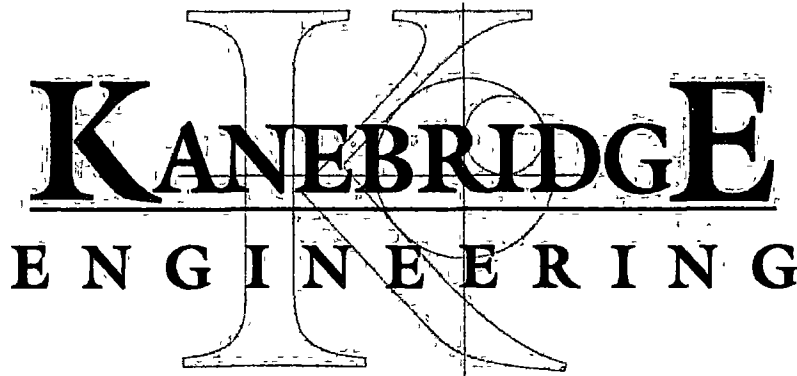


PROPOSED ARTICULATED MASONRY VENEER DWELLING
AT
LOT A, No. 44 WYADRA AVENUE
FRESHWATER NSW 2096
PROJECT No. 13KE158



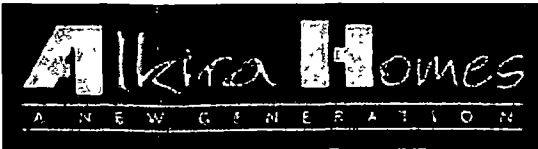
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STRUCTURAL DRAWINGS LIST

DRAWING No.	ISSUE No.	DRAWING TITLE
S1	A	STRUCTURAL NOTES
S2	A	WAFFLE SLAB LAYOUT PLAN
S3	A	SLABS AND FOOTINGS DETAILS AND SECTIONS
S4	A	SLABS AND FOOTINGS DETAILS AND SECTIONS
S5	A	SLABS AND FOOTINGS DETAILS AND SECTIONS
S6	A	SLABS AND FOOTINGS DETAILS AND SECTIONS
S7	A	FIRST FLOOR BEAM MARKING PLAN
S8	A	TYPICAL STRUCTURAL STEEL DETAILS
S9	A	STRUCTURAL STEEL NOTES & DETAILS
S10	A	STRUCTURAL STEEL DETAILS
S11	A	STRUCTURAL STEEL DETAILS - DETAIL 'A' - SHEET 1 OF 2
S12	A	STRUCTURAL STEEL DETAILS - DETAIL 'A' - SHEET 2 OF 2



ALKIRA HOMES JOB No.: 451 | FOR: MR. & MRS. PUTICA
HOUSE TYPE: SIENNA 42-4 | FACADE: CORVINA | HAND: RH



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GENERAL

G1 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT AND BE RESOLVED BEFORE WORK PROCEEDS

G2 ALL WORK SHALL BE CARRIED OUT IN COMPLIANCE WITH THE REQUIREMENTS OF WORK COVER AND THE OH&S ACT

G3 ALL DIMENSIONS SHOWN AND/OR RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED BY THE BUILDER BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED ENGINEER'S DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS

G4 DURING CONSTRUCTION THE BUILDER SHALL MAINTAIN SAFE AND STABLE THE STRUCTURE AND NEIGHBOURING STRUCTURES NO PART SHALL BE OVERSTRESSED TEMPORARY BRACING SHALL BE PROVIDED BY THE BUILDER TO KEEP THE WORKS AND EXCAVATIONS STABLE AT ALL TIMES

G5 UNLESS NOTED OTHERWISE, ALL LEVELS ARE EXPRESSED IN METERS AND ALL DIMENSIONS ARE IN MILLIMETERS

G6 THE APPROVAL OF A SUBSTITUTION SHALL BE SOUGHT FROM THE ENGINEER SUCH SUBSTITUTION SHALL NOT BE AN AUTHORIZATION FOR A VARIATION TO THE CONTRACT ANY VARIATIONS INVOLVED MUST BE TAKEN UP WITH THE ARCHITECT BEFORE THE WORK COMMENCES

G7 ALL PROPS AND FORMWORK FOR BEAMS AND SLABS SHALL BE REMOVED BEFORE CONSTRUCTION OF ANY MASONRY WALLS OR PARTITIONS ON THE FLOOR

G8 ALL NON-LOAD BEARING WALLS SHALL BE KEPT CLEAR OF THE UNDERSIDE OF SLABS AND BEAMS BY 20mm UNLESS OTHERWISE SHOWN

G9 ABBREVIATIONS USED

ALT	ALTERNATIVE
BTM	BOTTOM
CTS	CENTRES
C/S	BRICK / BLOCK COURSE
DIA	DIAMETER
FGL	FINISHED GROUND LINE
GALV	HOT DIP GALVANISED
MAX	MAXIMUM
MIN	MINIMUM
NSOP	NOT SHOWN ON PLAN
U N O	UNLESS NOTED OTHERWISE
U/S	UNDERSIDE

G10 THE STRUCTURAL WORK SHOWN ON THESE DRAWINGS HAS BEEN DESIGNED FOR THE FOLLOWING LIVE LOADS
GENERAL RESIDENTIAL 1.5 KPa & GARAGE 2.5 KPa

INSPECTIONS

I1 THE PURPOSE OF THE STRUCTURAL INSPECTIONS IS TO VERIFY THAT THE BUILDER HAS COMPLIED WITH THE STRUCTURAL REQUIREMENTS OF THE CONTRACT DOCUMENTATION, NOT TO BE THE FIRST CHECK OF A SUBCONTRACTOR'S INTERPRETATION OF THESE REQUIREMENTS SHOULD THE WORK CLEARLY BE UNSATISFACTORY AT THE TIME THE INSPECTION IS ARRANGED, THE VISIT AND SUBSEQUENT 'ABORTIVE' INSPECTION VISITS (INCLUDING ASSOCIATED TRAVEL AND OFFICE TIME) WILL BE CHARGED TO THE BUILDER

SITE PREPARATION & EXCAVATOR NOTES

D1 STRIP TOPSOIL AND VEGETATION 200MM MINIMUM DEPTH AND STOCKPILE

D2 THE SITE IS TO BE BENCHED BY CUT AND FILL TO DESIRED LEVELS ALL EXCAVATION AND BACKFILL SHALL BE CARRIED OUT NEATLY TO THE LINES, LEVELS AND GRADES SPECIFIED BY THE ARCHITECT

D3 FILL IS TO BE PLACED IN 150MM MAXIMUM LAYERS AND THOROUGHLY COMPACTED USING EXCAVATOR UNLESS THIS FILL IS COMPACTED IN ACCORDANCE WITH CLAUSE 6.4.2 OF AS2870, IT IS NOT ADEQUATE TO PROVIDE LONG TERM STRUCTURAL SUPPORT TO THE SLAB/FOOTING SYSTEM AND THEREFORE, PIERS MUST BE INSTALLED ALTERNATIVELY, THE FILL CAN BE PLACED, TESTED AND CERTIFIED BY A QUALIFIED GEOTECHNICAL ENGINEER AS "CONTROLLED FILL" AS DEFINED IN AS3798 THIS IS THEN DEEMED TO BE ADEQUATE TO SUPPORT THE SLAB/FOOTING SYSTEM

D4 THE FILL IS TO EXTEND PAST THE EDGE OF THE HOUSE BY AT LEAST ONE METRE AND SHALL BE BATTERED OFF AT NOT STEEPER THAN TWO HORIZONTALLY TO ONE VERTICALLY OR RETAINED BY A SUITABLE STRUCTURE PROVIDED BY THE OWNER OR BUILDER AS SOON AS POSSIBLE

D5 THE FINISHED LEVELS SHALL ALLOW FOR THE MAIN SLAB LEVEL TO BE AT LEAST 300MM ABOVE THE ADJACENT GROUND SURFACE DRAINAGE SHALL BE PROVIDED AS REQUIRED TO AVOID THE POSSIBILITY OF WATER PONDING NEAR THE SLAB A FALL OF 50MM OVER A DISTANCE OF ONE METRE AWAY FROM THE SLAB IS CONSIDERED ADEQUATE SUBSOIL DRAINS (AGRICULTURAL DRAINS) ARE CONSIDERED DESIRABLE BUT SHOULD NOT BE LOCATED DIRECTLY ADJACENT TO THE FOOTINGS

D6 IT IS THE RESPONSIBILITY OF THE OWNER TO ENSURE THE SITE IS PROPERLY MAINTAINED APPENDIX B OF AS2870 PROVIDES INFORMATION AND GUIDANCE ON THE MAINTENANCE OF FOUNDATION SITE CONDITIONS SUBJECT TO ADOPTION OF THESE RECOMMENDATIONS THE BUILDING MAY EXPERIENCE MINOR DAMAGE BUT OF A SEVERITY NOT EXCEEDING THE LEVELS DEFINED IN APPENDIX C OF AS2870

D7 TRENCH EXCAVATIONS FOR SERVICES OR AGRICULTURAL DRAINS PARALLEL TO THE EDGE OF THE SLAB SHALL BE IN WITH NOTE 'P5' OF THE BORED PIER NOTES

D8 FOR ALL FILLED AREAS IN BUILDING PLATFORM, INTERNAL BEAMS ARE TO BE PIERED AT MAX 2400 CTS AT RIB INTERSECTIONS, UNLESS NOTED OTHERWISE

FOOTING AND SLAB NOTES

F1 BORED PIERS / FOOTINGS / BEAMS ETC ARE TO BE FOUNDED ONTO DENSE SAND U N O WITH MINIMUM ALLOWABLE BEARING VALUE 150kPa BEFORE ANY CONCRETE IS PLACED, THE SAFE BEARING CAPACITY SHALL BE VERIFIED BY A QUALIFIED GEOTECHNICAL ENGINEER

F2 THE FOOTING SYSTEM SPECIFIED ON THESE DRAWINGS WILL MEET THE PERFORMANCE REQUIREMENTS SET OUT IN CLAUSE 13 OF AS2870 (RESIDENTIAL SLABS AND FOOTINGS CODE) THE FOOTING SYSTEM INTENDED TO ACHIEVE ACCEPTABLE PROBABILITIES OF SERVICEABILITY AND SAFETY OF THE BUILDING DURING ITS DESIGN LIFE

F3 THE FOOTING DETAILS SHOWN ARE FOR THE SITE CLASSIFICATION STIPULATED ABOVE WHILST EVERY CARE HAS BEEN TAKEN TO VERIFY THAT THE INFORMATION SHOWN IS CORRECT, SG CONSULTANTS PTY LTD TAKE NO RESPONSIBILITY FOR VARIATIONS WHICH MAY OCCUR DUE TO VARIATIONS IN SITE CONDITIONS

F4 A DAMP PROOFING MEMBRANE MUST BE PLACED BENEATH THE SLAB SO THAT THE BOTTOM OF THE SLAB IS ENTIRELY UNDERLAIN THE DAMP PROOFING MEMBRANE MUST BE 0.2MM NOMINAL THICKNESS POLYTHENE FILM AND OF HIGH IMPACT RESISTANCE LAPS SHALL BE 200MM MINIMUM AT JOINTS AND ALL PLUMBING PENETRATIONS SHALL BE TAPED

F5 PIPE PENETRATIONS IN THE EDGE AND SPINE BEAMS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE DETAILS

F6 SUBTERRANEAN TERMITE PROTECTION IS TO BE PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF AS3660.1

SCREW PIER NOTES

P1 STEEL SCREW PILES SHALL COMPLY WITH AS2159 - PILING DESIGN AND INSTALLATION

P2 THE SCREW PILES ARE TO BE DESIGNED FOR BOTH THE LOADS AS SHOWN ON THE DRAWINGS, AND ANY LOADS DUE TO INSTALLATIONS

P3 SCREW PILE DESIGN CALCULATIONS, SHOWING DESIGN LOADS FROM BOTH INSTALLATION AND FINAL LOADS, ARE TO BE CERTIFIED BY AN NPER STRUCTURAL OR GEOTECHNICAL ENGINEER COMPETENT IN SCREW PILE DESIGN THESE CALCULATIONS ARE TO BE SUBMITTED TO THE STRUCTURAL OR GEOTECHNICAL ENGINEER FOR REVIEW THIS REVIEW SHALL NOT RELIEVE THE PILING CONTRACTOR FROM ANY OBLIGATIONS AND THE PILING CONTRACTOR SHALL REMAIN COMPLETELY LIABLE FOR THE PILE WORKS THE CONTRACTOR IS TO ALLOW FOR ANY COST AND THE TIME IMPLICATIONS FOR THIS REVIEW

P4 AT THE COMPLETION OF THE PILE WORKS, THE PILING CONTRACTOR IS TO ISSUE CERTIFICATION BY A REGISTERED NPER STRUCTURAL ENGINEER THAT THE INSTALLED PILES ARE SATISFACTORY TO CARRY THE DESIGN LOADS AS SHOWN ON THE DRAWINGS FOR THE SPECIFIED DESIGN LIFE OF 50 YEARS

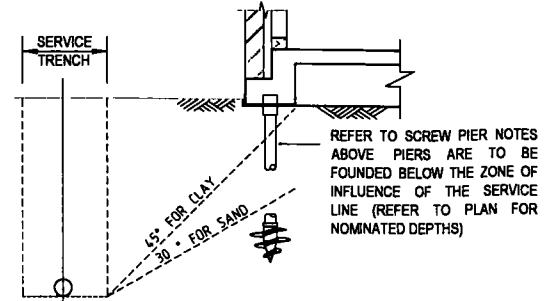
P5 CORROSION ALLOWANCE FOR STEEL PILES IS TO APPLY TO ALL STEEL SURFACES IN CONTACT WITH SOIL OR ATMOSPHERE FOR A DESIGN LIFE OF 50 YEARS ANY SURFACE COATINGS APPLIED TO THE PILE SHALL BE IGNORED WHEN CALCULATING CORROSION ALLOWANCE

P6 INSTALLATION TORQUES ARE TO BE MONITORED AND RECORDED TO RECONCILE EXPECTED GEOTECHNICAL CONDITIONS WITH THOSE ACTUALLY ENCOUNTERED DURING INSTALLATIONS THE PILING CONTRACTOR IS TO ALLOW IN THE DESIGN FOR ANY FORCES ON THE SCREW PILE ARISING OUT OF INSTALLATION OF THE SCREW PILE

P7 SCREW PILES ARE TO BE FOUNDED AT A DEPTH WHERE SUITABLE TO SATISFY STRUCTURAL DESIGN INTENT ALL PILES TO BEAR ON SIMILAR FOUNDATION STRATA

P8 PERMISSIBLE POSITION DEVIATION FOR A PILE AT CUT-OFF LEVEL SHALL BE +/- 75MM IN PLAN POSITION FROM THAT SHOWN ON THE DRAWINGS AND WITHIN 4% OF THE SPECIFIED INCLINATION FOR PILES RAKED UP TO 1 IN 5, AND 7% FOR PILES RAKED MORE THAN 1 IN 5 THE PILE AND ITS CONNECTION TO THE FOOTING MUST BE DESIGNED FOR THESE CONSTRUCTION TOLERANCES AND ANY ECCENTRICITIES AS A RESULT THE STRUCTURAL ENGINEER IS TO BE NOTIFIED OF ANY SCREW PILES WHICH DO NOT SATISFY THE ABOVE CRITERIA, FOR ANY POSSIBLE FOOTING RECTIFICATION DESIGN THE CONTRACTOR SHALL PAY FOR ANY COST FOR THIS REASSESSMENT, REDESIGN AND CONSTRUCTION

P9 WHERE A SERVICE TRENCH OR AGRICULTURAL DRAIN IS PARALLEL TO THE EDGE OF A SLAB, WHETHER THE SLAB BE IN EXCAVATED OR FILLED AREA, THEN PIERING TO SUPPORT THE SLAB BESIDE THE SERVICE TRENCH IS ONLY REQUIRED IF THE SERVICE LINE IS BELOW A LINE OF INFLUENCE DRAWN AS INDICATED BELOW IN Z O I DIAGRAM



FOR CONSTRUCTION NEXT TO OR OVER EXISTING/PROPOSED SERVICES EASEMENT - FINAL EXTENT AND ZONE OF INFLUENCE TO BE DETERMINED BY ENGINEER PRIOR TO CONSTRUCTION OF FLOOR SLAB DETAILS TO BE SUPPLIED FOLLOWING RECEIPT OF SEWER PEG OUT DETAILS

Z O I DIAGRAM

P10 THESE NOTES ARE INTENDED AS A GUIDE THERE IS ALWAYS A POSSIBILITY OF SITE CONDITIONS REQUIRING VARIATIONS TO THESE PROCEDURES IN SUCH CASES, THE ENGINEER MUST BE CONSULTED

PLASTIC SHRINKAGE CRACKING CONTROL AND SLAB MAINTENANCE

M1 CONCRETE PLACING, VIBRATING AND CURING MUST BE CARRIED OUT IN ACCORDANCE WITH AS3600

M2 WATER IS NOT TO BE ADDED TO THE CONCRETE ON SITE AS TO INCREASE THE SLUMP ABOVE THAT SPECIFIED

M3 IT IS RECOMMENDED THAT AN APPROVED CURING COMPOUND BE APPLIED TO THE SLAB IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS

M4 CAUTION SHOULD BE EXERCISED WHEN APPLYING BRITTLE FINISHES, SUCH AS CERAMIC TILES TO THE FLOOR SLAB AN ISOLATING MORTAR BED OR AN APPROVED FLEXIBLE ADHESIVE SYSTEM IS RECOMMENDED

M5 THE OWNER'S ATTENTION SHALL BE DRAWN TO APPENDIX 'A' - 'PERFORMANCE REQUIREMENTS AND FOUNDATION MAINTENANCE' OF AS2870 AND CSIRO PUBLICATION 'GUIDE TO HOME OWNERS ON FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE'

CONCRETE NOTES

C1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS

C2 UNLESS NOTED OTHERWISE

- MAXIMUM AGGREGATE SIZE SHALL BE 20MM
- SLUMP DURING PLACING SHALL BE 100MM
- NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING

C3 CEMENT TYPE TO BE GP/GB AND 250KG MIN CEMENT CONTENT PER m³

C4 ALL CONCRETE CONSTRUCTION TO BE COMPACTED WITH A MECHANICAL VIBRATOR

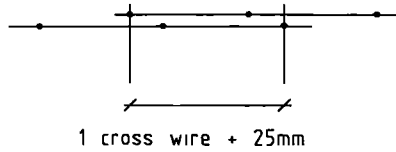
C5 REFER TO SLAB SPECIFICATIONS ON SLAB PLAN SHEET FOR CONCRETE STRENGTHS

REINFORCEMENT FIXING NOTES

R1 ALL REINFORCING BAR AND FABRIC SHALL BE DESIGNATED AS SHOWN IN THE FOLLOWING TABLE AND SHALL COMPLY WITH THE APPROPRIATE CODES AS NOTED BELOW

SYMBOL	TYPE
R	STRUCTURAL GRADE ROUND BARS TO AS4671 (230MPa)
S	STRUCTURAL GRADE DEFORMED BARS TO AS4671 (230MPa)
N	TEMPCORE DEFORMED BARS TO AS4671 (500MPa)
RL / SL	FABRIC TO AS4671 (500MPa)
TM	TRENCH MESH TO AS4671 (500MPa)
NOTE: THE NUMBER FOLLOWING THE SYMBOL IS THE BAR DIAMETER IN MILLIMETERS	

R2 IF SLAB FABRIC IS USED IT IS TO BE LAPPED ONE FULL SQUARE PLUS 25MM AT SPLICES AS SHOWN IN THE DIAGRAM BELOW AND PLACED ON CHAIRS AT ONE METRE CENTRES BOTH WAYS TO GIVE 20MM CLEAR TOP COVER IN SHELTERED LOCATIONS AND 40MM CLEAR TOP COVER TO VERANDAHS



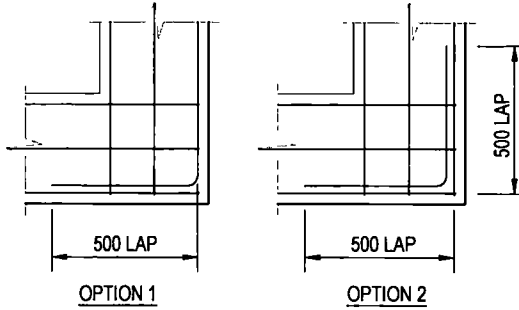
R3 FOOTING BEAMS AND RIB REINFORCEMENT TO HAVE 40MM CLEAR COVER ALL-ROUND

R4 BAR REINFORCEMENT IS TO BE TIED BENEATH THE FABRIC IF USED OR OTHERWISE PLACED ON CHAIRS AND LAPPED AS FOLLOWS

BAR SIZE	N12	N16	N20	N24	N28	N32
SPLICE LENGTH	400	600	800	1200	1350	1650

R5 WHERE FABRIC IS CUT TO PERMIT PIPE PENETRATION OF PIPES A 600 X 600 PIECE OF FABRIC IS TO BE SPLICED OVER THE PENETRATION

R6 REINFORCING BARS SHALL HAVE A LAP LENGTH AT SPLICES NOT LESS THAN 500MM AT 'T' AND 'L' INTERSECTIONS, THE BARS SHALL BE CONTINUED ACROSS THE FULL WIDTH OF THE INTERSECTION AT L-INTERSECTIONS, ONE OUTER BAR SHALL BE BENT AND CONTINUED 500MM (OPTION 1), OR A BENT BAR 500MM LONG ON EACH LEG SHALL BE PROVIDED (OPTION 2) REFER TO THE DIAGRAM BELOW



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A	ISSUED FOR CONSTRUCTION	C KHOUDAIR	28 09 2013
REV	PROJECT STATUS / AMENDMENT(S)	APPROVED	DATE

