

# ALUMINUM WALL MOUNTED BENCH

## ASSEMBLY/INSTALLATION INSTRUCTIONS

BEGIN BY LAYING OUT BENCH BRACKETS, AND BENCH BACKREST ASSEMBLY.

LOCATE BENCH SLATS.

MOUNT BENCH BRACKETS TO WALL COLUMNS AND MULLIONS AS REQUIRED USING #14 X 1" S.S. HEX HEAD TEK SCREW.

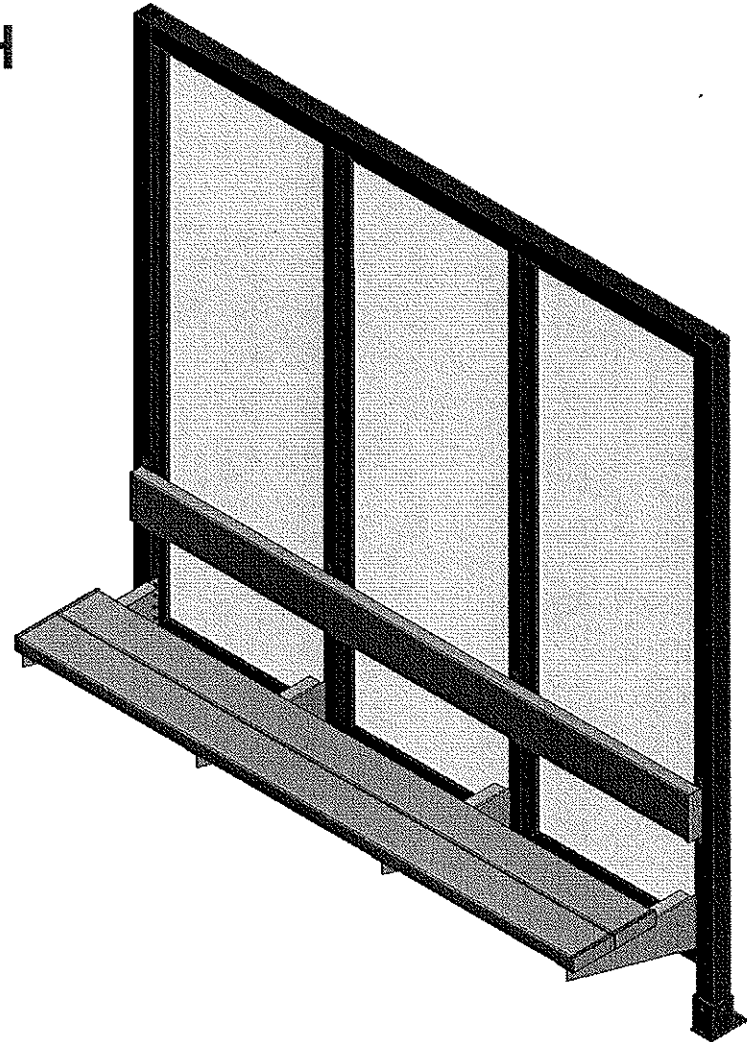
INSERT BENCH TIE-DOWN CLIPS INTO BENCH SLAT AND ALIGN WITH BENCH BRACKET. INSERT FLAT WASHER WITH CARRIAGE BOLT FROM ABOVE, AND LOCKWASHER AND NUT FROM BELOW.

REPEAT STEPS FOR EACH BRACKET.

ONCE ALL BENCH TIE-DOWN CLIPS ARE ATTACHED, HAND TIGHTEN AND MAKE NECESSARY ADJUSTMENTS FOR ALIGNMENT.

ONCE ALIGNMENT IS COMPLETE, TIGHTEN ALL BENCH TIE-DOWN CLIPS.

USING #14 X 1" S.S. HEX HEAD TEK SCREW, MOUNT BENCH BACKREST STRAPS TO WALL COLUMNS, AND MULLIONS AS REQUIRED.

