

MODEL PROCESS PORTFOLIO

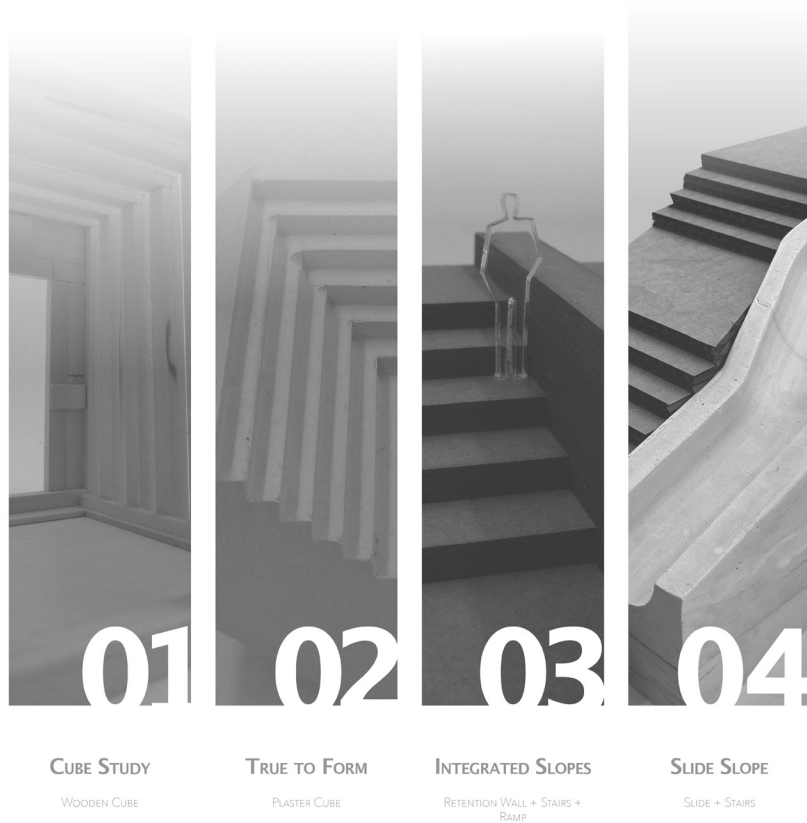
ALEXANDRA UGAN

DESIGN IMPLEMENTATION 2

PAUL RUSSEL

SPRING 2024

LARC 3620

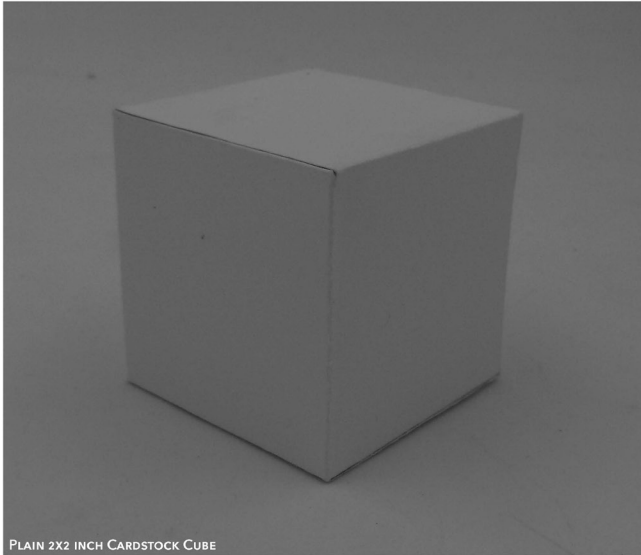


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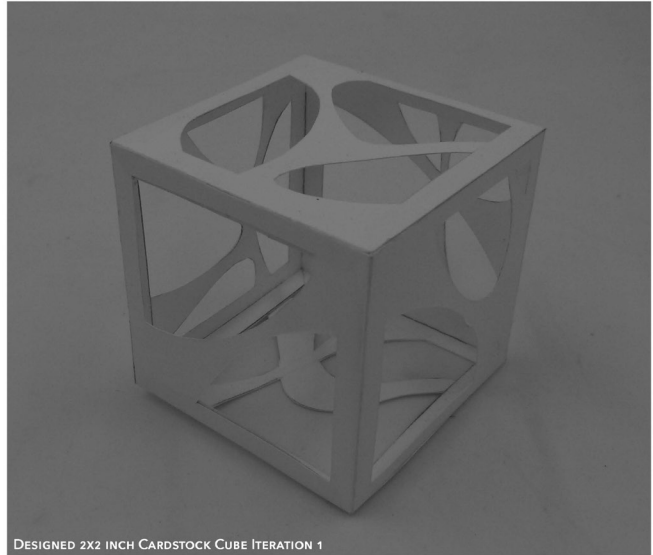
CUBE STUDY

01

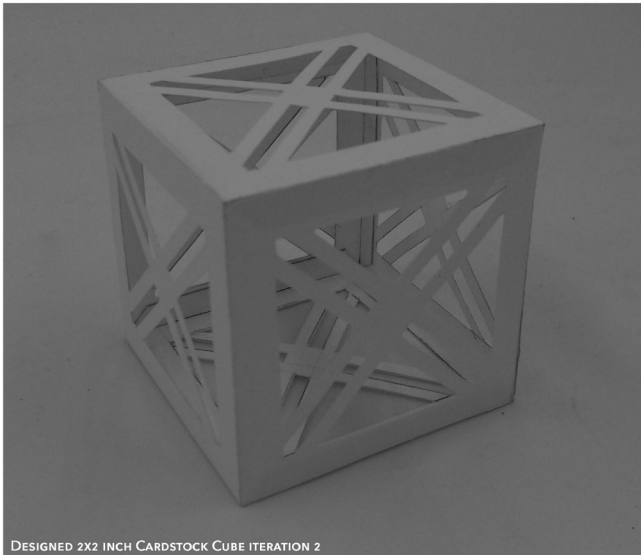
BEGINNING CONCEPTUALLY WITH THE PROMPT OF "DESIGNING THREE 2 INCH CUBES WITH THE CONCEPT OF NEGATIVE SPACE AND LIGHT". AFTER CREATING THESE FIRST ITERATIONS, ONE WAS CHOSEN TO ADVANCE INTO A LARGER 4IN X 4IN CARDSTOCK CUBE. FROM THIS POINT, I WAS TASKED WITH CREATING A WOODEN FINAL OF THIS 4 INCH CUBE AT THE SCALE $1/2" = 1' - 0"$ WITH DOWELS AND WOODSHOP EQUIPMENT. THE FINAL DESIGN HAS BEEN REFINED INTO A SIMPLE GEOMETRIC ABSTRACTION OF A "ROOM" THAT PLAYS WITH LIGHT AND SHADOWS, CREATED OUT OF 3 DIFFERENT SIZED WOODEN DOWELS OR "DIMENSIONAL LUMBER".



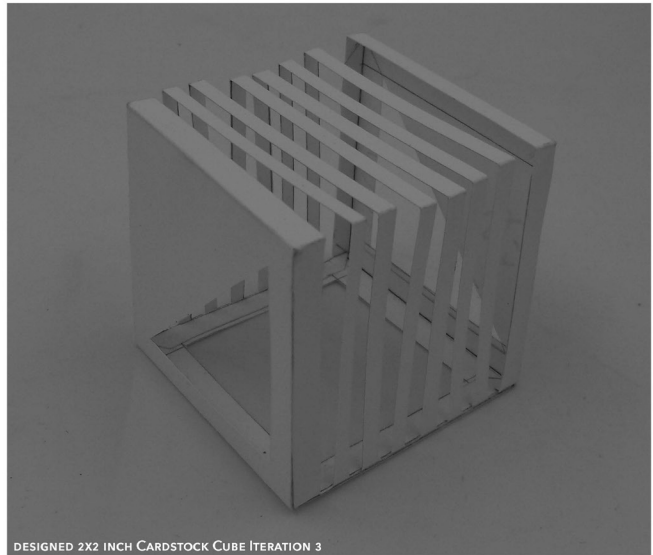
PLAIN 2X2 INCH CARDSTOCK CUBE



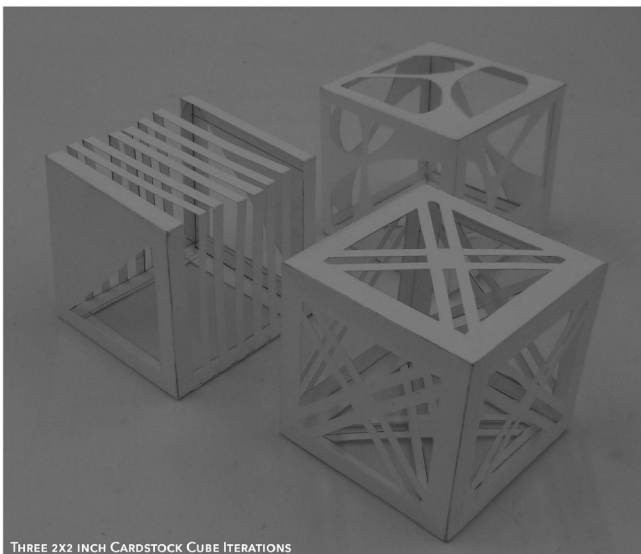
DESIGNED 2X2 INCH CARDSTOCK CUBE ITERATION 1



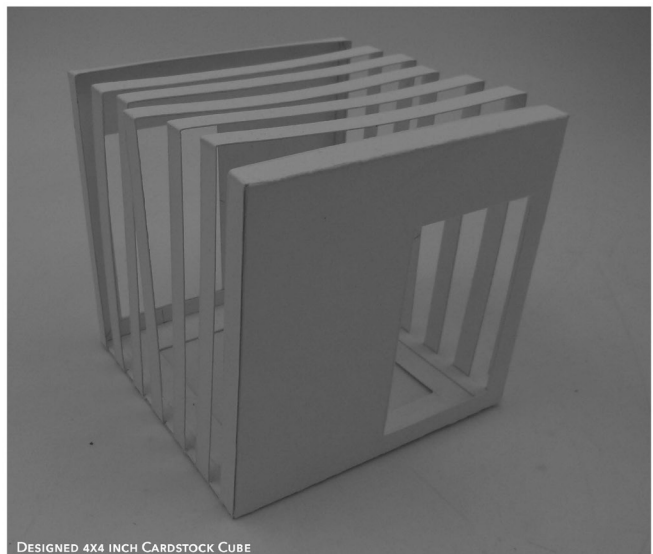
DESIGNED 2X2 INCH CARDSTOCK CUBE ITERATION 2



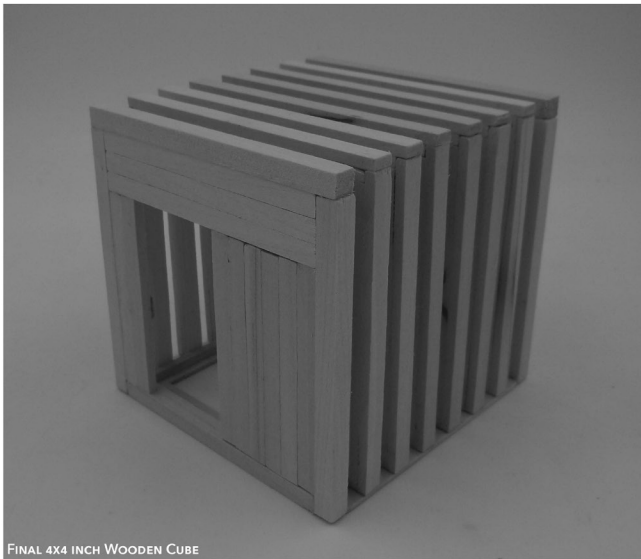
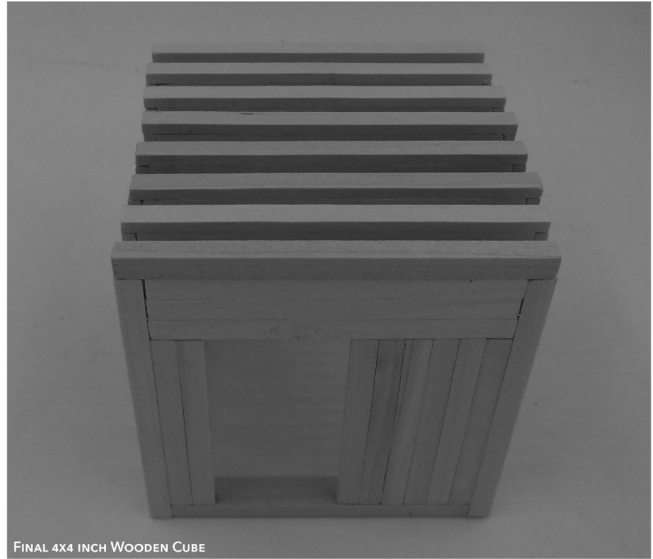
DESIGNED 2X2 INCH CARDSTOCK CUBE ITERATION 3



