Horse Shelter 12' x 15' 76110678

Hardware Kit 76900228

THANK YOU FOR PURCHASING THIS PRODUCT

Behlen Country has been in the business of providing quality products for more than 80 years. Our products will provide many years of service when maintained by the owner and used in accordance with the capabilities of the product. For questions about this product, or for parts inquiries, please contact our Customer Service Center listed below.



Check with local government authorities to determine if a building permit is required.

Sheeting used must conform to these or greater specifications as listed below:

Design Criteria

- Snow 40 psf ground snow
- Wind 90 MPH exposure C
- Loads calculated in accordance with the Uniform Building Code 94 Edition.

This shelter requires adequate anchoring to safely resist the design wind forces and to avoid injury to animals and others. Behlen Mfg. Co. strongly recommends that you consult a qualified professional engineer to design the anchor for your specific application.

Components for the Modular Shelter System as provided by Behlen Country, have been designed

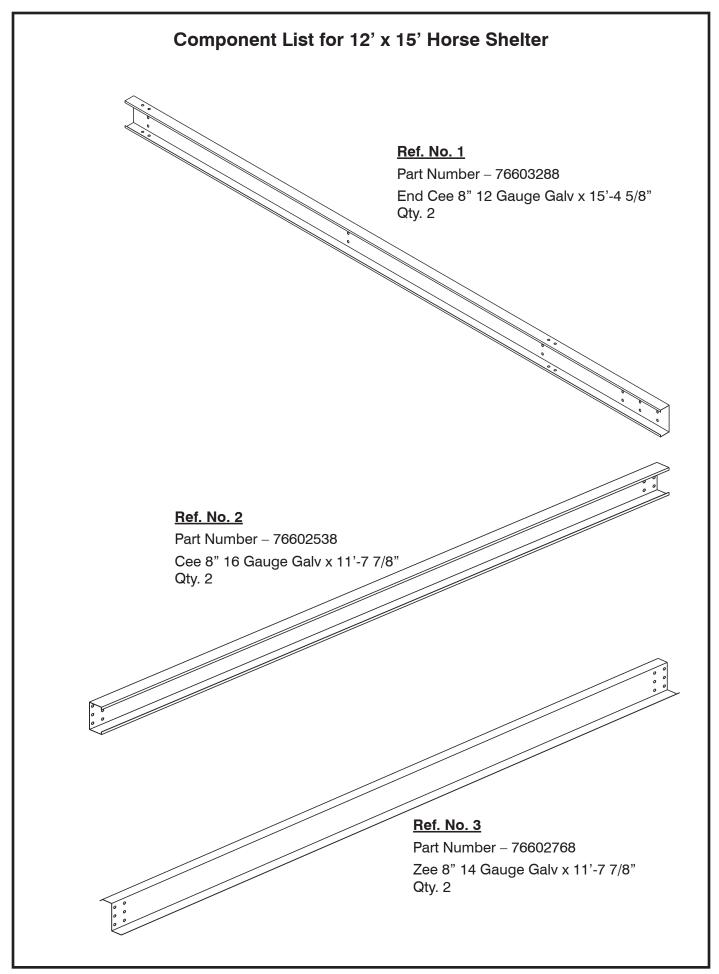
for ground snow loads of up to 40 psf and winds up to 90 mph (Exposure "C"). The ability of these shelters to safely resist these conditions is dependant upon several factors beyond the manufacturer's control such as the uniformity of the soil bearing support and the adequacy of wind uplift anchorage.

These Modular Shelter Systems are not intended to serve as permanent building structures and should not be used as such. (For these reasons, an engineering certification is not offered by Behlen Mfg. Co.) Customers are responsible for verifying ground snow load and wind load requirements in the area in which the Modular Shelter Systems will be constructed.



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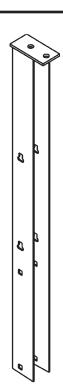


