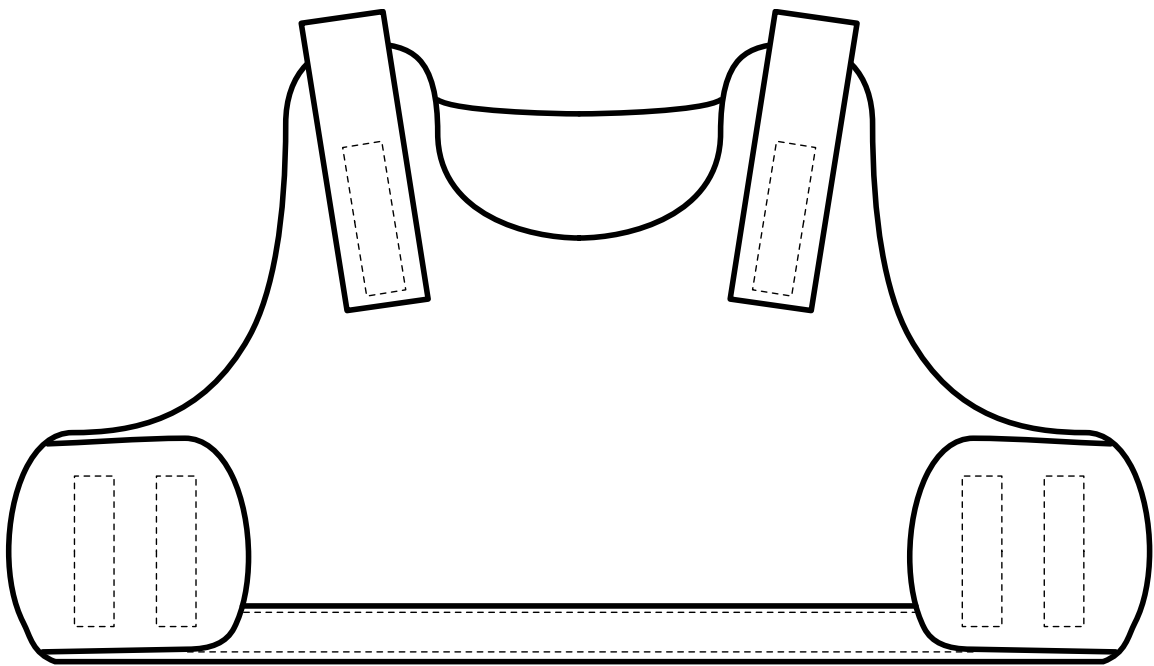


# Sew a Soft Armor Carrier / Vest

This pattern is designed to be customizable to any size/shape of soft armor, easy enough for beginner sewers, and it only requires a few materials. It's very simple but can totally be upgraded if you are a more experienced sewist and have ideas!



This zine/pattern is by **Mending Bloc** in Portland, Oregon.

With help from **Armor Bloc**.

Find us as **mendingbloc** on instagram, or at **mendingbloc.carrd.co**.

Find Armor Bloc as **armorblocpdx** on instagram and find their zine *Armor: Gear, Skills, and Comrades* on **acab.city**.

Please distribute this freely, digitally and/or physically!

You'll find downloadable printable and screen-viewing versions on our website.

These instructions are for if you source a set of soft armor pieces **secondhand** or **surplus**. If you were to buy a new vest, it would include these soft armor pieces inside the vest, ready to wear, so you wouldn't need to sew anything; but if you find just the armor pieces on ebay or elsewhere, they may be just the inner armor pieces with no way to wear them, or the outer vest may be very ripped and unusable. (Of course if it's just somewhat ripped, mending it may be easier than sewing a new one!)

# What You'll Need

- A set of **soft armor** pieces (front & back)
- **Fabric** – cotton with no stretch at all is recommended, like Duck Canvas, which comes in different weights; you may choose to use something like ripstop nylon instead but that may be trickier to sew with if it's not something you have experience with; you may choose to use cotton on the outsides and something thinner like nylon on the body-facing sides, for breathability (this hasn't been tested with the pattern, but it should work!)
- **Velcro** – 1.5" wide, approx 80" length of each side, plus a little more if adding extra pockets for hard plates (NOT sticky-back!!)
- A **sewing machine** for straight stitch that will sew through a few layers of fabric plus velcro, loaded with good thread

For fabric quantity, you'll probably need approximately 2 yards of 40-44" wide depending on size of armor, but it may vary quite a bit. We recommend measuring your armor and figuring out the yardage you'll need before buying fabric, and/or being willing to make extra seams in order to make what you have stretch and work as needed! You can maximize yardage by cutting pieces in either direction, as long as the fabric has no stretch.

## Cut Out Fabric Pieces

See illustrations of all the pieces on next page!

First, lay down your fabric then lay a soft armor piece on top of it. Either trace with chalk then cut with scissors, or cut with a rotary cutter.

