



Manufactured by:  
 Backyard Discovery  
 3305 Airport Drive, Pittsburg, KS 66762  
 800-856-4445

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# 12x10 STRATFORD, ASHFORD, HAWTHORNE PERGOLA

Model #'s : 2105089B, 2105096B, 2105102B



**2105089B STRATFORD (BLACK)**



**2105096B ASHFORD (BROWN)**



Electrical enclosure available only in North America



**2105102 HAWTHORNE (WHITE)**

Please visit [www.backyarddiscovery.com](http://www.backyarddiscovery.com)  
 For the most up to date assembly manual, to register your product, or to order replacement parts *Para obtener instrucciones en español, visite* [www.backyarddiscovery.com](http://www.backyarddiscovery.com)



**EASY STEP-BY-STEP**  
**3D INTERACTIVE INSTRUCTIONS**  
 DOWNLOAD THE FREE APP  
  
 ONLY AVAILABLE IN NORTH AMERICA



**INSTALLATION SERVICES AVAILABLE!**  
 See *inside for details*  
 ONLY AVAILABLE IN U.S.



It is critically important that you start with square and level footings, concrete pad or deck to attach your structure

- Pay close attention to the items needed for each step. Make sure you are using the correct hardware for each step. Using incorrect hardware may result in improper assembly
- Remember to double check for underground utilities and overhead electrical lines

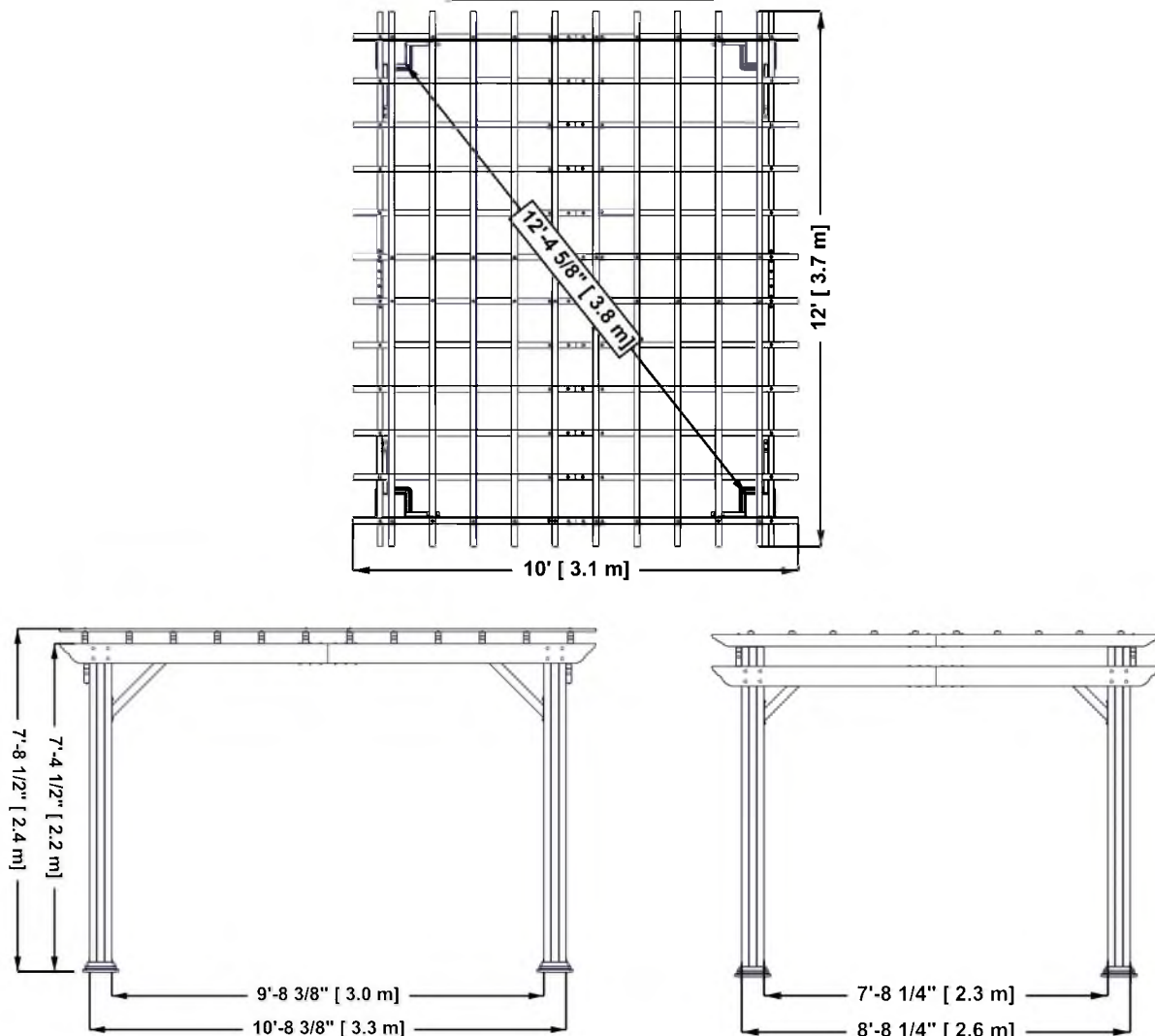
Post mounts are provided with your structure which allows you to permanently install your structure to a pre-existing or new wood or concrete surface.

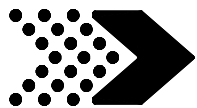
- The hardware to attach the post mounts to the structure is included.
- The hardware to mount the structure permanently to a concrete surface is NOT included.
- The hardware to mount the structure permanently to a wood deck is NOT included and will need to be purchased separately. **You must ensure there is ample structural support under the deck before permanently attaching.**

## Metal Roof Assembly

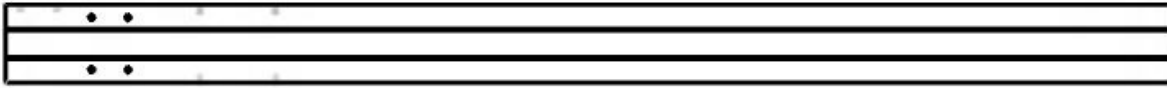
Remove plastic covering from metal roof panels before installing each piece. Place roofing materials on a nonabrasive, flat surface before and after assembly as it could bend, dent or scratch

### Overall Dimensions

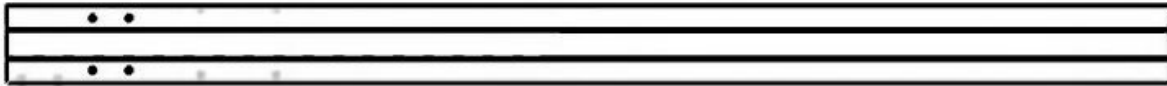




Metal Components (Not to Scale)



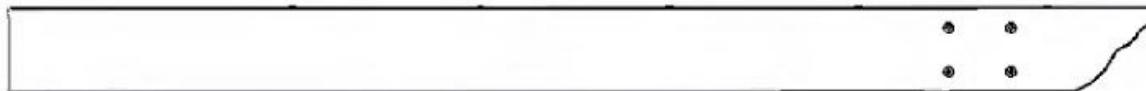
**A1** POST - A4M01565  
(2) 6"x6"x88" (152x152x2235)



**A2** POST - A4M01566  
(2) 6"x6"x88" (152x152x2235)



**B1** JOIST END - A4M01567  
(2) 1 3/8"x5 1/4"x72 1/8" (36x134x1833)



**B2** JOIST END - A4M01568  
(2) 1 3/8"x5 1/4"x72 1/8" (36x134x1833)



**C1** JOIST END - A4M01563  
(2) 1 3/8"x5 1/4"x60 1/8" (36x134x1526)



**C2** JOIST END - A4M01564  
(2) 1 3/8"x5 1/4"x60 1/8" (36x134x1526)



**D1** JOIST END - A4M01569  
(8) 1 5/8"x3 1/8"x60 1/8" (40x80x1526)



**D2** JOIST END - A4M01285  
(16) 1 5/8"x3 1/8"x60 1/8" (40x80x1526)



Metal Components (Not to Scale)



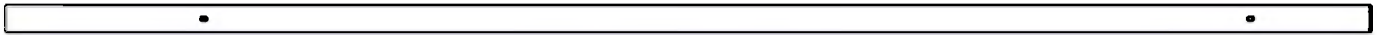
**J1** | SPLICE BRACKET - A4M01269  
(2) | 1 1/4"x5 1/8"x19 5/8" (33x131x500)



**J3** | SPLICE BRACKET - A4M01271  
(12) | 1 1/2"x3"x15 3/4" (37x77x400)



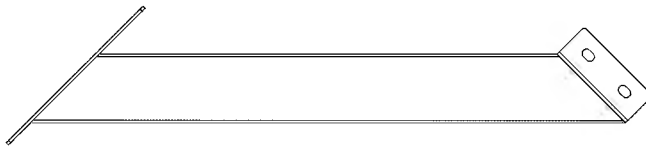
**J2** | SPLICE BRACKET - A4M01270  
(2) | 1 1/4"x5 1/8"x15 3/4" (33x131x400)



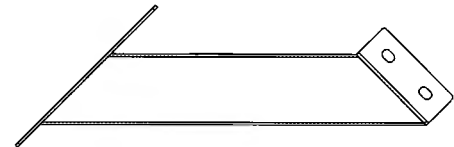
**E1** | PURLIN END - A4M01289  
(10) | 3/4"x1 5/8"x77 5/8" (20x40x1972)



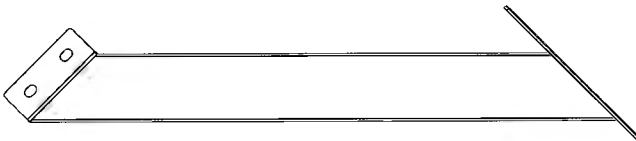
**E2** | PURLIN END - A4M01290  
(10) | 3/4"x1 5/8"x66 7/8" (20x40x1698)



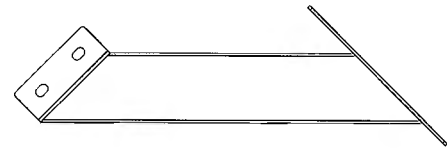
**F1** | LONG ANGLE BRACE - A4M01273  
(2) | 1 1/8"x4"x21 1/2" (30x101x546)



**F3** | SHORT ANGLE BRACE - A4M01275  
(2) | 1 1/8"x4"x14" (30x101x355)



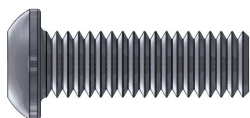
**F2** | LONG ANGLE BRACE - A4M01274  
(2) | 1 1/8"x4"x21 1/2" (30x101x546)



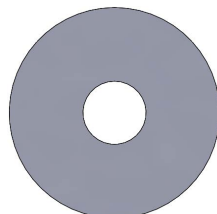
**F4** | SHORT ANGLE BRACE - A4M01276  
(2) | 1 1/8"x4"x14" (30x101x355)



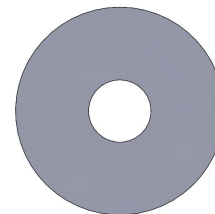
Hardware Components



**H101101 | TORX PAN HEAD**  
(186) | 1/4-20x3/4"



**H101053 | STEEL WASHER**  
(250) | 6x20



**H101054 | SEALANT WASHER**  
(250)



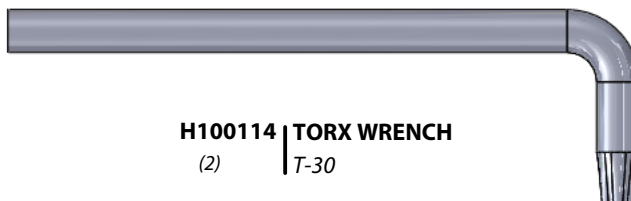
**H101107 | TORX PAN HEAD**  
(26) | 1/4-20x1 1/2"



