SARA MOTWANI

THE BARTLETT
SCHOOL OF ARCHITECTURE

PORTFOLIO

20-21

YEAR I

ENGINEERING AND ARCHITECTURAL. DESIGN, MENG

THE ALMANAC

Live Drawing

Photogrammetry

Japanese Joinery

Diagramming Flux

COUTURE

Café Design

Live Drawing

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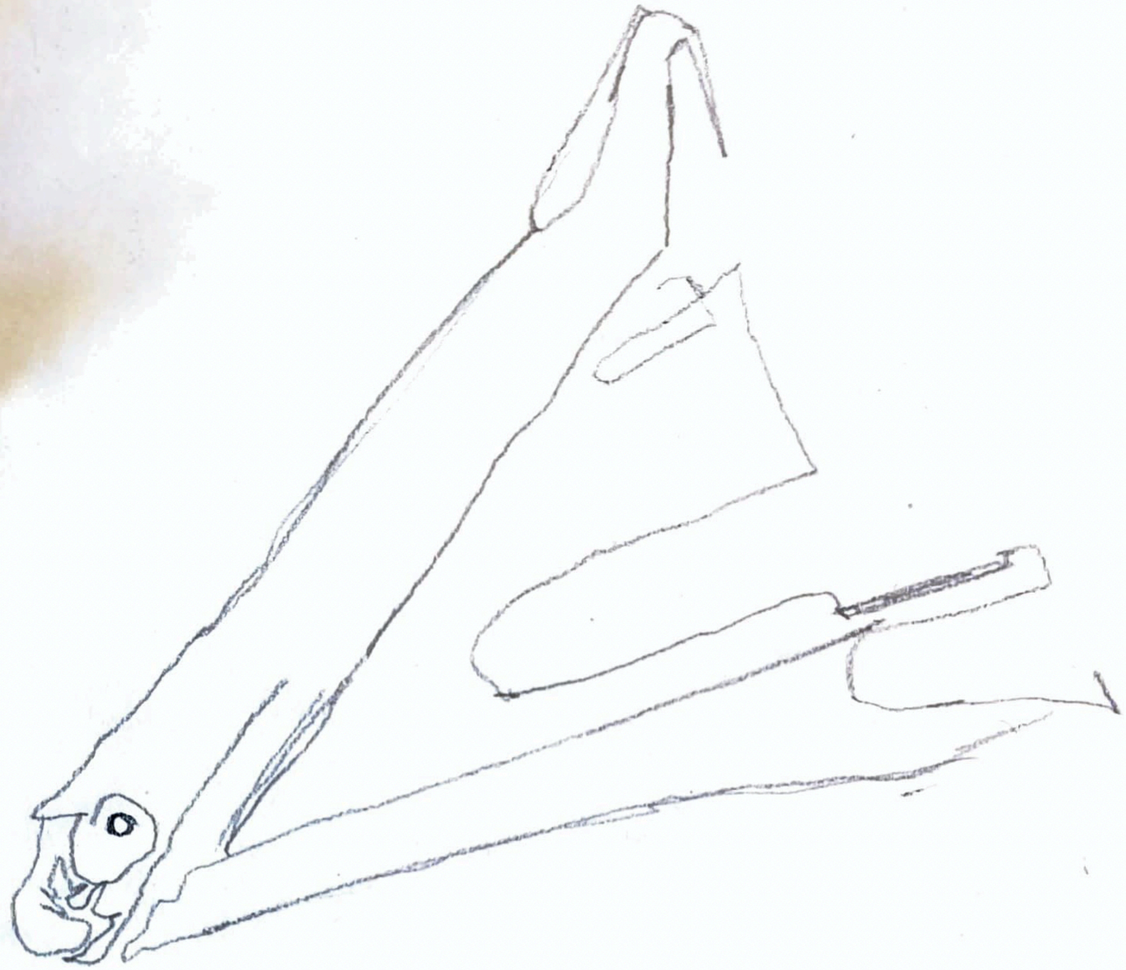
OBJECT DRAWING (PENCIL)





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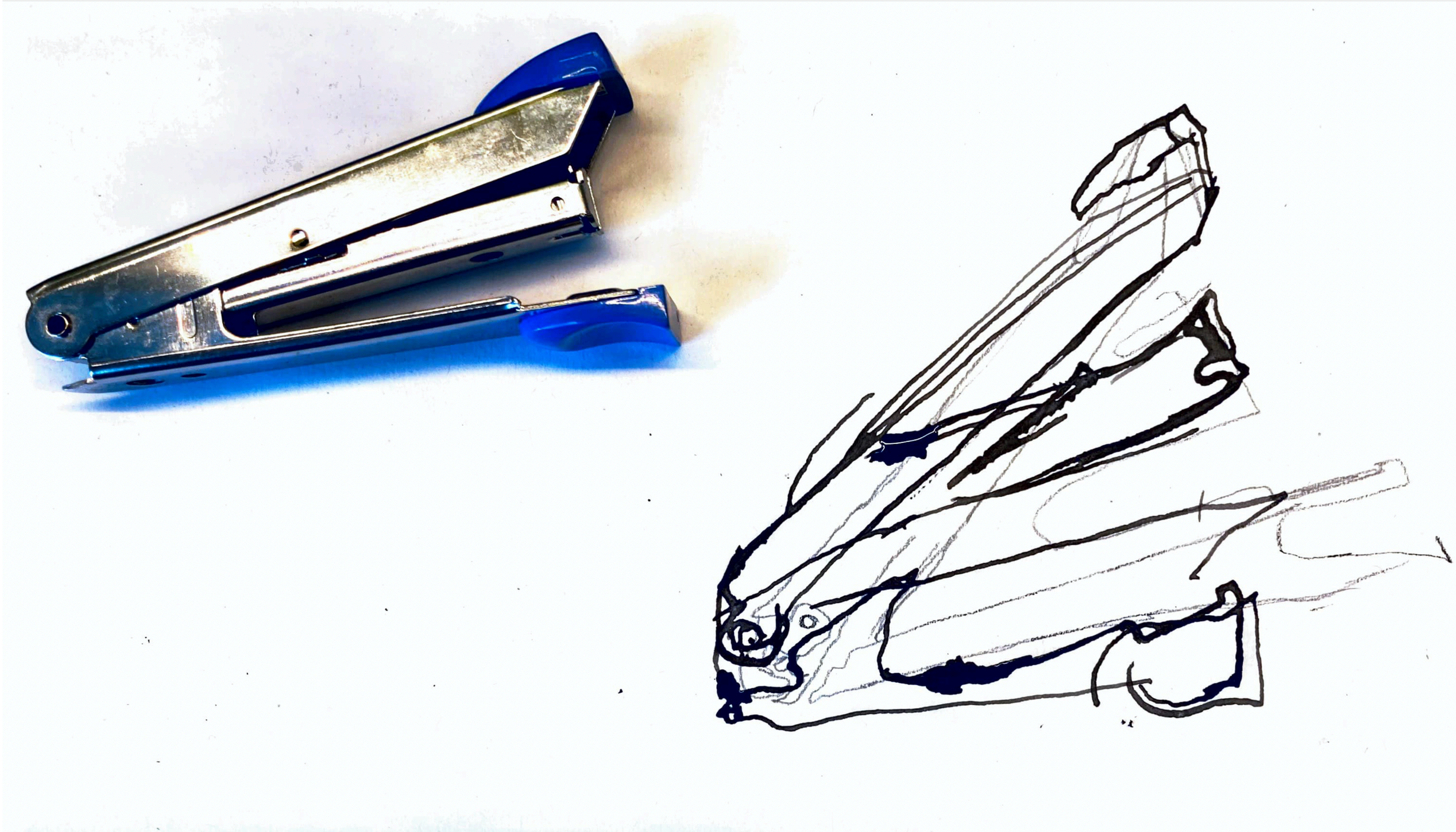
OBJECT DRAWING (INK OVERLAY)



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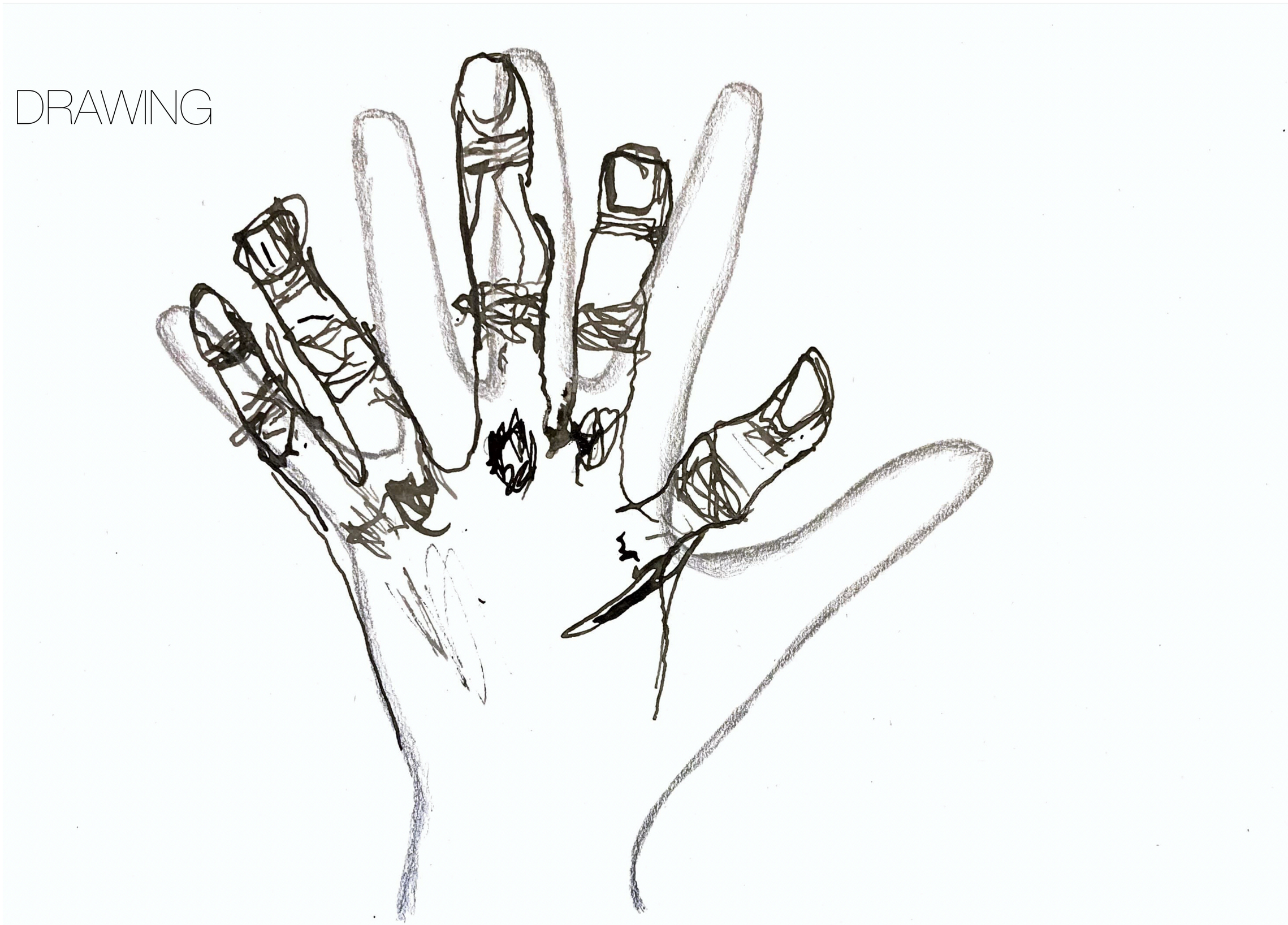
HAND DRAWING



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HAND DRAWING - MULTIPLE GESTURES



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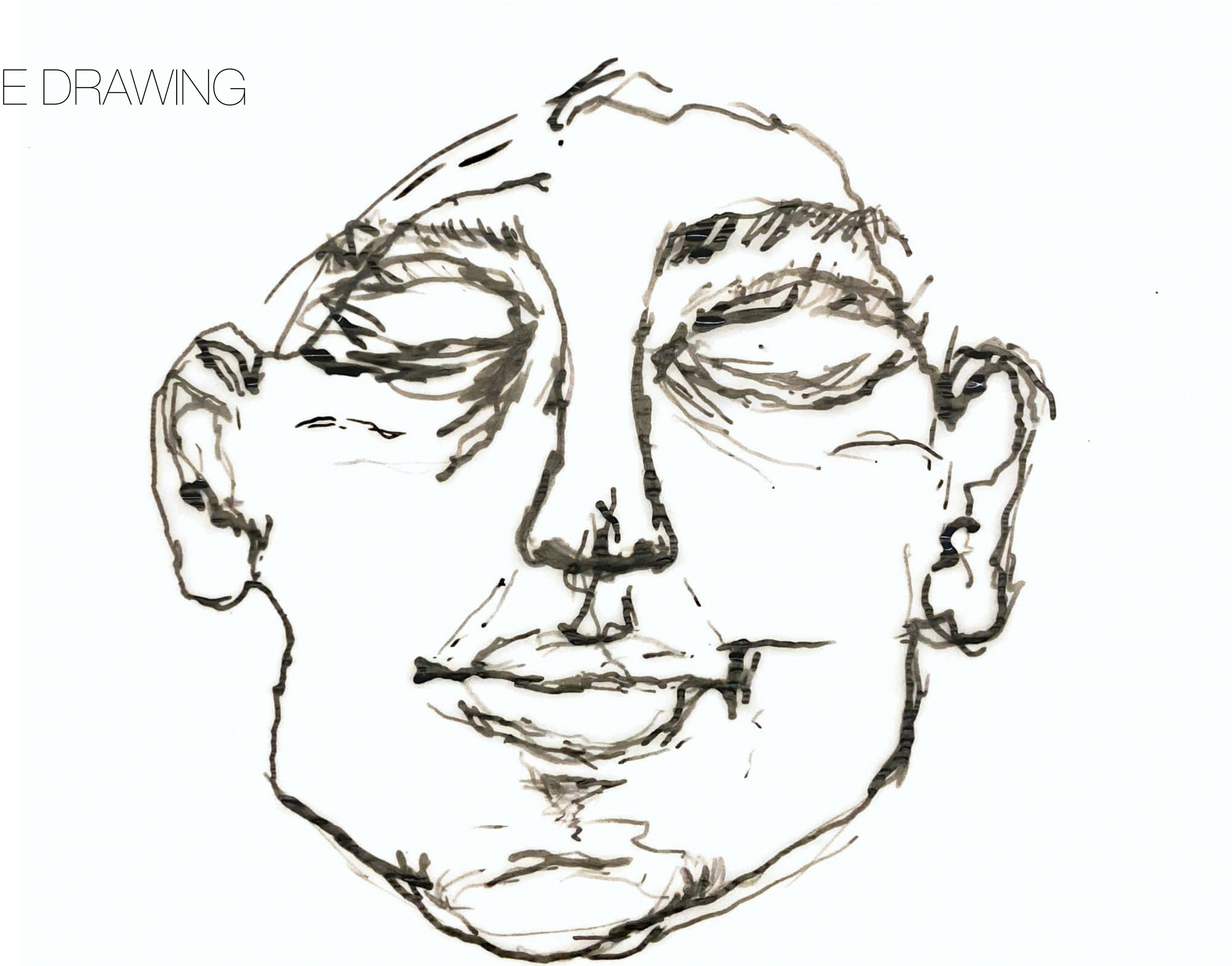
FACE DRAWING



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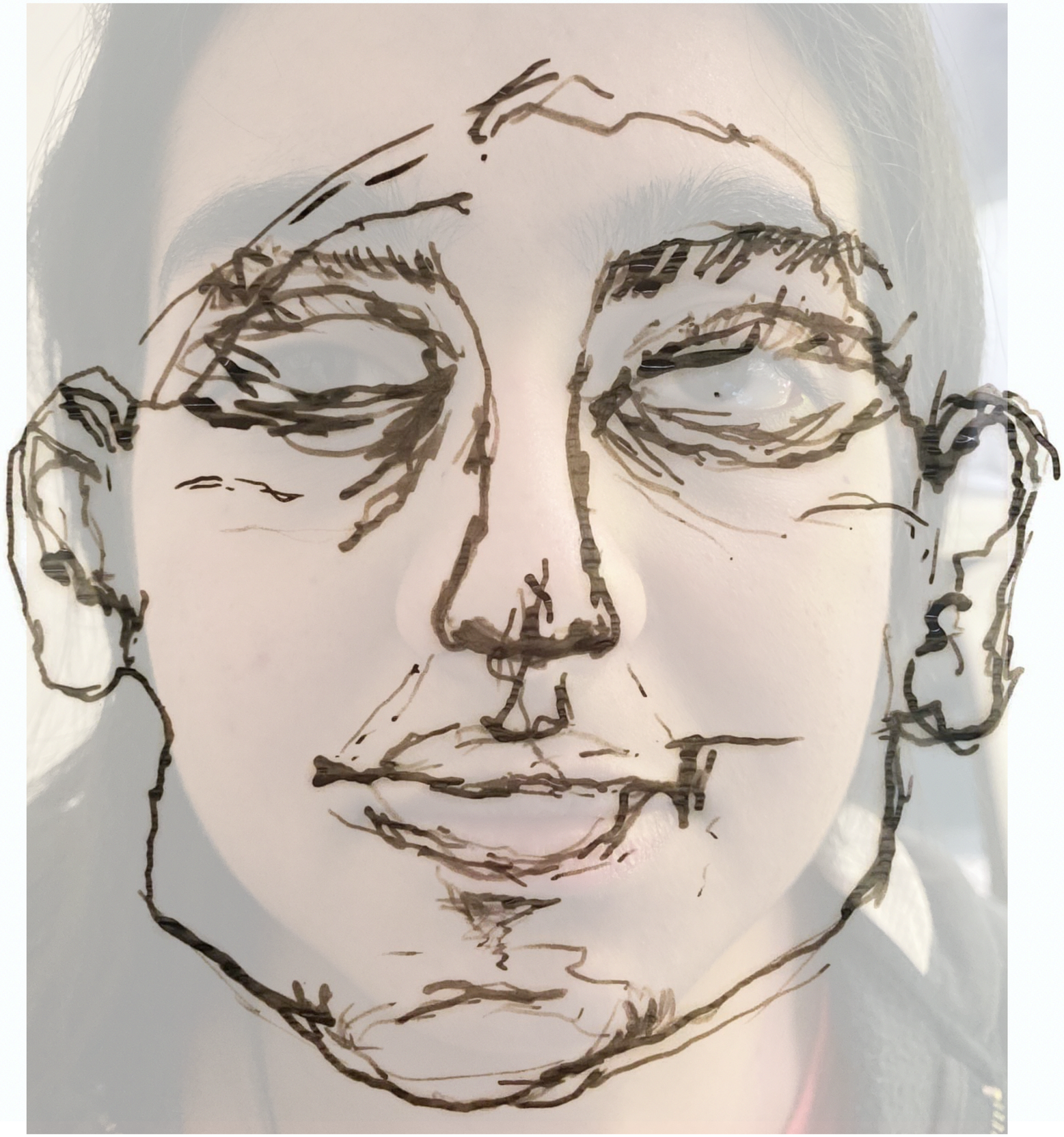
FACE DRAWING

THE FACE DRAWING STARTED WITH AN OUTLINE OF THE FACE FRAME USING ONLY TOUCH. ONCE THE FACE FRAME WAS ESTABLISHED, FACIAL FEATURES AND FACE CONTOURS WERE ADDED WITH THE HELP OF TOUCH .

ALONGSIDE IS AN IMAGE OF THE FACE DRAWING OVERLAID ON THE FACE REPRESENTED.



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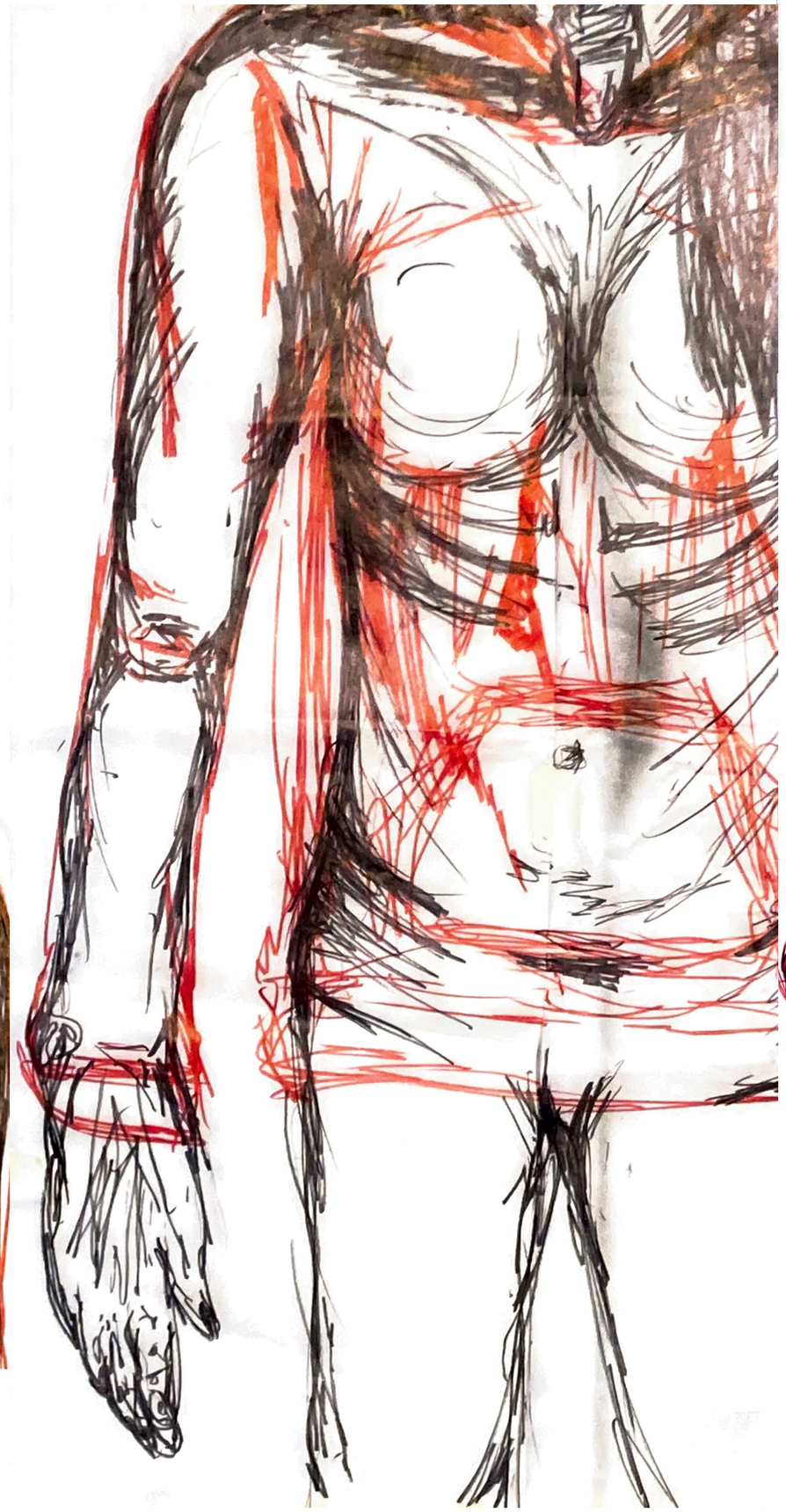
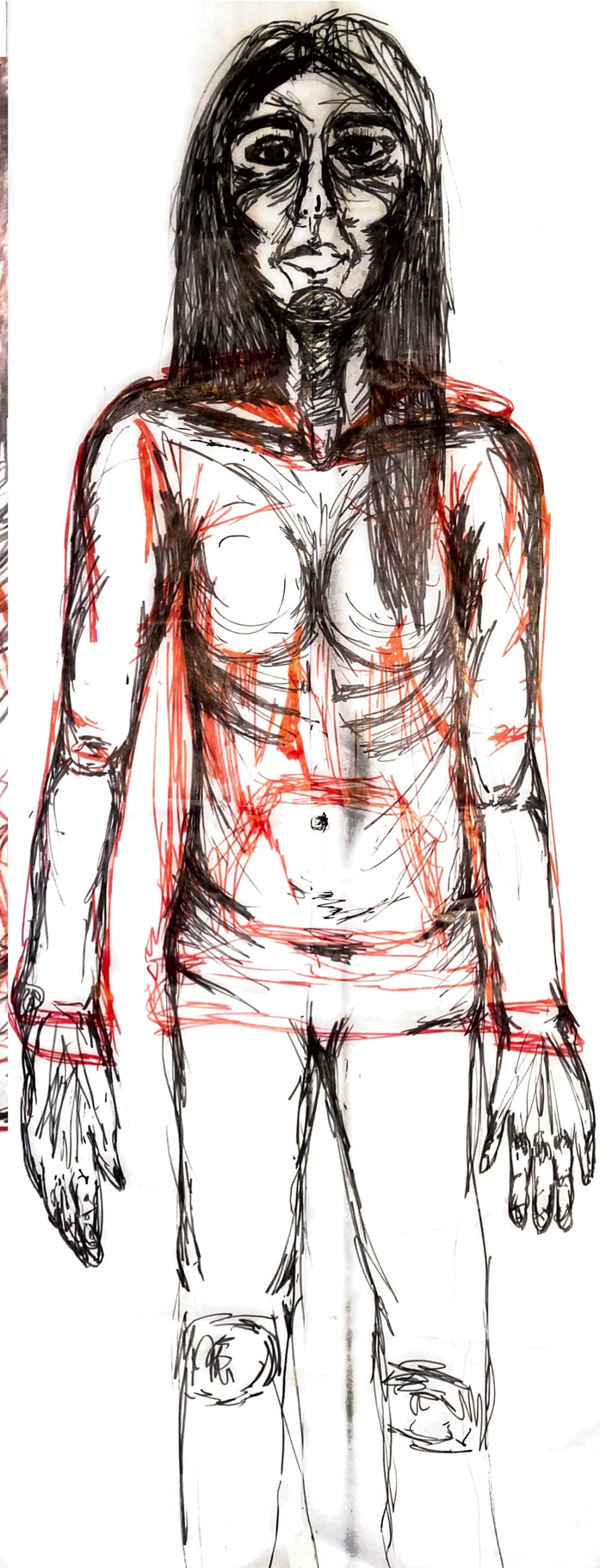
FULL BODY DRAWING







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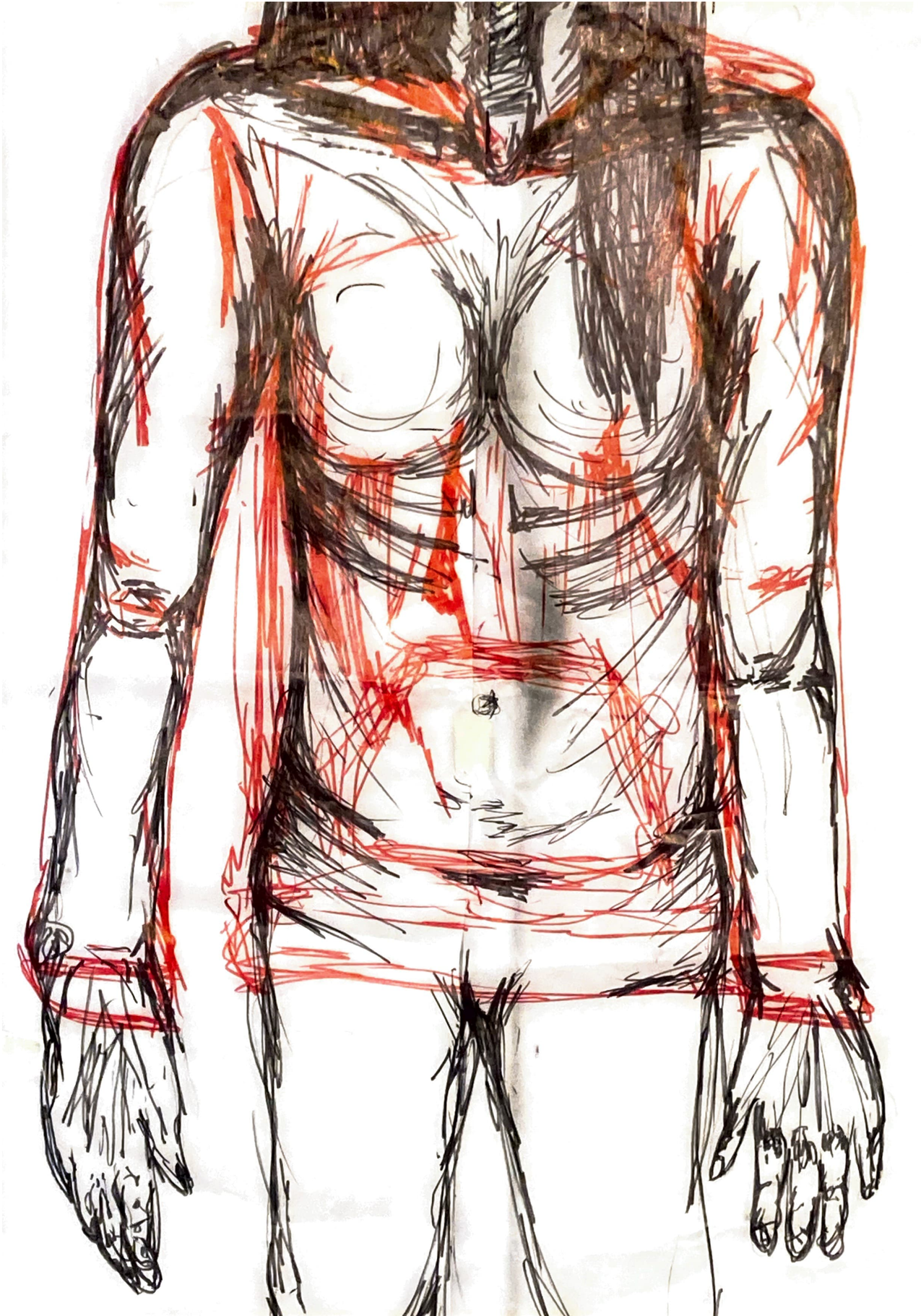
FULL BODY DRAWING

THE FULL BODY DRAWING STARTED WITH TRACING OUT THE OUTLINES OF THE BODY. ONCE THIS WAS DONE, FEATURES AND CONTOURS WERE ESTABLISHED USING ONLY THE SENSE OF TOUCH,

THE BLACK INK REPRESENTS THE UNCLOTHED BODY WHEREAS THE RED INK REPRESENTS THE BODY WITH CLOTHES.



