

## 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.

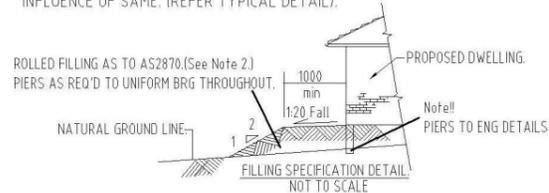
NOTE!! SHOULD PIERS COLLAPSE DURING CONSTRUCTION, THEN "SCREW-IN" PIER MAY NEED TO BE USED (6te SWL).

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.
- 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.
- SPLICES 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.

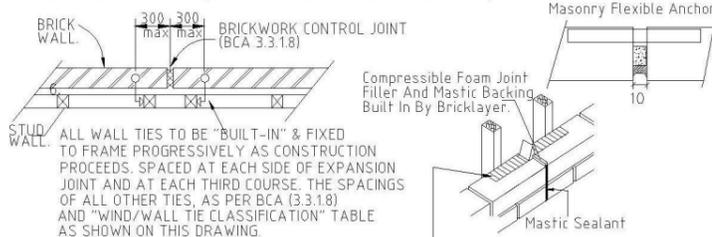


## TIMBER FRAMING NOTES

- 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**  
 Consulting Engineers Pty Ltd  
 A.B.N.64 180 170 853

PO BOX 259 CONDELL PARK NSW 2200 office: (02) 9707 3414 - fax: 9707 3414  
 web: www.sectaengineering.com.au email: admin@sectaeng.com.au

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

FOR: X. HE  
 LOT 157 HUTTON STREET  
 NORTH PENRITH-THORNTON NSW

SC\_17074 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 G.P. 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 DEEPENED 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

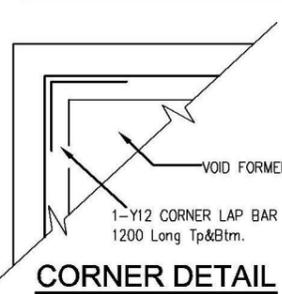
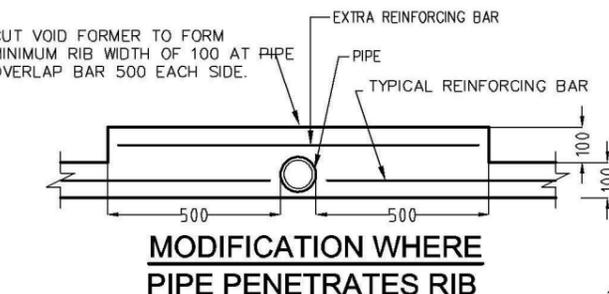
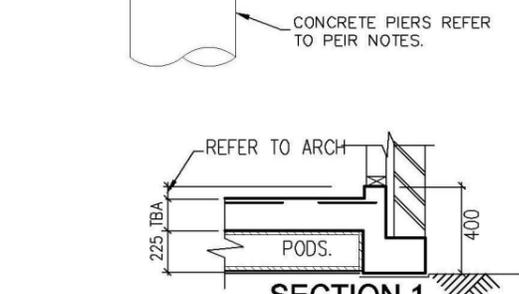
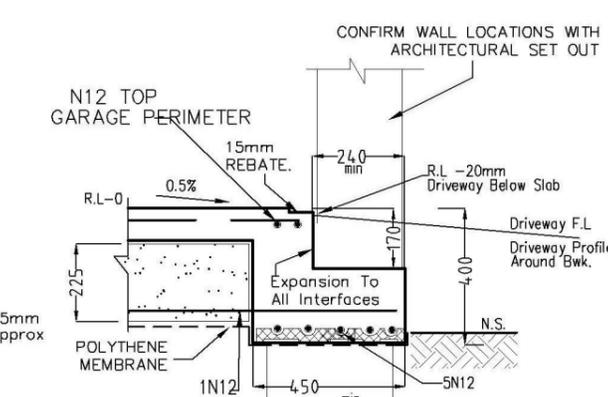
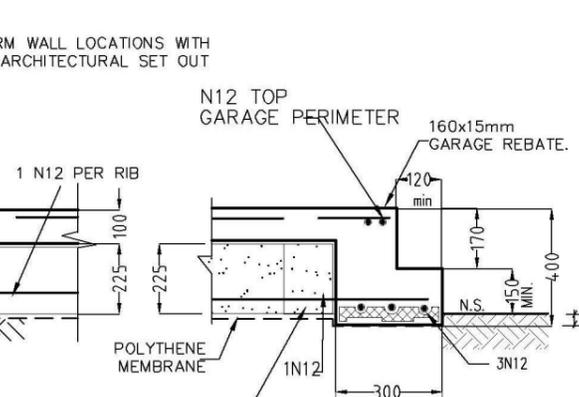
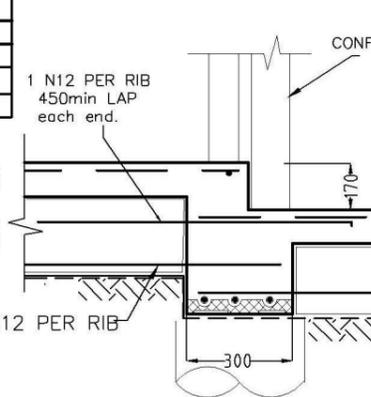
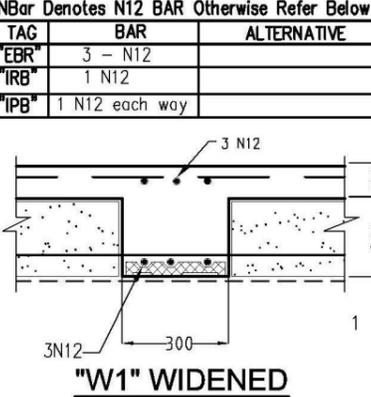
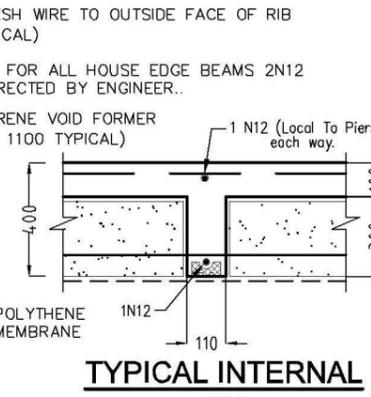
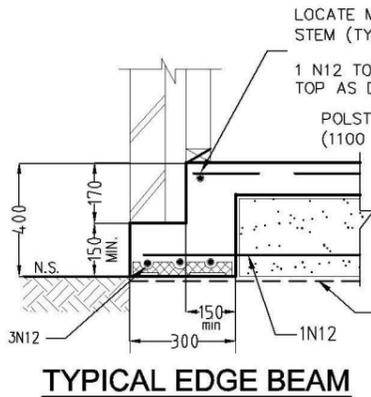
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**REINFORCEMENT TABLE**