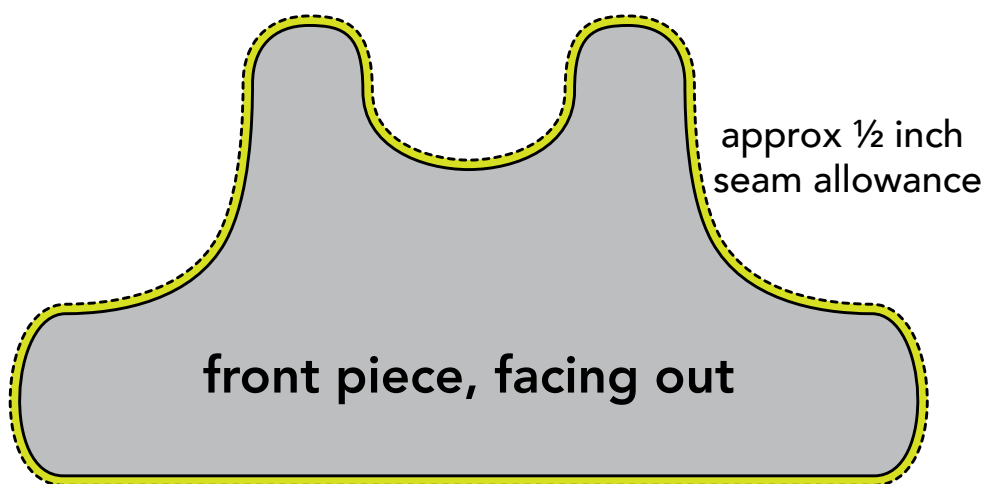
Cut around the pieces as shown, with about a half-inch seam allowance—you want a snug fit for the armor!

**Important:** Be sure you're cutting the front fabric pieces using the soft armor piece that dips down more for the neck, and the back fabric pieces with the armor piece that does not dip so far down, or goes straight across with no dip at all.

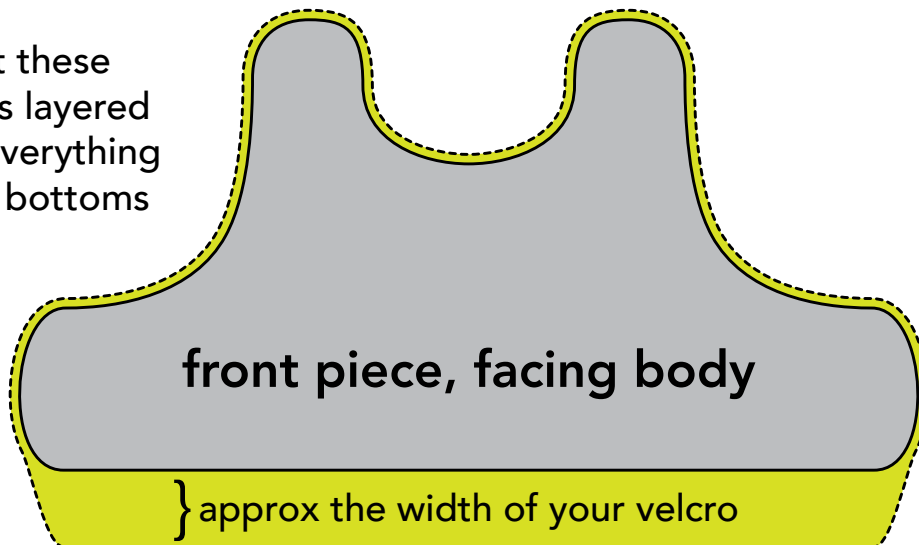
To help keep track of what's what, use chalk or an erasable pen to write "F" on the outsides of the front fabric pieces and "B" on the outsides of the back pieces.

On back pieces, add side flaps going out approx 6" beyond the sides of the armor piece, which will become the side flaps that will velcro on to to the fronts and hold the carrier on.

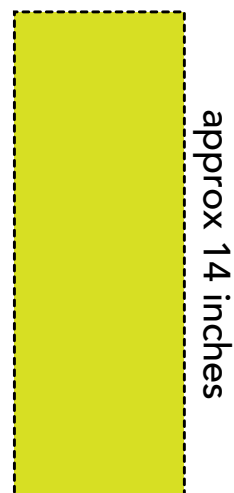
Once cutting is done, you'll have two front pieces, one that's taller on the bottom, two back pieces, both extra long on the sides, and one taller on the bottom, and two strap pieces (approx 14" long and 5" wide, each).



