

# CURVED ROOF ATTACHED PATIO

## STRATCO OUTBACK® ASSEMBLY INSTRUCTIONS.

### Your supplementary guide to building an ATTACHED CURVED ROOF VERANDAH or PATIO



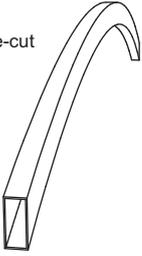
This set of instructions should be used in conjunction with the Stratco instruction brochure 'Flat Verandahs Attached - Your complete guide to building an Attached Outback Verandah, Patio or Carport'.

#### BEFORE YOU START

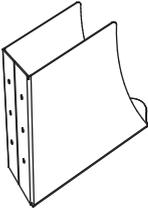
Carefully read these instructions, along with the "Stratco Flat Verandahs Attached" Instructions. If you do not have all the necessary tools or information, contact Stratco for advice. Before starting lay out all components and check them against the delivery docket. The parts description identifies additional curved roof parts, and the component layout diagram indicates their fastening position.



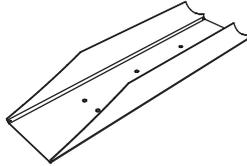
**CURVED RAFTERS**  
Consist of pre-cut 100mm RHS.



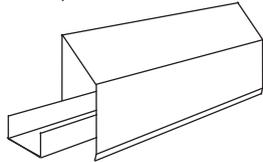
**CURVED RAFTER TO VALLEY BRACKET**  
Fastens the curved rafter to the valley beam.



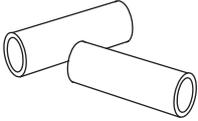
**CURVED RAFTER TO HEADER BRACKET**  
Connects curved rafters to header beam on a Multispan Curved unit.



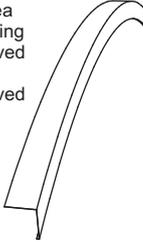
**BEAM CAPPING**  
Fixed to the top of the valley beam to provide support for the Outback Deck on a Clearspan Curved unit.



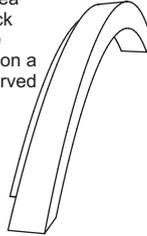
**SPACERS**  
Used to prevent the 150 attachment beam from crushing.



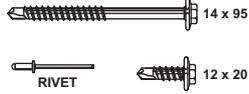
**CURVED BARGE CAP**  
Covers the area where the roofing finishes at curved frames on a Multispan Curved unit.



**CURVED GUTTERS**  
Covers the area where the deck finishes at the curved frame on a Clearspan Curved unit.

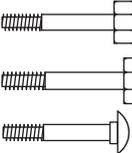


**SCREWS AND RIVETS**  
Fastener types vary depending upon the connection, ensure correct fixings are used.



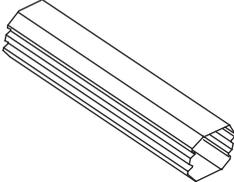
14 x 95  
RIVET  
12 x 20

**BOLTS**  
Fastener types vary depending upon the connection, ensure correct fixings are used.

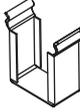


M10 HEX HEAD BOLT  
M12 HEX HEAD BOLT  
CUPHEAD BOLT

**PURLINS**  
Provide support for cladding, on a Multispan Curved unit.



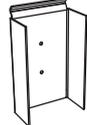
**POST BRACKET**  
Connects post to beam.



**POST CAP**  
Fills gap between post and beam.



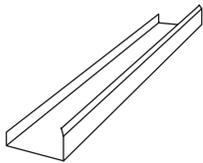
**BEAM TO BEAM BRACKET**  
Connects horizontal beams.



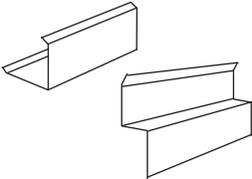
**BEAM FILLER**  
Fills gap between intersecting beams.



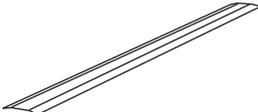
**SOAKER FLASHING**  
Water proofs the rear of the curved unit and conceals the existing house gutter.



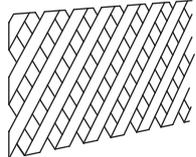
**HEADER FLASHINGS**  
Run along header beam to neatly finish the base of infill panels.



**PANEL STRIPS**  
Decorative strips fixed to infill panels.



**INFILL PANEL**  
Cut to suit curved end frames.




## ADDITIONAL MATERIALS

Please note that the Stratco Outback kit does not include any brackets or fixings to attach the unit to an existing structure, or concrete / masonry anchors for column installation. If required they must be purchased as additional items.

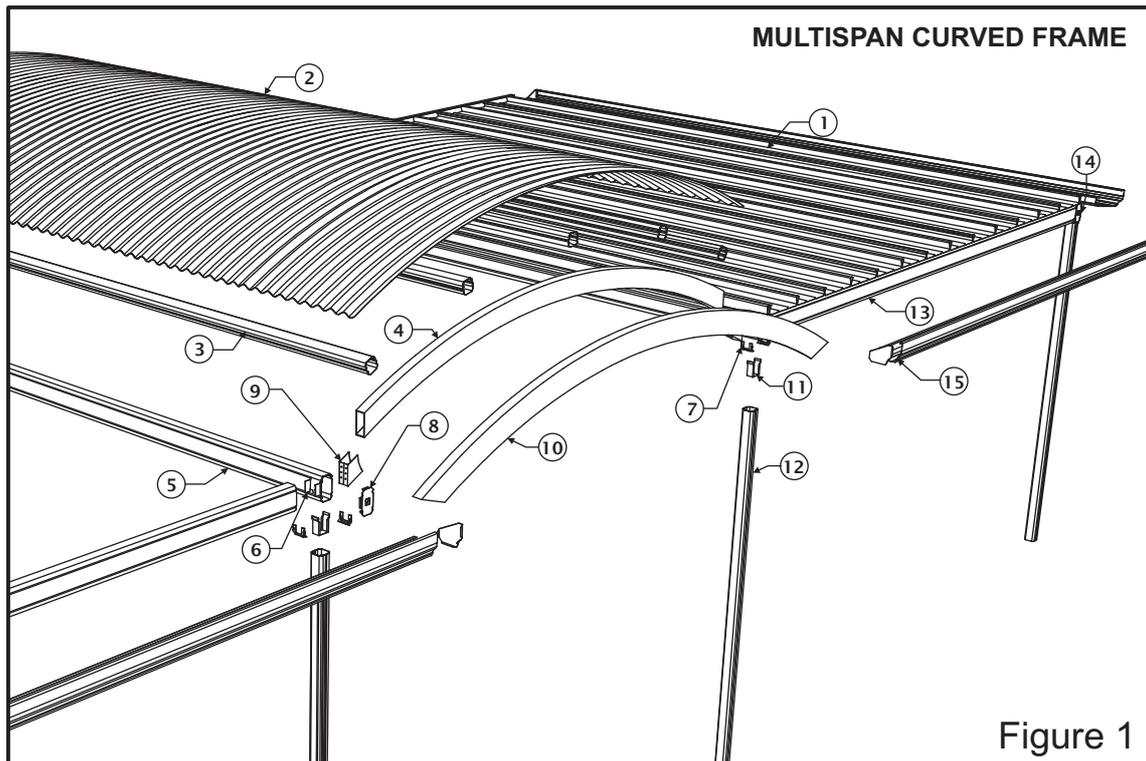


Figure 1

- ① Outback Deck
- ② Polycarbonate Sheet, or CGI
- ③ Purlin
- ④ Curved Rafter
- ⑤ Valley Beam
- ⑥ Beam to Beam Bracket
- ⑦ Notched Beam Filler
- ⑧ Beam End Cap
- ⑨ Curved Rafter to Valley Bracket
- ⑩ Curved Barge Cap
- ⑪ Post Bracket
- ⑫ Post
- ⑬ Front Fascia Beam
- ⑭ Side Fascia Beam
- ⑮ Gutter and Gutter Stop End
- ⑯ Post Cap