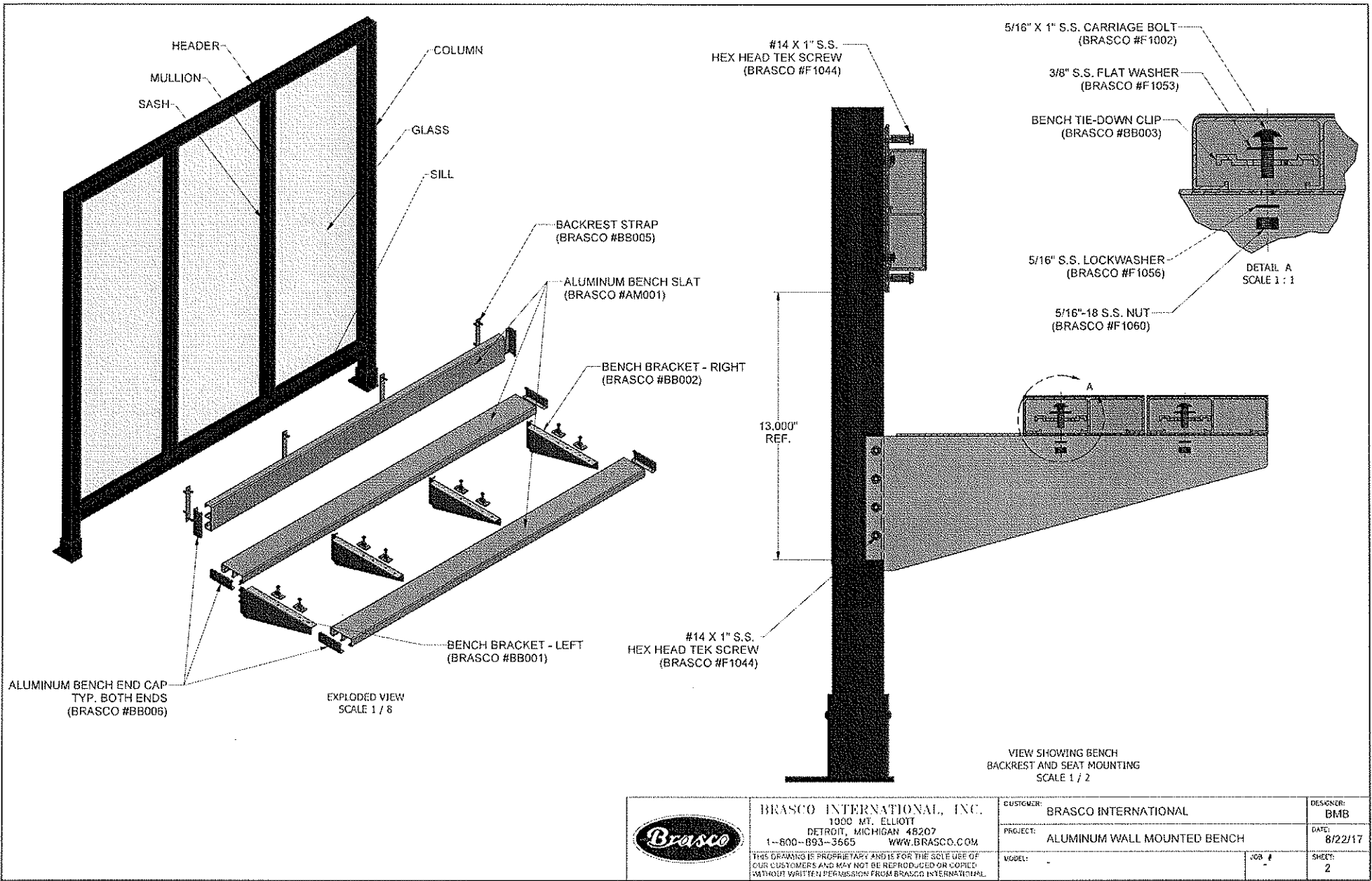


BRASCO INTERNATIONAL, INC.  
1000 E. 11th St.  
DETROIT, MICHIGAN 48207  
1-800-892-3665 WWW.BRASCO.COM

THIS DRAWING IS PROPRIETARY AND IS FOR THE SOLE USE OF OUR CUSTOMERS AND MAY NOT BE REPRODUCED OR COPIED WITHOUT WRITTEN PERMISSION FROM BRASCO INTERNATIONAL

