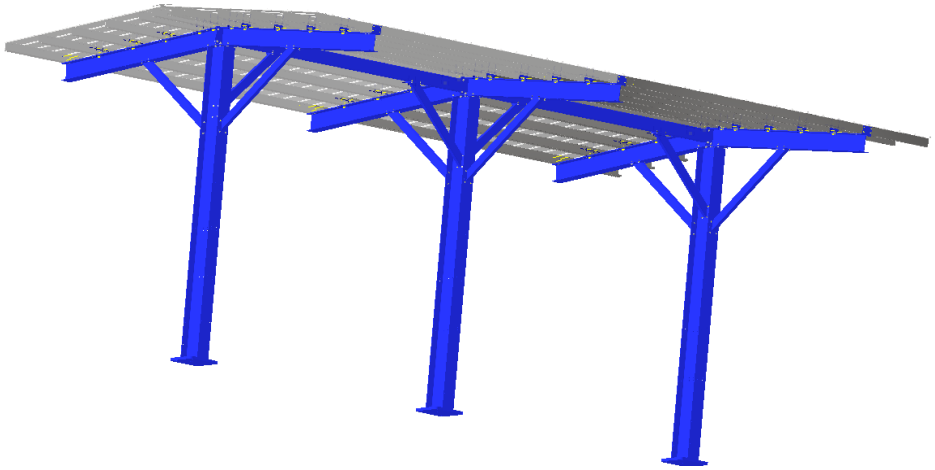
Models- **42000-1, 42000-2 Haven Shelter**

Page 2	Product Information
Page 3	Specifications
Page 4	Product Dimensions
Page 5-8	Pre Installation Info, foundation
Page 9-14	Frame Installation Instructions
Page 15-18	Roof Installation
Page 19	Example Installation
Page 20	Maintenance
Page 21-26	Parts



PRODUCT INFORMATION

Please take a moment to fill out the information below in order to aid us with any future sales or service inquiries. Model number and serial number information can be found on the serial tag located inside the control box and/or on the lower exterior of the can. Key number can be found on the tag that comes attached to the keys. There may be more than one key number depending on unit.

Please keep this information with your records.

MODEL#:_____

SERIAL#:_____

KEY NUMBER(S):_____

DATE PURCHASED:_____

DISTRIBUTOR:_____

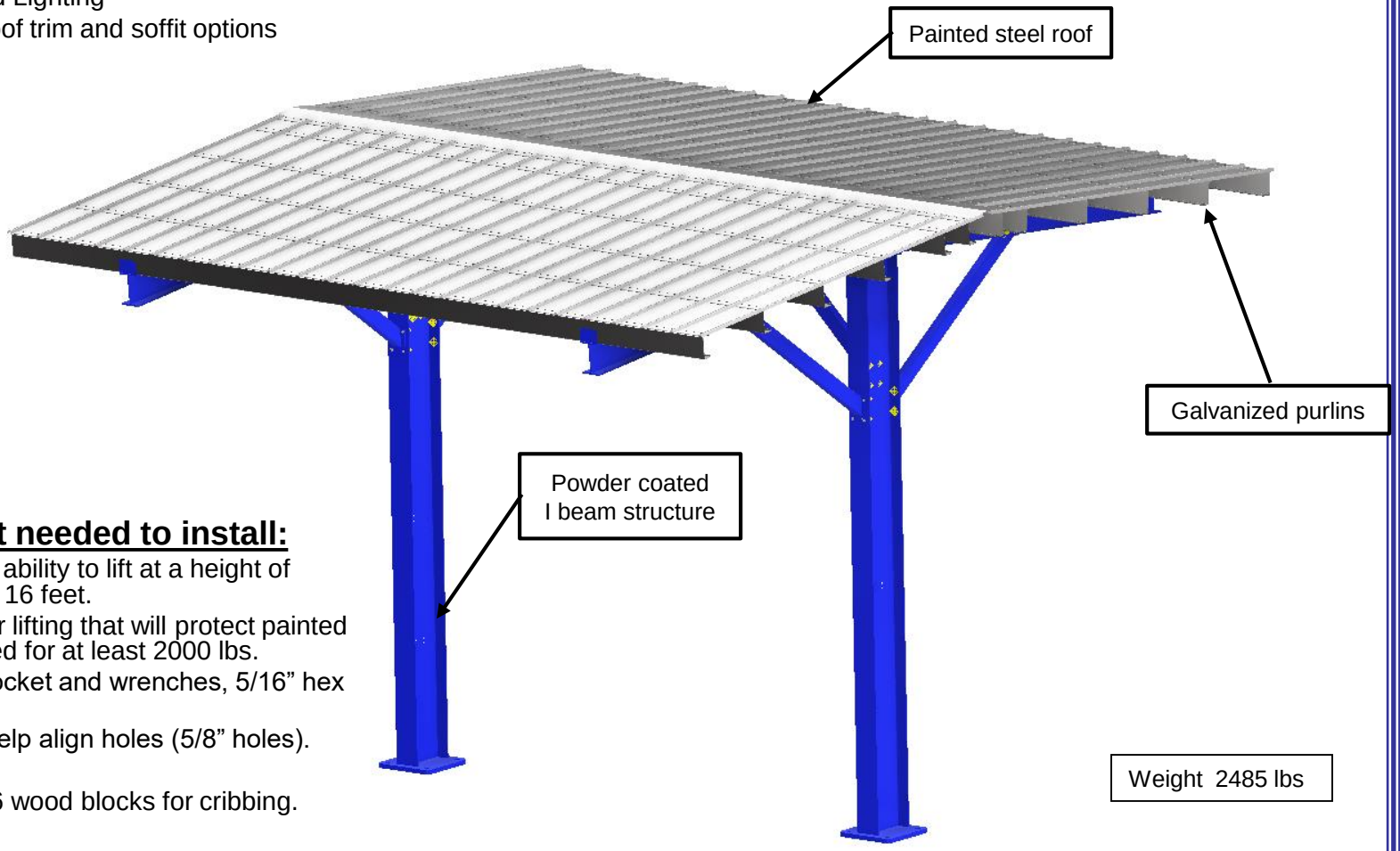
J.E. Adams Industries
1025 63rd Ave. S.W.
Cedar Rapids, IA 52404
1-800-553-8861
www.jeadams.com

Specifications

NOTE: Vertical I beam post are on 12ft center to center spread

Unit features:

- Large shelter system
- Ability to daisy chain shelter to create multiple bays
- Powder coated I beams, zinc rich primer
- Designed to work with a variety of JE Adams vacuum products
- Single version has coverage space for two cars depending on center curb width 18.8 ft x 18 ft.
- Optional Led Lighting
- Perimeter roof trim and soffit options



Equipment needed to install:

-Machine with ability to lift at a height of approximately 16 feet.

-Soft straps for lifting that will protect painted surfaces. Rated for at least 2000 lbs.

-3/4", 9/16" socket and wrenches, 5/16" hex driver

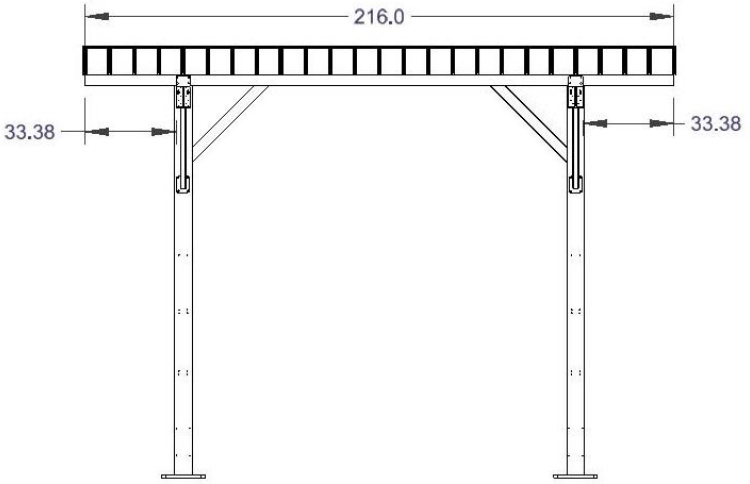
-Drift pins to help align holes (5/8" holes).

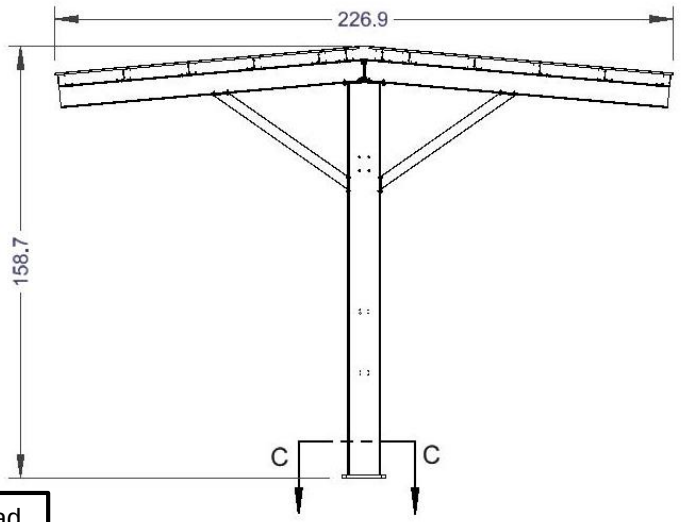
-Level

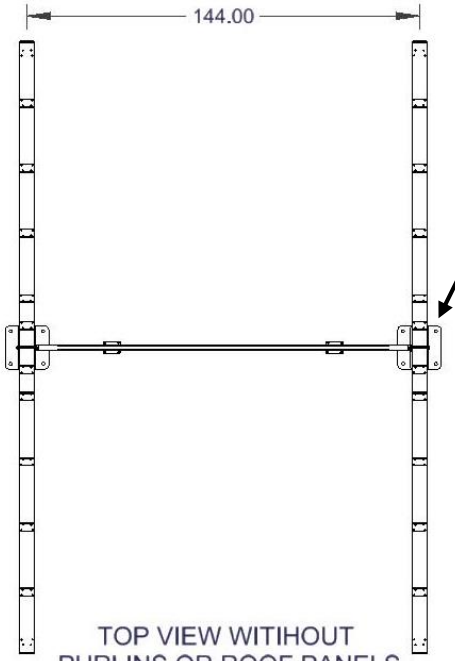
-(4) 4x4 or 6x6 wood blocks for cribbing.

Weight 2485 lbs

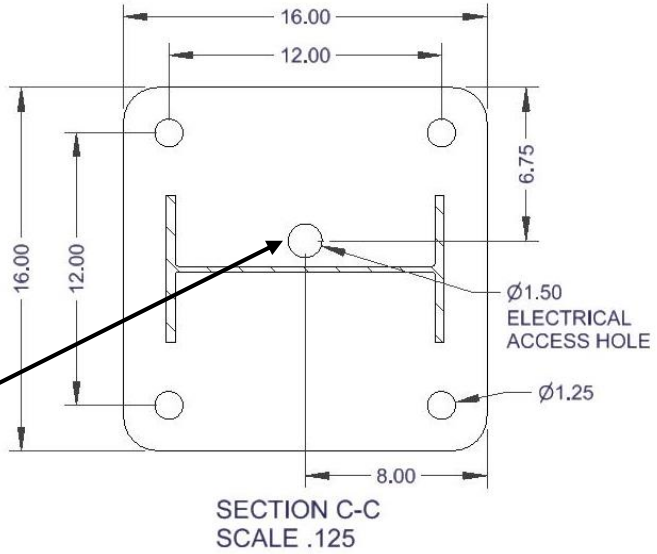
Dimensions







12 ft I beam spread and proper bolt pattern orientation is critically important for proper assembly



Electrical access hole through base plate can be on either side of I beam since weldment is symmetrical

Installation: Foundation

STEP 1 – Layout site preparation is critical, plan accordingly. **Foundation needs to meet local codes.**

42000-CFPA kit available, includes L bolts, nuts, washers and fixture plate to hold 12" square pattern.

****JE Adams assumes no liability nor makes any representations of suitability of foundation recommendations. Owner/installer are advised to seek out local Engineering firm to conform with local/state building code and soil requirements.**

•Information presented here was developed by local engineering firm to meet 2018 International Building Code (IBC) which references ASCE 7-16 in regards to applied load development. Wind load and snow load calculations were developed for a structure of Risk Category I, with wind speeds of 107 mph and snow loads of 60 psf.

Foundation reactions at a single column produced from nominal load combinations utilizing allowable stress design of the canopy frame were:

Two Column Version	Daisy Chained Version
•1. Overturning: 24,900 ft-lb	-1. Overturning: 30,700 ft-lb
•2. Uplift: 1,410 lb	-2. Uplift: 1390 lb
•3. Down-drag: 11,000 lb	-3. Down-drag: 14,570 lb
•4. Lateral: 860 lb	-4. Lateral: 960 lb

For evaluation purposes only, with normal soils a presumptive soil values per IBC of clay, sandy clay, silty clay, clayey silt, silt and sandy silt (CL, ML, MH, and CH.) were used.

