BHARGAVI LALITHA MURTHY

ARCHITECTURAL DESIGN PORTFOLIO

SELECT ACADEMIC AND PROFESSIONAL WORK

contents

01 │ GLASS BOX

Almaraz Arts' Centre in Boyle Heights, Los Angeles

GRADUATE │ SEMESTER 2

Mentors: Edward Ford, Luis Pancrobo

In a notoriously ungentrifiable neighborhood, this project creates serene spaces for woodworking, painting and making ceramics a. It relies on varying degrees of transparency and permeability to invite residents to "**come take a peek"**, with the idea that literal visibility will be most effective in encouraging engagement.

A view of the Arts Centre Building from the street beside the Mariachi Plaza in Boyle Heights
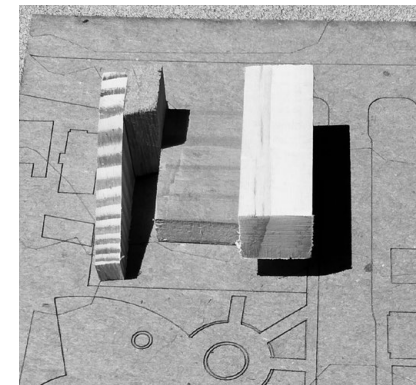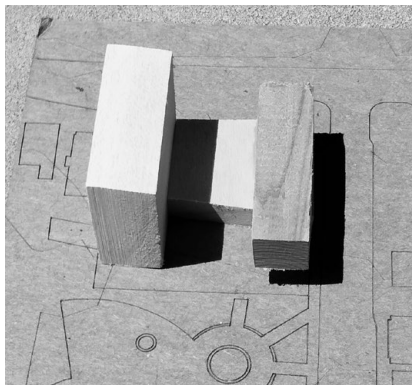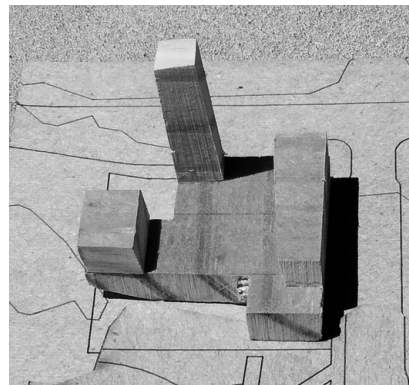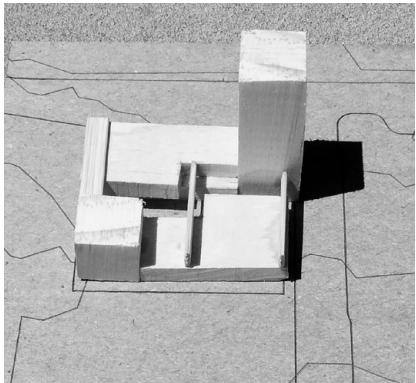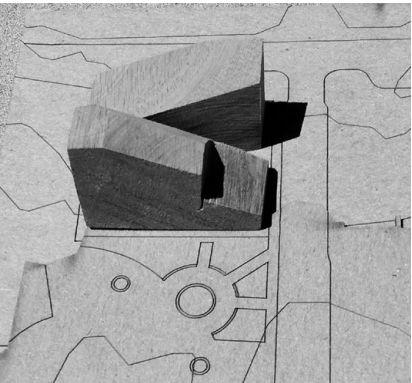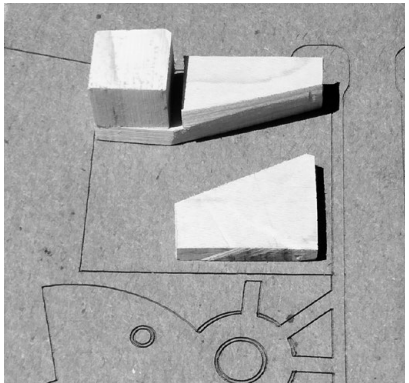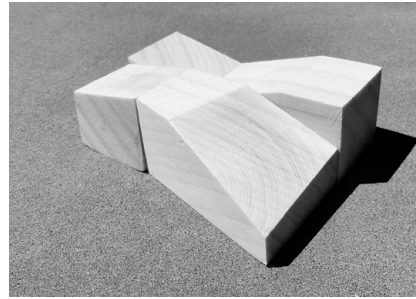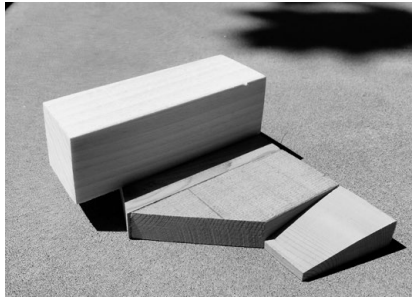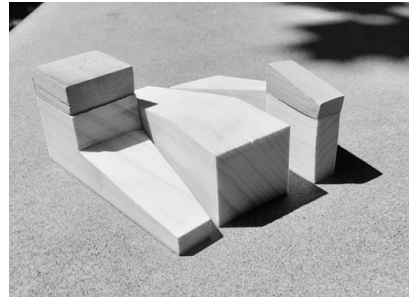
<u>Left</u>: Design iterations explored through scale models.
<u>Right</u>: Site Plan of the neighborhood of Boyle Heights around the Mariachi Plaza.

