

GENERAL NOTES

THIS DRAWING IS SIGNED SUBJECT TO CERTIFICATE OF INSPECTION ISSUED BY ENGINEER.

- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS.
- ANY DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT FOR DECISION BEFORE PROCEEDING WITH THE WORK.
- DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS.
- ANY SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY THE BUILDER.
- DURING CONSTRUCTION THE BUILDER SHALL MAINTAIN THE STRUCTURE IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED.
- ALL WORK SHALL COMPLY WITH THE BUILDING CODE OF AUSTRALIA AND RELEVANT AUSTRALIAN STANDARD CODES.
- SLAB & FOOTING DESIGN HAS BEEN BASED ON PRINCIPLES AS SET OUT IN AS2870 'RESIDENTIAL SLABS & FOOTINGS' - CURRENT EDITION AT TIME OF DESIGN ISSUE.
- PROVIDED THE SLAB IS CONSTRUCTED IN ACCORDANCE WITH THESE DETAILS, THE SLAB CAN BE CONSIDERED AS A MONOLITHIC TERMITE BARRIER IN ACCORDANCE WITH AS 3660. WHERE THE REQUIREMENTS OF AS 3660 CANNOT BE ACHIEVED, ADVICE FROM A LICENSED PEST CONTROL EXPERT SHALL BE OBTAINED & THE SUPERINTENDENT SHALL BE ADVISED OF ANY NECESSARY CHANGES RESULTING FROM SUCH ADVICE, PRIOR TO PROCEEDING WITH CONSTRUCTION. ADDITIONAL TERMITE TREATMENT IN ACCORDANCE WITH AS 3660 SHALL BE PROVIDED TO ALL CAVITIES, PENETRATIONS, JOINTS & CHASES AS REQUIRED.
- THE DESIGN AND DETAILS SHOWN ON THESE DRAWINGS ARE APPLICABLE TO THIS PROJECT ONLY AND MAY NOT BE REPRODUCED IN WHOLE OR PART, OR BE USED FOR ANY OTHER PROJECT OR PURPOSE, WITHOUT THE WRITTEN PERMISSION OF "SECTA CONSULTING ENGINEERS Pty Ltd" WITH WHOM THE COPYRIGHT RESIDES. WRITTEN CONSENT FROM "SECTA" FOR THE USE OF THESE PLANS MUST BE OBTAINED PRIOR TO ANY CHANGE OF PARTIES INCLUDING BUT NOT LIMITED TO OWNER, BUILDER & SUPERINTENDANT.

ENGINEERS DRAWINGS ARE SIGNED & ISSUED ON THE UNDERSTANDING THAT THE BUILDER MAINTAINS IN FORCE, PROPER AND ADEQUATE CONTRACT WORKS INSURANCE AND PUBLIC LIABILITY INSURANCE DURING THE FULL COURSE OF THE CONSTRUCTION, AND/OR ANY MAINTENANCE PERIOD. CLAIMS OF DAMAGE TO ANY ADJACENT PROPERTY OR BUILDING IS NOT THE RESPONSIBILITY OF THE ENGINEER.

SITE PREPARATION & MAINTENANCE NOTES

- THE BUILDER SHALL ENSURE THAT THE OWNER'S ATTENTION IS DRAWN TO THE CSIRO'S "GUIDE TO HOME OWNERS ON FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE".
- STRIP TOP SOIL AND VEGETATION. BENCH SITE BY CUT & FILL TO REQUIRED LEVEL. FILL TO BE PLACED AS PER AS2870(6.4.2) AND IN LAYERS NOT EXCEEDING 150mm USING MULTIPLE PASSES OF EXCAVATOR. THE ACTUAL PREPARATION OF THE BUILDING PLATFORM IS NOT THE RESPONSIBILITY OF THE ENGINEER.
- THE SITE SHALL BE GRADED AND DRAINED SO THAT STORMWATER WILL BE DIRECTED AWAY FROM THE BUILDING PLATFORM.
- THE MINIMUM HEIGHT OF THE SLAB ABOVE FINISHED CONSTRUCTION LEVEL SHALL BE 300mm OR GREATER AS MAY BE REQUIRED BY COUNCIL.
- ALL EARTH DRAINS SHALL BE GRADED AT 1% (1 IN 100) MINIMUM. THE GROUND SHALL FALL AWAY FROM THE EARTH DRAIN AT 5% (1 IN 20) FOR THE FIRST METRE THEN AT 2.5% (1 IN 40). ANY VERTICAL OR NEAR VERTICAL PERMANENT EXCAVATION (CUT) DEEPER THAN 0.6 METRES.
- IN MATERIAL OTHER THAN ROCK SHALL BE ADEQUATELY RETAINED OR BATTERED AT A MINIMUM OF 3:1.
- WHERE CUT OR FILL BATTERS CANNOT BE PROVIDED THEY SHALL BE ADEQUATELY RETAINED.
- ALL SERVICE TRENCHES ARE TO BE LOCATED IN ACCORDANCE WITH THE DETAILS SHOWN ON HYDRAULIC CONSULTANTS DRAWINGS.
- STORMWATER MUST NOT BE CONCENTRATED ON TO ADJACENT PROPERTY.
- STORMWATER MUST BE CONNECTED TO THE NEAREST DISPOSAL POINT APPROVED BY COUNCIL. TYPICALLY THIS MAY BE DIRECTLY TO THE KERB OR TO AN INTER-ALLOTMENT DRAINAGE PIPELINE.
- THE PROVISION OF SURFACE OR SUBSOIL DRAINAGE OR PAVING WILL ALL IMPROVE SITE DRAINAGE.
- GOOD DRAINAGE MUST BE MAINTAINED THROUGHOUT CONSTRUCTION AS WELL AS AFTER COMPLETION.
- ALL EXPOSED GROUND SHOULD BE REVEGETATED AS SOON AS PRACTICAL AFTER COMPLETION.
- SEDIMENT AND EROSION CONTROL MEASURES ARE TO BE PROVIDED IN ACCORDANCE WITH COUNCIL REQUIREMENTS.

PIERING NOTES

P1. PIERS TO EXTERNAL WALLS SHALL BE SPACED AT NO GREATER THAN:
 1.5m c/c FOR DOUBLE STOREY AREAS (Ø400min DIA TO CLAY BRG 350kPa) - UNO ON SLAB PLAN
 1.8m c/c FOR SINGLE STOREY AREAS (Ø400min DIA TO CLAY BRG 350kPa) - UNO ON SLAB PLAN
 1.8m c/c FOR SINGLE AND DOUBLE STOREY AREA (Ø300min DIA TO ROCK/SHALE BRG 600kPa).
 IF PIERS EXCEED 2.5m Deep THEN Ø450min (Must Be) Adopted. PIERS GREATER THAN 2.8m Deep (Must Be) REINFORCED WITH A MINIMUM OF 4-N12 Bars + R6 Ties @400c/c.

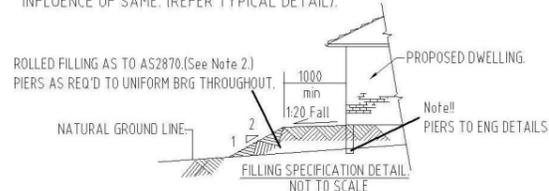
NOTE!! SHOULD PIERS COLLAPSE DURING CONSTRUCTION, THEN "SCREW-IN" PIER MAY NEED TO BE USED (6te SWL).

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE PIER TOPS ARE CLEAN AND FREE OF FOREIGN MATTER PRIOR TO THE LAYING OF THE MEMBRANE AND CONCRETE SLAB. ENGINEER'S REINFORCEMENT CHECK DOES NOT RELEASE THE CONTRACTOR FROM THIS RESPONSIBILITY.



FOUNDATION NOTES

- ALL FOOTING BEAMS AND PADS ARE DESIGNED TO BEAR ON UNIFORM NATURAL GROUND WITH AN ALLOWABLE BEARING CAPACITY OF 100 kPa.
- PRIOR TO CONSTRUCTION OF THE BUILDING PLATFORM FOR THE SLAB:
 (i) AN AREA EXTENDING AT LEAST 1.0M BEYOND THE EDGE OF THE SLAB AND TO THE TOE OF ANY FILL BATTERS SHALL BE STRIPPED OF ALL ORGANIC MATTER AND ASSOCIATED TOPSOIL & NATURAL FILL AS NOTED ON BOREHOLE.
 (ii) FILL PLACED IN THE BUILDING PLATFORM SHALL BE PLACED IN ACCORDANCE WITH CL6.4.2 AS2870-2011.
 FOUNDATION MATERIAL SHALL BE APPROVED BY A SUITABLY QUALIFIED ENGINEER BEFORE COMMENCING FOOTING CONSTRUCTION.
- WHERE SOFT SPOTS (BEARING CAPACITY OF LESS THAN 100 kPa) ARE ENCOUNTERED IN NATURAL FOUNDATION MATERIAL OR BUILDING PLATFORM, OR WHERE FILL EXCEEDS 300mm THEN ADDITIONAL PIERS TO SUITABLE FOUNDING MATERIAL MAY BE REQUIRED AS DIRECTED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
- WHERE ROCK IS ENCOUNTERED THE REMAINDER OF THE FOOTING SYSTEM SHALL BE FOUNDED ON ROCK AS DIRECTED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
- WHERE THE INTEGRITY OF FOUNDATION MATERIAL IS LIKELY TO BE DISTURBED BY SERVICE TRENCHES ADJACENT, PIERS SHALL BE FOUNDED BELOW THE ZONE OF INFLUENCE OF SAME. (REFER TYPICAL DETAIL).



CONCRETE NOTES

- ALL WORKMANSHIP & MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- CONCRETE QUALITY - AS NOTED ON THE DRAWINGS.
- CONCRETE 20 MPa AT 28 DAYS. 80mm SLUMP, & TO BE CURED IMMEDIATELY FOLLOWING THE CONCRETE POUR. NO ADDITIONAL WATER TO BE ADDED TO CONCRETE ON SITE.
- KEEP CONCRETE CONTINUALLY WET FOR 7 DAYS MINIMUM AFTER PLACEMENT, PLASTIC OR WAX LIQUID SPRAYS MAY BE USED. EXTRA PRECAUTION SUCH AS THE USE OF EVAPORATIVE RETARDERS (ALIPHATIC ALCOHOLS) ARE RECOMMENDED DURING HOT WEATHER CONCRETE POURS TO HELP AVOID THERMAL RELATED SLAB CRACKING. CLEAR COVER OF REINFORCEMENT SHALL BE AS NOTED ON THE DRAWINGS.
- REINFORCEMENT SHALL BE RIGIDLY SUPPORTED TO MAINTAIN SPECIFIED COVER DURING CONSTRUCTION.
- CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE SUPERINTENDENT.
- BEAM DEPTHS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS.
- SPLICING IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITION SHOWN. OBTAIN APPROVAL FROM THE SUPERINTENDENT FOR ANY OTHER SPLICES.
- WHERE SLABS OR BEAMS BEAR UPON MASONRY, THE TOP COURSE SHALL BE LEVEL, SMOOTH & COVERED BY TWO LAYERS OF GALVANISED FLAT STEEL WITH GRAPHITE GREASE BETWEEN LAYERS.
- METHOD OF CURING CONCRETE SHALL BE SUBMITTED TO THE SUPERINTENDENT FOR APPROVAL.
- NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR APPROVAL OF THE SUPERINTENDENT.
- CONDUITS, PIPES, ETC. SHALL ONLY BE LOCATED IN THE MIDDLE ONE THIRD OF SLAB DEPTH, U.N.O.
- REINFORCEMENT SYMBOLS:
 R - GRADE 250N PLAIN BAR IN ACCORDANCE WITH AS/NZS 4671.
 N - GRADE 500 DEFORMED BAR IN ACCORDANCE WITH AS/NZS 4671.
 L - GRADE 500 DEFORMED WELDED WIRE MESH IN ACCORDANCE WITH AS/NZS 4671. I REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY & IT IS NOT NECESSARILY IN TRUE PROJECTION.
- WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.
- MESH SHALL BE LAPPED 1 MESH + 50mm.
- BUNDLED BARS SHALL BE TIED TOGETHER AT 30 BAR DIAMETERS CENTRES WITH 3 WRAPS OF THE WIRE.
- MASONRY WALLS SHALL NOT BE CONSTRUCTED ON SUSPENDED CONCRETE UNTIL ALL TEMPORARY SUPPORTS ARE REMOVED.
- STRUCTURAL STEELWORK WHERE CONCRETE ENCASED SHALL HAVE 50mm CONCRETE COVER, REINFORCED WITH GALVANISED SL41 MESH WITH 25mm COVER, LAPPED 150mm AT SPLICES.
- BRITTLE FLOOR COVERINGS TO BE LAID ON A SUITABLE FLEXIBLE TYPE BEDDING SYSTEM & SUPPLIED WITH CONTROL JOINTS @ 4000 CENTERS MAX ALTERNATIVELY FABRIC SL-92 TO BE USED, AS IF ADVISED BY BUILDER.

CONCRETE QUALITY

ELEMENT	Strength Grade	Slump mm	Max. Agg. mm	Cement Type
SLAB	20	80	20	SL
PIERS	20	80	20	SL
SALINE ENVIRONMENT Pier & Slab (High Impact Membrane) ORANGE PREMIUM	N32	80	20	SL

MINIMUM COVER IN SALINE SOILS - 55mm
 KEEP SLAB CONTINUALLY WET FOR 7 DAYS min.
 THE BUILDER TO CONFIRM & ADHERE TO RELEVANT CONDITIONS OF CONSENT IN RELATION TO CONSTRUCTION INCLUSIONS ON SITES LOCATED OR LIKELY TO BE IMPACTED BY SALINITY LEVELS.

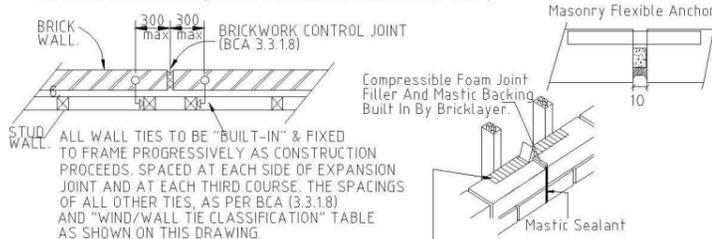


TIMBER FRAMING NOTES

- ALL DESIGN, WORKMANSHIP & MATERIALS SHALL BE IN ACCORDANCE WITH NATIONAL TIMBER FRAMING CODE AS1684 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- TIMBER SIZES, CONNECTIONS AND BRACING WALL SHALL BE TO FRAME MANUFACTURER'S DETAILS & SPECIFICATIONS & SHALL BE IN ACCORDANCE WITH AS1684. TIMBER FRAMING OUTSIDE THE SCOPE OF AS1684 SHALL BE REFERRED TO THE SUPERINTENDENT FOR A DECISION BEFORE PROCEEDING.
- ROOF BRACING & ANCHOR DETAILS WHERE NOT SHOWN ON DRAWINGS SHALL BE IN ACCORDANCE WITH AS1684.

