



# Isaiah Ho

5th year | virginia tech  
architecture portfolio

photography  
graphic design



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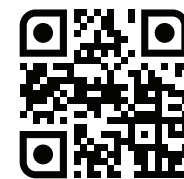
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College Address  
222 Pheasant Run Dr.  
Blacksburg, VA 24060

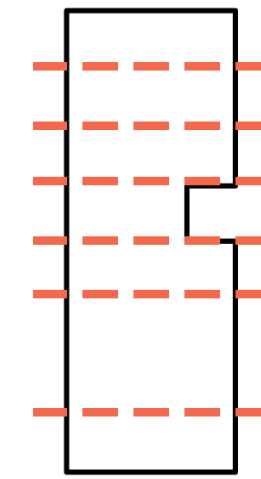
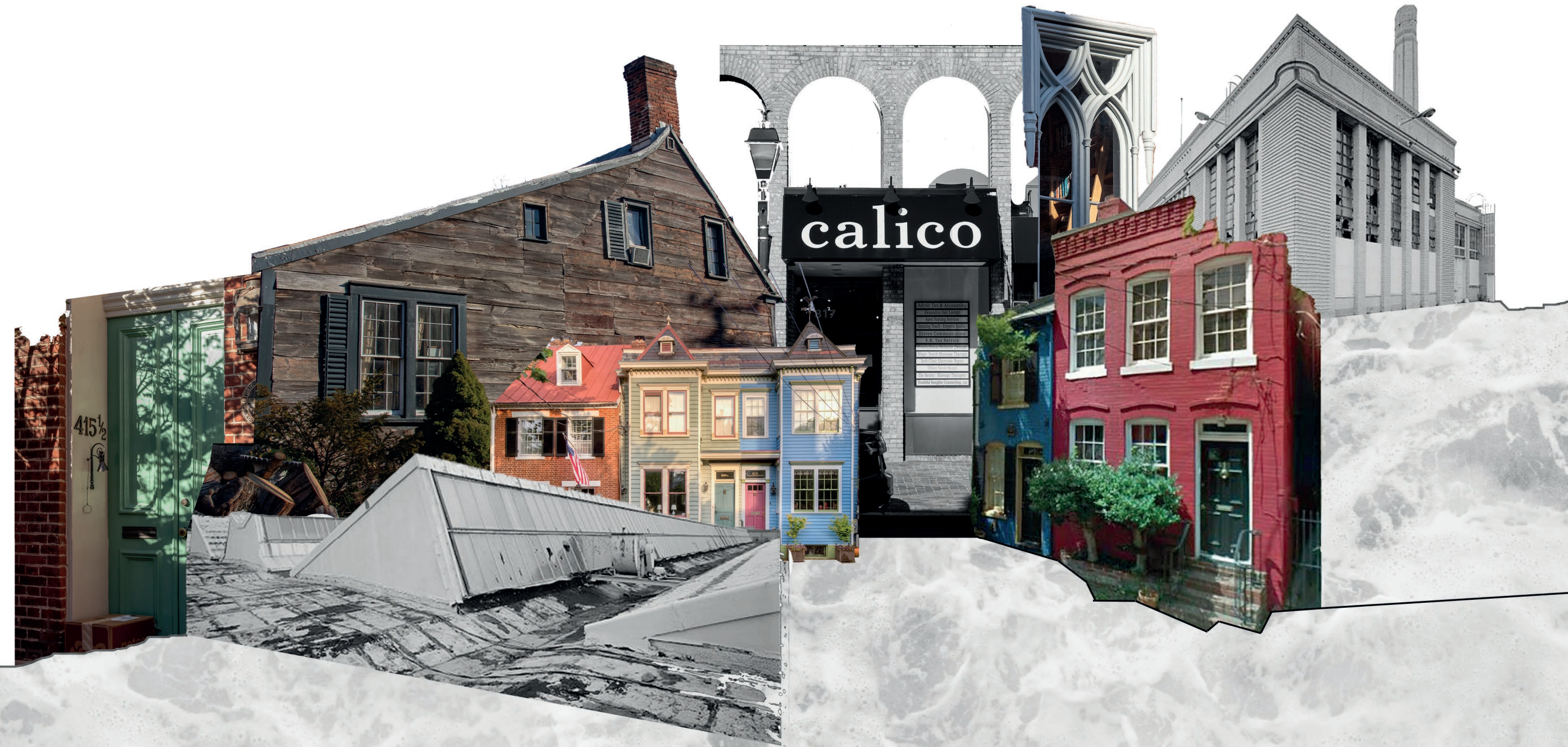
For a digital portfolio/website:  
isaiah.s-neon.xyz

Permanent Address  
6 Berwyn Court  
Simpsonville, SC 29681



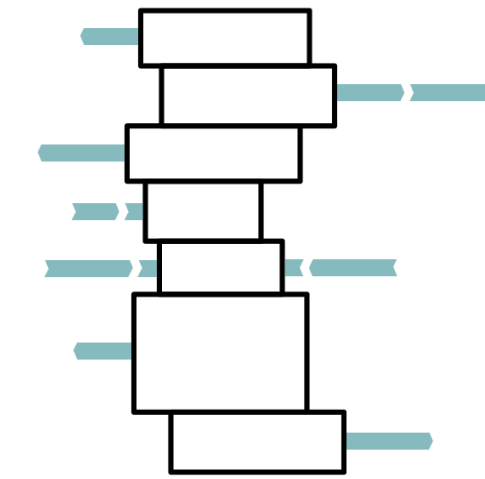
# alexandria museum of histories

a museum to remember the many voices that comprise alexandria's rich history  
Alexandria, VA



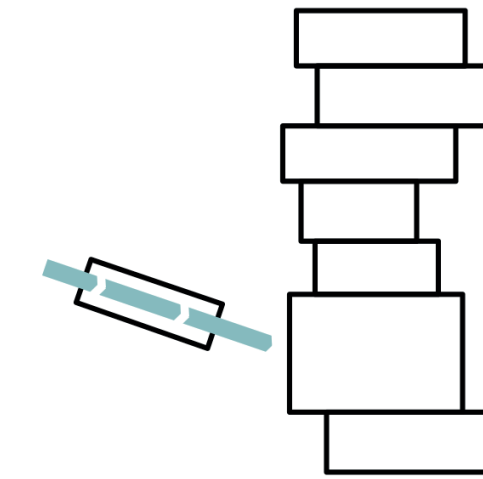
## 1 divide

create divisions that mimic the width of a row house and establish party walls



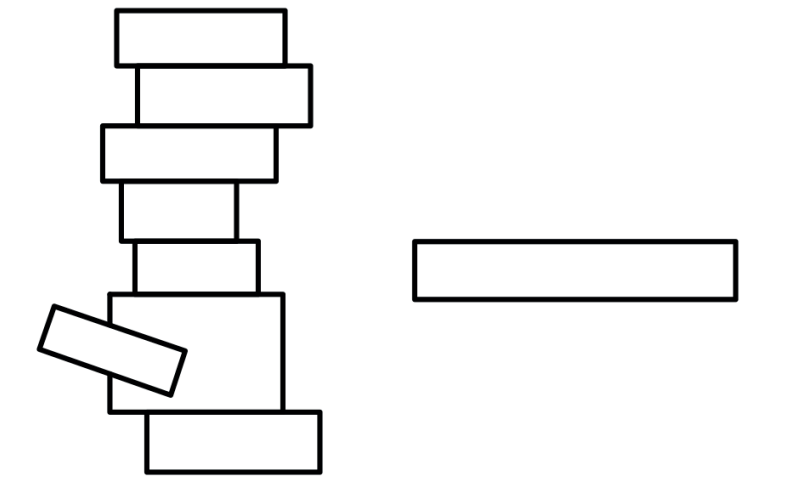
## 2 push and pull

following the flow of the water of the potomac, shift the new forms east and west



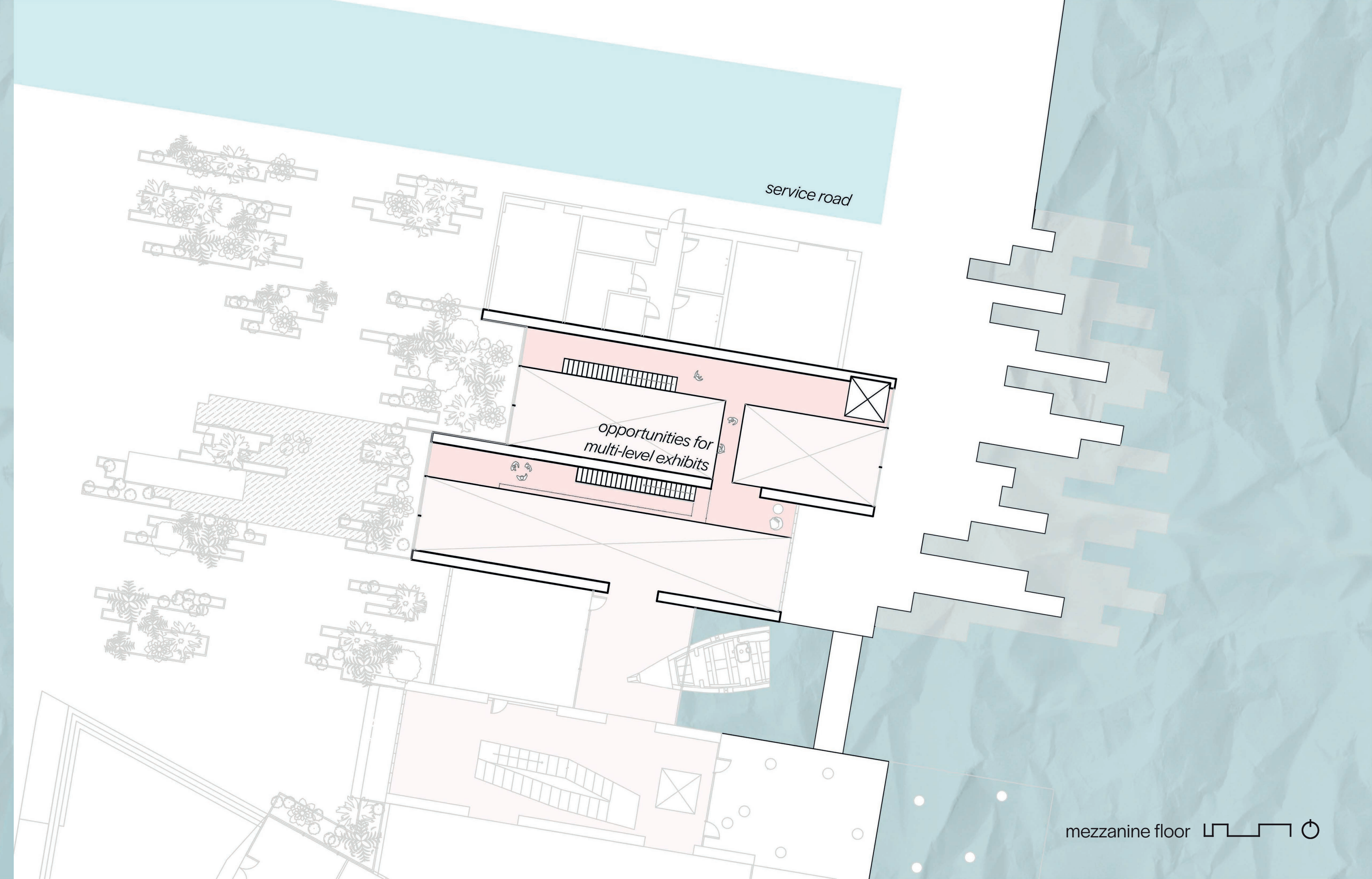
## 3 pierce and welcome

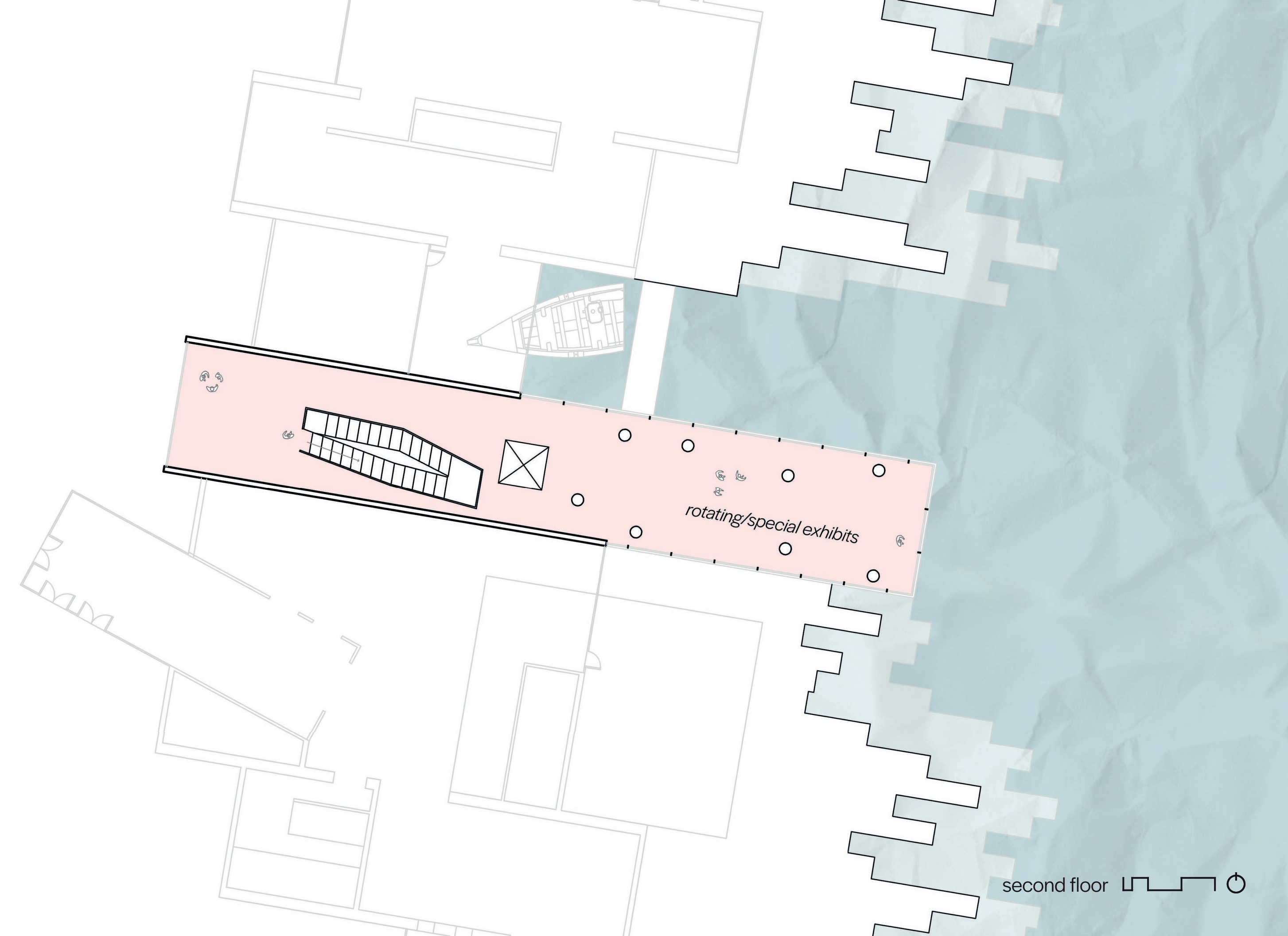
pierce the form and create an opening in the solid mass, saying come on in