COMPANY: BRASCO INTERNATIONAL  
PROJECT: ALUMINUM WALL MOUNTED BENCH  
PAGE: -

DWG. NO.: BMB  
DATE: 8/22/17  
SHEET: 1



	<b>BRASCO INTERNATIONAL, INC.</b> 1900 MT. ELLIOTT DETROIT, MICHIGAN 48207 1-800-893-3665 WWW.BRASCO.COM		CUSTOMER:	BRASCO INTERNATIONAL	DESIGNER:	BMB
	THIS DRAWING IS PROPRIETARY AND IS FOR THE SOLE USE OF YOUR CUSTOMERS AND MAY NOT BE REPRODUCED OR COPIED WITHOUT WRITTEN PERMISSION FROM BRASCO INTERNATIONAL.		PROJECT:	ALUMINUM WALL MOUNTED BENCH	DATE:	8/22/17
			MODEL:	-	JOB #	-



BRASCO INTERNATIONAL, INC.

# INSTALLATION GUIDELINES

Thank you for your order with Brasco International, Inc. Attached to these Guidelines are engineering instructions specific to your order. Please review all pages in full before proceeding with your installation.

### Storage:

- It is important that products stored outside be fully tarped. Wooden crates, cardboard boxes and identifying labels are not weatherproof and will deteriorate in the elements.
- If your order includes solar lighting, be cautious when handling batteries as they are capable of generating hazardous short-circuit currents. Remove all jewelry (bracelets, metal watches, rings) before attempting to handle or disassemble batteries.
- Batteries should be stored indoors at a recommended 68 degrees Fahrenheit for max. shelf life.
- Batteries should be installed no later than 3 months of delivery or battery warranties will be void.

### Cleaning

- Do not use anything abrasive (steel wool, abrasive brushes) to clean any surface. Anodized surfaces are prone to marring from abrasives. Painted surfaces will dull as a result, and glass and plastic may scratch and break down.
- Over cleaning or excessive rubbing can do more harm than good.
- To prevent marring, make sure cleaning sponges, clothes, etc. are free of grit or dirt.
- Strong solvents can cause damage to the finished surfaces of both anodized and powder coated aluminum. Always clean a test surface in an inconspicuous area first.
- Avoid temperature extremes as heat can accelerate chemical reactions and may evaporate water from cleaning solutions. Extremely low temperatures may result in poor cleaning results.
- Solar panels need to be regularly cleaned to ensure maximum performance. Clean as needed with water and a soft cloth or sponge using a mild non-abrasive soap, and rinse well.

### COMMON TOOLS NEEDED FOR INSTALLTION

Drill Motor	Cordless Drill	Rivet Gun
1/4" Drill Bit	Air Compressor	Tape Measure
#11 Drill Bit	Steel Hammer	Torque Wrench
8" Long 1/2" Masonry Drill Bits	Dead Blow Hammer or Mallet	60" Bar Clamps
5/8" and 3/4" Socket and Wrench	Bubble Level, Line / String Level	Generator or Other Power Source
HD Drill Motor or Hammer Drill	Min. 6ft. Step Ladder	Shop Vac or Broom for Clean Up

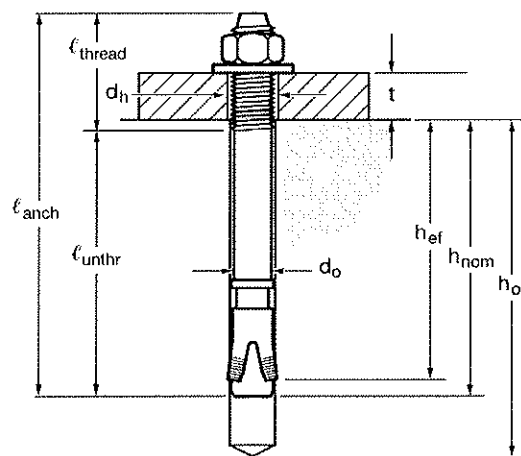
Brasco International, Inc.  
32500 Industrial Dr.  
Madison Heights, MI 48071

P (313) 253-0483  
F (313) 253-0489  
info@brasco.com

Product information is subject to change without notice.  
© 2016 Brasco International, Inc.  
All Rights Reserved.

