

Utility Trailer 5' x 8' Building Notes

This is a standard utility trailer model that is currently on the market (at least in Minnesota). The price tag seems to average around \$900 - \$1100. There is no doubt that you can build the same thing much cheaper.

These 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 on 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 just in case someone wanted to build their own anyway. If you plan on using a different size tire you should check to make sure it will fit. 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.

The tires the trailer was designed around are 205/75-D14. This is a really common tire size for that type of axle.

The tail light brackets should be able to accommodate any tail lights you would use for this type of trailer. I did not include any wiring diagrams on the plans. If you do a quick Google search you will find more information than you will know what to do with.

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 should be fine. Just make sure that it will fit around a 2x2 square

tube. Also make 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.

Utility Trailer 8'x5' Total Material List

13'8" x 2" x 2" x 3/16" square tube

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

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

5' x 3/4" solid rod

1' x 1/2" solid rod

2'8" x 3/4" schedule 40 black pipe

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

Utility Trailer 5' x 8' 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 (side frame rail)

Hitch

- 2 - 52"x2x2x3/16 square tube (tongue hitch gusset tube)
- 1 - 60"x2x2x3/16 square tube (tongue hitch)

Top Rail

- 1 - 63.75"x2x2x1/8 angle iron (front top rail)
- 2 - 98"x2x2x1/8 angle iron (side top rail)
- 11 - 12"x2x2x1/8 angle iron (top rail support bracket)
- 2 - 8"x2x2x1/8 angle iron (tail light bracket)

Ramp

- 6 - 58"x2x2x1/8 angle iron (ramp parts) *use 3/16 thick if you need a heavy duty ramp
- 4 - 8"x3/4 schedule 40 black pipe (ramp hinge bushing)
- 1 - 60"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.

Top view

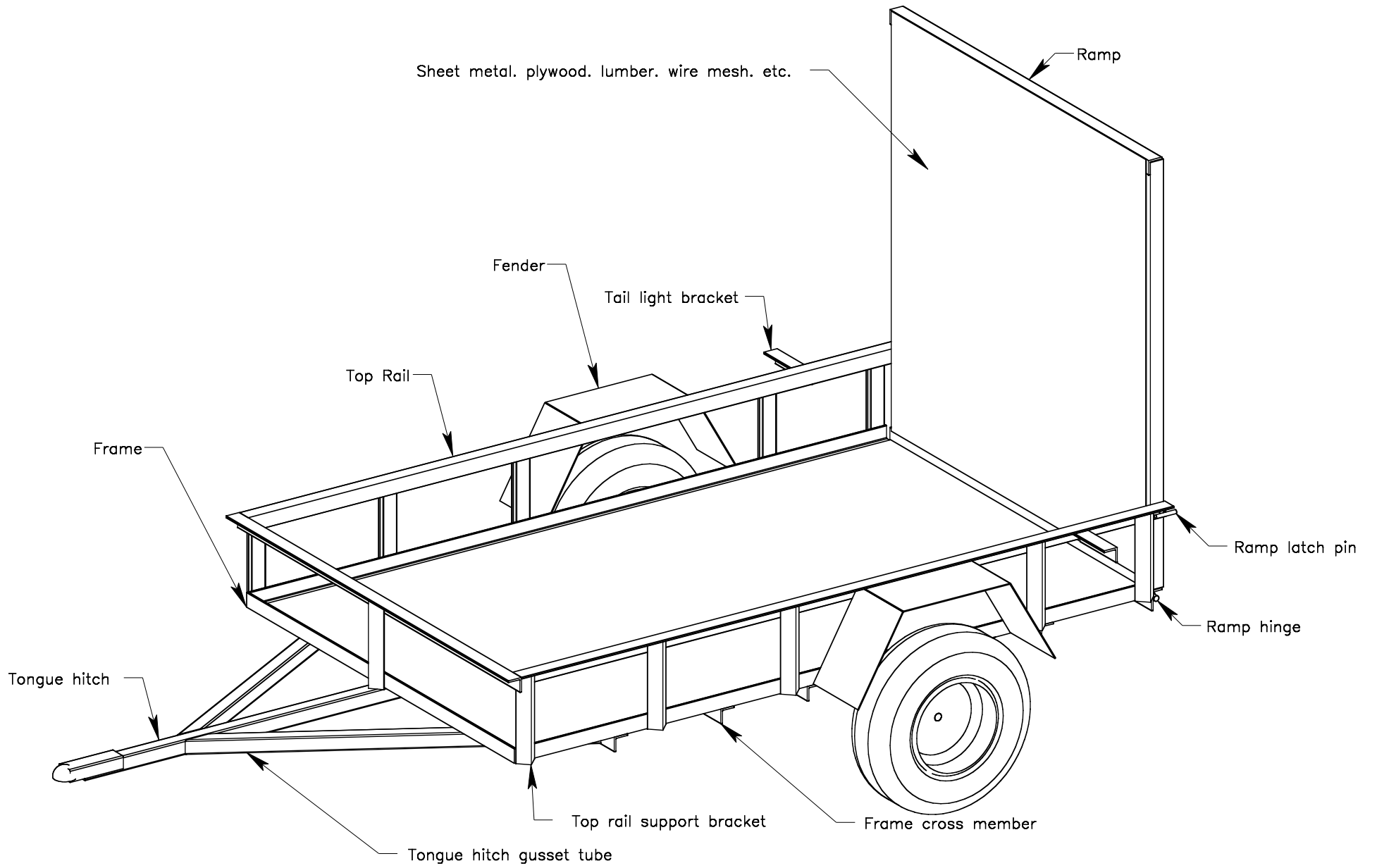
Picture view

Note: this is not a drawing it is like a map legend

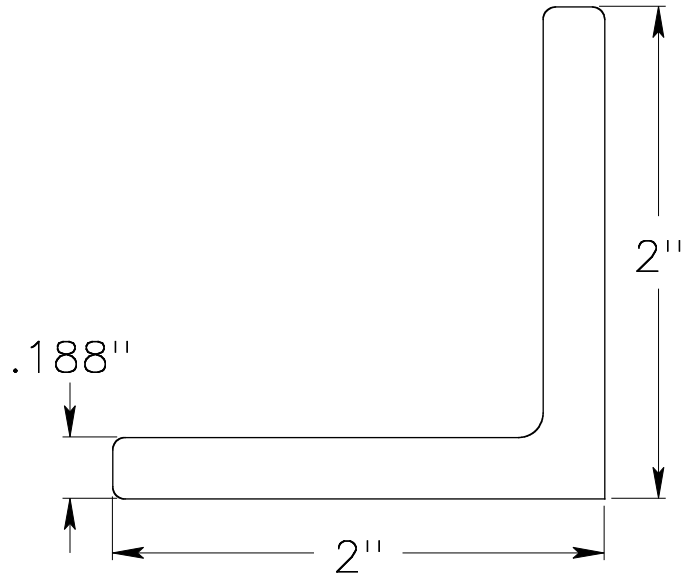
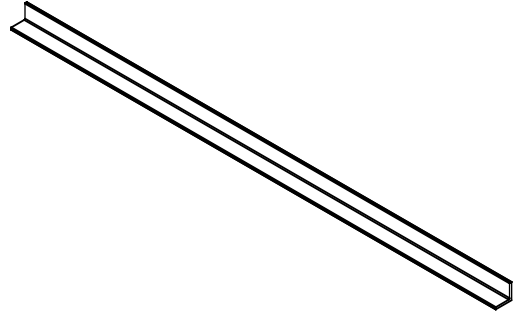
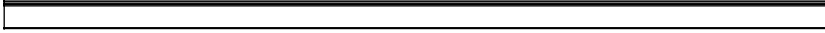
Front view

Right side view

Part name & quantity (this is the way all the 4 view drawings are drawn)