BRICKWORK NOTES

- BRICKWORK TO BE IN ACCORDANCE WITH AS3700
- ALL BRICKS TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 20MPa.
- BRICKWORK MORTAR TO BE A MIX OF 1 CEMENT : 1 LIME : 4.5 SAND (REFER TO DURABILITY CLASS).
- BRICK WALLS TO BE PROVIDED WITH VERTICAL CONTROL JOINTS AT 6 METRE MAX CTS.
- TWO BED JOINTS ABOVE AND BELOW ALL OPENINGS TO HAVE BRICK REINFORCEMENT AND TO EXTEND 600 EACH SIDE OF OPENING.
- ALL CLAY BRICKS SHALL BE EXPOSED TO AMBIENT CONDITIONS FOR A MINIMUM OF 3 MONTHS BEFORE USE.
- MAXIMUM 5 YEAR UNRESTRAINED EXPANSION OF CLAY BRICKS SHALL BE 0.8MM PER METRE.
- CLAY BRICKS SHALL NOT BE LAID OVER FLOOR SLAB FOR A MINIMUM OF 10 DAYS AFTER CONCRETING THE SLAB.
- BRICKWORK ARTICULATION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF TN61 ARTICULATED WALLING (CEMENT & CONCRETE ASSOCIATION AUST)



EXPANSION JOINT DETAIL.

6000c/c max.

DURABILITY CLASSIFICATION, EXTERIOR

CATEGORY (durability)	WALL TIES AS 3700	GRADE OF BRICKS AS/NZS 4456.10	MORTAR AS 3700	STRUCTURAL STEEL (Surface finish)
severe marine	R4 Stainless or Polymer	EXPOSURE	M4 (1:4)	GALVANISED (GZLP) (600g per sq.m)
marine	R3	GENERAL PURPOSE	M3 (1:5)	AS/ANZ 2312/1994.
exterior	R2	GENERAL PURPOSE	M2 (1:2:8)	AS/ANZ 2312/1994.

WIND/WALL TIE CLASSIFICATION N2 "W33"

WIND Class	(Vp)	WALL TIE	HORIZONTAL SPACING	VERTICAL SPACING
N1	W28N1	LIGHT DUTY	600	600
N2	W33N2	MEDIUM DUTY	600	600
N3	W41N3	MEDIUM DUTY	600	430 (5 COURSES)

WALL TIE SPACINGS AROUND OPENINGS 300c/c EACH WAY.
 POLYMER WALL TIES RATED "LIGHT DUTY ONLY" (W28N1).
 (Vp = PERMISSABLE STRESS METHOD)

SLAB DESIGN AS PER "AS2870:1996 CODE FOR RESIDENTIAL SLABS AND FOOTINGS" AND IN ACCORDANCE WITH ENGINEERING PRINCIPLES, AND SECTION 3 & 4 OF AS2870:1996.

SECTA
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PREPARED: S.I.D
 CHECKED: S.A.A
 APPROVED: S.Abdelfattah ME (Aust) CP Eng NPER Civ/Struct BRB Acc Certifier 0137
 DATE: 17/08/2015

FOR: P. O. CHRISTIAN
 LOT 158 HUTTON STREET
 NORTH PENRITH-THORNTON NSW

SC_17075 E-00 A
 Secta Ref Nmbr DRG Nmbr REV
 GENERAL NOTES DO NOT SCALE

NOTES REGARDING SUBTERRANEAN TERMITE PROTECTION.

- ALL CONCRETE TO BE 25MPa. CONCRETE TO BE MECHANICALLY VIBRATED DURING POUR. KEEP SLAB CONTINUALLY WET FOR 7 DAYS MIN. PLASTIC OR WAX SPRAYS MAY BE USED.
- ALL WORKS TO BE IN ACCORDANCE WITH AS 3660.1 (CE)
- INSPECTIONS OF THE RESIDENCE AND IMMEDIATE SURROUNDS TO BE CARRIED OUT BY A QUALIFIED PEST EXPERT ON AN ANNUAL BASIS. BY THE HOMEOWNER.
- ANY FUTURE CRACKING OCCURRING IN THE SLAB IS TO BE ASSESSED BY A QUALIFIED PEST EXPERT AND WHERE DIRECTED BE SEALED BY EPOXY INJECTION.
- SITE MAINTENANCE IS THE RESPONSIBILITY OF THE HOME OWNER. ALL RECOMMENDATIONS OUTLINED BY THE C.S.I.R.O. IN SHEET 10-91 TO BE CARRIED OUT.

STRUCTURAL STEELWORK NOTES

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS4100 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
 - STEELWORK DESIGN AS PER "AS4100 STEEL STRUCTURES CODE CURRENT EDITION AND AS1170 DEAD AND LIVE LOADS.
 - STEEL QUALITY: ALL STEELWORK SHALL BE GRADE 250 UNLESS NOTED OTHERWISE. ROLLED SECTIONS (UB, UC, PFC, EA, ETC.) SHALL BE GRADE BHP-300 PLUS. RECTANGULAR HOLLOW SECTIONS SHALL BE IN ACCORDANCE WITH AS1397 AND AS1538, AND BE EQUIVALENT TO BHP GALVASPAN, COATING CLASS 2350.
 - WELDING: ALL WELDING SHALL BE IN ACCORDANCE WITH AS1554, UNLESS NOTED OTHERWISE. ALL CONNECTIONS BETWEEN MEMBERS SHALL BE 6mm CONTINUOUS FILLET WELD TYPE GP. BUTT WELDS SHALL BE COMPLETE PENETRATION TYPE SP. WELDING SYMBOLS ON DRAWINGS ARE IN ACCORDANCE WITH AS1101 PART 3.
 - HOLES IN MEMBERS FOR FIXINGS OF OTHER TRADES SHALL NOT EXCEED 14mm DIAMETER.
 - BOLTING: BOLTS SHALL BE M20 4.6/S UNLESS NOTED OTHERWISE. MEMBERS SHALL BE CONNECTED WITH 2 BOLTS UNLESS NOTED OTHERWISE. APPROVED LOAD-INDICATING WASHERS SHALL BE USED UNDER THE BOLT HEAD OF 8.8/TF AND 8.8/TB JOINTS.
 - NO PRIMING COAT SHALL BE APPLIED TO CONTACTING SURFACES UTILISING 8.8/TF BOLTS NOR TO MEMBERS TO BE SUBSEQUENTLY CONCRETE ENCASED OR FIRE RATED.
- MEMBERS NOTED Z SHALL BE GIVEN A CLASS 2.5 PREPARATION IN ACCORDANCE WITH AS1627.4 AND COATED WITH A MINIMUM OF 75 MICRONS OF AN APPROVED INORGANIC ZINC SILICATE.
 MEMBERS NOTED G SHALL BE HOT DIP GALVANISED.
 ALL BOLTS, NUTS AND WASHERS USED IN CONNECTION OF MEMBERS NOTED Z OR G SHALL BE HOT DIP GALVANISED.
 MAKE GOOD PROTECTIVE COATINGS AT SITE WELDS AND UNCOATED STEELWORK AT T.F. BOLTED JOINTS.

BOLTING PROCEDURE	BOLT NAME	AUSTRALIAN STANDARD	INSTALLATION AS6100
4.6/S	COMMERCIAL	AS1111	SNUG TIGHTENED
8.8/S	HIGH STRENGTH	AS1252	SNUG TIGHTENED
8.8/TF	HIGH STRENGTH	AS1252	TENSIONED FRICTION
8.8/TB	HIGH STRENGTH	AS1252	TENSIONED BEARING

DRAWING SCHEDULE

- E-00 GENERAL NOTES
- E-01 REINFORCED SLAB PLAN
- E-02 SLAB DETAIL SHEET
- E-03 DEEPEDED EDGE BEAM SHEET
- E-04 CONC DETAIL SHEET
- E-05 STEEL MARKING PLAN
- E-06 STEEL DETAILS
- E-07 BRICK ARTICULATION PLAN
- E-08 RET WALL DETAILS
- E-09 SEWER DETAILS
- E-10

Rev DATE AMENDMENT Arch Ref: 808-14 (Rev QA1) - OXFORD 24 CUSTOM

SITE CLASSIFICATION :

THE FOOTING SYSTEM HAS BEEN DESIGNED FOR A CLASS P SITE IN ACCORDANCE WITH AS 2870 - 2011.

CONSTRUCTION: TWO STOREY
TYPE : ARTICULATED MASONRY VENEER
DURABILITY CLASS : EXTERIOR
WIND CLASS : N2 "W33"

NOTES

- FOR COMPREHENSIVE GENERAL NOTES REFER TO TITLE SHEET E-00
- USE 0.2mm POLYTHENE NOMINAL THICKNESS (1) VAPOUR BARRIER, (2) DAMP PROOF MEMBRANE AND OF HIGH IMPACT RESISTANCE.
 - LAP TOP & BTM BARS IN EDGE BEAMS 500 AT ; RETURNS LESS THAN 1200 (SINGLE STOREY) ALL RETURNS (DOUBLE STOREY)
 - PLACE 3-N12 TRIMMERS 2000 LONG TO ALL INTERNAL CORNERS TYPICAL.
 - REINFORCEMENT LAPS: MESH 2 CROSSWIRES + 25mm
 - COVER TO REINFORCEMENT:
 SLABS - TOP 20mm (INSIDE)
 30mm (OUTSIDE)
 - BTM 30mm
 STIFFENING BEAMS - 30mm
 STRIP FOOTINGS - 50mm
 ## MINIMUM COVER IN SALINE SOILS A2-45mm, B1-50mm, B2-55mm.
 - 30/45 MESHLOCK BAR CHAIRS ARE TO BE USED ON WAFFLE PODS. ALL POD SPACERS SHOULD BE APPROVED BY ENGINEER BEFORE PLACING PODS. BAR CHAIRS TO BE AT 800 CTRS BOTH WAYS.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE PIER TOPS ARE CLEAN AND FREE OF FOREIGN MATTER PRIOR TO THE LAYING OF THE MEMBRANE AND CONCRETE SLAB. ENGINEER'S REINFORCEMENT SPOT CHECK DOES NOT RELEASE THE CONTRACTOR FROM THIS RESPONSIBILITY.
 - IT IS THE RESPONSIBILITY OF THE BUILDER TO ENSURE ALL SETOUTS, DRAINAGE, CRITICAL SERVICES INCLUDING GENERAL ARRANGEMENT ARE VERIFIED PRIOR TO INITIATING CONCRETE WORKS. ENGINEER'S SPOT CHECK DOES NOT RELEASE THE CONTRACTOR FROM THIS RESPONSIBILITY.
 - THE BUILDER TO CONFIRM & ADHERE TO RELEVANT CONDITIONS OF CONSENT IN RELATION TO CONSTRUCTION INCLUSIONS ON SITES LOCATED OR LIKELY TO BE IMPACTED BY SALINITY LEVELS.
 - BRITTLE FLOOR COVERINGS TO BE LAID ON A SUITABLE FLEXIBLE TYPE BEDDING SYSTEM & SUPPLIED WITH CONTROL JOINTS @ 4000 CENTERS MAX ALTERNATIVELY FABRIC SL-92 TO BE USED, AS IF ADVISED BY BUILDER.
 - IT IS THE RESPONSIBILITY OF THE BUILDER/CONTRACTOR TO ENSURE THE HOUSEHOLD DRAINAGE SYSTEM INCLUDES FLEXIBLE JOINTING AS PER RELEVANT AUSTRALIAN STANDARDS. IT IS OUTSIDE THE ENGINEERS SCOPE/EXPERTISE TO ENSURE THIS.
 - SLAB AND FOUNDATIONS HAVE BEEN DESIGNED TAKEN INTO CONSIDERATION FINDINGS AND RECOMMENDATIONS AS NOTED IN REFERENCED DOCUMENT.

PIER NOTES

- REFER ALSO TO FOUNDATION NOTES ON SHEET No. E-00.
- ALL PIERS POURED SEPARATE TO NOMINATED SLAB.
- CONCRETE PIERS TO BE CORRECTLY LOCATED BY CONTRACTOR AND ARE ADOPTED TO ACHIEVE EVEN BEARING AS REQUIRED BY ENGINEER AND SITE CONDITIONS.
- DENOTES CONCRETE BEARING PIERS FOUNDED 200min BELOW ZONE OF INFLUENCE OF SEWER AND OR PROPOSED ADJACENT SERVICE TRENCHES REFER TO DETAIL ON SHEET E-00.
- WHERE PIERS ARE PROVIDED PLACE ADDITIONAL STEEL TO INTERNAL BEAMS AS PER DETAILS ON PIERS TO EXTERNAL WALLS SHALL BE SPACED AT NO GREATER THAN:

PIERING NOTES

P1: PIERS TO EXTERNAL WALLS SHALL BE SPACED AT NO GREATER THAN:
 1.5m c/c FOR DOUBLE STOREY AREAS (ø400min DIA TO CLAY BRG 350kPa) - UNO ON SLAB PLAN
 1.8m c/c FOR SINGLE STOREY AREAS (ø400min DIA TO CLAY BRG 350kPa) - UNO ON SLAB PLAN
 1.8m c/c FOR SINGLE AND DOUBLE STOREY AREA (ø300min DIA TO ROCK/SHALE BRG 600kPa)
 IF PIERS EXCEED 2.5m Deep THEN ø450min (Must Be) Adopted. PIERS GREATER THAN 2.8m Deep (Must Be) REINFORCED WITH A MINIMUM OF 4-N12 Bars + R6 Ties @400c/c

 SLAB THICKNESS DENOTED ON PLAN BY

 PODS LAYED IN SEQUENCE AND STARTED WHERE SHOWN THUS ON PLAN.

CONCRETE QUALITY

ELEMENT	Strength Grade	Slump mm	Max. Agg. mm	Cement Type
SLAB	20	80	20	SL
PIERS	20	80	20	SL
SALINE ENVIRONMENT (Pier & Slab) (High Impact Membrane) ORANGE PREMIUM	N32	80	20	SL

MINIMUM COVER IN SALINE SOILS - 55mm
 KEEP SLAB CONTINUALLY WET FOR 7 DAYS min.
 THE BUILDER TO CONFIRM & ADHERE TO RELEVANT CONDITIONS OF CONSENT IN RELATION TO CONSTRUCTION INCLUSIONS ON SITES LOCATED OR LIKELY TO BE IMPACTED BY SALINITY LEVELS.

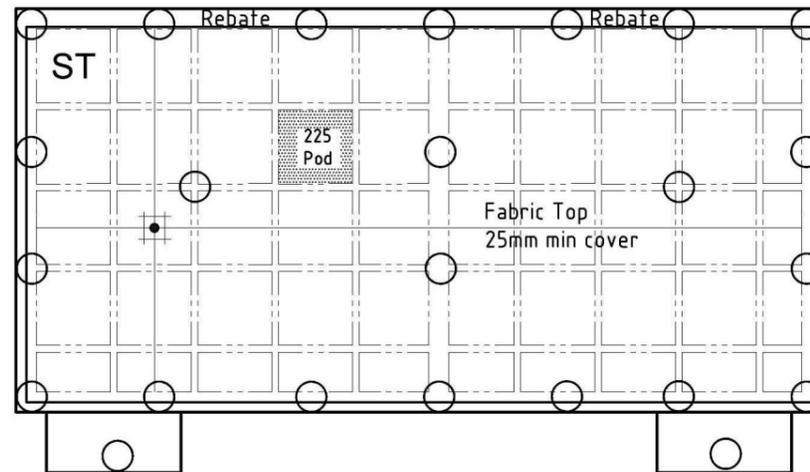
SLAB PLAN

Do Not Scale

ALL STEP-DOWNS, DEEP BEAMS, F.F.L, R.L, AND REBATES TO BE CONFIRMED WITH ARCHITECTURAL DOCUMENTATION. HWS & AIRCON PADS TO BE CONFIRMED WITH CONTRACT. IT IS NOT THE RESPONSIBILITY OF THE ENGINEER TO VERIFY THE ABOVE.