**CURVED WITH INFILL**

- ⑰ Curved Rafter To Header Bracket
- ⑱ Header Beam

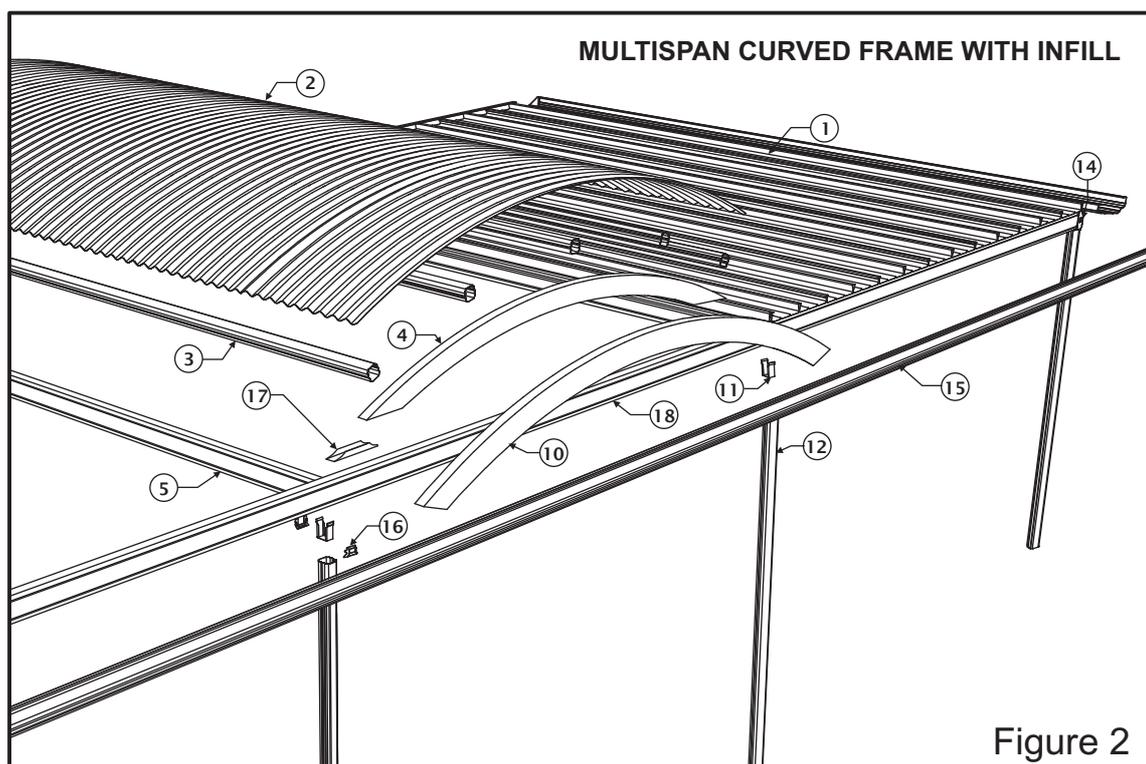


Figure 2

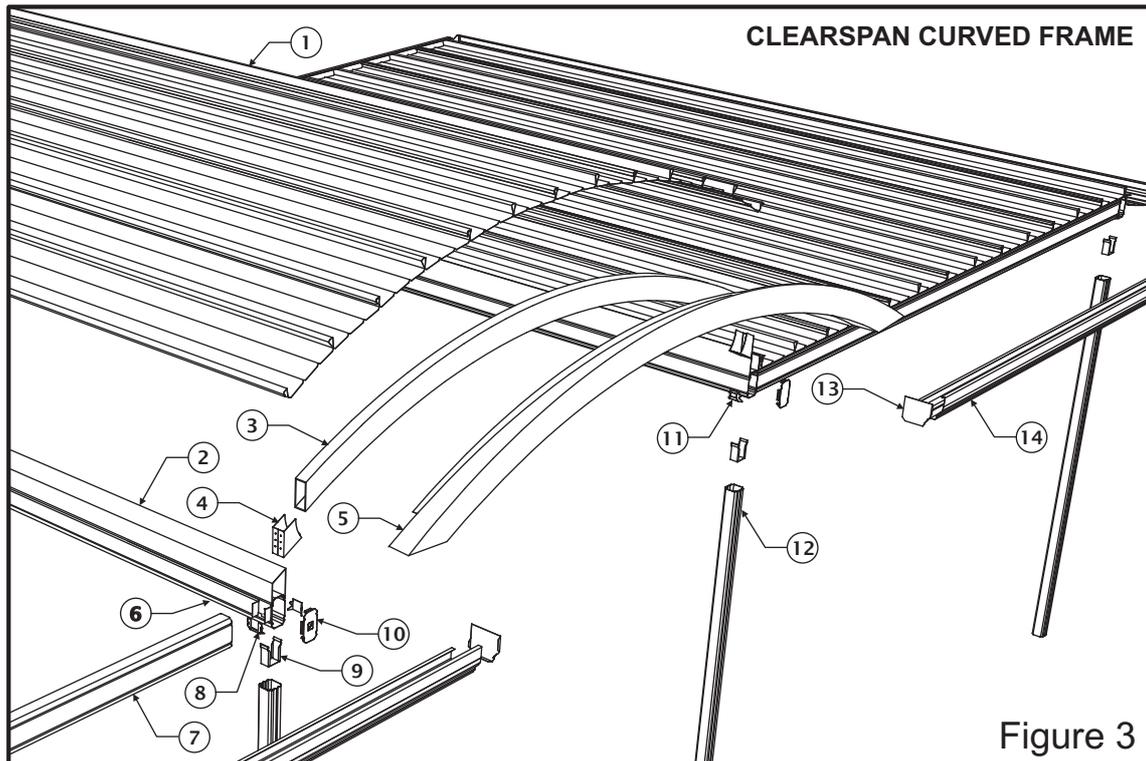


Figure 3

- |                                   |                       |
|-----------------------------------|-----------------------|
| ① Outback Deck                    | ⑧ Notched Beam Filler |
| ② Beam Capping                    | ⑨ Post Bracket        |
| ③ Curved Rafter                   | ⑩ Beam End Cap        |
| ④ Curved Rafter to Valley Bracket | ⑪ Post Cap            |
| ⑤ Curved Gutter                   | ⑫ Post                |
| ⑥ Valley Beam                     | ⑬ Gutter Stop End     |
| ⑦ Front Fascia Beam               | ⑭ Gutter              |

**CURVED WITH INFILL**

- ⑮ Header Beam

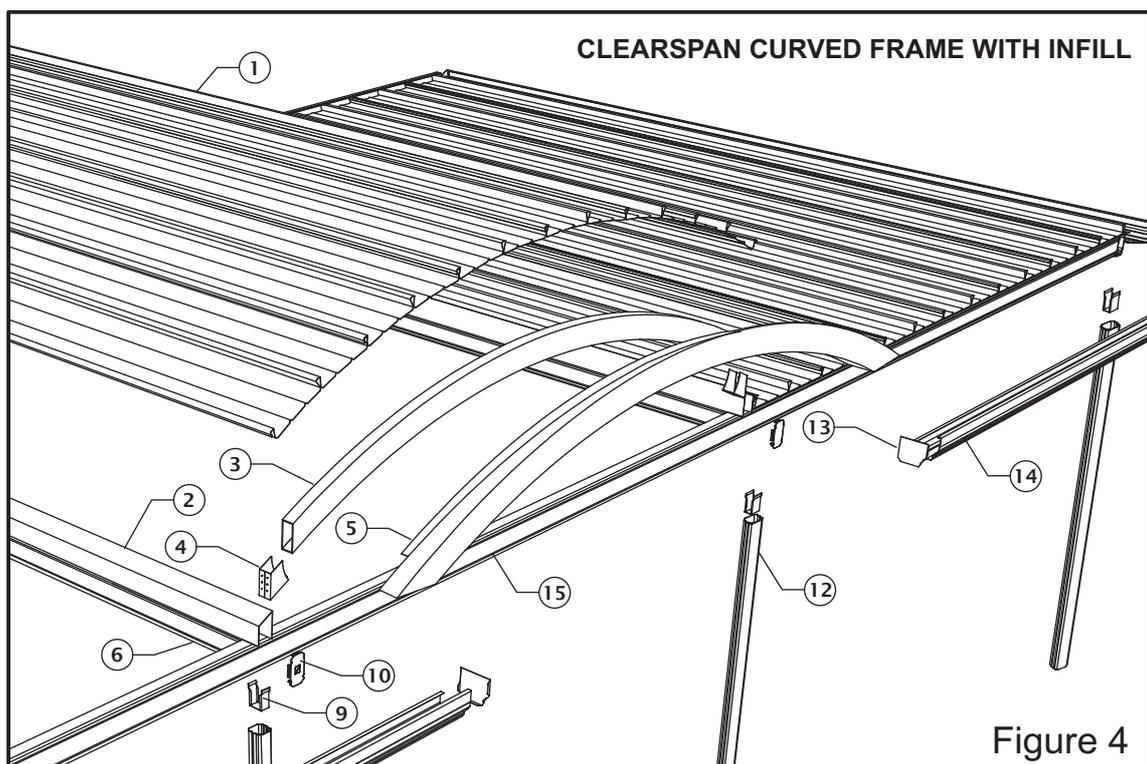


Figure 4

## 1.0 INTRODUCTION

Please read these assembly instructions thoroughly before commencing the construction. Double check all dimensions, levels and bolting locations before cutting, screwing or bolting structural members. It is recommended that the persons erecting the structure have had some previous building experience because some modifications to the existing house structure are required.

## 2.0 ATTACHING TO AN EXISTING STRUCTURE

The builder or council is to ensure the existing house/structure is of a suitable structural integrity and complies with all the relevant Australian Building codes and standards. For more information regarding the suitability of the house structure to accommodate the Stratco Attached Curved unit, consult a structural engineer or a building authority. It is the builder's responsibility to ensure that the existing house roof structure is strengthened correctly.

Refer to Section 2.1 if attaching the Stratco Curved unit on it's side to a house, Section 2.2 if attaching on it's end to a house or refer to both sections if attaching the unit on it's side and end.

### 2.1 ATTACHING ON SIDE TO HOUSE

A Stratco Curved unit attached on it's side to a house is attached to the existing eaves overhang at the fascia, or to an existing wall if height permits.

The first objective in the construction is to fix a structural side beam along the fascia or wall, to which the curved unit is attached.

Most existing houses have not been designed for the attachment of curved frames to the fascia, therefore additional strengthening of the house rafters must be performed.

In order to strengthen the existing house rafters, the roof tiles or roof sheets need to be lifted to expose the roof frame. Steel rafter brackets and channels are then bolted along the house rafters. Refer to Section 2.1.1.

A 150 mm Outback beam is bolted to the strengthening brackets at the fascia. Once the 150 attachment beam is secured to the house, the curved unit can be erected and fastened to the beam.