## Expansion Anchor Guidelines

### Expansion Anchor Installed



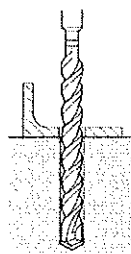
### Expansion Anchor Technical Reference Chart

Setting information	Symbol	Units	Nominal anchor diameter $d_s$													
			3/8		1/2		5/8		3/4							
Nominal bit diameter	$d_{be}$	in.	3/8		1/2		5/8		3/4							
Minimum nominal embedment	$h_{nom}$	in. (mm)	2-5/16 (59)	2-3/8 (60)	3-5/8 (91)	3-9/16 (91)	4-7/16 (113)	4-5/16 (110)	5-9/16 (142)							
Effective minimum embedment	$h_{ef}$	in. (mm)	2 (51)	2 (51)	3-1/4 (83)	3-1/8 (79)	4 (102)	3-3/4 (95)	4-3/4 (121)							
Min. hole depth	$h_o$	in. (mm)	2-5/8 (67)	2-5/8 (67)	4 (102)	3-3/4 (95)	4-3/4 (121)	4-5/8 (117)	5-3/4 (146)							
Min. thickness of fixture <sup>1</sup>	$t_{min}$	in. (mm)	1/8 (3)	1/8 (3)	n/a	1/8 (3)	n/a	1/8 (3)	n/a							
Max. thickness of fixture	$t_{max}$	in. (mm)	2-1/4 (57)	4 (101)	2-3/4 (70)	5-5/8 (143)	4-3/4 (121)	4-5/8 (117)	3-5/8 (92)							
Installation torque	$T_{inst}$	ft-lb (Nm)	25 (34)	40 (54)		60 (81)		110 (149)								
Fixture hole diameter	$d_h$	in. (mm)	7/16 (11.1)	9/16 (14.3)		11/16 (17.5)		13/16 (20.6)								
Available anchor lengths	$l_{anch}$	in. (mm)	3 (76)	3-3/4 (95)	5 (127)	3-3/4 (95)	4-1/2 (114)	5-1/2 (140)	7 (178)	4-3/4 (121)	6 (152)	8-1/2 (216)	10 (254)	5-1/2 (140)	8 (203)	10 (254)
Threaded length including dog point	$l_{thread}$	in. (mm)	7/8 (22)	1-5/8 (41)	2-7/8 (73)	1-5/8 (41)	2-3/8 (60)	3-3/8 (86)	4-7/8 (128)	1-1/2 (38)	2-3/4 (70)	5-1/4 (133)	6-3/4 (171)	1-1/2 (38)	4 (102)	5 (152)
Unthreaded length	$l_{unthr}$	in. (mm)	2-1/8 (54)		2-1/8 (54)		3-1/4 (83)		4 (102)							

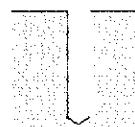
1. Minimum thickness of fixture is a concern only when the anchor is installed at the minimum nominal embedment. When KWIK Bolt TZ anchors are installed at this embedment, the anchor threading ends near the surface of the concrete. If the fixture is sufficiently thin, it could be possible to run the nut to the bottom of the threading during application of the installation torque. If fixtures are thin, it is recommended that embedment be increased accordingly.

## Anchoring Expansion Anchors into Concrete

### Step 1. Prepping the Concrete:

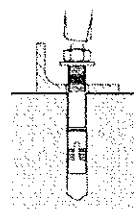


Using anchor boot as a template, mark hole locations and move anchor boot out of the way. Drill a hole the same diameter as the expansion anchor to a minimum depth of 1/2" deeper than the anchor will penetrate to allow debris to fall during installation



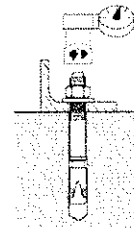
### Step 2. Prepping the Hole:

Clean debris from holes using a wire brush, vacuum, or compressed air.



