

Outdoor Decorative Accents

Installation Manual

ED-16076

Rev 3 – 19 January 2016

Model Series	
DA-1000	DA-1200

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Section 1: Introduction

This manual explains the installation of Daktronics outdoor decorative accents. This manual is not specific to a particular installation.

IMPORTANT SAFEGUARDS

- Read and understand all instructions before beginning the installation process.
- Do not modify the structure or attach any panels or coverings to the display without the express written consent of Daktronics.

1.1 Resources

Figure 1 illustrates a Daktronics drawing label. This manual refers to drawings by listing the last set of digits and the letter preceding them. In the example, the drawing would be referred to as **Drawing D-1007804**. All references to drawing numbers, appendices, figures, or other manuals are presented in bold typeface. Any drawings referenced in a particular section are listed at the beginning of it as shown below:

D		DAKTRONICS, INC. BROOKINGS, SD 57006 DO NOT SCALE DRAWING		THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2010 DAKTRONICS, INC.	
PROJ: DAKTRONICS					
TITLE: SYSTEM RISER DIAGRAM					
DESIGN:		DRAWN: APAGE		DATE: 11 MAY 10	
SCALE: NONE					
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE	1007804	
200	02	C17581	F-01C		

Drawing Number

Figure 1: Drawing Label

Reference Drawing:
System Riser Diagram **Drawing D-1007804**

Daktronics identifies manuals by the DD or ED number located on the cover page. For example, this manual would be referred to as **ED-16076**.

Project-specific information takes precedence over any other general information found in this manual. Such information may include:

- **Shop Drawings:** describe mounting methods to structural elements, access method (front or rear), and power and signal entrance points
- **Final Assembly Drawings:** describe internal display component locations and detailed product appearance with part numbers and quantities

Ensure all applicable material has been gathered before beginning the installation. Contact a Daktronics sales coordinator or project manager.

Section 2: Installation

2.1 Pole Locations

Reference Drawings:

Pole Locations; Decorative Trusses.....**Drawing B-1122070**

Drawing B-1122070 in **Appendix A** shows the recommended number of beams and spacing between them for the various lengths of square and arch truss. While beam placement will be determined by the dimensions of the overall scoring display, these drawings show where to expect mounting hardware will typically be attached (so beams may be partially hidden by the vertical truss, for example).

Note: Refer to any site-specific diagrams for proper placement and mounting method of display pieces.

Any column and footing size dimensions are to assist with estimating installation costs; they are estimates only and are not intended for actual construction purposes. Be sure that the installation complies with local building codes and is suitable for the particular soil and wind conditions. The columns, footings, and all connection details must be designed and certified by a professional engineer licensed to practice in the state of the installation.

Note: Daktronics does not assume any liability for any installation derived from the information provided in this manual or installations designed and installed by others.

Drain Holes

Take care during the installation process to ensure the drain holes in the accent pieces are not covered by the mounting structure. **If they are covered**, 3/8" holes must be drilled through the mounting structure in the same spot as the original holes.

2.2 Lifting

Decorative accents are shipped equipped with 1/2" shoulder-type eyebolts to lift them. The eyebolts are located along the top of the accents. On domed accents, the eyebolts are located on rear cabinets, not the dome itself.

Daktronics strongly recommends using a spreader bar, or lifting bar, to lift the accent. Spreader bars ensure the force on the eyebolts remains straight up, minimizing lifting stress.

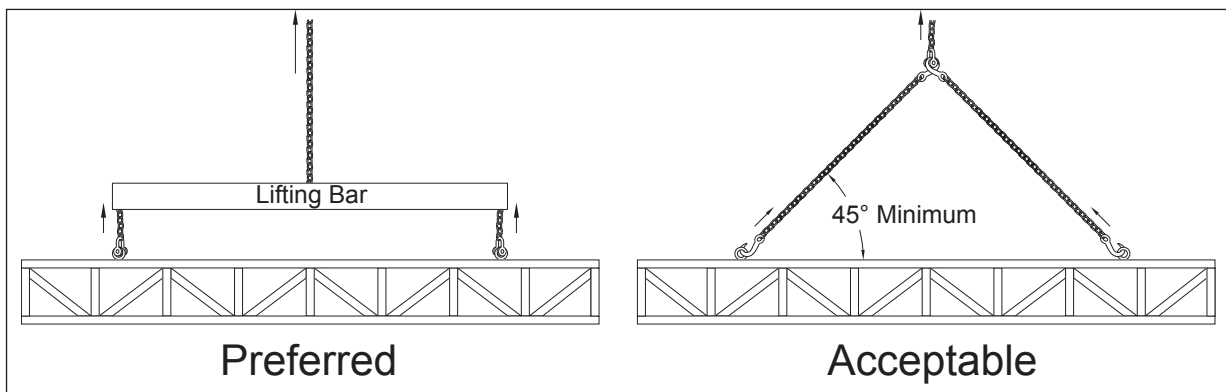


Figure 2: *Lifting Methods*

Figure 2 illustrates the preferred lifting method on the left and an acceptable alternative lifting method on the right. When lifting:

- Use a spreader bar if possible.
- Use every lifting point provided.

Avoid using other lifting methods. Cables and chains attached to the eyebolts and directly to a center lifting point, as shown in the right example in **Figure 2**, create a dangerous lateral force on the eyebolts and may cause the eyebolts to fail. The smaller the angle between the cable and the top of the accent, the lighter the accent must be to safely lift it. If this method must be used, ensure a minimum angle between the chain and accent of at least 45°.

Do NOT attempt to lift the accent if the angle is less than 45°. Exceeding load angles or weight limits could cause the bolts in the cabinet to buckle, resulting in serious damage to property or injury to personnel. Also, loads should be applied directly in the plane of the eyebolt as shown in **Figure 3**.

Note: Daktronics assumes no liability for damages resulting from incorrect setup or lifting methods. Eyebolts are intended for lifting only. Do not attempt to permanently support the accent by the eyebolts.

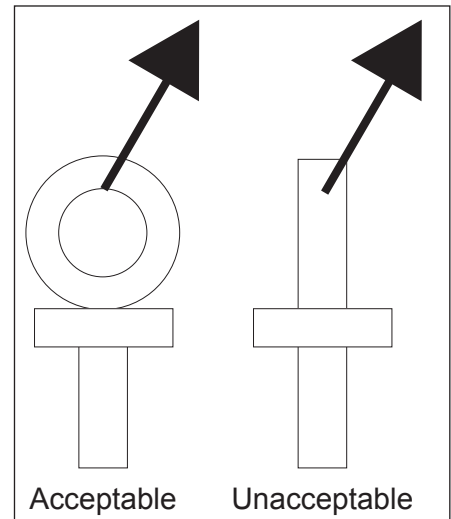


Figure 3: Eyebolt Plane Load

2.3 Square & Arch Truss Mounting

Two standard mounting methods are available for Daktronics square and arch truss decorative accents.

Note: Do not use lubrication on any mounting hardware or the warranty will be void!

I-Beam Clamps

Reference Drawings:

Truss I-Beam Clamp Mounting **Drawing A-1111650**

Mounting hardware includes mounting channels; unistruts; spring nuts; I-beam clamps; 1/2-13 x 3" bolts, flat washers, and lock washers; and 3/8-16 x 1" bolts, flat washers, lock washers, and nuts. Refer to **Figure 4** and **Drawing A-1111650** in **Appendix A**.

Note: I-beams must have a flange thickness of 1/4" – 3/4". If flange thickness is greater than 3/4", longer bolts will be required at added expense.

1. Position the accent at the front of the beams, and lift it to the desired height.
2. Use the self-drilling screws to attach a mounting channel to the top rear of the accent. The mounting channel should be as close to center on the beams as possible.
3. Attach the piece of unistrut to the mounting channel with the included 3/8" hardware, as shown in **Figure 4**.
4. Place spring nuts into the unistrut. Twist the spring nuts until they are perpendicular to the unistrut channel (refer to **Figure 5**).

Note: Accents require four spring nuts per beam (two at the top and two at the bottom).

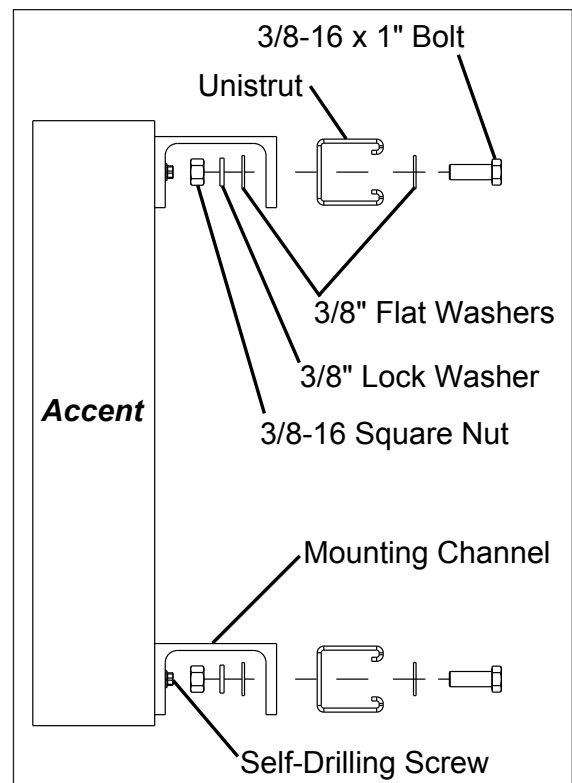
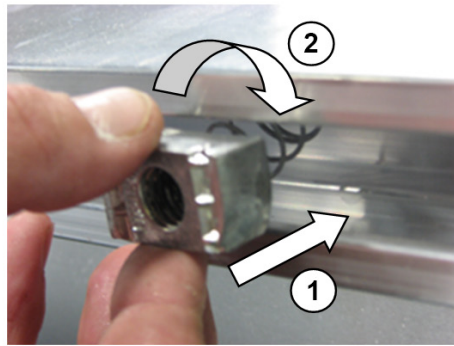
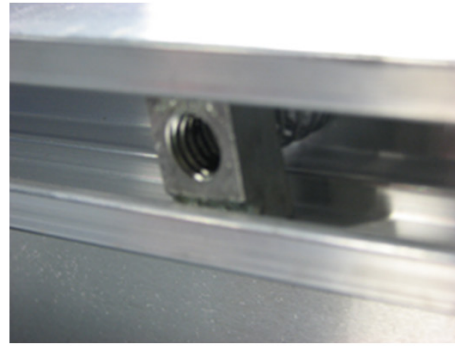


Figure 4: Unistrut Attachment, Side View



1) Insert into channel 2) Twist



Correct spring nut position

Figure 5: Spring Nut Insertion

5. Slide a lock washer, flat washer, and I-beam clamp onto each bolt, and loosely screw the bolts into the spring nuts.
6. Position each I-beam clamp assembly as close to the I-beam flanges as possible.
7. Make final adjustments in the positioning of the accent to ensure it is flush and level, and firmly tighten all of the bolts (**Figure 6**).