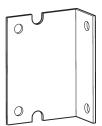
Ref. No. 4

Part Number – 76400349 Short Shelter Post – Hot-dipped Galvanized



Part Number – 76400359 Tall Shelter Post – Hot-dipped Galvanized



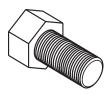


Ref. No. 6

Part Number – 76602558 Side Channel "L" Clip – Galv. Qty. 8

Ref. No 7

Part Number – 76900228 Hardware Package for Horse Shelter



Ref. No 7a

Hex Head Cap Bolt ½" x 1" Plated Qty. 24



Ref. No 7b

Flat Round Head Bolt – ½" x 1" Plated - Qty. 16



Ref. No 7c

Nut $\frac{1}{2}$ " Hex Grade A Plated Qty. 52





Ref. No 7e

Carriage Bolt 3/8" x 1" Plated Qty. 8



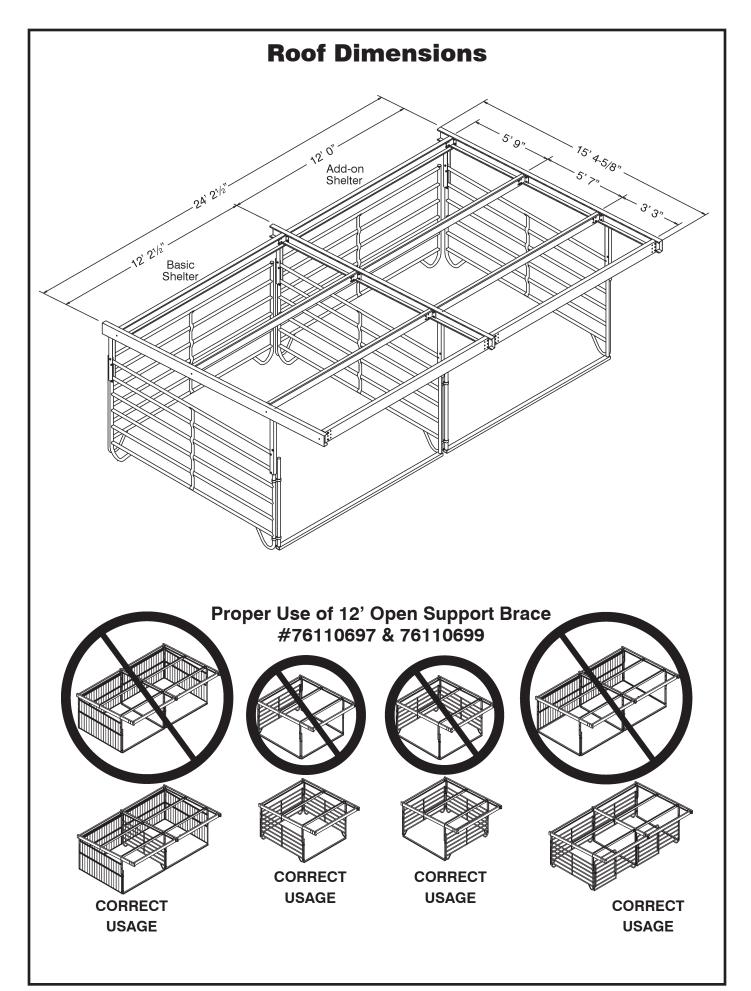


Ref. No 7g

Nut 3/8" – Flanged Whiz Lock – Plated Qty. 8

Ref. No 7h

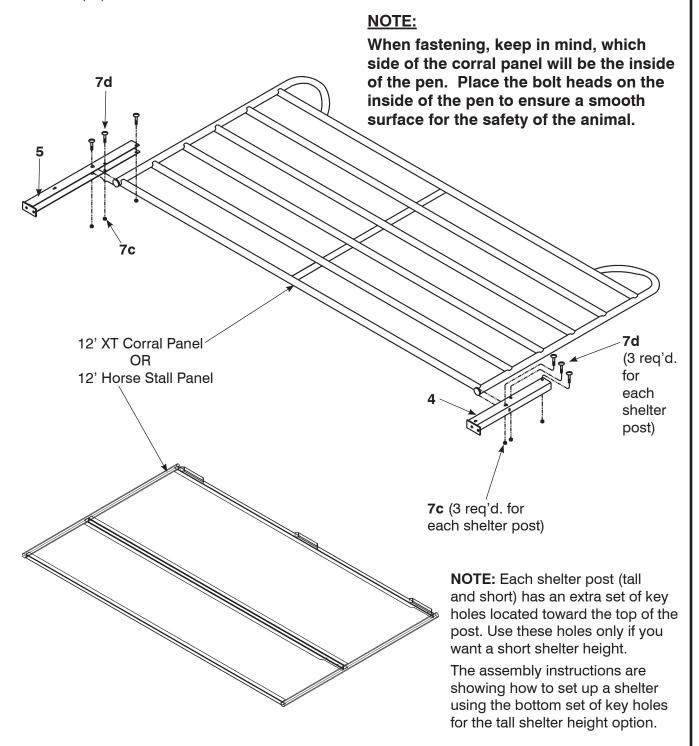
Part Number – 76602837 (8 pair) Rubber Strip (Not Illustrated) Qty. 2



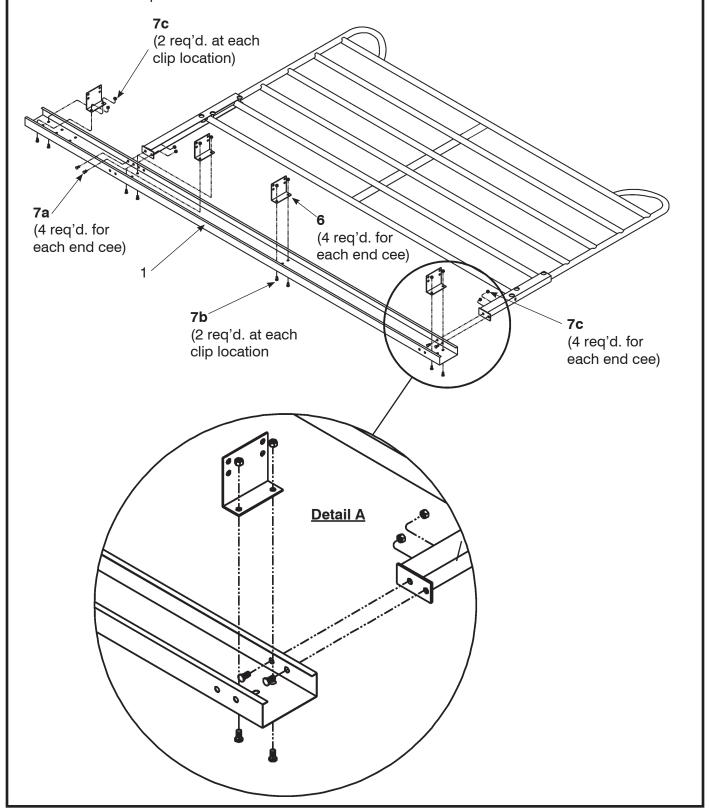
NOTE: If you are planning on erecting an add-on section onto the shelter, read through both the instructions. This will eliminate rework.

If sheeting will be installed, do not install it until all sections of the shelter are erected.

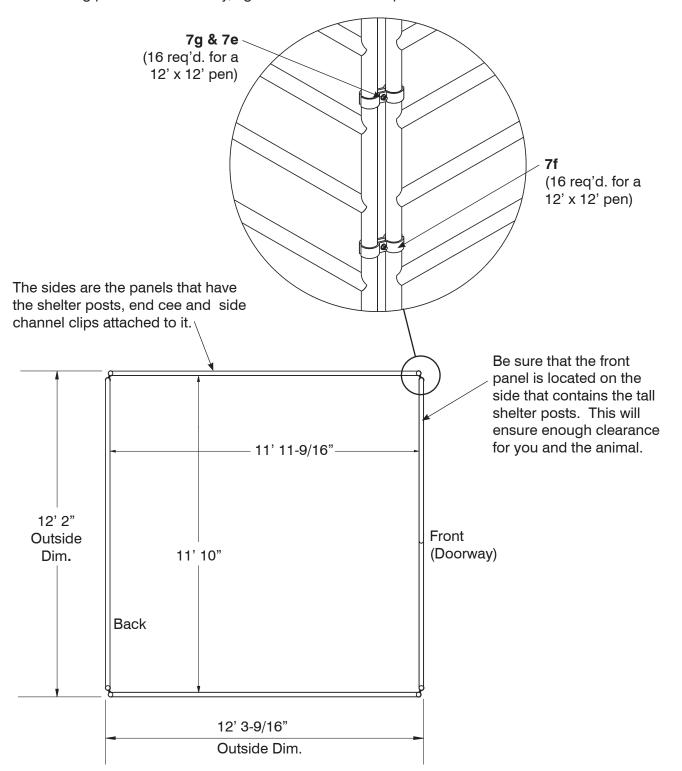
- 1a For assembling ease, lay the panel down. Slide the tall shelter post (5) and the short shelter post (4) onto the vertical 2" tube. If assembling the shelter on a 12' XT Corral Panel, be sure the cap rests in the three slots provided on the shelter posts.
- 1b Fasten each shelter post (4 & 5) with three-½" x 3" plated carriage bolts (7d) and three-½" nuts (7c).



- 2a With the corral panel still lying down, assemble the end cee (1) to the shelter posts using four½" x 1" hex head bolts (7a) and two-½" nuts (7c). Use the holes indicated on the illustration.
 When assembling end cee onto a horse stall, use the holes as indicated in Detail A.
- 2b Assemble the side channel clips (6) to the end cee using two ½" x 1" flat round head bolts (7b) and two ½" nuts (7c). Be sure to keep the bolt heads to the outside of the cee as shown. Position the clips in the direction as shown.

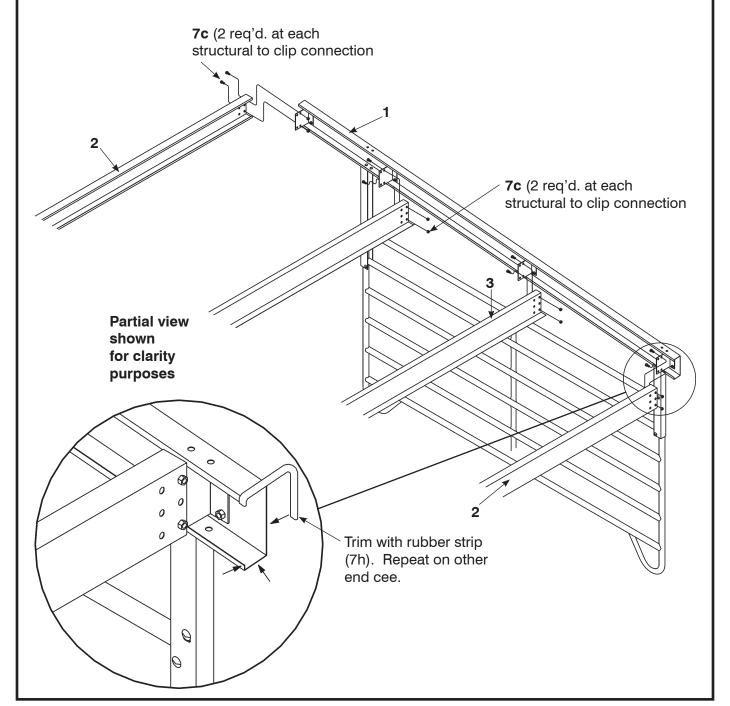


- 3a At this point, the structure can now be set in place. Two people are needed for this process for safety purposes. Place four 2" butterfly connector halves (7f) at each corner of the pen. Fasten the butterflies with one 3/8" x 1" carriage bolt (7e) and one-3/8" flanged whiz nut (7g). Make sure the bolt head is on the inside of the pen for a smooth edge near the animal. Do not fully tighten the butterflies. This will allow for adjustment of the pen. When attaching the butterflies, place one directly below the shelter post and one near the bottom of the panel.
- 3b Measure the pen to match the measurements provided in the illustration. After measuring and moving panels as necessary, tighten the butterflies in place.



