



**LYNN ROBINSON**  
Outdoor Design + Development



Greetings,

I feel very grateful to be working and living among the mountains of New Hampshire. It was here that I took my first week long backpack trip as a pre-teen. The pack was a simple external frame, made of blue nylon ripstop, and had only one pocket.

Of course, this pack held more than just gear. It became filled with memories of early journeys that initiated a life long passion for being in the backcountry and engaging in my favorite adventures whether it was rock climbing, backpacking, trail running, or mountain biking.

As an outdoor enthusiast, I've always believed that when you venture forth into the unknown with only a handful of objects to take you through a journey, the best objects are uncomplicated, lightweight, long lasting, and go "unnoticed" because the details and fit are well thought-out.

As a designer and developer of outdoor gear for the last 10 years, I continue to be inspired and mindful of these design "truths" with every new project.

Thank you for taking the time to look at my portfolio.

Lynn Robinson  
[www.lynnrobinson.com](http://www.lynnrobinson.com)



# PACKS



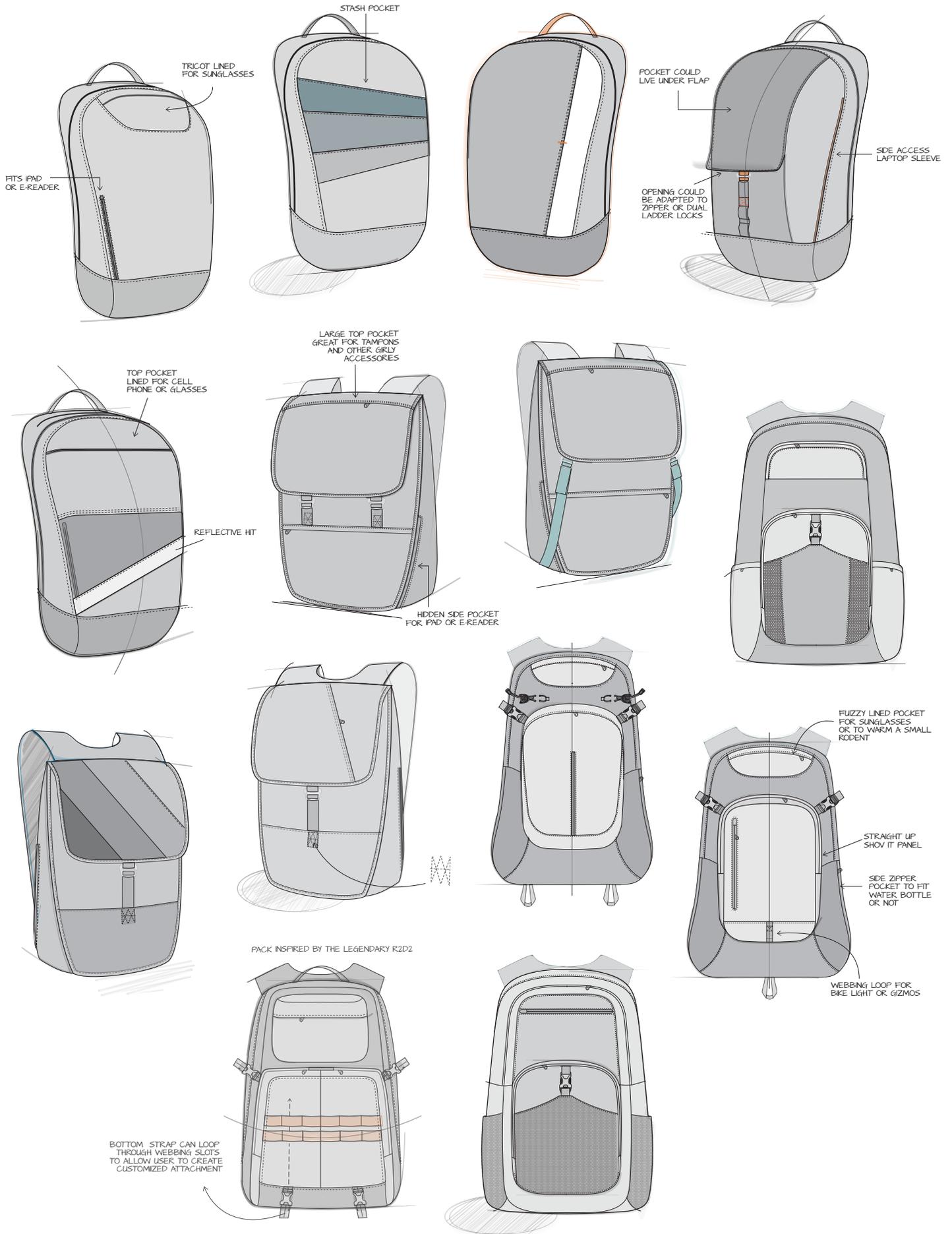
I spent 6 years as a designer + developer for the Eastern Mountain Sports equipment team. Our team was responsible for 60 styles per season that included: technical backpacks, daypacks, lifestyle, travel, sleeping bags, tents, and camp accessories.

It was at EMS, that I gained practical experience through each season of presenting initial design concepts, researching color + trends, recommending materials, product branding, trim development, guiding prototype revisions, and finalizing tech specifications.

While collaborating with our factory partners, I learned how to minimize cost through more efficient construction methods, increase manufacturing productivity through standardizing pack components, and implement new technologies.



# IDEATION + CONCEPT SKETCHES





The Iko was one of 6 daypacks I designed for Eastern Mountain Sports. After researching our current line, and looking at the comp set, it was collaboratively decided what the price points, and features of each pack would be. A part of the challenge was to give different identities to each pack to allow for a variety of consumer choices.



Sometimes with only a month between design review and the release of initial tech packs, sketching digitally increases efficiency.



arco

Zencolan



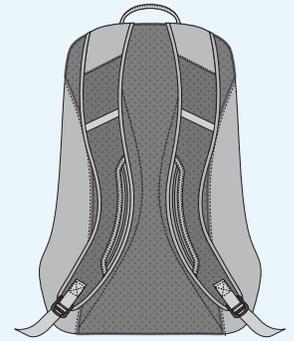
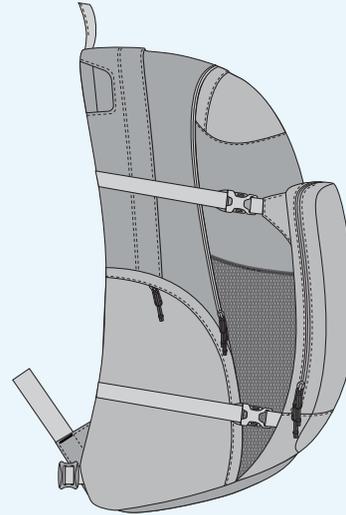
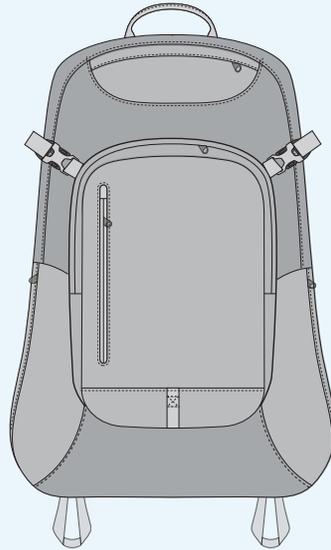
## MATERIALS + TRIMS: PRODUCT LINE REFINEMENT

Choosing fabrics and materials is a collaborative effort with sourcing and merchants being involved in the process. For the daypack line, it was important to choose materials that considered function and cost, but also reflected industry trend.

Prior to design review presentation, I spent a great deal of time transitioning initial pack ideation into refined products with features, and specific materials determined. Once a product line was approved, I would spend the next few months creating all initial tech packs and trim sheets that would be sent to our factory partners for first proto-type construction.

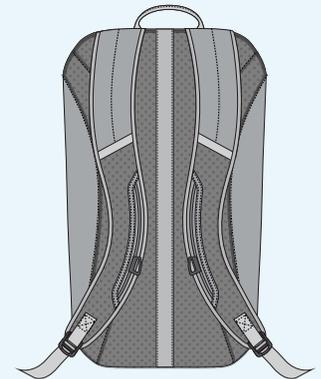
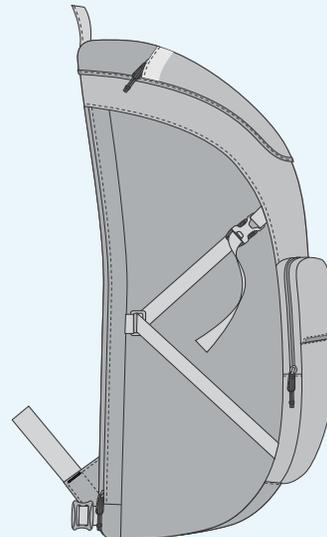
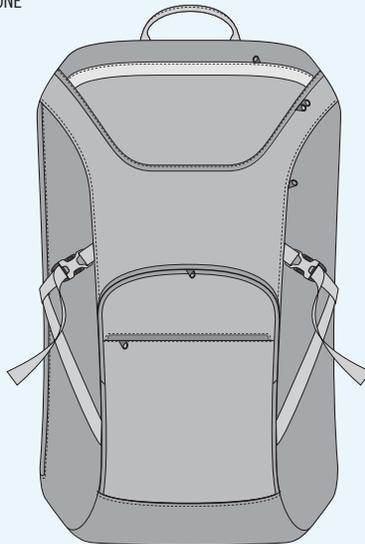
**FEATURES >>**

- CAPACITY 30L - 79.00
- SIZE 19H X 11.5W X 9.5D
- FRONT STASH POCKET FOR SMART PHONE
- LINED SUNGLASS POCKET
- SIDE ZIPPER ACCESS WATER BOTTLE POCKETS
- WEBBING LOOP FOR BICYCLE LIGHT
- FRONT POCKET WITH TWO ORGANIZATIONAL SLOTS
- TOOL LOOPS
- FRONT SHOV-IT
- INTERIOR MESH POCKET WITH KEY FOB
- HYDRATION COMPATIBLE
- REMOVABLE HIPBELT



