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## 5' x8' Standard Utility Trailer Building Notes

This is a standard utility trailer model that is currently on the market all over the United States. The price tag seems to average around \$1000 - \$1300. There is no doubt that you can build the same thing much cheaper and of higher quality.

The plans go hand in hand with the video. If you are not sure of what to do at a certain step, be sure to watch the video since many different viewpoints are given about building the utility trailer. I make many references to see the video on the plans. This is because it's sometimes easier to show certain things on video than to clutter up the drawings with too many details. The plans have enough info. on them by themselves but, the video will help a beginner understand certain things better.

The building notes are put together as guidelines and are placed in no particular order of importance. I would suggest reading through them before starting the project. That will give you a better idea of the project and how it works as an end result. If you deviate from the dimensions it's no big deal. The design works with many different sizes of trailers. You will just need to make some adjustments along the way.

You will notice on some of the 4 view drawings that some of the views are out of proportion with the others. This is for clarity and to give you the biggest view possible for standard paper from your printer. Please note that drawings are not to scale, so don't measure off the drawings. there is enough information about each part, to build each part. If you have any problems figuring something out, just look at another print that has that part on it or a picture view. This utility trailer was drawn with common sense in mind, it is not rocket science. If there is something really important I made a note of it on the drawing or building notes page, otherwise it is no big deal.

One thing I would like to talk about are the fenders. I have come to the conclusion that you really can't build a good set of fenders as cheap as you can buy pre made fenders. I hate to say

it because I'm the type of guy that like to build as much stuff as possible. It would also be very time consuming to try to match the better look you will get with pre made fenders. I added fenders in the plans for someone to build their own anyway. If you plan on using a different size tire, you should check to make sure it will fit under the fenders. You also want to allow for suspension travel.

Another thing you need to figure out before you start is what axle will you be using. The plans were designed for a 3500 pound axle (no brakes) with 58" spring centers. That will be the size used for the 60" wide frame dimensions. I know what your thinking, why would I need that heavy of an axle for a utility trailer? The answer is simply, the 2000 pound axles are almost just as expensive and I always tend to overbuild just about everything. I don't know too many people that wouldn't want a heavier duty trailer for almost the same amount of money as a lighter one. If you decide to sell it someday I'm sure the potential buyer wouldn't mind it either. Wouldn't it be nice to not worry about overloading it? If you don't like the idea of leaf springs you can also use a torsion axle for this trailer. I made some notes on the frame assembly plans for cross member locations for either axle. A good rule of thumb for axle location is: 60% of the trailer frame should be in front of the axle and 40% of the trailer frame should be behind the axle. When you order your axle be sure to get the mounting hardware for mounting the leaf springs.

Good places to get your axles would be any local trailer manufacturer, Northern Tool, Freedom Axle, Dexter Axle. Some places you might need to order it online but, I have found out that even with the shipping the prices are really competitive.

The tires the trailer was designed around are 205/75-R15. This is a really common tire size for that type of axle. 205/75-D14 tires will work fine also and be slightly smaller and cheaper. Just be sure they will fit on the hubs that come with your axle. The hub bolt pattern that I used was called: 5 bolt x 4.5".

The tail light brackets should be able to accommodate most kinds of tail lights you would use

for this type of trailer. The wiring diagram I included with the plans shows that 3 marker lights are needed on any trailer longer than 80". I don't really think that is true as a general statement. You might want to check with your local trailer regulations to be sure. The same goes for the side marker lights. I think these rules apply more for a company selling trailers rather than building one for personal use.

The trailer deck can be plywood, lumber, steel, or expanded metal (mesh). The sides can be the same or left open. The same goes for the ramp.

The welds that secure the tongue to the trailer frame are what I would consider to be critical welds. Please make sure you are up to the task, since I might be following you on the highway someday.

Use the proper trailer coupler to make sure you have enough capacity for the loads you will be hauling. A standard 2" coupler with a 50 degree A-frame should be fine. Be sure to mount it according to the coupler manufacturers instructions.

Safety chains are a good idea and may even be the law in your state. Be sure to check the regulations for where you live. Just mount them to the tongue hitch right behind the coupler. You can bolt them or weld them.

If you decide to make the ramp a little heavier, you will need to make adjustments to your material list as well as your cut list.

By using these plans to build your trailer you assume responsibility to follow all trailer rules and regulations for your area. These plans are only guidelines for the construction of the trailer and are not meant to cover all the possible rules and regulations that need to be followed.

### 5'x8' Standard Utility Trailer Total Material List

51' x 2" x 2" x 3/16" angle iron

60'8" x 2" x 2" x 1/8" angle iron

10'4" x 3" x 3.5 lb channel iron

1'5" x 3/4" solid rod

1' x 1/2" solid rod

1'4" x 3/4" schedule 40 black pipe

7'2" x 10" flat sheet (optional fenders)

## 5' x8' Standard Utility Trailer Cut List

### Frame

- 6 - 60"x2x2x3/16 angle iron (frame cross member)
- 1 - 60"x2x2x3/16 angle iron w/45 degree cuts (front frame rail)
- 2 - 96"x2x2x3/16 angle iron w/45 degree cuts (side frame rail)

### Hitch

- 2 - 62"x3"x3.5 lb channel iron (hitch channel)

### Top Rail

- 1 - 63.75"x2x2x1/8 angle iron (front top rail)
- 2 - 98"x2x2x1/8 angle iron (side top rail)
- 12 - 12"x2x2x1/8 angle iron (top rail support bracket)
- 2 - 8"x2x2x1/8 angle iron (tail light bracket)

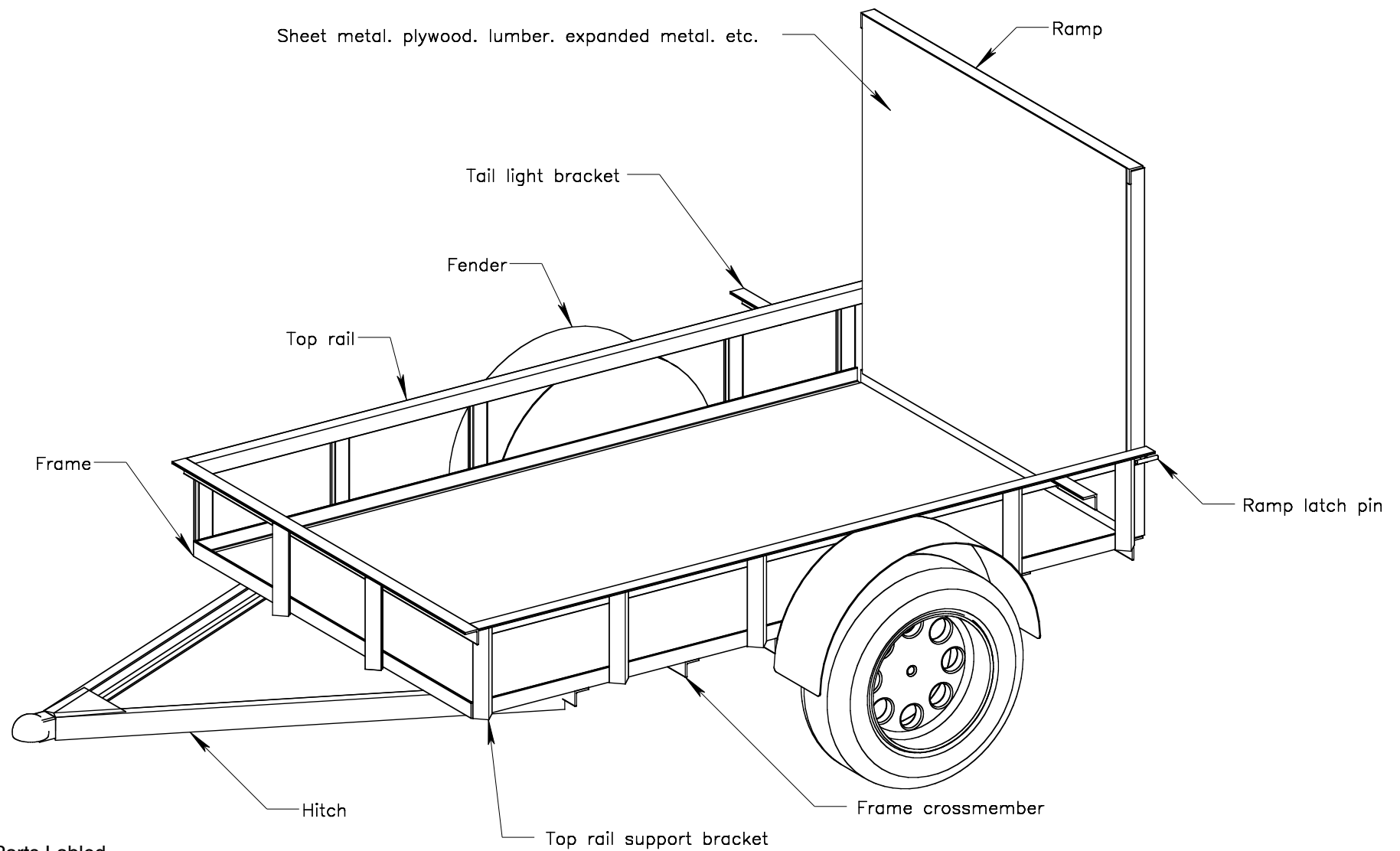
### Ramp

- 2 - 58"x2x2x1/8 angle iron w/45 degree cuts (front and back ramp frame)
- 2 - 48"x2x2x1/8 angle iron w/45 degree cuts (side ramp frame)
- 2 - 47.75"x2x2x1/8 angle iron (ramp crossmembers)
- 2 - 4"x3/4 schedule 40 black pipe (ramp hinge bushing large)
- 4 - 2"x3/4 schedule 40 black pipe (ramp hinge bushing small)
- 2 - 8.5"x3/4 solid rod (ramp hinge pin)
- 4 - 3"x1/2 solid rod (ramp latch pin)

