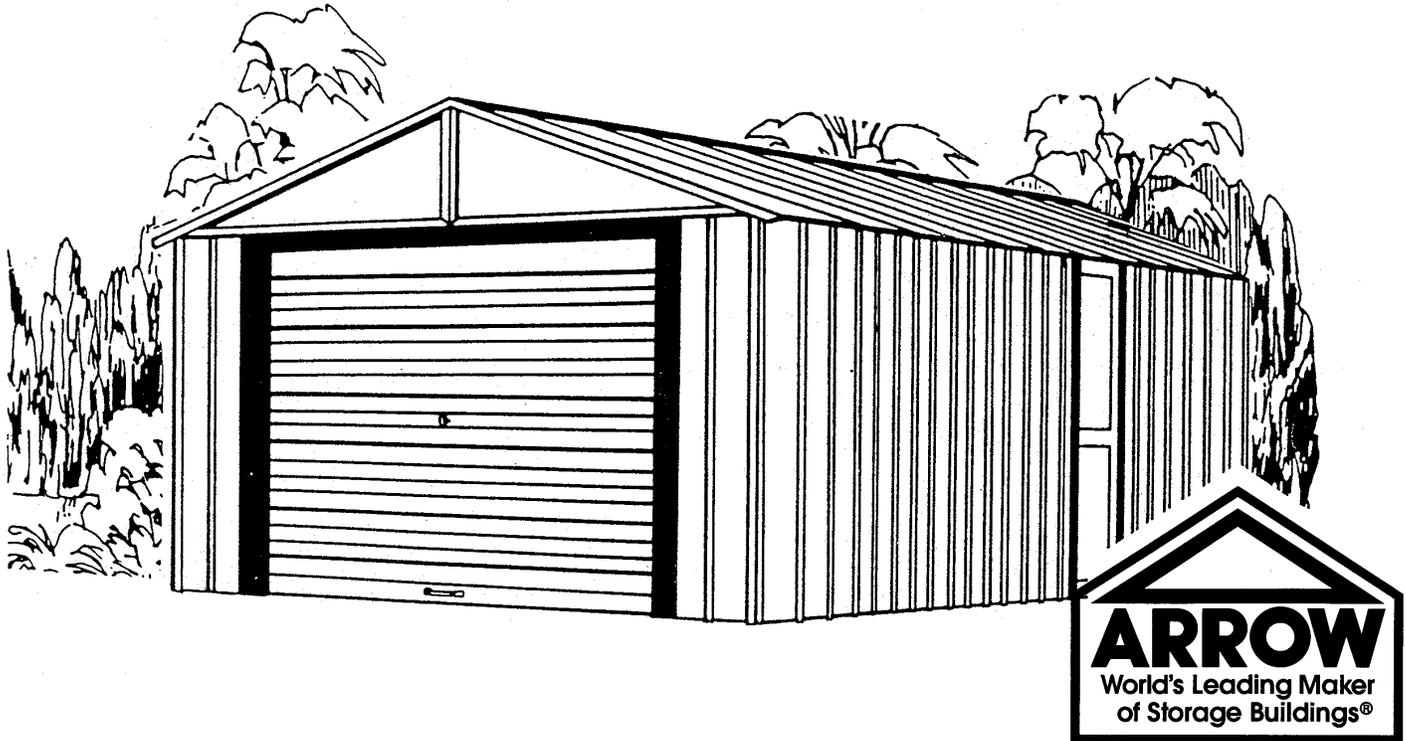


# Owner's Manual & Assembly Instructions

BW1

**Model No.**    **VT1210**                       **VT1217**                       **VT1224**   
                          **VT1231**                       **697.68887**                       **697.68888**



704880801

**BUILDING DIMENSIONS** \* Size rounded off to the nearest foot



**CAUTION: SOME PARTS HAVE SHARP EDGES. CARE MUST BE TAKEN WHEN HANDLING THE VARIOUS PIECES TO AVOID A MISHAP. FOR SAFETY SAKE, PLEASE READ SAFETY INFORMATION PROVIDED IN THIS MANUAL BEFORE BEGINNING CONSTRUCTION. WEAR GLOVES WHEN HANDLING METAL PARTS.**

*Approx. Size	Foundation Size	Storage Area Sq. Ft. Cu. Ft.		Exterior Dimensions (Roof Edge to Roof Edge)			Interior Dimensions (Wall to Wall)		
				Width	Depth	Height	Width	Depth	Height
12' x 10'	141 1/8" x 111 3/4"	110	801	146 1/8"	117"	103 1/4"	141 1/8"	111 3/4"	102"
12' x 17'	141 1/8" x 198"	194	1419	146 1/8"	203 1/4"	103 1/4"	141 1/8"	198"	102"
12' x 24'	141 1/8" x 284 1/4"	278	2037	146 1/8"	289 1/2"	103 1/4"	141 1/8"	284 1/4"	102"
12' x 31'	141 1/8" x 370 1/2"	362	2655	146 1/8"	375 3/4"	103 1/4"	141 1/8"	370 1/2"	102"
3,7m x 3,1m	3,58m x 2,84m	10,2m <sup>2</sup>	22,7m <sup>3</sup>	3,71m	2,97m	2,62m	3,58m	2,84m	2,59m
3,7m x 5,2m	3,58m x 5,03m	18,0m <sup>2</sup>	40,2m <sup>3</sup>	3,71m	5,16m	2,62m	3,58m	5,03m	2,59m
3,7m x 7,3m	3,58m x 7,22m	25,8m <sup>2</sup>	57,7m <sup>3</sup>	3,71m	7,35m	2,62m	3,58m	7,22m	2,59m
3,7m x 9,5m	3,58m x 9,41m	33,6m <sup>2</sup>	75,2m <sup>3</sup>	3,71m	9,54m	2,62m	3,58m	9,41m	2,59m

# BEFORE YOU BEGIN...

A2

## Owner's Manual

Before beginning construction, check local building codes regarding footings, location and other requirements. Study and understand this owner's manual.

Important information and helpful tips will make your construction easier and more enjoyable.

**Assembly Instructions:** Instructions are supplied in this manual and contain all appropriate information for your building model. Review all instructions before you begin, and during assembly, follow the step sequence carefully for correct results.

**Foundation and Anchoring:** Your storage building must be anchored to prevent wind damage. A foundation is also necessary as a base in order to construct a square and level building. Anchoring and foundation materials are not included with your building. We recommend the combined use of an **Arrow Floor Foundation Kit** and an **Arrow Anchoring Kit** as an effective method of securing your building to the ground (Available by mail order or at your local dealer) or you may construct the foundation and anchoring system of your choice. Your assembly instructions provide information on a few methods commonly used to secure and level a storage building.

**Parts and Parts List:** Check to be sure that you have all the necessary parts for your building.

- All part numbers can be found on the parts. All of these numbers (before the -) must agree with the numbers on the parts list. The parts list is located on page 12.

- If you find that a part is missing, include the model number of your building and contact:

**Arrow Group Industries, Inc. Customer Service Department**  
**Route 50 East Breese, Illinois 62230**  
**1-800-851-1085**

- Separate contents of the carton by the part number while reviewing parts list. The first few steps show how to join related parts to make larger sub assemblies which will be used later.

- Familiarize yourself with the hardware and fasteners for easier use during construction. These are packaged within the carton. Note that extra fasteners have been supplied for your convenience.

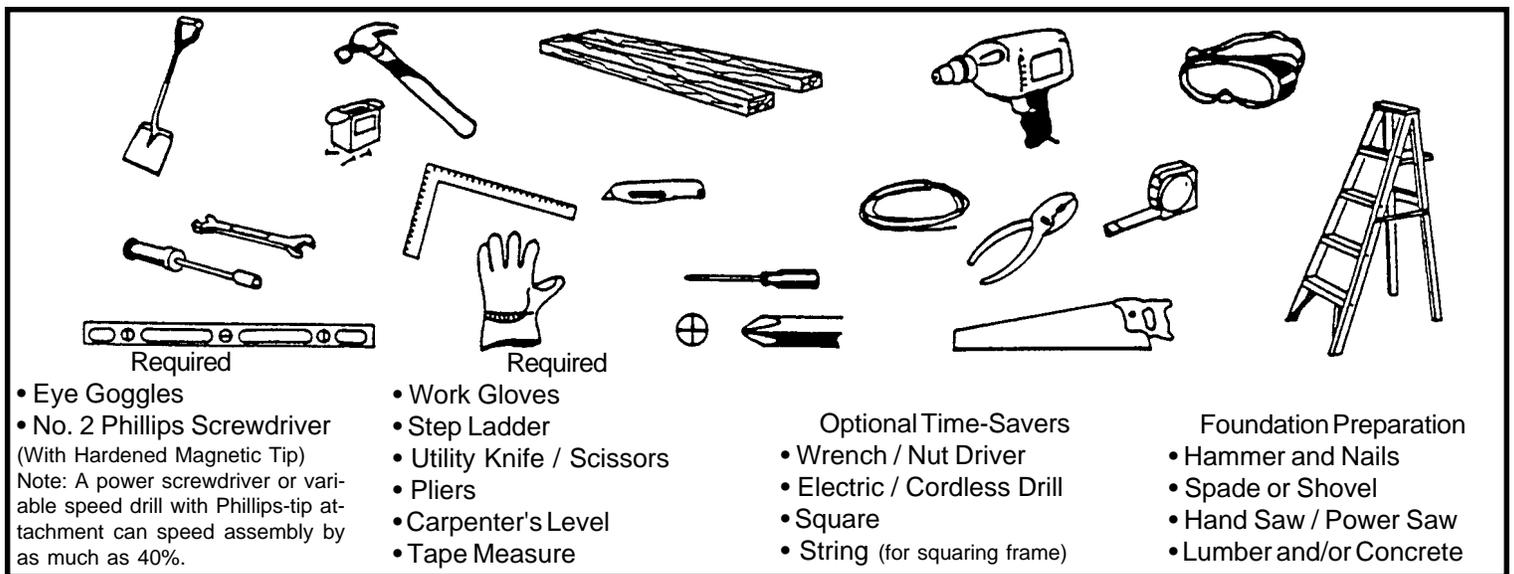
# PLAN AHEAD...

A3

**Watch the Weather:** Be sure the day you select to install your building is dry and calm. Do not attempt to assemble your building on a windy day. Be careful on wet or muddy ground.

**Teamwork:** Whenever possible, two or more people should work together to assemble your building. One person can position parts or panels while the other is able to handle the fasteners and the tools.

**Tools and Materials:** These are some basic tools and materials you will need for the construction of your building. Decide which method of anchoring and the type of foundation you wish to use in order to form a complete list of the materials you will need.



**Selecting and Preparing Your Site:** Before assembly, you will want to decide on a location for your building. The best location is a level area with good drainage.

- Allow enough working space for ease of moving parts into position during assembly. Be sure there will be enough space at entrance for doors to open fully and enough space around the building to be able to fasten the panel screws from the outside.

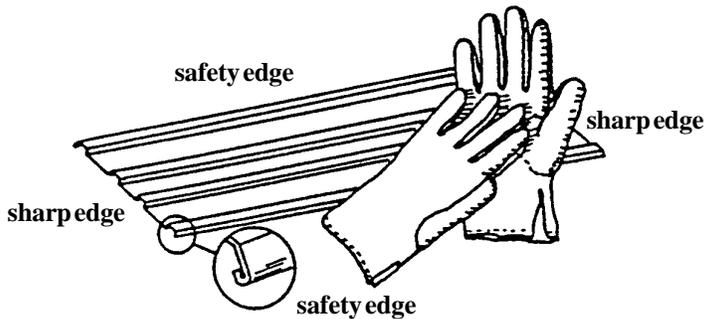
- Before you begin the first steps in assembling your parts, a foundation should be constructed and an anchoring system should be ready to use.

# SAFETY FIRST...

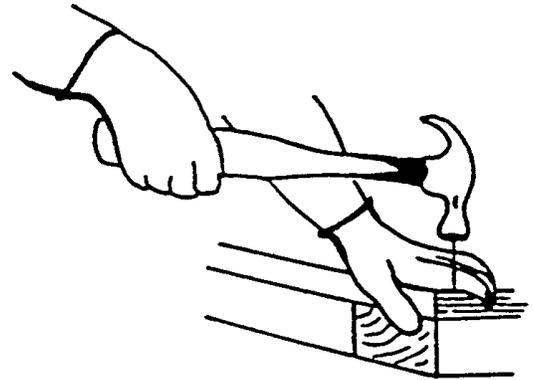
A4

**Safety precautions are important to follow throughout the construction of your building.**

•Care must be taken when handling various pieces of your building since some contain sharp edges. Please wear work gloves, eye protection and long sleeves when assembling or performing any maintenance on your building.



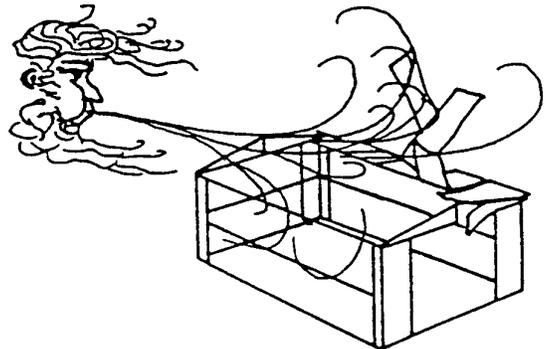
•Practice caution with the tools being used in the assembly of this building. Be familiar with the operation of all power tools.



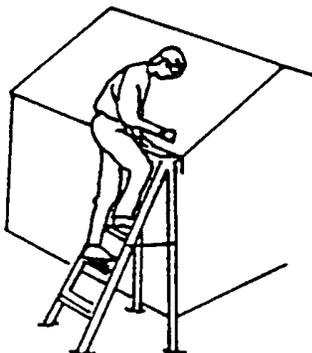
•Keep children and pets away from worksite to avoid distractions and any accidents which may occur.



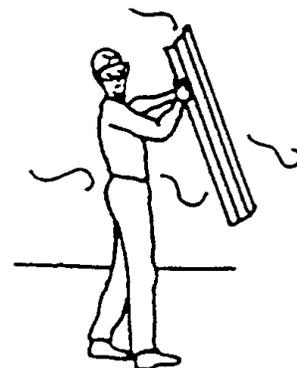
•Do not attempt to assemble the building if parts are missing because any building left partially assembled may be seriously damaged by light winds. Call 1-800-851-1085



•Never concentrate your total weight on the roof of the building. When using a step ladder make sure that it is fully open and on even ground before climbing on it.



•Do not attempt to assemble the building on a windy day, because the large panels acting as a "sail", can be whipped about by the wind making construction difficult and unsafe.



# CARE & MAINTENANCE....

A5 Web

**Finish:** For long lasting finish, periodically clean and wax the exterior surface. Touch-up scratches as soon as you notice them on your unit. Immediately clean the area with a wire brush; wash it and apply touch-up paint per manufacturer's recommendation.

**Roof:** Keep roof clear of leaves and snow with long handled, soft-bristled broom. Heavy amounts of snow on roof can damage building making it unsafe to enter. In snow country, Roof Strengthening Kits are available for most Arrow Buildings for added protection against heavy snow accumulation.

**Doors:** Always keep the door tracks clear of dirt and other debris that prevent them from sliding easily. Lubricate door track annually with furniture polish or silicone spray. Keep doors closed and locked to prevent wind damage.

**Fasteners:** Use all washers supplied to protect against weather infiltration and to protect the metal from being scratched by screws. Regularly check your building for loose screws, bolts, nuts, etc. and retighten them as necessary.

**Moisture:** A plastic sheet (vapor barrier) placed under the entire floor area with good ventilation will reduce condensation.

## Other Tips....

- Wash off inked part numbers on coated panels with soap and water.
- Silicone caulking may be used for watertight seals throughout the building.

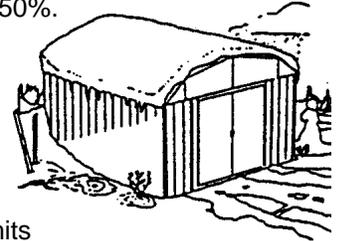
**Do not store swimming pool chemicals in your building. Combustibles and corrosives must be stored in air tight approved containers.**

**Keep this Owner's Manual and Assembly Instructions for future reference.**

# ACCESSORIES...

A6 WEB

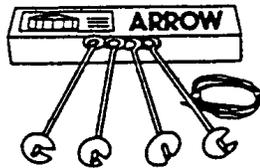
**ROOF STRENGTHENING (heavy snow load) KITS** Extra roof beams and gable braces designed for added protection against heavy snow accumulation. Increases the strength of your roof by 50%.



## ANCHOR KIT

### Model No. AK4

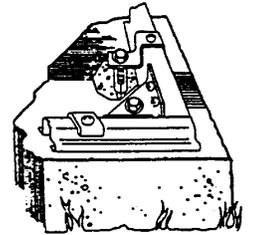
Anchor Kit contains heavy-duty steel augers, 60' (18m) of steel cable and 4 cable clamps. No digging or concrete pouring, just insert cable under roof, over roof beams, into augers and twist augers into the ground. For buildings larger than 10'x9', use 2 kits.



## ANCHOR KIT

### Model No. AK100

New concrete anchor system permits anchoring any size Arrow building directly to a concrete slab. Each kit contains heavy-duty, hot-dipped galvanized steel corner gussets and perimeter clips which fit over the floor frame and lag bolt into a concrete slab. Full assembly instructions and a 1/4" masonry drill bit are included.



## FLOOR FOUNDATION KITS

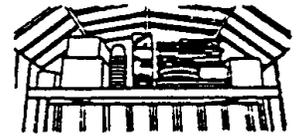


MODELS FB47410, FB5465, FB106-A  
FB109-A, FB1010 AND FB1014-A

A simple new floor frame system made of heavy-duty, hot-dipped galvanized steel. Use as foundation for plywood, sand or stone.

## ATTIC KIT / WORKBENCH KIT

Heavy-duty galvanized steel bars that fit all 10' wide Arrow buildings. They install quickly and easily to help organize space and create more useable space as an attic or workbench. Will hold up to 250 lbs. (113kg) evenly distributed.



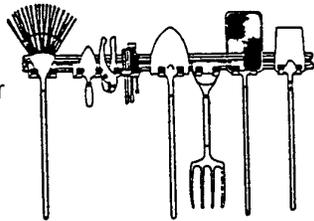
Model No.	Fits	Shipping Weight
AT101	10' Long, 250 lb. (113kg) load+ Fits all Arrow 10' wide buildings.	16 lbs. (7kg)

Must be drilled for use as workbench in Estator.  
+ Even weight distribution.

## TOOL HANGING RACK

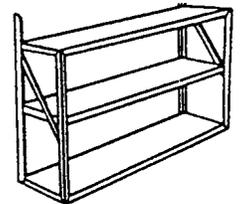
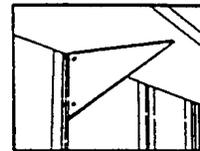
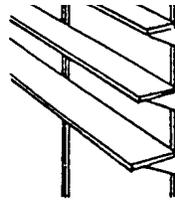
### Model No. TH100

The perfect tool organizer. Twin 25 1/2" (65cm) steel channels plus five heavy-duty snap-in hangers and a small tool holder for screwdrivers, pliers, etc. Holders slide along channel for fully adjustable spacing. Great for garage, basement, or the back of any door. Fits all Arrow storage buildings.



## SHELF UNITS

Heavy-duty, galvanized steel shelf units help organize storage space. They easily mount on the wall or sit on the floor. Fits all Arrow buildings.\*



Model No. SS404

- Makes 8" to 12" (20-30cm) wide shelves in any length.
- Brackets, braces, hardware included. Lumber is not included.

Model No. SS900-A

- Grey color
- 3 shelves
- Holds up to 85 lbs. (38kg) (even weight distribution)

\* Some drilling required to fit buildings without mid-wall bracing.

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# Foundation

BW9

## The Foundation For Your Building

### Concrete Slab

**The slab should be at least 3" to 4" (8-10cm) thick. It must be level and flat to provide good support for the frame. The following are the recommended materials for your foundation.**

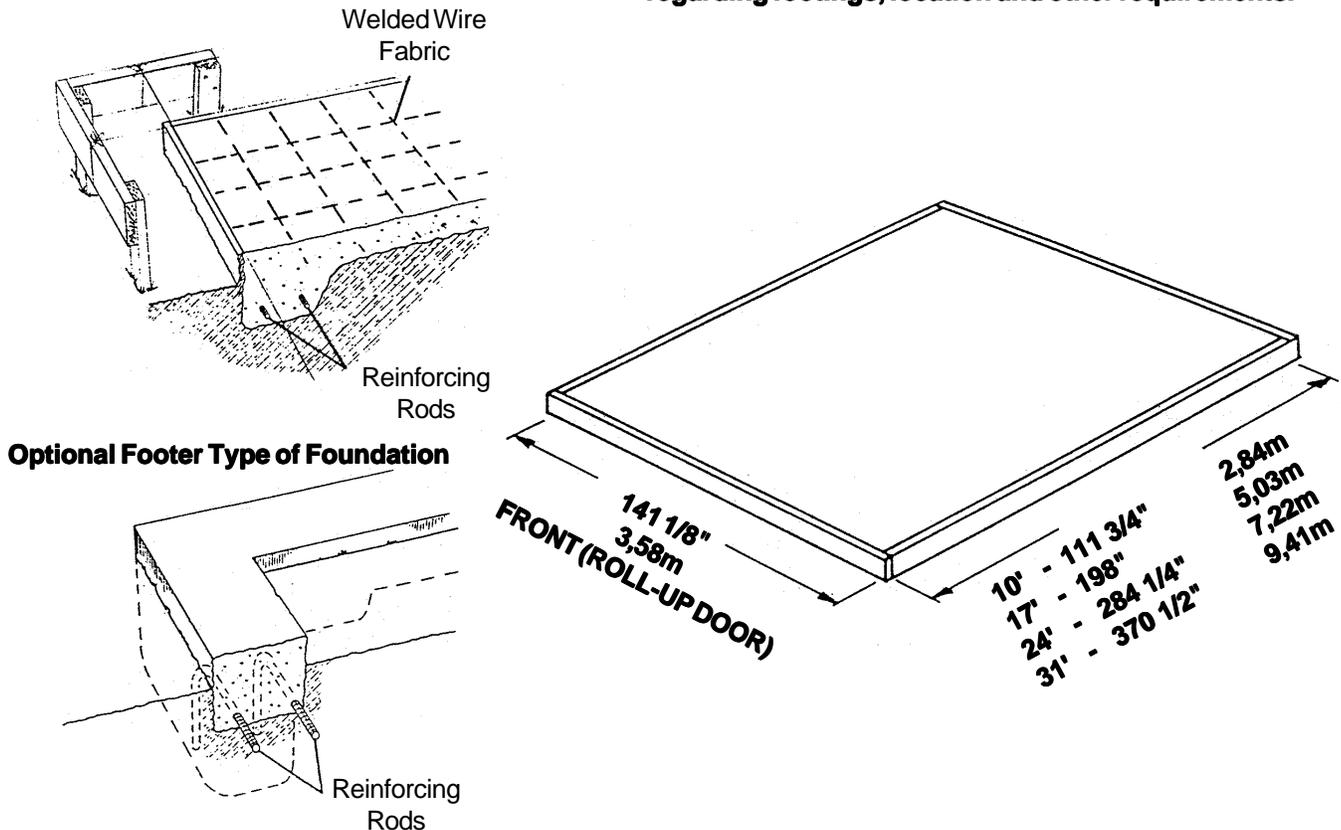
- 2 x 4's (5cm x 10cm) (will be removed once the concrete cures)
- Concrete
- Sheet of 6 mil plastic
- We recommend for a proper strength concrete to use a mix of:  
1 part cement ● 3 parts pea sized gravel ● 2 1/2 parts clean sand

### Prepare the Site/Construct a Foundation

1. Dig a square, 6" (15cm) deep into the ground (remove grass).
2. Fill up to 4" (10cm) in the square with gravel and tamp firm.
3. Cover gravel with a sheet of 6 mil plastic.
4. Construct a wood frame using four planks of 2x4 (5cm x 10cm) lumber.
5. Pour in concrete to fill in the hole and the frame giving a total of 4" (8-10cm) thick concrete. Be sure surface is level.

**Allow 3 - 5 hours for construction and a week for concrete curing time.**

**Note: Before beginning construction, check local building codes regarding footings, location and other requirements.**



**Note:** Finished Slab dimensions, with lumber removed.

# Anchoring

A10

## Anchoring Down The Building

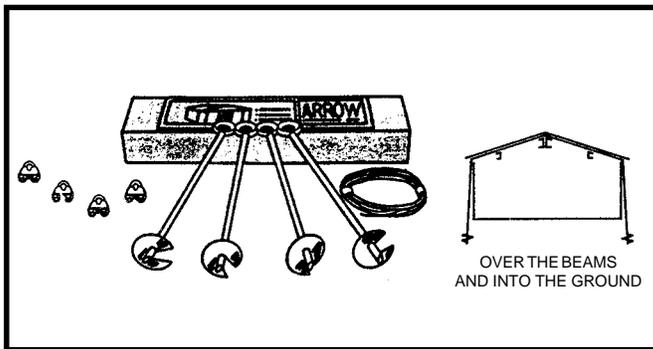
**It is important that the entire floor frame be anchored after the building is erected.**

Below are recommended ways of anchoring.

**Arrow Anchoring Kit:** (Model No. AK4 or 60298)

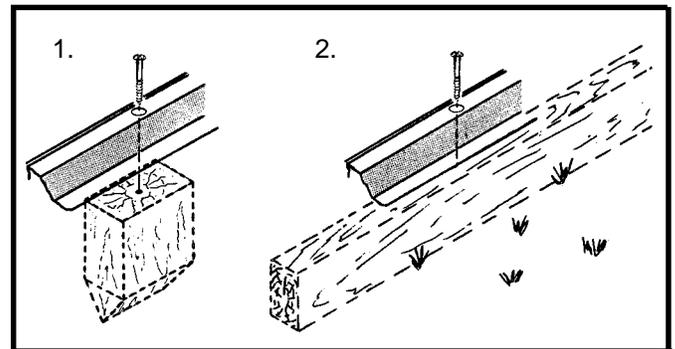
Recommended for use with **any** suggested **base**.