### Step 3. Anchor Installation:

Replace the anchor boot and align with holes in the concrete. Make sure the nut on the expansion anchor is threaded to the top of the threaded rod to prevent damage to the threads. Insert the expansion anchor through the base plate and into the hole in the concrete. Hit the expansion anchor with sharp blows until the washers are snug against the base plates.



### Step 4. Securing the Anchor Boot:

Tighten the nut to the recommended installation torque.



Brasco International, Inc.  
32400 Industrial Dr.  
Madison Heights, MI 48071

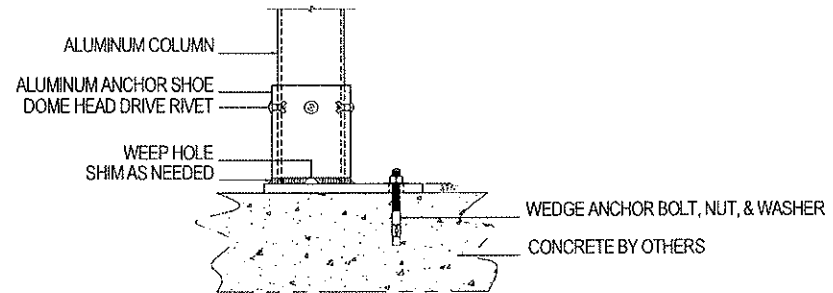
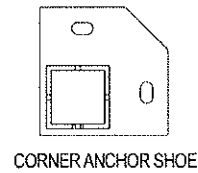
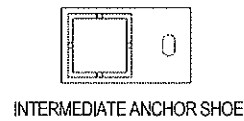
P (313) 593-0343  
F (313) 593-0408  
info@brasco.com

Product information is subject to change without notice.  
© 2016 Brasco International, Inc.  
All Rights Reserved.

## Standard Brasco Anchoring Guidelines

1. Locating proper column locations is critical. Care must be taken to keep columns plumb and walls square to each other.
2. Shelter should be sloped slightly to the rear for proper drainage. Approximately 1/4 inch slope per ft. from front to rear of shelter is recommended. Columns should be shimmed as necessary.
3. Anchors to be installed in conjunction with manufacturers recommendations only. (See Expansion Anchor technical chart)
4. Anchors need to be installed a minimum of 6 inches from the edge of the concrete pad. See [Brasco's General Concrete Pad Recommendations](#) for reference.

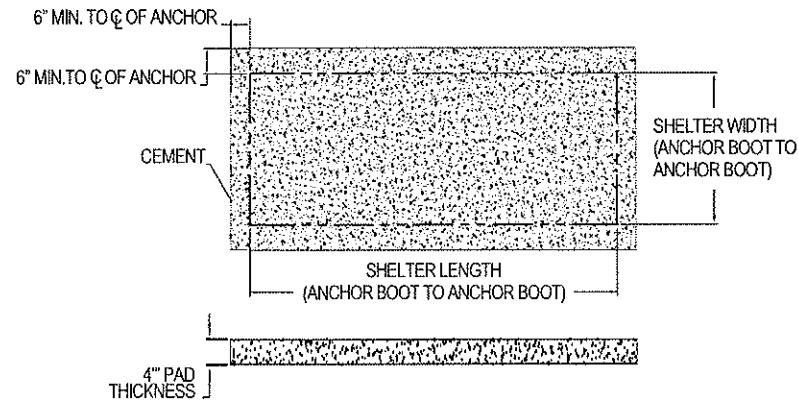
## Anchoring System Overview



## General Concrete Pad Recommendations

**PLEASE NOTE:** These recommendations are to serve as a reference only. Brasco is not liable for concrete installation instructions unless structural concrete calculations are included with an order. Consult your local building codes for specific concrete pad requirements.