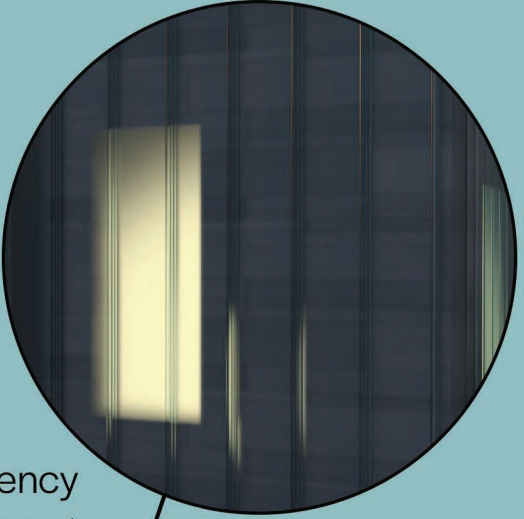
## 4 rise and overlook

elevate the special exhibit spaces and create an overlook on the potomac river





channel glass controls views to the exterior, dictating the museum experience



wood shading protects from harsh afternoon light



wood panel references neighboring buildings & creates statement piece



terracotta panel respects brick culture while being flexible and sustainable

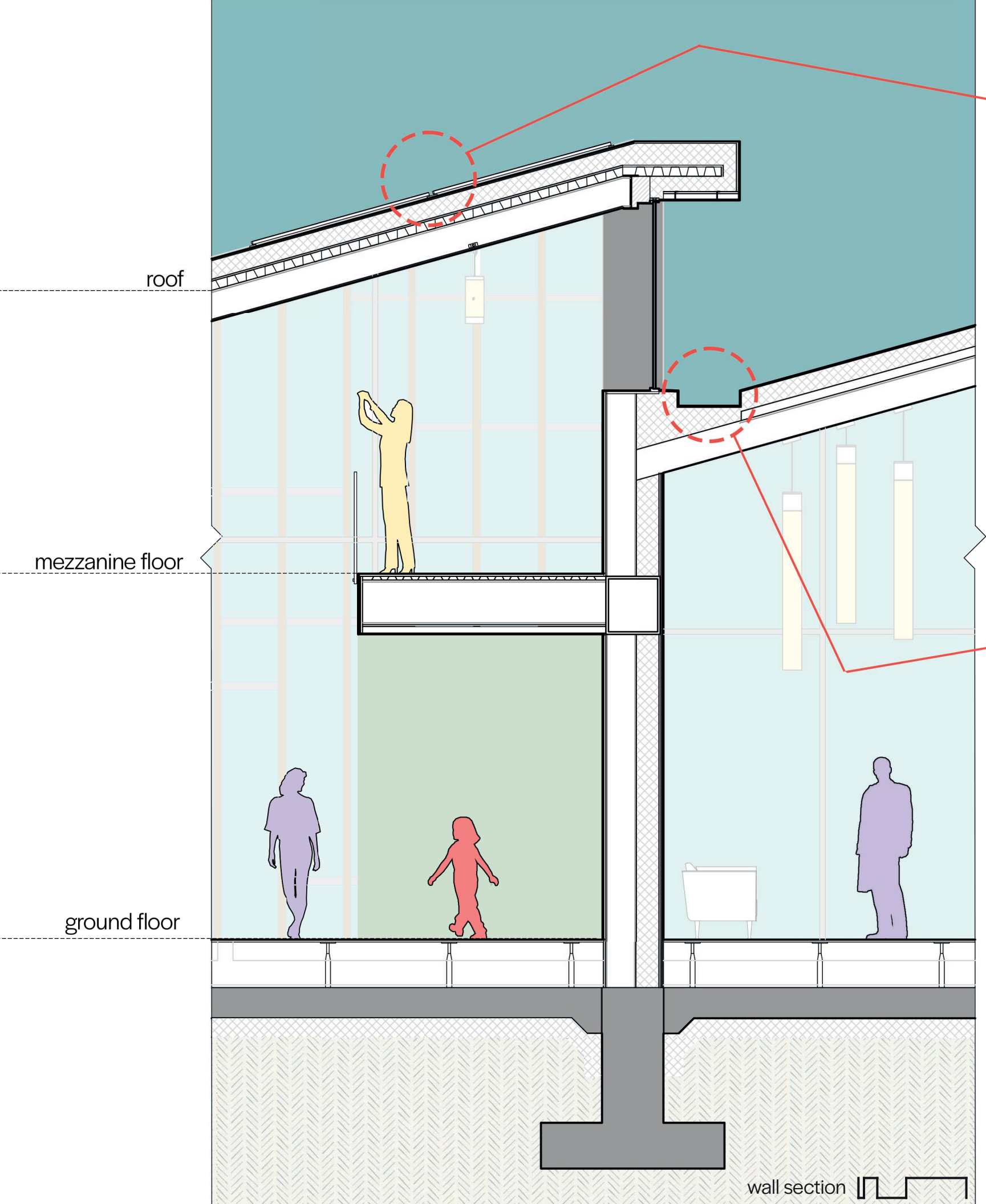


multiple transparency levels allow for different scenarios

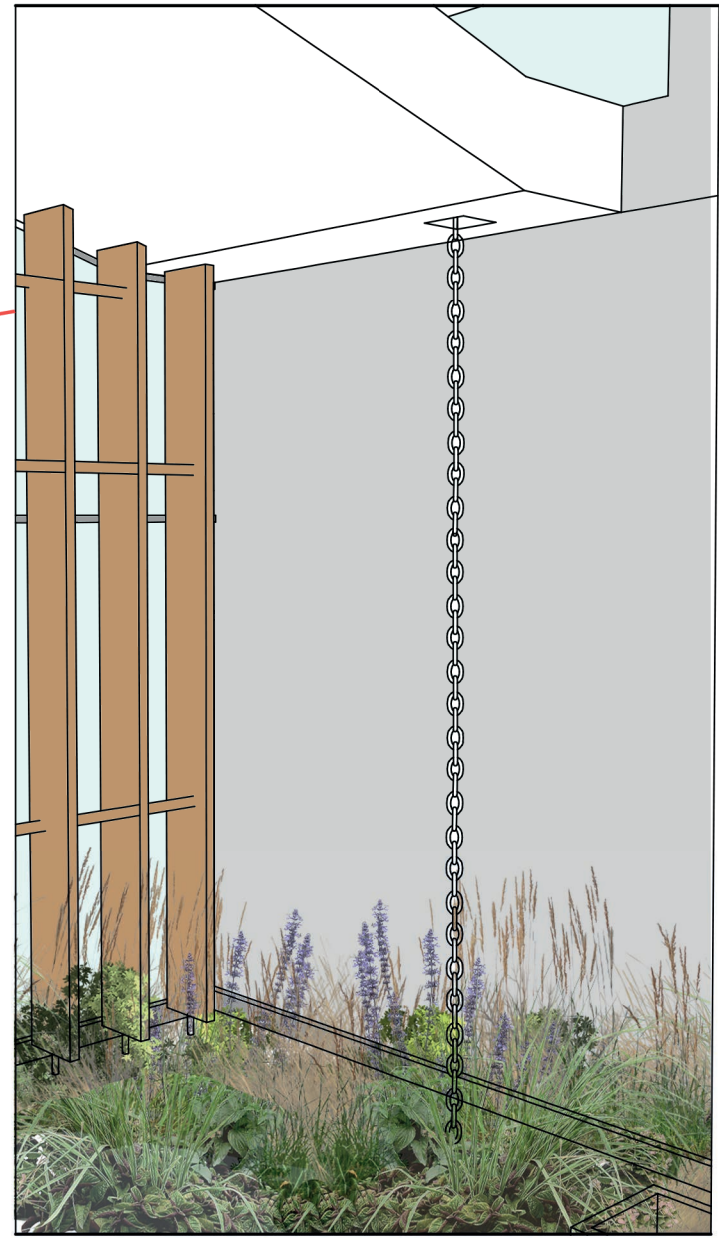
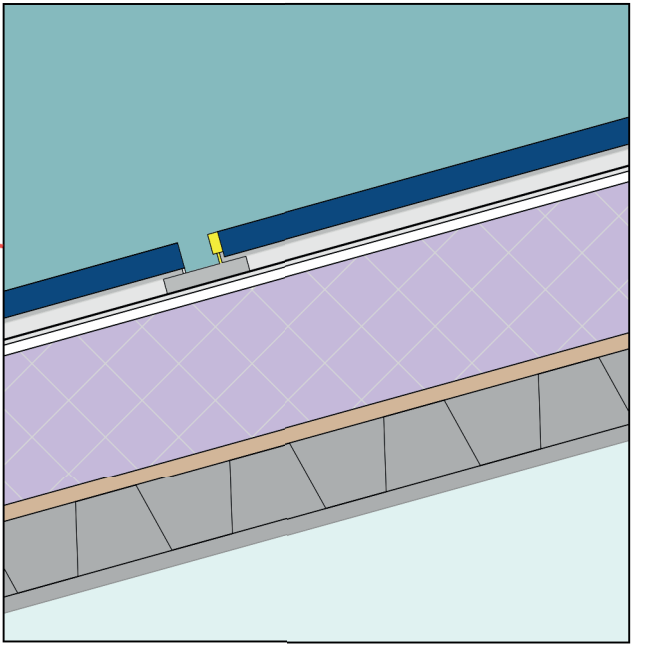


strand street elevation - west

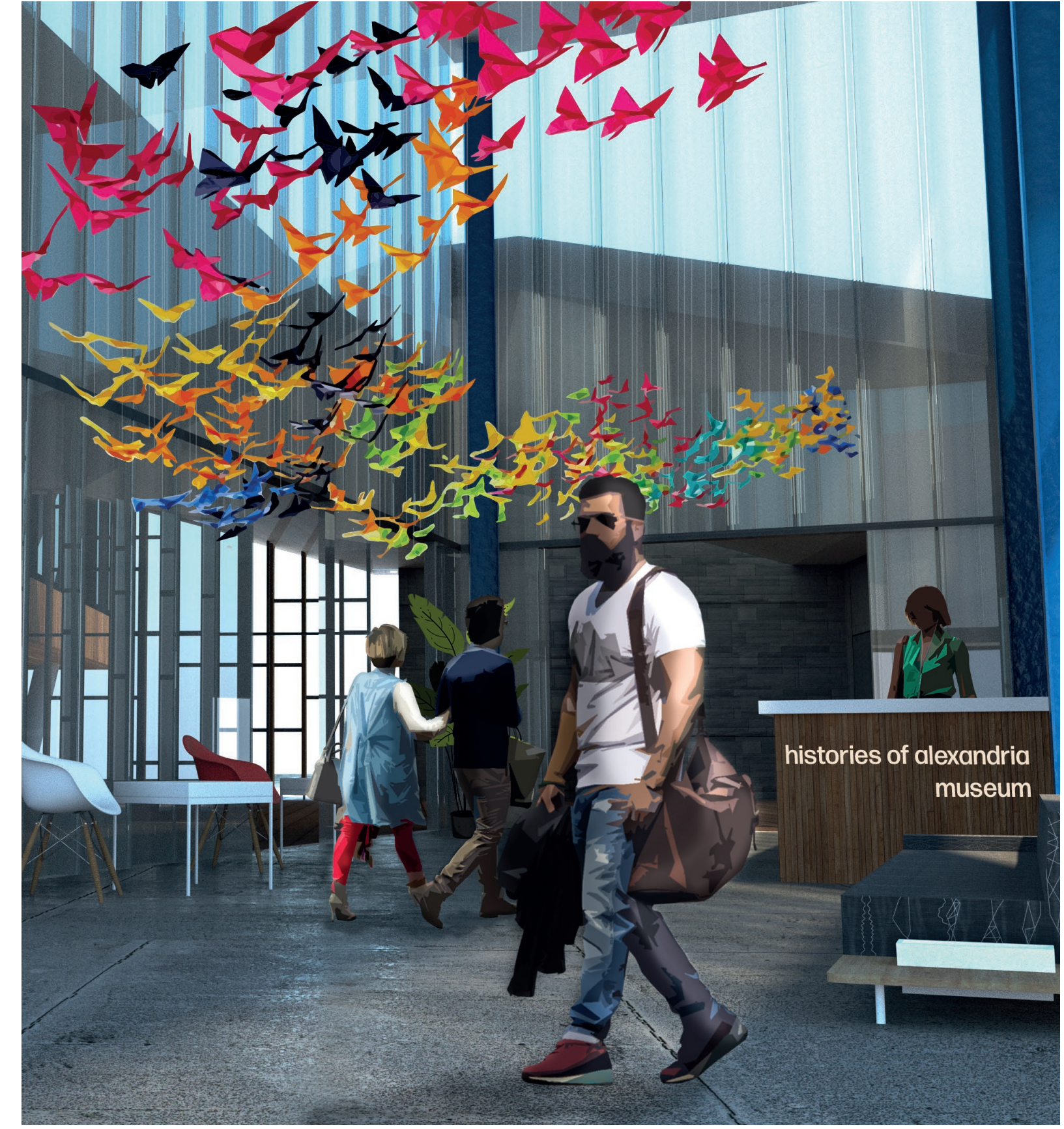




**solar management**  
 sawtooth roof allows for solar panels to take advantage of the southern sun on the while allowing northern light into the museum



**water management**  
 large gutters take rainwater and distributes it to the landscape  
 helps prevent flooding during heavy rains



**lobby perspective**  
 tall double-height ceiling allows for art installations

**overlook perspective**  
 second floor looks out towards the Potomac





exterior plaza perspective  
open space allows for community gathering



museum exhibit perspective  
mezzanine floor allows for multi-story exhibition



# the core: a new heart for the community

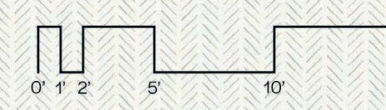
gilmer neighborhood social justice center  
Roanoke, VA



