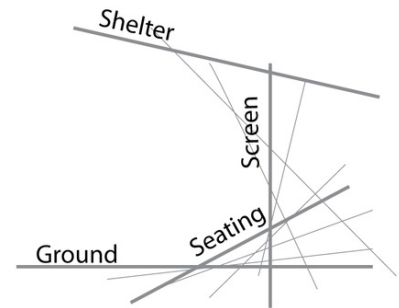




Design Communication II /// ARCH 222 /// CoD/// Spring 2020
Instructor: Philip Speranza, Associate Professor
Graduate Employees: Courtney Sigloh and Cary Chu

Exercise 3.1a /// Parametric Bench

As a final exercise, you will apply your cumulative understanding and skills from the course to develop a bench for your studio project. You will begin by defining the needs and intent for your project proposal, including location, activities, and material. Then develop the proposal using the tools we have learned in this course.



SHoP, Dunescape

Purpose

Integrate topics covered and work flow developed in the media course and apply to a design project.

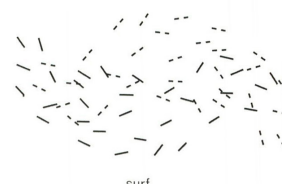
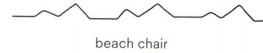
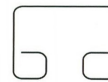
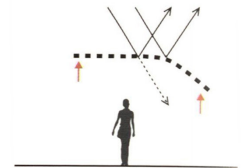
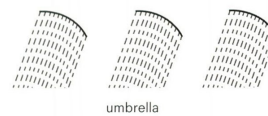
Before beginning to design, it is important to think about the method and framework for your system:

Unit + Organization + Variation (external force) = System

Performative Seating: Designing the System from the Bottom Up, Analog Parametrics

Individually, develop a single, horizontal tabloid (11x17) sheet to describe your application of the system method above. This sheet should include the following elements:

- **Two-word title** // Describe **what it is** (affect) and **what it does** (purpose) in two words.
- **Location** // Where is this on the site? Why this place? How does it relate to your specific ritual(s)? How does it relate to the house and the rest of your project?
- **Design Intent Paragraph** // Use a 10 or 12-pt font and describe the overall affect (think ritual, activity) and 5+ conditions of that affect. What will the project do? What is the **unit**, what is the **operation/variation** (i.e. how does it achieve the intent, how does the system adapt to different conditions)? Who is this for and why is it important? What other **external inputs** are there (light, sound, moisture, immediate context, location, etc.)? Use qualitative (feeling, ideas, intents) and quantitative (measurements, numbers) language to precisely describe your design intent.
- **Material and Construction Method** // Choose from: folding (panels), stacking (bricks, CMU, wood chunks), contouring (strips, lattice, wood), or sectioning (truss/slice structure)
- **Generative Diagrams** // Catalog the conditions with simple 2D diagrams (5+; see SHoP Dunescape). What are the implications of these for the unit/material/**operation** you have selected? Show



SHoP, Dunescape

in simple diagrams how the system **adapts** to different conditions. These diagrams should align with your written paragraph, be simple but clean, and have very high quality digital drawings.

- **Multiple diagrams may come together** in one, more complex 4D diagram that overlays multiple conditions and spatial data.
- **“Dumb” 3D Model** // Using Rhino, begin to explore the 3D implications of your design ideas. Work at **human scale** as you integrate the abstract ideas and test conditions in different iterations. Export your work as a **Make2D line drawing** or drawings, use lineweights and **one tone or color** (Illustrator) to communicate your design. **Include a scale person.** Use the analog design tool (Rhino) to test the parametric operation. This may be an opportunity to test lighting with V-ray, if that is important to your affect statement.

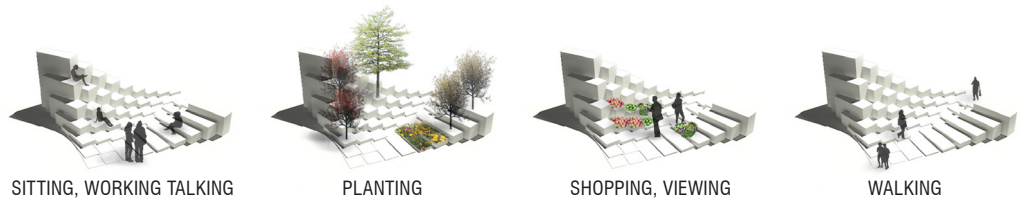
Consider layout and typography in your submission, as well as the overall composition of images and text.

Exercise 3.1b: Rendering and Collage

Develop your performative seating system with digital parametric tools (Grasshopper) **in groups of two**. Use one of the provided definition templates as a starting point, then develop your script utilizing the skills you have learned this term. Create design drawings and renderings of your final proposal (see below).

