

KATERYNA MALAIA, PHD



'25

Architectural History and Theory **1**

Electives **3**

Studio **6**

Research Methods **18**

Architectural Drawing **20**

Architectural Theory

Taught at the Mississippi State University in Fall 2020, 2021, and 2022.

This **Architectural Theory** survey course is a senior lecture and discussion group course meant to familiarize students with the central texts and documents through the history of architecture from the Ancient World to today. This course sets four student objectives:

- (1) To understand the thinking behind architecture production throughout history;
- (2) To understand the place of texts in architecture;
- (3) To understand the relationship between larger historic world views and their effects on architecture;
- (4) To examine and learn to be aware of ways in which we, as architects, currently think about architectural design.

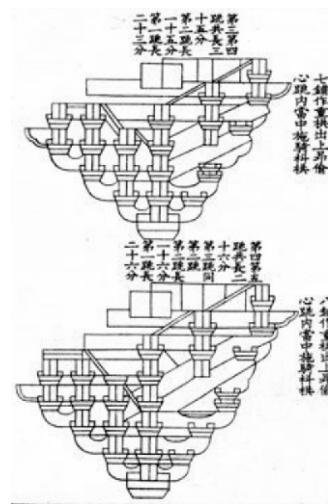
Modules:

- | | | | |
|--|--|--|---|
| 1. What is Theory?
Thinking behind
architecture | 4. Islam, Christianity,
<i>and reading about
Topkapi Scroll</i> | 9. High Modernism
and Preservation,
reading Gropius,
Le Corbusier, and
Jane Jacobs | 11. Postmodernism,
reading McLuhan,
Venturi and Koolhaas |
| 2. Plato, Aristotle,
and reading Vitruvius | 5. Renaissance,
Reason, Reaction,
and reading Alberti | 10. Phenomenology,
Structuralism, and
Spatial Turn, reading
Pallasmaa and
Lefebvre | 12. Postcolonialism
and Race in Built
Environment, reading
Said and Wilson |
| 3. Confucius, Lao
Tzu, and reading
<i>Yingzao Fashi</i> by
Li Jie | 6. Arts and Crafts vs
Functionalism, reading
Ruskin and Loos | 7. Understanding
a Plan, reading Van
Slyck | 13. Uncertain Future,
reading Colomina |

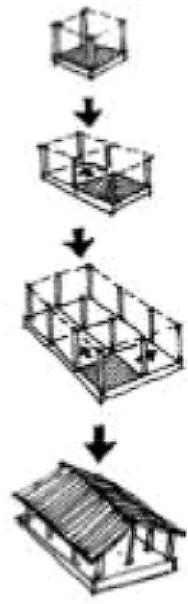
Module Example:

3. Confucius, Lao Tzu, and Yingzao Fashi Manual of Building Standards

Is there an architect in the traditional Chinese architecture? Unlike in the ancient Greco-Roman tradition, there is no figure of an architect in the traditional Chinese architecture. Instead, there are craftsman who follow construction manuals put together by civil servants. Chinese civil service, the administrative system of the traditional Chinese government, the members of which were selected by a competitive examination. The Confucian belief that the state was the moral guardian of the people was reflected in a number of institutions. At the same time, within the rigid system of rules and dimensions of the Chinese tradition architecture, there is still place for the Taoist principle of incompleteness:



An illustration of a bracket system from *Yingzao Fashi* building manual



A system of *Jian* modules and their endless repetition



A craftsman carrying modular pieces of wood from *Yingzao Fashi* building manual



Forbidden City roofs,
Beijing, China

Elective Course

Housing Insecurity in Mississippi

Architectural education in the context of the current crises cannot be limited to quick design solutions. Therefore, this project addresses one of the main current day challenges in North America—the growing housing insecurity— through research and architectural fieldwork course taught at the Mississippi State University School of Architecture. In this class, students studied the problem of housing insecurity globally and locally in the American South through the lens of architectural documentation, learning from community members, and oral history collection. The course resulted in a traveling exhibition and oral history collection. The exhibition and collection are expanding.

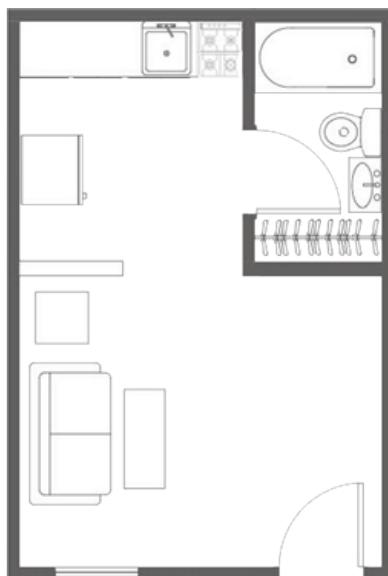
Modules:

- | | | | |
|--|---|---|--|
| 1. Introduction:
Housing Insecurity
in the United States | 3. Oral History
collection methods,
best practices,
and IRB training | 6. Oral History
Collection

- Group interviews
with 2-4 students
- Transcription
- Drafting and
archiving collected
architectural
data
- Community
“listening parties” | 7. “Housing Insecurity
in Mississippi” traveling
exhibition and website
development |
| 2. Community partner
presentations | 4. Oral History
collection practice | | |
| | 5. Architectural
documentation
practice field trip | | |

Co-authored with
Sivlina Lopez Barrera.
Taught in
Fall 2021, 2022.

Evictions in Mississippi resumed immediately after the federal COVID-19 moratorium was lifted in August 2021. We documented the residential spaces and stories of the community members affected by the mass eviction wave that followed.



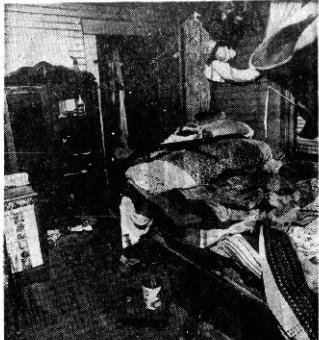
Interview and apartment plan recorded by the student team with Starkville, MS resident Kristy B., October 2021



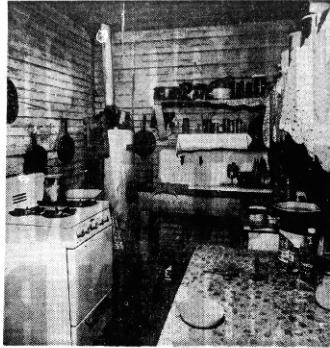
"I have four daughters and we've always been able to laugh and joke and play and most of the time anybody's secret that's gonna get told is gonna get told in the kitchen you know... When we're in the kitchen and we cook with each other, we laugh and we joke..."

...that's all I know, that's how my grandmother did it, that's how my mom did it. No matter how bad a situation is, we can sit and talk about it and it's gonna-it's gonna feel better even if it's not better after we finish eating this pie. It's gonna be better. So, I lost all of that for a little while."