SUPERVISOR NOTE

Extend Edge Beam To Suit.
 Supervisor To Ensure All Feature Nibs etc Are Incorporated As Shown On Arch Plans. REFER TO SLAB DETAILS FOR SERVICE PAD EXTENTIONS.



SLAB REINFORCEMENT - SL 82

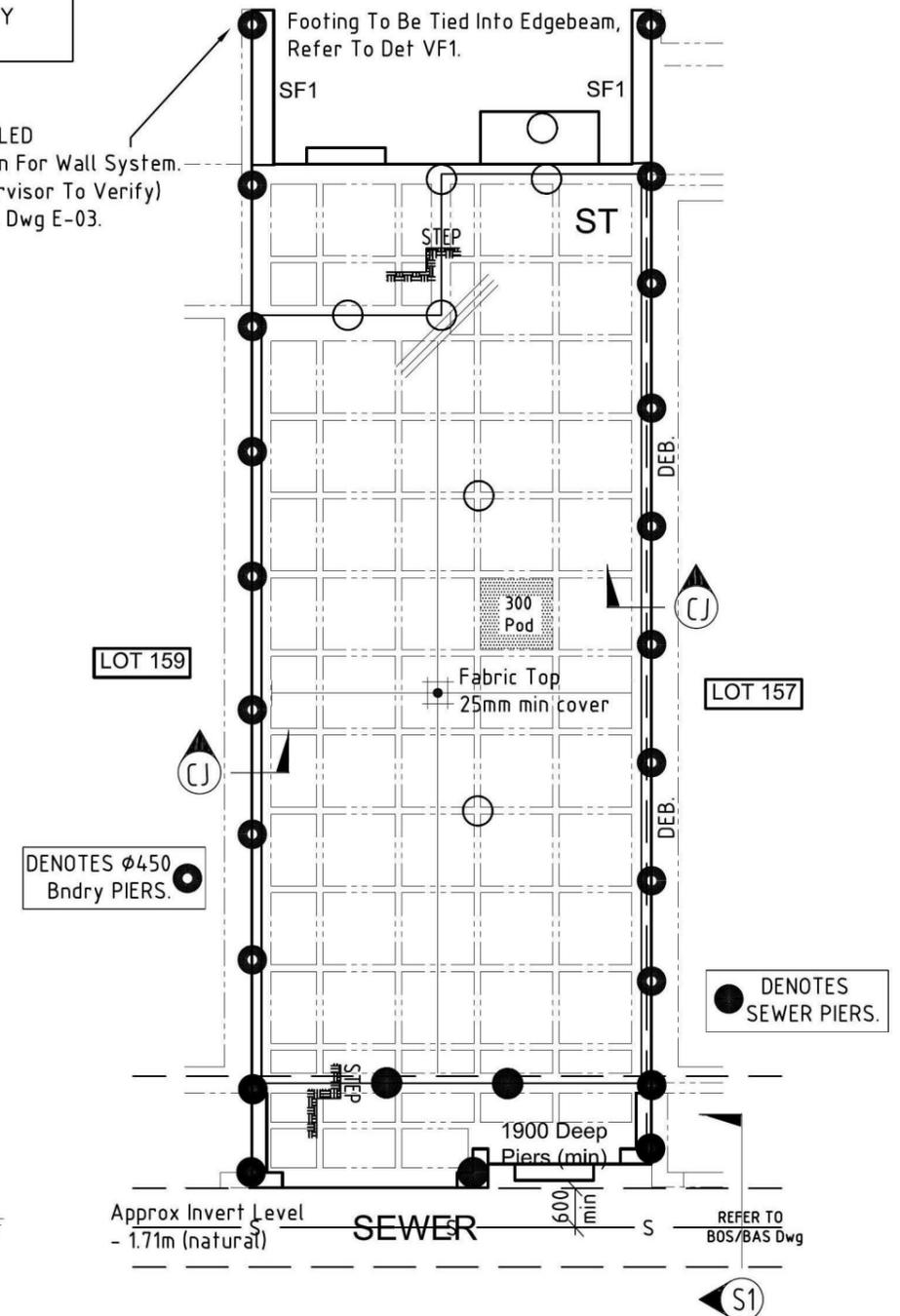
COVER TO REINFORCEMENT:
 SLABS - TOP 20mm (INSIDE)
 30mm (OUTSIDE)
 - BTM 30mm
 STIFFENING BEAMS - 30mm

* CARE TO BE TAKEN DURING EXCAVATION, *

ENGINEER TO BE ADVISED IF ABNORMAL SUB CONDITIONS ARE ENCOUNTERED INCLUDING EXTENT OF ANY TREE ROOTS, PIPES, DEBRIS & "SOFT SPOTS".

IF IN DOUBT "STOP WORK AND ASK"

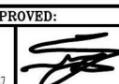
PROFILED Upturn For Wall System. (Supervisor To Verify) Detail Dwg E-03.



DENOTES ø450 Bndry PIERS.

DENOTES SEWER PIERS.

Approx Invert Level - 1.71m (natural) SEWER REFER TO BOS/BAS Dwg

PREPARED:	S.I.D	FOR:	P. O. CHRISTIAN LOT 158 HUTTON STREET NORTH PENRITH-THORNTON NSW		
CHECKED:	S.A.A		SC_17075	E-01	A
APPROVED:		Secta Ref Nbr	DRG Nbr	REV	
S. AbdelFattah ME (Aus) (PEng) NPER Civ/Struct BPB: Acc Certifier 0737					
DATE:	17/08/2015	REINFORCED SLAB PLAN			DO NOT SCALE

It is the responsibility of the Contractor/Supervisor, that any "on site" deviation/alteration to the Engineer's Drwgs/Design must be formally brought to the attention of the Engineer/Inspector, prior to any work proceeding.

Rev	DATE	AMENDMENT	Arch Ref: 808-14 (Rev QA1) - OXFORD 24 CUSTOM
A	17/08/15	Issued for construction	

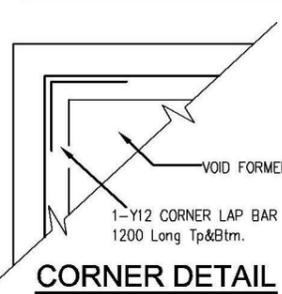
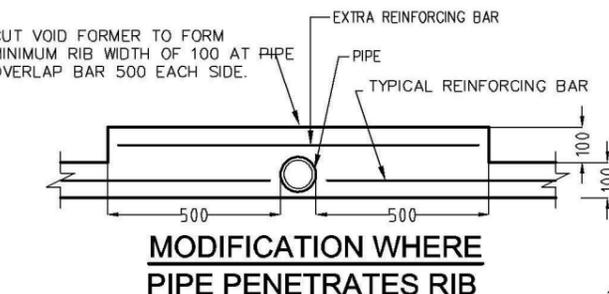
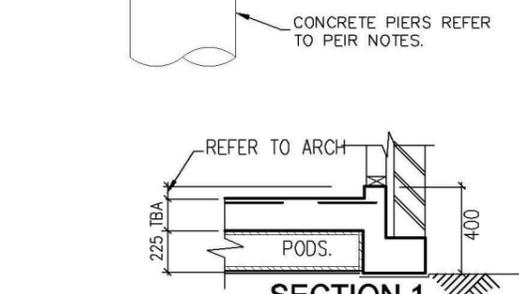
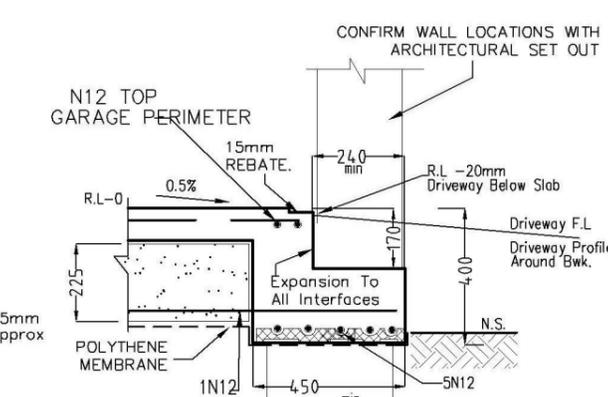
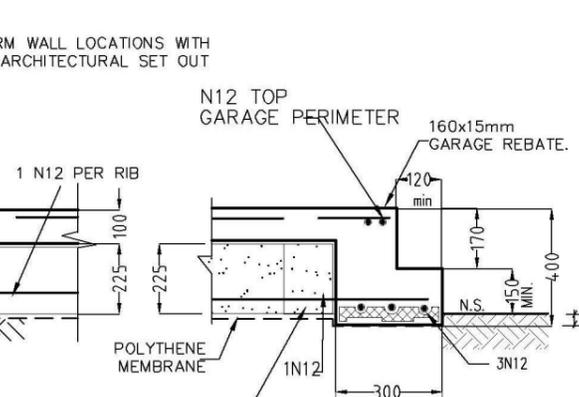
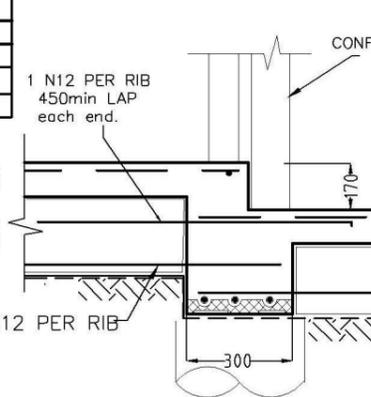
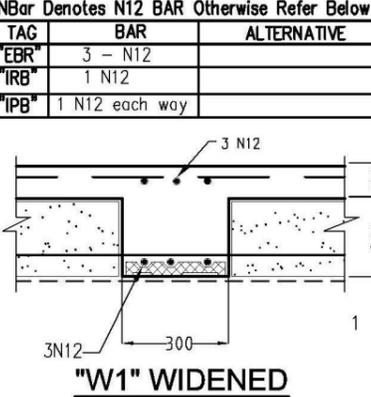
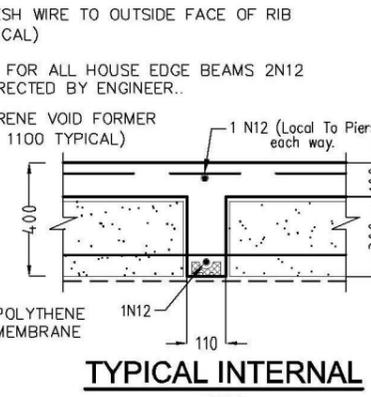
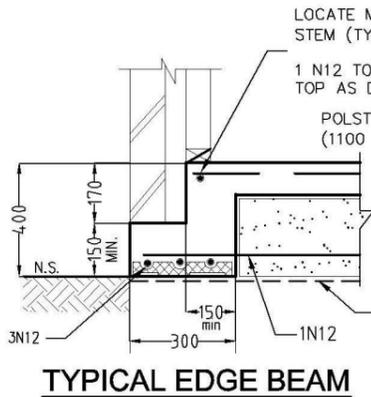


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REINFORCEMENT TABLE

NBar Denotes N12 BAR Otherwise Refer Below

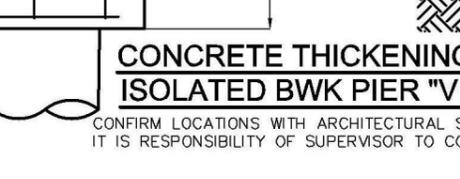
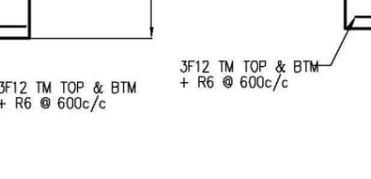
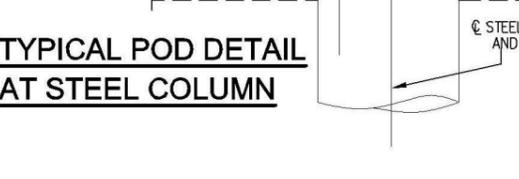
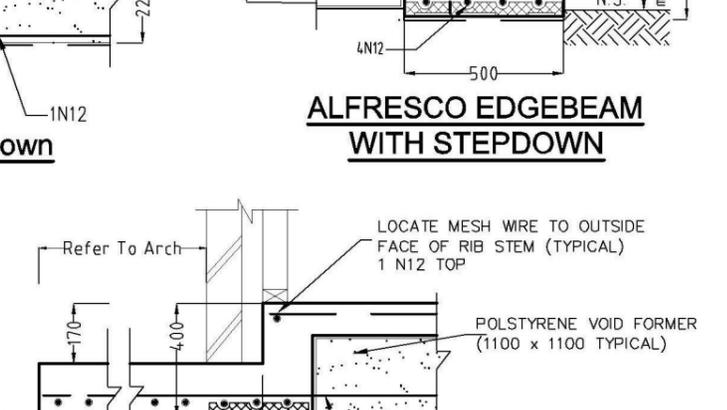
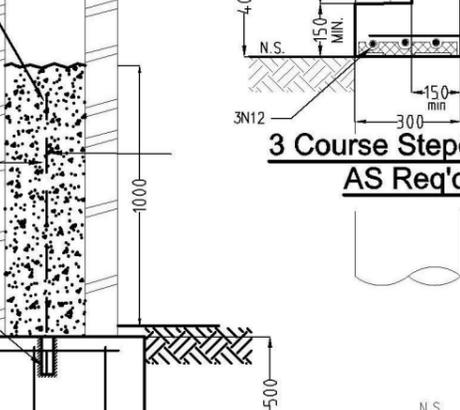
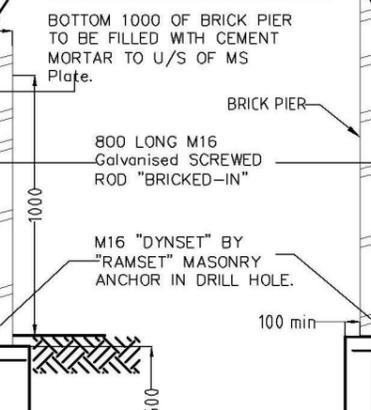
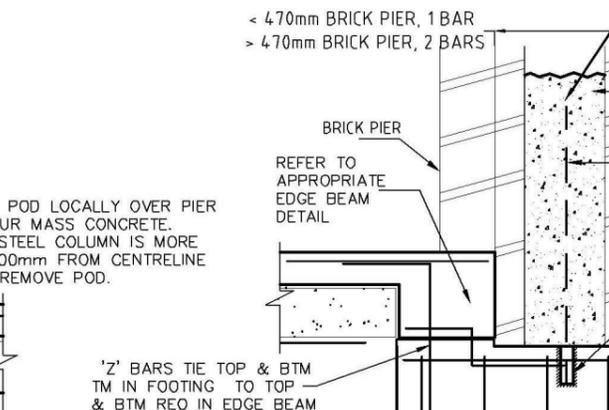
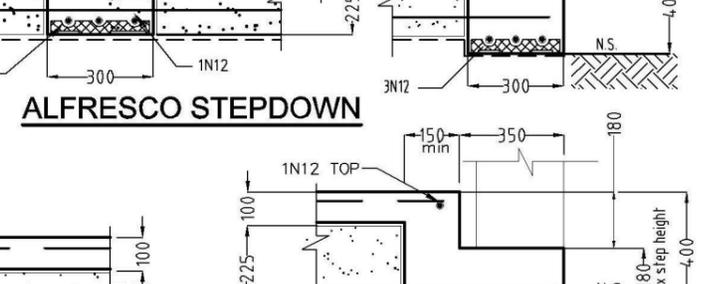
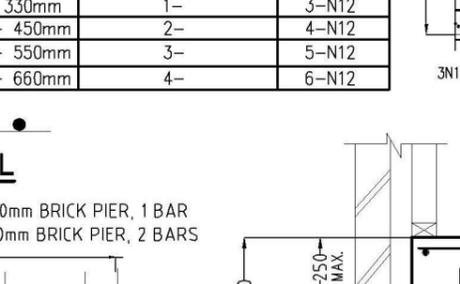
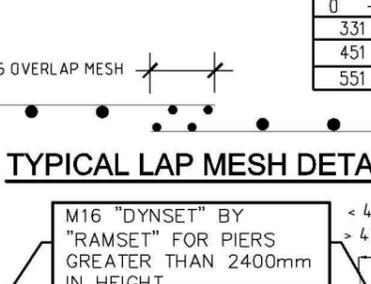
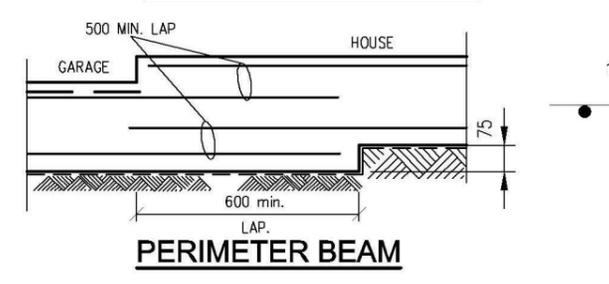
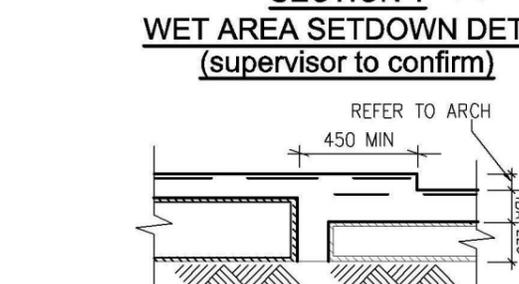
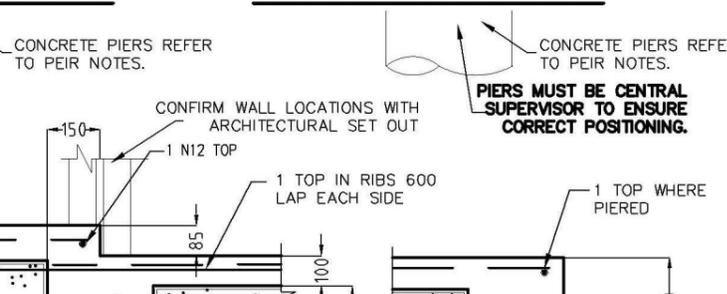
TAG	BAR	ALTERNATIVE
"EBR"	3 - N12	
"IRB"	1 N12	
"IPB"	1 N12 each way	