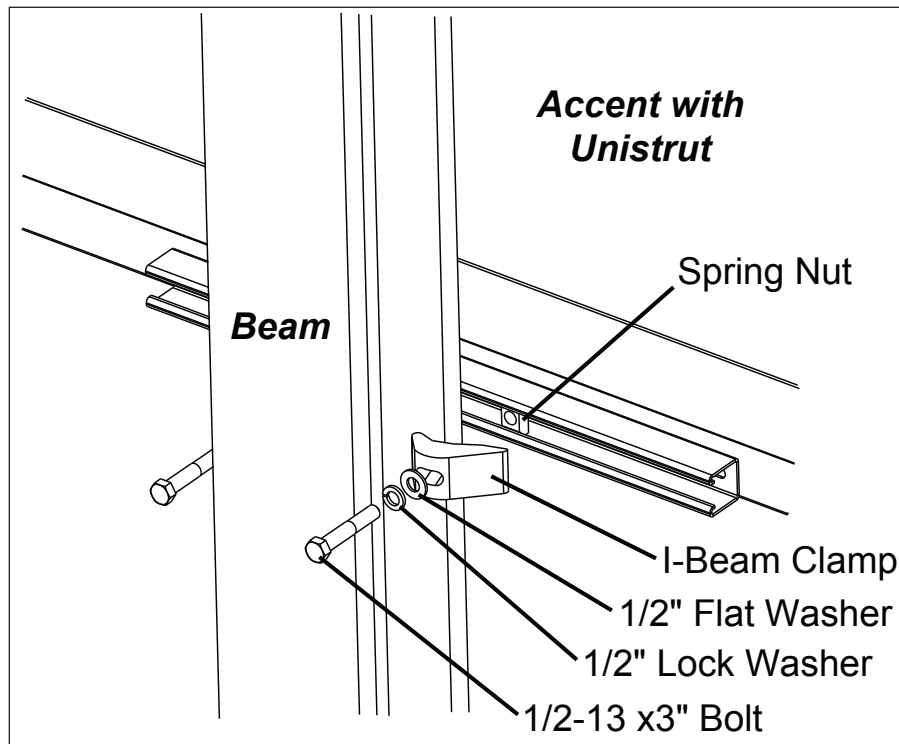


Figure 6: Accent Mounting with I-beam Clamps, Rear Isometric View

8. Repeat steps 2-7 for the other mounting hardware set on the bottom rear of the accent.
9. Repeat step 8 for all beams.
10. Remove the lift eyebolts and fill remaining holes with silicone.

Clamping Angles

Reference Drawings:

Mtg Attachment: DA-1001 Series.....	Drawing A-251223
Mtg Attachment: DA-1000 Series.....	Drawing A-997378

Mounting hardware includes mounting channels, clamping angles, self-drilling screws, 1/2-13 x 24" threaded rods, 1/2" nuts, and 1/2" lock washers. Refer to **Figure 7** as well as **Drawing A-251223** for arch truss and **Drawing A-997378** for square truss.

Note: The threaded rods do not pass through the beams; they run along both sides.

1. Position the accent at the front of the beams, and lift it to the desired height.
2. Use the self-drilling screws to attach a mounting channel to the top rear of the accent. The mounting channel should be as close to center on the beams as possible.
3. Insert the threaded rods into the holes on the mounting channel, one on either side of the beam. Ensure the rods are in the holes closest to the sides of the beam.
4. Screw square nuts on the ends of the threaded rods inside the mounting channel.
5. Slide clamping angles over the other ends of the threaded rods and loosely install the washers and nuts.
6. Make final adjustments in the positioning of the accent to ensure it is flush and level, and firmly tighten all of the 1/2" hex nuts.
7. Repeat steps 2-6 for the other mounting hardware set on the bottom rear of the accent.
8. Repeat step 7 for all beams.
9. Remove the lift eyebolts and fill remaining holes with silicone.

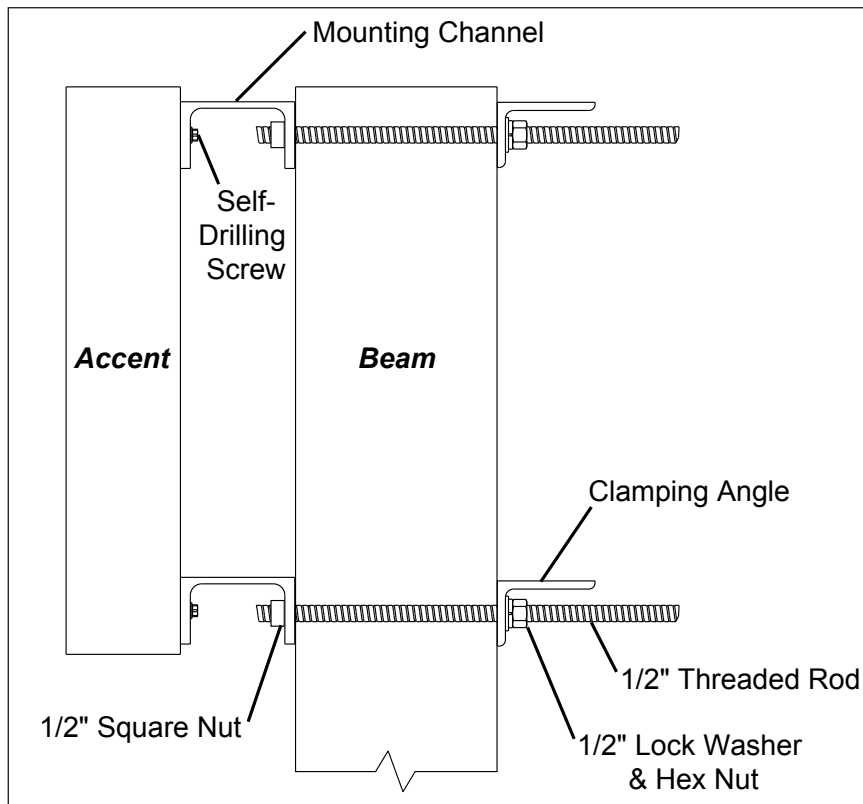


Figure 7: Accent Mounting with Clamping Angles, Side View

Truss with Clocks

To install clocks to the truss, refer to the **Analog Clock Installation & Maintenance Manual (ED-16102)**, provided with the clock assembly.

2.4 Dome Mounting

Two standard mounting methods are available for Daktronics dome decorative accents.

Note: Do not use lubrication on any mounting hardware or the warranty will be void!

I-Beam Clamps

Reference Drawings:

Double Pole Mounting- Dome Outdoor Non-Backlit	Drawing B-303997
Odd Number Pole Mounting; Dome OD Non-Bklt.....	Drawing B-369907
Two Pole Mounting; DA-1205 Domes	Drawing B-1080123
Three Pole Mounting; DA-1205 Domes	Drawing B-1080180

Mounting hardware includes C-channels; unistrut; spring nuts; I-beam clamps; 1/2-13 x 3" bolts, flat washers, and lock washers; and 3/8-16 x 1" bolts, flat washers, lock washers, and nuts. Refer to **Figure 8** and one of the following drawings from **Appendix A**:

	<i>Even # of Poles</i>	<i>Odd # of Poles</i>
<i>Partial Dome</i>	Drawing B-303997	Drawing B-369907
<i>Full Dome</i>	Drawing B-1080123	Drawing B-1080180

Note: I-beams must have a flange thickness of 1/4" - 3/4". If flange thickness is greater than 3/4", longer bolts will be required at added expense.

1. Position the accent at the front of the beams, and lift it to the desired height.
2. Using the C-channel as a template, drill four 7/16" holes in the upper rear flange of the accent cabinet where the beams will be located.

Note: Try to ensure that the two center holes will be within the width of the beam.

3. Attach the piece of unistrut to the accent cabinet with the included 3/8" hardware, as shown in **Figure 8**.
4. Place spring nuts into the unistrut. Twist the spring nuts until they are perpendicular to the unistrut channel (refer to **Figure 5**).

Note: Accents require four spring nuts per beam (two at the top and two at the bottom).

5. Slide a lock washer, flat washer, and I-beam clamp onto each bolt, and loosely screw the bolts into the spring nuts.
6. Position each I-beam clamp assembly as close to the I-beam flanges as possible.

(Continued on next page)

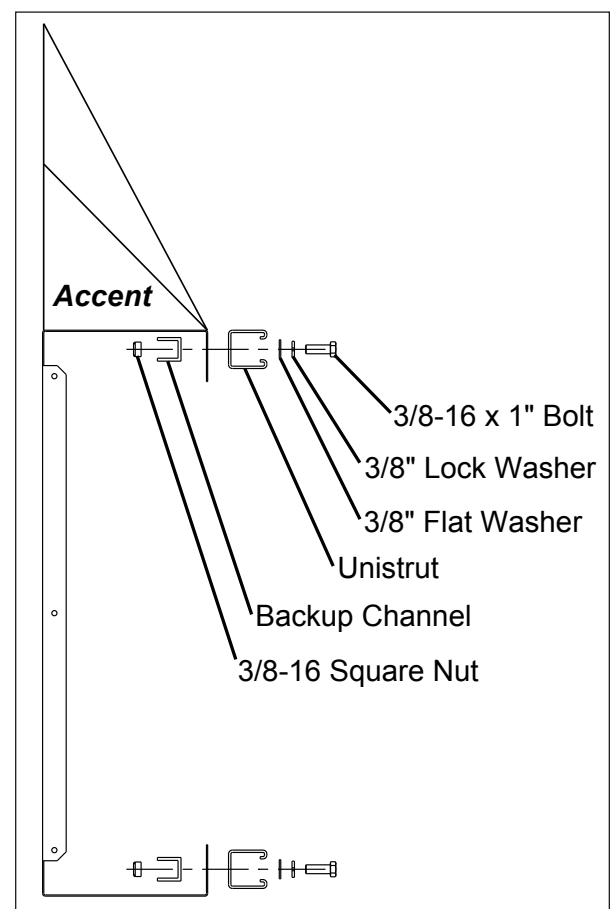


Figure 8: Unistrut Attachment, Side View

7. Make final adjustments in the positioning of the accent to ensure it is flush and level, and firmly tighten all of the bolts (**Figure 9**).