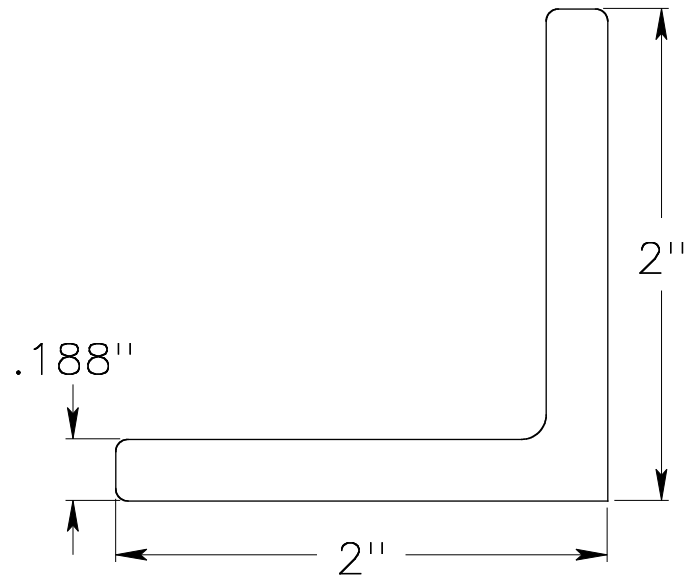
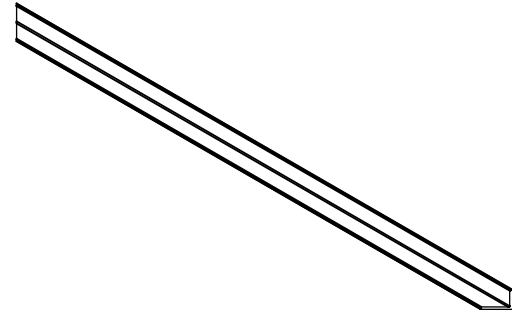
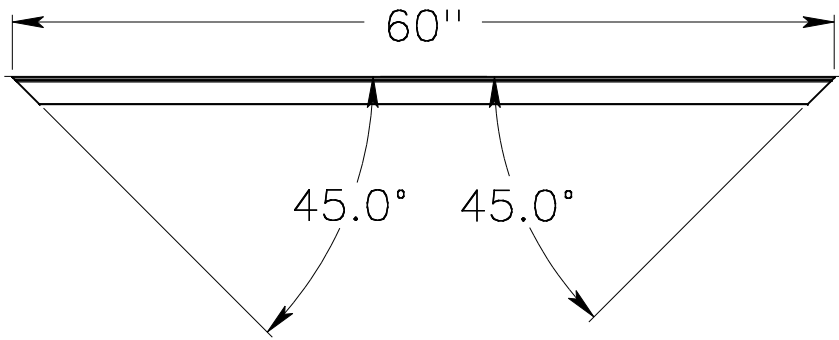


Utility trailer parts labeled



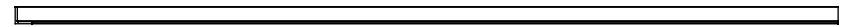
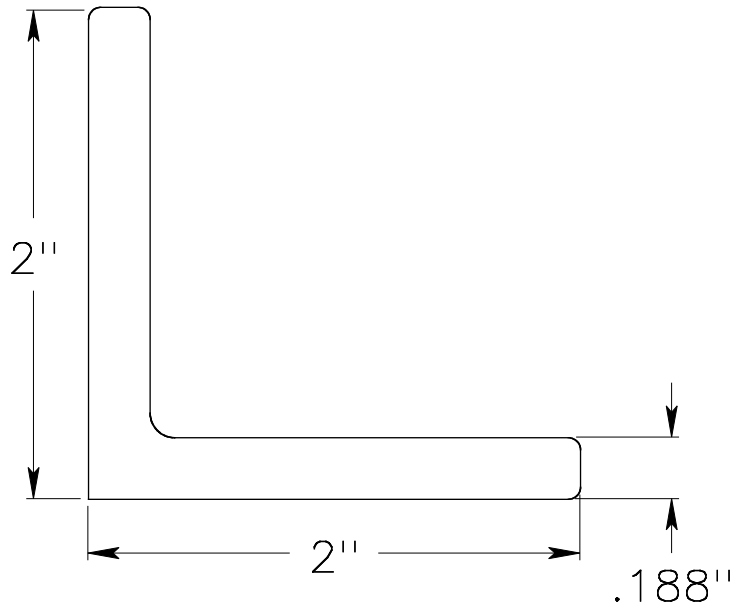
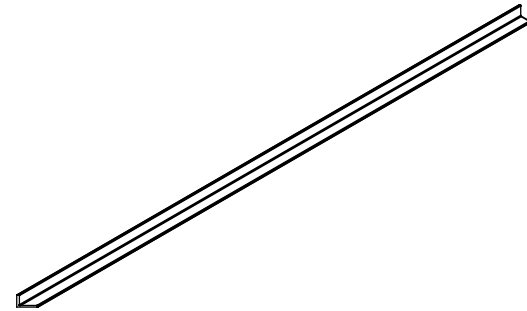
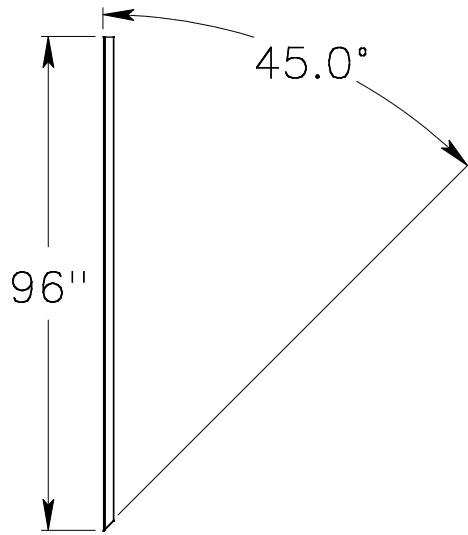
Frame cross member