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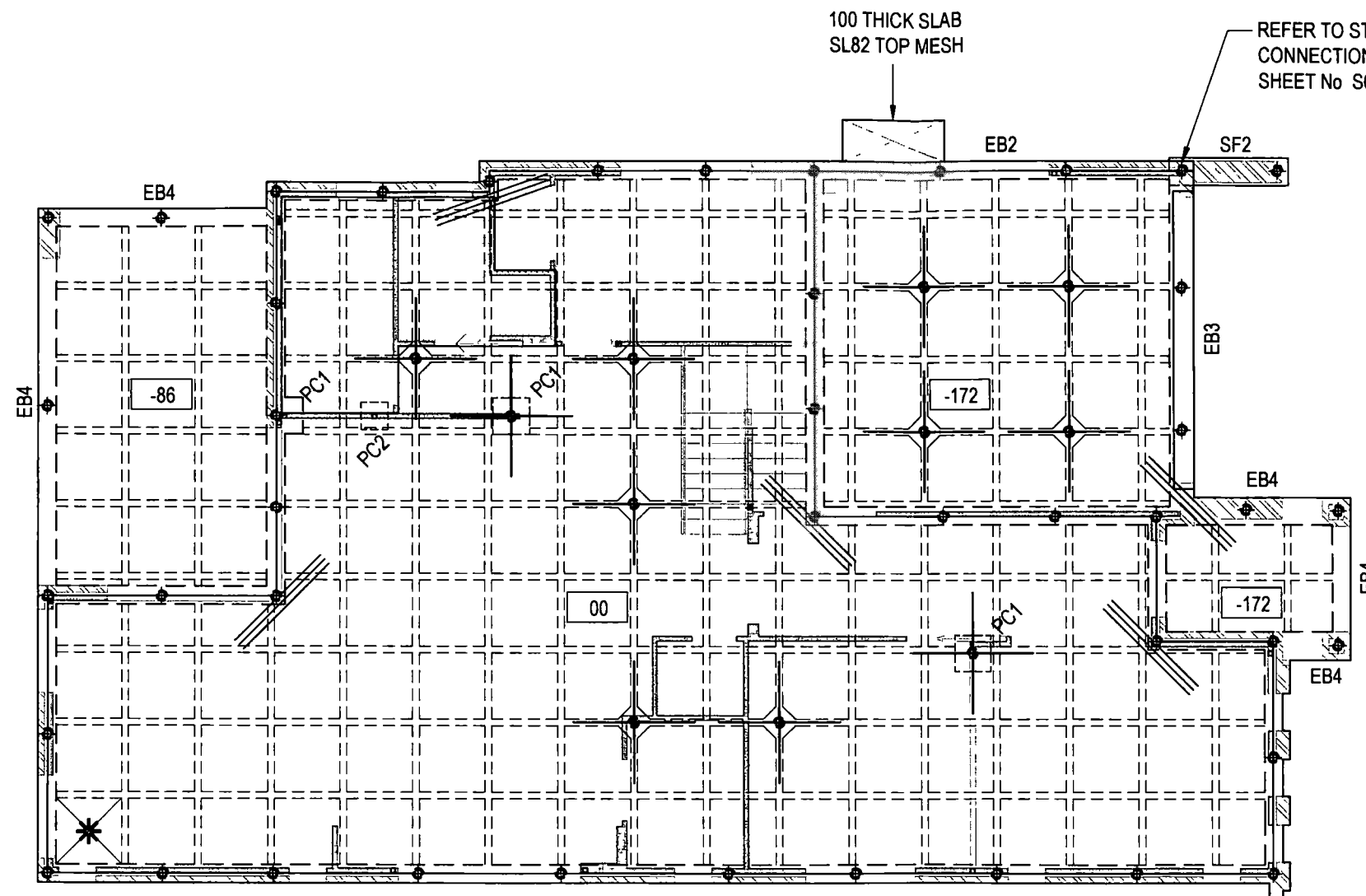
PROJECT	TWO-STOREY ARTICULATED MASONRY VENEER DWELLING	DESIGNED BY	C K	PROJECT No.	13KE158
FOR	MR & MRS PUTICA	DRAWN BY	T C	SHEET No	S1
ADDRESS	LOT 1 No 44 WYADRA AVENUE FRESHWATER NSW 2096	CHECKED BY	C K	ISSUE No	A
STATUS	ISSUED FOR CONSTRUCTION	SCALE @ A3	NTS		
APPROVED BY CHARBIL KHOUDAIR BE(Civil) Op.Eng. Prac. MEAust PErg					

* SITE CLASSIFICATION NOTE

THE SITE HAS BEEN CLASSIFIED AS "S" BY AW GEOTECHNICAL PTY LTD REPORT NUMBER AWG31638 DATED 20 MAY 2013 THESE DOCUMENTS HAVE BEEN PREPARED USING THE ABOVE RECOMMENDATION ON THE BASIS OF A CLASSIFICATION "P" IN ACCORDANCE WITH THE PROVISION OF AS2870-2011 RESIDENTIAL SLABS AND FOOTINGS CODE

WAFFLE POD NOTE

ENSURE THAT WHERE EDGE BEAMS AREA DEEPEENED AS NOTED IN DETAILS ON SUBSEQUENT SHEETS WHERE SMALLER PODS ARE USED - TYPICAL



WAFFLE SLAB LAYOUT PLAN

ALL EDGE BEAMS TO BE TYPE 'EB1' AND INTERNAL BEAMS TO BE TYPE 'IB1' UNLESS NOTED OTHERWISE

MAXIMUM SPACING OF SCREW PIERS TO BE 2.4m CENTRE TO CENTRE, UNLESS NOTED OTHERWISE

'PC1' DENOTES 600 SQ. POD CUTOUT CENTRAL UNDER TRIPLE STUD / COLUMN AND OVER BLADE / SCREW PILE

'PC2' DENOTES 600 SQ. POD CUTOUT CENTRAL UNDER COLUMN

DENOTES 50mm MAX WET AREA SET-DOWN AND 150 DEEP PODS ZONE REFER TO SHEET No S5 FOR DETAIL

SITE CLASSIFICATION TO AS2870

SITE CLASSIFICATION *		P
WAFFLE SLAB SPECIFICATIONS TABLE		
RESIDENCE WAFFLE POD DEPTH (mm)		225
GARAGE WAFFLE POD DEPTH (mm)		150
AFLRESKO WAFFLE POD DEPTH (mm)		150
PORCH WAFFLE POD DEPTH (mm)		150
SLAB THICKNESS U N O (mm)		85
TOP REINFORCEMENT THROUGHOUT		SL82
TOP COVER	INTERNAL (mm)	20
	EXTERNAL (mm)	45
BTM COVER TO BARS OVER MEMBRANE		30
COVER TO REINFORCEMENT FOOTINGS IN CONTACT WITH GROUND (mm)		50
TYPICAL EDGE BEAM REBATE DEPTH (mm)		160
GARAGE EDGE BEAM REBATE DEPTH (mm)		160
PIERS CONCRETE STRENGTH (f _c)		N/A
SLAB CONCRETE STRENGTH (f _c)		25 MPa
CONCRETE SLUMP (mm)		100

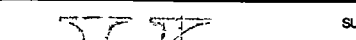
LEGEND

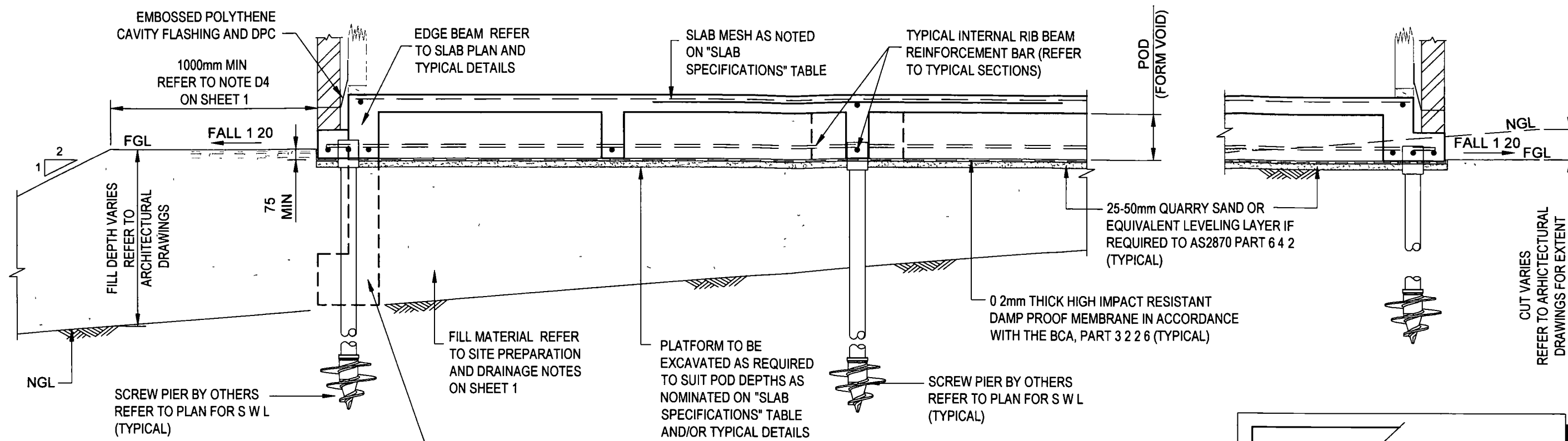
+	SCREW / BLADE PILES BY OTHERS REFER TO NOTES ON SHEET No S1 S W L = 75 kN
⊗	1090 x 1090 STANDARD WAFFLE POD
*	POD SETOUT / START POINT LOCATION
=====	OUTLINE OF 110mm WIDE INTERNAL RIB BEAM (IR1)
///	3N12 TRIMMER BARS TOP (2000 LONG) - 30 mm FROM CORNER AND TIED TO UNDERSIDE OF TOP MESH (TYPICAL)

NOTES

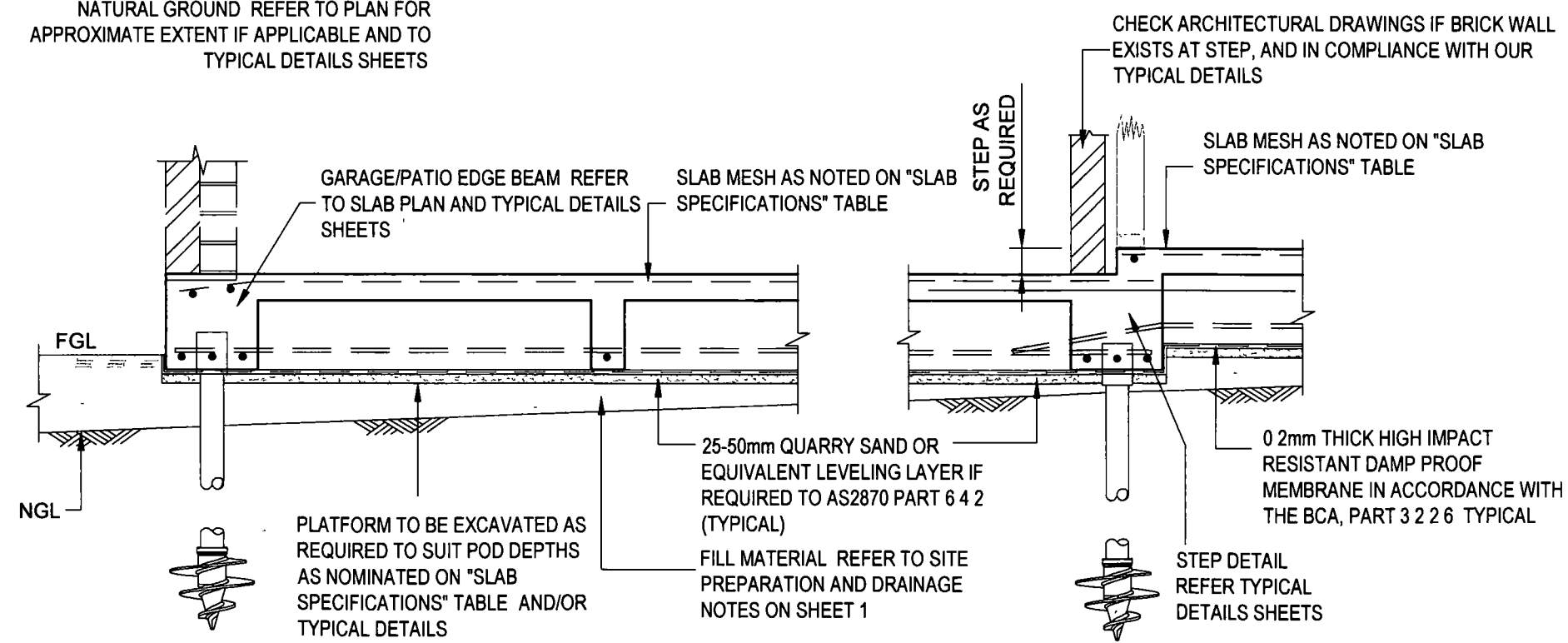
- HIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE STRUCTURAL NOTES SHEET AND THE SUBSEQUENT DETAIL SHEETS
- VERTICAL BRICKWORK ARTICULATION JOINTS MUST BE PROVIDED IN ACCORDANCE WITH THE B.C.A., AS3700, AS4773.2 AND AS4773.2
- UNLESS NOTED OTHERWISE, SERVICES IN EASEMENT(S) ADJACENT TO THIS PROPERTY HAVE NOT BEEN ASSESSED EVALUATION OF THE EFFECTS OF ANY SERVICES WILL BE MADE FOLLOWING RECEIPT OF FURTHER INFORMATION THIS INFORMATION WILL BE DOCUMENTED AS AN AMENDMENT TO THESE DRAWINGS IF REQUIRED
- IT IS THE RESPONSIBILITY OF THE BUILDER / SUB-CONTRACTOR TO ENSURE CORRECT PIER SETOUT

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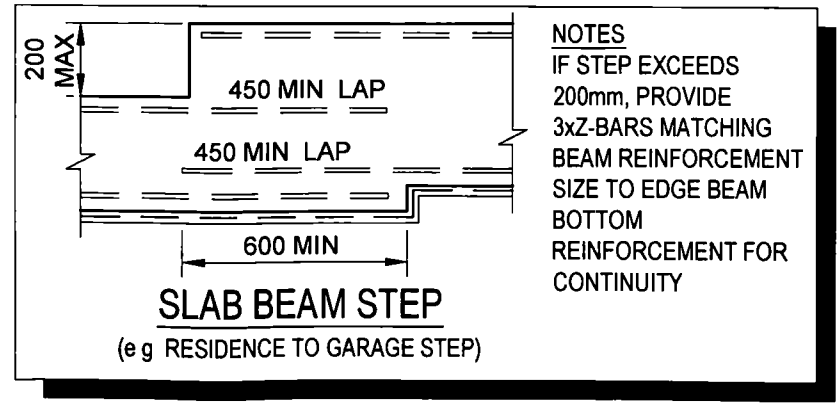
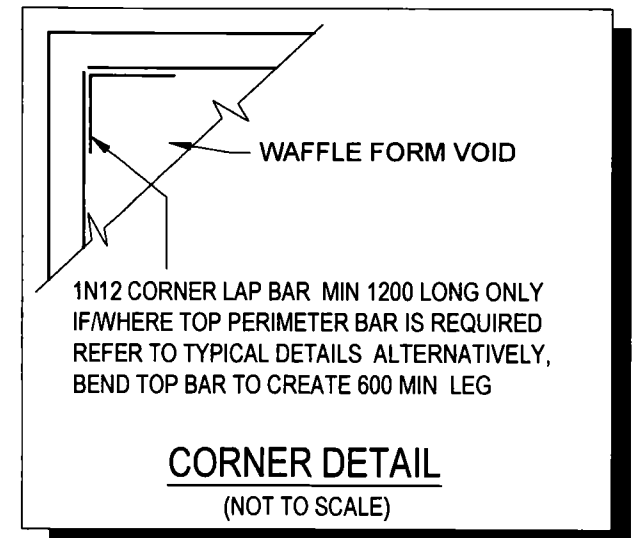
				 KANEBRIDGE ENGINEERING	SUITE 1.00 29-31 LEXINGTON DR. BELLA VISTA NSW 2153 PO BOX 646 PARRAMATTA NSW 2124 p (02) 9633 5445 f (02) 9633 5884 m 0414 590 690 e mail@kanebridgeengineering.com.au w www.kanebridge.com.au ABN 34 141 919 208 A C N 141 919 208	 CLIENT / BUILDER P 02 8882 9698 F 02 8882 9620 info@alkirahomes.com.au www.alkirahomes.com.au	PROJECT	TWO-STOREY ARTICULATED MASONRY VENEER DWELLING	DESIGNED BY	C K	PROJECT No.	13KE158
					FOR		MR & MRS PUTICA	DRAWN BY	T C			
					ADDRESS		LOT 1 No 44 WYADRA AVENUE FRESHWATER NSW 2096	CHECKED BY	C K	SHEET No	S2	
A	ISSUED FOR CONSTRUCTION		C KHOUDAIR	28 09 2013			STATUS	ISSUED FOR CONSTRUCTION				
REV	PROJECT STATUS / AMENDMENT(S)	APPROVED	DATE				APPROVED BY CHARBIL KHOUDAIR B.E.(Civil) Dip.Eng.Proc. MEAust P.Eng. 		SCALE @ A3	1 100	ISSUE No	A

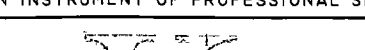


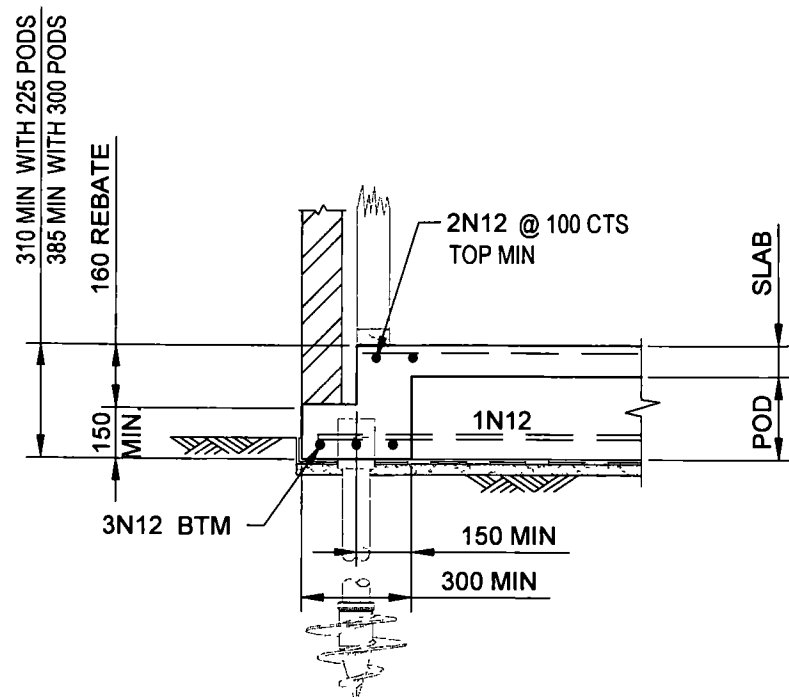
SECTION THROUGH SLAB - STANDARD REQUIREMENTS



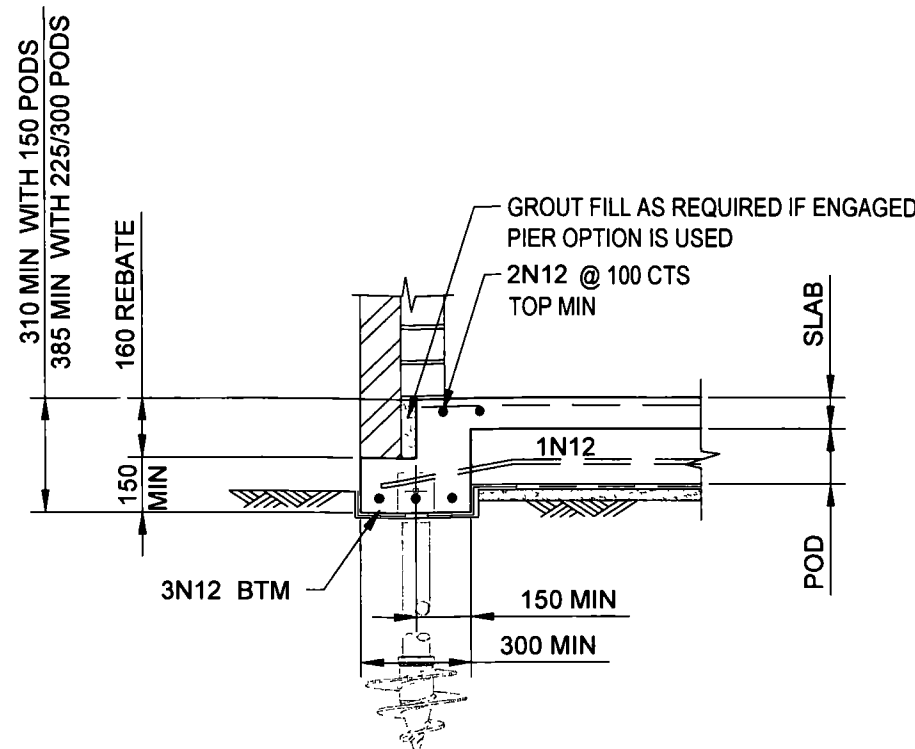
SECTION THROUGH GARAGE/ALFRESCO/PORCH - STANDARD REQUIREMENTS



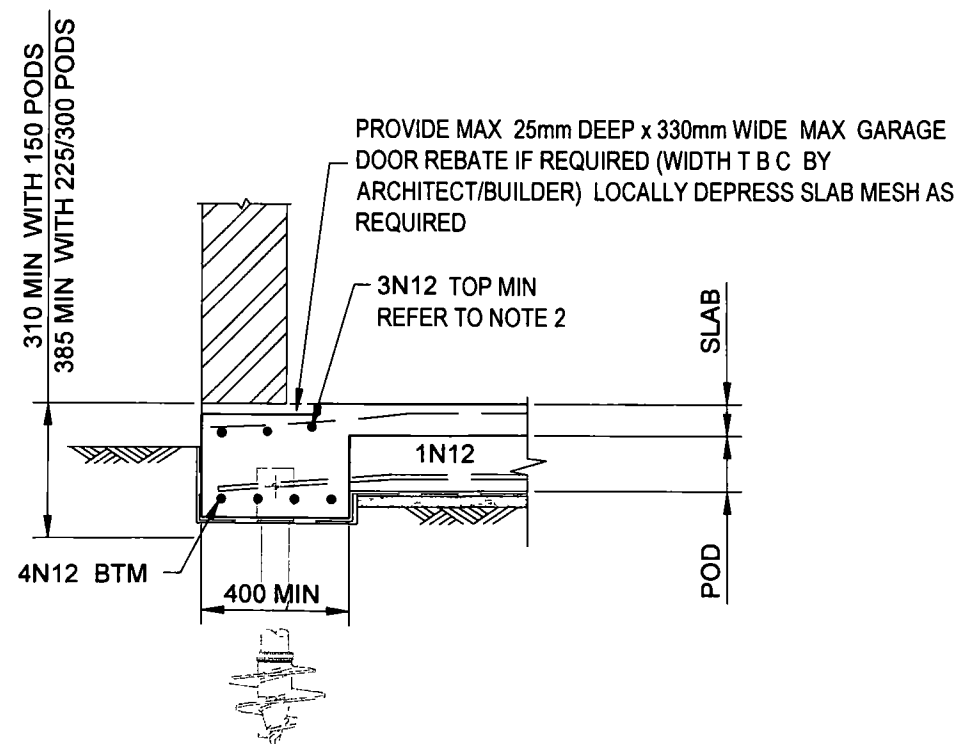
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A	ISSUED FOR CONSTRUCTION	C KHOUDAIR	28.09.2013											
REV	PROJECT STATUS / AMENDMENT(S)	APPROVED	DATE											



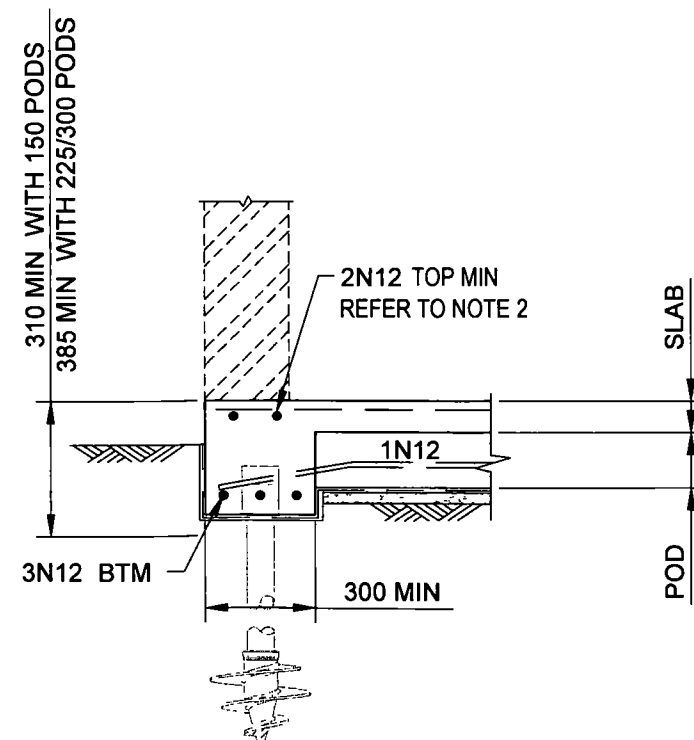
EDGE BEAM DETAIL (EB1)
(2 COURSES MAX REBATE)