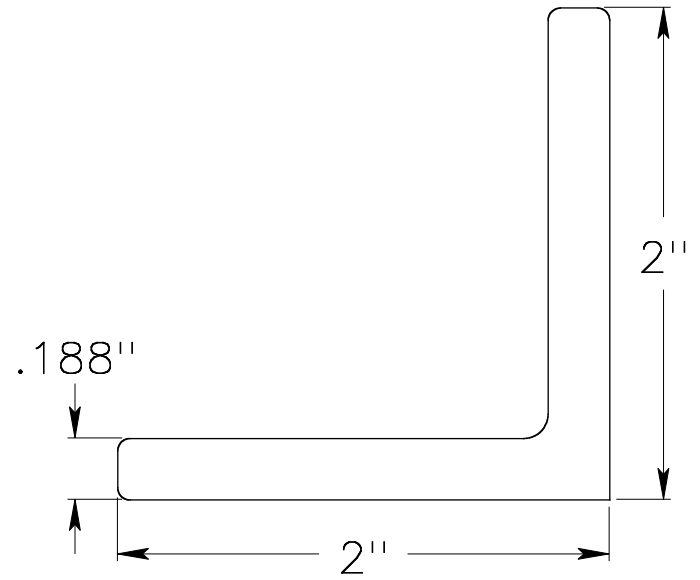
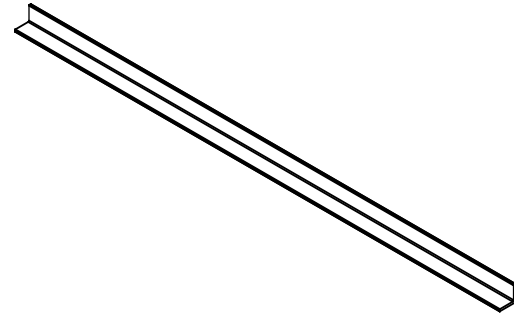
### Fenders (optional)

- 2 - 16"x10x1/8 flat sheet (top sheet)
- 4 - 13.5"x10x1/8 flat sheet (vertical sheet)

\*Don't forget about the trailer deck and ramp deck when you order your material.



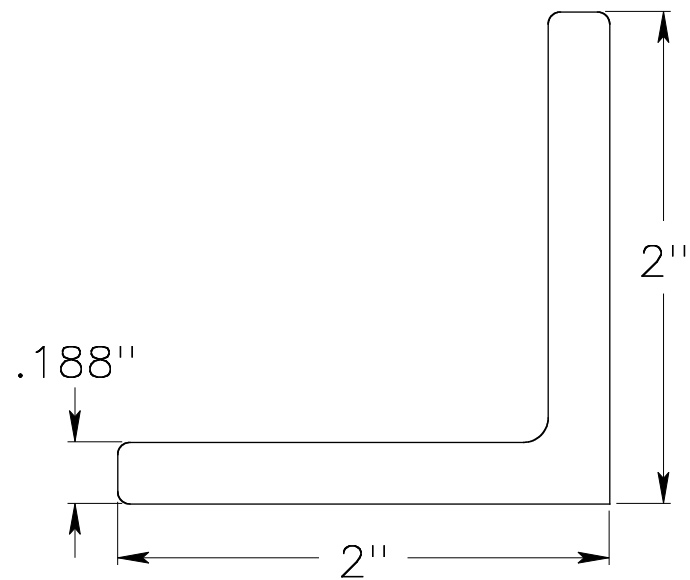
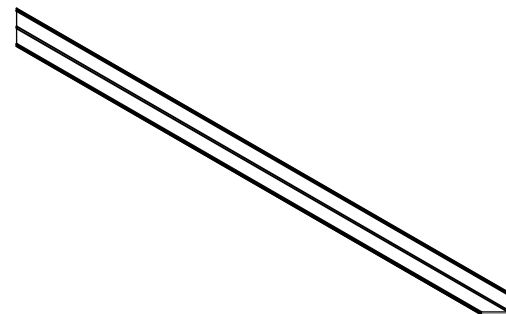
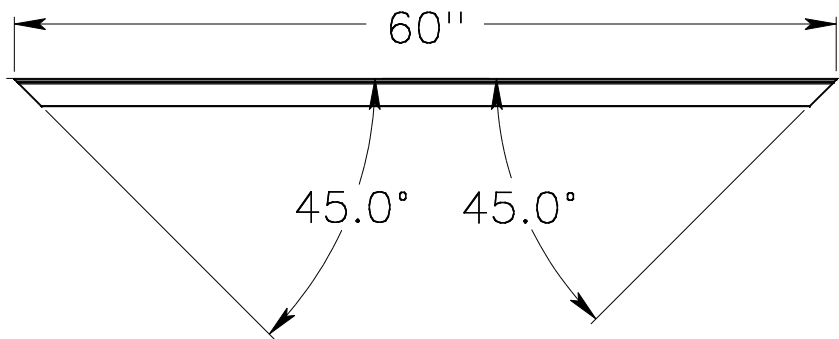
Utility Trailer Parts Labeled



Frame cross member

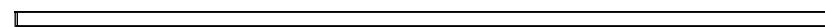
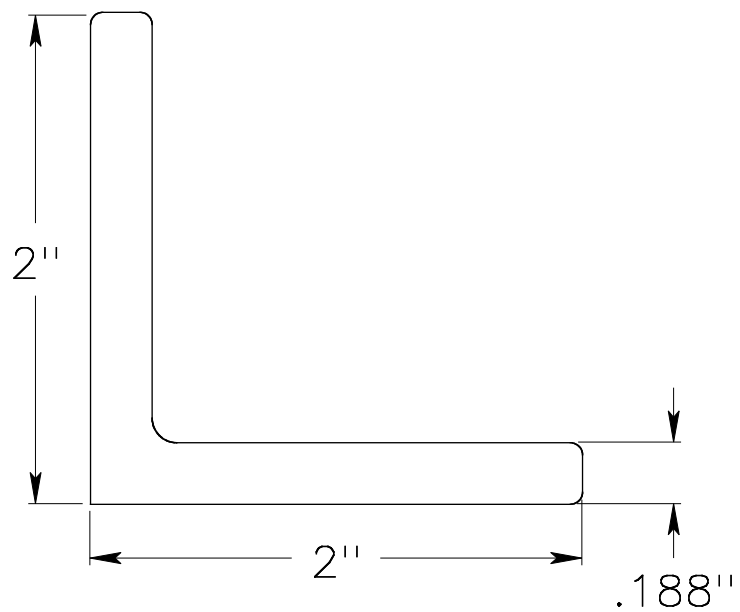
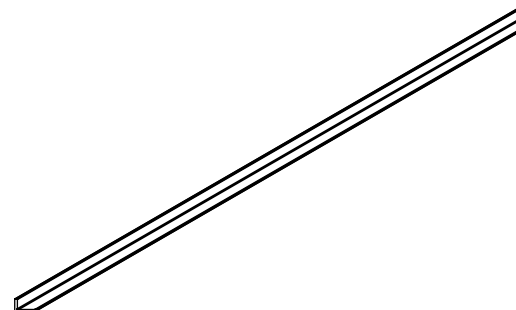
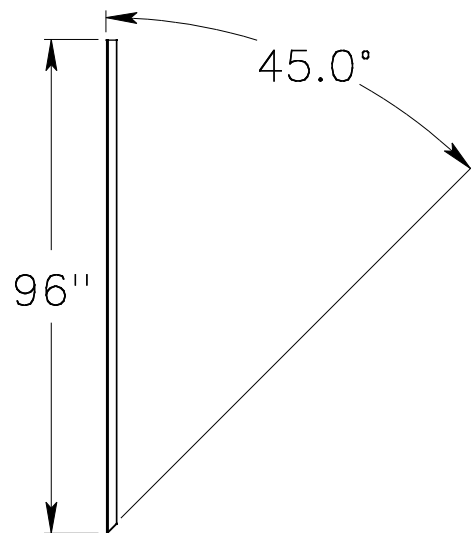
Quantity: 6





