

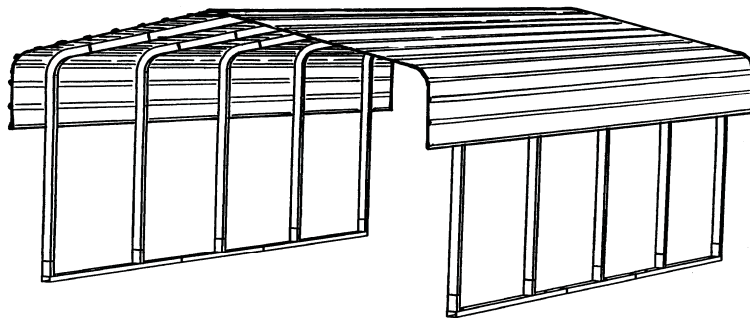


UNIVERSAL INSTALLATION

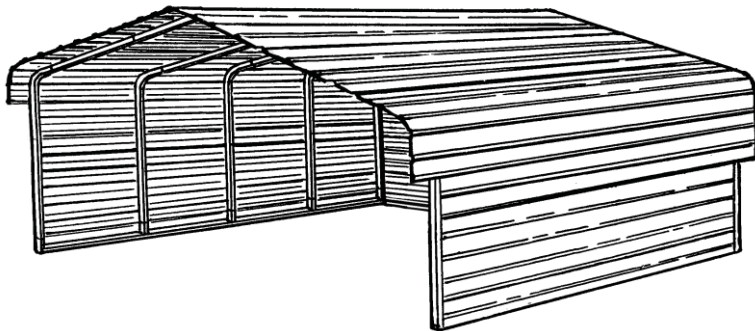
FRAME SIZES:

WIDTH: START AT 10' UP TO 60'
ON CENTER FRAME SPACING: 4' AND 5'
EAVE HEIGHTS: START AT 7' UP TO 16'
FRAME SIZE: 2" x 3" OR 2" x 4"

CARPORT



3 SIDED SHELTER



Our unique assembly process quickly transforms the individual pieces into a finished structure that will give you a lifetime of service. Great care has been taken to ensure complete satisfaction with your purchase. In the unlikely event that there are any missing or damaged parts, or if you simply need technical assistance, please call our Toll Free Hotline at 1-800-900-7222 and your questions will be addressed promptly. Thank you for choosing the VersaTube Building System.

PLEASE SEE E-MAILED CARE PACKAGE FOR STRUCTURAL DRAWINGS, BUILDING MATERIAL LISTS (BOM), AND SHEET METAL TAKE-OFF FOR YOUR SPECIFIC BUILDING DETAILS AND ASSEMBLY.

SAFETY, HAZARD, AND MAINTENANCE INSTRUCTIONS

CAUTION:

Read the following safety warnings and all instructions in their entirety prior to installation. If you have questions or are missing any parts, contact Mid-South Metal Products, Inc. (DBA, VersaTube Building systems) customer service at 1-800-900-7222 before proceeding.

CAUTION:

VersaTube Building Systems designs and manufactures framing products to meet minimum load requirements in most areas. It is the buyer's sole responsibility to determine the specific building code requirements applicable in the city and/or county of the state in which this product is being erected, and to ensure the product is installed with sufficient materials and in such a manner as to comply with the codes.

WARNING:

Metal parts may get hot when exposed to high heat or direct sunlight. Avoid contact with skin and wear protective gloves and clothing to prevent the possibility of burns.

WARNING:

Standing or walking on the structure could cause damage to the sheet metal panels. If you must walk on the roof, step within 1' of a major frame member. The structure must be properly braced to support human weight. Collapse of the structure may cause serious injury due to weight of components.

WARNING:

Avoid installation on windy days as wind may create hazards during the installation process. Wind may blow material or cause partially installed components to collapse prior to being secured or fully installed. The weight of the components or structure may cause serious injury if it should collapse.

Replacement cost will be the sole responsibility of the customer.

WARNING:

Metal conducts electricity and electrical shock hazards exist since the structure is made of metal. During installation or storage, keep the structure and all components away from electrical sources. Make sure that your selected location is away from power lines, underground cables, and any other source of electrical power. Serious injury or even death may occur if contact is made with electrical current.

WARNING:

In the event that your structure is fully enclosed, be sure to provide proper and adequate ventilation and egress and ingress. Hazardous, poisonous or noxious substances should not be stored in the structures absent proper ventilation. Follow all warnings and instructions of the manufacturer of any substance stored in your building. Also, proper ingress and egress should be provided to prevent persons or children from becoming trapped inside the structure.

WARNING:

If metal panels are selected to cover all or a portion of your structure, be careful of the sharp edges which may cause cuts or lacerations. Wear protective work gloves and suitable clothing for protection and always take care when handling metal parts.

NOTE:

The VersaTube Building System is an all domestically produced galvanized tubular steel framing system. Maintenance is required twice annually on particular areas of the framing system i.e. "weld seams" and "cut or raw ends". This maintenance is performed by applying any "Zinc coated" silver spray paint found at local mass merchant or paint store to these areas twice annually or every six (6) months.

NOTE:

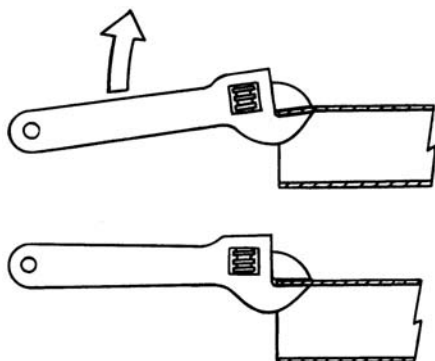
All sheet metal cladding applied to the VersaTube frame are attached with self drilling screws with a rubber washer. These screws produce small shavings when drilling through the cladding. If the shavings are allowed to sit on the sheet metal for an extended period, rust spots will form and promote deterioration. Metal shavings must be brushed after installation of the sheet metal. Claims reported against rust spots will not be honored by VersaTube Building Systems.

ATTENTION:

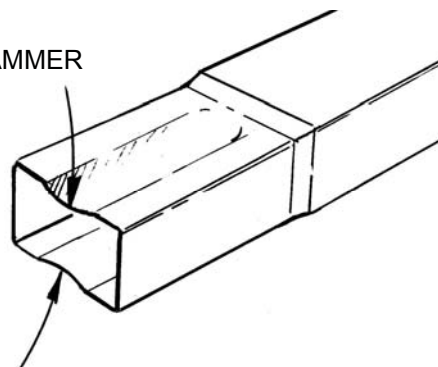
IT IS IMPORTANT THAT YOU READ THE FOLLOWING NOTE BEFORE STARTING THE ASSEMBLY OF YOUR CARPORT

NOTE:

If during the installation process you have difficulty fitting frame components together, use an adjustable wrench to open the end of the receiving tube as shown below. Close wrench down around bent portion of tube and bend wall outward. It may also be helpful to hit the center of the swage at the end of the tube to create more of a lead.



STRIKE WITH HAMMER



Torque Setting

**Cordless (14 or 18 volt)
Or Electric Screw Gun
With 5/16" Socket Drive**



**Safety Goggles
Or glasses**



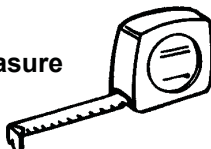
Work Gloves



**Pencil/Marker
And Felt Marker**



Tape Measure



Hammer



Tin Snips



What you'll need

**Chalk Line and
Mason Line or
Nylon String**



Level



2 Step Ladders



One must be able to comfortably reach the peak of the building 10' to 16' high depending on building width and height. An extension ladder can also be helpful when installing sheet metal.

**Shovel or
Post Hole
Digger**

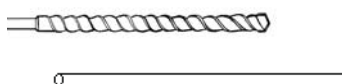


Items you may need

Adjustable



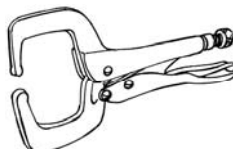
**Masonry
Drill Bit
1/2" x 8"
Drill depth**



Wrench, 3/4" & 1/2"

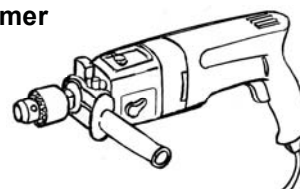


**Vise grip or other
quick clamp**

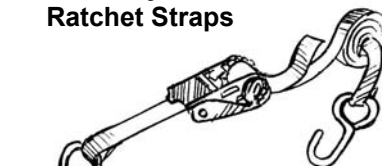


**Straw for
Blowing
dust out of
drilled
holes**

**Hammer
Drill**



**Motor Cycle or
Ratchet Straps**



(May be required to pull frame plumb.)

BASIC CARPORT PARTS LIST

SEE VISUAL BOM in Care Package for quantities and specifics pertaining to your building

BASE RAILS FOR 4' ON CENTER 2"X3" FRAMES:

8' STARTER BASE RAIL, 2"X3" X 98 1/2" rail with 3 welded vertical pins. **Part # 2X3-SBR-8-4**

4' BASE EXTENSION RAIL, 2"X3" X 52 3/4" rail with 1 welded vertical pin. Swaged one end. **Part # 2X3-EBR-4-4**

8' BASE EXTENSION RAIL, 2"X3" X 100 3/4" rail with 2 welded vertical pins. Swaged one end. **Part # 2X3-EBR-8-4**

BASE RAILS FOR 5' ON CENTER 2"x3" FRAMES:

10' STARTER BASE RAIL, 2"X3" X 122 1/2" rail with 3 welded vertical pins. **Part # 2X3-SBR-10-5**

5' BASE EXTENSION RAIL, 2"X3" X 64 3/4" rail with 1 welded vertical pin on one end. Swaged one end.

Part # 2X3-EBR-5-5

10' BASE EXTENSION RAIL, 2"X3" X 124 3/4" rail with 2 welded vertical pins. Swaged one end. **Part # 2X3-EBR-10-5**

BASE RAILS FOR 4' ON CENTER 2"X4" FRAMES:

8' STARTER BASE RAIL, 2"X4" X 98 1/2" rail with 3 welded vertical pins. **Part # 2X4-SBR-8-4**

4' BASE EXTENSION RAIL, 2"X4" X 52 3/4" rail with 1 welded vertical pin. Swaged one end. **Part # 2X4-EBR-4-4**

8' BASE EXTENSION RAIL, 2"X4" X 100 3/4" rail with 2 welded vertical pins. Swaged one end. **Part # 2X4-EBR-8-4**

BASE RAILS FOR 5' ON CENTER 2"x4" FRAMES:

10' STARTER BASE RAIL, 2"X4" X 122 1/2" rail with 3 welded vertical pins. **Part # 2X4-SBR-10-5**

5' BASE EXTENSION RAIL, 2"X4" X 64 3/4" rail with 1 welded vertical pin on one end. Swaged one end.

Part # 2X4-EBR-5-5

10' BASE EXTENSION RAIL, 2"X4" X 124 3/4" rail with 2 welded vertical pins. Swaged one end. **Part # 2X4-EBR-10-5**

***NOTE:** The length of the carport can be extended using 2', 3', 4', OR 5' base extensions, one on each side of the carport. For 2' Extension **Part # 2x3/2x4-EBR-2-2**, for 3' **Part # 2x3/2x4-EBR-3-3**, for 4' **Part # 2x3/2x4-EBR-4-4**, and for 5' **Part # 2x3/2x4-EBR-5-5**.

SIDE POST: 2" X 3" tube with a bend at one end. **Part # 2X3-SP-7 (7')**, **2X3-SP-8 (8')**

EAVE CORNER: 2" X 4" tube with a bend in the middle. Swaged on both ends. **Part # 2X4-EC** Eave Corners connect to 2"x4" cut length tubing for the side component. **Part # 2x4-XXXXX**

PEAK: 2" X 3" X 72" with one bend in the center. **Part # 2X3-PK.**

2"X4" X 72" with one bend in the center and swaged on both ends. **Part # 2X4-PK.**

HEIGHT EXTENSIONS (optional) Height extensions are 2" x 3" tubes with a swage at one end. They come in net height increments of 1' to 5' (the height from the end to the swage). **Part # 2X3-HE-1, 2X3-HE-2, 2X3-HE-3, 2X3-HE-4, 2X3-HE-5.**

RAFTERS,

2" x 3" tube swaged both ends. **Part # 2X3-R-XX-3/12.** 2" x 4" cut length tube, no swage. **Part # 2X4-XXXXX**

BK-BPR, Reinforcement bracket (if supplied)

VINYL TRIM, Length will change depending on the size of the carport. **Part # VINYL TRIM / 9901-VTW**

BUTYL TAPE, Length will change depending on the size of the carport. **Part # 71-9401/ Butyl Tape**

FRAME SCREWS, # 12 hex head, Self-Drilling screws. Come in 70 pack **Part # FRAMING SCREW / 71-9999**

SCREWS FOR ROOF METAL, #12 X 1" painted screws with rubber washers.

VERSATUBE ANCHORS, Anchors may or may not be supplied.

REBAR ANCHOR, used with concrete. #4 x 30" rebar with welded top plate. # ANC-24 Use 1 per post. Base rails are pre punched showing location of anchors. Concrete Wedge Anchors 1/2" x 7" for 2"X3" framing OR Concrete Wedge Anchors 5/8" x 7" for 2"X4" framing. (Concrete Wedge Anchors 1/2" x 7" are Supplied ONLY by REQUEST.)

SHEET METAL PANELS: Sizes are listed on the Sheet Metal Take off in your Care Package.

TRUSS BRACES: Truss braces may be required on your carport depending on width, wind load and snow load. In SOME cases carports do not require a truss brace. Three types of truss braces are available. Type 1 (collar tie), Type 2 (collar tie with a vertical support) and Type 3 (a collar tie with web angle braces and knee braces) See the part descriptions in that section beginning on Page 9.

SITE PREPARATION FOR CARPORTS

The VersaTube carport frame is designed to be placed on a foundation that is level side to side and sloped about 1/8" per foot front to back or back to front. That foundation can be: **prepared ground** (leveled and re-compacted), **a concrete footing**, or a **concrete mono slab with built-in footing**. It is important that you create one of these conditions prior to your carport or building installation. **We recommend that you check with your local building official prior to starting your project to find out what is acceptable for foundations and anchoring in your county.** If you extend the carport site about 3 or 4 feet on all sides, it will make it easier to position ladders for sheet metal installation.

SLAB WITH FOOTING OR FOOTINGS ALONE

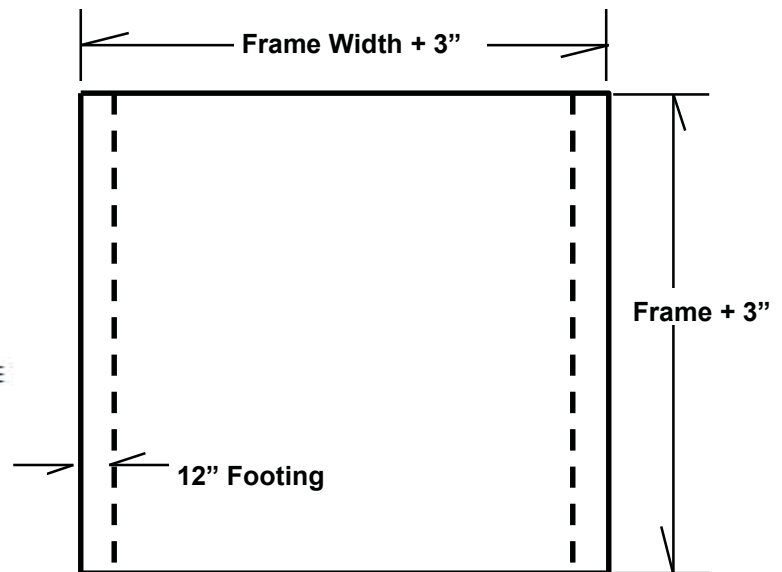
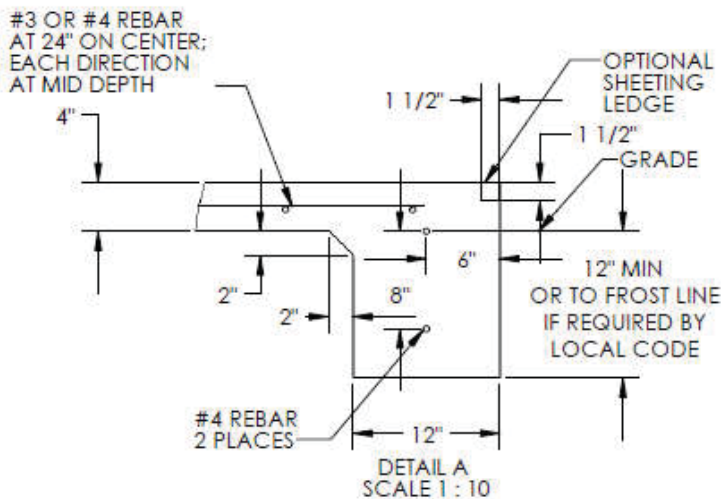
If you will be pouring a slab for your carport, the slab should be 4" thick and have a footing down both sides. The footing should be 12" x 12" with a 45° blend between the slab and the footing. The slab should have a front to back or back to front slope of about 1/8" per foot. One run of #5 rebar mid-depth is recommended in the footing. Check with your local building official for details and requirements in your county. Some counties require the footing to extend down 1' below the frost line. The concrete should be 2500 to 3000 PSI.

The outside dimensions of the slab should be at least 3" larger than your frame dimensions. Example: if you have a 20'W x 20'-2"L frame, the slab should be at least 20'-3"W x 20'-5"L. This will allow the center of your anchor bolts to be 3" from the edge of the slab.

FOOTINGS: Footings alone should be 12" wide and a minimum of 12" deep and can be positioned so the base rails are centered in the footing if you will be using wedge anchor bolts to anchor the base rails. The outside dimension of the footing will be the carport width plus 9".

Footings should be 3" longer than your frame. Footings should also slope 1/8" per foot front to back or back to front to allow water that might gather in horizontal ribs to flow over roof lap joints and off the roof.