**FEATURES >>**

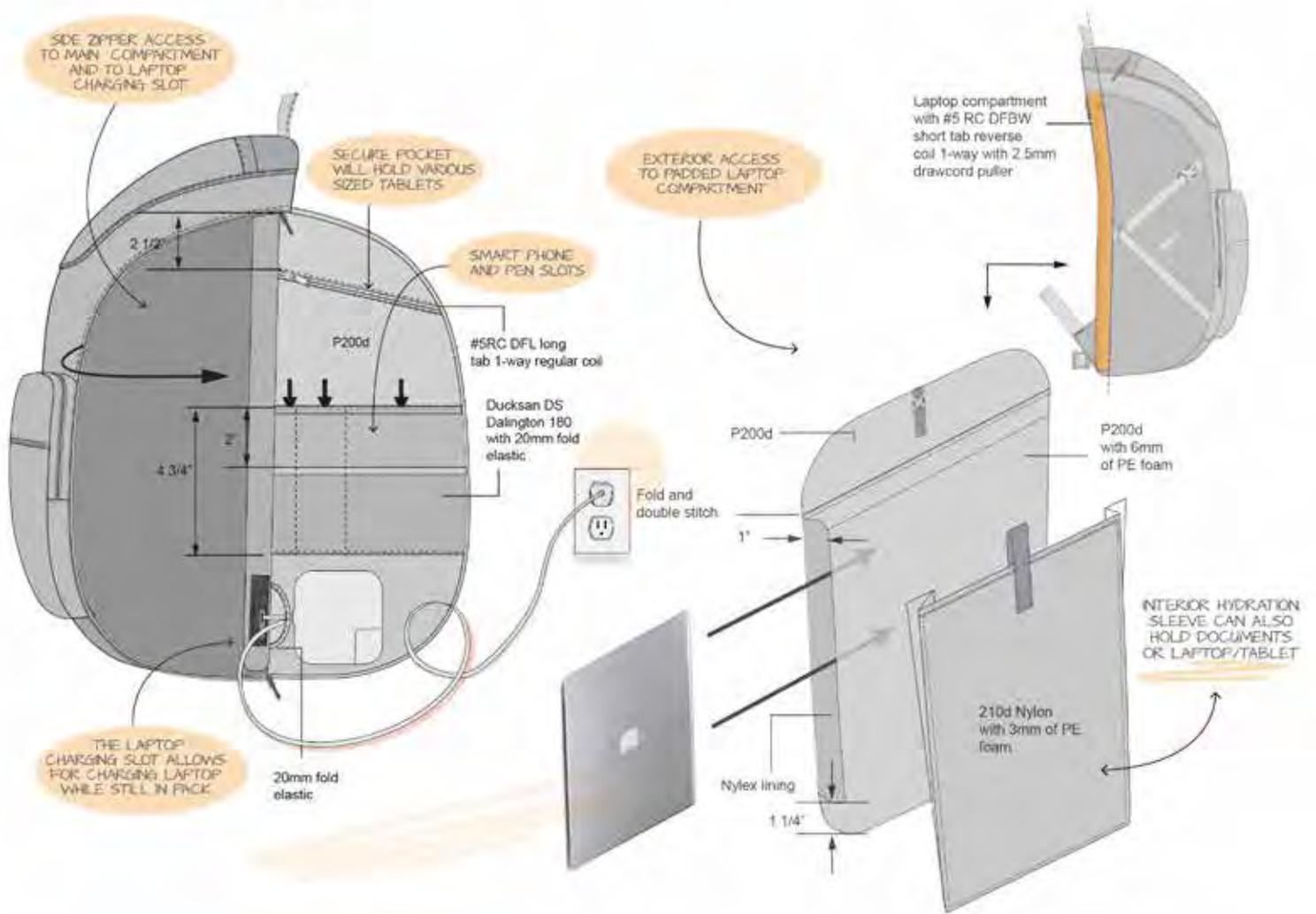
- CAPACITY 35L - 99.00
- SIZE 19H X 11.5W X 11D
- FRONT STASH POCKET FITS BIKE U-LOCK
- DEDICATED 17" LAPTOP COMPARTMENT
- SIDE PANEL ZIPPER ACCESS WITH MESH POCKETS
- INTERNAL WATERBOTTLE HOLSTER
- FRONT POCKET SLOTS FOR ORGANIZATION
- FRONT TRICOT LINED POCKET FOR SMART PHONE
- MESH POCKET WITH KEY FOB
- HYDRATION COMPATIBLE
- REMOVABLE HIPBELT



- PROJECT >>** DAYPACKS
- DATE >>** DESIGN REVIEW
- SCALE >>** % OF 1:1



# INTERIOR FEATURES

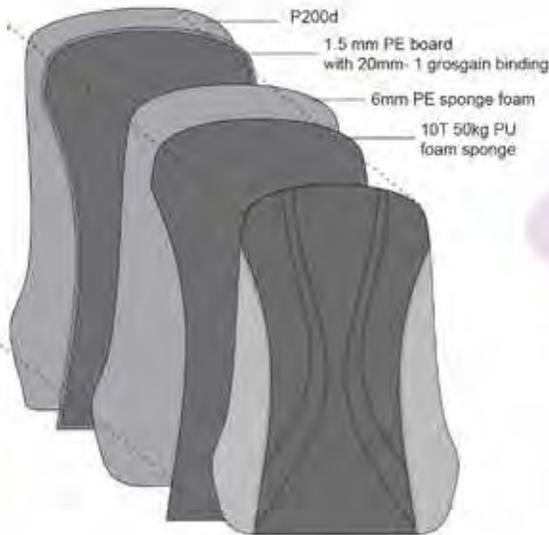
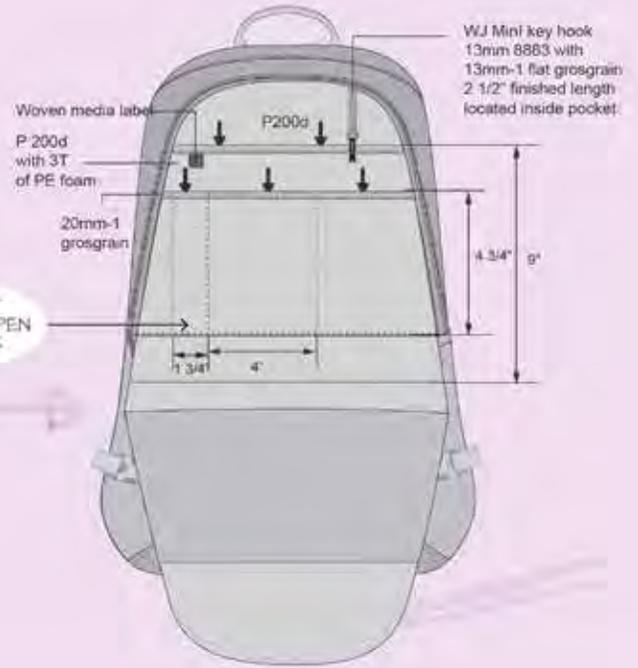


PLENTY OF INTERIOR POCKETING ALLOWS FOR USER TO MAKE CUSTOMIZED STORAGE CHOICES



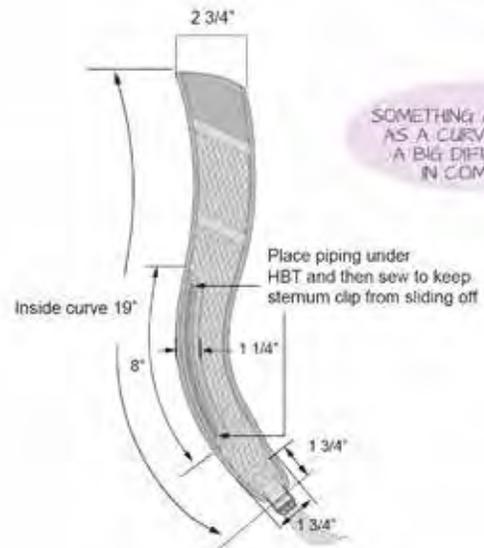
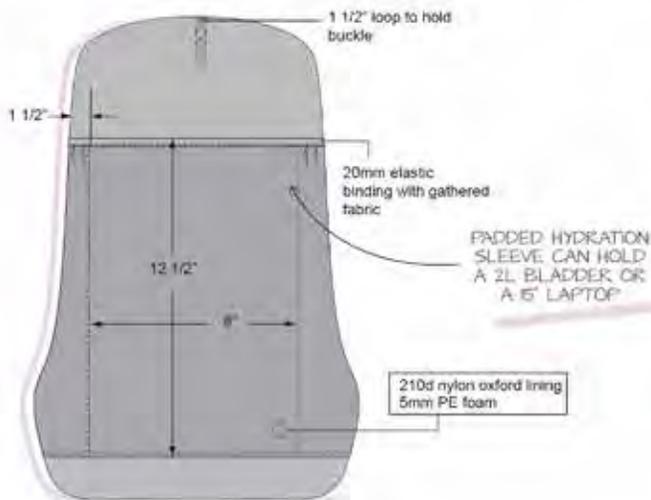
YE! GLORIOUS KEY HOOK

EASY TO REACH PADDED TABLET SLOT



BACKPANEL + SHOULDER STRAPS WERE DESIGNED WITH COMFORT FOR A DAY OF HIKING OR LOTS OF BOOKS

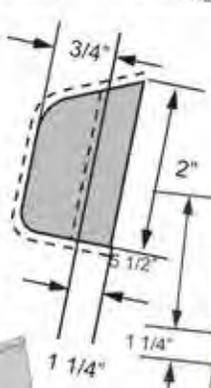
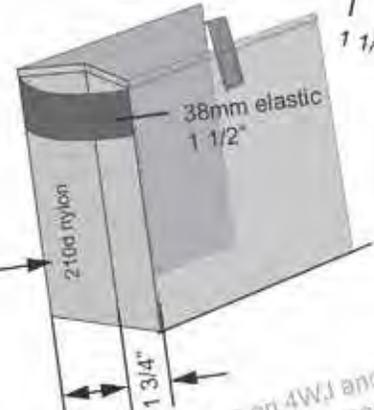
ADJUSTABLE STERNUM STRAP + REMOVABLE HIP BELT



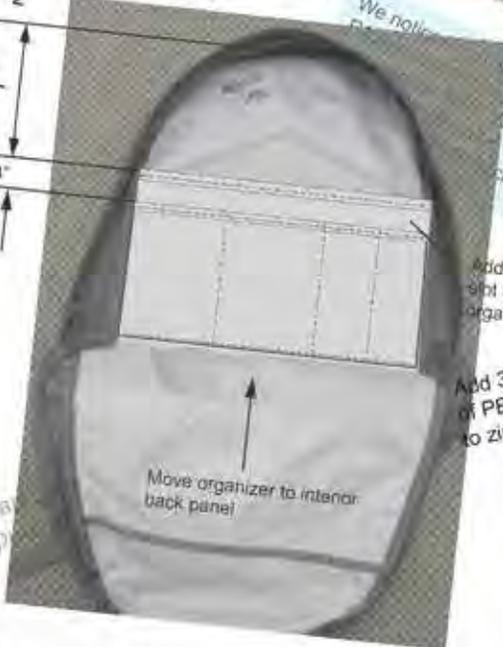
SOMETHING AS SIMPLE AS A CURVE MAKES A BIG DIFFERENCE IN COMFORT



hydration pocket - Reduce width of panels so that it fits hydration bladders or binders tighter. Adjust width of velcro closing webbing



Note that on P1 sample this puckering did not happen so much.