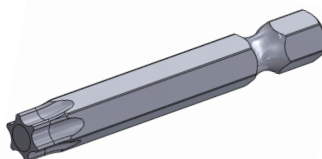
**H101102 | TORX PAN HEAD**  
(26) | 1/4-20x4"



**H101103 | TORX SOCKET SCREW**  
(34) | 1/4-20



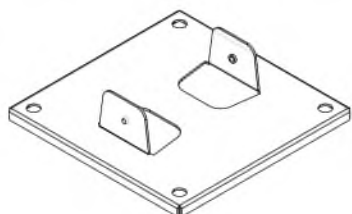
**H100114 | TORX WRENCH**  
(2) | T-30



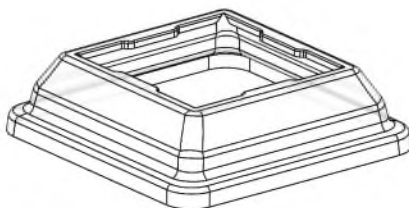
**H100147 | TORX BIT**  
(2) | T-30



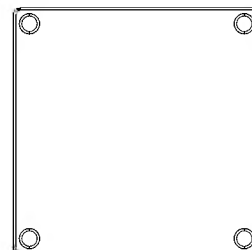
Accessory Components (Not to Scale)



**G1** | POST FOOT PLATE - A4M01278  
(4) | 2 1/8"x8 3/8"x8 3/8" (54x213x213)



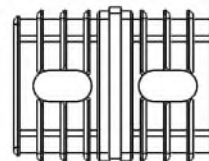
**G2** | POST FOOT - A4M01279  
(4) | 2 5/8"x9 7/8"x9 7/8" (68x250x250)



**G3** | FOOT PLASTIC PLATE - A6P00464  
(4) | 3/8"x8 1/8"x8 1/8" (11x207x207)



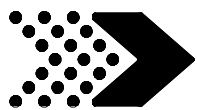
**H1** | HOLE COVER - A4M01352  
(32)



**H2** | 2-WAY SQUARE PLUG- A6P00465  
(10) | 3/4"x1 5/8"x2" (20x40x52)



**9205413** | ELECTRICAL ENCLOSURE  
(x1)



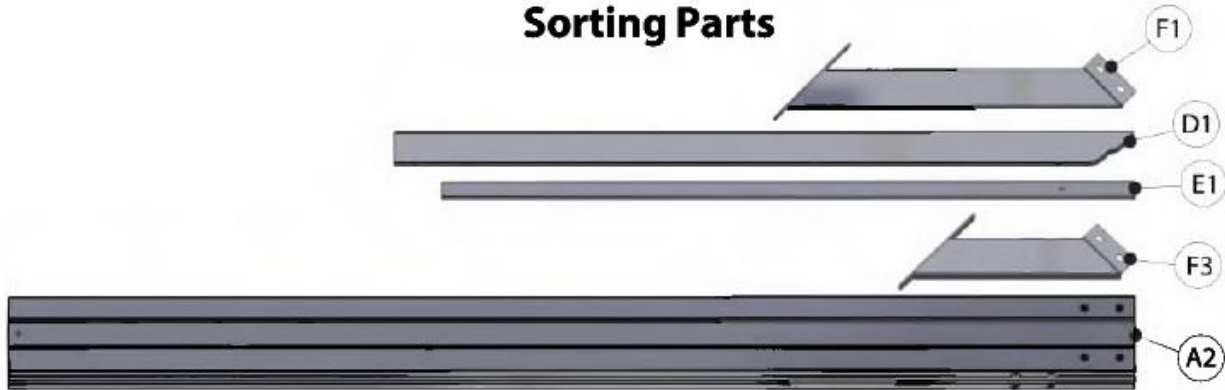
# PRE-ASSEMBLY STEP 1 SORTING PARTS



### ASSEMBLY TIP:

Keep an eye out for these boxes which will contain helpful pictures and information making the assembly process as quick and painless as possible.

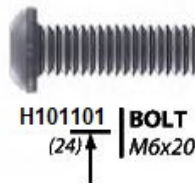
## Sorting Parts



When removing the parts from the boxes we recommend arranging them by part number before you begin assembly. This will allow for faster assembly and easily identify any parts that may be missing or damaged.

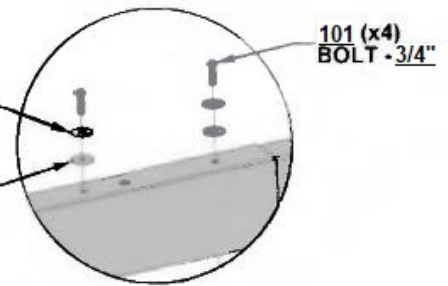
Hardware is identified with a seven digit alpha-numeric part number. During assembly you only need to reference the last three digits of the part number as noted in each step. This will make finding the correct hardware easier.

## Hardware Identification



053 (x4)  
STEEL WASHER - 6x20

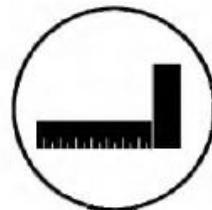
054 (x4)  
RUBBER WASHER - 6x20



## Tools Required



Some steps in the assembly process will require a second set of hands. Make sure you have a helper available.



You will need to make sure that your assembly is square before fully tightening your bolts.



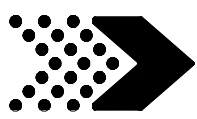
For proper assembly you will need to ensure that your structure is level before proceeding to the next step.



A tape measure may be needed to check overall dimensions to ensure structure is square.



A ladder will be needed for assembly. DO NOT stand or climb on any part of the structure at any point. Doing so may result in injury.



## PRE-ASSEMBLY STEP 2 CHOOSE YOUR ASSEMBLY METHOD

There are several types of assembly instructions available to you.

1. Printed Assembly Manual included with your set
2. BILT APP - 3D interactive instructions
3. Combination of the Printed Manual and BILT APP (Note: Step numbers can differ between the two methods)

**BILT.**

**Scan for easy  
3D instructions**

Download the BILT app  
before you begin

Download on the  
App Store

GET IT ON  
Google Play

The advertisement features the BILT logo at the top left, a QR code at the top right, and two buttons for downloading the app on the App Store and Google Play. Below this is a smartphone displaying a 3D assembly instruction for a step labeled 'Hardware Needed', showing a 3D model of a structure with a horizontal beam and a triangular support.



# PERGOLA ASSEMBLY

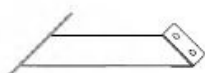
## STEP 1



**C1** | JOIST END - A4M01563  
(2) | 1 3/8"x5 1/4"x60 1/8" (36x134x1526)



**J2** | SPLICE BRACKET - A4M01270  
(2) | 1 1/4"x5 1/8"x15 3/4" (33x131x400)



**F3** | SHORT ANGLE BRACE - A4M01275  
(2) | 1 1/8"x4"x14" (30x101x355)



**H101101** | TORX PAN HEAD  
(16) | 1/4-20x3/4"



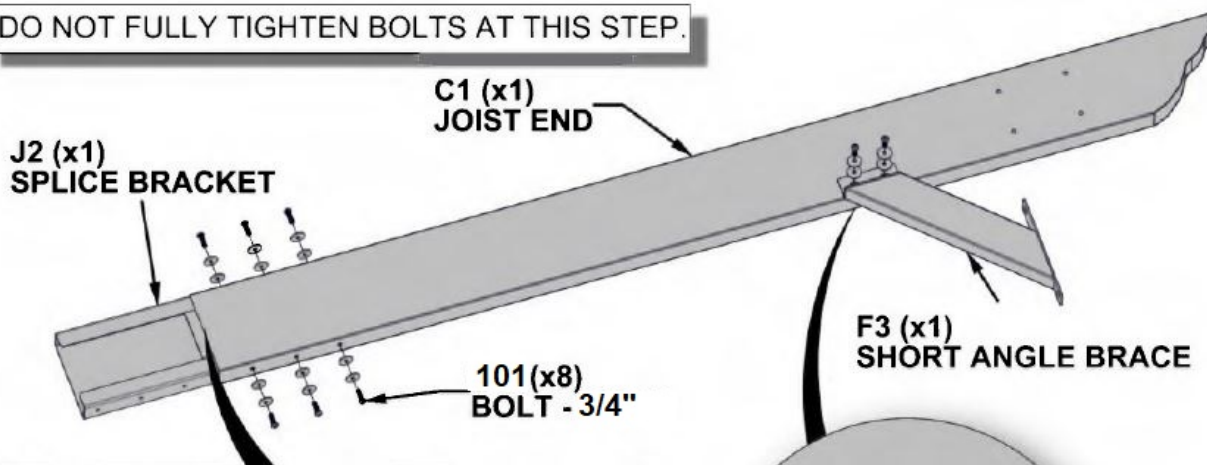
**H101053** | STEEL WASHER  
(16) | 6x20



**H101054** | SEALANT WASHER  
(16)



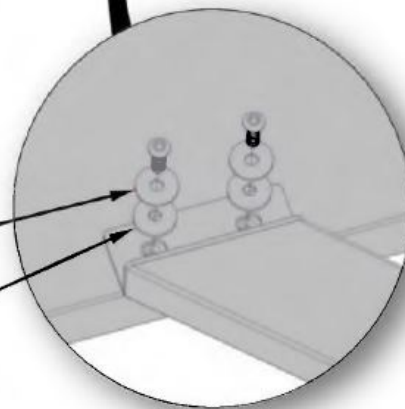
**DO NOT FULLY TIGHTEN BOLTS AT THIS STEP.**



J2 SLIDES INTO C1. LINE UP THREE HOLES ON J2 WITH THREE HOLES ON C1 AND INSERT BOLTS TOP AND BOTTOM.