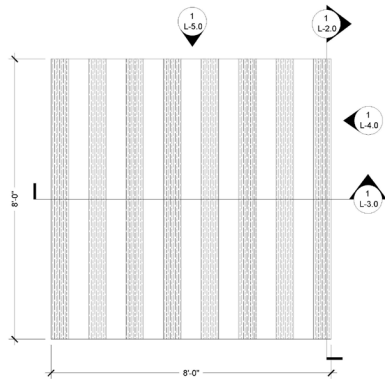
THREE 2X2 INCH CARDSTOCK CUBE ITERATIONS



DESIGNED 4X4 INCH CARDSTOCK CUBE

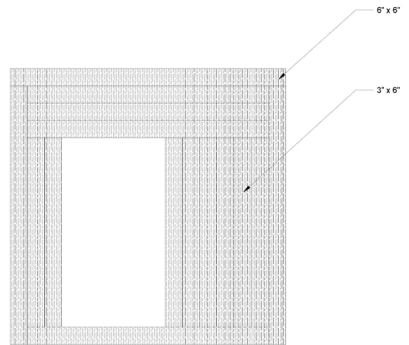


CONSTRUCTION DOCUMENTS



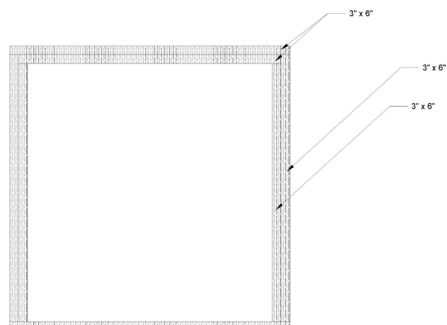
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Plan View



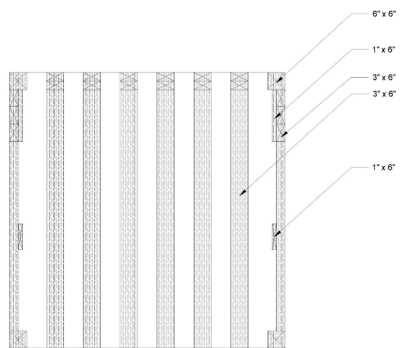
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Section 1



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Section 2



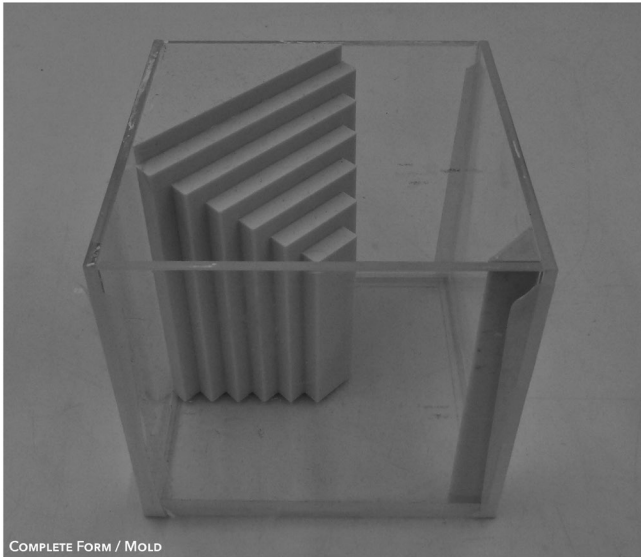
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Section Elevation

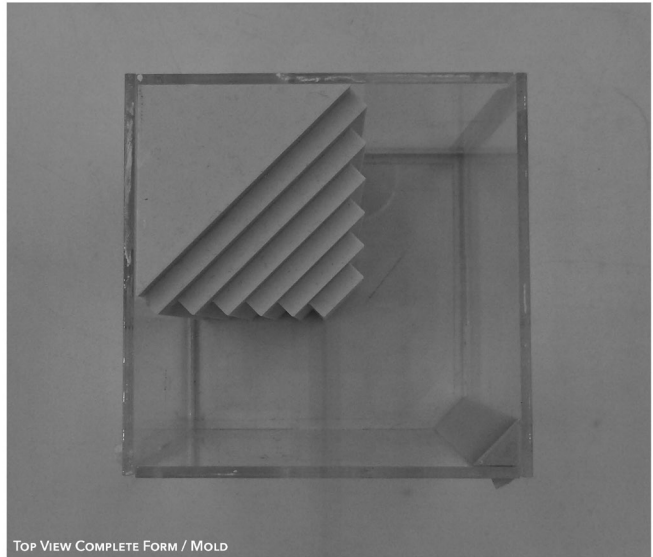
TRUE TO FORM

02

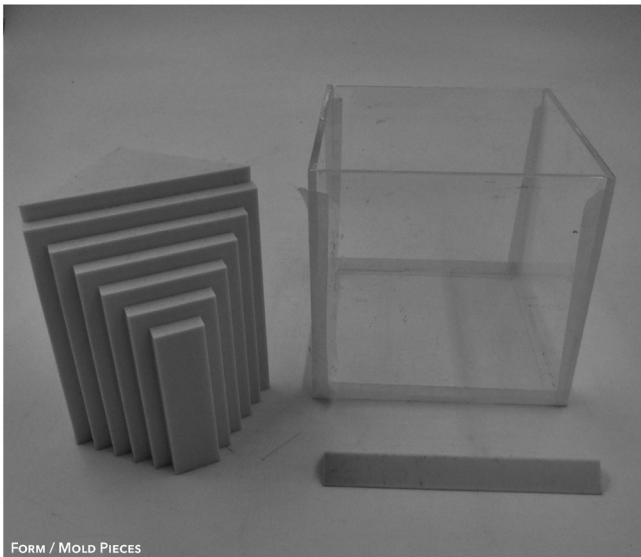
BEGINNING CONCEPTUALLY WITH THE PROMPT OF "DESIGNING THREE 4 INCH PLASTER CUBES, ONE PATTERN, ONE NEGATIVE SPACE, AND ONE FUNCTIONAL, WE CREATED MANY ITERATIONS TO PERFECT THE PROCESS OF POURING AND REMOVING A MODEL FROM ITS MOLD. AFTER CREATING THESE FIRST ITERATIONS, ONE WAS CHOSEN TO ADVANCE INTO A MORE REFINED 4IN X 4IN PLASTER CUBE. FROM THIS POINT, I WAS TASKED WITH CREATING A MOLD OUT OF LASER CUT ACRYLIC AND 3D PRINTED PIECES. AFTER MULTIPLE ITERATIONS AND ATTEMPTS WITH BOTH MORTAR AND PLASTER, I LANDED ON A FINAL PIECE. THE FINAL DESIGN IS AN ABSTRACT, GEOMETRIC CUBE BASED ON THE IDEA OF NEGATIVE SPACE AND SHARP EDGES, MADE OUT OF A MIXTURE OF PLASTER, WATER, AND GLUE.



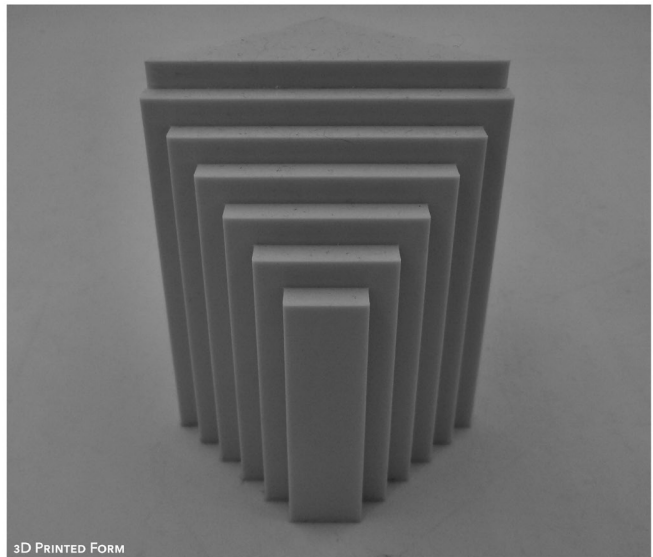
COMPLETE FORM / MOLD



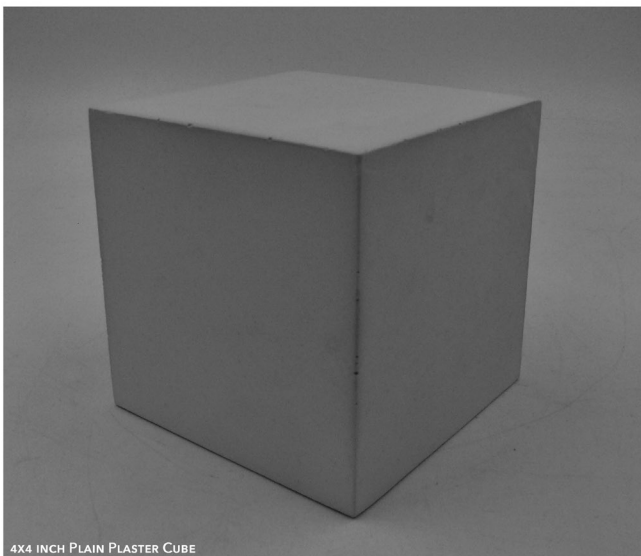
TOP VIEW COMPLETE FORM / MOLD



FORM / MOLD PIECES



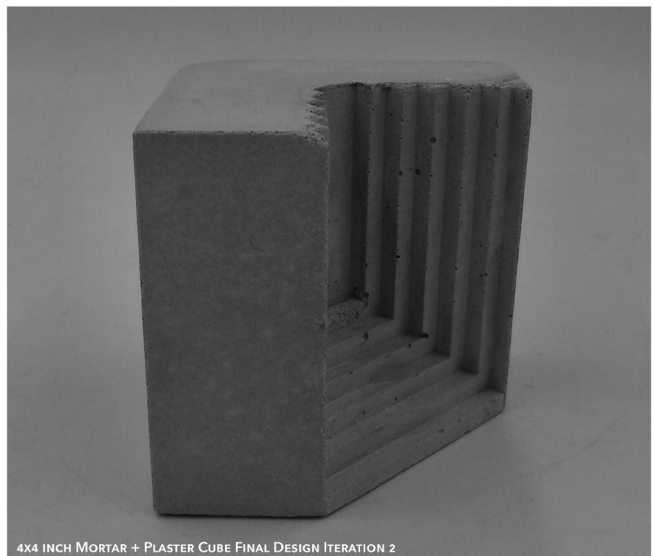
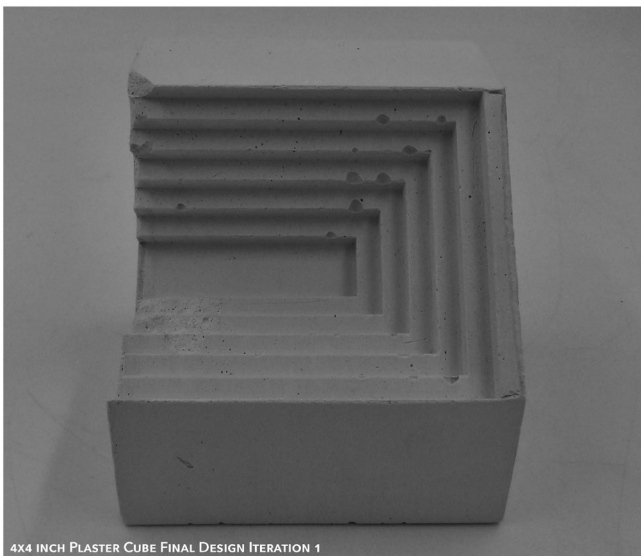
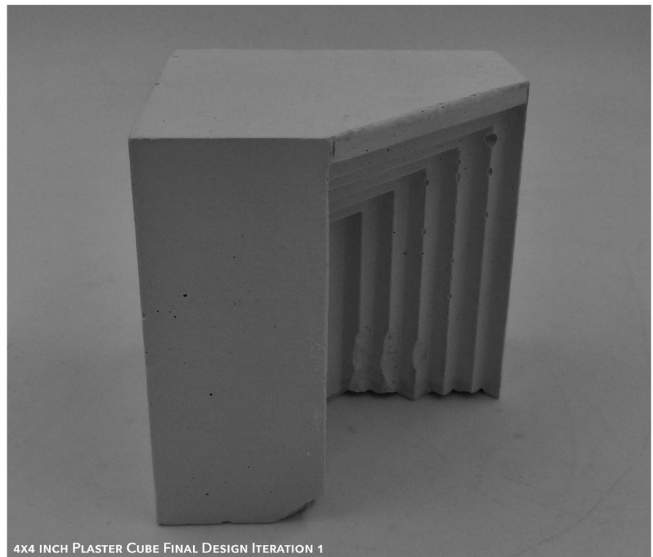
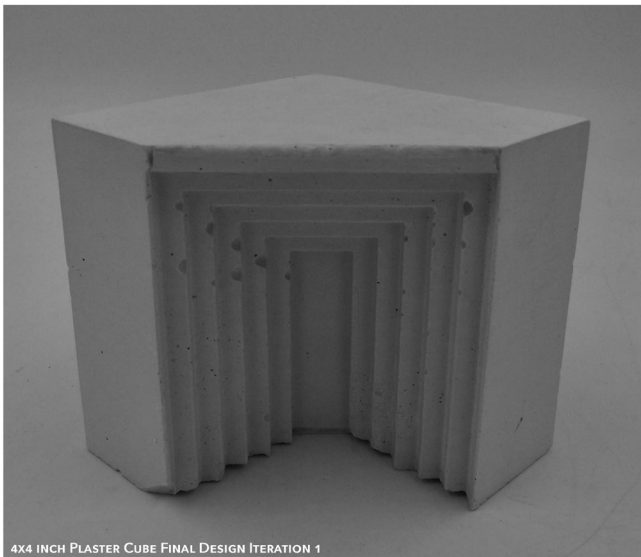
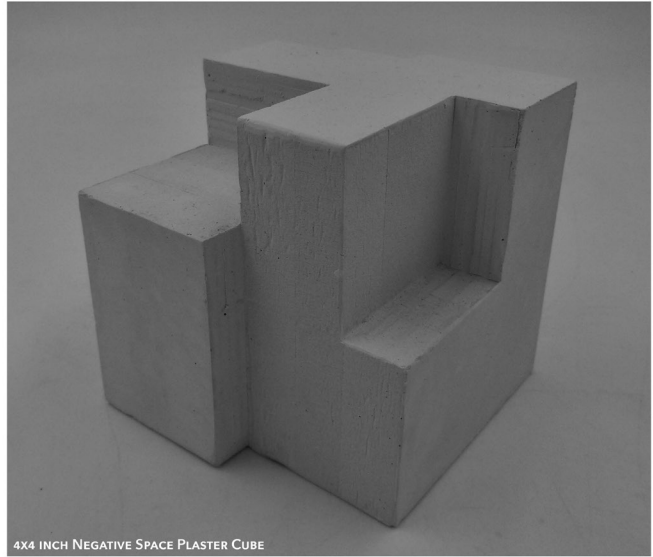
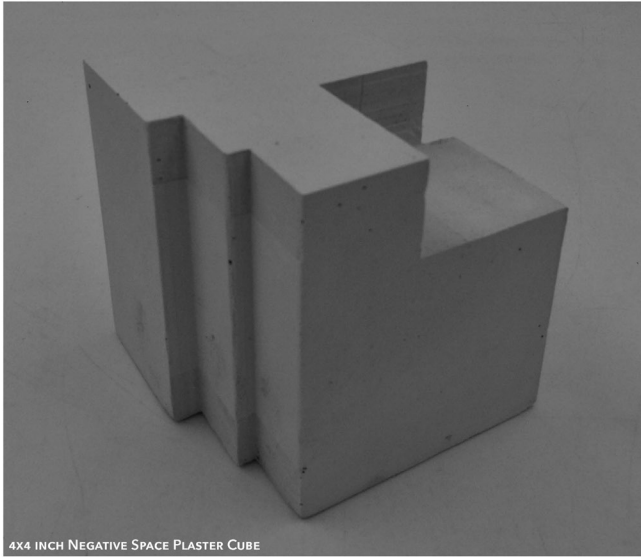
3D PRINTED FORM

