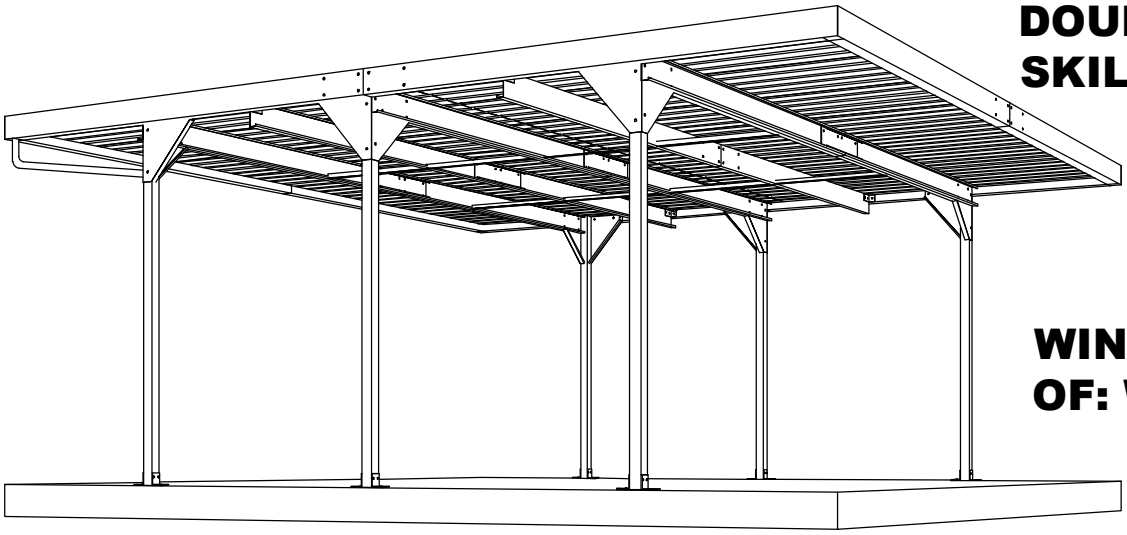
Absco Industries
Skillion Carport Model: CPDW50

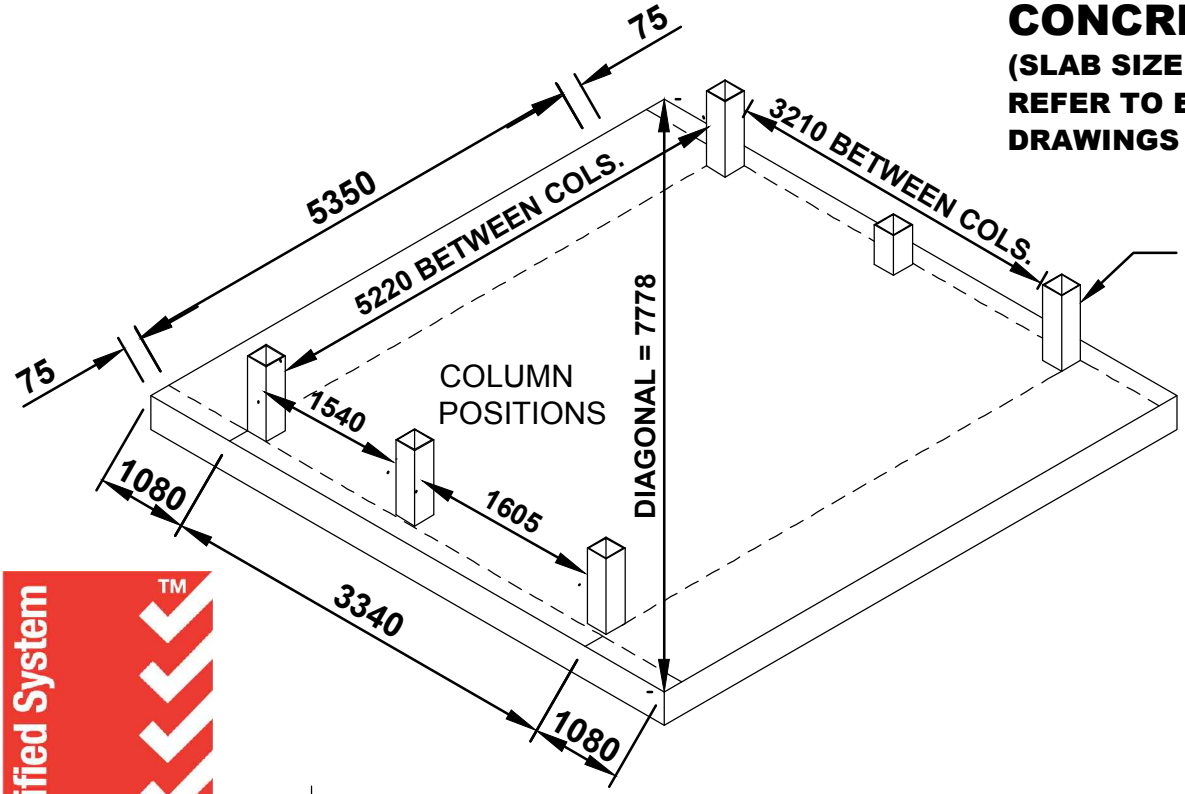


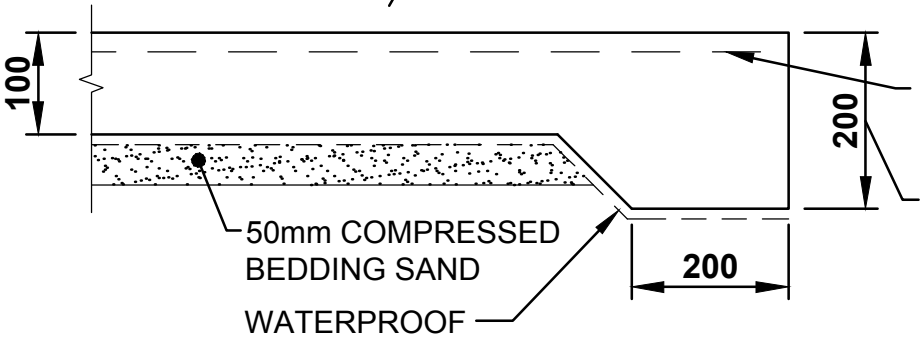
DOUBLE CARPORT- SKILLION ROOF

WIND LOADINGS OF: W 50C - C2

CONCRETE SLAB:

(SLAB SIZE 5500 x 5500 - REFER TO ENGINEER'S DRAWINGS ATTACHED)





Certified System™

Quality ISO 9001

SAI GLOBAL

FOOTINGS:

WHERE NO CONCRETE SLAB IS PROPOSED, CONCRETE FOOTINGS WITH DIMENSIONS SHOWN ON THIS PAGE MAY BE USED.

FOOTING DIMENSIONS:

900 SQUARE x 500 DEEP

SITE PREPARATION

- Local council approval must be obtained prior to construction of the carport. Once you have selected your site you will need to create and lodge a site plan to your local council or certifier. You will also have to attach a copy of the engineering drawings at the back of these instructions to your site plan.

- The site for the carport must be level, refer to concrete and foundation notes on engineers drawing 06205-003-CP03.

GENERAL INSTRUCTIONS

- Before commencing any assembly, read through these instructions and engineers drawings in detail to gain a thorough understanding of assembly methods and associated details.

- Some components have been pre-punched. Some 10mm holes will still have to be drilled. It may be easier to drill a small pilot hole first.

- Measure, and check off all components using the parts lists on the following pages prior to commencement. To prevent damage in transit, some components may be packed inside others, almost hidden. Carefully examine inside each component to ensure that you have located every item. If a discrepancy is found, contact Absco industries immediately.

TOOLS REQUIRED

- SPIRIT LEVEL
- SPANNERS
- 10mm MASONARY DRILL BIT
- TAPE MEASURE
- CLAMP OR VICE GRIPS
- HACKSAW

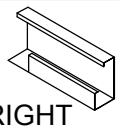
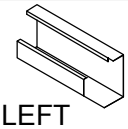
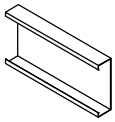
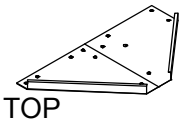
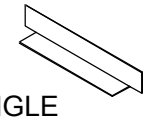
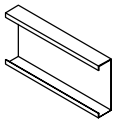
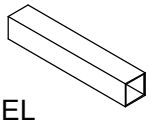
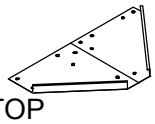
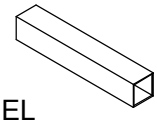
10mm DRILL BIT AND
MASONRY DRILL BIT

A NOTE ON SAFETY

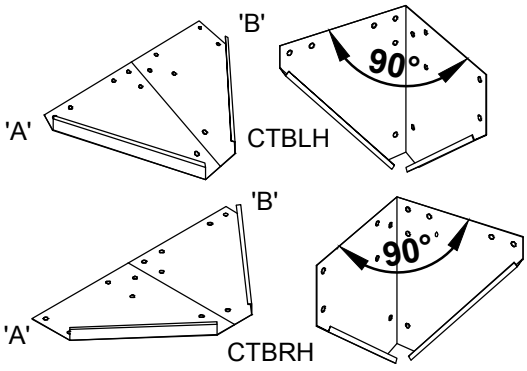
- Some parts may have sharp edges. It is advisable to wear gloves when handling these items and safety glasses if drilling holes. Sensible shoes are highly recommended.

- It is highly recommended to erect the carport with at least two or more people.

COMPONENTS PACKING LIST - CHECK OFF ALL COMPONENTS

CPDW50 DOUBLE CARPORT FRAME COMPONENTS							
QTY	COMPONENT DESCRIPTION	PART No.	CHECK	QTY	COMPONENT DESCRIPTION	PART No.	CHECK
4	 EDGE BEAM RIGHT HAND L= 2750	EBRH		4	 EDGE BEAM LEFT HAND L= 2750	EBLH	
6	 CROSS BEAM L= 2610	CB		8	 EDGE BEAM SPLICE PLATE L= 608	EBSP	
3	 COLUMN TOP BRACKET LEFT HAND	CTBLH		8	 CROSS BEAM SPLICE PLATE L= 608	CBSP	
8	 30 x 30 ANGLE ROOF BRACE L=815	ARB		10	 4 = 1.2mm 6 = 1.0mm CROSS BEAM L= 2675	CB	
2	 65 x 65 STEEL COLUMN L = 2200	RHS		3	 COLUMN TOP BRACKET RIGHT HAND	CTBRH	
4	 65 x 65STEEL COLUMN L = 2250	RHS		16	 STEEL SHEET L= 2820	SHEET	

BEND COLUMN TOP BRACKETS (CTBLH & CTBRH)



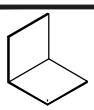
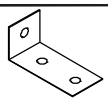
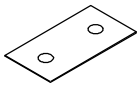
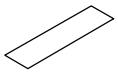
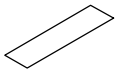
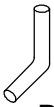
BEND EACH COLUMN TOP BRACKET ALONG THE SLOTTED CENTRE LINE, SIMPLY BY HOLDING THE BRACKETS AT POINTS A & B AS SHOWN.

APPLY SUFFICIENT PRESSURE TO FORM A 90 DEGREE ANGLE ALONG THE BEND LINE.

ENSURE THAT THE EXISTING PRE-FOLDED EDGES ALWAYS FACE INWARDS. THE END RESULT WILL GIVE YOU TWO LEFT HAND AND TWO RIGHT HAND BRACKETS.

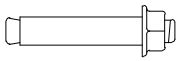
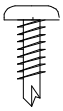
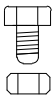
COMPONENTS PACKING LIST - CHECK OFF ALL COMPONENTS

CPDW50 DOUBLE CARPORT FRAME ACCESSORIES

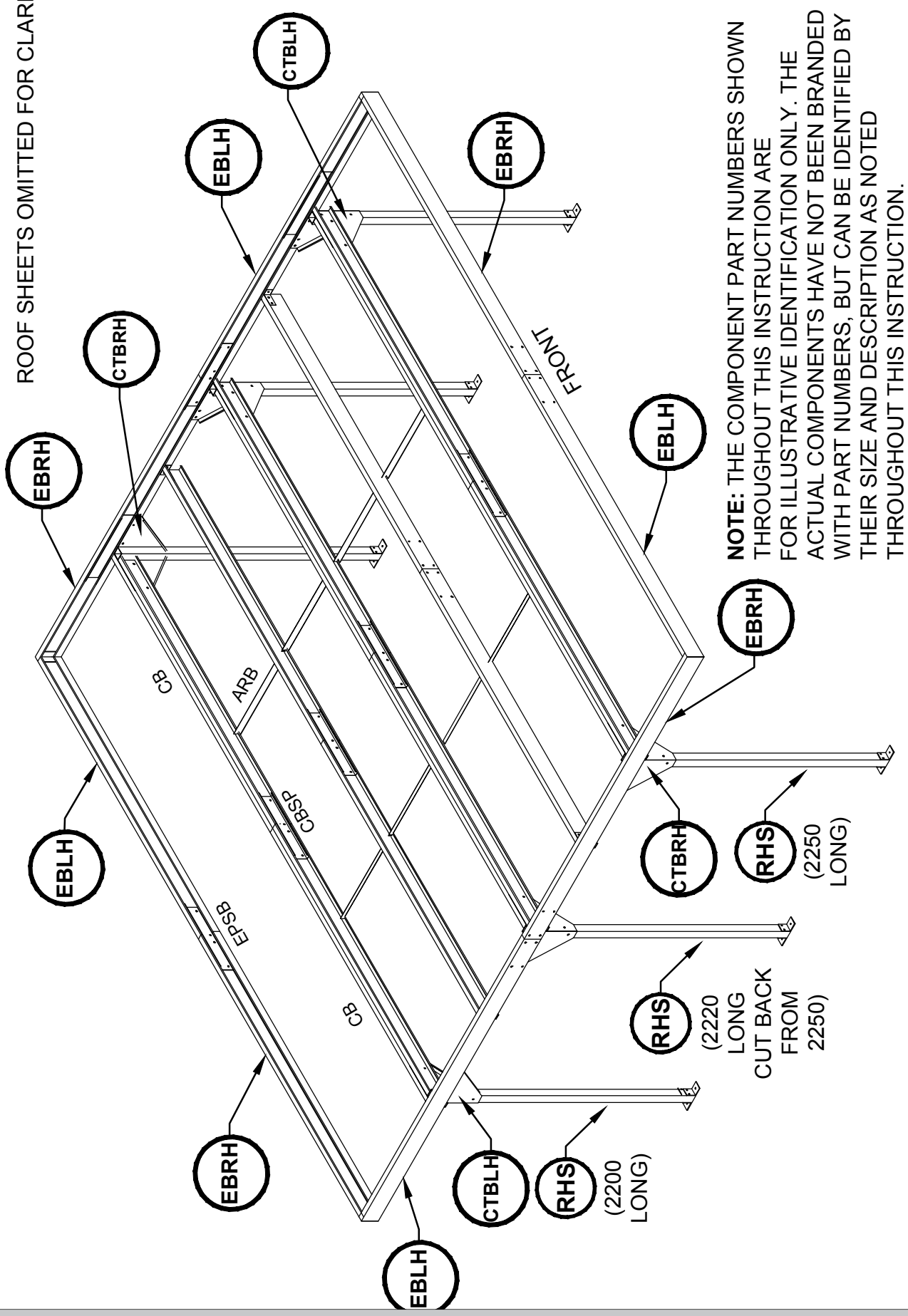
QTY	COMPONENT DESCRIPTION	PART No.	CHECK	QTY	COMPONENT DESCRIPTION	PART No.	CHECK
4	 JOINER ANGLE 50 x 50 L = 45mm (EDGE BEAM INNER CORNER CONNECTOR)	JA-1		4	 JOINER ANGLE 50 x 50 L = 100mm (EDGE BEAM OUTER CORNER CONNECTOR)	JA-2	
8	 JOINER ANGLE 100 x 50 L = 50mm (MID CROSS BEAM TO EDGE BEAM CONNECTOR)	JA-3		4	 50mm JOINER PLATE L = 100mm (BACKING SUPPORT PLATE FOR JA-3)	JP	
12	 75 x 75 ANGLE COLUMN BASE BRACKET L= 65mm (CONNECT COLUMNS TO CONCRETE)	CBB		16	 25mm WIDE FLAT STRIPS L = 270mm (FOLD FOR LATER USE AS ROOF BRACKETS)	RB	
2	 25mm WIDE FLAT STRIPS L = 270mm (FOLD FOR LATER USE AS DOWNPIPE STRAPS)	DS		1	 50mm PVC DOWNPIPE L = 1800mm	DP-1	
1	 50mm PVC DOWNPIPE L = 900mm	DP-2		2	 50mm PVC DOWNPIPE 90° bend	DP-3	
1	 50mm PVC DOWNPIPE 45° bend	DP-4		1	50mm ROUND GALV. GUTTER DROP FOR DOWNPIPE 	DP-5	

COMPONENTS PACKING LIST - CHECK OFF ALL COMPONENTS

CPDW50 DOUBLE CARPORT FRAME ACCESSORIES (CONT.)