Loudon Avenue Elevation

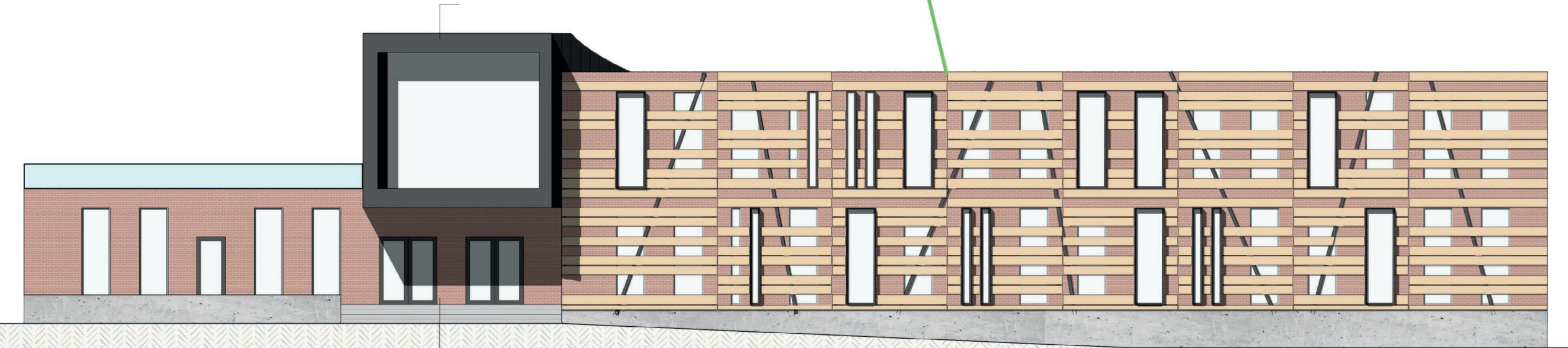
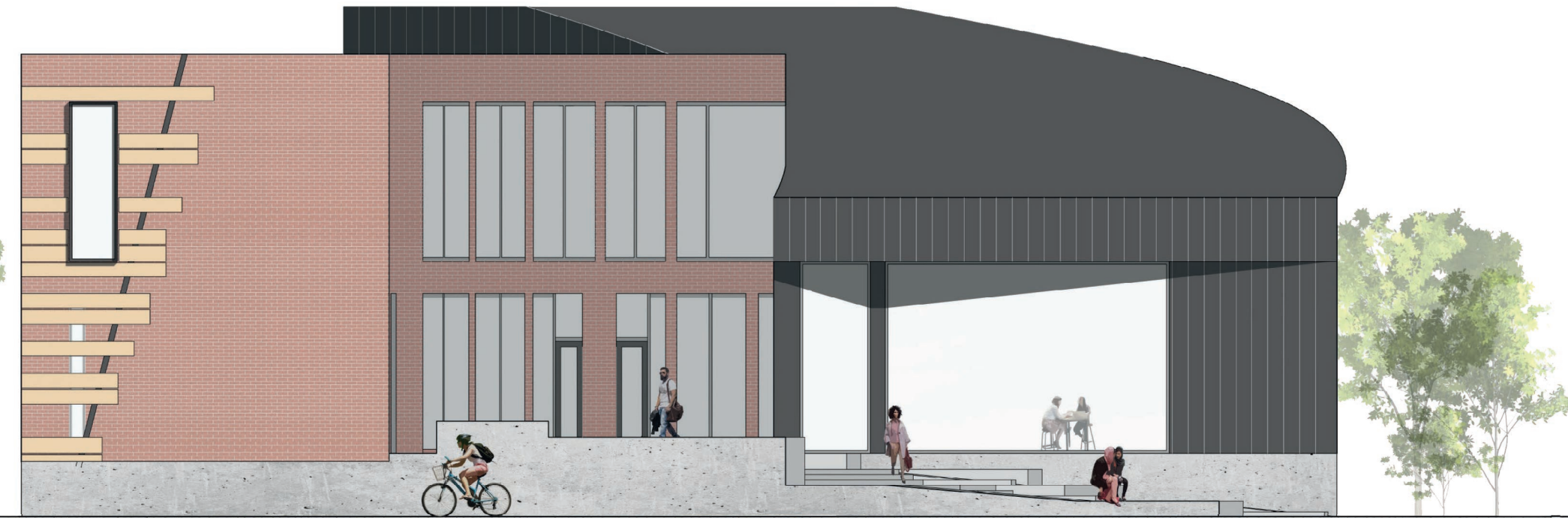


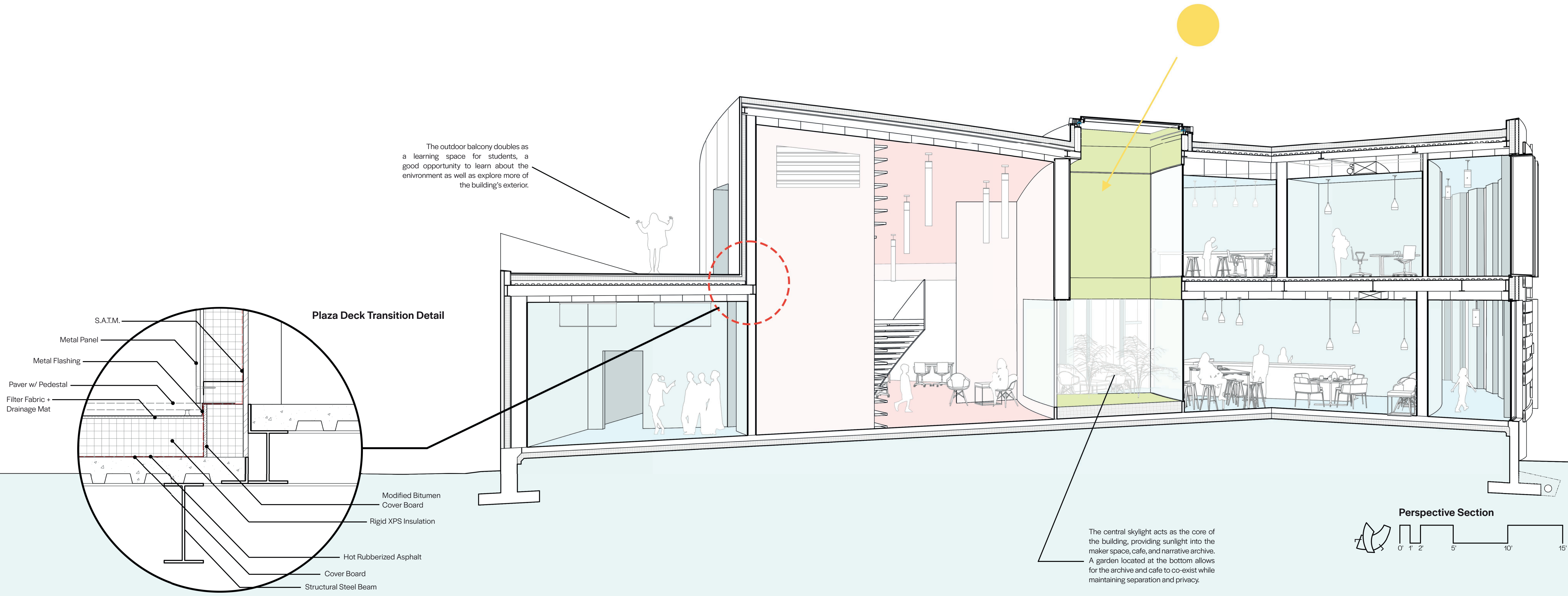
5th Street Elevation



The shading system preserves views towards the exterior at head level height, varying between adult and child heights depending on the program of the interior space. Aluminum punchout windows provide unobstructed views outside while maintaining proper shading due to the deep recess. Together they help to disconnect the industrial Coca-Cola plant from the community, creating a warmer and more welcoming atmosphere. The segmented design helps break up the long sweeping facade, helping the building blend with its surroundings.

Environmentally, they providing shading from the harsh morning sun from the east, as well as limiting solar heat gain from the south.



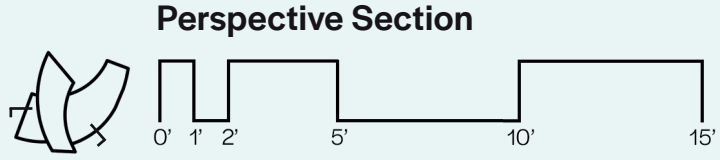


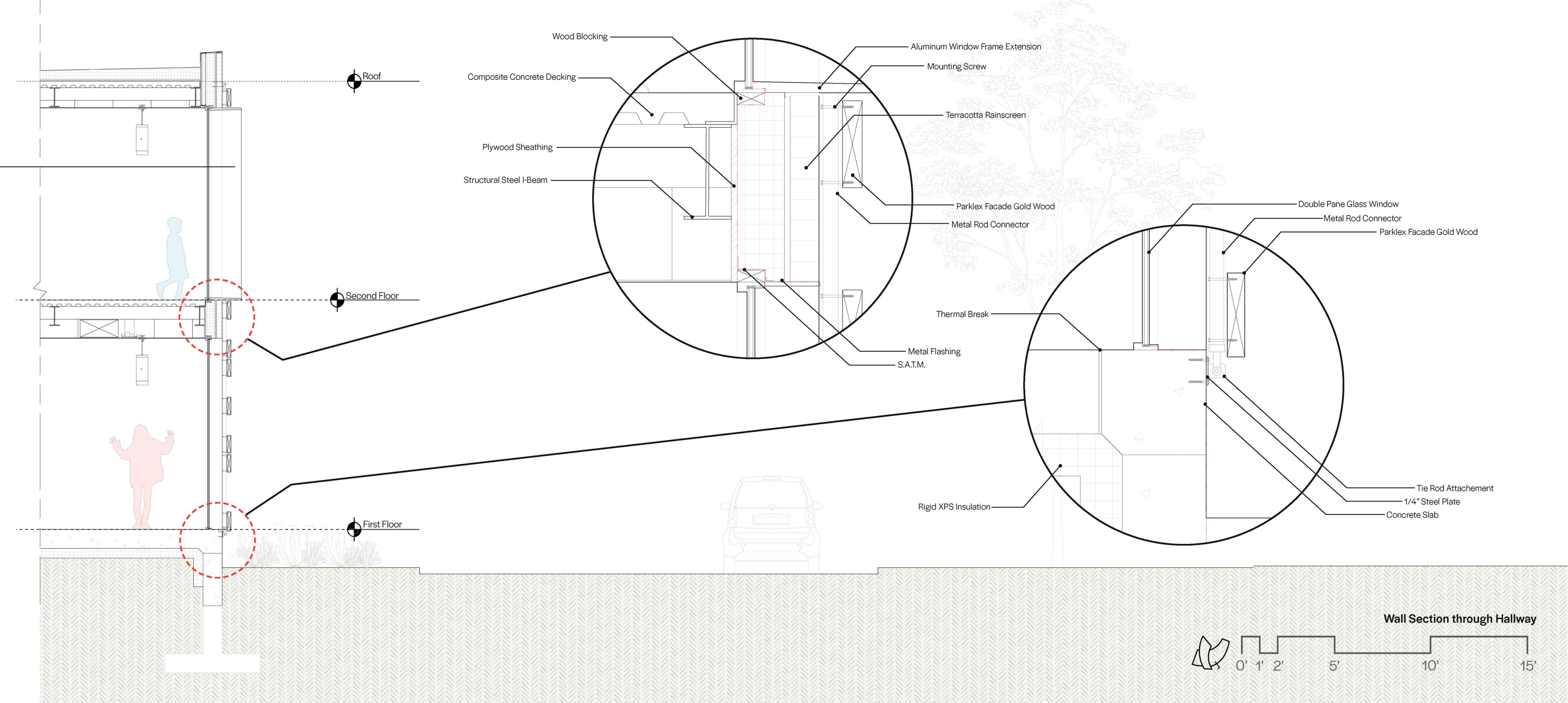
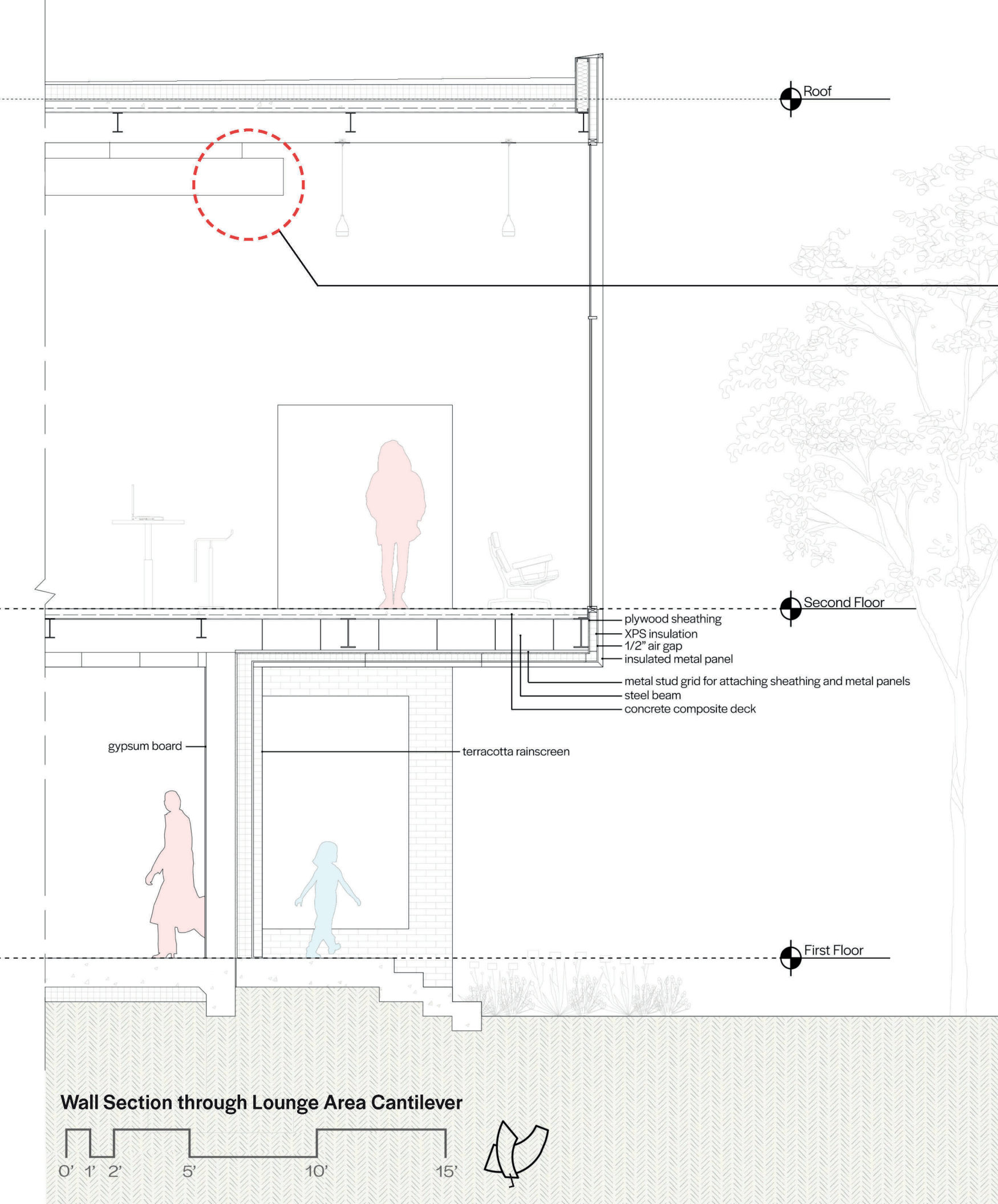
The outdoor balcony doubles as a learning space for students, a good opportunity to learn about the environment as well as explore more of the building's exterior.