NBar Denotes N12 BAR Otherwise Refer Below

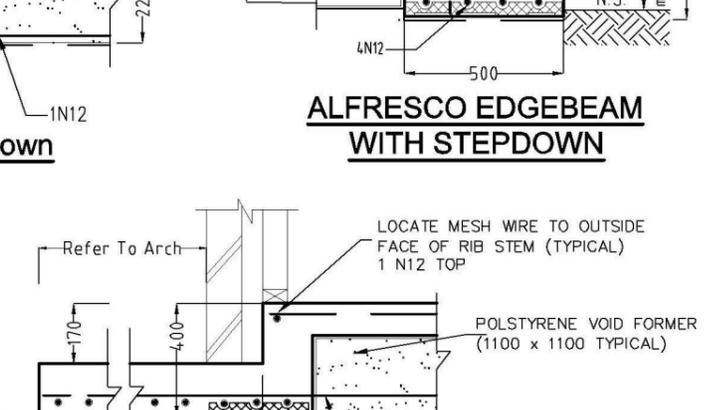
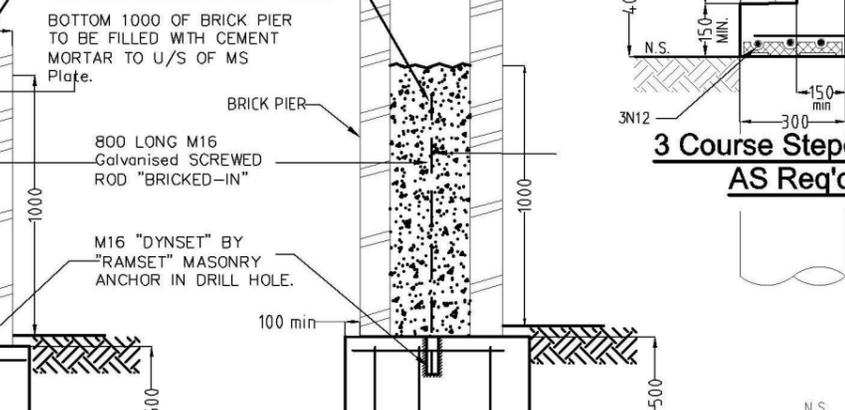
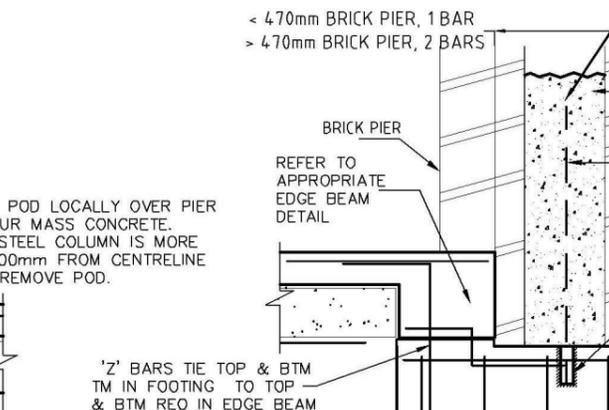
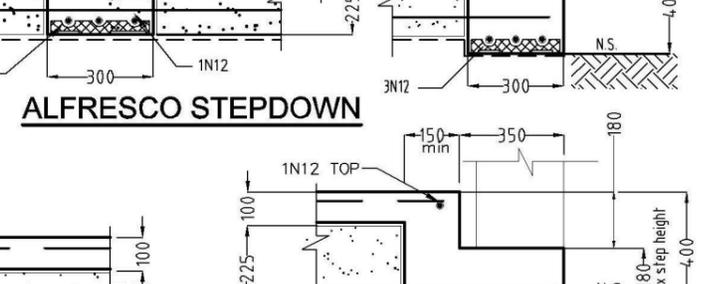
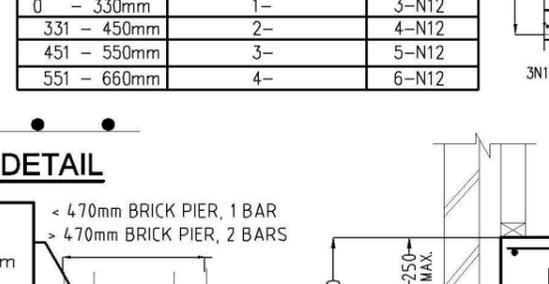
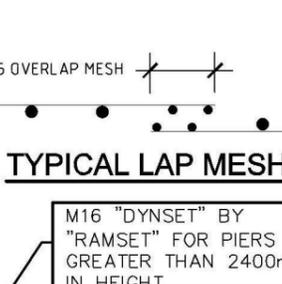
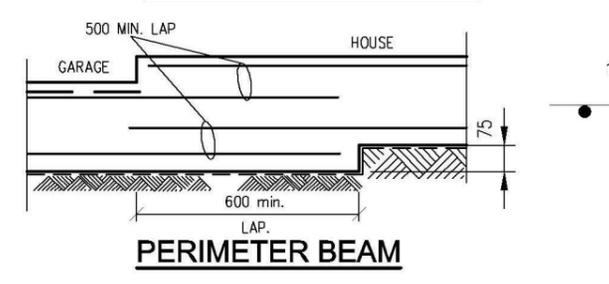
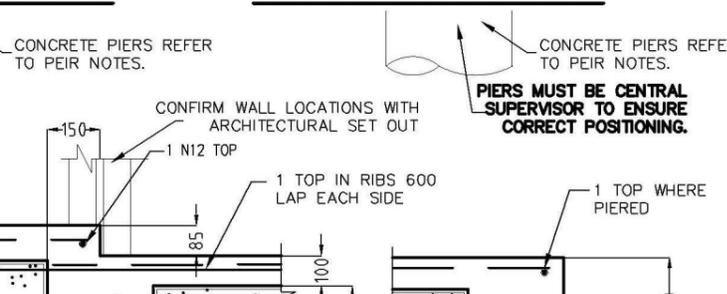
TAG	BAR	ALTERNATIVE
"EBR"	3 - N12	
"IRB"	1 N12	
"IPB"	1 N12 each way	



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



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

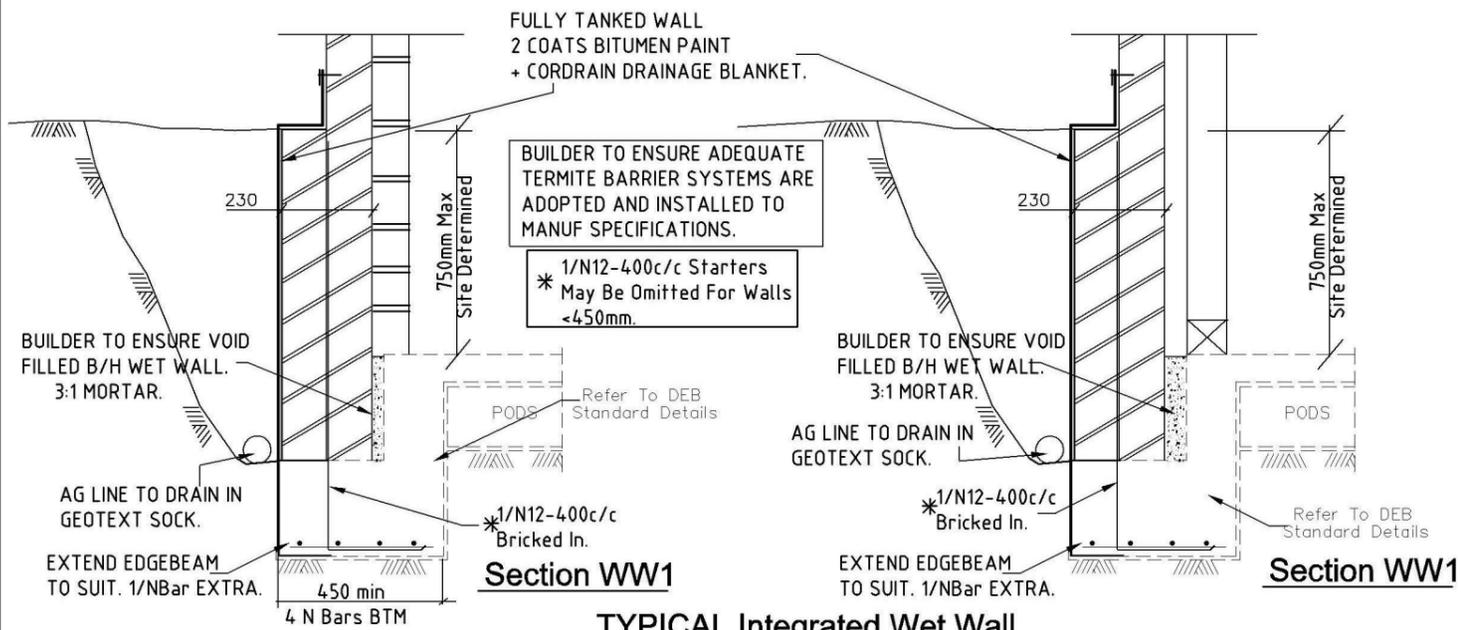
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**SECTA**  
Consulting Engineers Pty Ltd  
A.B.N.64 180 170 853  
PO BOX 259 CONDELL PARK NSW 2200 office: (02) 9707 3414 - fax: 9707 3414  
web: www.sectaengineering.com.au email: admin@sectaeng.com.au