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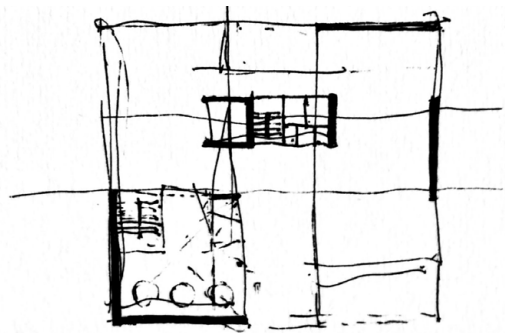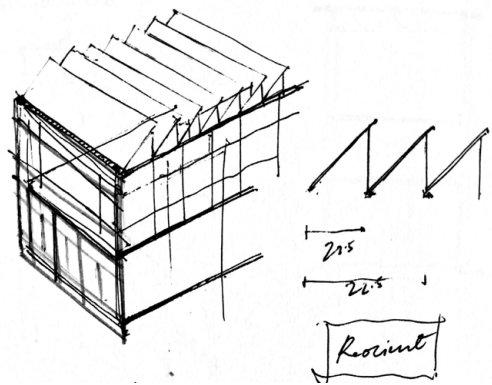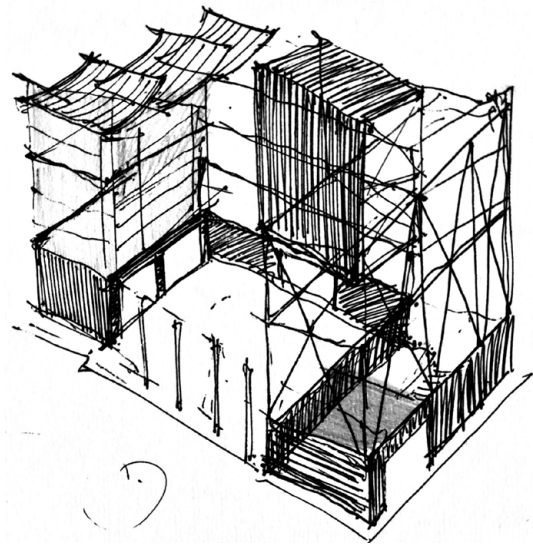
Process sketches and that explore function, structure and movement, to test out possibilities of transparency and permeability.
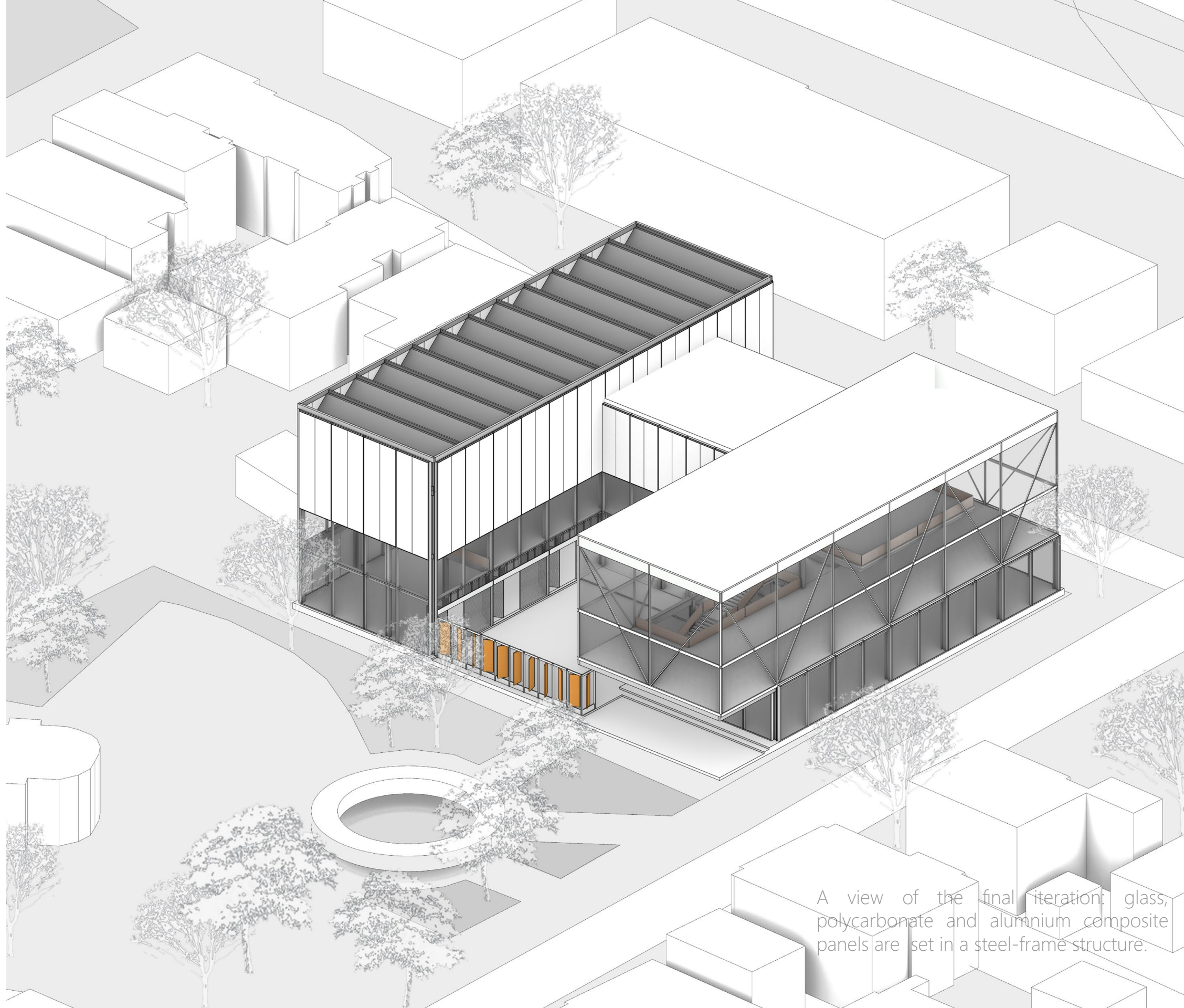
A view of the final iteration: glass, polycarbonate and aluminium composite panels are set in a steel-frame structure.
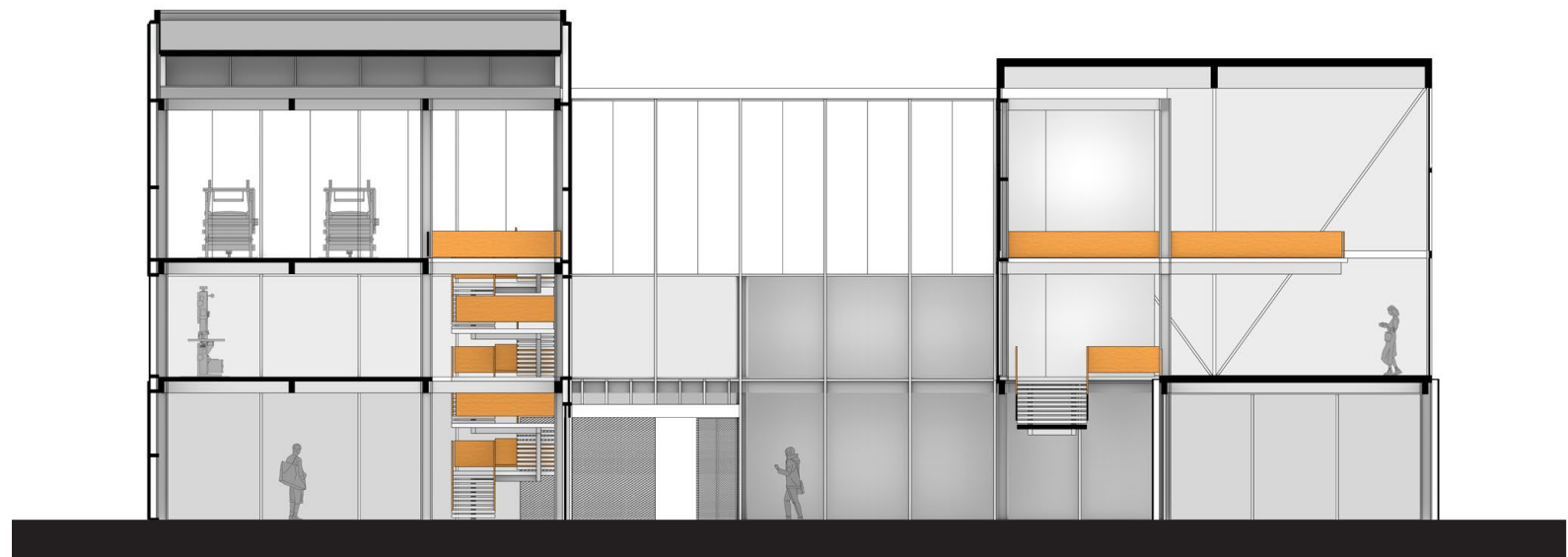
LONGITUDINAL SECTION TAKEN ACROSS THE COURT