PLUMBING - FOR CLASS P, H, E ALL PENETRATIONS THROUGH FOOTINGS AND EDGE BEAMS SHALL BE SLEEVED TO ALLOW MINIMUM MOVEMENT AS PER AS2870 CLAUSE 5.5.4(A). ALL PLUMBING AND DRAINAGE SERVICES ARE TO BE FITTED WITH FLEXIBLE CONNECTIONS AS PER AS2870 CLAUSE 5.5.4 (B).

TOTAL REINFORCEMENT FOR EXTERNAL PIERED BEAMS

WIDTH	TOP STEEL	BTM STEEL
0 - 330mm	1-	3-N12
331 - 450mm	2-	4-N12
451 - 550mm	3-	5-N12
551 - 660mm	4-	6-N12



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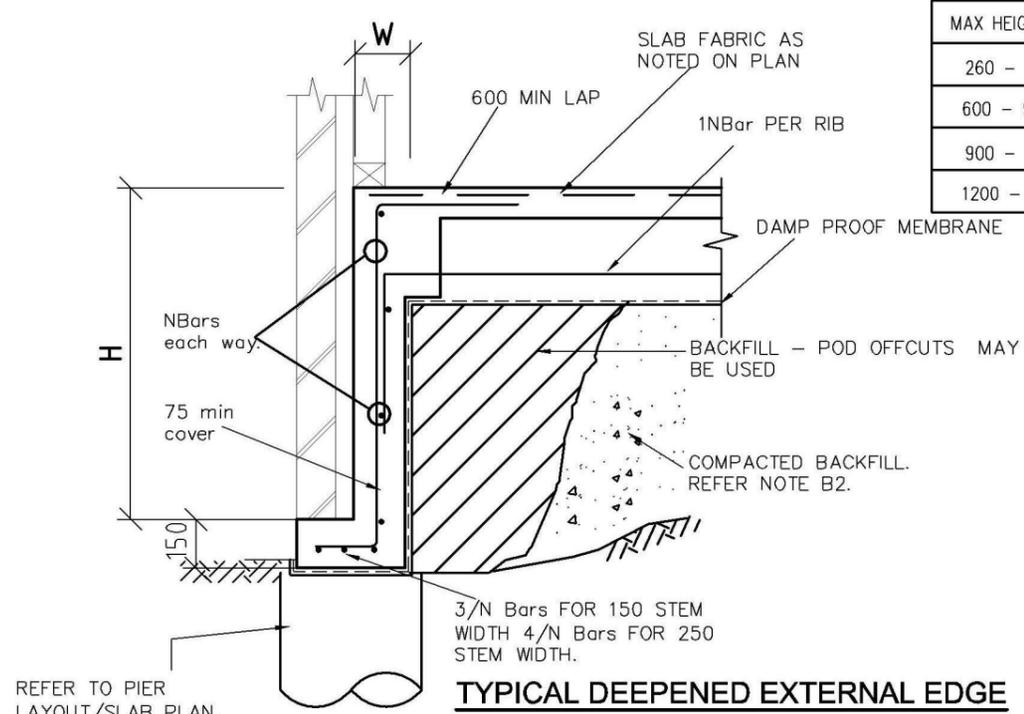
PREPARED: S.I.D
CHECKED: S.A.A
APPROVED: [Signature]
S. AbdelFattah
MIE (Aust) CP Eng
NPER Lic/Struct
BPE: Acc Certifier 0731
DATE: 17/08/2015

FOR: P. O. CHRISTIAN
LOT 158 HUTTON STREET
NORTH PENRITH-THORNTON NSW

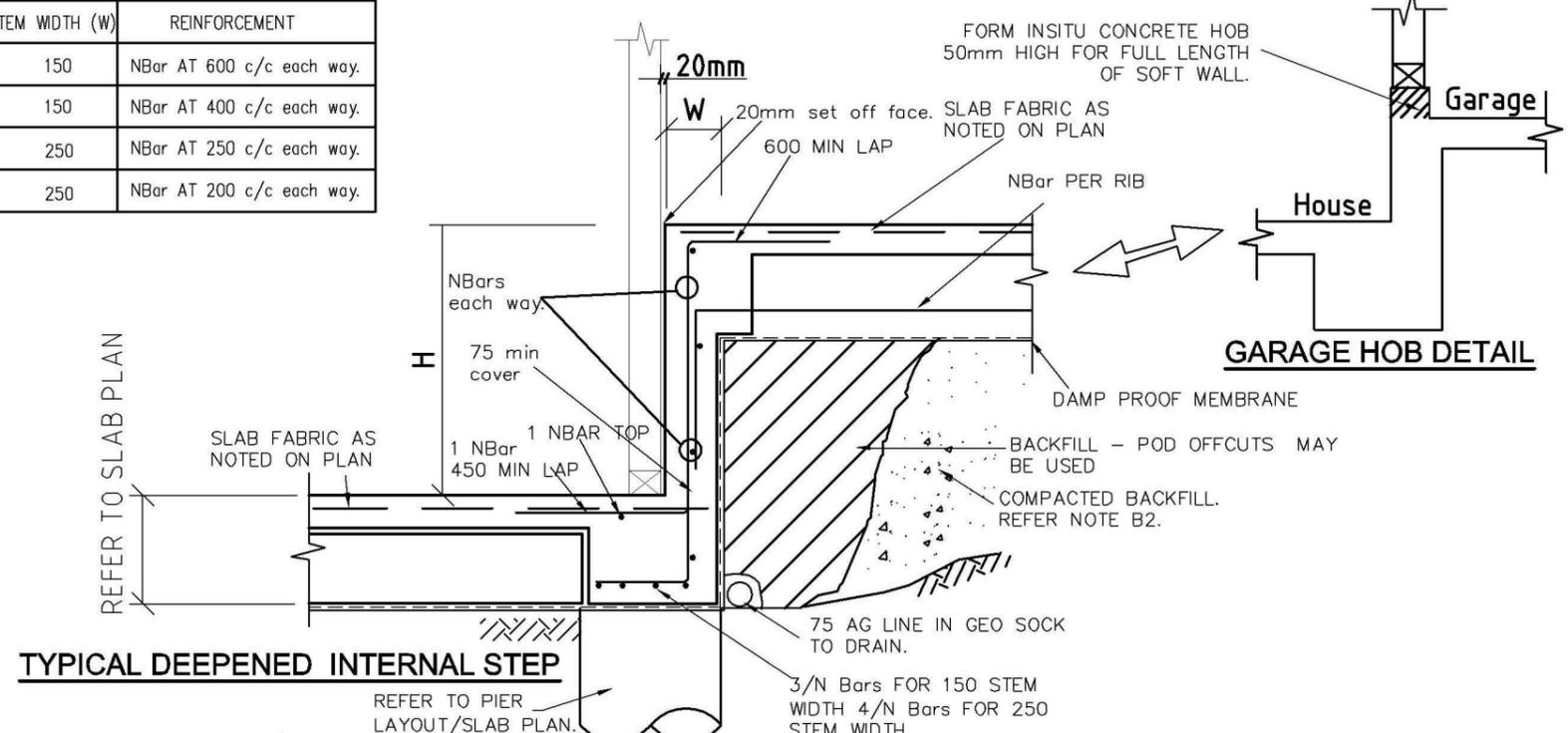
Secta Ref Nbr: SC_17075
DRG Nbr: E-02
REV: A

SLAB DETAIL SHEET
DO NOT SCALE

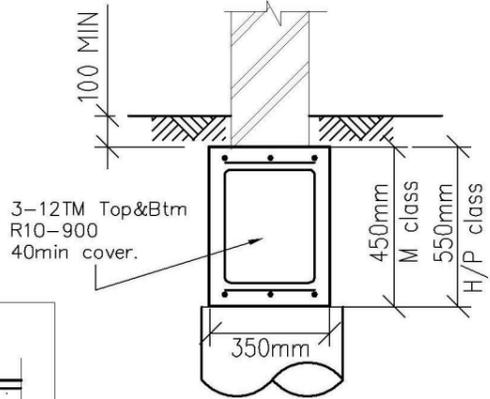
MAX HEIGHT (H)	STEM WIDTH (W)	REINFORCEMENT
260 - 600	150	NBar AT 600 c/c each way.
600 - 900	150	NBar AT 400 c/c each way.
900 - 1200	250	NBar AT 250 c/c each way.
1200 - 1600	250	NBar AT 200 c/c each way.



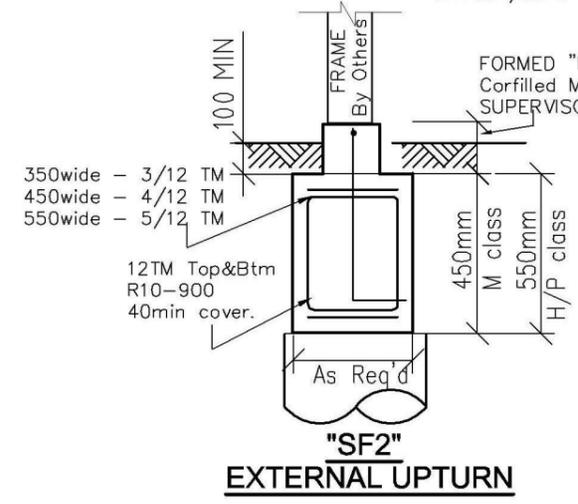
TYPICAL DEEPEMED EXTERNAL EDGE



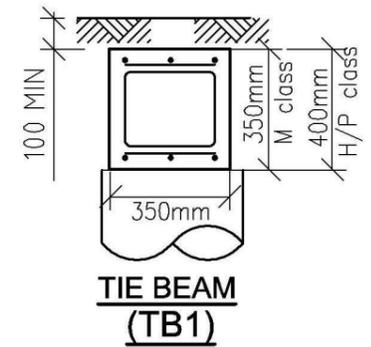
TYPICAL DEEPEMED INTERNAL STEP



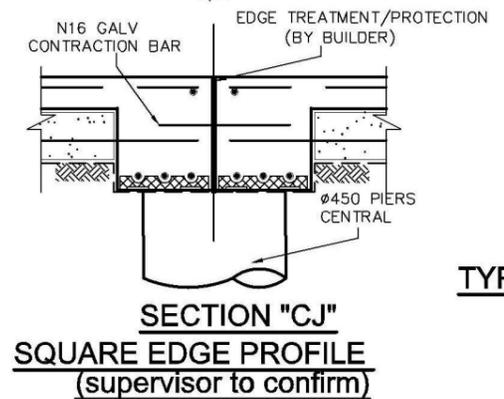
STRIP FOOTING (SF1)



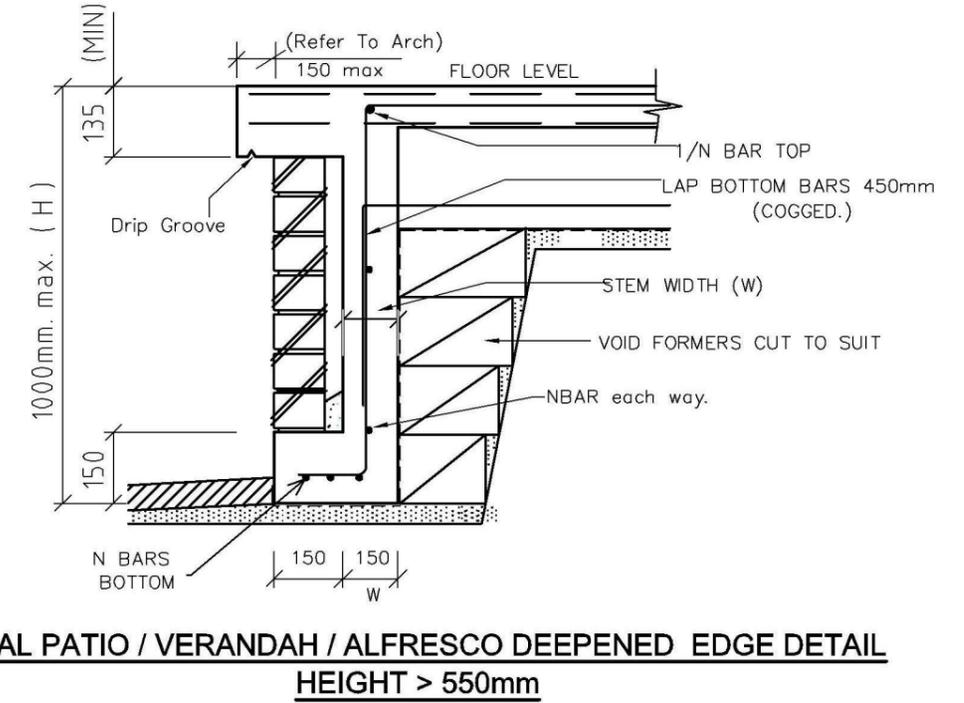
"SF2" EXTERNAL UPTURN



TIE BEAM (TB1)



SECTION "CJ" SQUARE EDGE PROFILE (supervisor to confirm)



TYPICAL PATIO / VERANDAH / ALFRESCO DEEPEMED EDGE DETAIL HEIGHT > 550mm

Where step "S" does not exceed 100mm;
x length "L" shall be a minimum of 600mm.
x reinforcement to be arranged as shown in method A.