**053 (x8)** | STEEL WASHER - 6x20

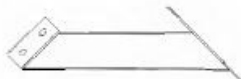
**054 (x8)** | SEALANT WASHER



**COMPLETE THIS STEP TWICE.**



**C2** JOIST END - A4M01564  
(2) | 1 3/8"x5 1/4"x60 1/8" (36x134x1526)



**F4** SHORT ANGLE BRACE - A4M01276  
(2) | 1 1/8"x4"x14" (30x101x355)



**H101101** TORX PAN HEAD  
(16) | 1/4-20x3/4"

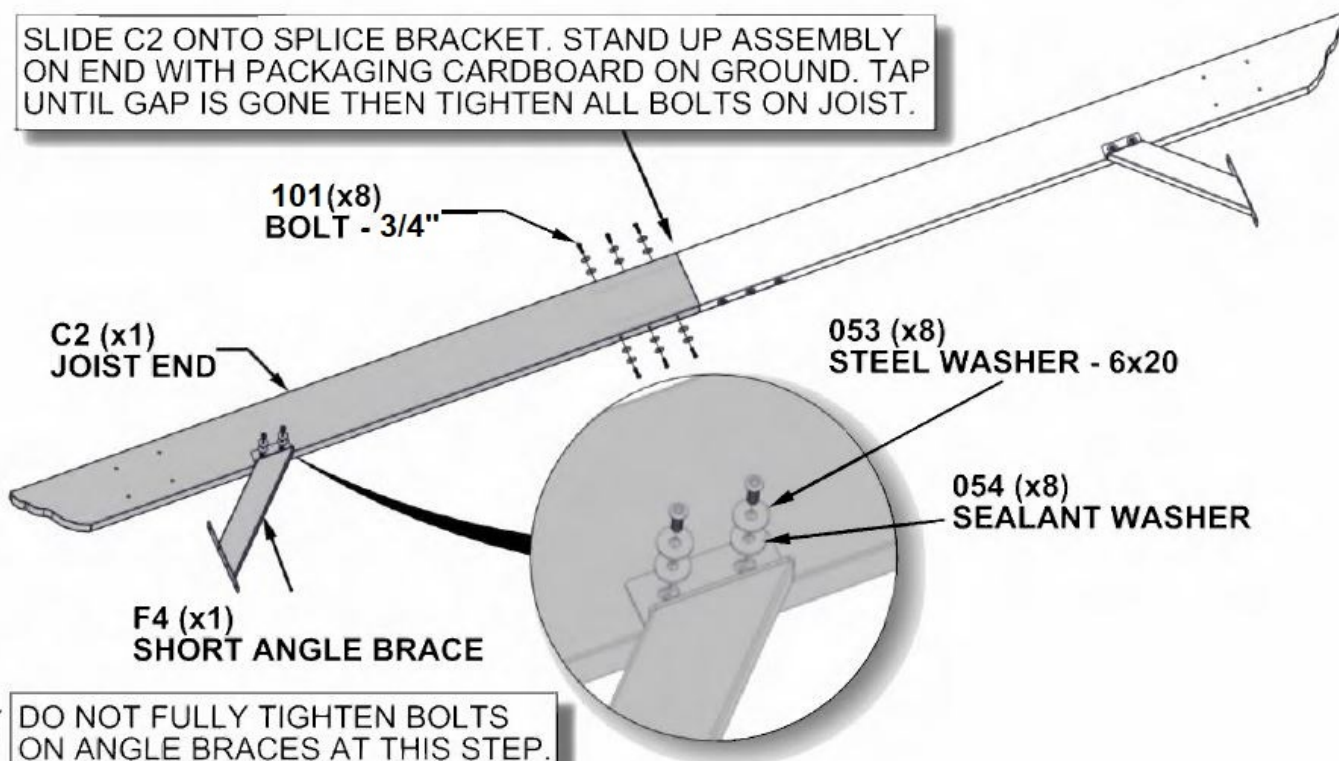


**H101053** STEEL WASHER  
(16) | 6x20



**H101054** SEALANT WASHER  
(16)

SLIDE C2 ONTO SPLICE BRACKET. STAND UP ASSEMBLY ON END WITH PACKAGING CARDBOARD ON GROUND. TAP UNTIL GAP IS GONE THEN TIGHTEN ALL BOLTS ON JOIST.



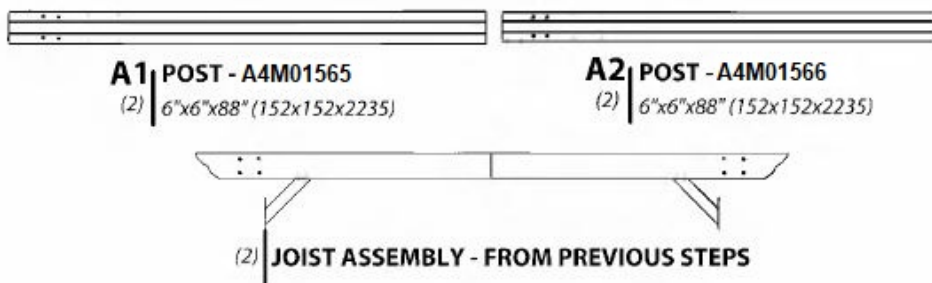
DO NOT FULLY TIGHTEN BOLTS ON ANGLE BRACES AT THIS STEP.

COMPLETE THIS STEP TWICE.



# PERGOLA ASSEMBLY

## STEP 3



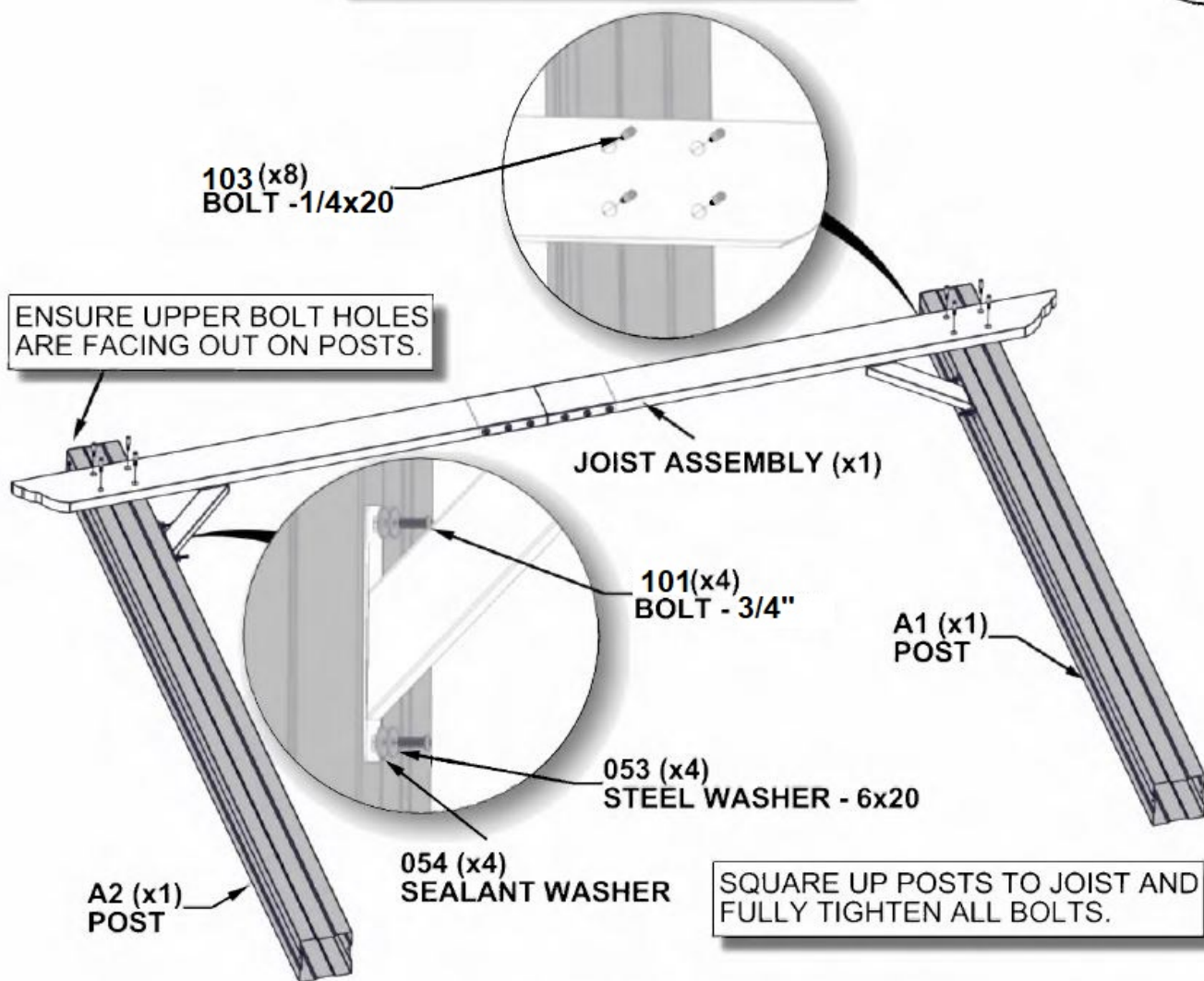
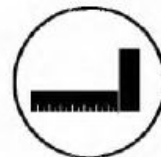
**H101101 TORX PAN HEAD**  
(8) | 1/4-20x3/4"

**H101053 STEEL WASHER**  
(8) | 6x20

**H101103 TORX SOCKET SCREW**  
(16) | 1/4-20

**H101054 SEALANT WASHER**  
(8)

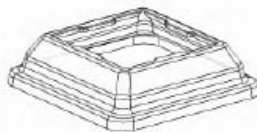
LAY PARTS ON GROUND OR SAW HORSES FOR EASE OF ASSEMBLY.



REPEAT THIS STEP FOR OTHER UPRIGHT ASSEMBLY.



**G1 | POST FOOT PLATE - A4M01278**  
(4) | 2 1/8"x8 3/8"x8 3/8" (54x213x213)



**G2 | POST FOOT - A4M01279**  
(4) | 2 5/8"x9 7/8"x9 7/8" (68x250x250)



**H101101 | TORX PAN HEAD**  
(8) | 1/4-20x3/4"



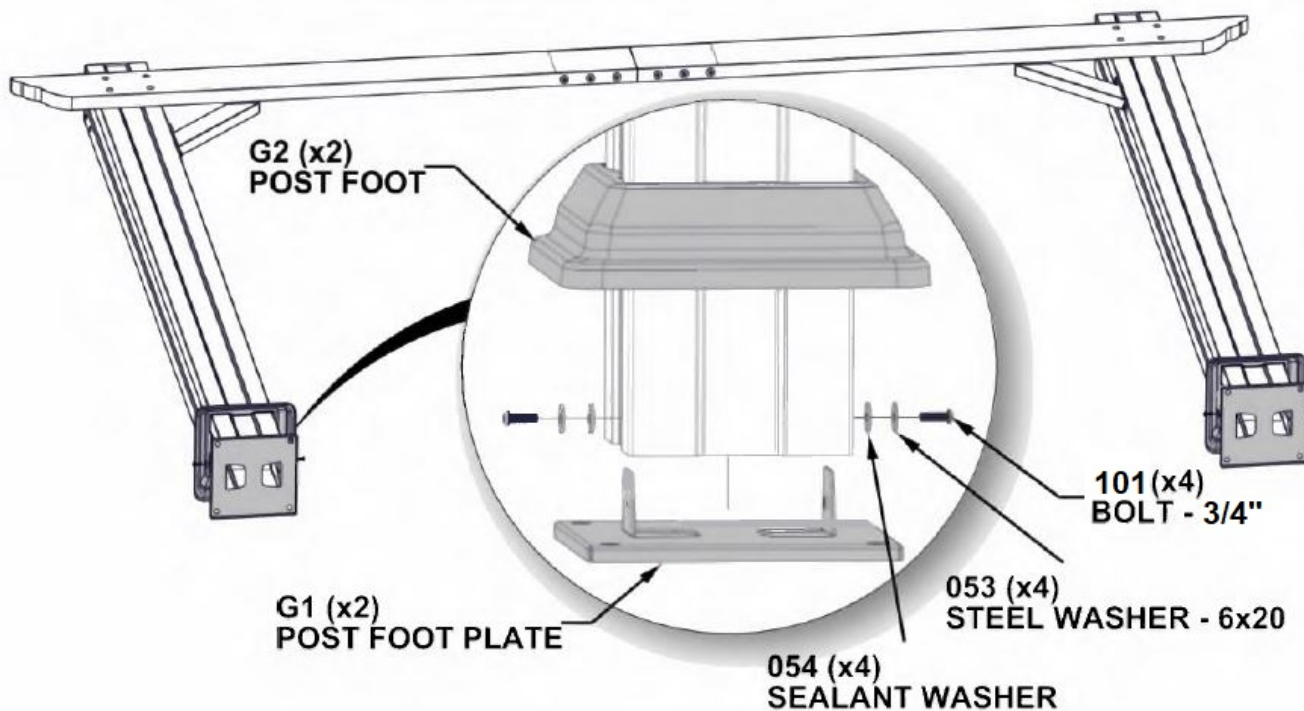
**H101053 | STEEL WASHER**  
(8) | 6x20



**H101054 | SEALANT WASHER**  
(8)



SLIDE A POST FOOT ONTO EACH POST THEN BOLT ON POST FOOT PLATES TO EACH POST. VERTICAL TAB ON POST FOOT PLATE LINES UP WITH HOLES ON SIDE OF POST.