With the above soil types the pier requirements are as follows:

Stand alone Two Column Shelter

Constrained: Pier diameter- 30", Pier depth- 8'-6"

Unconstrained: Pier diameter- 30", Pier depth- 11'-0"

Daisy Chained (shared center columns

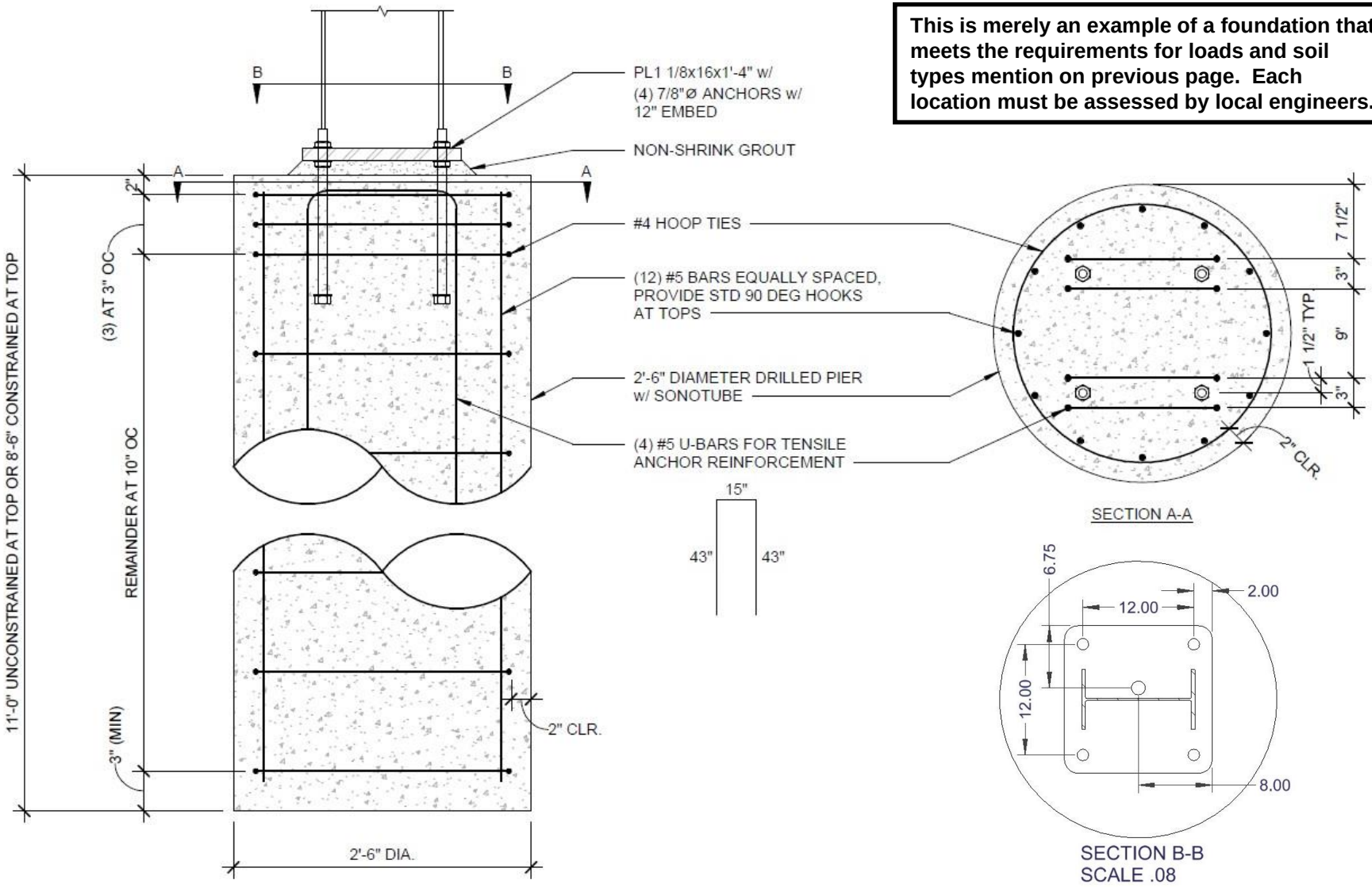
Constrained: Pier diameter- 30", Pier depth- 12'-6"

Unconstrained: Pier diameter- 30", Pier depth- 12'-6"

This design on following page will not be suitable for all soil types. In some cases it may lack in bearing support and in others it may be excessive. All locations must have soil types assessed and adjustments made by local licensed engineers.

Foundation Example

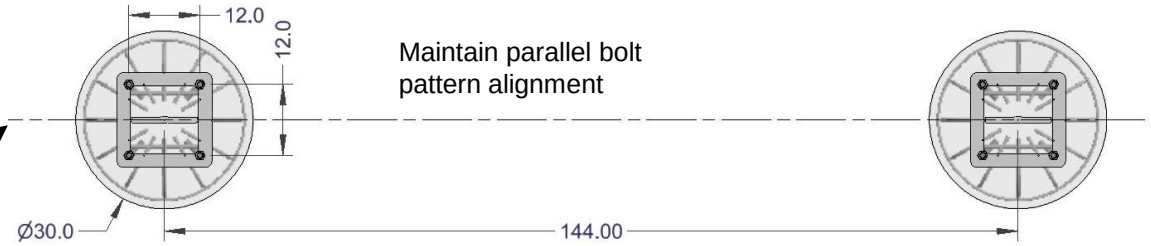
This is merely an example of a foundation that meets the requirements for loads and soil types mention on previous page. Each location must be assessed by local engineers.

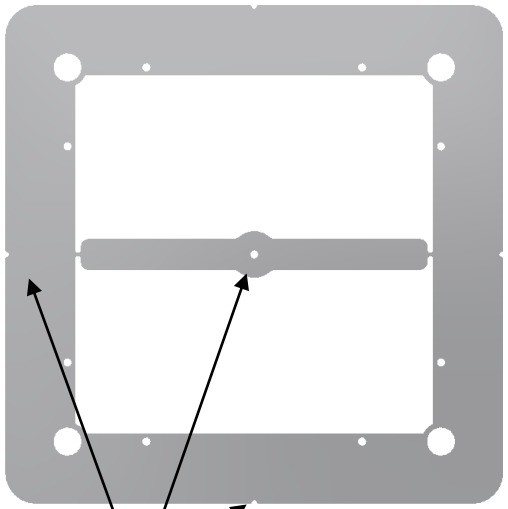


Foundation Footings

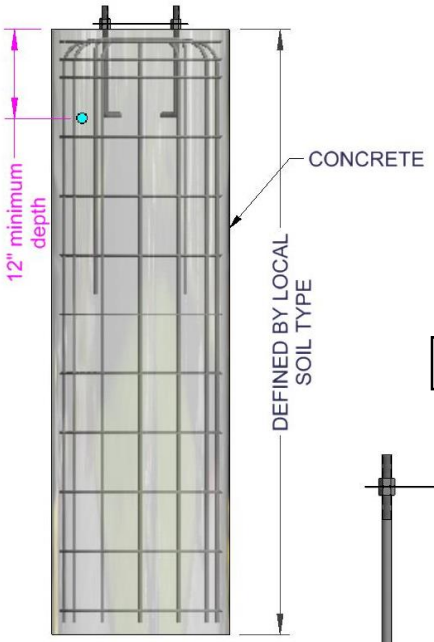
Important that footings for vertical I beam posts be level and bolt orientation be square to each other or roof beams will not be square at assembly stage. Spread of 144” is critically important. Allow for 4” of anchor bolt exposure for post leveling at assembly stage. Minimum anchor bolt depth is 12”. This information is showing only the footings, a curb feature can be included between and around posts.

42000-CFPA Kit is very useful to align both patterns, notches in plate can be aligned with center string

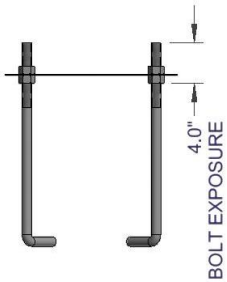


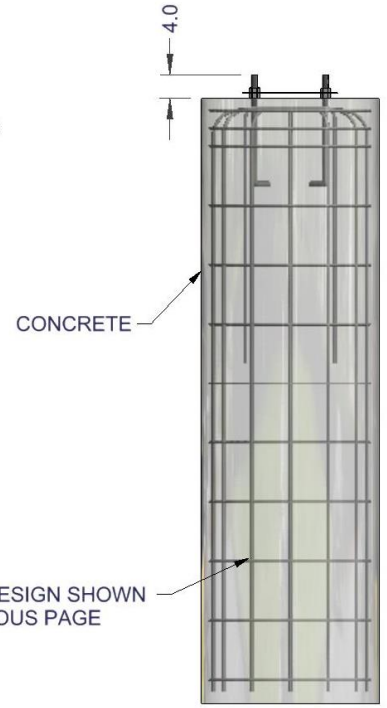


Center mark notches in perimeter of plate and center hole in middle of bolt pattern make pattern alignment easy.



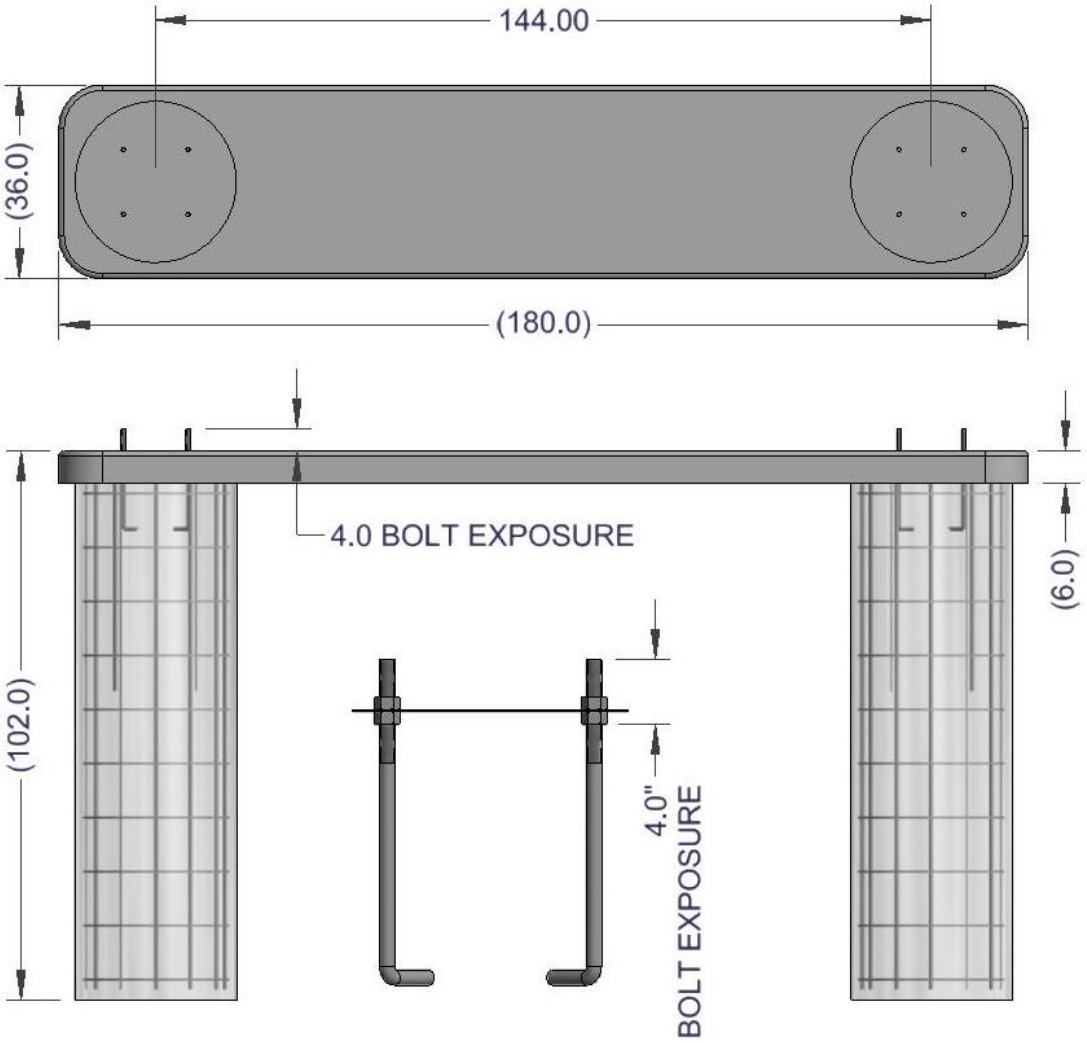
42000-CFPA Kit





Foundation Example, Post Setup

This is just one example of a curb added with the foundation. The curb feature can help protect shelter structure and equipment better. Curbs are not a required element of the foundation but help define parking and structure use. Note however the wider the curb the less coverage achieved by shelter. A curb or any concrete pad encompassing both footings creates a “constrained” footing which could allow shallower footing depth. Each location must have soil type and footing design assessed for local code conformance.

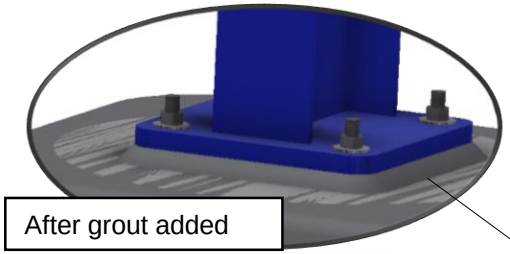


Vertical 12” I Beam Post Assembly

Take care to protect paint while lifting posts over threaded anchor bolts. Approximate weight of single I beam weldment is 460 lbs

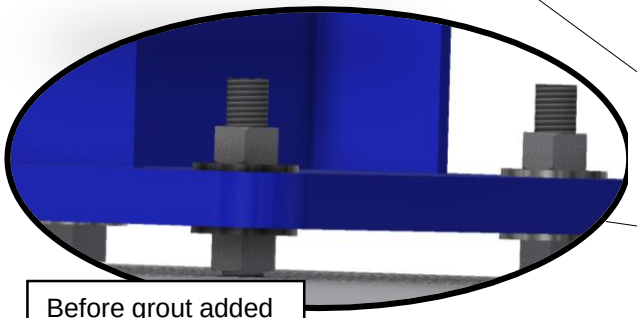
Note orientation of bracket on top of post.

Step 1. Assemble 12’ tall x 12” I beam vertical posts over anchor bolts. Two options in mating post to foundation: 1. If surface is flat and level bolting directly to concrete is acceptable. 2. Drive 1” nut down over anchor bolts to concrete, place 1” flat washer, then post, then another flat washer, lock washer and top nut. This method will allow adjustment to get posts vertical. Non-shrink grouting must be applied under post base once shelter is fully assembled. In either assembly method the base of post must be in contact with foundation through direct contact or grout.