CROSS SECTION TAKEN AT THE WORKSHOPS

Braced frame
structure with
frosted glass

Sawtooth
Roof for
Diffused
Lighting

Combination
of opaque
composite
panels,
frosted and
clear glass
with steel
frame

Steel framed
structural
system
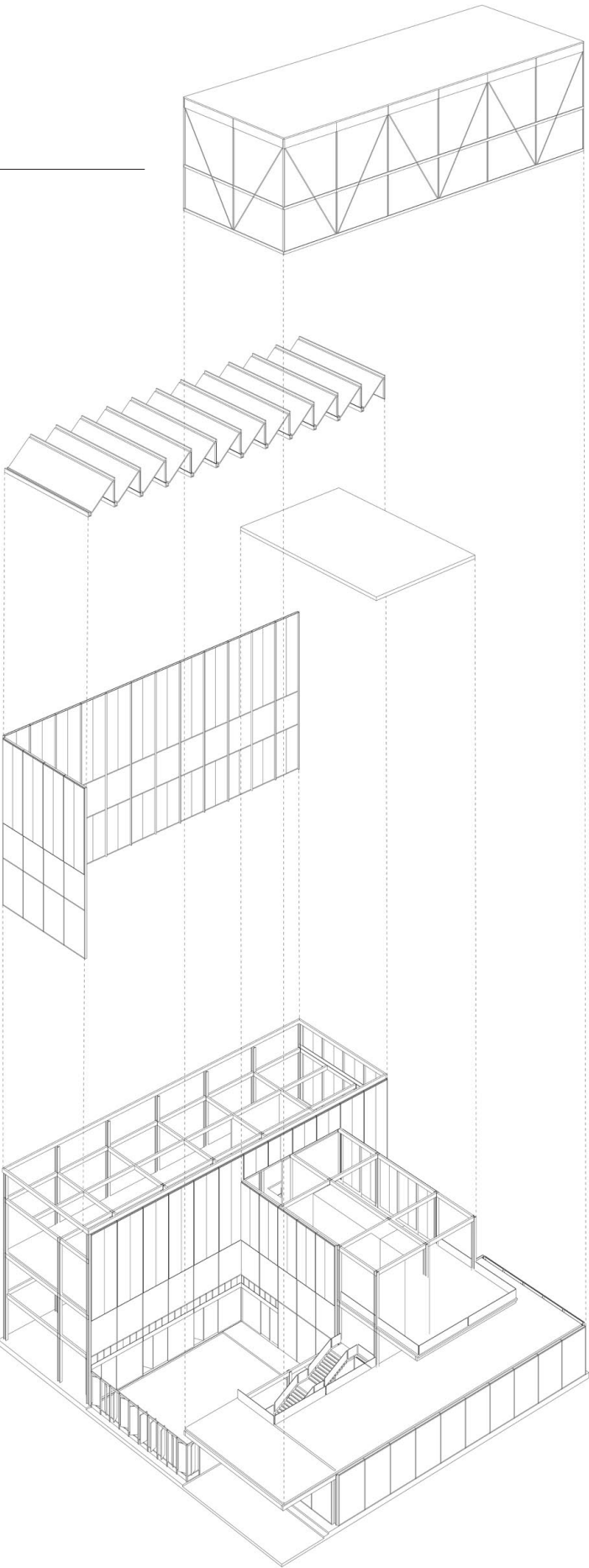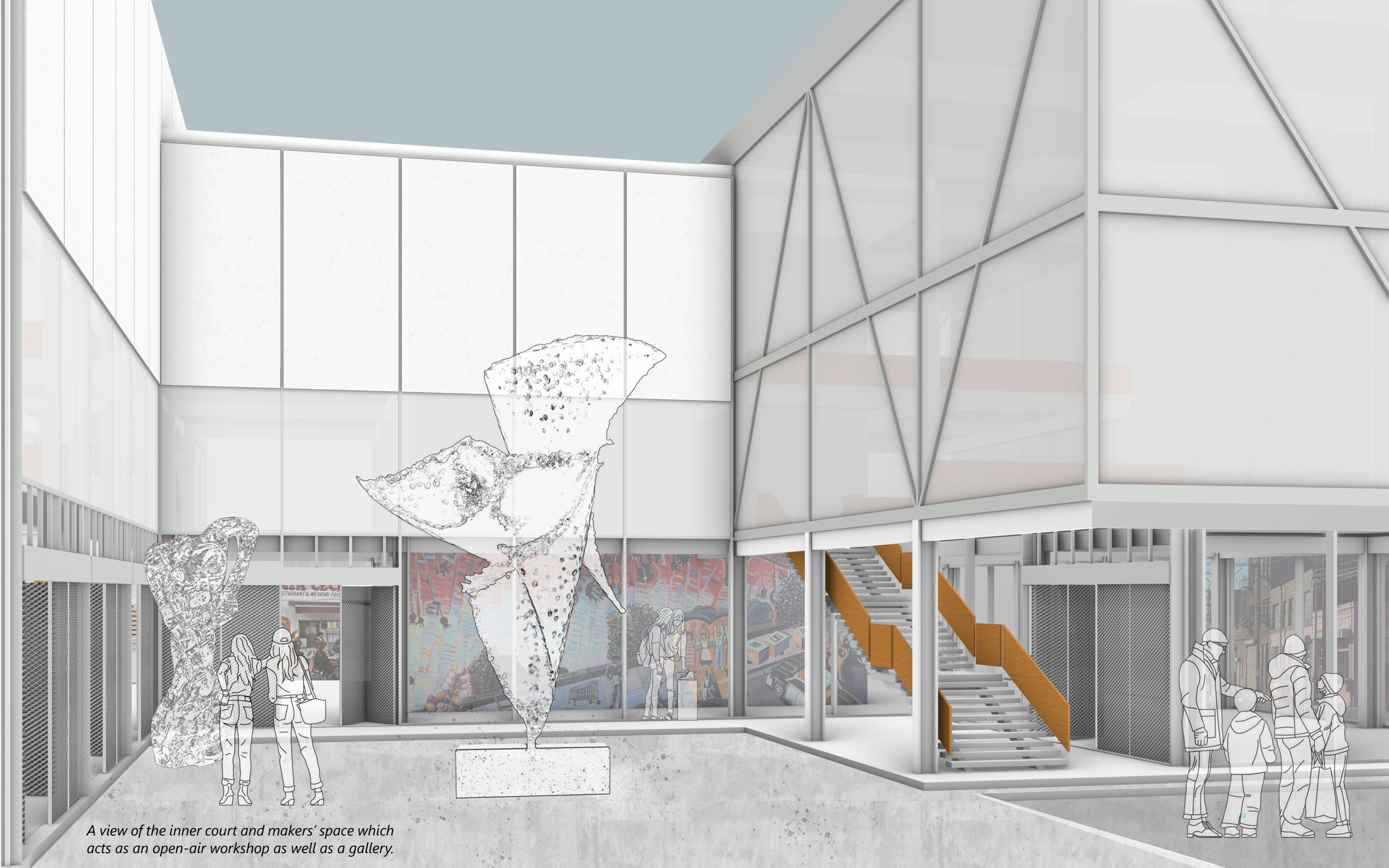
*A view of the inner court and makers' space which
acts as an open-air workshop as well as a gallery.*

02 | PEEPHOLES

A Low-cost Primary School for Melanikuzhi Village, India

PROFESSIONAL | PRO BONO

I led this project on behalf of a non-profit called **One School At A Time** (OSAAT) India. My role involved site surveys, documentation and design, ranging from creating conceptual proposals with community members, design and construction drawings to arranging for labor and local materials. Owing to supply-chain and labor-related issues during the pandemic, this project is unrealized.

"THIS is our school, the school of our town", a sign proudly reads in a nearby village.

Every surface in a classroom is used by teachers to create low-cost learning tools.

In many villages, secondary schools double up as community gathering spaces in the weekend.

Three **design alternatives** using different building technologies were proposed to community members, local builders and school authorities to elicit participation and narrow down upon a cost-effective and culturally sensitive scheme.

BRICK VAULT

LINTEL BEAM

JAALI WINDOW

FILLER SLAB

1.00

3.00

0.60

1.40

3.00

0.60

1.40

RCC FILLER SLOPED ROOF

LINTEL BEAM

JAALI WINDOW

FILLER SLAB

1.50

3.00

3.00

0.60

1.40

RCC FILLER SLOPED ROOF

JAALI WINDOW

SHORT LINTEL

FILLER SLAB

1.50

3.00

3.00

1.20

1.40

RIDGE PLATE

POLYURETHANE
FOAM (PUF) PANEL
Factory cut for
quick assembly. Less
labour-intensive than
tiled-roofs, which
are common in the
region.

STEEL PURLINS

PUF SIDE PANEL

RCC RING BEAM

STEEL RAFTERS
Pre-fabricated for
quick assembly. Gable
shape allows air circul-
ation and prevents
overheating.

POROUS WALL
Placed on the east and
west facades to capture
north-eastern and south-
western cool winds
year-round.

SOLID WALL
Placed on the north
face of to block harsh
summer sun between
April and October.

SHORT LINTEL

MILD-STEEL DOORS
As a low-cost alternative
to wooden doors, MS
sheets are reinforced
with 1" MS strips, and
painted in a bright
vermillion hue.

COMPRESSED
EARTH BLOCK
WALL (CEB)
This load-bearing wall
is made of CEB, which
is manufactured in-situ
using locally available
soil. CEB can be made with
readily available moulds
in large quantity, and
sundried. The wall provi-
des great insulation and
requires no plastering.

JAALI FOR VENTILATION
Jaali (perforation) is a traditional
Indian architectural element that
promotes ventialtionin hot-humid
climate.It is also a low-cost and
low-maintenance alternative to
glazed windows.

FLOORING: INDIAN
PATENT STONE

FOUNDATION: RCC COLUMNS
UPTO PLINTH LEVEL

03 | STORIES ON THE FRINGE

An Alternate Public Library

UNDERGRADUATE THESIS PROJECT

Mentors: Guru Prasanna C, Dev Bildikar

This project de-institutionalizes the public library building typology and occupies four conservancy (service) lanes in the neighborhood of Shankarapuram, Bengaluru, India.

