIZES

MULLIONS	M1	150 X 100 X 6.0 RHS
MULLIONS	M2	89 X 89 X 5.0 SHS
BRACING	BR	12# ROD
LINTEL	L1	150 X 75 PFC
LINTEL	L2	150 X 75 PFC

● INDICATES DOUBLE STUD UNDER, TIE DOWN USING 30 X 0.8 G.I. STRAP 6 NAILS EACH END.



LINTEL "L1" CONNECTION DETAILS



SECTION F-F

STEELWORK NOTES:

- STEELWORK TO BE IN ACCORDANCE WITH AS 4100. FABRICATION TO BE CARRIED OUT IN ACCORDANCE WITH SECTION 14 OF AS 4100. ERECTION TO BE CARRIED OUT IN ACCORDANCE WITH SECTION 15 OF AS 4100.
- UNLESS NOTED OTHERWISE, STEEL IS TO BE OF THE FOLLOWING GRADE:
 UB's, UC's, PFC's & LARGE ANGLES TO AS/NZS 3679.1 GRADE 300
 WELDED SECTIONS TO AS/NZS 3679.2 GRADE 300
 HOT ROLLED PLATES, FLOOR PLATES AND SLABS TO AS/NZS 3678 GRADE 250
 HOLLOW SECTIONS TO AS 1163 GRADE C350
 COLD FORMED PURLINS AND GIRTS TO AS 1397 GRADE G450 Z350
- DIMENSIONS AND SETOUTS TO BE OBTAINED FROM ARCHITECTURAL DRAWINGS WHERE NOT INDICATED ON STRUCTURAL DRAWINGS.
- THE FABRICATOR SHALL PROVIDE CLEATS AND DRILL HOLES NECESSARY FOR FIXING OTHER ELEMENTS TO THE STEEL WHETHER OR NOT DETAILED ON THE STRUCTURAL DRAWINGS.
- THE FABRICATION AND ERECTION OF STRUCTURAL STEELWORK IS TO BE SUPERVISED BY A PERSON QUALIFIED IN SUCH SUPERVISION, IN ORDER TO ENSURE ALL DESIGN REQUIREMENTS ARE MET.
- BEAMS AND RAFTERS TO BE INSTALLED WITH NATURAL CAMBER UP.
- MEMBERS SHALL BE SUPPLIED IN SINGLE LENGTHS. SPLICES ARE PERMITTED ONLY WHERE SPECIFICALLY SHOWN ON STRUCTURAL DRAWINGS.
- STEELWORK SHALL BE TEMPORARILY BRACED TO STABILISE THE STRUCTURE DURING ERECTION.
- UNLESS NOTED OTHERWISE:
 - BOLTS TO BE M20 8.8/S
 - CONNECTIONS SHALL HAVE A MINIMUM OF 2 BOLTS
 - BOLTS AND WASHERS SHALL BE GALVANISED
 - HOLES SHALL BE 2mm LARGER THAN THE BOLT DIAMETER
 - BOLTS TO BE IN ACCORDANCE WITH AS 1252
- WELDING TO BE CARRIED OUT IN ACCORDANCE WITH AS 1554.1 UNLESS NOTED OTHERWISE;
 - FILLET WELDS SHALL BE 6mm C.F.W. SP TO AS 1554.1
 - BUTT WELDS SHALL BE COMPLETE PENETRATION SP TO AS 1554.1
 RADIOGRAPHIC OR ULTRASONIC EXAMINATION TO BE IN ACCORDANCE WITH AS1554.1, AS2177.1 AND AS2207 AS APPROPRIATE.
- STEELWORK NOT TO BE ENCASED BY CONCRETE SHALL BE PROTECTED FROM CORROSION IN THE FOLLOWING MANNER:
 THE STEELWORK IS TO BE CLEANED TO AN AS 1827 CLASS POWER BRUSH PREPARATION AND GIVEN 1 COAT '215 RUST FIGHTER' TO GIVE A DRY FILM THICKNESS OF 40 MICRONS BEFORE DISPATCH TO SITE.
- STEELWORK TO BE ENCASED IN CONCRETE SHALL BE UNPAINTED. ENCASED CONCRETE SHALL BE GRADE N25 PROVIDING ADEQUATE COVER TO SUIT FIRE RATING OR EXPOSURE CONDITIONS. CONCRETE ENCASEMENT SHALL BE REINFORCED WITH 5mm WIRE TO AS 4617 OR 6mm STRUCTURAL GRADE BARS TO AS 4617 AT 150mm PITCH WHERE NOT INDICATED ON STRUCTURAL DRAWINGS.

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Client: JONES DESIGNS

Scale: 1:100, 1:10(A1) Design: N.G.

XEROS PICCOLI CONSULTING ENGINEERS Drawn: A.B.Y.

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