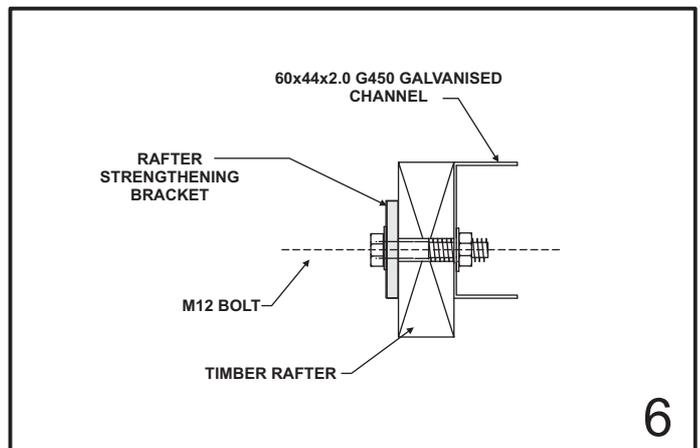
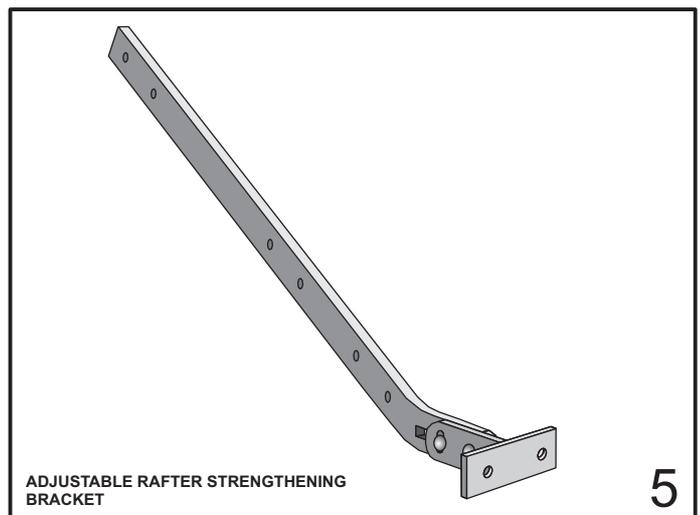
#### 2.1.1 RAFTER STRENGTHENING

The first step is to determine the number of rafters which need to be strengthened and their location relative to the unit. You will have to lift some roof tiles or roof sheets to discover the rafter positions and spacings. The number of rafters which need to be strengthened is determined by the builder, however spacing is recommended not to exceed 1200mm.

**Note:** It is the builder's responsibility to ensure the existing rafters and fascia are adequately reinforced and strengthened to accommodate any additional attached structure. The reinforcing method must be approved by the appropriate council or engineer.

It is recommended an adjustable rafter strengthening bracket is used in conjunction with an extension channel, as shown in Figure 6.

The adjustable rafter strengthening bracket is shown in Figure 5. Please note that this bracket may not be suitable for applications where the front face of the house gutter is higher than 120 mm. In these cases please contact Stratco for alternative solutions.



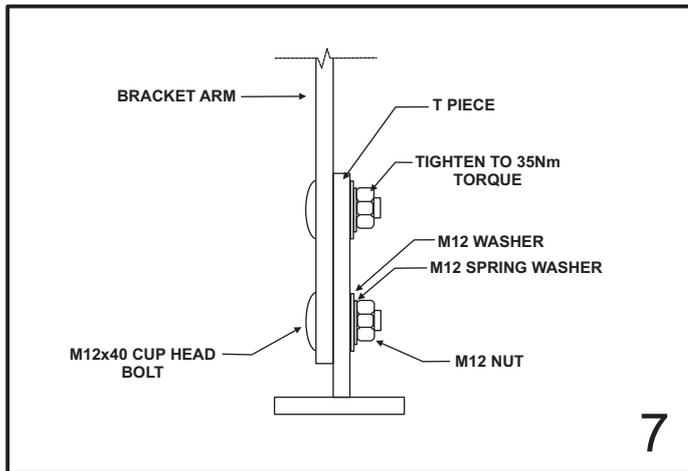
### Fixing Rafter Strengthening Brackets and Channels

The adjustable rafter strengthening bracket allows for an adjustment of pitch in the range of 15 to 30 degrees. The distance the bracket extends past the fascia is also adjustable to allow for standard gutters or box gutters with a width of up to 200mm.

In conjunction with rafter strengthening brackets a channel is fixed to the side of the house rafter (Figure 6). The bottom end of the channel must be located at the base of the house rafter. Holes should be marked and pre-drilled in the channel to suit the location of existing holes in the bracket. The channel will extend beyond the bracket so additional holes are to be drilled in the channel at approximately 500mm centres.

Initially the bracket T piece shall be fixed to the bracket arm with two M12 cup head bolts (hand tighten only), a spring washer is to be located between the standard M12 washer and nut (Figure 7).

Mark the position of the bracket on the fascia and notch a rectangular hole in the fascia allowing the bracket to be fed through the front of the fascia. The hole may need to be enlarged slightly if the M12 cup head bolts interfere with the fascia.

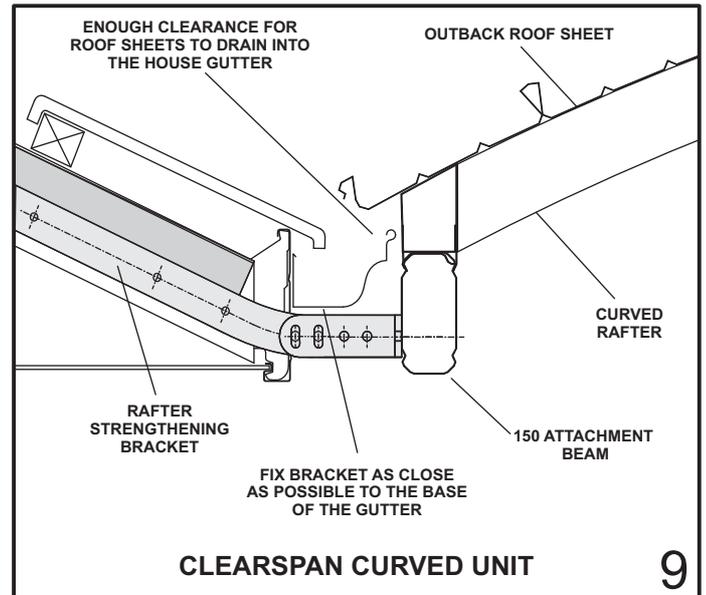
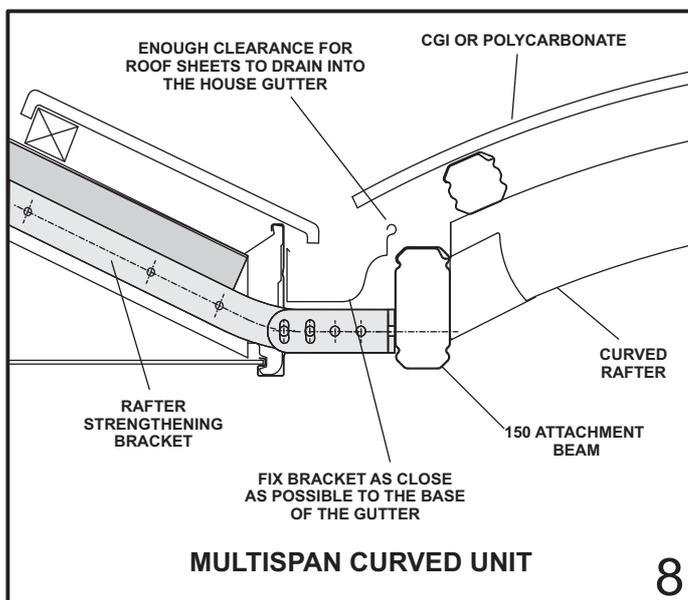


Insert the bracket through the fascia and fix with the channel to the house rafter using M12 hex head bolts through the existing holes in the bracket and further up the channel (Figure 11).

Adjust the T piece so it is horizontal and has the appropriate extension past the fascia to allow for fixing of the attachment beam. T piece connection bolts are to be tightened to a minimum 35Nm torque.

Fix the bracket as close to the base of the gutter as possible (recommended distance 10mm from lowest end of gutter), as shown in Figure 8 for a Multispan Curved unit, and Figure 9 for a Clearspan Curved unit.

The 150 attachment beam is to be fixed to the end plate of the rafter bracket to ensure the roof sheets extend into the existing house gutter (Figure 8 for a Multispan Curved unit, Figure 9 for a Clearspan Curved unit).



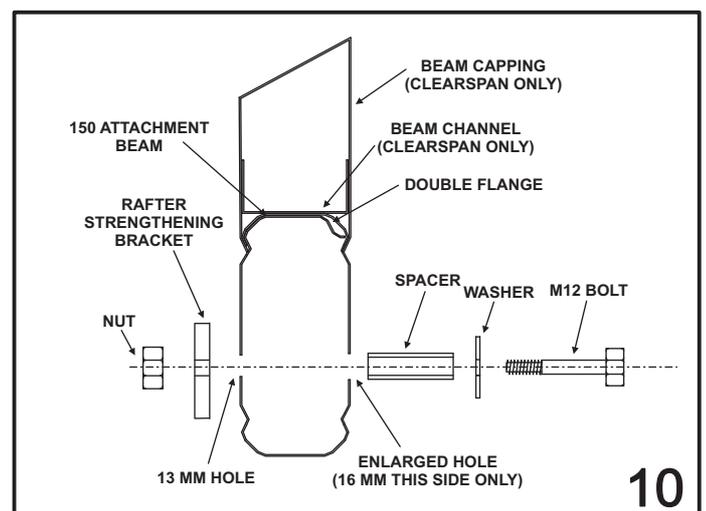
### Fixing the 150 Attachment Beam in Place

After fixing all the brackets and channels, the 150 attachment beam is fixed in place. For a Multispan Curved unit the 150 attachment beam will need to be propped in position with the double thickness on top and must be located at a height on the bracket which allows clearance between the curved roof sheets and the gutter. For the Clearspan Curved unit the 150 attachment beam will need to be propped in position with the beam capping on top, with the beam adjusted to achieve a minimum fall of 1 in 60 towards the front of the unit.

Fix the 150 attachment beam to the end plates of the rafter bracket using two M12 bolts, with the bolt head on the 150 attachment beam side. Insert spacers to prevent the beam from crushing, and bolt in position, using nuts and washers (only use washers to the inside face of the beam).

**Note:** Do not over tighten bolts as this can lead to a visible indentation due to the high gloss nature of the material. Refer to Figure 10 for fixing spacers.

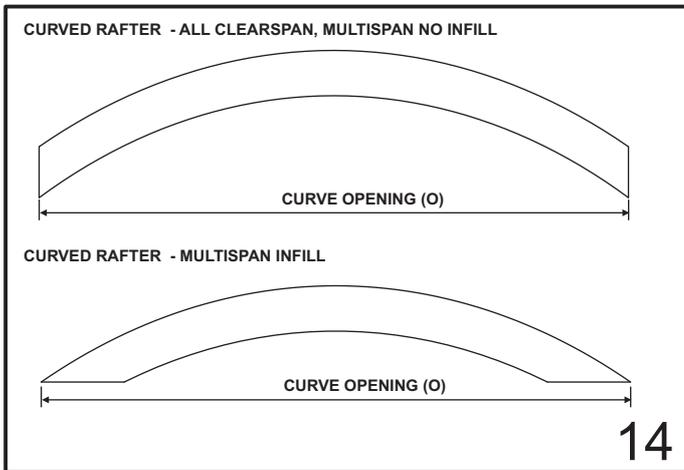
To insert spacers drill 13 mm holes through the 150 attachment beam. Then drill 16 mm holes on the inside face only, ie, this time do not drill all the way through. This will allow the spacer to slide in from the inside and stop at the other side as shown in Figure 10.