GARAGE EXTERNAL PERIMETER EDGE BEAM DETAIL (EB2)
(WITH SINGLE SKIN MASONRY & ENGAGED PIERS OR THE LIKE OTHERWISE ADOPT 'EB1')



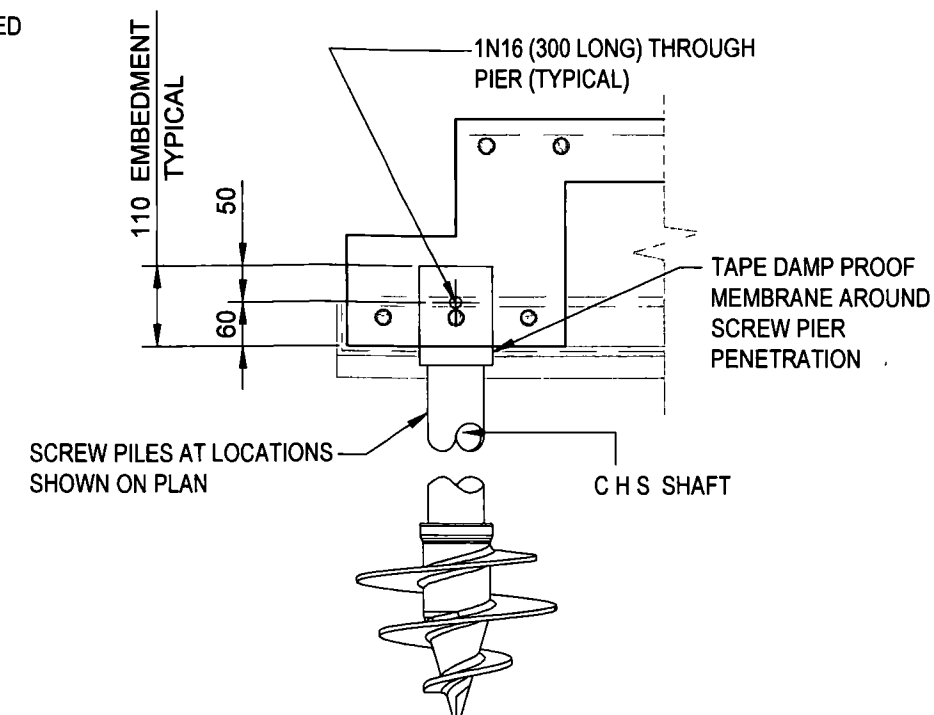
GARAGE ENTRY EDGE BEAM DETAIL (EB3)
(20mm MAX DEEP REBATE AT GARAGE DOOR OPENING)



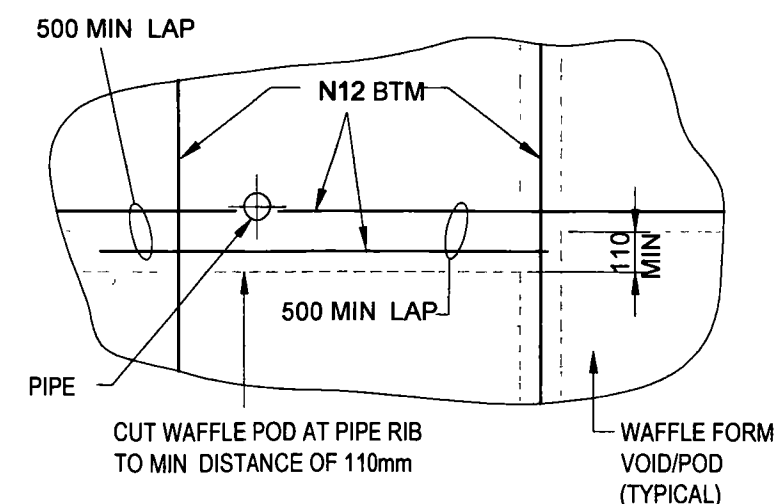
PORCH / ALFRESCO EDGE BEAM DETAIL (EB4)

NOTES

- 1 FOR SLAB SPECIFICATIONS AND POD SIZES REFER TO TABLE ON SHEET 2
- 2 EDGE AND INTERNAL BEAM WIDTHS NOMINATED ARE MINIMUM ONLY IF THESE WIDTHS ARE EXCEEDED ADDITIONAL REINFORCEMENT SHALL BE REQUIRED IN ACCORDANCE WITH FIGURE 3 4 3 - AS2870-2011 REFER TO 'TOTAL REINFORCEMENT REQUIREMENTS' TABLE ON SHEET 2



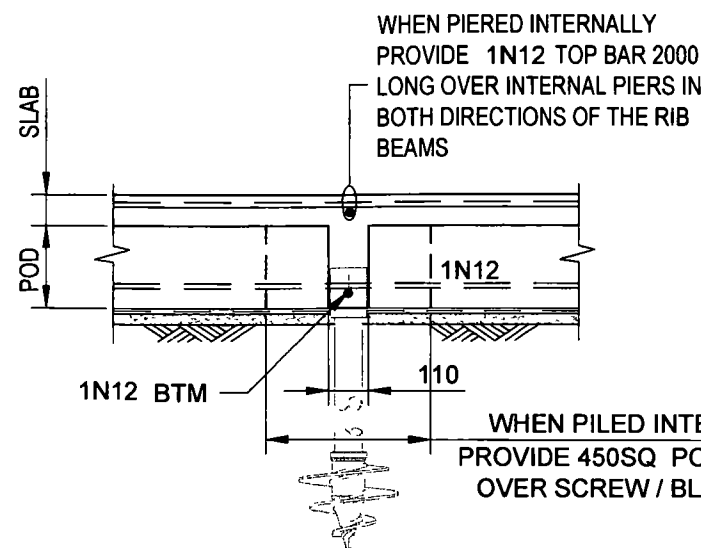
TYPICAL SCREW / BLADE PILE CONNECTION DETAIL
(NOT TO SCALE)



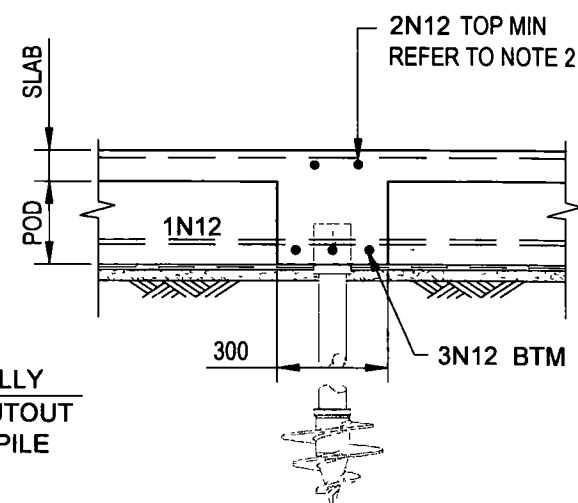
PLAN ON PIPE PENETRATION THROUGH RIB BEAM (IR1) DETAIL

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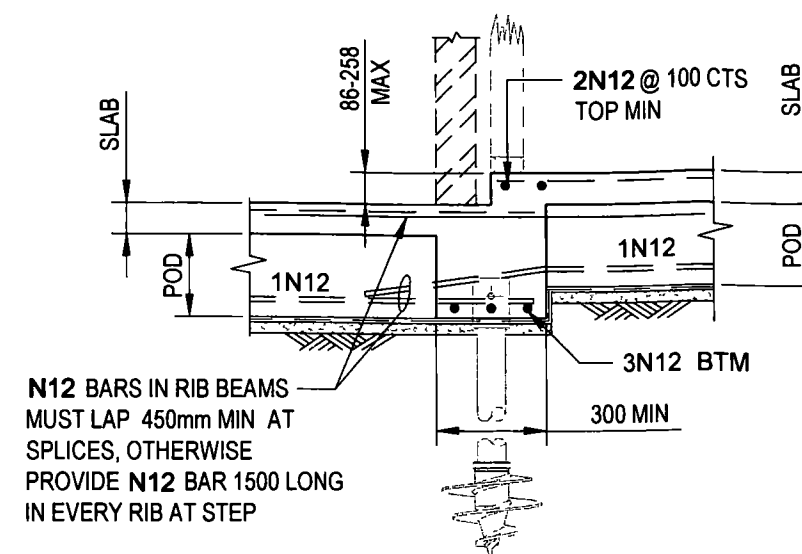
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**TYPICAL INTERNAL RIB BEAM
DETAIL (IR1)**
(OVER INTERNAL PILE CONDITION)



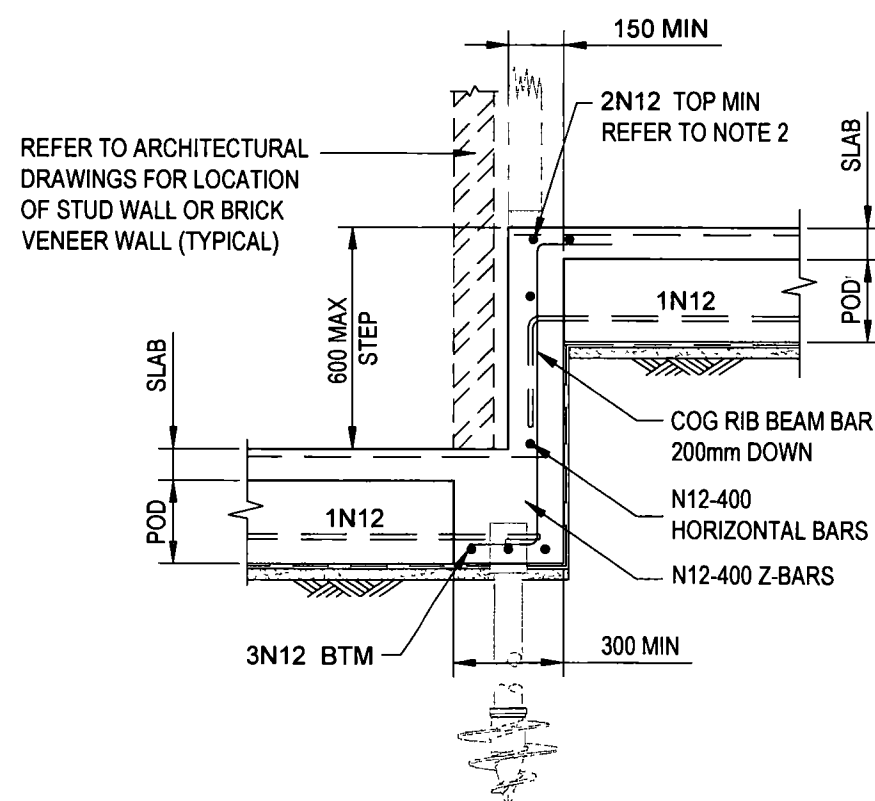
**TYPICAL STIFFENING BEAM DETAIL
(SB1)**



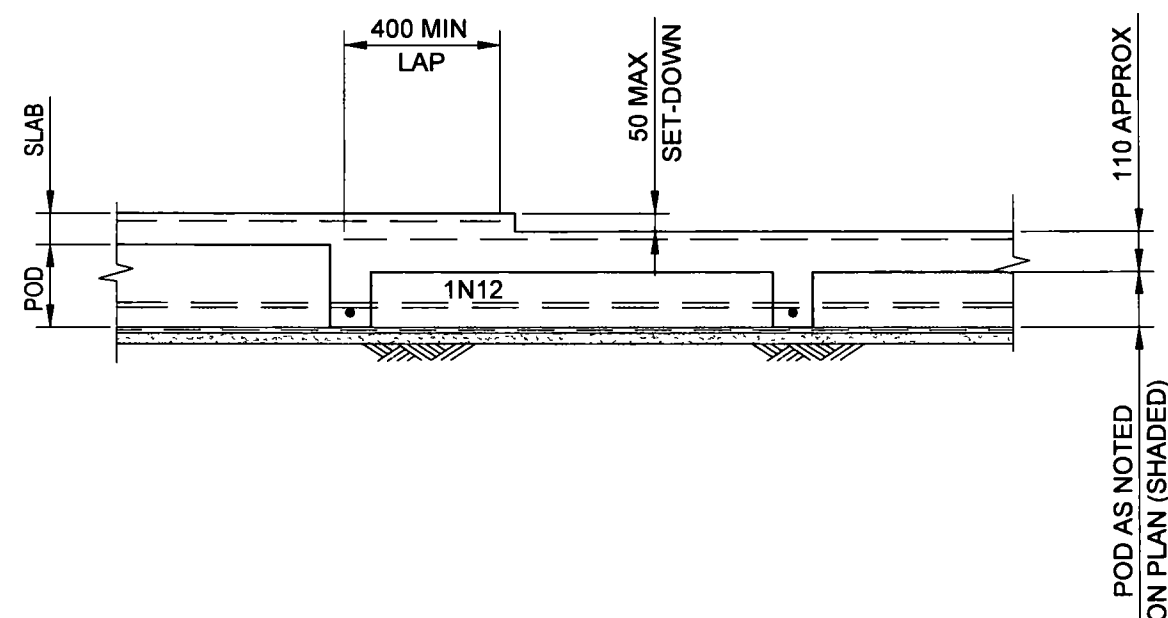
TYPICAL INTERNAL STEP BEAM DETAIL (IB1)
(3 COURSES MAX STEP)

NOTES

- 1 FOR SLAB SPECIFICATIONS AND POD SIZES REFER TO TABLE ON SHEET 2
- 2 EDGE AND INTERNAL BEAM WIDTHS NOMINATED ARE MINIMUM ONLY IF THESE WIDTHS ARE EXCEEDED ADDITIONAL REINFORCEMENT SHALL BE REQUIRED IN ACCORDANCE WITH FIGURE 3.4.3 - AS2870-2011 REFER TO 'TOTAL REINFORCEMENT REQUIREMENTS' TABLE ON SHEET 2
- 3 PLEASE NOTE THAT OUR FIRM TAKES NO RESPONSIBILITY IF NOT INSTALLED WE WILL INSPECT ONLY IF REQUESTED BY THE BUILDER / OWNER PRIOR TO PLACEMENT OF FILLING

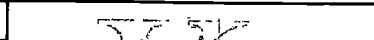


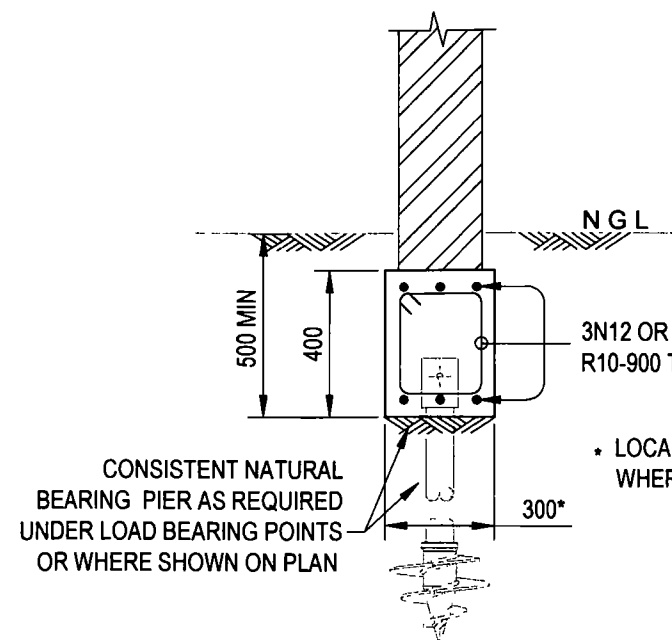
TYPICAL INTERNAL STEP BEAM DETAIL (IB1)
(7 COURSES MAX STEP)



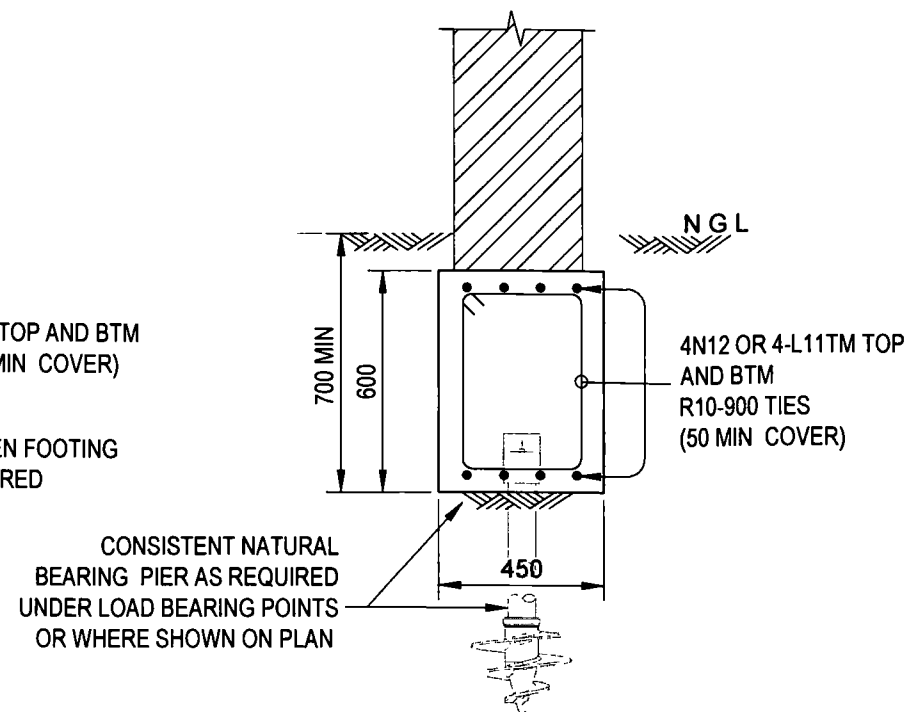
**TYPICAL SLAB WET AREA SET-DOWN DETAIL
IF REQUIRED**

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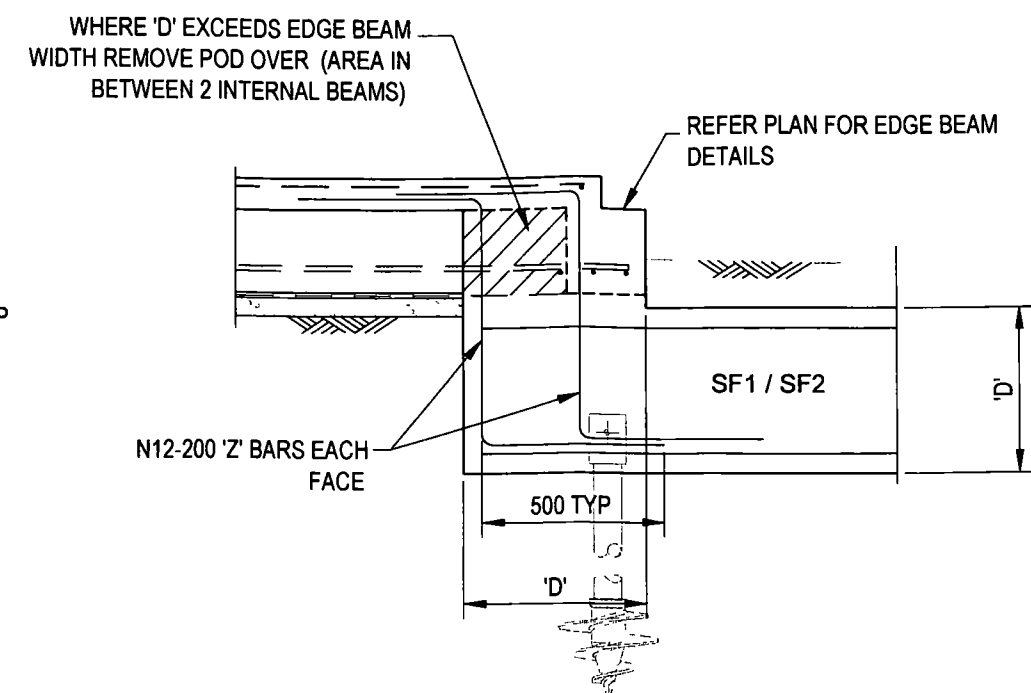
				 KANEBRIDGE ENGINEERING	SUITE 1.00 29-31 LEXINGTON DR. BELLA VISTA NSW 2153 PO BOX 646 PARRAMATTA NSW 2124 p (02) 9633 6445 f (02) 9633 5884 m 0414 590 880 e mail@kanebridgeengineering.com.au w www.kanebridge.com.au ABN 34 141 919 208 A C N 141 919 208		CLIENT / BUILDER  P 02 8882 9698 F 02 8882 9620 info@alkirahomes.com.au www.alkirahomes.com.au		PROJECT TWO-STOREY ARTICULATED MASONRY VENEER DWELLING FOR MR & MRS PUTICA ADDRESS LOT 1 No 44 WYADRA AVENUE FRESHWATER NSW 2096 STATUS ISSUED FOR CONSTRUCTION APPROVED BY CHARBIL KHOUDAIR BE(Civil) OpEngPrac MEAust PEng 		DESIGNED BY CK	PROJECT No 13KE158
									DRAWN BY TC	SHEET No S5		
A ISSUED FOR CONSTRUCTION					C KHOUDAIR 28 09 2013				CHECKED BY CK	ISSUE No A		
REV PROJECT STATUS / AMENDMENT(S)					APPROVED DATE				SCALE @ A3 1:20			



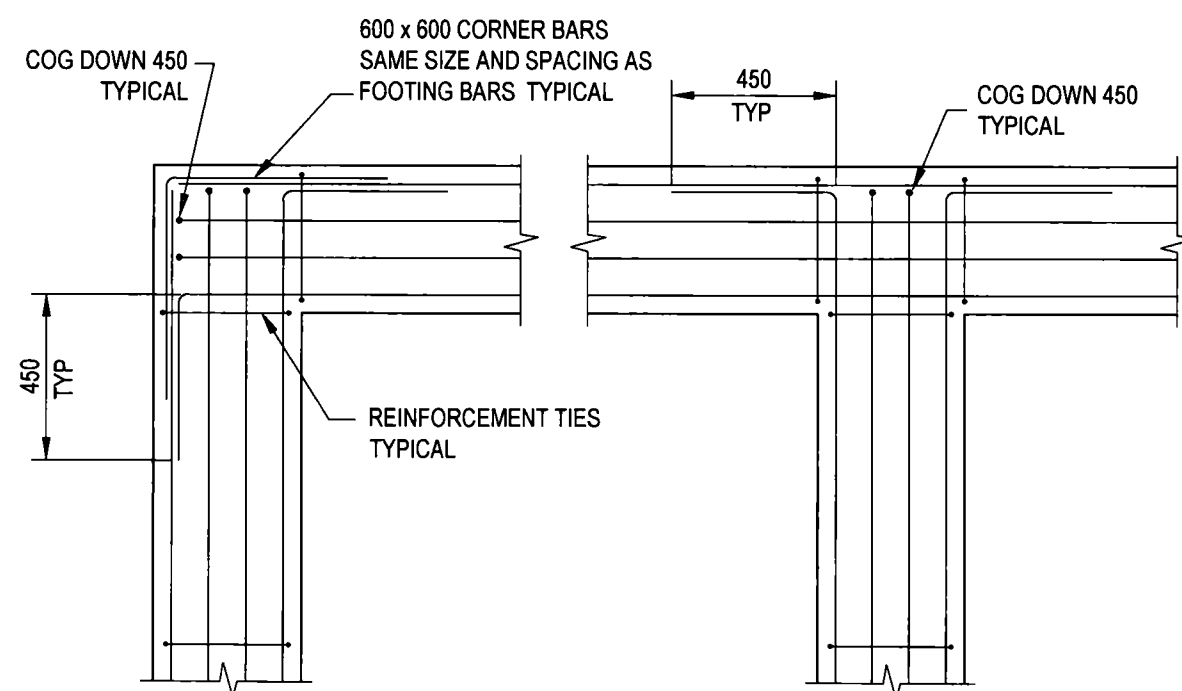
STRIP FOOTING DETAIL (SF1)



