Pickle Project: Travel Accessories and Zipper Tutorials, Part 2:
Two flavors of duffel bag, any size

As always, I post these projects because I like the idea of encouraging folks to make and modify their own gear; and I feel that gift-giving is more meaningful when it's something handmade and practical and thoughtful than when people trample each other on the way to the Black Friday sale. If you use them, I would love to see what you create! You can use #pickleproject if you are so inclined.
And if you enjoy them, please consider making a small donation to the League of American Bicyclists, MassBike, American Bicycle Education Association, BikesNotBombs, or another worthy bicycle advocacy organization of your choice. Thank you.

Small travel accessories - see part 1

Note: People will tell you that sewing is hard. Ignore them, they are wrong. You may think that only certain kinds of people can sew, or that you need lots of expensive equipment to be able to do anything good, or that "home sewing" means making cutesy curtains out of quilting cotton and rick-rack that just look "home made" and not in a good way. Those assumptions are also wrong! Sewing is a skill that gets better with practice, but it isn't rocket science. All of these items - yes, those fancy-looking duffel bags - are things you absolutely can do with no previous experience, if you are patient. Don't be afraid to do dry runs, rip out seams and try again, practice things a few times until they feel comfortable. You can do it!!

A word about cutting

When you think of sewing, you probably think about sitting up to a gently whirring sewing machine, maybe having to rip out a seam and do it again, and hoping you get a good result with stitches that look neat. This picture isn't wrong, but it isn't complete. The first step in any sewing project (not counting the design phase) is cutting. Cutting sounds boring grunt work, the unimportant stuff you do before you get to The Actual Sewing. But cutting is actually really really important to pay attention to. Take your time, and do whatever it takes to ***cut as accurately as possible***. If things don't go quite right when you're sewing, you can usually rip out your seam and try it again. But if you didn't cut accurately and precisely in the first place, it's never going to go right. The edges won't line up as they should, things will come out crooked, and clothing won't fit.
Sometimes it's boring and tedious and you just want to get on with the exciting part where you sew things together. But I promise, it's really worth the time and effort to do right. It may well take you every bit as long to carefully cut and mark everything as it does to sew it together, but it's worth it.
The items in the last tutorial were pretty forgiving in that if things weren't cut exactly, there were ways to compensate or fix it. But these are a little less so. So please, do yourself a favor and take your time with the cutting phase.

There are several ways to cut accurately. If you are using scissors, your best bet is often to trace the pattern onto the fabric. If you do this, do your best to trace exactly at the edge of the pattern (using chalk, pencil, or whatever will show up on your fabric); and then when you cut, make your cut exactly on the inside edge of the line you made so that you cut the line away. You can also use a rotary cutter and cutting mat, which may be easier for certain shapes.

For these projects, you may be able to get away with drawing everything directly onto the fabric and not using a paper pattern at all, but at the very least I strongly recommend making one for the circular panels of the cylindrical duffel. It really doesn't take much inaccuracy for the stitching lines to not line up the way they should when you have curved pieces.

But making paper patterns for these things also gives you the opportunity to think things through, consider how you'll mark and sew various features, and makes it easy to either repeat the process or make modifications the next time around. So it's worth the extra time.

Quilting rulers and other good rules and squares are invaluable. Even a roofing square will help a lot if you don't have a pattern-making-specific one. You don't have to spend a ton on rulers, but being able to measure accurately and make accurate 90-degree angles is important.

Here is a list of information and techniques covered in these two tutorials:

Part 1:

All about zippers: types of zippers, how to buy zippers, how to install zipper sliders
Stopping the ends of zippers
Sewing the zipper onto fabric
Figuring seam allowance with zippers
Using one side of a zipper in a long loop instead of two sides
Making a pouch with one folded side
Finishing seams with grosgrain ribbon, bias tape, etc.
Making a pencil case to go in a 3-ring binder
Using contrasting tabs on the ends to stop a zipper
Using a lining to make a clean finish on the inside
Making a lining even easier
Making a 3-D boxy pouch by sewing across the corners
Adding an outside pocket
Finishing the pocket pouch
Flattening the corners to give the pouch some depth
Finishing the boxy pouch
Odds and ends, other possibilities, and where to shop for supplies

Part 2:

A word about cutting, and also rulers
Designing and cutting a circular duffel, and the dimensions for the example
Sewing a covered zipper and calculating seam allowance for it
Making your own handles and straps
Sewing box tacks for strong strap attachments
Using notches to align cut edges
Sewing a curved edge to a straight edge
Making a boxy 3-D structure starting from one rectangle and calculating dimensions of the cut pieces
The two approaches to sewing down the corners to create a 3-D structure
Dimensioned drawing for the large square duffel
Another method for making an outside pocket with a zipper
Another method for attaching D-rings
Finishing the square duffel
Odds and ends and other ideas

Now, on to the projects.

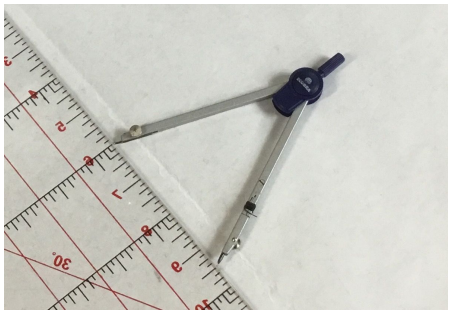
In this part, we'll make duffel bags in two styles, which will illustrate two different methods of **getting a 3-D shape**. The first is your basic standard round duffel with handles. I made this one in miniature, but this is a simple formula and you can make your bag whatever size you like.

Setting aside any details such as zippers, pockets, straps, etc, a basic **cylindrical duffel bag** is just like a tin can: it has a circle on each end and a rectangle wrapped around the two circles. One side of the rectangle is the overall width of the bag. The other side of the rectangle is the circumference of the circles.

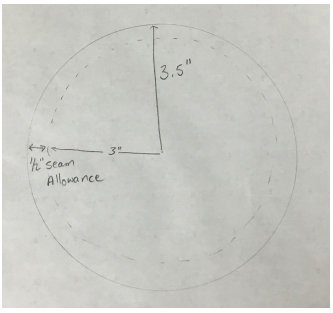
In this case, the bag is 6" in diameter and 11" long. We'll calculate everything based only on stitching lines (final dimensions) and then add in the seam allowance and the extra for the zipper later.

A 6" circle has a 3" radius. The formula for the circumference of a circle is ***2πr,*** or 2 x 3.14 x 3 = 18.84. So the final dimensions (NOT the size we're going to cut!) of that wrap-around-rectangle are 11" x 18 ⅞".

I'm using a ½" seam allowance, so that means that I need to add an additional ½" to my circles all around. So I cut a circle whose radius is 3.5".



Using a ruler to measure the compass opening



Seam allowance sketched in for reference - not drawn precisely!

If the finished width of the bag will be 11”, and we add ½” at each end for seam allowance, that means the rectangle will be cut 12” wide; that part is easy. But for the height of the rectangle, we’ll have to **account for the zipper and how it’s being attached**. Part 1 included some discussion of how to do this, but now I’ll show you another way that looks fancier AND is actually easier to calculate!

For this method, we’re going to end up with a **fold of the fabric covering the zipper on each side**, with the slider in the middle. This is a nice way to give a cleaner finish to a bag, and also to help keep weather or crud out of the zipper.