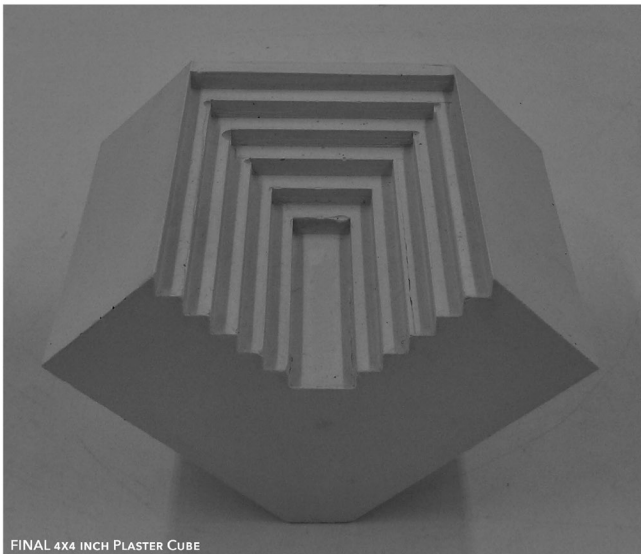
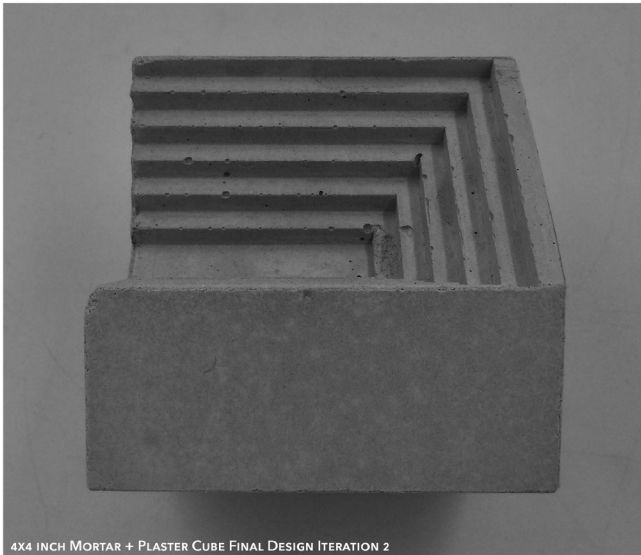


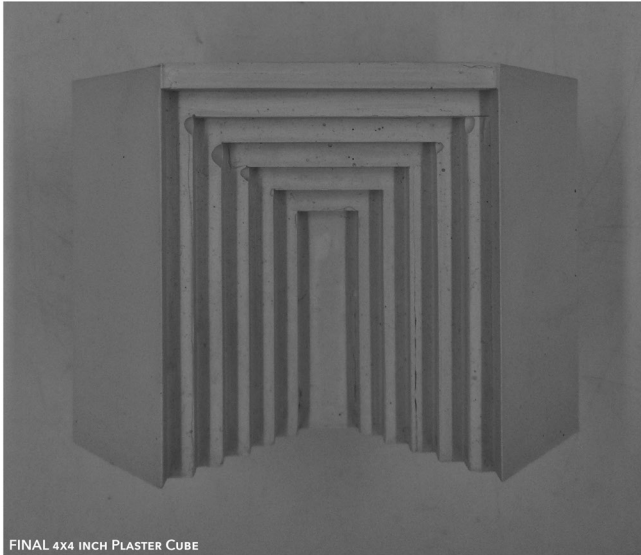
4X4 INCH PLAIN PLASTER CUBE



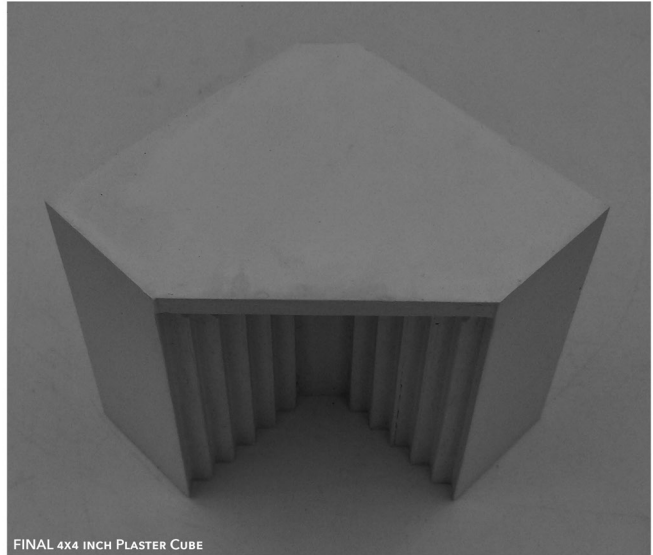
4X4 INCH PATTERN / TEXTURE PLASTER CUBE



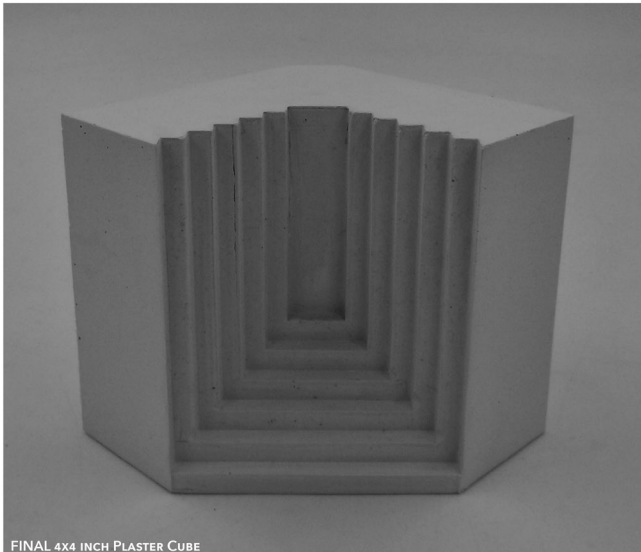




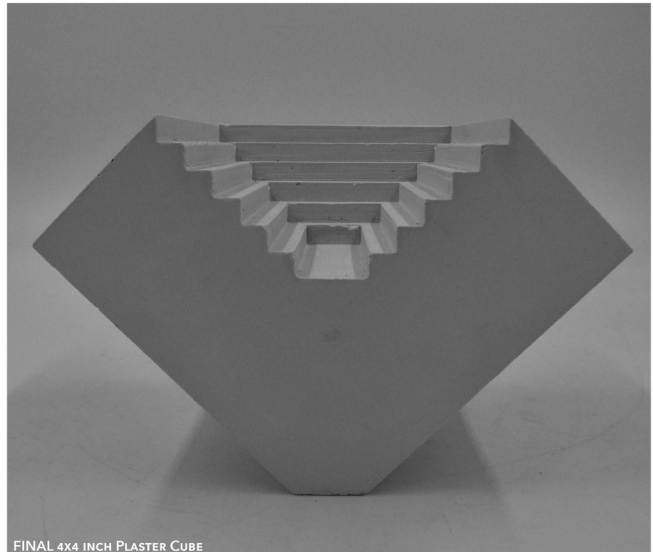
FINAL 4x4 INCH PLASTER CUBE



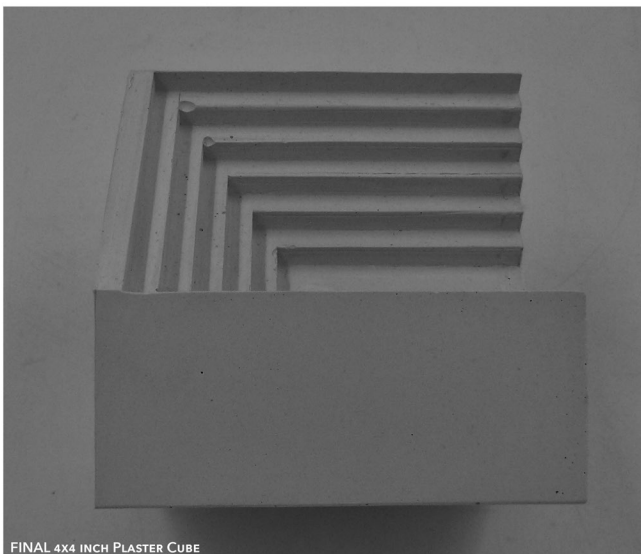
FINAL 4x4 INCH PLASTER CUBE



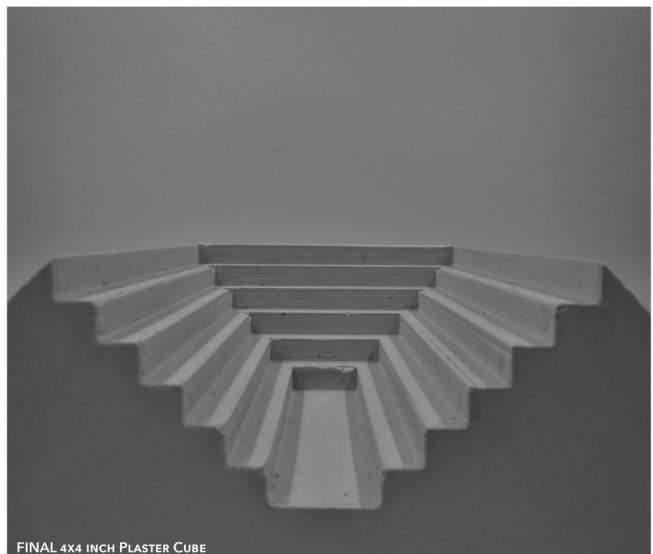
FINAL 4x4 INCH PLASTER CUBE



FINAL 4x4 INCH PLASTER CUBE

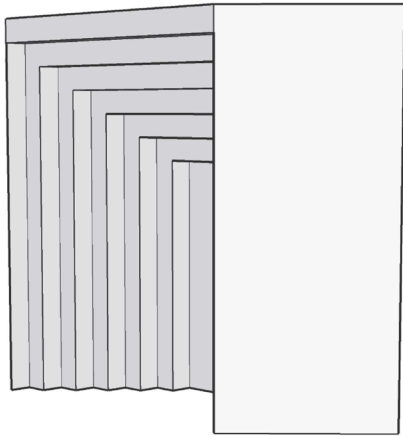


FINAL 4x4 INCH PLASTER CUBE



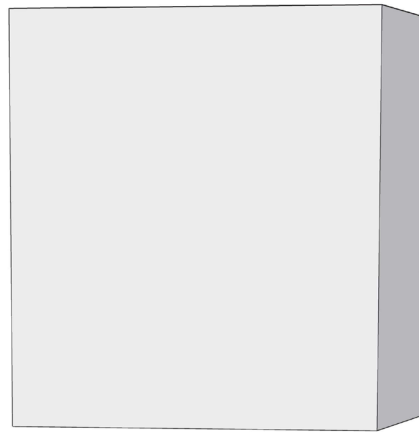
FINAL 4x4 INCH PLASTER CUBE

CONSTRUCTION DOCUMENTS



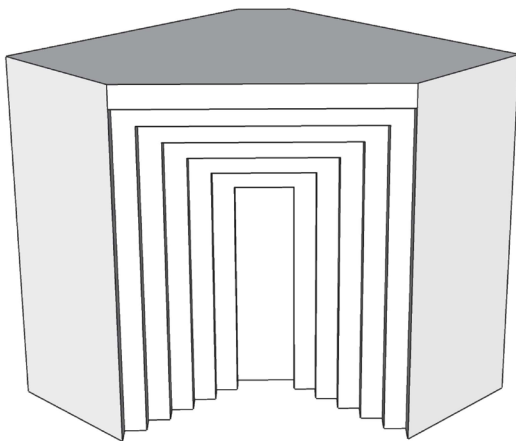
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ELEVATION