**Plaza Deck Transition Detail**

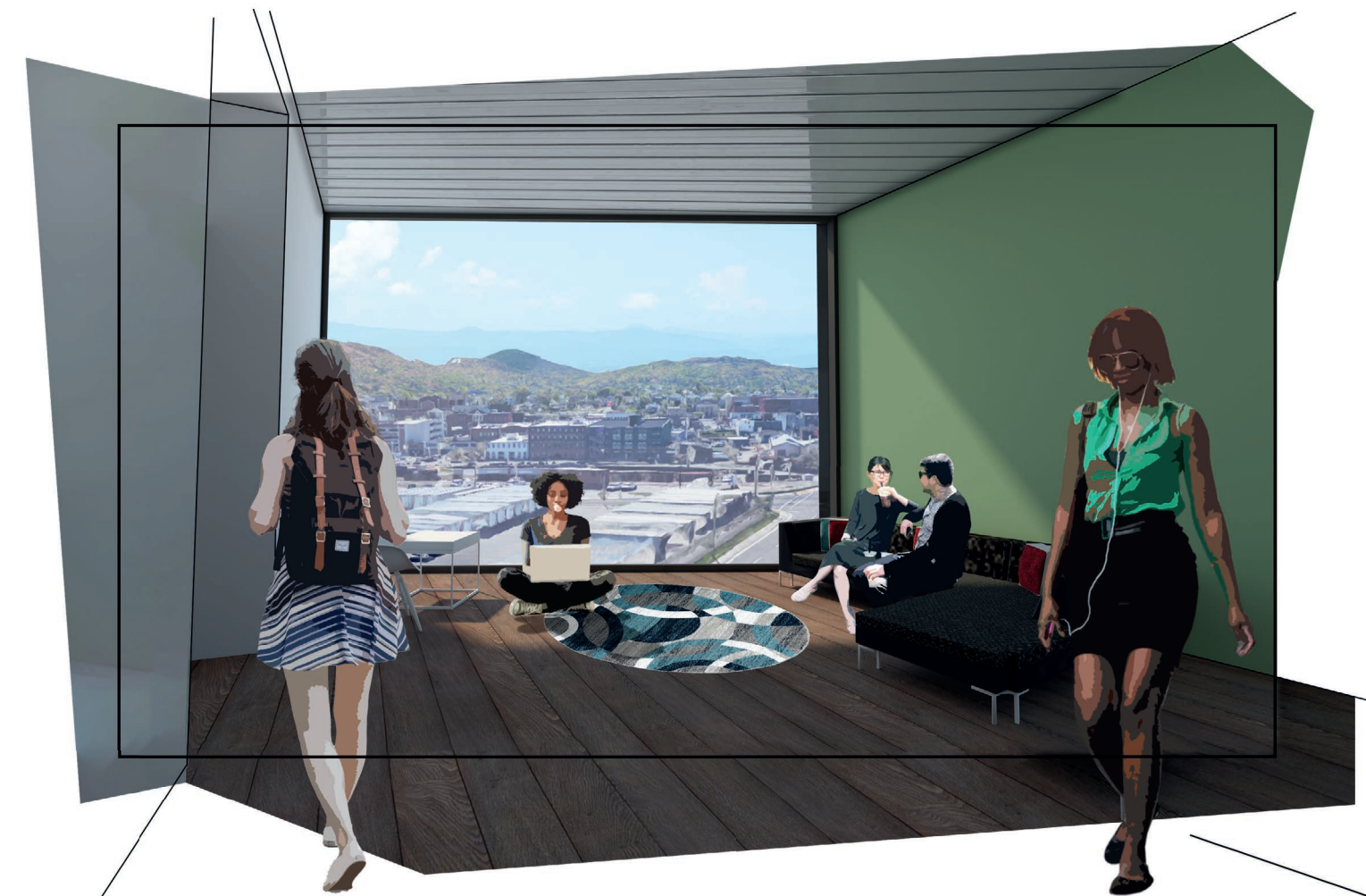
- S.A.T.M.
- Metal Panel
- Metal Flashing
- Paver w/ Pedestal
- Filter Fabric + Drainage Mat
- Modified Bitumen Cover Board
- Rigid XPS Insulation
- Hot Rubberized Asphalt
- Cover Board
- Structural Steel Beam

The central skylight acts as the core of the building, providing sunlight into the maker space, cafe, and narrative archive. A garden located at the bottom allows for the archive and cafe to co-exist while maintaining separation and privacy.





The shading elements and aluminum punch-out windows are the first thing that can be seen as visitors approach the building. They create a unique but elegant facade that marks the entrance into the community. The large aperture looking out towards downtown Roanoke also provides a deep and welcoming awning, shielding visitors from the elements as they enter the building.



The large aperture seen from the entrance houses the lounge area, a place where community members can gather and spend time together. The view towards downtown fosters a connection with the fabric of the city as well as bringing light deep into the space towards the narrative archive.

The narrative archive is the core of the building, the first thing that visitors see when they step beyond the threshold and into the heart of the community. A large bookshelf wall greets visitors, beckoning them to pull a book off the shelf and dive into the rich history of the neighborhood and the people that have lived in it for decades. Ample space is provided for interaction and study, a fine balance struck between work and play. A glimpse of the lounge area above allows the conversation to continue in a more private and relaxed environment.

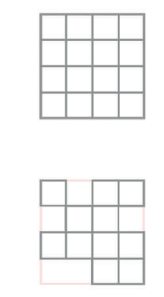
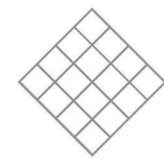


# push & pull: blacksburg high school research center for climate change and sea level rise

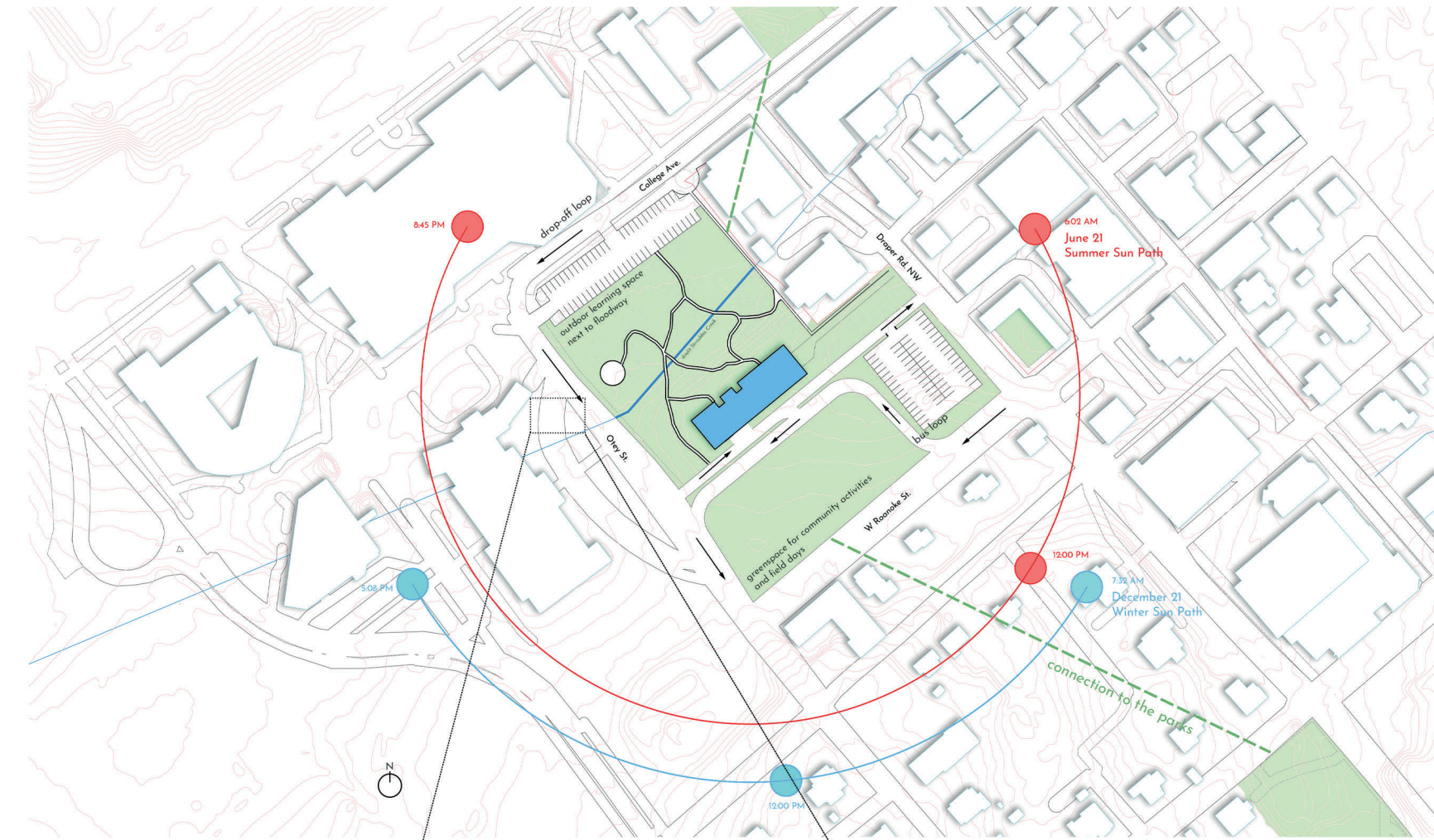
24,150 sqft. | 160 students

First Place  
VA4LE 2019-2020  
Architecture Student  
Design Competition

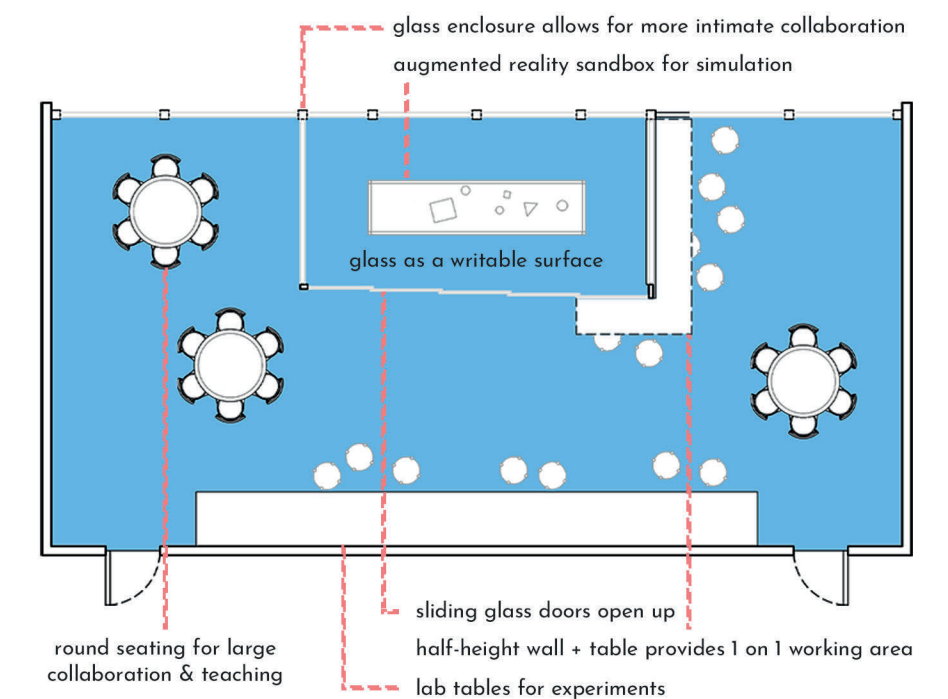
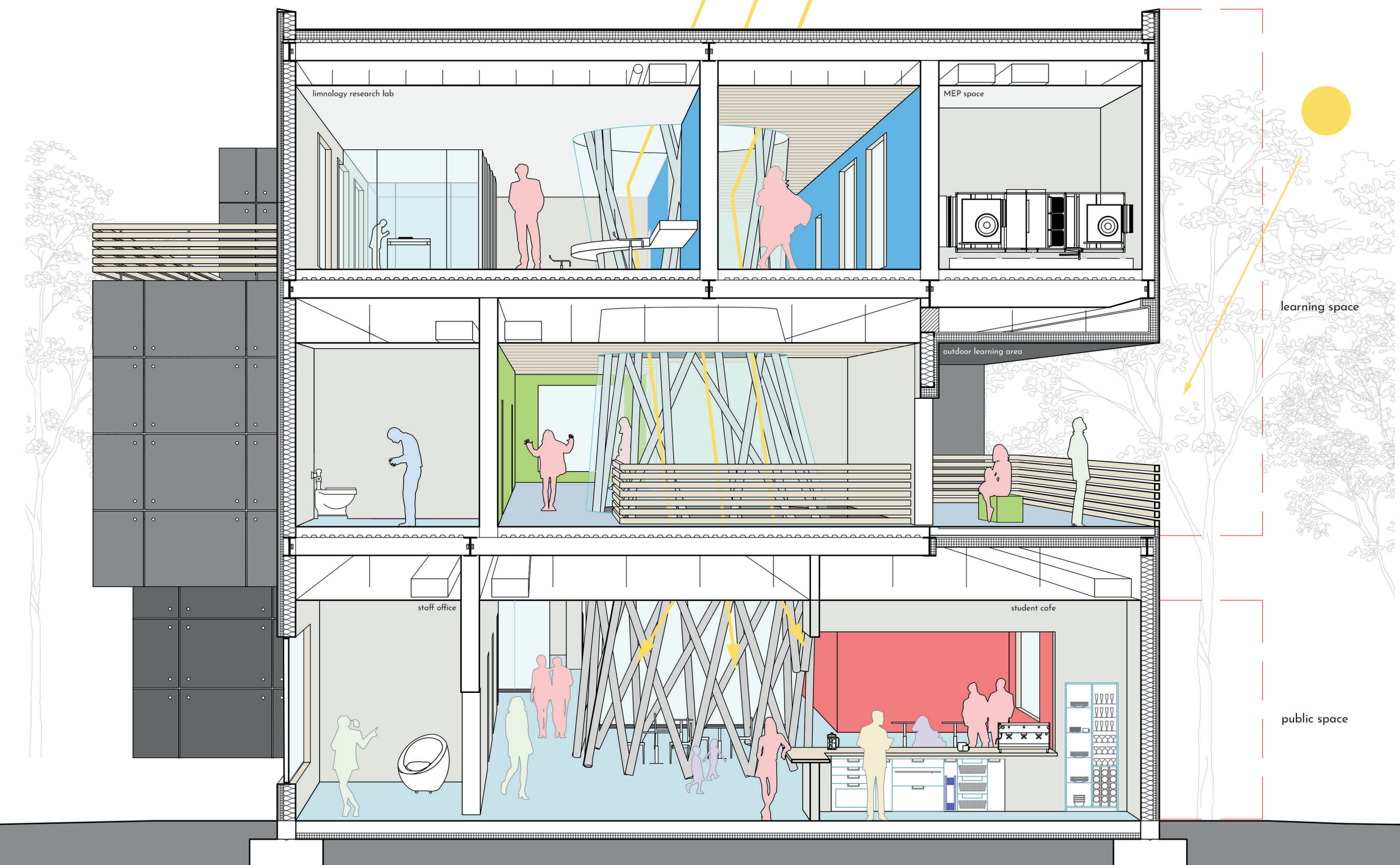
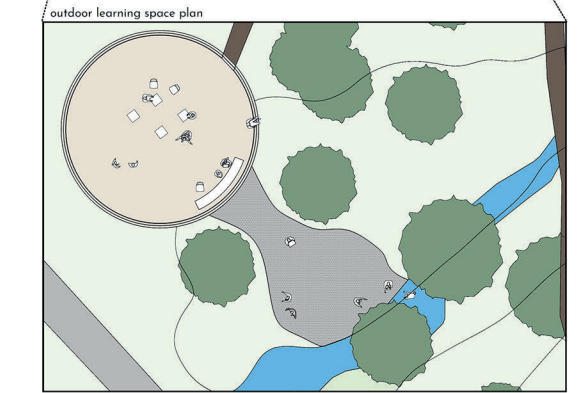
First Place  
Spring 2020 IIBEC  
Mid-Atlantic and Virginia  
Chapters Student  
Design Competition



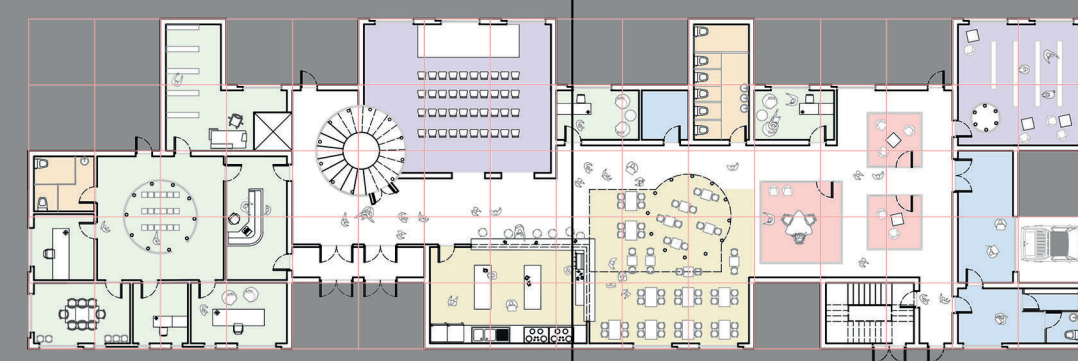
- understanding site & program
- original 16 squares
- push/pull | give/take relationship w/ VT
- sunlight piercing: maximum daylight
- connection to outside
- welcoming & diverse
- high flexibility