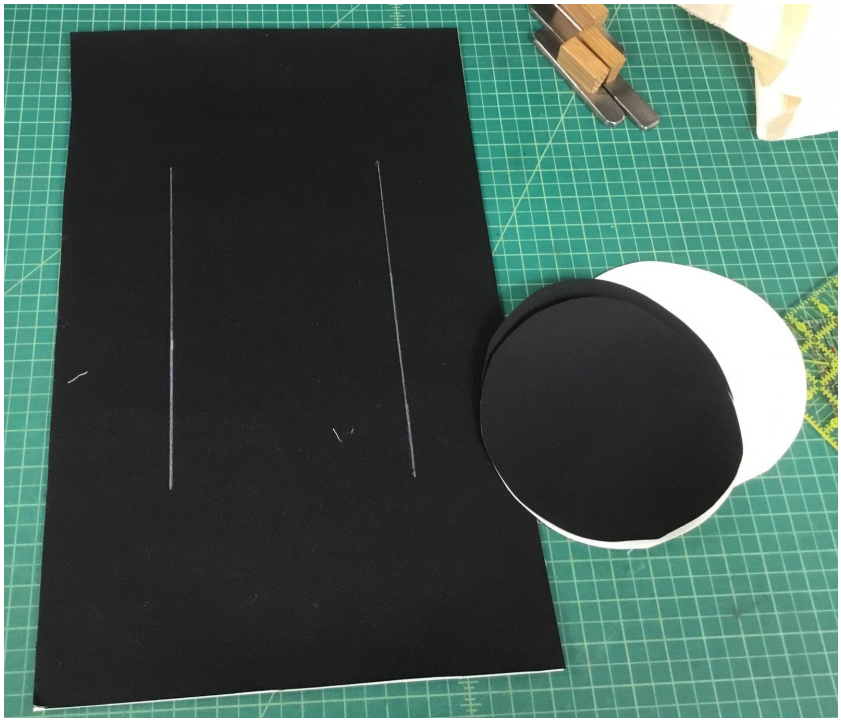
This zipper tape is 1 ¼” wide, so divide that in half to get the seam allowance for each side, or ⅝”. In the finished bag, the ends of the fabric will fold under by ⅝” on each side and the folds will meet in the middle over the center of the zipper teeth.

So if the final circumference of the circle is 18 ⅞”, we’ll add 2(⅝”) to get 20 ⅛”. Therefore, we’ll cut the main center panel of the bag to 12” x 20 ⅛”.

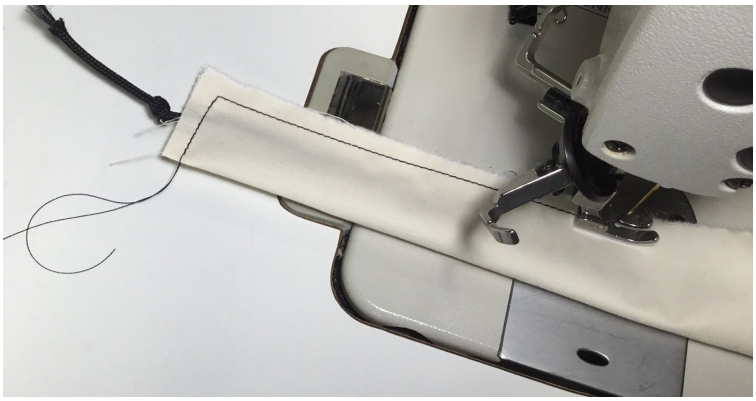
This bag will be lined, the easy way; so cut the two end circles and the center panel out of both the outside material and the lining. In this case, the outside material is Commercial Water Resistant Canvas from Fairfield Textiles, and the lining is a lighter and finer natural cotton canvas from the same place.

Since this bag is small, I’m keeping it pretty simple. The only thing we need to sew onto the outside are the handles. The handles will be one big long loop with the ends meeting at the bottom of the bag, so they’re extra strong. I sewed them at halfway up the sides, although they’re often sewn higher up than that; it’s up to you.

Here you can see the cut pieces with the main center panel marked for the handles:



So now let's **make the handles**. You could skip this step and just use webbing, as we'll do for the big square duffel. But for this one, I'm making handles out of the same fabric as the lining for a bit of fancy contrast. I need to make a long tube and turn it right side out. Turning something long and skinny like this can be a bit of a pain, so I made it easier by sewing a piece of cord into the tube in the first place:

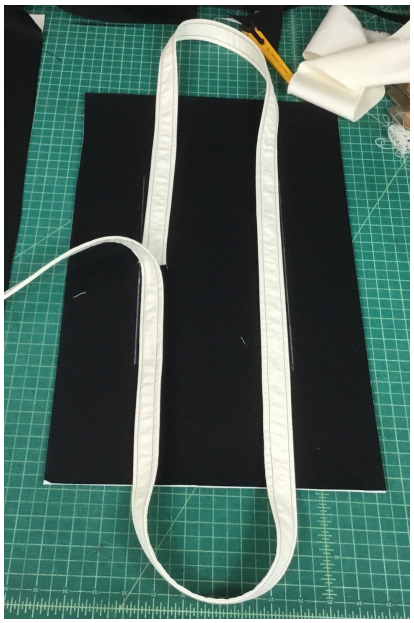


The end of the cord is knotted and sewn into the end of the tube; the cord is inside the folded-over part from now on. Be careful not to sew through the cord later!

I sewed down one side and got a tube, but I want two sides that look the same. So I sewed down the other side where the fold is, with the same seam allowance:

Now I can pull the cord to help me turn the whole tube right side out, starting from the first end where the cord is sewn in. If you try to do it all at once it will bunch up and be impossible, but if you let it go a little at a time it goes pretty easily. After that, I topstitched down both sides of the tube to keep it all flat. Ironing it first would be a good idea and would help it come out more neatly, but in this case I didn't (it would have been neater if I had!).

I made plenty of extra length, so I had enough to play with and figure out how much length would wrap around the bottom of the bag and give me nice-sized handles at the top. To make sure the handles match in the end, measure the length between the ends of the chalk lines and make sure they're both the same!

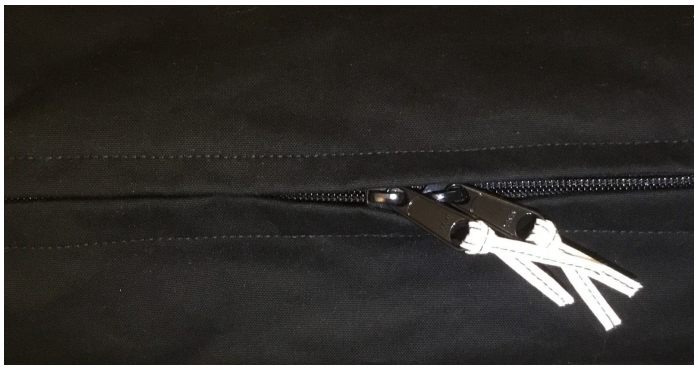


For a tidy junction between the two ends, add a little extra on one end so that you can fold the raw edge under and overlap the the ends a bit. Then sew the straps down. I made box tacks at each point where the handles meet the sides of the bag, for a stronger finished result. A **box tack** is just a box with an X across it, as you can see below. If you're using lighter weight thread on heavy materials or for a larger bag that's going to be heavy when in use, you might want to go over the box tack a couple of times, or at least the top edge of it.

I sewed the straps on outside where I topstitched the seam allowances of the tube, but you could sew through the same line instead; it's up to you. Just be consistent with whichever you do for a neat finished result.