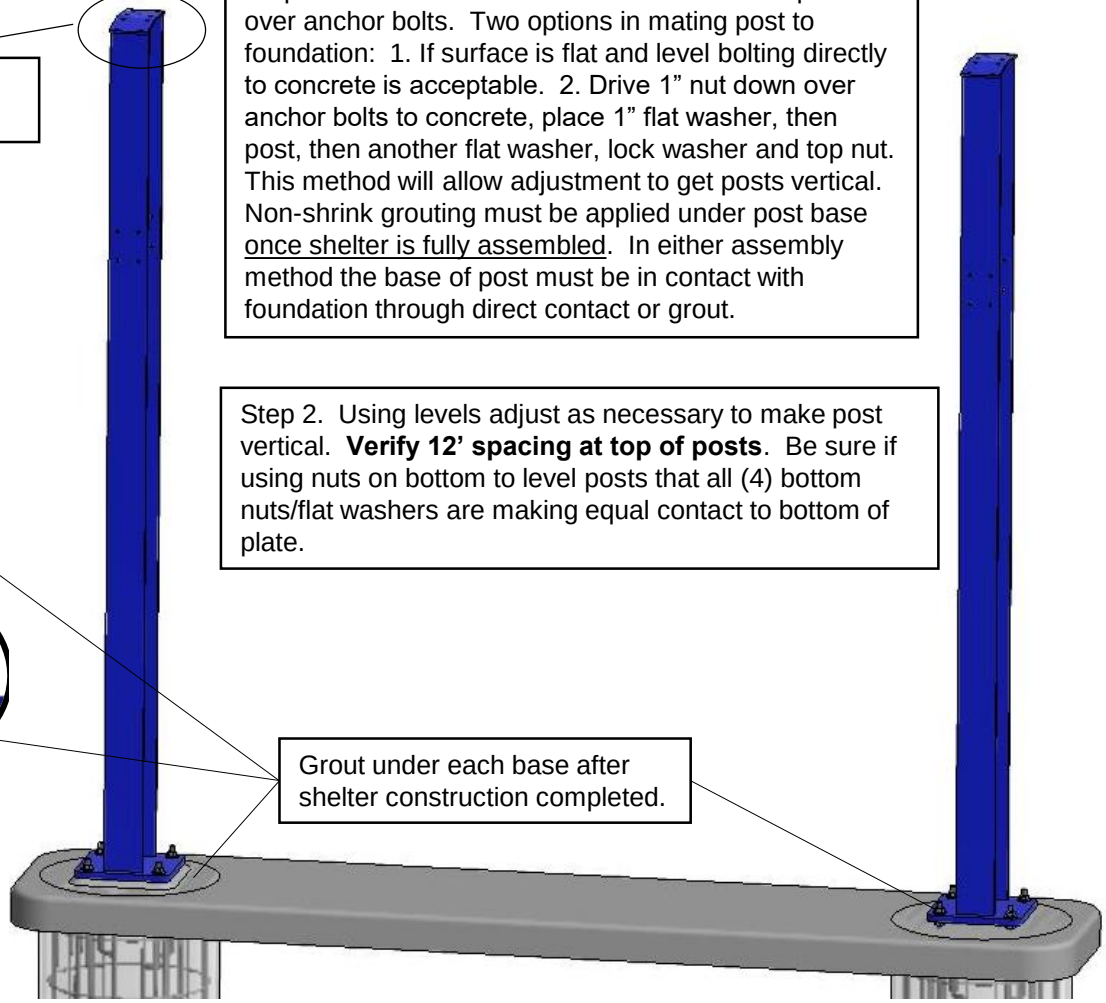
After grout added

Step 2. Using levels adjust as necessary to make post vertical. **Verify 12’ spacing at top of posts**. Be sure if using nuts on bottom to level posts that all (4) bottom nuts/flat washers are making equal contact to bottom of plate.



Before grout added

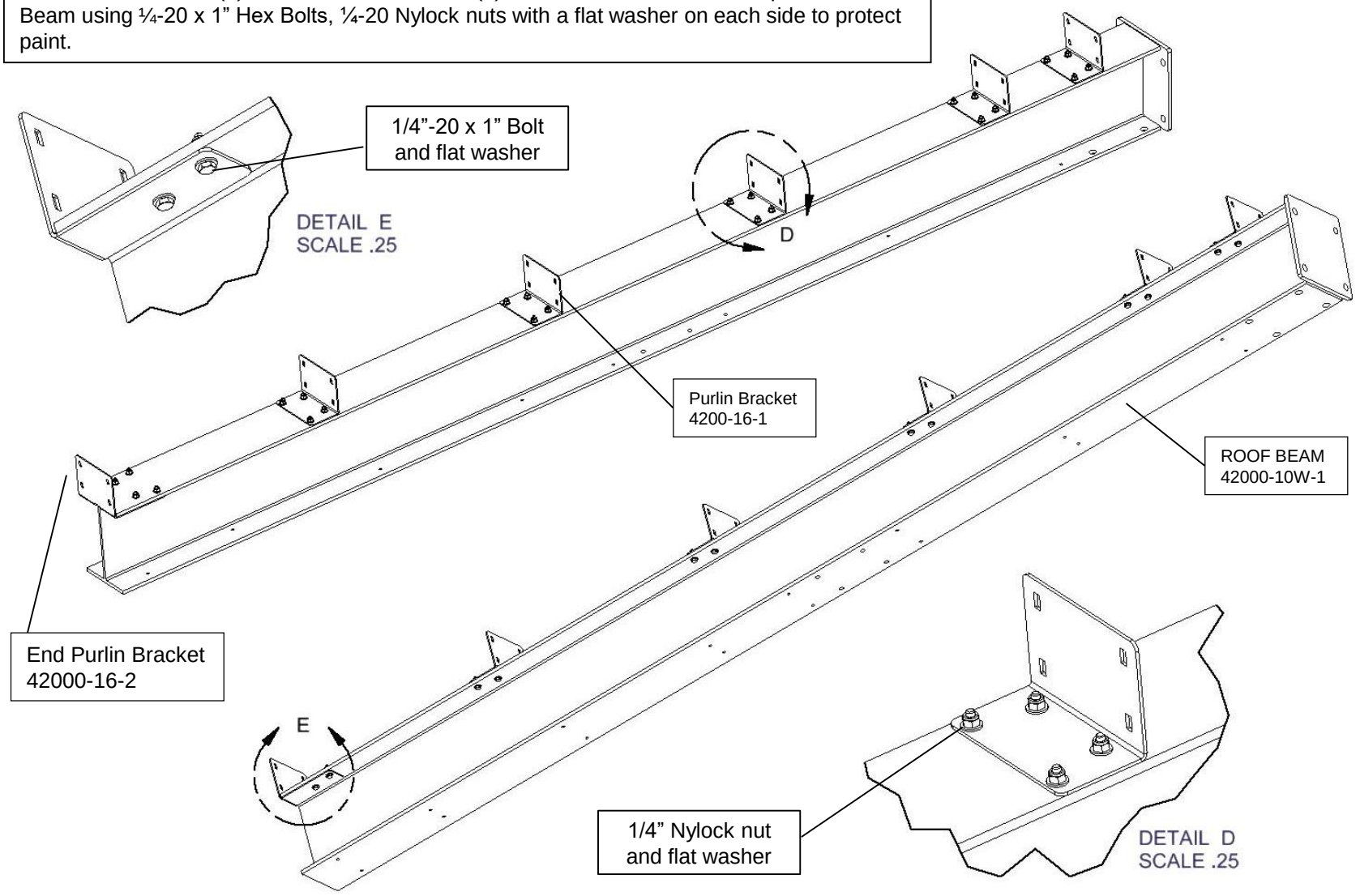
Grout under each base after shelter construction completed.



General practice throughout the assembly of this structure unless otherwise directed, there should always be a flat washer against paint on each side of all bolted joints to protect the painted finish.

Shelter Roof Beam Assembly

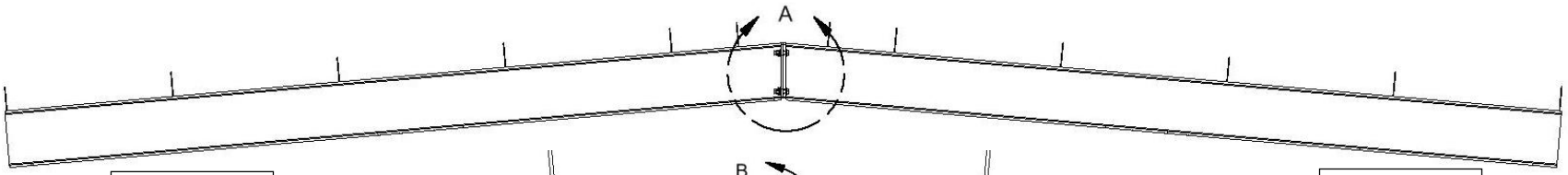
STEP 3 – Assemble (1) End Purlin Bracket and (5) Intermediate Brackets on top side of Roof Beam using ¼-20 x 1” Hex Bolts, ¼-20 Nylock nuts with a flat washer on each side to protect paint.

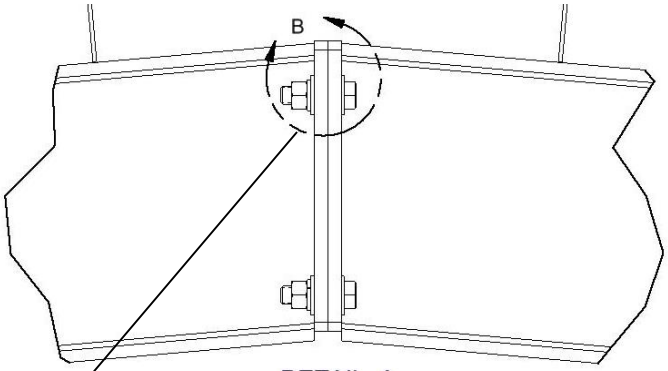


Shelter Assembly

STEP 4 – Layout (2) of the four Roof I beams on their side on flat level surface with at least 4” x 4” wood blocks under beam to allow access to bolted joints on both sides of beam. Bolt beams together using ½” hardware, torque to approximately 75 ft*lbs. Be sure to align perimeter of plates on roof beams.

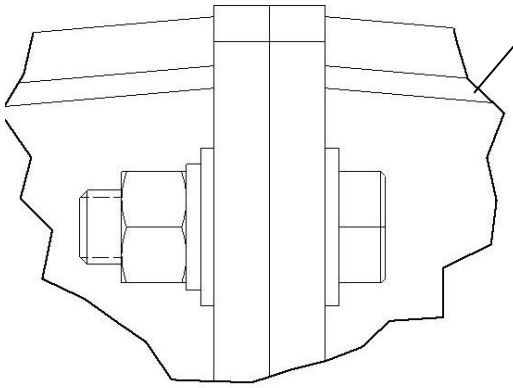
STEP 5 – Prepare to lift assembled beams. Use soft straps rated for at least 2000 lbs (beam assembly weight approx. 350 lbs total). Spread lift points far enough apart so load is stable. Do not lift at middle, this area needs to remain clear.



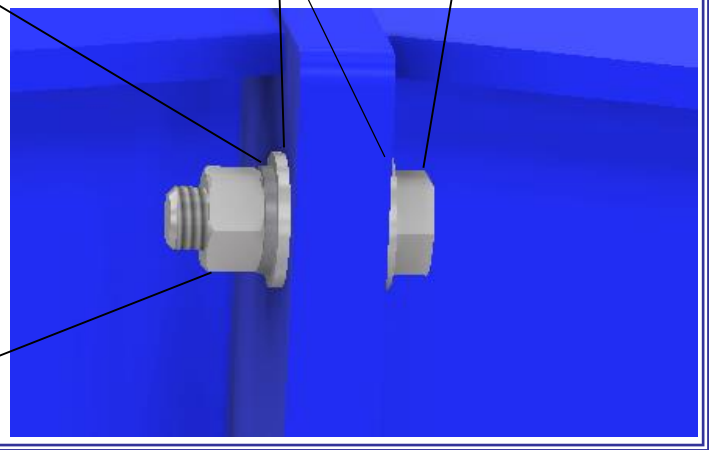


DETAIL A

Maintain flush edge fit between plates on all 4 sides as (4) bolts are tighten to 75 ft*lbs