Where step "S" does exceed 100mm;
x step "S" shall not exceed 600mm.
x length "L" shall be a minimum of 600mm.
x reinforcement to be arranged as shown in either methods B, C, D.

65mm cover to reinforcement. Steel spacers at 900cts.

REINFORCED CONCRETE STRIP FOOTINGS STEPPINGS AND REINFORCEMENT

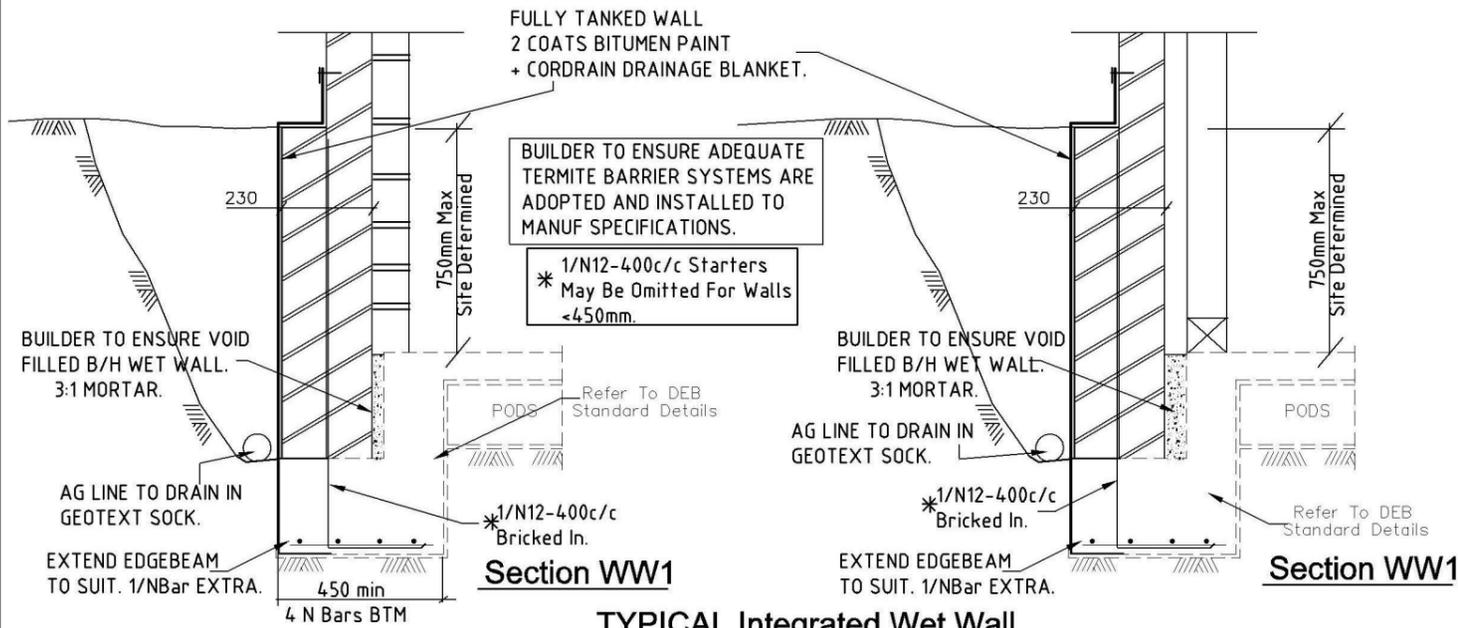


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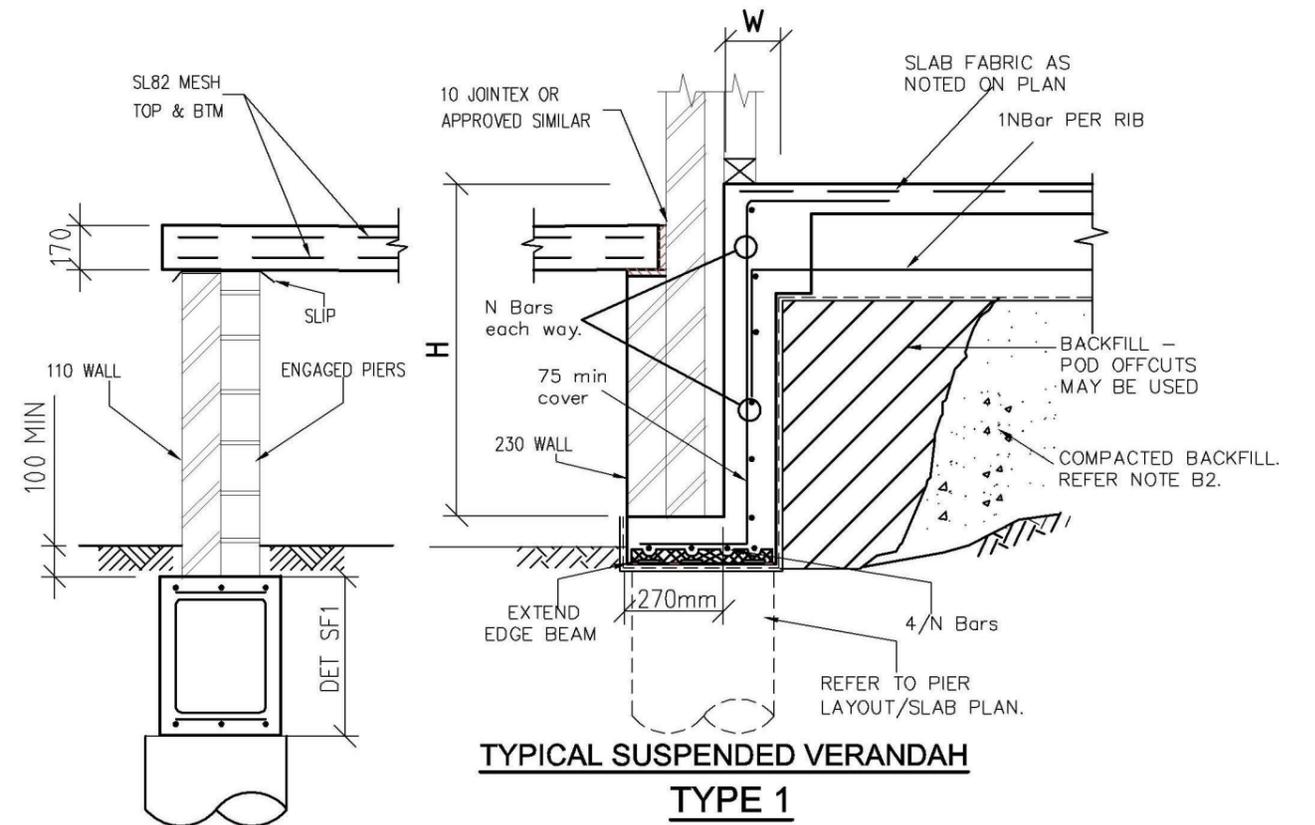
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PREPARED: S.I.D	FOR: P. O. CHRISTIAN LOT 158 HUTTON STREET NORTH PENRITH-THORNTON NSW
CHECKED: S.A.A	
APPROVED: S. Abdelfattah MIE (Aust) CP Eng NFER Cnv/Struct BFB Acc Certifier 0137	
DATE: 17/08/2015	
Secta Ref Nmbr SC_17075	DRC Nmbr E-03
DEEPEMED EDGE BEAM SHEET	
	REV A
	DO NOT SCALE

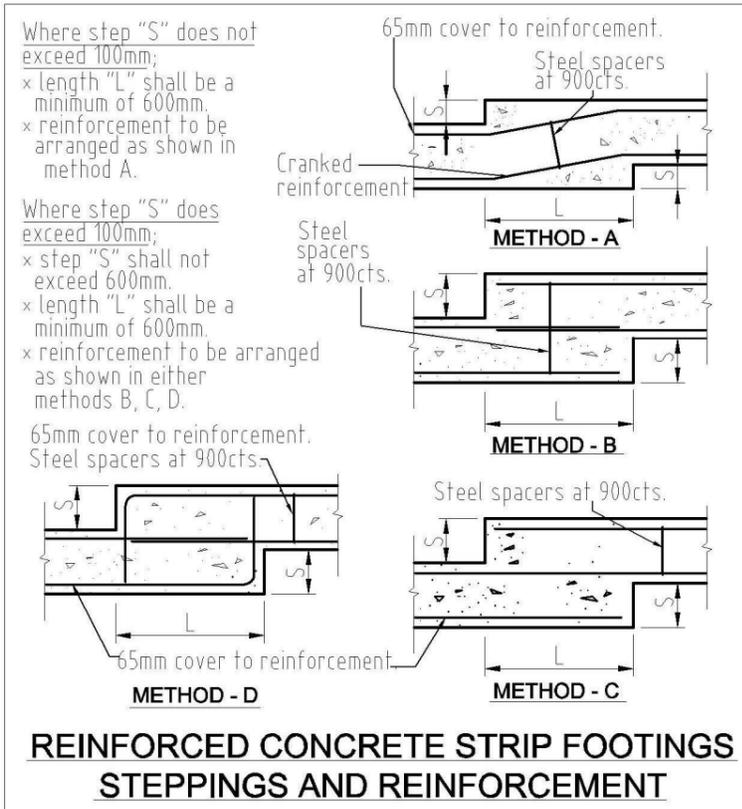


TYPICAL Integrated Wet Wall

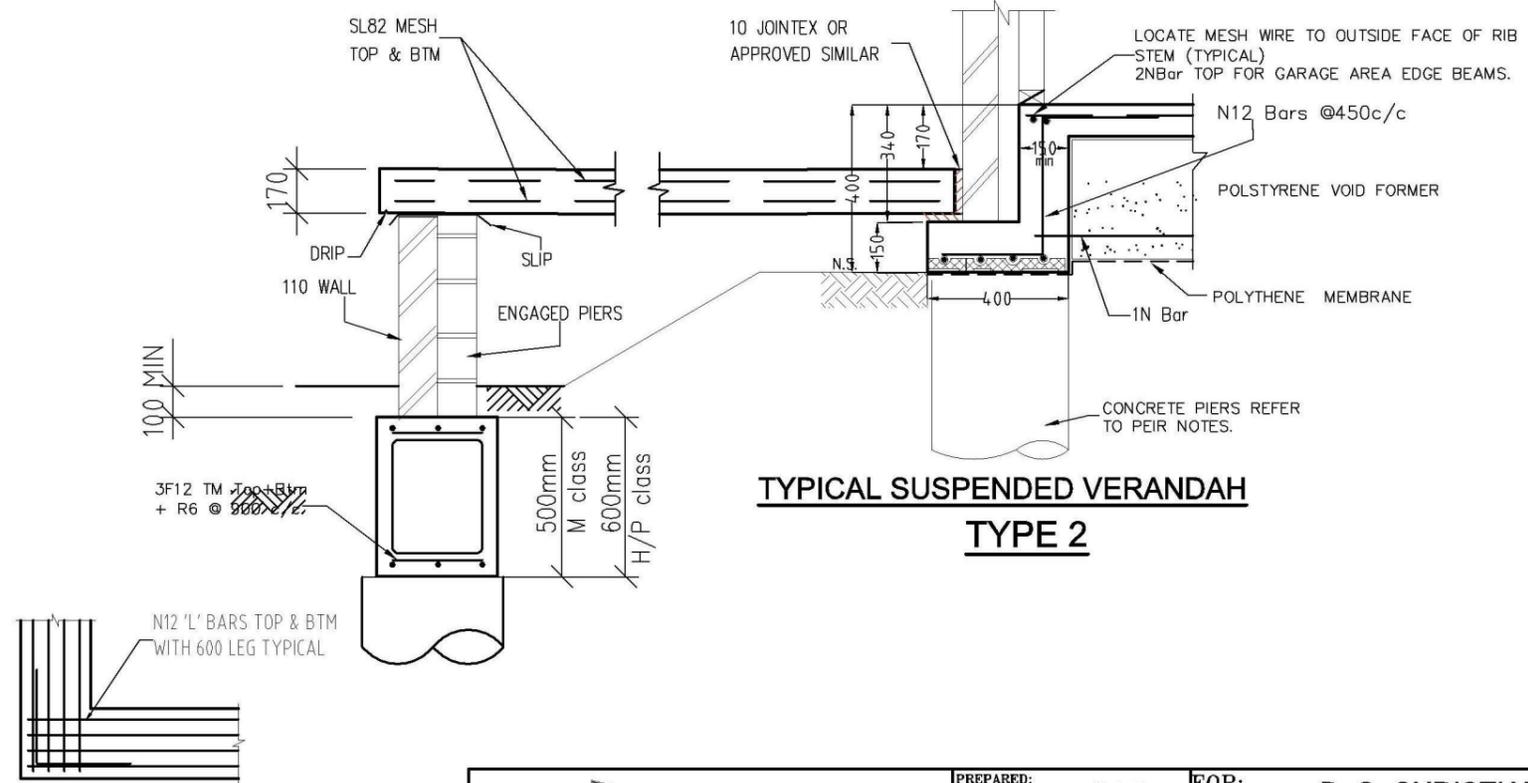
SUPERVISOR TO CONFIRM DETAIL VARIANCE.
REFER TO ARCHITECTURALS



TYPICAL SUSPENDED VERANDAH TYPE 1



REINFORCED CONCRETE STRIP FOOTINGS STEPPINGS AND REINFORCEMENT



TYPICAL SUSPENDED VERANDAH TYPE 2



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CHECKED:	S.A.A				
APPROVED:					
S. Abdelfattah MIE (Aust) / CP Eng NPER Civ/Struct NFB: Acc Certifier 0137		Secta Ref Nbr	SC_17075	DRC Nbr	E-04
DATE:	17/08/2015		CONC DETAIL SHEET		A
					DO NOT SCALE

FIRST FLOOR BEAM PLAN

FJ DENOTES ASSUMED FLOOR JOIST SPAN DIRECTION
TB DENOTES TIMBER BEAM TO FRAME MANUFACTURER'S DETAILS
 TIMBER FRAMING SPAN DIRECTIONS, SIZES & SUPPORTS (OTHER THAN STEEL BEAMS SHOWN) ARE INDICATIVE ONLY & SHALL BE CONFIRMED WITH THE FRAME MANUFACTURER'S SPECIFICATIONS.
 REFER TO TIMBER FRAMING NOTES ON SHEET No. E-00

