

A Compilation of Questions and Curiosities: Selected Works 2019 - 2022

How can the community be invited into a housing complex? How can the intervention be successful and productive during all seasons? How do people interact with and contribute to their neighborhood?

How can breaks and recess become an integral part of the school day? What does a future NYC look like?

How can public spaces be interwoven into a school? How will speeds & the way people interact with architecture change?

How have New Yorkers appropriated their own spaces? How can the neighboring Melrose Community Garden extend itself to the new complex? How can a site plan be designed around ritual & time?

How can one, simple gesture separate the public and school programming? Can we create a new language on the site which speaks to the old without overwhelming it? Can light entering through an atrium become a gnomon, or timekeeper, for a building?

How can the spiritual significance of trees & forests become present in the forestation industry? How can architecture encourage casual interactions and elements of play throughout a school day?

If we used our thermostats less in exchange for using clothing for thermal comfort, could we use the savings to plant a forest? How can farmers, musicians, and everyday New Yorkers utilize the space? Can views inspire music? How can people interact with ruins?

How can architects intervene on a ruin site? Can housing promote community engagement? How can we consider an economy of means based on spans of the existing grids? Should the ribbon be composed compositionally or functionally? Can it be both?

How can the form be generated by program? How do the new & old interact? What is the significance of ritual? How can yards, hallways, urban pockets encourage dialogue and influence how people see their surroundings?

What does it mean to be part of “the Block?” How can each studio be individually accessible from the exterior? What is the most minimal gesture which can be made to transform the experience of the site?

How can architecture enhance the body’s inner spirit and reflect the Earth’s natural cycles? How can the school day be structured around recesses and breaks?

How can we reduce a reliance on modern technology in favor natural systems? How does sound move throughout a small space?

What does monastic architecture look like? Can the natural properties of plants be used to absorb sound? How can classrooms be oriented to children developmental attention spans?

How can a monk’s day revolve around work, the forest, and meditation? Should more investment be placed into food infrastructure? Can natural ventilation & access to green spaces become a right in new housing developments?

How can light activate different spaces? How can the walk between the forest & monastery become a moment of reflection? What needs will need to be accommodated in a post-anthropocene New York?

How do people move throughout a city? What does it mean for an icon to become a site of ruin in the 22nd century? Is the fire-escape an extension of the home?

I believe questions and curiosities are powerful. Curiosities lead to questions. Questions are the foundations of ideas. In a field so intimately involved with our end users' lives, it is important to not only ask questions about design but also be curious about society. Being curious and asking questions expands our mind to what the world is capable of and the potentials of architecture. They help us challenge our profession and propell us to envisage a new world.

The Recess School

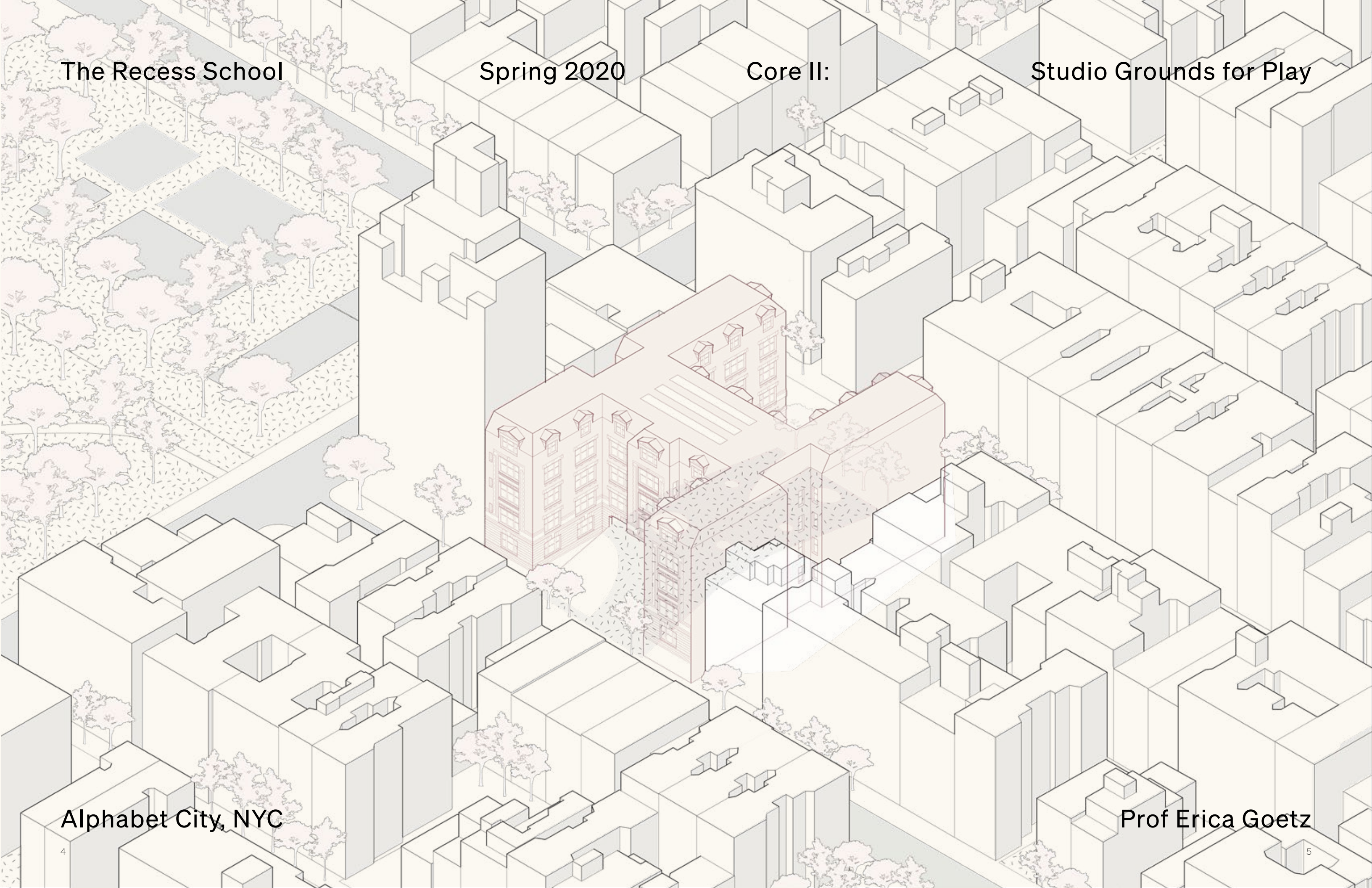
Spring 2020

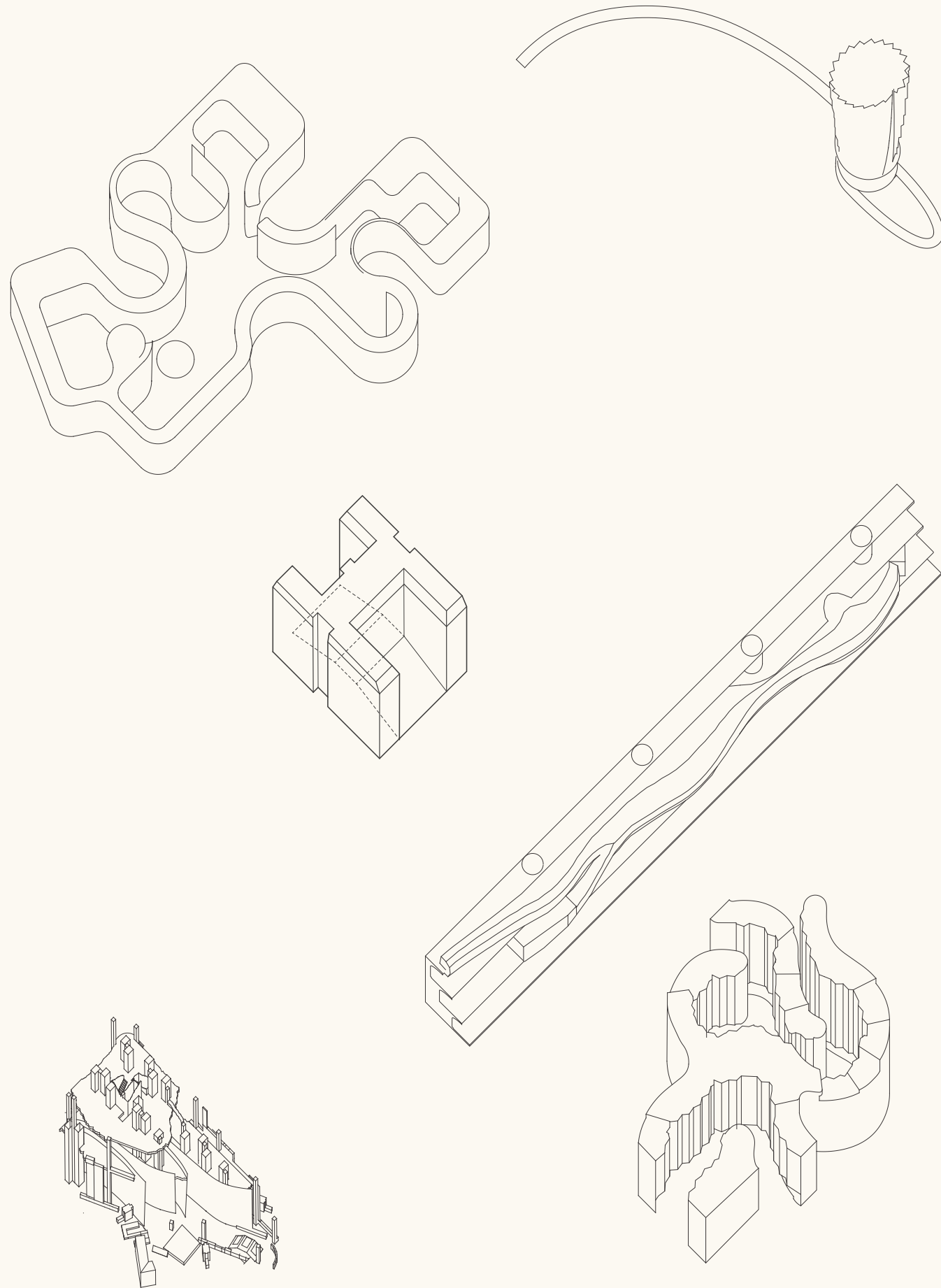
Core II:

Studio Grounds for Play

Alphabet City, NYC

Prof Erica Goetz





This project looks at P.S. 64 - a school designed by C.B.J. Snyder in Manhattan's Alphabet City. Abandoned since the 1970s, the building serves as an excellent site for an adaptive reuse proposal for a K-8 school. My project to utilize the shell of the existing structure and add subtle interventions in order to encourage informal interactions throughout the school day.

before and after school as well as invite the community to inside the building. Entrances embedded within the hill directly connect the public program to the street level while the school entrance is elevated providing a more intimate experience.

How can breaks and recess become an integral part of the school day?

How can public spaces be interwoven into a school?

Breaks and times of play are crucial to developmental education as they allow for more focused, productive time when in the classroom.. Breakout spaces become a place for informal interactions between students and teachers, an opportunity to play, as well as a chance to rest. In this school, breaks become an important part of the education experience, and the school day becomes reoriented around these times.

How can one, simple gesture separate the public and school programming?

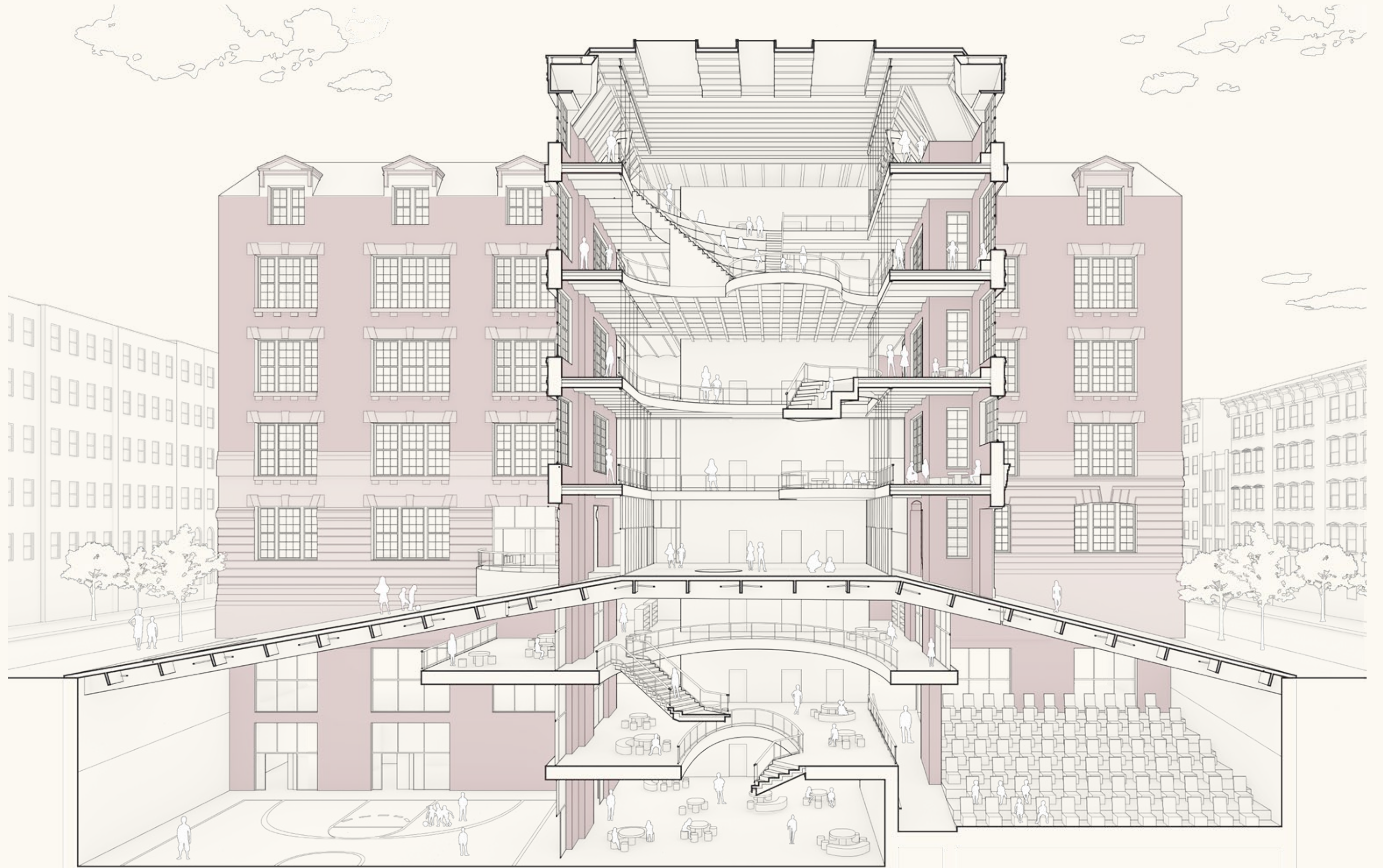
My main intervention includes adding a 1:12 public "hill" intersecting into the building and connecting 9th and 10th street. Below this hill holds public programming: a high-school level basketball court as well as a branch of the NYC Public Library. Walking to the top of the hill will bring one to the main lobby of the school. The school's classrooms are located on the upper levels.

The center portion of Snyder's "H" is designed as a large breakout area and is saw-cut from the original structure. The classroom's are either situated to face towards or face away from these break-out spaces depending on the age-level and structure of each class.

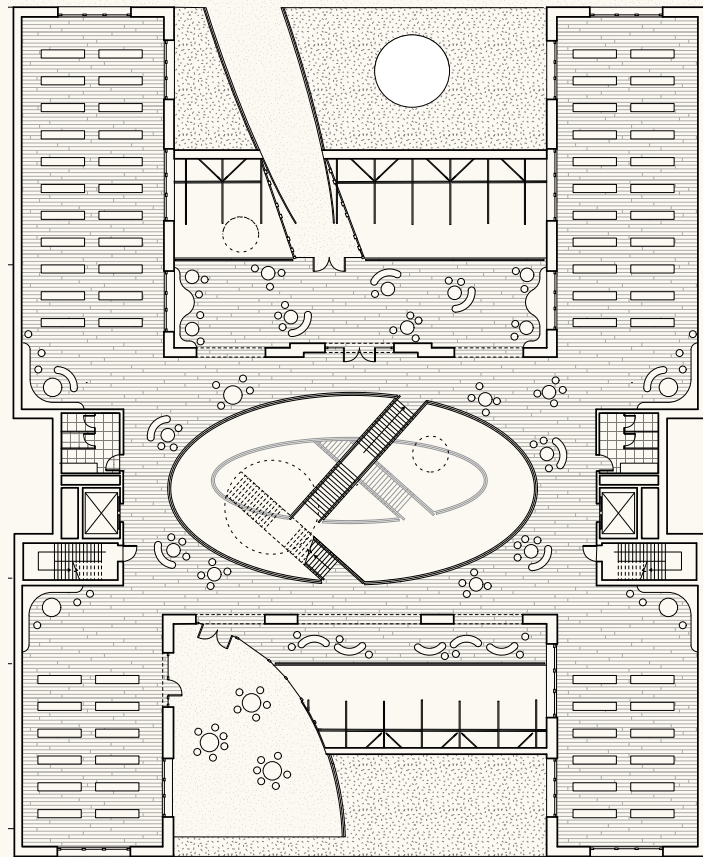
The hill features a playscape to both accommodate children playtime

How can the notion of “play” reveal itself on the exterior?

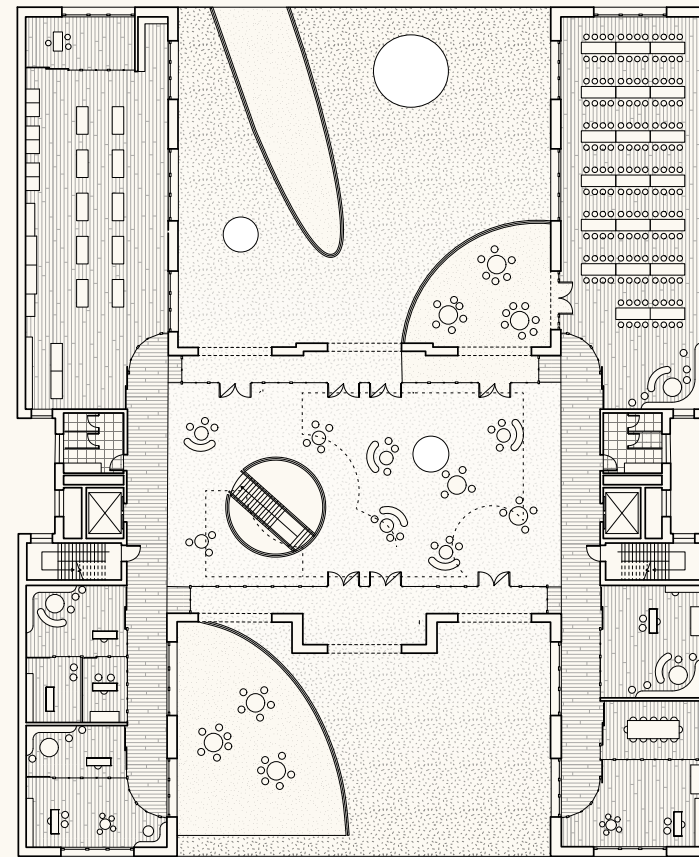




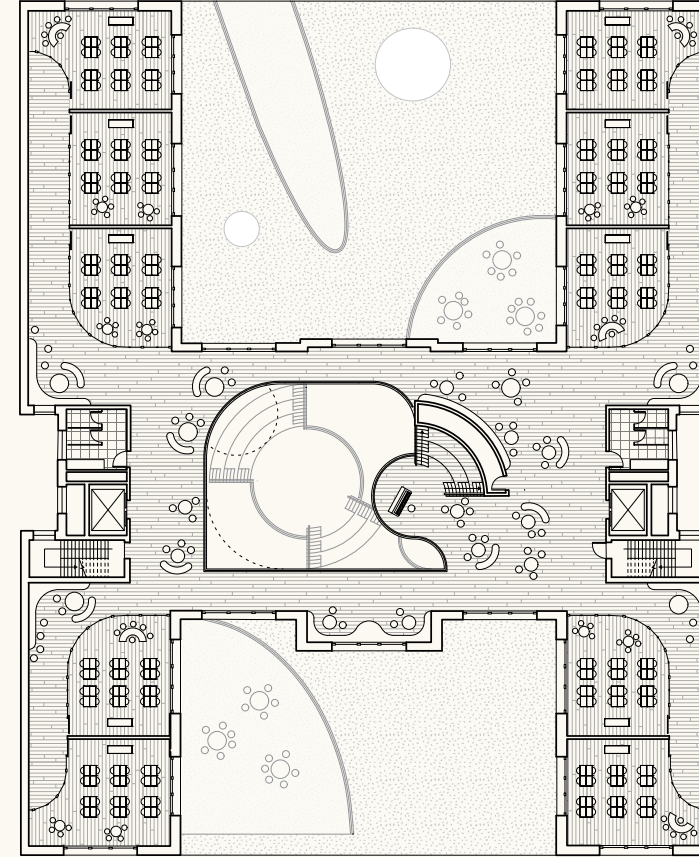
How can a playscape invite people into the building?