Once the pen is set in place, it is now time to assemble the interior cees and zee. Two people are needed for this process for safety purposes.

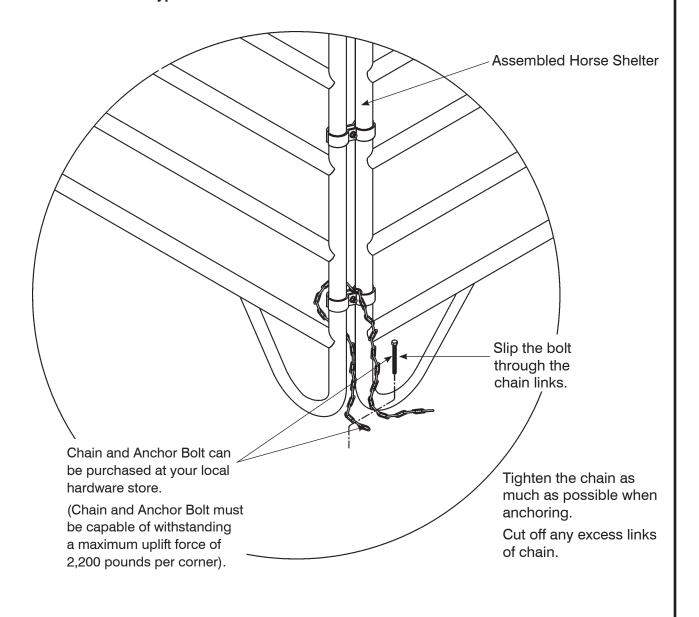
- 4a To begin, start on the low side. Lift the 8-inch cee (2) up to the bottom clips and rest on the side channel clips. Be sure that the 8-inch cee (2) is positioned as shown on the illustration. The open face of the 8-inch cees has to face into the pen. Fasten at each end with two-1/2" x 1" hex head bolts (7a) and two-1/2" nuts (7c).
- 4b Follow the same instructions for the 8-inch zee (3) and the high side 8-inch cee (2). Make note of the position to ensure proper assembly.
- 4c Insert the rubber strip (7h) around the entire end of the end cee on the low side. See Detail B. Cut any excess rubber strip off. Repeat this process for the other side. This will take away any sharp edge that could endanger your animal.



Anchoring the Assembled Horse Shelter

The assembled horse shelter <u>will</u> require anchoring. When anchoring into concrete, all materials will be supplied by the buyer and can be bought at any local hardware store. The shelter <u>must</u> be anchored at every corner. With a 90-MPH wind, an uplift force of 2,200 pounds per corner can be created.

Typical detail of installation in a concrete situation.



Add-On for 12' x 15' Shelter System - 76110708

Hardware Kit 76900238

THANK YOU FOR PURCHASING THIS PRODUCT

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Component List for Shelter System Add On (12' x 15'):

Ref. No. 2

Ref. No. 1

Part Number - 76602538

Cee 8" 16 Gauge

Galv x 11' 7-7/8" Qty. 2

Part Number 76603288 Middle Cee 8" 12 Gauge Galv. x 15' 4-5/8'

Part Number - 76602768

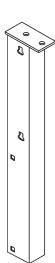
Zee 8" 14 Gauge Galv. x 11' 7-7/8"

Qty. 2



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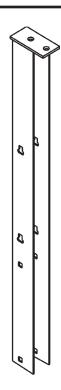


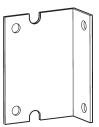
Ref. No. 4

Part Number – 76400349 Short Shelter Post – Hot-dipped Galvanized Qty. 1



Part Number – 76400359 Tall Shelter Post – Hot-dipped Galvanized Qty. 1





Ref. No. 6

Part Number – 76602558 Side Channel "L" Clip – Galv. Qty. 8

Ref. No 7 Part Number-76900238 Hardware Package for Add On Shelter System Bags 1 of 2 and 2 of 2



Ref. No 7a

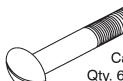
Hex Head Cap Bolt ½" x 1" Plated Qty. 20



Ref. No 7b

Nut ½" Hex Grade A Plated Qty. 26





Ref. No 7c

Carriage Bolt ½" x 3" Plated Qty. 6



Ref. No 7f

Nut 3/8" – Flanged Whiz Lock – Plated Qty. 8

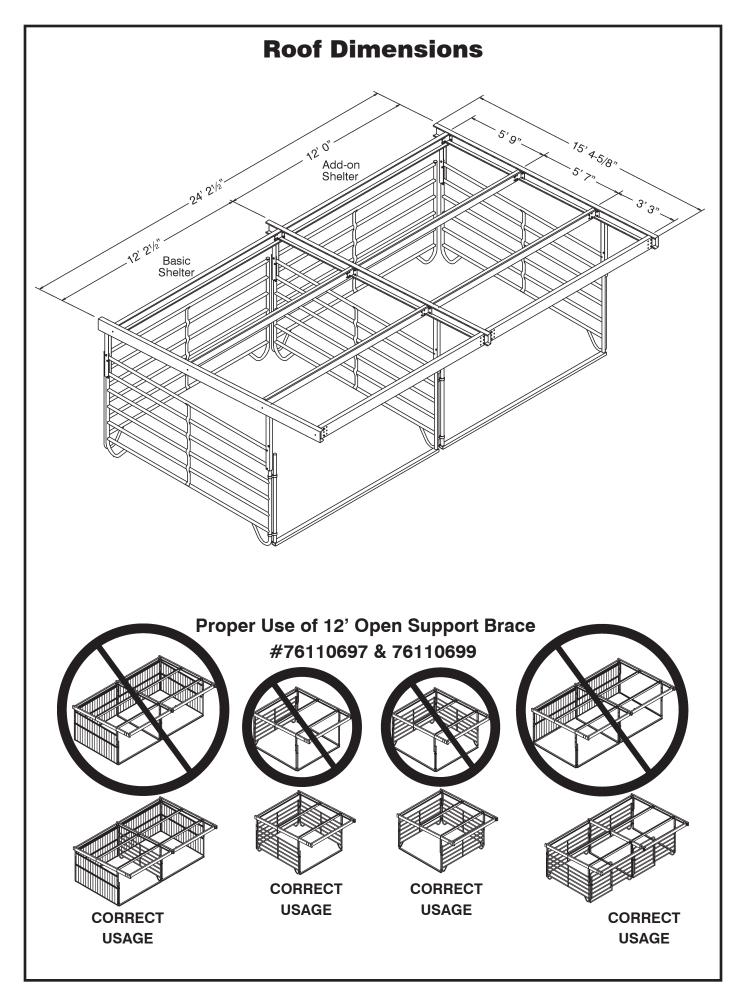


Ref. No 7d

Carriage Bolt 3/8" x 1" Plated Qty. 8

Ref. No 7q

Part Number – 76602837 (8 pair) Rubber Strip (Not Illustrated)

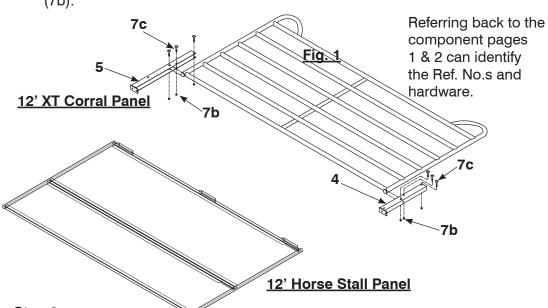


Installation Instructions for Add On for 12' x 15' Shelter System

For placing two horse shelters together, you will need to use the instructions that you received with the first unit as well as these instructions. To save yourself extra work, read through both sets of instructions before you begin.