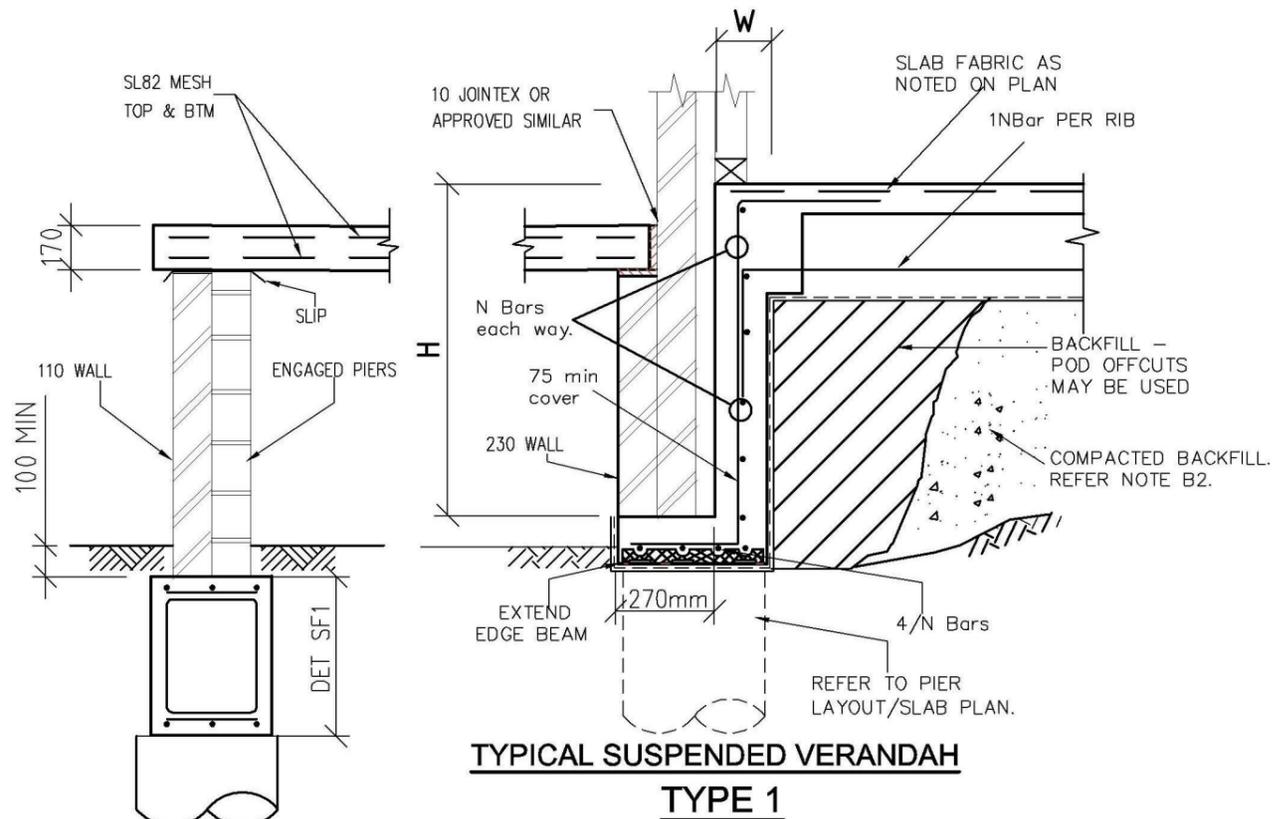
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DATE: 17/08/2015

FOR: X. HE  
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NORTH PENRITH-THORNTON NSW  
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REV A  
SLAB DETAIL SHEET  
DO NOT SCALE

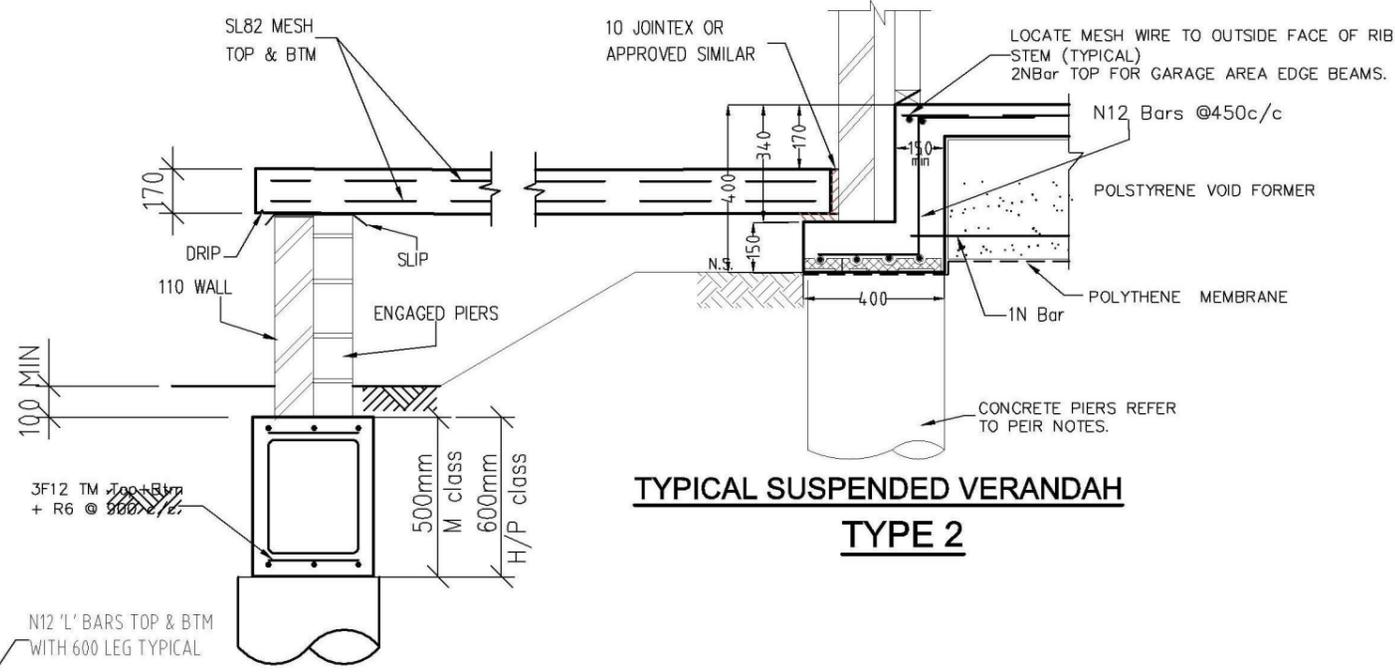
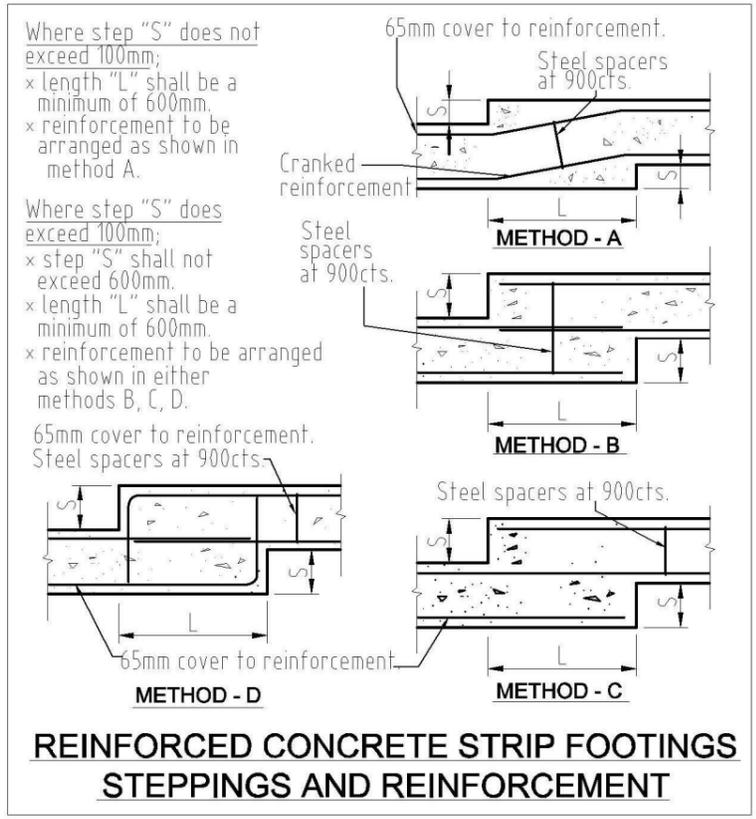