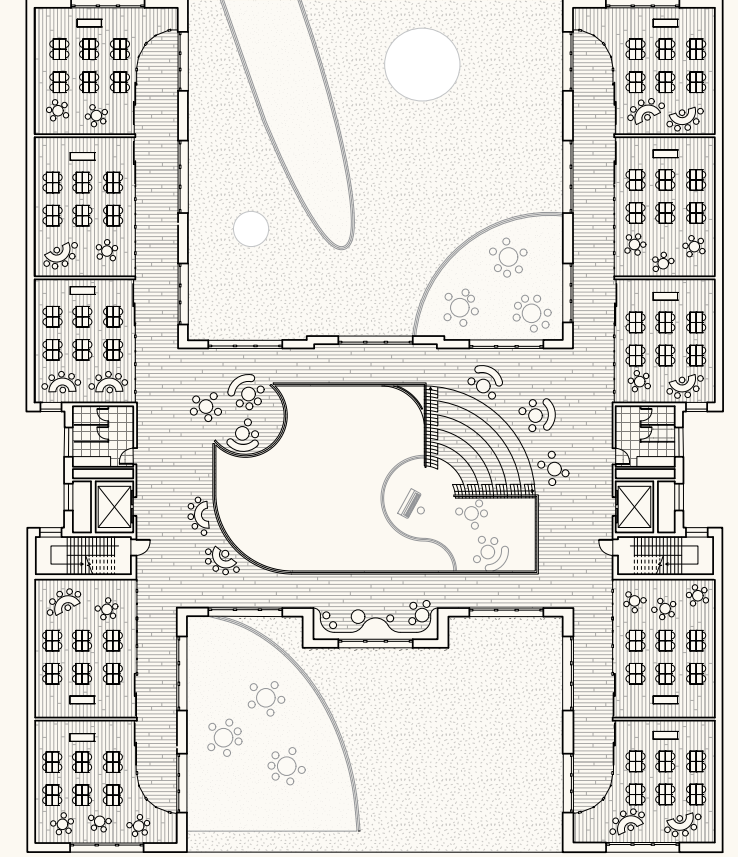
Floor -1: Public Library



Floor 0: School Lobby



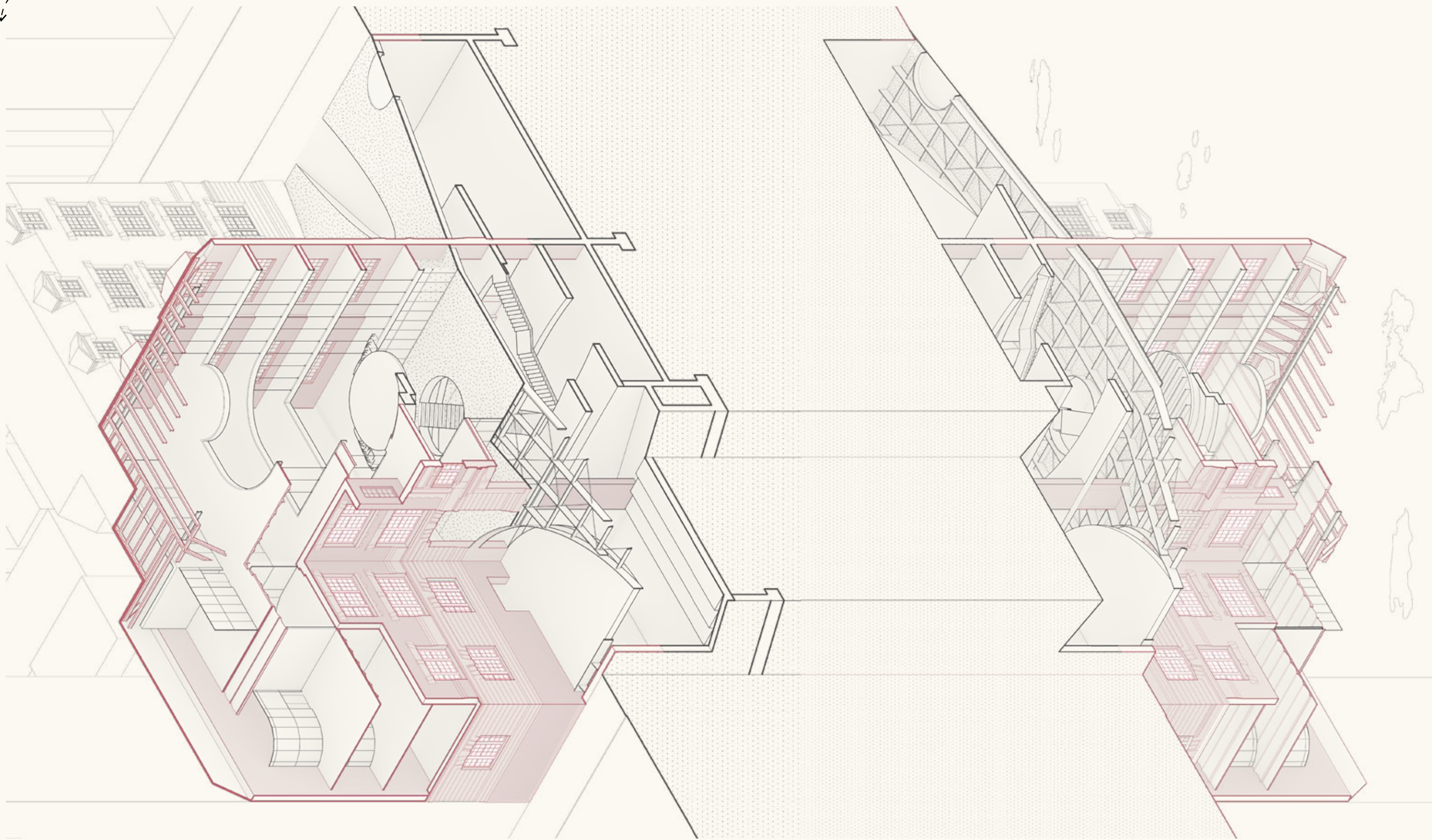
Floor 5: Classroom Level



Floor 6: Classroom Level

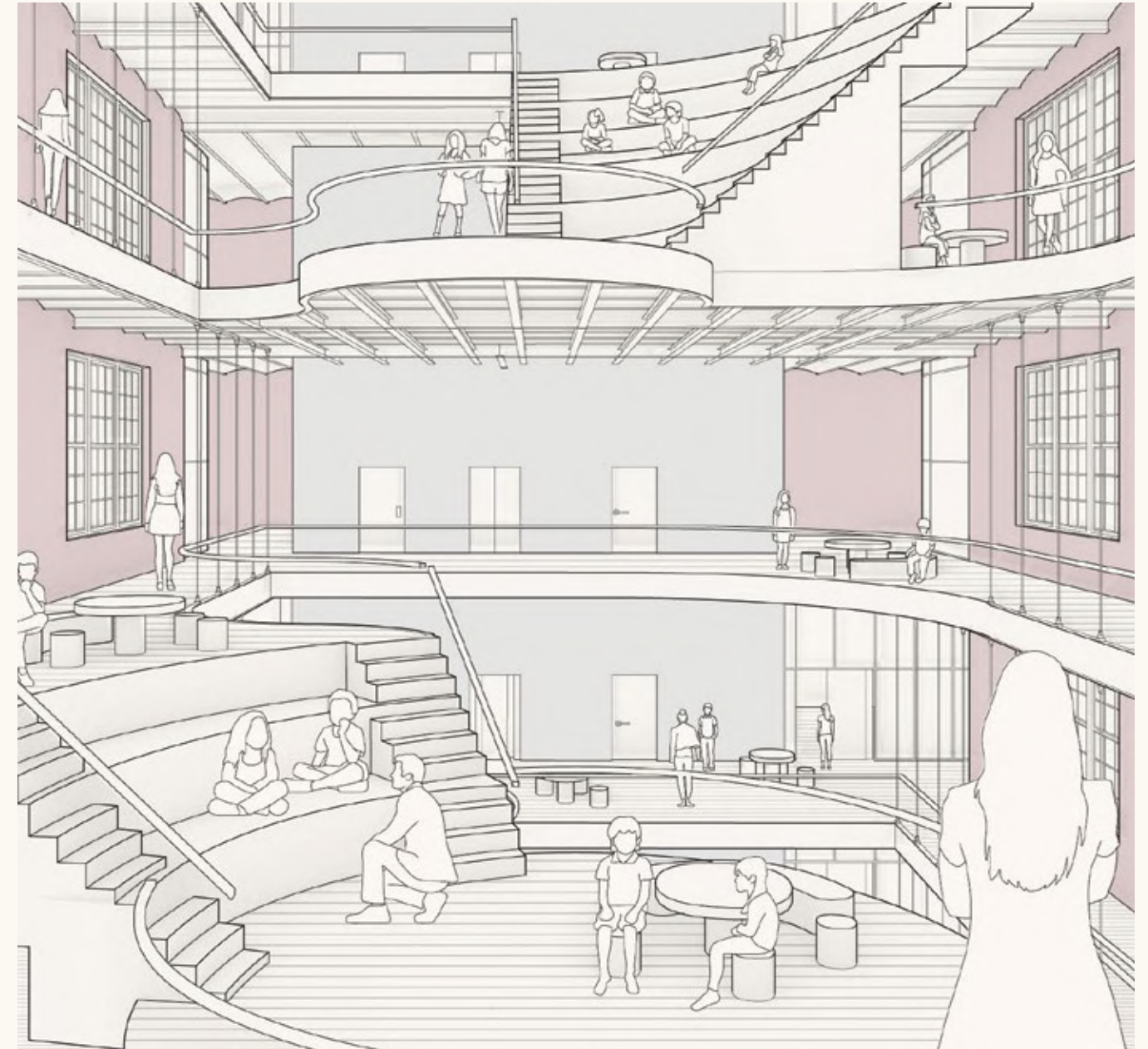
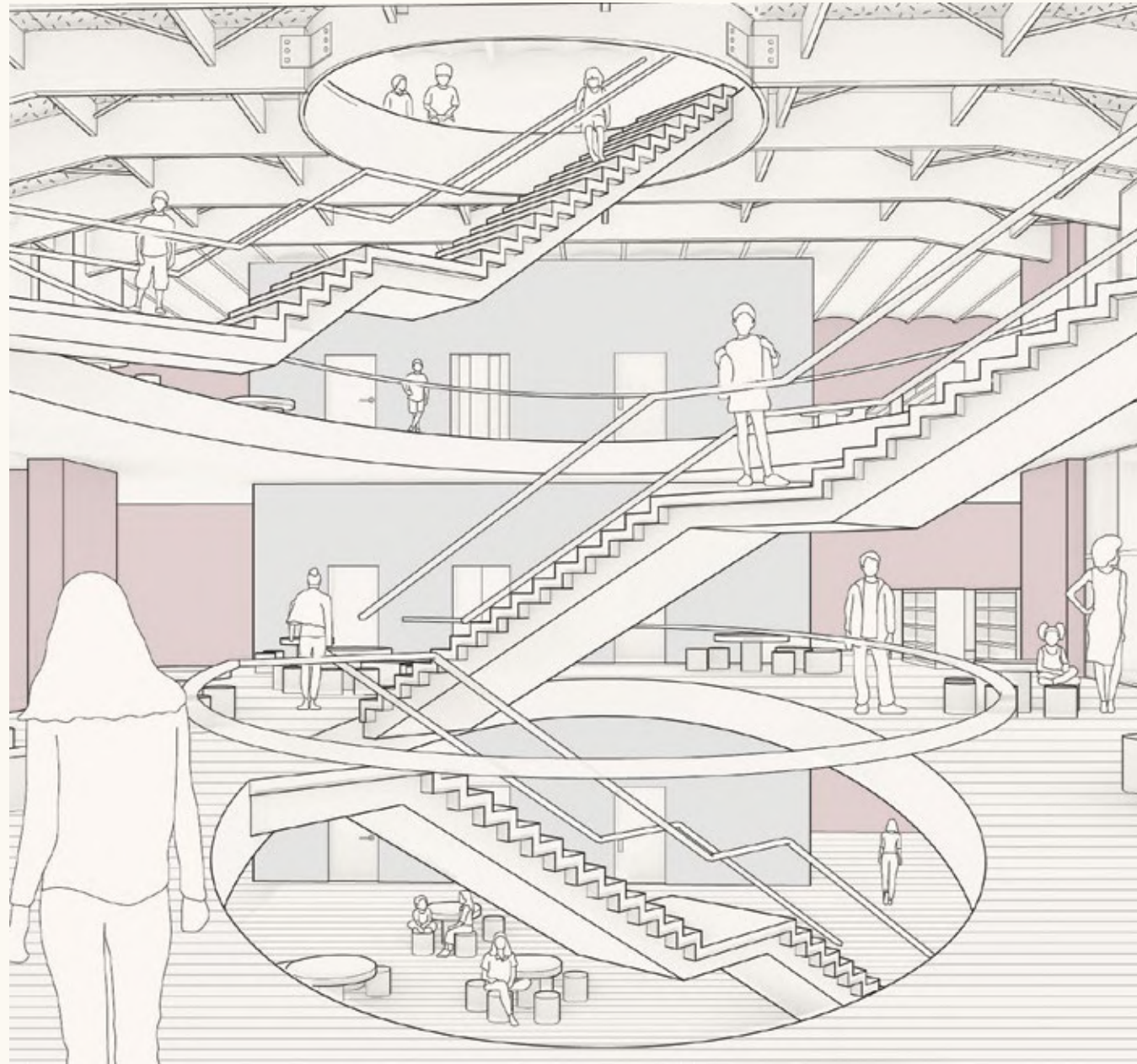
How can classrooms be oriented to children developmental attention spans?

turn this way.



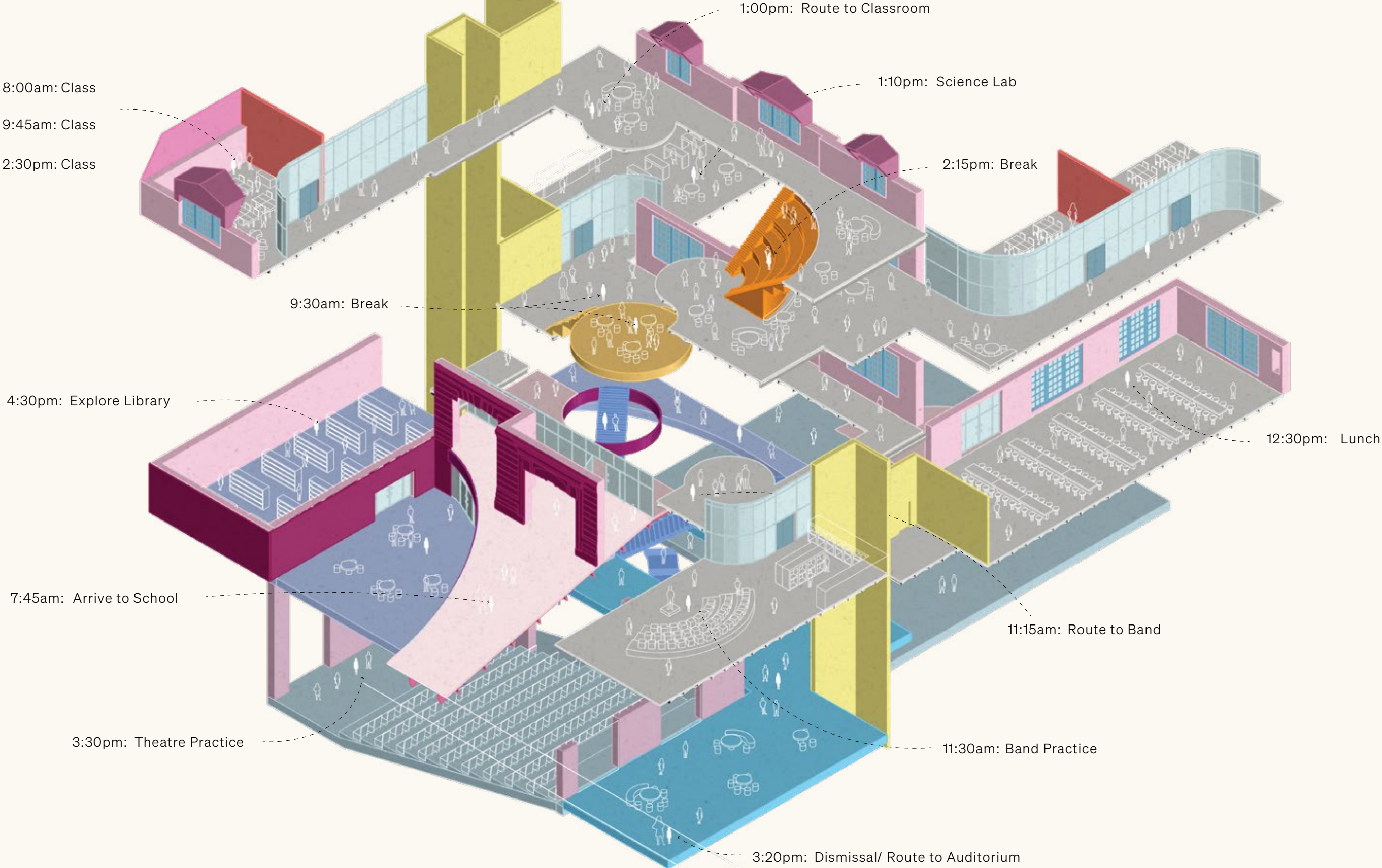
and this way.

How can the center of the “H” become a grounding element, both above and below the hill?



How can architecture encourage casual interactions and elements of play throughout a school day?

How can the school day be structured around recesses and breaks?



Monastic Timber

Spring 2021

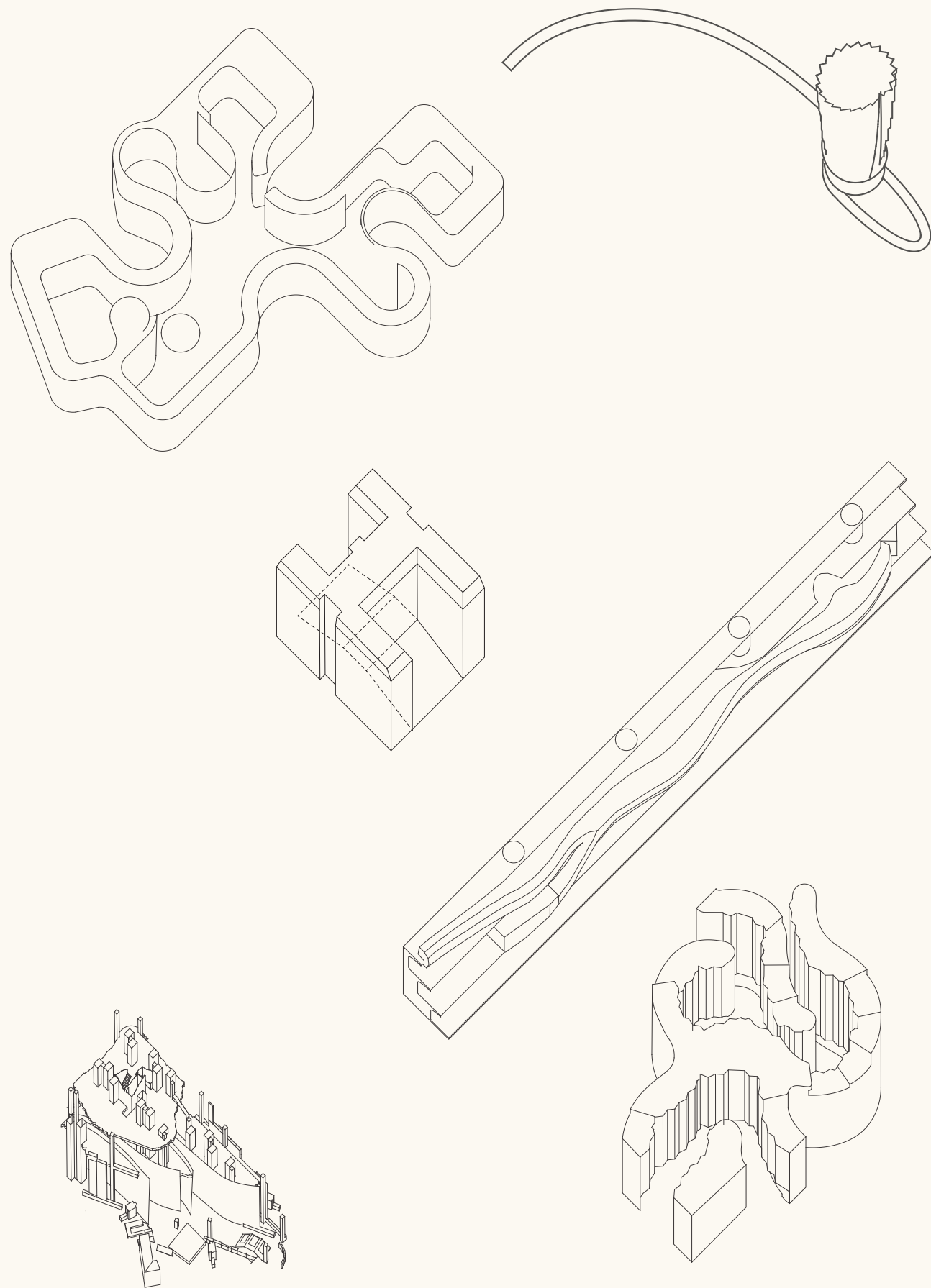
Adv IV:

Fringe Timber



New Canaan, NY

Prof: Lindsey Wikstrom



How can the spiritual significance of trees & forests become present in the forestation industry?

Monastic life strips away modern comforts and conveniences to make space for a habitual life of humility. Days are centered around prayer, meditation and work. In a Trappist Monastery in Massachusetts, the monks' daily habits include the historic work of brewing beer, there are numerous examples of this across the world where monks find new and interesting ways to not only fund their way of life, but also find meaning translating natural resources between earth and humans. The Hemlock Monastery is a monastery where the monks are loggers with a sawmill, harvesting timber to support themselves. Here the day is structured around work, forest, and meditation.

What does monastic architecture look like?

Through carefully crafted geometry, using shadow studies across seasons, light activates different spaces in accordance with the rigorous schedule of the monks. The architecture, made from the material they cultivate,

and package for others - connects to the acoustics of sleep, an aesthetic of rest, the geometry of their circadian rhythms, and wakes them to celebrate changes in the season.

How can architecture enhance the body's inner spirit and reflect the Earth's natural cycles?

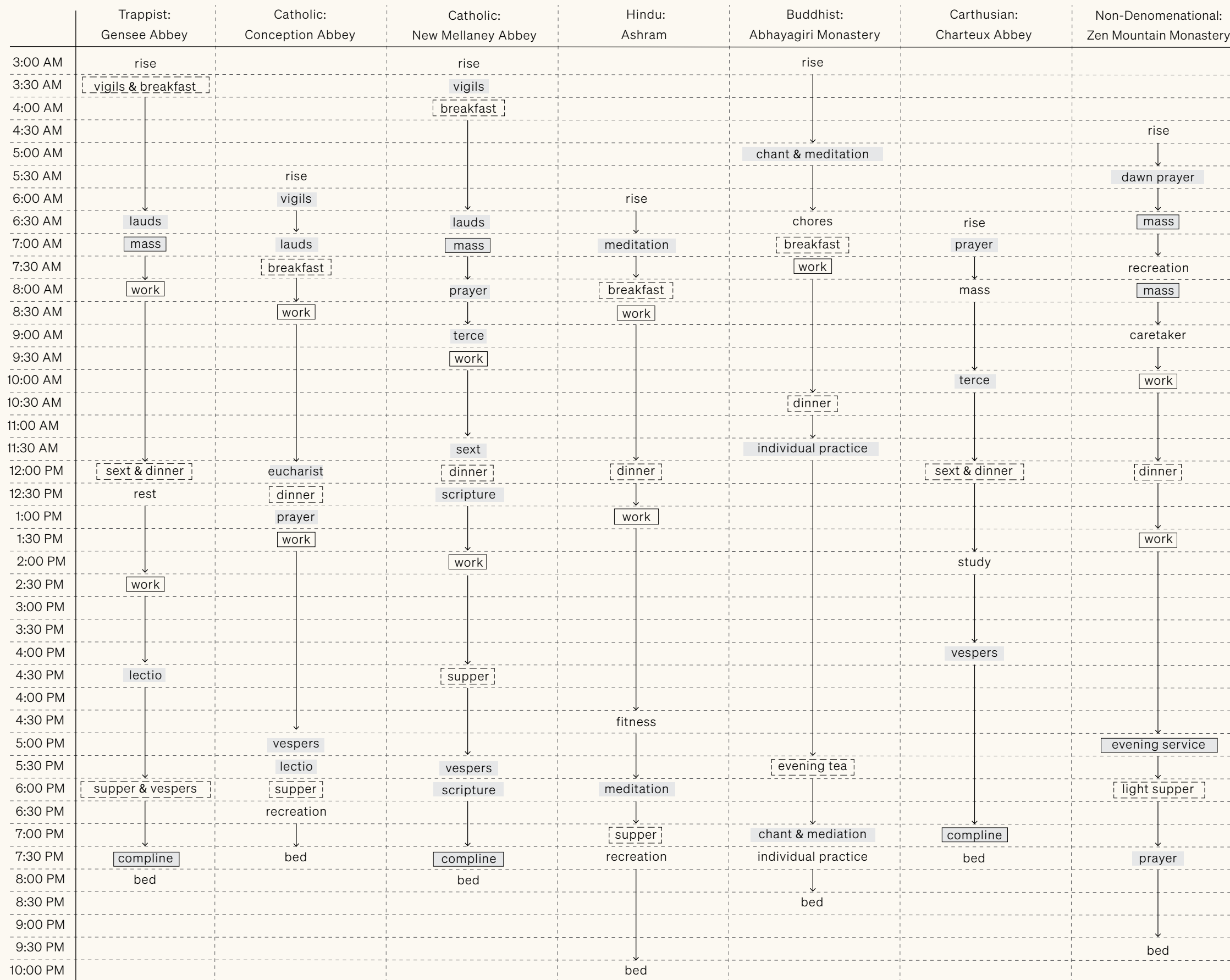
With logging and meditative tasks splitting the day, monks will be ascending and descending in the tower often. Along ramp draws people slowly away from the architecture towards the forest floor, increasing and decreasing speed, creating views, and gradually transitioning between indoors and outdoors.

On the exterior, a pin-wheel system using CLT blanks open or close depending on the interior programming. On the residential levels, the units' are facing east and their rooms open up to capture the earliest dawn of the year on the summer solstice.

The Hemlock Monastery recrafts the narrative of the timber industry to honor and respect the spiritual significance of trees & the forest.

What does a monk's day look like?

What is the significance of ritual?



Definitions:

Lauds: "Acclaim all Glory," traditional morning prayer of the Western church, occurs before dawn.

Terce: "Third Hour," a fixed time of prayer of the Divine Office in almost all Christian Liturgies, occurs around 9am

Sext: "Sixth Hour," a fixed time of prayer of the Divine Office in almost all Christian Liturgies, occurs around noon

Lectio: "Divine Reading," traditional monastic practice of spiritual reading, meditation and prayer

Vespers: "Evening Prayer," prayer of Thanksgiving and evening sacrifice to God, occurs during sunset

Compline: "Night service," final church service of the day in the Western Church, occurs after sunset

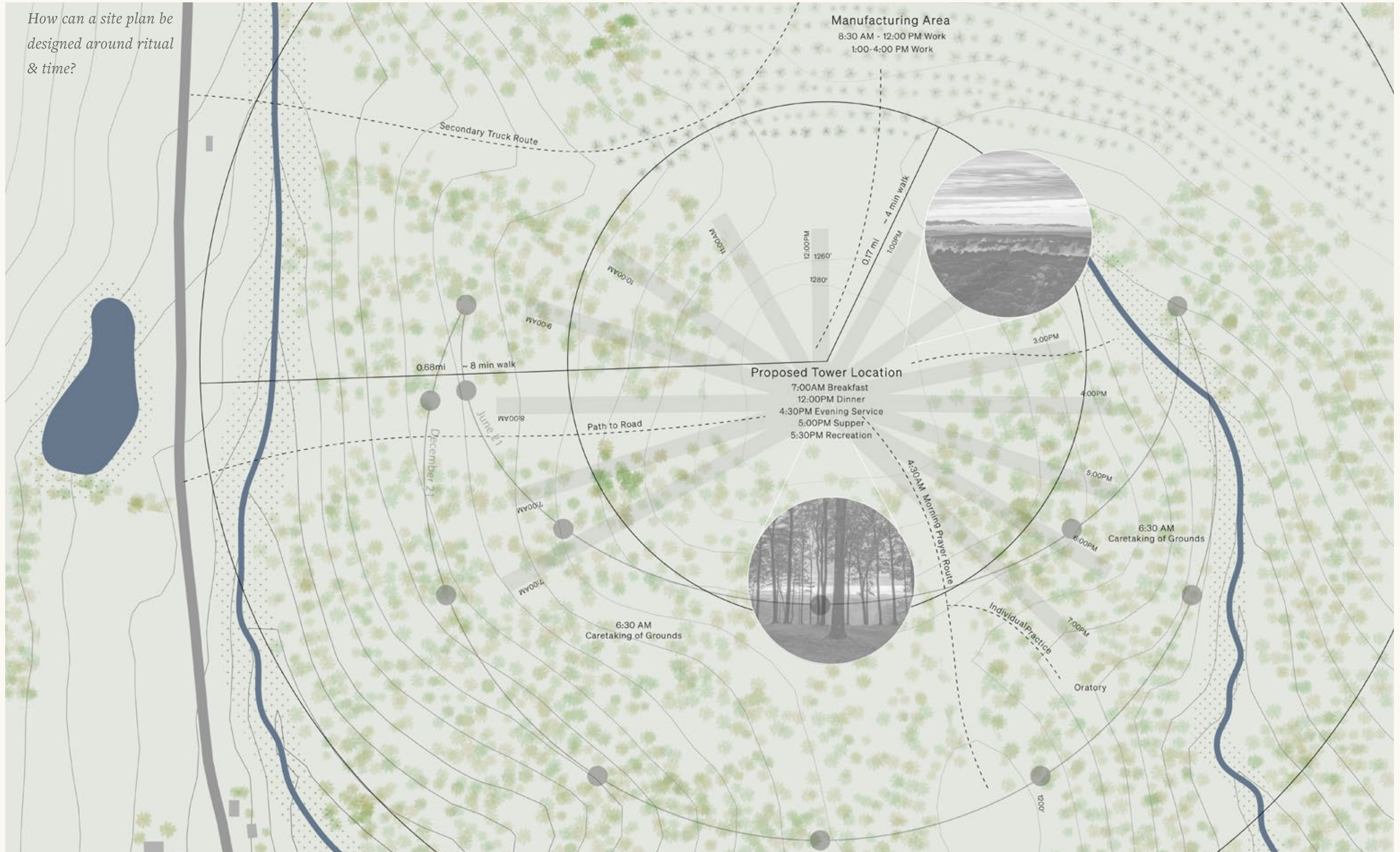
Legend:

- Work
- Meal
- Prayer
- Service

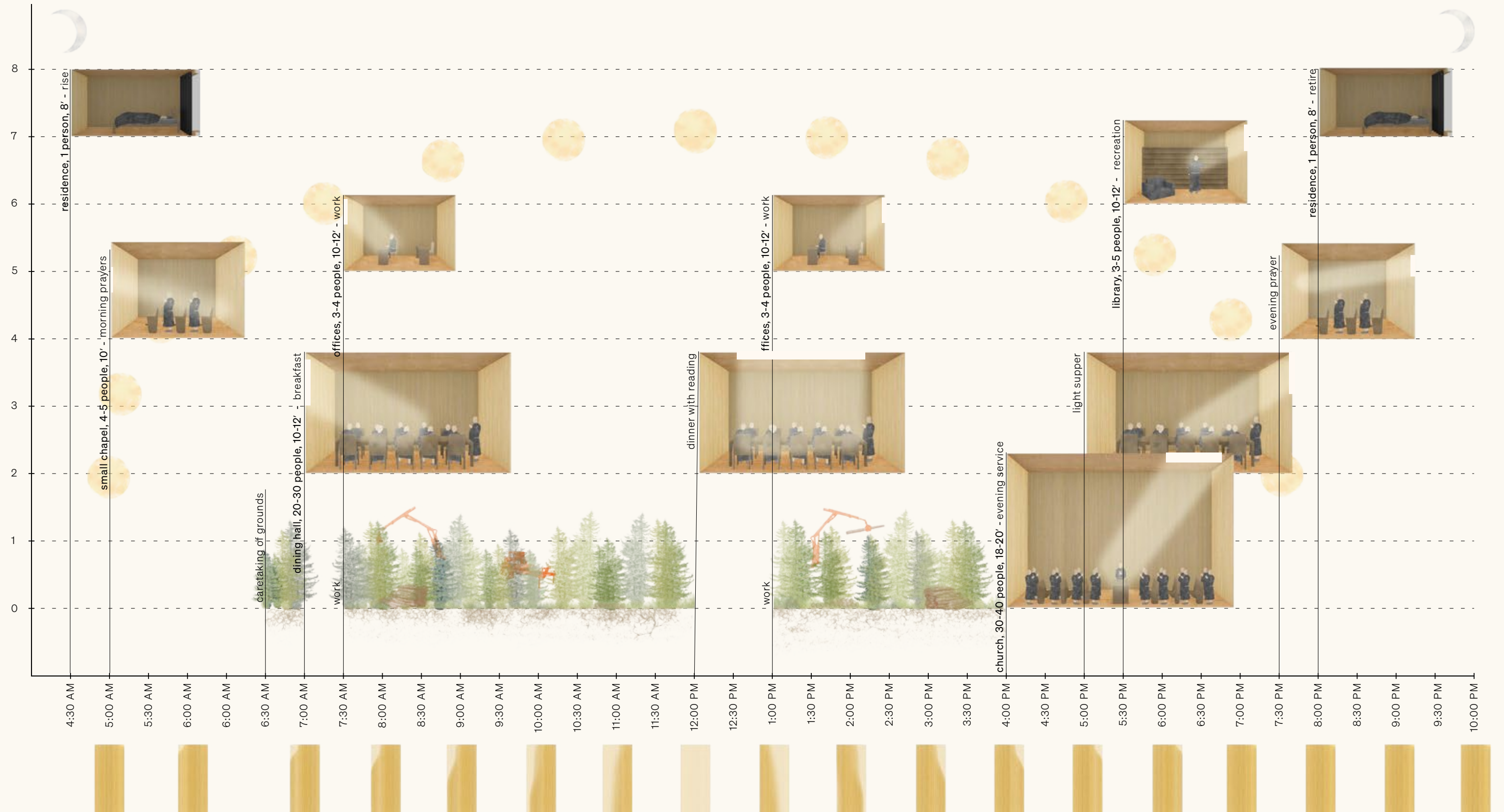


How can a monk's day revolve around work, the forest, and meditation?

How can a site plan be designed around ritual & time?