Step 1

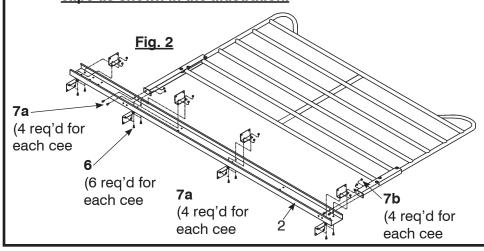
- **1a** For assembling ease, lay the panel down. Slide the tall shelter post (5) and the short shelter post (4) onto the vertical 2" tubes. If assembling the shelter on a 12' XT Corral Panel, be sure that the cap of the panel rests in the three slots provided on the shelter post (see Fig 1).
- **1b** Fasten each shelter post (4&5) with three ½" x 3" plated carriage bolts (7c) and three ½" nuts (7b).



When fastening, keep in mind which side of the corral panel will be on the inside of the pen and put the bolts on this side. This ensures a smooth surface in the animal's pen.

Step 2

- 2a While the panels are still lying down, bolt the end cees (not illustrated) and middle cee to the shelter post on the panels. Line up the holes as shown in Fig. 2 for bolting the cee's onto the shelter post.
- **2b** On the end cees, bolt the side channel clips on as described on the first instructions (these bolts are in the first package). On the middle cee, use eight (8) clips and fasten them to the channel using six ½" x 1" hex bolts (7a) and six ½" hex nuts (7b). **IMPORTANT: Position the clips as shown in the illustration.**

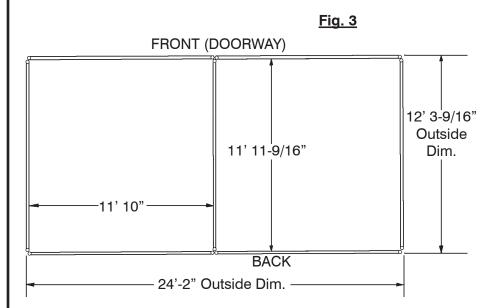


NOTE: Each shelter post (tall and short) has an extra set of key holes located toward the top of the post. Use these holes only if you want a short shelter height.

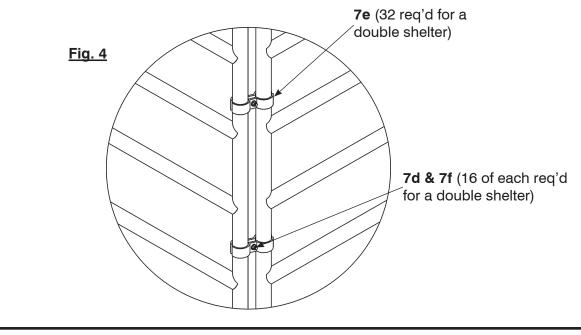
The assembly instructions are showing how to set up a shelter using the bottom set of key holes for a tall shelter height.

STEP 3

- 3a At this point, the structure can now be set upright. Two people are needed for this process for safety purposes. Make sure that when you put the middle and sides into place that the tall shelter posts are to the front side. Place four 2" butterfly connector halves (7e) at each corner of the pen two directly below the shelter post and two near the bottom of the panel. Make sure to keep the bolt heads to the inside of the pen so that the horse will have a safe, smooth surface. Fasten the butterflies with one 3/8" x 1" carriage bolt (7d) and one 3/8" flanged whiz nut (7f). Do not fully tighten the butterflies. This will allow for adjustment of the pen once it is standing. Move the panels to the dimensions in Fig. 3.
- 3b After the panels have been moved into place and the corners squared, tighten the butterflies in place. Refer to Fig. 4 for quantities.

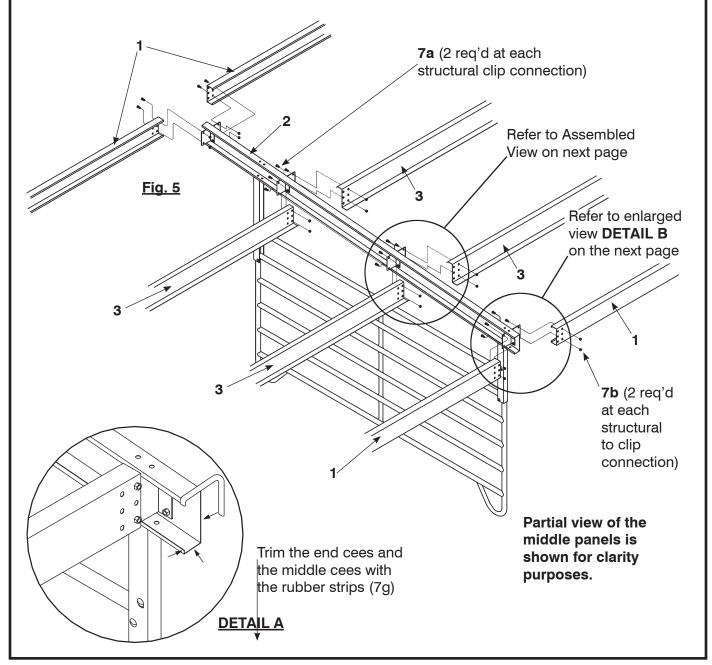


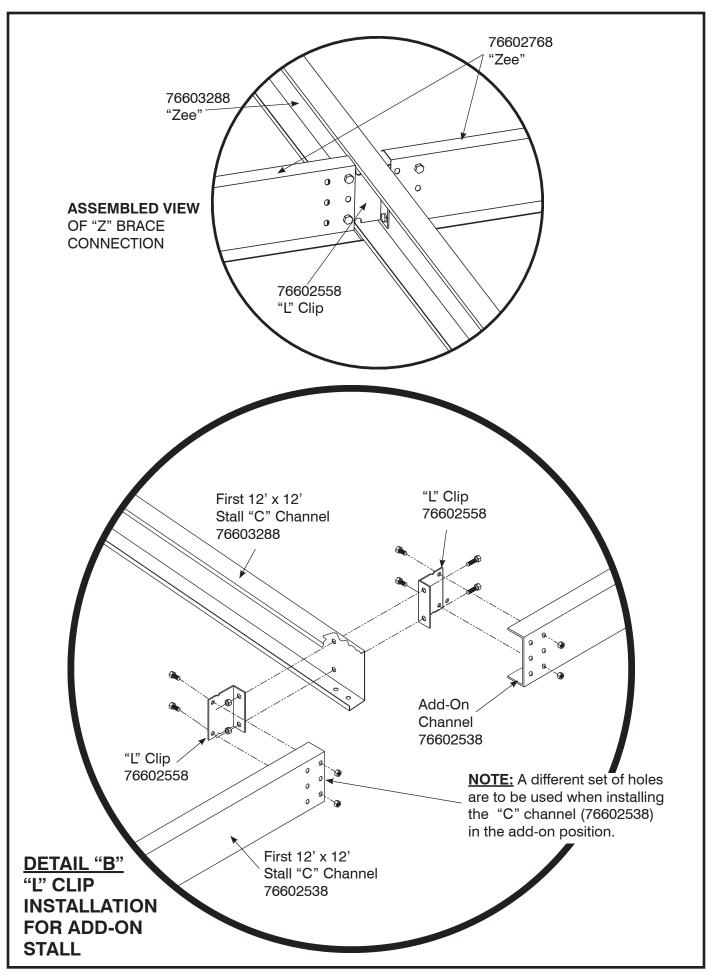
Be sure that the front panels are located on the side that has the tall shelter posts. This will ensure enough clearance for you and the animal.