MONO SLAB WITH FOOTINGS DOWN BOTH SIDES



ASSEMBLING AND POSITIONING THE BASE RAILS:

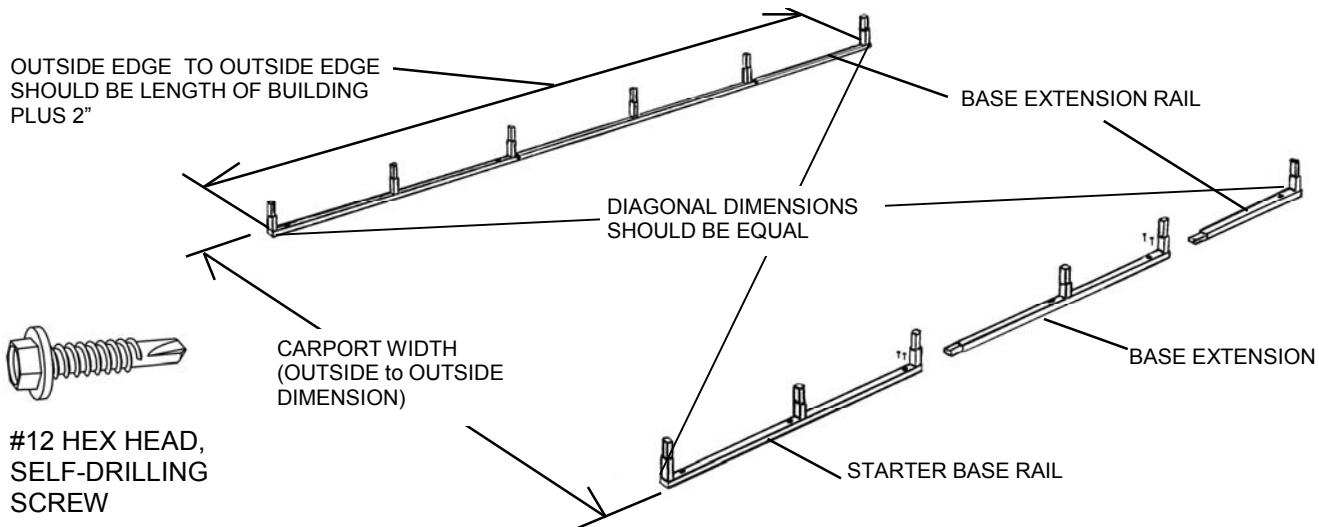
Lay out the base rails on your slab or footing or prepared ground. The base rails should be spaced building width apart (outside to outside) specific to the carport that you purchased. The length from the front to the back of the base rail assembly will be 2" longer than the frame length. (Example: If you have a 20' x 20' frame, the length of the base rail assembly will be 20'-2".

Join all the base rail components as shown. Check the overall length of the assembly, keep the swage joints even in length and fasten the swage joints with (2) #12 hex head, self drilling screws per joint on top of the base rail.

Place the Left and Right base rail assemblies the specified width distance apart (outside to outside) and take a measurement across the diagonals of the frame to check it for square. Adjust the frame until the measurements are equal.

EXAMPLE LAYOUT FOR 4' ON CENTER BASE RAILS

An Example Base Rail layout for 4' On Center is shown below, the frame sections has two 8' starter rails, two 8' base extension rails and two 4' base extension rails. If additional length is needed, you can add additional 2', 4' or 8' base extensions. The base rail layout will be similar for different on-center spacing but the component lengths will vary accordingly.



ANCHORING CARPORT BASE RAILS:

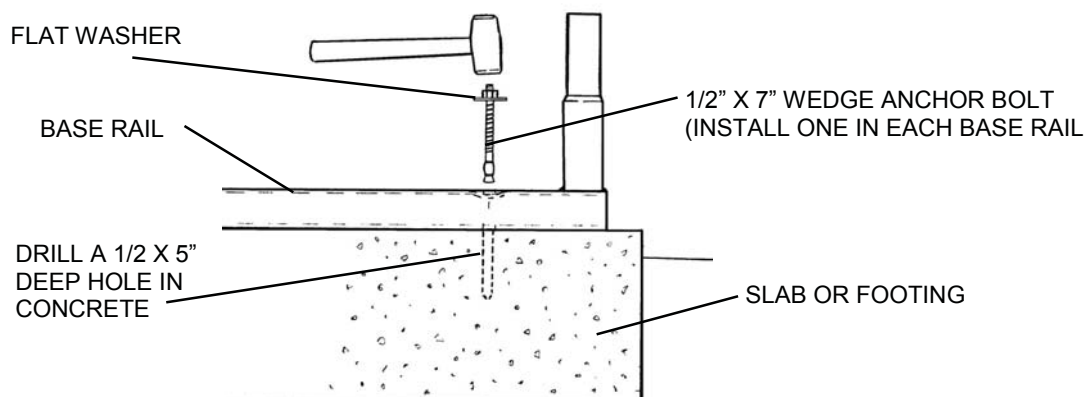
These instructions offer two anchoring methods: (1) To a concrete slab or concrete footings with concrete wedge anchor bolts. (2) To the ground with VersaTube Rebar Anchors and concrete.

ANCHORING TO CONCRETE SLAB OR FOOTING WITH 1/2" OR 5/8" X 7" WEDGE (EXPANSION) BOLTS

After you have completed all measurements and have the base rails in place and squared, screw the joints together with 2 screws per joint on the top surface of the base rail. This will assure that the rails remain straight and do not vibrate apart when you drill the anchor holes in the concrete.

To drill the anchor holes, you will need a hammer drill and a 1/2" x 8" or 12" concrete drill bit for 2"X3" Framing. You will need a 5/8" x 8" or 12" concrete drill bit for 2"X4" Framing. Hold the base rail in place with your foot, insert the drill bit through the anchor hole in the base rail and drill a hole 5" into the concrete. The base rail is 2" thick, so the total depth from the top of the base rail will be 7". **Blow dust residue out of holes before applying your anchor.**

Place a flat washer onto the anchor bolt and screw on a hex nut until about 2 threads are exposed above the nut. Now, place the bolt in the hole and tap it down with a hammer until the nut and washer touch the top of the base rail. Use a 3/4" wrench to tighten the nut. Tighten the nut until it is snug. Do not crush the base rail tube.



ANCHORING TO GROUND WITH CONCRETE PIERS

DIGGING HOLES FOR CONCRETE

Mark the locations of the rails and the anchor holes on the ground. Move the base rails to one side and dig holes at each anchor point for concrete. You may want to rent a gas-powered post hole digger with an 8" or 12" diameter auger for this job. Many larger carports require larger piers.

HOLE SIZE:

Hole size to be a Minimum of 12" in diameter and 24" deep. Size and depth varies depending on bearing load and uplift. Check with Local Building Officials for frost line depth to ensure the proper anchoring depth for your specific building.

ANCHORING

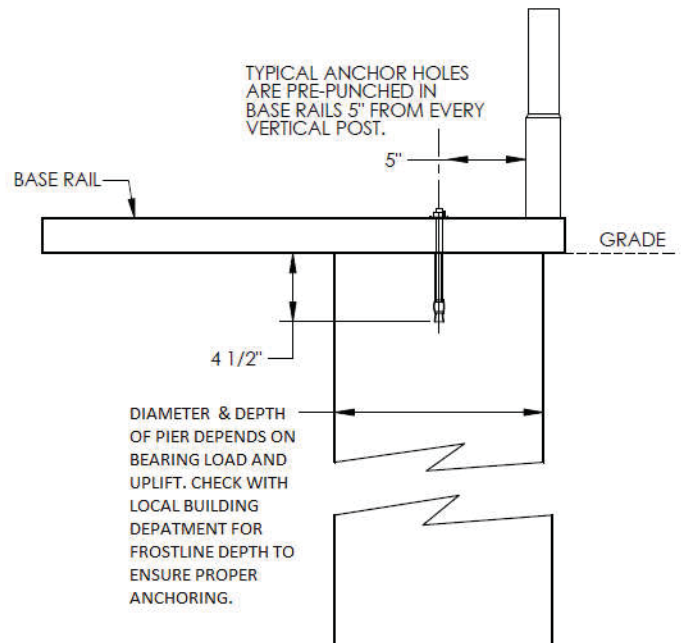
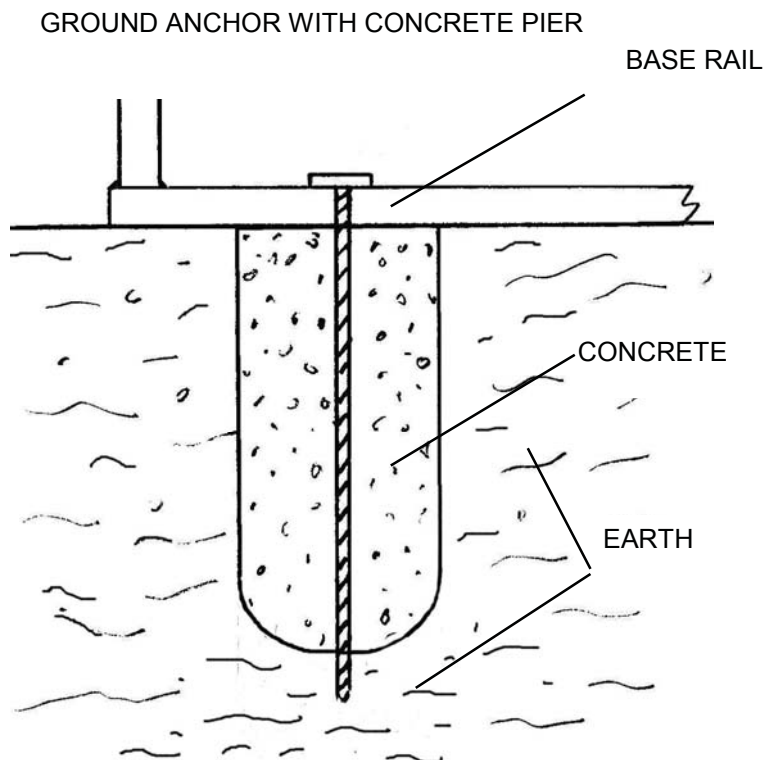
Move the base rails back into position over the holes. Re-measure to make sure the rails are in the proper location (see layout on page 6).

Now drop a VersaTube 30" re-bar ground anchor with a flat washer and nut at the top into each anchor hole. A 24" rod could also be used. Mix up concrete and pour into holes up to ground level. You may want to rent a mixer for this job. Before the concrete sets, re-check all your dimensions to make sure the frame is square and has the proper width.

VERSATUBE RE-BAR GROUND ANCHOR



WEDGE ANCHOR WITH CONCRETE PIER OPTION

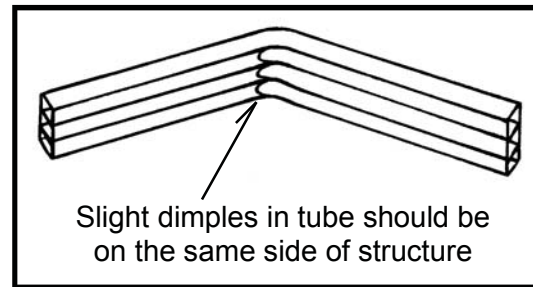
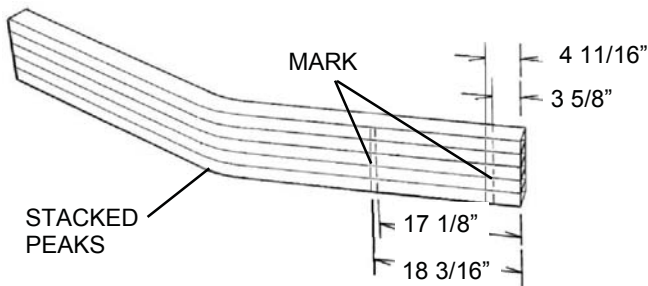


ROOF/WALL FRAME ASSEMBLY

Before you start the assembly of the Roof/Wall sections, stack the Peak tubes, line up the ends and mark a line on the top of each peak 17 1/8" OR 3 5/8" from one end. This will be the location of the edge of your first run of sheet metal panels on the roof of the carport. **If your unit is 3-Sided then you will need to add the additional mark.**

If your carport is 11', 12', 13', 17', 18', 19', 23', 24', 25', 29', 30', 31', 34', 35', 36', 40', 41', 42', 46', 47', 51', 52', 53', 57', 58', or 59' wide place the mark at 17 1/8" from the end. ****If your unit is 3-Sided Add an Additional Mark at 18 3/6".****

If your carport is 10', 14', 15', 16', 20', 21', 22', 26', 27', 28', 32', 33', 37', 38', 39', 43', 44', 45', 48', 49', 50', 54', 55', 56', or 60' wide, place the mark 3 5/8" from the end. ****If your unit is 3-Sided Add an Additional Mark at 4 11/16".****

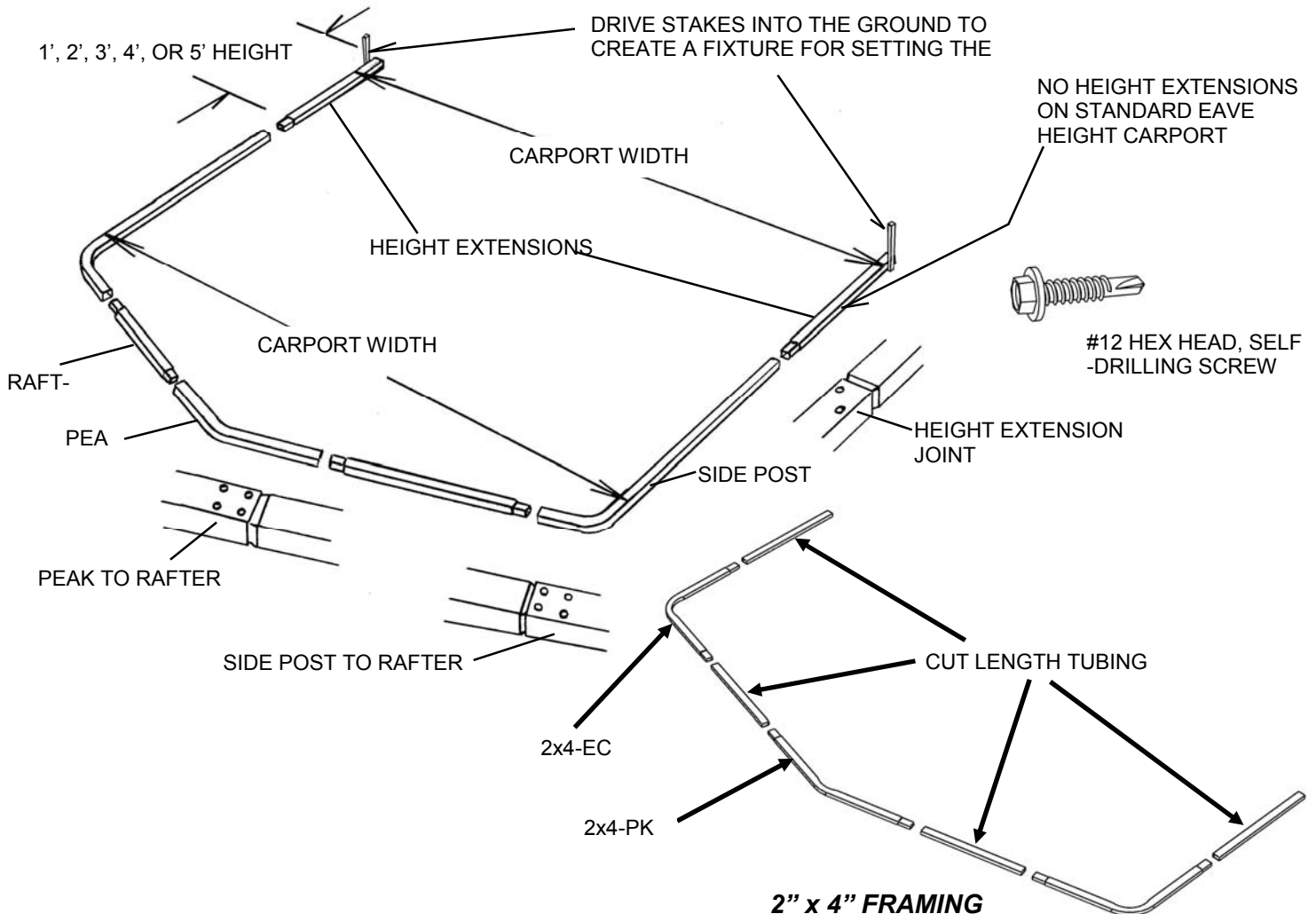


On the ground, assemble (1) peak, (2) rafters, (2) side posts, and (2) height extensions. (Height Extensions only used in 2"x3" framing 9' to 13' side height carports.)

Before you fasten the joints with screws, take a measurement across the top and bottom of the assembly as shown. This outside measurement is the outside size of your carport. Try to keep the joint spacing on both sides of the assembly equal. **It is very helpful to drive stakes into the ground at the width of the building and use them to set the dimension at the bottom of the assembly. You should set the bottom dimension before you adjust and set the top dimension.**

Now, fasten the joints with #12 hex head, self-drilling screws. **Use 4 screws in the peak to rafter and side post to rafter joints and 2 screws in the height extension joints.** See details below.

NOTE: You can use the first assembly as a template to assemble the remaining Roof/Wall Frames.

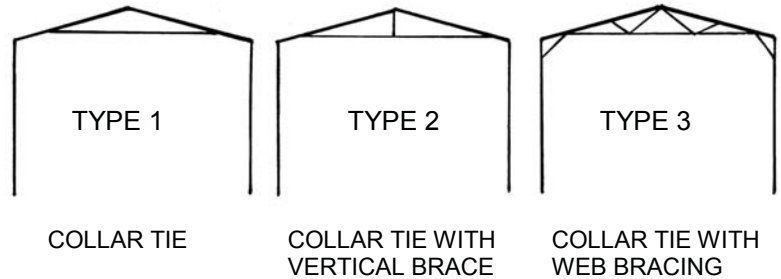


BRACING NOTE: PLEASE REFER TO THE STRUCTURAL DRAWINGS IN YOUR CARE PACKAGE FOR SPECIFIC TRUSS BRACE DETAILS.

TYPE (1) COLLAR TIE, TYPE (2) COLLAR TIE WITH VERTICAL, TYPE (3) COLLAR TIE WITH WEB BRACES

Your carport may or may not require a truss brace depending on the width and the wind & snow load in your county. In some cases buildings smaller than 20' wide carports may not require a truss brace. Carports 21' and wider will require some type of truss brace assembly.

NOTE: TRUSS BRACES ARE USED ON ALL INSIDE FRAME SECTIONS, NOT ON THE TWO ENDS. ON CARPORTS 30'+ WIDE, ALL FRAMES WILL BE BRACED.