2 The Clarion-Ledger JACKSON DAILY NEWS
SECTION C Sunday, August 1, 1971



NOT THE LIFE BEAUTIFUL
Leaving Depressing Setting Behind

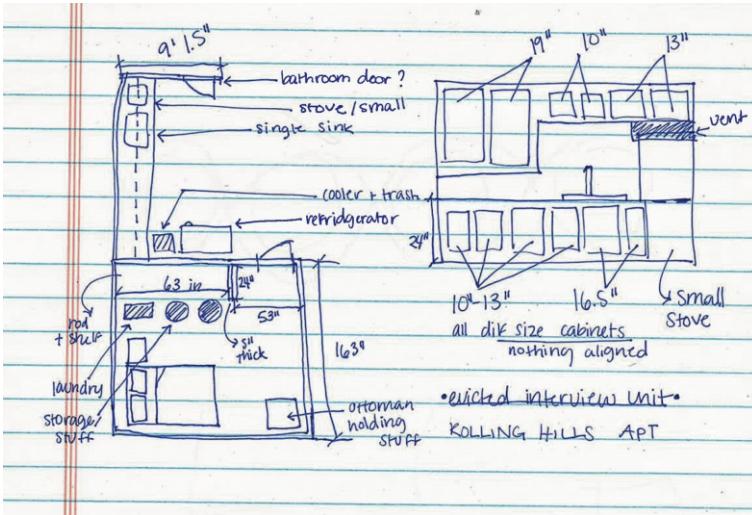


TARGET OF HOUSING PROGRAM
This House Was Rebuilt

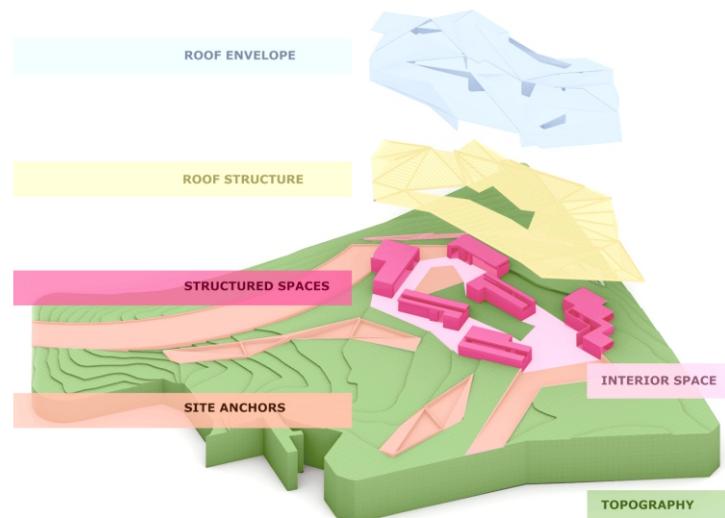
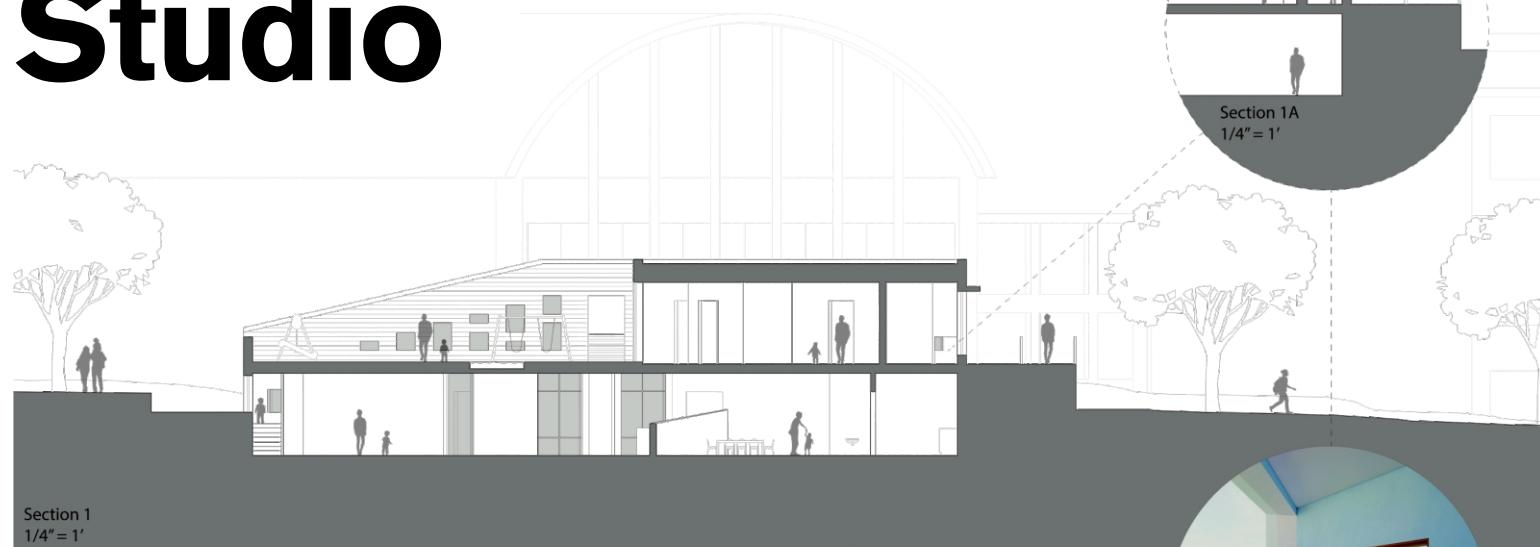
MISS Seeks To Improve Local Housing Conditions



Research and fieldwork artifacts collected in Fall 2022. Exhibition held at the Mississippi State University in February 2022.



Undergraduate Studio



Daycare on Campus Sophomore Studio:

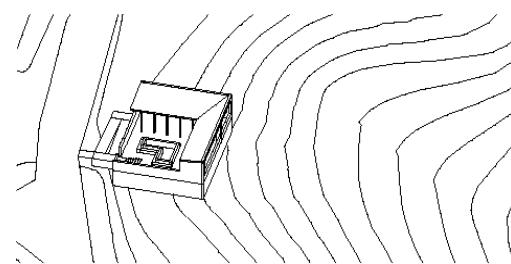
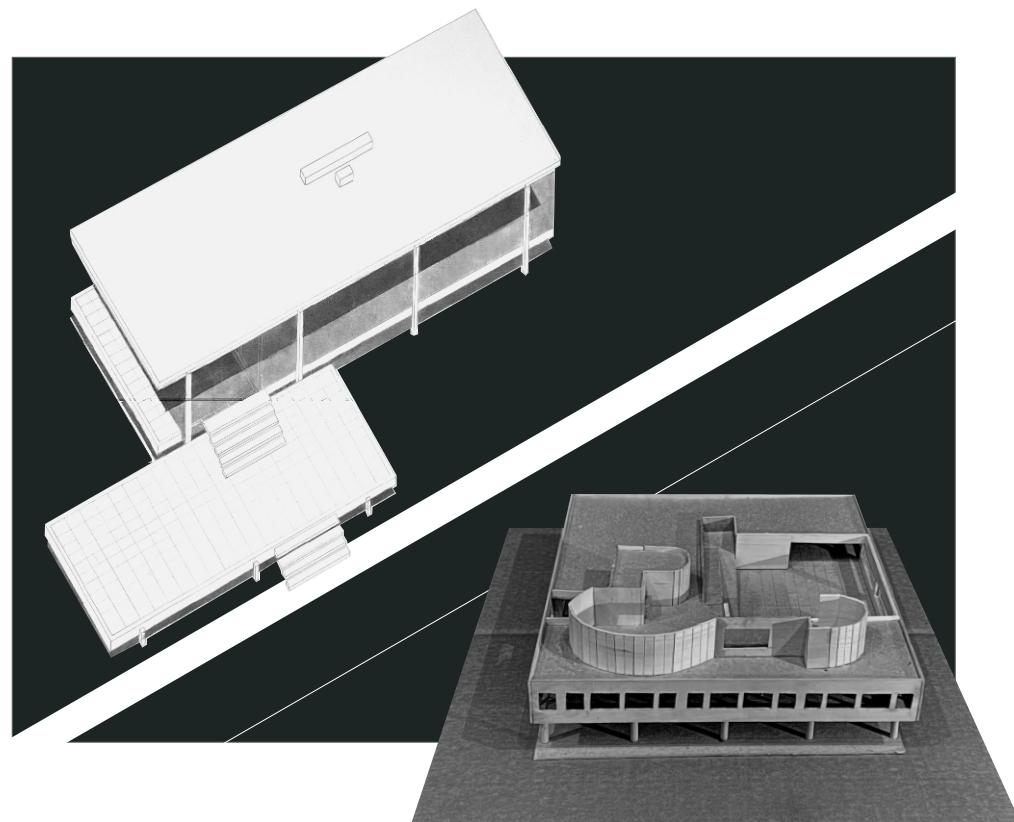
In this studio, students were asked to design a small daycare for Mississippi State University campus. Students had to address several challenges: 1) the difference in scale between an adult and a child; 2) the separation of flows between the students, parents, and teachers; 3) a site with an uneven topography; 4) and the need for firm but non-oppressive boundary between a lively campus area and daycare outdoor play spaces.

Undergraduate

Foundations Freshman Studio I and II Summer Session:

The first freshman studio focused on the tools of architectural communication. Through studying free hand drawing techniques, plain air drawing, measuring and drafting an existing stair, and finally analyzing and copying a famous piece of mid-century architecture, students learned about the methods of architectural communications and design, drafting, and modeling conventions.

The second freshman studio introduced students to the principles of design thinking and designing in context, through first requiring them to design a stair, an opening, and finally an open air pavilion that contained both of these elements at a site on campus.



Student work by Cole Arlington and
Billy Guevara-Gonzalez, 2022

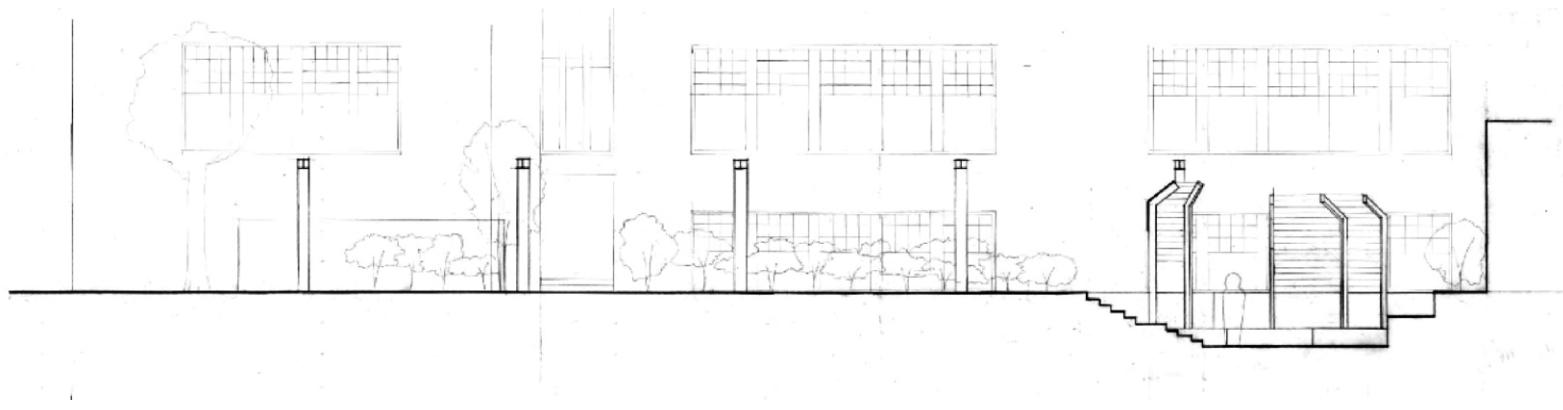
Undergraduate



Reading Out Loud as Social Event Sophomore Studio:

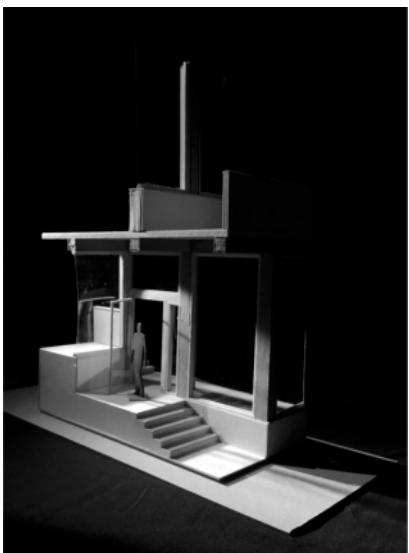
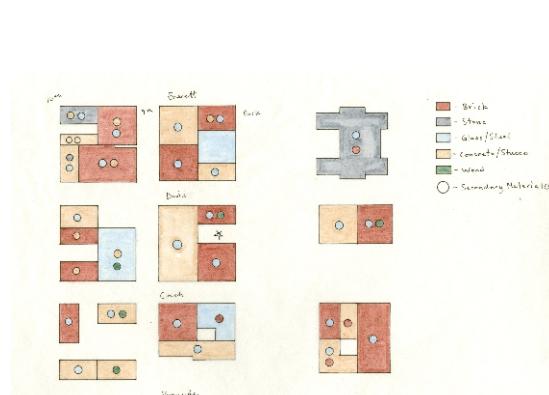
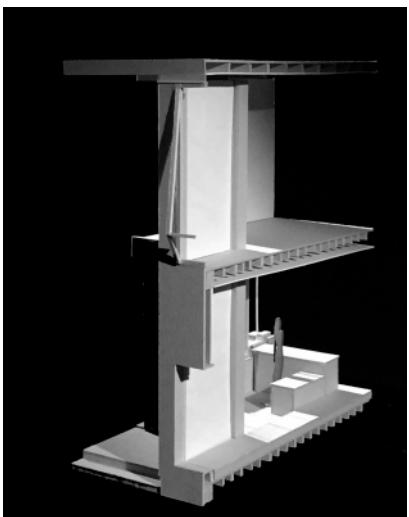
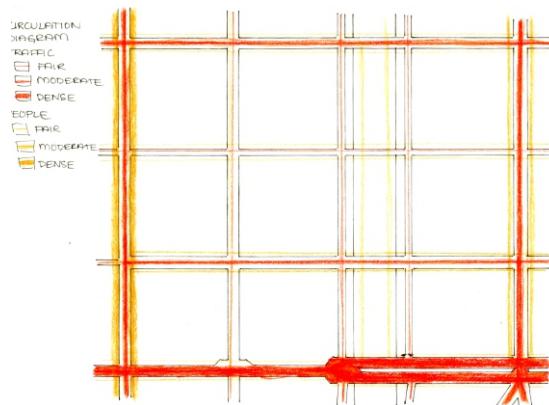
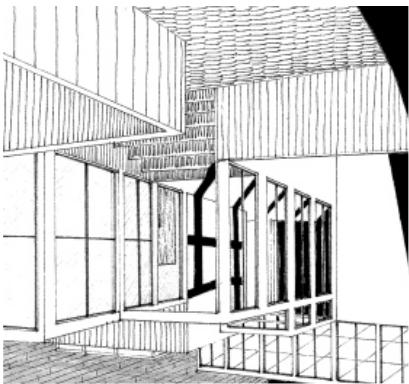
This first sophomore studio investigated:

- the orientation and context of a particular assigned location;
- the act of reading out loud to an audience;
- the contribution and use of familiar and perennial architectural elements in multiple, nuanced ways.
- the cultural import of literature in the form of the text animated by voice.



Student work by Sandra Garcia Garcia and Ian Vickstrom, Portland State University, 2019

Undergraduate

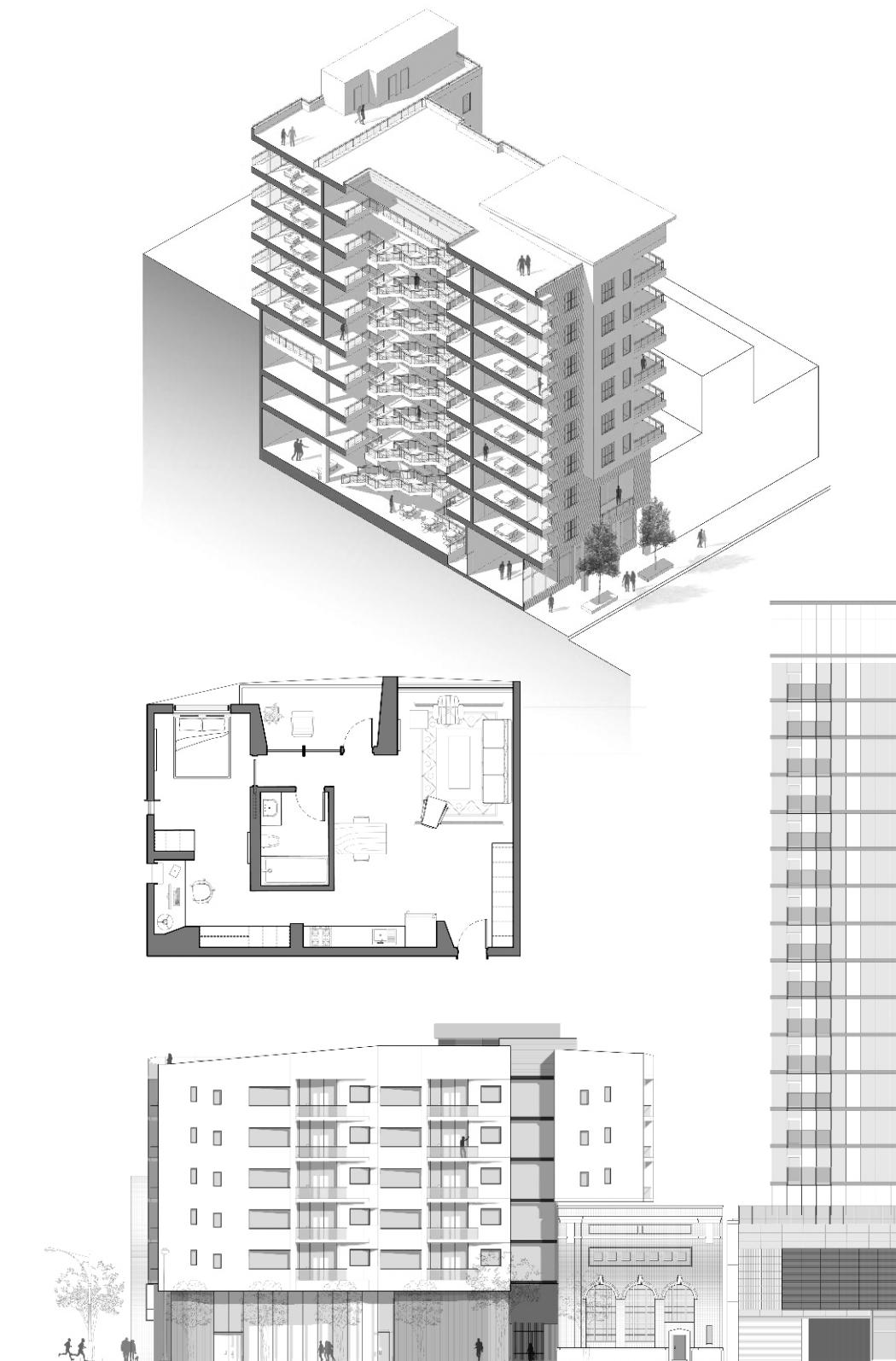


Shaping a Place for Arts Junior Studio: Learning from Park Avenue in Portland, OR

This studio explored the relationship between architecture and consuming art in a dense urban environment, through designing a building for an art foundation. Students investigated a site in an area with the highest concentration of art galleries and social services for the homeless population. After that they constructed a fragment of the art foundation's façade. Finally, students designed a building for an art foundation, according to the programmatic requirements for a gallery space, while also responding to the challenges of this vibrant and diverse city district.

Student work by Claire Dimmick, Don Klein, David Maldonado, and Kiet Nguyen,
Portland State University, 2019.

Undergraduate



Mixed-Use Residential Development in Chicago:

This studio introduced students to the qualities of dwelling in the city: density, light, sound, climate, history, social interactions, and more. Aware of current challenges, this studio asked students to consider the repercussions of the global pandemic for dense urban housing. In addition, this studio focused on the basics of zoning and building code, with the specific urban location in Chicago originally unfamiliar to the majority of the students. The studio unwrapped in four stages: site analysis, conceptual design, plan and section development, and facade strategies.