REPEAT THIS STEP FOR OTHER UPRIGHT ASSEMBLY.



**B1** | JOIST END - A4M01567  
(2) | 1 3/8"x5 1/4"x72 1/8" (36x134x1833)



**F1** | LONG ANGLE BRACE - A4M01273  
(2) | 1 1/8"x4"x21 1/2" (30x101x546)



**J1** | SPLICE BRACKET - A4M01269  
(2) | 1 1/4"x5 1/8"x19 5/8" (33x131x500)



**H101101** | TORX PAN HEAD  
(16) | 1/4-20x3/4"



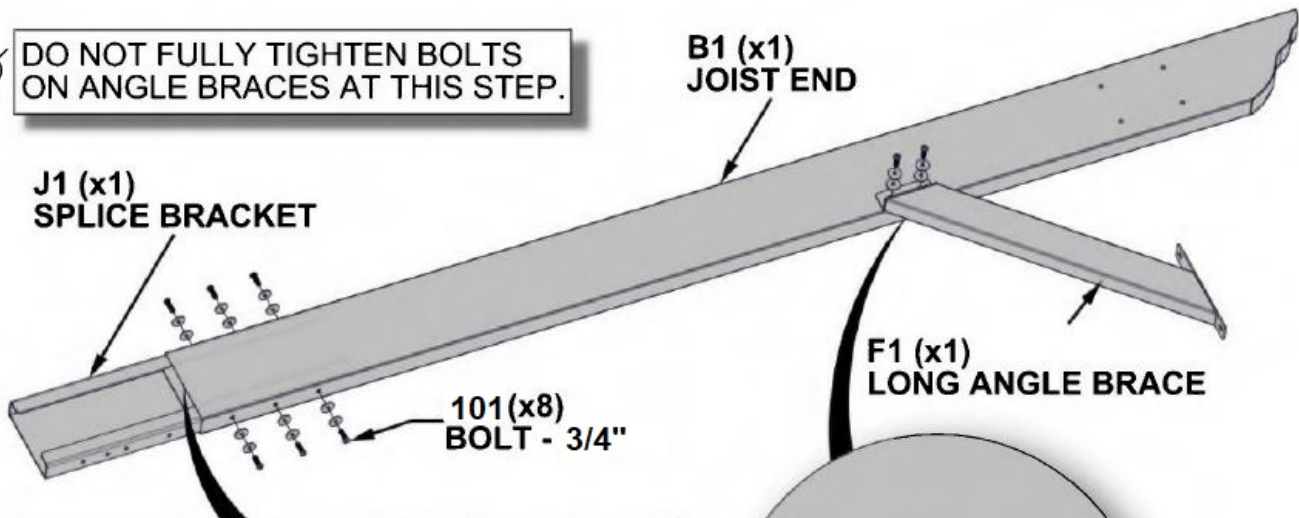
**H101053** | STEEL WASHER  
(16) | 6x20



**H101054** | SEALANT WASHER  
(16)



DO NOT FULLY TIGHTEN BOLTS ON ANGLE BRACES AT THIS STEP.



**J1 (x1)**  
SPLICE BRACKET

**B1 (x1)**  
JOIST END

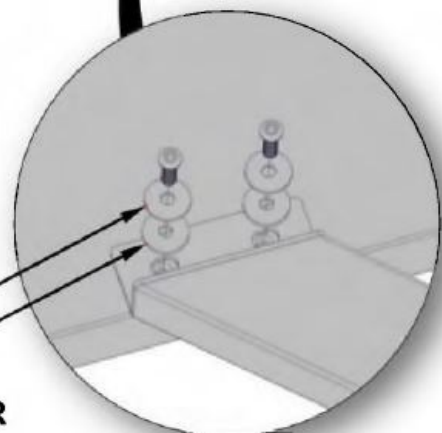
**F1 (x1)**  
LONG ANGLE BRACE

**101 (x8)**  
BOLT - 3/4"

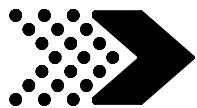
J1 SLIDES INTO B1. LINE UP THREE HOLES ON J1 WITH THREE HOLES ON B1 AND INSERT BOLTS TOP AND BOTTOM.

**053 (x8)**  
STEEL WASHER - 6x20

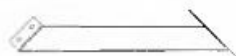
**054 (x8)**  
SEALANT WASHER



REPEAT THIS STEP FOR OTHER JOIST ASSEMBLY.



**B2** JOIST END - A4M01568  
(2) | 1 3/8"x5 1/4"x72 1/8" (36x134x1833)



**F2** LONG ANGLE BRACE - A4M01274  
(2) | 1 1/8"x4"x21 1/2" (30x101x546)



**H101101** TORX PAN HEAD  
(16) | 1/4-20x3/4"

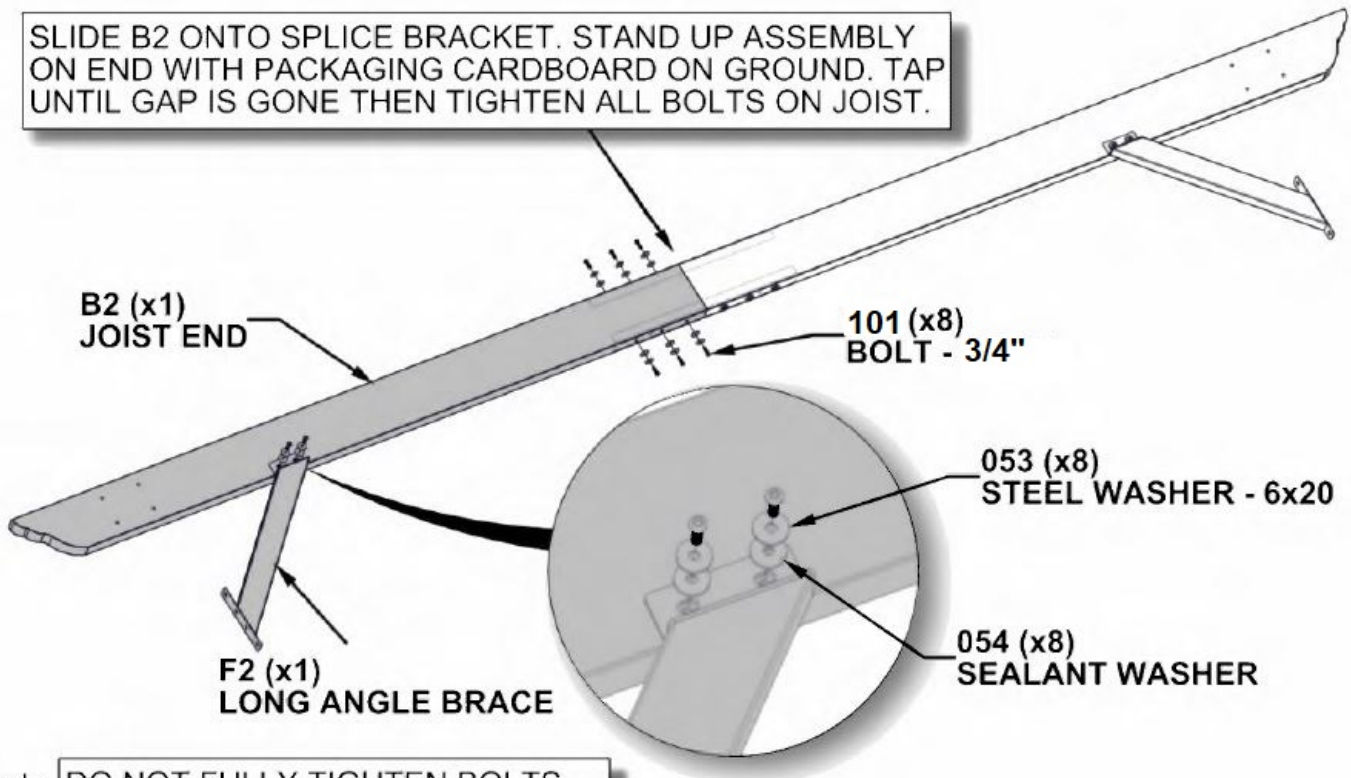


**H101053** STEEL WASHER  
(16) | 6x20



**H101054** SEALANT WASHER  
(16)

SLIDE B2 ONTO SPLICE BRACKET. STAND UP ASSEMBLY ON END WITH PACKAGING CARDBOARD ON GROUND. TAP UNTIL GAP IS GONE THEN TIGHTEN ALL BOLTS ON JOIST.



**B2 (x1)**  
JOIST END

**101 (x8)**  
BOLT - 3/4"

**053 (x8)**  
STEEL WASHER - 6x20

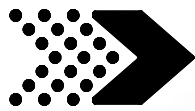
**F2 (x1)**  
LONG ANGLE BRACE

**054 (x8)**  
SEALANT WASHER



DO NOT FULLY TIGHTEN BOLTS ON ANGLE BRACES AT THIS STEP.

REPEAT THIS STEP FOR OTHER JOIST ASSEMBLY.

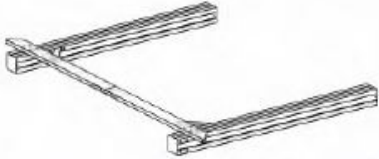


# PERGOLA ASSEMBLY

## STEP 7



(2) JOIST ASSEMBLY - FROM PREVIOUS STEPS



(2) UPRIGHT ASSEMBLY - FROM PREVIOUS STEPS



H101101 | TORX PAN HEAD  
(8) | 1/4-20x3/4"