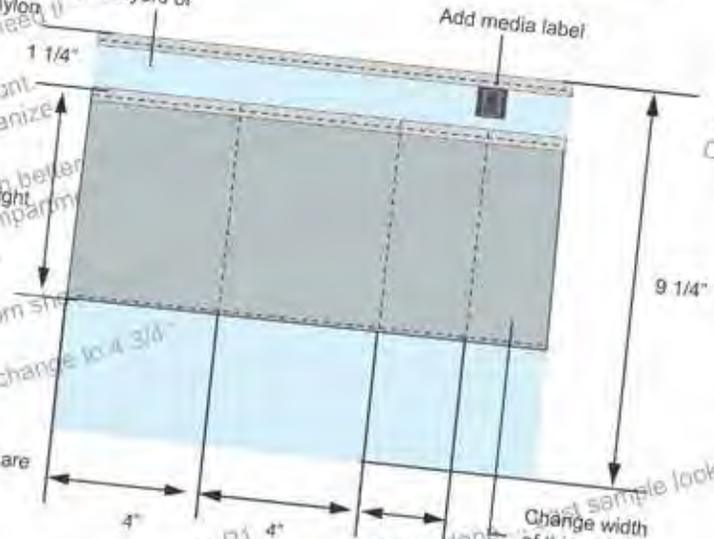
fabric seam was too close to front of pack - puckering?

Please add branding to pack as seen below.

Left Wear Side - Embroidery

**BENTON** 10mm

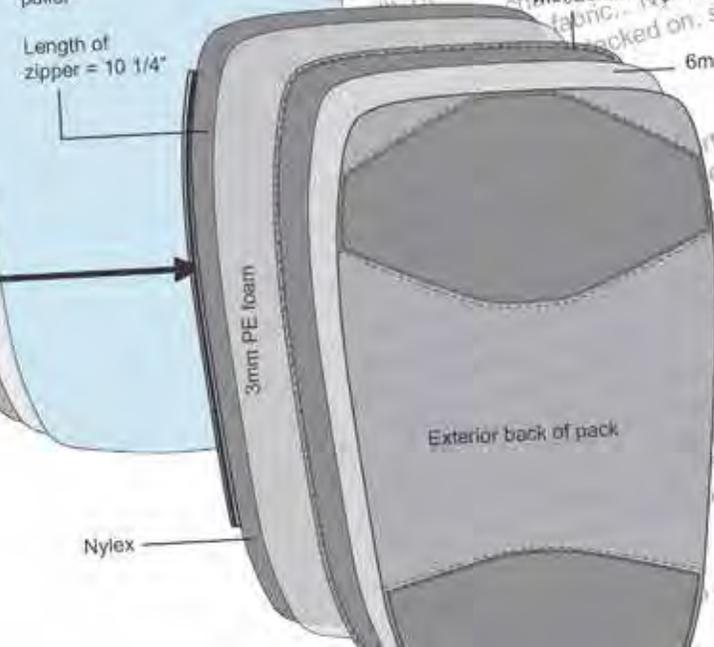
Change organizer height from 5 1/4" to 4 3/4"



Add media label

When changing the height of the organizer, change the distance between the top of organizer to 3/4"

#5RC Reverse coil DFBW short tab with drawcord puller  
Length of zipper = 10 1/4"



1.5 mm PE board with 20mm - 1 gross grain binding

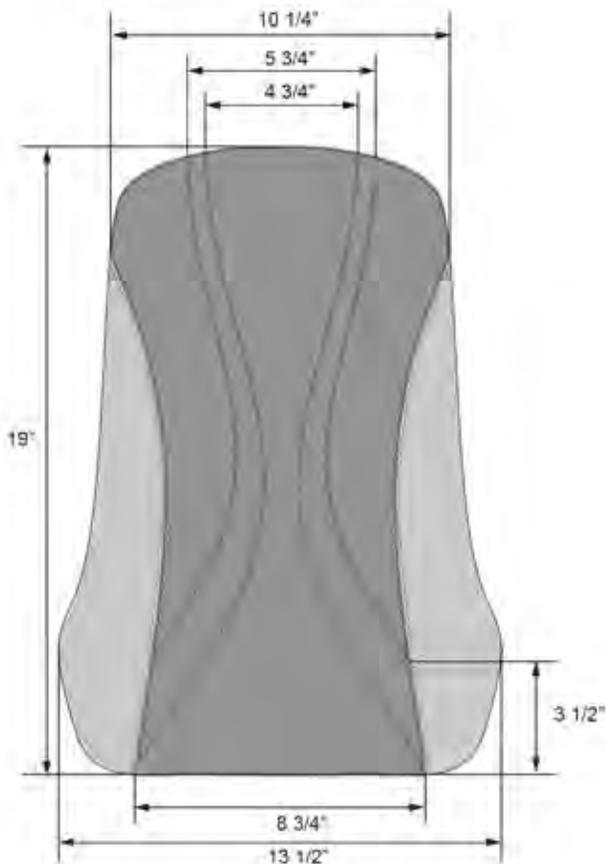
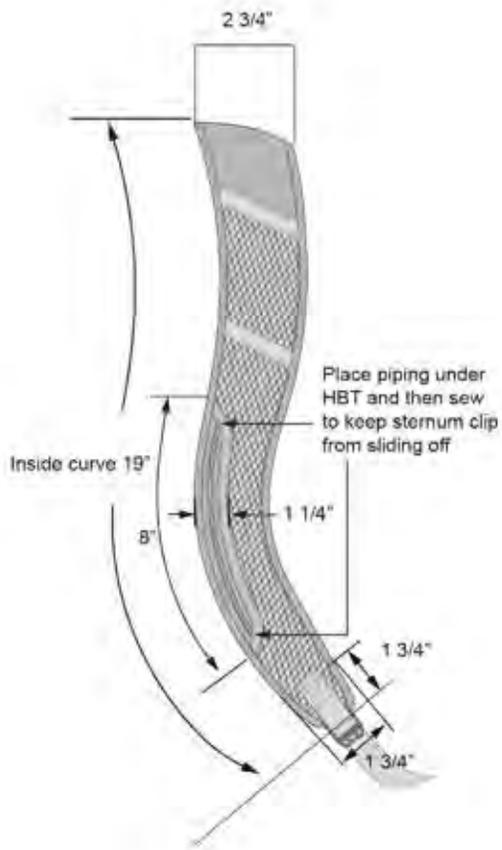
6mm PE foam



Remove 1/2" fabric piece located in front of zipper

Note that on P1 sample this puckering did not happen so much.

Add Dair panel so of front s

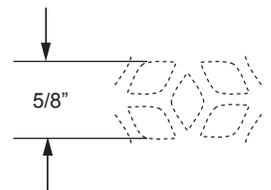
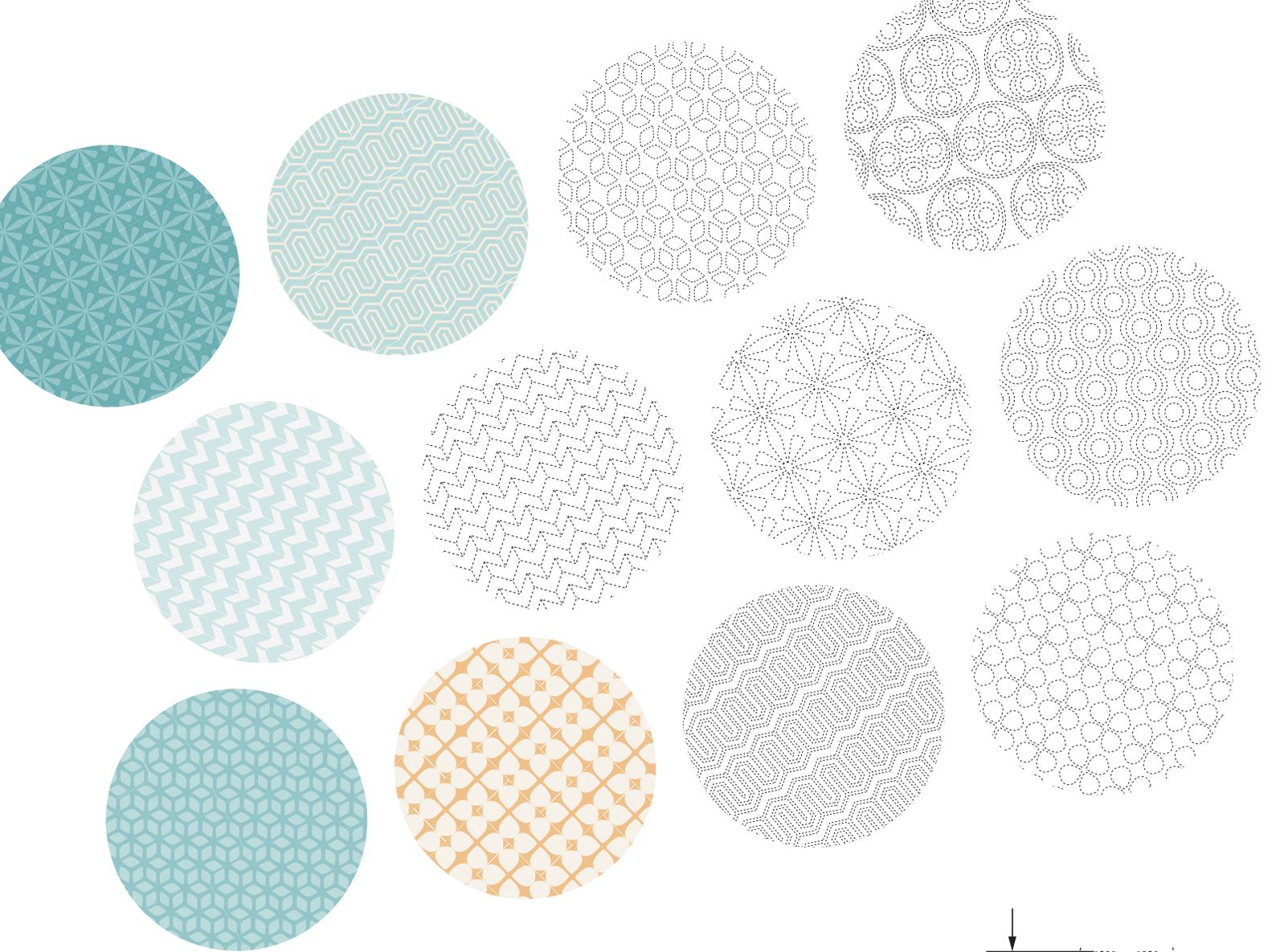


## TECH SPECS + REVISIONS

Getting technical starts with initial spec release. The more accurate and detailed information that can be communicated from the outset reduces the need for excessive prototype development.

The more technical the product the more difficult it becomes to separate design from engineering. Having worked as both a developer and designer, I have successfully communicated hundreds of prototype revisions to factories overseas.