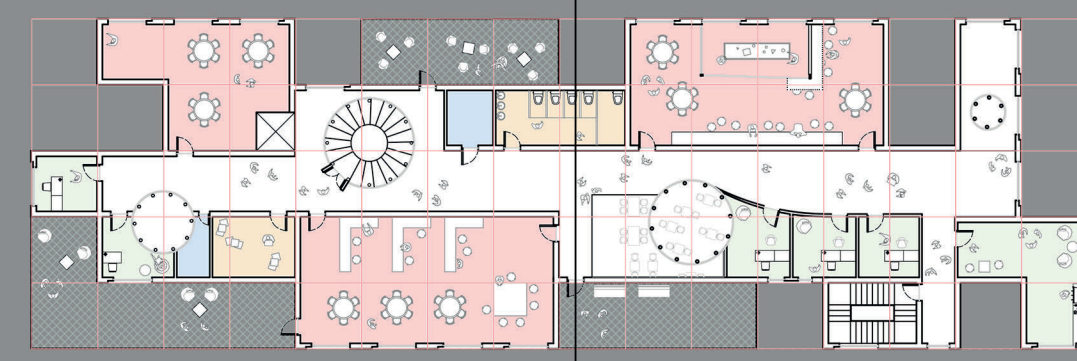
Community is born through shared experience, and this project strives to create an intimate connection among the university, Blacksburg community, and the high school itself. Following the fabric of the original sixteen squares of Blacksburg, the rectilinear form is carved away to create outdoor learning spaces and reflect the give and take of resources between the high school and university. Collaboration and presentation spaces invite the community inside onto the public first floor while instruction and exploration happens on the upper two floors. Large light wells pierce the form, bringing daylight deep into the space and creating a unique experience for students and guests. The light wells become inhabitable, serving as circulation and lounge space for the students. Every aspect of the building is catered to creating a fun and invigorating experience. A welcoming and diverse floor plan with many nooks and cutaways allows students to interact and socialize outside of the classroom while maintaining the flow of circulation. High flexibility in the lab allows for intimate and large group collaboration, traditional teaching situations, and one-on-one interactions. A constant connection to the outside is formed through the outdoor learning spaces, including one located directly beside daylight Stroubles Creek.



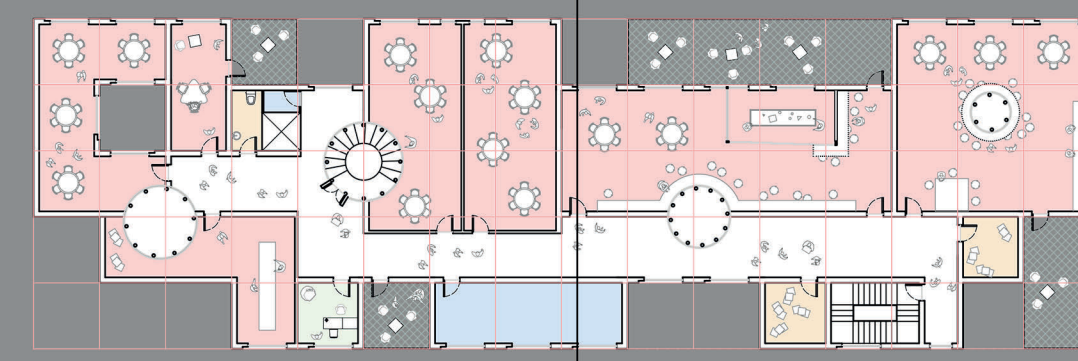
- Academic & Collaboration Spaces
- Administration & Staff Offices
- Maintenance & Distribution
- Cafe & Warming Kitchen
- Unities
- Public Services (Library/Presentation)
- Outdoor Learning Space



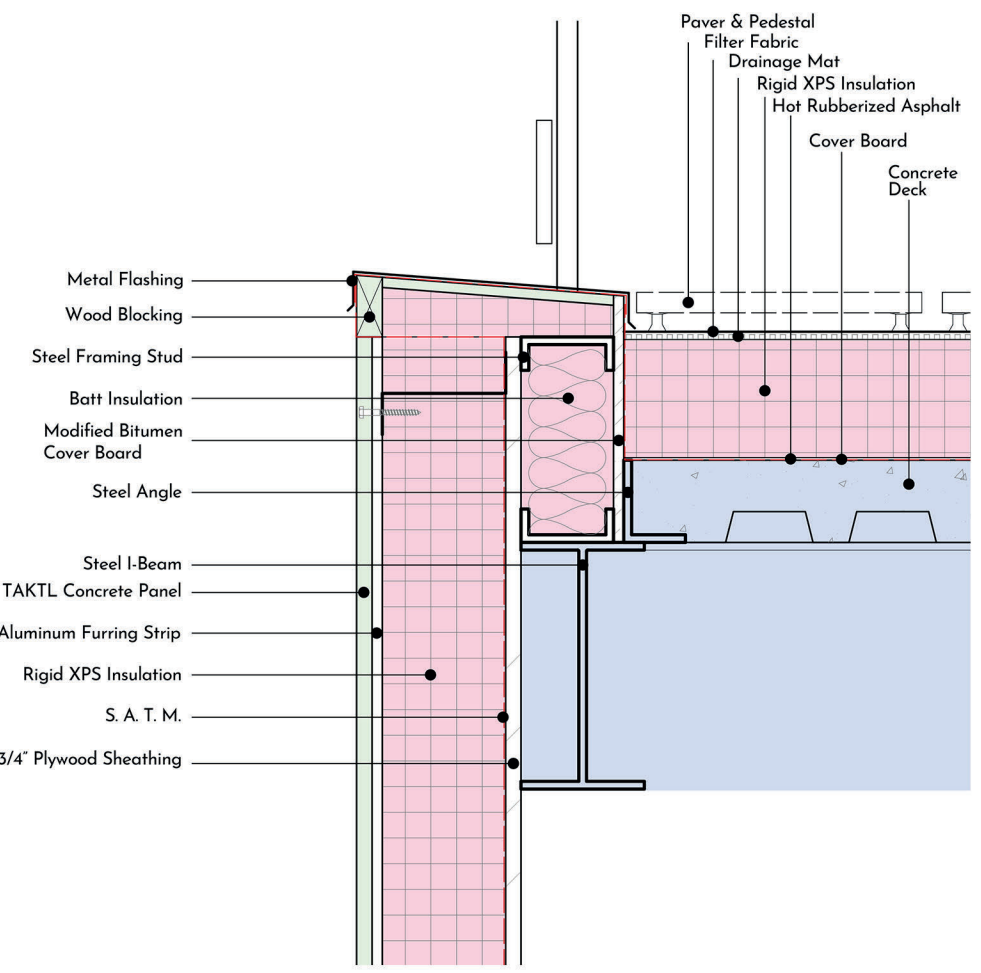
first floor: admin + public spaces & collaboration



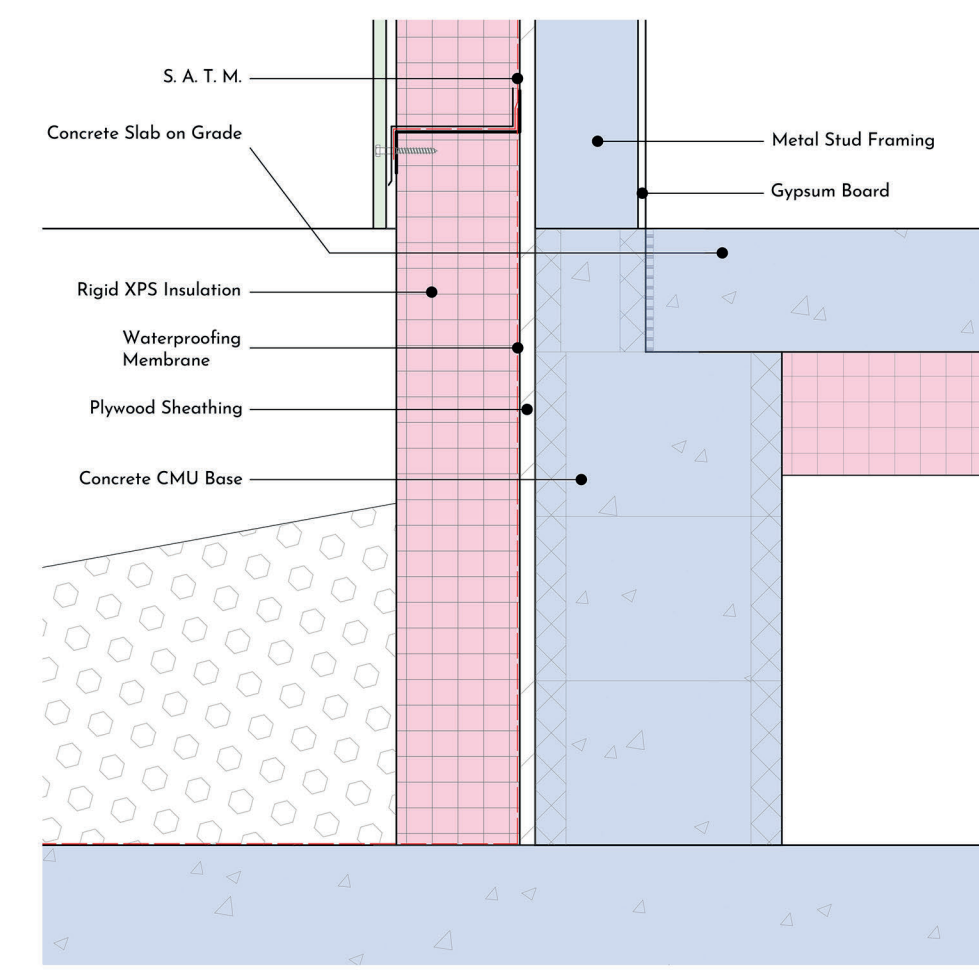
second floor: indoor/outdoor learning spaces & staff facilities



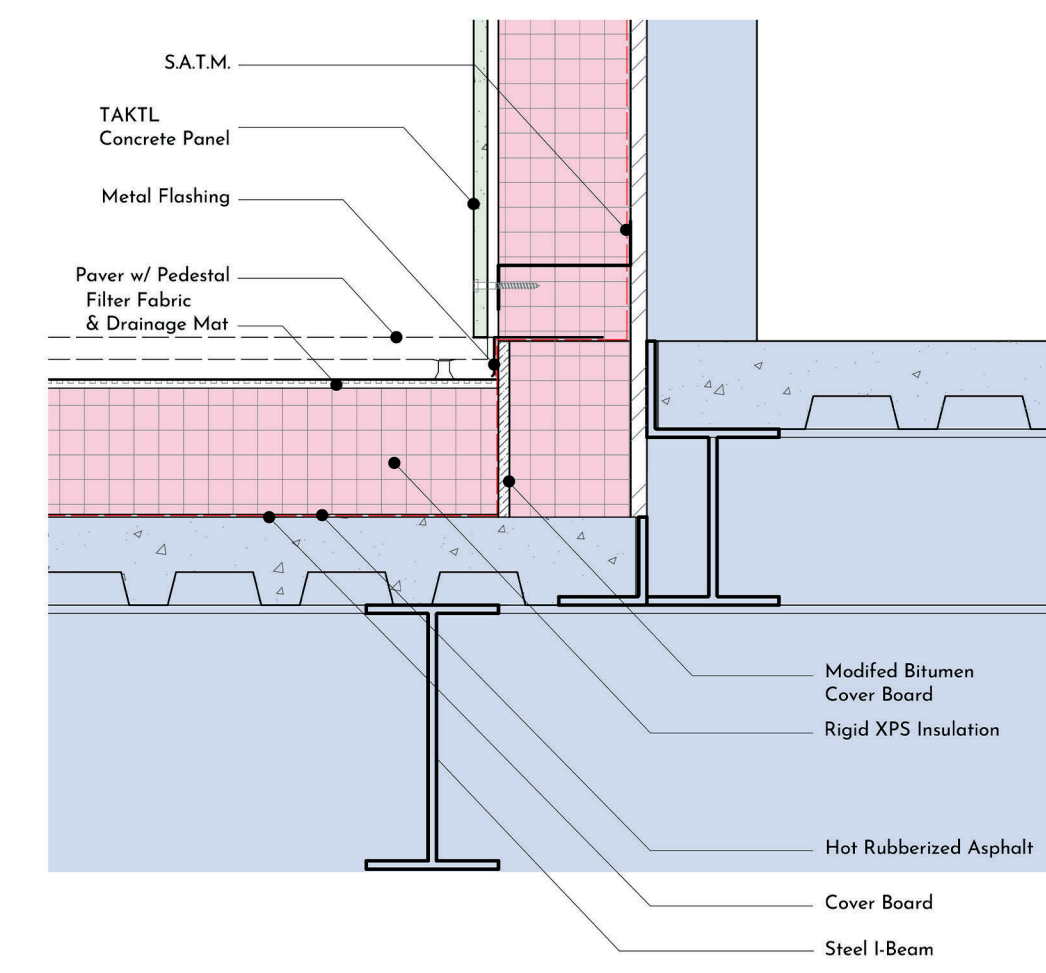
third floor: student centered & highly flexible labs & classrooms