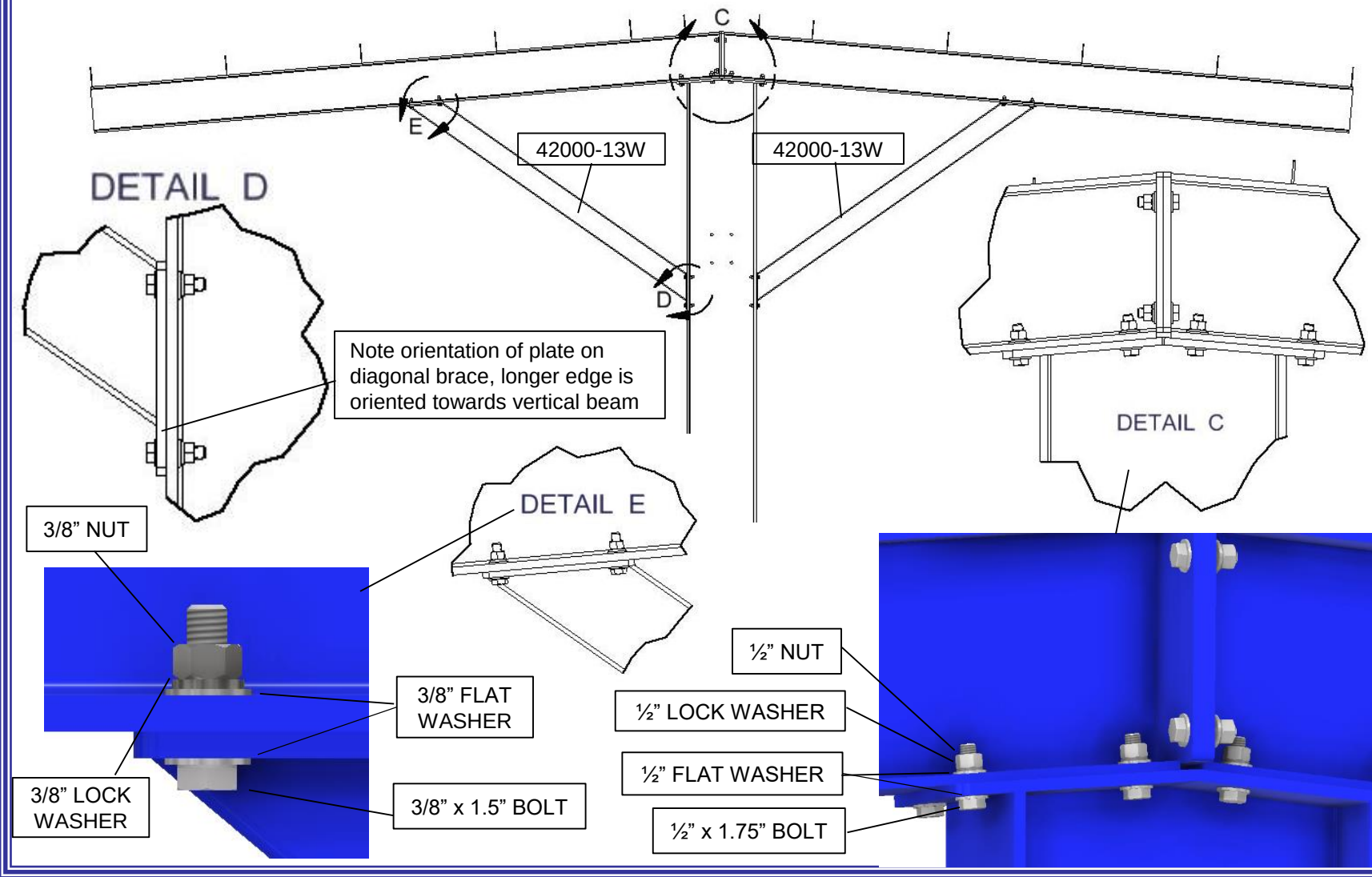
DETAIL B



Shelter Assembly

STEP 6 – Lift beam assembly over vertical beam and bolt in place per detail C using ½" hardware. Secure hardware but do not torque to 75 ft*lbs until step 7 is completed.

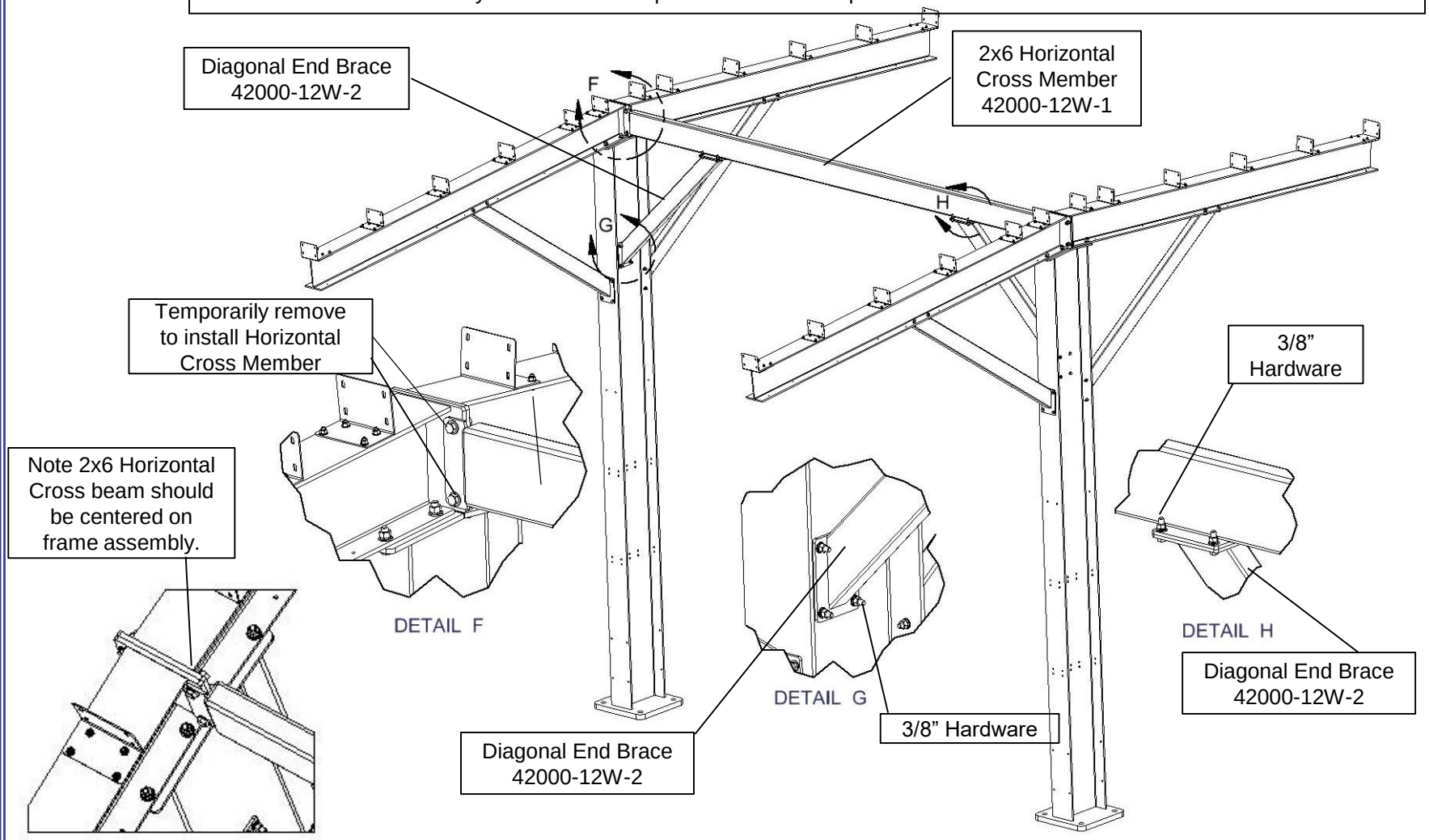
STEP 7-- Assembly two diagonal braces between roof beams and vertical beam. Note orientation is important showing in detail D, longer exposed mounting plate is oriented down against vertical I beam. Use 3/8" hardware and torque to 31 ft*lbs.



Shelter Assembly

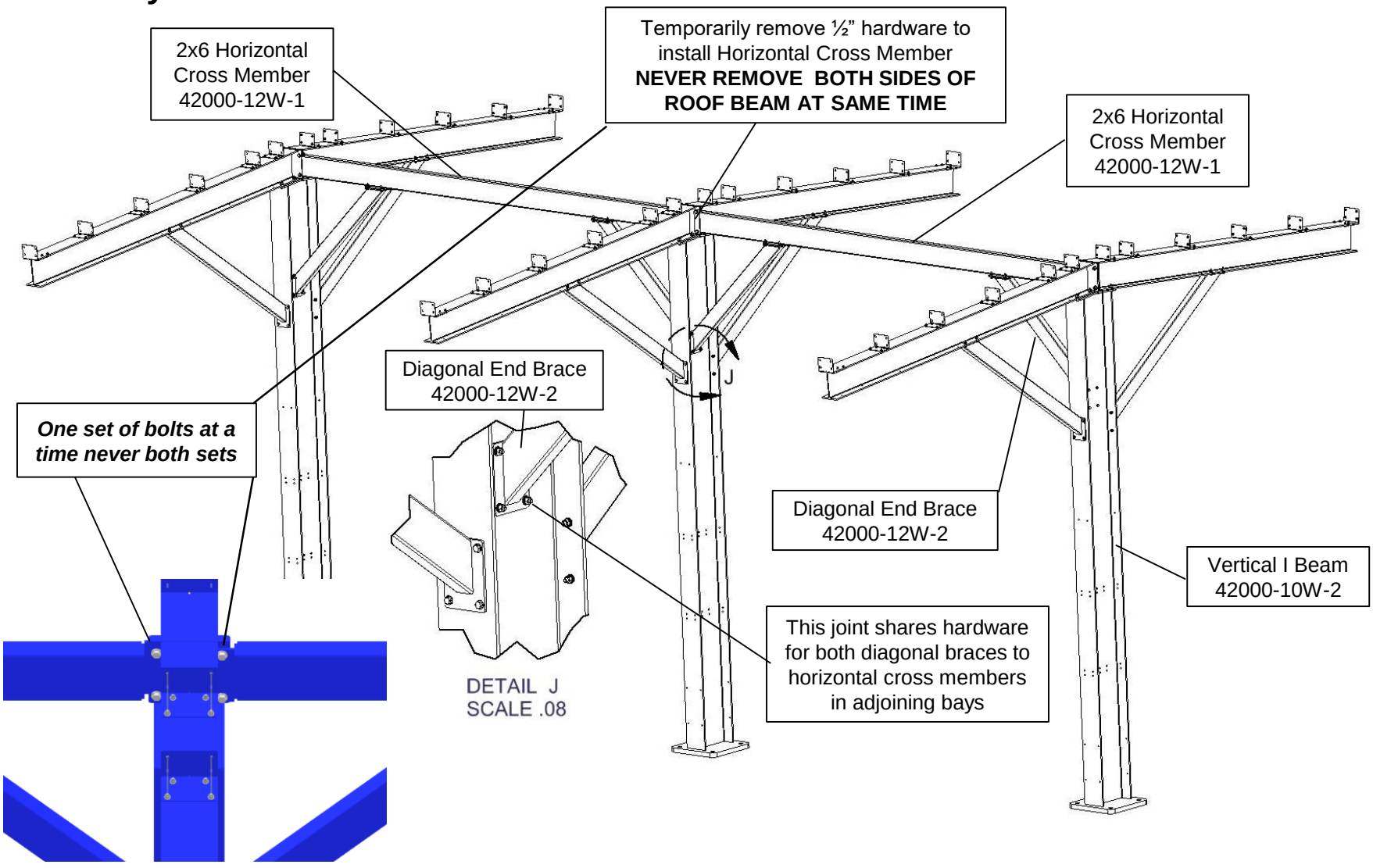
STEP 8 – Once at least two vertical beams with roof beams are erected attach 2x6 horizontal cross member by temporarily removing the two inside ½" roof beam bolts on each beam structure Detail F. Lift 2x6 horizontal cross member (120lbs) into place with diagonal brace plates oriented down. Replace ½" bolts, torque to 75 ft*lbs. Note the 2x6 Horizontal Cross brace is designed to be centered on frame assembly, hence why mounting plates are offset.

STEP 9-- Attach end diagonal braces to underside of horizontal brace just installed and I beam using 3/8" hardware, Detail G and H. This cross brace is symmetrical so no special orientation required.



Daisy Chain Shelter Assembly

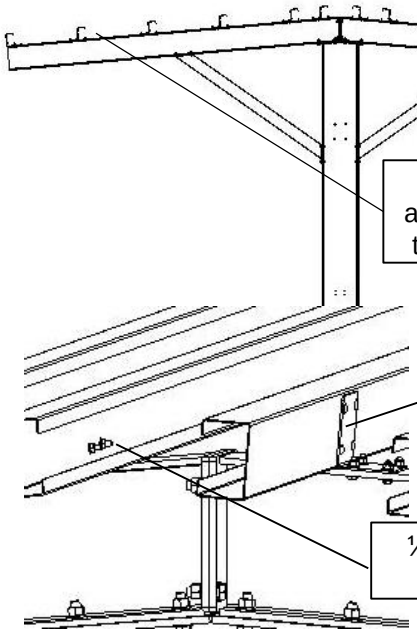
The steps to assemble a daisy chained version of the shelter are identical to a single bay. The diagonal braces for the 2x6 Horizontal Cross Member will simply share hardware on the vertical beam. **Never remove both sets of the ½" roof beam bolts on both sides at same time. Always complete one bay at a time.**



Shelter Roof Purlin Assembly

Stop! If installing soffit option, read soffit manual first.

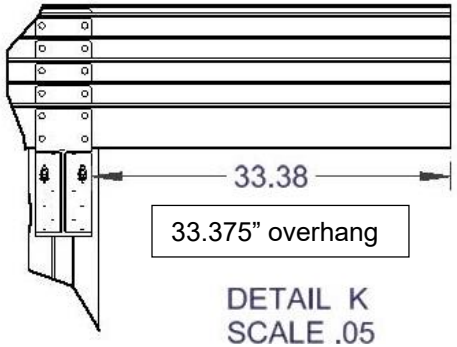
STEP 10 – Place Purlins (42000-15, 18ft) at each vertical plate on roof beams with tall flat side of purlin against roof bracket. Target 33.38" of overhang on each end of the purlin at both sides of the roof beam. Reminder roof I beams should have 144" center to center spread. Bolt purlins to brackets using (4) ¼-20 x .75" carriage bolt and flange nuts. Consider attaching the two outside end purlins first to verify roof I beam spread.