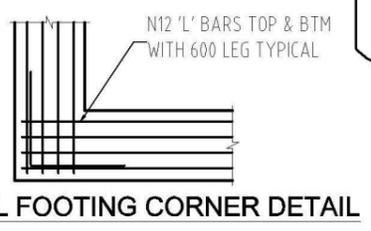
**TYPICAL Integrated Wet Wall**  
SUPERVISOR TO CONFIRM DETAIL VARIANCE.  
REFER TO ARCHITECTURALS



**TYPICAL SUSPENDED VERANDAH TYPE 1**



**TYPICAL SUSPENDED VERANDAH TYPE 2**



**TYPICAL FOOTING CORNER DETAIL**



Rev	DATE	AMENDMENT
A	17/08/15	Issued for construction
Arch Ref: 807-14 (Rev QA2) - PARKVIEW 18.5 CUSTC		

**SECTA**  
Consulting Engineers Pty Ltd  
A.B.N.64 180 170 853  
PO BOX 259 CONDELL PARK NSW 2200 office: (02) 9707 3414 - fax: 9707 3414  
web: www.sectaengineering.com.au email: admin@sectaeng.com.au

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

FOR:	X. HE LOT 157 HUTTON STREET NORTH PENRITH-THORNTON NSW		
Secta Ref Nbr	SC_17074	DRC Nbr	E-04
REV	A		DO NOT SCALE
<b>CONC DETAIL SHEET</b>			

# 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

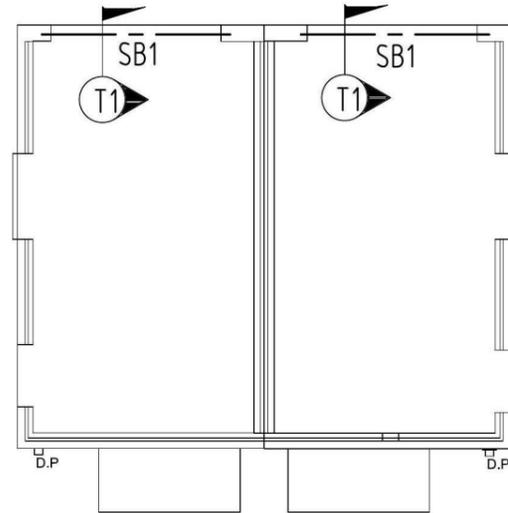
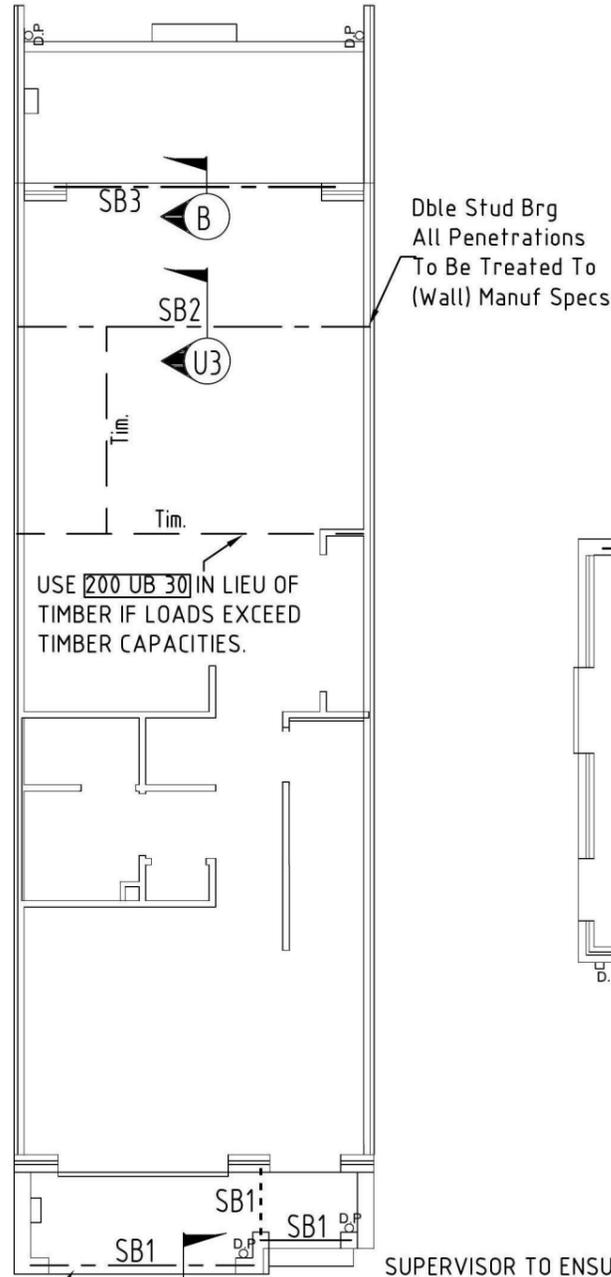
**'A'** UNLESS NOTED OTHERWISE ALL BEAMS AND LINTEL SUPPORTED ON BRICKWORK TO HAVE A MINIMUM BEARING LENGTH OF 150mm

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.



No Floor Loads To Be Transferred To Tee Bars.

SUPERVISOR TO ENSURE STARTER BARS ARE INSTALLED FOR ALL FREESTANDING BWK PIERS.