Once the pens are set into place, it is time to assemble the cross member cees and zees. Two people are needed for this process for safety purposes.

- 4a To begin, start on the low side. You can complete one side of the middle panel and then move over to the other side. Lift the 8" cee (1) up onto the bottom clips and rest them on the clips. The open face of the 8" cees have to face into the pen (refer to Fig 5). Fasten each end of the cees with two ½" x 1" hex head bolts (7a) and two ½" nuts (7b).
- 4b Follow the same instructions for the 8" zee (3) and the high side 8" cee. You can repeat steps 4a and 4b for doing the other side of the middle panel.
- 4c Now that you have all of the structural bracing in place you need to place the rubber strips (7g) around the low side of the middle and end cees (refer to Detail A). Cut the excess rubber off. This will take away any sharp edge that could injure your animal.



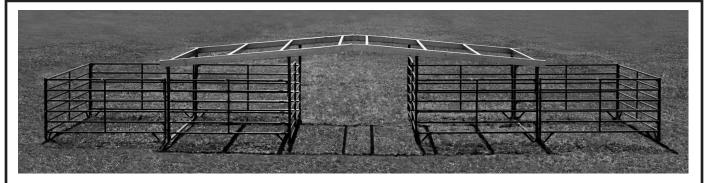


Modular Shelter Breezeway Hardware Kit **Assembly Instructions**

76900188

THANK YOU FOR PURCHASING THIS PRODUCT

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Check with local government authorities to determine if a building permit is required.

Sheeting used must conform to these or greater specifications as listed below:

Design Criteria

Snow – 40 psf ground snow

Wind – 90 MPH exposure C

Loads calculated in accordance with the Uniform Building Code 94 Edition.

This shelter requires adequate anchoring to safely resist the design wind forces and to avoid injury to animals and others. Behlen Mfg. Co. requires that an anchor package be installed at every corner in heavy, undisturbed soil. Behlen Mfg. Co. strongly recommends that you consult a qualified professional engineer to design the anchor for your specific application.

- NOTE: Before assembling, it is necessary the ground be level to less than 1" within the area the shelter is to cover.
 - It will take two people to erect this shelter.
 - Tools required: Ratchet wrench, 3/4" & 9/16" socket heads, straight edge, string line.

Table of Contents

NOTE: To assemble this Modular Shelter System,

two 76110678 (12' x 15') Horse Shelter Framing kits must first be assembled.

Pages 1-6. Instructions for assembling two (12' x 15') Horse Shelters for set up into a 12' x 36' Modular Shelter System.

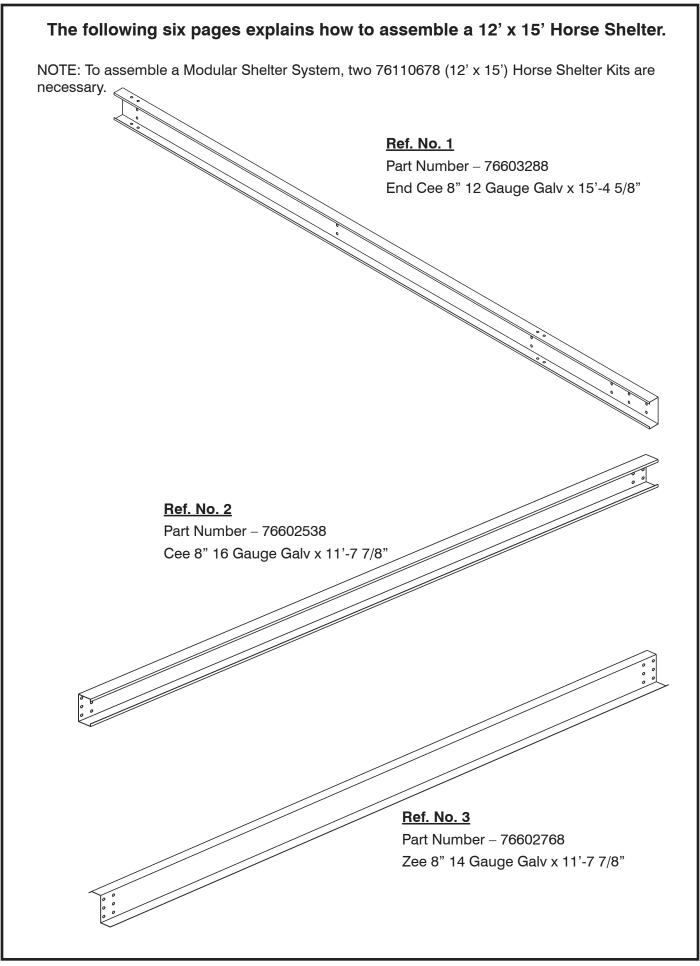
Pages 7-12. Instructions for assembling the 6' Center Roof Connection for the Modular Shelter System.

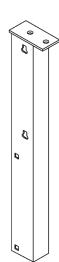


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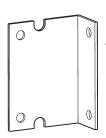
Ref. No. 4

Part Number – 76400349 Short Shelter Post – Hot-dipped Galvanized



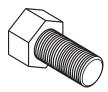
Part Number – 76400359 Tall Shelter Post – Hot-dipped Galvanized





Ref. No. 6

Part Number – 76602558 Side Channel "L" Clip – Galv.



Ref. No 7a

Hex Head Cap Bolt ½" x 1" Plated



Ref. No 7b

Flat Round Head Bolt – ½" x 1" Plated



Ref. No 7c

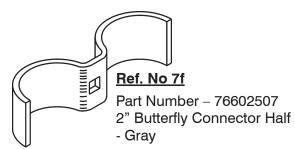
Nut ½" Hex Grade A Plated





Ref. No 7e

Carriage Bolt 3/8" x 1" Plated



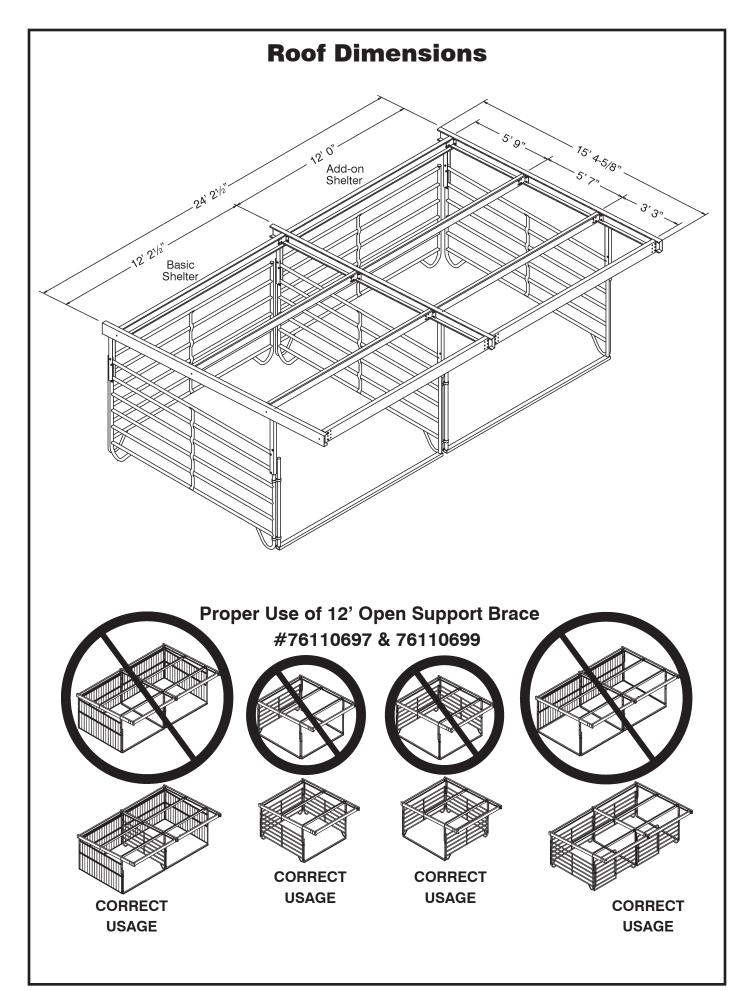


Ref. No 7q

Nut 3/8" – Flanged Whiz Lock – Plated

Ref. No 7h

Part Number – 76602837 (8 pair) Rubber Strip (Not Illustrated)