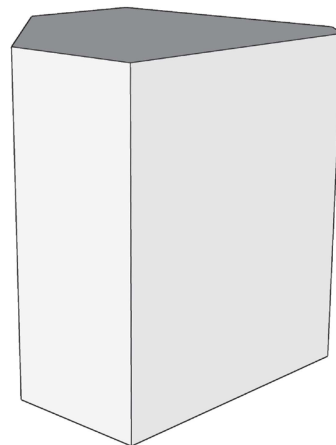
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ELEVATION



3

AXONOMETRIC



4

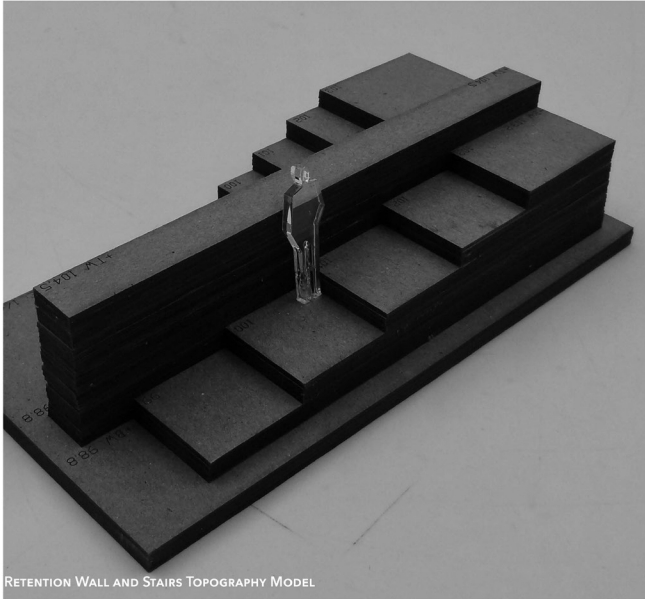
AXONOMETRIC

INTEGRATED SLOPES

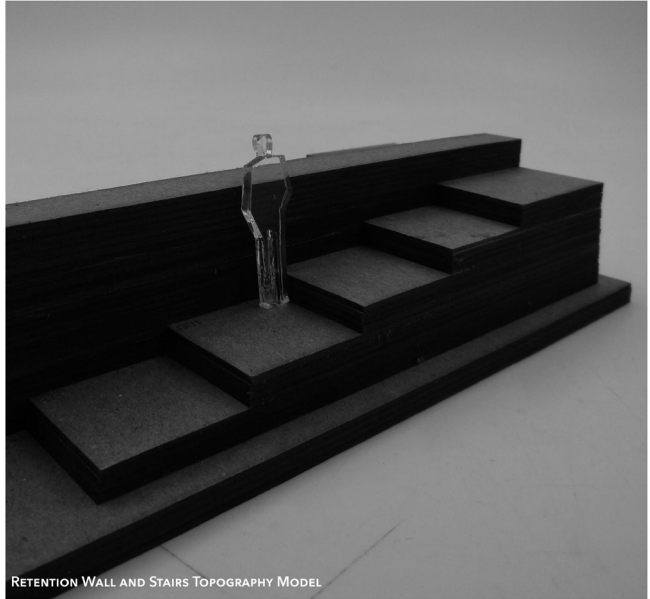
03

IN **PART 1** WE USED CHIPBOARD, CAD, AND THE LASER CUTTER TO CONSTRUCT A MODEL OF THE PROPOSED TOPOGRAPHY AND WALL AS IT COORDINATED WITH THE TOPOGRAPHIC PLAN WE RECEIVED.

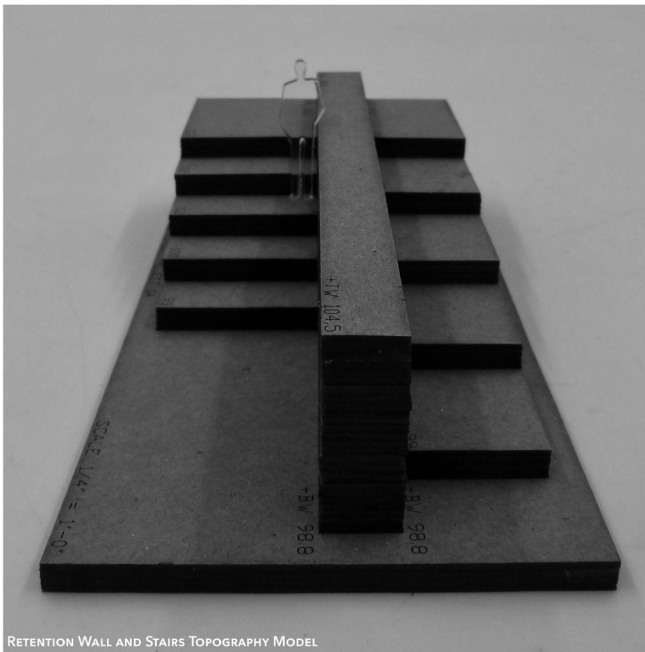
IN **PART 2** WE USED CHIPBOARD, CAD, AND THE LASER CUTTER TO DESIGN AND CONSTRUCT A MODEL SOLUTION THAT INCORPORATES A SET OF STEPS THAT NEGOTIATE THE GRADE CHANGE BETWEEN THE PROPOSED TOP OF SLOPE AND BOTTOM OF SLOPE. ADDITIONALLY, WE INCORPORATED A RAMP THAT SUCCESSFULLY NEGOTIATES THE PROPOSED TOP OF SLOPE AND BOTTOM OF SLOPE AND MEETS ADA STANDARDS FOR AN ACCESSIBLE RAMP.



RETENTION WALL AND STAIRS TOPOGRAPHY MODEL



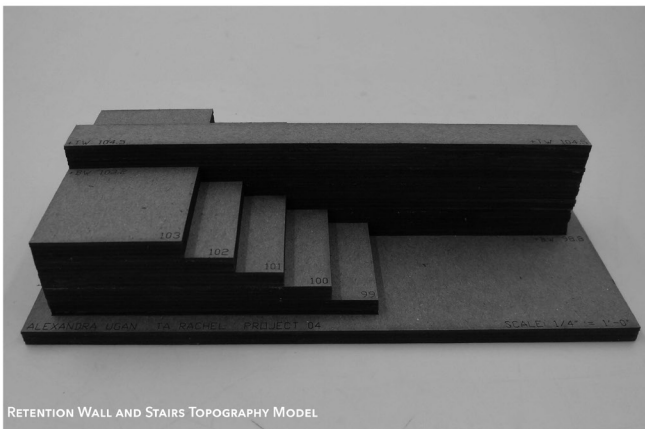
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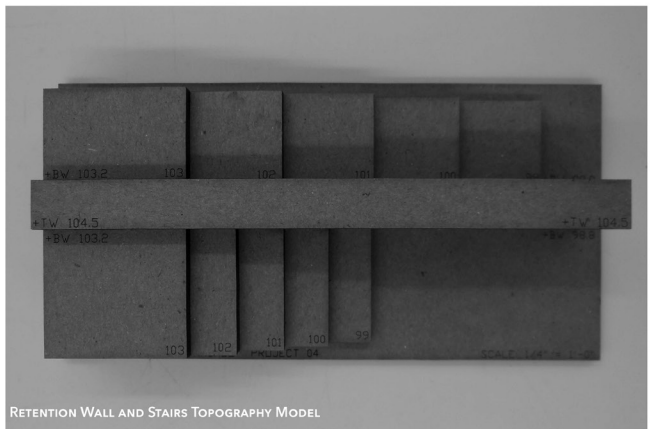
RETENTION WALL AND STAIRS TOPOGRAPHY MODEL



RETENTION WALL AND STAIRS TOPOGRAPHY MODEL



RETENTION WALL AND STAIRS TOPOGRAPHY MODEL



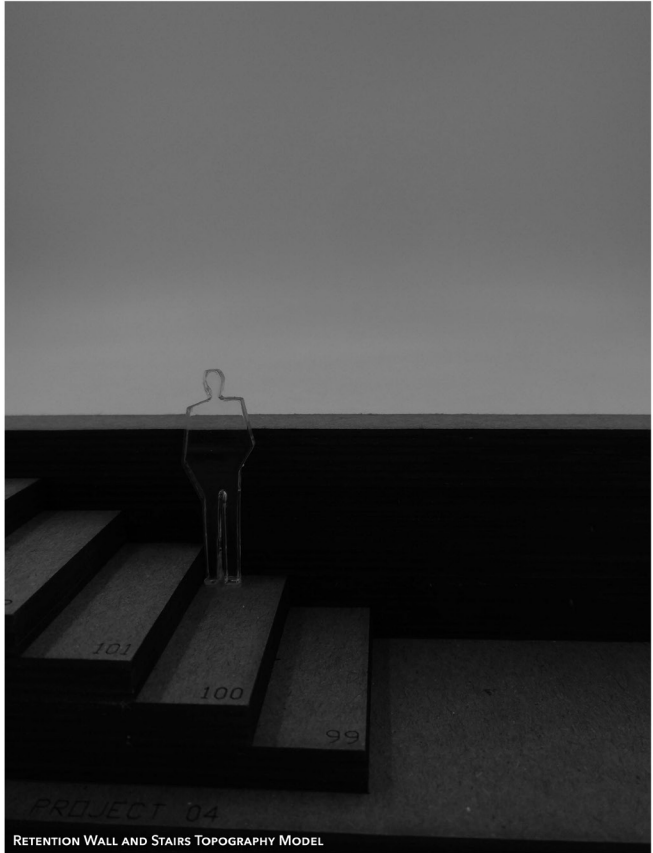
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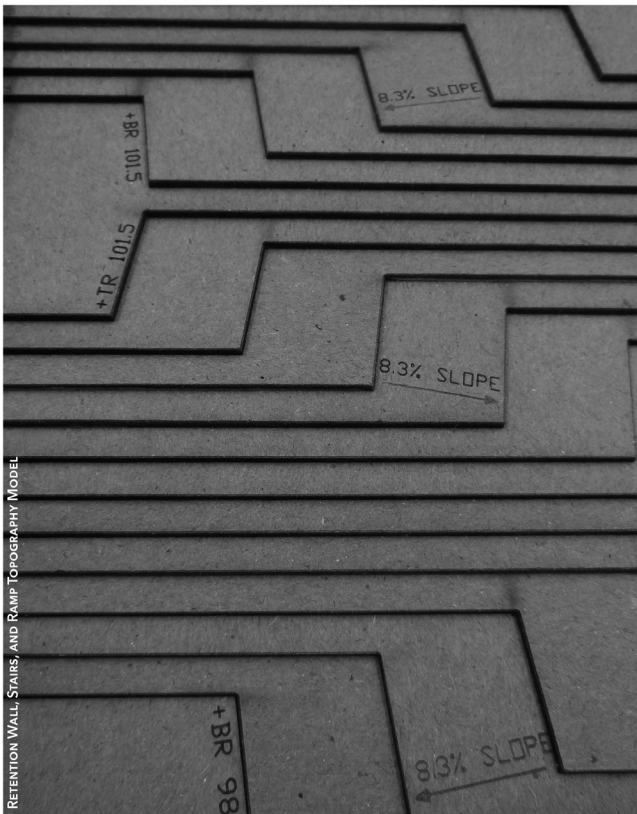
RETENTION WALL AND STAIRS TOPOGRAPHY MODEL



