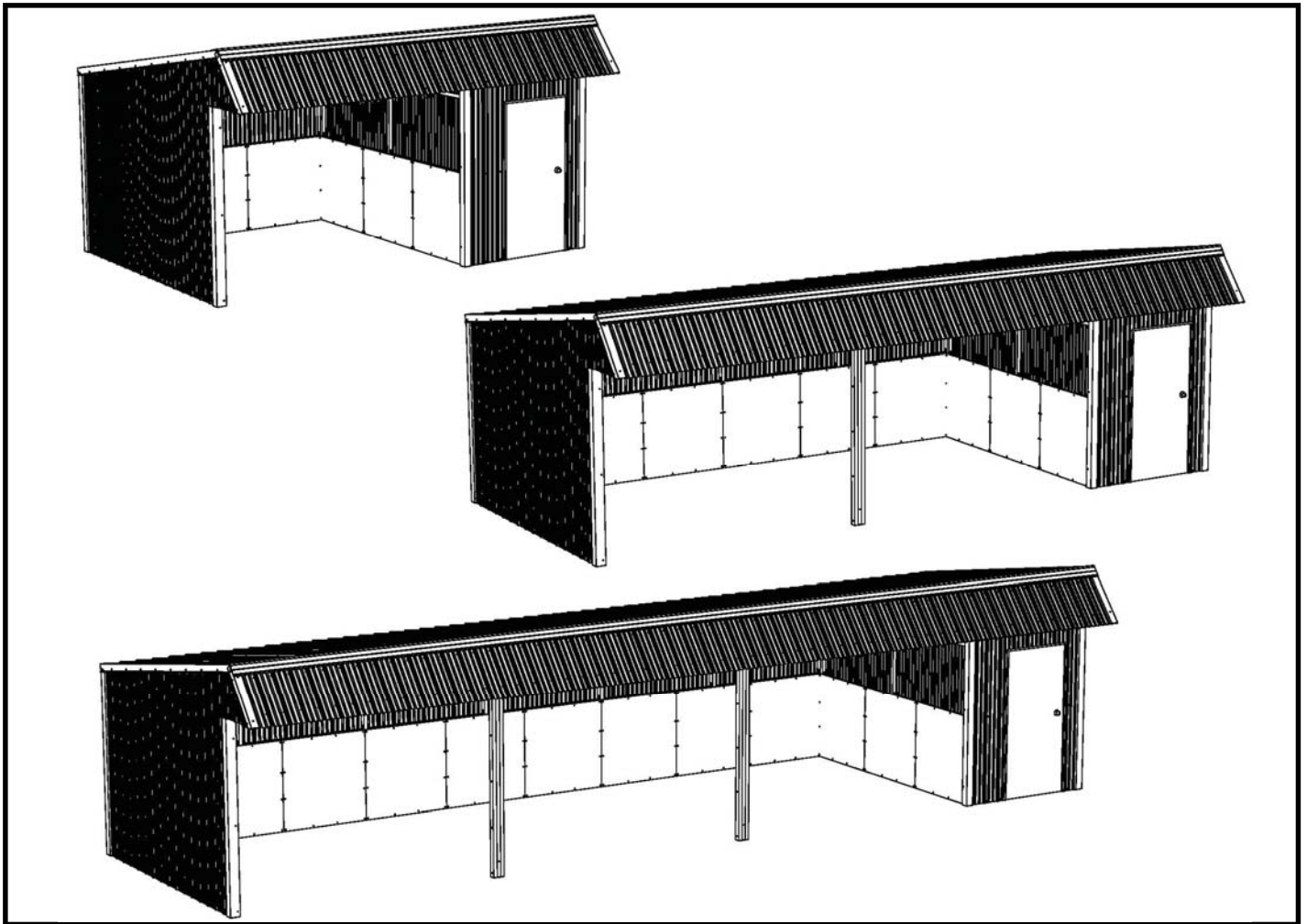




**ASSEMBLY INSTRUCTIONS
FOR VERSATUBE VERTICALLY SHEETED 2"x3" SINGLE SLOPE
LOADING SHED
12'W X 18'2" / 30'2" / 42'2"L X 8' / 10'
6' ON CENTER FRAMES**



Our unique assembly process quickly transforms the individual pieces into a finished structure that will give you years 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 Hot-line at 1-800-900-7222 and your questions will be addressed promptly. Thank you for choosing the VersaTube Building System.

ZINST-SSLS

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.

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.

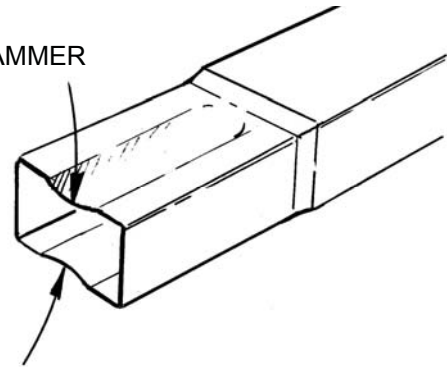
ATTENTION:

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



What you'll need

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



Safety Goggles
Or glasses



Chalk Line and
Mason Line or
Nylon String



Level

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.

2 Step Ladders



Shovel or
Post Hole
Digger



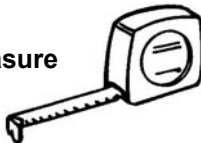
Work Gloves



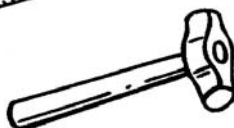
Pencil/Marker
And Felt Marker



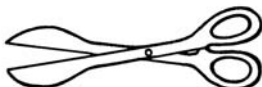
Tape Measure



Hammer



Tin Snips



Items you may need

Adjustable wrench



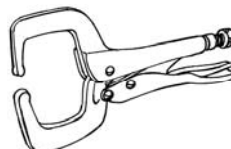
Masonry
Drill Bit
1/2" x 8"
Drill depth



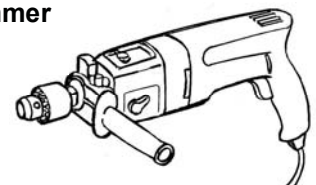
Wrench, 3/4" & 1/2"



Vise grip or other
quick clamp



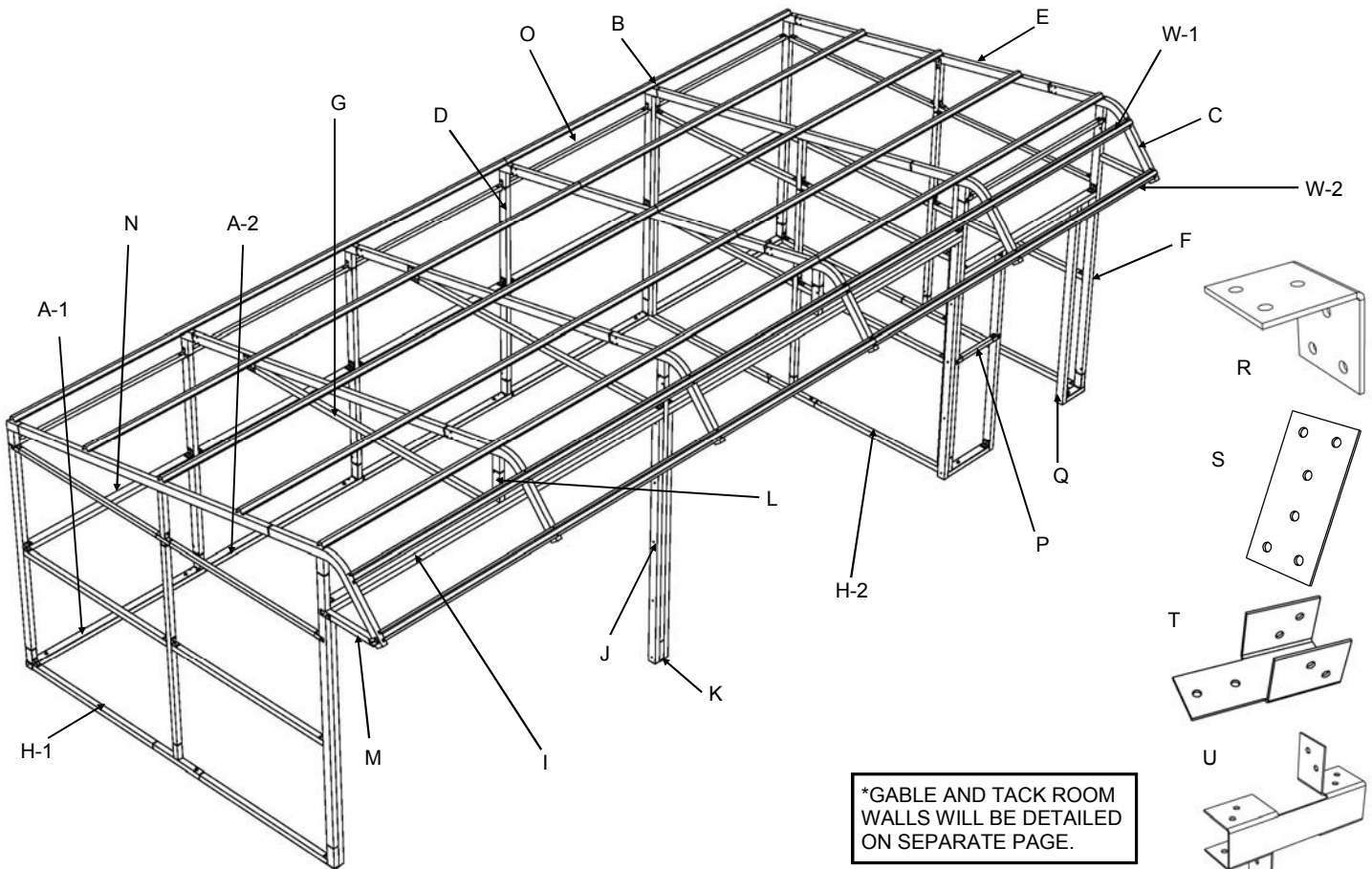
Hammer
Drill



Motor Cycle or
Ratchet Straps

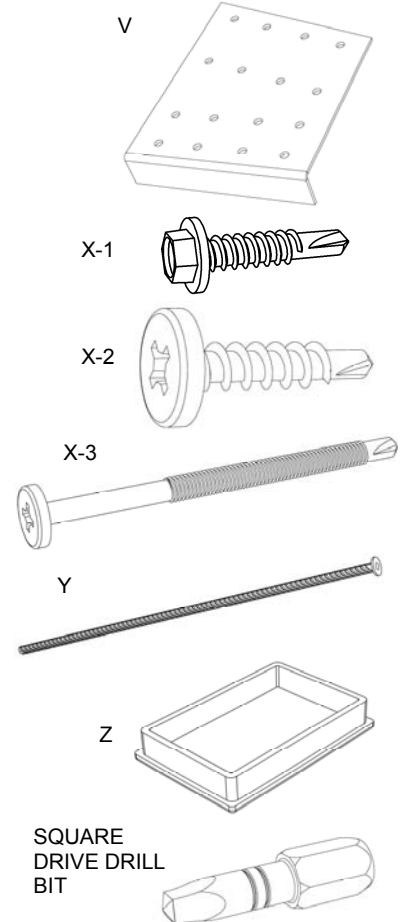
(May be required to pull
frame plumb.)

LOAFING SHED PARTS LIST



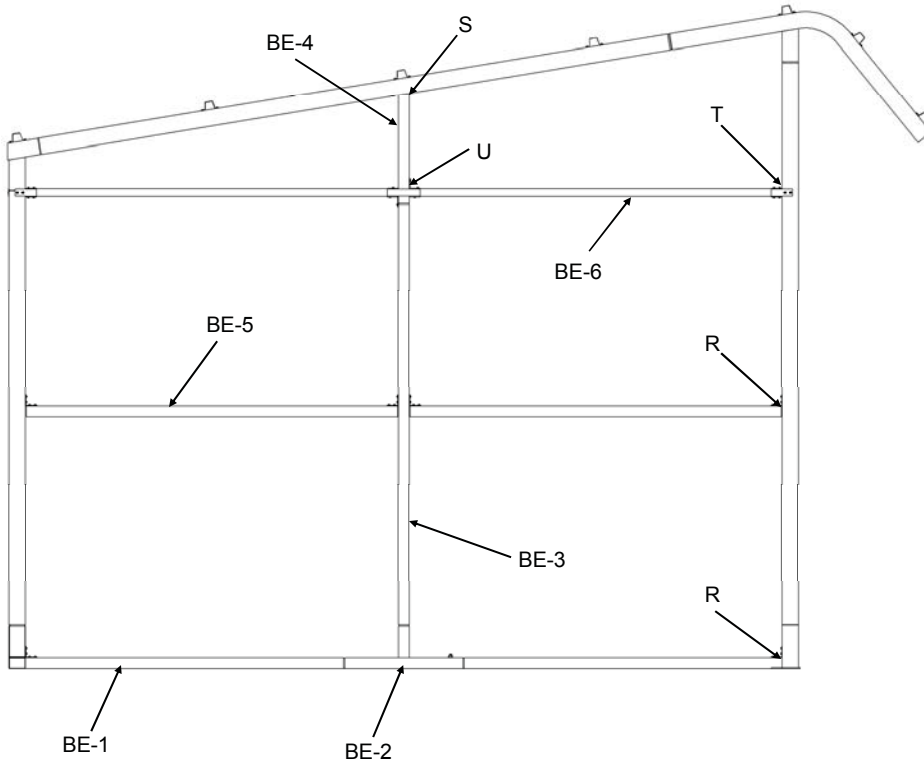
*GABLE AND TACK ROOM WALLS WILL BE DETAILED ON SEPARATE PAGE.