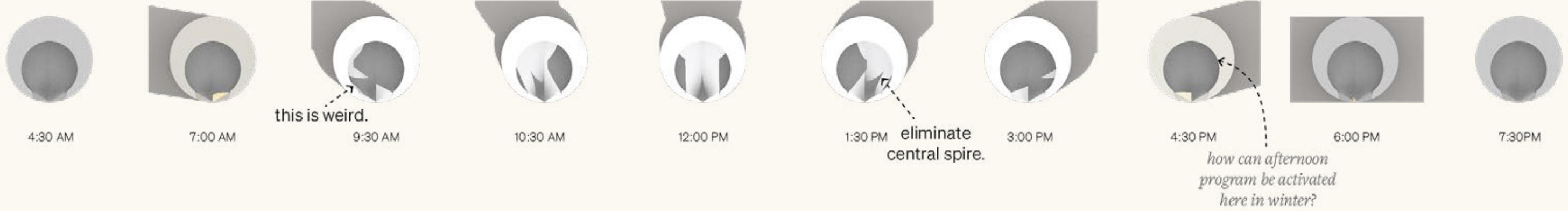
How can we reduce a reliance on modern technology in favor natural systems?



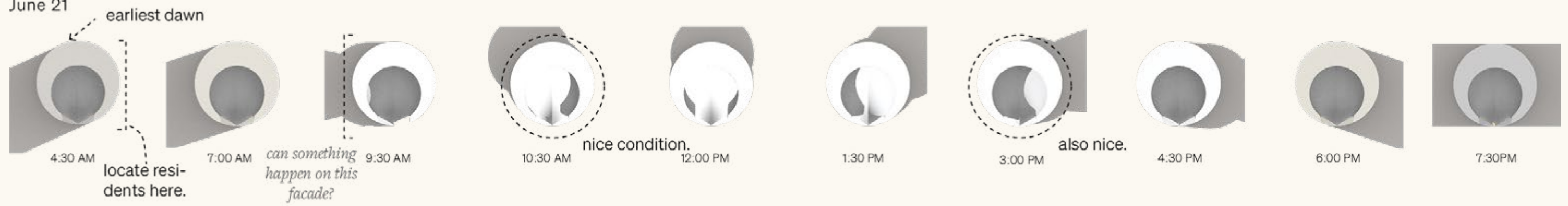
Can light entering through an atrium become a gnomon, or timekeeper, for a building?

How can light activate different spaces?

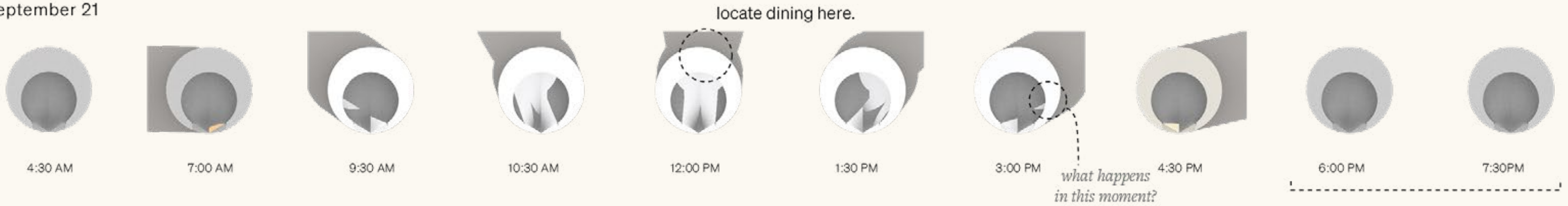
March 21



June 21

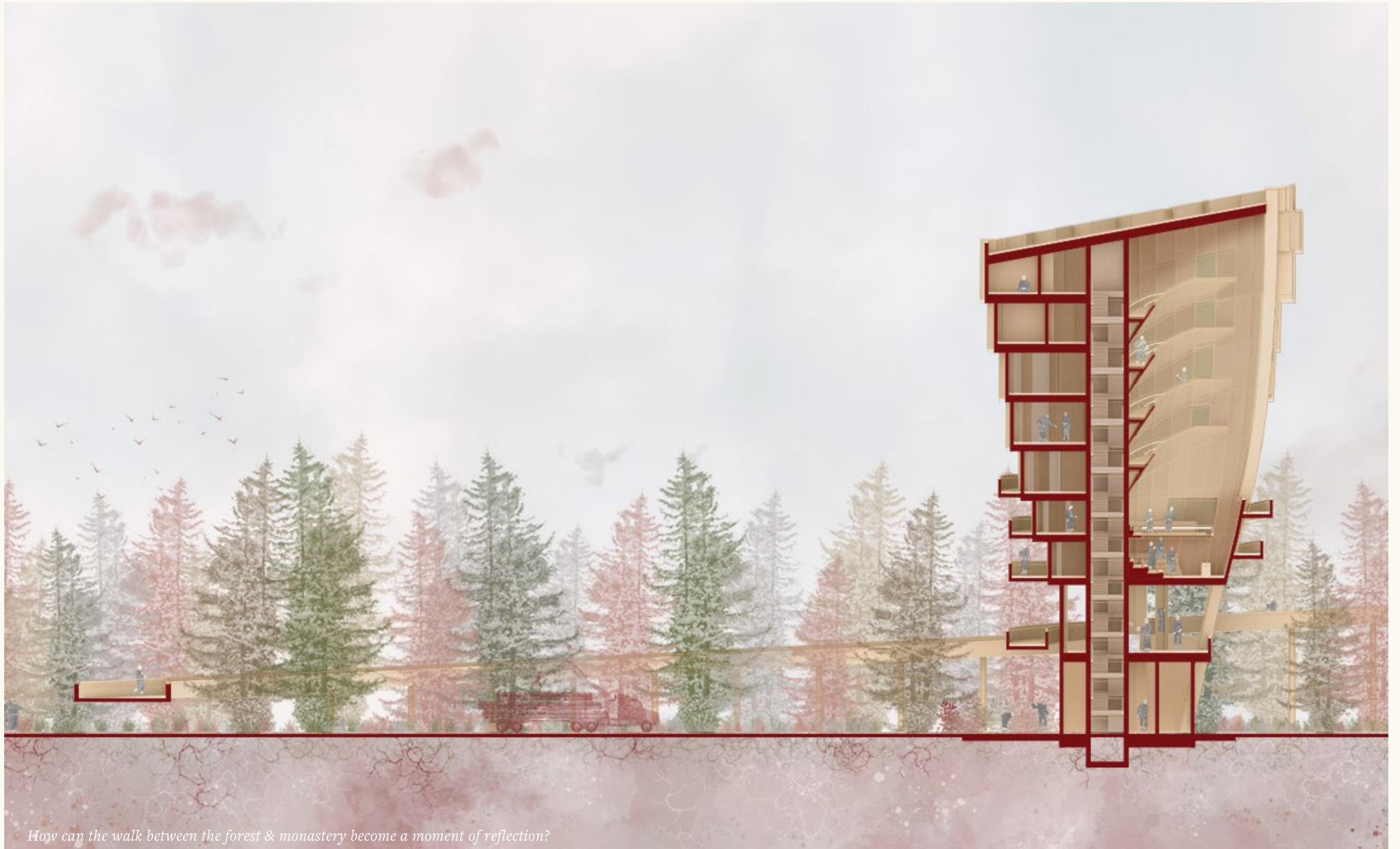


September 21

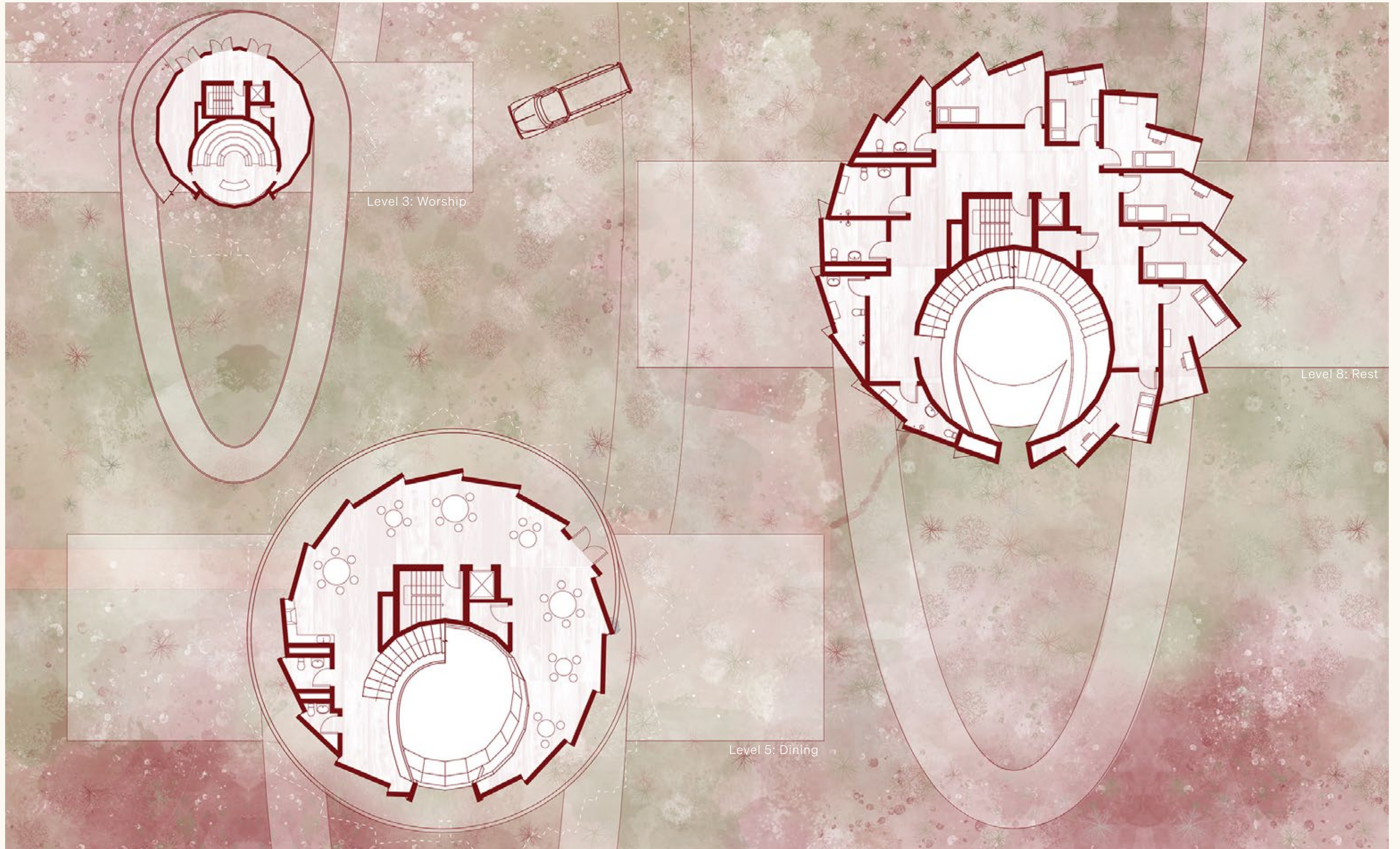


December 21





How can the walk between the forest & monastery become a moment of reflection?



How can the relation to the monks' work and the forest remain present throughout the day?



4:30 AM - Rise



5:00 PM - Worship



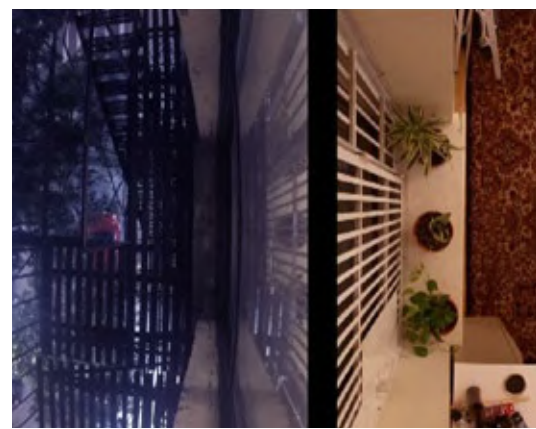
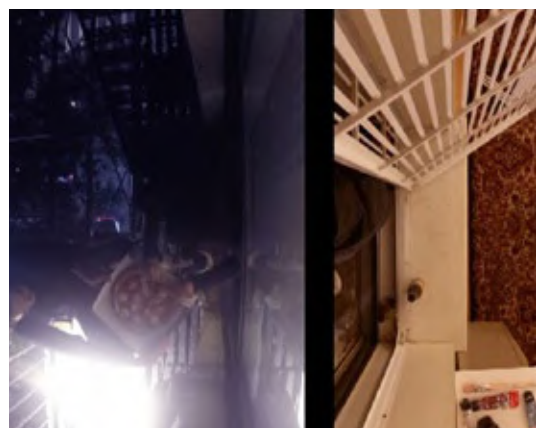
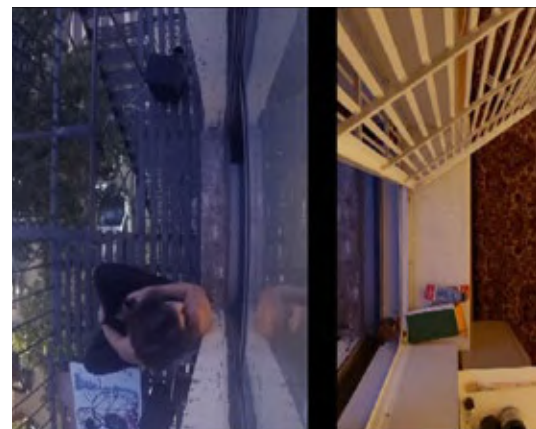
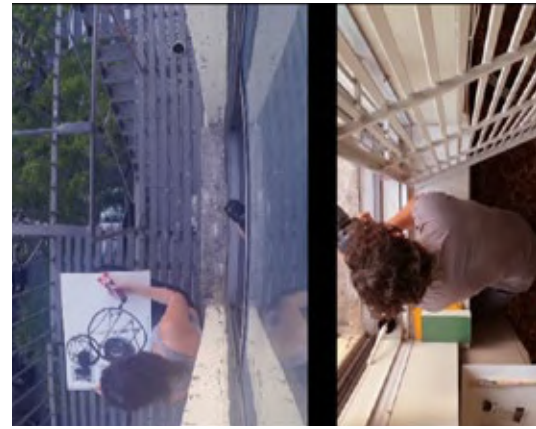
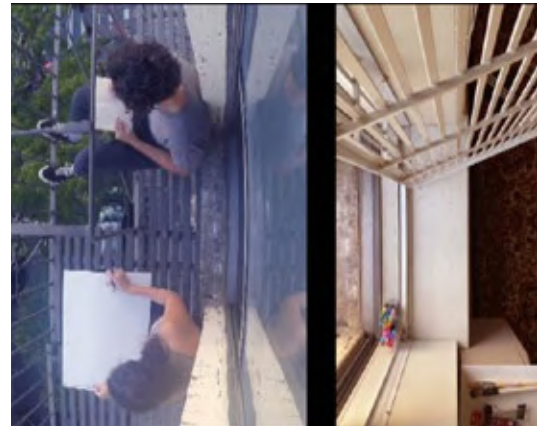
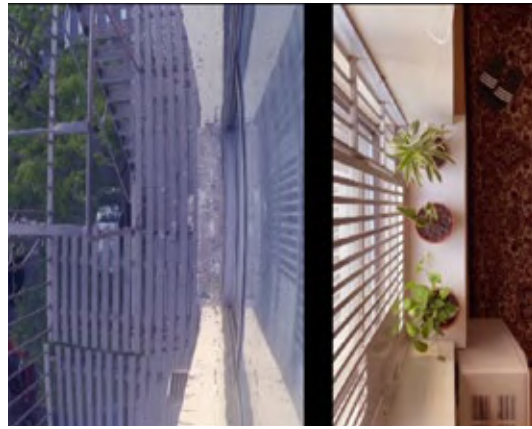
12:00PM -Preparation for Forest



7:00PM- Preparation for Rest



How have New Yorkers appropriated their own spaces?



What are the boundaries of a home?

Building on the Block

Fall 2020

Core III:

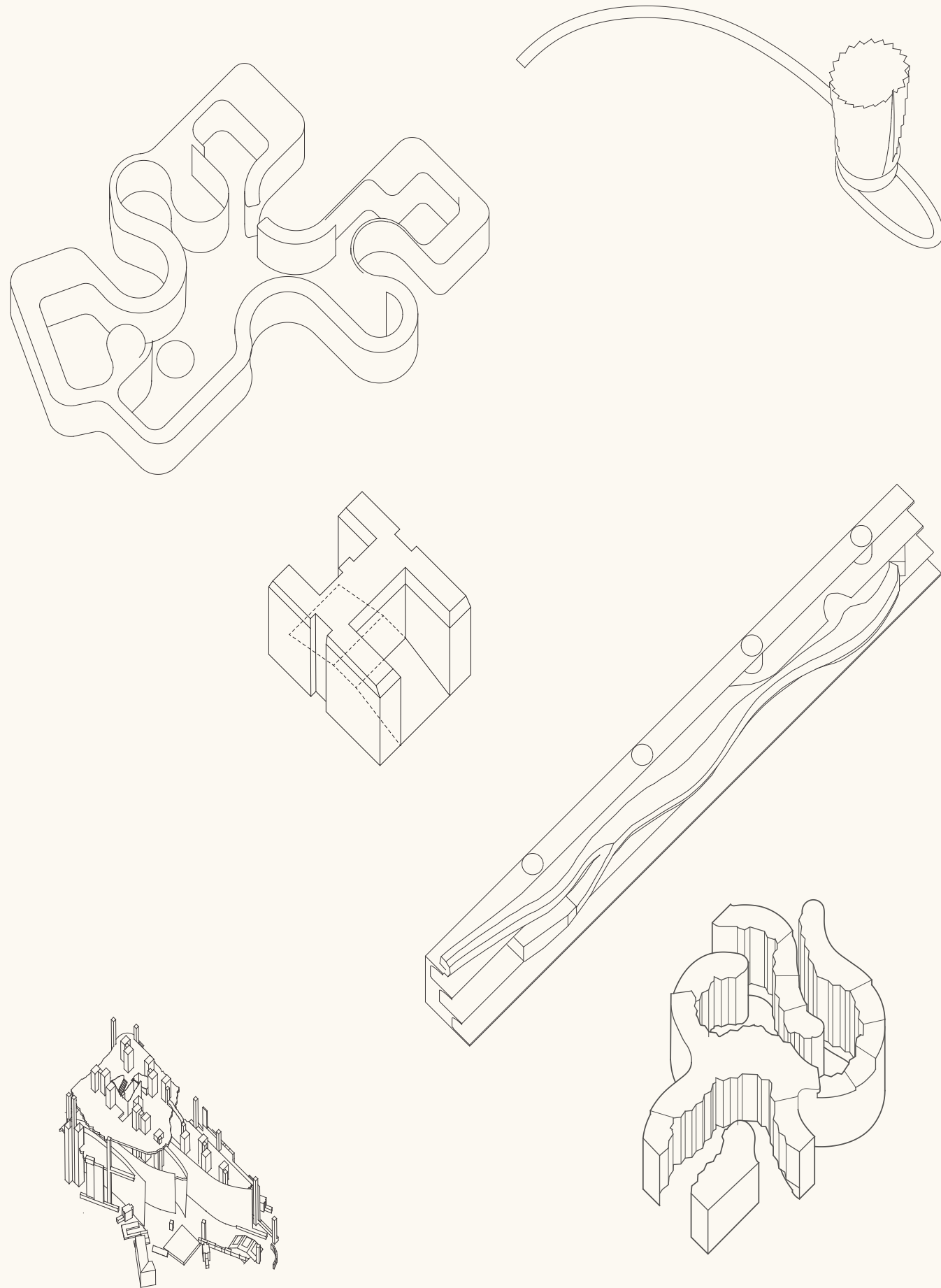
The Home Unbound



South Bronx, NYC

Partner: Gustavo Lopez Mendoza

Prof: Benjamin Cadena



Gustavo and I were first introduced to our site through volunteering at the Bronx Documentary Center located on the same block as our site. Spending multiple Sundays at the site provided us with an unique opportunity to engage with the site, its inhabitants, and surroundings in an intimate way. We became interested in the concept of “the Block” and how people interact with it. Our housing proposal is designed for those who aim to become part of their community through the active participation of “the Block.”

What does it mean to be part of “the Block?”

Our design is propelled by interaction. How can yards, hallways, urban pockets encourage dialogue between residents and influence how people see their surroundings. These moments set off the idea for a collective experience. Within the structure, the resulting aggregation of units creates exterior voids located alongside the circulation path to encourage informal gathering and small gardens.

How can the experience from individual units contribute to a collective experience?

In this housing proposal, each unit employs the use of angled windows to maximize the amounts of views into three central “yards.” These established views, in turn, become a topic of conversation among tenants and establish neighborhood relations.

Can housing promote community engagement?

The agregation of units result in four “snakes” which look onto the central yards. These yards and the connections to them create a sense of collective experience and memory, as well as encourage residents to engage in active participation of the block.

This proposal supports community engagement as a tool to encourage and integrate the economic resilience of the block into an ecological housing model. Through this facility, residents have the means to take on ownership of the Block and, through its furtherance, participate in an experience of inheritance, restoration, and development.

How can actively visiting the site & building relationships with community members change the reading of a site & influence a design approach?





How do people interact with and contribute to their neighborhood?

What are the temporary remnants of life left behind on a permanent block?



● Temporary interventions and objects left behind by residents.

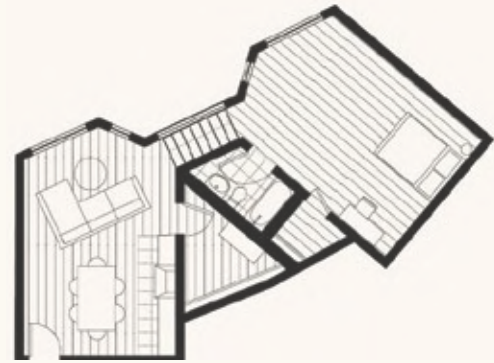
How can views be maximized within units?



micro-studio



studio



one bed



one bed

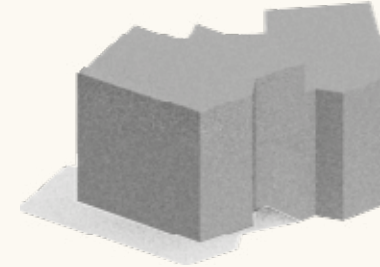


ADA one bed

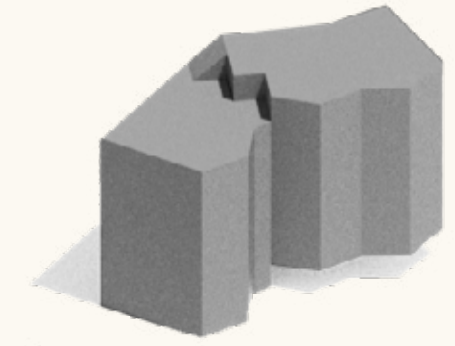


two bed

How do the units aggregate?



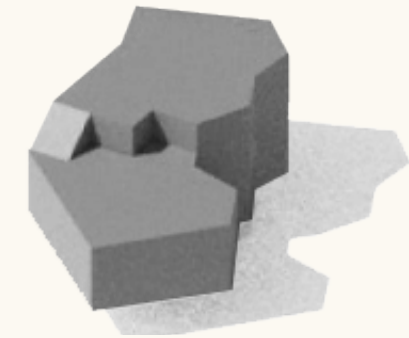
one bed + one bed



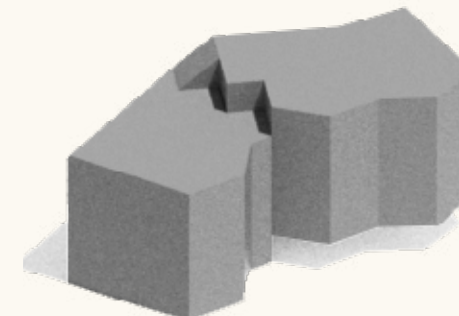
two bed + two bed



one bed + studio



one bed + micro + micro

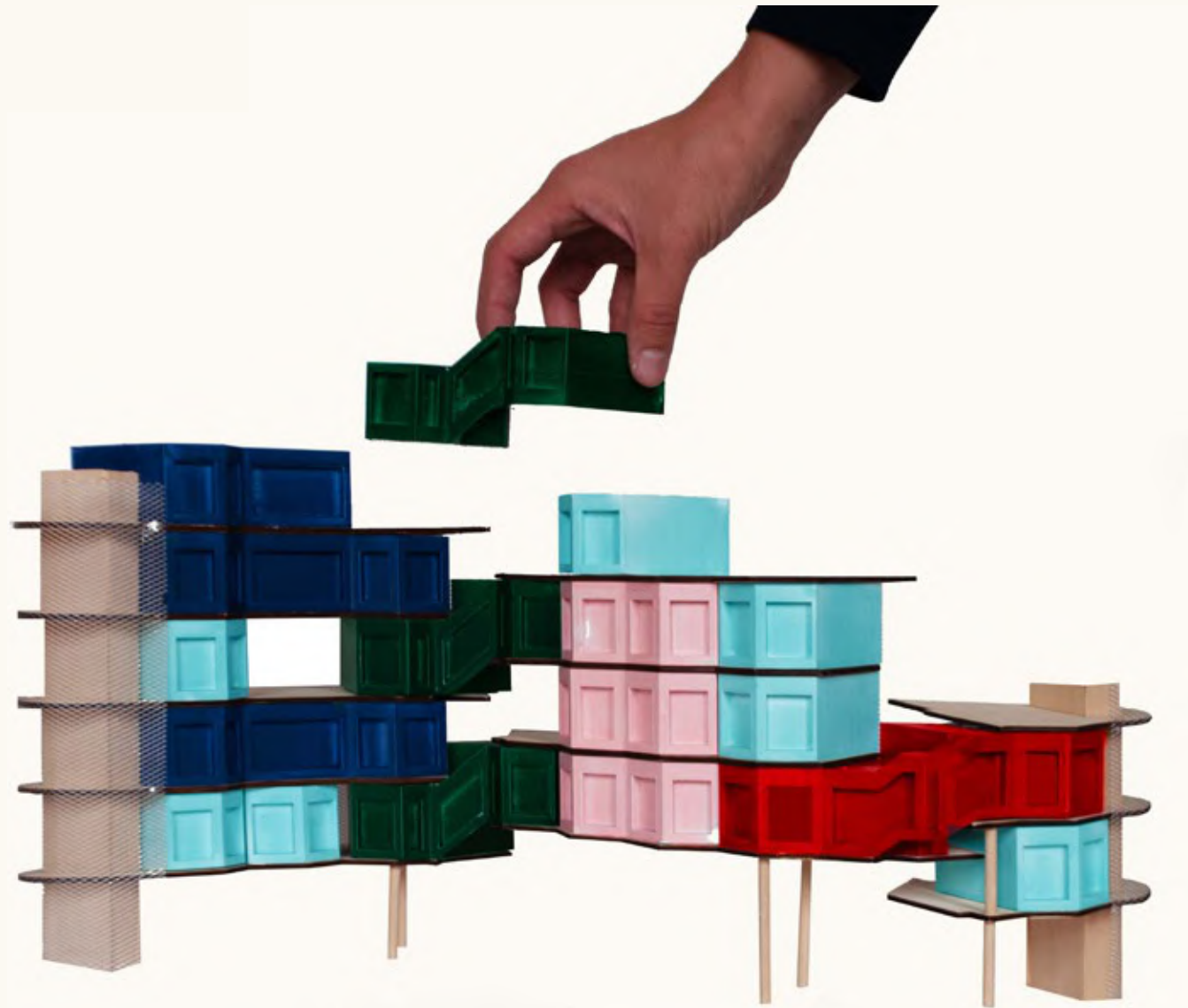


one bed + one bed



two bed + micro

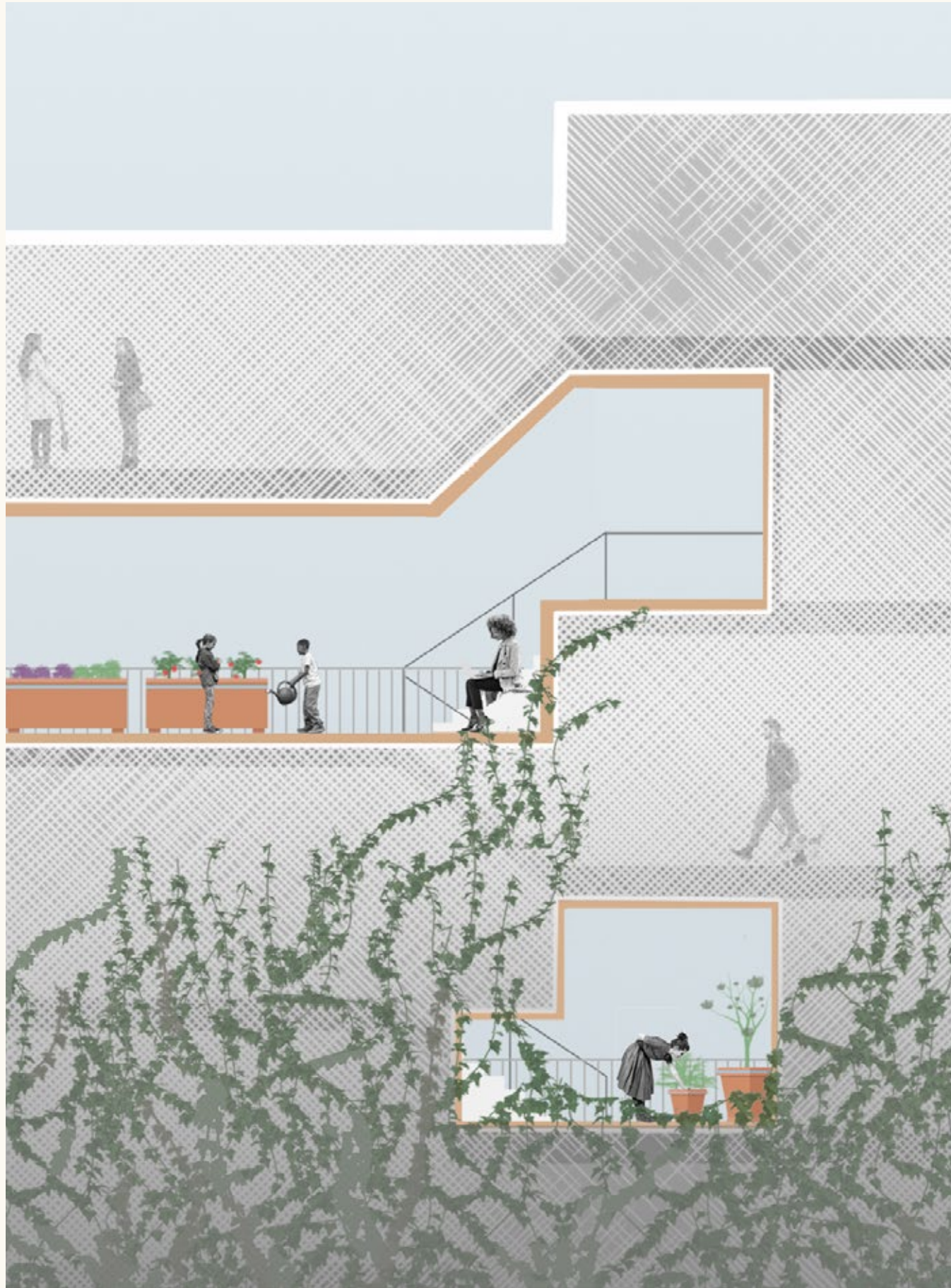
Can a permanent “scaffold” be employed to allow for modular construction?