RETENTION WALL, STAIRS, AND RAMP TOPOGRAPHY MODEL



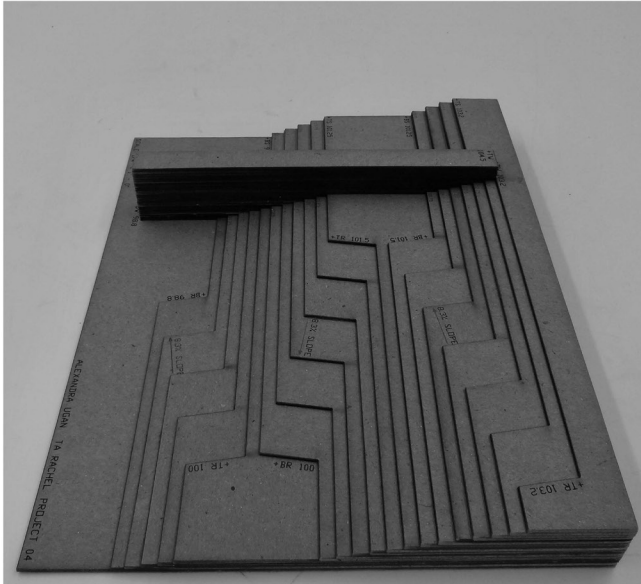
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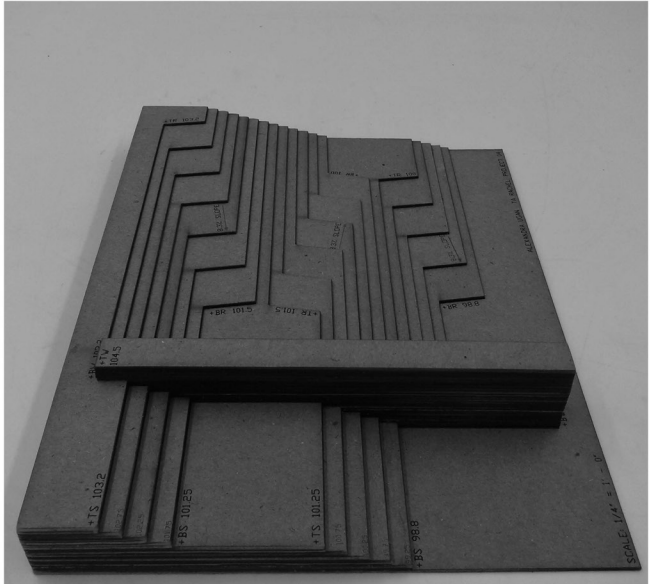
RETENTION WALL, STAIRS, AND RAMP TOPOGRAPHY MODEL



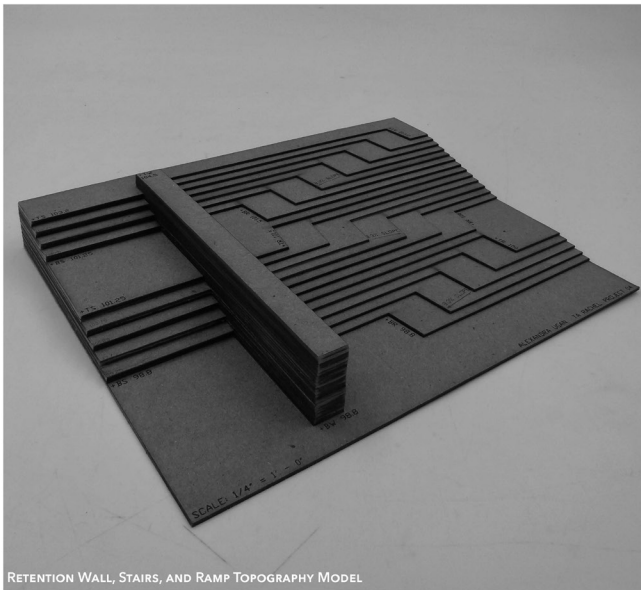
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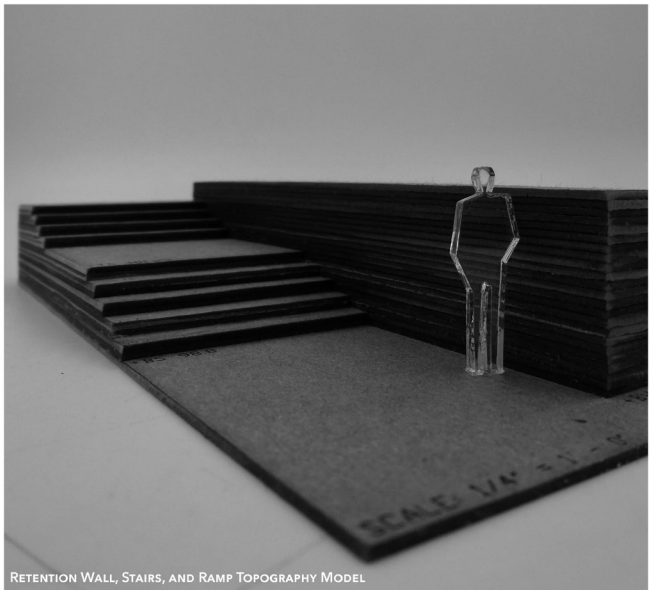
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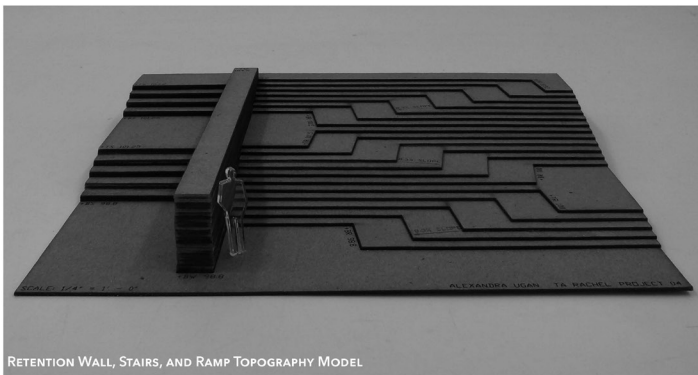
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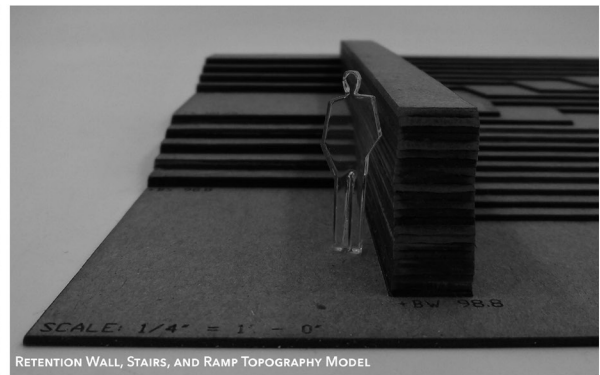
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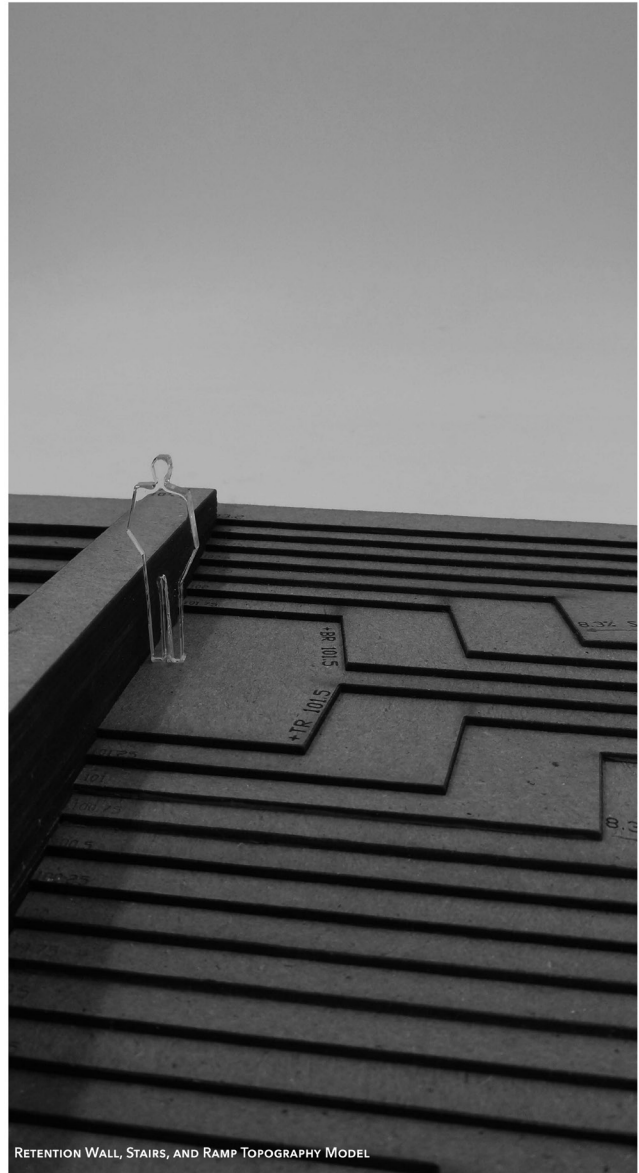
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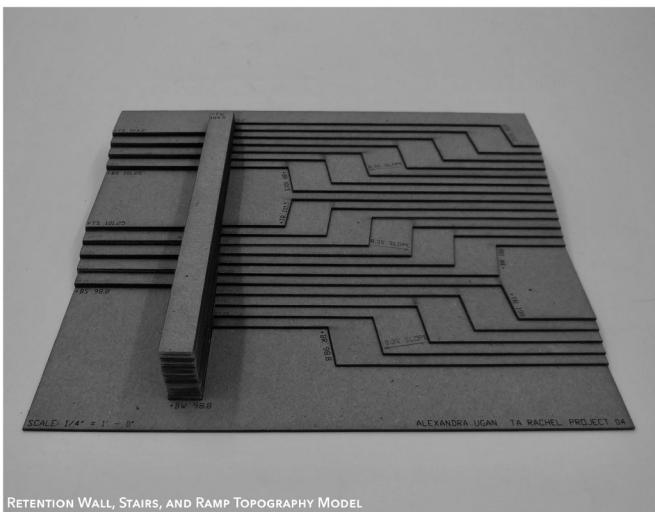
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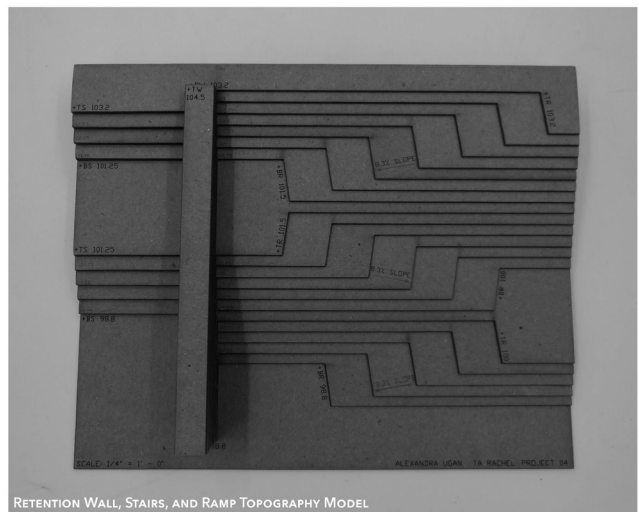
RETENTION WALL, STAIRS, AND RAMP TOPOGRAPHY MODEL



RETENTION WALL, STAIRS, AND RAMP TOPOGRAPHY MODEL



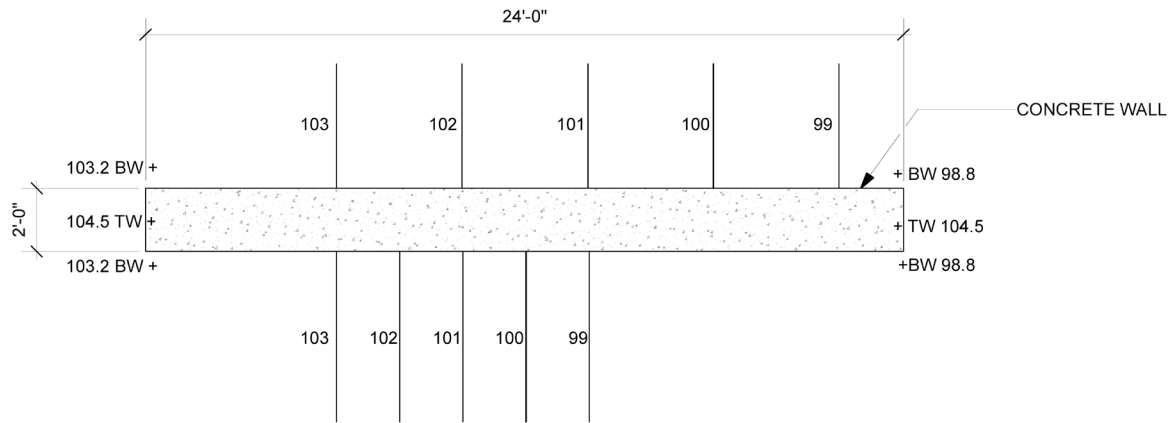
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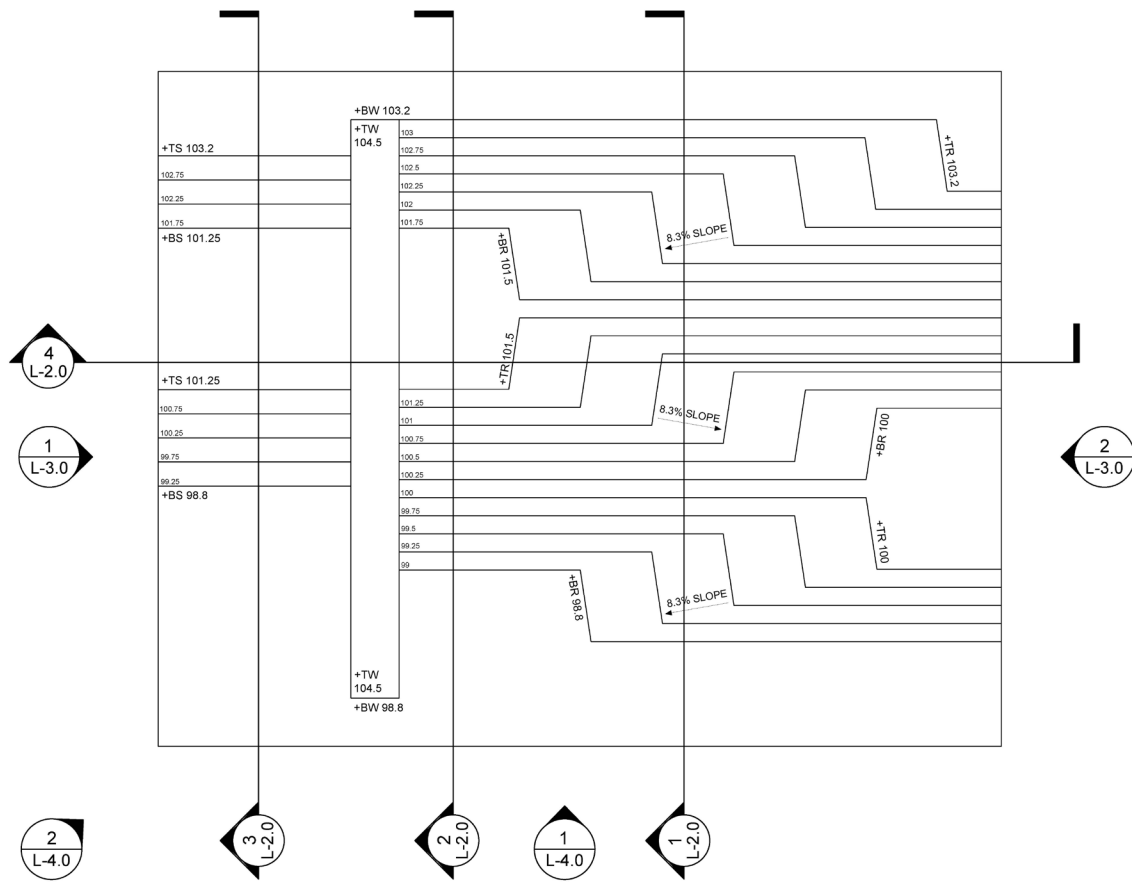
RETENTION WALL, STAIRS, AND RAMP TOPOGRAPHY MODEL