## STEEL MARKING PLAN

Do Not Scale

ITEM	MEMBER	SCHEDULE
ITEM	DESCRIPTION	
SB1	200x200x10 MS FL	
SB2	250 UB 37	
SB3	150x100x10 UA + 40x40 MS FL	
SB4		
SB5		
SB6		
SB7		
C1		
C2		

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



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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PO BOX 259 CONDELL PARK NSW 2200 office: (02) 9707 3414 - fax: 9707 3414  
 web: www.sectaengineering.com.au email: admin@sectaeng.com.au

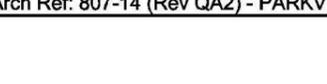
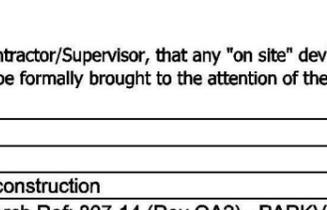
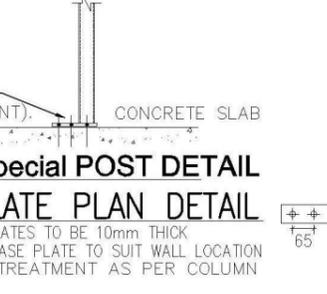
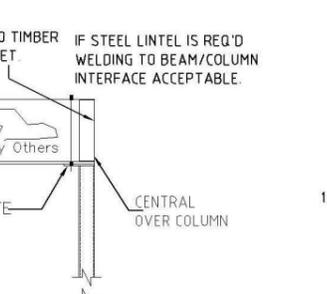
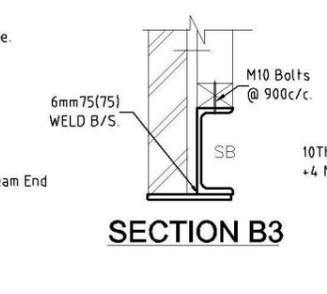
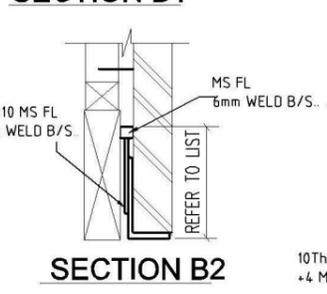
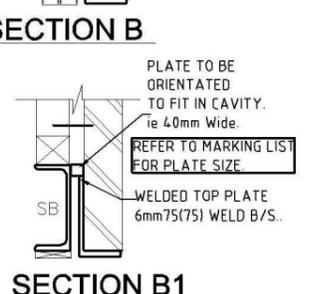
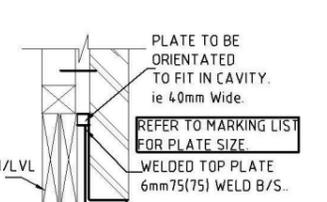
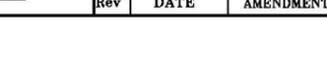
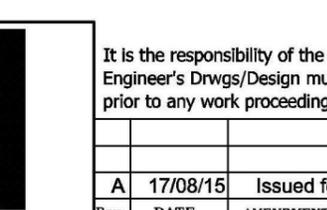
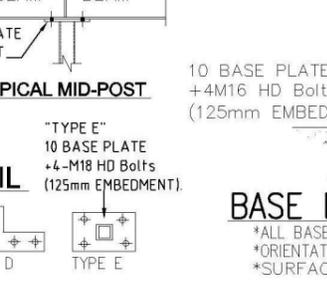
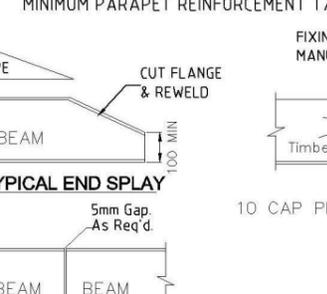
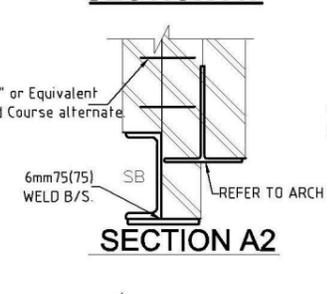
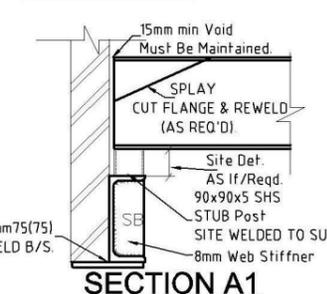
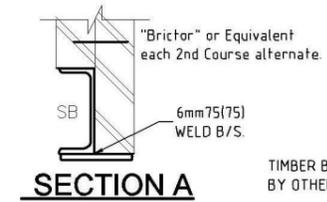
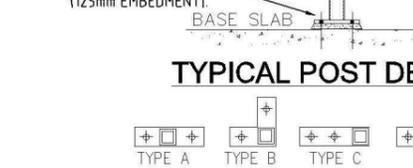
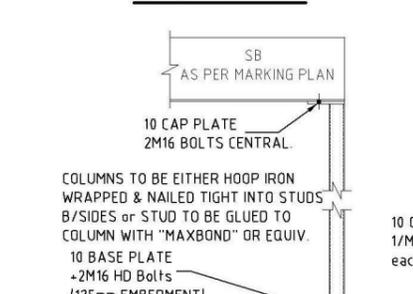
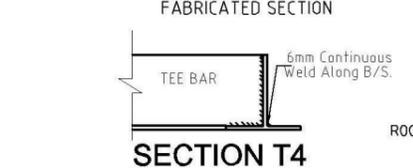
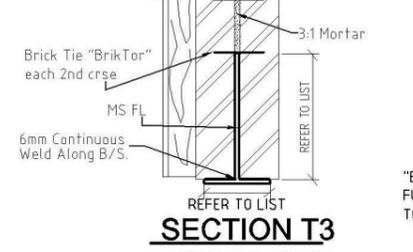
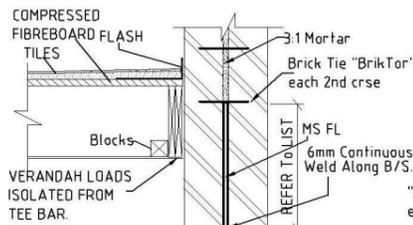
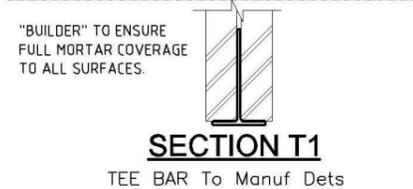
PREPARED:	S.I.D
CHECKED:	S.A.A
APPROVED:	
DATE:	17/08/2015

FOR: X. HE	LOT 157 HUTTON STREET		
	NORTH PENRITH-THORNTON NSW		
Secta Ref Nnbr	SC_17074	DRG Nnbr	E-05
			A
STEEL MARKING PLAN			DO NOT SCALE