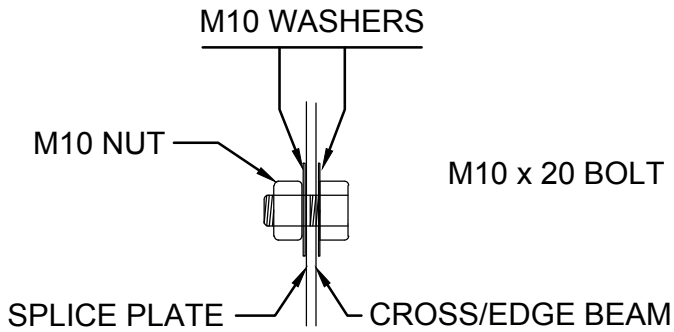
QTY	COMPONENT DESCRIPTION	CHECK	QTY	COMPONENT DESCRIPTION	CHECK
12	 12mm DYNABOLTS		240	 NEOPREHNE WASHERS	
320	 10mm x 16mm WAFER HEAD SELF DRILLING TEK SCREWS		370	 WASHERS	
24	 10mm x 80mm BOLTS & NUTS		1	ASSEMBLY INSTRUCTIONS	
152	 10mm x 20mm BOLTS & NUTS				

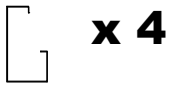
CARPORT COMPONENTS



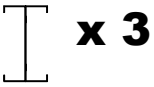
STEP 1.

JOIN THE EDGE BEAMS AND CROSS BEAMS TOGETHER WITH THE SPLICE PLATES, USING M10 x 20 BOLTS, NUTS AND WASHERS AS SHOWN.




x 4


x 2


x 3

INSERT FOUR EXTRA EDGE BEAM SPLICE PLATES IN THE TWO SIDE EDGE BEAMS FOR LATER CONNECTION **(REFER STEP 3A)**

ON THE THREE DOUBLE CROSS BEAMS AT EACH END, USE THE PRE-PUNCHED 2610mm SECTION AS A TEMPLATE TO DRILL FOUR 10mm HOLES INTO THE 2675mm SECTION. THESE HOLES WILL LATER BE USED FOR CONNECTION TO COLUMN TOP BRACKETS.

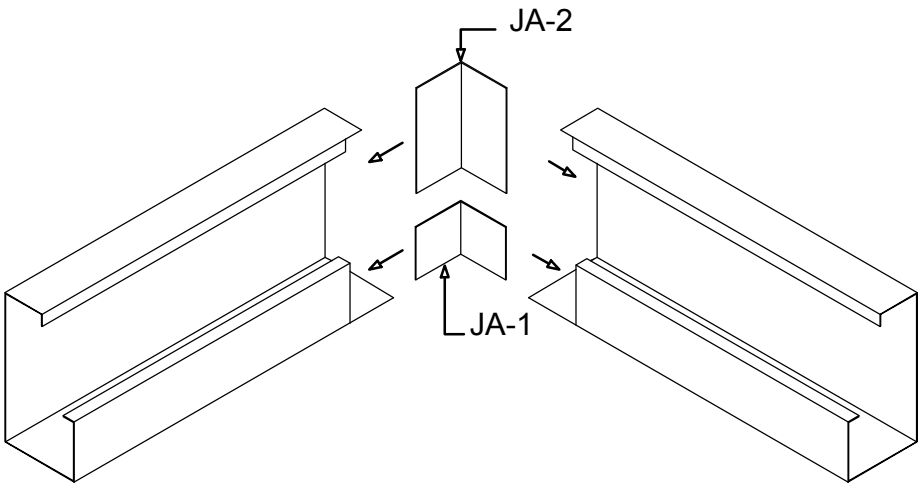
STEP 2.

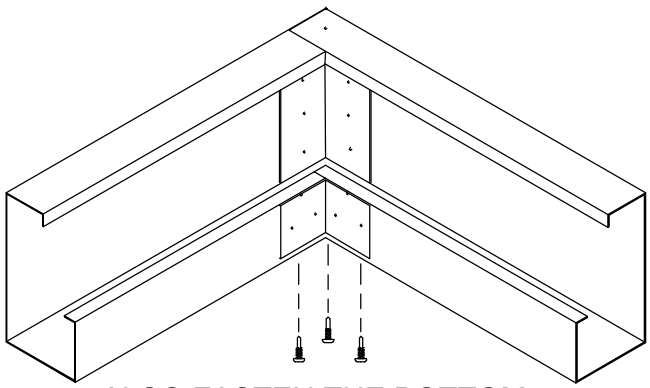
SECURE THE EDGE BEAMS TOGETHER AT EACH CORNER USING THE JOINER ANGLES AS SHOWN.

THE JOINER ANGLES SHOULD BE POSITIONED ON THE INSIDE OF THE EDGE BEAMS, HELD WITH 'G' CLAMPS, AND FASTENED WITH TEK SCREWS FROM THE OUTSIDE OF THE EDGE BEAMS.

SEAL ALL JOINTS WITH SILICONE.

THE EXTERNAL DIMENSIONS OF THIS FRAME SHOULD MATCH THE CONCRETE SLAB SIZE OF 5500 x 5500 WITH A DIAGONAL MEASUREMENT OF 7778, AS SHOWN ON THE FRONT PAGE OF THIS INSTRUCTION.

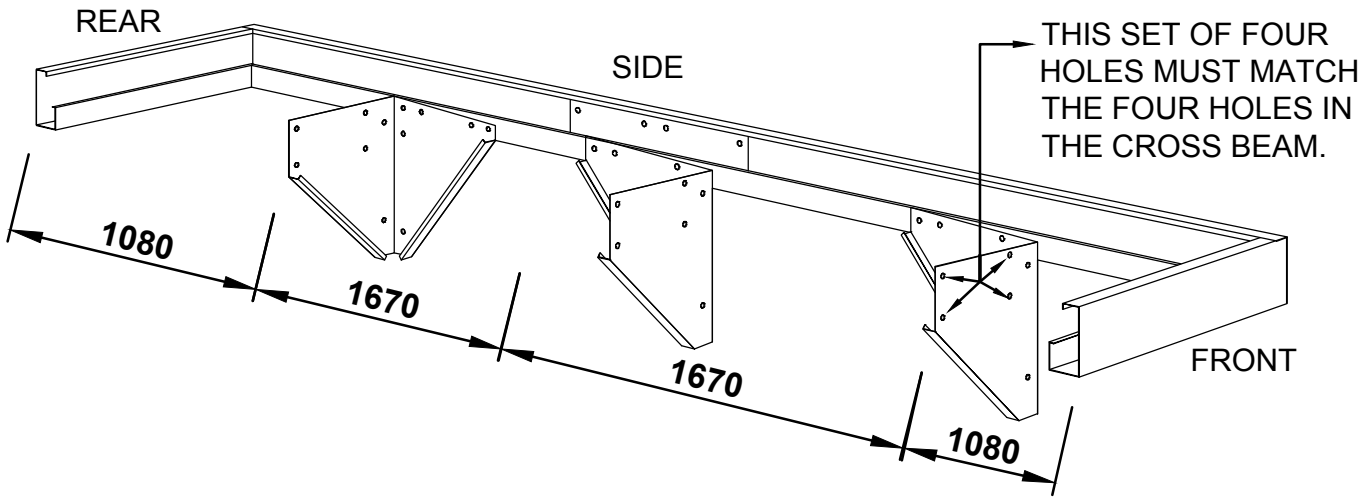




ALSO FASTEN THE BOTTOM OVERLAP SECTIONS OF THE EDGE BEAMS WITH THREE TEK SCREWS.

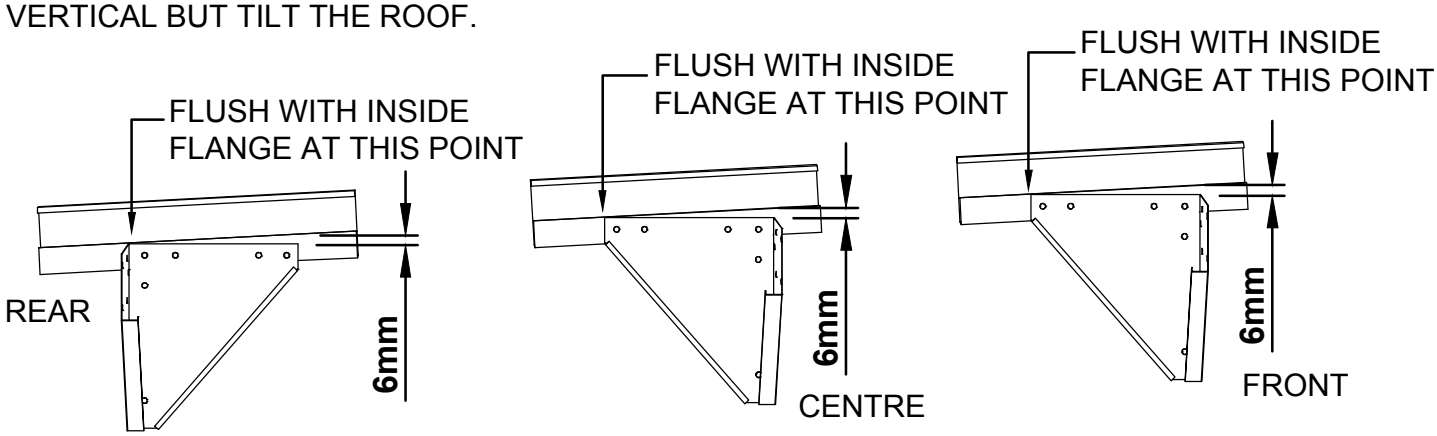
STEP 3.

MARK OFF THE SIDE BEAMS TO THE DIMENSIONS SHOWN BELOW. THESE ARE THE POSITIONS FOR LOCATING THE COLUMN TOP BRACKETS, TO WHICH THE COLUMNS AND CROSS BEAMS WILL BE LATER CONNECTED.



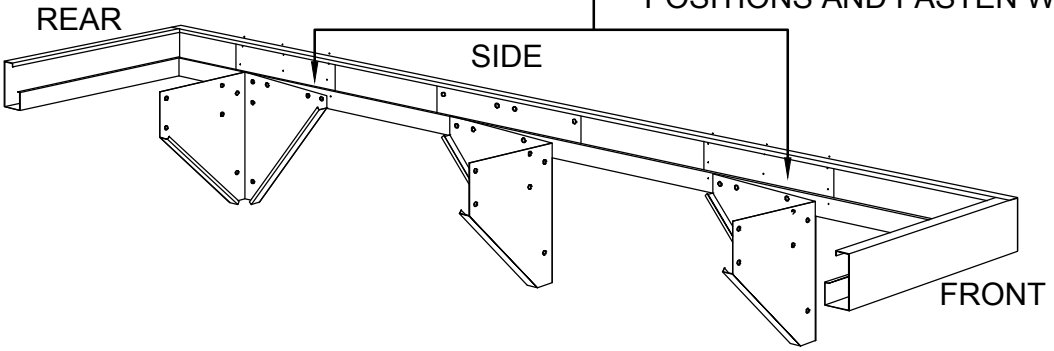
THE REAR RHS COLUMNS ARE 50mm SHORTER THAN THE FRONT RHS COLUMNS. THIS PRODUCES ABOUT A ONE DEGREE FALL IN THE ROOF, TO ALLOW RAINWATER TO FLOW TO THE REAR DOWNPIPE.

THEREFORE, TO ENSURE THAT THE COLUMNS WILL REMAIN VERTICAL WHEN THE STRUCTURE IS RAISED, EACH COLUMN TOP BRACKET MUST BE OFFSET BY 6mm AS SHOWN BELOW. YOU CAN SEE BELOW HOW THE END RESULT WILL KEEP THE COLUMNS VERTICAL BUT TILT THE ROOF.



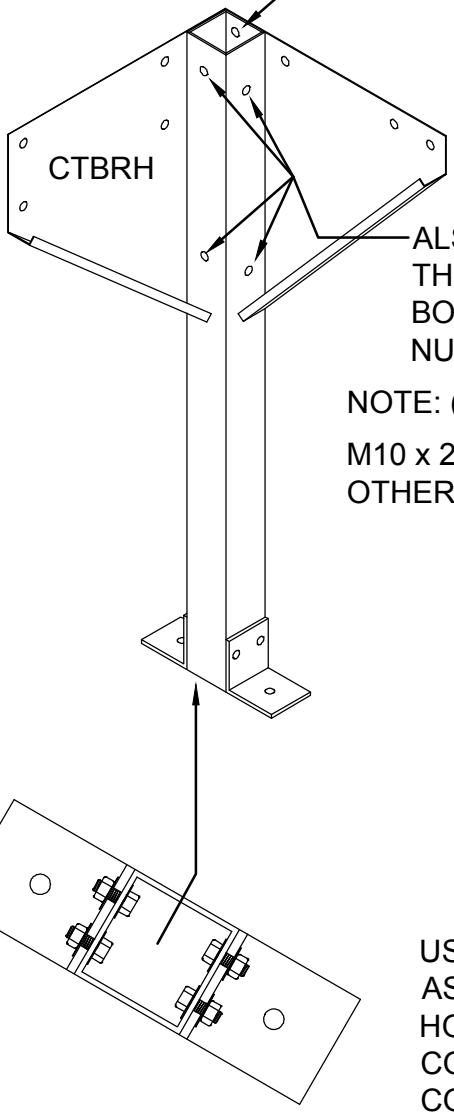
STEP 3A.

FIT AN EXTRA SPLICE PLATE IN EACH SIDE EDGE BEAM, OVER THE FRONT AND REAR COLUMN POSITIONS AND FASTEN WITH TEK SCREWS.