Front frame rail

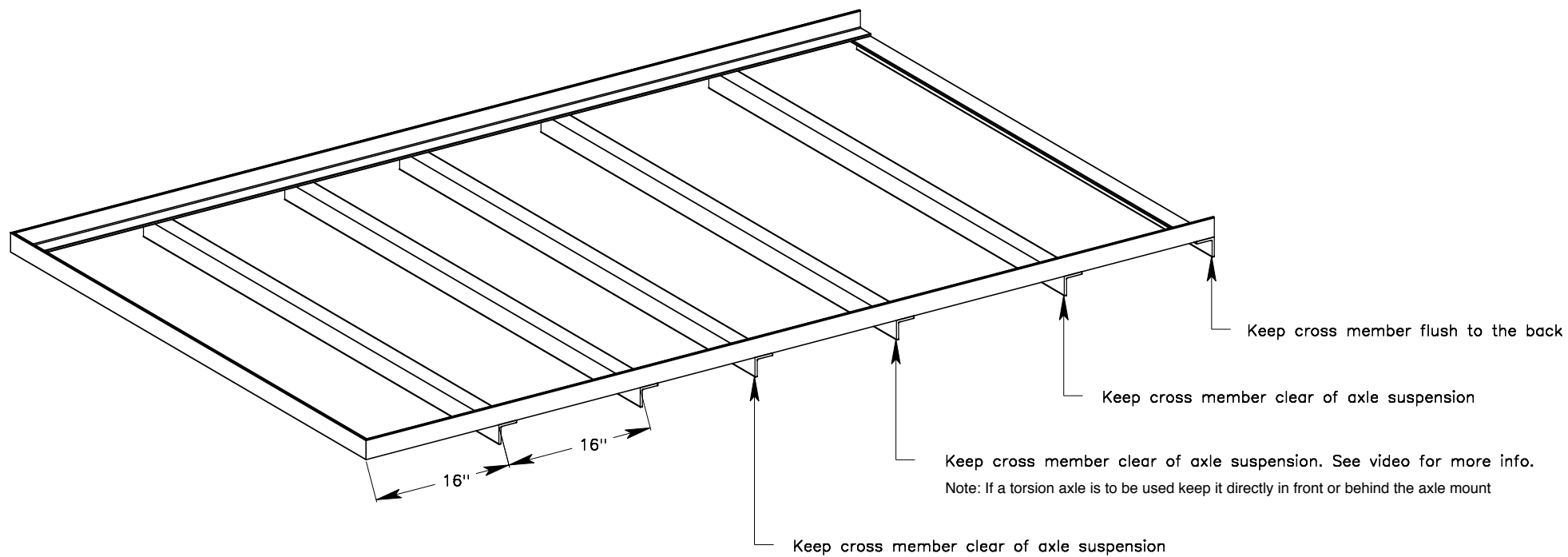
Quantity: 1



Side frame rail

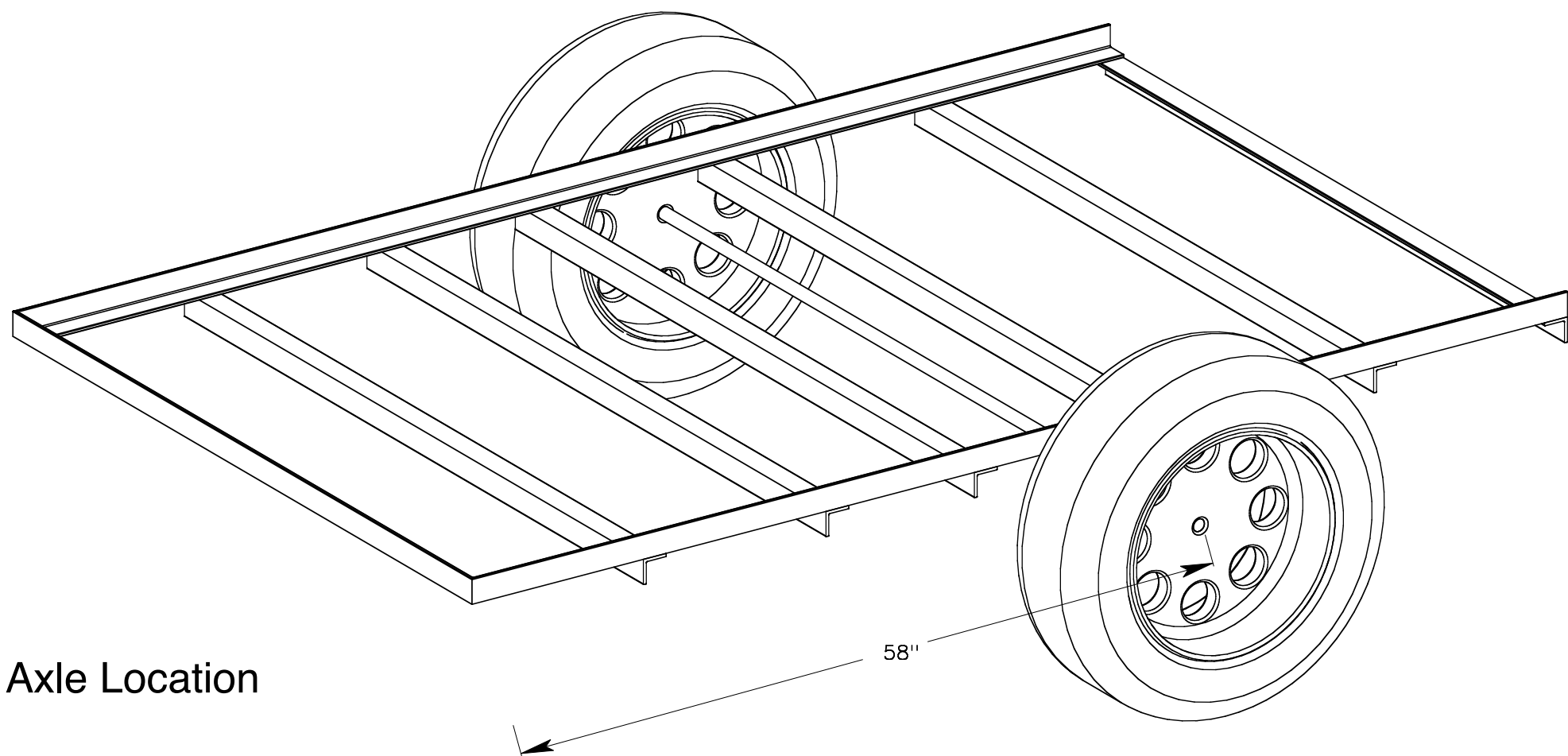
Quantity: 2 (1 right hand 1 left hand)

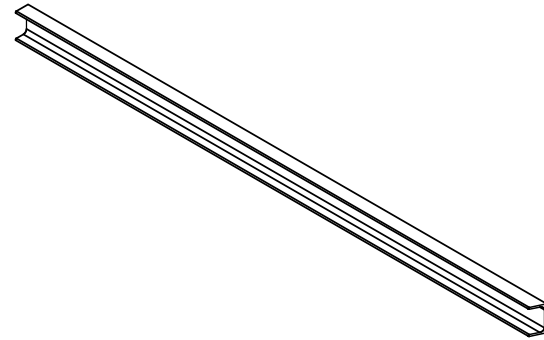
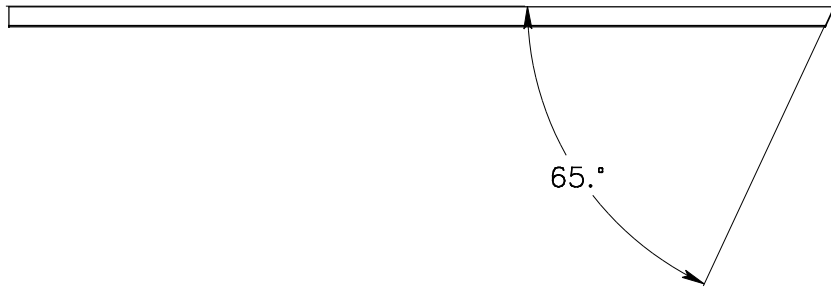
Weld everything just enough to hold for now as long as the frame is square and you have determined final axle location. The welding will be completed once more parts are added.



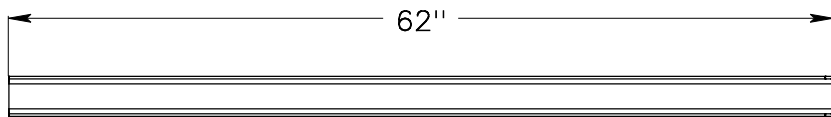
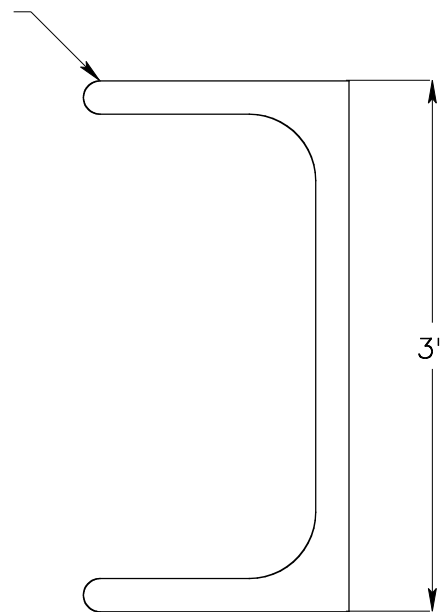
Frame assembly