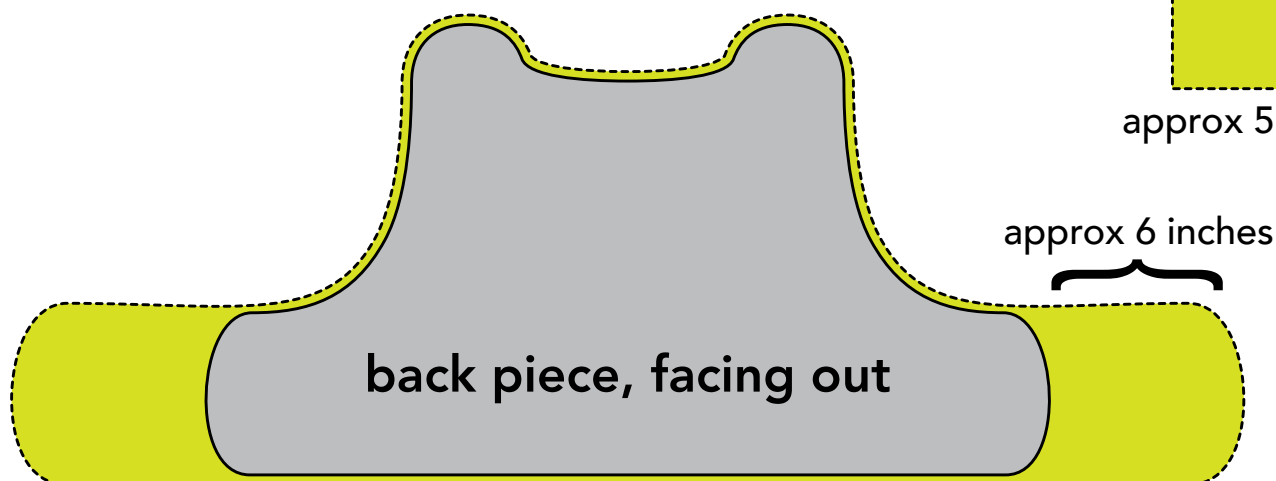
you can cut these  
front pieces layered  
together, everything  
except the bottoms



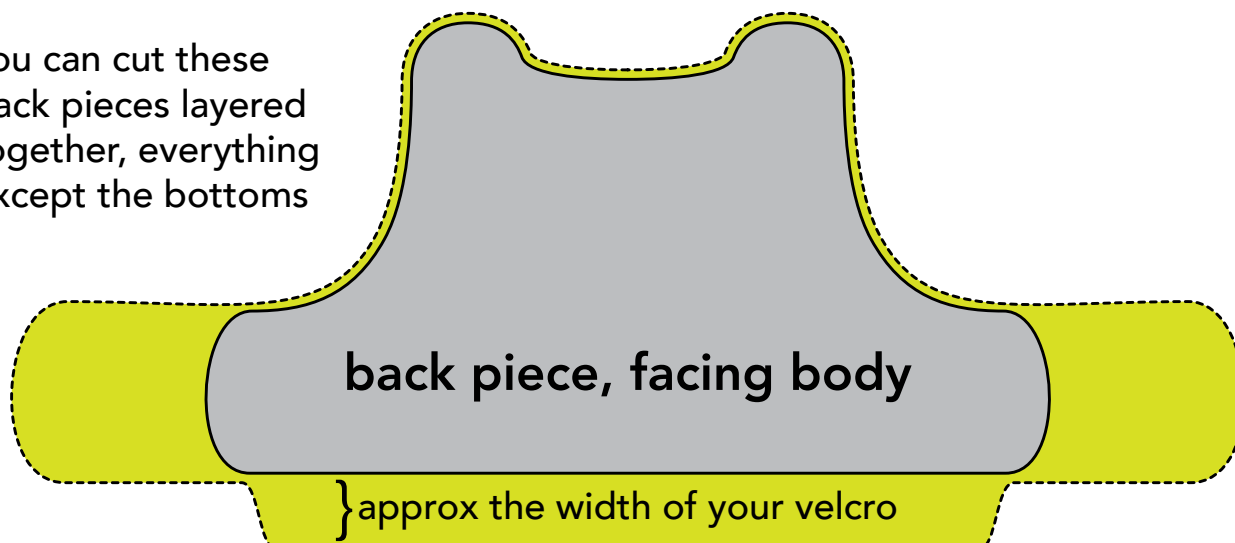
**shoulder  
straps  
(cut 2):**



approx 5 inches



you can cut these  
back pieces layered  
together, everything  
except the bottoms



# Sew Velcro onto Pieces

Cut your velcro pieces sized to fit the carrier pieces. Measurement approximations may vary significantly depending on armor size.

## **Scratchy side (hook side) of velcro:**

- 2 pieces to go on shoulder fronts, approx 6"
- 4 pieces for front sides, approx 6"
- 2 long pieces for bottoms, approx 20", or 3-4" shorter than total width of carrier piece
- 2 small pieces for bottom of front, approx 2"

## **Soft size (loop side) of velcro:**

- 2 long pieces for bottoms, same length as other long bottom pieces
- 4 pieces for back sides, approx 5" (for later—it's best to wait until after sewing the pieces together to cut these pieces, to get the size right by holding it against carrier)
- 2 pieces for straps, approx 6" (for later)

Begin sewing pieces together by first sewing up the bottom hems on all four pieces.