Tutorials

Vray for Rhino
Rhino 3 (Camera setup)
Grasshopper 1-3



Deliverables

Exercise 3.1a: [1] 11 x 17 (description above)
Exercise 3.1b: [1] 11 x 17 perspective rendering showing your project being used (e.g. with people); [3] 8.5 x 11s showing close-ups of different conditions (Make2D with tone and people); [1] 11 x 17 with scaled plan and elevation drawings of your project (1/2" = 1'); [1] 8.5 x 11 of your final Grasshopper script (File>Export High Res Image).

Learning Objectives

- To learn a practical application of parametric system design.

Evaluation Criteria

- Ability to creatively connect design intent to experience
- Ability to develop and apply an analog parametric design workflow
- Ability to develop and apply a digital parametric design workflow

Schedule

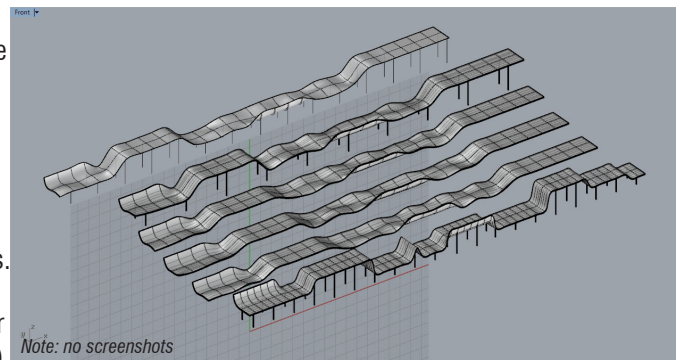
Assigned: Tuesday, May 5

3.1a

Upload Due: Wednesday, May 13, 11:59pm

3.1b

Upload Due: Monday, May 25, 11:59pm



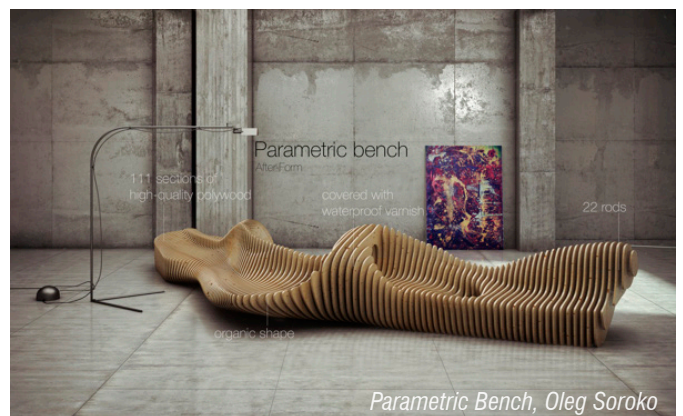
Flying Carpet, Area Architects



Centennial Bench, Georgia Tech



Flying Carpet, Area Architects

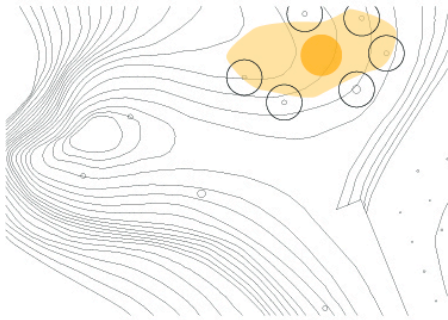


Parametric Bench, Oleg Soroko

FIRESIDE FRIENDSHIP

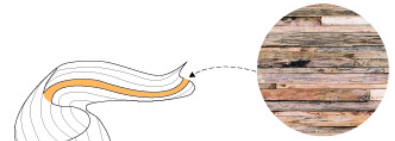
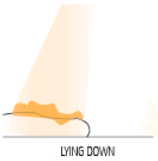
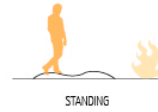
LOCATION:

THIS SEATING AREA WILL SURROUND A FIRE LOCATED IN SECLUDED AREA THAT RESTS BELOW THE CANOPY OF A DENSE CLUSTER OF DOUGLAS FIR TREES. THIS LOCATION WAS CHOSEN FOR THE BUILDING OF THE FIREPIT AND SEATING AREA BECAUSE IT A UNIQUE PART OF THE SITE THAT FEELS SECLUDED. THE AREA WORKS WELL TO ALLOW FRIENDS TO LEAVE THEIR WORLDS BEHIND THEM AND CHAT AMONGST THE WARMTH OF THE FIRE AND THE SECURITY OF THE TREES, BUT IT ALSO WORKS WELL TO ALLOW A PERSON TO GO OUTSIDE AND HAVE SOLITUDE IN THE MASS OF THE TOWERING TREES.