Diagramming Flux

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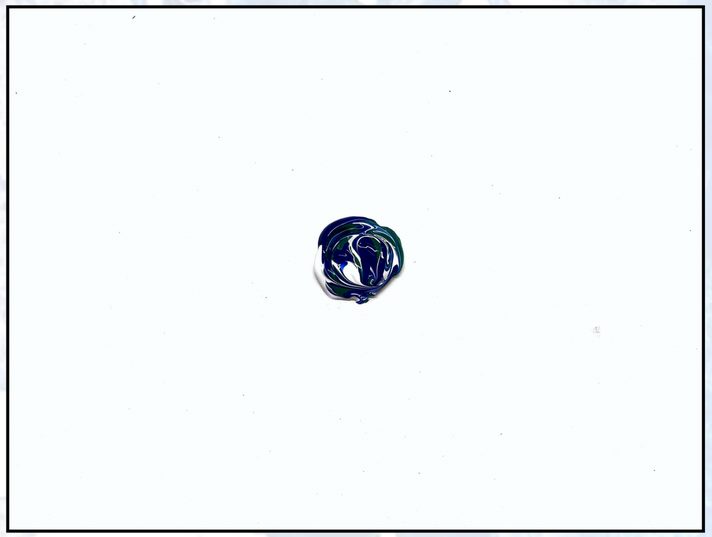
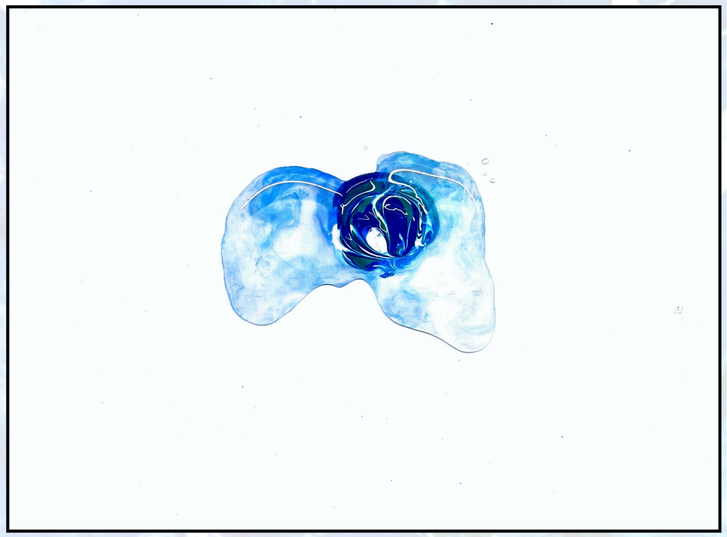
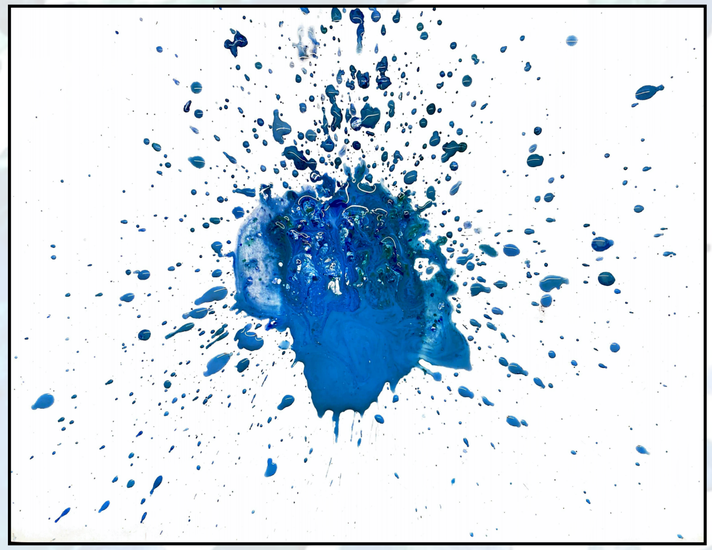
KAR GAYI CHULL by BADSHAH



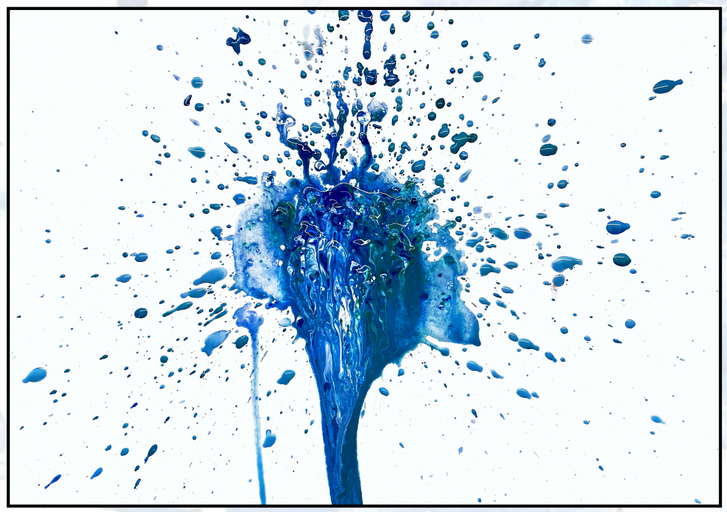
PHASE I : STAGNANT BEATS AT THE START OF THE SONG



PHASE II : TRANSITION INTO THE MAIN BEATS BEGINS



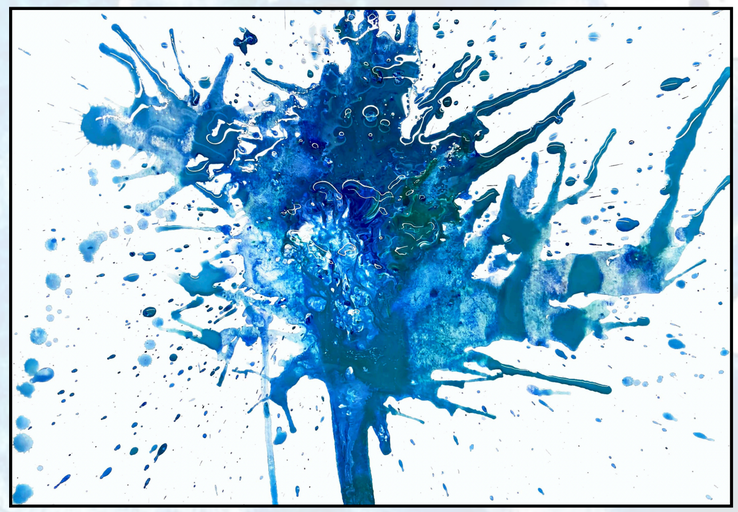
PHASE III : STRONG PULSATING BEATS OF THE SONG



PHASE IV : SUDDENLY BEAT FADES INTO SILENCE



PHASE V : BEAT DROPS AGAIN AND LOUDER



PHASE VI : VOCALS OF THE SONG BEGIN

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KAR GAYI CHULL by BADSHAH



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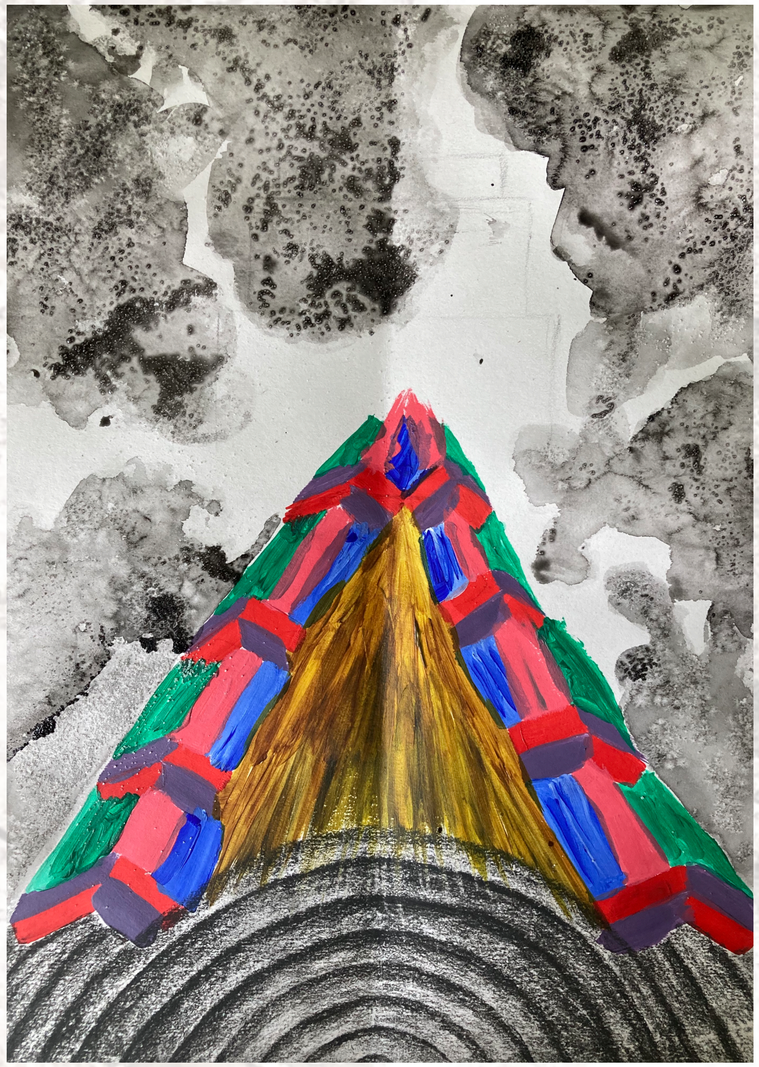
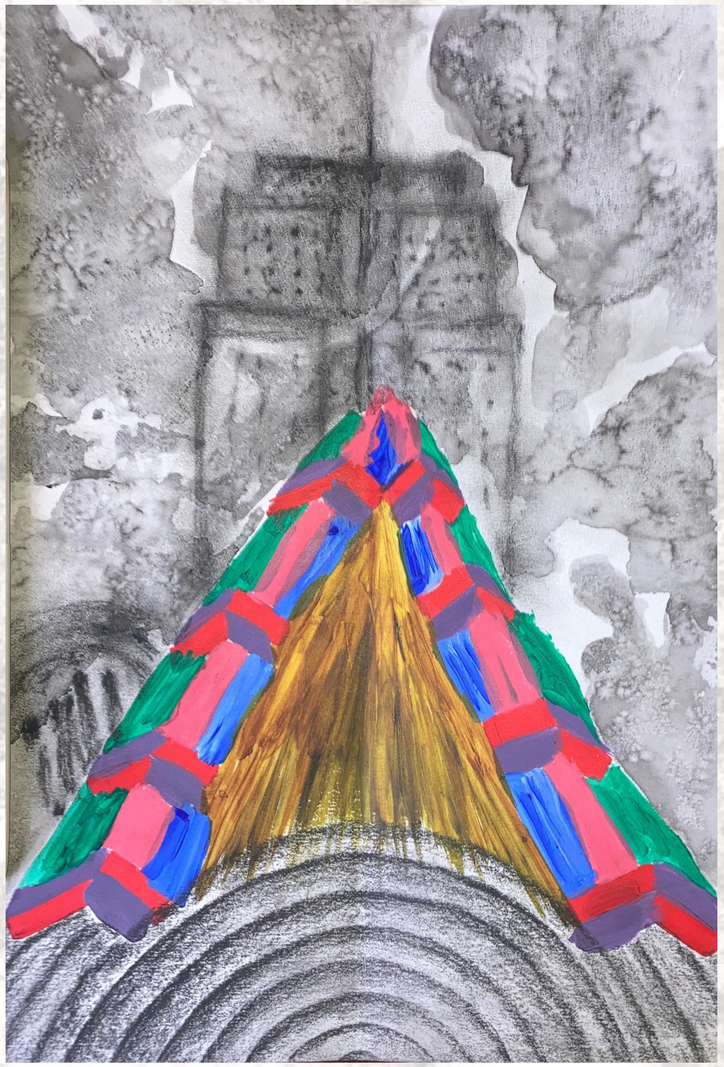
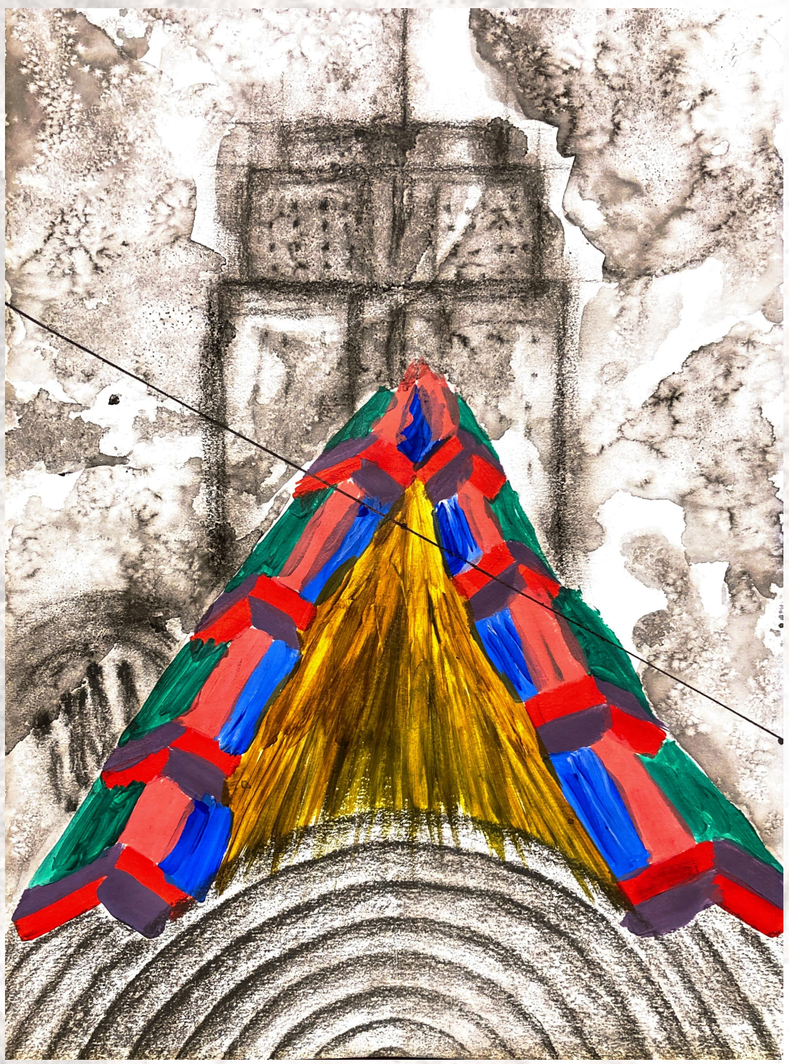
SUPER TROOPER by ABBA







CONCEPT

THE CONCENTRIC SEMI CIRCLES REPRESENT THE ECHO IN THE BEGINNING OF THE SONG. THE INTRO MUSIC. CONSISTS OF 5 DISTICT NOTES WHICH ARE REPRESENTED BY 5 DIFFERENT COLOURS. JUST AS THE INTRO PROGRESSES INTO THE SONG, THESE COLOURS LEAD TO THE STARRY CLOUDS. THE IMAGE OF THE SENATE HOUSE IS REPRESENTATIVE OF A PERSONAL MEMORY CONNECTED TO THE SONG. FINALLY THE RAYS OF BROWN AND ORANGE SYMBOLISE THE BEAT OF THE SONG.

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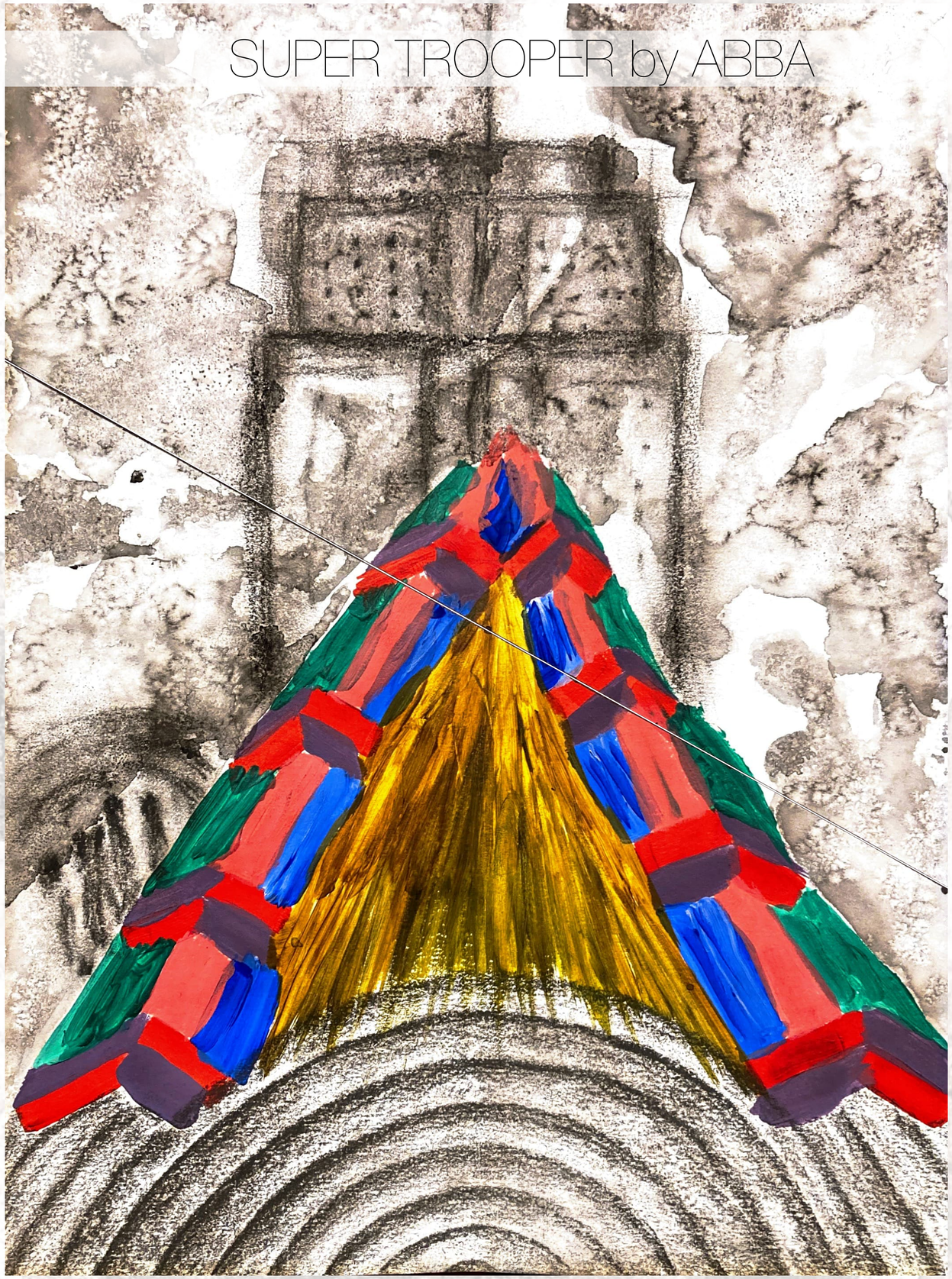
SUPER TROOPER by ABBA



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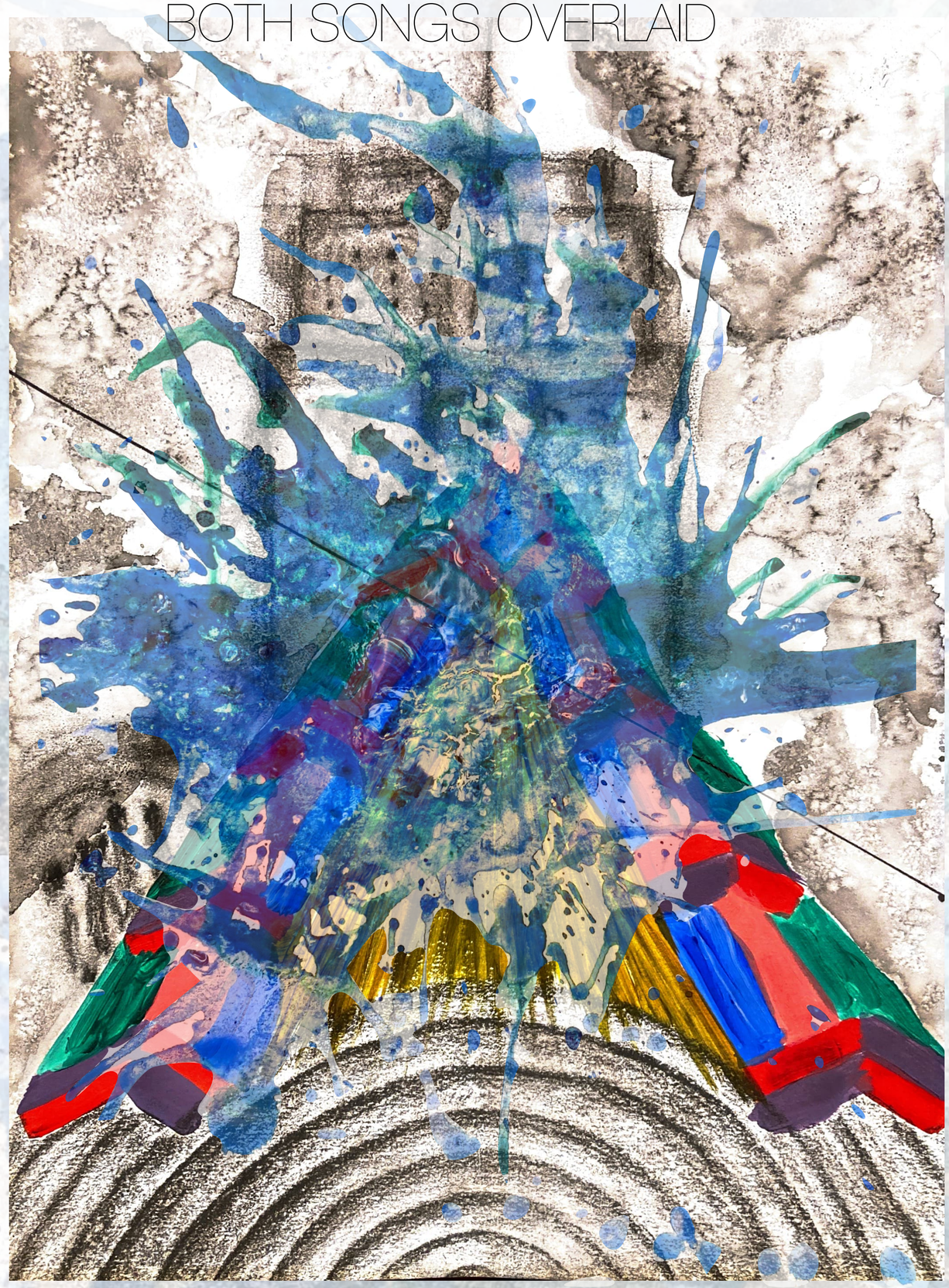
BOTH SONGS OVERLAID



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PROCESS OF ERASURE





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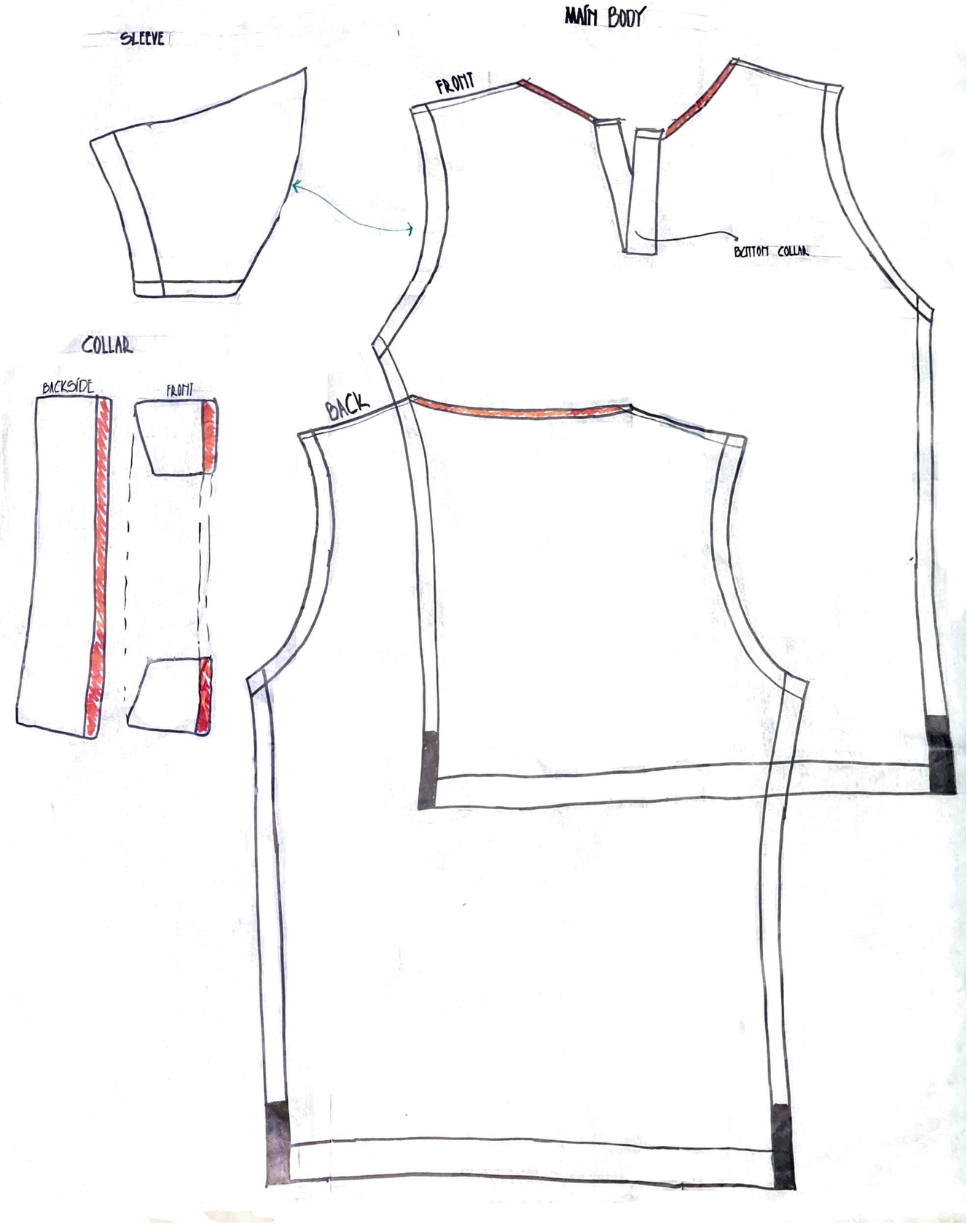
COUTURE

GARMENT MASTERPLAN

THIS MASTERPLAN WAS MADE FOR A XL SIZED MEN'S POLO T-SHIRT

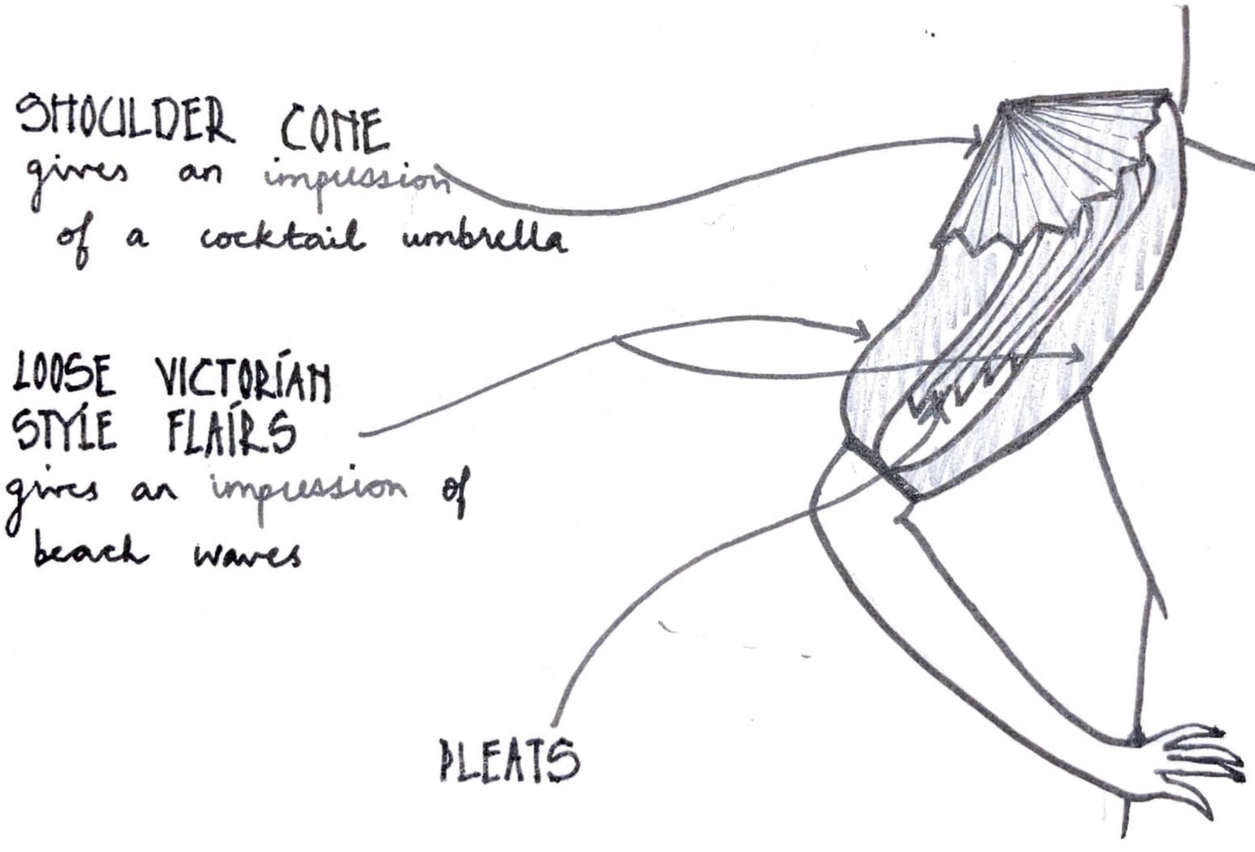
THE PARTS SHADED IN RED ARE MEANT TO JOIN IN ORDER TO FORM THE GARMENT



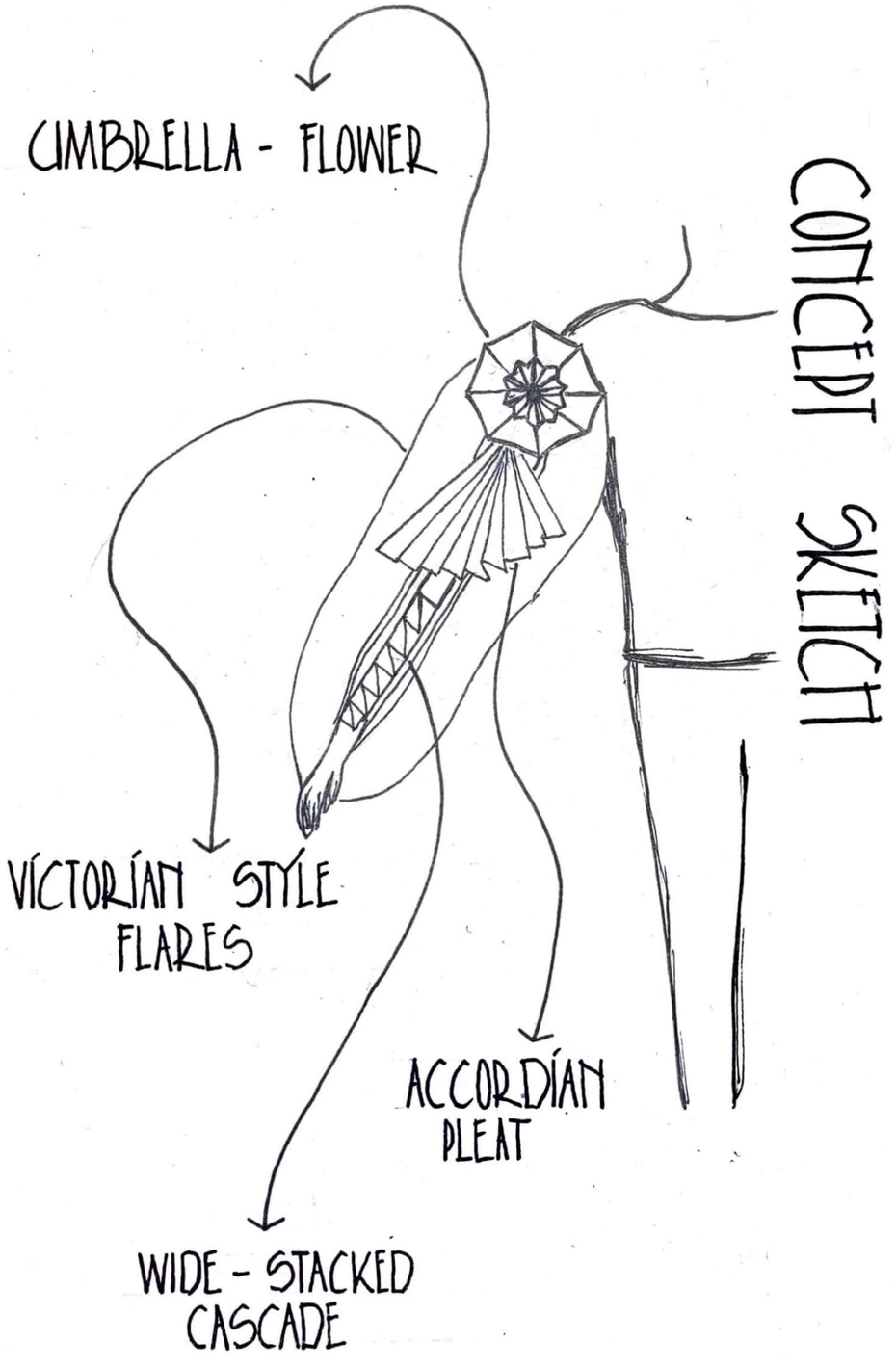


ARM VOLUME

INITIAL CONCEPT



FINAL CONCEPT



THE DESIGN

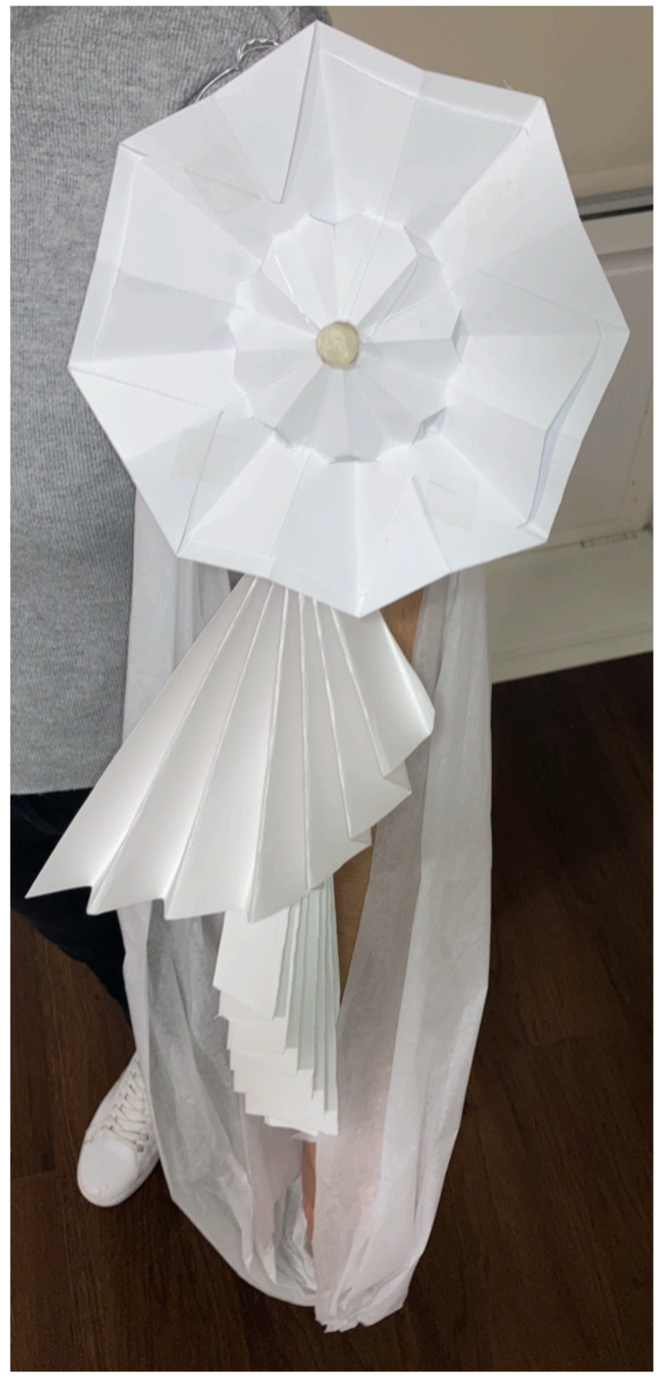
THE DESIGN FOR THE ARM VOLUME IS A THREE PIECE VOLUME.