Quantity: 6



Front frame rail

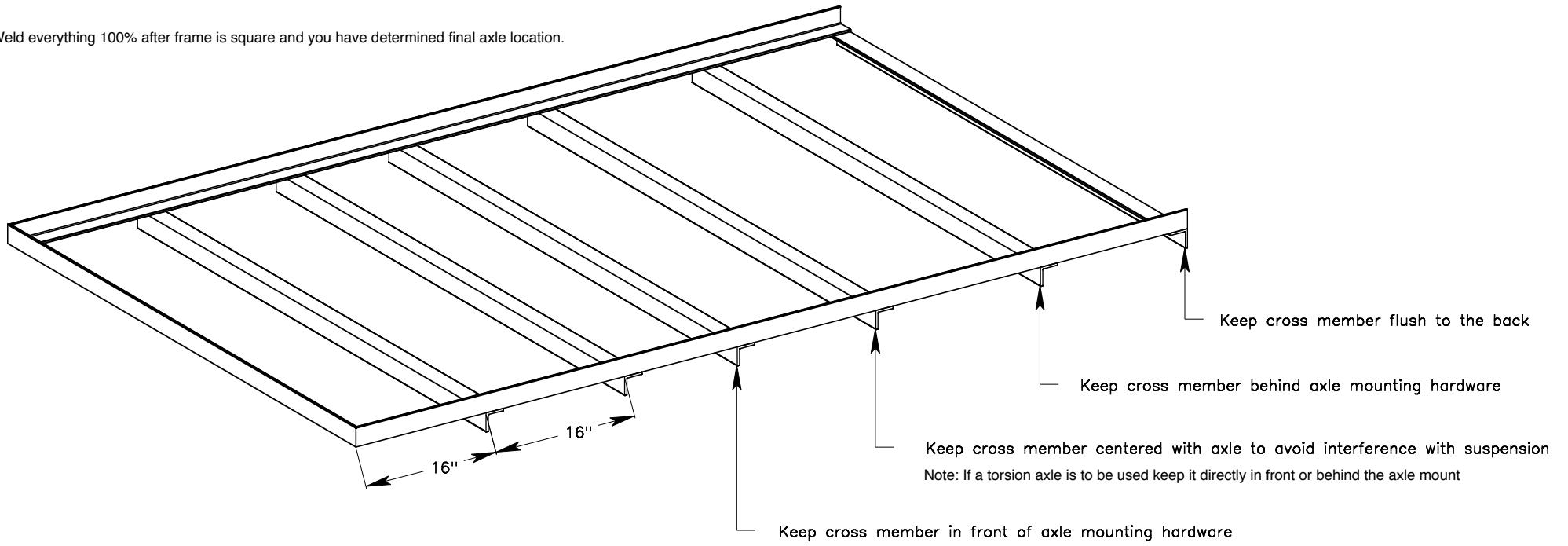
Quantity: 1



Side frame rail

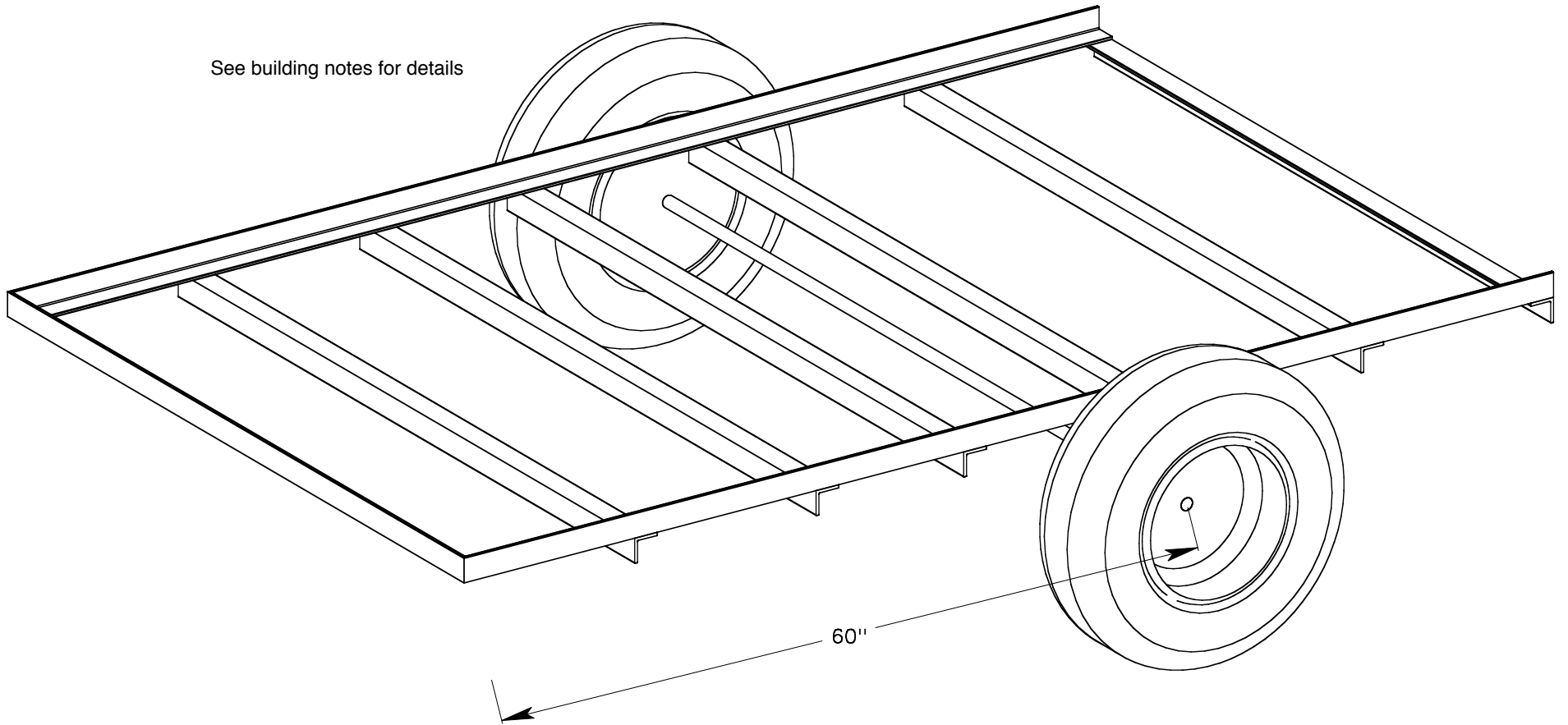
Quantity: 2 (1 right hand 1 left hand)

Weld everything 100% after frame is square and you have determined final axle location.

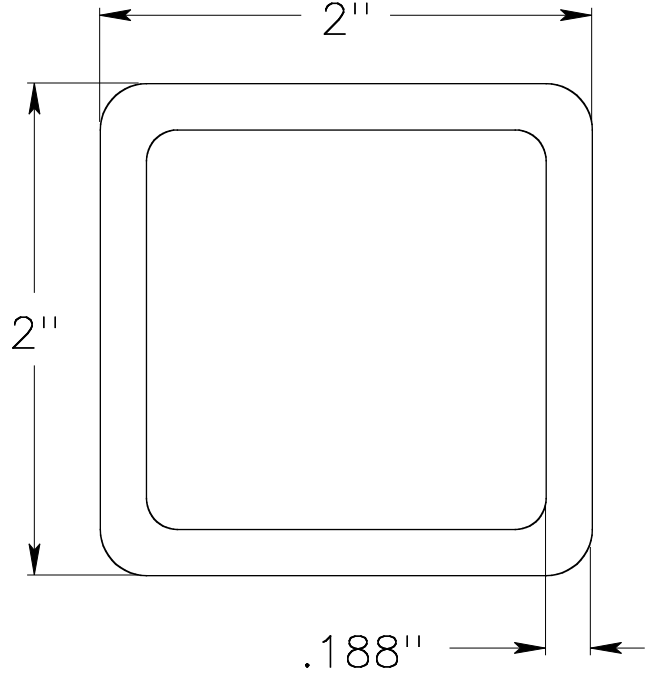
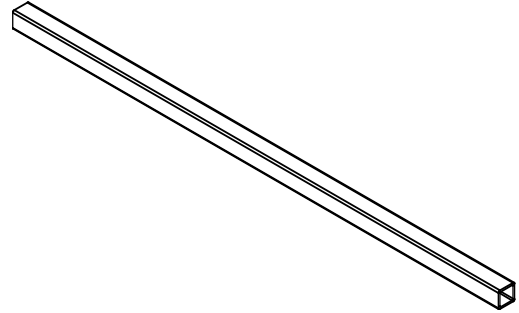


Frame assembly

See building notes for details

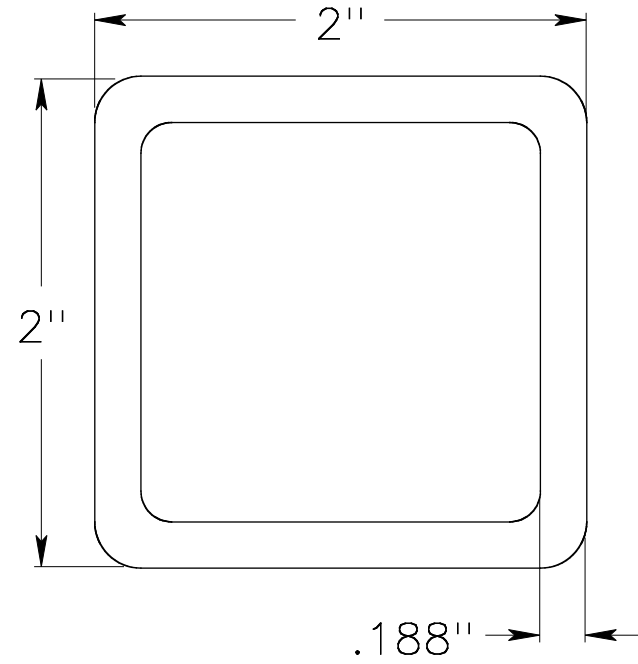
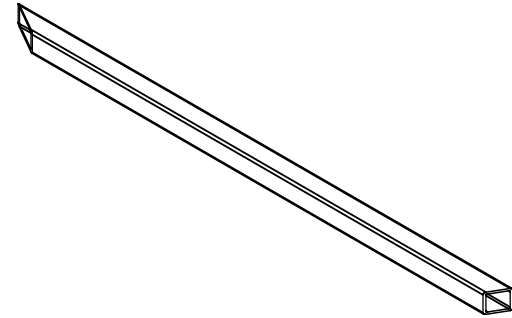
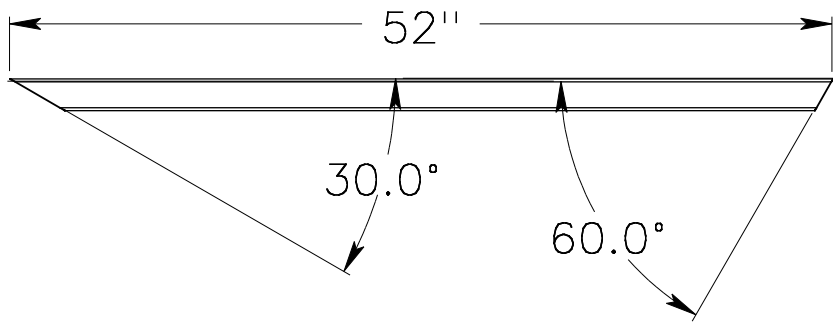