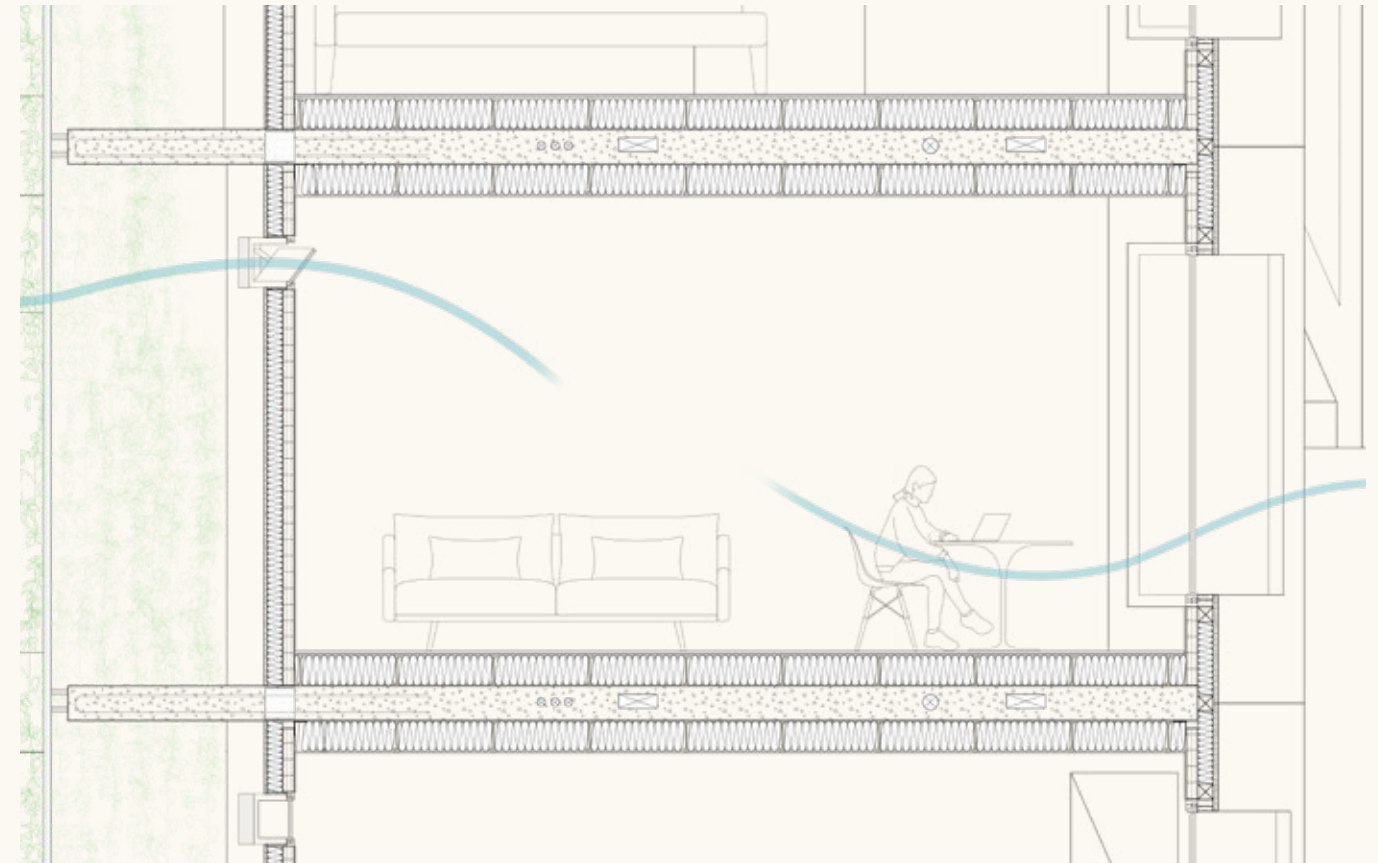
What is the feeling of being inside one of these units?







How can the neighboring Melrose Community Garden extend itself to the new complex?

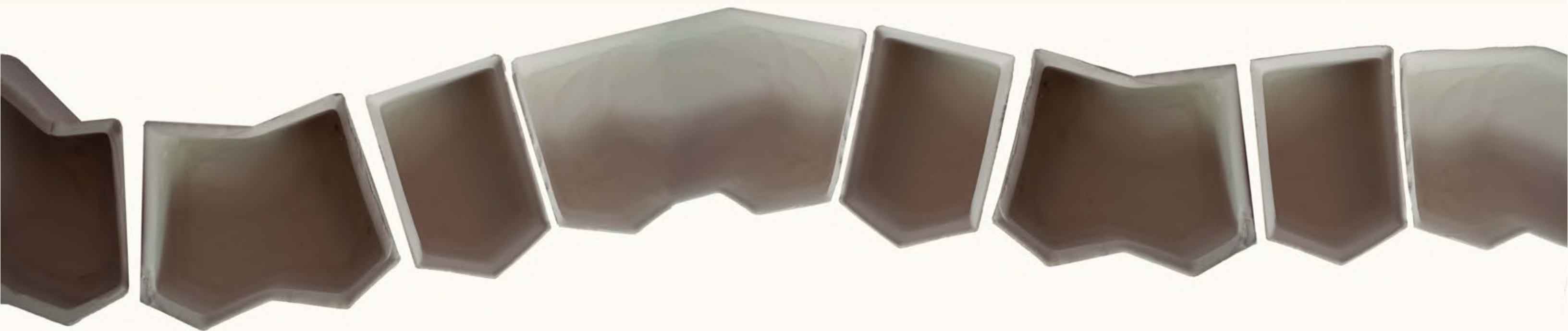


Can natural ventilation & access to green spaces become a right in new housing developments?

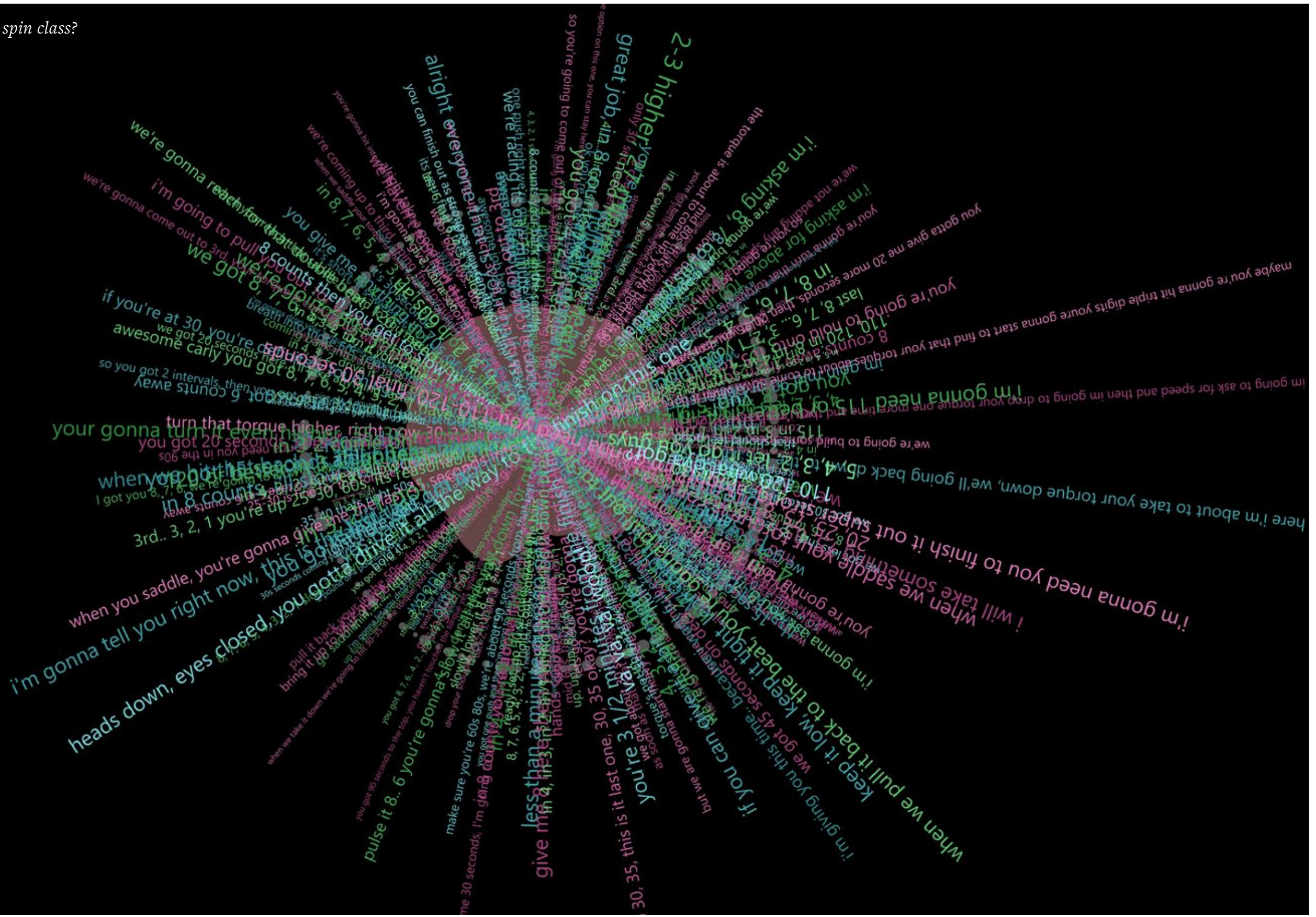
How can the community be invited into a housing complex?

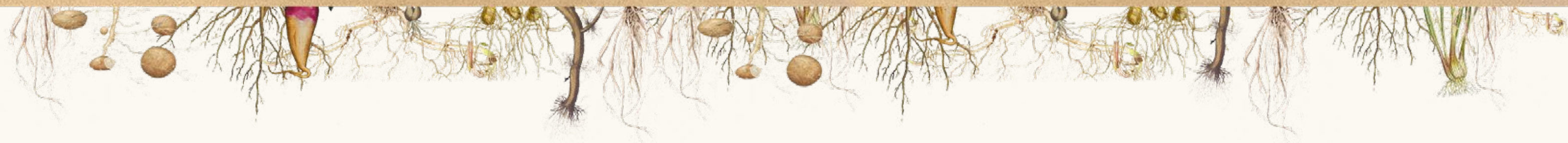


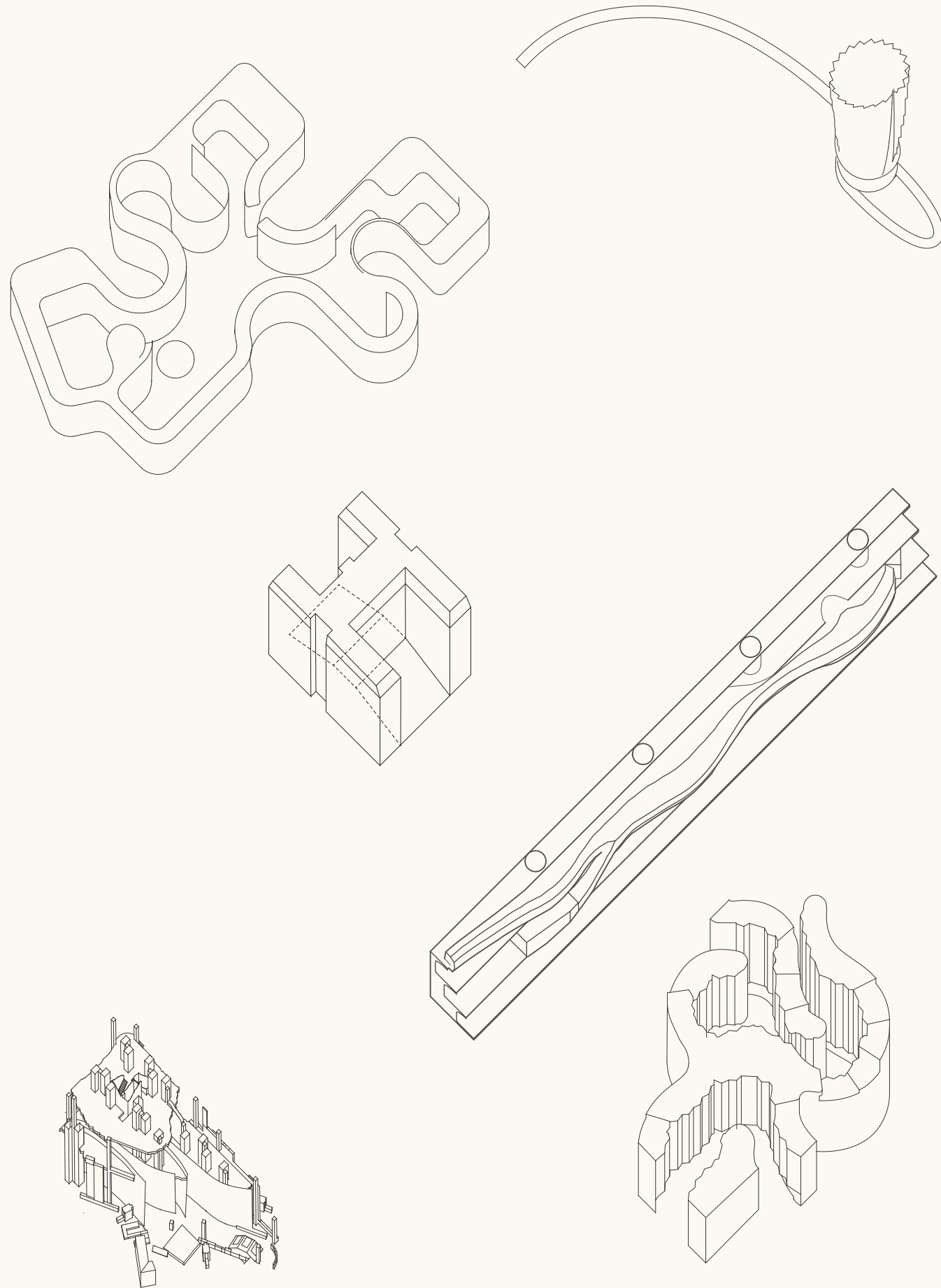
How can yards, hallways, urban pockets encourage dialogue and influence how people see their surroundings?



What is the anatomy of a spin class?







The site is located at the site of the triple cantilever of the Brooklyn - Queens Express Way (BQE) in Brooklyn Heights. This strange piece of highway infrastructure is currently a main route for delivery vehicles and physically creates a wall between the Brooklyn Heights Community and the Brooklyn Bridge Park.

What program can be located on the BQE to encourage people to come and interact with the space?

La Primavera proposes an urban farm with a series of music practice rooms which cascade down a 750' stretch of the BQE. It addresses both social and nutritional issues by exploring the mutually beneficial relationship between plants and music.

Should more investment be placed into food infrastructure?

La Primavera aims to reconnect visitors to the people, process, and places in which their food comes. Employing farms within cities supplements production, reduces transportation time, and builds food resiliency within American metropolitan areas.

Can music programming become a right?

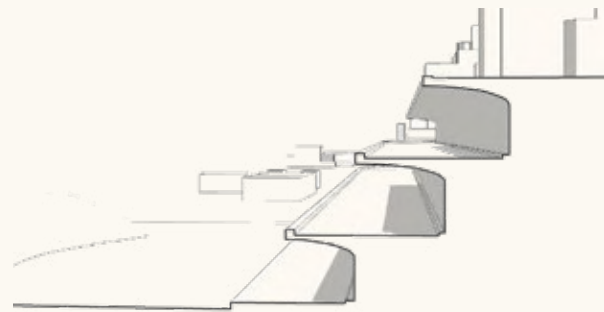
The implementation of music programming addresses the extreme lack of accessible practice rooms within the city. For many musicians, it is unsuitable to practice within their apartments and practice rooms are expensive and have caused many musicians, including myself, to stop playing an instrument.

How can these systems work together?

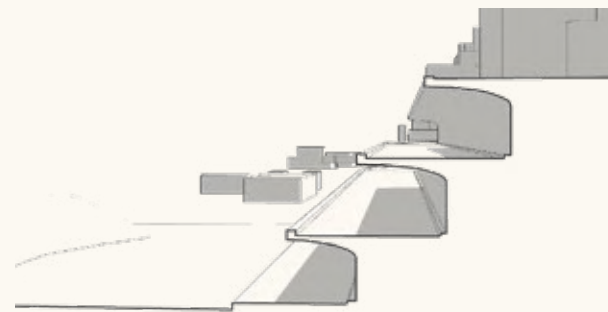
Numerous studies have shown the positive impact of music on plants including the stimulation of plant growth and increased biomass. Specifically, the vibrations from music encourage the stomata to open, increasing nutrient absorption and supporting plant immune systems. Conversely for musicians, plants are a great absorber of sound and provide clean, filtered air, which is especially important for wind musicians.

La Primavera acts as a testing ground for how unused infrastructure can be used to support a community socially, economically, and resiliently.

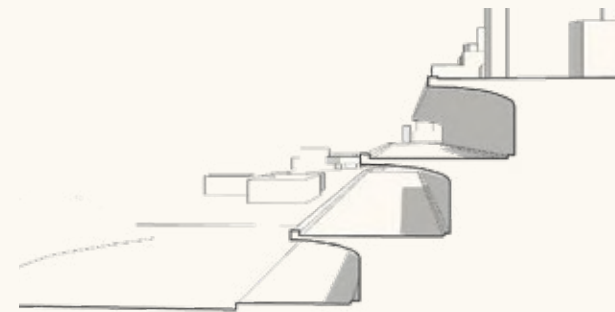
Can the overhangs of the triple cantilever & its shadows support growing?



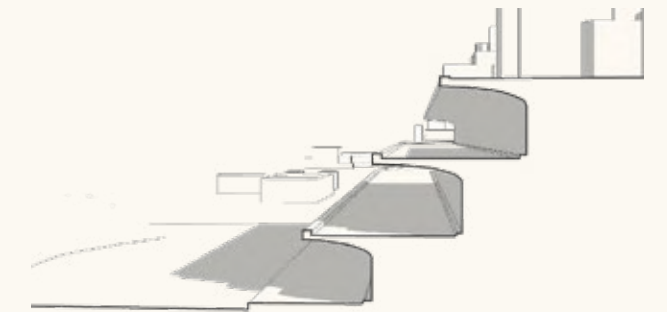
March 21 10:00 AM



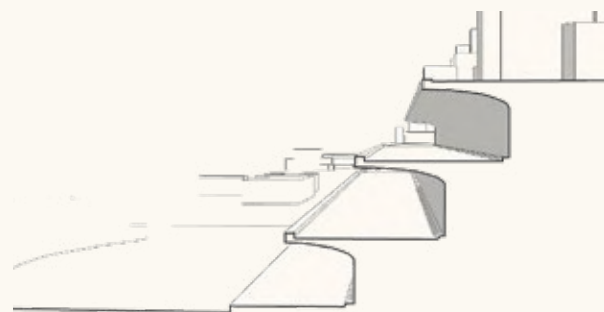
June 21 10:00 AM



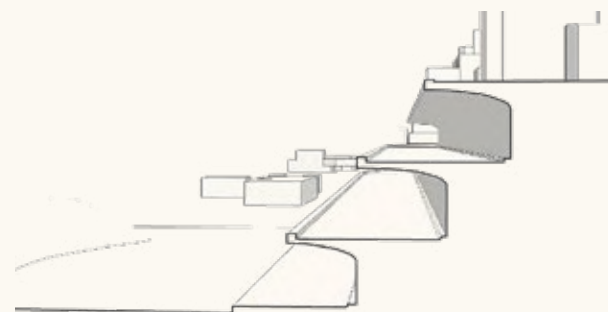
September 21 10:00 AM



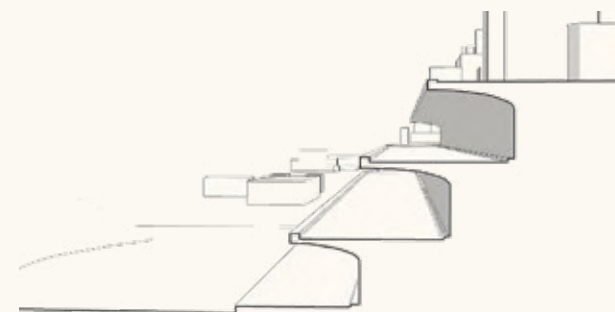
December 21 10:00 AM



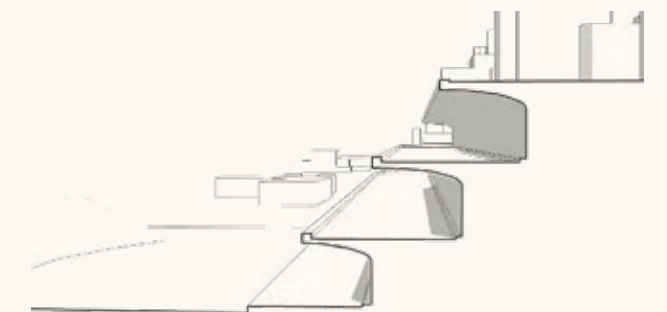
March 21 12:00 PM



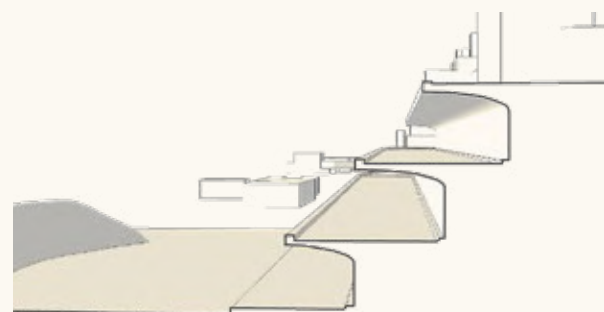
June 21 12:00 PM



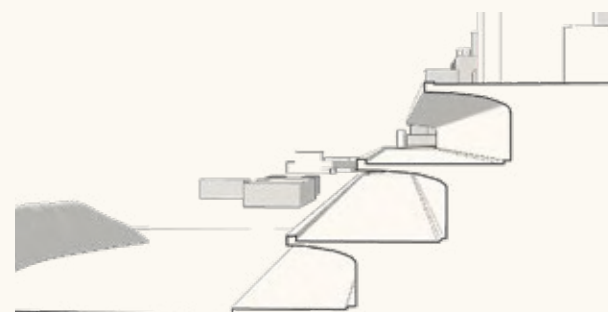
September 21 12:00 PM



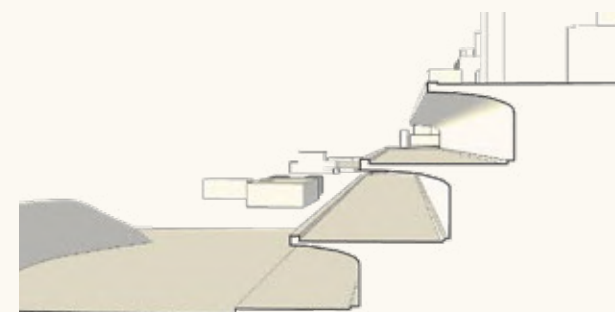
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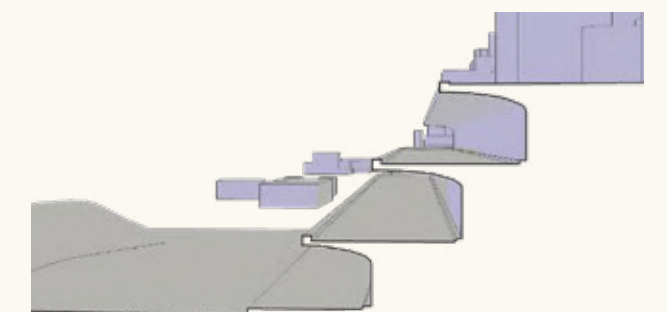
March 21 5:00 PM