See building notes or video for more details





3" x 3.5 LB. Channel

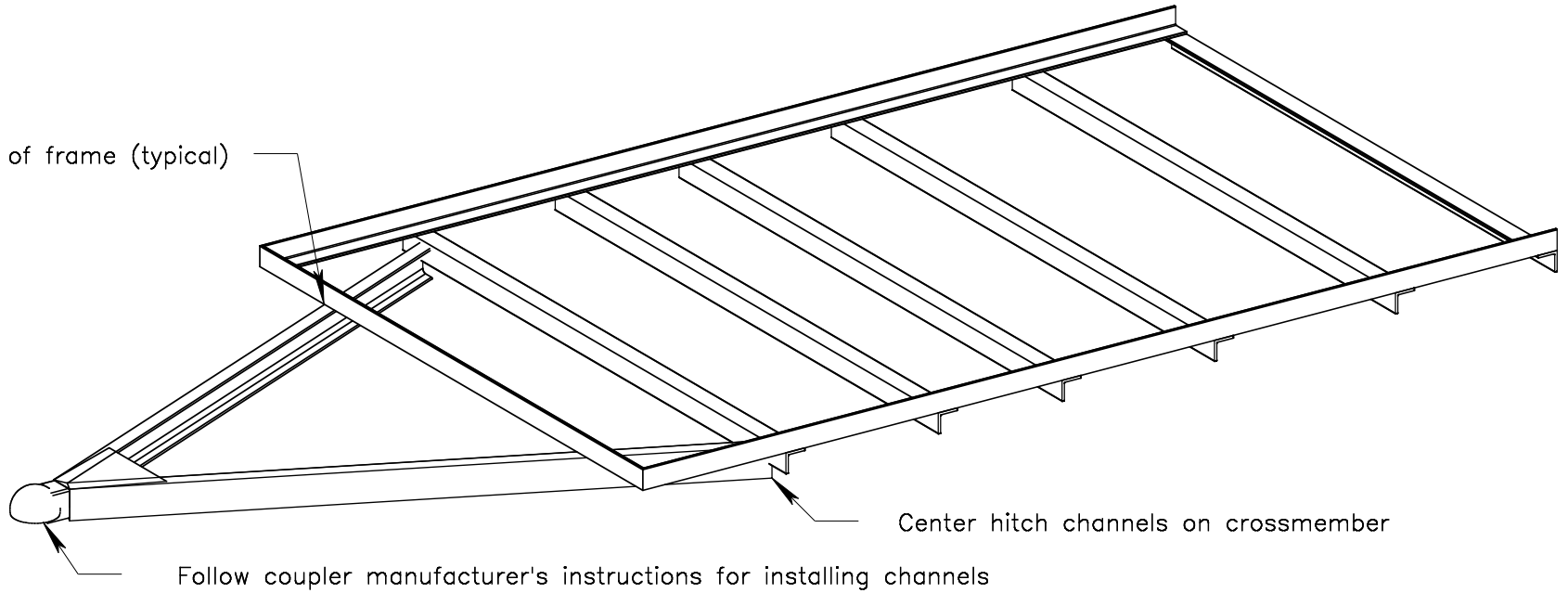


Hitch Channel

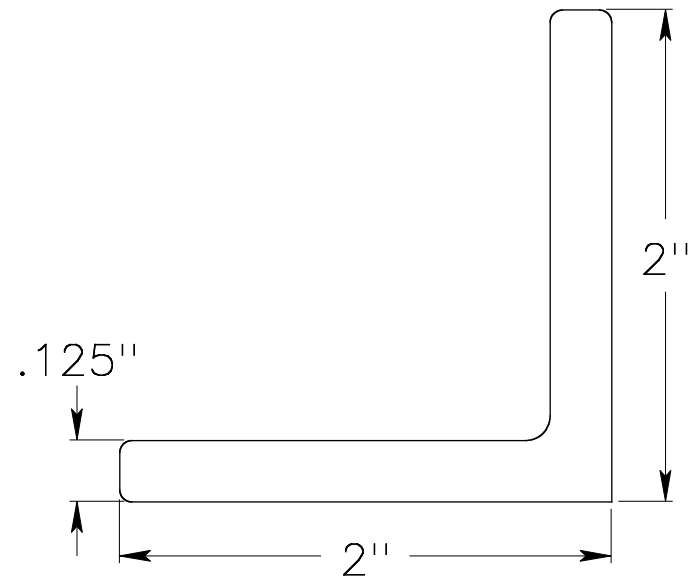
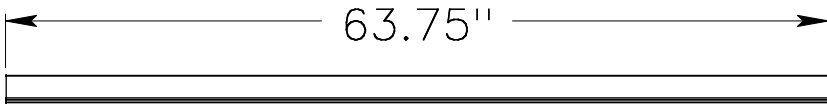
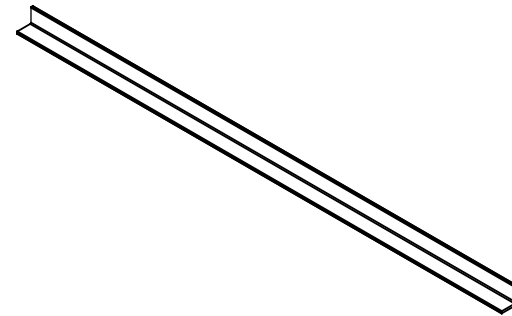
Quantity: 2 (1right hand 1 left hand)

Weld all hitch parts 100% after squaring everything up.  
See video for details on squaring and centering the hitch.  
Note: These are critical welds.

Keep tight to bottom of frame (typical)

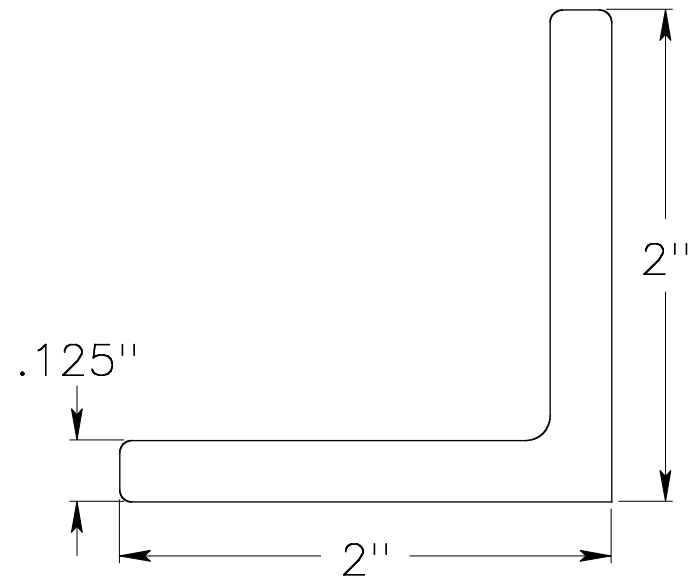
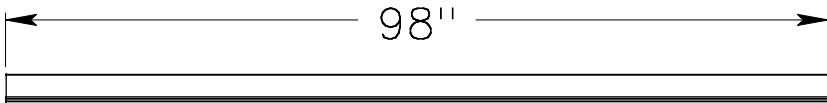
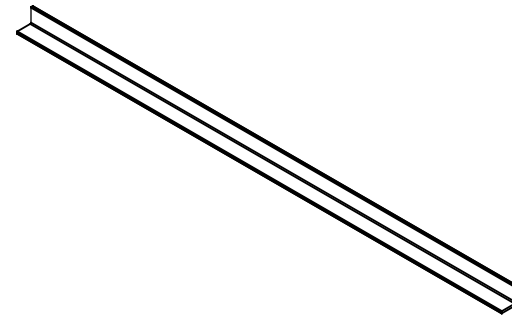


Hitch assembly



Front top rail

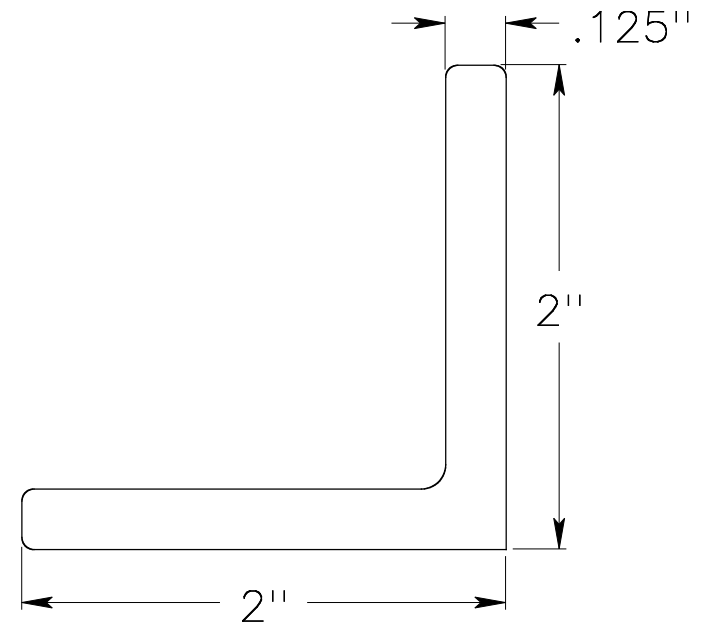
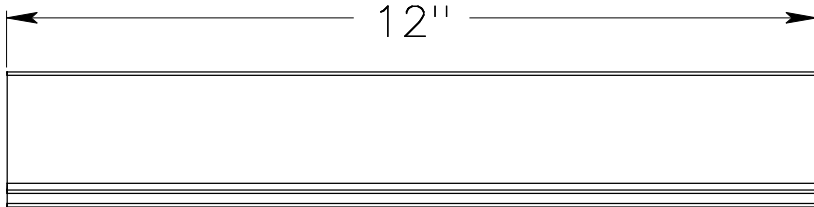
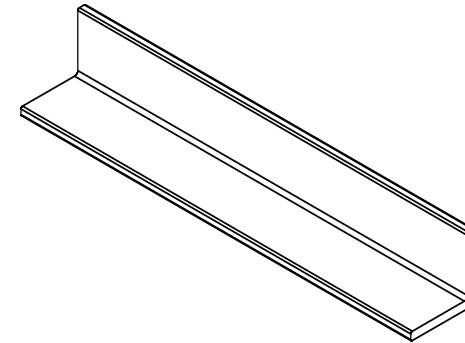
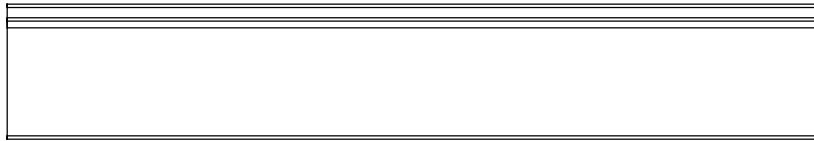
Quantity: 1