plaza deck parapet detail



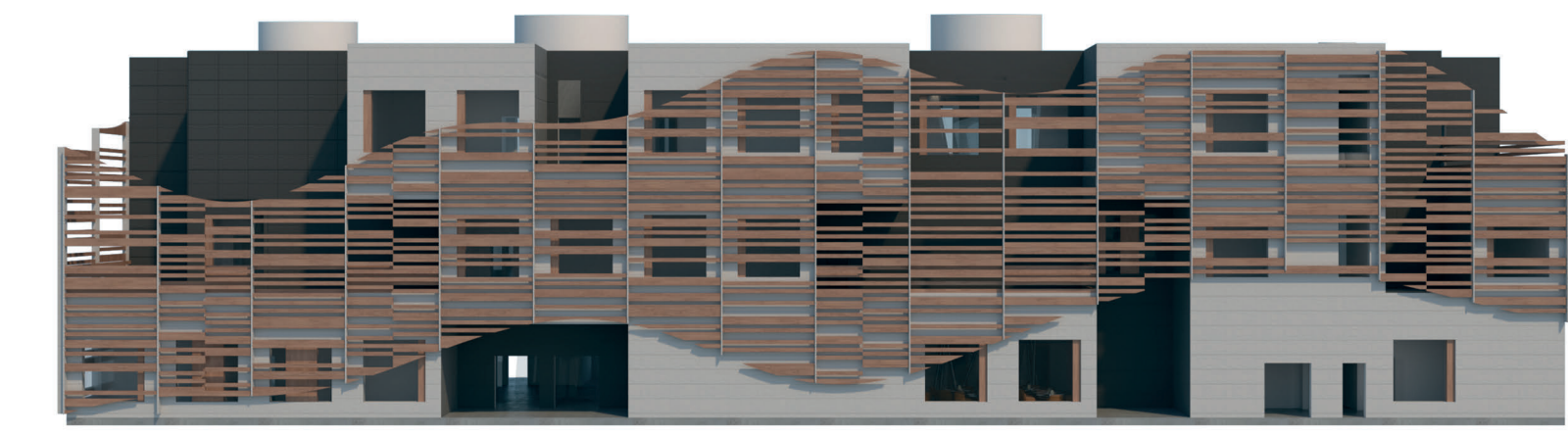
ground plane detail



plaza deck transition detail

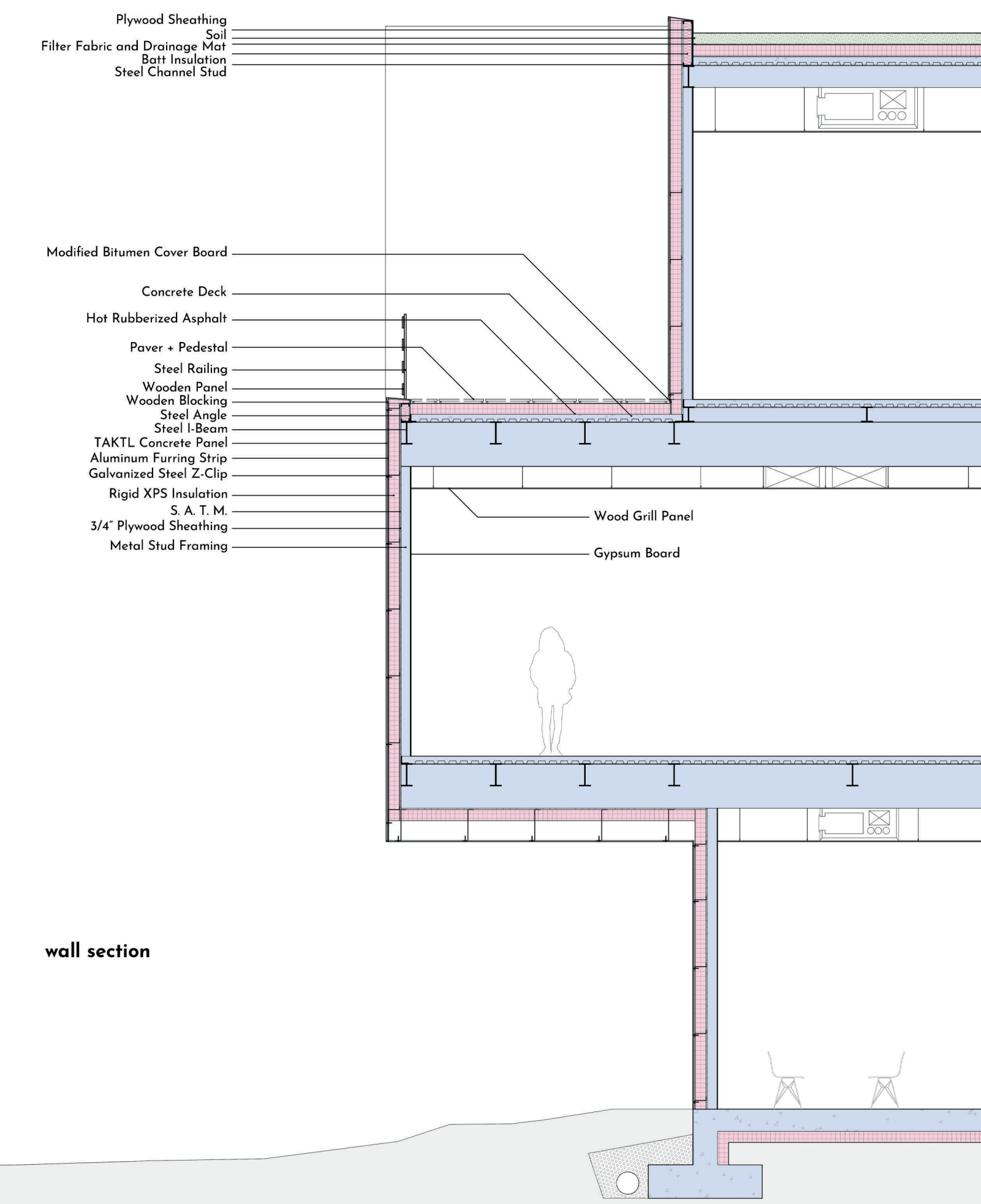
membrane transitions into hot rubberized asphalt at plaza deck transition.

each plaza deck contains its own drain and drainage pipe.



south elevation (facing W Roanoke St.)

the double-skin facade is designed in a way to give shading to the south facing windows, which are susceptible to excess solar heat gain. Larger openings are placed at eyelevel, while keeping things dense to further lessen the amount of sun hitting the building facade. this also acts as a secondary rain-screen.



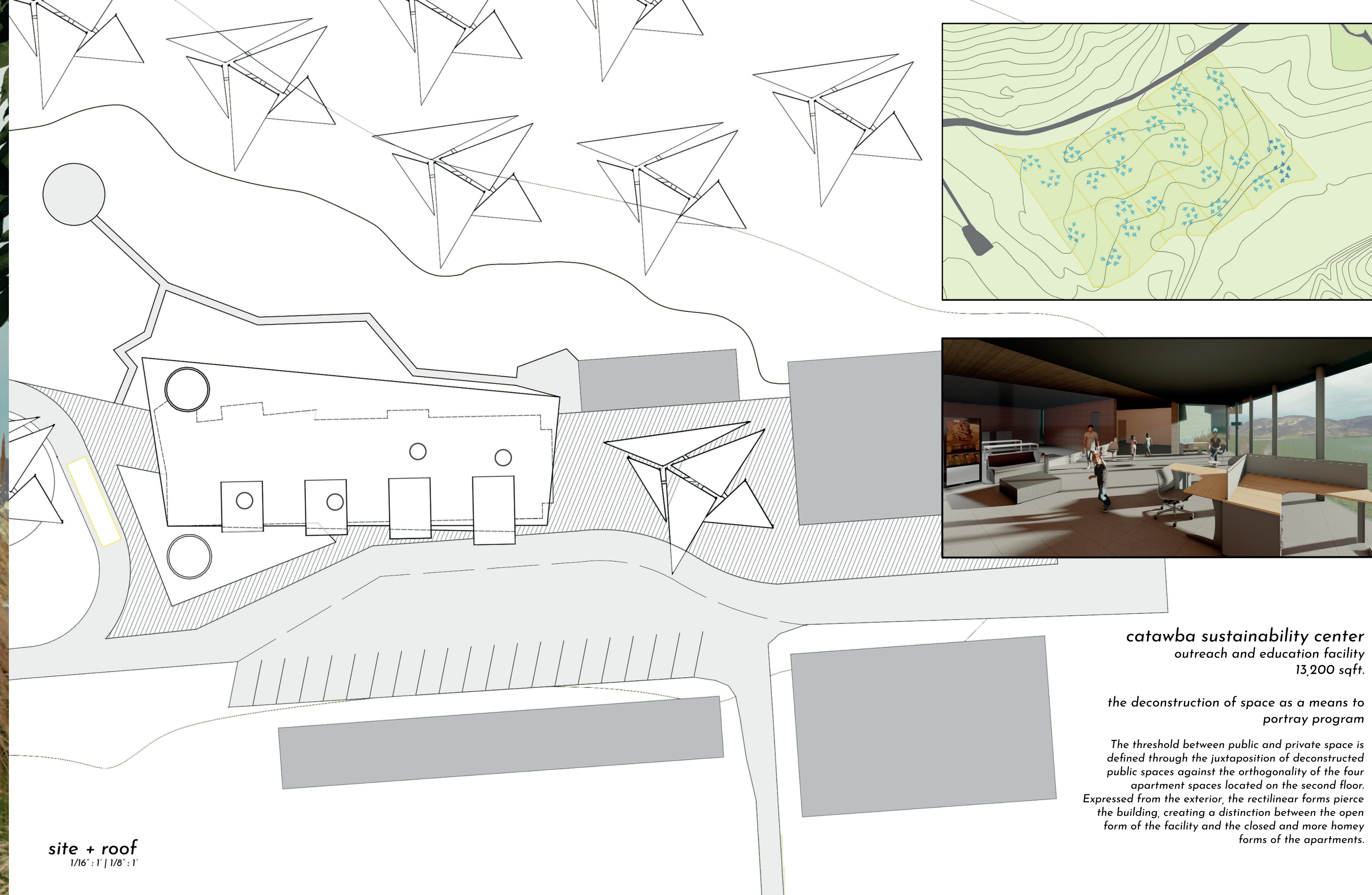
wall section

# outreach and education facility

catawba sustainability center



3rd year, first semester  
professor elizabeth grant



site + roof  
1/16" = 1' | 1/8" = 1'

catawba sustainability center  
outreach and education facility  
13,200 sqft.

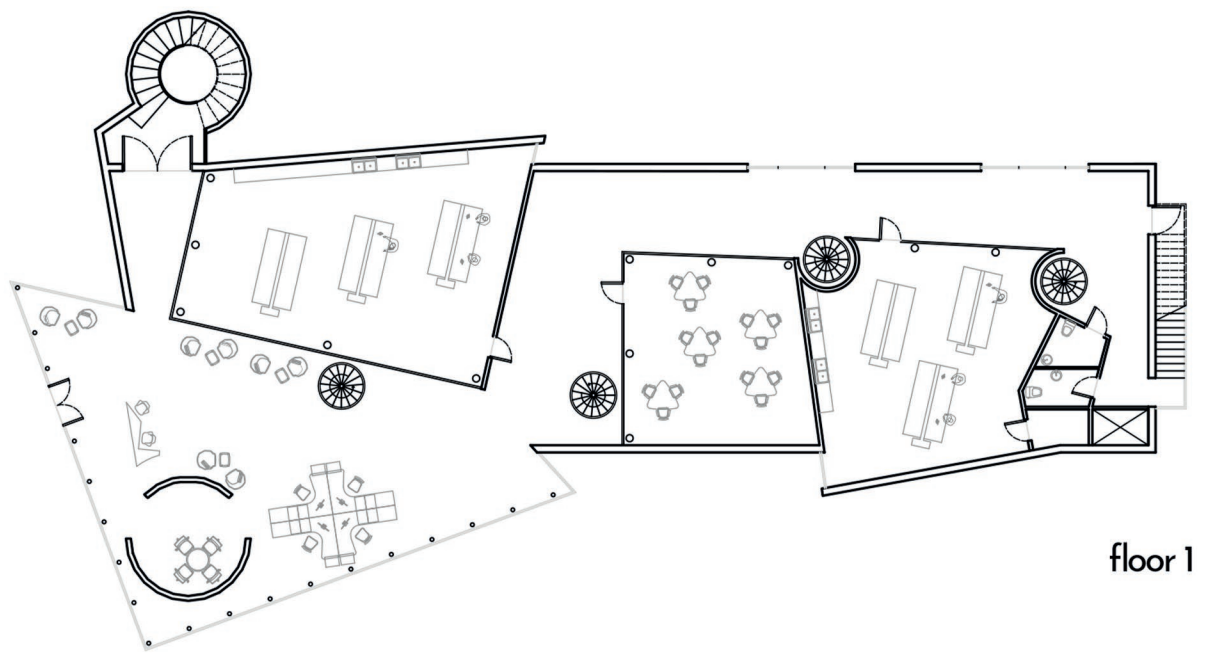
the deconstruction of space as a means to  
portray program

The threshold between public and private space is defined through the juxtaposition of deconstructed public spaces against the orthogonality of the four apartment spaces located on the second floor. Expressed from the exterior, the rectilinear forms pierce the building, creating a distinction between the open form of the facility and the closed and more homey forms of the apartments.

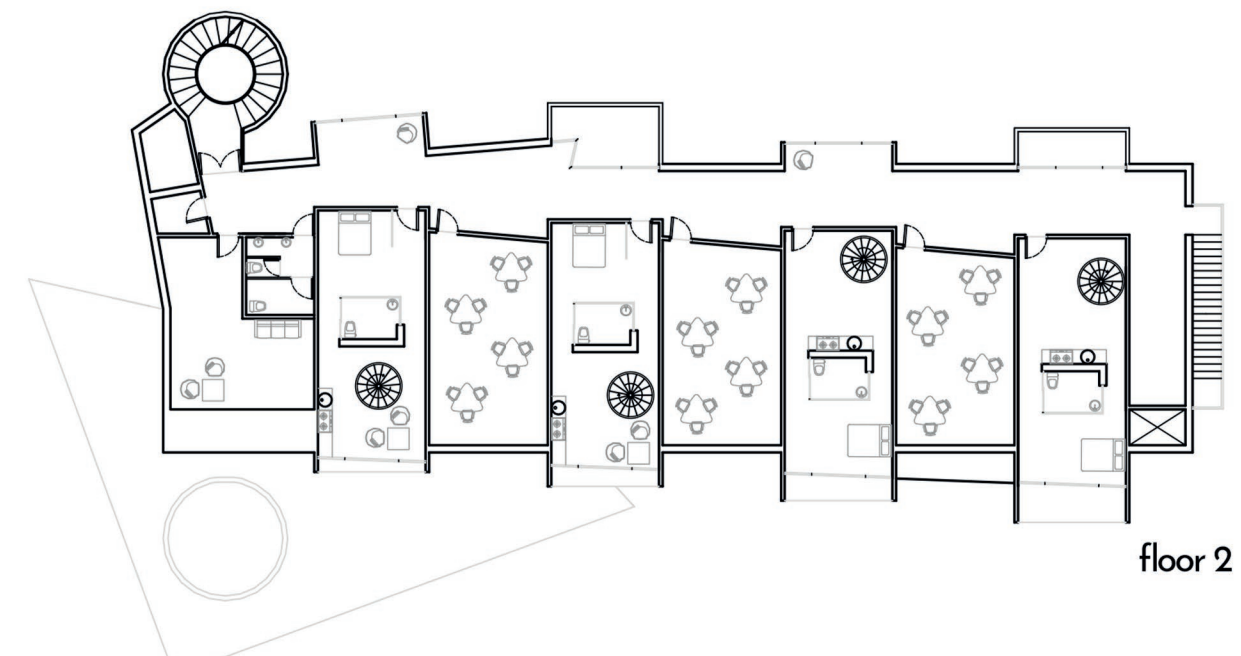


**plans**

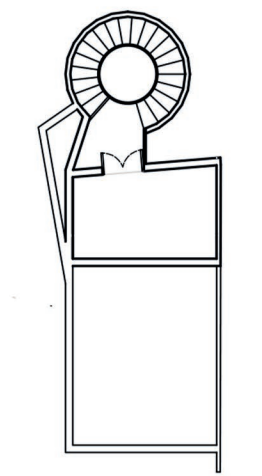
120kW of power supplied through solar panels covering the roof & supplemental tree shading structures.