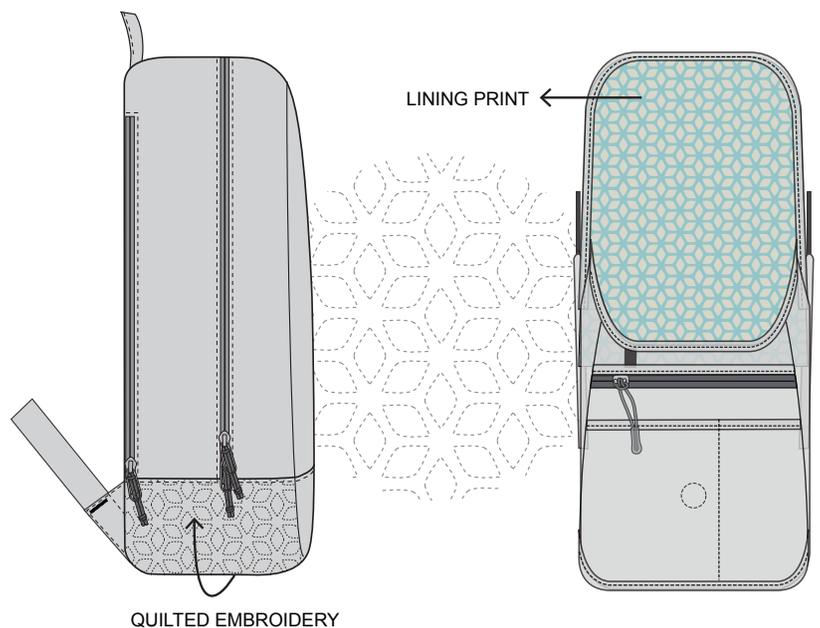
With only three folks on our equipment team, I became very efficient at creating final tech packs, bill of materials, and colorway details to meet production deadlines.



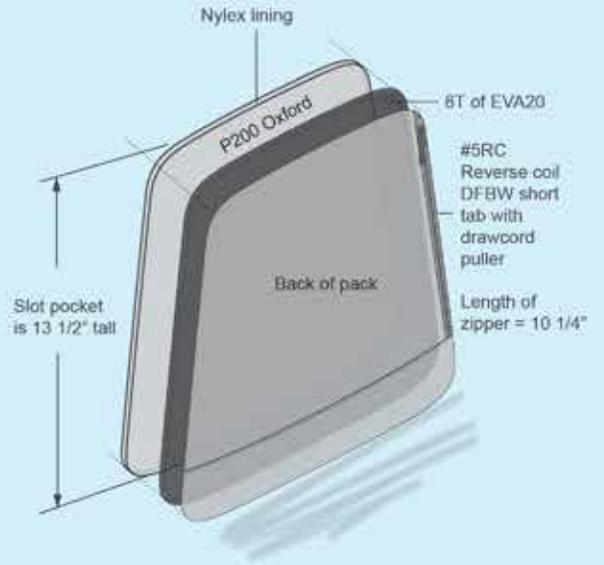
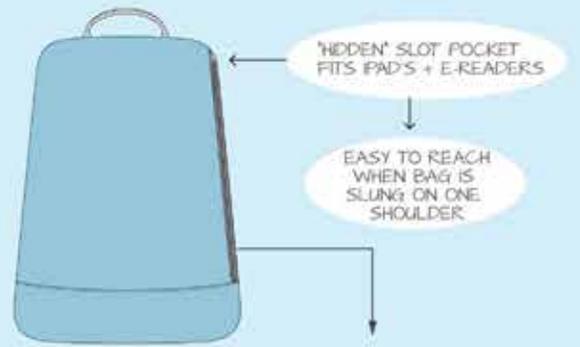
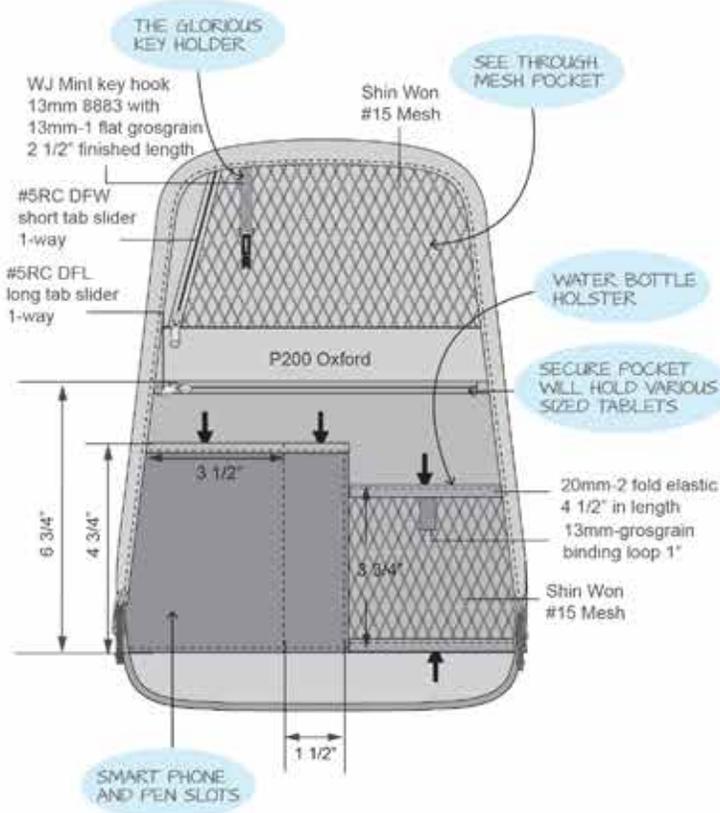
## PRINTS + PATTERNS

A sublimated print or a pattern detail is a simple way to give new life to an existing product or to accent a new one.

I designed the women's Fenway backpack to have a simple and clean aesthetic with loaded features and "hidden" pocket options. A simple embroidery detail was added to the exterior to avoid the crazy bedazzlements that is often found on women's products. And it's not pink.



# WOMEN'S FENWAY BACKPACK



# COLOR: FINDING BALANCE

Like other designers I spend time researching seasonal color and trend. However, a great deal of my personal inspiration comes directly from what I see in nature. Artists that deal with nature as their subject (ie. Chiura Obata, Emily Carr, Hiroshige) and textile artisans that make use of natural dyes are a particular influence.

Outdoor products such as backpacks and sleeping bags should last consumers for many years and therefore this is a context I consider when looking at color. I use "trending" colors if it works for a particular product/brand - not merely because that particular color is "trending".



SPRING: HARDGOODS PALETTE





*A thimble full of red is redder than a bucketful. ~Matisse*

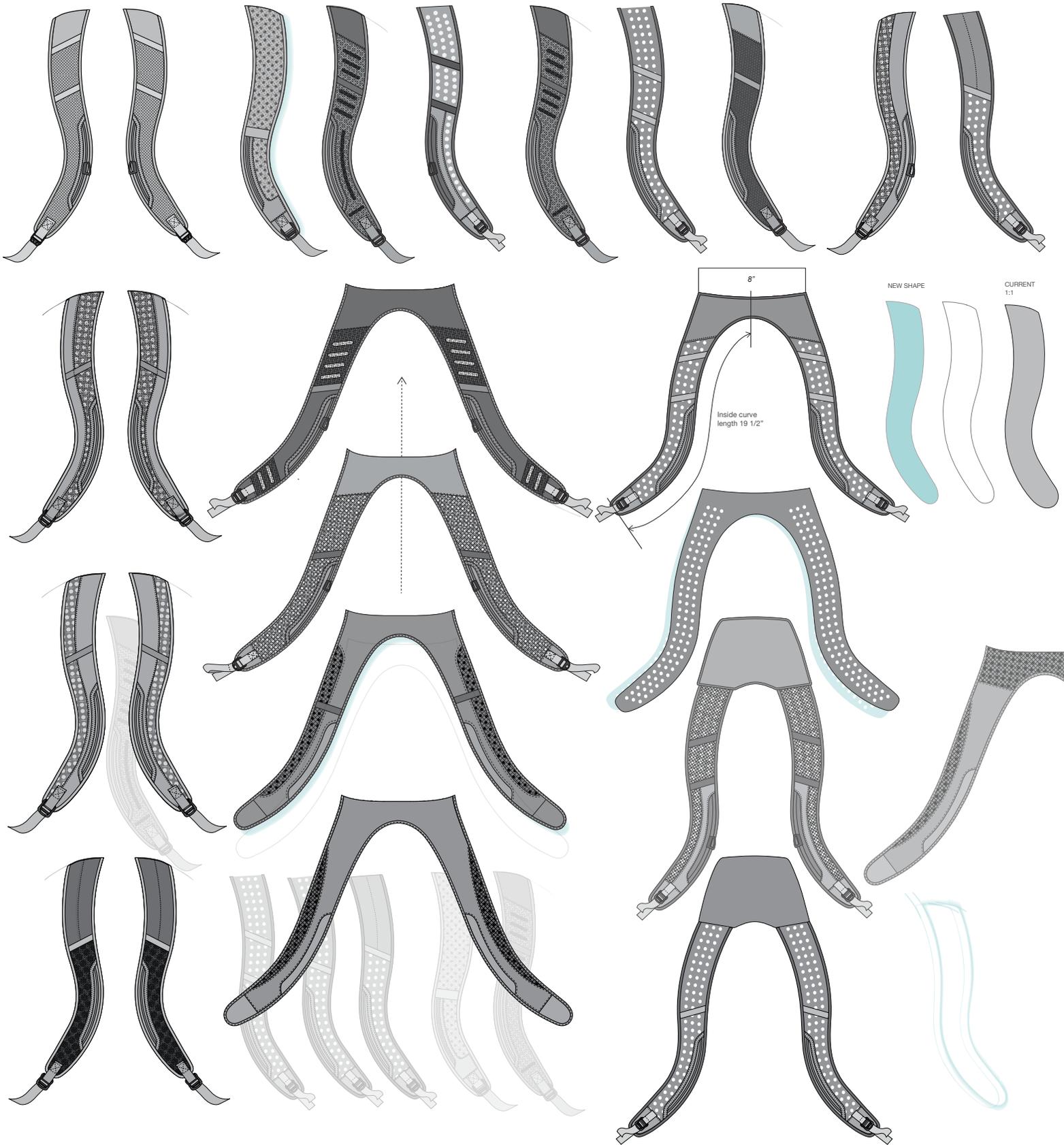


SECTOR PACKS: SIMPLE + LIGHTWEIGHT



*The ability to simplify means to eliminate the unnecessary so the necessary may speak.*

*~Hans Hoffman*



## ITERATIONS

While choosing materials and making design decisions, lightweight functionality and comfortable fit were my primary focus for the Sector backpack line. Trying to determine what was essential and necessary allowed me to focus on the features that matter most to the "light and fast" user. A great deal of time was spent adjusting the hip belt and shoulder strap patterns to get a good overall fit and optimal breathability.

## FIT: GETTING IT RIGHT

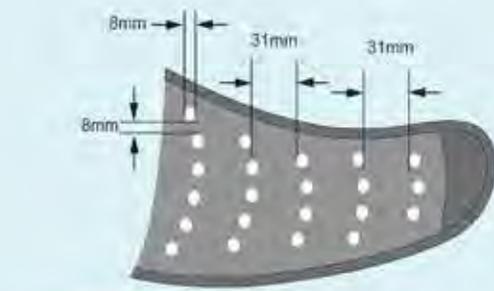
Getting it right sometimes means getting hands on, and getting behind a sewing machine or building a jig to make frame bends.