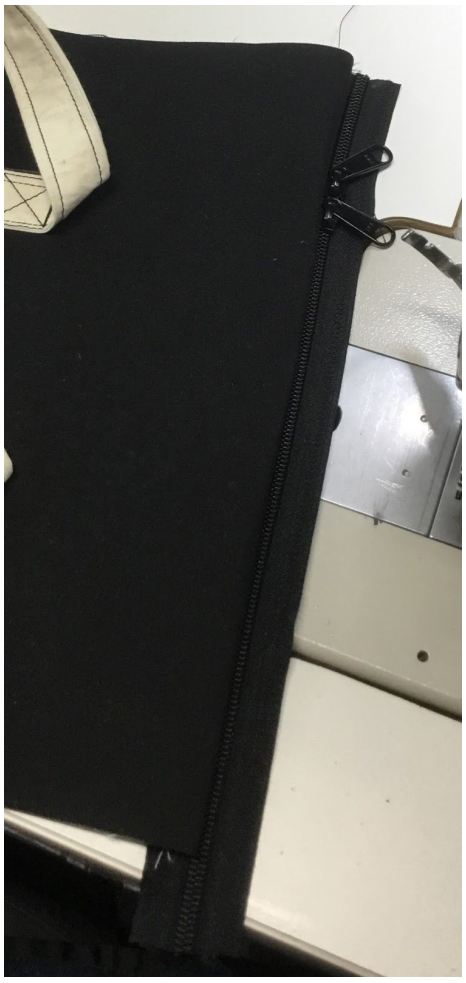
Once you've sewn on the straps (plus whatever other details you decide to put on the outside - pockets, patches, labels, etc) you can **stack the lining and the outside together**. From here on out they'll be treated as one piece that's black on one side and white on the other.

Now let's put on the zipper. A I mentioned earlier, in this method the exterior fabric folds over the teeth to make a sleek-looking **covered zipper**:



Un-zip the zipper into two pieces; we'll deal with each side separately. You can even leave the zipper extra long and then trim it to length afterward.
I start by sewing the zipper just as I would if I were doing it the way I described in Part 1: outside of the zipper facing outside of the outside fabric. I sewed it with about a ¼" seam allowance, but this isn't really that important. If you're using a fabric that frays easily, it would be a good idea to bind or cover this seam. But with the materials I used, if I just pull off the first few strands after it's all sewn together, it won't really fray more under the zipper tape. So use your judgement.

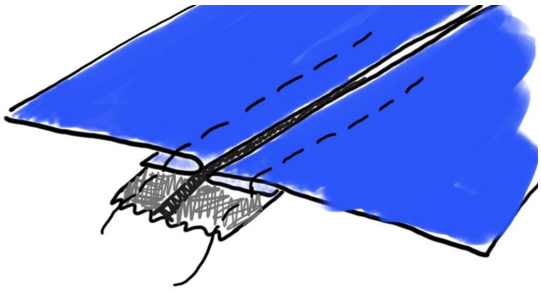
Now we'll flip the zipper over the right way up, just like before. But instead of pulling the fabric away to topstitch it, we'll let it fold over the zipper teeth. You can see how this should go in this picture, shown with both sides of the zipper together to make it easier to see how the fold should bisect the zipper:



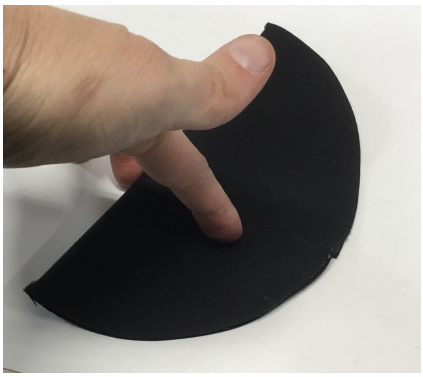
However, the easiest way to line this up actually is to unzip the zipper into its two halves and line the fold up with the edge of the zipper teeth. Now we'll topstitch through all the layers. The easiest way to do a good job in my opinion is to use the normal foot (i.e, not the zipper foot) and

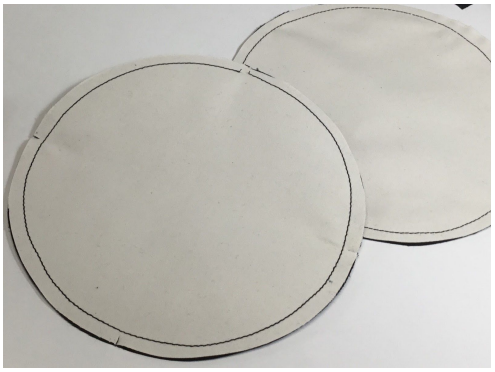
let its righthand edge follow the bump of the zipper teeth so that you stitch at a consistent distance from the folded edge. Once you've done that on both ends of the outside fabric, trim the ends and insert the sliders. You might need a couple of tries on the sliders; you want to make sure they match up and don't end up with more teeth between them on one side than on the other. You might as well zip it up with the tube inside out, since that's what we'll need when we sew it all together.

Here's a diagram of the final structure:



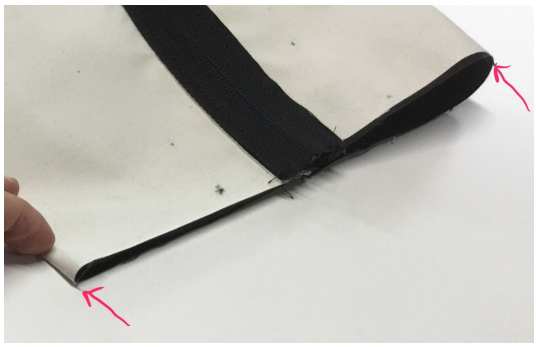
So now you've got a tube and two circular ends. There are just a couple more steps before the final assembly. First, we need to be able to make sure everything is lining up as it should. For that we'll **use notches** spaced evenly around the circle. To mark the circular pieces, I fold them in half and make a little snip into the seam allowance at the fold. As long as the snip is less than ½" long (because we're using a ½" seam allowance), it will be only in the seam allowance and won't show or cause problems in the finished product. Then I fold the circle in half the other way with those two snips meeting in the middle and make two more snips at the folds. This gives me four notches equally spaced around the circle. Lastly, I stack the linings and the outsides and sew them together just so I won't have to worry about keeping them together when I'm assembling the whole thing. Like the notches, this seam should be less than ½" from the edge of the fabric so it's only in the seam allowance and won't show later.





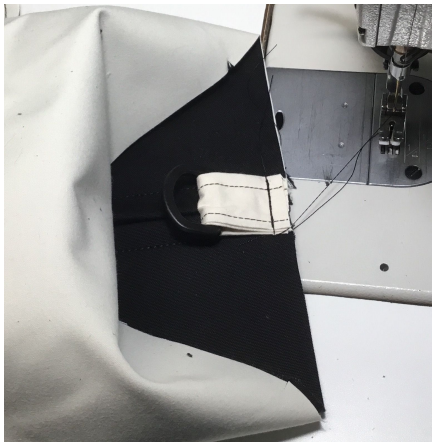
Take note of where the grain of the fabric is when making these snips, because they'll determine the final orientation of the circles. I made mine on the grain and the cross-grain of the fabric.

Now we'll do the equivalent with the tube. The zipper will be the top, so it counts as one of the notches. Flatten the tube with the zipper on one side to make a notch exactly opposite it; then flatten the tube the other way so that the zipper meets that notch in the middle and make your other two notches in the resulting folds.