THE FIRST PIECE IS AN OUTWARDLY INVERTED ORIGAMI UMBRELLA. THE INITAL IDEA WAS TO USE THE UMBRELLA AS A SHOULDER CONE BUT AFTER MAKING IT WAS REALISED THAT THE INSIDES LOOKED MORE INTERESTING. THIS IS WHAT MOTIVATED A CHANGE IN DESIGN

THE SECOND PIECE IS A TWO PART PIECE CONSISTING OF AN ACCORDION PLEAT AND A WIDE-STACKED CASCADE THAT ADDS VOLUME.

THE THIRD PIECE ARE THE VICTORIAN STYLE FLARES THAT PERFORM THE ROLE OF UNIFYING THE ENTIRE VOLUME INTO A SINGLE SLEEVE.





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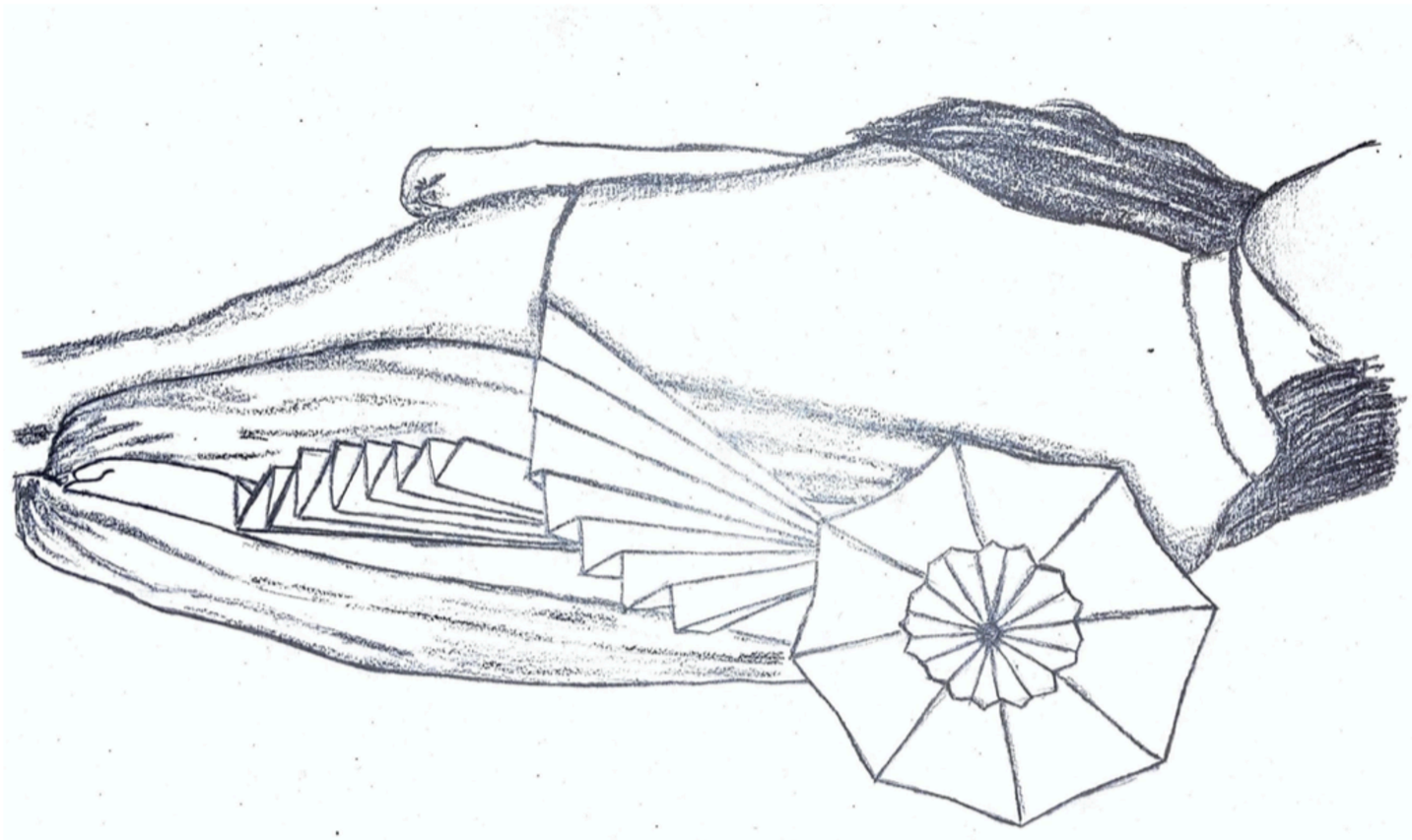
THE VOLUME IN MOTION

THE DESIGN THROUGH MY EYES



FULL BODY VOLUME

THE DESIGN

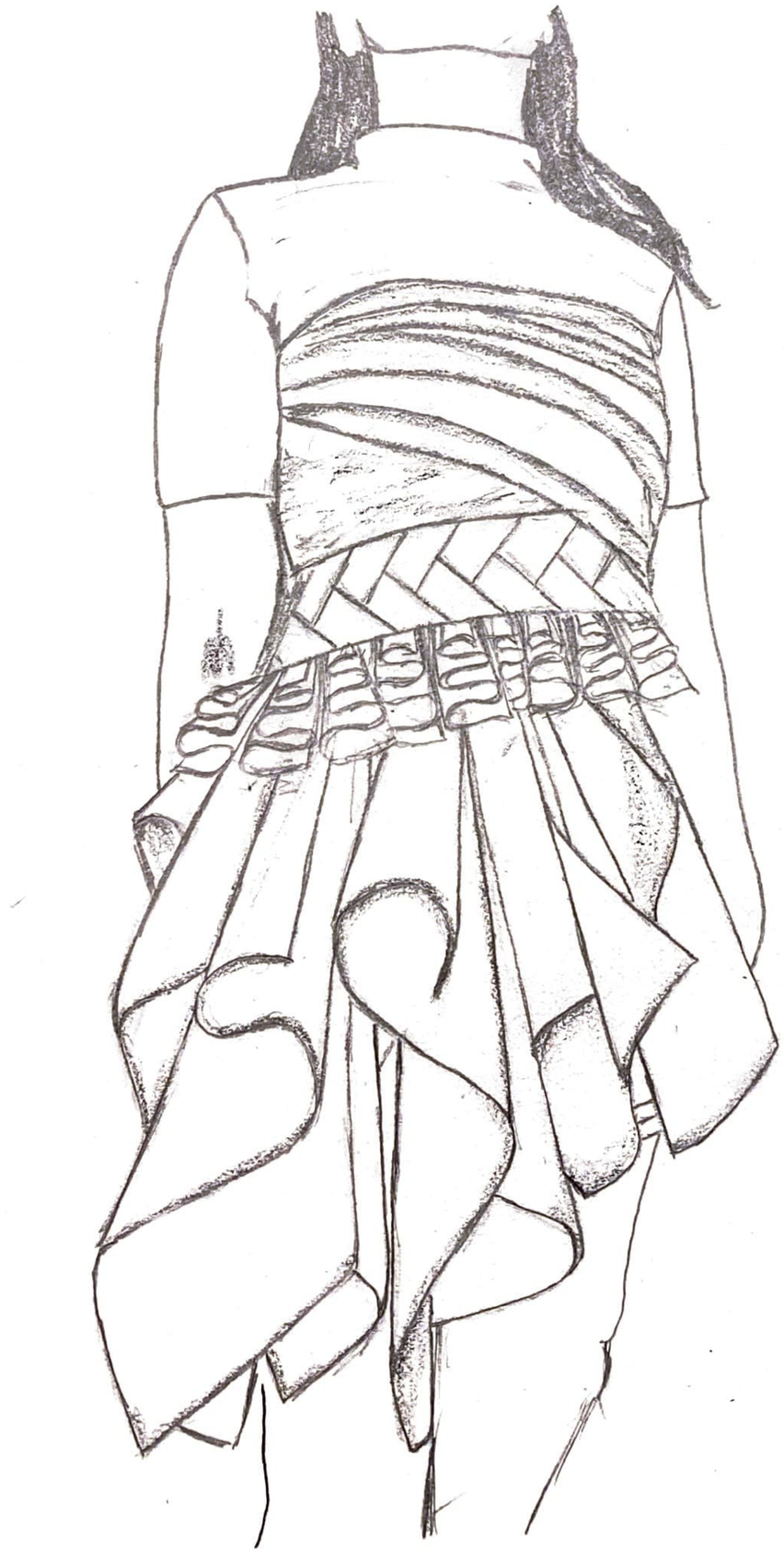
THE DESIGN IS FORMULATED FROM 4 MAIN PARTS

STARTING FROM THE TOP, THE FIRST PART IS THE RADIATING PLEATED BUSTIER THAT COVERS THE MOST PART OF THE CHEST.

THE SECOND PART IS A BRAIDED BELT THAT SEPARATES THE BUSTIER FROM THE VOLUMINOUS SKIRT.

THE THIRD PART IS THE SMALL CASCADES THAT PREPARE THE BEGINNING OF THE VOLUMINOUS SKIRT.

THE FOURTH AND FINAL PART IS THE LARGE CASCADES THAT ARE THE MOST PROMINANT PART OF THIS VOLUME.



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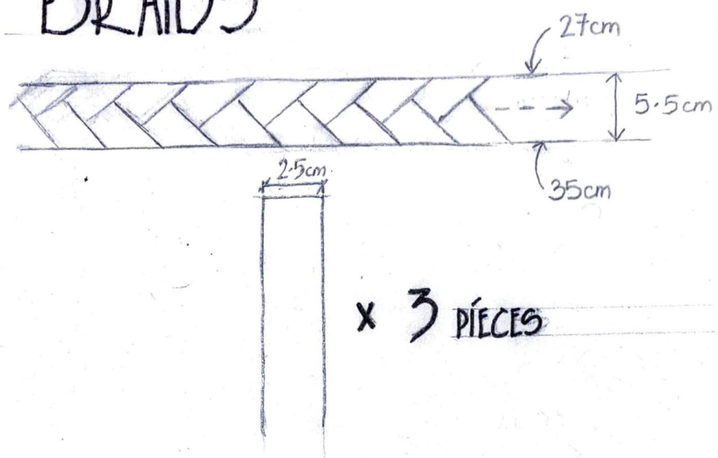
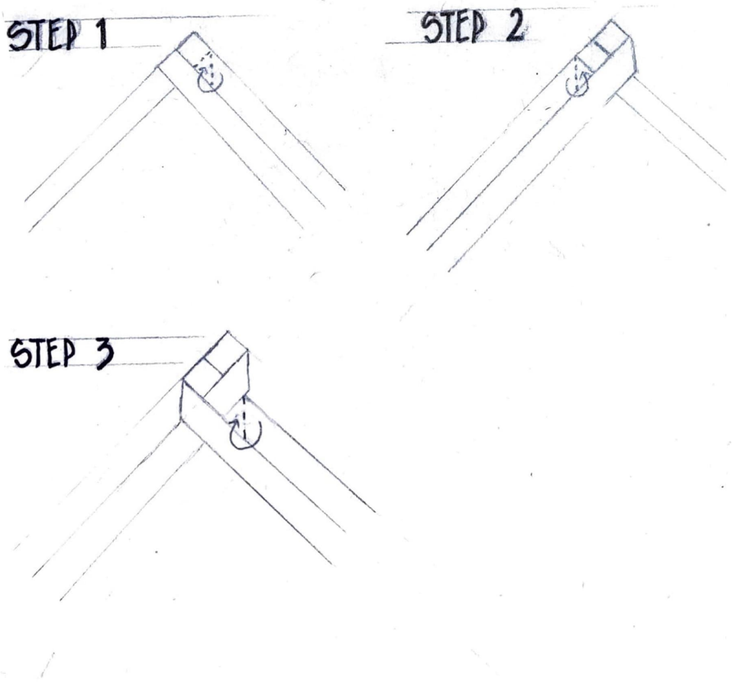
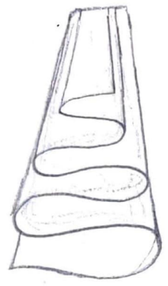
MASTERPLAN

BRAIDS

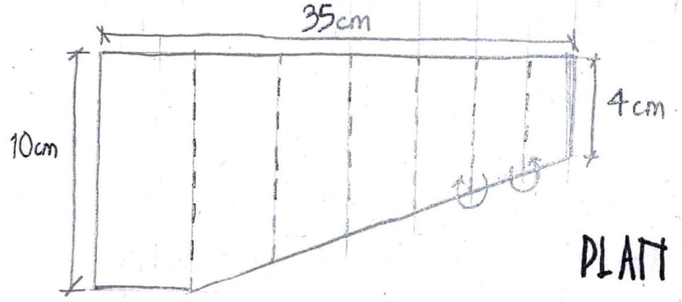




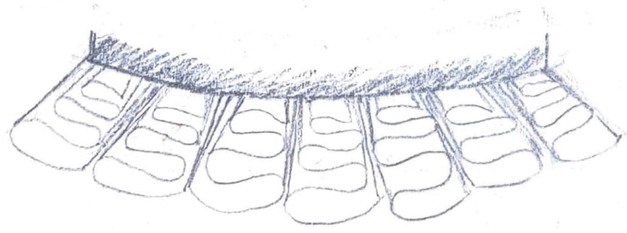
SMALL CASCADES



INDIVIDUAL PIECE

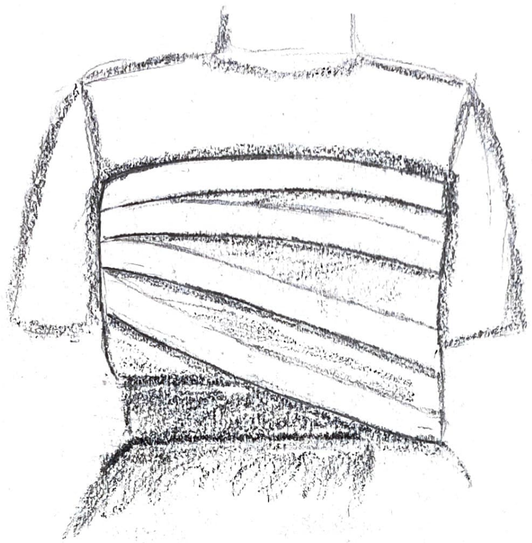


PLAN

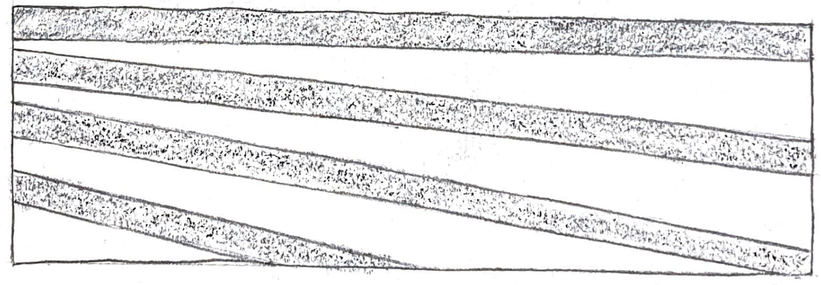


FRONT VIEW

RADIATING PLEATED BUSTIER



FRONT VIEW



PLAN

LARGE CASCADES IN A 3:1 RATIO WITH THE SMALL CASCADES

FINAL LOOK

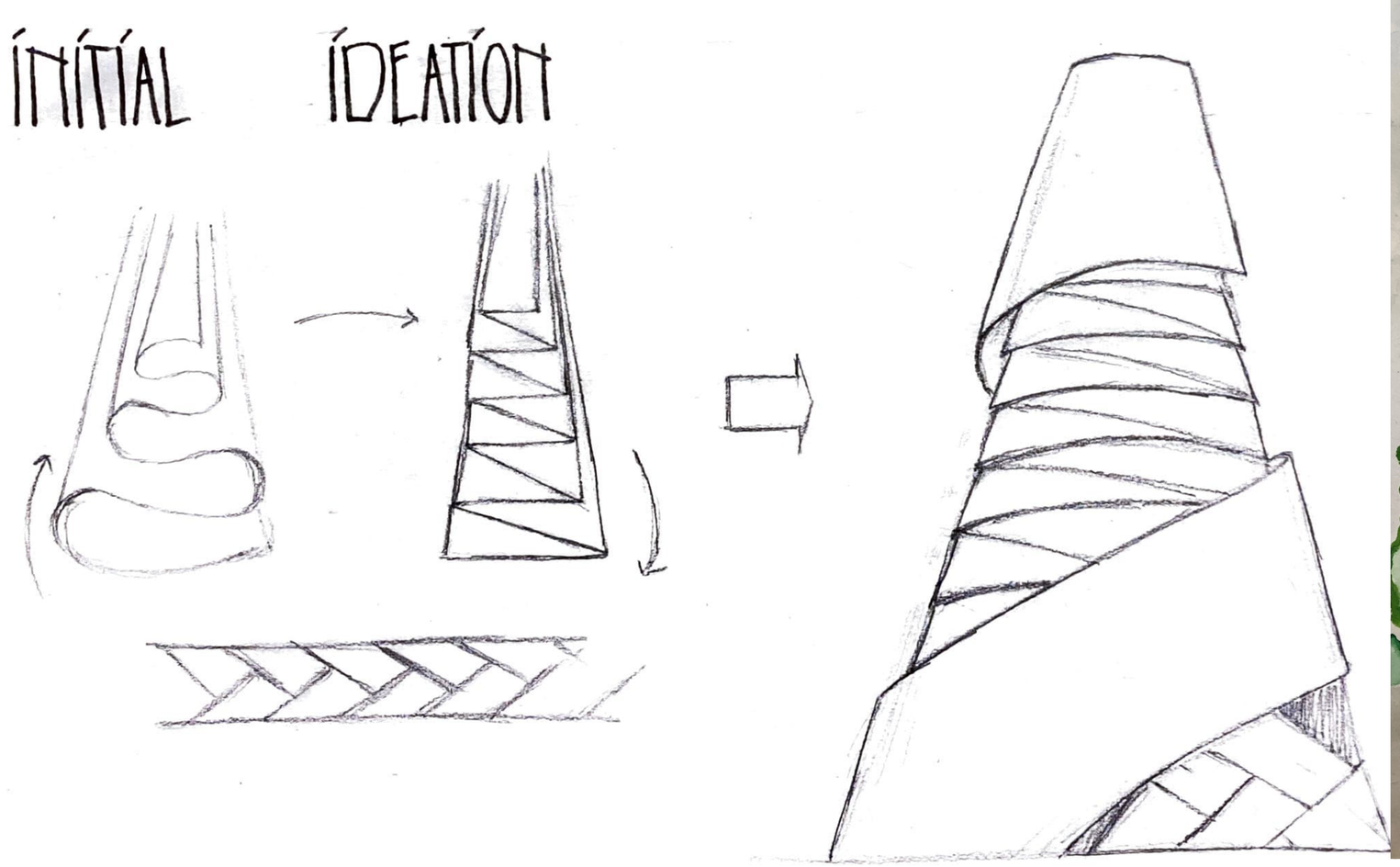




ARCHITECTURAL INSPIRATION

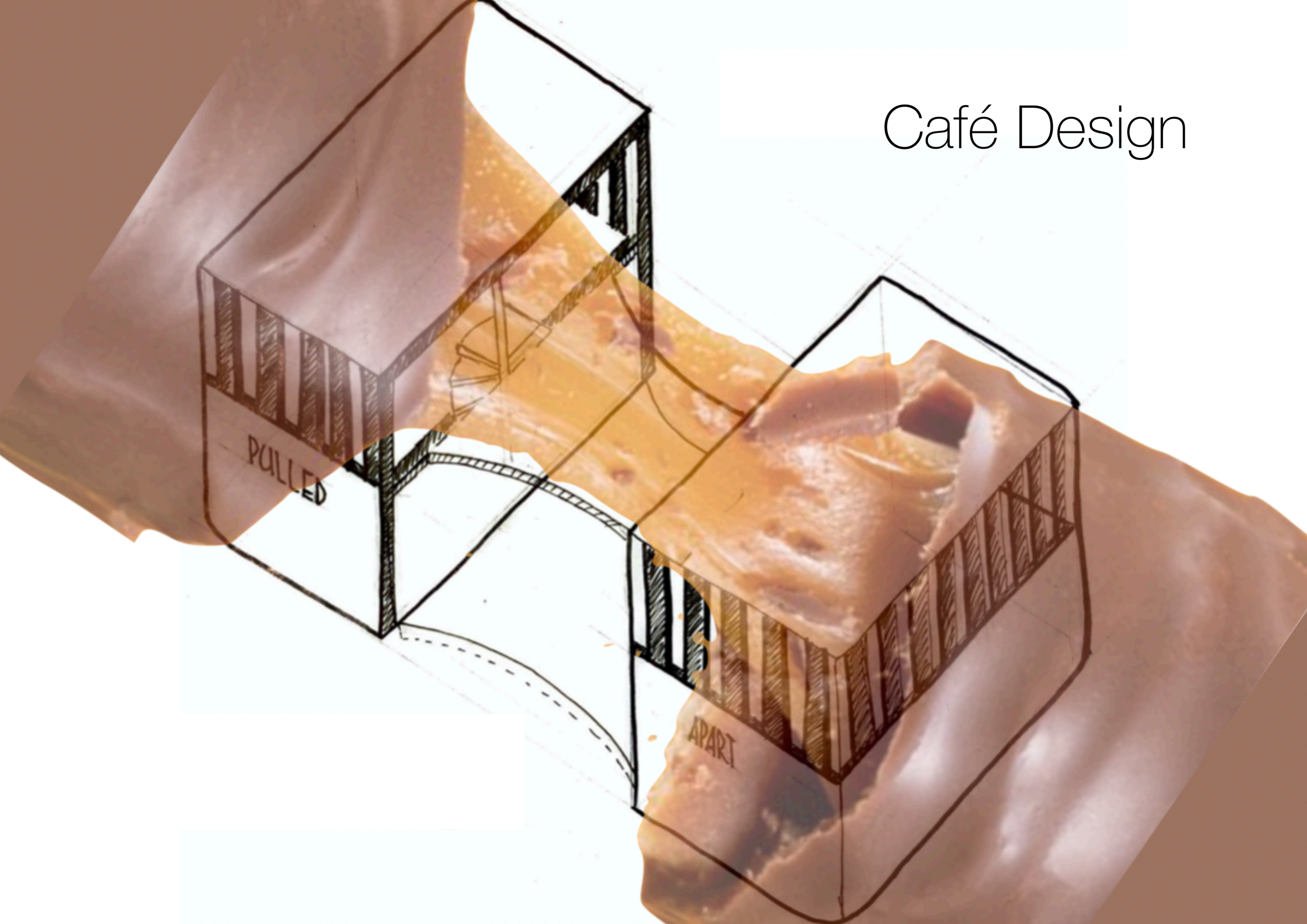
THE STRUCTURE

THE STRUCTURE IS A CONCEPT FOR A COMMERCIAL TOWER OR OFFICE BUILDING INSPIRED FROM THE THREE COUTURE ELEMENTS ILLUSTRATED.





Café Design



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Rendered SketchUp Model Of the café 'Pulled Apart'

THE CONCEPT

PULLED APART IS A TWO-FLOORED, OPEN-AIRED CAFÉ WITH ITS STRUCTURE AND NAME INSPIRED FROM THE PULLING APART OF A TWIX CHOCOLATE BAR.

HEREON ARE THE TECHNICAL DRAWINGS OF THE CAFÉ AND A RENDERED 3D MODEL.