Student work by Will Russel and Maddox Hazel, Mississippi State University, 2020
Studio coordinated by Jacob Gines

Undergraduate

Housing is always more than just housing.

Residential Development in Downtown Memphis Junior Studio:

—David Madden and Peter Marcuse,
In Defense of Housing: The Politics of Crisis

In this studio, students were asked to develop a mid-rise urban apartment complex with an experimental component in downtown Memphis. Throughout their design, they considered environmental and social conditions of the site, and envisioned their housing design with future Memphis development in mind.

This project addressed the current housing crisis by rethinking the architectural language of an apartment unit and communal space in an apartment block. Students were required to answer several questions:



NORTH BB KIND BOULEVARD ELEVATION

Undergraduate

Social:

- What does it mean to design for a city? Who are the primary users of urban apartment blocks?
- How does a mixed-use residential development serve the needs of a resident, but also the needs of a neighbor, a resident of a different neighborhood, a tourist on a stroll through downtown?
- Can an apartment building be family friendly?

Temporal:

- How does an apartment building age in an urban context?
- How does the spatial configuration of a unit transform over time?

Technological:

- How can you address the issues of thermal comfort in a hot Southern climate via passive cooling strategies in a mid-rise building?
- How do code regulations and city zoning ordinances shape this building?



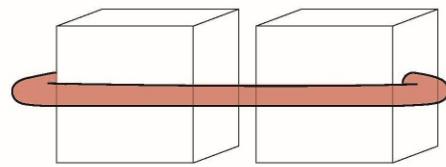
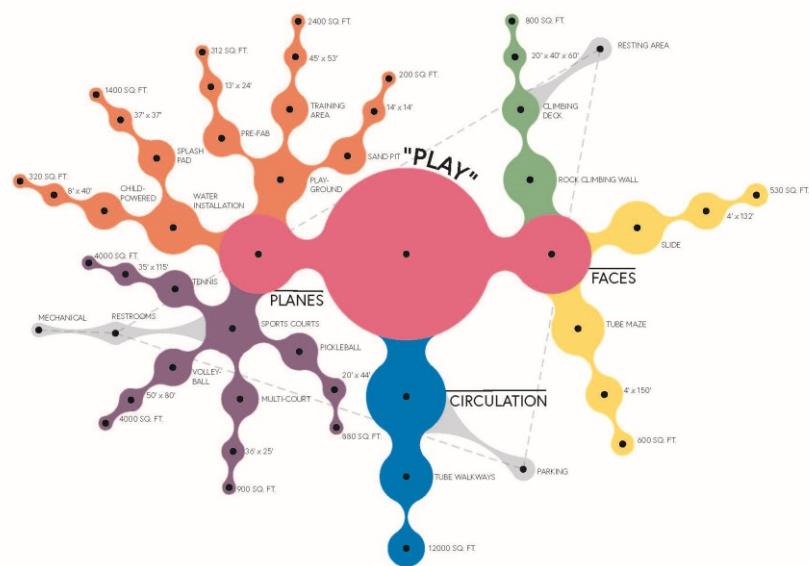
Student work by William Brotherton, 2022

Undergraduate

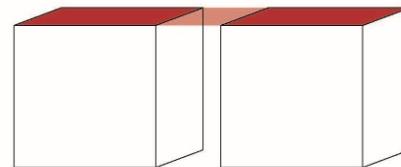
Urban Parasites:

Taking over four blocks of Salt Lake City Downtown, this studio proposed to rethink Salt Lake City density by adding parasitic structures onto the armature of existing built fabric. Students choose a function for their parasitic intervention between dwelling, work, play, or production.

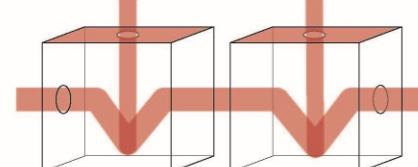
Salt Lake City is in the middle of a construction boom. Old city blocks are leveled to make way for rows of townhomes, mid-rise “five-over-one” condominiums, and new skyscrapers. Soon, there will be no brownfield sites left to develop. What happens to a city center when it no longer has space for redevelopment? How can a city continue growing and changing without displacing residents and sending tons of construction debris to landfill?



"PARASITE AS PATHS"

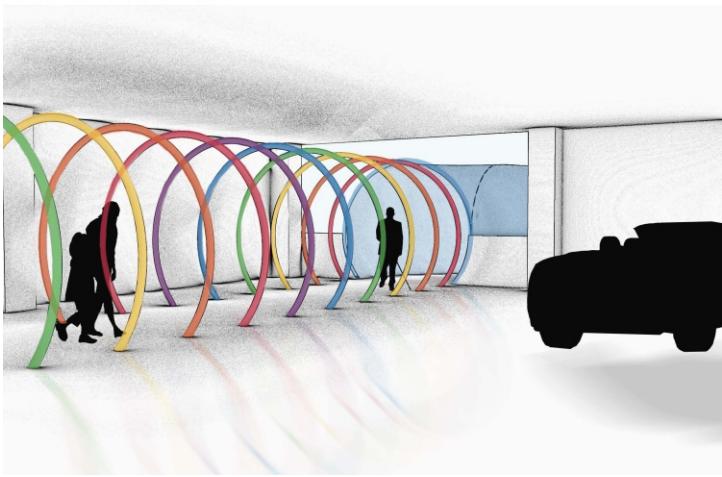


"PARASITE AS PLANES"

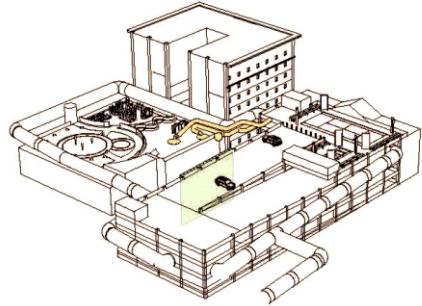


"PARASITE AS PARKS"

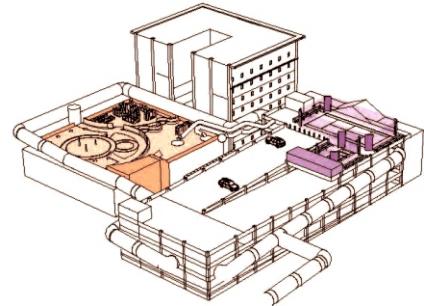
Undergraduate



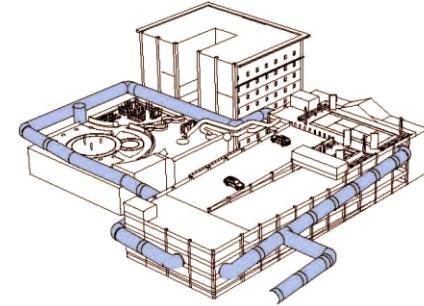
FACES



PLANES



CIRCULATION



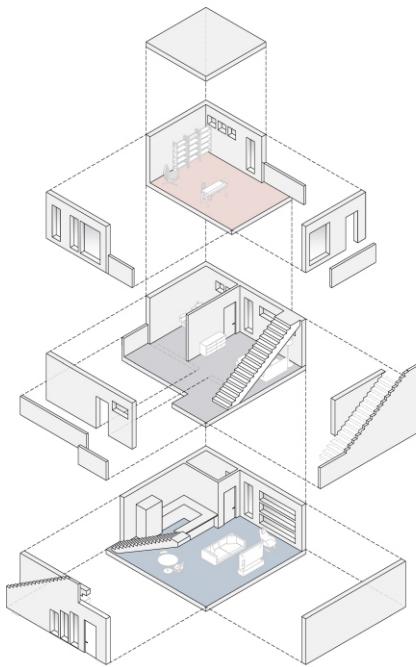
Colorful Interior "Echoes" -
These colorful archways help
visitors navigate through the
existing garage and identify the
nearest Tube entrance!