Side top rail

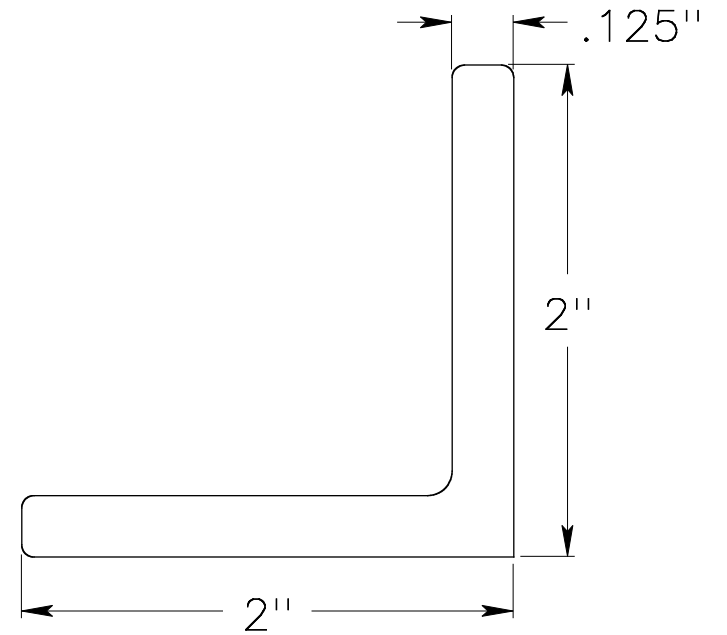
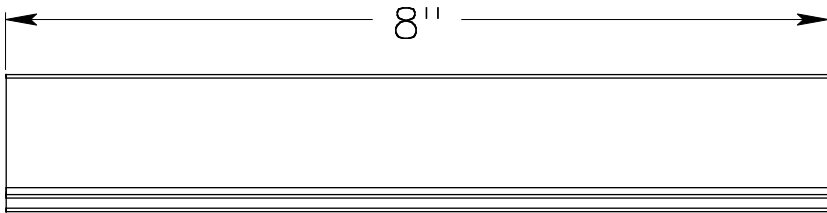
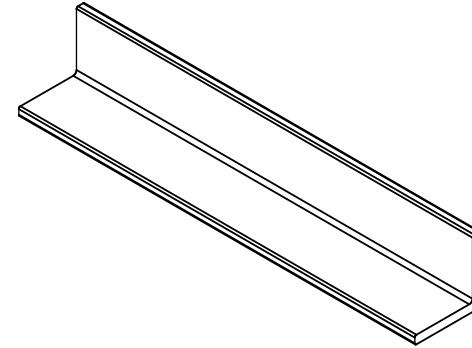
Quantity: 2





Top rail support bracket

Quantity: 12

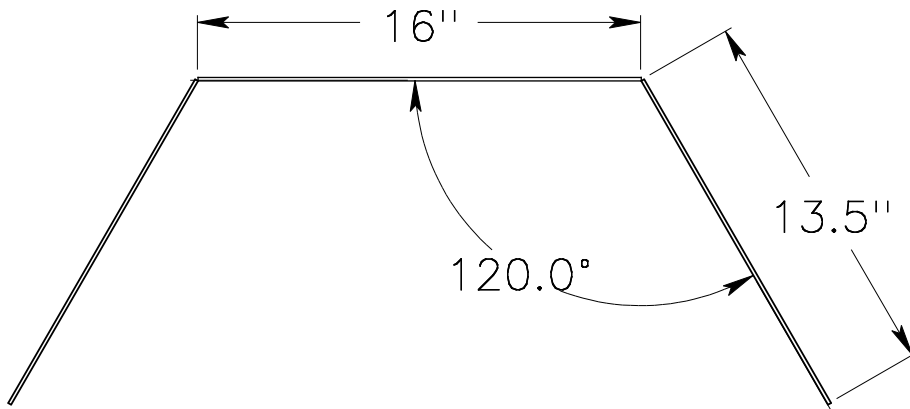
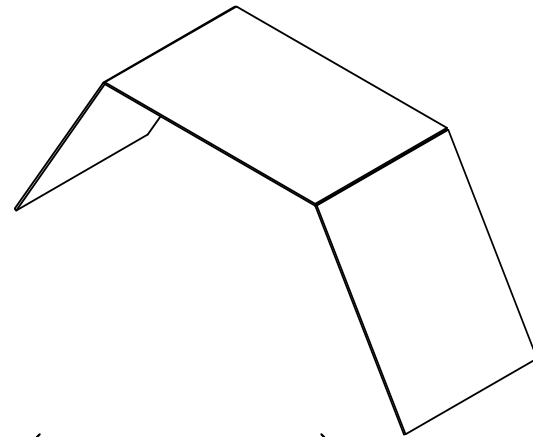


Tail light bracket

Quantity: 2



.125" flat sheet (all 3 pieces)

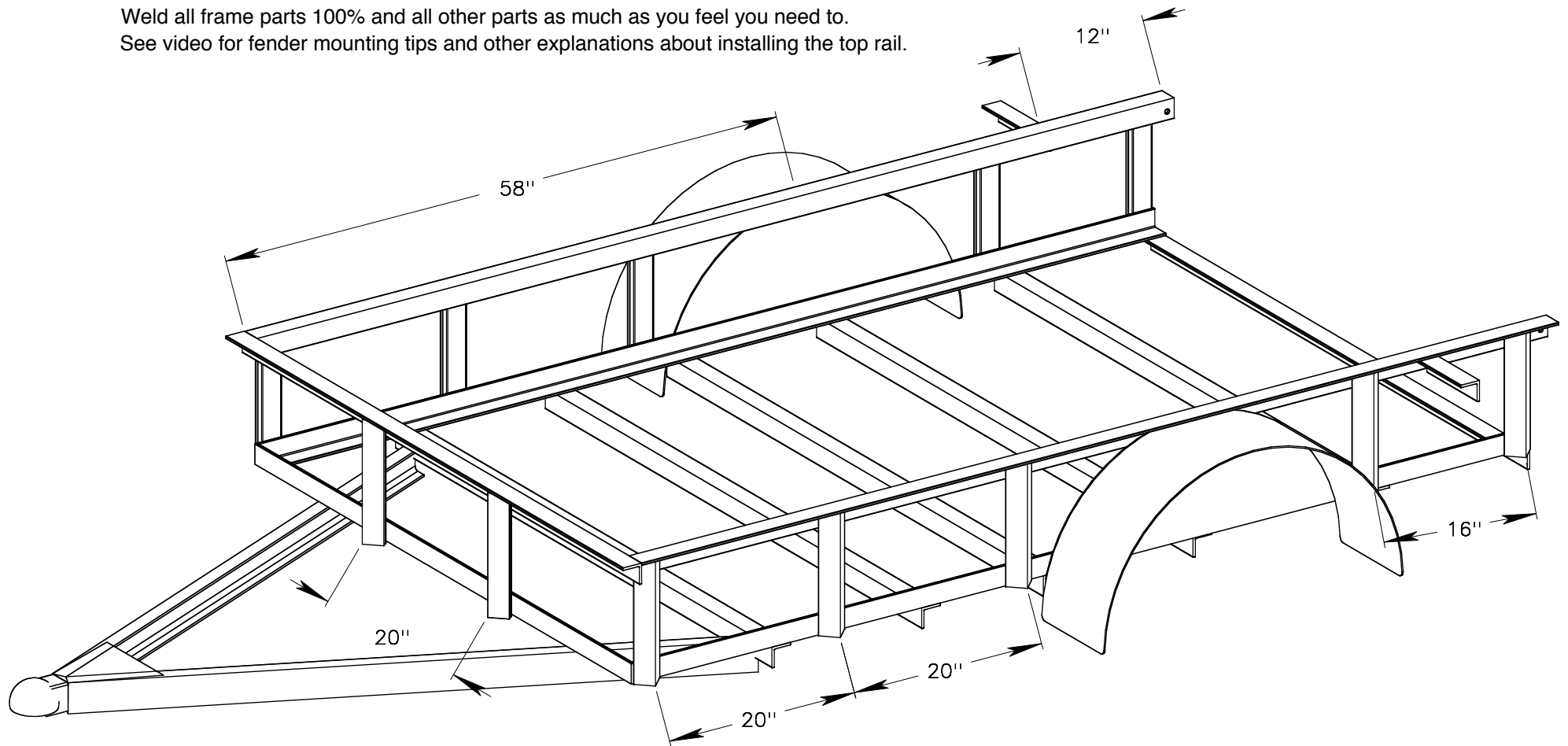


See building notes before making fenders due to many different variables.

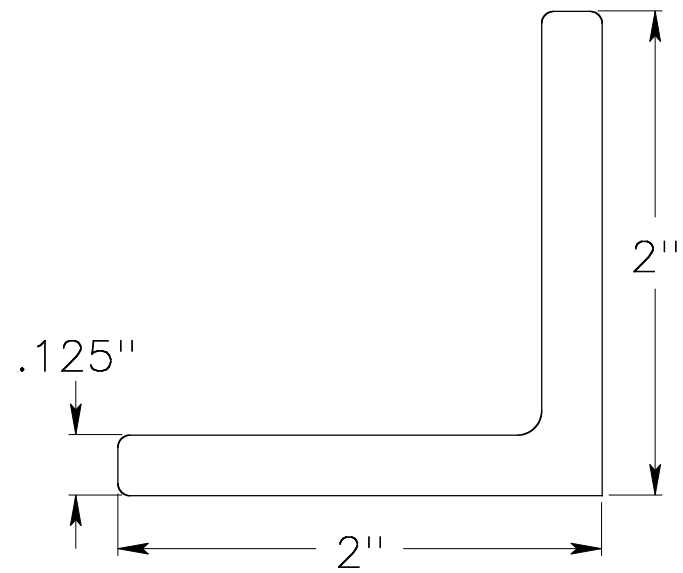
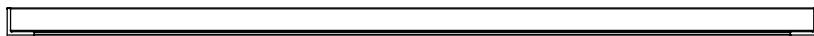
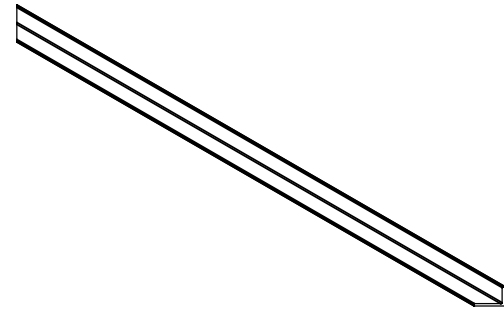
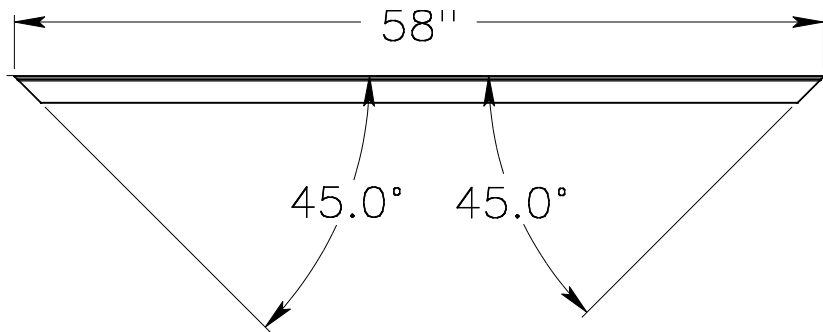
Fender

Quantity: 2

Weld all frame parts 100% and all other parts as much as you feel you need to.  
See video for fender mounting tips and other explanations about installing the top rail.