Letter	Part Description	Part #	Qty per 18'	Qty per 30'	Qty per 42'
A-1	6' On Center Starter Base Rail	71-4602	2	2	2
A-2	6' On Center Extension Base Rail	71-7040	2	4	6
B	Welded & Swaged Eave Corner	81-ECSW-212	4	6	8
C	Peak	71-6000-ECLS-212	4	6	8
D	2"x3"x15GA.x79.25" Back Vertical Post	7100-7925	4	6	8
E	2"x3"x15GA.x122.5", Swaged Rafter	71-12250S	4	6	8
F	2"x3"x15GA.x102.75" Front Vertical Post	7100-10275	3	4	5
G	2"SQ.x15GA.x111" Collar Tie	7400-11100	1	3	5
H-1	Gable End Wall	BE11208LS-212	2	2	2
H-2	Tack Room Divider Wall	BE11208LS2SQ-212	1	1	1
I	142" Double Door Header	81-DDH142-1	1	2	3
J	2"x3"x15GA.x96" Door Jamb	7100-9600	2	4	6
K	2"x3"x8" Swaged Pin Plate	PP-40-8	1	2	3
L	2"x3"x15GA.10.75" Vertical over header	7100-1075	1	2	3
M	2"SQ.x15GA.x20.25" Overhang Stringer	7400-2025	2	2	2
N	2"x3"x15GA.x70" Back Wall Bottom Girt	7100-7000	4	6	8
O	1.5"SQ.x18GA.x69.75" Back Wall Top Girt	7500-06975	4	6	8
P	1.5"SQ.x18GA.x19.75" Girt next to door	7500-01975	1	1	1
Q	2"x3"x15GA.x81.75" Walk Door Vertical	7100-8175	2	2	2
R	2"x2"x2" Angle Bracket	BK-10	18	28	42
S	2"x4" Flat Bracket	BK-20	4	4	4
T	Single Purlin Bracket	BK-30	6	6	6
U	Double Purlin Bracket	BK-31	2	4	6
V	Collar Tie Bracket	BK-60	1	3	5
W-1	Hat Channel 18 GA X 144"	7700-14400	7	14	21
W-2	Hat Channel 18 GA X 72"	7700-07200	7	7	7
X-1	Hex screw bag (70 pc.)	71-9999	5	7	9
X-2	Pancake square drive screw	71-9999-PAN	16	16	16
X-3	3" x #14 Concealor screw	71-9999-C314	10	20	30
Y	30" x 1/2" Rebar Anchor	ANC-24	7	10	13
Z	2"x3" Plastic End Cap	9901-EC	7	9	11



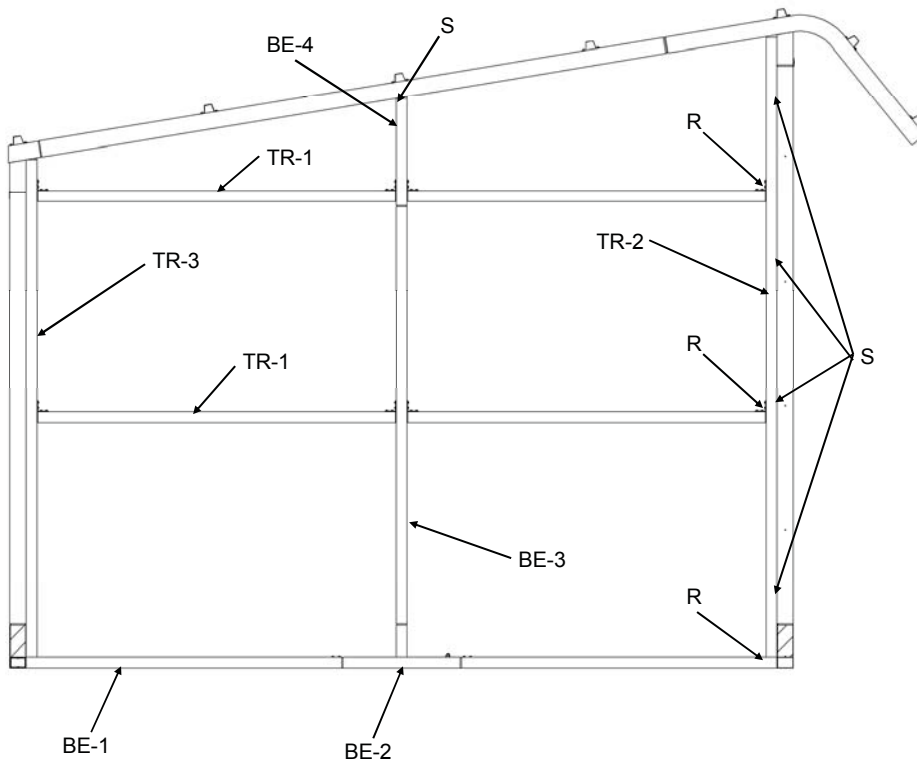
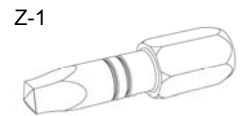
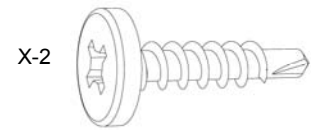
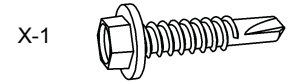
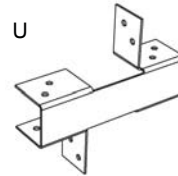
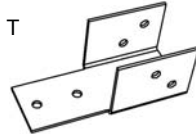
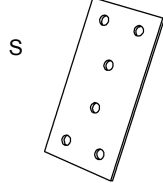
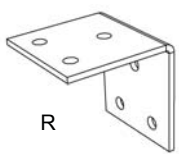
SQUARE
DRIVE DRILL
BIT

GABLE END WALL AND TACK ROOM DIVIDER WALL PARTS LIST



BE11208LS-212 GABLE END WALL

Letter	Part Description	Part #	Qty per Wall
BE-1	2" x 2" x 15 GA x 58"	7400-5800	2
BE-2	Back enclosure "T" connector	71-BE-T	1
BE-3	2" SQ x 81.75" upright	74-8175	1
BE-4	2" X 2" X 15 GA. X 19.75"	7400-1975	1
BE-5	2" X 2" X 15 GA X 67.75"	7400-6775	2
BE-6	1.5" SQ. X 18 GA. X 67.75"	7500-06775	2
R	2 X 2 X 2 ANGLE BRACKET	BK-10	6
S	2 X 4 FLAT BRACKET	BK-20	1
T	Single Purlin Bracket	BK-30	2
U	Double Purlin Bracket	BK-31	1
X-1	Hex screw bag (70 pc.)	71-9999	1
X-2	Pancake square drive screw	71-9999-PAN	6
Y	30" x 1/2" Rebar Anchor	ANC-24	1
Z-1	Square drive drill bit	71-SQ-DB	1



BE11208LS2SQ-212 TACK ROOM DIVIDER WALL

Letter	Part Description	Part #	Qty per Wall
BE-1	2" x 2" x 15 GA x 58"	7400-5800	2
BE-2	Back enclosure "T" connector	71-BE-T	1
BE-3	2" SQ x 81.75" upright	74-8175	1
BE-4	2" X 2" X 15 GA. X 19.75"	7400-1975	1
TR-1	2" X 2" X 15 GA X 65.75"	7400-6575	4
TR-2	2" X 2" X 15 GA. X 114"	7400-11400	1
TR-3	2" X 2" X 15 GA. X 91.5"	7400-9150	1
R	2 X 2 X 2 ANGLE BRACKET	BK-10	10
S	2 X 4 FLAT BRACKET	BK-20	9
X-1	Hex screw bag (70 pc.)	71-9999	2
Y	30" x 1/2" Rebar Anchor	ANC-24	1

SITE PREPARATION FOR LOAFING SHEDS

The VersaTube loafing shed frame is designed to be placed on a foundation that is level side to side and front to back. A sloped foundation is permissible; about 1/8" per foot front to back or back to front. That foundation can be: **a concrete strip footing, a concrete mono slab with built-in footing, or prepared ground with concrete piers at each anchor point** (leveled and re-compacted). It is important that you create one of these conditions prior to your carport or building installation. We *highly* 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 municipality or county. If you extend the loafing shed site about 3 or 4 feet on all sides, it will make it easier to position ladders for sheet metal installation.

STRIP FOOTINGS

Footings alone should be 12" wide and 16" deep with (2) continuous runs of #4 rebar and will be positioned so the base rails are centered in the footing if you will be using wedge anchor bolts (not supplied) to anchor the base rails. A minimum of 12" of the footing must be buried, leaving a maximum of a 4" reveal (Dia. 1). The outside width dimension of the footing will be 12' 9". The outside length dimension of the footing will be 10" longer than the frame size (19'L for 18'2"L, 31'L for 30'2"L, 43'L for 42'2"L). The tack room footing will be 7' wide and will also run under the tack room divider wall (Dia. 2). For the 30'2"L and 42'2"L models, a 12"dia. x 18" deep (minimum dimensions) concrete pier will be needed under the door jambs.

WARNING! If you are using the supplied rebar anchors, do NOT complete concrete work without wet-setting the anchors. If you are using concrete expansion anchors (not supplied), you can anchor your structure after the concrete

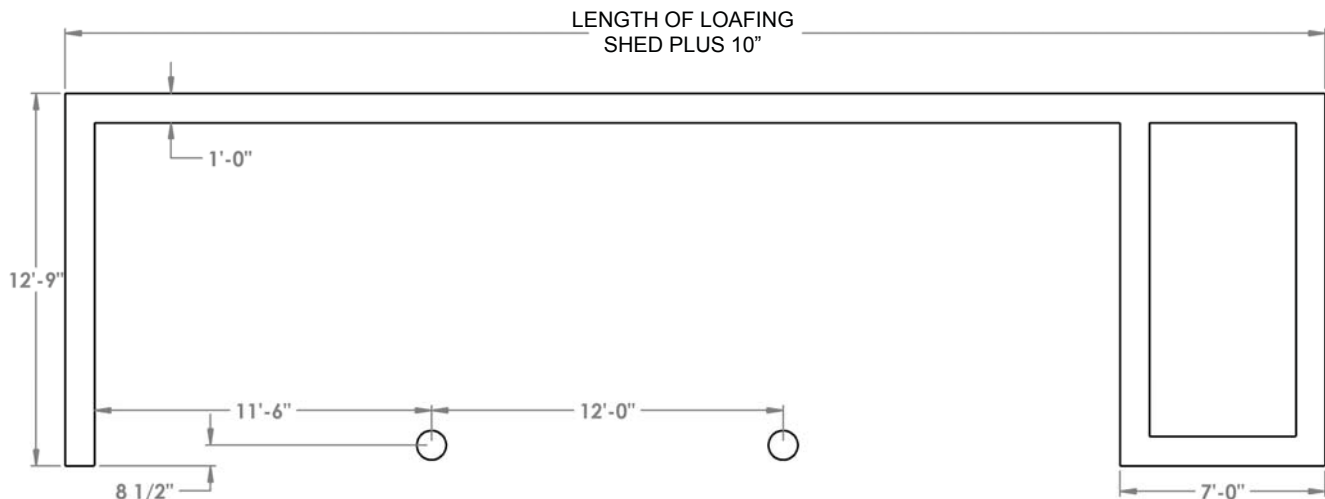
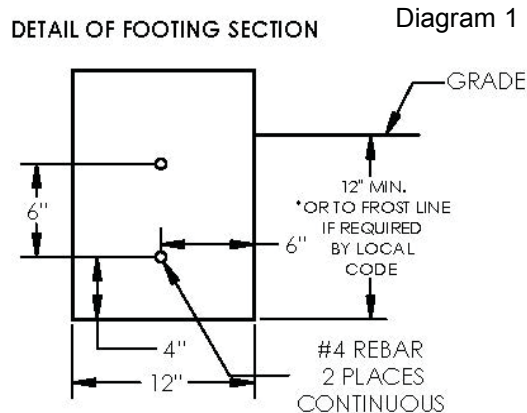


Diagram 2

SITE PREPARATION FOR LOAFING SHEDS (cont'd.)