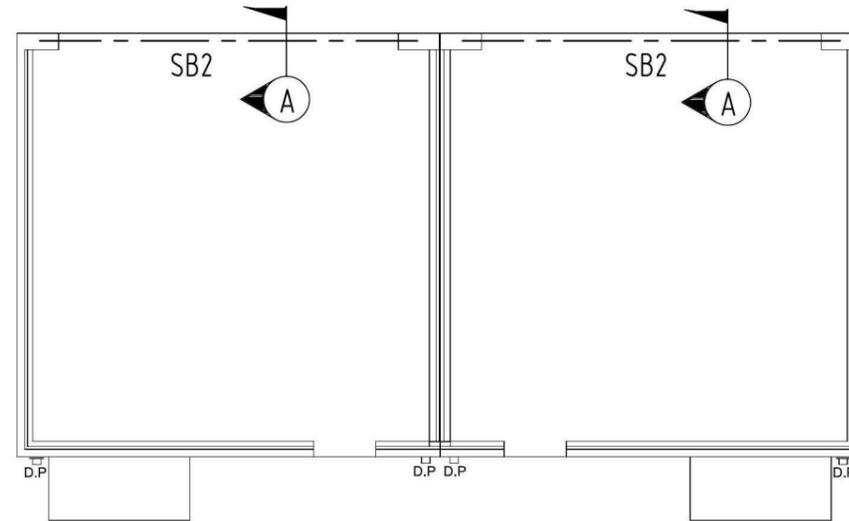
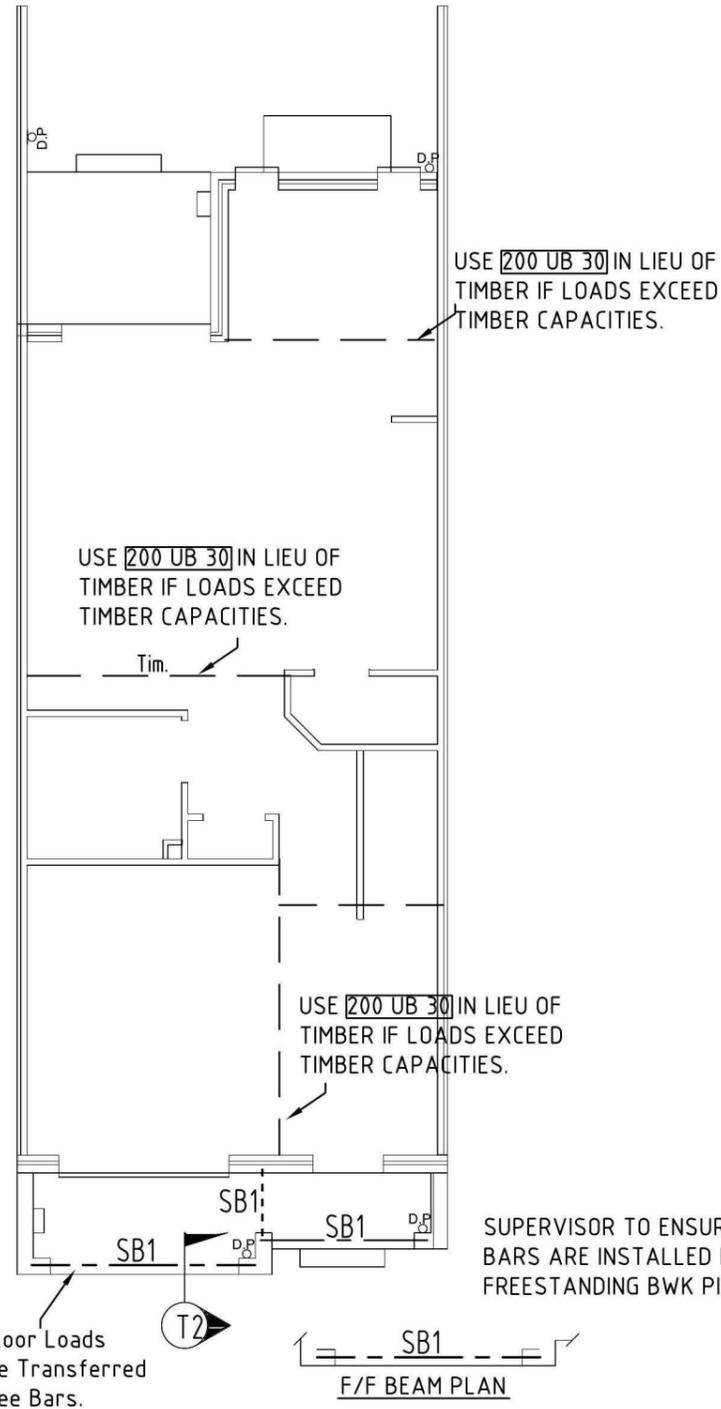
'A' UNLESS NOTED OTHERWISE ALL BEAMS AND LINTEL SUPPORTED ON BRICKWORK TO HAVE A MINIMUM BEARING LENGTH OF 150mm

LINTELS OVER DOOR & WINDOW OPENINGS, OTHER THAN THOSE SPECIFIED ABOVE, SHALL BE TO THE BUILDER'S SPECIFICATION

TEMPORARY BRACING OF STEEL STRUCTURE
 STEEL COLUMNS SHALL BE TEMPORARILY BRACED UNTIL ALL THE TIMBER FRAMING IS POSITIVELY FIXED TO THE STEELWORK AS DETAILED & THE PERMANENT WALL BRACING IS IN PLACE.

NOTE:
 -STEELWORK DESIGNED IN ACCORDANCE WITH AS4100 "STEEL STRUCTURES CODE" AND AS1170.1/AS1170.2 " DEAD AND LIVE LOADS AND WIND LOADS."
 STRUCTURAL STEEL TO BE GRADE (BHP 300 PLUS) U.N.O.
 SURFACE PREPARATION & FINISH TO COMPLY WITH AS/NZS 2312.

NOTE: ROOF TRUSSES HAVE BEEN ASSUMED TO BE SUPPORTED ON LEVEL 1 EXTERNAL WALLS (ON STUDS). PRIOR TO COMMENCING CONSTRUCTION THE BUILDER SHALL OBTAIN FROM THE TRUSS MANUFACTURER A PLAN WHICH CLEARLY IDENTIFIES ANY INTERNAL LEVEL 1 STUD WALLS WHICH ARE TO BE USED TO SUPPORT ROOF TRUSSES & THEIR CORRESPONDING REACTIONS (WORKING DEAD, LIVE & WIND LOADS) TO ALLOW VERIFICATION OF STRUCTURAL STEELWORK SHOWN ON THIS DRAWING. IT IS NOTED THAT IF INTERNAL LEVEL 1 WALLS ARE TO BE USED AS LOAD BEARING ELEMENTS TO SUPPORT THE ROOF FRAMING, THEN ADDITIONAL STRUCTURAL STEELWORK MAY BE REQUIRED.



STEEL MARKING PLAN
 Do Not Scale

MEMBER	SCHEDULE
ITEM	DESCRIPTION
SB1	200x200x10 MS FL
SB2	250 PFC 36 + 200x10 MS FL
SB3	
SB4	
SB5	
SB6	
SB7	
C1	
C2	

DESIGN LIVE LOAD : GENERALLY 1.5kPa
 ROOF (NON-TRAFFICABLE) 0.25kPa



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PREPARED:	S.I.D
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DATE:	17/08/2015

FOR: P. O. CHRISTIAN
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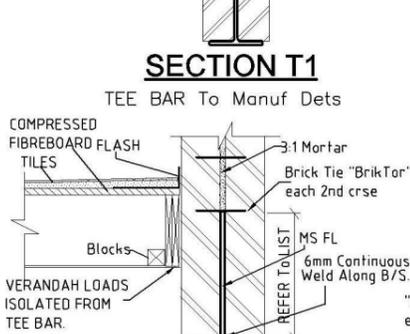
Secta Ref Nbr: SC_17075
 DRG Nbr: E-05
 REV: A

STEEL MARKING PLAN
 DO NOT SCALE

TYPICAL TEE BAR NOTE

- NOTES, GALINTEL TEE (GARAGE DOOR OPENING)
1. TEE TO BE PROPPED @ 1.2m c/c. max.
 2. PROPS TO REMAIN IN PLACE UNTIL MORTAR ACHIEVES FULL STRENGTH (7 DAYS)
 3. MORTAR MIX 1:4 (min) AND APPLIED TO ALL FACES BETWEEN BRICK & MORTAR INCLUDING BTM FLANGE & VERTICAL WEB.
 4. MINIMUM 3 BRICK COURSES TO BOTH SIDES.

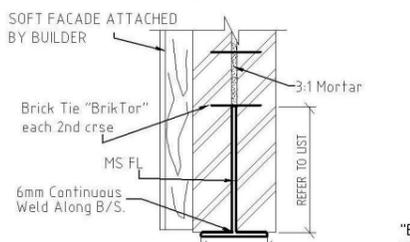
"BUILDER" TO ENSURE FULL MORTAR COVERAGE TO ALL SURFACES.



SECTION T1
TEE BAR To Manuf Dets



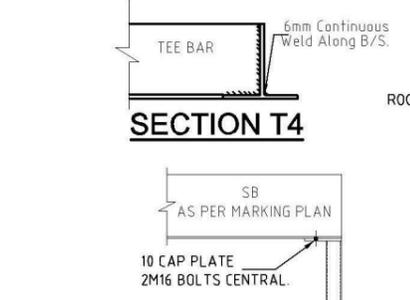
SECTION T2
AS APPLICABLE



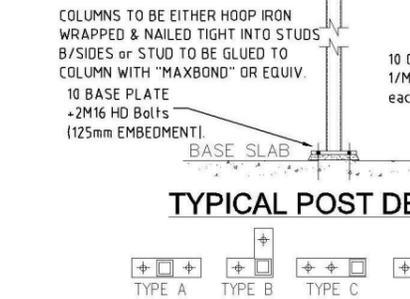
SECTION T3
FABRICATED SECTION



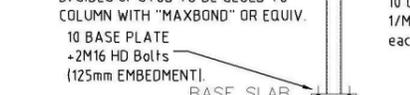
SECTION T4



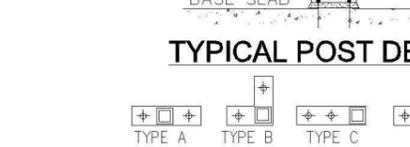
TYPICAL POST DETAIL



TYPICAL END SPLAY



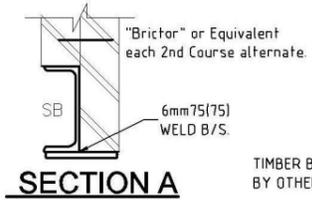
TYPICAL MID-POST



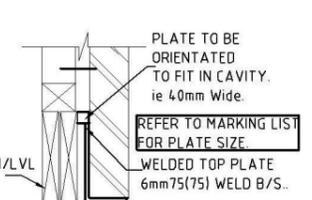
Special POST DETAIL BASE PLATE PLAN DETAIL

*ALL BASE PLATES TO BE 10mm THICK
*ORIENTATE BASE PLATE TO SUIT WALL LOCATION
*SURFACE TREATMENT AS PER COLUMN

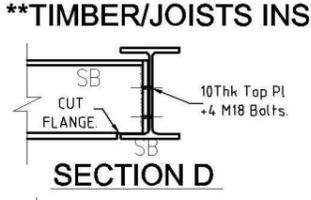
****TIMBER/JOISTS INSTALLED TO MANUF SPECIFICATIONS****



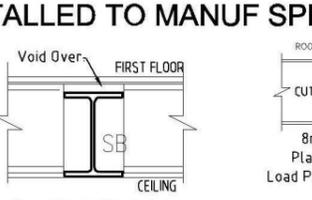
SECTION A



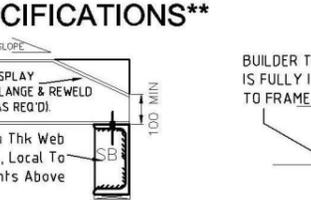
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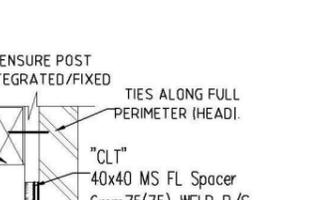
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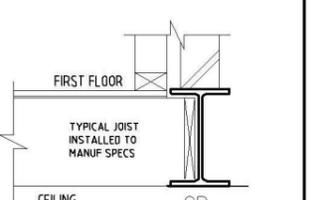
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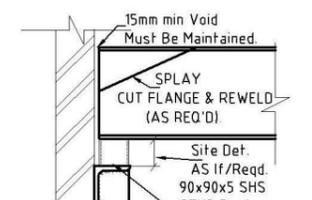
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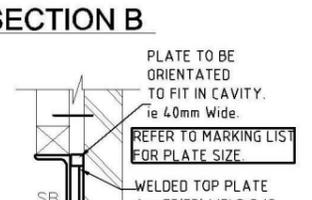
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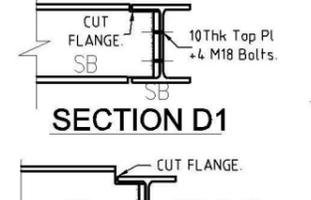
SECTION U1



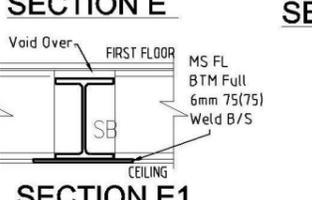
SECTION A1



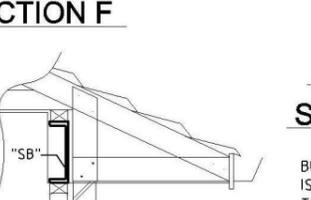
SECTION B1



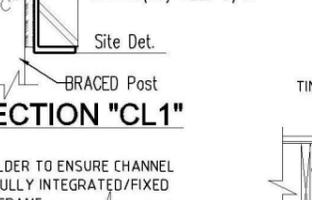
SECTION D1



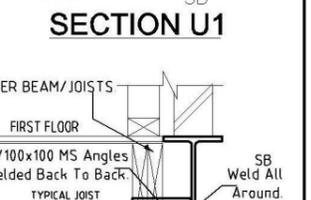
SECTION E1



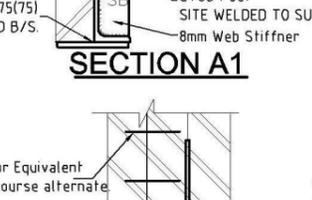
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SECTION "CL2"



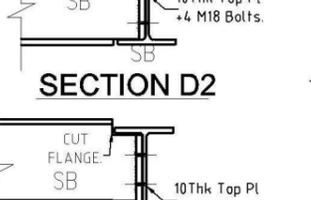
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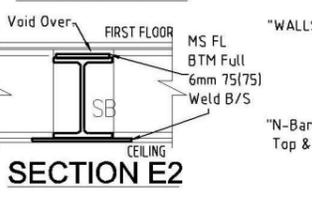
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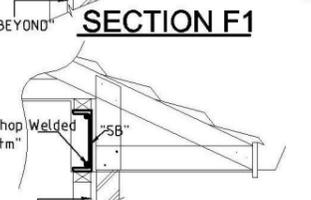
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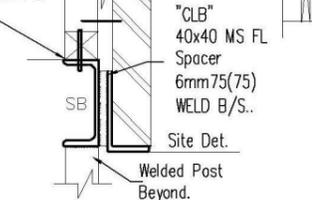
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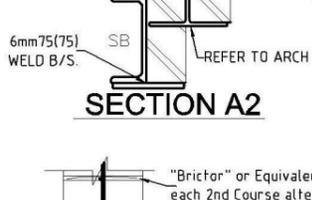
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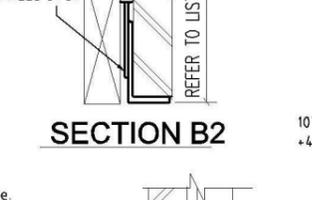
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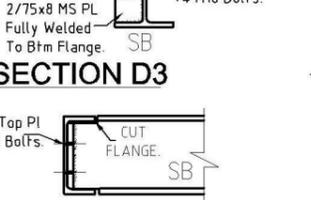
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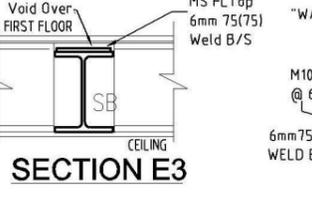
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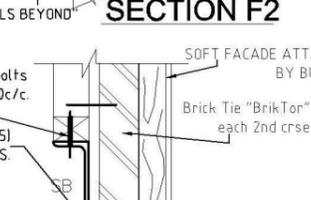
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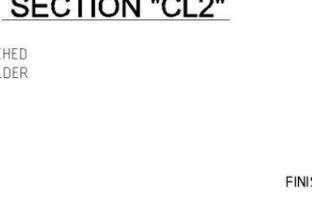
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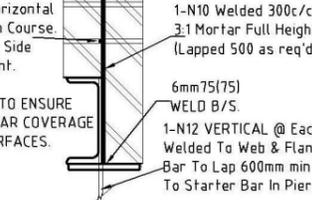
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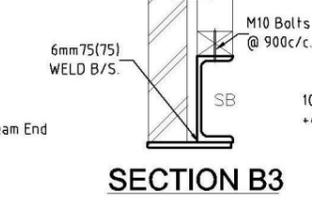
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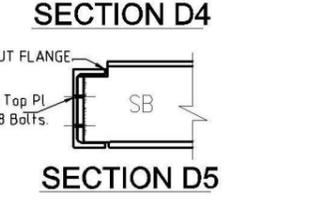
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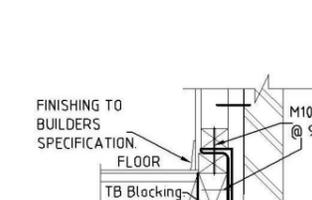
SECTION A3
MINIMUM PARAPET REINFORCEMENT T/O