floor 1



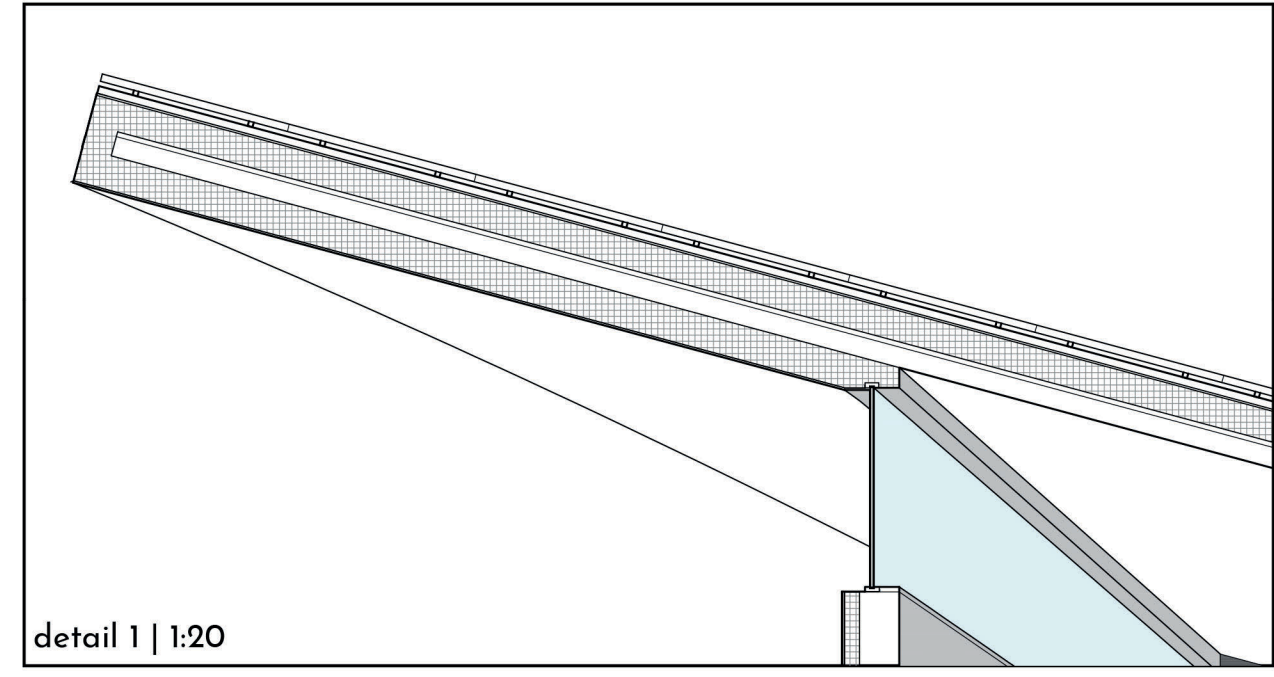
floor 2



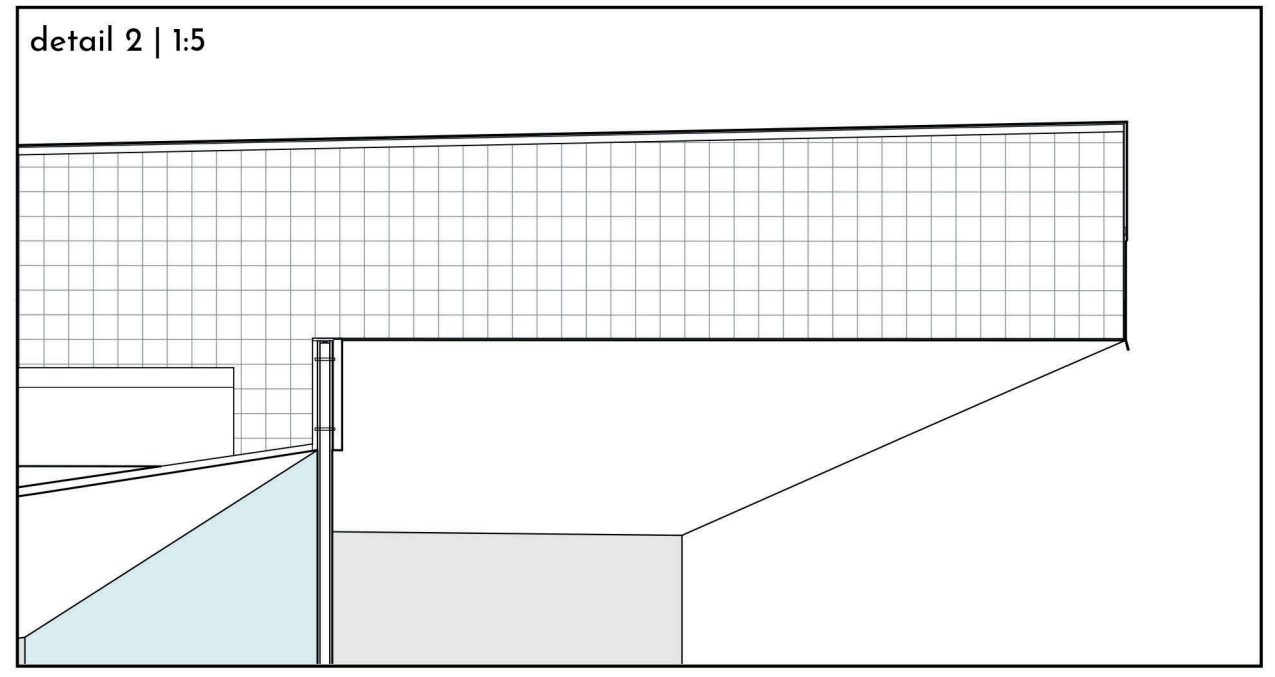
attic

**sections & details**

details 1:20 & 1:5



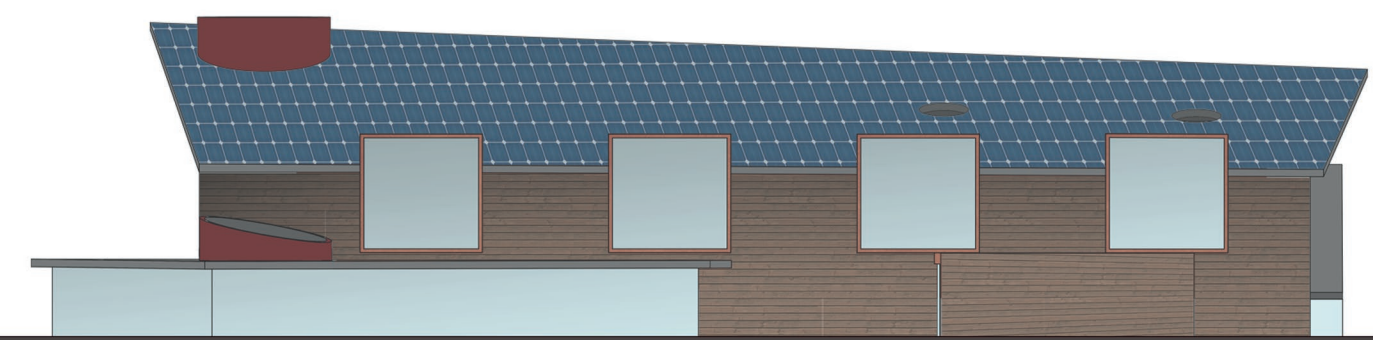
detail 1 | 1:20



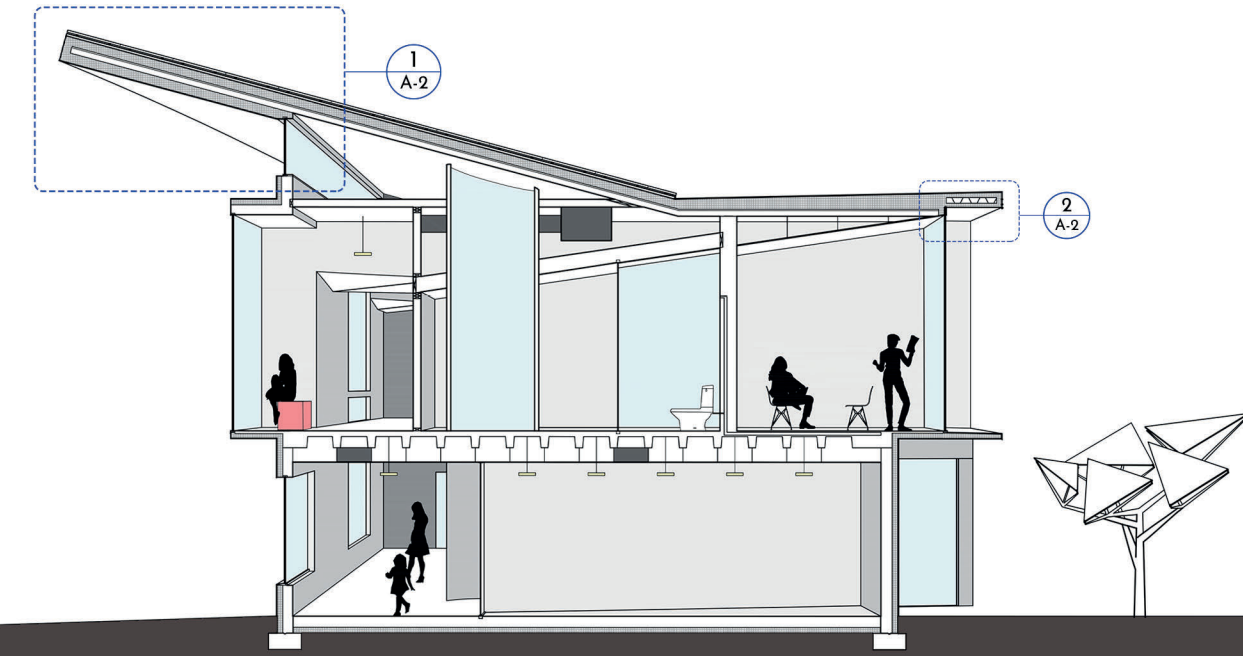
detail 2 | 1:5



north elevation

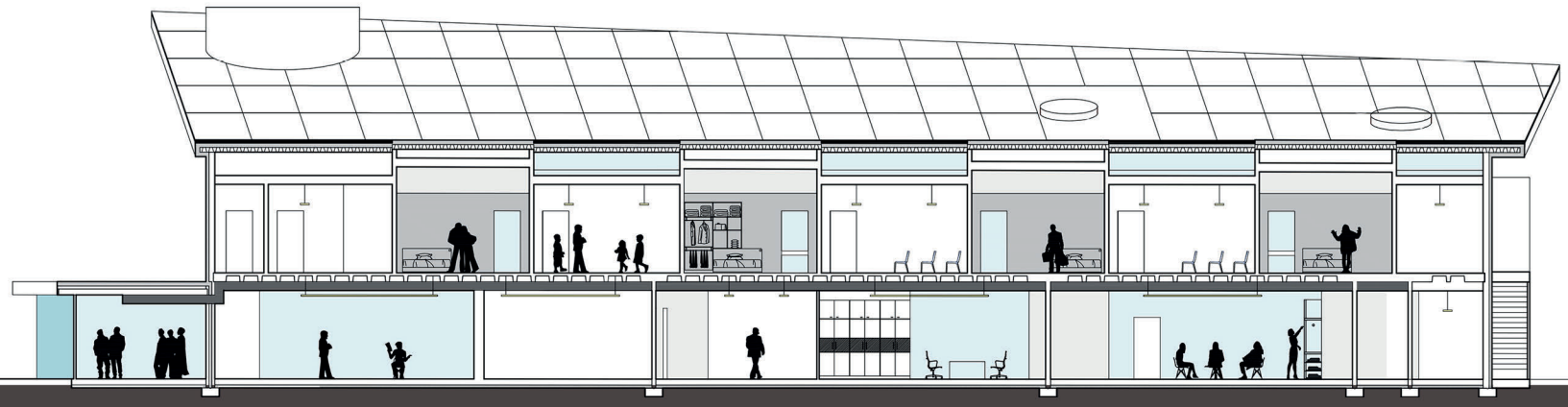


south elevation



1 A-2

2 A-2



2 A-2

ages 5-99

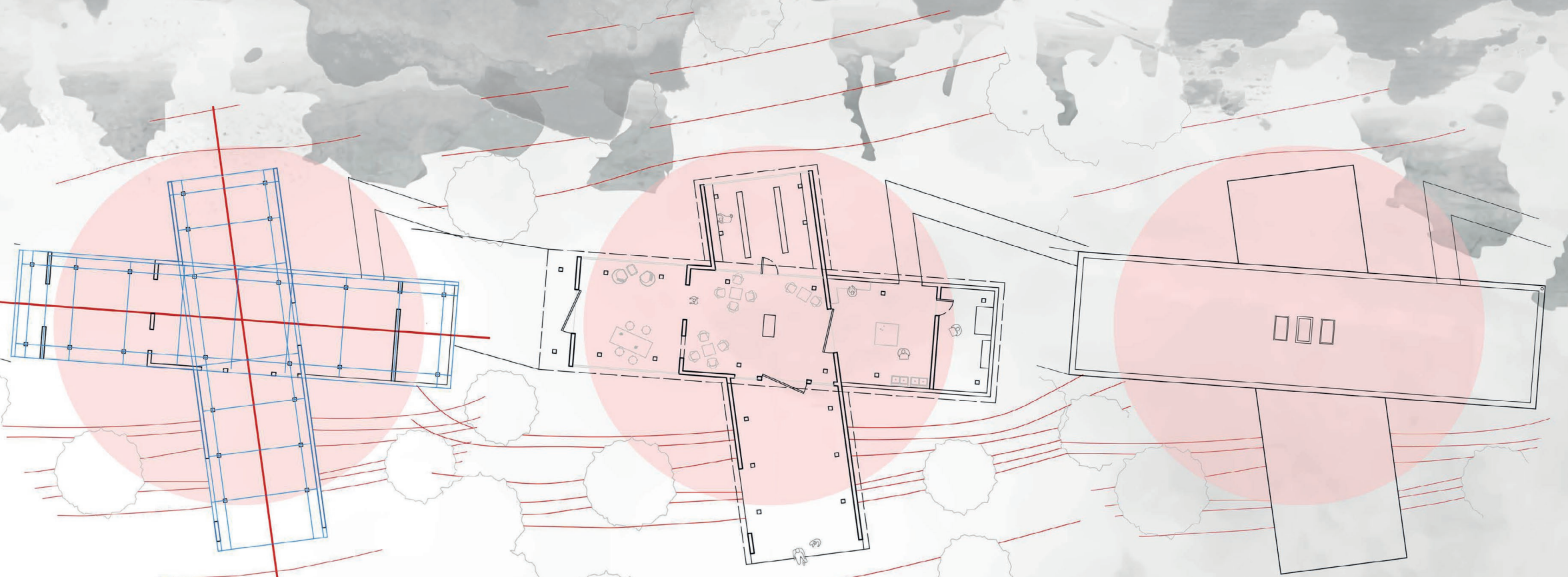
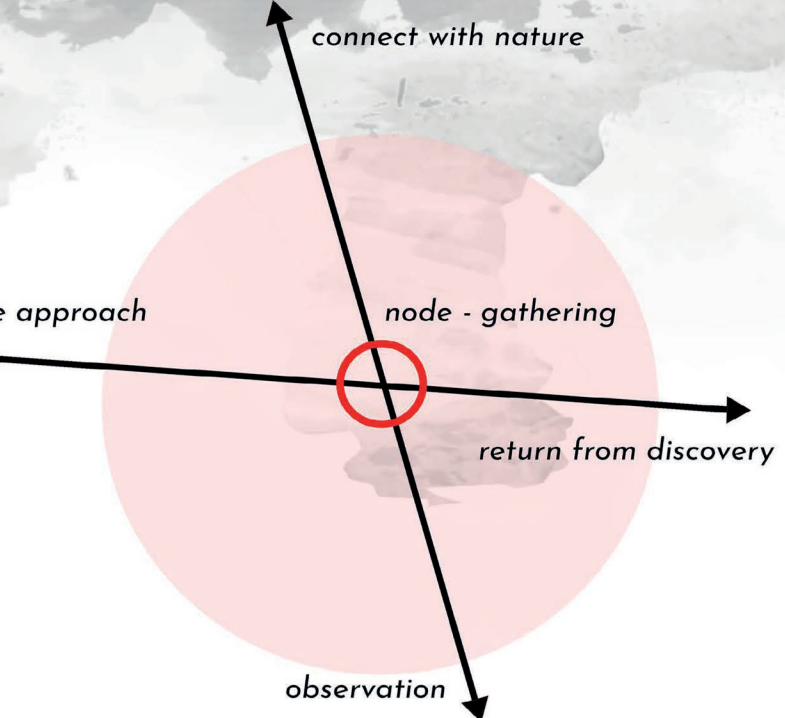
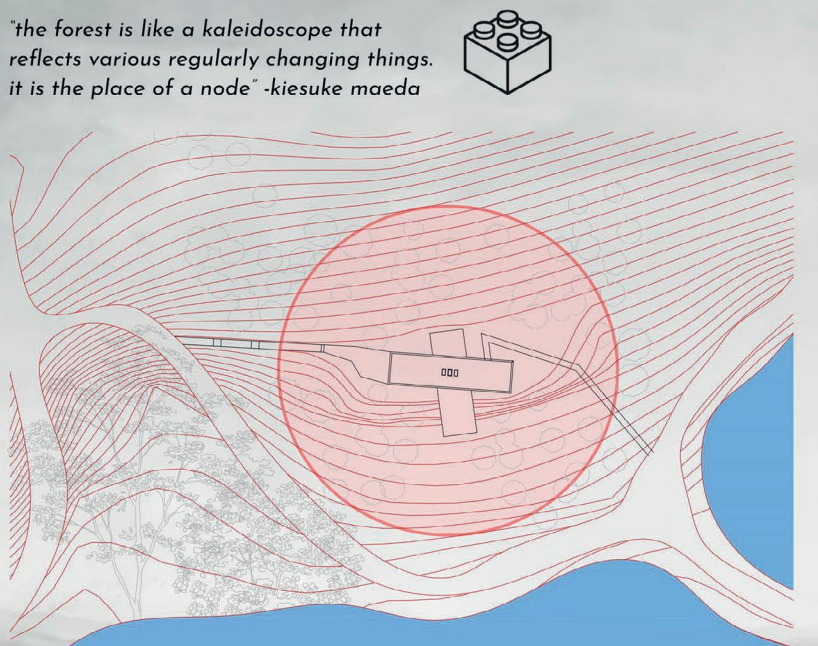
#1169

connecting with nature:  
a research station

4935 pieces

"the forest is like a kaleidoscope that  
reflects various regularly changing things.  
it is the place of a node" -kiesuke maeda