COLLAR TIE ASSEMBLY:

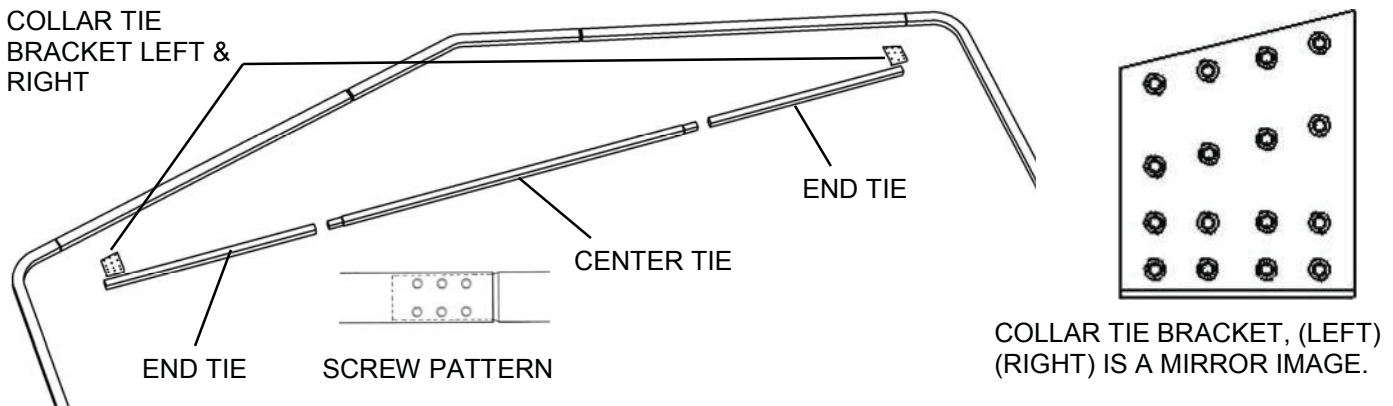
VISIT <https://www.youtube.com/watch?v=XXYgnPUSrMU> FOR COLLAR TIE VIDEO FOR 2"x3" FRAMING

VISIT <https://www.youtube.com/watch?v=XXYgnPUSrMU> FOR CALLAR TIE VIDEO FOR 2"x4" FRAMING

Typically Collar Ties are made up of 3 parts: (1) Center Tie 2" x 2" x 111" long swaged (reduced) on both ends, Part # **2SQ-CT111** and (2) end ties. End Ties are 2" square tube. Part # **2SQ-XXXXX**. You will find on narrow carports the collar tie is made up of only 1 piece, **2SQ-XXXXX**.

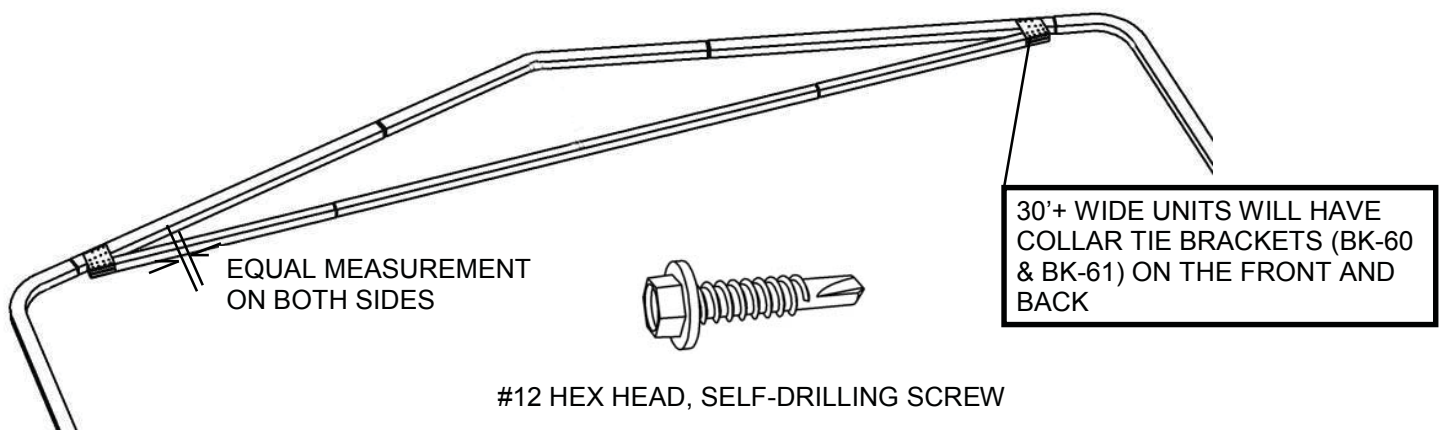
Assembly: Place an End Tie on both ends of the Center Tie and fasten each joint with (6) #12 hex head, self-drilling screws. Place screws on one side of the assembly as shown. Note: Make sure the assembly is straight when you install screws.

Install a left and right Collar Tie Bracket on both ends as shown.



ASSEMBLY OF COLLAR TIE TO ROOF/WALL FRAME:

The collar tie must be centered in the frame. Take a measurement from the end of the side post to the collar tie bracket on both ends of the truss brace. Adjust the brace side to side until the measurements are equal. Fasten the collar tie brackets to the rafters and end ties with (16) self-drilling screws on each collar tie.



INSTALLING VERTICAL BRACE FOR BRACE TYPE (2) TRUSS BRACE

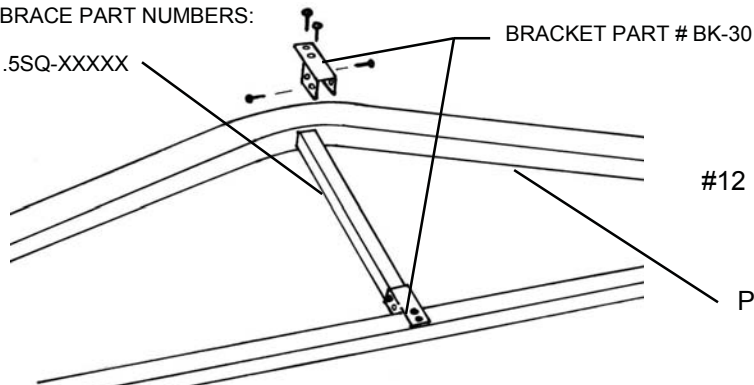
VISIT <https://www.youtube.com/watch?v=Amk2gHtke-w> FOR ASSEMBLY VIDEO FOR 2"x3"

VISIT <https://www.youtube.com/watch?v=8UwbLIWx1f0> FOR ASSEMBLY VIDEO FOR 2"x4"

The Center Vertical Brace is 1 1/2" square tube. Fasten the brace to the Collar Tie and the Frame Peak with Single Purlin Brackets. Use two screws in the bracket tongue and one screw in each side flange as shown. Fasten the brackets to the vertical brace first. Place the assembly together and adjust the parts to fit before installing any screws. Make sure that the Collar Tie assembly is straight before you fasten the brace to the Collar Tie and Peak.

CENTER BRACE PART NUMBERS:

PART # 1.5SQ-XXXXX



#12 HEX HEAD, SELF-DRILLING SCREW

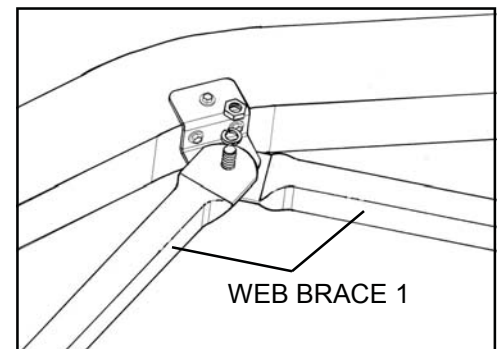
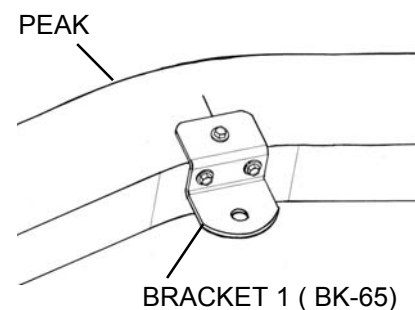
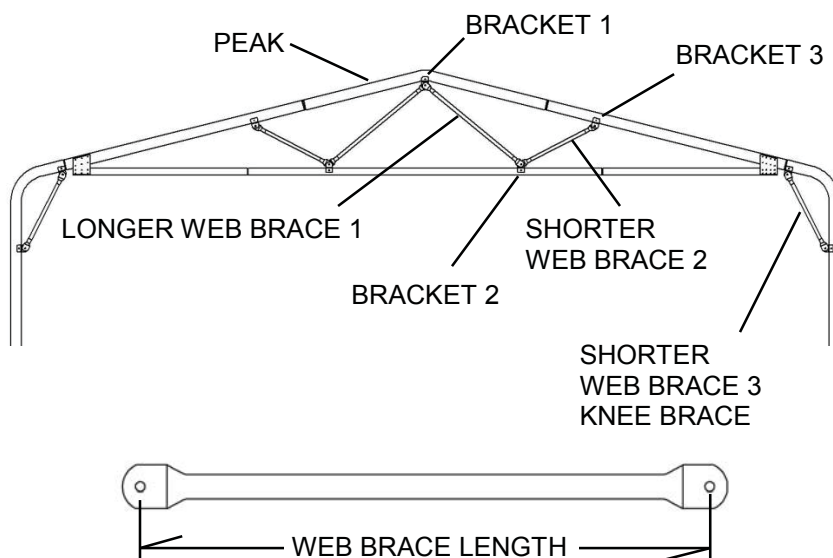
INSTALLING WEB BRACING FOR TYPE (3) TRUSS BRACE:

VISIT <https://www.youtube.com/watch?v=FkPMMFku7Sc> FOR ASSEMBLY VIDEO FOR 2"x3"

VISIT <https://www.youtube.com/watch?v=54rYwH-KKkQ> FOR ASSEMBLY VIDEO FOR 2"x4"

STEP 1: INSTALLING THE PEAK WEB BRACKET.

Measure up from both ends of the peak to find the center and make a mark. Place a Web Bracket, Part # **BK-65**, centered at your mark and pressed against the bottom of the peak. Fasten the Bracket 1 to the peak with 3 self-drilling screws as shown in detail. All brackets in the web assembly are BK-65's.



STEP 2: INSTALL TWO OF LONGER WEB BRACE 1: Part # 1SQ-WEB-XXXXX. Place one of the brace ends on top of the Web Bracket tab and the other brace end on the bottom of the tab. Join the parts with a 3/8" x 1 1/4" hex bolt, lock washer and hex nut. Do not tighten at this time. It may be necessary to lift the frame to insert bolt.

STEP 3: INSTALL WEB BRACE 2: Loosely attach Web Bracket 2 to the other end of Web Brace 1. Place the Web Bracket on the Collar Tie (make sure the collar tie is straight and fasten the face of the bracket to the collar tie with a self-drilling screw. Remove the hex nut and attach one end of Web Brace 2 to the Web Bracket 2 assembly. (Like the first assembly, one brace end should be on one side of the web bracket tab and one on the other.) Now, loosely attach Web Bracket 3 to the other end of Web Brace 2 and fasten the bracket to the under side of the rafter. Repeat assembly for remaining Web Brace 2.

VISIT THE LINKS BELOW FOR ASSEMBLY TUTORIAL VIDEOS FOR THE FOLLOWING:

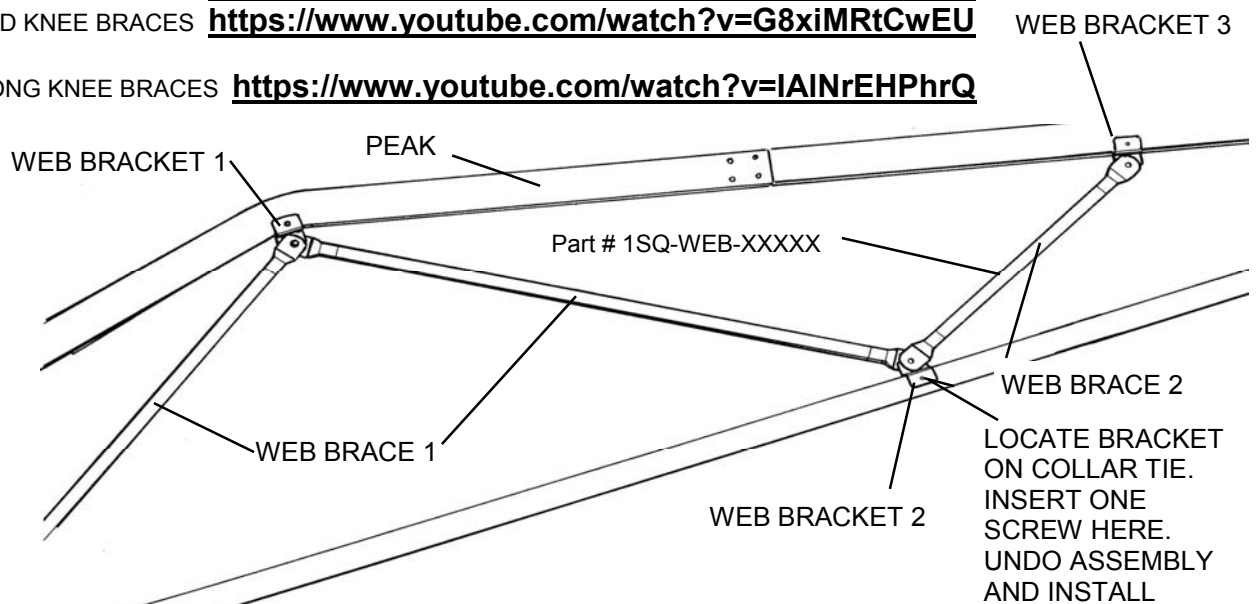
2"x3" WEB w/ KNEE BRACES <https://www.youtube.com/watch?v=l0lg0T4twDE>

2"x4" WEB w/ KNEE BRACES <https://www.youtube.com/watch?v=hkat6LhuFVE>

2"x3" WEB w/ MID KNEE BRACES <https://www.youtube.com/watch?v=xfeWrWSS1VY>

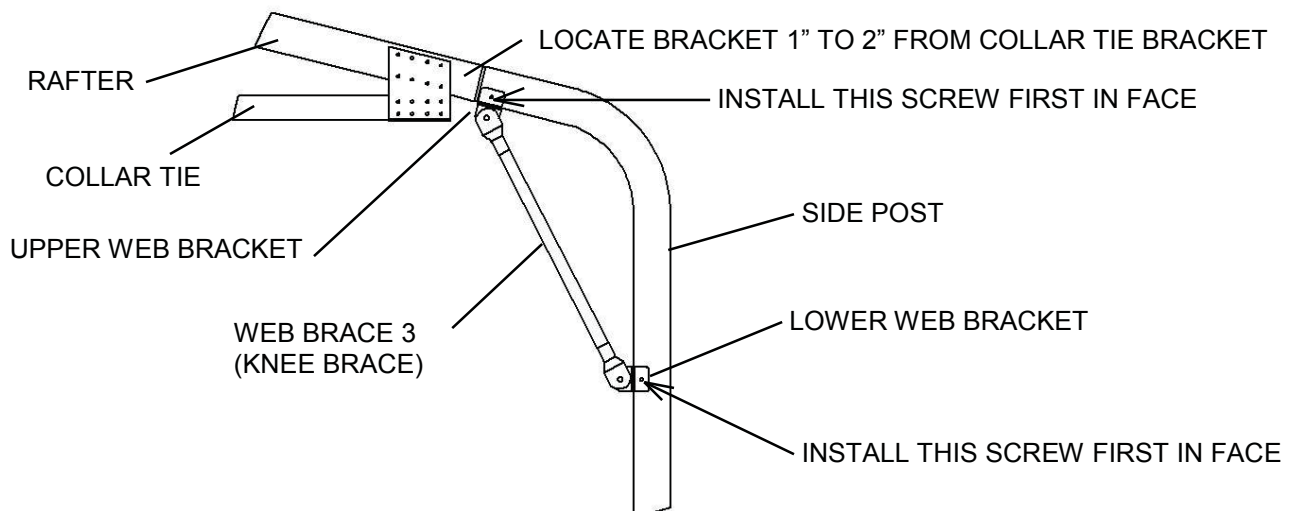
2"x4" WEB w/ MID KNEE BRACES <https://www.youtube.com/watch?v=G8xiMRtCwEU>

2"x3" WEB w/ LONG KNEE BRACES <https://www.youtube.com/watch?v=IAINrEHPhrQ>



STEP 4: ASSEMBLING WEB BRACE 3 (KNEE BRACE): WEB BRACE 3 (KNEE BRACE) IS 24" LONG ON MOST CARPORTS **UNLESS TESTING CALLS FOR LONGER KNEE BRACES** (Standard Knee Brace Part # **1SQ-WEB-2400**). In the event that your unit has longer knee braces, please see your structural drawing in your Care Package for details. Measure out approximately 1" to 2" from the end of the Collar Tie and make a mark. This will be the location of the upper Web Bracket for Web Brace 3 (Knee Brace). Attach the upper Web Bracket with 3 self-drilling screws. Now, fasten Web Brace 3 (Knee Brace) to the upper Web Bracket with a hex bolt, lock washer and hex nut. (Do Not tighten at this time.) Loosely attach a Web Bracket to the lower end of Web Brace 3 and place it against the side post. Re-check the carport dimension across the bottom of the frame before attaching lower bracket to side post. Now, attach the face to the side post with a screw, remove the hex nut, let the bolt drop down and install the two screws in the side of the Web Bracket. Now, reinstall the bolt, lock washer and nut. Repeat assembly for remaining Web Brace 3 (Knee Brace) on the other side of the frame.

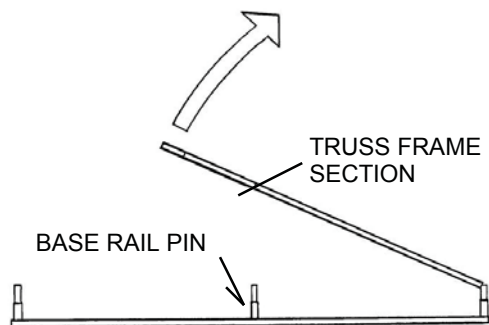
WHEN ALL BRACES ARE IN PLACE, TIGHTEN ALL HARDWARE. The nut size is 9/16". You may also need to hold the bolt head with pliers.



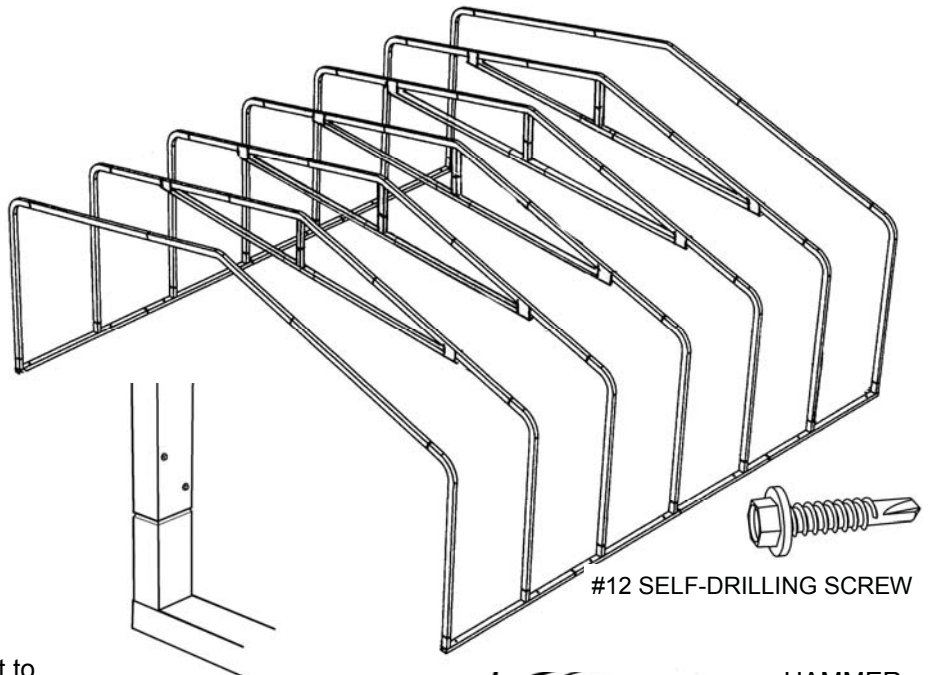
INSTALLING ROOF/WALL FRAMES SECTIONS TO BASE RAILS

NOTE: This assembly will require at least two people. Larger frames may require more. When raising a larger frame, the third person can walk the center of the frame up a ladder placed inside the carport. Start at one end of the building and place a Roof/Wall frame assembly (**one with no truss brace**) on the first base rail vertical pins. Fasten joints with two screws each. Keep the screw heads away from the outside of the building where sheet metal may be installed. Check the bottom ends of the side posts or height extensions for dimples that might interfere with assembly to base rail pins. Dimples must be removed. (See page 2.) Repeat this assembly until all Roof/Wall frame assemblies are installed. (Remember, NO Truss Braces at the ends of the Carport, unless your carport is 30'+ wide, then every frame system will have truss brace assemblies).