STRIP FOOTING DETAIL (SF2)

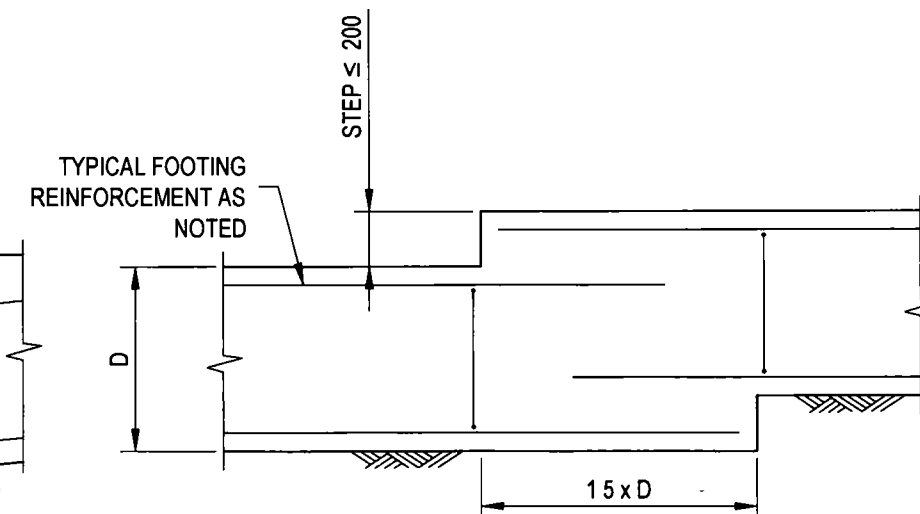
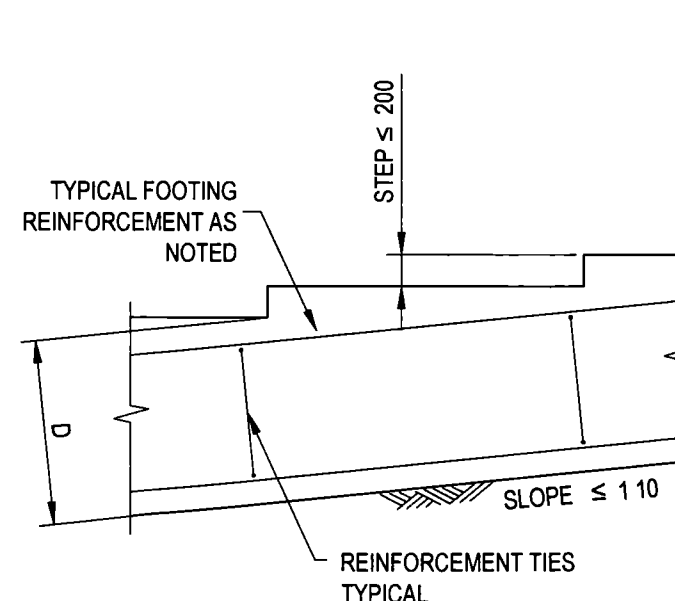


STRIP FOOTING CONNECTION DETAIL



CORNER DETAIL

INTERSECTION DETAIL

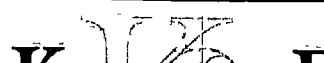
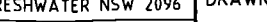


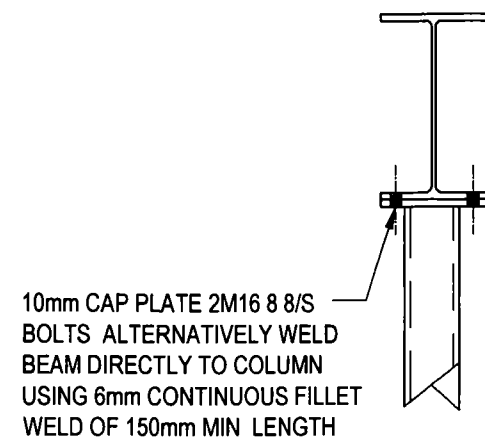
NOTE
THE BASE OF A STRIP FOOTING SHALL BE HORIZONTAL OR AT A SLOPE OF NOT MORE THAN 1:10
IF CONDITION DIFFER FROM THE ABOVE CONTACT THE ENGINEER IMMEDIATELY FOR ADVICE

STRIP FOOTING JUNCTION DETAILS.

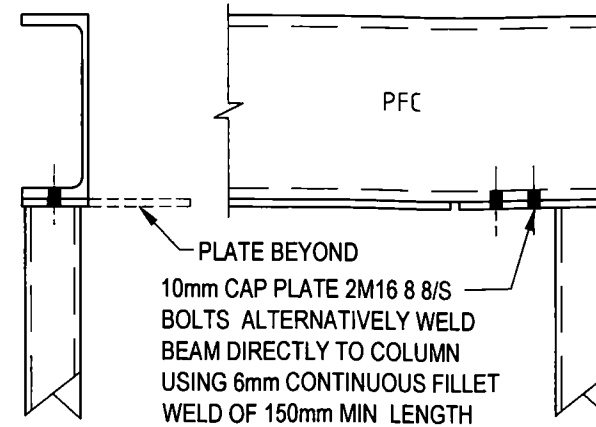
FOOTING STRIP FOOTING STEP DETAILS.
STEP ≤ 200

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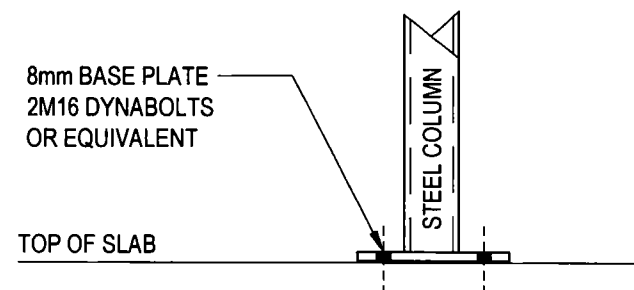
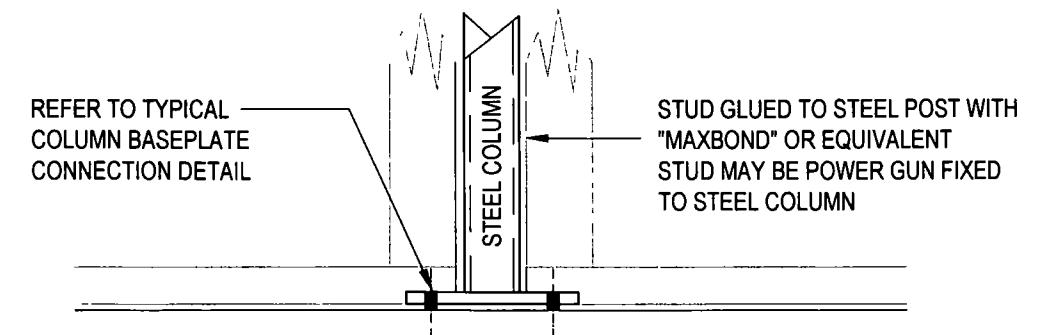
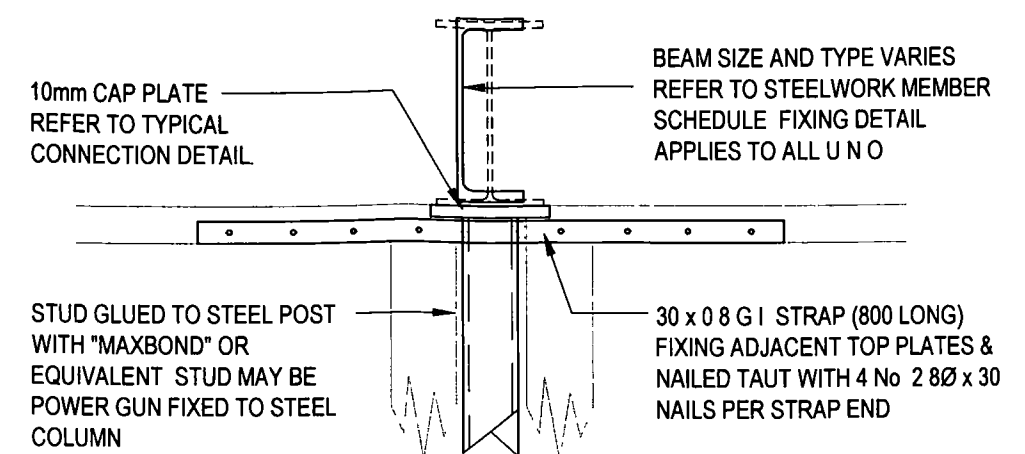
				 KANE BRIDGE ENGINEERING	SUITE 100 29-31 LEXINGTON DR. BELLA VISTA NSW 2153 PO BOX 646 PARRAMATTA NSW 2124 p (02) 9633 5445 f (02) 9633 5884 m 0414 590 690 e mail@kanebridgeengineering.com.au w www.kanebridge.com.au ABN 34 141 919 205 A C N 141 919 205	CLIENT / BUILDER  Alkira Homes A L K I R A H O M E S P 02 8882 9698 F 02 8882 9620 info@alkirahomes.com.au www.alkirahomes.com.au	<table><tr><td>PROJECT</td><td>TWO-STOREY ARTICULATED MASONRY VENEER DWELLING</td></tr><tr><td>FOR</td><td>MR & MRS PUTICA</td></tr><tr><td>ADDRESS</td><td>LOT 1 No 44 WYADRA AVENUE FRESHWATER NSW 2096</td></tr><tr><td>STATUS</td><td>ISSUED FOR CONSTRUCTION</td></tr></table> APPROVED BY CHARBIL KHOUDAIR BE(IGW) Dip.Eng. Prac. MEAust P.Eng. 	PROJECT	TWO-STOREY ARTICULATED MASONRY VENEER DWELLING	FOR	MR & MRS PUTICA	ADDRESS	LOT 1 No 44 WYADRA AVENUE FRESHWATER NSW 2096	STATUS	ISSUED FOR CONSTRUCTION	<table><tr><td>DESIGNED BY</td><td>CK</td></tr><tr><td>DRAWN BY</td><td>TC</td></tr><tr><td>CHECKED BY</td><td>CK</td></tr><tr><td>SCALE @ A3</td><td>1:20</td></tr></table>	DESIGNED BY	CK	DRAWN BY	TC	CHECKED BY	CK	SCALE @ A3	1:20	<table><tr><td>PROJECT No</td><td>13KE158</td></tr><tr><td>SHEET No</td><td>S6</td></tr><tr><td>ISSUE No</td><td>A</td></tr></table>	PROJECT No	13KE158	SHEET No	S6	ISSUE No	A
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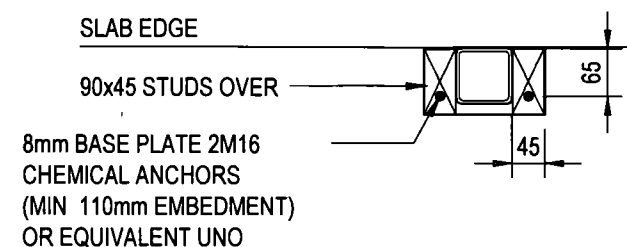
**TYPICAL 'UB' / 'UC'
CONNECTION DETAIL**



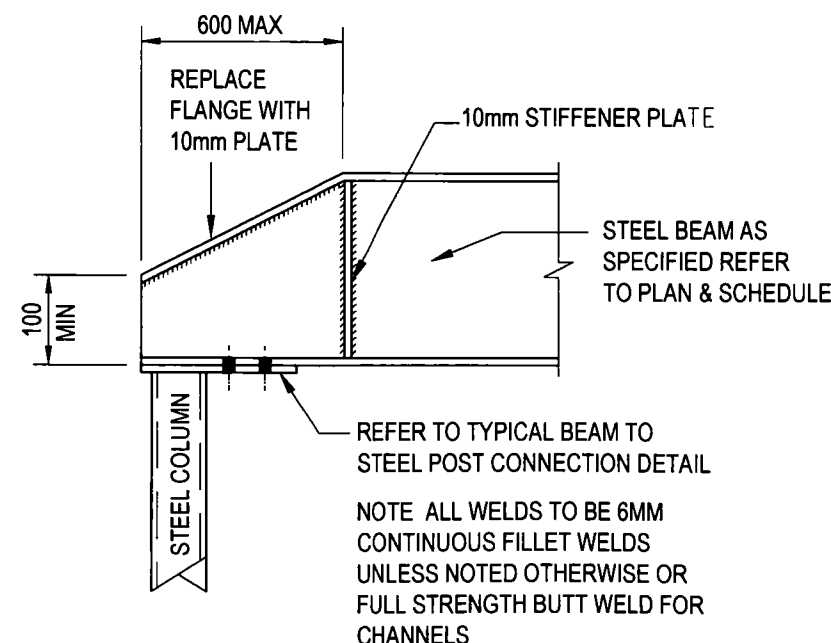
**TYPICAL 'PFC' OR 'PFC+PL'
CONNECTION DETAIL**



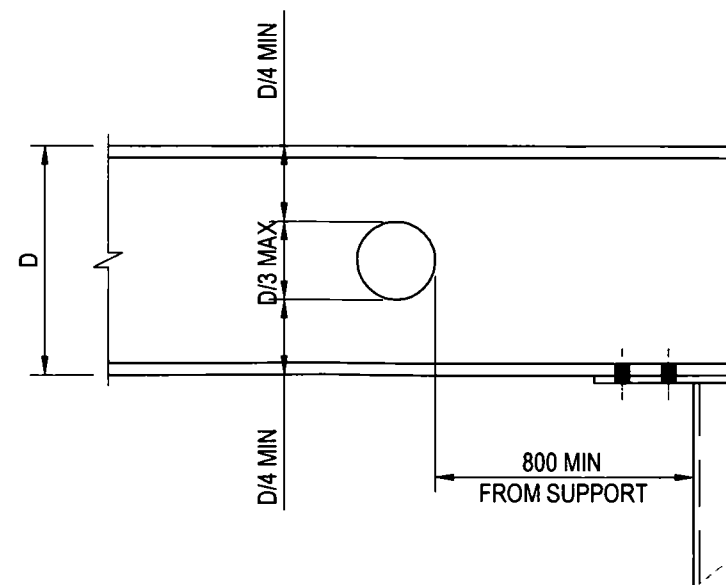
TYPICAL COLUMN BASEPLATE CONNECTION DETAIL



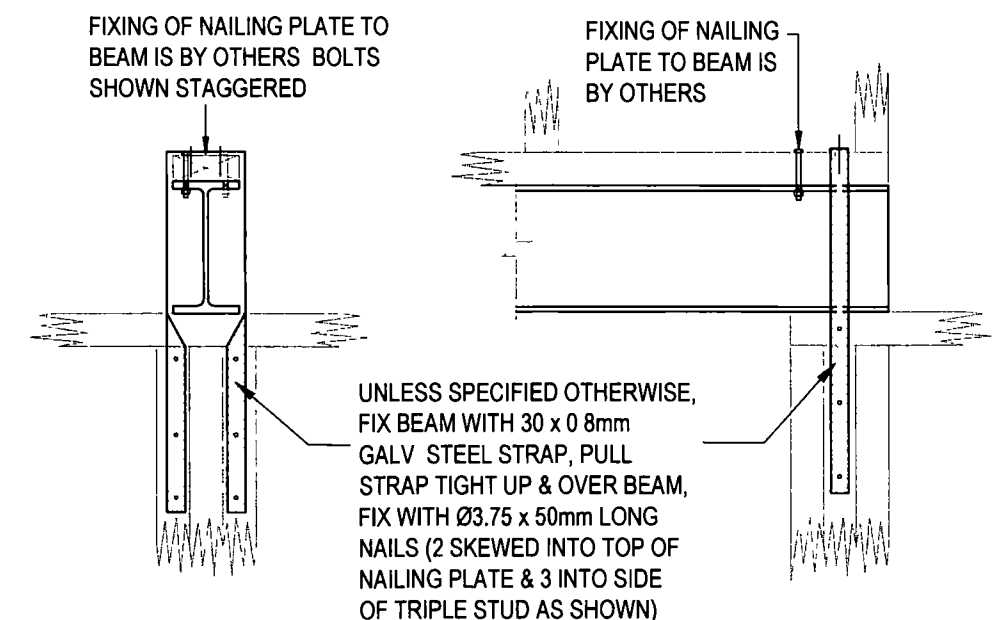
COLUMN BASEPLATE CONNECTION



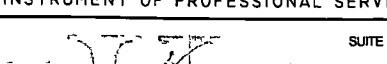
TYPICAL CHAMFER DETAIL / END TREATMENT FOR SPLAY BEAM
NOTE THE BUILDER IS TO DETERMINE IF THIS DETAIL IS REQUIRED



TYPICAL STEEL BEAM PENETRATION DETAIL
(UNIVERSAL BEAM / CHANNEL OPTION)



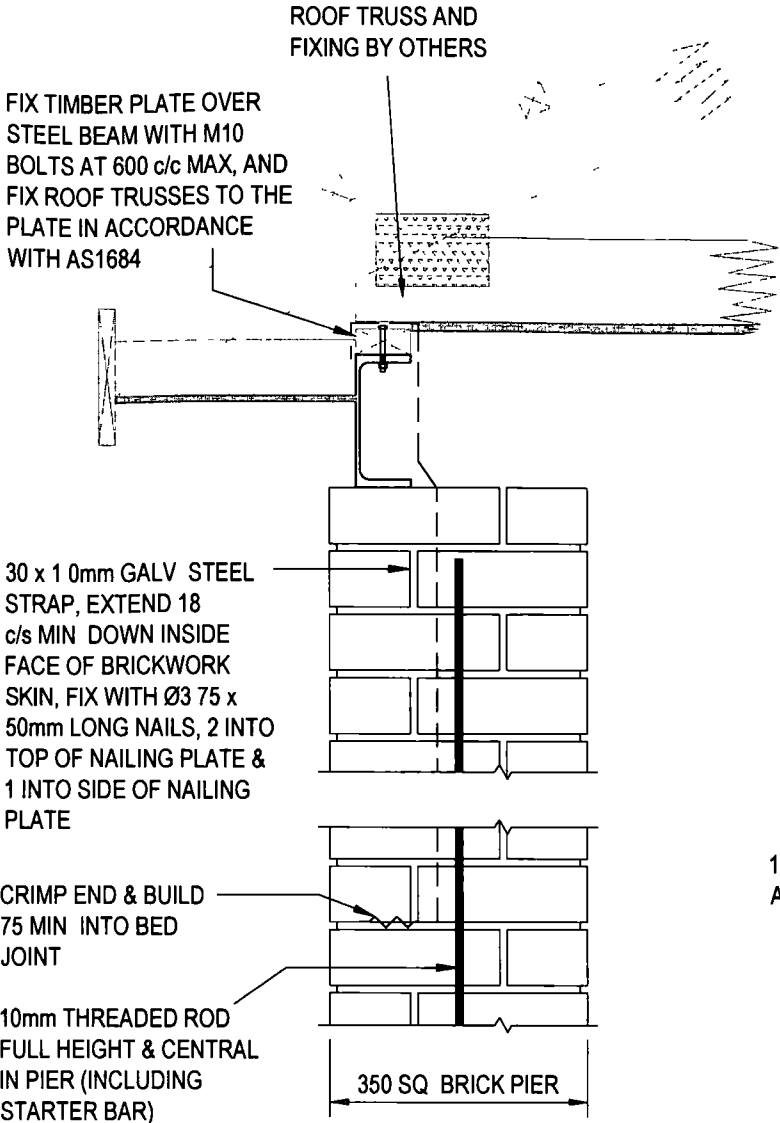
TYPICAL TRIPLE STUD FIXING DETAIL
(UNIVERSAL BEAM OPTION DRAWN - ALL BEAM TYPES SIMILAR)
(NAILING OF 'TS' TO AS1684 - PROVIDE A MIN 1 NOGGIN MID-HEIGHT OF 'TS' TO WEAK AXIS)

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				 SUITE 1.00 29-31 LEXINGTON DR. BELLA VISTA NSW 2153 PO BOX 646 PARRAMATTA NSW 2124 p (02) 9633 5445 f (02) 9633 5884 m 0414 590 680 e mail@kanebridgeengineering.com.au w www.kanebridge.com.au ABN 34 141 919 208 A C N 141 919 208	CLIENT / BUILDER		PROJECT	TWO-STOREY ARTICULATED MASONRY VENEER DWELLING	DESIGNED BY	CK	PROJECT No	13KE158	
							FOR	MR & MRS PUTICA	DRAWN BY	TC	SHEET No	S8	
							ADDRESS	LOT 1, No 44 WYADRA AVENUE FRESHWATER NSW 2096	CHECKED BY	CK	ISSUE No	A	
A	ISSUED FOR CONSTRUCTION	C KHOUDAIR	28 09 2013				STATUS	ISSUED FOR CONSTRUCTION					
REV	PROJECT STATUS / AMENDMENT(S)	APPROVED	DATE				APPROVED BY CHARBIL KHOUDAIR BE(Gnl) OpEngPrac MEAust PEng 						
						P 02 8882 9698 F 02 8882 9620 info@alkirahomes.com.au www.alkirahomes.com.au		SCALE @ A3		1:10			