CONSTRUCTION DOCUMENTS

ORIGINAL TOPOGRAPHIC PLAN

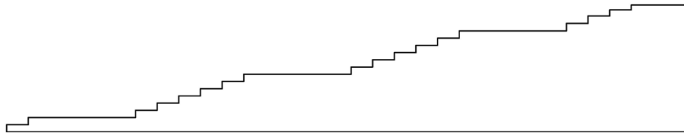


GRADING PLAN

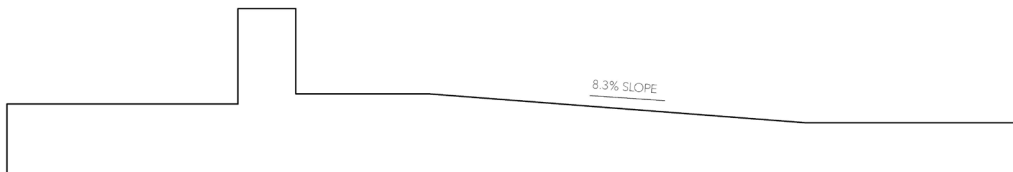


CONSTRUCTION DOCUMENTS

SECTIONS



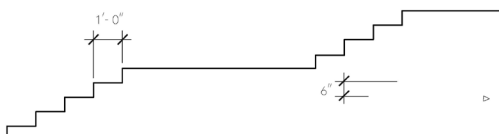
1 RAMP



2 STAIRS, WALL, RAMPS



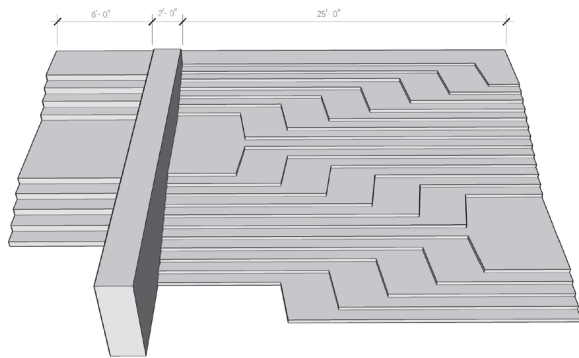
3 RAMP



4 STAIRS

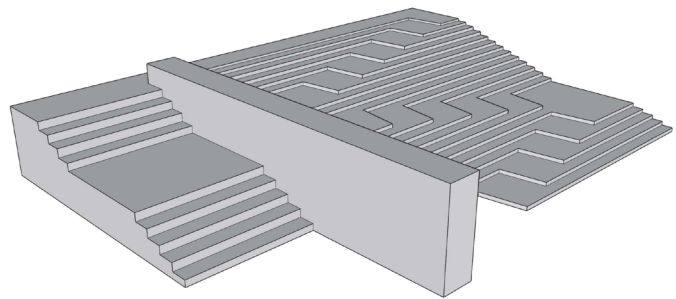
CONSTRUCTION DOCUMENTS

AXONOMETRICS



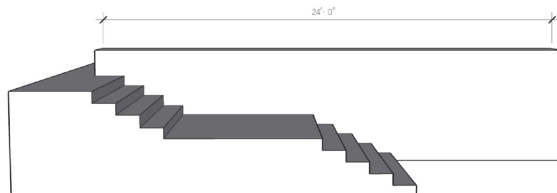
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AXONOMETRIC



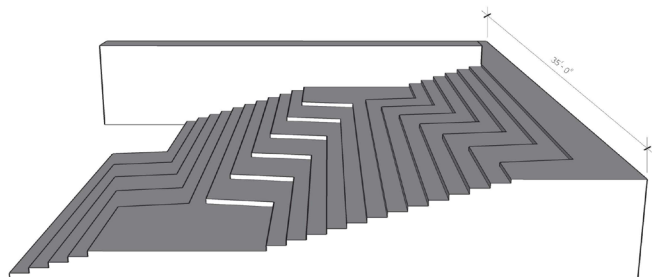
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AXONOMETRIC



3

AXONOMETRIC



4

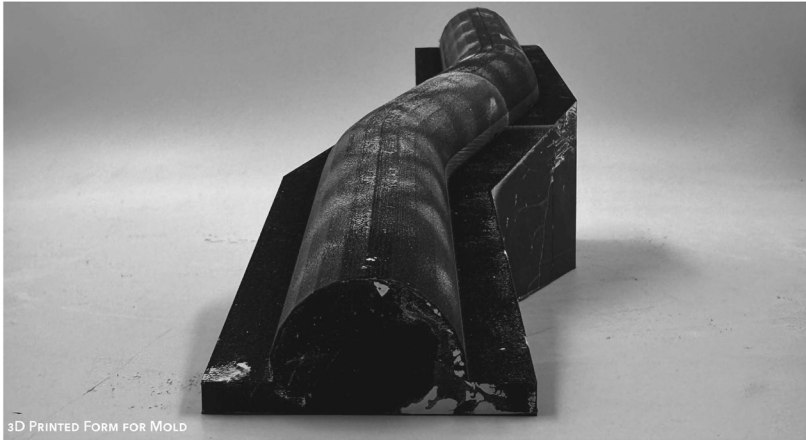
AXONOMETRIC

SLIDE SLOPE

04

IN COLLABORATION WITH **EMMA ROCCHETTA** AND **OLIVIA HOLLEMAN**

USING CARDBOARD AS OUR STAIRS AND TOPOGRAPHY, AND PLASTER OF PARIS AS A RETENTION WALL, WE WERE TASKED TO DESIGN AND CONSTRUCT A SCALED MODEL OF THE PROPOSED TOPOGRAPHY AND WALL AS INDICATED ON THE CORRESPONDING PLAN AND SECTION, AS WELL AS ADDING OUR OWN CREATIVE FLAIR TO IT. WE HAVE INTEGRATED A SET OF STAIRS, NATURAL TOPOGRAPHY, AND A RETENTION WALL THAT DOUBLES AS A SLIDE, MADE OUT OF PLASTER INTO THIS STUDY MODEL.