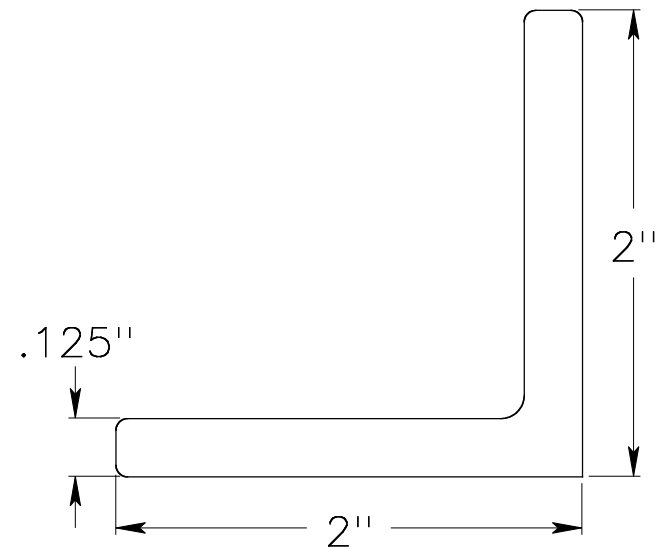
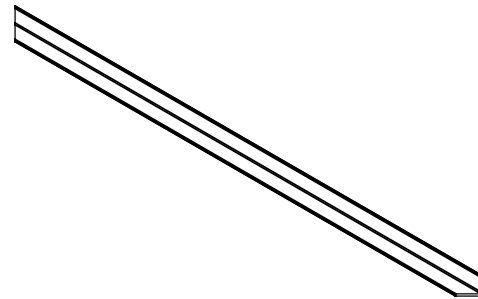
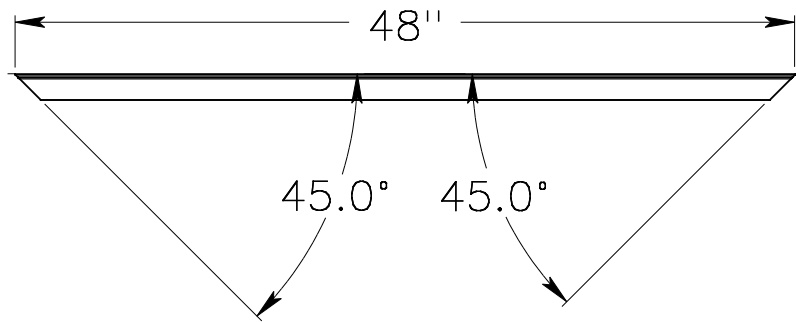


Top Rail Assembly



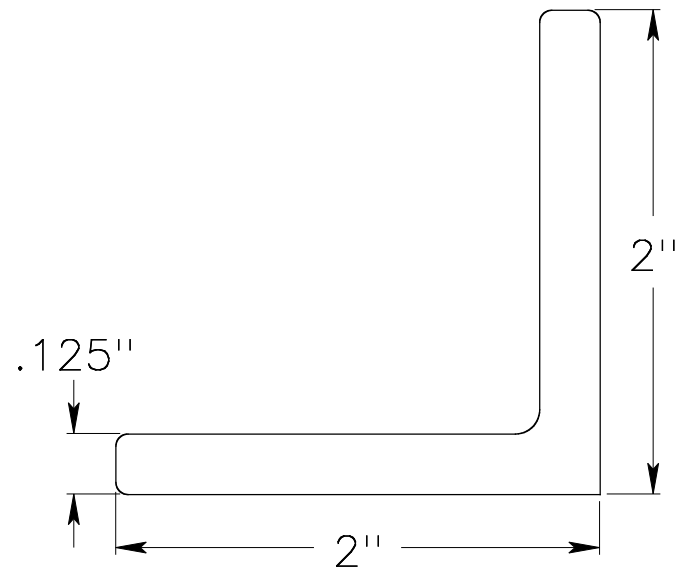
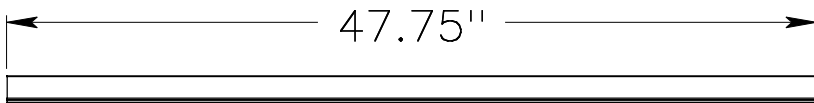
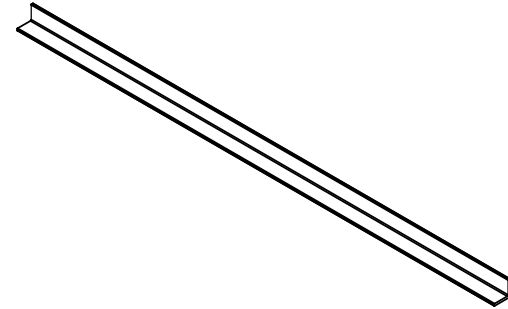
Front and back ramp frame

Quantity: 2



Side ramp frame

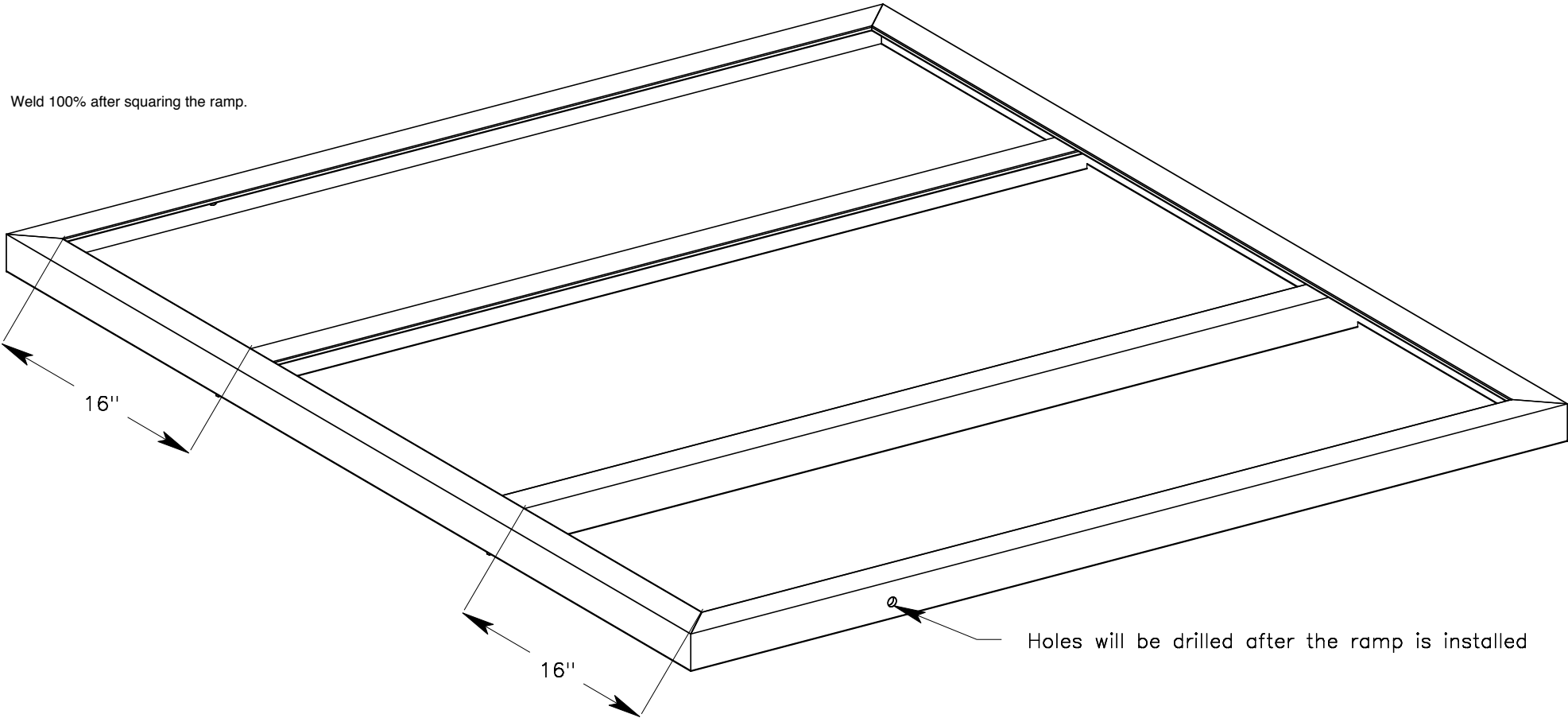
Quantity: 2



Note: Add more crossmembers if you need a heavy duty ramp.

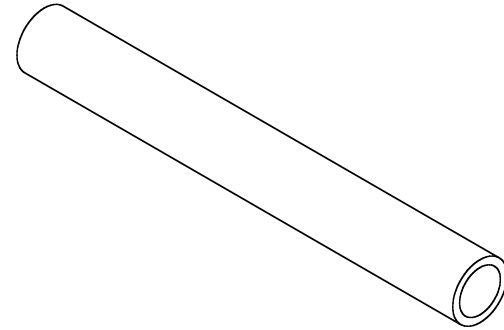
Ramp crossmembers      Quantity: 2 (minimum)

Weld 100% after squaring the ramp.