Axle location



Tongue hitch

Quantity: 1

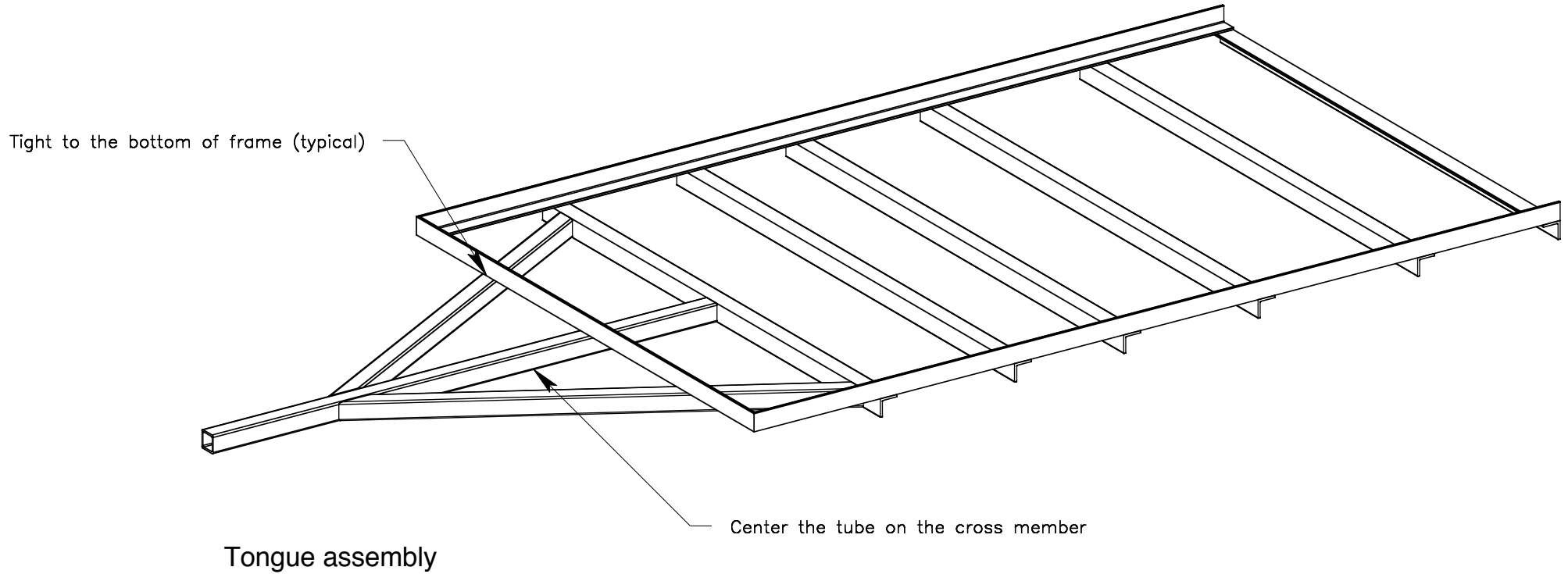


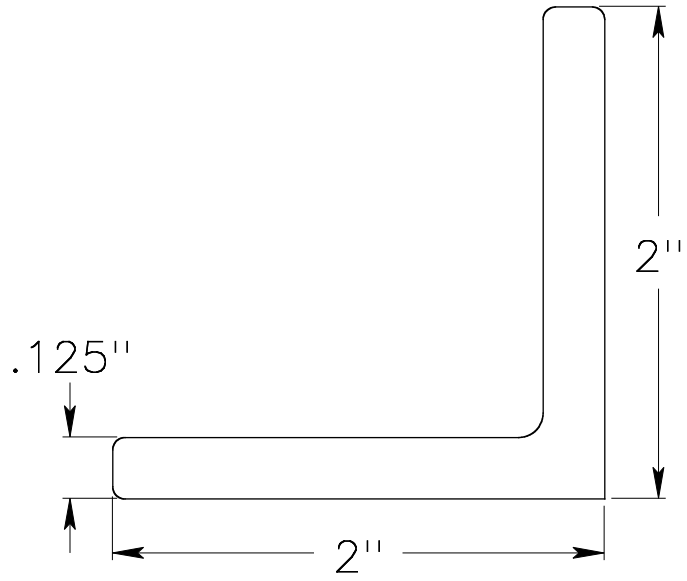
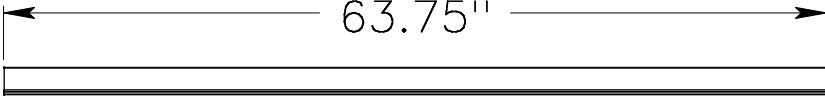
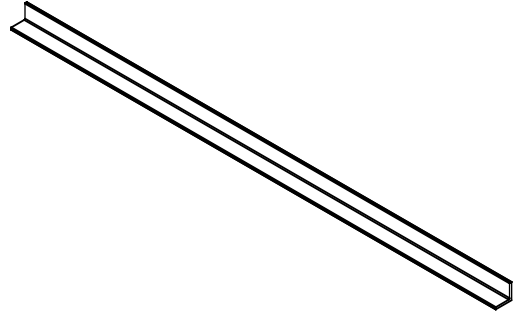
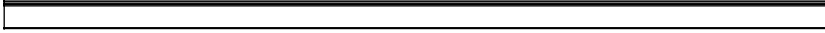
Tongue hitch gusset tube

Quantity: 2

Weld all parts 100% after squaring everything up.

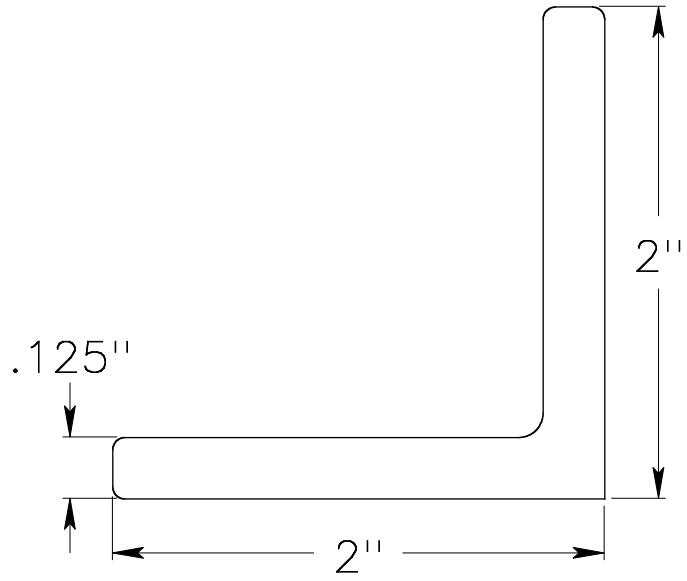
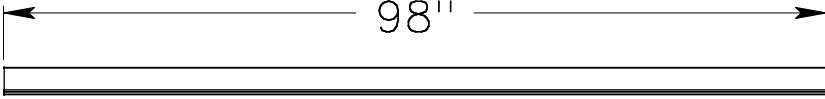
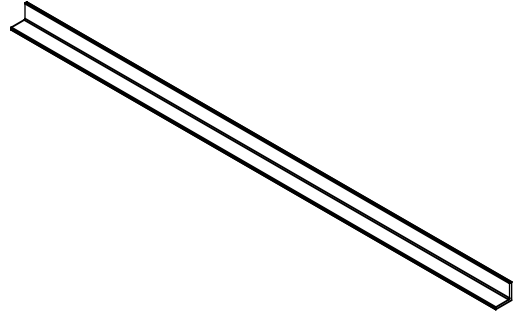
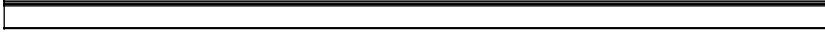
Note: These are all important welds to make sure the trailer stays attached to your vehicle.





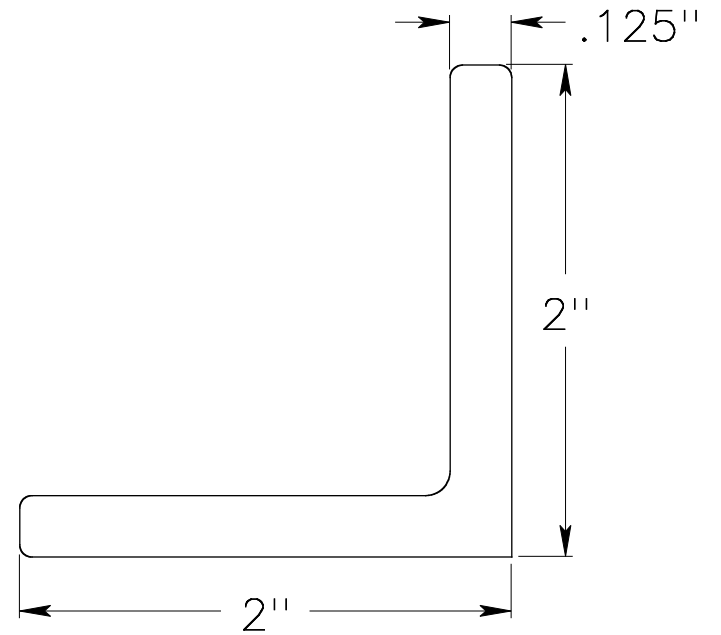
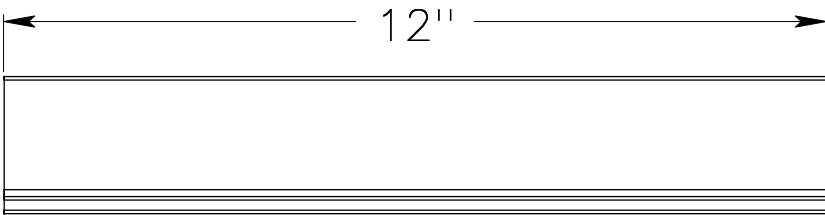
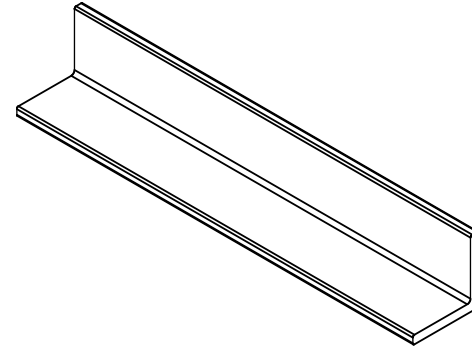
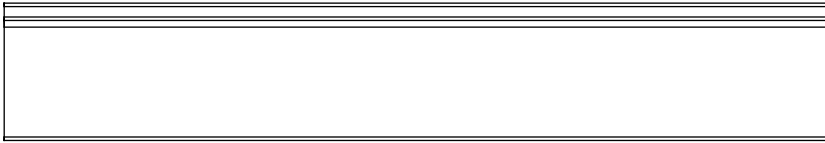
Front top rail