Getting it right also means testing, revising, and evaluating with a variety of outdoor folks. A good pack fit relies on the "sum of its parts".

Hip belt curve, shoulder strap length, frame stay bend all work together for equal weight dispersion and a positive user experience.



### AIR FLOW = COMFORT + LESS WEIGHT

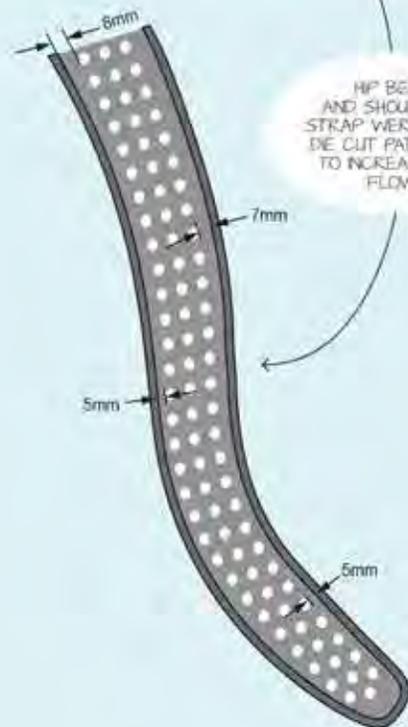


HIP BELT CURVE DESIGNED + TESTED TO HOLD WEIGHT WITH COMFORT

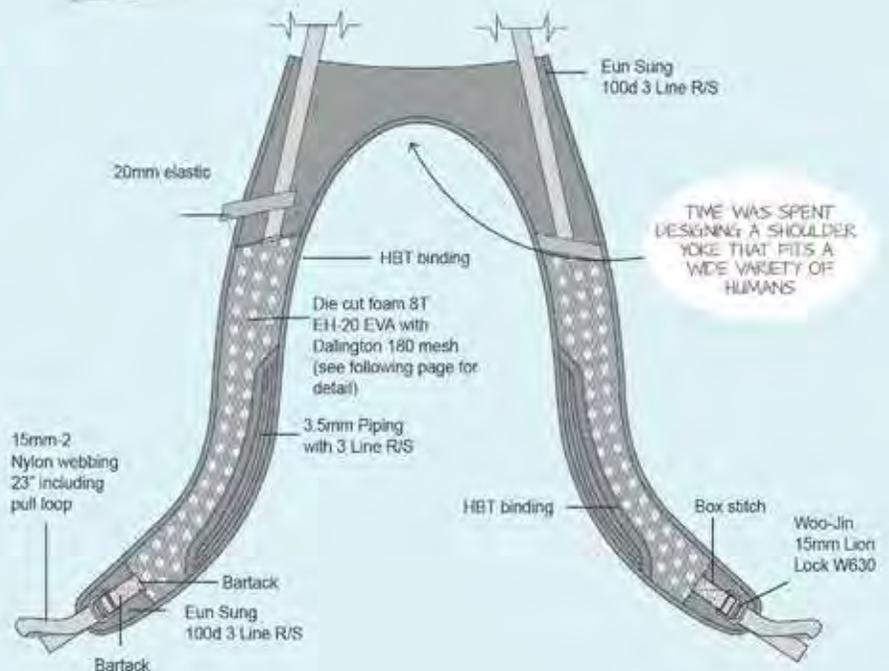
BACK PANEL DESIGNED WITH AIR FLOW CHANNELS AND MOLDED DIE-CUT FOAM



GIVING THE PACK MORE 'AIRFLOW' INCREASED COMFORT WHILE DECREASING WEIGHT



HIP BELT AND SHOULDER STRAP WERE GIVEN DIE CUT PATTERNS TO INCREASE AIR FLOW



TIME WAS SPENT DESIGNING A SHOULDER YOKE THAT FITS A WIDE VARIETY OF HUMANS

## COLLABORATION

Meeting directly with factory partners is an insightful experience that builds trust and lasting relationships. There were six packs in the Sector Pack line. As a part of the design brief, I was given the challenge of assuring that all packs shared many construction parts to mitigate cost. By working together, we were able to accomplish our goal, and gain knowledge that would improve technical specifications, provide insight into the costing implications of various design methods, and bring new innovations to products.







Testing gear in the White Mountains, NH



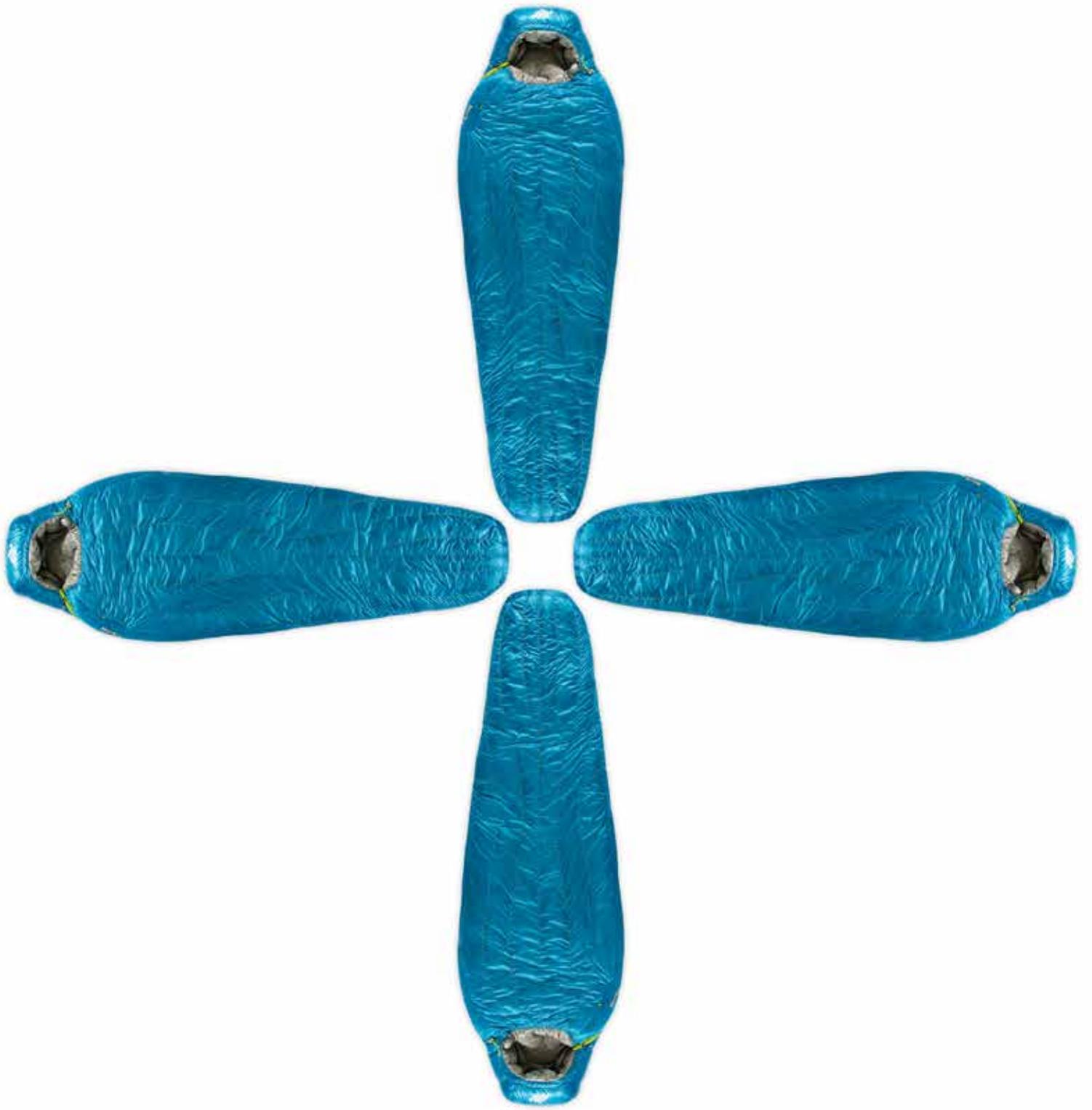
The Sector 42 Liter is the largest of the Sector series. In addition to the size, what differentiates the 42 is its adjustable harness that fits torso lengths from 17"-20". The 42 has a stable aluminum stay and frame sheet that can be easily removed by weight conscious hikers, taking 6 ounces out of the overall pack weight.

# SLEEPING



One of the reasons I enjoy working on outdoor products is the process of problem solving that happens when the rule of functionality strongly dictates aesthetic considerations.

More than any other category I have found this to be true with sleeping bags, tents, and pads. I know, from experience, how much safe backcountry travel depends on a reliable sleeping bag with a well tested temperature rating, and a trustworthy tent.

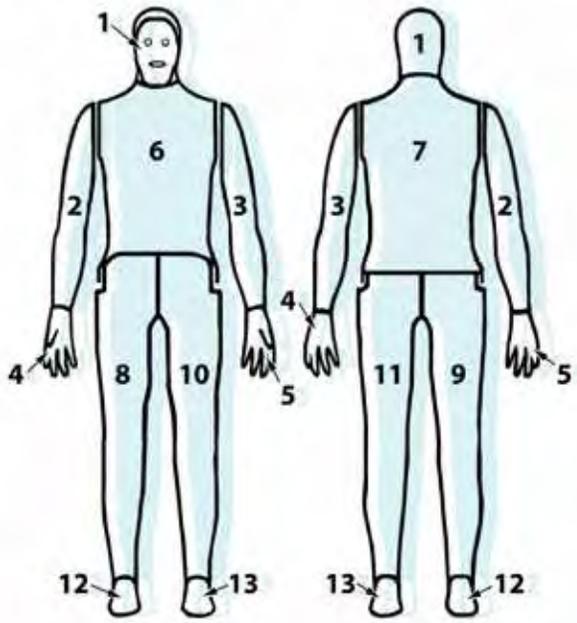


## DOWN: TESTING + CONSTRUCTION

Regardless of whether a down bag is created by flow construction, traditional horizontal baffles, or some hybrid, getting the correct down distribution and loft is crucial to the safety and warmth of the user. Gathering data from a variety of scientific testing such as manikin, and loft evaluation is as important as getting perceived warmth information from a variety of test subjects. This data allows for insightful revisions regarding the design and development of the sleeping bag.