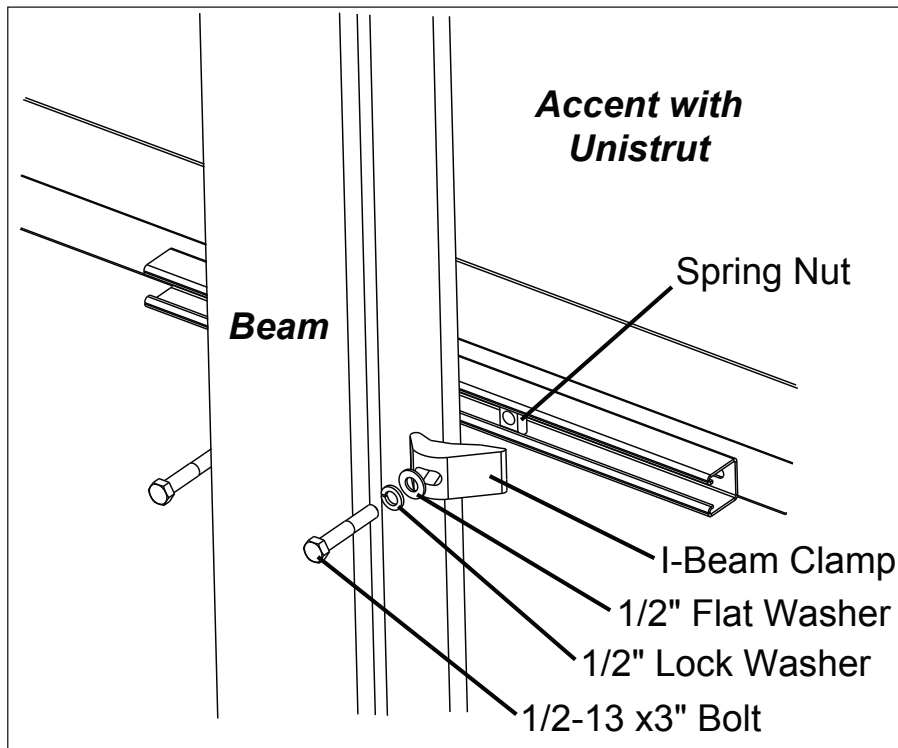


Figure 9: Dome Accent Mounting with I-beam Clamps, Rear Isometric View

8. Repeat steps 2-7 for the other mounting hardware set on the bottom rear of the accent.
9. Repeat step 8 for all beams.
10. Remove the lift eyebolts and fill remaining holes with silicone.

Clamping Angles

Reference Drawings:

Ad Panel Mounting..... **Drawing B-52187**

Mounting hardware includes C-channels; rear clamping angles; 1/2-13 x 15" threaded rods; and 1/2" nuts and lock washers. Refer to **Figure 10** and **Drawing A-52187** in **Appendix A**.

Note: The threaded rods do not pass through the beams; they run along both sides.

1. Position the accent at the front of the beams, and lift it to the desired height.
2. Using a clamping angle as a template, drill 9/16" holes in the upper rear flange of the accent cabinet where the C-channel support will be placed.
3. Position a C-channel inside the accent cabinet along the rear flange as shown in **Figure 10**.
4. Place 1/2" square nuts inside the C-channel, and thread the rods through the rear flange of the accent cabinet and the C-channel.
5. Slide clamping angles over the other ends of the threaded rods and loosely install the washers and nuts.
6. Make final adjustments in the positioning of the accent to ensure it is flush and level, and firmly tighten all of the 1/2" hex nuts.
7. Repeat steps 2-6 for the other mounting hardware set on the bottom rear flange of the accent cabinet.
8. Repeat step 7 for all beams.
9. Remove the lift eyebolts and fill remaining holes with silicone.

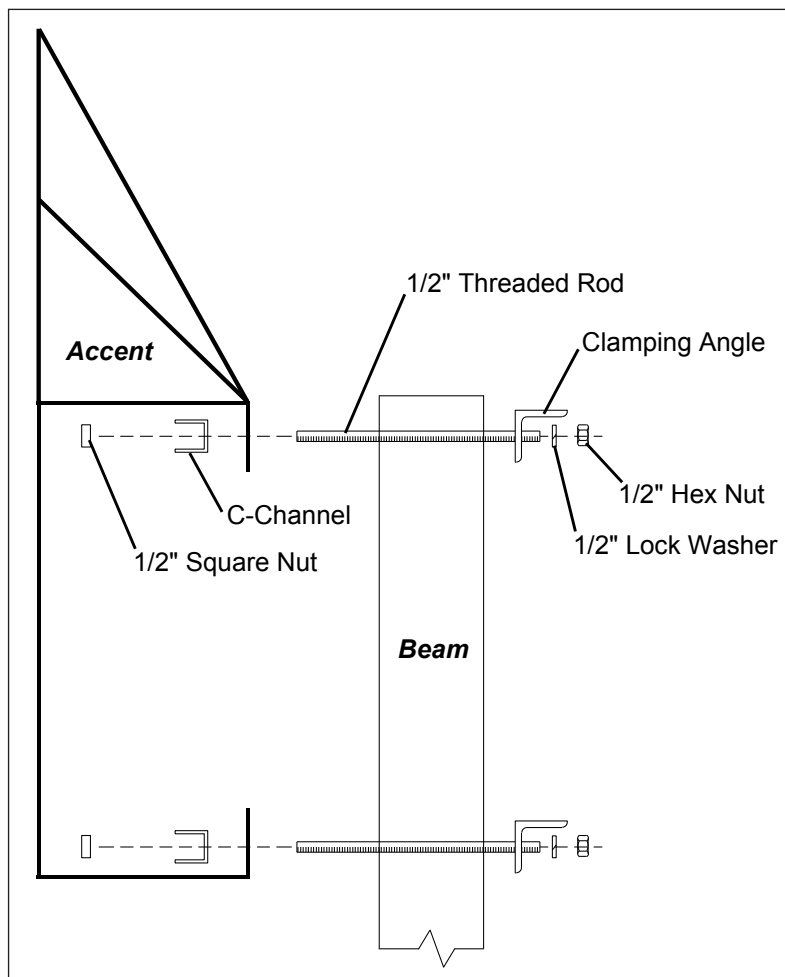


Figure 10: Dome Accent Mounting with Clamping Angles, Side View

Domes with Ad Panels

Reference Drawings:

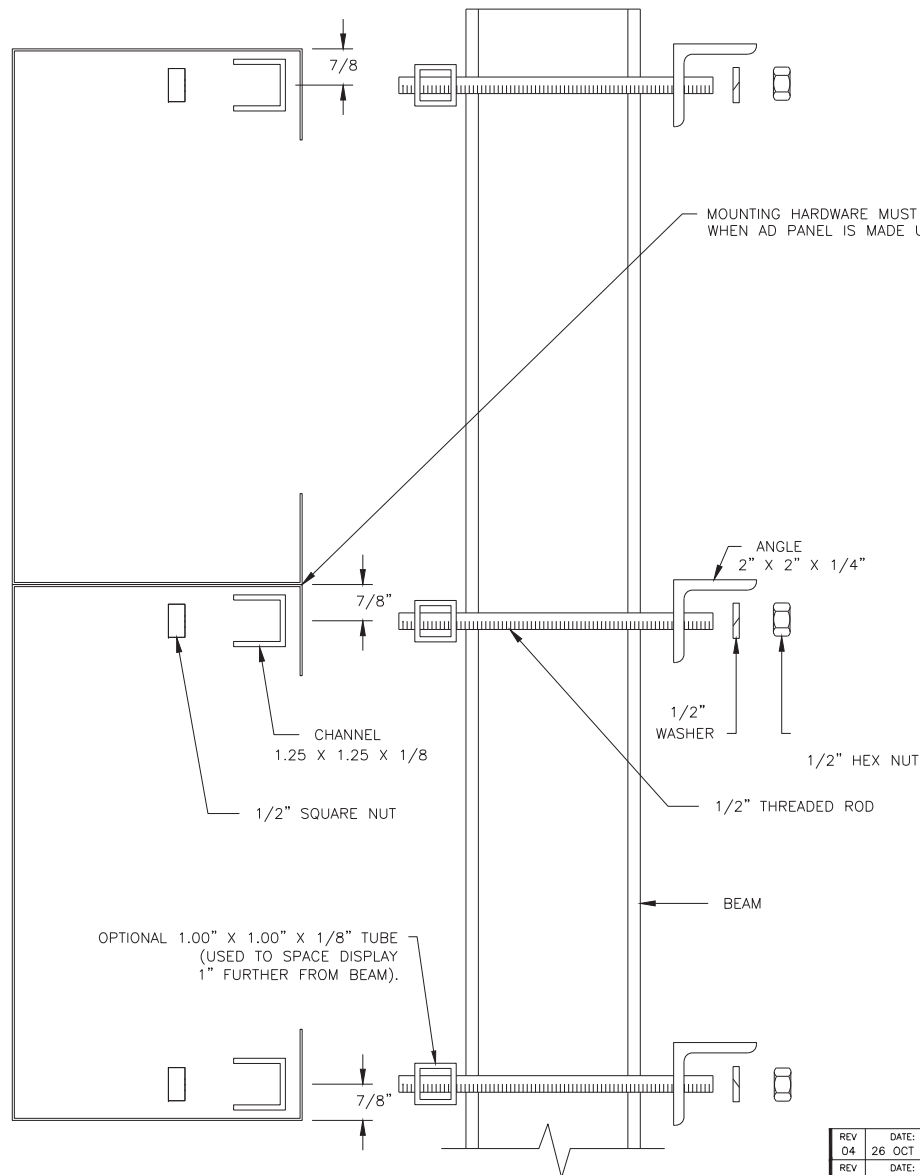
Semicircle to Ad Panel Assy	Drawing A-93857
Odd Number Pole Mounting; Dome OD Non-Bklt.....	Drawing B-369907

Domes are most often used together with an ad panel beneath them. Riveting the two pieces together will prevent the dome from twisting in strong winds. Sometimes this will be performed in the factory, while other times it may need to be done in the field. This would typically be required when there is a single pole behind a partial dome (as shown in **Drawing A-369907**). In these cases, follow **Drawing A-93857** for riveting instructions.

Appendix A: Reference Drawings

Refer to **Section 1.1** for information regarding how to read the drawing number. These drawings are listed in alphanumeric order. Any contract-specific drawings take precedence over these general drawings.

<i>Drawing Title</i>	<i>Drawing Number</i>
Ad Panel Mounting.....	B-52187
Semicircle to Ad Panel Assy	A-93857
Mtg Attachment: DA-1001 Series.....	A-251223
Double Pole Mounting- Dome Outdoor Non-Backlit	B-303997
Odd Number Pole Mounting; Dome OD Non-Bklt.....	B-369907
Mtg Attachment: DA-1000 Series.....	A-997378
Two Pole Mounting; DA-1205 Domes.....	B-1080123
Three Pole Mounting; DA-1205 Domes	B-1080180
Truss I-Beam Clamp Mounting	B-1111650
Pole Locations; Decorative Trusses.....	B-1122070




MOUNTING INSTRUCTIONS:

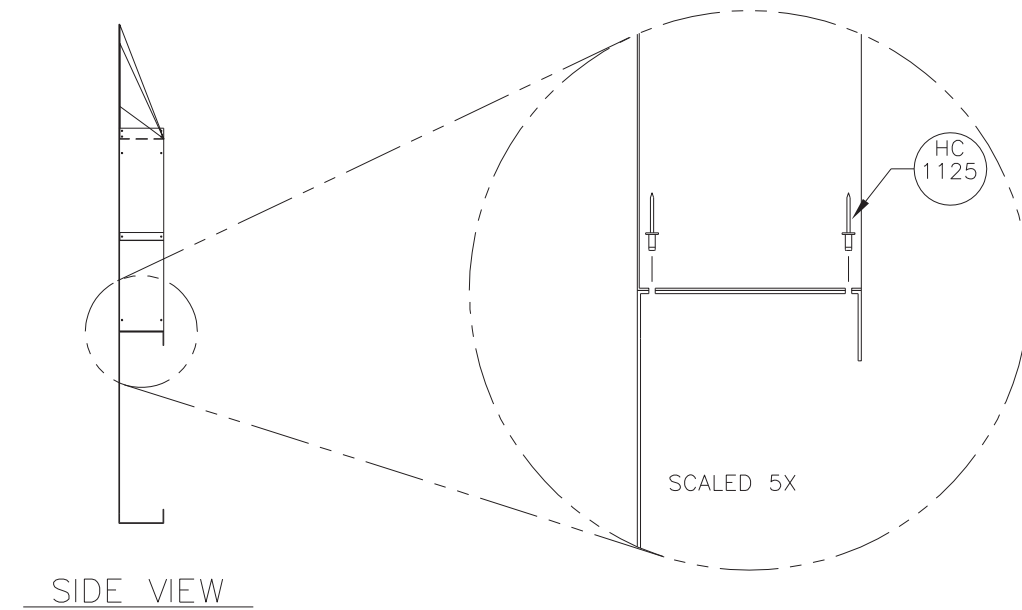
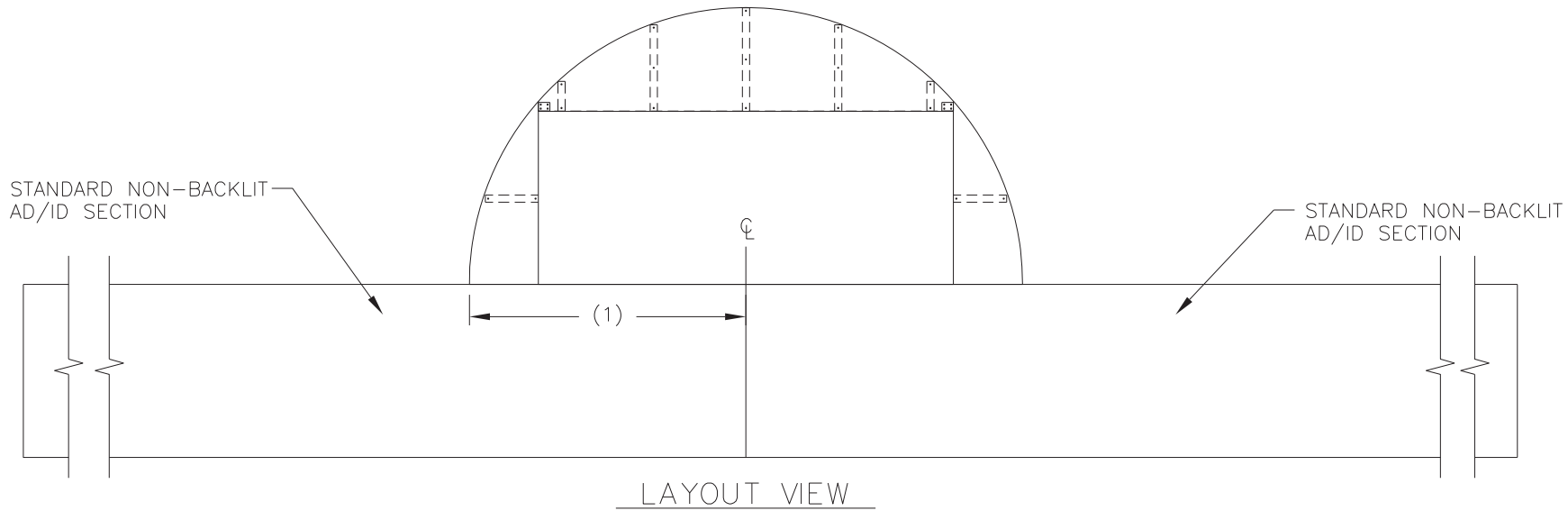
1. USE THE MOUNTING CHANNEL TO DETERMINE WHICH HOLE COMBINATION SHOULD BE USED. BE SURE TO KEEP THE BOLTS AS CLOSE TO THE BEAM AS POSSIBLE.
2. USING THE MOUNTING CHANNEL AS A TEMPLATE, DRILL 9/16" HOLES IN THE UPPER AND LOWER REAR FLANGE OF AD PANEL WHERE THE SUPPORTS WILL GO.
3. PLACE SQUARE NUTS INSIDE CHANNEL AND THREAD BOLTS THROUGH.
4. LIFT AD PANEL INTO POSITION WITH BOLTS STILL IN PLACE.
5. PLACE MOUNTING ANGLES OVER EACH PAIR OF BOLTS AND SECURE WITH LOCK WASHERS AND HEX NUTS.
6. WHEN PANEL IS ADJUSTED TO FINAL DESIRED POSITION, TIGHTEN HEX NUTS FIRMLY.

MOUNTING INSTRUCTIONS: FOR AD PANELS WITH BACKSHEETS.

1. USE THE MOUNTING CHANNEL TO DETERMINE WHICH HOLE COMBINATION SHOULD BE USED. BE SURE TO KEEP THE BOLTS AS CLOSE TO THE BEAM AS POSSIBLE.
2. USING THE MOUNTING CHANNEL AS A TEMPLATE, DRILL 9/16" HOLES IN THE UPPER AND LOWER REAR FLANGE OF AD PANEL WHERE THE SUPPORTS WILL GO.
3. REMOVE BACKSHEETS IN AREAS ABOVE AND BELOW HOLES DRILLED IN STEP 2.
4. PLACE SQUARE NUTS INSIDE CHANNEL AND THREAD BOLTS THROUGH.
5. REPLACE BACKSHEETS REMOVED IN STEP 3.
6. LIFT AD PANEL INTO POSITION WITH BOLTS STILL IN PLACE.
7. PLACE MOUNTING ANGLES OVER EACH PAIR OF BOLTS AND SECURE WITH LOCK WASHERS AND HEX NUTS.
8. WHEN PANEL IS ADJUSTED TO FINAL DESIRED POSITION, TIGHTEN HEX NUTS FIRMLY.

REV 04	DATE: 26 OCT 11	ADDED NOTE FOR USING MOUNTING HARDWARE AT AD PANEL SPLICES	BY: MBC	 <div>BROOKINGS, SD 57006</div> <div>DO NOT SCALE DRAWING</div>	DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2011 DAKTRONICS, INC.	
REV 03	DATE: 12 APR 10	ADDED 1" TUBE SPACER	BY: KDD			
REV 02	DATE: 13 AUG 97	INCLUDED INSTRUCTIONS FOR AD PANELS WITH BACKSHEETS	BY: JAA	PROJ: OUTDOOR INCANDESCENT SCOREBOARDS		
REV 01	DATE: 26 MAY 93	ADDED DESCRIPTION TEXT TO PARTS.	BY: MGG	TITLE: AD PANEL MOUNTING		
				DESIGN:	DRAWN: MGUNDERSON	DATE: 09 JUL 92
				SCALE: NONE		
				SHEET	REV 04	JOB NO: P1091
				FUNC: TYPE-SIZE		R-10-B
						52187

REV.	01	29 JAN 07	ADD DIMENSION TABLE FOR ASSEMBLY NUMBERS CHANGED HC-108 WASHER FROM DRAWING. REMOVED HC-108 WASHER FROM DRAWING.	DESCRIPTION	BY	PFB	APPR.
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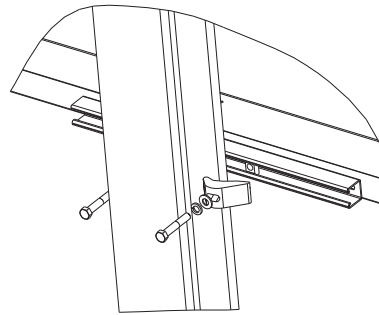
NOTE:
SOME HOLES MAY
HAVE TO BE DRILLED
FOR ASSEMBLY.

PACKET NUMBER	DIMENSION (1)
0A-1091-0315....DA-1203	48.00"
0A-1091-0317....DA-1201	39.00"
0A-1091-0493....DA-1204	32.875"
0A-1091-1463....DA-1200	48.00"
0A-1091-1474....DA-1202	53.065"
0A-1091-1611....DA-1207	30.00"

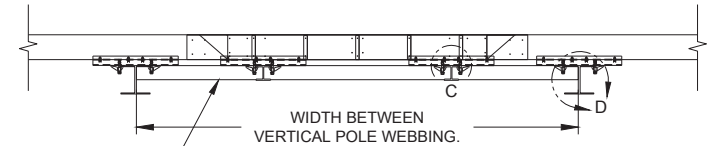
PROJ:	STANDARD FOOTBALL & BASEBALL SCBDS
TITLE:	SEMICIRCLE TO AD PANEL ASSY
DES. BY:	JANDRE
APPR. BY:	KQUAMEN
DATE:	17JUN97
REVISION	01
SCALE:	1=30
1091-E10A-93857	

DAKTRONICS, INC. BROOKINGS, SD 57006

DOMES TYPE:	DOMES SIZE:	DIMENSION (1)	DIMENSION (2)
DA-1200	18.0" X 96.0"	12.00"	37.00"
DA-1201	24.0" X 78.0"	16.00"	30.00"
DA-1202	32.0" X 106.13"	20.00"	51.00"
DA-1203	48.0" X 96.0"	32.00"	53.00"
DA-1204	36.0" X 65.73"	24.00"	30.00"
DA-1207	24.0" X 60.0"	16.00"	21.00"



GRAPHICAL REPRESENTATION OF THE POLE MOUNT HARDWARE.

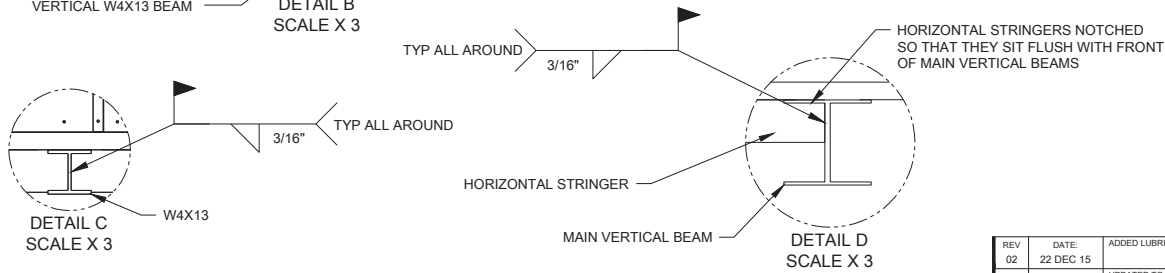
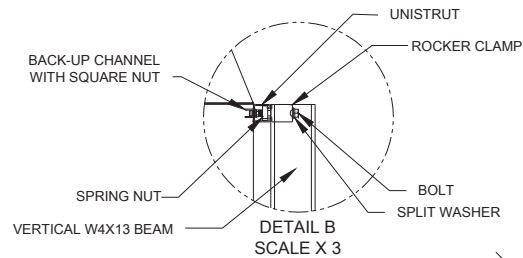
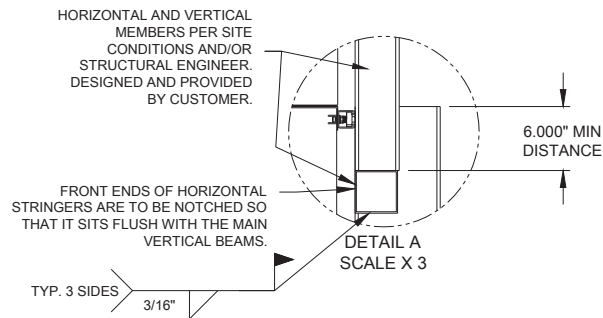


STRINGER CUT TO FIT ONSITE
WELD ALL AROUND EACH END
TO WEB OF WF

WIDTH BETWEEN
VERTICAL POLE WEBBING.