### 3.0 CURVED FRAME

The curved rafters are supplied pre-cut as shown in Figure 14. Measure the distance between rafter ends, O (Figure 14), to check the spacing between the internal faces of the valley beams.



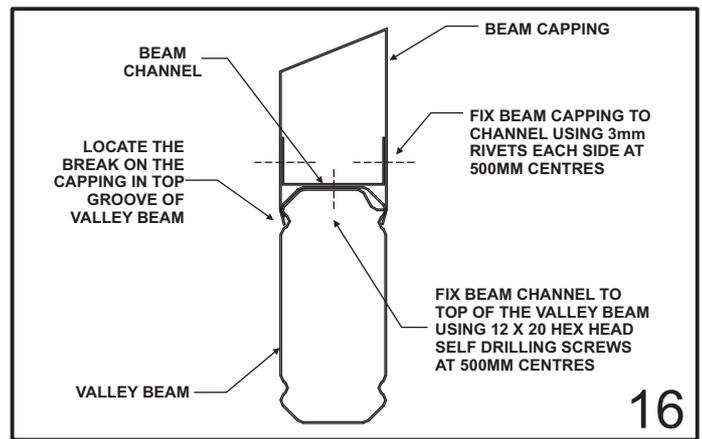
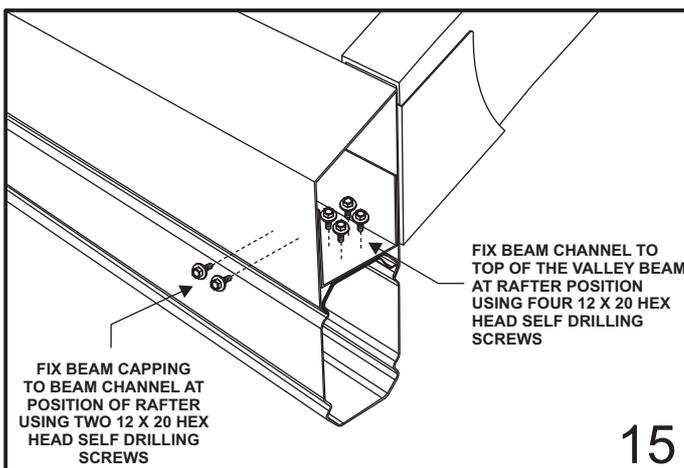
### 4.0 VALLEY BEAM ASSEMBLY

Before erecting the valley beams for the Clearspan Curved unit fix the beam capping and beam channel to the top of the beams.

First fix the beam channel to the top of the valley beam with four 12x20 hex head self drilling screws at the intended position of the curved rafters, as shown in Figure 15. Continue fixing the beam channel to top of the valley beam using 12x20 hex head self drilling screws at 500mm centres as shown in Figure 16.

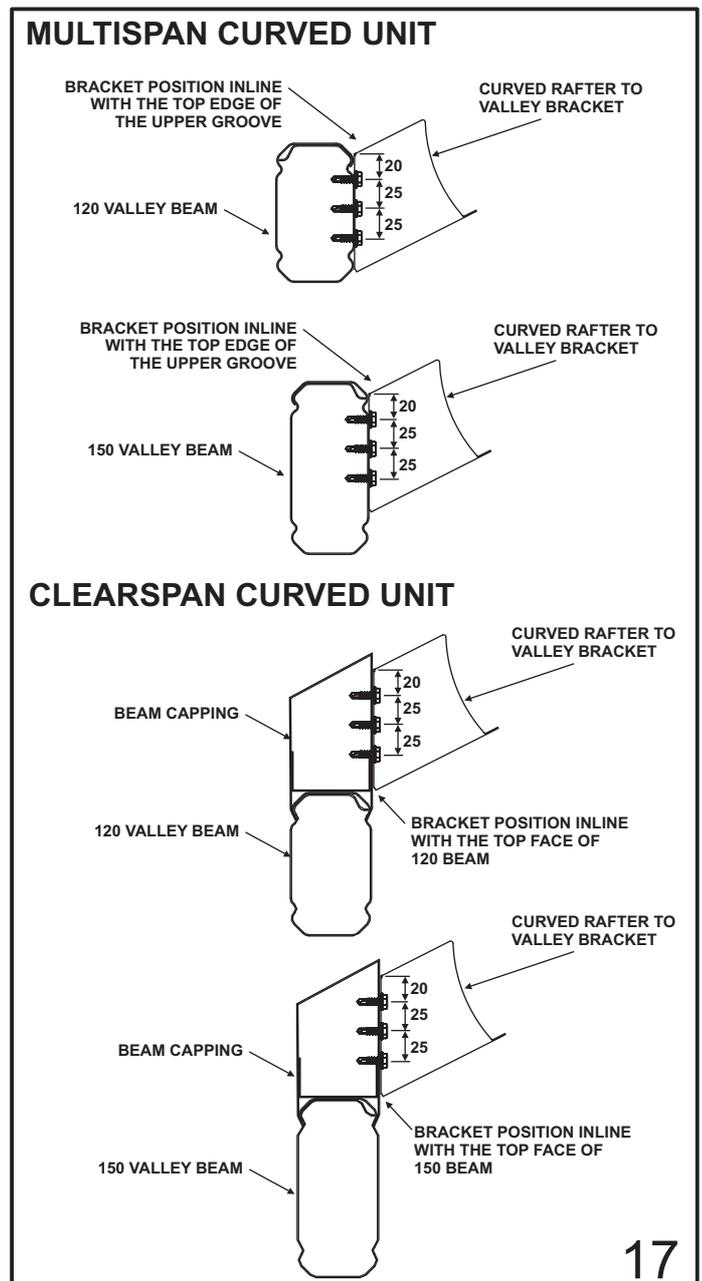
Two 12x20 hex head self drilling screws must be used to fix the beam capping to the beam channel on the opposite side to the curved rafter to valley bracket, as shown in Figure 15. It is important to ensure the break on the beam capping is located in the top groove of the valley beam (Figure 16). Fix the rest of the beam capping to the channel using 3mm rivets each side at 500mm centres (Figure 16). If attaching the valley beam to a header beam, notch the capping if necessary, as shown in Figure 25.

Refer to Section 4.1 if attaching the Stratco Curved unit on its side to a house, Section 4.2 if attaching on its end to a house, or refer to both sections if attaching the unit on its side and end.



### 4.1 SIDE ATTACHED

For side attached units, without header beams, fix the curved rafter to valley bracket to the valley beams (150 attachment beam will be considered a valley beam) at the correct rafter positions (refer Section 5) using six 12x20 hex head screws per bracket through the pre-drilled holes (Figure 17).



Please note that for Multispan Curved units the top face of the bracket lines up with the top edge of the upper groove for both 150 beams and 120 beams (Figure 17).

For Clearspan Curved units please note that the bottom face of the bracket is inline with the top face of the beam (Figure 17).

Check positions before drilling. This can be done before the valley beams are fixed in place.

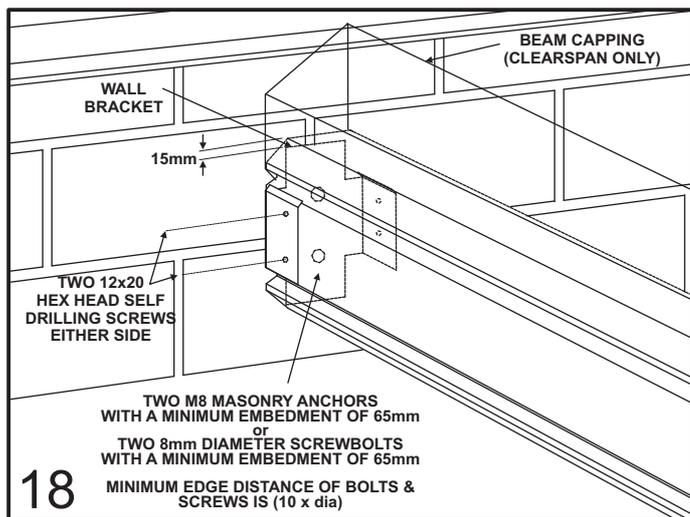
Support the second valley beam at the spacing determined in Section 3.0 on adjustable construction props. If any intermediate columns are required, measure the valley beam marking where they meet. Fasten post brackets as explained in 'Outback Flat Attached Verandahs, Patios & Carports' under "FRONT FASCIA BEAM".

## 4.2 END ATTACHED

For units attached on the end to a wall, wall brackets are positioned at either side of the curve opening at the spacing determined in Section 3.0. The first bracket is fastened to the wall with two M8 masonry anchors.

The curved legs of the bracket are located at the top and the highest point of the wall bracket will be 15mm below the top of the beam (Figure 18). Locate the first valley beam (double thickness on top for the Multispan Curved unit, beam capping on top for Clearspan Curved unit) up into the wall bracket so the curved legs locate against the top flute of the beam.

The valley beam is fastened to the wall bracket with 12x20 hex head screws in the pre-drilled holes while the opposite end is supported on adjustable construction props.



For units attached on the end to a fascia, suspension brackets are positioned at either side of the curve opening at the spacing determined in Section 3.0 (Figure 14). The top tab of the suspension bracket must be located between the fascia and back channel. A minimum of two M6 bolts with washers are fixed through the back channel, suspension bracket and fascia (Figure 19).

**Note:** If back channel is not present, (ie, no adjacent flat roof) locate a 2mm washer plate behind the timber or steel fascia at the beam to fascia connection. Bolt through suspension bracket, fascia and washer plate.