MARK THE HOLE POSITIONS FOR THE FOUR HOLES TO BE DRILLED IN THE BEAMS AT EACH LOCATION, AND DRILL 10mm HOLES. DO NOT FASTEN THE COLUMN TOP BRACKETS TO THE EDGE BEAMS AT THIS STAGE.

STEP 4. CONSTRUCTION PIVOT HOLE

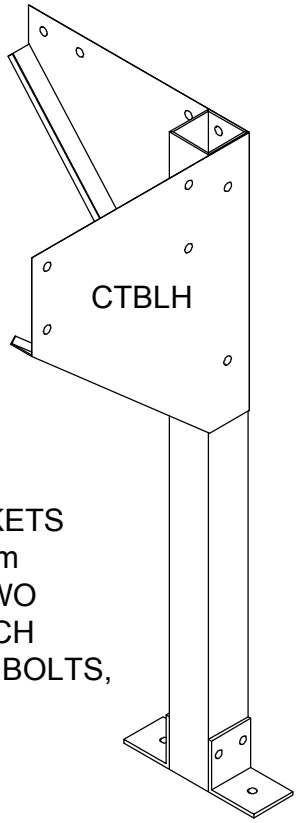


USING THE COLUMN TOP BRACKET AS A TEMPLATE, DRILL THIS HOLE IN EACH COLUMN. IT WILL LATER BE USED AS THE PIVOT POINT TO LIFT UP THE STRUCTURE.

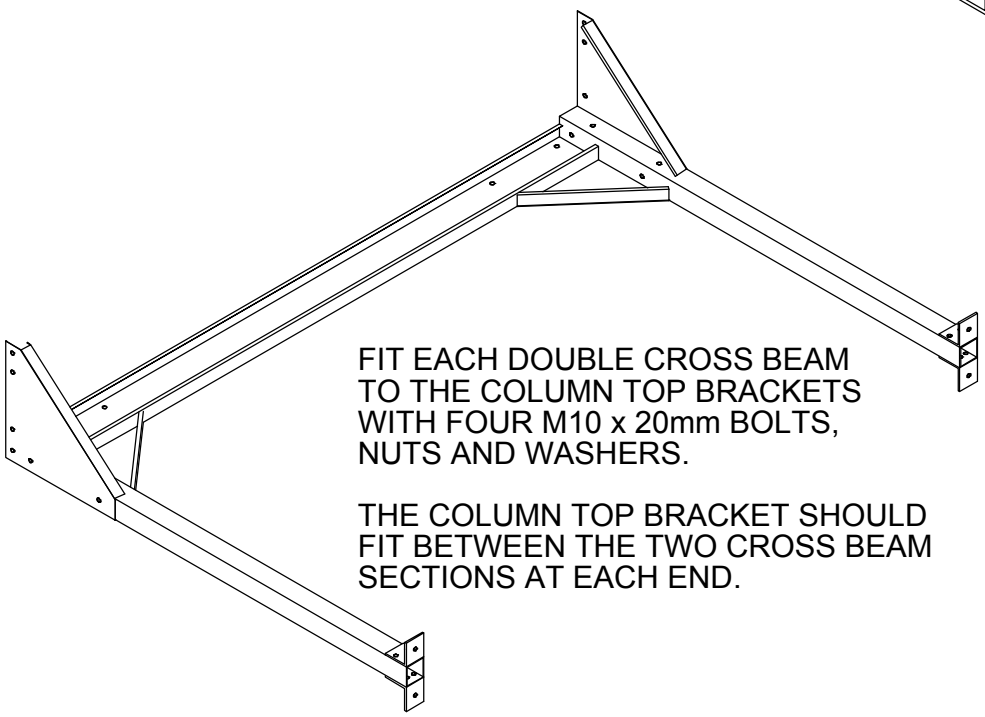
ALSO USING THE COLUMN TOP BRACKET AS A TEMPLATE, DRILL THESE FOUR HOLES THROUGH 'BOTH' SIDES OF THE COLUMN. JOIN BOTH SECTIONS TOGETHER WITH FOUR M10 X 80mm LONG BOLTS, NUTS AND WASHERS.

NOTE: (24 x 80mm LONG BOLTS SUPPLIED = 4 PER COLUMN)

M10 x 20mm BOLTS ARE USED AT ALL OTHER LOCATIONS.



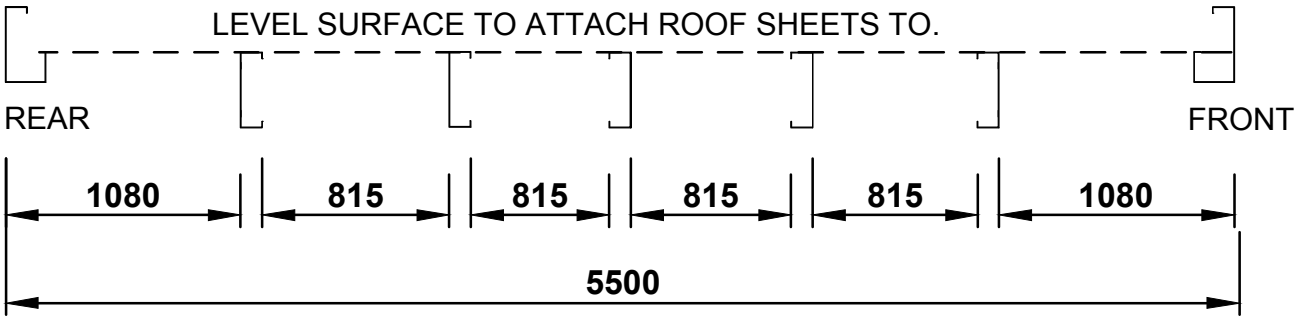
USING THE COLUMN BASE BRACKETS AS TEMPLATES, DRILL FOUR 10mm HOLES IN EACH COLUMN. JOIN TWO COLUMN BASE BRACKETS TO EACH COLUMN WITH FOUR M10 x 20mm BOLTS, NUTS AND WASHERS.

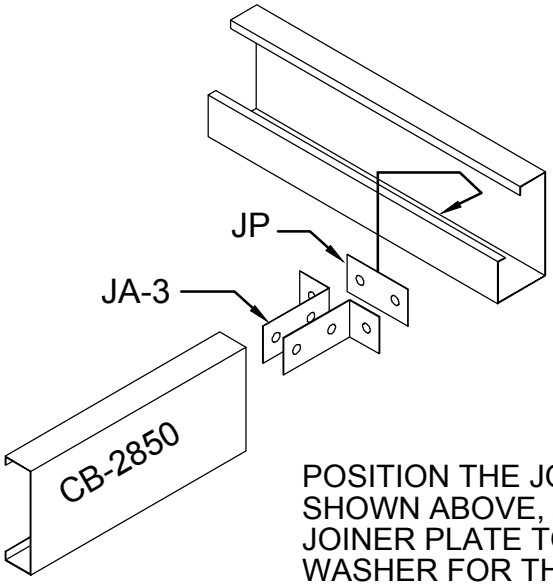


FIT EACH DOUBLE CROSS BEAM TO THE COLUMN TOP BRACKETS WITH FOUR M10 x 20mm BOLTS, NUTS AND WASHERS.

THE COLUMN TOP BRACKET SHOULD FIT BETWEEN THE TWO CROSS BEAM SECTIONS AT EACH END.

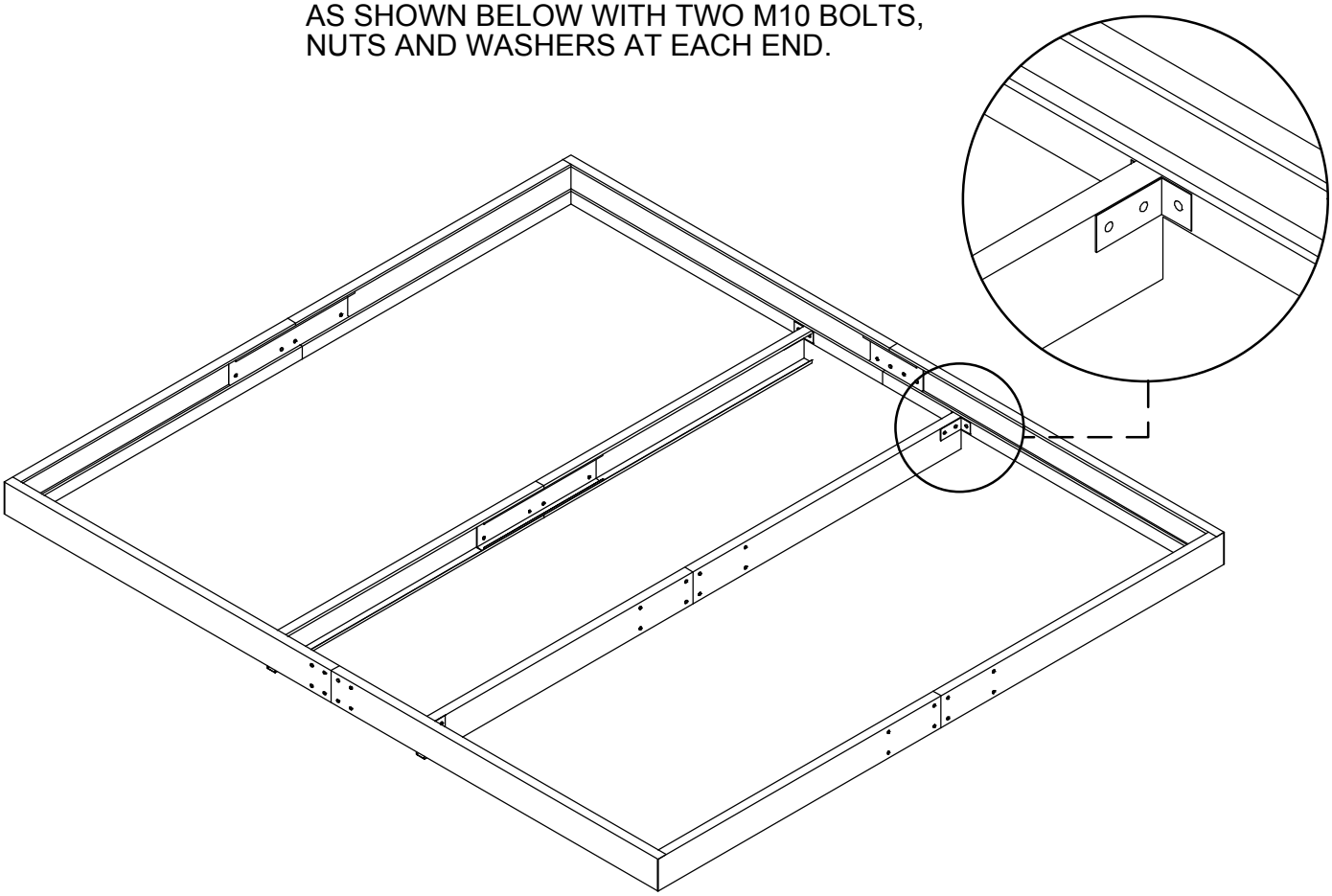
STEP 5. MARK THE POSITIONS FOR THE REMAINING CROSS BEAM ON THE EDGE BEAMS.





USING THE JA-3 JOINER ANGLE AS A TEMPLATE, DRILL TWO 10mm HOLES IN EACH END OF THE CROSS BEAM. SECURE TWO JA-3 JOINER ANGLES TO EACH END OF THE CROSS BEAM WITH TWO M10 x 20mm BOLTS, NUTS AND WASHERS. THE JOINER ANGLES SHOULD BE FLUSH WITH THE TOP OF THE CROSS BEAM TO ACHIEVE A LEVEL SURFACE TO ATTACH THE ROOF SHEETS TO.

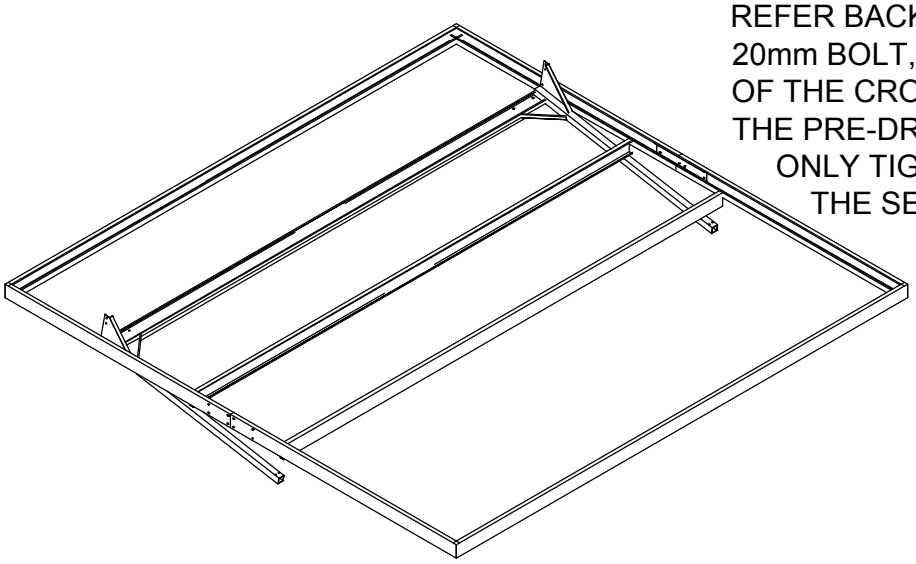
POSITION THE JOINER PLATE (JP) ON THE EDGE BEAM TO THE DIMENSIONS SHOWN ABOVE, AND DRILL TWO 10mm HOLES IN THE EDGE BEAM. MOVE THE JOINER PLATE TO THE INSIDE OF THE EDGE BEAM, TO ACT AS A LARGE WASHER FOR THE BOLTS. SECURE THE CROSS BEAMS TO THE EDGE BEAMS AS SHOWN BELOW WITH TWO M10 BOLTS, NUTS AND WASHERS AT EACH END.



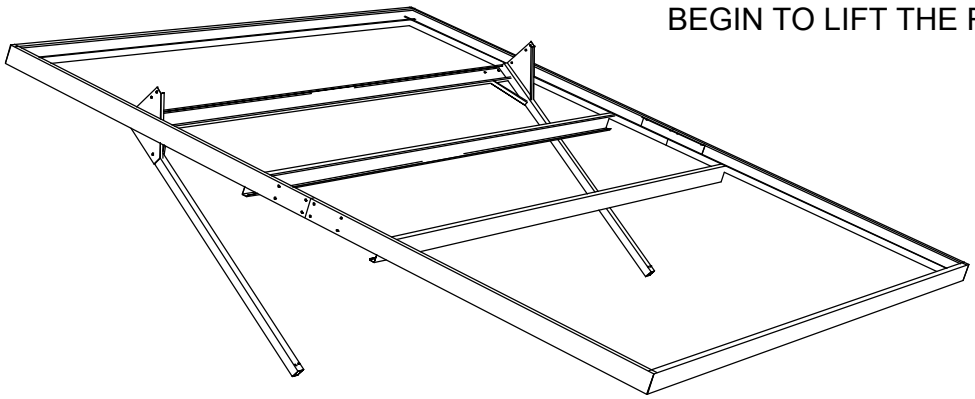
STEP 6.

YOU WILL REQUIRE ASSISTANCE FROM ANOTHER PERSON TO LIFT THE ROOF STRUCTURE UP.

PIVOT HOLE CONNECTION.