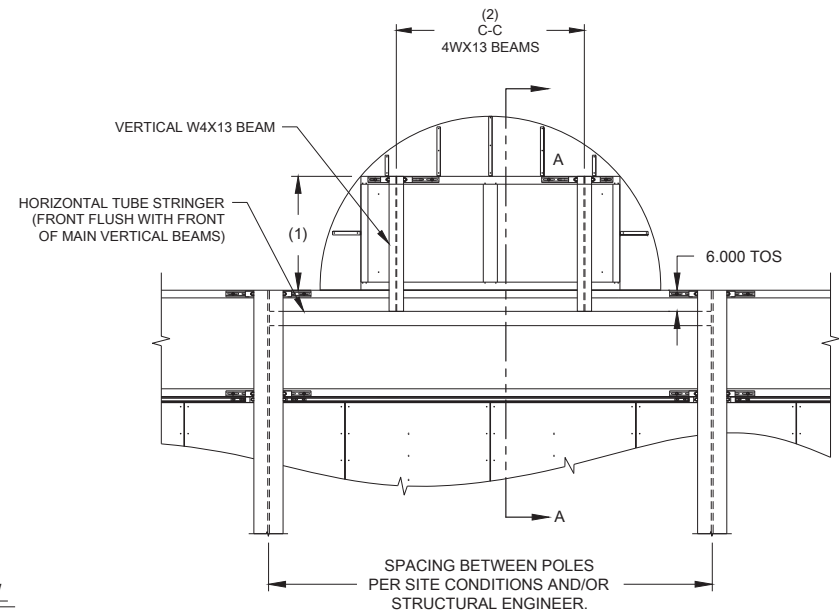
TOP VIEW

CRITICAL
DO NOT USE ANY LUBRICANT ON ANY MOUNTING
HARDWARE OR WARRANTY WILL BE VOIDED



SECTION: A-A

SIDE VIEW



REAR VIEW

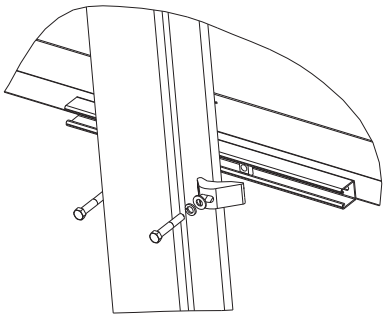
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DO NOT SCALE DRAWING		COPYRIGHT 2012 DAKTRONICS, INC.	
PROJ: DOUBLE POLE MOUNTING- DOME OUTDOOR NON-BACKLIT		DATE: 01 MAY 07	
TITLE: DOUBLE POLE MOUNTING- DOME OUTDOOR NON-BACKLIT		DRAWN: PBURNET	
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01	02	P1091	E - 10 - B

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02	22 DEC 15		PJS
REV	DATE	UPDATED TO ROCKER CLAMP STYLE MOUNTING	BY:
01	1 MAY 12		KCS

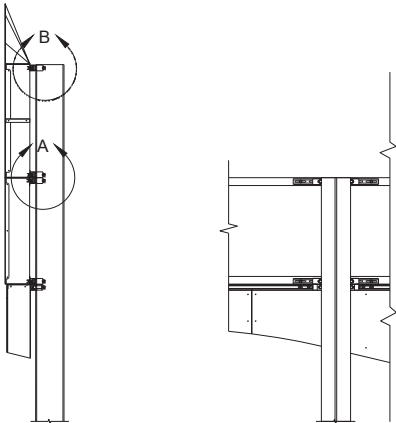
303997

DOMES TYPE:	DOMES SIZE:	DIMENSION (1)
DA-1200	18.0" X 96.0"	12.00"
DA-1201	24.0" X 78.0"	16.00"
DA-1202	32.0" X 106.13"	20.00"
DA-1203	48.0" X 96.0"	32.00"
DA-1204	36.0" X 65.73"	24.00"
DA-1207	24.0" X 60.0"	16.00"

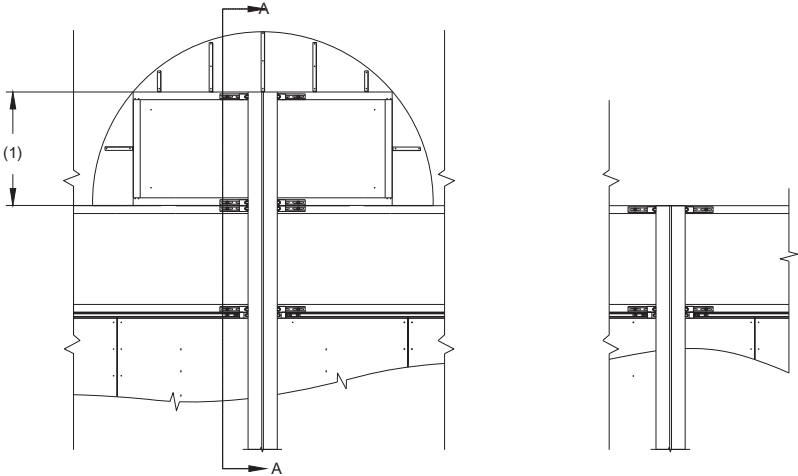
CRITICAL
DO NOT USE ANY LUBRICANT ON ANY MOUNTING
HARDWARE OR WARRANTY WILL BE VOIDED



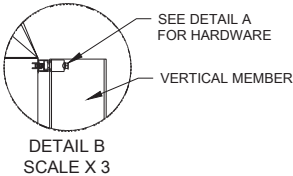
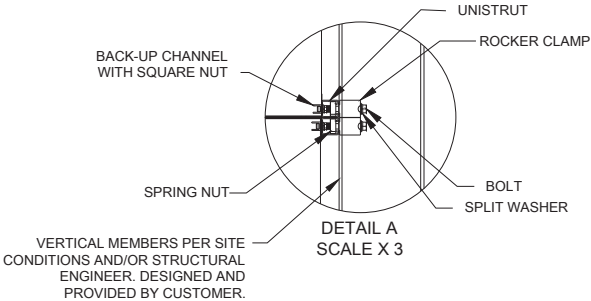
GRAPHICAL REPRESENTATION OF THE
POLE MOUNT HARDWARE.



SECTION: A-A

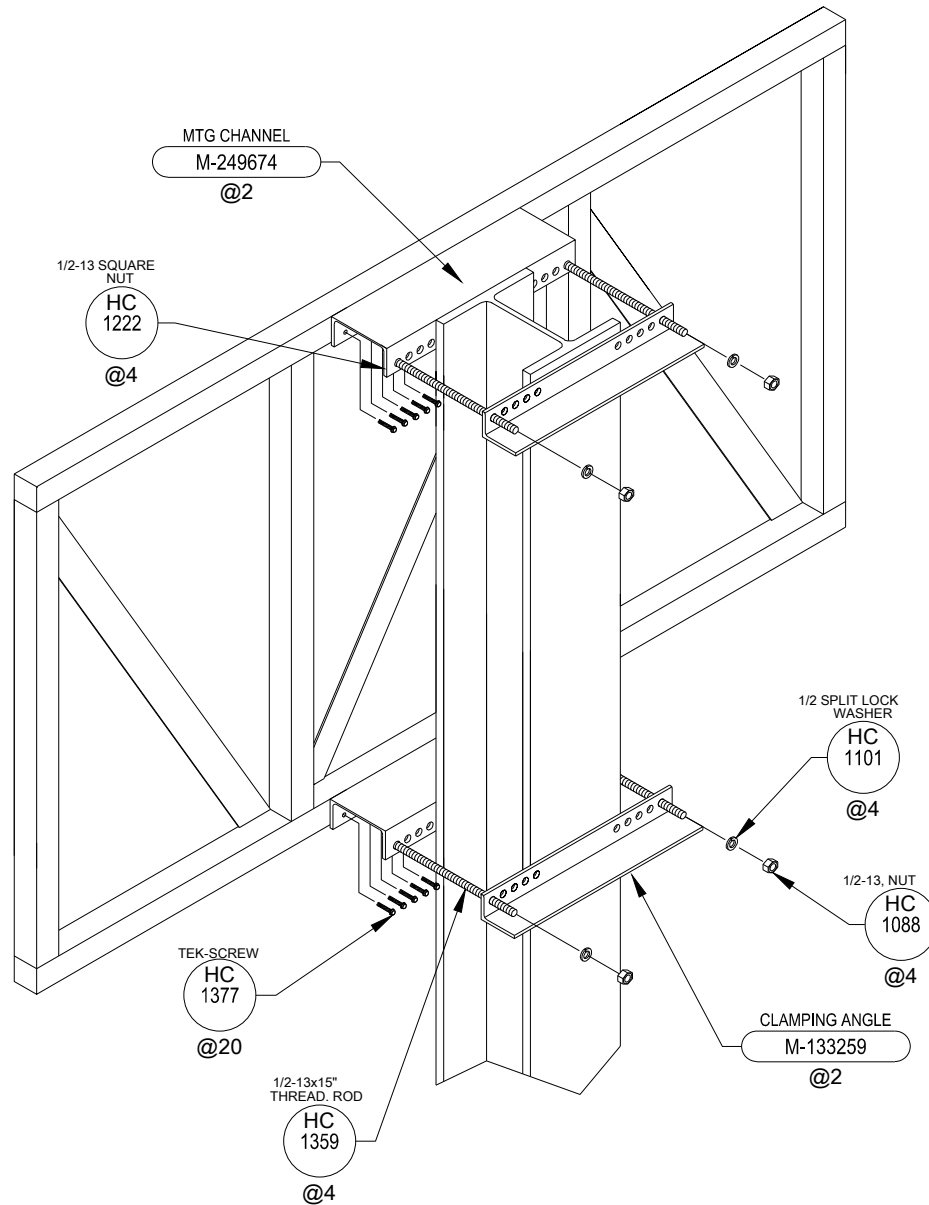


REAR VIEW



REV 02	DATE: 22 DEC 15	ADDED LUBRICANT WARNING	BY: PJS	
REV 01	DATE: 1 MAY 12	UPDATED TO ROCKER CLAMP STYLE MOUNTING	BY: KCS	

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PROJ: ODD NUMBER POLE MOUNTING; DOME OD NON-BKLT TITLE: ODD NUMBER POLE MOUNTING; DOME OD NON-BKLT		
DESIGN: SNOBLE SCALE: 1=35		DRAWN: SNOBLE DATE: 10 MAR 08
SHEET	REV 02	JOB NO. P1091
FLUNC-TYPE-SIZE		E - 10 - B
369907		




ISOMETRIC VIEW
TYPICAL CLAMP MOUNT PER POLE

NOTES:

- ATTACH MOUNTING CHANNEL (0M-249674) TO TRUSSWORK USING HC-1377 TEK SCREWS.
- CHANNELS ARE TO BE CENTERED AT VERTICAL BEAM LOCATIONS.