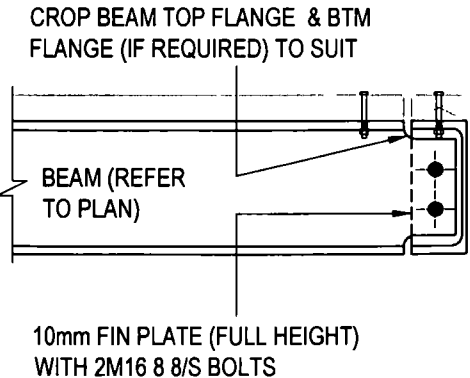
STRUCTURAL STEEL NOTES

- S1 ALL MATERIALS, WORKMANSHIP, FABRICATION AND ERECTION SHALL COMPLY WITH THE REQUIREMENTS OF AS4100, AS1538, AS1554 AND THE SPECIFICATION
- S2 UNLESS SHOWN OTHERWISE, ALL STEEL SHALL BE IN ACCORDANCE WITH AS1204 GRADE 300 ALL STEEL HOLLOW SECTIONS SHALL BE GRADE 350 U N O AND SHALL BE IN ACCORDANCE WITH AS1163
ALL PRESSED METAL PURLINS AND GIRTS SHALL BE GRADE 450 STEEL IN ACCORDANCE WITH AS1538
- S3 UNLESS SHOWN OTHERWISE ON THE DRAWINGS, ALL CONNECTIONS SHALL BE IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS
- (i) ALL WELDS SHALL BE 6mm CONTINUOUS FILLET WELDS ALL ROUND
- (ii) ALL BOLTS SHALL BE M20 - 8 8/S, WITH A MINIMUM OF 2 BOLTS PER CONNECTION
- (ii)a) PURLIN BOLTS TO BE M12 - 4 6/S WITH A MINIMUM OF 2 BOLTS PER PURLIN END
- (iii) ALL GUSSET AND CLEAT PLATES SHALL BE 10mm THICK (U N O)
- (iv) ALL CAP PALTES SHALL BE 10mm THICK (U N O)
- (v) ALL BASE PLATES SHALL BE 10mm THICK (U N O)
- S4 BOLT DESIGNATION
- 4 6/S REFERS TO COMMERCIAL BOLTS OF STRENGTH GRADE 4 6 TO AS1111 TIGHTENED TO A SNUG TIGHT CONDITION
- 8 8/S REFERS TO HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8 8 TO AS1252 TIGHTENED TO A SNUG TIGHT CONDITIONS
- 8 8/TB REFERS TO HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8 8 TO AS1252 FULLY TENSIONED TO AS4100 AS A BEARING JOINT
- 8 8/TF REFERS TO HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8 8 TO AS1252 FULLY TENSIONED TO AS4100 AS A FRICTION JOINT
- S5 HIGH STRENGTH BOLTED JOINTS SHALL BE IN ACCORDANCE WITH AS1511 THE SPECIFIED BOLT TENSION SHALL BE OBTAINED BY USE OF THE "PART TURN" METHOD OF TIGHTENING
- S6 ALL WELDS SHALL BE SP (SPECIAL PURPOSE) IN ACCORDANCE WITH AS1554 ALL ELECTRODES SHALL BE CLASS E48 ALL BUTT WELDS SHALL BE FULL STRENGTH COMPLETE PENETRATION WELDS
- S7 SUBSTITUTIONS FOR STEEL SECTIONS SHOWN ON DRAWINGS SHALL NOT BE MADE WITHOUT APPROVAL OF THE ENGINEER
- S8 ALL STEELWORK BELOW GROUND OR FINISHED SURFACE LEVEL IS TO BE ENCASED IN 75mm CONCRETE ALL ROUND
- S9 ALL STEELWORK, EXCEPT THAT WHICH IS TO BE CONCRETE ENCASED FIRE SPRAYED OR CONTACT SURFACES OF FRICTION TYPE JOINTS, SHALL BE SURFACE CLEANED AND PAINTED IN ACCORDANCE WITH THE SPECIFICATION
- S10 STEELWORK THAT IS CONCRETE ENCASED, FIRE SPRAYED

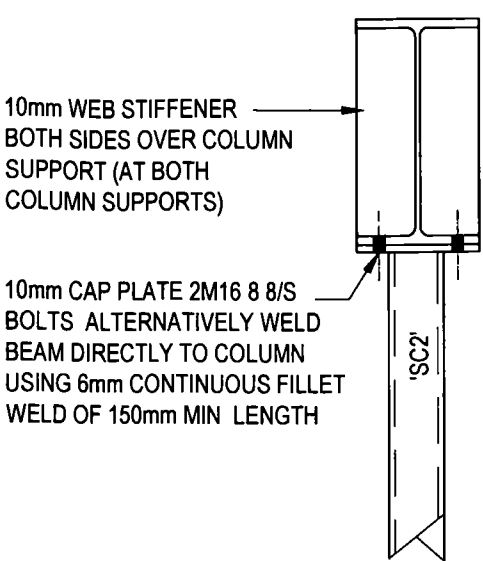
- OR FACING SURFACES OF FRICTION TYPE JOINTS SHALL BE LEFT UNPAINTED AND FREE FROM SCALE
- S11 THE CONTRACTOR SHALL PROVIDE ALL CLEATS AND DRILL ALL HOLES NECESSARY FOR FIXING STEEL, TIMBER AND OTHER ELEMENTS TO STEEL WHETHER OR NOT DETAILED ON THE DRAWINGS
- S12 THE FABRICATION AND ERECTION OF THE STRUCTURAL STEELWORK SHALL BE SUPERVISED BY QUALIFIED PERSONNEL EXPERIENCED IN SUCH SUPERVISION TO ENSURE THAT ALL REQUIREMENTS OF THE DESIGN ARE MET DETAILS OF ERECTION SEQUENCE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF ERECTION
- S13 COLUMNS AND MULLIONS SHALL HAVE THEIR BASE PLATES FULLY GROUTED IN ACCORDANCE WITH THE SPECIFICATIONS AFTER PLUMBING AND LEVELLING ON STEEL PACKERS
- S14 THREE (3) SETS OF STEELWORK SHOP DETAIL DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF ANY FABRICATION THE CHECK SHALL NOT COVER LAYOUT AND MEMBER DIMENSIONS
- S15 CONCRETE ENCASED STRUCTURAL STEELWORK TO BE ENCLOSED BY F41 MESH PLACED CLEAR OF STEELWORK, ENCASING TO PROVIDE 50mm MIN COVER TO STEELWORK U N O ON THE DRAWINGS COVER TO MESH TO BE 20mm MIN MAXIMUM AGGREGATE SIZE = 10mm, CONCRETE $f_c = 20 \text{ MPa}$
- S17 THE CONTRACTOR SHALL CONFIRM EXPOSURE CLASSIFICATIONS OF THE STEELWORK IN ACCORDANCE WITH THE B C A AND PROVIDE THE NECESSARY COATING UNLESS SPECIFIED OTHERWISE
- S16 UNLESS SPECIFIED OTHERWISE, STEELWORK SHALL HAVE THE FOLLOWING SURFACE TREATMENT
- EXTERNAL
SURFACE PREPARATION
PRE-CLEAN TO AS1627 1
ACIDPICKLE TO AS1627 5
- COATING
HOT DIP GALVANIZING TO AS4680
600 g/m^2 FOR THICKNESS GREATER THAN 6mm
500 g/m^2 FOR THICKNESS 3mm < THICKNESS < 6mm
- AREAS TO BE PAINTED SWEEP (BRUSH) BLAST CLEANING TO AS4680 AND PAINT TO MANUFACTURER'S RECOMMENDATIONS
- HOT DIP GALVANIZING ELEMENT TRANSPORTATION, STORAGE, WELDING AND COATING RE-INSTATEMENT TO AS4680
- INTERNAL
SURFACE PREPARATION
PRE-CLEAN TO AS1627 1
BLAST CLEAN TO CLASS 2 TO AS1627
- COATING
ZINC PHOSPHATE PRIMER TO 75 μm



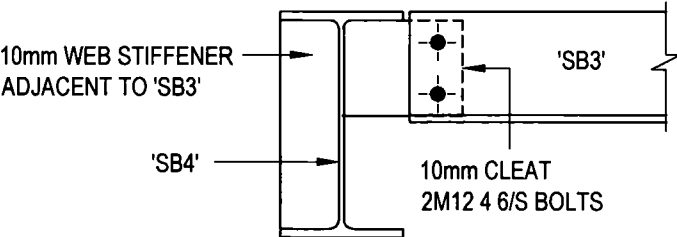
BEAM HOLD DOWN DETAIL



TYPICAL 'PFC' TO 'PFC' CONNECTION DETAIL

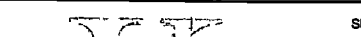


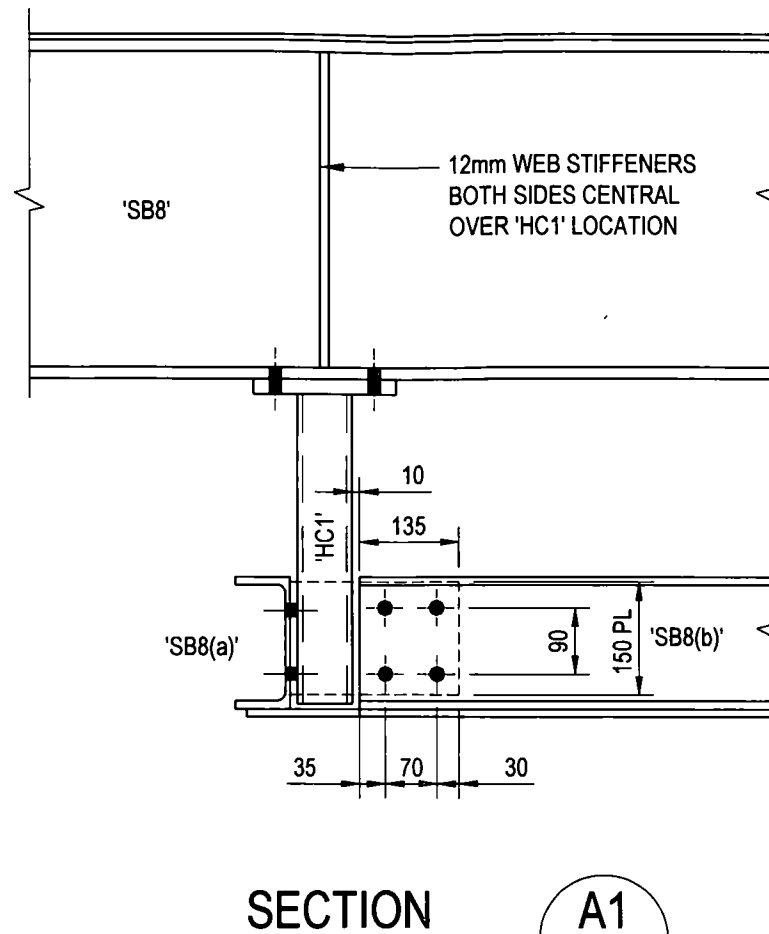
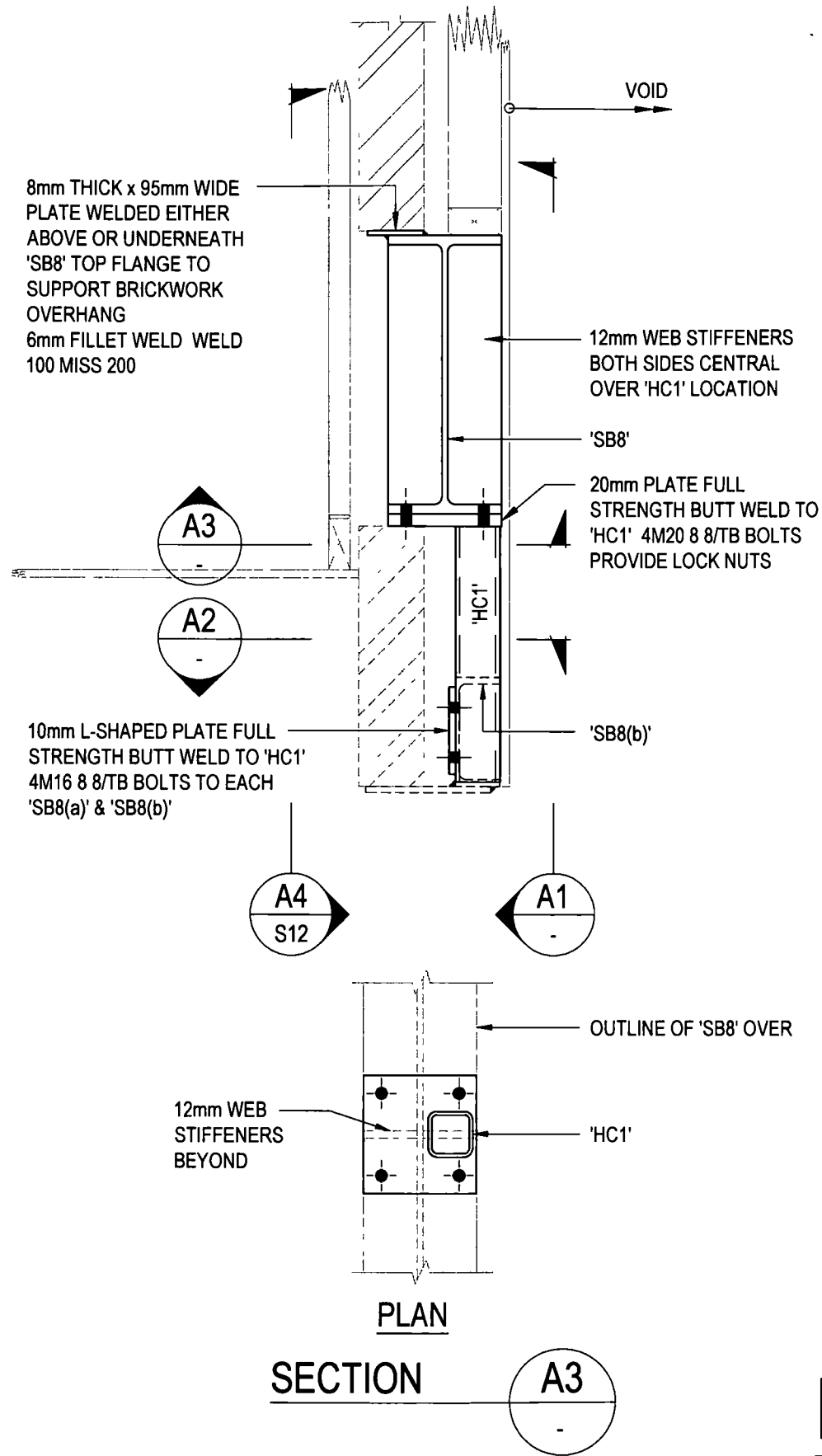
'SB8' TO COLUMN CONNECTION DETAIL
(AT BOTH COLUMN SUPPORTS)



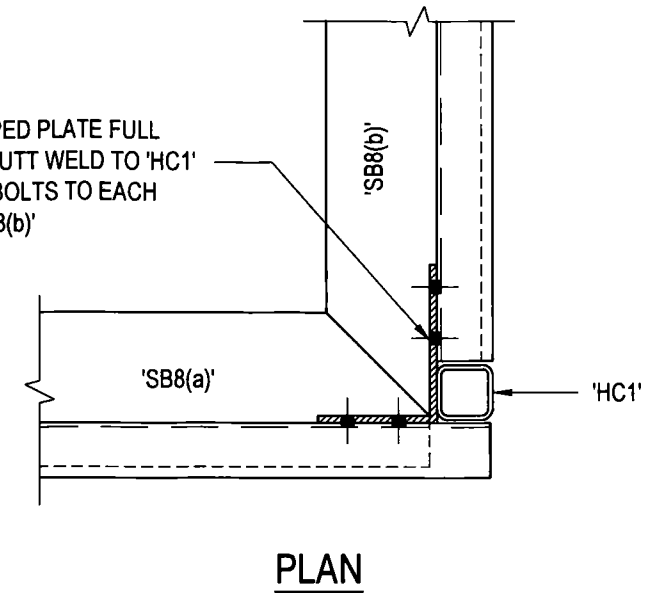
'SB3' TO 'SB4' CONNECTION DETAIL

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						SUITE 1.00 29-31 LEXINGTON DR. BELLA VISTA NSW 2153 PO BOX 546 PARRAMATTA NSW 2124 p (02) 9633 5445 f (02) 9633 5884 m 0414 590 690 e mail@kanebridgeengineering.com.au w www.kanebridge.com.au ABN 34 141 919 208 A C N 141 919 208		CLIENT / BUILDER  P 02 8882 9698 F 02 8882 9620 info@alkirahomes.com.au www.alkirahomes.com.au		PROJECT TWO-STOREY ARTICULATED MASONRY VENEER DWELLING FOR MR & MRS PUTICA ADDRESS LOT 1 No 44 WYADRA AVENUE FRESHWATER NSW 2096 STATUS ISSUED FOR CONSTRUCTION APPROVED BY CHARBIL KHOUDAIR B.E.(Civl) Dip.Eng.Proc MEAust P.Eng 		DESIGNED BY C K DRAWN BY T C CHECKED BY C K SCALE @ A3 1 10		PROJECT No 13KE158 SHEET No S9 ISSUE No A	
A	ISSUED FOR CONSTRUCTION			C KHOUDAIR	28 09 2013										
REV	PROJECT STATUS / AMENDMENT(S)			APPROVED	DATE										



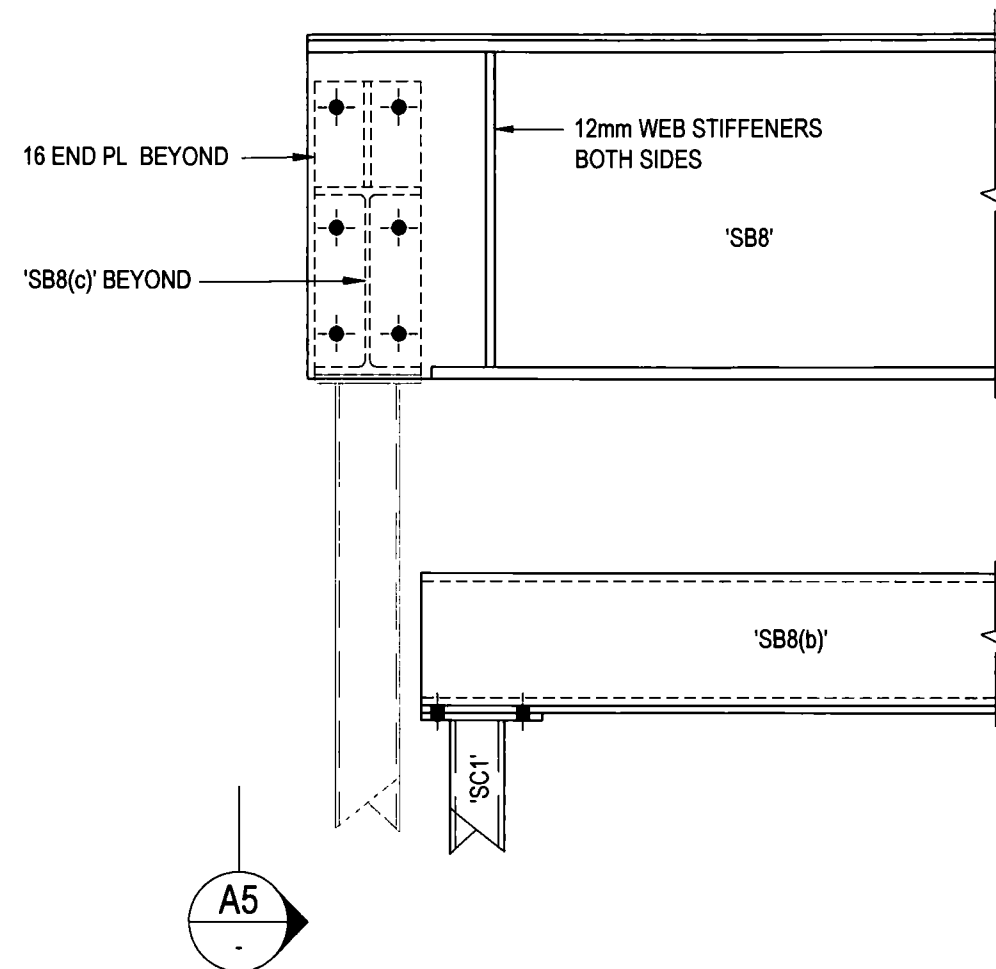
10mm L-SHAPED PLATE FULL STRENGTH BUTT WELD TO 'HC1' 4M16 8 8/TB BOLTS TO EACH 'SB8(a)' & 'SB8(b)'



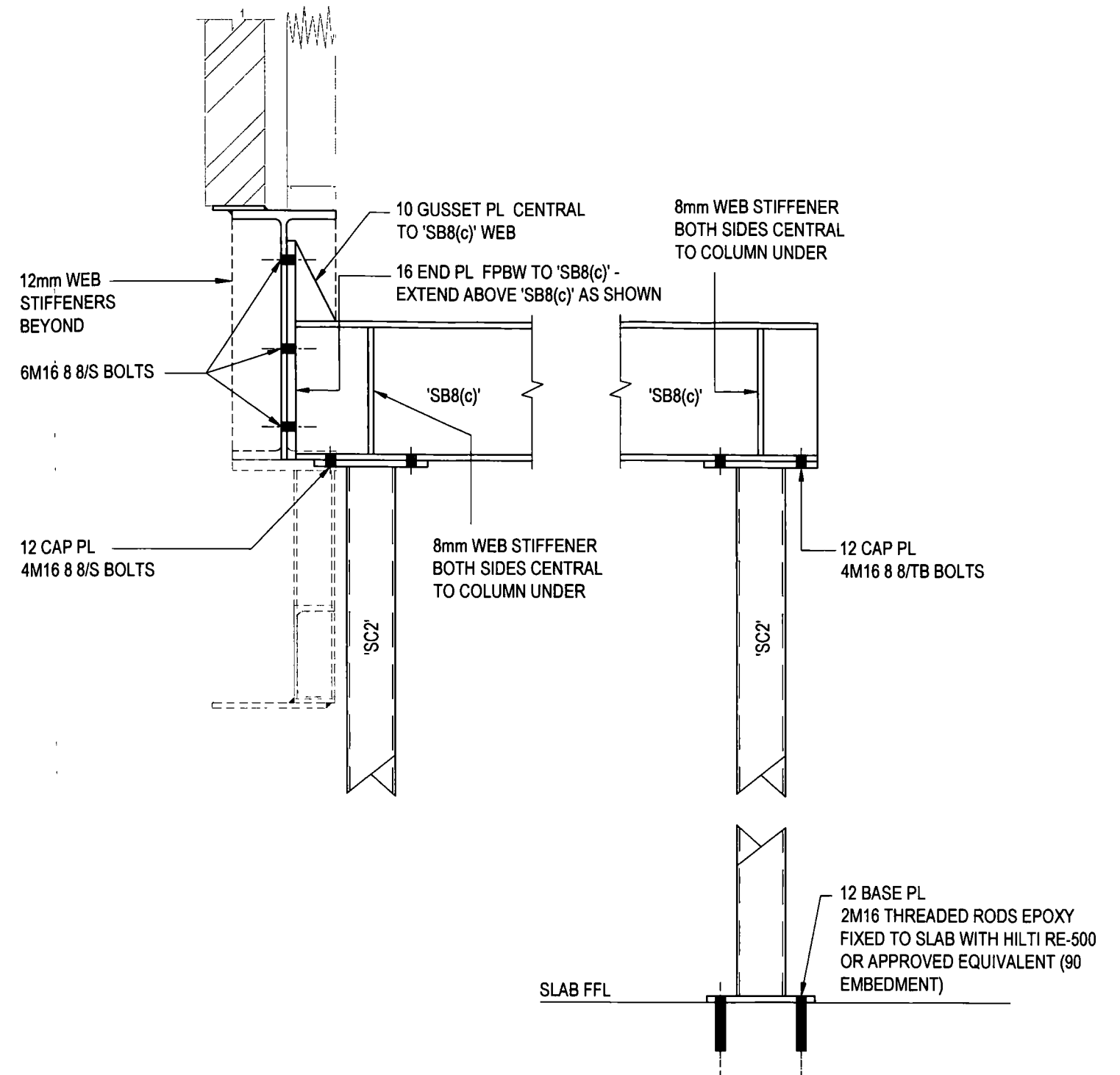
DETAIL 'A' - SHEET 1 OF 2

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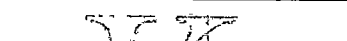
SECTION A4
S11