Incidentally, normally you make notches by measuring along the stitching line and marking particular spots in the same place on different pieces that will be assembled. This fold-in-half-to-find-the-middle method only works with certain shapes; for more complex items, you need to measure along the line. Home sewing patterns generally show notches as little triangles that stick in or out, but you can still make them as little snips into the seam allowance. Sometimes you'll see notches in pairs in some places and singly in others; that makes sure that you don't accidentally sew something to the wrong side of a part.

Lastly, we'll put tabs at the ends of the zipper to hold onto while zipping and unzipping and to hold D-rings that a shoulder strap could clip onto. In order to make sure they get positioned just right at the ends of the zipper, I pulled the other side of the tube out of the way and sewed them onto the ends over the zipper and everything. These tabs are made out of the same tube I made the handles out of.



Now we can finally **sew it all together**! Here's where it really matters that those circles were cut accurately and that you can sew at a consistent distance from the edge of the fabric. Remember that formula we used to figure out how big to cut the rectangular center panel: $2\pi r$, or 2 x 3.14 x 3 = 18.84

That is the length the stitching line should be, if the circle is cut to 7" across and sewn with ½" of seam allowance; and if it is that length it will match up with the rectangular outside panel. However, if I were to skimp on the seam allowance and sew it at ⅜" from the edge instead, the radius of the circle has effectively increased by ⅛" (0.125") and now the formula is 2 x 3.14 x 3.125 = 19.625. ⅛ of an inch doesn't seem like a lot to be off by in your seam allowance, but it makes your circle too big by about ¾" and the tube it was supposed to be sewn onto is now too small! By the same token, if you make your seam allowance too big, you'll run out of circle before you run out of tube, and that's not going to work either.

So how do we avoid this problem? That's where the notches come in. To start, line up a notch on the circle with a notch on the tube. In this case it doesn't matter which one, but if you had put a side pocket or something on the ends of the tube you'd obviously want to make sure it was oriented the right way up.

By the way, you'll notice **I didn't pin anything**. For the most part, I discourage using pins because they are likely to get in the way and distort the fabric. While it's tempting to try and hold everything together into its final configuration all at once before you start sewing, you actually don't have to do that. **Edges to be joined do not actually have to come together until they are actually under the needle**. So I put the flat piece underneath and the curved piece on top so I can see both of them, and just maneuver them more or less separately so that they come together under the needle. Likewise, the edges of the tube that I haven't gotten to can just be held out of the way until I get there. As a side note: If you do feel better securing parts together before sewing, I prefer binder clips for all but the most delicate fabrics. They hold well and don't distort the edges like pins do; plus you can't possibly forget to remove them before sewing the part where they are.
I started sewing at the bottom (it doesn't really matter where you start - it's a circle!), call it 6:00. When I get to the next pair of notches at 9:00, I can see if they line up or not. If they do, great - just keep on. If I get to the notch in the circle before I get to the notch in the tube, that means I'm making the seam allowance too big and the circle too small, and I adjust so that I'm stitching just a tad closer to the fabric edge. If it's the other way around, I adjust so that I'm stitching just a tad further from the fabric edge. It really doesn't take a lot, and if I'm making these little adjustments as I go, I'll avoid any major discrepancies and none of those tiny adjustments will show. Of course, if the discrepancy really is big by the time you get to the first notch, you're better off ripping out the seam (at least you didn't get very far) and make whatever adjustment you need to make from the beginning. That's why I made four notches - they give me four chances to stay on track. If I were making a really big duffel bag or using recalcitrant fabric that tended to stretch or distort, I might make eight notches. But again, as long as I have the notches to keep me honest, I don't need pins!

Here's the **assembled tube-plus-circle**:

To finish, I trimmed off any frayed bits and threads and bound the edge with grosgrain. You'll notice that the edges of the circle look wavy now, because the sewn diameter is smaller

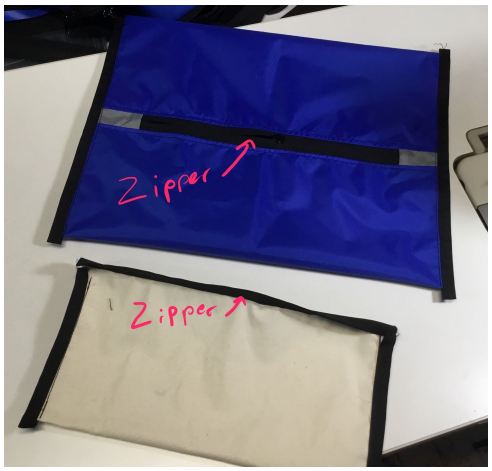
than the diameter of the cut circle. The bigger your seam allowance, the more pronounced that effect. One way to reduce it is to trim the seam allowance smaller. But for these purposes, it will be fine and won't cause problems. I'll just bind that edge right over the wavy parts:

Now all that's left is to turn the bag right side out!

Next we'll look at the **big square duffel**. In a lot of ways, it's pretty similar. The zipper will be done the same way, and the handles will go on the same way. It has outside pockets that are similar to the outside pocket in Part 1. What's interesting about this one is **the way it gets its 3-dimensional boxy shape**. So for starters, let's get a birds-eye view of this duffel's structure alongside a couple of similarly constructed boxy pouches.

All three of these items are made by taking a big rectangular pouch, flattening out the corners, and sewing across the resulting triangles.

In the case of the blue pouch, the zipper was positioned in the middle; in the case of the white pouch, the zipper was at one end.



As you can see, the blue pouch winds up with a zipper that is longer than the length of the box, and runs halfway down the ends. This is good for making it easy to get bulky items in and out of the bag, but it means that if you put D-rings for a shoulder strap at the ends of the zipper like we did in the round duffel, they'll be too low on the sides and the bag won't be that stable to carry.

The size of the triangles determines how long the finished pouch is versus how deep it is. If the triangles on the blue pouch were smaller, the pouch would be longer but much more squat. If the triangles were bigger, it would be tall and skinny, but not very long.

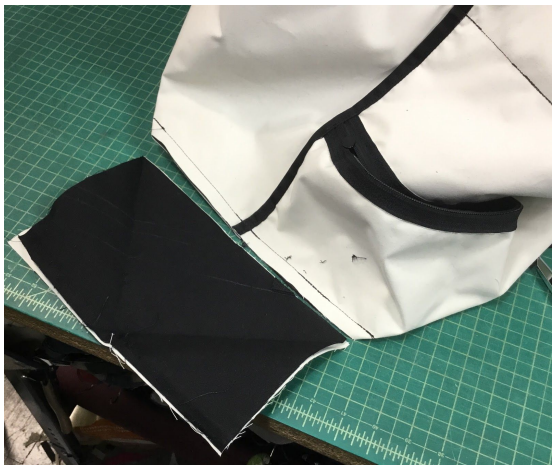
So for the duffel bag, we need to **decide what the final dimensions will be** and then **figure out how to get that**. To help visualize this, I'm going to skip ahead a few steps. This should already be a little familiar from Part 1:

Tube sewn flat with zipper in middle

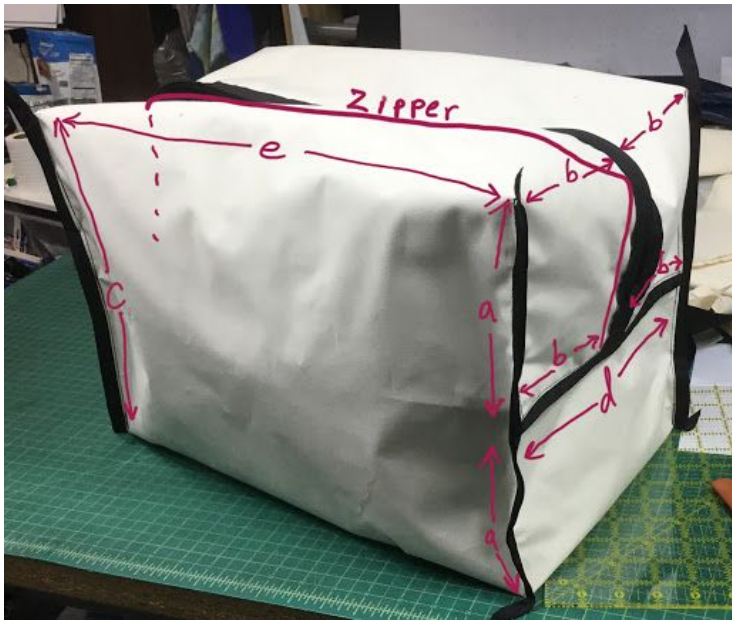
Mark depth

Fold down corners & sew

Now, just to illustrate how this whole thing actually works, after I cut off the corner I picked out the seam and flattened it back out again to reveal a rectangle. This may be helpful for visualizing the structure of the finished bag when thinking about the flat piece we're starting with:



Getting back to the dimensions, I've decided I want to make the duffel 18" long, 10" deep, and 12" high. I need to figure out **how big of a rectangle** to cut in order to get that. Here's the bag still inside-out, with all its parts labeled:



We can see that the final length is e, which is 18”; the final height is C, which is 12”, and the final depth is d, which is 10”. a is half of c, so 6”. The length of the zipper is the width of the rectangle we’ll start out by cutting *not including seam allowance*, which is a+e+a, or 30”. The height of the rectangle will be b+c+d+c+b, and b is half of d. So that makes 5+12+10+12+5=44”. We’ll add ½” for seam allowance to each side of the width to get a cut width of 31”, and ⅝” to each end for the fold over the zipper, which we’ll sew with the same method as in the round duffel (although obviously, you can use a different method for the zipper in which case you should adjust the cut size as necessary).

This formula will let you make a duffel whatever size you like; and the beauty of doing it this way is that it’s actually pretty forgiving. As long as you start with a big rectangle somewhere in the right ballpark, you’ll be able to sew down the corners and make a nice square bag and everything will be fine, even if you miscalculated or fudged things a bit or made minor adjustments for the dimensions of the material you have. As long as your rectangle is straight and true, it will work out!

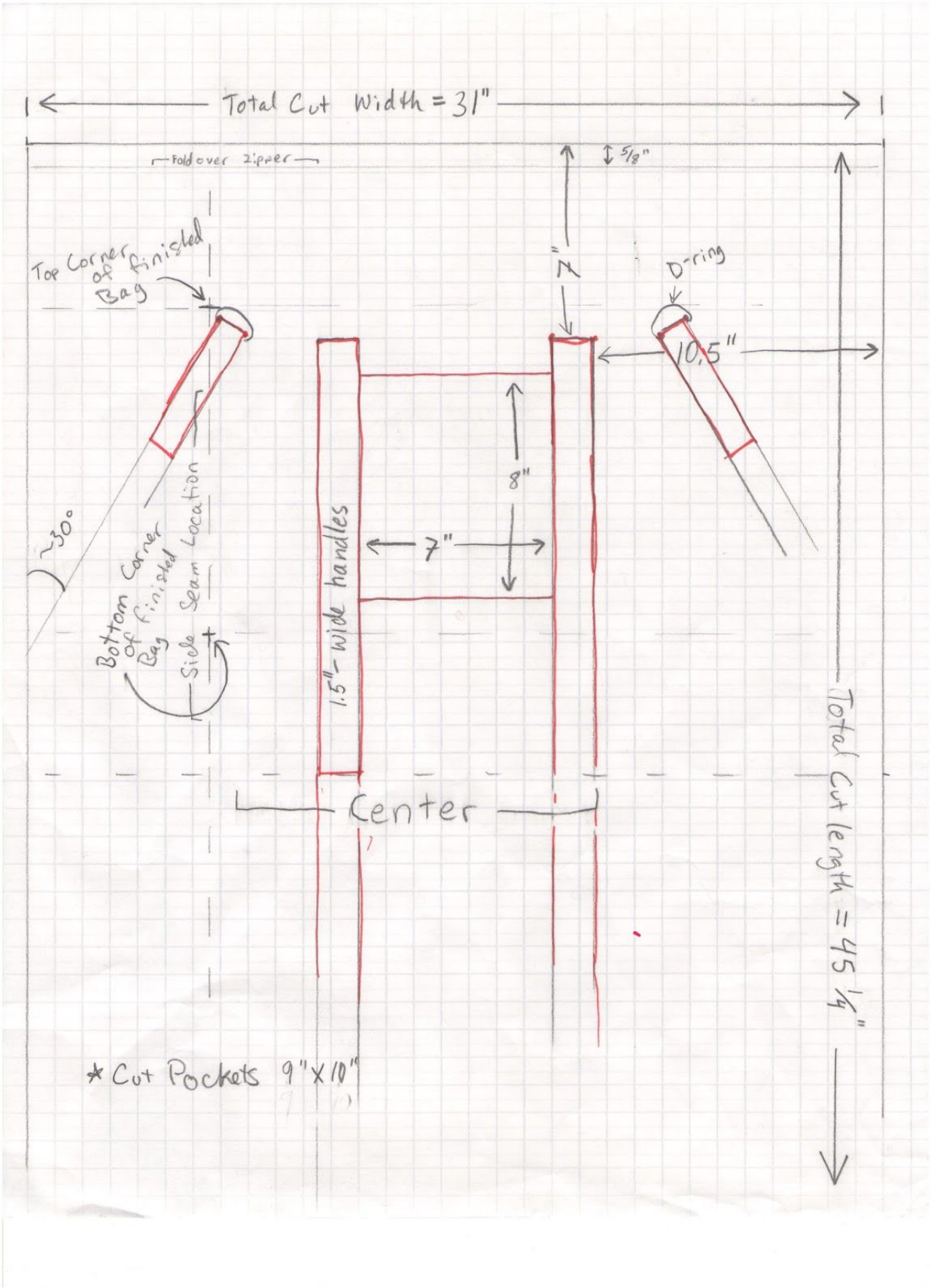
If you’d rather start from the dimensions I used, I’ve included a drawing (on the next page) with the positions of all the straps, pockets, and D-rings marked out. Note that in order to make it fit comfortably on one page, I only actually drew half of it; the other end gets the same markings.

So let’s start marking. First are the **handles**. They wrap around the bottom just like on the round duffel. Since this one is square, they’ll reach almost up to the top corner but not quite. So the top attachment points are 7” from the cut edge, which accounts for the width of the top of the bag plus the fabric turned under at the zipper. As in the round duffel, the handles are made of a single long piece. In this case I used 1.5” wide black nylon webbing because I figured white would get dirty and I was also feeling lazy.