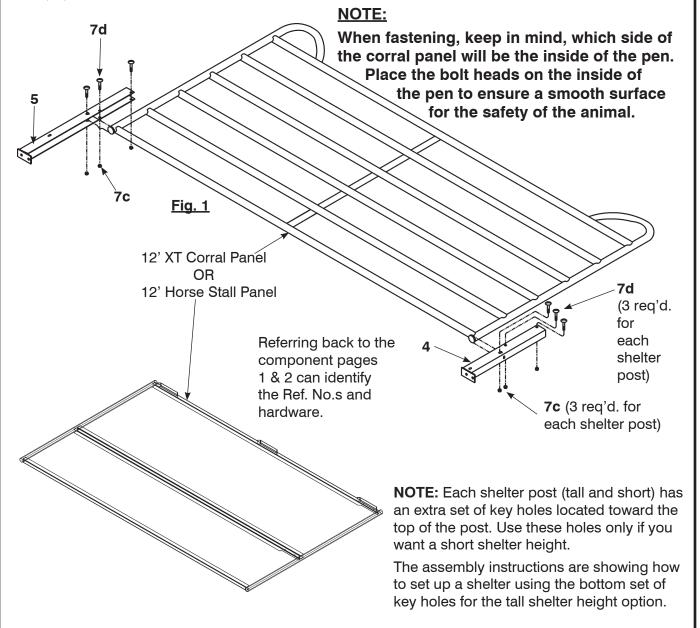


NOTE:

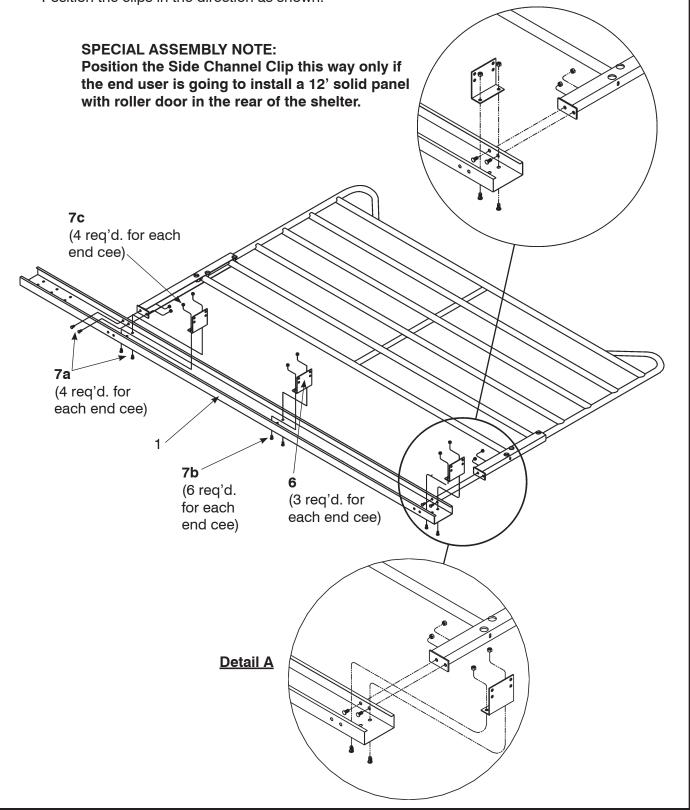
If you are planning on erecting an add-on section onto the shelter, read through both the Single and Add-on instructions. This will eliminate rework.

If sheeting will be installed, do not install it until all sections of the shelter are erected. (Behlen does not supply sheeting)

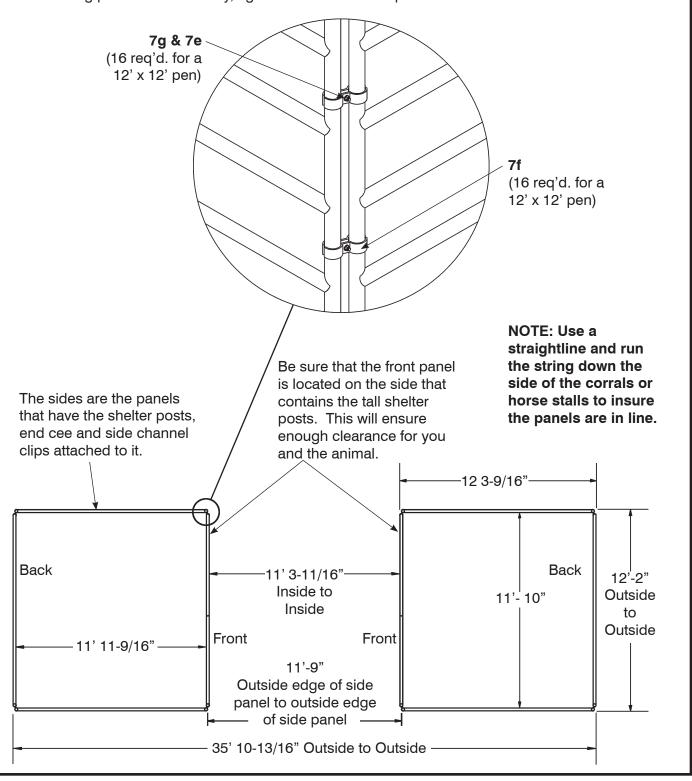
- 1a The ground on which the shelter sets must be level to about 1" from one end to the other.
- **1b** Assemble the shelter in an area which is 12' x 36'. Assemble the first shelter structure and then assemble the next shelter on the opposite side facing the first shelter.
- 1c For a more accurate layout, dimensions are given on page 6, but at this point they are not necessary. For assembling ease, lay the panel down. Slide the tall shelter post (5) and the short shelter post (4) onto the vertical 2" tube. If assembling the shelter on a 12' XT Corral Panel, be sure the cap rests in the three slots provided on the shelter posts.
- **1d** Fasten each shelter post (4 & 5) with three ½" x 3" plated carriage bolts (7d) and three ½" nuts (7c).



- 2a With the corral panel still lying down, bolt the end cee (1) to the shelter posts using two ½" x 1" hex head bolts (7a) and two ½" nuts (7c). Use the holes indicated on the illustration. When assembling end cee onto a horse stall, use the middle set of holes as indicated in Detail A.
- 2b Assemble the side channel clips (6) to the end cee using two ½" x 1" flat round head bolts (7b) and two ½" nuts (7c). Be sure to keep the bolt heads to the outside of the cee as shown. Position the clips in the direction as shown.