Note "C" shaped purlins all oriented with open side towards center of shelter

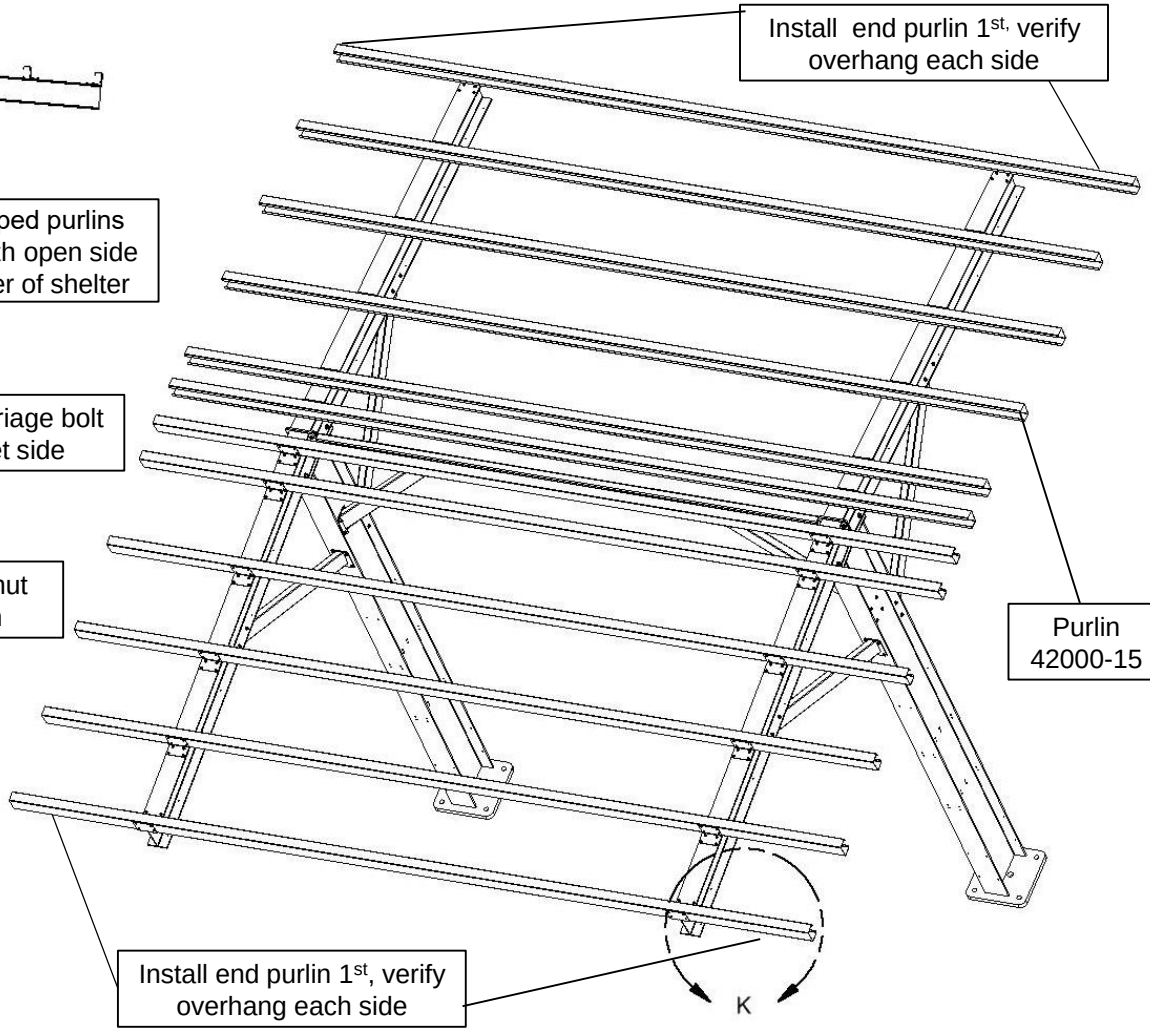
¼"-20 carriage bolt Bracket side

¼"-20 flange nut Inside purlin



33.375" overhang

DETAIL K
SCALE .05



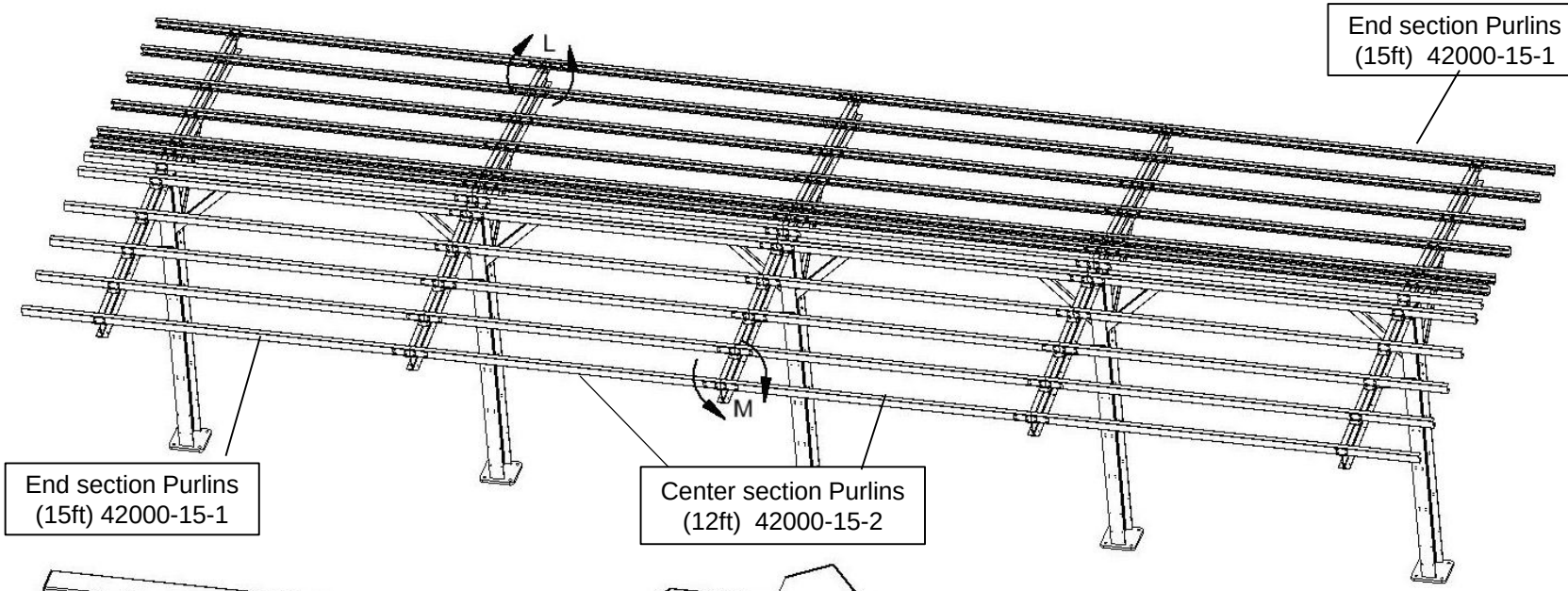
Install end purlin 1st, verify overhang each side

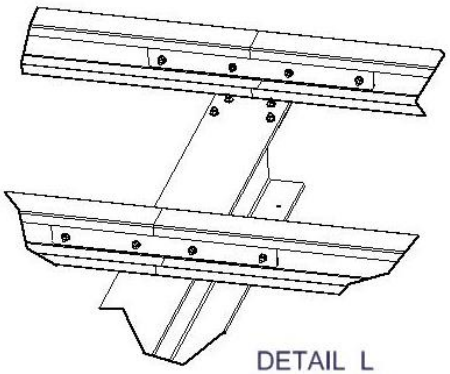
Purlin 42000-15

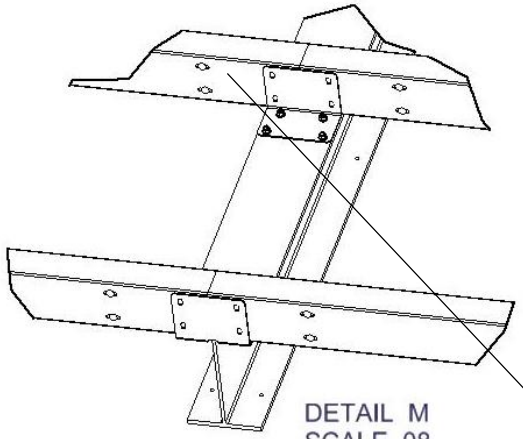
Install end purlin 1st, verify overhang each side

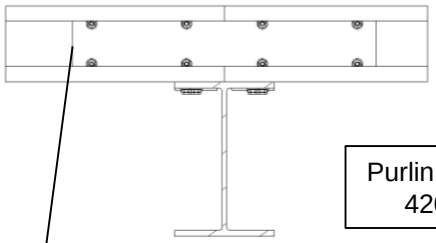
Shelter Roof Purlin Daisy Chain Assembly

Purlin assembly is identical on a daisy chain (multi-bay) shelter except the purlin lengths are shorter, (15ft for end sections and 12ft for center sections). Also the purlin to purlin butt joints have an extra Patch Plate (42000-15-3) included to strengthen spliced purlin, this patch plate should always be on inside of purlin. Target same 33.38" of overhang on end sections and utilize same ¼-20 x .75" carriage bolts and flange nuts at joints. Always install outside purlins first to verify roof I beam spread at 12ft center to center.

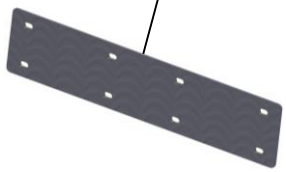



DETAIL L
SCALE .08


DETAIL M
SCALE .08

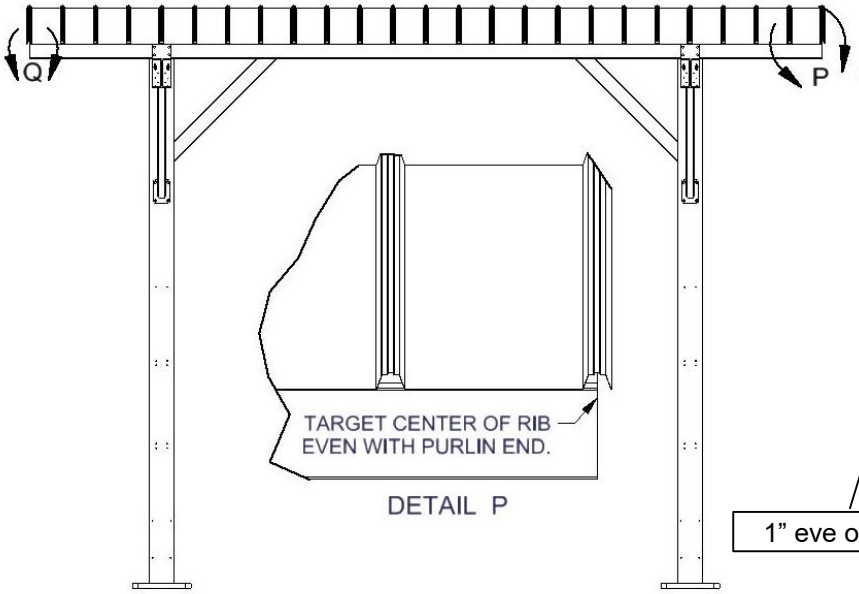

All purlin joints happen on top of Roof I Beam and must include an extra Patch Plate (42000-15-3)

Purlin Patch Plate
42000-15-3

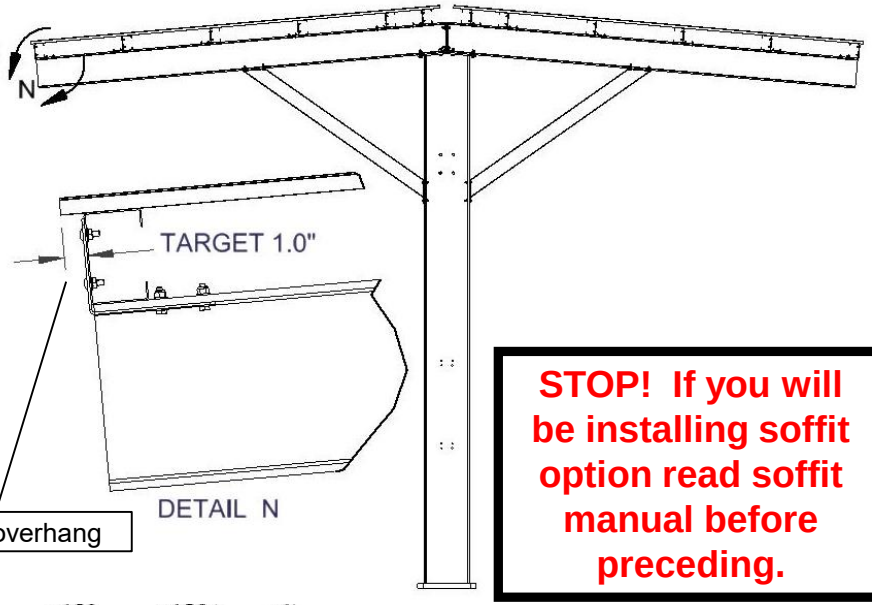


Shelter Assembly

STEP 11 – Install roof making sure to start from same side at each end so peaks on panels align, simply an aesthetic benefit. Target center of first rib on first panel (Detail Q) Use self-drilling rubber washer sealing screws to attach roof panels to purlins always in flat area between ribs, (4) screws per purlin is fine. Roughly 1" overhang on eve of roof should be the target (Detail N). Verify 1st panel is square by measuring edge of first roof panel to far ends of purlins at top and bottom, this is a more accurate way to verify sheet is running square to roof structure than only monitoring 1" overhang. Once set maintain even panel overhang and verify square on occasion by measuring top and bottom to far purlin again. The last panel should end with end of purlin at approximately middle of rib. Same process applies to Daisy Chain Shelter.



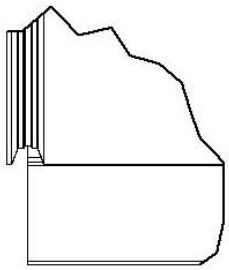
DETAIL P



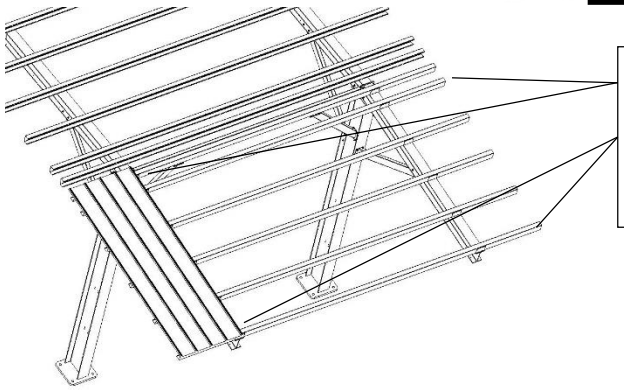
1" eve overhang

DETAIL N

STOP! If you will be installing soffit option read soffit manual before preceding.