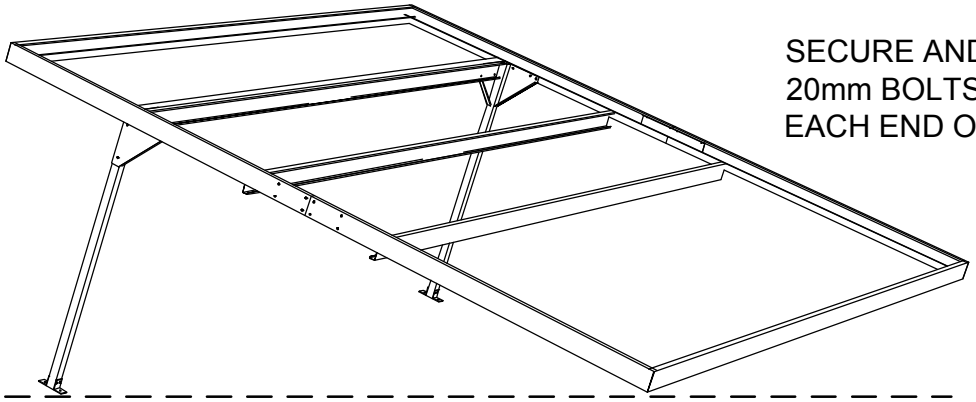


REFER BACK TO STEP 4. LOCATE ONE M10 x 20mm BOLT, NUT AND WASHER AT EACH END OF THE CROSS BEAM/COLUMN ASSEMBLY TO THE PRE-DRILLED HOLE IN THE EDGE BEAM. ONLY TIGHTEN FINGER TIGHT TO ALLOW THE SECTIONS TO MOVE DURING LIFTING.



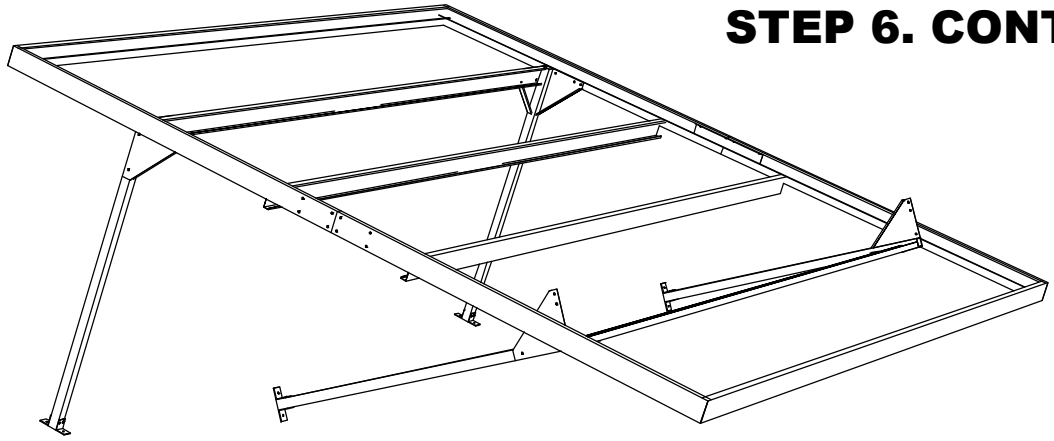
WITH ONE PERSON HOLDING EACH COLUMN, BEGIN TO LIFT THE ROOF STRUCTURE.

CONTINUE LIFTING THE ROOF STRUCTURE UNTIL A SECOND BOLT CAN BE FASTENED TO THE COLUMN TOP BRACKET AND EDGE BEAM.



SECURE AND TIGHTEN ALL FOUR M10 x 20mm BOLTS NUTS AND WASHERS AT EACH END OF THE CROSS BEAM.

STEP 6. CONTINUED



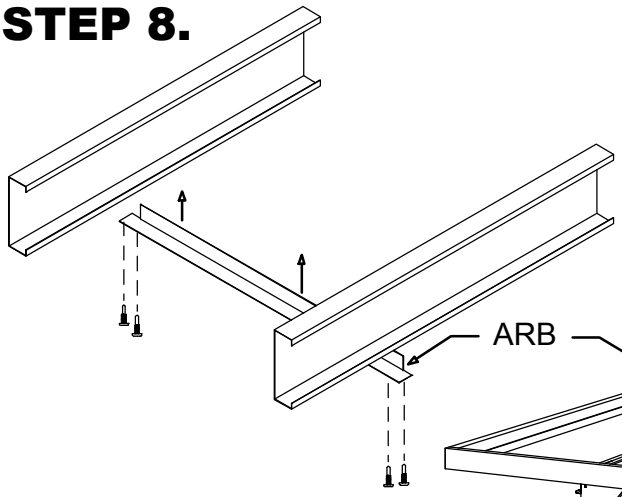
REPEAT THE LIFTING PROCEDURE FOR THE FRONT CROSS BEAM ASSEMBLY. WITH THE STRUCTURE NOW STANDING, POSITION AND SECURE THE CENTRE CROSS BEAM ASSEMBLY.

DOUBLE CHECK TO ENSURE THAT ALL BOLTS AND NUTS (INCLUDING SPLICE PLATE CONNECTIONS) ARE STILL FULLY TIGHTENED. IT IS ALSO VERY IMPORTANT (ALTHOUGH AWKWARD) TO ENSURE THAT THE BOLTS SECURING THE BASE BRACKETS TO THE COLUMNS ARE VERY TIGHT, TO REDUCE THE AMOUNT OF SWAY IN THE STRUCTURE.

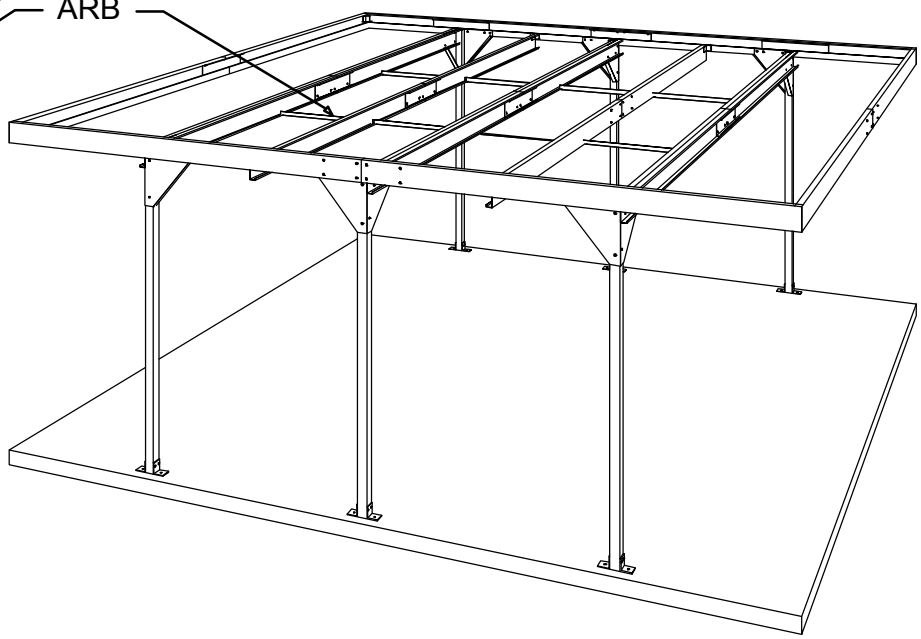
STEP 7.

TO THE DIMENSIONS SHOWN ON THE FRONT PAGE OF THIS INSTRUCTION, SECURE THE FRAME TO THE CONCRETE SLAB WITH THE M12 DYNABOLTS PROVIDED. YOU WILL REQUIRE AN M12 MASONRY DRILL BIT TO DRILL INTO THE CONCRETE.

STEP 8.



EQUALLY SPACE THE EIGHT ANGLE ROOF BRACES (ARB) AS SHOWN, AND SECURE TO THE UNDERSIDE OF THE CROSSBEAMS WITH TWO TEK SCREWS PER CONNECTION.

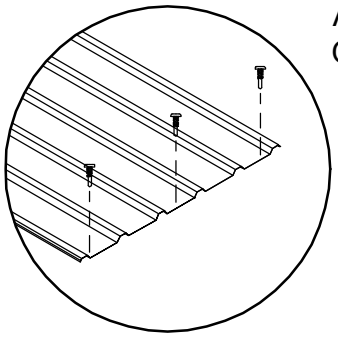


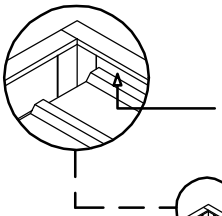
STEP 9.

SECURE 16 x 2820mm ROOF SHEETS TO FRAME.

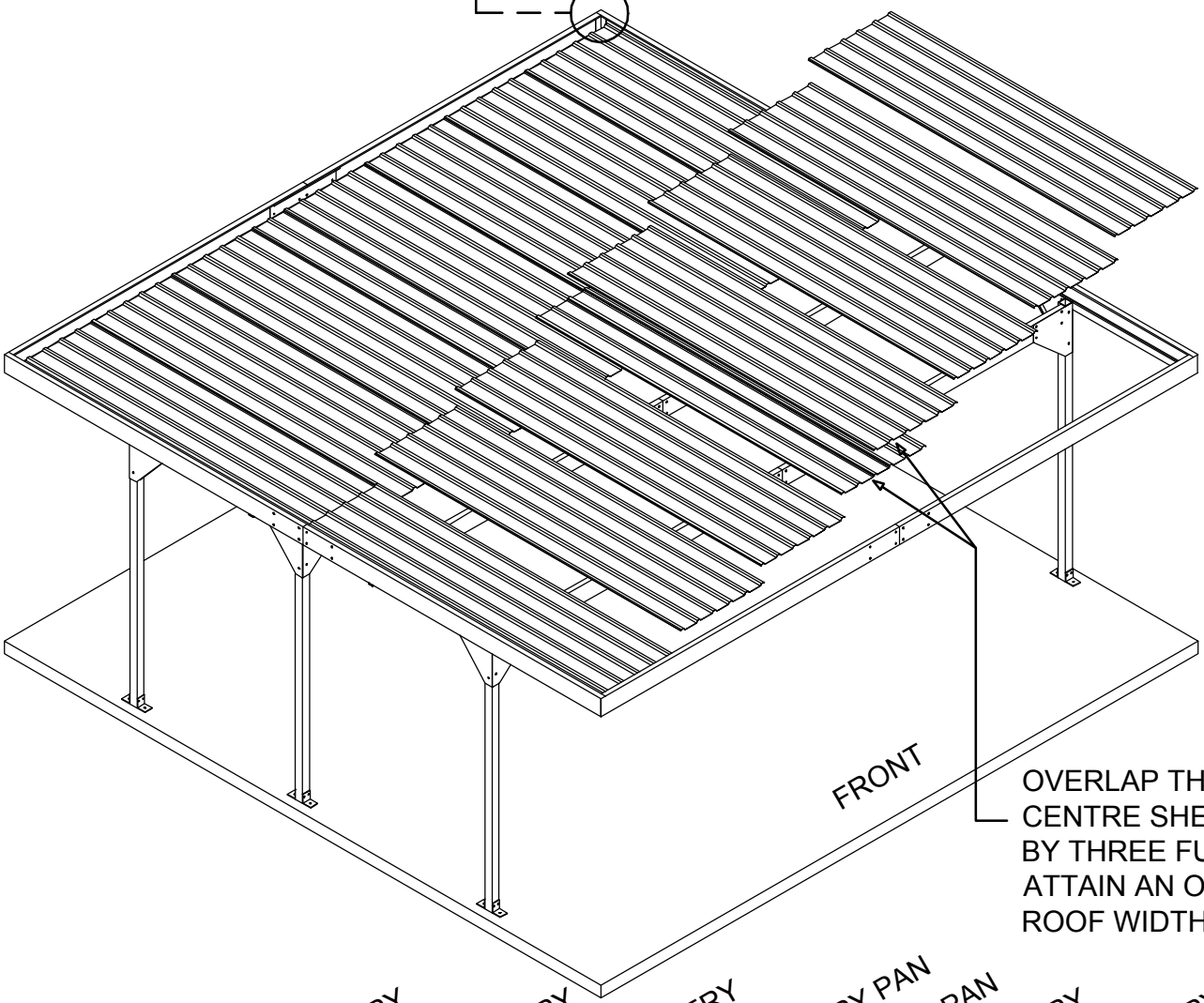
ALL ROOF SHEETS ARE PAN-FIXED. ie SCREW THROUGH THE FLAT PAN OF THE SHEET INTO THE FRAMEWORK.

SLIP THE NEOPRENE WASHERS ON TO THE SELF DRILLING SCREWS FOR A WATER TIGHT CONNECTION.

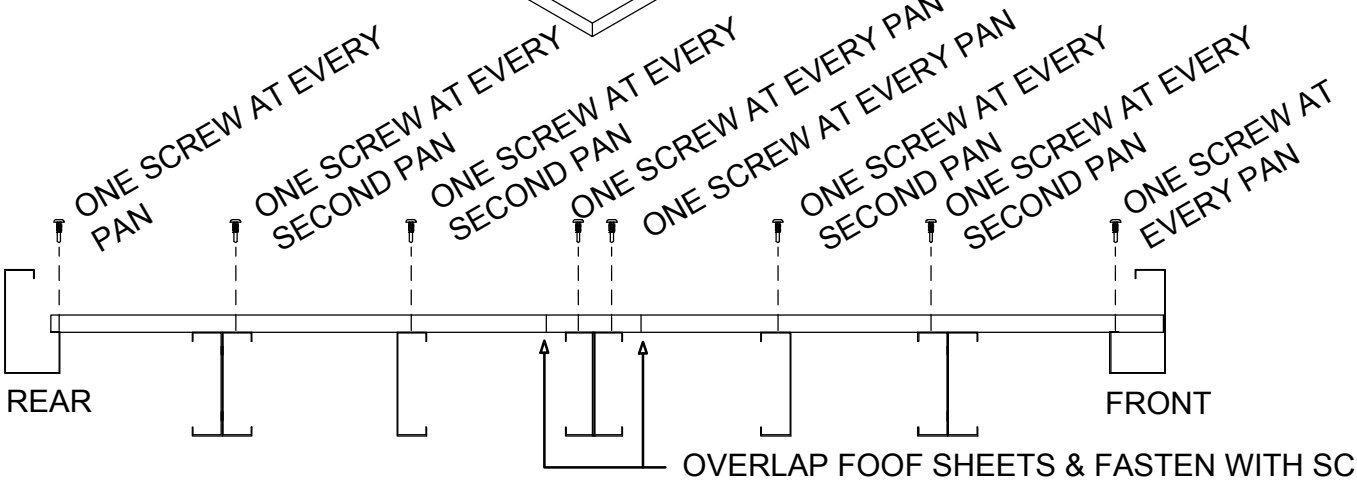




THE EDGE ALONG THE LENGTH OF THE SHEET SHOULD BE HARD UP AGAINST THE INSIDE OF THE EDGE BEAM ON BOTH SIDES OF THE STRUCTURE. SECURE WITH SCREWS ALONG THIS EDGE AT 150mm CENTRES.