SLAB WITH FOOTINGS

If you will be pouring a slab for your loafing shed, the slab should be 4" thick and have the same footing layout as on the previous page (Dia. 3). The footing should be 12" x 16" with a 45° blend between the slab and the footing (Dia. 4). The slab should have a front to back or back to front slope of about 1/8" per foot. Two continuous runs of #4 rebar is recommended in the footing (see previous page). Check with your local building official for details and requirements in your county. Some counties require the footing to extend down below the frost line. The concrete should be 2500 to 3000 PSI. The 4" slab should have welded wire fabric (WWF 6/6/10/10) at mid depth for reinforcement or #4 rebar grid at 24" on center in each direction.

The outside dimensions of the slab will stay the same as if you were pouring footings only (see previous page for dimensions).

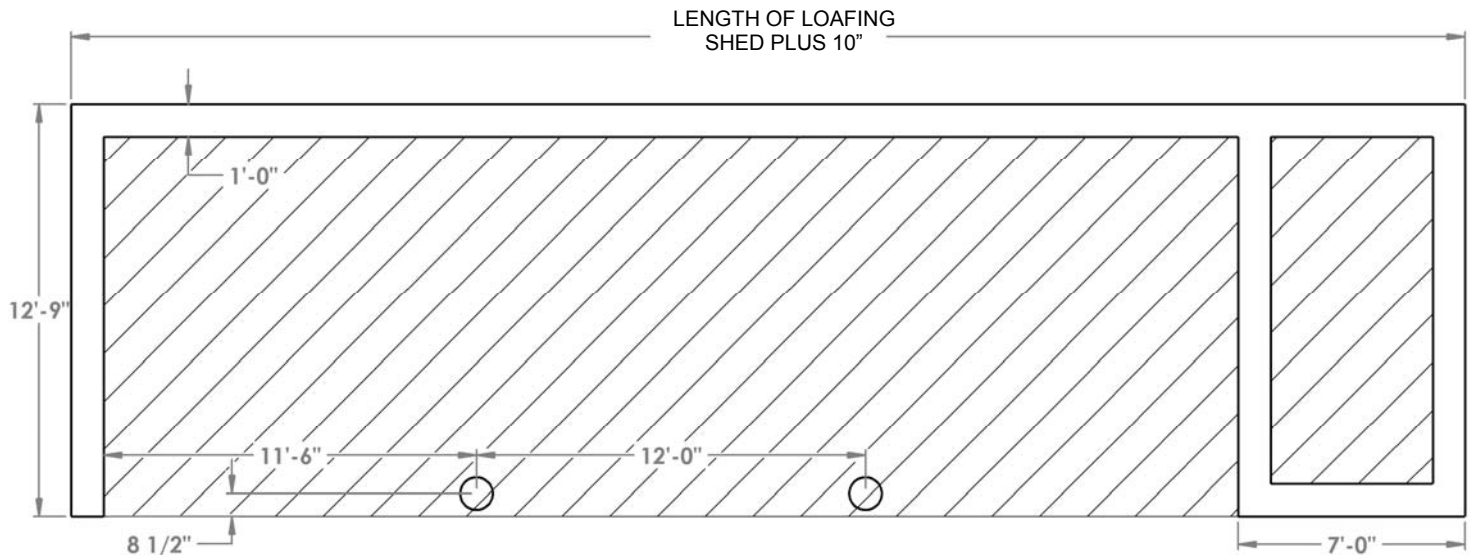


Diagram 3

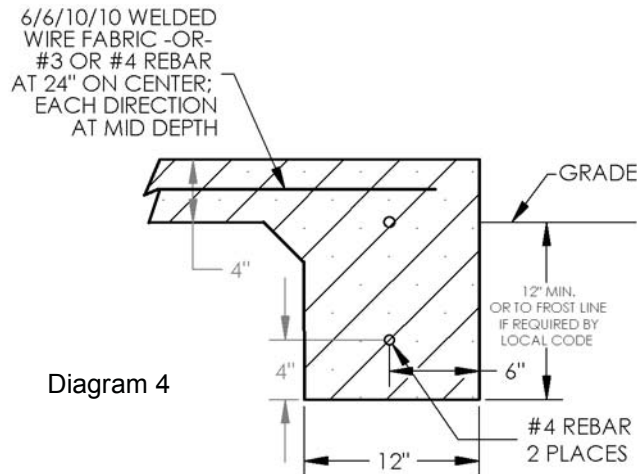


Diagram 4

ASSEMBLING AND POSITIONING THE BASE RAILS AND PIN PLATES:

Layout the back wall base rails on your slab or footing or prepared ground. The length from the front to the back of the base rail assembly will be 1/2" longer than the frame length (Example: If you have a 12' x 18'2" frame, the length of the base rail assembly will be 18'2-1/2". The dimension from the front of the front vertical pin to the back of the back vertical pin will be 18'2".) Join all the base rail components as shown. Check the overall length of the assembly, keeping the distance between vertical pins equal and fasten the swage joints with (2) #12 hex head, self drilling screws per joint on top of the base rail (Dia. 5). Place the back wall and tack room base rail assemblies 12' 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. Place the pin plate(s) 12' apart from the first pin on the starter rail. If you have a 30'2"L or 42'2"L structure, place a pin plate 12' on center away from your first pin plate.

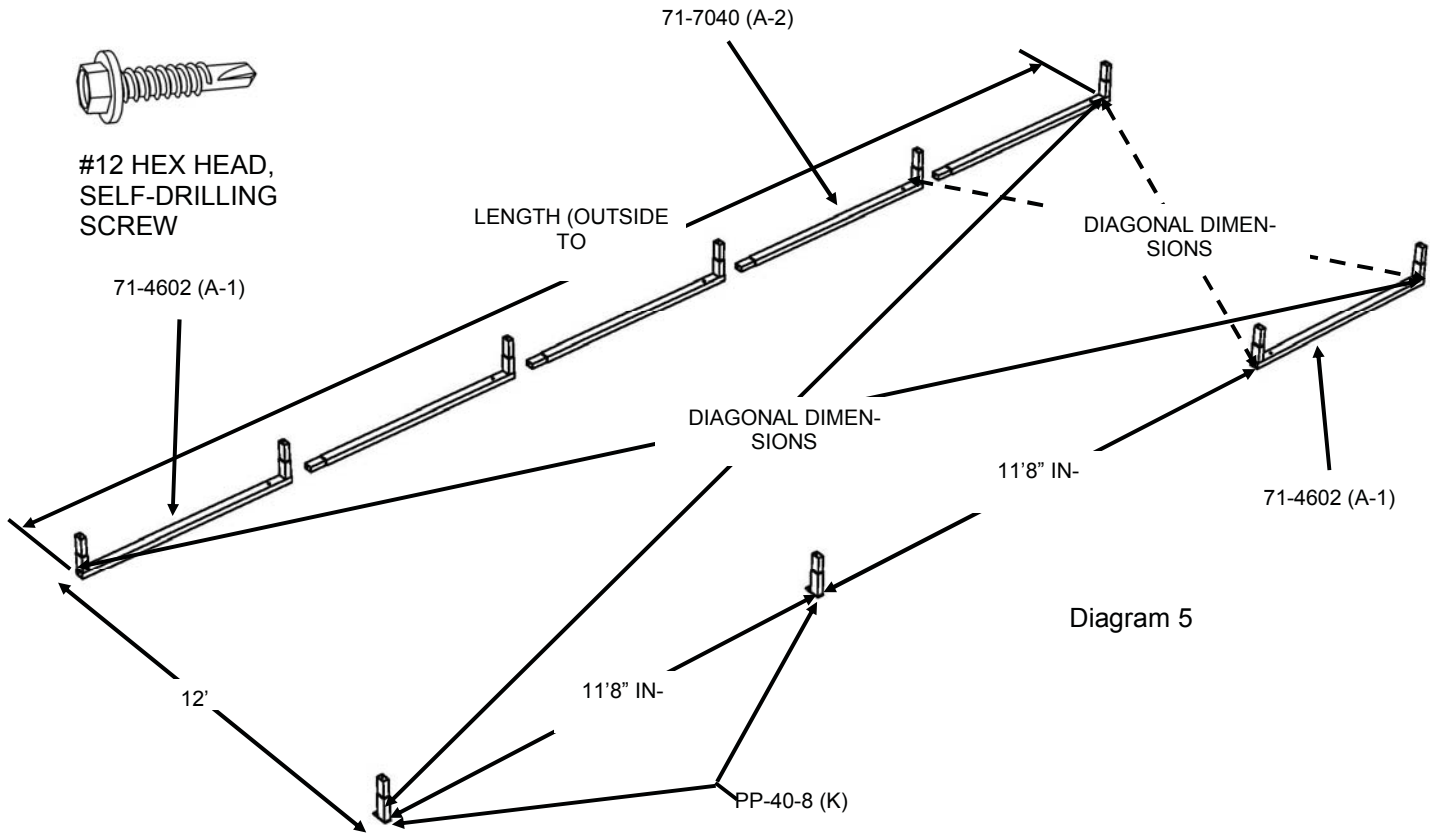


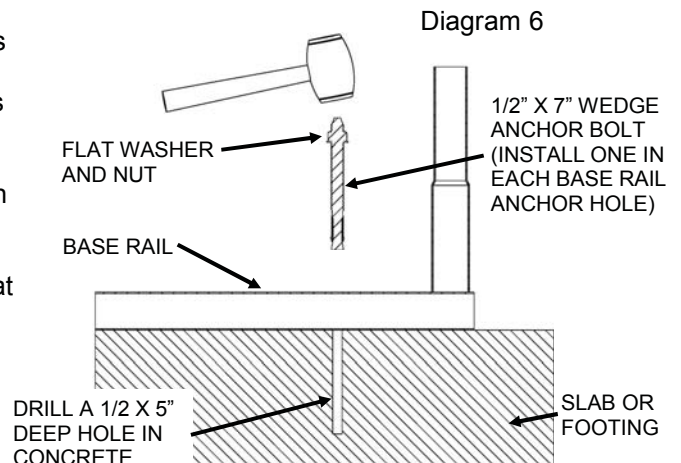
Diagram 5

ANCHORING LOAFING SHED BASE RAILS:

These instructions offer three anchoring methods: (1) To a concrete slab with footings with concrete wedge anchor bolts. (2) To the concrete footings only with concrete wedge anchors. (3) To the ground with VersaTube Rebar Anchors and concrete. *Concrete Wedge Anchors not provided.*

ANCHORING TO CONCRETE SLAB OR FOOTING WITH 1/2" 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 drilling the anchor holes in the concrete. To drill the anchor holes, use a hammer drill and a 1/2"x8" or 12" concrete drill bit. 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" (Dia. 6). Place a flat washer onto the anchor bolt and screw on a hex nut until about 2 threads are exposed above the nut. 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.



SITE PREPARATION FOR LOAFING SHEDS (cont'd.)

CONCRETE PIERS:

A minimum 12" dia. X 18" deep pier will be used at every anchor point. It is suggested to install concrete piers in conjunction with laying your base rails and rebar anchors. If you are using concrete expansion anchors (not supplied), you can layout your concrete piers before setting your anchors.

DIGGING HOLES FOR CONCRETE

Mark the locations of the rails and the anchor holes on the ground. You can use silver spray paint or any type of marking system to locate your anchor holes. There is also a layout provided below for a 30'2"L structure (Dia. 7). If you have an 18'2"L or 42'2"L structure, remove or add (2) piers on the back wall 6' apart and (1) pier on the front 12' apart. 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 a 12" diameter auger for this job.

*NOTE: Your municipality may require a wider or deeper concrete pier. It is suggested to check if there are any frost depth requirements before installing concrete.

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 8). Now drop or drive a VersaTube 30" rebar ground anchor through the base rail into the hole, mix concrete and pour into holes up to ground level (Dia. 8). 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. Let the concrete cure overnight before installing the Roof/Wall assemblies.