We're also going to mark out the **side pockets**. These lines will not be the actual top and bottom of the pocket; they'll be closer together than that because they'll be used to align the edges for sewing. So put the top maybe ¼" lower than the actual top of the pocket and the bottom maybe ½" higher. You'll see why when we attach the pockets. One more consideration about the top edge of the pockets is that the handles are going to form the stops on the pocket zippers. But we're also going to want to put box tacks at the junctions of the handles with the sides of the bag. This will be easier if you position the top of the pocket low enough that the zipper won't be in the way of making your box tacks, if you choose to use them.

The last thing to mark are the **webbing tabs that will hold D-rings** for a shoulder strap. As I mentioned earlier, it's common to have the D-rings for the shoulder strap centered on the sides of the bag and positioned at the ends of the zipper. But in this case, the zipper goes to the halfway point on the sides of the bag, which would make the bag less stable. So I have instead put the D-rings on the sides, and I placed two on each side. A shoulder strap can be attached diagonally depending on which shoulder it will be carried on. I attached these at about a 30-degree angle, which should more or less somewhat follow the angle of the shoulder strap when in use, and the ends will neatly disappear into the side seams. I positioned them so that the tops of the D-rings will be just a bit below the top corners of the bag, and will clear the side seams comfortably. The webbing doesn't need to go all the way to the edges of the fabric, since a lot of that will be cut off after we sew those triangles.

(continued after drawing)



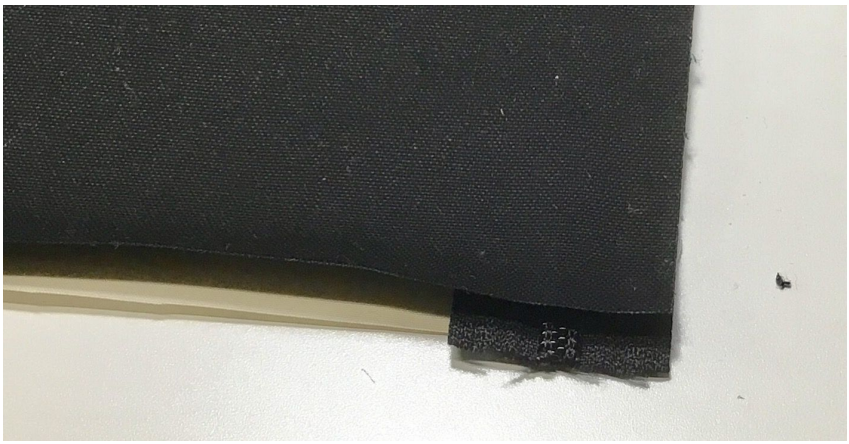
I used a protractor to measure 30 degrees, but it's really not that critical as long as all four match. You can use a folded or cut piece of paper to get an angle that looks good, and then use that to mark these four spots.

Alternative ways to attach D-rings for a shoulder strap could include placing them on the side(s) of the zipper and then sewing them down higher up, or putting them on a larger triangular tab at the ends of the zipper with a base wide enough to keep the bag from tipping around if it is top-heavy when full. The method I used is maybe best used on skinnier bags, but should still make for a comfortable carry on this one.

Note: All these exterior features get sewn onto the outer fabric WITHOUT going through the lining as well. We'll put the lining together with the outside later. It's not that critical, but it means you won't see any of these seams on the inside of the finished bag.

So let's start with sewing these side pockets. In this case, they are cut to 9" wide by 10" high. In the drawing, the box marked out where they'll go is only 7" x 8". There's a reason for that! The extra width and height of the pockets will end up giving them a bit of depth, which will make them more useful.

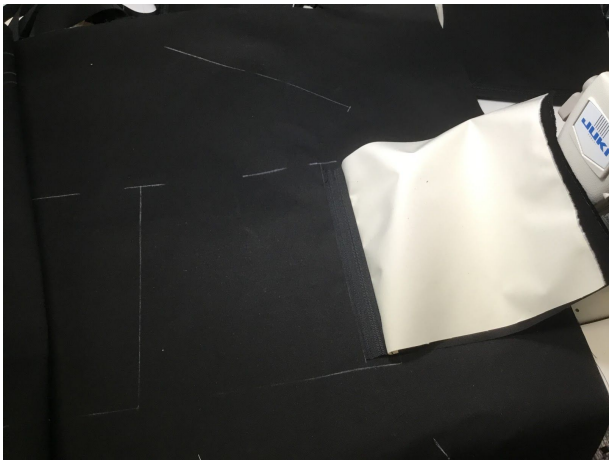
These are going to be basically like the side pocket in Part 1, but **with an extra twist.** Start by sewing the pocket onto the zipper. This time, the zipper tape will end up between the lining and the outside for a cleaner finish on the inside. Put the outside of the zipper facing the outside fabric, with the lining against the back side of the zipper:



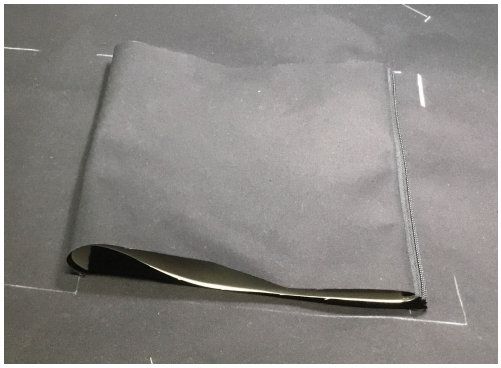
Then stitch and fold back both the outside and the lining. Depending on your fabric and your style, you may want to topstitch at this point, either through just the outside and the zipper, through just the lining and the zipper, or through all three. In this case I didn't, because both fabrics fold down nicely and I don't think the lining is going to get stuck in the zipper.

I've now sewn zipper to the tops of both pockets and trimmed the ends neatly, but haven't put on any sliders yet:

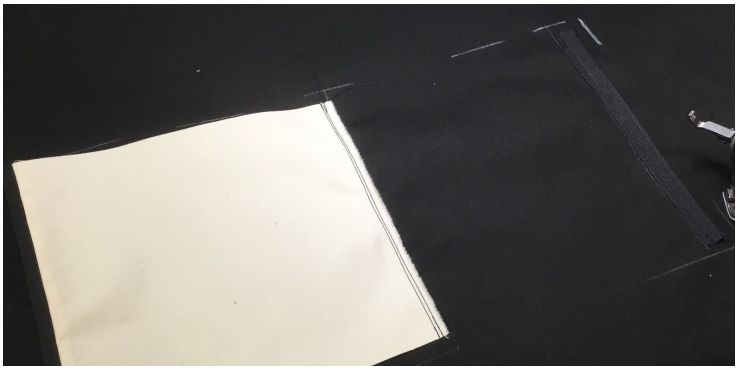
To sew the top of the pocket, align the top, un-sewn edge of the zipper tape with the upper line, with the outside of the pocket facing the main panel and with the pocket sticking up, and sew.