**RECOMMENDATION:** Brasco recommends a minimum of 4 inch thick, 3000 PSI concrete pad. The concrete pad should allow a minimum of 6 inches around the shelter perimeter to prevent concrete breakage when anchoring to the pad. Concrete may or may not require additional reinforcement. If concrete calculations are required for installation or permitting purposes, please contact your Brasco account manager for a quote.



Brasco International, Inc.  
32450 Industrial Dr.  
Madison Heights, MI 48071

P (313) 393-0245  
F (313) 363-0409  
info@brasco.com

Product information is subject to change without notice.  
©2010 Brasco International, Inc.  
All Rights Reserved

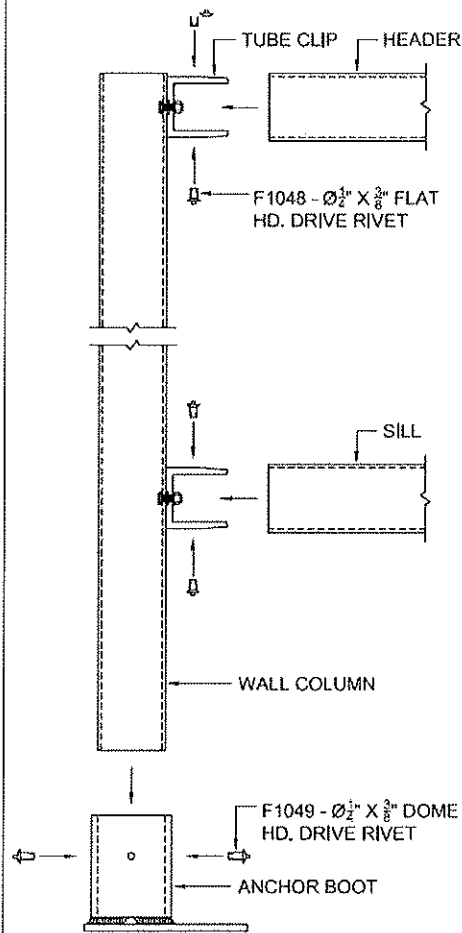


FIGURE 1

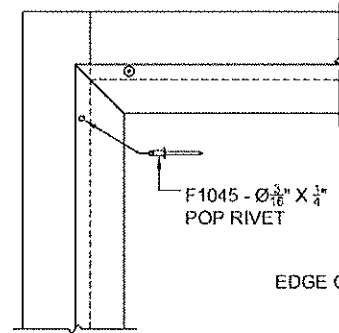


FIGURE 2

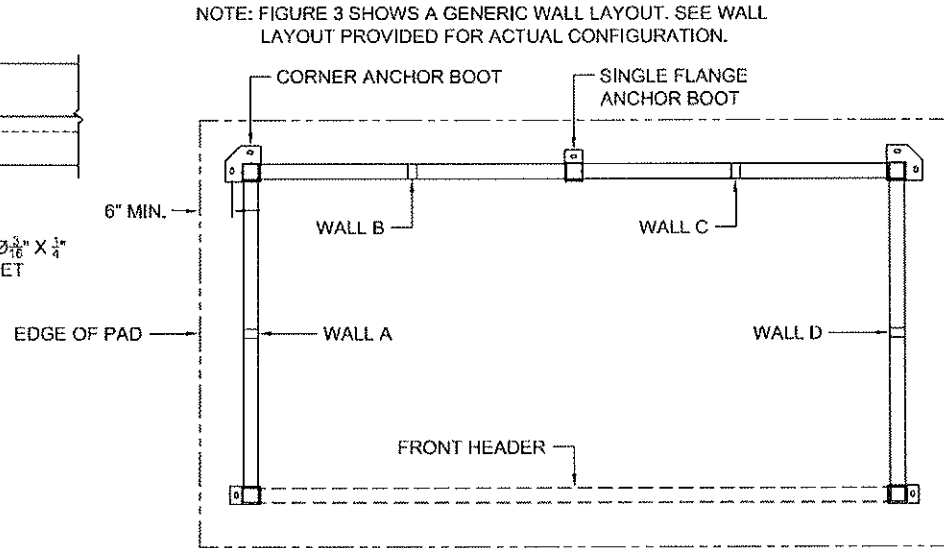


FIGURE 3

NOTE: FIGURE 3 SHOWS A GENERIC WALL LAYOUT. SEE WALL LAYOUT PROVIDED FOR ACTUAL CONFIGURATION.