SECTION B3



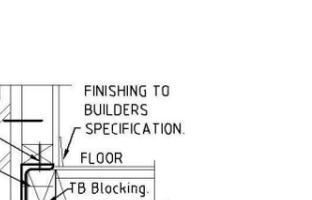
SECTION D5



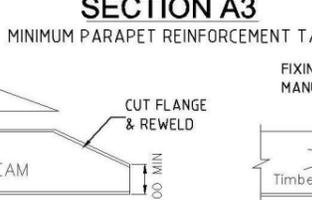
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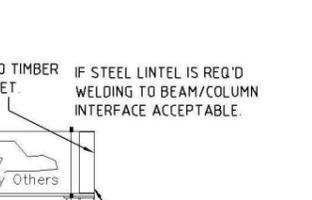
SECTION F3



SECTION U4

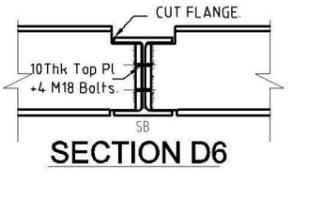


TYPICAL END SPLAY

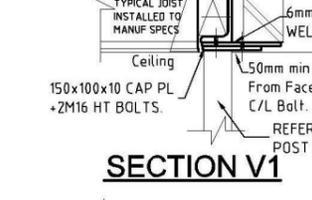


Special POST DETAIL BASE PLATE PLAN DETAIL

*ALL BASE PLATES TO BE 10mm THICK
*ORIENTATE BASE PLATE TO SUIT WALL LOCATION
*SURFACE TREATMENT AS PER COLUMN



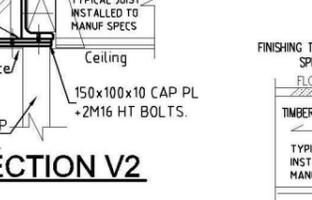
SECTION D6



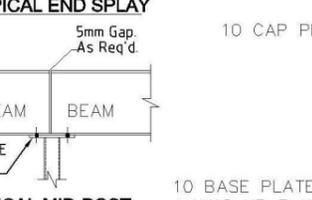
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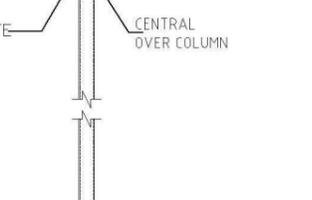
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SECTION U5

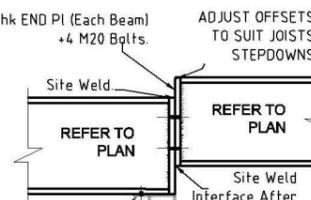


TYPICAL MID-POST

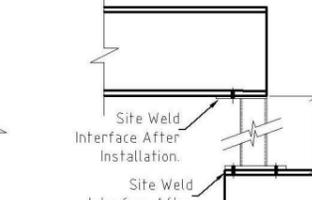


Special POST DETAIL BASE PLATE PLAN DETAIL

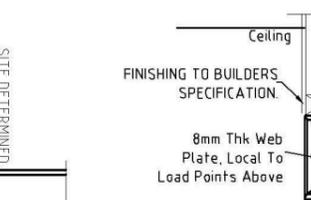
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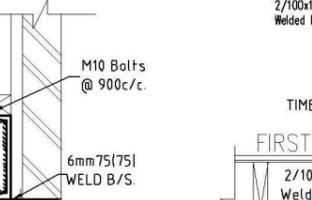
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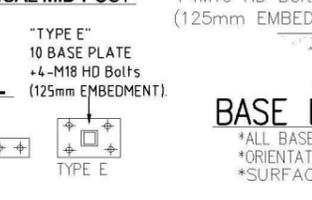
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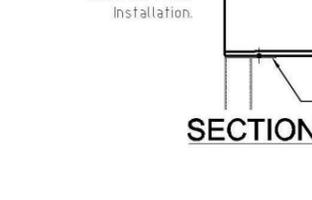
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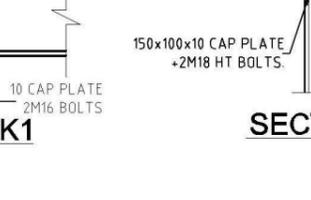
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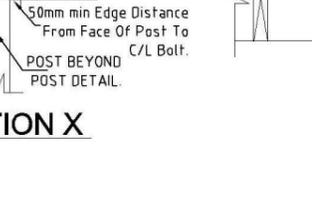
TYPICAL MID-POST GARAGE-DWELLING GD1



SECTION K1



SECTION X



SECTION U6



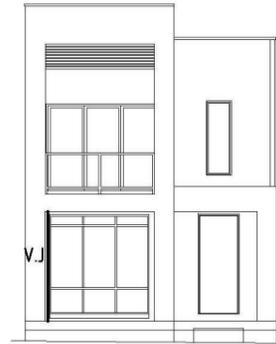
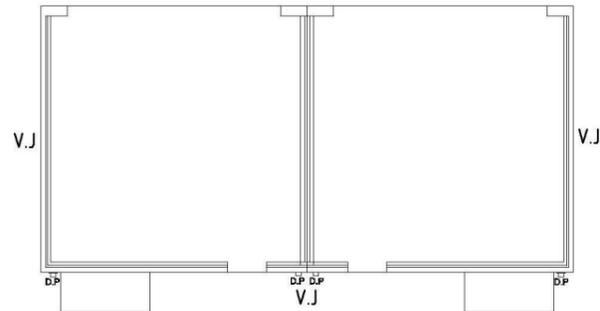
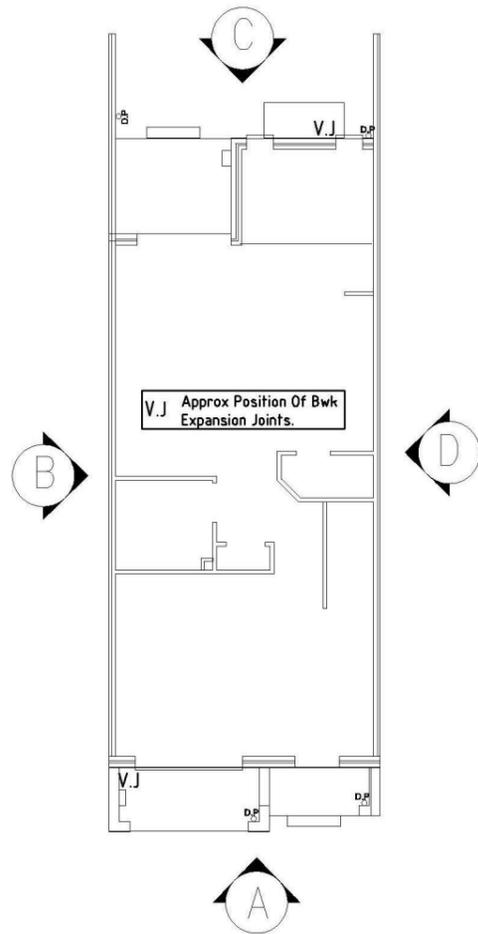
It is the responsibility of the Contractor/Supervisor, that any "on site" deviation/alteration to the Engineer's Drwgs/Design must be formally brought to the attention of the Engineer/Inspector, prior to any work proceeding.

Rev	DATE	AMENDMENT
A	17/08/15	Issued for construction
Arch Ref: 808-14 (Rev QA1) - OXFORD 24 CUSTOM		

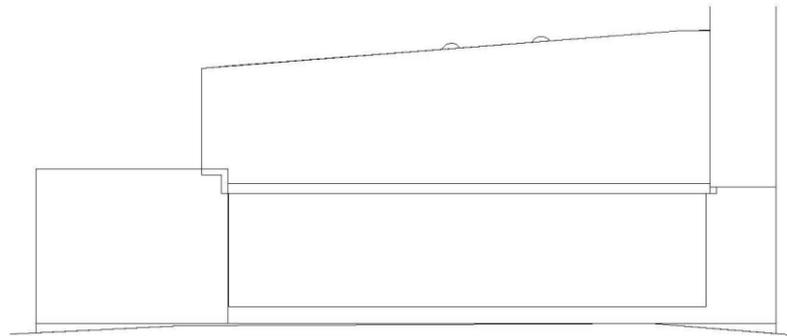
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PREPARED:	S.I.D
CHECKED:	S.A.A
APPROVED:	
S.Abdeltattah ME (Aust) CP Eng NPER CIV/Struct BPE: Acc Certifier 0737	DATE: 17/08/2015

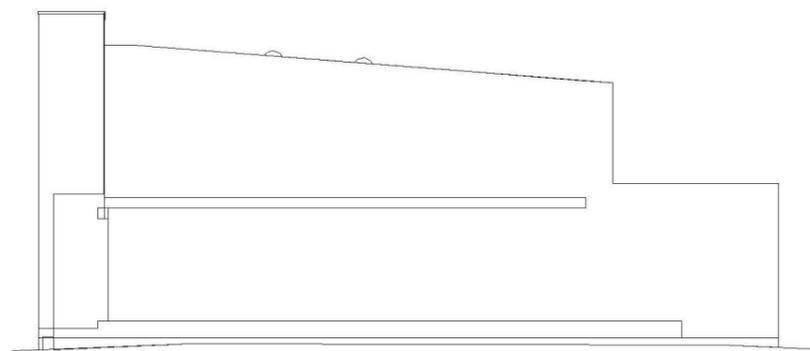
FOR: P. O. CHRISTIAN LOT 158 HUTTON STREET NORTH PENRITH-THORNTON NSW	SC_17075	E-06	A
Secta Ref Nubr	DRC Nubr	REV	DO NOT SCALE
STEEL DETAILS			



ELEVATION A



ELEVATION B



ELEVATION D



ELEVATION C

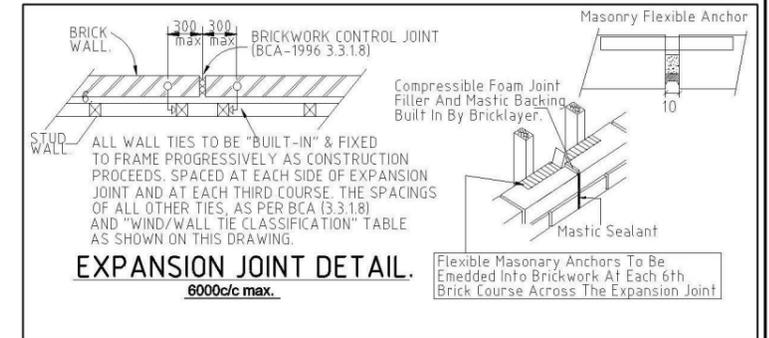
DURABILITY CLASSIFICATION. EXTERIOR

CATEGORY (durability)	WALL TIES AS 3700	GRADE OF BRICKS AS/NZS 4456.10	MORTAR AS 3700	STRUCTURAL STEEL (Surface finish)
severe marine	R4 Stainless or Polymer	EXPOSURE	M4 (1:4)	GALVANISED (GZLP) (600g per sq.m)
marine	R3	GENERAL PURPOSE	M3 (1:5)	AS/ANZ 2312/1994.
exterior	R2	GENERAL PURPOSE	M2 (1:2:8)	AS/ANZ 2312/1994.

WIND/WALL TIE CLASSIFICATION N2 "W33"

WIND Class (Vp)	WALL TIE	HORIZONTAL SPACING	VERTICAL SPACING
N1	W28N1	LIGHT DUTY	600
N2	W33N2	MEDIUM DUTY	600
N3	W4IN3	MEDIUM DUTY	600 (5 COURSES)

WALL TIE SPACINGS AROUND OPENINGS 300c/c EACH WAY.
POLYMER WALL TIES RATED "LIGHT DUTY ONLY" (W28N1).
(Vp = PERMISSABLE STRESS METHOD)



EXPANSION JOINT DETAIL.
6000c/c max.

Flexible Masonary Anchors To Be Emedded Into Brickwork At Each 6th Brick Course Across The Expansion Joint



It is the responsibility of the Contractor/Supervisor, that any "on site" deviation/alteration to the Engineer's Drwgs/Design must be formally brought to the attention of the Engineer/Inspector, prior to any work proceeding.