**Contains:** 4 Anchors with Cable, Clamps and installation instruction.



**Anchoring into Wood/Post:**

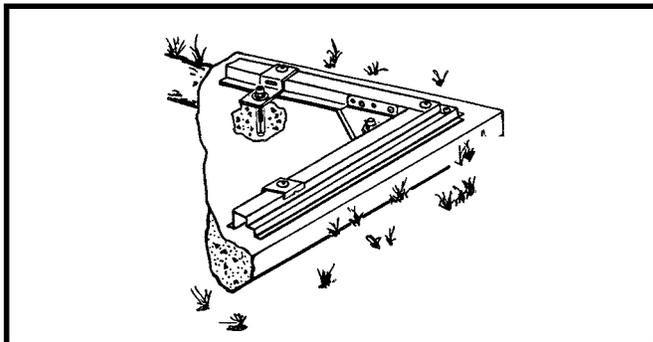
Use 1/4" Wood Screws. There are 1/4" (0,63cm) dia. holes provided in the frames for proper anchoring.



**Arrow Anchoring Kit:** (Model No. AK100 or 68383)

Recommended for use with the **concrete** foundation.

**Contains:** Corner gussets, perimeter clips, hardware, 1/4" masonry drill bit and installation instruction.

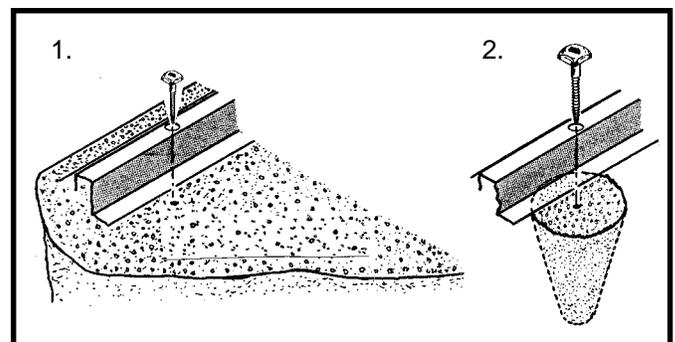


**Anchoring into Concrete:**

1. For poured concrete slab or footing or patio blocks:

Use 1/4" x 2" Lag Screws.

2. For Anchor Post of Concrete poured after building is erected: Use 1/4" x 6" Lag Screws.

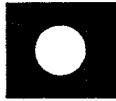


# Hardware for Building

BW11



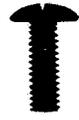
**65004**  
#8x5/16" Screw (403)  
(190) (Carton 4)



**65101**  
1/4-20 Square Nut (10)  
(Packed with Screws)



**65106**  
#10-32 Square Nut (200)  
(184) (Carton 4)



**65943**  
#10-32x7/16" Bolt (194)  
(184) (Carton 4)



**65989**  
1/4-20x1/2" Hex Head Bolt (10)  
(Packed with Screws)



**65408**  
#10-32x1/4" Bolts (4)

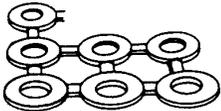


Remove from bag of screws  
and save for the Step 28

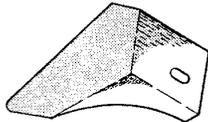
**65900A**  
#10Bx1/2" Black Screw (2)  
(Packed with Screws)



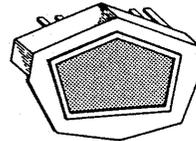
**65914**  
#6x7/8" Screw (5)  
(Packed with Screws)



**66646**  
Washer (600)  
(320) (Carton 4)



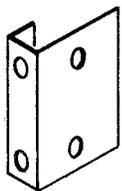
**66444**  
Roof Trim Cap  
(2 right & 2 left)



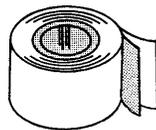
**66446 (Arrow Logo)**  
Peak Cap (2)



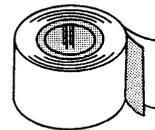
**66610 (No Slot)**  
#10-32x7/16" Bolt (2)



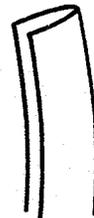
**7972**  
Door Handle Lock Bracket (1)



**67545 21'**  
Weather Stripping (1)



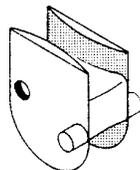
**67293 10'**  
Weather Stripping (1)  
(Carton 4)



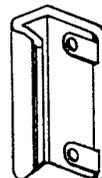
**66265**  
Edge Trim (4)  
(Carton 4)



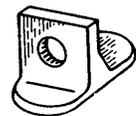
**66098**  
Plastic Spacer (5)



**66242**  
Door Slide (2)



**66260**  
Handle (2)



**66382**  
Lower Door Guide (2)

# Parts List

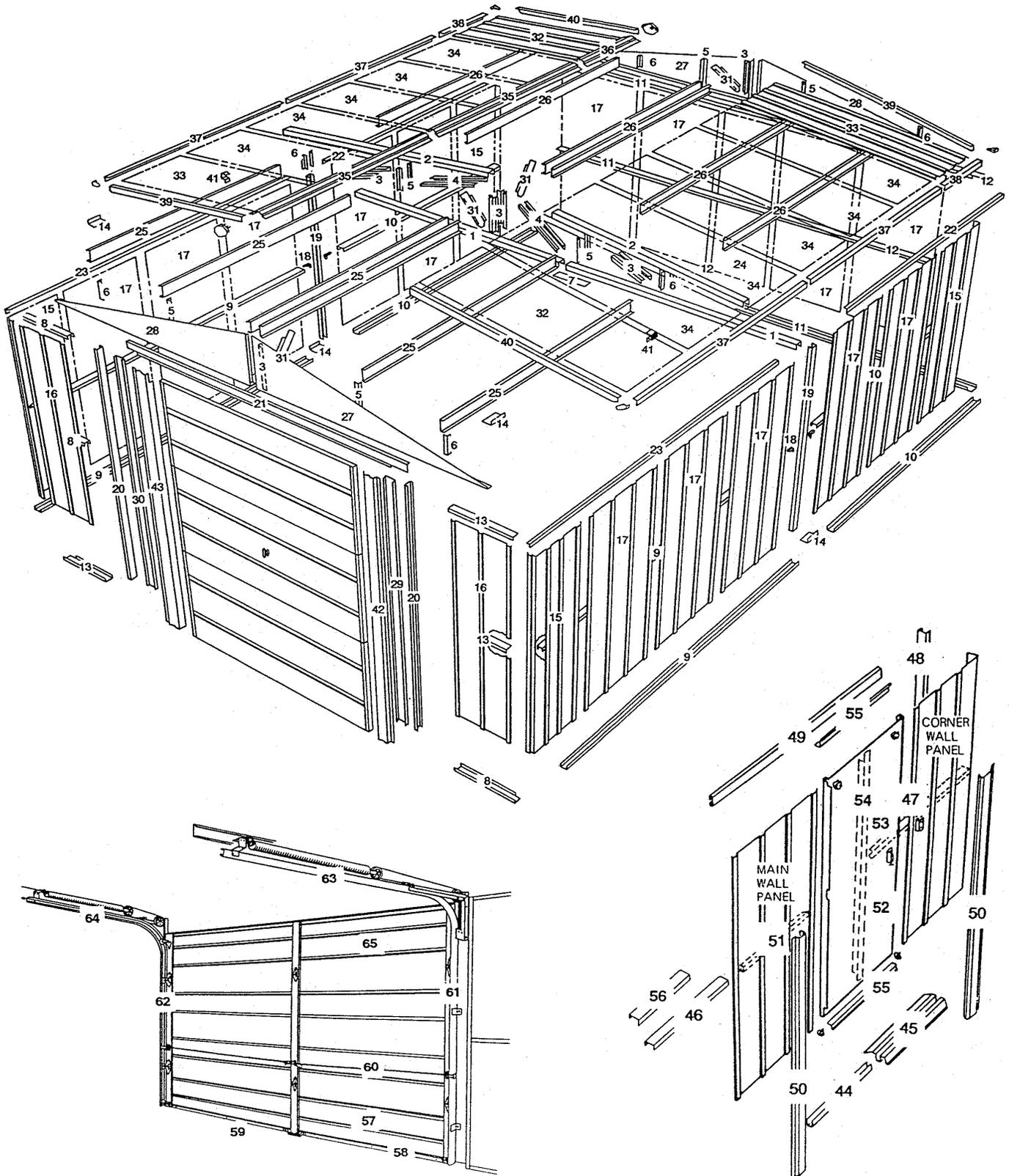
BW12

Carton #4 of the VT1217 can be deleted for a complete 12'x10' building, or more than one carton #4 may be used to extend depth in multiples of 7'.

Assembly Key No.	Part Number	Part Description	Carton 1	Carton 2	Carton 3	Carton 4
1	7855	Truss Lower Chord				2
2	7856	Truss Upper Chord				2
3	6382	Center Gable Brace		2		8
4	7739	Truss Diagonal				4
5	6381	Mid Gable Brace		4		4
6	6380	Outer Gable Brace		4		4
7	7738	Splice Plate				1
8	7834	Right Front Frame		3		
9	7837	Side Frame		4		
10	7914	Side Frame				4
11	8532	Right Rear Frame		3		
12	8531	Left Rear Frame		3		
13	7835	Left Front Frame		3		
14	7857	Truss Support	2			2
15	7824	Corner Wall Panel	4			
16	7825	Front Wall Panel	2			
17	7822	Main Wall Panel	7			6
18	6228	Frame Support				4
19	7917	Truss Column				2
20	7839	Front Column	2			
21	7831	Lintel		1		
22	7915	Side Top Angle				2
23	7838	Side Top Angle		2		
24	7823	Medium Wall Panel	1			
25	7833	Roof Beam		6		
26	7912	Roof Beam				6
27	7942	Right Gable	2			
28	7943	Left Gable	2			
29	7840	Right Track Support	1			
30	7841	Left Track Support	1			
31	6372	Gable Strut		2		2
32	7827	Left Roof Panel	2			
33	7826	Right Roof Panel	2			
34	7828	Middle Roof Panel	4			6
35	7843	Ridge Cap		1		1
36	6874	Ridge Cap		1		
37	5220	Side Roof Trim		2		2
38	6014	Side Roof Trim		2		
39	7845	Left Rake		2		
40	7846	Right Rake		2		
41	7913	Spring Support Bracket	2			
42	7830	Right Door Jamb	1			
43	7829	Left Door Jamb	1			
44	7517	Lower Door Track	1			
45	7560	Ramp	1			
46	7950	Side Wall Channel	1			
47	7949	Side Wall Channel	1			
48	7951	Support Column	1			
49	7958	Door Track	1			
50	7946	Door Jamb	2			
51	7948	Door Wall Brace	1			
52	7945	Door	1			
53	3719	Door Handle Brace	1			
54	7947	Vertical Door Brace	1			
55	6264	Horizontal Door Brace	2			
56	8530	Splice Channel	1			
57	9286	Door Panel (Bottom)			1	
58	7808	Bottom Angle			1	
59	8198	Vinyl Weatherstrip			1	
60	7848	Door Panel (Lock)			1	
61	67510	Right Vertical Track			1	
62	67509	Left Vertical Track			1	
63	67476	Right Horizontal Tack			1	
64	67475	Left Horizontal Track			1	
65	7847	Door Panel (Top)			1	

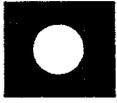
# Assembly by Key No.

BW13



# Hardware for Roll-Up-Door

BW14



**65101 (16)**  
1/4-20 Square Nut  
(Packed with Screws)



**66464 (2)**  
1/4-20 1 1/2" Hex  
Head Bolt



**65989 (6)**  
1/4-20x1/2" Hex  
Head Bolt  
(Packed with Screws)



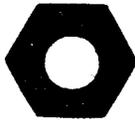
**65106 (16)**  
#10-32 Square  
Nut



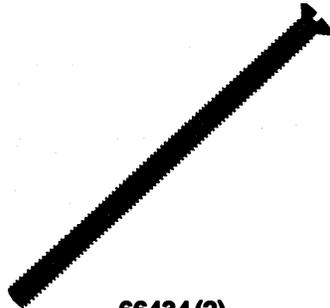
**66431 (8)**  
1/4-20x5/8" Rib  
Neck Bolt



**66432 (4)**  
3/8-16x1 1/2" Hex  
Head Bolt



**66433 (4)**  
3/8-16 Hex Nut



**66434 (2)**  
#10-32 x 2 1/2" Flat  
Head Bolt



**65900A (38)**  
#10Bx1/2" Black  
Truss Head Screw  
(Packed with Screws)



**66441 (14)**  
#10-32x3/8" Bolt

**67525**  
Inside "T" Handle  
(1)

**67483**  
Cable Lacer  
(2)

**67484**  
Spring Clevis  
(2)

**67488**  
Heavy "S" Hook  
(4)

**67503**  
Stile Spacer  
(2)

**67504**  
Inside Latch Bar  
Spacer (1)

**67482**  
Keyed Cable  
(2)

**67485**  
Left Bottom  
Bracket (1)

**67486**  
Right Bottom  
Bracket (1)

**67490**  
#1 Hinge  
(4)

**67491**  
#2 Hinge  
(2)

**67493**  
Top Fixture  
(2)

**67494**  
Lift Handle  
(2)

**67496**  
Roller  
(8)

**67497**  
Sheave  
(4)

**67528 Latch Set**  
(1) Flat Latch Bar  
(4) "S" Hooks  
(2) Strikers  
(2) Spring Latches  
(2) Latch Chains

**67500**  
Spring  
(2)

**67513**  
Spring Restraint  
Cable (2)

**67526**  
Locking Handle  
(1)

# Step 1

BW15

● Parts Needed For ●

## Truss Assembly 12x17, 12x24 & 12x31 ONLY

- 7855 Truss Lower Chord (2)
- 7856 Truss Upper Chord (2)
- 6382 Center Gable Brace (8)
- 7739 Truss Diagonal (4)
- 6381 Mid Gable Brace (4)
- 6380 Outer Gable Brace (4)
- 7738 Splice Plate (1)

**1** Assemble 1/2 truss at a time, using #10-32x7/16" bolts and square nuts, on all connections loosely.

**2** Attach **truss lower chord** to **truss upper chord**.

**3** Attach 2 **center gable braces** to the upper and lower chords at the opposite end of truss.

**4** Attach 2 **truss diagonals** to upper and lower chords.

**5** Attach 2 **mid gable braces** to upper and lower chords.

**6** Attach 2 **center gable braces** to upper and lower chords at middle of truss.

**7** Attach 2 **outer gable braces** to upper and lower chords. Mount with short leg of brace.

**8** Square up 1/2 truss, adjust and tighten.

**9** Make other half and square.

**10** Splice both halves together with **splice plate** and fasten center gable braces together, using 3 bolts and nuts.

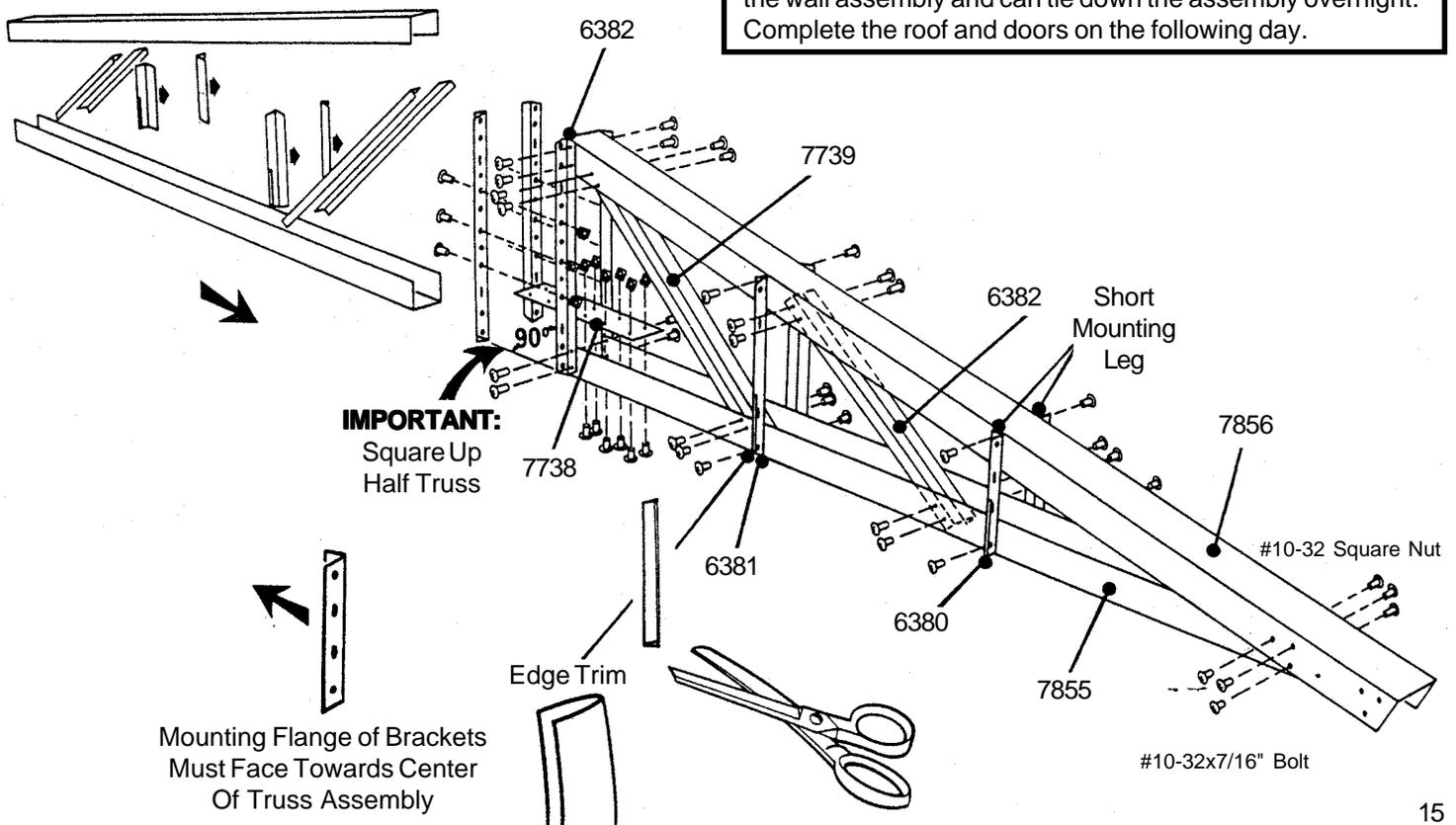
**11** Cut the 4 pieces of **edge trim** in half and slip over the bottom edges of gable braces. This trim is a must to protect against injury from the sharp edge.

Make 1 assembly for the 12x17  
Make 2 assemblies for the 12x24  
Make 3 assemblies for the 12x31

### NOTE

The day before construction of the building, complete the sub-assemblies so they will be ready. EXAMPLE: Truss, floor frames, roof beams, gables, side and overhead doors. Set the assemblies aside, so they will not get damaged.

The remainder of the building assembly requires more than 1 work session and more than 1 person. Do not continue beyond this point if you do not have enough time to complete the wall assembly and can tie down the assembly overnight. Complete the roof and doors on the following day.



# Step 2

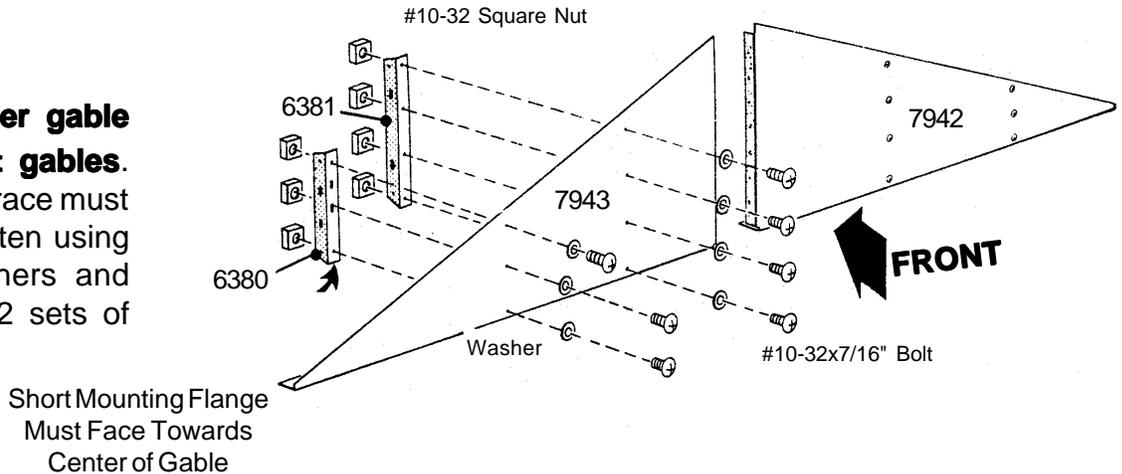
BW16

## ● Parts Needed For ● Gables All Sizes

- 6381 Mid Gable Brace (4)
- 6380 Outer Gable Brace (4)
- 7942 Right Gable (2)
- 7943 Left Gable (2)

The gables go on top of the front and rear walls to support the roof beams. The gables are packed nested together and might be mistaken as 1 piece. Carefully separate them before continuing.

**1** Position **mid** and **outer gable braces** on **right** and **left gables**. Short mounting flange of brace must face center of gable. Fasten using #10-32x7/16" bolts, washers and square nuts. Assemble 2 sets of gables.



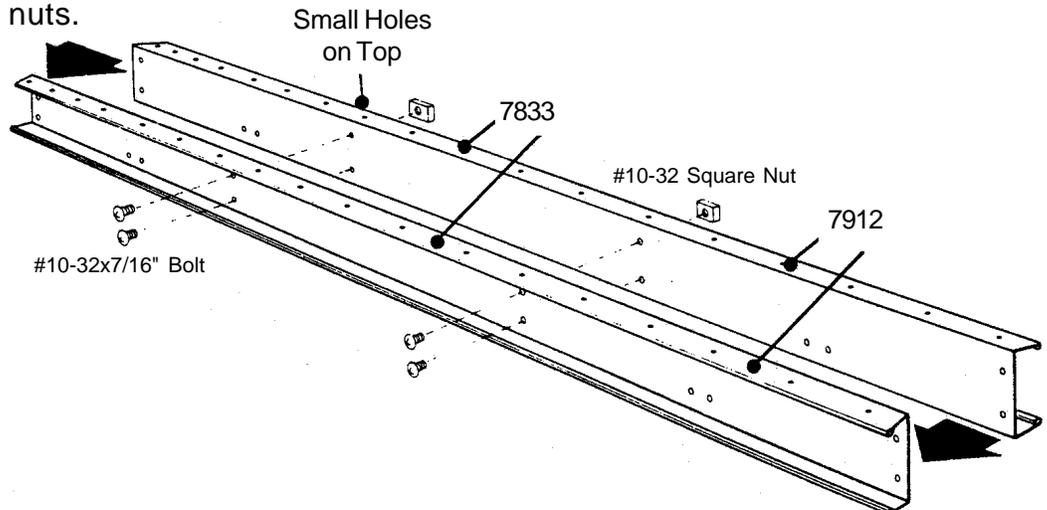
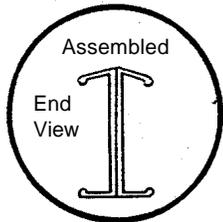
# Step 3

## ● Parts Needed For ● Roof Beam Assemblies

- 7833 Roof Beam (2) (All Sizes)
- 7912 Roof Beam (2) (1217)
- 7912 Roof Beam (4) (1224)
- 7912 Roof Beam (6) (1231)

The roof beams join the gables to the truss and supports the roof panels.

**1** Align the holes on 2 **roof beams**, back-to-back and fasten using 4 #10-32x7/16" bolts and square nuts.



# Step 4

BW17

## ● Parts Needed For ● Floor Frame Assembly 12x10

- 8532 Right Rear Frame (1)
- 8531 Left Rear Frame (1)
- 7837 Side Frame (2)
- 7834 Right Front Frame (1)
- 7835 Left Front Frame (1)
- 7517 Lower Door Track (1)
- 7560 Ramp (1)

The rear floor frame is made up of 2 pieces. The holes in these pieces will align when the pieces are positioned with correct amount of overlap. The illustration below shows the proper overall length for the rear.

**1** Overlap **right** and **left rear frames**, align holes, and fasten using 8 bolts and nuts. Make 3 assemblies. Use 1 assembly for this step.