0A-1348-0001... MTG HDWE; TRUSSWORK, 1-POLE

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DO NOT SCALE DRAWING						
PROJ:DECORATIVE ACCENTS						
TITLE:MTG ATTACHMENT: DA-1000 SERIES						
DESIGN:JANDRE		DRAWN:SGOULD		DATE: 06 APR 10		
SCALE: 1=15						
SHEET		REV	JOB NO:	FUNC -TYPE- SIZE		997378
		02	P 1348	E - 10 - A		

REV 02	DATE: 13 JAN 15	FIX HC1359 FROM @20 TO @4	BY: KDB
REV 01	DATE: 20 DEC 12	UPDATED DWG TO REMOVE CHAMFERS FROM CLAMPING ANGLES (M-133259)	BY: AJH

TABLE 1: SPACINGS

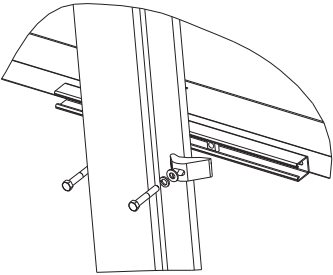
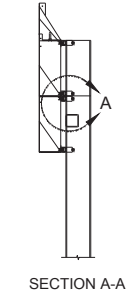
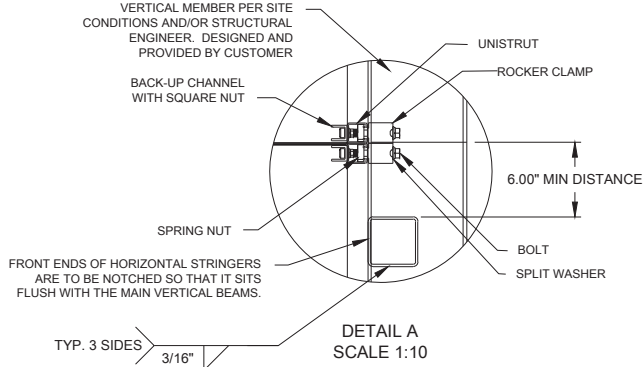
DOME MODEL#	DOME SIZE	DIMENSION (1)	DIMENSION (2)	DIMENSION (3)	DIMENSION (4)
DA-1205-12	3'-0" X 12'-0"	7'-0" - 9'-0"	4'-0"	1'-6"	0'-10"
DA-1205-14	4'-0" X 14'-0"	9'-0" - 11'-0"	5'-0"	2'-0"	1'-0"
DA-1205-16	2'-6" X 16'-0"	8'-0" - 10'-0"	4'-0"	1'-0"	1'-2"
DA-1205-18	3'-0" X 18'-0"	11'-0" - 13'-0"	5'-0"	1'-4"	1'-2"
DA-1205-20	3'-0" X 20'-0"	12'-0" - 14'-0"	7'-0"	1'-2"	1'-2"
DA-1205-25	4'-0" X 25'-0"	14'-0" - 16'-0"	9'-0"	1'-6"	1'-6"
DA-1205-27	4'-0" X 27'-0"	14'-6" - 16'-6"	10'-0"	1'-6"	1'-6"

TABLE 2: STEEL STRINGER SIZES

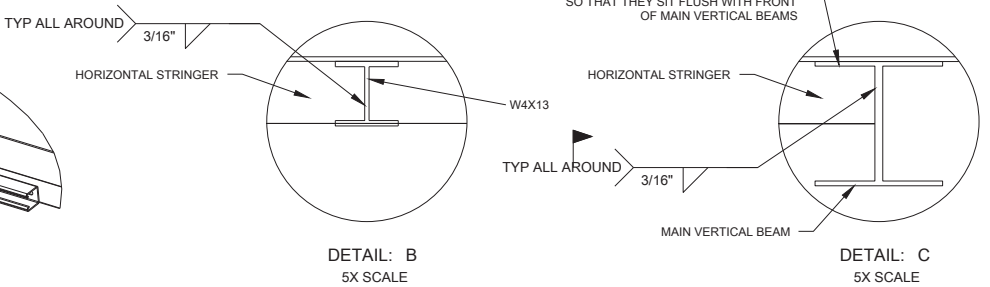
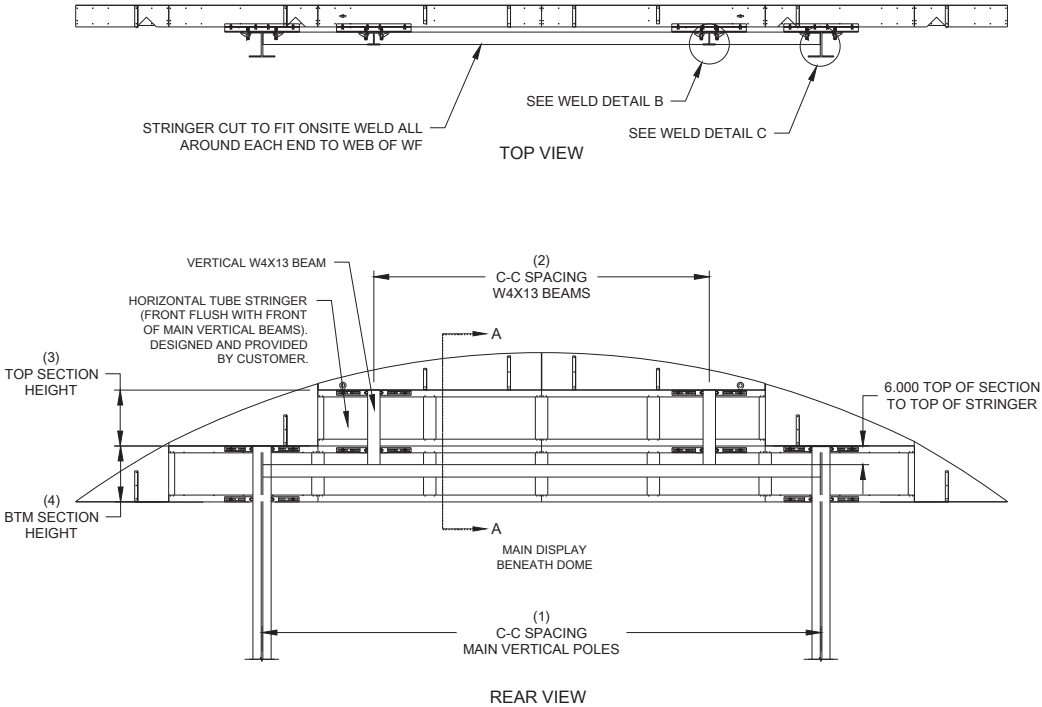
DISPLAY LENGTH (FT.)	NUMBER OF COLUMNS	COLUMN SPACING (FT.)	STRINGER SIZE	
			DESIGN WIND VELOCITY	
			90 MPH - 130 MPH	150 MPH
14	2	9'-0"-11'-0"	HSS4X4X3/16	HSS4X4X3/16
16	2	8'-0"-10'-0"	HSS4X4X3/16	HSS4X4X3/16
18	2	11'-0"-13'-0"	HSS4X4X3/16	HSS4X4X3/16
20	2	12'-0"-14'-0"	HSS4X4X3/16	HSS4X4X3/16
25	2	14'-0"-16'-0"	HSS4X4X3/16	HSS5X5X3/16
27	2	14'-0"-16'-0"	HSS4X4X3/16	HSS5X5X3/16



*WIND DESIGN: ASCE 7-05 USE CAT II, EXP C,
Kz=1.04, Cf=1.64, 30' MAX SIGN FACE, DISPLAY
IS ASSUMED TO BE 10' OFF GRADE

*** CRITICAL ***
DO NOT USE ANY LUBRICANT
ON ANY MOUNTING HARDWARE
OR WARRANTY WILL BE VOIDED



REAR ISO VIEW
GRAPHICAL REPRESENTATION OF THE
POLE MOUNT HARDWARE.



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PROJECT: DECORATIVE ACCENTS FOR OUTDOOR SCOREBOARDS					
TITLE: TWO POLE MOUNTING; DA-1205 DOMES					
DATE: 04 JAN 12		DIM UNITS: INCHES (MILLIMETERS)		SHEET	REV
SCALE: 1/40		DO NOT SCALE DRAWING			02
DESIGN: MCARSRU	JOB NO.	FUNC - TYPE - SIZE		1080123	
DRAWN: MCARSRU	P1348	E - 10 - B			

REV 02	DATE: 15 JAN 16	ADDED LUBRICANT WARNING	BY: PJS
REV 01	DATE: 26 APR 12	UPDATED TO ROCKER CLAMP STYLE MOUNTING	BY: JLR

TABLE 1: SPACINGS

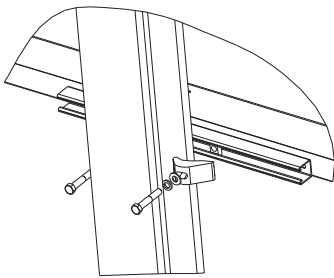
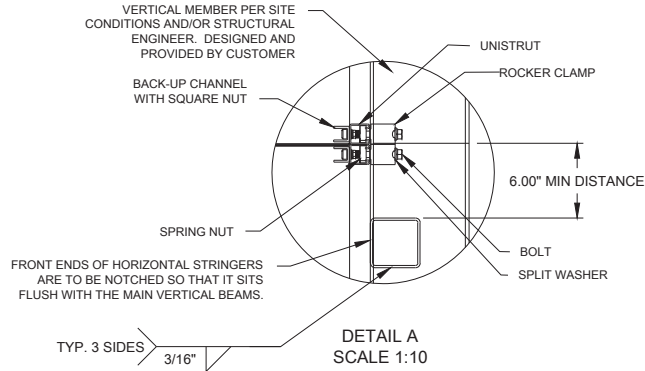
DOMES MODEL#	DOMES SIZE	DIMENSION (1)	DIMENSION (2)	DIMENSION (3)	DIMENSION (4)
DA-1205-28	4'-0" X 28'-0"	9'-6" - 11'-6"	2'-3"	10'-0"	1'-0"
DA-1205-32	5'-0" X 32'-0"	10'-6" - 12'-6"	2'-6"	11'-0"	1'-6"
DA-1205-36	5'-0" X 36'-0"	12'-0" - 14'-0"	2'-6"	12'-0"	1'-6"