The first valley beam is fastened into the suspension bracket with three 12x20 hex head screws either side while the opposite end is supported on adjustable construction props.

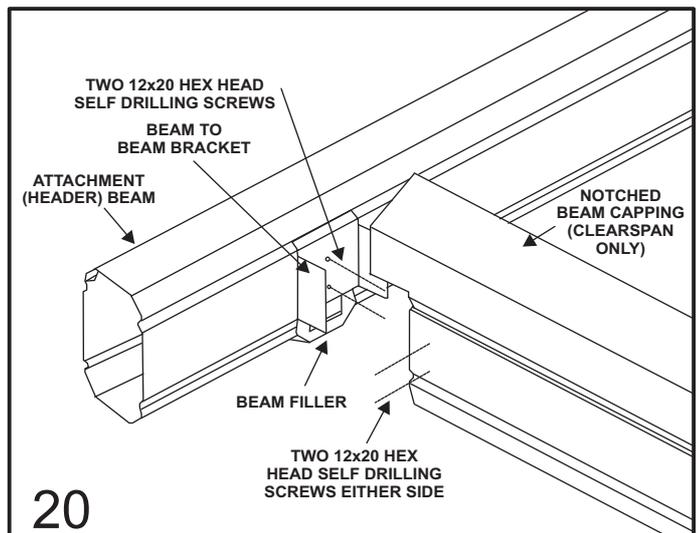
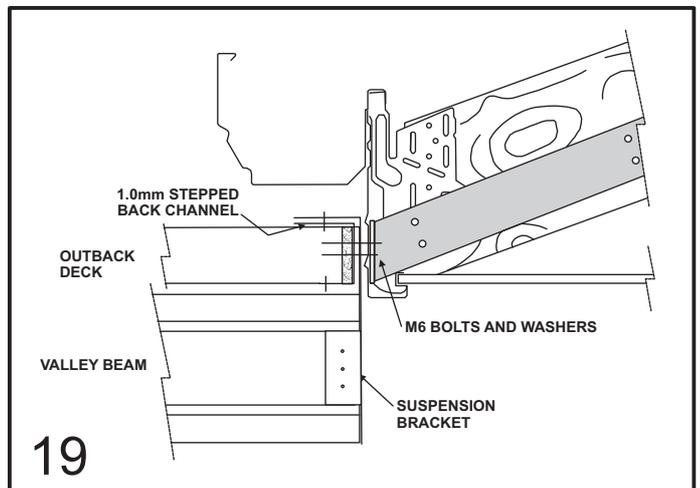
For units attached on the end to an attachment beam (Figure 28), beam to beam brackets are positioned at either side of the curve opening at the spacing determined in Section 3.0 (Figure 14).

Fix beam to beam brackets to the attachment beam (header beam) with two 12x20 hex head screws so they clamp the beam filler to the beam (Figure 20). The first valley beam is fastened over the beam to beam bracket with two 12x20 hex head screws either side while the opposite end is supported on adjustable construction props.

If any intermediate columns are required measure the valley beam marking where they meet. Fasten post brackets as explained in the installation guide 'Outback Flat Attached Verandahs, Patios & Carports' under "FRONT FASCIA BEAM". This can be done before valley beams are fixed in place.

If attached on the end, attach the second valley beam into the wall, fascia or attachment beam and support the other end on adjustable construction props. Adjust the valley beam to the correct height.

**Note:** For end attached Clearspan Curved units a 1° (1 in 60) fall is required toward the front of the unit allowing roof sheets to drain into the curved gutter.



## 5.0 CURVED FRAME CONNECTION

**Note:** Be aware that curved rafters are always 100 RHS beams, however valley beams may consist of either 120 or 150 beams which will effect the position of the curved rafters relative to the valley beam.

### 5.1 CURVED FRAMES

#### 5.1.1 MULTISPAN CURVED FRAMES

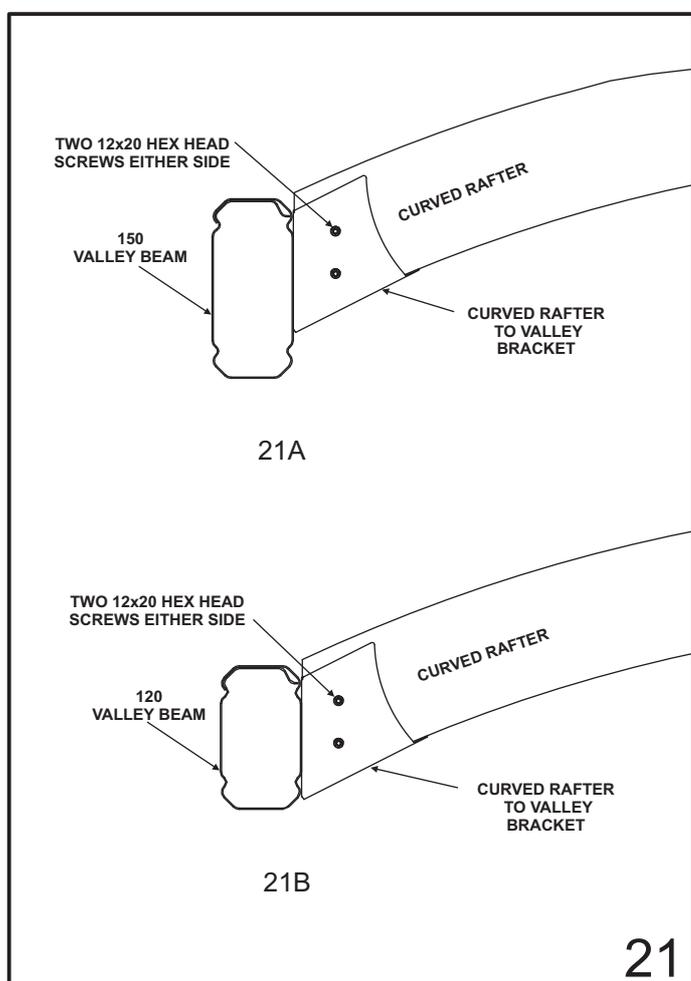
If no infill is to be used at the front of the curved section (Figure 1) and if there is no header, connect the curved rafter to valley brackets so that the front face of the bracket is flush with the front face of the valley beam.

The curved rafter to valley brackets are attached to the valley beams using six 12x20 hex head screws (Figure 17, Section 4.1) at the appropriate locations.

Fix the curved rafters into the curved rafter to valley brackets with two 12x 20 hex head screws either side (Figure 21).

Intermediate frames should be spaced evenly and fixed into curved rafter to valley brackets as previously described. A rear curved frame without a header beam (no infill) is fixed as per an intermediate frame.

Refer to Section 5.2.1.1 if attaching a Stratco Multispan Curved unit on it's side to a house and both Section 5.2.1.1 and Section 5.2.2 if attaching on it's end or attaching on both it's side and end.



#### 5.1.2 CLEARSPAN CURVED FRAMES

Fix the curved rafter to valley brackets to the beam capping using six 12x20 hex head screws (Figure 17, Section 4.1) at the appropriate locations.

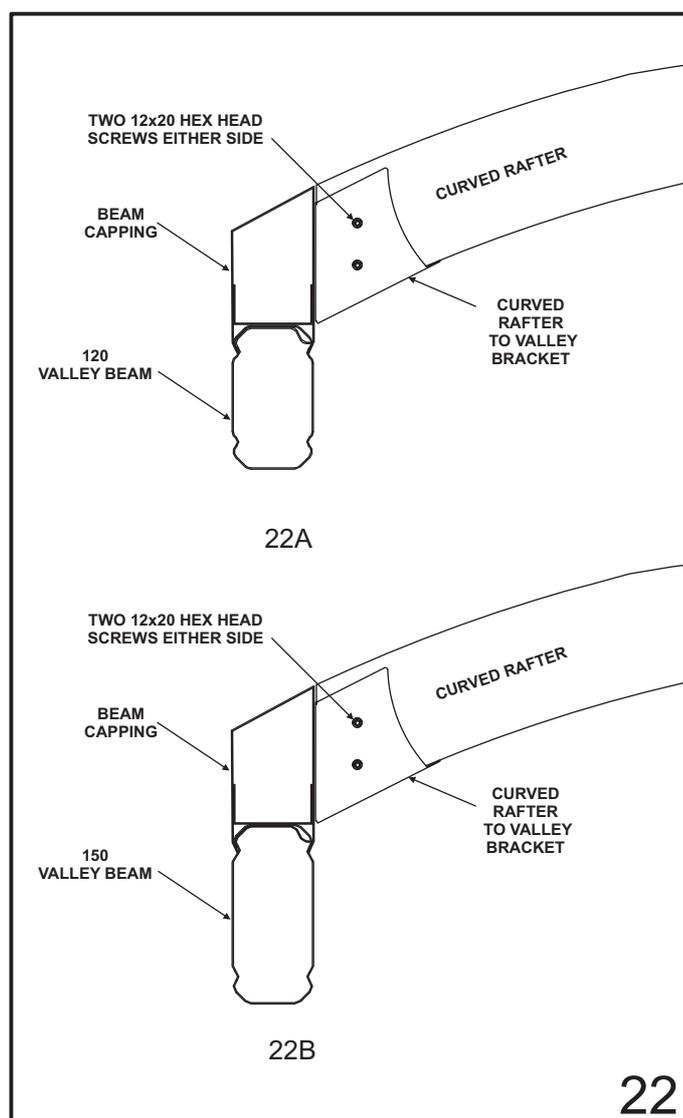
Fix the curved rafters into the curved rafter to valley brackets with two 12x20 hex head screws either side (Figure 22).

Intermediate frames should be spaced evenly and fixed into curved rafter to valley brackets as previously described. A rear curved frame without a header beam is fixed as per an intermediate frame.

It is important to ensure that in the case of a unit without a header the front face of the front curved rafter to valley bracket is flush with the front face of the front fascia beam or the front face of the valley beam.

For a unit with a header beam the front face of the front curved rafter to valley bracket must be flush with the front face of the header beam.