Quantity: 1



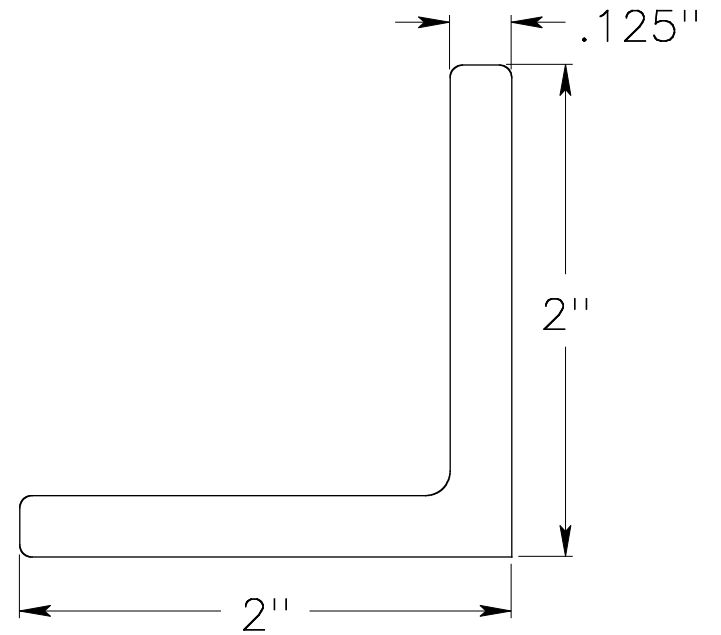
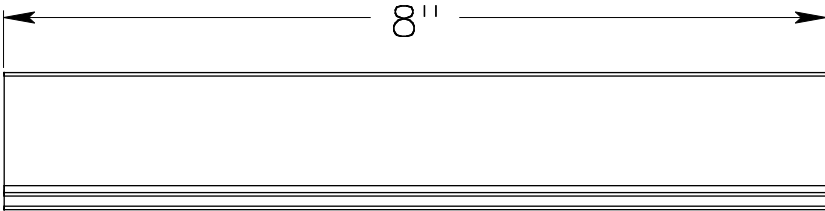
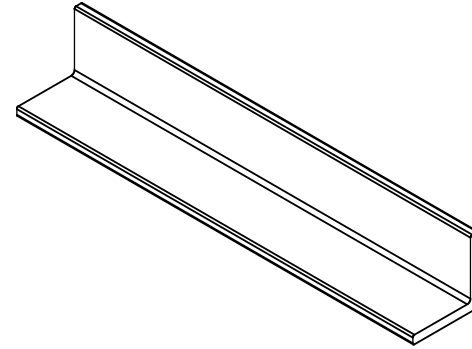
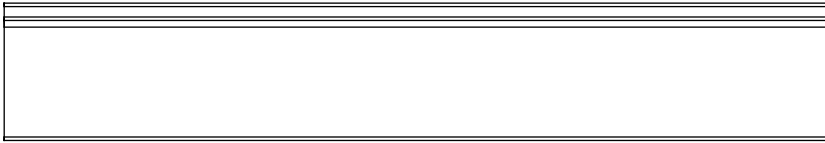
Side top rail

Quantity: 2



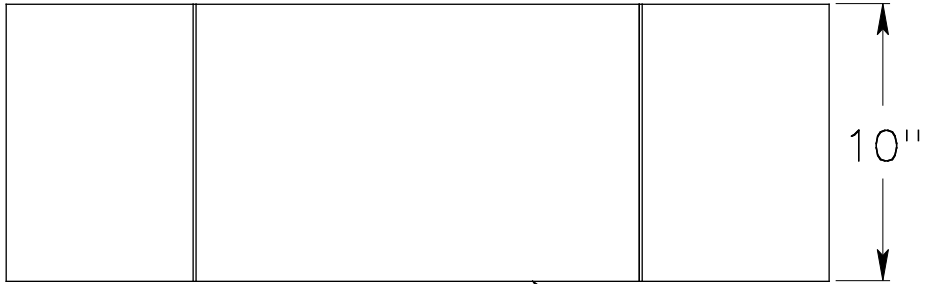
Top rail support bracket

Quantity: 11

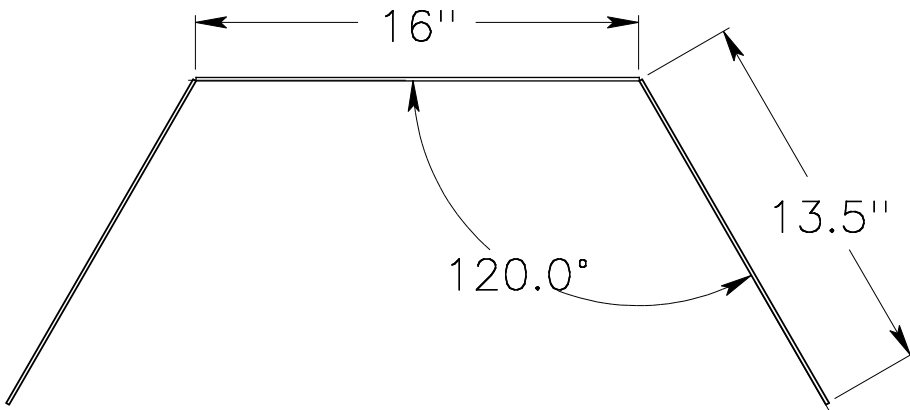
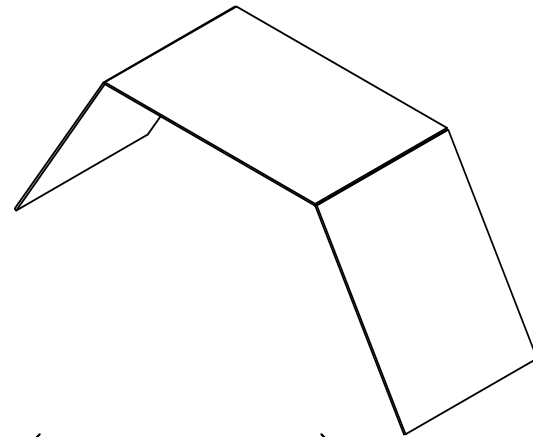


Tail light bracket

Quantity: 2



.125" flat sheet (all 3 pieces)



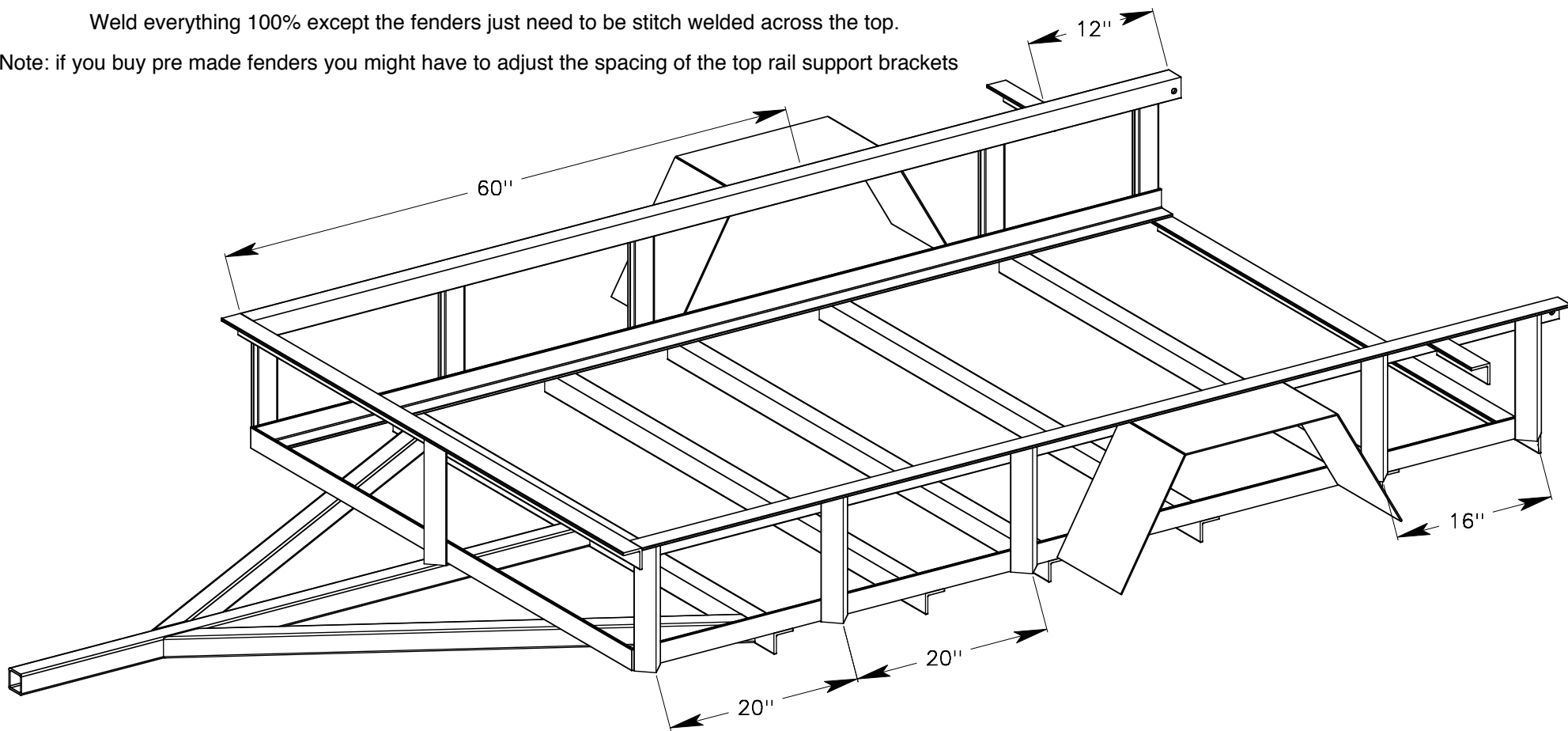
See building notes before making fenders due to many different variables.