An aerial view of libraries occupying the back alleys in a residential neighborhood block of Shankarapuram.
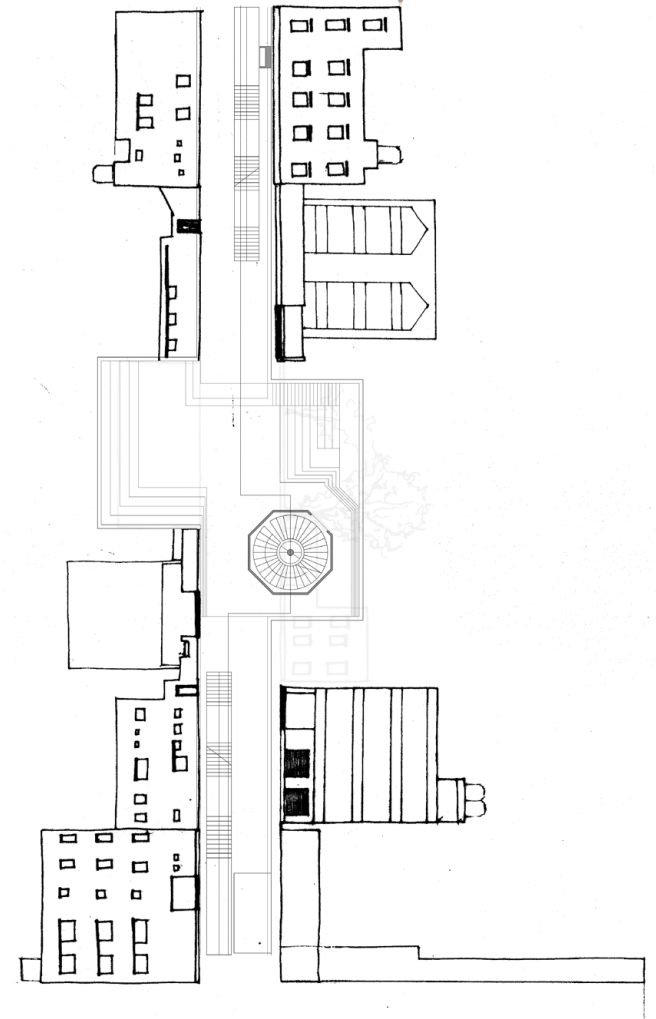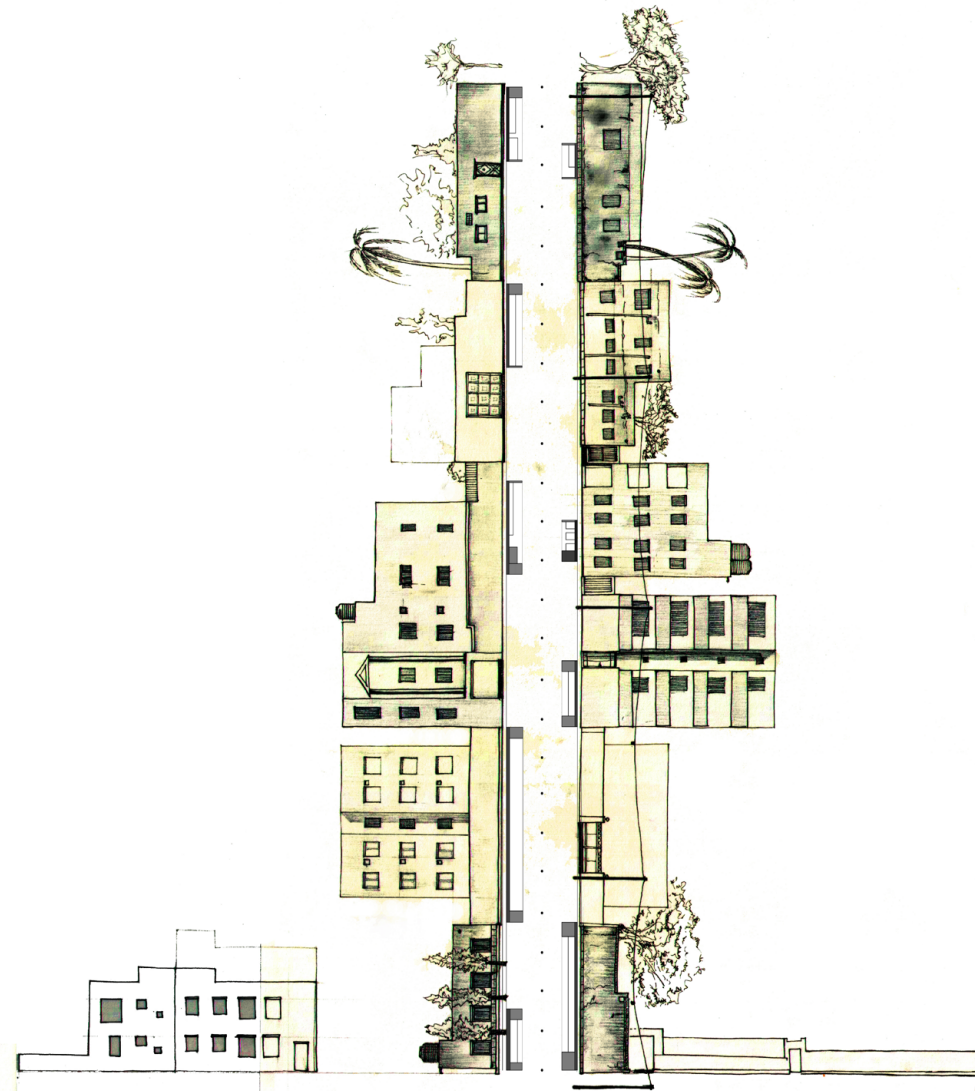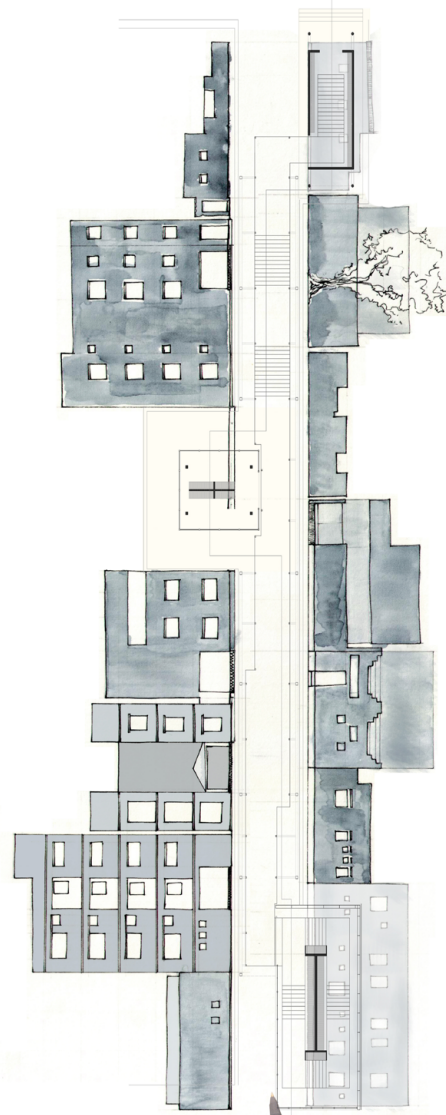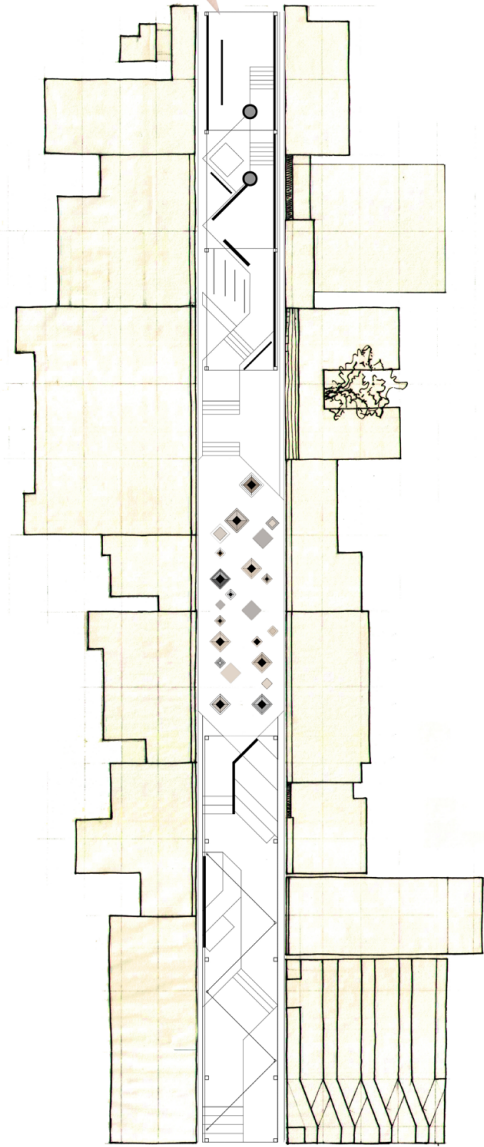
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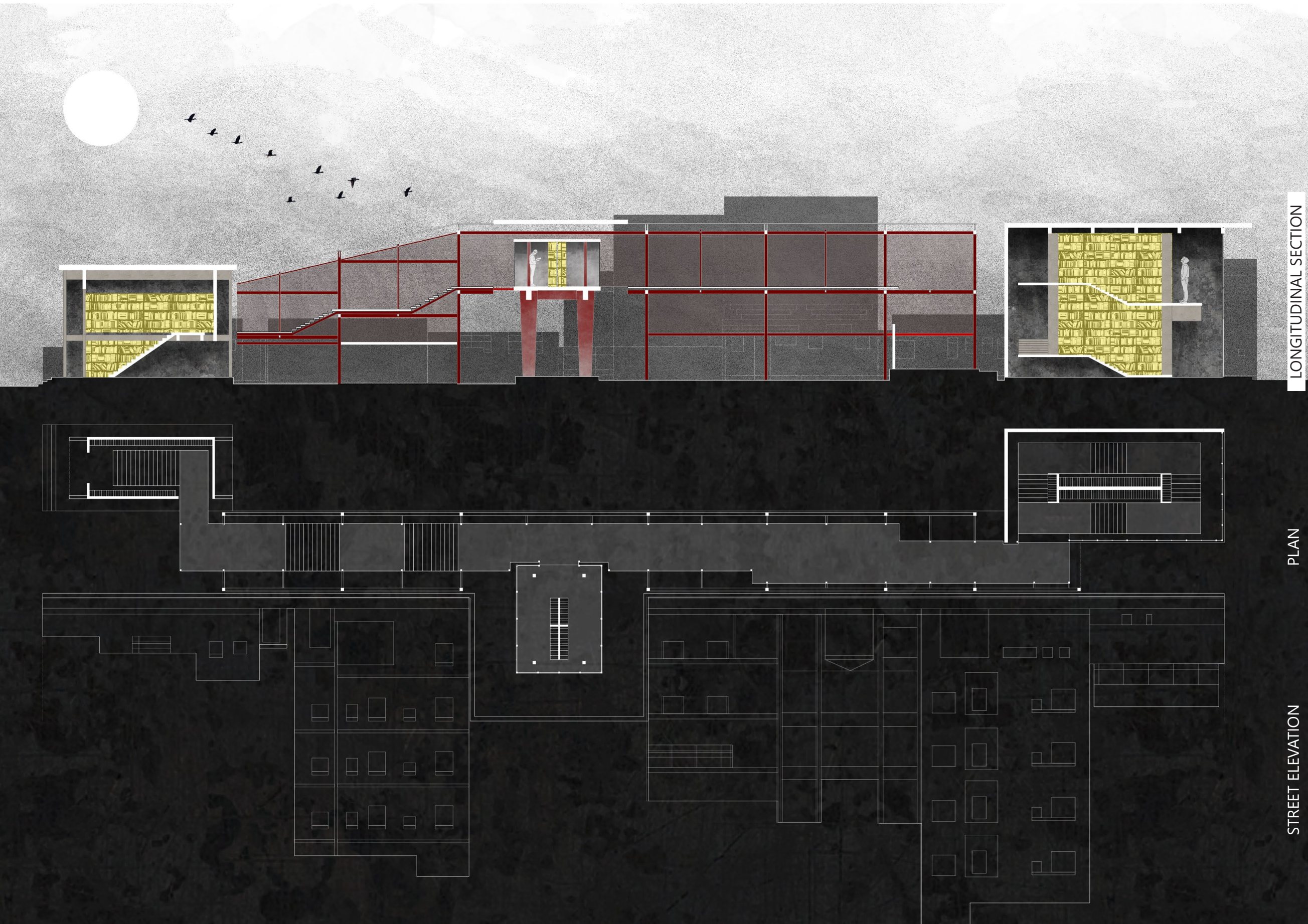The **USER** doesn't fit into a "demographic". Which two people assimilate knowledge the same way?