- 1) START WITH THE LEFT SIDE WALL AND LEFT BACK WALL. SET COLUMNS IN ANCHOR BOOTS. (ANCHOR BOOTS CAN BE ALIGNED UNDER SILLS OR TO OUTSIDE OF SHELTER AS SHOWN IN FIGURE 3) SLIDE HEADER AND SILL TUBES ONTO CORRESPONDING TUBE CLIPS UNTIL FULLY ENGAGED. USING THE DRIVE RIVET TOOL, ATTACH TO CLIPS WITH F1048 - Ø½" X ¾" FLAT HEAD DRIVE RIVETS.
- 2) REPEAT STEP 1 FOR REMAINING WALL SECTIONS, FRONT HEADER AND CROSS BRACE(S) CONNECTIONS.
- 3) WHERE WALL SECTIONS WERE CONNECTED, USE #11 (Ø.191") DRILL BIT TO TRANSFER HOLES IN GLAZING SASH TO COLUMNS. SECURE SASH TO COLUMN WITH F1045 - Ø¾" X ¼" POP RIVET (FIGURE 2).
- 4) WITH THE SHELTER IN THE PROPER LOCATION, SQUARE AND PLUMB WALL SECTIONS. USING THE SHIMS PROVIDED, PITCH SHELTER TO THE REAR FOR DRAINAGE. TRANSFER Ø½" HOLES THRU ANCHOR BOOTS INTO COLUMNS. ATTACH COLUMNS TO ANCHOR BOOTS USING Ø½" X ⅝" DOME HD. DRIVE RIVET.

- 5) DRILL A Ø¾" HOLE 4" DP, MINIMUM IN CONCRETE FOR F1022 - WEDGE ANCHORS. CLEAN DUST AND DEBRIS FROM HOLES. TAP WEDGE ANCHORS INTO HOLES LEAVING ½" MIN. EXPOSED ABOVE BOOT FLANGE. APPLY FLAT WASHER, LOCK WASHER AND NUT ONTO ANCHOR AND TIGHTEN SECURELY.



**BRASCO INTERNATIONAL, INC.**  
 32400 INDUSTRIAL DRIVE  
 MADISON HEIGHTS, MICHIGAN 48071  
 1-800-893-3665 WWW.BRASCO.COM

THIS DRAWING IS PROPRIETARY AND IS FOR THE SOLE USE OF OUR CUSTOMERS AND MAY NOT BE REPRODUCED OR COPIED WITHOUT WRITTEN PERMISSION FROM BRASCO INTERNATIONAL. LEAD TIME BEGINS UPON RECEIPT OF SIGNED APPROVAL.

SIGNED: \_\_\_\_\_ DATE: \_\_\_\_\_

CUSTOMER:	INSTALLATION INSTRUCTIONS	ENGINEER:	SJT
PROJECT:	SLIMLINE STYLE TRANSIT SHELTER	DATE:	11-10-11
MODEL:	SLIMLINE SERIES	CHECKER:	BDH
JOB #		DATE:	11-18-11
SHEET #:	2		