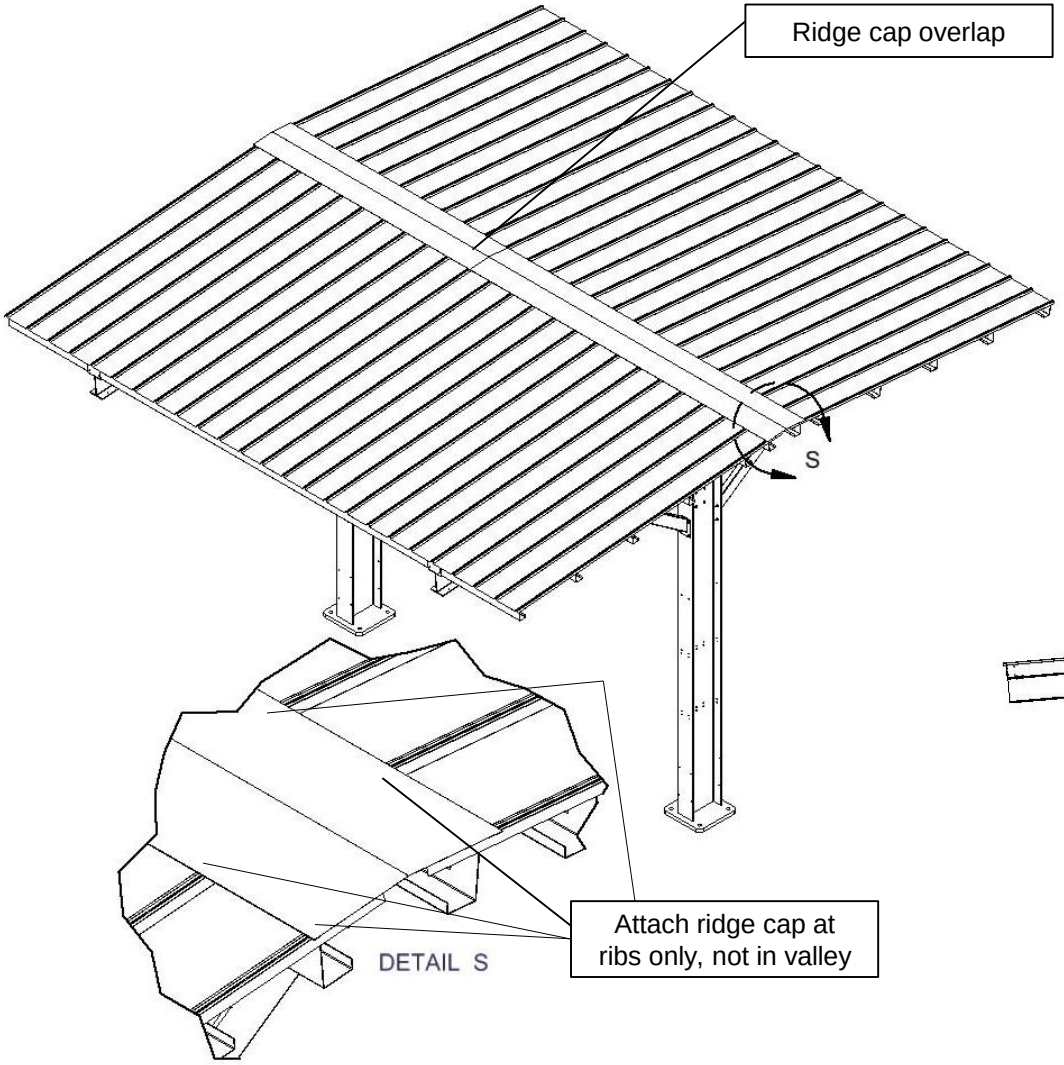
DETAIL Q

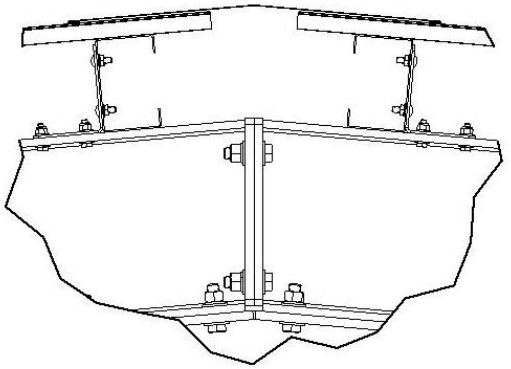


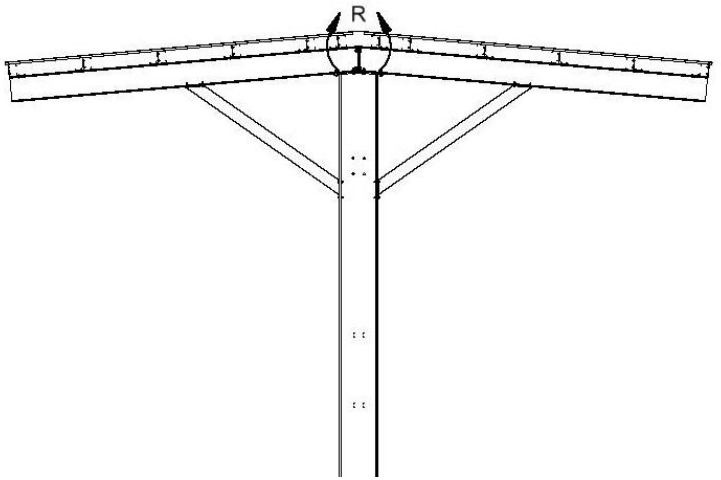
Measure from edge of roof panel to far end of purlin at top and bottom to verify roof panel is running square to roof.

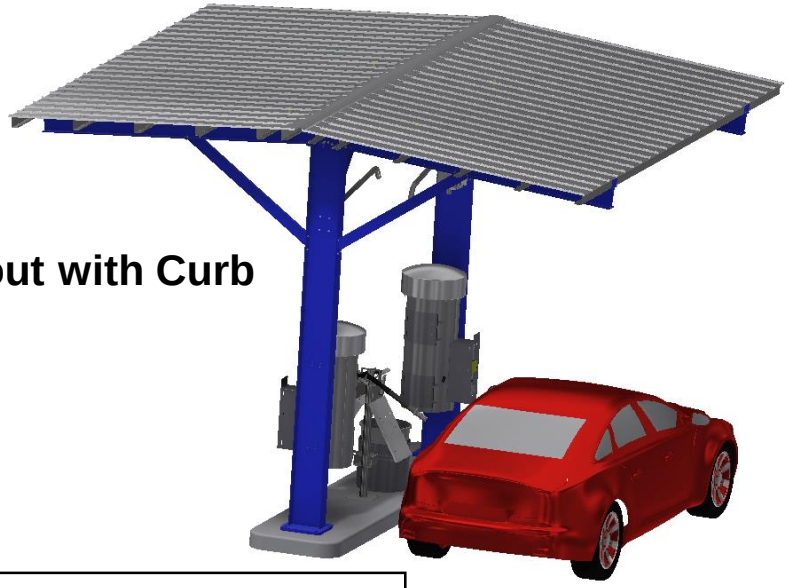
Shelter Assembly

STEP 12 – Install ridge cap with ends even with roof edge and centered over gap in roof panels. Use same screws as used on roof panels but only use on roof panel ridges. Screws are not designed to reach purlins to prevent crushing the ribs. 2nd' ridge cap piece should have significant overlap (2" to 3"). May apply bead of silicone sealant in overlap.



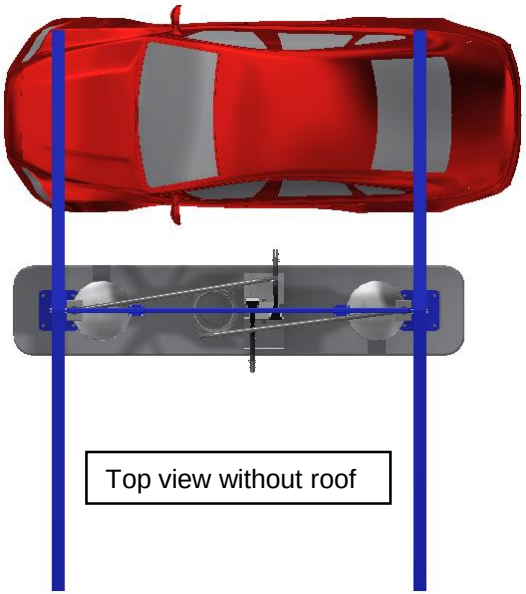




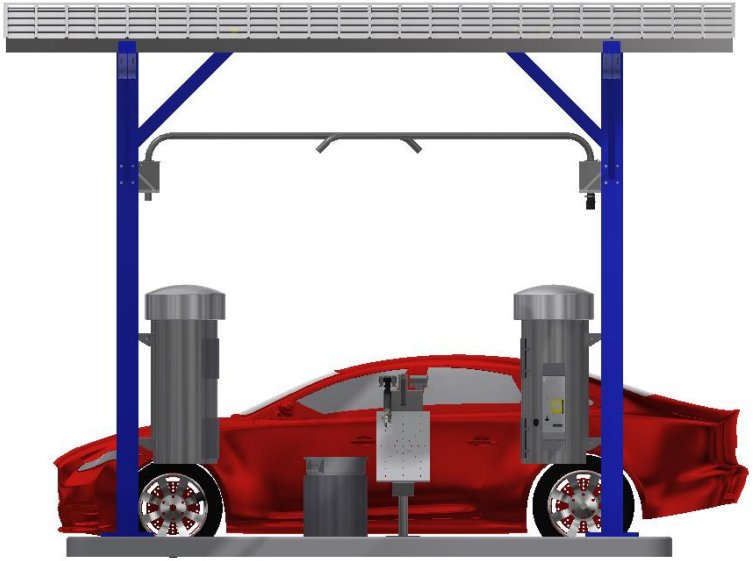


Example Layout with Curb

This example has curb to help protect structure and vacuum system.
This is also showing JE Adams 75000 Swivel arch with spring return.



Top view without roof

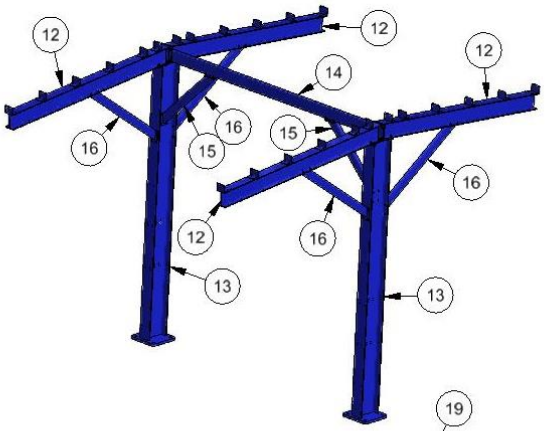


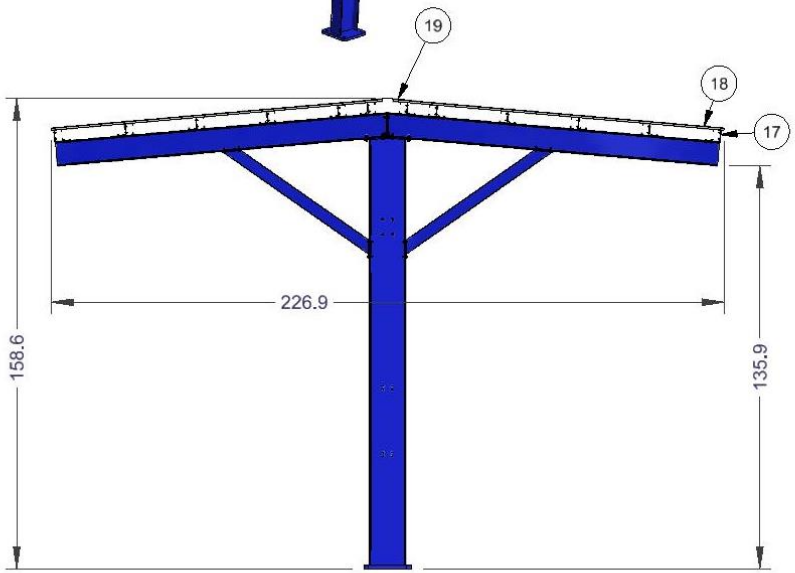
Maintenance:

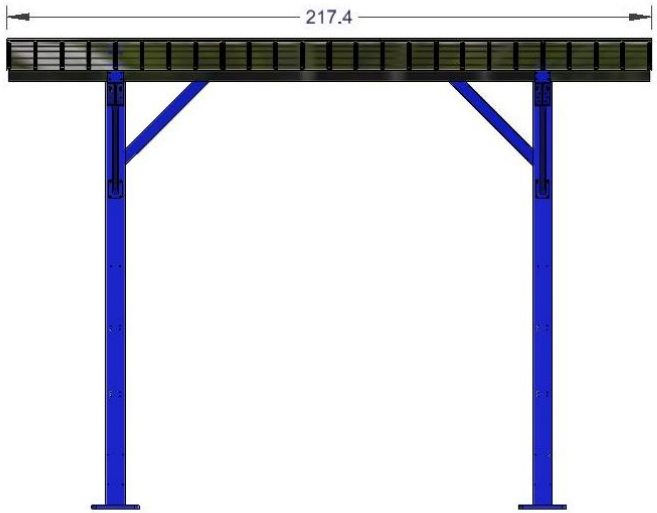
- Nuts and bolts on structure should be checked once a month or as needed.
- Powder coated parts will eventually wear over time. JE Adams offers touch up paint to keep parts looking great.
- Stainless steel parts should be wiped/ cleaned as needed.
- Inspect grout under shelter mounting plates at least once every 6 months, replace grout if cracked.