A place to mobilize needn't have the appearance of an **INSTITUTION.**

ARCHIVAL must be participative and informal, and for all physical artifacts that have collective value.

The **SITE** is entangled with the stories of it inhabitants and cannot merely hold reading rooms.
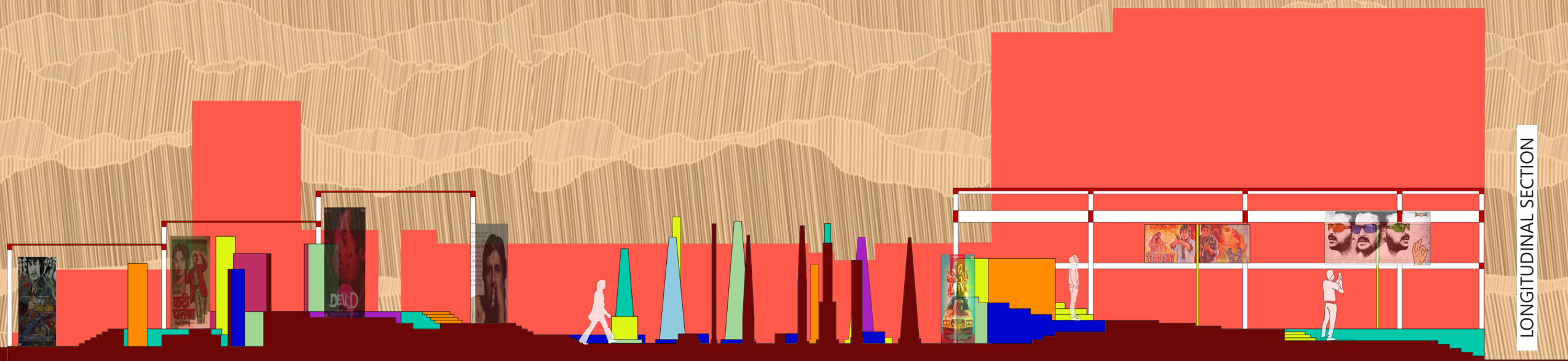
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One of the four streets functions as a restricted library. It has semi-enclosed walkways leading to a crypt called a "**giftschrank**". As articles which are now banned/taboo become acceptable to society, the contents from this library circulate into other sections, while the contents of others might find their way into the crypt.
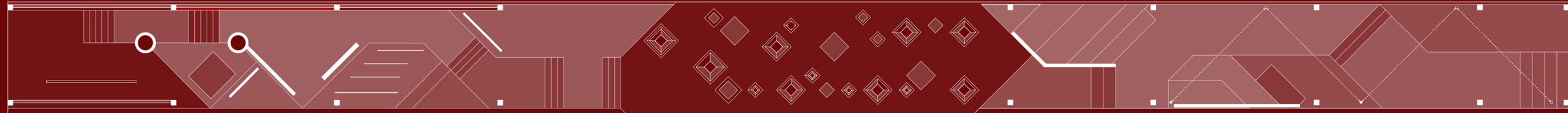
PLAN

STREET ELEVATION

Another street contains the library of the "Impermeable Man", inspired by the 1970s Alvin Toffler book 'Future Shock', who is subject to "information overload". The library is an abundance of visual and auditory information all at once, much like the digital worlds we inhabit.
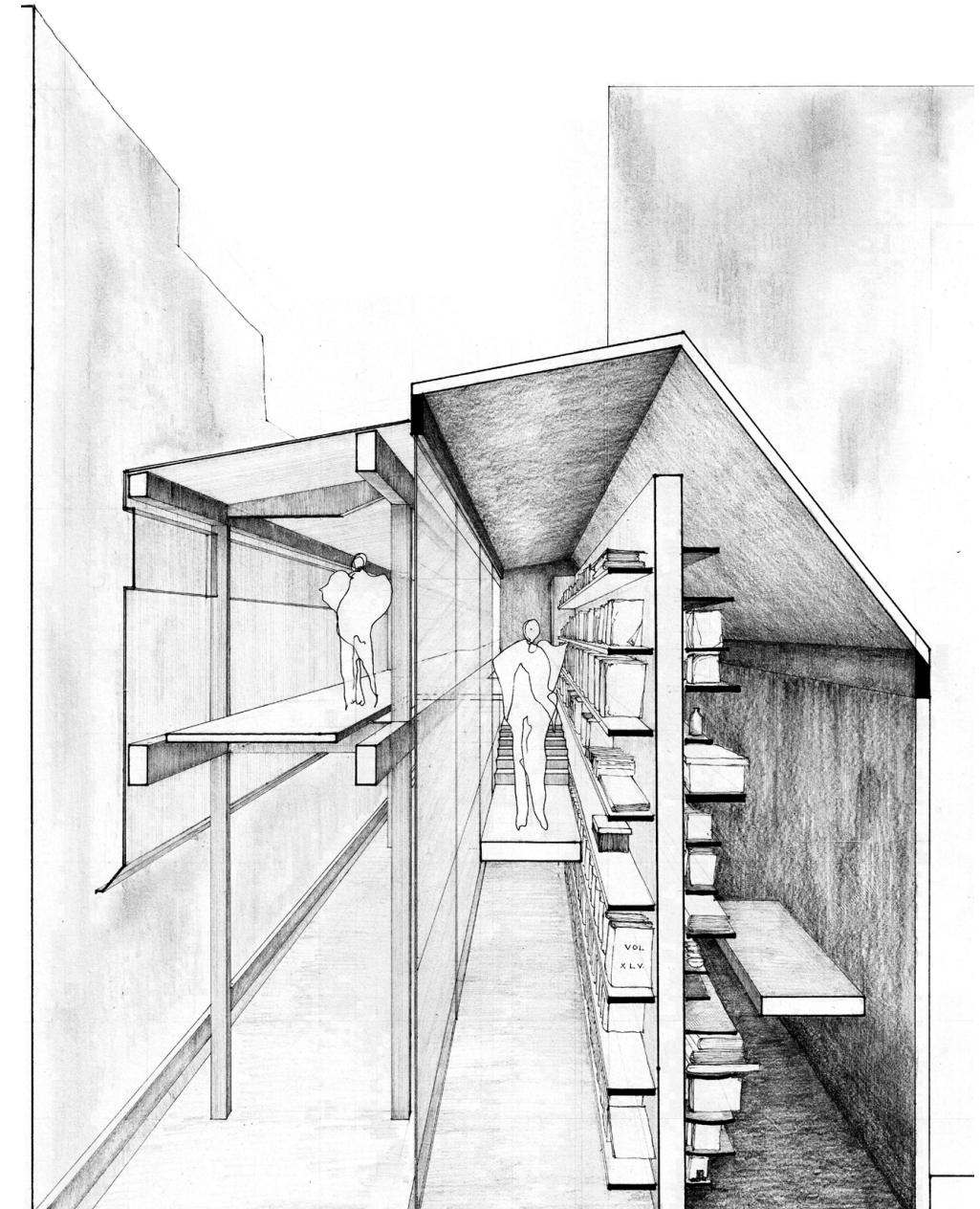