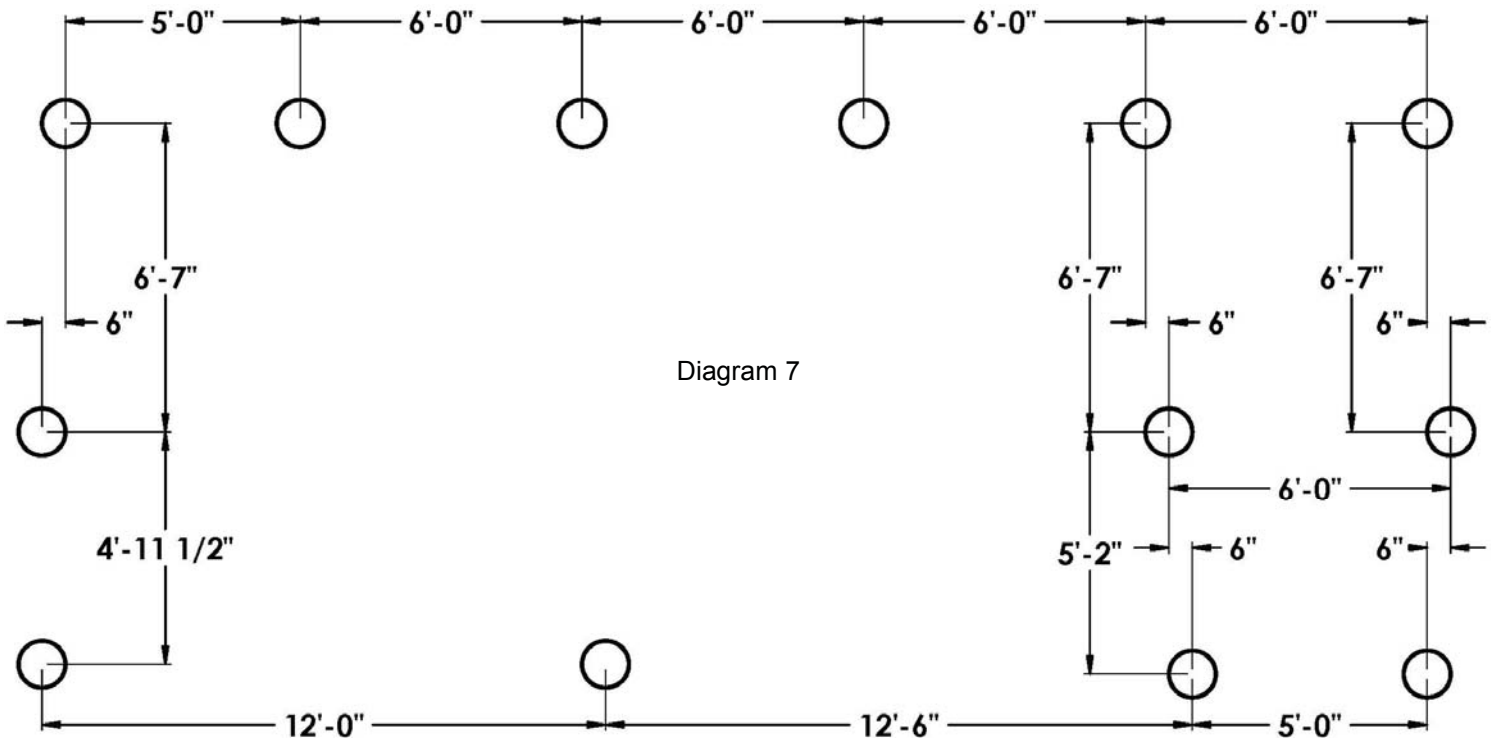


Diagram 7

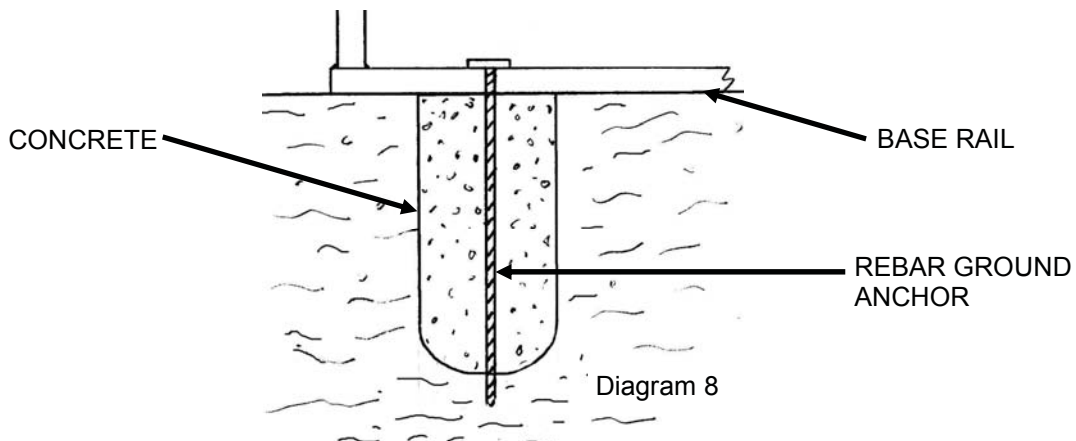
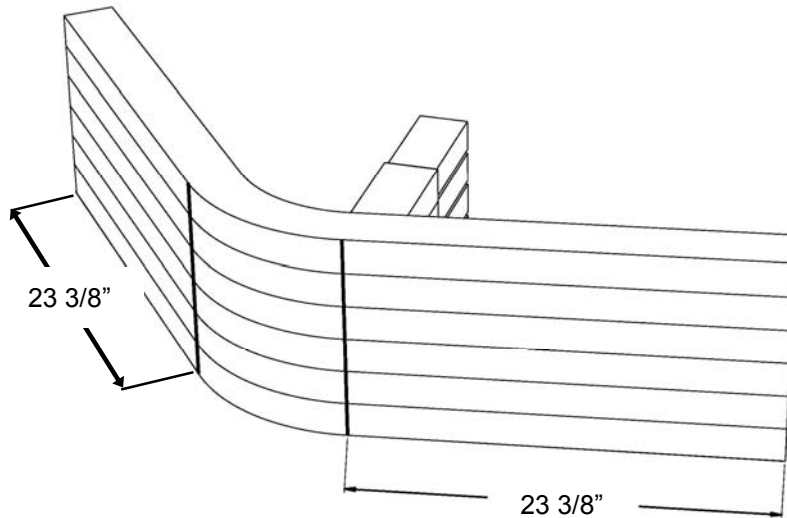


Diagram 8

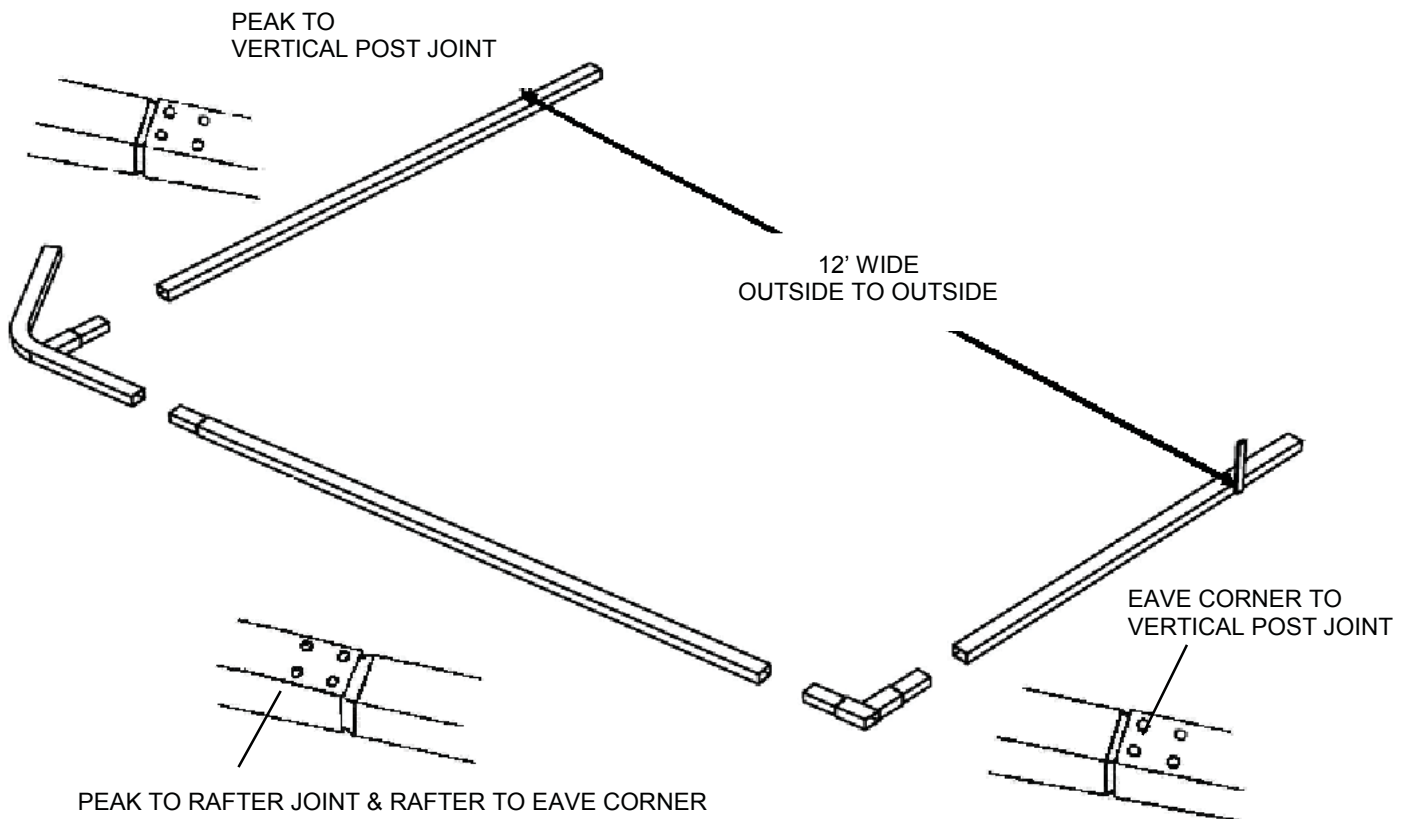
ROOF/WALL FRAME ASSEMBLY

Before you start the assembly of the Roof/Wall sections, find and stack **all** of your peaks (C). Mark a line on the top of each peak 23 3/8" from each end. This will be the location for the roof hat channel that crosses over the peak. eave corners (B), vertical posts (D&F), and rafters (E). Make sure you have the correct quantity for the length structure you purchased (refer to page 4). Only full roof/wall frames will be assembled at this point. This includes (2) end wall frames, tack room divider wall frame and any full frames between openings (1 for 30'2"L; 2 for 42'2"L).

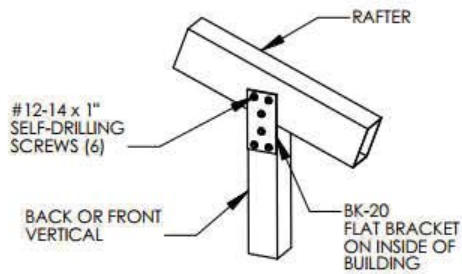


On the ground, assemble (1) peak, (1) rafter, (1) eave corner, and (2) vertical posts. Before you fasten the joints with screws take a measurement across the top and bottom of the assembly as shown. This outside measurement is the outside size of your building (12'). Try to keep the joint spacing on 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.**

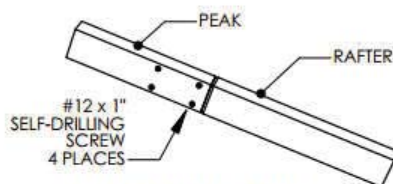
Now, fasten the joints with #12 self-drilling screws. 4 screws in the peak to rafter and side post to rafter joints. See details below. **NOTE: You can use the first assembly as a template to assemble the remaining Roof/Wall Frames.**