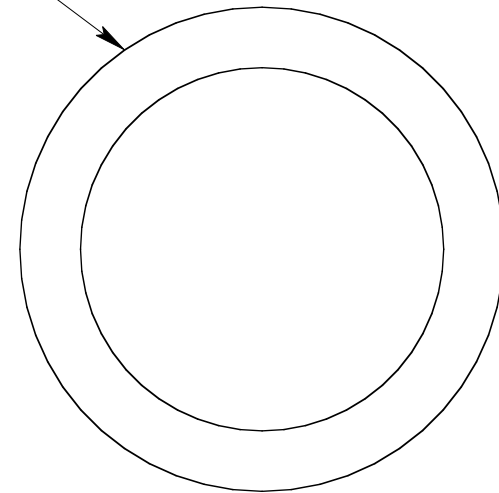
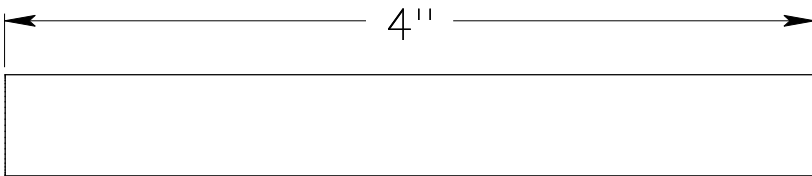
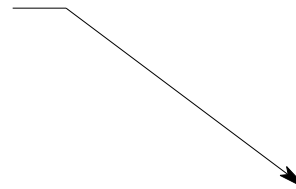


Ramp Assembly



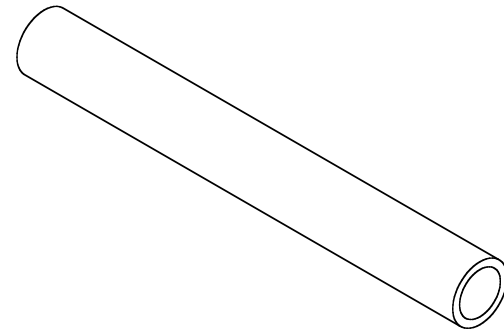


.75" schedule 40 black pipe

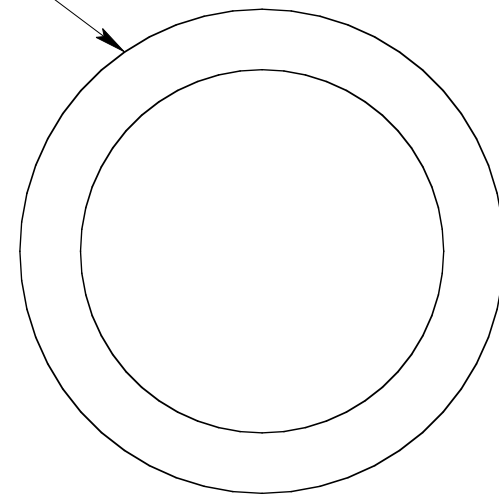
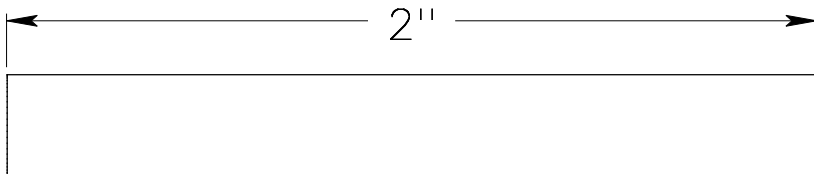
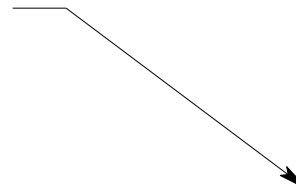


Ramp hinge bushing (Large)

Quantity: 2

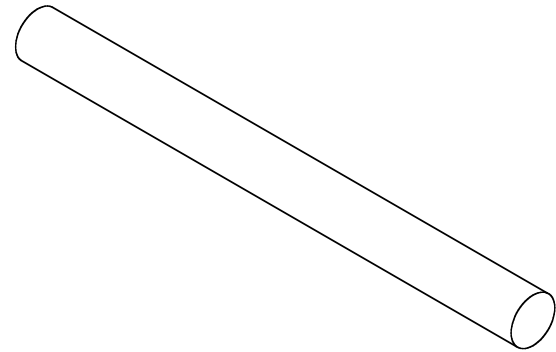


.75" schedule 40 black pipe

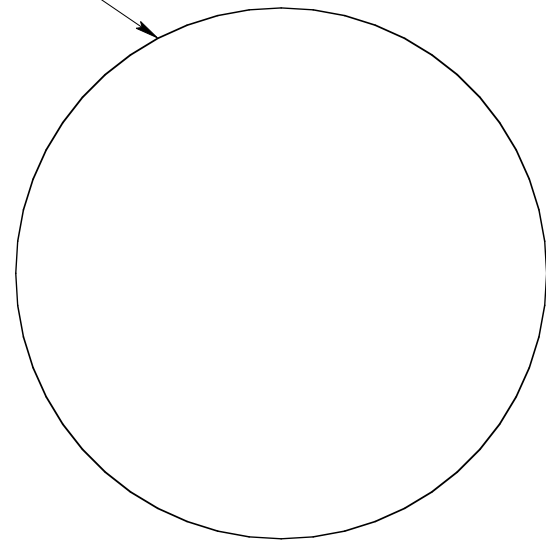
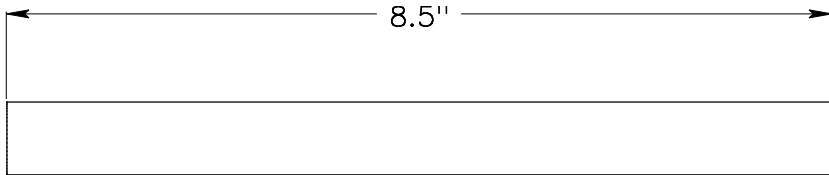
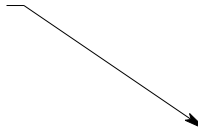


Ramp hinge bushing (Small)