Keep the hems narrow, folded up approx a half-inch. Fold them up once and zig-zag stitch them down to prevent fraying—they will all be either covered by velcro, or hidden on the insides of the carriers.

For the front pieces, fold up the bottom edges up towards the insides of each piece.

For the back piece facing body (the piece with the extra flap) fold up the bottom edge on that extra bottom extension part.

Then mark that same length along the bottom of the other back piece, across the center, and fold/sew up the bottom edge only for that length, leaving the outer flap sides un-hemmed. (See illustrations.)

After sewing all four hems up, sew on the velcro pieces. Be sure to sew them securely on, always backstitching at the beginning and end, since they'll be pulled on. For extra strength, you may stitch diagonal lines through the middles of the velcro pieces, and/or go around the perimeter twice.

Onto the front piece, facing out (no extra length on the bottom), attach 2 pieces of scratchy-side velcro coming down at a slight angle from shoulders (leaving at least approx 1" of space between velcro and edges).

Also on the front, facing out, sew a long piece of scratchy-side velcro along bottom (overlapping a bit where hem was sewn up on other side).

And then 2 pieces of scratchy-side velcro on each side (see illustration), being sure to leave approx 1" between velcro and edges (it can be a bit less space at the corner).

Onto the front piece, facing body, on inside of piece, sew the long soft-side velcro across bottom, so it'll be sewn over folded-up hem.

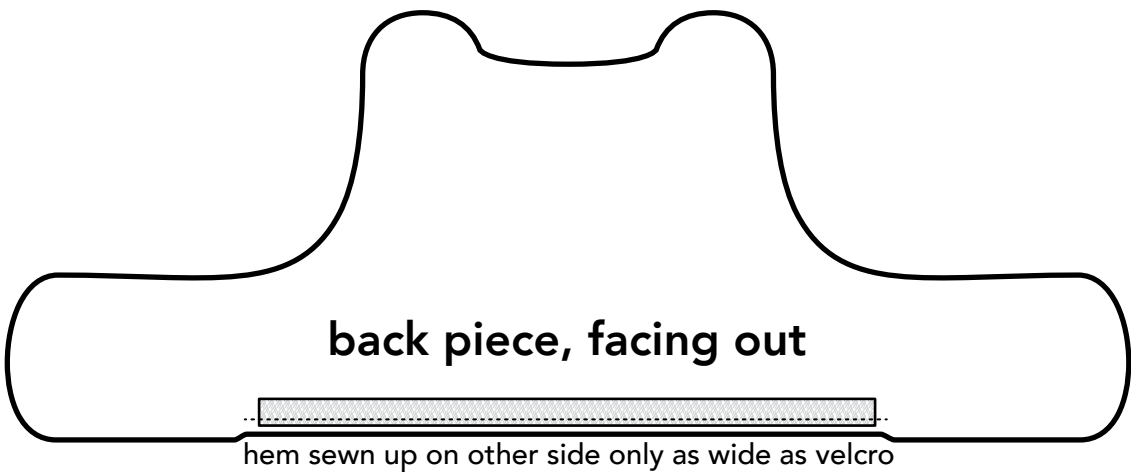
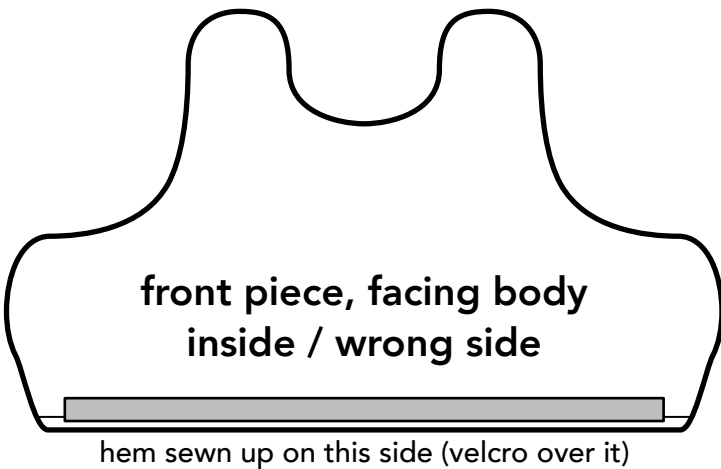
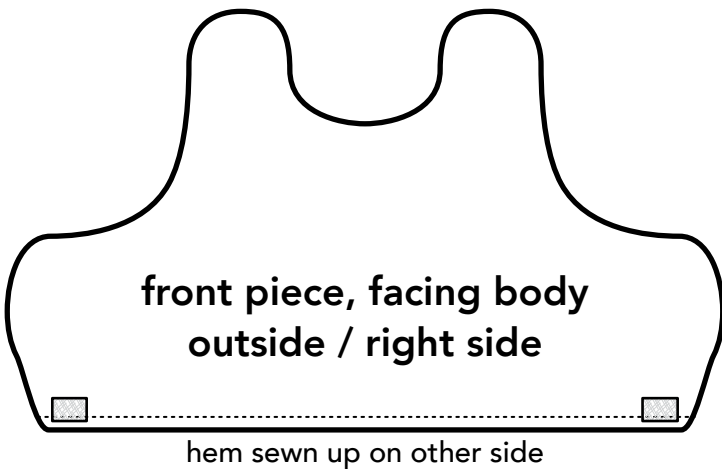
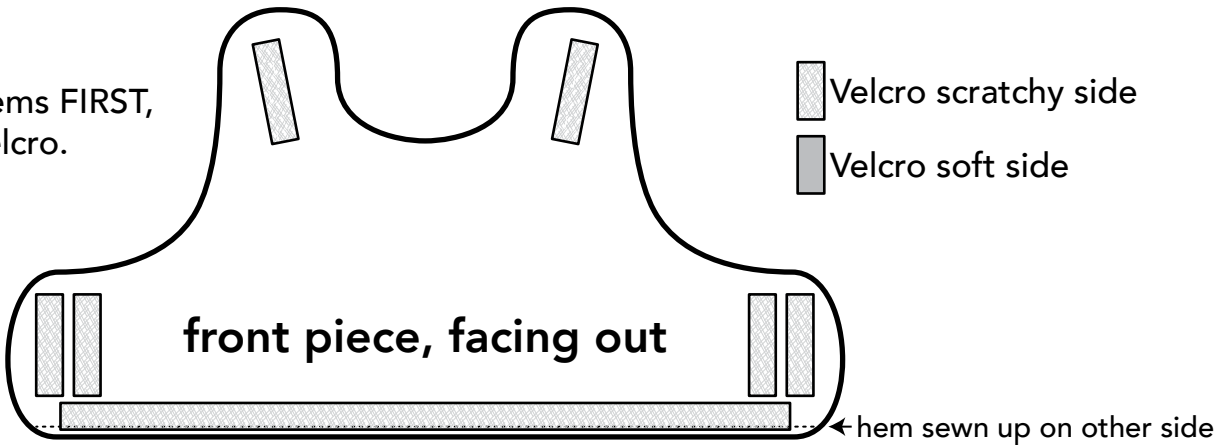
On the other side (outside, which will face body when worn), sew the 2 small soft-side pieces on the bottom, about an inch away from each side edge, which should overlap the velcro on the opposite side more or less.