Place bottom of side posts on base rail pins at an angle.
Raise frame section and drop it onto pins at the same time on both sides of the carport.
Tap lightly on the side post with a hammer if parts do not drop into place.



SQUARING UP YOUR FRAME

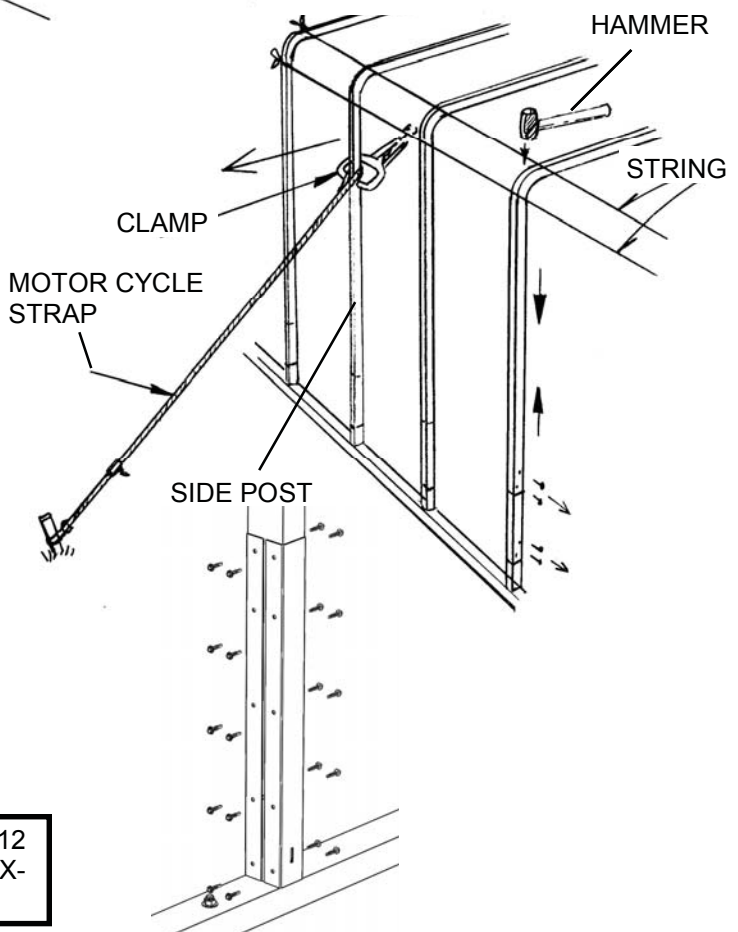


Before you install sheet metal, you may want to check the Roof/Wall assemblies to make sure they are plumb and square and that the side post heights are equal.

To do this, first check the front and back Roof/Wall sections to make sure that they are plumb side to side. Check the outside of the side post. If adjustments must be made, you can drive a wooden or metal stake into the ground about 8' from the building and use a Motor Cycle strap or Ratchet strap to pull the side post into plumb. Place a clamp on the side post as shown and attach the strap above the clamp.

When the front and back sections are plumb (side to side), tie two strings from the front side post to the back side post at the bottom and top of the bend radius as shown. These strings will let you see which sections are high, low or out of plumb. If the side posts are high or low, remove the joint screws and raise the low posts and hammer down the higher posts as much as possible. Reinstall the screws in a new location. Check the height of the side posts on both sides of the building. The straps should remain in place until several runs of roof metal have been installed.

Note: This is not a critical step, but it may improve the appearance of your building. If side posts are out of plane with the other side posts more than 1/4", it may be visible



IF PROVIDED, Install the BK-BPR-24 at this time with (10) #12 framing screws. There will be (2) BK-BPR-24 per side post EXCLUDING the front and back side posts.

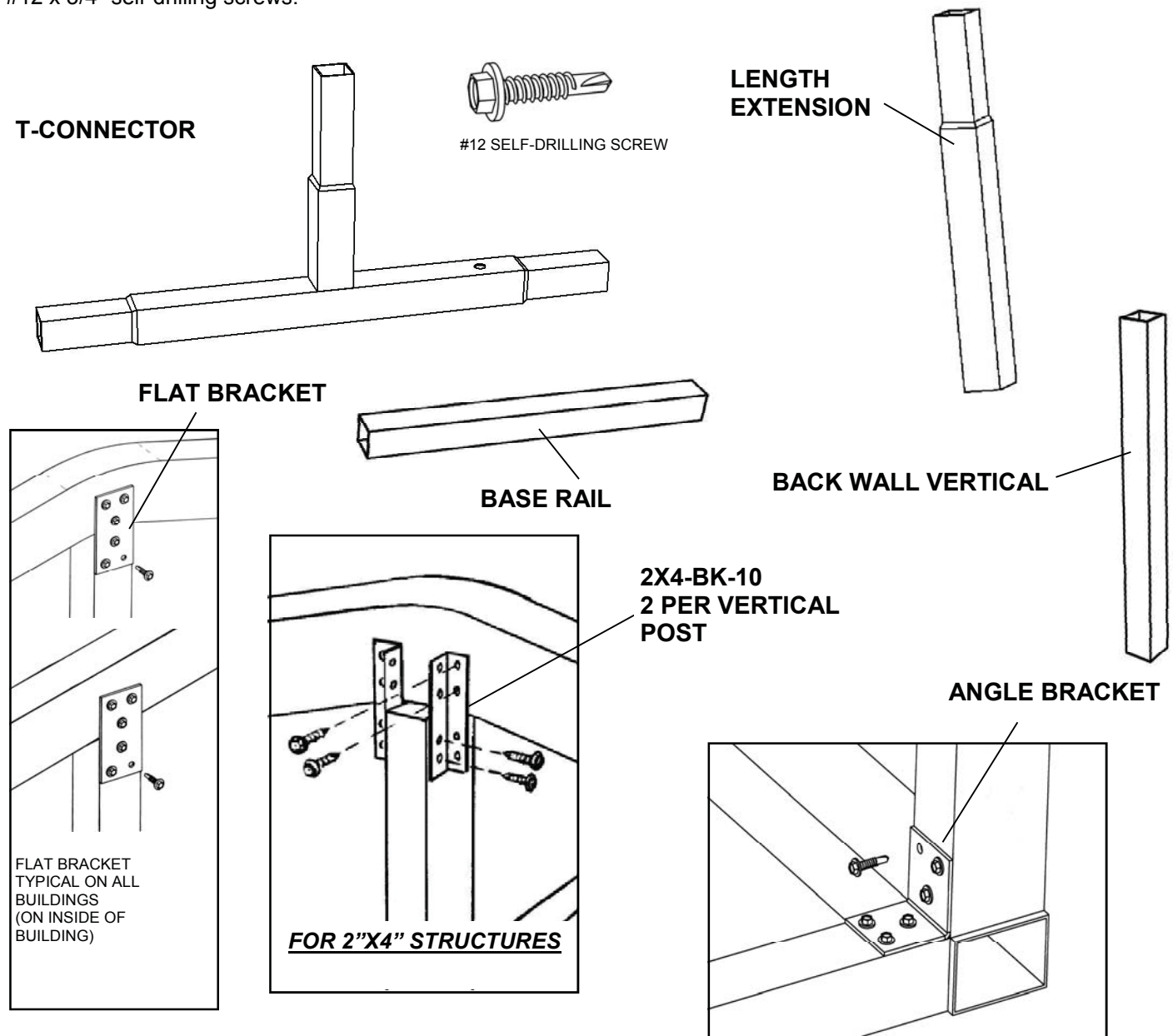
BACK ENCLOSURE INSTALLATION (ON ENCLOSED STRUCTURES ONLY)

The following instructions are for typical back enclosures, you may have a special back enclosure. Please see your Care Package for your Back enclosure Drawing for all structural components need for assembly.

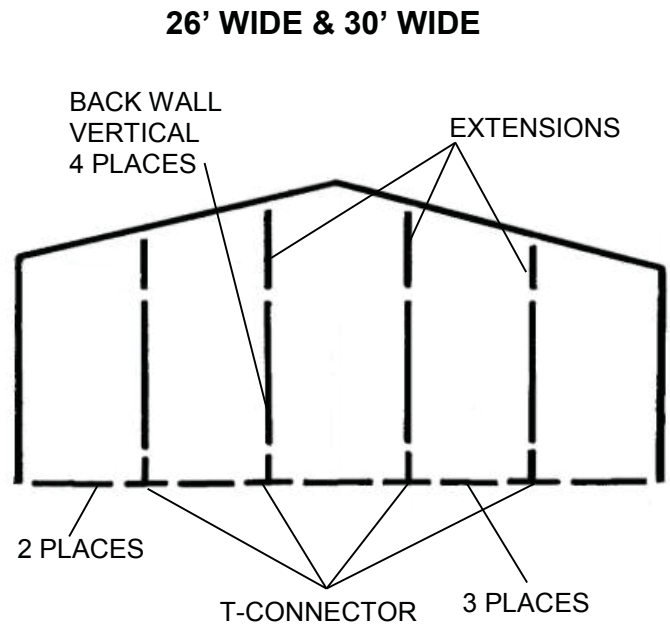
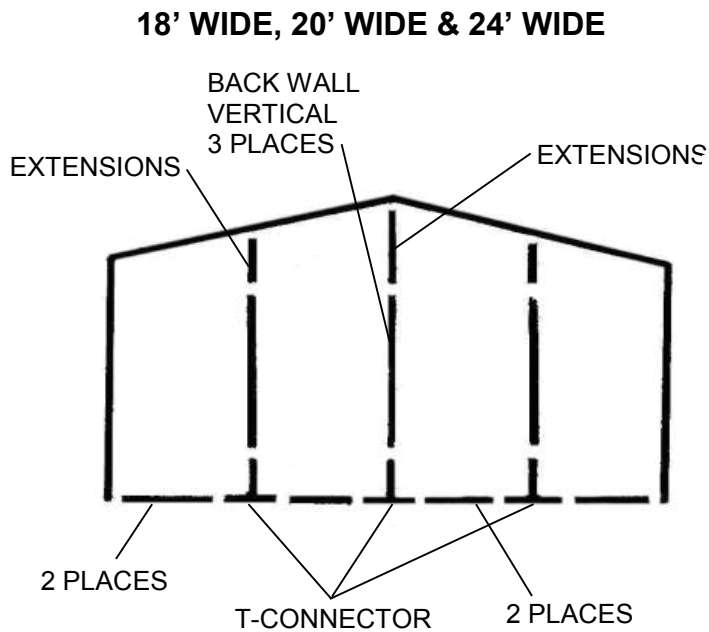
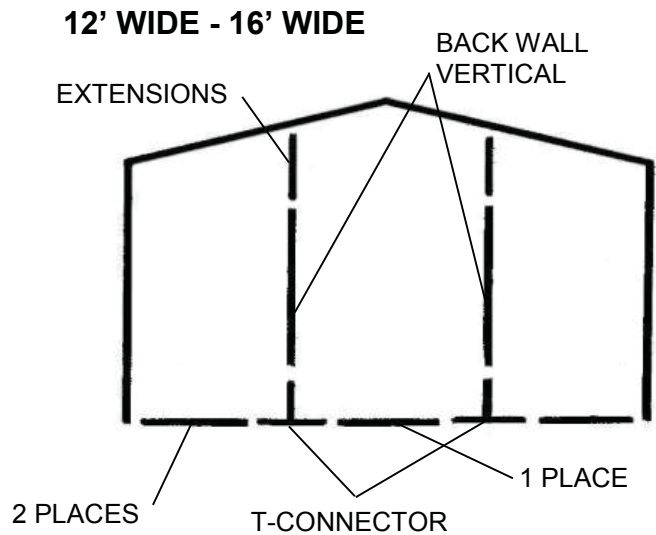
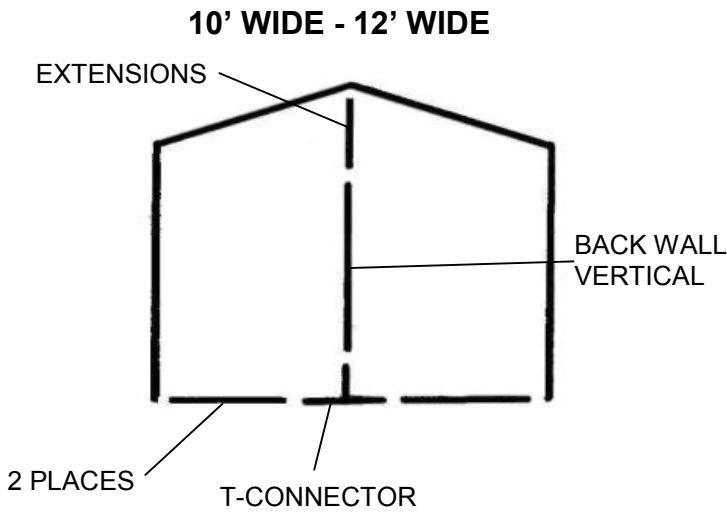
The illustrations below show the basic components of the back enclosures. On the following pages you will find the layout for various sized frames. The base rails are created with T-Connectors and straight cut pieces of 2" square tube. The end tubes are attached to the vertical pins on the side base rails with angle brackets. Typically on top of the T-connectors are back wall verticals. These verticals are 81 3/4" long with a swage at one end. On top of the back wall verticals are length extensions. The length extensions are cut pieces of 2" square tube.

To get started with the installation of the back base rails, snap a chalk line on the slab or on the ground 1/4" in from the back of the base rail ends or even with the vertical side posts. The base rail will be lined up with the back of the end side post. Line the T-Connectors up along the chalk line and insert all of the straight cut tubes. The spaces between the T-connectors and the side post should be equal. Attach the end base rails to the side base rail pins with angle brackets and self-drilling screws. Now fasten all of the base rail joints with two screws each on top of the base rails. Anchor the T-Connectors as you did the side base rails.

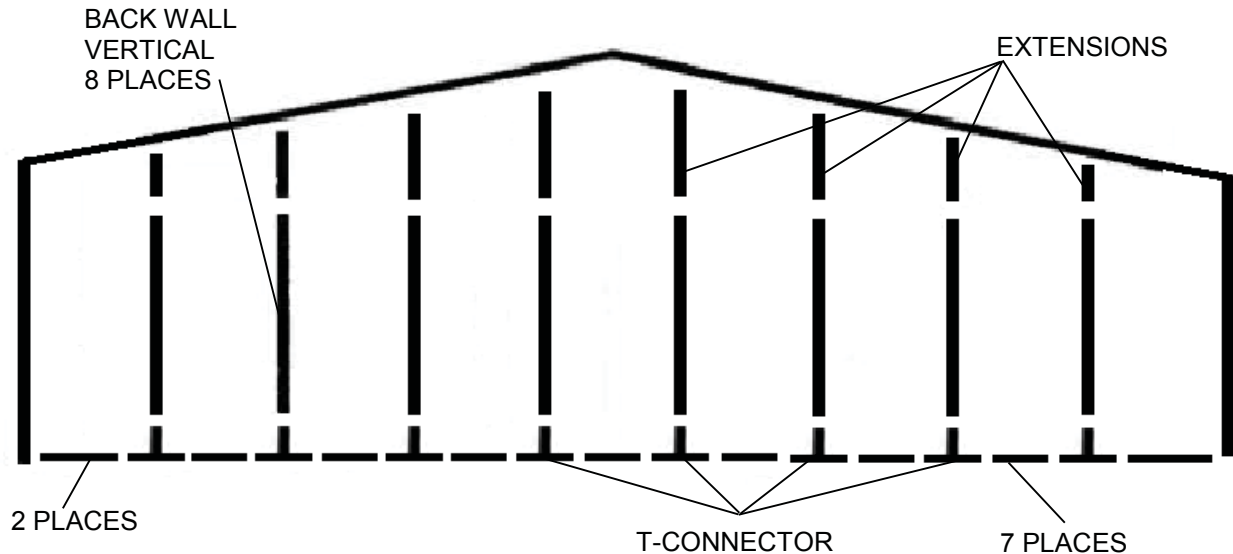
Attach the length extensions to the back verticals with two self drilling screws. (hint: lay the back vertical with the length extension attached down on a flat surface and use a straight edge to make sure they are straight. Now attach the parts with two self-drilling screws). Attach a flat bracket to the end of the height extension. Let the bracket hang 2" over the end. Place the post assembly on the T-Connector with the flat bracket on the inside of the building. Raise it up until the extension touches the under side of the frame, make sure the post is plumb and attach the flat bracket to the frame with three #12 x 3/4" self-drilling screws.