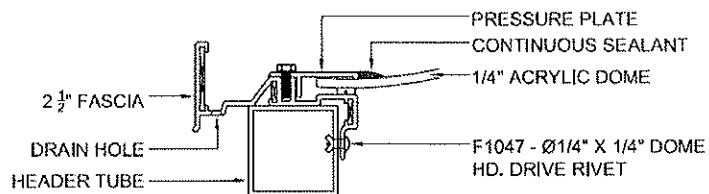


FIGURE 4

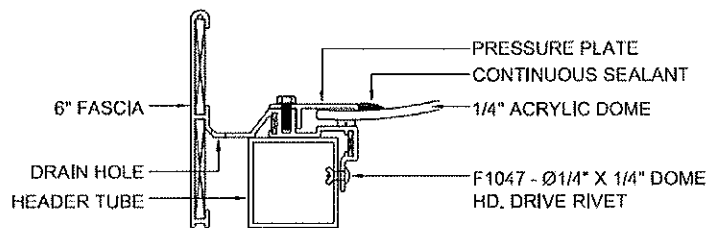


FIGURE 5

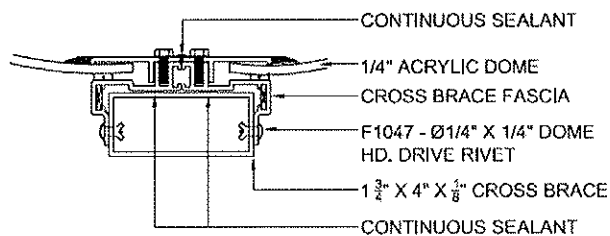


FIGURE 6

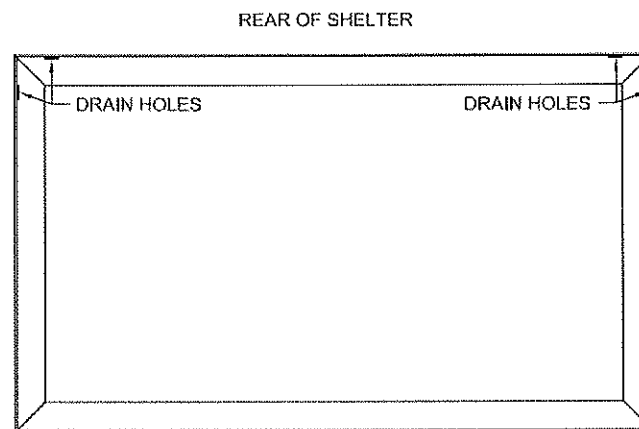


FIGURE 7

- 6) MAKE SURE TOP OF HEADER BEAMS ARE CLEAN AND CLEAR OF DEBRIS. WITH DRAIN HOLES TO REAR OF SHELTER SET THE ROOF MODULE ONTO SHELTER WALL SECTIONS (FIGURE 7).
- 6A) FIGURE 6 SHOWS ATTACHMENT FOR MULTIPLE DOME ROOFS. ON MULTI-DOME ROOFS RUN TWO CONTINUOUS  $\frac{1}{4}$ " BEADS OF SILICONE ALONG CROSS BRACE AS SHOWN. AFTER ROOFS ARE INSTALLED RUN A CONTINUOUS BEAD OF SILICONE ALONG ABUTMENT OF DOME ROOF MODULES.
- 7) TRANSFER MOUNTING HOLES IN FASCIA ALIGNMENT LIP TO HEADERS WITH  $\varnothing \frac{1}{8}$ " DRILL BIT.
- 8) ATTACH ROOF MODULE AROUND ENTIRE PERIMETER WITH F1047 -  $\varnothing \frac{1}{4}$ " X  $\frac{1}{4}$ " DOME HD. DRIVE RIVETS.



**BRASCO INTERNATIONAL, INC.**  
 32400 INDUSTRIAL DRIVE  
 MADISON HEIGHTS, MICHIGAN 48071  
 1-800-893-3665 WWW.BRASCO.COM

THIS DRAWING IS PROPRIETARY AND IS FOR THE SOLE USE OF OUR CUSTOMERS AND MAY NOT BE REPRODUCED OR COPIED WITHOUT WRITTEN PERMISSION FROM BRASCO INTERNATIONAL. **LEAD TIME BEGINS UPON RECEIPT OF SIGNED APPROVAL.**

SIGNED: \_\_\_\_\_ DATE: \_\_\_\_\_

CUSTOMER:	INSTALLATION INSTRUCTIONS	ENGINEER:	SJT
PROJECT:	SLIMLINE STYLE TRANSIT SHELTER	DATE:	11-10-11
MODEL:	SLIMLINE SERIES	CHECKER:	BDH
	JOB #	DATE:	11-18-11
		SHEET #:	3