Gallery of visual overload

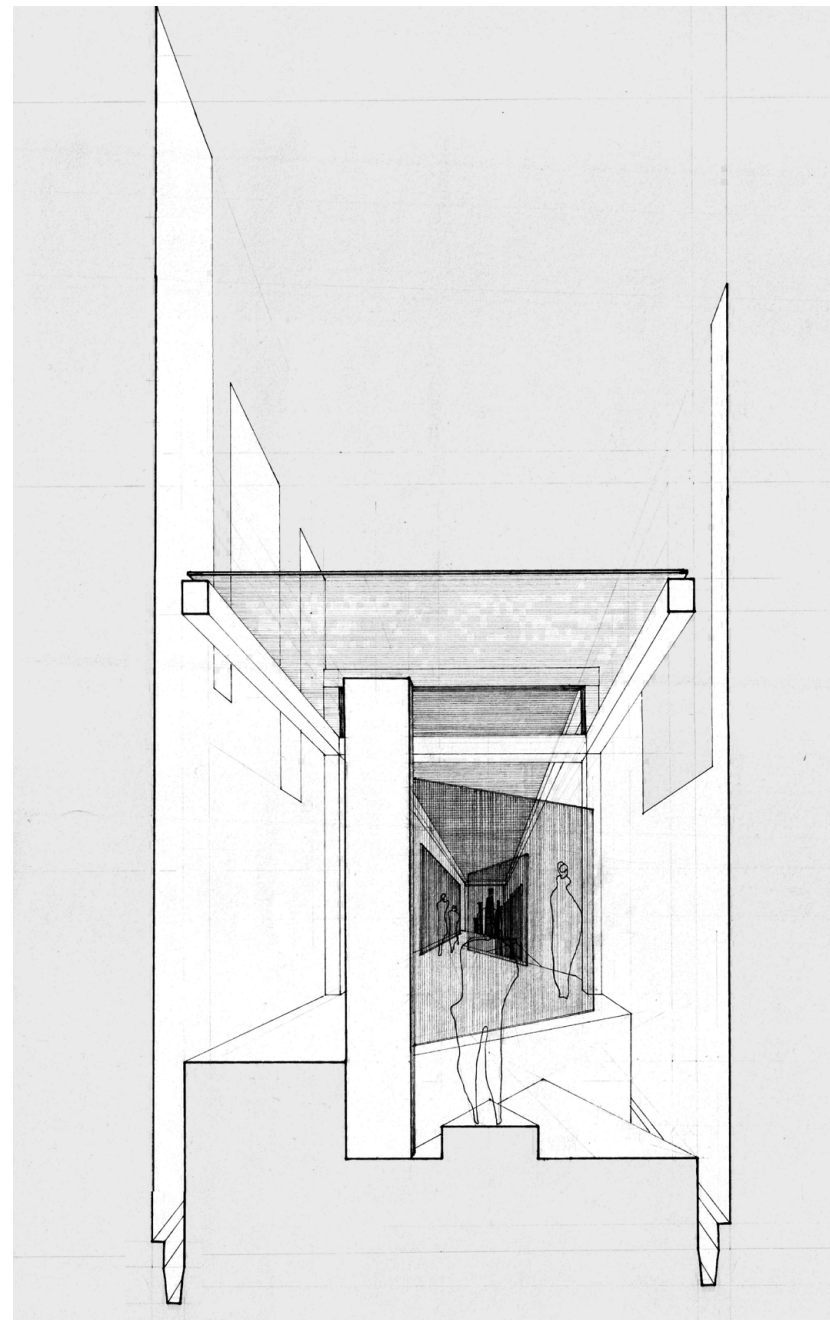*Court of mock-obelisks*

Gallery of sounds

LONGITUDINAL SECTION

PLAN

STREET ELEVATION

A public library should be able to pop up anywhere, even if the "site" is four 10-ft wide back alleys. This design considers each of the homes (windows and egress) located in these alleys and weaves a library amidst them.

An 18" x 18" x 20" tea table crafted for a post-human tea ritual based on the principles of mindfulness present in the Japanese tea ceremony.