June 21 5:00 PM
















September 21 5:00 PM

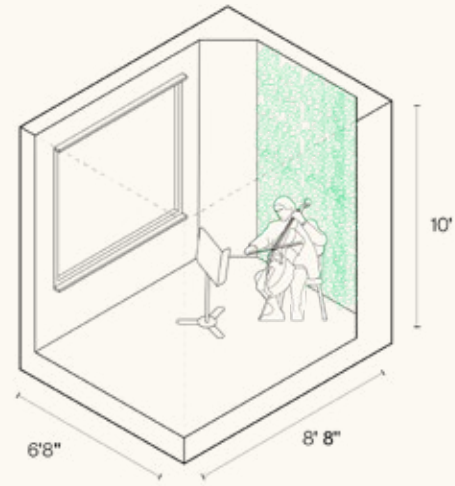


December 21 5:00 PM

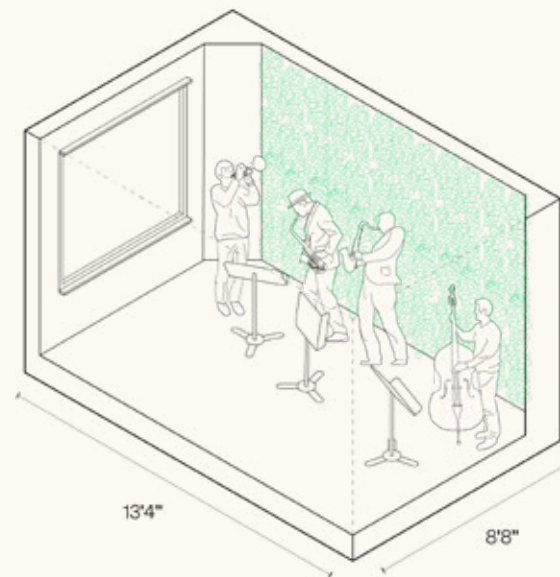
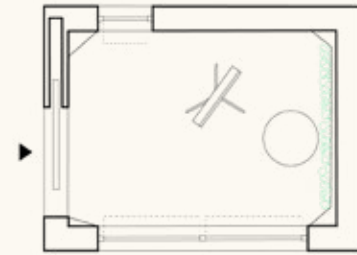
What plants are suitable for growing given the conditions of the BQE?

					harvest calendar
 broccoli	☉ partial sun	● → 12 - 18"	30"		May - July, Sept - Dec
 brussel sprouts	● full shade	● → 12 - 18"	30"		May - June
 cauliflower	☉ full sun	● → 12 - 18"	30"		May - July, Sept - Dec
 garlic	☉ partial sun	● → 12 - 18"	12-18"		June - Dec
 kohlrabi	☉ full sun	● → 12 - 18"	18-24"		May - July, Sept - Oct
 leeks	☉ partial sun	● → 12 - 18"	12-18"		May - Sept
 lettuce	● full shade	● → 12 - 18"	12-18"		April - July, Sept - Dec
 onion	☉ partial sun	● → 12 - 18"	12-18"		April - Dec
 potato	☉ partial sun	● → 12 - 18"	24-36"		June - Dec
 radish	☉ partial sun	● → 12 - 18"	6-12"		May - Nov
 spinach	● full shade	● → 12 - 18"	12-18"		March - July, Sept - Dec
 spring wheat	☉ partial sun	● → 19" - 24"	3"		April - Sept
 winter wheat	☉ partial sun	● → 19" - 24"	3"		Jan - June, Sept - Dec
	req. sun	root depth	spacing between plants		jan feb mar april may june july aug sept oct nov dec

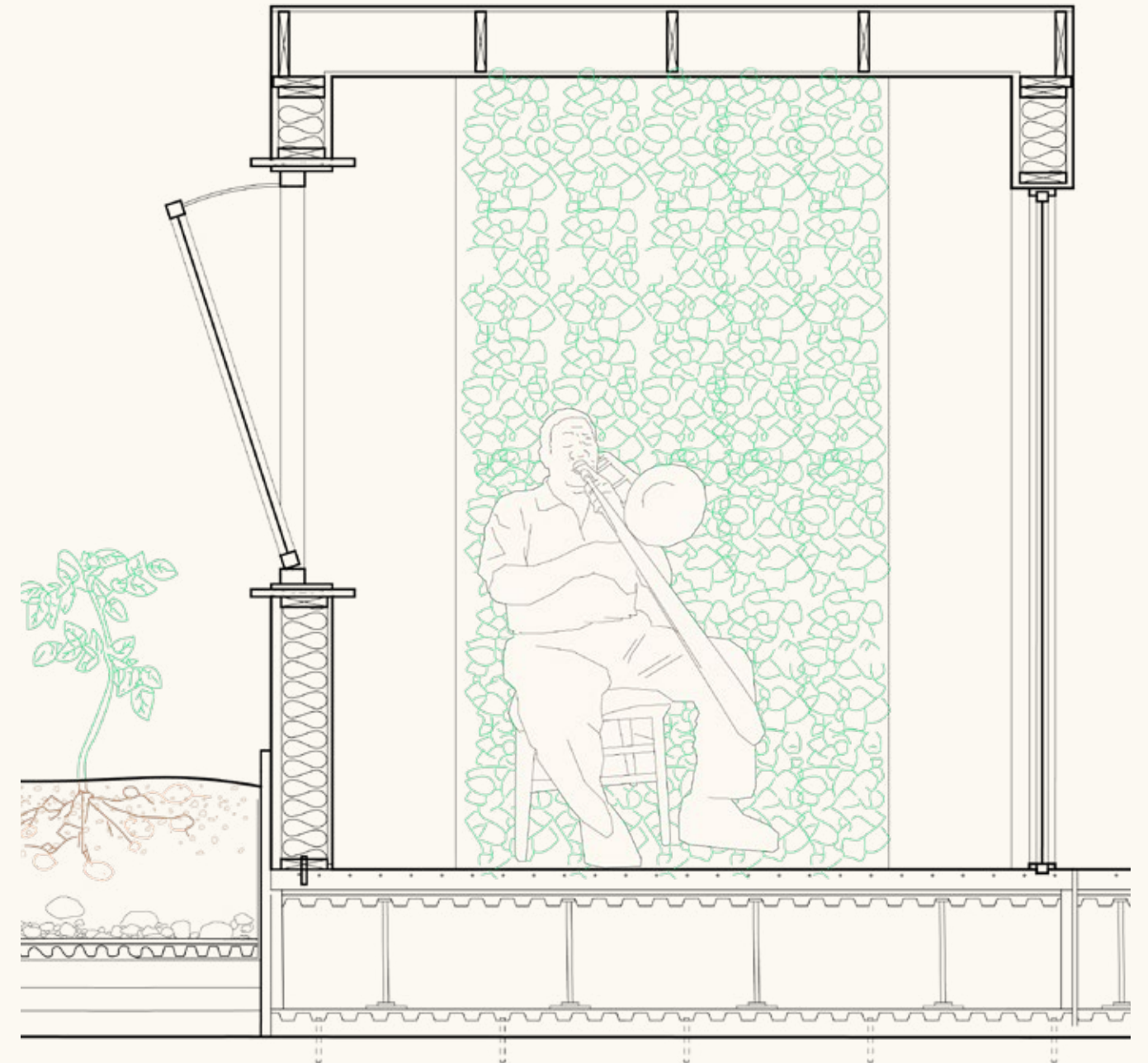
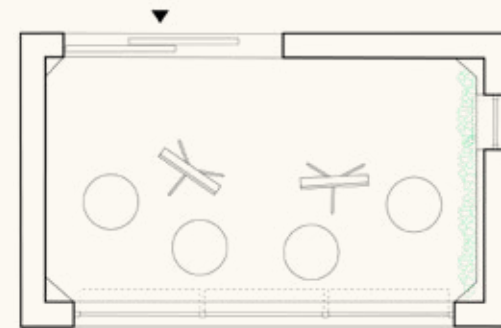
What does it mean to create an architecture centered around individual music practice?



2-3 person practice room



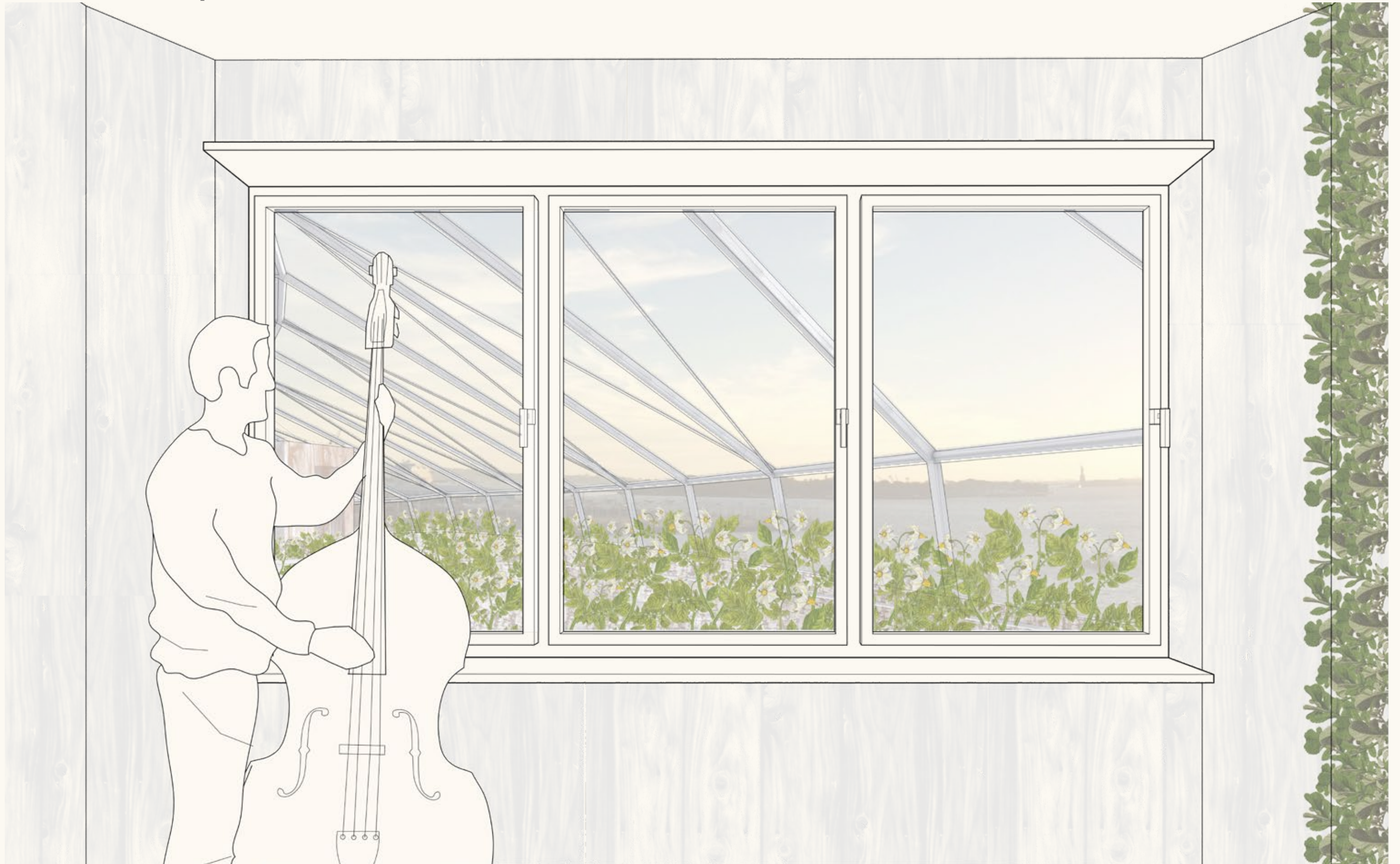
4-6 person practice room

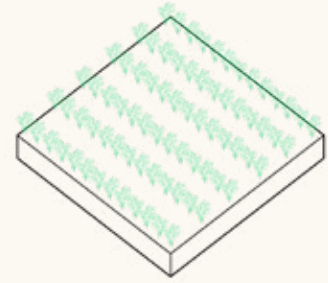


How does sound move throughout a small space?

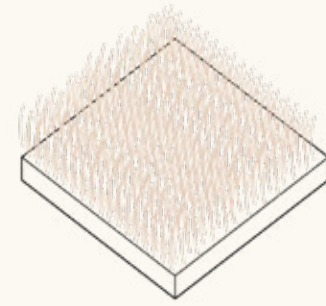
Can the natural properties of plants be used to absorb sound?

Can views inspire music?





farming plots



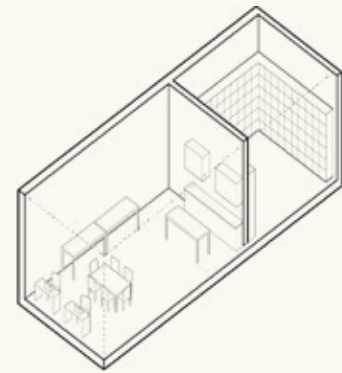
wheat field plots



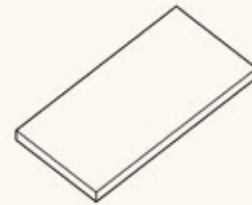
water retention pond



pump storage tank



back of house & seed storage



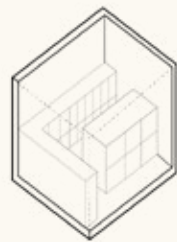
circulation zones



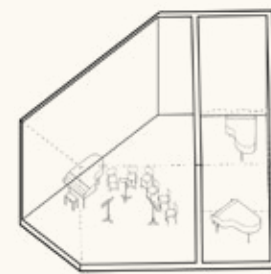
1-2 person practice room



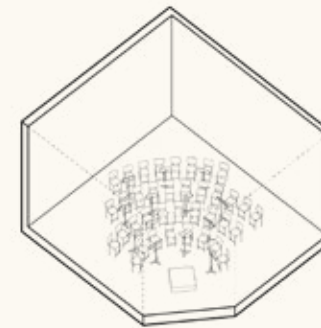
4-6 person practice room



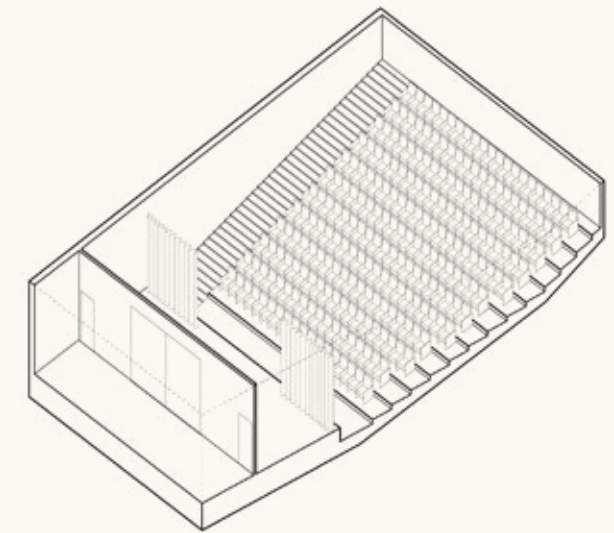
music storage



piano practice room & big band practice



music education center

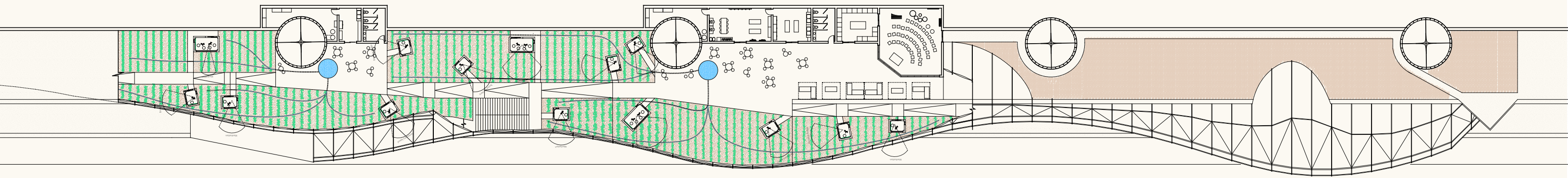


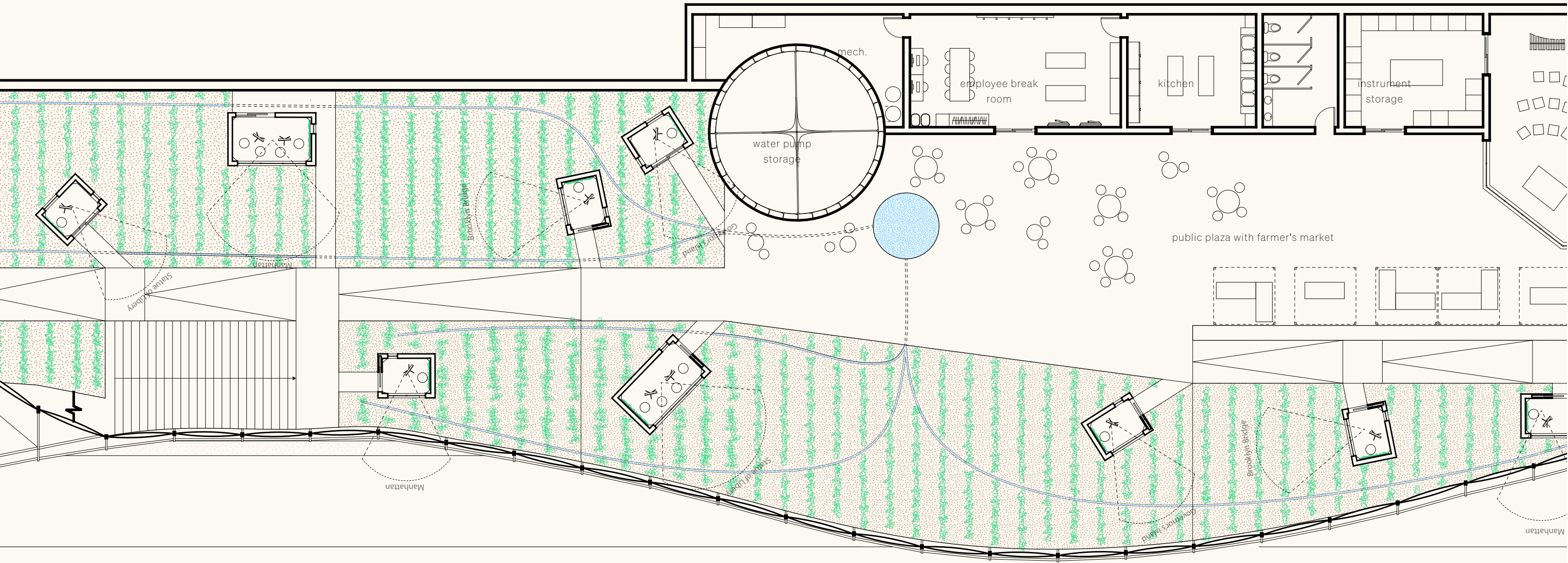
auditorium

What components are required to create a machine for both music and farming?

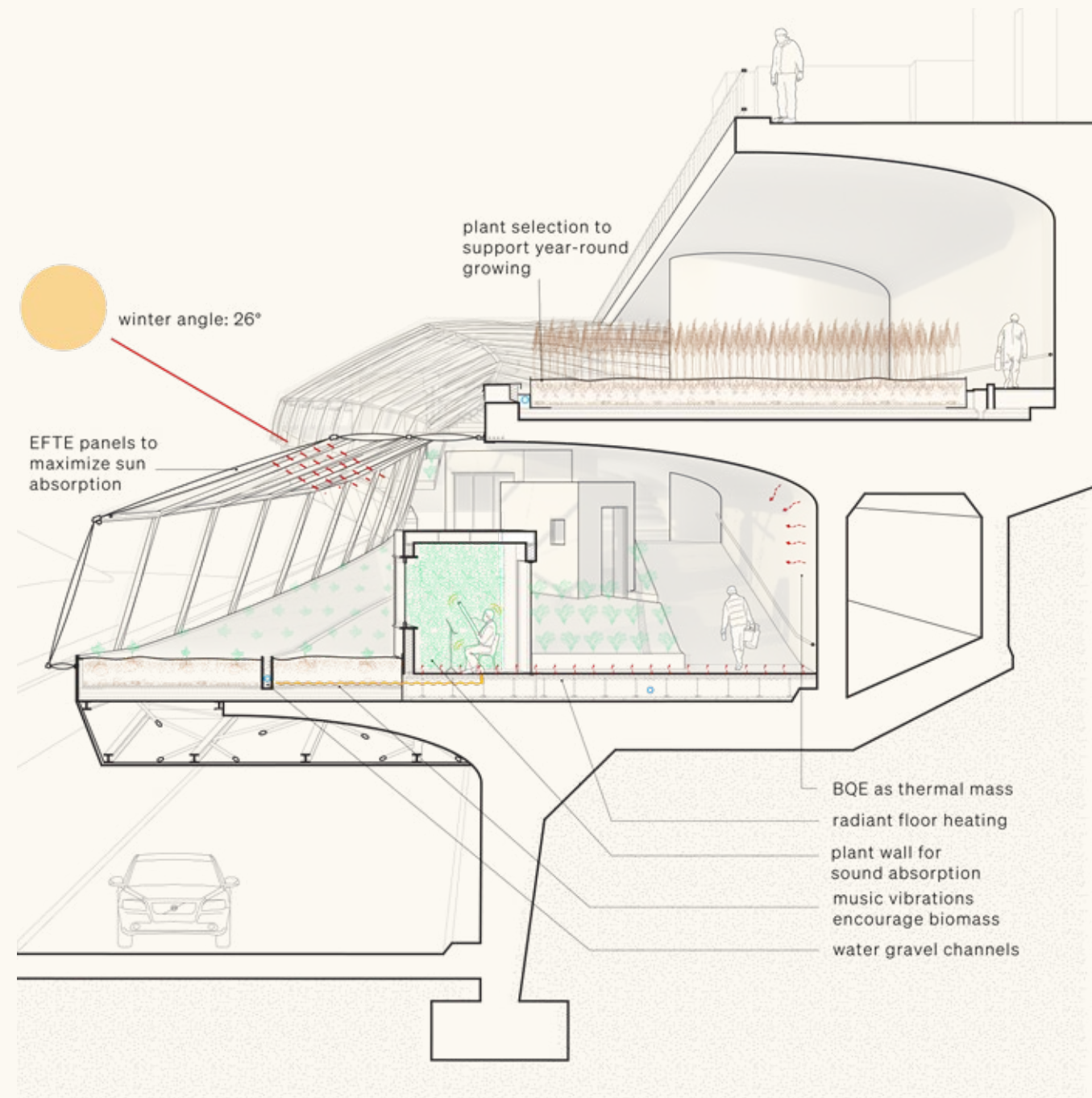
How can farmers, musicians, and everyday New Yorkers utilize the space?

How can the form undulate to capture light?

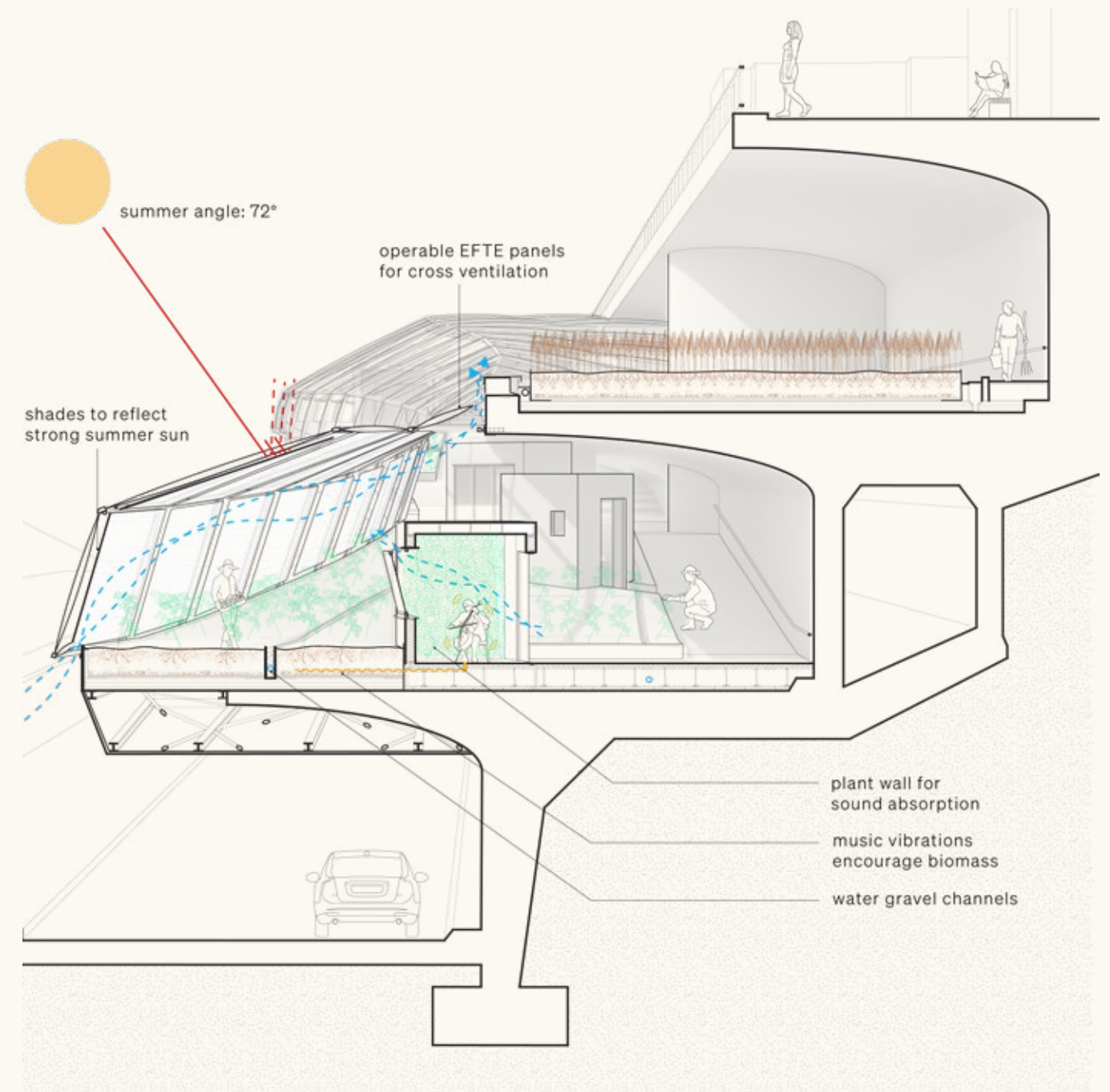




How can passive systems be employed to support the green house & provide comfortable spaces for musicians?



winter



summer

How can the intervention be successful and productive during all seasons?



winter



summer



Radish

● Partial Sun

6-12"



Kohlrabi

○ Full Sun

18-24"



Leeks

● Partial Sun

12-18"



Onion

● Partial Sun

12-18"