I'd really like to have the same thing happen at the bottom edge so it looks like this:

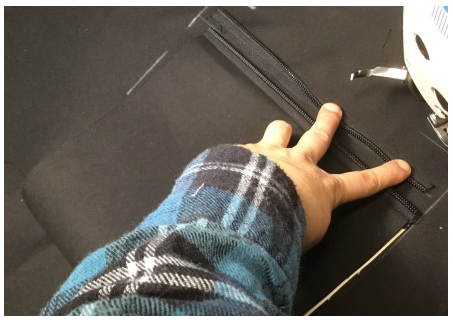
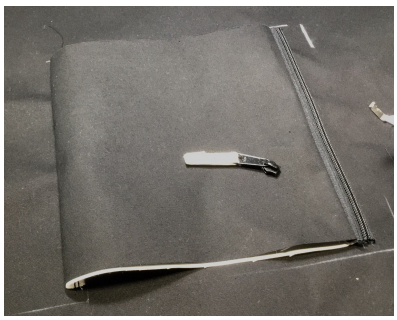
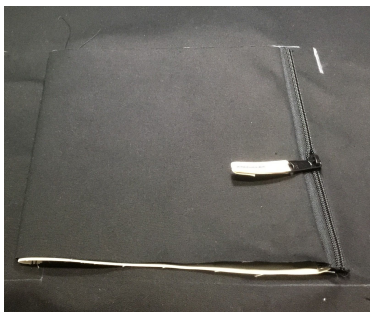


Ordinarily that wouldn't work if the top is already sewn down. But in this case, we're in luck! The top is only attached by a zipper, so let's unzip it and sew the bottom edge the same way:

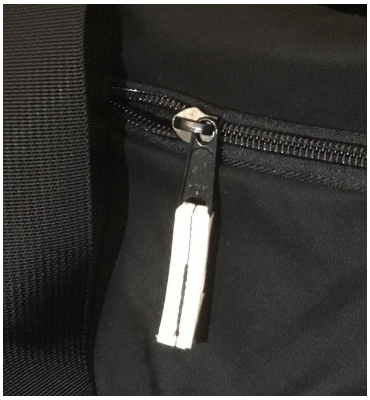


I did two lines of stitching for good measure. Like the main zipper, I'm not too concerned about this fabric fraying, especially since I cut the pockets with the bottoms at the selvedge of the fabric where it won't fray anyway. But otherwise, you might want to cover or finish these seams in some way. There are lots of possibilities.

Now you can flip the pocket back up and install the zipper slider. Insert the slider at one end, then zip all the way off the other end so the teeth are closed all the way to the edge. Now open up one end and put the zipper slider in again, but leave it in the middle this time:

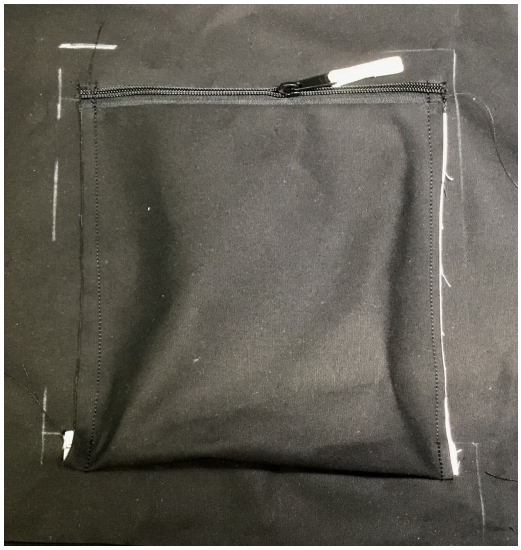




As a side note, you might notice that I added a **little pull tab** to the zipper slider. It's a narrow strip of the white fabric folded over and sewn down. It's an easy little detail that makes the bag look fancy and color coordinated. I did it for all the zipper sliders on this bag.



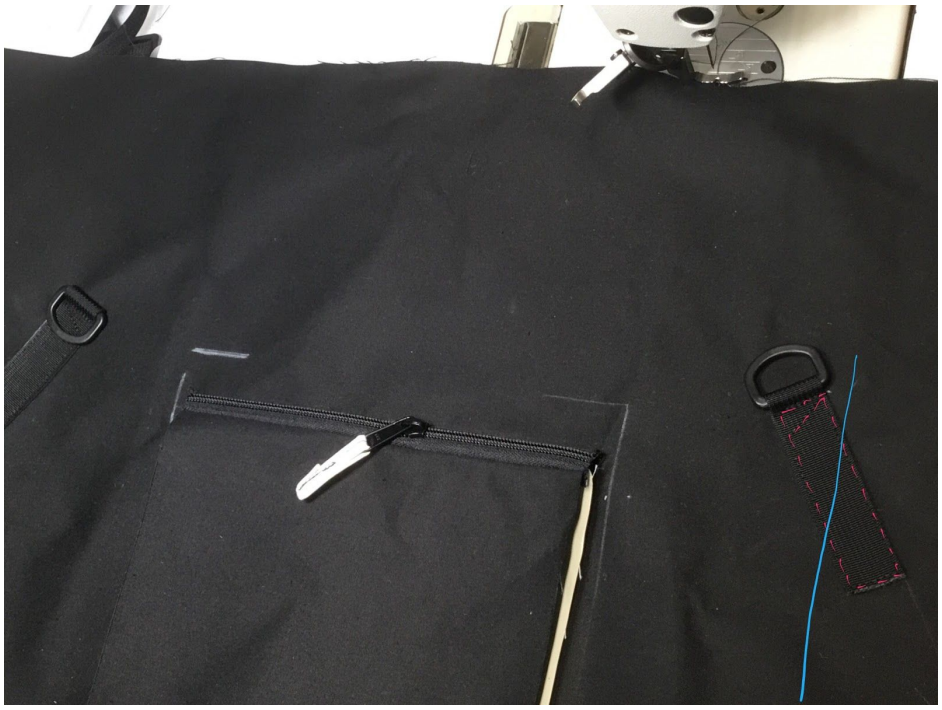
Now we'll sew down the sides of the pocket. You could just sew straight down both sides without doing anything special, and then you'd be wondering why the pockets were cut with so much extra width. But instead, we're going to use that extra width to fudge things a bit so that the **pockets have a little more depth** to them and work better for bulkier contents. That's also why there's a bit of extra height in the pocket, too.

So instead of keeping the sides of these pockets straight as I sew down them, I'm going to pull them inward a bit. Start at the top edge, at the zipper; the bit of extra slack at the bottom will help make it work out. You have to use some judgment for how much you can get away with on the fabric you're working with, and you want to be careful to stay well within the area that will get covered up by the straps so that nothing will show. It might be helpful to put a kitchen sponge (a clean one!!) inside the pocket to puff it out while you do this. It doesn't take a whole lot; just a little bit will make the pocket a lot easier to get your wallet or something out of if the duffel is full.



Before putting the handles on, let's put on the **webbing for the D-rings**. I use a zipper foot to get right up against the flat side of the D, but your equipment may vary so do what you can. I made a sort of variation on a box tack, since these are going on at an angle and the sides will be cut off at an angle. But you could do a box tack with a normal "X" or whatever you feel is appropriate. Just make sure that whatever you do is sturdy and spreads the stress over a large enough area of the fabric, because these will support all the weight of the bag. For reference, here's how they'll look in the end:

And here's how they look when they've just been sewn on. I have highlighted the stitching I did in pink because otherwise it's hard to see black thread on black webbing on black canvas. The blue line is roughly where the side seam will be.



Now we'll sew on the handles. It's just like the handles of the round duffel. Follow the chalk lines and sew neatly along the edges of the webbing. The straps will cover the edges of the pockets and become the stops at the ends of the zippers. It doesn't hurt to tack back and forth an extra time or two at the ends of the zippers.

The last thing you see sewn on there that I haven't mentioned is a little **label** that says "Canzonet". Canzonet.net is Dill Pickle's sister site, for musical instrument cases. Since this is fabric I typically use for those, I figured I'd use that label because why not. If you find yourself making a lot of things for other people, you could get some labels of your own.
But if not, this would also be a good time to apply any patches, decorations, etc.