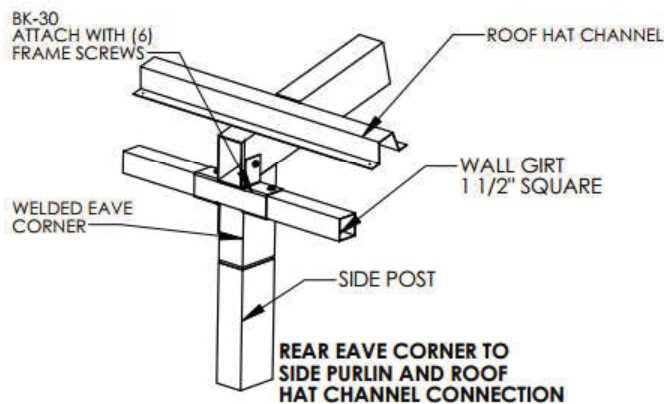
ASSEMBLY DETAILS



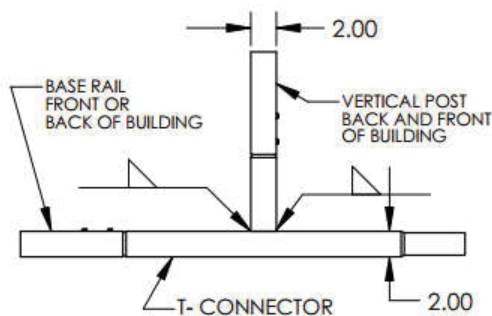
BACK OR FRONT VERTICAL TO RAFTER OR PEAK



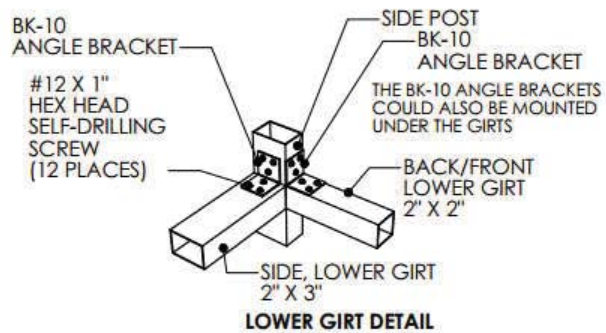
PEAK TO RAFTER DETAIL



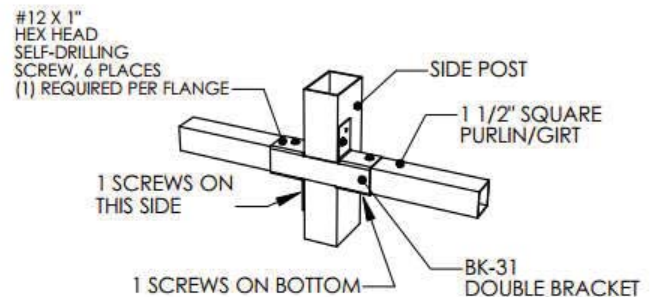
REAR EAVE CORNER TO SIDE PURLIN AND ROOF HAT CHANNEL CONNECTION



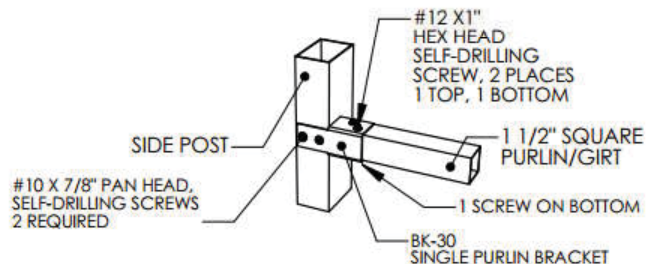
BASE RAIL AND VERTICAL TO T-CONNECTOR DETAIL



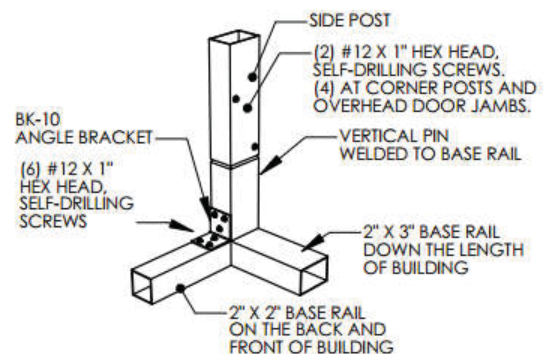
LOWER GIRT DETAIL



DOUBLE PURLIN BRACKET



SINGLE PURLIN BRACKET



SIDE POST TO BASE RAIL AND FRONT/BACK BASE RAIL TO SIDE BASE RAIL

#12 x 1" SELF-DRILLING SCREW USED IN MOST JOINING APPLICATIONS

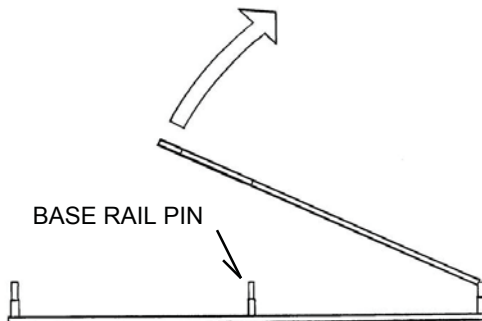


INSTALLING ROOF/WALL FRAMES SECTIONS TO BASE RAILS

NOTE: This assembly will require at least two people.

Start at one end of the building and place a Roof/Wall frame assembly 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 3) Repeat this assembly until all Roof/Wall frame assemblies are installed.

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 frame. Tap lightly on the side post with a hammer if parts do not drop into place.



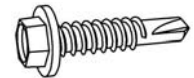
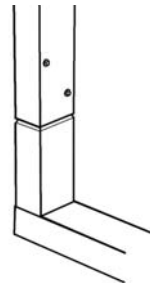
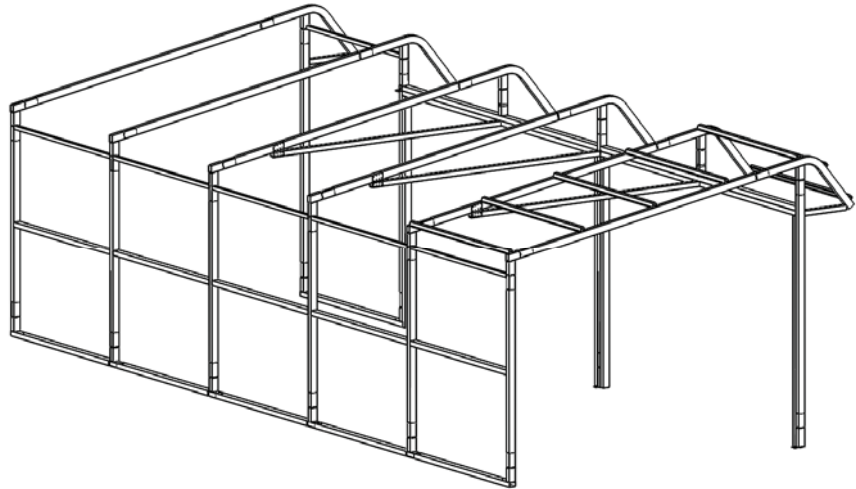
SQUARING UP YOUR FRAME

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.

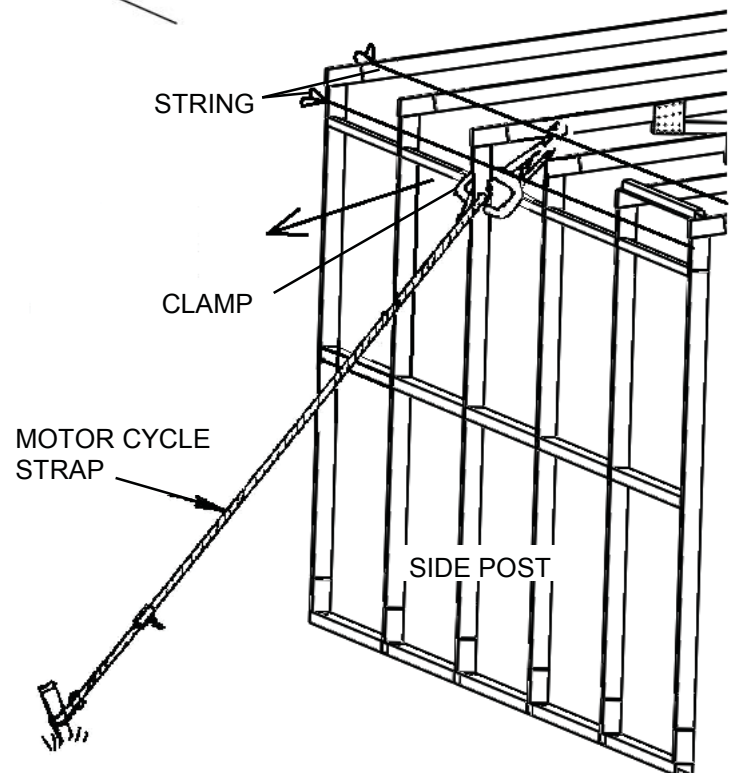
To do this, first check the front and back Roof/Wall sections to make sure that they are plumb side to side. Check the outside of the side post. If adjustments must be made, you can drive a wooden or metal stake into the ground about 8' from the building and use a Motor Cycle strap or Ratchet strap to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



#12 SELF-DRILLING SCREW



STEP 11: INSTALLATION OF SIDE WALK DOOR TRIM

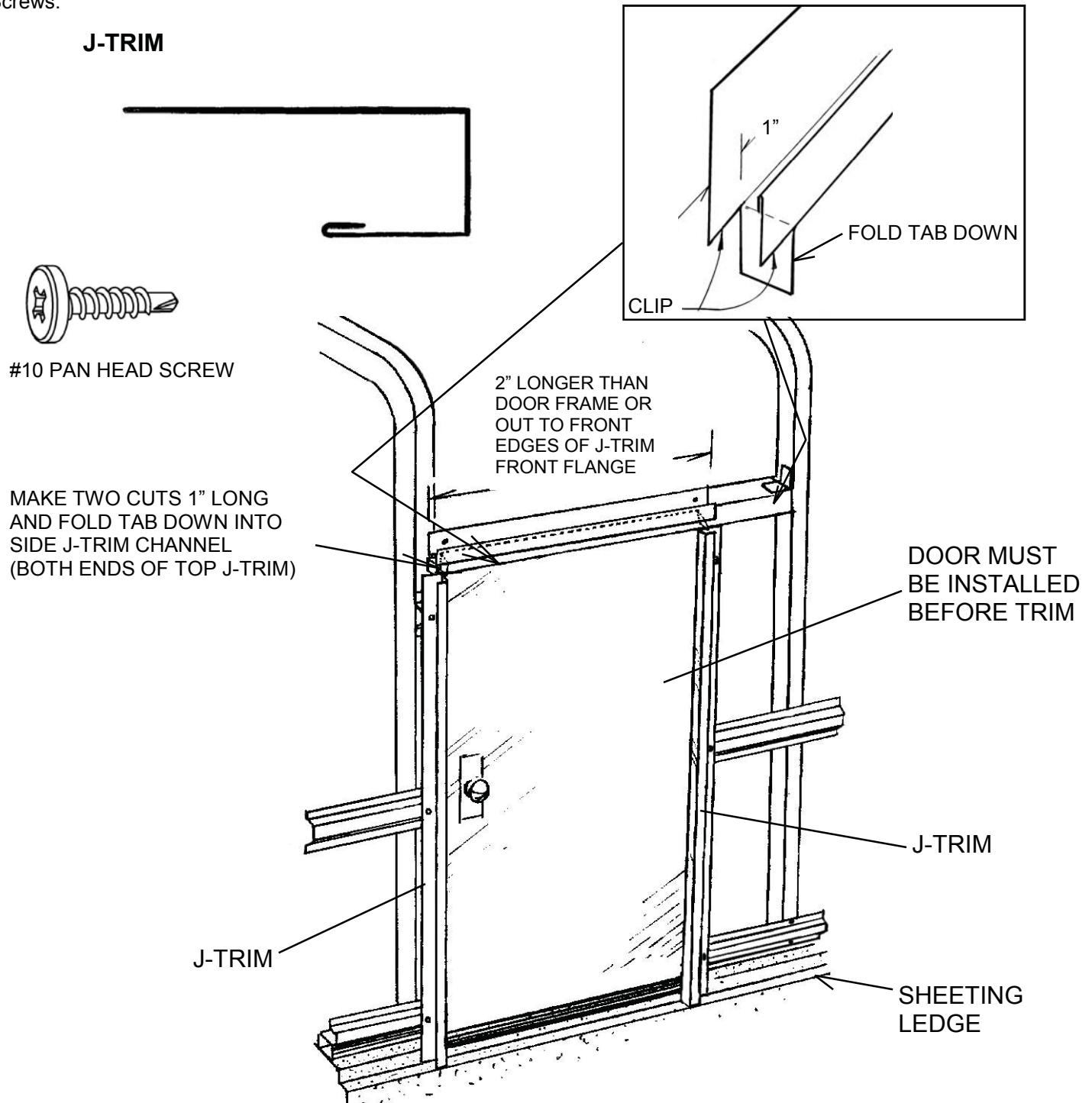
If door J-Trim is not built in to your door install it at this time.

VISIT <https://www.youtube.com/watch?v=IYATMczoLsM> FOR WALK DOOR TRIM APPLICATION VIDEO

Cut two pieces of Side J-Trim to fit from the bottom of the sheeting ledge on the slab to the top of the door frame. Cut one piece of Top J-Trim 2" longer than the door frame. (Note that this piece of J-Trim will extend out beyond the door frame to the ends of the Side J-Trim front flange on both sides of the door. You may want to place the Side J-Trim on both sides of the door frame and take a measurement to check that distance before you cut the Top J-Trim.)

Attach the Side J-Trim on both sides of the door to the vertical nailers with Pan Head Self-Drilling Screws.

Clip two 1" long slits in the ends of the Top J-Trim as shown below. (Both ends of the Top J-Trim) Now, Place the Top J-Trim on top of the Side J-Trim over the door and fold the tabs that you created at the ends of the Top J-Trim down into the top of the Side J-Trim. Attach the Top J-Trim at both ends to the top nailer with Pan Head Screws.



INSTALLING SIDE SHEET METAL PANELS:

SEE SHEET METAL TAKE OFF IN YOUR CARE PACKAGE FOR SHEET METAL PANEL LENGTHS.