Refer to Section 5.2.1.2 if attaching a Stratco Clearspan Curved unit on it's side to a house and both Section 5.2.1.2 and Section 5.2.2 if attaching on it's end or attaching on both it's side and end.



## 5.2 CURVED FRAME WITH INFILL

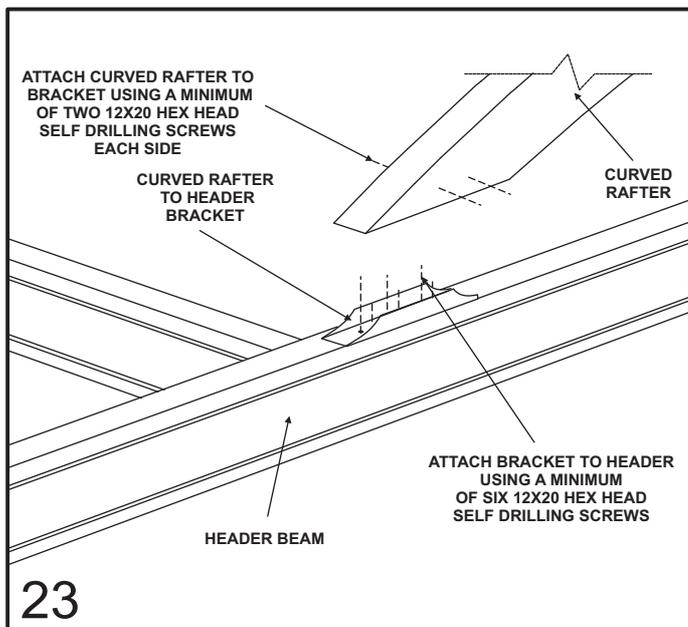
### 5.2.1 FRONT INFILL

#### 5.2.1.1 MULTISPAN FRONT INFILL (FIGURE 2)

Where there is an infill at the front of the unit (in the case of a side attached unit, infills on both ends are treated as front infills), run the front fascia beam of the flat roof section continuously across the opening to support the infill panel and form a header beam (the gutter subsequently runs the full length of the header beam), see Figure 23.

If attached on the side the rear header is fixed to the attachment beam with beam to beam brackets. If there is no adjacent flat a header beam is required, see Figure 24.

Measure the end curved frame opening and attach curved rafter to header brackets to the header beam at the appropriate spacing using six 12x20 hex head self drilling screws. Fasten the curved rafters that form the end curved frame into the curved rafter to header brackets with a minimum of two 12x20 hex head screws either side (Figure 23).



#### 5.2.1.2 CLEARSPAN FRONT INFILL (FIGURE 4)

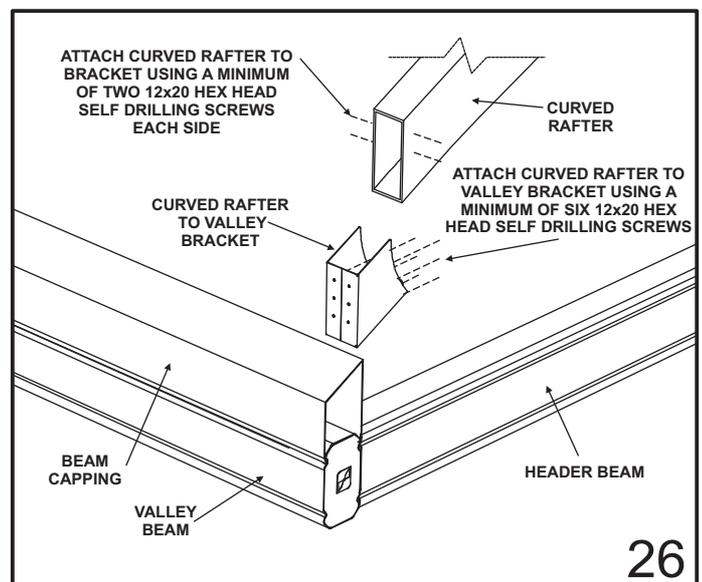
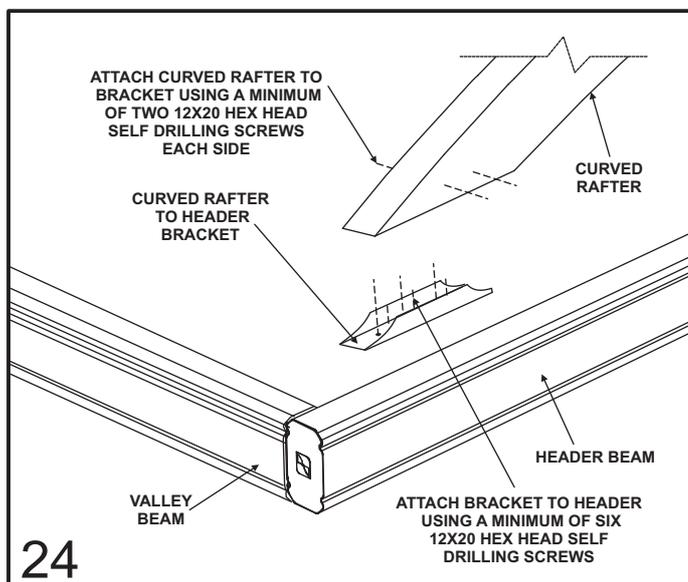
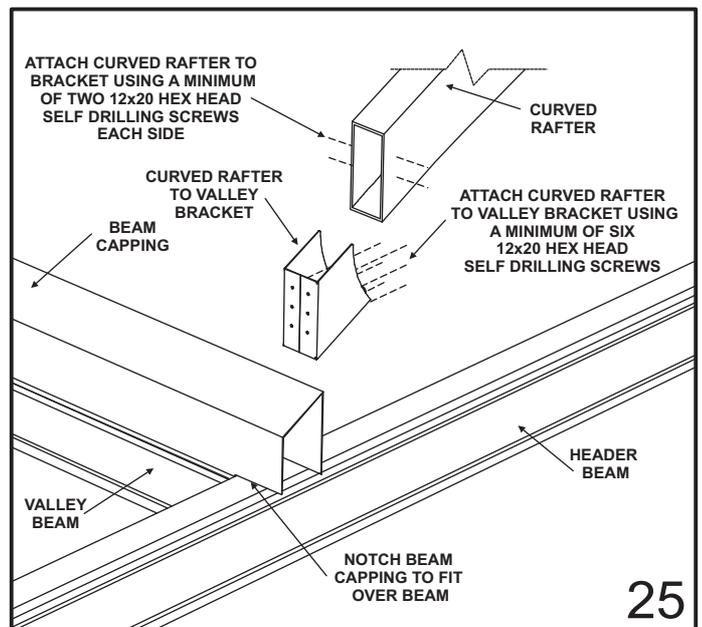
Where there is an infill at the front of the unit (in the case of a side attached unit, infills on both ends are treated as front infills), run the front fascia beam of the flat roof section continuously across the opening to support the infill panel and form a header beam (the gutter subsequently runs the full length of the header beam), see Figure 25.

If there is no adjacent flat a front header beam is to be used, Figure 26.

Measure the end curved frame opening and attach curved rafter to valley brackets to the beam capping at the appropriate spacing using a minimum of six 12 x 20 hex head self drilling screws.

Rafters are fastened inside the curved rafter to valley brackets with a minimum of two 12x20 hex head self drilling screws either side as shown in Figures 25 and 26.

It is important to ensure that the front face of the curved rafter to valley bracket is flush with the front face of the header beam.



## 5.2.2 REAR INFILL

A rear header beam will be required if the unit includes an infill to the rear curved frame. For units attached at the rear with suspension brackets, the rear header is fixed between valley beams using beam to beam brackets.

If fixed at the rear to an attachment beam (Figure 28), the attachment beam becomes the header (valley beams are fixed to the header beam).

For a Multispan Curved unit measure the end curved frame opening and attach curved rafter to header brackets to the rear header beam at the appropriate spacing using six 12x20 hex head self drilling screws. Rafters are fastened inside the curved rafter to header brackets with a minimum of two 12x20 hex head self drilling screws either side as shown in Figure 23 and 24.

For a Clearspan Curved unit, curved rafters are fastened inside the curved rafter to valley brackets with a minimum of two 12x20 hex head self drilling screws either side as shown in Figures 25 and 26.

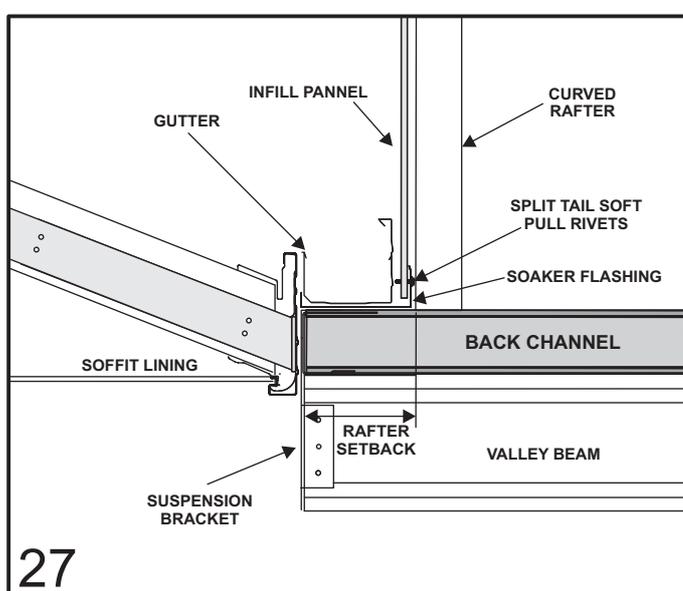
In both Multispan and Clearspan Curved units it is important to ensure that the back face of the rafter is flush with the back face of the rear header beam.

If the rear header beam is positioned so that the top face of the beam is below the bottom face of the house gutter a soaker flashing can be used to waterproof the rear end of the curved unit and neatly finish the base of the infill panel, refer to Section 5.2.2.1.

If the rear header beam is positioned so that the top face of the beam is above the bottom face of the house gutter a header flashing must be used in conjunction with the rear infill, refer to Section 5.2.2.2.