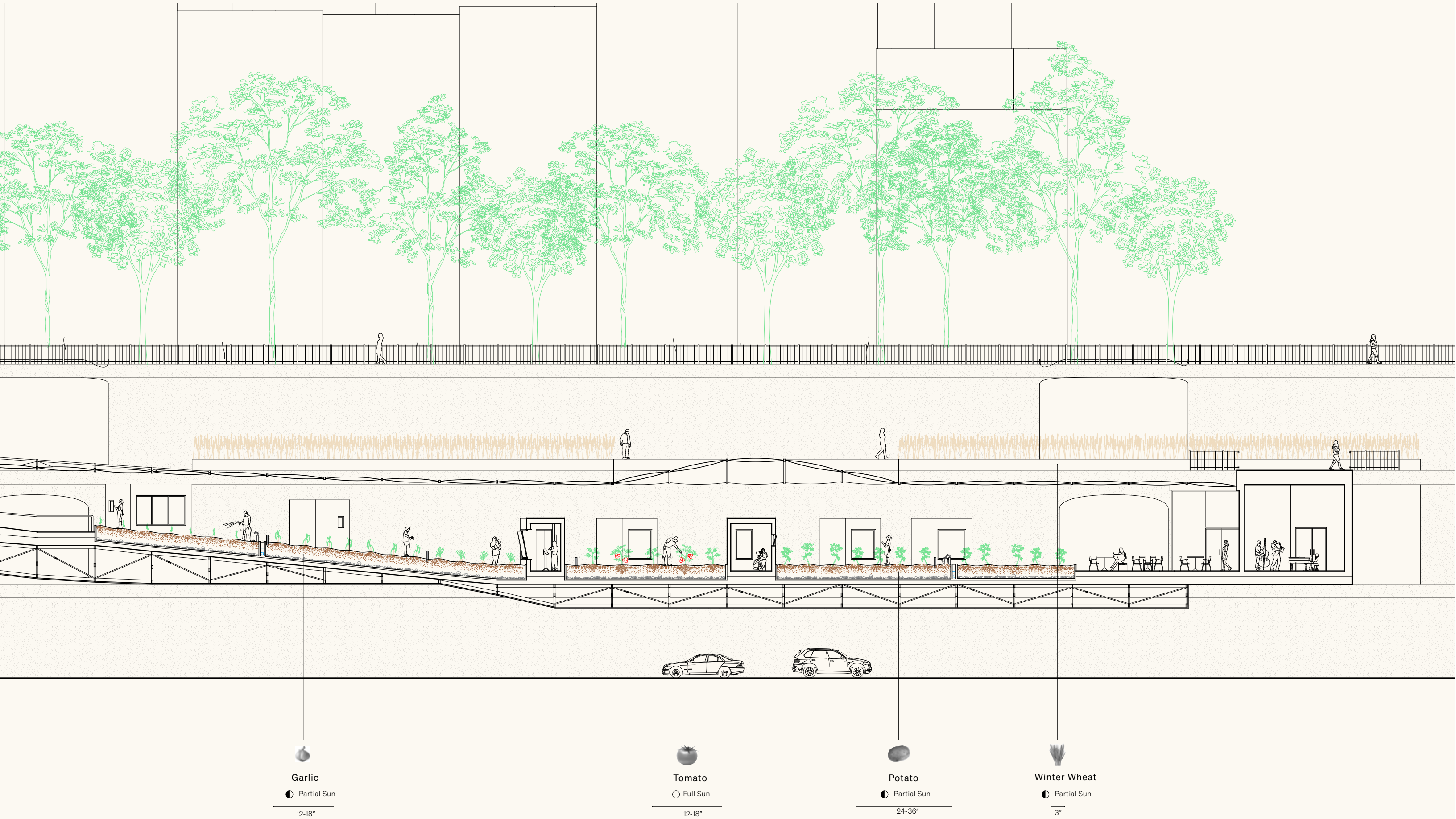


Spinach

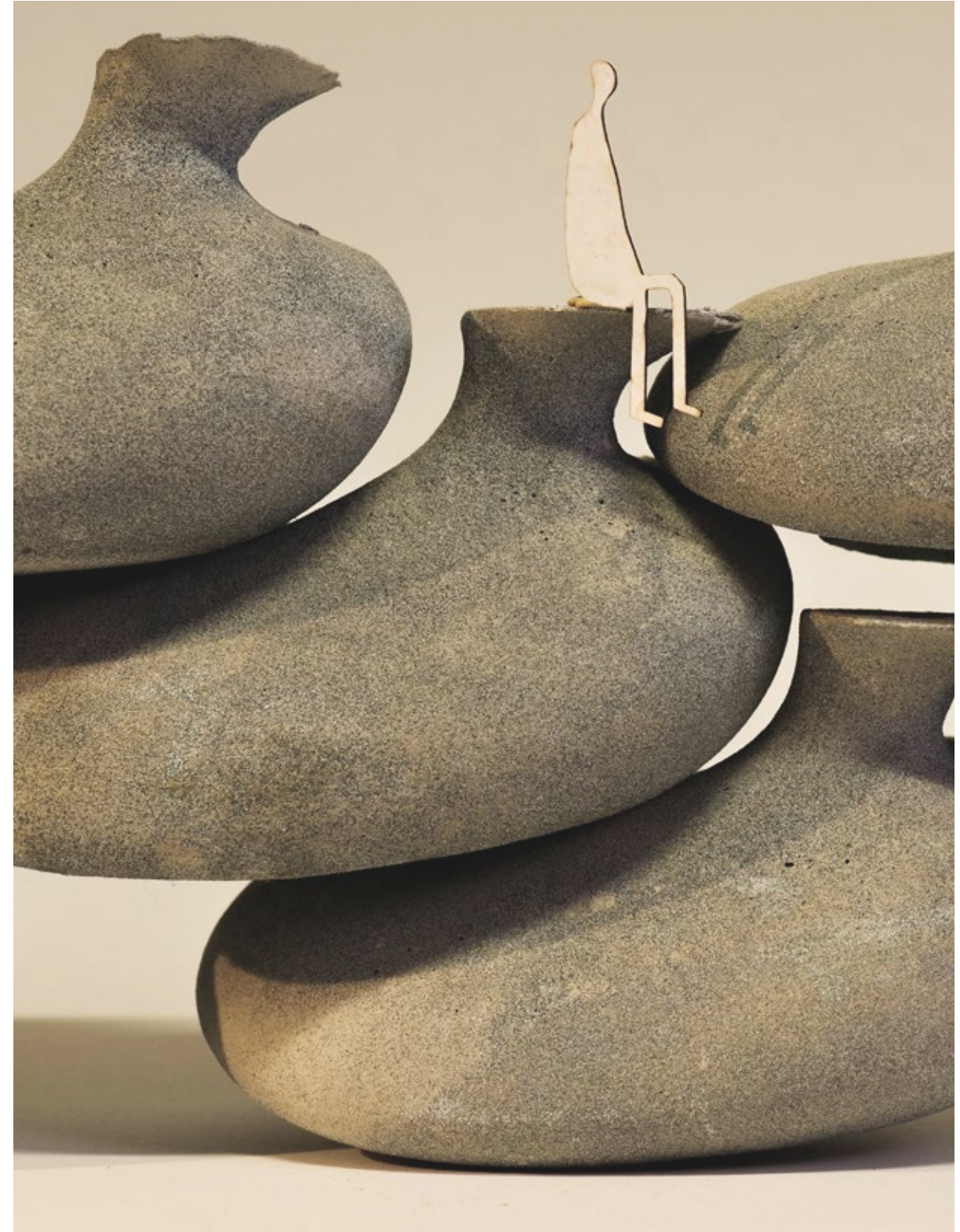
● Full Shade

12-18"





Can a brick tessellate in all directions to create infinite possibilities of brickwork?



Amidst the Ruins of a Landmark

Fall 2019

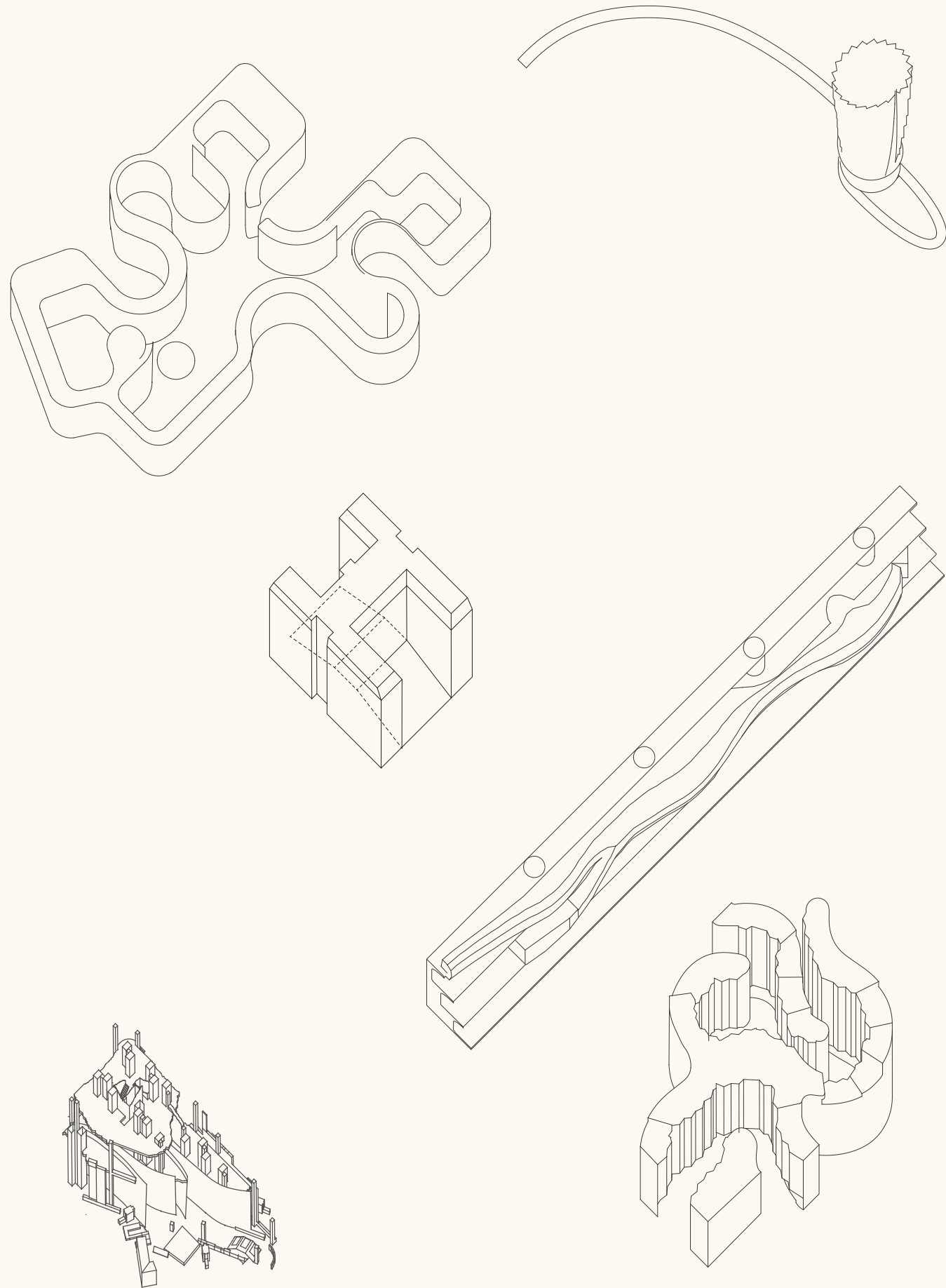
Core I:

Studio Broadway Stories

Flat Iron Building, NYC

Prof Amina Blacksher





How will the elements transform the urban landscape of New York City?

Wind resulting from a catastrophic storm event has left the Flatiron building in ruins. As the streets and buildings around it have transformed to accommodate the 22nd century, the site of the once-icon of New York has remained stagnant. My intervention explores the interaction and aftermath of the beloved NYC landmark.

What does it mean for an icon to become a site of ruin in the 22nd century?

The memorial to the Flat Iron utilizes the principal actor in the buildings demise, wind, as a tool for design. Interventions situated around the ruins of the faltering flat iron both commemorate the buildings collapse and encourage visitors to pause and take a breath of fresh air in a world of extreme weather events.

A large wind tunnel interjects through the middle of the ruins, funneling air from the Broadway and 5th Ave wind corridors. The bottom of the wind tunnel is coated with layers of mineralized dust,

creating an ephemeral art piece. In large wind events, the dust is swept off of the ground to create a hazy, transformative experience when entering into the first two levels of the the site.

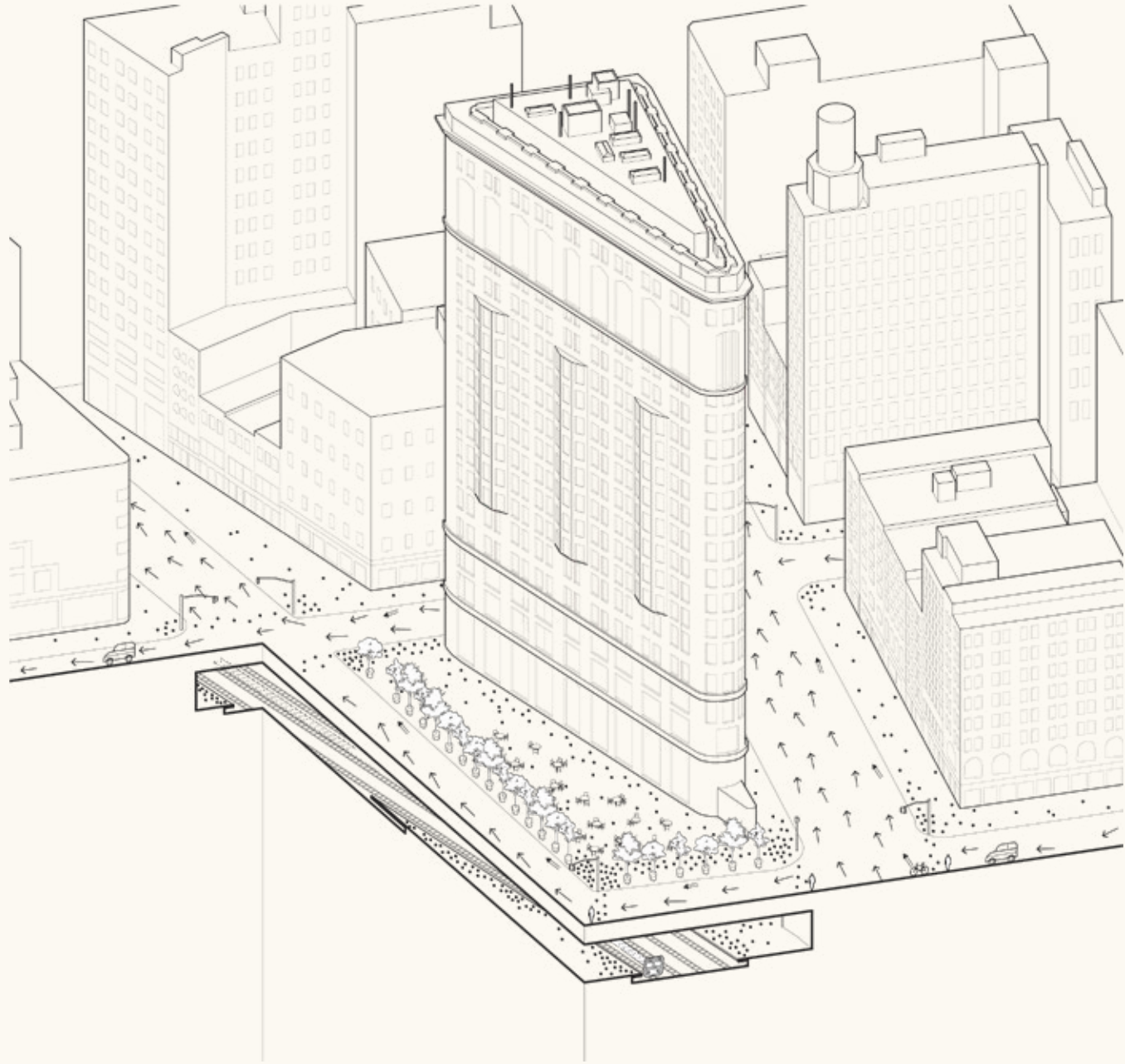
The remaining ruins scattered around the site are cataloged and superimposed with glass surfaces to re-purpose the ruins for modern use. This encourage visitors to interact with the ruins, rather than merely taking a photo of them, and leaving to be a spectacle.

What needs will need to be accommodated in a post-anthropocene New York?

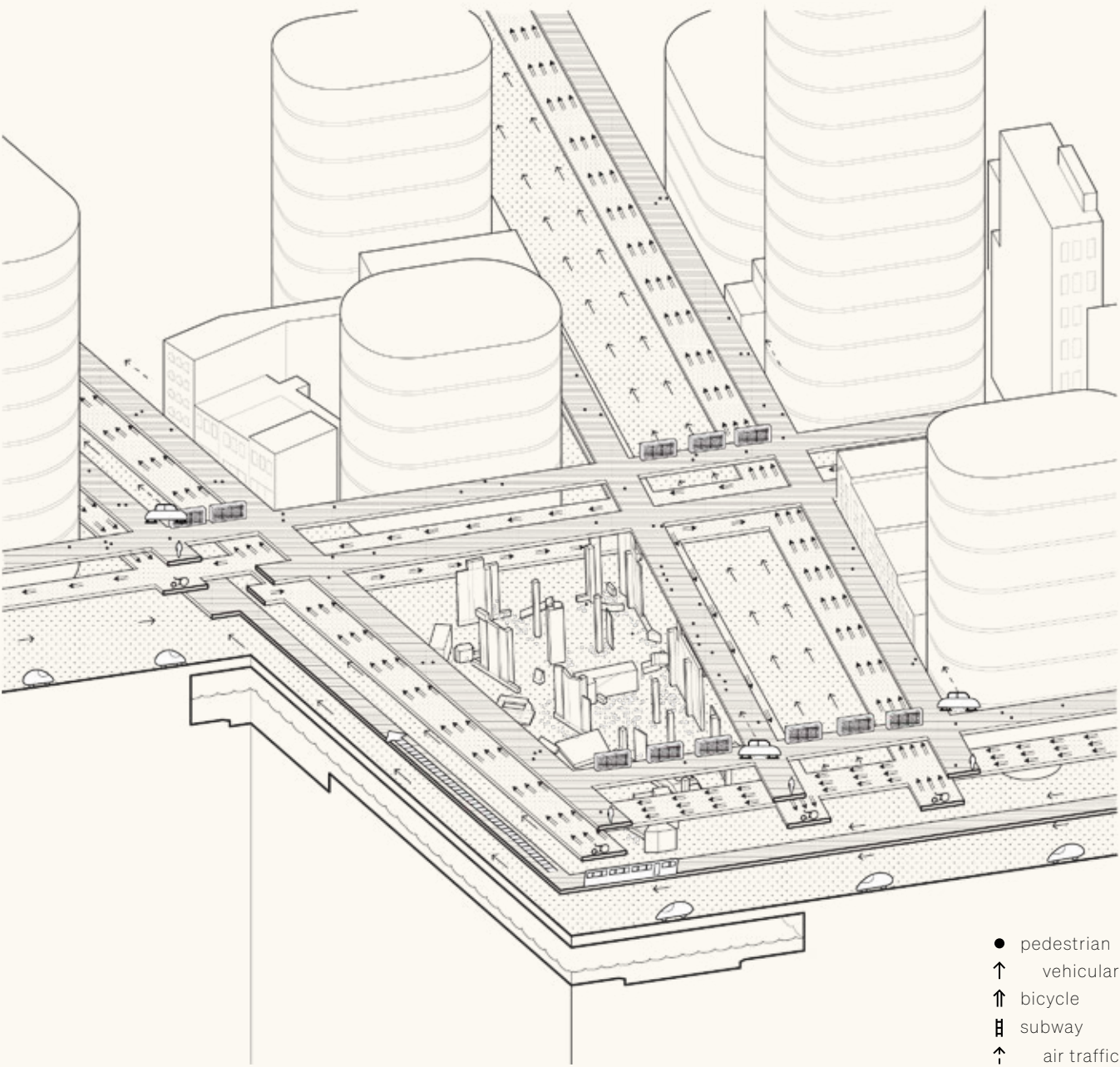
As the global temperature rises, saunas and steam rooms will lose popularity as feeling cool, or chilled, will become the luxury. Vertical "cooling" elevators situate themselves amongst the ruins for people to enter from the subway level and gradually raise into the project. This experience allows a chance for the user to pause, take a breath, and feel the cool air on their skin in the constantly changing, warming world.

What does a future NYC look like?

How will speeds & the way people interact with architecture change?



September 6, 2019 12:10:00 pm



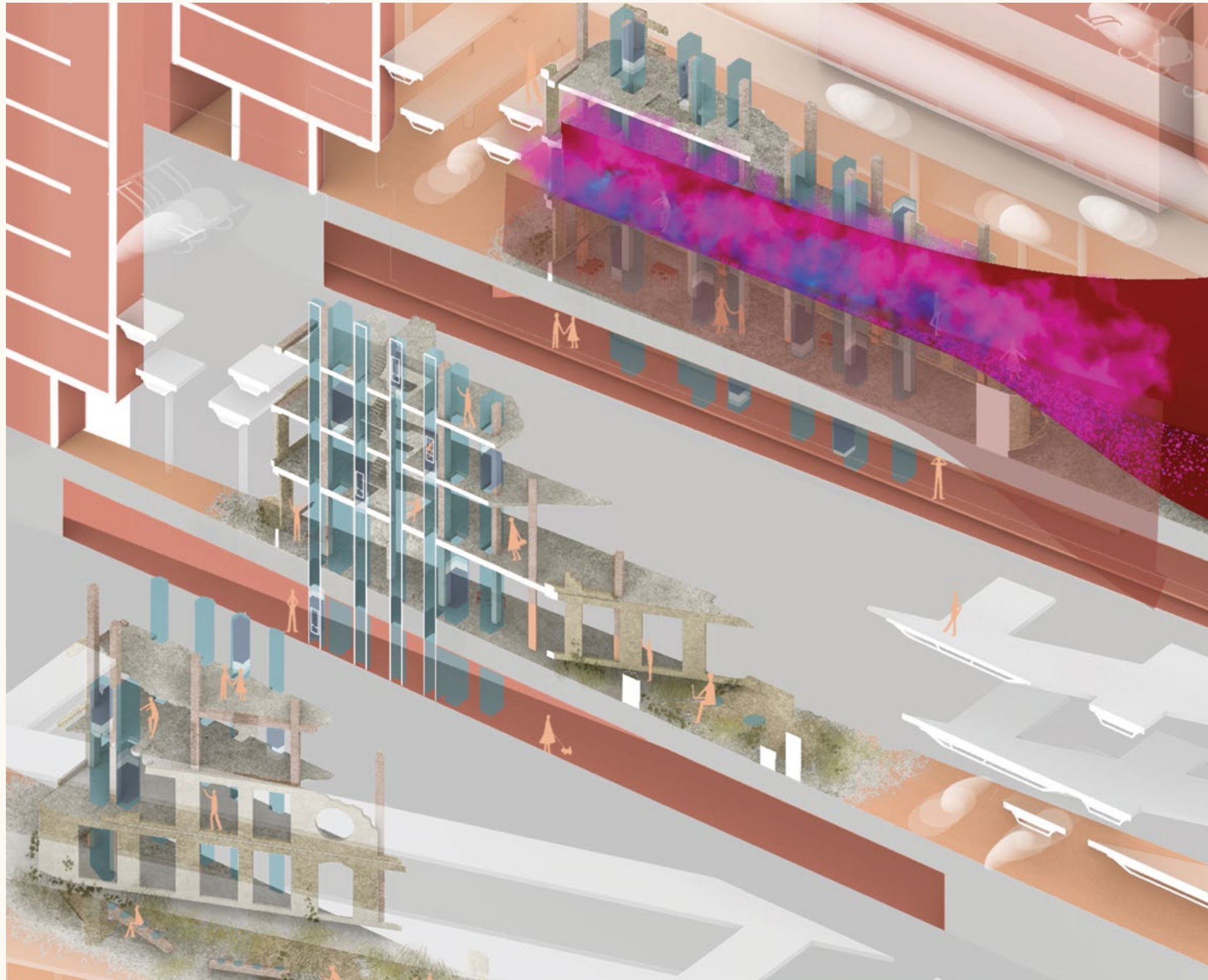
September 6, 2100 12:10:00 pm

- pedestrian
- ↑ vehicular
- ↑ bicycle
- ⊞ subway
- ↑ air traffic

How do people move throughout a city?

How can people interact with ruins?





How can architects intervene on a ruin site?

Interventions:

1. Repurpose of Ruins

- Ruins are covered with Glass surfaces and re-purpose as stools, tables, and lounge chairs.

2. Wind Tunnel

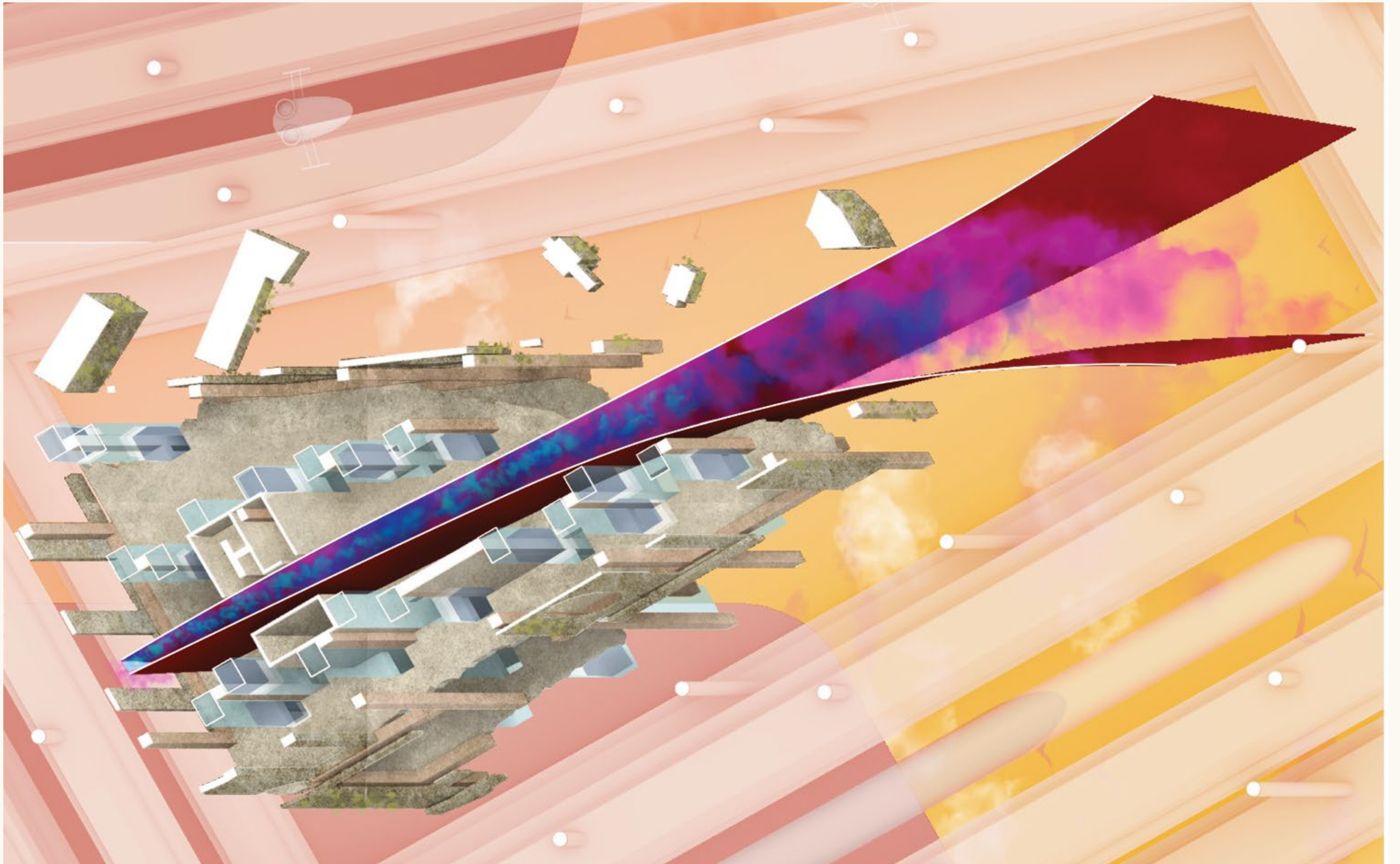
- The wind tunnel interjects through the ruins, funneling air from the Broadway and 5th ave. wind corridors. The ground is coated with layers of mineralized dust, creating an ephemeral art piece during large wind events.