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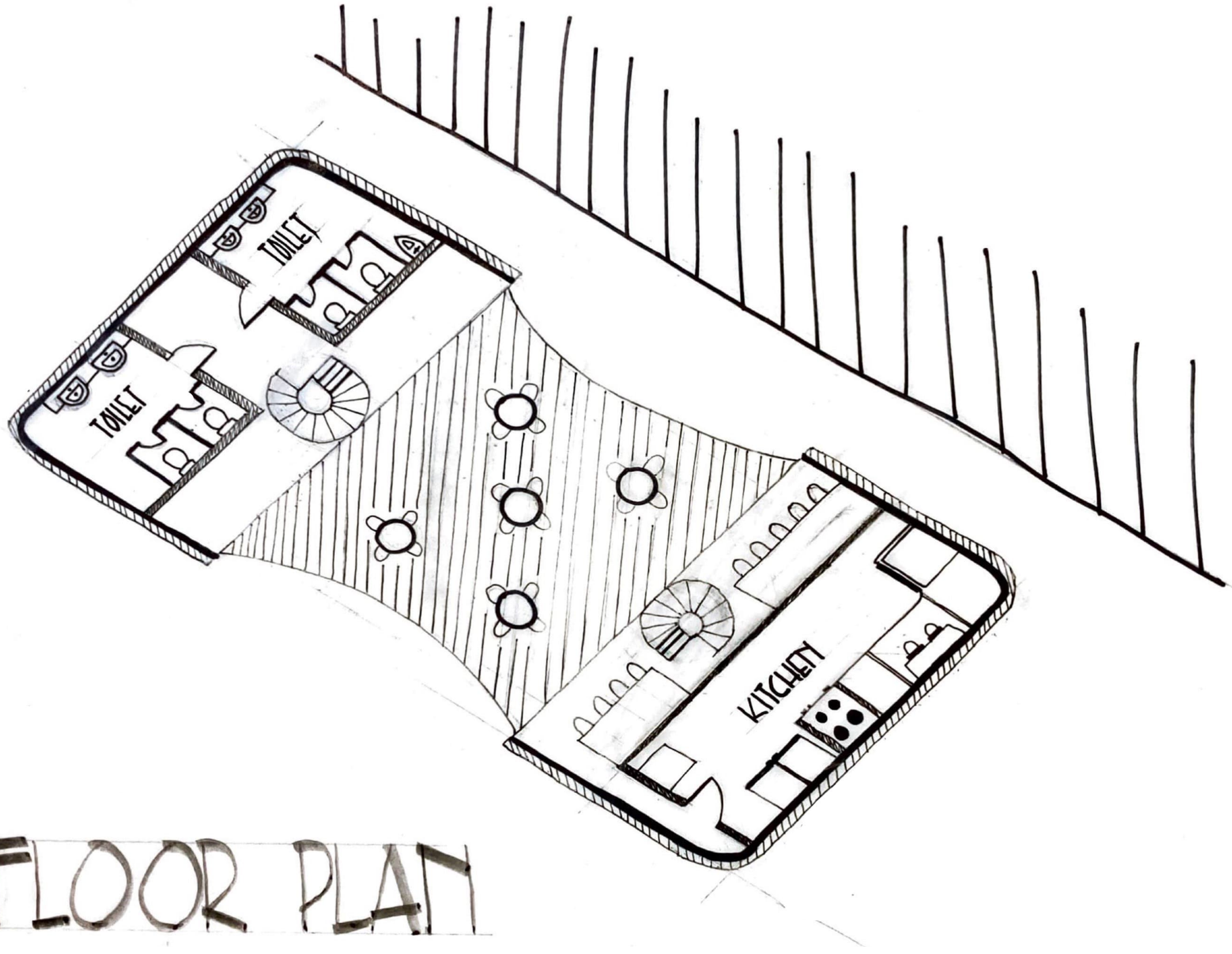

FLOOR PLAN

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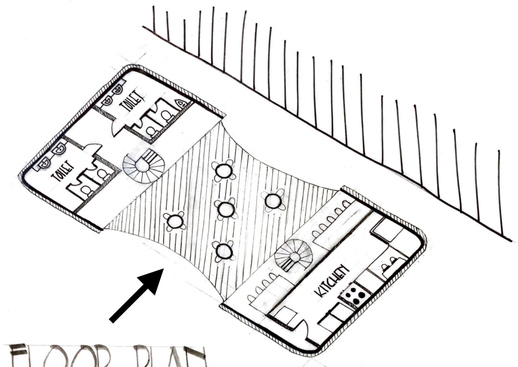
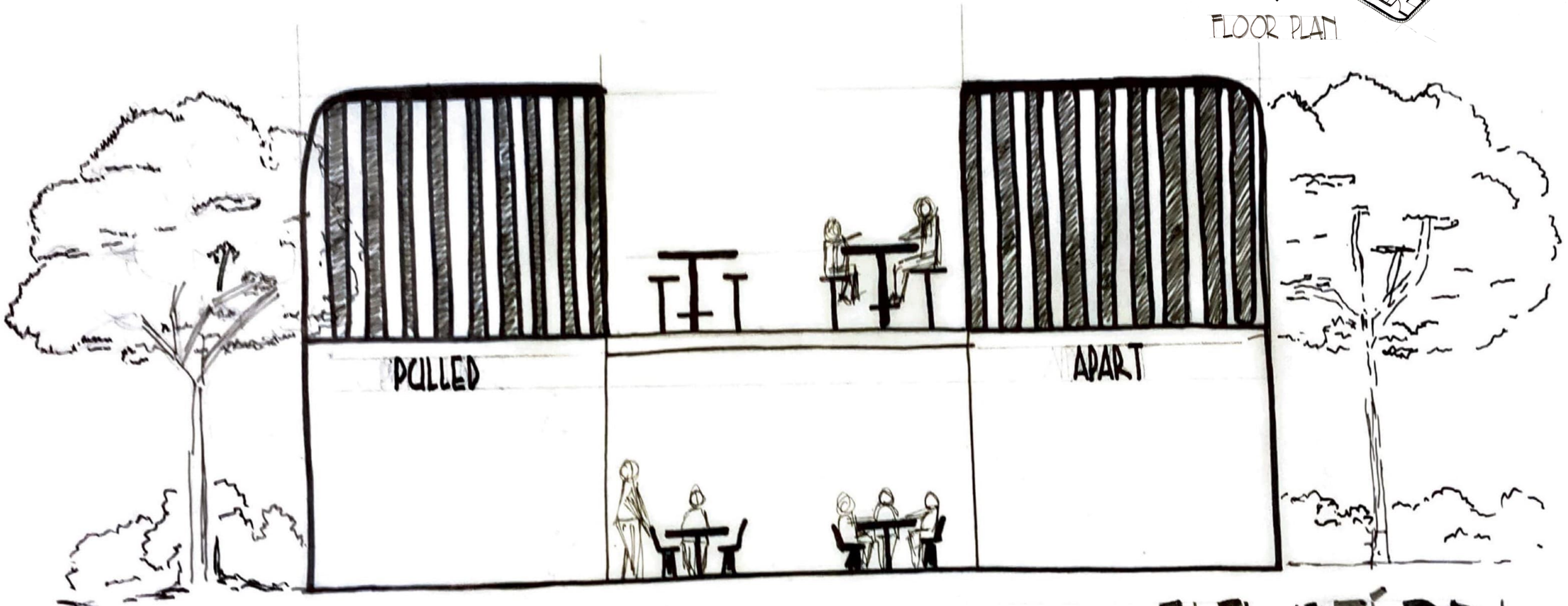


FLOOR PLAN



ELEVATION

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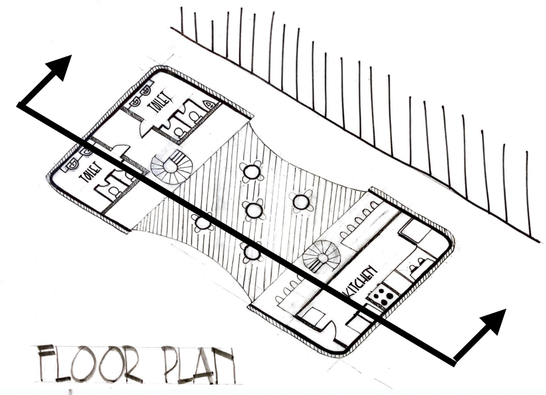

FLOOR PLAN

SECTION

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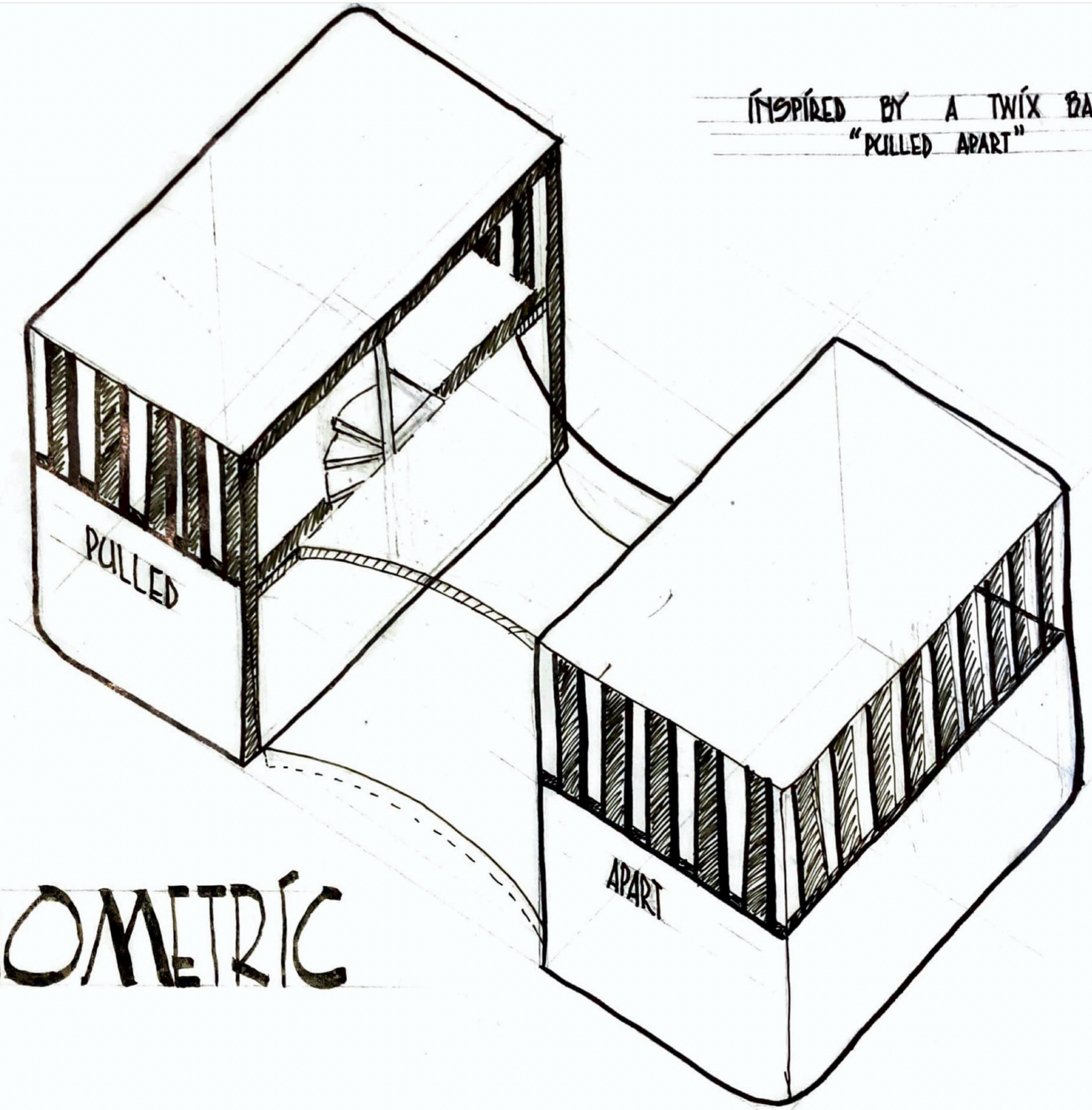
INSPIRED BY A TWIX BAR
"PULLED APART"



AXONOMETRIC

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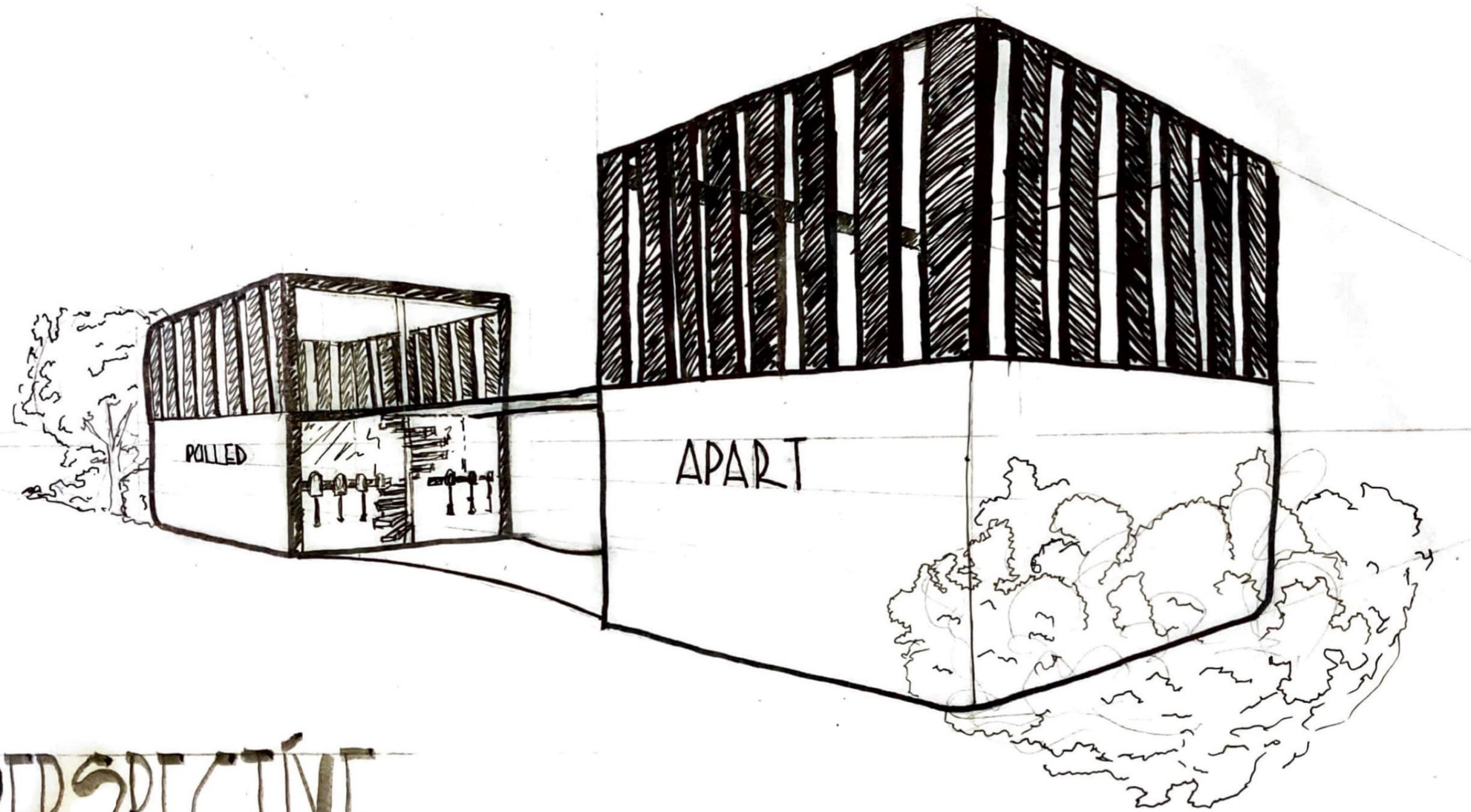

PERSPECTIVE

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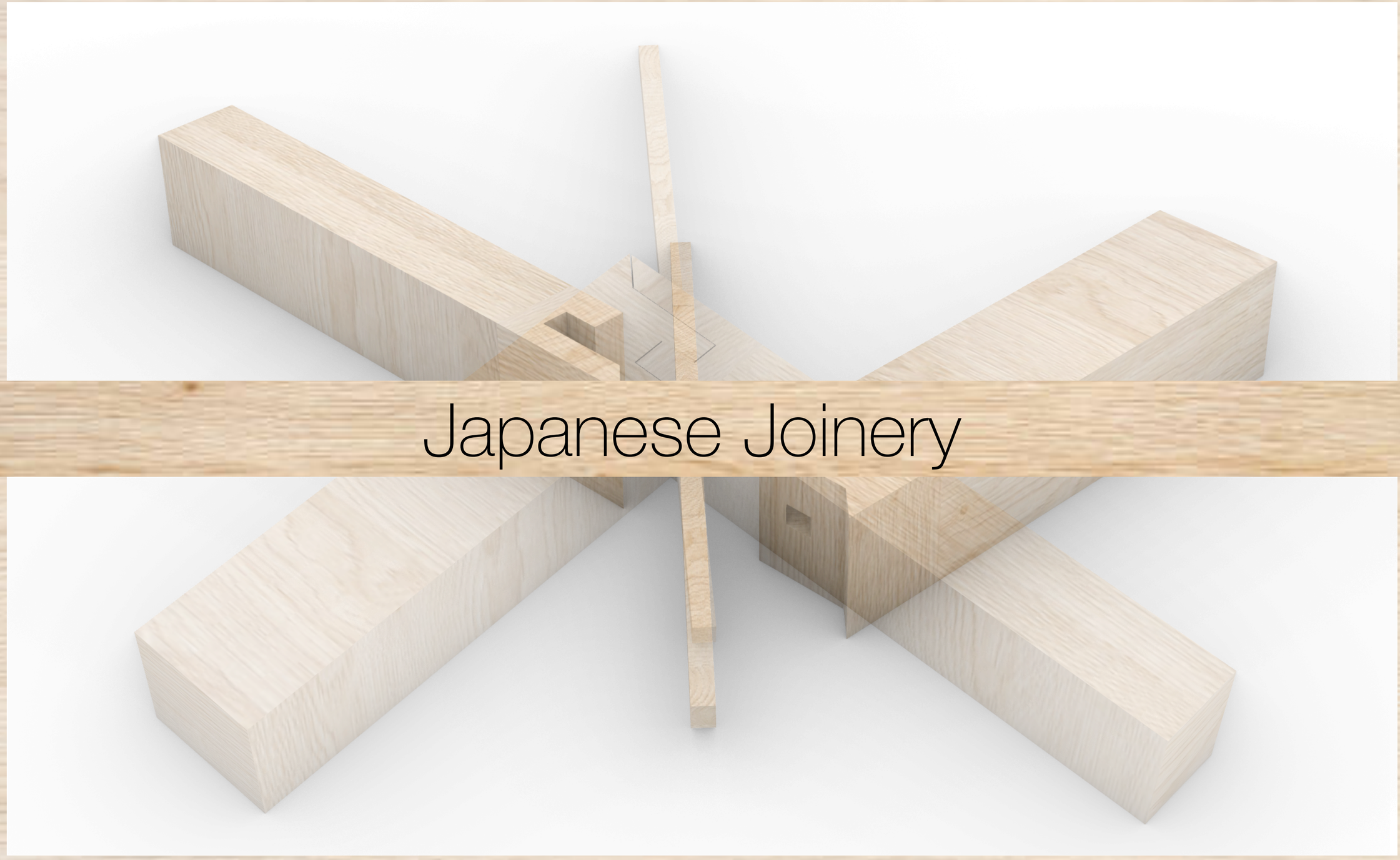
Rendered SketchUp Model Of the café 'Pulled Apart'

Japanese Joinery



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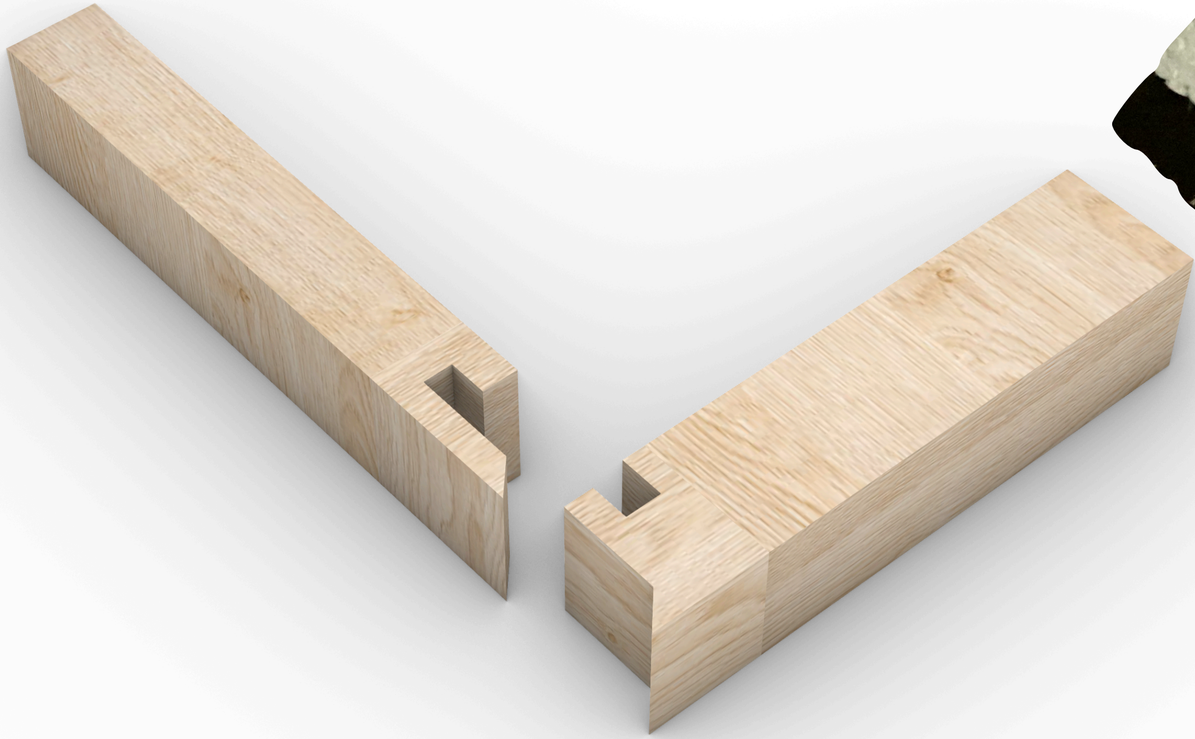
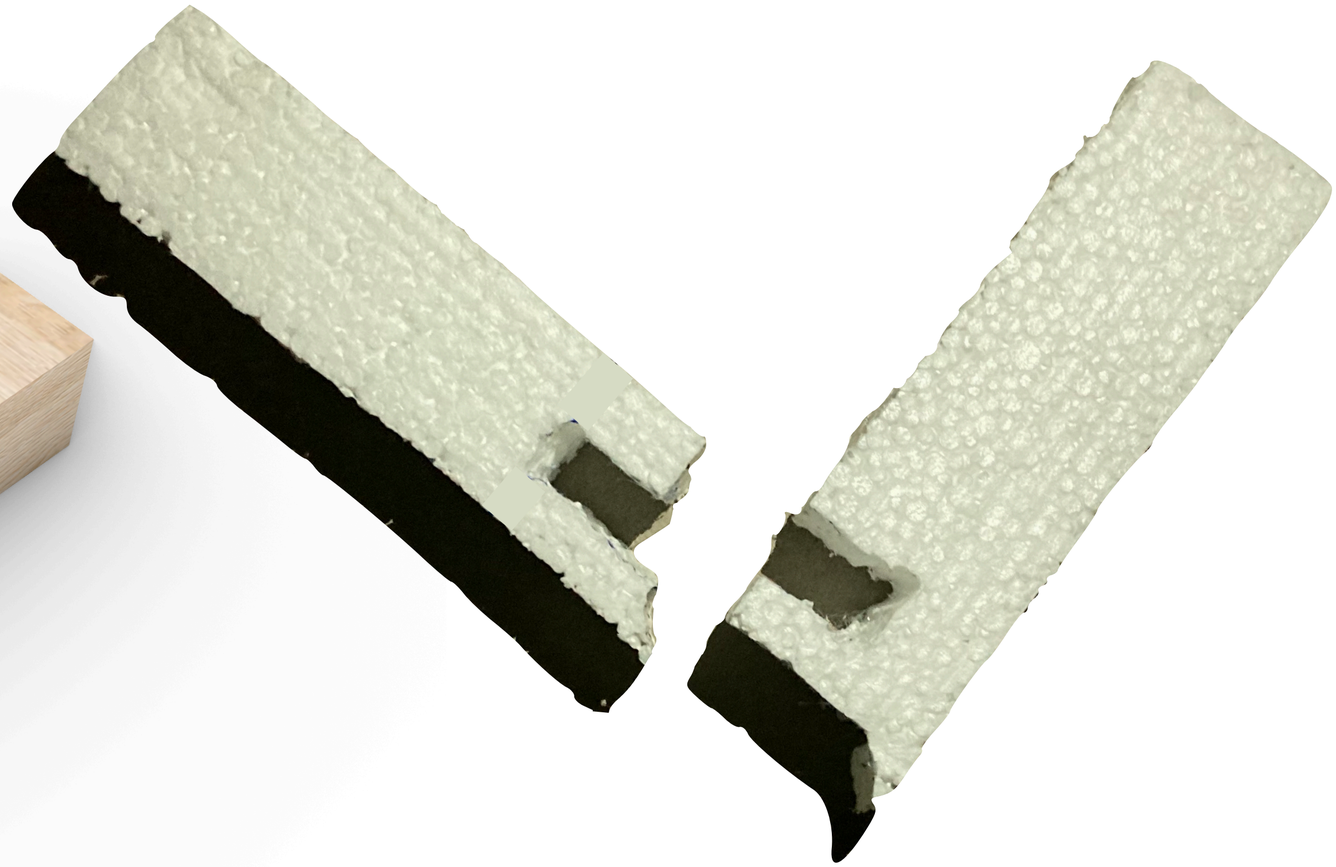
RABETTED TENONED MITER JOINT



Rendered Rhino Model of chosen joint



Real Physical Model of chosen joint

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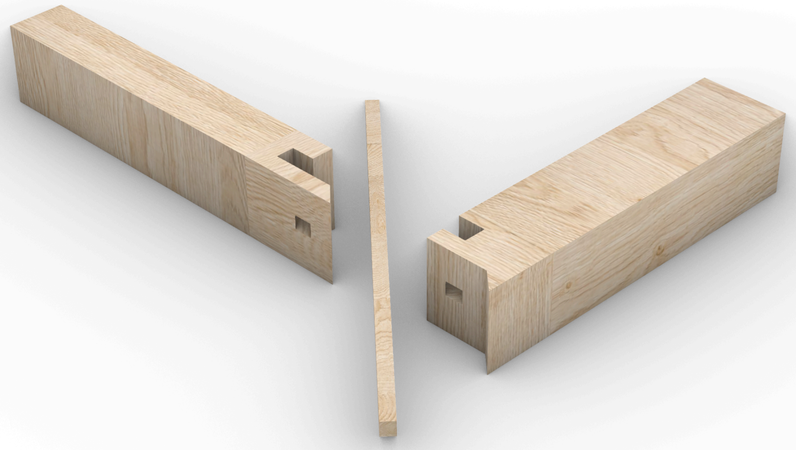
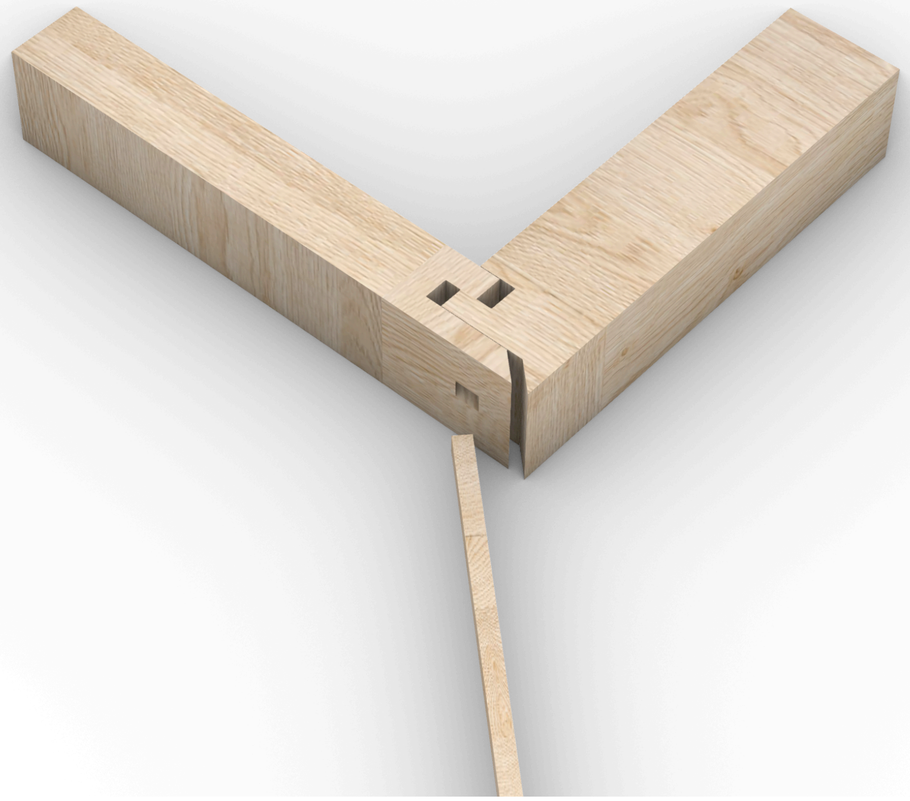
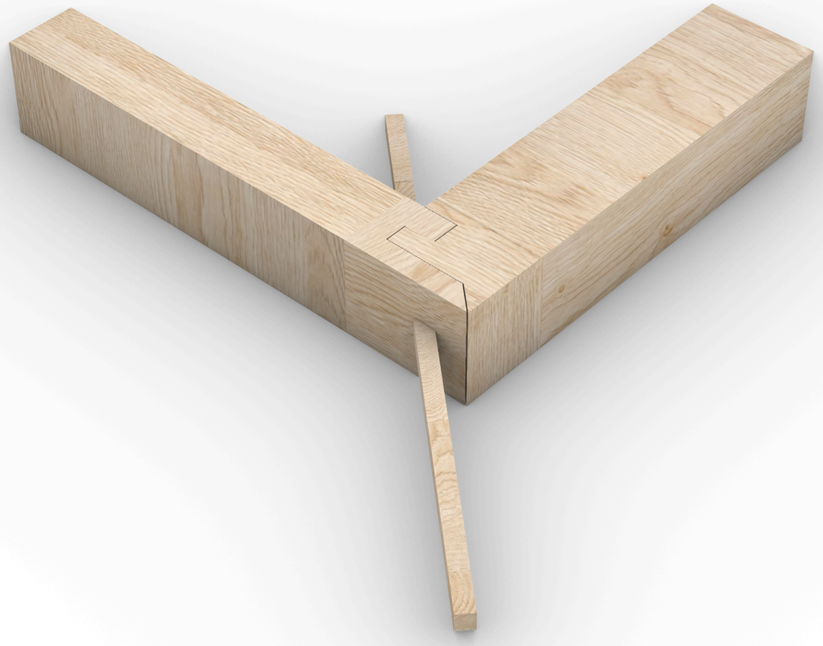
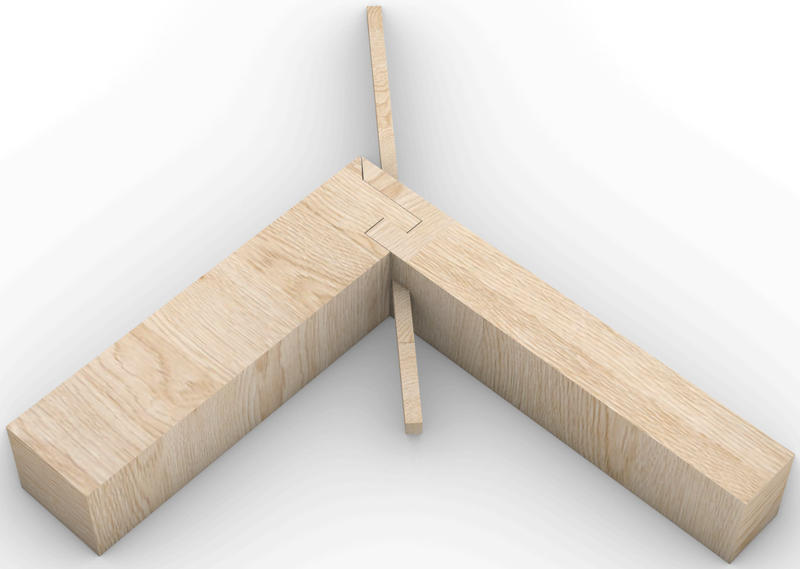
MODIFIED JOINT









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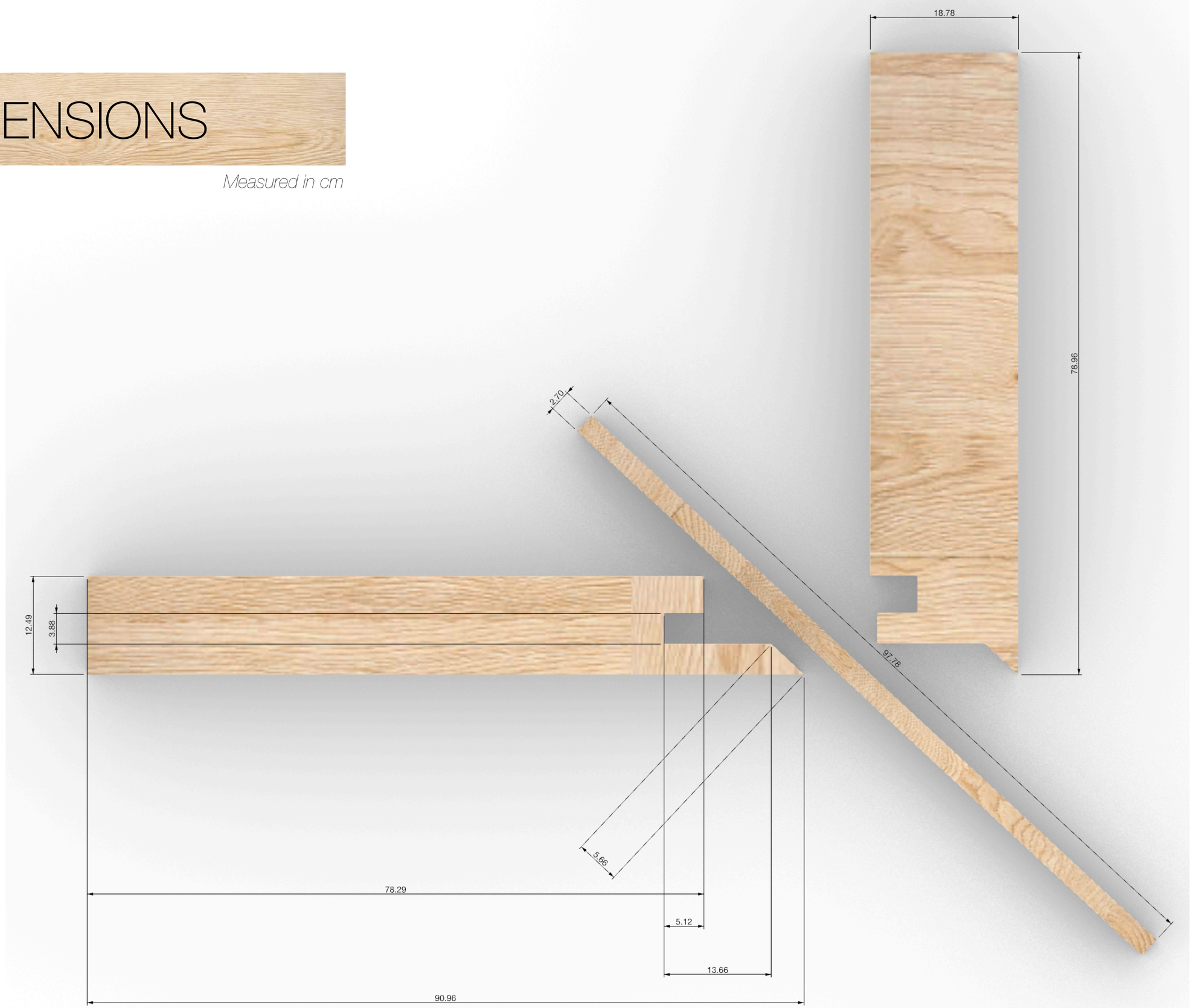
DIMENSIONS