**2** Position **floor frames** as shown and fasten at each corner using 2 bolts through the bottom and nuts on top.

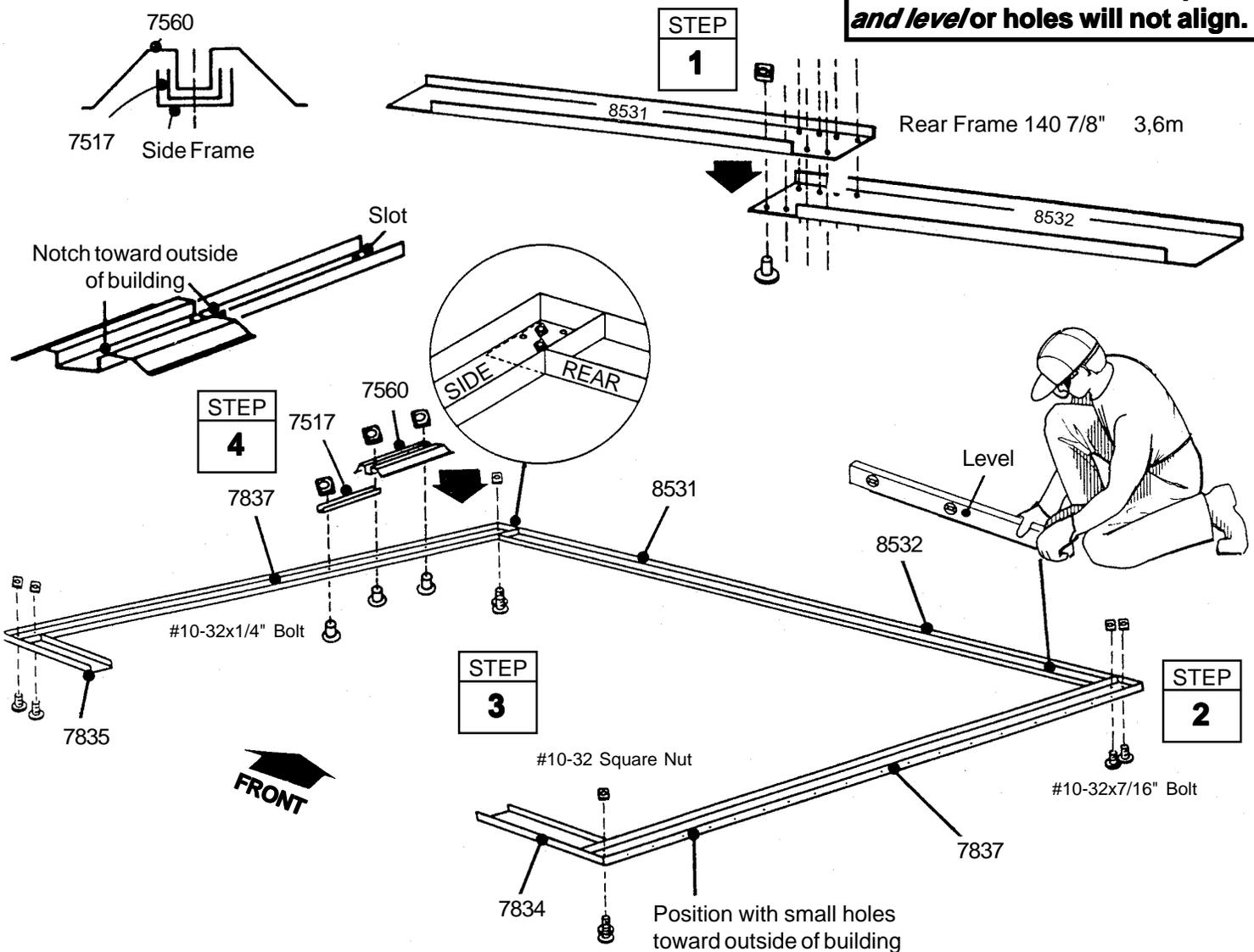
**3** Measure the floor frame diagonally. When the diagonal measurements are equal, the floor frame is square.

**4** Select location of side door on either side, toward the rear of building. Install **lower door track** and **ramp**, notch toward outside, using 1/4" bolts and nuts, as shown. See Step 12 for Rear Door Installation.

### NOTE

Do not fasten the floor frames to your foundation at this time. You will anchor the building after it is erected.

**The floor frame *must be square and level* or holes will not align.**



# Step 5 Floor Frame Assembly

## 12x17, 12x24, 12x31

BW18

### ● Parts Needed For ●

- 8532 Right Rear Frame (1)
- 7837 Side Frame (2)
- 8531 Left Rear Frame (1)
- 7834 Right Front Frame (1)
- 7914 Side Frame (see below)
- 7835 Left Front Frame (1)
- 7857 Truss Support (see below)
- 7517 Lower Door Track (1)
- 7560 Ramp (1)

The rear floor frame is made up of 2 pieces. The holes in these pieces will align when the pieces are positioned with correct amount of overlap. The illustration below shows the proper overall length for the rear.

**1** Overlap **right** and **left rear frames**, align holes, and fasten using 8 bolts and nuts. Make 3 assemblies. Use 1 assembly for this step.

**2** Position **floor frames** as shown and fasten at each corner using 2 bolts through the bottom and nuts on top. When installing **side frame 7914**, be sure set of holes 1" in from end of frames are installed toward rear of building.

**3** Fasten side frames together with a **truss support** using 4 bolts through the bottom and nuts on top.

**NOTE**  
Position of holes, and fasten at the 1st set of holes. See side connection.

**4** Measure the floor frame diagonally. When the measurements are equal, the floor frame is square.

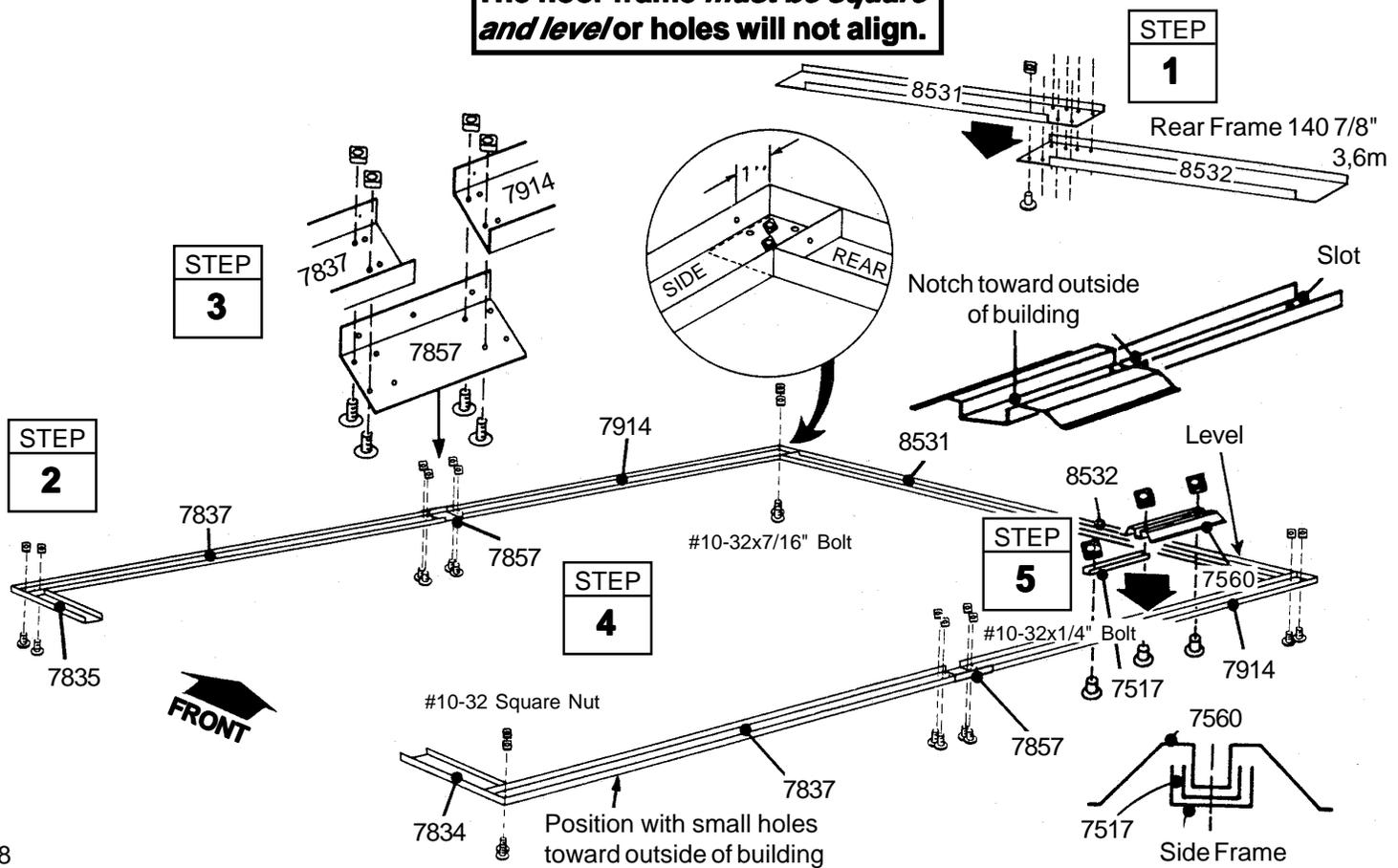
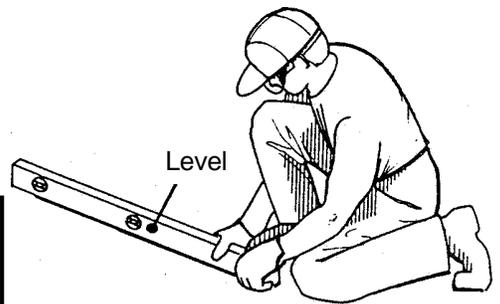
**5** Select location of side door on either side, toward the rear of building. Install **lower door track** and **ramp**, notch toward outside, using 1/4" bolts and nuts. See Step 12 for Rear Door Installation.

**NOTE**  
Do not fasten the floor frames to your foundation at this time. You will anchor the building after it is erected.

**The floor frame *must be square and level* or holes will not align.**

IF YOU ARE BUILDING A 12x24  
Fasten additional side frame 7914 and truss support 7857 to side frame 7914 using the side connection. Position rear frame at rear of assembly and fasten using the rear corner connection.

IF YOU ARE BUILDING A 12x31  
Fasten 2 additional side frames 7914 and truss supports 7857 to side frame 7914 using the side connection. Position rear frame at rear of assembly and fasten using the rear corner connection.



# Step 6

BW19

## ● Parts Needed For ● Corners All Sizes

- 7824 Corner Wall Panel (4)
- 7825 Front Wall Panel (2)
- 7822 Main Wall Panel (2)

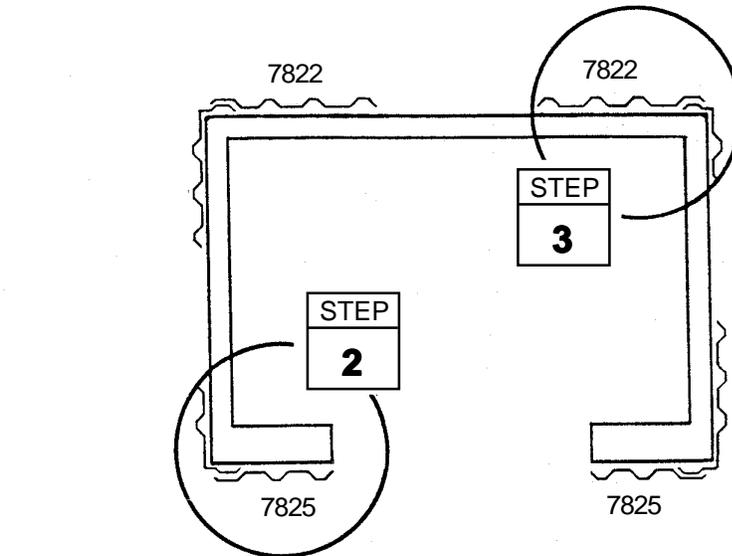
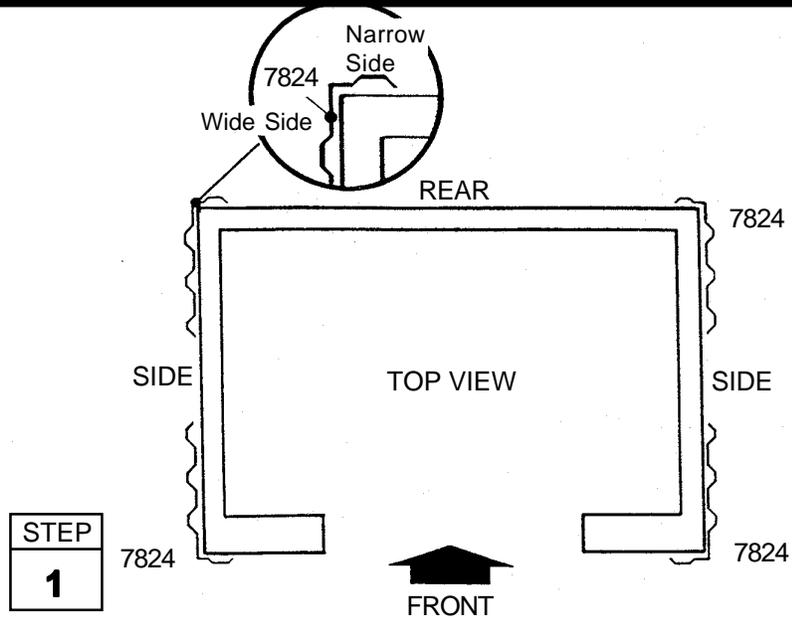
Each screw and bolt in the wall requires a washer.

**1** Install a **corner wall panel** at the corner of the floor frame as shown. The widest part of each corner panel must be placed along the side of the building for all 4 corners. Fasten the corner panel to the floor frame with 4 screws.

Support the corner panel with a step ladder until a wall panel is attached.

**2** Attach the **front wall panels** to the front corner panels, as shown.

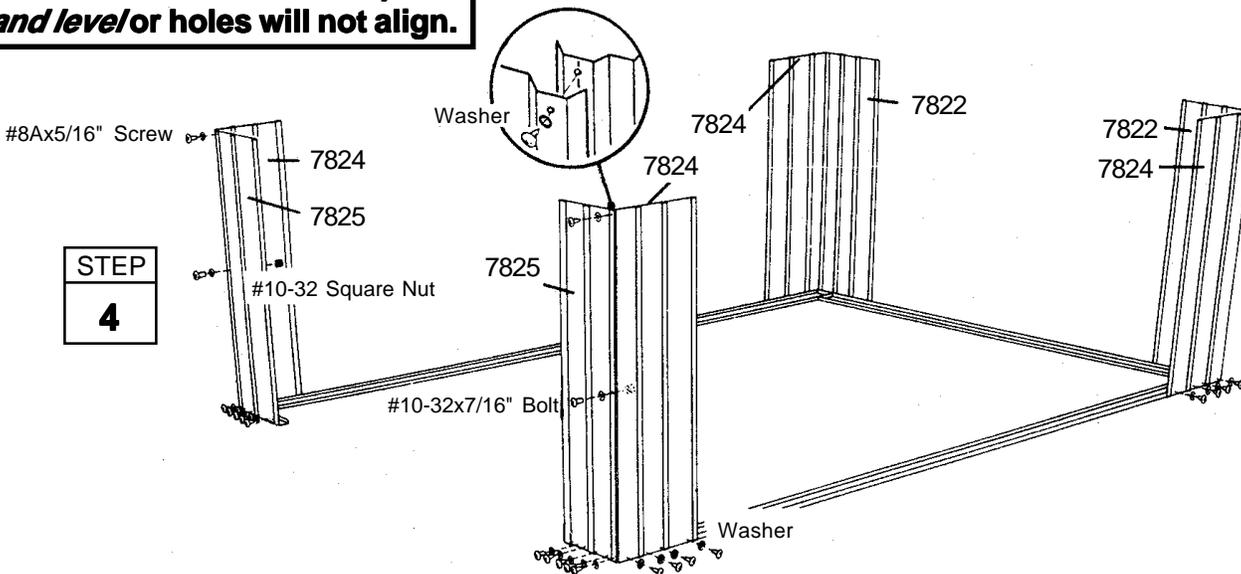
**3** Attach the **main wall panels** to the rear corner panels, as shown.



**NOTE**  
Be careful to install the correct panel in each position as shown.

**4** Double-check the part numbers of the wall panels, before proceeding.

**The floor frame *must be square and level* or holes will not align.**



# Step 7

BW20

## ● Parts Needed For ● Frames 12x10

- Rear Frame Assembly (1)
- 7834 Right Front Frame (1)
- 7835 Left Front Frame (1)
- 7837 Side Frame (2)
- 7950 Side Wall Channel (1)
- 7949 Side Wall Channel (1)
- 7951 Support Channel (1)

The mid frame pieces give rigidity to the side and rear wall.

### NOTE

Before installing mid frames decide at which location you want the entrance door. Do not install the 1x2 mid frame at 1 of 3 locations.

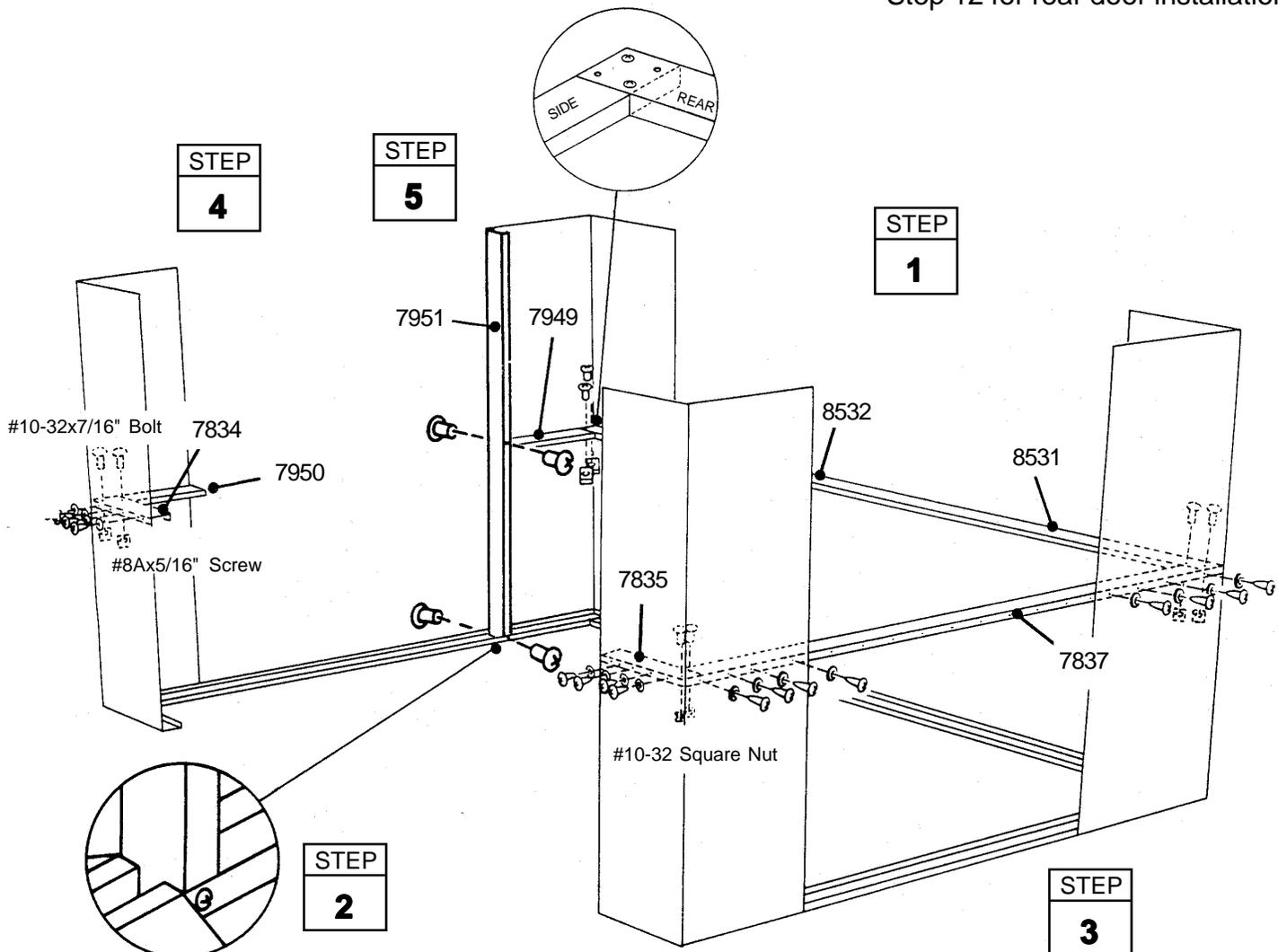
**1** Fasten a **rear frame assembly** to the main wall panels using screws.

**2** Fasten a **right and left front frame** to the front wall panels the same way.

**3** Fasten **side frame** to the corner panels using screws. Where rear frame overlaps side frame in corner, fasten using 2 bolts and nuts.

**4** Fasten **side wall channels** to the corner panels using screws. Fasten overlaps in corners using bolts.

**5** Fasten **support column** to side frame and side wall channel using bolts and nuts where shown. Fold corner panel slightly away from column to fasten bolts from outside. See Step 12 for rear door installation.



# Step 8

BW21

## Parts Needed For Frames 12x17, 12x24 & 12x31

- Rear Frame Assembly (1)
- 7834 Right Front Frame (1)
- 7835 Left Front Frame (1)
- 7917 Truss Column (see below)
- 7914 Side Frame (see below)
- 7837 Side Frame (2)
- 6228 Frame Support (4)
- 7949 Side Wall Channel (1)
- 7951 Support Column (1)

The mid frame pieces give rigidity to the side and rear wall.

### NOTE

Before installing mid frames decide at which location you want the entrance door. Do not install the 1x2 mid frame at 1 of 3 locations.

- 1** Fasten a **rear frame assembly** to the main wall panels using screws.
- 2** Fasten a **right and left front frame** to the front wall panels the same way.
- 3** Attach 4 **frame supports** to the middle of the 2 **truss columns** using 2 bolts and nuts on each.
- 4** Fasten **side frame 7914** to the rear corner panel using screws. Be sure set of holes 1" in from end of frame is installed toward rear of building. Where rear frame overlaps side frame in corner, fasten using 2 bolts and nuts. Fasten opposite end to frame support on truss column, using 2 bolts and nuts in the 1st set of holes. Fasten truss support to truss column at bottom with 1 screw at the 1st hole on column. Support column assembly with step ladder.

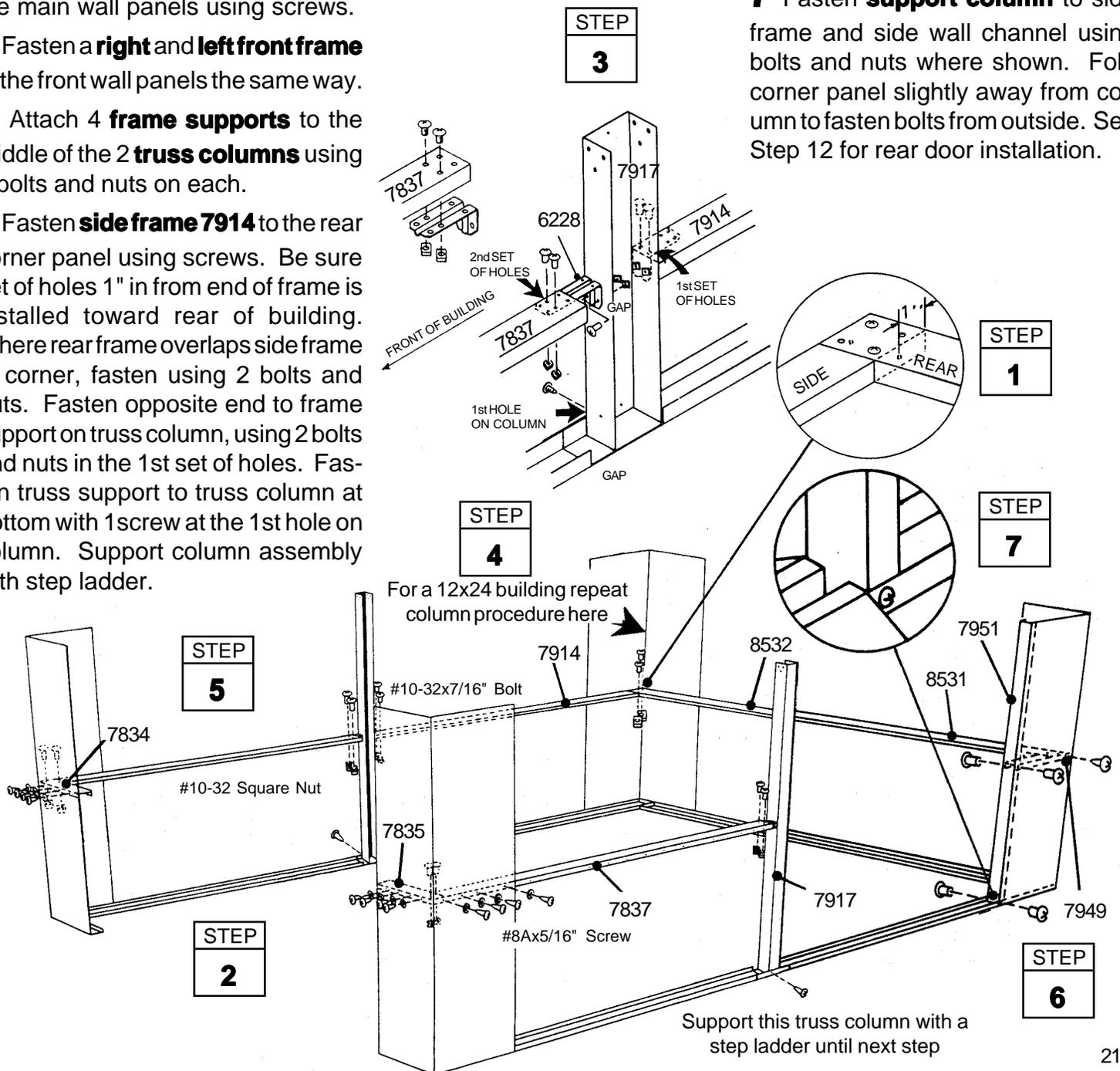
IF YOU ARE BUILDING A 12x24  
Each side of building will have 2 column assemblies and 2 extra side frames 7914.

IF YOU ARE BUILDING A 12x31  
Each side of building will have 3 column assemblies and 4 extra side frames 7914.

**5** Fasten **side frame 7837** to the front corner panel using screws. Fasten overlap in corner. Fasten opposite end to the frame support on truss column, using 2nd set of holes. This will leave a gap between side frame and truss column.

**6** Fasten **side wall channel** to the rear corner panel using screws.

**7** Fasten **support column** to side frame and side wall channel using bolts and nuts where shown. Fold corner panel slightly away from column to fasten bolts from outside. See Step 12 for rear door installation.



# Step 9

BW22

## ● Parts Needed For ● Frames 12x10

- 7839 Front Column (2)
- 7834 Right Front Frame (1)
- 7835 Left Front Frame (1)
- 7831 Lintel (1)
- Rear Frame Assembly (1)
- 7838 Side Top Angle (2)
- 7958 Door Track (1)

The top frame pieces give rigidity to the side walls and provide a surface for attaching the gables which support the roof.

**1** Fasten **front columns** to the bottom and mid front frames with bolts and nuts. Flange with 2 holes at each end must be facing outside. Fold front panel slightly away from column to tighten bolts and nuts.