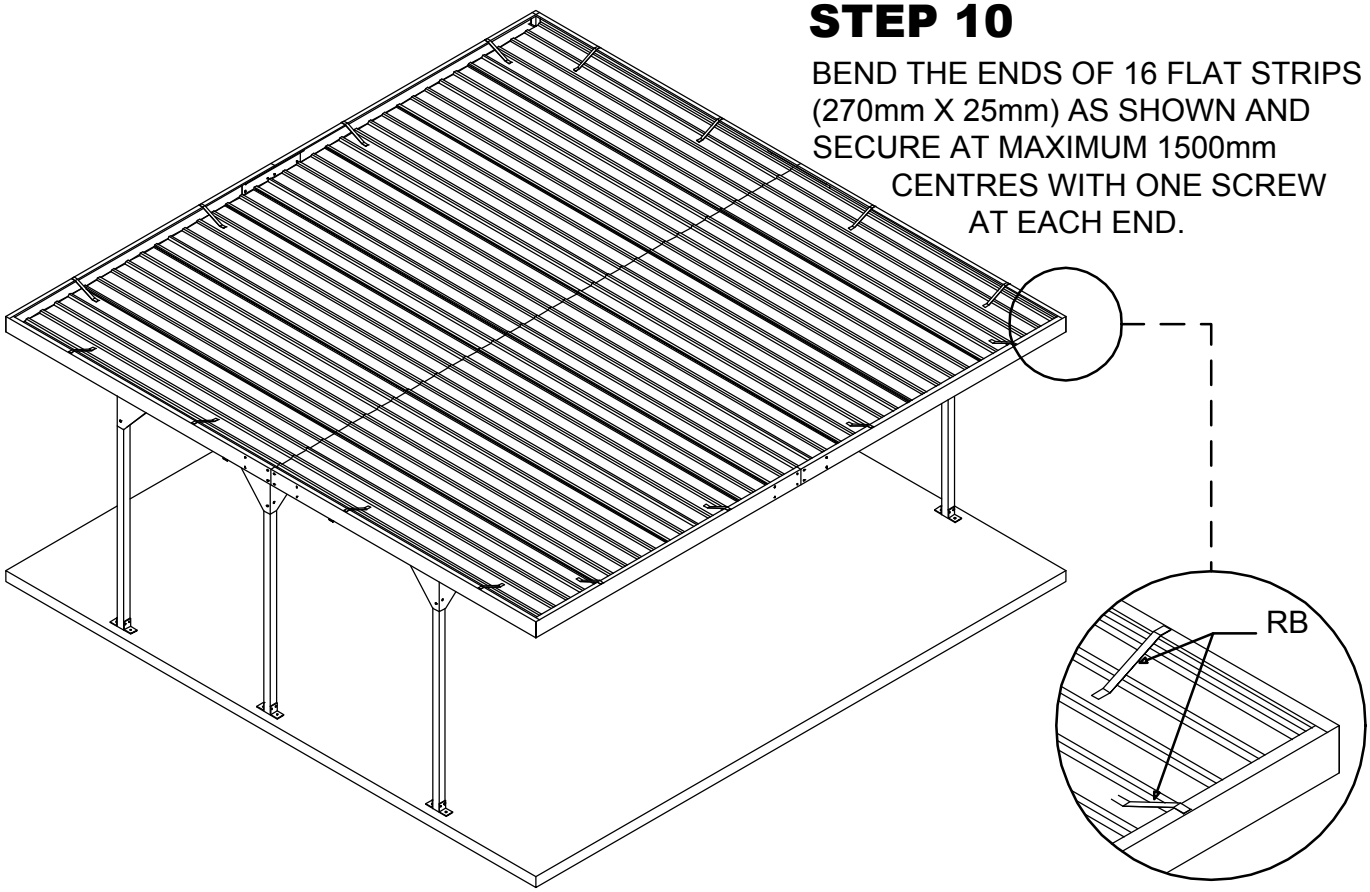


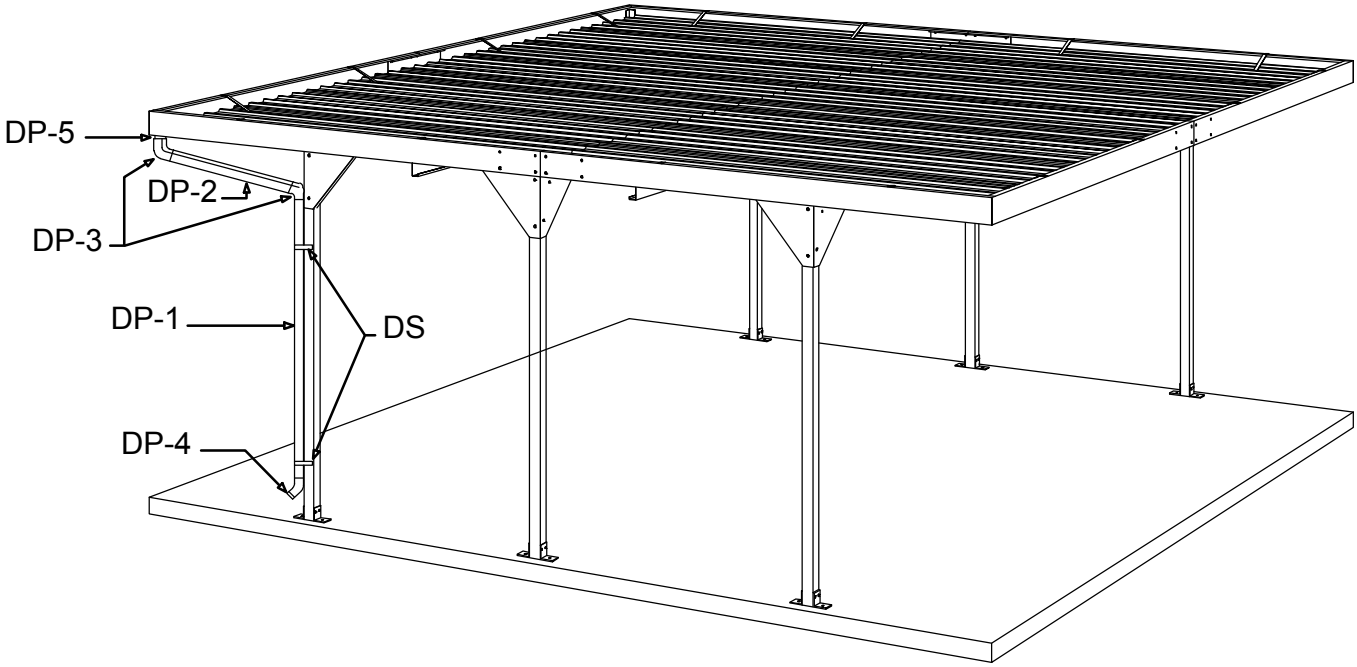
OVERLAP THE TWO CENTRE SHEETS ONLY, BY THREE FULL PANS TO ATTAIN AN OVERALL ROOF WIDTH OF 5500mm.



STEP 10

BEND THE ENDS OF 16 FLAT STRIPS (270mm X 25mm) AS SHOWN AND SECURE AT MAXIMUM 1500mm CENTRES WITH ONE SCREW AT EACH END.

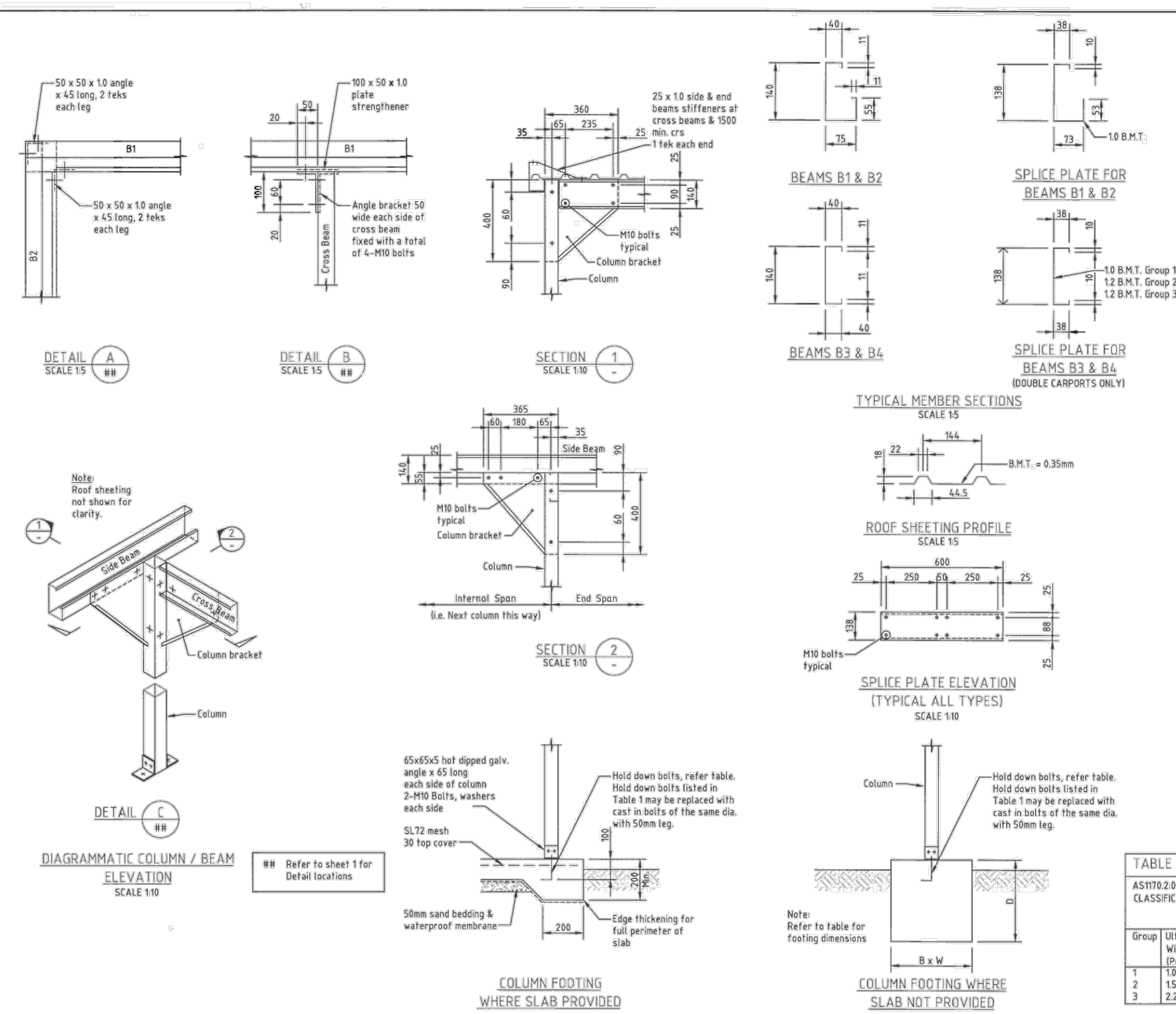




CUT A ROUND HOLE 51mm IN DIAMETER IN ONE END OF THE REAR EDGE BEAM. THIS CAN BE DONE BY DRILLING A SERIES OF 3mm HOLES AND THEN PUNCHING OUT THAT SECTION. FIT THE GALVANISED GUTTER DROP AND SEAL WITH SILICONE. FASTEN THE DOWNPIPES AND BENDS AS SHOWN. BEND THE 270 x 25 FLAT STRIPS (DS) TO SHAPE AND FASTEN THE DOWNPIPE TO THE COLUMNS.

IMMEDIATE MAINTENANCE:

CLEAN DOWN ALL ROOF AND EDGE/CROSS BEAM INTERNAL AREAS. METAL FILINGS FROM DRILLING HOLES AND USING SELF DRILLING SCREWS CAN CAUSE DISCOLORATION AND CORROSION TO ROOF SHEETS AND GALVANIZED FRAMING SECTIONS.


50 x 50 x 1.0 angle x 45 long, 2 teks each leg
B1
B2
DETAIL A SCALE 1:5 ##
100 x 50 x 1.0 plate strengthener
Angle bracket 50 wide each side of cross beam fixed with a total of 4-M10 bolts
Cross Beam
DETAIL B SCALE 1:5 ##
25 x 1.0 side & end beams stiffeners at cross beams & 1500 min. crs
1 tek each end
M10 bolts typical
Column bracket
Column
SECTION 1 SCALE 1:10
BEAMS B1 & B2
BEAMS B3 & B4
SPLICE PLATE FOR BEAMS B1 & B2
SPLICE PLATE FOR BEAMS B3 & B4 (DOUBLE CARPORTS ONLY)
1.0 B.M.T.
1.0 B.M.T. Group 1
1.2 B.M.T. Group 2
1.2 B.M.T. Group 3
TYPICAL MEMBER SECTIONS SCALE 1:5
Note: Roof sheeting not shown for clarity.
Side Beam
Cross Beam
Column bracket
Column
DETAIL C ##
DIAGRAMMATIC COLUMN / BEAM ELEVATION SCALE 1:10
Internal Span (i.e. Next column this way)
End Span
SECTION 2 SCALE 1:10
B.M.T. = 0.35mm
ROOF SHEETING PROFILE SCALE 1:5
M10 bolts typical
SPLICE PLATE ELEVATION (TYPICAL ALL TYPES) SCALE 1:10
Refer to sheet 1 for Detail locations
65x65x5 hot dipped galv. angle x 65 long each side of column 2-M10 Bolts, washers each side
SL72 mesh 30 top cover
50mm sand bedding & waterproof membrane
Hold down bolts, refer table. Hold down bolts listed in Table 1 may be replaced with cast in bolts of the same dia. with 50mm leg.
Edge thickening for full perimeter of slab
COLUMN FOOTING WHERE SLAB PROVIDED
Note: Refer to table for footing dimensions
B x W
D
COLUMN FOOTING WHERE SLAB NOT PROVIDED

COLUMN FOOTING / SLAB DETAILS
SCALE 1:10

LOADINGS

L1 These structures are clasified as Class 10a of Importance Level 2, and have been designed for the following wind loads to AS1170.2 and the BCA - Volume 1: Refer 'Table A'.

L2 The following structural pressure coefficients have been used:

Empty under – Windward = -0.6, +0.6
– Leeward = -0.4, +0.2
Blocked under – Windward = -1.0, +0.4
– Leeward = -0.8, +0.4

L3 Roof live loads to AS1170.1
UDL of 0.25 kPa. Point load of 1.1 kN to structural elements.

CONCRETE & FOUNDATIONS

C1 Slab details are appropriate for sites classified as A, S, M & H in accordance with AS2870.

C2 Problem sites, extremely reactive sites and sites with uncontrolled fill require individual assessment by an engineer.

C3 If the structure is to be lined with fragile internal linings, is to have fragile floor coverings (tiles) or to be used as accommodation or office, the slab and footing system will need to be modified to comply with the Australian Standards.

C4 The foundations shall have a minimum allowable bearing capacity of 75kPa.

C5 Concrete F'c = 20 MPa minimum.

C6 Slab to be poured on 50mm compacted sand bed and waterproof membrane.

STEELWORK

S1 Roof framing members shall be AZ150 material to the Grades specified in AS 4600.

S2 Roof, wall and door sheeting to be Grade G550 AZ150 Zincalume Hi-Ten with a B.M.T. = 0.30mm (Minimum).

S3 Columns shall be Grade C450 Duragal.

S4 Provide suitable corrosion protection to all ungalvanised components. e.g. zinc rich paint.

FIXINGS

F1 All screws to be N°. 10 Wafer Teks with minimum edge distance of 10mm and pitch of 15mm u.n.o.

F2 Roof sheeting fixing to cross & edge beams:
(a) At edge and laps - 1 screw at every pan (i.e. 144 crs)
(b) Elsewhere - 1 screw every second pan (i.e. 288 crs).
Screws to roof sheeting to have neoprene washers.

F3 Bolts to be M10 x 20 to the grade shown in the table.

F4 All angle brackets & connector plates to be B.M.T. = 1.0mm u.n.o.