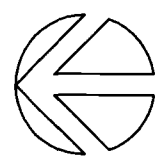
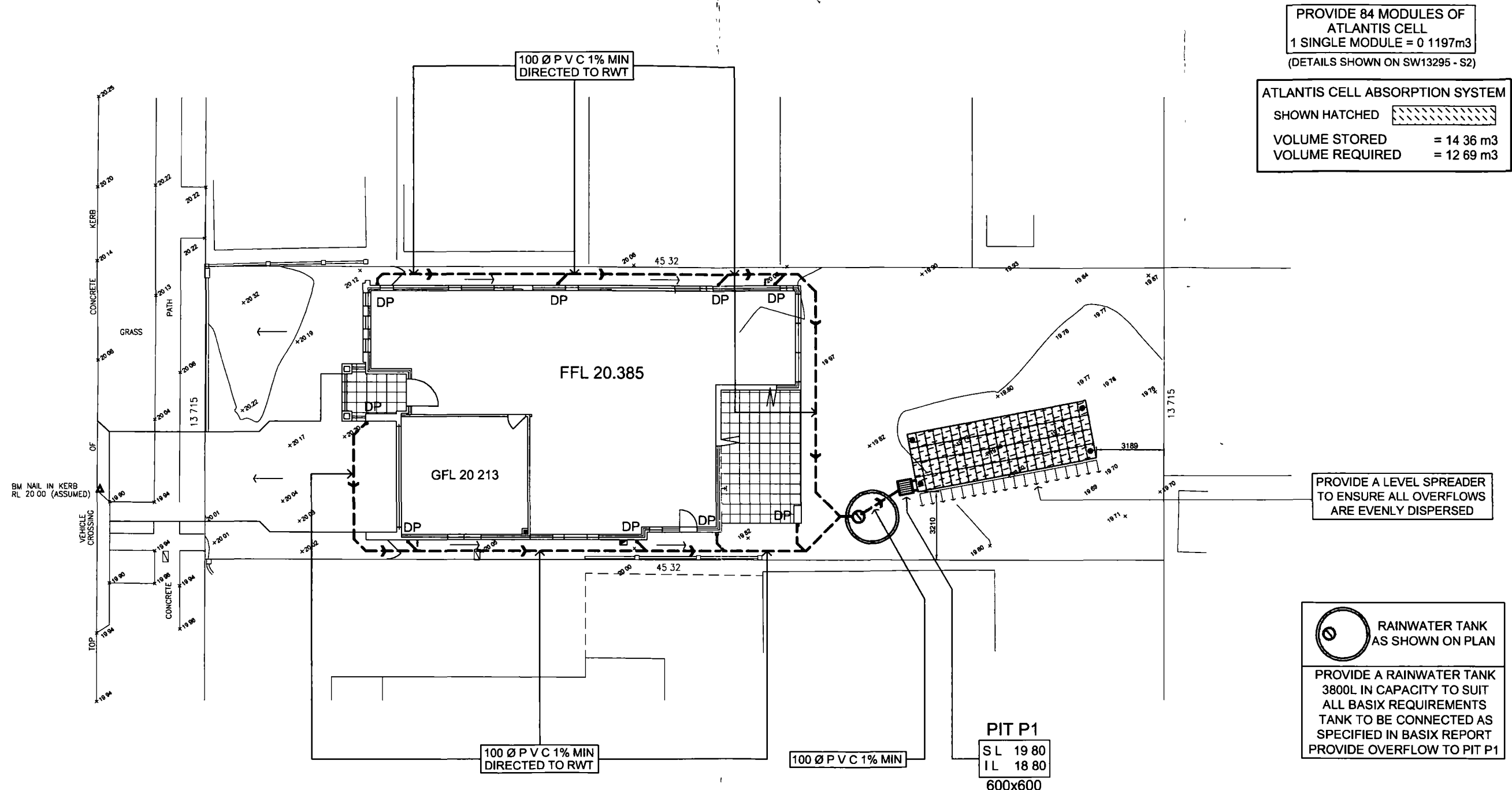
SECTION A5

DETAIL 'A' - SHEET 2 OF 2

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								SUITE 1.00 29-31 LEXINGTON DR. BELLA VISTA NSW 2153 PO BOX 646 PARRAMATTA NSW 2124 p (02) 9633 5445 f (02) 9633 5884 m 0414 590 690 e mail@kanebridgeengineering.com.au w www.kanebridge.com.au ABN 34 141 919 208 A C N 141 919 208				CLIENT / BUILDER		PROJECT TWO-STORY ARTICULATED MASONRY VENEER DWELLING		DESIGNED BY CK		PROJECT No 13KE158	
												FOR MR & MRS PUTICA		DRAWN BY TC		SHEET No S12			
												ADDRESS LOT 1, No 44 WYADRA AVENUE FRESHWATER NSW 2096		CHECKED BY CK		ISSUE No A			
A		ISSUED FOR CONSTRUCTION		C KHOUDAIR		28 09 2013				P 02 8882 9698 F 02 8882 9620 info@alkirahomes.com.au www.alkirahomes.com.au		STATUS ISSUED FOR CONSTRUCTION		APPROVED BY CHARBIL KHOUDAIR BE (Civl) Dip Eng Pract MEAust P Eng 		SCALE @ A3 1:10			
REV		PROJECT STATUS / AMENDMENT(S)		APPROVED		DATE													

WYADRA AVENUE



SITE STORMWATER MANAGEMENT LAYOUT

SCALE 1:200/A3

STORMWATER LAYOUT NOTES	
1) PITS DEEPER THAN 600mm TO BE 600 X 900 W, ELSE 375 SQ UNO	COMMENCING ANY WORKS & NOTIFY THE ENGINEER OF ANY DISCREPANCIES
2) ALL PIPES TO HAVE 1% MIN GRADE UNO	8) DRIVEWAY LEVELS PROVIDED FOR DRAINAGE DESIGN PURPOSES ONLY. LEVELS MAY BE ADJUSTED TO SUIT FINAL HOUSE CUT/FILL CONDITIONS BUT NEED TO MAINTAIN INTENT OF DRAINAGE SYSTEM. ENGINEER TO BE CONSULTED PRIOR TO CONSTRUCTION TO ENSURE INTENT MAINTAINED
3) ALL DOWNPIPES TO BE 100 X 50 BOX OR 90 Ø	9) END OF EXISTING DRAINAGE LINE TO BE EXPOSED & LEVELS CONFIRMED BY BUILDER PRIOR TO COMMENCEMENT OF WORKS
4) PIPES TO BE U P V C OR STORMWATER PIPE TO A S 1254	10) BUILDERS TO ENSURE SERVICES CONNECTIONS TO HOUSE DO NOT CONFLICT WITH DRAINAGE DESIGN REQUIREMENTS
5) PITS TO BE STANDARD PRECAST CONCRETE PITS OR BRICK RENDERED WITH CONCRETE HEAVY DUTY GRATES SIZED AS PITS PER PLAN	11) ALL WORKS TO BE CONSTRUCTED TO GOOD BUILDING PRACTICE & MATERIALS TO MEET ACCEPTED SPECIFICATIONS
6) NO SEWER VENTS, GULLY PITS OR SIMILAR TO BE LOCATED BELOW THE MAXIMUM WATER SURFACE LEVEL IN DETENTION BASINS	
7) PERSONS UTILISING THIS PLAN FOR ANY PURPOSES SHALL VERIFY THE DATUM & RESPECTIVE LEVELS PRIOR TO	

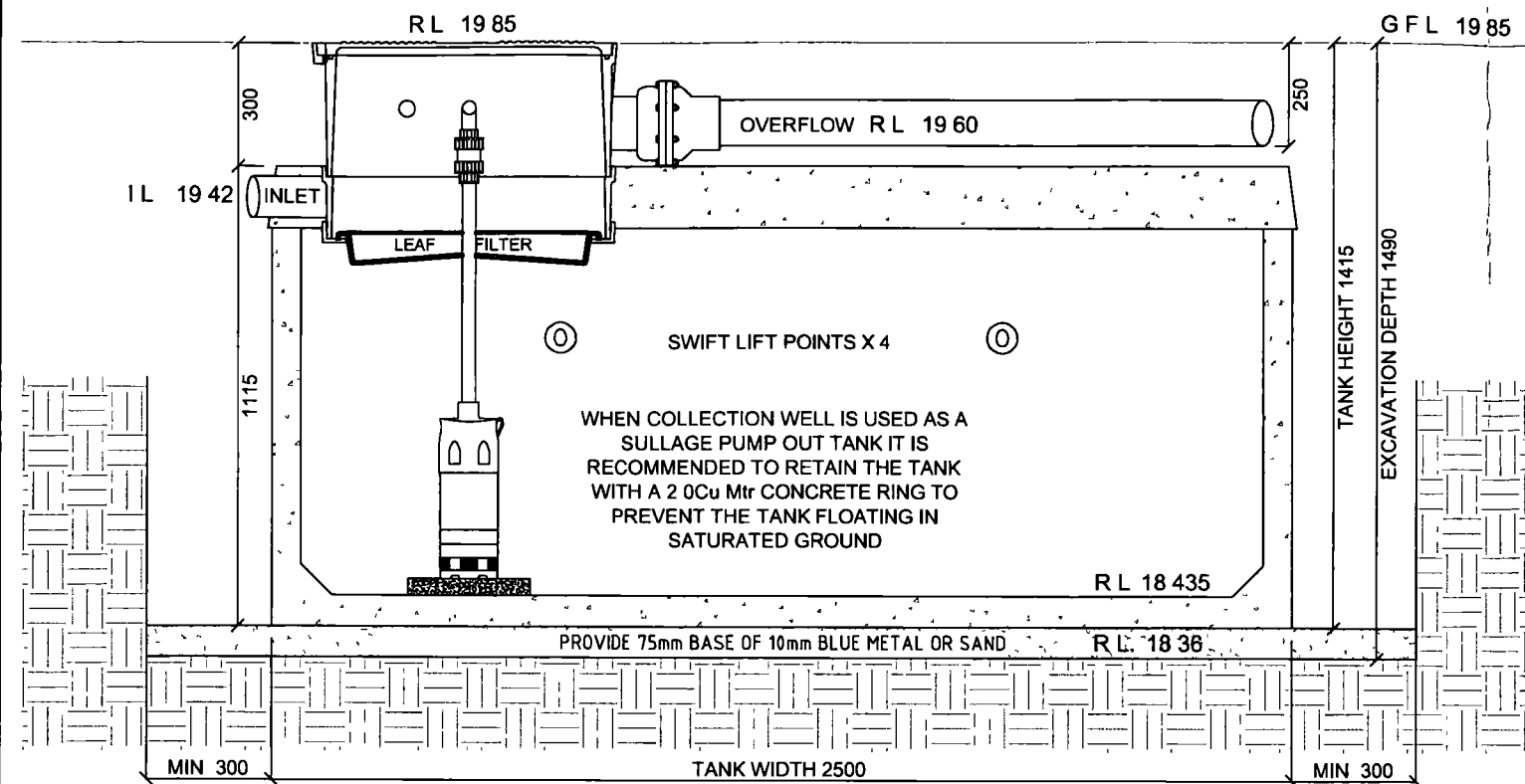
LEGEND			
P1	PIT LABEL	GFL	GARAGE FLOOR LEVEL
	SUMP PIT	0.00	EXISTING REDUCED LEVEL
	300x300 FLOOR GULLY	R.L. 157.00	PROPOSED REDUCED LEVEL
	100/150 Ø GARDEN GULLY	DP	DOWNPIPE
	DRAINAGE PIPE	SP	SPITTER/SPREADER
	AERIAL PIPE	⊕	CLEANING EYE
SL	SURFACE LEVEL	+++++	SEDIMENT FENCE
IL	INVERT LEVEL	---	AG LINE
FFL	FINISHED FLOOR LEVEL	→	OVERLAND FLOW

alwdesign

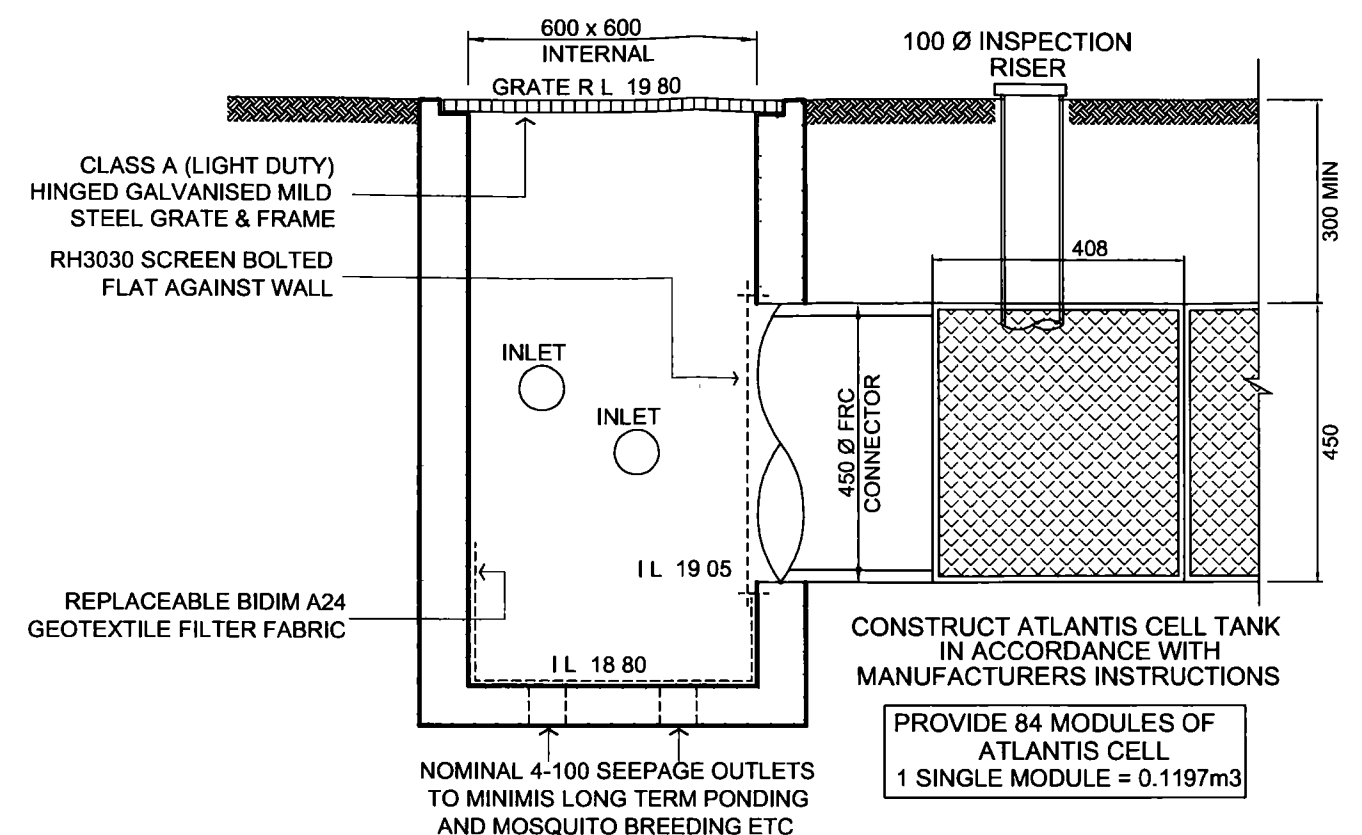
CIVIL ENGINEERING CONSULTANTS
P 02 8819 2565 F 02 8819 2597 E admin@alwdesign.com.au
M 0413 763 432 69A COWELLS LANE, ERMINGTON NSW 2115

PROJECT	PROPOSED RESIDENTIAL DWELLING AT LOT A, # 44 WYADRA AVENUE, FRESHWATER NSW		
DRAWING	SITE STORMWATER MANAGEMENT LAYOUT		
DESIGNED	DRAWN	CHECKED	ANDREW L WAHBE - BE (CIVIL) MIEAUST PENG
A W	M W	DRAWINGS NOT TO BE USED FOR CONSTRUCTION UNLESS SIGNED BY DESIGNING ENGINEER	
C	ISSUED FOR CC - REAR SYSTEM ADJUSTED		28/10/13
B	ISSUED FOR CONSTRUCTION CERTIFICATE		16/10/13
A	ISSUED FOR DEVELOPMENT APPLICATION		09/08/13
ISSUE	REVISION DESCRIPTION		APPR. DATE

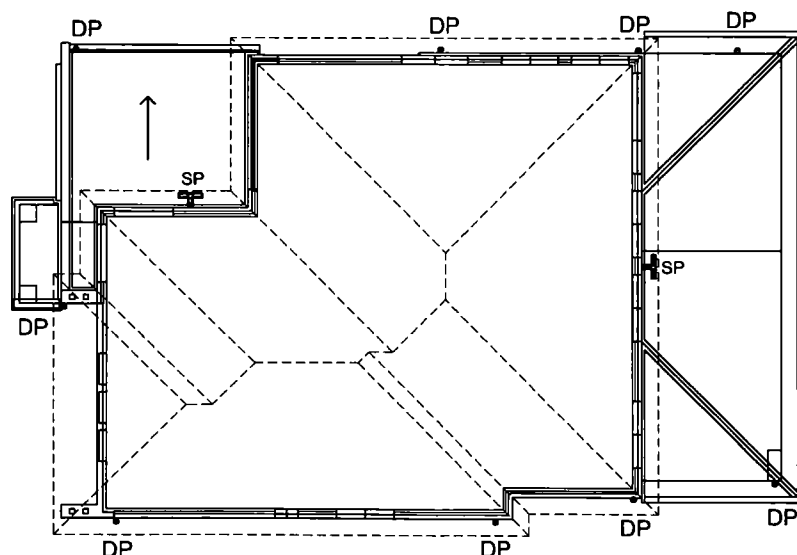
JOB NUMBER
SW13295
DRAWING NUMBER
SW13295 - S1



3,800L UNDERGROUND RAINWATER TANK
(REINFORCED CONCRETE) BY SYDNEY WATER TANKS

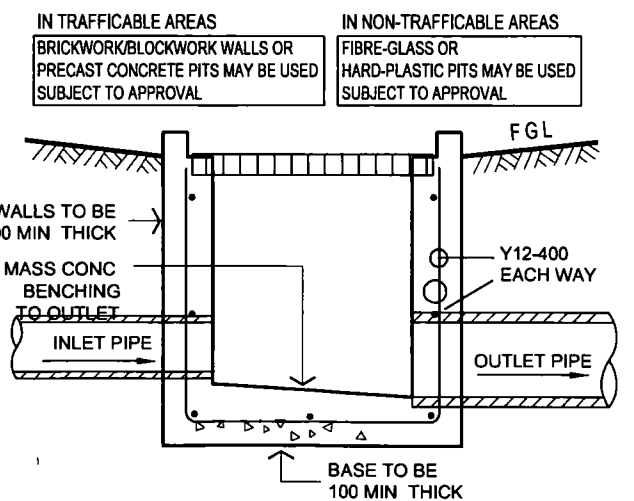


PIT P1 & ATLANTIS CELL DETAIL



ROOF & FIRST FLOOR LAYOUT
SCALE 1 200/A3

ABSORPTION PIT DESIGN						
WARRINGAH COUNCIL						
SW13295						
ATLANTIS CELL STYLE ABSORPTION						
# of Cell Modules proposed	84					
Area of Single Module	0.279	Storage per Module = 0.1197				
Base Area	23.436					
					Tank Storage=	10.0548
Available Storage (m^3) =		10.06				
Calculating Inflows, Outflows and Storages						
Contributing Area (m^2)=		275	F _R =		0.75	
Nominal Absorption Rate (l/s/m^2) =		0.24				
Design Absorption Rate (l/s/m^2) =		0.18		Outflow (l/s) =		4.21848
Time (min)	Intensity (mm/hr)	Inflow (l/s)	Inflow Vol (m^3)	Outflow Vol (m^3)	Required Vol (m^3)	Avail-Reqd (m^3)
5	240	18.33	5.50	1.27	4.23	5.83
6	225	17.19	6.19	1.52	4.67	5.39
10	188	14.36	8.62	2.53	6.09	3.98
20	143	10.92	13.11	5.06	8.05	2.02
30	119	9.09	16.36	7.59	8.77	1.29
40	108	8.25	19.80	10.12	9.68	0.39
50	98	7.49	22.46	12.66	9.80	0.26
60	83	6.34	22.83	15.19	7.64	2.42
90	69	5.27	28.46	22.78	5.68	4.38
120	55	4.20	30.25	30.37	-0.12	10.18
						0.26
Rainwater Tank						
Vol of Tank (m^3)		Offset Applies		Offset Allowance		
3.8		N		0		0.2586
NOTE THAT COLUMN Avail-Reqd MUST BE POSITIVE FOR ALL VALUES						
THE DESIGN IS		SATISFACTORY				



TYPICAL PIT SECTION

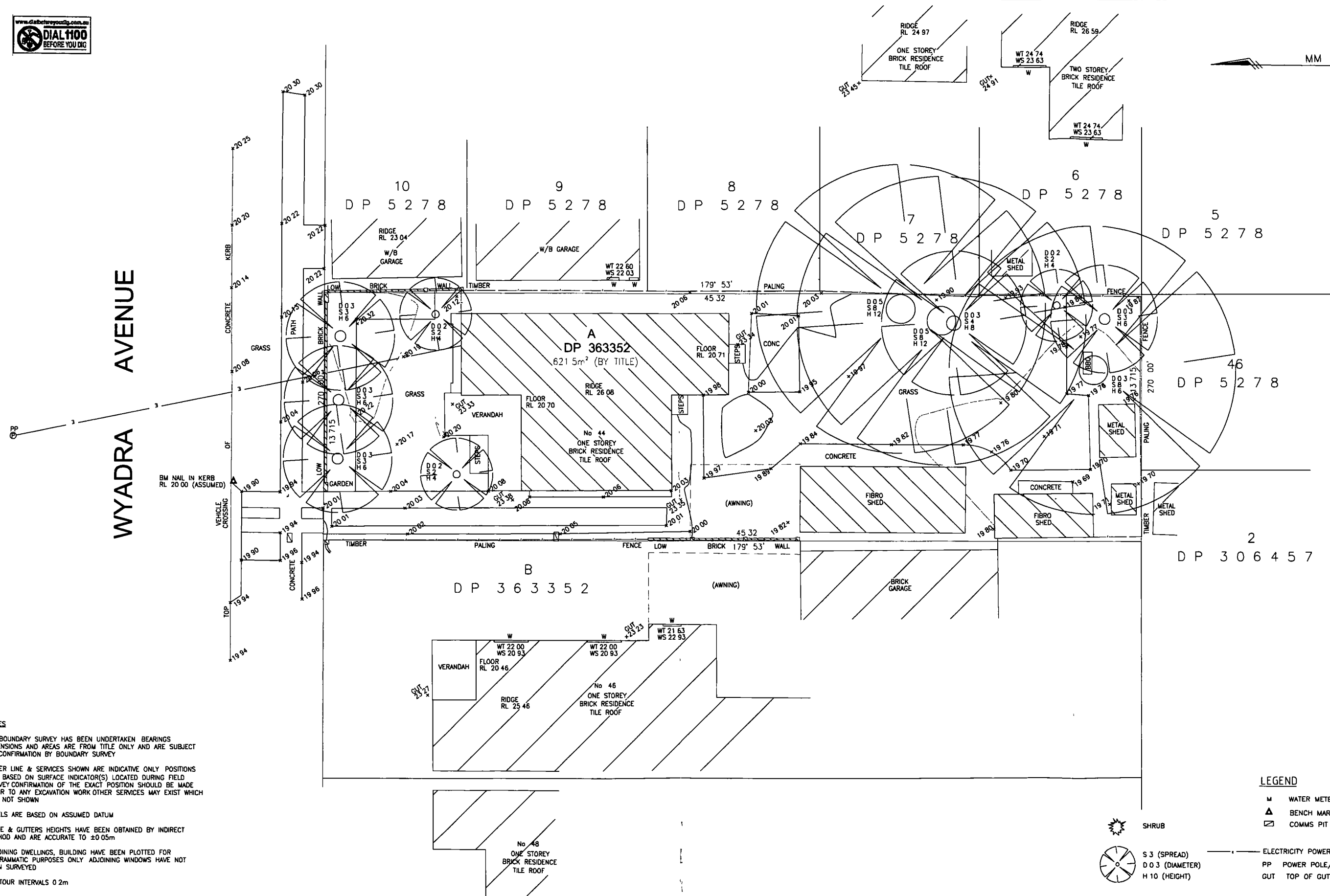
alwdesign

CIVIL ENGINEERING CONSULTANTS
P 02 8819 2565 F 02 8819 2597 E admin@alwdesign.com.au
M 0413 763 432 69A COWELLS LANE, ERMINGTON NSW 2115