Onto the back piece, facing out, sew scratchy-side long piece across center bottom, over where the hem was sewn up, folded up to other side.

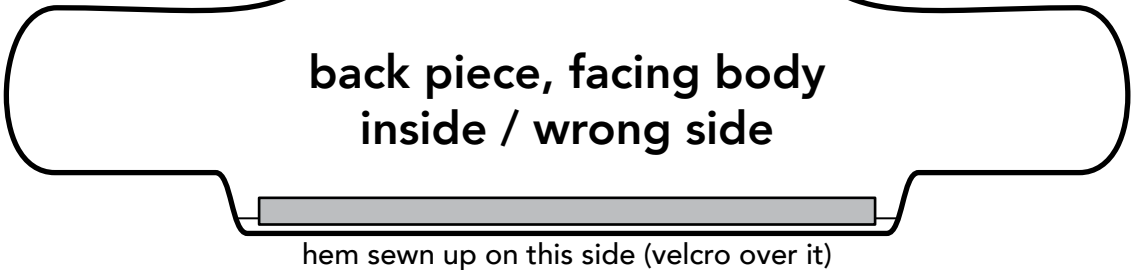
Onto the back piece, facing body, on inside of piece, sew long soft-side velcro piece across bottom, so it'll be sewn over the folded-up hem.

Sew bottom hems FIRST,  
then sew on velcro.

- Velcro scratchy side
- Velcro soft side



If you want to add optional  
pockets for **hard plates** to be  
inserted, see the **last page**  
before moving on to sewing  
the pieces together!



# Sew the Pieces Together

First, hold the two **front** pieces with outsides facing each other (so all the velcro is on the inside except for the bottom extension piece which is facing outwards).

Note: These are heavy-duty pieces that will need to put up with some weight and strain so use good thread and consider sewing around the pieces twice for extra strength.

Sew from one side, with approx a half-inch seam allowance (or a bit less, between ¼" and ½"), around the whole piece – up to the top, around the curves of the shoulders and neck, and down the other side.

Be sure to sew securely, and you can choose how to handle the flap sides to clean them up, hem them down on the sides. The front piece is done now!

For the **back**, first make the straps.