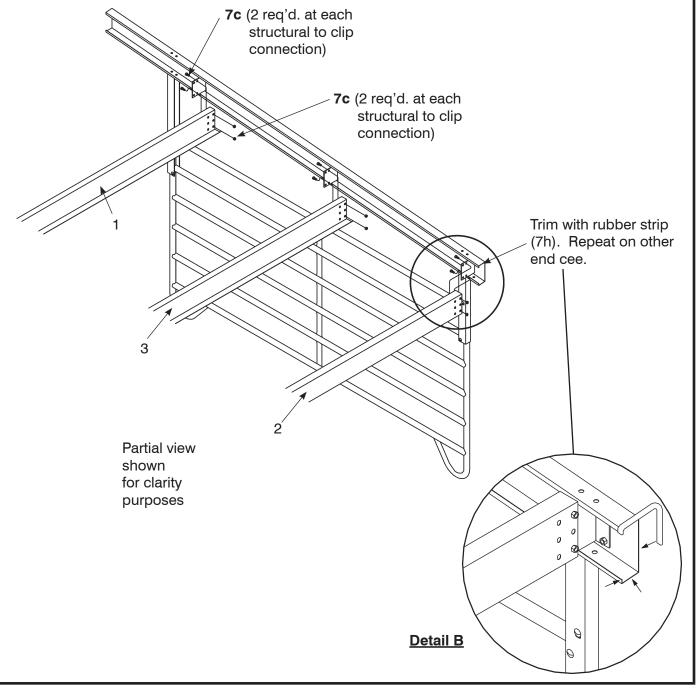


- 3a At this point, the structure can now be set in place. Two people are needed for this process for safety purposes. Place four 2" butterfly connector halves (7f) at each corner of the pen. Fasten the butterflies with one 3/8" x 1" carriage bolt (7e) and one 3/8" flanged whiz nut (7g). Make sure the bolt head is on the inside of the pen for a smooth edge near the animal. Do not fully tighten the butterflies. This will allow for adjustment of the pen. When attaching the butterflies, place one directly below the shelter post and one near the bottom of the panel.
- **3b** Measure the pen to match the measurements provided in the illustration. After measuring and moving panels as necessary, tighten the butterflies in place.



Once the pen is set in place, it is now time to assemble the interior cees and zee. Two people are needed for this process for safety purposes.

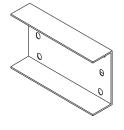
- 4a To begin, start on the low side. Lift the 8-inch cee (2) up to the bottom clips and rest on the side channel clips. Be sure that the 8-inch cee (2) is positioned as shown on the illustration. The open face of the 8-inch cees has to face into the pen. Fasten at each end with two 1/2" x 1" hex head bolts and two 1/2" nuts.
- **4b** Follow the same instructions for the 8-inch zee (3). Make note of the position to ensure proper assembly.
- **4c** Insert the rubber strip (7h) around the entire end of the end cee on the low side. See Detail B. Cut any excess rubber strip off. Repeat this process for the other side. This will take away any sharp edge that could endanger your animal.



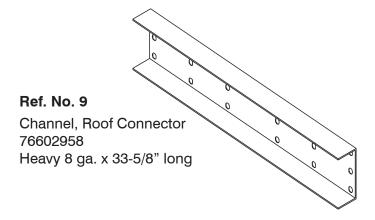
Component List for 6' Center Roof Connector (76110688) (Center Roof Section of Modular Shelter System)

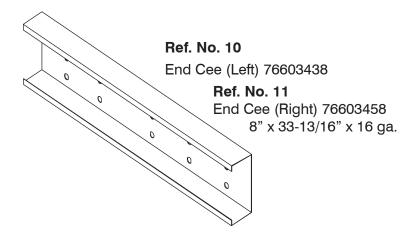
NOTE: For a 12' x 36' or Single Modular Shelter System, two (76110688) 6' Center Roof Connector Kits are necessary.

If more add-on sections will be added, only (1)76110688 6' Center Roof Connector Kit is necessary for each additional 12' add-on section.