APPLICABLE S.A.A. CODES & STANDARDS

AS 1170 Parts 1 & 2 loading Codes.
AS 4600 Cold Formed Steel Structures Code.
AS 1562 Design and Installation of Sheet Roof & Wall Cladding.
AS 1111/1112 Metric Hexagon Commercial Bolts & Screws.
AS 2312 Guide to the Protection of Iron & Steel.
AS 4100 Steel Structures Code.
AS 2870 Residential Slabs & Footings.
AS 3600 Concrete Structures.

TABLE A

AS1170.2:02 CLASSIFICATION			EQUIVALENT AS 4055 CLASSIFICATION		EQUIVALENT AS1170:89 PERMISSIBLE STRESS CLASSIFICATION (SUPERSEDED)
Group	Ultimate Design Wind Pressure (Pu)	Ultimate Design Wind Speed (Vsit,B)	Non-Cyclonic Regions A + B	Cyclonic Regions C + D	(m/s)
1	1.0 kPa	41 m/s	N2	-	W33N
2	1.5 kPa	50 m/s	N3	C1	W41N / W41C
3	2.25 kPa	61 m/s	N4	C2	W50N / W50C

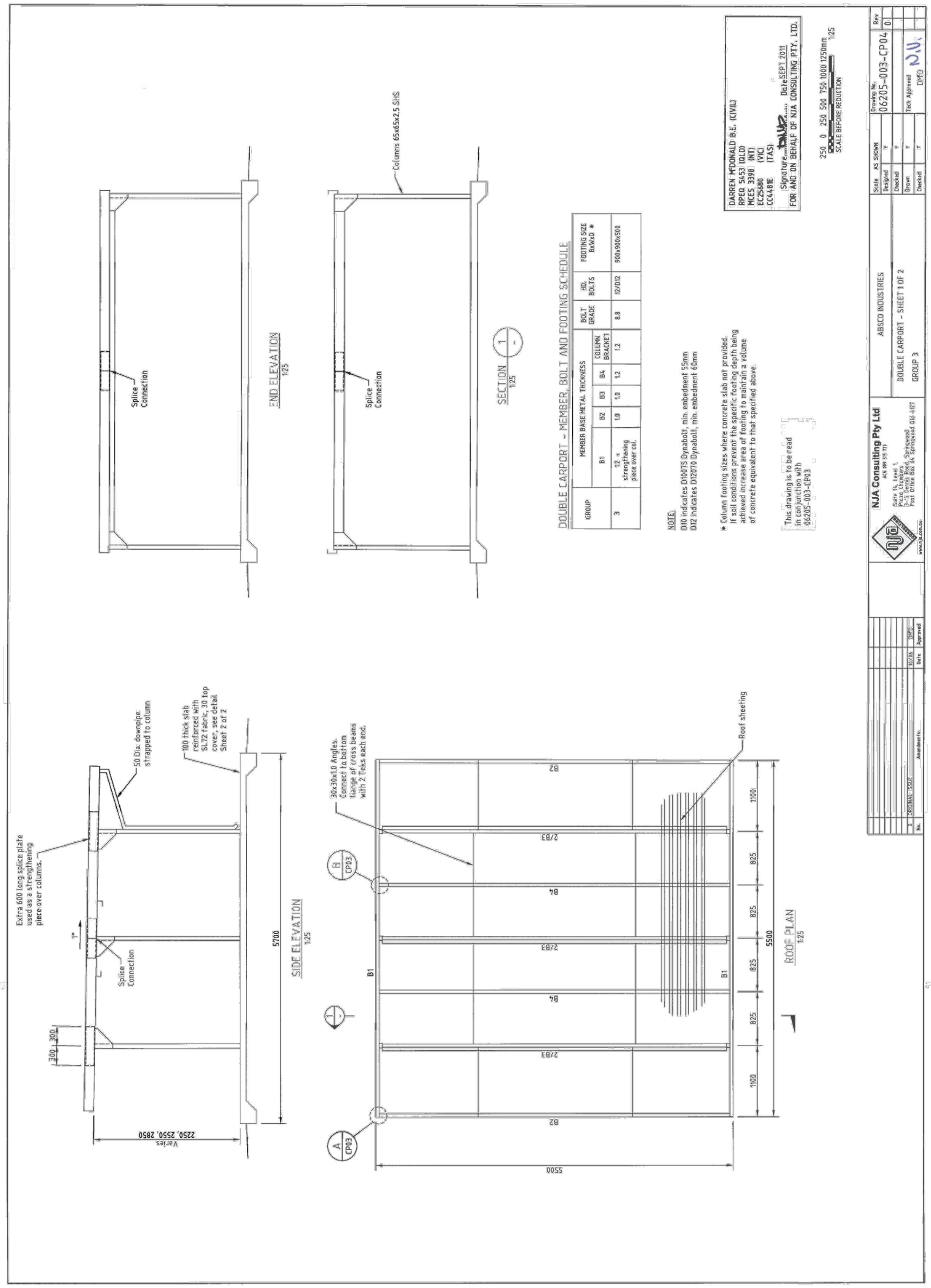
DARREN M^cDONALD B.E. (CIVIL)
RPEQ 5453 (QLD)
MCES 3398 (NT)
EC25680 (VIC)
CC4481E (TAS)
Signature.......[signature]....... Date SEPT 2011
FOR AND ON BEHALF OF NJA CONSULTING PTY. LTD.

No.	Amendments	Date	Approved
0	ORIGINAL ISSUE	10/06	DMD

NJA Consulting Pty Ltd
ACN 009 515 726
Suite 14, Level 1, Plaza Chambers
3-15 Dennis Road, Springwood
Post Office Box 64 Springwood Qld 4127
www.nja.com.au

ABSCO INDUSTRIES
CARPORTS SHEET 2 OF 2
TYPICAL STEELWORK DETAILS

Scale	AS SHOWN	Drawing No.	06205-003-CP03
Designed	Y	Rev	0
Checked	Y		
Drawn	Y	Tech Approved	N.V.
Checked	Y		DMD



END ELEVATION 1:25
Splice Connection
Columns 65x65x2.5 SHS
SECTION 1 1:25
SIDE ELEVATION 1:25
ROOF PLAN 1:25
Extra 600 long splice plate used as a strengthening piece over columns.
50 Dia. downpipe strapped to column
100 thick slab reinforced with SL72 fabric, 30 top cover, see detail Sheet 2 of 2
30x30x10 Angles. Connect to bottom flange of cross beams with 2 Teks each end.
Roof sheeting
Varies 2250, 2550, 2850
5700
5500
1100
825
B1
B2
2/B3
B4
A CP03
B CP03
NOTE:
D10 indicates D10075 Dynabolt, min. embedment 55mm
D12 indicates D12070 Dynabolt, min. embedment 60mm
* Column footing sizes where concrete slab not provided. If soil conditions prevent the specific footing depth being achieved increase area of footing to maintain a volume of concrete equivalent to that specified above.
This drawing is to be read in conjunction with 06205-003-CP03
DARREN M'DONALD B.E. (CIVIL)
RPEQ 5453 (QLD)
MCES 3398 (NT)
EC25680 (VIC)
CC4481E (TAS)
Date SEPT 2011
FOR AND ON BEHALF OF NJA CONSULTING PTY. LTD.
SCALE BEFORE REDUCTION
NJA Consulting Pty Ltd
ABSCO INDUSTRIES
DOUBLE CARPORT - SHEET 1 OF 2
GROUP 3
Drawing No. 06205-003-CP04
Rev 0
Scale AS SHOWN

DOUBLE CARPORT – MEMBER, BOLT AND FOOTING SCHEDULE

GROUP	MEMBER BASE METAL THICKNESS B1	B2	B3	B4	COLUMN BRACKET	BOLT GRADE	HD. BOLTS	FOOTING SIZE BxWxD *
3	1.2 + strengthening piece over col.	1.0	1.0	1.2	1.2	8.8	12/D12	900x900x500

Queensland Government

Department of Housing and Public Works

Form 15—Compliance certificate for building design or specification

Version 4 – July 2017

NOTE: This is to be used for the purposes of section 10 of the *Building Act 1975* and/or section 46 of the *Building Regulation 2006.*

RESTRICTION: A building certifier (class B) can only give a compliance certificate about whether building work complies with the BCA or a provision of the Queensland Development Code (QDC). A building certifier (Class B) can not give a certificate regarding QDC boundary clearance and site cover provisions.

1. Property description

This section need only be completed if details of street address and property description are applicable.

E.g. in the case of (standard/generic) pool design/shell manufacture and/or patio and carport systems this section may not be applicable.

The description must identify all land the subject of the application.

The lot and plan details (e.g. SP/RP) are shown on title documents or a rates notice.

If the plan is not registered by title, provide previous lot and plan details.

Street address (include no., street, suburb/locality and postcode)

Postcode

Lot and plan details (attach list if necessary)

In which local government area is the land situated?

2. Description of component/s certified

Clearly describe the extent of work covered by this certificate, e.g. all structural aspects of the steel roof beams.

ABSCO standard range of kit-form garages, carports, awnings.

3. Basis of certification

Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications, were relied upon.

The structural design for the range of ABSCO kit-form buildings has been undertaken in accordance with the following design conditions.

- NCC - Building Code of Australia (2016) – Volume 2 – Class 1 and Class 10 Buildings
- AS1170.0-2002 - Structural design actions Part 0 General Principles
- AS1170.1-2002 - Structural design actions Part 1 Permanent, imposed and other actions
- AS1170.2-2011 - Structural design actions Part 2 Wind Actions
- AS1170.3-2003 - Snow Loads
- AS3600 - 2009 - Concrete Structures
- AS4100 - 1998 - Steel Structures
- AS4055 - 2012 - Wind loads for Housing
- AS4600 - 2005 - Cold-formed Steel Structures
- AS2870 - 2011 - Residential Slabs and Footings – Construction.
- Ramset - Specifiers Resource Book
- Buildex Fasteners - Technical Specification
- Low-High-Low testing of cyclonic area roof sheeting by University of Adelaide. Test results available on request.

LOCAL GOVERNMENT USE ONLY

Date received		Reference Number/s	

4. Reference documentation
Clearly identify any relevant documentation, e.g. numbered structural engineering plans.

NJA Consulting Pty Ltd Drawings:

Carports:	Drawings: **06205-003-CP01, CP02A, CP03 to CP06, CP07A, CP08, CP09**
Awnings:	Drawings: **06205-003-AW01A, AW02A, AW05**
Garages:	Drawings: **06205-003-GR01A, 02A, 03B to 11B, 12A, 13B, 14A, 15B**
Connections	Drawings: **06205-003-CN01**

Scope or Limitations

- This certificate relates to the structural aspects of the building only.
- The slab and footings nominated on the drawings are suitable for class A, S, M & H site classifications (awnings, garden sheds and carports), class A, S & M site classifications (garages) in accordance with AS2870. The applicant shall seek advice from a local building practitioner should the site classification fall outside of this range ie class H, E and P sites.
- The building shall be constructed in accordance with the design drawings and ABSCO assembly manuals. NJA accept no responsibility whatsoever for the performance of structures not constructed in accordance with these documents.
- The structures are designed to sustain the wind loads nominated on the drawing for Group 1, Group 2 and Group 3 wind loadings. The site wind classification shall be derived in accordance with AS4055. Structural wind loads have been derived using AS1170.2-2011.

  The following criteria are applicable to structure wind loads:

  Structure Importance Level: **2**
  Annual probability of exceedance: **1:500**
  Topographic Classification: **T1**

  Internal Pressure Coefficients
  N2, N3 garages: **+0.2, -0.3 (non-cyclonic)**
  C1 garages: **+0.7, -0.65 (cyclonic)**

  The structures are rated to meet the wind classifications nominated on the plans. The onus is on the building certifier or local authority to ensure that the wind classification relevant to the intended siting of the ABSCO product does not exceed the product's individual wind rating. The site wind classification shall be determined in accordance with AS4055 Table 1 for topographic classification T1, for the relevant wind region.

  NJA Consulting will not be providing site specific wind data as part of this certification. Should the certifier require site specific wind data, then they shall refer the applicant to a suitably qualified local building practitioner.

- This certificate shall not be construed as relieving any party of their contractual responsibilities, **and is valid until 8 October 2018. Beyond this date the certification will be carried by another engineering consultant.**

5. Building certifier reference number

Building certifier reference number

6. Competent person details

A competent person for building work, means a person who is assessed by the building certifier for the work as competent to practice in an aspect of the building and specification design, of the building work because of the individual's skill, experience and qualifications in the aspect. The competent person must also be registered or licensed under a law applying in the State to practice the aspect.

If no relevant law requires the individual to be licensed or registered to be able to give the help, the certifier must assess the individual as having appropriate experience, qualifications or skills to be able to give the help.

If the chief executive issues any guidelines for assessing a competent person, the building certifier must use the guidelines when assessing the person.

Name (in full)
Darren John McDonald

Company name (if applicable)
NJA Consulting Pty Ltd

Contact person

Phone no. (business hours) **Mobile no.**

Fax no.

Email address
admin@nja.com.au

Postal address
PO Box 64
Springwood QLD **Postcode** 4127

Licence or registration number (if applicable)
RPEQ 5453

7. Signature of competent person

This certificate must be signed by the individual assessed by the building certifier as competent.

Signature

for and on behalf of
NJA Consulting Pty Ltd

Date
10 April 2017

The *Building Act 1975* is administered by the Department of Housing and Public Works

12206-003-DMCD

3 May 2017

ABSCO
PO Box 119
ACACIA RIDGE QLD 4110

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ACN 089 515 720

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Email admin@nja.com.au
Web www.nja.com.au

STRUCTURAL CERTIFICATION OF ABSCO PRODUCT RANGE

We refer to above matter. We hereby certify that the range of ABSCO products indicated on the drawings listed below are structurally satisfactory in accordance with the Australian Standards outlined in the Design Certificate Criteria section of this certificate.

DOCUMENTS ATTACHED (as built drawings or latest amendments)

Drawing Nos: This certificate covers the full range of ABSCO products as outlined on the following drawings:

NJA Consulting Pty Ltd Drawings:

Garden Sheds:	Drawings: **06205-003-GS01C, GS02C, GS03B, GS04B, GS05A, GS06A, GS07A, GS08B, GS09 to GS11, GS12A, GS13B, GS14C, GS15, GS16B, GS17.**
Carports:	Drawings: **06205-003-CP01, CP02A, CP3 to CP06, CP07A, CP08, CP09**
Awnings	Drawings: **06205-003-AW01A, AW02A, AW05**
Garages	Drawings: **06205-003-GR01A, GR02A, GR03B to GR11B, GR12A, GR13B, GR14A, GR15B**
Connections	Drawings: **06205-003-CN01**

Other Related Documents:

1. PI INSURANCE CERTIFICATE (attached)

DESIGN CERTIFICATE CRITERIA

The structural design for the range of ABSCO kit-form buildings has been undertaken in accordance with the following design conditions.

- Building Code of Australia – Volume 2 (2016) – Class 1 and Class 10 Buildings
- AS1170.0-2002 - Structural design actions Part 0 General Principles
- AS1170.1-2002 - Structural design actions Part 1 Permanent, imposed and other actions
- AS1170.1-2011 - Structural design actions Part 2 Wind Actions
- AS1170.3-2003 - Snow Loads
- AS3600 - 2009 - Concrete Structures
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- AS2870 - 2011 - Residential Slabs and Footings – Construction.
- Ramset - Specifiers Resource Book
- Buildex Fasteners - Technical Specification
- Low-High-Low testing of cyclonic area roof sheeting by University of Adelaide.