Fender

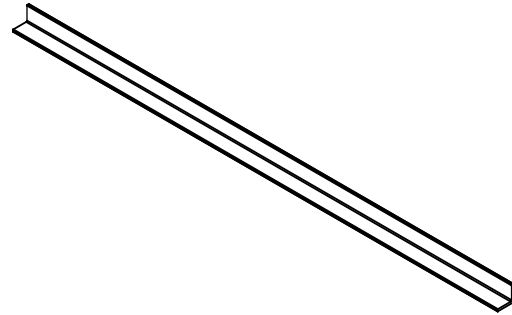
Quantity: 2

Weld everything 100% except the fenders just need to be stitch welded across the top.

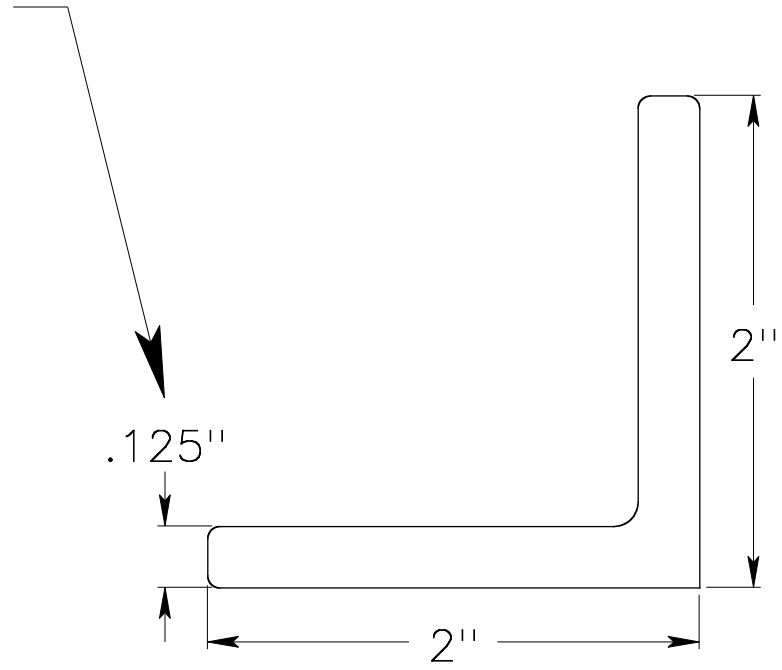
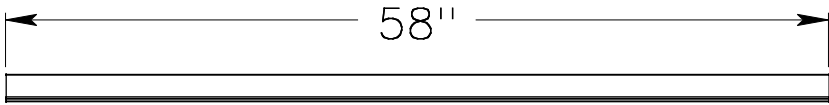
Note: if you buy pre made fenders you might have to adjust the spacing of the top rail support brackets



Top rail assembly



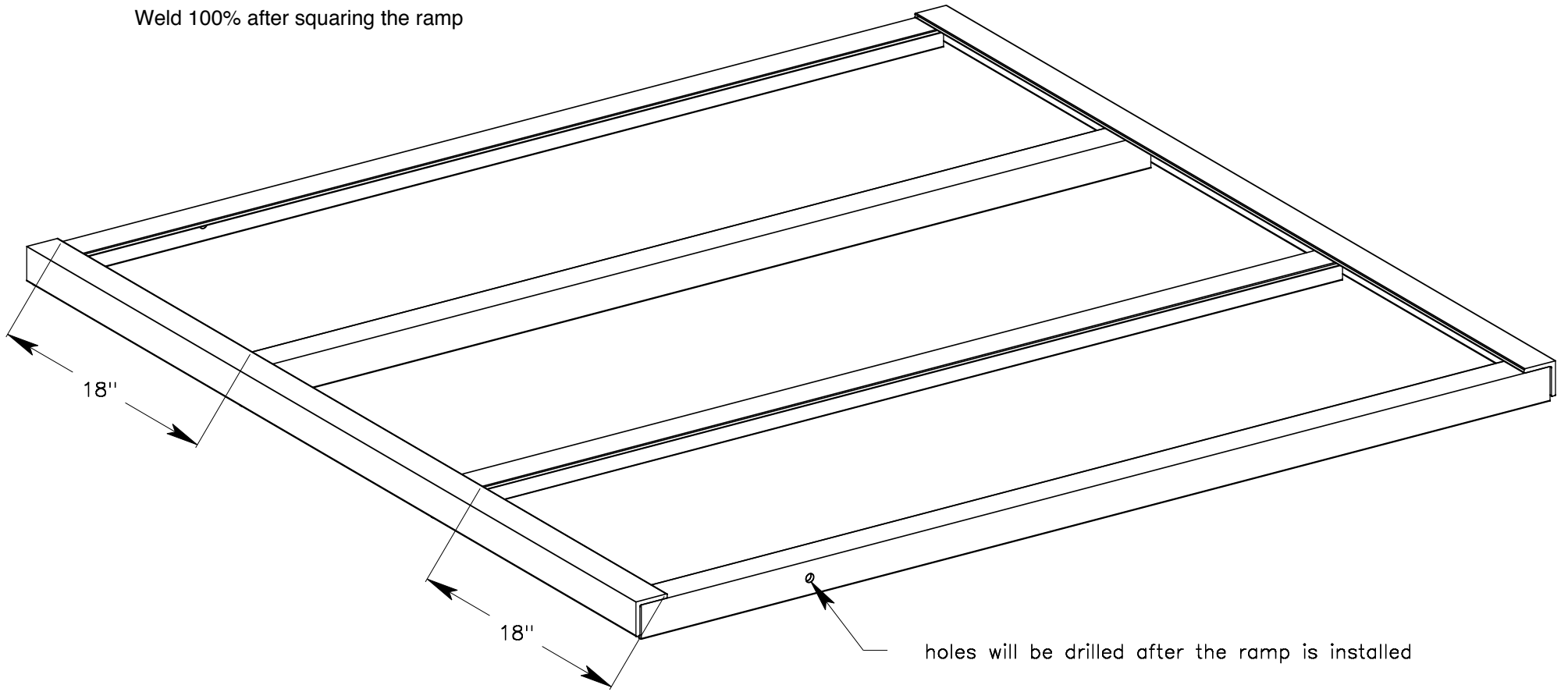
.188" for a heavy duty ramp



Ramp parts (all 6 ramp angle irons are the same)

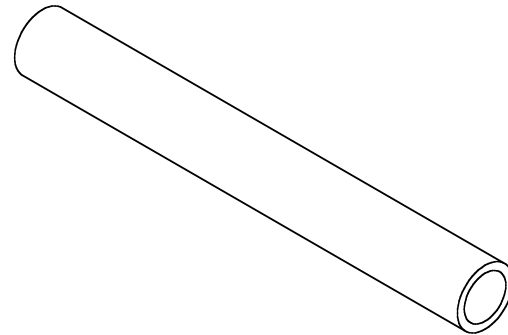
Quantity: 6

Weld 100% after squaring the ramp

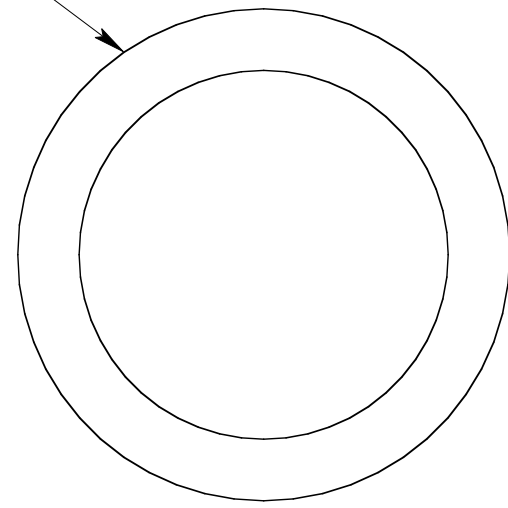
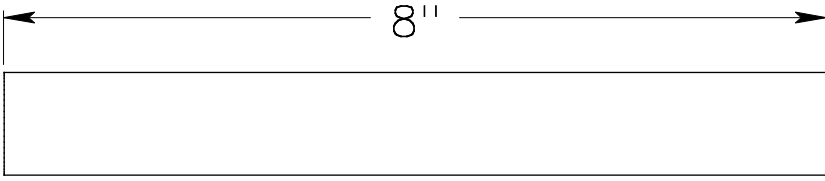
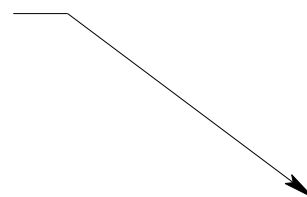