SCIENTIFIC MANKIN TESTING

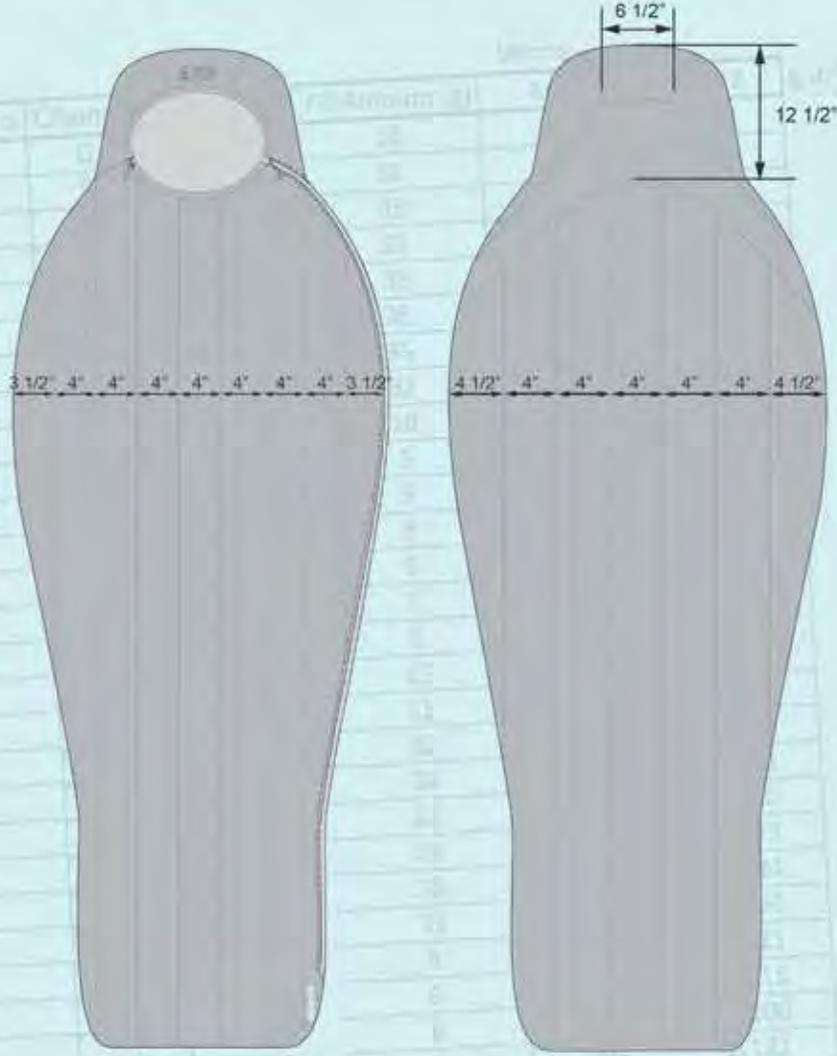


HUMAN TESTING

YEP, THAT'S ME MAKING AN EARLY MORNING ASSESMENT OF PERCEIVED WARMTH



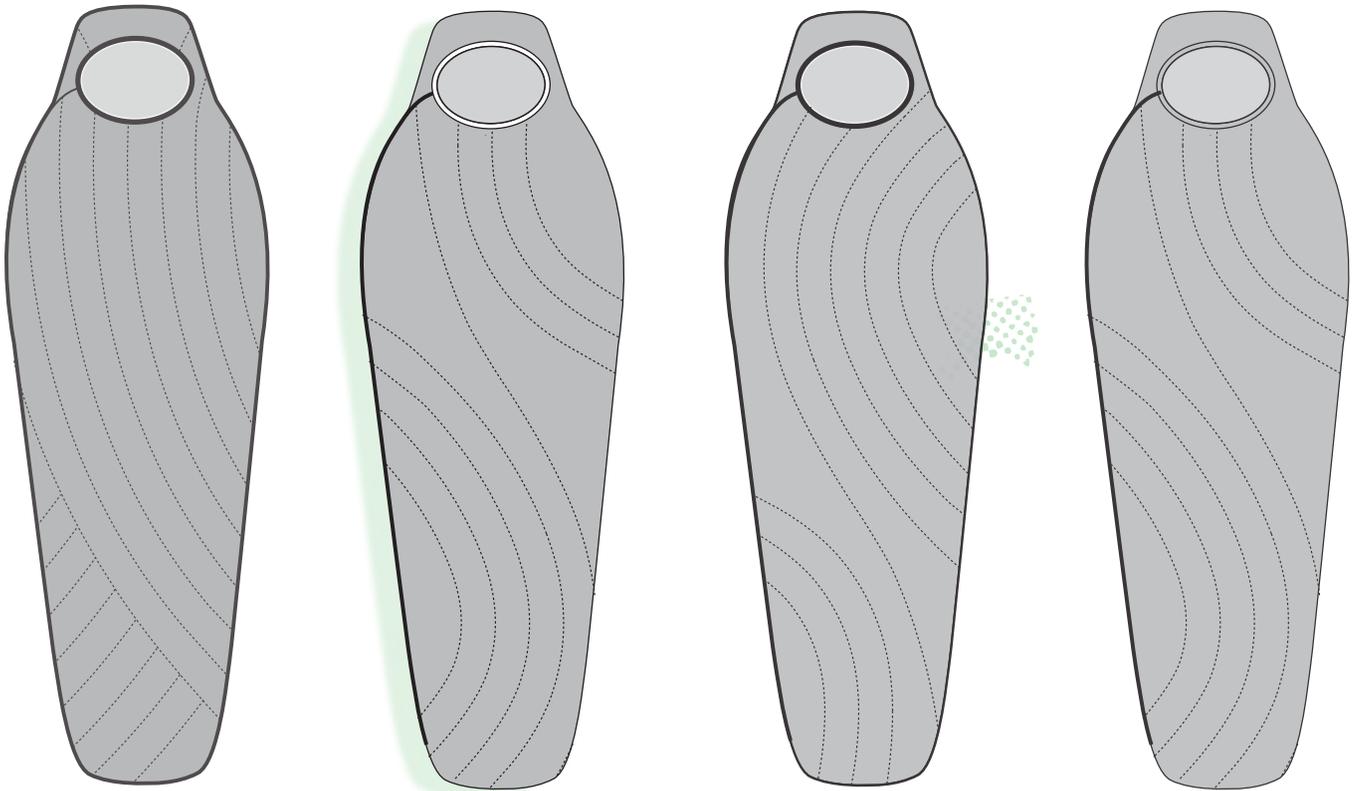
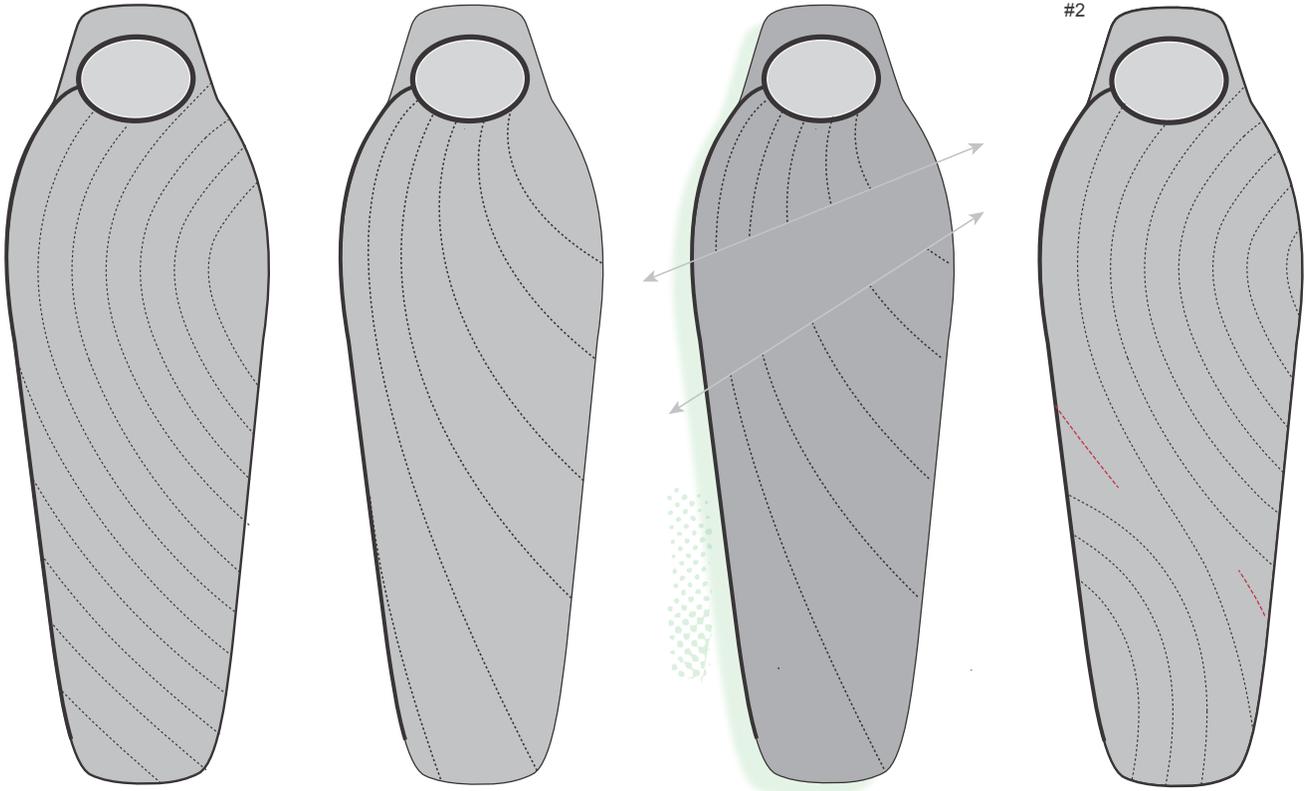
Baffle Spacing



TESTING EARLY ON IN THE DEVELOPMENT PROCESS GIVES DATA THAT IS IMPORTANT TO UNDERSTANDING LOFT, BAFFLE SPACING AND DOWN DISTRIBUTION