SHEET METAL PANELS FOR THE SIDE OF THE BUILDING ARE 8'-1", 10'-1",

Start at one corner of the building. (It is preferred that you chose a corner that is away from the prevailing wind). Make sure that the frame is plumb when installing the first side panel. All additional panels will depend on the first panel being plumb and square.

Carefully place the first panel on the slab sheeting ledge (or at the bottom of the base rail if no sheeting ledge is available.) Place the overlap edge at the starting corner of the building. This will allow you to easily overlap the second panel over the first and so on down the length of the building.

Attach the panels to the hat channels with #12 x 1" painted, Self-Drilling Screws with rubber washers. Place one screw about 3/4" to one side of each major rib.

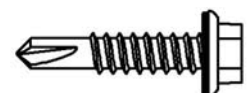
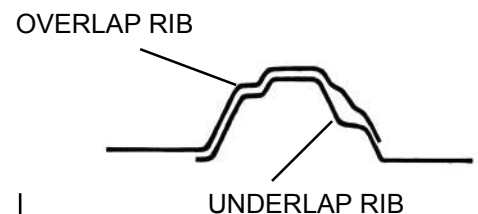
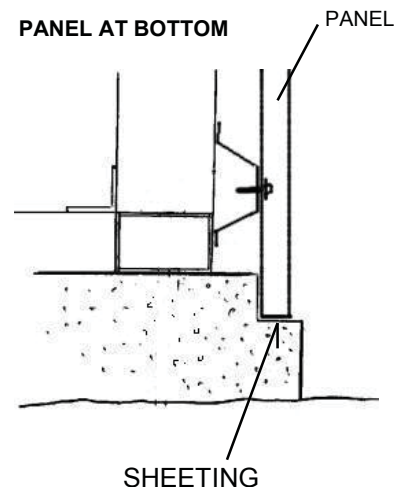
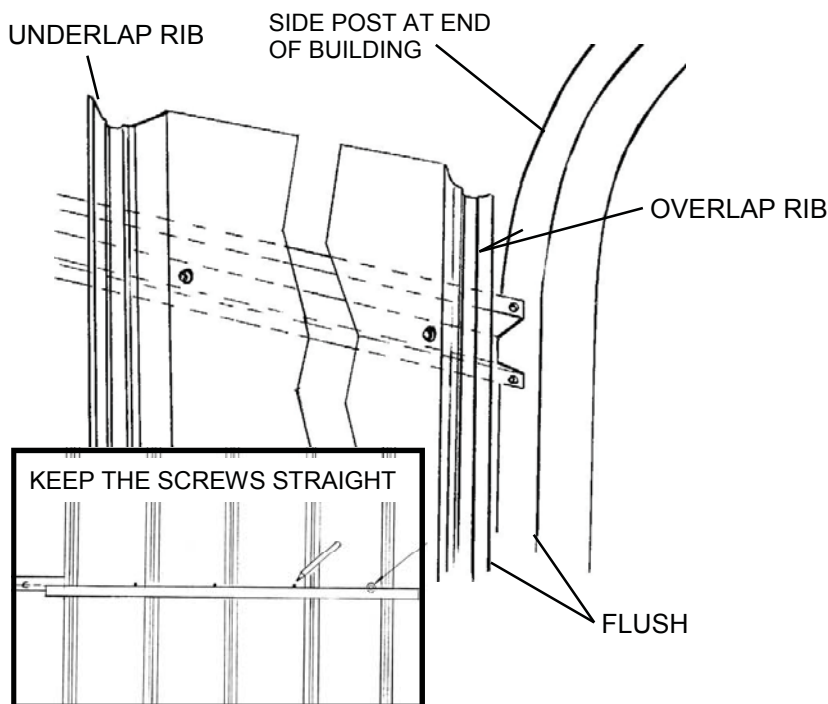
NOTE: It is important to keep the panels from stretching or compressing in width as you install them. The panels should be 36" from the center of the major rib on one side of the panel to the center of the major rib at the other side of the panel. Measure each panel as you go or pre-mark the building frame every 36" to check the panel width as you go.

The last panel installed on the side on the building should come out flush with the other end of the building frame if the length is divisible by 3. If not (example 20' or 25' long building) you will need to trim the last panel to be flush with the building frame.

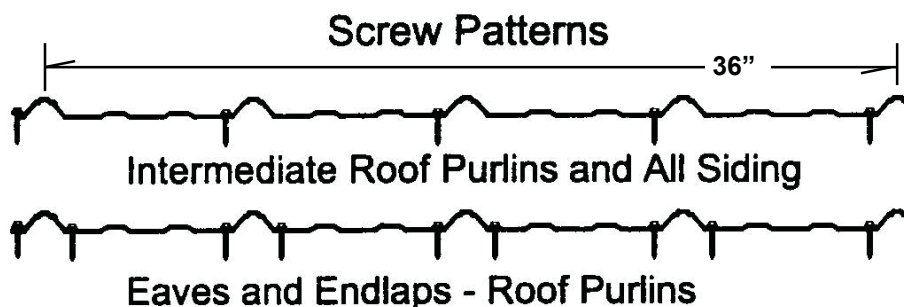
Remember to be careful not to scratch up the bottom of the panels as you place and adjust them on the concrete slab or sheeting ledge.

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.

TIP: To keep the screws in a straight line down the length of the building, install screws next to the 1st major rib. Hold a straight edge between the center point of the screw and the center of the hat channel at the other side of the panel and mark dots along that line where the remaining screws will be located with a felt tip marker. You can also tie a small loop in one end of a string, hook it over the first screw and draw the string to the center of the hat channel. Holding the string taut, use a felt marker to mark location points for the remaining screws. A speed square and a pencil can also be used.



#12 X 1" PAINTED, SELF-DRILLING SCREW WITH RUBBER WASHER



INSTALLING GABLE END SHEET METAL PANELS

INSTALLING BACK PANELS:

SEE SHEET METAL TAKE OFF IN YOUR CARE PACKAGE FOR SHEET METAL PANEL LENGTHS.

If you building is 12', 24', or 30' wide start in the middle of the building and work to the sides. See the panel layout drawing on the following pages for your size building. The drawing will give you the panel lengths and locations. If your building is 20' wide, center the first panel in the building width and work to both sides.

Start by placing the under lap edge of the first panel flush with one edge of the back center frame post on the 12' and 24' wide buildings. On the 30' wide building you will need to measure and mark the center of the building on the girts and base rail. Make a mark 1" to the side of the center marks. This will be the edge of the first underlay rib of the first panel. On 20' wide buildings, locate the center major rib of the first panel in the center of the building.

The length or height of the sheet metal panels are sized to fit your building. (See drawing on following pages of your building size for panel lengths). To cut the roof angle on the top of the panel measure down on the outside edge of the panel 9 1/2" and make a mark. Now, draw a line between the upper corner and the mark. This will be the angle cut for the roof pitch. On the 20' wide building, first panel, measure down on both sides of the panel 4 3/4" and draw a line back up to the center of the panel and cut along the lines. On all additional panels use the 9 1/2" measurement down one side as described above. Cut with large straight cut tin snips. Fasten the first panel to the back girts with 1" painted self-drilling screws with rubber washers. Do Not place any screws next to the overlap rib until you lift and insert the underlay edge of the next panel in that direction.

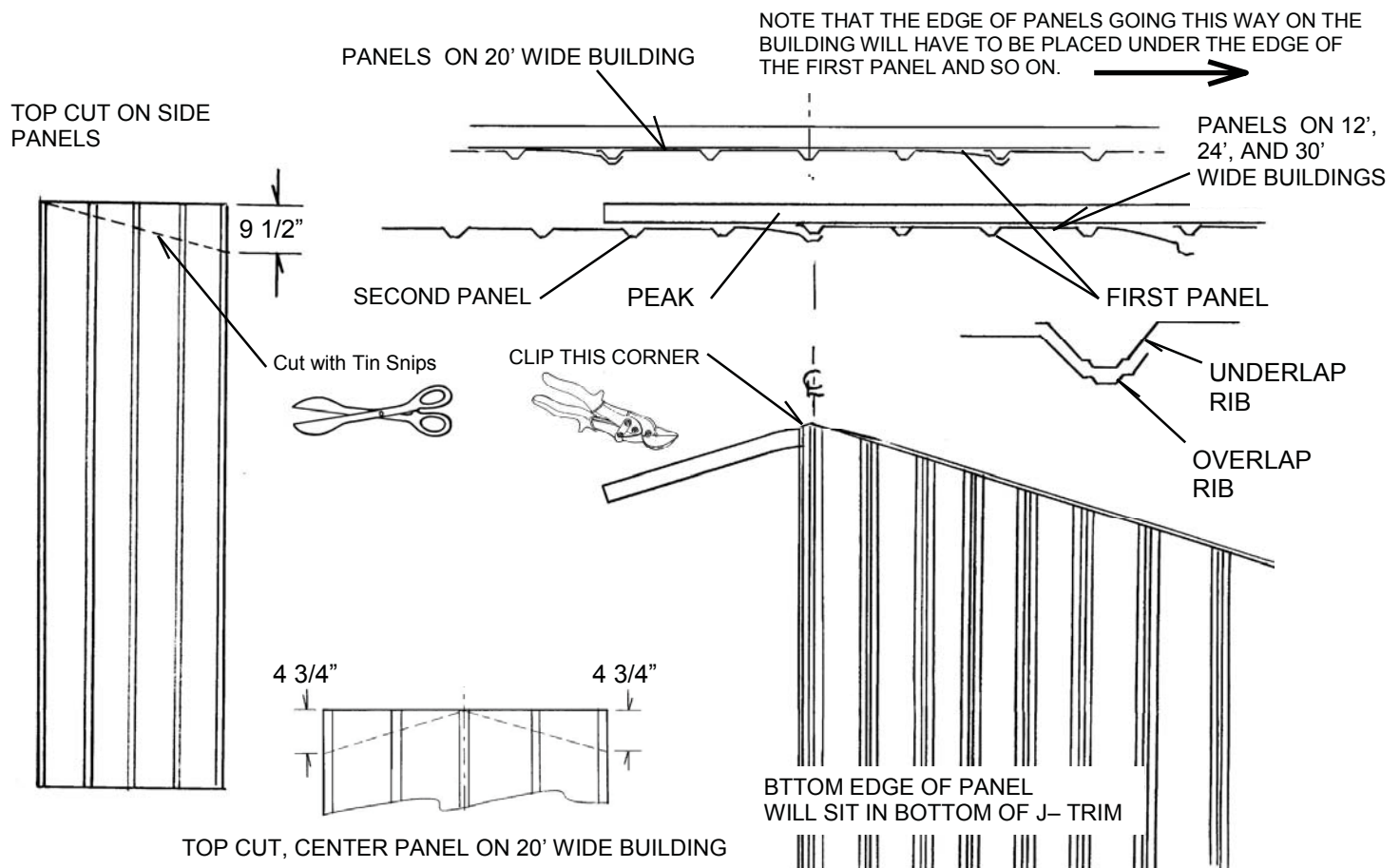
On 12', 24', and 30' wide buildings the second back panel will also start in the center of the building with the overlap rib in the center of the building. Measure and cut the top of this panel opposite of the first panel. (The overlap rib will be the top corner measurement and the underlay rib will be the low measurement.) Note that panels going to one side of the building will lap under the previous panel. You will need to leave out the screws in the overlap rib until the next panel is installed. On 20' wide buildings, the second panel can go to either side of the first panel.

Measure and trim the top angle on the remaining panels as you did the other panels. (9 1/2" down one side and up to the opposite corner) When you get to the sides of the building trim the last panel to be flush with the building frame. (NOTE: The edge can extend out about 1 3/4" and still fit under the corner trim.)