### 5.2.2.1 SOAKER FLASHING

In the case of a rear infill panel, a soaker flashing is used to conceal the existing house gutter, waterproof the rear end of the curved unit and neatly finish the base of the infill panel (Figure 27).



The rear curved frame and header beam are positioned to accommodate for the house gutter and infill panel plus the standard soaker flashing which is optional with the Outback unit (Figure 27). Fix the standard soaker flashing into position on top of the back channel (if one exists) and underneath the gutter.

Infill panels must be fixed with split tail soft pull rivets at 500mm centres a minimum of 20 mm above the pan of the soaker flashing. This will reduce the possibility of moisture being absorbed into the sheet. Refer section 10 for details of fixing infill panels to curved frames.

#### Note:

1. A custom made soaker flashing will need to be ordered to the required dimensions. The rafter setback will need to be adjusted to suit.
2. Do not form stop ends at either end of the soaker flashing.
3. Soaker flashing is not to come in contact with the base of the house gutter.

### 5.2.2.2 HEADER FLASHING

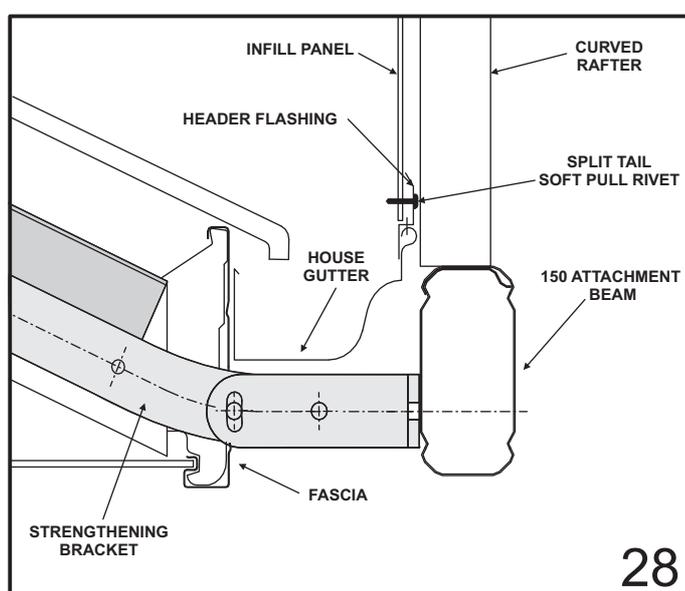
When a curved unit is fixed at the rear to an attachment beam which has its top face above the bottom face of the house gutter, typically a header flashing is used in conjunction with the rear infill. In this case, the rear attachment beam is considered a header, and along with the rear curved frame is fixed as close as possible (within 5mm) to the existing gutter in order to accommodate the header flashing.

For a Multispan Curved unit the curved frame is fixed on to the rear header using curved rafter to header brackets (Figures 23 and 24).

For a Clearspan Curved unit the curved rafter is fixed onto the beam capping into the curved rafter to valley brackets as previously described (Figures 25 and 26).

Fix the header flashing into position over the existing gutter lip with rivets.

Infill panels are located behind the header flashing and fixed with split tail soft pull rivets at 500mm centres (Figure 28). Refer section 10 for details of fixing infill panels to curved frames.



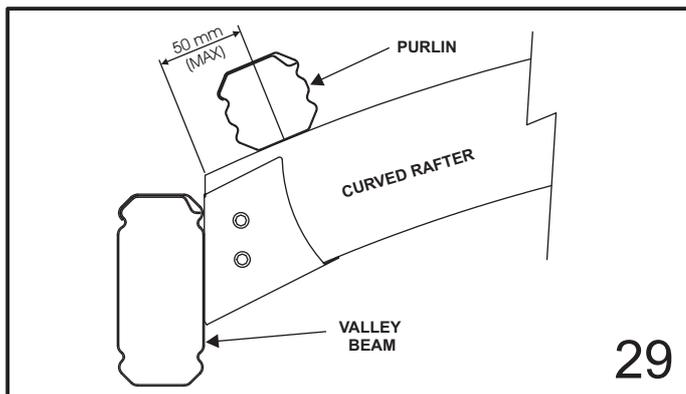
## 6.0 MULTISPAN CURVED UNIT PURLINS

The Stratco Multispan Curved unit uses purlins to support the roofing. The lowest purlin should be positioned a maximum of 50mm from the valley beam (Figure 29). In the case of a flat next to the curve the lowest purlin is positioned adjacent to the back channel on the valley beam (Figure 33 and 34). Any intermediate purlins are spaced evenly on rafters, ensuring maximum recommended deck spans are not exceeded. Where there is no purlin overhang ensure that the end of the purlins are flush with the front face of the rafter, as in Figure 39.

Where purlins are continuous over rafters they are fixed in position using 14x95 hex head self drilling screws. If it is necessary for purlins to be broken over standard curved frames (ie, purlins continue in the same direction past a join) a 68mm in-line purlin connector is used.

### Note:

1. By drilling pilot holes and screwing through the top of the purlin before lifting it into position, the process of screwing into the curved rafters is made easier.
2. Pilot holes should also be drilled through curved rafters at the fixing location.



## 7.0 REMAINING FRAME ASSEMBLY

Assemble the remaining framework of the verandah as per the installation guide 'Outback Flat Attached Verandahs, Patios & Carports'. Fix the posts, as described in the instruction brochure under "COLUMNS AND FOOTINGS" or "ALTERNATIVE FOOTING".

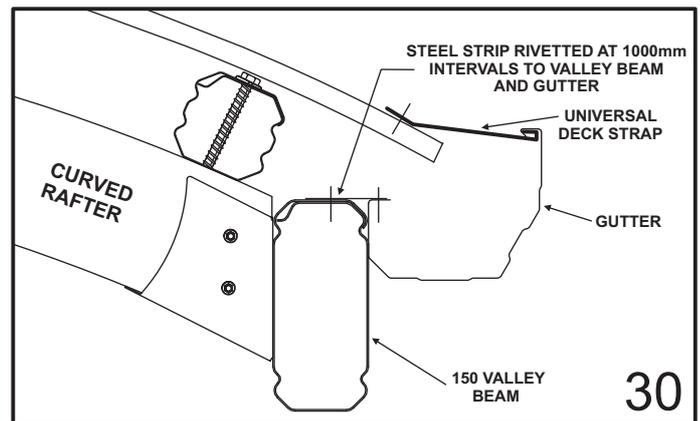
**Note:** All adjustable construction props are to be left in position until decking is attached and concrete is set.

## 8.0 GUTTERING

If a flat verandah is included connect the gutter to the flat roof Outback as described in 'Outback Flat Attached Verandahs, Patios & Carports'. Gutters will need to be mitred if they continue around a corner. All gutter joins and rivets are to be waterproofed with silicon.

### 8.1 MULTISPAN CURVED UNIT GUTTERING

Where there is no flat roof adjacent to the Multispan Curved unit, the gutter is attached with gutter straps and flat connecting strips which are fixed to the valley beam. Cut the strip into sections and rivet at 1000 mm intervals to the valley beam. Fix the gutter to the strip with rivets as shown in Figure 30.

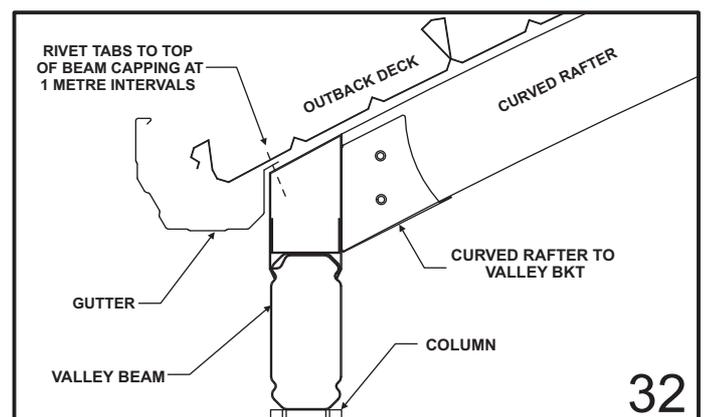
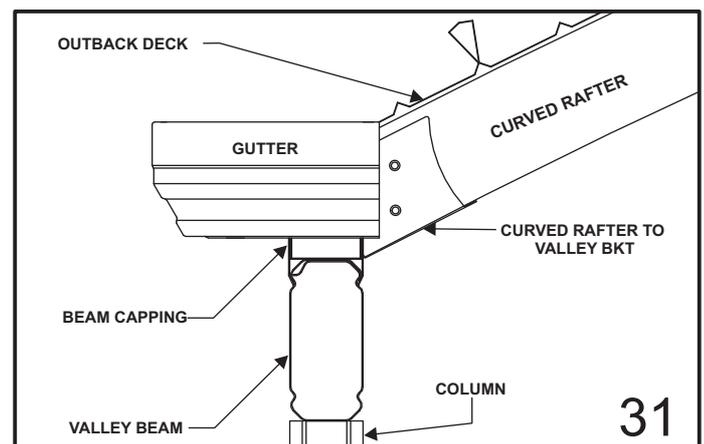


Once the roofing is attached (Section 9.0) the gutter is secured to the roof sheeting using gutter straps at maximum 1000mm intervals. Gutter straps may need to be bent slightly so they can be rivetted to the roof sheets. All gutter joins and rivets are to be waterproofed with silicon.

### 8.2 CLEARSPAN CURVED UNIT GUTTERING

Where there is no flat roof adjacent to the Clearspan Curved unit, the gutter is attached to the top of the beam capping and must return around to the front of the unit, see Figure 31. Cut 30mm tabs in the gutter back lip at 1000mm intervals and fold back. Fix the gutter to the beam capping, through the tabs with rivets as shown in Figure 32. Once decking is attached (Section 9.1 and 9.3) fit gutter straps at maximum 1000mm intervals, attaching to the top of the decking with rivets.

A curved gutter must also be attached to the front and possibly rear of the Clearspan Curved unit. The gutter is attached to the top of the curved rafter. Fix the gutter to the top of the curved rafter, through the gutter back lip with rivets as shown in Figure 36.