PART NO 42000-1

NOTES:
1. COLOR CHOICES FOR ITEM 1 SCREWS, ROOF PANEL & RIDGE CAP CAN BE FOUND AT THE SOURCE FOR ROOFING (https://www.affordablemetalmfg.com/color-picker/).
2. ALL FRAMING ELEMENTS WILL ALSO NEED COLOR ESTABLISHED.
3. PURLINS ARE GALVANIZED, GREY IN COLOR WITH NO PAINT OPTION.







BILL OF MATERIALS

ITEM	PART NUMBER	DESCRIPTION	QTY
1	5600D20	SCREW, #12 X 1.5, HWH, SD, SEALING (BAG OF 250)	2
2	5603D21	NUT, 1/4-20NC ZP, SERATE EDGE	96
3	5605D2	NUT, 3/8-16, HEX, SS	48
4	5605D13	NUT, 1/2" X 13, HEX, SS	24
5	5606D25	1/2 SAE WASHER, SS	48
6	5606D31	WASHER, FLAT 3/8" SAE, SS	96
7	5621D1	3/8 LOCK WASHER	48
8	5622D4	3/8-16 UNC x 1.5 CAP SCREW	48
9	5635D4	BOLT, CARRIAGE, 1/4-20 UNC	96
10	5646D6	BOLT, 1/2-13 X 1.75",HH, HD, FT, SS	24
11	8049	1/2 LOCK WASHER	24
12	42000-10A-1	SHELTER, ROOF IBEAM ASSEMBLY	4
13	42000-10W-2P	I-BEAM VERTICAL, SHELTER, PNT	2
14	42000-12W-1P	WLDMNT SHELTER DIVIDER BAR, PNT	1
15	42000-12W-2P	WLDMNT, SHELTER, DIAG. SPRT, PNT	2
16	42000-13W-P	WLDMNT, SHELTER, ROOF DIAG SPRT, PNT	4
17	42000-15	SHELTER, PURLIN 18FT	12
18	42000-18	ROOF PANEL, RIBBED, 3FT X 112"	12
19	42000-19-6	ROOF RIDGE CAP, 8 X 8 X 126"	2
20	42000-P1	SHELTER PACK, PALLET ASY	1

REV	NO.	DESCRIPTION	DATE	BY
-	9026	RELEASED	6/14/23	MWS

TITLE: CANOPY, SELF SUPPORTED 18X18

UNSPECIFIED TOLERANCES
1 PL ±.030
2 PL ±.020
3 PL ±.003
ANGLE ±1°

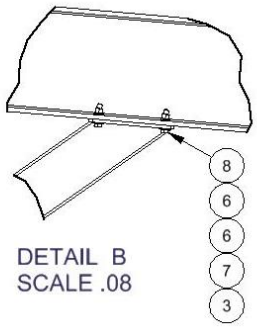
MATERIAL
DRAWN BY mike
DATE 1/27/2022
SCALE .0175
SHEET 1 / 3

CEDAR RAPIDS, IOWA
J.E. ADAMS INDUSTRIES, LTD

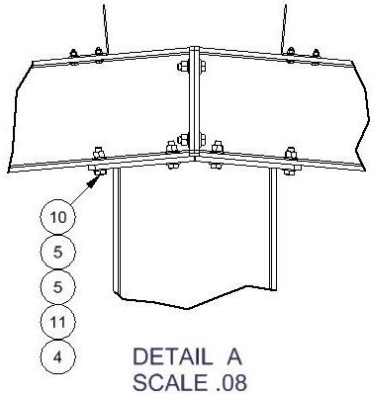
PART NO 42000-1
REV. -

PART NO 42000-1

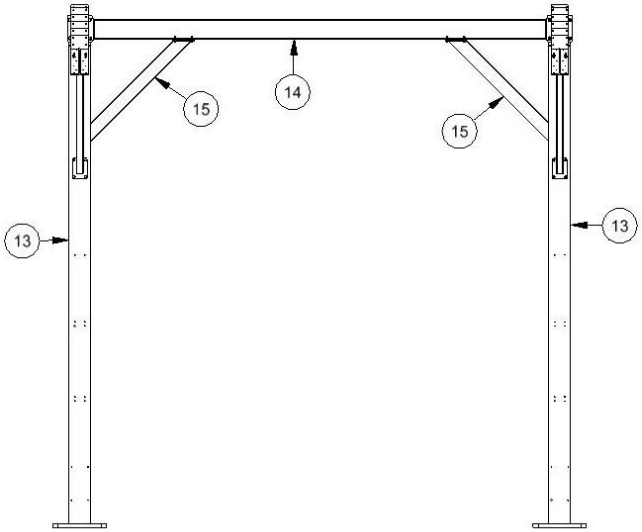
WEIGHT TABLE				
ITEM #	PART #	USAGE	SIZE	WEIGHT
13	42000-10W-2P	2	12X6X144	460 LBS
12	42000-10A-1	4	8X5X112	174 LBS
14	42000-12W-1P	1	6X2X139.75	114 LBS
15	42000-12W-2P	2	4X2X48	20.5 LBS
16	42000-13W-P	4	4X2X61.4	25.6 LBS
17	42000-15	12	4X2.5X216	36 LBS

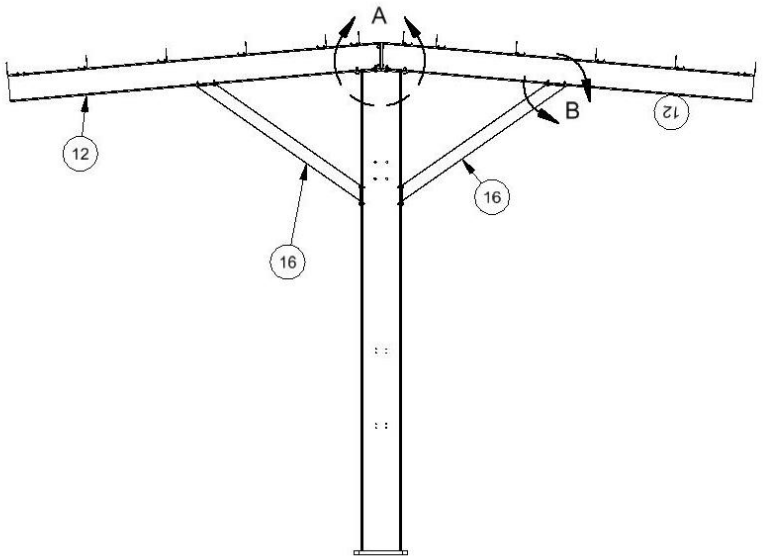


DETAIL B
SCALE .08



DETAIL A
SCALE .08





REV	NO.	DESCRIPTION	DATE	BY

TITLE: CANOPY, SELF SUPPORTED 18X18

UNSPECIFIED TOLERANCES
1 PL ±.030
2 PL ±.020
3 PL ±.003
ANGLE ±1°

MATERIAL
DRAWN BY: mike
DATE: 1/27/2022
SCALE: .0175
SHEET: 2 / 3

CEDAR RAPIDS, IOWA
J.E. ADAMS INDUSTRIES, LTD

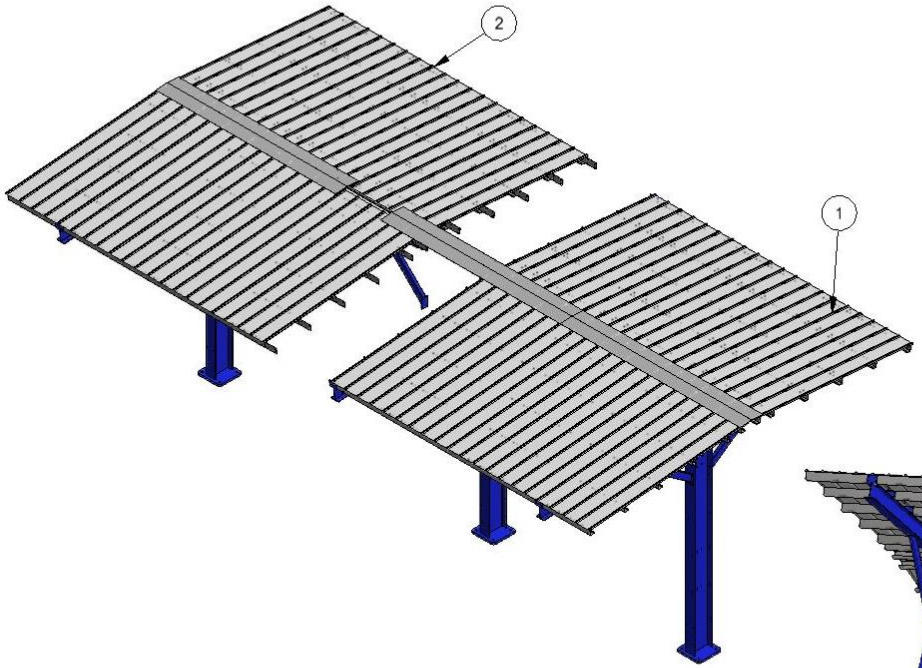
PART NO: 42000-1
REV: -

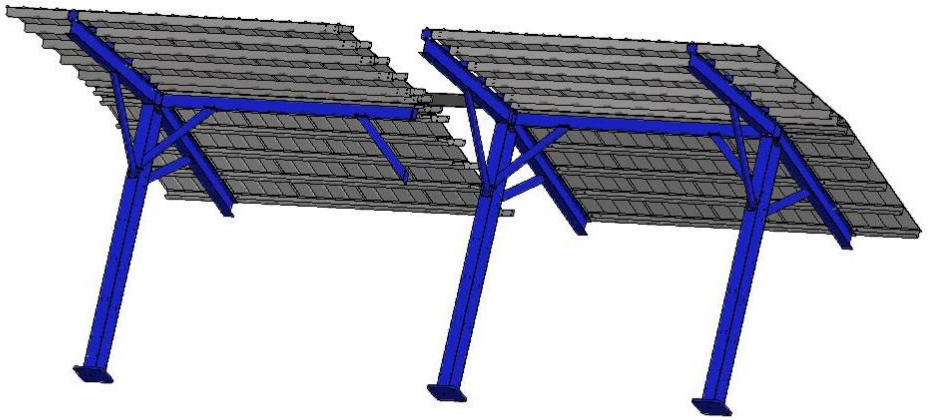
PART NO. 42000-2

NOTE(S):
1. 42000-2-1 USED TO ADD ADDITIONAL BAYS TO THE 42000-2 ASSEMBLY.
2. COLOR CHOICES FOR ITEMS: SCREWS, ROOF PANEL & RIDGE CAP CAN BE FOUND AT THE SOURCE FOR ROOFING (https://www.affordablemetalmfg.com/color-picker/).
3. ALL FRAMING ELEMENTS WILL ALSO NEED COLOR ESTABLISHED.
4. PURLINS ARE GALVANIZED, GREY COLOR WITH NO PAINTING OPTIONS.

BILL OF MATERIALS

ITEM	PART NUMBER	DESCRIPTION	QTY
1	42000-2B	CANOPY, LINKED BAYS, START BAY ASSEMBLY	1
2	42000-2A	CANOPY, LINKED BAYS, END BAY ASSEMBLY	1
3	42000-P1	PALLET, SHELTER PACK	1
4	75000BOX	BOX, 26 X 26 X 12 200 LB TEST	1
5	8605-2	PALLET,VAC 34 x 32 w/5/8x3.5Bd	1





REV	NO.	DESCRIPTION	DATE	BY
-	9026	RELEASED	6/14/23	MWS

THIS DOCUMENT SHALL NOT BE REPRODUCED NOR SHALL THE INFORMATION THEREIN BE USED BY OR DISCLOSED TO OTHERS EXCEPT AS AUTHORIZED BY J.E. ADAMS INDUSTRIES

TITLE: CANOPY, LINKED 2 BAY, 12 FOOT, STARTER KIT

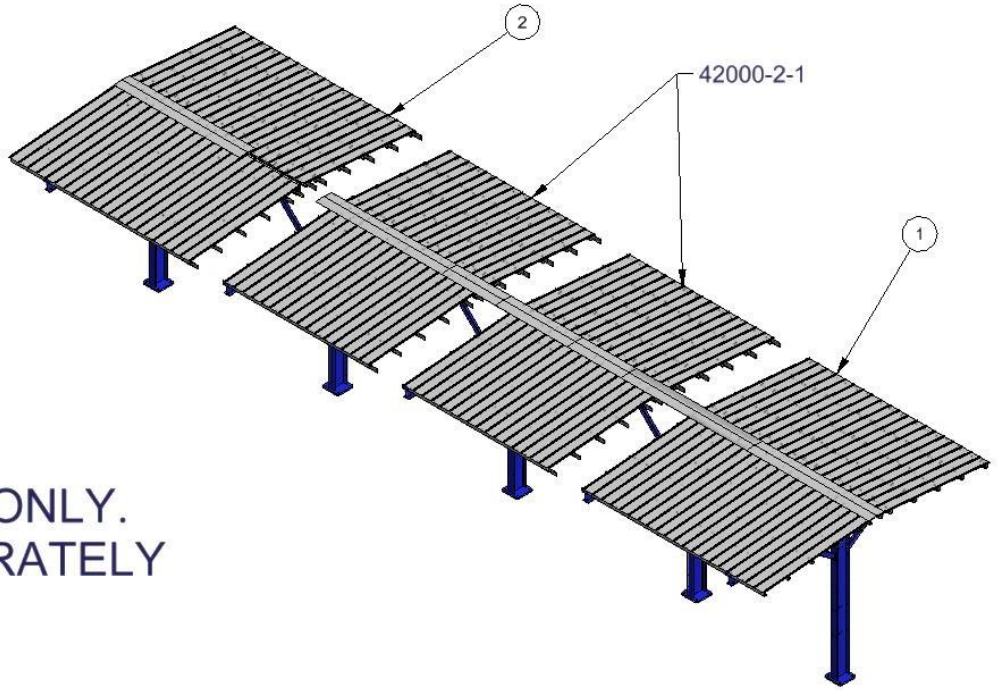
UNSPECIFIED TOLERANCES
1 PL ±.030
2 PL ±.020
3 PL ±.003
ANGLE ±1°

MATERIAL
DRAWN BY: BJL
DATE: 3/7/2023
SCALE: .012
SHEET: 1 / 2

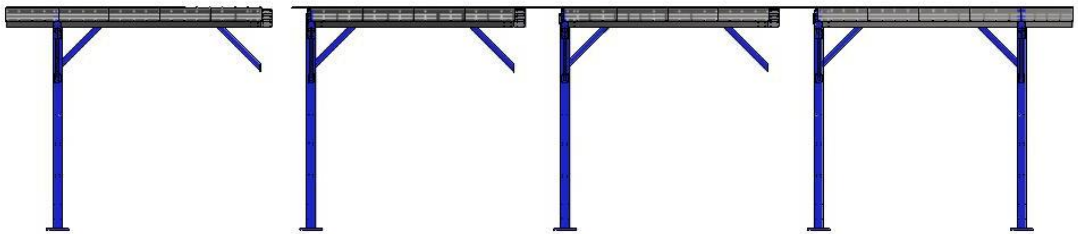
CEDAR RAPIDS, IOWA
J.E. ADAMS INDUSTRIES, LTD

PART NO: 42000-2
REV: -

PART NO 42000-2



REFERENCE IMAGES ONLY.
42000-2-1 SOLD SEPERATELY



REV	NO.	DESCRIPTION	DATE	BY

THIS DOCUMENT SHALL NOT BE REPRODUCED NOR SHALL THE INFORMATION THEREIN BE USED BY OR DISCLOSED TO OTHERS EXCEPT AS AUTHORIZED BY J.E. ADAMS INDUSTRIES