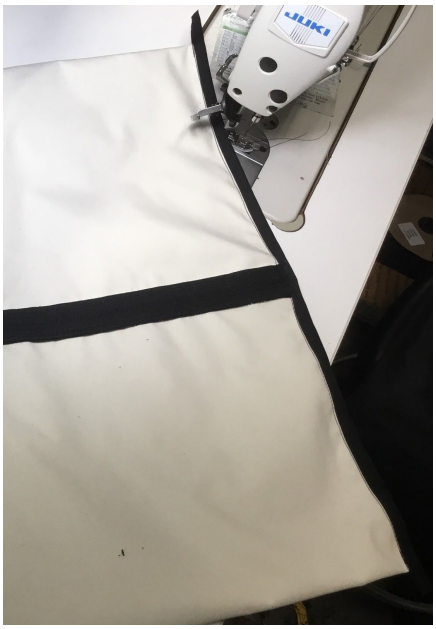
Now we'll **put the outside fabric and the lining together** and sew on the **main zipper**, also just like in the round duffel. Once that's done, fold the rectangle in half to find the middle and make a notch:

Put on the zipper sliders, one at each end, to make the rectangle into a tube. I decided to put white tabs at the ends of the zipper on this duffel too, just like on the little round one. I suppose I could have put D rings on these as well because why not, but I didn't.

Then flatten the tube so that the zipper lines up with the notches and sew across both ends.

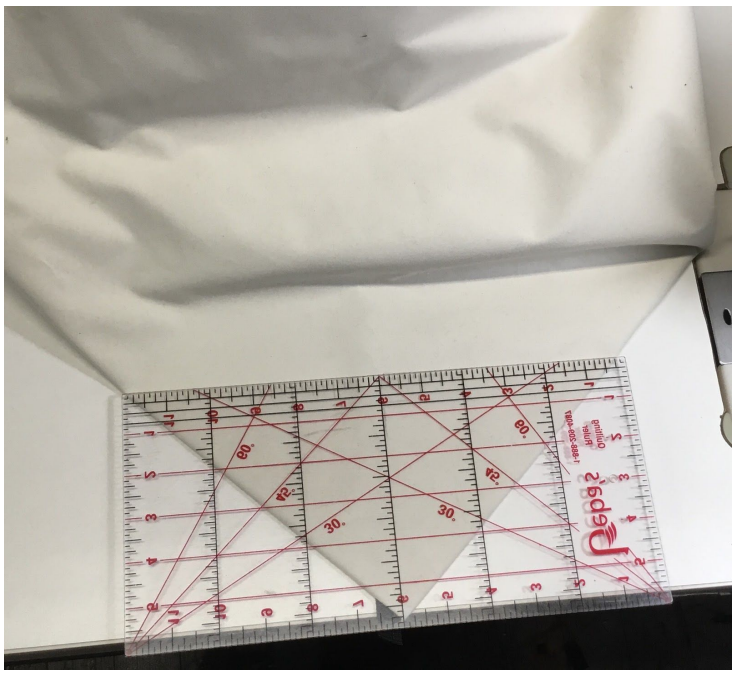
This seam will be somewhat load-bearing, so make sure it's strong and back-tack a few extra times at the ends of the zipper. If your sewing machine doesn't handle heavy thread well, maybe just sew over this seam an extra time or two to reinforce it.

I bound these edges with grosgrain. As I have mentioned before, it's easy to do and it hides a lot of evils, too!



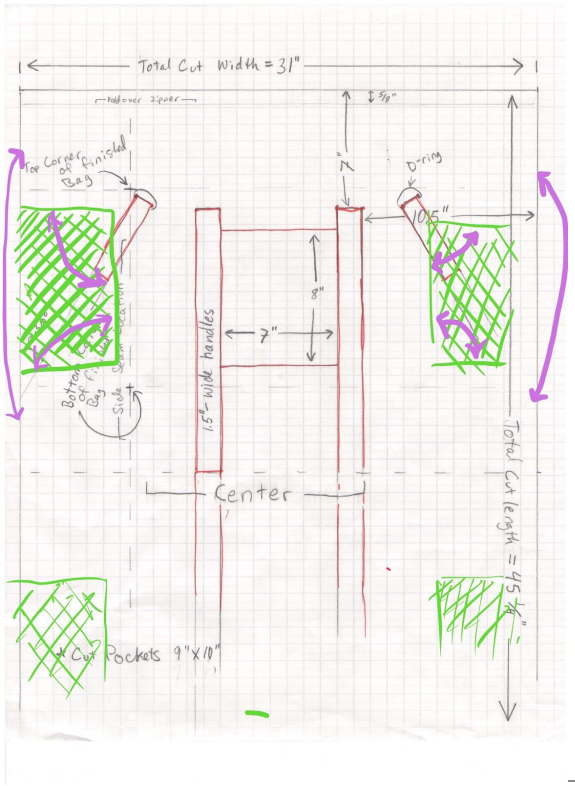
You don’t need need to worry about the ends of the grosgrain, because this part will be cut off momentarily.
Before flattening the corners origami-style, let’s mark everything to **make sure it’s as square and accurate** as possible. The benefit of white lining (aside from making it easier to find things inside the bag) is that I can mark it easily and precisely with a regular pencil. I need to mark the center point of the side fold, and I need to mark six inches from the edge. It’s going to be easiest to do this on all sides first before sewing any of the corners.

Now I’ll **flatten out the corner**. You might just barely be able to see a thin pencil line under the six inch line of this ruler. Take your time to make sure everything is square at this point. The seam you just sewed should be exactly centered in the triangle this ruler is covering. A ruler like this is obviously useful to have, but it’s not necessary. You could also cut two cardboard right triangles with 6” legs and use them to line up these corners. What matters is that you’re careful to be as accurate and precise as you can, otherwise the bag will come out crooked.



Carefully mark the line at the top of the ruler with pencil, and then sew exactly on that line. Then **cut off the resulting triangle**, leaving a consistent ½" seam allowance.

Incidentally, you absolutely could **draw your pattern in the first place with these segments already cut out** and planned that way. Leaving it until this stage gives you maybe a hair more flexibility in the final dimensions of the bag if you think you might change your mind at the last minute, and it's easier to just cut a big rectangle to start with. But it is actually easier to get the alignment right if you cut with these segments planned out. This cut-off triangle opens out into a rectangle, and here's approximately where it would be in the original drawing to help you conceptualize it better:



The green crosshatched areas are the corners that you cut off, and the purple arrows indicate which parts end up sewn together.

But if you had done it that way in the first place, you wouldn't have these stylin' offcuts:

When all four corners are sewn and the raw edges bound, this is what you have:

Turn it right side out and you've got a nice piece of carryon luggage!

Odds and ends and extras:
Like the round duffel, this basic concept can be re-shaped for any number of purposes. Some things you might consider: additional pockets, including 3-D pockets, water bottle pockets, etc. Additional D-rings or a mesh pocket on the end for a bike helmet or pair of shoes. A tall skinny version could be a briefcase. You could add internal pockets for specific items as needed. A small version could be a nice carry-on size. You could add a pocket on the bottom with stow-able backpack straps in it.
There are lots of changes you could make to the basic shape, too. One way to experiment with that is with paper and tape to prove your concepts. You can make scale models in paper easily by using graph paper and pretend that each square is an inch.

There really are endless possibilities, but I hope this gives you a good start. Please contact me if you have any questions! And please do send along pictures of what you come up with, or use the hashtag **#pickleproject.**