04| MATERIAL FANTASIES

Projects which re-imagine our relationship with everyday materials and rituals

GRADUATE | DESIGN RESEARCH

These projects, made over multiple semesters, are a part of my independent research as a graduate student. They combine my learnings in contemporary philosophy with various processes of making that are integral to design. Through the use of material and methods of crafting, they are intended to evoke a consciousness towards **more-than-human agents** who we share the world with.
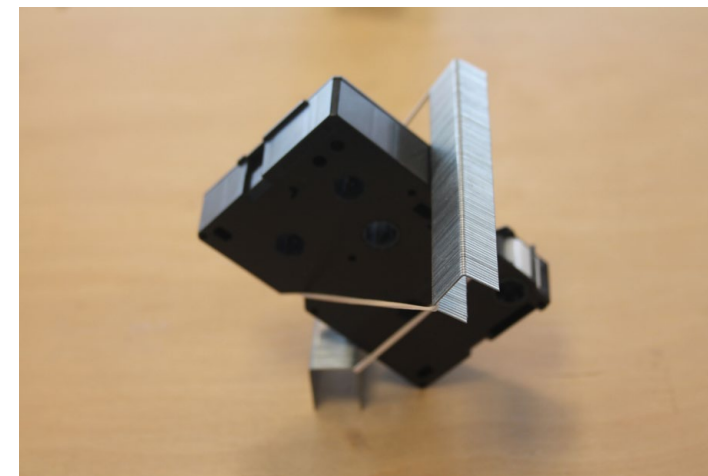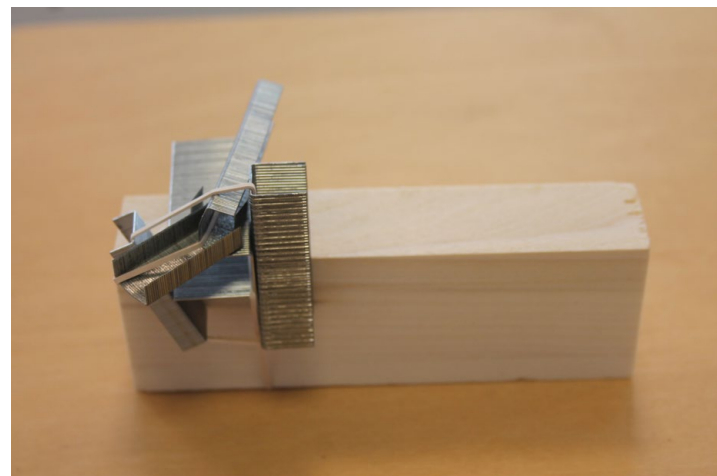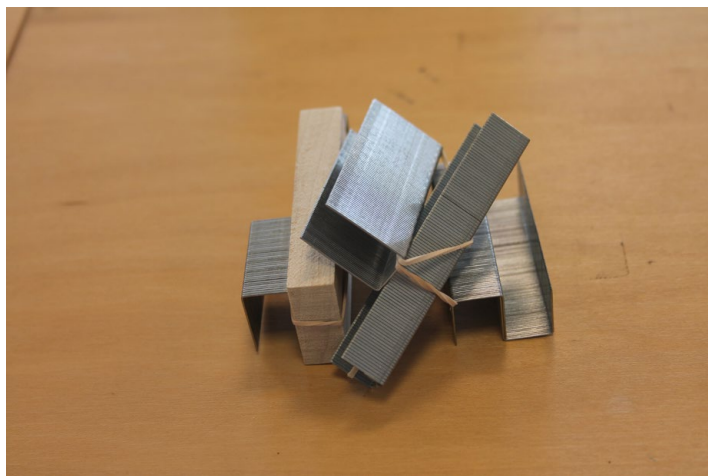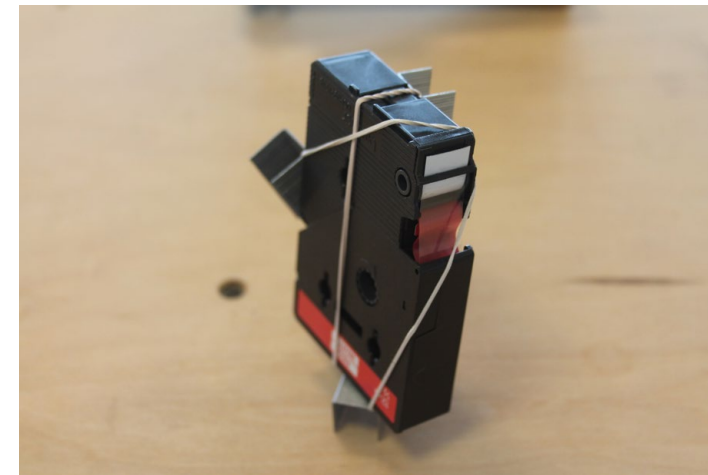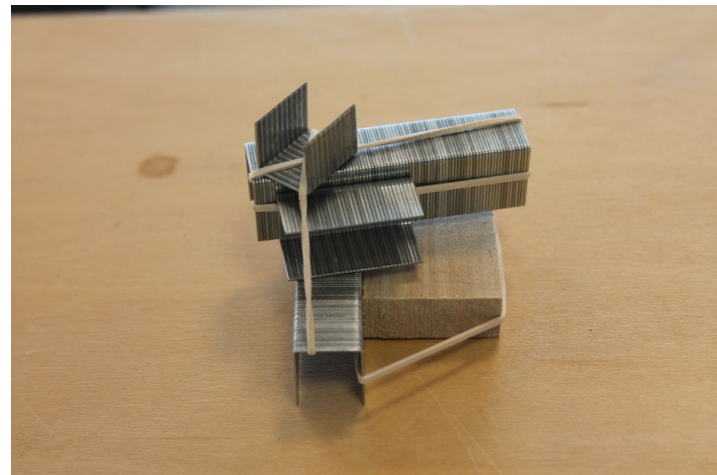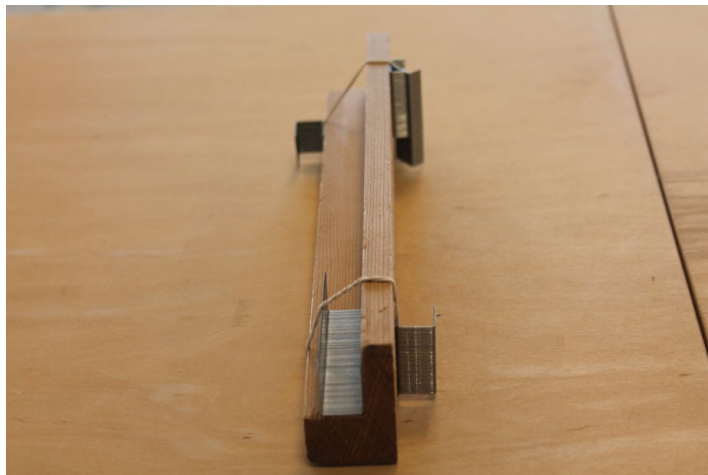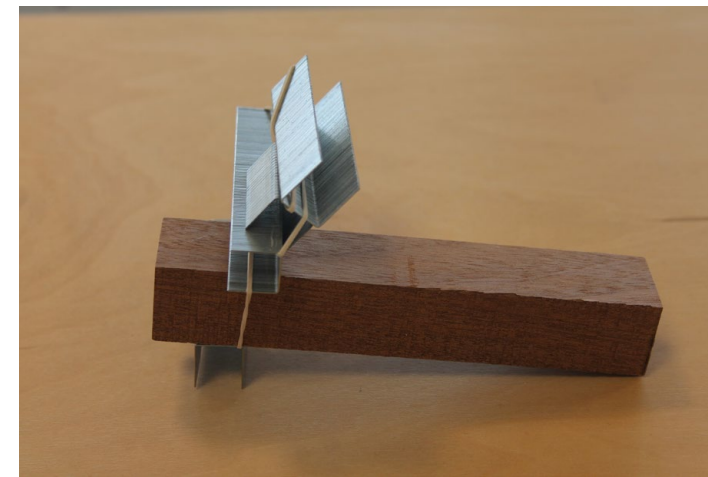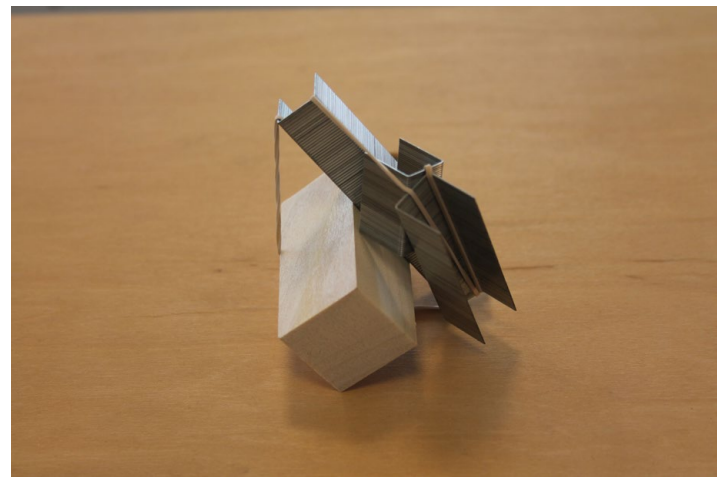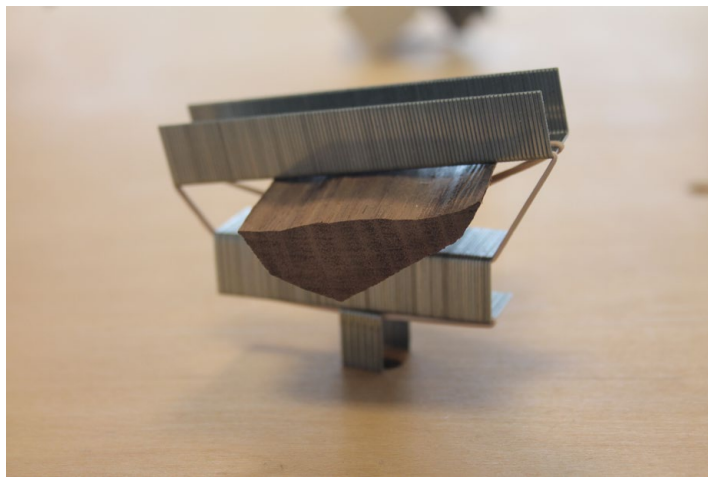
STATIONERY ENSEMBLE

These assemblages are an experiment in creating 3D physical models, ubiquitous to the architectural studio, out of excess material. Breaking from the tradition of using new materials that will yeild to the agency of its user, these models attempt to build through the act of playing with found materials. Even though these models are only abstract spatial compositions, they are highly useful in the design process to test out initial conceptual ideas. In many cases, negotiating the properties of the objects itself use will yeild unique spatial forms that new materials may not.

EXHIBITIONS:
Material Realities, UVA School of Architecture

FACULTY ADVISOR: Sanda Iliescu

FOUND SAMPLES

Among several "found" materials foraged, the three that proved most exciting were discarded tea bags, dried-up seed pods and discarded cuts of live-edge bark.

MAKING BUILDING MATERIAL

Material prototypes were created to test two ideas: porosity and flow. Each prototype can function as building material by itself..

PROTOTYPES FOR CONSTRUCTION

Pushing our testing process a step further, we created scale models of a table that would embody both ideas: porosity and flow, without using all the same materials.

Re-CHADO

A tea table is crafted by hand from discarded, termite-eaten pieces of bark which allow water to flow through. For the table-top, pieces of wood are deliberately arranged to direct the water towards the center, while slowing percolating through the pores and reaching the ground. The "ritual" of watching the water flow into the ground, while activating the scent of the wood, creates a new type mindfulness between the participants. Since no adhesives are used in making the prototype, the "tea" will slowly break down the table over time, making each experience ephemral and unique.

COLLABORATOR: Juwuan Wright

FACULTY ADVISOR: Katie MacDonald

The Trade Triad

An urban history project about discovering the former Portuguese colonial city Panjim, Goa by foot

PROFESSIONAL | WORKSHOP + EXHIBITION

Mentors: Pratyush Shankar

This project draws, documents and analyzes the urban vestiges of a colonial Indian city through maps and drawings made by hand and discovered on-site, through speculation as well as archival evidence.