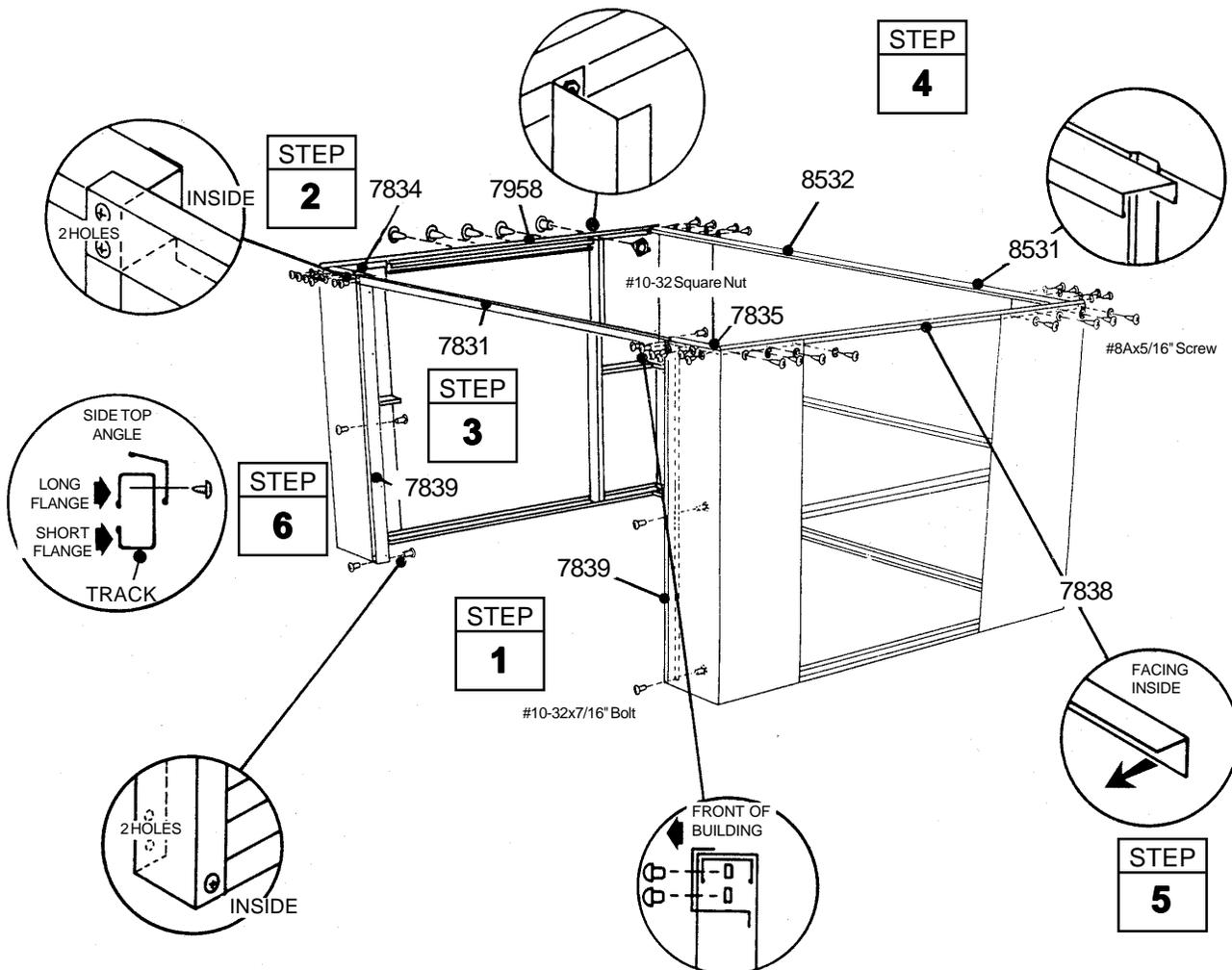
**2** Fasten **right and left front frame** to the top of front wall panels using 4 screws.

**3** Position **lintel** across top of frames and columns and fasten with bolts.

**4** Position **rear frame assembly** across top of main wall panels and fasten using screws.

**5** Fasten **side top angles** to the corner panels using screws. Fasten support column to top angle using a bolt.

**6** Position **door track** to the inside of side top angle, butted up against support column. With short flange of track at bottom, fasten angle to track using 4 screws at the 2nd, 3rd, 4th and 5th hole in from support column. See Step 12 for rear door installation.



# Step 10

BW23

## ● Parts Needed For ● Frames 12x17, 12x24 & 12x31

- 7839 Front Column (2)
- 7834 Right Front Frame (1)
- 7835 Left Front Frame (1)
- 7831 Lintel (1)
- Rear Frame Assembly (1)
- 7915 Side Top Angle (see below)
- 7838 Side Top Angle (2)
- 7958 Door Track (1)

The top frame pieces give rigidity to the side walls and provide a surface for attaching the gables which support the roof.

**1** Fasten **front columns** to the bottom and mid front frames with bolts and nuts. Flange with 2 holes at each end must be facing outside. Fold front panel slightly away from column to tighten bolts and nuts.

**2** Fasten **right and left front frame** to the top of front wall panels using 4 screws.

**3** Position **lintel** across top of frames and columns and fasten with bolts.

**4** Position **rear frame assembly** across top of main wall panels and fasten using screws.

IF YOU ARE BUILDING A 12x24  
Repeat side top angle assembly using 2 additional angles 7915.

IF YOU ARE BUILDING A 12x31  
Repeat side top angle assembly using 4 additional angles 7915.

**5** Fasten **side top angles 7915** to the truss column using a screw and to rear corner panels using screws.

**6** Fasten **side top angles 7838** under **7915** and fasten to front corner panels using screws. Fasten overlap (2 1/2" 6cm) with 2 bolts and nuts. Side angles overlap front and rear frames in the corners. Fasten support column to side top angle using a bolt and nut.

**7** Position **door track** to the inside of side top angle, butted up against support column. With short flange of track at bottom, fasten angle to track using 4 screws at the 2nd, 3rd, 4th and 5th hole in from support column. See Step 12 for rear door installation.

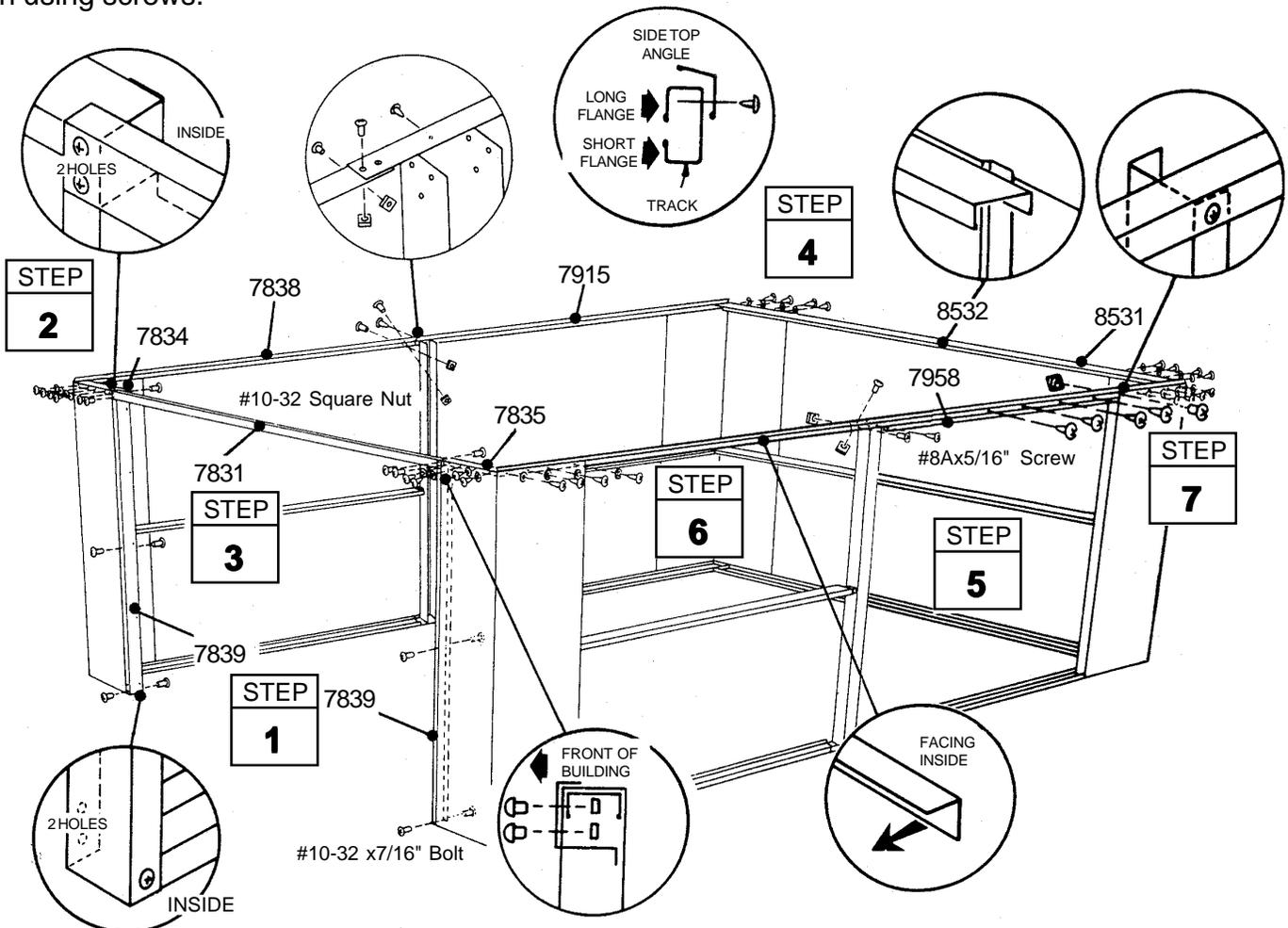
STEP  
3

STEP  
4

STEP  
6

STEP  
5

STEP  
7



# Step 11

BW24

## ● Parts Needed For ● Walls All Sizes

- 7822 Main Wall Panel (see below)
- 7823 Medium Wall Panel (1)

Each wall panel has a crimped rib on 1 side. The crimped rib should go under the rib of the panel that follows it. Leave out 1 main wall panel at the side or rear entry door location.

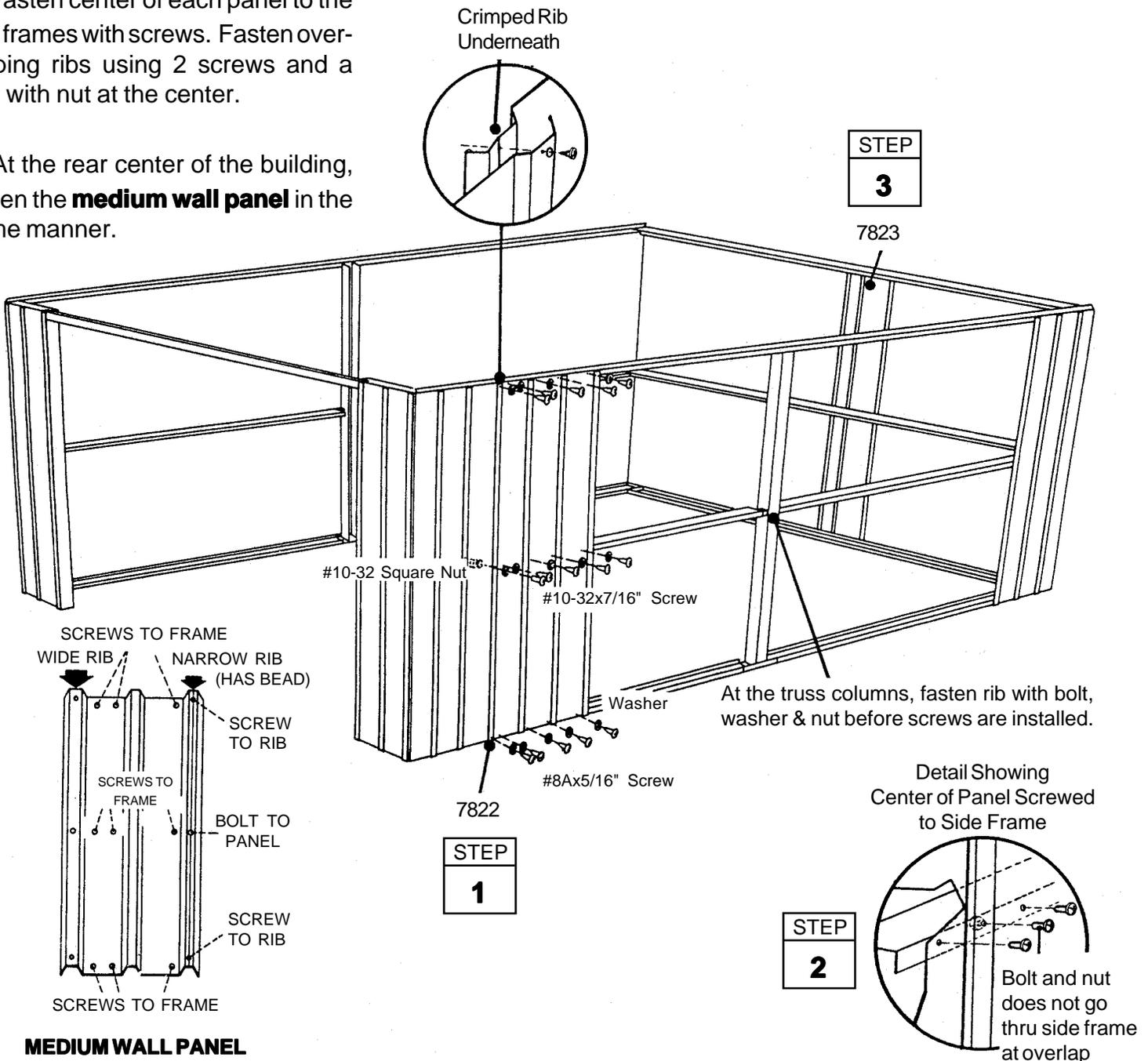
IF YOU ARE BUILDING A 12x24  
Install 3 additional main wall panels on each side of the building.

IF YOU ARE BUILDING A 12x31  
Install 6 additional main wall panels on each side of the building.

**1** Fasten the **main wall panels** at the top and bottom with screws.

**2** Fasten center of each panel to the mid frames with screws. Fasten overlapping ribs using 2 screws and a bolt with nut at the center.

**3** At the rear center of the building, fasten the **medium wall panel** in the same manner.



# Step 12

BW25

## ● Parts Needed For ● Rear Entry Door All Sizes

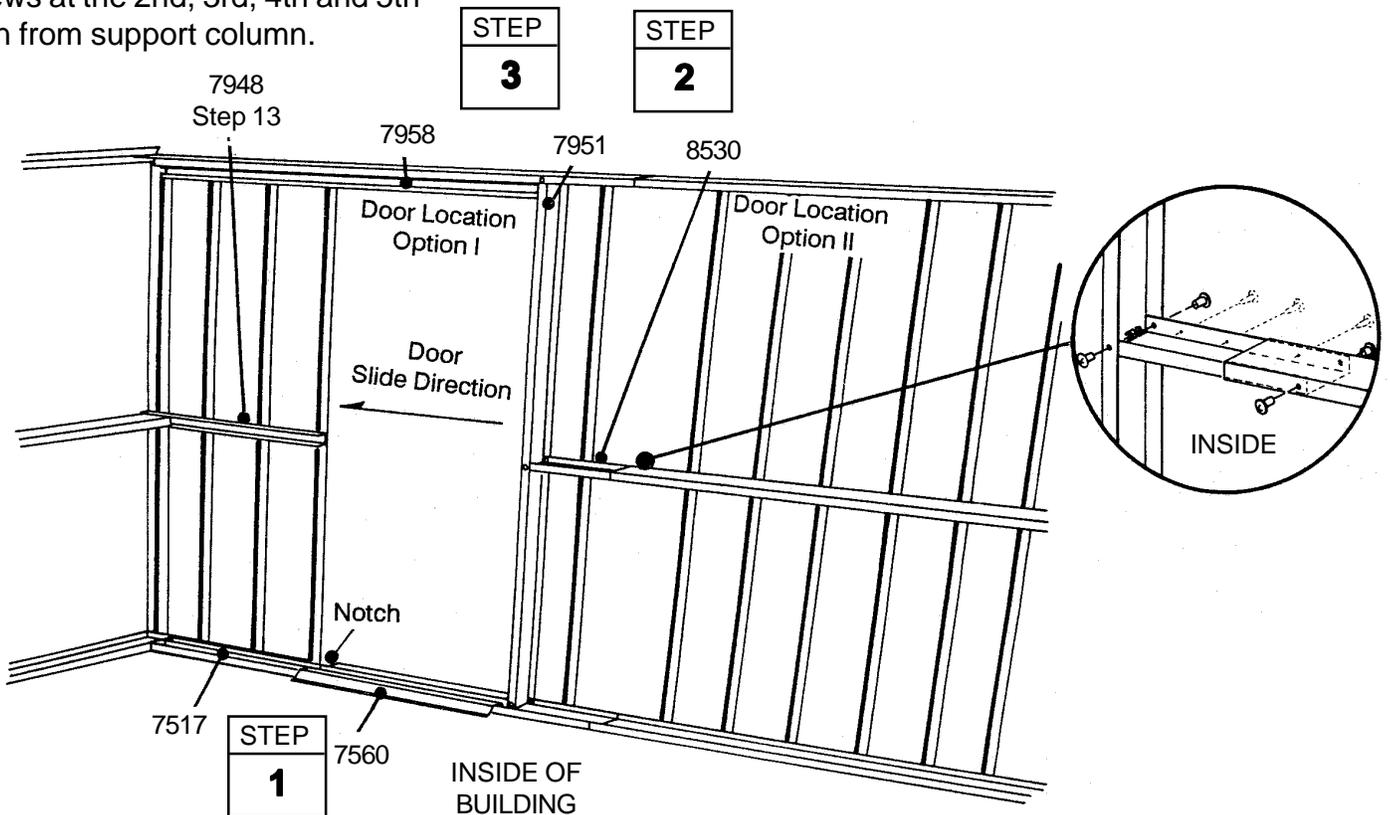
- 7517 Lower Door Track (1)
- 7560 Ramp (1)
- 8530 Splice Channel (1)
- 7951 Support Column (1)
- 7958 Door Track (1)

Using the previous side entry door steps and this illustration, you can install the entry door at 2 locations along the rear wall. Whichever you choose, the door will always slide towards the corner of the building.

**1** Install **lower door track** and **ramp** using 1/4" bolts and nuts.

**2** Fasten **splice channel**, upside down, to rear frame and to **support column** using bolts and nuts, and to wall panel using screws. Fasten support column to rear frames using bolts and nuts. Fold rear wall panel slightly away from column to tighten bolts and nuts.

**3** Position **door track** to the inside of the rear frame, butted up against support column. With short flange of track at bottom, fasten frame to track using 4 screws at the 2nd, 3rd, 4th and 5th hole in from support column.



# Step 13

BW26

## ● Parts Needed For ● Side or Rear Entry Door All Sizes

- 7946 Door Jamb (2)
- 7948 Door Wall Brace (1)
- 7972 Door Handle Lock Bracket (1)

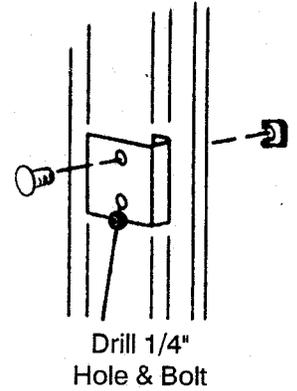
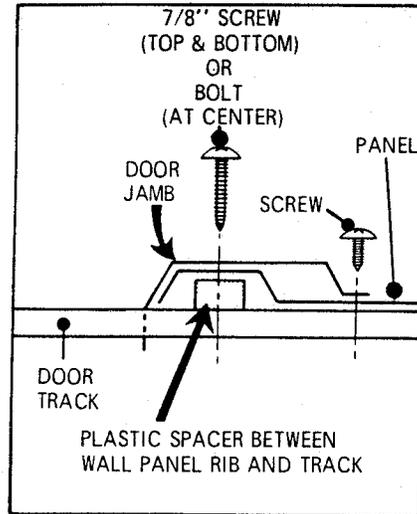
The door jambs reinforce the door opening and provide an attractive trim. Follow these steps for both door jambs.

**1** Place **door wall brace** behind wall panel in the direction of sliding door. Fasten panel to brace using screws.

**2** Overlap rib of wall panel with a **door jamb** and fasten at top to angle, middle to brace, and bottom to frame using #6x7/8" screws and spacers. Position spacer inside wall panel rib.

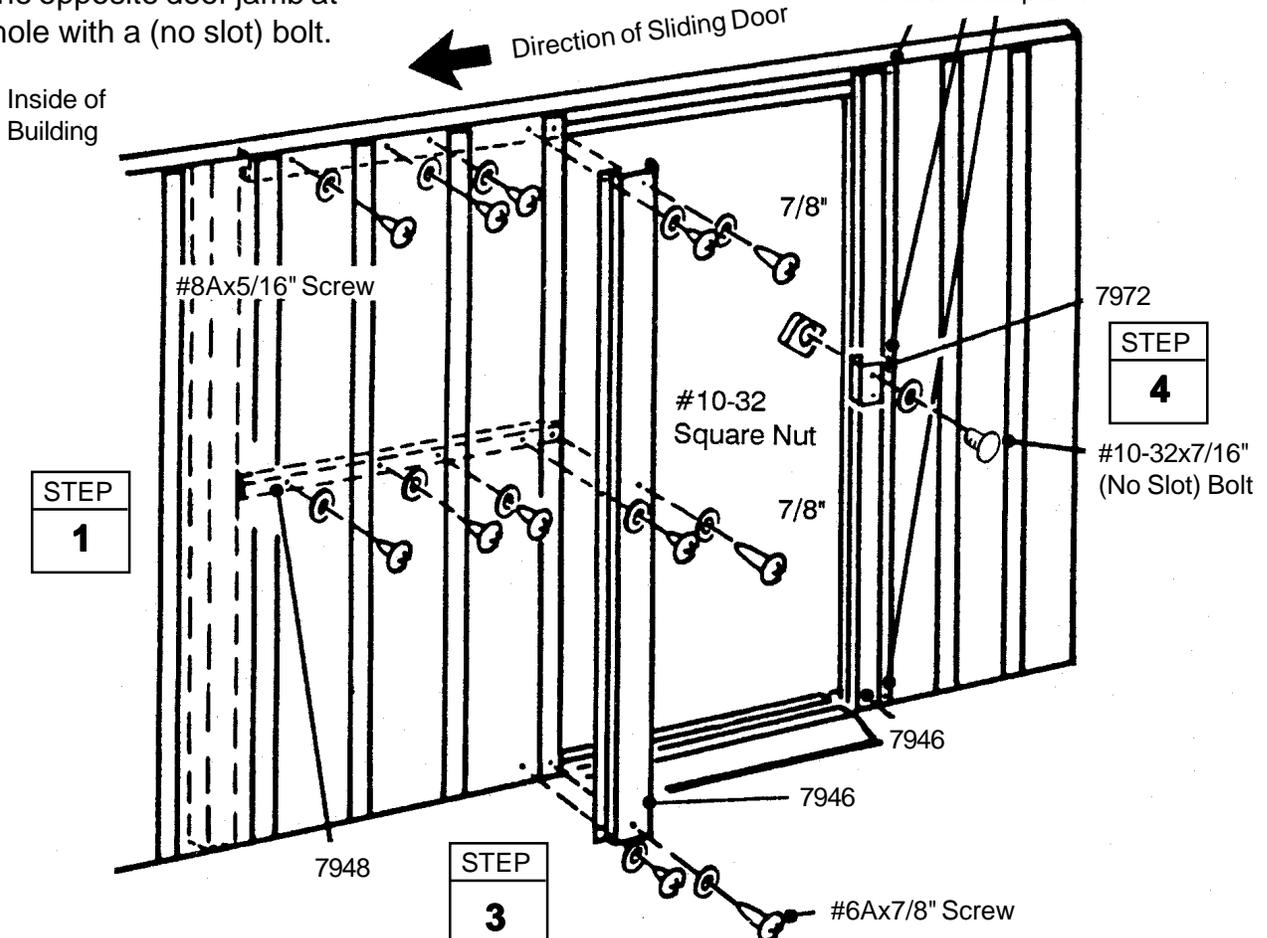
**3** Fasten outer flange of door jamb to wall panel using 3 screws.

**4** Secure the **door handle lock bracket** to the opposite door jamb at the middle hole with a (no slot) bolt.



STEP  
2

Remove and reinsert screws from panel



# Step 14

BW27

## ● Parts Needed For ● Track Supports All Sizes

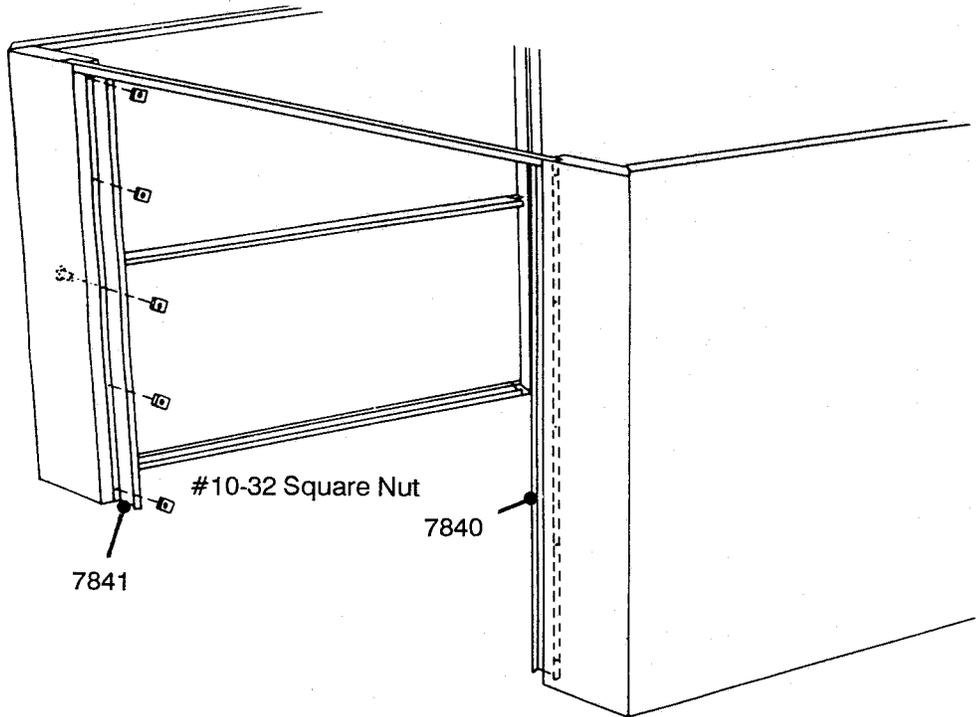
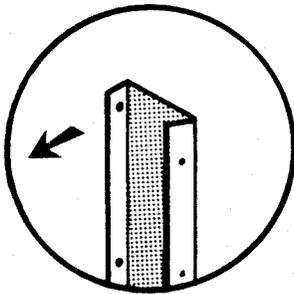
- 7840 Right Track Support (1)
- 7841 Left Track Support (1)

**1** Fasten **right** and **left track supports** to the front columns using 5 bolts from the inside and nuts outside.

### NOTE

Flanges on track supports *must* face towards front of building.