Integrated Seating -
This tubular walkway features a
fiberglass railing system that
benches plans to accommodate
inhibition seating. Take a break
and enjoy the views!

Accessible Tube -
The sites elevated
walkway by a fibergloss
tube covering an
elevated ramp
system for visitors of
any mobility type!

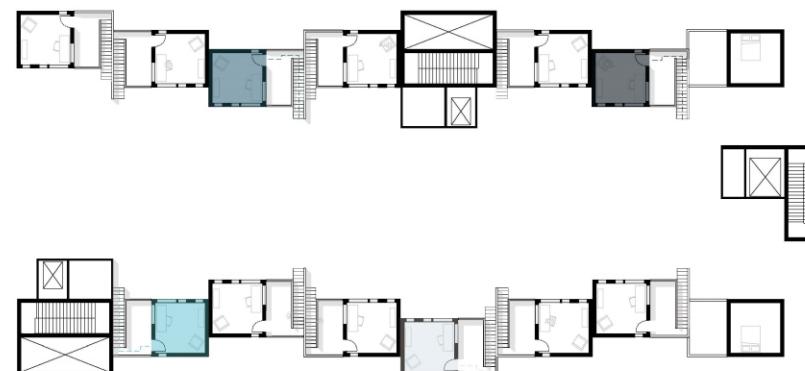
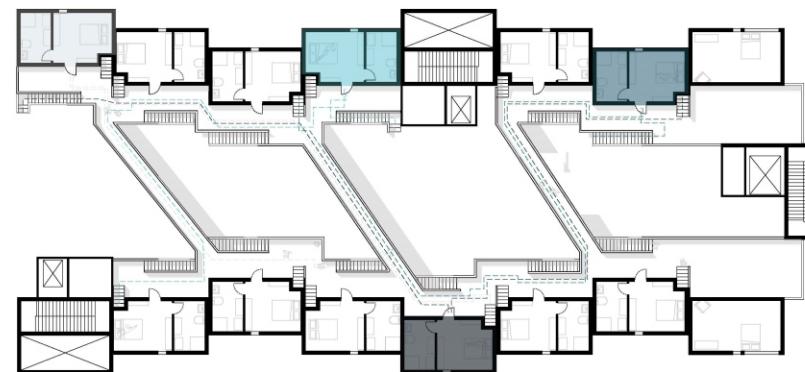
Structural Anchors -
This parasitic tube can
climb to the structural
system of buildings that are
already built. These Tube
Anchors ensure that your
interior are safe and held

Graduate Studio



Experimental Residential High-Rise:

The students were asked to develop a building facing the current crisis in housing supply and affordability by rethinking the architectural language of an apartment unit and programmed spaces in and outside of an apartment block. This project was located in Salt Lake City Downtown.



Student work by Sagan Gotberg, 2024

Graduate

Assignments walk the student through designing a residential building that challenges developer-friendly standards, considers and questions local and national codes.

Assignment 1: Research and Precedent

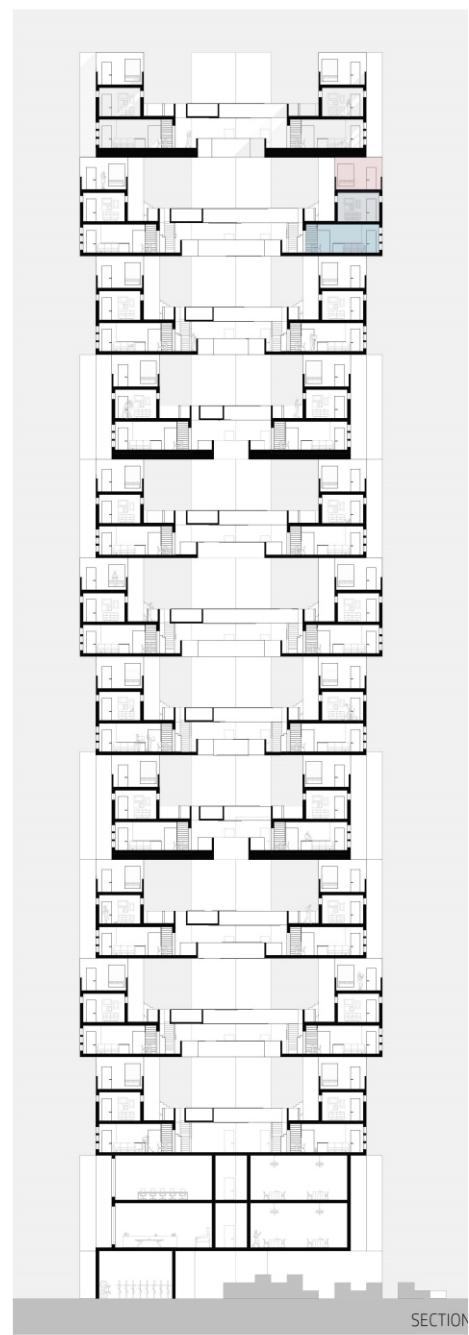
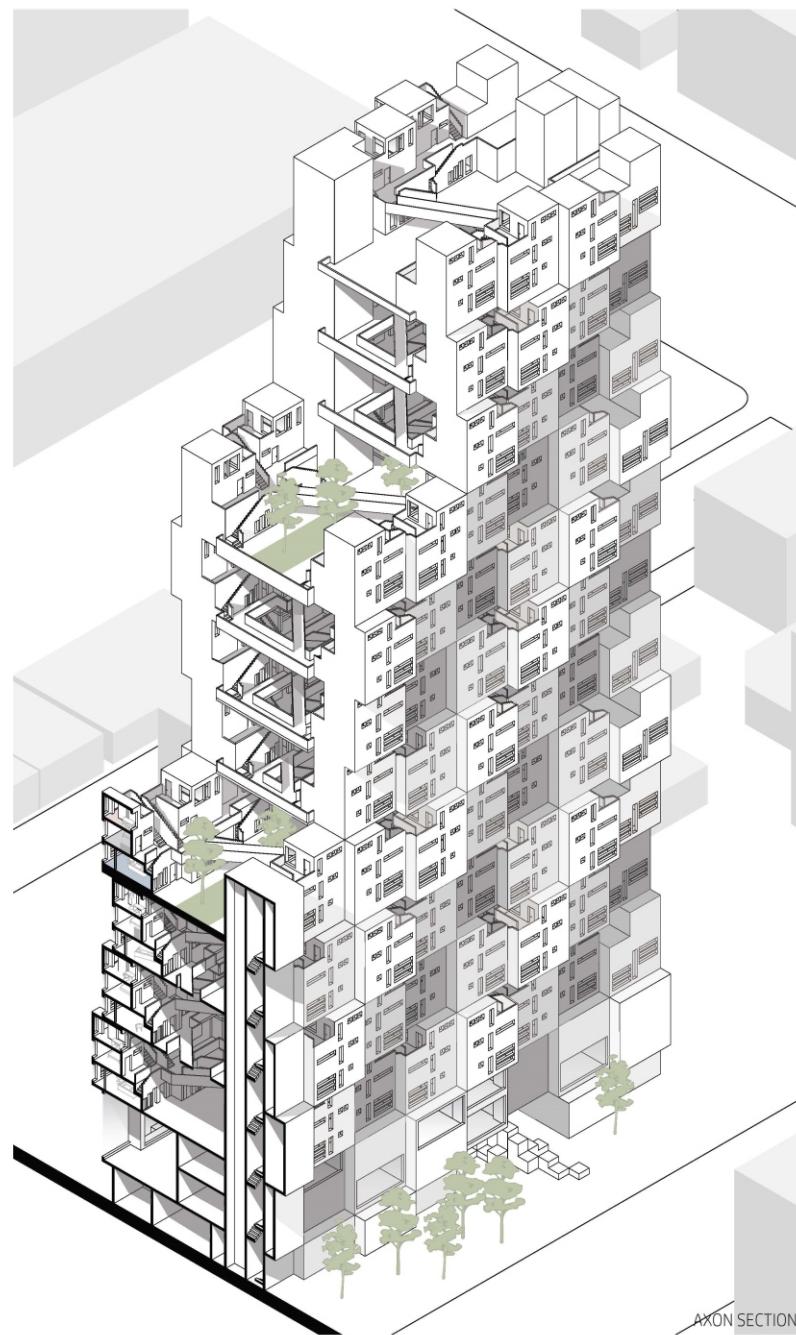
Assignment 2: Site Analysis