H101053 | STEEL WASHER  
(8) | 6x20

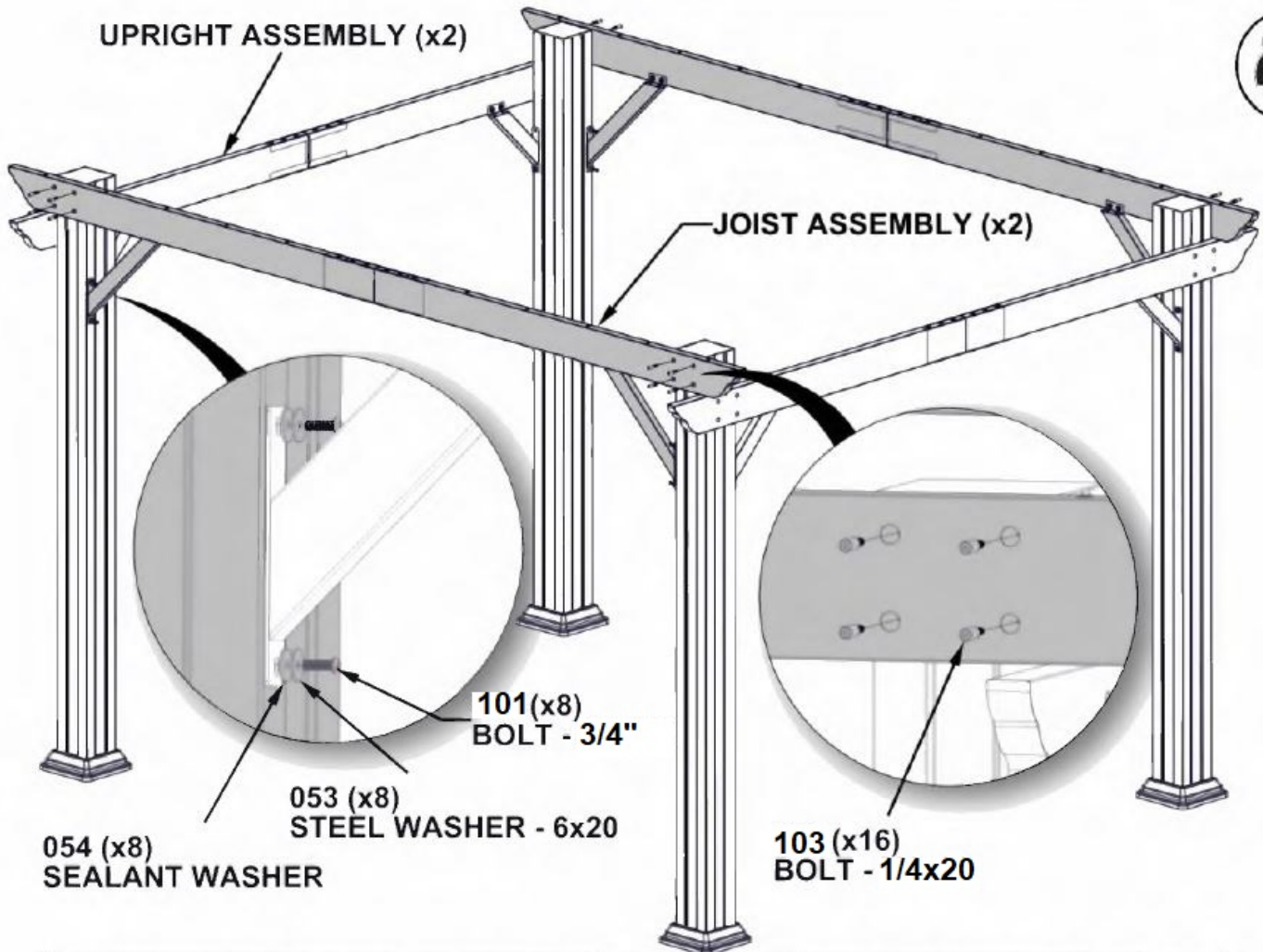


H101103 | TORX SOCKET HEAD  
(16) | 1/4-20



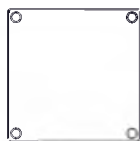
H101054 | SEALANT WASHER  
(8)

WITH BOTH UPRIGHT ASSEMBLIES STANDING, ONE JOIST ASSEMBLY IS BOLTED ON WITHOUT FULLY TIGHTENING BOLTS. ONCE ONE JOIST ASSEMBLY IS BOLTED ON, BOLT ON SECOND JOIST ASSEMBLY.



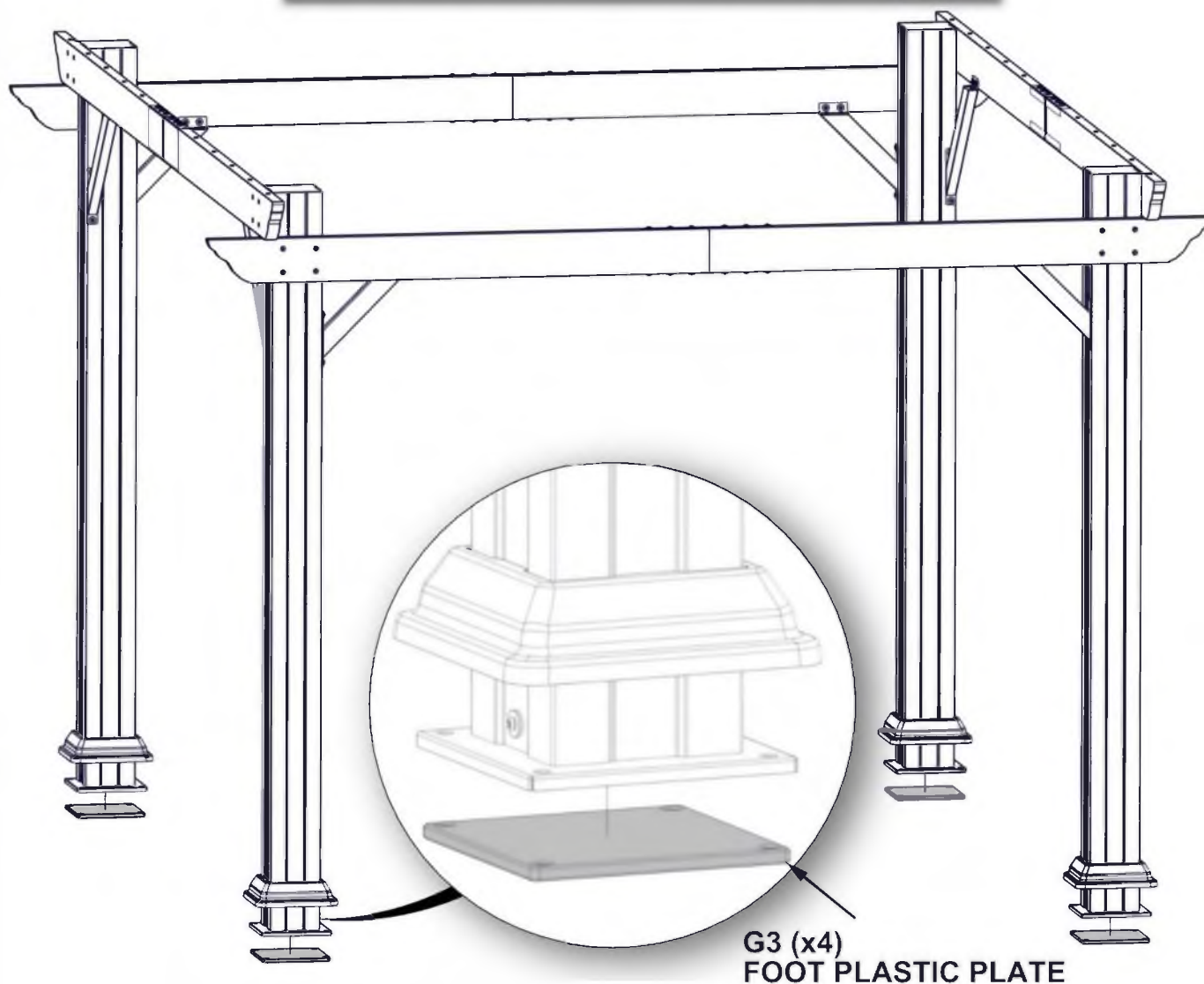
SQUARE UP ALL POSTS TO JOIST ASSEMBLIES AND FULLY TIGHTEN ALL BOLTS.

NOTE: A THIRD PERSON IS HELPFUL FOR THIS STEP.



**G3** FOOT PLASTIC PLATE - A6P00464  
(4) 3/8"x8 1/8"x8 1/8" (11x207x207)

LIFT UP EACH POST AND SLIDE A FOOT PLASTIC PLATE UNDER EACH POST FOOT PLATE.





**D1** JOIST END - A4M01569  
(4) | 1 5/8"x3 1/8"x60 1/8" (40x80x1526)



**J3** SPLICE BRACKET - A4M01271  
(4) | 1 1/2"x3"x15 3/4" (37x77x400)



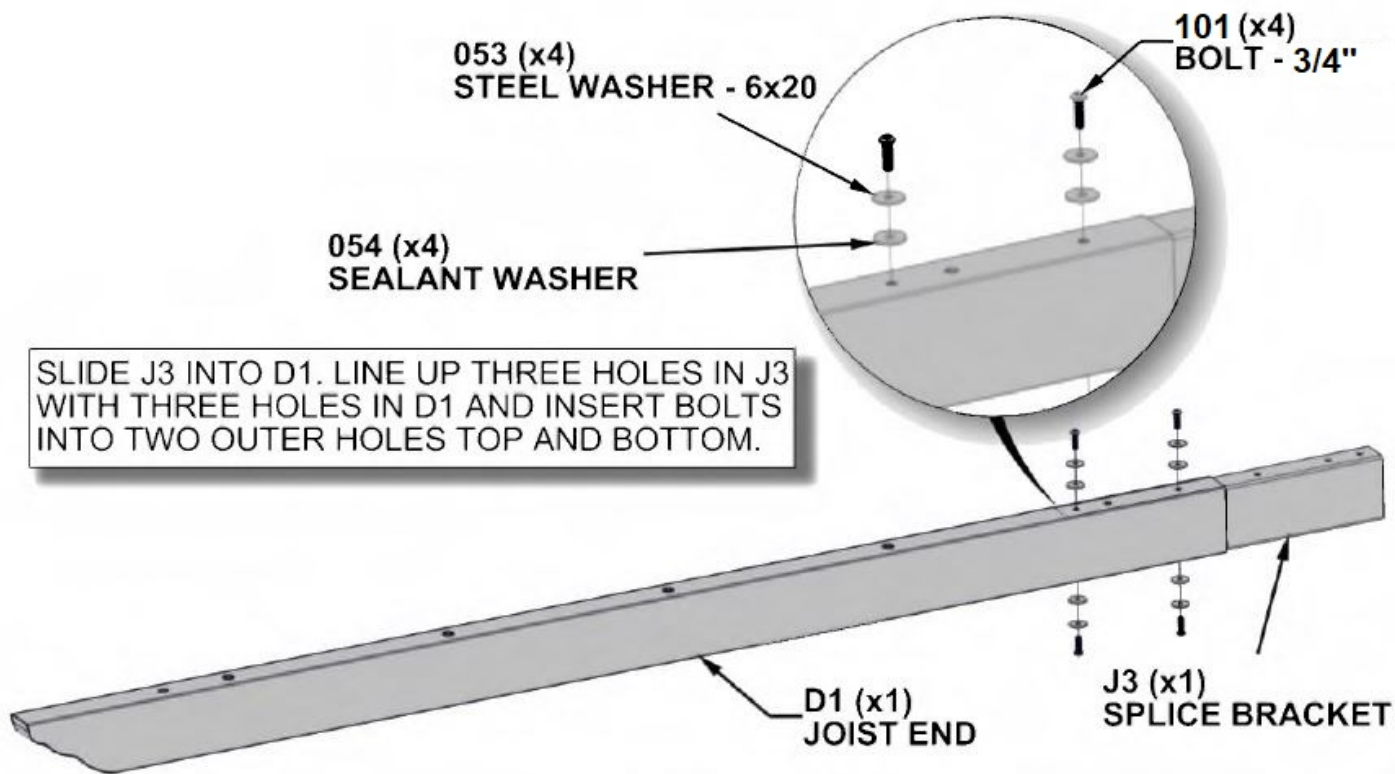
**H101101** TORX PAN HEAD  
(16) | 1/4-20x3/4"



**H101053** STEEL WASHER  
(16) | 6x20



**H101054** SEALANT WASHER  
(16)

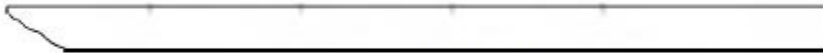
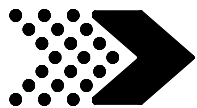


SLIDE J3 INTO D1. LINE UP THREE HOLES IN J3 WITH THREE HOLES IN D1 AND INSERT BOLTS INTO TWO OUTER HOLES TOP AND BOTTOM.



DO NOT FULLY TIGHTEN BOLTS AT THIS STEP.

COMPLETE THIS STEP FOUR TIMES.