#10-32x7/16" Bolt



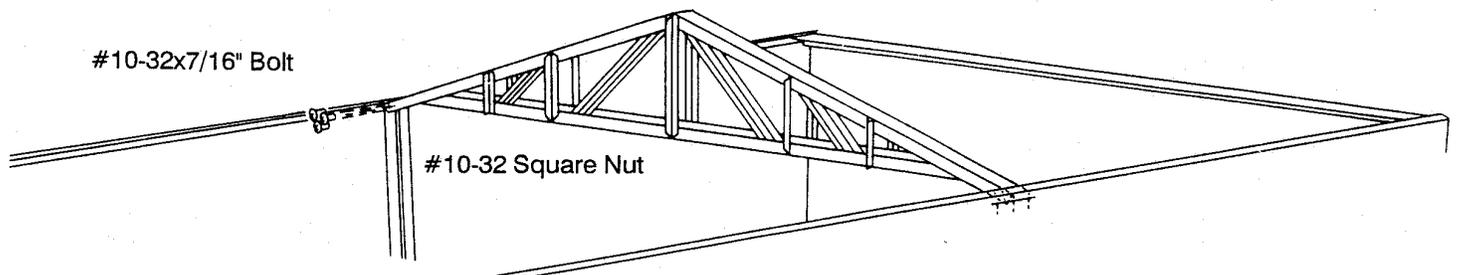
# Step 15

## ● Parts Needed For ● Truss 12x17, 12x24 & 12x31

- Truss Assembly (see below)

**1** Position Truss Assembly on building by sliding truss upper chords over truss columns and fasten with 6 bolts and nuts on each side.

IF YOU ARE BUILDING A 12x24  
Install 2 trusses on truss columns  
IF YOU ARE BUILDING A 12x31  
Install 3 trusses on truss columns



# Step 16

BW28

## ● Parts Needed For ● Roof Beams 12x17, 12x24 & 12x31

- Right Gable Assembly (1)
- 7833 Roof Beam (4)
- Left Gable Assembly (1)
- 6382 Center Gable Brace (1)
- 7833 Roof Beam Assembly (1)
- 6372 Gable Strut (2)

**1** Lift and fasten a right gable assembly at top of lintel using bolts & screws.

**2** Install single **roof beams 7833** to the gable braces at the front section.

**3** Lift and fasten a left gable assembly in the same manner.

**4** Join left and right gables together with a **center gable brace** using 3 bolts and nuts, at middle holes.

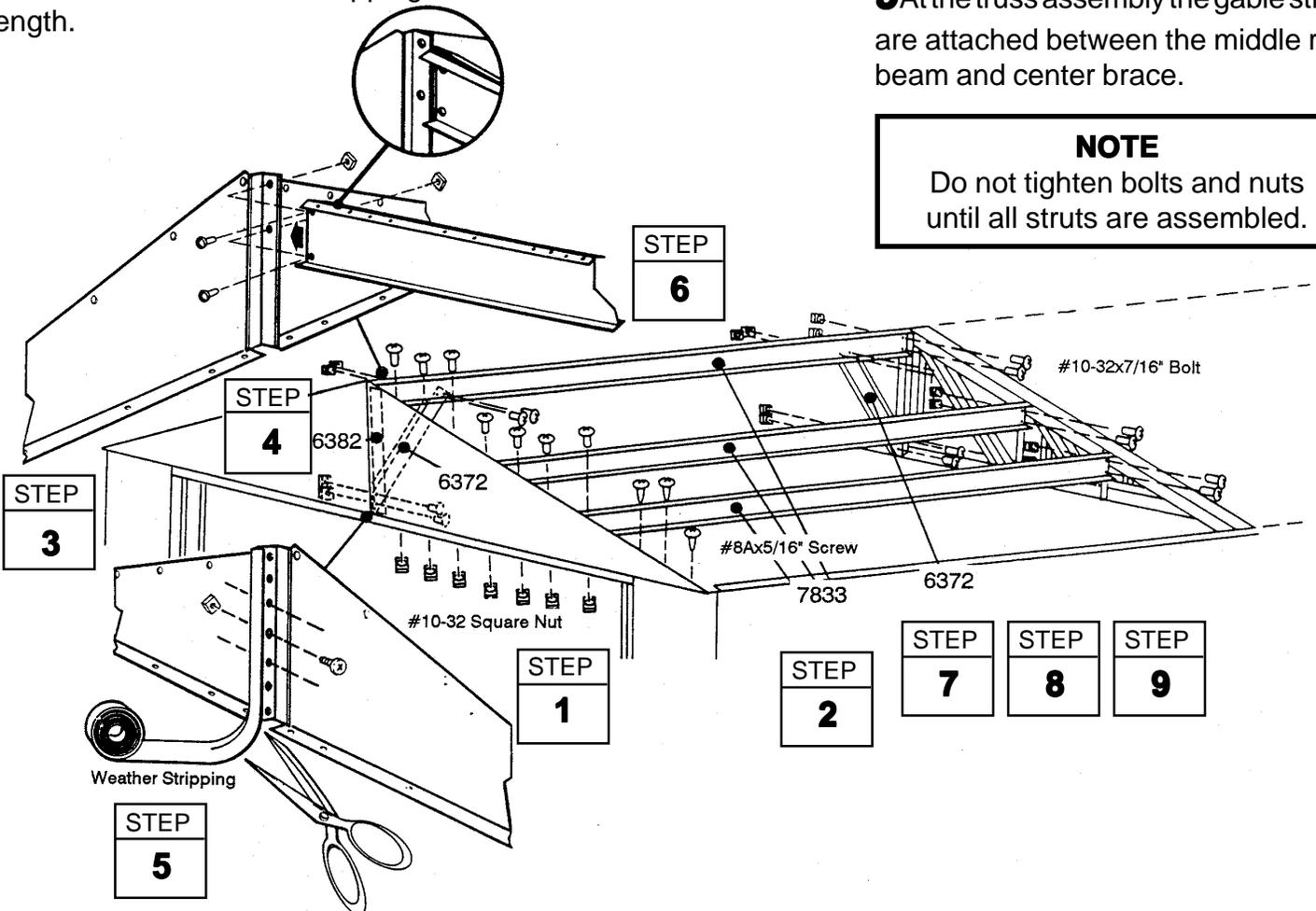
**5** Apply **weather stripping** along the mating edge of the left and right gables as shown. Cut the weather stripping to length.

**6** Install single roof beams to the left side of building in the same manner. Slide a **roof beam assembly 7833** over center gable flange and other end over center gable braces on truss and fasten using bolts & nuts.

**7** Fasten a **gable strut** to the middle roof beam behind the front gable by placing tab on end of strut *between* the roof beams. Align the tab with holes and fasten strut with 2 bolts.

**8** Fasten the lower end of the strut to center gable flange with 2 bolts.

**9** At the truss assembly the gable struts are attached between the middle roof beam and center brace.



**NOTE**  
Do not tighten bolts and nuts until all struts are assembled.

# Step 17

## Parts Needed For Roof Beams 12x17, 12x24 & 12x31

- Right Gable Assembly (1)
- Left Gable Assembly (1)
- 7912 Roof Beam (4)
- 6382 Center Gable Brace (1)
- 7912 Roof Beam Assembly (1)
- 6372 Gable Strut (2)

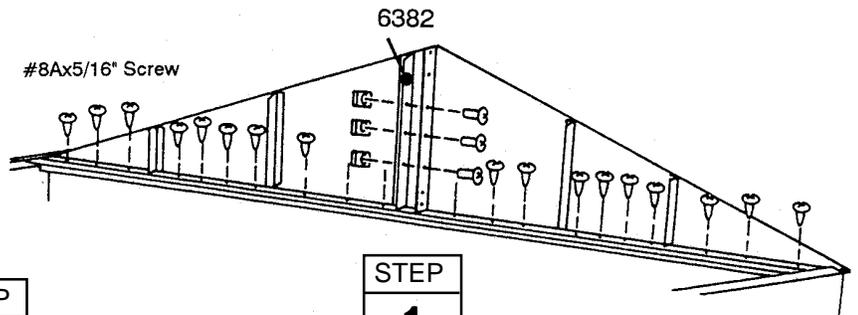
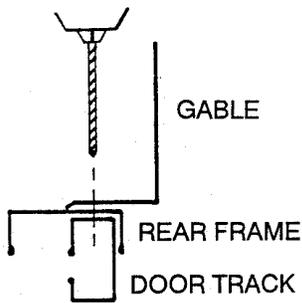
BW29

**1** Fasten gables to rear frame using all screws.

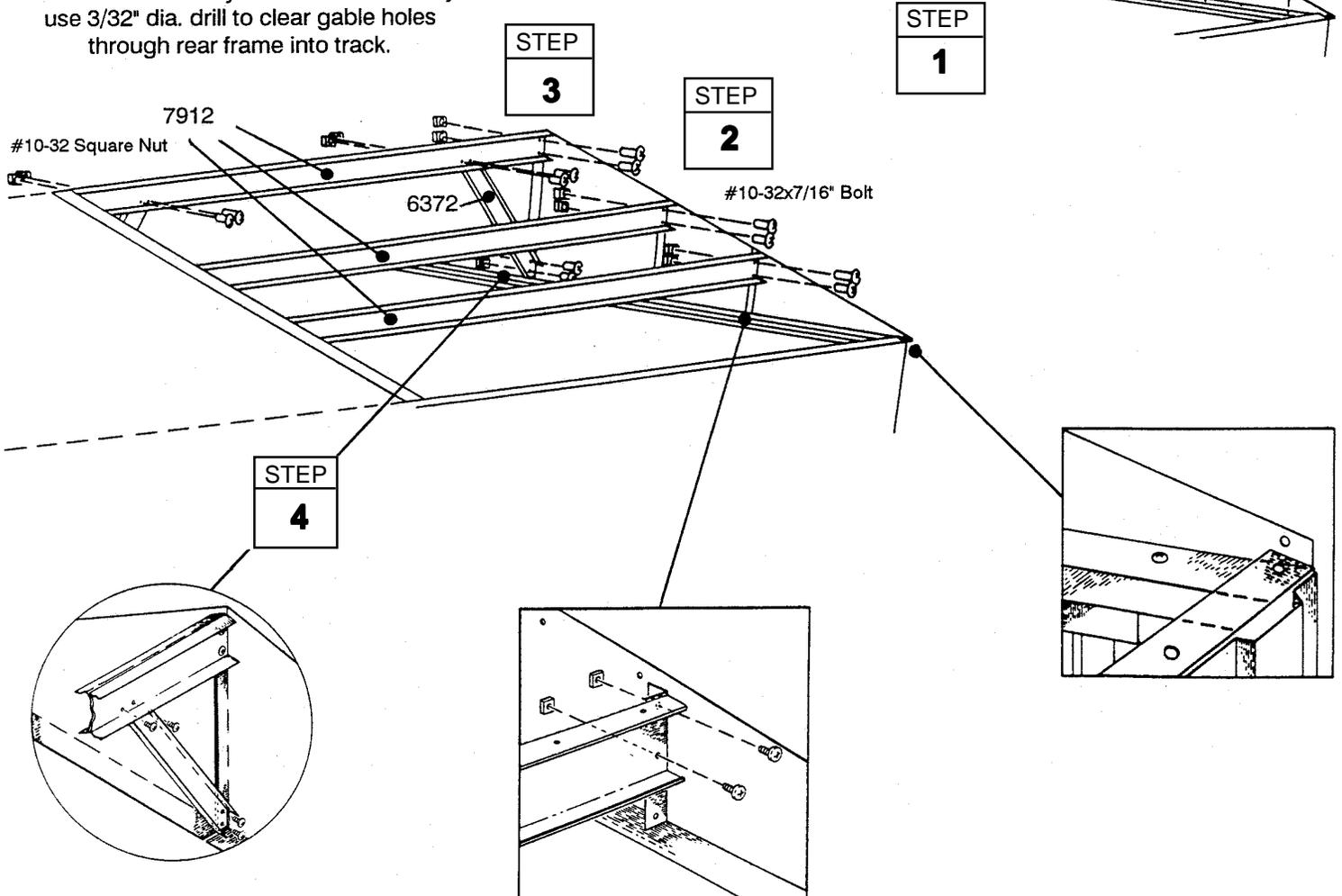
**2** Install single **roof beams 7912** and center gable brace to rear section in the same manner.

**3** Fasten **roof beam assembly 7912** and struts as before.

**4** Fasten **gable strut** to rear of building.



NOTE: For rear entry door installation only use 3/32" dia. drill to clear gable holes through rear frame into track.



# Step 18

## ● Parts Needed For ● Roof Beams 12x10

- Right Gable Assembly (2)
- Left Gable Assembly (2)
- 6382 Center Gable Brace (2)
- 7833 Roof Beam (4)
- 7833 Roof Beam Assembly (1)
- 6372 Gable Strut (2)

BW30

**1** Lift and fasten a right gable assembly at top of lintel using bolts & screws.

**2** Lift and fasten a left gable assembly at top of rear frame using screws.

**3** Install single **roof beams** to gable braces using bolts and nuts.

**4** Fasten gables to left side of building in the same manner.

**5** Join left and right gables together with a **center gable brace** using 3 bolts and nuts, at middle holes.

**6** Apply **weather stripping** along the mating edge of the left and right gables as shown. Cut the weather stripping to length.

**7** Install single roof beams to the left side of building in the same manner. Slide a **roof beam assembly** over center gable flange and fasten.

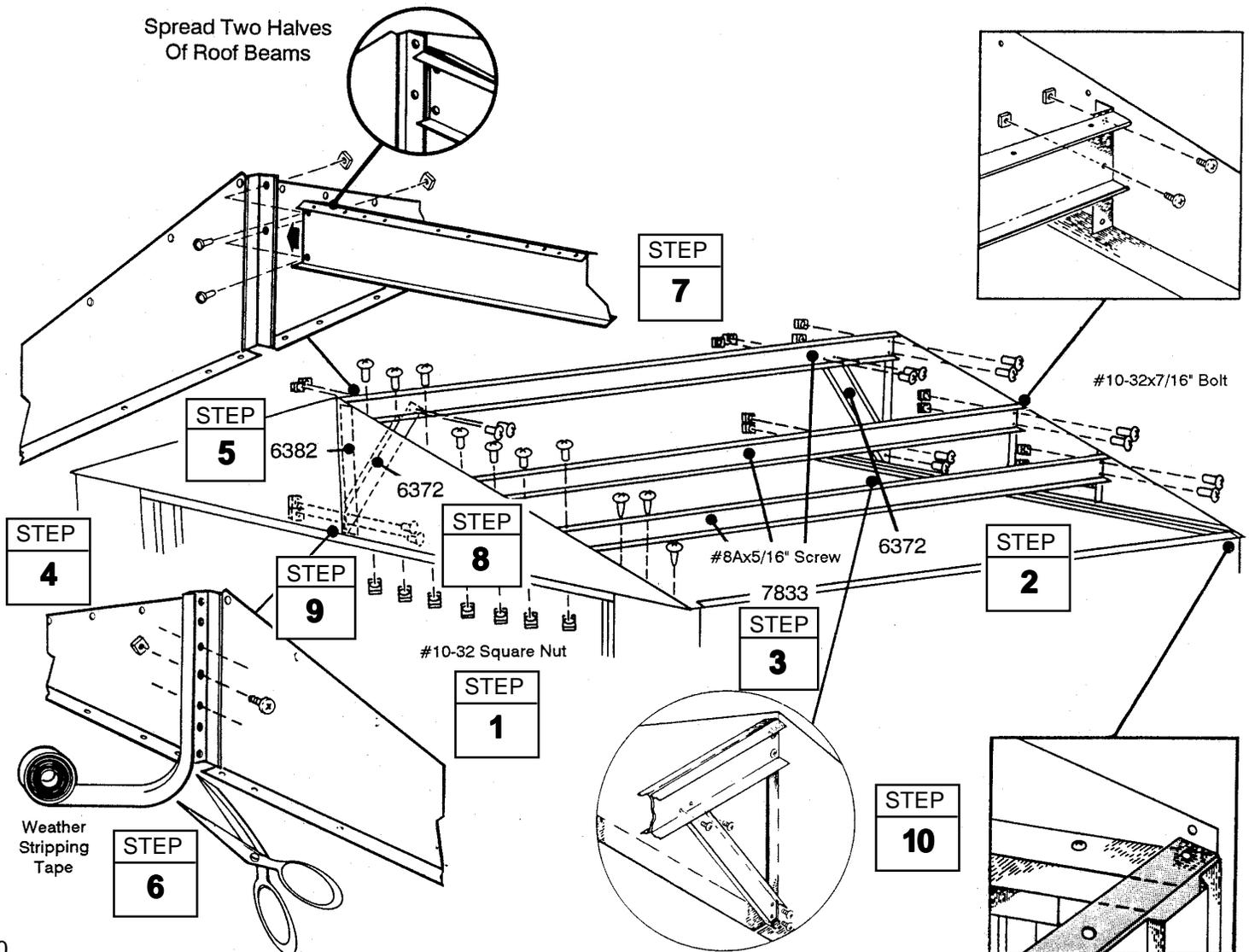
**8** Fasten a **gable strut** to the middle roof beam behind the front gable by placing tab on end of strut *between* the roof beams. Align the tab with holes and fasten strut with 2 bolts.

**9** Fasten the lower end of the strut to center gable flange with 2 bolts.

**10** Repeat Steps 8 & 9 for rear of building.

**NOTE**

Do not tighten bolts and nuts until the strut is assembled at rear



# Step 19

## Squaring the Building All Sizes

BW31

**1** Square the building on the foundation and at the top, by measuring diagonally from corner to corner as previously done.

**2** Use string to check and see if the sides and rear of building are straight, not bowed inward or outward.

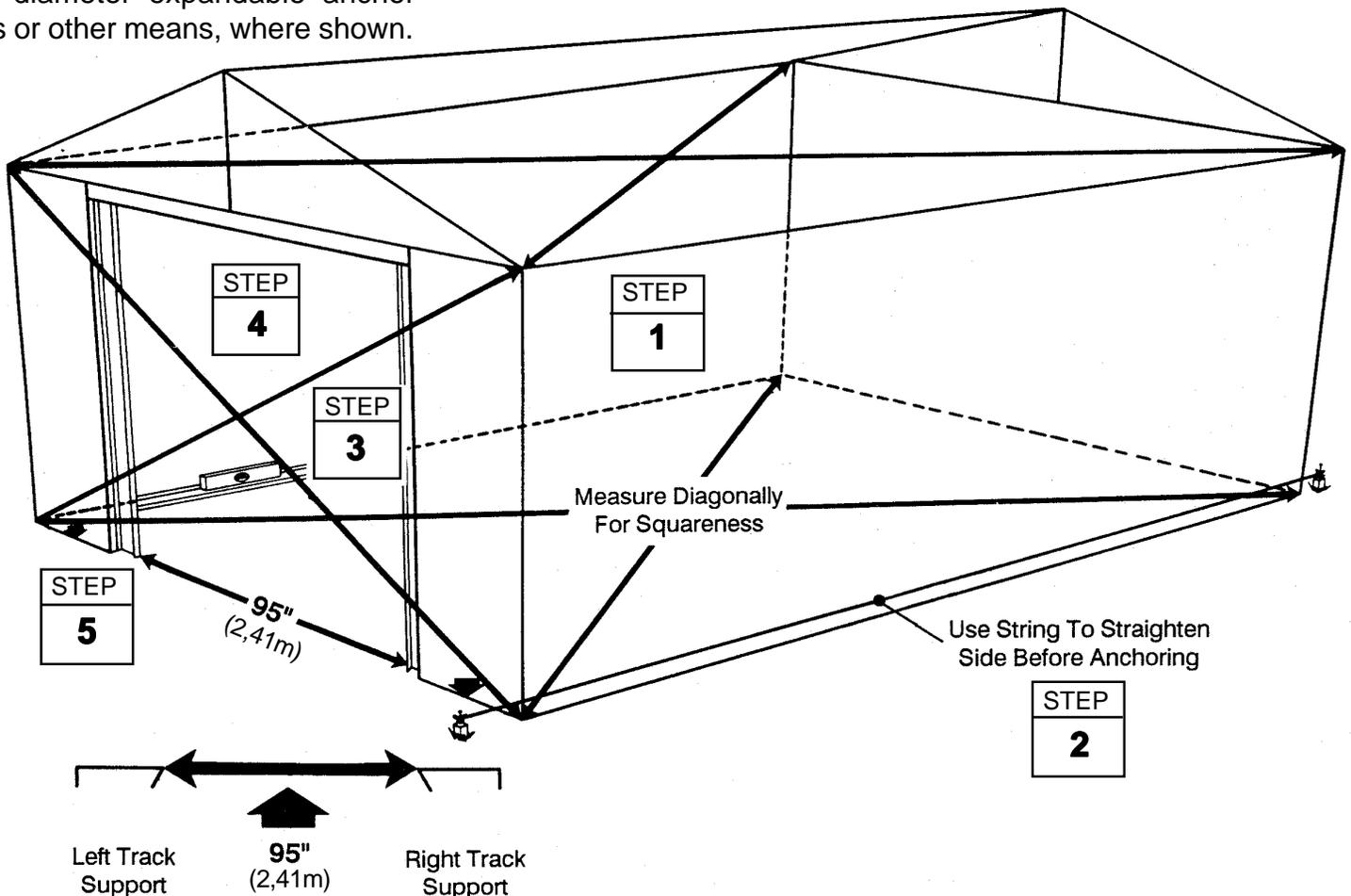
**3** Level the full perimeter of the floor frame. Shim under with wood shingles if necessary.

**4** Square the front of building as previously done for base.

**5** Anchor front frame to concrete with 1/4" diameter expandable anchor bolts or other means, where shown.

### NOTE

The 95" (2,41m) door opening must be held for proper door alignment. Measure between the left and right track support.



# Step 20

BW32

## ● Parts Needed For ● Corner Roof Panels All Sizes

- 7826 Right Roof Panel (2)
- 7827 Left Roof Panel (1)

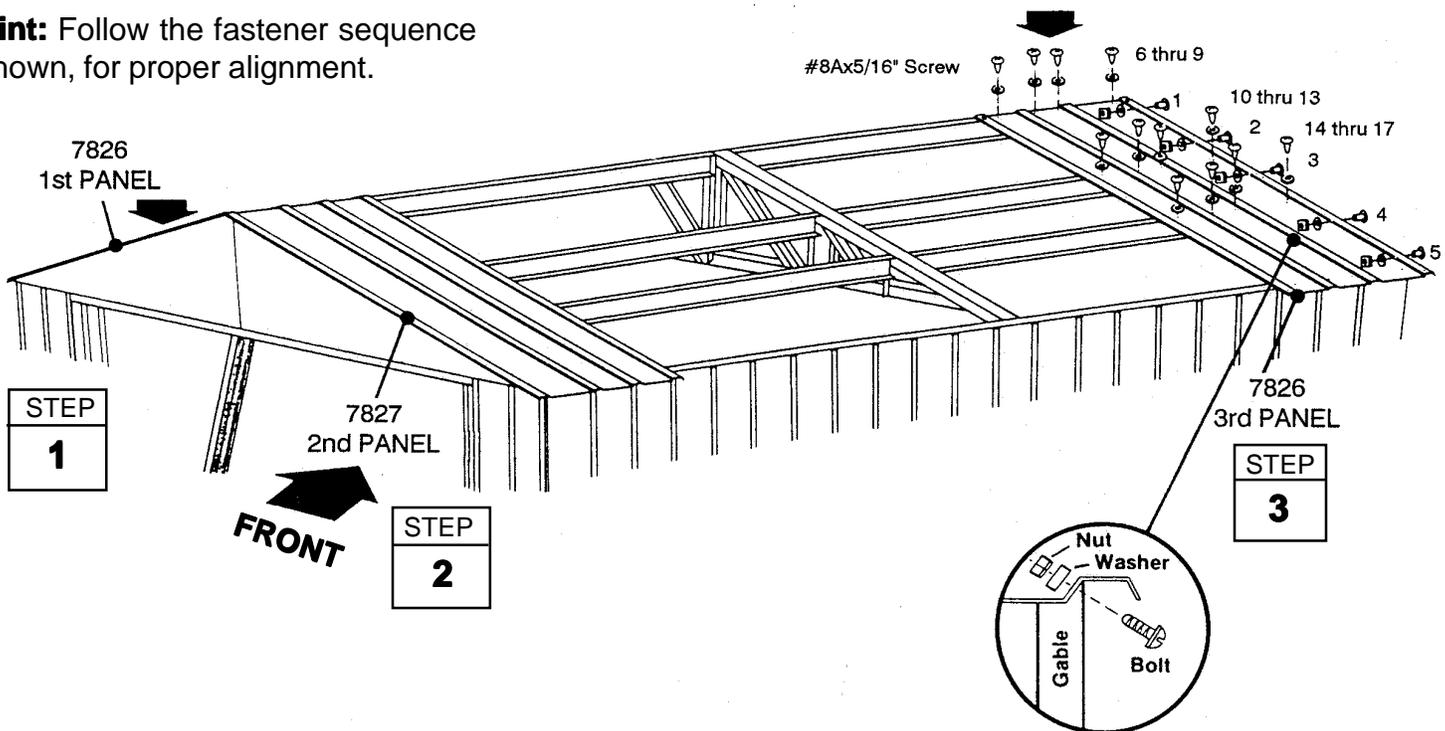
Installing the roof panels is best done with a step ladder. Each screw and bolt in the roof requires a washer. Support lintel by propping up at center with a wood 2x4 until sag is gone and there are no buckles in gables.