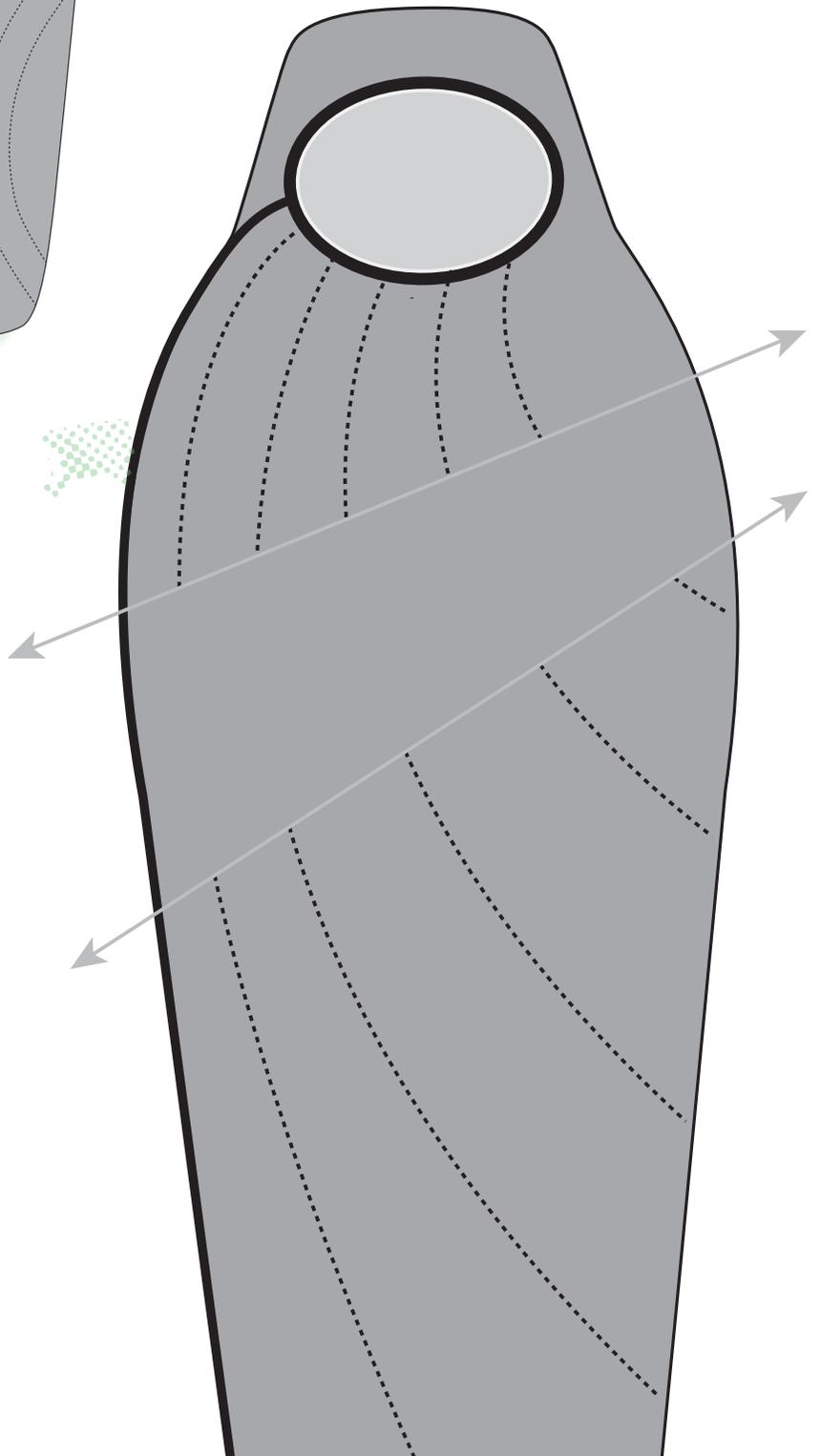
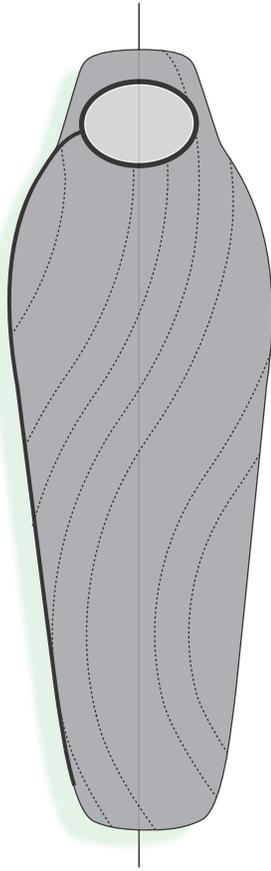
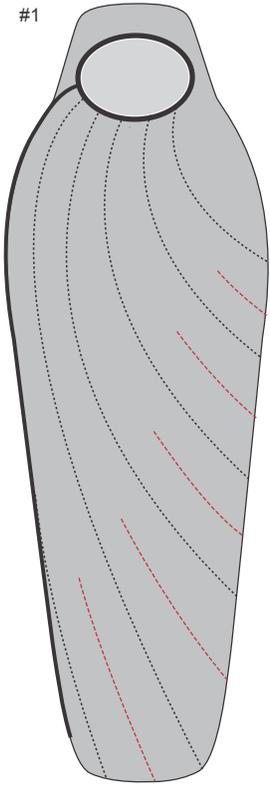
Product bag	Baffle Spacing
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
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24	24
25	25
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28	28
29	29
30	30





CONCEPT: FLOW CHANNELS

#1



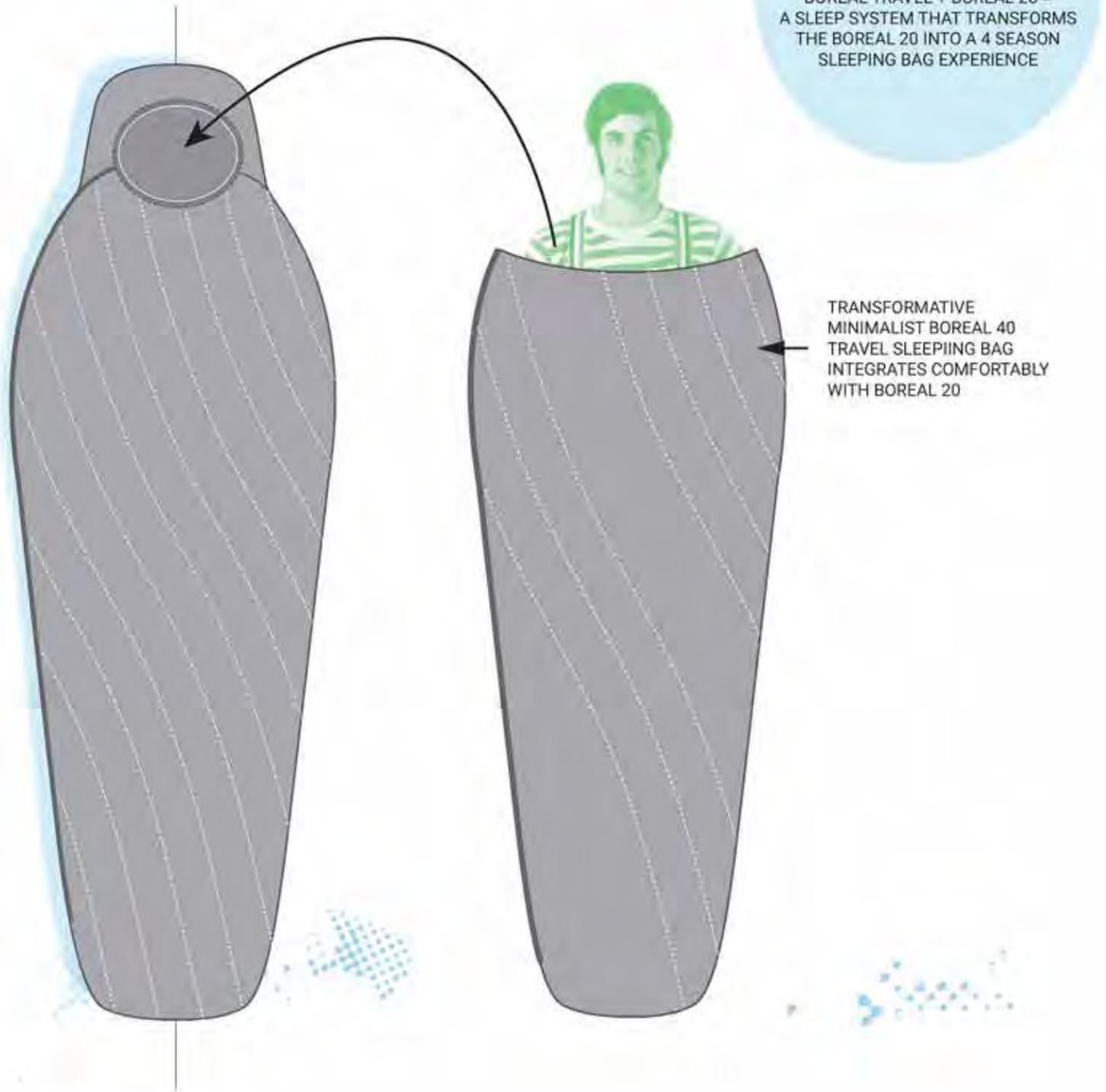


**BOREAL: APPLYING NEW INSULATION TECHNOLOGY**

## MODULAR SLEEP SYSTEM

This was a project that our team worked very closely with our factory partners and insulation manufacturers. At the time this bag was designed, Insotect Tubic Construction was still a new technology.

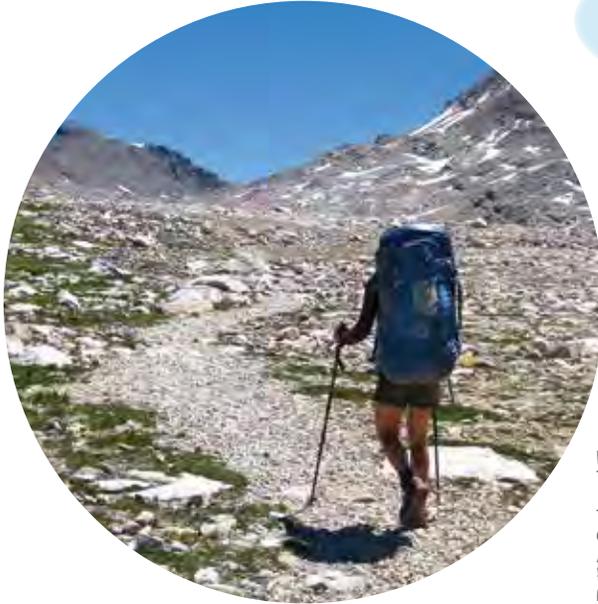
The Boreal 20 works modularly with the Boreal 40 increasing its warmth range.



# FUNCTIONALITY AND AESTHETICS

Initially, I spent a great deal of time iterating to give the vertical lines a more organic look. Through testing and evaluation it became obvious that the insulation lofted greater when using a specific range of "tubic" widths. One of the reasons I enjoy working on outdoor products is the process of problem solving that the rule of functionality brings to each aesthetic decision.