Measured in cm



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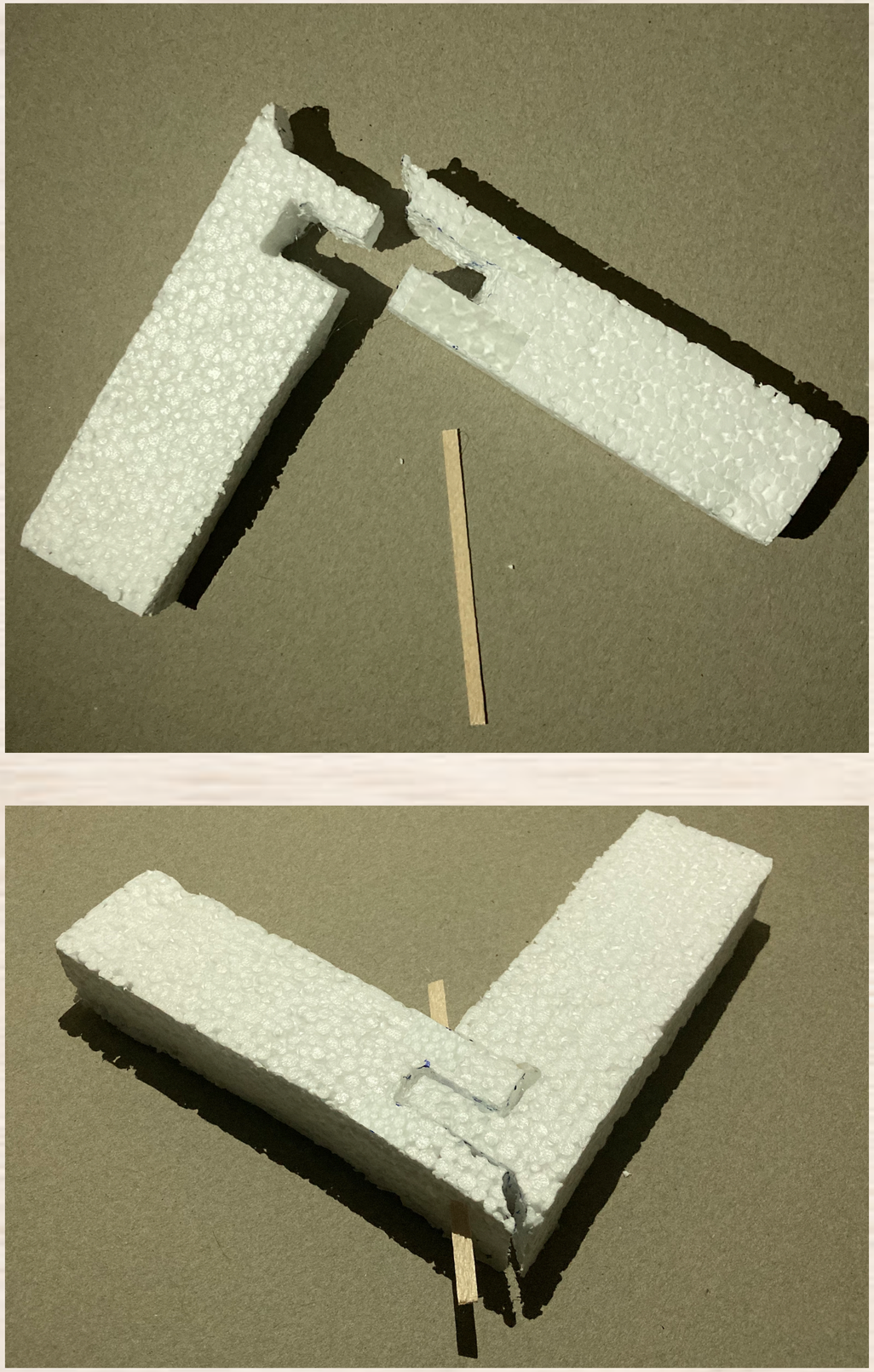

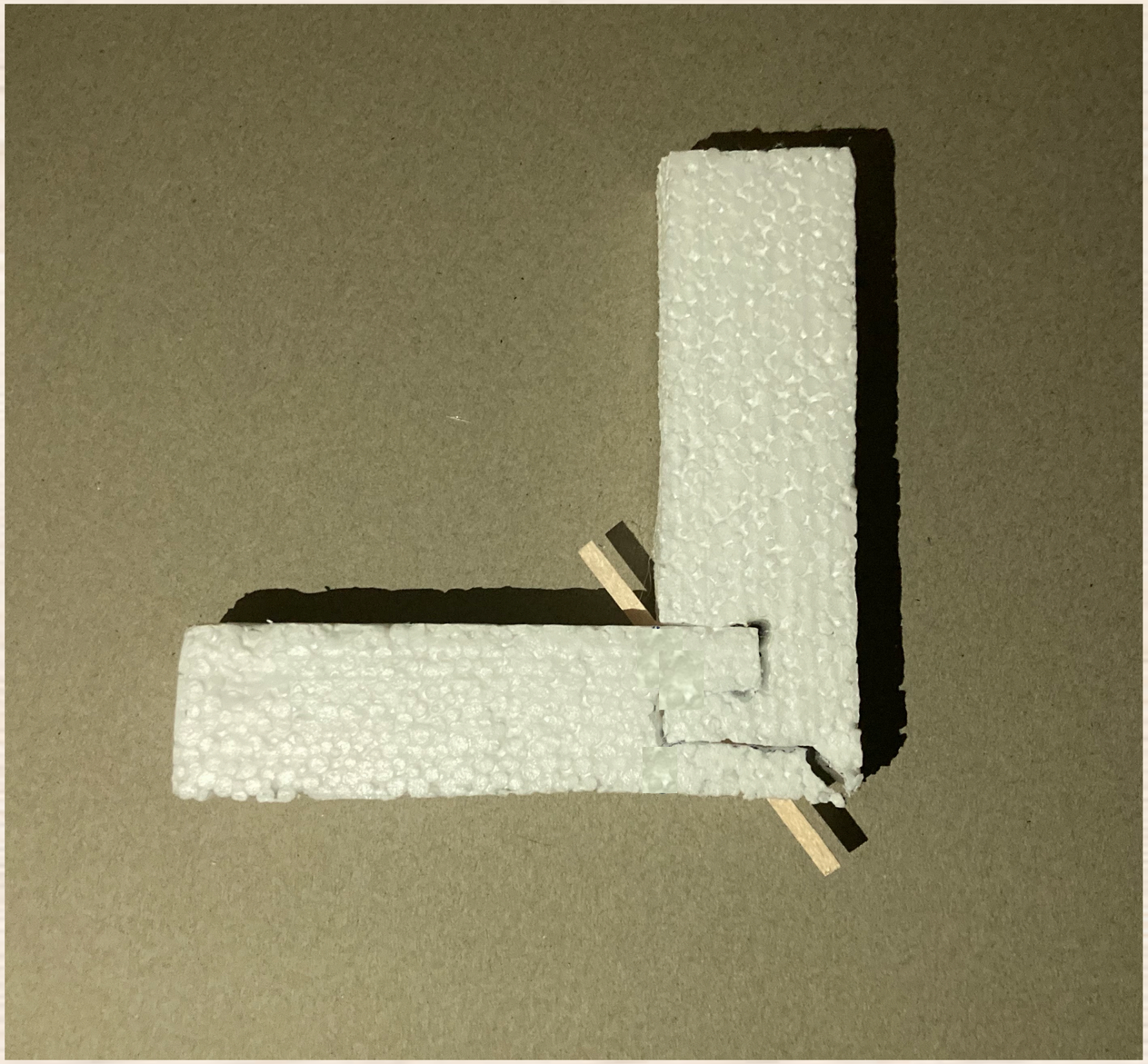

Real Physical Model of Modified Joint

Photogrammetry

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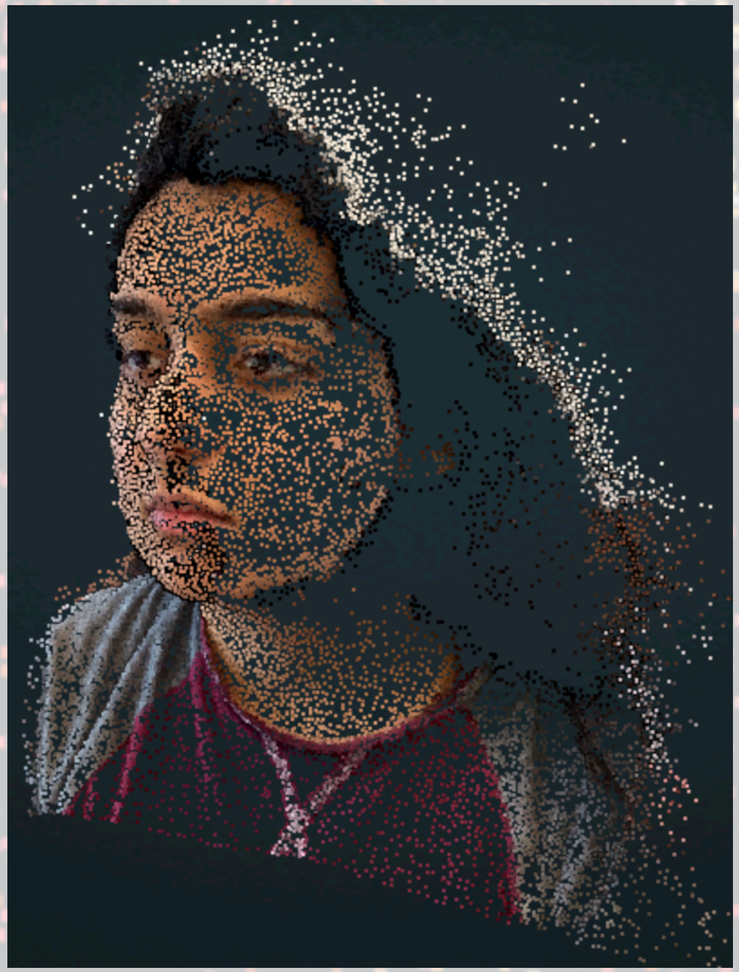
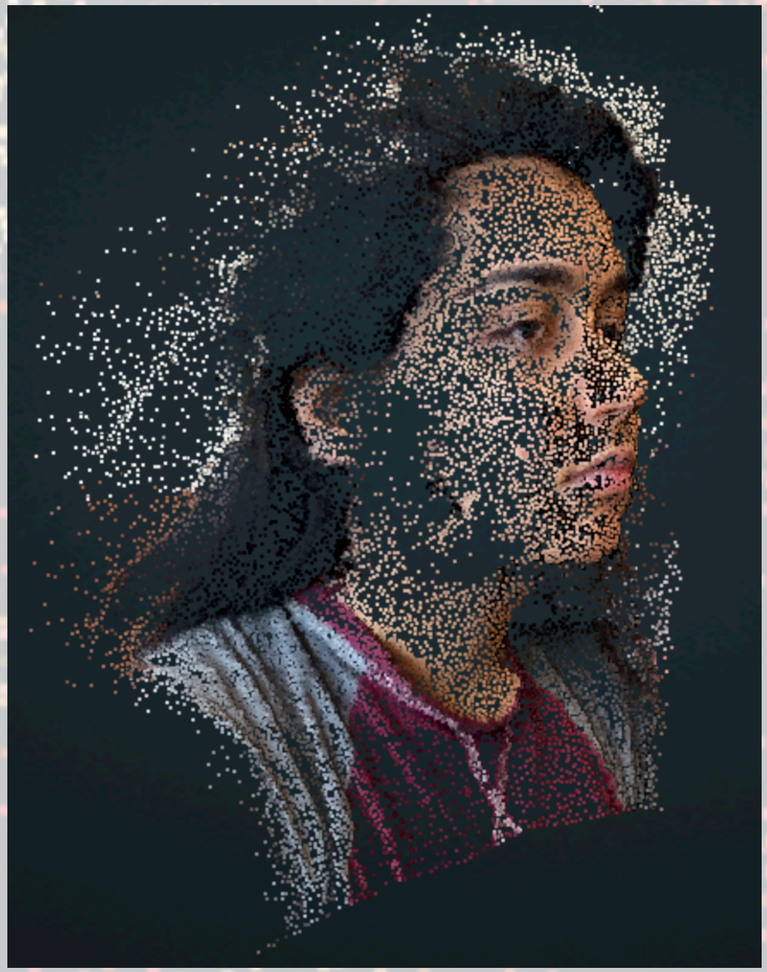
SELF PORTRAIT







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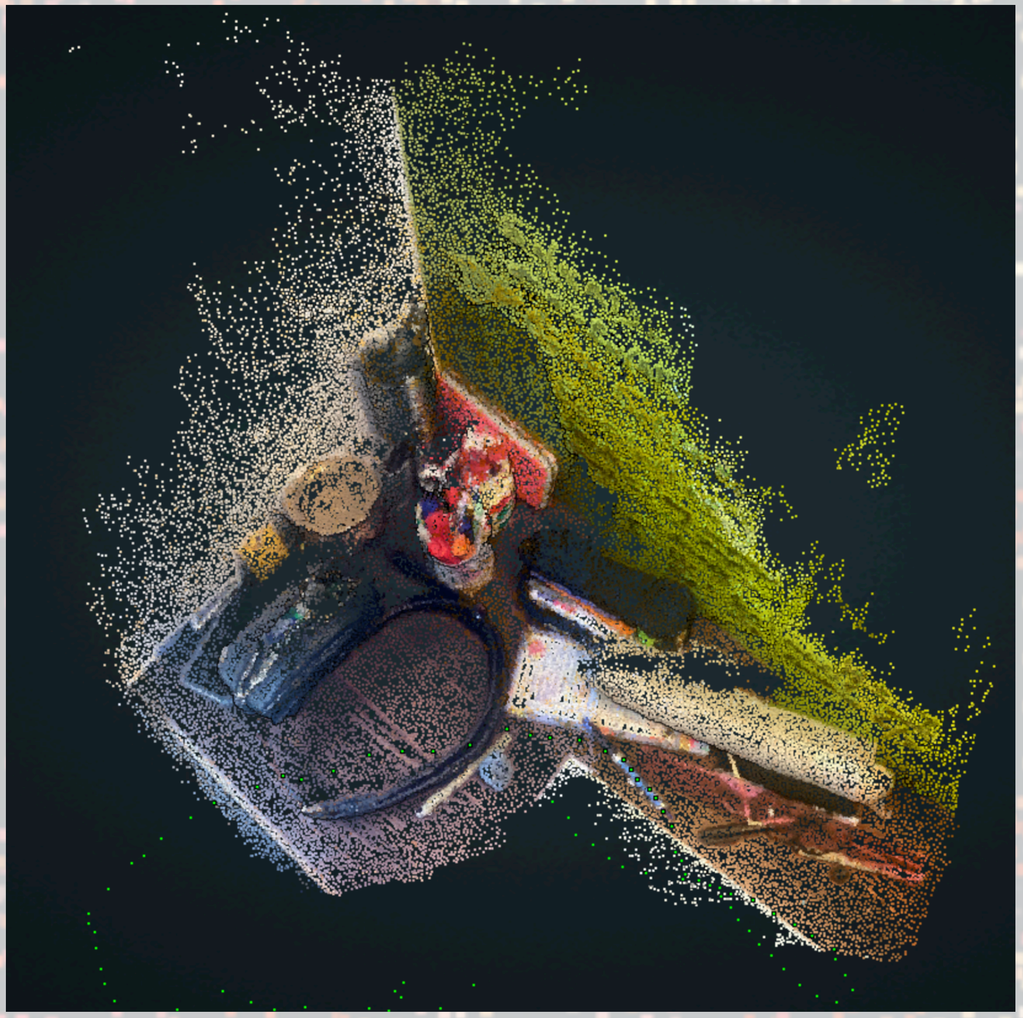
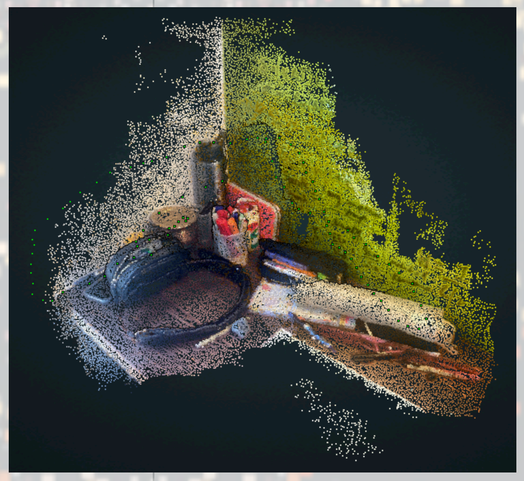
TOP OF A DESK







GIRL ON THE DESK



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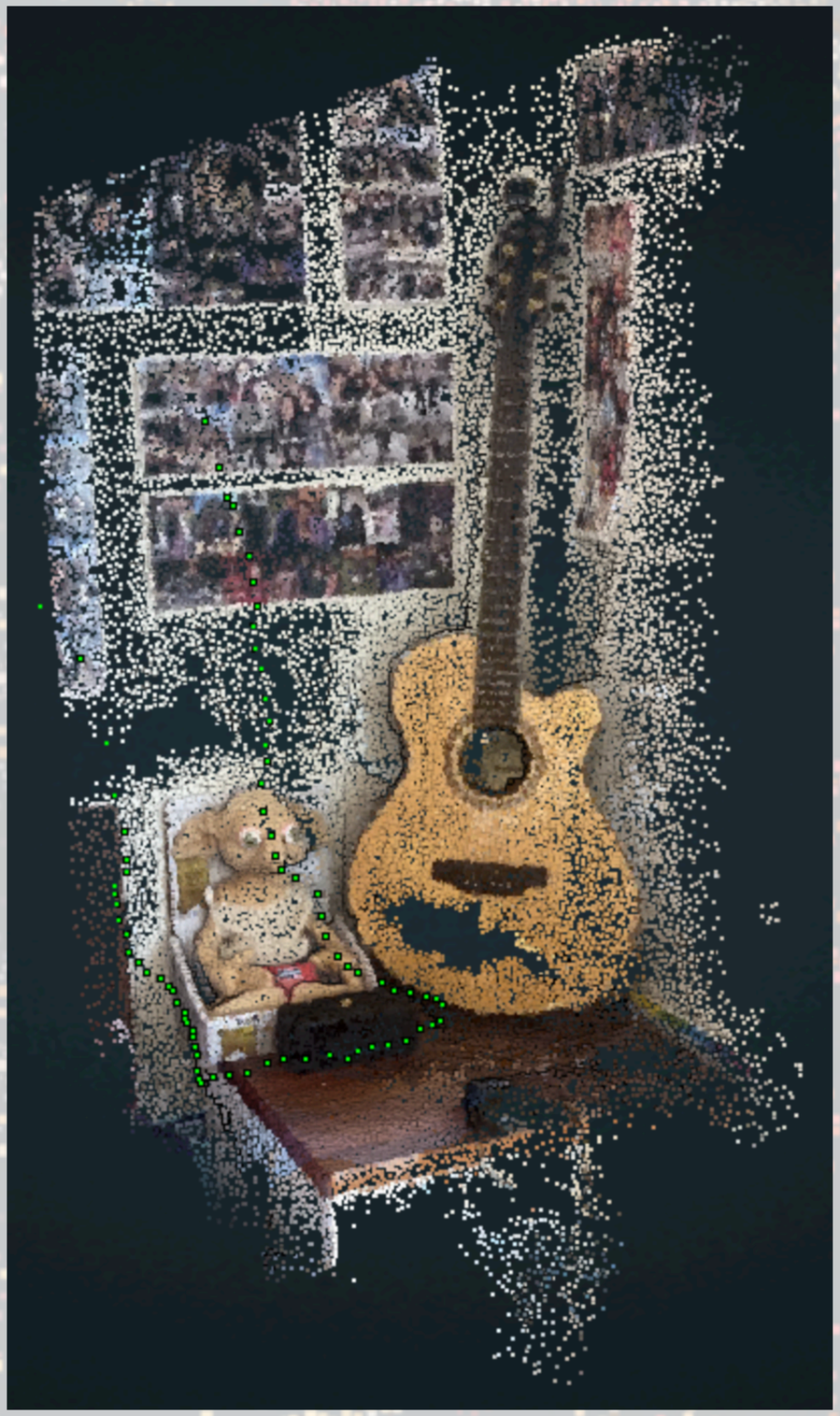
SIDE TABLE AND ADJACENT WALLS





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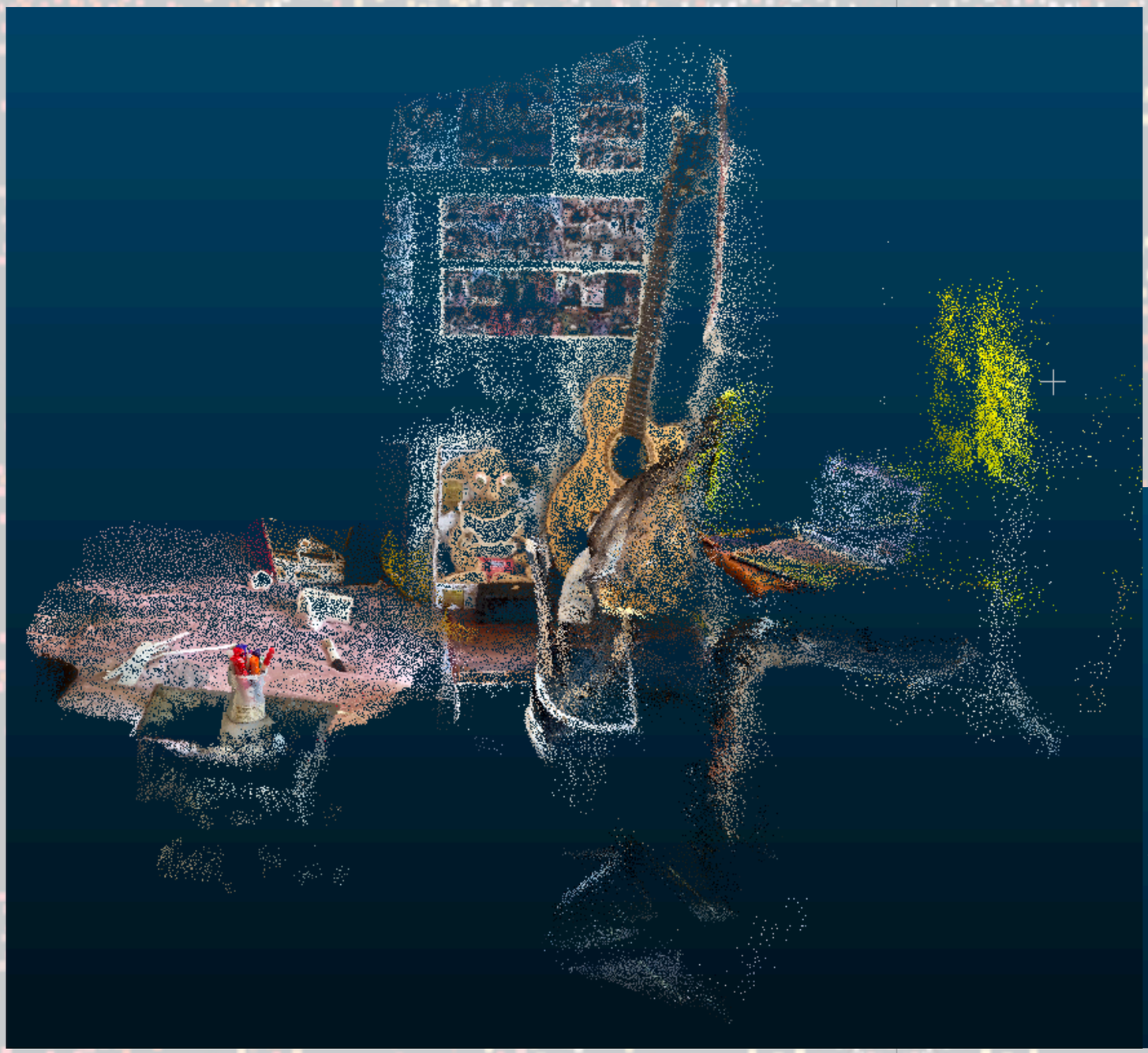
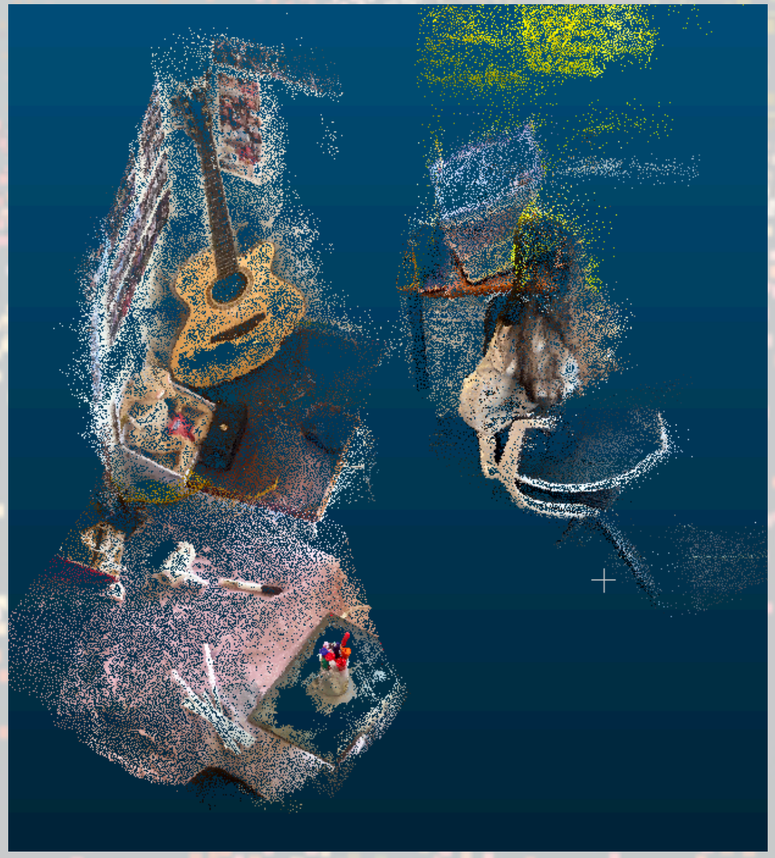
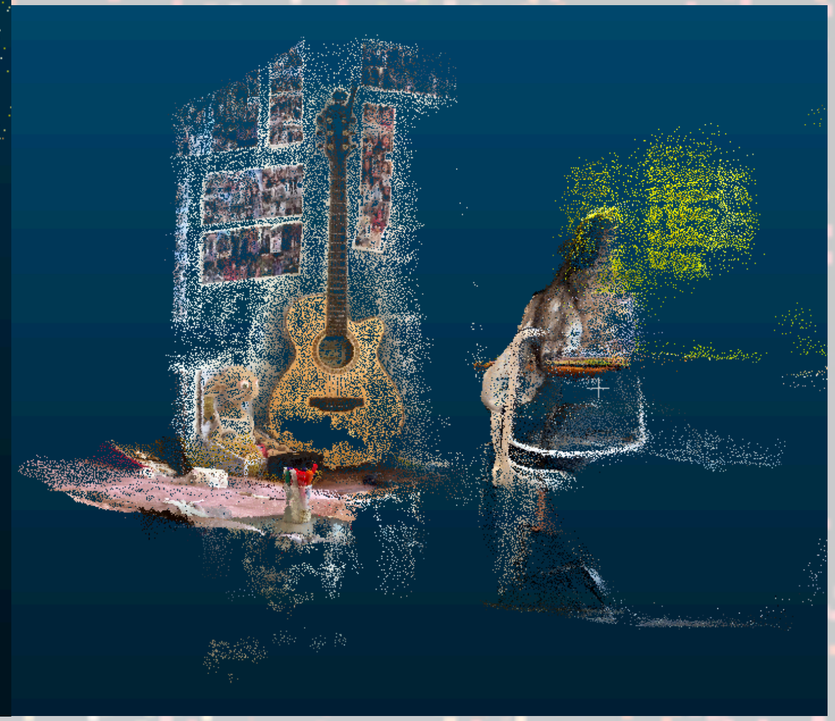
SUPERPOSITIONING DISTINCT SCANS