The ends of the curved gutter should feed into the gutter on either side of the unit.

Once decking is attached (Section 9.0) the gutter is secured to the roof sheeting using gutter straps at maximum 1000mm intervals. All gutter joints and rivets are to be waterproofed with silicon.

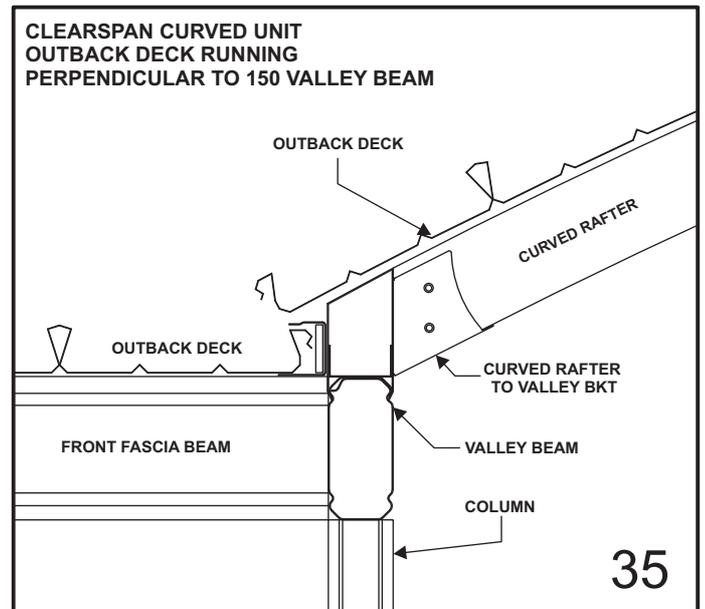
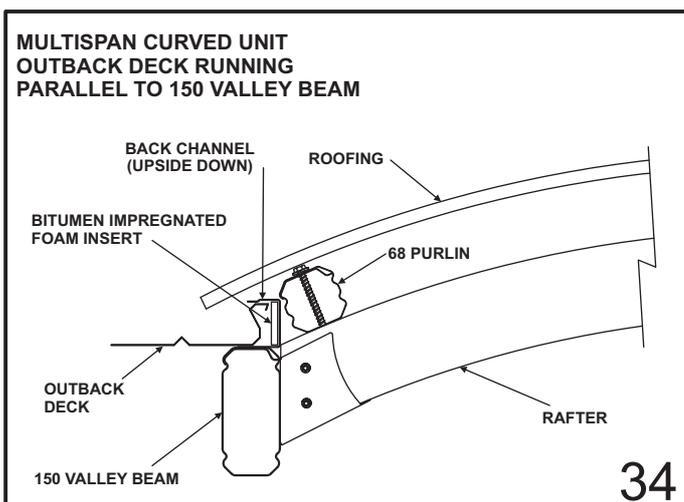
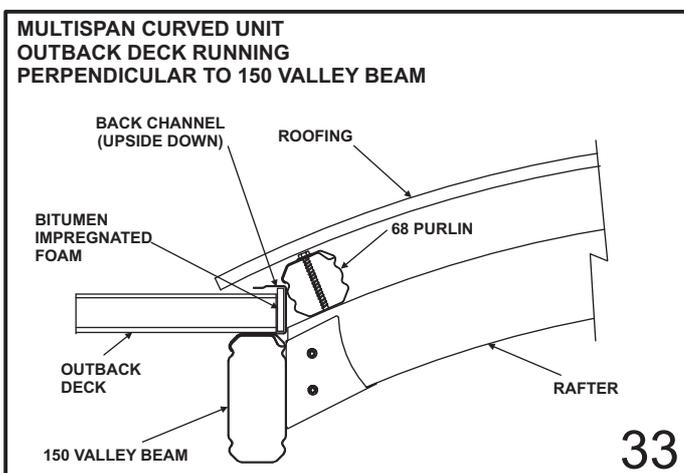
## 9.0 ATTACH DECKING

### 9.1 FLAT ROOF

If a flat verandah is included attach the decking to the flat roof verandah first as laid out under "THE DECKING" ('Outback Flat Attached Verandahs, Patios & Carports'), starting from the valley beam and working away, on both sides.

The back channel is attached upside down (the shorter leg on top) along valley beams to assist the fixing of decking. (Figures 33, 34 and 35). The channel extends to the end of the valley beams.

Figure 34 shows the back channel and Outback Deck running perpendicular to a 150 valley beam, on a Multispan Curved unit. Figure 33 shows the back channel and Outback Deck running parallel fixed to a 150 valley beam on a Multispan Curved unit. Figure 35 shows the back channel and Outback Deck running perpendicular to a 150 valley beam on a Clearspan Curved unit. The Outback Deck and back channel can also run parallel to the valley beam in a Clearspan Curved unit.



### 9.2 MULTISPAN CURVED UNIT

Corrugated roofing is supplied pre-curved to the required radius. Polycarbonate roofing can be used on curved frames with radii greater than 3m, and is spring curved on site, over purlins.

When attaching the roofing to the unit, start from the front, aligning the sheets so as to avoid the purlin fixing screws.

Standard roof fixing requirements apply for corrugated and polycarbonate roofing.

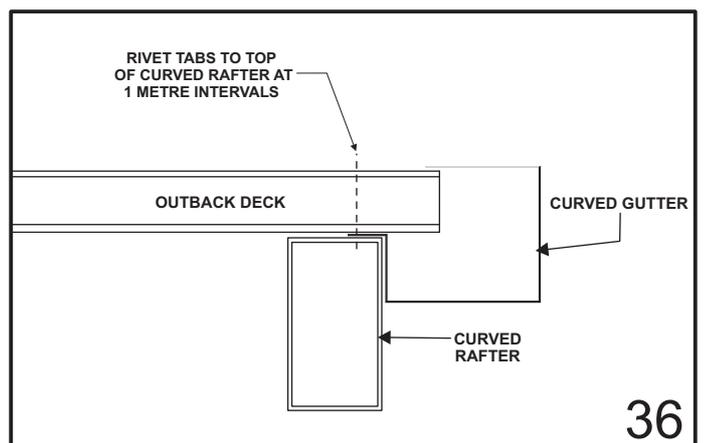
**Note:** If Installing Outback Rooflite, refer to "OUTBACK ROOFLITE INSTALLATION" ('Outback Flat Attached Verandahs, Patios & Carports').

### 9.3 CLEARSPAN CURVED UNIT

Outback Deck is supplied flat and must be spring curved on side over the rafter. When attaching the decking to the unit, start from the valley beam with the deck running parallel to the beam. Fix the deck to the curved rafters.

Standard roof fixing requirements apply for Outback Deck.

The Outback Deck will need to overhang the curved rafter allowing water to flow directly into the gutter (Figure 36).



## 10.0 INFILL PANELS

Two styles of header flashings are available to neatly finish the base of infill panels, one is used on header beams with gutter (Section 10.1) and the other for headers without gutter (Section 10.2).

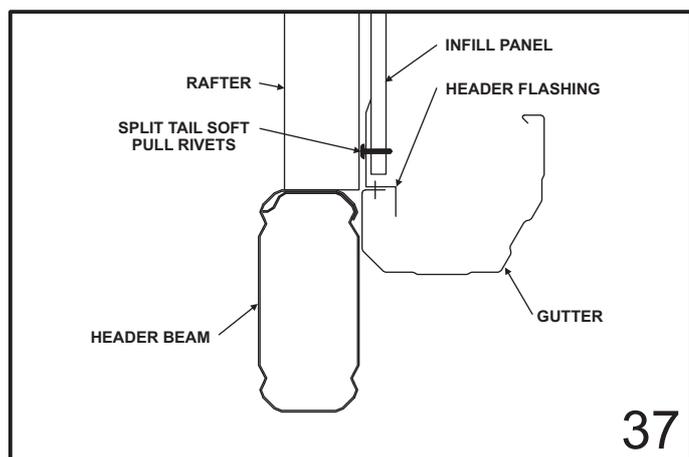
Curved infill panels are to be cut in semicircular shapes to fit the end frame.

Panels can be painted to the desired colour before installing.

### 10.1 HEADER BEAM WITH GUTTER

Attach the header flashing to the rear gutter lip with rivets. Infill panels are fixed through the front face of rafters with 8x35mm self embedding teks at 500mm centres in non-cyclonic areas and 250mm centres in cyclonic areas.

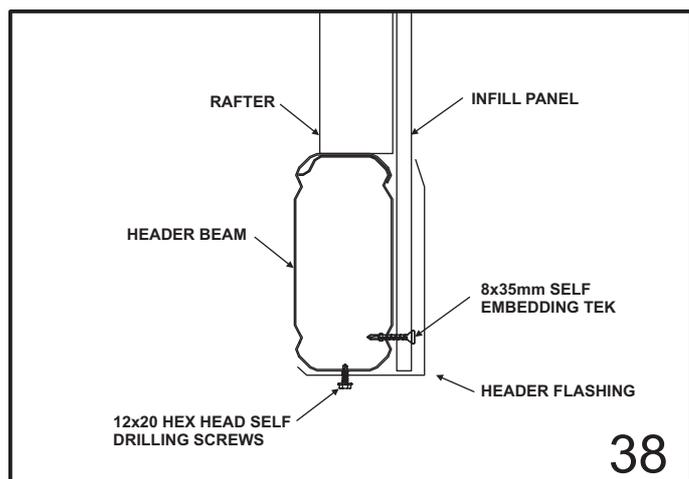
Panels are fixed at the base through the header flashing with split tail soft pull rivets at 500mm centres (Figure 37).



### 10.2 HEADER BEAM WITHOUT GUTTER

Infill panels are fixed through the front face of rafters and the lower groove of the header beam with 8x35mm self embedding teks. Fix at 500mm centres in non-cyclonic areas and 250mm centres in cyclonic areas.

Attach the header flashing to the underside of the header beam with 12x20 hex head screws to neatly finish the base of the infill panels (Figure 38).



## 11.0 MULTISPAN CURVED UNIT BARGE CAP