Assignment 3: Concept, Unit, and Building

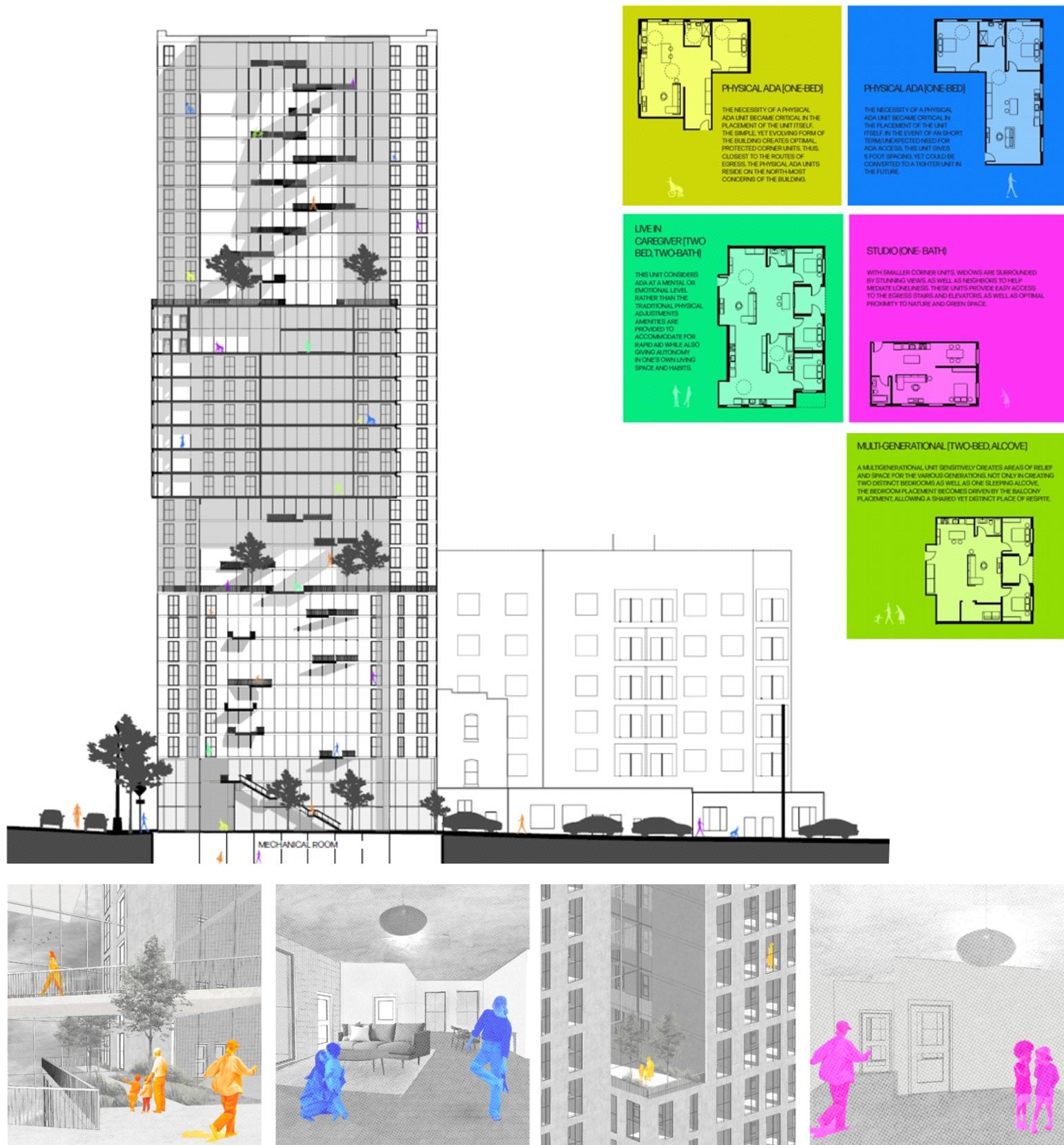
Assignment 4: Schematic Design

Assignment 5: Design Development

Assignment 6: Portfolio



Graduate



Research Methods

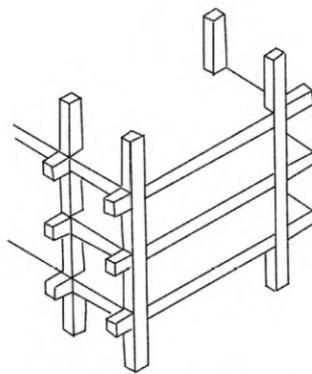
for M. Arch students

Architectural design is rarely universal—most buildings and theoretical constructions are applicable to specific contexts and situations, and not generalizable enough to work anywhere and everywhere. In order to build a logical narrative of an architectural project, a designer first needs to conduct research that will validate this narrative and provide a framework for justifying design decisions and evaluating design consequences. At different stages of design, research will help produce informed concepts, and nuanced, sophisticated, and appropriate architectural statements.