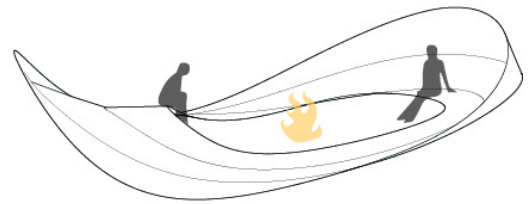
DESIGN INTENT:

THIS SEATING AREA WILL ACCOMPANY VARIOUS DEGREES OF SOCIALIZING. AT NIGHT TIME, FRIENDS CAN SIT WITH EACH OTHER CLOSER TO THE FIRE. IF ONE WANTS TO SEE THE STARS IN THE SKY WITHOUT THE GLARE FROM THE FIRE, THE BENCH WILL DIP AWAY FROM THE FIRE AND ITS BACK WILL RECLINE TO MAKE LOOKING UP INTO THE SKY EASIER. DURING THE DAY, ONE CAN LAY BACK ON THE BENCH TO BATH IN THE SUN WHEN THE SUN IS HIGH ENOUGH TO REACH INTO THE CLEARING IN THE SUMMER, OR ONE CAN TAKE A BOOK OUT TO READ. IF IT IS RAINING THE BACK OF THE BENCH WILL CURVE UP TO PROVIDE SHELTER. THE BENCH WILL CIRCLE AROUND THE FIRE PIT AND WILL UNDULATE TOWARDS AND AWAY FROM THE FIRE TO ALLOW THE DIFFERENT EXPERIENCES JUST DESCRIBED. IT WILL BE BIG ENOUGH TO ALLOW SEVERAL PEOPLE TO LAY BACK AND SIT, SO PEOPLE CAN HAVE THESE EXPERIENCES EITHER IN SOLITUDE OR WITH EACH OTHER.



MATERIAL & CONSTRUCTION

METHOD:
BENDING & CONTOURING VARIOUS TONES OF WOOD STRIPS TO CREATE VARIOUS EXPERIENCES IN THE BENCH



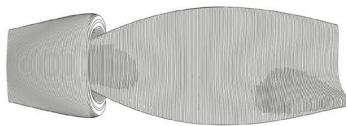
NOAH ROESLER
EXERCISE 7A
ARCH 222
5/19/2014

EXTREMELY LOUD AND INCREDIBLY CLOSE

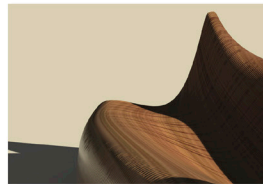
GISELLE SHEERAN, ALEX COLLINS, ARCH 222, 7B

DESIGN INTENT:

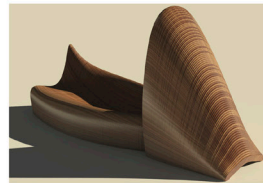
ONE SIMPLE UNIT WITH A GRADUAL TRANSFORMATION INTO A NOOK FOR ACOUSTIC PROJECTION.



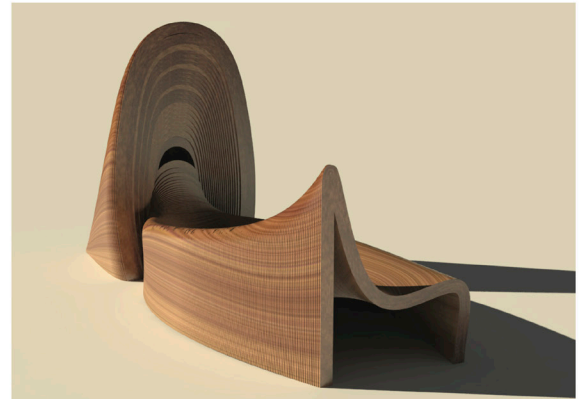
THE GAME PLAN



THE BLIND SIDE



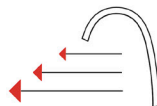
TANGLED



THE SOUND OF MUSIC



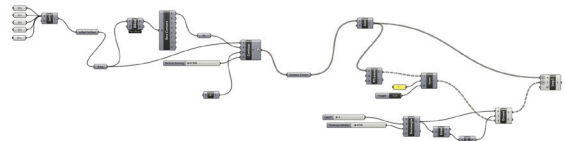
UNIT



DISPERSION OF SOUND



HUMAN SCALE



burnin' couch kushion

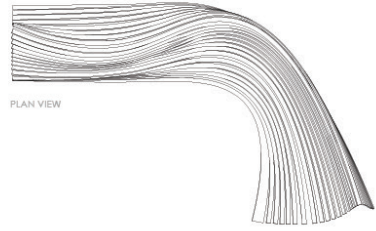
ARCH 222 // EXERCISE 9 // SEAN LINK // KAHILI DAUL // REI NUKAGA // KAYLA BUNDY



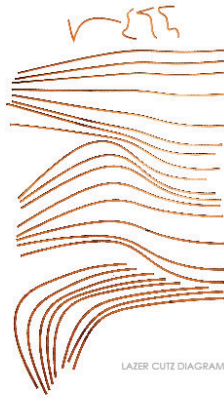
BACK ELEVATION



FRONT ELEVATION



PLAN VIEW



LAZER CUTZ DIAGRAM