Fold each strap piece in half lengthwise, and sew up the long side, and across one short edge, then turn right-side out, using a chopstick or knitting needle, etc, to push the corner out.

Now put the back carrier pieces together, outsides facing in (so bottom extension flap velcro is facing out), and sandwich the straps at the shoulders.

The straps should be fully inside the pieces, except for the raw edges sticking up just a little (half inch or less) from the shoulders. Pin in place so they stay put as you sew around the whole carrier pieces.

Now sew the pieces together the same as the fronts, but start at the bottom next to the bottom extension part, sewing across the bottom of the flap on that side, around the flap, up to the top, then through all the layers across the first strap, across the top, then across the other strap, down that side, and around that side flap back to the bottom.

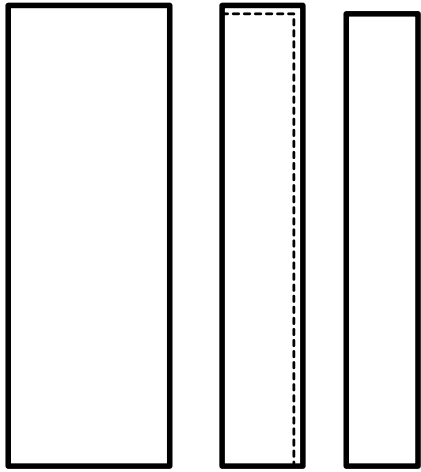
It's a good idea to now sew back over the strap sections again for extra strength.

Now turn that back piece right-side out. Sew the 4 soft-side velcro pieces to the side flaps, 2 on each side, sewing through all the layers, with the velcro on the side of the carrier that will be against the body. Make sure they are positioned outside of where the actual armor piece will sit inside the carrier.

Sew the strap velcro soft-side pieces to the ends of the straps, on the same side as the side velcro (the side that's against the body where worn).