holes will be drilled after the ramp is installed

Ramp assembly

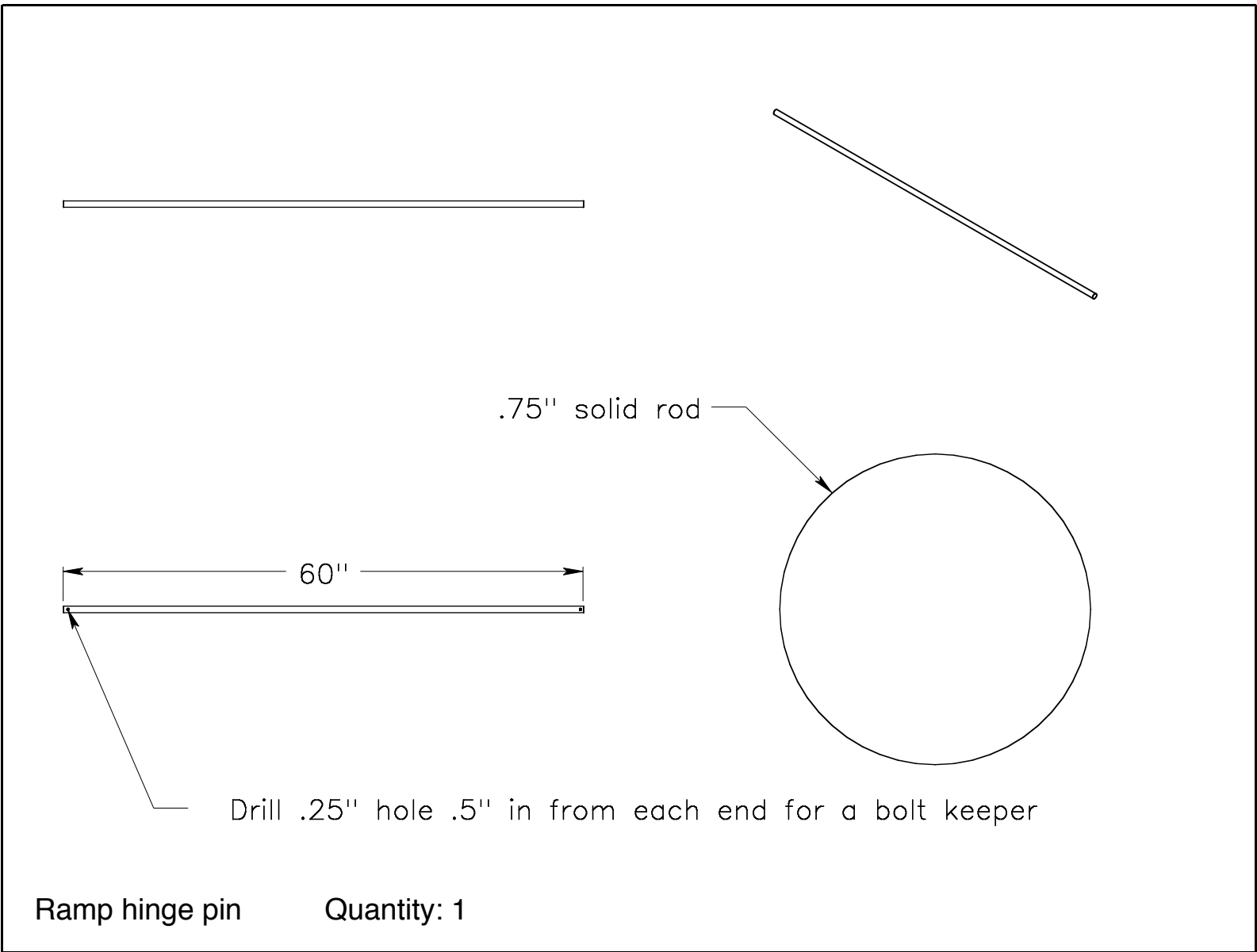


.75" black pipe



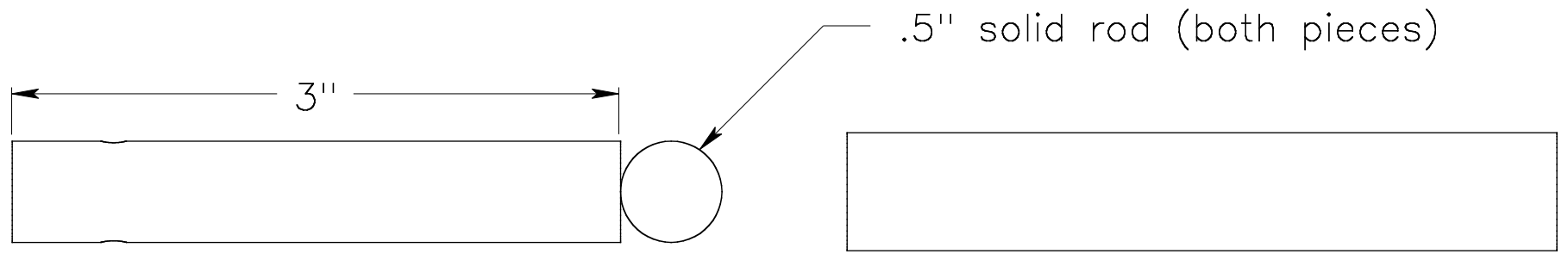
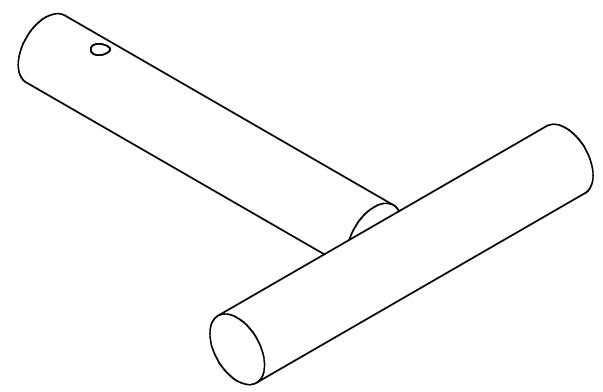
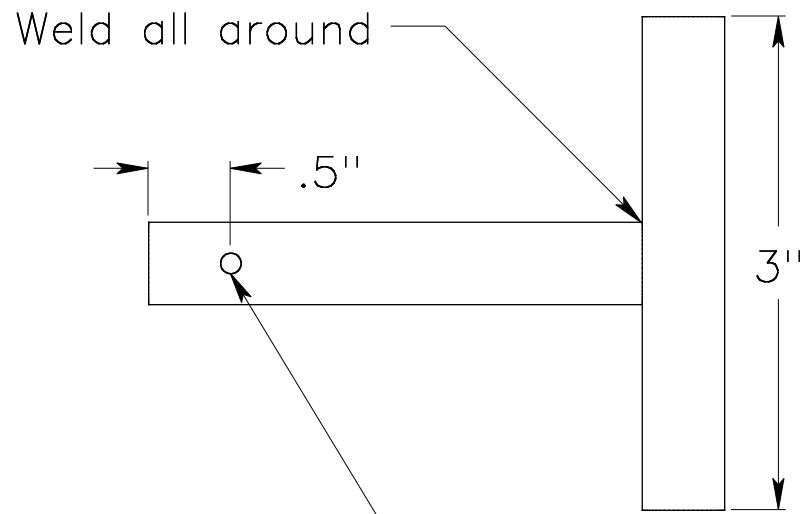
Ramp hinge bushing