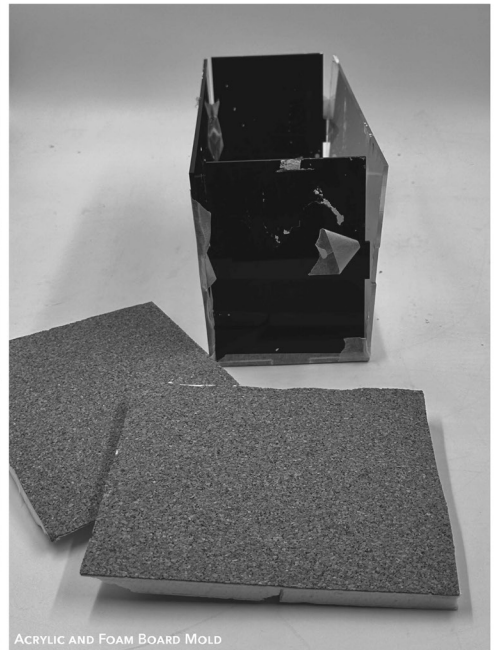
3D PRINTED FORM FOR MOLD



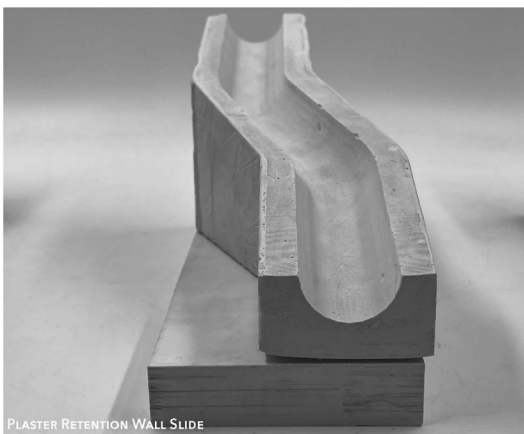
3D PRINTED FORM FOR MOLD



PLASTER RETENTION WALL SLIDE + STAIRS



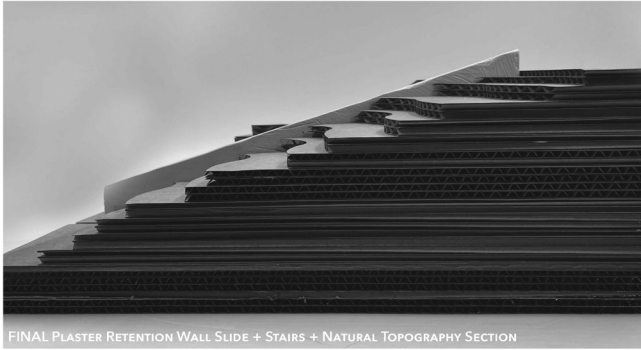
ACRYLIC AND FOAM BOARD MOLD



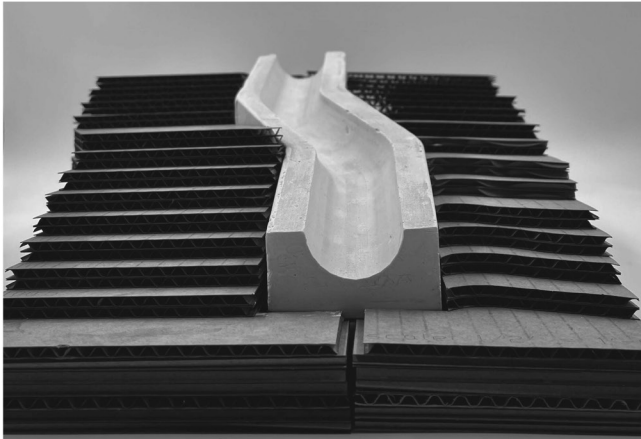
PLASTER RETENTION WALL SLIDE



ACRYLIC MOLD



FINAL PLASTER RETENTION WALL SLIDE + STAIRS + NATURAL TOPOGRAPHY SECTION



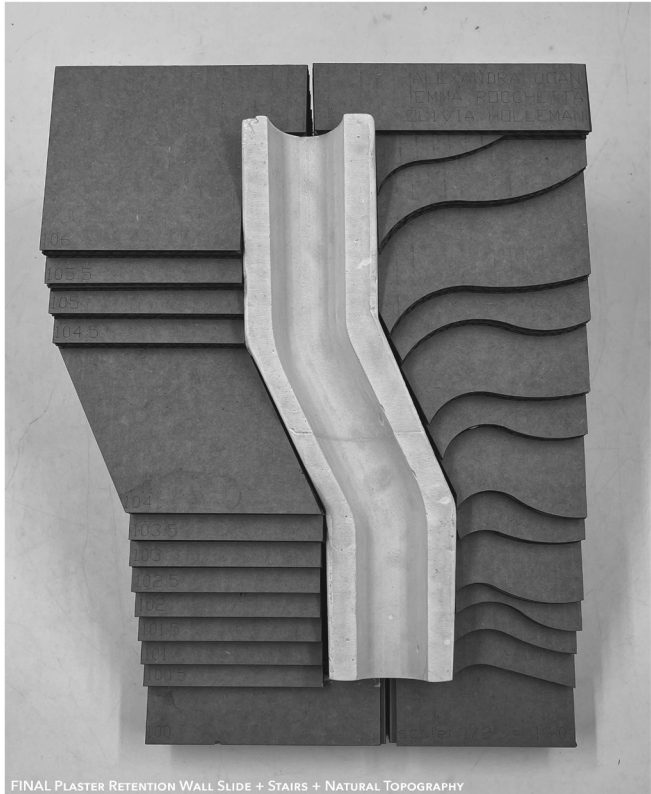
FINAL PLASTER RETENTION WALL SLIDE + STAIRS + NATURAL TOPOGRAPHY



FINAL STAIRS + NATURAL TOPOGRAPHY TOP VIEW



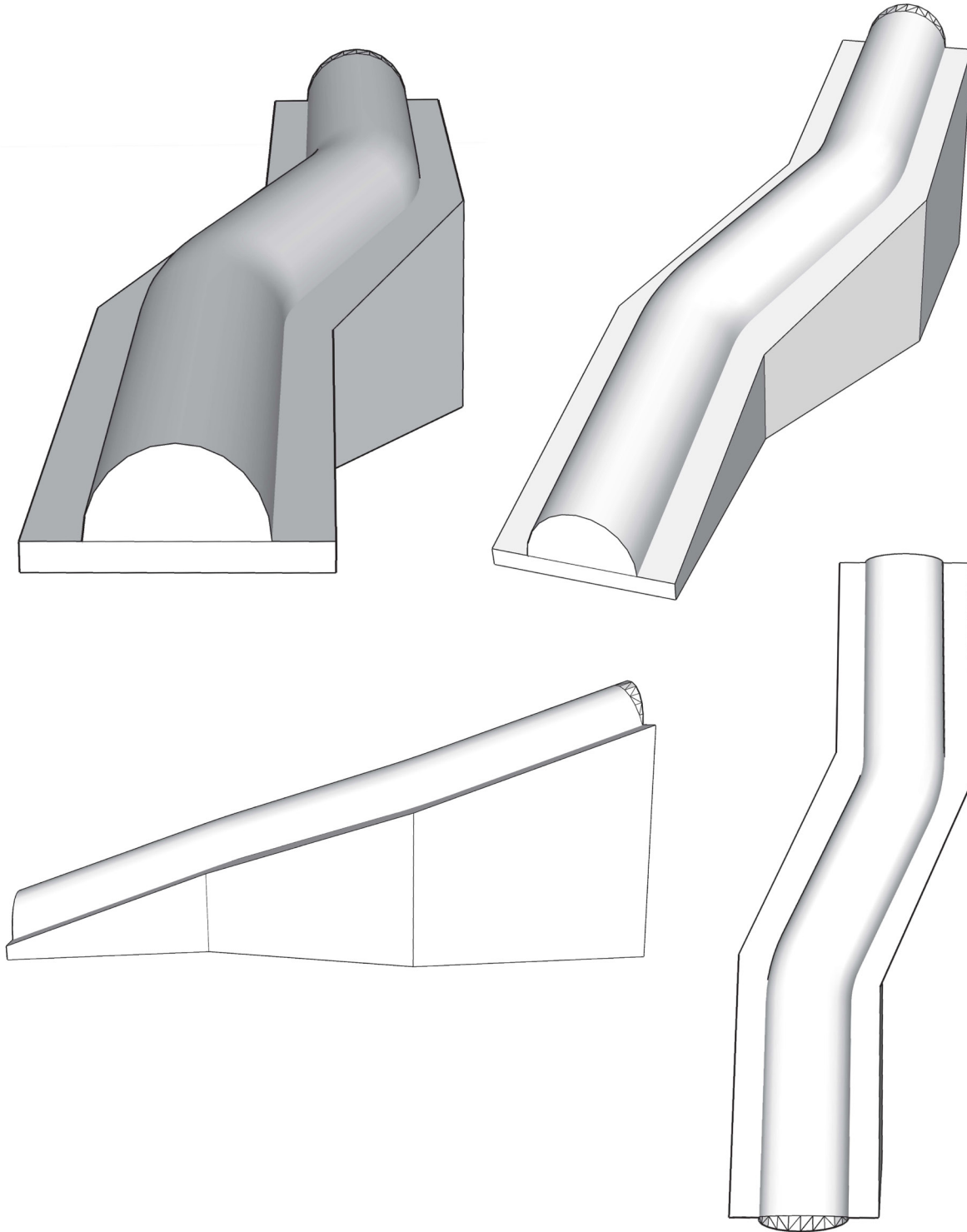
FINAL PLASTER RETENTION WALL SLIDE + STAIRS + NATURAL TOPOGRAPHY



FINAL PLASTER RETENTION WALL SLIDE + STAIRS + NATURAL TOPOGRAPHY

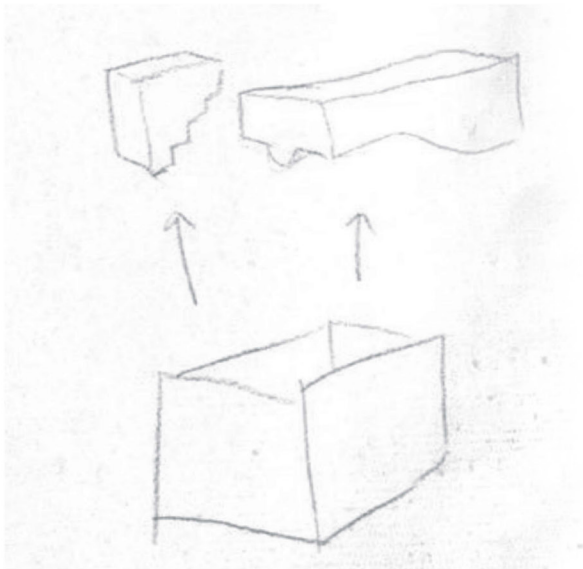
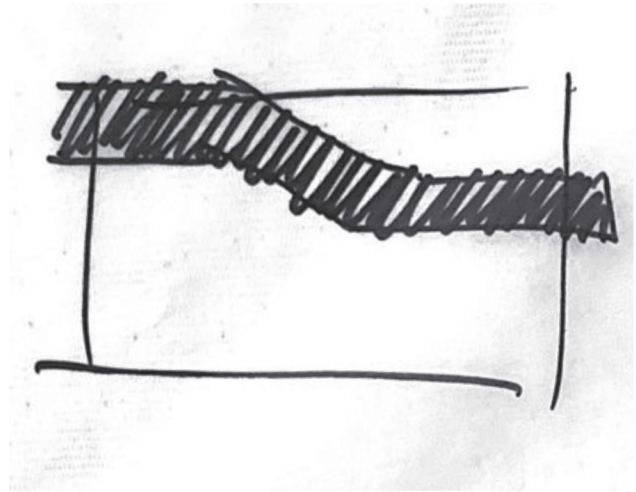
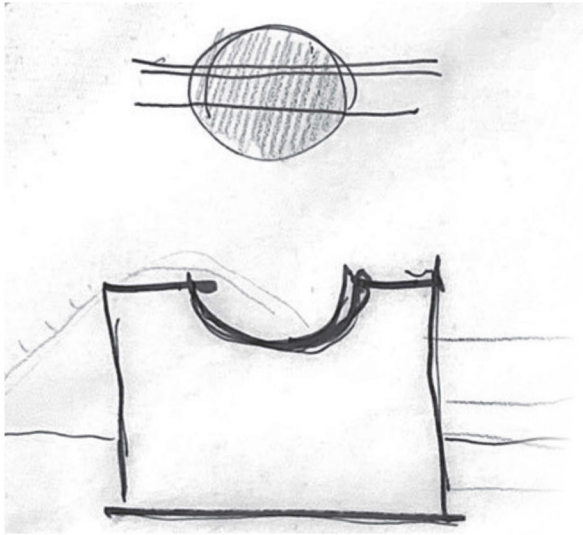
CONSTRUCTION DOCUMENTS

SKETCHUP MODEL FOR SLIDE FORM



PROCESS DOCUMENTATION

PROCESS SKETCHES



DESIGN IMPLEMENTATION II

EMMA ROCCHETTA
TA KINZER
SPRING 2024

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PAPER CUBES:

Description: This project is the first part of an experimented with craftsmanship and how negative space interacts with light. Initial iterations were created and eventually lead to a final model. My concept was taken from a wave design that I simplified in my final design to have a more logo look moving into the second part of the project .

PAPER CUBES:

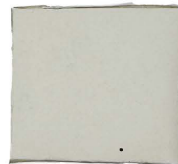
AXON
PRIMARY ITERATIONS



PLAN



FRONT



FINAL DESIGN

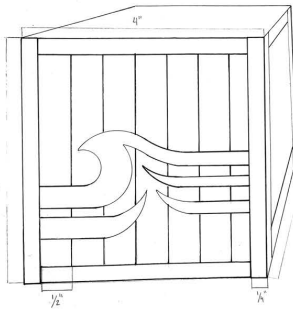


WOOD CUBES: _____

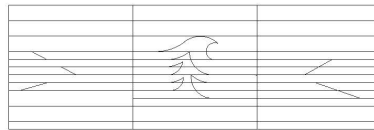
Description: The development of the wood cubes is a continuation of the concept from the paper cubes. I furthered by logo wave design through building it out of basswood, first by hand cutting and then laser cutting in my final iteration. Through this model, I was able to experiment with a new material, hone in on craftsmanship and identify how light interacts with the space of the cube.

WOOD CUBE: _____

PROCESS:



AXON



PLAN

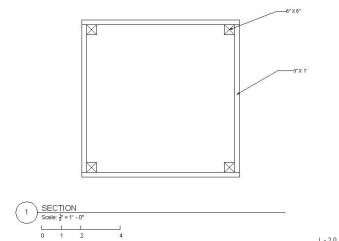
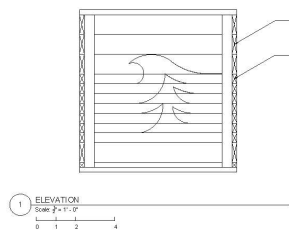
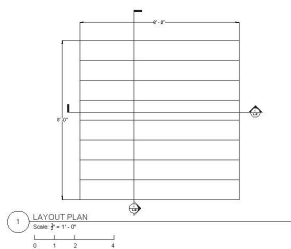


FRONT

PRIMARY ITERATION



FINAL + CONSTRUCTION DOCS



TRUE TO FORM: _____

Description: True to Form is an experimentation with plaster of Paris to represent the real world application of concrete. Through my first iteration I was able to discover the best exit strategies and materials for molds that prepared me for my final cube. Through these iterations we were assigned to make a simple 4x4 cube, negative space, a function, and texture. From there we chose our most successful and developed our final strongest and final iteration. I chose my functional piece to develop further and made a staircase that ascended around the cube. This design was both simple and intriguing as it had interesting view points from all sides and was scaled to be representative of a real staircase.

TRUE TO FORM:

AXON

PLAN

FRONT

PRIMARY ITERATIONS:



4X4IN CUBE



FUNCTION



NEGATIVE SPACE

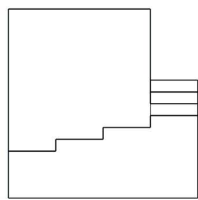


TEXTURE

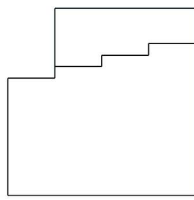


TRUE TO FORM

FINAL ITERATION: FUNCTION
PROCESS + MOLD



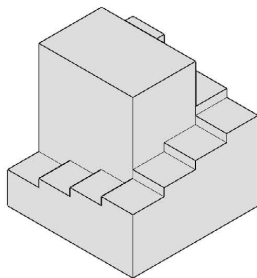
1.1 ELEVATION



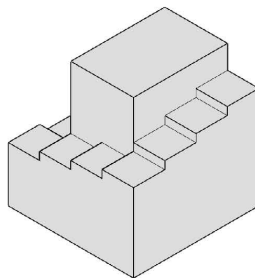
1.2 ELEVATION



AXON



2.1 AXONOMETRIC



2.2 AXONOMETRIC

PLAN



FRONT



Scale: 1/2" = 1' - 0"

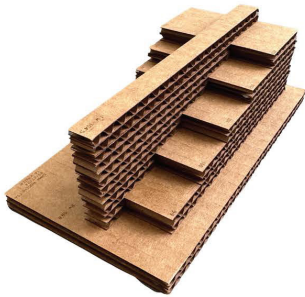
INTEGRATED SLOPES

Description: Integrated slopes is a sequence of cardboard model iterations meant to resemble the real world application of stairs, a wall and a ramp. The iteration started as straight forward and progressed to more complex and creative model. The concept for my final iteration is to create two ways to come down a slope. The first being a simple staircase which gently descends with a landing. The second is a long ramp that twists around large planters that enhances the experience by immersing you into the vegetation as you move downward.