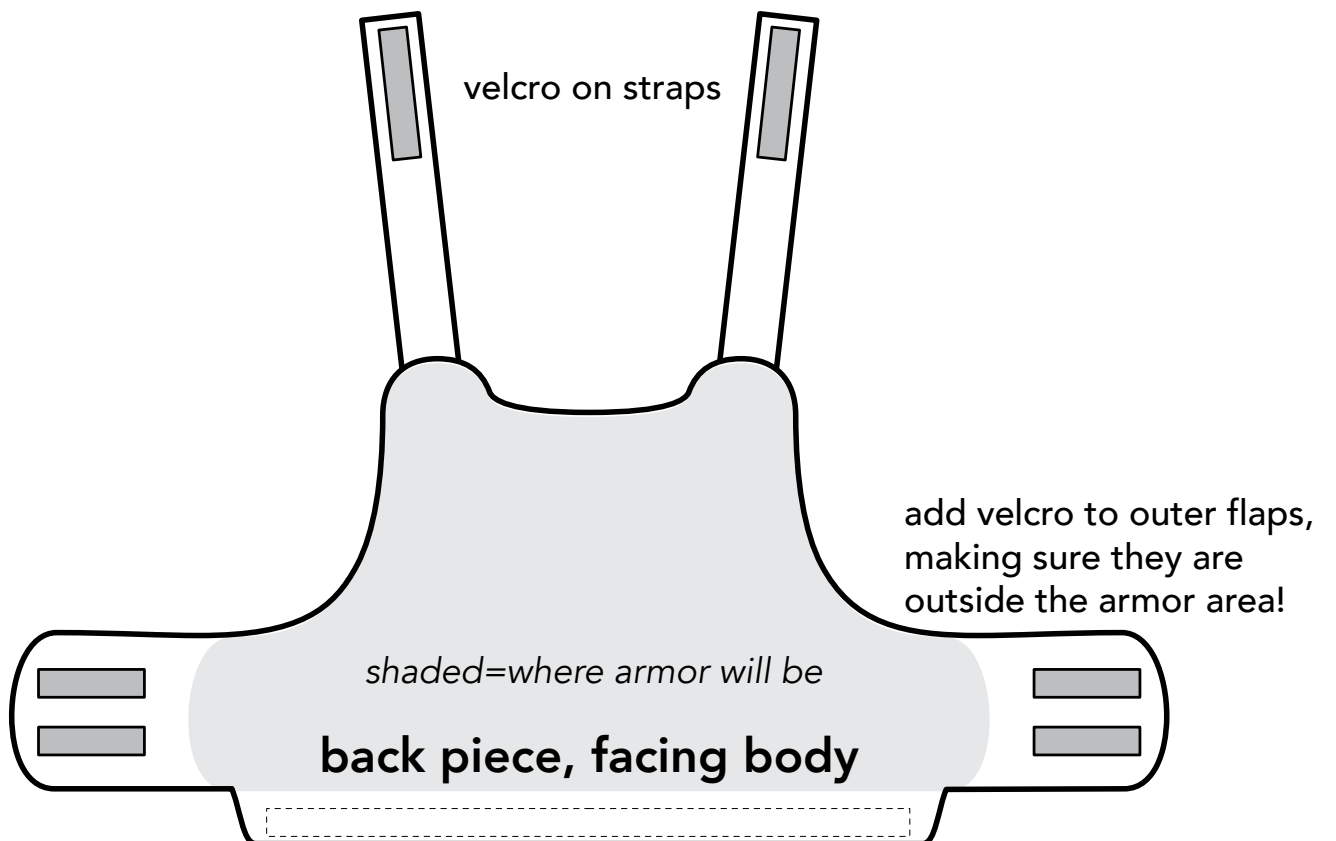
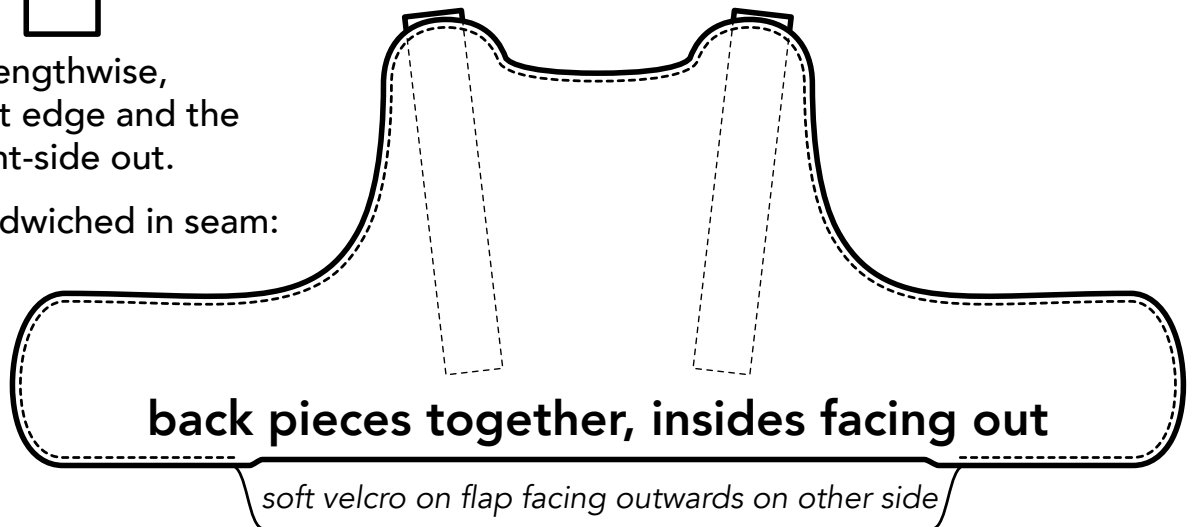
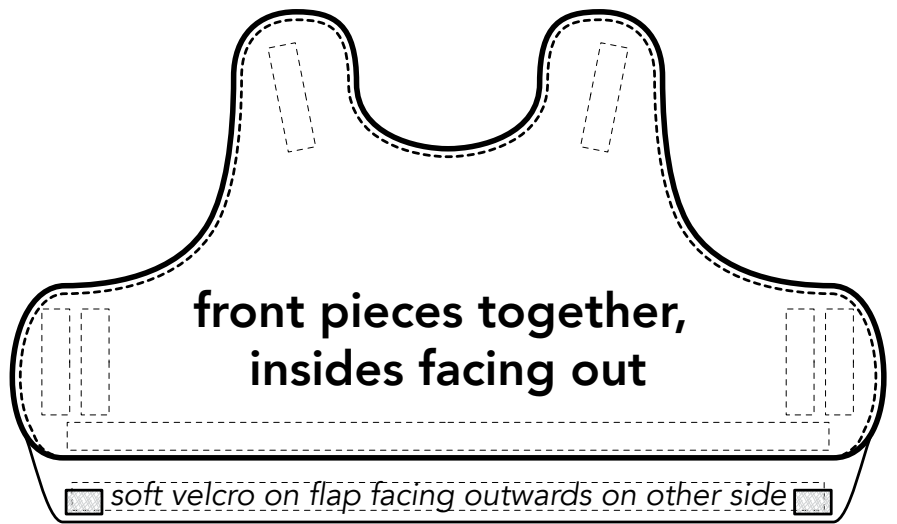
That's all the parts! You now have a functional armor carrier. Put the soft armor pieces inside and fasten the bottom velcro – they should fit inside very snugly, you'll have to pull up hard on the velcro to get it fastened for the tight fit.

To wear, the soft armor pieces should be as close as possible to just touching on the sides, but some overlap or some gap is okay as long as the velcro securely closes. The top should come up high on the neck, for the best protection.



Fold straps in half lengthwise, sew along one short edge and the long edge, turn right-side out.