TITLE: CANOPY, LINKED 2 BAY, 12 FOOT, STARTER KIT

UNSPECIFIED TOLERANCES
1 PL ± .030
2 PL ± .020
3 PL ± .003
ANGLE ± 1°

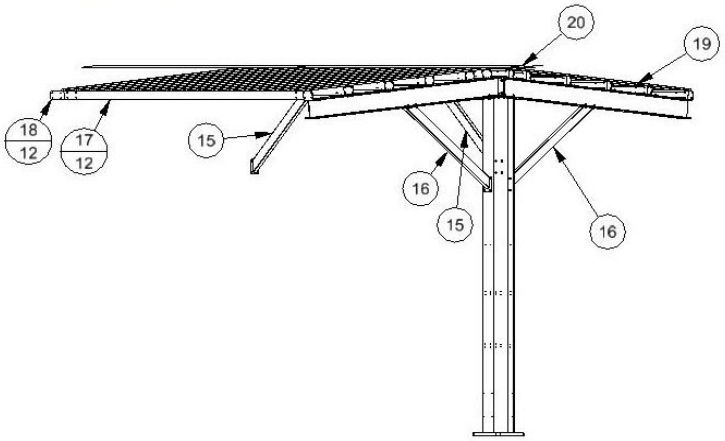
MATERIAL:
DRAWN BY: BJL
DATE: 3/7/2023
SCALE: .012
SHEET: 2 / 2

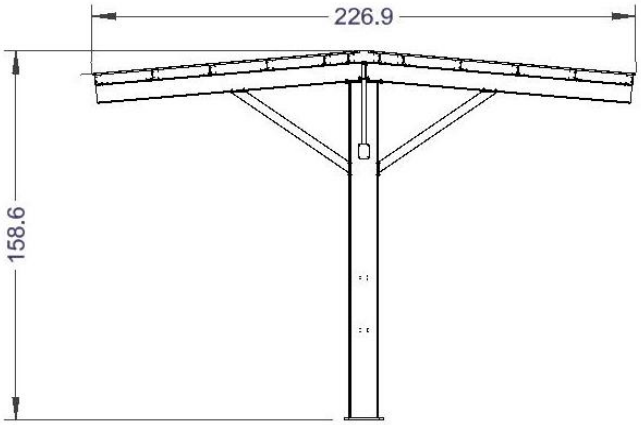
CEDAR RAPIDS, IOWA
J.E. ADAMS INDUSTRIES, LTD

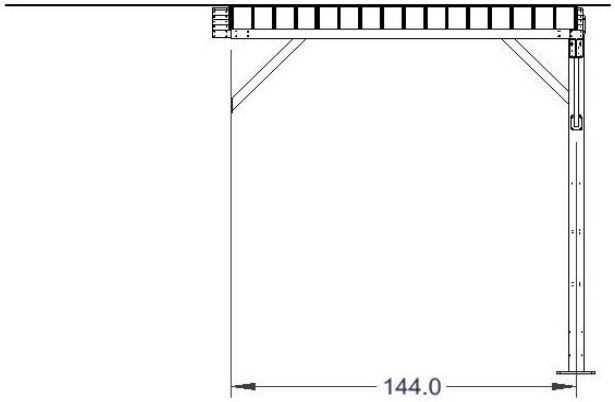
PART NO: 42000-2
REV: -

PART NO 42000-2-1

NOTES:
1. HARDWARE USED TO LINK TO OTHER SECTIONS.
2. MOUNTING HARDWARE COMES WITH MATING SECTION.
3. COLOR CHOICES FOR ITEM 1 SCREWS, ROOF PANEL & RIDGE CAP CAN BE FOUND AT THE SOURCE FOR ROOFING (https://www.affordablemetalmfg.com/color-picker/).
4. ALL FRAMING ELEMENTS WILL ALSO NEED COLOR ESTABLISHED.
5. PURLINS (ITEM 17) ARE GALVANIZED AND GREY IN COLOR WITH NO PAINTING OPTIONS.







BILL OF MATERIALS

ITEM	PART NUMBER	DESCRIPTION	QTY
1	5600D20	SCREW, #12 X 1.5, HWH, SD, SEALING (BAG OF 250)	1
2	5603D21	NUT, 1/4-20NC ZP, SERATE EDGE	96
3	5605D2	NUT, 3/8-16, HEX, SS	28
4	5605D13	NUT, 1/2" X 13, HEX, SS	12
5	5606D25	1/2 SAE WASHER, SS	24
6	5606D31	WASHER, FLAT 3/8" SAE, SS	56
7	5621D1	3/8 LOCK WASHER	28
8	5622D4	3/8-16 UNC x 1.5 CAP SCREW	28
9	5635D4	BOLT, CARRIAGE, 1/4-20 UNC	96
10	5646D6	BOLT, 1/2-13 X 1.75",HH, HD, FT, SS	12
11	8049	1/2 LOCK WASHER	12
12	42000-10A-1	SHELTER, ROOF IBEAM ASSEMBLY	2
13	42000-10W-2P	I-BEAM VERTICAL, SHELTER, PNT	1
14	42000-12W-1P	WLDMNT SHELTER DIVIDER BAR, PNT	1
15	42000-12W-2P	WLDMNT, SHELTER, DIAG. SPRT, PNT	2
16	42000-13W-P	WLDMNT, SHELTER, ROOF DIAG SPRT, PNT	2
17	42000-15-2	SHELTER, PURLIN 12FT	12
18	42000-15-3	SHELTER PURLIN PATCH PLATE	12
19	42000-18	ROOF PANEL, RIBBED, 3FT X 112"	8
20	42000-19-6	ROOF RIDGE CAP, 8 X 8 X 126"	2

REV	NO.	DESCRIPTION	DATE	BY
-	9026	RELEASED	6/14/23	MWS

TITLE: CANOPY, LINKED BAY, ADD A BAY, 12 FOOT

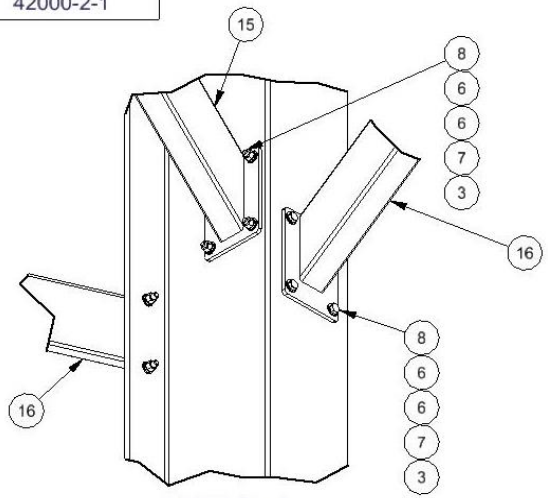
UNSPECIFIED TOLERANCES
1 PL ± .030
2 PL ± .020
3 PL ± .003
ANGLE ± 1°

MATERIAL
DRAWN BY BJL
DATE 3/6/2023
SCALE 1 / 71
SHEET 1 / 2

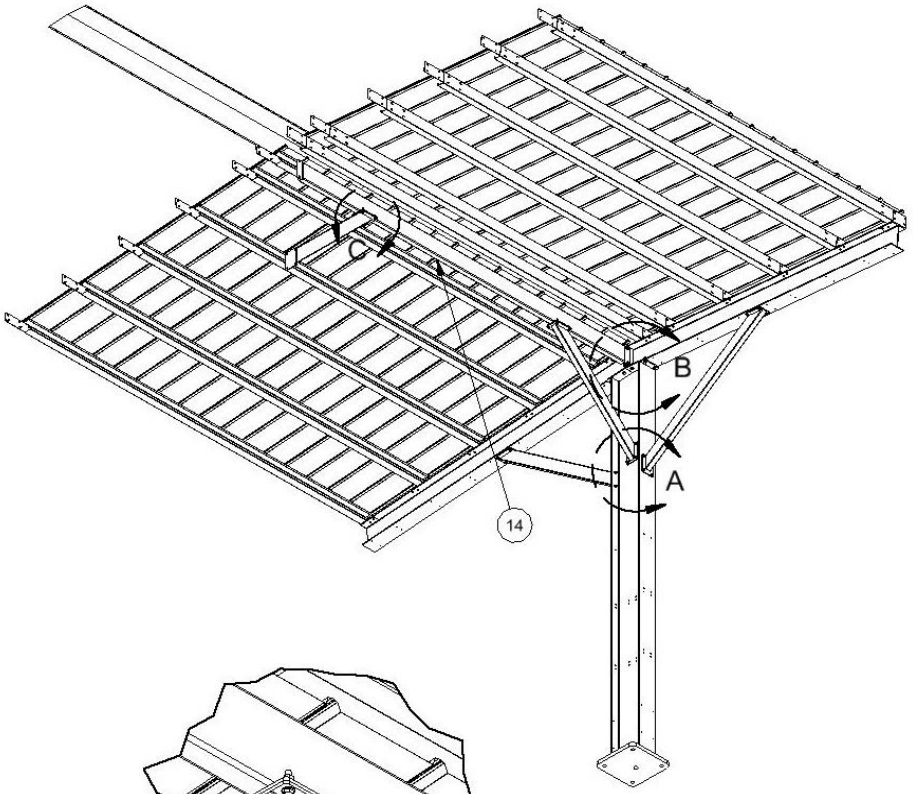
CEDAR RAPIDS, IOWA
J.E. ADAMS INDUSTRIES, LTD

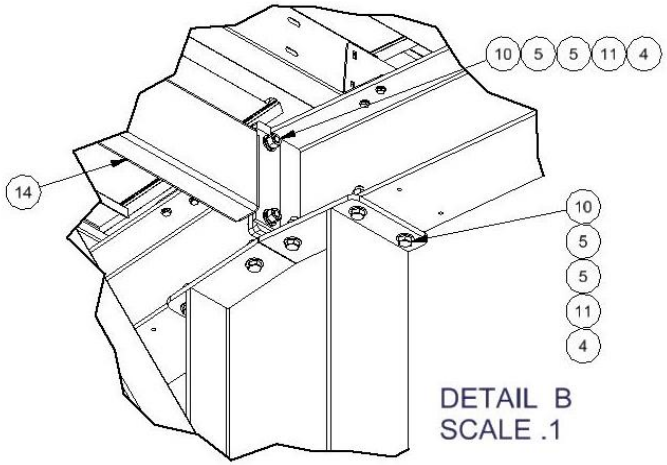
PART NO 42000-2-1
REV. -

PART NO 42000-2-1

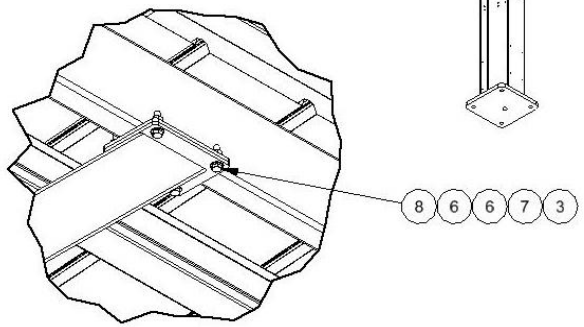


DETAIL A
SCALE .1





DETAIL B
SCALE .1



DETAIL C
SCALE .1

REV	NO.	DESCRIPTION	DATE	BY

THIS DOCUMENT SHALL NOT BE REPRODUCED NOR SHALL THE INFORMATION THEREIN BE USED BY OR DISCLOSED TO OTHERS EXCEPT AS AUTHORIZED BY J.E. ADAMS INDUSTRIES

TITLE: CANOPY, LINKED BAY, ADD A BAY, 12 FOOT

UNSPECIFIED TOLERANCES
1 PL ± .030
2 PL ± .020
3 PL ± .003
ANGLE ± 1°

MATERIAL:
DRAWN BY: BJL
DATE: 3/6/2023
SCALE: 1 / 71
SHEET: 2 / 2

CEDAR RAPIDS, IOWA
J.E. ADAMS INDUSTRIES, LTD

PART NO: 42000-2-1
REV: -