3. Cooling Elevators

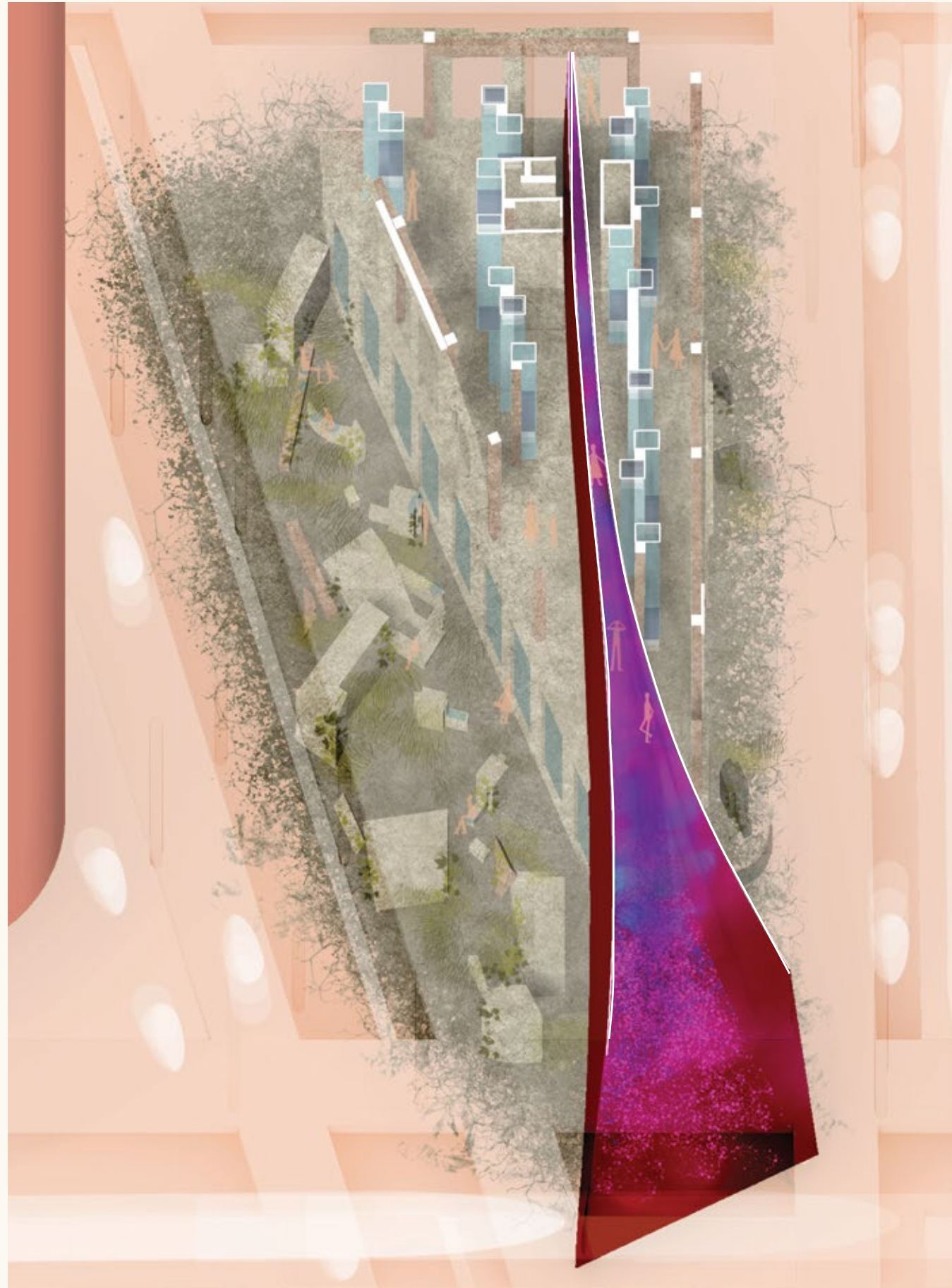
- Cooling elevators situate themselves amongst the ruins for people to enter from the subway level and gradually raise into the project and allow visitors to cool themselves in a warming world.

Can ruins be repurposed for new, everyday use?

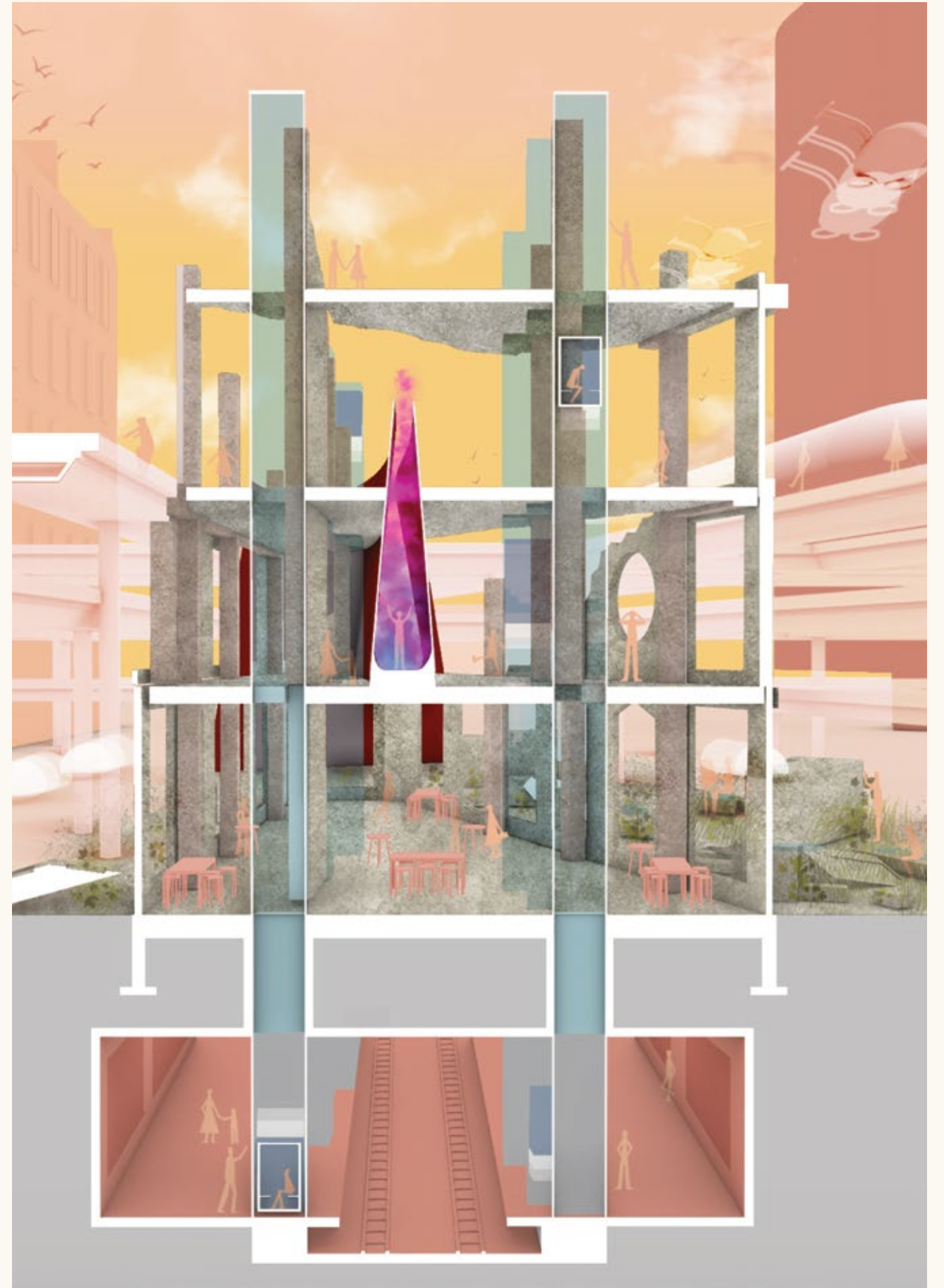




How do the new & old interact?



How can a ruin site become a moment of pause in a fast-paced society?



Inshallah Reih al Beit

Fall 2021

-

Spring 2022

Independent Research

"Godwilling, We are
Going Home"



Tartus, Syria

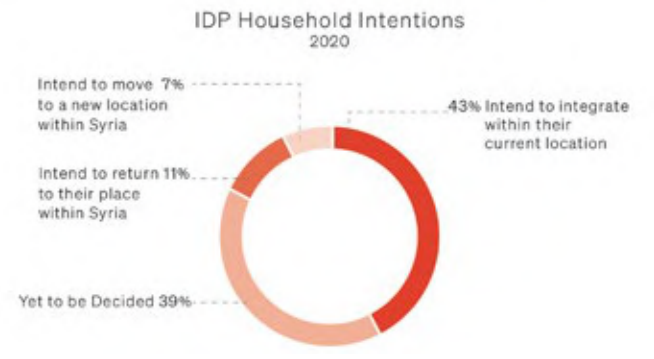
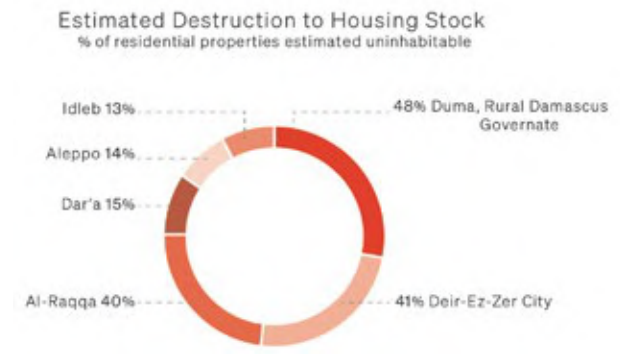
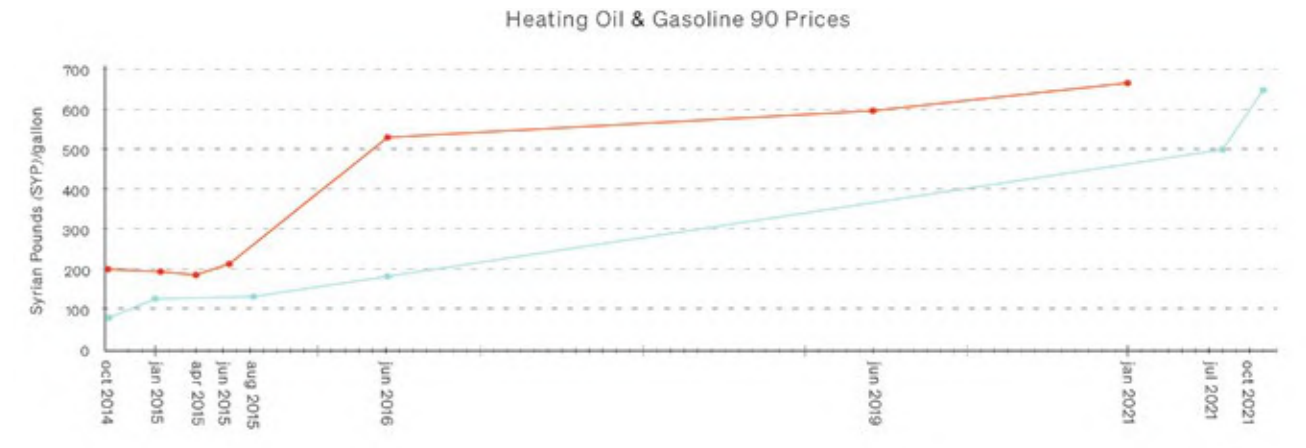
Advisor: Yasser Elsheshtawy

Since the wake of the 2011 Arab Spring, the country of Syria has been in conflict. The pro-democracy uprisings ignited the still-continuing Syrian civil war. The militant group, ISIS, declared a caliphate—a political, religious state ruled by a caliph—from 2014-2017 in the northeastern part of the country. In 2010, Syria's population was roughly 21.2 million. However, the ongoing crisis has caused over 13 million Syrians to leave their home. Although the majority of these Syrians fled to seek refuge in other countries such as Lebanon, Jordan, and Turkey, roughly 6.2 million became internally displaced within their own borders.¹

Despite ISIS having been largely defeated and the Syrian civil war, at last, nearing an end, the current situation is a far cry from normal. Limited electricity, access to clean water, increased fuel prices, and extremely high inflation rates have impacted every home in Syria. For those with a home, it has made it exceedingly difficult to carry-out daily functions. For refugees, it has made it nearly impossible to re-establish their lives and create a new sense of home. A report from the United Nations (UN) states that nearly 60% of the Syrian population, or 9.86 million people lack sufficient access to food,² and the Syrian Lira has dropped nearly 750% since 2011.³ A woman in the Baba Amr district of Homs, while being interviewed by an Oxford University researcher posed a question: "Is life after war more difficult than the life at the time of war? ... Every day is war."⁴

The built environment has played a crucial role in the development of the Syrian crisis. Using satellite imagery, the United Nations has estimated that as of November 2017 a total number of 109,393 buildings were damaged in the war, equating to over \$120 billion in damage.⁵ This is plaguing a country not only with a crippling economy but also sanctions from nearly every country in the world leaving Syria to fall deeper into its hole everyday. Entire cities have been devastated and their urban fabrics are destroyed. Property rights became a tactic to ensure power or conflict, and forces on both sides of the conflict utilized existing buildings to occupy and conspire during the war.⁶ Marwa Sabouni, an architect living in Homs, stresses the diminishment of a community and social cohesion through the physical destruction of her hometown, Homs, in western Syria.⁷ In the same interview by the Oxford researcher, the woman in the Baba Amr district claims that she feels as though a "monster" had destroyed her city, her home.⁸ For those who have decided to flee, many of them have battled equally challenging conditions. Numerous sources articulate the brutal, inevitable conditions refugees are living in whether it is in a camp or not: ice encrusting family tents,⁹ homes made from burlap sacks,¹⁰ and climate change is causing families to have to quickly adapt to extreme weather conditions. For Syrians who have relocated outside of the Middle East, many have been met with resistance from their adopted cities' original inhabitants. The refugees face problems and

¹"Humanitarian Needs Overview: Syrian Arab Republic." OCHA, Humanitarian Programme Cycle, March 2021.
²"Food Insecurity in Syria Reaches Record Levels: WFP | UN News." United Nations, February 17, 2021. <https://news.un.org/en/story/2021/02/1084972>.
³Chokr, Hussein. "Mapping the Depreciation of the Syrian Lira." London School of Economics, April 15, 2021. <https://blogs.lse.ac.uk/mec/2021/04/01/mapping-the-depreciation-of-the-syrian-lira/#:~:text=The%20first%20one%2C%20between%202011,the%20third%20quarter%20of%202019.>
⁴Azzouz, Ammar. "Every Day Is War" – a Decade of Slow Suffering and Destruction in Syria." The Conversation, October 13, 2021. <https://theconversation.com/every-day-is-war-a-decade-of-slow-suffering-and-destruction-in-syria-154595>.
⁵Najjar, Ameen. "Damage Caused by the Syrian Civil War." Towards Data Science, August 24, 2018. <https://towardsdatascience.com/damage-caused-by-the-syrian-civil-war-what-the-data-say-ebad5796fca8>.
⁶Shannan, Sangar; Salih, Youssif; Qadr, Kayfi Maghdid and McGee, Thomas. Reclaiming Home: The Struggle for Socially Just Housing, Land and Property Rights in Syria, Iraq and Libya. Edited by Hannes Baumann. Bonn, DE: Friedrich-Ebert-Stiftung's Regional Project, 2019.
⁷Azzouz, Ammar.
⁸ibid.



Sources:
<https://www.thefuelprice.com/Fsy/en>
 "Humanitarian Needs Overview: Syrian Arab Republic." OCHA, Humanitarian Programme Cycle, March 2021.

difficulties of assimilation and acceptance into their new environment. In these new hardships, many Syrian refugees located in different countries have even considered returning despite the continuing crisis, exacerbating a need for adequate home and shelter within the Syrian borders.

The region of Tartus, located north of the Lebanese border along the Mediterranean sea, has seen little activity since the beginning of the war besides an influx of 1.2 million refugees. With the exception of one refugee camp accommodating 20,000 persons, internally displaced refugees (IDPs) largely have been left on their own. In the villages and countryside surrounding the main city of Tartus,¹¹ building skeletons dot the landscape. With high inflation rates and increased construction costs largely



A Home in Hama, Syria constructed of Burlap sacks¹⁰

due to sanctions beginning in 2011¹² numerous building projects were forfeited and their remaining

structures were abandoned. The resulting skeletons consist of 4-5 stories of concrete slabs with square concrete columns and cast-in-place stairs. The majority of these structures lack formal ownership and have remained empty for nearly a decade.

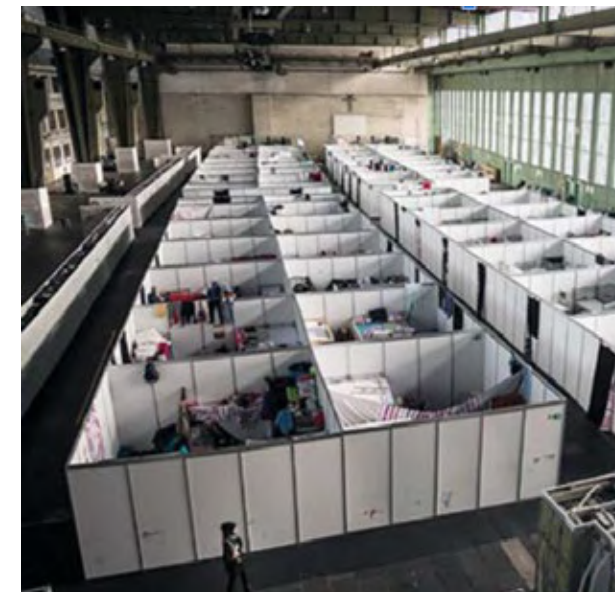


Building Skeleton Located in Safita, Tartus, Syria.

Now, nearing the end of the civil war, the reconstruction and reclamation of thousands of buildings throughout Syria has emerged as an important topic. These building structures have the potential to provide temporary shelter and create informal settlements for internally displaced refugees in the Tartus region. With a permanent structure already in place, the existing skeletons can allow families and individuals, infill, create, and occupy shelter within these currently unoccupied spaces.

Several precedents exemplify the promise in creating shelters and establishing collective homes

for under-served populations. The former Ex-Moi in Turin became a refuge for west African migrants in Italy, becoming more than just a place to sleep but a community space for people to meet each other and provide resources for its inhabitants.¹³ Establishing density for refugee housing reduces the isolating effects many families face when trying to re-establish themselves in new environments. In the case of Berlin, refugee housing was placed right in the heart of the city in the former Tempelhof airport, directly incorporated into the urban fabric of Berlin. This has promoted the recognition of Syrians as city inhabitants and enhanced the social cohesion between Syrians and Berliners,¹⁴ creating an argument for placing refugee housing embedded in established city structures to prevent marginalization.



Refugee Shelter inside Tempelhof Airport in Berlin, DE.¹⁴

A sense of place and community is vital for anyone attempting to feel at home and re-establish themselves in a new place. This idea has remained especially evident in looking at various refugee housing case studies. The Za'atari refugee camp in Jordan is the largest Syrian refugee camp housing ~80,000 refugees. The camp has a unique spatial organization and its inhabitants have been taking reclamation over the site, transforming it from a refugee camp to a semi-permanent city. Here, Syrian refugees have been intervening onto and reorganizing the structure of the camp to meet their desires. Although the camp is formally managed by the United Nations High Commissioner for Refugees (UNHCR), its habitants have quickly learned how to reorganize and establish a sense of place to make the camp feel more like home. Initially, when tent structures were utilized, humanitarian workers recall how Syrian families would watch and wait for their tent to be erected only for them to immediately deconstruct it and rebuild in a different location near their acquaintances in an attempt to recreate a social fabric in their new surroundings. Even when more permanent structures were introduced, Syrian welders used fence posts from camp walls and wheels to create a cart to move the caravans around the camp. The operation became so large that a humanitarian worker noted "organizations are trying to keep up with the refugees."¹⁵

¹⁰ "Icy Blow to Syrian Refugees in Jordan." The New York Times. The New York Times, January 8, 2015. <https://www.nytimes.com/video/multimedia/100000003438226/icy-blow-to-syrian-refugees-in-jordan.html?searchResultPosition=34>.

¹¹ Addrario, Linsey. "Syrians Living as Outsiders, as Squatters or in Camps (Published 2013)." The New York Times. The New York Times, December 31, 2013. <https://www.nytimes.com/slideshow/2013/12/31/world/middleeast/CAMPS/s/CAMPS-slide-BIZP.html?interstitial=true&prev=3&next=4&src=3>.

¹² Ibid.

¹³ Vohra, Anchal. "Syria Sanctions Inflict Suffering as Al-Assad Regime Marches On." Al Jazeera, January 16, 2021. <https://www.aljazeera.com/news/2021/1/16/syria-sanctions-hurting-the-population-more-than-the-regime>.

¹³ Provost, Claire, and Simone Lai. "Occupy Turin: Refugees Find a Home in Italy's Abandoned Olympic Village." The Guardian, March 2, 2016. <https://www.theguardian.com/cities/2016/mar/02/turin-refugees-italy-abandoned-olympic-village>.

¹⁴ Razavivand Fard, Haniyeh, and Mehan, Asma. "Adaptive Reuse of Abandoned Buildings for Refugees: Lessons from European Context." Essay. In *Suspended Living in Temporary Space*, 188–97. Lettera Ventidue, January 2018.

¹⁵ "Innovation at Za'atari: How Do Refugees Make Tents and Caravans into Homes?" The Guardian. Guardian News and Media, July 22, 2015. <https://www.theguardian.com/global-development-professionals-network/2015/jul/22/za-atari-refugee-camp-jordan-creativity-innovation>.



"Removal Men" moving Housing Unit at Za'atari Refugee Camp.¹⁵

Within the building skeletons, using traditional, affordable techniques is crucial given the present situation in Syria when infilling the structure to create residences. Construction in the Middle East has continued for thousands of years using locally sourced materials and traditional construction techniques. It was only until recently that modernized construction materials and techniques became favored and building projects began requiring outsourced materials and skilled labor. In recent years, however, the price of imported steel has soared and, furthermore, the government has placed a high interest rate on government loans which can take upwards of 15-20 years to pay back.¹⁶ Strict sanctions aggravating the already crippling economy have millions of Syrians to lose their jobs, making the purchase of steel and other imported materials simply unfeasible.

Hassan Fathy, an Egyptian architect whose work is associated with the vernacular, stresses the importance and benefits of implementing traditional, local techniques. These techniques often provide viable solutions for passive heating and cooling

strategies, and, because their origin lives within the history of a culture, their designs can be more easily accepted and adopted by communities.¹⁷ In the Middle East, vernacular techniques have shown how people have used the materials which surround them to create shelter for thousands of years which protects them from the elements without requiring heavy machinery. Al-Kassab (a reed), for example, is still being collected and woven by local craftsmen to create shading devices to protect themselves from the intense Syrian sun while allowing for the breeze from the Mediterranean Sea to flow through it.¹⁸ Although some craftsmen still employ the use of found materials and vernacular techniques, it is primarily completed on the small, residential scale. Syria is rich with ample resources such as this reed, black basalt stone, and rammed earth which all can be utilized to construct ample housing for internally displaced Syrian refugees.



Men Constructing Shade Awning using Al-Kassab Reed.¹⁸

Beyond using only traditional materials and techniques native to the Syrian landscape, there

is equal opportunity to look to elsewhere for other methods. In Egypt, nearly every aspect of the Date Palm Tree (also found in Syria) has been used to construct homes: the palm trunks for the flooring, the leaves for the ceilings, and the remaining parts to build furniture.¹⁹ The Bedouin culture furthermore provides inspiration of how, in their constant movement throughout the Mediterranean basin, families have consistently utilized the materials around them to create structures which are climatically appropriate.²⁰ Outside of natural materials, there is potential for other found materials to generate structure. Shigeru Ban has shown in numerous examples how humble objects such as paper tubes can be used to create shelter. Furthermore, researchers in Turkey have been looking at how to repurpose rubble from destroyed buildings around Syria for the creation of aggregate for new construction. In this sense, the researchers argue that by using existing material composition from buildings in the area, the new constructions will blend more seamlessly into the urban environment and be more easily accepted by the wider community.²¹



Structure Created from Date Palm Tree.¹⁹



Paper Emergency Tube Shelters in Byumba Refugee Camp, Rwanda.²²

Related projects/proposals concerning humanitarian architecture highlight the potential for involving the community in construction, both socially through creating a sense of ownership and also economically through the creation of jobs. Although these ideas and prospects are quite promising and beautiful, one has to be extremely precise and articulate with the development of their proposals. In Hassan Fathy's proposal for New Gournia, he developed a precise aesthetic and organization which resulted in an unrealistic, undesirable proposal for the future residents of the new village. The development and eventual failure of this project emphasizes the importance of not imposing a vision or ideal onto villages for developing communities. Rather it is crucial to understand the community's true wishes as well as how a proposal can be adapted and personalized by residents to accommodate their needs as time goes on. Alejandro Aravena's Quinta Monroy also provides a lesson in how to guarantee the long term success of the project. Although this project was met with much success and the

¹⁵Jioudy, M. Hosam. "Re-Thinking Rural Architecture in Syria." *Angle Journal*, October 1, 2012. <https://anglejournal.com/article/2012-10-re-thinking-rural-architecture-in-syria-a-traditional-approach-to-contemporary-living>

¹⁶Fathy, Hassan, Walter Shearer, and Sultan, Abd-el-Rahman Ahmed. *Natural Energy and Vernacular Architecture: Principles and Examples with Reference to Hot Arid Climates*. Chicago, IL: Published for the United Nations University by the University of Chicago Press, 1995.

¹⁸"Ha Kaza Tosna'a Mazalat al-Qasab alati Nastamt'i'o bi-Zilaha" (This is how Sugarcane Shades are constructed, so that we can enjoy their shade). YouTube. July 1, 2018. Educational Video, 2:06. <https://youtu.be/bnxkOTkg9nQ>

¹⁹Liuzzi, Stefania, Sara Sanarica, and Pietro Stefanizzi. "Use of Agro-Wastes in Building Materials in the Mediterranean Area: A Review." *Energy Procedia* 126 (September 2017): 242-49. <https://doi.org/10.1016/j.egypro.2017.08.147>.

²⁰Webster, Roger M. "THE BEDOUIN IN SOUTHERN AND SOUTHEASTERN ARABIA The Evolution of Bedouin Life Reconsidered." *Proceedings of the Seminar for Arabian Studies* 22 (July 1991)

²¹Rukiye Cetin, Salah Haj Ismail, and Morishita, Naom". "Pre-Design of Transitional Rural Housing for Syria with Recycled Rubble from Destroyed Buildings." *IOP Conference Series: Materials Science and Engineering* 245 (2017). <https://doi.org/10.1088/1757-899x/245/8/082024>.

²²ArchDaily. "The Humanitarian Works of Shigeru Ban." *ArchDaily*, May 12, 2020. <https://www.archdaily.com/4489255/the-humanitarian-works-of-shigeru-ban>.

photos of Aravena's "half-built" homes are among the first images when one searches "humanitarian architecture," the evolution of the project has been less idealistic. As Aravena only left residents with a simple guidebook for how families could expand their home, residents have taken authority over the complex, overtaking spaces Aravena has allotted for open space and community gathering in favor for home additions and garages.²³ In designing an architecture for non-architects, one must consider and be realistic about the long term occupation and what liberties residents will take with their new home.

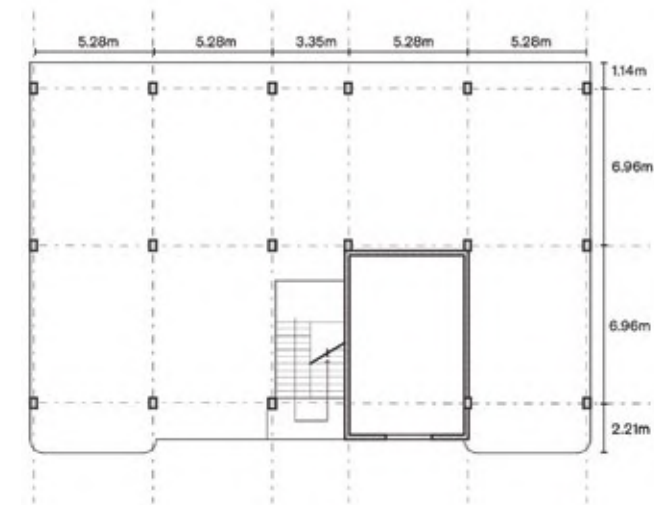
In designing a humanitarian architecture for an under-served population, it is necessary to approach the project with a certain sense of empathy and understanding of the future inhabitants lives. The current situation in Syria and for Syrian refugees is a dire one. The economy is faltering; inflation is at a record high; climate change is causing unprecedented weather conditions; there is little money to build; if you leave, there is no promise of assimilation. The list does not end there.