PROJECT PROPOSED RESIDENTIAL DWELLING AT
LOT A, # 44 WYADRA AVENUE, FRESHWATER NSW
DRAWING ROOF LAYOUT & GENERAL DETAILS

DESIGNED	DRAWN	CHECKED	APPROVED
A W	M W		ANDREW L WAHBE - BE (CIVIL) MIEAUST PENG
C	ISSUED FOR CC - REAR SYSTEM ADJUSTED		
B	ISSUED FOR CONSTRUCTION CERTIFICATE		
A	ISSUED FOR DEVELOPMENT APPLICATION		
ISSUE	REVISION DESCRIPTION		APPR DATE

JOB NUMBER
SW13295
DRAWING NUMBER
SW13295 - S2



NOTES

NO BOUNDARY SURVEY HAS BEEN UNDERTAKEN BEARINGS DIMENSIONS AND AREAS ARE FROM TITLE ONLY AND ARE SUBJECT TO CONFIRMATION BY BOUNDARY SURVEY

SEWER LINE & SERVICES SHOWN ARE INDICATIVE ONLY POSITIONS ARE BASED ON SURFACE INDICATOR(S) LOCATED DURING FIELD SURVEY CONFIRMATION OF THE EXACT POSITION SHOULD BE MADE PRIOR TO ANY EXCAVATION WORK OTHER SERVICES MAY EXIST WHICH ARE NOT SHOWN

LEVELS ARE BASED ON ASSUMED DATUM

RIDGE & GUTTERS HEIGHTS HAVE BEEN OBTAINED BY INDIRECT METHOD AND ARE ACCURATE TO $\pm 0.05m$

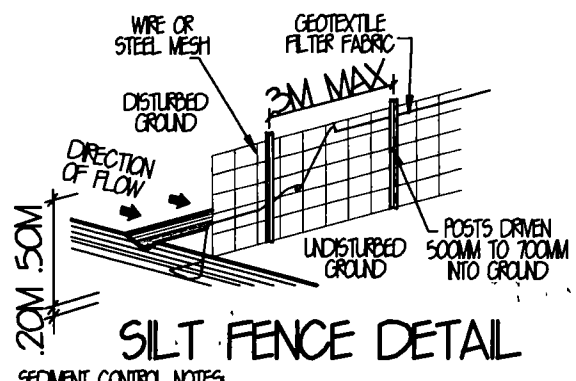
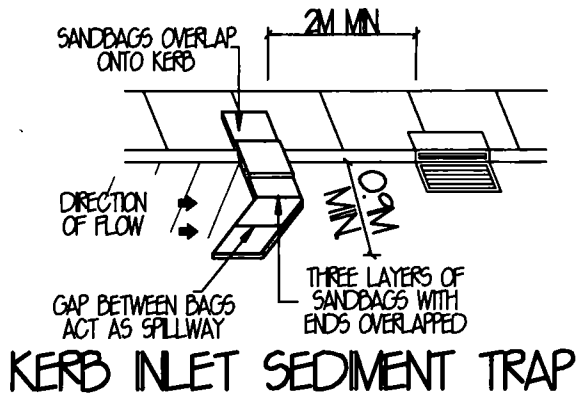
ADJOINING DWELLINGS, BUILDING HAVE BEEN PLOTTED FOR DIAGRAMMATIC PURPOSES ONLY ADJOINING WINDOWS HAVE NOT BEEN SURVEYED

CONTOUR INTERVALS 0.2m

LEGEND

- W WATER METER
- ▲ BENCH MARK
- COMMS PIT
- SHRUB
- S 3 (SPREAD)
- D 0.3 (DIAMETER)
- H 10 (HEIGHT)
- ELECTRICITY POWER LINE
- PP POWER POLE/SERVICES
- GUT TOP OF GUTTER

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---	--	--	---	--	---	---	-----------------------------------	--	--



SEEDMENT CONTROL NOTES

ALL EROSION AND SEDIMENTATION CONTROL MEASUREMENTS INCLUDING REVEGETATION AND STORAGE OF SOIL AND TOPSOIL SHALL BE IMPLEMENTED TO THE STANDARDS OF THE SOIL CONSERVATION OF NSW

ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AROUND AND STABILISED AS EARLY AS POSSIBLE DURING DEVELOPMENT

SEEDMENT TRAPS SHALL BE CONSTRUCTED AROUND ALL INLET PITS, CONSISTING OF 300MM WIDE X 300MM DEEP TRENCH

ALL SEDIMENT BASINS AND TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A MAXIMUM OF 60% FULL OF MATERIALS, INCLUDING THE MAINTENANCE PERIOD

ALL DISTURBED AREAS SHALL BE REVEGETATED AS SOON AS THE RELEVANT WORKS ARE COMPLETED

SOIL AND TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AND AREA WHERE WATER MAY CONCENTRATE

FILTER SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR APPROVED EQUIVALENT) BETWEEN POST AT 2M CENTRES) FABRIC SHALL BE BURIED 150MM ALONG ITS LOWER EDGE

- GENERAL NOTES**
- STORMWATER TO DISCHARGE INTO DESIGNATED DISCHARGE POINT TO PCA REQUIREMENTS
 - SEWER TO LOCAL AUTHORITIES REQUIREMENTS
 - ALL GROUND LINES ARE TO BE VERIFIED ON-SITE BY THE BUILDER
 - FINAL LOCATION OF BUILDINGS TO BE VERIFIED ON-SITE BY A REGISTERED SURVEYOR
 - WRITTEN DIMENSIONS TO TAKE PRECEDENCE OVER SCALING ANY PLAN DISCREPANCIES TO BE REFERRED BACK TO A&N DESIGN BEFORE PROCEEDING
 - SITE CLASSIFICATION 5
 - CUT AND FILL HOUSE PLATFORM APPROXIMATELY TO RL 20-0 GARAGE TO RL 19-914
 - HOUSE FLOOR LEVEL RL 20-385, 385MM ABOVE PLATFORM LEVEL, GARAGE FLOOR LEVEL APPROX RL 20-213, 213MM ABOVE PLATFORM LEVEL

SITE DATA

SITE AREA = 621-5 M²

PRIVATE OPEN SPACE REQUIRED = 60 M²

PROVIDED = 264-9 M²

LANDSCAPED AREA REQUIRED = 40% OR 248-6 M²

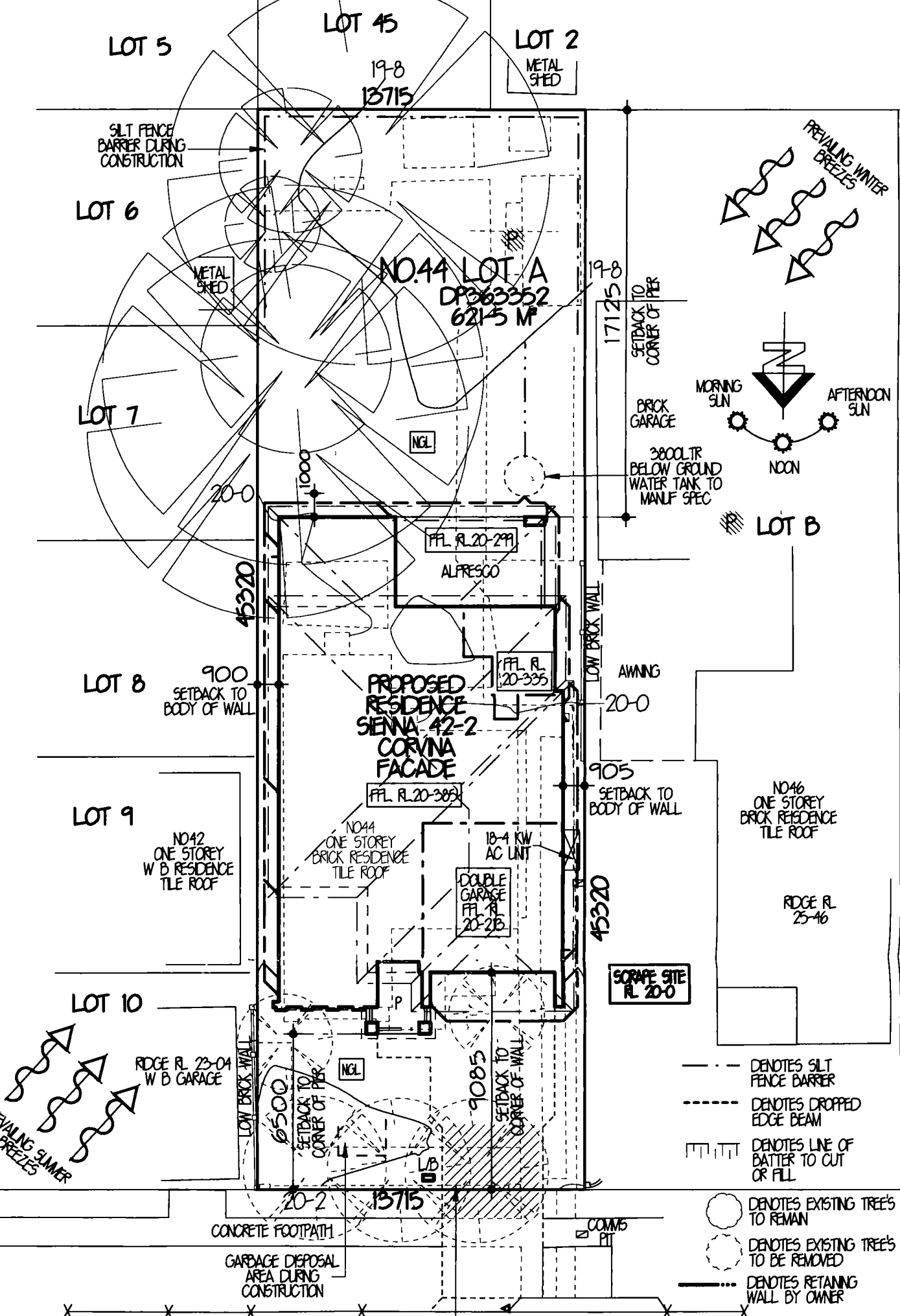
PROVIDED = 46% OR 285-9 M²

FINISHED CEILING LEVEL RL 25-905

FINISHED RIDGE LEVEL RL 28-475

MAX BUILDING HEIGHT 8500MM PROVIDED = 8320 MM

MAX WALL HEIGHT 5900 MM PROVIDED = 5780 MM



FLOOR AREAS

GROUND FLOOR AREA = 169-1 M² (NOT INCLUDING GARAGE)

GARAGE FLOOR AREA = 35-8 M²

PORCH FLOOR AREA = 7 M²

ALFRESCO FLOOR AREA = 23-6 M²

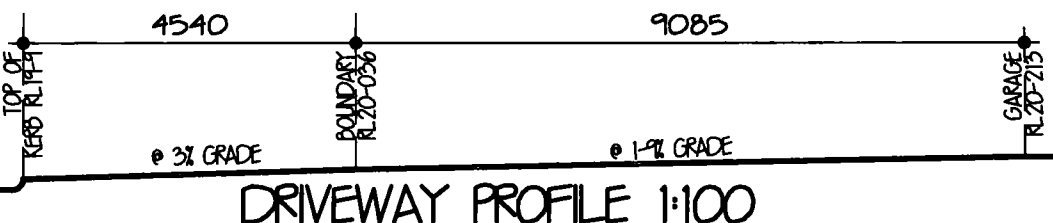
FIRST FLOOR AREA = 167-9 M²

TOTAL FLOOR AREA = 403-4 M² OR 43-4 SQS

WYADRA AVENUE **SITE ANALYSIS & SITE PLAN 1:200** (DRAINAGE PLAN)

DENOTES STORMWATER TO BE DIRECTED INTO RAINWATER TANK FINAL LOCATION TO BE VERIFIED ON SITE BY THE BUILDER

DENOTES STORMWATER TO BE DIRECTED AS PER HYDRAULIC ENG'S PLANS



Alkira Homes
A NEW GENERATION

PO BOX 417, KELLYVILLE NSW 2155
TEL: (02) 88501667 FAX: (02) 8841 4077
EMAIL: INFO@ALKIRAHOMES.COM.AU
WEB: WWW.ALKIRAHOMES.COM.AU

FOR **MR & MRS PUTICA**

AT **LOT A, 44 WYADRA AVENUE, FRESHWATER** DP363352

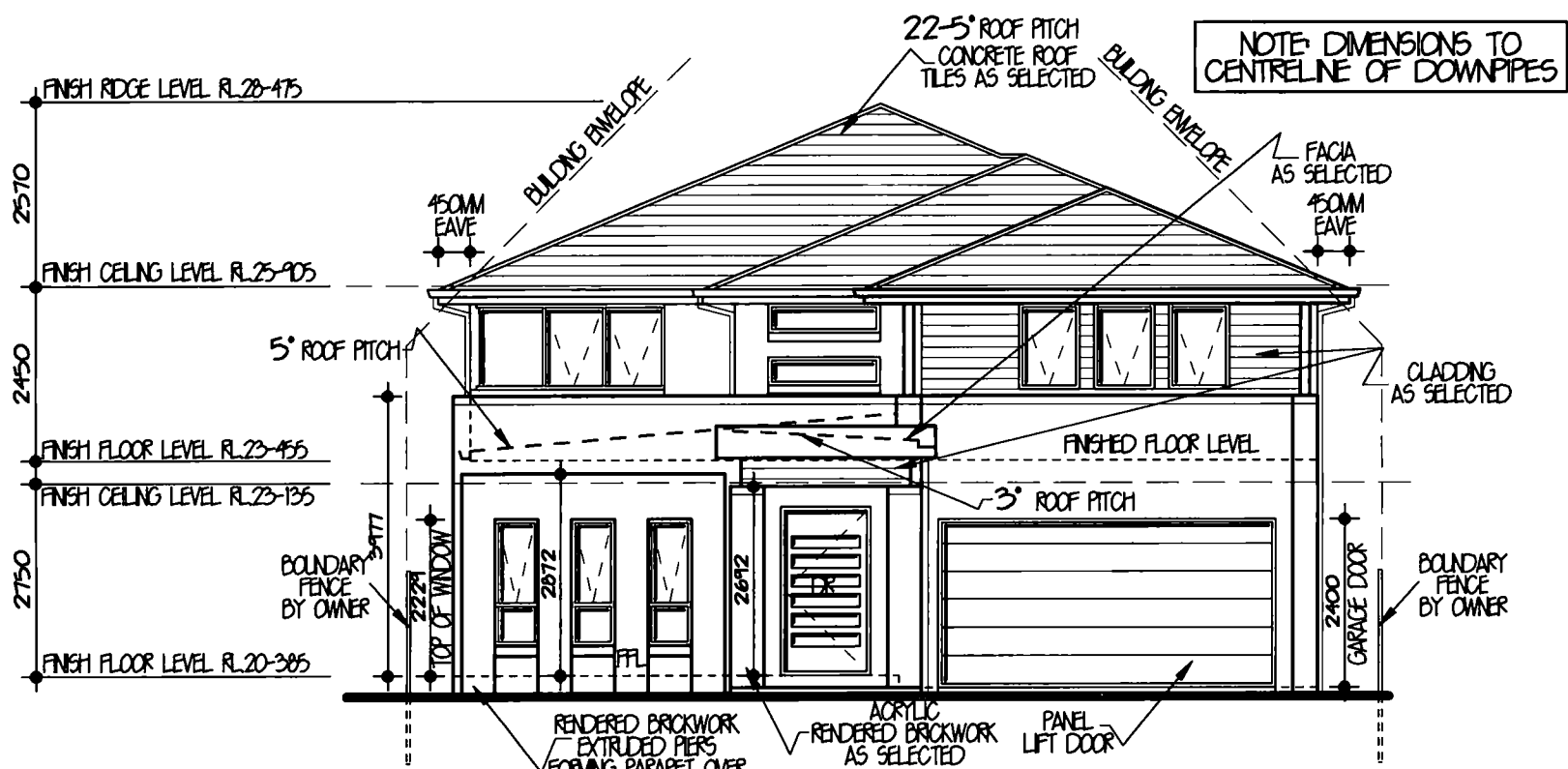
TYPE SIENNA 42-2	JOB NO 451
FACADE CORVINA	HAND RH
MASTER A17471	DWG NO A19767
	PAGE NO 1 OF 9

ADN SYDNEY

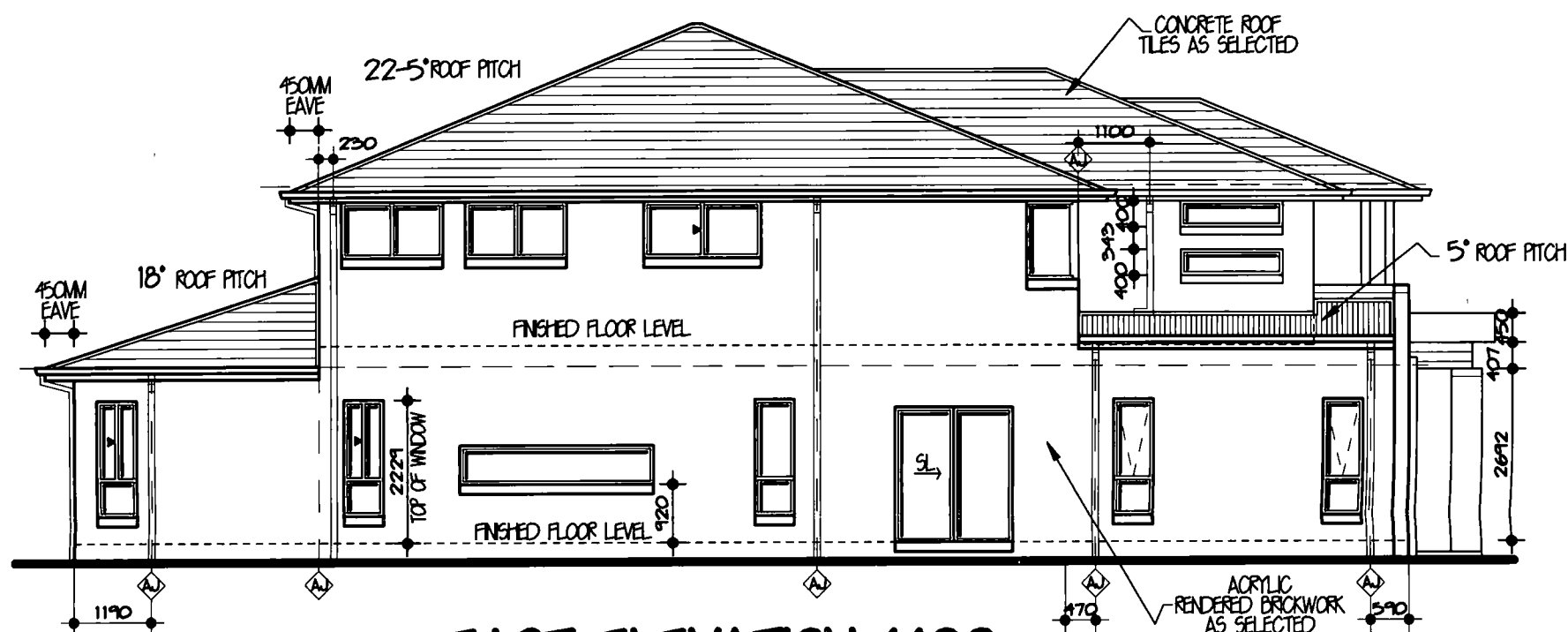
UNIT 39/5 INGLEWOOD PLACE,
NORWEST BUSINESS PARK,
BALLKHAM HILLS NSW 2153
PO BOX 6410 BALLKHAM HILLS
BUSINESS CENTRE NSW 2153
PHONE: (02) 8824 3533
FAX: (02) 8824 3544
EMAIL: INFO@ADNSYDNEY.COM.AU

ISSUE	DATE	REVISION	DRAWN
A	16-4-13	SITING	JD
B	04-06-13	CC PLANS	SK
C	12-07-13	AMENDMENTS	RR
D	25-07-13	BASIC	RR
E	12-08-13	AMENDMENT	AD
F	18-10-13	AMENDMENT	CY

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NORTH ELEVATION 1:100



EAST ELEVATION 1:100



WEST ELEVATION 1:100

Alkira Homes
A NEW GENERATION

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TEL: (02) 88501667 FAX: (02) 88501667
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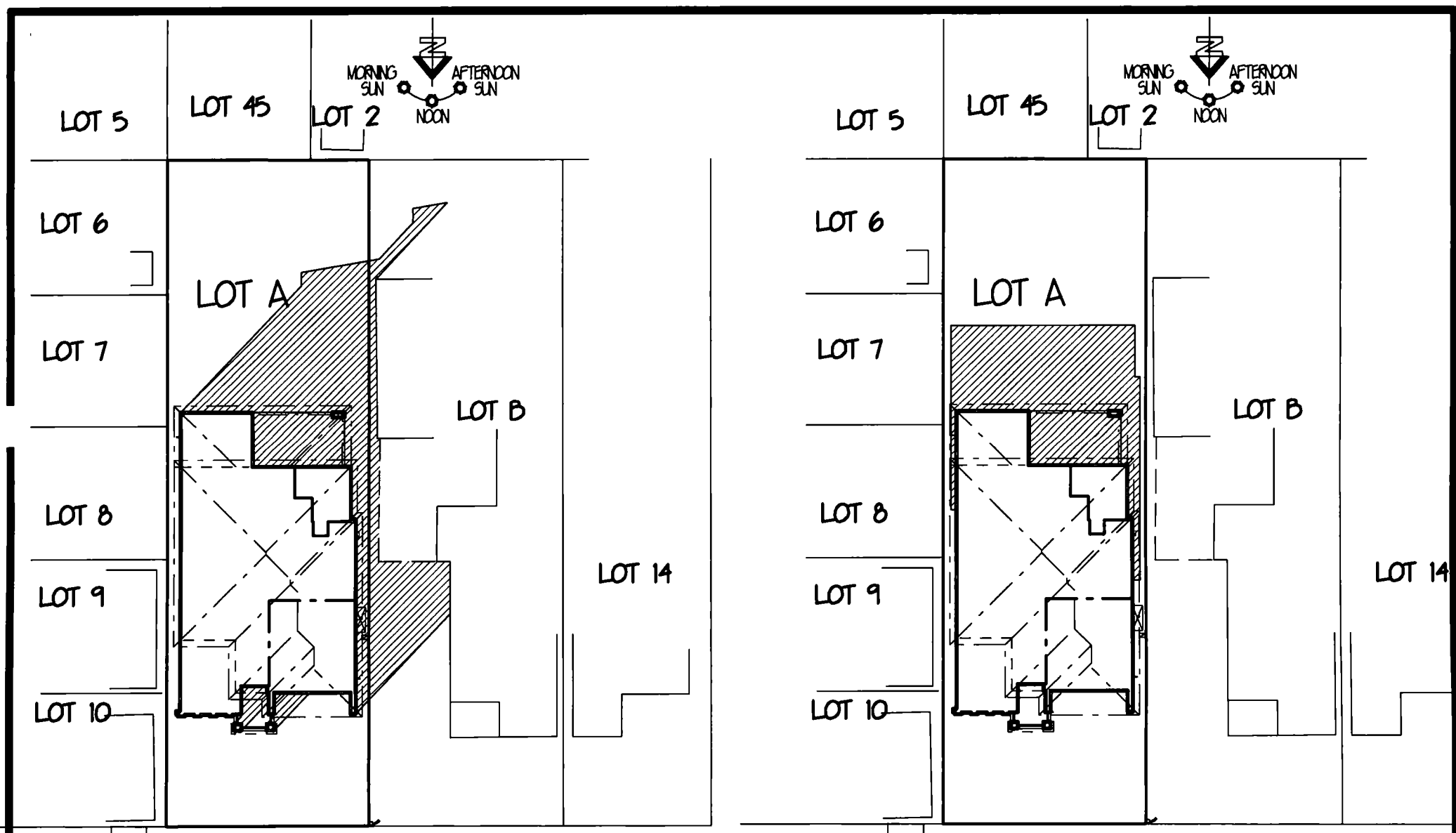
FOR	MR & MRS PUTICA		
AT	LOT A, 44 WYADRA AVENUE, FRESHWATER DP363352		
TYPE	SIENA 42-2	JOB NO.	451
FACADE	CORVINA	HAND	RH
MASTER	A17471	DWG NO.	A19767
		PAGE NO.	4 OF 9