**D1** JOIST END - A4M01569  
(4) 1 5/8"x3 1/8"x60 1/8" (40x80x1526)



**H101101** TORX PAN HEAD  
(16) 1/4-20x3/4"

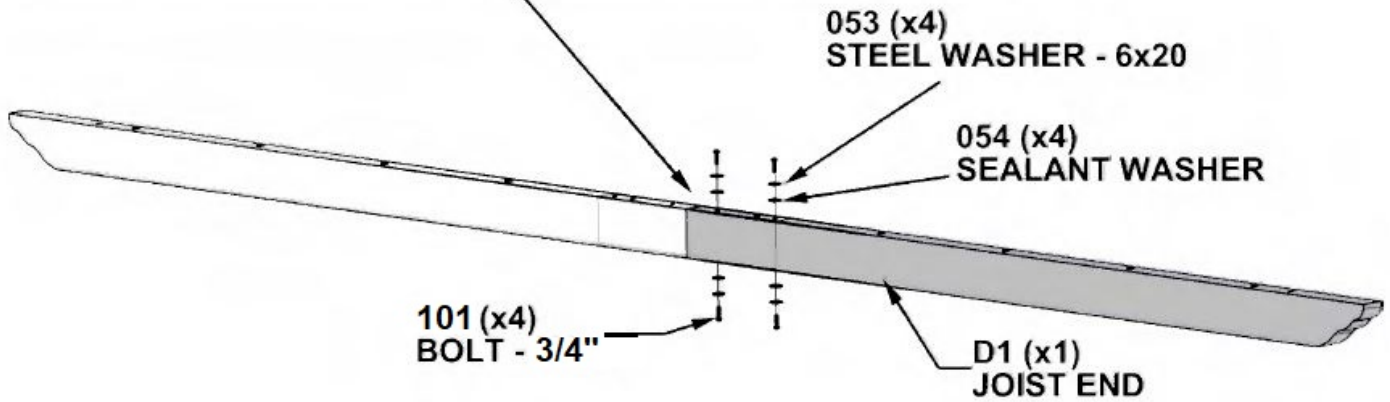


**H101053** STEEL WASHER  
(16) 6x20

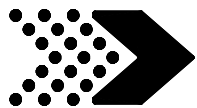


**H101054** SEALANT WASHER  
(16)

SLIDE D1 ONTO SPLICE BRACKET. STAND UP ASSEMBLY ON END WITH PACKAGING CARDBOARD ON GROUND. TAP UNTIL GAP IS GONE THEN TIGHTEN ALL BOLTS ON JOIST.



COMPLETE THIS STEP FOUR TIMES.



(4) JOIST ASSEMBLY - FROM PREVIOUS STEPS



H101102 | TORX PAN HEAD  
(8) | 1/4-20x4"

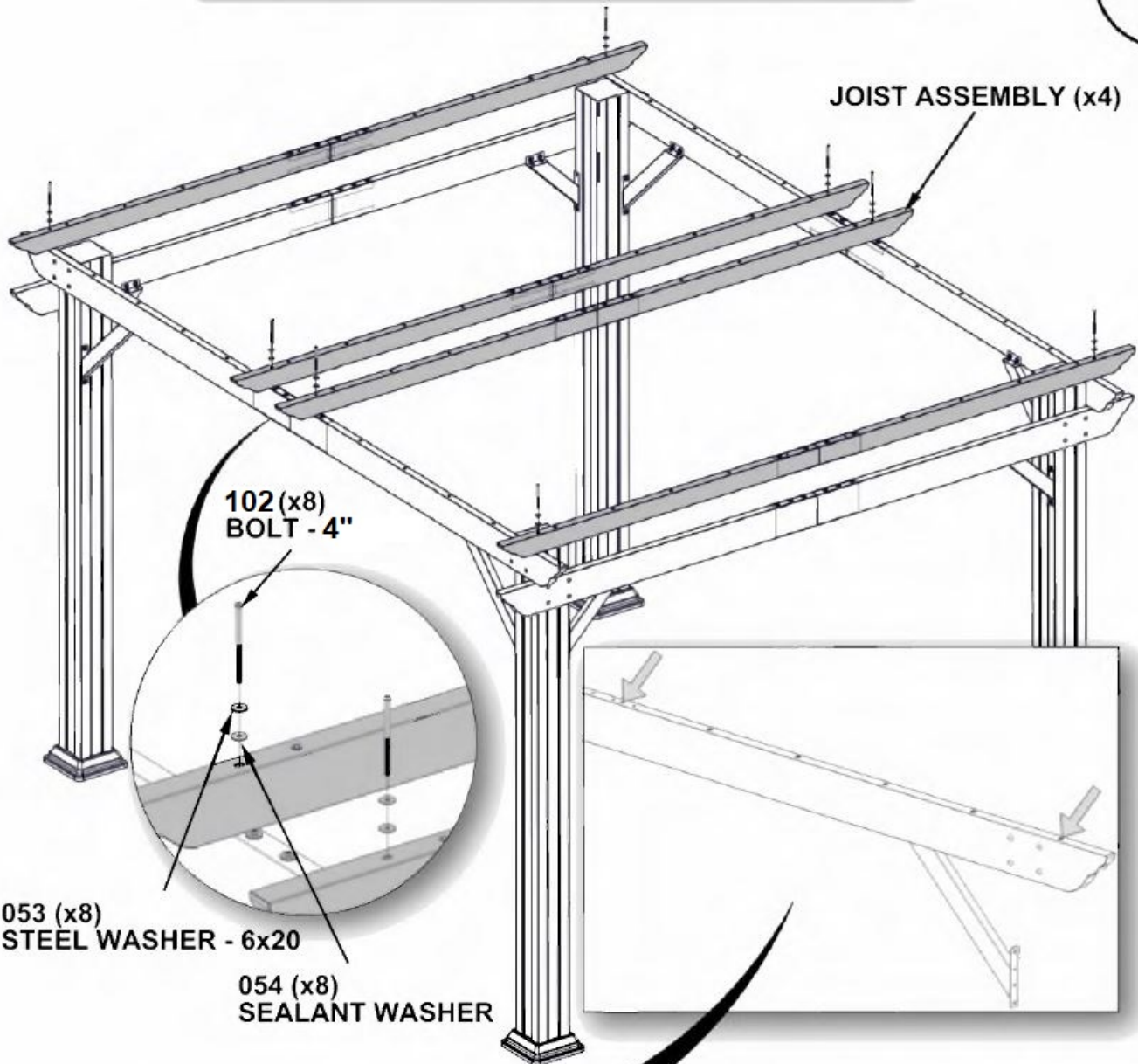


H101053 | STEEL WASHER  
(8) | 6x20

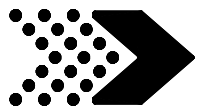


H101054 | SEALANT WASHER  
(8)

BOLT ONE SIDE OF JOISTS FIRST THEN BOLT OTHER SIDE. DO NOT FULLY TIGHTEN BOLTS AT THIS STEP.



ENSURE JOIST ASSEMBLIES ARE SPACED OUT CORRECTLY AS PLACEMENT IS CRITICAL FOR PURLIN ATTACHMENT.



**D2 JOIST END - A4M01285**  
(8) | 1 5/8"x3 1/8"x60 1/8" (40x80x1526)



**J3 SPLICE BRACKET - A4M01271**  
(8) | 1 1/2"x3"x15 3/4" (37x77x400)



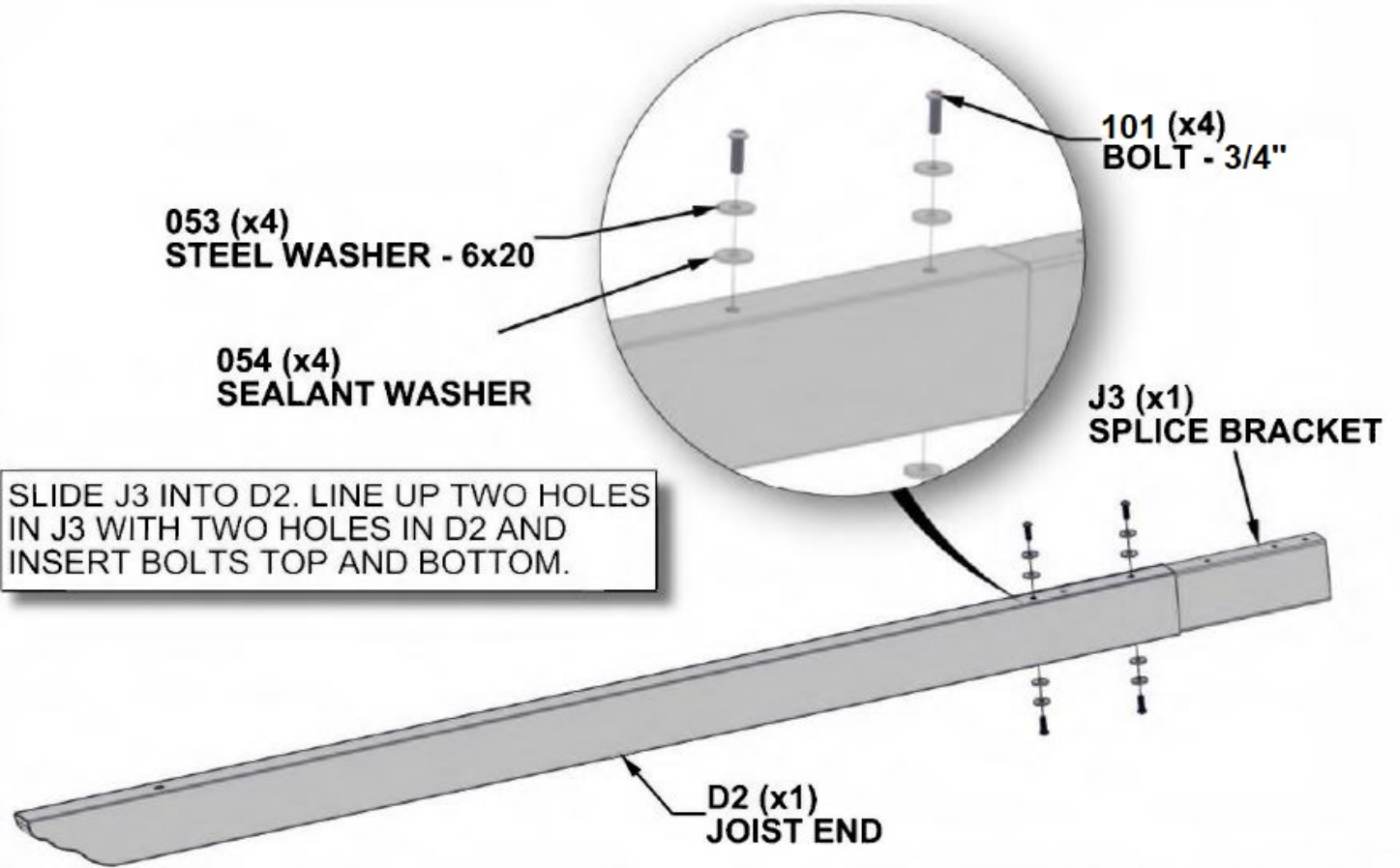
**H101101 TORX PAN HEAD**  
(32) | 1/4-20x3/4"



**H101053 STEEL WASHER**  
(32) | 6x20



**H101054 SEALANT WASHER**  
(32)

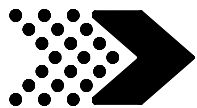


SLIDE J3 INTO D2. LINE UP TWO HOLES IN J3 WITH TWO HOLES IN D2 AND INSERT BOLTS TOP AND BOTTOM.