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The Anaconda Dribble

CONSTRUCTION DRAWINGS



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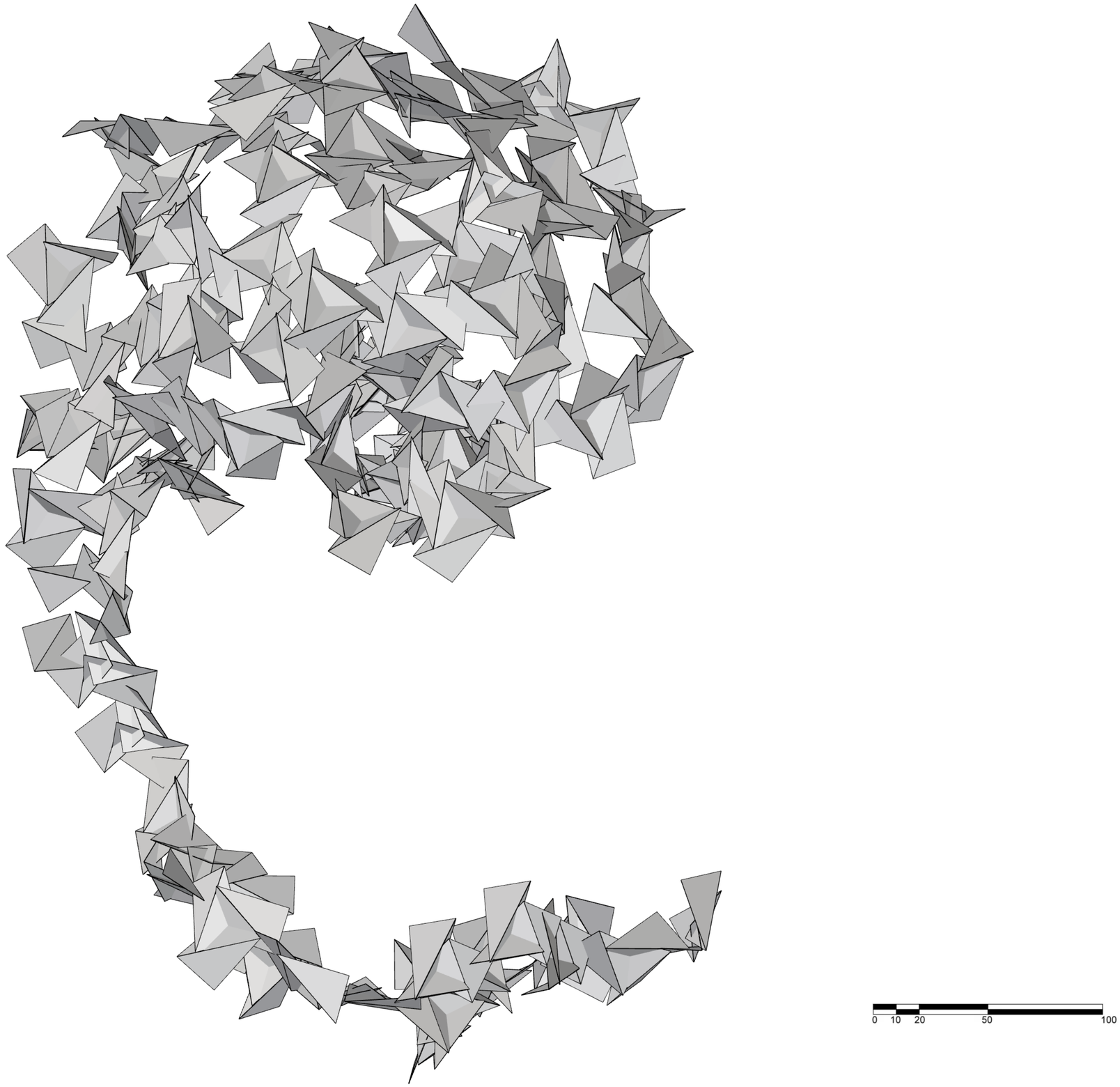
TOP VIEW



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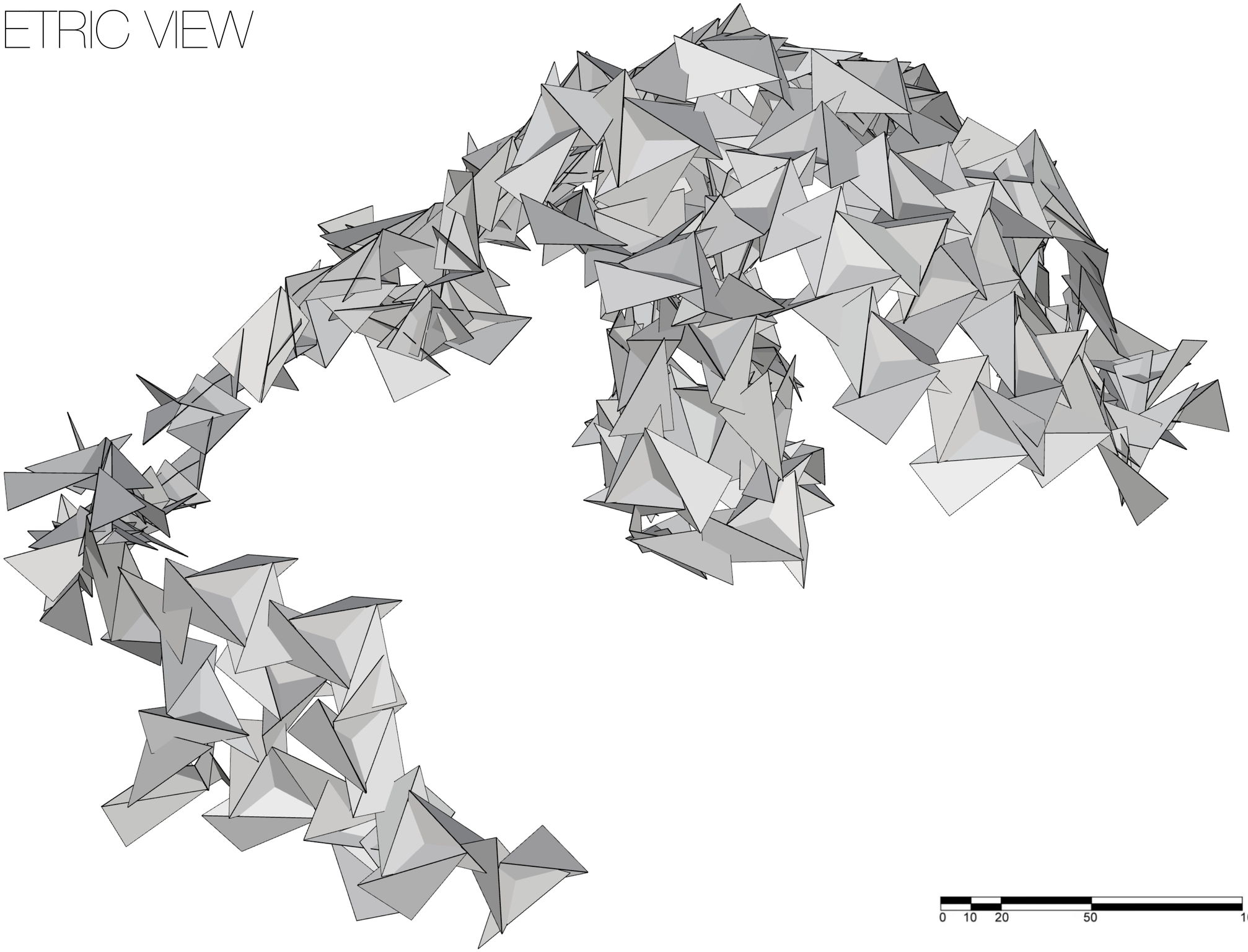
ISOMETRIC VIEW



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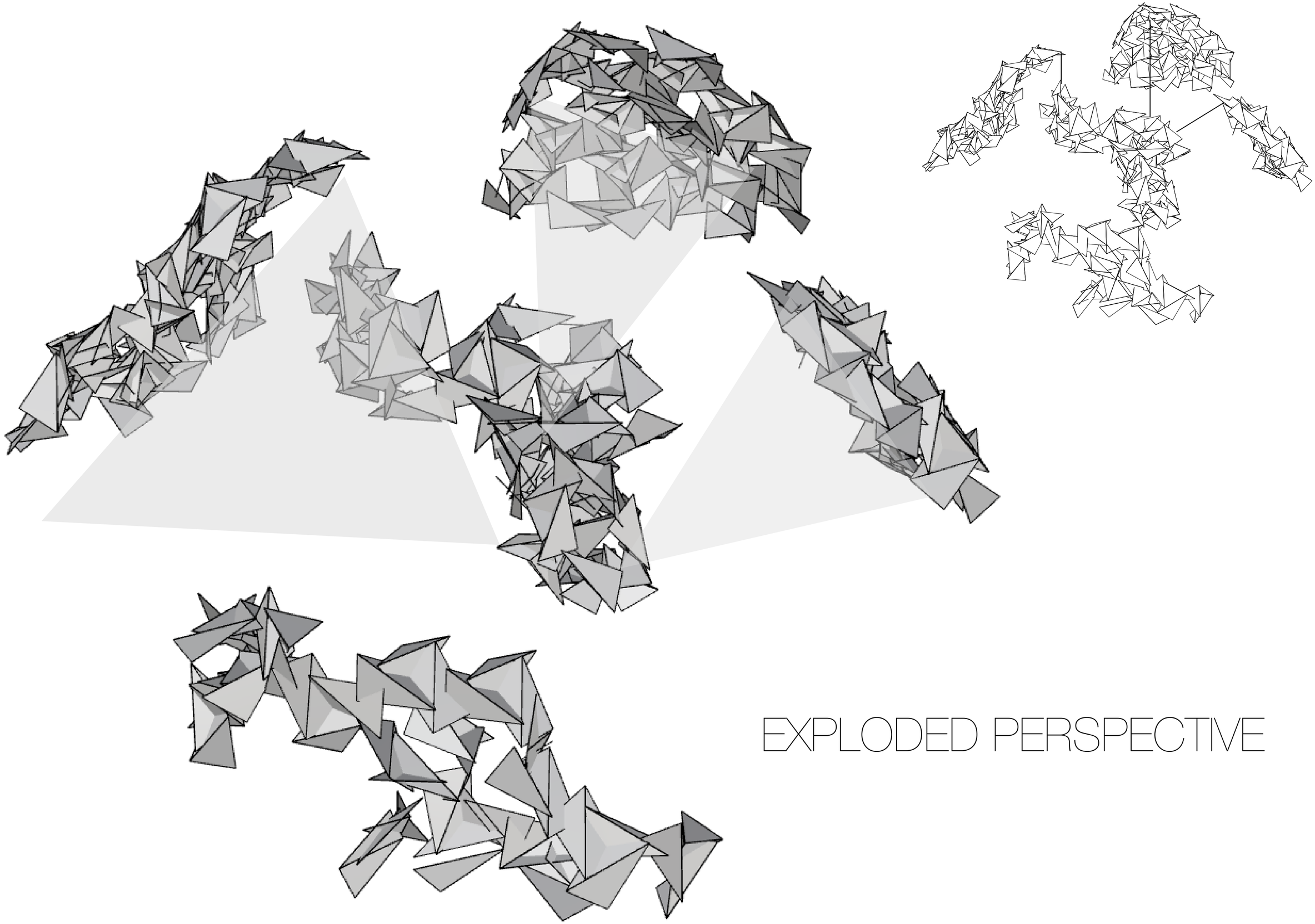

EXPLODED PERSPECTIVE

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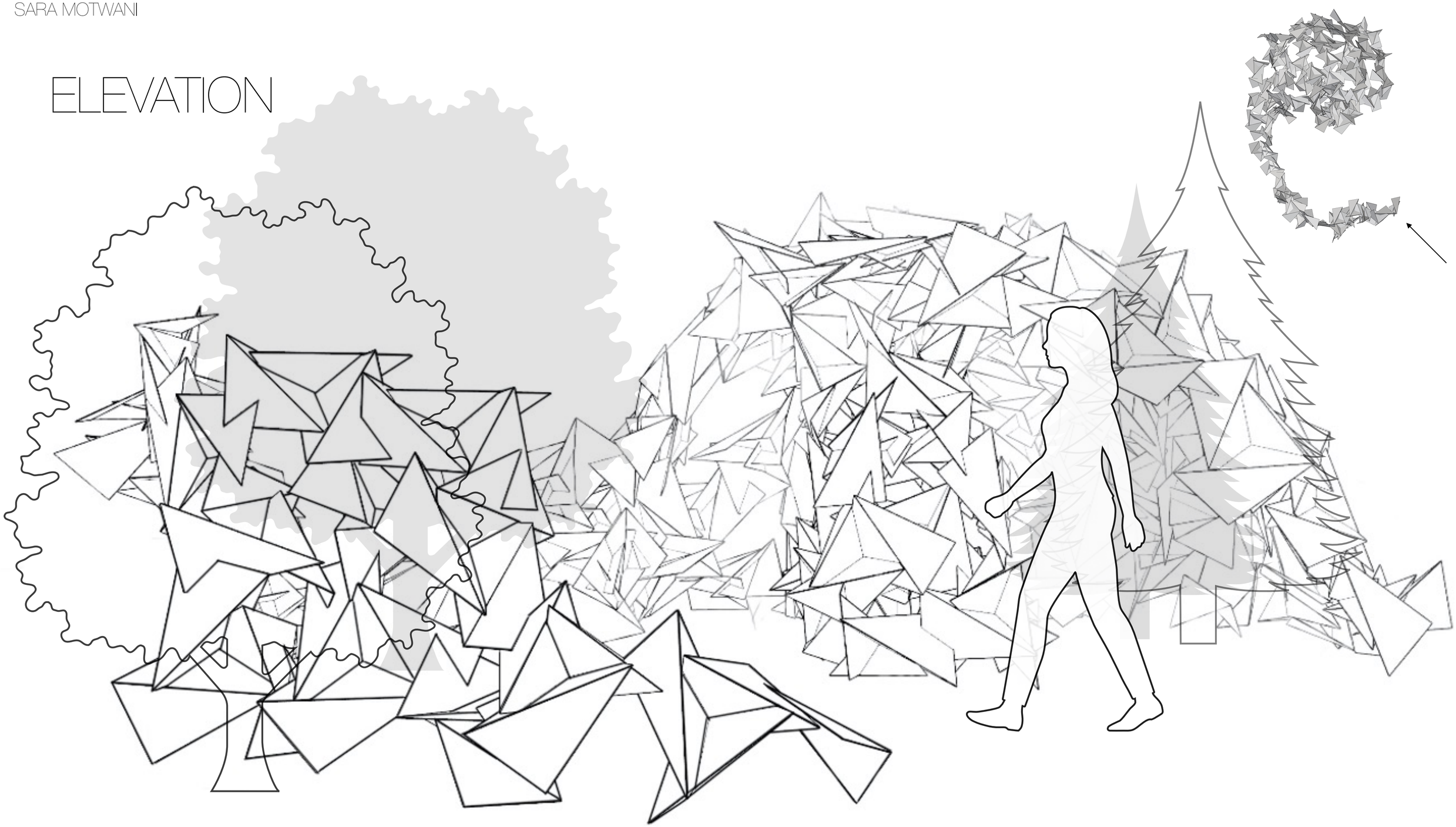
ELEVATION



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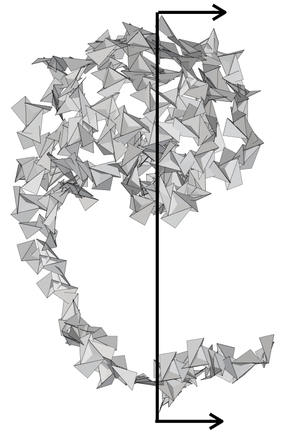
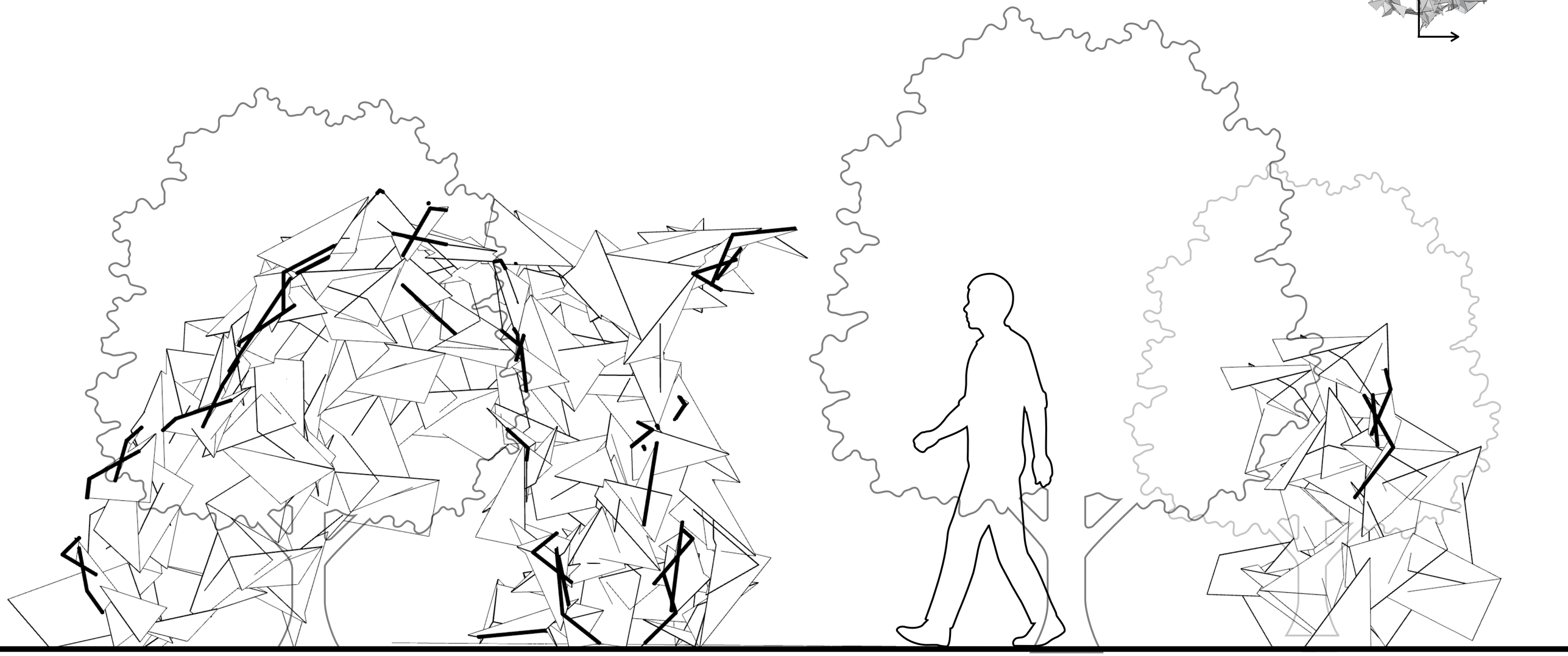
SECTION VIEW





0 10 20 50 100

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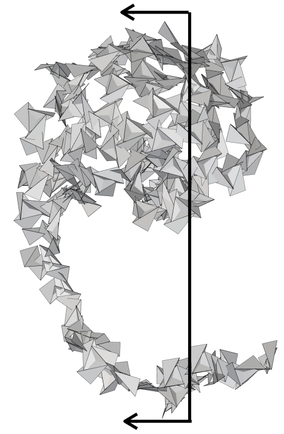
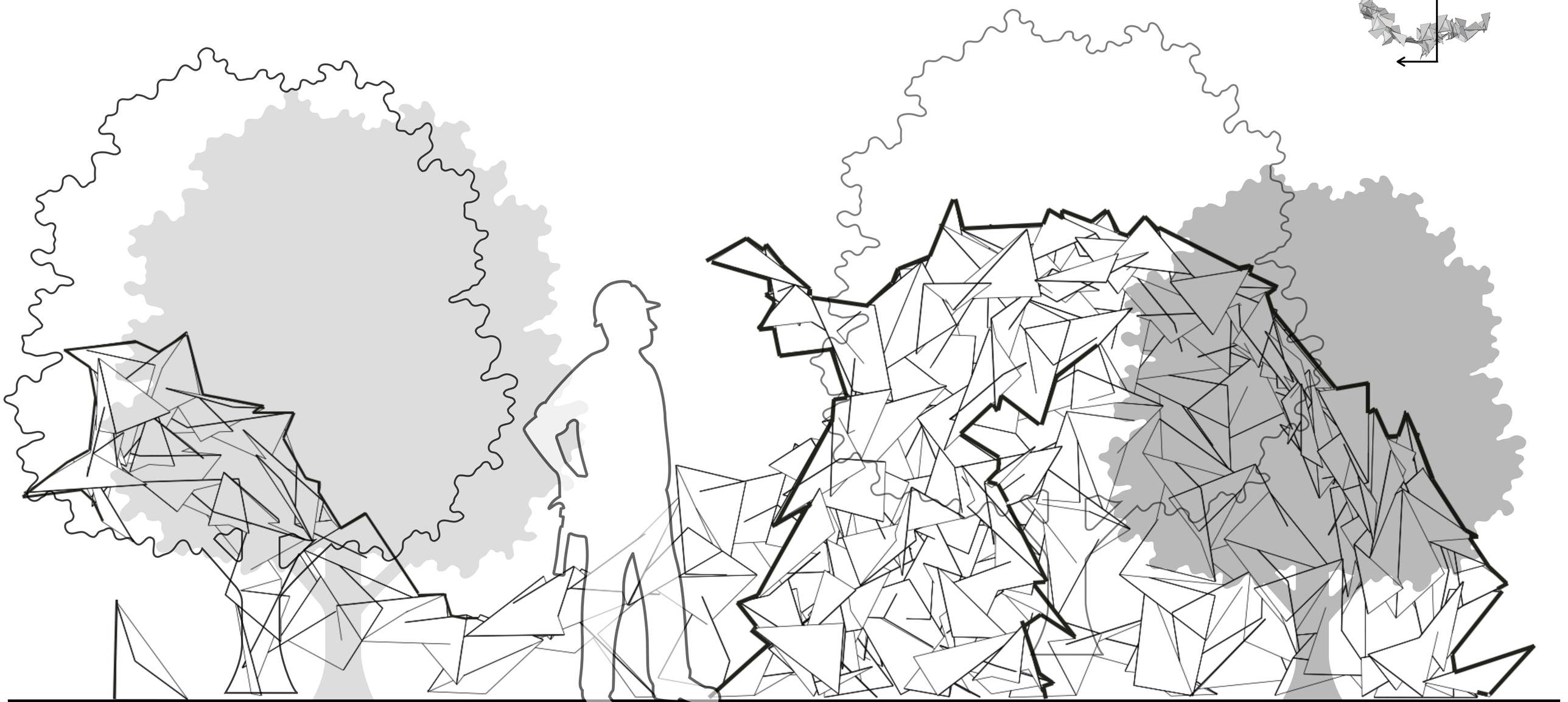
SECTION VIEW





0 10 20 50 100

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1:1 SCALED MODEL



Individual Sections of the real life model photoshopped to give the effect of the real model due to lack of resources

jantar mantar

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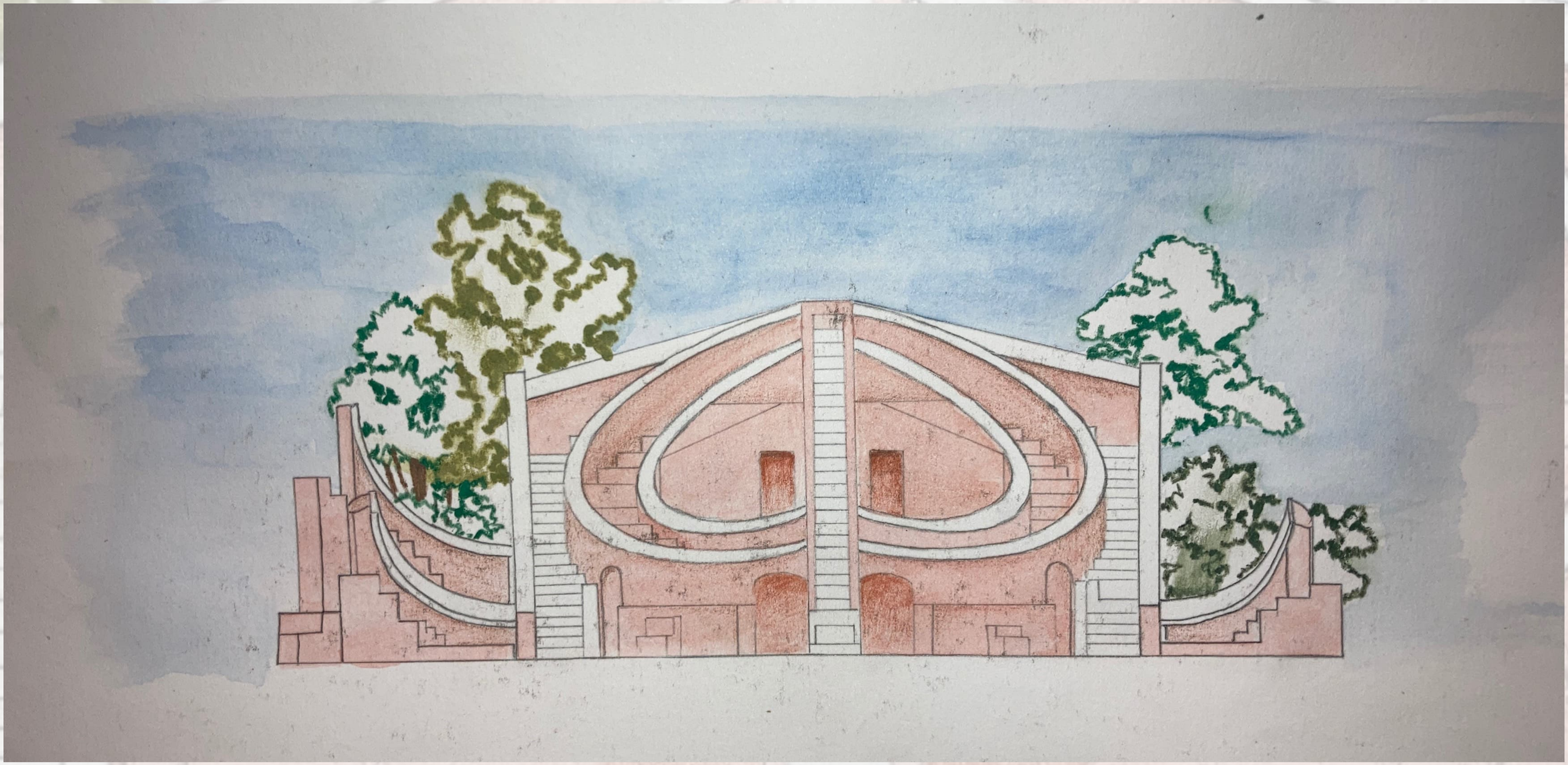

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Miscellaneous

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DREAMS : ENGULFED IN THE SUB CONSCIENCE

IT IS A KNOWN FACT THAT WHAT WE SEE IN OUR DREAMS ARE ACTUALLY FRAGMENTS OF OUR SUB CONSCIENCE. THIS VISUAL REPRESENTATION OF DREAMS HAS TWO LAYERS- GENERAL AND PERSONAL.

THE GENERAL LAYER SHOWS A BODY AT REST (SLEEPING) BEING ENGULFED BY THE AURA WHICH REPRESENTS ITS SUB CONSCIENCE. THIS AURA SETS THE STAGE FOR THE DREAMS TO PLAY.

THE PERSONAL LAYER SHOWS DOODLES THAT ARE SYMBOLIC OF CERTAIN RECURRING DREAMS I HAVE SEEN AT NIGHT AS WELL AS CERTAIN DREAMS/ASPIRATIONS I HAVE IN LIFE THAT I WISH TO FULFIL.



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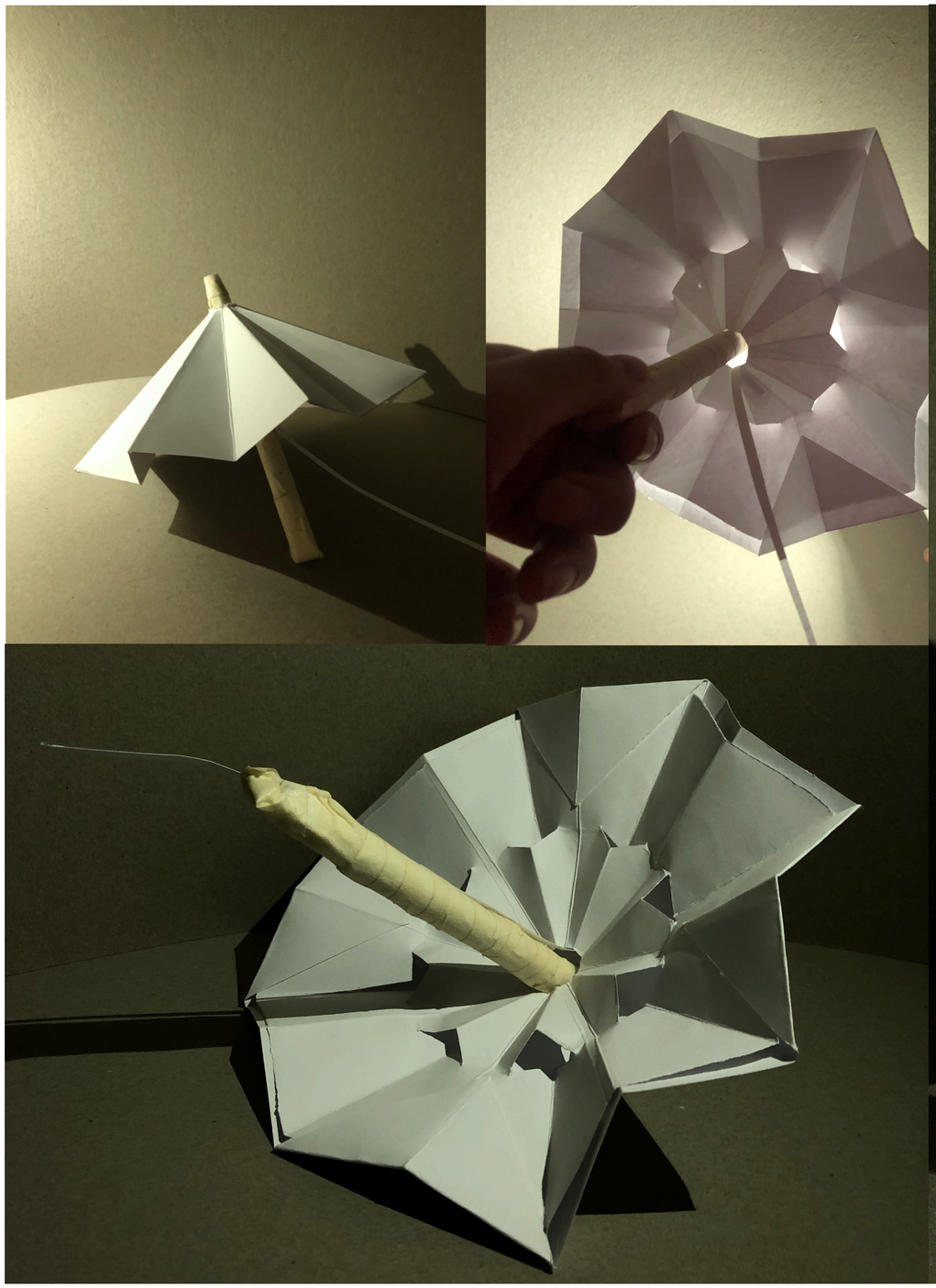
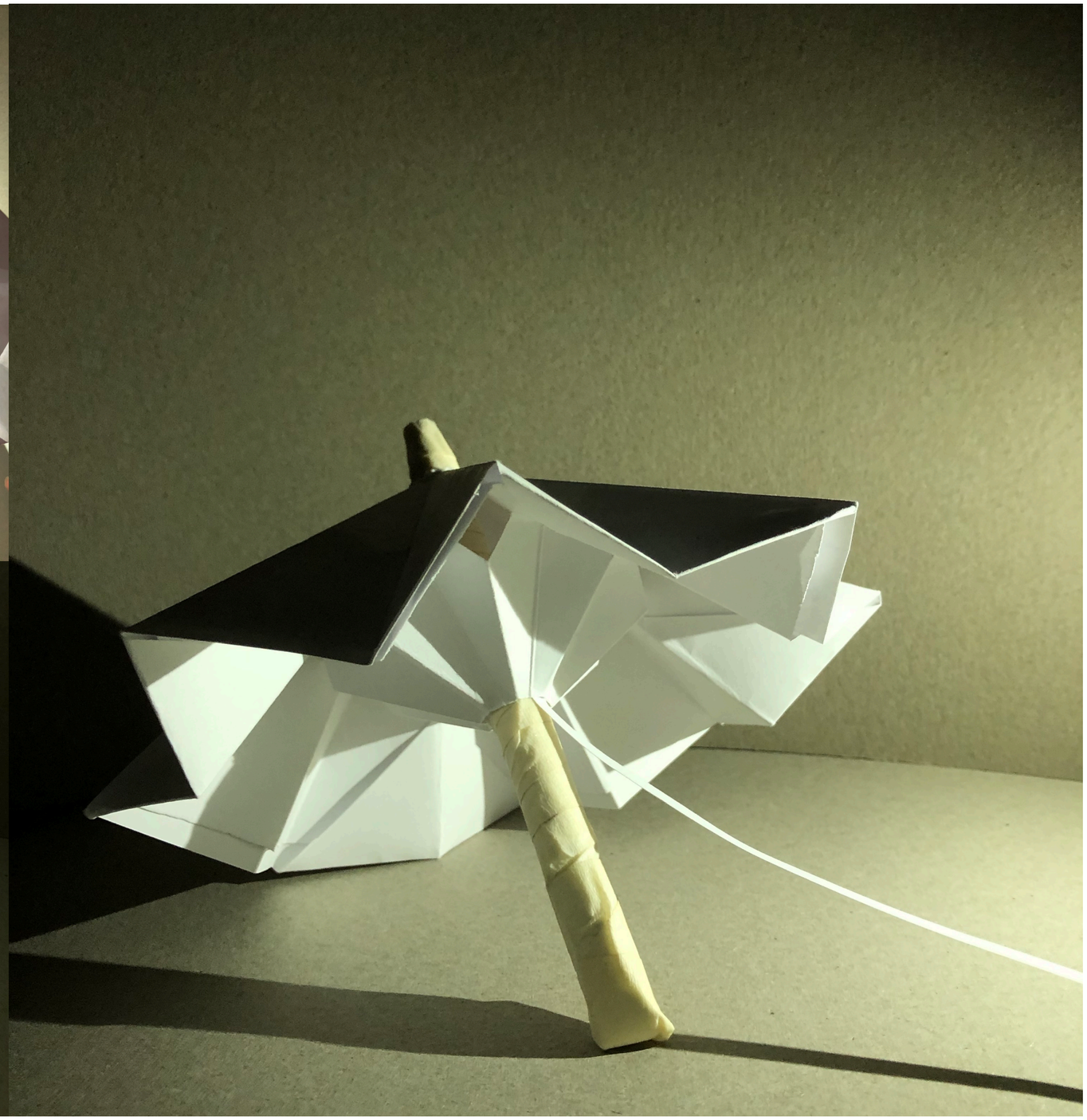
ORIGAMI UMBRELLA