LAYOUT OF BACK WALL FRAMING MAY VARY DEPENDING ON WIND & SNOW LOAD CONDITIONS

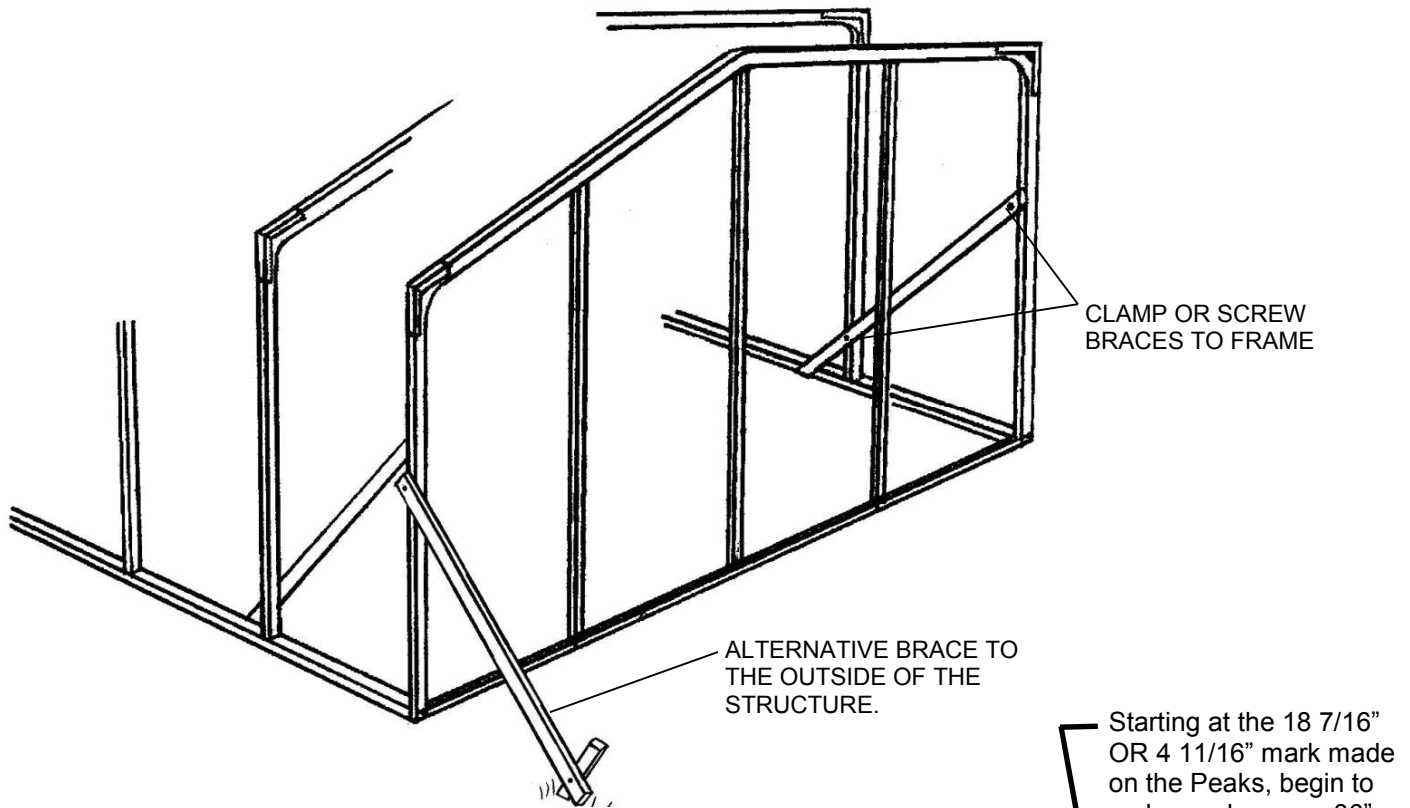


EXAMPLE OF LARGER BACK ENCLOSURE



BACK ENCLOSURE SHEET METAL INSTALLATION

NOTE: If you are enclosing the end walls, the end wall sheet metal should be installed before the roof and side wall metal. This will allow you to mark and cut the upper panels to contour the building gable end frame. Before you get started with the sheet metal you need to brace the back frame with diagonal braces from about two thirds of the way up the side wall to the base rail about at the next frame section. You can use wood and clamps to create the braces. The wood can also be screwed to the frame if you pre-drill 1/4" holes at both ends of the wood braces and use #12 x 3" self-drilling screws to attach the braces to the frame side post and base rail on the inside of the building.



MARKING THE BACK FRAME TO LOCATE BACK SHEET METAL PANELS

The ribs on the end wall sheet metal should line up with the ribs on the side wall sheet metal.

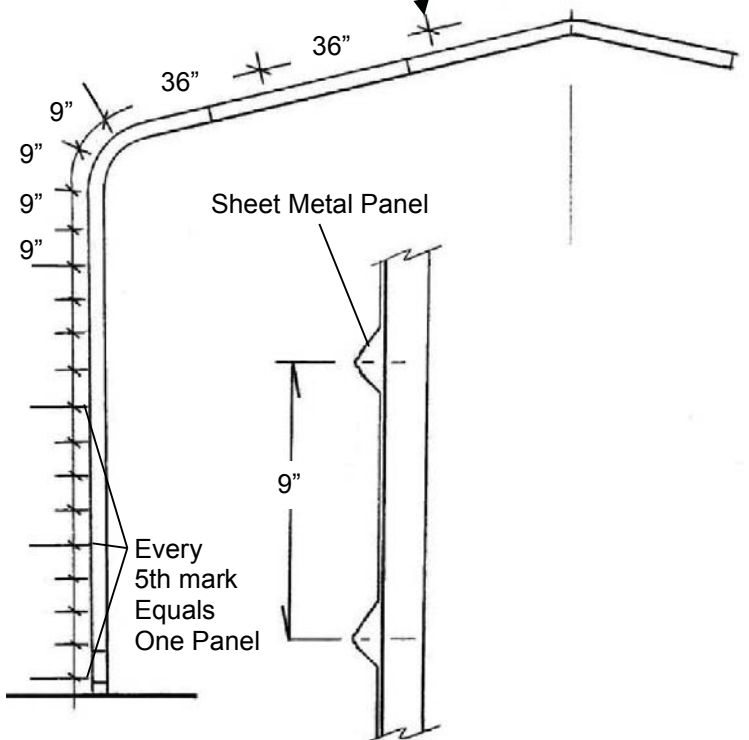
To make this happen without the roof OR side metal installed you must measure and mark the frame on one side to line up the back wall sheet metal ribs.

To do this, start at the 18 7/16" OR 4 11/16" mark on the peak and measure down from your mark in 36" (3') increments until you get to, or close to, the eave of the building.

Then start marking the side post in 9" increments until you get to the bottom of the side post. **Please note that every fifth mark begins a new panel.**

These marks will represent the center of the ribs on the sheet metal panels that will be installed on the roof and side walls and will assist in panel location and installation of the back wall panels.

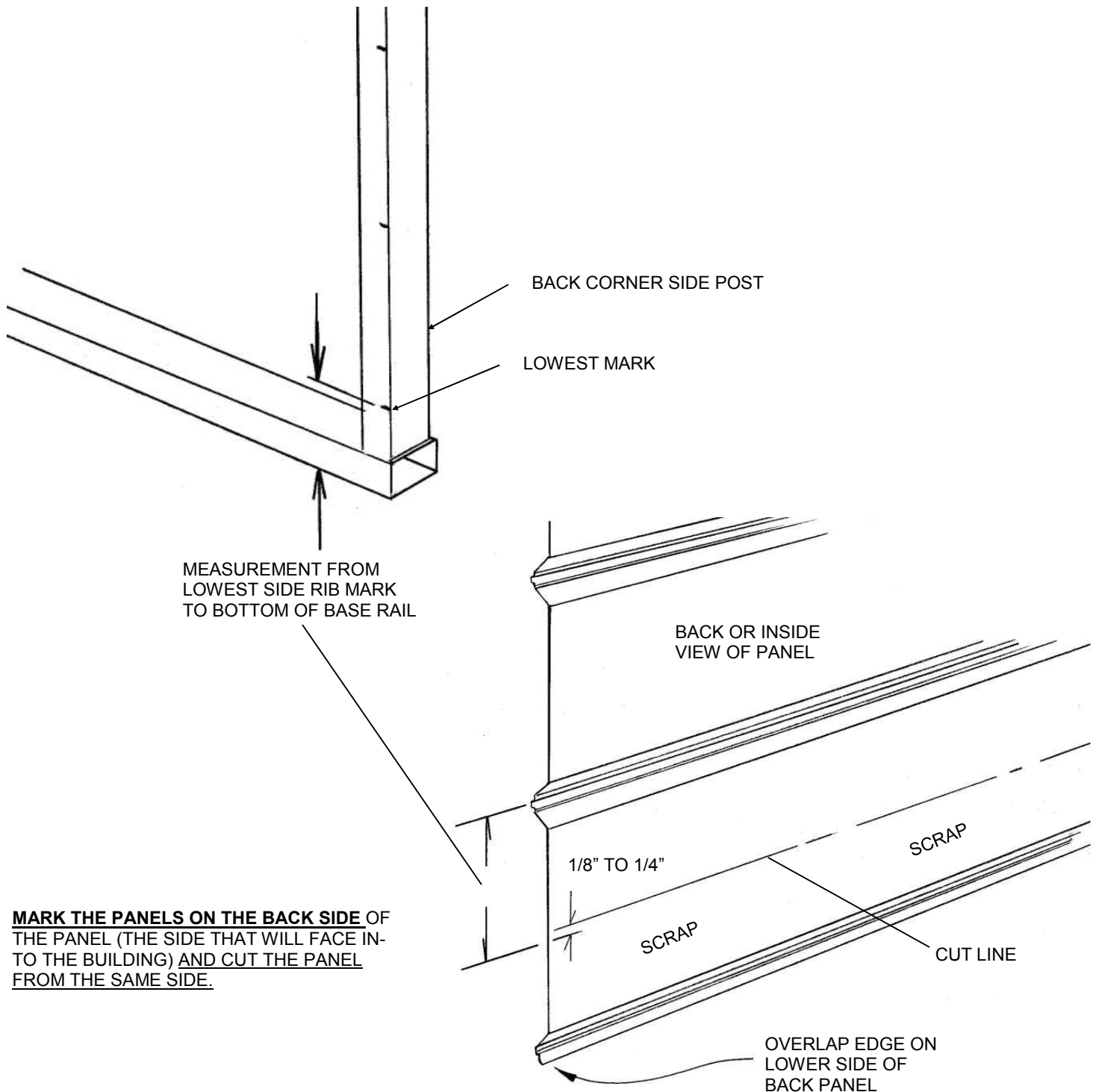
The lowest mark on the side post represents a rib on your bottom panel, and you will need to line up the marks with your panel ribs, noting where the top of that panel begins with the 5th marks. In most cases you will have to trim off a portion of the lower panels to set a rib at this location. See the following pages for basic panel layouts.



INSTALLING THE BACK WALL PANELS

If you have run a tape measure down your carport frame and marked the frame to locate where the major ribs will be on the side wall panels, you are ready to install the first back panel at the bottom of the back wall.

On some carports you will not have to cut the bottom panel. On most carports you will have to cut the bottom panel in order to line up the back panel ribs with the side panel ribs. Measure from the lowest rib mark on your frame down to the bottom of the base rail. Now, on the back side of the sheet metal panel measure the same distance from the second to the bottom rib on your sheet metal panel (from the overlap rib edge) and make a mark. Now raise the mark up about 1/8" to 1/4". This will set the bottom cut edge of the panel 1/8" to 1/4" above the slab or ground. Draw a line the length of the panel and cut the panel with a circular saw with a metal cutting blade.



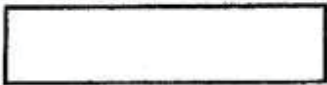
BACK WALL PANEL INSTALLATION CONTINUED

The following chart shows some typical sizes and layouts of the back wall panels on various frame widths.

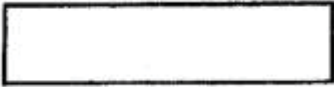
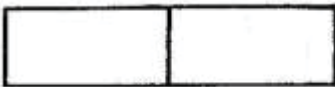
PLEASE SEE YOUR CARE PACKAGE FOR YOUR SPECIFIC PANEL LENGTHS FOR YOUR BACK ENCLOSURE.

The various layouts show the panels used in one run of sheet metal panels. All of the panels courses will be the same. The taller the building, the more courses of panels will be needed.

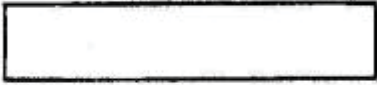
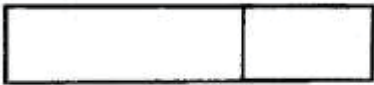
FOR 10' WIDE BUILDINGS USE (1) 10' PANEL



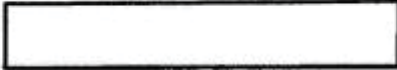
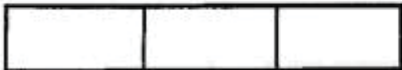
FOR 12' WIDE BUILDINGS USE (2) 6'-2" PANELS OR (1) 12' PANEL



FOR 14' WIDE BUILDINGS USE (1) 9'-5" PANEL AND (1) 4'-10" PANEL OR (1) 14' PANEL



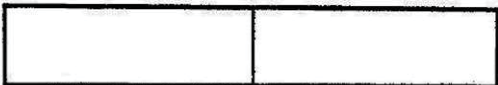
FOR 16' WIDE BUILDINGS USE (3) 5'-6" PANELS OR (1) 16' PANEL



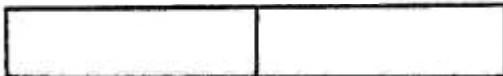
FOR 18' WIDE BUILDINGS USE (2) 9'-2" PANELS



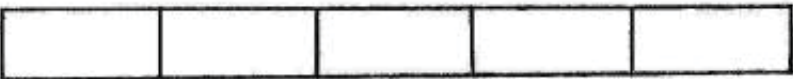
FOR 20' WIDE BUILDINGS USE (2) 10'-2" PANELS



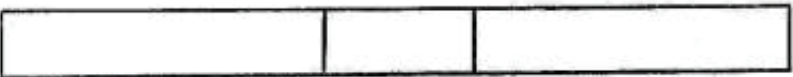
FOR 24' WIDE BUILDINGS USE (4) 6'-2" PANELS OR (2) 12'-1" PANEL



FOR 26' WIDE BUILDINGS USE (2) 10'-6" and (1) 5'-4" PANEL



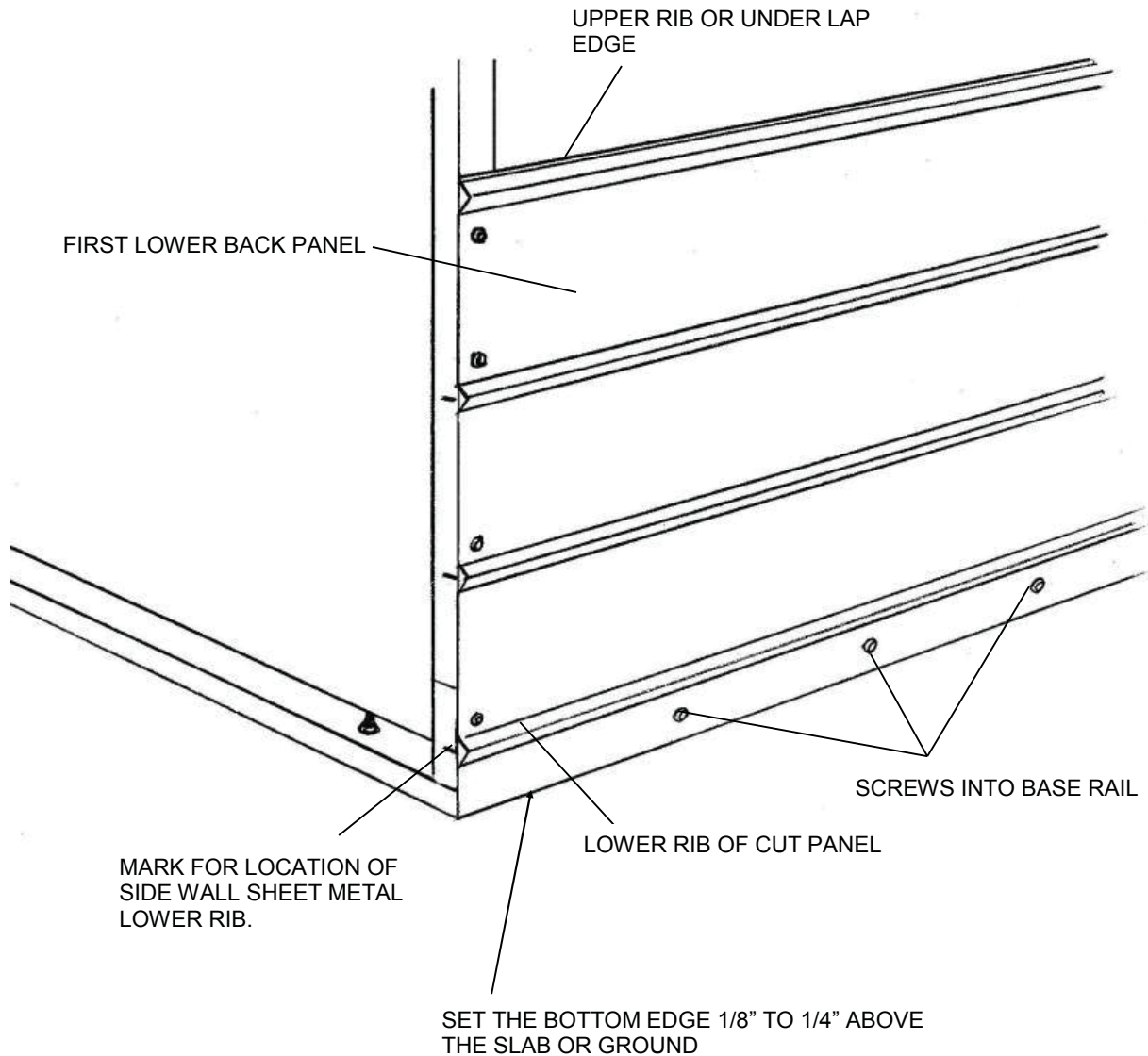
FOR 30' WIDE BUILDINGS USE (5) 6'-3" PANELS
OR
(2) 12'-2" PANELS AND (1) 6'-2" PANEL



BACK WALL PANEL INSTALLATION CONTINUED

After you have cut all of the panels necessary to complete the bottom course or run of panels locate the first panel with the lower rib lined up with your mark for the location of the lowest side wall panel rib. Make sure that the panel is level and attach the panel to the side post and vertical back posts with the painted self-drilling screws. At vertical posts where panel ends will overlap leave the screws out until the overlapping panel is in place. If you have a wide section of flat metal below the lower rib you may want to install screws into the base rail to attach the lower portion of the panel. Keep all of the panels level.

Continue installing the courses of sheet metal panels until you get to the building eave or bend in the side post. Here you have two options: (1) locate the next course of panels and mark them on from the inside of the building to match the gable end contour. Take the panel down and cut the contour along your line. Replace the panel and screw it to the frame side post, rafter and back vertical. (2) You install the upper course of panels with screws and come back and using the frame as a guide cut the panels off with a reciprocating saw and a metal cutting blade.



ROOF AND SIDE PANELS FOR A 3 SIDED SHELTER:

IF YOU WILL BE ENCLOSING THE SIDES AND BACK ONLY, REFER TO YOUR CARPORT ASSEMBLY INSTRUCTIONS FOR INSTALLATION OF THE ROOF SHEET METAL. SEE PAGES 27 AND 28 OF THESE INSTRUCTIONS FOR INSTALLATION OF SHEET METAL DOWN THE SIDE WALLS. **NOTE:** THE BACK CORNERS OF THE 3 SIDES SHELTER WILL BE TRIMMED OUT WITH 3" X 3" ANGLE TRIM SHOWN LATER AND THE FRONT CORNERS WILL BE TRIMMED WITH J-TRIM AS SHOWN ON PAGES 27 AND 28.

INSTALLING SHEET METAL ON YOUR CARPORT OR 3 SIDED SHELTER:

The sheet metal will be installed with the ribs running in a horizontal direction. If you have a 3 sided shelter you will install the sheet metal panels on the back of the shelter before you install the roof and side panels. This will allow you to mark and cut the panels to contour the frame or to install the panels and cut them in place with a reciprocating saw.