Class of Building (BCA) : 10a
Building Importance Level: (BCA Table B1.2a): 2
Annual Probability of Exceedance for wind: 1 in 500

NJA CONSULTING
STRUCTURAL CIVIL FORENSIC ENGINEERS

COMMENTS / EXCLUSIONS (Exclusions to this Certificate must be clearly identified).

- This certificate relates to the structural aspects of the building only.
- The slab and footings nominated on the drawings are suitable for class A, S, M & H site classifications (awnings, garden sheds and carports), class A, S & M site classifications (garages) in accordance with AS2870. The applicant shall seek advice from a local building practitioner should the site classification fall outside of this range ie class H, E and P sites. The founding material shall have a minimum safe bearing capacity of 75kPa.
- The building shall be constructed in accordance with the design drawings and ABSCO assembly manuals. NJA accept no responsibility whatsoever for the performance of structures not constructed strictly in accordance with these documents.
- The structures are designed to sustain the wind loads nominated on the drawing for Group 1, Group 2 and Group 3 wind loadings. The site wind classification shall be derived in accordance with AS4055. Structural wind loads have been derived using AS1170.2-2011.

The following criteria are applicable to structure wind loads:

Structure Importance Level: **2**
Annual probability of exceedance: **1:500**
Topographic Classification: **T0 and T1 (ref AS4055) generally flat site with ground slope up to 1 in 10**
Internal Pressure Coefficients
N2, N3 garages: **+0.2, -0.3 (non-cyclonic)**
C1 garages: **+0.7, -0.3 (cyclonic)**
Garden Sheds: **0.0, -0.2 (all regions)**

Garden sheds are considered to be effectively sealed during major wind events. Roller doors are excluded from certification, and are assumed to have blown in during cyclonic wind events.

The structures are rated to meet the wind classifications nominated on the plans. The onus is on the building certifier or local authority to ensure that the wind classification relevant to the intended siting of the ABSCO product does not exceed the product's individual wind rating. The site wind classification shall be determined in accordance with AS4055 Table 1 for topographic classification T0 or T1, for the relevant wind region. **NJA Consulting will not be providing site specific wind data as part of this certification. Should the certifier require site specific wind data, then they shall refer the applicant to a suitably qualified local building practitioner.**

- All glazed windows and doors to be designed and certified by window manufacturer. The glazing shall be designed to the Wind Classification System specified above, as defined in AS4055-1992. The glazing manufacturer shall satisfy the requirements of AS2047 for the specified Wind Classification System. The wind classification system has been determined on the basis of the following additional assumptions:-
- Flat site. Where the site is not generally flat (i.e. average slope steeper than 1:10), advise the certifying engineer for a possible reclassification of the glazing requirements.

- This certificate shall not be construed as relieving any party of their contractual responsibilities.

- NJA have prepared a range of engineering drawings for ABSCO garden sheds, GS01 to GS16 inclusive. These drawings nominate the maximum size garden shed structure, in length, width, and height permissible for each shed design. NJA acknowledge that for each garden shed design, as detailed on engineering plans GS01 to GS16 inclusive, that garden shed structures smaller in size are acceptable, providing that all structural elements are fully adhered to, including internal steel framework, which can be proportionately reduced in size and spacing, in accordance with the reduced garden shed size.

Yours faithfully

Darren McDonald B.E. (Civil) RPEQ
Senior Structural Engineer - Director
For an on behalf of NJA Consulting Pty Ltd

Building Act 1993

Building Interim Regulations 2017

REGULATION 1507: CERTIFICATE OF COMPLIANCE - DESIGN

Building Certifier or Local Authority (applicant to complete)

Relevant building surveyor:

Postal address:

Postcode:

From

Building practitioner: **Darren McDonald**

Category and class: **Engineer - Civil** Registration No: **EC 25680**

Postal address: **PO Box 64 Springwood QLD**

Postcode: **4127**

Property details (applicant to complete)

Number: Street/road:

City/suburb/town:

Lot/s: LP/PS:

Volume: Folio:

Crown allotment: Section:

Parish: County:

Municipal District:

COMPLIANCE

I did prepare the design and I certify that the part of the design described as ABSCO garages, carports and awnings comply with the following provisions of the Regulations.

- NCC - Building Code of Australia (2016) – Volume 2 – Class 1 and Class 10 Buildings
- AS1170.0-2002 - Structural design actions Part 0 General Principles
- AS1170.1-2002 - Structural design actions Part 1 Permanent, imposed and other actions
- AS1170.1-2011 - Structural design actions Part 2 Wind Actions
- AS1170.3-2003 - Snow Loads
- AS3600 - 2009 - Concrete Structures
- AS4100 - 1998 - Steel Structures
- AS4055 - 2012 - Wind loads for Housing
- AS4600 - 2005 - Cold-formed Steel Structures
- AS2870 - 2011 - Residential Slabs and Footings – Construction.
- Ramset - Specifiers Resource Book
- Buildex Fasteners - Technical Specification
- Low-High-Low testing of cyclonic area roof sheeting by University of Adelaide.

NJA Consulting Pty Ltd
ACN 089 515 720

Suite 14, Level 1
Plaza Chambers
3-15 Dennis Road
PO Box 64
Springwood QLD 4127

Ph (07) 3208 4755
Fax (07) 3208 1822
Email admin@nja.com.au
Web www.nja.com.au

DESIGN DOCUMENTS

NJA Consulting Pty Ltd Drawings **Dated: OCTOBER 2006 REV: 0 UNO**

Carports:	Drawings: **06205-003-CP01, CP02A, CP03 to CP06, CP07A, CP08, CP09**
Awnings:	Drawings: **06205-003-AW01A, AW02A, AW05**
Garages:	Drawings: **06205-003-GR01A, 02A, 03B to 11B, 12A, 13B, 14A, 15B**
Connections	Drawings: **06205-003-CN01**

Specifications: N/A	Prepared by:	Date:
Computations: N/A	Prepared by:	Date:
Test reports: N/A	Prepared by:	Date:
Other Documentation: N/A	Prepared by:	Date:

SCOPE OR LIMITATIONS

- This certificate relates to the structural aspects of the building only.
- The slab and footings nominated on the drawings are suitable for class A, S, M & H site classifications (awnings, garden sheds and carports), class A, S & M site classifications (garages) in accordance with AS2870. The applicant shall seek advice from a local building practitioner should the site classification fall outside of this range ie class H, E and P sites. The founding material shall have a minimum safe bearing capacity of 75kPa.
- The building shall be constructed in accordance with the design drawings and ABSCO assembly manuals. NJA accept no responsibility whatsoever for the performance of structures not constructed strictly in accordance with these documents.
- The structures are designed to sustain the wind loads nominated on the drawing for Group 1, Group 2 and Group 3 wind loadings. The site wind classification shall be derived in accordance with AS4055. Structural wind loads have been derived using AS1170.2-2002.

The following criteria are applicable to structure wind loads:

Structure Importance Level: **2**
Annual probability of exceedance: **1:500**
Topographic Classification: **T1**
Internal Pressure Coefficients: N2, N3 garages: **+0.2, -0.3 (non-cyclonic)**
C1 garages: **+0.7, -0.65 (cyclonic)**

The structures are rated to meet the wind classifications nominated on the plans. The onus is on the building certifier or local authority to ensure that the wind classification relevant to the intended siting of the ABSCO product does not exceed the product's individual wind rating. The site wind classification shall be determined in accordance with AS4055 Table 1 for topographic classification T1, for the relevant wind region. **NJA Consulting will not be providing site specific wind data as part of this certification. Should the certifier require site specific wind data, then they shall refer the applicant to a suitably qualified local building practitioner.**

- This certificate shall not be construed as relieving any party of their contractual or duty of care responsibilities, **and is valid until 08 October 2018. Beyond this date the certification is to be carried by another consultant.**

Signature 

Signed: Darren McDonald EC25680 Date: 10 April 2018

for and on behalf of NJA Consulting Pty Ltd

Our Ref: 12206-003: DMCD

NJA Consulting Pty Ltd
ACN 089 515 720

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Plaza Chambers
3-15 Dennis Road
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Web www.nja.com.au

4 February 2016

ABSCO
PO Box 119
ACACIA RIDGE QLD 4110

Attn: Ms Lisa Holtby

Dear Lisa

ABSCO KIT-FORM BUILDING PRODUCTS – REGULATION 88 - CERTIFICATE OF INDEPENDENT TECHNICAL EXPERT

We refer to the above matter.

We advise that NJA Consulting have been providing structural engineering certification services to ABSCO since 2006.

The current structural designs were originally prepared and certified by Cardno prior to NJA being engaged as the structural engineering certifier for ABSCO. The structural design verification process was undertaken by NJA Consulting based on the Cardno designs prior to providing certification services.

The structural design verification process has been undertaken, which complies with the following Australian standards and design conditions:

- NCC - Building Code of Australia (2015) – Volume 2 – Class 1 and Class 10 Buildings
- AS1170.0-2002 - Structural design actions Part 0 General Principles
- AS1170.1-2002 - Structural design actions Part 1 Permanent, imposed and other actions
- AS1170.1-2011 - Structural design actions Part 2 Wind Actions
- AS3600 - 2009 - Concrete Structures
- AS4100 - 1998 - Steel Structures
- AS4055 - 2012 - Wind loads for Housing
- AS4600 - 2005 - Cold-formed Steel Structures
- AS2870 - 2011 - Residential Slabs and Footings – Construction.
- Ramset - Specifiers Resource Book
- Buildex Fasteners - Technical Specification
- Low-High-Low testing of cyclonic area roof sheeting by University of Adelaide.

The current product range was originally indicated on Cardno drawings as follows:

Sheds/Garages: 1685/11/01-045, 049 to 050, 200 to 211, 224 to 227
Garden Sheds: 1685/11/01-017 to 019, 028, 031, 038, 039, 040, 055, 056, 059, 062
Awnings: 1685/11/01-060, 063, 231, 232
Carports: 1685/11/01-041 to 044, 051, 052, 100, 101

NJA CONSULTING
STRUCTURAL CIVIL FORENSIC ENGINEERS

The ABSCO product range is currently indicated on NJA drawings as follows:

Garden Sheds:	**06205-003-GS01C, GS02C, GS03B, GS04B, GS05B, GS06A, GS07A, GS08B, GS09 to GS11, GS12B, GS13B, GS14C, GS15, GS16C, GS17**
Carports:	**06205-003-CP01, CP02A, CP03 to CP06, CP07A, CP08, CP09**
Awnings:	**06205-003-AW01A, AW02A, AW05**
Garages:	**06205-003-GR01A, 02A, 03B to 11B, 12A, 13B, 14A, 15B**
Connections:	**06205-003-CN01**

If constructed in accordance with the above plans the range of structures indicated will comply with the relevant parts of the Building Code of Australia, and should be structurally sound.

We advise as independent technical experts;

1. We are not direct employees of the product manufacturer or building owner;
2. We were not involved in any aspect whatsoever of the product development or original design process by the previous consultant;
3. We have no pecuniary interest whatsoever in any aspect of proposed developments involving ABSCO products;
4. We have qualifications (Bachelor Degree suitable for corporate membership of the Institution of Engineers Australia) that qualify NJA Consulting Pty Ltd to act as an independent technical expert under regulation 85 of the South Australian Development Regulations.

Specifically in relation to the range of ABSCO Products the following limitations apply;

SCOPE OR LIMITATIONS

- *This certificate relates to the structural aspects of the building only.*
- *The slab and footings nominated on the drawings are suitable for class A, S, M & H site classifications (awnings, garden sheds and carports), class A, S & M site classifications (garages) in accordance with AS2870. The applicant shall seek advice from a local building practitioner should the site classification fall outside of this range ie class H, E and P sites. The founding material shall have a minimum safe bearing capacity of 75kPa.*
- *The building shall be constructed in accordance with the design drawings and ABSCO assembly manuals. NJA accept no responsibility whatsoever for the performance of structures not constructed strictly in accordance with these documents.*
- *The structures are designed to sustain the wind loads nominated on the drawing for Group 1, Group 2 and Group 3 wind loadings. The site wind classification shall be derived in accordance with AS4055. Structural wind loads have been derived using AS1170.2-2002.*

  The following criteria are applicable to structure wind loads:

  Structure Importance Level: ***2***
  Annual probability of exceedance: ***1:500***
  Topographic Classification: ***T1***

  Internal Pressure Coefficients:

  N2, N3 garages: ***+0.2, -0.3 (non-cyclonic)***
  C1 garages: ***+0.7, -0.3 (cyclonic)***
  Garden Sheds: ***0.0, -0.2 (all regions)***

  Garden sheds are considered to be effectively sealed during major wind events.

  The structures are rated to meet the wind classifications nominated on the plans. The onus is on the building certifier or local authority to ensure that the wind classification relevant to the intended siting of the ABSCO product does not exceed the product's individual wind rating. The site wind classification shall be determined in accordance with AS4055 Table 1 for topographic classification T1, for the relevant wind region. ***NJA Consulting will not be providing site specific wind data as part of this certification. Should the certifier require site specific wind data, then they shall refer the applicant to a suitably qualified local building practitioner.***

- *This certificate shall not be construed as relieving any party of their contractual or duty of care responsibilities.*

- *The range of engineering drawings for ABSCO garden sheds is indicated as GS01 to GS16 inclusive. These drawings nominate the maximum size garden shed structure, in length, width, and height permissible for each shed design. NJA acknowledge that for each garden shed design, as detailed on engineering plans GS01 to GS16 inclusive, that garden shed structures smaller in size are acceptable, providing that all structural elements are fully adhered to, including internal steel framework, which can be proportionately reduced in size and spacing, in accordance with the reduced garden shed size.*

Please contact us if you have any further queries in relation to this matter.

Yours faithfully

Darren McDonald – Senior Structural Engineer (Director)

B.E. (Civil)
RPEQ 5453 QLD
24619ES NT
EC25680 VIC
CC 4481E TAS

for and on behalf of
NJA Consulting Pty Ltd

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

To: *Owner name* / *Address* / *Suburb/postcode*

Form 35

Designer details:

Name:	Darren McDonald	Category:	CIVIL
Business name:	NJA Consulting Pty Ltd	Phone No:	07 3208 4755
Business address:	PO Box 64 (3-15 Dennis Road) Springwood		
	QLD 4127	Fax No:	07 3208 1822
Licence No:	CC-4481E	Email address:	d.mcdonald@nja.com.au

Details of the proposed work:

Owner/Applicant

Address:

Designer's project reference No.

Lot No:

Type of work: Building work [X] Plumbing work [ ] *(X all applicable)*

Description of work:

New kit-form steel structure (Carport, Awning or Garage)

(new building / alteration / addition / repair / removal / re-erection water / sewerage / stormwater / on-site wastewater management system / backflow prevention / other)

Description of the Design Work (Scope, limitations or exclusions): *(X all applicable certificates)*

Certificate Type:	Certificate	Responsible Practitioner
	☐Building design	Architect or Building Designer
	☑**Structural design**	**Engineer or Civil Designer**
	☐Fire Safety design	Fire Engineer
	☐Civil design	Civil Engineer or Civil Designer
	☐Hydraulic design	Building Services Designer
	☐Fire service design	Building Services Designer
	☐Electrical design	Building Services Designer
	☐Mechanical design	Building Service Designer
	☐Plumbing design	Plumber-Certifier; Architect, Building Designer or Engineer
	☐Other (specify)	

Deemed-to-Satisfy: ☐ Performance Solution: ☒

Other details: NIL

Design documents provided:

The following documents are provided with this Certificate –

Document description:

Drawing numbers:

NJA Consulting Pty Ltd Drawings:

Carports:	Drawings: ***06205-003-CP01, CP02A, CP03 to CP06, CP07A, CP08, CP09***
Awnings:	Drawings ***06205-003-AW01A, AW02A, AW05***
Garages:	Drawings: ***06205-003-GR01A, 02A, 03B to 11B, 12A, 13B, 14A, 15B***
Connections	Drawings: ***06205-003-CN01***

** Applicable drawings for each individual ABSCO product shall be supplied with the application. Only some drawings are required for each individual product*

This is a generic certificate for kit-form steel building products. The above items left blank on this certificate shall be completed by the applicant in conjunction with the Building Surveyor.