HUMAN TESTING



UNDERSTANDING THE NUMBERS IS CRITICAL TO MAKING INFORMED DECISIONS ABOUT INSULATION WEIGHTS + DISTRIBUTION

ANALYTICAL / SCIENTIFIC TESTING

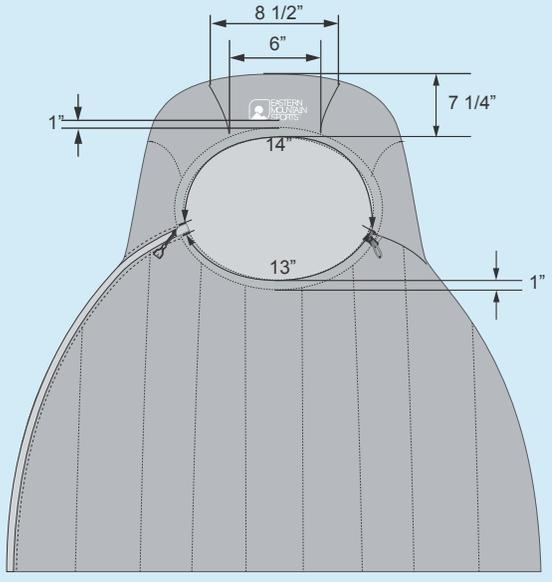
Part	surface Area Represented by Each Segment (m2)	Boreal 20 ACT Clu	ACT Clu
004752183	1.5%	1.756	2.183
00971588	3.2%	3.764	4.478
006188904	2.6%	6.418	7.186
008167416	1.7%	4.505	5.251
005182901	2.8%	5.219	6.139
003167478	1.7%	4.589	5.256
00844159	2.1%	6.033	7.019
00418752	1.4%	3.371	4.021
00844139	2.1%	5.181	6.079
00618752	1.4%	4.331	4.91
00403712	2.5%	5.87	6.913
00403732	1.5%	4.927	5.532
006197029	4.9%	6.364	7.841
00727336	4.2%	6.661	8.150
01018828	1.4%	7.335	8.205
006199192	3.4%	11.469	14.023
00408043	2.5%	7.453	9.048
006036674	2.7%	7.809	10.559
00488241	2.0%	8.354	9.641
006199192	3.4%	11.469	14.023
002735044	1.5%	15.483	18.958
004884463	2.6%	6.60	8.963
003081546	1.8%	28.114	34.157
002735044	1.5%	16.674	20.819
010181593	1.5%	8.647	9.34
004877643	2.6%	10.181	12.184
010181593	1.5%	7.339	8.205
004877643	2.6%	8.70	11.091
006239044	4.4%	6.531	8.511
006277131	2.8%	7.125	8.924
006239044	4.4%	8.401	7.856
005277131	2.8%	6.8	8.2
00444722	3.2%	4.877	5.877

BY FAR MY FAVORITE KIND OF TESTING - THE HUMAN KIND  
 TESTING PRODUCT IN A VARIETY OF ENVIRONMENTS + WITH A VARIETY OF HUMANS ALLOWS FOR A BETTER UNDERSTANDING OF PERCEIVED COMFORT

## FIT + TECHNICAL SPECS

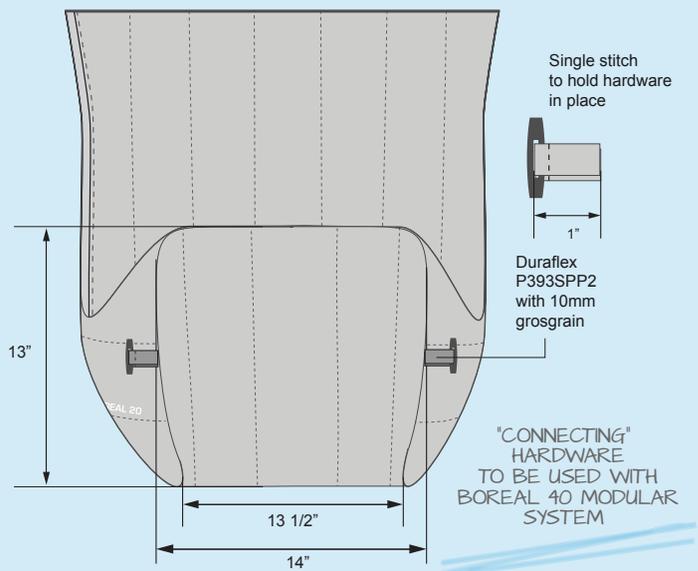
UPDATED HOOD WITH A TIGHTER FITTING MORE ERGONOMIC SHAPE

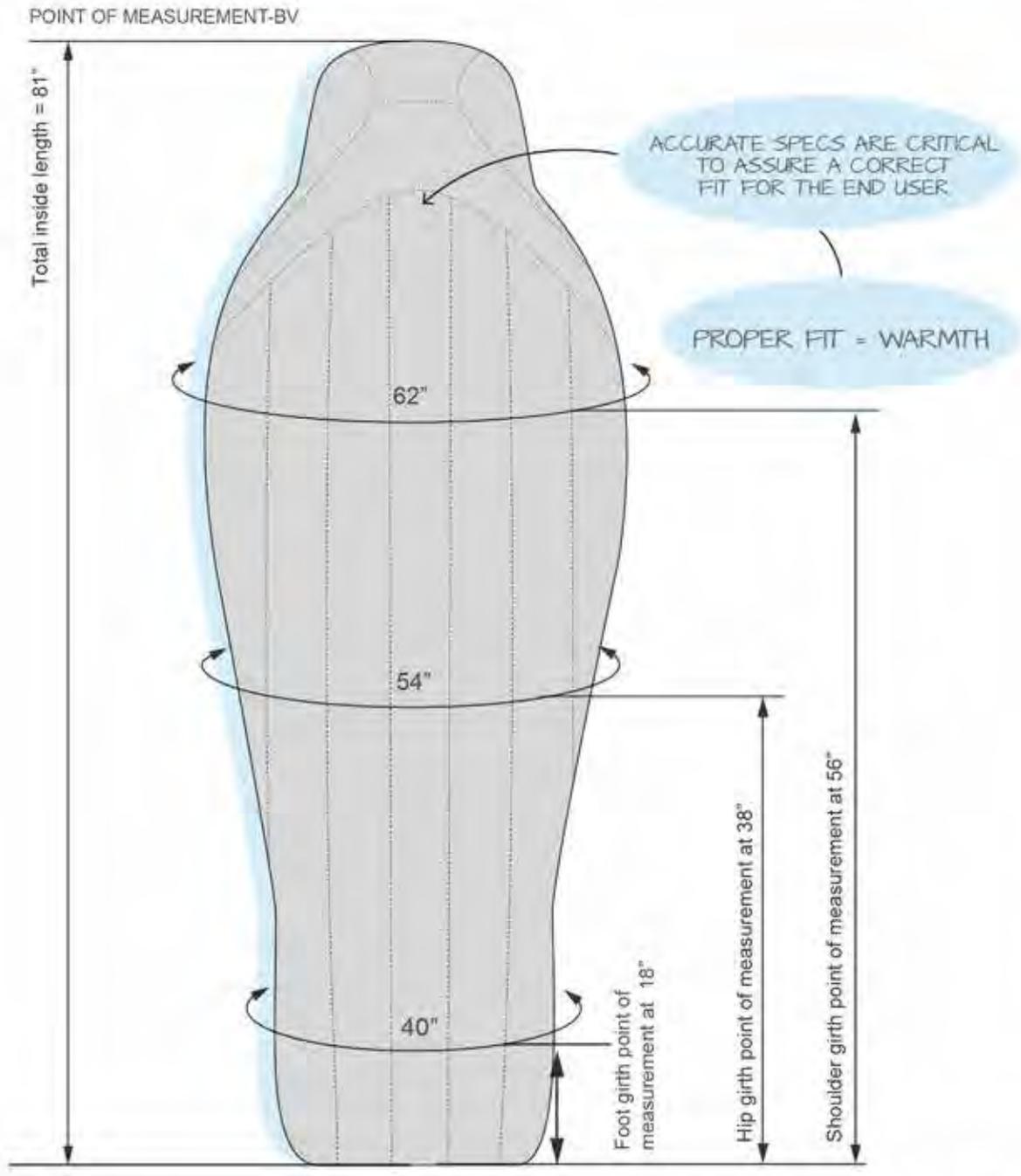
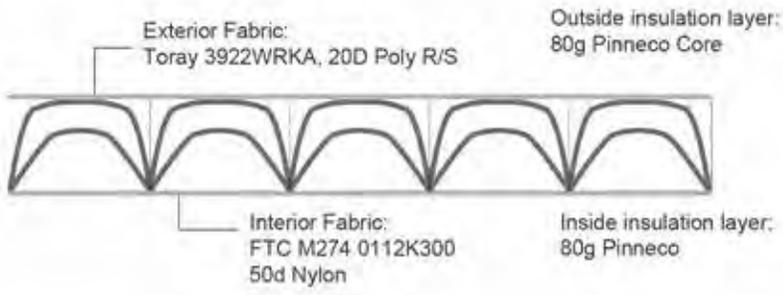
UNIQUE FOOTBOX ELIMINATES BOTTOM SEAM CREATING A DRAFT FREE + TOE WARMING SLEEP EXPERIENCE



HOOD MEASUREMENTS

FOOTBOX





\* All measurements must be taken on inside of sleeping bag

# PRODUCT BRANDING + TRIM DEVELOPMENT

Creating branding and trims for an outdoor product is a unique skill, and it is a part of the design process I have always enjoyed. When designing trims and branding I focus on these elements: functionality, proportion, user touch points and their relativity to the 3d space of that particular piece of gear. It is these details that often go unnoticed, but are an integral part of the user's experience.



STUFF SACK GRAPHICS



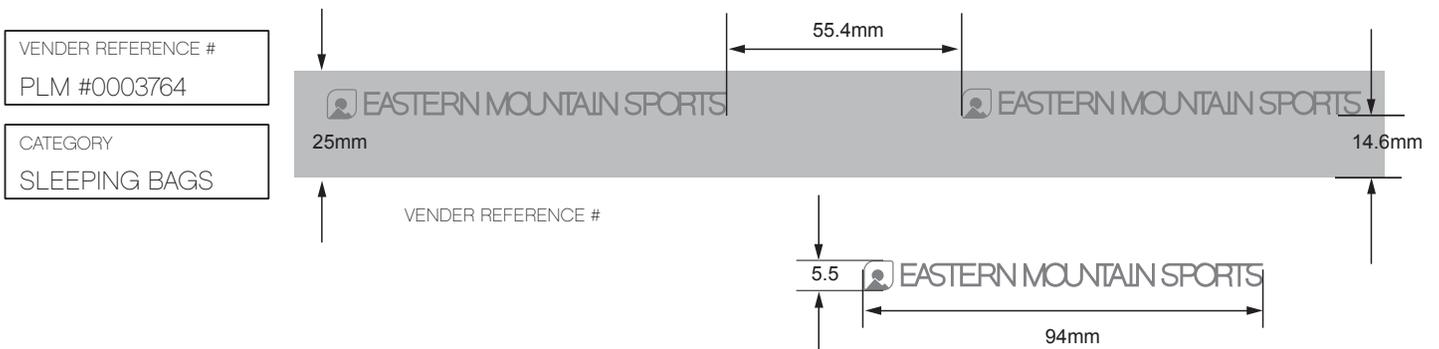
- TPU  
COLOR APPLICATION
- 1 SILVER
  - 2 BLACK 19-4007TC
  - 3 BRIGHT WHITE 11-0601TC

TPU - HIGH REFLECTIVE



1 SILVER REFLECTIVE

25MM GROSGRAIN WITH REPEAT LONGFORM BRANDING - EMBOSSED





## **VELOCITY 35**

It's always a fun challenge to take an "iconic" product and update the design and technology while still keeping some of the beloved, historical DNA. Choosing the proper materials was critical to making the costing competitive but still maintain the Velocity's position as one of the lightest synthetic bag on the market.



*Sugar Shack*

## **TENT DEVELOPMENT**

Tents are a bit like rock climbing, it's almost impossible to do it without a few trusted partners. There is no other product in outdoor design that is truly so much of a collaborative effort. Sourcing, design, product development, the pole manufacturer, and factory, all have to be equally involved to make a new tent.



*Sunapee*



*Velocity 2*



*Traverse*



*Velocity Footprint*



*Big Easy 4*



*"Of all the paths you take in life, make sure a few of them are dirt."  
~ John Muir ~*