Raw edge goes sandwiched in seam:



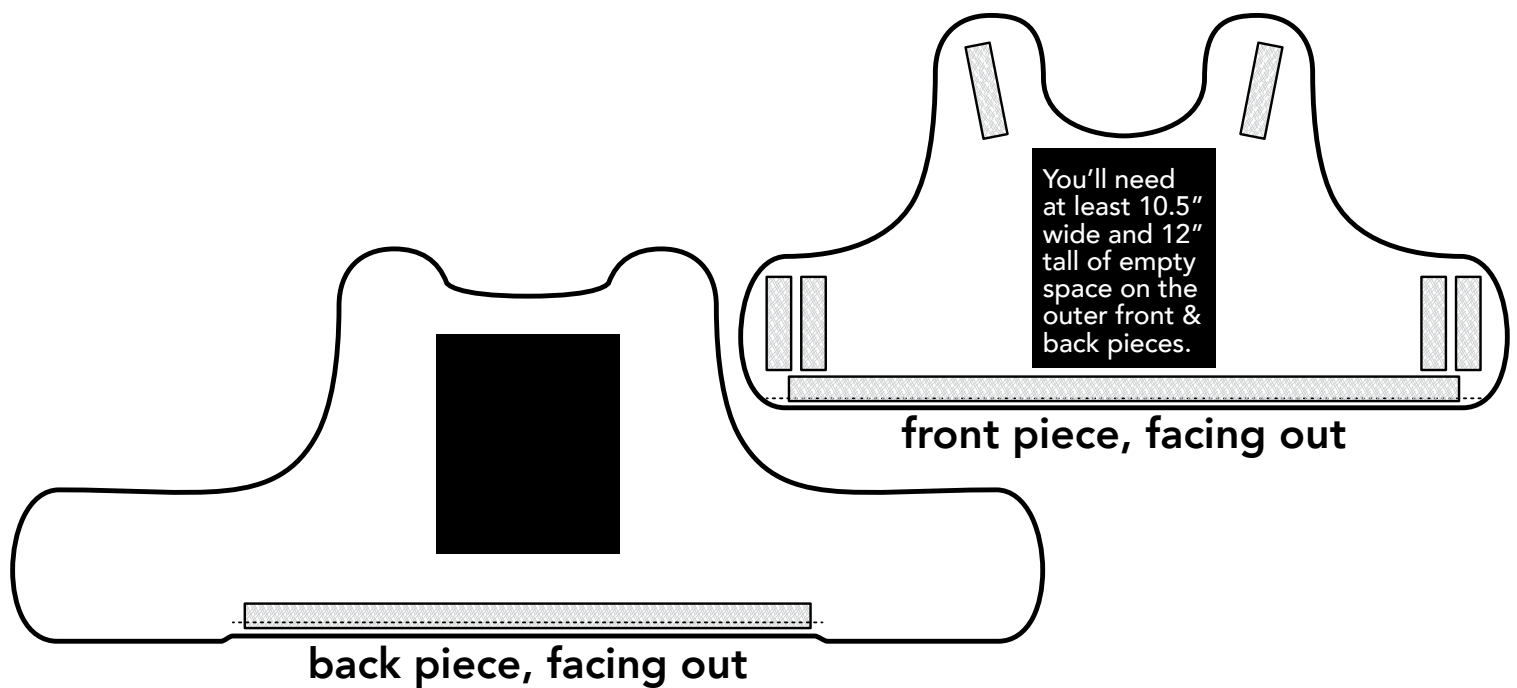
# Add Optional Hard Plate Pocket

You may choose to add pockets to front & back where hard plates can be inserted.

This will be much easier to do if you add them before sewing the pieces together!

In order for this to work, the carriers need to be large enough to fit the extra pockets, so this won't work with small size soft armor.

Depending on how much space you have, and how much work you want to put in, you could make a top flap that folds down and velcros onto the pocket to seal it, or make the pocket extra tall and put velcro on the inside top of the pocket to velcro down and close.



A standard hard plate measures 10" wide, 12" tall, and approx 1" thick. For a simple pocket, cut a fabric piece:

- 12" wide
- 14" tall if making a separate top flap
- or 15" if making the pocket velcro to the carrier with no extra flap

Fold all four sides approx a quarter-inch down and either sew around the perimeter or iron. Sew velcro across the top of the pocket, either on the outside if making a separate flap, or on the inside if not. Now make the separate flap and sew velcro onto that, or sew velcro onto the carrier where the top will close onto.

Pin the pocket in place, centered on the carrier piece and as high as possible, and sew around the side, bottom, side, sewing very close to the folded edges, going over the stitches twice for extra strength. (The plates are very heavy so you want these pockets to be as strong as possible!)

Add the flap if making one. Repeat the whole pocket for the other carrier side. Once pockets are added on both sides, continue on with the carriers, sewing the pieces together.