Schedules: NIL	Prepared by:	Date:
Specifications: NIL	Prepared by:	Date:
Computations: NIL	Prepared by:	Date:
Performance solution proposals: NIL	Prepared by:	Date:
Test reports: NIL	Prepared by:	Date:

Standards, codes or guidelines relied on in design process:

Substance of Certificate:

The structural design for the range of ABSCO kit-form buildings has been undertaken in accordance with the following design conditions.

- NCC - Building Code of Australia (2016) – Volume 2 – Class 1 and Class 10 Buildings
- AS1170.0-2002 - Structural design actions Part 0 General Principles
- AS1170.1-2002 - Structural design actions Part 1 Permanent, imposed and other actions
- AS1170.2-2011 - Structural design actions Part 2 Wind Actions
- AS1170.3-2003 - Snow Loads
- AS3600 - 2009 - Concrete Structures
- AS4100 - 1998 - Steel Structures
- AS4055 - 2012 - Wind loads for Housing
- AS4600 - 2005 - Cold-formed Steel Structures
- AS2870 - 2011 - Residential Slabs and Footings – Construction.
- Ramset - Specifiers Resource Book
- Buildex Fasteners - Technical Specification
- Low-High-Low testing of cyclonic area roof sheeting by University of Adelaide. Test results available on request.

Scope or Limitations

- This certificate relates to the structural aspects of the building only.
- The slab and footings nominated on the drawings are suitable for class A, S, M, and H site classifications (awnings, garden sheds and carports), class A, S & M site classifications (garages) in accordance with AS2870. The applicant shall seek advice from a local building practitioner should the site classification fall outside of this range i.e. class E and P sites. The foundation material shall have a minimum safe bearing capacity of 75 kPa.
- The building shall be constructed in accordance with the design drawings and ABSCO assembly manuals. NJA accept no responsibility whatsoever for the performance of structures not constructed in accordance with these documents.
- The structures are designed to sustain the wind loads nominated on the drawing for Group 1, Group 2 and Group 3 wind loadings. The site wind classification shall be derived in accordance with AS4055. Structural wind loads have been derived using AS1170.2-2002.

  The following criteria are applicable to structure wind loads:

  Structure Importance Level: **2**
  Annual probability of exceedance: **1:500**
  Topographic Classification: **T1**
  Internal Pressure Coefficients N2, N3 garages: **+0.2, -0.3 (non-cyclonic)**
  C1 garages: **+0.7, -0.65 (cyclonic)**

  The structures are rated to meet the wind classifications nominated on the plans. The onus is on the building certifier or local authority to ensure that the wind classification relevant to the intended siting of the ABSCO product does not exceed the product's individual wind rating. The site wind classification shall be determined in accordance with AS4055 Table 1 for topographic classification T1, for the relevant wind region.

  NJA Consulting will not be providing site specific wind data as part of this certification. Should the certifier require site specific wind data, then they shall refer the applicant to a suitably qualified local building practitioner.

- This certificate shall not be construed as relieving any party of their contractual responsibilities, **and is valid until 8 October 2018. Beyond this date the certification shall be carried by another consultant.**

NORTHERN TERRITORY OF AUSTRALIA
BUILDING ACT
SECTION 40 – CERTIFICATE OF COMPLIANCE – STRUCTURAL DESIGN

PROPERTY / PROJECT DETAILS	
Owner (if known):	
Lot/Portion Number:	Address:
Location:	Town / Hundred :
Description of works : ***PROPOSED KIT-FORM SHED, AWNING or CARPORT***	

DOCUMENTS ATTACHED (as built drawings or latest amendments)

Drawing Nos: This certificate covers the full range of ABSCO products as outlined on the following drawings:

NJA Consulting Pty Ltd Drawings:

Carports:	Drawings: **06205-003-CP01, CP02A, CP3 to CP06, CP07A, CP08, CP09**
Awnings	Drawings: **06205-003-AW01A, AW02A, AW05**
Garages	Drawings: **06205-003-GR01A, GR02A, GR03B to GR11B, GR12A, GR13B, GR14A, GR15B**
Connections	Drawings: **06205-003-CN01**

Other Related Documents:

1. Schedule of inspections : see over
2. PI INSURANCE CERTIFICATE (attached)

DESIGN CERTIFICATE CRITERIA

The structural design for the range of ABSCO kit-form buildings has been undertaken in accordance with the following design conditions.

- NCC - Building Code of Australia (2016) – Volume 2 – Class 1 and Class 10 Buildings
- AS1170.0-2002 - Structural design actions Part 0 General Principles
- AS1170.1-2002 - Structural design actions Part 1 Permanent, imposed and other actions
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- AS1170.3-2003 - Snow Loads
- AS3600 - 2009 - Concrete Structures
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- AS4055 - 2012 - Wind loads for Housing
- AS4600 - 2005 - Cold-formed Steel Structures
- AS2870 - 2011 - Residential Slabs and Footings – Construction.
- Ramset - Specifiers Resource Book
- Buildex Fasteners - Technical Specification
- Low-High-Low testing of cyclonic area roof sheeting by University of Adelaide.

Class of Building (BCA) : 10a
Building Importance Level: (BCA Table B1.2a): 2
Annual Probability of Exceedance for wind: 1 in 500

COMMENTS / EXCLUSIONS (Exclusions to this Certificate must be clearly identified).

- This certificate relates to the structural aspects of the building only.
- The slab and footings nominated on the drawings are suitable for class A, S, M & H site classifications (awnings, garden sheds and carports), class A, S & M site classifications (garages) in accordance with AS2870. The applicant shall seek advice from a local building practitioner should the site classification fall outside of this range ie class H, E and P sites. The founding material shall have a minimum safe bearing capacity of 75kPa.
- The building shall be constructed in accordance with the design drawings and ABSCO assembly manuals. NJA accept no responsibility whatsoever for the performance of structures not constructed strictly in accordance with these documents.
- The structures are designed to sustain the wind loads nominated on the drawing for Group 1, Group 2 and Group 3 wind loadings. The site wind classification shall be derived in accordance with AS4055. Structural wind loads have been derived using AS1170.2-2002.

The following criteria are applicable to structure wind loads:

Structure Importance Level: **2**
Annual probability of exceedance: **1:500**
Topographic Classification: **T1**
Internal Pressure Coefficients — N2, N3 garages: **+0.2, -0.3 (non-cyclonic)**
C1 garages: **+0.7, -0.3 (cyclonic)**

The structures are rated to meet the wind classifications nominated on the plans. The onus is on the building certifier or local authority to ensure that the wind classification relevant to the intended siting of the ABSCO product does not exceed the product's individual wind rating. The site wind classification shall be determined in accordance with AS4055 Table 1 for topographic classification T1, for the relevant wind region. **NJA Consulting will not be providing site specific wind data as part of this certification. Should the certifier require site specific wind data, then they shall refer the applicant to a suitably qualified local building practitioner.**

- All glazed windows and doors to be designed and certified by window manufacturer. The glazing shall be designed to the Wind Classification System specified above, as defined in AS4055-1992. The glazing manufacturer shall satisfy the requirements of AS2047 for the specified Wind Classification System. The wind classification system has been determined on the basis of the following additional assumptions:-
- Flat site. Where the site is not generally flat (i.e. average slope steeper than 1:10), advise the certifying engineer for a possible reclassification of the glazing requirements.

- This certificate shall not be construed as relieving any party of their contractual responsibilities **and is valid until 8 October 2018. Beyond the date the certification will be carried by another engineering consultant.**

CERTIFICATION BY STRUCTURAL ENGINEER

Company Name if certification issued on behalf of a corporation	**Company NT Registration Number: 53639ES**
NJA CONSULTING PTY LTD	

I certify that reasonable care has been taken to ensure that the structural engineering aspects of the works as described above have been designed in accordance with the requirements of the Building Code of Australia and the Northern Territory Building Regulations.

Name (see *below)	**Nominee/Individual NT Registration Number**	**Signature**	**Date**
Darren John McDonald	**24619ES**	DMcD.	**10 April 2018**

* Name and registration number of nominee signing on behalf of the company or if no company, name of individual issuing certification.

SCHEDULE OF STRUCTURAL INSPECTIONS (CERTIFIER TO DETERMINE REQUIREMENTS)

[ ] **1.** Completion of site preparation/site filling/excavations for footings prior to placement of any reinforcement or concrete.

[ ] **2.** Completion of preparations for placing of concrete strip footings including placement of reinforcement.

[*] 3. Completion of preparations for placing concrete slabs including compaction of fill and sand blinding, placement of formwork, reinforcement, starter bars and cast in items.

[ ] **4.** Completion of preparations for placing of concrete pier footings including reinforcement (if any).

[ ] **5.** Starter bars and cast in items after placing of concrete and prior to any covering up work.

[ ] **6** Reinforcement to walls completed prior to core filling (inspection holes and cleanout cores to be completed).

[*]7. Structural steelwork and cold formed steelwork completed and prior to any covering up work. Floor framing system completed before floors are laid or underside is lined.

[ ] **8.** Suspended concrete floor slabs with formwork, reinforcement and cast in items completed, prior to placing of concrete.

[ ] **9.** Wall framing or blockwork wall core filling completed (with windows fixed in place) and roof framing with connections completed and prior to sheeting or lining.

Note: [ ] Prior lodgement of truss manufacturer's drawings, details and certification required.
[ ] Prior lodgement of windows manufacturer's drawings including fixings and certification required.

[ ] **10.** Structural wall linings completed and prior to any covering up work.

[ ] **11.** Final inspection upon completion of all structural work including fixings of external roof and wall claddings, flashings, barges & vents.

[ ] **12.** Other Inspections

Important Information:

1) The above inspections are required to be carried out by either the certifying engineer or the building certifier who issued the Building Permit for the work. (If no inspections are indicated refer to the certifying engineer for advice).

2) Where works are prescribed building works under the *NT Building Act*, the building certifier must be provided with a copy of the inspection record and no further works must be carried out by the builder until the building certifier issues a release to proceed with further works.

3) Additional non-structural inspections may be required during the course of construction before the issue of an Occupancy Permit (refer to building certifier for requirements).

4) Failure to obtain inspections may prevent the issue of an Occupancy Permit upon completion of the building works.

SPECIALTY RISKS

TK SPECIALTY RISKS PTY LTD
ABN: 21 608 877 783
Representative No: 001237371
Corporate Authorised Representative
Millennium Underwriting Agencies Pty Ltd – AFSL No: 246721

Certificate of Currency

Insured:	**NJA Consulting Pty Ltd**
Class of Insurance:	Professional Indemnity Insurance
Policy Number:	TKSCC1709131736
Policy Term:	From 4pm 8/10/2017 to 4pm 8/10/2018
Limit of Liability:	Professional Indemnity: $3,000,000 Costs Inclusive
Excess:	Professional Indemnity: $10,000
Wording:	TKSR CCB 2016
Retroactive Date:	Unlimited, excluding known claims and/or circumstances
Insurer:	100% Certain Underwriters at Lloyd's

The above is a brief outline of the Policy only, and coverage is at all times subject to the terms and conditions of the Policy.

T Kent
Authorised Officer
Millennium Underwriting Agencies Pty Ltd

Date: 06/10/2017

AUSTRALIA PRODUCT WARRANTY AGAINST DEFECTS

Congratulations on your purchase of an ABSCO SHED

ABSCO SHEDS, including garden sheds, garden beds, aviaries, storage units, garages, awnings and carports are made using high quality Australian made steel.

We are pleased to advise we warrant that the steel coating will not rust, crack, flake peel or blister for **30 years** from date of purchase, when installed within Australia.

This warranty does not apply to surface deterioration of panels caused by 'Swarf" (Tiny particles of steel debris left from cutting, grinding or drilling operations) that has not been removed after building construction, or as a result of contact with damp soil, chemicals, fertilisers or other corrosive substances.

This warranty covers any Absco product used for normal domestic use and installed in accordance with the installation instructions. The warranty does NOT cover Damage caused by storms, wind, rain snow or poor foundations.

This warranty does NOT cover ABSCO products installed in severe coastal, industrial or other highly corrosive environments. The warranty does not cover fasteners (screws, nuts, bolts, rivets, hasps or sliding padbolts).

The warranty is limited to replacement and delivery of components and does not include any labour or installation costs. The benefits given by the warranty are in addition to your other rights and remedies under a law in relation to the goods or services to which the warranty relates.
The warranty applies to the exclusion of all other representations, guarantees or warranties express or implied, our goods come with guarantees that cannot be excluded under the Australian consumer law and is not transferable. You are entitled to a replacement or refund for a major failure and for compensation for any other foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of an acceptable quality and the failure does not amount to a major failure. For further information go to http://www.consumerlaw.gov.au.
Please retain a proof of purchase (sales docket or invoice) or register your warranty within 30 days of purchase here:
www.absco.com.au/register_warranty.php

In the unlikely event a warranty claim is made, it must be supported by photographic evidence and details of the defect, including component part numbers, together with proof of purchase documentation (or on-line registration of purchase) and forwarded to the address below. Upon receipt of the warranty claim, the Customer Service Manager will contact you within three business days to advise you of the assessment outcome of the claim, which may include your expenses incurred in making the claim.

THE CUSTOMER SERVICE MANAGER, ABSCO INDUSTRIES, PO BOX 119 ACACIA RIDGE QLD AUSTRALIA 4110

PHONE: 1800 029701 FAX: 07-33441191 EMAIL: warranty@absco.com.au

Issued 01 January 2013

ABSCO SHEDS - STORAGE GUIDELINES

ABSCO SHEDS include garden sheds, garden beds, storage units, aviaries, garages, awnings and carports.

ABSCO SHEDS are designed to be weatherproof for normal weather conditions. In the event of extreme weather conditions such as heavy rain, combined with high wind gusts, the ridge capping, sheeting joins, screw fixings etc., may exhibit minor deformations which may allow some water entry. These areas should be checked regularly to ensure that maximum strength and protection is maintained.

Other weather conditions such as extreme heat and extreme cold, moist or dry air can influence the effects of concrete floor moisture and/or condensation on the underside of the roof sheets.

ABSCO SHEDS and storage units are primarily used for storage of garden equipment such as lawnmowers, wheelbarrows, garden tools etc. Storage items that might be adversely affected by any of the above conditions may require additional protection such as being sealed or covered by plastic sheets and/or stacked above the concrete floor on timber slats.

Waterproof sealants may be used to offer further protection where required around joins and screw fixings, as can rubber door seals and other products which are available from most hardware outlets.

Placement of waterproof sealants (silicone) between the base of the shed and concrete slab is not recommended, as this process can have a reverse effect, preventing excess water from escaping, resulting with water accumulating and being trapped inside the shed.

Absco accepts no responsibility for water entry, floor moisture, condensation or the condition of the Contents inside your Absco steel building arising from any of the pre-mentioned weather conditions.