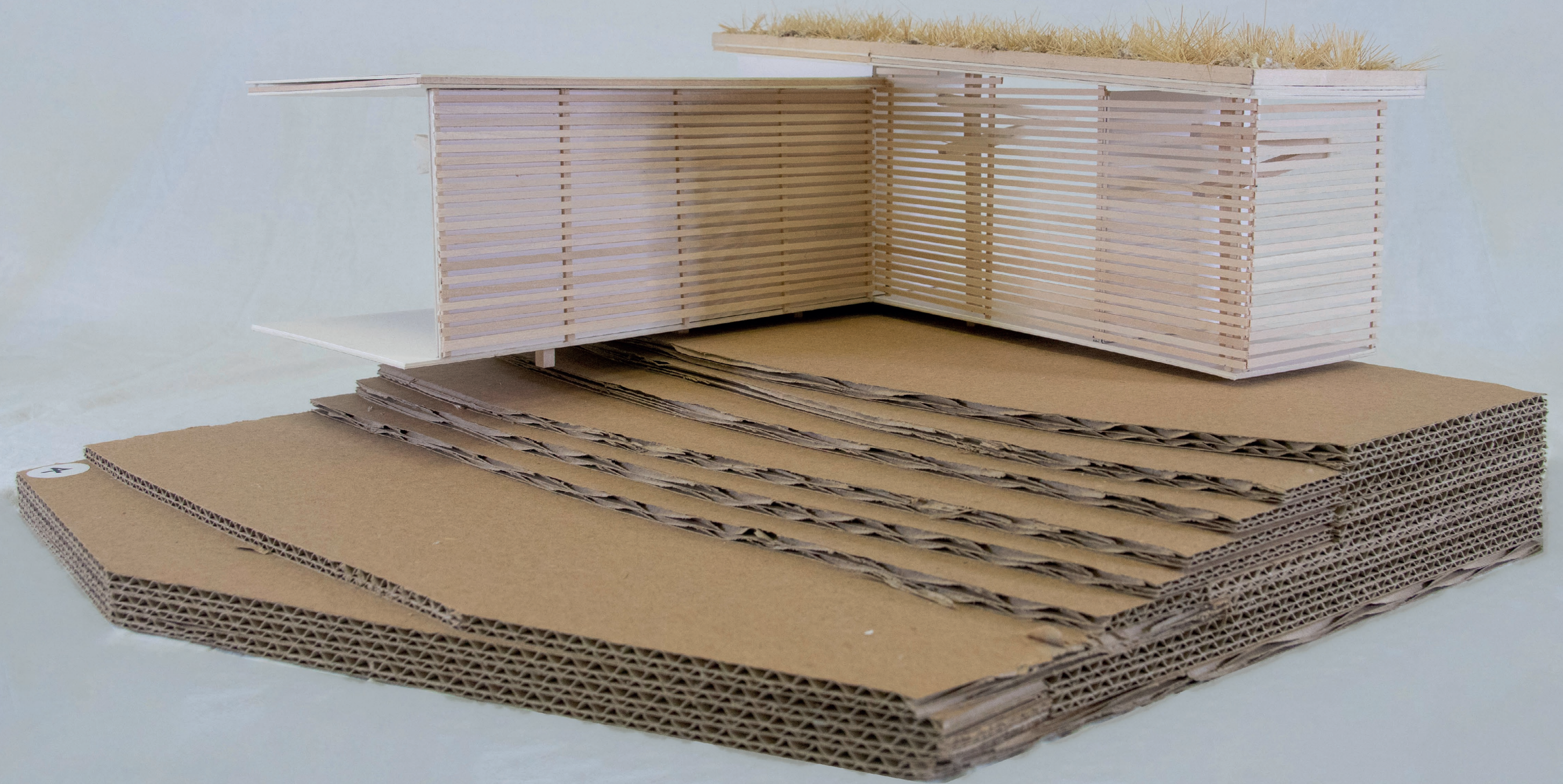
- 52 6"x6" birch timber posts
- 203 cedar wooden slats
- 35 prefabricated CNC CLT panels
- 205 metal brackets
- 1000 screws
- 26 furring strips
- 150 4"x8" rigid XPS insulation
- 22 2"x80" sheets of steel decking
- 10 windows
- 2 skylight fixtures
- 3 rolls of waterproofing barrier
- 1580 ft<sup>3</sup> of organic material
- 160 tall grass plants
- 3 pivot doors
- 2 doors
- 1 fireplace element
- 2 countertops
- 1 rain barrel
- 1 batter pack
- 2 sinks
- 15 chairs
- 4 tables
- 10 researchers

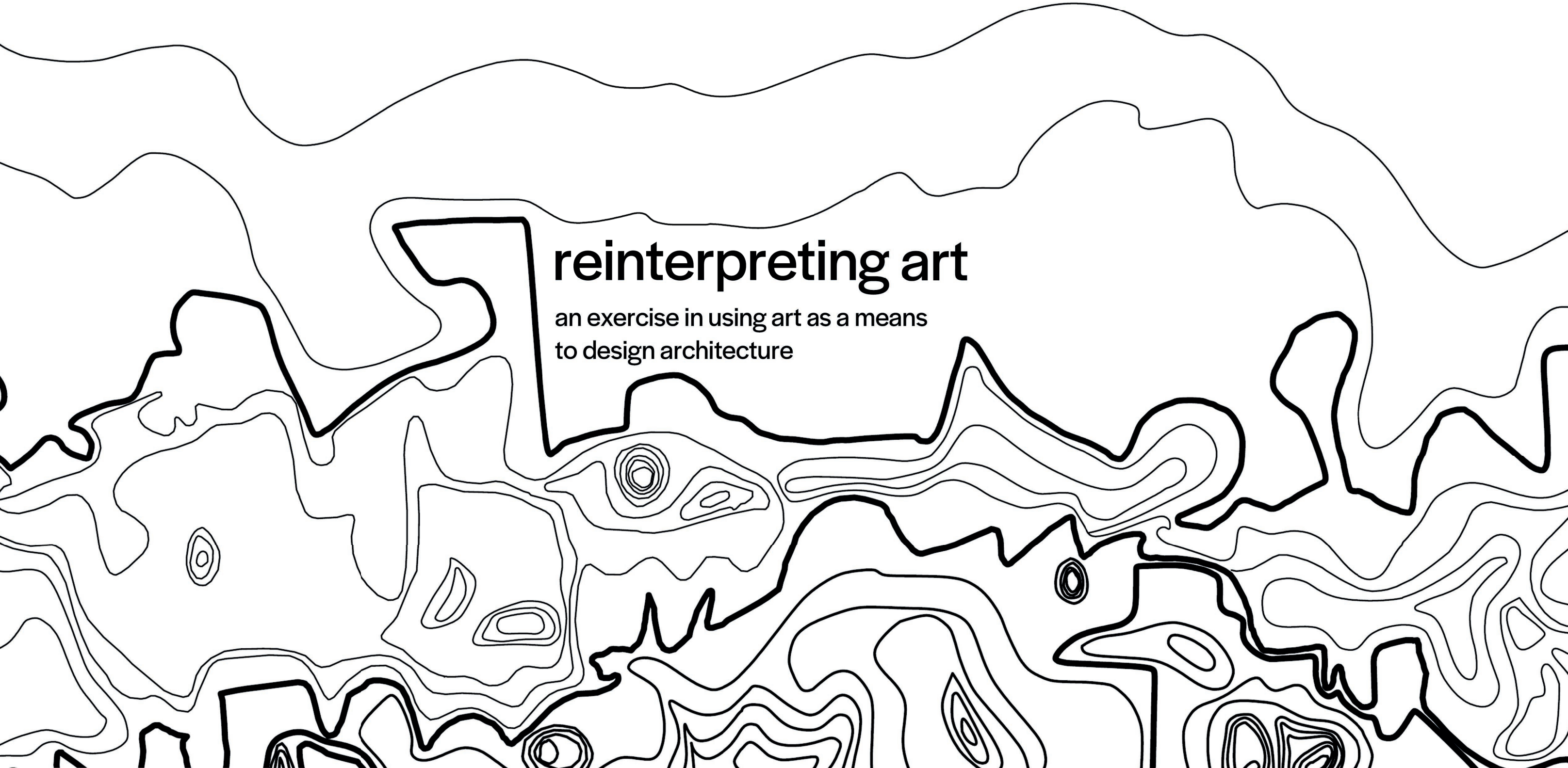


diagrams | grid | plan | roof in instruction booklet

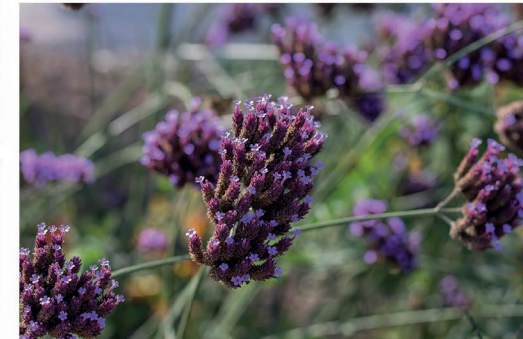
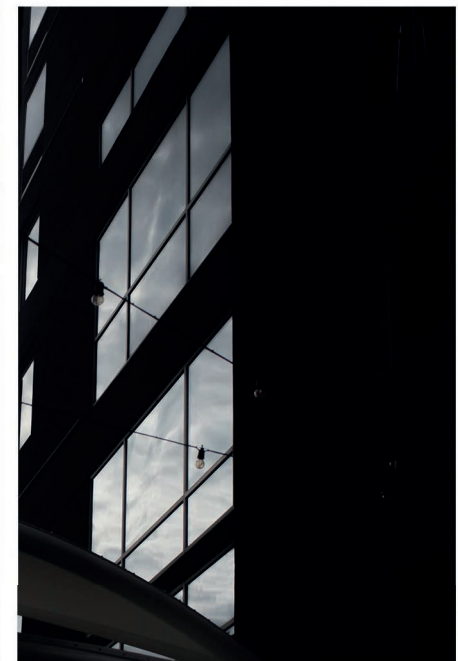
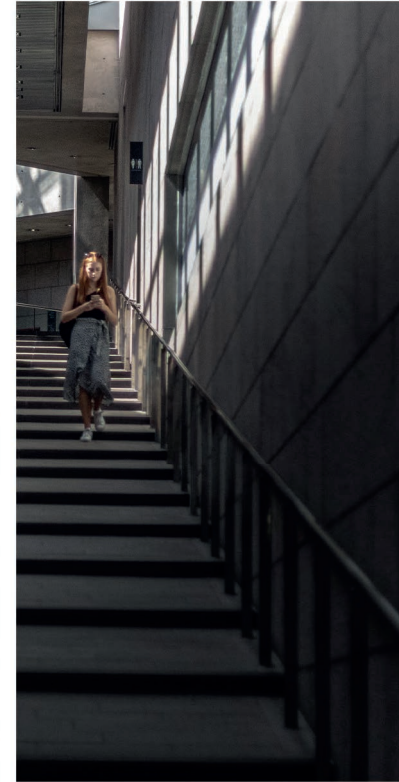
3rd year competition | merit award winner

sectional model 3/8" scale

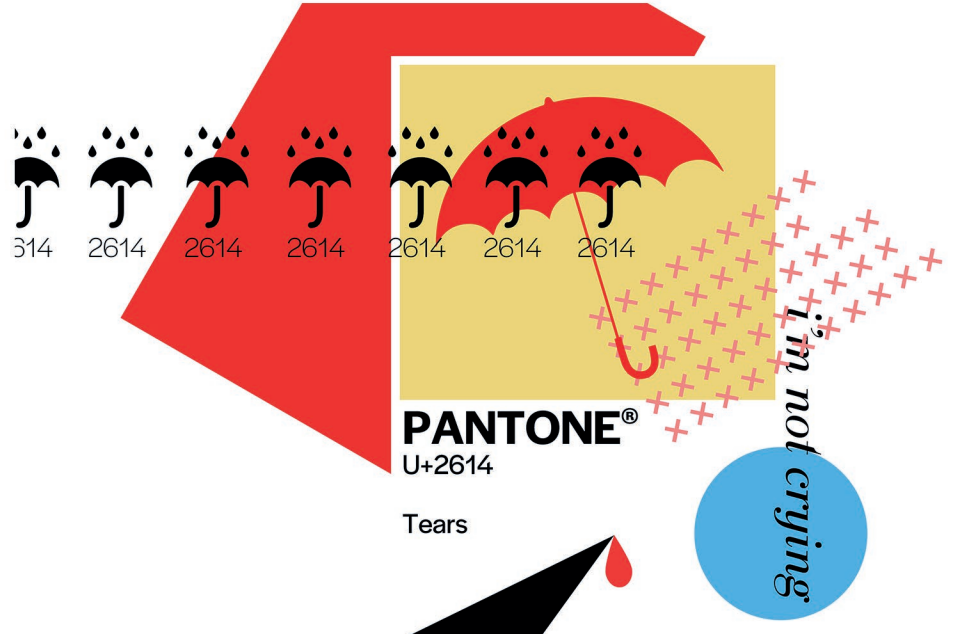




photography  
freezing a moment of  
time into something  
we can hold in the palm  
of our hand



2016-2020  
selected works



the freest form of expression, the liberating feeling of emotions flowing through the work itself.

graphic design  
various self-projects & commissions  
2016-2020

# *crisis*

*in Hong Kong*



*dissapearance of private space  
the loss of an urban identity  
during COVID-19*