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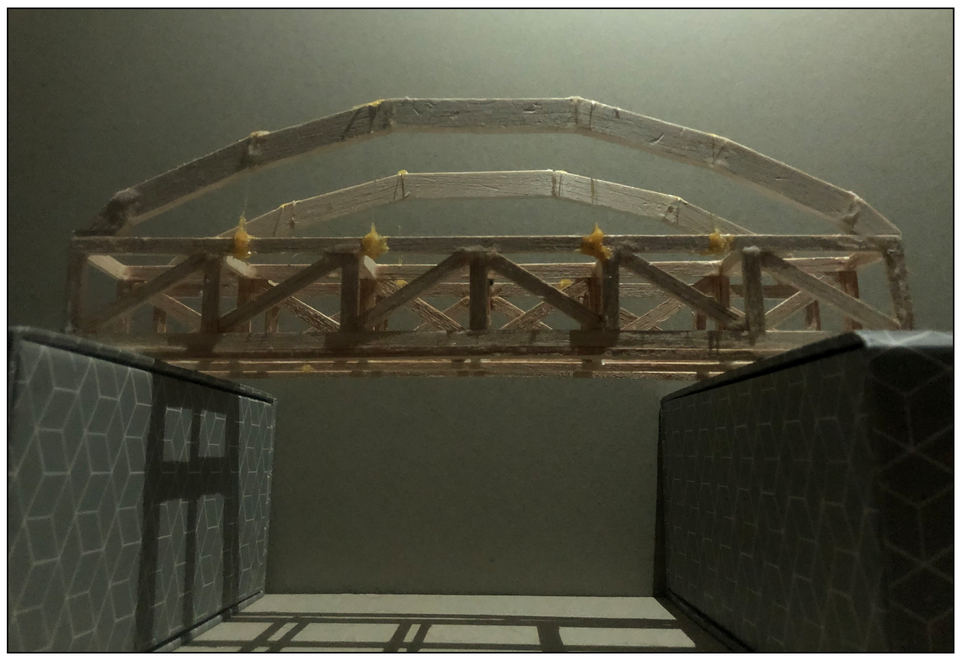
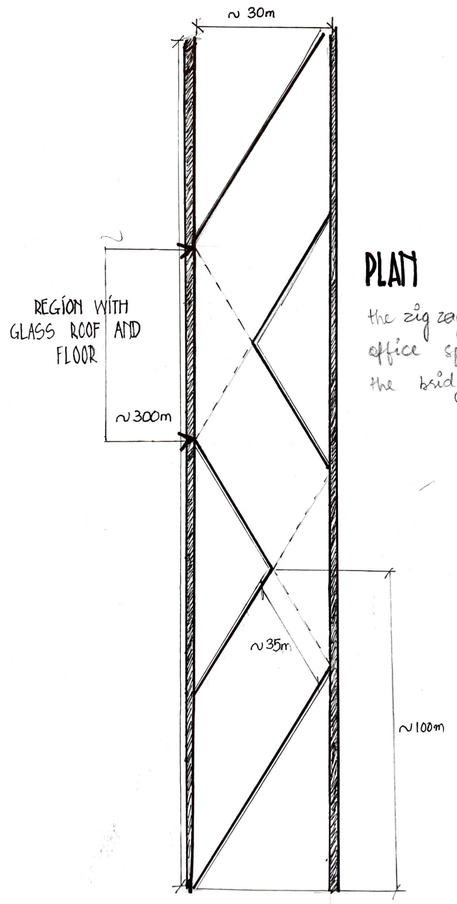
LIVE BRIDGE



Physical Model in Timber



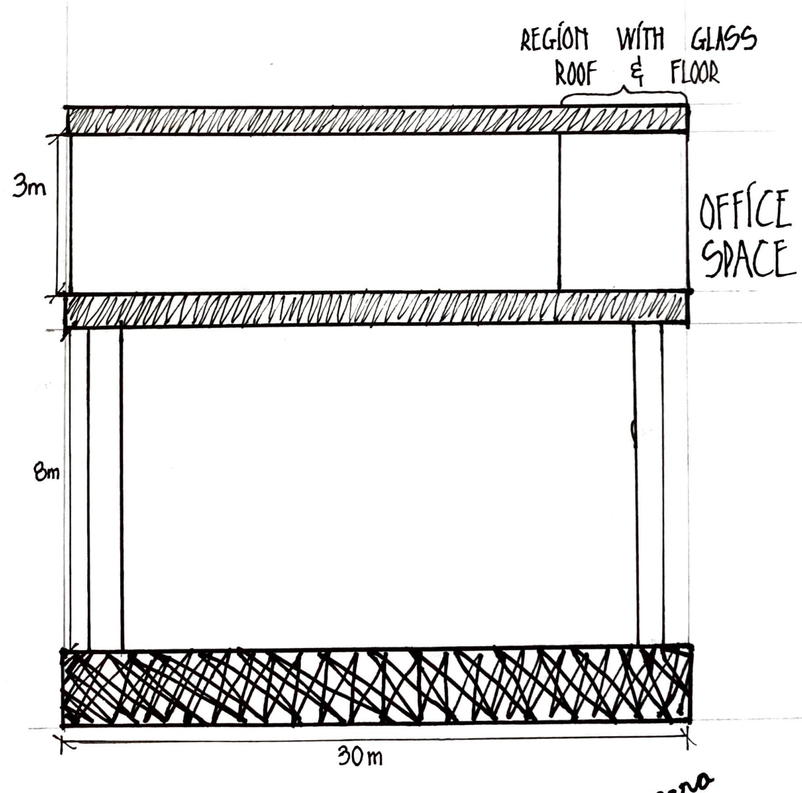


PLAN

the zig zag represents office spaces above the bridge

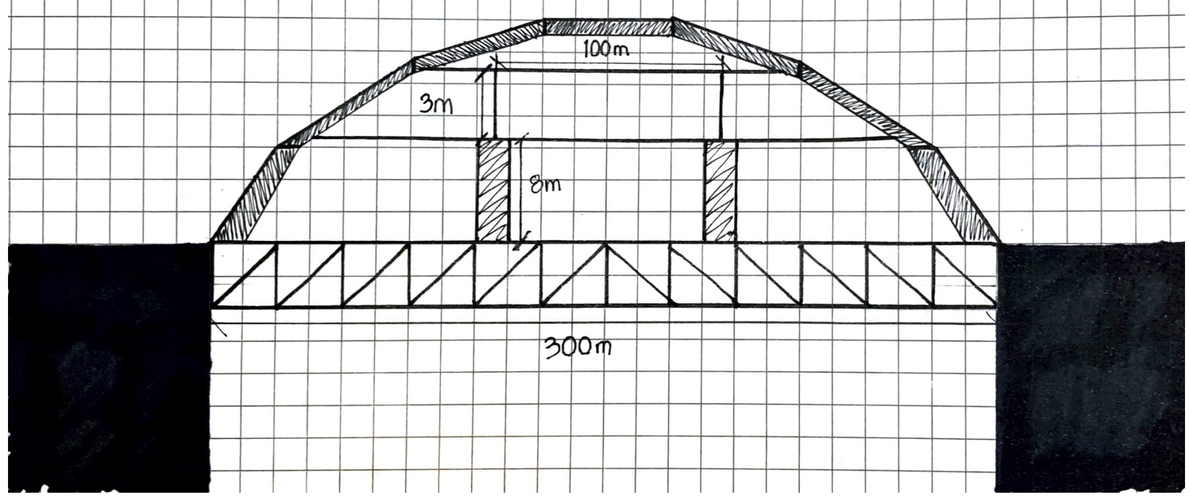
zara

ELEVATION SECTION



zara

STRUCTURAL DRAWING



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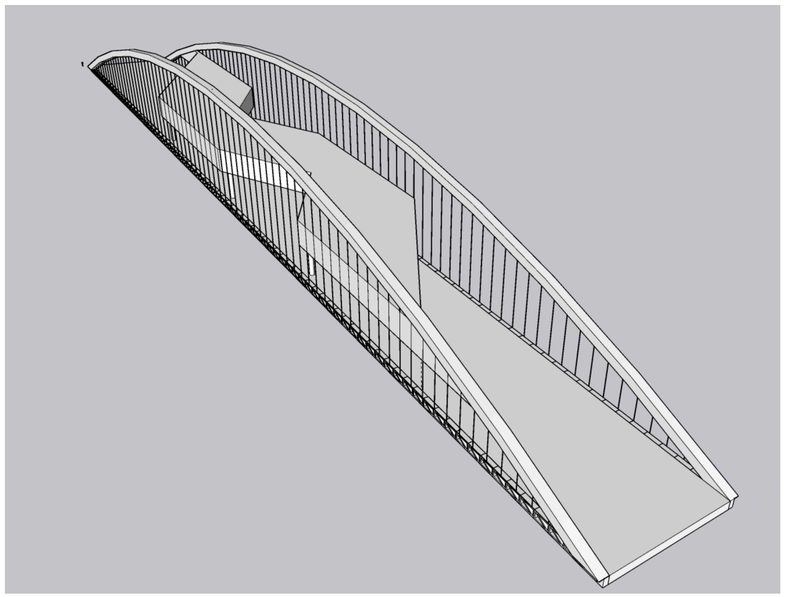
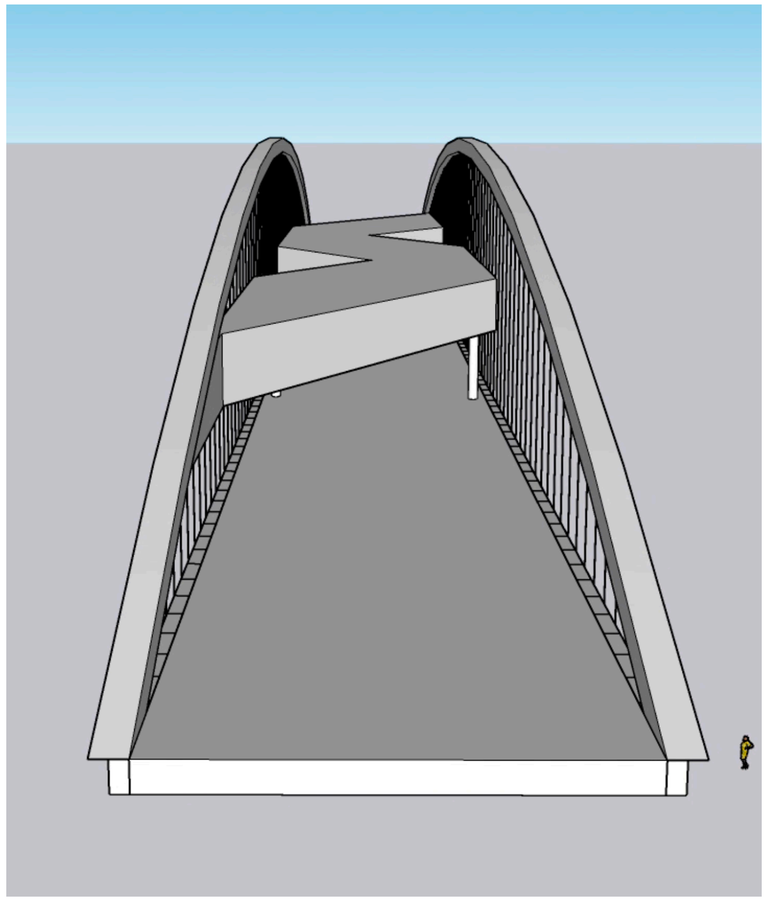
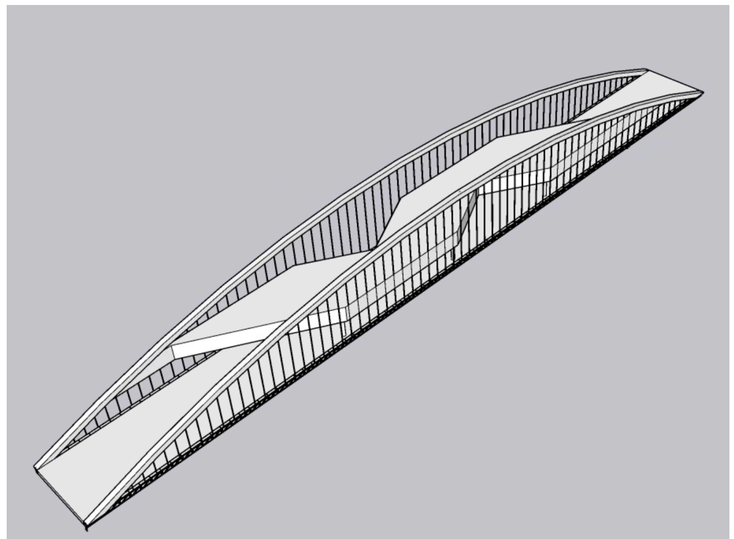
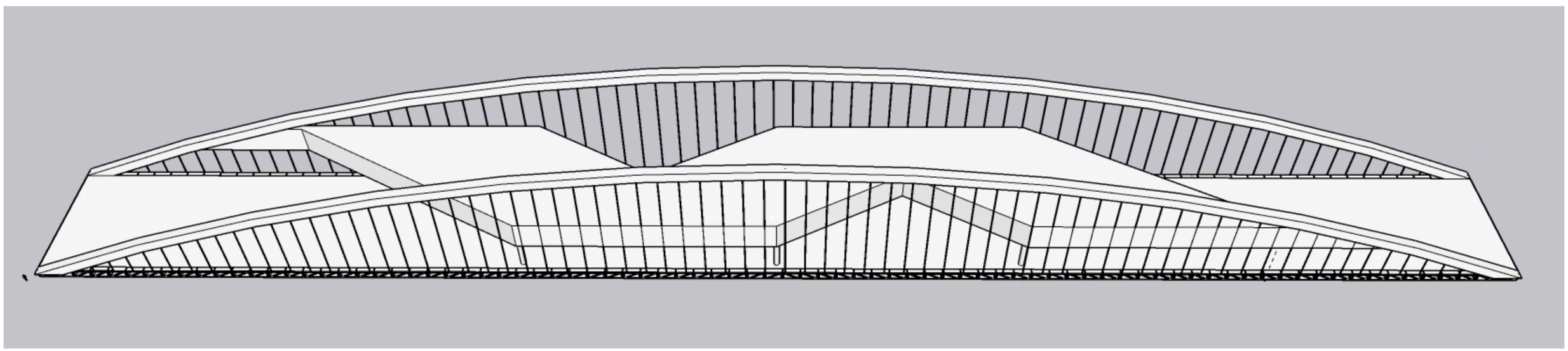
LIVE BRIDGE





3D Model





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PENCIL SKETCH OF MY GRANDFATHERS DESK



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ODDS AGAINST TOMORROW



A sketch showing the contrast between the world we're leading to and one we could have

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Design Make Live:

SECOND ITERATION

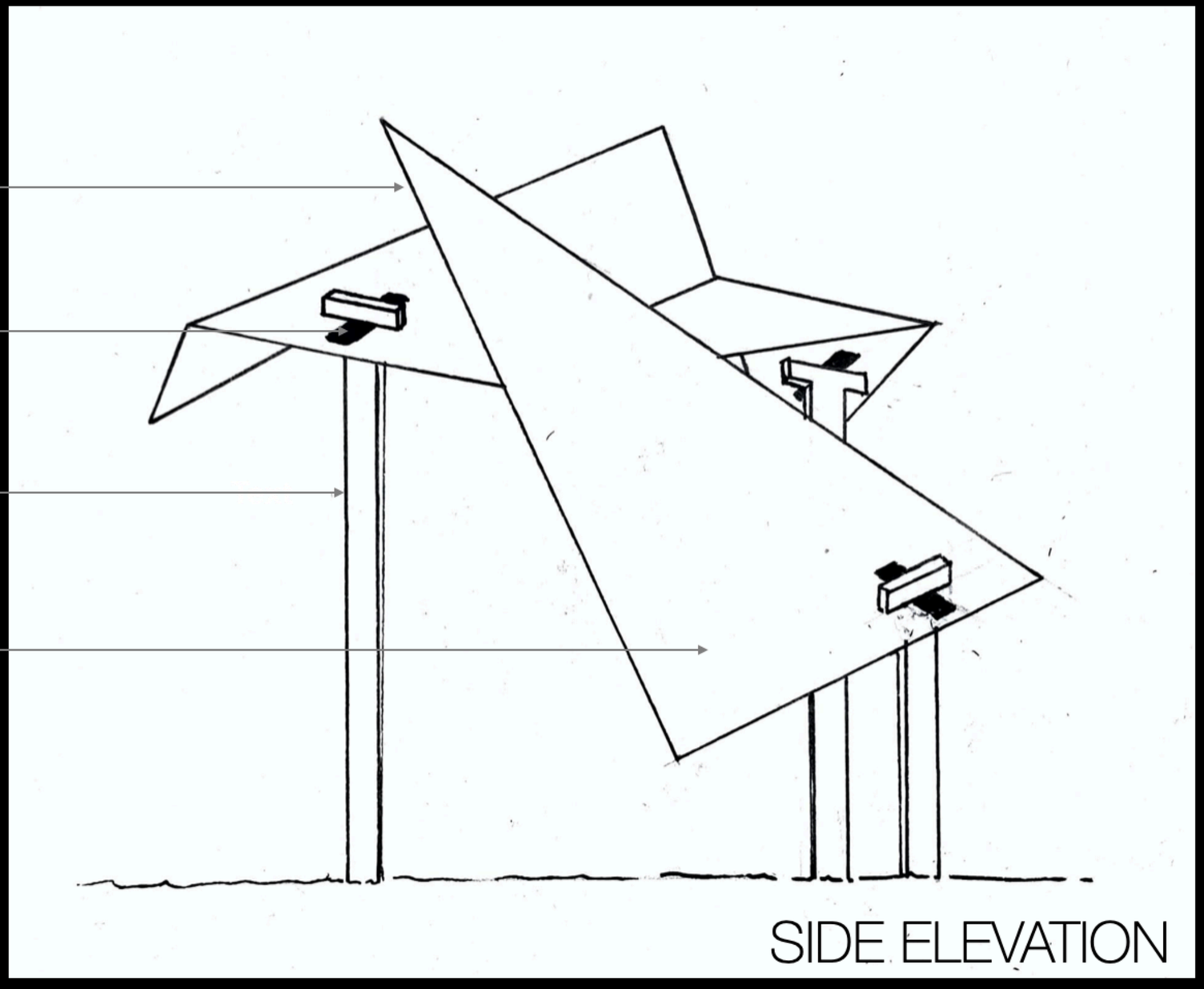
INITIAL IDEATION

STAR COMPONENT AT INCLINED AT 20°

SLITS IN THE ROOF

WOODEN SUPPORT PILLARS
(INCORPORATING INTERLOCKING)

FIBRE CEMENT PROFILE SHEET



SIDE ELEVATION

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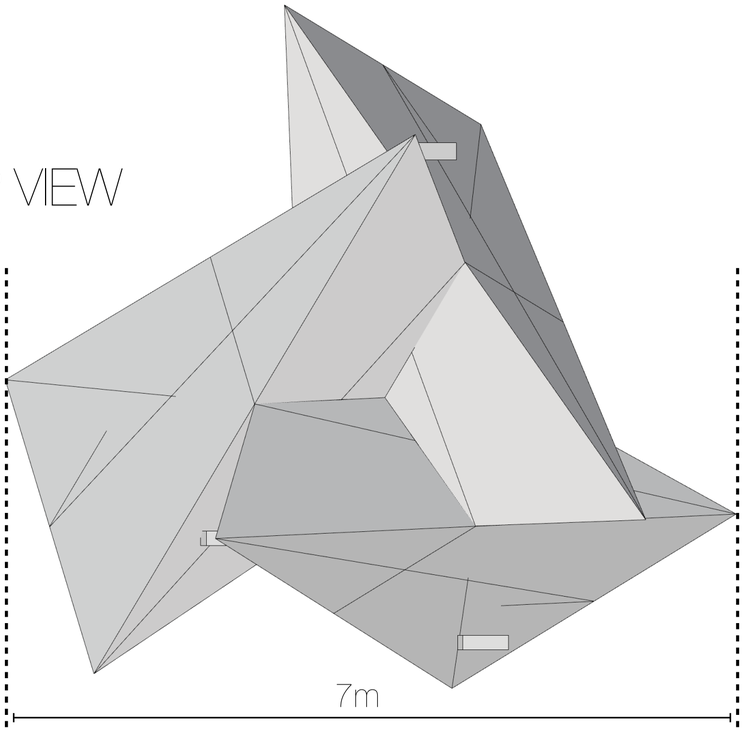
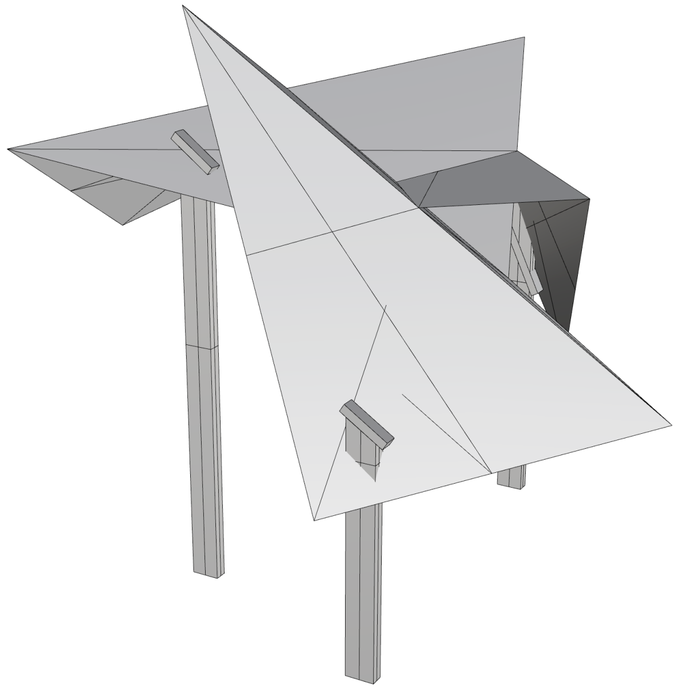
STRUCTURAL DRAWINGS

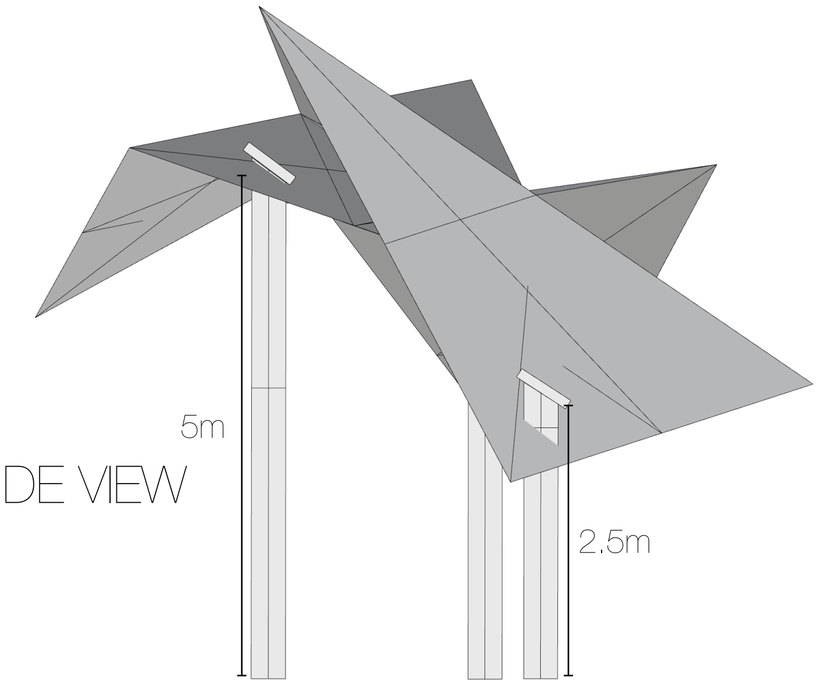
TOP VIEW



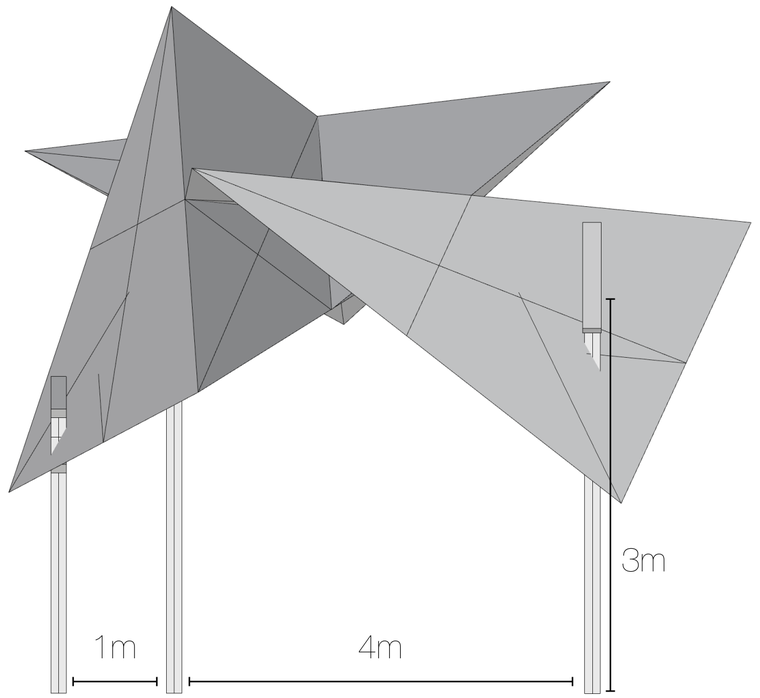
PERSPECTIVE



SIDE VIEW



BACK VIEW



An approximation of dimensions for farm shed; Figures are not to scale

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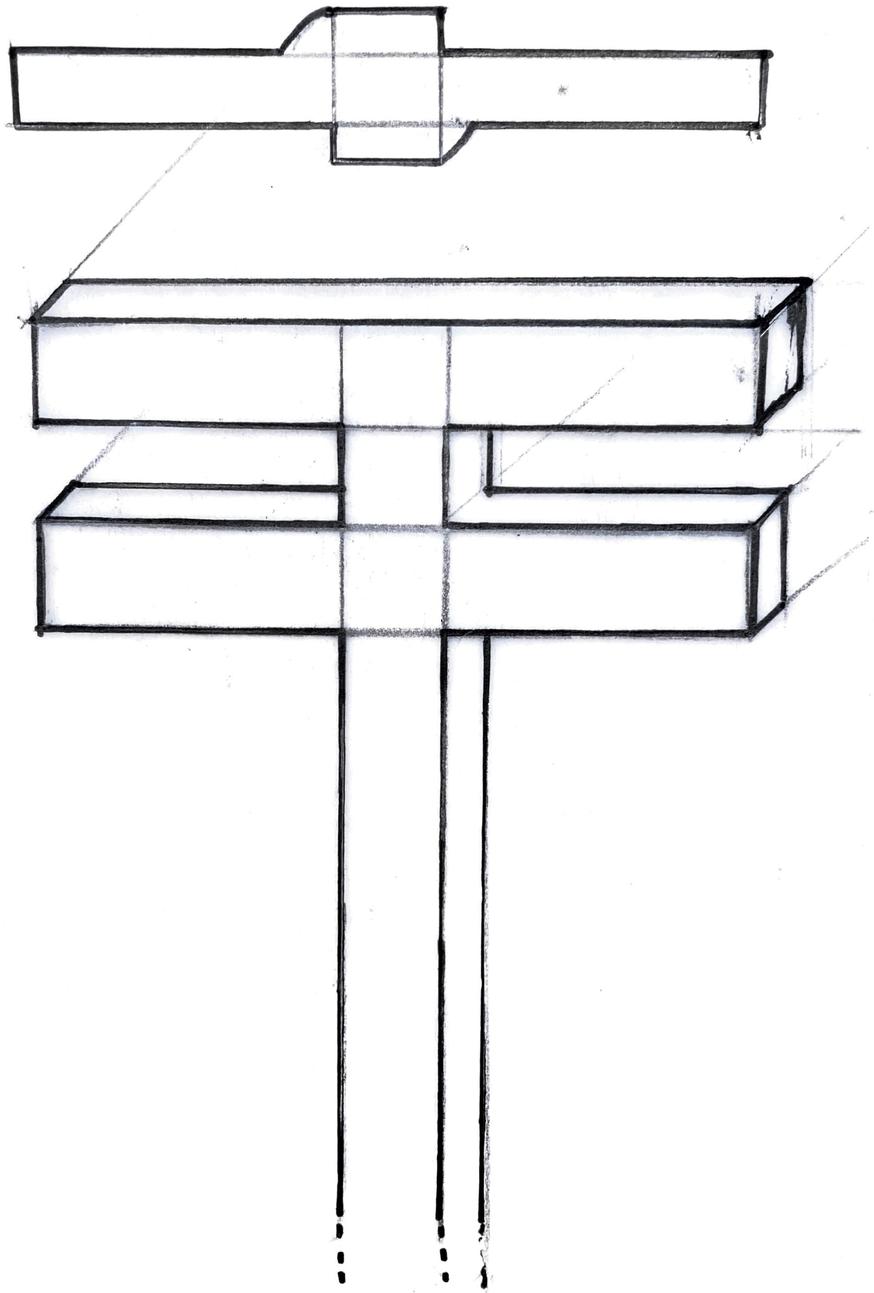
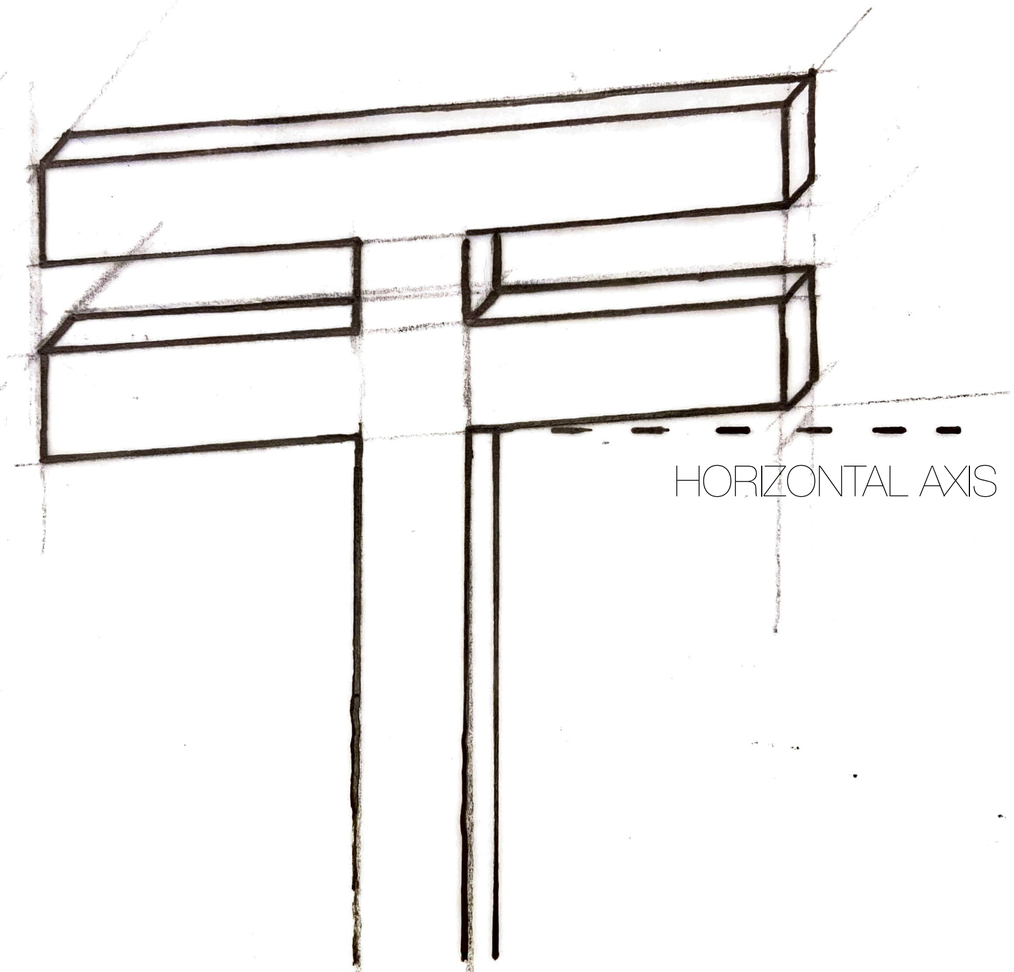
ROOF-PILLAR JOINT