**1** Position a **right roof panel** at the front left corner and fasten to the gable and roof beams using screws and bolts as shown. *Do not fasten the lower end of the panels to the side top angle at this time.*

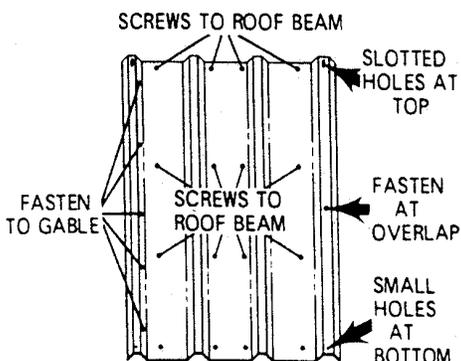
**Hint:** Follow the fastener sequence shown, for proper alignment.

**2** Install the **left roof panel** for the right side in the position shown. Remove lintel support.

**3** Temporarily install a second right roof panel loosely as shown, for removal later. Do not fasten left rear panel at this time.

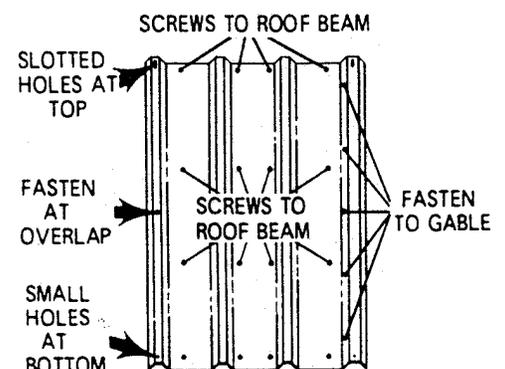


### LEFT CORNER ROOF PANEL



**NOTE**  
If roof beam holes do not line up with the roof panel holes, shift the building from left to right. If this does not help, your building may not be level. Shim the corners until holes line up.

### RIGHT CORNER ROOF PANEL



# Step 21

## ● Parts Needed For ● Roof Panels 12x10

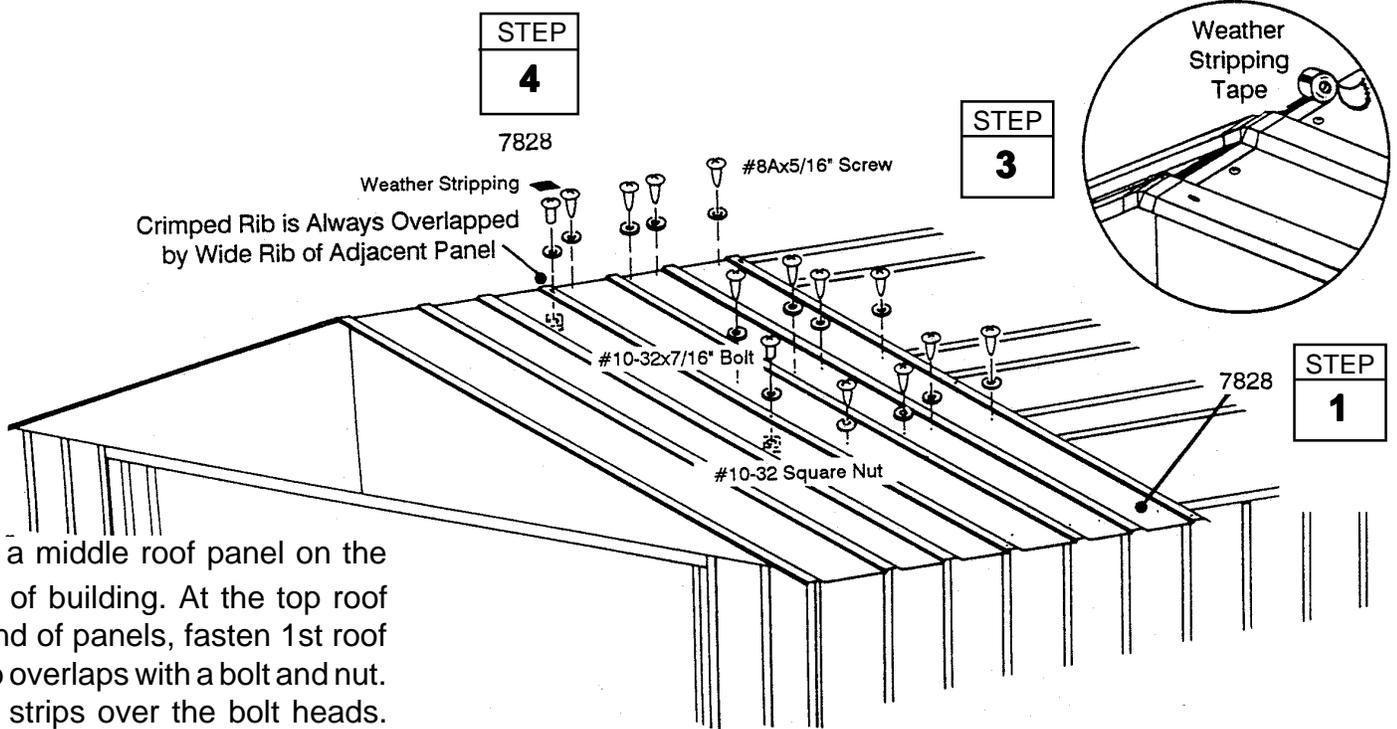
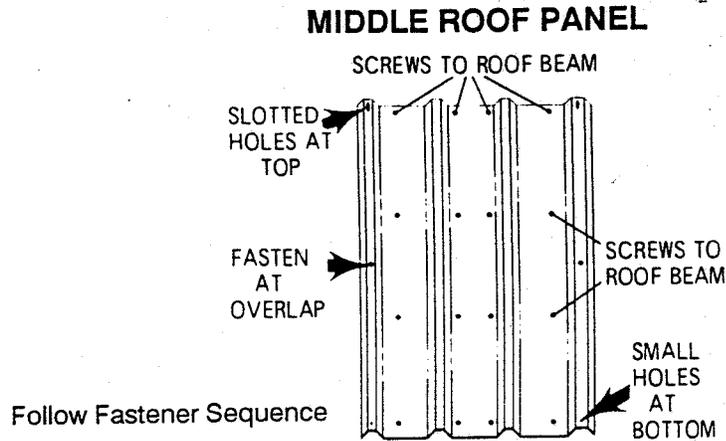
### ● 7828 Middle Roof Panel (2)

BW33

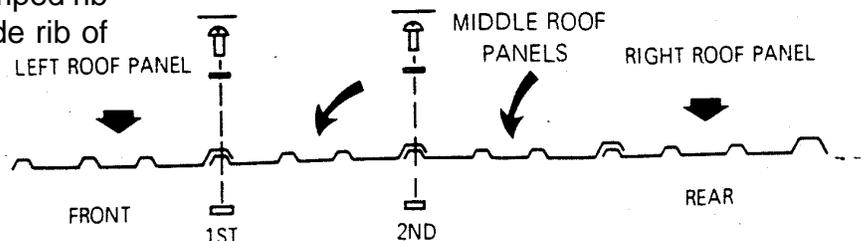
**1** Position **middle roof panel** overlapping rib of left corner roof panel. Fasten overlap at center of roof panel rib using a bolt and nut. Fasten to roof beams as before using screws.

**2** Cut the **weather stripping tape** into 4 strips, each strip being about 2" (5cm) long.

**3** Cover the joint at the peak with weather stripping tape. Unroll the tape and press it down over the opening at the ridge as you install each roof panel. Do not cut the tape at this time.



**4** Install a middle roof panel on the left side of building. At the top roof beam end of panels, fasten 1st roof panel rib overlaps with a bolt and nut. Press 2 strips over the bolt heads. Save the other 2 strips for the next overlap. Remember, the crimped rib is always overlapped by wide rib of adjacent panel.



# Step 22

## ● Parts Needed For ● Roof Panels 12x17, 12x24 & 12x31

● 7828 Middle Roof Panel  
(see below)

BW34

**1** Position **middle roof panel** overlapping rib of left corner roof panel. Fasten overlap at center of roof panel rib using a bolt and nut. Fasten to roof beams as before using screws.

**2** Cut the **weather stripping tape** into 8 strips, each strip being about 2" (5cm) long.

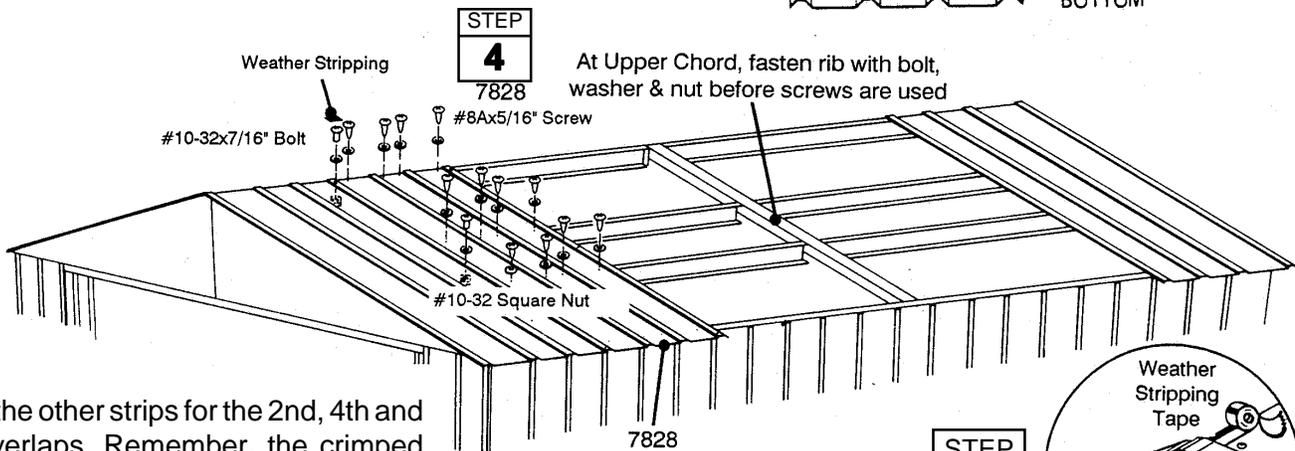
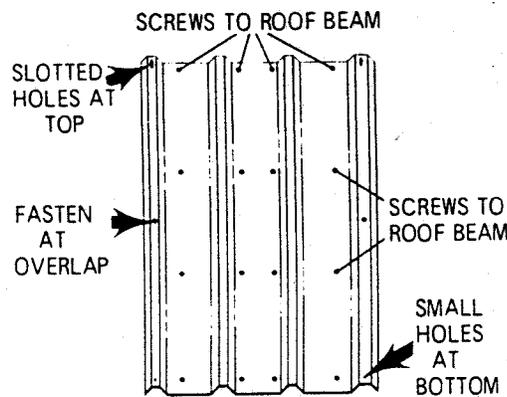
**3** Cover the joint at the peak with weather stripping tape. Unroll the tape and press it down over the opening at the ridge as you install each roof panel. Do not cut the tape at this time.

**4** Install a middle roof panel on the left side of building. At the top roof beam end of panels, fasten 1st roof panel rib overlaps with a bolt and nut. Press 2 strips over the bolt heads.

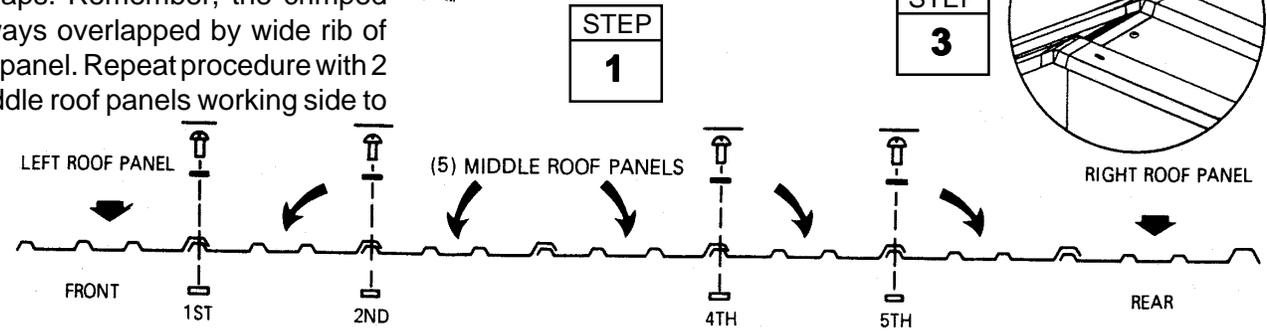
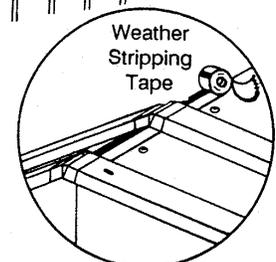
IF YOU ARE BUILDING A 12x24  
Cut 12 2" (5cm) strips. There are 3 extra middle roof panels on each side of building. Fasten 7th and 8th panel overlap and apply strip over head of bolt, along with ridge caps.

IF YOU ARE BUILDING A 12x31  
Cut 16 2" (5cm) strips. There are 6 extra middle roof panels on each side of building. Fasten 7th, 8th, 10th & 11th panel overlap and apply strip over head of bolt, along with ridge caps.

### MIDDLE ROOF PANEL



Save the other strips for the 2nd, 4th and 5th overlaps. Remember, the crimped rib is always overlapped by wide rib of adjacent panel. Repeat procedure with 2 more middle roof panels working side to side.



# Step 23

BW35

## ● Parts Needed For ● Ridge Caps 12x10

- 7828 Middle Roof Panel (2)
- 7843 Ridge Cap (1)
- 7827 Left Roof Panel (1)
- 6874 Ridge Cap (1)

**1** Temporarily remove right rear roof panel.

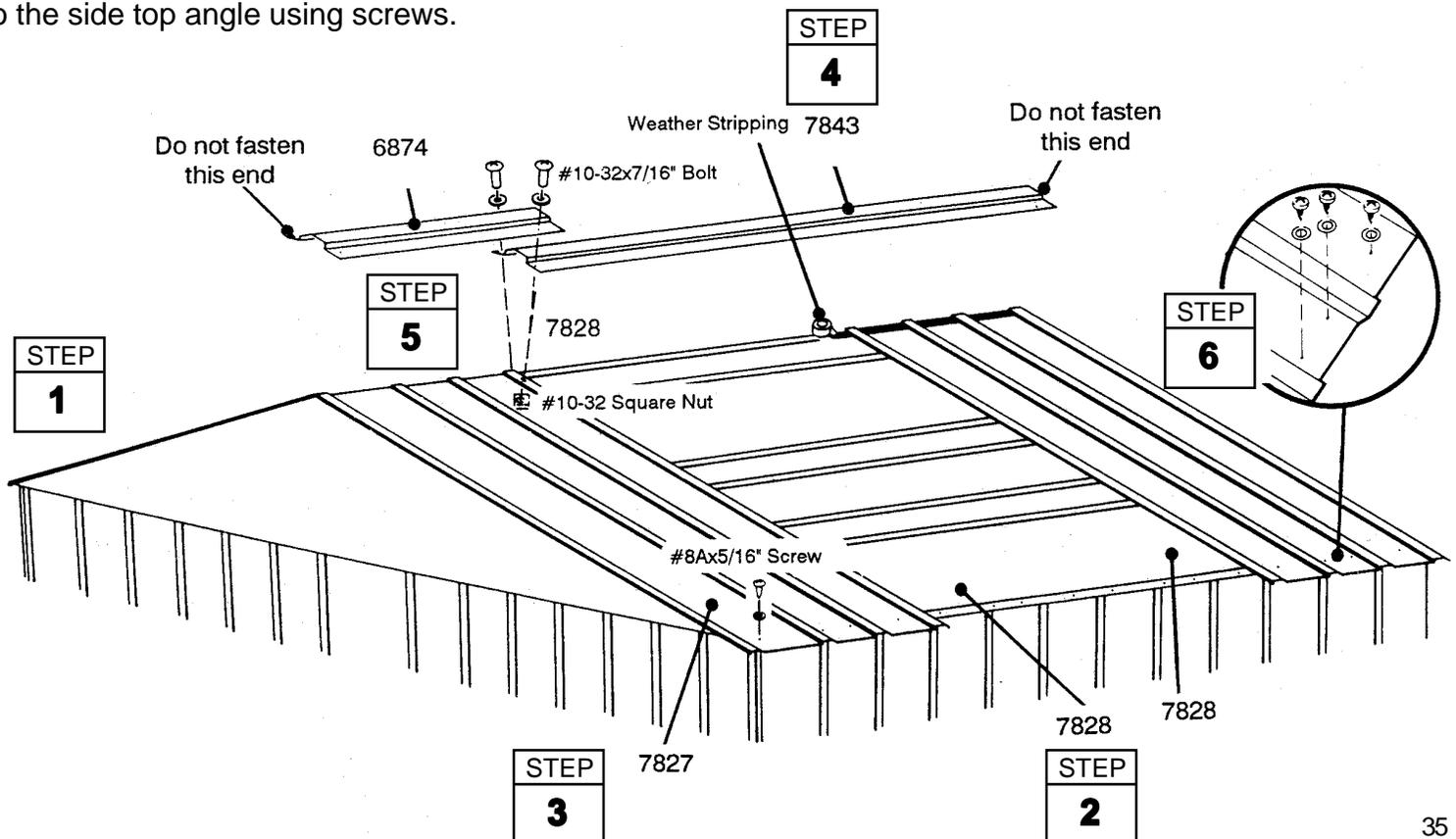
**2** Install 2 **middle roof panels**. Fasten 2nd roof panel rib overlaps with a bolt and nut. Press 2 strips over the bolt heads. Continue weather striping.

**3** Install the **right** and **left roof panels** at the rear gables. Follow fastener sequence.

**4** Position a **ridge cap 7843** on the completed front roof section.

**5** Install the second **ridge cap 6874** overlapping the first ridge cap. Align the holes and fasten using bolts.

**6** Fasten the lower end of the panels to the side top angle using screws.



# Step 24 Ridge Caps 12x17, 12x24 & 12x31

● Parts Needed For ●

- 7828 Middle Roof Panel (see below)
- 7843 Ridge Cap (see below)
- 7827 Left Roof Panel (1)
- 6874 Ridge Cap (1)

BW36

**1** Continue weather stripping and fastening overlaps.

**2** Position a **ridge cap 7843** on the completed front roof section.

**3** Install 2 **middle roof panels**.

**4** Install the second **ridge cap 7843** overlapping the first ridge cap. Align the holes and fasten using bolts.

**5** Temporarily remove right rear roof panel. Install 4 **middle roof panels**. As each panel is fastened, carefully raise 2nd ridge cap slightly away from panels for fasteners and tape.

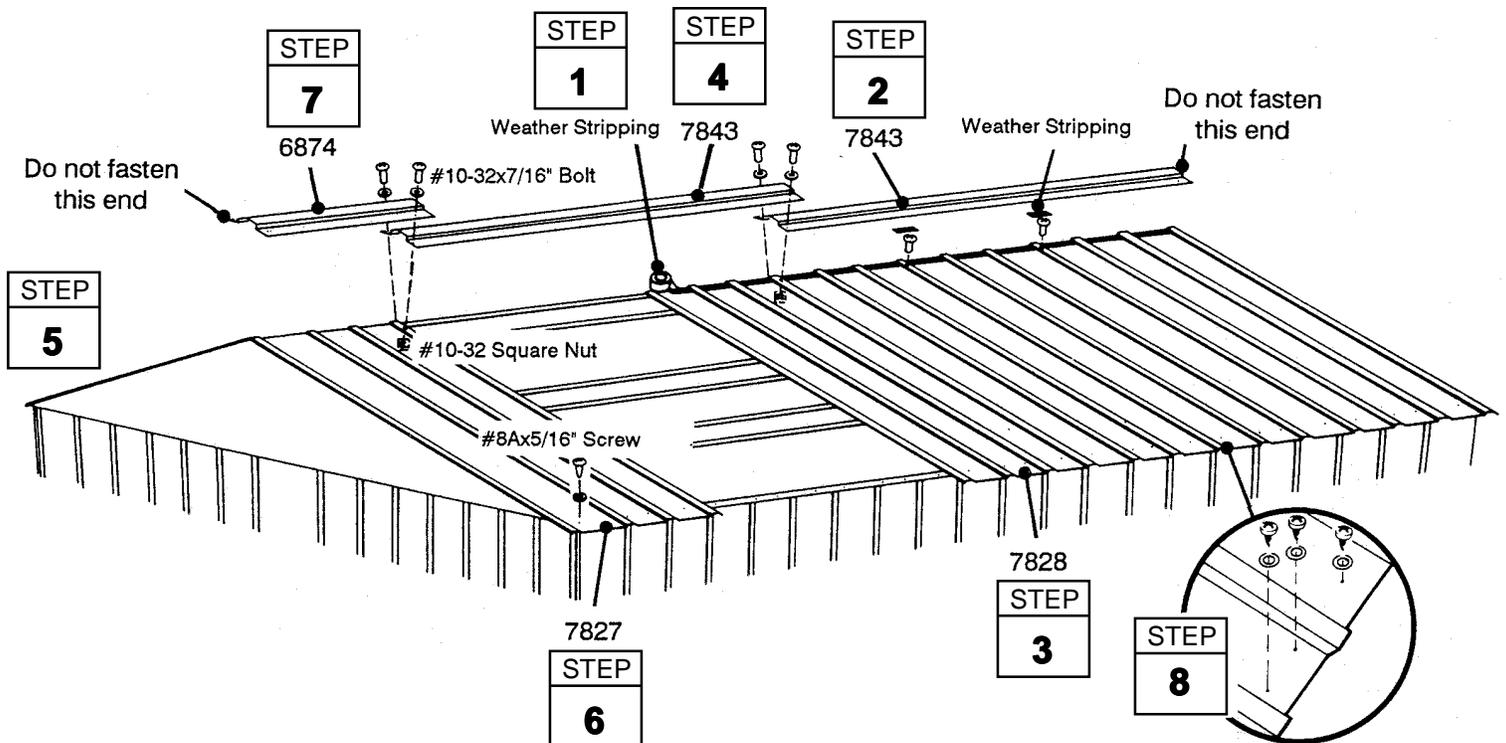
**6** Install the **right and left roof panels** at the rear gables. Follow fastener sequence.

**7** Install the third **ridge cap 6874** overlapping the second ridge cap. Align the holes and fasten using bolts.

**8** Fasten the lower end of the panels to the side top angle using screws.

IF YOU ARE BUILDING A 12x24  
Replace ridge cap 6874 with an additional ridge cap 7843 and install ridge cap 6874 to rear of building.

IF YOU ARE BUILDING A 12x31  
Replace ridge cap 6874 with 2 additional ridge caps 7843 and install ridge cap 6874 to rear of building.



# Step 25

BW37

## ● Parts Needed For ● Trim 12x10

- 5220 Side Roof Trim (2)
- 6014 Side Roof Trim (2)
- 7846 Right Rake (2)
- 7845 Left Rake (2)

**1** Attach the **side roof trim** to the lower end of the roof panels on each side of the building using screws at each panel overlap.

### NOTE

A single screw fastens both trim pieces at the overlap.

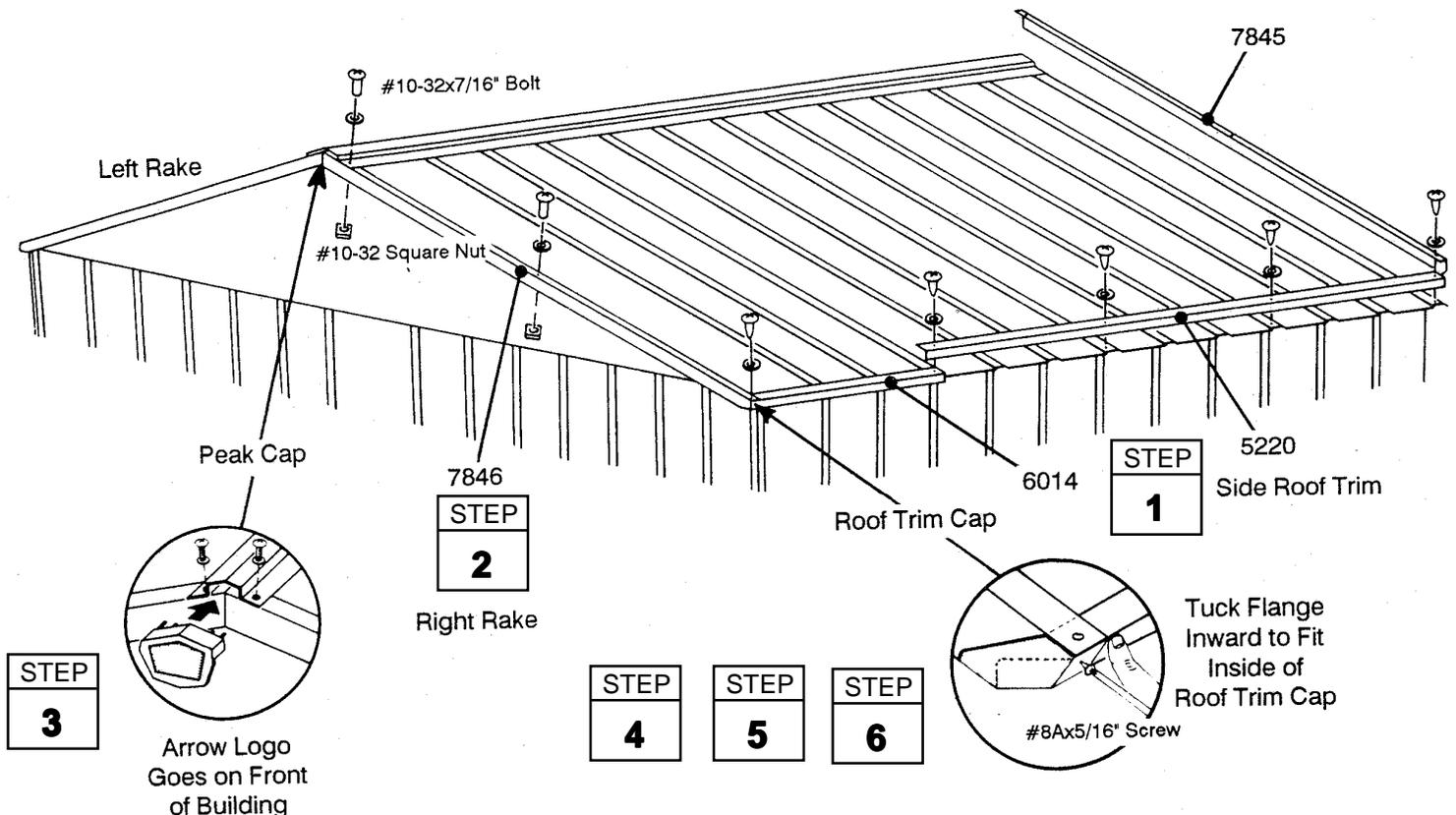
**2** Position **left** and **right rake** to the ends of roof, noting that rake slips under ridge cap, but fits on top of side roof trim. Fasten rake to the center of roof panel rib using a bolt.