TABLE 2: STEEL STRINGER SIZES

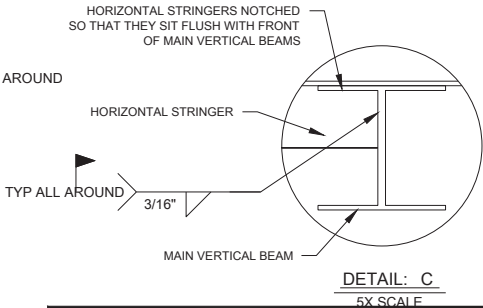
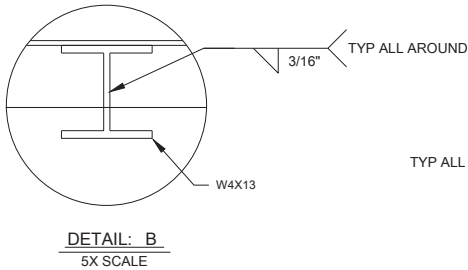
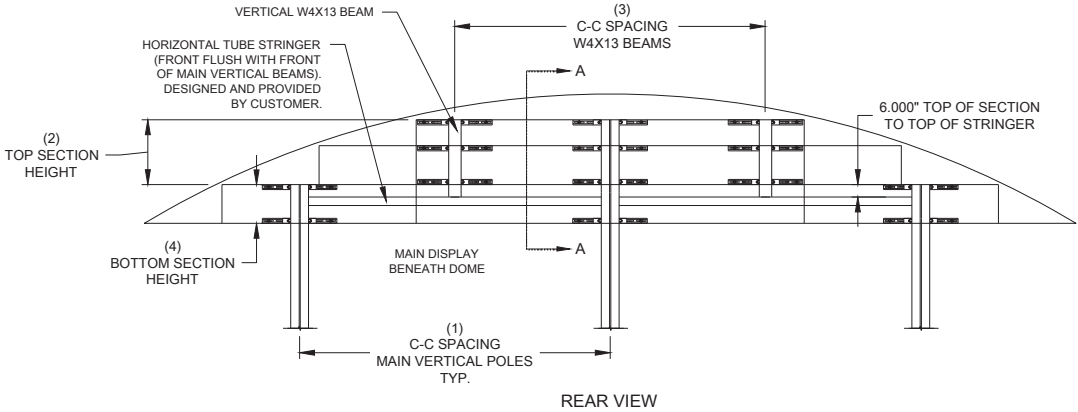
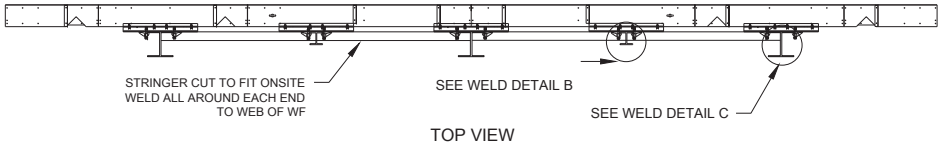
DISPLAY LENGTH (FT.)	NUMBER OF COLUMNS	COLUMN SPACING (FT.)	STRINGER SIZE			
			DESIGN WIND VELOCITY			
			90 MPH	110 MPH	130MPH	150 MPH
28	3	9'-6"-11'-6"	HSS4X4X3/16	HSS4X4X3/16	HSS4X4X3/16	HSS5X5X3/16
32	3	10'-6"-12'-6"	HSS4X4X3/16	HSS4X4X3/16	HSS5X5X3/16	HSS6X6X3/16
36	3	12'-0"-14'-0"	HSS4X4X3/16	HSS5X5X3/16	HSS5X5X3/16	HSS6X6X3/16



*WIND DESIGN: ASCE 7-05 USE CAT II, EXP C, Kz=1.04, Cf=1.64, 30' MAX SIGN FACE, DISPLAY IS ASSUMED TO BE 10' OFF GRADE

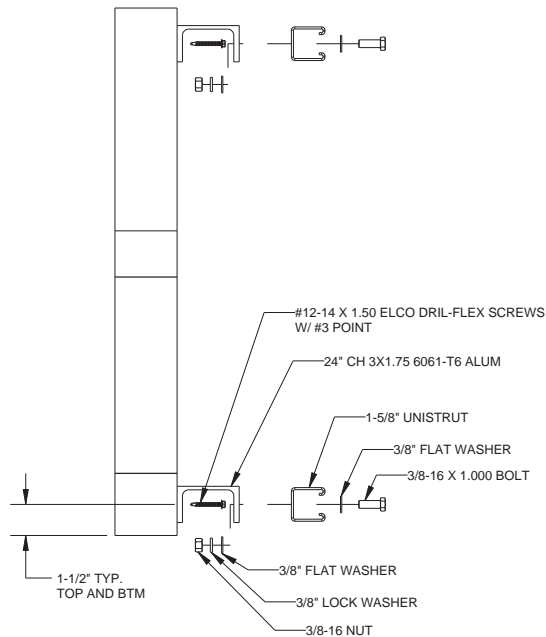
*** CRITICAL ***
DO NOT USE ANY LUBRICANT
ON ANY MOUNTING HARDWARE
OR WARRANTY WILL BE VOIDED



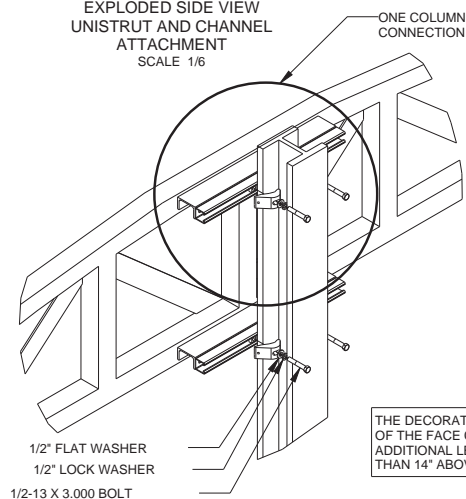
REAR ISO VIEW
GRAPHICAL REPRESENTATION OF THE
POLE MOUNT HARDWARE.



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PROJECT: DECORATIVE ACCENTS FOR OUTDOOR SCOREBOARDS					
TITLE: THREE POLE MOUNTING: DA-1205 DOMES					
DATE: 05 JAN 12		DIM UNITS: INCHES [MILLIMETERS]		SHEET	
SCALE: 1/40		DO NOT SCALE DRAWING		REV 02	
DESIGN: MCARSRU		JOB NO. P1348		FUNC - TYPE - SIZE	
DRAWN: MCARSRU				1080180	

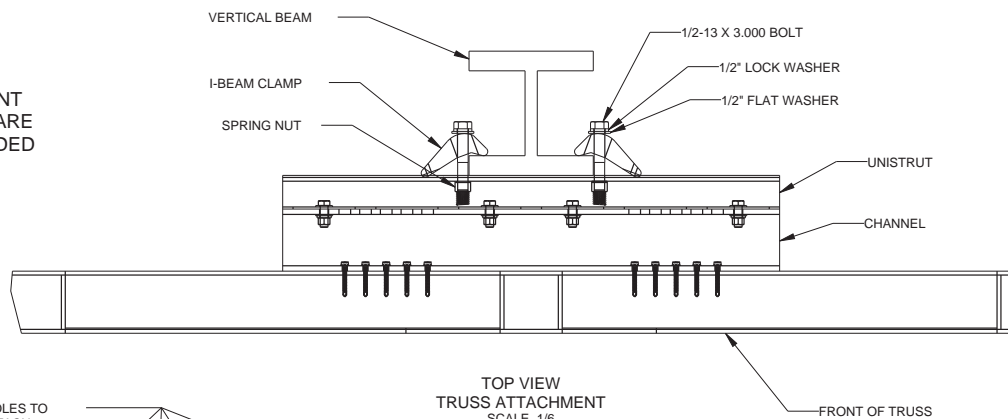


EXPLODED SIDE VIEW
UNISTRUT AND CHANNEL
ATTACHMENT
SCALE 1/6



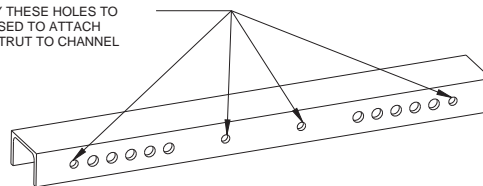
EXPLODED REAR ISOMETRIC VIEW
TRUSS ATTACHMENT
SCALE 1/15

CRITICAL
DO NOT USE ANY LUBRICANT
ON ANY MOUNTING HARDWARE
OR WARRANTY WILL BE VOIDED



TOP VIEW
TRUSS ATTACHMENT
SCALE 1/6

ONLY THESE HOLES TO
BE USED TO ATTACH
UNISTRUT TO CHANNEL



FRONT ISOMETRIC VIEW
24" CH 3X1.75 6061-T6 ALUM
SCALE 1/6

STRUCTURAL NOTES:

ALLOWABLE LOADS PER COLUMN CONNECTION

MAX ALLOWABLE WEIGHT: 180 LBS
MAX WIND LOAD CAPACITY: 1400 LBS
COEFFICIENT OF FRICTION: 0.45
BOLT TORQUE: 40 FT-LB
MIN-MAX I-BEAM FLANGE THICKNESS: 3/16"-3/4"
NOTE: IF THE I-BEAM FLANGE THICKNESS IS GREATER THAN
SPECIFIED, LONGER BOLTS WILL BE REQUIRED AT THE
CUSTOMER'S EXPENSE. MAX LENGTH OF REPLACEMENT
BOLT IS 3.5". MUST BE GRADE 5 MINIMUM.

MOUNTING INSTRUCTIONS:

1. ATTACH THE PREDRILLED ALUMINUM CHANNEL TO THE TRUSS WITH SELF DRILLING SCREWS AS SHOWN IN THE UNISTRUT ATTACHMENT SIDE VIEW.
2. ATTACH UNISTRUT TO CHANNEL THROUGH HOLES INDICATED IN THE FRONT ISOMETRIC VIEW OF THE CHANNEL AND ATTACH WITH HARDWARE SHOWN IN UNISTRUT ATTACHMENT SIDE VIEW.
3. PLACE SPRING NUTS INTO UNISTRUT IN APPROXIMATE LOCATION OF VERTICAL BEAMS.
4. LIFT TRUSS INTO POSITION.
5. ATTACH I-BEAM CLAMPS WITH 1/2" HARDWARE AS SHOWN IN TOP AND REAR ISOMETRIC VIEW TRUSS ATTACHMENT.
6. MAKE SURE THE 1/2-13 BOLTS ARE AS CLOSE TO THE I-BEAM FLANGES AS POSSIBLE.
7. WHEN TRUSS IS ADJUSTED TO FINAL DESIRED POSITION, TIGHTEN BOLTS FIRMLY.

TO DETERMINE IF THE TRUSS BEING MOUNTED WILL EXCEED THE
MAX ALLOWABLE LOAD PER CONNECTION TAKE THE WEIGHT
OF THE TRUSS AND DIVIDE BY THE NUMBER OF CONNECTIONS.

THE DECORATIVE TRUSS SHALL NOT HAVE MORE THAN 50%
OF THE FACE COVERED.

ADDITIONAL LETTERING/LOGOS SHALL NOT PROTRUDE MORE
THAN 14" ABOVE THE TOP OF THE DECORATIVE TRUSS.



REFERENCE THE PRODUCT SPECIFICATION DOCUMENTS TO DETERMINE
THE WEIGHT OF THE DA-1001 AND DA-1000 TRUSSES.