Ref. No. 8 Channel, Ridge Connector 76602948

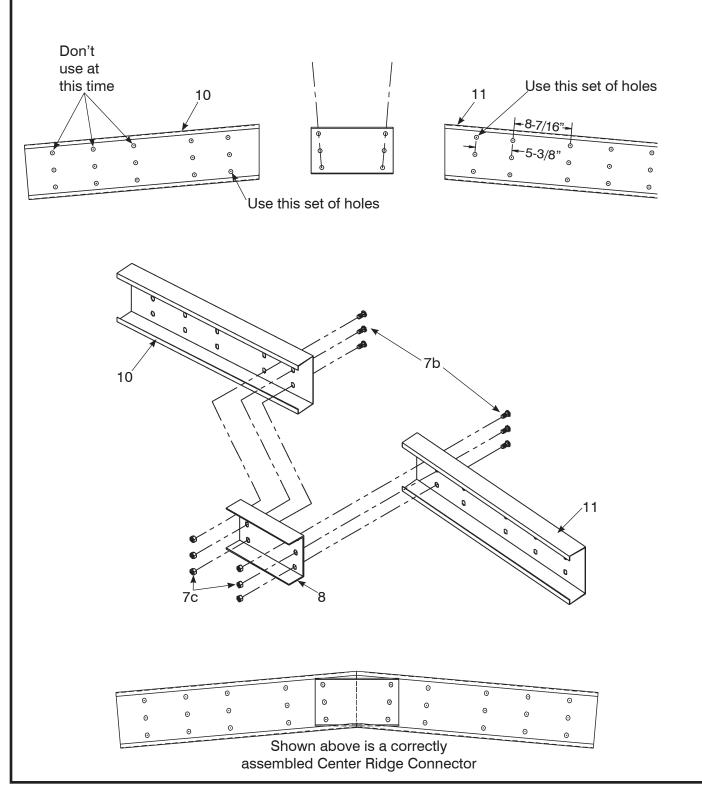


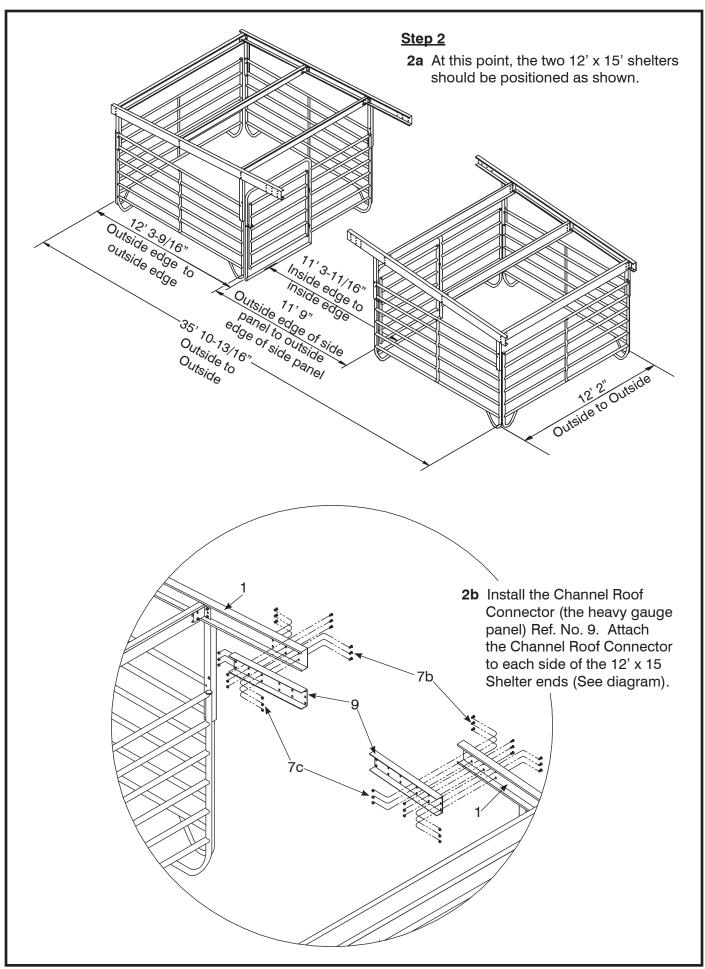


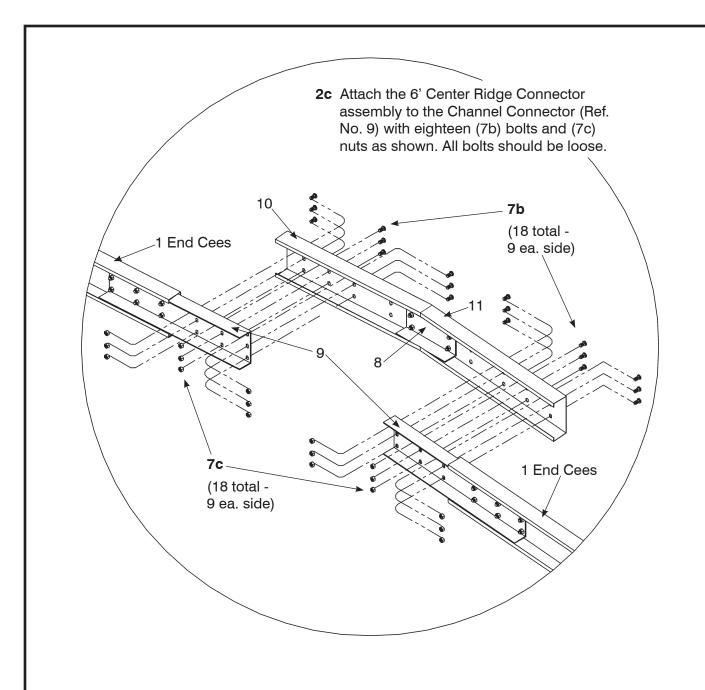
1a Assemble the 6' Center Roof Connector using the components and hardware in pkg. 76110688. The Ridge Connector (Ref. No. 8) is the starting point. Position the plate so that the open face of the plate is facing up. Next, install the short End Cee Channels (Ref. No's. 10 & 11). Follow the diagram below on how to position the Cees leaving all bolts lose at this time.

Connect the two End Cees using the set of holes shown. Note the hole grouping.

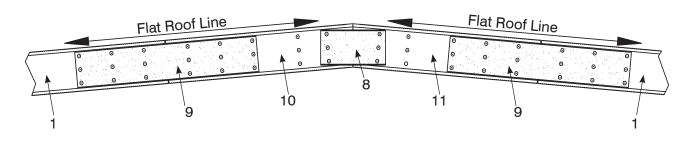
Lay the Center Ridge Connector (8) out so that the holes are positioned as shown angling outward.

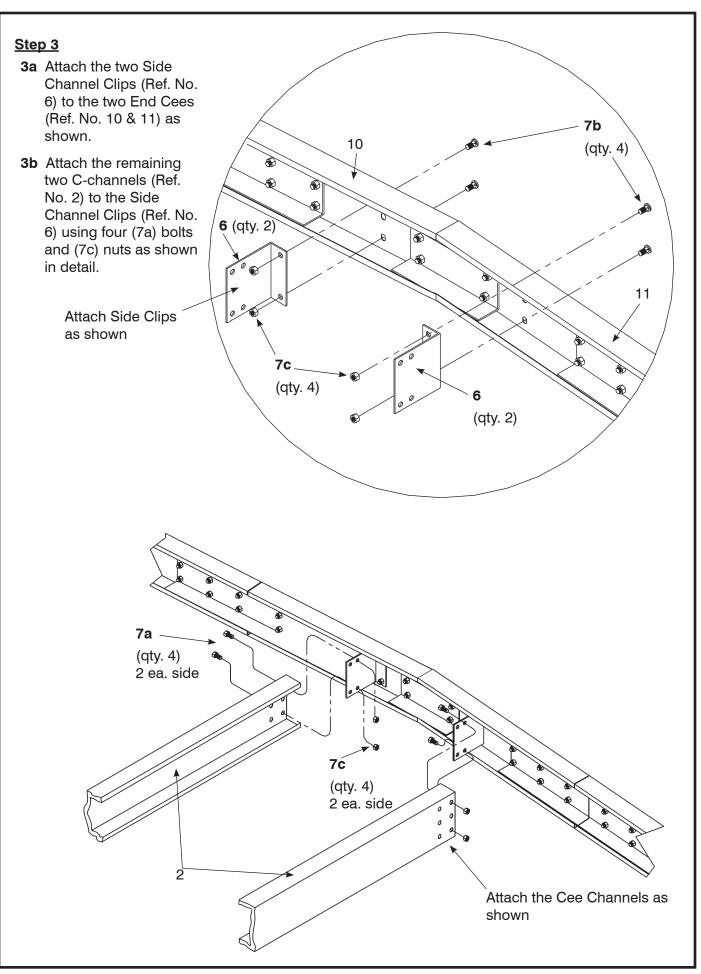


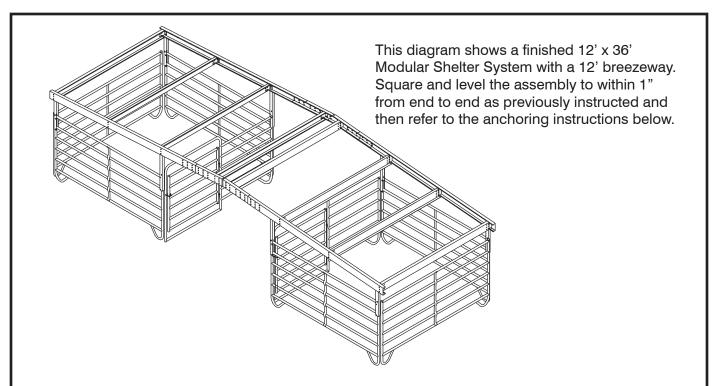




2d After the Center Ridge Connector (Ref No. 8) is attached, adjust the angles (Ref. Nos. 10, 11 & 1) so that they produce a flat roof line as shown in the detail. A straight edgel will help in achieving this. Bolts can now be tightened to hold the roofline shape as it is being adjusted.



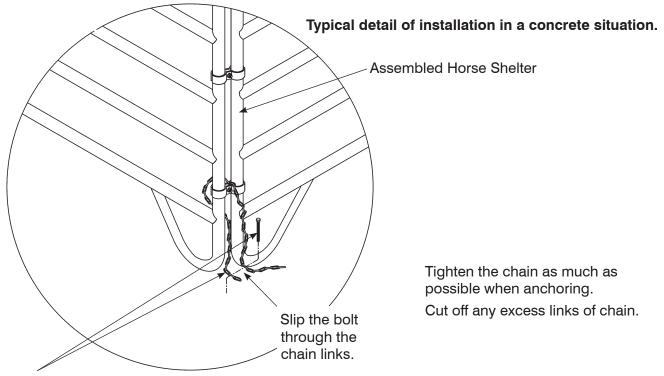




Anchoring the Assembled Horse Shelter

The assembled horse shelter <u>will</u> require anchoring. When anchoring into concrete, all materials will be supplied by the buyer and can be bought at any local hardware store. The

shelter <u>must</u> be anchored at every corner. With a 90-MPH wind, an uplift force of 2,200 pounds per corner can be created.



Chain and anchor bolt can be purchased at your local hardware store.

(Chain and anchor bolt must be capable of withstanding a maximum uplift force of 2,200 pounds per corner).

To assemble the Add-on kits, follow the same instructions as for the 12' x 15' Add-on unit. It will take two people to assemble this unit.

The original 12'x 15' units will always be placed on the ends.