**3** Fasten roof panel rib, rake, **peak cap** and ridge cap together using bolts and nuts. Fasten remaining peak cap in the same manner.

**4** Using your thumb and index finger, overbend the bottom flange of the side roof trim at the corner inward enough so the right and left roof trim caps fit onto right and left corners.

**5** Fasten rake to side trim using a screw into roof panel.

**6** Fasten the roof trim caps to the side trim using a screw.



# Step 26

BW38

## ● Parts Needed For ● Trim 12x17, 12x24 & 12x31

- 5220 Side Roof Trim (see below)
- 6014 Side Roof Trim (2)
- 7845 Left Rack (2)
- 7846 Right Rake (2)

**1** Attach the **side roof trim** to the lower end of the roof panels on each side of the building using screws at each panel overlap.

### NOTE

A single screw fastens both trim pieces at the overlap.

**2** Position **left** and **right rake** to the ends of roof, noting that rake slips under ridge cap, but fits on top of side roof trim. Fasten rake to the center of roof panel rib using a bolt.

**3** Fasten roof panel rib, rake, **peak cap** and ridge cap together using bolts and nuts. Fasten remaining peak cap in the same manner.

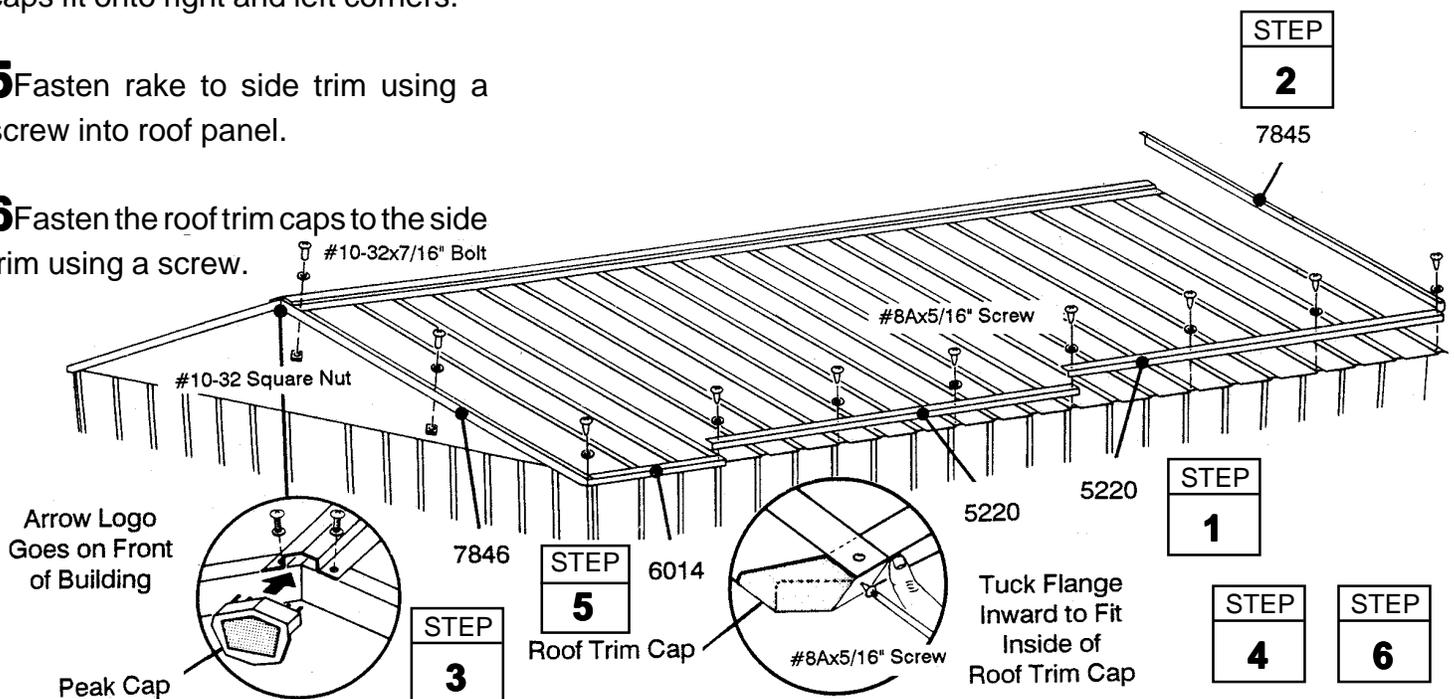
**4** Using your thumb and index finger, overbend the bottom flange of the side roof trim at the corner inward enough so the right and left roof trim caps fit onto right and left corners.

**5** Fasten rake to side trim using a screw into roof panel.

**6** Fasten the roof trim caps to the side trim using a screw.

IF YOU ARE BUILDING A 12x24  
Install additional side roof trim 5220 towards rear of building.

IF YOU ARE BUILDING A 12x31  
Install 2 additional side roof trim 5220 pieces towards rear of building.



# Step 27

BW39

## ● Parts Needed For ● Side or Rear Entry Door All Sizes

- 7945 Door (1)
- 3719 Door Handle Brace (1)
- 7947 Vertical Door Brace (1)
- 6264 Horizontal Door Brace (2)

### NOTE

To assemble door to slide from left to right (opening), position door with handle holes on left side of door. Position handle holes on right side if door is to slide from right to left (opening).

Each bolt and screw in the door requires a washer.

**1** Attach the **door handle brace** and **handle** to the **door** with 1 bolt as shown. *Don't tighten the bolt yet.*

**2** Swing the door handle brace up to the hole in the center of the door and insert a screw.

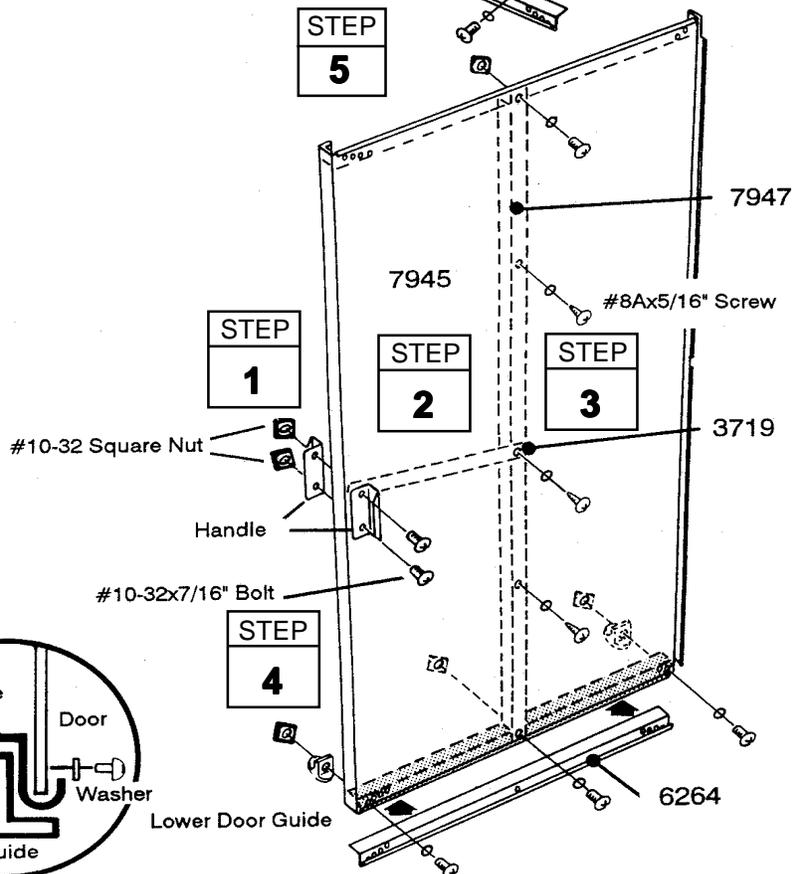
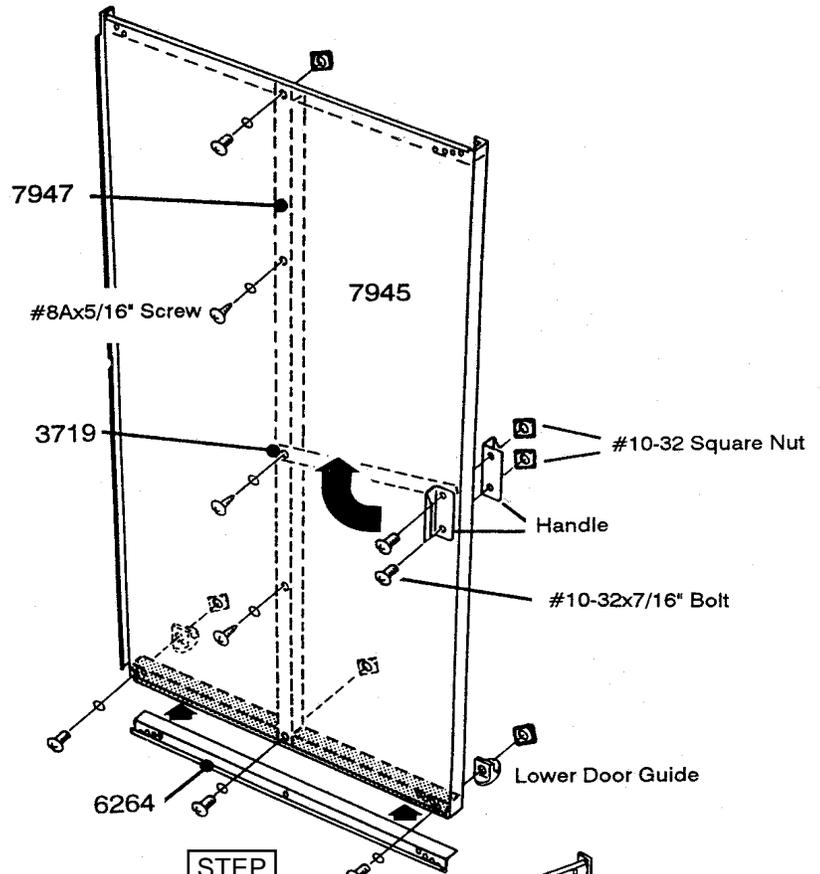
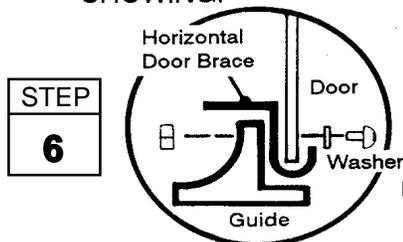
**3** Hold the **vertical door brace** against the center of the inside surface of the door and turn the screw to hold the vertical door brace and door handle brace in place. Fasten to door above and below center connection using 2 screws.

**4** Insert a second bolt in the door handle and tighten both bolts.

**5** Put a **horizontal door brace** onto the top edge *and* bottom edge and fasten *with 1 bolt in the center.*

**6** Attach the **lower door guides** as shown.

END VIEW  
SHOWING:



# Step 28

## ● Parts Needed For ● Side or Rear Entry Door All Sizes

● Door Assembly (1)

BW40

**1** Position **door slides** onto the legs, from the end of door track, as shown in the end view.

**2** From inside the building, put the bottom of the door behind door jamb into the lower door track.

**3** Position the top of the door so that the holes in the door line up with the holes in the door slides.

**4** Fasten the door to the door slides using a #10Bx1/2" screw.

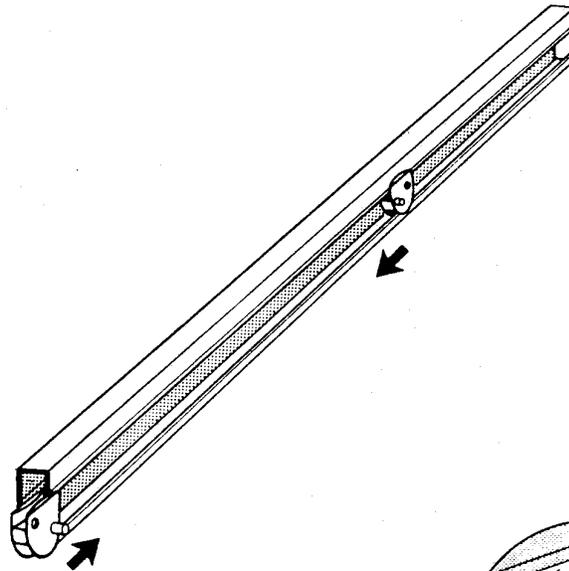
### NOTE

The 4 holes in the top of door allow you to adjust the door. Place the door slide in the middle 2 holes.

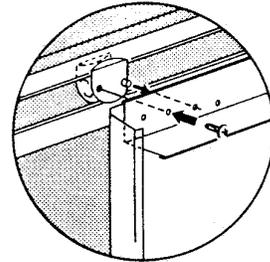


END VIEW

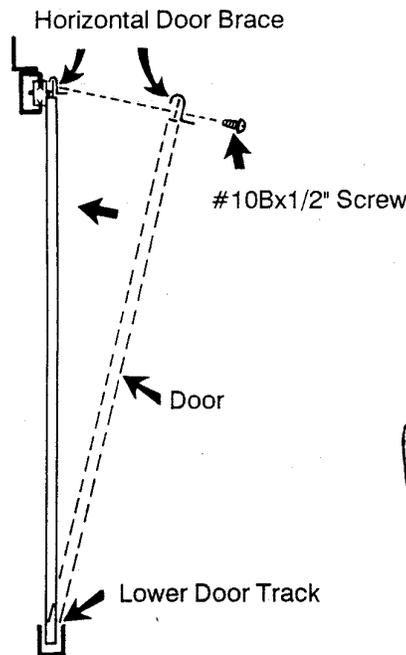
STEP  
1



STEP  
3

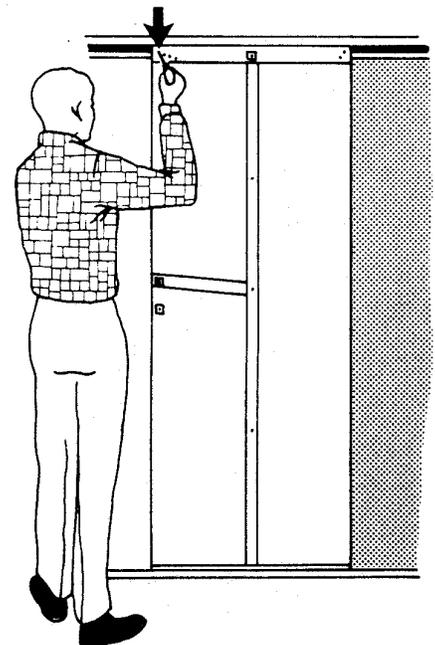


STEP  
4



STEP  
2

Adjustment Holes Allow Door to Meet Evenly Along Its Length



# Step 29

BW41

## ● Parts Needed For ● Bottom Section Roll-Up-Door

- 9286 Door Panel (Bottom) (1)
- 7808 Bottom Angle (1)
- 8198 Vinyl Weatherstrip (1)

**1** Layout the **door panels** on a flat surface, protecting the panels from being scratched.

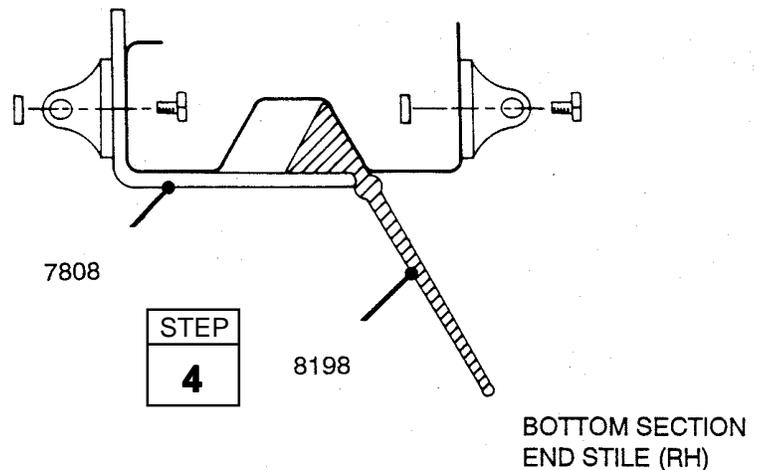
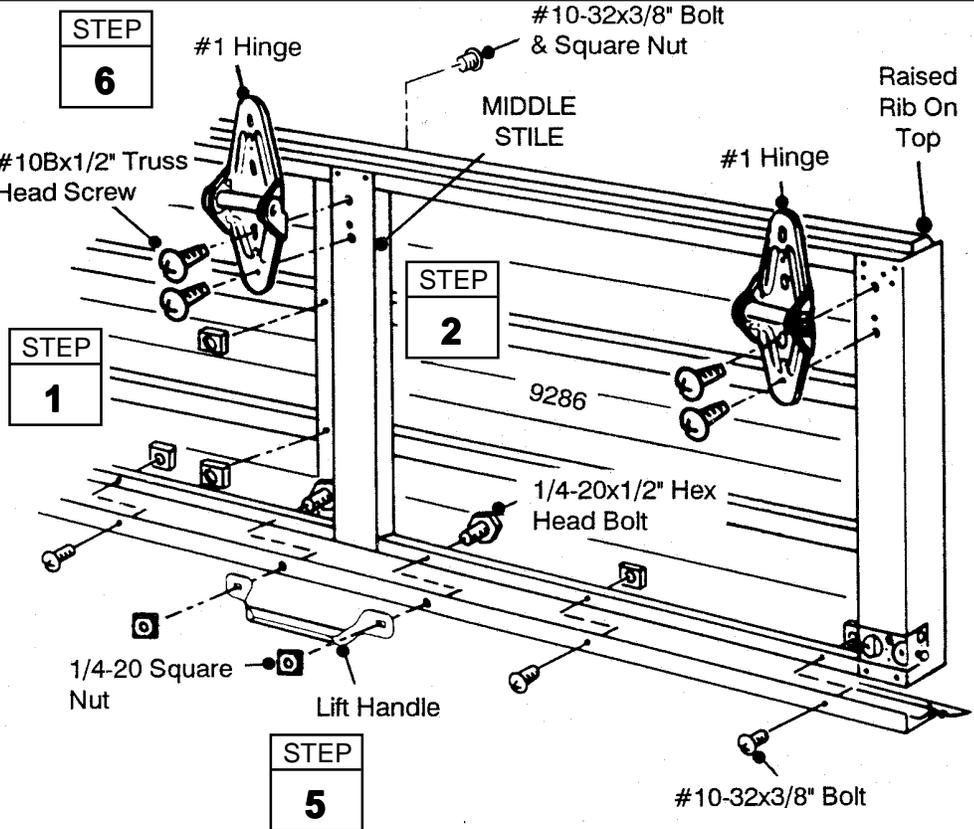
**2** Bolt the middle stiles at the center of the 3 door panels where indicated with #10-32x3/8" bolts on the outside and square nuts inside.

**3** On the **door panel bottom section**, attach the **right bottom bracket** to the lower right corner and the **left bottom bracket** to the left side using #10Bx1/2" truss head screws into end stiles.

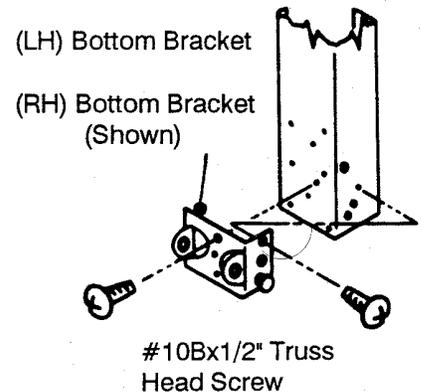
**4** Loosely install **bottom angle** to the bottom section using #10-32x3/8" bolts and square nuts. Insert vinyl **weather strip** between angle and bottom section and tighten bolts.

**5** Fasten 2 **lift handles** to bottom section, just below the bottom of middle stile using 1/4-20x1/2" hex head bolts and 1/4-20 square nuts.

**6** Install the **#1 hinges** at the upper corners and to the middle stile of the bottom section using #10Bx1/2" truss head screws.



**NOTE**  
Be sure you fasten the lower part of hinge to the top of each stile. The top hinge leaf is marked.



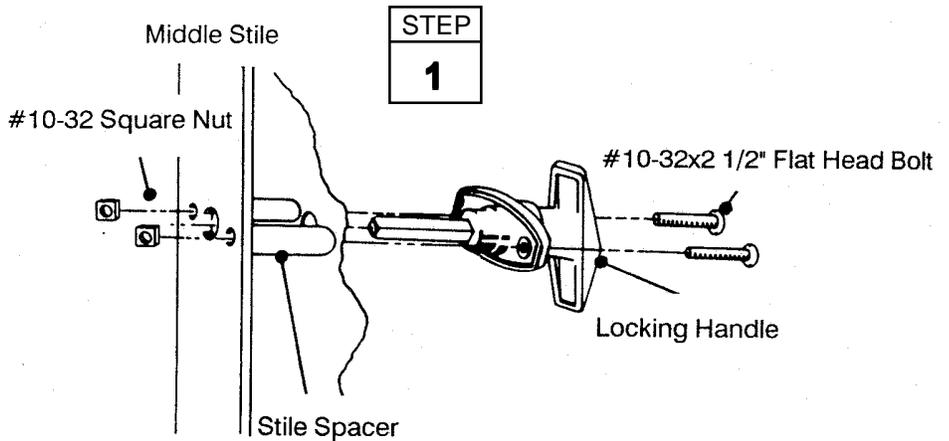
# Step 30

## ● Parts Needed For ● Lock Section Roll-Up-Door

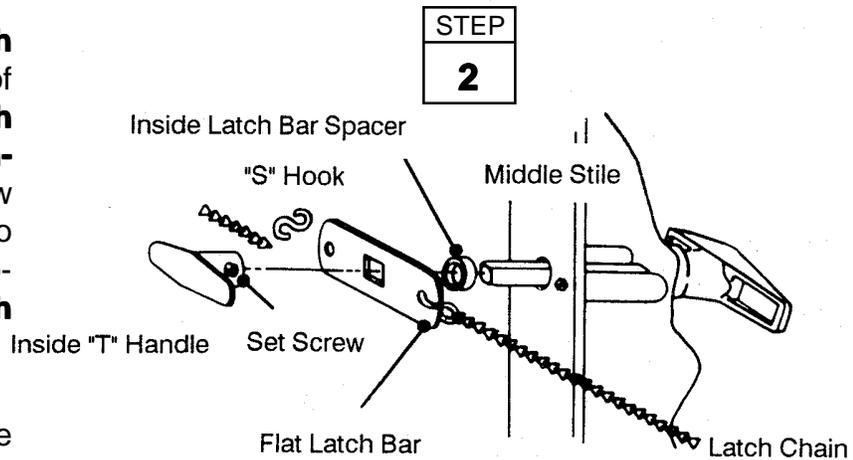
● 7848 Door Panel (Lock) (1)

BW42

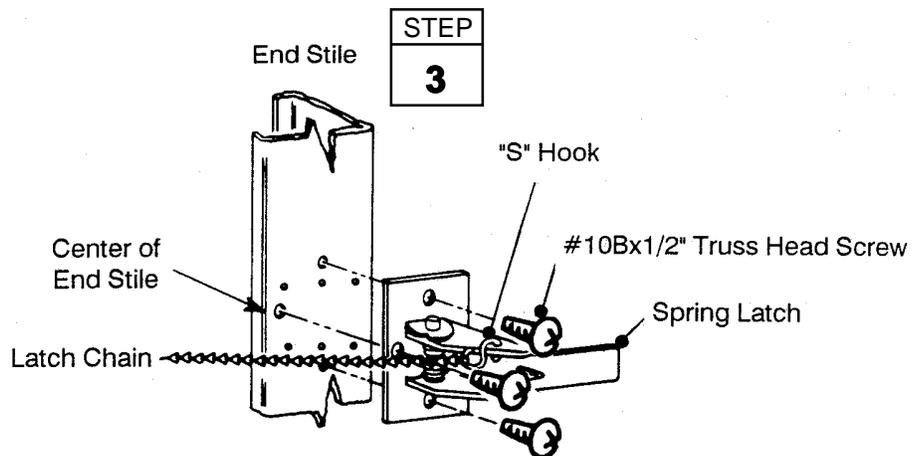
**1** With the key, unlock the outside **locking handle** and rotate the handle to a vertical position. Insert the square shank through the hole located in the center of **door panel lock section**. Slide in the **stile spacers** and insert the #10-32x2 1/2" flat head bolts through handle, spacer and stile. Secure with square nuts and tighten.



**2** Turn the locking handle to a horizontal position. Slide the **inside latch bar spacer** over the square shank of the lock handle and slip the **flat latch bar** over shank. Secure with the **inside "T" handle**. Tighten set screw in handle. Attach small **"S" hooks** to holes on the flat latch bar. Slip opposite end of "S" hooks through **latch chains**.



**3** Attach the **spring latches** to the end stiles on the lock section. Attach "S" hooks to the holes on top of the latches. Attach the latch chains to the "S" hooks so that the chain is taut.