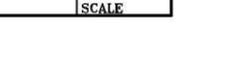
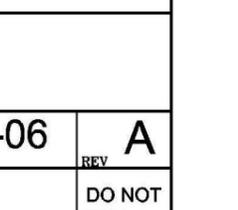
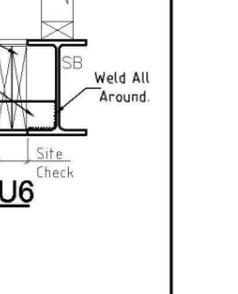
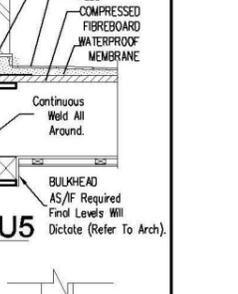
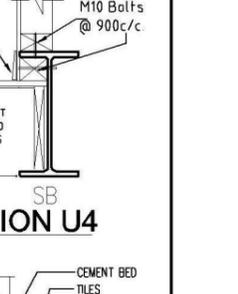
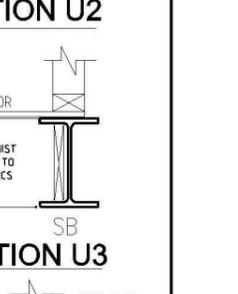
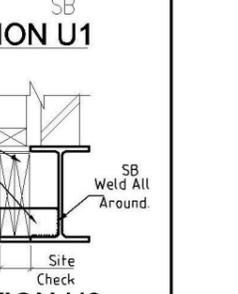
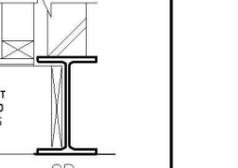
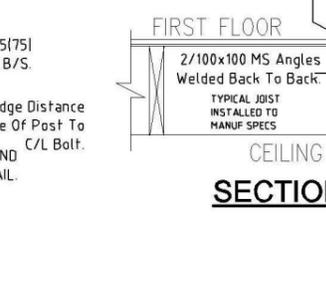
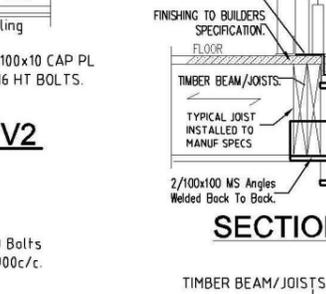
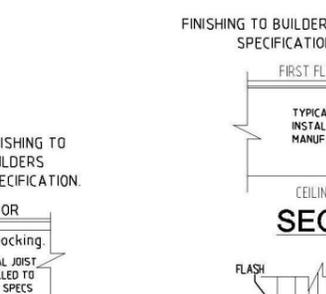
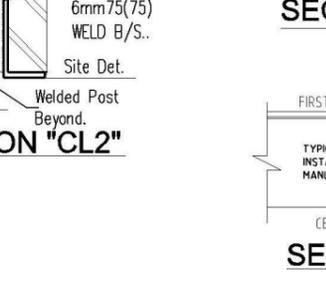
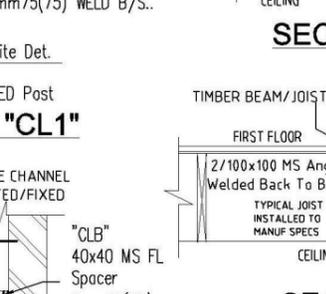
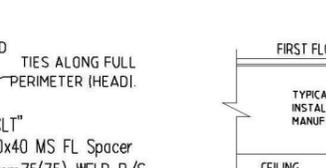
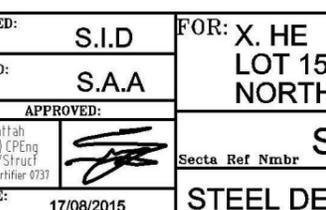
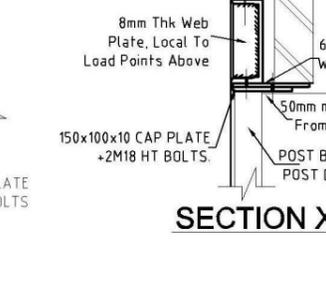
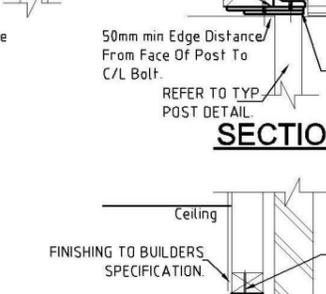
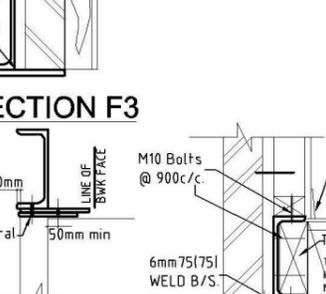
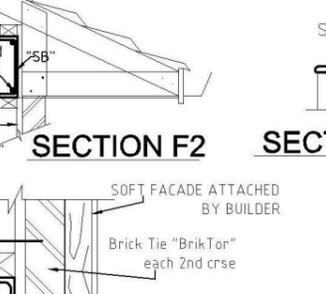
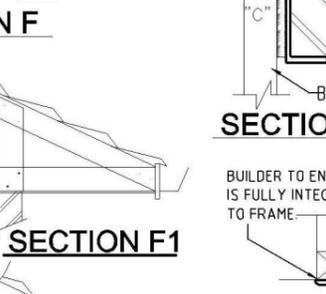
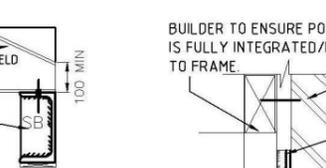
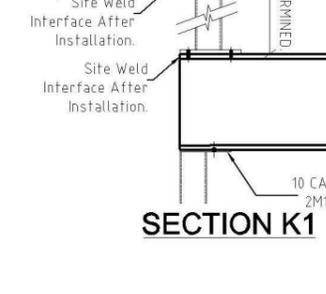
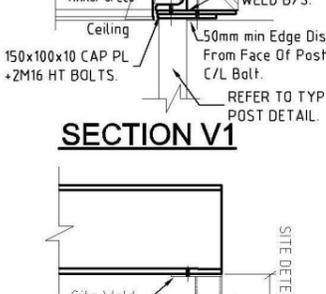
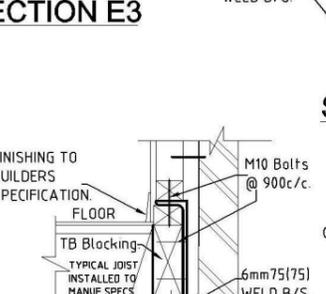
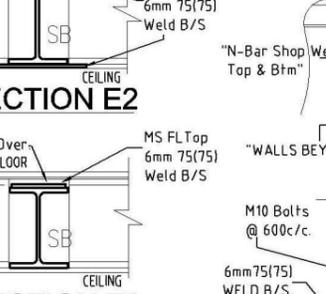
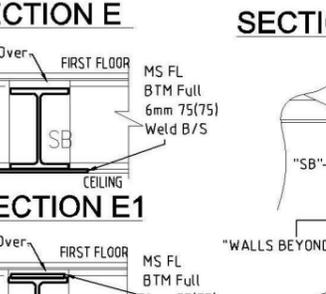
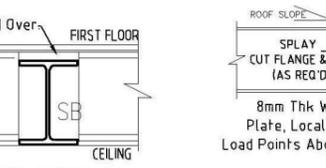
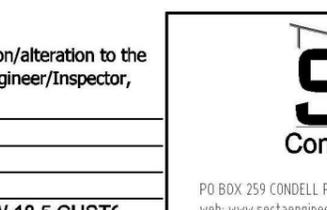
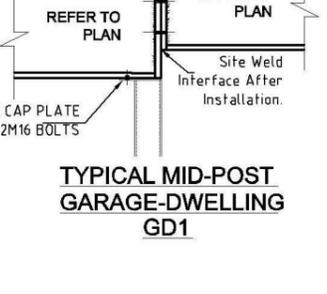
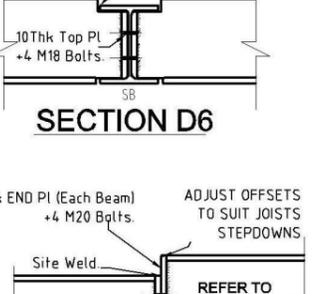
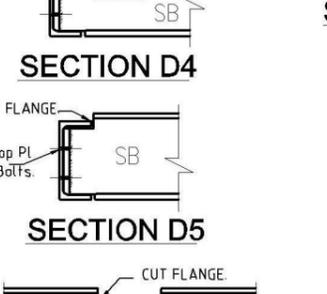
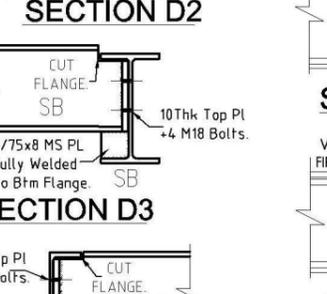
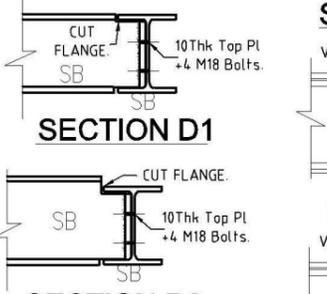
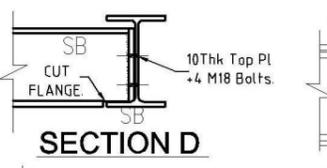
**TYPICAL TEE BAR NOTE**

- 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.