**DO NOT FULLY TIGHTEN BOLTS AT THIS STEP.**

**COMPLETE THIS STEP EIGHT TIMES.**



**D2 JOIST END - A4M01285**  
(8) | 1 5/8"x3 1/8"x60 1/8" (40x80x1526)



**H101101 TORX PAN HEAD**  
(32) | 1/4-20x3/4"

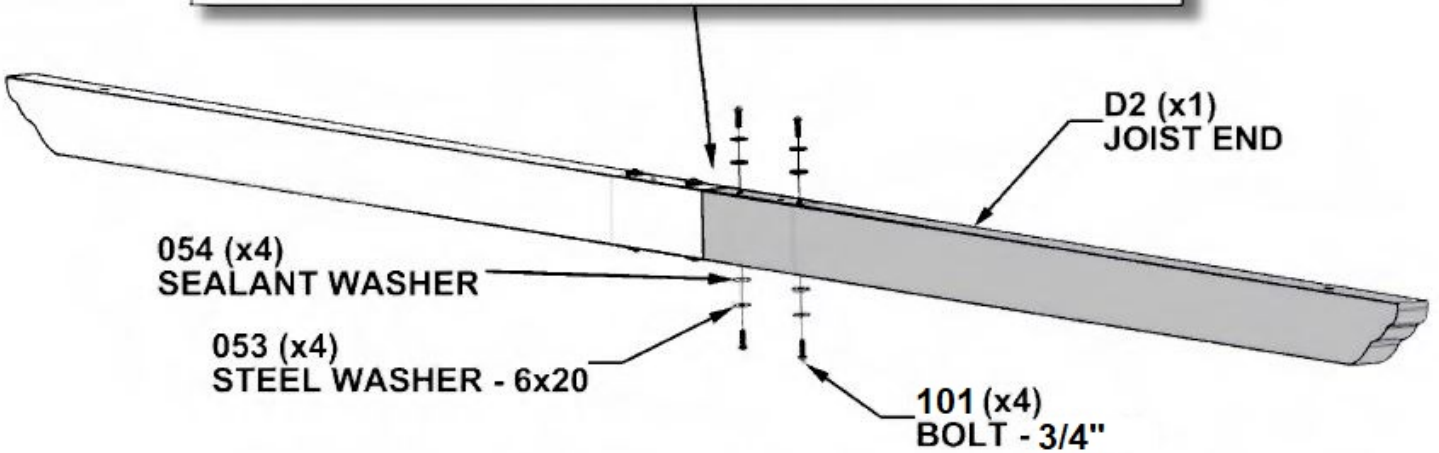


**H101053 STEEL WASHER**  
(32) | 6x20

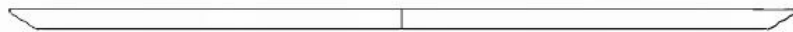


**H101054 SEALANT WASHER**  
(32)

SLIDE D2 ONTO SPLICE BRACKET. STAND UP ASSEMBLY ON END WITH PACKAGING CARDBOARD ON GROUND. TAP UNTIL GAP IS GONE THEN TIGHTEN ALL BOLTS ON JOIST.



COMPLETE THIS STEP EIGHT TIMES.



(8) JOIST ASSEMBLY - FROM PREVIOUS STEPS



H101102 | TORX PAN HEAD  
(16) | 1/4-20x4"

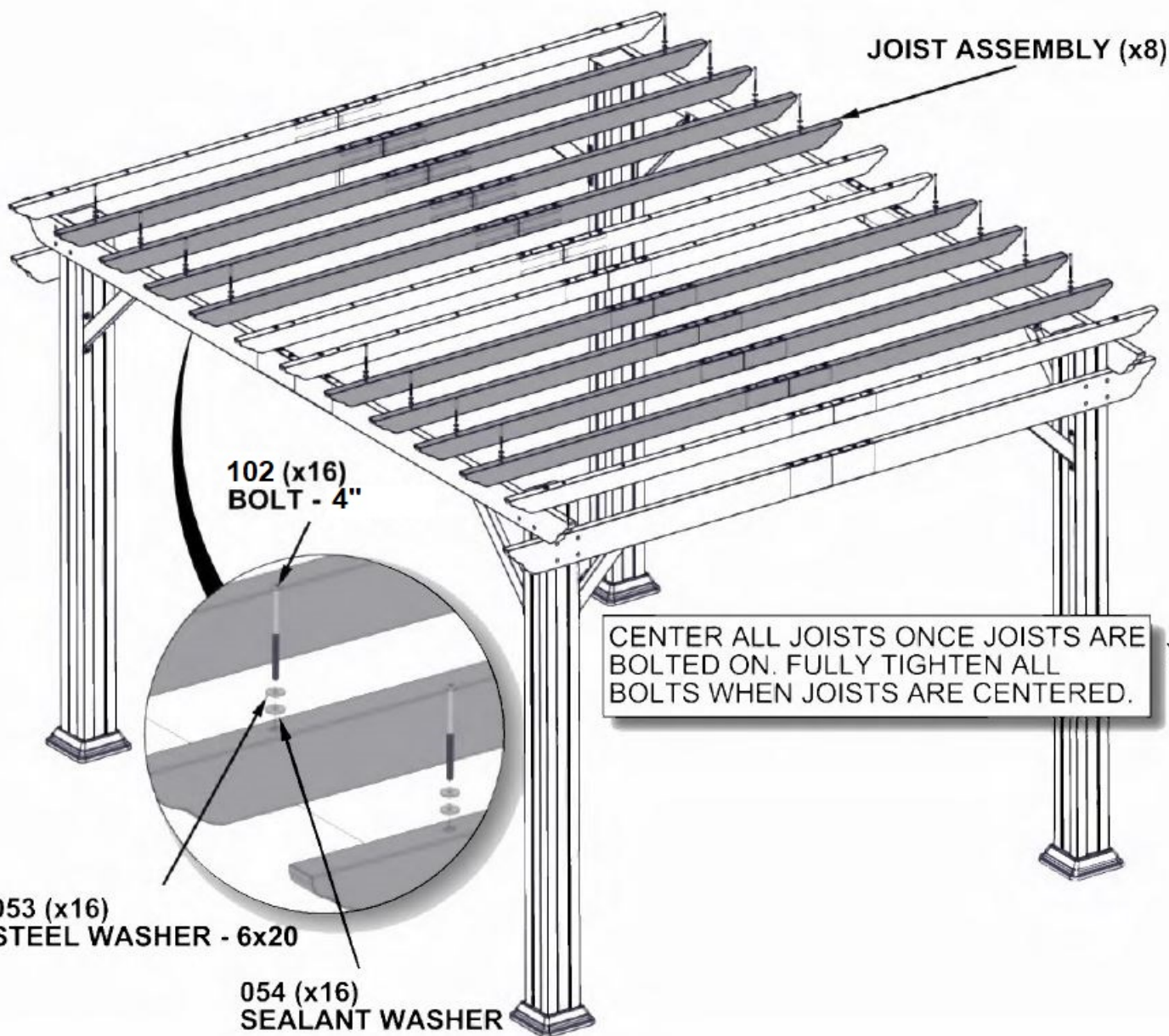


H101053 | STEEL WASHER  
(16) | 6x20



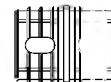
H101054 | SEALANT WASHER  
(16)

BOLT ONE SIDE OF JOISTS FIRST THEN BOLT OTHER SIDE. DO NOT FULLY TIGHTEN BOLTS YET.





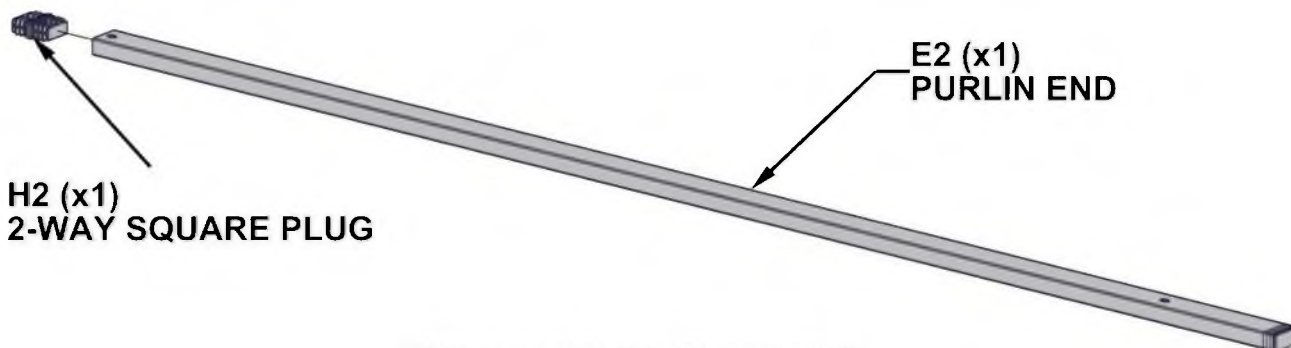
**E2 | PURLIN END - A4M01290**  
(10) | 3/4"x1 5/8"x66 7/8" (20x40x1698)



**H2 | 2-WAY SQUARE PLUG- A6P00465**  
(10) | 3/4"x1 5/8"x2" (20x40x52)



SLIDE A 2-WAY SQUARE PLUG INTO THE END OF PURLIN.



COMPLETE THIS STEP TEN TIMES.

NOTE: A RUBBER MALLET MAY BE HELPFUL TO GET THE 2-WAY SQUARE PLUG INTO THE END OF THE PURLIN.



(10) PURLIN ASSEMBLY - FROM PREVIOUS STEPS



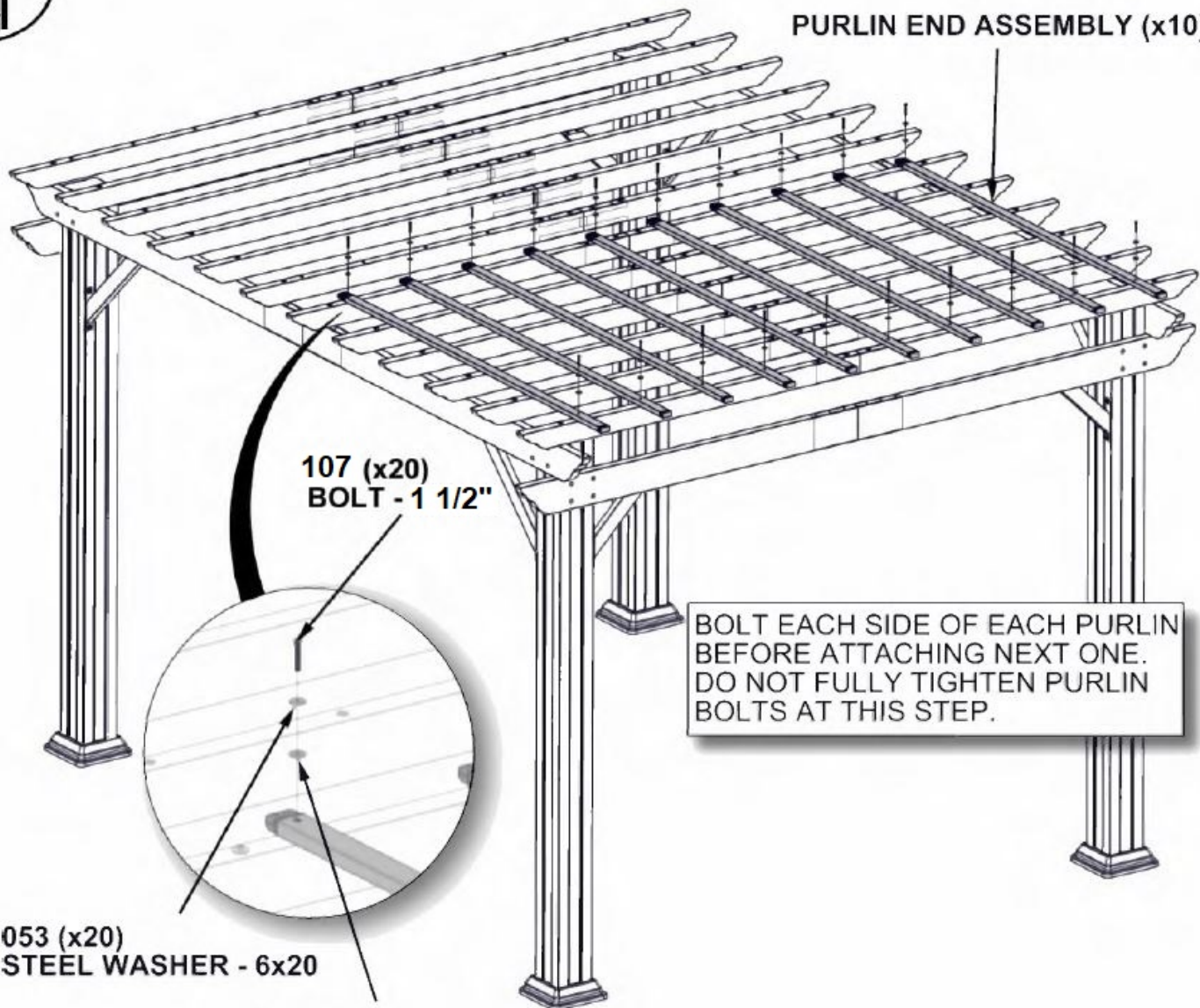
H101107 | TORX PAN HEAD  
(20) | 1/4-20x1 1/2"



H101053 | STEEL WASHER  
(20) | 6x20



H101054 | SEALANT WASHER  
(20)



BOLT EACH SIDE OF EACH PURLIN BEFORE ATTACHING NEXT ONE. DO NOT FULLY TIGHTEN PURLIN BOLTS AT THIS STEP.