INSTALLING FRONT PANELS:

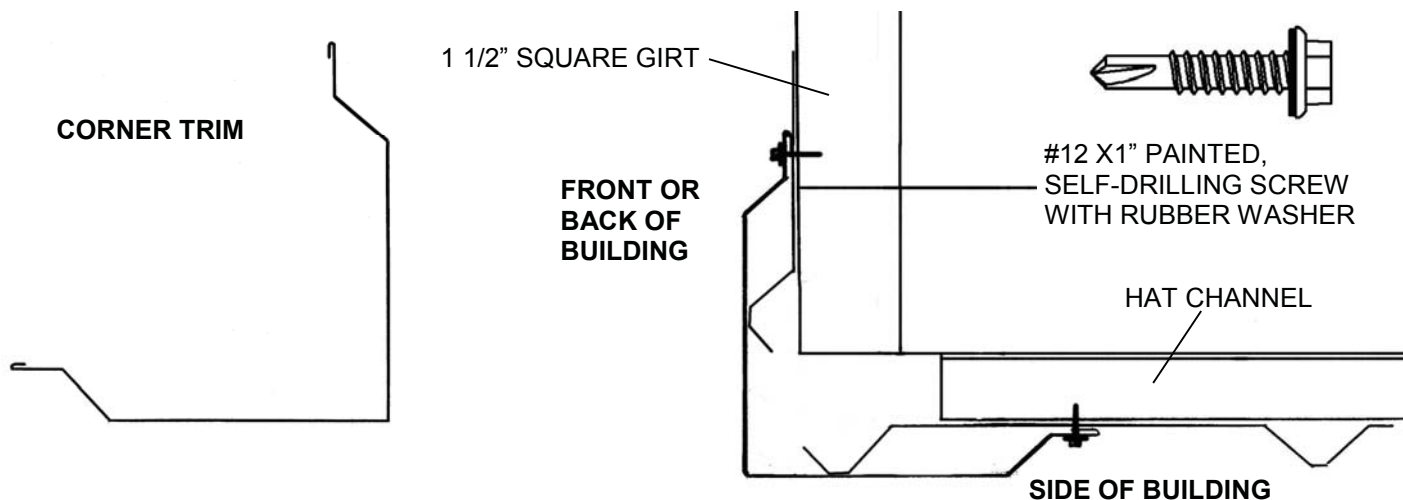
Measure, mark, and cut the top angle on the front panels as you did the back panels. You can either measure and cut the door openings or put the panels up against the building, mark the door openings, take the panels down and cut the door openings. If you place the panels against the building to mark the door opening add about 1/4" to the opening marks to make sure that the J-Trim will not interfere. Cut the horizontal across the ribs with large straight cut Tin Snips first.

To make the vertical cut you can use a straight edge and a Utility Knife. Score the metal with a sharp utility knife the full length of the



INSTALLING CORNER TRIM

Cut corner trim to fit the corner height of your building. Corner trim should sit down in sheeting ledge if your slab has one. Install a piece of Corner Trim on the 4 corners of the building with 1" Painted, Self-Drilling Screws. Install the screws through the flat flanges at the edges of the trim into the wall girts (front or back) hat Channel (sides).



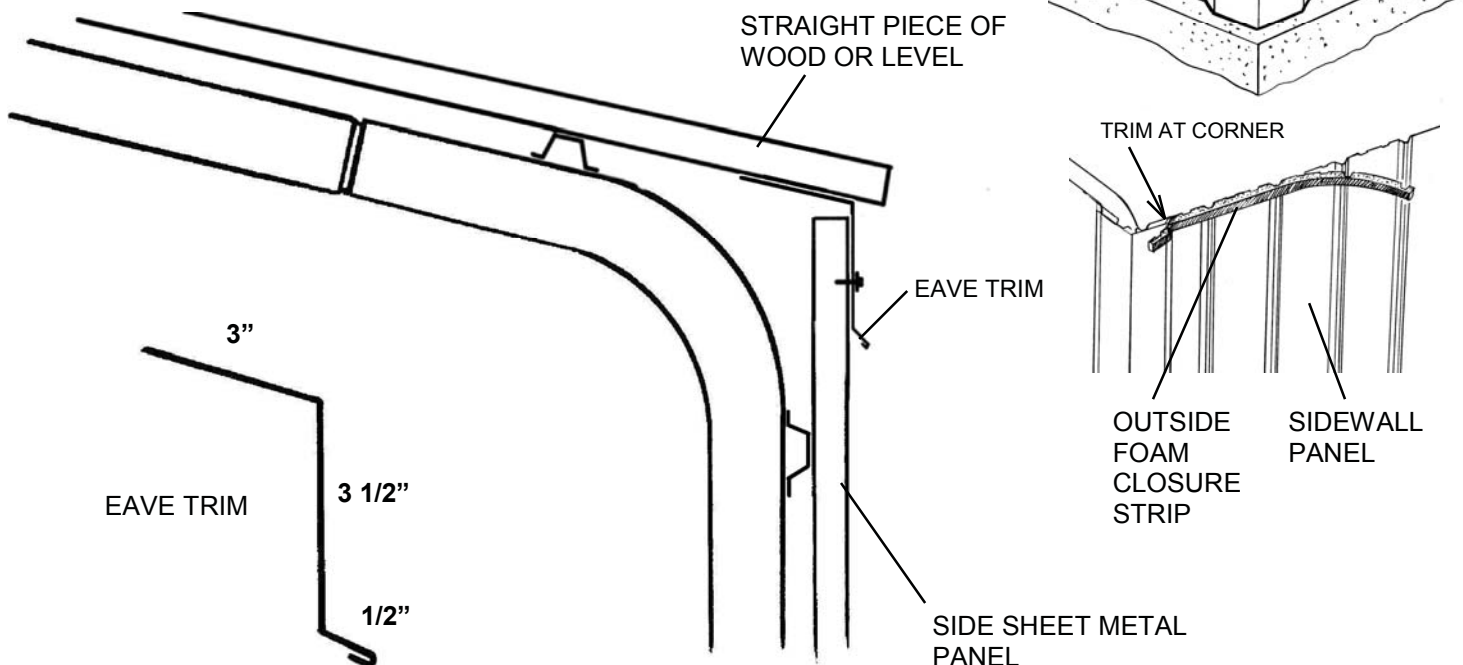
INSTALLING EAVE TRIM

Install Outside Foam Closure Strips along the outside, top edge, of every side panel before you install Eave Trim. Trim the Closures as needed at the corners of the building. (See illustration at lower right.)

Attach the Eave Trim at the top of the side sheet metal all the way down both sides of the building with #12 x1" Painted, Self-Drilling Screws with Rubber washers. Place the screws into the center of every other major rib.

To position the Eave Trim place a straight board or level on top of the roof frame and extend it out to act as a stop for the top of the Eave Trim. See the illustration below. Eave Trim comes in 10' lengths. You will need to overlap the trim about 3" at the ends. Trim excess at end of building flush with the outside of the corner trim.

Eave Trim should overlap Corner Trim. Your trim will look better if you start at the back of the building and work forward.



INSTALLING ROOF SHEET METAL PANELS

LENGTH OF ROOF PANELS: 12' WIDE BUILDING 6'5" LONG, 20' WIDE BUILDING 10'-7" LONG, 24' WIDE BUILDING 12'-7" LONG, 30' WIDE BUILDING 15'-9" LONG.

YOU WILL NEED AT LEAST TWO PEOPLE TO INSTALL ROOF SHEET METAL PANELS

One person will be on a tall step ladder, extension ladder, or scaffold inside the building at the building peak and the other on the outside of the building at the eave. An additional person on the inside of the building on a step ladder close to the side wall can be helpful in lifting the panels onto the roof.

The roof metal is sized to allow a 2" overhang at the eave.

Place the first sheet of roof sheet metal at the back edge of the roof flush with the outside of the building frame. Place the Overlap edge of the panel flush with the end of the building frame.

The person at the lower end of the panel must line the panel edge up with the edge of the building and set the lower edge of the panel to allow 2" of overhang on the side of the building. The person at the upper end of the panel should line the edge of the panel with the edge of the building frame and attach the panel to the top roof purlin (hat channel) with a 1" painted (roof color), self-drilling screw with rubber washer. The person at the lower end of the panel should then attach the panel to the lower purlin making sure that the panel is flush with the building frame. At the eave end of the panel you must install a screw on both sides of each major rib, At the top of the panel and all other intermediate install one screw on one side of each major rib. Where the next panel overlaps the previous panel install screws on both sides of the overlap rib.

We recommend that you install one screw next to the under lap rib of the panel at each roof purlin at this time. This will make the roof more secure when you have to walk on it, and give you location points for installing the remaining screws later when the purlins are not visible. (A third person will save time and energy with this step.)

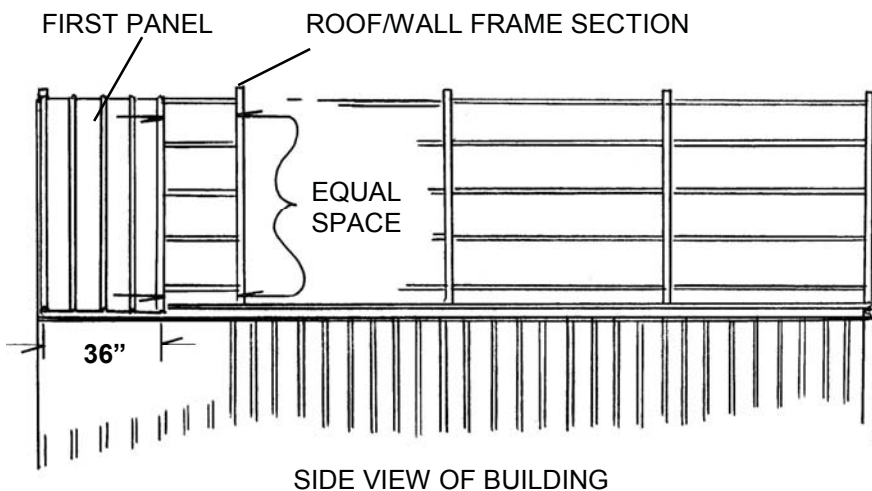
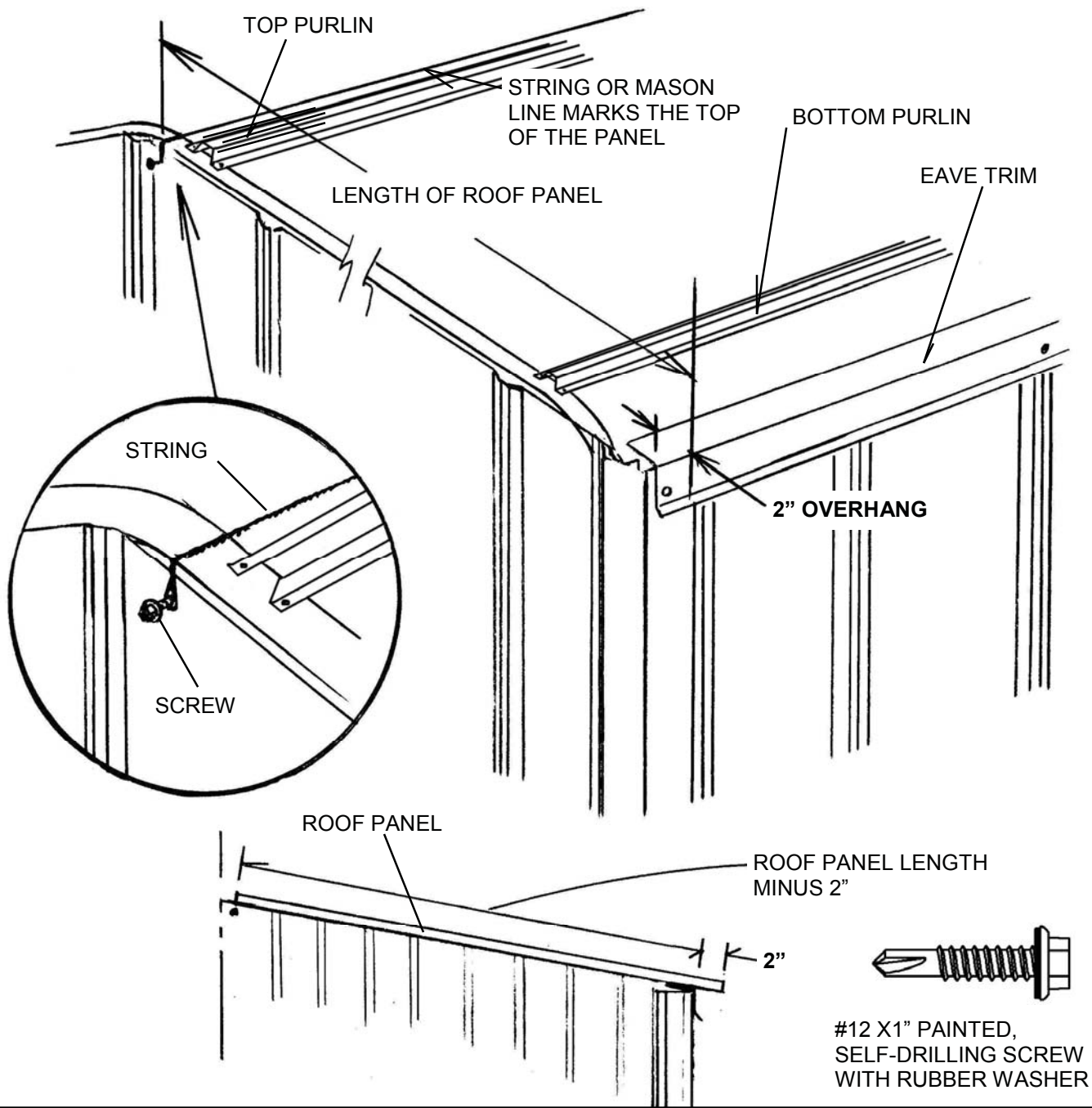
Place the overlap edge of the next roof panel over the under lap edge of the previous panel. Line the panel up with the first panel at the bottom or overhang edge. Attach that upper and lower ends to the purlins. Again, attach the under lap edge at each purlin. **IMPORTANT:** Now, take a measurement from the under lap edge of the panel at the top and bottom to the next frame section. The dimension at the top and bottom of the panel should be the same. If the measurements are not the same you will have to straighten the next panel to get you sheet metal to come out flush with the building at the other end. When you set the next panel in place fasten it to the purlin at the overlap joint at the top and bottom of the panel. You can now stretch or compress the panel to get it parallel with the frame section. Check the distance from the under lap rib to the next frame section at the top and bottom of the panel. If the dimension at the top is larger install a screw next to the under lap rib at the top. If the dimension at the bottom is larger install the screw there and leave the screw out at the top. . This should be 36". Attach at the bottom, measure to the next frame section, set the top edge at the same dimension and attach the top of the panel. Place one screw in remaining roof purlins at the edge of the panel.