ADMINISTRATIVE AND TRADE

This drawing focuses on the part of Panjim where the Portuguese set up base for the first time. The Mandovi River enabled the movement of ships inland, where goods could be off-loaded and make their journey into the subcontinent. A King's Palace, a customs office and dock become strategic allies in opening up an opportunity for the influx of Portuguese ships.
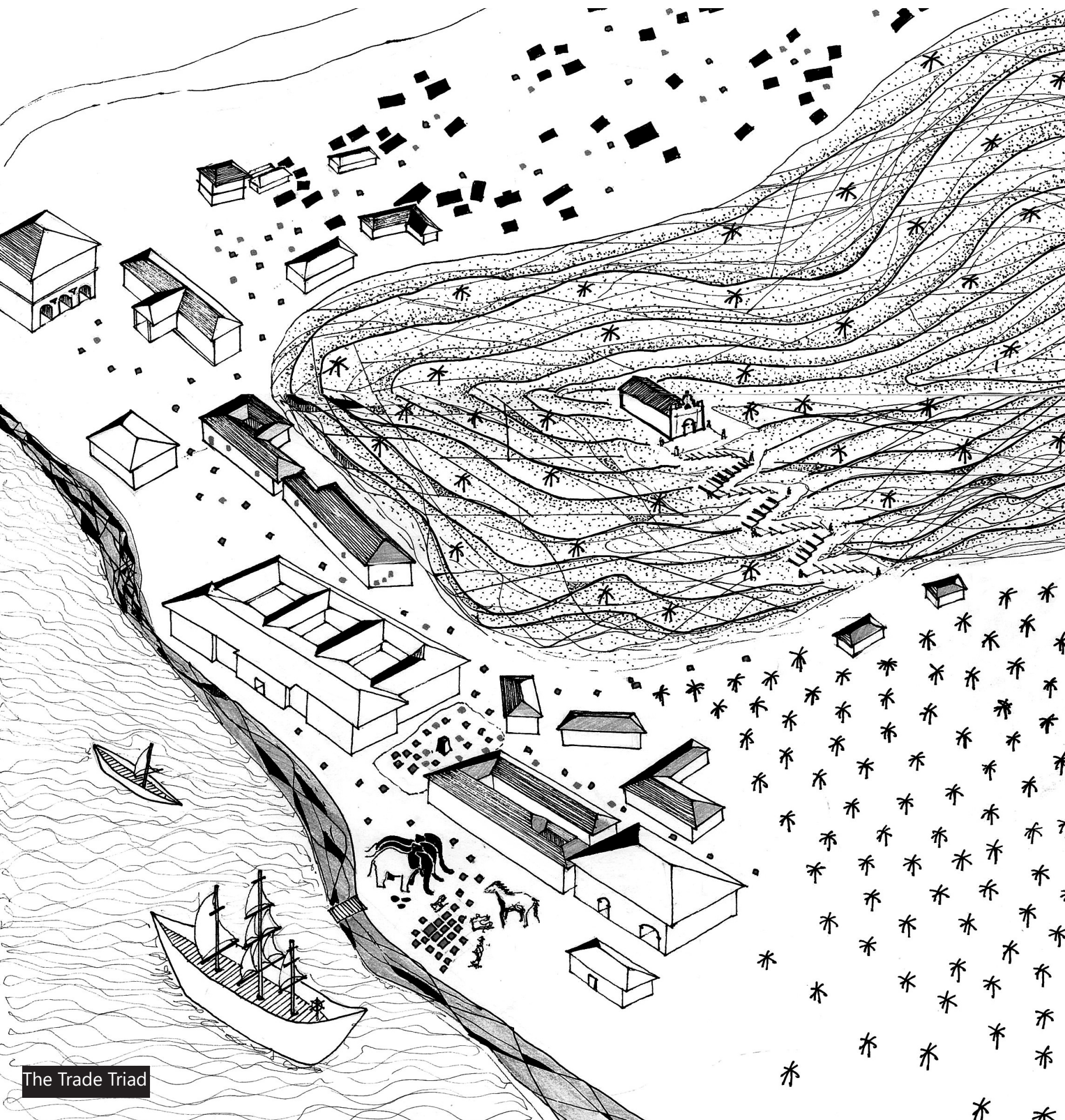
RELIGIOUS INSTITUTIONS
AND POWER STRUCTURES

A heirarchy is established
between colonizers and
locals through religious
institutions. The St. Mar-
ys Immaculate Church, a
dominant entity in the set-
tlement is located prom-
inently atop the hill. Yet
exclusive and inaccessible
to everyone. Smaller reli-
gious spaces, like temples,
are converted into chapels
for the use of locals. A si-
lent power heirarchy takes
shape between the colo-
nizers and the locals.
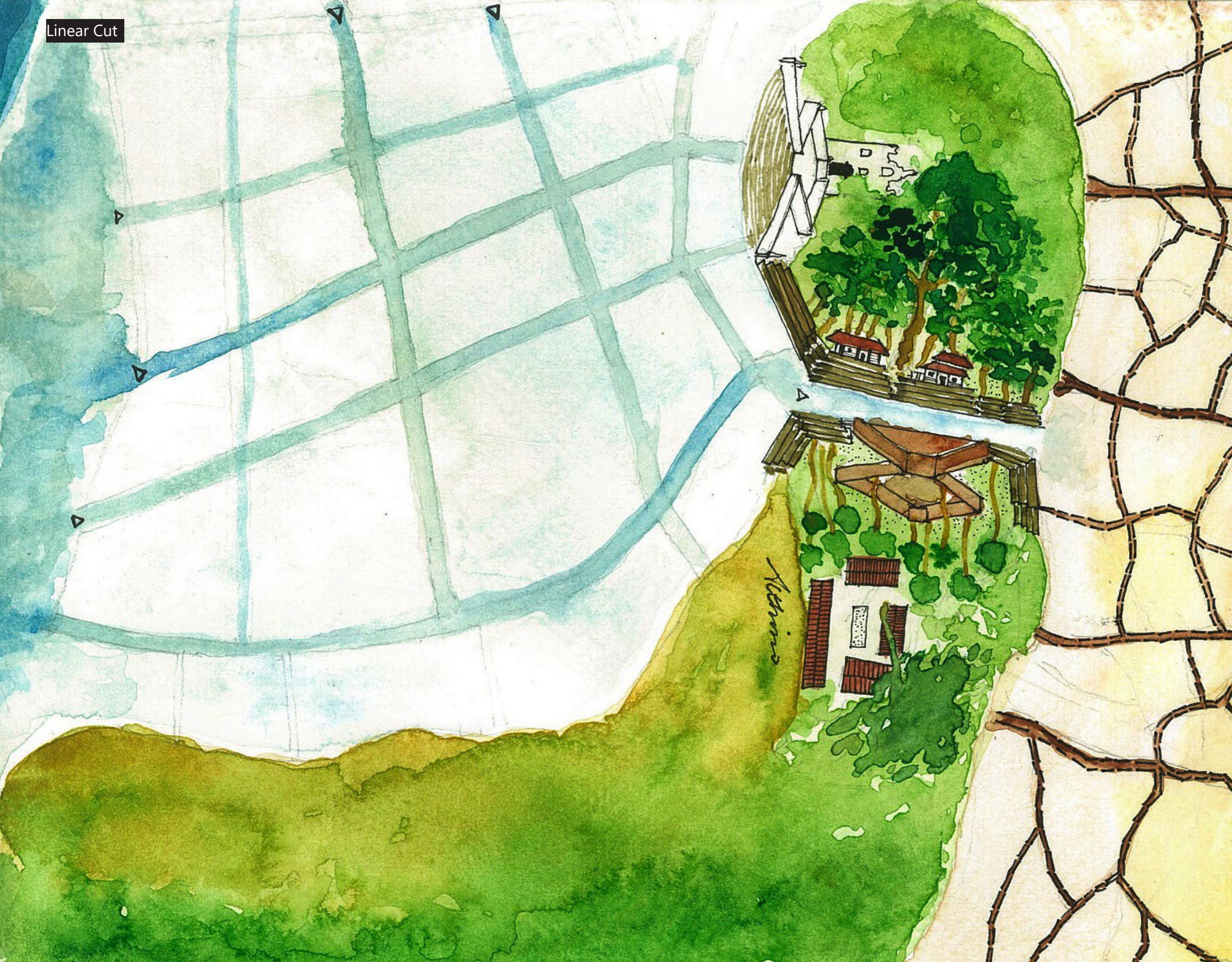
MODIFICATION OF NATURE

An avenue is cut directly through the Althino Hill, a seemingly strange endeavour; directly connects the native town to the White Town.

This is perhaps to allow the movement of fresh sea-breeze into parts of town with rampant disease and detriment.

Section through a speculative folly containing the seemingly continuous and loop-like set of the 2015 film 'Birdman' which, like the protagonist's neurosis, offers no escape.

CONNECT

@

bhargavi.mrth@gmail.com

+1 (434)-249-3287

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