053 (x20)  
STEEL WASHER - 6x20

054 (x20)  
SEALANT WASHER



**E1 PURLIN END - A4M01289**  
(10) | 3/4"x1 5/8"x77 5/8" (20x40x1972)



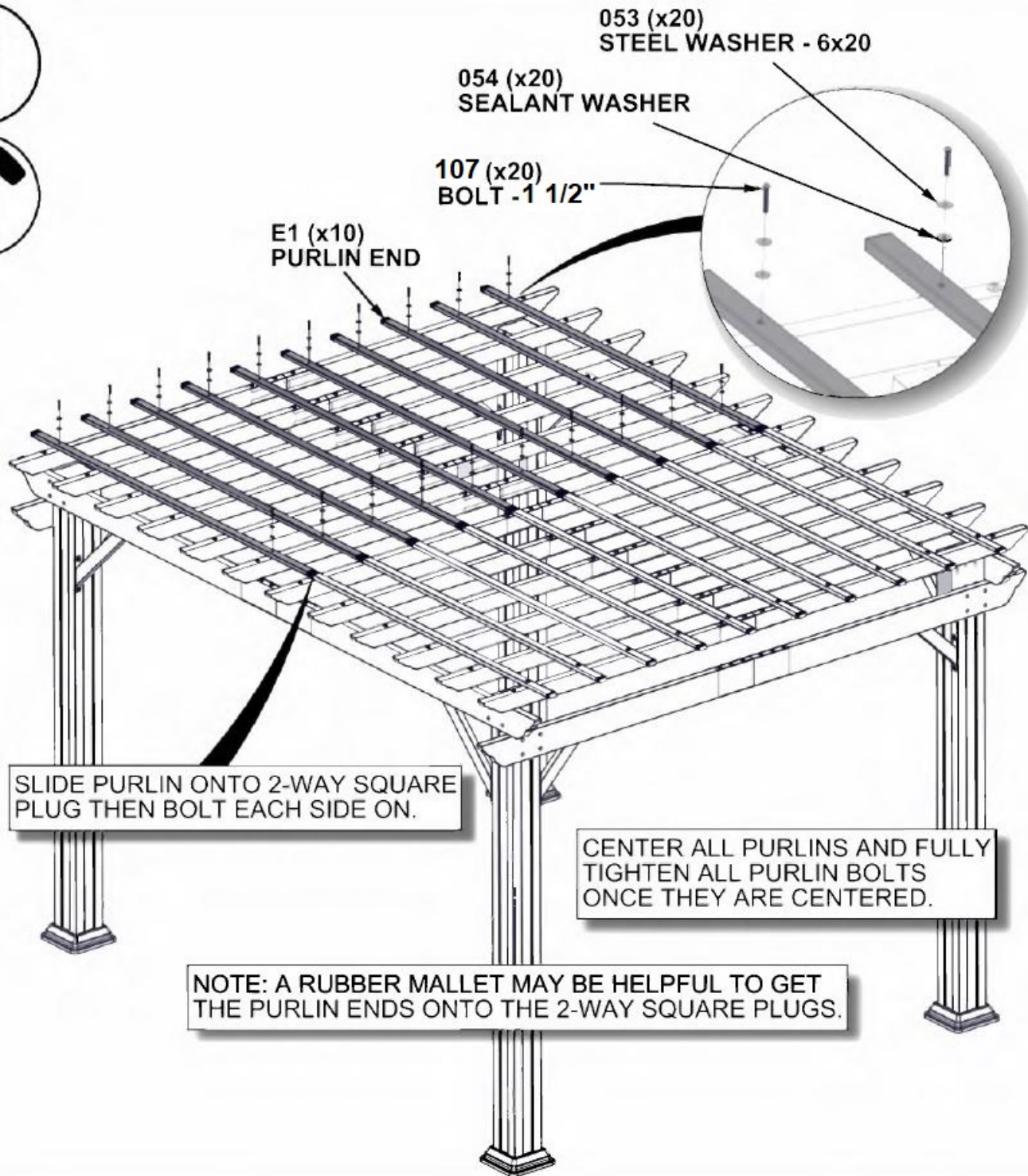
**H101107 TORX PAN HEAD**  
(20) | 1/4-20X1 1/2"

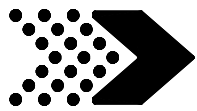


**H101053 STEEL WASHER**  
(20) | 6x20

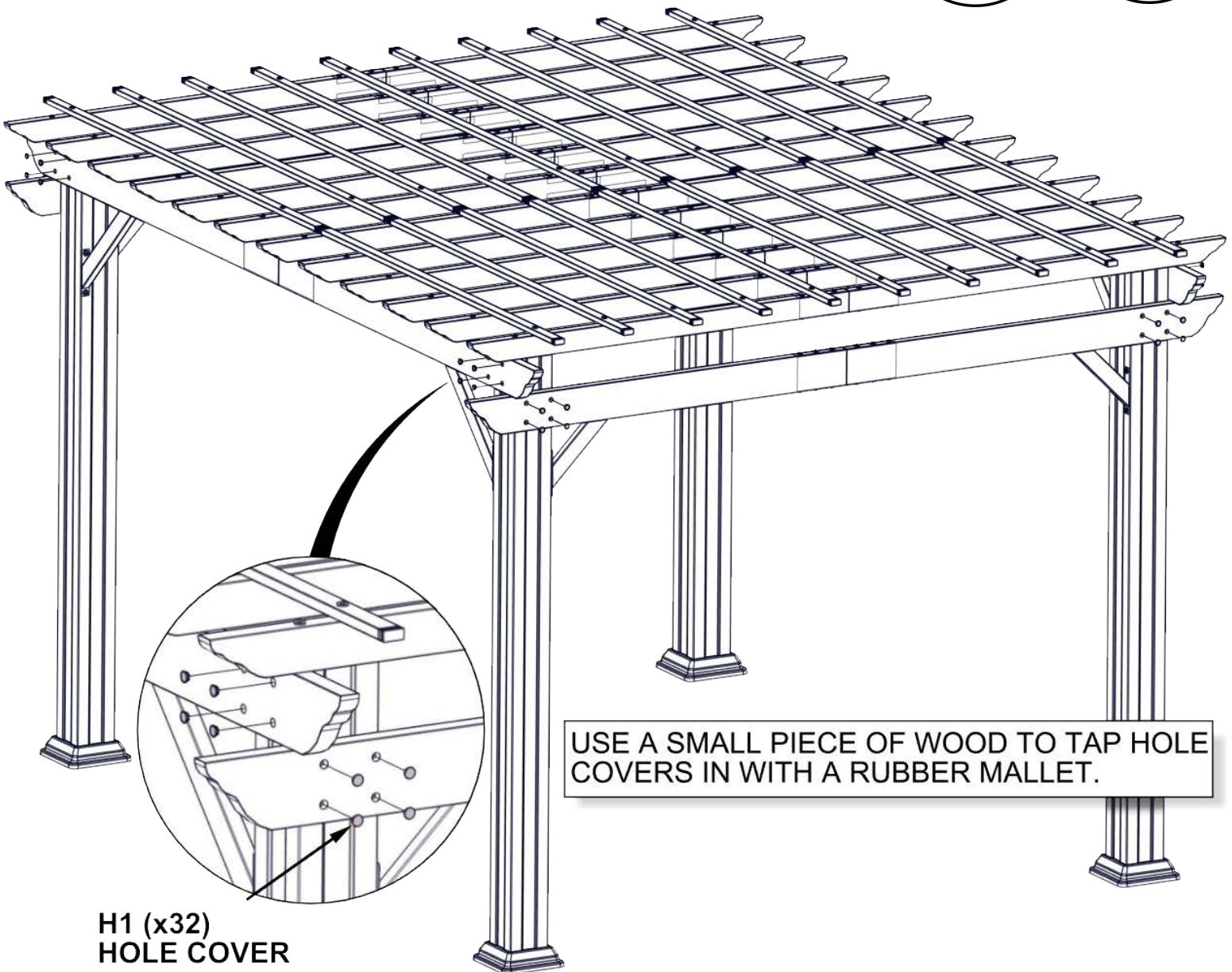
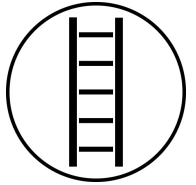


**H101054 SEALANT WASHER**  
(20)



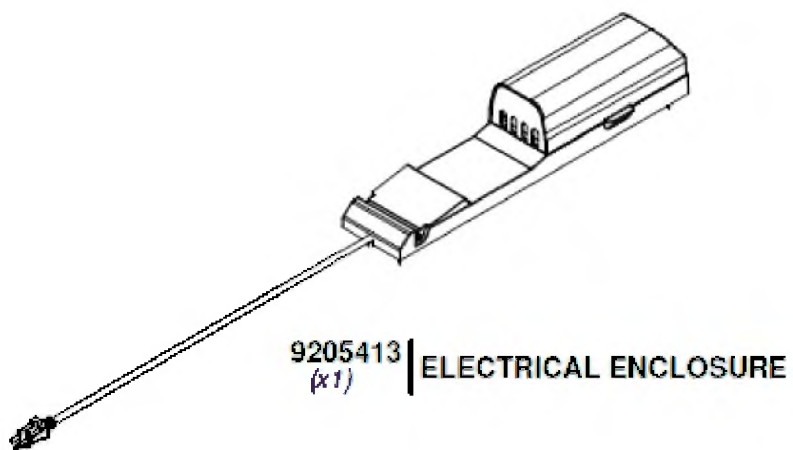


H1 | HOLE COVER-A4M01352  
(32)



USE A SMALL PIECE OF WOOD TO TAP HOLE COVERS IN WITH A RUBBER Mallet.

H1 (x32)  
HOLE COVER



FOR ELECTRICAL ENCLOSURE INSTALLATION REFER TO ASSEMBLY INSTRUCTIONS THAT COMES PACKAGED WITH THE ELECTRICAL ENCLOSURE KIT. INSTALL ON ANY POST THAT IS DESIRED. FOLLOW DIRECTIONS FOR PROPER INSTALLATION.