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



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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PREPARED: S.I.D  
 CHECKED: S.A.A  
 APPROVED: [Signature]  
 S. Abdelattah  
 ME (Aust) CP Eng  
 NPER Civil/Struct  
 BRB: Acc Certifier 0737  
 DATE: 17/08/2015

FOR: X. HE  
 LOT 157 HUTTON STREET  
 NORTH PENRITH-THORNTON NSW  
 SC\_17074  
 E-06  
 A  
 STEEL DETAILS  
 DO NOT SCALE

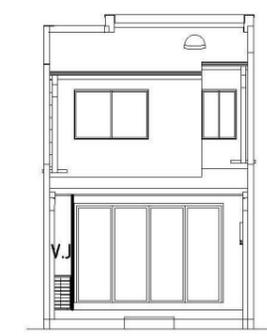
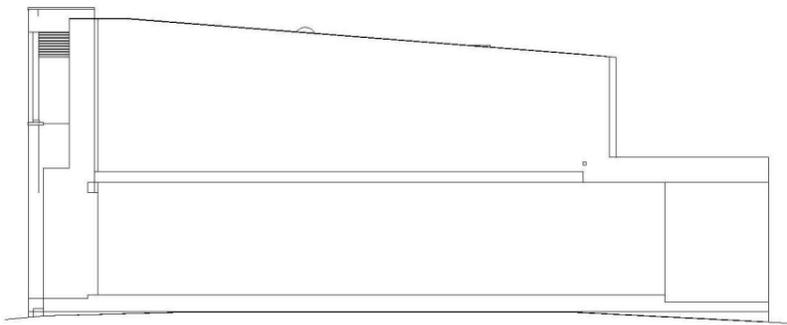
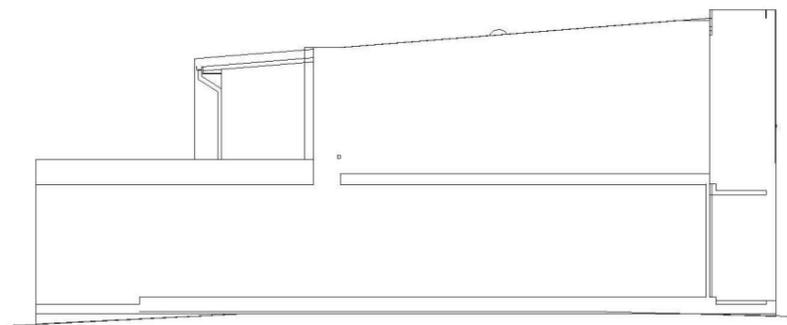
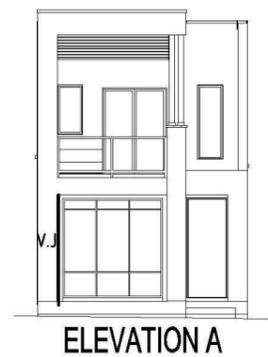
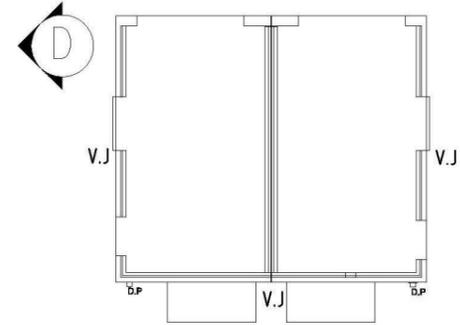
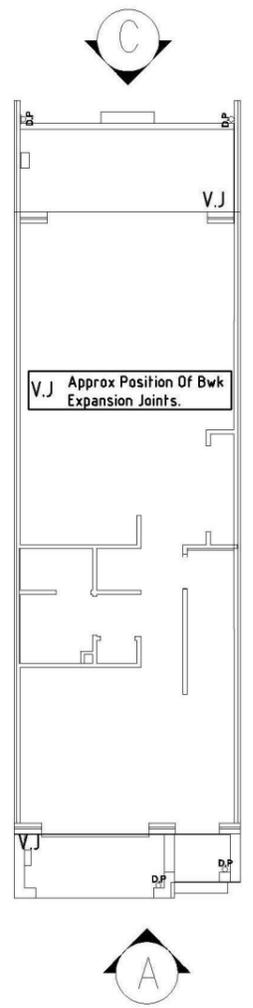
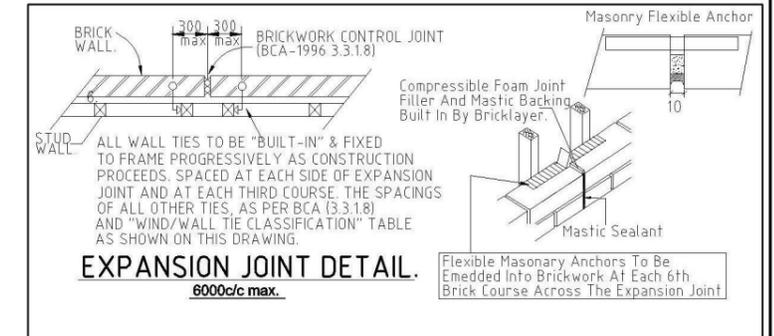
**DURABILITY CLASSIFICATION. EXTERIOR**

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	W4IN3 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 )



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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A	17/08/15	Issued for construction

Arch Ref: 807-14 (Rev QA2) - PARKVIEW 18.5 CUSTC

**SECTA**  
 Consulting Engineers Pty Ltd  
 A.B.N.64 180 170 853  
 PO BOX 259 CONDELL PARK NSW 2200 office: (02) 9707 3414 - fax - 9707 3414  
 web: www.sectaengineering.com.au email: admin@sectaeng.com.au

PREPARED: S.I.D  
 CHECKED: S.A.A  
 APPROVED: [Signature]  
 S.Abdeltattah  
 M.E.(Aust) CPEng  
 NPER Civ/Struct  
 BRB: Acc Certifier 0737  
 DATE: 17/08/2015

FOR: X. HE  
 LOT 157 HUTTON STREET  
 NORTH PENRITH-THORNTON NSW

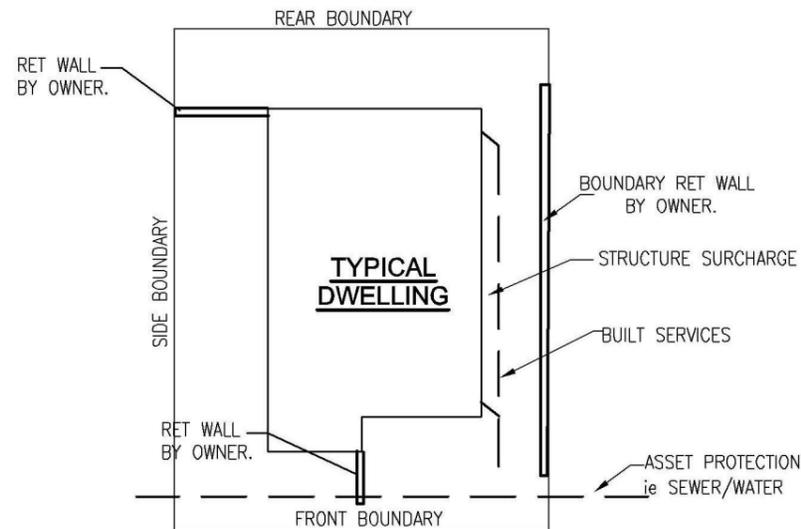
Secta Ref Nmbr SC\_17074 DRG Nmbr E-07 REV A