The building structures scattered throughout the landscape of the Tartus region provide ample opportunity for displaced Syrian refugee families to create shelter and establish a new sense of home. Having largely remained empty for nearly a decade, these structures are currently failing to reach any potential. Roughly 4-5 stories tall, the concrete skeletons consist only of wide span floors,

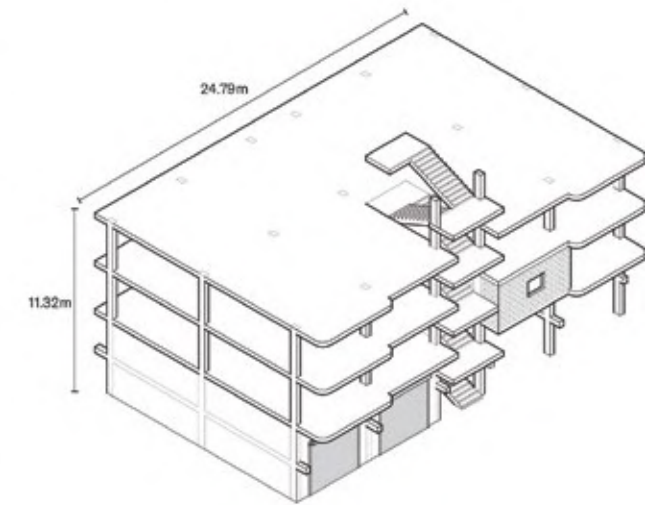
square columns, and a cast-in place concrete stair. The ground-level is sometimes finished with walls and a garage door to become store-fronts for local vendors, or, are empty and sometimes occupied by local inhabitants as a place to gather. Almost always, however, the upper levels remain fully vacant—not even walls or a facade obtrude the structure. With only unfinished floors with a grid of columns, these structures allow for maximum flexibility and personalization by incoming families. The scale of the structures furthermore can allow for multiple families to occupy the same skeleton, allowing them to converse and create a sense of community while these families attempt to re-establish themselves in view of their current situation. Many of the structures are located directly within the villages of the Tartusi region, embedding refugees right in the heart of existing communities, rather than separating and alienating them as seen with many other refugee camps and housing. Similar to the Berlin Tempelhof refugee housing, this placement can assist in the assimilation and acclimatization process of their new surroundings.



Building Skeleton in Safsafeh, Tartus, Syria.



Typical Upper Floor Building Skeleton Plan



Typical Building Skeleton Axo

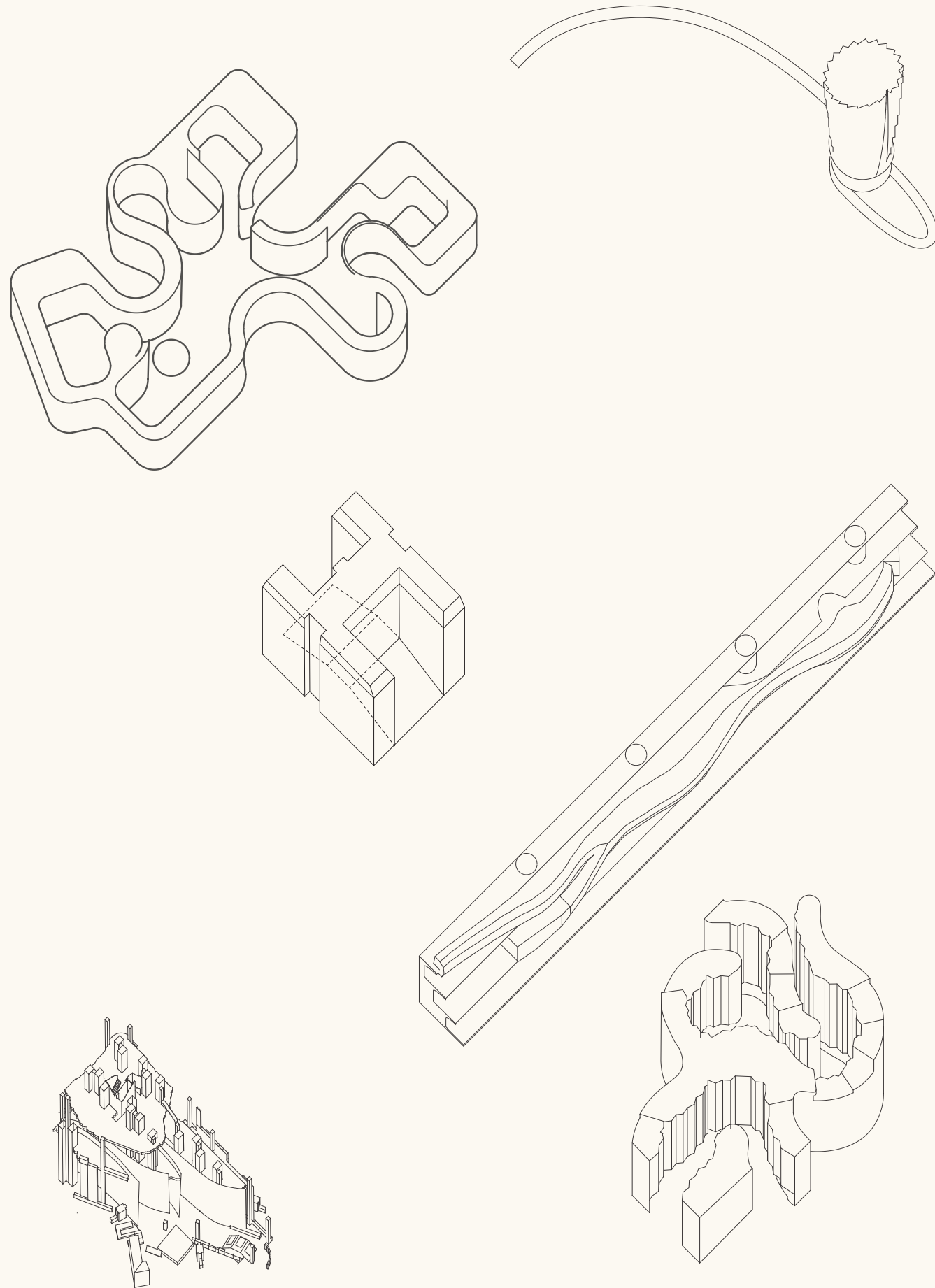
Climate change has afflicted Syria, as with the rest of the world, with unprecedented weather changes and climate events. Long periods of cold and snow, hotter summers, and exceptionally wet springs are becoming more frequent. This has made squatting and occupying open air structures unfeasible. Walls and enclosure must be constructed to shield refugees from the elements as well as simply create a comfortable atmosphere and sense of protection in their home.

High costs and inaccessibility of traditional construction materials has prevented many Syrians from building since their civil war. An extreme lack of basic services such as electricity and water and high gas prices further adds difficulty to the construction and transportation process of material. It is crucial to explore and utilize found resources from the Syrian region. The extraction, making, and implementation of these materials not only reduces construction costs but also has the potential to establish a framework or economy for Syrian laborers.

The coverage of the Syrian civil war and the sense of agency from the western world diminished. The crisis, however, remains intact. Syria needs help now. Housing solutions for the short and long term are necessary in the reconstruction of a post-civil war Syria. The existing building skeletons which dot the landscape in the Tartousi region of Syria provide ample opportunity for the infill of temporary housing for internally displaced refugees. The country is rich with resources and found materials to create walls which shelter Syrians from the elements and families are given the opportunity to be engaged in the design process to establish a sense of comfort and permanence. Traditional construction methods, not only from Syria, but also from other regions can be implemented to employ and provide income for local craftsmen. By utilizing these building skeletons already located within villages, these projects can become a transition point to locate and integrate internally displaced persons directly into existing communities, helping them assimilate into and become accepted by the larger community.

²³Carrasco, Sandra, and David O'Brien. "Revisit: Quinta Monroy by Elemental." *Architectural Review*, December 4, 2021. <https://www.architectural-review.com/buildings/housing/revisit-quinta-monroy-by-elemental>.





Houston Currents proposes an art incubator at the previous Coca-Cola Bottling Plant in Houston, TX through the introduction of juxtaposing geometry to facilitate a new interaction within the existing structures that comprise the complex.

With Houston being such a difficult city to understand due to the lack of zoning laws, what can we gain from looking at context?

Surrounding the site is a post-office to the east, low-scale residential homes to the south, a Holiday Inn to the west, and finally a transmitter plant to the North. Unable to make sense of this context, the project truly began with a forensic analysis of the site with a particular intrigue in the nuances in its intersecting structural grids. The reading of the site took us to Houston at large: grids created by a system of overlapping and intersecting lines defined by vehicular traffic. Particular to Houston, however, Bayous, slow moving bodies of water, intersect the grids, serve as a natural, driving force and bisect this copious system of lines. This understanding of Houston's urban composition informed the intervention of the site where

the art incubator presents a new language on the site in the form of a "ribbon."

What is the most minimal gesture which can be made to transform the experience of the site?

Defined by two walls, the ribbon contains all of the art incubator programming and creates the boundary for a large gallery. Within the ribbon are various sized studios as well as support spaces for a large gallery. As a curved structure, the ribbon is self supporting and column free, allowing for a new type of space and language which separates the artist from the existing conditions of the site.

As the curved walls dodge and pass the existing structure, quality and exchange between the new and the existing is created where each enhances the other. The ribbon weaves through these many grids to create a unified space to encourage circulation, embrace creative production and inspiration, as well as generate different qualities of spaces within the old Coca-Cola Bottling Plant.

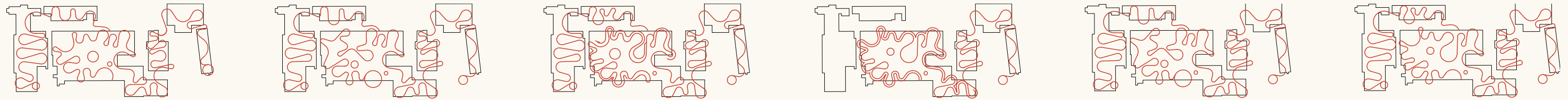


How can our intervention embrace and highlight the existing structural systems?

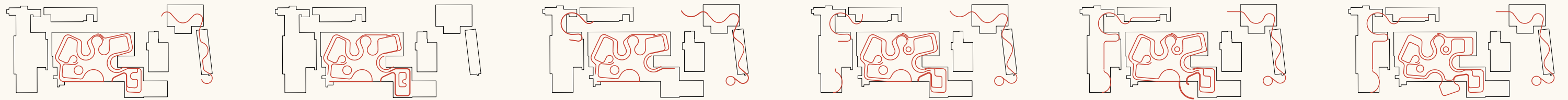
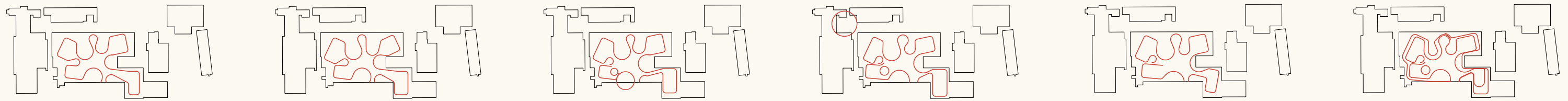
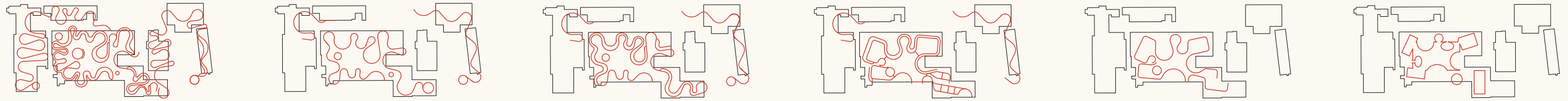


What can we learn from the urban composition of Houston?

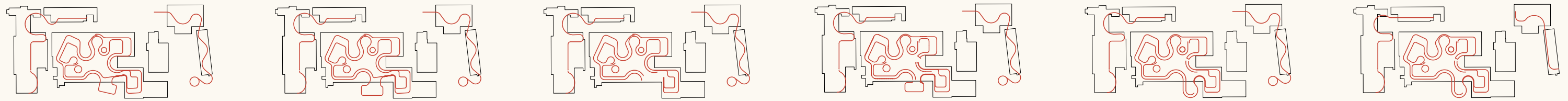




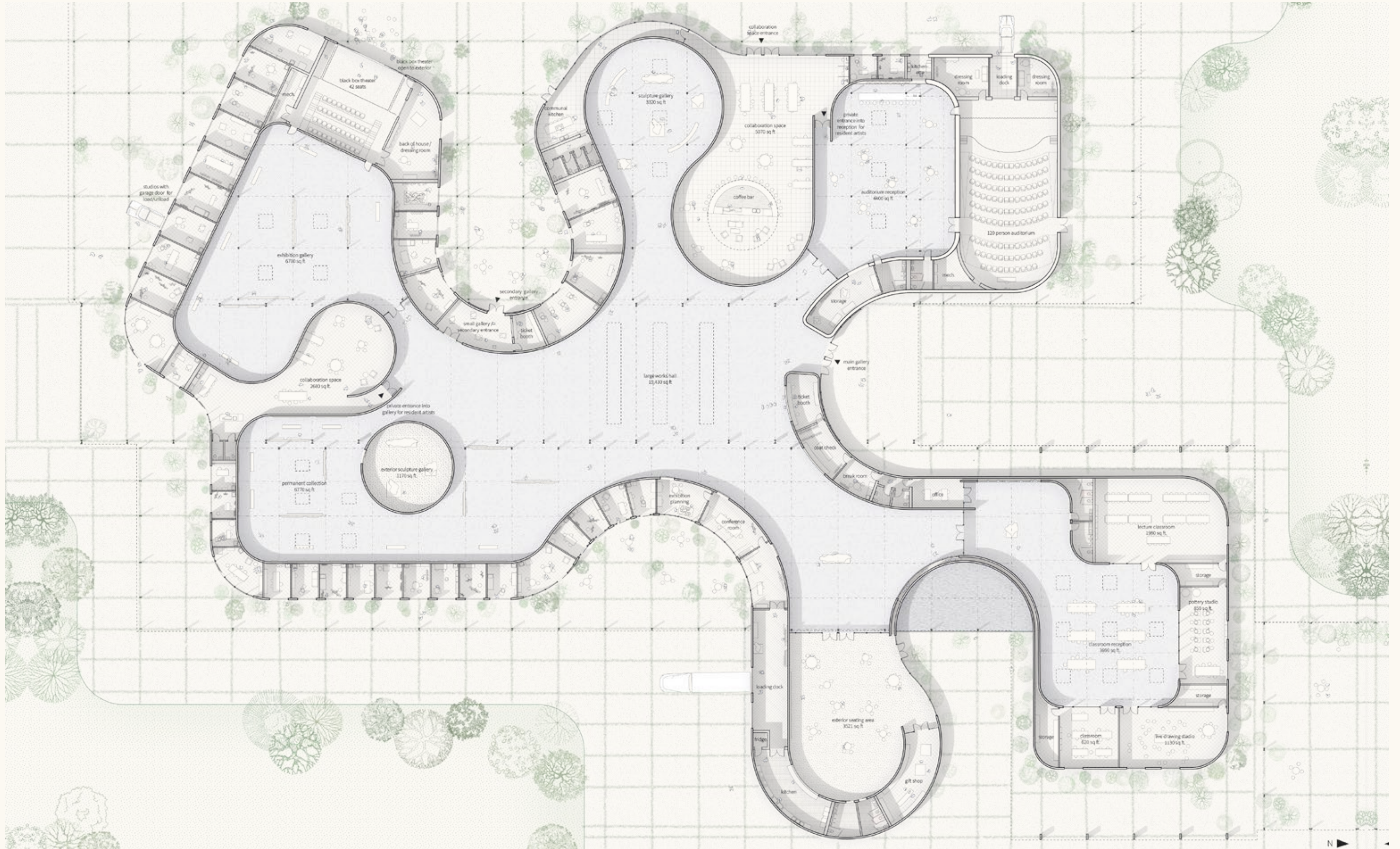
How can we introduce the nature of the bayous into the structural grids of the Coca-Cola Plant?



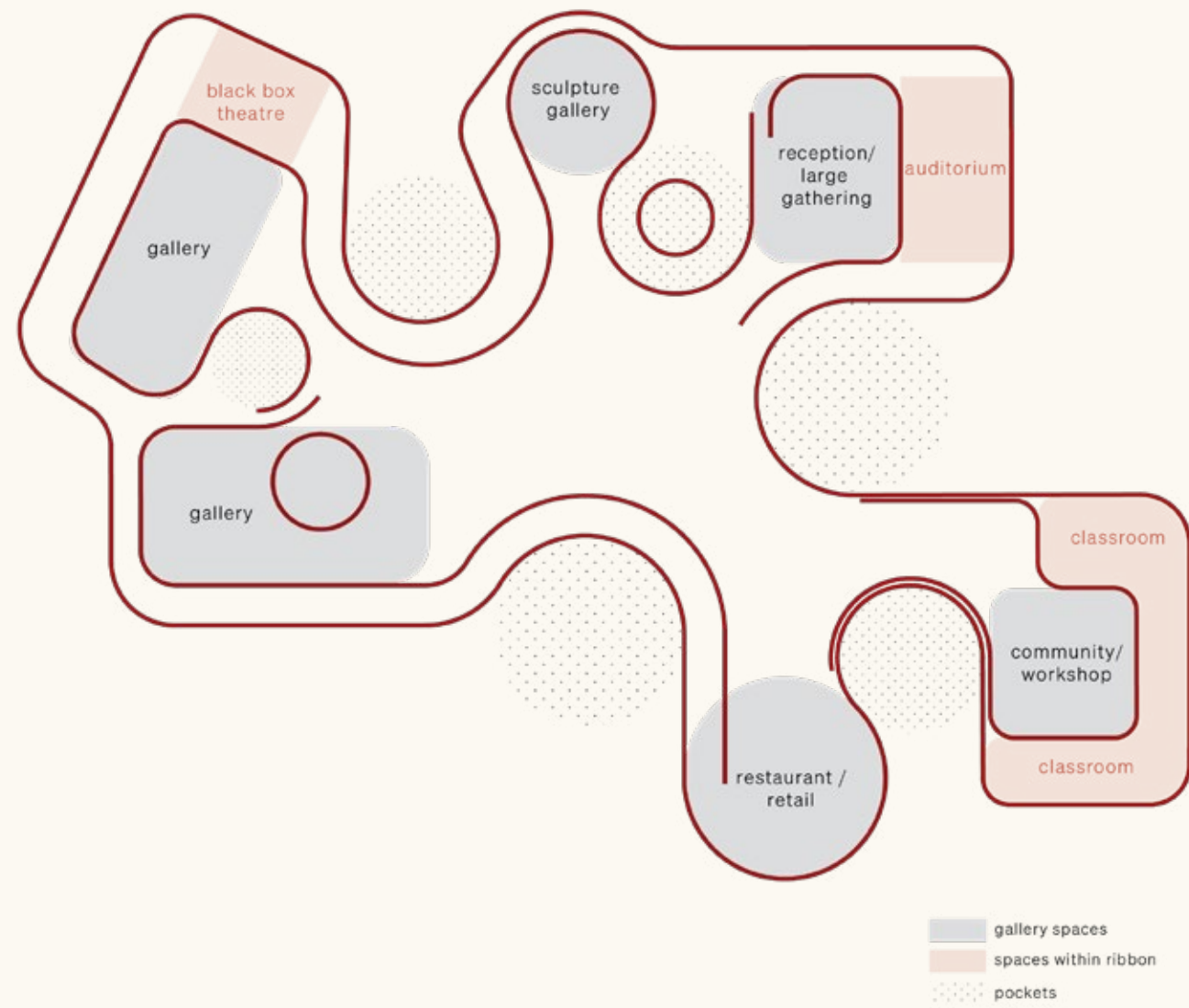
Should the ribbon be composed compositionally or functionally? Can it be both?



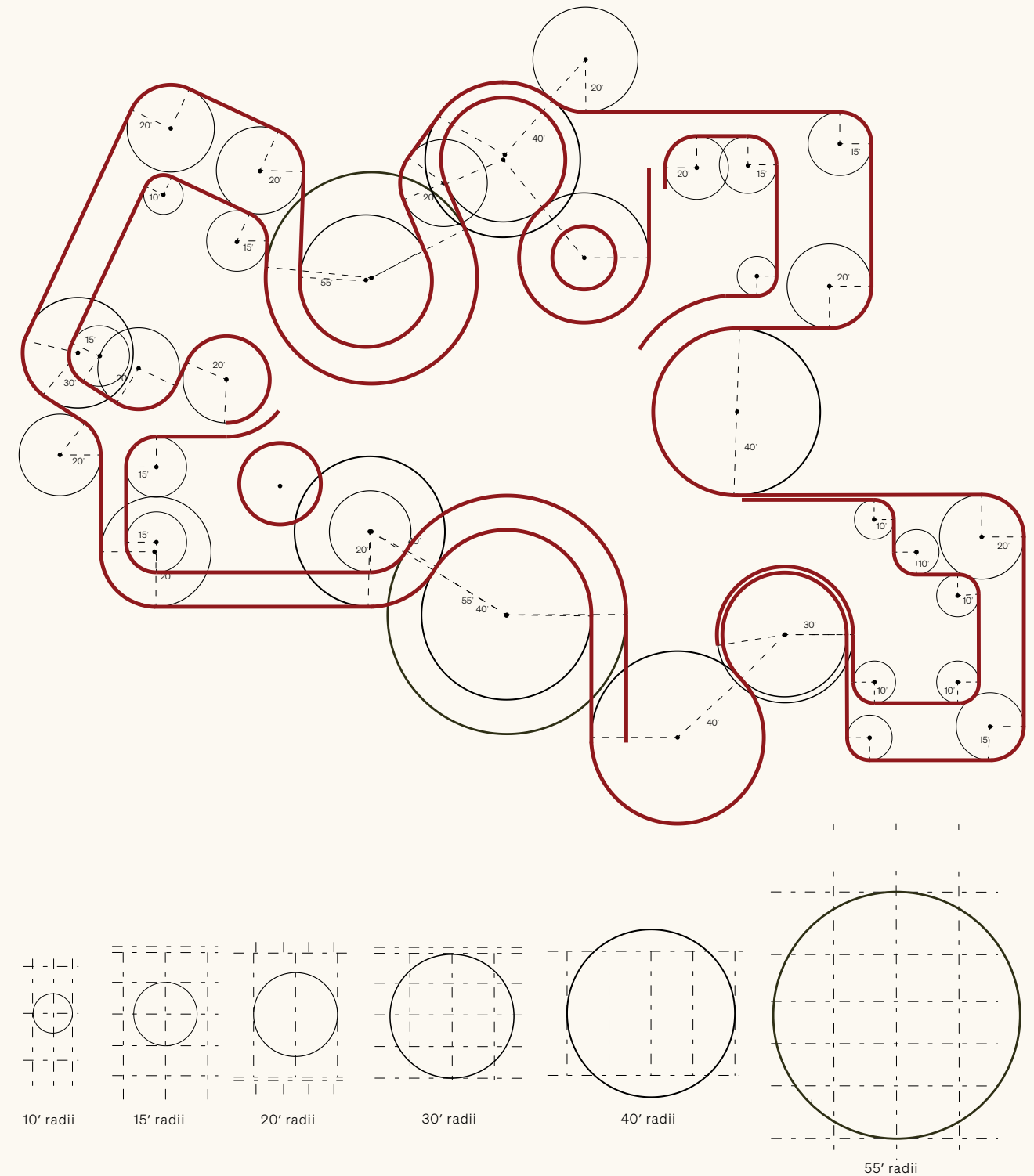
How can the form undulate to accommodate a wide variety of spaces?



How can the form be generated by program?

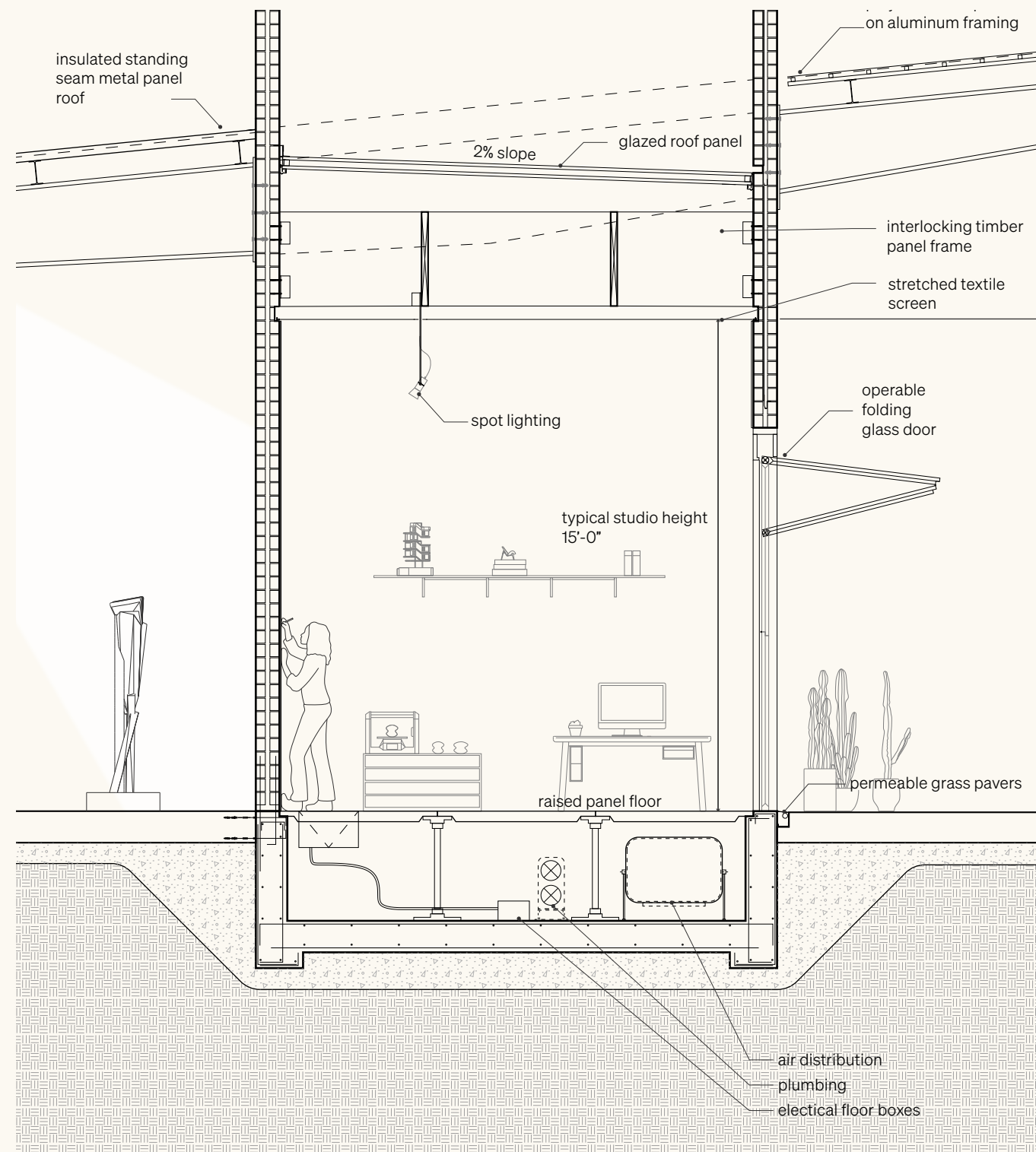


How can we consider an economy of means based on spans of the existing grids?





How can the ribbon be completely self-sustaining?



What opportunities are there to embrace the duality of the ribbon?

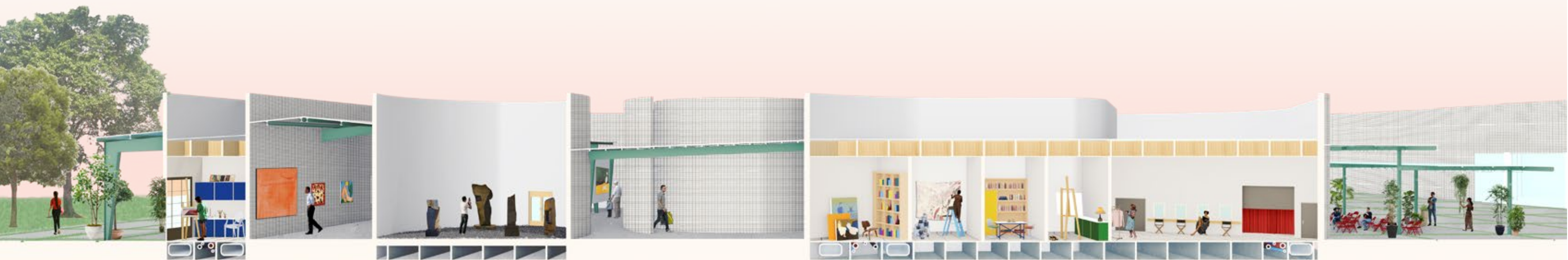


What lighting qualities are desired for the exterior, studios, and interior gallery?

How can each studio be individually accessible from the exterior?







What's Next?