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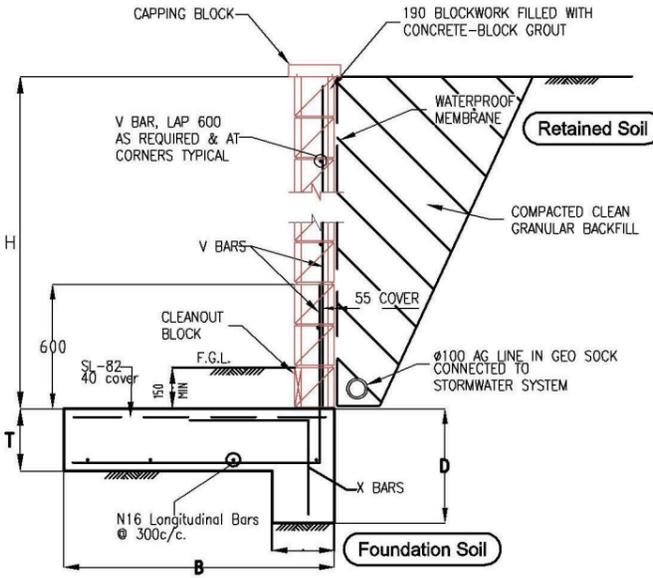
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web: www.sectaengineering.com.au email: admin@sectaeng.com.au

PREPARED:	S.I.D
CHECKED:	S.A.A
APPROVED:	
S. Abdeltattah MIE (Aust) CP Eng NPER Civ/Struct BFB: Acc Certifier 0737	
DATE:	17/08/2015

FOR:	P. O. CHRISTIAN LOT 158 HUTTON STREET NORTH PENRITH-THORNTON NSW		
Secta Ref Nmbr	SC_17075	DRC Nmbr	E-07
			A
BRICK ARTICULATION PLAN			DO NOT SCALE

**RESPONSIBILITY OF OWNER
RETAINING STRUCTURE BY OWNER.**

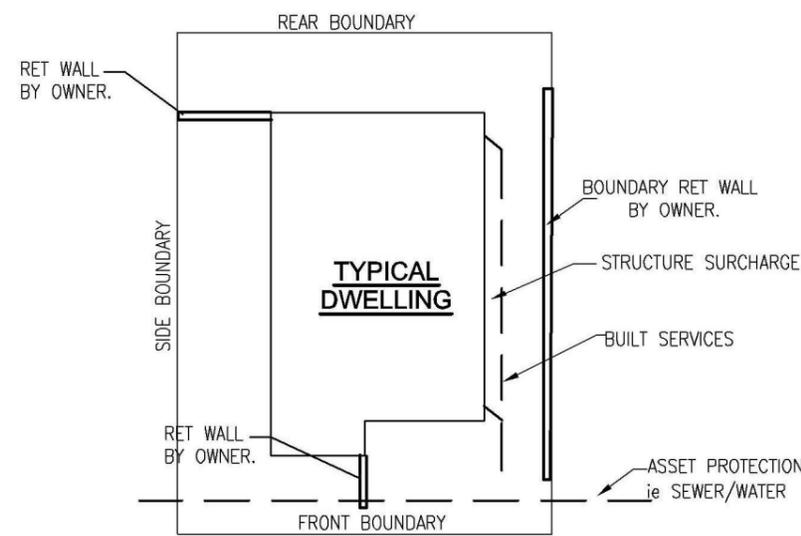
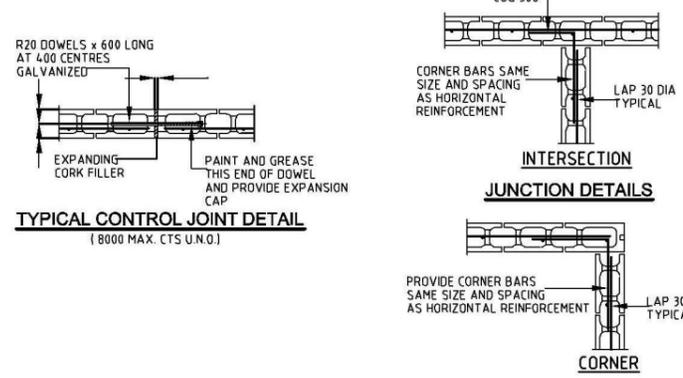
- A) ENSURE RET WALL TYPE COMPLIES WITH SUBDIVISION and/or COUNCIL CONDITIONS.
- B) ALL EXISTING SERVICES/STRUCTURES WITHIN CRITICAL ZONES ARE PROTECTED.
- C) USE OF PROPRIETY WALL SYSTEMS ARE INSTALLED AND SPECIFIED AS PER MANUFACTURERS SPECS.
- D) ENSURE SITE/SOIL CONDITIONS SUIT SELECTED RET WALL TYPE.
- E) ENSURE APPROPRIATE SURFACE DRAINAGE MEASURES ARE ADOPTED INCLUDING APPROPRIATE MATERIALS ARE PLACED BEHIND WALL TO CONVEY GROUND WATER AWAY FROM THE WALL AND ITS FOUNDATIONS.



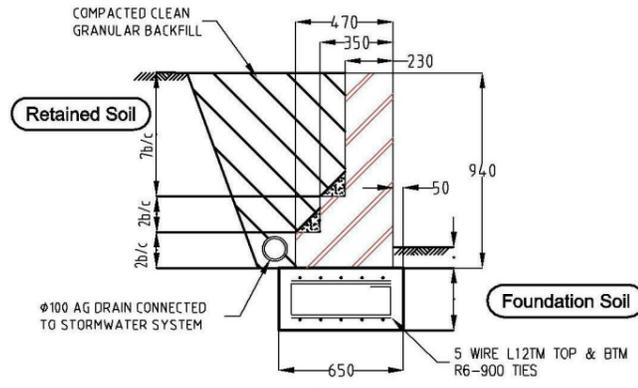
**TYPE A
RETAINING WALL HEIGHT 0 - 1000**

4 kPa MAX ALLOWABLE SURCHARGE

RETAINING WALL SCHEDULE					
H	B	D	T	V BARS	X BARS
0 - 800	800	400	200	N12-400	N12-400
800-1000	900	400	200	N12-400	N12-400

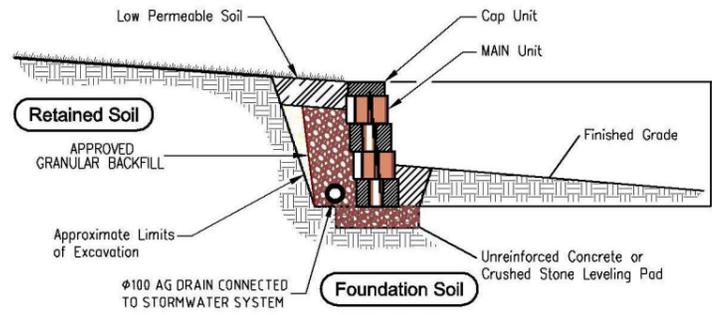


**TYPICAL SITE
NOT TO SCALE**

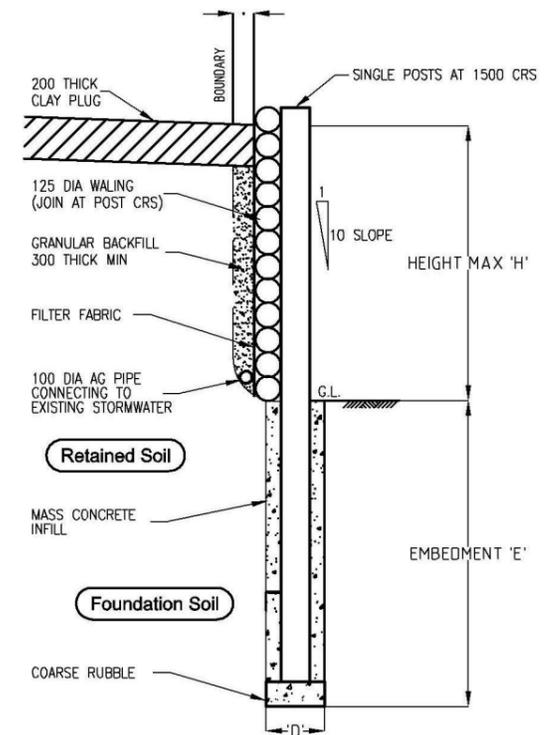


**TYPE B
TYPICAL GRAVITY BRICKWORK
RETAINING WALL DETAILS**

- 1. 4 kPa SURCHARGE ALLOWED
- 2. ALL BRICKWORK TO BE INTERLOCKED USING HEADER COURSES SO THAT THE WALLS ACT AS AN INTEGRAL UNIT
- 3. VERTICAL BRICK JOINTS AT 6000 CTRS UNO



**TYPE C
Typical "PROPRIETY"
Gravity Wall Section**



**TYPE D
TYPICAL LOG RETAINING WALL**

TIMBER LOG RETAINING WALL				
HEIGHT MAX 'H'	EMBEDMENT 'E'	POST DIA MIN	POST Spacing MIN	WALL DIA MIN
900	1000 MIN	200	1500	125

CONSTRUCTION OF WALL TO BE IN ACCORDANCE WITH "KOPPERS LOG" RETAINING WALL SPECIFICATIONS
 'D' 400 DIA FOR POST 200 DIA
 'D' 2 x 400 DIA FOR DOUBLE POSTS

TYPICAL RET WALL TYPES

PRIOR TO SELECTION, OWNER MUST CONTACT EITHER MANUFACTURER and/or QUALIFIED ENGINEER TO DISCUSS SUITABILITY OF SYSTEM.

BRICKWORK AND BLOCKWORK

- B1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3700, SAA BLOCKWORK CODE AS475 AND ALL OTHER RELATED CODES.
- B2 STRENGTHS OF MASONRY UNITS AND TYPE OF MORTAR SHALL BE AS FOLLOWS:

ELEMENT	MATERIAL	CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH (F'c)	MORTAR (CEMENT : LIME : SAND) (F'c)
BRICKS	CLAY	20 MPa	1 : 1 : 6
BLOCKS	CONC	15 MPa	1 : 0.25 : 3

- B3 ONLY LOAD BEARING MASONRY WALLS ARE SHOWN UNDER CONCRETE SLABS.
- B4 OTHER THAN REINFORCED CONCRETE BLOCKWORK, MASONRY SUPPORTING SLABS AND BEAMS SHALL BE TROWELLED SMOOTH WITH MORTAR FILLING ALL VOIDS. TWO LAYERS OF MALTHOID SHALL BE PLACED FULL WIDTH ACROSS SUCH LOAD BEARING SURFACES EXCEPT WHERE PROPRIETARY BEARING STRIP IS NOTED OR ALTERNATIVE DETAIL IS DOCUMENTED. THE HEADS OF LOAD BEARING WALLS SHALL NOT EXTEND ABOVE THE SOFFIT OF THE CONCRETE SLAB ABOVE.
- B5 ALL DOUBLE SKIN SOLID WALLS SUCH AS 230mm THICK BRICKWORK SHALL BE BONDED BY A HEADER COURSE EVERY 4th COURSE.
- B6 ALL MASONRY SUPPORTING OR SUPPORTED BY CONCRETE FLOORS SHALL BE PROVIDED WITH VERTICAL JOINTS TO MATCH ANY CONTROL JOINTS IN THE CONCRETE.
- B7 NON LOAD BEARING WALLS BUILT PRIOR TO POURING CONCRETE SHALL BE SEPARATED FROM CONCRETE ABOVE BY 16 mm THICK CLOSED CELL POLYSTYRENE STRIP. WHERE BUILT AFTER CONCRETE IS POURED LEAVE 12 mm CLEAR OF CONCRETE SOFFIT.
- B8 NO CHASES OR RECESSES ARE PERMITTED IN LOAD BEARING MASONRY WITHOUT THE APPROVAL OF THE ENGINEER.
- B9 PROVIDE VERTICAL CONTROL JOINTS AT 8 m MAX. CENTRES GENERALLY, AND 5 m MAX. FROM CORNERS FOR BRICKWORK AND UNREINFORCED BLOCKWORK.
- B10 REFER TO CONCRETE NOTES FOR DE-PROPPING PRIOR TO CONSTRUCTION OF MASONRY WALLS ON SUSPENDED SLABS.
- B11 ALL CAVITY CONSTRUCTION SHALL INCLUDE STAINLESS STEEL TIES INSTALLED IN ACCORDANCE WITH CLAUSE 3.8 AS 3700.
- B12 REINFORCED CONCRETE BLOCKWORK SHALL COMPLY WITH THE FOLLOWING, UNLESS NOTED
 - * BLOCKS SHALL BE STRENGTH GRADE 15 CONFORMING TO AS 2733.
 - * MORTAR SHALL COMPRISE 1 CEMENT:0.25 LIME:3 SAND.
 - * PROVIDE CLEANOUT HOLES 100 mm SQUARE MINIMUM AT BASE OF ALL WALLS AND ROD CORE HOLES TO REMOVE PROTRUDING MORTAR FINIS PRIOR TO GROUTING.
 - * CORE FILLING GROUT SHALL BE :- F'c = 20 MPa MINIMUM CEMENT CONTENT = 300 kg/m, SLUMP = 230 ± 30 mm.
- * REINFORCEMENT PROJECTING FROM FOUNDATION OR SLABS INTO CORES, SHALL BE SET ACCURATELY IN PLACE USING TEMPLATES TO ALIGN WITH THE CENTRE OF THE LENGTH OF CORES AND WITH COVER AS NOTED. WHERE HORIZONTAL BARS ARE INDICATED, THE WEBS OF THE BLOCKS BELOW THE BARS SHALL BE CUT DOWN TO ACCOMMODATE THE BARS.
- * GROUT ALL CORES IN REINFORCED BLOCKWORK UNLESS OTHERWISE NOTED. HEIGHT OF BLOCKWORK TO BE GROUTED ON ONE DAY SHALL BE 2400mm. GROUT SHALL BE PLACED IN LIFTS OF 1200mm MAXIMUM AND COMPACTED BY POKER VIBRATOR. A SHORT TIME SHOULD ELAPSE BETWEEN SUCCESSIVE LIFTS TO ALLOW PLASTIC SETTLEMENT TO OCCUR.
- * PROVIDE 50 mm COVER FROM THE OUTSIDE OF THE BLOCKWORK UNLESS NOTED.
- B13 BACKFILL TO RETAINING WALLS SHALL BE FREE DRAINING GRANULAR MATERIAL. PROVIDE SUBSOIL DRAIN AT BASE OF WALL. DO NOT BACKFILL UNTIL 14 DAYS AFTER GROUTING, OR IF APPLICABLE, AFTER RESTRAINING SLAB OVER HAS BEEN POURED AND CURED FOR 7 DAYS. BACKFILL SHALL BE COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT ±2 %.



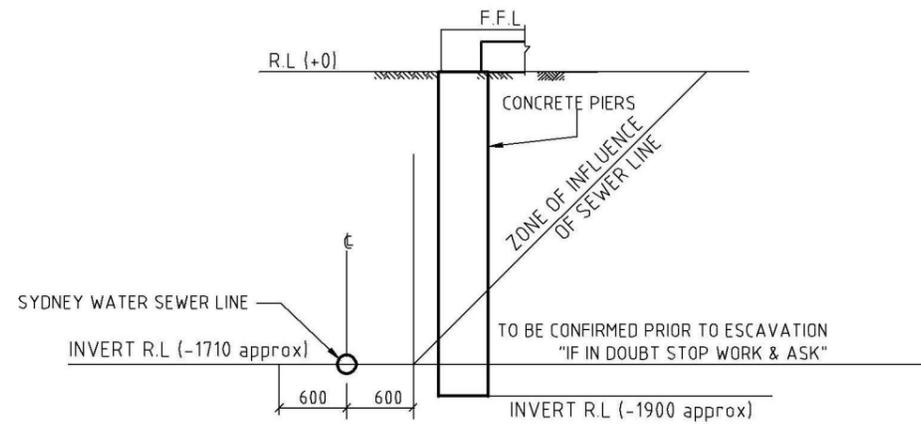
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PREPARED:	S.I.D
CHECKED:	S.A.A
APPROVED:	
DATE:	17/08/2015

FOR:	P. O. CHRISTIAN LOT 158 HUTTON STREET NORTH PENRITH-THORNTON NSW		
Secta Ref Nmb	SC_17075	DRC Nmb	E-08
REV	A	DO NOT SCALE	



SECTION S1
Do Not Scale

(TYP) BUILDING ADJACENT/OVER TO SEWER
Do Not Scale

NOTE: PIERS TO BE FOUNDED
200 BELOW ZONE OF INFLUENCE
OF SEWER. IF ROCK IS ENCOUNTERED
NOTIFY ENGINEER PRIOR TO COMPLETION.

NOTE: CHECK WITH SYDNEY WATER OR
LOCAL AUTHORITY ON MIN. CLEARANCES

DEPTH GOVERNED BY ENGINEERING REQUIREMENTS
ALL PIERS EXPECTED TO STIFF NATURAL SHALE BEARING
REFER TO PIER NOTES IN CUT AREA.

IF ROCK IS NOT ENCOUNTERED FULL DEPTH OF PIERING MUST BE
ADOPTED TO SATISFY SYDNEY WATER REQUIREMENTS.



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PREPARED:	S.I.D	FOR:	P. O. CHRISTIAN LOT 158 HUTTON STREET NORTH PENRITH-THORNTON NSW		
CHECKED:	S.A.A				
APPROVED:					
S. AbdelFattah ME (Aust) CP Eng NPER Cnv/Struct BPB: Acc Certifier 0737		Secta Ref Nbr	SC_17075	DRG Nbr	E-09
DATE:	17/08/2015				A
SEWER DETAILS					DO NOT SCALE