DA-1001: SL-08028
DA-1000: SL-08027

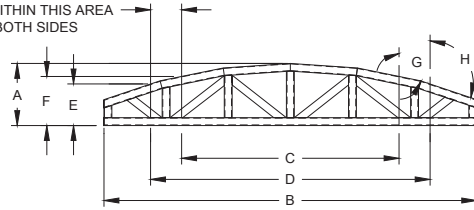
THE DECORATIVE TRUSS SHALL NOT HAVE MORE THAN 50%
OF THE FACE COVERED.
ADDITIONAL LETTERING/LOGOS SHALL NOT PROTRUDE MORE
THAN 14" ABOVE THE TOP OF THE DECORATIVE TRUSS.

0A-1348-1054
MTG HDWE, BEAM CLAMP, DECORATIVE TRUSSWORK, 1-POLE
THIS ASSEMBLY HAS ENOUGH FOR (2) COLUMN CONNECTIONS

04	22 DEC 15	ADDED LUBRICANT WARNING		
03	15 JUN 15	UPDATED COLUMN NOTES AND ADDED STRUCTURAL NOTES		
02	15 JUN 15	UPDATED TO MAKE REVISIONS MATCH		
01	23 OCT 13	PER EC-12382; CHANGED BOLT TORQUE FROM 50 FT-LB TO 40 FT-LB		
REV	DATE:		BY:	

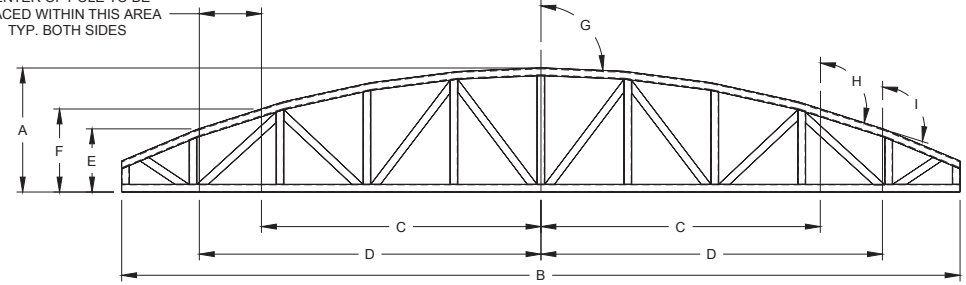
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PROJECT: OUTDOOR DECORATIVE ACCENTS					
TITLE: TRUSS I-BEAM CLAMP MOUNTING					
DATE: 22-DEC-15		DIM UNITS: INCHES [MILLIMETERS]		SHEET 1 OF 1	
SCALE: 1/60		DO NOT SCALE DRAWING		REV 04	
DESIGN: KSCHNABEL		JOB NO. P1348		FUNC - TYPE - SIZE E - 10 - B	
DRAWN: KSCHNABEL				1111650	

CENTER OF POLE TO BE
PLACED WITHIN THIS AREA
TYP. BOTH SIDES



TWO POLE TRUSS
MOUNTING

CENTER OF POLE TO BE
PLACED WITHIN THIS AREA
TYP. BOTH SIDES



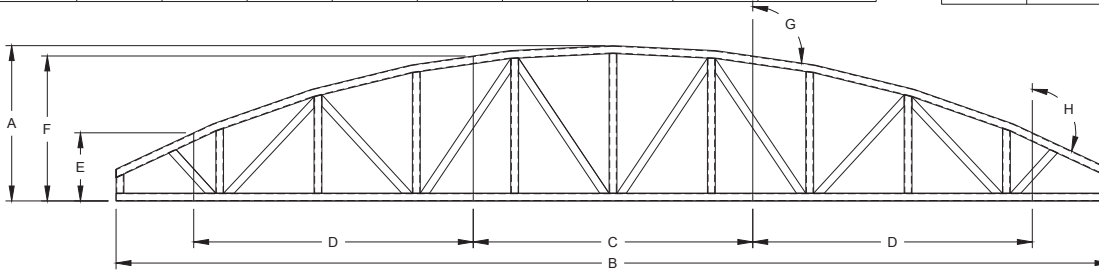
THREE POLE TRUSS
MOUNTING

TWO POLE TRUSS MOUNTING TABLE

MODEL NUMBER	HEIGHT Dim. A	WIDTH Dim. B	POLE SPACE MIN Dim. C	POLE SPACE MAX Dim. D	POLE HEIGHT Dim. E	POLE HEIGHT Dim. F	ANGLE Dim. G	ANGLE Dim. H	POSSIBLE TO POSITION POLE BEHIND VERTICAL TRUSS MEMBER
DA-1001-12	2'-0"	12'-0"	7'-0"	9'-0"	1'-4"	1'-6 15/16"	102°	109°	YES
DA-1000-14	2'-0"	14'-0"	9'-0"	11'-0"	2'-0"	2'-0"	NA	NA	YES
DA-1001-14	3'-0"	14'-0"	9'-0"	11'-0"	1'-10 11/16"	2'-3 7/16"	104°	114°	YES
DA-1000-16	2'-0"	16'-0"	9'-6"	11'-6"	2'-0"	2'-0"	NA	NA	YES
DA-1001-16	3'-0"	16'-0"	9'-6"	11'-6"	2'-2 13/16"	2'-6 3/16"	106°	106°	NO
DA-1000-18	2'-0"	18'-0"	11'-0"	13'-0"	2'-0"	2'-0"	NA	NA	NO
DA-1001-18	3'-0"	18'-0"	11'-0"	13'-0"	1'-11 5/8"	2'-3 5/16"	103°	108°	YES
DA-1000-20	2'-0"	20'-0"	12'-0"	14'-0"	2'-0"	2'-0"	NA	NA	NO
DA-1001-20	3'-0"	20'-0"	12'-0"	14'-0"	2'-0 5/16"	2'-3 9/16"	101°	106°	YES
DA-1001-24	4'-0"	24'-0"	14'-0"	16'-0"	2'-9 1/16"	3'-0 11/16"	103°	109°	YES
DA-1000-25	3'-0"	25'-0"	14'-0"	16'-0"	3'-0"	3'-0"	NA	NA	NO
DA-1001-25	4'-0"	25'-0"	14'-0"	16'-0"	2'-9 11/16"	3'-0 15/16"	103°	109°	YES
DA-1000-27	2'-0"	27'-0"	14'-6"	16'-6"	2'-0"	2'-0"	NA	NA	TBD
DA-1001-27	4'-0"	27'-0"	14'-6"	16'-6"	2'-10 15/16"	3'-1 5/8"	102°	107°	YES
DA-1000-28	3'-0"	28'-0"	14'-6"	16'-6"	3'-0"	3'-0"	NA	NA	NO
DA-1001-28	4'-0"	28'-0"	14'-6"	16'-6"	2'-11 3/4"	3'-2 3/8"	102°	106°	NO

THREE POLE TRUSS MOUNTING TABLE

MODEL NUMBER	HEIGHT Dim. A	WIDTH Dim. B	POLE SPACE MIN Dim. C	POLE SPACE MAX Dim. D	POLE HEIGHT Dim. E	POLE HEIGHT Dim. F	ANGLE Dim. G	ANGLE Dim. H	ANGLE Dim. I	POSSIBLE TO POSITION POLE BEHIND VERTICAL TRUSS MEMBER
DA-1000-25	3'-0"	25'-0"	8'-6"	8'-6"	3'-0"	3'-0"	NA	NA	NA	NO
DA-1001-25	4'-0"	25'-0"	8'-6"	8'-6"	2'-7 11/16"	2'-7 11/16"	93°	109°	109°	NO
DA-1000-27	2'-0"	27'-0"	9'-0"	11'-0"	2'-0"	2'-0"	NA	NA	NA	TBD
DA-1001-27	4'-0"	27'-0"	9'-0"	11'-0"	2'-0 7/16"	2'-8 1/8"	93°	107°	113°	NO
DA-1000-28	3'-0"	28'-0"	9'-6"	11'-6"	3'-0"	3'-0"	NA	NA	NA	YES
DA-1001-28	4'-0"	28'-0"	9'-6"	11'-6"	2'-0 1/8"	2'-7 7/16"	92°	107°	112°	YES
DA-1000-32	4'-0"	32'-0"	10'-6"	12'-6"	4'-0"	4'-0"	NA	NA	NA	NO
DA-1001-32	5'-0"	32'-0"	10'-6"	12'-6"	2'-7 7/16"	3'-3 13/16"	93°	109°	109°	NO
DA-1000-36	3'-0"	36'-0"	12'-0"	14'-0"	3'-0"	3'-0"	NA	NA	NA	NO
DA-1001-36	5'-0"	36'-0"	12'-0"	14'-0"	2'-7 7/16"	3'-2 13/16"	92°	107°	107°	YES



FOUR POLE TRUSS
MOUNTING

FOUR POLE TRUSS MOUNTING TABLE

MODEL NUMBER	HEIGHT Dim. A	WIDTH Dim. B	POLE SPACE MIN Dim. C	POLE SPACE MAX Dim. D	POLE HEIGHT Dim. E	POLE HEIGHT Dim. F	ANGLE Dim. G	ANGLE Dim. H	POSSIBLE TO POSITION POLE BEHIND VERTICAL TRUSS MEMBER
DA-1000-32	4'-0"	32'-0"	9'-0"	9'-0"	4'-0"	4'-0"	NA	NA	NO
DA-1001-32	5'-0"	32'-0"	9'-0"	9'-0"	1'-11 5/16"	4'-8"	98°	115°	NO
DA-1000-36	3'-0"	36'-0"	9'-0"	9'-0"	3'-0"	3'-0"	NA	NA	NO
DA-1001-36	5'-0"	36'-0"	9'-0"	9'-0"	2'-9 1/4"	4'-8 13/16"	97°	107°	NO

NOTES:

- FOR AESTHETIC PURPOSES SPACE POLES OF DISPLAY SO THEY ARE IN LINE WITH VERTICALS OF TRUSS WHEN POSSIBLE.

- DRAWING TABLES CONTAIN DIMENSIONS FOR SQUARE DECORATIVE TRUSSES.

SQUARE - DA-1000
ARCHED - DA-1001

- DIMENSIONS G, H, I WILL NOT APPLY TO SQUARE TRUSSES.

- DIMENSIONS E AND F ARE SHOWN TO GIVE AN APPROXIMATE HEIGHT OF THE POLES. ACTUAL POLE HEIGHT WILL NEED TO BE DETERMINED BASED ON THE POLE SPACING.

DAKTRONICS, INC. BROOKINGS, SD 57006		THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2012 DAKTRONICS, INC.	
DO NOT SCALE DRAWING			
PROJECT: OUTDOOR DECORATIVE ACCENTS			
TITLE: POLE LOCATIONS; DECORATIVE TRUSSES			
DESIGN: KSCHNABEL	DRAWN: KSCHNABEL	DATE: 14 DEC 12	
SCALE: 1/4" = 1'			
SHEET	REV	JOB NO.	FLWG-TYPE-SIZE
01	01	P1348	E - 10 - B
			1122070

REV	DATE	ADDED 28' TRUSS INFO TO TABLES	BY:
01	13 JAN 15		KDB