If you purchased a carport only, you may proceed to installation of roof panels.

INSTALLING THE BACK WALL PANELS ON A 3 SIDED SHELTER:

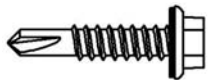
The length of panels used on the back of the shelter are noted on the Sheet Metal Take off in your Care Package, labeled Gable Wall.

See the illustration below for an EXAMPLE of the layout of the panels on the back of the shelter. Panel 1 and 2 will have to be trimmed at the bottom. In this EXAMPLE 2 5/8" will need to be trimmed off the overlap edge of the panels. This will allow the major ribs on the back panels to line up with the major ribs on the side panels when they are installed. Each panel has an under lap edge and an overlap edge. The under lap edge has a small flange on the edge. See Illustration at bottom of page. Trim off the overlap edge.

Place the cut edge of Panel 1 at the bottom to the left. Panels 1 and 2 will overlap 2" in the center of the building.

Make sure that the panel is level and install #12 x 1" painted, self-drilling screws **above each major rib**. Do not install screws into the back center post at this time. Now, Position panel 2 with the cut edge down. Panel 2 will overlap panel 1 at the center of the shelter about 2". Make sure that Panel 2 is level and install screws as you did in Panel 1. Screws can now be installed in the center lap joint. (**Do not over tighten the screws. See guide below**)

Now, install panels 3 through 7. Keep the overlap edge at the bottom of the panels. When you get to panels 5,6 and 7 you can put the panels in place, mark them on the back and remove them for cutting with your tin snips or screw the panels to the frame and cut the panels to contour the frame with a reciprocating saw with a fine metal blade using the frame as a guide.



#12 X 1" PAINTED,
SELF-DRILLING SCREW

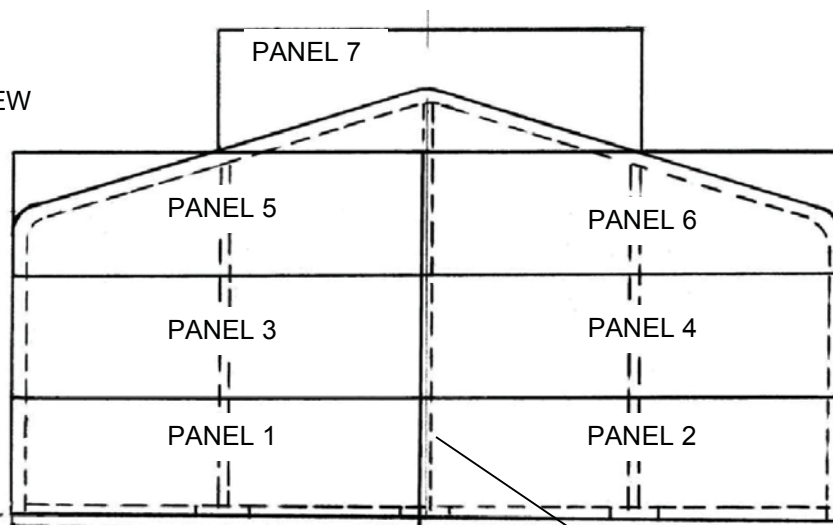


NO YES NO

PANELS
LENGTHS LISTED
IN SHEET METAL
TAKE OFF
LABELED "GABLE
END"

NUMBER OF RUNS
DETERMINED BY
THE SIDE WALL
HEIGHT.
**THIS
ILLUSTRATION
DEPICTS A 7' TALL
SIDE WALL.**

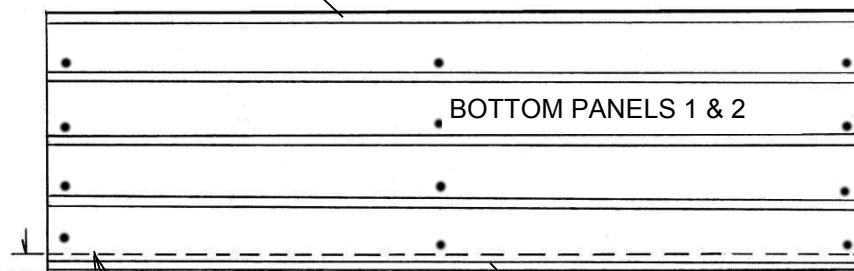
2 5/8" IS ONE
EXAMPLE OF
HOW MUCH
WILL BE
TRIMMED OFF



MARKED HEIGHT

UNDER LAP EDGE

LAP PANEL (2) 2" OVER PANEL (1)



OVERLAP EDGE

CUT LINE TRIM OFF THE BOTTOM OF PANEL

The Roof layout directly effects the placement of panels on the sides & back wall. The Cut length will vary depending on these factors. Please see Page 15 to determine Cut Line.

INSTALLING HORIZONTAL SHEET METAL ON THE CARPORT FRAME:

Different lengths, styles, and gauges of sheet metal panels can be installed on the VersaTube frame. With the use of optional roof purlins, you can also install vertical sheet metal panels. For the purpose of these assembly instructions, we will be using sheet metal panels run horizontally.

*Note: Adding additional side panels will effect the wind load applied to your structure. If you intend to add additional panels, you may require additional bracing or closer On Center spacing of the frame sections.

Carport frame sections will be on 4', 5' or 6' On Center spacing. Check to see which frame spacing you have. The length of the roof panels will be different for each frame spacing.
***Please see the Sheet Metal Take off in your Care Package for your specific sheet metal panel lengths.* The "Roof" panels are called out on your Sheet Metal Take off.**

STEP 1: Before Installing Panel One

On the bottom end of the panel, put a light pencil mark to indicate the 12" overhang. This line will help you keep the overhang square with the end of the frame.

****THE FIRST PANEL SHOULD BE INSTALLED ON THE LOW END OF THE CARPORT FOR PROPER DRAINAGE.****

Before you assembled the Roof/Wall sections, you should have put a mark on one side of each peak as a guide for the under lap edge of the first run of panels down the peak of the carport. If you did not, refer to Page 8 for the proper mark location for your building width.

STEP 2: Determining if you will install Panel One centered on the peak using the 17 1/8" mark or will you offset Panel One to one side of the peak following the 3 5/8" mark.

Please read the Width Sizes listed at the top of the next several pages before beginning, to determine where the first panel will be installed!

****We have grouped the pages together for specific Width Sizes to help prevent any confusion.****

Follow illustration below for installing the first panel on 11, 12', 13', 17', 18', 19', 23', 24', 25', 29', 30', 31', 34', 35', 36', 40', 41', 42', 46', 47', 51', 52', 53', 57', 58', or 59' wide carports.

See Page 24 if your carport width is NOT listed.

STEP 3:

Place the first panel on the roof with the under lap edge of the panel lined up with the marks on the peaks and the end of the panel overhanging the end of the building 12". If you did not mark the peaks, mark them now.
See Page 8 for a guide.

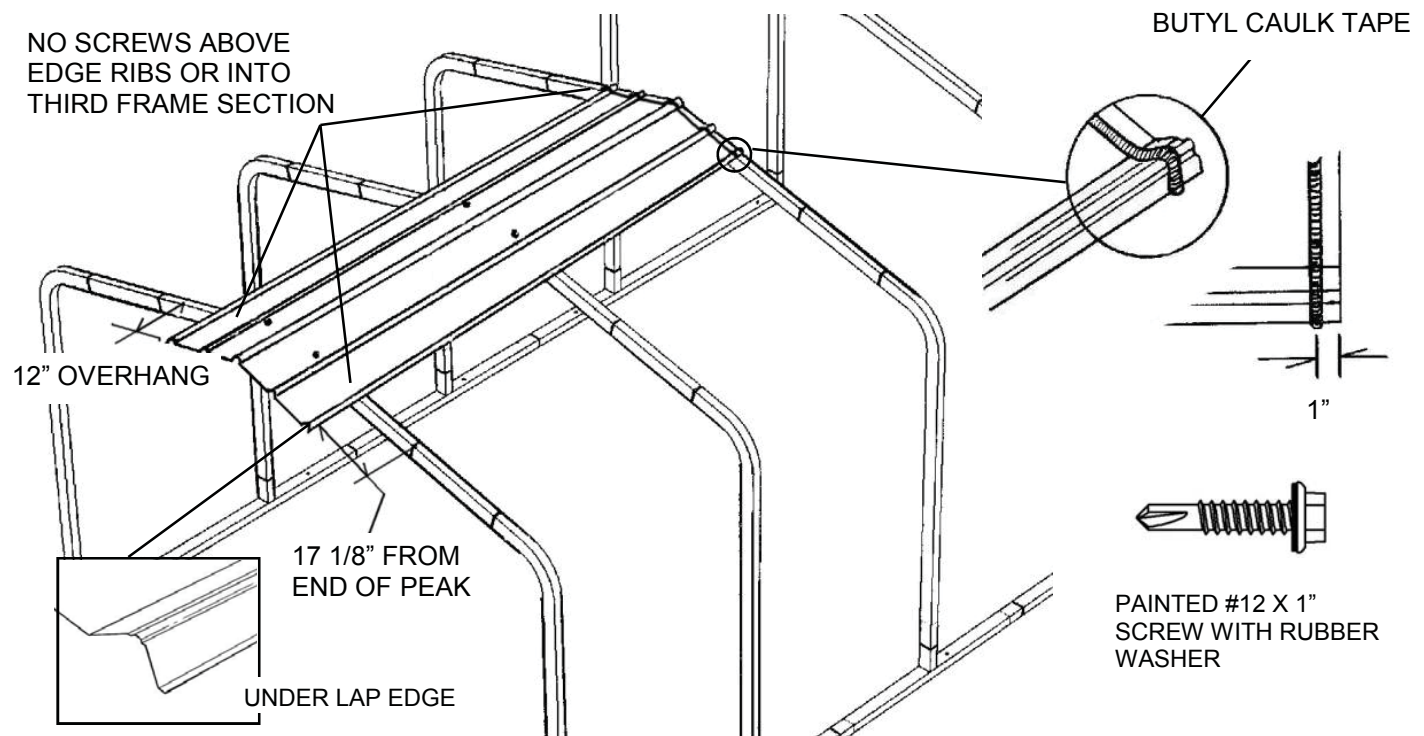
You may want to clamp the panel in place while installing the screws. With the panel lined up with all your marks, attach the panel to the first frame section with painted #12 x 1" self-drilling screws with rubber washers about 1" above the major ribs.

Do not install screws above the edge ribs at this time. You will be sliding the lower panels under the edges of the panels above.

Before you install screws in the second frame section, check to see that it is square with the first section. Take a measurement between the frame sections at the base rail and transfer that dimension up to the peaks. Now, install screws in the second frame section. The other end of the panel should line up with the back of the third frame section. Do not install screws into the third frame section at this time.

Run a strip of Butyl Caulk Tape across the back end of the panel 1" from the end. Let a little bit hang over the edges.

Install all panels down the peak of the carport before moving on to the second lower course of panels.



In order to seal panels properly and prevent leaking, each course of panels running from front to back on your carport must be completely sealed with butyl caulk tape or clear butyl caulk from a caulk gun. The ideal assembly would have full length roof panels. For purposes of shipping and handling, this is not possible. Several lengths of panels are provided and these lengths must be sealed together to extend the length of your carport. You may have a carport that is longer or has more than two panels down the length of the carport. Each additional panel must be sealed to the previous panel, as you will seal panel two to panel one.

See page 22 for Panel 2 installation.

INSTALLING PANEL TWO on 11, 12', 13', 17', 18', 19', 23', 24', 25', 29', 30', 31', 34', 35', 36', 40', 41', 42', 46', 47', 51', 52', 53', 57', 58', or 59' wide carports.

See Page 24 if your carport width is NOT listed.

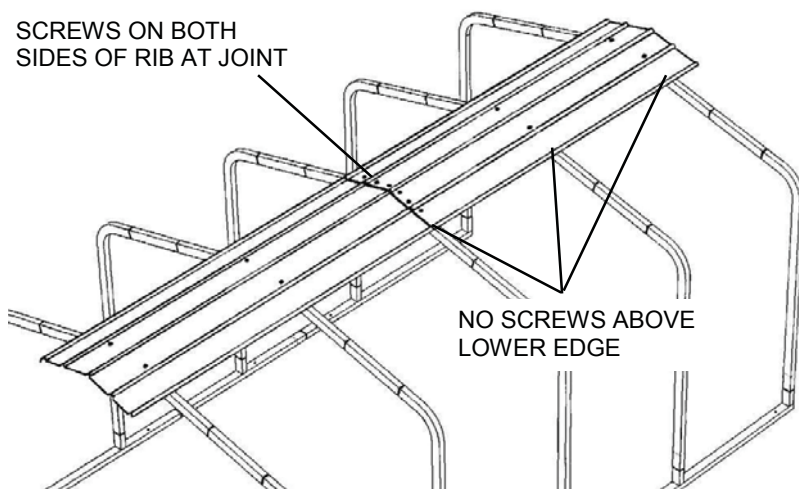
STEP 4:

If you have not removed the protective paper on the butyl tape that you applied to panel 1, do that at this time.

Now, position panel two as shown below with a 2" overlap on panel one. Press the panels together well to create a good seal with the butyl caulk. The lower (under lap) edge of the panel should line up with the marks on the peaks. Before you install screws, make sure that the third frame section is the same distance from the second frame section at the base rail and at the peak. Attach the panel with screws on both sides of the major ribs at the lap joint and above the major ribs at other locations. Do Not install screws above the Lower Edge rib (see illustration) or at the end of panels that continue on down the roof of longer carport buildings.

ADDITIONAL PANELS DOWN CARPORT LENGTH: Install additional panels down the length of the carport as needed in the same manner as you installed panel two.

SCREWS ON BOTH
SIDES OF RIB AT JOINT



NO SCREWS ABOVE
LOWER EDGE

Install all panels down the peak of the carport before moving on to the second lower course of panels.

STEP 5:

The second course of panels will be installed starting at the **opposite** end of the carport.

Slide the under lap edge of the first panel of the second course under the lower edge of the last panel in the first course.

See illustration at the bottom of this page.

Note: On one side of the roof, you will be inserting a under lap edge under an under lap edge. This is fine and it only occurs once. In the rest of the installation, the under lap rib will go under an overlap rib. Install the screws at the end of the carport to hold the panel in place. (No screws above the lower edge at this time.)

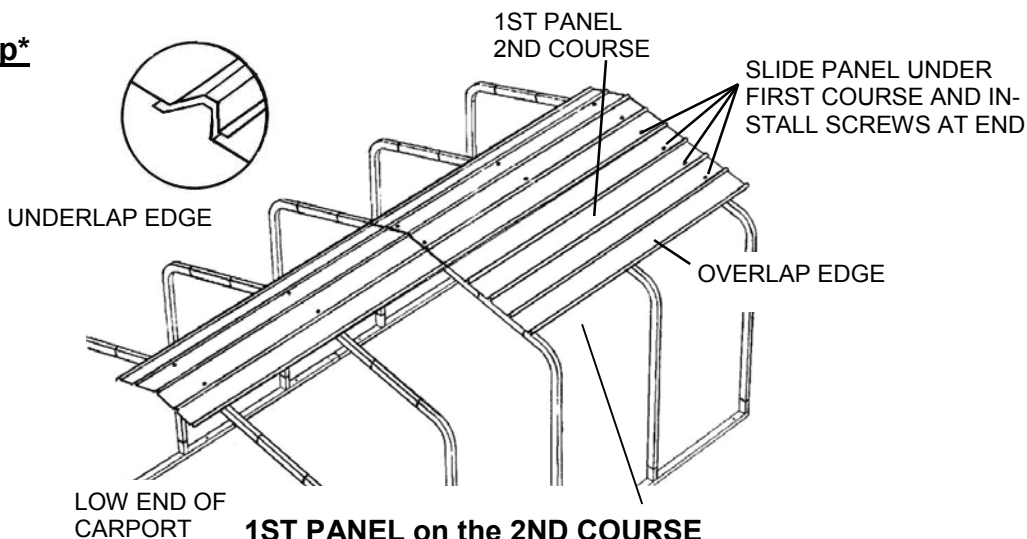
Select the next panel to be installed and run a bead of butyl caulk tape on one end 1" from the end. The panel should be positioned with the under lap edge on the upper side of the panel. Remove the protective paper from the butyl caulk.

Now, lift the end of the panel you just installed and the edge of the first course of panels above and insert the next panel 2" under the previous panel. Check your dimensions and press the panel overlap tightly together. Install screws in the overlap joint and all screws in the previous panel and the panels above that will not have to be lifted to insert additional panels.

Note: To reach all of the screw locations, you will have to get up high on your ladder and lean on the roof with your hand or knee. When you do this, press only on the flat sections between ribs and make sure that you press only over a frame section.

Continue this installation method until the roof is sheeted on one side. Start all panels courses from the end of the carport that you started the second course of panels. The last panel on the side will contour down around the frame and become a short side panel, approximately 11 inches coming down on the side.

See Page 21 for Next Step



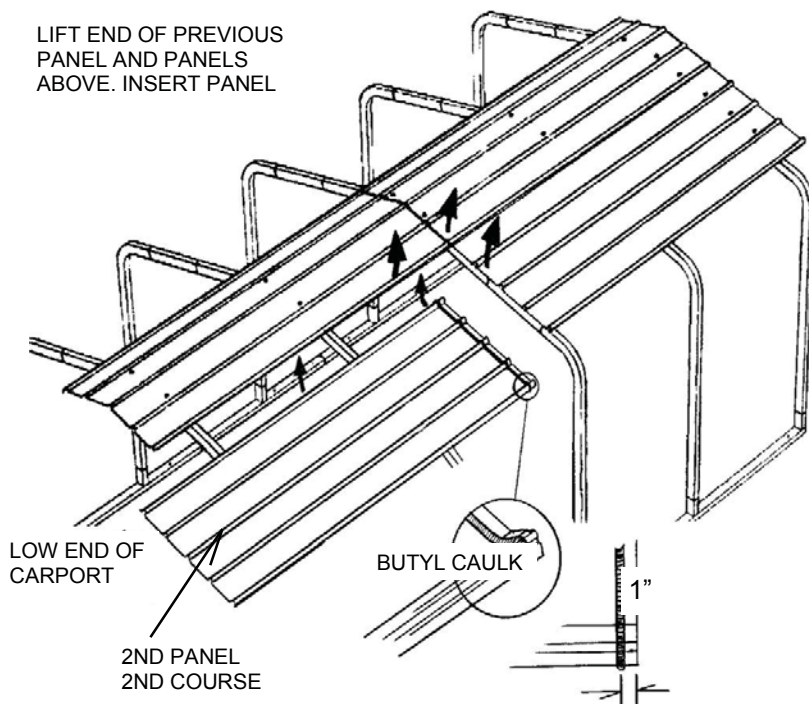
INSTALLING THE 2ND PANEL, 2ND COURSE AND ADDITIONAL PANELS 2ND COURSE

11, 12', 13', 17', 18', 19', 23', 24', 25', 29', 30', 31', 34', 35', 36', 40', 41', 42', 46', 47', 51', 52', 53', 57', 58', or 59' wide carports.