44N
SYDNEY

UNIT 395 INGLEWOOD PLACE,
NORWEST BUSINESS PARK,
BALLKHAM HILLS NSW 2153
PO BOX 6410 BALLKHAM HILLS
BUSINESS CENTRE NSW 2153
PHONE: (02) 8824 3533
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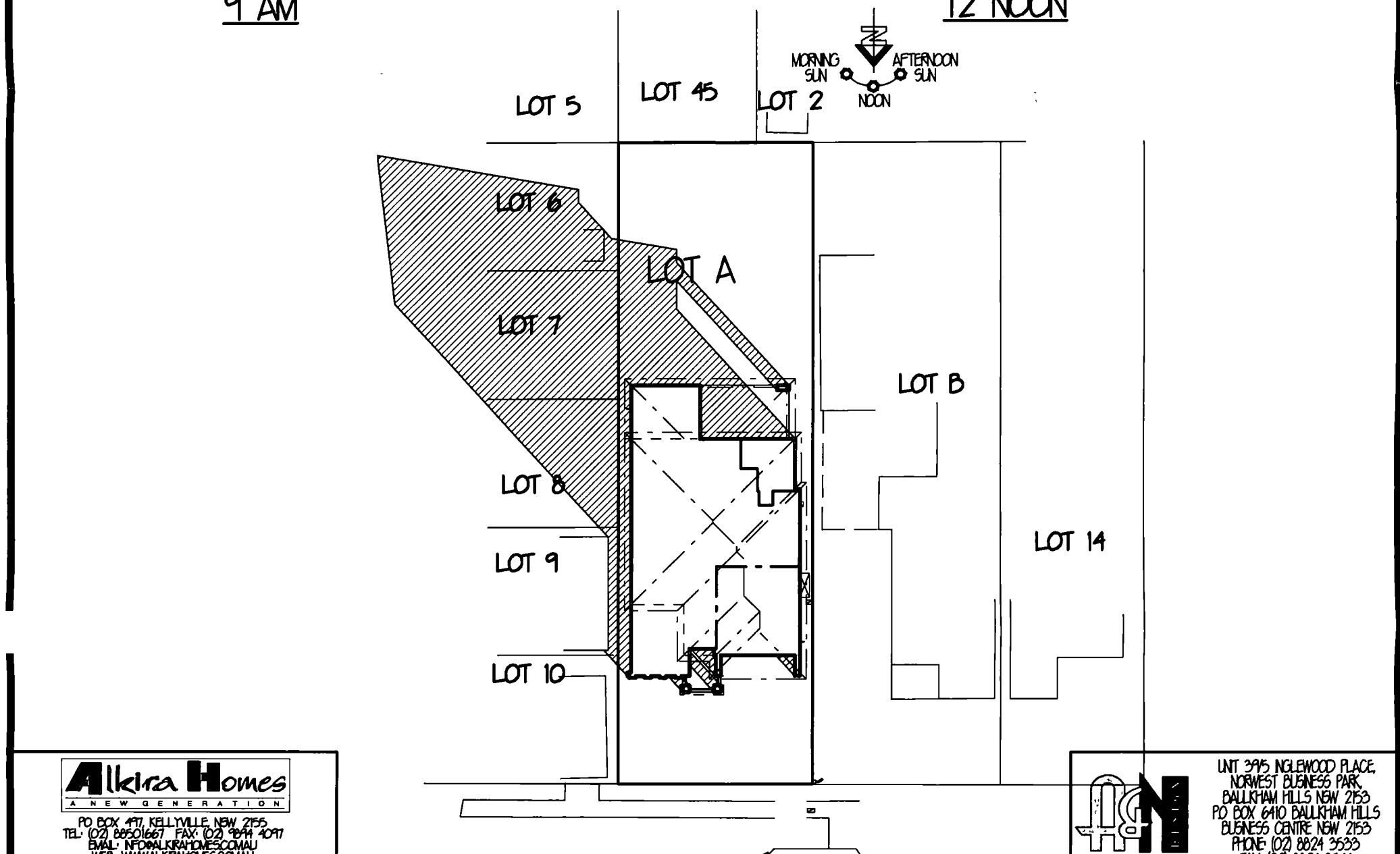
ISSUE	DATE	REVISION	DRAWN
A	16-4-13	SITING	JD
B	04-06-13	CC PLANS	SK
C	12-07-13	AMENDMENTS	RR
D	25-07-13	BASIC	RR
E	12-08-13	AMENDMENT	AD
F	18-10-13	AMENDMENT	CY

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WYADRA AVENUE
9 AM

WYADRA AVENUE
12 NOON



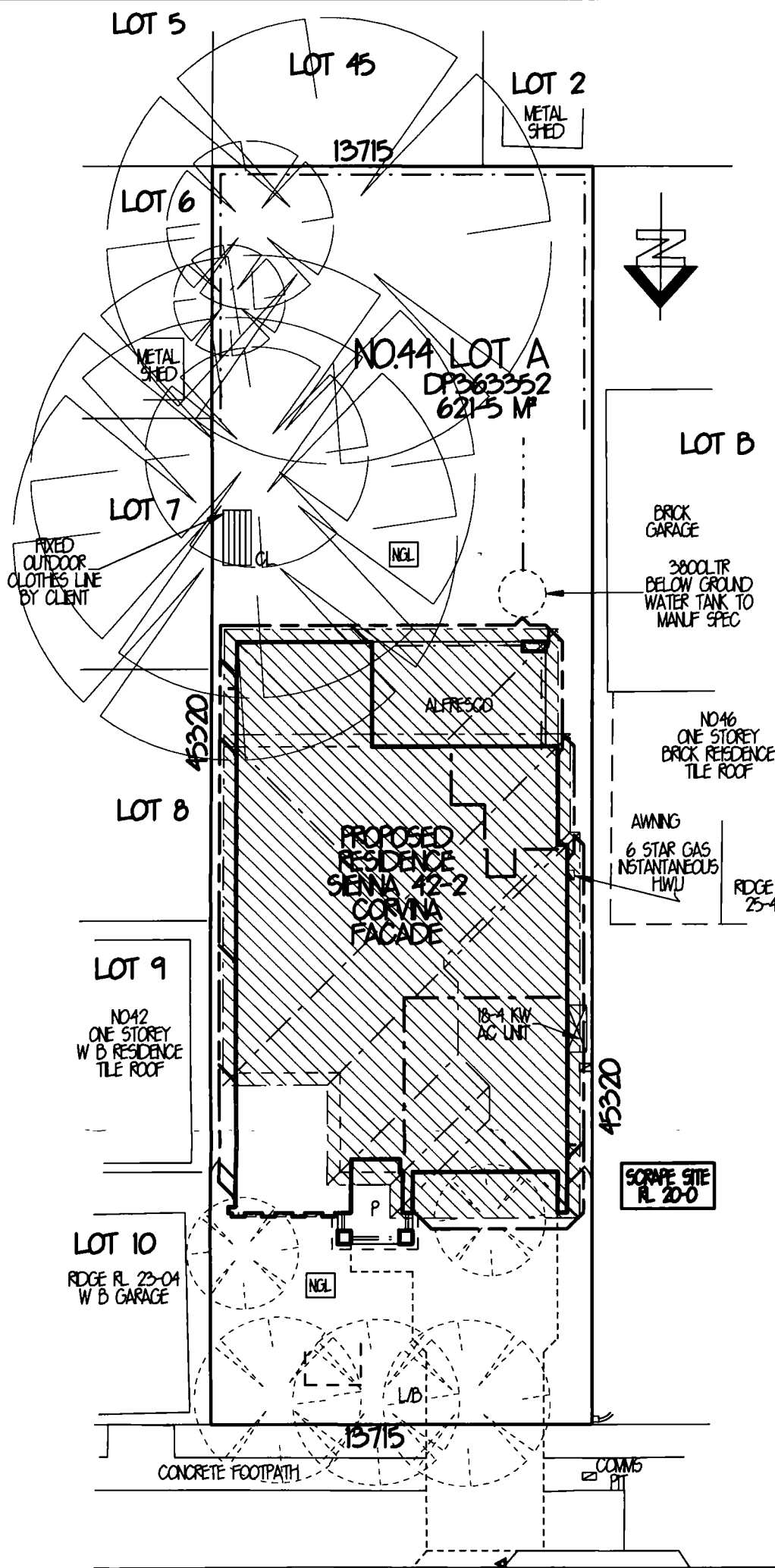
WYADRA AVENUE
3 PM

SHADOW DIAGRAMS JUNE 21ST MID-WINTER 1:350

SHADOW DIAGRAMS TO BE USED AS A GUIDE ONLY SITE CONDITIONS MAY CAUSE VARIATIONS

PO BOX 471, KELLYVILLE NSW 2155 TEL: (02) 88501667 FAX: (02) 8854 4097 EMAIL: INFO@ALKIRAHOMES.COM.AU WEB: WWW.ALKIRAHOMES.COM.AU		
FOR MR & MRS PUTICA		
AT LOT A, 44 WYADRA AVENUE, FRESHWATER DP363352		
TYPE	SIENNA 42-2	JOB NO 451
FACADE	CORVINA	HAND R1
MASTER A17471	DWG NO A19767	PAGE NO 6 OF 9

UNIT 39/5 INGLEWOOD PLACE, NORWEST BUSINESS PARK, BALLKHAM HILLS NSW 2153 PO BOX 6410 BALLKHAM HILLS BUSINESS CENTRE NSW 2153 PHONE: (02) 8824 3533 FAX: (02) 8824 3544 EMAIL: INFO@DESIGNSYDNEY.COM.AU			
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WYADRA AVENUE
BASIC PLAN 1:200
 (DRAINAGE PLAN)

(BASIX CERTIFICATE NUMBER 4943996)

STORMWATER / WATER

COLLECTION OF RAINWATER & STORMWATER
 THE APPLICANT MUST INSTALL A RAINWATER TANK ON THE SITE. THE RAINWATER TANK MUST MEET, AND BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ALL APPLICABLE REGULATORY AUTHORITIES

RAINWATER TANK:
 THE APPLICANT MUST CONFIGURE THE RAINWATER TANK TO COLLECT RUNOFF FROM AT LEAST 100 SQM OF THE ROOF AREA OF THE DWELLING

THE APPLICANT MUST CONNECT THE RAINWATER TANK TO ALL THE TOILETS IN THE DEVELOPMENT, SO THAT RAINWATER CAN BE USED FOR TOILET FLUSHING

THE APPLICANT MUST CONNECT THE RAINWATER TANK TO THE COLD WATER TAP THAT SUPPLIES EACH CLOTHES WASHING MACHINE IN THE DEVELOPMENT, SO THAT RAINWATER CAN BE USED FOR CLOTHES WASHING

THE APPLICANT MUST CONNECT THE RAINWATER TANK TO A LEAST ONE OUTDOOR TAP IN THE DEVELOPMENT SO THAT RAINWATER CAN BE USED TO IRRIGATE VEGETATED AREAS OF THE SITE

THE RAINWATER TANK MUST HAVE A CAPACITY OF AT LEAST 3800 LITRES

SHOWERHEADS:
 THE APPLICANT MUST INSTALL SHOWERHEADS WITH A MINIMUM RATING OF 3 STAR (75 LITRE PER MIN) IN ALL SHOWERS IN THE DEVELOPMENT

TOILETS:
 THE APPLICANT MUST INSTALL A TOILET FLUSHING SYSTEM WITH A MINIMUM RATING OF 4 STAR IN EACH TOILET IN THE DEVELOPMENT

TAP FITTINGS:
 THE APPLICANT MUST INSTALL TAPS WITH A MINIMUM FLOW RATE OF 3 STAR IN THE KITCHEN IN THE DEVELOPMENT

THE APPLICANT MUST INSTALL BATHROOM TAPS (OTHER THAN SHOWERHEADS) WITH A MINIMUM FLOW RATE OF 3 STAR IN EACH BATHROOM IN THE DEVELOPMENT

ENERGY

HOT WATER:
 THE APPLICANT MUST INSTALL THE FOLLOWING HOT WATER SYSTEM IN THE DEVELOPMENT:
 GAS INSTANTANEOUS - 6 STARS (OR ONE WITH A HIGHER STAR RATING)

ACTIVE COOLING:
 THE APPLICANT MUST INSTALL THE FOLLOWING COOLING SYSTEMS IN THE DEVELOPMENT, OR SYSTEMS WITH A HIGHER ENERGY RATING: 1 LIVING AREA: 3 PHASE AIRCONDITIONING ENERGY RATING: EER < 25, 1 BEDROOM: 3 PHASE AIRCONDITIONING ENERGY RATING: EER < 25. THE COOLING SYSTEM MUST PROVIDE FOR DAY/NIGHT ZONING BETWEEN LIVING AREAS AND BEDROOM

ACTIVE HEATING:
 THE APPLICANT MUST INSTALL THE FOLLOWING HEATING SYSTEMS IN THE DEVELOPMENT, OR SYSTEMS WITH A HIGHER ENERGY RATING: 1 LIVING AREA: 3 PHASE AIRCONDITIONING ENERGY RATING: EER < 25, 1 BEDROOM: 3 PHASE AIRCONDITIONING ENERGY RATING: EER < 25. THE HEATING SYSTEM MUST PROVIDE FOR DAY/NIGHT ZONING BETWEEN LIVING AREAS AND BEDROOM

VENTILATION:
 THE APPLICANT MUST INSTALL THE FOLLOWING EXHAUST SYSTEMS IN THE DEVELOPMENT:
 AT LEAST 1 BATHROOM: INDIVIDUAL FAN DUCTED TO FACADE OR ROOF: OPERATION CONTROL: MANUAL SWITCH ON/OFF
 KITCHEN: INDIVIDUAL FAN DUCTED TO FACADE OR ROOF: OPERATION CONTROL: MANUAL SWITCH ON/OFF
 LAUNDRY: NATURAL VENTILATION ONLY, OR NO LAUNDRY: OPERATION CONTROL: N/A

NATURAL LIGHTING:
 THE APPLICANT MUST INSTALL A WINDOW AND/OR SKYLIGHT IN 3 BATHROOM(S)/TOILET(S) IN THE DEVELOPMENT FOR NATURAL LIGHTING
 THE APPLICANT MUST INSTALL A WINDOW AND/OR SKYLIGHT IN THE KITCHEN OF THE DWELLING FOR NATURAL LIGHTING

THE APPLICANT MUST INSTALL A WINDOW AND/OR SKYLIGHT IN THE KITCHEN OF THE DWELLING FOR NATURAL LIGHTING

COOKING:
 THE APPLICANT MUST INSTALL A GAS COOKTOP & ELECTRIC OVEN IN THE KITCHEN OF THE DWELLING

OTHER:
 THE APPLICANT MUST INSTALL A FIXED OUTDOOR CLOTHES DRYING LINE AS PART OF THE DEVELOPMENT

THERMAL COMFORT

THE APPLICANT MUST CONSTRUCT THE DEVELOPMENT IN ACCORDANCE WITH THE REQUIREMENTS SET OUT IN THE ASSESSOR CERTIFICATE N° 1005523426 AND IN ACCORDANCE WITH THOSE ASPECTS OF THE DEVELOPMENT APPLICATION OR APPLICATION FOR COMPLYING DEVELOPMENT CERTIFICATE WHICH WERE USED TO CALCULATE THE VALUES SHOWN IN THE ASSESSOR CERTIFICATE N° 1005523426

INSULATION

R1-5 WALL INSULATION
 R3-0 CEILING INSULATION
 (EXCLUDING GARAGE & ALFRESCO)

BASIX SCORE

WATER - 41% (TARGET 40%)
 THERMAL COMFORT - PASS (TARGET PASS)
 ENERGY - 41% (TARGET 40%)

DENOTES 100M² OF ROOF TO BE COLLECTED

Alkira Homes
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 WEB: WWW.ALKIRAHOMES.COM.AU

FOR **MR & MRS PUTICA**
 AT **LOT A, 44 WYADRA AVENUE, FRESHWATER** DP363352
 TYPE **SIENNA 42-2** JOB NO **451**
 FACADE **CORVINA** HAND **R1**
 MASTER **A17471** DWG NO **A1767** PAGE NO **9 OF 9**

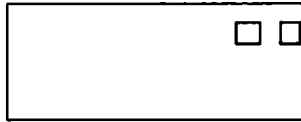
ADN
 SYDNEY

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SINGLE STOREY
W/B GARAGE
LOT 9



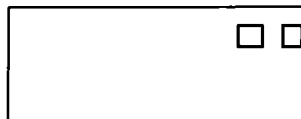
9 AM

SINGLE STOREY
W/B GARAGE
LOT 9



10 AM

SINGLE STOREY
W/B GARAGE
LOT 9



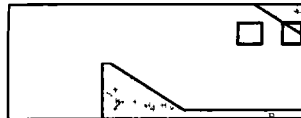
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SINGLE STOREY
W/B GARAGE
LOT 9



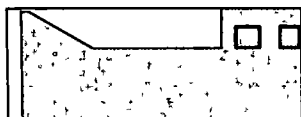
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SINGLE STOREY
W/B GARAGE
LOT 9



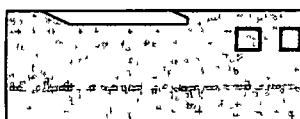
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SINGLE STOREY
W/B GARAGE
LOT 9



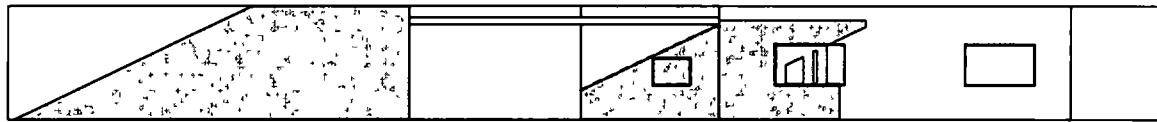
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SINGLE STOREY
W/B GARAGE
LOT 9



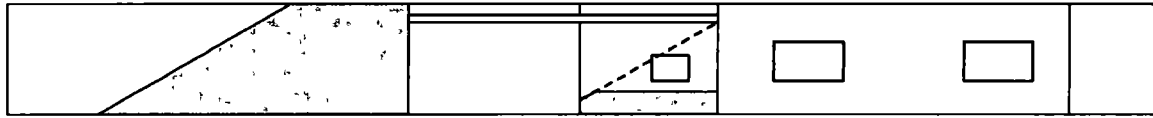
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SINGLE STOREY
BRICK RESIDENCE
LOT B NO. 46



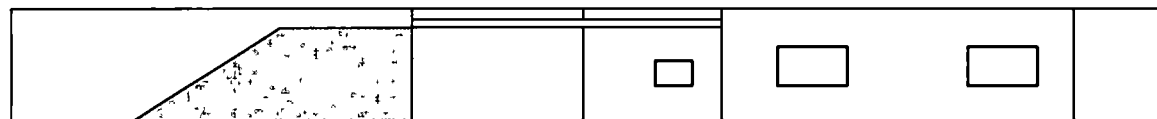
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SINGLE STOREY
BRICK RESIDENCE
LOT B NO. 46



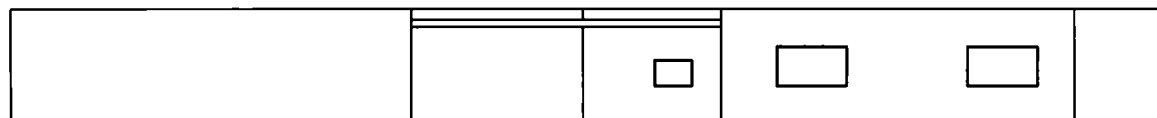
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SINGLE STOREY
BRICK RESIDENCE
LOT B NO. 46



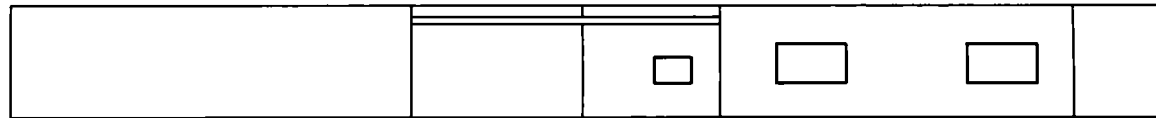
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SINGLE STOREY
BRICK RESIDENCE
LOT B NO. 46



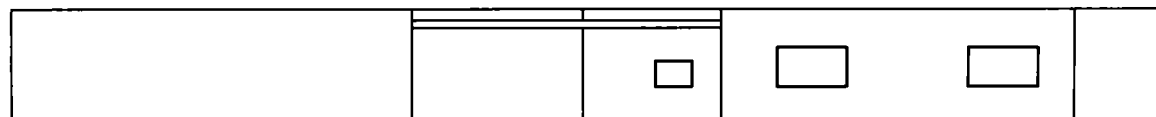
12 NOON

SINGLE STOREY
BRICK RESIDENCE
LOT B NO. 46



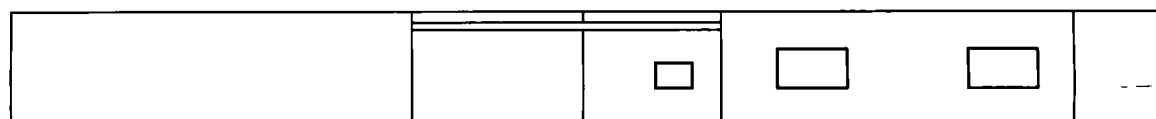
1 PM

SINGLE STOREY
BRICK RESIDENCE
LOT B NO. 46



2 PM

SINGLE STOREY
BRICK RESIDENCE
LOT B NO. 46



3 PM

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FOR
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AT LOT A 44 WYADRA AVENUE,
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TYPE SENNA 42-2 JOB NO 451
FACADE CORVINA HAND RH
MASTER A17471 DWG NO A19767 PAGE NO 1 OF 1

ELEVATIONAL SHADOW DIAGRAMS JUNE 22ND MID-WINTER 1:200

SHADOW DIAGRAMS TO BE USED AS A GUIDE ONLY SITE CONDITIONS MAY CAUSE VARIATIONS

----- SHADOW CAST BY ITSELF

AGN
SYDNEY

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ISSUE	DATE	REVISION	DRAWN
A	4-9-13	ELEVATIONAL SHADOWS	MD

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