Quantity: 4



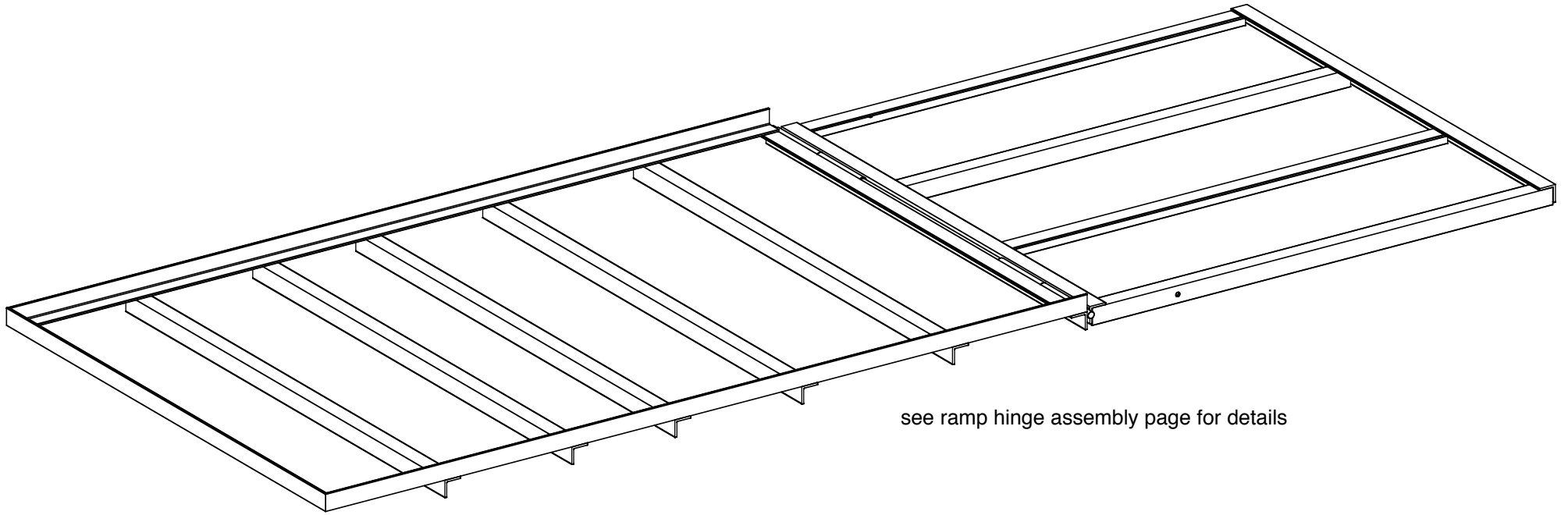
Ramp hinge pin

Quantity: 1



Ramp latch pin

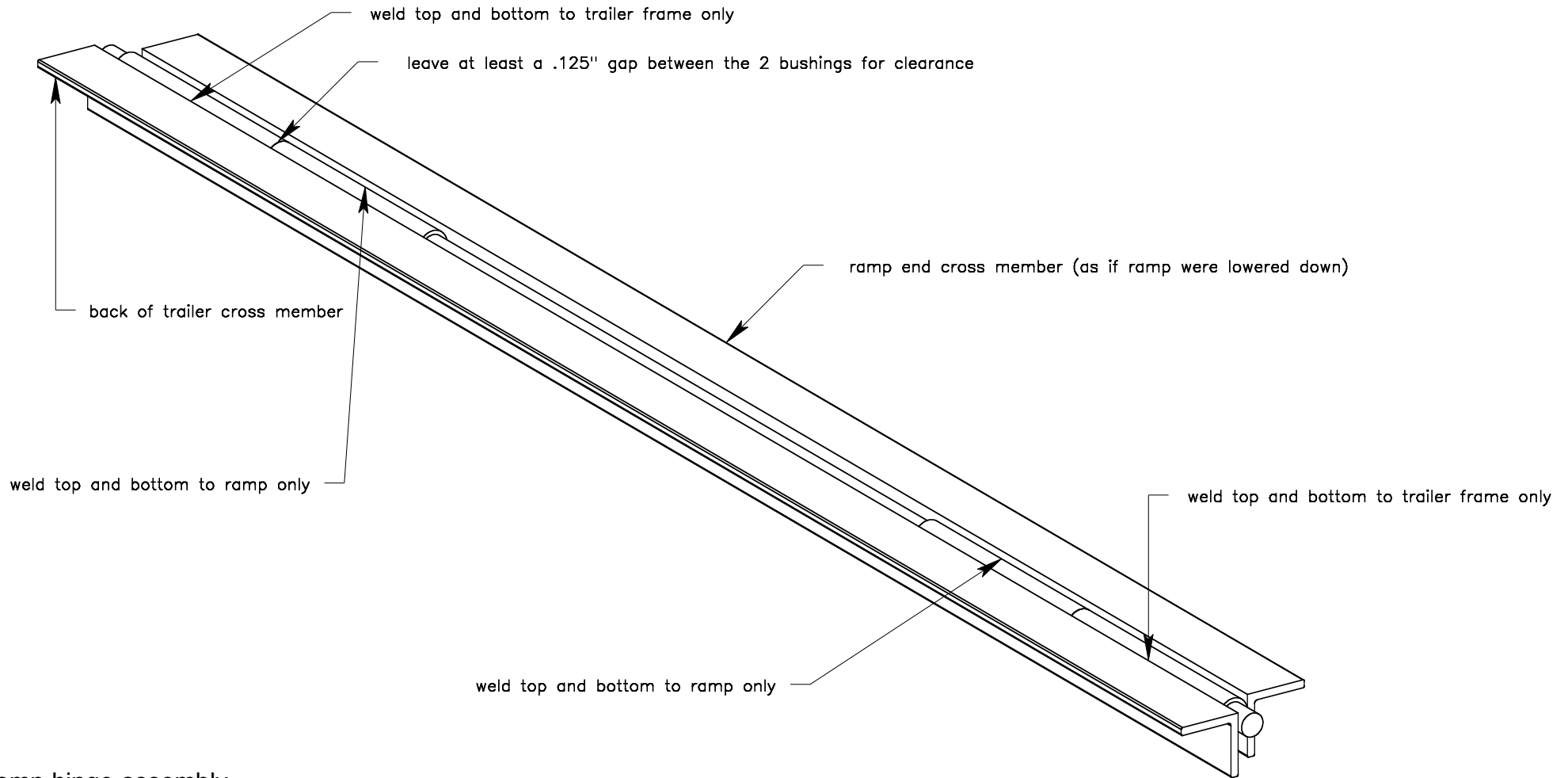
Quantity: 2



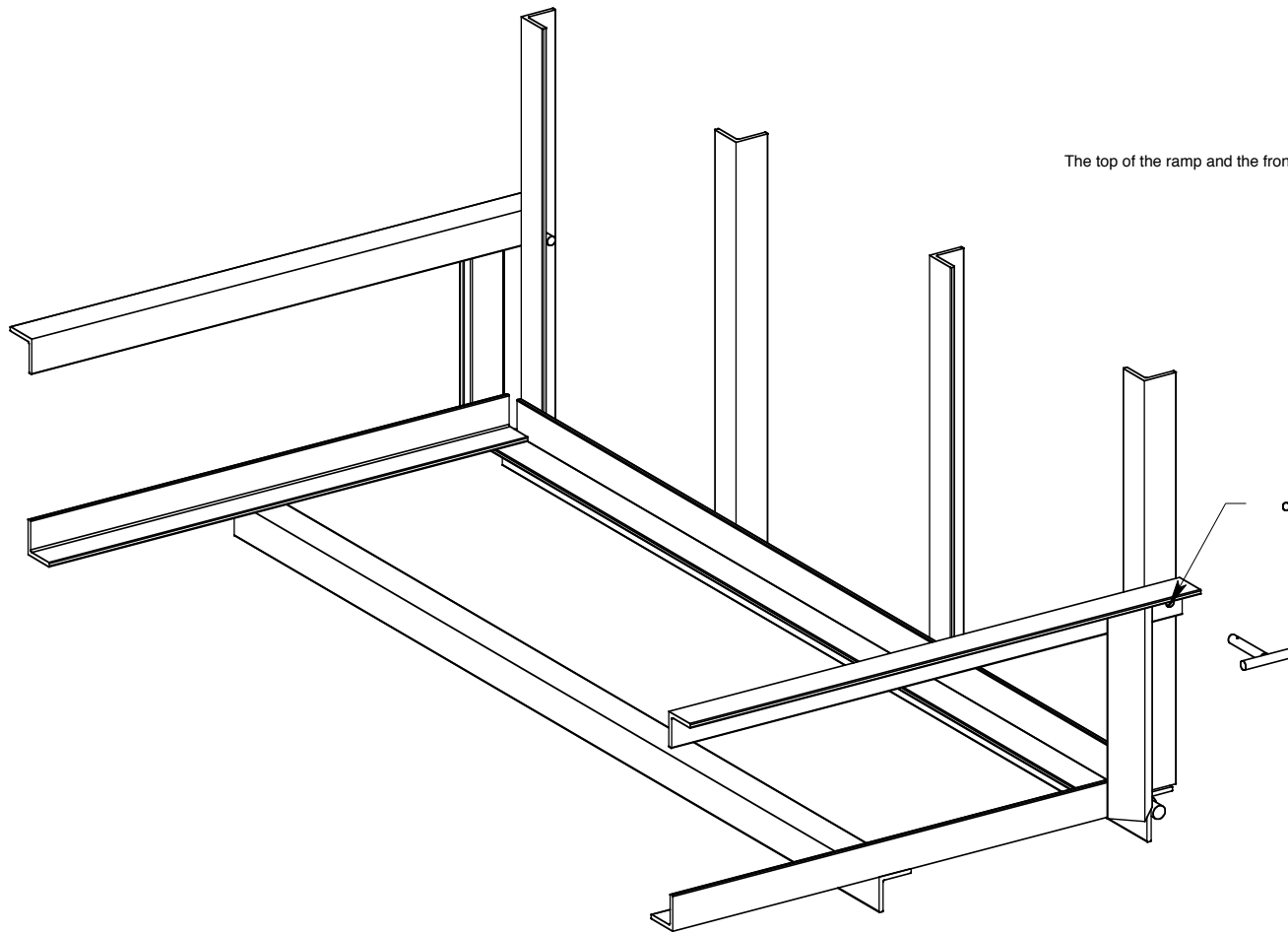
see ramp hinge assembly page for details

Ramp hinge assembly full view

Try not to weld the hinge pin or you won't be able to take the ramp off.



Ramp hinge assembly



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

drill .5" hole through both the top frame of trailer and ramp cross member

Ramp latch view