See the Sheet Metal Take off in your Care Package for panel sizes required for the on center frame spacing of your carport.

The additional panel/panels in the second course must be positioned with the under lap edge to the upper side of the panel. The upper under lap edge of the panel will lap under the panel above and the end of the panel will lap under the panel you just installed. Run a bead of butyl caulk on the end to be lapped under the previous panel 1" from the end and remove the protective paper. Now, lift the panels above and the previous panel in the course you are installing and slide the upper edge of the panel under the panel above and the end 2" under the previous panel. Press the panels together well at the caulked end to get a good seal. For longer carports, continue installing panels in the same manner to the end of the carport. Both ends of the carport should have the same overhang.

Additional Courses of Sheet metal: Start all additional courses of metal on the carport at the same end as you started the second course (the high end of the carport). Install them in the same manner. Place under lap edges under overlap edges.



INSTALLING ADDITIONAL PANELS:

All additional panels on start on the high end of the carport (same as second course) and be installed in the same manner.

2ND PANEL, 2ND COURSE

Follow illustration below for installing the first panel on 10', 14', 15', 16', 20', 21', 22', 26', 27', 28', 32', 33', 37', 38', 39', 43', 44', 45', 48', 49', 50', 54', 55', 56', or 60' WIDE CARPORT.

STEP 3:

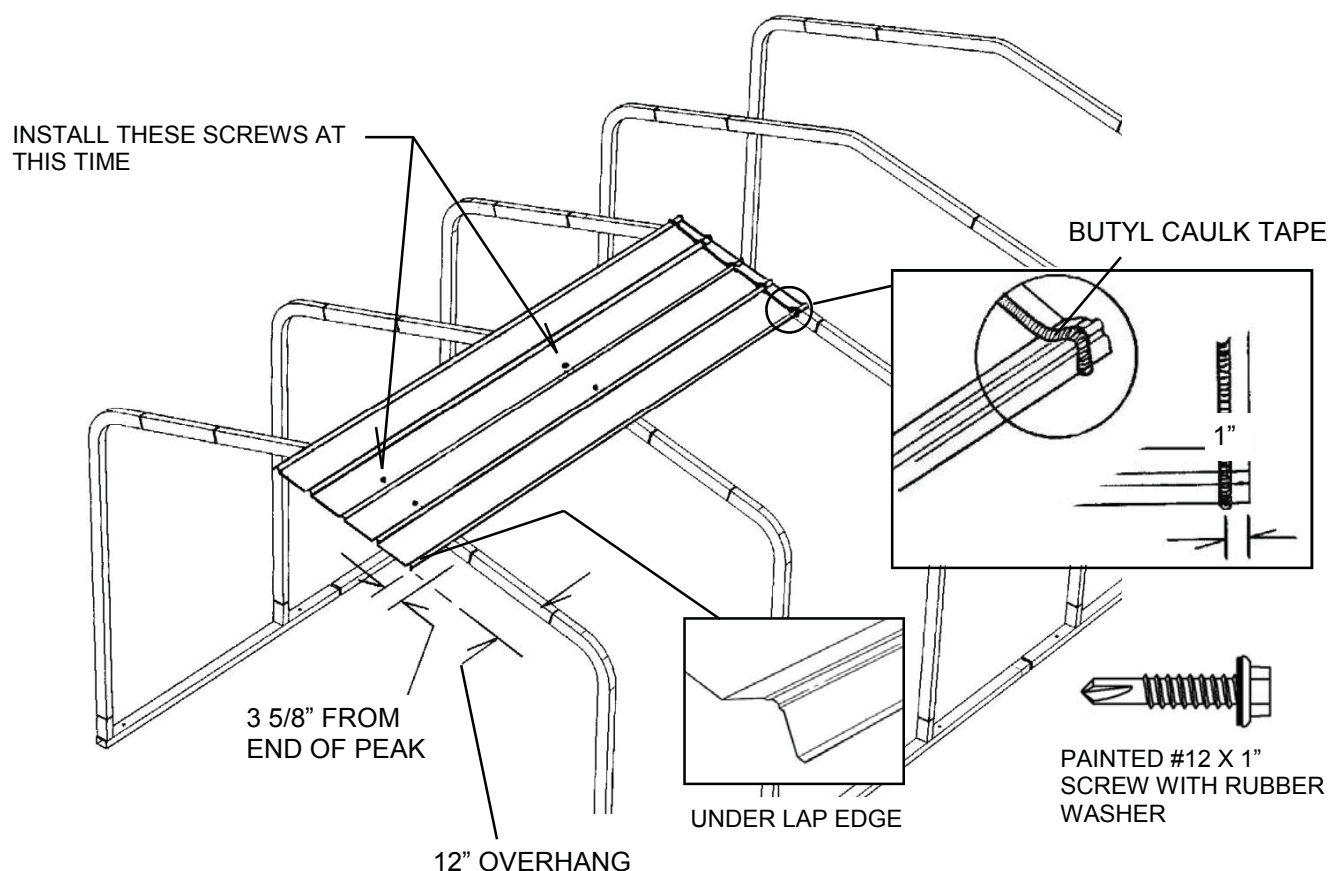
When you install sheet metal panels on any of the above listed width carports, the first course of panels will be positioned to one side of the roof peak and the first panels on the other side of the roof will overlap these panels 10" or to the second major rib. **(See illustration below.)**

You should have marked all of the peaks on the frame sections 3 5/8" from one end.

This mark will be the guide for the under lap edge of the first course of roof panels. If you did not mark the peaks, mark them now. See page 8.

Install the first panel as shown below with the proper 12" overhang. Do not install screws above the lower edge ribs at this time. Do not install screws into the third frame section at this time.

Run a bead of butyl caulk tape at the back end of the panel 1" from the end. Let a little caulk extend slightly over each edge.



In order to seal panels properly and prevent leaking, each course of panels running from front to back on your carport must be completely sealed with butyl caulk tape or clear butyl caulk from a caulk gun. The ideal assembly would have full length roof panels. For purposes of shipping and handling, this is not possible. Several lengths of panels are provided and these lengths must be sealed together to extend the length of your carport.

You may have a carport that is longer or has more than two panels down the length of the carport. Each additional panel must be sealed to the previous panel, as you will seal panel two to panel one.

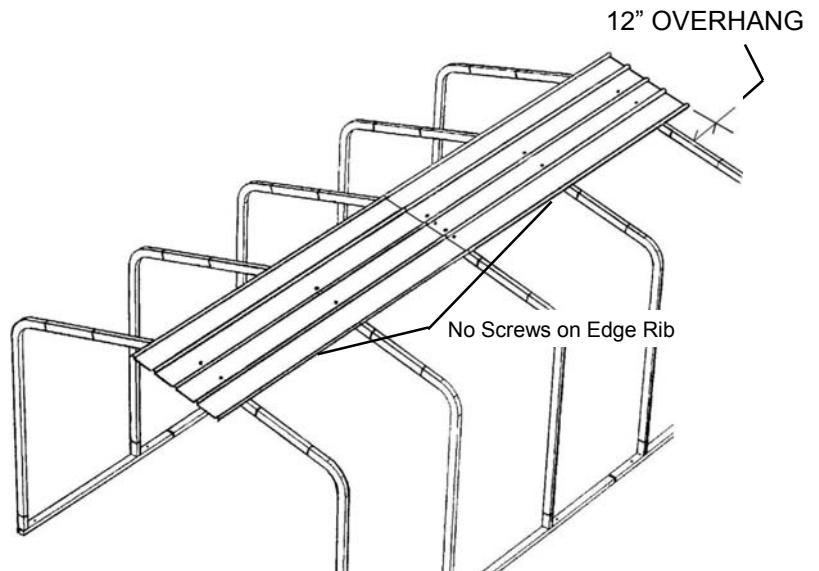
See Page 25 for Panel 2 installation.

INSTALLING PANEL TWO on 10', 14', 15', 16', 20', 21', 22', 26', 27', 28', 32', 33', 37', 38', 39', 43', 44', 45', 48', 49', 50', 54', 55', 56', or 60' WIDE CARPORT.

STEP 4:

If you have not removed the protective paper on the butyl tape that you applied to Panel One, do that at this time.

Now, position Panel Two as shown below with a 2" overlap on panel one. Press the panels together well to create a good seal with the butyl caulk. The lower (under lap) edge of the panel should line up with the marks on the peaks. Before you install screws, make sure that the third frame section is the same distance from the second frame section at the base rail and at the peak. Attach the panel with screws on both sides of the major ribs at the lap joint and above the major ribs at other locations. **Do Not install screws above the Lower Edge rib (see illustration) or at the end of panels that continue on down the roof of longer carport buildings.**



Install additional panels down the length of the carport as needed in the same manner as you installed panel two.
NOTE: On longer carports, you will have additional long center panels.

STEP 5:

Start the second course of panels at the end of the carport next to where you started the first panel (Panel One). Lap the under lap edge of this second course panel over the peak of the roof and onto the second major rib of Panel One of the first course. (See overlap detail below.)

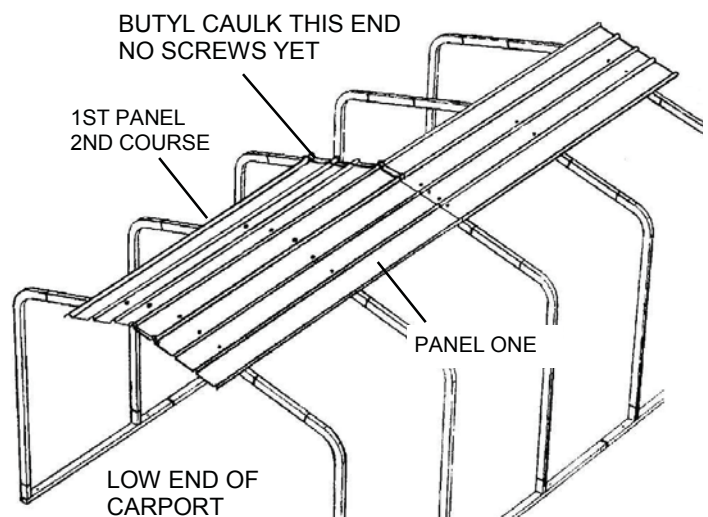
Install several screws above the edge rib from the side of the carport that you installed the first course of roof metal (no screws into the end of the panel at the third frame section). Now, press the panel down at the peak and on the other side of the roof and install screws in locations indicated below. Run a bead of butyl caulk tape on the end of the panel 1" in from the end. Extend the ends of the tape a little over the edges of the panel.

NOTE: The panels that overlap over the peak are the only panels that overlap by (2) ribs. All other laps only overlap by (1) rib. (See overlap detail below.)

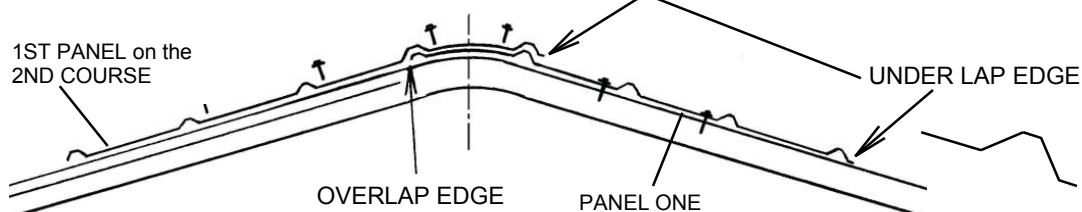
Install all panels down the peak of the carport before moving on to the next course of panels.

See Page 26 for Next Step

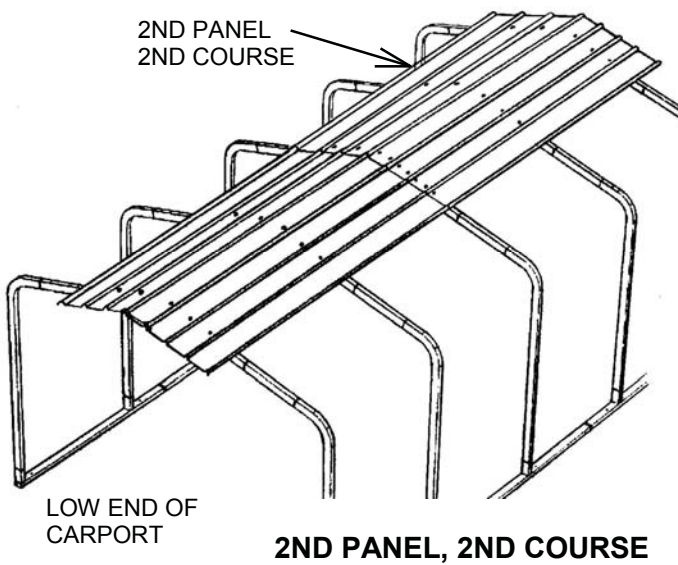
1ST PANEL of the 2ND COURSE on the PEAK



PEAK OVERLAP DETAIL



INSTALLING THE 2ND PANEL, 2ND COURSE AND ADDITIONAL PANELS 2ND COURSE FOR 10', 14', 15', 16', 20', 21', 22', 26', 27', 28', 32', 33', 37', 38', 39', 43', 44', 45', 48', 49', 50', 54', 55', 56', or 60' WIDE CARPORT.



STEP 6:

See the Sheet Metal Take off in the Care Package for panel sizes required for the on-center frame spacing of your carport.

The additional panel/panels in the second course must be positioned like the first panel in the second course with the

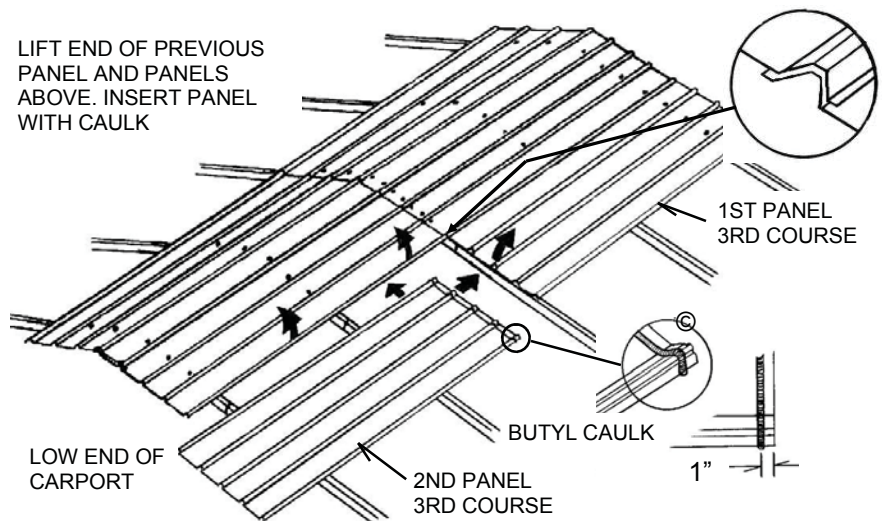
Under lap edge over the peak of the carport and on-to the second rib of the first course (NOTE: Only overlap by 2 ribs over the peak). Remove the protective paper on the butyl caulk and place the end of the second panel 2" over the end of the previous panel.

With the ribs lined up and the panel pressed down to the frame, install the screws as shown below. Install the screws first on the side of the roof that you installed the first course of panels. For longer carports, continue installing panels in the same manner to the end of the carport. Both ends of the carport should have the same overhang.

Additional Courses of Sheet metal:

Start all additional courses of metal on the carport at the same end as you started the second course (the high end of the carport). Install them in the same manner. Place under lap edges under overlap edges.

All additional panels on should start at the high side of the carport (the opposite end that you started the 1st and 2nd course) and be installed like the 3rd course shown at right.



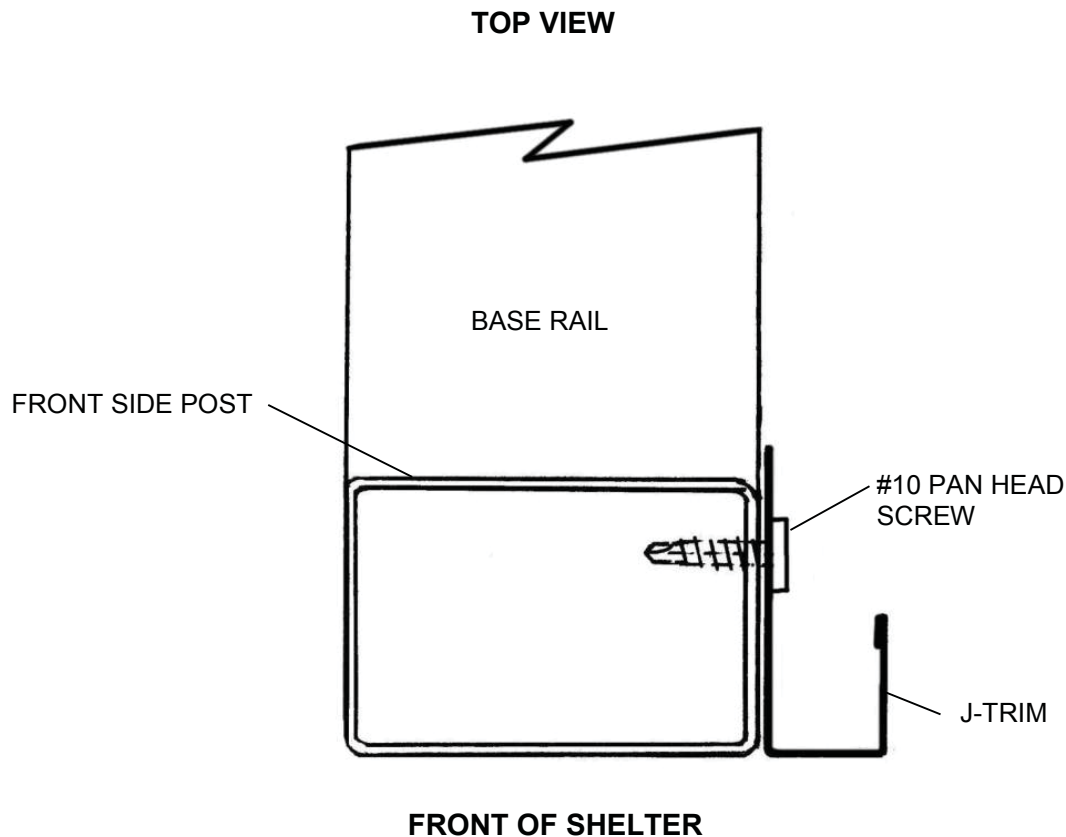
INSTALLING SIDE PANELS AND TRIM

Step 1 Installing J-Trim

Before you install the sheet metal panels on the side of the shelter you must install J-Trim on the side posts at the front of the shelter.

Measure the distance from the bottom of the base rail to the lower edge of the roof panels at front corners of the shelter.