Repeat this installation method down the length of the building.

When you install the panels on the other side of the roof, you will have to work the top side of the panels from one side or from the roof on the other side.

When all roof panels have been installed you must get up onto the roof and use the straight edge or string method to install the remaining screws. **When walking on the roof step on the flats only (not on major ribs) . Step on or very near the purlins or frame members. The screws should be a guide to purlin and frame locations.**

(See illustrations on next page)



REMAINING SCREWS

When all roof panels have been installed climb onto the roof. Step only on flat areas next to frame sections or purlins. Install the remaining screws. (use one screw next to each major rib.)

Do not step on major ribs.

INSTALLING GABLE TRIM

GABLE TRIM WILL COME IN 10' OR 14' LENGTHS.

Gable Trim will finish the joints at the gable ends of the building between the roof and the end wall panels.

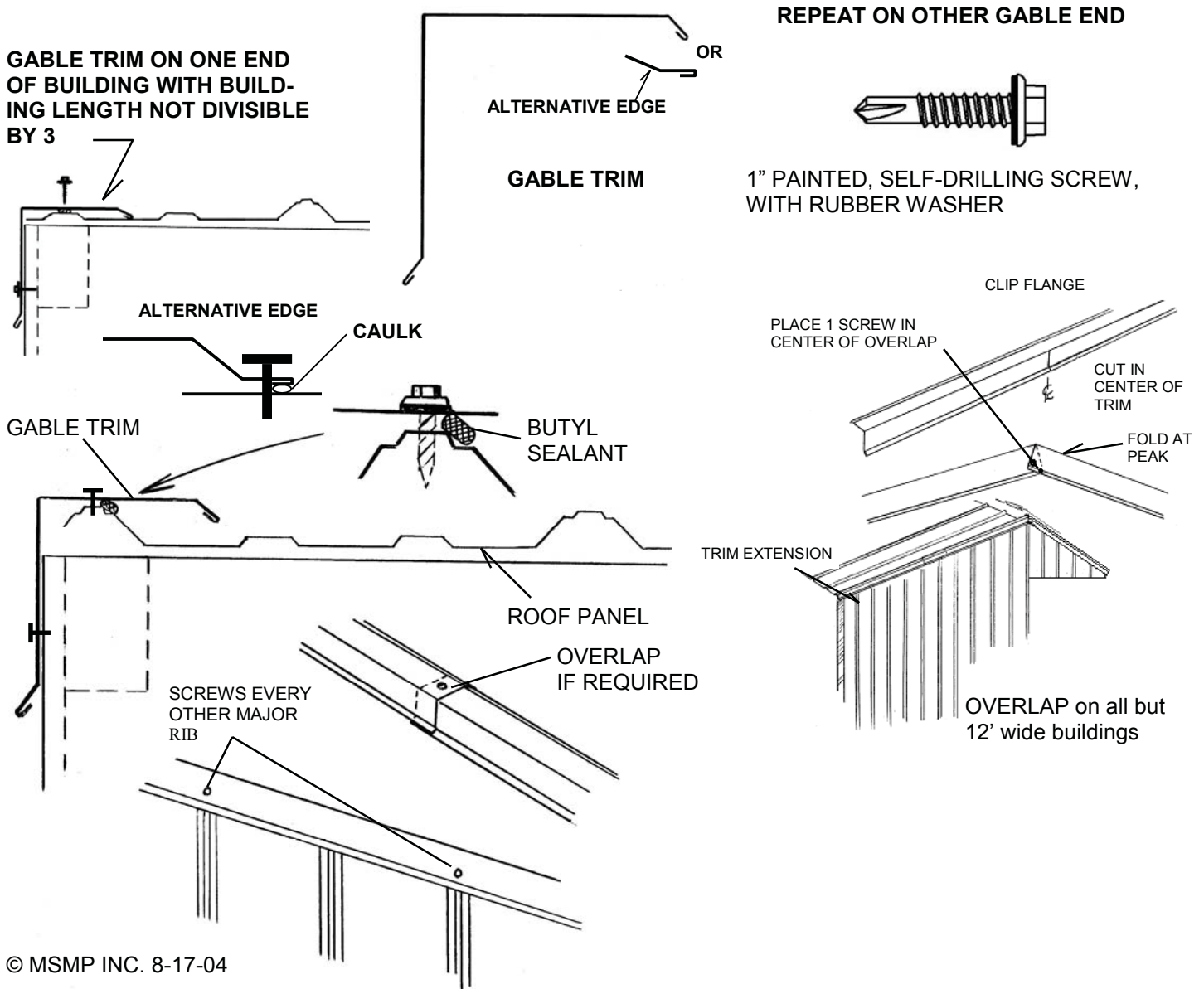
Clip one piece of gable trim in the front center and the top back flange as shown. Fold the trim so the front flanges overlap. This will go at the peak of the building. If you have a 12' wide building and 14' trim you will need to trim the ends of the peak flush with the lower edge of the roof sheet metal panels. If you have 10' trim, you will need to cut 4 short pieces to lap under the ends of the peak pieces. The ends should be flush with the lower edge of the roof panels. If you have a 20', 24', or 30' wide building you will have additional trim pieces that can be cut (or not) to create extensions which will under lap the peak trim at both ends. The lower ends of the gable trim extensions should be set flush with the lower edge of the roof panels. The rest can lap under the peak piece. You should allow enough under lap to have vertical ribs on the front or back of the building to fasten screws into.

On a 30' wide buildings you may need 2 trim extensions on each side of the peak depending on the length of the trim in your kit. Remember, the lower edge of the gable trim should be flush with the lower edge of the roof panels.

Before you install the Gable Trim, run a bead of Butyl Sealant down the major rib of the end roof panels. Place the Butyl Sealant just to the inside of the center of the rib. (See Detail) Run the bead the full length of each gable end roof panel. If you have a building length that is not divisible by 3, one end of the building will not have a major rib on which to place the butyl caulk. In this case place the caulk on top of the 1/4" high minor rib closest to the end of the building.

Fasten the Gable trim to the Roof and End panels with 1" painted, self-drilling screws into the top of every other major rib on the front face and about 24" apart on the roof.

Keep the front of the trim flush with the front of the building and the top flush with the roof. If your trim has a step down or alternative edge on the roof, run the caulk under that edge flange and fasten the trim through the flange.



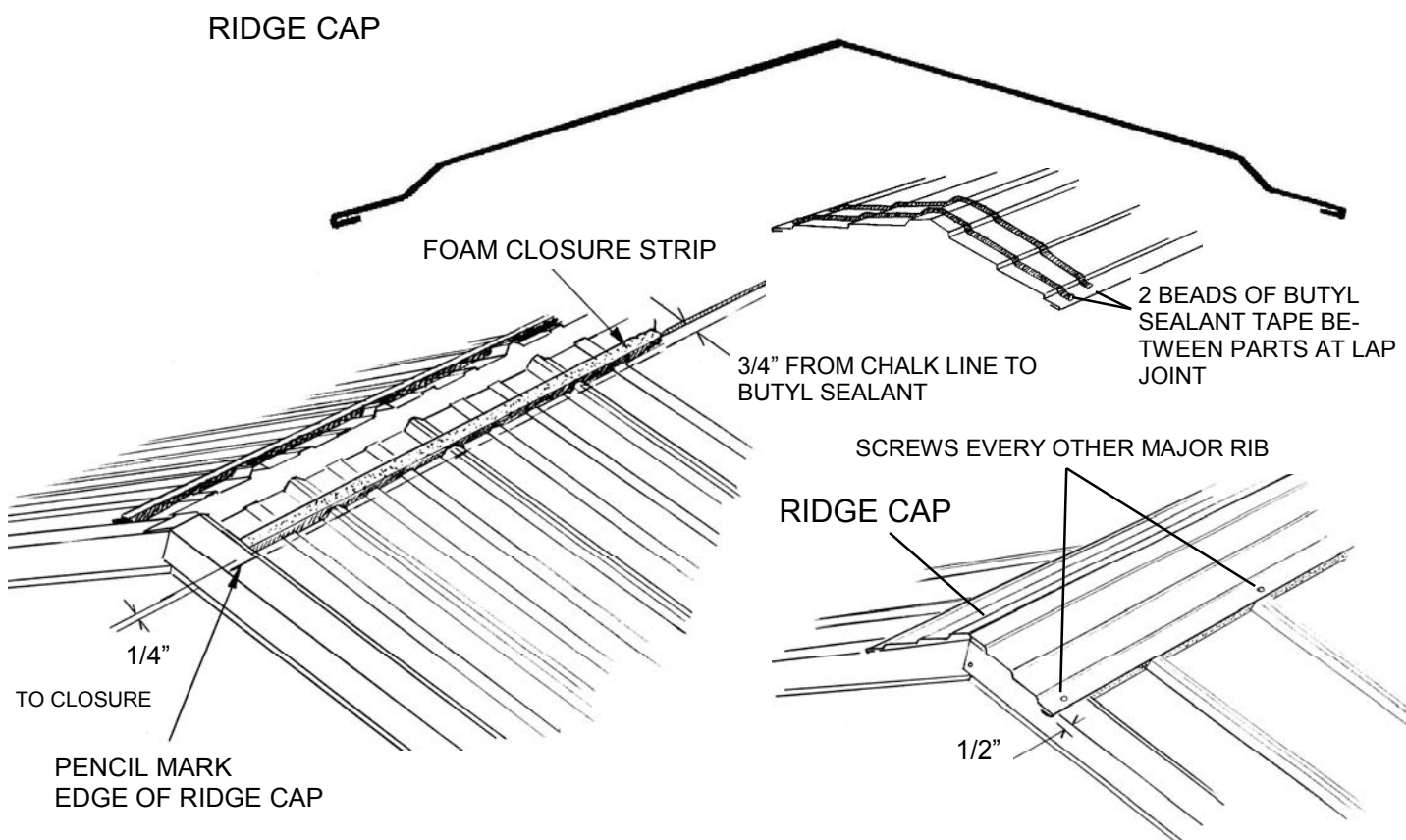
INSTALLATION OF RIDGE CAP

RIDGE CAP WILL COME IN 10'-6" LENGTHS. YOU WILL OVERLAP PIECES 6" UNTIL YOU GET TO THE OTHER END OF THE BUILDING WHERE YOU WILL TRIM THE LAST PIECE TO FIT. THE RIDGE CAP SHOULD OVERHANG THE GABLE TRIM 1/2" AT BOTH ENDS OF THE BUILDING.

Place a piece of Ridge Cap on the peak of the building. Center it and make a mark at the lower edges at the end of the building. Do the same thing at the opposite end of the building and snap a chalk line between the marks. This will make the Ridge Cap easier to line up and provide a measuring point for locating Butyl Sealing Tape and Outside Foam Closure Strips.

Apply a bead of Butyl Sealing Tape to the roof panels the full length of the building 3/4" up from the chalk lines on both sides of the roof. Now, press Outside Closure strips to the Butyl Tape all the way down the building on both sides of the roof. The edge of the Closure should be 1/4" up from the chalk line.

Install the first piece of Ridge Cap on the peak at the back of the building. Let the Ridge Cap overhang the Gable Trim by 1/2". Fasten with 1" Painted, Self-drilling Screws through the edge flange and into the top of every other major rib. Run two beads of butyl tape at the end of the first piece of ridge cap to seal it to the next overlapping piece of Ridge Cap. Lap the next piece of Ridge Cap 6" over the first, press the seam together and so on down the building. The last piece should overhang the Gable Trim at the other end of the building 1/2".



STEP 19: INSIDE CLOSURE STRIPS AT EAVE

On the inside of the building, install Inside Foam Closure Strips between the eave trim flange and the roof panels. Peel the strips off the backing paper, pull down the eave trim flange and work the closure strips between the flange and the roof panels. The ends of the strips will interlock at a major rib. Start in one corner and work to the other.



FOAM CLOSURE INTERLOCK