**BRICK ARTICULATION PLAN**

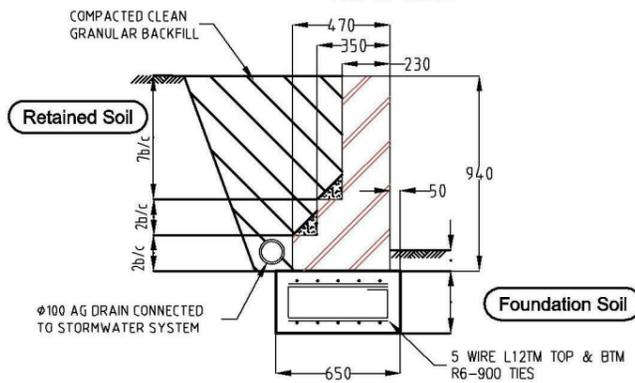
DO NOT SCALE

**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.

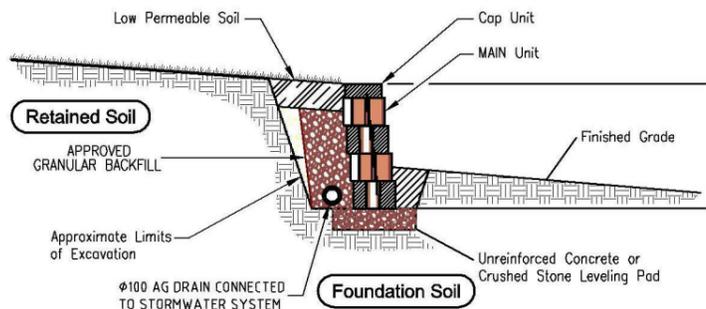


**TYPICAL SITE  
NOT TO SCALE**

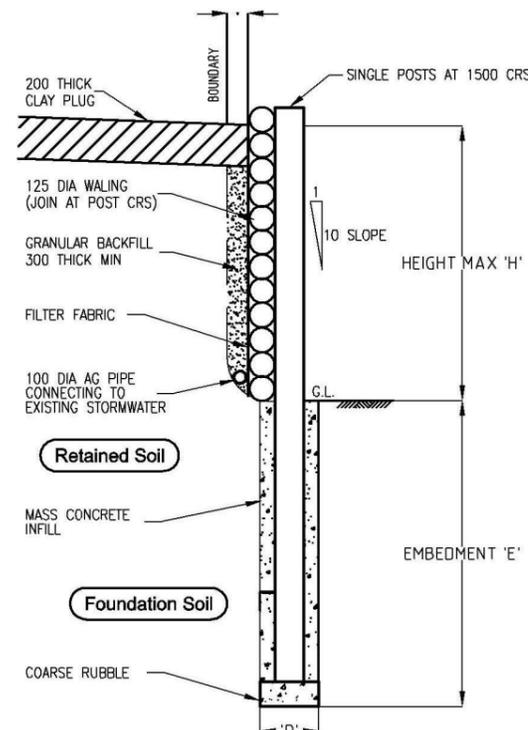


**TYPE B  
TYPICAL GRAVITY BRICKWORK  
RETAINING WALL DETAILS**

- 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.

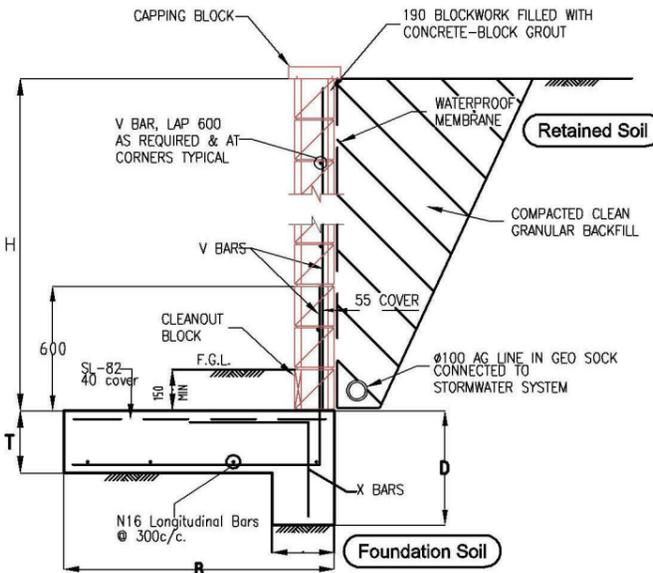
**BRICKWORK AND BLOCKWORK**

- 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

MORTAR ADMIXTURES SHALL NOT BE USED WITHOUT THE WRITTEN APPROVAL OF THE SUPERINTENDENT.

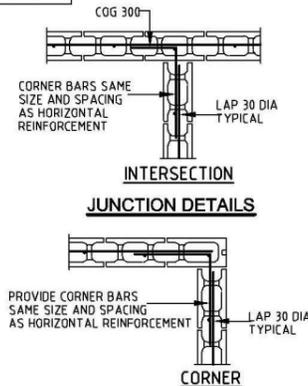
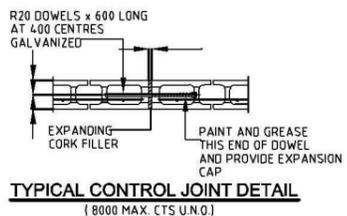
- B3 ONLY LOAD BEARING MASONRY WALLS ARE SHOWN UNDER CONCRETE SLABS.
- B4 OTHER THAN REINFORCED CONCRETE BLOCKWORK, MASONRY SUPPORTING SLABS AND BEAMS SHALL BE TROWELLED SMOOTH WITH MORTAR FILLING ALL VOIDS. TWO LAYERS OF MALTHOID SHALL BE PLACED FULL WIDTH ACROSS SUCH LOAD BEARING SURFACES EXCEPT WHERE 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 %.



**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



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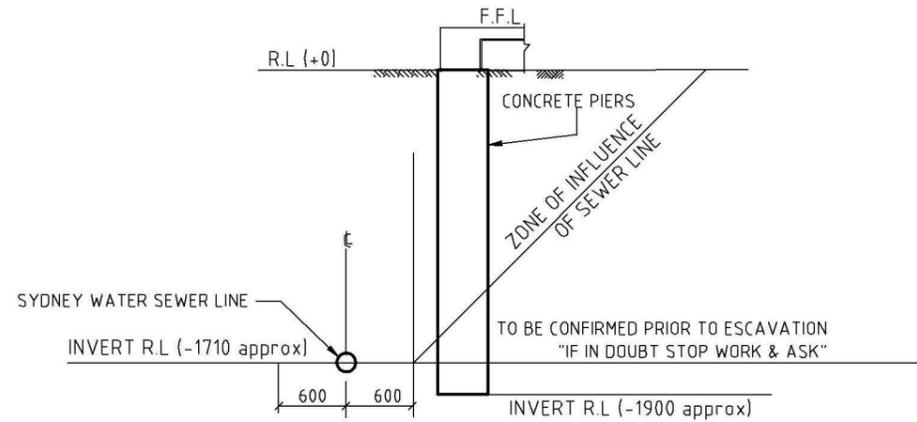
**SECTA**  
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A.B.N.64 180 170 853  
PO BOX 259 CONDELL PARK NSW 2200 office: (02) 9707 3414 - fax: 9707 3414  
web: www.sectaengineering.com.au email: admin@sectaeng.com.au

PREPARED: S.I.D  
CHECKED: S.A.A  
APPROVED: S. Abdelrahman  
S. Abdelrahman  
ME (Aus) / CP Eng  
NFER Civ/Struct  
BFB: Acc Certifier 0737  
DATE: 17/08/2015

FOR: X. HE  
LOT 157 HUTTON STREET  
NORTH PENRITH-THORNTON NSW

Secta Ref Nmb: SC\_17074  
DRC Nmb: E-08  
REV: A

RET WALL DETAILS  
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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PO BOX 259 CONDELL PARK NSW 2200 office: (02) 9707 3414 - fax: 9707 3414  
web: www.sectaengineering.com.au email: admin@sectaeng.com.au

PREPARED:	S.I.D	FOR:	X. HE
CHECKED:	S.A.A	LOT 157 HUTTON STREET NORTH PENRITH-THORNTON NSW	
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			REV A
SEWER DETAILS			DO NOT SCALE