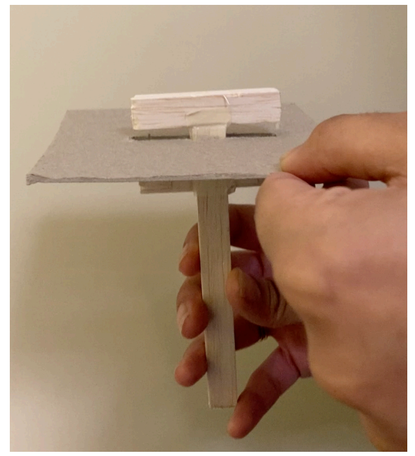
SLIT ON THE ROOF

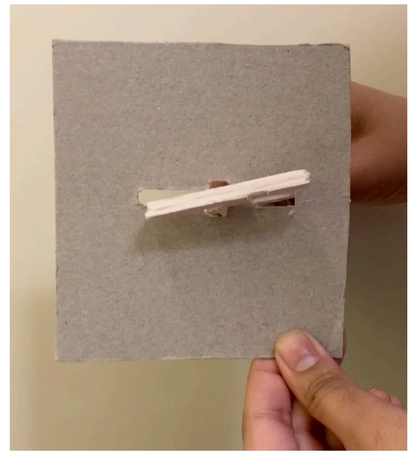


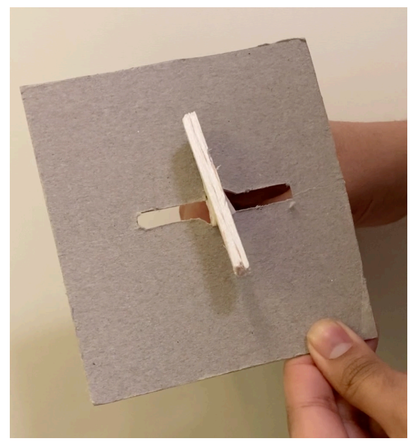
CLOSE UP AXONOMETRIC OF PILLAR



AXONOMETRIC OF ACTUAL ANGLED COMPONENT







Physical Model

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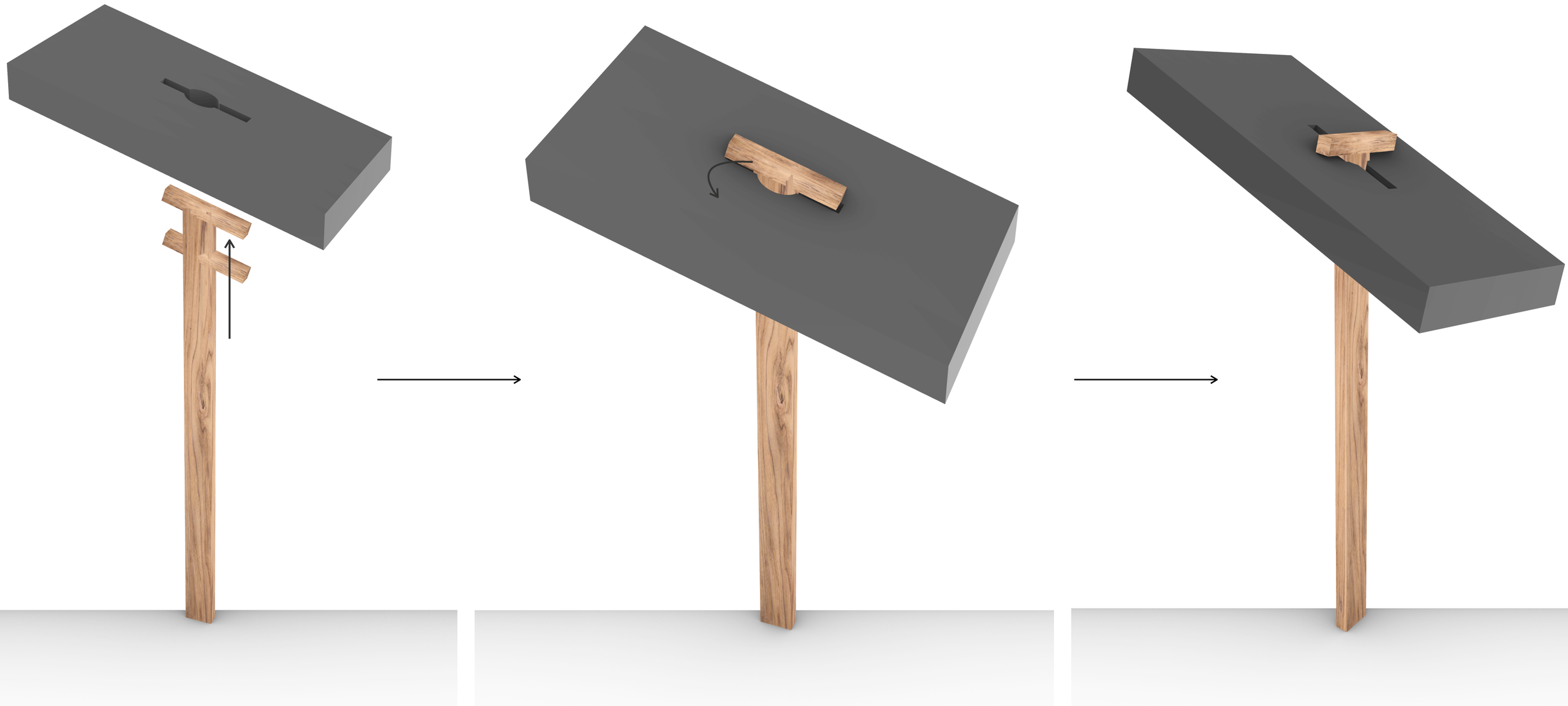
PROCESS OF ASSEMBLY



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FARMLAND REST SHEDS



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THE CONCEPT

THE STRUCTURE GENERATED CAN HAVE MULTIIPLE APPLICATIONS. THE MOST PROMINENT OF THESE WOULD BE TO USE THEM AS REST SHELTERS IN FARMS AND AGRICULTURAL FIELDS. THEY CAN ALSO BE USED AS LIVESTOCK SHELTERS.

THE ROOF USES THE SAME MATERIAL AS THE STAR COMPONENT OF THE PAVILION- CORRUGATED POLYPROPYLENE COATED WITH REFLECTIVE SHEETS. THIS CHOICE OF MATERIAL MAKES IT LIGHTWEIGHT AND THIS ALONG WITH THE EASY ASSEMBLY/DISASSEMBLY MAKES IT EASILY MOVABLE.

THE STRUCTURE HAS MULTIPLE SECONDARY USES AS WELL. THESE INCLUDE THE FACT THAT THE REFLECTIVE SHEETS OF THE ROOF HELP INCREASE PLANT GROWTH. FURTHER, THE STRUCTURE CAN ACT AS A MODIFIED SCARECROW AND PROTECT FIELDS FROM PREDATORS.

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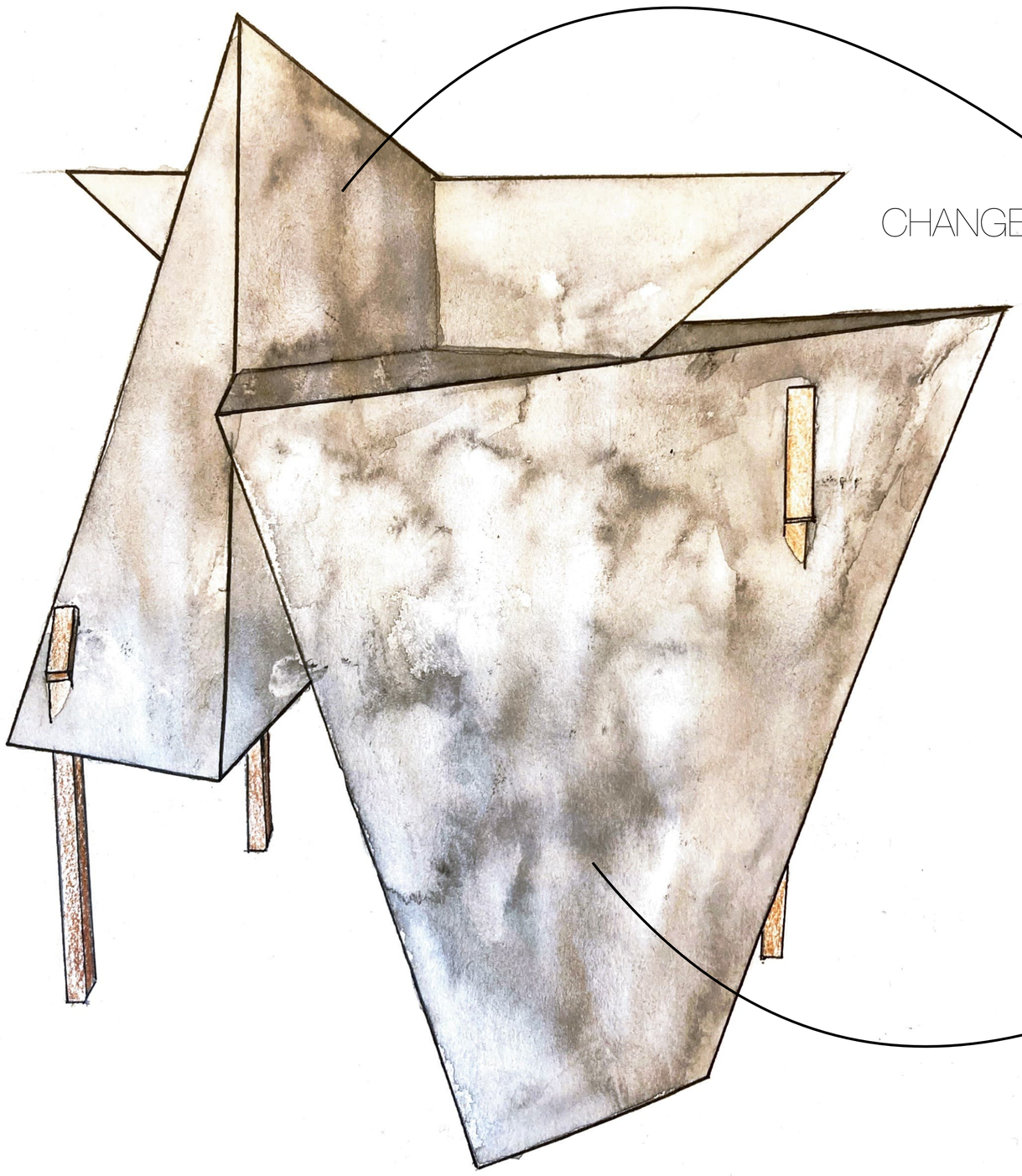
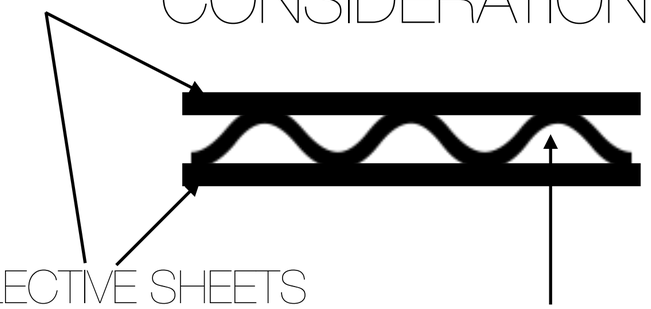
FURTHER STRUCTURAL EXPLORATION

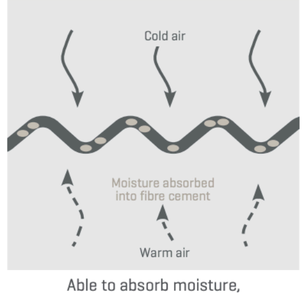


CHANGE OF MATERIAL USED FOR ROOF

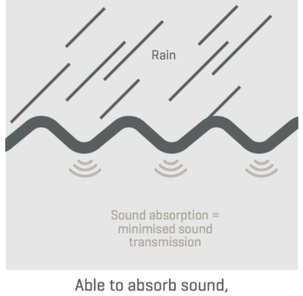
ROOF MATERIAL CONSIDERATION



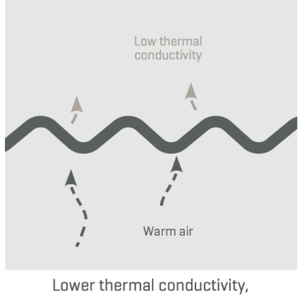
BACK PANEL OF COMPONENT EXTENDED TO TOUCH THE GROUND IN ORDER TO PROVIDE SUPPORT AND STABILITY AND MAKE THE STRUCTURE MORE ENCLOSED



Able to absorb moisture, so minimises condensation



Able to absorb sound, so minimises internal noise



Lower thermal conductivity, so retains some heat

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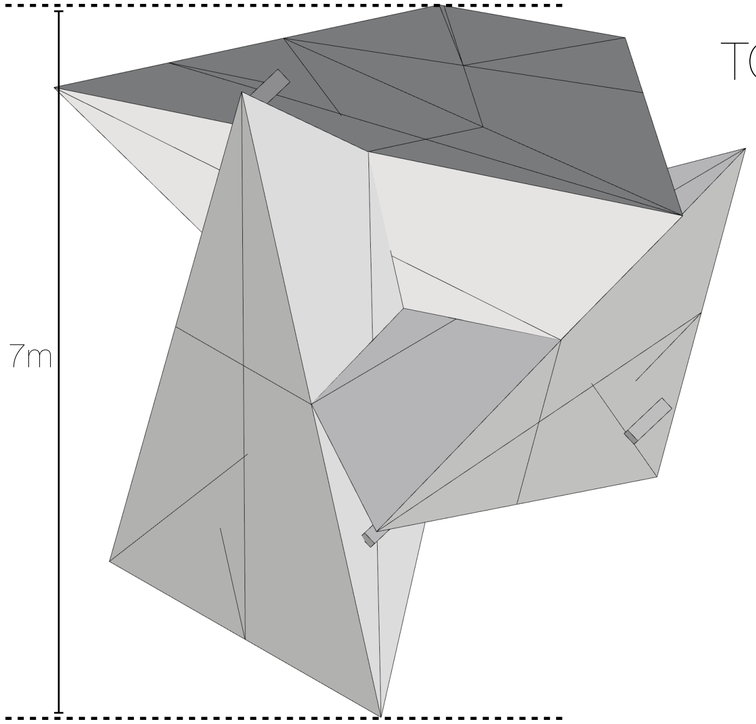
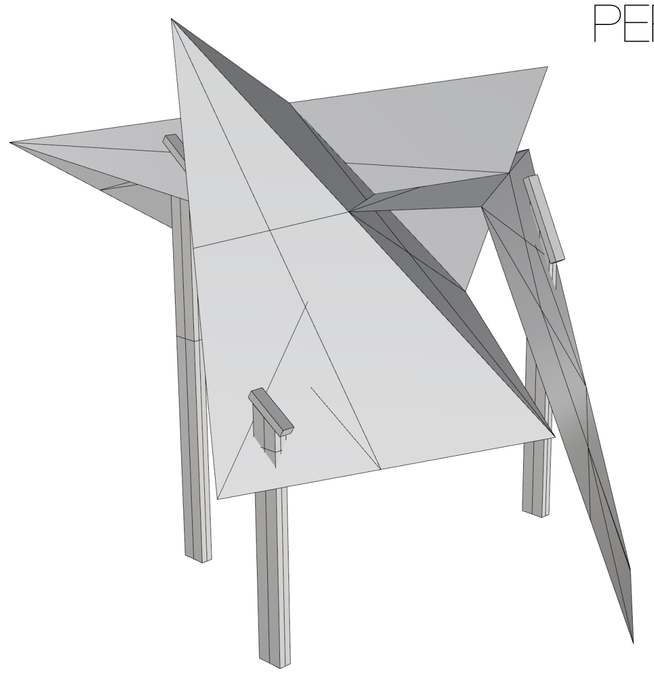
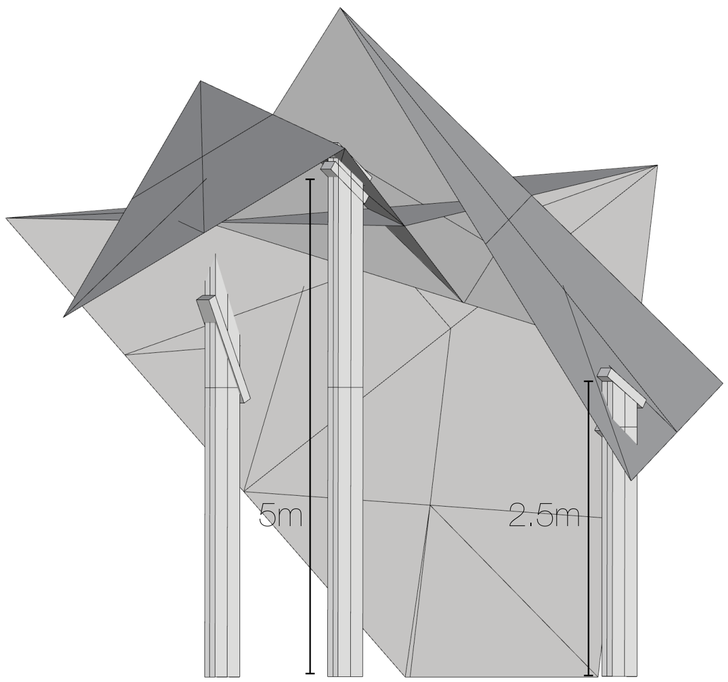
STRUCTURAL DRAWINGS



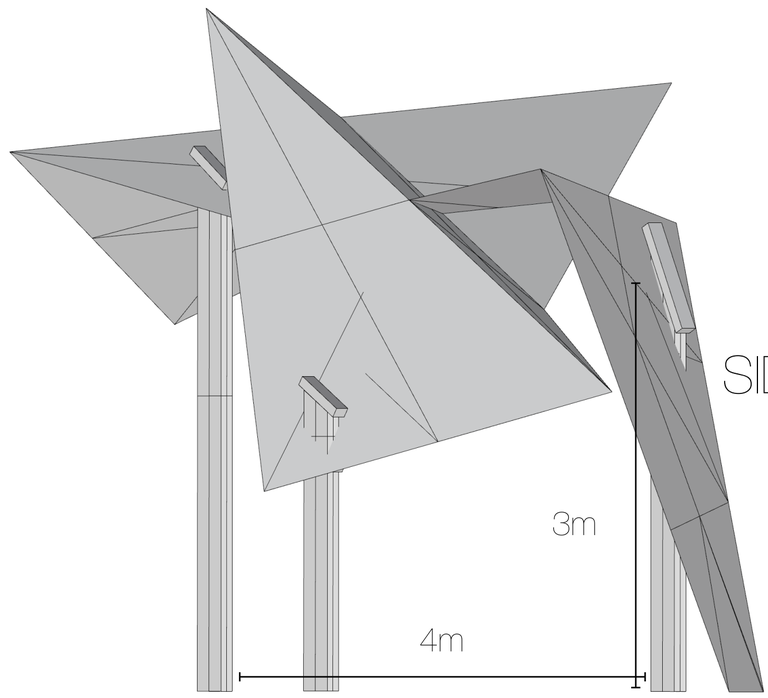
TOP VIEW



PERSPECTIVE



FRONT VIEW



SIDE VIEW

An approximation of dimensions for emergency shelter; Figures are not to scale

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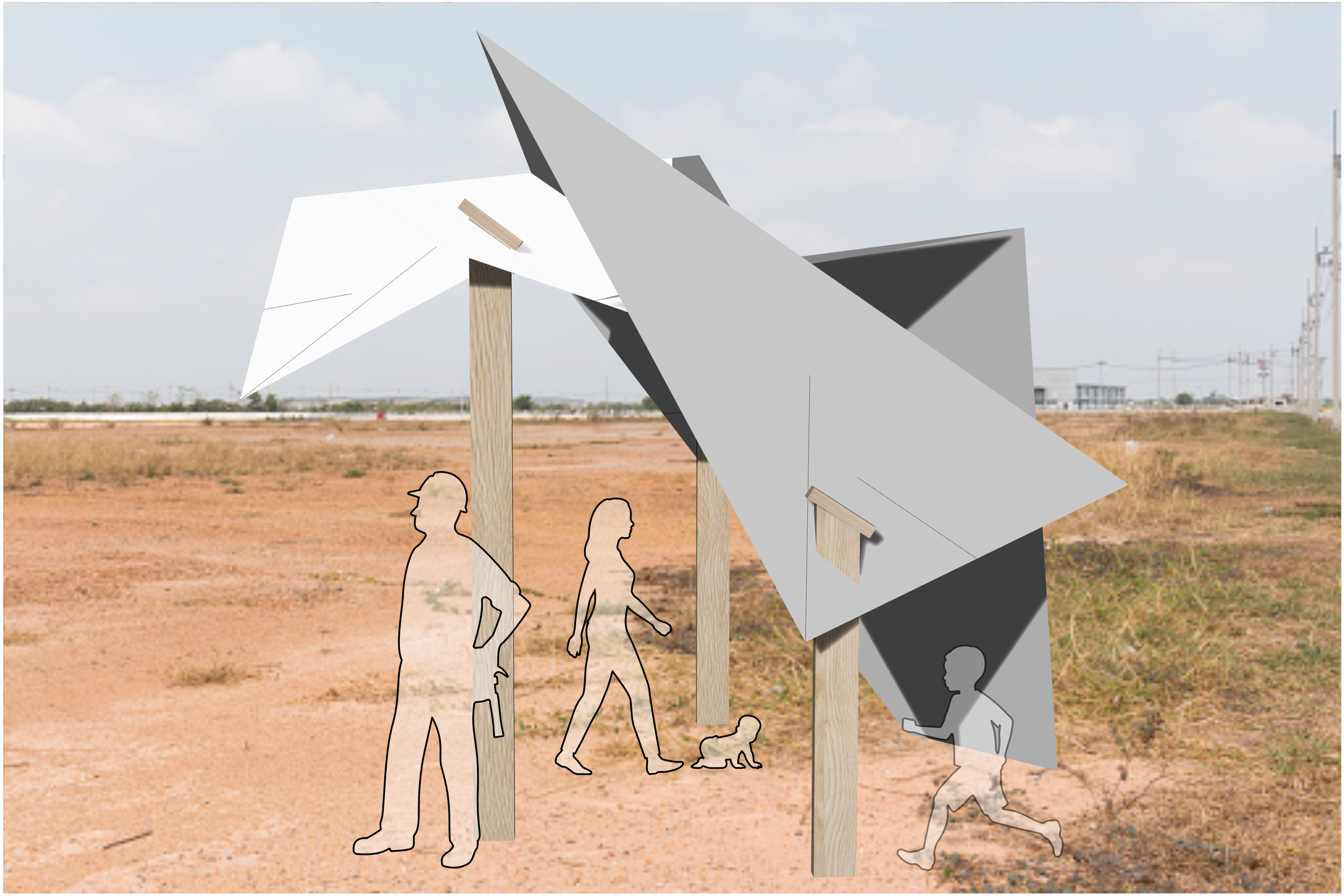
EMERGENCY SHELTERS

ROOFS FOR THE HOMELESS



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THE CONCEPT

THE STRUCTURE GENERATED CAN BE USED AS A COLLAPSABLE SHED/ROOF FOR PEOPLE WITHOUT HOMES. A MORE SPECIFIC APPLICATION COULD BE TO USE THEM AS EMERGENCY SHELTERS.

THE USE OF AFFORDABLE MATERIALS LIKE FIBRE CEMENT SHEETS MAKES THE SHED EASILY ACCESSIBLE TO ALL. ALSO THE LIGHT WEIGHT OF THE COMPONENTS MAKES IT EASILY TRANSPORTABLE. THE EASE OF ASSEMBLY/ DISASSEMBLY MAKES ITS RELOCATION CONVENIENT.

SINCE THE SHED CAN BE FLAT PACKED, IT CAN BE TRANSPORTED OVER LARGE DISTANCES MUCH EASILY AND SO CAN BE MADE READILY AVAILABLE IN THE TIMES OF A CRISIS.

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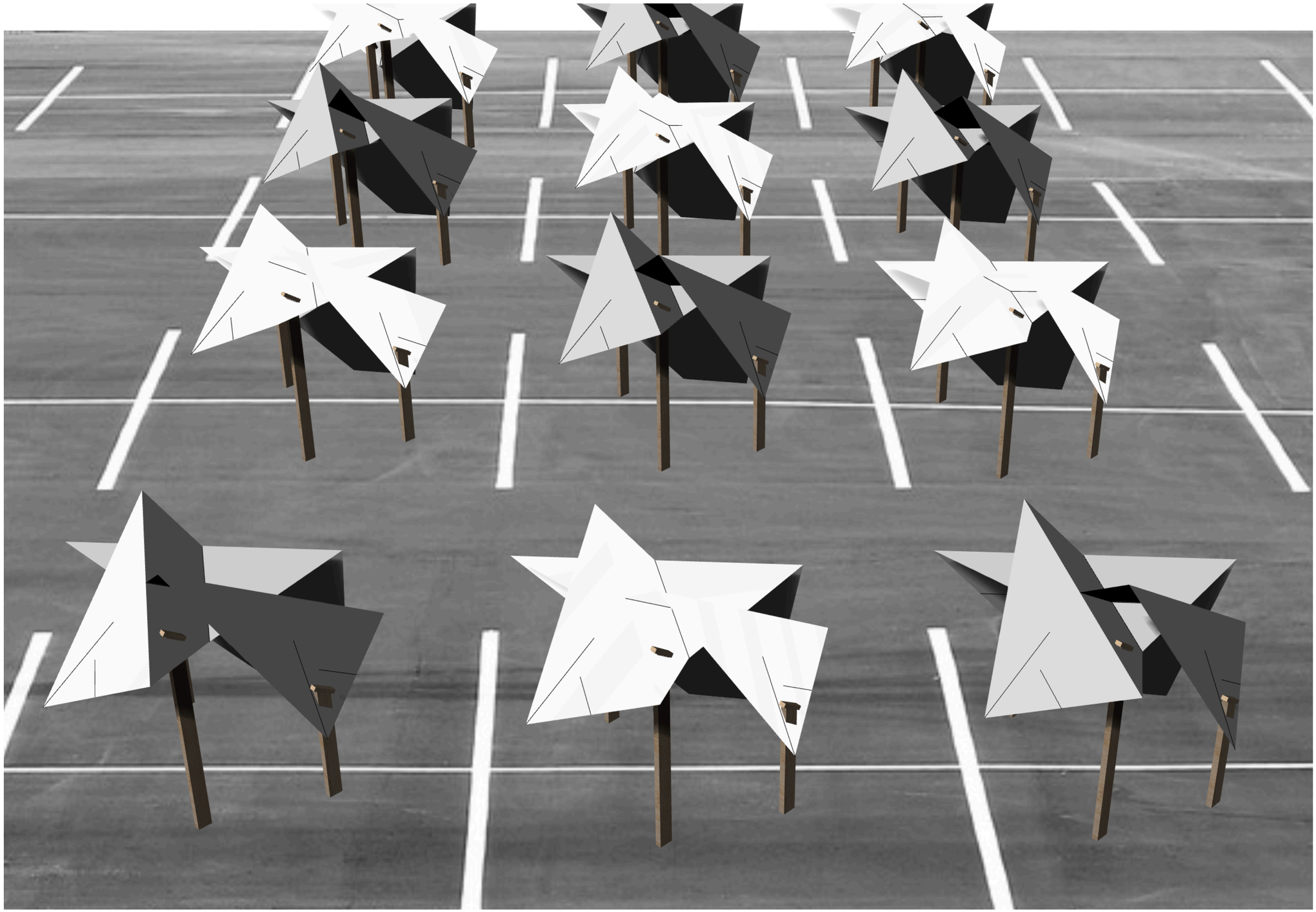
PROJECT PROPOSAL :

PARKING LOT BY DAY - HOMELESS SHELTER BY NIGHT



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PROPOSAL

COMMERCIAL PARKING LOTS OCCUPY A LARGE AMOUNT OF AREA. HOWEVER, THESE PARKING LOTS ARE ONLY FUNCTIONAL DURING WORKING HOURS. AFTER A MALL OR AN OFFICE CLOSES ITS PARKING LOT ALSO EMPTIES OUT.

THIS PROPOSAL SUGGESTS MAKING USE OF EMPTY PARKING SPACES AT NIGHT TO HOUSE THE HOMELESS.

THE COLLAPSABLE SHEDS DESIGNED, CAN BE EASILY FLAT PACKED AND STORED DURING THE DAY WHEN THE PARKING LOT IS IN USE. AS SOON AS THE SPACE IS EMPTIED OUT, THESE SHEDS CAN BE ASSEMBLED FOR HOMELESS PEOPLE TO SPEND THE NIGHT UNDER AND THEN CAN BE DISASSEMBLED AGAIN IN THE DAY.

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