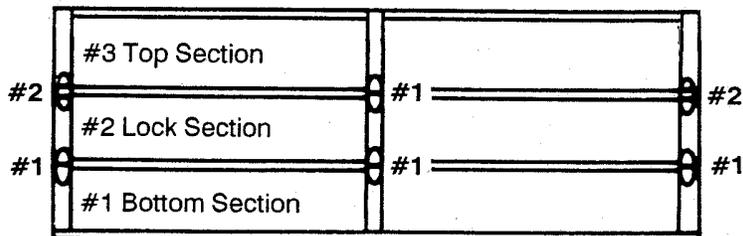
**Hint:** If chain is too tight, latches will not engage strikes (on track) properly. If chain is too loose, the lock handle will not retract latches. Adjust chains by changing the hole location of "S" hook through chain.

**4** Attach **#2 hinges** to lock section at the upper corners of end stiles. Fasten **#1 hinge** to the middle stile.

**Hint:** When installing hinges, be sure the hinge number is always on the lower hinge leaf.

STEP  
**4**

Hinge Location Only!  
Do Not Join Panels Together



# Step 31

BW43

## ● Parts Needed For ● Vertical Tracks Roll-Up-Door

- 67510 Right Vertical Track (1)
- 67509 Left Vertical Track (1)

### NOTE

When rib neck bolts are inserted in the track, use bolts with heads located on the inner side of the track to prevent interference with the movement of the rollers.

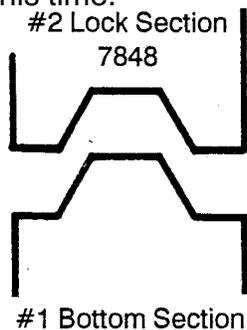
**1** Insert the **roller** shaft into the barrel holes on the hinges furthest out from the face of the end stiles on both panels. Note that #1 hinge has only one barrel. Insert rollers through the tabs on the bottom brackets on bottom section.

**2** Attach **right** and **left vertical tracks** loosely to right and left track supports using 1/4-20x1/2" hex head bolts and square nuts.

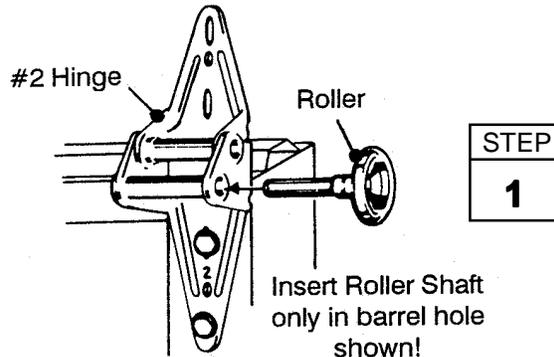
**3** Attach spring latch **strikers** loosely to vertical tracks using 1/4-20x1/2" rib neck bolts and square nuts.

**4** Lift the bottom section and insert the rollers into the vertical tracks. Slide the panel down and level across top. Shim to level if necessary.

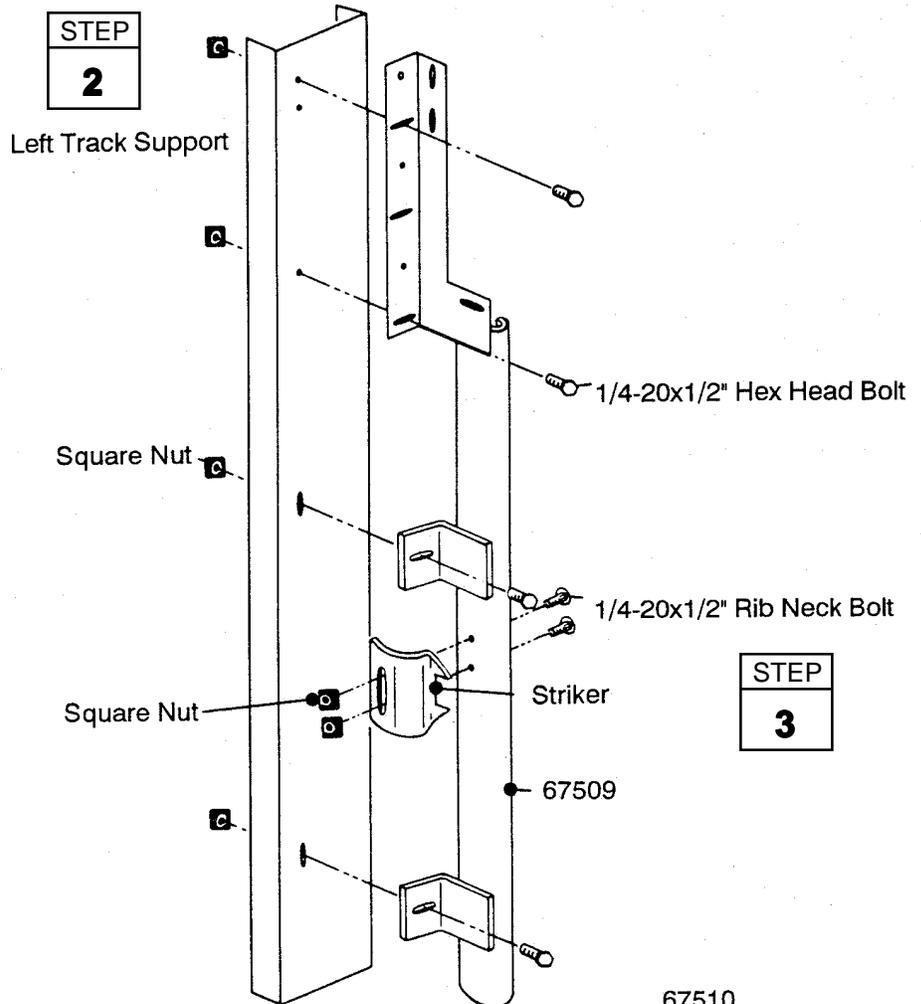
**5** Insert lock section into vertical tracks. Attach hinges from #1 to #2 panel by inserting #10Bx1/2" truss head screws at bottom edge of lock section. Do not fasten the last door panel at this time.



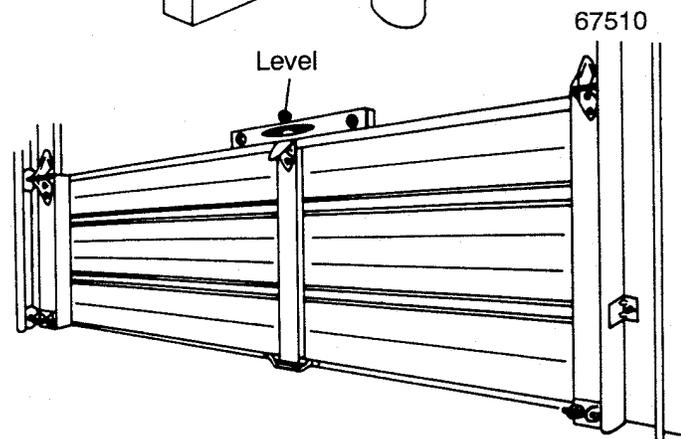
STEP  
**5**



STEP  
**1**



STEP  
**3**



STEP  
**4**

# Step 32

BW44

## ● Parts Needed For ● Horizontal Track Roll-Up-Door

- 7913 Spring Support Bracket (2)
- 67476 Right Horizontal Track (1)
- 67475 Left Horizontal Track (1)
- 7857 Truss Support (2)
- 7847 Door Panel (Top) (1)

**1** Install **spring support brackets** to the roof beams using #10-32x7/16" bolts and #10-32 square nuts.

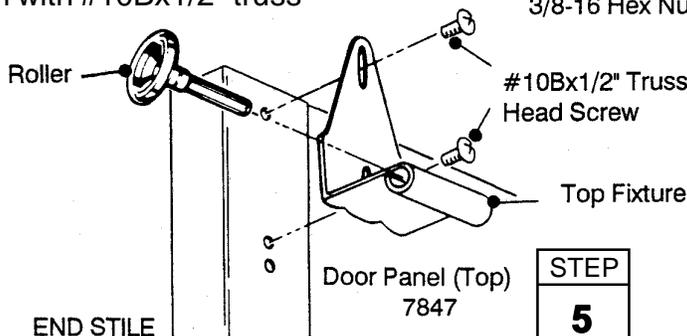
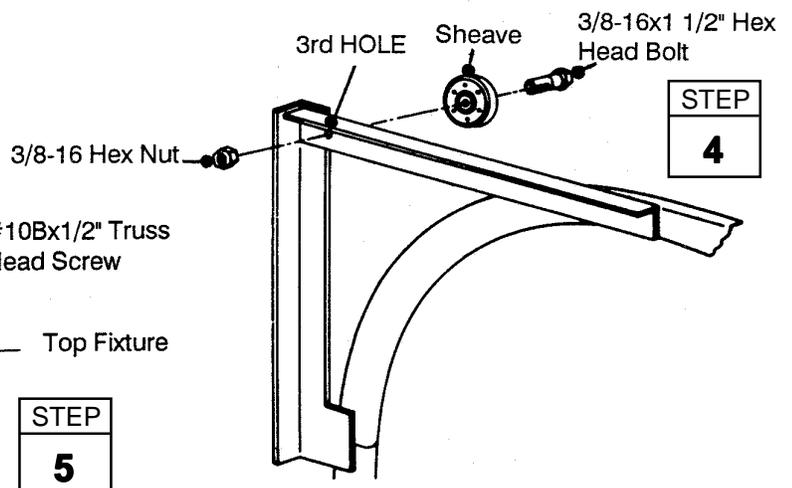
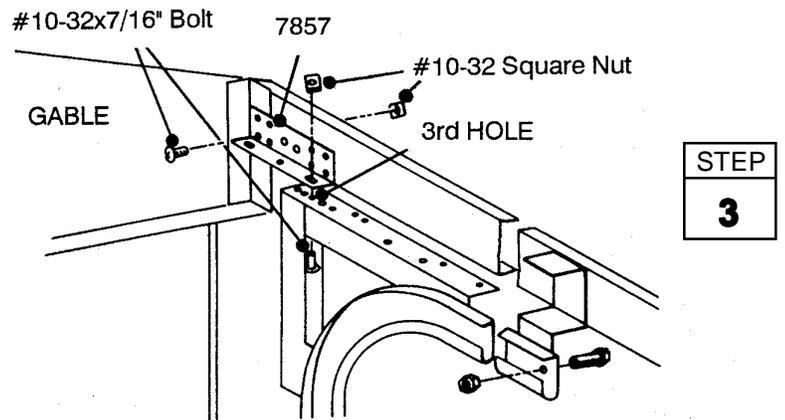
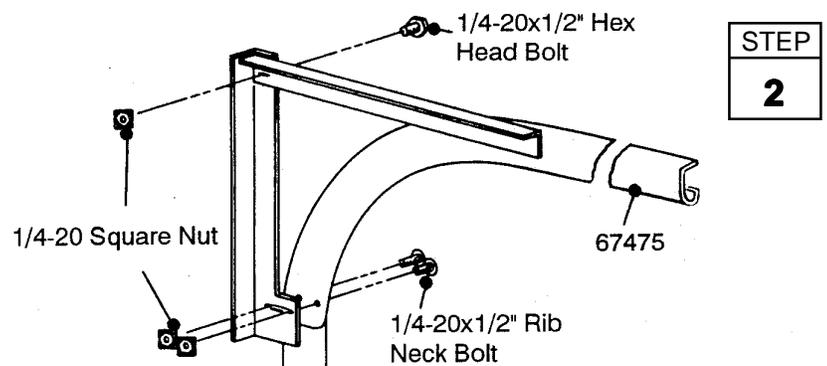
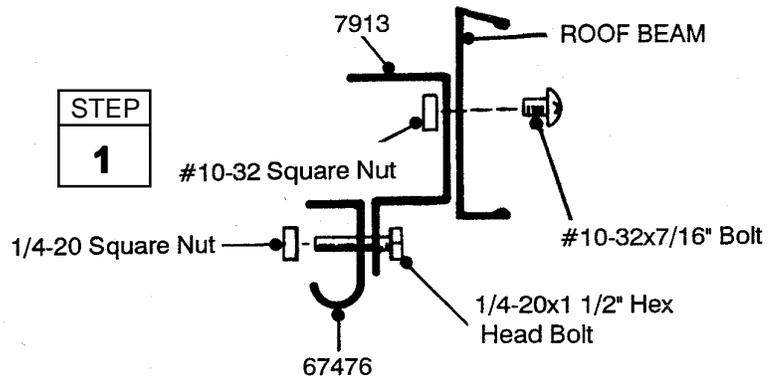
**2** Attach the **right and left horizontal track** to right & left vertical track using bolts and nuts shown loosely.

**3** Fasten horizontal tracks loosely to spring support brackets using 1/4-20x1/2" hex head bolts and 1/4-20 square nuts. Remove lower bolt at gable end of roof beam. Position **truss support** with 2" (5cm) flange against roof beam. Replace bolt to fasten support, brace and roof beam. Fasten opposite end to vertical track angle at the 3rd hole in from the end using #10-32x7/16" bolt and #10-32 square nut. Tighten all bolts and nuts.

**4** Attach the **sheave** (pulley wheel) to the 3rd hole on the support angle of the horizontal track using 3/8 - 16 x 1 1/2" hex head bolt & 3/8-16 hex nut.

**5** Position third **door panel top section** on second panel. Fasten top of hinges to bottom of third door panel using #10Bx1/2" truss head screws.

**6** Engage roller with **top fixture**, slide roller into horizontal track. Move assembly to line up with holes in end stile and fasten with #10Bx1/2" truss head screws.



# Step 33

## Roll-Up-Door

BW45

### CAUTION:

**FROM THIS POINT ON, BE SURE TO USE EXTREME CAUTION UNTIL THE DOOR IS PROPERLY SPRUNG AND OPERATING**

#### 1 Attach "S" hooks to both springs.

Fasten **sheave** and **spring clevis** to opposite ends of springs using a 3/8-16x1 1/2" hex head bolt and 3/8 nut. Attach spring assemblies to spring support brackets.

2 Carefully raise the door to a fully open position and prop. Make sure the door is level in the opening. Slip the keyed end of the **keyed cable** over the studs of the bottom brackets. Thread cable over front sheave, around spring sheave and attach end to **cable lacer**. Attach cable lacer with "S" hook in a convenient hole in horizontal track angle, keeping equal tension on both springs, so that door hangs level. Once cable is installed, remove prop and lower door.

3 Adjust vertical tracks so rollers seat in "U" of track and bottom rollers fit snug against bottom brackets, but not too tight, so rollers will operate freely. When complete, tighten all track bolts.

4 Adjust striker plates for proper engagement with the latches. Adjust the top fixture up or down and tighten the screws to hold the third door panel against the lintel.

### NOTE

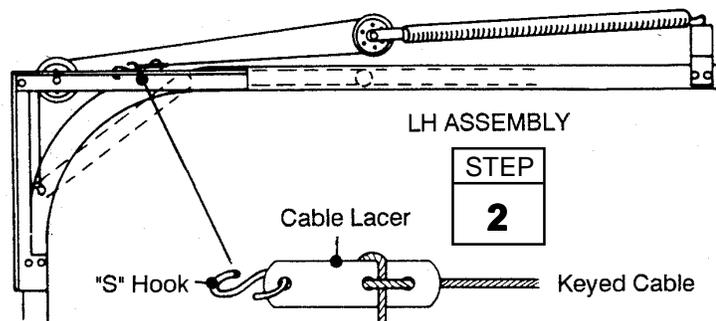
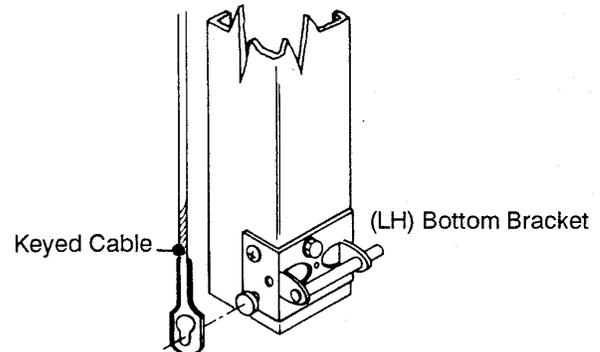
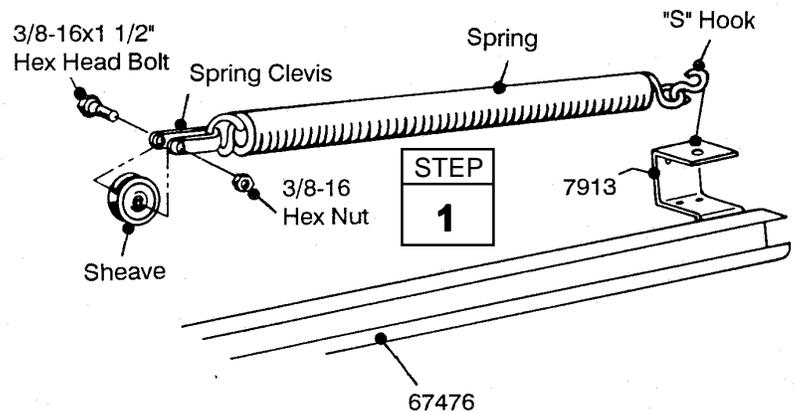
Recheck all door fasteners and hardware to be sure that each fastener is tight and secure.

### CHECK

Be sure that the lift cables do not rub and/or the rollers do not bind in the track when door is opened or closed. Recheck the springs to be sure that there is equal tension on both springs. This is extremely important for proper door operation.

### ADJUST

Springs by changing location of "S" hooks to another hole on support angle of the horizontal track.



# Step 34

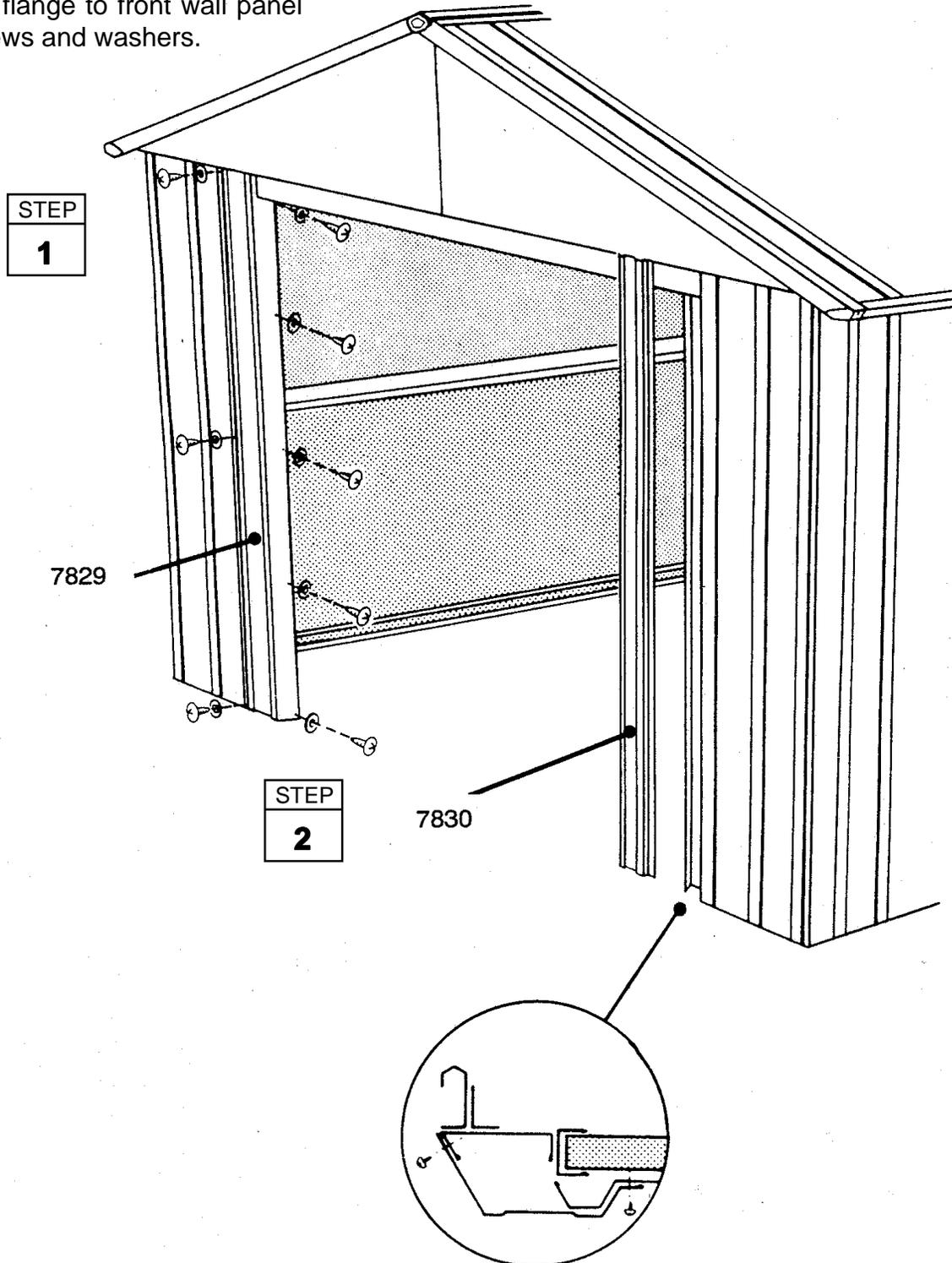
BW46

## ● Parts Needed For ● Front Door Jambs All Sizes

- 7830 Right Door Jamb (1)
- 7829 Left Door Jamb (1)

**1** Position **right** and **left door jambs** to right and left track supports with notched end on top, facing inside building.

**2** Fasten long flange to track support and short flange to front wall panel using screws and washers.



# Step 35

## Spring Restraint Cable All Sizes

BW47

**1** After door has been completely installed, raise door to a full open position. Remove nut from bolt holding the horizontal track to the spring support bracket, but do not remove bolt.

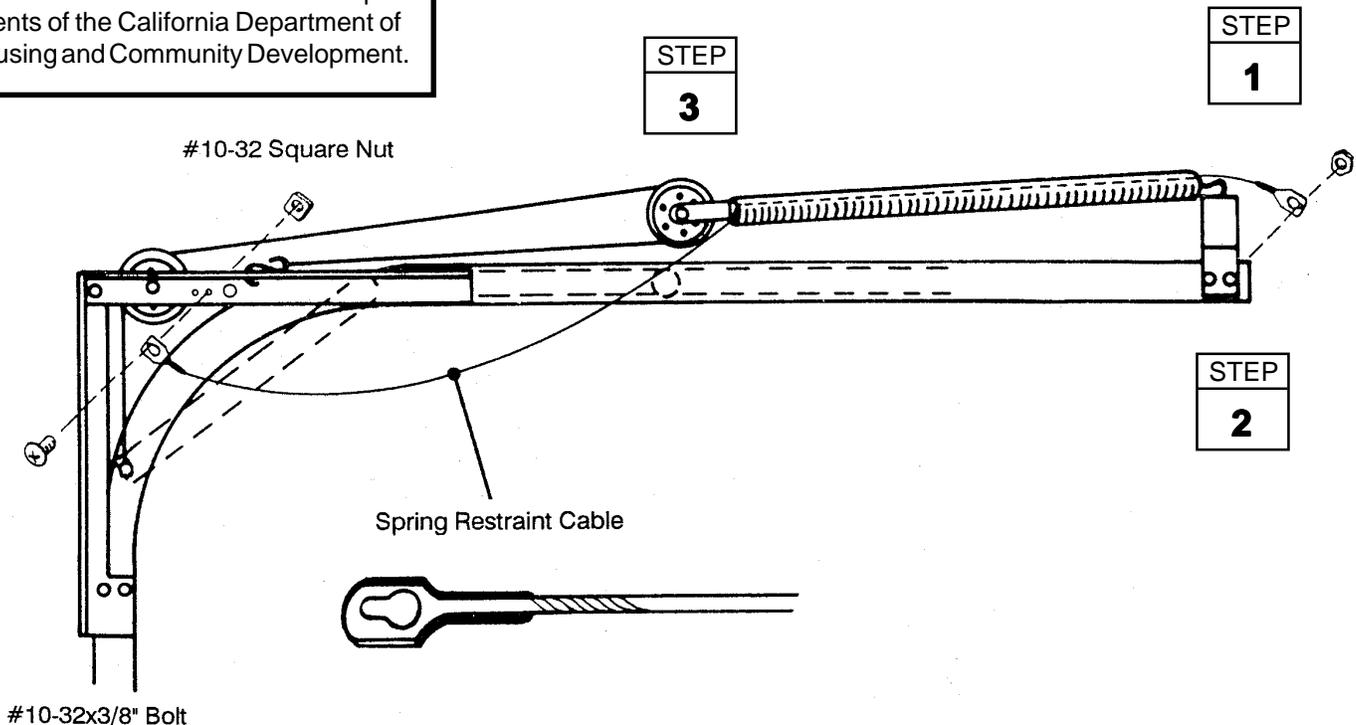
**2** Slip keyed end of **spring restraint cable** over shaft of bolt. Replace nut and tighten securely.

**3** Thread spring restraint cable through spring, making sure cable goes through spring loops on each end of spring. Fasten to hole shown on angle of the horizontal track using a #10-32x3/8" bolt and square nut through keyed end of cable.

**4** Repeat above installation procedure for the other spring.

### NOTE

This spring restraint cable has been manufactured in accordance with requirements of the California Department of Housing and Community Development.



**VT1210**

**VT1217**  
**697.68887**

**VT1224**  
**697.68888**

**VT1231**

BW48

## **SOME FACTS ABOUT RUST**

Rusting is a natural oxidizing process that occurs when bare metal is exposed to moisture. Problem areas include screw holes, unfinished edges, or where scrapes and nicks occur in the protective coating through normal assembly, handling and use. Identifying these natural rusting problem areas and taking some simple rust protection precautions can help to stop rust from developing, or stop it quickly as soon as it appears.

1. Avoid nicking or scraping the coating surface, inside and out.
2. Use all the washers supplied. In addition to protecting against weather infiltration, the washers protect the metal from being scraped by the screws.
3. Keep roof, base perimeter and door tracks free of debris and leaves which may accumulate and retain moisture. These can do double damage since they give off acid as they decay.
4. Touch up scrapes or nicks and any area of visible rust as soon as possible. Make sure the surface is free of moisture, oils, dirt or grime and then apply an even film of high quality touch-up paint.