Quantity: 4

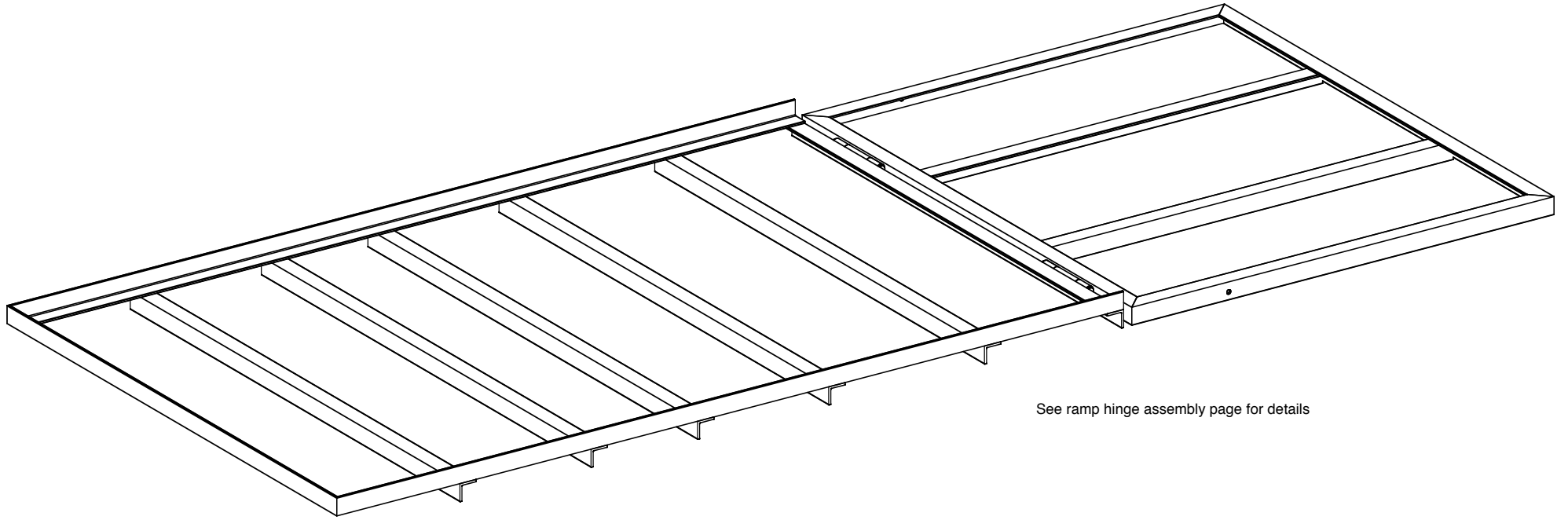


.75" solid rod



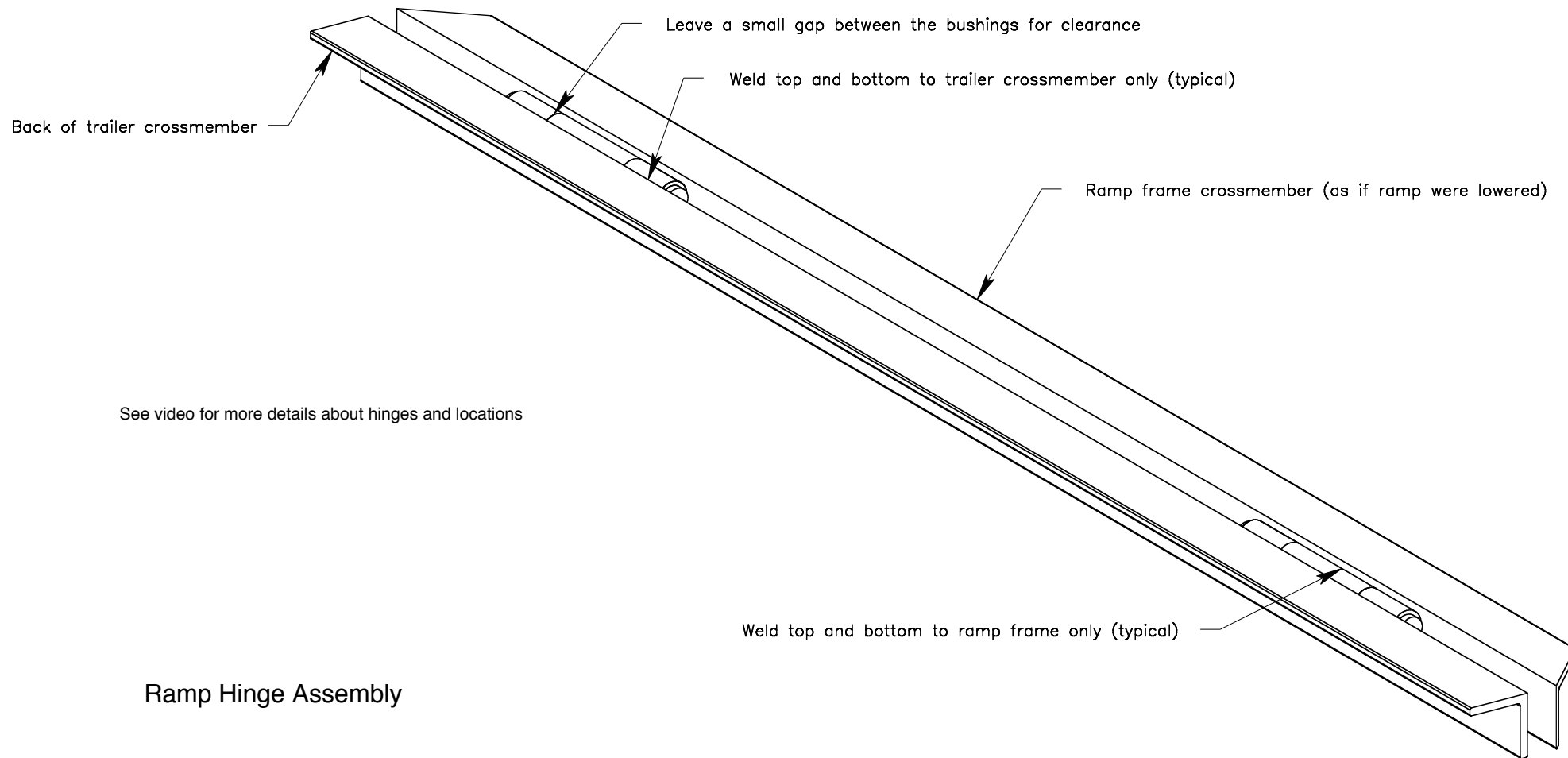
Ramp Hinge Pin

Quantity: 2

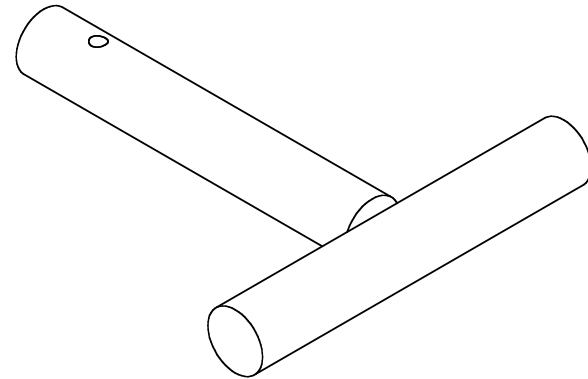
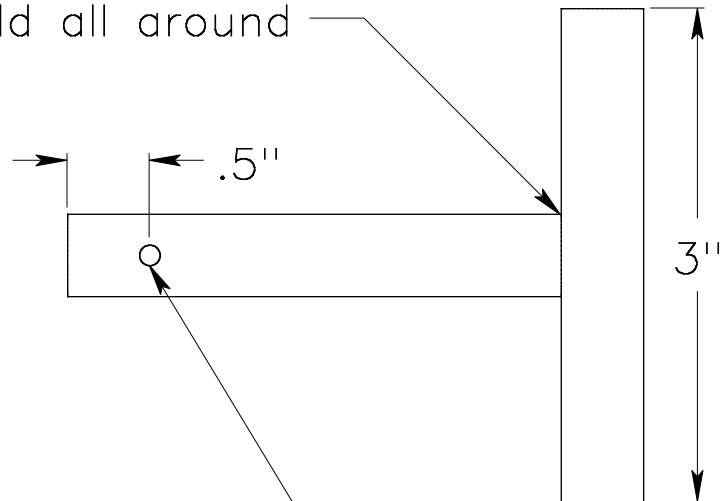


See ramp hinge assembly page for details

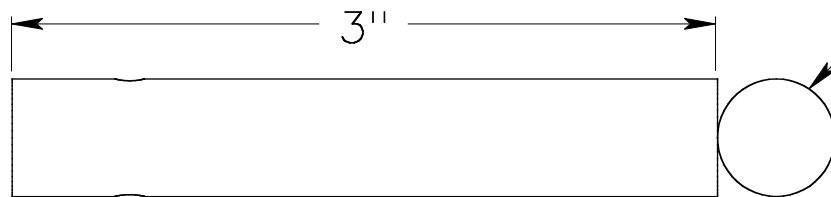
Ramp hinge assembly full view



Weld all around



.125" hole (or whatever size keeper pin you use)

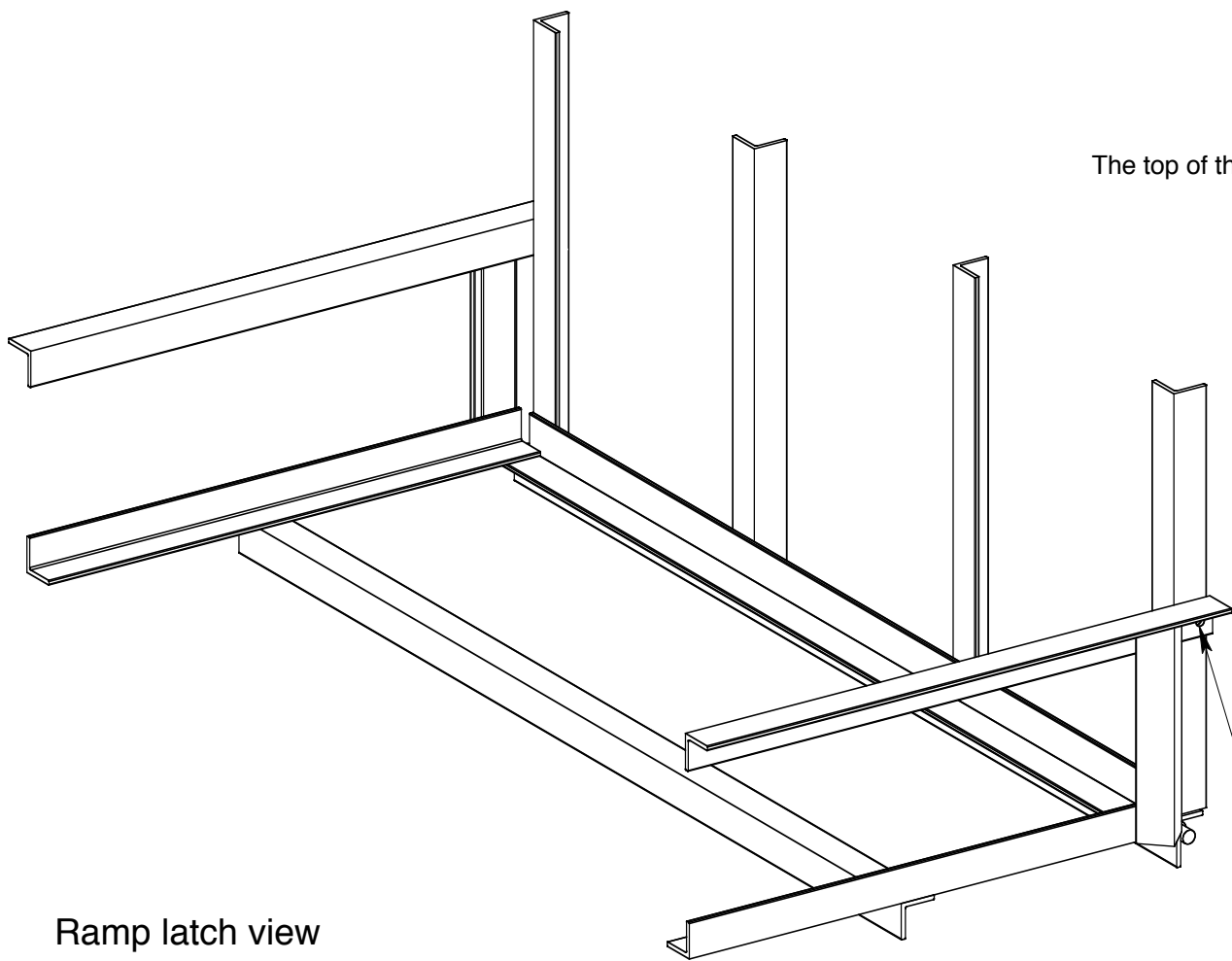


.5" solid rod (both pieces)



Ramp latch pin

Quantity: 2



The top of the ramp and the front of the trailer are cut off for clarity

Drill hole for latch pin

Ramp latch view

### Side Marker (Amber)

Located as far forward as  
practical exclusive of tongue  
(D.O.T. MVSS 108)