Cut pieces of J-Trim to fit the distance. Now, install the J-Trim at the front two corners of the shelter flush with the front of the side post. (See illustration below). Use (3) #10 x 7/8" pan head, square drive, self-drilling screws to attach the trim to the frame. One at the top and bottom and one in the center. The Corner Trim at the back corners must be installed after the front and side metal are installed.



Step 2 Installing side panels

PLEASE SEE YOUR CARE PACKAGE TO DETERMINE THE LENGTH OF PANEL THAT YOU WILL USE FOR THE SIDES OF YOUR BUILDING.

The number of panel courses are determined by the height of your building and the rollover edge. The bottom course may have to be trimmed to fit. Measure to determine the correct amount of material that will need to be trimmed from the overlap edge. Measure twice to be sure.

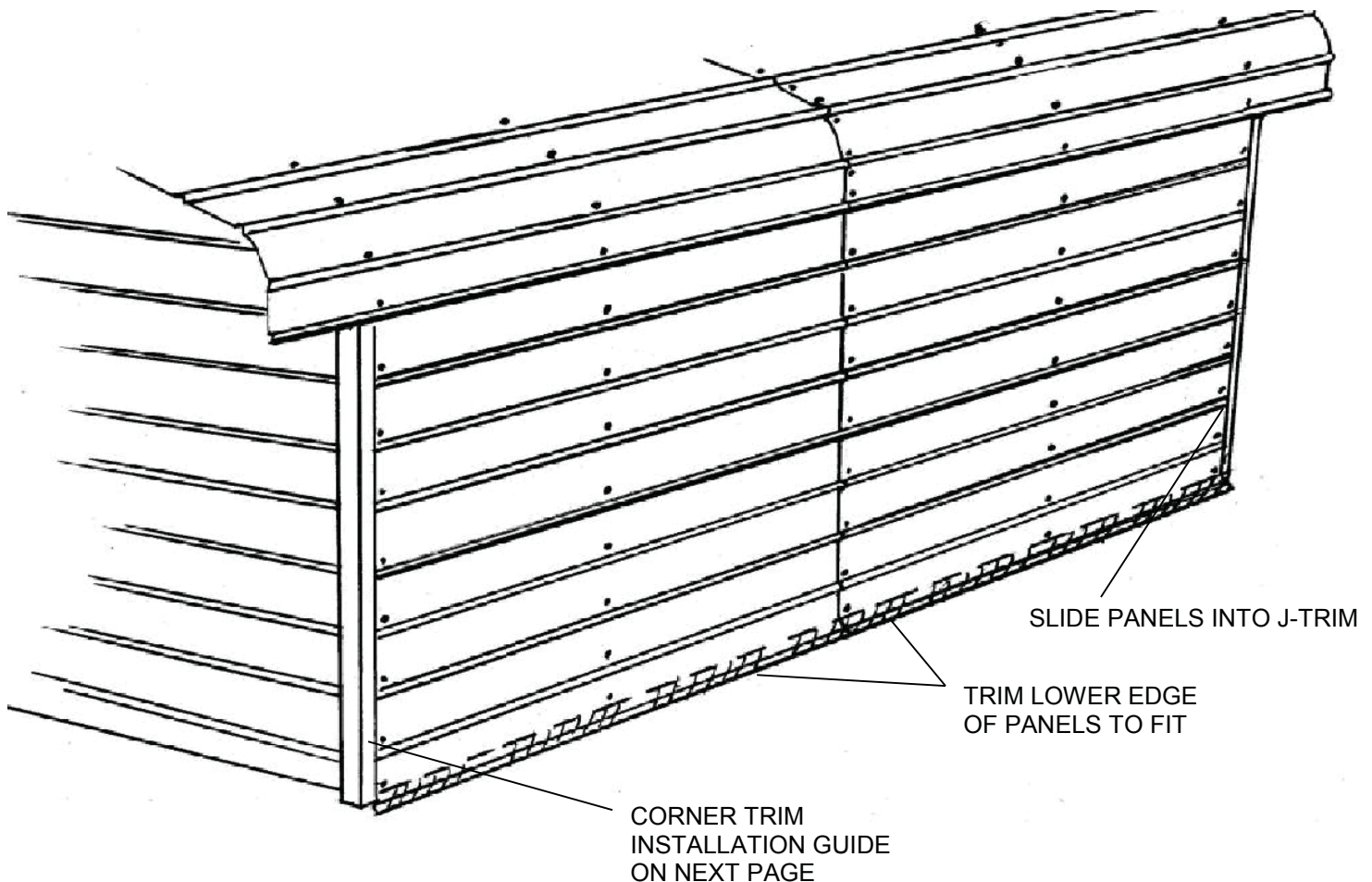
Place the first side panel on the side of the shelter to the back of the shelter. Lift the roof panel at the back and fit the top under lap edge of the panel under the overlap edge of the roof panel.

A helper will have to hold the panel in place while you install screws or you can clamp the panel in place. Install screws as you did on the shelter back wall. (No screws at this time in the center frame section. You can install screws above the lower rib of the roof panel at this time except at the center frame section.

Now, Install the next panel in that course. Lift the lower edge of the roof panel, insert the under lap edge of the second side panel and slide the panel forward into the front J-Trim. Install all screws except the lower edge. Install screws in the center frame at this time.

The last (bottom) course of panels on the side will have to be trimmed to fit. You can measure and mark the panel or insert the panel under the course above and mark the cut point. Trim the necessary material from the overlap edge of the bottom two panels and install them as you did the panels above.

Repeat these steps on the other side of the shelter. Once all side panels are installed, you can now install the corner trim on the corners of the back of the building. See next page for details on Corner Trim installation.



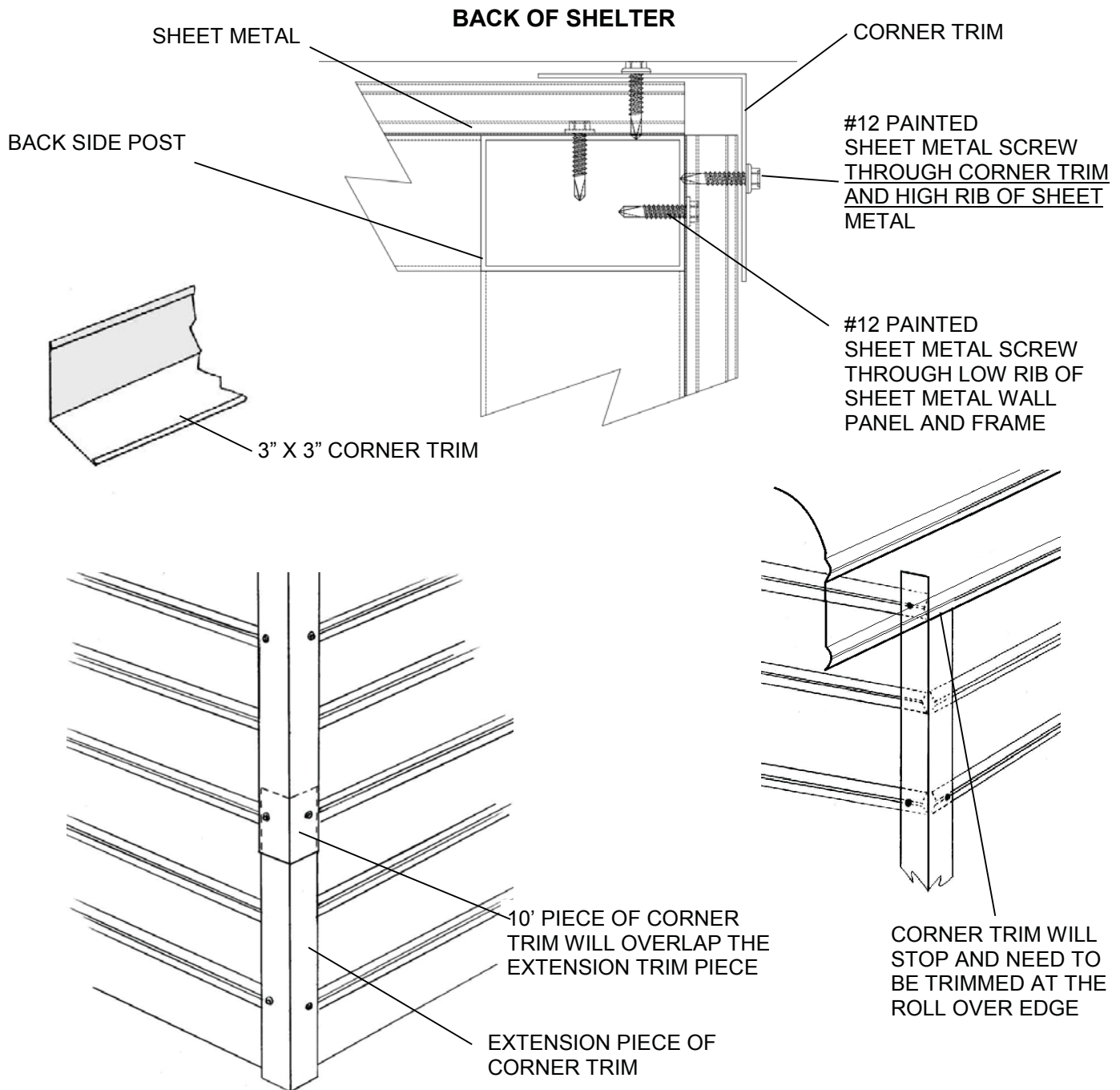
INSTALLING CORNER TRIM

After you have installed the sheet metal panels on the back and sides of the shelter then you will install Corner Trim on the back corners of the shelter. The corner trim for your building is angle trim 3" x 3" x 10' long.

Start by measuring the distance from the bottom of the base rail to the lower edge of the roof panels at back corners of the shelter. If your building is 10' or under at the eave you will need to cut the trim to fit.

If your building is over 10' you will have to cut 2 extension pieces of trim for the back corners and overlap them as shown below. **Cut the extension to allow about 5" of overlap.** Place the extension pieces on the back corners of the building at the bottom.

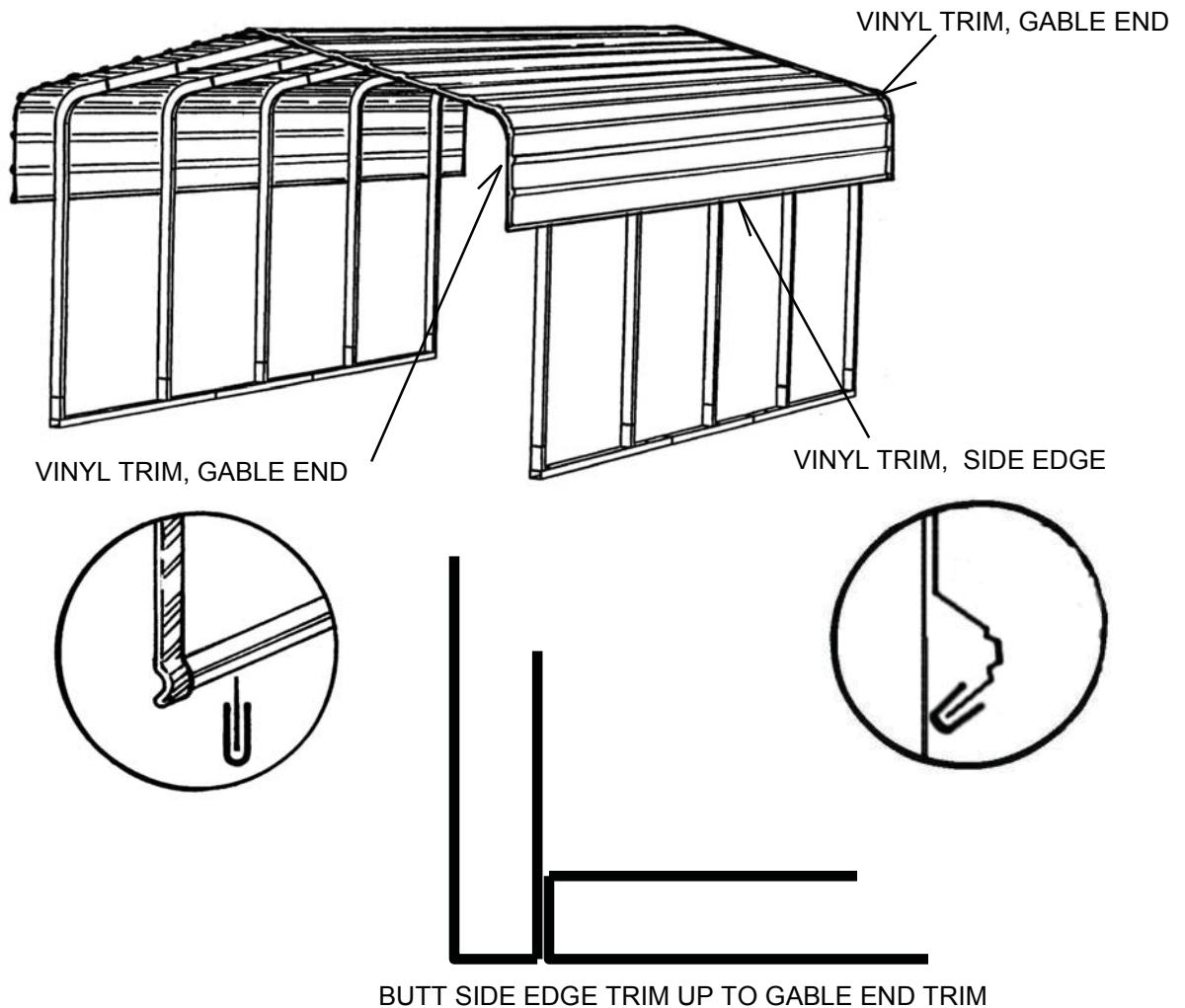
Screw the trim to the building with #12 x 1" self-drilling screws painted the color of the trim. Place the screws in the trim to hit the center of every other major rib in the sheet metal panels. Do not install screws at the top of the angle until a longer 10' piece is installed. Now place a 10' piece of trim on each corner of the building with the top of the trim 1" above the top of the side sheet metal. The trim should overlap the Extension piece of trim at the bottom about 5". Attach with screws in the center of every other rib as shown in the illustration below.



INSTALLING VINYL EDGE TRIM:

Install vinyl edge trim on front, back and side edges of sheet metal panels. Start at one corner and push the trim securely over the sheet metal edge.

*A helpful tip: use a flat head screw driver to open up the vinyl trim slightly when you first begin, then press firmly in place using your thumbs. Using gloves will help prevent blisters during application. Install the trim on the gable ends first starting at one corner, up along the gable and down to the other corner. Install vinyl edge trim on both side edges of the carport. Clip the trim flush with the edge of the trim on the gable ends. It may help to use a small hammer or a small rubber mallet to fit trim over major ribs. Use your tin snips to cut the trim.



NOTE: The carport could also be trimmed out with metal trim. Metal trim is not provided. The gable ends can be trimmed with Angle Trim and the side edges can be trimmed with J-Trim.

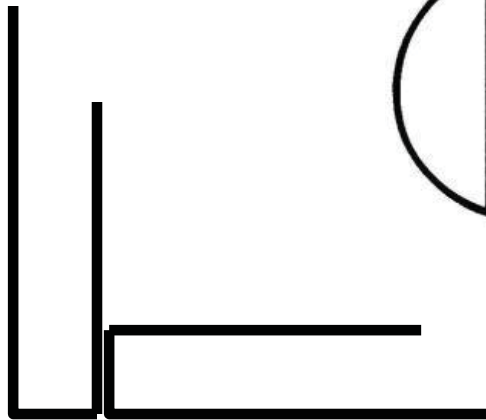
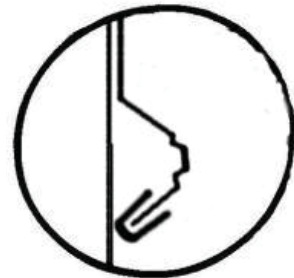
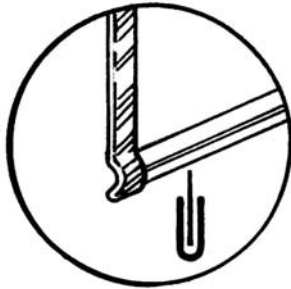
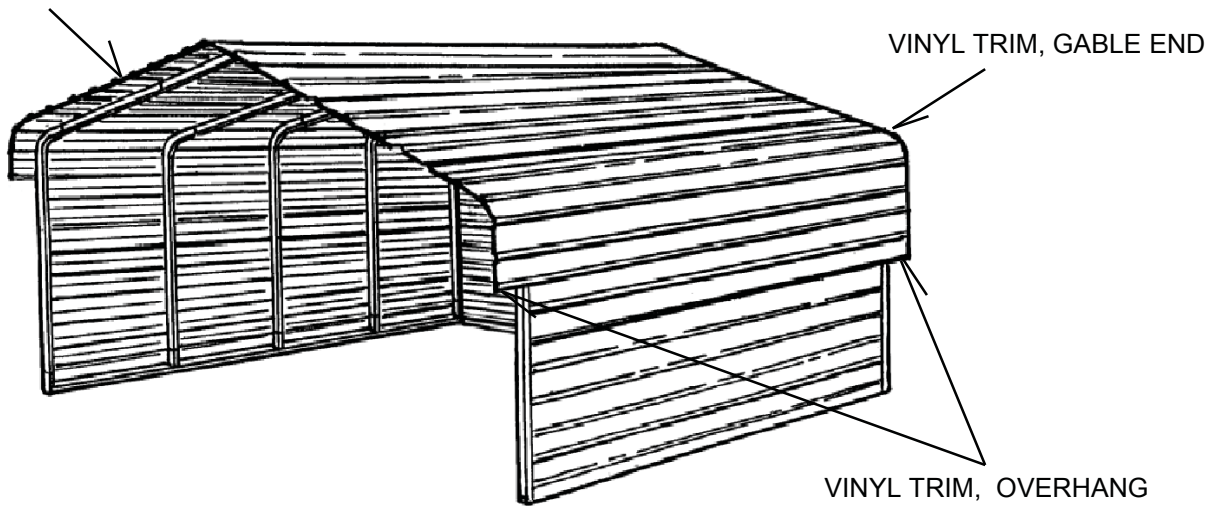
IMPORTANT:

All of the metal shavings created by the installation of self-drilling screws must be washed or swept off of the carport roof. These raw metal shavings will rust and stain the roof panels.

INSTALLING VINYL EDGE TRIM ON A 3-SIDED ENCLOSED:

For a 3-Sided Shelter you will Install vinyl edge trim on the front, back and the 11" overhangs. Start at one corner and push the trim securely over the sheet metal edge. Install the trim on the gable ends first starting at one corner, up along the gable and down to the other corner. Install vinyl edge trim on side overhang edges of the carport. Clip the trim flush with the edge of the trim on the gable ends. It may help to use a small hammer to fit trim over major ribs. Use your tin snips to cut the trim.

VINYL TRIM, GABLE END



BUTT SIDE EDGE/OVERHANG TRIM UP TO GABLE END TRIM