In this course, students look at logical systems and methods that will help their thesis project design (statement) to fend for itself. Components include:

- Annotated Bibliography
- Project Brief
- Selection and Analysis of a Project Site
- Programming Document

PROGRAM - LONG BEACH, LONG ISLAND, NY

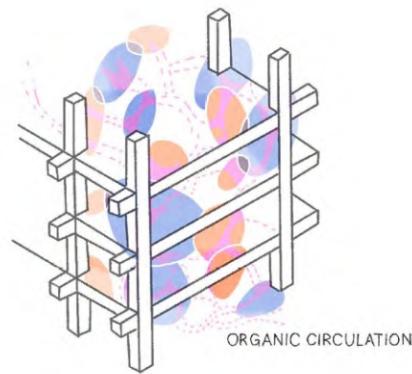


SKELETAL FRAME

CONCEPT OF ARTIFICIAL LAND



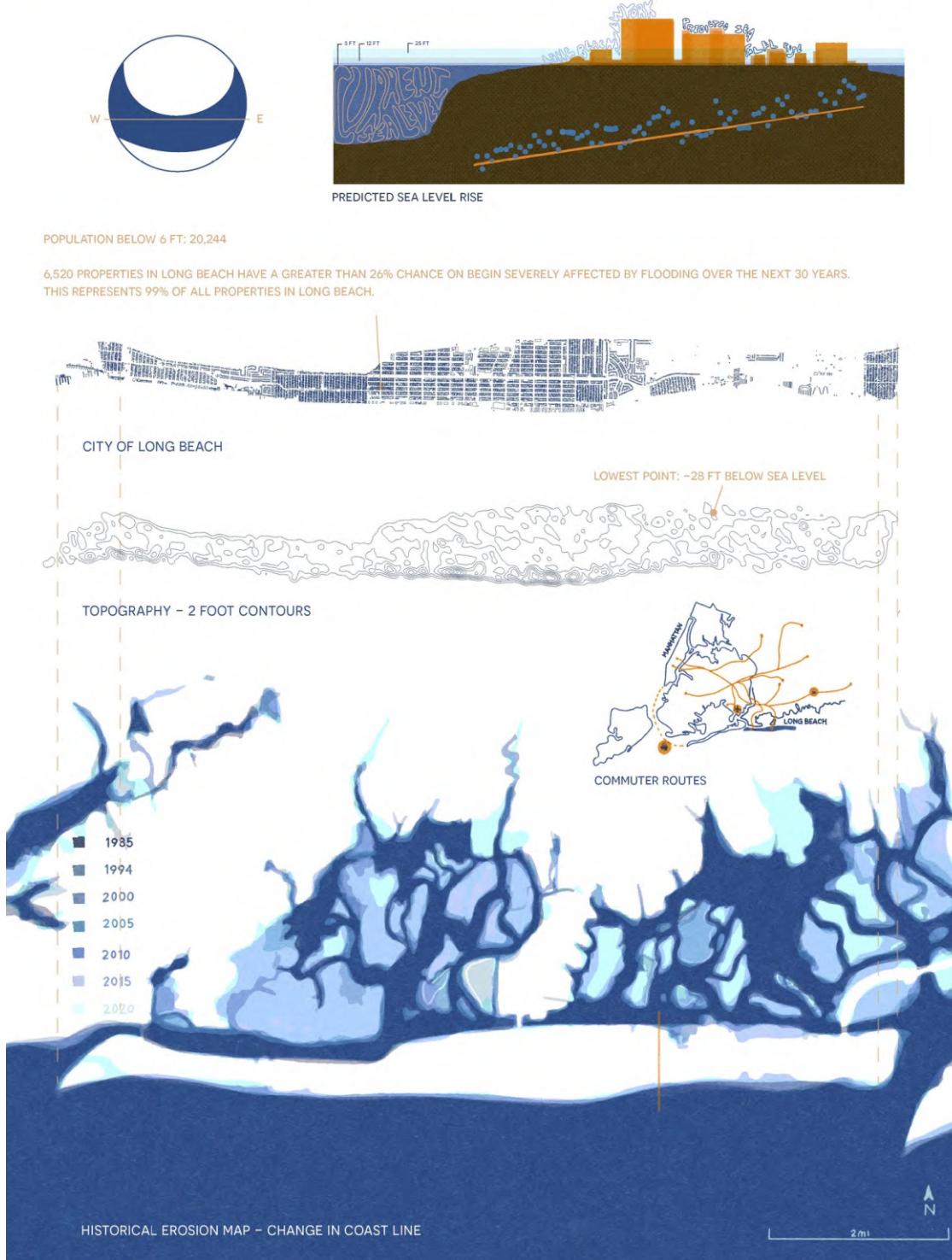
INDIVIDUAL INFILL



ARTIFICIAL LAND

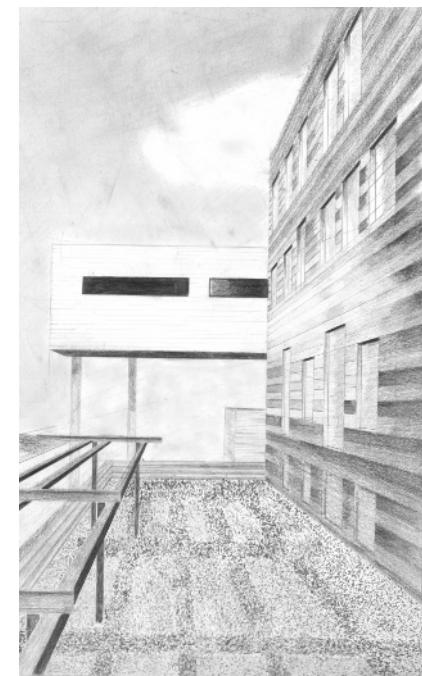
SITE ANALYSIS – LONG BEACH, LONG ISLAND, NY

THE CITY OF LONG BEACH ASSUMES THAT SEA LEVEL WILL RISE BY 11 INCHES IN THE NEXT 10 YEARS. MORE ALARMING ARE THE PROJECTIONS FOR MIDCENTURY AND BEYOND. THE CITY'S CLIMATE ACTION PLAN ASSUMES THAT SEA LEVEL WILL RISE TWO FEET BY 2050 AND AS MUCH AS 6½ FEET BY 2100.



Architectural Drawing

Visual Communication 1 is an introduction to freehand drawing that focuses on the delineation of both interior and exterior space, starting with direct observation to conceptual drawings of imagination. The course covers different media and color including the study of light and light qualities.



Student work by William Harrington, Christopher Sowell, and Kiet Nguen, Jena Rose Gaoiran
Portland State University, 2016-2017