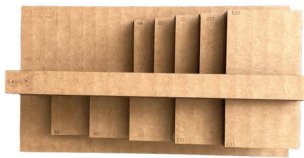
INTEGRATED SLOPES

FIRST ITERATION

AXON



PLAN



FRONT



SIDE



FINAL ITERATION

AXON



PLAN



FRONT

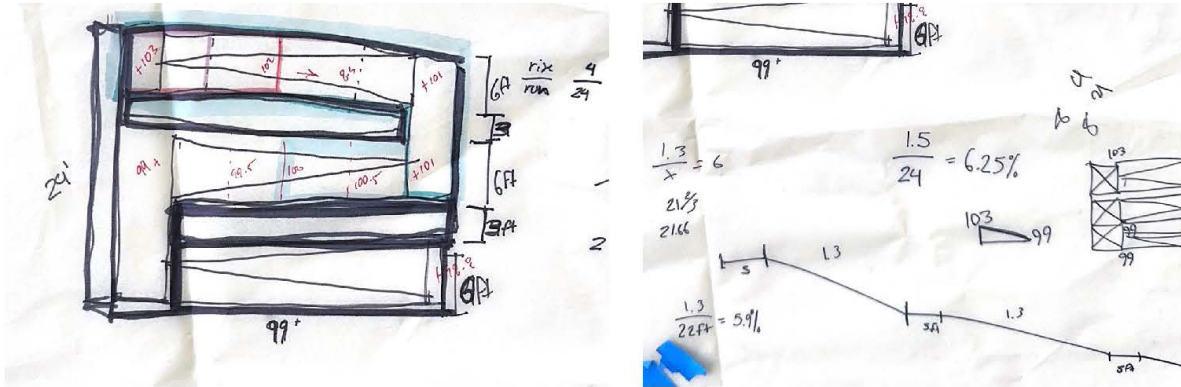


SIDE



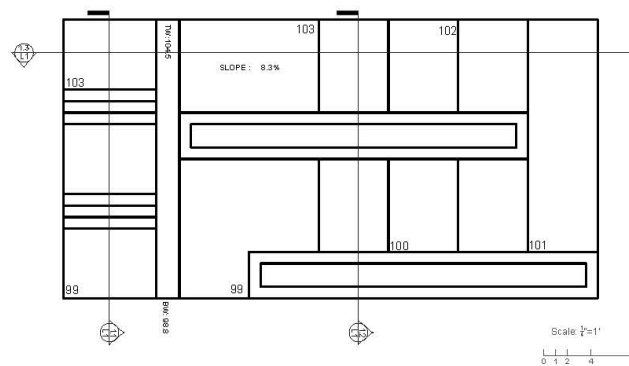
INTEGRATED SLOPES

FINAL ITERATION: PROCESS SKETCHES

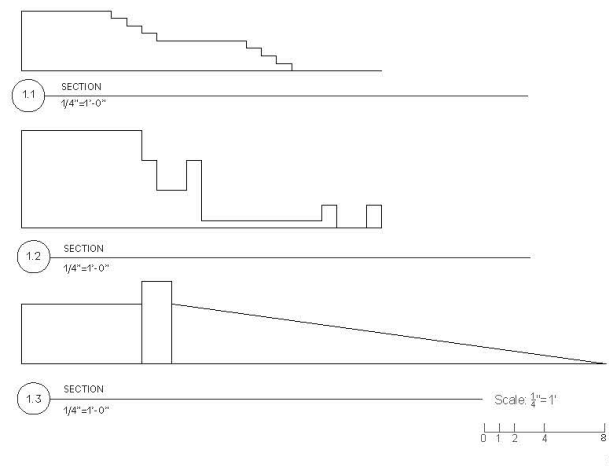


FINAL ITERATION: CONSTRUCTION DOCUMENTS

PLAN



SECTIONS



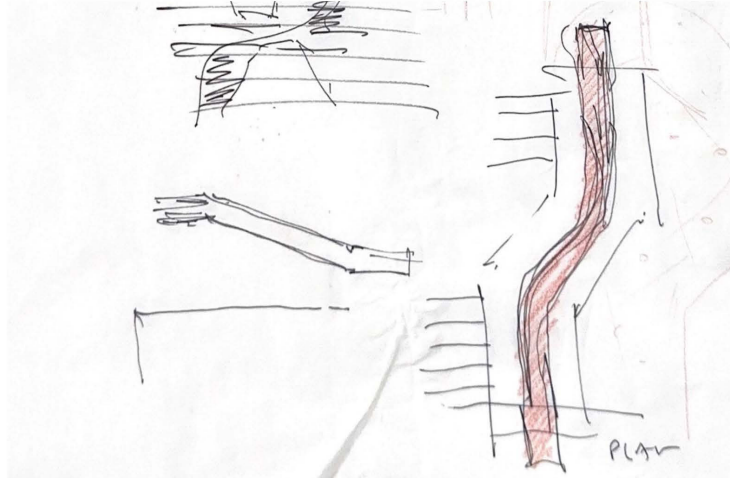
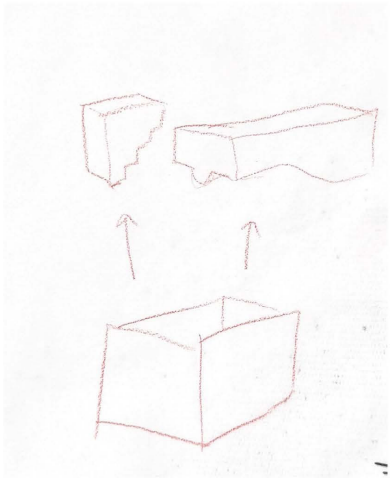
FINAL PROJECT: SLIDE DESIGN

Acknowledgments: Olivia Hollamen + Alexandra Ugan

Description: The slide design is a concept inspired by OMGEVING playgrounds. We drew from their use of simple but unique movements down a slope to create play. Our slide curves down the slope settled between a hillside and staircase. The model materials consist of cardboard and plaster of paris in 3 distinct pieces, the hill, the slide + footer, and the stairs. The separation of the elements allows for the viewing of how the model was constructed and to help visualize the footer within the landscape.

FINAL PROJECT: SLIDE DESIGN _____

PROCESS



MOLD

3D PRINTED SLIDE

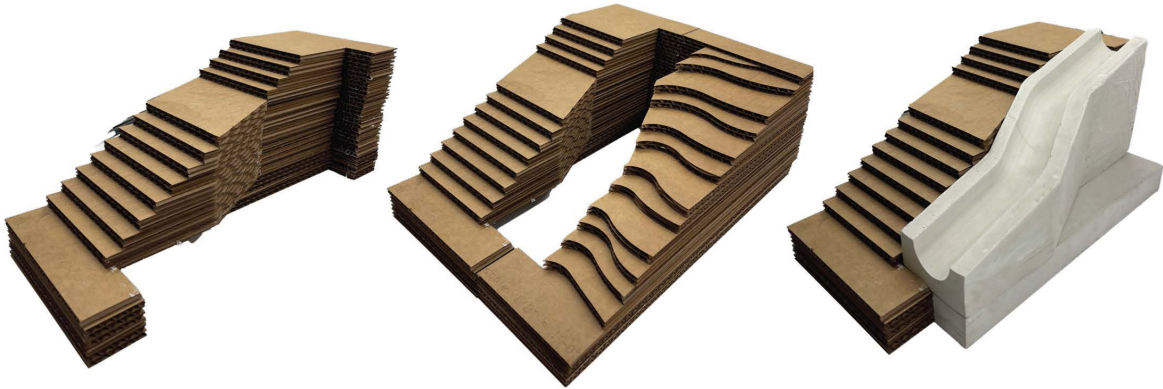


ACRYLIC + FOAM



FINAL PROJECT: SLIDE DESIGN

MODEL PIECES AXON



AXON

PLAN

FRONT

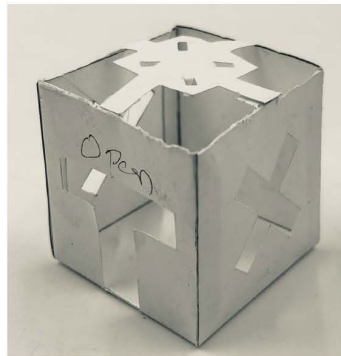
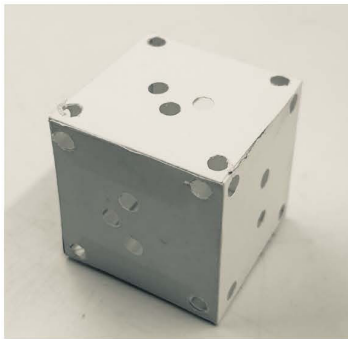
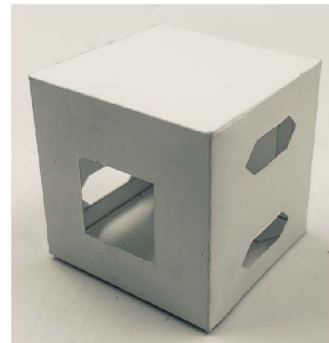
SLIDE



FULL MODEL



Project 1



First model

Final model



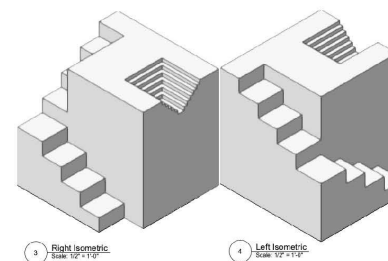
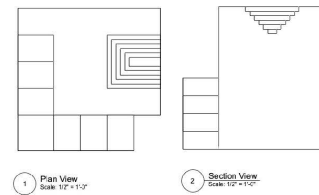
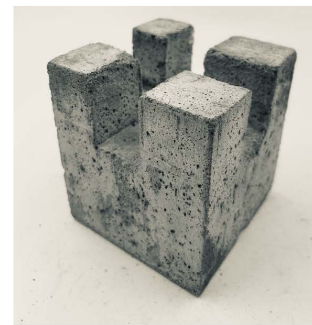
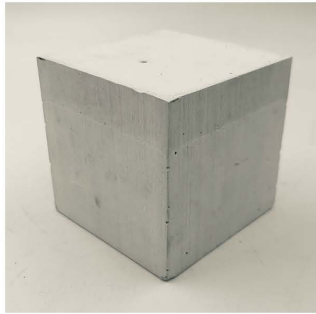
Bryce Rausch|Hurt|Final portfolio

Project 2



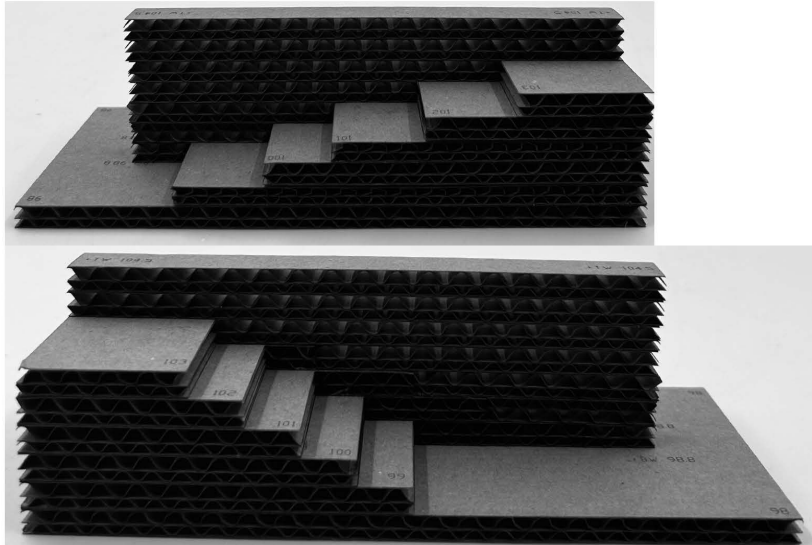
Bryce Rausch|Hurt|Final portfolio

Project 3



Bryce Rausch|Hurt|Final portfolio

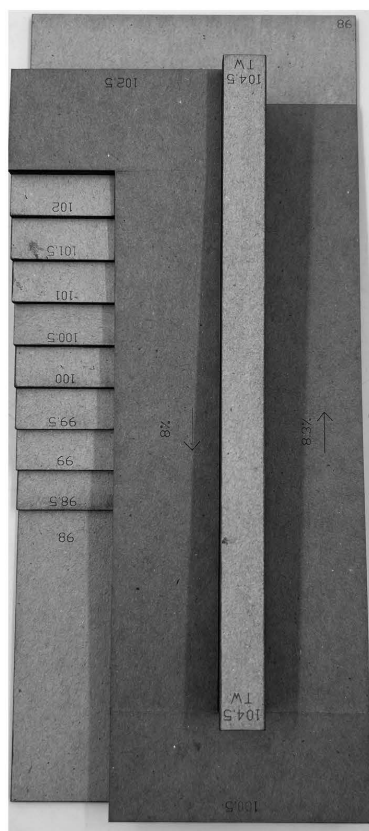
Project 4



Final product



First and the “ugly” model



Bryce Rausch|Hurt|Final portfolio

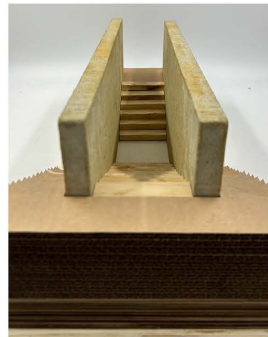
Project 5



Test pieces for iron reaction with iron embedded in the mortar



Final product is rust sprayed onto concrete to give rustic look



Bryce Rausch|Hurt|Final portfolio

